TOOLFLO

Member IMC Group

THREADING CATALOG


EWAG
FANUC Series 31i-MODEL B5

TOOLFLO

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BANTAM

TOOLFLO
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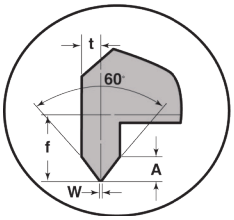
Small Diameter Solid Threading Tools

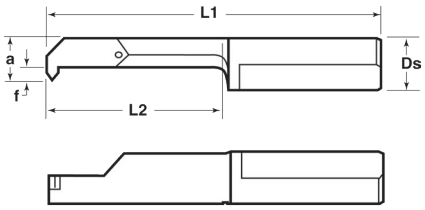
FLOMIN

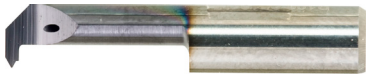
MINIATURE SOLID TOOLING

THREADING

TFSC





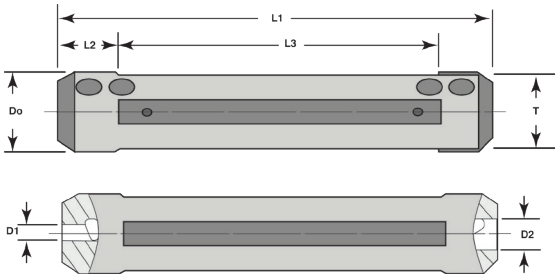


Description	EDP Code	R/L	Pitch	Min Bore Dm	W	Ds	f	a	L1	L2	A	t	GP22
TFIR04140050-D040	TFSC04140050D4O3S	RH	0.5	4.0	0.06	4.0	1.5	3.5	30.0	14.0	0.3	0.35	●
TFIR07140050-D050	TFSC04140050D5O3S	RH	0.5	5.0	0.06	7.0	0.9	4.4	30.0	14.0	0.3	0.35	●
TFIR07140075-D050	TFSC04140075D5O3S	RH	0.75	5.0	0.09	7.0	0.9	4.4	30.0	14.0	0.4	0.45	●
TFIR07140100-D048	TFSC04140100D4O3S	RH	1.0	4.8	0.12	7.0	0.9	4.4	30.0	14.0	0.6	0.55	●
TFIR07140100-D060	TFSC04140100D6O3S	RH	1.0	6.0	0.12	7.0	1.8	5.3	30.0	14.0	0.6	0.55	●
TFIR07140125-D060	TFSC04140125D6O3S	RH	1.25	6.0	0.15	7.0	1.8	5.3	30.0	14.0	0.7	0.65	●
TFIR07140150-D060	TFSC04140150D6O3S	RH	1.5	6.0	0.18	7.0	1.8	5.3	30.0	14.0	0.8	0.75	●
TFIR07140150-D070	TFSC04140150D7O3S	RH	1.5	7.0	0.18	7.0	2.8	6.3	30.0	14.0	0.8	0.75	●

EXTERNAL HOLDER

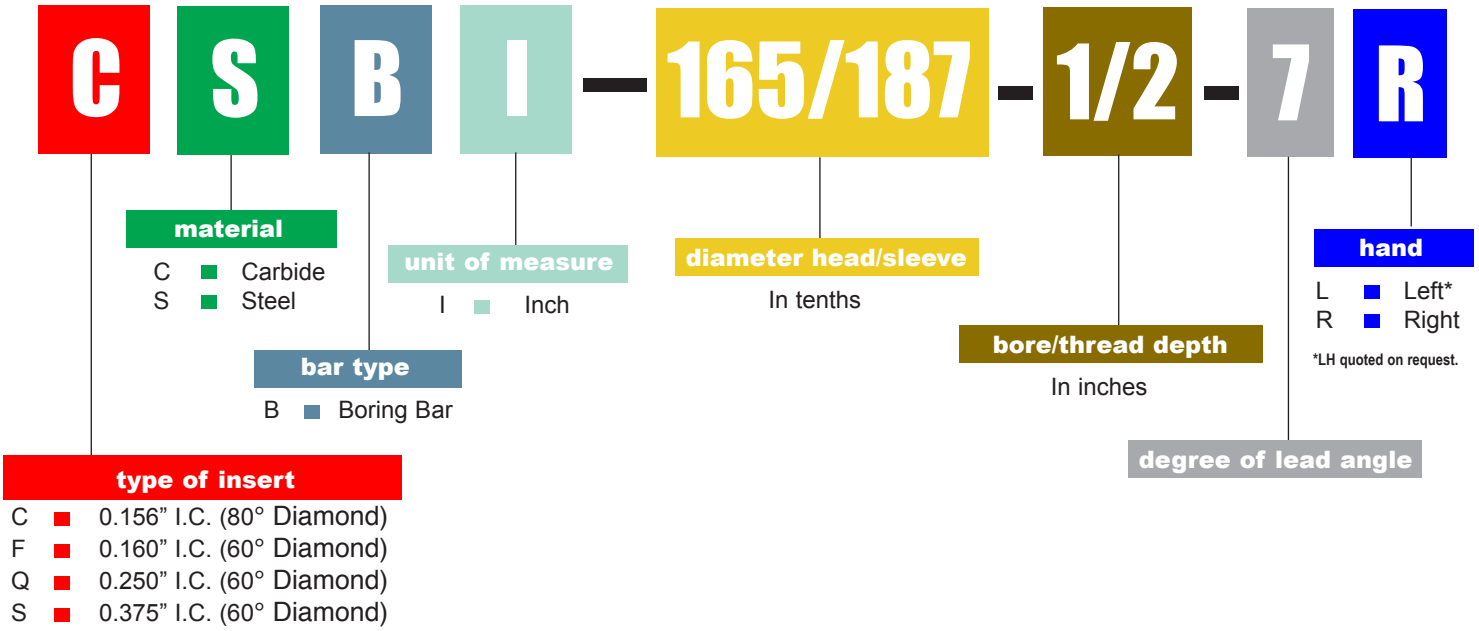
THREADING

TFSH

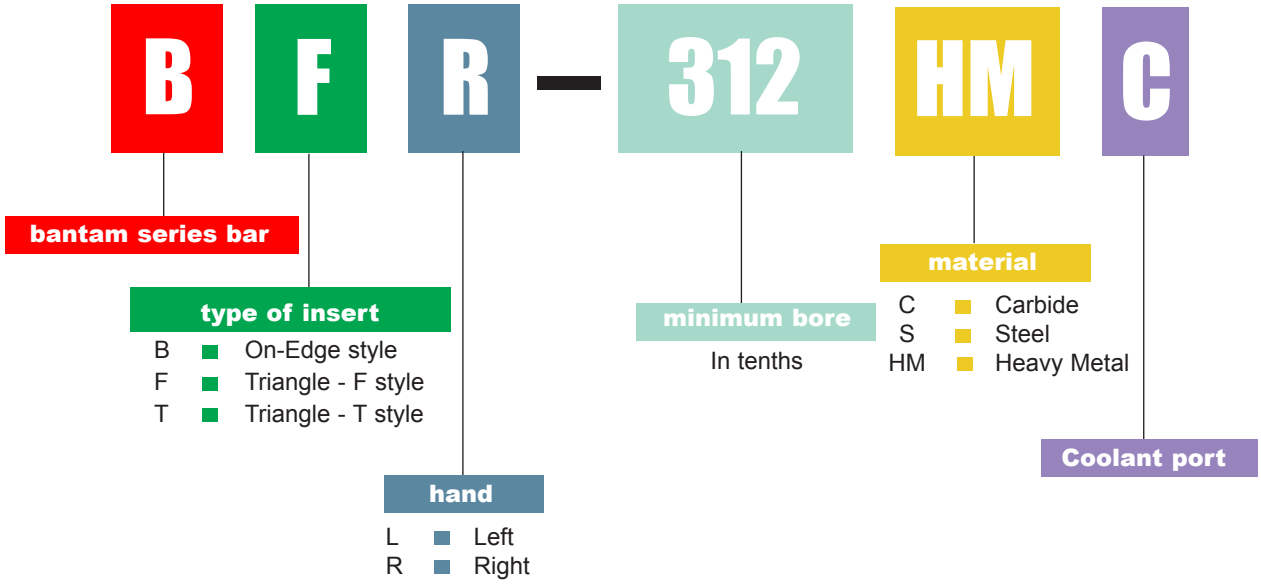


Description	EDP Code	Do	D1	D2	L1	L2	L3	T	Clamping Screw	Wrench
TFBS12-4-4	TFSH1244	12	4	4	75	10	55	10.3	SSHM5-4PF-S	P-2.5
TFBS127-4-4	TFSH12744	12.7	4	4	76.2	10	56.2	11.6	SSHM5-6PF-S	P-2.5
TFBS14-4-4	TFSH1444	14	4	4	75	10	55	12	SSHM5-4PF-S	P-2.5
TFBS159-4-7	TFSH15947	15.9	4	7	76.2	10	56.2	14	SSHM5-6PF-S	P-2.5
TFBS16-4-7	TFSH1647	16	4	7	75	10	55	15	SSHM5-6PF-S	P-2.5
TFBS19-4-7	TFSH1947	19	4	7	89	10	69	17.2	SSHM5-6PF-S	P-2.5
TFBS20-4-7	TFSH2047	20	4	7	90	10	70	18	SSHM5-6PF-S	P-2.5
TFBS22-4-7	TFSH2247	22	4	7	90	10	70	20	SSHM5-6PF-S	P-2.5
TFBS25-4-7	TFSH2547	25	4	7	100	10	80	23	SSHM5-6PF-S	P-2.5
TFBS254-4-7	TFSH25447	25.4	4	7	90	10	70	23.4	SSHM5-6PF-S	P-2.5

Bantam Boring Bar Nomenclature Chart

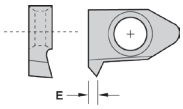


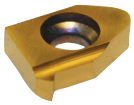
Bantam Grooving/Threading Bar Nomenclature Chart



MINIMUM BORE .250 (6.35)

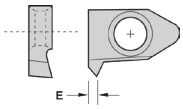
THREADING - NPT
BSVR

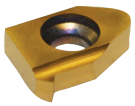




Description	EDP Code	TPI	E	Uncoated C22	TiN Coated GP22	TiN Coated GP4	AlTiN Coated AC22	AlTiN Coated AC4
BSVR-14NPT	9BSV14R	14	.045 (1.14)			●		
BSVR-18NPT	9BSV18R	18	.033 (0.84)			●		
BSVR-27NPT	9BSV27R	27	.026 (0.66)			●		

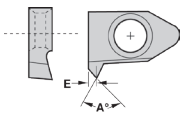
THREADING - UN
BSVR





Description	EDP Code	TPI	E	Uncoated C22	TiN Coated GP22	TiN Coated GP4	AlTiN Coated AC22	AlTiN Coated AC4
BSVR-12UN	9BSU12R	12	.040 (1.02)			●		
BSVR-16UN	9BSU16R	16	.031 (0.79)			●		
BSVR-18UN	9BSU18R	18	.029 (0.74)			●		
BSVR-20UN	9BSU20R	20	.026 (0.66)			●		
BSVR-24UN	9BSU24R	24	.023 (0.58)			●		
BSVR-28UN	9BSU28R	28	.021 (0.53)			●		
BSVR-32UN	9BSU32R	32	.019 (0.48)			●		

55°/60° V
BSVR



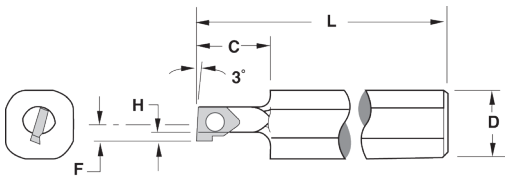
Description	EDP Code	TPI	R/F	E	A	Uncoated C22	TiN Coated GP22	TiN Coated GP4	AlTiN Coated AC22	AlTiN Coated AC4
BSVR-55	9BSV55R	16-48	.003F (0.08F)	.039 (0.99)	55°			●		
BSVR-60	9BSV60R	16-48	.003R (0.08R)	.039 (0.99)	60°			●		

In an effort to improve our stock standard grade offering, there are periodic changes.
Please see current price list for up to date grade offering.

● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

	GP22	GP4
Cast Iron		●
Non-Ferrous	●	
Stainless/High Temp	●	
Steel	●	

BSR
Inch



Description	EDP Code	Stk	Material	Insert	Coolant Port	L	D	C	H	F**	Min. Bore	Screw*
BSR-250S	9B250S	●	Steel	BSVR		5.000	.500	.500	.050	.157	.250	TS1
BSR-250SC	9B250SC	●	Steel	BSVR	✓	5.000	.500	.500	.050	.157	.250	TS1

*TS1 screw uses K05 wrench
** Dimension over sharp point

BSRM
Metric

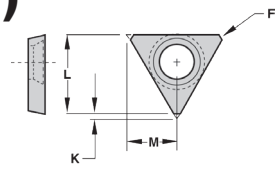
Description	EDP Code	Stk	Material	Insert	Coolant Port	L	D	C	H	F**	Min. Bore	Screw*
BSRM-6.35S	9BM635S	●	Steel	BSVR		127.00	12.00	12.70	1.27	3.99	6.35	TS1
BSRM-6.35SC	9BM635SC	●	Steel	BSVR	✓	127.00	12.00	12.70	1.27	3.99	6.35	TS1

*TS1 screw uses K05 wrench
** Dimension over sharp point

MINIMUM BORE .312 (7.92)

THREADING - 60° V

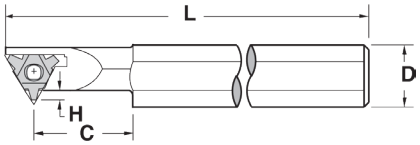
BHV



Description	EDP Code	TPI	F	Uncoated C22	TiN Coated GP22	TiN Coated GP4	AlTiN Coated AC22	AlTiN Coated AC4
BHV-002	9BHV002	16-48	.002 (0.05)		●	●		

BHR

Inch



Description	EDP Code	Stk	Material	Insert	L	D	C	H	Min. Bore	Screw*
BHR-312S	9BHR312S	●	Steel	BHV	4.000	.500	.750	.060	.312	TS3
BHR-312HM	9BHR312HM	●	Heavy Metal	BHV	4.000	.500	1.000	.060	.312	TS3

***TS3 screw uses K1 wrench**

BHRM

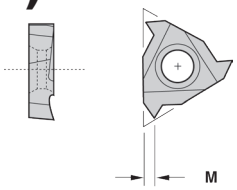
Metric

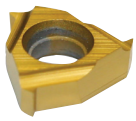
Description	EDP Code	Material	Insert	L	D	C	H	Min. Bore	Screw*
BHRM-7.9S	9BHRM79S	Steel	BHV	101.60	12.00	19.05	1.52	7.92	TS3
BHRM-7.9HM	9BHRM79HM	Heavy Metal	BHV	101.60	12.00	25.40	1.52	7.92	TS3

***TS3 screw uses K1 wrench**

MINIMUM BORE .312 (7.92)

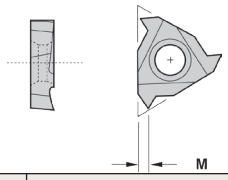
THREADING - NPT
BFR3

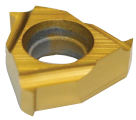




Description	EDP Code	TPI	M	Uncoated C22	TiN Coated GP22	TiN Coated GP4	AlTiN Coated AC22	AlTiN Coated AC4
BFR3-18NPT	9BFR3V18	18	.033 (0.84)		●	●		
BFR3-27NPT	9BFR3V27	27	.026 (0.66)		●	●		

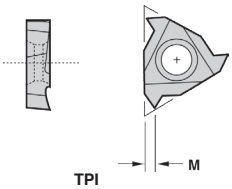
THREADING - ISO
BFR3

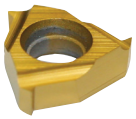




Description	EDP Code	Pitch	Uncoated C22	TiN Coated GP22	TiN Coated GP4	AlTiN Coated AC22	AlTiN Coated AC4
BFR3-0.75 ISO	9BFR3I75	0.75			●		
BFR3-1.0 ISO	9BFR3I10	1.00			●		
BFR3-1.5 ISO	9BFR3I15	1.50			●		
BFR3-1.75 ISO	9BFR3I175	1.75		●	●		

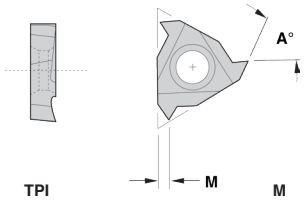
THREADING - UN
BFR3

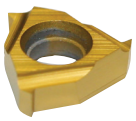




Description	EDP Code	TPI	M	Uncoated C22	TiN Coated GP22	TiN Coated GP4	AlTiN Coated AC22	AlTiN Coated AC4
BFR3-20UN	9BFR3U20	20	.026 (0.66)			●		
BFR3-24UN	9BFR3U24	24	.026 (0.66)			●		
BFR3-28UN	9BFR3U28	28	.021 (0.53)			●		
BFR3-32UN	9BFR3U32	32	.019 (0.48)		●	●		

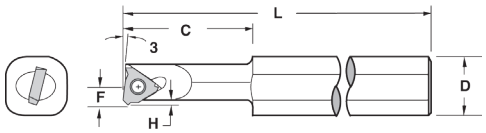
THREADING - 55°/60° V
BFR3





Description	EDP Code	TPI	M	A	Uncoated C22	TiN Coated GP22	TiN Coated GP4	AlTiN Coated AC22	AlTiN Coated AC4
BFR3-55V	9BFR3V55	20-48	.028 (0.71)	55°			●		
BFR3-60V	9BFR3V60	27-48	.031 (0.79)	60°		●	●		

BFR3
Inch



Description	EDP Code	Stk	Material	Insert	Coolant Port	L	D	C	H	F	Min. Bore	Screw*
BFR-312S	9BF312S	●	Steel	BFR3		5.000	.500	.500	.050	.150	.312	TS25
BFR-312SC	9BF312SC	●	Steel	BFR3	✓	5.000	.500	.500	.050	.150	.312	TS25
BFR-312HM	9BF312HM	●	Heavy Metal	BFR3		5.000	.500	1.250	.050	.150	.312	TS25
BFR-312HMC	9BF312HMC	●	Heavy Metal	BFR3	✓	5.000	.500	1.250	.050	.150	.312	TS25

***TS25 screw uses K2 wrench**

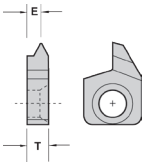
BFRM3
Metric

Description	EDP Code	Material	Insert	Coolant Port	L	D	C	H	F	Min. Bore	Screw*
BFRM-7.9S	9BFM79S	Steel	BFR3		127.00	12.00	12.70	1.27	3.81	7.92	TS25
BFRM-7.9SC	9BFM79SC	Steel	BFR3	✔	127.00	12.00	12.70	1.27	3.81	7.92	TS25
BFRM-7.9HM	9BFM79HM	Heavy Metal	BFR3		127.00	12.00	31.75	1.27	3.81	7.92	TS25
BFRM-7.9HMC	9BFM79HMC	Heavy Metal	BFR3	✔	127.00	12.00	31.75	1.27	3.81	7.92	TS25

*TS25 screw uses K2 wrench

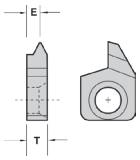
MINIMUM BORE .312 - .440 (7.92 - 11.17)

THREADING - NPT
BNVR/L



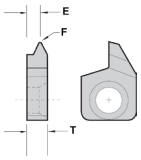
Description	EDP Code	TPI	E	T	Uncoated C22	TiN Coated GP22	TiN Coated GP4	AlTiN Coated AC22	AlTiN Coated AC4
BNVR-14NPT	9BNP14R	14	.040 (1.02)	.137 (3.48)		●	●		
BNVL-14NPT	9BNP14L	14	.040 (1.02)	.137 (3.48)		●	●		
BNVR-18NPT	9BNP18R	18	.030 (0.76)	.137 (3.48)		●	●		
BNVL-18NPT	9BNP18L	18	.030 (0.76)	.137 (3.48)		●	●		
BNVR-27NPT	9BNP27R	27	.030 (0.76)	.137 (3.48)		●	●		
BNVL-27NPT	9BNP27L	27	.030 (0.76)	.137 (3.48)		●	●		

THREADING - UN
BNVR/L



Description	EDP Code	TPI	E	T	C22	GP22	GP4	AC22	AC4
BNVR-12UN	9BNV12R	12	.040 (1.02)	.137 (3.48)		●	●		
BNVL-12UN	9BNV12L	12	.040 (1.02)	.137 (3.48)		●	●		
BNVR-16UN	9BNV16R	16	.031 (0.79)	.137 (3.48)		●	●		
BNVL-16UN	9BNV16L	16	.031 (0.79)	.137 (3.48)		●	●		
BNVR-18UN	9BNV18R	18	.031 (0.79)	.137 (3.48)		●	●		
BNVL-18UN	9BNV18L	18	.031 (0.79)	.137 (3.48)		●	●		
BNVR-20UN	9BNV20R	20	.030 (0.76)	.137 (3.48)		●	●		
BNVL-20UN	9BNV20L	20	.030 (0.76)	.137 (3.48)		●	●		
BNVR-24UN	9BNV24R	24	.030 (0.76)	.137 (3.48)		●	●		
BNVL-24UN	9BNV24L	24	.030 (0.76)	.137 (3.48)		●	●		
BNVR-28UN	9BNV28R	28	.030 (0.76)	.137 (3.48)		●	●		
BNVL-28UN	9BNV28L	28	.030 (0.76)	.137 (3.48)		●	●		
BNVR-32UN	9BNV32R	32	.030 (0.76)	.137 (3.48)		●	●		
BNVL-32UN	9BNV32L	32	.030 (0.76)	.137 (3.48)		●	●		

THREADING - 60° V
BNVR/L



Description	EDP Code	TPI	F	E	T	GFI	C22	GP22	GP4	AC22	AC4
BNVR-60	9BNV60R	18-40	.003F	.095 (2.41)	.137 (3.48)	●	●	●	●		●
BNVL-60	9BNV60L	18-40	.003F	.095 (2.41)	.137 (3.48)			●	●		

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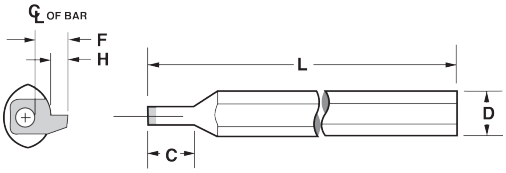
Please see current price list for up to date grade offering.

● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

Cast Iron				●		
Non-Ferrous			●			
Stainless/High Temp			●			
Steel			●			

BB
Inch



Description	EDP Code	Material	Insert	L	D	C	F	H	Min. Bore	Screw*
BB-312S	9B312S	Steel	BN_R/L	5.000	.500	.750	.156	.070	.312	TS25
BB-344S	9B344S	Steel	BN_R/L	5.000	.500	.750	.152	.070	.344	TS25
BB-375S	9B375S	Steel	BN_R/L	5.000	.500	.750	.1625	.070	.375	TS25
BB-440S	9B440S	Steel	BN_R/L	5.000	.500	1.000	.190	.070	.440	TS25
BB-312HM	9B312HM	Heavy Metal	BN_R/L	5.000	.500	1.000	.156	.070	.312	TS25
BB-344HM	9B344HM	Heavy Metal	BN_R/L	5.000	.500	1.000	.152	.070	.344	TS25
BB-375HM	9B375HM	Heavy Metal	BN_R/L	5.000	.500	1.250	.1625	.070	.375	TS25
BB-440HM	9B440HM	Heavy Metal	BN_R/L	5.000	.500	1.500	.190	.070	.440	TS25
BB-312C	9B312C	Carbide	BN_R/L	5.000	.500	1.250	.156	.070	.312	TS25
BB-440C	9B440C	Carbide	BN_R/L	5.000	.500	1.500	.190	.070	.440	TS25

***TS25 screw uses K2 wrench**

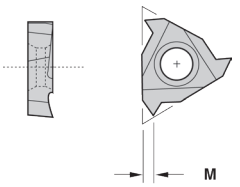
BBM
Metric

Description	EDP Code	Material	Insert	L	D	C	F	H	Min. Bore	Screw*
BBM-7.9S	9BM79S	Steel	BN_R/L	127.00	12.00	19.05	3.96	1.78	7.92	TS25
BBM-8.7S	9BM87S	Steel	BN_R/L	127.00	12.00	19.05	3.86	1.78	8.74	TS25
BBM-9.5S	9BM95S	Steel	BN_R/L	127.00	12.00	19.05	4.13	1.78	9.53	TS25
BBM-11.1S	9BM111S	Steel	BN_R/L	127.00	12.00	25.40	4.83	1.78	11.18	TS25
BBM-7.9HM	9BM79HM	Heavy Metal	BN_R/L	127.00	12.00	25.40	3.96	1.78	7.92	TS25
BBM-8.7HM	9BM87HM	Heavy Metal	BN_R/L	127.00	12.00	25.40	3.86	1.78	8.74	TS25
BBM-9.5HM	9BM95HM	Heavy Metal	BN_R/L	127.00	12.00	31.75	4.13	1.78	9.53	TS25
BBM-11.1HM	9BM111HM	Heavy Metal	BN_R/L	127.00	12.00	38.10	4.83	1.78	11.18	TS25
BBM-7.9C	9BM79C	Carbide	BN_R/L	127.00	12.00	31.75	3.96	1.78	7.92	TS25
BBM-11.1C	9BM111C	Carbide	BN_R/L	127.00	12.00	38.10	4.83	1.78	11.18	TS25

***TS25 screw uses K2 wrench**

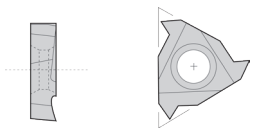
MINIMUM BORE .400 (10.16)

THREADING - NPT
BFR4



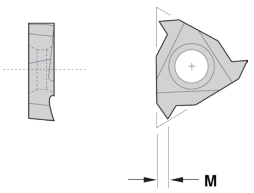
Description	EDP Code	TPI	M	Uncoated C22	TiN Coated GP22	TiN Coated GP4	AlTiN Coated AC22	AlTiN Coated AC4
BFR4-18NPT	9BFR4V18	18	.033 (0.84)		●			
BFR4-27NPT	9BFR4V27	27	.026 (0.66)		●			

THREADING - ISO
BFR4



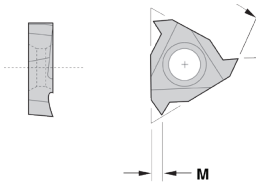
Description	EDP Code	Pitch	Uncoated C22	TiN Coated GP22	TiN Coated GP4	AlTiN Coated AC22	AlTiN Coated AC4
BFR4-2.0 ISO	9BFR4I20	2.00		●			
BFR4-1.75 ISO	9BFR4I175	1.75		●			
BFR4-1.50 ISO	9BFR4I15	1.50		●			
BFR4-1.25 ISO	9BFR4I125	1.25		●			
BFR4-1.0 ISO	9BFR4I10	1.00		●			
BFR4-0.75 ISO	9BFR4I075	0.75		●			

THREADING - UN
BFR4



Description	EDP Code	TPI	M	Uncoated C22	TiN Coated GP22	TiN Coated GP4	AlTiN Coated AC22	AlTiN Coated AC4
BFR4-12UN	9BFR4U12	12	.043 (1.09)		●			
BFR4-14UN	9BFR4U14	14	.039 (0.99)		●			
BFR4-16UN	9BFR4U16	16	.034 (0.86)		●			
BFR4-20UN	9BFR4U20	20	.026 (0.66)		●			
BFR4-24UN	9BFR4U24	24	.026 (0.66)		●			
BFR4-28UN	9BFR4U28	28	.021 (0.53)		●			
BFR4-32UN	9BFR4U32	32	.019 (0.48)		●			

THREADING - 55°/60° V
BFR4



Description	EDP Code	TPI	M	A	Uncoated C22	TiN Coated GP22	TiN Coated GP4	AlTiN Coated AC22	AlTiN Coated AC4
BFR4-55V	9BFR4V55	14-48	.043 (1.09)	55°		●	●		
BFR4-60V	9BFR4V60	14-48	.043 (1.09)	60°		●	●		

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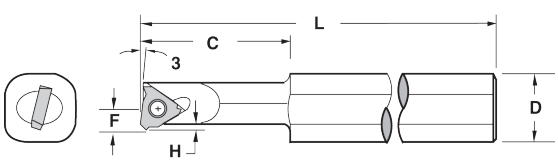
● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

Cast Iron		●	▲				
Non-Ferrous		●	▲				
Stainless/High Temp		●	▲				
Steel		●	▲				

BFR4
Inch



Description	EDP Code	Material	Insert	Coolant Port	L	D	C	H	F**	Min. Bore	Screw*
BFR-400S	9BF400S	Steel	BFR4		5.000	.500	1.000	.050	.237	.400	TS25
BFR-400SC	9BF400SC	Steel	BFR4	✓	5.000	.500	1.000	.050	.237	.400	TS25
BFR-400HM	9BF400HM	Heavy Metal	BFR4		5.000	.500	1.000	.050	.237	.400	TS25
BFR-400HMC	9BF400HMC	Heavy Metal	BFR4	✓	5.000	.500	1.000	.050	.237	.400	TS25

*TS25 screw uses K2 wrench
** Dimension over sharp point

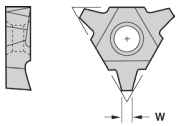
BFRM4
Metric

Description	EDP Code	Material	Insert	Coolant Port	L	D	C	H	F**	Min. Bore	Screw*
BFRM-10.1S	9BFM101S	Steel	BFR4		127.00	12.00	25.40	1.27	6.02	10.16	TS25
BFRM-10.1SC	9BFM101SC	Steel	BFR4	✔	127.00	12.00	25.40	1.27	6.02	10.16	TS25
BFRM-10.1HM	9BFM101HM	Heavy Metal	BFR4		127.00	12.00	25.40	1.27	6.02	10.16	TS25
BFRM-10.1HMC	9BFM101HMC	Heavy Metal	BFR4	✔	127.00	12.00	25.40	1.27	6.02	10.16	TS25

*TS25 screw uses K2 wrench
** Dimension over sharp point

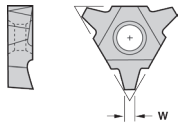
MINIMUM BORE .450 (11.43)

THREADING - ACME
BHR4



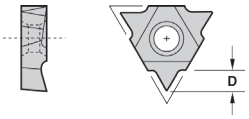
Description	EDP Code	TPI	W	Uncoated C22	Uncoated GP22	TiN Coated GP4	AlTiN Coated AC22	AlTiN Coated AC4
BHR4-8ACME	9BHA080R	8	.0411 (1.04)			●		
BHR4-10ACME	9BHA100R	10	.0319 (0.81)			●		
BHR4-12ACME	9BHA120R	12	.0283 (0.72)			●		
BHR4-16ACME	9BHA160R	16	.0206 (0.52)			●		

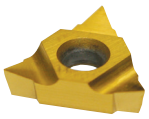
THREADING - STUB ACME
BHR4



Description	EDP Code	TPI	W	C22	GP22	GP4	AC22	AC4
BHR4-8STACME	9BHA081R	8	.0476 (1.21)			●		
BHR4-10STACME	9BHA101R	10	.0370 (0.94)			●		
BHR4-12STACME	9BHA121R	12	.0326 (0.83)			●		
BHR4-16STACME	9BHA161R	16	.0238 (0.60)			●		

THREADING - 60° V
BHR4





Description	EDP Code	TPI	D	C22	GP22	GP4	AC22	AC4
BHR4-60V	9BH460R	16-48	.075 (1.91)			●	●	

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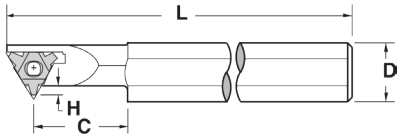
● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

	C22	GP22	GP4	AC22	AC4
Cast Iron		●	▲		
Non-Ferrous		●	▲		
Stainless/High Temp		●	▲		
Steel		●	▲		

BHR4
Inch



Description	EDP Code	Material	Insert	L	D	C	H	Min. Bore	Screw
BHR-450S	9BHR450S	Steel	BHR4	5.000	.500	1.000	.075	.450	TS25
BHR-450HM	9BHR450HM	Heavy Metal	BHR4	5.000	.500	1.000	.075	.450	TS25

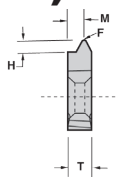
BHRM4
Metric

Description	EDP Code	Material	Insert	L	D	C	H	Min. Bore	Screw
BHRM-11.4S	9BHRM114S	Steel	BHR4	127.00	12.00	25.40	1.91	11.43	TS25
BHRM-11.4HM	9BHRM114HM	Heavy Metal	BHR4	127.00	12.00	25.40	1.91	11.43	TS25

MINIMUM BORE .500 (12.7)

THREADING - 60° V

BTVR/L



Description	EDP Code	TPI	M	H	T	F	Uncoated C22	TiN Coated GP22	TiN Coated GP4	AlTiN Coated AC22	AlTiN Coated AC4
BTVR-60	9BTV60R	8-40	.047 (1.19)	.075 (1.91)	.130 (3.30)	.004 (0.10)		●	●		
BTVL-60	9BTV60L	8-40	.047 (1.19)	.075 (1.91)	.130 (3.30)	.004 (0.10)		●	●		

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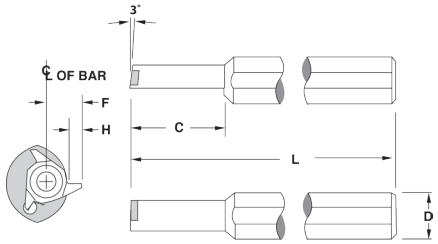
● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

Cast Iron		●	▲		
Non-Ferrous		●	▲		
Stainless/High Temp		●	▲		
Steel		●	▲		

BTR/L

Inch



Description	EDP Code	Material	Insert	L	D	C	H	F	Min. Bore	Screw*
BTR-500S	9BTR500S	Steel	BTVR	5.000	.500	1.250	.075	.225	.500	TS25
BTL-500S	9BTL500S	Steel	BTVL	5.000	.500	1.250	.075	.225	.500	TS25
BTR-500HM	9BTR500HM	Heavy Metal	BTVR	5.000	.500	1.500	.075	.225	.500	TS25
BTL-500HM	9BTL500HM	Heavy Metal	BTVL	5.000	.500	1.500	.075	.225	.500	TS25

*TS25 screw uses K2 wrench

BTRM/LM

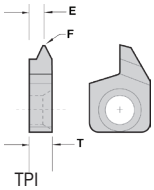
Metric

Description	EDP Code	Material	Insert	L	D	C	H	F	Min. Bore	Screw*
BTRM-12.7S	9BTRM127S	Steel	BTVR	127.00	12.00	31.75	1.91	5.72	12.70	TS25
BTLM-12.7S	9BTLM127S	Steel	BTVL	127.00	12.00	31.75	1.91	5.72	12.70	TS25
BTRM-12.7HM	9BTRM127HM	Heavy Metal	BTVR	127.00	12.00	38.10	1.91	5.72	12.70	TS25
BTLM-12.7HM	9BTLM127HM	Heavy Metal	BTVL	127.00	12.00	38.10	1.91	5.72	12.70	TS25

*TS25 screw uses K2 wrench

MINIMUM BORE .516 (13.10)

CIRCULAR INTERPOLATING THREADMILLING
BNVR



Description	EDP Code	TPI	F	E	T	Uncoated C22	TiN Coated GP22	TiN Coated GP4	AlTiN Coated AC22	AlTiN Coated AC4
BNVR-60	9BNV60R	18-40	.003F (0.08F)	.095 (2.41)	.137 (3.48)	●	●	●		●
BNVL-60	9BNV60L	18-40	.003F (0.08F)	.095 (2.41)	.137 (3.48)		●	●		

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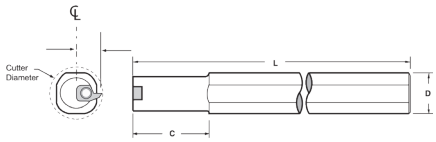
● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

Cast Iron			●		
Non-Ferrous		●			
Stainless/High Temp		●			
Steel		●			

CIRCULAR INTERPOLATING THREADMILLING & MILLGROOVING
BBC
Inch



Description	EDP Code	Material	Insert	L	D	C	Min. Dia.	Cutter Dia.	Screw*
BBC-516S	9BC516S	Steel	BN_R/L	5.000	.500	1.250	.800	.516	TS25
BBC-516HM	9BC516HM	Heavy Metal	BN_R/L	5.000	.500	1.500	.800	.516	TS25

*TS25 screw uses K2 wrench

BBCM
Metric

Description	EDP Code	Material	Insert	L	D	C	Min. Dia.	Cutter Dia.	Screw*
BBCM-13.1S	9BCM131S	Steel	BN_R/L	127.00	12.00	31.75	20.32	13.11	TS25
BBCM-13.1HM	9BCM131HM	Heavy Metal	BN_R/L	127.00	12.00	38.10	20.32	13.11	TS25

*TS25 screw uses K2 wrench

Bantam Series Kits

SAVE! Buy in Kits

THREADING KITS

V-THREADING
KIT #1
Kit Contents

1	BFR-312S
10	BFR3-60V GP22
1	T8 WRENCH
1	TS25 SCREW

18NPT-THREADING
KIT #2
Kit Contents

1	BFR-312S
10	BFR3-18NPT GP22
1	T8 WRENCH
1	TS25 SCREW

27NPT-THREADING
KIT #3
Kit Contents

1	BFR-312S
10	BFR3-27NPT GP22
1	T8 WRENCH
1	TS25 SCREW

THREADING KITS

V-THREADING
KIT #1M
Kit Contents

1	BFRM-7.9S
10	BFR3-60V GP22
1	T8 WRENCH
1	TS25 SCREW

18NPT-THREADING
KIT #2M
Kit Contents

1	BFRM-7.9S
10	BFR3-18NPT GP22
1	T8 WRENCH
1	TS25 SCREW

27NPT-THREADING
KIT #3M
Kit Contents

1	BFRM-7.9S
10	BFR3-27NPT GP22
1	T8 WRENCH
1	TS25 SCREW

Technical Information (INCH)

SURFACE FOOTAGE PER MINUTE (SFPM)

	Tool-Flo grade	uncoated		TiN coated		AlTiN coated	
		GFI	C22	GP4	GP22	AC4	AC22
WORKPIECE MATERIAL	Alloy Steel 4000 Series	60-120			100-250	100-180	200-500
	Aluminum		80-200		200-400		300-600
	Carbon Steel		80-150		80-200	100-210	200-500
	Ductile Iron	60-120			100-250		200-500
	Non Metals	60-120	80-150	60-150	200-400		300-600
	Stainless Steel 300 Series	60-120	80-150	60-150	100-250	80-180	150-350
	Stainless Steel 400 Series	60-120		60-150	100-300	80-180	200-500

FEED RATE

	Application	THREADING	GROOVING	BORING
WORKPIECE MATERIAL	Alloy Steel 4000 Series	Set by pitch (DOC per pass= .002-.004)	IPR=.002-.004	.002-.004
	Aluminum Non-Metals	Set by pitch (DOC per pass= .004-.006)	IPR=.004-.006	.004-.006
	Carbon Steel	Set by pitch (DOC per pass= .002-.004)	IPR=.002-.004	.002-.004
	300Stainless Steel High Temp Alloys	Set by pitch (DOC per pass= .002-.004)	IPR=.002-.004	.002-.004
	Stainless Steel 400 Series	Set by pitch (DOC per pass= .002-.004)	IPR=.002-.004	.002-.004

CUTTING DATA

TOOL-FLO MFG, on all threading and grooving bars, sets the cutting edge of inserts above centerline. This decreases the deflection reducing the load on the insert. The result is a better finish with less chatter. We recommend following the same procedure for boring operations.

*When using the BB-312S/HM bar with a grooving insert .062 wide or greater, reduce the recommended IPR by 50%.

GRADE CROSSOVER CHART

TOOL-FLO	CIRCLE	EVEREDE
C22	C2,C3,C25	CS2,CM2
GFI	C50	CS-4, CS-6, CS-7
GP22	CG5/CM-10	CVM-2, CV-7
GP4	C-4	CT-7
AC22	CG6	CA2
AC4	C70	CC-7

Technical Information (METRIC)

SURFACE METERS PER MINUTE (SM/M)

		uncoated		TiN coated		AlTiN coated	
	Tool-Flo grade	GFI	C22	GP4	GP22	AC4	AC22
WORKPIECE MATERIAL	Alloy Steel 4000 Series	18.30 - 36.60			30.40 - 76.20	30.50 - 54.80	60.00 - 152.40
	Aluminum		24.40 - 60.00		60.00 - 121.92		91.40 - 182.90
	Carbon Steel		24.40 - 45.70		24.40 - 60.96	30.50 - 64.00	60.00 - 152.40
	Ductile Iron	18.30 - 36.60			30.50 - 76.20		60.00 - 152.40
	Non Metals	18.30 - 36.60	24.40 - 45.70	18.30 - 45.70	60.00 - 121.92		91.40 - 182.90
	Stainless Steel 300 Series	18.30 - 36.60	24.40 - 45.70	18.30 - 45.70	30.50 - 76.20	24.40 - 54.90	45.70 - 106.70
	Stainless Steel 400 Series	18.30 - 36.60		18.30 - 45.70	30.50 - 91.40	24.40 - 54.90	60.00 - 152.40

FEED RATE (MM/REV)

	Application	THREADING	GROOVING	BORING
WORKPIECE MATERIAL	Alloy Steel 4000 Series	Set by pitch (DOC per pass= 0.051-0.102)	MM/R=0.051-0.102	0.051-0.102
	Aluminum Non-Metals	Set by pitch (DOC per pass= 0.102-0.152)	MM/R=0.102-0.152	0.102-0.152
	Carbon Steel	Set by pitch (DOC per pass= 0.051-.102)	MM/R=0.051-0.102	0.051-0.102
	300Stainless Steel High Temp Alloys	Set by pitch (DOC per pass= 0.051-.102)	MM/R=0.051-0.102	0.051-0.102
	Stainless Steel 400 Series	Set by pitch (DOC per pass= 0.051-0.102)	MM/R=0.051-0.102	0.051-0.102

CUTTING DATA

TOOL-FLO MFG, on all threading and grooving bars, sets the cutting edge of inserts above centerline. This decreases the deflection reducing the load on the insert. The result is a better finish with less chatter. We recommend following the same procedure for boring operations.

*When using the BB-312S/HM bar with a grooving insert .062 wide or greater, reduce the recommended MM/REV by 50%.

GRADE CROSSOVER CHART

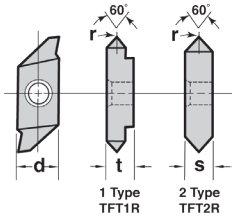
TOOL-FLO	CIRCLE	EVEREDE
C22	C2,C3,C25	CS2,CM2
GFI	C50	CS-4, CS-6, CS-7
GP22	CG5/CM-10	CVM-2, CV-7
GP4	C-4	CT-7
AC22	CG6	CA2
AC4	C70	CC-7

SWISS TOOLING

THREADING

TFT_R

Design for Swiss machines



Description	EDP Code	R/L	Min	Max	d	s	r	C3	GP3S
TFT1R6000F	TFT1R6000F	RH	0.02 (0.50)	0.04 (1.00)	0.315 (8.000)	0.156 (3.97)	0.001 (0.03)	●	●
TFT2R6000F	TFT2R6000F	RH	0.02 (0.50)	0.04 (1.00)	0.315 (8.000)	0.156 (3.97)	0.001 (0.03)	●	●
TFT3R6000F	TFT3R6000F	RH	0.02 (0.50)	0.04 (1.00)	0.315 (8.000)	0.156 (3.97)	0.001 (0.03)		●

In an effort to improve our stock standard grade offering, there are periodic changes.
Please see current price list for up to date grade offering.

● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

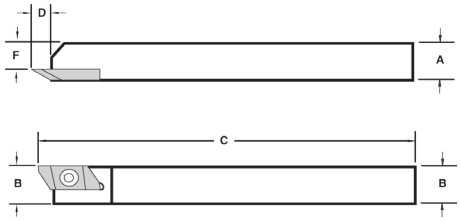
Cast Iron		●
Non-Ferrous	●	
Stainless/High Temp	●	
Steel	●	

EXTERNAL HOLDER

THREADING, GROOVING

TFHBR/L

Design for Swiss machines



RH SHOWN

RH Holder uses RH Inserts

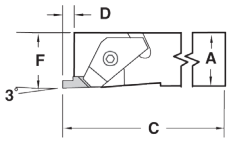
Description	EDP Code	Insert	A	B	C	D	F	Insert Screw
TFHBR1010K8-C	TFHBR1010K8	RH	0.393 (10.0)	0.393 (10.0)	4.921 (125.0)	0.263 (6.70)	0.224 (5.7)	CSTB-4SD
TFHBL1010K8-C	TFHBL1010K8	LH	0.393 (10.0)	0.393 (10.0)	4.921 (125.0)	0.263 (6.70)	0.224 (5.7)	CSTB-4SD
TFHBR1212K8-C	TFHBR1212K8	RH	0.472 (12.0)	0.472 (12.0)	4.921 (125.0)	0.263 (6.70)	0.303 (7.0)	CSTB-4SD
TFHBL1212K8-C	TFHBL1212K8	LH	0.472 (12.0)	0.472 (12.0)	4.921 (125.0)	0.263 (6.70)	0.303 (7.0)	CSTB-4SD
TFHBR1616K8	TFHBR1616K8	RH	0.629 (16.0)	0.629 (16.0)	4.921 (125.0)	0.251 (6.40)	0.461 (11.7)	CSTB-4SD
TFHBL1616K8	TFHBL1616K8	LH	0.629 (16.0)	0.629 (16.0)	4.921 (125.0)	0.251 (6.40)	0.461 (11.7)	CSTB-4SD
TFHBR2020K8	TFHBR2020K8	RH	0.787 (20.0)	0.787 (20.0)	4.921 (125.0)	0.251 (6.40)	0.618 (15.7)	CSTB-4SD
TFHBL2020K8	TFHBL2020K8	LH	0.787 (20.0)	0.787 (20.0)	4.921 (125.0)	0.251 (6.40)	0.618 (15.7)	CSTB-4SD
TFHBL2525K8	TFHBL2525K8	RH	0.984 (25.0)	0.984 (25.0)	4.921 (125.0)	0.251 (6.40)	0.815 (20.7)	CSTB-4SD

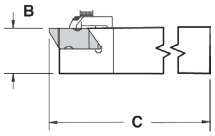
EXTERNAL HOLDER

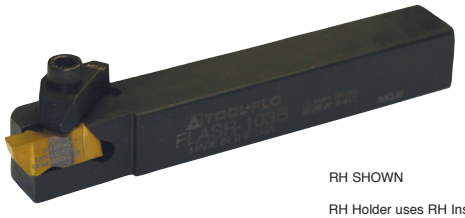
THREADING, GROOVING

FLASR/L

Design for Swiss machines







RH SHOWN

RH Holder uses RH Inserts

SEE FLO-LOCK SECTION FOR COMPLETE INSERT OFFERING

Coolant fed clamps available (See TF-CP clamps on page 106)

Description	EDP Code	Insert	A	B	C	F	D	Clamp	Clamp Screw
FLASR-062D	92900608D	FL_-2R	3/8	3/8	6	.375	.138	TF-182	S-310
FLASL-062D	92650608D	FL_-2L	3/8	3/8	6	.375	.138	TF-183	S-310
FLASR-082D	92900808D	FL_-2R	1/2	1/2	6	.500	.138	TF-182	S-310
FLASL-082D	92650808D	FL_-2L	1/2	1/2	6	.500	.138	TF-183	S-310
FLASR-102B	92901008B	FL_-2R	5/8	5/8	4-1/2	.625	.138	TF-184	S-412
FLASR-083D	92900816D	FL_-3R	1/2	1/2	6	.500	.210	TF-184	S-412
FLASR-103B	92901016B	FL_-3R	5/8	5/8	4-1/2	.625	.210	TF-184	S-412
FLASL-103B	92651016B	FL_-3L	5/8	5/8	4-1/2	.625	.210	TF-185	S-412

Description	EDP Code	Insert	A	B	C	D	F	Clamp	Clamp Screw
FLASR-1010M2	92711008	FL_-2R	10,0	10,0	150,0	3,51	10,0	TF-182	S-310
FLASL-1010M2	92661008	FL_-2L	10,0	10,0	150,0	3,51	10,0	TF-183	S-310
FLASR-1212M2	92711208	FL_-2R	12,0	12,0	150,0	3,51	12,0	TF-182	S-310
FLASL-1212M2	92661208	FL_-2L	12,0	12,0	150,0	3,51	12,0	TF-183	S-310
FLASR-1616M2	92711608	FL_-2R	16,0	16,0	125,0	3,51	16,0	TF-184	S-412
FLASR-1616M3	92711616	FL_-3R	16,0	16,0	125,0	5,31	16,0	TF-184	S-412
FLASL-1616M3	92661616	FL_-3L	16,0	16,0	125,0	5,31	16,0	TF-185	S-412

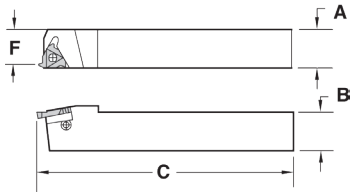
EXTERNAL HOLDER

THREADING, GROOVING

AL

(Inch)

Design for Swiss machines



RH SHOWN

RH Holder uses RH Inserts

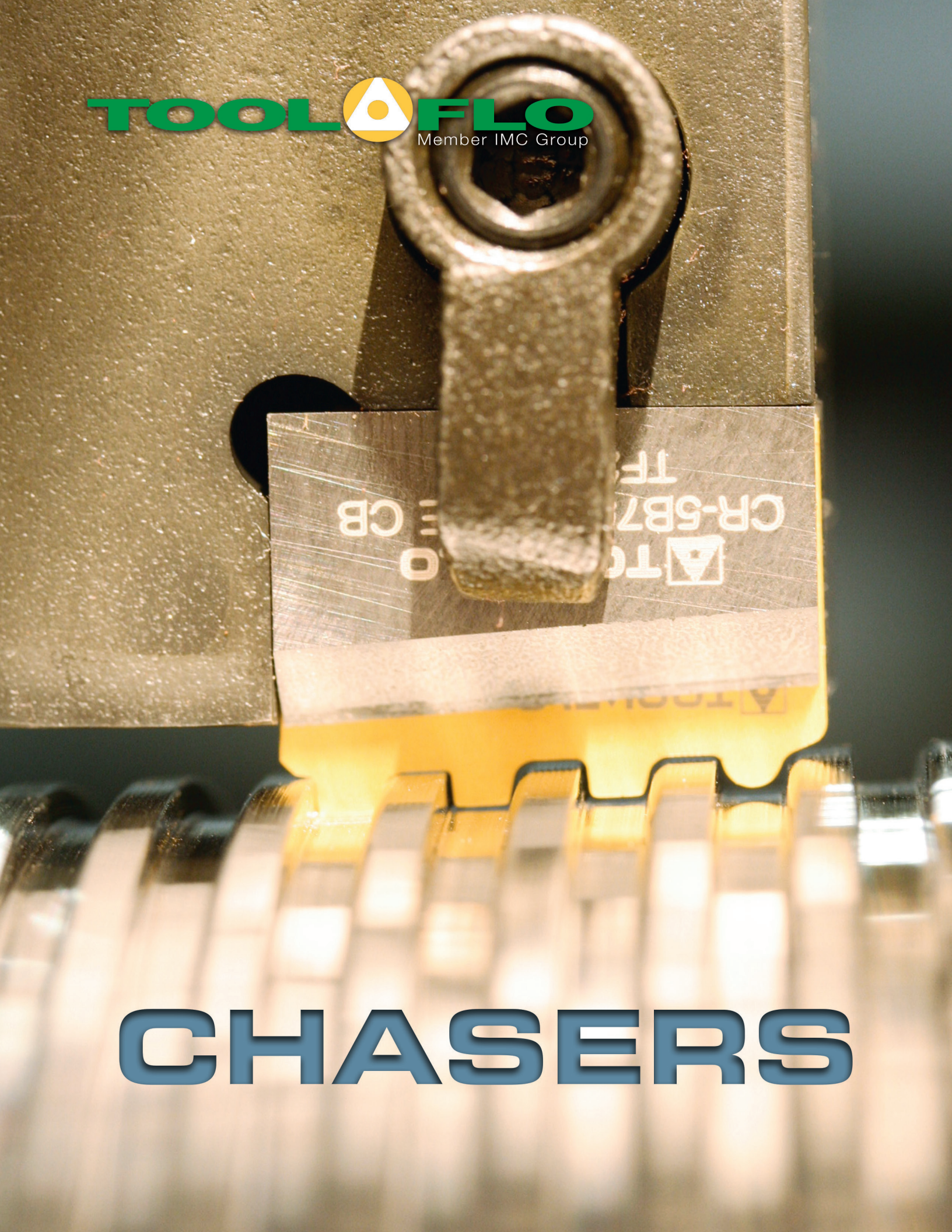
SEE LAYDOWN SECTION FOR COMPLETE INSERT OFFERING

Description	EDP Code	Insert	A	B	C	E	F	Insert Screw	Seat Screw	Wrench	Seat
AL0500-3R (SER 0500 F16)	916050361	16ER	1/2	1/2	3.27	1.15	.63	SA3	SY3	K3	YE3
AL0500-3L (SEL 0500 F16)	916050362	16EL	1/2	1/2	3.27	1.15	.63	SA3	SY3	K3	YI3
AL0625-3R (SER 0625 H16)	916052361	16ER	5/8	5/8	5	1.15	.63	SA3	SY3	K3	YE3
AL075-3R (SER 0750 K16)	916056361	16ER	3/4	3/4	5	1.2	.75	SA3	SY3	K3	YE3
AL075-3L (SEL 0750 K16)	916056362	16EL	3/4	3/4	5	1.2	.75	SA3	SY3	K3	YI3
AL100-3R (SER 1000 M16)	916064361	16ER	1	1	6	1.2	1.0	SA3	SY3	K3	YE3
AL100-3L (SEL 1000 M16)	916064362	16EL	1	1	6	1.2	1.0	SA3	SY3	K3	YI3
AL100-4R (SER 1000 M22)	916064401	22ER	1	1	6	1.42	1.0	SA4	SY4	K4	YE4
AL100-4L (SEL 1000 M22)	916064402	22EL	1	1	6	1.42	1.0	SA4	SY4	K4	YI4
AL125-4R (SER 1250 P22)	916068401	22ER	1-1/4	1-1/4	7	1.42	1.250	SA4	SY4	K4	YE4
AL125-5R (SER 1250 P27)	916068441	27ER	1-1/4	1-1/4	7	1.57	1.250	SA5	SY5	K5	YE5
AL125-5L (SEL 1250 P27)	916068442	27EL	1-1/4	1-1/4	7	1.57	1.250	SA5	SY5	K5	YI5

(Metric)

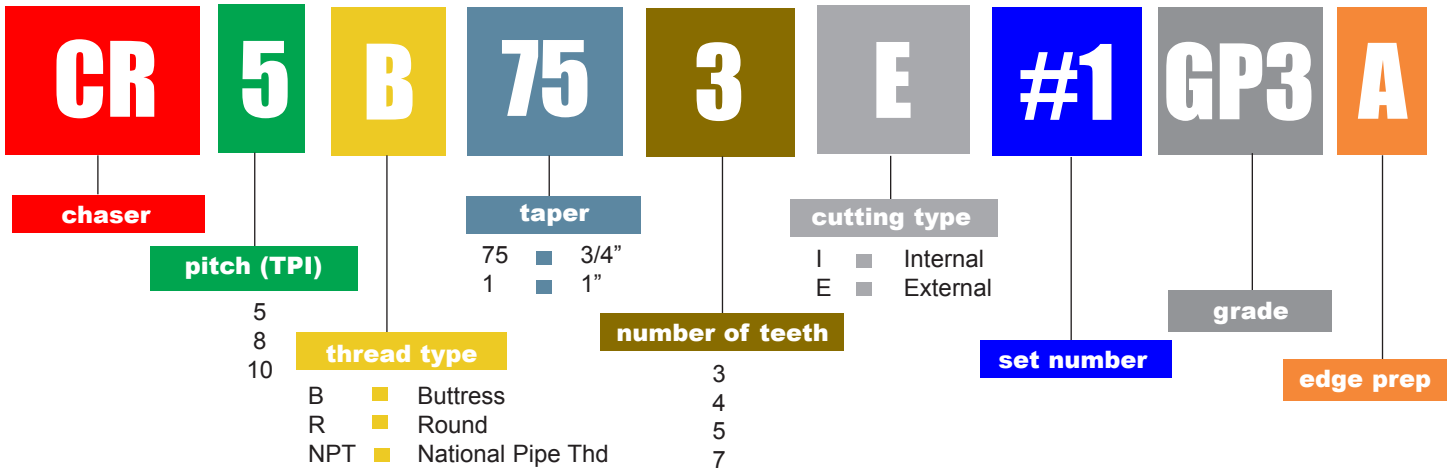
Description	EDP Code	Insert	A	B	C	F	Insert Screw	Seat Screw	Wrench	Seat
AL1616M3R (SER 1616 H16)	916116361	16ER	16,0	16,0	100,0	16,0	SA3	SY3	K3	YE3
AL1616M3L (SEL 1616 H16)	916116362	16EL	16,0	16,0	100,0	16,0	SA3	SY3	K3	YI3
AL2020M3R (SER 2020 K16)	916120361	16ER	20,0	20,0	128,6	20,0	SA3	SY3	K3	YE3
AL2020M3L (SEL 2020 K16)	916120362	16EL	20,0	20,0	128,6	20,0	SA3	SY3	K3	YI3
AL2525M3R (SER 2525 M16)	916125361	16ER	25,0	25,0	153,6	25,0	SA3	SY3	K3	YE3
AL2525M3L (SEL 3232 P16)	916125362	16EL	25,0	25,0	153,6	25,0	SA3	SY3	K3	YI3

TOOLFLO
Member IMC Group



CHASERS

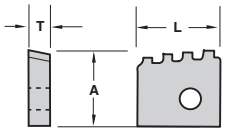
Chaser Insert Nomenclature Chart



API BUTTRESS

External

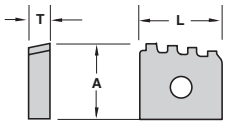
For holders see pg. 25



Description	EDP Code	TPI	TPF	L	A	T	No. of Teeth	CVD Coated G50	CVD Coated GP50	TiN Coated ZA3	AlTiN* Coated AC50
CR-5B75-3E #1 ┐ SET	M16415188	5	3/4	.670 (17.02)	.573 (14.55)	.205 (5.21)	3	●	●	●	●
CR-5B75-3E #2 ┤ SET	M16415189	5	3/4	.670 (17.02)	.582 (14.78)	.205 (5.21)	3	●	●	●	●
CR-5B75-3E #3 ┘ SET	M16426149	5	3/4	.670 (17.02)	.590 (14.99)	.205 (5.21)	3	●	●	●	●
CR-5B75-3E	M1641296	5	3/4	.670 (17.02)	.590 (14.99)	.205 (5.21)	3	●	●		
CR-5B75-4E	M16422675	5	3/4	.804 (20.42)	.625 (15.88)	.200 (5.08)	4	●	●	●	●
CR-5B75-5E	M16434802	5	3/4	.804 (20.42)	.625 (15.88)	.200 (5.08)	5	●		●	●
CR-5B1-3E	M1742052	5	1	.800 (20.32)	.640 (16.26)	.200 (5.08)	3	●			●
CR-5B1-4E	M1741130	5	1	.800 (20.32)	.640 (16.26)	.200 (5.08)	4	●	●	●	●
CR-8B75-4E	M2145353	8	3/4	.800 (20.32)	.605 (15.37)	.200 (5.08)	4	●	●		●

Internal

For bars see pg. 26

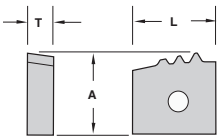


Description	EDP Code	TPI	TPF	L	A	T	No. of Teeth	G50	GP50	ZA3	AC50
CR-5B75-2I	M16828936	5	3/4	.630 (16.00)	.622 (15.80)	.204 (5.18)	2			●	●
CR-5B75-3I	M1681847	5	3/4	.630 (16.00)	.577 (14.66)	.204 (5.18)	3	●		●	●
CR-5B75-4I	M1681347	5	3/4	.800 (20.32)	.582 (14.78)	.205 (5.21)	4	●	●	●	●
CR-5B75-5I	M16815688	5	3/4	1.000 (25.40)	.590 (14.99)	.205 (5.21)	5	●		●	●
CR-5B1-3I	M1782052	5	1	.635 (16.13)	.635 (16.13)	.200 (5.08)	3	●			●
CR-5B1-4I	M1782051	5	1	.800 (20.32)	.640 (16.26)	.200 (5.08)	4	●			●
CR-8B75-4I	M2185353	8	3/4	.800 (20.32)	.590 (14.99)	.205 (5.21)	4	●	●	●	●

API ROUND

External

For holders see pg. 25

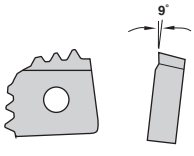


Description	EDP Code	TPI	TPF	L	A	T	No. of Teeth	G50	GP50	AC3	AC50
CR-8R-3E #1 ┐ SET	M32416731	8	3/4	.630 (16.00)	.577 (14.66)	.204 (5.18)	3	●	●		●
CR-8R-3E #2 ┤ SET	M32416732	8	3/4	.630 (16.00)	.586 (14.88)	.204 (5.18)	3	●	●		●
CR-8R-3E #3 ┘ SET	M32416733	8	3/4	.630 (16.00)	.591 (15.01)	.204 (5.18)	3	●	●		●
CR-8R-3E	M32419310	8	3/4	.630 (16.00)	.592 (15.04)	.204 (5.18)	3	●	●		●
CR-8R-4E 6°	M3241136	8	3/4	.640 (16.26)	.625 (15.88)	.200 (5.18)	4	●	●		●
CR-8R-4E 12°	M3241163	8	3/4	.635 (16.13)	.625 (15.88)	.200 (5.18)	4	●	●		●
CR-10R-3E #1 ┐ SET	M34416728	10	3/4	.628 (15.95)	.563 (14.30)	.204 (5.18)	3	●	●		●
CR-10R-3E #2 ┤ SET	M34416729	10	3/4	.628 (15.95)	.572 (14.53)	.204 (5.18)	3	●	●		●
CR-10R-3E #3 ┘ SET	M34416730	10	3/4	.628 (15.95)	.575 (14.61)	.204 (5.18)	3	●	●		●
CR-10R-3E	M3441291	10	3/4	.630 (16.00)	.625 (15.88)	.204 (5.18)	3	●	●		●

API ROUND & BUTTRESS

External

CNGA - Double Sided (2 cutting edges)



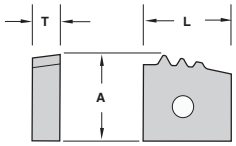
For holders see pg. 25

Description	EDP Code	TPI	TPF	No. of Teeth	CVD Coated G50	TiN Coated GP50	AlTiN Coated ZA3	AlTiN Coated AC50
CNGA-8R-3E	M32427407	8	3/4	3		●		●
CNGA-10R-3E	M34427408	10	3/4	3				●
CNGA-5B75-3E	M16427408	5	3/4	3		●	●	●

API ROUND

Internal

For bars see pg. 26

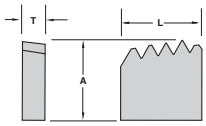


Description	EDP Code	TPI	TPF	L	A	T	No. of Teeth	G50	GP50	AC50	ZA50
CR-8R-3I	M3287464	8	3/4	.630 (16.00)	.592 (15.04)	.204 (5.18)	3	●	●	●	
CR-8R-4I	M3281136	8	3/4	.635 (16.13)	.625 (15.88)	.204 (5.18)	4	●	●	●	
CR-8R-4I	M32819437	8	3/4	.640 (16.26)	.625 (15.88)	.204 (5.18)	4	●	●	●	
CR-8R-7I	M32814828	8	3/4	1.000 (25.40)	.625 (15.88)	.204 (5.18)	7	●	●	●	
CR-8R-7I	M32817968	8	3/4	1.000 (25.40)	.625 (15.88)	.204 (5.18)	7	●	●	●	
CR-10R-3I	M3481291	10	3/4	.630 (16.00)	.625 (15.88)	.204 (5.18)	3	●	●	●	

NPT/LPT

External

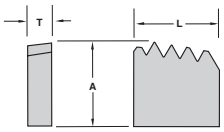
For holders see pg. 25



Description	EDP Code	TPI	TPF	L	A	T	No. of Teeth	G50	GP50	AC3	AC50
CR-8NPT-4E	M3648996	8	3/4	.630 (16.00)	.620 (15.75)	.204 (5.18)	4	●	●		●
CR-11.5NPT-4E	M3649668	11.5	3/4	.625 (15.88)	.620 (15.75)	.1875 (4.76)	4	●	●		●
CR-8P-3E WW	M50928966	8	0	.630 (16.00)	.592 (15.04)	.204 (5.18)	3				●

Internal

For bars see pg. 26

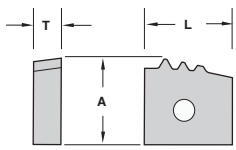


Description	EDP Code	TPI	TPF	L	A	T	No. of Teeth	G50	GP50	AC3	AC50
CR-8NPT-4I	M3689804	8	3/4	.625 (15.88)	.620 (15.75)	.204 (5.18)	4	●	●		●
CR-11.5NPT-4I	M36823951	11.5	3/4	.625 (15.88)	.620 (15.75)	.1875 (4.76)	4	●			●
CR-8NPT-7I	M36817755	8	3/4	1.000 (25.40)	.615 (15.62)	.2000 (5.08)	7		●		●
CR-8P-3I WW	M50828192	8	0	.625 (15.88)	.592 (15.04)	.204 (5.18)	3		●		●

WATERWELL

INT/EXT

For bars see pg. 25



Description	EDP Code	TPI	TPF	L	A	T	No. of Teeth	G50	GP50	AC3	AC50
CR-8P-3E WW	M50928966	8	0	.630 (16.00)	.592 (15.04)	.204 (5.18)	3				●
CR-8P-3I WW	M50828192	8	0	.625 (15.88)	.592 (15.04)	.204 (5.18)	3		●		●

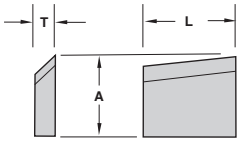
In an effort to improve our stock standard grade offering, there are periodic changes. Please see current price list for up to date grade offering.

● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

	G50	GP50	AC3	AC50
J-Series	▲	▲	●	●
K-Series	▲	▲	●	●
L-Series	▲	▲	●	●
N-Series	▲	▲	●	●
P-Series	▲	▲	●	●
Q-Series	▲	▲	●	●

CHIPBREAKERS

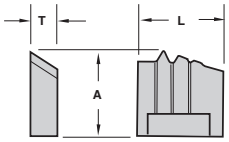
External

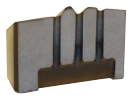


Description	EDP Code	L	A	T	Inserts
CR-5B75/5B1-4E-CB	TF2993	.800 (20.32)	.500 (12.70)	.125 (3.18)	CR-5B75-4E/CR-5B1-4E
CR-8R/10R-3E/4E-CB	TF1353E	.625 (15.88)	.460 (11.68)	.120 (3.05)	CR-8R-3E/CR-8R-4E/CR-10R-3E/CR-8NPT-4E
#3 CB without COOLANT GROOVES .170	TF26424	.618 (15.70)	.460 (11.68)	.170 (4.32)	CR-8R-3E/CR-8R-4E/CR-10R-3E/CR-8NPT-4E

External
with coolant grooves

Also available at -.010 (-0.25), -.020 (-0.50) and -.030 (-0.76) off the A dimension.

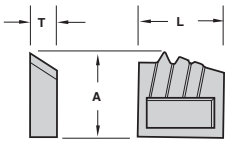


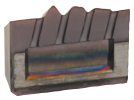


Description	EDP Code	L	A	T	Coolant Grooves	Inserts
TD4601 5B75-1-CB	TF16660	.665 (16.89)	.530 (13.46)	.170 (4.32)	✔	CR-5B75-3E #1
TD4602 5B75-2-CB	TF16661	.668 (16.97)	.543 (13.79)	.170 (4.32)	✔	CR-5B75-3E #2
TD4603 5B75-3-CB	TF16662	.665 (16.89)	.553 (14.05)	.170 (4.32)	✔	CR-5B75-3E #3
TD3931 8R-1-CB	TF16657	.628 (15.95)	.518 (13.16)	.175 (4.45)	✔	CR-8R-3E #1
TD3932 8R-2-CB	TF16658	.635 (16.13)	.526 (13.36)	.175 (4.45)	✔	CR-8R-3E #2
TD3933 8R-3-CB	TF16659	.630 (16.00)	.540 (13.72)	.175 (4.45)	✔	CR-8R-3E #3
TA2237 10R-1-CB	TF16760	.628 (15.95)	.503 (12.78)	.175 (4.45)	✔	CR-10R-3E #1
TA2238 10R-2-CB	TF16761	.628 (15.95)	.512 (13.00)	.175 (4.45)	✔	CR-10R-3E #2
TA2239 10R-3-CB	TF16762	.628 (15.95)	.515 (13.08)	.175 (4.45)	✔	CR-10R-3E #3
#3 CB W/COOLANT GROOVES .170	TF26423	.618 (15.17)	.460 (11.68)	.170 (4.32)	✔	CR-8R-3E

External
with coolant grooves and cavity

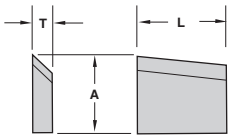
Also available at -.010 (-0.25), -.020 (-0.50) and -.030 (-0.76) off the A dimension.





Description	EDP Code	L	A	T	Coolant Grooves	Inserts
TD4601 5B75-1-CB W/CAVITY	TF30297	.665 (16.89)	.550 (13.97)	.170 (4.32)	✔	CR-5B75-3E #1
TD4602 5B75-2-CB W/CAVITY	TF30298	.668 (16.97)	.550 (13.97)	.170 (4.32)	✔	CR-5B75-3E #2
TD4603 5B75-3-CB W/CAVITY	TF30299	.665 (16.89)	.560 (14.22)	.170 (4.32)	✔	CR-5B75-3E #3
TD3931 8R-1-CB W/CAVITY	TF28130	.628 (15.95)	.518 (13.16)	.165 (4.19)	✔	CR-8R-3E #1
TD3932 8R-2-CB W/CAVITY	TF28131	.635 (16.13)	.526 (13.36)	.165 (4.19)	✔	CR-8R-3E #2
TD3933 8R-3-CB W/CAVITY	TF28132	.628 (15.95)	.520 (13.21)	.165 (4.19)	✔	CR-8R-3E #3

Internal



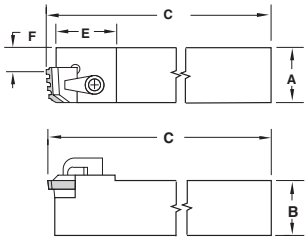
Description	EDP Code	L	A	T	Coolant Grooves	Inserts
CR-5B75/5B1-4I-CB	TF16104	.800 (20.32)	.500 (12.70)	.125 (3.18)		CR-5B75-4I/CR-5B1-4I
CR-8R/10R-3I/4I-CB	TF1353I	.630 (16.00)	.488 (12.40)	.125 (3.18)		CR-8R-3I/CR-8R-4I/CR-10R-3I/CR-8LPT-4I
CR-5B75-5I-CB	TF28765	1.000 (25.40)	.540 (13.72)	.125 (3.18)	✔	CR-5B75-5I
CR-8R-7I-CB	TF3435	1.000 (25.40)	.520 (13.21)	.125 (3.18)		CR-8R-7I
CR-8R-7I-CB	TF18096	1.010 (25.65)	.540 (13.72)	.125 (3.18)	✔	CR-8R-7I

EXTERNAL HOLDER

Threading

CLVOR

Inch



RH SHOWN

Description	EDP Code	Insert	A	B	C	E	F	Seat	Seat Screw	Clamp	Clamp Screw	Chip Breaker
CLVOR-166	92601694	3 TOOTH*	1	1	8	1.25	.475	TF1207	SF80	TC311	STC-4	TF1353#
CLVOR-206	92602060	3 TOOTH*	1-1/4	1-1/4	7	1.25	.725	TF1207	SF80	TC311	STC-4	TF1353#
CLVOR-168	92601696	4 TOOTH**	1	1	6	1.25	.800	TF8132E	SF80	TC311	STC-4	TF2993#
CLVOR-208	92602096	4 TOOTH**	1-1/4	1-1/4	7	1.25	.800	TF8132E	SF60	TC311	STC-4	TF2993#
CLVOR-248	92602496	4 TOOTH**	1-1/2	1-1/2	7	1.25	.800	TF8132E	SF60	TC311	STC-4	TF2993#

*Accepts 3 & 4 Tooth RD, NPT, and 3 Tooth Buttress **Accepts 4 Tooth Buttress Only
#Chipbreakers sold separately.

Metric

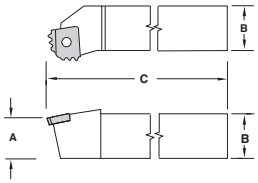
Description	EDP Code	Insert	A	B	C	E	F	Seat	Seat Screw	Clamp	Clamp Screw	Chip Breaker
CLVOR-25M6	9260M2594	3 TOOTH*	25	25	170	32	16.10	TF1207	SFM80	CLM12	XNSM-0825	TF1353#
CLVOR-32M6	9260M3294	3 TOOTH*	32	32	170	32	16.10	TF1207	SFM80	CLM12	XNSM-0825	TF1353#
CLVOR-40M6	9260M4094	3 TOOTH*	40	40	170	32	20.32	TF1207	SFM85	CLM12	XNSM-0825	TF1353#
CLVOR-25M8	9260M2596	4 TOOTH**	25	25	170	32	20.32	TF8132E	SFM80	CLM12	XNSM-0825	TF2993#
CLVOR-32M8	9260M3296	4 TOOTH**	32	32	170	32	20.32	TF8132E	SFM60	CLM12	XNSM-0825	TF2993#
CLVOR-40M8	9260M4096	4 TOOTH**	40	40	170	32	20.32	TF8132E	SFM60	CLM12	XNSM-0825	TF2993#

*Accepts 3 & 4 Tooth RD, NPT, and 3 Tooth Buttress **Accepts 4 Tooth Buttress Only
#Chipbreakers sold separately.

PCFNR

For double sided CNGA chaser style

Inch



RH SHOWN

Description	EDP Code	Insert	A	B	C	Lock Pin	Clamp	Clamp Screw
PCFNR-165	96301664	CNGA 8R/10R/5B75-3E	1	1	6	NL-44	TC250	STC-11
PCFNR-205	96302064	CNGA 8R/10R/5B75-3E	1-1/4	1-1/4	6	NL-44	TC250	STC-11

Metric

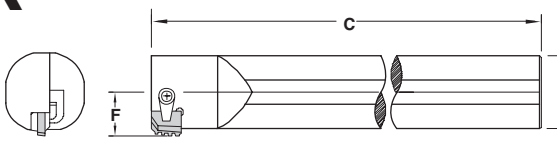
Description	EDP Code	Insert	A	B	C	Lock Pin	Clamp	Clamp Screw
PCFNR-25M5	963025M64	CNGA 8R/10R/5B75-3E	25	25	150	NL-44	TC250	STC-11
PCFNR-32M5	963032M64	CNGA 8R/10R/5B75-3E	32	32	150	NL-44	TC250	STC-11

INTERNAL BAR

Threading

SI-CLHOR

Inch



RH SHOWN

Description	EDP Code	Insert	D	F	C	Min. Bore	Seat	Seat Screw	Clamp	Clamp Screw
SI-CLHOR-206	97002094	CR-8R-3I	1-1/4	.750	14	1.500	-	-	TC311	STC-8
		CR-8R-4I	1-1/4	.750	14	1.500	-	-	TC311	STC-8
		CR-5B75-3I	1-1/4	.750	14	1.500	-	-	TC311	STC-8
SI-CLHOR-326	97003294	CR-8R-3IDC	2	1.125	14	2.250	TF1780I	SF60	TC311	STC-8
SI-CLHOR-328	97003296	CR-5B1-4I	2	1.125	14	2.250	TF8132I	SF60	TC311	STC-8
		CR-5B75-4I	2	1.125	14	2.250	TF8132I	SF60	TC311	STC-8
		CR-8B75-4I	2	1.125	14	2.250	TF8132I	SF60	TC311	STC-8
SI-CLHOR-408	97004096	CR-5B1-4I	2-1/2	1.375	14	2.750	TF8132I	SF60	TC311	STC-8
		CR-5B75-4I	2-1/2	1.375	14	2.750	TF8132I	SF60	TC311	STC-8
		CR-8B75-4I	2-1/2	1.375	14	2.750	TF8132I	SF60	TC311	STC-8
SI-CLHOR-329	97003298	CR-8R-7I	2	1.125	16	2.250	TF3218	SF48	TC311	STC-4
SI-CLHOR-409	97004098	CR-5B75-5I	2-1/2	1.375	16	2.750	TF3218	SF48	TC311	STC-4

Metric

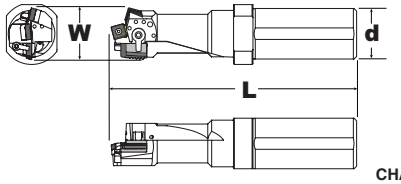
Description	EDP Code	Insert	D	F	C	Min. Bore	Seat	Seat Screw	Clamp	Clamp Screw
SI-CLHOR-32M6	970032M94	CR-8R-3I	32	19.1	350	38.1	-	-	CLM12	STCM-8
		CR-8R-4I	32	19.1	350	38.1	-	-	CLM12	STCM-8
		CR-5B75-3I	32	19.1	350	38.1	-	-	CLM12	STCM-8
SI-CLHOR-40M6	970040M94	CR-8R-3I	40	23.16	400	50.8	-	-	CLM12	STCM-8
		CR-8R-4I	40	23.16	400	50.8	-	-	CLM12	STCM-8
		CR-5B75-3I	40	23.16	400	50.8	-	-	CLM12	STCM-8
SI-CLHOR-50M6	970050M94	CR-8R-3IDC	50	28.6	350	57.2	TF1780I	SFM60	CLM12	STCM-8
SI-CLHOR-50M8	970050M96	CR-5B1-4I	50	28.6	350	57.2	TF8132I	SFM60	CLM12	STCM-8
		CR-5B75-4I	50	28.6	350	57.2	TF8132I	SFM60	CLM12	STCM-8
		CR-8B75-4I	50	28.6	350	57.2	TF8132I	SFM60	CLM12	STCM-8
SI-CLHOR-60M8	970060M96	CR-5B1-4I	60	34.9	350	69.9	TF8132I	SFM60	CLM12	STCM-8
		CR-5B75-4I	60	34.9	350	69.9	TF8132I	SFM60	CLM12	STCM-8
		CR-8B75-4I	60	34.9	350	69.9	TF8132I	SFM60	CLM12	STCM-8
SI-CLHOR-50M9	970050M98	CR-8R-7I	50	28.6	400	57.2	TF3218	SFM48	CLM12	XNSM-0825
SI-CLHOR-60M9	970060M98	CR-5B75-5I	60	34.9	400	69.9	TF3218	SFM48	CLM12	XNSM-0825

COMBINATION BAR

CR Chaser style

Threading, Facing and Turning

ALL-IN-ONE



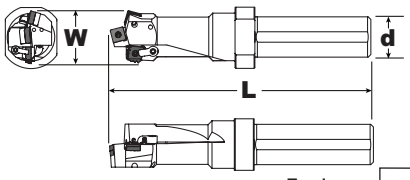
Description	EDP Code	W	d	L	Chaser	Turning Insert	Seat Screw	CHASER SPARE PARTS Seat	Side Clamp	Clamp Screw	Insert Clamp	Clamp Screw	TURNING SPARE PARTS Seat	Clamp	Clamp Screw	Lock Pin
SI-CLHORM-329	97103298	1.992	2.000	8.990	CR-8R-7I*	SNMG-43_*	SF-48	TF28528	TC-191	XNS-35	TC-311	XNS-59	ISSN-433	CLM-7	XNS-35	NL-46
					CR-5B75-5I*	SNMG-43_*	SF-48	TF28528	TC-191	XNS-35	TC-311	XNS-59	ISSN-433	CLM-7	XNS-35	NL-46
SI-CLHORM-40M9	9710M4098	1.992	40	250	CR-8R-7I*	SNMG-43_*	SF-48	TF28528	TC-191	XNS-35	TC-311	XNS-59	ISSN-433	CLM-7	XNS-35	NL-46
					CR-5B75-5I*	SNMG-43_*	SF-48	TF28528	TC-191	XNS-35	TC-311	XNS-59	ISSN-433	CLM-7	XNS-35	NL-46
SI-CLHORM-50M9	9710M5098	2.467	50	300	CR-8R-7I*	SNMG-43_*	SF-48	TF28528	TC-191	XNS-35	TC-311	XNS-59	ISSN-433	CLM-7	XNS-35	NL-46
					CR-5B75-5I*	SNMG-43_*	SF-48	TF28528	TC-191	XNS-35	TC-311	XNS-59	ISSN-433	CLM-7	XNS-35	NL-46
SI-CLHORM-60M9	9710M6098	3.146	60	350	CR-8R-7I*	SNMG-64_*	SF-48	TF28528	TC-191	XNS-35	TC-311	XNS-59	ISSN-633	CLM-12	STCM-8	NL-68
					CR-5B75-5I*	SNMG-64_*	SF-48	TF28528	TC-191	XNS-35	TC-311	XNS-59	ISSN-633	CLM-12	STCM-8	NL-68

*These items are sold separately.

CNGA Chaser style (Double sided)

Threading, Facing and Turning

ALL-IN-ONE



Description	EDP Code	W	d	L	Chaser	Turning Insert	TURNING SPARE PARTS Lock Pin	Seat	Clamp	Clamp Screw	CHASER SPARE PARTS Clamp	Clamp Screw	Lock Pin
SI-PCLHORM-329	97153298	1.977	2.000	228.6	CNGA-8R-3I*	SNMG-43_*	NL-46	ISSN-433	CLM-7	STCM-9	CLM-20	STCM-11	NL-44
					CNGA-5B75-3I*	SNMG-43_*	NL-46	ISSN-433	CLM-7	STCM-9	CLM-20	STCM-11	NL-44
SI-PCLHORM-40M9	9715M4098	1.977	40	250	CNGA-8R-3I*	SNMG-43_*	NL-46	ISSN-433	CLM-7	STCM-9	CLM-20	STCM-11	NL-44
					CNGA-5B75-3I*	SNMG-43_*	NL-46	ISSN-433	CLM-7	STCM-9	CLM-20	STCM-11	NL-44
SI-PCLHORM-50M9	9715M5098	2.467	50	300	CNGA-8R-3I*	SNMG-43_*	NL-46	ISSN-433	CLM-7	STCM-9	CLM-20	STCM-11	NL-44
					CNGA-5B75-3I*	SNMG-43_*	NL-46	ISSN-433	CLM-7	STCM-9	CLM-20	STCM-11	NL-44
SI-PCLHORM-60M9	9715M6098	3.144	60	350	CNGA-8R-3I*	SNMG-64_*	NL-68	ISSN-633	CLM-12	STCM-8	CLM-20	STCM-11	NL-44
					CNGA-5B75-3I*	SNMG-64_*	NL-68	ISSN-633	CLM-12	STCM-8	CLM-20	STCM-11	NL-44

*These items are sold separately.

Technical Information - Inch

API ROUND THREADING application	*8 & 10 PITCH* surface feet/minute (SFPM)
External	500 - 800
Internal	500 - 700

API BUTTRESS THREADING application	*5 PITCH* surface feet/minute (SFPM)
External	300 - 500
Internal	500 - 700

- Number of passes is dictated by the number of teeth on the insert.
  - 3-4 tooth requires 3-5 passes
  - 7 tooth requires 1-2 passes
  - One or two addtional passes may be required for heat treated materials.

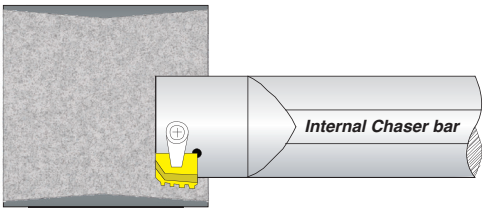
Technical Information - Metric

API ROUND THREADING application	*8 & 10 PITCH* surface meters/minute (M/MIN)
External	152.40 - 243.80
Internal	152.40 - 213.30

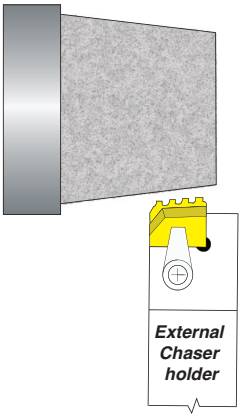
API BUTTRESS THREADING application	*5 PITCH* surface meters/minute (M/MIN)
External	91.40 - 152.40
Internal	152.40 - 213.30

- Number of passes is dictated by the number of teeth on the insert.
  - 3-4 tooth requires 3-5 passes
  - 7 tooth requires 1-2 passes
  - One or two addtional passes may be required for heat treated materials.

internal chaser application



external chaser application



Technical Information - Inch

Recommended SFPM for Chasers

EXTERNAL 8 Round Sets

Material	1st Choice AlTiN PVD Coated ZA3	2nd Choice AlTiN PVD Coated AC3	AlTiN PVD Coated AC50	CVD Coated G50	General purpose TiN PVD Coated GP50
H	500	500	500	500	800
J	500	500	500	500	800
K	500	500	500	500	800
L	500	500	500	500	600
N	500	500	500	500	600
P	500	500	500	500	600

ZA3 - All diameters
AC3 - All diameters
AC50 - All diameters
G50 - 4-1/2" - 9-5/8" Casing
GP50 - 2-3/8" - 3-1/2" Tubing

EXTERNAL 8 Round Stand Alone TF19310

Material	1st Choice AlTiN PVD Coated ZA3	2nd Choice AlTiN PVD Coated AC3	TiN PVD Coated AC50	TiN CVD Coated G50
H	500	500	500	500
J	500	500	500	500
K	500	500	500	500
L	500	500	500	500
N	500	500	500	500
P	500	500	500	500

AC50 - 3-1/2" - 7" diameters
G50 - Only over 7" diameters
4 PASSES

INTERNAL 8 Round Stand Alone TF19437 4 TOOTH

Material	1st Choice AlTiN PVD Coated ZA3	AlTiN PVD Coated AC3	AlTiN PVD Coated AC50
H	700	700	700
J	700	700	700
K	700	700	700
L	700	700	700
N	700	700	700
P	700	700	700

ZA3 - All diameters
AC3 - All diameters
AC50 - All diameters
4-5 PASSES

INTERNAL 8 Round Stand Alone TF17968 7 TOOTH

Material	1st Choice AlTiN PVD Coated ZA3	2nd Choice AlTiN PVD Coated AC3	TiN PVD Coated AC50
H	500	500	700
J	500	500	700
K	500	500	700
L	500	500	700
N	500	500	700
P	500	500	700

AC50 - All diameters
1-2 PASSES

EXTERNAL Buttress Sets

Material	TiN CVD Coated G50
H	500
J	500
K	500
L	500
N	500
P	500

G50 - All diameters

EXTERNAL Buttress Stand Alone TF22675 3/4" TAPER

Material	TiN CVD Coated G50
H	800
J	800
K	800
L	600
N	600
P	600

G50 - All diameters
5 PASSES

EXTERNAL Buttress Stand Alone TF1130 1" TAPER

Material	TiN CVD Coated G50
H	800
J	800
K	800
L	600
N	600
P	600

G50 - All diameters
5 PASSES

INTERNAL Buttress Stand Alone TF22675 3/4" TAPER

Material	TiN CVD Coated G50
H	800
J	800
K	800
L	600
N	600
P	600

G50 - All diameters
5 PASSES

Technical Information - Metric

Recommended M/MIN for Chasers

EXTERNAL 8 Round Sets

Material

Material	1st Choice AlTiN PVD ZA3	2nd Choice AlTiN PVD AC3	AlTiN PVD AC50	CVD G50	General purpose TiN PVD GP50
H	152.40	152.40	152.40	152.40	243.80
J	152.40	152.40	152.40	152.40	243.80
K	152.40	152.40	152.40	152.40	243.80
L	152.40	152.40	152.40	152.40	182.80
N	152.40	152.40	152.40	152.40	182.80
P	152.40	152.40	152.40	152.40	182.80

ZA3 - All diameters
AC3 - All diameters
AC50 - All diameters
G50 - 4-1/2" - 9-5/8" Casing
GP50 - 2-3/8" - 3-1/2" Tubing

EXTERNAL 8 Round Stand Alone TF19310

Material

Material	1st Choice AlTiN PVD ZA3	2nd Choice AlTiN PVD AC3	TiN PVD AC50	TiN CVD G50
H	152.40	152.40	152.40	152.40
J	152.40	152.40	152.40	152.40
K	152.40	152.40	152.40	152.40
L	152.40	152.40	152.40	152.40
N	152.40	152.40	152.40	152.40
P	152.40	152.40	152.40	152.40

AC50 - 3-1/2" - 7" diameters
G50 - Only over 7" diameters
4 PASSES

INTERNAL 8 Round Stand Alone TF19437 **4 TOOTH**

Material

Material	1st Choice AlTiN PVD ZA3	AlTiN PVD AC3	AlTiN PVD AC50
H	213.30	213.30	213.30
J	213.30	213.30	213.30
K	213.30	213.30	213.30
L	213.30	213.30	213.30
N	213.30	213.30	213.30
P	213.30	213.30	213.30

ZA3 - All diameters
AC3 - All diameters
AC50 - All diameters
4-5 PASSES

INTERNAL 8 Round Stand Alone TF17968 **7 TOOTH**

Material

Material	1st Choice AlTiN PVD ZA3	2nd Choice AlTiN PVD AC3	TiN PVD AC50
H	152.40	152.40	213.30
J	152.40	152.40	213.30
K	152.40	152.40	213.30
L	152.40	152.40	213.30
N	152.40	152.40	213.30
P	152.40	152.40	213.30

AC50 - All diameters
1-2 PASSES

EXTERNAL Buttress Sets

Material

Material	1st Choice AlTiN PVD ZA3	TiN CVD G50
H		152.40
J		152.40
K		152.40
L		152.40
N		152.40
P		152.40

G50 - All diameters

EXTERNAL Buttress Stand Alone TF1130 **1" TAPER**

Material

Material	1st Choice AlTiN PVD ZA3	TiN CVD G50
H		243.80
J		243.80
K		243.80
L		182.80
N		182.80
P		182.80

G50 - All diameters
5 PASSES

EXTERNAL Buttress Stand Alone TF22675 **3/4" TAPER**

Material

Material	1st Choice AlTiN PVD ZA3	TiN CVD G50
H		243.80
J		243.80
K		243.80
L		182.80
N		182.80
P		182.80

G50 - All diameters
5 PASSES

INTERNAL Buttress Stand Alone TF22675 **3/4" TAPER**

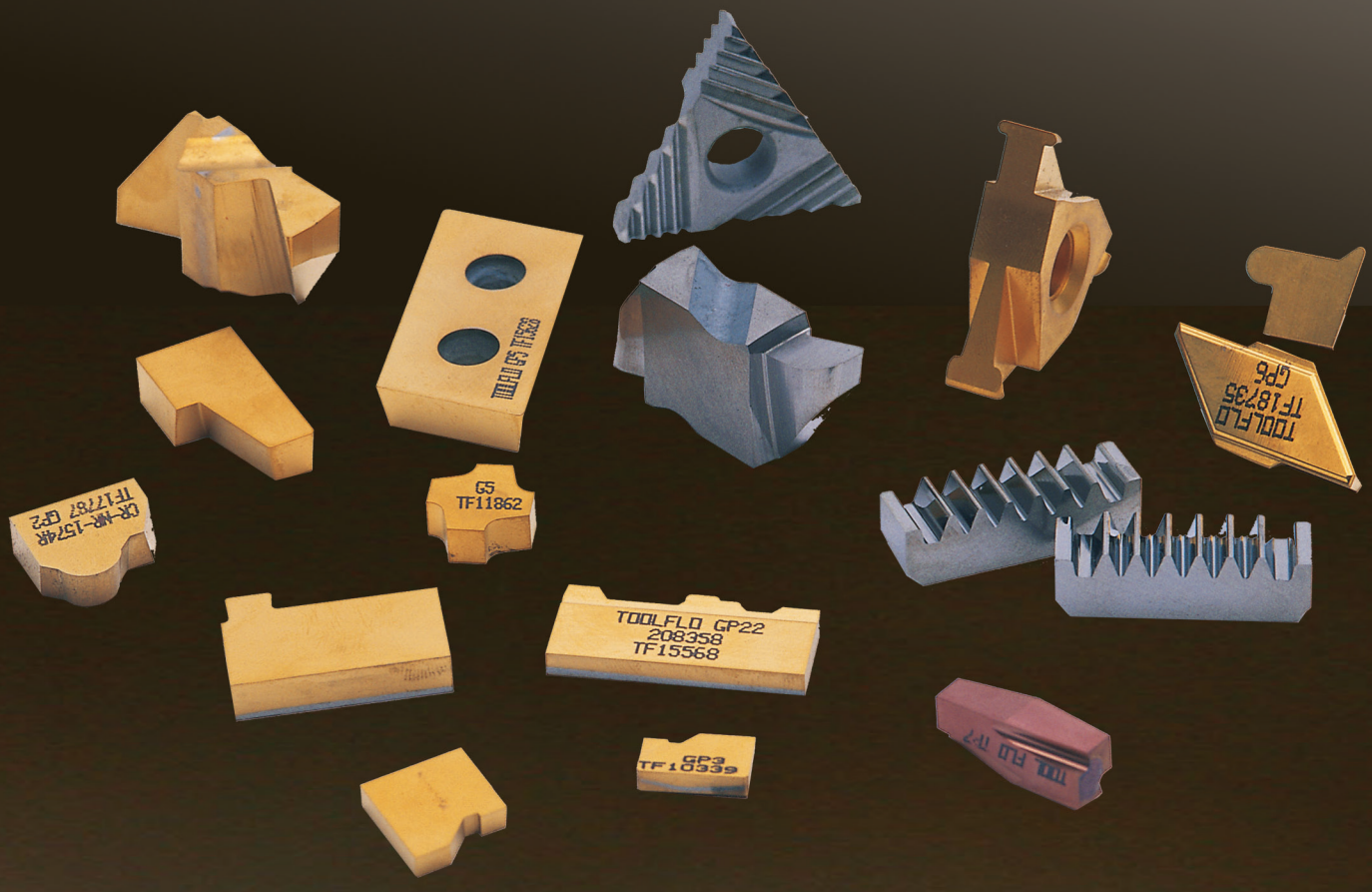
Material

Material	1st Choice AlTiN PVD ZA3	TiN CVD G50
H		243.80
J		243.80
K		243.80
L		182.80
N		182.80
P		182.80

G50 - All diameters
5 PASSES

TOOLFLO
Member IMC Group

We make any special insert or toolholder

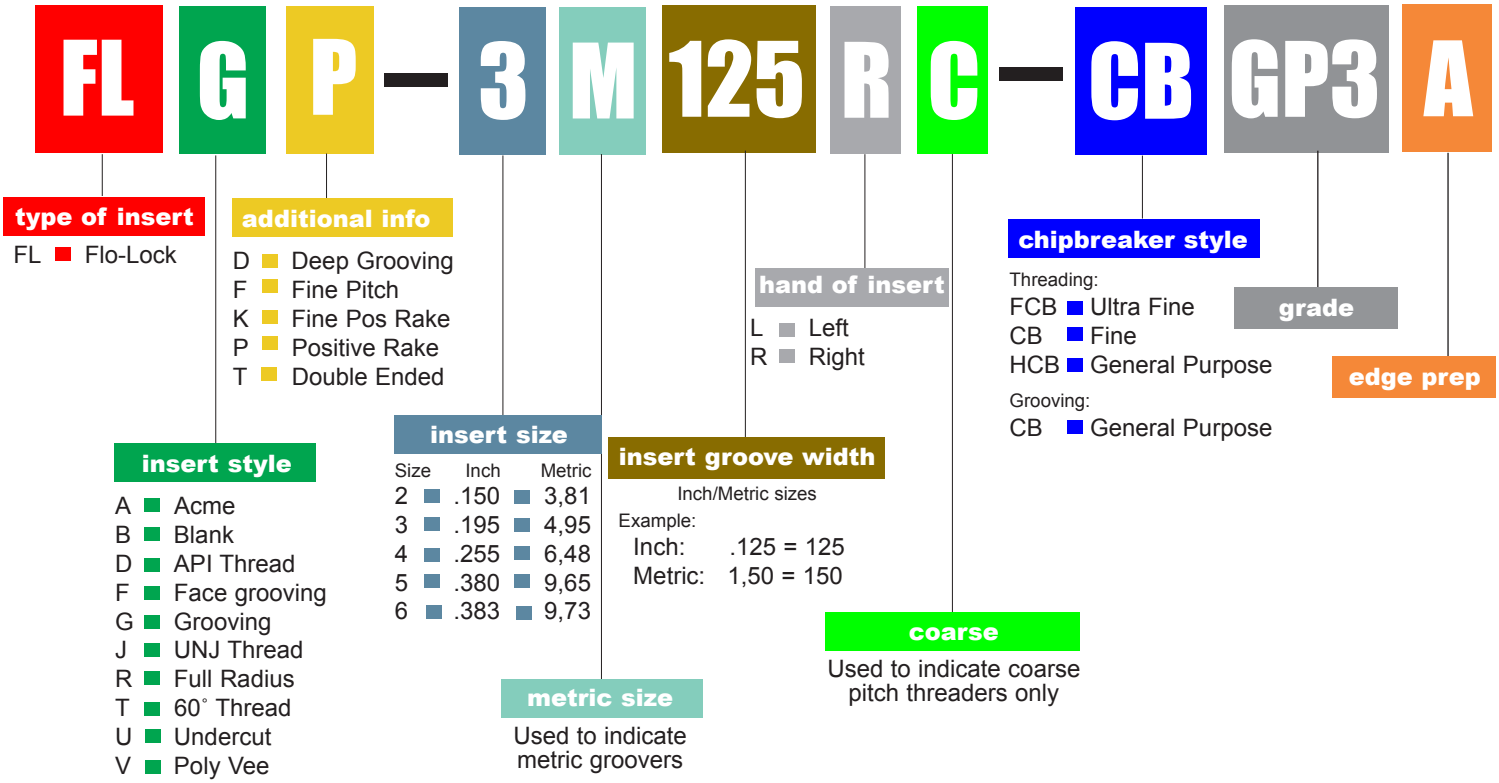


SPECIALS

TOOL-FLO
Member IMC Group

FLO-LOCK

Flo-Lock Grooving/Threading Insert Identification Chart



Flo-Lock Cross Reference Chart

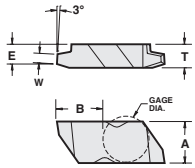
STYLE	TOOL-FLO	KENNAMETAL®	SANDVIK®*	VALENITE®*	HORIZON®*	RTW®*
ACME	FLA	NA	TLA	VLA	HA	PA
ACME STUBFLAS	NAS	TLAS	VLAS	HAS	PAS	
API-NON TOPPING	FLD	ND	TLD	#	#	#
API-TOPPING	FLDC	NDC	TLDC	#	HDC	PDC
UNJ	FLJ	NJ	TLJ	#	HJ	#
UNJ-FINE PITCH	FLJF	NJF	TLJF	#	HJF	#
UNJ-FINE PITCH-POSITIVE	FLJK	NJK	TLJK	#	#	#
UNJ-POSITIVE	FLJP	NJP	TLJP	#	#	#
60˚ V	FLT	NT	TLT	VLRT	HT	PT
AMERICAN STANDARD BUTTRESS	FLTB	NTB	TLTB	#	HTB	#
UN - UNIFIED	FLTC	NTC	TLTC	VLTC	HTC	PTC
60˚ V - FINE PITCH	FLTF	NTF	TLTF	VLTF	HTF	PTF
60˚ V - FINE PITCH POSITIVE	FLTK	NTK	TLTK	VLTK	HTK	PTK
60˚ V - POSITIVE	FLTP	NTP	TLTP	VLTP	HTP	PTP

*Top Clamp change is required when converting from SANDVIK®

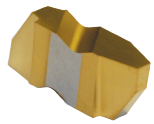
ACME THREADING

FLA

For Flo-Lock acme thread limits see pg. 48.



RH Shown

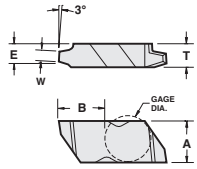


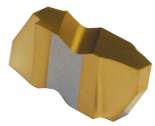
Description	EDP Code	TPI	W	T	E	A	B	Gage Dia.	Uncoated C3	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLA-2R8	552008R	8	.0411 (1.04)	.150 (3.81)	.115 (2.92)	.219 (5.56)	.2700 (6.85)	.1875 (4.76)		●	●		
FLA-2L8	552008L	8	.0411 (1.04)	.150 (3.81)	.115 (2.92)	.219 (5.56)	.2700 (6.85)	.1875 (4.76)		●	●		
FLA-2R6	552006R	6	.0566 (1.43)	.150 (3.81)	.117 (2.97)	.219 (5.56)	.2700 (6.85)	.1875 (4.76)		●	●		
FLA-2L6	552006L	6	.0566 (1.43)	.150 (3.81)	.117 (2.97)	.219 (5.56)	.2700 (6.85)	.1875 (4.76)		●	●		
FLA-2R5	552005R	5	.0689 (1.75)	.150 (3.81)	.107 92.71)	.219 (5.56)	.2700 (6.85)	.1875 (4.76)		●	●		
FLA-2L5	552005L	5	.0689 (1.75)	.150 (3.81)	.107 92.71)	.219 (5.56)	.2700 (6.85)	.1875 (4.76)		●	●		
FLA-3R16	553016R	16	.0206 (0.52)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		●
FLA-3L16	553016L	16	.0206 (0.52)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		●
FLA-3R14	553014R	14	.0239 (0.61)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		●
FLA-3L14	553014L	14	.0239 (0.61)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		●
FLA-3R12	553012R	12	.0283 (0.72)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		●
FLA-3L12	553012L	12	.0283 (0.72)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		●
FLA-3R10	553010R	10	.0319 (0.81)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	
FLA-3L10	553010L	10	.0319 (0.81)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	
FLA-3R8	553008R	8	.0411 (1.04)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	●
FLA-3L8	553008L	8	.0411 (1.04)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	●
FLA-3R7	553007R	7	.0478 (1.21)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		
FLA-3R6	553006R	6	.0566 (1.43)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)	●	●	●	●	●
FLA-3L6	553006L	6	.0566 (1.43)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)	●	●	●	●	●
FLA-3R5	553005R	5	.0689 (1.75)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)	●	●	●	●	●
FLA-3L5	553005L	5	.0689 (1.75)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)	●	●	●	●	●
FLA-3R4	553004R	4	.0875 (2.22)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)	●	●	●	●	●
FLA-3L4	553004L	4	.0875 (2.22)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)	●	●	●	●	●
FLA-4R8	554008R	8	.0411 (1.04)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●		
FLA-4L8	554008L	8	.0411 (1.04)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●		
FLA-4R6	554006R	6	.0566 (1.43)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●		
FLA-4L6	554006L	6	.0566 (1.43)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●		
FLA-4R5	554005R	5	.0689 (1.75)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)			●		
FLA-4L5	554005L	5	.0689 (1.75)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)			●		
FLA-4R4	554004R	4	.0875 (2.22)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●	●	●
FLA-4L4	554004L	4	.0875 (2.22)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●	●	●
FLA-4R3.5	554035R	3.5	.1007 (2.55)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)			●		
FLA-4R3	554003R	3	.1184 (3.00)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)			●		
FLA-6R3.5	556035R	3.5	.1007 (2.55)	.383 (9.72)	.283 (7.18)	.453 (11.50)	.6308 (16.02)	.3750 (9.52)			●		
FLA-6R3	556003R	3	.1184 (3.00)	.383 (9.72)	.283 (7.18)	.453 (11.50)	.6308 (16.02)	.3750 (9.52)			●		
FLA-6L3	556003L	3	.1184 (3.00)	.383 (9.72)	.283 (7.18)	.453 (11.50)	.6308 (16.02)	.3750 (9.52)			●		
FLA-6R2.5	5560025R	2.5	.1431 (3.63)	.383 (9.72)	.283 (7.18)	.453 (11.50)	.6308 (16.02)	.3750 (9.52)			●		
FLA–6L2.5	5560025L	2.5	.1431 (3.63)	.383 (9.72)	.283 (7.18)	.453 (11.50)	.6308 (16.02)	.3750 (9.52)			●		
FLA-6R2	556002R	2	.1802 (4.57)	.383 (9.72)	.283 (7.18)	.453 (11.50)	.6308 (16.02)	.3750 (9.52)			●		
FLA-6L2	556002L	2	.1802 (4.57)	.383 (9.72)	.283 (7.18)	.453 (11.50)	.6308 (16.02)	.3750 (9.52)			●		

PARTIAL TOPPING ACME THREADING

FLA-PT (with corner radii)

For Flo-Lock acme thread limits see pg. 48.





RH Shown

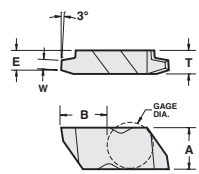
Description	EDP Code	TPI	W	T	E	A	B	Gage Dia.	Uncoated C3	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLA-3R16-PT-E	553016PTRE	16	.0206 (0.52)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		●
FLA-3L16-PT-I	553016PTLI	16	.0206 (0.52)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		●
FLA-3R14-PT-E	553014PTRE	14	.0239 (0.61)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		●
FLA-3L14-PT-I	553014PTLI	14	.0239 (0.61)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		●
FLA-3R12-PT-E	553012PTRE	12	.0283 (0.72)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		●
FLA-3L12-PT-I	553012PTLI	12	.0283 (0.72)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		●
FLA-3R10-PT-E	553010PTRE	10	.0319 (0.81)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●		
FLA-3L10-PT-I	553010PTLI	10	.0319 (0.81)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●		
FLA-3R8-PT-E	553008PTRE	8	.0411 (1.04)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	●
FLA-3L8-PT-I	553008PTLI	8	.0411 (1.04)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	●
FLA-3R6-PT-E	553006PTRE	6	.0566 (1.43)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)	●	●	●	●	●
FLA-3L6-PT-I	553006PTLI	6	.0566 (1.43)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)	●	●	●	●	●
FLA-3R5-PT-E	553005PTRE	5	.0689 (1.75)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)	●	●	●	●	●
FLA-3L5-PT-I	553005PTLI	5	.0689 (1.75)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)	●	●	●	●	●
FLA-3R4-PT-E	553004PTRE	4	.0875 (2.22)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)	●	●	●	●	●
FLA-3L4-PT-I	553004PTLI	4	.0875 (2.22)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)	●	●	●	●	●
FLA-4R8-PT-E	554008PTRE	8	.0411 (1.04)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●		
FLA-4L8-PT-I	554008PTLI	8	.0411 (1.04)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●		
FLA-4R6-PT-E	554006PTRE	6	.0566 (1.43)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●		
FLA-4L6-PT-I	554006PTLI	6	.0566 (1.43)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●		
FLA-4R5-PT-E	554005PTRE	5	.0689 (1.75)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)			●		
FLA-4L5-PT-I	554005PTLI	5	.0689 (1.75)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)			●		
FLA-4R4-PT-E	554004PTRE	4	.0875 (2.22)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●	●	●
FLA-4L4-PT-I	554004PTLI	4	.0875 (2.22)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●	●	●
FLA-4R3-PT-E	554003PTRE	3	.1184 (3.00)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●		
FLA-4L3-PT-I	554003PTLI	3	.1184 (3.00)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●		

I = Internal
E = External

STUB ACME THREADING

FLAS

For Flo-Lock acme thread limits see pg. 48.



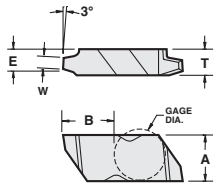
RH Shown

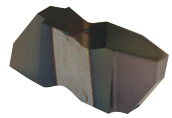
Description	EDP Code	TPI	W	T	E	A	B	Gage Dia.	Uncoated C3	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLAS-2R10	552210R	10	.0370 (0.93)	.150 (3.81)	.124 (3.14)	.219 (5.56)	.2700 (6.85)	.1875 (4.76)			●		
FLAS-2L10	552210L	10	.0370 (0.93)	.150 (3.81)	.124 (3.14)	.219 (5.56)	.2700 (6.85)	.1875 (4.76)			●		
FLAS-2R8	552208R	8	.0476 (1.20)	.150 (3.81)	.124 (3.14)	.219 (5.56)	.2700 (6.85)	.1875 (4.76)					●
FLAS-2L8	552208L	8	.0476 (1.20)	.150 (3.81)	.124 (3.14)	.219 (5.56)	.2700 (6.85)	.1875 (4.76)					●
FLAS-2R6	552206R	6	.0652 (1.65)	.150 (3.81)	.124 (3.14)	.219 (5.56)	.2700 (6.85)	.1875 (4.76)			●		
FLAS-2L6	552206L	6	.0652 (1.65)	.150 (3.81)	.124 (3.14)	.219 (5.56)	.2700 (6.85)	.1875 (4.76)			●		
FLAS-3R16	553216R	16	.0238 (0.60)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	
FLAS-3L16	553216L	16	.0238 (0.60)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		
FLAS-3R14	553214R	14	.0276 (0.70)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		●
FLAS-3L14	553214L	14	.0276 (0.70	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		●
FLAS-3R12	553212R	12	.0326 (0.82)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		
FLAS-3L12	553212L	12	.0326 (0.82)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		
FLAS-3R10	553210R	10	.0370 (0.93)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	
FLAS-3L10	553210L	10	.0370 (0.93)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●		
FLAS-3R8	553208R	8	.0476 (1.20)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	●
FLAS-3L8	553208L	8	.0476 (1.20)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	●
FLAS-3R6	553206R	6	.0652 (1.65)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	●
FLAS-3L6	553206L	6	.0652 (1.65)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	●
FLAS-3R5	553205R	5	.0793 (2.01)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	●
FLAS-3L5	553205L	5	.0793 (2.01)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	●
FLAS-3R4	553204R	4	.1004 (2.55)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	●
FLAS-3L4	553204L	4	.1004 (2.55)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	●
FLAS-4R8	554208R	8	.0476 (1.20)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●		
FLAS-4R4	554204R	4	.1004 (2.55)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)			●		
FLAS-4L4	554204L	4	.1004 (2.55)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)			●		
FLAS-4R3	554203R	3	.1356 (3.44)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●		
FLAS-4L3	554203L	3	.1356 (3.44)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●		
FLAS-6R2	556202R	2	.2060 (5.23)	.383 (9.72)	.283 (7.18)	.453 (11.50)	.6308 (16.02)	.3750 (9.52)			●		
FLAS-6L2	556202L	2	.2060 (5.23	.383 (9.72)	.283 (7.18)	.453 (11.50)	.6308 (16.02)	.3750 (9.52)			●		

I = Internal
E = External

PARTIAL TOPPING ACME STUB THREADING

FLAS-PT (with corner radii)





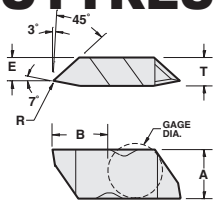
RH Shown

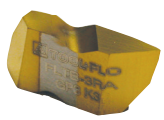
Description	EDP Code	TPI	W	T	E	A	B	Gage Dia.	Uncoated C3	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLAS-3L16-PT-I	553216PTLI	16	.0238 (0.60)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		
FLAS-3R14-PT-E	553214PTRE	14	.0276 (0.70)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		
FLAS-3L14-PT-I	553214PTLI	14	.0276 (0.70)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●		
FLAS-3R12-PT-E	553212PTRE	12	.0326 (0.82)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		
FLAS-3L12-PT-I	553212PTLI	12	.0326 (0.82)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		
FLAS-3R10-PT-E	553210PTRE	10	.0370 (0.93)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●		
FLAS-3L10-PT-I	553210PTLI	10	.0370 (0.93)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●		
FLAS-3R8-PT-E	553208PTRE	8	.0476 (1.20)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	●
FLAS-3L8-PT-I	553208PTLI	8	.0476 (1.20)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	●
FLAS-3R6-PT-E	553206PTRE	6	.0652 (1.65)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	●
FLAS-3L6-PT-I	553206PTLI	6	.0652 (1.65)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	●
FLAS-3L5-PT-I	553205PTLI	5	.0793 (2.01)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)		●	●	●	●
FLAS-3R4-PT-E	553204PTRE	4	.1004 (2.55)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●	●	●
FLAS-3L4-PT-I	553204PTLI	4	.1004 (2.55)	.255 (6.47)	.202 (5.13)	.453 (11.50)	.6332 (16.08)	.3750 (9.52)		●	●	●	●

AMERICAN STANDARD BUTTRESS 7° LEAD

FLTB

For ASB specifications and application see pg. 47.





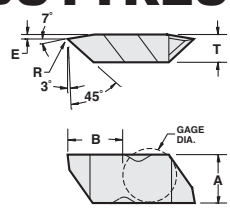
RH Shown

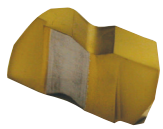
Description	EDP Code	TPI	R	T	E	A	B	Gage Dia.	Uncoated C3	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLTB-2RA	602801R	16-20	.002/.004 (0.05/0.10)	.150 (3.81)	.126 (3.20)	.219 (5.56)	.2688 (6.83)	.1875 (4.76)		●	●	●	●
FLTB-2LA	602801L	16-20	.002/.004 (0.05/0.10)	.150 (3.81)	.126 (3.20)	.219 (5.56)	.2688 (6.83)	.1875 (4.76)		●	●	●	●
FLTB-3RA	603801R	8-16	.005/.008 (0.13/0.20)	.195 (4.95)	.164 (4.17)	.344 (8.74)	.4034 (10.25)	.3750 (9.53)		●	●	●	●
FLTB-3LA	603801L	8-16	.005/.008 (0.13/0.20)	.195 (4.95)	.164 (4.17)	.344 (8.74)	.4034 (10.25)	.3750 (9.53)		●	●	●	●
FLTB-4RA	604801R	4-6	.008/.012 (0.20/0.30)	.255 (6.48)	.206 (5.23)	.453 (11.51)	.6334 (16.09)	.3750 (9.53)		●	●	●	●
FLTB-4LA	604801L	4-6	.008/.012 (0.20/0.30)	.255 (6.48)	.206 (5.23)	.453 (11.51)	.6334 (16.09)	.3750 (9.53)		●	●	●	

AMERICAN STANDARD BUTTRESS 45° LEAD

FLTB

For ASB specifications and application see pg. 47.



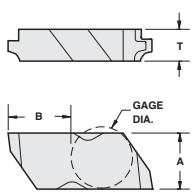


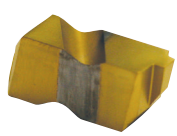
RH Shown

Description	EDP Code	TPI	R	T	E	A	B	Gage Dia.	Uncoated C3	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLTB-2RB	602802R	16-20	.002/.004 (0.05/0.10)	.150 (3.81)	.126 (3.20)	.219 (5.56)	.2688 (6.83)	.1875 (4.76)		●	●	●	●
FLTB-2LB	602802L	16-20	.002/.004 (0.05/0.10)	.150 (3.81)	.126 (3.20)	.219 (5.56)	.2688 (6.83)	.1875 (4.76)		●	●	●	
FLTB-3RB	603802R	8-16	.005/.008 (0.13/0.20)	.195 (4.95)	.164 (4.17)	.344 (8.74)	.4034 (10.25)	.3750 (9.53)		●	●	●	●
FLTB-3LB	603802L	8-16	.005/.008 (0.13/0.20)	.195 (4.95)	.164 (4.17)	.344 (8.74)	.4034 (10.25)	.3750 (9.53)		●	●	●	●
FLTB-4RB	604802R	4-6	.008/.012 (0.20/0.30)	.255 (6.48)	.206 (5.23)	.453 (11.51)	.6334 (16.09)	.3750 (9.53)		●	●	●	●
FLTB-4LB	604802L	4-6	.008/.012 (0.20/0.30)	.255 (6.48)	.206 (5.23)	.453 (11.51)	.6334 (16.09)	.3750 (9.53)		●	●	●	●

API BUTTRESS THREADING

FLDC



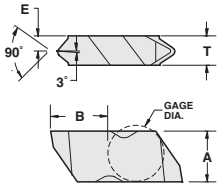


RH EXT Shown

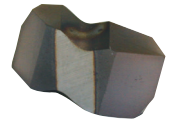
Description	EDP Code	TPI	TPF	T	A	B	Gage Dia.	Uncoated C3	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLDC-3-5B75E	553616E	5	3/4	.250 (6.35)	.344 (8.74)	.4026 (10.23)	.3750 (9.53)			●		
FLDC-3-5B75I	553616I	5	3/4	.250 (6.35)	.344 (8.74)	.4026 (10.23)	.3750 (9.53)			●		
FLDC-3-5B1E	553617E	5	1	.250 (6.35)	.344 (8.74)	.4026 (10.23)	.3750 (9.53)			●		
FLDC-3-5B1I	553617I	5	1	.250 (6.35)	.344 (8.74)	.4026 (10.23)	.3750 (9.53)			●		
FLDC-4-5B75E	554616E	5	3/4	.255 (6.48)	.453 (11.51)	.6320 (16.05)	.3750 (9.53)			●		
FLDC-4-5B75I	554616I	5	3/4	.255 (6.48)	.453 (11.51)	.6320 (16.05)	.3750 (9.53)			●		
FLDC-4-5B1E	554617E	5	1	.255 (6.48)	.453 (11.51)	.6320 (16.05)	.3750 (9.53)			●		
FLDC-4-5B1I	554617I	5	1	.255 (6.48)	.453 (11.51)	.6320 (16.05)	.3750 (9.53)			●		

API HUGHES H90

FLDC



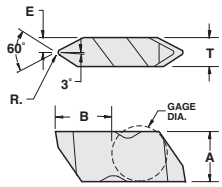
RH Shown



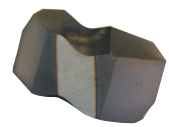
Description	EDP Code	TPI	TPF	T	A	B	Gage Dia	Connection	Uncoated C3	Uncoated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLDC-4-H902E	554628E	2	3-1/2	.255 (6.48)	.453 (11.51)	.6293 (15.98)	.3750 (9.53)	3-1/2 - 6-5/8 H90			●		
FLDC-4-H902I	554628I	2	3-1/2	.255 (6.48)	.453 (11.51)	.6293 (15.98)	.3750 (9.53)	3-1/2 - 6-5/8 H90			●		

API THREADING NON TOPPING

FLD



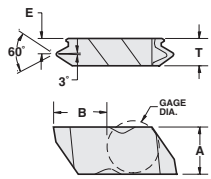
RH Shown



Description	EDP Code	TPI	R	E	T	A	B	Gage Dia.	Uncoated C3	Uncoated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLD-3038R	553438R	4	.033/.038 (0.84/0.97)	.082 (2.08)	.195 (4.95)	.344 (8.74)	.3991 (10.14)	.3750 (9.53)			●		
FLD-3038L	553438L	4	.033/.038 (0.84/0.97)	.082 (2.08)	.195 (4.95)	.344 (8.74)	.3991 (10.14)	.3750 (9.53)			●		
FLD-3040R	553440R	5	.015/.020 (0.38/0.51)	.082 (2.08)	.195 (4.95)	.344 (8.74)	.3991 (10.14)	.3750 (9.53)			●		
FLD-3040L	553440L	5	.015/.020 (0.38/0.51)	.082 (2.08)	.195 (4.95)	.344 (8.74)	.3991 (10.14)	.3750 (9.53)			●		
FLD-4038R	554438R	4	.033/.038 (0.84/0.97)	.128 (6.48)	.255 (6.48)	.453 (11.51)	.6293 (15.98)	.3750 (9.53)			●		
FLD-4038L	554438L	4	.033/.038 (0.84/0.97)	.128 (6.48)	.255 (6.48)	.453 (11.51)	.6293 (15.98)	.3750 (9.53)			●		
FLD-4040R	554440R	5	.015/.020 (0.38/0.51)	.128 (6.48)	.255 (6.48)	.453 (11.51)	.6293 (15.98)	.3750 (9.53)			●		
FLD-4040L	554440L	5	.015/.020 (0.38/0.51)	.128 (6.48)	.255 (6.48)	.453 (11.51)	.6293 (15.98)	.3750 (9.53)			●		
FLD-4050R	554450R	4	.020/.025 (0.51/0.64)	.128 (6.48)	.255 (6.48)	.453 (11.51)	.6293 (15.98)	.3750 (9.53)			●	●	
FLD-4050L	554450L	4	.020/.025 (0.51/0.64)	.128 (6.48)	.255 (6.48)	.453 (11.51)	.6293 (15.98)	.3750 (9.53)			●		

API ROTARY SHOULDER CONNECTION THREADING

FLDC

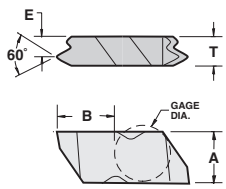


RH EXT Shown

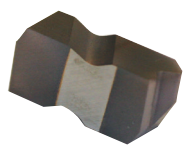
Description	EDP Code	TPI	TPF	E	T	A	B	Gage Dia.	Conn. No. or Size	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
FLDC-3-530E	553613E	5	3	.147 (3.73)	.250 (6.35)	.344 (8.74)	.4026 (10.23)	.3750 (9.53)	3-1/2 FH, 2-3/8-4-1/2 Reg.		●			
FLDC-3-530I	553613I	5	3	.147 (3.73)	.250 (6.35)	.344 (8.74)	.4026 (10.23)	.3750 (9.53)	3-1/2 FH, 2-3/8-4-1/2 Reg.		●			
FLDC-4-425E	554609E	4	2	.183 (4.65)	.312 (7.92)	.453 (11.51)	.6320 (16.05)	.3750 (9.53)	5-1/2 FH, 6-5/8 FH & Reg.		●			
FLDC-4-425I	554609I	4	2	.183 (4.65)	.312 (7.92)	.453 (11.51)	.6320 (16.05)	.3750 (9.53)	5-1/2 FH, 6-5/8 FH & Reg.		●	●	●	
FLDC-4-428E	554610E	4	2	.183 (4.65)	.312 (7.92)	.453 (11.51)	.6320 (16.05)	.3750 (9.53)	NC23-NC50, 2-3/8-5-1/2IF		●	●		●
FLDC-4-428I	554610I	4	2	.183 (4.65)	.312 (7.92)	.453 (11.51)	.6320 (16.05)	.3750 (9.53)	NC23-NC50, 2-3/8-5-1/2IF		●	●		●
FLDC-4-435E	554611E	4	3	.183 (4.65)	.312 (7.92)	.453 (11.51)	.6320 (16.05)	.3750 (9.53)	5-1/2, 7-5/8, 8-5/8 Reg.		●			
FLDC-4-435I	554611I	4	3	.183 (4.65)	.312 (7.92)	.453 (11.51)	.6320 (16.05)	.3750 (9.53)	5-1/2, 7-5/8, 8-5/8 Reg.		●			
FLDC-4-438E	554612E	4	3	.183 (4.65)	.312 (7.92)	.453 (11.51)	.6320 (16.05)	.3750 (9.53)	NC56 - NC71		●			
FLDC-4-438I	554612I	4	3	.183 (4.65)	.312 (7.92)	.453 (11.51)	.6320 (16.05)	.3750 (9.53)	NC56 - NC71		●			
FLDC-4-530E	554613E	5	3	.183 (4.65)	.312 (7.92)	.453 (11.51)	.6320 (16.05)	.3750 (9.53)	3-1/2 FH, 2-3/8-4-1/2 Reg.		●			
FLDC-4-530I	554613I	5	3	.183 (4.65)	.312 (7.92)	.453 (11.51)	.6320 (16.05)	.3750 (9.53)	3-1/2 FH, 2-3/8-4-1/2 Reg.		●			

API ROUND THREADING

FLDC



RH Shown

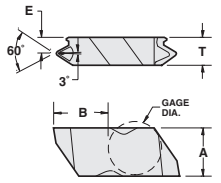


Description	EDP Code	TPI	TPF	E	T	A	B	Gage Dia.	Uncoated C3	Uncoated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLDC-3-8RDR75	553632R	8	3/4	.195 (3.18)	.125 (4.95)	.344 (8.74)	.4010 (10.19)	.3750 (9.53)			●	●	●
FLDC-3-8RDL75	553632L	8	3/4	.195 (3.18)	.125 (4.95)	.344 (8.74)	.4010 (10.19)	.3750 (9.53)			●	●	●
FLDC-3-10RDR75	553634R	10	3/4	.195 (3.18)	.125 (4.95)	.344 (8.74)	.4010 (10.19)	.3750 (9.53)			●	●	●
FLDC-3-10RDL75	553634L	10	3/4	.195 (3.18)	.125 (4.95)	.344 (8.74)	.4010 (10.19)	.3750 (9.53)			●		●

FLDC

with chipbreaker

Exclusive patented design!



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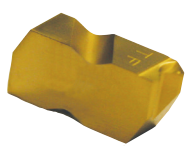
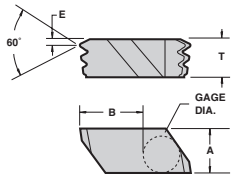


Description	EDP Code	TPI	TPF	E	T	A	B	Gage Dia.	Uncoated C3	Uncoated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLDC-3-8RDR75-CB	553632PR	8	3/4	.195 (3.18)	.125 (4.94)	.344 (8.74)	.4010 (10.19)	.3750 (9.53)			●		●
FLDC-3-8RDL75-CB	553632PL	8	3/4	.195 (3.18)	.125 (4.94)	.344 (8.74)	.4010 (10.19)	.3750 (9.53)			●		●

API ROUND THREADING

FLDC

Multi-tooth

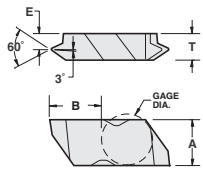


RH Shown

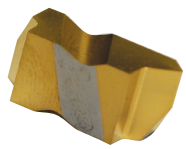
Description	EDP Code	TPI	TPF	E	T	A	B	Gage Dia.	Uncoated C3	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLDC-3-8RD-2TE	553633E	8	3/4	.070 (1.78)	.383 (9.73)	.453 (11.51)	.6360 (16.15)	.3750 (9.53)			●		
FLDC-3-8RD-2TI	553633I	8	3/4	.070 (1.78)	.383 (9.73)	.453 (11.51)	.6360 (16.15)	.3750 (9.53)			●		
FLDC-3-10RD-2TE	553635E	10	3/4	.070 (1.78)	.383 (9.73)	.453 (11.51)	.6360 (16.15)	.3750 (9.53)			●		
FLDC-3-10RD-2TI	553635I	10	3/4	.070 (1.78)	.383 (9.73)	.453 (11.51)	.6360 (16.15)	.3750 (9.53)			●		
FLDC-3-8RDR-75M	553633R	8	3/4	.070 (1.78)	.383 (9.73)	.453 (11.51)	.6360 (16.15)	.3750 (9.53)			●		
FLDC-3-8RDL-75M	553633L	8	3/4	.070 (1.78)	.383 (9.73)	.453 (11.51)	.6360 (16.15)	.3750 (9.53)			●		
FLDC-6-8RDR75M	556633R	8	3/4	.070 (1.78)	.383 (9.73)	.453 (11.51)	.6360 (16.15)	.3750 (9.53)			●		
FLDC-6-10RDR75M	556635R	10	3/4	.134 (3.40)	.383 (9.73)	.453 (11.51)	.6360 (16.15)	.3750 (9.53)			●		

NPT THREADING

FLDC



RH Shown

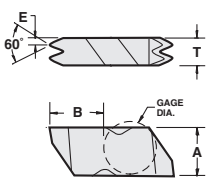


Description	EDP Code	TPI	TPF	E	T	A	B	Gage Dia.	Uncoated C3	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLDC-3-8VR-75	553608R	8	3/4	.100 (2.54)	.195 (4.95)	.344 (8.74)	.4000 (10.16)	.3750 (9.53)		●	●	●	
FLDC-3-8VL-75	553608L	8	3/4	.100 (2.54)	.195 (4.95)	.344 (8.74)	.4000 (10.16)	.3750 (9.53)		●	●	●	
FLDC-3-115VR-75	553611R	11.5	3/4	.144 (3.66)	.195 (4.95)	.344 (8.74)	.4000 (10.16)	.3750 (9.53)		●	●	●	
FLDC-3-115VL-75	553611L	11.5	3/4	.144 (3.66)	.195 (4.95)	.344 (8.74)	.4000 (10.16)	.3750 (9.53)		●	●	●	
FLDC-3-14VR-75	553614R	14	3/4	.148 (3.76)	.195 (4.95)	.344 (8.74)	.4023 (10.22)	.3750 (9.53)		●	●	●	
FLDC-3-14VL-75	553614L	14	3/4	.148 (3.76)	.195 (4.95)	.344 (8.74)	.4023 (10.22)	.3750 (9.53)		●	●		
FLDC-3-18VR-75	553618R	18	3/4	.154 (3.91)	.195 (4.95)	.344 (8.74)	.4023 (10.22)	.3750 (9.53)		●		●	
FLDC-3-18VL-75	553618L	18	3/4	.154 (3.91)	.195 (4.95)	.344 (8.74)	.4023 (10.22)	.3750 (9.53)					
FLDC-3-27VR-75	553627R	27	3/4	.162 (4.11)	.195 (4.95)	.344 (8.74)	.4023 (10.22)	.3750 (9.53)		●	●	●	
FLDC-3-27VL-75	553627L	27	3/4	.162 (4.11)	.195 (4.95)	.344 (8.74)	.4023 (10.22)	.3750 (9.53)					

NPT THREADING

FLDC

Multi-tooth

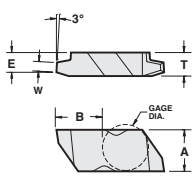


RH Shown

Description	EDP Code	TPI	TPF	E	T	A	B	Gage Dia.	Uncoated C3	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLDC-3-8 NPT-2E	553708E	8	3/4	.058 (1.47)	.250 (6.35)	.344 (8.74)	.4050 (10.29)	.3750 (9.53)			●	●	●
FLDC -3-8 NPT-2I	553708I	8	3/4	.058 (1.47)	.250 (6.35)	.344 (8.74)	.4050 (10.29)	.3750 (9.53)			●		
FLDC-3-11.5 NPT-2E	553711E	11.5	3/4	.048 (1.22)	.250 (6.35)	.344 (8.74)	.4050 (10.29)	.3750 (9.53)			●		
FLDC-3-11.5 NPT-2I	553711I	11.5	3/4	.048 (1.22)	.250 (6.35)	.344 (8.74)	.4050 (10.29)	.3750 (9.53)			●		
FLDC-3-14 NPT-2E	553714E	14	3/4	.048 (1.22)	.250 (6.35)	.344 (8.74)	.4050 (10.29)	.3750 (9.53)			●		

TRAPEZOIDAL THREADING

FLA



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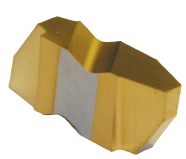
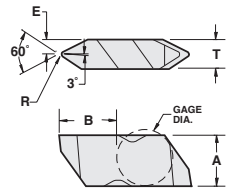


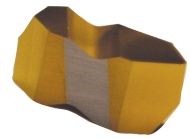
Description	EDP Code	Pitch	W	T	E	A	B	Gage Dia.	Uncoated C3	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLA-3R4.0TR	543804R	4.0	.0875 (2.22)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		
FLA-3L4.0TR	543804L	4.0	.0875 (2.22)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		
FLA-3R3.0TR	543803R	3.0	.0875 (2.22)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		
FLA-3L3.0TR	543803L	3.0	.0875 (2.22)	.195 (4.95)	.149 (3.78)	.344 (8.73)	.4026 (10.22)	.3750 (9.52)			●		

UNJ THREADING

FLJ



RH Shown

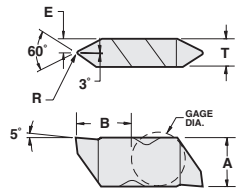


Description	EDP Code	TPI	R	E	T	A	B	Gage Dia.	Uncoated C3	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLJ-3010R16	583216R	16	.0094/.0104 (0.24/0.26)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)		●	●	●	
FLJ-3010L16	583216L	16	.0094/.0104 (0.24/0.26)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)		●	●	●	
FLJ-3014R12	583212R	12	.0125/.0135 (0.32/0.34)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)		●	●	●	
FLJ-3014L12	583212L	12	.0125/.0135 (0.32/0.34)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)		●	●	●	
FLJ-3020R8	583208R	8	.0188/.0198 (0.48/0.50)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)		●	●	●	
FLJ-3020L8	583208L	8	.0188/.0198 (0.48/0.50)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)		●	●	●	

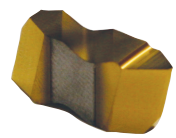
UNJ THREADING

FLJP

Positive rake



RH Shown

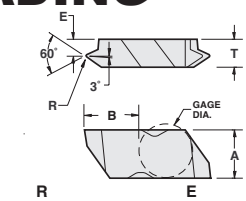


Description	EDP Code	TPI	R	E	T	A	B	Gage Dia.	Uncoated C3	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLJP-3010R16	583816R	16	.0094/.0104 (0.24/0.26)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)		●	●	●	
FLJP-3010L16	583816L	16	.0094/.0104 (0.24/0.26)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)		●	●	●	
FLJP-3014R12	583812R	12	.0125/.0135 (0.32/0.34)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)		●	●	●	
FLJP-3014L12	583812L	12	.0125/.0135 (0.32/0.34)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)		●	●	●	
FLJP-3020R8	583808R	8	.0188/.0198 (0.48/0.50)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)		●	●	●	
FLJP-3020L8	583808L	8	.0188/.0198 (0.48/0.50)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)		●	●	●	

UNJ FINE PITCH THREADING

FLJF

For cutting close to shoulder



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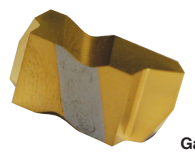
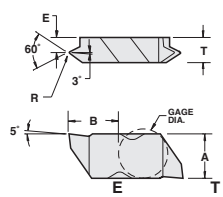


Description	EDP Code	TPI	R	E	T	A	B	Gage Dia.	Uncoated C3	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLJF-3005R32	583432R	32	.0047/.0057 (0.12/0.15)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJF-3005L32	583432L	32	.0047/.0057 (0.12/0.15)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJF-3006R28	583428R	28	.0054/.0064 (0.14/0.16)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJF-3006L28	583428L	28	.0054/.0064 (0.14/0.16)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJF-3007R24	583424R	24	.0063/.0073 (0.16/0.19)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJF-3007L24	583424L	24	.0063/.0073 (0.16/0.19)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJF-3008R20	583420R	20	.0075/.0085 (0.19/0.22)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJF-3008L20	583420L	20	.0075/.0085 (0.19/0.22)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJF-3009R18	583418R	18	.0083/.0093 (0.21/0.24)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJF-3009L18	583418L	18	.0083/.0093 (0.21/0.24)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJF-3010R16	583416R	16	.0094/.0104 (0.24/0.26)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJF-3010L16	583416L	16	.0094/.0104 (0.24/0.26)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJF-3012R14	583414R	14	.0107/.0117 (0.27/0.30)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJF-3012L14	583414L	14	.0107/.0117 (0.27/0.30)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	

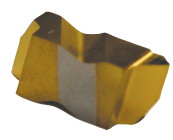
UNJ FINE PITCH THREADING

FLJK

Positive rake



RH Shown

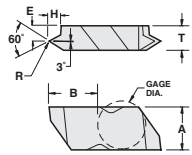


Description	EDP Code	TPI	R	E	T	A	B	Gage Dia.	Uncoated C3	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLJK-3005R32	583632R	32	.0047/.0057 (0.12/0.15)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJK-3005L32	583632L	32	.0047/.0057 (0.12/0.15)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	●
FLJK-3006R28	583628R	28	.0054/.0064 (0.14/0.16)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJK-3006L28	583628L	28	.0054/.0064 (0.14/0.16)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJK-3007R24	583624R	24	.0063/.0073 (0.16/0.19)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJK-3007L24	583624L	24	.0063/.0073 (0.16/0.19)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJK-3008R20	583620R	20	.0075/.0085 (0.19/0.22)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJK-3008L20	583620L	20	.0075/.0085 (0.19/0.22)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJK-3009R18	583618R	18	.0083/.0093 (0.21/0.24)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJK-3009L18	583618L	18	.0083/.0093 (0.21/0.24)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJK-3010R16	583616R	16	.0094/.0104 (0.24/0.26)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJK-3010L16	583616L	16	.0094/.0104 (0.24/0.26)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJK-3012R14	583614R	14	.0107/.0117 (0.27/0.30)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	
FLJK-3012L14	583614L	14	.0107/.0117 (0.27/0.30)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)		●	●	●	

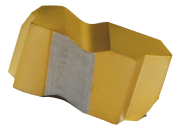
UN THREADING

FLTC

Crest topping



RH EXT Shown



Description	EDP Code	TPI	R	E	H	T	A	B	Gage Dia.	Uncoated C3	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLTC-3R7E	613007R	7	.017 (0.43)	.107 (2.72)	.108 (2.74)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3L7E	613007L	7	.017 (0.43)	.107 (2.72)	.108 (2.74)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)					
FLTC-3R7I	613207R	7	.009 (0.23)	.107 (2.72)	.092 (2.34)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3L7I	613207L	7	.009 (0.23)	.107 (2.72)	.092 (2.34)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)			●		
FLTC-3R8E	613008R	8	.015 (0.38)	.107 (2.72)	.094 (2.39)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3L8E	613008L	8	.015 (0.38)	.107 (2.72)	.094 (2.39)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3R8I	613208R	8	.007 (0.18)	.107 (2.72)	.081 (2.06)	195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3L8I	613208L	8	.007 (0.18)	.107 (2.72)	.081 (2.06)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3R9E	613009R	9	.013 (0.33)	.107 (2.72)	.084 (2.13)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3L9E	613009L	9	.013 (0.33)	.107 (2.72)	.084 (2.13)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)					
FLTC-3R9I	613209R	9	.006 (0.15)	.107 (2.72)	.072 (1.83)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)					
FLTC-3L9I	613209L	9	.006 (0.15)	.107 (2.72)	.072 (1.83)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)					
FLTC-3R10E	613010R	10	.012 (0.30)	.107 (2.72)	.076 (1.93)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3L10E	613010L	10	.012 (0.30)	.107 (2.72)	.076 (1.93)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3R10I	613210R	10	.005 (0.13)	.107 (2.72)	.065 (1.65)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3L10I	613210L	10	.005 (0.13)	.107 (2.72)	.065 (1.65)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3R11E	613011R	11	.011 (0.28)	.107 (2.72)	.069 (1.75)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3L11E	613011L	11	.011 (0.28)	.107 (2.72)	.069 (1.75)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)					
FLTC-3R11I	613211R	11	.005 (0.13)	.107 (2.72)	.059 (1.50)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)			●		
FLTC-3L11I	613211L	11	.005 (0.13)	.107 (2.72)	.059 (1.50)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)			●		
FLTC-3R12E	613012R	12	.010 (0.25)	.148 (3.76)	.051 (1.30)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3L12E	613012L	12	.010 (0.25)	.148 (3.76)	.051 (1.30)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●		
FLTC-3R12I	613212R	12	.004 (0.10)	.148 (3.76)	.048 (1.22)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3L12I	613212L	12	.004 (0.10)	.148 (3.76)	.048 (1.22)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3R13E	613013R	13	.009 (0.23)	.148 (3.76)	.054 (1.37)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●		
FLTC-3R14E	613014R	14	.009 (0.23)	.148 (3.76)	.054 (1.37)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3L14E	613014L	14	.009 (0.23)	.148 (3.76)	.054 (1.37)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●		
FLTC-3R14I	613214R	14	.003 (0.08)	.148 (3.76)	.044 (1.12)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3L14I	613214L	14	.003 (0.08)	.148 (3.76)	.044 (1.12)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3R16E	613016R	16	.008 (0.20)	.148 (3.76)	.046 (1.17)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3L16E	613016L	16	.008 (0.20)	.148 (3.76)	.046 (1.17)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3R16I	613216R	16	.003 (0.08)	.148 (3.76)	.040 (1.02)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3L16I	613216L	16	.003 (0.08)	.148 (3.76)	.040 (1.02)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3R18E	613018R	18	.007 (0.18)	.148 (3.76)	.041 (1.04)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●		
FLTC-3L18E	613018L	18	.007 (0.18)	.148 (3.76)	.041 (1.04)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3R18I	613218R	18	.003 (0.08)	.148 (3.76)	.036 (0.91)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)			●		
FLTC-3L18I	613218L	18	.003 (0.08)	.148 (3.76)	.036 (0.91)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)			●		
FLTC-3R20E	613020R	20	.006 (0.15)	.148 (3.76)	.037 (0.94)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3L20E	613020L	20	.006 (0.15)	.148 (3.76)	.037 (0.94)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3R20I	613220R	20	.003 (0.08)	.148 (3.76)	.031 (0.79)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)			●		
FLTC-3L20I	613220L	20	.003 (0.08)	.148 (3.76)	.031 (0.79)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)			●		
FLTC-3R24E	613024R	24	.005 (0.13)	.148 (3.76)	.031 (0.79)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●		
FLTC-3L24E	613024L	24	.005 (0.13)	.148 (3.76)	.031 (0.79)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)					
FLTC-3R24I	613224R	24	.003 (0.08)	.148 (3.76)	.026 (0.66)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)					
FLTC-3L24I	613224L	24	.003 (0.08)	.148 (3.76)	.026 (0.66)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)					
FLTC-3R28*	613028R	28	.003 (0.08)	.148 (3.76)	.023 (0.58)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)			●		
FLTC-3L28*	613028L	28	.003 (0.08)	.148 (3.76)	.023 (0.58)	..195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)			●		
FLTC-3R32*	613032R	32	.003 (0.08)	.148 (3.76)	.021 (0.53)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)		●	●	●	
FLTC-3L32*	613032L	32	.003 (0.08)	.148 (3.76)	.021 (0.53)	.195 (4.95)	.344 (8.74)	.4004 (10.17)	.3750 (9.53)					

*Will work for either internal or external.

In an effort to improve our stock standard grade offering, there are periodic changes. Please see current price list for up to date grade offering.

● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

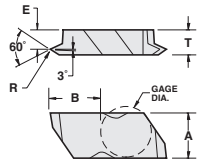
Cast Iron		▲		●	
Non-Ferrous		▲		●	
Stainless/High Temp		▲		●	
Steel			▲		●

60° V-THREADING

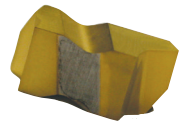
FLTF

Fine pitch

For 60˚V-thread limits see pg. 48.



RH Shown

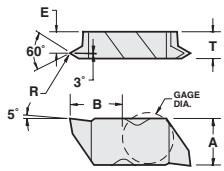


Description	EDP Code	TPI Int	TPI Ext	R	E	T	A	B	Gage Dia.	Uncoated C25	TiN Coated GP3	TiN Coated GP4	TiN Coated GP50	TiN Coated GP520	AlTiN Coated AC3	AlTiN Coated AC50
FLTF-2R	612400R	12-24	14-44	.002/.004 (0.05/0.10)	.110 (2.79)	.150 (3.81)	.219 (5.56)	.2679 (6.80)	.1875 (4.76)	●	●		●		●	●
FLTF-2L	612400L	12-24	14-44	.002/.004 (0.05/0.10)	.110 (2.79)	.150 (3.81)	.219 (5.56)	.2679 (6.80)	.1875 (4.76)	●	●		●		●	●
FLTF-3R	613400R	9-24	10-44	.002/.004 (0.05/0.10)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)	●	●		●		●	●
FLTF-3L	613400L	9-24	10-44	.002/.004 (0.05/0.10)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)	●	●		●		●	●
FLTF-4R	614400R	9-24	10-44	.002/.004 (0.05/0.10)	.201 (5.11)	.255 (6.48)	.453 (11.51)	.6322 (16.06)	.3750 (9.53)		●		●		●	
FLTF-4L	614400L	9-24	10-44	.002/.004 (0.05/0.10)	.201 (5.11)	.255 (6.48)	.453 (11.51)	.6322 (16.06)	.3750 (9.53)		●		●		●	

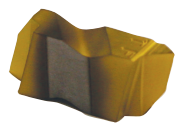
60° V-THREADING

FLTK

Positive rake



RH Shown



Description	EDP Code	TPI Int	TPI Ext	R	E	T	A	B	Gage Dia.	Uncoated C25	TiN Coated GP3	TiN Coated GP4	TiN Coated GP50	TiN Coated GP520	AlTiN Coated AC3	AlTiN Coated AC50
FLTK-2R	612600R	12-24	14-44	.002/.004 (0.05/0.10)	.110 (2.79)	.150 (3.81)	.219 (5.56)	.2679 (6.80)	.1875 (4.76)	●	●		●		●	●
FLTK-2L	612600L	12-24	14-44	.002/.004 (0.05/0.10)	.110 (2.79)	.150 (3.81)	.219 (5.56)	.2679 (6.80)	.1875 (4.76)	●	●		●		●	●
FLTK-3R	613600R	9-24	10-44	.002/.004 (0.05/0.10)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)	●	●		●		●	●
FLTK-3L	613600L	9-24	10-44	.002/.004 (0.05/0.10)	.141 (3.58)	.195 (4.95)	.344 (8.74)	.4022 (10.22)	.3750 (9.53)	●	●		●		●	●
FLTK-4R	614600R	9-24	10-44	.002/.004 (0.05/0.10)	.201 (5.11)	.255 (6.48)	.453 (11.51)	.6322 (16.06)	.3750 (9.53)		●		●			●
FLTK-4L	614600L	9-24	10-44	.002/.004 (0.05/0.10)	.201 (5.11)	.255 (6.48)	.453 (11.51)	.6322 (16.06)	.3750 (9.53)		●		●			●

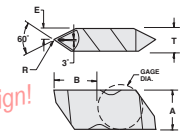
60° V-THREADING - CHIP-FLO

FLT-CB

Features:

- Patented chipbreaker - Patent No. 6,146,064
- Maximum chip control
- Fewer scarred threads
- For coarse and fine pitches

Exclusive patented design!



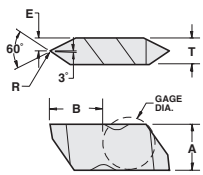
RH Shown

Description	EDP Code	TPI Int	TPI Ext	R	E	T	A	B	Gage Dia.	Uncoated C25	Uncoated C3	TiN Coated GP22	TiN Coated GP4	TiN Coated GP50	TiN Coated GP520	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
FLT-3R-HCB	603600HCR	5-12	6-20	.005/.008 (0.13/0.20)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)			●		●		●		●
FLT-3L-HCB	603600HCL	5-12	6-20	.005/.008 (0.13/0.20)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)			●		●		●		●
FLT-3RC-HCB	603612HCR	5-6	6-11	.012/.015 (0.30/0.38)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)			●		●		●		●
FLT-3LC-HCB	603612HCL	5-6	6-11	.012/.015 (0.30/0.38)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)			●		●		●		●
FLT-3R-CB	603600CR	8-12	8-20	.005/.008 (0.13/0.20)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)			●		●		●		●
FLT-3L-CB	603600CL	8-12	8-20	.005/.008 (0.13/0.20)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)			●		●		●		●
FLT-3R-FCB	603600FCR	7-20	8-36	.003/.005 (0.08/0.13)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)			●		●		●		●
FLT-3L-FCB	603600FCL	7-20	8-36	.003/.005 (0.08/0.13)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)			●		●		●		

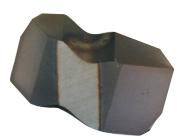
60° V-THREADING

FLT

For 60˚V-thread limits see pg. 48.



RH Shown



Description	EDP Code	TPI Int	TPI Ext	R	E	T	A	B	Gage Dia.	Uncoated C25	TiN Coated GP3	TiN Coated GP4	TiN Coated GP50	TiN Coated GP520	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
FLT-2R	602600R	7-20	8-36	.003/.005 (0.08/0.13)	.075 (1.91)	.150 (3.81)	.219 (5.56)	.2661 (6.76)	.1875 (4.76)	●	●	●	●			●	●
FLT-2L	602600L	7-20	8-36	.003/.005 (0.08/0.13)	.075 (1.91)	.150 (3.81)	.219 (5.56)	.2661 (6.76)	.1875 (4.76)	●	●	●	●			●	●
FLT-3R	603600R	5-12	6-20	.005/.008 (0.13/0.20)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)	●	●	●	●	●	●	●	●
FLT-3L	603600L	5-12	6-20	.005/.008 (0.13/0.20)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)	●	●	●	●	●		●	●
FLT-3RC	603612R	6	6-11	.0135 (0.34)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)							●	
FLT-3LC	603612L	6	6-11	.0135 (0.34)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)							●	
FLT-3010R	603610R	5-12	6-18	.009/.011 (0.23/0.28)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)		●		●			●	●
FLT-3010L	603610L	5-12	6-18	.009/.011 (0.23/0.28)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)		●		●				
FLT-4R	604600R	4-12	4-20	.005/.008 (0.13/0.20)	.128 (3.25)	.255 (6.48)	.453 (11.51)	.6298 (16.00)	.3750 (9.53)	●	●		●			●	●
FLT-4L	604600L	4-12	4-20	.005/.008 (0.13/0.20)	.128 (3.25)	.255 (6.48)	.453 (11.51)	.6298 (16.00)	.3750 (9.53)	●	●		●			●	●
FLT-4RC	604612R	4.5-6	4.5-11	.0135 (0.34)	.128 (3.25)	.255 (6.48)	.453 (11.51)	.6298 (16.00)	.3750 (9.53)							●	
FLT-4LC	604612L	4.5-6	4.5-11	.0135 (0.34)	.128 (3.25)	.255 (6.48)	.453 (11.51)	.6298 (16.00)	.3750 (9.53)							●	

In an effort to improve our stock standard grade offering, there are periodic changes. Please see current price list for up to date grade offering.

● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

Cast Iron		▲					●	
Non-Ferrous		▲					●	
Stainless/High Temp		▲					●	
Steel				▲	▲			●

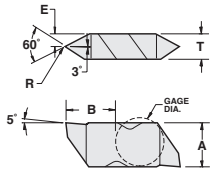
TOOLFLO Member IMC Group

60° V-THREADING

FLTP

Positive rake

For 60˚V-thread limits see pg. 48.

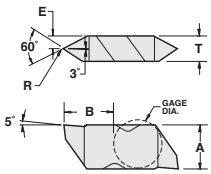


RH Shown

Description	EDP Code	TPI Int	TPI Ext	R	E	T	A	B	Gage Dia.	Uncoated C25	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLTP-2R	612800R	7-20	8-36	.003/.005 (0.08/0.13)	.075 (1.91)	.150 (3.81)	.219 (5.56)	.2661 (6.76)	.1875 (4.76)	●	●	●	●	●
FLTP-2L	612800L	7-20	8-36	.003/.005 (0.08/0.13)	.075 (1.91)	.150 (3.81)	.219 (5.56)	.2661 (6.76)	.1875 (4.76)	●	●	●	●	●
FLTP-3R	613800R	5-12	6-20	.005/.008 (0.13/0.20)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)	●	●	●	●	●
FLTP-3L	613800L	5-12	6-20	.005/.008 (0.13/0.20)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)	●	●	●	●	●
FLTP-4R	614800R	4-12	4-20	.005/.008 (0.13/0.20)	.128 (3.25)	.255 (6.48)	.453 (11.51)	.6293 (15.98)	.3750 (9.53)	●	●	●	●	●
FLTP-4L	614800L	4-12	4-20	.005/.008 (0.13/0.20)	.128 (3.25)	.255 (6.48)	.453 (11.51)	.6293 (15.98)	.3750 (9.53)	●	●	●	●	●

55° V-THREADING

FLTP

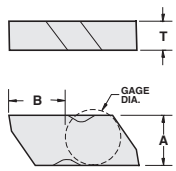


RH Shown

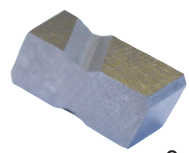
Description	EDP Code	TPI Int	TPI Ext	R	E	T	A	B	Gage Dia.	Uncoated C25	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
FLT-3R 55˚	603655R	5-12	6.20	.003/.005 (0.08/0.13)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)			●	●	
FLT-3L 55˚	603655L	5-12	6.20	.003/.005 (0.08/0.13)	.098 (2.49)	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)			●	●	

FLO-LOCK BLANKS

FLB



RH Shown

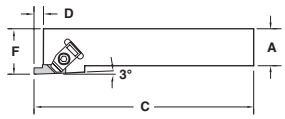


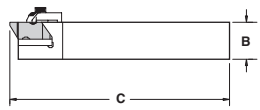
Description	EDP Code	T	A	B	Gage Dia.	C3	C5
FLB-2R	FRB20	.150 (3.81)	.219 (5.56)	.2661 (6.76)	.1875 (4.76)	●	●
FLB-2L	FLB20	.150 (3.81)	.219 (5.56)	.2661 (6.76)	.1875 (4.76)	●	●
FLB-3R	FRB30	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)	●	●
FLB-3L	FLB30	.195 (4.95)	.344 (8.74)	.3999 (10.16)	.3750 (9.53)	●	●
FLB-4R	FRB40	.255 (6.48)	.344 (8.74)	.6288 (15.97)	.3750 (9.53)	●	●
FLB-4L	FLB40	.255 (6.48)	.344 (8.74)	.6288 (15.97)	.3750 (9.53)	●	●
FLB-5R	FRB50	.380 (9.65)	.688 (17.47)	.9520 (24.18)	.5000 (12.80)	●	●
FLB-5L	FLB50	.380 (9.65)	.688 (17.47)	.9520 (24.18)	.5000 (12.80)	●	●
FLB-6R	FRB60	.383 (9.72)	.453 (11.50)	.6308 (16.02)	.3750 (9.52)	●	●
FLB-6L	FLB60	.383 (9.72)	.453 (11.50)	.6308 (16.02)	.3750 (9.52)	●	●

EXTERNAL HOLDER (INCH)

FLSR/L

Threading and Grooving





RH SHOWN

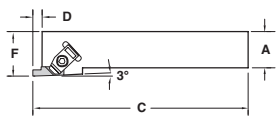
Coolant fed clamps available (See TF-CP clamps on page 49,50)

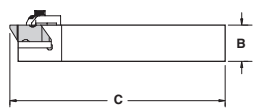
Description	EDP Code	Insert	A	B	C	D	F*	Seat	Seat Screw	Clamp	Clamp Screw
FLSR-62	93400608C	FL_-2R	3/8	3/8	2-1/2	.14	.562	-	-	TF-74	S-310
FLSL-62	93300608C	FL_-2L	3/8	3/8	2-1/2	.14	.562	-	-	TF-75	S-310
FLSR-82V	93400808V	FL_-2R	1/2	1/2	3-1/2	.14	.750	-	-	TF-74	S-310
FLSL-82V	93300808V	FL_-2L	1/2	1/2	3-1/2	.14	.750	-	-	TF-75	S-310
FLSR-102B	93401008B	FL_-2R	5/8	5/8	4-1/2	.14	1.000	-	-	TF-74	S-310
FLSR-122B	93401208B	FL_-2R	3/4	3/4	4-1/2	.14	1.000	-	-	TF-74	S-310
FLSL-122B	93301208B	FL_-2L	3/4	3/4	4-1/2	.14	1.000	-	-	TF-75	S-310
FLSR-162C	93401608C	FL_-2R	1	1.000	5	.14	1.250	-	-	TF-74	S-310
FLSL-162C	93301608C	FL_-2L	1	1.000	5	.14	1.250	-	-	TF-75	S-310
FLSR-123B	93401216B	FL_-3R	3/4	3/4	4-1/2	.21	1.000	-	-	TF-72	S-412
FLSL-123B	93301216B	FL_-3L	3/4	3/4	4-1/2	.21	1.000	-	-	TF-73	S-412
FLSR-163C	93401616C	FL_-3R	1	1	5	.21	1.250	-	-	TF-72	S-412
FLSL-163C	93301616C	FL_-3L	1	1	5	.21	1.250	-	-	TF-73	S-412
FLSR-163D	93401616D	FL_-3R	1	1	6	.21	1.250	-	-	TF-72	S-412
FLSL-163D	93301616D	FL_-3L	1	1	6	.21	1.250	-	-	TF-73	S-412
FLSR-203D	93402016D	FL_-3R	1-1/4	1-1/4	6	.21	1.500	-	-	TF-72	S-412
FLSL-203D	93302016D	FL_-3L	1-1/4	1-1/4	6	.21	1.500	-	-	TF-73	S-412
FLSR-164D	93401620D	FL_-4R	1	1	6	.29	1.250	SM-420	SL-344	TF-72	S-412
FLSL-164D	93301620D	FL_-4L	1	1	6	.29	1.250	SM-420	SL-344	TF-73	S-412
FLSR-204D	93402020D	FL_-4R	1-1/4	1-1/4	6	.29	1.500	SM-420	SL-344	TF-72	S-412
FLSL-204D	93302020D	FL_-4L	1-1/4	1-1/4	6	.29	1.500	SM-420	SL-344	TF-73	S-412
FLSR-205D	93402024D	FL_-5R	1-1/4	1-1/4	6	.40	1.500	-	-	TF-80	S-352
FLSL-205D	93302024D	FL_-5L	1-1/4	1-1/4	6	.40	1.500	-	-	TF-81	S-352
FLSR-206D	93402028D	FL_-6R	1-1/4	1-1/4	6	.29	1.500	SM-416	S-111	TF-120	S-412
FLSL-206D	93302028D	FL_-6L	1-1/4	1-1/4	6	.29	1.500	SM-416	S-111	TF-121	S-412

* "F" Dim. over sharp point of grooving insert.

EXTERNAL HOLDER (METRIC)

FLSR/L





RH SHOWN

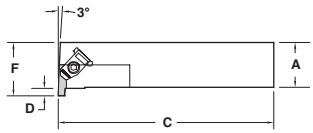
Coolant fed clamps available (See TF-CP clamps on page 49,50)

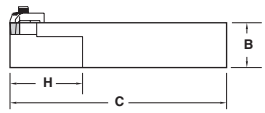
Description	EDP Code	Insert	A	B	C	D	F*	Seat	Seat Screw	Clamp	Clamp Screw
FLSR-1010M2	93411008	FL_-2R	10	10	70	3.56	14.27	-	-	TF-74	SM-310
FLSL-1010M2	93311008	FL_-2L	10	10	70	3.56	14.27	-	-	TF-75	SM-310
FLSR-1212M2	93411208	FL_-2R	12	12	80	3.56	19.05	-	-	TF-74	SM-310
FLSL-1212M2	93311208	FL_-2L	12	12	80	3.56	19.05	-	-	TF-75	SM-310
FLSR-1616M2	93411608	FL_-2R	16	16	100	3.56	25.40	-	-	TF-74	SM-310
FLSR-2020M2	93412008	FL_-2R	20	20	125	3.56	25.40	-	-	TF-74	SM-310
FLSL-2020M2	93312008	FL_-2L	20	20	125	3.56	25.40	-	-	TF-75	SM-310
FLSR-2525M2	93412508	FL_-2R	25	25	150	3.56	31.75	-	-	TF-74	SM-310
FLSL-2525M2	93312508	FL_-2L	25	25	150	3.56	31.75	-	-	TF-75	SM-310
FLSR-2020M3	93412016	FL_-3R	20	20	125	5.33	25.40	-	-	TF-72	SSM-51
FLSL-2020M3	93312016	FL_-3L	20	20	125	5.33	25.40	-	-	TF-73	SSM-51
FLSR-2525M3	93412516	FL_-3R	25	25	150	5.33	31.75	-	-	TF-72	SSM-51
FLSL-2525M3	93312516	FL_-3L	25	25	150	5.33	31.75	-	-	TF-73	SSM-51
FLSR-3232M3	93413216	FL_-3R	32	32	170	5.33	38.10	-	-	TF-72	SSM-51
FLSL-3232M3	93313216	FL_-3L	32	32	170	5.33	38.10	-	-	TF-73	SSM-51
FLSR-2525M4	93412520	FL_-4R	25	25	150	7.37	31.75	SM-420	SL-344	TF-72	SSM-51
FLSL-2525M4	93312520	FL_-4L	25	25	150	7.37	31.75	SM-420	SL-344	TF-73	SSM-51
FLSR-3232M4	93413220	FL_-4R	32	32	170	7.37	38.10	SM-420	SL-344	TF-72	SSM-51
FLSL-3232M4	93313220	FL_-4L	32	32	170	7.37	38.10	SM-420	SL-344	TF-73	SSM-51
FLSR-3232M5	93413224	FL_-5R	32	32	170	10.16	38.10	-	-	TF-80	SM-352
FLSL-3232M5	93313224	FL_-5L	32	32	170	10.16	38.10	-	-	TF-81	SM-352
FLSR-3232M6	93413228	FL_-6R	32	32	170	7.37	38.10	SM-416	S-111	TF-120	SM-412
FLSL-3232M6	93313228	FL_-6L	32	32	170	7.37	38.10	SM-416	S-111	TF-121	SM-412

* "F" Dim. over sharp point of grooving insert.

EXTERNAL HOLDER (INCH)

FLER/L





RH SHOWN

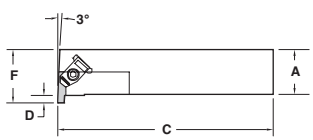
Coolant fed clamps available (See TF-CP clamps on page 49,50)

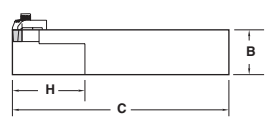
Description	EDP Code	Insert	A	B	C	D	F*	H	Clamp	Clamp Screw
FLER-82V	93100808V	FL_-2L	1/2	1/2	3-1/2	.14	.750	1	TF-75	S-310
FLER-122B	93101208B	FL_-2L	3/4	3/4	4-1/2	.14	1.000	1	TF-75	S-310
FLEL-122B	93001208B	FL_-2R	3/4	3/4	4-1/2	.14	1.000	1	TF-74	S-310
FLER-162C	93101608C	FL_-2L	1	1	5	.14	1.250	1	TF-75	S-310
FLEL-162C	93001608C	FL_-2R	1	1	5	.14	1.250	1	TF-74	S-310
FLER-123B	93101216B	FL_-3L	3/4	3/4	4-1/2	.21	1.125	2	TF-73	S-412
FLEL-123B	93001216B	FL_-3R	3/4	3/4	4-1/2	.21	1.125	2	TF-72	S-412
FLER-163D	93101616D	FL_-3L	1	1	6.000	.21	1.250	2	TF-73	S-412
FLEL-163D	93001616D	FL_-3R	1	1	6.000	.21	1.250	2	TF-72	S-412
FLER-203D	93102016D	FL_-3L	1-1/4	1-1/4	6.000	.21	1.500	2	TF-73	S-412
FLEL-203D	93002016D	FL_-3R	1-1/4	1-1/4	6.000	.21	1.500	2	TF-72	S-412
FLER-164D	93101620D	FL_-4L	1	1	6.000	.29	1.375	2	TF-73	S-412
FLEL-164D	93001620D	FL_-4R	1	1	6.000	.29	1.375	2	TF-72	S-412
FLER-204D	93102020D	FL_-4L	1-1/4	1-1/4	6.000	.29	1.625	2	TF-73	S-412
FLEL-204D	93002020D	FL_-4R	1-1/4	1-1/4	6.000	.29	1.625	2	TF-72	S-412
FLER-205D	93102024D	FL_-5L	1-1/4	1-1/4	6.000	.29	2.000	2	TF-81	S-352
FLEL-205D	93002024D	FL_-5R	1-1/4	1-1/4	6.000	.29	2.000	2	TF-80	S-352
FLER-206D	93102028D	FL_-6L	1-1/4	1-1/4	6.000	.29	1.625	2	TF-121	S-412
FLEL-206D	93002028D	FL_-6R	1-1/4	1-1/4	6.000	.29	1.625	2	TF-120	S-412

* C&F measured over sharp point of grooving insert

EXTERNAL HOLDER (METRIC)

FLER/L





RH SHOWN

Coolant fed clamps available (See TF-CP clamps on page 49,50)

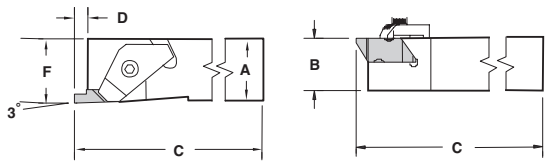
Description	EDP Code	Insert	A	B	C	D	F*	H	Clamp	Clamp Screw
FLER-1212M2V	931012M08V	FL_-2L	12	12	80	3.56	19.05	25.00	TF-75	SM-310
FLER-2020M2B	931012M08B	FL_-2L	20	20	125	3.56	25.40	25.00	TF-75	SM-310
FLEL-2020M2B	930020M08B	FL_-2R	20	20	125	3.56	25.40	25.00	TF-74	SM-310
FLER-2525M2C	931025M08C	FL_-2L	25	25	150	3.56	31.75	25.00	TF-75	SM-310
FLEL-2525M2C	930025M08C	FL_-2R	25	25	150	3.56	31.75	25.00	TF-74	SM-310
FLER-2020M3B	931020M16B	FL_-3L	20	20	125	5.33	28.58	50.80	TF-73	SSM-51
FLEL-2020M3B	930020M16B	FL_-3R	20	20	125	5.33	28.58	50.80	TF-72	SSM-51
FLER-2525M3D	931025M16D	FL_-3L	25	25	150	5.33	31.75	50.80	TF-73	SSM-51
FLEL-2525M3D	930025M16D	FL_-3R	25	25	150	5.33	31.75	50.80	TF-72	SSM-51
FLER-3232M3D	931032M16D	FL_-3L	32	32	170	5.33	38.10	50.80	TF-73	SSM-51
FLEL-3232M3D	930032M16D	FL_-3R	32	32	170	5.33	38.10	50.80	TF-72	SSM-51
FLER-2525M4D	931025M20D	FL_-4L	25	25	150	7.37	34.93	50.80	TF-73	SSM-51
FLEL-2525M4D	930025M20D	FL_-4R	25	25	150	7.37	34.93	50.80	TF-72	SSM-51
FLER-3232M4D	931032M20D	FL_-4L	32	32	170	7.37	41.28	50.80	TF-73	SSM-51
FLEL-3232M4D	930032M20D	FL_-4R	32	32	170	7.37	41.28	50.80	TF-72	SSM-51
FLER-3232M5D	931032M24D	FL_-5L	32	32	170	7.37	50.80	50.80	TF-81	SM-352
FLEL-3232M5D	930032M24D	FL_-5R	32	32	170	7.37	50.80	50.80	TF-80	SM-352
FLER-3232M6D	931032M28D	FL_-6L	32	32	170	7.37	41.28	50.80	TF-121	SSM-51
FLEL-3232M6D	930032M28D	FL_-6R	32	32	170	7.37	41.28	50.80	TF-120	SSM-51

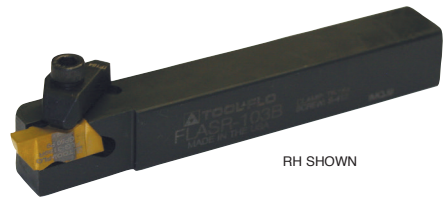
* C&F measured over sharp point of grooving insert

EXTERNAL HOLDER (INCH)

FLASR/L

Design for Swiss machines





Coolant fed clamps available (See TF-CP clamps on page 49,50)

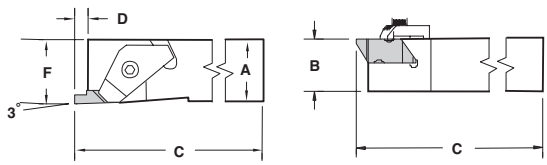
Description	EDP Code	Insert	A	B	C	D	F	Clamp	Clamp Screw
FLASR-062D	92900608D	FL_-2R	3/8	3/8	6	.138	.375	TF-182	S-310
FLASL-062D	92650608D	FL_-2L	3/8	3/8	6	.138	.375	TF-183	S-310
FLASR-082D	92900808D	FL_-2R	1/2	1/2	6	.138	.500	TF-182	S-310
FLASL-082D	92650808D	FL_-2L	1/2	1/2	6	.138	.500	TF-183	S-310
FLASR-102B	92901008B	FL_-2R	5/8	5/8	4-1/2	.138	.625	TF-184	S-412
FLASR-103B	92901016B	FL_-3R	5/8	5/8	4-1/2	.21	.625	TF-184	S-412
FLASL-103B	92891016B	FL_-3L	5/8	5/8	4-1/2	.21	.625	TF-185	S-412

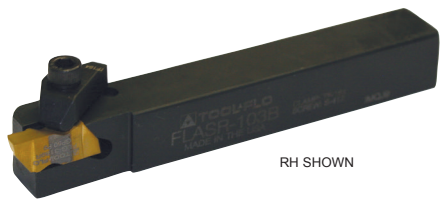
* "F" Dim. over sharp point of grooving insert.

EXTERNAL HOLDER (METRIC)

FLASR/L

Design for Swiss machines





Coolant fed clamps available (See TF-CP clamps on page 49,50)

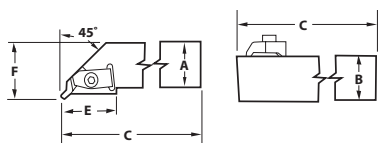
Description	EDP Code	Insert	A	B	C	D	F	Clamp	Clamp Screw
FLASR-1010M2D	92901010M08D	FL_-2R	10	10	150	3.51	9.53	TF-182	SM-310
FLASL-1010M2D	92651010M08D	FL_-2L	10	10	150	3.51	9.53	TF-183	SM-310
FLASR-1212M2D	92901212M08D	FL_-2R	12	12	150	3.51	12.70	TF-182	SM-310
FLASL-1212M2D	92651212M08D	FL_-2L	12	12	150	3.51	12.70	TF-183	SM-310
FLASR-1616M2B	92901616M08B	FL_-2R	16	16	125	3.51	15.88	TF-184	SSM-51
FLASL-1616M2B	92651616M08B	FL_-2R	16	16	125	3.51	15.88	TF-184	SSM-51
FLASR-1616M3B	9290616M16B	FL_-3R	16	16	125	5.33	15.88	TF-184	SSM-51
FLASL-1616M3B	9289616M16B	FL_-3L	16	16	125	5.33	15.88	TF-185	SSM-51

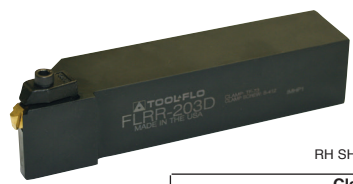
* "F" Dim. over sharp point of grooving insert.

EXTERNAL HOLDER (INCH)

FLRR/L

Undercutting





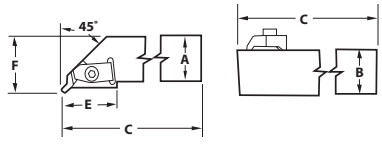
Coolant fed clamps available (See TF-CP clamps on page 49,50)

Description	EDP Code	Insert	A	B	C	E	F	Clamp	Clamp Screw
FLRR-123B	93201216B	FLU-3L	3/4	3/4	4-1/2	1-1/4	1.000	TF-73	S-412
FLRL-123B	93181216B	FLU-3R	3/4	3/4	4-1/2	1-1/4	1.000	TF-72	S-412
FLRR-163D	93201616D	FLU-3L	1	1	6	1-1/4	1.250	TF-73	S-412
FLRL-163D	93181616D	FLU-3R	1	1	6	1-1/4	1.250	TF-72	S-412
FLRR-203D	93202016D	FLU-3L	1-1/4	1-1/4	6	1-1/4	1.500	TF-73	S-412
FLRL-203D	93182016D	FLU-3R	1-1/4	1-1/4	6	1-1/4	1.500	TF-72	S-412

EXTERNAL HOLDER (METRIC)

FLRR/L

Undercutting



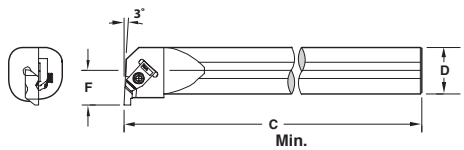
Coolant fed clamps available (See TF-CP clamps on page 49,50)

Description	EDP Code	Insert	A	B	C	E	F	Clamp	Clamp Screw
FLRR-2020M3B	932020M16B	FLU-3L	20	20	125	31.75	25.40	TF-73	SSM-51
FLRL-2020M3B	931820M16B	FLU-3R	20	20	125	31.75	25.40	TF-72	SSM-51
FLRR-2525M3D	932025M16D	FLU-3L	25	25	150	31.75	31.75	TF-73	SSM-51
FLRL-2525M3D	931825M16D	FLU-3R	25	25	150	31.75	31.75	TF-72	SSM-51
FLRR-3232M3D	932032M16D	FLU-3L	32	32	170	31.75	38.10	TF-73	SSM-51
FLRL-3232M3D	931832M16D	FLU-3R	32	32	170	31.75	38.10	TF-72	SSM-51

INTERNAL HOLDER (INCH)

A_-FLER/L

Threading and Grooving
Coolant hole



RH SHOWN

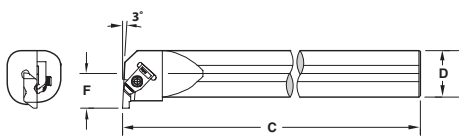
Description	EDP Code	Insert	Min. Bore	D	C	F	Clamp	Clamp Screw
A08-FLER2	96500808	FL-2L	.730	.500	8	.437	TF-147	S-39
A08-FLEL2	96400808	FL-2R	.730	.500	8	.437	TF-146	S-39
A10-FLER2	96501008	FL-2L	1.000	.625	10	.500	TF-75	S-310
A12-FLER2	96501208	FL-2L	1.125	.750	10	.562	TF-75	S-310
A12-FLEL2	96401208	FL-2R	1.125	.750	10	.562	TF-74	S-310
A16-FLER2	96501608	FL-2L	1.375	1.000	12	.688	TF-75	S-310
A16-FLEL2	96401608	FL-2R	1.375	1.000	12	.688	TF-74	S-310
A16-FLER3	96501616	FL-3L	1.375	1.000	12	.688	TF-73	S-412
A16-FLEL3	96401616	FL-3R	1.375	1.000	12	.688	TF-72	S-412
A20-FLER3	96502016	FL-3L	1.750	1.250	14	.875	TF-73	S-412
A20-FLEL3	96402016	FL-3R	1.750	1.250	14	.875	TF-72	S-412
A24-FLER3	96502416	FL-3L	2.000	1.500	14	1.000	TF-73	S-412
A24-FLEL3	96402416	FL-3R	2.000	1.500	14	1.000	TF-72	S-412
A28-FLER3	96502816	FL-3L	2.250	1.750	14	1.125	TF-73	S-412
A32-FLER3	96503216	FL-3L	2.500	2.000	16	1.250	TF-73	S-412
A32-FLEL3	96403216	FL-3R	2.500	2.000	16	1.250	TF-72	S-412
A28-FLER4	96502820	FL-4L	2.250	1.750	14	1.250	TF-73	S-412
A28-FLEL4	96402820	FL-4R	2.250	1.750	14	1.250	TF-72	S-412
A32-FLER4	96503220	FL-4L	2.750	2.000	16	1.296	TF-73	S-412
A32-FLEL4	96403220	FL-4R	2.750	2.000	16	1.296	TF-72	S-412
A32-FLER5	96503224	FL-5L	2.812	2.000	16	1.406	CM-81	S-352
A32-FLER6	96503228	FL-6L	2.750	2.000	16	1.375	CM-121	S-412

"F" and "C" Dim. over sharp point of grooving insert.

INTERNAL HOLDER (METRIC)

A_M-FLER/L

Threading and Grooving
Coolant hole



RH SHOWN

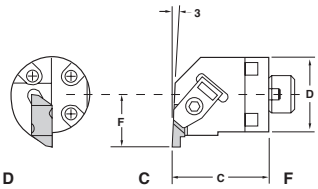
Description	EDP Code	Insert	Min. Bore	D	C	F	Clamp	Clamp Screw
A12M-FLER2	96441208	FL-2L	18.54	12	150	11.10	TF-147	SM-310
A12M-FLEL2	96451208	FL-2R	18.54	12	150	11.10	TF-146	SM-310
A16M-FLER2	96441608	FL-2L	25.40	16	250	12.70	TF-75	SM-310
A16M-FLEL2	96451608	FL-2R	25.40	16	250	12.70	TF-74	SM-310
A20M-FLER2	96442008	FL-2L	28.58	20	250	14.27	TF-75	SM-310
A20M-FLEL2	96452008	FL-2R	28.58	20	250	14.27	TF-74	SM-310
A25M-FLER2	96442508	FL-2L	34.93	25	300	17.48	TF-75	SM-310
A25M-FLEL2	96452508	FL-2R	34.93	25	300	17.48	TF-74	SM-310
A25M-FLER3	96442516	FL-3L	34.93	25	300	17.48	TF-73	SSM-51
A25M-FLEL3	96452516	FL-3R	34.93	25	300	17.48	TF-72	SSM-51
A32M-FLER3	96443216	FL-3L	44.45	32	350	22.23	TF-73	SSM-51
A32M-FLEL3	96453216	FL-3R	44.45	32	350	22.23	TF-72	SSM-51
A40M-FLER3	96444016	FL-3L	50.80	40	350	25.40	TF-73	SSM-51
A40M-FLEL3	96454016	FL-3R	50.80	40	350	25.40	TF-72	SSM-51
A50M-FLER3	96445016	FL-3L	63.50	50	400	31.75	TF-73	SSM-51
A50M-FLEL3	96455016	FL-3R	63.50	50	400	31.75	TF-72	SSM-51
A40M-FLER4	96444020	FL-4L	57.15	40	350	31.75	TF-73	SSM-51
A40M-FLEL4	96454020	FL-4R	57.15	40	350	31.75	TF-72	SSM-51
A50M-FLER4	96445020	FL-4L	69.85	50	400	32.92	TF-73	SSM-51
A50M-FLEL4	96455020	FL-4R	69.85	50	400	32.92	TF-72	SSM-51
A50M-FLER5	96445024	FL-5L	71.42	50	400	35.71	CM-81	SM-352
A50M-FLER6	96445028	FL-6L	69.85	50	400	34.93	CM-121	SSM-51

"F" and "C" Dim. over sharp point of grooving insert.

INTERCHANGEABLE HEADS

H-FLER

Threading and Grooving



RH SHOWN

Description	EDP Code	Insert	D	C	F	Min. Bore	PARTS Clamp	Clamp Screw
H20-FLER3W	93502016W	FL-3L	1-1/4	1.625	.875	1.750	TF-73	S-412
H24-FLER3W	93502416W	FL-3L	1-1/2	1.625	1.000	2.000	TF-73	S-412
H28-FLER3W	93502816W	FL-3L	1-3/4	1.625	1.125	2.250	TF-73	S-412
H32-FLER3W	93503216W	FL-3L	2	1.625	1.250	2.500	TF-73	S-412
H40-FLER3W	93504016W	FL-3L	2-1/2	1.625	1.500	3.000	TF-73	S-412
H28-FLER4W	93502820W	FL-4L	1-3/4	1.625	1.250	2.500	TF-73	S-412
H32-FLER4W	93503220W	FL-4L	2	1.625	1.375	2.750	TF-73	S-412
H36-FLER4W	93503620W	FL-4L	2-1/4	1.625	1.500	3.000	TF-73	S-412
H40-FLER4W	93504020W	FL-4L	2-1/2	1.625	1.625	3.250	TF-73	S-412
H28-FLER6W	93502828W	FL-6L	1-3/4	1.625	1.250	2.500	TF-121	S-412
H32-FLER6W	93503228W	FL-6L	2	1.625	1.375	2.750	TF-121	S-412
H40-FLER6W	93504028W	FL-6L	2-1/2	1.625	1.625	3.250	TF-121	S-412

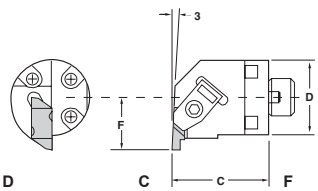
*Left hand quoted on request

INTERCHANGEABLE HEADS

H_M-FLER

Threading and Grooving

Inch



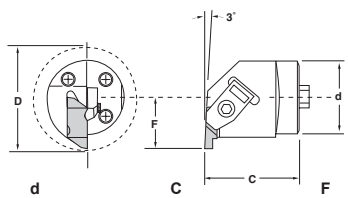
RH SHOWN

Description	EDP Code	Insert	D	C	F	Min. Bore	PARTS Clamp	Clamp Screw
H32M-FLER3W	935032M16W	FL-3L	32	40	22.23	44.45	TF-73	SSM-51
H40M-FLER3W	935040M16W	FL-3L	40	40	25.40	50.80	TF-73	SSM-51
H44M-FLER3W	935044M16W	FL-3L	44	40	28.58	57.15	TF-73	SSM-51
H50M-FLER3W	935050M16W	FL-3L	50	40	31.75	63.50	TF-73	SSM-51
H67M-FLER3W	935067M16W	FL-3L	67	40	38.10	76.20	TF-73	SSM-51
H40M-FLER4W	935040M20W	FL-4L	40	40	31.75	63.50	TF-73	SSM-51
H50M-FLER4W	935050M20W	FL-4L	50	40	34.93	69.85	TF-73	SSM-51
H60M-FLER4W	935060M20W	FL-4L	60	40	38.10	76.20	TF-73	SSM-51
H67M-FLER4W	935067M20W	FL-4L	67	40	41.28	82.55	TF-73	SSM-51
H40M-FLER6W	935040M28W	FL-6L	40	40	31.75	63.50	TF-121	SSM-51
H50M-FLER6W	935050M28W	FL-6L	50	40	34.93	69.85	TF-121	SSM-51
H67M-FLER6W	935067M28W	FL-6L	67	40	41.28	82.55	TF-121	SSM-51

*Left hand quoted on request

HS-FLEL/R*

Metric



RH SHOWN

Description	EDP Code	Insert	d	C	F	Min. Bore (D)	PARTS Clamp	Clamp Screw
HS32-FLER3W	9IHS65032M16	FL-3L	32	34.04	22.00	43.94	TF-73	SSM-51
HS40-FLER3W	9IHS65040M16	FL-3L	40	40.13	27.99	56.13	TF-73	SSM-51
HS50-FLER3W	9IHS65050M16	FL-3L	50	41.91	35.05	70.10	TF-73	SSM-51
HS60-FLER3W	9IHS65060M16	FL-3L	60	44.45	44.20	88.39	TF-73	SSM-51
HS50-FLER4W	9IHS65050M20	FL-4L	50	41.91	35.05	70.10	TF-73	SSM-51
HS60-FLER4W	9IHS65060M20	FL-4L	60	44.45	44.20	88.39	TF-73	SSM-51

*Left hand quoted on request.
570 Connection style

Flo-Lock Series Kits

SAVE!
Buy in Kits

THREADING KITS (Inch)

V-THREADING
KIT #1A

Kit Contents

1	FLSR-163D
4	FLT-3R-HCB GP50
1	S-412 SCREW

V-THREADING
KIT #1B

Kit Contents

1	FLSR-163D
4	FLT-3R-HCB GP3
1	S-412 SCREW

V-THREADING
KIT #2A

Kit Contents

1	FLSR-163D
4	FLT-3R-HCB AC50
1	S-412 SCREW

V-THREADING
KIT #2B

Kit Contents

1	FLSR-163D
4	FLT-3R-HCB AC22
1	S-412 SCREW

THREADING KITS (Metric)

V-THREADING
KIT #1MA

Kit Contents

1	FLSR-2525M3D
4	FLT-3R-HCB GP50
1	SSM51 SCREW

V-THREADING
KIT #1MB

Kit Contents

1	FLSR-2525M3D
4	FLT-3R-HCB GP3
1	SSM51 SCREW

V-THREADING
KIT #2MA

Kit Contents

1	FLSR-2525M3D
4	FLT-3R-HCB AC50
1	SSM51 SCREW

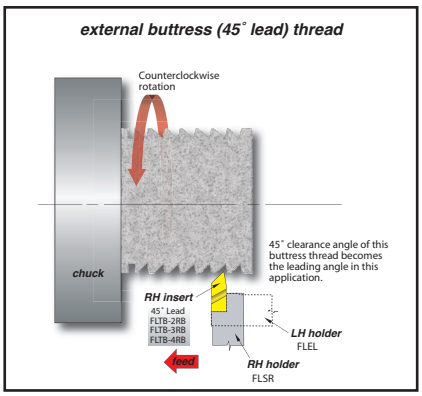
V-THREADING
KIT #2MB

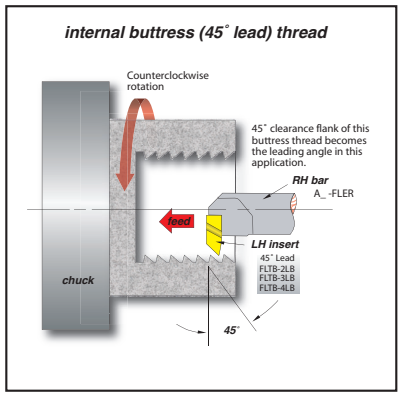
Kit Contents

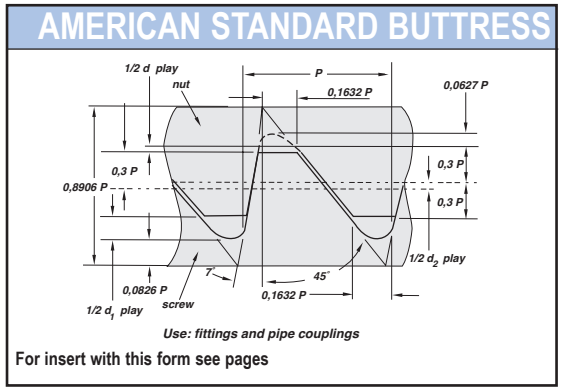
1	FLSR-2525M3D
4	FLT-3R-HCB AC22
1	SSM51 SCREW

American Standard Buttress Thread Designations

- When only the designation BUTT is used, the thread is a “pull” type buttress (external thread pulls) with the clearance flank (45˚) leading and the pressure flank (7˚) following.
- When the designation PUSH-BUTT is used, the thread is a push type buttress (external thread pushes) with the load flank (7˚) leading and the 45˚ clearance flank following.
- Whenever possible this description should be confirmed by a simplified view showing thread angles on the drawing of the product that has the buttress thread.
- Always remember that the position of your holder and direction of your feed will determine the lead angle on the insert.

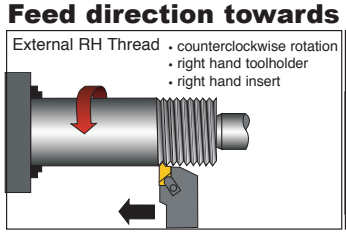


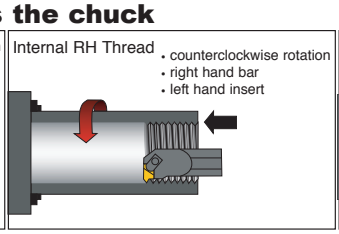


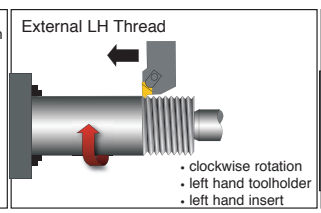


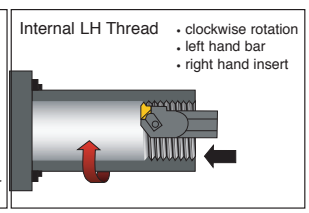
For insert with this form see pages

Feed direction towards the chuck

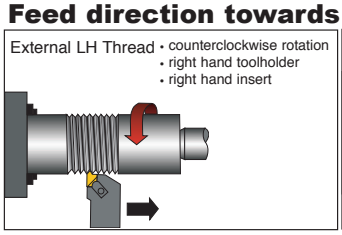


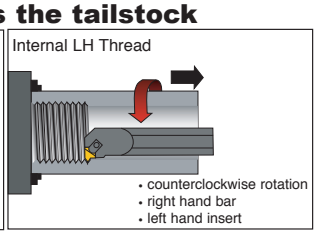


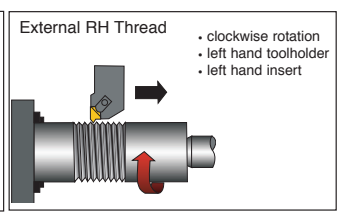


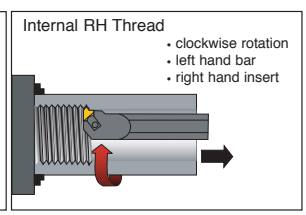


Feed direction towards the tailstock









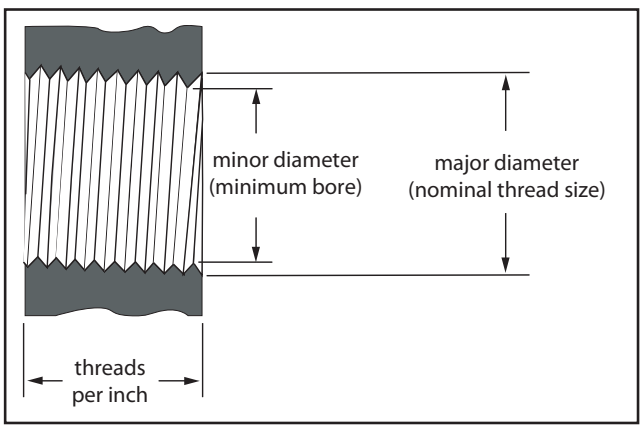
Threading Limits with Standard Flo-Lock Inserts - INCH (METRIC)

The following charts list the largest pitch that can be applied on internal applications for Acme and V-Threading Flo-Lock inserts in sizes 2,3, 4 and 6. For Buttress threads, please see previous page.

60˚ V-Threading Limits

FLT-2 Inserts	internal threading limitations	
threads per inch	nominal thread size	minimum minor diameter
6	1-7/8	1.695 (43.05)
7	1-3/4	1.595 (40.51)
8	1-5/8	1.490 (37.84)
9	1-9/16	1.442 (36.62)
10	1-1/2	1.392 (35.35)
11	1-7/16	1.339 (34.01)
12	1-3/8	1.285 (32.63)
13	1-5/16	1.229 (31.21)
14	1-1/4	1.173 (29.79)
16	1-1/4	1.182 (30.02)
18	1-1/8	1.065 (27.05)
20	1-1/8	1.071 (27.20)
24	1-1/16	1.017 (25.83)

* 24 TPI and finer can be cut with a #2 series inseret provided thart the minor diameter is 1.000 or larger.



FLT-3 & 4 Inserts	internal threading limitations	
threads per inch	nominal thread size	minimum minor diameter
4**	3	2.729 (69.31)
4-1/2**	2-7/8	2.634 (66.90)
5	2-3/4	2.534 (64.36)
6	2-1/2	2.320 (58.92)
7	2-1/4	2.095 (53.21)
8	2	1.865 (47.37)
9	1-15/16	1.817 (46.15)
10	1-7/8	1.767 (44.88)
11	1-13/16	1.714 (43.53)
12	1-3/4	1.660 (42.16)
13	1-5/8	1.542 (39.16)
14	1-9/16	1.485 (37.71)
16*	1-7/16	1.370 (34.79)

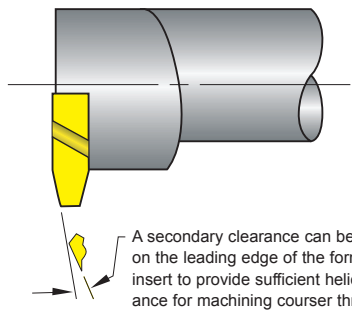
*16 pitch V threads and finer can be cut provided the minor diameter is 1.370 (34.79) or larger.

**FLT-4 only.

Acme Threading Limits

FLA-2	internal threading limitations	
threads per inch	nominal thread size	minimum minor diameter
6	2-1/2	2.333 (59.25)
8	2-1/4	2.125 (53.97)
10	2	1.900 (48.26)
12	1-3/4	1.667 (42.34)
14	1-5/8	1.554 (39.47)
16*	1-1/2	1.438 (36.52)

*16 pitch acme threads and finer can be cut provided the minor diameter is 1.438 (36.52) or larger.



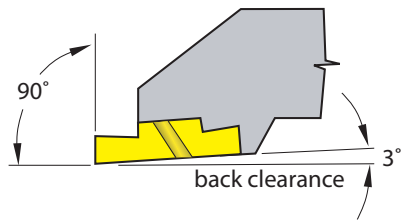
A secondary clearance can be ground on the leading edge of the form of the insert to provide sufficient helical clearance for machining courser threads and multiple start threads.

Modified standard inserts may be produced for special threads or ones not listed on the charts shown. Quoted upon request.

FLA-3, 4 & 6	internal threading limitations	
threads per inch	nominal thread size	minimum minor diameter
2**	5	4.500(114.30)
2-1/2**	4-1/2	4.100 (104.14)
3**	4	3.665 (93.09)
4	3-1/2	3.250 (82.55)
5	3	2.800 (71.12)
6	2-1/2	2.333 (59.25)
8	2-1/4	2.125 (53.97)
10	2	1.900 (48.26)
12	1-3/4	1.667 (42.34)
14	1-5/8	1.554 (39.47)
16*	1-1/2	1.438 (36.52)

*16 pitch acme threads and finer can be cut provided the minor diameter is 1.438 or larger.
**FLA-6 only.

NOTE: Positive rake acme inserts are recommended for stainless steels and high-temp alloy applications. Quoted upon request.



NOTE: Tool holders are designed to locate the insert at a 3˚ angle to provide back clearance down the side.

FLTB-2A & 2B	internal threading limitations	
threads per inch	nominal thread size	minimum minor diameter
8	1-3/4	1.600 (40.64)
10	1-5/8	1.505 (38.22)
12	1-1/2	1.400 (35.56)
16	1-1/4	1.175 (29.84)
20	1-1/16	1.002 (25.45)

FLTB-3A & 4A	internal threading limitations	
threads per inch	nominal thread size	minimum minor diameter
4*	2-1/2	2.200 (58.88)
5	2-1/4	2.010 (51.05)
6	2	1.800 (45.72)
8	1-3/4	1.600 (40.64)
10	1-5/8	1.505 (38.22)
12**	1-1/2	1.400 (35.56)

* FLTB-4A insert only
** Sixteen or 20 threads per inch can be cut providing minor diameter is 1.375 or larger.

FLTB-3B & 4B	internal threading limitations	
threads per inch	nominal thread size	minimum minor diameter
4	*2-7/8	2.575 (65.40)
5	2-3/4	2.510 (63.75)
6	2-3/8	2.175 (55.24)
8	2-1/8	1.975 (50.16)
10	1-7/8	1.755 (44.57)
12	1-5/8	1.525 (38.73)
16	1-1/2	1.407 (35.73)
20	1-7/16	1.378 (35.00)

* FLTB-4B insert only

Coolant-Fed Clamps

Patent pending

Can be used with low pressure or high pressure coolant (rated up to 1500 psi)

- *Available for #2, 3 & 4 Flo-Lock right and left hand inserts*
- *Fits other brand's standard holders*
- *Available in 6 and 12 pack quantities for an added cost savings!*

Use Your Existing Holders!

Simply replace the top clamp on your standard holder.

6mm High Pressure Coolant Kit

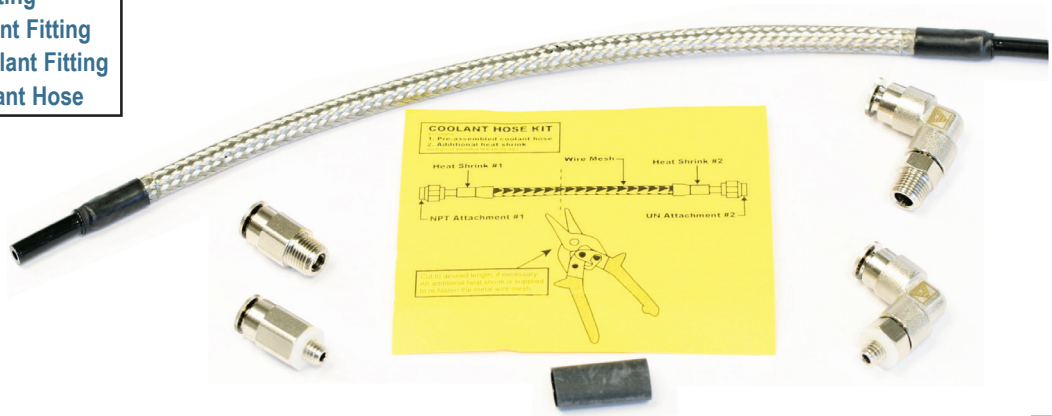
6MM COOLANT KIT HIGH PRESSURE

EDP code: 9HCPKIT6MHP

Kit comes complete with:

1 pc	M6X1 Elbow Coolant Fitting
1 pc	M6x1 Straight Coolant Fitting
1 pc	.125 (1/8")x1 Elbow Coolant Fitting
1 pc	.125 (1/8")x1 Straight Coolant Fitting
1 pc	6mm High Pressure Coolant Hose

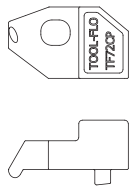
Clamp not included. Sold separately.



Coolant Fed Clamps

For FLSR/L and FLASR holders

TF-CP



TF72CP shown

Clamp	EDP Code	Toolholder	Insert
TF72CP	9HTF72CP	FLSR-__3/4	FL_-3R/4R
TF73CP	9HTF73CP	FLSL-__3/4	FL_-3L/4L
TF74CP	9HTF74CP	FLSR-__2	FL_-2R
TF75CP	9HTF75CP	FLSL-__2	FL_-2L
TF182CP	9HTF182CP	FLASR-__2	FL_-2R
TF184CP	9HTF183CP	FLASR-__3	FL_-3R

Fittings

6mm & 1/8”

M6 x 1 elbow
(Connection to machine)

M6 x 1 straight
(Connection to machine)

1/8” (.125) NPT elbow
(Connection to clamp)

1/8” (.125) NPT straight
(Connection to clamp)

Description	EDP Code	Fitting/Thread size
M6X1 ELBOW COOLANT FITTING	9HCPM6X190	6mm x 1.0 (Connection to machine)
M6X1 STRAIGHT COOLANT FITTING	9HCPM6X1	6mm x 1.0 (Connection to machine)
1/8” NPT ELBOW COOLANT FITTING	9HCP12590NPT	1/8” (.125) x 27 NPT (Connection to clamp)
1/8” NPT STRAIGHT COOLANT FITTING	9HCP125NPT	1/8” (.125) x 27 NPT (Connection to clamp)

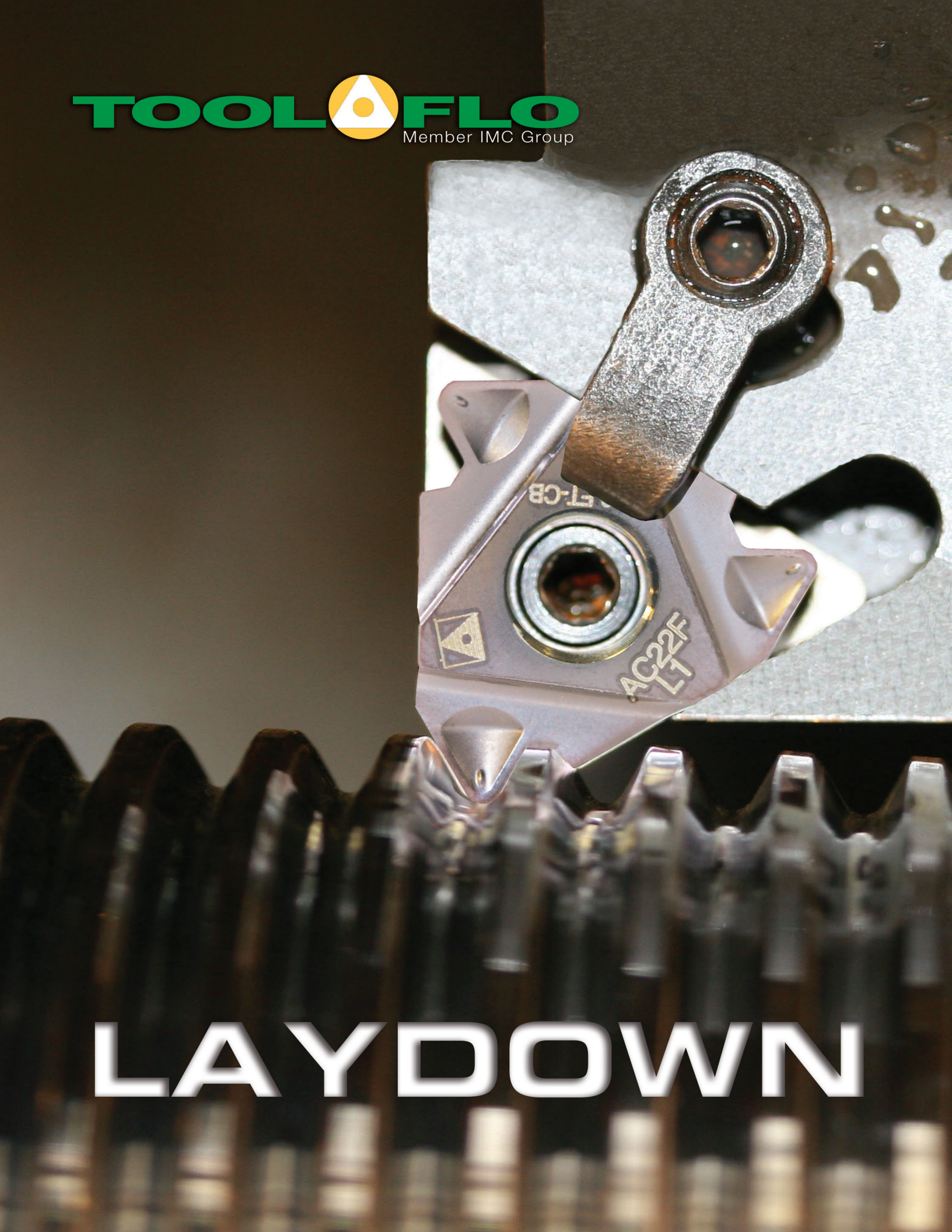
High Pressure Coolant Hose

6mm

Comes with extra shrink fit in case the hose needs to be shortened.

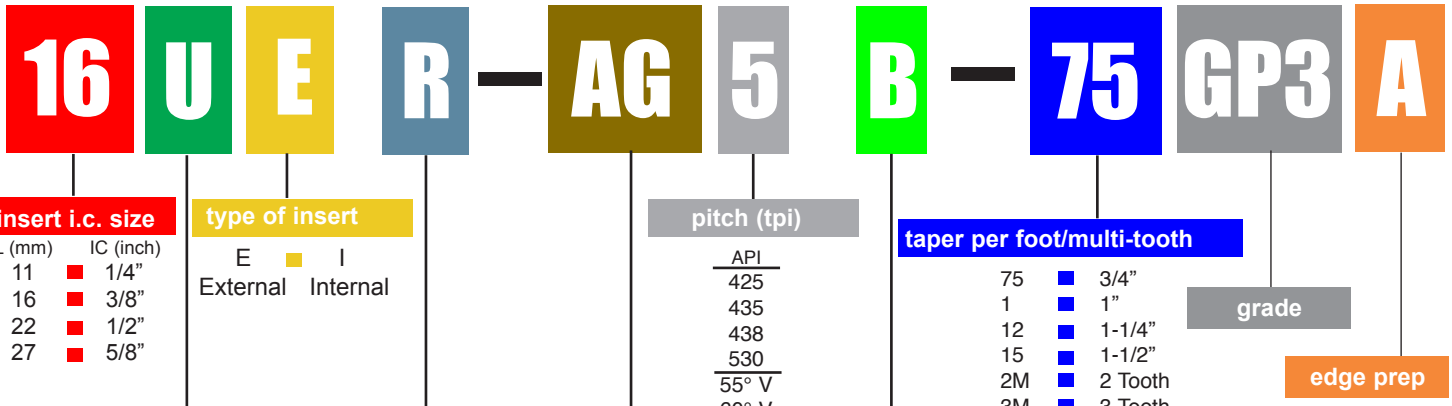
Description	EDP Code	Size	Length
6MM HIGH PRESSURE COOLANT HOSE	9HCP6MHOSEHP	6mm	12”

TOOLFLO
Member IMC Group



LAYDOWN

LT Style Laydown Insert Nomenclature Chart



insert i.c. size

L (mm)	IC (inch)
11	1/4”
16	3/8”
22	1/2”
27	5/8”

type of insert

E External I Internal

hand of insert

L Left
R Right

insert style

U

Z

insert groove/threadform

A	Non-Topping V-Thread (Ultra Fine)
AG	Non-Topping V-Thread (Fine)
G	Non-Topping V-Thread (Medium)
N	Non-Topping V-Thread (Coarse)
NG	Non-Topping Groover

pitch (tpi)

API
425
435
438
530

55° V
60° V

thread type

ACME	Acme-PT (Partial Topping)
B	Buttress Thread
BSPT	British Std Pipe Thread
ISO	ISO Thread
NPT	National Pipe Thread
NPTF	National Pipe Thread (Dry Seal)
PA	Pittsburgh Acme
RD	API Round Thread
STACME	Stub Acme
TR	Trapezoidal Thread
UN	Unified Thread
UNF	Unified Thread
VAM	VAM Thread
VO.055	NC Conn. Thread
W	Witworth (BSW) Thread
XL	X-Line Thread

taper per foot/multi-tooth

75	3/4”
1	1”
12	1-1/4”
15	1-1/2”
2M	2 Tooth
3M	3 Tooth
2Z	2 Tooth

grade

edge prep

External Toolholder Nomenclature Chart

A - anvil required

L - External

shank width

.375
.500
.625
.750
1.00
1.25

insert size

2	1/4”
3	3/8”
4	1/2”
5	5/8”

hand of insert

L Left
R Right

Internal Bar Nomenclature Chart

A - anvil required

N - no anvil used

Internal Round Shank

shank diameter

.375
.500
.625
.750
1.00
1.25
1.50
2.00

insert size

2	IC 1/4”
3	IC 3/8”
4	IC 1/2”
5	IC 5/8”

hand of insert

L Left
R Right

style of insert

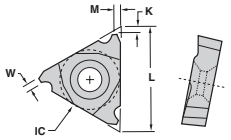
M
U
Z

material

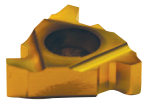
C	Carbide
HM	Heavy Metal

LAYDOWN

ACME

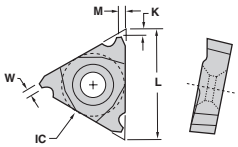


INT RH SHOWN
EXT OPPOSITE

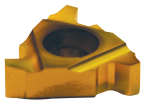


Description	EDP Code	TPI	W	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
16ER 16ACME-PT	5006216PT	16	.0206 (0.52)	3/8	.63 (16.00)	.04 (1.0)	.03 (0.9)		●	●		
16EL 16ACME-PT	5046216PT	16	.0206 (0.52)	3/8	.63 (16.00)	.04 (1.0)	.03 (0.9)	●				
16ER 14ACME-PT	5006214PT	14	.0239 (0.60)	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)		●			
16EL 14ACME-PT	5046214PT	14	.0239 (0.60)	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)	●				
16ER 12ACME-PT	5006212PT	12	.0283 (0.71)	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)		●			
16EL 12ACME-PT	5046212PT	12	.0283 (0.71)	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)	●				
16ER 10ACME-PT	5006210PT	10	.0319 (0.81)	3/8	.63 (16.00)	.05 (1.2)	.05 (1.2)		●	●		
16EL 10ACME-PT	5046210PT	10	.0319 (0.81)	3/8	.63 (16.00)	.05 (1.2)	.05 (1.2)	●				
16ER 8ACME-PT	5006208PT	8	.0411 (1.04)	3/8	.63 (16.00)	.06 (1.5)	.06 (1.5)	●	●	●		
16EL 8ACME-PT	5046208PT	8	.0411 (1.04)	3/8	.63 (16.00)	.06 (1.5)	.06 (1.5)	●				
22ER 6ACME-PT	5106206PT	6	.0566 (1.43)	1/2	.87 (22.00)	.08 (2.1)	.07 (1.8)		●	●		
22EL 6ACME-PT	5146206PT	6	.0566 (1.43)	1/2	.87 (22.00)	.08 (2.1)	.07 (1.8)		●			
22ER 5ACME-PT	5106205PT	5	.0689 (1.75)	1/2	.87 (22.00)	.09 (2.3)	.08 (2.0)		●			●
22EL 5ACME-PT	5146205PT	5	.0689 (1.75)	1/2	.87 (22.00)	.09 (2.3)	.08 (2.0)		●			
27ER 4ACME-PT	5206204PT	4	.0875 (2.22)	5/8	1.06 (27.00)	.10 (2.7)	.09 (2.3)	●	●			
27EL 4ACME-PT	5246204PT	4	.0875 (2.22)	5/8	1.06 (27.00)	.10 (2.7)	.09 (2.3)		●			
16IR 16ACME-PT	5026216PT	16	.0206 (0.52)	3/8	.63 (16.00)	.04 (1.0)	.03 (0.9)		●	●		
16IL 16ACME-PT	5066216PT	16	.0206 (0.52)	3/8	.63 (16.00)	.04 (1.0)	.03 (0.9)			●		
16IR 14ACME-PT	5026214PT	14	.0239 (0.60)	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)		●			
16IL 14ACME-PT	5066214PT	14	.0239 (0.60)	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)			●		
16IR 12ACME-PT	5026212PT	12	.0283 (0.71)	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)		●			
16IL 12ACME-PT	5066212PT	12	.0283 (0.71)	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)	●				
16IR 10ACME-PT	5026210PT	10	.0319 (0.81)	3/8	.63 (16.00)	.05 (1.2)	.05 (1.2)		●	●		
16IL 10ACME-PT	5066210PT	10	.0319 (0.81)	3/8	.63 (16.00)	.05 (1.2)	.05 (1.2)	●				
16IR 8ACME-PT	5026208PT	8	.0411 (1.04)	3/8	.63 (16.00)	.06 (1.5)	.06 (1.5)		●	●		
16IL 8ACME-PT	5066208PT	8	.0411 (1.04)	3/8	.63 (16.00)	.06 (1.5)	.06 (1.5)		●			
22IR 8ACME-PT	5126208PT	8	.0411 (1.04)	1/2	.87 (22.00)	.08 (2.1)	.08 (2.1)		●			
22IR 6ACME-PT	5126206PT	6	.0566 (1.43)	1/2	.87 (22.00)	.08 (2.1)	.07 (1.8)		●	●		
22IL 6ACME-PT	5166206PT	6	.0566 (1.43)	1/2	.87 (22.00)	.08 (2.1)	.07 (1.8)		●			
22IR 5ACME-PT	5126205PT	5	.0689 (1.75)	1/2	.87 (22.00)	.09 (2.3)	.08 (2.0)		●			●
22IL 5ACME-PT	5166205PT	5	.0689 (1.75)	1/2	.87 (22.00)	.09 (2.3)	.08 (2.0)		●			
27IR 4ACME-PT	5226204PT	4	.0875 (2.22)	5/8	1.06 (27.00)	.10 (2.7)	.09 (2.3)	●	●			
27IL 4ACME-PT	5266204PT	4	.0875 (2.22)	5/8	1.06 (27.00)	.10 (2.7)	.09 (2.3)	●				

ACME STUB



INT RH SHOWN
EXT OPPOSITE



Description	EDP Code	TPI	W	IC	L	M	K	GP22	GP50	AC22	AC3	AC50
16ER 16STACME-PT	5006416PT	16	.0238 (0.60)	3/8	.63 (16.00)	.04 (1.0)	.03 (0.9)		●	●		
16EL 16STACME-PT	5046416PT	16	.0238 (0.60)	3/8	.63 (16.00)	.04 (1.0)	.03 (0.9)	●				
16ER 14STACME-PT	5006414PT	14	.0276 (0.70)	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)		●	●		
16EL 14STACME-PT	5046414PT	14	.0276 (0.70)	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)	●				
16ER 12STACME-PT	5006412PT	12	.0326 (0.82)	3/8	.63 (16.00)	.05 (1.2)	.05 (1.2)		●	●		
16EL 12STACME-PT	5046412PT	12	.0326 (0.82)	3/8	.63 (16.00)	.05 (1.2)	.05 (1.2)	●				
16ER 10STACME-PT	5006410PT	10	.0370 (0.93)	3/8	.63 (16.00)	.05 (1.2)	.05 (1.2)	●				
16EL 10STACME-PT	5046410PT	10	.0370 (0.93)	3/8	.63 (16.00)	.05 (1.2)	.05 (1.2)	●				
16ER 8STACME-PT	5006408PT	8	.0476 (1.20)	3/8	.63 (16.00)	.06 (1.5)	.06 (1.5)		●	●		
16EL 8STACME-PT	5046408PT	8	.0476 (1.20)	3/8	.63 (16.00)	.06 (1.5)	.06 (1.5)	●				
22ER 6STACME-PT	5106406PT	6	.0652 (1.65)	1/2	.87 (22.00)	.08 (2.1)	.07 (1.8)		●	●		
22EL 6STACME-PT	5146406PT	6	.0652 (1.65)	1/2	.87 (22.00)	.08 (2.1)	.07 (1.8)		●			
22ER 5STACME-PT	5106405PT	5	.0793 (2.01)	1/2	.87 (22.00)	.09 (2.3)	.08 (2.0)		●			
22EL 5STACME-PT	5146405PT	5	.0793 (2.01)	1/2	.87 (22.00)	.09 (2.3)	.08 (2.0)			●		
27ER 4STACME-PT	5206404PT	4	.1004 (2.55)	5/8	1.06 (27.00)	.10 (2.7)	.09 (2.3)		●	●		
27EL 4STACME-PT	5246404PT	4	.1004 (2.55)	5/8	1.06 (27.00)	.10 (2.7)	.09 (2.3)		●			
16IR 16STACME-PT	5026416PT	16	.0238 (0.60)	3/8	.63 (16.00)	.04 (1.0)	.03 (0.9)		●	●		
16IL 16STACME-PT	5066416PT	16	.0238 (0.60)	3/8	.63 (16.00)	.04 (1.0)	.03 (0.9)			●		
16IR 14STACME-PT	5026414PT	14	.0276 (0.70)	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)		●	●		
16IL 14STACME-PT	5066414PT	14	.0276 (0.70)	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)		●			
16IR 12STACME-PT	5026412PT	12	.0326 (0.82)	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)		●	●		
16IL 12STACME-PT	5066412PT	12	.0326 (0.82)	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)		●			
16IR 10STACME-PT	5026410PT	10	.0370 (0.93)	3/8	.63 (16.00)	.05 (1.2)	.05 (1.2)		●	●		
16IL 10STACME-PT	5066410PT	10	.0370 (0.93)	3/8	.63 (16.00)	.05 (1.2)	.05 (1.2)			●		
16IR 8STACME-PT	5026408PT	8	.0476 (1.20)	3/8	.63 (16.00)	.06 (1.5)	.06 (1.5)	●		●		
16IL 8STACME-PT	5066408PT	8	.0476 (1.20)	3/8	.63 (16.00)	.06 (1.5)	.06 (1.5)		●			
22IR 8STACME-PT	5122500PT	8	.0476 (1.20)	1/2	.87 (22.00)	.08 (2.1)	.07 (1.8)		●			
22IR 6STACME-PT	5126406PT	6	.0652 (1.65)	1/2	.87 (22.00)	.08 (2.1)	.07 (1.8)		●	●		
22IL 6STACME-PT	5166406PT	6	.0652 (1.65)	1/2	.87 (22.00)	.08 (2.1)	.07 (1.8)			●		
22IR 5STACME-PT	5126405PT	5	.0793 (2.01)	1/2	.87 (22.00)	.09 (2.3)	.08 (2.0)		●	●		
22IL 5STACME-PT	5166405PT	5	.0793 (2.01)	1/2	.87 (22.00)	.09 (2.3)	.08 (2.0)			●		
27IR 4STACME-PT	5226404PT	4	.1004 (2.55)	5/8	1.06 (27.00)	.10 (2.7)	.09 (2.3)		●	●		
27IL 4STACME-PT	5266404PT	4	.1004 (2.55)	5/8	1.06 (27.00)	.10 (2.7)	.09 (2.3)		●			

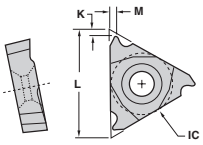
In an effort to improve our stock standard grade offering, there are periodic changes.
Please see current price list for up to date grade offering.

● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

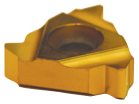
	GP22	GP50	AC22	AC3	AC50
Cast Iron	▲		●	●	
Non-Ferrous	▲		●	●	
Stainless/High Temp	▲		●	●	
Steel		▲			●

AMERICAN BUTTRESS

45˚ Lead

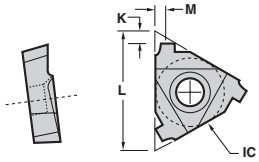


EXT RH SHOWN
INT OPPOSITE



Description	EDP Code	TPI	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
11IR 20ABUT	4928020	20	1/4	.43 (11.00)	.05 (1.3)	.04 (1.0)			●		
11IR 16ABUT	4928016	16	1/4	.43 (11.00)	.06 (1.5)	.04 (1.0)			●		
11IL 16ABUT	5018016	16	1/4	.43 (11.00)	.06 (1.5)	.04 (1.0)		●			
16ER 20ABUT	5008520	20	3/8	.63 (16.00)	.04 (1.1)	.04 (1.1)			●		
16ER 16ABUT	5008016	16	3/8	.63 (16.00)	.04 (1.1)	.04 (1.1)	●		●		
16EL 16ABUT	5048016	16	3/8	.63 (16.00)	.04 (1.1)	.04 (1.1)		●	●		
16ER 12ABUT	5006212	12	3/8	.63 (16.00)	.05 (1.4)	.05 (1.4)	●		●		
16EL 12ABUT	5048012	12	3/8	.63 (16.00)	.05 (1.4)	.05 (1.4)			●		
16ER 10ABUT	5006210	10	3/8	.63 (16.00)	.09 (2.3)	.06 (1.5)	●				
16EL 10ABUT	5048010	10	3/8	.63 (16.00)	.09 (2.3)	.06 (1.5)			●		
16IR 20ABUT	5048020	20	3/8	.63 (16.00)	.04 (1.1)	.04 (1.1)			●		
16IR 16ABUT	5026216	16	3/8	.63 (16.00)	.04 (1.1)	.04 (1.1)	●				
16IL 16ABUT	5068016	16	3/8	.63 (16.00)	.04 (1.1)	.04 (1.1)	●		●		
16IR 12ABUT	5028012	12	3/8	.63 (16.00)	.05 (1.4)	.05 (1.4)	●		●		
16IL 12ABUT	5066212	12	3/8	.63 (16.00)	.05 (1.4)	.05 (1.4)	●				
16IR 10ABUT	5028010	10	3/8	.63 (16.00)	.09 (2.3)	.06 (1.5)	●		●		
16IL 10ABUT	5068010	10	3/8	.63 (16.00)	.09 (2.3)	.06 (1.5)	●		●		
22ER 8ABUT	5108008	8	1/2	.87 (22.00)	.13 (3.3)	.08 (2.1)	●		●		
22ER 6ABUT	5106206	6	1/2	.87 (22.00)	.14 (3.4)	.08 (2.1)	●				
22IR 8ABUT	5126208	8	1/2	.87 (22.00)	.13 (3.3)	.08 (2.1)	●				
22IR 6ABUT	5126206	6	1/2	.87 (22.00)	.14 (3.4)	.08 (2.1)	●				

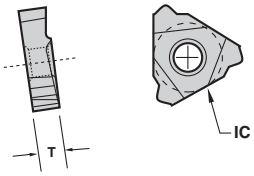
API BUTTRESS



EXT SHOWN
INT OPPOSITE

Description	EDP Code	TPI	TPF	IC	L	M	K	Conn. No.	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
22ER 8B75	5102100	8	3/4	1/2	.87 (22.00)	.102 (2.60)	.073 (1.85)	U.S. Improved Buttress		●			
22ER 5B75	5101600	5	3/4	1/2	.87 (22.00)	.087 (2.20)	.087 (2.20)	4-1/2 - 13-3/8	●	●	●		●
22ER 5B1	5101700	5	1	1/2	.87 (22.00)	.095 (2.41)	.087 (2.20)	16 and larger	●	●	●		
22IR 8B75	5122100	8	3/4	1/2	.87 (22.00)	.102 (2.60)	.073 (1.85)	U.S. Improved Buttress			●		
22IR 5B75	5121600	5	3/4	1/2	.87 (22.00)	.081 (2.05)	.087 (2.20)	4-1/2 - 13-3/8	●	●	●		●
22IR 5B1	5121700	5	1	1/2	.87 (22.00)	.081 (2.05)	.090 (2.28)	16 and larger		●	●		

API HUGHES H90



EXT SHOWN
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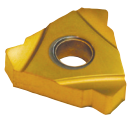
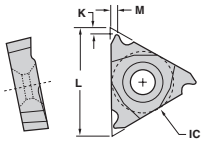
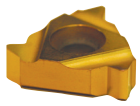


Description	EDP Code	TPI	TPF	IC	T	Conn. No.	TiN Coated GP22	TiN Coated GP50	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
27ER H902	5202900	3-1/2	2	5/8	.189 (4.80)	3-1/2 - 6-5/8 H90		●				
27ER H903	5205400	3-1/2	3	5/8	.189 (4.80)	7 - 8-5/8 H90		●				
27IR H902	5222900	3-1/2	2	5/8	.189 (4.80)	3-1/2 - 6-5/8 H90		●				
27IR H903	5225400	3-1/2	3	5/8	.189 (4.80)	7 - 8-5/8 H90		●				

API ROTARY SHOULDER CONNECTION



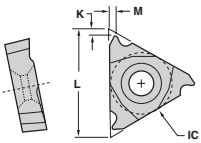
EXT RH SHOWN
INT OPPOSITE



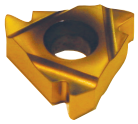
Description	EDP Code	TPI	TPF	IC	L	M	K	Conn. No.	TiN Coated: GP22	TiN Coated: GP50	AlTiN Coated: AC22	AlTiN Coated: AC50	AlTiN Coated: ZA3
22ER 530	5101300	5	3	1/2	.87 (22.00)	.10 (2.54)	.08 (2.03)	3-1/2FH, 2-3/8, 4-1/2 Reg.		●	●	●	
22EL 530	5146205	5	3	1/2	.87 (22.00)	.10 (2.54)	.08 (2.03)	3-1/2FH, 2-3/8, 4-1/2 Reg.		●			
22ER 4PAC	5101500	4	1-1/2	1/2	.87 (22.00)	.11 (2.79)	.08 (2.03)	American Open Hole	●	●	●		
22ER 438	5101200	4	3	1/2	.87 (22.00)	.11 (2.79)	.11 (2.79)	NC56 - NC71		●	●	●	
22EL 438	5144205	4	3	1/2	.87 (22.00)	.11 (2.79)	.11 (2.79)	NC56 - NC71		●			
22ER 435	5101100	4	3	1/2	.87 (22.00)	.11 (2.79)	.08 (2.03)	5-1/2, 7-5/8, 8-5/8 Reg.		●	●	●	
22EL 435	5141200	4	3	1/2	.87 (22.00)	.11 (2.79)	.08 (2.03)	5-1/2, 7-5/8, 8-5/8 Reg.		●			
22ER 42F*	5101400	4	2	1/2	.87 (22.00)	.11 (2.79)	.08 (2.03)	VO.065*			●		
22ER 428	5101000	4	2	1/2	.87 (22.00)	.10 (2.54)	.08 (2.03)	NC23-NC50, 2-3/8 - 5-1/2IF		●	●	●	
22EL 428	5141100	4	2	1/2	.87 (22.00)	.10 (2.54)	.08 (2.03)	NC23-NC50, 2-3/8 - 5-1/2IF		●			
22ER 425	5100900	4	2	1/2	.87 (22.00)	.10 (2.54)	.08 (2.03)	5-1/2, 6-5/8FH, 6-5/8 Reg.	●	●	●	●	
22EL 425	5141000	4	2	1/2	.87 (22.00)	.10 (2.54)	.08 (2.03)	5-1/2, 6-5/8FH, 6-5/8 Reg.		●			
22IR 530	5121300	5	3	1/2	.87 (22.00)	.10 (2.54)	.08 (2.03)	3-1/2FH, 2-3/8, 4-1/2 Reg.	●	●	●	●	
22IL 530	5166205	5	3	1/2	.87 (22.00)	.10 (2.54)	.08 (2.03)	3-1/2FH, 2-3/8, 4-1/2 Reg.		●			
22IR 4PAC	5121500	4	1-1/2	1/2	.87 (22.00)	.11 (2.79)	.08 (2.03)	American Open Hole		●	●		
22IR 438	5121200	4	3	1/2	.87 (22.00)	.11 (2.79)	.11 (2.79)	NC56 - NC71		●	●	●	
22IL 438	5164205	4	3	1/2	.87 (22.00)	.11 (2.79)	.11 (2.79)	NC56 - NC71		●			
22IR 435	5121100	4	3	1/2	.87 (22.00)	.11 (2.79)	.08 (2.03)	5-1/2, 7-5/8, 8-5/8 Reg.		●	●	●	
22IL 435	5161200	4	3	1/2	.87 (22.00)	.11 (2.79)	.08 (2.03)	5-1/2, 7-5/8, 8-5/8 Reg.		●			
22IR 42F*	5121400	4	2	1/2	.87 (22.00)	.11 (2.79)	.08 (2.03)	VO.065*			●		
22IR 428	5121000	4	2	1/2	.87 (22.00)	.10 (2.54)	.08 (2.03)	NC23-NC50, 2-3/8 - 5-1/2IF		●	●		
22IL 428	5161100	4	2	1/2	.87 (22.00)	.10 (2.54)	.08 (2.03)	NC23-NC50, 2-3/8 - 5-1/2IF		●			
22IR 425	5120900	4	2	1/2	.87 (22.00)	.10 (2.54)	.08 (2.03)	5-1/2, 6-5/8FH, 6-5/8 Reg.		●	●	●	
22IL 425	5161000	4	2	1/2	.87 (22.00)	.10 (2.54)	.08 (2.03)	5-1/2, 6-5/8FH, 6-5/8 Reg.		●			
27ER 530	5201300	5	3	5/8	1.26 (32.00)	.11 (2.79)	.07 (1.78)	3-1/2FH, 2-3/8, 4-1/2 Reg.		●	●	●	
27ER 438	5201200	4	3	5/8	1.26 (32.00)	.11 (2.79)	.08 (2.03)	NC56 - NC71		●	●		
27ER 435	5201100	4	3	5/8	1.26 (32.00)	.12 (3.04)	.08 (2.03)	5-1/2, 7-5/8, 8-5/8 Reg.		●	●		
27ER 4PAC	5206404	4	1-1/2	5/8	1.26 (32.00)	.11 (2.79)	.08 (2.03)	American Open Hole		●			
27ER 428	5201000	4	2	5/8	1.26 (32.00)	.11 (2.79)	.08 (2.03)	NC23-NC50, 2-3/8 - 5-1/2IF		●	●		
27ER 425	5200900	4	2	5/8	1.26 (32.00)	.12 (3.04)	.08 (2.03)	5-1/2, 6-5/8FH, 6-5/8 Reg.		●	●	●	
27IR 530	5221300	5	3	5/8	1.26 (32.00)	.11 (2.79)	.08 (2.03)	3-1/2FH, 2-3/8, 4-1/2 Reg.		●	●		
27IR 438	5221200	4	3	5/8	1.26 (32.00)	.11 (2.79)	.08 (2.03)	NC56 - NC71		●	●		
27IR 435	5221100	4	3	5/8	1.26 (32.00)	.12 (3.04)	.08 (2.03)	5-1/2, 7-5/8, 8-5/8 Reg.		●	●	●	●
27IR 428	5221000	4	2	5/8	1.26 (32.00)	.11 (2.79)	.08 (2.03)	NC23-NC50, 2-3/8 - 5-1/2IF		●	●	●	●
27IR 425	5220900	4	2	5/8	1.26 (32.00)	.12 (3.04)	.08 (2.03)	5-1/2, 6-5/8FH, 6-5/8 Reg.		●	●	●	

* Obsolescent thread form, See A.P.I. Spec 7, 35th Edition, May 1, 1995, Section 9.4

API ROUND

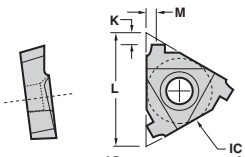


EXT RH SHOWN
INT OPPOSITE

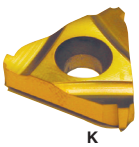


Description	EDP Code	TPI	IC	L	M	K	GP22	GP50	AC22	AC3	AC50
16ER 8RD	5003200	8	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)	●	●	●		●
16ER 8RD-CB	5003200HCB	8	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)	●	●	●		●
22ER 8RD	5103200	8	1/2	.87 (22.10)	.060 (1.52)	.056 (1.42)		●	●	●	
27ER 8RD 2M	5203300	8	5/8	1.08 (27.43)	.177 (4.50)	.114 (2.90)	●		●		
16IR 8RD	5023200	8	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)	●	●	●		●
16IR 8RD-CB	5023200HCB	8	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)		●	●		●
22IR 8RD	5123200	8	1/2	.87 (22.10)	.060 (1.52)	.056 (1.42)		●	●		●
27IR 8RD 2M	5223300	8	5/8	1.08 (27.43)	.177 (4.50)	.114 (2.90)			●		●
16ER 10RD	5003200	10	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)	●	●	●		●
16ER 10RD-CB	5003200HCB	10	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)		●	●		●
22ER 10RD	5103200	10	1/2	.87 (22.10)	.060 (1.52)	.056 (1.42)		●	●	●	
22ER 10RD 2M	5103500	10	1/2	.88 (22.43)	.146 (3.71)	.094 (2.39)					●
16IR 10RD	5023400	10	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)	●	●			●
16IR 10RD-CB	5023400HCB	10	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)	●		●		●
22IR 10RD	5123400	10	1/2	.87 (22.10)	.060 (1.52)	.056 (1.42)		●	●		●
22IR 10RD 2M	5223500	10	1/2	.88 (22.43)	.146 (3.71)	.094 (2.39)		●			●

API VAM



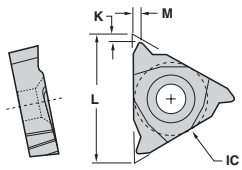
EXT RH SHOWN
INT OPPOSITE



Description	EDP Code	TPI	IC	L	M	K	GP22	GP50	AC22	AC3	AC50
22ER 8VAM	5102500	8	1/2	.87 (22.10)	.059 (1.50)	.059 (1.50)		●			
22ER 6VAM	5102400	6	1/2	.87 (22.10)	.079 (2.01)	.079 (2.01)		●			
22ER 5VAM	5102300	5	1/2	.87 (22.10)	.079 (2.01)	.079 (2.01)		●			
22IR 8VAM	5122500	8	1/2	.87 (22.10)	.059 (1.50)	.059 (1.50)		●			
22IR 6VAM	5122400	6	1/2	.87 (22.10)	.079 (2.01)	.079 (2.01)		●			
22IR 5VAM	5122300	5	1/2	.87 (22.10)	.079 (2.01)	.079 (2.01)		●			

API VO.055

American MT, AMT, AMMT*

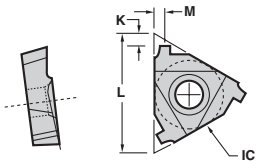


EXT RH SHOWN
INT OPPOSITE

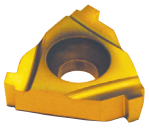
Description	EDP Code	TPI	TPF	IC	L	M	K	Connection	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
16ER 6P VO.055 MT	5004300	6	1-1/2	3/8	.65 (16.51)	.059 (1.50)	.051 (1.30)	NC10-NC16, VO.055, 1, 1-1/2 REG	●	●	●		
22ER 6P VO.055 MT	5104300	6	1-1/2	1/2	.87 (22.10)	.072 (1.83)	.060 (1.52)	NC10-NC16, VO.055, 1, 1-1/2 REG	●	●	●		
16IR 6P VO.055 MT	5024300	6	1-1/2	3/8	.65 (16.51)	.059 (1.50)	.051 (1.30)	NC10-NC16, VO.055, 1, 1-1/2 REG	●	●	●		
22IR 6P VO.055 MT	5124300	6	1-1/2	1/2	.87 (22.10)	.072 (1.83)	.060 (1.52)	NC10-NC16, VO.055, 1, 1-1/2 REG	●	●	●		

* MT is Macaroni Tubing, AMT is American Macaroni Tubing and AMMT is American Mining Macaroni Tubing.

API X-LINE



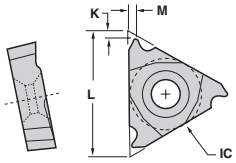
EXT RH SHOWN



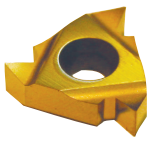
Description	EDP Code	TPI	TPF	IC	L	M	K	Conn. No.	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
22ER 6XL75	5102000	6	3/4	1/2	.87 (22.10)	.075 (1.91)	.078 (1.98)	-			●		
22ER 6XL15	5101900	6	1-1/2	1/2	.87 (22.10)	.075 (1.91)	.086 (2.18)	5 - 7-5/8		●			
22ER 5XL12	5101800	5	1-1/4	1/2	.87 (22.10)	.087 (2.21)	.083 (2.11)	8-5/8 - 10-3/4		●			
22NR 6XL75	5122000	6	3/4	1/2	.87 (22.10)	.075 (1.91)	.078 (1.98)	-			●		
22NR 6XL15	5121900	6	1-1/2	1/2	.87 (22.10)	.075 (1.91)	.086 (2.18)	5 - 7-5/8		●			
22NR 5XL12	5121800	5	1-1/4	1/2	.87 (22.10)	.087 (2.21)	.083 (2.11)	8-5/8 - 10-3/4			●		

BSPT

55˚



EXT RH SHOWN

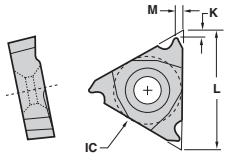


Description	EDP Code	TPI	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
11IR 19BSPT	4924419	19	1/4	.433 (11.00)	.03 (0.9)	.03 (0.8)	●	●	●		
11IRB 19BSPT*	492B4419	19	1/4	.433 (11.00)	.03 (0.9)	.03 (0.8)			●		
11IR 14BSPT	4924414	14	1/4	.433 (11.00)	.04 (1.0)	.03 (0.9)	●	●	●		
11IL 14BSPT	5014414	14	1/4	.433 (11.00)	.04 (1.0)	.03 (0.9)			●		
16ER 28BSPT	5004428	28	3/8	.63 (16.00)	.031 (0.79)	.028 (0.71)	●		●		
16ER 19BSPT	5004419	19	3/8	.63 (16.00)	.031 (0.79)	.028 (0.71)		●	●		
16EL 19BSPT	5044419	19	3/8	.63 (16.00)	.031 (0.79)	.028 (0.71)			●		
16ER 14BSPT	5004414	14	3/8	.63 (16.00)	.059 (1.50)	.059 (1.50)	●		●		
16ERB 14BSPT*	500B3614	14	3/8	.63 (16.00)	.059 (1.50)	.059 (1.50)			●		
16ERM 14BSPT#	500M3614	14	3/8	.63 (16.00)	.059 (1.50)	.059 (1.50)			●		
16EL 14BSPT	5044414	14	3/8	.63 (16.00)	.059 (1.50)	.059 (1.50)			●		
16ER 11BSPT	5004411	11	3/8	.63 (16.00)	.059 (1.50)	.059 (1.50)	●		●		
16ERB 11BSPT*	500B6611	11	3/8	.63 (16.00)	.059 (1.50)	.059 (1.50)			●		
16ERM 11BSPT#	500M6011	11	3/8	.63 (16.00)	.059 (1.50)	.059 (1.50)			●		
16EL 11BSPT	5044411	11	3/8	.63 (16.00)	.059 (1.50)	.059 (1.50)		●	●		
16IR 28BSPT	5024428	28	3/8	.63 (16.00)	.031 (0.79)	.031 (0.79)		●	●		
16IR 19BSPT	5024419	19	3/8	.63 (16.00)	.031 (0.79)	.031 (0.79)			●		
16IR 14BSPT	5024428	14	3/8	.63 (16.00)	.031 (0.79)	.031 (0.79)			●		
16IRB 14BSPT*	502B3614	14	3/8	.63 (16.00)	.031 (0.79)	.031 (0.79)			●		
16IRM 14BSPT#	502M3614	14	3/8	.63 (16.00)	.031 (0.79)	.031 (0.79)			●		
16IL 14BSPT	5063614	14	3/8	.63 (16.00)	.031 (0.79)	.031 (0.79)			●		
16IR 11BSPT	5024411	11	3/8	.63 (16.00)	.031 (0.79)	.031 (0.79)			●		
16IRB 11BSPT*	502B6011	11	3/8	.63 (16.00)	.031 (0.79)	.031 (0.79)			●		
16IRM 11BSPT#	502M6011	11	3/8	.63 (16.00)	.031 (0.79)	.031 (0.79)			●		
16IL 11BSPT	5066611	11	3/8	.63 (16.00)	.031 (0.79)	.031 (0.79)			●		

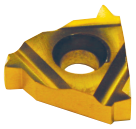
* With chipformer # Pressed to size

ISO

LAYDOWN



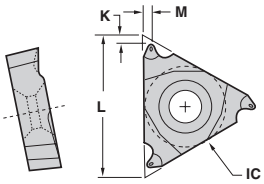
INT RH SHOWN



Description	EDP Code	Pitch	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
11IR 0.35 ISO	49242035	0,35	1/4	.433 (11.00)	.01 (0.3)	.03 (0.8)			●		
11IL 0.35 ISO	50142035	0,35	1/4	.433 (11.00)	.01 (0.3)	.03 (0.8)			●		
11IR 0.40 ISO	4924204	0,40	1/4	.433 (11.00)	.015 (0.4)	.03 (0.8)			●		
11IR 0.50 ISO	4924205	0,50	1/4	.433 (11.00)	.015 (0.4)	.03 (0.8)			●		
11IRB 0.50 ISO*	492B4205	0,50	1/4	.433 (11.00)	.015 (0.4)	.03 (0.8)			●		
11IL 0.50 ISO	5014205	0,50	1/4	.433 (11.00)	.015 (0.4)	.03 (0.8)			●		
11IR 0.70 ISO	4924207	0,70	1/4	.433 (11.00)	.02 (0.6)	.02 (0.6)			●		
11IR 0.75 ISO	49242075	0,75	1/4	.433 (11.00)	.02 (0.6)	.02 (0.6)	●		●		
11IRB 0.75 ISO*	492B42075	0,75	1/4	.433 (11.00)	.02 (0.6)	.02 (0.6)			●		
11IL 0.75 ISO	50142075	0,75	1/4	.433 (11.00)	.02 (0.6)	.02 (0.6)			●		
11IR 0.80 ISO	4924208	0,80	1/4	.433 (11.00)	.02 (0.6)	.02 (0.6)		●	●		
11IRB 0.80 ISO*	492B4208	0,80	1/4	.433 (11.00)	.02 (0.6)	.02 (0.6)			●		
11IR 1.00 ISO	4924201	1,00	1/4	.433 (11.00)	.03 (0.7)	.02 (0.6)	●	●	●		
11IRB 1.00 ISO*	492B4201	1,00	1/4	.433 (11.00)	.03 (0.7)	.02 (0.6)			●		
11IRM 1.00 ISO#	492M42010	1,00	1/4	.433 (11.00)	.03 (0.7)	.02 (0.6)			●		
11IL 1.00 ISO	5014201	1,00	1/4	.433 (11.00)	.03 (0.7)	.02 (0.6)		●	●		
11IR 1.25 ISO	492420125	1,25	1/4	.433 (11.00)	.03 (0.8)	.03 (0.8)		●	●		
11IRB 1.25 ISO*	492B42125	1,25	1/4	.433 (11.00)	.03 (0.8)	.03 (0.8)			●		
11IL 1.25 ISO	501420125	1,25	1/4	.433 (11.00)	.03 (0.8)	.03 (0.8)		●	●		
11IR 1.50 ISO	49242015	1,50	1/4	.433 (11.00)	.04 (1.0)	.03 (0.8)		●	●		
11IRB 1.50 ISO*	492B42015	1,50	1/4	.433 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IRM 1.50 ISO#	492M42015	1,50	1/4	.433 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IL 1.50 ISO	50142015	1,50	1/4	.433 (11.00)	.04 (1.0)	.03 (0.8)		●	●		
11IR 1.75 ISO	492420175	1,75	1/4	.433 (11.00)	.04 (1.1)	.03 (0.8)		●	●		
11IRB 1.75 ISO*	492B420175	1,75	1/4	.433 (11.00)	.04 (1.1)	.03 (0.8)			●		
11IL 1.75 ISO	501420175	1,75	1/4	.433 (11.00)	.04 (1.1)	.03 (0.8)			●		
11IR 2.00 ISO	4924220	2,00	1/4	.433 (11.00)	.035 (0.9)	.03 (0.8)		●	●		
11IL 2.00 ISO	5014202	2,00	1/4	.433 (11.00)	.035 (0.9)	.03 (0.8)					
16IR 0.35 ISO	50242035	0,35	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)			●		
16IR 0.40 ISO	5024204	0,40	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)			●		
16IL 0.40 ISO	5046204	0,40	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)			●		
16IR 0.45 ISO	50242045	0,45	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)					
16IL 0.45 ISO	50642045	0,45	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)			●		
16IR 0.50 ISO	5024205	0,50	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)		●	●		
16IL 0.50 ISO	5046205	0,50	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)		●	●		
16IR 0.60 ISO	5024206	0,60	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)			●		
16IR 0.70 ISO	5024207	0,70	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)		●	●		
16IR 0.75 ISO	50242075	0,75	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)		●	●		
16IR 0.75 ISO 3M	50269075	0,75	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)			●		
16IL 0.75 ISO	50462075	0,75	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)		●	●		
16IR 0.80 ISO	50242080	0,80	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)		●			
16IR 1.00 ISO	5024201	1,00	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)		●	●		●
16IR 1.00 ISO 3M	5026910	1,00	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)			●		
16IRB 1.00 ISO	502B4201	1,00	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)			●		
16IRM 1.00 ISO	502M4201	1,00	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)			●		
16IL 1.00 ISO	5046201	1,00	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)		●	●		
16IR 1.25 ISO	502420125	1,25	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)		●	●		
16IRB 1.25 ISO	502B420125	1,25	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)			●		
16IRM 1.25 ISO	502M420125	1,25	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)			●		
16IL 1.25 ISO	504620125	1,25	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)		●	●		
16IR 1.50 ISO	50242015	1,50	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)	●	●	●		●
16IR 1.50 ISO 2M	50241015	1,50	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)			●		
16IRB 1.50 ISO*	502B42015	1,50	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)			●		
16IRM 1.50 ISO#	502M42015	1,50	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)			●		
16IL 1.50 ISO	50462015	1,50	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)		●	●		
16IR 1.75ISO	502420175	1,75	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)	●		●		
16IRB 1.75ISO*	502B420175	1,75	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)			●		
16IRM 1.75ISO#	502M420175	1,75	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)			●		
16IL 1.75ISO	504620175	1,75	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)		●	●		
16IR 2.00 ISO	5024202	2,00	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)	●	●	●		●
16IR 2.00 ISO 2M	5027002	2,00	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)			●		
16IRB 2.00 ISO*	502B4202	2,00	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)			●		
16IRM 2.00 ISO#	502M4202	2,00	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)			●		
16IL 2.00 ISO	5064202	2,00	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)		●	●		
16IR 2.50 ISO	50242025	2,50	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)		●	●		
16IRB 2.50 ISO*	502B42025	2,50	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)			●		
16IRM 2.50 ISO#	502M42025	2,50	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)			●		
16IL 2.50 ISO	50642025	2,50	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)		●	●		
16IR 3.00 ISO	5024203	3,00	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)	●	●	●		
16IRB 3.00 ISO*	502B4203	3,00	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)			●		
16IRM 3.00 ISO#	502M4203	3,00	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)			●		
16IL 3.00 ISO	5064203	3,00	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)		●	●		
16IR 3.50 ISO	5024203	3,00	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)		●			

* With chipformer # Pressed to size

ISO



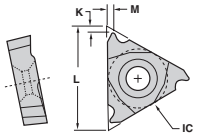
EXT RH SHOWN

Description	EDP Code	Pitch	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
16ER 0.35 ISO	50042035	0,35	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)		●	●		
16EL 0.35 ISO	50442035	0,35	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)			●		
16ER 0.40 ISO	5004204	0,40	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)			●		
16EL 0.40 ISO	5044204	0,40	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)			●		
16ER 0.45 ISO	50042045	0,45	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)		●	●		
16ER 0.50 ISO	5004205	0,50	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)		●	●		
16EL 0.50 ISO	5044205	0,50	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)			●		
16ER 0.60 ISO	5004206	0,60	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)		●	●		
16ER 0.70 ISO	5004207	0,70	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)		●	●		
16EL 0.70 ISO	5044207	0,70	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)		●	●		
16ER 0.75 ISO	50042075	0,75	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)		●	●		
16ER 0.75 ISO 3M	50041075	0,75	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)			●		
16ERM 0.75 ISO#	500M42075	0,75	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)			●		
16EL 0.75 ISO	50442075	0,75	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)		●	●		
16ER 0.80 ISO	50042080	0,80	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)		●	●		
16ERB 0.80 ISO*	500B42080	0,80	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)			●		
16EL 0.80 ISO	50442080	0,80	3/8	.63 (16.00)	.02 (0.51)	.04 (1.02)		●			
16ER 1.00 ISO	5004201	1,00	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)	●	●	●		●
16ER 1.00 ISO 3M	5006910	1,00	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)			●		
16ERB 1.00 ISO*	500B4201	1,00	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)			●		
16ERM 1.00 ISO#	500M4201	1,00	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)			●		
16EL 1.00 ISO	5044201	1,00	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)		●	●		
16ER 1.25 ISO	500420125	1,25	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)		●	●		
16ERB 1.25 ISO*	500B420125	1,25	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)			●		
16ERM 1.25 ISO#	500M420125	1,25	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)			●		
16EL 1.25 ISO	504420125	1,25	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)		●	●		
16ER 1.50 ISO	50042015	1,50	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)	●	●	●		
16ER 1.50 ISO 2M	50041015	1,50	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)		●	●		
16ERB 1.50 ISO*	500B42015	1,50	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)			●		
16ERM 1.50 ISO#	500M42015	1,50	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)			●		
16EL 1.50 ISO	50442015	1,50	3/8	.63 (16.00)	.03 (0.76)	.03 (0.76)		●	●		
16ER 1.75ISO	500420175	1,75	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)		●	●		
16ERB 1.75ISO*	500B420175	1,75	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)			●		
16ERM 1.75ISO#	500M420175	1,75	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)			●		
16EL 1.75ISO	504420175	1,75	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)		●	●		
16ER 2.00 ISO	5004202	2,00	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)	●	●	●		●
16ER 2.00 ISO 2M	5006920	2,00	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)			●		
16ERB 2.00 ISO*	500B4202	2,00	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)			●		
16ERM 2.00 ISO#	500M4202	2,00	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)			●		
16EL 2.00 ISO	5044202	2,00	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)		●	●		
16ER 2.50 ISO	50042025	2,50	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)		●			
16ERB 2.50 ISO*	500B42025	2,50	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)			●		
16ERM 2.50 ISO#	500M42025	2,50	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)			●		
16EL 2.50 ISO	50442025	2,50	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)		●	●		
16ER 3.00 ISO	5004203	3,00	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)		●	●		
16ERB 3.00 ISO*	500B4203	3,00	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)			●		
16ERM 3.00 ISO#	500M4203	3,00	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)			●		
16EL 3.00 ISO	5044203	3,00	3/8	.63 (16.00)	.06 (1.52)	.04 (1.02)		●	●		

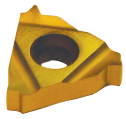
* With chipformer # Pressed to size

LAYDOWN

ISO



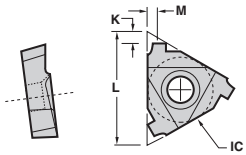
EXT RH SHOWN



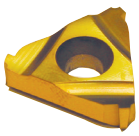
Description	EDP Code	Pitch	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
22IR 1.50 ISO 3M	5123400	1,5	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)			●		
22IR 2.00 ISO 2M	5124102	2,0	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)			●		
22IR 2.00 ISO 3M	51242035	2,0	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)			●		
22IR 3.50 ISO	51242035	3,5	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)	●	●	●		
22IL 3.50 ISO	51242035	3,5	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)		●			
22IR 4.00 ISO	5124204	4,0	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)		●	●		
22IL 4.00 ISO	5164204	4,0	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)		●	●		
22IR 4.50 ISO	51242045	4,5	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)		●	●		
22IL 4.50 ISO	51642045	4,5	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)		●			
22IR 5.00 ISO	5124205	5,0	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)		●	●		
22IL 5.00 ISO	5164205	5,0	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)			●		
22IR 6.00 ISO	5124206	6,0	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)			●		
27IR 3.00 ISO 2M	5206403	5,5	5/8	1.06 (26.92)	.09 (2.29)	.06 (1.52)		●			
27IR 5.5ISO	52242055	5,5	5/8	1.06 (26.92)	.09 (2.29)	.06 (1.52)			●		
27IR 6.0ISO	5224206	6,0	5/8	1.06 (26.92)	.10 (2.54)	.07 (1.78)		●	●		
27IL 6.0ISO	5264206	6,0	5/8	1.06 (26.92)	.10 (2.54)	.07 (1.78)		●	●		
22ER 1.50 ISO 3M	5123400	1,5	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)		●	●		
22ER 2.00 ISO 2M	5124102	2,0	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)			●		
22ER 2.00 ISO 3M	51042035	2,0	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)		●	●		
22ER 3.50 ISO	51042035	3,5	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)	●	●	●		
22ERM 3.50 ISO#	510M42035	3,5	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)			●		
22EL 3.50 ISO	51072035	3,5	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)		●			
22ER 4.00 ISO	5104204	4,0	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)	●	●	●		
22ERM 4.00 ISO#	510M4204	4,0	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)			●		
22EL 4.00 ISO	5144204	4,0	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)		●	●		
22ER 4.50 ISO	51042045	4,5	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)		●	●		
22EL 4.50 ISO	51442045	4,5	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)		●			
22ER 5.00 ISO	5104205	5,0	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)	●	●	●		
22EL 5.00 ISO	5144205	5,0	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)		●			
22ER 6.00 ISO	5107006	6,0	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)		●			
22EL 6.00 ISO	5147006	6,0	1/2	.87 (22.10)	.09 (2.29)	.06 (1.52)		●			
27ER 3.00 ISO 2M	5206403	5,5	5/8	1.06 (26.92)	.09 (2.29)	.06 (1.52)			●		
27ER 5.5ISO	52042055	5,5	5/8	1.06 (26.92)	.09 (2.29)	.06 (1.52)		●	●		
27EL 5.5ISO	52442055	5,5	5/8	1.06 (26.92)	.09 (2.29)	.06 (1.52)		●			
27ER 6.0ISO	5204206	6,0	5/8	1.06 (26.92)	.10 (2.54)	.07 (1.78)		●	●		
27EL 6.0ISO	5244206	6,0	5/8	1.06 (26.92)	.10 (2.54)	.07 (1.78)		●	●		

Pressed to size

MAYHEW

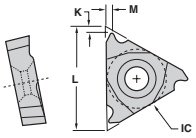


EXT RH SHOWN
INT OPPOSITE

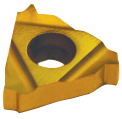


Description	EDP Code	TPI	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
22ER 2-3/8 MAYHEW JR	5103004	4	1/2	.632 (16.05)	.110 (2.79)	.08 (2.03)		●			
27ER 2-3/8 MAYHEW JR	5203004	4	5/8	.796 (20.21)	.130 (3.30)	.09 (2.28)		●			

MJ



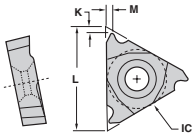
EXT RH SHOWN



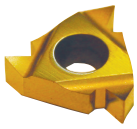
Description	EDP Code	Pitch	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
11IR 1.00MJ	4926910	1,00	1/4	.43 (11.00)	.03 (0.8)	.027 (0.7)			●		
11IRB 1.00MJ*	492B6910	1,00	1/4	.43 (11.00)	.03 (0.8)	.027 (0.7)			●		
11IR 1.25MJ	49269125	1,25	1/4	.43 (11.00)	.035 (0.9)	.03 (0.8)			●		
11IR 1.50MJ	4926915	1,50	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IRB 1.50MJ	492B6915	1,50	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IR 2.00MJ	4926920	2,00	1/4	.43 (11.00)	.04 (1.0)	.035 (0.9)			●		
16IR 1.00MJ	5026910	1,00	3/8	.63 (16.00)	.031 (0.79)	.031 (0.79)			●		
16IR 1.25MJ	50269125	1,25	3/8	.63 (16.00)	.031 (0.79)	.031 (0.79)			●		
16IR 1.50MJ	50269150	1,50	3/8	.63 (16.00)	.031 (0.79)	.031 (0.79)			●		
16ER 1.00MJ	5006910	1,00	3/8	.63 (16.00)	.031 (0.79)	.031 (0.79)			●		
16ER 1.25MJ	50069125	1,25	3/8	.63 (16.00)	.031 (0.79)	.031 (0.79)			●		
16ER 1.50MJ	50069150	1,50	3/8	.63 (16.00)	.031 (0.79)	.031 (0.79)		●	●		
16ER 2.00MJ	5006920	2,00	3/8	.63 (16.00)	.031 (0.79)	.031 (0.79)			●		

* With chipformer

NPT



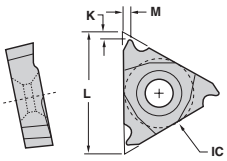
EXT RH SHOWN



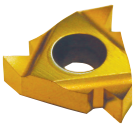
Description	EDP Code	TPI	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
11IR 14NPT	4923614	14	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)		●	●		
11IL 14NPT	5013614	14	1/4	.43 (11.00)	.03 (0.8)	.03 (0.8)		●			
11IR 18NPT	4923618	18	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IRB 18NPT	492B3618	18	1/4	.43 (11.00)	.03 (0.8)	.03 (0.8)			●		
11IL 18NPT	5013618	18	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
16IR 8NPT	5023608	8	3/8	.63 (16.00)	.06 (1.5)	.05 (1.2)	●	●	●		●
16IRB 8NPT*	502B6608	8	3/8	.63 (16.00)	.06 (1.5)	.05 (1.2)			●		
16IRM 8NPT#	502M6608	8	3/8	.63 (16.00)	.06 (1.5)	.05 (1.2)			●		
16IL 8NPT	5063608	8	3/8	.63 (16.00)	.06 (1.5)	.05 (1.2)		●	●		
16IR 11.5NPT	5023611	11.5	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		●
16IRB 11.5NPT*	502B4411	11.5	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16IRM 11.5NPT#	502M6612	11.5	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16IL 11.5NPT	5063611	11.5	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		
16IR 14NPT	5023614	14	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)	●	●	●		
16IRB 14NPT*	502B6614	14	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)			●		
16IRM 14NPT#	502M6614	14	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)			●		
16IL 14NPT	5066414	14	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)			●		
16IR 18NPT	5023618	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)	●	●	●		●
16IR 27NPT	5023627	27	3/8	.63 (16.00)	.03 (0.8)	.03 (0.8)	●		●		
22IR 11.5NPT 2M	5123811	11.5	1/2	.87 (22.00)	.14 (3.5)	.09 (2.0)		●	●		●
22U-IR 11.5NPT 2M	5133811	11.5	1/2	.87 (22.00)	.14 (3.5)	.09 (2.0)	●		●		
27IR 8NPT 2M	5223808	8	5/8	1.06 (27.00)	.20 (5.0)	.12 (3.0)		●	●		●
27IL 8NPT 2M	5223811	8	5/8	1.06 (27.00)	.20 (5.0)	.12 (3.0)	●				
27IR 11.5NPT 3M	5224103	11.5	5/8	1.06 (27.00)	.22 (5.5)	.13 (3.3)		●	●		
16ER 8NPT	5003608	8	3/8	.63 (16.00)	.06 (1.5)	.05 (1.2)	●	●	●		●
16ERB 8NPT*	500B6608	8	3/8	.63 (16.00)	.06 (1.5)	.05 (1.2)			●		
16ERM 8NPT#	500M7208	8	3/8	.63 (16.00)	.06 (1.5)	.05 (1.2)			●		
16ER 11.5NPT	5003611	11.5	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		●
16ERB 11.5NPT*	500B4411	11.5	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16ERM 11.5NPT#	500M6611	11.5	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16EL 11.5NPT	5043611	11.5	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		
16ER 14NPT	5003614	14	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)	●	●	●		
16ERB 14NPT*	500B6614	14	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)			●		
16ERM 14NPT#	500M6614	14	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)			●		
16EL 14NPT	5043614	14	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)			●		
16ER 18NPT	5023618	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)	●	●	●		●
16ERB 18NPT*	500B6618	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16ERM 18NPT#	500M6618	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16EL 18NPT	5043618	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)	●		●		
16ER 27NPT	5003627	27	3/8	.63 (16.00)	.03 (0.8)	.03 (0.8)			●		●
22ER 8NPT	5103200	8	1/2	.87 (22.00)	.14 (3.5)	.09 (2.0)			●		
22ER 11.5NPT 2M	5103811	11.5	1/2	.87 (22.00)	.14 (3.5)	.09 (2.0)	●	●	●		●
27ER 8NPT 2M	5203808	8	5/8	1.06 (27.00)	.20 (5.0)	.12 (3.0)		●	●		
27ER 11.5NPT 3M	520414	11.5	5/8	1.06 (27.00)	.22 (5.5)	.13 (3.3)		●			

* With chipformer # Pressed to size

NPTF DRY SEAL



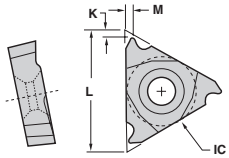
EXT RH SHOWN



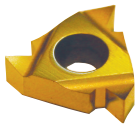
Description	EDP Code	TPI	IC	L	M	K	GP22	GP50	AC22	AC3	AC50
11IR 14NTPF	4924014	14	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IR 18NPTF	4924018	18	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)	●				
11IRB 18NPTF*	492B4018	18	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
16IR 8NPTF	5024008	8	3/8	.63 (16.00)	.07 (1.8)	.05 (1.2)	●		●		
16IR 11.5NPTF	5024011	11.5	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		
16IL 11.5NPTF	5063811	11.5	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)					
16IR 14NPTF	5024014	14	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)		●	●		
16IL 14NPTF	5063814	14	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)			●		
16IR 18NPTF	5024018	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16ER 8NPTF	5004008	8	3/8	.63 (16.00)	.07 (1.8)	.05 (1.2)			●		
16ER 11.5NPTF	5004011	11.5	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)	●		●		
16ER 14NPTF	5004014	14	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)	●	●	●		
16ER 18NPTF	5004018	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)	●				
16ER 27NPTF	5004027	27	3/8	.63 (16.00)	.03 (0.8)	.03 (0.8)			●		

* With chipformer

PG

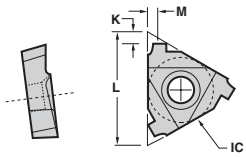


EXT RH SHOWN

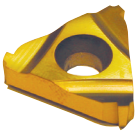


Description	EDP Code	TPI	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
11IR 18PG	4928518	18	1/4	.43 (11.00)	.035 (0.9)	.03 (0.8)		●	●		
16IR 16PG	5026516	16	3/8	.63 (16.00)	.04 (1.0)	.03 (.08)			●		
16IL 16PG	5066416	16	3/8	.63 (16.00)	.04 (1.0)	.03 (.08)			●		
16IR 18PG	5026618	18	3/8	.63 (16.00)	.035 (.09)	.03 (.08)			●		
16IR 20PG	5026620	20	3/8	.63 (16.00)	.04 (1.0)	.03 (.08)					
16IL 20PG	5066620	20	3/8	.63 (16.00)	.04 (1.0)	.03 (.08)			●		
16ER 16PG	5006616	16	3/8	.63 (16.00)	.04 (1.0)	.03 (.08)			●		
16ER 18PG	5006618	18	3/8	.63 (16.00)	.035 (.09)	.03 (.08)			●		
16ER 20PG	5006620	20	3/8	.63 (16.00)	.04 (1.0)	.03 (.08)			●		

SLIM LINE BUTTRESS

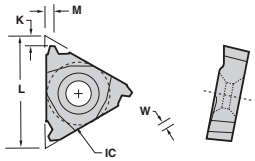


EXT RH SHOWN
INT OPPOSITE

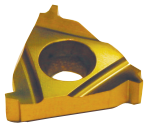


Description	EDP Code	TPI	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
16ER 12SLB	5003012	12	3/8	.515 (13.08)	.062 (1.57)	.03 (0.76)			●		
16IR 12SLB	5023012	12	3/8	.515 (13.08)	.062 (1.57)	.03 (0.76)		●			

TRAPEZOIDAL

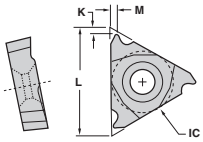


EXT RH SHOWN

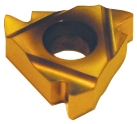


Description	EDP Code	Pitch	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
16ER I.5TR	5007015	1,5	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)	●	●	●		
16EL I.5TR	5047015	1,5	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)		●			
16ER 2.0TR	5007002	2,0	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)	●	●	●		
16EL 2.0TR	5047002	2,0	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)		●			
16ER 3.0TR	5007003	3,0	3/8	.63 (16.00)	.06 (1.5)	.05 (1.2)	●	●	●		
16EL 3.0TR	5047003	3,0	3/8	.63 (16.00)	.06 (1.5)	.05 (1.2)		●	●		
16ER 4.0TR	5007004	4,0	3/8	.63 (16.00)	.06 (1.5)	.05 (1.2)		●			
22ER 4.0TR	5107004	4,0	1/2	.87 (22.00)	.07 (1.9)	.07 (1.8)		●	●		
22EL 4.0TR	5147004	4,0	1/2	.87 (22.00)	.07 (1.9)	.07 (1.8)		●	●		
22ER 5.0TR	5107005	5,0	1/2	.87 (22.00)	.09 (2.4)	.08 (2.0)		●	●		
22EL 5.0TR	5147005	5,0	1/2	.87 (22.00)	.09 (2.4)	.08 (2.0)		●	●		
22ER 6.0TR	5107006	6,0	1/2	.87 (22.00)	.09 (2.4)	.08 (2.0)			●		
22EL 6.0TR	5147006	6,0	1/2	.87 (22.00)	.09 (2.4)	.08 (2.0)			●		
27ER 6.0TR	5207006	6,0	5/8	1.6 (27.00)	.11 (2.7)	.09 (2.3)		●	●		
27EL 6.0TR	5247006	6,0	5/8	1.6 (27.00)	.11 (2.7)	.09 (2.3)			●		
27ER 7.0TR	5207007	7,0	5/8	1.6 (27.00)	.10 (2.6)	.08 (2.2)		●			
27EL 7.0TR	5247007	7,0	5/8	1.6 (27.00)	.10 (2.6)	.08 (2.2)		●			
16IR I.5TR	5007015	1,5	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)		●			
16IR 2.0TR	5007002	2,0	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)	●		●		
16IL 2.0TR	5047002	2,0	3/8	.63 (16.00)	.05 (1.2)	.04 (1.0)		●	●		
16IR 3.0TR	5007003	3,0	3/8	.63 (16.00)	.06 (1.5)	.05 (1.2)	●	●	●		
16IL 3.0TR	5047003	3,0	3/8	.63 (16.00)	.06 (1.5)	.05 (1.2)		●	●		
22IR 4.0TR	5107004	4,0	1/2	.87 (22.00)	.07 (1.9)	.07 (1.8)		●	●		
22IL 4.0TR	5147004	4,0	1/2	.87 (22.00)	.07 (1.9)	.07 (1.8)		●	●		
22IR 5.0TR	5107005	5,0	1/2	.87 (22.00)	.09 (2.4)	.08 (2.0)		●	●		
22IL 5.0TR	5147005	5,0	1/2	.87 (22.00)	.09 (2.4)	.08 (2.0)			●		
22IR 6.0TR	5107006	6,0	1/2	.87 (22.00)	.09 (2.4)	.08 (2.0)		●	●		
22IL 6.0TR	5147006	6,0	1/2	.87 (22.00)	.09 (2.4)	.08 (2.0)			●		
27IR 6.0TR	5207006	6,0	5/8	1.6 (27.00)	.11 (2.7)	.09 (2.3)		●	●		
27IL 6.0TR	5247006	6,0	5/8	1.6 (27.00)	.11 (2.7)	.09 (2.3)		●	●		
27IR 7.0TR	5207007	7,0	5/8	1.6 (27.00)	.10 (2.6)	.08 (2.2)		●			
27IL 7.0TR	5247007	7,0	5/8	1.6 (27.00)	.10 (2.6)	.08 (2.2)		●			

ROUND (DIN)



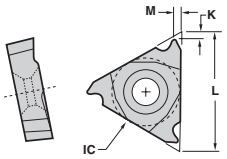
EXT RH SHOWN
INT OPPOSITE



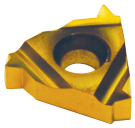
Description	EDP Code	TPI	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
16ER 10 RND	5007210	10	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)		●	●		
16EL 10 RND	5047210	10	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)			●		
16ER 8 RND	5007208	8	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)		●	●		
16ERM 8 RND#	500M6608	8	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)			●		
16EL 8 RND	5047208	8	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)		●	●		
16ER 6 RND	5004300	6	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)		●	●		
16ERM 6 RND#	500M3606	6	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)			●		
16EL 6 RND	5047206	6	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)		●			
22ER 6 RND	5104206	6	1/2	.87 (22.10)	.060 (1.52)	.056 (1.42)		●	●		
22EL 6 RND	5144206	6	1/2	.87 (22.10)	.060 (1.52)	.056 (1.42)		●	●		
22ER 4 RND	5104206	6	1/2	.87 (22.10)	.060 (1.52)	.056 (1.42)		●	●		
22EL 4 RND	5144206	6	1/2	.87 (22.10)	.060 (1.52)	.056 (1.42)		●	●		
27ER 4 RND	52066045	8	5/8	1.08 (27.43)	.177 (4.50)	.114 (2.90)		●			
16IR 10 RND	5027210	10	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)		●	●		
16IR 8 RND	5027208	8	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)		●	●		
16IL 8 RND	5066208	8	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)		●	●		
16IR 6 RND	5024300	6	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)		●	●		
16IRM 6 RND#	502M3606	6	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)			●		
16IL 6 RND	5067208	6	3/8	.65 (16.00)	.059 (1.50)	.056 (1.42)			●		
22IR 6 RND	5124206	6	1/2	.87 (22.10)	.060 (1.52)	.056 (1.42)			●		
22IR 4 RND	5124206	4	1/2	.87 (22.10)	.060 (1.52)	.056 (1.42)		●	●		
22IL 4 RND	5164206	4	1/2	.87 (22.10)	.060 (1.52)	.056 (1.42)		●			
27IR 4 RND	52266045	4	5/8	1.08 (27.43)	.177 (4.50)	.114 (2.90)		●			
27IL 4 RND	52666045	4	5/8	1.08 (27.43)	.177 (4.50)	.114 (2.90)		●			

Pressed to size

UN



INT RH SHOWN

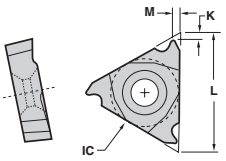


Description	EDP Code	TPI	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
11IR 64UN	4926664	64	1/4	.43 (11.00)	.02 (0.5)	.02 (0.5)			●		
11IR 36UN	4926636	36	1/4	.43 (11.00)	.02 (0.5)	.02 (0.5)			●		
11IR 32UN	4926632	32	1/4	.43 (11.00)	.02 (0.5)	.02 (0.5)			●		
11IRB 32UN*	492B6632	32	1/4	.43 (11.00)	.02 (0.5)	.02 (0.5)			●		
11IL 32UN	5016632	32	1/4	.43 (11.00)	.02 (0.5)	.02 (0.5)			●		
11IR 28UN	4926628	28	1/4	.43 (11.00)	.03 (0.8)	.02 (0.5)			●		
11IRB 28UN*	492B6628	28	1/4	.43 (11.00)	.03 (0.8)	.02 (0.5)			●		
11IL 28UN	5016628	28	1/4	.43 (11.00)	.03 (0.8)	.02 (0.5)			●		
11IR 24UN	4926624	24	1/4	.43 (11.00)	.03 (0.8)	.03 (0.8)			●		
11IRB 24UN*	492B6624	24	1/4	.43 (11.00)	.03 (0.8)	.03 (0.8)			●		
11IL 24UN	5016624	24	1/4	.43 (11.00)	.03 (0.8)	.03 (0.8)			●		
11IR 20UN	4926620	20	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)	●		●		
11IRB 20UN*	4926620	20	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IL 20UN	4926620	20	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IR 18UN	4926618	18	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IRB 18UN*	492B6618	18	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IL 18UN	5016618	18	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)		●	●		
11IR 16UN	4926616	16	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)	●	●	●		
11IRB 16UN*	492B6616	16	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IL 16UN	5016616	16	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IR 14UN	4926614	14	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)		●	●		
11IRB 14UN*	492B6614	14	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IL 14UN	5016614	14	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)		●	●		
11IR 12UN	4926612	12	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)		●			
11IRB 12UN*	492B6612	12	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IR 11UN	4926611	11	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)		●	●		

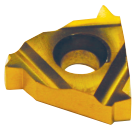
* With chipformer

LAYDOWN

UN



INT RH SHOWN



Description	EDP Code	TPI	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
16IR 44UN	5026644	44	3/8	.63 (16.00)	.02 (0.5)	.02 (0.5)			●		
16IR 32UN	5026632	32	3/8	.63 (16.00)	.02 (0.5)	.02 (0.5)		●	●		
16IR 28UN	5026628	28	3/8	.63 (16.00)	.03 (0.8)	.02 (0.5)	●	●	●		
16IL 28UN	5066628	28	3/8	.63 (16.00)	.03 (0.8)	.02 (0.5)			●		
16IR 24UN	5026624	24	3/8	.63 (16.00)	.03 (0.8)	.03 (0.8)	●	●	●		
16IRB 24UN*	502B6624	24	3/8	.63 (16.00)	.03 (0.8)	.03 (0.8)			●		
16IL 24UN	5066624	24	3/8	.63 (16.00)	.03 (0.8)	.03 (0.8)	●				
16IR 20UN	5026620	20	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)	●	●	●		●
16IRB 20UN*	502B6620	20	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16IRM 20UN#	502M6620	20	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16IL 20UN	5066620	20	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)	●		●		
16IR 18UN	5026618	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)	●	●	●		●
16IRB 18UN*	502B6618	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16IRM 18UN#	502M6618	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16IL 18UN	5066618	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16IR 16UN	5026616	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)		●	●		●
16IR 16UN 2M	5026616	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)	●				
16IRB 16UN*	502B6616	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)			●		
16IRM 16UN#	502M6616	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)			●		
16IL 16UN	5066616	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)			●		
16IR 14UN	5026614	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)	●	●	●		●
16IRB 14UN*	502B6614	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16IRM 14UN#	502M6614	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16IL 14UN	5066614	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)	●		●		
16IR 13UN	5026613	13	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16IL 13UN	5066613	13	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)	●		●		
16IR 12UN	5026612	12	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		●
16IRM 12UN#	502M6612	12	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16IL 12UN	5066612	12	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)	●	●	●		
16IR 11.5UN	5024411	11	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16IL 11.5UN	5064411	11	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16IR 11UN	5026611	11	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		
16IL 11UN	5066611	11	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16IR 10UN	5026610	10	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		●
16IRB 10UN*	502B6010	10	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16IL 10UN	5066610	10	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		
16IR 9UN	5026609	9	3/8	.63 (16.00)	.07 (1.8)	.05 (1.3)	●	●	●		
16IR 8UN	5026608	8	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)	●	●	●		●
16IRB 8UN*	502B6608	8	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16IRM 8UN#	502M6608	8	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16IL 8UN	5066608	8	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		
22IR 16UN 3M	5124102	16	1/2	.87 (22.00)	.09 (2.3)	.06 (1.5)			●		
22IR 12UN 2M	5126712	12	1/2	.87 (22.00)	.09 (2.3)	.06 (1.5)			●		
22IR 12UN 3M	5126114	12	1/2	.87 (22.00)	.09 (2.3)	.06 (1.5)			●		
22IR 7UN	5126607	7	1/2	.87 (22.00)	.09 (2.3)	.06 (1.5)	●	●	●		●
22IL 7UN	5166607	7	1/2	.87 (22.00)	.09 (2.3)	.06 (1.5)			●		
22IR 6UN	5126606	6	1/2	.87 (22.00)	.09 (2.3)	.06 (1.5)		●	●		
22IL 6UN	5166606	6	1/2	.87 (22.00)	.09 (2.3)	.06 (1.5)			●		
22IR 5UN	5126605	5	1/2	.87 (22.00)	.09 (2.3)	.06 (1.5)		●	●		
22IL 5UN	5166605	5	1/2	.87 (22.00)	.09 (2.3)	.06 (1.5)			●		
27IR 8UN 2M	5222800	8	5/8	1.06 (27.00)	.09 (2.3)	.07 (1.8)			●		
27IR 4.5UN	52266045	4.5	5/8	1.06 (27.00)	.09 (2.3)	.07 (1.8)		●			
27IL 4.5UN	52666045	4.5	5/8	1.06 (27.00)	.09 (2.3)	.07 (1.8)		●	●		
27IR 4UN	5226604	4	5/8	1.06 (27.00)	.11 (2.8)	.07 (1.8)	●	●	●		
27IL 4UN	5266604	4	5/8	1.06 (27.00)	.11 (2.8)	.07 (1.8)		●	●		

* With chipformer # Pressed to size

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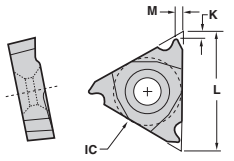

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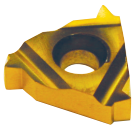

Description	EDP Code	TPI	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
16ER 72UN	5006672	72	3/8	.63 (16.00)	.02 (0.5)	.02 (0.5)			●		
16ER 56UN	5006656	56	3/8	.63 (16.00)	.02 (0.5)	.02 (0.5)			●		
16ER 48UN	5006648	48	3/8	.63 (16.00)	.02 (0.5)	.02 (0.5)			●		
16ER 40UN	5006640	40	3/8	.63 (16.00)	.02 (0.5)	.02 (0.5)			●		
16EL 40UN	5046640	40	3/8	.63 (16.00)	.02 (0.5)	.02 (0.5)			●		
16ER 36UN	5006636	36	3/8	.63 (16.00)	.02 (0.5)	.02 (0.5)			●		
16EL 36UN	5046636	36	3/8	.63 (16.00)	.02 (0.5)	.02 (0.5)			●		
16ER 32UN	5006632	32	3/8	.63 (16.00)	.02 (0.5)	.02 (0.5)	●	●	●		●
16EL 32UN	5046632	32	3/8	.63 (16.00)	.02 (0.5)	.02 (0.5)			●		
16ER 28UN	5006628	28	3/8	.63 (16.00)	.03 (0.8)	.02 (0.5)	●	●	●		
16EL 28UN	5046628	28	3/8	.63 (16.00)	.03 (0.8)	.02 (0.5)		●	●		
16ER 24UN	5006624	24	3/8	.63 (16.00)	.03 (0.8)	.03 (0.8)	●	●	●		
16ERB 24UN*	500B6624	24	3/8	.63 (16.00)	.03 (0.8)	.03 (0.8)			●		
16ERM 24UN#	500M6624	24	3/8	.63 (16.00)	.03 (0.8)	.03 (0.8)			●		
16EL 24UN	5046624	24	3/8	.63 (16.00)	.03 (0.8)	.03 (0.8)			●		
16ER 20UN	50026620	20	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)	●	●	●		●
16ERB 20UN*	500B6620	20	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16ERM 20UN#	500M6620	20	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16EL 20UN	5046620	20	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●	●		
16ER 18UN	5006618	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)	●	●	●		●
16ERB 18UN*	500B6618	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16ERM 18UN#	500M6618	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16EL 18UN	5046618	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)	●		●		
16ER 16UN	5006616	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)	●	●	●		●
16ER 16UN 2M	5006616	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)			●		
16ERB 16UN*	500B6616	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)			●		
16ERM 16UN#	500M6616	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)			●		
16EL 16UN	5046616	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)		●	●		
16ER 14UN	5006614	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)	●	●	●		●
16ER 14UN 2M	5006614	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16ERB 14UN*	500B6614	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16ERM 14UN#	500M6614	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16EL 14UN	5046614	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)	●	●			
16ER 13UN	5006613	13	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)	●	●	●		
16ERB 13UN*	500B6613	13	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16ERM 13UN#	500M6613	13	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16EL 13UN	5046613	13	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)		●	●		
16ER 12UN	5006612	12	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)	●	●	●		●
16ER 12UN 2M	5006612	12	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16ERB 12UN*	500B6612	12	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16ERM 12UN#	500M6612	12	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16EL 12UN	5046612	12	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		
16ER 11.5UN	50066115	11.5	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16EL 11.5UN	50666115	11.5	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●			
16ER 11UN	5006611	11	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)	●	●	●		●
16ERB 11UN*	500B6611	11	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16EL 11UN	5046611	11	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16ER 10UN	5006610	10	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		●
16ERB 10UN*	500B6010	10	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16EL 10UN	5046610	10	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●			
16ER 9UN	5006609	9	3/8	.63 (16.00)	.07 (1.7)	.05 (1.3)		●	●		
16ERB 9UN*	5006609	9	3/8	.63 (16.00)	.07 (1.7)	.05 (1.3)			●		
16EL 9UN	5006609	9	3/8	.63 (16.00)	.07 (1.7)	.05 (1.3)			●		
16ER 8UN	5006608	8	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)	●	●	●		●
16ERB 8UN*	500B6608	8	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16ERM 8UN#	500M6608	8	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16EL 8UN	5046608	8	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		

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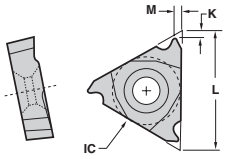

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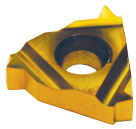
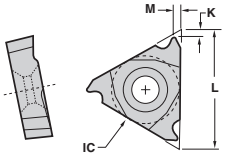


Description	EDP Code	TPI	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
22ER 16UN 3M	5104102	16	1/2	.87 (22.00)	.09 (2.3)	.06 (1.5)			●		
22ER 12UN 2M	5106712	12	1/2	.87 (22.00)	.09 (2.3)	.06 (1.5)			●		
22ER 12UN 3M	5106114	12	1/2	.87 (22.00)	.09 (2.3)	.06 (1.5)			●		
22ER 7UN	5106607	7	1/2	.87 (22.00)	.09 (2.3)	.06 (1.5)		●	●		
22ER 6UN	5106606	6	1/2	.87 (22.00)	.09 (2.3)	.06 (1.5)			●		
22ER 5UN	5106605	5	1/2	.87 (22.00)	.09 (2.3)	.06 (1.5)		●	●		
22EL 5UN	5146605	5	1/2	.87 (22.00)	.09 (2.3)	.06 (1.5)			●		
27ER 8UN 2M	5202800	8	5/8	1.06 (27.00)	.09 (2.3)	.07 (1.7)			●		
27ER 4.5UN	5200900	4.5	5/8	1.06 (27.00)	.09 (2.3)	.07 (1.7)			●		
27ER 4UN	5206604	4	5/8	1.06 (27.00)	.11 (2.8)	.07 (1.7)	●	●	●		

UNJ



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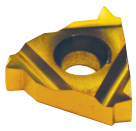

Description	EDP Code	TPI	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
11IR 32UNJ	4926832	32	1/4	.43 (11.00)	.02 (0.5)	.02 (0.5)			●		
11IRB 32UNJ*	492B6832	32	1/4	.43 (11.00)	.02 (0.5)	.02 (0.5)			●		
11IR 28UNJ	4926828	28	1/4	.43 (11.00)	.03 (0.8)	.02 (0.5)			●		
11IRB 28UNJ*	492B6828	28	1/4	.43 (11.00)	.03 (0.8)	.02 (0.5)			●		
11IR 24UNJ	4926824	24	1/4	.43 (11.00)	.03 (0.8)	.03 (0.8)			●		
11IRB 24UNJ*	492B6824	24	1/4	.43 (11.00)	.03 (0.8)	.03 (0.8)			●		
11IRB 20UNJ*	4926820	20	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IR 18UNJ	4926818	18	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IRB 18UNJ*	492B6818	18	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IR 16UNJ	4926816	16	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IRB 16UNJ*	492B6816	16	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IR 14UNJ	4926814	14	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IRB 14UNJ*	492B6814	14	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
16IR 20UNJ	5026020	20	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16IR 18UNJ	5026018	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16IL 18UNJ	5066018	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●			
16IR 16UNJ	5026016	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)		●	●		
16IL 16UNJ	5066016	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)			●		
16IR 14UNJ	5026014	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16IR 12UNJ	5026012	12	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		
16IL 12UNJ	5066012	12	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16IR 8UNJ	5026008	8	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16IL 8UNJ	5064608	8	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16ER 48UNJ	5006620	48	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16ER 44UNJ	5006620	44	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16ER 40UNJ	5006620	40	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16ER 36UNJ	5006620	36	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16ER 32UNJ	5006620	32	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16ER 28UNJ	5006620	28	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)	●	●	●		
16ER 24UNJ	5006620	24	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)	●		●		
16EL 24UNJ	5026620	24	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●			
16ER 20UNJ	5006620	20	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)	●	●	●		
16EL 20UNJ	5046620	20	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16ER 18UNJ	5006618	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●	●		
16ER 16UNJ	5006616	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)			●		
16EL 16UNJ	5046616	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)			●		
16ER 14UNJ	5006614	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)	●	●	●		
16EL 14UNJ	5046614	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16ER 13UNJ	5006614	13	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16ER 12UNJ	5006612	12	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		
16EL 12UNJ	5046612	12	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16ER 11UNJ	5006612	11	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16ER 10UNJ	5006612	10	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16ER 8UNJ	5006608	8	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16EL 8UNJ	5006608	8	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●			

* With chipformer # Pressed to size

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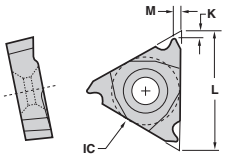

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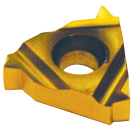
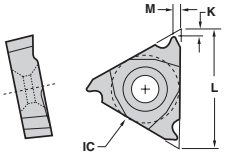


Description	EDP Code	TPI	IC	L	M	K	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
11IR 28W	4926028	28	1/4	.43 (11.00)	.03 (0.8)	.02 (0.50)		●			
11IRB 28W*	492B6028	28	1/4	.43 (11.00)	.03 (0.8)	.02 (0.50)			●		
11IR 24W	4926024	24	1/4	.43 (11.00)	.03 (0.8)	.03 (0.8)			●		
11IRB 24W*	492B6024	24	1/4	.43 (11.00)	.03 (0.8)	.03 (0.8)			●		
11IL 24W	5016024	24	1/4	.43 (11.00)	.03 (0.8)	.03 (0.8)			●		
11IR 20W	4926020	20	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)		●	●		
11IRB 20W*	4926020	20	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IR 19W	4926019	19	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)		●	●		
11IRB 19W*	4926019	19	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IR 18W	4926018	18	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)		●	●		
11IRB 18W*	492B6018	18	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IL 18W	5016018	18	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IR 16W	4926016	16	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)		●	●		
11IRB 16W*	492B6016	16	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IR 14W	4926014	14	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)		●	●		
11IRB 14W*	492B6014	14	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
11IL 14W	5016014	14	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)		●	●		
11IL 12W	5016012	12	1/4	.43 (11.00)	.04 (1.0)	.03 (0.8)			●		
16IR 28W	5026028	28	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●			
16IR 26W	5026020	26	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●	●		
16IR 24W	5026024	24	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●	●		
16IL 24W	5066624	24	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●			
16IR 22W	5026022	22	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16IR 20W	5026020	20	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●	●		
16IRB 20W*	502B6020	20	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16IL 20W	5066620	20	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●	●		
16IR 19W	5026019	19	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●	●		
16IRB 19W*	502B6019	19	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16IR 18W	5026018	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●	●		
16IL 18W	5066018	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●	●		
16IR 16W	5026016	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)		●	●		
16IRB 16W*	502B6016	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)			●		
16IRM 16W#	502M6016	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)			●		
16IR 14W	5026014	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)	●	●	●		
16IR 14W 2M	5028014	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16IRB 14W*	502B6014	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16IRM 14W#	502M6014	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16IL 14W	5066014	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16IR 12W	5026012	12	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		
16IL 12W	5066012	12	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16IR 11W	5026011	11	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		
16IRB 11W*	502B6011	11	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16IRM 11W#	502M6011	11	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16IL 11W	5026011	11	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		
16IR 10W	5026010	11	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		
16IRB 10W*	502B6010	11	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)			●		
16IL 10W	5066010	11	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●			
16IR 9W	5026009	9	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●			
16IR 8W	5026008	8	3/8	.63 (16.00)	.06 (1.5)	.04 (1.0)		●	●		
22IR 14W 3M	5126716	14	1/2	.87 (22.00)	.18 (4.5)	.11 (2.8)			●		
22IR 11W 2M	5126712	11	1/2	.87 (22.00)	.13 (3.4)	.09 (2.3)			●		
22IR 7W	5126007	7	1/2	.87 (22.00)	.09 (2.3)	.06 (1.6)	●		●		
22IR 6W	5126006	6	1/2	.87 (22.00)	.09 (2.3)	.06 (1.6)	●	●			
22IR 5W	5126005	5	1/2	.87 (22.00)	.094 (2.4)	.066 (1.7)		●			
22IL 5W	5167005	5	1/2	.87 (22.00)	.094 (2.4)	.066 (1.7)		●			
22IR 4W	5126004	4	1/2	.87 (22.00)	.094 (2.4)	.066 (1.7)		●			
27IR 4.5W	5220900	4.5	5/8	1.06 (27.00)	.11 (2.9)	.08 (2.0)		●			
27IR 4W	5242045	4	5/8	1.06 (27.00)	.11 (2.9)	.08 (2.0)			●		

* With chipformer # Pressed to size

LAYDOWN

WHITWORTH



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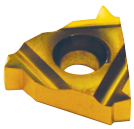
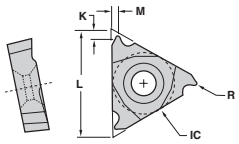


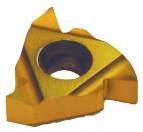
Description	EDP Code	TPI	IC	L	M	K	TiN Coated		AlTiN Coated		
							GP22	GP50	AC22	AC3	AC50
16ER 40W	5006040	40	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16ER 28W	5006028	26	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●	●		
16EL 28W	5046028	28	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●			
16ER 26W	5006026	26	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●	●		
16ER 24W	5006024	24	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●	●		
16ER 22W	5006022	22	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●	●		
16ER 20W	5006020	20	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●	●		
16ER 19W	5006019	19	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●	●		
16ERB 19W*	500B6019	19	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16ERM 19W#	500M6019	19	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16EL 19W	5046019	19	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)		●	●		
16ER 18W	5006018	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)	●	●	●		
16EL 18W	5046018	18	3/8	.63 (16.00)	.04 (1.0)	.03 (0.8)			●		
16ER 16W	5026016	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)		●	●		
16ERB 16W*	500B6016	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)			●		
16ERM 16W#	500M6016	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)			●		
16EL 16W	5046016	16	3/8	.63 (16.00)	.04 (1.0)	.04 (1.0)			●		
16ER 14W	5006014	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)	●	●	●		
16ER 14W 2M	5006014	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16ERB 14W*	502B6014	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16ERM 14W#	502M6014	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)			●		
16EL 14W	5066014	14	3/8	.63 (16.00)	.05 (1.3)	.04 (1.0)		●	●		
16ER 12W	5006012	12	3/8	.63 (16.00)	.06 (1.6)	.04 (1.0)		●	●		
16EL 12W	5046012	12	3/8	.63 (16.00)	.06 (1.6)	.04 (1.0)			●		
16ER 11W	5006011	11	3/8	.63 (16.00)	.06 (1.6)	.04 (1.0)	●	●	●		
16ERB 11W*	500B6011	11	3/8	.63 (16.00)	.06 (1.6)	.04 (1.0)			●		
16ERM 11W#	500M6011	11	3/8	.63 (16.00)	.06 (1.6)	.04 (1.0)			●		
16EL 11W	5006011	11	3/8	.63 (16.00)	.06 (1.6)	.04 (1.0)		●	●		
16ER 10W	5006010	11	3/8	.63 (16.00)	.06 (1.6)	.04 (1.0)		●	●		
16ERB 10W*	500B6010	11	3/8	.63 (16.00)	.06 (1.6)	.04 (1.0)			●		
16ER 9W	5006009	9	3/8	.63 (16.00)	.06 (1.6)	.04 (1.0)		●			
16ER 8W	5006008	8	3/8	.63 (16.00)	.06 (1.6)	.04 (1.0)		●	●		
22ER 14W 3M	5106714	14	1/2	.87 (22.00)	.18 (4.5)	.11 (2.8)			●		
22ER 11W 2M	5106711	11	1/2	.87 (22.00)	13 (3.4)	.09 (2.3)			●		
22ER 7W	5106007	7	1/2	.87 (22.00)	.09 (2.3)	.06 (1.6)			●		
22ER 6W	5106006	6	1/2	.87 (22.00)	.09 (2.3)	.06 (1.6)	●	●	●		
22ER 5W	5106005	5	1/2	.87 (22.00)	.094 (2.4)	.066 (1.7)		●			
27ER 4W	5204204	4	5/8	1.06 (27.00)	.11 (2.9)	.08 (2.0)			●		

* With chipformer # Pressed to size

55° V THREADING - A55

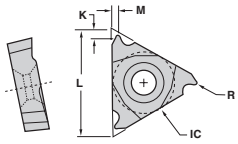


EXT RH SHOWN

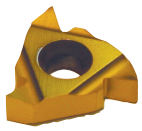


Description	EDP Code	TPI	IC	L	M	K	R	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
11IR A55	4925400	16-48	1/4	.43 (11.00)	.035 (0.9)	.03 (0.8)	.002 (0.05)			●		
11IL A55	5015400	16-48	1/4	.43 (11.00)	.035 (0.9)	.03 (0.8)	.002 (0.05)			●		
16ER A55	5005400	16-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.05)		●	●		
16IR A55	5025400	16-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.05)		●	●		

55° V THREADING - AG55



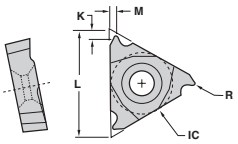
EXT RH SHOWN



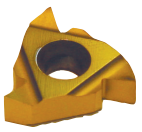
Description	EDP Code	TPI	IC	L	M	K	R	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
16IR AG55	5025600	8-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.05)	●	●	●		
16IRB AG55*	502B48600	8-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.05)			●		
16IRM AG55#	502M4800	8-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.05)			●		
16IL AG55	5064800	8-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.05)			●		
16ER AG55	5005600	8-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.05)	●	●	●		
16ERB AG55*	500B48600	8-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.05)			●		
16ERM AG55#	500M4800	8-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.05)			●		
16EL AG55	5045600	8-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.05)		●	●		

* With chipformer # Pressed to size

55° V THREADING - G55



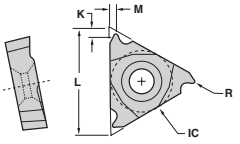
EXT RH SHOWN



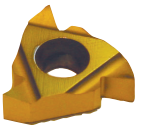
Description	EDP Code	TPI	IC	L	M	K	R	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
16IR G55	5025800	8-14	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.007 (0.20)		●	●		
16IRB G55*	502B5800	8-14	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.007 (0.20)			●		
16IRM G55#	502M5800	8-14	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.007 (0.20)			●		
16IL G55	5065800	8-14	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.007 (0.20)		●	●		
16ER G55	5005800	8-14	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.007 (0.20)		●	●		
16ERB G55*	500B5800	8-14	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.007 (0.20)			●		
16ERM G55#	500M5800	8-14	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.009 (0.23)			●		
16EL G55	5045800	8-14	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.007 (0.20)		●			

* With chipformer # Pressed to size

55° V THREADING - N55

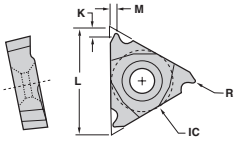


EXT RH SHOWN

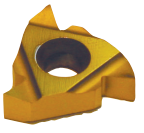


Description	EDP Code	TPI	IC	L	M	K	R	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
22IR N55	5125900	5-7	1/2	.87 (22.00)	.09 (2.5)	.06 (1.7)	.016 (0.42)		●	●		
22ER N55	5105900	5-7	1/2	.87 (22.00)	.09 (2.5)	.06 (1.7)	.016 (0.42)	●	●	●		
22EL N55	5145900	5-7	1/2	.87 (22.00)	.09 (2.5)	.06 (1.7)	.016 (0.42)		●			

55° V THREADING - Q55

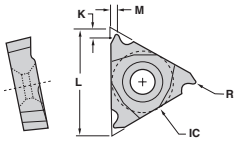


EXT RH SHOWN

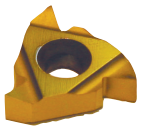


Description	EDP Code	TPI	IC	L	M	K	R	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
27IR Q55	5125900	4-4.5	5/8	1.06 (27.00)	.11 (2.9)	.07 (2.0)	.023 (0.60)		●	●		
27ER Q55	5105900	4-4.5	5/8	1.06 (27.00)	.11 (2.9)	.07 (2.0)	.023 (0.60)		●	●		

60° V THREADING - A60



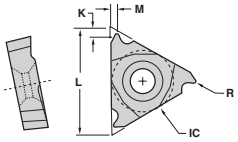
EXT RH SHOWN



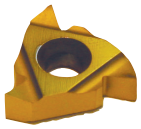
Description	EDP Code	TPI	IC	L	M	K	R	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
11IR A60	4924600	16-48	1/4	.43 (11.00)	.035 (0.9)	.03 (0.8)	.002 (0.05)		●	●		
11IRM A60	492M4600	16-48	1/4	.43 (11.00)	.035 (0.9)	.03 (0.7)	.002 (0.05)			●		
11IL A60	5014600	16-48	1/4	.43 (11.00)	.035 (0.9)	.03 (0.8)	.002 (0.05)		●	●		
16IR A60	5024600	16-48	3/8	.63 (16.00)	.02 (0.6)	.02 (0.6)	.002 (0.05)	●	●	●		
16IRB A60*	502B4600	16-48	3/8	.63 (16.00)	.02 (0.6)	.02 (0.6)	.002 (0.05)			●		
16IRM A60#	502M4600	16-48	3/8	.63 (16.00)	.02 (0.6)	.02 (0.6)	.002 (0.05)			●		
16IL A60	5064600	16-48	3/8	.63 (16.00)	.02 (0.6)	.02 (0.6)	.002 (0.05)		●	●		
16ER A60	5004600	16-48	3/8	.63 (16.00)	.035 (0.9)	.03 (0.8)	.002 (0.05)		●	●		
16ERB A60*	500B5600	16-48	3/8	.63 (16.00)	.035 (0.9)	.03 (0.8)	.002 (0.05)			●		
16ERM A60#	500M5600	16-48	3/8	.63 (16.00)	.035 (0.9)	.03 (0.8)	.002 (0.05)			●		
16EL A60	5044600	16-48	3/8	.63 (16.00)	.035 (0.9)	.03 (0.8)	.002 (0.05)		●	●		

* With chipformer # Pressed to size

60° V THREADING - AG60



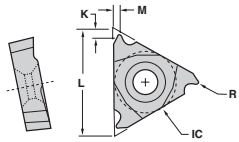
EXT RH SHOWN



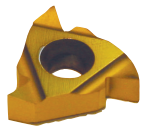
Description	EDP Code	TPI	IC	L	M	K	R	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
16IR AG60	5024800	8-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.05)	●	●	●		●
16IRB AG60*	502B4800	8-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.05)			●		
16IRM AG60#	502M4800	8-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.05)			●		
16IL AG60	5064800	8-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.05)		●	●		
16ER AG60	5004800	8-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.05)	●	●	●		●
16ERB AG60*	500B48600	8-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.05)			●		
16ERM AG60#	500M4800	8-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.06)			●		
16EL AG60	5044800	8-48	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.002 (0.05)	●	●	●		

* With chipformer # Pressed to size

60° V THREADING - G60



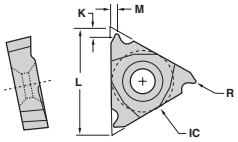
EXT RH SHOWN



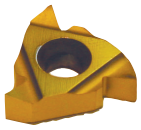
Description	EDP Code	TPI	IC	L	M	K	R	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
16IR G60	5025000	8-14	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.006 (0.17)	●	●	●		
16IRB G60*	502B5000	8-14	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.006 (0.17)			●		
16IRM G60#	502M5000	8-14	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.006 (0.17)			●		
16IL G60	5065000	8-14	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.006 (0.17)		●	●		
16ER G60	5005000	8-14	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.006 (0.17)	●	●	●		●
16ERB G60*	500B5000	8-14	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.006 (0.17)			●		
16ERM G60#	500M5000	8-14	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.006 (0.17)			●		
16EL G60	5045000	8-14	3/8	.63 (16.00)	.06 (1.7)	.04 (1.2)	.006 (0.17)		●	●		

* With chipformer # Pressed to size

60° V THREADING - N60



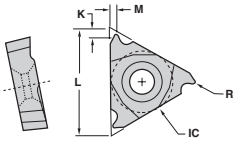
EXT RH SHOWN



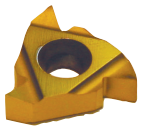
Description	EDP Code	TPI	IC	L	M	K	R	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
22IR N60	5125200	5-7	3/8	.87 (20.00)	.09 (2.5)	.06 (1.7)	.012 (0.05)	●	●	●		●
22IL N60	5125200	5-7	3/8	.87 (20.00)	.09 (2.5)	.06 (1.7)	.012 (0.05)		●	●		
22ER N60	5105200	5-7	3/8	.87 (20.00)	.09 (2.5)	.06 (1.7)	.012 (0.32)		●	●		
22ERM N60#	5105200	5-7	3/8	.87 (20.00)	.09 (2.5)	.06 (1.7)	.012 (0.32)			●		
22EL N60	5145200	5-7	3/8	.87 (20.00)	.09 (2.5)	.06 (1.7)	.012 (0.32)		●	●		

Pressed to size

60° V THREADING - Q60



EXT RH SHOWN



Description	EDP Code	TPI	IC	L	M	K	R	TiN Coated GP22	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
27IR Q60	5225300	4-4.5	5/8	1.06 (27.00)	.12 (3.1)	.08 (2.1)	.024 (0.63)		●	●		
27ER Q60	5205300	4-4.5	5/8	1.06 (27.00)	.12 (3.1)	.08 (2.1)	.024 (0.63)		●	●		

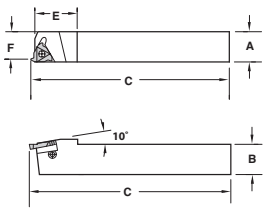
EXTERNAL HOLDER

AL

For Threading and Grooving

Inch

RH Holder uses RH Inserts



RH SHOWN

Description	EDP Code	Insert	A	B	C	E	F*	Insert Screw	Seat Screw	Wrench	Seat
AL0500-3R (SER 0500 F16)	916050361	16ER	.500	.500	3.25	1.15	.63	SA3	SY3	K3	YE3
AL0500-3L (SEL 0500 F16)	916050352	16EL	.500	.500	3.25	1.15	.63	SA3	SY3	K3	YI3
AL0625-3R (SER 0625 H16)	916052361	16ER	.630	.630	4	1.15	.63	SA3	SY3	K3	YE3
AL075-3R (SER 0750 K16)	916056361	16ER	.750	.750	5	1.2	.75	SA3	SY3	K3	YE3
AL075-3L (SEL 0750 K16)	916056362	16EL	.750	.750	5	1.2	.75	SA3	SY3	K3	YI3
AL100-3R (SER 1000 M16)	916064361	16ER	1.000	1.000	6	1.2	1.0	SA3	SY3	K3	YE3
AL100-3L (SEL 1000 M16)	916064362	16EL	1.000	1.000	6	1.2	1.0	SA3	SY3	K3	YI3
AL100-4R (SER 1000 M22)	916064401	22ER	1.000	1.000	6	1.42	1.0	SA4	SY4	K4	YE4
AL100-4L (SEL 1000 M22)	916064402	22EL	1.000	1.000	6	1.42	1.0	SA4	SY4	K4	YI4
AL125-4R (SER 1250 P22)	916068401	22ER	1.250	1.250	7	1.42	1.250	SA4	SY4	K4	YE4
AL125-4L (SEL 1250 P22)	916068402	22EL	1.250	1.250	7	1.42	1.250	SA4	SY4	K4	YE4
AL125-5R (SER 1250 P27)	916068441	27ER	1.250	1.250	7	1.57	1.250	SA5	SY5	K5	YE5
AL125-5L (SEL 1250 P27)	916068442	27EL	1.250	1.250	7	1.57	1.250	SA5	SY5	K5	YI5

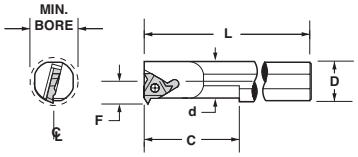
Metric

Description	EDP Code	Insert	A	B	C	E	F*	Insert Screw	Seat Screw	Wrench	Seat
AL1212M3R (SER 1212 F16)	916112361	16ER	12,0	12,0	80,0	30,0	16,0	SA3	SY3	K3	YE3
AL1616M3R (SER 1616 H16)	916116361	16ER	16,0	16,0	100,0	30,0	16,0	SA3	SY3	K3	YE3
AL1616M3L (SEL 1616 H16)	916116362	16EL	16,0	16,0	100,0	30,0	16,0	SA3	SY3	K3	YI3
AL2020M3R (SER 2020 K16)	916120361	16ER	20,0	20,0	125,0	30,0	20,0	SA3	SY3	K3	YE3
AL2020M3L (SEL 2020 K16)	916120362	16EL	20,0	20,0	125,0	30,0	20,0	SA3	SY3	K3	YI3
AL2525M3R (SER 2525 M16)	916125361	16ER	25,0	25,0	150,0	30,0	25,0	SA3	SY3	K3	YE3
AL2525M3L (SEL 2525 M16)	916125362	16EL	25,0	25,0	150,0	30,0	25,0	SA3	SY3	K3	YI3
AL3232M3R (SER 3232 P16)	916132361	16ER	32,0	32,0	170,0	30,0	32,0	SA3	SY3	K3	YE3
AL3232M3L (SEL 3232 P16)	916132362	16EL	32,0	32,0	170,0	30,0	32,0	SA3	SY3	K3	YI3
AL2525M4R (SER 2525 M22)	916125401	22ER	25,0	25,0	150,0	30,0	25,0	SA3	SY3	K3	YE4
AL2525M4L (SEL 2525 M22)	916125402	22EL	25,0	25,0	150,0	30,0	25,0	SA4	SY4	K4	YI4
AL3232M4R (SER 3232 P22)	916132401	22ER	32,0	32,0	170,0	30,0	32,0	SA4	SY4	K4	YE4
AL3232M4L (SEL 3232 P22)	916132402	22EL	32,0	32,0	170,0	30,0	32,0	SA4	SY4	K4	YI4
AL3232M5R (SER 3232 P27)	916032441	27ER	32,0	32,0	170,0	30,0	32,0	SA5	SY5	K5	YE5
AL3232M5L (SEL 3232 P27)	916032442	27EL	32,0	32,0	170,0	30,0	32,0	SA5	SY5	K5	YI5

INTERNAL BAR

AVR/NVR

Inch



RH SHOWN

Description	EDP Code	Insert	d	D	F**	L	C	Min. Bore	Insert Screw	Seat Screw & Washer	Wrench	Seat
NVR 375-2R* (SIR 0375 K11)	962048351	11IR	.375	.620	.260	5	1.00	.470	SN-2T	-	K3	-
NVR 375-2L* (SIL 0375 K11)	962048352	11IL	.375	.620	.260	5	1.00	.470	SN-2T	-	K3	-
NVR 500-2R* (SIR 0500 L11)	962008511	11IR	.500	.625	.320	5.5	1.25	.630	SN-2T	-	K3	-
NVR 500-2L* (SIL 0500 L11)	962008512	11IL	.500	.625	.320	5.5	1.25	.630	SN-2T	-	K3	-
NVR 500-3R* (SIR 0500 M16)	962008361	16IR	.500	.625	.390	6	1.25	.640	SA3	-	K3	-
NVR 500-3L* (SIL 0500 M16)	962008362	16IL	.500	.625	.390	6	1.25	.640	SA3	-	K3	-
NVR 625-3R* (SIR 0625 P16)	962052361	16IR	.625	.750	.450	7	1.50	.750	SA3	-	K3	-
NVR 625-3L* (SIL 0625 P16)	962052362	16IL	.625	.750	.450	7	1.50	.750	SA3	-	K3	-
AVR 750-3R (SIR 0750 P16)	918056361	16IR	.750	.750	.510	8	-	1.000	SA3	SY3	K3	YI3
AVR 750-3L (SIL 0750 P16)	918056362	16IL	.750	.750	.510	8	-	1.000	SA3	SY3	K3	YE3
AVR 100-3R (SIR 1000 R16)	918064361	16IR	1.000	1.000	.650	8	-	1.200	SA3	SY3	K3	YI3
AVR 100-3L (SIL 1000 R16)	918064362	16IL	1.000	1.000	.650	8	-	1.200	SA3	SY3	K3	YE3
AVR 125-3R (SIR 1250 S16)	918068361	16IR	1.250	1.250	.770	10	-	1.420	SA3	SY3	K3	YI3
AVR 125-3L (SIL 1250 S16)	918068362	16IL	1.250	1.250	.770	10	-	1.420	SA3	SY3	K3	YE3
AVR 150-3R (SIR 1500 T16)	918072361	16IR	1.500	1.500	.900	12	-	1.650	SA3	SY3	K3	YI3
AVR 150-3L (SIL 1500 T16)	918072362	16IL	1.500	1.500	.900	12	-	1.650	SA3	SY3	K3	YE3
NVR 750-4R (SIR 0750 P22)	962056401	22IR	.750	.750	.510	7	-	.950	SA4	-	K4	-
NVR 750-4L (SIL 0750 P22)	962056402	22IL	.750	.750	.510	7	-	.950	SA4	-	K4	-
AVR 100-4R (SIR 1000 R22)	918064401	22IR	1.000	1.000	.710	8	-	1.200	SA4	SY4	K4	YI4
AVR 100-4L (SIL 1000 R22)	918064402	22IL	1.000	1.000	.710	8	-	1.200	SA4	SY4	K4	YE4
AVR 125-4R (SIR 1250 S22)	918068401	22IR	1.250	1.250	.850	10	-	1.500	SA4	SY4	K4	YI4
AVR 125-4L (SIL 1250 S22)	918068402	22IL	1.250	1.250	.850	10	-	1.500	SA4	SY4	K4	YE4
AVR 150-4R (SIR 1500 T22)	918072401	22IR	1.500	1.500	.980	12	-	1.750	SA4	SY4	K4	YI4
AVR 150-4L (SIL 1500 T22)	918072402	22IL	1.500	1.500	.980	12	-	1.750	SA4	SY4	K4	YE4
AVR 125-5R (SIR 1250 S27)	918068441	27IR	1.250	1.250	.880	10	-	1.560	SA5	SY5	K4	YI5
AVR 125-5L (SIL 1250 S27)	918068442	27IL	1.250	1.250	.880	10	-	1.560	SA5	SY5	K4	YE5
AVR 150-5R (SIR 1500 T27)	918072441	27IR	1.500	1.500	1.000	12	-	1.800	SA5	SY5	K4	YI5
AVR 150-5L (SIL 1500 T27)	918072442	27IL	1.500	1.500	1.000	12	-	1.800	SA5	SY5	K4	YE5
AVR 200-5R (SIR 2000 U27)	918080441	27IR	2.000	2.000	1.250	14	-	2.300	SA5	SY5	K4	YI5
AVR 200-5L (SIL 2000 U27)	918080442	27NL	2.000	2.000	1.250	14	-	2.300	SA5	SY5	K4	YE5

*Over NV Insert

**Support must be slightly modified if used for grooving.

Metric

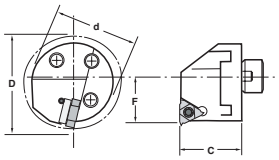
Description	EDP Code	Insert	d	D	F**	L	C	Min. Bore	Insert Screw	Seat Screw & Washer	Wrench	Seat
NVR10M-2R (SIR 0010 H11)	962010M351	11IR	10	10	7.4	100	-	12	SN-2T	-	K2	-
NVR10M-2L (SIL 0010 H11)	962010M352	11IL	10	10	7.4	100	-	12	SN-2T	-	K2	-
NVR13M-2R (SIR 0013 L11)	962013M351	11IR	13	16	8.9	140	32	15	SN-2T	-	K2	-
NVR13M-2L (SIL 0013 L11)	962013M352	11IL	13	16	8.9	140	32	15	SN-2T	-	K2	-
NVR13M-3R (SIR 0013 M16)	962013M361	16IR	13	16	10.0	150	32	16	SN-3T	-	K3	-
NVR13M-3L (SIL 0013 M16)	962013M362	16IL	13	16	10.0	150	32	16	SN-3T	-	K3	-
NVR16M-3R (SIR 0016 P16)	962016M361	16IR	16	20	11.4	170	40	19	SN-3T	-	K3	-
NVR16M-3L (SIL 0016 P16)	962016M362	16IL	16	20	11.4	170	40	19	SN-3T	-	K3	-
AVR20M-3R (SIR 0020 P16)	918020M361	16IR	20	20	13.7	170	-	24	SA3	SY3	K3	YI3
AVR20M-3L (SIL 0020 P16)	918020M362	16IL	20	20	13.7	170	-	24	SA3	SY3	K3	YE3
AVR25M-3R (SIR 0025 R16)	918025M361	16IR	25	25	16.3	250	-	29	SA3	SY3	K3	YI3
AVR25M-3L (SIL 0025 R16)	918025M362	16IL	25	25	16.3	250	-	29	SA3	SY3	K3	YE3
AVR32M-3R (SIR 0032 S16)	918032M361	16IR	32	32	19.7	250	-	36	SA3	SY3	K3	YI3
AVR32M-3L (SIL 0032 S16)	918032M362	16IL	32	32	19.7	250	-	36	SA3	SY3	K3	YE3
AVR40M-3R (SIR 0040 T16)	918040M361	16IR	40	40	23.7	300	-	44	SA3	SY3	K3	YI3
AVR40M-3L (SIL 0040 T16)	918040M362	16IL	40	40	23.7	300	-	44	SA3	SY3	K3	YE3
AVR50M-3R (SIR 0050 U16)	918050M361	16IR	50	50	28.7	350	-	54	SA3	SY3	K3	YI3
AVR50M-3L (SIL 0050 U16)	918050M362	16IL	50	50	28.7	350	-	54	SA3	SY3	K3	YE3
NVR20M-4R (SIR 0020 P22)	962020M401	22IR	20	20	15.6	170	-	24	SN-3T	-	K3	-
NVR20M-4L (SIL 0020 P22)	962020M401	22IL	20	20	15.6	170	-	24	SN-3T	-	K3	-
AVR25M-4R (SIR 0025 R22)	918025M401	22IR	25	25	17.2	200	-	29	SA4	SY4	K4	YI4
AVR25M-4L (SIL 0025 R22)	918025M402	22IL	25	25	17.2	200	-	29	SA4	SY4	K4	YE4
AVR32M-4R (SIR 0032 S22)	918032M401	22IR	32	32	21.5	250	-	38	SA4	SY4	K4	YI4
AVR32M-4L (SIL 0032 S22)	918032M402	22IL	32	32	21.5	250	-	38	SA4	SY4	K4	YE4
AVR40M-4R (SIR 0040 T22)	918040M401	22IR	40	40	25.8	300	-	46	SA4	SY4	K4	YI4
AVR40M-4L (SIL 0040 T22)	918040M402	22IL	40	40	25.8	300	-	46	SA4	SY4	K4	YE4
AVR50M-4R (SIR 0050 U22)	918050M401	22IR	50	50	30.6	350	-	56	SA4	SY4	K4	YI4
AVR50M-4L (SIL 0050 U22)	918050M402	22IL	50	50	30.6	350	-	56	SA4	SY4	K4	YE4
AVR32M-5R (SIR 0032 S27)	918032M41	27IR	32	32	22.4	250	-	40	SA5	SY5	K4	YI5
AVR32M-5L (SIL 0032 S27)	918032M42	27IL	32	32	22.4	250	-	40	SA5	SY5	K4	YE5
AVR40M-5R (SIR 0040 T27)	918040M41	27IR	40	40	26.6	300	-	48	SA5	SY5	K4	YI5
AVR40M-5L (SIL 0040 T27)	918040M42	27IL	40	40	26.6	300	-	48	SA5	SY5	K4	YE5
AVR50M-5R (SIR 0050 U27)	918050M41	27IR	50	50	31.6	350	-	58	SA5	SY5	K4	YI5
AVR50M-5L (SIL 0050 U27)	918050M42	27IL	50	50	31.6	350	-	58	SA5	SY5	K4	YE5

*Over NV Insert

**Support must be slightly modified if used for grooving.

INTERCHANGEABLE HEADS

H-AVR/L*
(Inch)



RH SHOWN

Description	EDP Code	Insert	D	C	F	Min. Bore	PARTS Insert Screw	Seat Screw	Seat
H16-AVR-3R	9IH18064361	16IR	1.000	1.625	0.650	1.200	SA-3	SY-3	YI3
H20-AVR-3R	9IH18068361	16IR	1.250	1.625	0.765	1.450	SA-3	SY-3	YI3
H24-AVR-3R	9IH18072361	16IR	1.500	1.625	0.890	1.760	SA-3	SY-3	YI3
H32-AVR-3R	9IH18080361	16IR	2.000	1.625	1.281	2.400	SA-3	SY-3	YI3
H24-AVR-4R	9IH18072401	22IR	1.500	1.625	0.978	1.760	SA-4	SY-4	YI4
H32-AVR-4R	9IH18080401	22IR	2.000	1.625	1.281	2.400	SA-4	SY-4	YI4

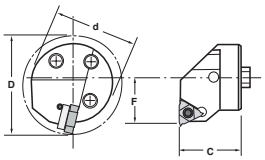
*Left Hand quoted on request.

H-AVR/L*
(Metric)

Description	EDP Code	Insert	D	C	F	Min. Bore	PARTS Insert Screw	Seat Screw	Seat
H25M-AVR-3R	9IH18025M361	16IR	25.00	41.28	16.51	30.48	SAM3	SYM3	YI3
H32M-AVR-3R	9IH18032M361	16IR	32.00	41.28	19.43	36.83	SAM3	SYM3	YI3
H40M-AVR-3R	9IH18040M361	16IR	40.00	41.28	22.61	44.70	SAM3	SYM3	YI3
H50M-AVR-3R	9IH18050M361	16IR	50.00	41.28	32.54	60.96	SAM3	SYM3	YI3
H40M-AVR-4R	9IH18040M401	22IR	40.00	41.28	24.84	44.70	SAM4	SYM4	YI4
H50M-AVR-4R	9IH18050M401	22IR	50.00	41.28	32.54	60.96	SAM4	SYM4	YI4

*Left Hand quoted on request.

HS-AVR/L*



RH SHOWN

Description	EDP Code	Insert	D	C	F	Min. Bore	PARTS Insert Screw	Seat Screw	Seat
HS25-AVR-3R	9IHS18025M361	16IR	0.98 (25.00)	0.98 (24.89)	0.669 (16.99)	1.260 (32.00)	SA-3	SY-3	YI3
HS32-AVR-3R	9IHS18032M361	16IR	1.26 (32.00)	1.26 (32.00)	0.866 (22.00)	1.570 (39.88)	SA-3	SY-3	YI3
HS40-AVR-3R	9IHS18040M361	16IR	1.57 (40.00)	1.26 (32.00)	1.063 (27.00)	1.970 (50.04)	SA-3	SY-3	YI3
HS50-AVR-3R	9IHS18050M361	16IR	1.97 (50.00)	1.57 (39.88)	1.378 (35.00)	2.480 (62.99)	SA-3	SY-3	YI3
HS40-AVR-4R	9IHS18040M401	22IR	1.57 (40.00)	1.26 (32.00)	1.063 (27.00)	1.970 (50.04)	SA-4	SY-4	YI4
HS50-AVR-4R	9IHS18050M401	22IR	1.97 (50.00)	1.57 (39.88)	1.378 (35.00)	2.480 (62.99)	SA-4	SY-4	YI4

*Left Hand quoted on request.
* S70 type connection

ANVILS

Resultant Helix Angle			4.5˚	3.5˚	2.5˚	1.5˚	0.5˚	0˚	-0.5˚	-1.5˚
IC	L	Holder	Anvil Description							
3/8”	.63 .63	ER/NL EL/NR	YE3-3P YI3-3P	YE3-2P YI3-2P	YE3-1P YI3-1P	YE3 YI3	YE3-1N YI3-1N	YE3-1.5N YI3-1.5N	YE3-2N YI3-2N	YE3-3N YI3-3N
1/2”	.87 .87	ER/NL EL/NR	YE4-3P YI4-3P	YE4-2P YI4-2P	YE4-1P YI4-1P	YE4 YI4	YE4-1N YI4-1N	YE4-1.5N YI4-1.5N	YE4-2N YI4-2N	YE4-3N YI4-3N
5/8”	1.06 1.06	ER/NL EL/NR	YE5-3P YI5-3P	YE5-2P YI5-2P	YE5-1P YI5-1P	YE5 YI5	YE5-1N YI5-1N	YE5-1.5N YI5-1.5N	YE5-2N YI5-2N	YE5-3N YI5-3N
3/8”M	.63 .63	ER/NL EL/NR				YE3M YI3M	YE3M-1N YI3M-1N	YE3M-1.5N YI3M-1.5N	YE3M-2N	
1/2”M	.87 .87	ER/NL EL/NR				YE4M YI4M	YE4M-1N YI4M-1N	YE4M-1.5N YI4M-1.5N	YE4M-2N	
5/8”M	1.06 1.06	ER/NL EL/NR				YE5M YI5M	YE5M-1N YI5M-1N	YE5M-1.5N YI5M-1.5N		
1/2”Z	.87	EL/NR			YI4Z-1P					
1/2”U	.87 .87	ER/NL EL/NR	YE4U-3P YI4U-3P	YE4U-2P YI4U-2P	YE4U-1P YI4U-1P	YE4U YI4U	YE4U-1N YI4U-1N	YE4U-1.5N YI4U-1.5N	YE4U-2N YI4U-2N	YE4U-1N YI4U-1N

ANVIL KITS

IC	L	TF #	Included Anvils
3/8”	.63	**KTY3**	YE3-2P, 1P, 1N, 2N, 3N
	.63		YI3-2P, 1P, 1N, 2N, 3N
1/2”	.87	**KTY4**	YE4-2P, 1P, 1N, 2N, 3N
	.87		YI4-2P, 1P, 1N, 2N, 3N
1/2”U	.87	**KTY4U**	YE4U-2P, 1P, 1N, 2N, 3N
	.87		YI4U-2P, 1P, 1N, 2N, 3N
5/8”	1.06	**KTYE5**	YE5-2P, 1P, 1N, 2N, 3N
	1.06	**KTYI5**	YI5-2P, 1P, 1N, 2N, 3N
5/8”U	1.06	**KTYE5U**	YE5U-2P, 1P, 1N, 2N, 3N
	1.06	**KTYI5U**	YI5U-2P, 1P, 1N, 2N, 3N

Standard Anvil		M Style Anvil		Z Style Anvil	
					
ER/NL	EL/NR	ER/NL	EL/NR	ER/NL	EL/NR

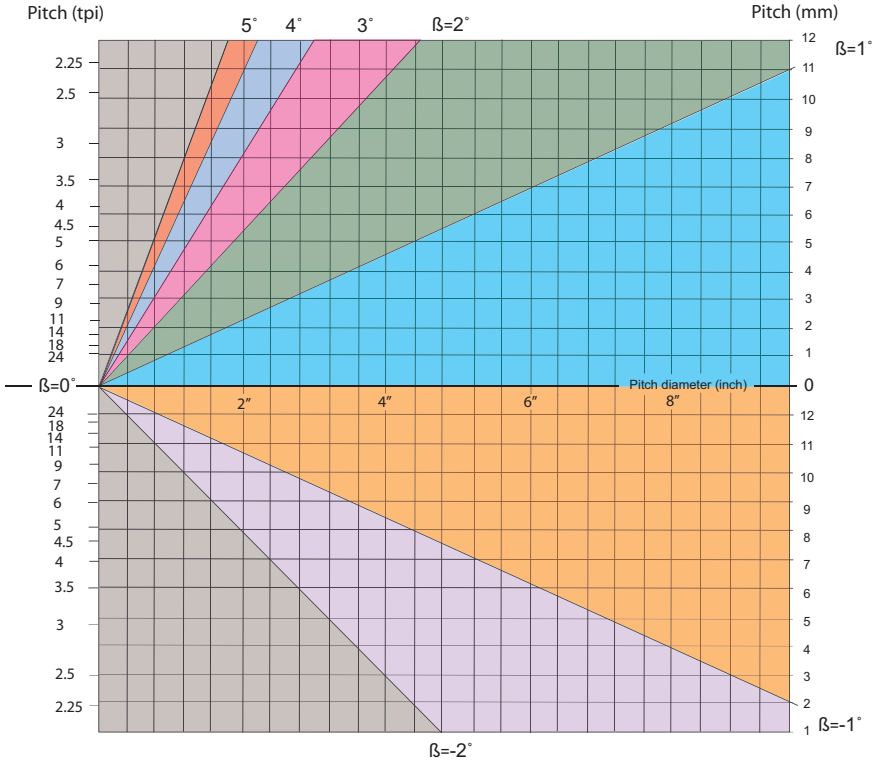
ANVIL FORMS

1/2”	YE4-11.5NPT-2M YI4-11.5NPT-2M
5/8”	YE5-8NPT-2M, YE5-8RD-2M YI5-8NPT-2M, YI5-8RD-2M

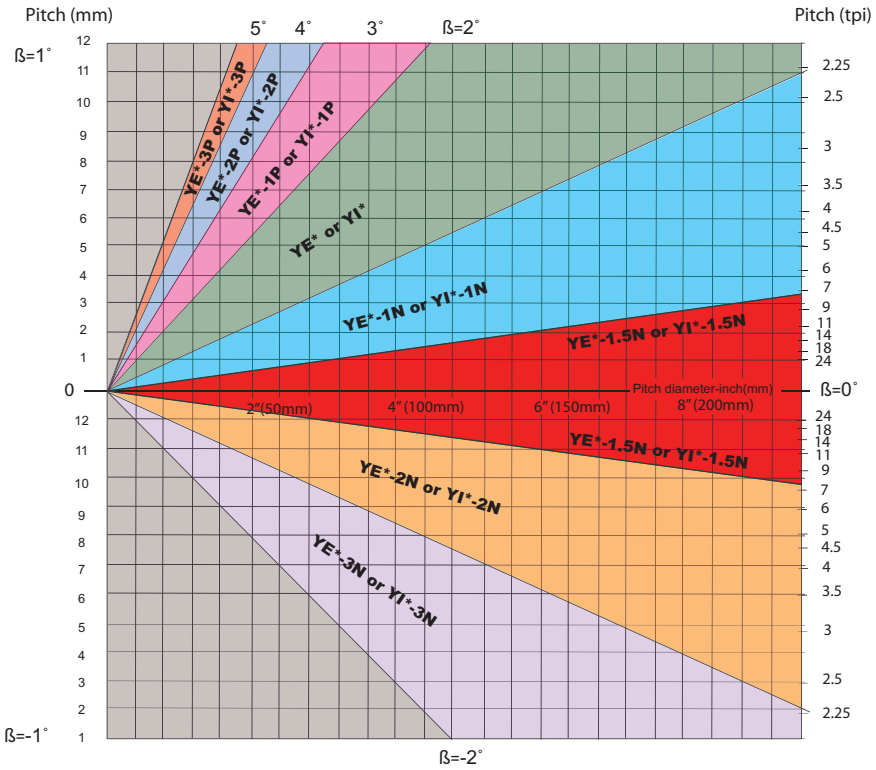
Helix Angle Table (For Given Pitch and Diameter)

resultant helical angle	4.5˚	3.5˚	2.5˚	1.5˚	0.5˚	0˚	-0.5˚	-1.5˚
threads per inch	D I A M E T E R							
48			0.12 - 0.18	0.18 - 0.48	0.48 - 1.28	> 1.28	1.28 - 0.48	0.48 - 0.18
44		0.13 - 0.20	0.20 - 0.52	0.52 - 1.40	> 1.40	1.40 - 0.52	0.52 - 0.20	
40		0.11 - 0.14	0.14 - 0.22	0.22 - 0.57	0.57 - 1.52	> 1.52	1.52 - 0.57	0.57 - 0.22
36		0.12 - 0.16	0.16 - 0.24	0.24 - 0.64	0.64 - 1.70	> 1.70	1.70 - 0.64	0.64 - 0.24
32	0.12 - 0.13	0.13 - 0.18	0.18 - 0.27	0.27 - 0.71	0.71 - 1.90	> 1.90	1.90 - 0.71	0.71 - 0.27
28	0.12 - 0.15	0.15 - 0.20	0.20 - 0.31	0.31 - 0.82	0.82 - 2.19	> 2.19	2.19 - 0.82	0.82 - 0.31
27	0.14 - 0.16	0.16 - 0.21	0.21 - 0.32	0.32 - 0.84	0.84 - 2.25	> 2.25	2.25 - 084	0.84 - 0.32
24	0.16 - 0.18	0.18 - 0.24	0.24 - 0.36	0.36 - 0.96	0.96 - 2.55	> 2.55	2.55 - 0.86	0.96 - 0.36
20	0.19 - 0.22	0.22 - 0.28	0.28 - 0.43	0.43 - 1.14	1.14 - 3.04	> 3.04	3.04 - 1.14	1.14 - 0.43
18	0.21 - 0.24	0.24 - 0.32	0.32 - 0.49	0.49 - 1.28	1.28 - 3.40	> 3.40	3.40 - 1.28	1.28 - 0.49
16	0.23 - 0.27	0.27 - 0.35	0.35 - 0.54	0.54 - 1.41	1.41 - 3.77	> 3.77	3.77 - 1.41	1.41 - 0.54
14	0.27 - 0.31	0.31 - 0.40	0.40 - 0.62	0.62 - 1.62	1.62 - 4.32	> 4.32	4.32 - 1.62	1.62 - 0.62
13	0.29 - 0.33	0.33 - 0.44	0.44 - 0.67	0.67 - 1.76	1.76 - 4.68	> 4.68	4.68 - 1.76	1.76 - 0.67
12	0.32 - 0.36	0.36 - 0.48	0.48 - 0.73	0.73 - 1.92	1.92 - 5.11	> 5.11	5.11 - 1.92	1.92 - 0.73
11.5	0.33 - 0.38	0.38 - 0.49	0.49 - 0.76	0.76 - 1.98	1.98 - 5.29	> 5.29	5.29 - 1.98	1.98 - 0.76
11	0.35 - 0.39	0.39 - 0.52	0.52 - 0.79	0.79 - 2.07	2.07 - 5.53	> 5.53	5.53 - 2.07	2.07 - 0.79
10	0.38 - 0.43	0.43 - 0.57	0.57 - 0.87	0.87 - 2.28	2.28 - 6.08	> 6.06	6.08 - 2.28	2.28 - 0.87
9	0.42 - 0.48	0.48 - 0.63	0.63 - 0.96	0.96 - 2.53	2.53 - 6.75	> 6.75	6.75 - 2.53	2.53 - 0.96
8	0.47 - 0.54	0.54 - 0.71	0.71 - 1.09	1.09 - 2.85	2.85 - 7.60	> 7.60	7.60 - 2.85	2.85 - 1.09
7	0.54 - 0.62	0.62 - 0.81	0.81 - 1.24	1.24 - 3.26	3.26 - 8.69	> 8.69	8.69 - 3.26	3.26 - 1.24
6	0.63 - 0.72	0.72 - 0.95	0.95 - 1.45	1.45 - 3.81	3.81 - 10.15	> 10.15	10.15 - 3.81	3.81 - 1.45
5	0.76 - 0.87	0.87 - 1.14	1.14 - 1.74	1.74 - 4.56	4.56 - 12.16	> 12.16	12.16 - 4.56	4.56 - 1.74
4.5	0.84 - 0.96	0.96 - 1.26	1.26 - 1.93	1.93 - 5.06	5.06 - 13.49	> 13.49	13.49 - 5.06	5.06 - 1.93
4	0.95 - 1.08	1.08 - 1.42	1.42 - 2.17	2.17 - 5.70	5.70 - 15.20	> 15.20	15.20 - 5.70	5.70 - 2.17

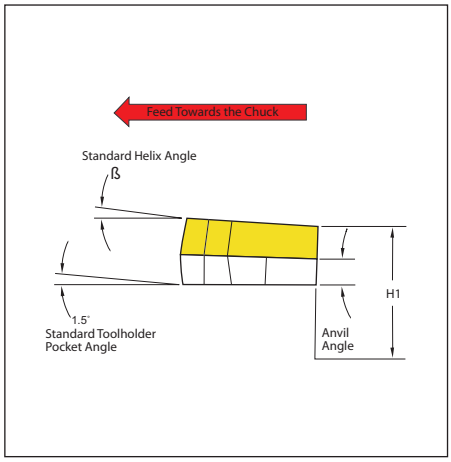
Helix Angle Diagram



Helix Angle Diagram

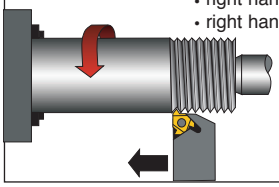


Feed direction towards the chuck

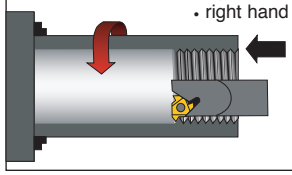


RH Tooling

External RH Thread
- counterclockwise rotation
- right hand toolholder
- right hand insert

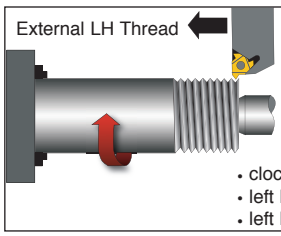


Internal RH Thread
- counterclockwise rotation
- right hand bar
- right hand insert

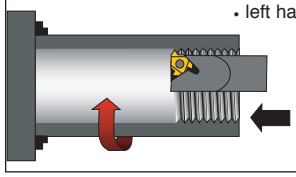


LH Tooling

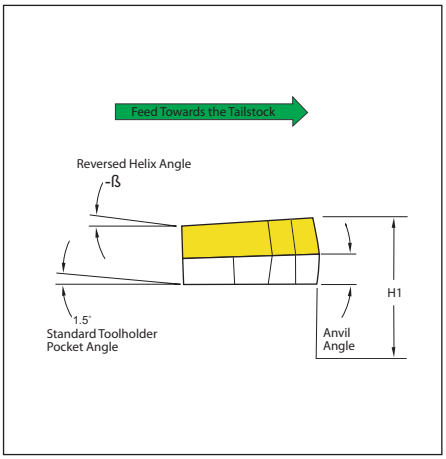
External LH Thread
- clockwise rotation
- left hand toolholder
- left hand insert



Internal LH Thread
- clockwise rotation
- left hand bar
- left hand insert

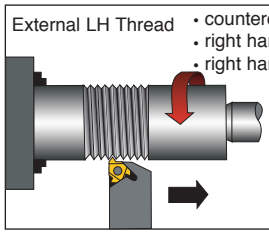


Feed direction towards the tailstock

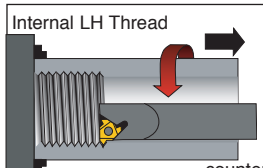


RH Tooling

External LH Thread
- counterclockwise rotation
- right hand toolholder
- right hand insert



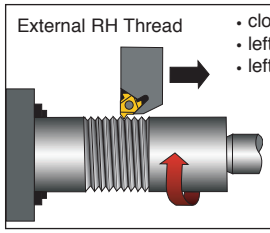
Internal LH Thread



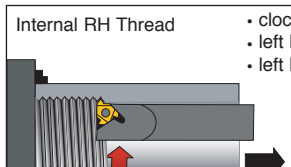
- counterclockwise rotation
- right hand bar
- right hand insert

LH Tooling

External RH Thread
- clockwise rotation
- left hand toolholder
- left hand insert



Internal RH Thread
- clockwise rotation
- left hand bar
- left hand insert



SELECTION OF SHIMS

To calculate the lead angle of a given thread, use this formula:

$$ß = \text{Arctan} \frac{P \times S}{\pi \ D_e}$$

ß = Thread lead angle

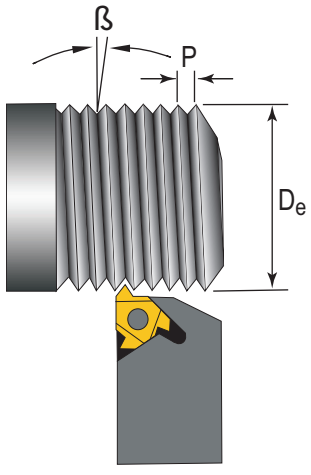
D_e = effective pitch diameter of thead where P = 1/tpi

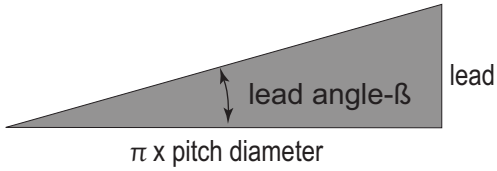
tpi = Threads per inch

S = number of starts (=1 for standard thread)

P = pitch

multiple-start, lead = P x S





LAYDOWN

L-Style Laydown Insert Nomenclature Chart

L 43 NT 5 B 75 EXT GP3 A

type of insert

L	Laydown
LDS	Double sided
LPGC	Laydown
TPGC	T-style

insert ic size

32	3/8”
42	1/2”
43	1/2”
53	5/8”
54	5/8

thread form

NT	Non-Topping Acme Thread
NV	Non-Topping 60° V-Thread
H90	API Hughes H90 Thread

pitch (tpi)

threaders
4
5
8
10

thread type

B	Buttress Thread
NPT	National Pipe Thread
PA	Pittsburgh Acme
RD	API Round Thread
UN	Unified Thread
VAM	VAM Thread
XL	X-Line Thread

taper per foot

75	3/4”
1	1”
12	1-1/4”
15	1-1/2”

type of insert

EXT	External
INT	Internal

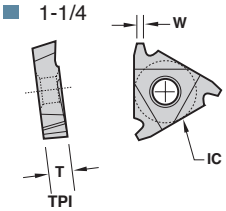
grade

edge prep

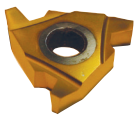
api form

cat no.	tpi	tpf
425	4	2
428	4	2
435	4	3
438	4	3
530	5	3
4PAC	4	1-1/2
H902	3-1/2	2
H903	3-1/2	3
H90S	3	1-1/4

ACME

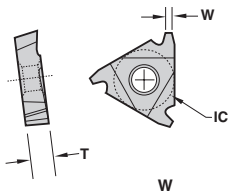


EXT SHOWN
INT OPPOSITE



Description	EDP Code	TPI	W	IC	T	TiN Coated			AlTiN Coated		
						GP22	GP50	GP5	AC22	AC3	AC50
L43 NT 8P EXT	0215A080	8	.0411 (1.04)	1/2	.189 (4.80)		●				
L43 NT 6P EXT	0215A060	6	.0566 (1.44)	1/2	.189 (4.80)		●				
L43 NT 5P EXT	0215A050	5	.0689 (1.75)	1/2	.189 (4.80)		●				
L53 NT 4P EXT	0247A040	4	.0875 (2.22)	5/8	.189 (4.80)		●				
L43 NT 8P INT	0215C080	8	.0411 (1.04)	1/2	.189 (4.80)		●				
L43 NT 6P INT	0215C060	6	.0566 (1.44)	1/2	.189 (4.80)		●				
L43 NT 5P INT	0215C050	5	.0689 (1.75)	1/2	.189 (4.80)		●				
L53 NT 4P INT	0247C040	4	.0875 (2.22)	5/8	.189 (4.80)		●				

ACME STUB



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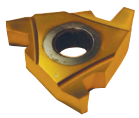
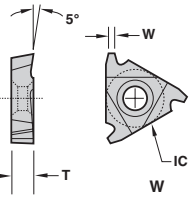
EXT OPPOSITE



Description	EDP Code	TPI	W	IC	T	TiN Coated			AlTiN Coated		
						GP22	GP50	GP54	AC22	AC3	AC50
L43 NT 8P STUB EXT	0215A081	8	.0476 (1.21)	1/2	.189 (4.80)		●				
L43 NT 6P STUB EXT	0215A061	6	.0652 (1.66)	1/2	.189 (4.80)		●				
L43 NT 5P STUB EXT	0215A051	5	.0793 (2.01)	1/2	.189 (4.80)		●				
L53 NT 4P STUB EXT	0247A041	4	.1004 (2.55)	5/8	.189 (4.80)		●				
L43 NT 8P STUB INT	0215C081	8	.0476 (1.21)	1/2	.189 (4.80)		●				
L43 NT 6P STUB INT	0215C061	6	.0652 (1.66)	1/2	.189 (4.80)		●				
L43 NT 5P STUB INT	0215C051	5	.0793 (2.01)	1/2	.189 (4.80)		●				
L53 NT 4P STUB INT	0247C041	4	.1004 (2.55)	5/8	.189 (4.80)		●				

ACME



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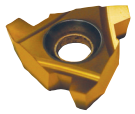
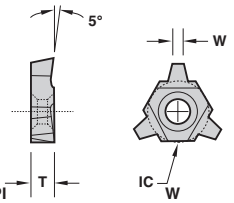
INT OPPOSITE

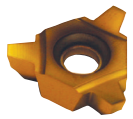


Description	EDP Code	TPI	W	IC	T	TiN Coated GP22	TiN Coated GP50	TiN Coated GP5	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
LPGC 32 NT 12P INT RH	0204A120	12	.0283 (0.72)	3/8	.127 (3.23)			●			
LPGC 32 NT 10P INT RH	0204A100	10	.0319 (0.81)	3/8	.127 (3.23)			●			
LPGC 32 NT 8P INT RH	0204A080	8	.0411 (1.04)	3/8	.127 (3.23)			●			
LPGC 42 NT 8P INT RH	0213A080	8	.0411 (1.04)	1/2	.127 (3.23)			●			
LPGC 42 NT 6P INT RH	0213A060	6	.0566 (1.44)	1/2	.127 (3.23)			●			
LPGC 42 NT 5P INT RH	0213A050	5	.0689 (1.75)	1/2	.127 (3.23)			●			
LPGC 42 NT 4P INT RH*	0213A040	4	.0875 (2.22)	1/2	.127 (3.23)			●			
LPGC 43 NT 8P INT RH	0227A080	8	.0411 (1.04)	1/2	.189 (4.80)			●			
LPGC 43 NT 6P INT RH	0227A060	6	.0566 (1.44)	1/2	.189 (4.80)			●			
LPGC 43 NT 5P INT RH	0227A050	5	.0689 (1.75)	1/2	.189 (4.80)			●			
LPGC 43 NT 4P INT RH*	0227A040	4	.0875 (2.22)	1/2	.189 (4.80)			●			

*Bar must be modified to clear depth.

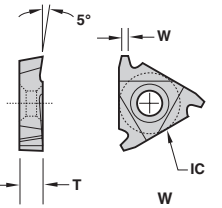
ACME





Description	EDP Code	TPI	W	IC	T	TiN Coated GP22	TiN Coated GP50	TiN Coated GP5	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
TPGC 32 NT 12P	0207120	12	.0283 (0.72)	3/8	.127 (3.23)			●			
TPGC 32 NT 10P	0207100	10	.0319 (0.81)	3/8	.127 (3.23)			●			
TPGC 32 NT 8P	0207080	8	.0411 (1.04)	3/8	.127 (3.23)			●			
TPGC 32 NT 6P	0207060	6	.0566 (1.44)	3/8	.127 (3.23)			●			
TPGC 32 NT 5P	0207050	5	.0689 (1.75)	3/8	.127 (3.23)			●			
TPGC 42 NT 8P	0214080	8	.0411 (1.04)	1/2	.127 (3.23)			●			
TPGC 42 NT 6P	0214060	6	.0566 (1.44)	1/2	.127 (3.23)			●			
TPGC 42 NT 5P	0214050	5	.0689 (1.75)	1/2	.127 (3.23)			●			
TPGC 42 NT 4P	0214040	4	.0875 (2.22)	1/2	.127 (3.23)			●			
TPGC 43 NT 6P	0238060	6	.0566 (1.75)	1/2	.189 (4.80)			●			
TPGC 43 NT 5P	0238050	5	.0689 (1.75)	1/2	.189 (4.80)			●			
TPGC 43 NT 4P	0238040	4	.0875 (2.22)	1/2	.189 (4.80)			●			

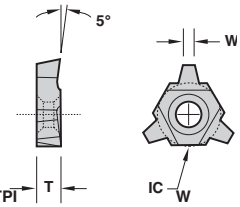
ACME STUB

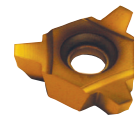


EXT SHOWN
INT OPPOSITE

Description	EDP Code	TPI	W	IC	T	TiN Coated GP22	TiN Coated GP5	TiN Coated GP50	AlTiN Coated AC25	AlTiN Coated AC3	AlTiN Coated AC50
LPGC 32 NT 8P STUB INT RH	0204A081	8	.0476 (1.21)	3/8	.127 (3.23)		●				
LPGC 42 NT 8P STUB INT RH	0213A081	8	.0476 (1.21)	1/2	.127 (3.23)		●				
LPGC 42 NT 6P STUB INT RH	0213A061	6	.0652 (1.66)	1/2	.127 (3.23)		●				
LPGC 42 NT 5P STUB INT RH	0213A051	5	.0793 (2.01)	1/2	.127 (3.23)		●				
LPGC 42 NT 4P STUB INT RH	0213A041	4	.1004 (2.55)	1/2	.127 (3.23)		●				
LPGC 43 NT 8P STUB INT RH	0227A081	8	.0476 (1.21)	1/2	.189 (4.80)		●				
LPGC 43 NT 6P STUB INT RH	0227A061	6	.0652 (1.66)	1/2	.189 (4.80)		●				
LPGC 43 NT 5P STUB INT RH	0227A051	5	.0793 (2.01)	1/2	.189 (4.80)		●				
LPGC 43 NT 4P STUB INT RH	0227A041	4	.1004 (2.55)	1/2	.189 (4.80)		●				

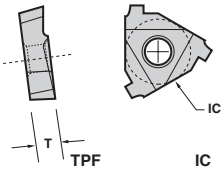
ACME STUB



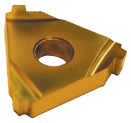


Description	EDP Code	TPI	W	IC	T	TiN Coated GP22	TiN Coated GP5	TiN Coated GP50	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
TPGC 32 NT 12P STUB	0207121	12	.0283 (0.72)	3/8	.127 (3.23)		●				
TPGC 32 NT 10P STUB	0207101	10	.0319 (0.81)	3/8	.127 (3.23)		●				
TPGC 32 NT 8P STUB	0207081	8	.0476 (1.21)	3/8	.127 (3.23)		●				
TPGC 32 NT 6P STUB	0207061	6	.0652 (1.66)	3/8	.127 (3.23)		●				
TPGC 32 NT 5P STUB	0207051	5	.0793 (2.01)	3/8	.127 (3.23)		●				
TPGC 42 NT 8P STUB	0214081	8	.0476 (1.21)	1/2	.127 (3.23)		●				
TPGC 42 NT 6P STUB	0214061	6	.0652 (1.66)	1/2	.127 (3.23)		●				
TPGC 42 NT 5P STUB	0214051	5	.0793 (2.01)	1/2	.127 (3.23)		●				
TPGC 42 NT 4P STUB	0214041	4	.1004 (2.55)	1/2	.127 (3.23)		●				
TPGC 43 NT 6P STUB	0238061	5	.0652 (1.66)	1/2	.189 (4.80)		●				
TPGC 43 NT 5P STUB	0238051	5	.0793 (2.01)	1/2	.189 (4.80)		●				
TPGC 43 NT 4P STUB	0238041	4	.1004 (2.55)	1/2	.189 (4.80)		●				

API BUTTRESS



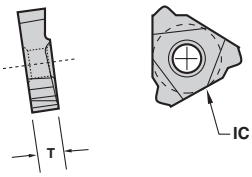
EXT SHOWN
INT OPPOSITE



Description	EDP Code	TPI	TPF	IC	T	Conn. No.	TiN Coated GP22	TiN Coated GP50	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
L43 5B75 EXT-FC	16154F	5	3/4	1/2	.189 (4.80)	4-1/2 - 13-3/8		●				●
L43 5B1 EXT -FC	17154F	5	1	1/2	.189 (4.80)	16 and larger		●				
L43 8B75 EXT-FC	21154F	8	3/4	1/2	.189 (4.80)	US Improved Buttress		●				
L53 5B75 EXT-FC	16474F	5	3/4	5/8	.189 (4.80)	4-1/2 - 13-3/8		●				●
L53 5B1 EXT-FC	17474F	5	1	5/8	.189 (4.80)	16 and larger		●				
L53 8B75 EXT-FC	21474F	8	3/4	5/8	.189 (4.80)	US Improved Buttress		●				
L43 5B75 INT-FC	16158F	5	3/4	1/2	.189 (4.80)	4-1/2 - 13-3/8		●				
L43 5B1 INT-FC	17158F	5	1	1/2	.189 (4.80)	16 and larger		●				
L43 8B75 INT-FC	21158F	8	3/4	1/2	.189 (4.80)	US Improved Buttress		●				
L53 5B75 INT-FC	16478F	5	3/4	5/8	.189 (4.80)	4-1/2 - 13-3/8		●				
L53 5B1 INT-FC	17478F	5	1	5/8	.189 (4.80)	16 and larger		●				
L53 8B75 INT-FC	21478F	8	3/4	5/8	.189 (4.80)	US Improved Buttress		●				

FC designates 5° flank clearance

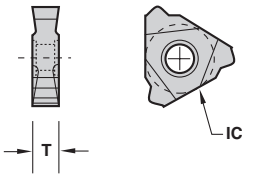
API HUGHES H90



EXT SHOWN
INT OPPOSITE

Description	EDP Code	TPI	TPF	IC	T	Conn. No.	TiN Coated GP22	TiN Coated GP50	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
L53 H902 EXT	28474	3-1/2	2	5/8	.189 (4.80)	3-1/2 - 6-5/8 H90		●				
L53 H903 EXT	29474	3-1/2	3	5/8	.189 (4.80)	7 - 8-5/8 H90		●				
L53 H90S EXT	27474	3	1-1/4	5/8	.189 (4.80)	2-3/8 - 3-1/2 Slimline		●				
L53 H902 INT	28478	3-1/2	2	5/8	.189 (4.80)	3-1/2 - 6-5/8 H90		●				
L53 H903 INT	29478	3-1/2	3	5/8	.189 (4.80)	7 - 8-5/8 H90		●				
L53 H90S INT	27478	3	1-1/4	5/8	.189 (4.80)	2-3/8 - 3-1/2 Slimline		●				

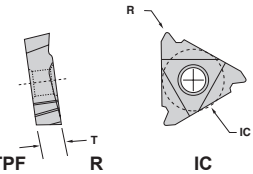
API HUGHES H90
Double Sided



EXT SIDE SHOWN

Description	EDP Code	TPI	TPF	IC	T	Conn. No.	TiN Coated GP22	TiN Coated GP50	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC54
LDS 54 H902	28490	3-1/2	2	5/8	.252 (6.40)	3-1/2 - 6-5/8 H90			●			●
LDS 54 H903	29490	3-1/2	3	5/8	.252 (6.40)	7 - 8-5/8 H90			●			
LDS 54 H90S	27490	3	1-1/4	5/8	.252 (6.40)	2-3/8 - 3-1/2 Slimline			●			

API ROTARY SHOULDER CONNECTION



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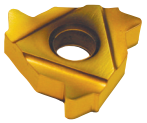
INT OPPOSITE



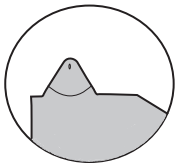
■ Must be used with API bars.

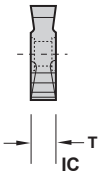
Description	EDP Code	TPI	TPF	R	IC	T	Connection	TiN Coated GP50	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
L43 425 EXT	09154	4	2	.025 (0.64)	1/2	.189 (4.80)	5-1/2 FH 6-5/8 FH 6-5/8 Reg.	●		●		●
L43 428 EXT	10154	4	2	.038 (0.97)	1/2	.189 (4.80)	NC 23-NC50 2-3/8 - 5-1/2 IF	●		●		●
L43 42F EXT*	14154	4	2	---	1/2	.189 (4.80)	V0.065*					
L43 435 EXT	11154	4	3	.025 (0.64)	1/2	.189 (4.80)	5-1/2 Rg. 7-5/8 Reg. 8-5/8 Reg.	●				●
L43 438 EXT	12154	4	3	.038 (0.97)	1/2	.189 (4.80)	NC56 - NC71	●				●
L43 530 EXT	13154	5	3	.020 (0.51)	1/2	.189 (4.80)	3-1/2 FH 2-3/8 - 4-1/2 Reg.	●				●
L43 4PAC EXT	15154	4	1-1/2	---	1/2	.189 (4.80)	American Open Hole	●				
L53 425 EXT	09474	4	2	.025 (0.64)	5/8	.189 (4.80)	5-1/2 FH 6-5/8 FH 6-5/8 Reg.	●		●		●
L53 428 EXT	10474	4	2	.038 (0.97)	5/8	.189 (4.80)	NC 23-NC50 2-3/8 - 5-1/2 IF	●		●		●
L53 42F EXT*	14474	4	2	---	5/8	.189 (4.80)	V0.065*					
L53 435 EXT	11474	4	3	.025 (0.64)	5/8	.189 (4.80)	5-1/2 Rg. 7-5/8 Reg. 8-5/8 Reg.	●		●		●
L53 438 EXT	12474	4	3	.038 (0.97)	5/8	.189 (4.80)	NC56 - NC71	●				●
L53 530 EXT	13474	5	3	.020 (0.51)	5/8	.189 (4.80)	3-1/2 FH 2-3/8 - 4-1/2 Reg.	●		●		●
L53 4PAC EXT	15474	4	1-1/2	---	5/8	.189 (4.80)	American Open Hole	●				
L43 425 INT	09158	4	2	.025 (0.64)	1/2	.189 (4.80)	5-1/2 FH 6-5/8 FH 6-5/8 Reg.	●		●		●
L43 428 INT	10158	4	2	.038 (0.97)	1/2	.189 (4.80)	NC 23-NC50 2-3/8 - 5-1/2 IF	●		●		●
L43 42F INT*	14158	4	2	---	1/2	.189 (4.80)	V0.065*					
L43 435 INT	11158	4	3	.025 (0.64)	1/2	.189 (4.80)	5-1/2 Rg. 7-5/8 Reg. 8-5/8 Reg.	●				●
L43 438 INT	12158	4	3	.038 (0.97)	1/2	.189 (4.80)	NC56 - NC71	●		●		●
L43 530 INT	13158	5	3	.020 (0.51)	1/2	.189 (4.80)	3-1/2 FH 2-3/8 - 4-1/2 Reg.	●				●
L43 4PAC INT	15158	4	1-1/2	---	1/2	.189 (4.80)	American Open Hole	●				
L53 425 INT	09478	4	2	.025 (0.64)	5/8	.189 (4.80)	5-1/2 FH 6-5/8 FH 6-5/8 Reg.	●		●		●
L53 428 INT	10478	4	2	.038 (0.97)	5/8	.189 (4.80)	NC 23-NC50 2-3/8 - 5-1/2 IF	●		●		●
L53 42F INT*	14478	4	2	---	5/8	.189 (4.80)	V0.065*					
L53 435 INT	11478	4	3	.025 (0.64)	5/8	.189 (4.80)	5-1/2 Rg. 7-5/8 Reg. 8-5/8 Reg.	●		●		●
L53 438 INT	12478	4	3	.038 (0.97)	5/8	.189 (4.80)	NC56 - NC71	●				●
L53 530 INT	13478	5	3	.020 (0.51)	5/8	.189 (4.80)	3-1/2 FH 2-3/8 - 4-1/2 Reg.	●		●		●
L53 4PAC INT	15478	4	1-1/2	---	5/8	.189 (4.80)	American Open Hole	●				

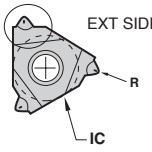
* Obsolescent thread form, See A.P.I. Spec 7, 35th Edition, May 1, 1995, Section 9.4

Double Sided
Lead Follow Topping
Internal/External
with patented chipbreaker

Exclusive patented design!





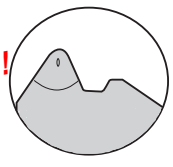


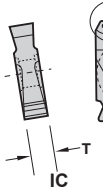
■ For holders see pg. 83

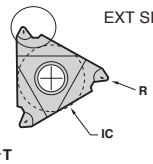
Description	EDP Code	TPI	TPF	R	IC	T	Connection	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50	AlTiN Coated AC54
LDS 54 428-CB #1	10490HC	4	2	.038 (0.97)	5/8	.252 (6.40)	NC23-NC50, 2-3/8-5-1/2 IF	●	●			●
LDS 54 438-CB #2	12490HC	4	3	.038 (0.97)	5/8	.252 (6.40)	NC56-NC71	●	●			●
LDS 54 425-CB #3	09490HC	4	2	.025 (0.64)	5/8	.252 (6.40)	5-1/2 FH, 6-5/8 FH, 6-5/8 Reg.	●	●			●
LDS 54 435-CB #4	11490HC	4	3	.025 (0.64)	5/8	.252 (6.40)	5-1/2 Reg. 7-5/8 Reg 8-5/8 Reg.	●	●			●
LDS 54 530-CB #5	13490HC	5	3	.020 (0.51)	5/8	.252 (6.40)	3-1/2 FH 2-3/8 - 4-1/2 Reg.	●	●			●

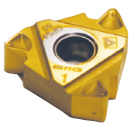
Double Sided
Follow Topping
Internal/External
with patented chipbreaker

Exclusive patented design!







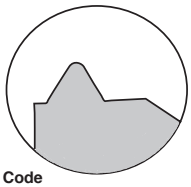


■ For holders see pg. 83

Description	EDP Code	TPI	TPF	R	IC	T	Connection	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50	AlTiN Coated AC54
LDS 54 428 FT-CB #1	10495HC	4	2	.038 (0.97)	5/8	.252 (6.40)	NC23-NC50, 2-3/8-5-1/2 IF	●	●			●
LDS 54 438 FT-CB #2	12495HC	4	3	.038 (0.97)	5/8	.252 (6.40)	NC56-NC71	●	●			●
LDS 54 425 FT-CB #3	09495HC	4	2	.025 (0.64)	5/8	.252 (6.40)	5-1/2 FH, 6-5/8 FH, 6-5/8 Reg.	●	●			●
LDS 54 435 FT-CB #4	11495HC	4	3	.025 (0.64)	5/8	.252 (6.40)	5-1/2 Reg. 7-5/8 Reg 8-5/8 Reg.	●	●			●
LDS 54 530 FT-CB #5	13495HC	5	3	.020 (0.51)	5/8	.252 (6.40)	3-1/2 FH 2-3/8 - 4-1/2 Reg.	●	●			●

API ROTARY SHOULDER CONNECTION

Double Sided
Full Topping



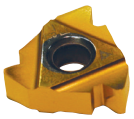
EXT SIDE SHOWN

Description	EDP Code	TPI	TPF	IC	T	Conn. No.	TiN Coated GP22	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50	AlTiN Coated AC54
LDS 54 428 #1	10490	4	2	5/8	.252 (6.40)	NC23-NC50, 2-3/8-5-1/2 IF		●	●			●
LDS 54 438 #2	12490	4	3	5/8	.252 (6.40)	NC56-NC71		●	●			●
LDS 54 425 #3	09490	4	2	5/8	.252 (6.40)	5-1/2 FH, 6-5/8 FH, 6-5/8 Reg.		●	●			●
LDS 54 435 #4	11490	4	3	5/8	.252 (6.40)	5-1/2 Reg. 7-5/8 Reg 8-5/8 Reg.		●	●			●
LDS 54 530 #5	13490	5	3	5/8	.252 (6.40)	3-1/2 FH 2-3/8 - 4-1/2 Reg.		●	●			●
LDS 54 42F*	14490	4	2	5/8	.252 (6.40)	V0.065*						
LDS 54 4PAC	15490	4	1-1/2	5/8	.252 (6.40)	American Open Hole		●	●			

* Obsolescent thread form, See A.P.I. Spec 7, 35th Edition, May 1, 1995, Section 9.4

Double Sided
Follow Topping

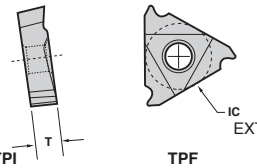
EXT SIDE SHOWN



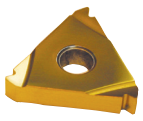
Description	EDP Code	TPI	TPF	IC	T	Conn. No.	TiN Coated GP22	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50	AlTiN Coated AC54
LDS 54 428 #1 FT	10495	4	2	5/8	.252 (6.40)	NC23-NC50, 2-3/8-5-1/2 IF		●	●			●
LDS 54 438 #2 FT	12495	4	3	5/8	.252 (6.40)	NC56-NC71		●	●			●
LDS 54 425 #3 FT	09495	4	2	5/8	.252 (6.40)	5-1/2 FH, 6-5/8 FH, 6-5/8 Reg.		●	●			●
LDS 54 435 #4 FT	11495	4	3	5/8	.252 (6.40)	5-1/2 Reg. 7-5/8 Reg 8-5/8 Reg.		●	●			●
LDS 54 530 #5 FT	13495	5	3	5/8	.252 (6.40)	3-1/2 FH 2-3/8 - 4-1/2 Reg.		●	●			●
LDS 54 42F* FT	14495	4	2	5/8	.252 (6.40)	V0.065*						
LDS 54 4PAC FT	15495	4	1-1/2	5/8	.252 (6.40)	American Open Hole		●				

* Obsolescent thread form, See A.P.I. Spec 7, 35th Edition, May 1, 1995, Section 9.4

API ROUND

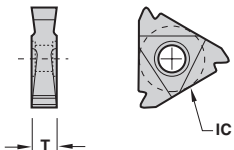


EXT SIDE SHOWN



Description	EDP Code	TPI	TPF	IC	T	TiN Coated GP22	TiN Coated GP50	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
L43 10RD EXT	34154	10	3/4	1/2	.189 (4.80)		●				●
L43 8RD EXT	32154	8	3/4	1/2	.189 (4.80)		●		●		●
L53 10RD EXT	34474	10	3/4	1/2	.189 (4.80)		●				
L53 8RD EXT	32474	8	3/4	1/2	.189 (4.80)		●		●		●
L43 10RD INT	34158	10	3/4	1/2	.189 (4.80)		●				●
L43 8RD INT	32158	8	3/4	1/2	.189 (4.80)		●		●		●
L53 10RD INT	32478	10	3/4	1/2	.189 (4.80)		●		●		●
L53 8RD INT	32478	8	3/4	1/2	.189 (4.80)		●		●		●

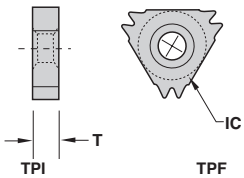
API ROUND
Double Sided



EXT SIDE SHOWN

Description	EDP Code	TPI	TPF	IC	T	TiN Coated GP22	TiN Coated GP50	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
LDS 43 10RD	34180	10	3/4	1/2	.189 (4.80)			●	●		
LDS 43 8RD	32180	8	3/4	1/2	.189 (4.80)			●	●		
LDS 54 10RD	34490	10	3/4	1/2	.252 (6.40)			●	●		
LDS 54 8RD	32490	8	3/4	1/2	.252 (6.40)			●	●		

API ROUND



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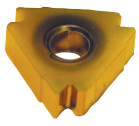
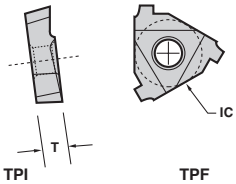
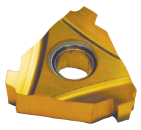


Description	EDP Code	TPI	TPF	IC	T	TiN Coated GP22	TiN Coated GP50	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
TNFA 43 8RD	32N70	8	3/4	1/2	.187 (4.75)		●				

API VAM

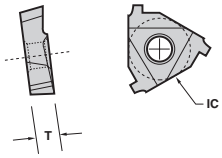


EXT SHOWN
INT OPPOSITE



Description	EDP Code	TPI	TPF	IC	T	TiN Coated GP22	TiN Coated GP50	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
L43 5VAM EXT	23154	5	3/4	1/2	.189 (4.80)		●				
L43 6VAM EXT	24154	6	3/4	1/2	.189 (4.80)		●				
L43 8VAM EXT	25154	8	3/4	1/2	.189 (4.80)		●				
L43 5VAM INT	23158	5	3/4	1/2	.189 (4.80)		●				
L43 6VAM INT	24158	6	3/4	1/2	.189 (4.80)		●				
L43 8VAM INT	25158	8	3/4	1/2	.189 (4.80)		●				

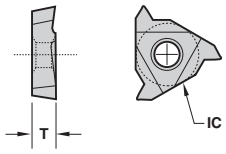
API X-LINE



EXT SHOWN
INT OPPOSITE

Description	EDP Code	TPI	TPF	IC	T	Conn. No.	TiN Coated GP22	TiN Coated GP50	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
L43 6XL15 EXT	19154	6	1-1/2	1/2	.189 (4.80)	5 - 7-5/8		●				
L43 6XL75 EXT	20154	6	3/4	1/2	.189 (4.80)	-		●				
L43 5XL12 EXT	18154	5	1-1/4	1/2	.189 (4.80)	8-5/8 - 10-3/4		●				
L53 6XL15 EXT	19474	6	1-1/2	5/8	.189 (4.80)	5 - 7-5/8		●				
L53 6XL75 EXT	20474	6	3/4	5/8	.189 (4.80)	-		●				
L53 5XL12 EXT	18474	5	1-1/4	5/8	.189 (4.80)	8-5/8 - 10-3/4		●				
L43 6XL15 INT	19158	6	1-1/2	1/2	.189 (4.80)	5 - 7-5/8		●				
L43 6XL75 INT	20158	6	3/4	1/2	.189 (4.80)	-		●				
L43 5XL12 INT	18158	5	1-1/4	1/2	.189 (4.80)	8-5/8 - 10-3/4		●				
L53 6XL15 INT	19478	6	1-1/2	5/8	.189 (4.80)	5 - 7-5/8		●				
L53 6XL75 INT	20478	6	3/4	5/8	.189 (4.80)	-		●				
L53 5XL12 INT	18478	5	1-1/4	5/8	.189 (4.80)	8-5/8 - 10-3/4		●				

NPT



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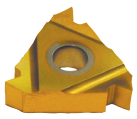
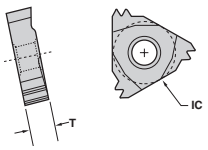


Description	EDP Code	TPI	TPF	IC	T	TiN Coated GP22	TiN Coated GP50	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
L43 11.5NPT EXT	3615114	11.5	3/4	1/2	.189 (4.80)		●				
L43 8NPT EXT	3615084	8	3/4	1/2	.189 (4.80)		●				
L43 11.5NPT INT	3615118	11.5	3/4	1/2	.189 (4.80)		●				
L43 8NPT INT	3615088	8	3/4	1/2	.189 (4.80)		●				

NPT
Multi-Tooth



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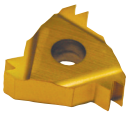
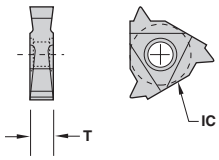


Description	EDP Code	TPI	TPF	IC	T	TiN Coated GP22	TiN Coated GP50	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
L43 11.5NPT2M EXT	3615114T	11.5	3/4	1/2	.189 (4.80)		●				●
L43 11.5NPT2M INT	3615118T	11.5	3/4	1/2	.189 (4.80)		●				●

NPT
Double Sided



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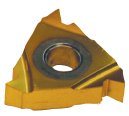
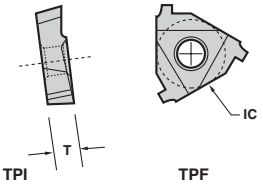


Description	EDP Code	TPI	TPF	IC	T	TiN Coated GP22	TiN Coated GP50	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
LDS 43 14NPT	3618140	14	3/4	1/2	.189 (4.80)			●			
LDS 43 11.5NPT	3618110	11.5	3/4	1/2	.189 (4.80)			●			
LDS 43 8NPT	3618080	8	3/4	1/2	.189 (4.80)			●			

PITTSBURGH ACME



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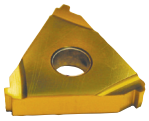
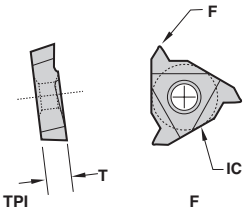
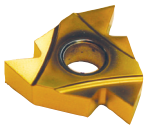


Description	EDP Code	TPI	TPF	IC	T	TiN Coated GP22	TiN Coated GP50	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
L43 8PA75 EXT	22154	8	3/4	1/2	.189 (4.80)		●				
L53 8PA75 EXT	22474	8	3/4	5/8	.189 (4.80)		●				
L43 8PA75 INT	22158	8	3/4	1/2	.189 (4.80)		●				
L53 8PA75 INT	22478	8	3/4	5/8	.189 (4.80)		●				

V THREADING - 60˚

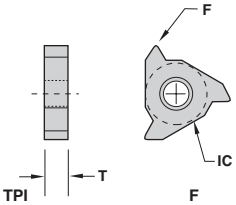


EXT SHOWN
INT OPPOSITE

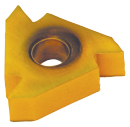


Description	EDP Code	TPI	F	IC	T	TiN Coated GP22	TiN Coated GP50	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
L43 NV EXT	0115040	8-48	.006/.008 (0.15/0.20)	1/2	.189 (4.80)		●				●
L53 NV EXT	0147040	5-32	.006/.008 (0.15/0.20)	5/8	.189 (4.80)		●				
L43 NV INT	0115080	8-48	.006/.008 (0.15/0.20)	1/2	.189 (4.80)		●				●
L53 NV INT	0147080	5-32	.006/.008 (0.15/0.20)	5/8	.189 (4.80)		●				

V THREADING - 60˚
Double Sided

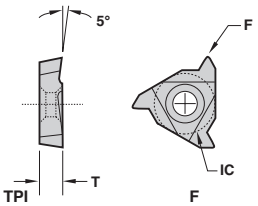


EXT SIDE SHOWN



Description	EDP Code	TPI	F	IC	T	TiN Coated GP22	TiN Coated GP50	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
LN 43 NV	0120000	8-48	.006/.008 (0.15/0.20)	1/2	.189 (4.80)		●				

V THREADING - 60˚



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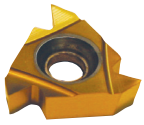
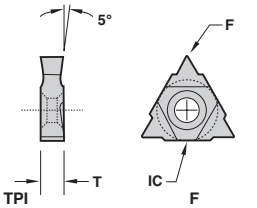


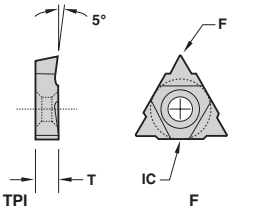
Description	EDP Code	TPI	F	IC	T	TiN Coated GP22	TiN Coated GP5	TiN Coated GP54	AlTiN Coated AC25	AlTiN Coated AC3	AlTiN Coated AC50
LPGC 32 NV INT RH	0104R80	8-48	.004/.006	3/8	.127 (3.23)		●				
LPGC 32 NV INT LH	0104L80	8-48	.004/.006	3/8	.127 (3.23)		●				
LPGC 42 NV INT RH	0113R80	8-20	.006/.008	1/2	.127 (3.23)		●		●		
LPGC 42 NV INT LH	0113L80	8-20	.006/.008	1/2	.127 (3.23)				●		
LPGC 43 NV INT RH	0127R80	5-16	.006/.008	1/2	.189 (4.80)		●		●		
LPGC 43 NV INT LH	0127L80	5-16	.006/.008	1/2	.189 (4.80)		●				

V THREADING - 60˚
Double Sided



Description	EDP Code	TPI	F	IC	T	TiN Coated GP22	TiN Coated GP50	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
TNPGC 43 NV	0137000	8-48	.005/.007 (0.13/0.18)	1/2	.189 (4.80)		●				

V THREADING - 60˚



Description	EDP Code	TPI	F	IC	T	TiN Coated GP22	TiN Coated GP5	TiN Coated GP54	AlTiN Coated AC22	AlTiN Coated AC3	AlTiN Coated AC50
TPGC 32 NV	0107000	8-48	.005/.007 (0.13/0.18)	3/8	.127 (3.23)		●		●		
TPGC 42 NV	0114000	5-32	.005/.007 (0.13/0.18)	1/2	.127 (3.23)		●				
TPGC 43 NV	0138000	4-16	.005/.007 (0.13/0.18)	1/2	.189 (4.80)		●				

In an effort to improve our stock standard grade offering, there are periodic changes.
Please see current price list for up to date grade offering.

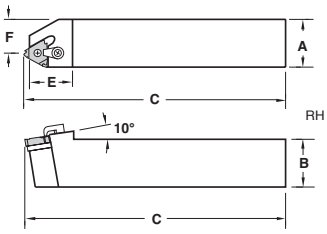
● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

Cast Iron					●	
Non-Ferrous					●	
Stainless/High Temp					●	
Steel		▲				

EXTERNAL HOLDER

MTENR/L

Threading
Inch



Description	EDP Code	Insert	A	B	C	E	F*	PARTS Seat	Lock Pin	Clamp	Clamp Screw
MTENR-164	95201656	TNPGC 43	1	1	6	1.47	.63	TS 43*	NL46	TC-190	STC5
MTENR-204	95202056	TNPGC 43	1-1/4	1-1/4	7	1.47	.88	TS 43*	NL46	TC-190	STC5

*Seats can be ordered as NO FORM or a FORM can be specified. Ex: TS 43 API EXT Seat.

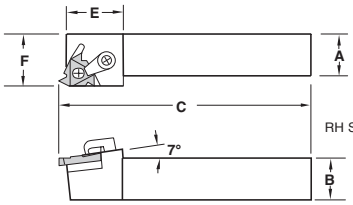
Metric

Description	EDP Code	Insert	A	B	C	E	F*	PARTS Seat	Lock Pin	Clamp	Clamp Screw
MTENR-2525M4	952025M56	TNPGC 43	25.00	25.00	152.40	37.34	16.00	TS 43*	NLM46	CLM-6	XNSM0515
MTENR-3232M4	952032M56	TNPGC 43	32.00	32.00	177.80	37.34	22.35	TS 43*	NLM46	CLM-6	XNSM0515

*Seats can be ordered as NO FORM or a FORM can be specified. Ex: TS 43 API EXT Seat.

MTVNR/L

Threading & Grooving
Inch



Description	EDP Code	Insert	A	B	C	E	F*	PARTS Seat	Lock Pin	Clamp	Clamp Screw
MTVNR-164	95801656	L43	1	1	6	1.27	1.250	LS43*	NL46	TC-190	STC5
MTVNL-164	95701656	L43	1	1	6	1.27	1.250	LS43*	NL46	TC-190	STC5
MTVNR-204	95802056	L43	1-1/4	1-1/4	7	1.27	1.500	LS43*	NL46	TC-190	STC9
MTVNR-165	95801662	L53	1	1	6	1.53	1.250	LS53*	NL58	TC-250	STC11
MTVNL-165	95701662	L53	1	1	6	1.53	1.250	LS53*	NL58	TC-250	STC11
MTVNR-205	95802062	L53	1-1/4	1-1/4	7	1.53	1.500	LS53*	NL58	TC-250	STC11
MTVNR-2054	95802064	LDS 54	1-1/4	1-1/4	7	1.53	1.500	LS53*	NL58	TC-250	STC11

*Seats can be ordered as NO FORM or a FORM can be specified. Ex: LS 43 API EXT. Seat.

Metric

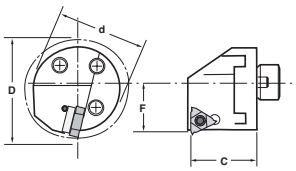
Description	EDP Code	Insert	A	B	C	E	F*	PARTS Seat	Lock Pin	Clamp	Clamp Screw
MTVNR-2525M4	9580M2556	L43	25.00	25.00	152.40	32.26	31.75	LS43*	NLM46	CLM-6	XNSM0515
MTVNL-2525M4	9570M2556	L43	25.00	25.00	152.40	32.26	31.75	LS43*	NLM46	CLM-6	XNSM0515
MTVNR-3232M4	9580M3256	L43	32.00	32.00	177.80	32.26	38.10	LS43*	NLM46	CLM-6	XNSM0515
MTVNR-2525M5	9580M2562	L53	25.00	25.00	152.40	38.86	31.75	LS53*	NLM58	CLM-20	STCM11
MTVNL-2525M5	9570M2562	L53	25.00	25.00	152.40	38.86	31.75	LS53*	NLM58	CLM-20	STCM11
MTVNR-3232M5	9580M3262	L53	32.00	32.00	177.80	38.86	38.10	LS53*	NLM58	CLM-20	STCM11
MTVNR-3232M54	9580M3264	LDS 54	32.00	32.00	177.80	38.86	38.10	LS53*	NLM58	CLM-20	STCM11

*Seats can be ordered as NO FORM or a FORM can be specified. Ex: LS 43 API EXT. Seat.

INTERCHANGEABLE HEADS

H-LNFR/L*

Inch



RH SHOWN

Description	EDP Code	Insert	d	C	F	Min. Bore (D)	PARTS Seat	Clamp	Clamp Screw	Lock Pin
H20-LNFR-43	9IH4206856	L43	1.250	1.625	0.765	1.450	-	TC-190	STC-9	NL-44
H24-LNFR-43	9IH4207256	L43	1.500	1.625	0.890	1.760	-	TC-190	STC-9	NL-44
H32-LNFR-43	9IH4208056	L43	2.000	1.625	1.281	2.400	LS43	TC-190	STC-5	NL-46
H24-LNFR-43API	9IH4407256	L43	1.500	1.625	0.890	1.760	-	TC-190	STC-9	NL-44
H32-LNFR-43API	9IH4408056	L43	2.000	1.625	1.281	2.400	-	TC-250	STC-11	NL-56
H24-LNFR-53	9IH4407262	L53	1.500	1.625	0.890	1.760	-	TC-250	STC-11	NL-56
H32-LNFR-53	9IH4208062	L53	2.000	1.625	1.281	2.400	-	TC-250	STC-11	NL-56
H24-LNFR-53API	9IH4407262	L53	1.500	1.625	0.890	1.760	-	TC-250	STC-11	NL-56
H32-LNFR-53API	9IH4408062	L53	2.000	1.625	1.281	2.400	-	TC-250	STC-11	NL-56
H32-LNFR-54	9IH4208064	LDS 54	2.000	1.625	1.281	2.400	-	TC-250	STC-11	NL-56
H24-LNFR-54API	9IH4407264	LDS 54	1.500	1.625	0.890	1.760	-	TC-250	STC-11	H410-1
H32-LNFR-54API	9IH4408064	LDS 54	2.000	1.625	1.281	2.400	-	TC-250	STC-11	NL-56

*Non API heads only for 8RD, 10RD, 5B75, 5B1 threads. API heads required for rotary shoulder connections threads.

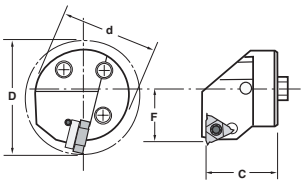
Metric

Description	EDP Code	Insert	d	C	F	Min. Bore (D)	PARTS Seat	Clamp	Clamp Screw	Lock Pin
H32M-LNFR-43	9IH42032M56	L43	32	41.28	19.43	36.83	-	CLM-6	STCM9	NLM44
H40M-LNFR-43	9IH42040M56	L43	40	41.28	22.61	44.70	-	CLM-6	STCM9	NLM44
H50M-LNFR-43	9IH42050M56	L43	50	41.28	32.54	60.96	LS43	CLM-6	XNSM0515	NLM46
H40M-LNFR-53API	9IH44040M62	L53	40	41.28	22.61	44.70	-	CLM-20	STCM11	NLM56
H50M-LNFR-53API	9IH44050M62	L53	50	41.28	32.54	60.96	-	CLM-20	STCM11	NLM56
H40M-LNFR-54API	9IH44040M64	LDS 54	40	41.28	22.61	44.70	-	CLM-20	STCM11	H410-1
H50M-LNFR-54API	9IH44050M64	LDS 54	50	41.28	32.54	60.96	-	CLM-20	STCM11	NLM56

*Non API heads only for 8RD, 10RD, 5B75, 5B1 threads. API heads required for rotary shoulder connections threads.

HS-LNFR/L*

Metric



RH SHOWN

Description	EDP Code	Insert	d	C	F	Min. Bore (D)	PARTS Clamp	Clamp Screw	Lock Pin
HS32-LNFR-43	9IHS42032M56	L43	1.25 (32)	1.26 (32)	0.866 (22)	1.570 (39.88)	TC-190	STC-9	NL-44
HS40-LNFR-43	9IHS42040M56	L43	1.57 (40)	1.26 (32)	1.063 (27)	1.970 (50.04)	TC-190	STC-9	NL-44
HS50-LNFR-43	9IHS42050M56	L43	1.97 (50)	1.57 (40)	1.378 (35)	2.480 (62.99)	TC-190	STC-9	NL-44
HS50-LNFR-43API	9IHS44050M56	L43	1.97 (50)	1.57 (40)	1.378 (35)	2.480 (62.99)	TC-190	STC-9	NL-44
HS32-LNFR-53	9IHS42032M62	L53	1.25 (32)	1.26 (32)	0.866 (22)	1.570 (39.88)	TC-190	STC-9	NL-56
HS40-LNFR-53	9IHS4240M62	L53	1.57 (40)	1.26 (32)	1.063 (27)	1.970 (50.04)	TC-250	STC-11	NL-56
HS50-LNFR-53	9IHS4250M62	L53	1.97 (50)	1.57 (40)	1.378 (35)	2.480 (62.99)	TC-250	STC-11	NL-56
HS40-LNFR-53API	9IHS4440M62	L53	1.57 (40)	1.26 (32)	1.063 (27)	1.970 (50.04)	TC-250	STC-11	NL-56
HS50-LNFR-53API	9IHS4450M62	L53	1.97 (50)	1.57 (40)	1.378 (35)	2.480 (62.99)	TC-250	STC-11	NL-56
HS40-LNFR-54	9IHS4240M64	LDS 54	1.57 (40)	1.26 (32)	1.063 (27)	1.970 (50.04)	TC-250	STC-11	H410-1
HS50-LNFR-54	9IHS4250M64	LDS 54	1.97 (50)	1.57 (40)	1.378 (35)	2.480 (62.99)	TC-250	STC-11	NL-56
HS40-LNFR-54API	9IHS4440M64	LDS 54	1.57 (40)	1.26 (32)	1.063 (27)	1.970 (50.04)	TC-250	STC-11	H410-1
HS50-LNFR-54API	9IHS4450M64	LDS 54	1.97 (50)	1.57 (40)	1.378 (35)	2.480 (62.99)	TC-250	STC-11	NL-56

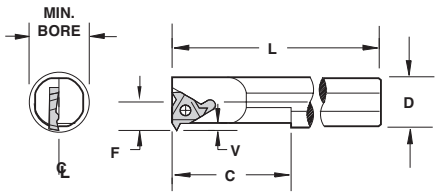
*Non API heads only for 8RD, 10RD, 5B75, 5B1 threads. API heads required for rotary shoulder connections threads.
570 Connection style

INTERNAL BAR

LFR/L

Threading & Grooving

Inch



RH SHOWN

Description	EDP Code	Insert	Min. Bore	L	D	C	F	V	Torx Screw
LFR 625-32	93905248	LPGC 32	.625	8	.625	2-1/2	.312	.100	SF30
LFL 625-32	93805248	LPGC 32	.625	8	.625	2-1/2	.312	.100	SF30
LFR 750-32	93905648	LPGC 32	.750	8	.750	2-3/4	.375	.100	SF30
LFL 750-32	93805648	LPGC 32	.750	8	.750	2-3/4	.375	.100	SF30
LFR 100-32	93906448	LPGC 32	1.000	10	1.000	2-3/4	.500	.100	SF30
LFL 100-32	93806448	LPGC 32	1.000	10	1.000	2-3/4	.500	.100	SF40
LFR 750-42	93905654	LPGC 42	.750	8	.750	2-3/4	.375	.100	SF50
LFL 750-42	93805654	LPGC 42	.750	8	.750	2-3/4	.375	.100	SF60
LFR 100-43	93906456	LPGC 43	1.000	10	1.000	2-3/4	.500	.125	SF60
LFL 100-43	93806456	LPGC 43	1.000	10	1.000	2-3/4	.500	.125	SF60
LFR 125-43	93906856	LPGC 43	1.250	12	1.250	2-3/4	.625	.125	SF60
LFL 125-43	93806856	LPGC 43	1.250	12	1.250	2-3/4	.625	.125	SF60
LFR 150-43	93907256	LPGC 43	1.500	14	1.500	3-3/4	.750	.125	SF60
LFL 150-43	93807256	LPGC 43	1.500	14	1.500	3-3/4	.750	.125	SF60
LFR 200-43	93908056	LPGC 43	2.000	14	2.000	3-3/4	1.000	.125	SF60
LFL 200-43	93808056	LPGC 43	2.000	14	2.000	3-3/4	1.000	.125	SF60
LFR 150-53	93907262	LPGC 53	1.500	14	1.500	3-3/4	.750	.150	SF67
LFL 150-53	93807262	LPGC 53	1.500	14	1.500	3-3/4	.750	.150	SF67
LFR 200-53	93908062	LPGC 53	2.000	14	2.000	3-3/4	1.000	.150	SF85

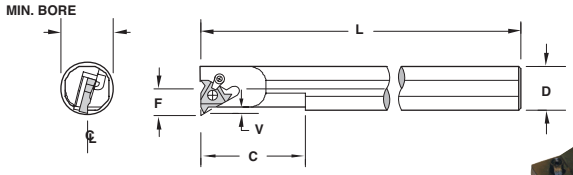
*Over NV Insert

Metric

Description	EDP Code	Insert	Min. Bore	L	D	C	F	V	Torx Screw
LFR 16M-32	939016M48	LPGC 32	16.00	200.00	16.00	2-1/2	7.92	2.54	SFM30
LFL 16M-32	938016M48	LPGC 32	16.00	200.00	16.00	2-1/2	7.92	2.54	SFM30
LFR 20M-32	939020M48	LPGC 32	20.00	200.00	20.00	2-3/4	9.53	2.54	SFM30
LFL 20M-32	938020M48	LPGC 32	20.00	200.00	20.00	2-3/4	9.53	2.54	SFM30
LFR 25M-32	939025M48	LPGC 32	25.00	250.00	25.00	2-3/4	12.70	2.54	SFM30
LFL 25M-32	938025M48	LPGC 32	25.00	250.00	25.00	2-3/4	12.70	2.54	SFM40
LFR 20M-42	939020M54	LPGC 42	20.00	200.00	20.00	2-3/4	9.53	2.54	SFM50
LFL 20M-42	938020M54	LPGC 42	20.00	200.00	20.00	2-3/4	9.53	2.54	SFM60
LFR 25M-43	939025M56	LPGC 43	25.00	250.00	25.00	2-3/4	12.70	3.18	SFM60
LFL 25M-43	938025M56	LPGC 43	25.00	250.00	25.00	2-3/4	12.70	3.18	SFM60
LFR 32M-43	939032M56	LPGC 43	32.00	300.00	32.00	2-3/4	15.88	3.18	SFM60
LFL 32M-43	938032M56	LPGC 43	32.00	300.00	32.00	2-3/4	15.88	3.18	SFM60
LFR 40M-43	939040M56	LPGC 43	40.00	350.00	40.00	3-3/4	19.05	3.18	SFM60
LFL 40M-43	938040M56	LPGC 43	40.00	350.00	40.00	3-3/4	19.05	3.18	SFM60
LFR 50M-43	939050M56	LPGC 43	50.00	350.00	50.00	3-3/4	25.40	3.18	SFM60
LFL 50M-43	938050M56	LPGC 43	50.00	350.00	50.00	3-3/4	25.40	3.18	SFM60
LFR 40M-53	939040M62	LPGC 53	40.00	350.00	40.00	3-3/4	19.05	3.81	SFM67
LFL 40M-53	938040M62	LPGC 53	40.00	350.00	40.00	3-3/4	19.05	3.81	SFM67
LFR 50M-53	939050M62	LPGC 53	50.00	350.00	50.00	3-3/4	25.40	3.81	SFM85

*Over NV Insert

LNFR/L
Threading & Grooving
Inch




RH SHOWN

PARTS

Description	EDP Code	Insert	Min. Bore	L	D	C	F	V*	Seat	Screw/ Lock Pin	Clamp	Clamp Screw
LNFR 100-43	94206456	L43	1.031	10	1	2-3/4	.564	.125	-	TS65	-	-
LNFL 100-43	94106456	L43	1.031	10	1	2-3/4	.564	.125	-	TS65	-	-
LNFR 125-43	94206856	L43	1.250	12	1-1/4	2-3/4	.625	.125	-	NL44	TC190	STC-5
LNFL 125-43	94106856	L43	1.250	12	1-1/4	2-3/4	.625	.125	-	NL44	TC190	STC-5
LNFR 150-43	94207256	L43	1.500	14	1-1/2	3-3/4	.750	.125	-	NL44	TC190	STC-9
LNFL 150-43	94107256	L43	1.500	14	1-1/2	3-3/4	.750	.125	-	NL44	TC190	STC-9
LNFR 200-43	94208056	L43	2.000	14	2	3-3/4	1.000	.125	LS43*	NL46	TC190	STC-9
LNFL 200-43	94108056	L43	2.000	14	2	3-3/4	1.000	.125	LS43*	NL46	TC190	STC-9
LNFR 150-53	94207262	L53	1.500	14	1-1/2	3-3/4	.750	.150	-	NL56	TC250	STC-11
LNFL 150-53	94107262	L53	1.500	14	1-1/2	3-3/4	.750	.150	-	NL56	TC250	STC-11
LNFR 200-53	94208062	L53	2.000	14	2	3-3/4	1.000	.150	LS53*	NL58	TC250	STC-11
LNFL 200-53	94108062	L53	2.000	14	2	3-3/4	1.000	.150	LS53*	NL58	TC250	STC-11
LNFR 150-54	94207264	LDS54	1.500	14	1-1/2	3-3/4	.750	.150	-	NL56	TC250	STC-11
LNFL 150-54	94107264	LDS54	1.500	14	1-1/2	3-3/4	.750	.150	-	NL56	TC250	STC-11
LNFR 200-54	94208064	LDS54	2.000	14	2	3-3/4	1.000	.150	-	NL56	TC250	STC-11
LNFL 200-54	94108064	LDS54	2.000	14	2	3-3/4	1.000	.150	-	NL56	TC250	STC-11

*Seat can be ordered as NO FORM or a FORM can be specified. EX: LS 43 API INT SEAT ** Over Sharp
**Non API bars will work for 8/10RD and 5B75/5B1 threadforms. API bars required for rotary shoulder connection threadforms.

Metric

PARTS

Description	EDP Code	Insert	Min. Bore	L	D	C	F	V*	Screw/ Seat	Lock Pin	Clamp Clamp	Screw
LNFR 32M-43	942M3256	L43	35,0	304,8	32,0	69,5	17,5	3,2	-	NLM44	CLM6	XNSM0515
LNFL 32M-43	941M3256	L43	35,0	304,8	32,0	69,5	17,5	3,2	-	NLM44	CLM6	XNSM0515
LNFR 40M-43	942M4056	L43	43,2	355,6	40,0	95,2	21,6	3,2	-	NLM44	CLM6	STCM9
LNFL 40M-43	941M4056	L43	43,2	355,6	40,0	95,2	21,6	3,2	-	NLM44	CLM6	STCM9
LNFR 50M-43	942M5056	L43	54,1	355,6	50,0	101,6	27,0	3,2	LS43*	NLM46	CLM6	XNSM0515
LNFL 50M-43	941M5056	L43	54,1	355,6	50,0	101,6	27,0	3,2	LS43*	NLM46	CLM6	XNSM0515
LNFR 40M-53	942M4062	L53	44,1	355,6	40,0	101,6	22,0	3,8	-	NLM56	CLM20	STCM11
LNFL 40M-53	941M4062	L53	44,1	355,6	40,0	101,6	22,0	3,8	-	NLM56	CLM20	STCM11
LNFR 50M-53	942M5062	L53	54,1	355,6	50,0	101,6	27,4	3,8	LS53*	NLM58	CLM20	STCM11
LNFL 50M-53	941M5062	L53	54,1	355,6	50,0	101,6	27,4	3,8	LS53*	NLM58	CLM20	STCM11
LNFR 40M-54	942M4064	LDS54	44,1	355,6	40,0	101,6	22,0	3,8	-	NLM56	CLM20	STCM11
LNFL 40M-54	941M4064	LDS54	44,1	355,6	40,0	101,6	22,0	3,8	-	NLM56	CLM20	STCM11
LNFR 50M-54	942M5064	LDS54	54,1	355,6	50,0	101,6	27,4	3,8	-	NLM56	CLM20	STCM11
LNFL 50M-54	941M5064	LDS54	54,1	355,6	50,0	101,6	27,4	3,8	-	NLM56	CLM20	STCM11

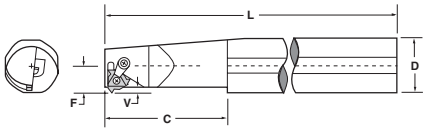
*Seat can be ordered as NO FORM or a FORM can be specified. EX: LS 43 API INT SEAT ** Over Sharp
**Non API bars will work for 8/10RD and 5B75/5B1 threadforms. API bars required for rotary shoulder connection threadforms.

INTERNAL BAR

LNFR/L-API

Threading
Inch

Tapered Head for API Forms



PARTS

Description	EDP Code	Insert	Min. Bore	L	D	C	F	V*	Lock Pin	Clamp	Clamp Screw
LNFR 150-43API	94407256	L43	1.500	14	1-1/2	4-1/2	.750	.167	NL44	TC190	XNS-36
LNFR 200-43API	94408056	L43	2.000	14	2	4-1/2	1.000	.167	NL44	TC190	XNS-36
LNFR 150-53API	94407262	L53	1.500	16	1-1/2	4-1/2	.750	.200	NL56	TC250	STC-11
LNFR 200-53API	94408062	L53	2.000	16	2	4-1/2	1.000	.200	NL56	TC250	STC-11
LNFR 200-54API	94408064	LDS 54	2.000	16	2	4-1/2	1.000	.200	NL56	TC250	STC-11

*Seat can be ordered as NO FORM or a FORM can be specified. EX: LS 43 API INT SEAT if required.
**Required for rotary shoulder connection theading inserts.

Metric

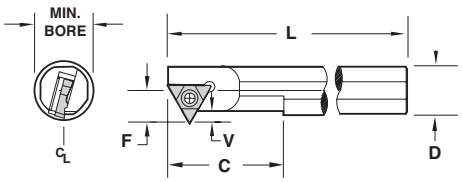
PARTS

Description	EDP Code	Insert	Min. Bore	L	D	C	F	V*	Lock Pin	Clamp	Clamp Screw
LNFR 40M-43API	944M4056	L43	41,9	355,6	40,0	114,3	20,9	4,2	NLM44	CLM6	XNSM0515
LNFR 50M-43API	944M5056	L43	55,0	355,6	50,0	114,3	27,4	4,2	NLM44	CLM6	XNSM0515
LNFR 40M-53API	944M4062	L53	42,1	355,6	40,0	114,3	20,9	5,8	NLM56	CLM20	STCM11
LNFR 50M-53API	944M5062	L53	55,2	406,4	50,0	114,3	27,6	5,8	NLM56	CLM20	STCM11
LNFR 50M-54API	944M5064	LDS 54	55,2	406,4	50,0	114,3	27,6	5,8	NLM56	CLM20	STCM11
LNFR-65M-54API	944M6564	LDS 54	68.5	403,3	65,0	114,3	34,1	5,8	NLM56	CLM20	STCM11

*Seat can be ordered as NO FORM or a FORM can be specified. EX: LS 43 API INT SEAT if required.
**Required for rotary shoulder connection theading inserts.

LNTR/L

Threading
Inch



Description	EDP Code	Insert	Min. Bore	L	D	C	F*	V	Torx Screw
LNTR 880-43	94706056	TNPGC 43	.880	8	1.000	2.750	.440	.199	SF60
LNTR 100-43	94706456	TNPGC 43	1.000	10	1.000	2.750	.490	.213	SF60
LNTL 100-43	94606456	TNPGC 43	1.000	10	1.000	2.750	.490	.213	SF60
LNTR 150-43	94707256	TNPGC 43	1.500	14	1.500	3.750	.740	.213	SF60
LNTL 150-43	94607256	TNPGC 43	1.500	14	1.500	3.750	.740	.213	SF60
LNTR 200-43	94708056	TNPGC 43	2.000	14	2.000	3.750	.990	.213	SF60
LNTL 200-43	94608056	TNPGC 43	2.000	14	2.000	3.750	.990	.213	SF60

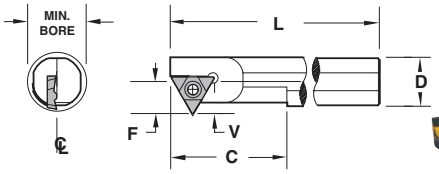
*Over NV Insert

Metric

Description	EDP Code	Insert	Min. Bore	L	D	C	F*	V	Torx Screw
LNTR 22M-43	947022M56	TNPGC 43	22.35	200.00	25.00	69.85	11.18	5.05	SFM60
LNTR 25M-43	947025M56	TNPGC 43	25.00	250.00	25.00	69.85	12.45	5.41	SFM60
LNTL 25M-43	946025M56	TNPGC 43	25.00	250.00	25.00	69.85	12.45	5.41	SFM60
LNTR 40M-43	947040M56	TNPGC 43	40.00	350.00	40.00	95.25	18.80	5.41	SFM60
LNTL 40M-43	946040M56	TNPGC 43	40.00	350.00	40.00	95.25	18.80	5.41	SFM60
LNTR 50M-43	947050M56	TNPGC 43	50.00	350.00	50.00	95.25	25.15	5.41	SFM60
LNTL 50M-43	946050M56	TNPGC 43	50.00	350.00	50.00	95.25	25.15	5.41	SFM60

*Over NV Insert

LTR/L
Threading & Grooving
Inch



RH SHOWN

Description	EDP Code	Insert	Min. Bore	L	D	C	F	V*	Torx Screw
LTR 625-32	95005248	TPGC 32	.625	8	.625	2.500	.375	.150	SF30
LTL 625-32	94905248	TPGC 32	.625	8	.625	2.500	.375	.150	SF30
LTR 750-32	95005648	TPGC 32	.750	8	.750	2.750	.375	.150	SF30
LTL 750-32	94905648	TPGC 32	.750	8	.750	2.750	.375	.150	SF30
LTR 100-32	95006448	TPGC 32	1.000	10	1.000	2.750	.500	.150	SF30
LTL 100-32	94906448	TPGC 32	1.000	10	1.000	2.750	.500	.150	SF30
LTR 750-42	95005654	TPGC 42	.800**	8	.750	2.750	.390	.125	SF50
LTL 750-42	94905654	TPGC 42	.800**	8	.750	2.750	.390	.125	SF50
LTR 100-43	95006456	TPGC 43	1.000	10	1.000	2.750	.500	.213	SF60
LTL 100-43	94906456	TPGC 43	1.000	10	1.000	2.750	.500	.213	SF60
LTR 125-43	95006856	TPGC 43	1.250	12	1.250	2.750	.625	.213	SF60
LTL 125-43	94906856	TPGC 43	1.250	12	1.250	2.750	.625	.213	SF60
LTR 150-43	95007256	TPGC 43	1.500	14	1.500	3.750	.750	.213	SF60
LTL 150-43	94907256	TPGC 43	1.500	14	1.500	3.750	.750	.213	SF60
LTR 200-43	95008056	TPGC 43	2.000	14	2.000	3.750	1.000	.213	SF60
LTL 200-43	94908056	TPGC 43	2.000	14	2.000	3.750	1.000	.213	SF60
LTR 150-53	95007262	TPGC 53	1.500	14	1.500	3.750	.750	.300	SF85
LTL 150-53	94907262	TPGC 53	1.500	14	1.500	3.750	.750	.300	SF85
LTR 200-53	95008062	TPGC 53	2.000	14	2.000	3.750	1.000	.300	SF85
LTL 200-53	94908062	TPGC 53	2.000	14	2.000	3.750	1.000	.300	SF85

*Over NV Insert **Over 4P Acme Insert

Metric

Description	EDP Code	Insert	Min. Bore	L	D	C	F	V*	Torx Screw
LTR 16M-32	950016M48	TPGC 32	16.00	200.00	16.00	63.50	9.53	3.81	SFM30
LTL 16M-32	949016M48	TPGC 32	16.00	200.00	16.00	63.50	9.53	3.81	SFM30
LTR 20M-32	950020M48	TPGC 32	20.00	200.00	20.00	69.85	9.53	3.81	SFM30
LTL 20M-32	949020M48	TPGC 32	20.00	200.00	20.00	69.85	9.53	3.81	SFM30
LTR 25M-32	950025M48	TPGC 32	25.40	250.00	25.00	69.85	12.70	3.81	SFM30
LTL 25M-32	949025M48	TPGC 32	25.40	250.00	25.00	69.85	12.70	3.81	SFM30
LTR 20M-42	950020M54	TPGC 42	20.32**	200.00	20.00	69.85	9.91	3.18	SFM50
LTL 20M-42	949020M54	TPGC 42	20.32**	200.00	20.00	69.85	9.91	3.18	SFM50
LTR 25M-43	950025M56	TPGC 43	25.00	250.00	25.00	69.85	12.70	5.41	SFM60
LTL 25M-43	949025M56	TPGC 43	25.00	250.00	25.00	69.85	12.70	5.41	SFM60
LTR 32M-43	950032M56	TPGC 43	32.00	300.00	32.00	69.85	15.88	5.41	SFM60
LTL 32M-43	949032M56	TPGC 43	32.00	300.00	32.00	69.85	15.88	5.41	SFM60
LTR 40M-43	950040M56	TPGC 43	40.00	350.00	40.00	95.25	19.05	5.41	SFM60
LTL 40M-43	949040M56	TPGC 43	40.00	350.00	40.00	95.25	19.05	5.41	SFM60
LTR 50M-43	950050M56	TPGC 43	50.00	350.00	50.00	95.25	25.40	5.41	SFM60
LTL 50M-43	949050M56	TPGC 43	50.00	350.00	50.00	95.25	25.40	5.41	SFM60
LTR 40M-53	950040M62	TPGC 53	40.00	350.00	40.00	95.25	19.05	7.62	SFM85
LTL 40M-53	949040M62	TPGC 53	40.00	350.00	40.00	95.25	19.05	7.62	SFM85
LTR 50M-53	950050M62	TPGC 53	50.00	350.00	50.00	95.25	25.40	7.62	SFM85
LTL 50M-53	949050M62	TPGC 53	50.00	350.00	50.00	95.25	25.40	7.62	SFM85

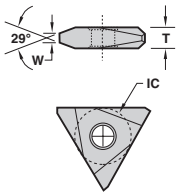
*Over NV Insert **Over 4P Acme Insert

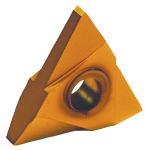

TOOLFLO
Member IMC Group
ON-EDGE

ACME

TNMA

Straight hole



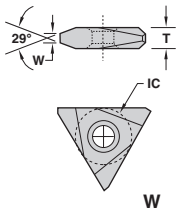


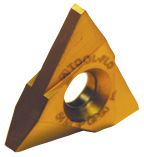
Description	EDP Code	TPI	W	IC	T	Uncoated C25	Uncoated C6H	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
TNMA 32 NT 6P	0208060	6	.0566 (1.44)	3/8	.127 (3.23)				●		●
TNMA 32 NT 8P	0208080	8	.0411 (1.04)	3/8	.127 (3.23)				●	●	●
TNMA 32 NT 10P	0208100	10	.0319 (0.81)	3/8	.127 (3.23)				●		●
TNMA 32 NT 12P	0208120	12	.0283 (0.72)	3/8	.127 (3.23)				●		●
TNMA 32 NT 14P	0208140	14	.0239 (0.61)	3/8	.127 (3.23)				●		
TNMA 32 NT 16P	0208160	16	.0206 (0.52)	3/8	.127 (3.23)				●		
TNMA 43 NT 4P	0239040	4	.0875 (2.22)	1/2	.189 (4.80)	●			●	●	●
TNMA 43 NT 5P	0239050	5	.0689 (1.75)	1/2	.189 (4.80)	●			●	●	●
TNMA 43 NT 6P	0239060	6	.0566 (1.44)	1/2	.189 (4.80)	●			●	●	●
TNMA 43 NT 8P	0239080	8	.0411 (1.04)	1/2	.189 (4.80)	●			●	●	●
TNMA 43 NT 10P	0239100	10	.0319 (0.81)	1/2	.189 (4.80)				●	●	●
TNMA 43 NT 12P	0239120	12	.0283 (0.72)	1/2	.189 (4.80)				●	●	●
TNMA 43 NT 14P	0239140	14	.0239 (0.61)	1/2	.189 (4.80)				●		
TNMA 43 NT 16P	0239160	16	.0206 (0.52)	1/2	.189 (4.80)				●		
TNMA 54 NT 3P	0251030	3	.1184 (3.00)	5/8	.252 (6.40)				●	●	●
TNMA 54 NT 3.5P	0251035	3.5	.1007 (2.55)	5/8	.252 (6.40)				●		
TNMA 54 NT 4P	0251040	4	.0875 (2.22)	5/8	.252 (6.40)				●	●	●
TNMA 54 NT 5P	0251050	5	.0689 (1.75)	5/8	.252 (6.40)				●	●	●
TNMA 55 NT 2.5P	02550250	2.5	.1431 (3.63)	5/8	.312 (7.92)				●		
TNMA 66 NT 2P	0279020	2	.1802 (4.58)	3/4	.375 (9.53)				●		

*Acme threads provided with sharp corners - radius available on a quotation basis.

TNMC

Countersink hole

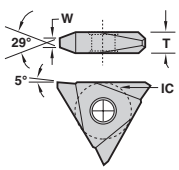




Description	EDP Code	TPI	W	IC	T	Uncoated C25	Uncoated C6H	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
TNMC 32 NT 6P	0209060	6	.0566 (1.44)	3/8	.127 (3.23)				●	●	●
TNMC 32 NT 8P	0209080	8	.0411 (1.04)	3/8	.127 (3.23)				●	●	●
TNMC 32 NT 10P	0209100	10	.0319 (0.81)	3/8	.127 (3.23)				●	●	●
TNMC 32 NT 12P	0209120	12	.0283 (0.72)	3/8	.127 (3.23)				●		
TNMC 32 NT 14P	0209140	14	.0239 (0.61)	3/8	.127 (3.23)				●		
TNMC 32 NT 16P	0209160	16	.0206 (0.52)	3/8	.127 (3.23)				●		
TNMC 43 NT 4P	0241040	4	.0875 (2.22)	1/2	.189 (4.80)	●			●	●	●
TNMC 43 NT 5P	0241050	5	.0689 (1.75)	1/2	.189 (4.80)	●			●	●	●
TNMC 43 NT 6P	0241060	6	.0566 (1.44)	1/2	.189 (4.80)				●	●	●
TNMC 43 NT 8P	0241080	8	.0411 (1.04)	1/2	.189 (4.80)				●	●	●
TNMC 43 NT 10P	0241100	10	.0319 (0.81)	1/2	.189 (4.80)				●	●	●
TNMC 43 NT 12P	0241120	12	.0283 (0.72)	1/2	.189 (4.80)				●		
TNMC 43 NT 14P	0241140	14	.0239 (0.61)	1/2	.189 (4.80)				●		
TNMC 43 NT 16P	0241160	16	.0206 (0.52)	1/2	.189 (4.80)				●		
TNMC 54 NT 3P	0253030	3	.1184 (3.00)	5/8	.252 (6.40)				●	●	●
TNMC 54 NT 3.5P	0253035	3.5	.1007 (2.55)	5/8	.252 (6.40)				●		
TNMC 54 NT 4P	0253040	4	.0875 (2.22)	5/8	.252 (6.40)				●	●	●
TNMC 54 NT 5P	0253050	5	.0689 (1.75)	5/8	.252 (6.40)				●		
TNMC 55 NT 2.5P	02560250	2.5	.1431 (3.63)	5/8	.312 (7.92)				●		
TNMC 66 NT 2P	0280020	2	.1802 (4.58)	3/4	.375 (9.53)		●		●		●

TPMA

Straight hole - Positive Rake



Description	EDP Code	TPI	W	IC	T	Uncoated C3	Uncoated C6H	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
TPMA 32 NT 6P	0210060	6	.0566 (1.44)	3/8	.127 (3.23)					●	
TPMA 32 NT 8P	0210080	8	.0411 (1.04)	3/8	.127 (3.23)					●	
TPMA 32 NT 10P	0210100	10	.0319 (0.81)	3/8	.127 (3.23)					●	
TPMA 32 NT 12P	0210120	12	.0283 (0.72)	3/8	.127 (3.23)					●	
TPMA 43 NT 4P	0240040	4	.0875 (2.22)	1/2	.189 (4.80)					●	
TPMA 43 NT 5P	0240050	5	.0689 (1.75)	1/2	.189 (4.80)					●	
TPMA 43 NT 6P	0240060	6	.0566 (1.44)	1/2	.189 (4.80)					●	
TPMA 43 NT 8P	0240080	8	.0411 (1.04)	1/2	.189 (4.80)					●	

*Acme threads provided with sharp corners
radius available on a quotation basis.

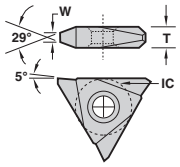
#For number of passes see acme table, page

TOOLFLO Member IMC Group

ACME

TPMC

Countersink hole - Positive Rake



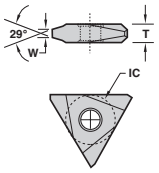
Description	EDP Code	TPI	W	IC	T	Uncoated C3	Uncoated C6H	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
TPMC 32 NT 6P	0211060	6	.0566 (1.44)	3/8	.127 (3.23)					●	
TPMC 32 NT 8P	0211080	8	.0411 (1.04)	3/8	.127 (3.23)					●	
TPMC 32 NT 10P	0211100	10	.0319 (0.81)	3/8	.127 (3.23)					●	
TPMC 32 NT 12P	0211120	12	.0283 (0.72)	3/8	.127 (3.23)					●	
TPMC 43 NT 4P	0242040	4	.0875 (2.22)	1/2	.189 (4.80)					●	
TPMC 43 NT 5P	0242050	5	.0689 (1.75)	1/2	.189 (4.80)					●	
TPMC 43 NT 6P	0242060	6	.0566 (1.44)	1/2	.189 (4.80)					●	
TPMC 43 NT 8P	0242080	8	.0411 (1.04)	1/2	.189 (4.80)					●	
TPMC 54 NT 3P	0254030	3	.1184 (3.00)	5/8	.252 (6.40)					●	
TPMC 54 NT 4P	0254040	4	.0875 (2.22)	5/8	.252 (6.40)					●	

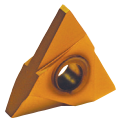
PARTIAL TOPPING ACME

EXTERNAL

TNMA (with corner radii)

Straight hole





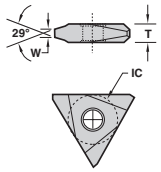
Description	EDP Code	TPI	W	IC	T	C3	C6H	GP3	GP50	AC3	AC50
TNMA 32 NT 6P EXT-PT	0208060PTE	6	.0566 (1.44)	3/8	.127 (3.23)				●		●
TNMA 32 NT 8P EXT-PT	0208080PTE	8	.0411 (1.04)	3/8	.127 (3.23)				●		●
TNMA 32 NT 10P EXT-PT	0208100PTE	10	.0319 (0.81)	3/8	.127 (3.23)				●		●
TNMA 32 NT 12P EXT-PT	0208120PTE	12	.0283 (0.72)	3/8	.127 (3.23)				●		●
TNMA 32 NT 14P EXT-PT	0208140PTE	14	.0239 (0.61)	3/8	.127 (3.23)				●		
TNMA 32 NT 16P EXT-PT	0208160PTE	16	.0206 (0.52)	3/8	.127 (3.23)				●		
TNMA 43 NT 6P EXT-PT	0239060PTE	6	.0566 (1.44)	1/2	.189 (4.80)				●		●
TNMA 43 NT 8P EXT-PT	0239080PTE	8	.0411 (1.04)	1/2	.189 (4.80)				●		●
TNMA 43 NT 10P EXT-PT	0239100PTE	10	.0319 (0.81)	1/2	.189 (4.80)				●		●
TNMA 43 NT 12P EXT-PT	0239120PTE	12	.0283 (0.72)	1/2	.189 (4.80)				●		●
TNMA 43 NT 14P EXT-PT	0239140PTE	14	.0239 (0.61)	1/2	.189 (4.80)				●		
TNMA 43 NT 16P EXT-PT	0239160PTE	16	.0206 (0.52)	1/2	.189 (4.80)				●		

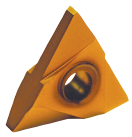
*Acme threads provided with sharp corners - radius available on a quotation basis.
For number of passes see acme table, page

INTERNAL

TNMA (with corner radii)

Straight hole





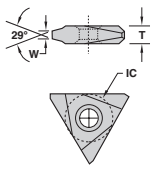
Description	EDP Code	TPI	W	IC	T	C3	C6H	GP3	GP50	AC3	AC50
TNMA 32 NT 6P INT-PT	0208060PTI	6	.0566 (1.44)	3/8	.127 (3.23)				●		●
TNMA 32 NT 8P INT-PT	0208080PTI	8	.0411 (1.04)	3/8	.127 (3.23)				●		●
TNMA 32 NT 10P INT-PT	0208100PTI	10	.0319 (0.81)	3/8	.127 (3.23)				●		●
TNMA 32 NT 12P INT-PT	0208120PTI	12	.0283 (0.72)	3/8	.127 (3.23)				●		●
TNMA 32 NT 14P INT-PT	0208140PTI	14	.0239 (0.61)	3/8	.127 (3.23)				●		
TNMA 32 NT 16P INT-PT	0208160PTI	16	.0206 (0.52)	3/8	.127 (3.23)				●		
TNMA 43 NT 6P INT-PT	0239060PTI	6	.0566 (1.44)	1/2	.189 (4.80)				●		●
TNMA 43 NT 8P INT-PT	0239080PTI	8	.0411 (1.04)	1/2	.189 (4.80)				●		●
TNMA 43 NT 10P INT-PT	0239100PTI	10	.0319 (0.81)	1/2	.189 (4.80)				●		●
TNMA 43 NT 12P INT-PT	0239120PTI	12	.0283 (0.72)	1/2	.189 (4.80)				●		●
TNMA 43 NT 14P INT-PT	0239140PTI	14	.0239 (0.61)	1/2	.189 (4.80)				●		
TNMA 43 NT 16P INT-PT	0239160PTI	16	.0206 (0.52)	1/2	.189 (4.80)				●		

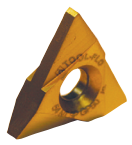
*Acme threads provided with sharp corners - radius available on a quotation basis.
For number of passes see acme table, page

EXTERNAL

TNMC (with corner radii)

Countersink hole





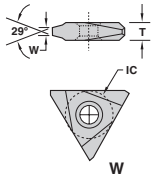
Description	EDP Code	TPI	W	IC	T	C3	C6H	GP3	GP50	AC3	AC50
TNMC 32 NT 8P EXT-PT	0209080PTE	8	.0411 (1.04)	3/8	.127 (3.23)				●		
TNMC 32 NT 10P EXT-PT	0209100PTE	10	.0319 (0.81)	3/8	.127 (3.23)				●		●
TNMC 32 NT 12P EXT-PT	0209120PTE	12	.0283 (0.72)	3/8	.127 (3.23)				●		
TNMC 32 NT 14P EXT-PT	0209140PTE	14	.0239 (0.61)	3/8	.127 (3.23)				●		
TNMC 43 NT 6P EXT-PT	0241060PTE	6	.0566 (1.44)	1/2	.189 (4.80)				●		●
TNMC 43 NT 8P EXT-PT	0241080PTE	8	.0411 (1.04)	1/2	.189 (4.80)				●		●

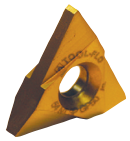
*Acme threads provided with sharp corners - radius available on a quotation basis.
For number of passes see acme table, page

INTERNAL

TNMC (with corner radii)

Countersink hole





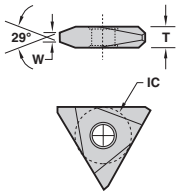
Description	EDP Code	TPI	W	IC	T	C3	C6H	GP3	GP50	AC3	AC50
TNMC 32 NT 6P INT-PT	0209060PTI	6	.0566 (1.44)	3/8	.127 (3.23)				●		
TNMC 32 NT 8P INT-PT	0209080PTI	8	.0411 (1.04)	3/8	.127 (3.23)				●		
TNMC 32 NT 10P INT-PT	0209100PTI	10	.0319 (0.81)	3/8	.127 (3.23)				●		●
TNMC 32 NT 12P INT-PT	0209120PTI	12	.0283 (0.72)	3/8	.127 (3.23)				●		
TNMC 32 NT 14P INT-PT	0209140PTI	14	.0239 (0.61)	3/8	.127 (3.23)				●		
TNMC 43 NT 6P INT-PT	0241060PTI	6	.0566 (1.44)	1/2	.189 (4.80)				●		●
TNMC 43 NT 8P INT-PT	0241080PTI	8	.0411 (1.04)	1/2	.189 (4.80)				●		●

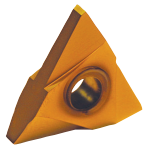
*Acme threads provided with sharp corners - radius available on a quotation basis.
For number of passes see acme table, page

STUB ACME

TNMA

Straight hole

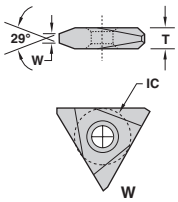


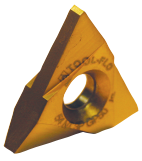


Description	EDP Code	TPI	W	IC	T	Uncoated C25	Uncoated C6H	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
TNMA 32 NT 6P STUB	0208061	6	.0652 (1.66)	3/8	.127 (3.23)			●	●		●
TNMA 32 NT 8P STUB	0208081	8	.0476 (1.21)	3/8	.127 (3.23)				●		●
TNMA 32 NT 10P STUB	0208101	10	.0370 (0.94)	3/8	.127 (3.23)				●		●
TNMA 32 NT 12P STUB	0208121	12	.0326 (0.83)	3/8	.127 (3.23)				●		
TNMA 32 NT 14P STUB	0208141	14	.0276 (0.70)	3/8	.127 (3.23)				●		
TNMA 32 NT 16P STUB	0208161	16	.0238 (0.60)	3/8	.127 (3.23)				●		
TNMA 43 NT 4P STUB	0239041	4	.1004 (2.55)	1/2	.189 (4.80)	●			●		●
TNMA 43 NT 5P STUB	0239051	5	.0793 (2.01)	1/2	.189 (4.80)	●			●		●
TNMA 43 NT 6P STUB	0239061	6	.0652 (1.66)	1/2	.189 (4.80)	●			●	●	●
TNMA 43 NT 8P STUB	0239081	8	.0476 (1.21)	1/2	.189 (4.80)	●			●	●	●
TNMA 43 NT 10P STUB	0239101	10	.0370 (0.94)	1/2	.189 (4.80)				●	●	●
TNMA 43 NT 12P STUB	0239121	12	.0326 (0.83)	1/2	.189 (4.80)				●		
TNMA 43 NT 14P STUB	0239141	14	.0276 (0.70)	1/2	.189 (4.80)				●		
TNMA 43 NT 16P STUB	0239161	16	.0238 (0.60)	1/2	.189 (4.80)				●		
TNMA 54 NT 3P STUB	0251031	3	.1356 (3.44)	5/8	.252 (6.40)				●	●	●
TNMA 54 NT 4P STUB	0251041	4	.1004 (2.55)	5/8	.252 (6.40)				●	●	●
TNMA 54 NT 5P STUB	0251051	5	.0793 (2.01)	5/8	.252 (6.40)				●	●	●
TNMA 55 NT 2.5P STUB	02550251	2.5	.1638 (4,16)	5/8	.312 (7.92)				●		
TNMA 66 NT 2P STUB	0279021	2	.2060 (5.23)	3/4	.375 (9.53)				●		

TNMC

Countersink hole



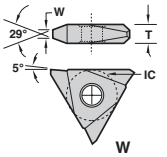


Description	EDP Code	TPI	W	IC	T	C3	C6H	GP3	GP50	AC3	AC50
TNMC 32 NT 6P STUB	0209061	6	.0652 (1.66)	3/8	.127 (3.23)				●	●	●
TNMC 32 NT 8P STUB	0209081	8	.0476 (1.21)	3/8	.127 (3.23)				●	●	●
TNMC 32 NT 10P STUB	0209101	10	.0370 (0.94)	3/8	.127 (3.23)				●		
TNMC 32 NT 12P STUB	0209121	12	.0326 (0.83)	3/8	.127 (3.23)				●		
TNMC 32 NT 14P STUB	0209141	14	.0276 (0.70)	3/8	.127 (3.23)				●		
TNMC 32 NT 16P STUB	0209161	16	.0238 (0.60)	3/8	.127 (3.23)				●		
TNMC 43 NT 4P STUB	0241041	4	.1004 (2.55)	1/2	.189 (4.80)				●	●	●
TNMC 43 NT 5P STUB	0241051	5	.0793 (2.01)	1/2	.189 (4.80)				●	●	●
TNMC 43 NT 6P STUB	0241061	6	.0652 (1.66)	1/2	.189 (4.80)				●	●	●
TNMC 43 NT 8P STUB	0241081	8	.0476 (1.21)	1/2	.189 (4.80)				●	●	●
TNMC 43 NT 10P STUB	0241101	10	.0370 (0.94)	1/2	.189 (4.80)				●	●	●
TNMC 43 NT 12P STUB	0241121	12	.0326 (0.83)	1/2	.189 (4.80)				●		
TNMC 43 NT 14P STUB	0241141	14	.0276 (0.70)	1/2	.189 (4.80)				●		
TNMC 43 NT 16P STUB	0241161	16	.0238 (0.60)	1/2	.189 (4.80)				●		
TNMC 54 NT 3P STUB	0253031	3	.1356 (3.44)	5/8	.252 (6.40)				●	●	●
TNMC 54 NT 4P STUB	0253041	4	.1004 (2.55)	5/8	.252 (6.40)				●	●	●
TNMC 54 NT 5P STUB	0253051	5	.0793 (2.01)	5/8	.252 (6.40)				●		
TNMC 66 NT 2P STUB	0280021	2	.2060 (5.23)	3/4	.375 (9.53)				●		

STUB ACME

TPMA

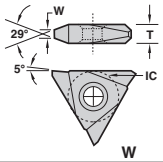
Straight hole - Positive Rake



Description	EDP Code	TPI	W	IC	T	C3	C6H	GP3	GP50	AC3	AC50
TPMA 32 NT 6P STUB	0210061	6	.0652 (1.66)	3/8	.127 (3.23)					●	
TPMA 32 NT 8P STUB	0210081	8	.0476 (1.21)	3/8	.127 (3.23)					●	
TPMA 32 NT 10P STUB	0210101	10	.0370 (0.94)	3/8	.127 (3.23)					●	
TPMA 32 NT 12P STUB	0210121	12	.0326 (0.83)	3/8	.127 (3.23)					●	
TPMA 43 NT 4P STUB	0240041	4	.1004 (2.55)	1/2	.189 (4.80)					●	
TPMA 43 NT 5P STUB	0240051	5	.0793 (2.01)	1/2	.189 (4.80)					●	
TPMA 43 NT 6P STUB	0240061	6	.0652 (1.66)	1/2	.189 (4.80)					●	
TPMA 43 NT 8P STUB	0240081	8	.0476 (1.21)	1/2	.189 (4.80)					●	
TPMC 54 NT 3P STUB	0254031	3	.1356 (3.44)	5/8	.252 (6.40)					●	
TPMC 54 NT 4P STUB	0254041	4	.1004 (2.55)	5/8	.252 (6.40)					●	
TPMC 66 NT 2P STUB	0282021	2	.2060 (5.23)	3/4	.375 (9.53)					●	

TPMC

Countersink hole - Positive Rake



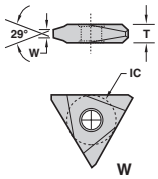
Description	EDP Code	TPI	W	IC	T	C3	C6H	GP3	GP50	AC3	AC50
TPMC 32 NT 6P STUB	0211061	6	.0652 (1.66)	3/8	.127 (3.23)					●	
TPMC 32 NT 8P STUB	0211081	8	.0476 (1.21)	3/8	.127 (3.23)					●	
TPMC 32 NT 10P STUB	0211101	10	.0370 (0.94)	3/8	.127 (3.23)					●	
TPMC 32 NT 12P STUB	0211121	12	.0326 (0.83)	3/8	.127 (3.23)					●	
TPMC 43 NT 4P STUB	0242041	4	.1004 (2.55)	1/2	.189 (4.80)					●	
TPMC 43 NT 5P STUB	0242051	5	.0793 (2.01)	1/2	.189 (4.80)					●	
TPMC 43 NT 6P STUB	0242061	6	.0652 (1.66)	1/2	.189 (4.80)					●	
TPMC 43 NT 8P STUB	0242081	8	.0476 (1.21)	1/2	.189 (4.80)					●	

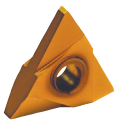
PARTIAL TOPPING STUB ACME

EXTERNAL

TNMA (with corner radii)

Straight hole





Description	EDP Code	TPI	W	IC	T	Uncoated C3	Uncoated C6H	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
TNMA 32 NT 6P STUB EXT-PT	0208061PTE	6	.0652 (1.44)	3/8	.127 (3.23)				●		●
TNMA 32 NT 8P STUB EXT-PT	0208081PTE	8	.0476 (1.04)	3/8	.127 (3.23)				●		●
TNMA 32 NT 10P STUB EXT-PT	0208101PTE	10	.0370 (0.81)	3/8	.127 (3.23)				●		●
TNMA 32 NT 12P STUB EXT-PT	0208121PTE	12	.0326 (0.72)	3/8	.127 (3.23)				●		
TNMA 32 NT 14P STUB EXT-PT	0208141PTE	14	.0276 (0.61)	3/8	.127 (3.23)				●		
TNMA 32 NT 16P STUB EXT-PT	0208161PTE	16	.0238 (0.52)	3/8	.127 (3.23)				●		
TNMA 43 NT 6P STUB EXT-PT	0239061PTE	6	.0652 (1.44)	1/2	.189 (4.80)				●		●
TNMA 43 NT 8P STUB EXT-PT	0239081PTE	8	.0476 (1.04)	1/2	.189 (4.80)				●		●
TNMA 43 NT 10P STUB EXT-PT	0239101PTE	10	.0370 (0.81)	1/2	.189 (4.80)				●		●
TNMA 43 NT 12P STUB EXT-PT	0239121PTE	12	.0326 (0.72)	1/2	.189 (4.80)				●		
TNMA 43 NT 14P STUB EXT-PT	0239141PTE	14	.0276 (0.61)	1/2	.189 (4.80)				●		
TNMA 43 NT 16P STUB EXT-PT	0239161PTE	16	.0238 (0.52	1/2	.189 (4.80)				●		

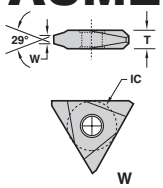
*Acme threads provided with sharp corners - radius available on a quotation basis.

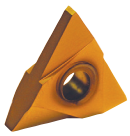
PARTIAL TOPPING STUB ACME

INTERNAL

TNMA (with corner radii)

Straight hole

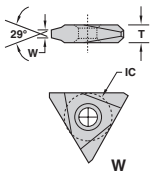


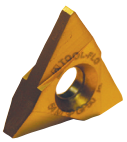


Description	EDP Code	TPI	W	IC	T	Uncoated C3	Uncoated C6H	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
TNMA 32 NT 8P STUB INT-PT	0208081PTI	8	.0476 (1.04)	3/8	.127 (3.23)				●		●
TNMA 32 NT 10P STUB INT-PT	0208101PTI	10	.0370 (0.81)	3/8	.127 (3.23)				●		●
TNMA 32 NT 12P STUB INT-PT	0208121PTI	12	.0326 (0.72)	3/8	.127 (3.23)				●		
TNMA 32 NT 14P STUB INT-PT	0208141PTI	14	.0276 (0.61)	3/8	.127 (3.23)				●		
TNMA 32 NT 16P STUB INT-PT	0208161PTI	16	.0238 (0.52)	3/8	.127 (3.23)				●		
TNMA 43 NT 6P STUB INT-PT	0239061PTI	6	.0652 (1.44)	1/2	.189 (4.80)				●		●
TNMA 43 NT 8P STUB INT-PT	0239081PTI	8	.0476 (1.04)	1/2	.189 (4.80)				●		●
TNMA 43 NT 10P STUB INT-PT	0239101PTI	10	.0370 (0.81)	1/2	.189 (4.80)				●		●
TNMA 43 NT 12P STUB INT-PT	0239121PTI	12	.0326 (0.72)	1/2	.189 (4.80)				●		
TNMA 43 NT 14P STUB INT-PT	0239141PTI	14	.0276 (0.61)	1/2	.189 (4.80)				●		
TNMA 43 NT 16P STUB INT-PT	0239161PTI	16	.0238 (0.52	1/2	.189 (4.80)				●		

*Acme threads provided with sharp corners - radius available on a quotation basis.

PARTIAL TOPPING STUB ACME
EXTERNAL
TNMC (with corner radii)
Countersink hole

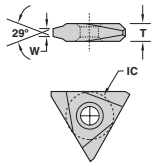


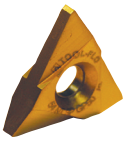


Description	EDP Code	TPI	W	IC	T	Uncoated C3	Uncoated C6H	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
TNMC 32 NT 6P STUB EXT-PT	0209061PTE	6	.0652 (1.44)	3/8	.127 (3.23)				●		
TNMC 32 NT 8P STUB EXT-PT	0209081PTE	8	.0476 (1.04)	3/8	.127 (3.23)				●		
TNMC 32 NT 10P STUB EXT-PT	0209101PTE	10	.0370 (0.81)	3/8	.127 (3.23)				●		
TNMC 32 NT 12P STUB EXT-PT	0209121PTE	12	.0326 (0.72)	3/8	.127 (3.23)				●		
TNMC 32 NT 14P STUB EXT-PT	0209141PTE	14	.0276 (0.61)	3/8	.127 (3.23)				●		
TNMC 43 NT 6P STUB EXT-PT	0239061PTE	6	.0652 (1.44)	1/2	.189 (4.80)				●		●
TNMC 43 NT 8P STUB EXT-PT	0239081PTE	8	.0476 (1.04)	1/2	.189 (4.80)				●		●

*Acme threads provided with sharp corners - radius available on a quotation basis.

PARTIAL TOPPING STUB ACME
INTERNAL
TNMC (with corner radii)
Countersink hole

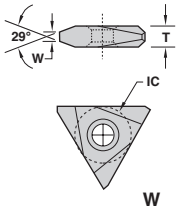


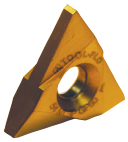


Description	EDP Code	TPI	W	IC	T	Uncoated C3	Uncoated C6H	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
TNMC 32 NT 6P STUB INT-PT	0209061PTI	6	.0652 (1.44)	3/8	.127 (3.23)				●		
TNMC 32 NT 8P STUB INT-PT	0209081PTI	8	.0476 (1.04)	3/8	.127 (3.23)				●		
TNMC 32 NT 10P STUB INT-PT	0209101PTI	10	.0370 (0.93)	3/8	.127 (3.23)				●		
TNMC 32 NT 12P STUB INT-PT	0209121PTI	12	.0326 (0.82)	3/8	.127 (3.23)				●		
TNMC 32 NT 14P STUB INT-PT	0209141PTI	14	.0276 (0.70)	3/8	.127 (3.23)				●		
TNMC 43 NT 6P STUB INT-PT	0241061PTI	6	.0652 (1.44)	1/2	.189 (4.80)				●		●
TNMC 43 NT 8P STUB INT-PT	0241081PTI	8	.0476 (1.04)	1/2	.189 (4.80)				●		●

*Acme threads provided with sharp corners - radius available on a quotation basis.

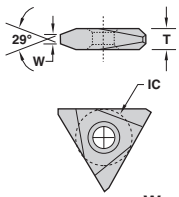
GAGEMAKER ACME
EXTERNAL
TNMC
Countersink hole

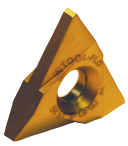




Description	EDP Code	TPI	W	IC	T	Uncoated C3	Uncoated C6H	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
TNMC 43 NT 4P EXT W.0916	G41040916	4	.0916 (2.32)	1/2	.189 (4.80)				●		
TNMC 43 NT 5P EXT W.0731	G41050731	5	.0731 (1.85)	1/2	.189 (4.80)				●		
TNMC 43 NT 6P EXT W.0607	G41060607	6	.0607 (1.54)	1/2	.189 (4.80)				●		
TNMC 43 NT 8P EXT W.0447	G41080447	8	.0447 (1.13)	1/2	.189 (4.80)				●		
TNMC 43 NT 10P EXT W.0348	G41100348	10	.0348 (0.88)	1/2	.189 (4.80)				●		
TNMC 43 NT 14P EXT W.0268	G41140268	14	.0268 (0.68)	1/2	.189 (4.80)				●		
TNMC 43 NT 16P EXT W.0239	G41160239	16	.0239 (0.60)	1/2	.189 (4.80)				●		

GAGEMAKER STUB ACME
EXTERNAL
TNMC
Countersink hole



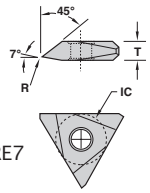


Description	EDP Code	TPI	W	IC	T	Uncoated C3	Uncoated C6H	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
TNMC 43 NT 4P STUB EXT W.1046	G41041046	4	.1046 (2.65)	1/2	.189 (4.80)				●		
TNMC 43 NT 5P STUB EXT W.0829	G41050829	5	.0829 (2.10)	1/2	.189 (4.80)				●		
TNMC 43 NT 6P STUB EXT W.0688	G41060688	6	.0688 (1.74)	1/2	.189 (4.80)				●		
TNMC 43 NT 8P STUB EXT W.0518	G41080518	8	.0518 (1.31)	1/2	.189 (4.80)				●		
TNMC 43 NT 10P STUB EXT W.0412	G41100412	10	.0412 (1.04)	1/2	.189 (4.80)				●		
TNMC 43 NT 12P STUB EXT W.0362	G41120362	12	.0362 (0.91)	1/2	.189 (4.80)				●		
TNMC 43 NT 14P STUB EXT W.0312	G41140312	14	.0312 (0.79)	1/2	.189 (4.80)				●		
TNMC 43 NT 16P STUB EXT W.0274	G41160274	16	.0274 (0.69)	1/2	.189 (4.80)				●		

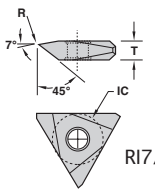
AMERICAN STANDARD BUTTRESS

TNMA & TNMC

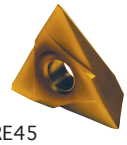
For thread specifications & applications see page 111



RI45/RE7



RI7/RE45

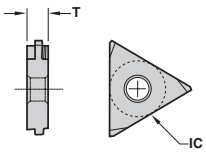


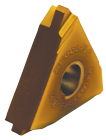
Description	EDP Code	TPI	R	IC	T	Lead Angle	Uncoated C3	Uncoated C6H	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
TNMA 43 ASB RI45/RE7	403900R008	8-16	.007-.009 (0.18-0.23)	1/2	.189 (4.80)	45° Internal/7° External				●		
TNMA 43 ASB RI7/RE45	393900R008	8-16	.007-.009 (0.18-0.23)	1/2	.189 (4.80)	7° Internal/45° External				●		
TNMA 54 ASB RI45/RE7	405100R010	4-6	.009-.011 (0.23-0.28)	5/8	.252 (6.40)	45° Internal/7° External				●		
TNMA 54 ASB RI7/RE45	395100R010	4-6	.009-.011 (0.23-0.28)	5/8	.252 (6.40)	7° Internal/45° External				●		
TNMC 43 ASB RI45/RE7	404100R008	8-16	.007-.009 (0.18-0.23)	1/2	.189 (4.80)	45° Internal/7° External				●		
TNMC 43 ASB RI7/RE45	394100R008	8-16	.007-.009 (0.18-0.23)	1/2	.189 (4.80)	7° Internal/45° External				●		
TNMC 54 ASB RI45/RE7	405300R010	4-6	.009-.011 (0.23-0.28)	5/8	.252 (6.40)	45° Internal/7° External				●		
TNMC 54 ASB RI7/RE45	395300R010	4-6	.009-.011 (0.23-0.28)	5/8	.252 (6.40)	7° Internal/45° External				●		

API BUTTRESS

TNMA

Straight hole



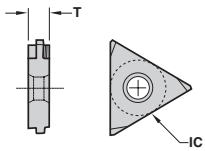


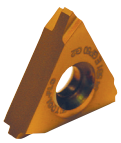
Description	EDP Code	TPI	TPF	IC	T	Conn. No.	C3	C6H	GP3	GP50	AC3	AC50
TNMA 43 8B75 EXT	21394	8	.750	1/2	.189 (4.80)	U.S. Improved Buttress				●		
TNMA 44 5B75 EXT-FC *	16434F	5	.750	1/2	.252 (6.40)	4-1/2 - 13-3/8				●		
TNMA 54 5B1 EXT-FC *	17514F	5	1.000	5/8	.252 (6.40)	16 and larger				●		●
TNMA 54 5B75 EXT-FC*	16514F	5	.750	5/8	.252 (6.40)	4-1/2 - 13-3/8				●		●
TNMA 43 8B75 INT	21398	8	.750	1/2	.189 (4.80)	U.S. Improved Buttress				●		
TNMA 44 5B75 INT-FC*	16438F	5	.750	1/2	.252 (6.40)	4-1/2 - 13-3/8				●		
TNMA 54 5B1 INT-FC*	17518F	5	1.000	5/8	.252 (6.40)	16 and larger				●		●
TNMA 54 5B75 INT-FC*	16518F	5	.750	5/8	.252 (6.40)	4-1/2 - 13-3/8				●		●

*FC designates flank clearance.

TNMC

Countersink hole





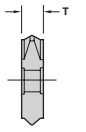
Description	EDP Code	TPI	TPF	IC	T	Conn. No.	C3	C6H	GP3	GP50	AC3	AC50
TNMC 43 8B75 EXT	21414	8	.750	1/2	.189 (4.80)	U.S. Improved Buttress				●		
TNMC 54 5B1 EXT-FC*	17534F	5	1.000	5/8	.252 (6.40)	16 and larger				●		●
TNMC 54 5B75 EXT-FC*	16534F	5	.750	5/8	.252 (6.40)	4-1/2 - 13-3/8				●		●
TNMC 43 8B75 INT	21418	8	.750	1/2	.189 (4.80)	U.S. Improved Buttress				●		●
TNMC 54 5B1 INT-FC*	17538F	5	1.000	5/8	.252 (6.40)	16 and larger				●		●
TNMC 54 5B75 INT-FC*	16538F	5	.750	5/8	.252 (6.40)	4-1/2 - 13-3/8				●		●

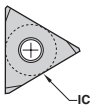
*FC designates flank clearance.

API HUGHES H90

TNMA

Straight hole

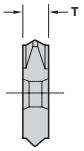


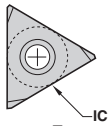


Description	EDP Code	TPI	TPF	IC	T	Conn. No.	C3	C6H	GP3	GP50	AC3	AC50
TNMA 55 H902 EXT	28554	3.5	2.000	5/8	.312 (7.92)	3-1/2 - 6-5/8 H90				●		
TNMA 55 H903 EXT	29554	3.5	3.000	5/8	.312 (7.92)	7 - 8-5/8 H90				●		
TNMA 56 H90S EXT	27Q14	3	1.250	5/8	.375 (9.53)	2-3/8 - 3-1/2 Slimline				●		
TNMA 55 H902 INT	28558	3.5	2.000	5/8	.312 (7.92)	3-1/2 - 6-5/8 H90				●		
TNMA 55 H903 INT	29558	3.5	3.000	5/8	.312 (7.92)	7 - 8-5/8 H90				●		
TNMA 56 H90S INT	27Q18	3	1.250	5/8	.375 (9.53)	2-3/8 - 3-1/2 Slimline				●		

TNMC

Countersink hole



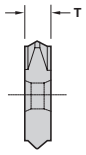


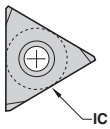
Description	EDP Code	TPI	TPF	IC	T	Conn. No.	C3	C6H	GP3	GP50	AC3	AC50
TNMC 55 H902 EXT	28564	3.5	2.000	5/8	.312 (7.92)	3-1/2 - 6-5/8 H90						
TNMC 55 H903 EXT	29564	3.5	3.000	5/8	.312 (7.92)	7 - 8-5/8 H90						
TNMC 56 H90S EXT	27Q34	3	1.250	5/8	.375 (9.53)	2-3/8 - 3-1/2 Slimline						
TNMC 55 H902 INT	28568	3.5	2.000	5/8	.312 (7.92)	3-1/2 - 6-5/8 H90						
TNMC 55 H903 INT	29568	3.5	3.000	5/8	.312 (7.92)	7 - 8-5/8 H90						
TNMC 56 H90S INT	27Q38	3	1.250	5/8	.375 (9.53)	2-3/8 - 3-1/2 Slimline						

API ROTARY SHOULDER CONNECTION

TNMA

Straight hole



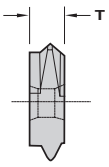


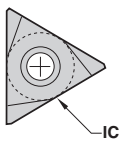
Description	EDP Code	TPI	TPF	IC	T	Conn. No.	C3	C6H	GP3	GP50	AC3	AC50
TNMA 54 530 EXT	13514	5	3	5/8	.252 (6.40)	3-1/2 FH, 2-3/8 - 4-1/2 Reg.				●		●
TNMA 55 425 EXT	09554	4	2	5/8	.312 (7.92)	5-1/2 FH, 6-5/8 FH, 6-5/8 Reg.				●		●
TNMA 55 428 EXT	10554	4	2	5/8	.312 (7.92)	NC23 - NC50, 2-3/8 - 5-1/2				●		●
TNMA 55 42F EXT*	14554	4	2	5/8	.312 (7.92)	VO.065*						
TNMA 55 435 EXT	11554	4	3	5/8	.312 (7.92)	5-1/2, 7-5/8, 8-5/8 Reg.				●		●
TNMA 55 438 EXT	12554	4	3	5/8	.312 (7.92)	NC56 - NC71				●		●
TNMA 55 530 EXT	13554	5	3	5/8	.312 (7.92)	3-1/2 FH, 2-3/8 - 4-1/2 Reg.				●		●
TNMA 55 4PAC EXT	15554	4	1.5	5/8	.312 (7.92)	American Open Hole				●		
TNMA 54 530 INT	13518	5	3	5/8	.252 (6.40)	3-1/2 FH, 2-3/8 - 4-1/2 Reg.				●		●
TNMA 55 425 INT	09558	4	2	5/8	.312 (7.92)	5-1/2 FH, 6-5/8 FH, 6-5/8 Reg.				●		●
TNMA 55 428 INT	10558	4	2	5/8	.312 (7.92)	NC23 - NC50, 2-3/8 - 5-1/2				●		●
TNMA 55 42F INT*	14558	4	2	5/8	.312 (7.92)	VO.065*						
TNMA 55 435 INT	11558	4	3	5/8	.312 (7.92)	5-1/2, 7-5/8, 8-5/8 Reg.				●		●
TNMA 55 438 INT	12558	4	3	5/8	.312 (7.92)	NC56 - NC71				●		
TNMA 55 530 INT	13558	5	3	5/8	.312 (7.92)	3-1/2 FH, 2-3/8 - 4-1/2 Reg.				●		●
TNMA 55 4PAC INT	15558	4	1.5	5/8	.312 (7.92)	American Open Hole				●		

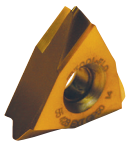
*Obsolesent thread form - see API Spec 7, 35th Edition, May 1, 1985 Section 9.4.

TNMC

Countersink hole







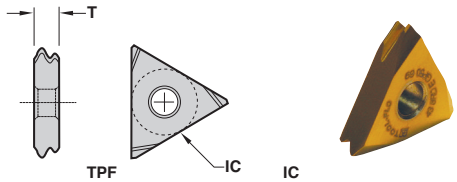
Description	EDP Code	TPI	TPF	IC	T	Conn. No.	C3	C6H	GP3	GP50	AC3	AC50
TNMC 54 530 EXT	13534	5	3	5/8	.252 (6.40)	3-1/2 FH, 2-3/8 - 4-1/2 Reg.						
TNMC 55 425 EXT	09564	4	2	5/8	.312 (7.92)	5-1/2 FH, 6-5/8 FH, 6-5/8 Reg.				●		●
TNMC 55 428 EXT	10564	4	2	5/8	.312 (7.92)	NC23 - NC50, 2-3/8 - 5-1/2				●		●
TNMC 55 42F EXT*	14564	4	2	5/8	.312 (7.92)	VO.065*						
TNMC 55 435 EXT	11564	4	3	5/8	.312 (7.92)	5-1/2, 7-5/8, 8-5/8 Reg.				●		●
TNMC 55 438 EXT	12564	4	3	5/8	.312 (7.92)	NC56 - NC71				●		●
TNMC 55 530 EXT	13564	5	3	5/8	.312 (7.92)	3-1/2 FH, 2-3/8 - 4-1/2 Reg.				●		●
TNMC 55 4PAC EXT	15564	4	1.5	5/8	.312 (7.92)	American Open Hole				●		
TNMC 54 530 INT	13538	5	3	5/8	.252 (6.40)	3-1/2 FH, 2-3/8 - 4-1/2 Reg.						
TNMC 55 425 INT	09568	4	2	5/8	.312 (7.92)	5-1/2 FH, 6-5/8 FH, 6-5/8 Reg.				●		●
TNMC 55 428 INT	10568	4	2	5/8	.312 (7.92)	NC23 - NC50, 2-3/8 - 5-1/2				●		●
TNMC 55 42F INT*	14568	4	2	5/8	.312 (7.92)	VO.065*						
TNMC 55 435 INT	11568	4	3	5/8	.312 (7.92)	5-1/2, 7-5/8, 8-5/8 Reg.				●		●
TNMC 55 438 INT	12568	4	3	5/8	.312 (7.92)	NC56 - NC71				●		●
TNMC 55 530 INT	13568	5	3	5/8	.312 (7.92)	3-1/2 FH, 2-3/8 - 4-1/2 Reg.				●		●
TNMC 55 4PAC INT	15568	4	1.5	5/8	.312 (7.92)	American Open Hole				●		

*Obsolesent thread form - see API Spec 7, 35th Edition, May 1, 1985 Section 9.4.

API ROUND

TNMA

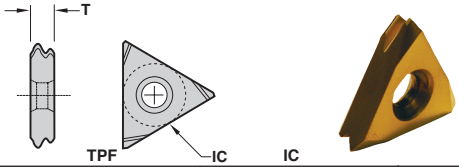
Straight hole



Description	EDP Code	TPI	TPF	IC	T	C3	C6H	GP3	GP50	AC22	AC50
TNMA 43 8RD EXT	32394	8	.750	1/2	.189 (4.80)				●	●	●
TNMA 43 10RD EXT	34394	10	.750	1/2	.189 (4.80)				●		●
TNMA 54 8RD EXT	32514	8	.750	5/8	.252 (6.40)				●		●
TNMA 54 10RD EXT	34514	10	.750	5/8	.252 (6.40)				●		
TNMA 43 8RD INT	32398	8	.750	1/2	.189 (4.80)				●	●	●
TNMA 43 10RD INT	34398	10	.750	1/2	.189 (4.80)				●		●
TNMA 54 8RD INT	32518	8	.750	5/8	.252 (6.40)				●		●
TNMA 54 10RD INT	34518	10	.750	5/8	.252 (6.40)				●		

TNMC

Countersink hole

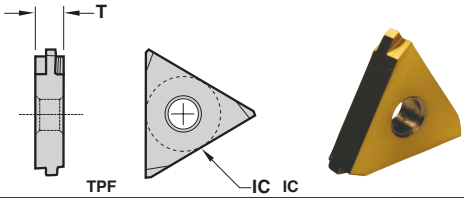


Description	EDP Code	TPI	TPF	IC	T	C3	C6H	GP3	GP50	AC22	AC50
TNMC 43 8RD EXT	32414	8	.750	1/2	.189 (4.80)				●	●	●
TNMC 43 10RD EXT	34414	10	.750	1/2	.189 (4.80)				●		●
TNMC 54 8RD EXT	32534	8	.750	5/8	.252 (6.40)				●		●
TNMC 43 8RD INT	32418	8	.750	1/2	.189 (4.80)				●	●	●
TNMC 43 10RD INT	34418	10	.750	1/2	.189 (4.80)				●		●
TNMC 54 8RD INT	32538	8	.750	5/8	.252 (6.40)				●		●

API VAM

TNMA

Straight hole



Description	EDP Code	TPI	TPF	IC	T	C3	C6H	GP3	GP50	AC3	AC50
TNMA 43 6VAM EXT	24394	6	.750	1/2	.189 (4.80)				●		
TNMA 43 8VAM EXT	25394	8	.750	1/2	.189 (4.80)				●		
TNMA 54 5VAM EXT	23514	5	.750	5/8	.252 (6.40)				●		
TNMA 43 6VAM INT	24398	6	.750	1/2	.189 (4.80)				●		
TNMA 43 8VAM INT	25398	8	.750	1/2	.189 (4.80)				●		
TNMA 54 5VAM INT	23518	5	.750	5/8	.252 (6.40)				●		

TNMC

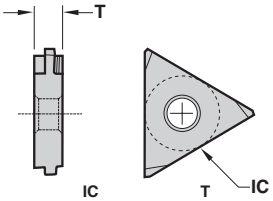
Countersink hole

Description	EDP Code	TPI	TPF	IC	T	C3	C6H	GP3	GP50	AC3	AC50
TNMC 43 6VAM EXT	24414	6	.750	1/2	.189 (4.80)						
TNMC 43 8VAM EXT	25414	8	.750	1/2	.189 (4.80)						
TNMC 54 5VAM EXT	23534	5	.750	5/8	.252 (6.40)						
TNMC 43 6VAM INT	24418	6	.750	1/2	.189 (4.80)						
TNMC 43 8VAM INT	25418	8	.750	1/2	.189 (4.80)						
TNMC 54 5VAM INT	23538	5	.750	5/8	.252 (6.40)						

API X-LINE

TNMA

Straight hole



Description	EDP Code	TPI	TPF	IC	T	Conn. No.	C3	C6H	GP3	GP50	AC3	AC50
TNMA 54 5XL12 EXT	18514	5	1.250	5/8	.252 (6.40)	8-5/8 - 10-3/4				●		
TNMA 54 6XL15 EXT	19514	6	1.500	5/8	.252 (6.40)	5 - 7-5/8				●		
TNMA 54 6XL75 EXT	20514	6	.750	5/8	.252 (6.40)	-				●		
TNMA 54 5XL12 INT	18518	5	1.250	5/8	.252 (6.40)	8-5/8 - 10-3/4				●		
TNMA 54 6XL15 INT	19518	6	1.500	5/8	.252 (6.40)	5 - 7-5/8				●		
TNMA 54 6XL75 INT	20518	6	.750	5/8	.252 (6.40)	-				●		

TNMC

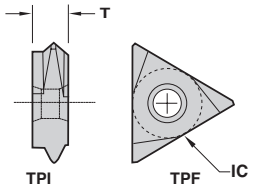
Countersink hole

Description	EDP Code	TPI	TPF	IC	T	Conn. No.	C3	C6H	GP3	GP50	AC3	AC50
TNMC 54 5XL12 EXT	18534	5	1.250	5/8	.252 (6.40)	8-5/8 - 10-3/4						
TNMC 54 6XL15 EXT	19534	6	1.500	5/8	.252 (6.40)	5 - 7-5/8						
TNMC 54 5XL12 INT	18538	5	1.250	5/8	.252 (6.40)	8-5/8 - 10-3/4						
TNMC 54 6XL15 INT	19538	6	1.500	5/8	.252 (6.40)	5 - 7-5/8						

NPT

TNMA

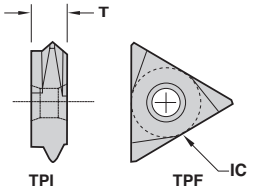
Straight hole



Description	EDP Code	Pipe Size	TPI	TPF	IC	T	C3	C6H	GP3	GP50	AC3	AC50
TNMA 43 8NPT EXT	3639084	2.5" and up	8	.750	1/2	.189 (4.80)				●		
TNMA 43 11.5NPT EXT	3639114	1"- 2"	11.5	.750	1/2	.189 (4.80)				●		
TNMA 43 8NPT INT	3639088	2.5" and up	8	.750	1/2	.189 (4.80)				●		
TNMA 43 11.5NPT INT	3639118	1"- 2"	11.5	.750	1/2	.189 (4.80)				●		

TNMC

Countersink hole

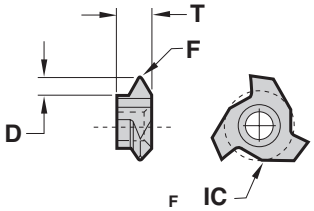


Description	EDP Code	Pipe Size	TPI	TPF	IC	T	C3	C6H	GP3	GP50	AC3	AC50
TNMC 43 8NPT EXT	3641084	2.5" and up	8	.750	1/2	.189 (4.80)				●		
TNMC 43 11.5NPT EXT	3641114	1"- 2"	11.5	.750	1/2	.189 (4.80)				●		
TNMC 43 8NPT INT	3641088	2.5" and up	8	.750	1/2	.189 (4.80)				●		
TNMC 43 11.5NPT INT	3641118	1"- 2"	11.5	.750	1/2	.189 (4.80)				●		

60° V-THREADING

TNEB

Small Diameter

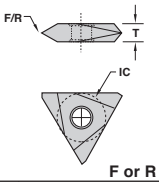


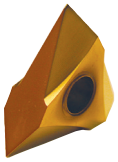
Description	EDP Code	TPI	F	IC	T	C3	C6H	GP3	GP5	AC3	AC50
TNEB 2.52 NVL-40	01D5000	7-32	.003/.005 (0.08/0.13)	1/3	.125 (3.18)				●		
TNEB 33 NVL-40	0112000	5-16	.003/.005 (0.08/0.13)	3/8	.187 (4.75)				●		

60° V-THREADING

TNMA

Straight hole

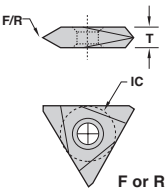


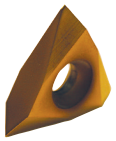


Description	EDP Code	TPI	F or R	IC	T	Uncoated C25	TiN Coated GP4	TiN Coated GP3	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
TNMA 32 NV	0108000	8-36	.003/.005 (0.08/0.13) Flat	3/8	.127 (3.23)		●	●	●	●	●
TNMA 33 NV	01K3000	8-36	.003/.005 (0.08/0.13) Flat	3/8							
TNMA 43 NV	0139000	5-24	.005/.007 (0.13/0.18) Flat	1/2	.189 (4.80)	●		●	●	●	●
TNMA 43 NV .010R	0139R10	4-20	.010 (0.25) Radius	1/2	.189 (4.80)			●	●		
TNMA 44 NV	0143000	4-24	.005/.009 (0.13/0.23) Flat	1/2	.250 (6.35)						
TNMA 54 NV	0151000	4-20	.008/.010 (0.20/0.25) Flat	5/8	.252 (6.40)	●	●	●	●	●	●
TNMA 54 NV .010R	0151R10	4-20	.010 (0.25) Radius	5/8	.252 (6.40)				●		
TNMA 54 NV .020R	0151R20	4-12	.020 (0.51) Radius	5/8	.252 (6.40)				●		
TNMA 54 NV .025R	0151R25	4-8	.025 (0.64) Radius	5/8	.252 (6.40)				●		
TNMA 54 NV .038R	0151R38	4-6	.038 (0.97) Radius	5/8	.252 (6.40)				●		
TNMA 55 NV	0155000	4-20	.008/.010 (0.20/0.25) Flat	5/8					●		
TNMA 64 NV	0174000	4-20	.008/.010 (0.20/0.25) Flat	3/4	.252 (6.40)						
TNMA 66 NV	0179000	3-12	.008/.010 (0.20/0.25) Flat	3/4	.375 (9.53)				●		

TNMC

Countersink hole

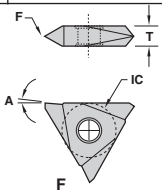


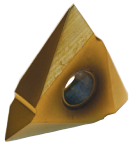


Description	EDP Code	TPI	F or R	IC	T	C25	GP4	GP3	GP50	AC3	AC50
TNMC 32 NV	0109000	8-36	.003/.005 (0.08/0.13) Flat	3/8	.127 (3.23)	●	●	●	●	●	●
TNMC 33 NV	01K8000	8-36	.003/.005 (0.08/0.13) Flat	3/8					●		
TNMC 43 NV	0141000	5-24	.005/.007 (0.13/0.18) Flat	1/2	.189 (4.80)	●	●	●	●	●	●
TNMC 43 NV .010R	0141R10	4-20	.010 (0.25) Radius	1/2	.189 (4.80)			●	●		●
TNMC 44 NV	0144000	4-24	.005/.009 (0.13/0.23) Flat	1/2	.250 (6.35)						
TNMC 54 NV	0153000	4-20	.008/.010 (0.20/0.25) Flat	5/8	.252 (6.40)	●	●	●	●	●	●
TNMC 54 NV .010R	0153R10	4-20	.010 (0.25) Radius	5/8	.252 (6.40)				●		●
TNMC 54 NV .020R	0153R20	4-12	.020 (0.51) Radius	5/8	.252 (6.40)				●		●
TNMC 54 NV .025R	0153R25	4-8	.025 (0.64) Radius	5/8	.252 (6.40)				●		●
TNMC 54 NV .038R	0153R38	4-6	.038 (0.97) Radius	5/8	.252 (6.40)				●		●
TNMC 64 NV	0175000	4-20	.008/.010 (0.20/0.25) Flat	3/4	.252 (6.40)						
TNMC 66 NV	0180000	3-12	.008/.010 (0.20/0.25) Flat	3/4	.375 (9.53)				●		

TPMA

Straight hole - Positive Rake

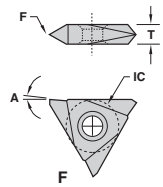


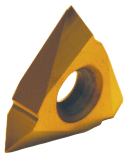


Description	EDP Code	TPI	F	A°	IC	T	C25	GP3	GP4	GP50	AC3	AC50
TPMA 32 NV	0110000	8-36	.003/.005 (0.08/0.13)	5	3/8	.127 (3.23)		●		●	●	
TPMA 43 NV	0140000	5-24	.005/.007 (0.13/0.18)	5	1/2	.189 (4.80)	●	●	●	●	●	●
TPMA 43 NV-10	0140100	5-24	.005/.007 (0.13/0.18)	10	1/2	.189 (4.80)				●		
TPMA 54 NV	0152000	4-20	.008/.010 (0.20/0.25)	5	1/2	.252 (6.40)		●		●		
TPMA 66 NV	0181000	3-12	.008/.010 (0.20/0.25)	5	3/4	.375 (9.53)				●		

TPMC

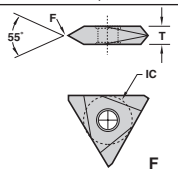
Countersink hole - Positive Rake

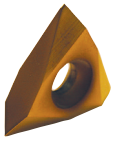




Description	EDP Code	TPI	F	A°	IC	T	C25	GP3	GP4	GP50	AC3	AC50
TPMC 32 NV	0111000	8-36	.003/.005 (0.08/0.13)	5	3/8	.127 (3.23)	●	●		●	●	●
TPMC 32 NV-10	0111100	8-36	.003/.005 (0.08/0.13)	10	3/8	.127 (3.23)				●		
TPMC 43 NV	0142000	5-24	.005/.007 (0.13/0.18)	5	1/2	.189 (4.80)	●	●	●	●	●	●
TPMC 43 NV-10	0142100	5-24	.005/.007 (0.13/0.18)	10	1/2	.189 (4.80)				●		
TPMC 54 NV	0154000	4-20	.008/.010 (0.20/0.25)	5	1/2	.252 (6.40)		●		●		
TPMC 66 NV	0182000	3-12	.008/.010 (0.20/0.25)	5	3/4	.375 (9.53)					●	

55° WHITWORTH



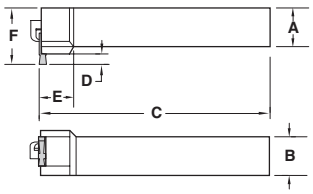


Description	EDP Code	TPI	F	IC	T	C3	C6H	GP3	GP50	AC3	AC50
TNMA 43 NV-55	0139055	5-24	.005/.007 (0.13/0.18)	1/2	.189 (4.80)				●		
TNMC 43 NV-55	0141055	5-24	.005/.007 (0.13/0.18)	1/2	.189 (4.80)				●		

EXTERNAL HOLDER

MTHOR/L

Threading/Grooving



RH SHOWN

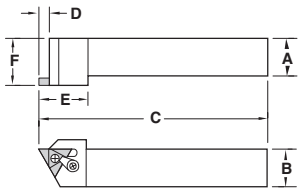
Description	EDP Code	Insert	A	B	C	D	E	F	PARTS Lock Pin	Clamp	Clamp Screw
MTHOR-164	95501656	T_MA/C 43	1	1	6	.19	.74	1.5	NL44	TC-250	STC11
MTHOL-164	95401656	T_MA/C 43	1	1	6	.19	.74	1.5	NL44	TC-250	STC11
MTHOR-204	95502056	T_MA/C 43	1-1/4	1-1/4	7	.19	.99	1.75	NL44	TC-250	STC11
MTHOL-204	95402056	T_MA/C 43	1-1/4	1-1/4	7	.19	.99	1.75	NL44	TC-250	STC11
MTHOR-165	95501664	T_MA/C 54	1	1	6	.24	.99	1.5	NL56	TC-250	STC11
MTHOL-165	95401664	T_MA/C 54	1	1	6	.24	.99	1.5	NL56	TC-250	STC11
MTHOR-205	95502064	T_MA/C 54	1-1/4	1-1/4	7	.24	.99	1.75	NL56	TC-250	STC11

Description	EDP Code	Insert	A	B	C	D	E	F	PARTS Lock Pin	Clamp	Clamp Screw
MTHOR-2525M4	955025M56	T_MA/C 43	25	25	150	4.83	18.80	38.10	NLM44	CLM20	STCM11
MTHOL-2525M4	954025M56	T_MA/C 43	25	25	150	4.83	18.80	38.10	NLM44	CLM20	STCM11
MTHOR-3232M4	955032M56	T_MA/C 43	32	32	170	4.83	25.15	44.45	NLM44	CLM20	STCM11
MTHOR-2525M5	955025M64	T_MA/C 54	25	25	150	6.10	25.15	38.10	NLM56	CLM20	STCM11
MTHOL-2525M5	954025M64	T_MA/C 54	25	25	150	6.10	25.15	38.10	NLM56	CLM20	STCM11
MTHOR-3232M5	955032M64	T_MA/C 54	32	32	170	6.10	25.15	44.45	NLM56	CLM20	STCM11

MTVOR/L

Threading/Grooving

Inch



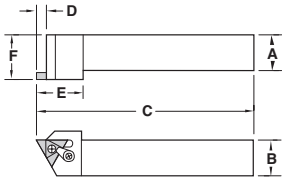
RH SHOWN

Description	EDP Code	Insert	A	B	C	D	E	F	PARTS Lock Pin	Clamp	Clamp Screw
MTVOR-83	96000848	T_MA/C 32							NL33	TC-190	STC5
MTVOR-123	96001248	T_MA/C 32	3/4	3/4	4-1/2	.15	1.08	1.00	NL33	TC-190	STC5
MTVOL-123	95901248	T_MA/C 32	3/4	3/4	4-1/2	.15	1.08	1.00	NL33	TC-190	STC5
MTVOR-163	96001648	T_MA/C 32	1	1	6	.15	1.08	1.25	NL33	TC-190	STC9
MTVOL-163	95901648	T_MA/C 32	1	1	6	.15	1.08	1.25	NL33	TC-190	STC9
MTVOR-124	96001256	T_MA/C 43	3/4	3/4	4-1/2	.23	1.23	1.00	NL44	TC-190	STC5
MTVOL-124	95901256	T_MA/C 43	3/4	3/4	4-1/2	.23	1.23	1.00	NL44	TC-190	STC5
MTVOR-164	96001656	T_MA/C 43	1	1	6	.23	1.23	1.25	NL44	TC-190	STC5
MTVOL-164	95901656	T_MA/C 43	1	1	6	.23	1.23	1.25	NL44	TC-190	STC5
MTVOR-204	96002056	T_MA/C 43	1-1/4	1-1/4	7	.23	1.23	1.50	NL44	TC-190	STC5
MTVOL-204	95902056	T_MA/C 43	1-1/4	1-1/4	7	.23	1.23	1.50	NL44	TC-190	STC5
MTVOR-165	96001664	T_MA/C 54	1	1	6	.29	1.43	1.25	NL56	TC-250	STC11
MTVOL-165	95901664	T_MA/C 54	1	1	6	.29	1.43	1.25	NL56	TC-250	STC11
MTVOR-205	96002064	T_MA/C 54	1-1/4	1-1/4	7	.29	1.43	1.50	NL56	TC-250	STC11
MTVOL-205	95902064	T_MA/C 54	1-1/4	1-1/4	7	.29	1.43	1.50	NL56	TC-250	STC11
MTVOR-2055	96002066	T_MA/C 55	1-1/4	1-1/4	7	.37	1.43	1.50	NL56	TC-250	STC11
MTVOR-2064	96002072	T_MA/C 64	1-1/4	1-1/4	7	.37	1.62	1.50	NL66	TC-310	STC4
MTVOR-206	96002076	T_MA/C 66	1-1/4	1-1/4	7	.37	1.62	1.50	NL66L	TC-310	STC4
MTVOL-206	95902076	T_MA/C 66	1-1/4	1-1/4	7	.37	1.62	1.50	NL66L	TC-310	STC4
MTVOR-246	96002476	T_MA/C 66	1-1/2	1-1/2	7	.37	1.62	2.00	NL66L	TC-310	STC4
MTVOR-2067	96002078	T_MA/C 67	1-1/4	1-1/4	7	.37	1.62	1.50	NL66L	TC-310	STC8
MTVOR-2069	96002080	T_MA/C 69	1-1/4	1-1/4	7	.37	1.62	1.50	NL66L	TC-311	STC4

EXTERNAL HOLDER

MTVOR/L

Threading/Grooving
Metric

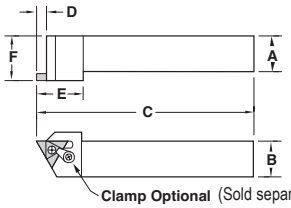


RH SHOWN

Description	EDP Code	Insert	A	B	C	D	E	F	PARTS Lock Pin	Clamp	Clamp Screw
MTVOR-2020M3	960020M48	T_MA/C 32	20	20	150	3,8	27,4	31,7	NLM33	CLM6	STCM9
MTVOL-2020M3	959020M48	T_MA/C 32	20	20	150	3,8	27,4	31,7	NLM33	CLM6	STCM9
MTVOR-2525M3	960025M48	T_MA/C 32	25	25	150	3,8	27,4	31,7	NLM33	CLM6	STCM9
MTVOL-2525M3	959025M48	T_MA/C 32	25	25	150	3,8	27,4	31,7	NLM33	CLM6	STCM9
MTVOR-2020M4	960020M56	T_MA/C 32	20	20	150	3,8	27,4	31,7	NLM33	CLM6	STCM9
MTVOL-2020M4	959020M56	T_MA/C 32	20	20	150	3,8	27,4	31,7	NLM33	CLM6	STCM9
MTVOR-2525M4	960025M56	T_MA/C 43	25	25	150	5,8	31,2	31,7	NLM44	CLM6	XNSM0515
MTVOL-2525M4	969025M56	T_MA/C 43	25	25	150	5,8	31,2	31,7	NLM44	CLM6	XNSM0515
MTVOR-3232M4	960032M56	T_MA/C 43	32	32	180	5,8	31,2	38,1	NLM44	CLM6	XNSM0515
MTVOR-2525M5	960025M64	T_MA/C 54	25	25	150	7,3	35,8	31,7	NLM56	CLM20	STCM11
MTVOL-2525M5	959025M64	T_MA/C 54	25	25	150	7,3	35,8	31,7	NLM56	CLM20	STCM11
MTVOR-3232M5	960032M64	T_MA/C 54	32	32	170	7,3	35,8	38,1	NLM56	CLM20	STCM11
MTVOR-2525M55	960025M66	T_MA/C 55	25	25	170	7,9	35,8	38,1	NLM56	CLM20	STCM11
MTVOR-3232M55	960032M66	T_MA/C 55	32	32	170	7,9	35,8	38,1	NLM56	CLM20	STCM11
MTVOR-3232M6	960032M76	T_MA/C 66	32	32	170	9,6	41,1	38,1	NLM66	CLM12	XNSM0825
MTVOL-3232M6	960032M76	T_MA/C 66	32	32	170	9,6	41,1	38,1	NLM66	CLM12	XNSM0825
MTVOR-4040M6	960040M76	T_MA/C 66	32	32	170	9,6	41,1	38,1	NLM66	CLM12	XNSM0825

STVOR/L

Threading/Grooving
Inch



Clamp Optional (Sold separately*)

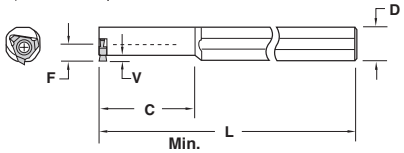
RH SHOWN

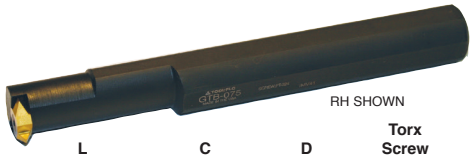
Description	EDP Code	Insert	A	B	C	D	E	F	PARTS Screw	Clamp*	Clamp Screw
STVOR-123	98001248	T_MC 32	3/4	3/4	4-1/2	.15	1.08	1.00	SD-1	TC-190	STC9
STVOL-123	97801248	T_MC 32	3/4	3/4	4-1/2	.15	1.08	1.00	SD-1	TC-190	STC5
STVOR-163	98001648	T_MC 32	1	1	6	.15	1.08	1.25	SD-1	TC-190	STC5
STVOL-163	97801648	T_MC 32	1	1	6	.15	1.08	1.25	SD-1	TC-190	STC5
STVOR-124	98001256	T_MC 43	3/4	3/4	4-1/2	.23	1.23	1.00	SD-2	TC-190	STC9
STVOL-124	97801256	T_MC 43	3/4	3/4	4-1/2	.23	1.23	1.00	SD-2	TC-190	STC9
STVOR-164	98001656	T_MC 43	1	1	6	.23	1.23	1.25	SD-2	TC-190	STC9
STVOL-164	97801656	T_MC 43	1	1	6	.23	1.23	1.25	SD-2	TC-190	STC9
STVOR-204	98002056	T_MC 43	1-1/4	1-1/4	7	.23	1.23	1.50	SD-2	TC-190	STC9
STVOL-204	97802056	T_MC 43	1-1/4	1-1/4	7	.23	1.23	1.50	SD-2	TC-190	STC9
STVOR-165	98001664	T_MC 54	1	1	6	.29	1.43	1.25	SD-3	TC-250	STC11
STVOL-165	97801664	T_MC 54	1	1	6	.29	1.43	1.25	SD-3	TC-250	STC11
STVOR-205	98002064	T_MC 54	1-1/4	1-1/4	7	.29	1.43	1.50	SD-3	TC-250	STC11
STVOR-2055	98002066	T_MC 55	1-1/4	1-1/4	7	.37	1.43	1.50	SD-3	TC-250	STC11
STVOR-206	98002076	T_MC 66	1-1/4	1-1/4	7	.37	1.62	1.50	SD-4	TC-310	STC4
STVOR-246	98002476	T_MC 66	1-1/2	1-1/2	7	.37	1.62	2.00	SD-4	TC-310	STC4

Description	EDP Code	Insert	A	B	C	D	E	F	PARTS Screw	Clamp	Clamp Screw
STVOR-2020M3	980020M48	T_MC 32	20	20	150	5,8	31,2	31,7	SD-2	CLM6	STCM9
STVOL-2020M3	978020M48	T_MC 32	20	20	150	5,8	31,2	31,7	SD-2	CLM6	STCM9
STVOR-2525M3	980125M48	T_MC 32	25	25	150	5,8	31,2	38,1	SD-2	CLM6	STCM9
STVOL-2525M3	980125M48	T_MC 32	25	25	150	5,8	31,2	38,1	SD-2	CLM6	STCM9
STVOR-2020M4	980020M56	T_MC 43	20	20	150	5,8	31,2	31,7	SD-2	CLM6	STCM9
STVOR-2525M4	980125M56	T_MC 43	25	25	150	5,8	31,2	31,7	SD-2	CLM6	STCM9
STVOL-2525M4	978025M56	T_MC 43	25	25	150	5,8	31,2	31,7	SD-2	CLM6	STCM9
STVOR-3232M4	980132M56	T_MC 43	32	32	170	5,8	31,2	38,1	SD-2	CLM6	STCM9
STVOR-2525M5	980125M64	T_MC 54	25	25	150	7,4	36,3	31,7	SD-3	CLM20	STCM11
STVOL-2525M5	978025M64	T_MC 54	25	25	150	7,4	36,3	31,7	SD-3	CLM20	STCM11
STVOR-3232M5	980132M64	T_MC 54	32	32	150	7,4	36,3	38,1	SD-3	CLM20	STCM11
STVOR-3232M55	980132M66	T_MC 55	32	32	170	9,4	36,3	38,1	SD-3	CLM20	STCM11
STVOR-3232M6	980132M76	T_MC 66	32	32	170	9,4	41,1	38,1	SD-4	CLM9	STCM8
STVOR-4040M6	980140M76	T_MC 66	32	32	170	9,4	41,1	38,1	SD-4	CLM9	STCM8

GTB

Threading/Grooving





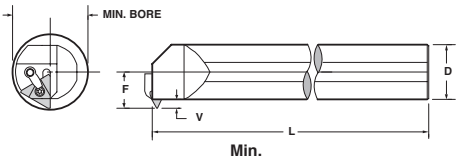
RH SHOWN

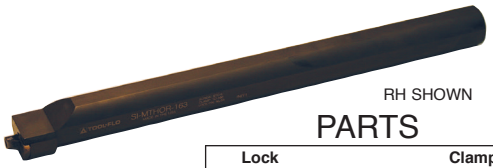
Description	EDP Code	Insert	Min. Bore	F	V	L	C	D	Torx Screw
GTB-062	93605000	TNEB 2.52	.862	.312	.070	6.00	2.00	.625	PT-324
GTB-075	93605200	TNEB 33	1.097	.375	.120	6.00	2.00	.750	PT-324

INTERNAL BAR

SI-MTHOR/L

Threading/Grooving





RH SHOWN

PARTS

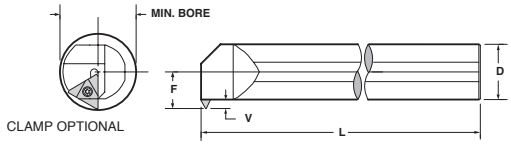
Description	EDP Code	Insert	Min. Bore	D	L	F	V	Lock Pin	Clamp	Clamp Screw
SI-MTHOR-163	97301648	T_MA 32	1.383	1.000	14	.687	.120	NL-33	TC-190	STC-5
SI-MTHOL-163	97201648	T_MA 32	1.383	1.000	14	.687	.120	NL-33	TC-190	STC-5
SI-MTHOR-204	97302056	T_MA 43	1.815	1.250	14	.875	.190	NL-44	TC-190	STC-9
SI-MTHOL-204	97202056	T_MA 43	1.815	1.250	14	.875	.190	NL-44	TC-190	STC-9
SI-MTHOR-244	97302456	T_MA 43	1.892	1.500	14	1.000	.190	NL-44	TC-190	STC-5
SI-MTHOL-244	97202456	T_MA 43	1.892	1.500	14	1.000	.190	NL-44	TC-190	STC-5
SI-MTHOR-324	97303256	T_MA 43	2.750	2.000	16	1.323	.220	NL-44	TC-190	STC-5
SI-MTHOR-245	97302464	T_MA 54	2.125	1.500	14	1.073	.220	NL-56	TC-250	STC-11
SI-MTHOL-245	97202464	T_MA 54	2.125	1.500	14	1.073	.220	NL-56	TC-250	STC-11
SI-MTHOR-325	97303264	T_MA 54	2.750	2.000	16	1.323	.220	NL-56	TC-250	STC-11
SI-MTHOR-3255	97303266	T_MA 55	2.750	2.000	16	1.323	.220	NL-56	TC-250	STC-11
SI-MTHOR-406	97304076	T_MA 66	3.250	2.500	16	1.625	.320	NL-66L	TC-380	STC-19

PARTS

Description	EDP Code	Insert	Min. Bore	D	L	F	V	Lock Pin	Clamp	Clamp Screw
SI-MTHOR-32M4	973032M56	T_MA 43	46,1	32,0	355,6	22,5	4,8	NLM-44	TC-190	STCM-9
SI-MTHOL-32M4	972032M56	T_MA 43	46,1	32,0	355,6	22,5	4,8	NLM-44	TC-190	STCM-9
SI-MTHOR-40M4	973040M56	T_MA 43	48,1	40,0	355,6	25,9	4,8	NLM-44	TC-190	STC-5
SI-MTHOL-40M4	972040M56	T_MA 43	48,1	40,0	355,6	25,9	4,8	NLM-44	TC-190	STC-5
SI-MTHOR-50M4	973050M56	T_MA 43	69,9	50,0	406,4	32,9	4,8	NLM-44	TC-190	STC-5
SI-MTHOR-60M4	973060M56	T_MA 43	82,6	60,0	406,4	36,8	4,8	NLM-44	TC-190	STC-5
SI-MTHOR-63M4	973063M56	T_MA 43	89,0	63,0	406,4	40,0	4,8	NLM-44	TC-190	STC-5
SI-MTHOR-40M5	973040M64	T_MA 54	48,1	40,0	355,6	25,9	5,6	NLM-56	TC-250	STCM-11
SI-MTHOL-40M5	972040M64	T_MA 54	48,1	40,0	355,6	25,9	5,6	NLM-56	TC-250	STCM-11
SI-MTHOR-50M5	973050M64	T_MA 54	69,9	50,0	406,4	32,9	5,6	NLM-56	TC-250	STCM-11
SI-MTHOR-60M5	973060M64	T_MA 54	82,6	60,0	406,4	36,8	5,6	NLM-56	TC-250	STCM-11
SI-MTHOR-63M5	973063M64	T_MA 54	89,0	63,0	406,4	40,0	5,6	NLM-56	TC-250	STCM-11
SI-MTHOR-32M55	973032M66	T_MA 55	46,1	32,0	355,6	22,5	4,8	NLM-56	TC-250	STCM-11
SI-MTHOR-40M55	973040M66	T_MA 55	48,1	40,0	355,6	25,9	5,6	NLM-56	TC-250	STCM-11
SI-MTHOR-60M55	973060M66	T_MA 55	82,6	60,0	406,4	36,8	5,6	NLM-56	TC-250	STCM-11
SI-MTHOR-50M6	973050M76	T_MA 66	69,9	50,0	406,4	32,9	8,1	NLM-66L	TC-380	STC-19
SI-MTHOR-63M6	973063M76	T_MA 66	89,0	63,0	406,4	40,0	8,1	NLM-66L	TC-380	STC-19

SI-STHOR/L

Threading/Grooving



CLAMP OPTIONAL

RH SHOWN

PARTS

Description	EDP Code	Insert	Min. Bore	D	L	F	V	Screw	Clamp*	Clamp Screw*
SI-STHOR-163	97601648	T_MC 32	1.383	1.000	14	.687	.120	SD-1	TC-190	STC-9
SI-STHOL-163	97501648	T_MC 32	1.383	1.000	14	.687	.120	SD-1	TC-190	STC-9
SI-STHOR-204	97602056	T_MC 43	1.815	1.250	14	.875	.190	SD-2	TC-190	STC-9
SI-STHOL-204	97502056	T_MC 43	1.815	1.250	14	.875	.190	SD-2	TC-190	STC-9
SI-STHOR-244	97602456	T_MC 43	1.892	1.500	14	1.000	.190	SD-2	TC-190	STC-9
SI-STHOL-244	97502456	T_MC 43	1.892	1.500	14	1.000	.190	SD-2	TC-190	STC-9
SI-STHOR-245	97602464	T_MC 54	2.240	1.500	14	1.073	.220	SD-3	TC-250	STC-11
SI-STHOL-245	97502464	T_MC 54	2.240	1.500	16	1.323	.220	SD-3	TC-250	STC-11
SI-STHOR-325	97603264	T_MC 54	2.750	2.000	16	1.323	.220	SD-3	TC-250	STC-11
SI-STHOL-325	97503264	T_MC 54	2.750	2.000	16	1.323	.220	SD-3	TC-250	STC-11
SI-STHOR-405	97604064	T_MC 54	3.250	2.500	16	1.625	.320	SD-3	TC-250	STC-11
SI-STHOR-2455	97602466	T_MC 55	2.240	1.500	14	1.073	.220	SD-3	TC-250	STC-11
SI-STHOR-406	97604076	T_MC 66	3.250	2.500	16	1.625	.320	SD-4	TC-380	STC-19
SI-STHOL-406	97504076	T_MC 66	3.250	2.500	16	1.625	.320	SD-4	TC-380	STC-19

*Clamp optional and sold separately.

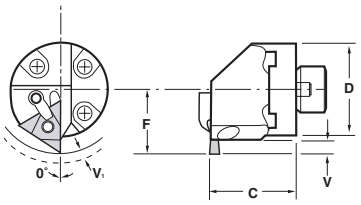
PARTS

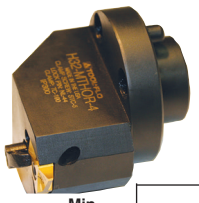
Description	EDP Code	Insert	Min. Bore	D	L	F	V	Screw	Clamp*	Clamp Screw*
SI-STHOR-25M3	976025M48	T_MC 32	35,1	25	350	17,4	3,1	SD-1	CLM6	STCM9
SI-STHOL-25M3	975025M48	T_MC 32	35,1	25	350	17,4	3,1	SD-1	CLM6	STCM9
SI-STHOR-32M4	976032M56	T_MC 43	46,1	32	350	22,5	4,8	SD-2	CLM6	STCM9
SI-STHOL-32M4	975032M56	T_MC 43	46,1	32	350	22,5	4,8	SD-2	CLM6	STCM9
SI-STHOR-40M4	976040M56	T_MC 43	48,1	40	350	25,9	4,8	SD-2	CLM6	STCM9
SI-STHOL-40M4	975040M56	T_MC 43	48,1	40	350	25,9	4,8	SD-2	CLM6	STCM9
SI-STHOR-40M5	976040M64	T_MC 54	48,1	40	350	26,8	5,6	SD-3	CLM20	STCM11
SI-STHOL-40M5	975040M64	T_MC 54	56,9	40	350	33,6	5,6	SD-3	CLM20	STCM11
SI-STHOR-50M5	976050M64	T_MC 54	69,9	50	400	33,6	5,6	SD-3	CLM20	STCM11
SI-STHOR-60M6	976060M76	T_MC 66	82,6	60	400	40,6	8,1	SD-4	TC-380	STC-19

*Clamp optional and sold separately.

INTERCHANGEABLE HEADS

H-MTHOR/L*





RH SHOWN

PARTS

Description	EDP Code	Insert	D	C	F	Min. Bore	Clamp	Clamp Screw	Lock Pin
H16-MTHOR-3	9IH7301648	T_MA/C 32	1.000	1.625	0.688	1.690	TC-190	STC-5	NL-33
H20-MTHOR-3	9IH7302048	T_MA/C 32	1.250	1.625	0.798	1.788	TC-190	STC-5	NL-33
H24-MTHOR-3	9IH7302448	T_MA/C 32	1.500	1.625	0.923	1.875	TC-190	STC-5	NL-33
H20-MTHOR-4	9IH7302056	T_MA/C 43	1.250	1.625	1.048	2.420	TC-190	STC-5	NL-44
H24-MTHOR-4	9IH7302456	T_MA/C 43	1.500	1.625	1.173	2.625	TC-190	STC-5	NL-44
H28-MTHOR-4	9IH7302856	T_MA/C 43	1.750	1.625	1.298	2.875	TC-190	STC-5	NL-44
H32-MTHOR-4	9IH7303256	T_MA/C 43	2.000	1.625	1.423	2.875	TC-190	STC-5	NL-44
H40-MTHOR-4	9IH7304056	T_MA/C 43	2.500	1.625	1.673	3.375	TC-190	STC-5	NL-44
H24-MTHOR-5	9IH7302464	T_MA/C 54	1.500	1.625	1.173	3.200	TC-250	STC-11	NL-56
H28-MTHOR-5	9IH7302864	T_MA/C 54	1.750	1.625	1.298	3.250	TC-250	STC-11	NL-56
H32-MTHOR-5	9IH7303264	T_MA/C 54	2.000	1.625	1.423	3.250	TC-250	STC-11	NL-56
H40-MTHOR-5	9IH7304064	T_MA/C 54	2.500	1.625	1.673	3.375	TC-250	STC-11	NL-56

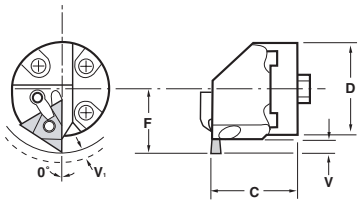
*Left hand quoted on request.

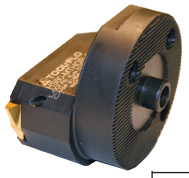
PARTS

Description	EDP Code	Insert	D	C	F	Min. Bore	Clamp	Clamp Screw	Lock Pin
H25M-MTHOR-3	9IH73025M48	T_MA/C 32	25	41.28	17.48	42.93	CLM6	XNSM0515	NLM33
H32M-MTHOR-3	9IH73032M48	T_MA/C 32	32	41.28	20.27	45.42	CLM6	XNSM0515	NLM33
H40M-MTHOR-3	9IH73040M48	T_MA/C 32	40	41.28	23.44	47.63	CLM6	XNSM0515	NLM33
H32M-MTHOR-4	9IH73032M56	T_MA/C 43	32	41.28	26.62	61.47	CLM6	XNSM0515	NLM44
H40M-MTHOR-4	9IH73040M56	T_MA/C 43	40	41.28	29.79	66.68	CLM6	XNSM0515	NLM44
H44M-MTHOR-4	9IH73044M56	T_MA/C 43	44	41.28	32.97	73.03	CLM6	XNSM0515	NLM44
H50M-MTHOR-4	9IH73050M56	T_MA/C 43	50	41.28	36.14	73.03	CLM6	XNSM0515	NLM44
H60M-MTHOR-4	9IH73060M56	T_MA/C 43	60	41.28	42.49	85.73	CLM6	XNSM0515	NLM44
H40M-MTHOR-5	9IH73040M64	T_MA/C 54	40	41.28	29.79	81.28	CLM20	STCM11	NLM56
H44M-MTHOR-5	9IH73044M64	T_MA/C 54	44	41.28	32.97	82.55	CLM20	STCM11	NLM56
H50M-MTHOR-5	9IH73050M64	T_MA/C 54	50	41.28	36.14	82.55	CLM20	STCM11	NLM56
H60M-MTHOR-5	9IH73060M64	T_MA/C 54	60	41.28	42.49	85.73	CLM20	STCM11	NLM56

*Left hand quoted on request.

HS-MTHOR/L*





RH SHOWN

PARTS

Description	EDP Code	Insert	D	C	F	Min. Bore	Clamp	Clamp Screw	Lock Pin
HS25-MTHOR-3	9IHS73025M48	TNMA/C 32	0.98	0.98	0.678	1.690	TC-190	STC-5	NL-33
HS32-MTHOR-3	9IHS73032M48	TNMA/C 32	1.26	1.26	0.800	1.788	TC-190	STC-5	NL-33
HS40-MTHOR-3	9IHS73040M48	TNMA/C 32	1.57	1.26	0.933	1.875	TC-190	STC-5	NL-33
HS32-MTHOR-4	9IHS73032M56	TNMA/C 43	1.26	1.26	1.050	2.420	TC-190	STC-5	NL-44
HS40-MTHOR-4	9IHS73040M56	TNMA/C 43	1.57	1.26	1.203	2.625	TC-190	STC-5	NL-44
HS50-MTHOR-4	9IHS73050M56	TNMA/C 43	1.97	1.57	1.413	2.875	TC-190	STC-5	NL-44
HS60-MTHOR-4	9IHS73060M56	TNMA/C 43	2.36	1.57	1.603	3.375	TC-190	STC-5	NL-44
HS40-MTHOR-5	9IHS73040M64	TNMA/C 54	1.57	1.26	1.203	3.200	TC-250	STC-11	NL-56
HS50-MTHOR-5	9IHS73050M64	TNMA/C 54	1.97	1.57	1.413	3.250	TC-250	STC-11	NL-56
HS60-MTHOR-5	9IHS73060M64	TNMA/C 54	2.36	1.57	1.603	3.375	TC-250	STC-11	NL-56

*Left hand quoted on request.

PARTS

Description	EDP Code	Insert	D	C	F	Min. Bore	Clamp	Clamp Screw	Lock Pin
HS25-MTHOR-3	9IHS73025M48	TNMA/C 32	25	24.89	17.22	42.93	CLM6	XNSM0515	NLM33
HS32-MTHOR-3	9IHS73032M48	TNMA/C 32	32	32.00	20.32	45.42	CLM6	XNSM0515	NLM33
HS40-MTHOR-3	9IHS73040M48	TNMA/C 32	40	32.00	23.70	47.63	CLM6	XNSM0515	NLM33
HS32-MTHOR-4	9IHS73032M56	TNMA/C 43	32	32.00	26.67	61.47	CLM6	XNSM0515	NLM44
HS40-MTHOR-4	9IHS73040M56	TNMA/C 43	40	32.00	30.56	66.68	CLM6	XNSM0515	NLM44
HS50-MTHOR-4	9IHS73050M56	TNMA/C 43	50	39.88	35.89	73.03	CLM6	XNSM0515	NLM44
HS60-MTHOR-4	9IHS73060M56	TNMA/C 43	60	39.88	40.72	85.73	CLM6	XNSM0515	NLM44
HS40-MTHOR-5	9IHS73040M64	TNMA/C 54	40	32.00	30.56	81.28	CLM20	STCM11	NLM56
HS50-MTHOR-5	9IHS73050M64	TNMA/C 54	50	39.88	35.89	82.55	CLM20	STCM11	NLM56
HS60-MTHOR-5	9IHS73060M64	TNMA/C 54	60	39.88	40.72	85.73	CLM20	STCM11	NLM56

*Left hand quoted on request.

TOOL-FLO
Member IMC Group

THREAD MILLING

SOLID THREADMILLS

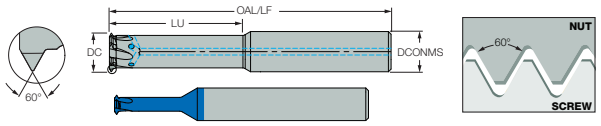
60˚ V-THREADING

MTECI

with coolant holes

INT/EXT

Single cutting edge for deep threads

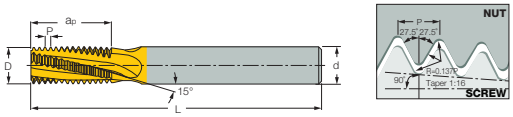


Description	EDP Code	PITCH INT	PITCH EXT	TPI INT	TPI EXT	Th	d	D	Flute	H	L	Shank	Coolant	Grade
MTECI 0605D20 A60	MTECI0605D20A60	0.50-0.80	0.4-0.8	56-28	64-32	>=6	6.00	5.00	4	20.00	58.00	C	Y	ACS22
MTECI 0808D28 A60	MTECI0808D28A60	0.50-0.80	0.4-0.8	56-28	64-32	>=9	8.00	8.00	4	28.00	64.00	C	Y	ACS22
MTECI 0808D30 A60	MTECI0808D30A60	1.00-1.75	0.8-1.5	28-14	32-16	>=10	8.00	8.00	4	30.00	64.00	C	Y	ACS22
MTECI 1010D35 A60	MTECI1010D35A60	1.00-1.75	0.8-1.5	28-14	32-16	>=12	10.00	10.00	4	35.00	73.00	C	Y	ACS22
MTECI 1212E40 A60	MTECI1212E40A60	2.0-3.0	1.75-2.5	13-8	15-10	>=16	12.00	12.00	5	40.00	84.00	C	Y	ACS22
MTECI 1614E45 A60	MTECI1614E45A60	2.0-3.0	1.75-2.5	13-8	15-10	>=18	16.00	14.00	5	45.00	101.00	C	Y	ACS22
MTECI 1616E50 A60	MTECI1616E50A60	2.0-3.0	1.75-2.5	13-8	15-10	>=20	16.00	16.00	5	50.00	101.00	C	Y	ACS22

BSPT THREADING

MTEC

INT/EXT

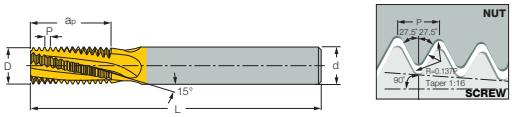


Description	EDP Code	TPI	BSPT	d	D	Flute	ap	L	SHANK C-Cylindrical	Grade
MTEC 0606C9 28BSPT	MTEC0606C928BSPT	28	RC1/8	6.00	6.00	3	9.50	58.00	C	AC22
MTEC 0808C14 19BSPT	MTEC0808C1419BSPT	19	RC1/4, RC3/8	8.00	8.00	3	14.00	64.00	C	AC22
MTEC 1212D19 14BSPT	MTEC1212D1914BSPT	14	RC1/2, RC7/8	12.00	12.00	4	19.10	84.00	C	AC22
MTEC 1616D28 11BSPT	MTEC1616D2811BSPT	11	RC1, RC2	16.00	16.00	4	28.90	105.00	C	AC22

ISO THREADING

MTEC

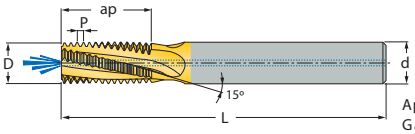
Internal

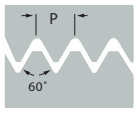


Description	EDP Code	PITCH	M Coarse	M Fine	d	D	Flute	ap	L	SHANK C-Cylindrical	Grade
MTEC 06038C10 0.5ISO	MTEC06038C100.5ISO	0.50	-	>5	6.00	3.80	3	10.30	58.00	C	AC22
MTEC 06022C5 0.5ISO	MTEC06022C50.5ISO	0.50	M3	>4	6.00	2.20	3	5.30	58.00	C	AC22
MTEC 06031C7 0.7ISO	MTEC06031C70.7ISO	0.70	M4	>5	6.00	3.10	3	7.40	58.00	C	AC22
MTEC 06045C10 0.75ISO	MTEC06045C100.75ISO	0.75	-	>6	6.00	4.50	3	10.00	58.00	C	AC22
MTEC 06036C9 0.8ISO	MTEC06036C90.8ISO	0.80	M5	>6	6.00	3.60	3	9.20	58.00	C	AC22
MTEC 0606C12 1.0ISO	MTEC0606C121.0ISO	1.00	-	>9	6.00	6.00	3	12.50	58.00	C	AC22
MTEC 0808D16 1.0ISO	MTEC0808D161.0ISO	1.00	-	>10	8.00	8.00	4	16.50	64.00	C	AC22
MTEC 0604C10 1.0ISO	MTEC0604C101.0ISO	1.00	M6	>7	6.00	4.00	3	10.50	58.00	C	AC22
MTEC 0604C14 1.0ISO	MTEC0604C141.0ISO	1.00	M6	>7	6.00	4.00	3	14.50	58.00	C	AC22
MTEC 0605C14 1.25ISO	MTEC0605C141.25ISO	1.25	M8	>10	6.00	5.00	3	14.40	58.00	C	AC22
MTEC 0605C19 1.25ISO	MTEC0605C191.25ISO	1.25	M8	>10	6.00	5.00	3	19.40	58.00	C	AC22
MTEC 1010D21 1.5ISO	MTEC1010D211.5ISO	1.50	-	>14	10.00	10.00	4	21.80	73.00	C	AC22
MTEC 1616F33 1.5ISO	MTEC1616F331.5ISO	1.50	-	>20	16.00	16.00	6	33.80	105.00	C	AC22
MTEC 0807C17 1.5ISO	MTEC0807C171.5ISO	1.50	M10	>12	8.00	7.00	3	17.30	64.00	C	AC22
MTEC 0807C24 1.5ISO	MTEC0807C241.5ISO	1.50	M10	>12	8.00	7.00	3	24.80	76.00	C	AC22
MTEC 0808C20 1.75ISO	MTEC0808C201.75ISO	1.75	M12	>14	8.00	8.00	3	20.10	64.00	C	AC22
MTEC 0808C28 1.75ISO	MTEC0808C281.75ISO	1.75	M12	>14	8.00	8.00	3	28.90	76.00	C	AC22
MTEC 1212D27 2.0ISO	MTEC1212D272.0ISO	2.00	-	>18	12.00	12.00	4	27.00	84.00	C	AC22
MTEC 2020F41 2.0ISO	MTEC2020F412.0ISO	2.00	-	>26	20.00	20.00	6	41.00	105.00	C	AC22
MTEC 1010C27 2.0ISO	MTEC1010C272.0ISO	2.00	M16	>17	10.00	10.00	3	27.00	73.00	C	AC22
MTEC 1010C39 2.0ISO	MTEC1010C392.0ISO	2.00	M16	>17	10.00	10.00	3	39.00	105.00	C	AC22
MTEC 1414D33 2.5ISO	MTEC1414D332.5ISO	2.50	M20	>22	14.00	14.00	4	33.80	84.00	C	AC22
MTEC 1414D48 2.5ISO	MTEC1414D482.5ISO	2.50	M20	>22	14.00	14.00	4	48.80	105.00	C	AC22
MTEC 1616C40 3.0ISO	MTEC1616C403.0ISO	3.00	M24	>25	16.00	16.00	3	40.50	105.00	C	AC22
MTEC 1616C58 3.0ISO	MTEC1616C583.0ISO	3.00	M24	>25	16.00	16.00	3	58.50	120.00	C	AC22

MTEC SOLID THREADMILLING

ISO THREADING
MTECB
with coolant holes
Internal

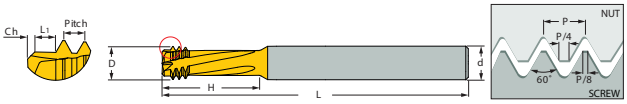




Application: Steam, Gas and Water Pipes

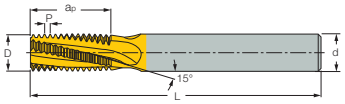
Description	EDP Code	PITCH	M Coarse	M Fine	d	D	Flute	ap	L	SHANK C-Cylindrical	Grade
MTECB 06038C10 0.5ISO	MTECB06038C100.5ISO	0.50	-	>=5	6.00	3.80	3	10.30	58.00	C	AC22
MTECB 06031C7 0.7ISO	MTECB06031C70.7ISO	0.70	M4	>=5	6.00	3.10	3	7.40	58.00	C	AC22
MTECB 06045C10 0.75ISO	MTECB06045C100.75ISO	0.75	-	>=6	6.00	4.50	3	10.10	58.00	C	AC22
MTECB 06038C9 0.8ISO	MTECB06038C90.8ISO	0.80	M5	>=6	6.00	3.80	3	9.20	58.00	C	AC22
MTECB 0606C12 1.0ISO	MTECB0606C121.0ISO	1.00	-	>=9	6.00	6.00	3	12.50	58.00	C	AC22
MTECB 0808D16 1.0ISO	MTECB0808D161.0ISO	1.00	-	>=10	8.00	8.00	4	16.50	64.00	C	AC22
MTECB 1010D24 1.0ISO	MTECB1010D241.0ISO	1.00	-	>=12	10.00	10.00	4	14.40	58.00	C	AC22
MTECB 0604C10 1.0ISO	MTECB0604C101.0ISO	1.00	M6	>=7	6.00	4.60	3	10.50	58.00	C	AC22
MTECB 0604C14 1.0ISO	MTECB0604C141.0ISO	1.00	M6	>=6	6.00	4.60	3	14.50	58.00	C	AC22
MTECB 0606C14 1.25ISO	MTECB0606C141.25ISO	1.25	M8	>=10	6.00	6.00	3	14.40	58.00	C	AC22
MTECB 0606C19 1.25ISO	MTECB0606C191.25ISO	1.25	M8	>=10	6.00	6.00	3	19.40	58.00	C	AC22
MTECB 1010D21 1.5ISO	MTECB1010D211.5ISO	1.50	-	>=14	10.00	10.00	4	21.80	73.00	C	AC22
MTECB 1616F33 1.5ISO	MTECB1616F331.5ISO	1.50	-	>=20	16.00	16.00	6	33.80	105.00	C	AC22
MTECB 1212D26 1.5ISO	MTECB1212D261.5ISO	1.50	-	>=16	12.00	12.00	4	26.30	84.00	C	AC22
MTECB 08078C17 1.5ISO	MTECB08078C171.5ISO	1.50	M10	>=12	8.00	7.80	3	17.00	64.00	C	AC22
MTECB 08078C24 1.5ISO	MTECB08078C241.5ISO	1.50	M10	>=12	8.00	7.80	3	24.80	76.00	C	AC22
MTECB 1009C20 1.75ISO	MTECB1009C201.75ISO	1.75	M12	>=12	10.00	9.00	3	20.10	73.00	C	AC22
MTECB 1009C28 1.75ISO	MTECB1009C281.75ISO	1.75	M12	>=12	10.00	9.00	3	20.10	73.00	C	AC22
MTECB 1010C27 2.0ISO	MTECB1010C272.0ISO	2.00	M14	>=15	10.00	10.00	3	27.00	73.00	C	AC22
MTECB 12118D27 2.0ISO	MTECB12118D272.0ISO	2.00	M16	>=17	12.00	11.80	4	27.00	84.00	C	AC22
MTECB 12118D39 2.0ISO	MTECB12118D392.0ISO	2.00	M16	>=17	12.00	11.80	4	39.00	105.00	C	AC22
MTECB 1615E33 2.5ISO	MTEC1615E332.5ISO	2.50	M20	>=22	16.00	15.00	5	33.80	105.00	C	AC22
MTECB 1615E48 2.5ISO	MTEC1615E482.5ISO	2.50	M20	>=22	16.00	15.00	5	48.80	105.00	C	AC22
MTECB 2018D58 3.0ISO	MTECB2018D583.0ISO	3.00	M24	>=25	20.00	18.00	4	58.50	120.00	C	AC22

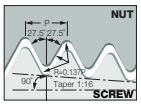
ISO THREADING
MTECD
Internal



Description	EDP Code	PITCH	Th	d	D	Flute	H	L	Ch	L1	SHANK C-Cylindrical	Coolant	Grade
MTECD 06032C11 1.7ISO	MTECD06032C111.7ISO	0.70	M4	6.00	3.15	3	11.60	58.00	0.2	0.7	C	N	ACS22
MTECD 0604C14 0.8ISO	MTECD0604C140.8ISO	0.80	M5	6.00	4.00	3	14.40	58.00	0.3	0.8	C	N	ACS22
MTECD 08047C14 1.0ISO	MTECD08047C141.0ISO	1.00	M6-M9	8.00	4.70	3	14.00	64.00	0.4	1.0	C	Y	ACS22
MTECD 08061D18 1.25ISO	MTECD08061D181.25ISO	1.25	M8-M12	8.00	6.10	4	18.00	64.00	0.5	1.3	C	Y	ACS22
MTECD 08078D23 1.5ISO	MTECD08078D231.5ISO	1.50	M10-M15	8.00	7.80	4	23.00	64.00	0.6	1.5	C	Y	ACS22
MTECD 1009D26 1.75ISO	MTECD1009D261.75ISO	1.75	M12	10.00	9.00	4	26.00	73.00	0.6	1.8	C	Y	ACS22
MTECD 12118D35 2.0ISO	MTECD12118D352.0ISO	2.00	M16-M23	12.00	11.80	4	35.00	84.00	0.6	2.0	C	Y	ACS22

ISO THREADING
MTEC E
External

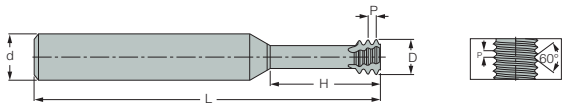




Description	EDP Code	Pitch	d	D	Flute	ap	L	SHANK C-Cylindrical	Grade
MTEC E 1010D16 1.0ISO	MTECE1010D161.0ISO	1.00	10.00	10.00	4	16.50	73.00	C	AC22
MTEC E 1010D16 1.25ISO	MTECE1010D161.25ISO	1.25	10.00	10.00	4	16.90	73.00	C	AC22
MTEC E 1010D15 1.5ISO	MTEC E 1010D15 1.5ISO	1.50	10.00	10.00	4	15.80	73.00	C	AC22
MTEC E 1212D20 1.5ISO	MTECE1212D201.5ISO	1.50	12.00	12.00	4	20.30	84.00	C	AC22
MTEC E 1212D20 1.75ISO	MTECE1212D201.75ISO	1.75	12.00	12.00	4	20.10	84.00	C	AC22
MTEC E 1212D21 2.0ISO	MTECE1212D202.0ISO	2.00	12.00	12.00	4	21.00	84.00	C	AC22

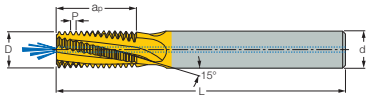
MTEC SOLID THREADMILLING

ISO THREADING
MTECSH
Internal



Description	EDP Code	Pitch	Th	d	D	Flute	H	L	SHANK C-Cylindrical	Grade
MTECSH 03012C5 0.35ISO	MTECSH03012C50.35ISO	0.35	M1.6	3.00	1.20	3	4.80	39.00	C	AC22
MTECSH 03016C6 0.4ISO	MTECSH03016C60.4ISO	0.40	M2	3.00	1.55	3	6.00	39.00	C	AC22
MTECSH 06016C4 0.4ISO	MTECSH06016C40.4ISO	0.40	M2	6.00	1.55	3	4.50	58.00	C	AC22
MTECSH 06017C5 0.45ISO	MTECSH06017C50.45ISO	0.45	M2.2	6.00	1.65	3	5.00	58.00	C	AC22
MTECSH 0602C5 0.45ISO	MTECSH0602C50.45ISO	0.45	M2.5	6.00	1.95	3	5.50	58.00	C	AC22
MTECSH 0602C7 0.45ISO	MTECSH0602C70.45ISO	0.45	M2.5	6.00	1.95	3	7.50	58.00	C	AC22
MTECSH 06024C6 0.5ISO	MTECSH06024C60.5ISO	0.50	M3	6.00	2.35	3	6.50	58.00	C	AC22
MTECSH 06024C9 0.5ISO	MTECSH06024C90.5ISO	0.50	M3	6.00	2.35	3	9.50	58.00	C	AC22
MTECSH 06028C7 0.6ISO	MTECSH06024C70.6ISO	0.60	M3.5	6.00	2.75	3	7.50	58.00	C	AC22
MTECSH 06031C12 0.7ISO	MTECSH06031C60.7ISO	0.70	M4	6.00	3.10	3	12.50	58.00	C	AC22
MTECSH 06038C12 0.8ISO	MTECSH06038C120.8ISO	0.80	M5	6.00	3.80	3	12.50	58.00	C	AC22
MTECSH 06038C16 0.8ISO	MTECSH06038C160.5ISO	0.80	M5	6.00	3.80	3	16.00	58.00	C	AC22
MTECSH 06047C14 1.0ISO	MTECSH06047C141.0ISO	1.00	M6	6.00	4.65	3	14.00	58.00	C	AC22
MTECSH 06047C20 1.0ISO	MTECSH06047C201.0ISO	1.00	M6	6.00	4.65	3	20.00	58.00	C	AC22
MTECSH 0606C18 1.25ISO	MTECSH0606C181.25ISO	1.25	M8	6.00	5.95	3	18.00	58.00	C	AC22
MTECSH 0606C24 1.25ISO	MTECSH0606C241.25ISO	1.25	M8	6.00	5.95	3	24.00	58.00	C	AC22
MTECSH 08078C23 1.5ISO	MTECSH08078C231.5ISO	1.50	M10	8.00	7.80	3	23.00	64.00	C	AC22
MTECSH 1009C26 1.75ISO	MTECSH1009C261.75ISO	1.75	M12	10.00	9.00	3	26.00	73.00	C	AC22
MTECSH 12118D35 2.0ISO	MTECSH 12118D35 2.0ISO	2.00	M16	12.00	11.80	4	35.00	84.00	C	AC22

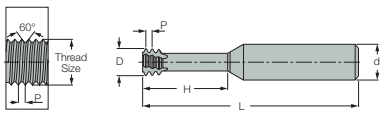
ISO THREADING
MTECQ
with coolant holes
Internal



Description	EDP Code	Pitch	Th	d	D	Flute	ap	H	L	SHANK C-Cylindrical	Grade
MTECQ 1212D38 1.0ISO	MTECQ1212D381.0ISO	1.00	>=14	12.00	12.00	4	21.00	38.00	84.00	C	AC22
MTECQ 1010D30 1.5ISO	MTECQ1010D301.5ISO	1.50	>=13	10.00	10.00	4	18.00	30.00	73.00	C	AC22
MTECQ 2020F56 2.0ISO	MTECQ2020F562.0ISO	2.00	>=24	20.00	20.00	6	34.00	56.00	105.00	C	AC22
MTECQ 2020D45 3.5ISO	MTECQ2020D453.5ISO	3.50	>=26	20.00	20.00	4	28.00	45.50	105.00	C	AC22

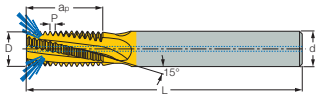
MTEC SOLID THREADMILLING

ISO THREADING
MTECS
Internal



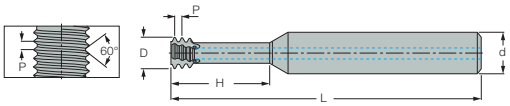
Description	EDP Code	Pitch	Th	d	D	Flute	H	L	SHANK C-Cylindrical	Grade
MTECS 03007C2 0.25ISO	MTECS 03007C2 0.25ISO	0.25	M1	3.00	0.72	3	2.50	39.00	C	AC22
MTECS 03009C3 0.25ISO	MTECS03009C30.25ISO	0.25	M1.2	3.00	0.90	3	3.00	39.00	C	AC22
MTECS 03011C4 0.3ISO	MTECS03011C40.3ISO	0.30	M1.4	3.00	1.05	3	4.00	39.00	C	AC22
MTECS 03012C5 0.35ISO	MTECS03012C50.35ISO	0.35	M1.6	3.00	1.20	3	4.80	39.00	C	AC22
MTECS 03016C6 0.4ISO	MTECS03016C60.4ISO	0.40	M2	3.00	1.53	3	6.00	39.00	C	AC22
MTECS 06016C4 0.4ISO	MTECS06016C40.4ISO	0.40	M2	6.00	1.53	3	4.50	58.00	C	AC22
MTECS 03017C7 0.45ISO	MTECS03017C70.45ISO	0.45	M2.2	3.00	1.65	3	7.00	39.00	C	AC22
MTECS 06017C5 0.45ISO	MTECS 06017C5 0.45ISO	0.45	M2.2	6.00	1.65	3	5.00	58.00	C	AC22
MTECS 0602C5 0.45ISO	MTECS0602C50.45ISO	0.45	M2.5	6.00	1.95	3	5.50	58.00	C	AC22
MTECS 0602C7 0.45ISO	MTECS0602C70.45ISO	0.45	M2.5	6.00	1.95	3	7.50	58.00	C	AC22
MTECS 06024C6 0.5ISO	MTECS06024C60.5ISO	0.50	M3	6.00	2.37	3	6.50	58.00	C	AC22
MTECS 06024C9 0.5ISO	MTECS06024C90.5ISO	0.50	M3	6.00	2.37	3	9.50	58.00	C	AC22
MTECS 06024C9 0.5ISO-L	MTECS06024C90.5ISO-L	0.50	M3	6.00	2.37	3	9.50	105.00	C	AC22
MTECS 03024C12 0.5ISO	MTECS 03024C12 0.5ISO	0.50	M3	3.00	2.40	3	12.50	39.00	C	AC22
MTECS 06028C10 0.6ISO	MTECS 06028C10 0.6ISO	0.60	M3.5	6.00	2.75	3	10.50	58.00	C	AC22
MTECS 06028C7 0.6ISO	MTECS06028C70.6ISO	0.60	M3.5	6.00	2.75	3	7.50	58.00	C	AC22
MTECS 06031C12 0.7ISO	MTECS06031C120.7ISO	0.70	M4	6.00	3.10	3	12.50	58.00	C	AC22
MTECS 06031C12 0.7ISO-L	MTECS06031C120.7ISO-L	0.70	M4	6.00	3.10	3	12.50	105.00	C	AC22
MTECS 06031C16 0.7ISO	MTECS06031C160.7ISO	0.70	M4	6.00	3.10	3	16.70	58.00	C	AC22
MTECS 06031C9 0.7ISO	MTECS06031C90.7ISO	0.70	M4	6.00	3.10	3	9.00	58.00	C	AC22
MTECS 0808D25 0.75ISO	MTECS0808D250.75ISO	0.75	M10	8.00	8.00	4	25.00	64.00	C	AC22
MTECS 06038C12 0.8ISO	MTECS06038C120.8ISO	0.80	M5	6.00	3.80	3	12.50	58.00	C	AC22
MTECS 06038C16 0.8ISO	MTECS06038C160.8ISO	0.80	M5	6.00	3.80	3	16.00	58.00	C	AC22
MTECS 06038C16 0.8ISO-L	MTECS06038C160.8ISO-L	0.80	M5	6.00	3.80	3	16.00	105.00	C	AC22
MTECS 06047C14 1.0ISO	MTECS06047C141.0ISO	1.00	M6	6.00	4.65	3	14.00	58.00	C	AC22
MTECS 06047C20 1.0ISO	MTECS06047C201.0ISO	1.00	M6	6.00	4.65	3	20.00	58.00	C	AC22
MTECS 06047C20 1.0ISO-L	MTECS06047C201.0ISO-L	1.00	M6	6.00	4.65	3	20.00	105.00	C	AC22
MTECS 0606C18 1.25ISO	MTECS0606C181.25ISO	1.25	M8	6.00	6.00	3	20.00	58.00	C	AC22
MTECS 0606C24 1.25ISO	MTECS0606C181.25ISO	1.25	M8	6.00	6.00	3	24.00	58.00	C	AC22
MTECS 08078C23 1.5ISO	MTECS08078C231.5ISO	1.50	M10	8.00	7.80	3	23.00	64.00	C	AC22
MTECS 1009C26 1.75ISO	MTECS1009C261.75ISO	1.75	M12	10.00	9.00	3	26.00	73.00	C	AC22
MTECS 12118D35 2.0ISO	MTECS12118D352.0ISO	2.00	M16	12.00	11.80	4	35.00	84.00	C	AC22
MTECS 12118D50 2.0ISO	MTECS12118D502.0ISO	2.00	M16	12.00	11.80	4	50.00	105.00	C	AC22
MTECS 1615E43 2.5ISO	MTECS1615E432.5ISO	2.50	M20	16.00	15.00	5	43.00	105.00	C	AC22

ISO THREADING
MTECZ
with coolant holes in the flutes
Internal



Description	EDP Code	Pitch	M Coarse	M Fine	d	D	Flute	ap	L	SHANK C-Cylindrical	Grade
MTECZ 0808D16 1.0ISO	MTECB0808D161.0ISO	1.00	-	>10	8.00	8.00	4	16.50	64.00	C	AC22
MTECZ 06048C10 1.0ISO	MTECZ06048C101.0ISO	1.00	M6	>7	6.00	4.80	3	10.50	58.00	C	AC22
MTECZ 0606C14 1.25ISO	MTECB0606C141.25ISO	1.25	M8	>10	6.00	6.00	3	14.40	58.00	C	AC22
MTECZ 0606C19 1.25ISO	MTECB0606C191.25ISO	1.25	M8	>10	6.00	6.00	3	19.40	58.00	C	AC22
MTECZ 1010D21 1.5ISO	MTECZ1010D211.5ISO	1.50	-	>14	10.00	10.00	4	21.80	73.00	C	AC22
MTECZ 1212D26 1.5ISO	MTECZ1212D261.5ISO	1.50	-	>16	12.00	12.00	4	26.30	84.00	C	AC22
MTECZ 1616E33 1.5ISO	MTECZ1616E331.5ISO	1.50	-	>20	16.00	16.00	5	33.80	101.00	C	AC22
MTECZ 08078C17 1.5ISO	MTECB08078C171.5ISO	1.50	M10	>12	8.00	7.80	3	17.00	64.00	C	AC22
MTECZ 1009C28 1.75ISO	MTECB1009C281.75ISO	1.75	M12	>12	10.00	9.00	3	28.90	73.00	C	AC22
MTECZ 1010C27 2.0ISO	MTECB1010C272.0ISO	2.00	M14	>15	10.00	10.00	3	27.00	73.00	C	AC22
MTECZ 12118D27 2.0ISO	MTECB12118D272.0ISO	2.00	M16	>17	12.00	11.80	4	27.00	84.00	C	AC22

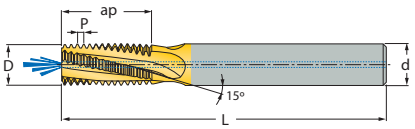
MJ THREADING
MTECS
with coolant holes in the flutes
Internal



Description	EDP Code	Pitch	Th	d	D	Flute	H	L	SHANK C-Cylindrical	Grade
MTECS 06032C10 0.7MJ	MTECS06032C100.7MJ	0.70	MJ4	6.00	3.20	3	10.00	58.00	C	AC22
MTECS 06039C12 0.8MJ	MTECS06039C120.8MJ	0.80	MJ5	6.00	3.90	3	12.50	58.00	C	AC22
MTECS 06048C4 1.0MJ	MTECS06048C41.0MJ	1.00	MJ6	6.00	4.80	3	15.00	58.00	C	AC22
MTECS 08061C20 1.25MJ	MTECS08061C201.25MJ	1.25	MJ8	8.00	6.10	3	20.00	64.00	C	AC22
MTECS 10092C30 1.75MJ	MTECS10092C301.75MJ	1.75	MJ12	10.00	9.20	3	30.00	73.00	C	AC22

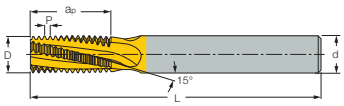
MTEC SOLID THREADMILLING

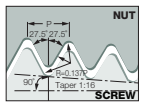
NPSF THREADING
MTECB
with coolant holes
INT/EXT



Description	EDP Code	TPI	NSPF	d	D	Flute	ap	L	SHANK C-Cylindrical	Grade
MTECB 0312C04 27NPSF	MTECB0312C0427NPSF	27	1/8	.312	.299	3	.430	2.500	C	AC22

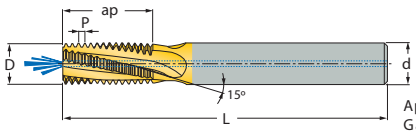
NPT THREADING
MTEC
INT/EXT

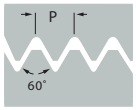




Description	EDP Code	TPI	NPT	d	D	Flute	ap	L	SHANK C-Cylindrical	Grade
MTEC 0606C9 27NPT	MTEC0606C927NPT	27.0	1/16, 1/8	6.00	6.00	3	9.90	58.00	C	AC22
MTEC 0808C14 18NPT	MTEC0808C1418NPT	18.0	1/4, 3/8	8.00	8.00	3	14.80	64.00	C	AC22
MTEC 1212D20 14NPT	MTEC1212D2014NPT	14.0	1/2, 3/4	12.00	12.00	4	20.90	84.00	C	AC22
MTEC 1616D27 11.5NPT	MTEC1616D2711.5NPT	11.5	1, 2	16.00	16.00	4	27.60	105.00	C	AC22
MTEC 2020D39 8NPT	MTEC2020D398NPT	8.0	>=2-1/2	20.00	20.00	4	39.70	105.00	C	AC22

NPT THREADING
MTECB
with coolant holes
INT/EXT

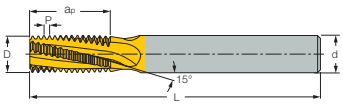


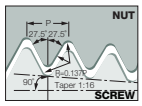


Application: Steam, Gas and Water Pipes

Description	EDP Code	TPI	NPT	d	D	Flute	ap	L	SHANK C-Cylindrical	Grade
MTECB 08076C10 27NPT	MTECB08076C1027NPT	27.0	1/8	8.00	7.60	3	10.80	64.00	C	AC22
MTECB 1010D16 18NPT	MTECB1010D1618NPT	18.0	1/4, 3/8	10.00	10.00	4	16.20	73.00	C	AC22
MTECB 16155D22 14NPT	MTECB16155D2214NPT	14.0	1/2, 3/4	16.00	15.50	4	22.70	105.00	C	AC22

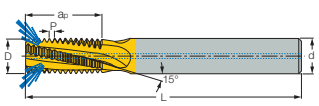
NPTF THREADING
MTEC
INT/EXT

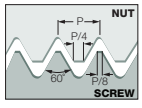




Description	EDP Code	TPI	NPTF	d	D	Flute	ap	L	SHANK C-Cylindrical	Grade
MTEC 0606C9 27NPTF	MTEC0606C927NPTF	27.0	1/16, 1/8	6.00	6.00	3	9.90	58.00	C	AC22
MTEC 0808C14 18NPTF	MTEC0808C1418NPTF	18.0	1/4, 3/8	8.00	8.00	3	14.80	64.00	C	AC22
MTEC 1212D20 14NPTF	MTEC1212D2014NPTF	14.0	1/2, 3/4	12.00	12.00	4	20.90	84.00	C	AC22

NPTF THREADING
MTECZ
with coolant holes in the flutes
INT/EXT

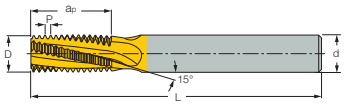


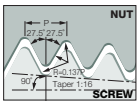


Description	EDP Code	TPI	NPTF	d	D	Flute	ap	L	SHANK C-Cylindrical	Grade
MTECZ 08076C10 27NPTF	MTECZ08076C1027NPTF	27.0	1/8	8.00	7.60	3	10.80	64.00	C	AC22
MTECZ 1010D16 18NPTF	MTECZ1010D1618NPTF	18.0	1/4, 3/8	10.00	10.00	4	16.20	73.00	C	AC22

MTEC SOLID THREADMILLING

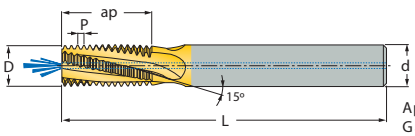
UN THREADING
MTEC
Internal

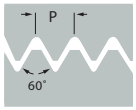




Description	EDP Code	TPI	UNC	UNF	UNEF	d	D	Flute	ap	L	SHANK C-Cylindrical	Grade
MTEC 06032C6 32UN	MTEC06032C632UN	32.0	8	10	12	6.00	3.20	3	6.80	58.00	C	AC22
MTEC 0604C11 28UN	MTEC0604C1128UN	29.0	-	7/16, 1/2	-	6.00	4.00	3	11.30	58.00	C	AC22
MTEC 0605C14 24UN	MTEC0605C1424UN	24.0	-	5/16	-	6.00	5.00	3	14.30	58.00	C	AC22
MTEC 0807C21 24UN	MTEC0807C2124UN	24.0	-	3/8	9/16, 5/8	8.00	7.00	3	20.00	64.00	C	AC22
MTEC 06045C12 20UN	MTEC06045C1220UN	20.0	1/4	-	-	6.00	4.50	3	12.10	58.00	C	AC22
MTEC 0807C21 20UN	MTEC0807C2120UN	20.0	-	7/16,1/2	-	8.00	7.00	3	20.00	64.00	C	AC22
MTEC 1212E27 20UN	MTEC1212E2720UN	20.0	-	-	3/4, 1	12.00	12.00	5	27.30	84.00	C	AC22
MTEC 0605C14 18UN	MTEC0605C1418UN	18.0	5/16	-	-	6.00	5.00	3	14.80	58.00	C	AC22
MTEC 1010D26 18UN	MTEC1010D2618UN	18.0	-	9/16, 5/8	1-1/8,1-5/8	10.00	10.00	4	26.10	73.00	C	AC22
MTEC 0606C16 16UN	MTEC0606C1616UN	16.0	3/8	-	-	6.00	6.00	3	16.70	58.00	C	AC22
MTEC 1212D31 16UN	MTEC1212D3116UN	16.0	-	3/4	-	12.00	12.00	4	30.00	84.00	C	AC22
MTEC 0615E37 14UN	MTEC0615E3714UN	14.0	-	7/8	-	16.00	15.00	5	37.20	105.00	C	AC22
MTEC 0808C22 13UN	MTEC0808C2213UN	13.0	1/2	-	-	8.00	8.00	3	22.50	64.00	C	AC22
MTEC 1010C26 12UN	MTEC1010C2612UN	12.0	9/16	-	-	10.00	10.00	3	26.50	73.00	C	AC22
MTEC 1616E41 12UN	MTEC1616E4112UN	12.0	-	1,1-1/2	-	16.00	16.00	5	41.30	105.00	C	AC22
MTEC 1010C28 11UN	MTEC1010C2811UN	11.0	5/8	-	-	10.00	10.00	3	28.90	73.00	C	AC22
MTEC 1212C34 10UN	MTEC1212C3410UN	10.0	3/4	-	-	12.00	12.00	3	34.30	84.00	C	AC22
MTEC 1615C38 9UN	MTEC1615C389UN	9.0	7/8	-	-	16.00	15.00	3	38.10	105.00	C	AC22
MTEC 1616C42 8UN	MTEC1616C428UN	8.0	1.0	-	-	16.00	16.00	3	42.90	105.00	C	AC22

UN THREADING
MTECB
with coolant holes
Internal

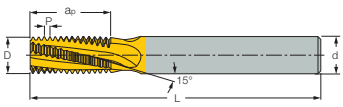


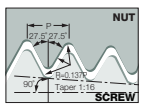


Application: Steam, Gas and Water Pipes

Description	EDP Code	TPI	UNC	UNF	UNEF	d	D	Flute	ap	L	SHANK C-Cylindrical	Grade
MTECB 06032C6 32UN	MTEC06032C632UN	32.0	8	10	12	6.00	3.20	3	6.80	58.00	C	AC22
MTECB 0605C11 28UN	MTEC0605C1128UN	28.0	-	1/4	-	6.00	5.00	3	11.30	58.00	C	AC22
MTECB 08066C14 24UN	MTECB08066C1424UN	24.0	-	5/16	-	8.00	6.60	3	14.30	64.00	C	AC22
MTECB 0808D21 24UN	MTECB0808D2124UN	24.0	-	-	9/16-5/8	8.00	8.00	4	20.60	64.00	C	AC22
MTECB 0808C21 20UN	MTECB0808C2120UN	20.0	-	7/16	-	8.00	8.00	3	21.00	64.00	C	AC22
MTECB 1010D22 20UN	MTECB1010D2220UN	20.0	-	1/2	-	10.00	10.00	4	22.30	73.00	C	AC22
MTECB 06056C14 18UN	MTECB06056C1418UN	18.0	5/16	-	-	6.00	5.60	3	14.80	58.00	C	AC22
MTECB 12113D26 18UN	MTECB12113D2618UN	18.0	-	9/16, 5/8	1-1/8,1-5/8	12.00	11.30	4	26.10	84.00	C	AC22
MTECB 08067C16 16UN	MTECB08067C1616UN	16.0	3/8	-	-	8.00	6.70	3	16.70	64.00	C	AC22
MTECB 0616E37 14UN	MTECB0616E3714UN	14.0	-	7/8	-	16.00	16.00	5	37.20	105.00	C	AC22
MTECB 10092C22 13UN	MTECB10092C2213UN	13.0	1/2	-	-	10.00	9.20	3	22.50	73.00	C	AC22
MTECB 12114C28 11UN	MTECB12114C2811UN	11.0	5/8	-	-	12.00	11.40	3	28.90	84.00	C	AC22
MTECB 16144D34 10UN	MTECB16144D3410UN	10.0	3/4	-	-	16.00	14.40	4	34.30	105.00	C	AC22
MTECB 20195D42 8UN	MTECB20195D428UN	8.0	1.0	-	-	20.00	19.50	4	42.90	105.00	C	AC22

UN THREADING
MTEC E
External

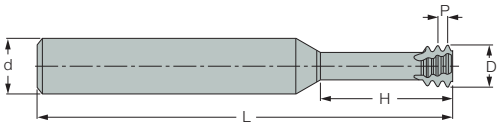




Description	EDP Code	TPI	d	D	Flute	ap	L	SHANK C-Cylindrical	Grade
MTEC E 1010D16 24UN	MTECE1010D1624UN	24.0	10.00	10.00	4	16.40	73.00	C	AC22
MTEC E 1212E21 20UN	MTECE1212E2120UN	20.0	12.00	12.00	5	21.00	84.00	C	AC22

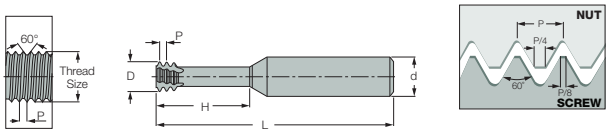
MTEC SOLID THREADMILLING

UN THREADING
MTECSH
Small diameter



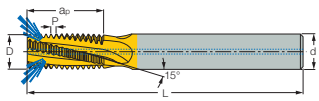
Description	EDP Code	TPI	UNC	UNF	d	D	Flute	H	L	SHANK C-Cylindrical	Grade
MTECSH 06012C4 80UN	MTECSH06012C480UN	80.0	-	0	6.00	1.15	3	4.00	58.00	C	AC22
MTECSH 06016C6 56UN	MTECSH06016C656UN	56.0	2	3	6.00	1.65	3	6.60	58.00	C	AC22
MTECSH 06019C5 48UN	MTECSH06019C548UN	48.0	3	4	6.00	1.90	3	5.20	58.00	C	AC22
MTECSH 06024C7 40UN	MTECSH06024C740UN	40.0	5	6	6.00	2.45	3	7.00	58.00	C	AC22
MTECSH 06021C8 40UN	MTECSH06021C840UN	40.0	4	-	6.00	2.10	3	8.00	58.00	C	AC22
MTECSH 06024C9 40UN	MTECSH06024C940UN	40.0	5	6	6.00	2.45	3	9.60	58.00	C	AC22
MTECSH 06025C10 32UN	MTECSH06025C1032UN	32.0	6	-	6.00	2.55	3	10.50	58.00	C	AC22
MTECSH 06032C9 32UN	MTECSH06032C932UN	32.0	8	-	6.00	3.20	3	9.50	58.00	C	AC22
MTECSH 06037C10 32UN	MTECSH06037C1032UN	32.0	-	10	6.00	3.70	3	10.50	58.00	C	AC22
MTECSH 06037C15 32UN	MTECSH06037C1532UN	32.0	-	10	6.00	3.70	3	15.00	58.00	C	AC22
MTECSH 06042C11 28UN	MTECSH06042C1128UN	28.0	-	12	6.00	4.20	3	11.00	58.00	C	AC22
MTECSH 0605C14 28UN	MTECSH0605C1428UN	28.0	-	1/4	6.00	5.00	3	14.50	58.00	C	AC22
MTECSH 06035C10 24UN	MTECSH06035C1024UN	24.0	10, 12	-	6.00	3.50	3	10.60	58.00	C	AC22
MTECSH 08066C17 24UN	MTECSH08066C1724UN	24.0	-	5/16	8.00	6.60	3	17.00	64.00	C	AC22
MTECSH 08066C24 24UN	MTECSH08066C2424UN	24.0	-	5/16	8.00	6.60	3	24.00	64.00	C	AC22
MTECSH 06047C19 20UN	MTECSH06047C1920UN	20.0	1/4	-	6.00	4.75	3	19.00	58.00	C	AC22
MTECSH 0808C25 20UN	MTECSH0808C2520UN	20.0	-	7/16	8.00	8.00	3	25.00	64.00	C	AC22
MTECSH 0606C17 18UN	MTECSH0606C1718UN	18.0	5/16	-	6.00	6.00	3	17.00	58.00	C	AC22
MTECSH 0606C23 18UN	MTECSH0606C2318UN	18.0	5/16	-	6.00	6.00	3	23.00	58.00	C	AC22
MTECSH 08067C22 16UN	MTECSH08067C2216UN	16.0	3/8	-	8.00	6.70	3	22.00	64.00	C	AC22
MTECSH 10092C27 13UN	MTECSH10092C2713UN	13.0	1/2	-	10.00	9.20	3	27.50	73.00	C	AC22
MTECSH 12114C34 11UN	MTECSH12114C3411UN	11.0	5/8	-	12.00	11.40	3	34.50	84.00	C	AC22

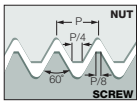
UN THREADING
MTECS
Small diameter



Description	EDP Code	TPI	UNC	UNF	d	D	Flute	H	SHANK L	C-Cylindrical	Grade
MTECS 03012C8 80UN	MTECS03012C880UN	80.0	-	0	3.00	1.15	3	8.00	39.00	C	AC22
MTECS 03015C6 72UN	MTECS03015C672UN	72.0	-	1	3.00	1.45	3	6.00	39.00	C	AC22
MTECS 06016C6 56UN	MTECS06016C656UN	56.0	2	3	6.00	1.65	3	6.60	58.00	C	AC22
MTECS 06019C5 48UN	MTECS06019C548UN	48.0	3	4	6.00	1.90	3	5.20	58.00	C	AC22
MTECS 03021C12 40UN	MTECS03021C1240UN	40.0	4	-	3.00	2.10	3	12.00	39.00	C	AC22
MTECS 06021C8 40UN	MTECS06021C840UN	40.0	4	-	6.00	2.10	3	8.00	58.00	C	AC22
MTECS 06024C9 40UN	MTECS06024C940UN	40.0	5	6	6.00	2.45	3	9.60	58.00	C	AC22
MTECS 06021C6 40UN	MTECS06021C640UN	40.0	4	-	6.00	2.10	3	6.30	58.00	C	AC22
MTECS 06033C9 36UN	MTECS06033C936UN	36.0	-	8	6.00	3.30	3	9.00	58.00	C	AC22
MTECS 06025C7 32UN	MTECS06025C732UN	32.0	6	-	6.00	2.55	3	7.10	58.00	C	AC22
MTECS 06025C10 32UN	MTECS06025C1032UN	32.0	6	-	6.00	2.55	3	10.50	58.00	C	AC22
MTECS 06032C9 32UN	MTECS06032C932UN	32.0	8	10	6.00	3.20	3	9.50	58.00	C	AC22
MTECS 06032C12 32UN	MTECS06032C1232UN	32.0	8	10	6.00	3.20	3	12.50	58.00	C	AC22
MTECS 06037C10 32UN	MTECS06037C1032UN	32.0	-	10	6.00	3.70	3	10.50	58.00	C	AC22
MTECS 06037C15 32UN	MTECS06037C1532UN	32.0	-	10	6.00	3.70	3	15.00	58.00	C	AC22
MTECS 0605C14 28UN	MTECS0605C1428UN	28.0	-	1/4	6.00	5.00	3	14.50	58.00	C	AC22
MTECS 0605C19 28UN	MTECS0605C1928UN	28.0	-	1/4	6.00	5.00	3	19.00	58.00	C	AC22
MTECS 08066C17 24UN	MTECS08066C1724UN	24.0	-	5/16	8.00	6.60	3	17.00	64.00	C	AC22
MTECS 08066C24 24UN	MTECS08066C2424UN	24.0	-	5/16	8.00	6.60	3	24.00	64.00	C	AC22
MTECS 06047C14 20UN	MTECS06047C1420UN	20.0	1/4	-	6.00	4.75	3	14.00	58.00	C	AC22
MTECS 06047C19 20UN	MTECS06047C1920UN	20.0	1/4	-	6.00	4.75	3	19.00	58.00	C	AC22
MTECS 06047C19 20UN-L	MTECS06047C1920UN-L	20.0	1/4	-	6.00	4.75	3	19.00	105.00	C	AC22
MTECS 0808C25 20UN	MTECS0808C2520UN	20.0	-	7/16	8.00	8.00	3	25.00	64.00	C	AC22
MTECS 0606C17 18UN	MTECS0606C1718UN	18.0	5/16	-	6.00	6.00	3	17.00	58.00	C	AC22
MTECS 0606C23 18UN	MTECS0606C2318UN	18.0	5/16	-	6.00	6.00	3	23.00	58.00	C	AC22
MTECS 1212D35 18UN	MTECS1212D3518UN	18.0	-	5/8	12.00	12.00	4	35.00	84.00	C	AC22
MTECS 08067C22 16UN	MTECS08067C2216UN	16.0	3/8	-	8.00	6.70	3	22.00	64.00	C	AC22
MTECS 08067C30 16UN	MTECS08067C3016UN	16.0	3/8	-	8.00	6.70	3	30.20	64.00	C	AC22
MTECS 10092C27 13UN	MTECS10092C2713UN	13.0	1/2	-	10.00	9.20	3	27.50	73.00	C	AC22
MTECS 12114C34 11UN	MTECS12114C3411UN	11.0	5/8	-	12.00	11.40	3	34.50	84.00	C	AC22

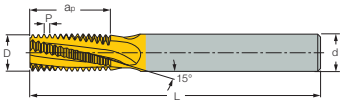
UN THREADING
MTECZ
with coolant holes in the flutes
Internal

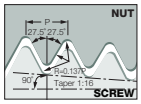




Description	EDP Code	TPI	UNC	UNF	UNEF	d	D	Flute	ap	L	SHANK C-Cylindrical	Grade
MTECZ 1010D22 20UN	MTECZ1010D2220UN	20.0	-	1/2	-	10.00	10.00	4	22.30	73.00	C	AC22
MTECZ 12113D26 18UN	MTECZ12113D2618UN	18.0	-	9/16-5/8	1-1/8-1-5/8	12.00	11.30	4	26.10	84.00	C	AC22
MTECZ 08067C16 16UN	MTECZ08067C1616UN	16.0	3/8	-	-	8.00	6.70	3	16.70	64.00	C	AC22

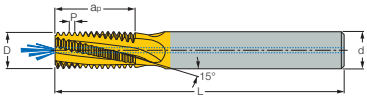
WHITWORTH THREADING
MTEC
INT/EXT

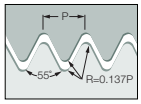




Description	EDP Code	TPI	BSP	d	D	Flute	ap	L	SHANK C-Cylindrical	Grade
MTEC 0606C9 28W	MTEC0606C928W	28	G1/8	6.00	6.00	3	9.50	58.00	C	AC22
MTEC 0808C14 19W	MTEC0808C1419W	19	G1/4, G3/8	8.00	8.00	3	14.00	64.00	C	AC22
MTEC 1212D19 14W	MTEC1212D1914W	14	G1/2, G7/8	12.00	12.00	4	19.30	84.00	C	AC22
MTEC 1212D26 14W	MTEC1212D2614W	14	G1/2, G7/8	12.00	12.00	4	26.30	84.00	C	AC22
MTEC 1212C24 11W	MTEC1212C2411W	11	G1, G1-1/2	12.00	12.00	3	24.20	84.00	C	AC22
MTEC 1616D28 11W	MTEC1616D2811W	11	G1, G3	16.00	16.00	4	38.10	105.00	C	AC22

WHITWORTH THREADING
MTECB
with coolant holes
INT/EXT





Description	EDP Code	TPI	BSP	d	D	Flute	ap	L	SHANK C-Cylindrical	Grade
MTECB 08078C14 28W	MTECB08078C1428W	28	G1/8	8.00	7.80	3	14.10	64.00	C	AC22
MTECB 1010D16 19W	MTECB1010D1619W	19	G1/4, G3/8	10.00	10.00	4	16.70	73.00	C	AC22
MTECB 1616E26 14W	MTECB1616E2614W	14	G1/2, G7/8	16.00	16.00	5	26.30	105.00	C	AC22
MTECB 1616D38 11W	MTECB1616D3811W	11	G>1	16.00	16.00	4	38.10	105.00	C	AC22
MTECB 2020E47 11W	MTECB2020E4711W	11	G>1	20.00	20.00	5	47.30	105.00	C	AC22

TC SERIES THREADMILLING

Threadmilling Insert Nomenclature Chart

TI **15** **N** — **8** **UN** — **I**

- **TI** — threadmilling insert
- **15** — insert length
  - 75 — .750 (19.05)
  - 1 — 1.000 (25.40)
  - 1.5 — 1.500 (38.10)
- **N** — type of insert
  - N — Neutral
  - P — Positive
- **8** — thread pitch
- **UN** — threadform
- **I** — type of insert
  - E — External
  - I — Internal

Threadmilling Cutter Nomenclature Chart

TC **P** **15** — **300** — **334** — **8**

- **TC** — tc series cutter
- **P** — cutter design
  - N — Neutral Pocket design
  - P — Positive Pocket design
  - S — Shell Mill design
- **15** — insert length
  - 75 — .750 (19.05)
  - 1 — 1.000 (25.40)
  - 1.5 — 1.500 (38.10)
- **300** — diameter
  - Shank
  - Head (Shell Mill only)
- **334** — cutter diameter
- **8** — no. of flutes

TCT/TCN

- TCT cutters offer tapered head to accommodate NPT and NPTF style inserts
- TCN cutters offer straight head to accommodate UN and ISO style inserts
- Inserts are CNC ground to tolerance of +/-.0005 effective in the cutter
- Positive geometry provides high shear action which results in better quality threads

TCP

- Cutters feature our patented locking system for accurate indexes
- Inserts are CNC ground to tolerance of +/-.0005 effective in the cutter
- Positive geometry provides high shear action which results in better quality threads
- Design allows for maximum number of flutes in minimum part diameter

TCS

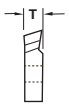
- Cutters feature our patented locking system for accurate indexes
- Inserts are CNC ground to tolerance of +/-.0005 effective in the cutter
- Positive geometry provides high shear action which results in better quality threads
- Design allows for maximum number of flutes in minimum part diameter
- Run at high speeds to reduce machining time by as much as 50%

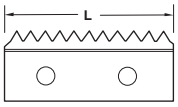
BSPT THREADING

TI_P

Positive Rake

■ Internal/External





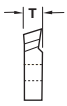
Description	EDP Code	Pitch	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI75P-19BSPT-I/E	TMIA4419I/E	19	.750 (19.05)	.080 (2.03)			●
TI1P-19BSPT-I/E	TMIB4419I/E	19	1.000 (25.40)	.140 (3.56)			●
TI1P-14BSPT-I/E	TMIB4414I/E	14	1.000 (25.40)	.140 (3.56)			●

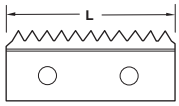
BSPP THREADING

TI_P

Positive Rake

■ Internal/External





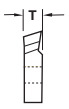
Description	EDP Code	TPI	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI75P-19BSPP-I/E	TMIA8519I/E	19	.750 (19.05)	.080 (2.03)			●
TI1P-19BSPP-I/E	TMIB8519I/E	19	1.000 (25.40)	.140 (3.56)			●
TI1P-14BSPP-I/E	TMIB8514I/E	14	1.000 (25.40)	.140 (3.56)			●

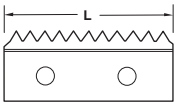
NPT/NPTF THREADING

TI_P

Positive Rake

■ Internal/External





Description	EDP Code	TPI	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI75P-18NPT-I/E	TMIA3618I/E	18	.750 (19.05)	.080 (2.03)			●
TI75P-18NPTF-I/E	TMIA4618I/E	18	.750 (19.05)	.080 (2.03)			●
TI1P-14NPT-I/E	TMIB3614I/E	14	1.000 (25.40)	.140 (3.56)			●
TI1P-14NPTF-I/E	TMIB4614I/E	14	1.000 (25.40)	.140 (3.56)			●

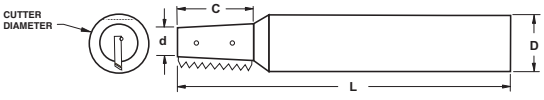
NPT/NPTF THREADING

TCT_

Cutter Bodies

Inch

■ Internal/External



Description	EDP Code	Insert	D	d	L	Cutter Dia	C	Flutes	Screw*
TCT75-500-400-1	TMTA084001	TI75P-18NPT/NPTF/BSPP/BSPT	.500	.229	3.000	.400	.750	1	TS250
TCT1-500-659-1	TMTB086591	TI1P-14NPT/NPTF/BSPP/BSPT	.500	.379	3.000	.659	1.000	1	TS45

*TS250 uses K-2 wrench, TS45 uses K-3 wrench

Metric

Description	EDP Code	Insert	D	d	L	Cutter Dia	C	Flutes	Screw*
TCT75-13M-400-1	TMTA13M4001	TI75P-18NPT/NPTF/BSPP/BSPT	13.00	5.82	76.99	10.44	19.00	1	TS250
TCT1-13M-659-1	TMTB13M6591	TI1P-14NPT/NPTF/BSPP/BSPT	13.00	9.40	76.99	16.74	25.00	1	TS252

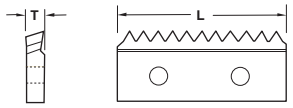
*TS250 uses K-2 wrench, TS45 uses K-3 wrench

UN THREADING

TI_P

Positive Rake

■ Internal



Description	EDP Code	TPI	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI75P-32UN-I	TMIA6632I	32	.750 (19.05)	.080 (2.03)			●
TI75P-24UN-I	TMIA6624I	24	.750 (19.05)	.080 (2.03)			●
TI75P-20UN-I	TMIA6620I	20	.750 (19.05)	.080 (2.03)			●
TI75P-18UN-I	TMIA6618I	18	.750 (19.05)	.080 (2.03)			●
TI75P-16UN-I	TMIA6616I	16	.750 (19.05)	.080 (2.03)			●
TI1P-32UN-I	TMIB6632I	32	1.000 (25.40)	.140 (3.56)			●
TI1P-24UN-I	TMIB6624I	24	1.000 (25.40)	.140 (3.56)			●
TI1P-20UN-I	TMIB6620I	20	1.000 (25.40)	.140 (3.56)			●
TI1P-18UN-I	TMIB6618I	18	1.000 (25.40)	.140 (3.56)			●
TI1P-16UN-I	TMIB6616I	16	1.000 (25.40)	.140 (3.56)			●
TI1P-13UN-I	TMIB6613I	13	1.000 (25.40)	.140 (3.56)			●
TI1P-14UN-I	TMIB6614I	14	1.000 (25.40)	.140 (3.56)			●
TI1P-12UN-I	TMIB6612I	12	1.000 (25.40)	.140 (3.56)			●
TI1P-10UN-I*	TMIB6610I	10	1.000 (25.40)	.140 (3.56)			●

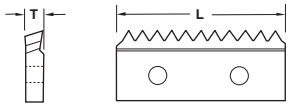
*To be used in TCN1 750-611-1 cutter only.

UNJ THREADING

TI_P

Positive Rake

■ Internal



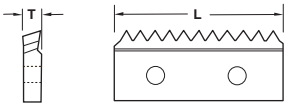
Description	EDP Code	TPI	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI75P-32UNJ-I	TMIA6832I	32	.750 (19.05)	.080 (2.03)			●
TI75P-24UNJ-I	TMIA6824I	24	.750 (19.05)	.080 (2.03)			●
TI75P-20UNJ-I	TMIA6820I	20	.750 (19.05)	.080 (2.03)			●
TI75P-18UNJ-I	TMIA6818I	18	.750 (19.05)	.080 (2.03)			●
TI75P-16UNJ-I	TMIA6816I	16	.750 (19.05)	.080 (2.03)			●
TI1P-32UNJ-I	TMIB6832I	32	1.000 (25.40)	.140 (3.56)			●
TI1P-24UNJ-I	TMIB6824I	24	1.000 (25.40)	.140 (3.56)			●
TI1P-20UNJ-I	TMIB6820I	20	1.000 (25.40)	.140 (3.56)			●
TI1P-18UNJ-I	TMIB6818I	18	1.000 (25.40)	.140 (3.56)			●
TI1P-16UNJ-I	TMIB6816I	16	1.000 (25.40)	.140 (3.56)			●
TI1P-14UNJ-I	TMIB6814I	14	1.000 (25.40)	.140 (3.56)			●
TI1P-12UNJ-I	TMIB6812I	12	1.000 (25.40)	.140 (3.56)			●
TI1P-10UNJ-I	TMIB6810I	10	1.000 (25.40)	.140 (3.56)			●

ISO THREADING

TI_P

Positive Rake

■ Internal



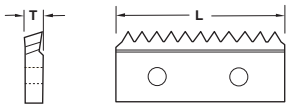
Description	EDP Code	Pitch	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI75P-1.5 ISO-I	TMIA7015I	1,5	.750 (19.05)	.080 (2.03)			●
TI75P-1.25 ISO-I	TMIA70125I	1,25	.750 (19.05)	.080 (2.03)			●
TI75P-1.0 ISO-I	TMIA7010I	1,0	.750 (19.05)	.080 (2.03)			●
TI75P-0.5 ISO-I	TMIA7005I	0,5	.750 (19.05)	.080 (2.03)			●
TI1P-2.0 ISO-I	TMIB7020I	2,0	1.000 (19.05)	.140 (3.56)			●
TI1P-1.5 ISO-I	TMIB7015I	1,5	1.000 (19.05)	.140 (3.56)			●
TI1P-1.0 ISO-I	TMIB7010I	1,0	1.000 (19.05)	.140 (3.56)			●

UN THREADING

TI_P

Positive Rake

External



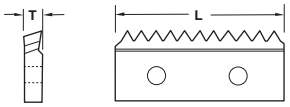
Description	EDP Code	TPI	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI75P-32UN-E	TMIA6632E	32	.750 (19.05)	.080 (2.03)			●
TI75P-24UN-E	TMIA6624E	24	.750 (19.05)	.080 (2.03)			●
TI75P-20UN-E	TMIA6620E	20	.750 (19.05)	.080 (2.03)			●
TI75P-18UN-E	TMIA6618E	18	.750 (19.05)	.080 (2.03)			●
TI75P-16UN-E	TMIA6616E	16	.750 (19.05)	.080 (2.03)			●
TI1P-32UN-E	TMIB6632E	32	1.000 (25.40)	.140 (3.56)			●
TI1P-24UN-E	TMIB6624E	24	1.000 (25.40)	.140 (3.56)			●
TI1P-20UN-E	TMIB6620E	20	1.000 (25.40)	.140 (3.56)			●
TI1P-18UN-E	TMIB6618E	18	1.000 (25.40)	.140 (3.56)			●
TI1P-16UN-E	TMIB6616E	16	1.000 (25.40)	.140 (3.56)			●
TI1P-13UN-E	TMIB6613E	13	1.000 (25.40)	.140 (3.56)			●
TI1P-12UN-E	TMIB6612E	12	1.000 (25.40)	.140 (3.56)			●
TI1P-10UN-E	TMIB6610E	10	1.000 (25.40)	.140 (3.56)			●

UNJ THREADING

TI_P

Positive Rake

External



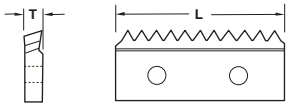
Description	EDP Code	TPI	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI75P-32UNJ-E	TMIA6832E	32	.750 (19.05)	.080 (2.03)			●
TI75P-24UNJ-E	TMIA6824E	24	.750 (19.05)	.080 (2.03)			●
TI75P-20UNJ-E	TMIA6820E	20	.750 (19.05)	.080 (2.03)			●
TI75P-18UNJ-E	TMIA6818E	18	.750 (19.05)	.080 (2.03)			●
TI75P-16UNJ-E	TMIA6816E	16	.750 (19.05)	.080 (2.03)			●
TI1P-32UNJ-E	TMIB6832E	32	1.000 (25.40)	.140 (3.56)			●
TI1P-24UNJ-E	TMIB6824E	24	1.000 (25.40)	.140 (3.56)			●
TI1P-20UNJ-E	TMIB6820E	20	1.000 (25.40)	.140 (3.56)			●
TI1P-18UNJ-E	TMIB6818E	18	1.000 (25.40)	.140 (3.56)			●
TI1P-16UNJ-E	TMIB6816E	16	1.000 (25.40)	.140 (3.56)			●
TI1P-12UNJ-E	TMIB6812E	12	1.000 (25.40)	.140 (3.56)			●

ISO THREADING

TI1P

Positive Rake

External



Description	EDP Code	Pitch	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI1P-2.0 ISO-E	TMIB7020E	2,0	1.000 (25.40)	.140 (3.56)			●
TI1P-1.5 ISO-E	TMIB7015E	1,5	1.000 (25.40)	.140 (3.56)			●
TI1P-1.0 ISO-E	TMIB7010E	1,0	1.000 (25.40)	.140 (3.56)			●

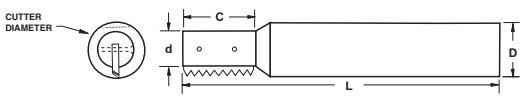
UN THREADING

TCN_

Cutter Bodies

Inch

Internal/External



Description	EDP Code	Insert	D	d	L	Cutter Dia	C	Flutes	Screw*
TCN75-500-394-1#	TMNA083941	TI75P-UN/ISO/UNJ	.500	.250	3.000	.394	.750	1	TS250
TCN75-500-468-1#	TMNA084681	TI75P-UN/ISO/UNJ	.500	.330	3.500	.468	.750	1	TS25
TCN1-750-625-1	TMNB126251	TI1P-UN/ISO/UNJ	.750	.454	3.500	.625	1.000	1	TS40
TCN1-750-611-1	TMNB126111	TI1P-10UN	.750	.383	3.500	.611	1.000	1	TS40

*TS250 and TS25 uses K-2 wrench, TS40 uses K-3 wrench
#Excludes BSPP, NPT and NPTF inserts

Metric

Description	EDP Code	Insert	D	d	L	Cutter Dia	C	Flutes	Screw*
TCN75-13M-394-1#	TMNA13M3941	TI75P-UN/ISO/UNJ	13.00	6.35	76.99	10.01	19.05	1	TS250
TCN75-13M-468-1#	TMNA13M4681	TI75P-UN/ISO/UNJ	13.00	8.38	90.47	11.89	19.05	1	TS25
TCN1-20M-625-1	TMNB20M6251	TI1P-UN/ISO/UNJ	19.20	11.53	90.47	15.88	25.40	1	TSM40
TCN1-20M-611-1	TMNB20M6111	TI1P-10UN	19.20	9.73	90.47	15.52	25.40	1	TSM40

*TS250 and TS25 uses K-2 wrench, TS40 uses K-3 wrench
#Excludes BSPP, BSPT, NPT and NPTF inserts

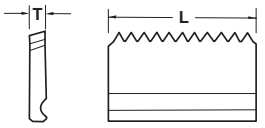
TC SERIES THREADMILLING

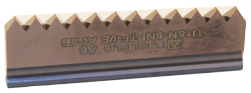
BSPT THREADING

TI_N

Neutral Rake

■ Internal/External





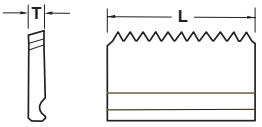
Description	EDP Code	TPI	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI1N-11BSPT-I/E	TMIC4411I/E	11	1.000 (25.40)	.140 (3.56)			●

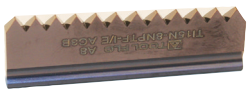
NGT/SGT THREADING

TI_N

Neutral Rake

■ Internal/External





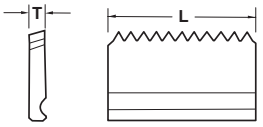
Description	EDP Code	TPI	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI15N-14NGT-I/E	TMID4714I/E	14	1.500 (38.10)	.140 (3.56)			●
TI15N-14SGT-I/E	TMID4914I/E	14	1.500 (38.10)	.140 (3.56)			●

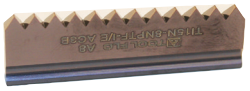
NPT/NPTF THREADING

TI_N

Neutral Rake

■ Internal/External





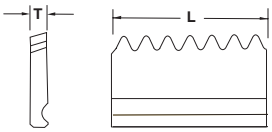
Description	EDP Code	TPI	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI15N-11.5NPT-I/E	TMID3611I/E	11.5	1.500 (38.10)	.140 (3.56)			●
TI15N-11.5NPTF-I/E	TMID4611I/E	11.5	1.500 (38.10)	.140 (3.56)			●
TI15N-8NPT-I/E	TMID3608I/E	8	1.500 (38.10)	.140 (3.56)			●
TI15N-8NPTF-I/E	TMID4608I/E	8	1.500 (38.10)	.140 (3.56)			●

API ROUND THREADING

TI15N

Neutral Rake

■ Internal/External



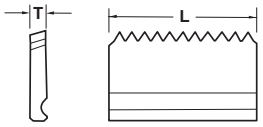
Description	EDP Code	TPI	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI15N-10RD-I/E	TMID3410I/E	10	1.500 (38.10)	.140 (3.56)			●
TI15N-8RD-I/E	TMID3200I/E	8	1.500 (38.10)	.140 (3.56)			●

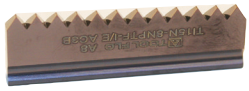
UN THREADING

TI_N

Neutral Rake

■ Internal





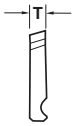
Description	EDP Code	TPI	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI1N-32UN-I	TMIC6632I	32	1.000 (25.40)	.140 (3.56)			●
TI1N-24UN-I	TMIC6624I	24	1.000 (25.40)	.140 (3.56)			●
TI1N-20UN-I	TMIC6620I	20	1.000 (25.40)	.140 (3.56)			●
TI1N-18UN-I	TMIC6618I	18	1.000 (25.40)	.140 (3.56)			●
TI1N-16UN-I	TMIC6616I	16	1.000 (25.40)	.140 (3.56)			●
TI1N-12UN-I	TMIC6612I	12	1.000 (25.40)	.140 (3.56)			●
TI1N-10UN-I	TMIC6610I	10	1.000 (25.40)	.140 (3.56)			●
TI1N-8UN-I	TMIC6608I	8	1.000 (25.40)	.140 (3.56)			●
TI15N-24UN-I	TMID6624I	24	1.500 (38.10)	.140 (3.56)			●
TI15N-20UN-I	TMID6620I	20	1.500 (38.10)	.140 (3.56)			●
TI15N-18UN-I	TMID6618I	18	1.500 (38.10)	.140 (3.56)			●
TI15N-16UN-I	TMID6616I	16	1.500 (38.10)	.140 (3.56)			●
TI15N-14UN-I	TMID6614I	14	1.500 (38.10)	.140 (3.56)			●
TI15N-12UN-I	TMID6612I	12	1.500 (38.10)	.140 (3.56)			●
TI15N-10UN-I	TMID6610I	10	1.500 (38.10)	.140 (3.56)			●
TI15N-8UN-I	TMID6608I	8	1.500 (38.10)	.140 (3.56)			●
TI15N-7UN-I	TMID6607I	7	1.500 (38.10)	.140 (3.56)			●
TI15N-6UN-I	TMID6606I	6	1.500 (38.10)	.140 (3.56)			●

UNJ THREADING

TI_N

Neutral Rake

■ Internal



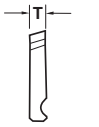
Description	EDP Code	TPI	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI1N-32UNJ-I	TMIC6832I	32	1.000 (25.40)	.140 (3.56)			●
TI1N-24UNJ-I	TMIC6824I	24	1.000 (25.40)	.140 (3.56)			●
TI1N-20UNJ-I	TMIC6820I	20	1.000 (25.40)	.140 (3.56)			●
TI1N-18UNJ-I	TMIC6818I	18	1.000 (25.40)	.140 (3.56)			●
TI1N-16UNJ-I	TMIC6816I	16	1.000 (25.40)	.140 (3.56)			●
TI1N-12UNJ-I	TMIC6812I	12	1.000 (25.40)	.140 (3.56)			●
TI1N-10UNJ-I	TMIC6810I	10	1.000 (25.40)	.140 (3.56)			●
TI15N-24UNJ-I	TMID6824I	24	1.500 (38.10)	.140 (3.56)			●
TI15N-20UNJ-I	TMID6820I	20	1.500 (38.10)	.140 (3.56)			●
TI15N-18UNJ-I	TMID6818I	18	1.500 (38.10)	.140 (3.56)			●
TI15N-16UNJ-I	TMID6816I	16	1.500 (38.10)	.140 (3.56)			●
TI15N-12UNJ-I	TMID6812I	12	1.500 (38.10)	.140 (3.56)			●
TI15N-10UNJ-I	TMID6810I	10	1.500 (38.10)	.140 (3.56)			●
TI15N-8UNJ-I	TMID6808I	8	1.500 (38.10)	.140 (3.56)			●

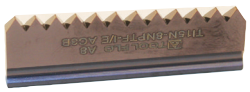
ISO THREADING

TI15N

Neutral Rake

■ Internal





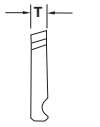
Description	EDP Code	Pitch	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI15N-6.0 ISO-I	TMID7060I	6.0	1.500 (38.10)	.140 (3.56)			●
TI15N-5.0 ISO-I	TMID7050I	5.0	1.500 (38.10)	.140 (3.56)			●
TI15N-4.5 ISO-I	TMID7045I	4.5	1.500 (38.10)	.140 (3.56)			●
TI15N-4.0 ISO-I	TMID7040I	4.0	1.500 (38.10)	.140 (3.56)			●
TI15N-3.5 ISO-I	TMID7035I	3.5	1.500 (38.10)	.140 (3.56)			●
TI15N-3.0 ISO-I	TMID7030I	3.0	1.500 (38.10)	.140 (3.56)			●
TI15N-2.5 ISO-I	TMID7025I	2.5	1.500 (38.10)	.140 (3.56)			●
TI15N-2.0 ISO-I	TMID7020I	2.0	1.500 (38.10)	.140 (3.56)			●
TI15N-1.5 ISO-I	TMID7015I	1.5	1.500 (38.10)	.140 (3.56)			●

ACME THREADING

TI_N

Neutral Rake - Full Profile

■ Internal only



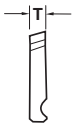
Description	EDP Code	TPI	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI1N-12ACME-I	TMIC0212I	12	1.000 (25.40)	.140 (3.56)			●
TI1N-10ACME-I	TMIC0210I	10	1.000 (25.40)	.140 (3.56)			●
TI1N-8ACME-I	TMIC0208I	8	1.000 (25.40)	.140 (3.56)			●
TI15N-12ACME-I	TMID0212I	12	1.500 (38.10)	.140 (3.56)			●
TI15N-10ACME-I	TMID0210I	10	1.500 (38.10)	.140 (3.56)			●
TI15N-8ACME-I	TMID0208I	8	1.500 (38.10)	.140 (3.56)			●
TI15N-6ACME-I	TMID0206I	6	1.500 (38.10)	.140 (3.56)			●
TI15N-5ACME-I	TMID0205I	5	1.500 (38.10)	.140 (3.56)			●
TI15N-4ACME-I	TMID0204I	4	1.500 (38.10)	.140 (3.56)			●

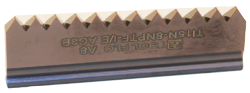
UN THREADING

TI_N

Neutral Rake

External





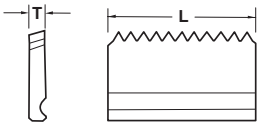
Description	EDP Code	TPI	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI1N-32UN-E	TMIC6632E	32	1.000 (25.40)	.140 (3.56)			●
TI1N-24UN-E	TMIC6624E	24	1.000 (25.40)	.140 (3.56)			●
TI1N-20UN-E	TMIC6620E	20	1.000 (25.40)	.140 (3.56)			●
TI1N-18UN-E	TMIC6618E	18	1.000 (25.40)	.140 (3.56)			●
TI1N-16UN-E	TMIC6616E	16	1.000 (25.40)	.140 (3.56)			●
TI1N-12UN-E	TMIC6612E	12	1.000 (25.40)	.140 (3.56)			●
TI1N-10UN-E	TMIC6610E	10	1.000 (25.40)	.140 (3.56)			
TI15N-24UN-E	TMID6624E	24	1.500 (38.10)	.140 (3.56)			
TI15N-20UN-E	TMID6620E	20	1.500 (38.10)	.140 (3.56)			●
TI15N-18UN-E	TMID6618E	18	1.500 (38.10)	.140 (3.56)			●
TI15N-16UN-E	TMID6616E	16	1.500 (38.10)	.140 (3.56)			●
TI15N-12UN-E	TMID6612E	12	1.500 (38.10)	.140 (3.56)			●
TI15N-10UN-E	TMID6610E	10	1.500 (38.10)	.140 (3.56)			●
TI15N-8UN-E	TMID6608E	8	1.500 (38.10)	.140 (3.56)			●
TI15N-6UN-E	TMID6606E	6	1.500 (38.10)	.140 (3.56)			●

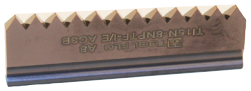
UNJ THREADING

TI_N

Neutral Rake

External





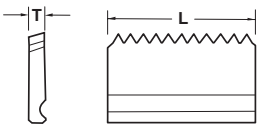
Description	EDP Code	TPI	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI1N-32UNJ-E	TMIC6832E	32	1.000 (25.40)	.140 (3.56)			●
TI1N-24UNJ-E	TMIC6824E	24	1.000 (25.40)	.140 (3.56)			●
TI1N-20UNJ-E	TMIC6820E	20	1.000 (25.40)	.140 (3.56)			●
TI1N-18UNJ-E	TMIC6818E	18	1.000 (25.40)	.140 (3.56)			●
TI1N-16UNJ-E	TMIC6816E	16	1.000 (25.40)	.140 (3.56)			●
TI1N-12UNJ-E	TMIC6812E	12	1.000 (25.40)	.140 (3.56)			●
TI1N-10UNJ-E	TMIC6810E	10	1.000 (25.40)	.140 (3.56)			●
TI15N-24UNJ-E	TMID6824E	24	1.500 (38.10)	.140 (3.56)			●
TI15N-20UNJ-E	TMID6820E	20	1.500 (38.10)	.140 (3.56)			●
TI15N-18UNJ-E	TMID6818E	18	1.500 (38.10)	.140 (3.56)			●
TI15N-16UNJ-E	TMID6816E	16	1.500 (38.10)	.140 (3.56)			●
TI15N-12UNJ-E	TMID6812E	12	1.500 (38.10)	.140 (3.56)			●
TI15N-10UNJ-E	TMID6810E	10	1.500 (38.10)	.140 (3.56)			●
TI15N-8UNJ-E	TMID6808E	8	1.500 (38.10)	.140 (3.56)			●

ISO THREADING

TI15N

Neutral Rake

External



Description	EDP Code	Pitch	L	T	Uncoated C3	TiN Coated GP3	AlTiN Coated ZS3
TI15N-6.0 ISO-E	TMID7060E	6.0	1.500 (38.10)	.140 (3.56)			●
TI15N-5.0 ISO-E	TMID7050E	5.0	1.500 (38.10)	.140 (3.56)			●
TI15N-4.5 ISO-E	TMID7045E	4.5	1.500 (38.10)	.140 (3.56)			●
TI15N-4.0 ISO-E	TMID7040E	4.0	1.500 (38.10)	.140 (3.56)			●
TI15N-2.0 ISO-E	TMID7020E	2.0	1.500 (38.10)	.140 (3.56)			●

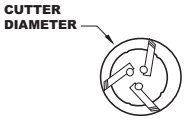
UN/NPT/ISO/ACME/API THREADING

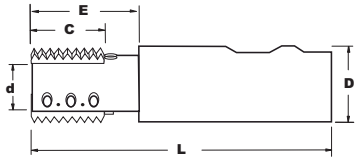
TCP_

Cutter Bodies

Inch

■ Internal/External





Description	EDP Code	Insert	Coolant Port	D	d	E	L	Cutter Dia. (UN/115NPT)	Cutter Dia. (8NPT)	C	Flutes	Screw	Pin
TCP1 100-969-2	TMPB169692	TI1N		1.000	.625	1.500	4.500	.969	.969	1.000	2	TSS-3	DP1
TCP1 125-175-5	TMPB201755	TI1N	✔	1.250	1.500	1.750	4.000	1.755	1.755	1.000	5	TSS-2	DP1
TCP15 100-932-1	TMPC169321	TI15N		1.000	.722	1.900	4.500	.932	1.065	1.500	1	TSS-2	DP135
TCP15 100-111-3	TMPC161113	TI15N	✔	1.000	.812	2.000	4.500	1.116	1.247	1.500	3	TSS-3	DP135
TCP15 125-175-5	TMPC201755	TI15N	✔	1.250	1.500	2.250	4.500	1.755	1.888	1.500	5	TSS-2	DP135
TCP15 125-175-5L	TMPC201755L	TI15N	✔	1.250	1.500	2.750	8.250	1.755	1.888	1.500	5	TSS-2	DP135

Metric

Description	EDP Code	Insert	Coolant Port	D	d	E	L	Cutter Dia. (UN/115NPT)	Cutter Dia. (8NPT)	C	Flutes	Screw	Pin
TCP1 25M-969-2	TMPB25M9692	TI1N		25.00	15.87	38.10	114.30	24.61	24.61	25.40	2	TSSM-3	DP1
TCP1 32M-175-5	TMPB32M1755	TI1N	✔	32.00	38.10	44.45	101.60	44.58	44.58	25.40	5	TSSM-2	DP1
TCP15 25M-932-1	TMPC25M9321	TI15N		25.00	18.34	48.26	114.30	23.67	27.05	38.10	1	TSSM-2	DP135
TCP15 25M-969-2	TMPC25M9692	TI15N		25.00	18.34	50.80	127.00	24.61	27.05	38.10	2	TSSM-2	DP135
TCP15 25M-111-3	TMPC25M1113	TI15N	✔	25.00	27.81	57.15	139.70	28.35	31.67	38.10	3	TSSM-3	DP135
TCP15 32M-175-5	TMPC32M1755	TI15N	✔	32.00	38.10	64.77	114.3	44.58	47.96	38.10	5	TSSM-2	DP135

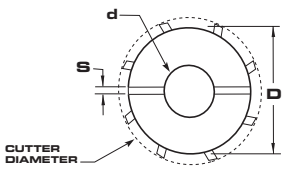
UN/NPT/ISO/ACME THREADING

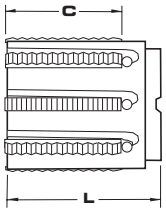
TCS_

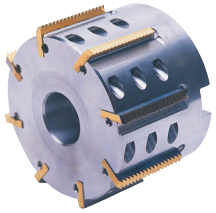
Shell Mill Cutter Bodies

Inch

■ Internal/External







Description	EDP Code	Insert	D	d	S	L	Cutter Dia.	C	Flutes	Pin	Screw
TCS15 200-234-6	TMSC322346	TI15N	2.000 (50.80)	.750 (19.05)	.312 (7.92)	2.250 (57.15)	2.349 (59.66)	1.500 (38.10)	6	DP135	TSS-2
TCS15 250-274-7	TMSC402747	TI15N	2.500 (63.50)	1.000 (25.40)	.375 (9.53)	2.250 (57.15)	2.846 (72.29)	1.500 (38.10)	7	DP135	TSS-2
TCS15 300-334-8	TMSC483348	TI15N	3.000 (76.20)	1.250 (31.75)	.500 (12.70)	2.250 (57.15)	3.341 (84.86)	1.500 (38.10)	8	DP135	TSS-2

Metric

Description	EDP Code	Insert	D	d	S	L	Cutter Dia.	C	Flutes	Pin	Screw
TCS15 250-274-7-27M	TMSC40274727M	TI15N	63.50	12.70	12.39	2-1/4	72.29	1-1/2	7	DP135	TSS-2
TCS15 300-334-8-32M	TMSC48334832M	TI15N	76.20	16.66	14.40	2-1/4	84.81	1-1/2	8	DP135	TSS-2

Threadmilling Kits

SAVE!
Buy in Kits

NPT THREADING KITS

18NPT-THREADING
KIT #101

Kit Contents

1	TCT75 500-400-1
4	TI75-18NPT AC3
1	T8 WRENCH
1	TS252 INSERT SCREW

14NPT-THREADING
KIT #102

Kit Contents

1	TCT1 500-659-1
4	TI1P-14NPT AC3
1	T8 WRENCH
1	TS252 INSERT SCREW

We welcome specials! Please call us with your specs.

UN THREADING KITS

16UN-THREADING
KIT #201

Kit Contents

1	TCN75 500-394-1
4	TI75P-16UN AC3
1	T8 WRENCH
1	TS252 INSERT SCREW

18UN-THREADING
KIT #202

Kit Contents

1	TCN75 500-394-1
4	TI75P-18UN AC3
1	T8 WRENCH
1	TS252 INSERT SCREW

20UN-THREADING
KIT #203

Kit Contents

1	TCN75 500-394-1
4	TI75P-20UN AC3
1	T8 WRENCH
1	TS252 INSERT SCREW

24UN-THREADING
KIT #204

Kit Contents

1	TCN75 500-394-1
4	TI75P-24UN AC3
1	T6 WRENCH
1	TS252 INSERT SCREW

32UN-THREADING
KIT #205

Kit Contents

1	TCN75 500-394-1
4	TI75P-32UN AC3
1	T6 WRENCH
1	TS252 INSERT SCREW

NPT THREADING KITS

18NPT-THREADING
KIT #101M

Kit Contents

1	TCT75 13M-400-1
4	TI75-18NPT AC3
1	T8 WRENCH
1	TS252 INSERT SCREW

14NPT-THREADING
KIT #102M

Kit Contents

1	TCT1 13M-659-1
4	TI1P-14NPT AC3
1	T8 WRENCH
1	TS252 INSERT SCREW

We welcome specials! Please call us with your specs.

UN THREADING KITS

16UN-THREADING
KIT #201M

Kit Contents

1	TCN75 13M-394-1
4	TI75P-16UN AC3
1	T8 WRENCH
1	TS252 INSERT SCREW

18UN-THREADING
KIT #202M

Kit Contents

1	TCN75 13M-394-1
4	TI75P-18UN AC3
1	T8 WRENCH
1	TS252 INSERT SCREW

20UN-THREADING
KIT #203M

Kit Contents

1	TCN75 13M-394-1
4	TI75P-20UN AC3
1	T8 WRENCH
1	TS252 INSERT SCREW

24UN-THREADING
KIT #204M

Kit Contents

1	TCN75 13M-394-1
4	TI75P-24UN AC3
1	T6 WRENCH
1	TS252 INSERT SCREW

32UN-THREADING
KIT #205M

Kit Contents

1	TCN75 13M-394-1
4	TI75P-32UN AC3
1	T6 WRENCH
1	TS252 INSERT SCREW

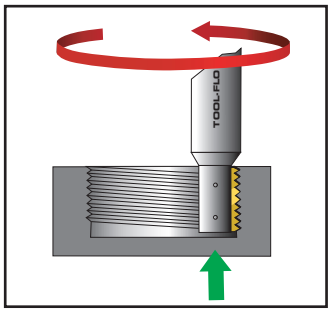
NPT & NPTF

When programming an NPT or NPTF thread form, a correction factor to compensate for the tapered thread form may need to be made. This is achieved by dividing the circular move into quarters or eighths, and moving the cutter out as the arc is generated so that the taper is included in the movement. The amount of taper for a given form is determined by the following formula:

$$\text{Taper per pitch} = \frac{.0625"}{\text{pitch}}$$

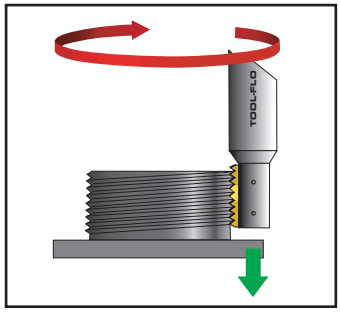
This amount of taper per pitch is then divided by number of programmed quadrants. This determines the amount that the cutter forms of the thread.

Climb Milling



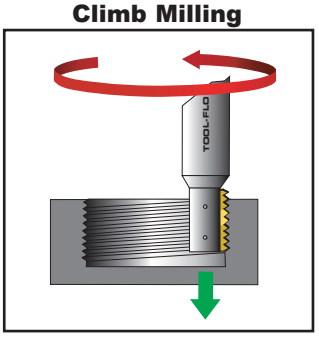
INTERNAL RIGHT HAND

Climb Milling



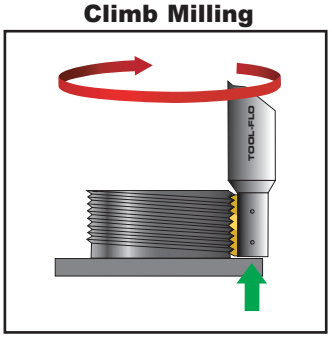
EXTERNAL RIGHT HAND

Climb Milling



INTERNAL LEFT HAND

Climb Milling



EXTERNAL LEFT HAND

NPT SELECTION CHART - INCH

SIZE	CUTTER	INSERT
1/4", 3/8"	TCT75 500-400-1	TI75P-18NPT
1/2". 3/4"	TCT1 500-659-1	TI1P-14NPT
1"	TCP15 100-932-1	TI15N-11.5NPT
1-1/4", 1-1/2"	TCP15 100-111-3	TI15N-11.5NPT
2"	TCP15 125-175-5	TI15N-11.5NPT
3"	TCP15 125-175-5	TI15N-8NPT

RECOMMENDED SPEED AND FEED RATES - INCH

MATERIAL	CHIP LOAD	SPEED (SFPM)
1018 Steel	.0008 - .002	250 - 500
Standard steel (4140)	.0005 - .002	175 - 350
300 Series Stainless	.0005 - .0035	250 - 500
400 Series Stainless	.0002 - .0015	125 - 300
Gray Iron	.0005 - .003	400 - 800
Ductile iron	.001 - .005	600 - 1000
Aluminum	.0015 - .006	800 - 1200
Brass	.002 - .0065	400 - 700

NPT SELECTION CHART - METRIC

SIZE	CUTTER	INSERT
1/4", 3/8"	TCT75 13M-400-1	TI75P-18NPT
1/2". 3/4"	TCT1 13M-659-1	TI1P-14NPT
1"	TCP15 25M-932-1	TI15N-11.5NPT
1-1/4", 1-1/2"	TCP15 25M-111-3	TI15N-11.5NPT
2"	TCP15 32M-175-5	TI15N-11.5NPT
3"	TCP15 32M-175-5	TI15N-8NPT

RECOMMENDED SPEED AND FEED RATES - METRIC

MATERIAL	CHIP LOAD	SPEED (SM/M)
1018 Steel	0.020 - 0.050	76.2 - 152.4
Standard steel (4140)	0.012 - 0.050	53.3 - 106.6
300 Series Stainless	0.012 - 0.088	76.2 - 152.4
400 Series Stainless	0.005 - 0.038	38.1 - 91.4
Gray Iron	0.012 - 0.076	121.9 - 243.8
Ductile iron	0.025 - 0.127	182.22 - 304.8
Aluminum	0.038 - 0.152	243.8 - 365.7
Brass	0.050 - .0065	121.9 - 182.8

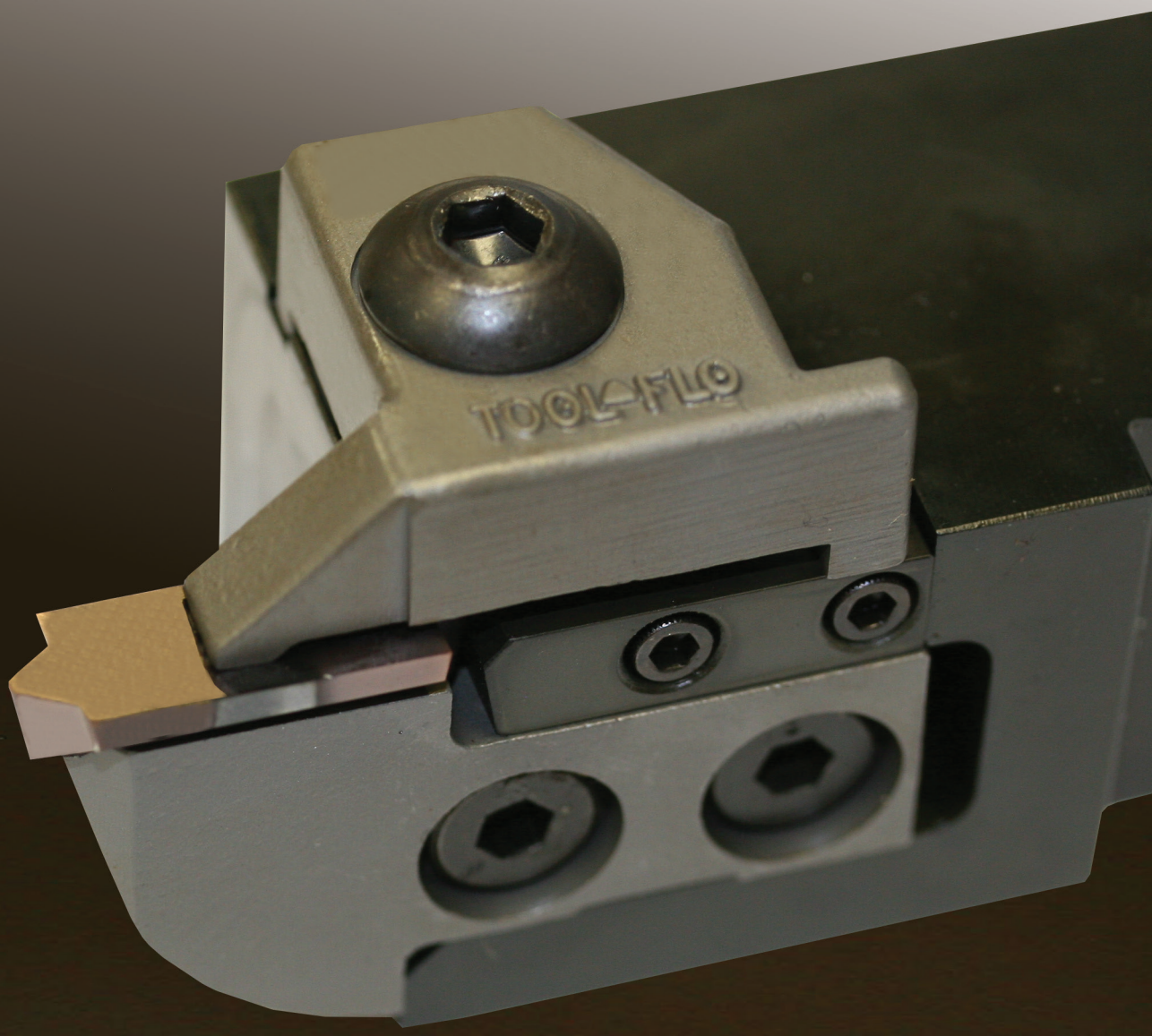
Minimum internal thread size vs threads per pitch for given cutter body for ISO threads

cutter body / pitch	0.5	1.0	1.25	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0
TCN75 500-394-1	M16	M16	M16	M16								
TCN75 500-468-1	M18	M18	M18	M20								
TCN1 750-625-1		M24		M25	M25							
TCP15 100-932-1				M36	M36	M39	M39	M39	M39	M42	M48	M50
TCP15 100-111-3				M45	M45	M45	M45	M48	M48	M48	M48	M52
TCP15 125-175-5				M68	M68	M68	M68	M70	M70	M72	M72	M72

Minimum internal thread size vs threads per inch (tpi) for given cutter body for UN threads

cutter body / tpi	32	24	20	18	16	14	12	10	8	7	6
TCN75 500-394-1	5/8”	5/8”	5/8”	3/4”	11/16”						
TCN75 500-468-1	3/4”	3/4”	3/4”	3/4”	13/16”						
TCN1 750-625-1	15/16”	1”	1”	1”	1-1/16”	1-1/8”	1-1/8”	1-1/8”			
TCP1 100-969-2		1-1/2”	1-1/2”	1-7/16”	1-1/2”	1-1/2”	1-1/2”	1-1/2”			
TCP1 125-175-5			2-5/8”	2-5/8”	2-5/8”	2-3/4”	2-3/4”	2-3/4”			
TCP15 100-932-1			1-7/16”	1-7/16”	1-7/16”	1-7/16”	1-1/2”	1-1/2”	1-1/2”	1-5/8”	1-5/8”
TCP15 100-111-3			1-11/16”	1-11/16”	1-11/16”	1-3/4”	1-11/16”	1-3/4”	1-3/4”	1-13/16”	1-13/16”
TCP15 125-175-5			2-5/8”	2-5/8”	2-5/8”	2-3/4”	2-3/4”	2-3/4”	2-3/4”	2-3/4”	2-3/4”

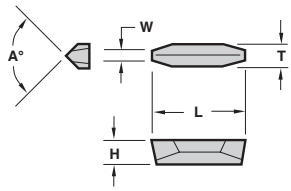
TOOL-FLO
Member IMC Group



VEE BOTTOM

ACME THREADING

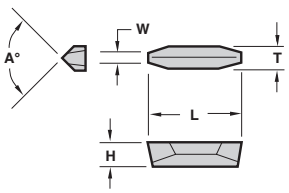
V84/V85/V120



Description	EDP Code	TPI	W	T	L	H	A°	Uncoated C3	TiN Coated GP3	TiN Coated GP5	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
V84 NT 3P	0261030	3	.1184 (3.01)	.250 (6.35)	1.000 (25.40)	.250 (6.35)	90°		●		●		●
V84 NT 4P	0261040	4	.0875 (2.22)	.250 (6.35)	1.000 (25.40)	.250 (6.35)	90°		●		●		●
V84 NT 5P	0261050	5	.0689 (1.75)	.250 (6.35)	1.000 (25.40)	.250 (6.35)	90°		●		●		●
V84 NT 6P	0261060	6	.0566 (1.44)	.250 (6.35)	1.000 (25.40)	.250 (6.35)	90°		●		●		●
V84 NT 8P	0261080	8	.0411 (1.04)	.250 (6.35)	1.000 (25.40)	.250 (6.35)	90°		●		●		●
V84 NT 10P	0261100	10	.0319 (0.81)	.250 (6.35)	1.000 (25.40)	.250 (6.35)	90°				●		
V84 NT 12P	0261120	12	.0283 (0.72)	.250 (6.35)	1.000 (25.40)	.250 (6.35)	90°				●		
V85 NT 2P	0263020	2	.1802 (4.58)	.312 (7.92)	1.000 (25.40)	.250 (6.35)	90°		●		●		
V85 NT 2.5P	0263025	2.5	.1431 (3.63)	.312 (7.92)	1.000 (25.40)	.250 (6.35)	90°				●		
V85 NT 3P	0263030	3	.1184 (3.01)	.312 (7.92)	1.000 (25.40)	.250 (6.35)	90°				●		
V120 NT 1P	0270010	1	.3655 (9.28)	.750 (19.05)	1.500 (38.10)	.375 (9.53)	120°			●			
V120 NT 1.5P	0270015	1.5	.2419 (6.14)	.750 (19.05)	1.500 (38.10)	.375 (9.53)	120°			●			

ACME STUB THREADING

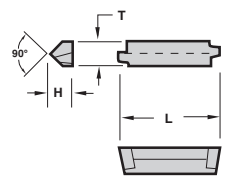
V84/V85/V120



Description	EDP Code	TPI	W	T	L	H	A°	Uncoated C3	TiN Coated GP3	TiN Coated GP5	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
V84 NT 3P STUB	0261031	3	.1356 (3.44)	.250 (6.35)	1.000 (25.40)	.250 (6.35)	90°		●		●		
V84 NT 4P STUB	0261041	4	.1004 (2.55)	.250 (6.35)	1.000 (25.40)	.250 (6.35)	90°		●		●		
V84 NT 5P STUB	0261051	5	.0793 (2.01)	.250 (6.35)	1.000 (25.40)	.250 (6.35)	90°		●		●		
V84 NT 6P STUB	0261061	6	.0652 (1.66)	.250 (6.35)	1.000 (25.40)	.250 (6.35)	90°		●		●		
V84 NT 8P STUB	0261081	8	.0476 (1.21)	.250 (6.35)	1.000 (25.40)	.250 (6.35)	90°		●		●		
V84 NT 10P STUB	0261101	10	.0370 (0.94)	.250 (6.35)	1.000 (25.40)	.250 (6.35)	90°				●		
V84 NT 12P STUB	0261121	12	.0326 (0.83)	.250 (6.35)	1.000 (25.40)	.250 (6.35)	90°				●		
V85 NT 2P STUB	0263021	2	.2060 (5.23)	.312 (7.92)	1.000 (25.40)	.250 (6.35)	90°		●		●		
V85 NT 2.5P STUB	02630251	2.5	.1638 (4.16)	.312 (7.92)	1.000 (25.40)	.250 (6.35)	90°				●		
V120 NT 1P STUB	0270011	1	.4172 (10.60)	.750 (19.05)	1.500 (38.10)	.375 (9.53)	120°			●			

API BUTTRESS THREADING

V84

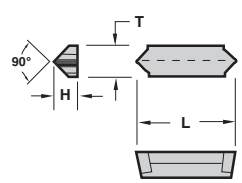


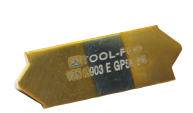
Description	EDP Code	TPI	TPF	T	L	H	Connection	Uncoated C3	TiN Coated GP3	TiN Coated GP5	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
V84 5B75 EXT-FC*	16614F	5	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)	4-1/2 - 13-3/8				●		
V84 5B1 EXT-FC	17614F	5	1	.250 (6.35)	1.000 (25.40)	.250 (6.35)	16 and larger				●		
V84 8B75 EXT	21614F	8	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)	US Improved Buttress				●		
V84 5B75 INT-FC	16618F	5	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)	4-1/2 - 13-3/8				●		
V84 5B1 INT-FC	17618F	5	1	.250 (6.35)	1.000 (25.40)	.250 (6.35)	16 and larger				●		
V84 8B75 INT-FC	21618F	8	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)	US Improved Buttress				●		

*FC indicates 5° flank clearance

API HUGHES THREADING

V85/V96

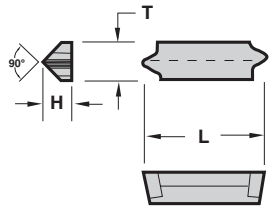




Description	EDP Code	TPI	TPF	T	L	H	Connection	Uncoated C3	TiN Coated GP3	TiN Coated GP5	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
V85 H902 EXT	28634	3-1/2	2	.250 (6.35)	1.000 (25.40)	.250 (6.35)	3-1/2 - 6-5/8 H90				●		
V85 H902 INT	28638	3-1/2	2	.250 (6.35)	1.000 (25.40)	.250 (6.35)	3-1/2 - 6-5/8 H90				●		
V85 H903 EXT	29634	3-1/2	3	.250 (6.35)	1.000 (25.40)	.250 (6.35)	7 - 8-5/8				●		
V85 H903 INT	29638	3-1/2	3	.250 (6.35)	1.000 (25.40)	.250 (6.35)	7 - 8-5/8				●		
V96 H90S EXT	27664	3	1-1/4	.375 (9.53)	1.125 (28.58)	.375 (9.53)	2-3/8 - 3-1/2 Slimline			●			
V96 H90S INT	27668	3	1-1/4	.375 (9.53)	1.125 (28.58)	.375 (9.53)	2-3/8 - 3-1/2 Slimline			●			

API ROTARY SHOULDER THREADING

V85

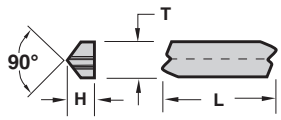


Description	EDP Code	TPI	TPF	T	L	H	Connection	Uncoated C3	TiN Coated GP3	TiN Coated GP5	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
V85 425 EXT	09634	4	2	.312 (7.92)	1.000 (25.40)	.250 (6.35)	5-1/2 - 6-5/8 FH, 6-5/8 REG				●	●	●
V85 428 EXT	10634	4	2	.312 (7.92)	1.000 (25.40)	.250 (6.35)	NC23 - 50, 2-3/8 - 5-1/2 IF				●	●	●
V85 42F EXT*	14634	4	2	.312 (7.92)	1.000 (25.40)	.250 (6.35)	VO.065*						
V85 435 EXT	11634	4	3	.312 (7.92)	1.000 (25.40)	.250 (6.35)	5-1/2 REG, 7-5/8 REG, 8-5/8 REG				●		●
V85 438 EXT	12634	4	3	.312 (7.92)	1.000 (25.40)	.250 (6.35)	NC56 - NC71				●		●
V85 530 EXT	13634	5	3	.312 (7.92)	1.000 (25.40)	.250 (6.35)	3-1/2FH, 2-3/8 - 4-1/2 REG				●		●
V85 4PAC EXT	15634	4	1-1/2	.312 (7.92)	1.000 (25.40)	.250 (6.35)	2-3/8 - 4-1/2 AMERICAN/PAC				●		
V85 425 INT	09638	4	2	.312 (7.92)	1.000 (25.40)	.250 (6.35)	5-1/2 - 6-5/8 FH, 6-5/8 REG				●	●	●
V85 428 INT	10638	4	2	.312 (7.92)	1.000 (25.40)	.250 (6.35)	NC23 - 50, 2-3/8 - 5-1/2 IF				●	●	●
V85 42F INT*	14638	4	2	.312 (7.92)	1.000 (25.40)	.250 (6.35)	VO.065*						
V85 435 INT	11638	4	3	.312 (7.92)	1.000 (25.40)	.250 (6.35)	5-1/2 REG, 7-5/8 REG, 8-5/8 REG				●		●
V85 438 INT	12638	4	3	.312 (7.92)	1.000 (25.40)	.250 (6.35)	NC56 - NC71				●		●
V85 530 INT	13638	5	3	.312 (7.92)	1.000 (25.40)	.250 (6.35)	3-1/2FH, 2-3/8 - 4-1/2 REG				●		●
V85 4PAC INT	15638	4	1-1/2	.312 (7.92)	1.000 (25.40)	.250 (6.35)	2-3/8 - 4-1/2 AMERICAN/PAC				●		

* Obsolescent thread form, See A.P.I. Spec 7, 35th Edition, May 1, 1995, Section 9.4

API ROUND THREADING

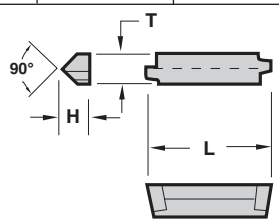
V84



Description	EDP Code	TPI	TPF	T	L	H	Uncoated C3	TiN Coated GP3	TiN Coated GP5	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
V84 10RD EXT	34614	10	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●		●
V84 10RD INT	34618	10	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●		●
V84 8RD EXT	32614	8	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●	●	●
V84 8RD INT	32618	8	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●	●	●

API VAM THREADING

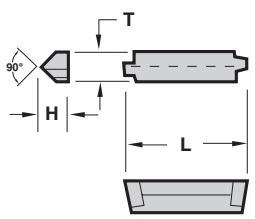
V84

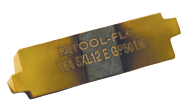


Description	EDP Code	TPI	TPF	T	L	H	Uncoated C3	TiN Coated GP3	TiN Coated GP5	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
V84 5 VAM EXT	23614	5	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●		
V84 5 VAM INT	23618	5	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●		
V84 6 VAM EXT	24614	6	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●		
V84 6 VAM INT	24618	6	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●		
V84 8 VAM EXT	25614	8	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●		
V84 8 VAM INT	25618	8	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●		

API X-LINE THREADING

V84

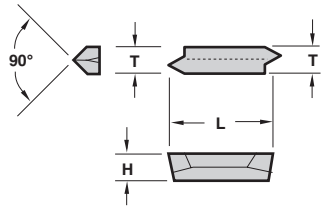




Description	EDP Code	TPI	TPF	T	L	H	Connection	Uncoated C3	TiN Coated GP3	TiN Coated GP5	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
V84 5XL12 EXT	18614	5	1-1/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)	8-5/8 - 10-3/4				●		
V84 5XL12 INT	18618	5	1-1/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)	8-5/8 - 10-3/4				●		
V84 6XL15 EXT	19614	6	1-1/2	.250 (6.35)	1.000 (25.40)	.250 (6.35)	5 - 7-5/8				●		
V84 6XL15 INT	19618	6	1-1/2	.250 (6.35)	1.000 (25.40)	.250 (6.35)	5 - 7-5/8				●		
V84 6XL75 EXT	20614	6	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)	-				●		
V84 6XL75 INT	20618	6	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)	-				●		

NPT THREADING

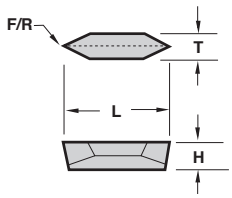
V84



Description	EDP Code	Pipe Size	TPI	TPF	T	L	H	Uncoated C3	TiN Coated GP3	TiN Coated GP5	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
V84 8NPT EXT	3661084	2-1/2" - up	8	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●		
V84 8NPT INT	3661088	2-1/2" - up	8	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●		
V84 11.5NPT EXT	3661114	1" - 2"	11.5	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●		
V84 11.5NPT INT	3661118	1" - 2"	11.5	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●		
V84 14NPT EXT	3661144	1/2" - 3/4"	14	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●		
V84 14NPT INT	3661148	1/2" - 3/4"	14	3/4	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●		

60° V-THREADING

V84/V85

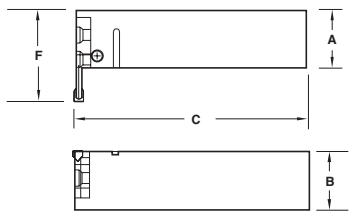


Description	EDP Code	TPI	F	T	L	H	Uncoated C25	TiN Coated GP3	TiN Coated GP5	TiN Coated GP50	AlTiN Coated AC3	AlTiN Coated AC50
V84 NV	0161000	5-20	.006/.008	.250 (6.35)	1.000 (25.40)	.250 (6.35)	●	●		●		●
V84 NV .010R	0161R10	4-20	.010R	.250 (6.35)	1.000 (25.40)	.250 (6.35)		●		●		●
V84 NV .020R	0161R20	4-12	.020R	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●		
V84 NV .025R	0161R25	4-8	.025R	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●		
V84 NV .038R	0161R38	4-6	.038R	.250 (6.35)	1.000 (25.40)	.250 (6.35)				●		
V85 NV	0163000	5-20	.006/.008	.312 (7.92)	1.000 (25.40)	.250 (6.35)		●		●		●

EXTERNAL 90° HOLDER

CDHOR/L

Inch



RH SHOWN

RH Holders use LH components - See pages 129.

PARTS

Description	EDP Code	A	B	C	F* .312(1)	F* .812(1)	Clamp Screw	Stop Screw	Anvil Screw
CDHOR-16	92101600	1	1	6	1.312	1.812	SB90	SS20	SF95
CDHOL-16	92001600	1	1	6	1.312	1.812	SB90	SS20	SF95
CDHOR-20	92102000	1-1/4	1-1/4	6	1.562	2.062	SB90	SS20	SF95
CDHOL-20	92002000	1-1/4	1-1/4	6	1.562	2.062	SB90	SS20	SF95
CDHOR-24	92102400	1-1/2	1-1/2	6	1.812	2.312	SB90	SS20	SF95
CDHOL-24	92002400	1-1/2	1-1/2	6	1.812	2.312	SB90	SS20	SF95

*The "f" dimension is determined by the D.O.C. of the anvil. (1) Anvil D.O.C.

Metric

PARTS

Description	EDP Code	A	B	C	F* .312(1)	F* .812(1)	Clamp Screw	Stop Screw	Anvil Screw
CDHOR-25MM	92112500	25.00	25.00	150.00	33.32	46.02	SBM90	SSM20	SFM95
CDHOL-25MM	92012500	25.00	25.00	150.00	33.32	46.02	SBM90	SSM20	SFM95
CDHOR-32MM	92113200	32.00	32.00	150.00	39.67	52.37	SBM90	SSM20	SFM95
CDHOL-32MM	92013200	32.00	32.00	150.00	39.67	52.37	SBM90	SSM20	SFM95
CDHOR-40MM	92114000	40.00	40.00	150.00	46.02	58.72	SBM90	SSM20	SFM95
CDHOL-40MM	92014000	40.00	40.00	150.00	46.02	58.72	SBM90	SSM20	SFM95

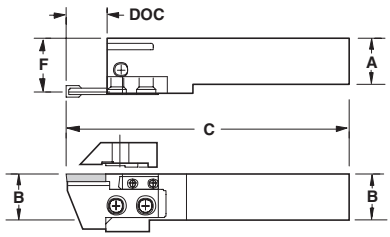
*The "f" dimension is determined by the D.O.C. of the anvil. (1) Anvil D.O.C.

EXTERNAL STRAIGHT HOLDER

CDVOR/L

Inch

■ RH Holders use RH components - See below..



RH SHOWN

PARTS

Description	EDP Code	A	B	C	F	Clamp Screw	Stop Screw	Anvil Screw
CDVOR-16	92401600	1	1	*	1.150	SB90	SS20	SF95
CDVOL-16	92301600	1	1	*	1.150	SB90	SS20	SF95
CDVOR-20	92402000	1-1/4	1-1/4	*	1.400	SB90	SS20	SF95
CDVOL-20	92302000	1-1/4	1-1/4	*	1.400	SB90	SS20	SF95
CDVOR-24	92402400	1-1/2	1-1/2	*	1.650	SB90	SS20	SF95
CDVOL-24	92302400	1-1/2	1-1/2	*	1.650	SB90	SS20	SF95

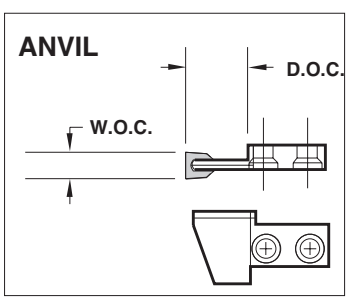
*The "C" dimension is determined by the D.O.C. of the anvil. If the D.O.C. is .312, C=5.500. If the D.O.C. is .812, C=6.000.

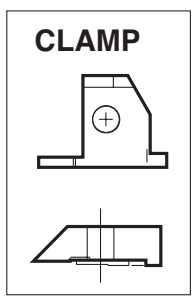
Metric

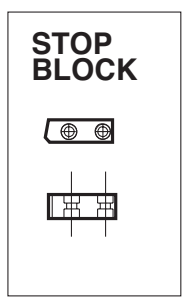
PARTS

Description	EDP Code	A	B	C	F	Clamp Screw	Stop Screw	Anvil Screw
CDVOR-25MM	92412500	25.00	25.00	*	29.21	SBM90	SSM20	SFM95
CDVOL-25MM	92312500	25.00	25.00	*	29.21	SBM90	SSM20	SFM95
CDVOR-32MM	92413200	32.00	32.00	*	35.56	SBM90	SSM20	SFM95
CDVOL-32MM	92313282	32.00	32.00	*	35.56	SBM90	SSM20	SFM95
CDVOR-40MM	92414000	40.00	40.00	*	41.91	SBM90	SSM20	SFM95
CDVOL-40MM	92314000	40.00	40.00	*	41.91	SBM90	SSM20	SFM95

*The "C" dimension is determined by the D.O.C. of the anvil. If the D.O.C. is .312, C=5.500. If the D.O.C. is .812, C=6.000.







Anvil	EDP Code	Insert	DOC	WOC	Clamp	Stop Block
AHR-118	9140118	VDB125	.812 (20.62)	.105-.125 (2.67-3.18)	CHR-182	SBH-2
AHL-118	9130118	VDB125	.812 (20.62)	.105-.125 (2.67-3.18)	CHL-182	SBH-2
AHR-148	9140148	V84/V85	.812 (20.62)	.220-.250 (5.59-6.35)	CHR-482	SBH-2
AHL-148	9130148	V84/V85	.812 (20.62)	.220-.250 (5.59-6.35)	CHL-482	SBH-2
AHR-173	9140173	V84/V85	.312 (7.92)	V-THREAD	CHR-431	SBH-1
AHL-173	9130173	V84/V85	.312 (7.92)	V-THREAD	CHL-431	SBH-1
AHR-113	9140113	DBP24/VDB125	.312 (7.92)	.105-.125 (2.67-3.18)	CHR-132	SBH-1
AHL-113	9130113	DBP24/VDB125	.312 (7.92)	.105-.125 (2.67-3.18)	CHL-132	SBH-1
AHR-138	9140138	DBP34/VDB188	.812 (20.62)	.170-.188 (4.32-4.78)	CHR-382	SBH-2
AHL-138	9130138	DBP34/VDB188	.812 (20.62)	.170-.188 (4.32-4.78)	CHL-382	SBH-2
AHR-148	9140148	VDB250A	.812 (20.62)	.220-.250 (5.59-6.35)	CHR-482	SBH-2
AHL-148	9130148	VDB250A	.812 (20.62)	.220-.250 (5.59-6.35)	CHL-482	SBH-2
AHR-248	9140248	DBP45/VDB250B	.812 (20.62)	.250-.312 (6.35-7.93)	CHR-482	SBH-2
AHL-248	9130248	DBP45/VDB250B	.812 (20.62)	.250-.312 (6.35-7.93)	CHL-482	SBH-2
AHR-268	9140268	DBP65/VDB375	.812 (20.62)	.350-.375 (8.89-9.53)	CHR-582	SBH-2
AHL-268	9130268	DBP65/VDB375	.812 (20.62)	.350-.375 (8.89-9.53)	CHL-582	SBH-2

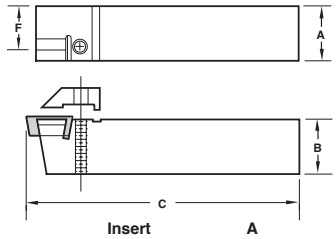
EXTERNAL STRAIGHT HOLDER

CDVOR/L/C

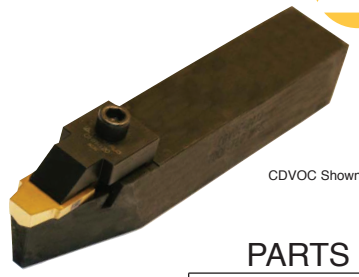
One piece design

Inch

■ RH Holders use RH clamps



CDVOR Shown



CDVOC Shown

PARTS

Description	EDP Code	Insert	A	B	C	F	Clamp	Clamp Screw
CDVOR-168	92401682	V84/V85	1	1	6	0.875	CHR-431	SB90
CDVOL-168	92301682	V84/V85	1	1	6	0.875	CHL-431	SB90
CDVOR-208	92402082	V84/V85	1-1/4	1-1/4	6	1.125	CHR-431	SB90
CDVOL-208	92302082	V84/V85	1-1/4	1-1/4	6	1.125	CHL-431	SB90
CDVOR-209	92402086	V96/V98	1-1/4	1-1/4	7	1.000	CHR-98	SS100
CDVOL-209	92302086	V96/V98	1-1/4	1-1/4	7	1.000	CHR-98	SS100
CDVOC-2012	92202090	V120	1-1/4	1-1/4	7	0.625	CHR-120	SS90

Metric

PARTS

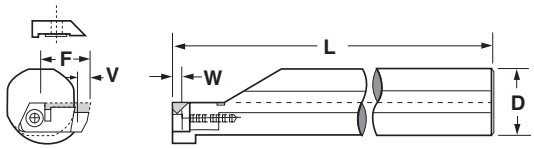
Description	EDP Code	Insert	A	B	C	F	Clamp	Clamp Screw
CDVOR-25M8	92412582	V84/V85	25,0	25,0	150,0	21,8	CHR-431	SB90
CDVOL-25M8	92312582	V84/V85	25,0	25,0	150,0	21,8	CHL-431	SB90
CDVOR-32M8	92413282	V84/V85	32,0	32,0	150,0	28,8	CHR-431	SB90
CDVOL-32M8	92313282	V84/V85	32,0	32,0	150,0	28,8	CHL-431	SB90
CDVOR-32M9	92413286	V96/V98	32,0	32,0	180,0	25,5	CHR-98	SS100
CDVOC-32M12	92413290	V120	32,0	32,0	180,0	22,5	CHR-120	SS90

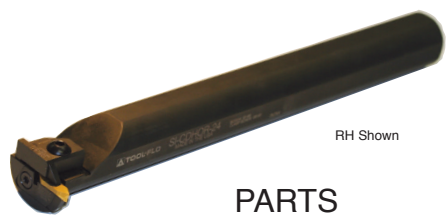
INTERNAL BAR

SI-CDHOR

Inch

■ RH Holders use LH components





RH Shown

PARTS

Description	EDP Code	Insert	D	L	W	V	F	Min. Bore	D.O.C. at Min. Bore	Anvil	Anvil Screw	Clamp	Clamp Screw
SI-CDHOR-24	96802400	V84/V85	1-1/2	14	.188-.250	.180	1.062	1.880	.080	ABL/R-131	SF69	CBL/R-411	SB90
SI-CDHOL-24	96702400	V84/V85			60°V	.180	1.062	1.880	.080	ABL/R-171	SF69	CBL/R-411	SB90
		V85			.295.312	.312	1.062	1.880	.080	ABL/R-143	SF69	CBL/R-531	SB90
		DBP24/VDB125			.105-.125	.312	1.062	1.880	.240	ABL/R-113	SF69	CBL.R-132	SB90
		DBP34/VDB188			.170-.188	.530	1.280	2.098	.240	ABL/R-135	SF69	CBL/R-352	SB90
		VDB250A			.220-.250	.530	1.280	2.098	.240	ABL/R-145	SF69	CBL/R-452	SB90
		DBP45/VDB250B			.220-.250	.530	1.280	2.098	.240	ABL/R-245	SF69	CBL/R-452	SB90

Metric

PARTS

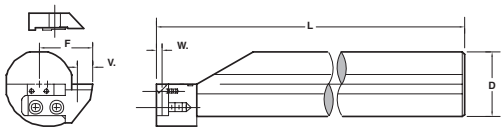
Description	EDP Code	Insert	D	L	W	V	F	Min. Bore	D.O.C. at Min. Bore	Anvil	Anvil Screw	Clamp	Clamp Screw
SI-CDHOR-40MM	96814000	V84	40,0	360,0	5,5-6,5	4,5	28,9	48,0	2,0	ABL/R-131	SF69	CBL/R-411	SB90
		V84			60°V	4,5	28,9	48,0	2,0	ABL/R-171	SF69	CBL/R-411	SB90
		V85			7,5-8,0	7,9	28,9	48,0	2,0	ABL/R-143	SF69	CBL/R-531	SB90
		DBP24/VDB125			2,6-3,2	7,9	28,9	53,5	6,0	ABL/R-113	SF69	CBL.R-132	SB90
		DBP34/VDB188			4,3-4,8	13,6	34,3	53,5	6,0	ABL/R-135	SF69	CBL/R-352	SB90
		VDB250A			5,5-6,5	13,6	34,3	53,5	6,0	ABL/R-145	SF69	CBL/R-452	SB90
		DBP45/VDB250B			5,5-6,5	13,6	34,3	53,5	6,0	ABL/R-245	SF69	CBL/R-452	SB90

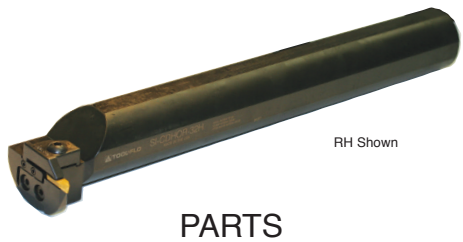
INTERNAL BAR

SI-CDHOR

Inch

■ RH Holders use LH components




RH Shown

PARTS

Description	EDP Code	Insert	D	L	W	V	F	Min. Bore	D.O.C. at Min. Bore	Anvil	Anvil Screw	Clamp	Clamp Screw	Stop Block	SBH Screw
SI-CDHOR-32H	96803200H	V84/V85	2	16	.220-.250	.312	1.584	3.000	.150	AHL/R-148	SF95	CHL/R-482	SB90	SBH-1	SS-20
SI-CDHOL-32H	96703200H	V84/V85			60°V	.312	1.584	3.000	.150	AHL/R-173	SF95	CHL/R-431	SB90	SBH-1	SS-20
		DBP34/VDB188			.170-.188	.625	1.592	3.000	.270	AHL/R-138	SF95	CHL/R-382	SB90	SBH-2	SS-20
		VDB250A			.220-.250	.625	1.592	3.000	.270	AHL/R-148	SF95	CHL/R-482	SB90	SBH-2	SS-20
		DBP45/VDB250B			.220-.250	.625	1.592	3.000	.270	AHL/R-248	SF95	CHL/R-482	SB90	SBH-2	SS-20

Metric

PARTS

Description	EDP Code	Insert	D	L	W	V	F	Min. Bore	D.O.C. at Min. Bore	Anvil	Anvil Screw	Clamp	Clamp Screw	Stop Block	SBH Screw
SI-CDHOR-50MM	96815000	V84/V85	50,0	400,0	5,5-6,5	7,9	39,5	76,2	2,0	AHL/R-148	SF95	CHL/R-482	SB90	SBH-1	SS-20
		V84/V85			60°V	7,9	39,5	76,2	2,0	AHL/R-173	SF95	CHL/R-431	SB90	SBH-1	SS-20
		DBP34/VDB188			4,3-4,8	20,6	40,0	76,2	6,0	AHL/R-138	SF95	CHL/R-382	SB90	SBH-2	SS-20
		VDB250A			5,5-6,5	20,6	40,0	76,2	6,0	AHL/R-148	SF95	CHL/R-482	SB90	SBH-2	SS-20
		DBP45/VDB250B			5,5-6,5	20,6	40,0	76,2	6,0	AHL/R-248	SF95	CHL/R-482	SB90	SBH-2	SS-20

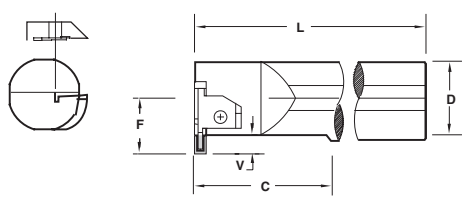
INTERNAL BAR

SI-CDHOR/L

One piece design

Inch

■ RH Holders use LH components




RH Shown

PARTS

Description	EDP Code	Insert	Min. Bore	D	L	C	F	V	D.O.C. at Min. Bore	Clamp Screw	Clamp
SI-CDHOR-168	96801682	V84/V85	2.500	1	10	3	.687	.270	.200	S526	CBL-84
SI-CDHOL-168	96701682	V84/V85	2.500	1	10	3	.687	.270	.200	S526	CBR-84
SI-CDHOR-208	96802082	V84/V85	2.500	1-1/4	12	-	.875	.285	.250	S526	CBL-84
SI-CDHOL-208	96702082	V84/V85	2.500	1-1/4	12	-	.875	.285	.250	S526	CBR-84
SI-CDHOR-329	96803286	V96/V98	3.100	2	16	-	1.530	.325	.312	SS110	CBL-98
SI-CDHOL-329	96703286	V96/V98	3.100	2	16	-	1.530	.325	.312	SS110	CBR-98
SI-CDHOR-409	96804086	V96/V98	4.000	2-1/2	16	-	1.575	.365	.312	SS110	CBL-98
SI-CDHOR-4012	96804092	V120	4.000	2-1/2	16	8.062	1.575	.570	.500	SB100	CBL-120
SI-CDHOL-4012	96704092	V120	4.000	2-1/2	16	8.062	1.575	.570	.500	SB100	CBL-120

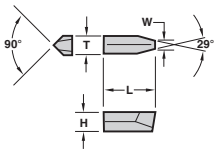
Metric

PARTS

Description	EDP Code	Insert	Min. Bore	D	L	F	V	D.O.C. at Min. Bore	Clamp Screw	Clamp
SI-CDHOR-25M8	96812582	V84/V85	30,15	25,0	250,0	17,4	6,4	4,8	S526	CBL-84
SI-CDHOL-25M8	96712582	V84/V85	30,15	25,0	250,0	17,4	6,4	4,8	S526	CBR-84
SI-CDHOR-32M8	96813282	V84/V85	38,1	32,0	300,0	18,5	6,4	4,8	S526	CBL-84
SI-CDHOL-32M8	96713282	V84/V85	38,1	32,0	300,0	18,5	6,4	4,8	S526	CBR-84
SI-CDHOR-50M9	96815086	V96/V98	63,5	50,0	400,0	38,8	9,2	7,9	SS110	CBL-98
SI-CDHOL-50M9	96715086	V96/V98	63,5	50,0	400,0	38,8	9,2	7,9	SS110	CBR-98
SI-CDHOR-65M9	96816586	V96/V98	76,2	65,0	400,0	40,0	9,2	9,5	SS110	CBL-98
SI-CDHOR-65M12	96816590	V120	76,2	65,0	400,0	40,0	14,0	12,7	SB100	CBL-120

ACME THREADING

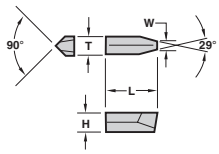
MLPE



Description	EDP Code	TPI	W	T	L	H	TiN Coated GP22	AlTiN Coated AC22
MLPE 2532 NT 4P	0271040	4	.0875 (2.22)	.188 (4.78)	.500 (12.70)	.150 (3.81)	●	●
MLPE 3425 NT 4P	0273040	4	.0875 (2.22)	.250 (6.35)	.625 (15.88)	.188 (4.78)	●	●
MLPE 2532 NT 5P	0271050	5	.0689 (1.75)	.188 (4.78)	.500 (12.70)	.150 (3.81)	●	●
MLPE 3425 NT 5P	0273050	5	.0689 (1.75)	.250 (6.35)	.625 (15.88)	.188 (4.78)	●	●
MLPE 2532 NT 6P	0271060	6	.0566 (1.44)	.188 (4.78)	.500 (12.70)	.150 (3.81)	●	●
MLPE 3425 NT 6P	0273060	6	.0566 (1.44)	.250 (6.35)	.625 (15.88)	.188 (4.78)	●	●
MLPE 2532 NT 8P	0271080	8	.0411 (1.04)	.188 (4.78)	.500 (12.70)	.150 (3.81)	●	●
MLPE 3425 NT 8P	0273080	8	.0411 (1.04)	.250 (6.35)	.625 (15.88)	.188 (4.78)	●	●
MLPE 2532 NT 10P	0271100	10	.0319 (0.81)	.188 (4.78)	.500 (12.70)	.150 (3.81)	●	●
MLPE 3425 NT 10P	0273100	10	.0319 (0.81)	.250 (6.35)	.625 (15.88)	.188 (4.78)	●	●
MLPE 2532 NT 12P	0271120	12	.0283 (0.72)	.188 (4.78)	.500 (12.70)	.150 (3.81)	●	●
MLPE 3425 NT 12P	0273120	12	.0283 (0.72)	.250 (6.35)	.625 (15.88)	.188 (4.78)	●	●

ACME STUB THREADING

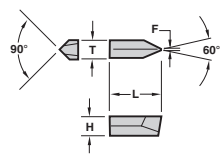
MLPE



Description	EDP Code	TPI	W	T	L	H	GP22	AC22
MLPE 2532 NT 4P STUB	0271041	4	.1004 (2.55)	.188 (4.78)	.500 (12.70)	.150 (3.81)	●	●
MLPE 3425 NT 4P STUB	0273041	4	.1004 (2.55)	.250 (6.35)	.625 (15.88)	.188 (4.78)	●	●
MLPE 2532 NT 5P STUB	0271051	5	.0793 (2.01)	.188 (4.78)	.500 (12.70)	.150 (3.81)	●	●
MLPE 3425 NT 5P STUB	0273051	5	.0793 (2.01)	.250 (6.35)	.625 (15.88)	.188 (4.78)	●	●
MLPE 2532 NT 6P STUB	0271061	6	.0652 (1.66)	.188 (4.78)	.500 (12.70)	.150 (3.81)	●	●
MLPE 3425 NT 6P STUB	0273061	6	.0652 (1.66)	.250 (6.35)	.625 (15.88)	.188 (4.78)	●	●
MLPE 2532 NT 8P STUB	0271081	8	.0476 (1.21)	.188 (4.78)	.500 (12.70)	.150 (3.81)	●	●
MLPE 3425 NT 8P STUB	0273081	8	.0476 (1.21)	.250 (6.35)	.625 (15.88)	.188 (4.78)	●	●
MLPE 2532 NT 10P STUB	0271101	10	.0370 (0.94)	.188 (4.78)	.500 (12.70)	.150 (3.81)	●	●
MLPE 3425 NT 10P STUB	0273101	10	.0370 (0.94)	.250 (6.35)	.625 (15.88)	.188 (4.78)	●	●
MLPE 2532 NT 12P STUB	0271121	12	.0326 (0.83)	.188 (4.78)	.500 (12.70)	.150 (3.81)	●	●
MLPE 3425 NT 12P STUB	0273121	12	.0326 (0.83)	.250 (6.35)	.625 (15.88)	.188 (4.78)	●	●

V-THREADING - 60°

MLPE



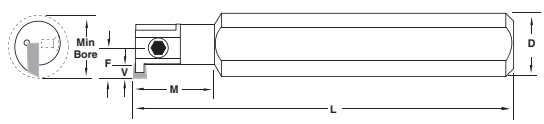
Description	EDP Code	TPI	F	T	L	H	GP54	AC22	AC54
MLPE 1251 NV	01720000	10-20	.002-.004 (0.05-010)	.160 (4.06)	.340 (8.64)	.115 (2.92)	●	●	●
MLPE 2532 NV	01710000	6-20	.002-.004 (0.05-010)	.188 (4.78)	.500 (12.70)	.150 (3.81)	●	●	●
MLPE 3425 NV	01730000	5-20	.003-.006 (0.08-015)	.250 (6.35)	.625 (15.88)	.188 (4.78)	●		●

INTERNAL BAR

MS-CDHOR/L

One piece design

■ RH Bars use RH clamps



RH Shown

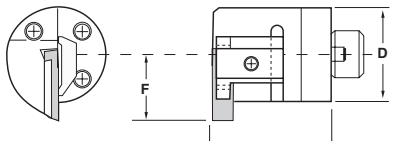
PARTS

Description	EDP Code	Insert	Min. Bore	D	M	L	F	V	Clamp Screw	Clamp
MS-CLHOR-46254	951546254	MLPE 1251	.500 (12.70)	.500 (12.70)	.930 (23.62)	6.000 (150)	.265 (6.73)	.079 (2.01)	SF20	MCR-30
MS-CLHOL-46254	951346254	MLPE 1251	.500 (12.70)	.500 (12.70)	.930 (23.62)	6.000 (150)	.265 (6.73)	.079 (2.01)	SF20	MCL-30
MS-CLHOR-6845	95156845	MLPE 2532	.700 (17.78)	.750 (19.05)	1.250 (31.75)	8.000 (200)	.400 (10.16)	.150 (3.81)	SF47	MCR-40
MS-CLHOL-6845	95256845	MLPE 2532	.700 (17.78)	.750 (19.05)	1.250 (31.75)	8.000 (200)	.400 (10.16)	.150 (3.81)	SF47	MCL-40
MS-CLHOR-6856	95156856	MLPE 3425	.830 (21.08)	.750 (19.05)	1.500 (38.10)	8.000 (200)	.462 (11.73)	.150 (3.81)	SA4	MCR-50
MS-CLHOL-6856	95256856	MLPE 3425	.830 (21.08)	.750 (19.05)	1.500 (38.10)	8.000 (200)	.462 (11.73)	.150 (3.81)	SA4	MCL-50
MS-CLHOR-8845	95158845	MLPE 2532	.830 (21.08)	1.000 (25.40)	1.500 (38.10)	8.000 (200)	.462 (11.73)	.150 (3.81)	SA4	MCR-40
MS-CLHOL-8845	95258845	MLPE 2532	.830 (21.08)	1.000 (25.40)	1.500 (38.10)	8.000 (200)	.462 (11.73)	.150 (3.81)	SA4	MCL-40
MS-CLHOR-8856	95158856	MLPE 3425	.830 (21.08)	1.000 (25.40)	1.500 (38.10)	8.000 (200)	.462 (11.73)	.150 (3.81)	SA4	MCR-50
MS-CLHOL-8856	95258856	MLPE 3425	.830 (21.08)	1.000 (25.40)	1.500 (38.10)	8.000 (200)	.462 (11.73)	.150 (3.81)	SA4	MCL-50

INTERCHANGEABLE HEADS

H-CDHOR/L*

Inch



RH SHOWN

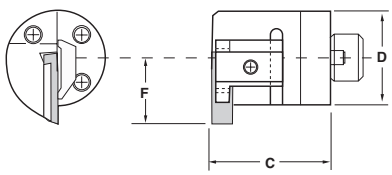
PARTS

Description	EDP Code	Insert	d	C	F	Min. Bore	Clamp	Clamp Screw
H16-CDHOR-8	9IH6801682	V84/V85	1.000	1.625	0.925	1.525	CBL-84	S-526
H20-CDHOR-8	9IH6802082	V84/V85	1.250	1.625	0.875	1.600	CBL-84	S-526
H24-CDHOR-8	9IH6802482	V84/V85	1.500	1.625	1.000	1.850	CBL-84	S-526
H32-CDHOR-8	9IH6803282	V84/V85	2.000	1.625	1.285	2.385	CBL-84	S-526
H40-CDHOR-8	9IH6804082	V84/V85	2.500	1.625	1.500	2.850	CBL-84	S-526
H32-CDHOR-9	9IH6803286	V96/V98	2.000	1.625	1.410	2.510	CBL-98	SS110
H40-CDHOR-9	9IH6804086	V96/V98	2.500	1.625	1.584	2.935	CBL-98	SS110
H40-CDHOR-12	9IH6804092	V120	2.500	1.625	1.820	3.170	CBL-120	SB100

*Left hand quoted on request.

H-CDHOR/L*

Metric



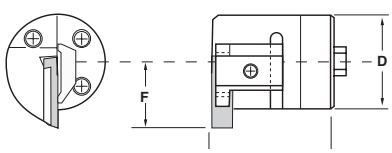
RH SHOWN

PARTS

Description	EDP Code	Insert	d	C	F	Min. Bore	Clamp	Clamp Screw
H25M-CDHOR-8	9IH68025M82	V84/V85	25	41.28	23.50	38.74	CBLM-84	SM526
H32M-CDHOR-8	9IH68032M82	V84/V85	32	41.28	22.23	40.64	CBLM-84	SM526
H40M-CDHOR-8	9IH68040M82	V84/V85	40	41.28	25.40	46.99	CBLM-84	SM526
H50M-CDHOR-8	9IH68050M82	V84/V85	50	41.28	32.64	60.58	CBLM-84	SM526
H60M-CDHOR-8	9IH68060M82	V84/V85	60	41.28	38.10	72.39	CBLM-84	SM526
H50M-CDHOR-9	9IH68050M86	V96/V98	50	41.28	35.81	63.75	CBL-98	SSM110
H60M-CDHOR-9	9IH68060M86	V96/V98	60	41.28	40.23	74.55	CBL-98	SSM110
H60M-CDHOR-12	9IH68060M92	V120	60	41.28	46.23	80.52	CBL-120	SBM100

*Left hand quoted on request.

HS-CDHOR/L*



RH SHOWN

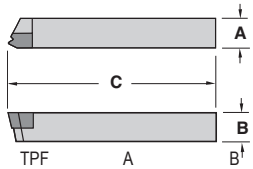
PARTS

Description	EDP Code	Insert	d	C	F	Min. Bore	Clamp	Clamp Screw
HS25-CDHOR-8	9IHS68025M82	V84/V85	0.984	1.355	0.925	1.517	CBL-84	S-526
HS32-CDHOR-8	9IHS68032M82	V84/V85	1.260	1.625	0.875	1.600	CBL-84	S-526
HS40-CDHOR-8	9IHS68040M82	V84/V85	1.575	1.625	1.084	1.971	CBL-84	S-526
HS50-CDHOR-8	9IHS68050M82	V84/V85	1.970	1.625	1.281	2.366	CBL-84	S-526
HS60-CDHOR-8	9IHS68060M82	V84/V85	2.360	1.625	1.476	2.756	CBL-84	S-526
HS50-CDHOR-9	9IHS68050M86	V96/V98	1.970	1.625	1.362	2.447	CBL-98	SS110
HS60-CDHOR-9	9IHS68060M86	V96/V98	2.360	1.625	1.558	2.838	CBL-98	SS110
HS60-CDHOR-12	9IHS68060M92	V120	2.360	1.625	1.750	3.030	CBL-120	SB100

*Left hand quoted on request.
570 type connection

BRAZED TOOLS

THREADING

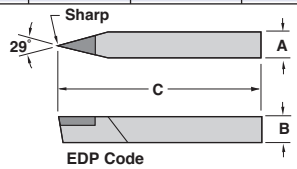


Description	EDP Code	TPI	TPF	A	B	C	Conn No orSize
B6 10RD EXT	77134E	10	3/4	3/8	3/8	2-1/2	-
B6 10RD INT	77134I	10	3/4	3/8	3/8	2-1/2	-
B8 NT - NO PITCH	77304A	8	3/4	1/2	1/2	4	-
B8 8RD EXT	77332E	8	3/4	1/2	1/2	4	-
B8 8RD INT	77332I	8	3/4	1/2	1/2	4	-
B8 10RD EXT	77334E	10	3/4	1/2	1/2	4	-
B8 10RD INT	77334I	10	3/4	1/2	1/2	4	-
B8 425 EXT	77309E	4	2	1/2	1/2	3-1/2	5-1/2 - 6-5/8 FH, 6-5/8 REG
B8 425 INT	77309I	4	2	1/2	1/2	3-1/2	5-1/2 - 6-5/8 FH, 6-5/8 REG
B8 428 EXT	77310E	4	2	1/2	1/2	3-1/2	NC23 - 50, 2-3/8 - 5-1/2 IF
B8 428 INT	77310I	4	2	1/2	1/2	3-1/2	NC23 - 50, 2-3/8 - 5-1/2 IF
B8 435 EXT	77311E	4	3	1/2	1/2	3-1/2	5-1/2 REG, 7-5/8 REG, 8-5/8 REG
B8 435 INT	77311I	4	3	1/2	1/2	3-1/2	5-1/2 REG, 7-5/8 REG, 8-5/8 REG
B8 438 EXT	77312E	4	3	1/2	1/2	3-1/2	NC56 - NC71
B8 438 INT	77312I	4	3	1/2	1/2	3-1/2	NC56 - NC71
B8 42F EXT*	77314E	4	2	1/2	1/2	3-1/2	VO.065*
B8 42F INT*	77314I	4	2	1/2	1/2	3-1/2	VO.065*
B8 530 EXT	77313E	5	3	1/2	1/2	3-1/2	3-1/2FH, 2-3/8 - 4-1/2 REG
B8 530 INT	77313I	5	3	1/2	1/2	3-1/2	3-1/2FH, 2-3/8 - 4-1/2 REG
B8 5B75 EXT	77316E	5	3/4	1/2	1/2	3-1/2	4-1/2 - 13-3/8
B8 5B75 INT	77316I	5	3/4	1/2	1/2	3-1/2	4-1/2 - 13-3/8
B8 5B1 EXT	77317E	5	1	1/2	1/2	3-1/2	16 AND LARGER
B8 5B1 INT	77317I	5	1	1/2	1/2	3-1/2	16 AND LARGER
B8 6XL15 EXT	77319E	6	1-1/2	1/2	1/2	3-1/2	5 - 7-5/8
B8 6XL15 INT	77319I	6	1-1/2	1/2	1/2	3-1/2	5 - 7-5/8
B8 6XL75 EXT	77320E	6	3/4	1/2	1/2	3-1/2	-
B8 6XL75 INT	77320I	6	3/4	1/2	1/2	3-1/2	-
B8 8B75 EXT	77321E	8	3/4	1/2	1/2	3-1/2	U.S. IMPROVED BUTTRESS
B8 8B75 INT	77321I	8	3/4	1/2	1/2	3-1/2	U.S. IMPROVED BUTTRESS
B8 8PA75 EXT	77322E	8	3/4	1/2	1/2	3-1/2	-
B8 8PA75 INT	77322I	8	3/4	1/2	1/2	3-1/2	-
B10 NT NO PITCH	77504A	-	-	5/8	5/8	4	-
B10 NT 2P	77504C	2	-	5/8	5/8	4	-
B10 NT 4P	77504E	4	-	5/8	5/8	4	-
B10 8RD EXT	77532E	8	3/4	5/8	5/8	4	-
B10 8RD INT	77532I	8	3/4	5/8	5/8	4	-
B10 10RD EXT	77534E	10	3/4	5/8	5/8	4	-
B10 10RD INT	77534I	10	3/4	5/8	5/8	4	-
B10 425 EXT	77509E	4	2	5/8	5/8	3-1/2	5-1/2 - 6-5/8 FH, 6-5/8 REG
B10 425 INT	77509I	4	2	5/8	5/8	3-1/2	5-1/2 - 6-5/8 FH, 6-5/8 REG
B10 428 EXT	77510E	4	2	5/8	5/8	3-1/2	NC23 - 50, 2-3/8 - 5-1/2 IF
B10 428 INT	77510I	4	2	5/8	5/8	3-1/2	NC23 - 50, 2-3/8 - 5-1/2 IF
B10 435 EXT	77511E	4	3	5/8	5/8	3-1/2	5-1/2 REG, 7-5/8 REG, 8-5/8 REG
B10 435 INT	77511I	4	3	5/8	5/8	3-1/2	5-1/2 REG, 7-5/8 REG, 8-5/8 REG
B10 438 EXT	77512E	4	3	5/8	5/8	3-1/2	NC56 - NC71
B10 438 INT	77512I	4	3	5/8	5/8	3-1/2	NC56 - NC71
B10 42F EXT*	77514E	4	2	5/8	5/8	3-1/2	VO.065*
B10 42F INT*	77514I	4	2	5/8	5/8	3-1/2	VO.065*
B10 530 EXT	77513E	5	3	5/8	5/8	3-1/2	3-1/2FH, 2-3/8 - 4-1/2 REG
B10 530 INT	77513I	5	3	5/8	5/8	3-1/2	3-1/2FH, 2-3/8 - 4-1/2 REG
B10 5B75 EXT	77516E	5	3/4	5/8	5/8	3-1/2	4-1/2 - 13-3/8
B10 5B75 INT	77516I	5	3/4	5/8	5/8	3-1/2	4-1/2 - 13-3/8
B10 5B1 EXT	77517E	5	1	5/8	5/8	3-1/2	16 AND LARGER
B10 5B1 INT	77517I	5	1	5/8	5/8	3-1/2	16 AND LARGER
B10 6XL15 EXT	77518E	6	1-1/2	5/8	5/8	3-1/2	5 - 7-5/8
B10 6XL15 INT	77518I	6	1-1/2	5/8	5/8	3-1/2	5 - 7-5/8
B10 8B75 EXT	77521E	8	3/4	5/8	5/8	3-1/2	U.S. IMPROVED BUTTRESS
B10 8B75 INT	77521I	8	3/4	5/8	5/8	3-1/2	U.S. IMPROVED BUTTRESS
B10 H902 EXT	77528E	2	3-1/2	5/8	5/8	4	3-1/2 - 6-5/8 H90
B10 H902 INT	77528I	2	3-1/2	5/8	5/8	4	3-1/2 - 6-5/8 H90
B12 NT NO PITCH	77604A	-	-	3/4	3/4	4-1/2	-

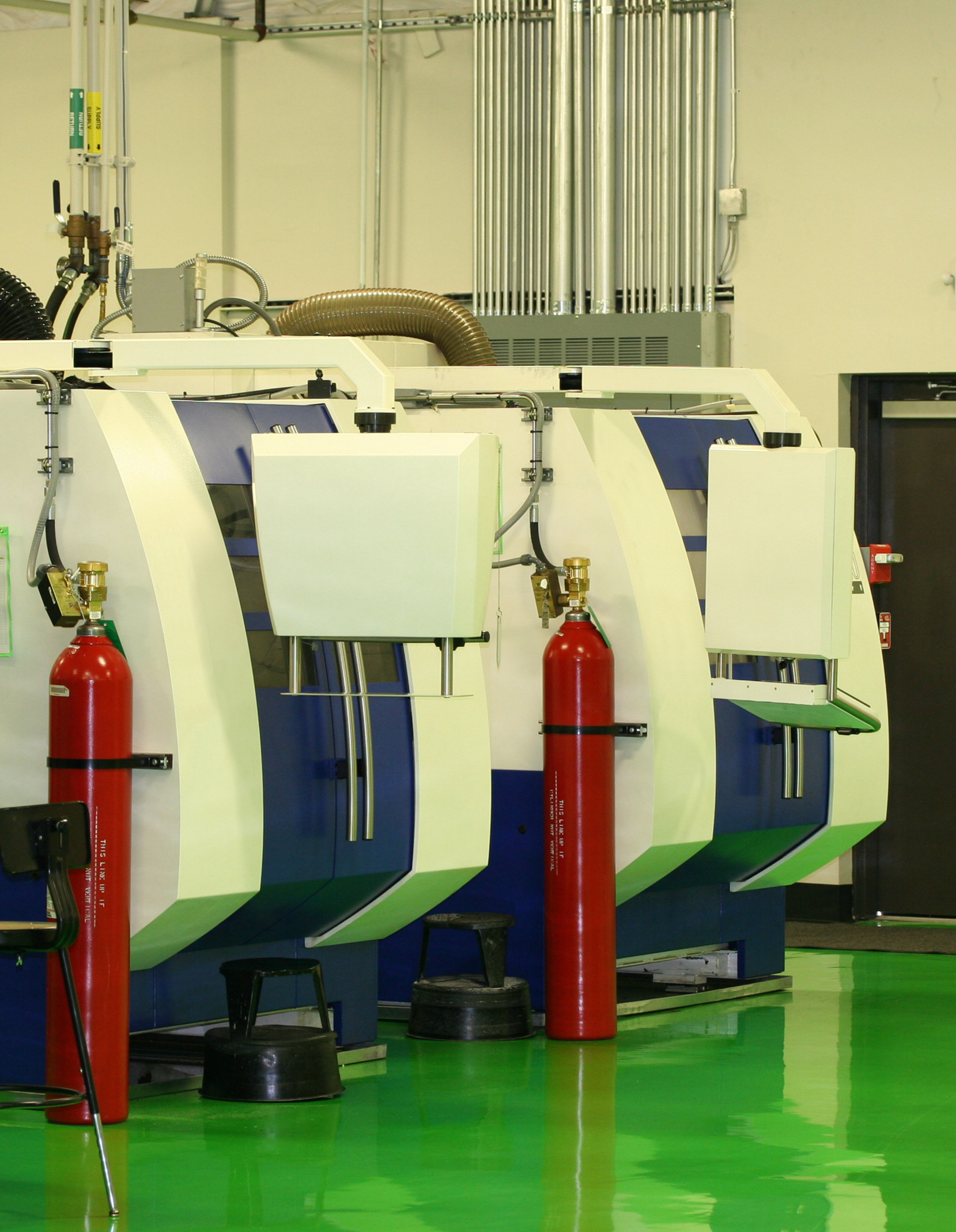
* Obsolescent thread form, See A.P.I. Spec 7, 35th Edition, May 1, 1995, Section 9.4

ACME THREADING

NO PITCH



Description	EDP Code	TPI	A	B	C
B6 NT NO PITCH	77104A	6-16	3/8	3/8	2-1/2
B8 NT NO PITCH	77304A	4-16	1/2	1/2	3-1/2
B10 NT NO PITCH	77504A	2-16	5/8	5/8	4
B12 NT NO PITCH	77604A	2-16	3/4	3/4	4-1/2



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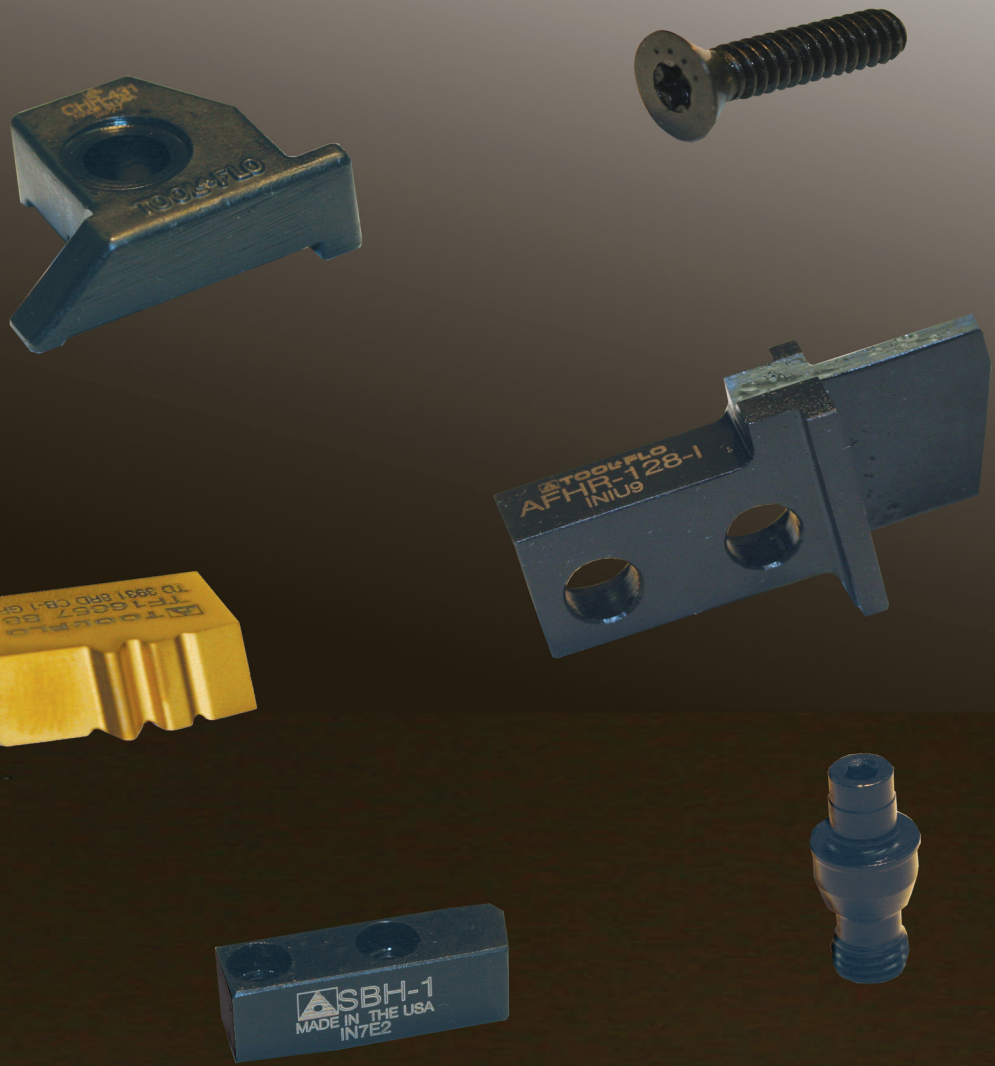


SPARE PARTS

SPARE PARTS

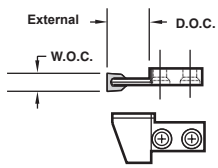
ANVILS

Threading

Internal

RH Shown

Description	D.O.C.	W.O.C.	Insert
ABL-113	7.92	2.67-3.18	DBP/VDB
ABR-113	7.92	2.67-3.18	DBP/VDB
ABL-131	4.57	4.78-6.35	V84/V85
ABR-131	4.57	4.78-6.35	V84/V85
ABL-135	13.46	4.32-4.78	DBP/VDB
ABR-135	13.46	4.32-4.78	DBP/VDB
ABL-143	7.92	7.49-7.93	V84/V85
ABR-143	7.92	7.49-7.93	V84/V85
ABL-145	13.46	5.59-6.35	VDB 250A
ABR-145	13.46	5.59-6.35	VDB 250A
ABL-171	4.57	60˚ V	V84/V85
ABR-171	4.57	60˚ V	V84/V85
ABL-245	13.46	5.59-6.35	DBP/VDB
ABR-245	13.46	5.59-6.35	DBP/VDB



RH Shown

AHL-138	20.62	4.32-4.78	VDB
AHR-138	20.62	4.32-4.78	VDB
AHL-148	20.62	5.59-6.35	VDB
AHR-148	20.62	5.59-6.35	VDB
AHL-173	20.62	V-THD	V84/V85
AHR-173	20.62	V-THD	V84/V85
AHL-248	20.62	6.35-7.93	VDB250B
AHR-248	20.62	6.35-7.93	VDB250B

FITTINGS

For Coolant Fed Clamps

1/8" (.125) NPT elbow
(Connection to clamp)

1/8" (.125) NPT straight
(Connection to clamp)

M6 x 1 elbow
(Connection to machine)

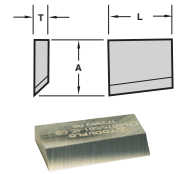
M6 x 1 straight
(Connection to machine)

1/8" NPT ELBOW	1/8" (0.125) x 27NPT
1/8" NPT STRAIGHT	1/8" (0.125) x 27NPT
M6X1 ELBOW	6MM X 1.0
M6X1 STRAIGHT	6MM X 1.0

CHIPBREAKERS

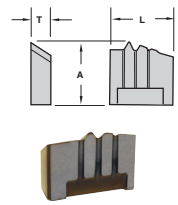
Description	Insert
CR 5B75/5B1-4E CB TF2993	CR-5B75-4E
CR 8R/10R-3E/4E CB 1353E	CR-8RD-3E
#3 CB w/o Coolant Grooves TF26424	CR-8R/10R-3E

External



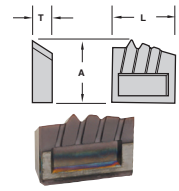
Description	Insert
TD4601 5B75-1 CB	CR-5B75-3E #1
TD4602 5B75-2 CB	CR-5B75-3E #2
TD4603 5B75-3 CB	CR-5B75-3E #3
TD3931 8RD-1 CB	CR-8R-3E #1
TD3932 8RD-2 CB	CR-8R-3E #2
TD3933 8RD-3 CB	CR-8R-3E #3
TA2237 10RD-1 CB	CR-10R-3E #1
TA2238 10RD-2 CB	CR-10R-3E #2
TA2239 10RD-3 CB	CR-10R-3E #3
#3 CB w/Coolant Grooves .170	CR-8R/10R-3E

External
with coolant grooves



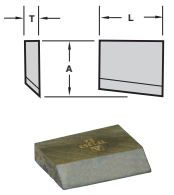
Description	Insert
TD4601 5B75-1 CB W/CAVITY	CR-5B75-3E #1
TD4602 5B75-2 CB W/CAVITY	CR-5B75-3E #2
TD4603 5B75-3 CB W/CAVITY	CR-5B75-3E #3
TD3931 8RD-1 CB W/CAVITY	CR-8R-3E #1
TD3932 8RD-2 CB W/CAVITY	CR-8R-3E #2
TD3933 8RD-3 CB W/CAVITY	CR-8R-3E #3

External
with coolant cavity



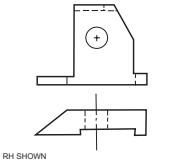
Description	Insert
CR 5B75/5B1-4I-CB TF16104	CR-5B75-4I
CR-8R/10R-3I/4I-CB TF1353	CR-8RD-3I
CR 5B75-5I-CB TF28765I	CR-5B75-5I
CR 8R-7I-CB TF3435I	CR-8RD-3I

Internal

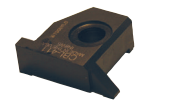


CLAMPS

Internal

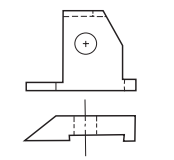


RH SHOWN



Description	D.O.C.	W.O.C.	Insert
CBLM-84	-	-	V84/V85
CBRM-84	-	-	V84/V85
CBL-98	-	-	V96/V98
CBR-98	-	-	V96/V98
CBL-120	-	-	V120
CBR-120	-	-	V120
CBL-132	7.92	2.67-3.18	DBP/VDB
CBR-132	7.92	2.67-3.18	DBP/VDB
CBL-352			DBP/VDB
CBR-352			DBP/VDB
CBL-411	4.57	4.78-6.35	V84/V85
CBR-411	4.57	4.78-6.35	V84/V85
CBL-452	13.46	5.59-6.35	DBP/VDB
CBR-452	13.46	5.59-6.35	DBP/VDB
CBL-531	7.92	7.49-7.93	V84/V85
CBL-531	7.92	7.49-7.93	V84/V85

External



RH SHOWN

Description	D.O.C.	W.O.C.	Insert
CHL-98	-	-	V96/V98
CHR-98	-	-	V96/V98
CHL-120	-	-	V120
CHR-120	-	-	V120
CHL-132	7.92	2.67-3.18	DBP/VDB
CHR-132	7.92	2.67-3.18	DBP/VDB
CHL-182	7.92	2.67-3.18	DBP/VDB
CHR-182	7.92	2.67-3.18	DBP/VDB
CHL-382	20.62	4.32-4.78	DBP/VDB
CHR-382	20.62	4.32-4.78	DBP/VDB
CHL-431	7.92	5.59-7.93	V84/V85
CHR-431	7.92	5.59-7.93	V84/V85
CHL-452	-	-	V84/V85
CHR-452	-	-	V84/V85
CHL-482	20.62	5.59-7.93	DBP/VDB
CHR-482	20.62	5.59-7.93	DBP/VDB
CHL-582	20.62	8.89-9.53	DBP/VDB
CHR-582	20.62	8.89-9.53	DBP/VDB
CHR-FCI094	13.49	2.39	FC-094
CHR-FCI125	13.49	3.18	FC-125
CHL-FCS094	20.62	2.39	FC-094
CHL-FCS125	20.62	3.18	FC-125
CHR-FCS094	20.62	2.39	FC-094
CHR-FCS125	20.62	3.18	FC-125

SPARE PARTS

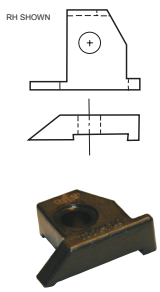
CLAMPS

External

RH SHOWN

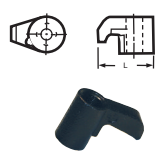
Description	D.O.C.	W.O.C.	Insert
CHR-FC094	12.70		FC-094
CHR-FC125	25.40		FC-125
CHR-FC187	25.40		FC-187
CHL-FC094	12.70		FC-094
CHL-FC125	25.40		FC-125
CHL-FC187	25.40		FC-187
CHR-FCED125	38.10		FC-125
CHR-FCED187	38.10		FC-187
CHL-FCED125	38.10		FC-125
CHL-FCED187	38.10		FC-187
CHR-FCI094	13.49		FC-094
CHR-FCI125	13.49		FC-125
CHR-FCL094	12.70	2.38	FC-094
CHR-FCL125/187	20.32	3.182/4.76	FC-125/187
CHL-FCS094	20.62	2.38	FC-094
CHL-FCS125	20.62	3.18	FC-125
CHR-FCS094	20.62	2.38	FC-094
CHR-FCS125	20.62	3.18	FC-125

Face Grooving

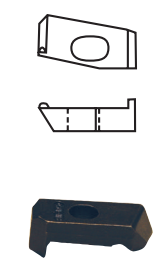


RH SHOWN

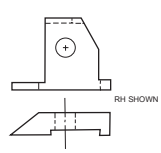
CHLF-282I	20.62	2.67-3.18	DBP/VDB
CHLF-282O	20.62	2.67-3.18	DBP/VDB
CHRF-282I	20.62	2.67-3.18	DBP/VDB
CHRF-282O	20.62	2.67-3.18	DBP/VDB
CHLF-382I	20.62	4.32-4.78	DBP/VDB
CHLF-382O	20.62	4.32-4.78	DBP/VDB
CHRF-382I	20.62	4.32-4.78	DBP/VDB
CHRF-382O	20.62	4.32-4.78	DBP/VDB
CHLF-482I	20.62	5.59-7.93	DBP/VDB
CHLF-482O	20.62	5.59-7.93	DBP/VDB
CHRF-482I	20.62	5.59-7.93	DBP/VDB
CHRF-482O	20.62	5.59-7.93	DBP/VDB
CHLF-582I	20.62	8.89-9.53	DBP/VDB
CHLF-582O	20.62	8.89-9.53	DBP/VDB
CHRF-582I	20.62	8.89-9.53	DBP/VDB
CHRF-582O	20.62	8.89-9.53	DBP/VDB



Description	Length
CLM-6	14.73
CLM-7	16.26
CLM-9	19.05
CLM-12	22.35
CLM-20	18.54
CLM-24	25.40
CLM-30	25.40



Description	Insert
CM-65	FLPL/R-33
CM-66	FLPL/R-33
CM-68	FLPR-5
CM-71	FLPL-5
CM-79	FLPR-5
CM-81	FL_-5L
CM-111	FLPR-5
CM-112	FLPL-5
CM-113	VPGR (RH HOLDER)
CM-114	VPGR (LH HOLDER)
CM-116	DPGR (RH HOLDER)
CM-117	DPGR (LH HOLDER)
CM-118	DPGR (RH BAR)
CM-119	DPGR (LH BAR)
CM-121	Replaced with TF-121
CM-180	FLPR-5
CM-181	FLPL-5



RH SHOWN

Description	D.O.C.	W.O.C.	Insert
DGCHL-132	31.75	2.67-3.18	VDG
DGCHR-132	31.75	2.67-3.18	VDG
DGCHL-382	34.93	4.32-4.78	VDG
DGCHR-382	34.93	4.32-4.78	VDG
DGCHL-482	38.10	5.54-6.35	VDG
DGCHR-482	38.10	5.54-6.35	VDG
DGCHL-500	38.10	6.35-7.93	VDG
DGCHR-500	38.10	6.35-7.93	VDG
DGCHL-582M	44.45	8.89-9.53	VDG
DGCHR-582M	44.45	8.89-9.53	VDG

LH SHOWN

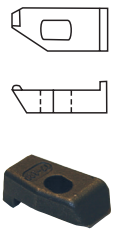
Description	Insert
MCL-30	MLPE-1251
MCR-30	MLPE-1251
MCL-40	MLPE-2532
MCR-40	MLPE-2532
MCL-50	MLPE-3425
MCR-50	MLPE-3425

*Designed for Sandvik® Toolholders & Bars.

CLAMPS

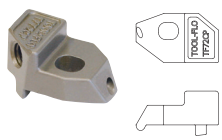
Description	Length
TC-190	13.46
TC-191	16.26
TC-250	18.54
TC-311	22.35
TC-380	25.40

Flo-Lock



Description	Insert
TF-72	FL-3R/4R
TF-73	FL-3L/4L
TF-74	FL-2R
TF-75	FL-2L
TF-77*	FL-4L/3L*
TF-78*	FL-4R/3R*
TF-80	FL-5R
TF-81	FL-5L
TF-120	FL-6R
TF-121	FL-6L
TF-146	FL-2R
TF-147	FL-2L
TF-182	FL-2R
TF-183	FL-2L
TF-184	FL-3R
TF-185	FL-3L

Coolant Fed Clamps

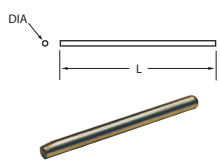


Description	Insert
TF-72CP	FL-3R/4R
TF-73CP	FL-3L/4L
TF-74CP	FL-2R
TF-75CP	FL-2L
TF-182CP	FL-6R
TF-183CP	FL-6L
TF-184CP	FL-6R
TF-185CP	FL-6L

CAM PINS

CLP-25
CLP-36
CLP-38
CLP-48
CLP-58
CLP-310
CLP-312
CLP-410
CLP-412
CLP-412T
CLP-510
CLP-512T
CLP-612

DOWEL PINS



Description	DIA	L
DP-1	3.18	25.40
DP-2	3.18	38.10
DP-3	6.35	9.65
DP-4	4.83	9.65
DP-5	2.29	4.83
DP-6	6.35	25.40
DP-7	4,0	10,0
DP-8	4,0	8,0
DP-9	6.35	12.70
DP-10	6.35	19.05
DP-11	4.83	16.00
DP-135	3.30	35.05

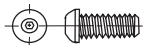
LOCK PINS

Description	Threads	Length	Wrench
NLM-33	1/4-20	8.64	5-64 HEX
NLM-33L	1/4-20	10.41	5-64 HEX
NLM-34	1/4-20	11.43	5-64 HEX
NLM-34L	1/4-20	12.95	5-64 HEX
NLM-44	1/4-28	12.95	3/32 HEX
NLM-46	1/4-28	17.27	3/32 HEX
NLM-46L	1/4-28	18.54	3/32 HEX
NLM-56	5/16-24	17.53	1/8 HEX
NLM-58	5/16-24	21.84	1/8 HEX
NLM-66	3/8-24	17.53	9/64 HEX
NLM-68	3/8-24	21.84	9/64 HEX
NLM-810	7/16-20	29.72	5/32 HEX
H-410-1	5/8 IC	17.02	3.0MM HEX
H-310-1	M5 x 0.8	17.02	3.0MM HEX

SPARE PARTS

SCREWS

Button Head



Description	Threads	Length	Wrench
SB10	4-40	6.35	1/16 HEX
SB90	5/16-18	19.05	3/16 HEX
SB100	5/16-18	25.40	3/16 HEX
SBM428	-	-	-
SBM518	M4 x 0.7	9MM	2.25MM HEX
SBM524	M5 x 0.8	12MM	2.0MM HEX
SBM526	M5 x 0.8	10MM	3MM HEX
SBM532	M6 x 1.0	19MM	4.0MM HEX
SBM625	M6 x 1.0	22MM	4.0MM HEX
SBM628	-	-	-

Clamp Screw

STCM8	M8 x 1.0	25MM	4.0MM HEX
STCM9	M5 x 0.8	15MM	2.5MM HEX
STCM11	M6 x 1.0	20MM	3.0MM HEX

Flat Head Cap Screw

S-111 (SF-20)	4 - 40	9.53	T-9 TORX
SAM3	M3.5 x 0.5	11MM	2.0 HEX
SAM4	M4 x 0.7	15MM	2.5 HEX
SAM5	M5 x 0.8	22MM	T-25 TORX
SFM10	M3 x 0.5	6MM	2.0MM HEX
SFM30	M3 x 0.5	10MM	2.0MM HEX
SFM40	M3.5 x 0.5	12MM	2.0MM HEX
SFM42	M3.5 x 0.5	15MM	2.0MM HEX
SFM45	M3.5 x 0.5	19MM	2.0MM HEX
SFM47	M3.5 x 0.5	13MM	2.0MM HEX
SFM48	M3.5 x 0.5	6MM	2.0MM HEX
SFM50	M5 x 0.7	10MM	2.5MM HEX
SFM60	M5 x 0.7	12MM	2.5MM HEX
SFM65	M5 x 0.8	13MM	3.0MM HEX
SFM69	M5 x 0.8	19MM	3.0MM HEX
SFM80	M5 x 0.8	13MM	3.0MM HEX
SFM85	M5 x 0.8	16MM	3.0MM HEX
SFM90	M8 x 1.25	25MM	5.0MM HEX
SFM95	M6 x 1.0	19MM	3.0MM HEX
SN-2T	M2.5 x 0.45	.265	T-8 TORX
SN-3T	5 - 40	.375	T-8 TORX
PT-324	5 - 40	9.53	1/16 HEX
PT-586T	M3 x 0.5	.410	T-8 TORX

SCREWS

SD Torx Flat Head

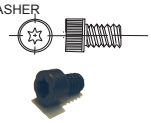
SD1	6 - 40	12.70	T-10 TORX
SD2	10 - 32	19.05	T-20 TORX
SD3	10 - 32	19.05	T-20 TORX
SD4	1/4 - 20	31.75	1/8 HEX
SDM-25	-	-	-
SSM82	M5 x 0.8	16MM	

Socket Head Cap Screw

SM352 (SSM90)	5/16 - 18	25.40	1/4 HEX
SM412	10 - 32	19.05	5/32 HEX
SSM20	4 - 40	9.53	3/32 HEX
SSM51	M4 x 0.7	20MM	3.0MM HEX
SSM61	M4 x 0.7	20MM	3.0MM HEX
SSM62	M3 x 0.5	10MM	2.5MM HEX
SSM63	M3 x 0.6	10MM	2.5MM HEX
SSM64	M4 x 0.7	12MM	3.0MM HEX
SSM65	M4 x 0.7	16MM	3.0MM HEX
SSM81	M5 x 0.8	18MM	4.0MM HEX
SSM82	-	-	-
SSM83	M8 x 1.25	20MM	5.0MM HEX
SSM85	M5 x 0.8	16MM	4.0MM HEX
SSM89	M5 x 0.8	10MM	4.0MM HEX
SSM90	M8 x 1.25	25MM	6.0MM HEX
SSM91	M5 x 0.8	12MM	3.0MM HEX
SSM94	M8 x 1.0	16MM	6.0MM HEX
SSM95	M8 x 1.0	25MM	6.0MM HEX
SSM100	M6 x 1.0	18MM	5.0MM HEX
SSM110	M6 x 1.0	25MM	5.0MM HEX
TS-61	M6 x 1.0	16MM	5.0MM HEX

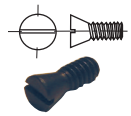
Socket Head Torx Screw

W/WASHER



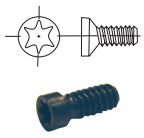
Description	Threads	Length	Wrench
SYM-3	5-40	6.35	T-10 TORX
SYM-4	8-32	9.53	T-20 TORX

Special Flat Head Screw



SL-344	4-40	7.94	-
S-34	10-32	2.34	
S-46	1/4-28		
S-58	5/16-24		
S-68	3/8-24		
S-69			
S-959	2-56	6.35	-

TS Torx Head Screw



TS1	1 - 72	2.38	T-6 TORX
TS25	M2.5 x 0.45	5.5MM	T-8 TORX
TS250	M2.5 x 0.45	4.8MM	T-8 TORX
TS252 (SF05)	M2.5 x 0.45	8.0MM	T-8 TORX
TS3	2 - 56	3.18	T-7 TORX
TSM40	5 - 40	9.53	T-10 TORX
TS42	M4 x 0.7	8.69	T-15 TORX
TSM6	4 - 40	5.16	T-10 TORX
TSSM2	10 - 32	12.70	T-20 TORX
TSSM3	M5 x 0.8	6MM	

Differential Screw

XNS-35	10 - 32	14.99	3/32 HEX
XNS-510	5/16 - 24	31.75	5/32 HEX
XNS-51	-	-	-
XNSM-0515	M5 x 0.8	15.0	2.5MM HEX
XNSM-0825	M8 x 1.0	25.0	4.0MM HEX

SEATS

Chaser Style

Description	Insert
TF1207	CR-8R-3E/4E
TF1780	CR-8R-3I/4I
TF3218	CR-8R-7I
TF8132-E	CR-5B75-4E
TF8132-I	CR-5B75-4I

SEATS

Flo-Lock Style

SM-267	FLPL-33
SM-268	FLPR-33
SM-271	FLPL-13
SM-272	FLPR-13
SM-285	FLPR-5
SM-286	FLPL-5
SM-412	VPGR
SM-414	DPGR
SM-416	FL-6
SM-420	FL-4

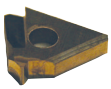
TOOLFLO Member IMC Group

SEATS (cont.)

Laydown L Style

Description	Length
LS 43 NO FORM EXT	L43 EXT
LS 43 NO FORM INT	L43 INT
LS 53 NO FORM EXT	L53 EXT
LS 53 NO FORM INT	L53 INT
LS 43 API EXT	L43 API EXT
LS 43 API INT	L43 API INT
LS 53 API EXT	L53 API EXT
LS 53 API INT	L53 API INT

Laydown LT Style



Description	Angle*	Insert
YE3 3N	-1.5°	16ER/16NL
YE3 2N	-0.5°	16ER/16NL
YE3 1.5N	0°	16ER/16NL
YE3 1N	0.5°	16ER/16NL
YE3	1.5°	16ER/16NL
YE3 1P	2.5°	16ER/16NL
YE3 2P	3.5°	16ER/16NL
YE3 3P	4.5°	16ER/16NL
YE3M NO FORM	1.5°	16ER/16NL
YE3M 1N	0.5°	16ER/16NL
YE3M 1.5N	0°	16ER/16NL
YE3M 2N	-0.5°	16ER/16NL
YE4 3N	-1.5°	22ER/22NL
YE4 2N	-0.5°	22ER/22NL
YE4 1.5N	0°	22ER/22NL
YE4 1N	0.5°	22ER/22NL
YE4	1.5°	22ER/22NL
YE4 1P	2.5°	22ER/22NL
YE4 2P	3.5°	22ER/22NL
YE4 3P	4.5°	22ER/22NL
YE4M NO FORM	1.5°	22ER/22NL
YE4M 1N	0.5°	22ER/22NL
YE4M 1.5N	0°	22ER/22NL
YE4M 2N	-0.5°	22ER/22NL
YE5 3N	-1.5°	27ER/27NL
YE5 2N	-0.5°	27ER/27NL
YE5 1.5N	0°	27ER/27NL
YE5 1N	0.5°	27ER/27NL
YE5	1.5°	27ER/27NL
YE5 1P	2.5°	27ER/27NL
YE5 2P	3.5°	27ER/27NL
YE5 3P	4.5°	27ER/27NL
YE5 8NPT 2M	1.5°	27ER/NL 8NPT 2M
YE5 8RD 2M	1.5°	27ER/NL 8RD 2M
YE5M NO FORM	1.5°	27ER/27NL
YE5M 1N	0.5°	27ER/27NL
YE5M 1.5N	0°	27ER/27NL
YI3 3N	-1.5°	16NR/16EL
YI3 2N	-0.5°	16NR/16EL
YI3 1.5N	0°	16NR/16EL
YI3 1N	0.5°	16NR/16EL
YI3	1.5°	16NR/16EL
YI3 1P	2.5°	16NR/16EL
YI3 2P	3.5°	16NR/16EL
YI3 3P	4.5°	16NR/16EL
YI3M NO FORM	1.5°	16NR/16EL
YI3M 1N	0.5°	16NR/16EL
YI3M 1.5N	0°	16NR/16EL
YI3M 2N	-0.5°	16NR/16EL
YI4 3N	-1.5°	22NR/22EL
YI4 2N	-0.5°	22NR/22EL
YI4 1.5N	0°	22NR/22EL
YI4 1N	0.5°	22NR/22EL
YI4	1.5°	22NR/22EL
YI4 1P	2.5°	22NR/22EL
YI4 2P	3.5°	22NR/22EL
YI4 3P	4.5°	22NR/22EL
YI4M NO FORM	1.5°	22NR/22EL
YI4M 1N	0.5°	22NR/22EL
YI4M 1.5N	0°	22NR/22EL
YI4M 2N	-0.5°	22NR/22EL
YI5 3N	-1.5°	27NR/27EL
YI5 2N	-0.5°	27NR/27EL
YI5 1.5N	0°	27NR/27EL
YI5 1N	0.5°	27NR/27EL
YI5	1.5°	27NR/27EL
YI5 1P	2.5°	27NR/27EL
YI5 2P	3.5°	27NR/27EL
YI5 3P	4.5°	27NR/27EL
YI5 8NPT 2M	1.5°	27NR/EL 8NPT 2M
YI5 8RD 2M	1.5°	27NR/EL 8RD 2M
YI5M NO FORM	1.5°	27NR/27EL
YI5M 1N	0.5°	27NR/27EL
YI5M 1.5N	0°	27NR/27EL

STOP BLOCKS

Description	
SBH-1	
SBH-2	
SBH-4	

WRENCHES

Flag Style Torx

Description	Wrench
K05	T-6 TORX
K1	T-7 TORX
K2	T-8 TORX
K3	T-10 TORX
K4	T-20 TORX
K5	T-25 TORX

L-Style Torx

Description	Wrench
K05L	T-6 TORX
K2L	T-8 TORX
K3L	T-10 TORX
K35L	T-15 TORX
K4L	T-20 TORX
K5L	T-25 TORX

Infeed Values for Threading Operations

External ISO Threads --- Recommendations for Steel Workpieces (<300BHN)

PITCH (mm)	6.0	5.5	5.0	4.5	4.0	3.5	3.0	2.5	2.0	1.75	1.5	1.25	1.0	0.75	0.5
# OF PASSES	Reduce cutting speed →														
1	0.016	0.017	0.016	0.015	0.013	0.013	0.011	0.011	0.010	0.009	0.009	0.007	0.007	0.007	0.004
2	0.017	0.016	0.015	0.013	0.013	0.012	0.010	0.010	0.009	0.008	0.008	0.007	0.007	0.006	0.004
3	0.014	0.013	0.013	0.011	0.010	0.010	0.008	0.008	0.007	0.006	0.007	0.006	0.005	0.004	0.003
4	0.012	0.011	0.011	0.009	0.009	0.008	0.007	0.007	0.006	0.006	0.006	0.005	0.004	0.003	0.003
5	0.011	0.009	0.009	0.009	0.007	0.007	0.006	0.006	0.006	0.005	0.005	0.004	0.003	0.020	0.014
6	0.009	0.009	0.009	0.008	0.007	0.007	0.006	0.005	0.005	0.004	0.003	0.003	0.026		
7	0.009	0.008	0.008	0.007	0.006	0.006	0.005	0.005	0.004	0.004	0.038	0.032			
8	0.008	0.007	0.007	0.007	0.006	0.006	0.005	0.004	0.003	0.003					
9	0.008	0.007	0.007	0.006	0.006	0.006	0.005	0.004	0.050	0.045					
10	0.007	0.007	0.007	0.006	0.005	0.005	0.004	0.003							
11	0.007	0.006	0.006	0.006	0.005	0.004	0.004	0.063							
12	0.006	0.006	0.006	0.005	0.005	0.003	0.003								
13	0.006	0.005	0.005	0.005	0.004	0.087	0.074								
14	0.006	0.005	0.004	0.004	0.003										
15	0.005	0.005	0.123	0.111	0.099										
16	0.004	0.004													
	0.147	0.135													

Infeed Values for Threading Operations

Internal ISO Threads --- Recommendations for Steel Workpieces (<300BHN)

PITCH (mm)	6.0	5.5	5.0	4.5	4.0	3.5	3.0	2.5	2.0	1.75	1.5	1.25	1.0	0.75	0.5
# OF PASSES	Reduce cutting speed →														
1	0.018	0.015	0.015	0.014	0.013	0.012	0.011	0.011	0.010	0.009	0.010	0.008	0.007	0.007	0.004
2	0.016	0.014	0.014	0.013	0.012	0.011	0.009	0.009	0.009	0.008	0.008	0.007	0.006	0.005	0.004
3	0.014	0.012	0.012	0.011	0.009	0.009	0.008	0.007	0.007	0.006	0.006	0.005	0.004	0.004	0.003
4	0.011	0.010	0.010	0.009	0.008	0.008	0.006	0.006	0.006	0.005	0.004	0.004	0.004	0.003	0.003
5	0.009	0.009	0.009	0.008	0.007	0.007	0.006	0.006	0.005	0.004	0.004	0.004	0.003	0.019	0.014
6	0.009	0.008	0.009	0.007	0.006	0.006	0.006	0.005	0.004	0.004	0.003	0.003	0.024		
7	0.008	0.007	0.007	0.006	0.006	0.006	0.005	0.004	0.004	0.004	0.035	0.031			
8	0.007	0.007	0.006	0.006	0.006	0.006	0.004	0.004	0.003	0.003					
9	0.007	0.006	0.006	0.006	0.005	0.005	0.004	0.004	0.048	0.043					
10	0.006	0.006	0.006	0.006	0.005	0.004	0.004	0.003							
11	0.006	0.006	0.006	0.005	0.004	0.004	0.004	0.059							
12	0.006	0.006	0.006	0.005	0.004	0.003	0.003								
13	0.006	0.006	0.005	0.004	0.004	0.081	0.070								
14	0.006	0.005	0.004	0.004	0.003										
15	0.005	0.005	0.114	0.104	0.092										
16	0.004	0.004													
	0.136	0.126													

Infeed Values for Threading Operations

External UN Threads --- Recommendations for Steel Workpieces (<300BHN)

TPI	4	5	6	7	8*	9	10	11	12	13	14	16	18	20	24	28	32	36	40	44	48
THREAD DEPTH	4.008	3.205	2.672	2.291	2.004	1.781	1.603	1.458	1.336	1.232	1.146	1.001	0.889	0.800	0.668	0.572	0.500	0.445	0.399	0.363	0.333
# OF PASSES																					
1	0.897	0.757	0.630	0.541	0.500	0.445	0.429	0.399	0.386	0.361	0.345	0.318	0.315	0.302	0.300	0.284	0.249	0.221	0.198	0.185	0.165
2	0.371	0.310	0.267	0.224	0.208	0.185	0.178	0.168	0.163	0.145	0.150	0.137	0.135	0.124	0.122	0.117	0.107	0.091	0.081	0.071	0.069
3	0.287	0.239	0.198	0.196	0.160	0.142	0.135	0.122	0.122	0.112	0.109	0.099	0.099	0.099	0.099	0.091	0.079	0.071	0.071	0.056	0.051
4	0.241	0.201	0.170	0.150	0.135	0.119	0.114	0.104	0.107	0.094	0.091	0.086	0.084	0.081	0.079	0.079	0.066	0.061	0.051	0.051	0.048
5	0.213	0.178	0.147	0.127	0.119	0.107	0.099	0.091	0.091	0.084	0.081	0.074	0.074	0.071	0.069						
6	0.193	0.160	0.132	0.114	0.109	0.094	0.091	0.079	0.081	0.076	0.074	0.066	0.066	0.064							
7	0.178	0.147	0.122	0.104	0.099	0.086	0.079	0.071	0.074	0.069	0.066	0.061	0.061	0.058							
8	0.165	0.137	0.114	0.097	0.091	0.081	0.076	0.066	0.069	0.064	0.061	0.056	0.056								
9	0.155	0.130	0.107	0.091	0.086	0.076	0.074	0.064	0.066	0.061	0.058	0.053									
10	0.145	0.122	0.102	0.086	0.081	0.071	0.071	0.061	0.064	0.058	0.056	0.051									
11	0.137	0.114	0.097	0.081	0.079	0.069	0.069	0.058	0.058	0.056	0.053										
12	0.132	0.109	0.091	0.079	0.074	0.066	0.066	0.056	0.056	0.053											
13	0.124	0.107	0.089	0.076	0.069	0.064	0.064	0.053													
14	0.122	0.104	0.086	0.074	0.066	0.061	0.061	0.051													
15	0.117	0.102	0.084	0.071	0.064	0.058															
16	0.112	0.099	0.081	0.069	0.064	0.056															
17	0.109	0.097	0.079	0.066																	
18	0.107	0.094	0.076	0.064																	
19	0.104																				
20	0.099																				

Infeed Values for Threading Operations

Internal UN Threads --- Recommendations for Steel Workpieces (<300BHN)

TPI	4	5	6	7	8	9	10	11	12	13	14	16	18	20	24	28	32	36	40	44	48
THREAD DEPTH	3.437	2.748	2.291	1.963	1.717	1.527	1.374	1.250	1.146	1.057	0.980	0.859	0.762	0.686	0.572	0.490	0.429	0.381	0.343	0.312	0.284
# OF PASSES																					
1	0.770	0.648	0.541	0.465	0.429	0.381	0.368	0.335	0.333	0.305	0.297	0.272	0.269	0.259	0.257	0.244	0.213	0.191	0.170	0.155	0.142
2	0.318	0.267	0.229	0.193	0.185	0.157	0.163	0.140	0.137	0.127	0.122	0.109	0.112	0.107	0.107	0.099	0.089	0.079	0.074	0.064	0.058
3	0.244	0.211	0.175	0.147	0.135	0.119	0.117	0.112	0.104	0.097	0.094	0.086	0.084	0.081	0.081	0.084	0.069	0.058	0.053	0.048	0.043
4	0.206	0.173	0.145	0.124	0.119	0.102	0.097	0.089	0.089	0.081	0.079	0.071	0.071	0.069	0.069	0.064	0.058	0.053	0.046	0.046	0.028
5	0.180	0.152	0.127	0.109	0.104	0.089	0.086	0.079	0.079	0.071	0.069	0.064	0.064	0.061	0.058						
6	0.163	0.137	0.114	0.099	0.091	0.081	0.079	0.071	0.071	0.064	0.064	0.074	0.058	0.056							
7	0.150	0.127	0.104	0.091	0.084	0.074	0.071	0.066	0.066	0.058	0.058	0.053	0.053	0.053							
8	1.397	0.117	0.097	0.084	0.076	0.069	0.066	0.061	0.061	0.056	0.053	0.051	0.074								
9	0.132	0.109	0.091	0.079	0.071	0.064	0.061	0.056	0.056	0.053	0.051	0.048									
10	0.124	0.104	0.086	0.074	0.069	0.061	0.058	0.053	0.053	0.051	0.048	0.046									
11	0.117	0.099	0.081	0.071	0.066	0.058	0.056	0.051	0.051	0.048	0.046										
12	0.112	0.094	0.079	0.069	0.064	0.056	0.053	0.048	0.048	0.046											
13	0.107	0.091	0.076	0.066	0.061	0.053	0.051	0.046													
14	0.104	0.089	0.074	0.064	0.058	0.051	0.048	0.043													
15	0.102	0.086	0.071	0.061	0.056	0.048															
16	0.099	0.084	0.069	0.058	0.053	0.048															
17	0.097	0.081	0.066	0.056																	
18	0.094	0.079	0.064	0.053																	
19	0.091																				
20	0.089																				

Infeed Values for Threading Operations

External ACME Threads- For Steel Workpieces (<300BHN)

# OF PASSES	Pitch Threads/inch → Reduce cutting speed							
	4	5	6	8	10	12	14	16
	Radial infeed per pass (inch)							
1	0.014	0.013	0.013	0.011	0.010	0.010	0.009	0.009
2	0.013	0.013	0.011	0.010	0.009	0.008	0.008	0.008
3	0.012	0.010	0.009	0.008	0.008	0.007	0.007	0.007
4	0.011	0.009	0.008	0.007	0.007	0.006	0.006	0.006
5	0.010	0.009	0.007	0.006	0.006	0.005	0.005	0.005
6	0.010	0.008	0.007	0.005	0.005	0.005	0.004	0.003
7	0.008	0.008	0.006	0.005	0.005	0.004	0.003	0.038
8	0.008	0.008	0.006	0.005	0.004	0.004	0.042	
9	0.008	0.007	0.006	0.005	0.004	0.049		
10	0.007	0.006	0.006	0.004	0.004			
11	0.007	0.006	0.006	0.004	0.062			
12	0.006	0.006	0.005	0.004				
13	0.006	0.005	0.004	0.074				
14	0.006	0.004	0.094					
15	0.006	0.112						
16	0.005							

Infeed Values for Threading Operations

Internal ACME Threads- For Steel Workpieces (<300BHN)

# OF PASSES	Pitch Threads/inch → Reduce cutting speed							
	4	5	6	8	10	12	14	16
	Radial infeed per pass (inch)							
1	0.015	0.013	0.013	0.011	0.011	0.010	0.009	0.009
2	0.013	0.012	0.011	0.010	0.009	0.008	0.008	0.008
3	0.012	0.010	0.009	0.008	0.008	0.007	0.007	0.007
4	0.011	0.009	0.008	0.007	0.007	0.006	0.006	0.006
5	0.010	0.008	0.007	0.006	0.006	0.005	0.005	0.005
6	0.009	0.008	0.006	0.006	0.005	0.005	0.004	0.003
7	0.008	0.008	0.006	0.005	0.005	0.004	0.003	0.038
8	0.008	0.008	0.006	0.005	0.004	0.004	0.042	
9	0.008	0.007	0.006	0.005	0.004	0.049		
10	0.007	0.006	0.006	0.004	0.004			
11	0.007	0.006	0.006	0.004	0.063			
12	0.006	0.006	0.005	0.004				
13	0.006	0.005	0.004	0.075				
14	0.006	0.004	0.093					
15	0.005	0.110						
16	0.005							

Infeed Values for Threading Operations

Internal STUB ACME Threads- For Steel Workpieces (<300BHN)

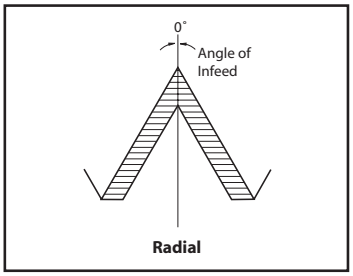
# OF PASSES	Pitch Threads/inch → Reduce cutting speed							
	4	5	6	8	10	12	14	16
	Radial infeed per pass (inch)							
1	0.012	0.011	0.011	0.009	0.009	0.009	0.008	0.007
2	0.011	0.010	0.009	0.008	0.007	0.006	0.006	0.005
3	0.010	0.008	0.008	0.007	0.006	0.005	0.005	0.005
4	0.008	0.008	0.007	0.006	0.006	0.004	0.005	0.004
5	0.008	0.007	0.006	0.006	0.006	0.004	0.004	0.004
6	0.007	0.006	0.006	0.006	0.005	0.004	0.028	0.025
7	0.006	0.006	0.006	0.005	0.004	0.032		
8	0.006	0.006	0.005	0.004	0.043			
9	0.005	0.005	0.004	0.051				
10	0.005	0.004	0.062					
11	0.004	0.071						
12	0.004							

Infeed Values for Threading Operations

External STUB ACME Threads-Steel Workpieces (<300BHN)

# OF PASSES	Pitch Threads/inch → Reduce cutting speed							
	4	5	6	8	10	12	14	16
	Radial infeed per pass (inch)							
1	0.012	0.011	0.011	0.010	0.009	0.009	0.009	0.008
2	0.011	0.010	0.008	0.008	0.008	0.007	0.007	0.006
3	0.010	0.008	0.008	0.008	0.007	0.006	0.006	0.005
4	0.008	0.008	0.007	0.007	0.006	0.005	0.005	0.004
5	0.008	0.007	0.006	0.006	0.006	0.004	0.004	0.004
6	0.007	0.006	0.006	0.006	0.005	0.004	0.031	0.027
7	0.006	0.006	0.006	0.005	0.004	0.035		
8	0.006	0.006	0.005	0.004	0.045			
9	0.005	0.005	0.004	0.054				
10	0.005	0.004	0.061					
11	0.004	0.071						
12	0.004							

Optional Infeed Angles for Threading Applications



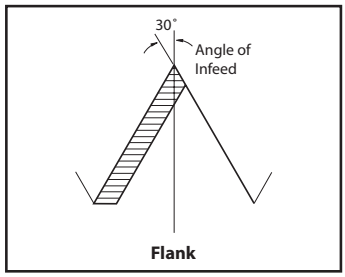
Advantage-
Cutting on both sides of the thread form places all of the cutting edge in the cut and protects edge from chipping.

Disadvantage-
Tool develops a channel chip which may be difficult to handle.

Tip chipping occurs when cutting high-tensile materials.

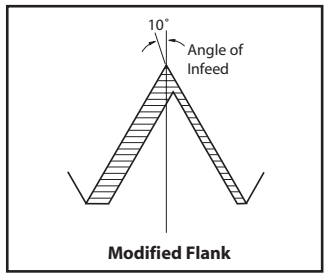
Burr condition is increased.

Entire cutting edge is engaged at finish of thread, causing increased tendency to chatter.



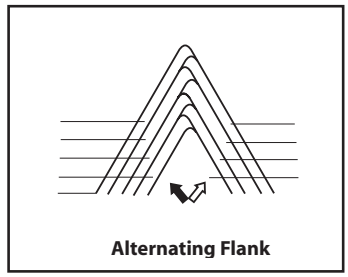
Advantage-
Cutting with the leading edge of the threading tool gives the chip a definate flow out of the thread form area. This reduces the burr problem on the trailing edge of the tool. To avoid bad surface finish, chipping, or excessive flank wear due to rubbing of the trailing edge, the infeed angle should be 3° to 5° smaller that the angle of the thread. This is a type of modified flank.

Disadvantage-
Trailing edge of threading insert may drag or rub, and tends to chip. Torn or poor surface finish threads result when cutting soft, gummy materials such as low carbon steels, aluminum, and stainless steels.



Advantage-
Tool cuts both sides of tread form and, therefore, is protected from chipping similar to 0° infeed. Channel-type chip develops but uneven chip thickness helps remove the chip similar to flank infeed.

Disadvantage-
Similar disadvantages as with 0Þ infeed, although slightly reduced in magnitude as the cutting forces are better equalized and chip flow is much less of a problem.



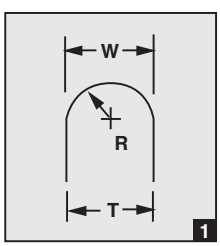
Advantage-
Increased tool life because both edges are used equally. NOTE: Some machine tools may require special programming techniques to achieve this method.

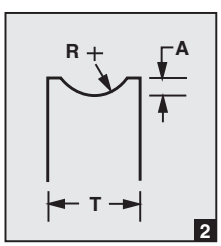
Disadvantage-
Difficult to cut on conventional machinery.

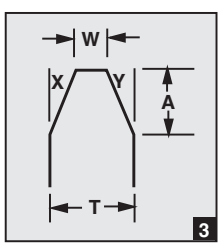
*For premium performance based upon optimal machining conditions, select the grade that will provide you with the highest allowable SFM for the material that is being machined. Optimum grades are in bold print. Grades are specific to certain insert styles. The grades listed below in bold print are stock within the style listed, see appropriate catalog page for precise stocking status.

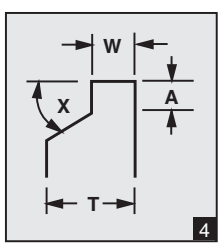
Bantam:	**C22**	Flo-Lock:	**C25**	Laydown:	**GP22**	Threadmill:	**C3**
	GP22		**GP4**		**GP3**		**GP3**
	GP4		**GP3**		**GP5**		GP22
	AC22		**GP4**		**GP50**	Turning:	**G525**
Ballnose:	**C26**		**GP5**		**AC22**	(Negative)	**AG525**
	ZS26		**GP50**		**AC50**		**AG535**
	CB400		**AC22**		C22		**AG615**
	DX200		**AC3**	Milling:	**GP5**	Turning:	**AC3**
Chasers:	**G50**		**AC50**		C5H	(Positive)	**AC50**
	GP50		**GPM6**	On Edge:	**GP22**		C3
	AC50		**CB200**		**GP3**	V-Bottom:	**GP3**
	ZA50		**CB400**		**GP54**	(V84/V85)	**GP50**
Cutoff:	**GP22**		**PC33**		**GP50**		**AC50**
	AC22		C22		**GPM6**		C3
	AC50		C3		**AC22**	V-Bottom:	**C3**
	C22	Laydown:	**GP22**		**AC3**	(VDB/VDG)	**GP3**
		(LT style)	**GP4**		**AC50**		**AC3**
			GP50		AC54		**AC50**
			AC22		C22		**CB200/CB400**
			AC50		C25		
			C22		C3		

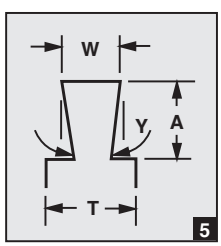
We welcome specials! Please call us with your specs.

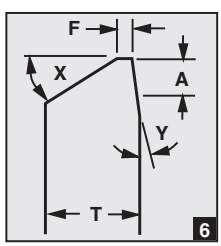


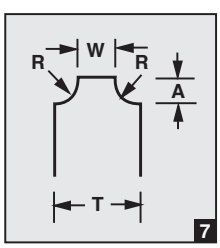


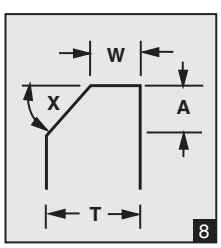


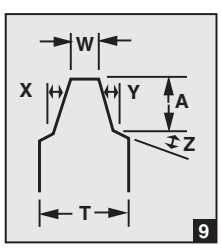


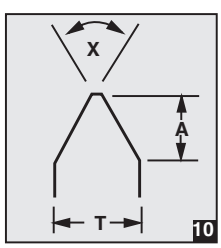


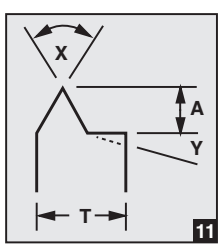


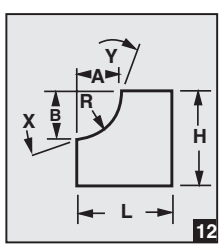






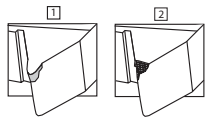
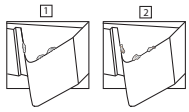
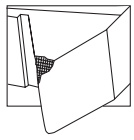
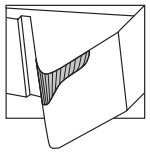


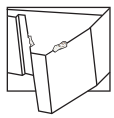




Trouble Shooting & Optimizing Tool Life/ Threading Economy

Modern PVD grades and insert geometries have done much to improve the productivity and reliability of thread turning. They have also helped to eliminate or minimize problems in threading. The following chart lists problems, in order of severity, which may still occur in modern threading.

Problem	Cause	Solution
Plastic Deformation  Starts as plastic deformation (1) which leads to plastic break (2)	Excessive temperature in the cutting area Unsuitable grade Inadequate coolant supply	Reduce cutting speed Increase number of infeeds Reduce the largest infeed depth Check diameter before threading Improve coolant supply Choose grade with better resistance to plastic deformation
Built-up Edge/ Edge Spalling  Built-up edge (1) and edge spalling (2) often occur in combination. Built-up edge accumulates and is then ripped away taking insert material with it	Cutting edge temperature too low Stainless material; CMC codes 05.2, 05.51, and 05.52 Low carbon steel Unsuitable grade	Increase cutting speed Choose an insert with good toughness, preferably PVD coated
Insert Breakage 	Wrong Diameter prior to threading operation Infeed series too tough Unsuitable grade Poor chip control Center height incorrect	Turn to correct diameter beforethreading--0.0012-0.0028 radially larger than maximum diameter for thread Increase number of infeeds Reduce size of the large infeeds Choose a tougher grade Change to “CB” geometry and use modified flank infeed Correct center height
Rapid Flank Wear 	Highly abrasive material Cutting speed too high Infeed depths too shallow Insert is above centerline	Choose a more wear resistant grade Reduce cutting speed Reduce number of infeeds Correct center height
Abnormal Flank Wear Poor Finish on One Flank of Thread	Incorrect method for flank infeed Insert’s inclination angle does not agree with thread’s lead angle	Change method of infeed Change shim to obtain correct angle of inclination
Vibration	Incorrect clamping work piece Incorrect set-up of the tool Incorrect cutting data Incorrect center height	Use softer jaws Minimize overhang of tool Check that the clamping sleeve for bars is not worn Increase cutting speed; if this does not help lower speed dramatically Use constant infeed series Try “CB” or “HCB” geometry Adjust the center height Use heavy metal, solid carbide or carbide cored bar.
Poor Surface Quality on Thread	Cutting speed too low The insert is above center Uncontrolled chips	Increase cutting speed Adjust center height Use “CB” or “HCB” geometry and modified flank infeed

Problem	Cause	Solution
Poor Chip Control	Incorrect method of infeed Wrong geometry	Modified Flank infeed 3Þ-5Þ “CB” or “HCB” geometry with modified flank infeed 1Þ
Shallow Profile	Wrong center height Insert breakage Excessive wear	Adjust the center height Change cutting edge
Incorrect Thread Profile	Unsuitable thread profile angle of thread and nose radius; external inserts used for internal operation and vice versa Wrong center height Holder not 90Þ to center line Pitch error in machine	Correct tool / insert combination Adjust the center height Adjust to 90Þ Correct in machine
Excessive Edge Pressure 	Work hardening material in combination with infeed depths which are too shallow Excessive pressure on cutting edge Profile with too small thread profile angle	Reduce the number of infeeds Change to “CB” or “HCB” geometry Use a tougher grade Use incremental flank infeed

ACME TABLE (Inch)

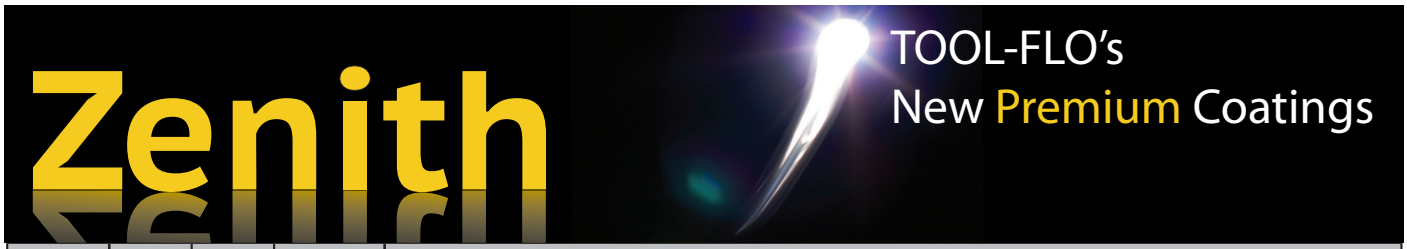
PITCH	REGULAR WIDTH	REGULAR DEPTH	STUB WIDTH	STUB DEPTH
16	.0206	.0362	.0238	.0238
14	.0239	.0407	.0276	.0264
12	.0283	.0467	.0326	.0300
10	.0319	.0600	.0370	.0400
9	.0360	.0656	.0417	.0433
8	.0411	.0725	.0476	.0475
7	.0478	.0814	.0551	.0529
6	.0566	.0933	.0652	.0600
5	.0689	.1100	.0793	.0700
4	.0875	.1350	.1004	.0850
3-1/2	.1007	.1529	.1155	.0957
3	.1184	.1767	.1356	.1100
2-1/2	.1431	.2100	.1638	.1300
2	.1802	.2600	.2060	.1600
1-1/2	.2419	.3433	.2764	.2100
1-1/3	.2728	.3850	.3116	.2350
1	.3655	.5100	.4172	.3100

Recommended SFM for Grooving Applications - Inch

	Free Machining Carbon Steels	Plain Carbon Steels	Alloy Steels 190-330 HB	Alloy Steels 330-450 HB	Martensitic/Ferritic Stainless Steel 400 Series	Austenitic Stainless 300 Series	Gray Cast Iron 190-330 HB	Gray Cast Iron 330-450 HB	Alloy / Ductile Irons	Free Machining Aluminum Alloys	High-Silicon Aluminum Alloys	Copper / Zinc / Brass	Non-Metallics	High Temperature Alloys 200-260 HB	High Temperature Alloys 260-450 HB	Titanium Alloys (Ti 6Al-4V)	Hardened Materials 48-65 HRC
C22	---	---	---	---	---	45.7-91.4	30.5-106.7	30.5-91.4	---	30.5-457.2	---	30.5-152.4	30.5-304.8	24.4-39.6	15.2-30.5	30.5-60.9	---
C25	----	---	---	---	---	60.9-106.7	30.5-114.3	30.5-106.7	---	60.9-518.2	---	60.9-182.9	121.9-365.8	24.4-39.6	15.2-30.5	30.5-60.9	---
C26S	---	---	---	---	---	---	---	---	---	457.2-914.4	---	121.9-243.8	121.9-365.8	---	---	---	---
C3	---	---	---	---	---	60.9-121.9	30.5-114.3	30.5-106.7	---	60.9-609.6	---	60.9-213.4	121.9-426.7	24.4-39.6	15.2-30.5	30.5-60.9	---
G50	91.4-213.4	91.4-213.4	91.4-213.4	91.4-182.9	91.4-182.9	---	---	---	91.4-182.9	---	---	---	---	---	---	---	---
GP22	45.7-91.4	45.7-91.4	45.7-91.4	45.7-91.4	45.7-91.4	45.7-121.9	45.7-121.9	45.7-106.7	45.7-91.4	45.7-609.6	---	45.7-213.4	152.4-457.2	30.5-53.3	24.4-45.7	30.5-76.2	---
GP25	45.7-91.4	45.7-91.4	45.7-91.4	45.7-91.4	45.7-91.4	45.7-121.9	45.7-121.9	45.7-106.7	45.7-91.4	45.7-609.6	---	45.7-213.4	152.4-457.2	30.5-53.3	24.4-45.7	30.5-76.2	---
GP26	121.9-243.8	121.9-243.84	91.4-182.9	60.9-152.4	91.4-182.9	60.9-152.4	121.9-243.8	91.4-182.9	91.4-182.9	365.8-1066.8	---	91.4-2438.4	91.4-365.8	30.5-60.9	30.5-60.9	30.5-76.2	---
GP3	60.9-121.9	60.9-121.9	60.9-121.9	60.9-106.7	60.9-121.9	60.9-152.4	60.9-182.9	60.9-152.4	30.5-60.9	91.4-609.6	---	60.9-274.3	91.4-457.2	30.5-60.9	30.5-53.3	45.7-91.4	---
GP4	18.3-53.3	18.3-53.3	18.3-45.7	18.3-45.7	18.3-45.7	18.3-45.7	18.3-45.7	18.3-45.7	18.3-45.7	18.3-45.7	---	---	---	15.2-24.3	15.2-24.4	15.2-24.4	---
GP5	60.9-152.4	60.9-152.4	60.9-121.9	60.9-121.9	60.9-121.9	---	---	---	60.9-121.9	---	---	---	---	---	---	---	---
GP54	60.9-152.4	60.9-152.4	60.9-121.9	60.9-121.9	60.9-121.9	---	---	---	60.9-121.9	---	---	---	---	---	---	---	---
GP50	60.9-182.9	60.9-182.9	60.9-152.4	60.9-137.2	60.9-152.4	---	---	---	60.9-152.4	---	---	---	---	---	---	---	---
AC22	76.2-152.4	76.2-152.4	76.2-137.2	76.2-121.9	60.9-137.2	91.4-182.9	91.4-182.9	60.9-167.6	76.2-137.2	182.9-670.6	---	91.4-274.3	106.7-365.8	24.4-60.9	24.4-53.3	24.4-91.4	---
AC26	152.4-304.8	152.4-304.8	121.9-243.8	91.4-182.9	121.9-243.8	91.4-213.4	152.4-304.8	121.9-243.8	121.9-243.8	457.2-1524.0	---	121.9-304.8	121.9-457.2	30.5-60.9	30.5-60.9	60.9-91.4	---
AC3	76.2-137.2	76.2-137.2	76.2-121.9	76.2-121.9	76.2-137.2	76.2-213.4	91.4-213.4	91.4-182.9	60.9-137.2	182.9-762.0	---	121.9-304.8	121.9-457.2	30.5-76.2	30.5-60.9	30.5-91.4	24.4-45.7
AC54	106.7-152.4	106.7-152.4	106.7-152.4	91.4-152.4	91.4-152.4	---	---	---	91.4-152.4	---	---	---	---	---	---	---	---
AC50	121.9-243.8	137.2-243.8	121.9-243.8	121.9-228.6	106.7-213.4	---	---	---	91.4-213.6	---	---	---	---	---	---	---	---
ZA22	76.2-152.4	76.2-152.4	76.2-137.2	76.2-121.9	60.9-137.2	91.4-182.9	91.4-182.9	60.9-167.6	76.2-137.2	182.9-670.6	---	91.4-274.3	106.7-365.8	24.4-60.9	24.4-53.3	24.4-91.4	---
ZA26	152.4-304.8	152.4-304.8	121.9-243.8	91.4-182.9	121.9-243.8	91.4-213.4	152.4-304.8	121.9-243.8	121.9-243.8	457.2-1524.0	---	121.9-304.8	121.9-457.2	30.5-60.9	30.5-60.9	60.9-91.4	---
ZA3	76.2-137.2	76.2-137.2	76.2-121.9	76.2-121.9	76.2-137.2	76.2-213.4	91.4-213.4	91.4-182.9	60.9-137.2	182.9-762.0	---	121.9-304.8	121.9-457.2	30.5-76.2	30.5-60.9	30.5-91.4	24.4-45.7
ZA50	121.9-243.8	137.2-243.8	121.9-243.8	121.9-228.6	106.7-213.4	---	---	---	91.4-213.4	---	---	---	---	---	---	---	---
ZL22	76.2-152.4	76.2-152.4	76.2-137.2	76.2-121.9	60.9-137.2	91.4-182.9	91.4-182.9	60.9-167.6	76.2-137.2	182.9-670.6	---	91.4-274.3	106.7-365.8	24.4-60.9	24.4-53.3	24.4-91.4	---
ZL26	152.4-304.8	152.4-304.8	121.9-243.8	91.4-182.9	121.9-243.8	91.4-213.4	152.4-304.8	121.9-243.8	121.9-243.8	457.2-1524.0	---	121.9-304.8	121.9-457.2	30.5-60.9	30.5-60.9	60.9-91.4	---
ZL3	76.2-137.2	76.2-137.2	76.2-121.9	76.2-121.9	76.2-137.2	76.2-213.4	91.4-213.4	91.4-182.9	60.9-137.2	182.9-762.0	---	121.9-304.8	121.9-457.2	30.5-76.2	30.5-60.9	30.5-91.4	24.4-45.7
ZR22	76.2-152.4	76.2-152.4	76.2-137.2	76.2-121.9	60.9-137.2	91.4-182.9	91.4-182.9	60.9-167.6	76.2-137.2	182.9-670.6	---	91.4-274.3	106.7-365.8	24.4-60.9	24.4-53.3	24.4-91.4	---
ZR26	152.4-304.8	152.4-304.8	121.9-243.8	91.4-182.9	121.9-243.8	91.4-213.4	152.4-304.8	121.9-243.8	121.9-243.8	457.2-1524.0	---	121.9-304.8	121.9-457.2	30.5-60.9	30.5-60.9	60.9-91.4	---
ZR3	76.2-137.2	76.2-137.2	76.2-121.9	76.2-121.9	76.2-137.2	76.2-213.4	91.4-213.4	91.4-182.9	60.9-137.2	182.9-762.0	---	121.9-304.8	121.9-457.2	30.5-76.2	30.5-60.9	30.5-91.4	24.4-45.8
ZR50	121.9-243.8	137.2-243.8	121.9-243.8	121.9-228.6	106.7-213.4	---	---	---	91.4-213.4	---	---	---	---	---	---	---	---
ZS22	76.2-152.4	76.2-152.4	76.2-137.2	76.2-121.9	60.9-137.2	91.4-182.9	91.4-182.9	60.9-167.6	76.2-137.2	182.9-670.6	---	91.4-274.3	106.7-365.8	24.4-60.9	24.4-53.3	24.4-91.4	---
ZS26	152.4-304.8	152.4-304.8	121.9-243.8	91.4-182.9	121.9-243.8	91.4-213.4	152.4-304.8	121.9-243.8	121.9-243.8	457.2-1524.0	---	121.9-304.8	121.9-457.2	30.5-60.9	30.5-60.9	60.9-91.4	---
ZS3	76.2-137.2	76.2-137.2	76.2-121.9	76.2-121.9	76.2-137.2	76.2-213.4	91.4-213.4	91.4-182.9	60.9-137.2	182.9-762.0	---	121.9-304.8	121.9-457.2	30.5-76.2	30.5-60.9	30.5-91.4	24.4-45.7
ZS50	121.9-243.8	137.2-243.8	121.9-243.8	121.9-228.6	106.7-213.4	---	---	---	91.4-213.4	---	---	---	---	---	---	---	---
GPM6	182.9-457.2	182.9-365.8	152.4-335.3	182.9-243.8	152.4-243.8	152.4-304.8	121.9-335.3	106.7-289.6	106.7-289.6	---	---	---	---	---	---	---	---
CB200	---	---	---	---	---	---	121.9-762.0	304.8-548.6	---	---	---	---	---	91.4-182.9	76.2-137.2	---	45.7-106.7
CB400	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	60.9-152.4
PC33	---	---	---	---	---	---	---	---	---	304.8-2438.4	304.8-1524.0	304.8-1219.2	304.8-1371.6	---	---	---	---
DX200	---	---	---	---	---	---	---	---	---	304.8-2133.6	304.8-914.4	304.8-1066.8	304.8-1219.2	---	---	---	---

Recommended SFM for Grooving Applications - Metric

	Free Machining Carbon Steels	Plain Carbon Steels	Alloy Steels 190-330 HB	Alloy Steels 330-450 HB	Martensitic/Ferritic Stainless Steel 400 Series	Austenitic Stainless 300 Series	Gray Cast Iron 190-330 HB	Gray Cast Iron 330-450 HB	Alloy / Ductile Irons	Free Machining Aluminum Alloys	High-Silicon Aluminum Alloys	Copper / Zinc / Brass	Non-Metallics	High Temperature Alloys 200-260 HB	High Temperature Alloys 260-450 HB	Titanium Alloys (Ti 6Al-4V)	Hardened Materials 48-65 HRC
C22	---	---	---	---	---	45.7-91.4	30.5-106.7	30.5-91.4	---	30.5-457.2	---	30.5-152.4	30.5-304.8	24.4-39.6	15.2-30.5	30.5-60.9	---
C25	----	---	---	---	---	60.9-106.7	30.5-114.3	30.5-106.7	---	60.9-518.2	---	60.9-182.9	121.9-365.8	24.4-39.6	15.2-30.5	30.5-60.9	---
C26S	---	---	---	---	---	---	---	---	---	457.2-914.4	---	121.9-243.8	121.9-365.8	---	---	---	---
C3	---	---	---	---	---	60.9-121.9	30.5-114.3	30.5-106.7	---	60.9-609.6	---	60.9-213.4	121.9-426.7	24.4-39.6	15.2-30.5	30.5-60.9	---
G50	91.4-213.4	91.4-213.4	91.4-213.4	91.4-182.9	91.4-182.9	---	---	---	91.4-182.9	---	---	---	---	---	---	---	---
GP22	45.7-91.4	45.7-91.4	45.7-91.4	45.7-91.4	45.7-91.4	45.7-121.9	45.7-121.9	45.7-106.7	45.7-91.4	45.7-609.6	---	45.7-213.4	152.4-457.2	30.5-53.3	24.4-45.7	30.5-76.2	---
GP25	45.7-91.4	45.7-91.4	45.7-91.4	45.7-91.4	45.7-91.4	45.7-121.9	45.7-121.9	45.7-106.7	45.7-91.4	45.7-609.6	---	45.7-213.4	152.4-457.2	30.5-53.3	24.4-45.7	30.5-76.2	---
GP26	121.9-243.8	121.9-243.84	91.4-182.9	60.9-152.4	91.4-182.9	60.9-152.4	121.9-243.8	91.4-182.9	91.4-182.9	365.8-1066.8	---	91.4-2438.4	91.4-365.8	30.5-60.9	30.5-60.9	30.5-76.2	---
GP3	60.9-121.9	60.9-121.9	60.9-121.9	60.9-106.7	60.9-121.9	60.9-152.4	60.9-182.9	60.9-152.4	30.5-60.9	91.4-609.6	---	60.9-274.3	91.4-457.2	30.5-60.9	30.5-53.3	45.7-91.4	---
GP4	18.3-53.3	18.3-53.3	18.3-45.7	18.3-45.7	18.3-45.7	18.3-45.7	18.3-45.7	18.3-45.7	18.3-45.7	18.3-45.7	---	---	---	15.2-24.3	15.2-24.4	15.2-24.4	---
GP5	60.9-152.4	60.9-152.4	60.9-121.9	60.9-121.9	60.9-121.9	---	---	---	60.9-121.9	---	---	---	---	---	---	---	---
GP54	60.9-152.4	60.9-152.4	60.9-121.9	60.9-121.9	60.9-121.9	---	---	---	60.9-121.9	---	---	---	---	---	---	---	---
GP50	60.9-182.9	60.9-182.9	60.9-152.4	60.9-137.2	60.9-152.4	---	---	---	60.9-152.4	---	---	---	---	---	---	---	---
AC22	76.2-152.4	76.2-152.4	76.2-137.2	76.2-121.9	60.9-137.2	91.4-182.9	91.4-182.9	60.9-167.6	76.2-137.2	182.9-670.6	---	91.4-274.3	106.7-365.8	24.4-60.9	24.4-53.3	24.4-91.4	---
AC26	152.4-304.8	152.4-304.8	121.9-243.8	91.4-182.9	121.9-243.8	91.4-213.4	152.4-304.8	121.9-243.8	121.9-243.8	457.2-1524.0	---	121.9-304.8	121.9-457.2	30.5-60.9	30.5-60.9	60.9-91.4	---
AC3	76.2-137.2	76.2-137.2	76.2-121.9	76.2-121.9	76.2-137.2	76.2-213.4	91.4-213.4	91.4-182.9	60.9-137.2	182.9-762.0	---	121.9-304.8	121.9-457.2	30.5-76.2	30.5-60.9	30.5-91.4	24.4-45.7
AC54	106.7-152.4	106.7-152.4	106.7-152.4	91.4-152.4	91.4-152.4	---	---	---	91.4-152.4	---	---	---	---	---	---	---	---
AC50	121.9-243.8	137.2-243.8	121.9-243.8	121.9-228.6	106.7-213.4	---	---	---	91.4-213.6	---	---	---	---	---	---	---	---
ZA22	76.2-152.4	76.2-152.4	76.2-137.2	76.2-121.9	60.9-137.2	91.4-182.9	91.4-182.9	60.9-167.6	76.2-137.2	182.9-670.6	---	91.4-274.3	106.7-365.8	24.4-60.9	24.4-53.3	24.4-91.4	---
ZA26	152.4-304.8	152.4-304.8	121.9-243.8	91.4-182.9	121.9-243.8	91.4-213.4	152.4-304.8	121.9-243.8	121.9-243.8	457.2-1524.0	---	121.9-304.8	121.9-457.2	30.5-60.9	30.5-60.9	60.9-91.4	---
ZA3	76.2-137.2	76.2-137.2	76.2-121.9	76.2-121.9	76.2-137.2	76.2-213.4	91.4-213.4	91.4-182.9	60.9-137.2	182.9-762.0	---	121.9-304.8	121.9-457.2	30.5-76.2	30.5-60.9	30.5-91.4	24.4-45.7
ZA50	121.9-243.8	137.2-243.8	121.9-243.8	121.9-228.6	106.7-213.4	---	---	---	91.4-213.4	---	---	---	---	---	---	---	---
ZL22	76.2-152.4	76.2-152.4	76.2-137.2	76.2-121.9	60.9-137.2	91.4-182.9	91.4-182.9	60.9-167.6	76.2-137.2	182.9-670.6	---	91.4-274.3	106.7-365.8	24.4-60.9	24.4-53.3	24.4-91.4	---
ZL26	152.4-304.8	152.4-304.8	121.9-243.8	91.4-182.9	121.9-243.8	91.4-213.4	152.4-304.8	121.9-243.8	121.9-243.8	457.2-1524.0	---	121.9-304.8	121.9-457.2	30.5-60.9	30.5-60.9	60.9-91.4	---
ZL3	76.2-137.2	76.2-137.2	76.2-121.9	76.2-121.9	76.2-137.2	76.2-213.4	91.4-213.4	91.4-182.9	60.9-137.2	182.9-762.0	---	121.9-304.8	121.9-457.2	30.5-76.2	30.5-60.9	30.5-91.4	24.4-45.7
ZR22	76.2-152.4	76.2-152.4	76.2-137.2	76.2-121.9	60.9-137.2	91.4-182.9	91.4-182.9	60.9-167.6	76.2-137.2	182.9-670.6	---	91.4-274.3	106.7-365.8	24.4-60.9	24.4-53.3	24.4-91.4	---
ZR26	152.4-304.8	152.4-304.8	121.9-243.8	91.4-182.9	121.9-243.8	91.4-213.4	152.4-304.8	121.9-243.8	121.9-243.8	457.2-1524.0	---	121.9-304.8	121.9-457.2	30.5-60.9	30.5-60.9	60.9-91.4	---
ZR3	76.2-137.2	76.2-137.2	76.2-121.9	76.2-121.9	76.2-137.2	76.2-213.4	91.4-213.4	91.4-182.9	60.9-137.2	182.9-762.0	---	121.9-304.8	121.9-457.2	30.5-76.2	30.5-60.9	30.5-91.4	24.4-45.8
ZR50	121.9-243.8	137.2-243.8	121.9-243.8	121.9-228.6	106.7-213.4	---	---	---	91.4-213.4	---	---	---	---	---	---	---	---
ZS22	76.2-152.4	76.2-152.4	76.2-137.2	76.2-121.9	60.9-137.2	91.4-182.9	91.4-182.9	60.9-167.6	76.2-137.2	182.9-670.6	---	91.4-274.3	106.7-365.8	24.4-60.9	24.4-53.3	24.4-91.4	---
ZS26	152.4-304.8	152.4-304.8	121.9-243.8	91.4-182.9	121.9-243.8	91.4-213.4	152.4-304.8	121.9-243.8	121.9-243.8	457.2-1524.0	---	121.9-304.8	121.9-457.2	30.5-60.9	30.5-60.9	60.9-91.4	---
ZS3	76.2-137.2	76.2-137.2	76.2-121.9	76.2-121.9	76.2-137.2	76.2-213.4	91.4-213.4	91.4-182.9	60.9-137.2	182.9-762.0	---	121.9-304.8	121.9-457.2	30.5-76.2	30.5-60.9	30.5-91.4	24.4-45.7
ZS50	121.9-243.8	137.2-243.8	121.9-243.8	121.9-228.6	106.7-213.4	---	---	---	91.4-213.4	---	---	---	---	---	---	---	---
GPM6	182.9-457.2	182.9-365.8	152.4-335.3	182.9-243.8	152.4-243.8	152.4-304.8	121.9-335.3	106.7-289.6	106.7-289.6	---	---	---	---	---	---	---	---
CB200	---	---	---	---	---	---	121.9-762.0	304.8-548.6	---	---	---	---	---	91.4-182.9	76.2-137.2	---	45.7-106.7
CB400	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	60.9-152.4
PC33	---	---	---	---	---	---	---	---	---	304.8-2438.4	304.8-1524.0	304.8-1219.2	304.8-1371.6	---	---	---	---
DX200	---	---	---	---	---	---	---	---	---	304.8-2133.6	304.8-914.4	304.8-1066.8	304.8-1219.2	---	---	---	



Grade Name	ANSI range	ISO range	Coating	Description
C2	C1-C2	K05-K15	Uncoated	Uncoated general purpose C2 grade. Good for all non-ferrous materials.
C22	C1	K30	Uncoated	Uncoated grade with a tough, micro-grain, unalloyed substrate. Good for threading at low to medium speeds, while capabale of handling interruptions. Works well in stainless steel, high-temperature alloys, and standard steels at low to medium SFM.
C25	C1-C2	K05-K10 M05-M10	Uncoated	Uncoated general purpose C2 grade. Good for all non-ferrous materials.
C26S	C1	K30-K40	Uncoated	Uncoated grade with a tough, fine grain, unalloyed substrate. Main uncoated grade for Rigid-lock endmill inserts. Edge is up-sharp for use in non-ferrous and composite applications.
C3	C3	K15-K25 M05-M20	Uncoated	Uncoated micro-grain C3 grade. Versatile grade that combines high hardness with toughness. Good for all non-ferrous, stainless steel, and nickel-based alloys at low to medium SFM.
GFI	C1-C5A	K30/P30	Uncoated	Uncoated extemely tough grade that perform well at very slow SFPM with minimal breakage or chipping.
C5	C5	P10-P35 M15-M30	Uncoated	Uncoated general purpose C5 grade. Good for all carbon/alloy steels at low to medium SFM.
C6	C6	P15-P20 M10-M20	Uncoated	Uncoated general purpose C5/C6 harder grade. Good for all carbon/alloy steels at low to medium SFM.
GP2	C1-C2	K05-K15	PVD TiN coated	PVD TiN coated grade. Works well in stainless steel, high-temperature alloys, and standard steels at low to medium SFM.
GP22	C1	K30	PVD TiN coated	PVD TiN grade with a tough, micro-grain substrate. Good for threading at low to medium speeds, while capabale of handling interruptions. Works well in stailess steel, high-temperature alloys, and standard steels at low to medium SFM.
GP25	C1-C2	K05-K10 M05-M10	PVD TiN coated	PVD TiN coated general purpose C2 grade. Good for all non-ferrous materials at low to medium SFM.
GP26	C1	K30-K40	PVD TiN coated	PVD TiN grade with a tough, micro-grain, unalloyed substrate. Rigid-Lok endmill grade. Good choice for steels, stainless, high-temperature alloys, and non-ferrous materials. Good in low to high SFM, will handle interruptions and high feed rates.
GP3	C3	K15-K25 M05-M20	PVD TiN coated	PVD TiN grade with a wear resistant micro-grain substrate. Excellent choice in stainless steels, high-temperature alloys, aero-space materials, and non-ferrous materials. Good in standard steels at low to medium SFM.
GP4	C1-C5A	K30/P30	PVD TiN coated	PVD TiN grade with our toughest substrate. **First choice** at low SFM (50-150) applications and heavy interruptions. Used in all applications where tool breakage is an issue.
GP44	C5A	P35-P50	PVD TiN coated	PVD TiN coated extemely tough sub-micron grade that perform well at very slow SFPM with minimal breakage or chipping.
GP5	C5	P10-P35 M15-M30	PVD TiN coated	PVD TiN grade with a medium tough substrate. Good general purpose grade for steel applications. Primary grade in LPGC and TPGC style inserts.
GP50	C5	P10-P35 M15-M30	PVD TiN coated	PVD TiN grade with a medium tough substrate and excellent wear properties. Great general purpose grade for steel applica-tions.
GP54	C5A	P35-P50	PVD TiN coated	PVD TiN grade with a tough substrate.
GP6	C6	P15-P20 M10-M20	PVD TiN coated	PVD TiN coated general purpose grade. Good for all carbon/alloy steels at medium SFM.
AC2	C1-C2	K05-K15	PVD AlTiN coated	PVD AlTiN coated grade with a tough, micro-grain, unalloyed substrate. Good for threading at low to medium speeds, while capabale of handling interrup-tions. Works well in stainless steel, high-temperature alloys, and standard steels at low to medium SFM.
AC22	C1	K30	PVD AlTiN coated	PVD TiAlN grade with a tough, micro-grain substrate. **First choice** in **Laydown Threading** in all materials. Dry machining capable.
AC25	C1-C2	K05-K10 M05-M10	PVD AlTiN coated	PVD AlTiN coated general purpose C2 grade. Good for all non-ferrous materials at medium to high SFM.
AC26	C1	K30-K40	PVD AlTiN coated	PVD TiAlN grade with a tough, fine grain, unalloyed substrate with excellent wear properties. **First choice** in **Rigid-Lock** inserts for steels, stainless, high-temp alloys, and non-ferrous materials. Performs very well at low to high SFM and will handle interruptions and high feed rates. Coating provides highest resistance to oxidation, physical abrasion, and chip welding. Dry machining capable.
AC3	C3	K15-K25 M05-M20	PVD AlTiN coated	PVD TiAlN grade. **First choice** for grooving and threading in stainless steel, high-temperature alloys, aerospace materials, and non-ferrous materials. Excellent in standard steels at medium SFM. Dry machining capable.
AC5	C5	P10-P35 M15-M30	PVD AlTiN coated	PVD AlTiN coated general purpose grade. Good for all carbon/alloy steels at medium to high SFM.
AC50	C5	P10-P35 M15-M30	PVD AlTiN coated	PVD TiAlN grade. **First choice** for grooving and threading in all standard steels and 400 series stainless. Application range is medium to high SFM. Dry machining capable.
AC54	C5A	P35-P50	PVD AlTiN coated	PVD AlTiN coated grade. Good for all carbon/alloy steels at medium SFM.
AC6	C6	P15-P20 M10-M20	PVD AlTiN coated	PVD AlTiN coated grade. Good for all carbon/alloy steels at medium SFM.

COATINGS

Grade Name	ANSI range	ISO range	Coating	Description
ZA22	C1	K30	PVD AlTiN coated	PVD TiAlN grade with a tough, micro-grain substrate. Dry machining capable.
ZA26	C1	K30-K40	PVD AlTiN coated	PVD TiAlN grade with a tough, fine grain, unalloyed substrate with excellent wear properties. **First choice** in **Rigid-Lock** inserts for steels, stainless, high-temp alloys, and non-ferrous materials. Performs very well at low to high SFM and will handle interruptions and high feed rates. Coating provides highest resistance to oxidation, physical abrasion, and chip welding. Dry machining capable.
ZA3	C3	K15-K25 M05-M20	PVD AlTiN coated	PVD TiAlN grade. **First choice** for grooving in stainless steel, high-temperature alloys, aerospace materials, and non-ferrous materials. Excellent in standard steels at medium SFM. Dry machining capable.
ZA50	C5	P10-P35 M15-M30	PVD AlTiN coated	PVD TiAlN grade. **First choice** for grooving and threading in all standard steels and 400 series stainless. Application range is medium to high SFM. Dry machining capable.
ZS22	C1	K30	PVD AlTiN coated	PVD AlTiN grade with a tough, micro-grain substrate. Good in **Laydown Threading** in all materials. Dry machining capable.
ZS26	C1	K30-K40	PVD AlTiN coated	PVD AlTiN grade with extra lubricity, a tough, fine grain, unalloyed substrate with excellent wear properties. **First choice** in **Rigid-Lock** inserts for steels, stainless, high-temp alloys, and non-ferrous materials. Performs very well at low to high SFM and will handle interruptions and high feed rates. Coating provides highest resistance to oxidation, physical abrasion, and chip welding. Dry machining capable.
ZS3	C3	K15-K25 M05-M20	PVD AlTiN coated	PVD AlTiN grade for grooving and threading in stainless steel, high-temperature alloys, aerospace materials, and non-ferrous materials. Excellent in standard steels at medium SFM. Dry machining capable.
ZS50	C5	P10-P35 M15-M30	PVD AlTiN coated	PVD AlTiN grade for grooving and threading in all standard steels and 400 series stainless. Application range is medium to high SFM. Dry machining capable.
ZL22	C1	K30	PVD AlTiN coated	PVD grade with a tough, micro-grain, unalloyed substrate. Good for turning at low to medium speeds, while capabale of handling interruptions. Works well in high-temperature alloys and aluminum.
ZL26	C1	K30-K40	PVD AlTiN coated	PVD grade with a tough, micro-grain, unalloyed substrate. Rigid-Lok endmill grade. Good choice for aluminum, high-temperature alloys, and non-ferrous materials. Good in low to high SFM, will handle interruptions and high feed rates.
ZL3	C3	K15-K25 M05-M20	PVD AlTiN coated	PVD grade with a wear resistant micro-grain substrate. Excellent choice in high-temperature alloys, aerospace materials, and non-ferrous materials.
ZR22	C1	K30	PVD AlTiN coated	PVD AlTiN grade with a tough, micro-grain, unalloyed substrate. Good for threading at low to medium speeds, while capabale of handling interruptions. Works well in stainless steel, high-temperature alloys, and standard steels at low to medium SFM.
ZR26	C1	K30-K40	PVD AlTiN coated	PVD AlTiN grade with a tough, micro-grain, unalloyed substrate. Rigid-Lok endmill grade. Good choice for steels, stainless, high-temperature alloys, and non-ferrous materials. Good in low to high SFM, will handle interruptions and high feed rates
ZR3	C3	K15-K25 M05-M20	PVD AlTiN coated	PVD AlTiN grade with a wear resistant micro-grain substrate. Excellent choice in stainless steels, high-temperature alloys, aerospace materials, and non-ferrous materials. Good in standard steels at low to medium SFM.
ZR50	C5	P10-P35 M15-M30	PVD AlTiN coated	PVD AlTiN grade with a medium tough substrate and excellent wear properties. Great general purpose grade for steel applications.
ZU22	C1	K30	PVD AlTiN coated	PVD AlTiN grade with a tough, micro-grain, unalloyed substrate. Good for threading at low to medium speeds, while capabale of handling interruptions. Works well in stainless steel, high-temperature alloys, and standard steels at low to medium SFM.
ZU26	C1	K30-K40	PVD AlTiN coated	PVD AlTiN grade with a tough, micro-grain, unalloyed substrate. Rigid-Lok endmill grade. Good choice for steels, stainless, high-temperature alloys, and non-ferrous materials. Good in low to high SFM, will handle interruptions and high feed rates.
ZU3	C3	K15-K25 M05-M20	PVD AlTiN coated	PVD AlTiN grade with a wear resistant micro-grain substrate. Excellent choice in stainless steels, high-temperature alloys, aerospace materials, and non-ferrous materials. Good in standard steels at low to medium SFM.
ZU50	C5	P10-P35 M15-M30	PVD AlTiN coated	PVD AlTiN grade with a medium tough substrate and excellent wear properties. Great general purpose grade for steel applications.
GPM6	C6/C7	P1-P10 K1-K10	PVD TiN coated Cermet	PVD TiN coated cermet grade. **First choice** for grooving in high-speed finishing of most carbon, alloy, and stainless steels. Performs very well in cast and ductile irons. Provides excellent workpiece finishes.
G50	C5	P10-P35 M15-M30	CVD coated	CVD TiN/TiC/TiN grade. API chaser grade for Q-Series material.
CB200	C8	K01	PCBN	PCBN tip brazed onto a carbide insert. High content CBN. **First choice** for cast iron and high-temperature alloys. Suited for roughing to finishing in hardened steels greater than 45 HRC, such as bearing steel, hot and cold work tool steels, high-speed steels, die steels, case hardened steels, nitrided irons, and some hard coatings.
CB400	C8		PCBN	PCBN tip brazed onto a carbide insert. Low content CBN. **First choice** for roughing to finishing of hardened steels 45 HRC and higher. Use on bearing steel, hot and cold work steels, die steels, case hardened steels, carburized and nitrided irons.
CB410	C8		PCBN	PCBN tip brazed onto a carbide insert. Low content CBN. **First choice** for roughing to finishing of hardened steels 45 HRC and higher. Use on bearing steel, hot and cold work steels, die steels, case hardened steels, carburized and nitrided irons.
PC33			PCD	PCD tip brazed onto a carvide insert. **First choice** for high solicone aluminum applications at high SFM. Use on all types of highly abrasive materials including non-ferrous metals and non-metallics. High SFM only!
DX200	C1-C2	K05-K15	PCD CVD coated	PCD CVD coated grade. Rigid-Lock insert grade. **First choice** at high SFM in non-metallic materials such as graphite, epoxy based resins, plastics and aluminum.

ORDERING INFORMATION

CONDITION OF SALE
Sales are made in accordance with our standard Conditions of Sale current at the time orders are accepted. Specifications and prices subject to change without notice.

QUOTATIONS
Will be subject to acceptance 60 days from the date of quotation unless otherwise agreed. **In order to receive special quoted pricing, a quote number must be referenced at the time the order is placed.**

TERMS OF PAYMENT
Net 30 Days

DELIVERY TERMS
F.O.B. Shipping point; Charges will be added to invoice.

WARRANTY
We will replace any material which is proven defective within 90 days from date of shipment to the customer. No claim for labor or damage will be allowed. Claims for error must be made upon receipt of material.

PRICING
So far as the resale of items in this price list is concerned, the prices referred to are to be regarded as suggested only. The distributor, in its sole discretion, determines the actual resale price. These suggested resale prices are based on quantities of identical items released by purchaser on one order for shipment at one time to one destination. The reseller should determine whether savings in cost can justify the suggested quantity price differential, as may be required by the Robinson-Patman Act or other applicable law.

OVER AND UNDER SHIPMENTS
For Non-Stock or Special items, unless otherwise specified or agreed, the following over and under allowances may be made:

Lots of	10-19	20-49	50-99	100+
Over/Under	1 piece	2 pieces	3 pieces	5%

MINIMUM ORDER
$50 Net per order. For Extended Discount Program - $100 Net per order.

RETURNS
Each Distributor will be allowed at a certain time of year to exchange 1% of their Net Sales for the previous year up to a maximum of $1,000. These exchanges will be limited to Stock Standard items only and will be replaced by such. The exchange schedule is as follows:

Group A Distributors:	January - March
Group B Distributors:	July - September
Group C Distributors:	April - June
Group D Distributors:	October - December

All Non-Stock and Specials are non-returnable and/or non-exchangeable.

A Returned Material Authorization (RMA) number must be assigned by Tool-Flo prior to any material being returned. Purchase Order numbers and original invoice numbers must be supplied before an RMA number can be issued.

RELEASE ORDER POLICY
A. Prices are to be based on total quantity of each item. Prices will be firm for six (6) months from the date of purchase. In the event of a price increase during the term of the order, one of the following conditions will apply:

1. If the increase becomes effective during the first six (6) months of the order, the balance of the order can be released within six (6) months from the date of purchase at existing prices. Any subsequent releases will be invoiced at the new price.

2. If the increase becomes effective after the first six (6) months of the order, the balance can be released immediately upon notification of the price increase at existing prices. All items not released immediately will be invoiced at the new price.

B. Minimum release order is 400 pieces. Releases must be made ever 30 days. Initial release must be made within 30 days of order date. Minimum release is 50 pieces every 30 days. Releases not to exceed twelve (12) months. At the end of the twelve (12) month period from the date of the order, any remaining pieces will be shipped.

TOOLFLO
Member IMC Group

Grade Crossover Chart

	Carboloy®	Kennametal®	Sandvik®	Teledyne	Valenite®	Vardex®
GFI		K1				
GP4					V1N	
AC4						
C22						
GP22	CP50	KC722	GC1020		VC927	
AC22	CP500					
GP222						
AC222						
C25	HX	K68		HTA		VK2
GP25				TP21		
AC25						
C26S						
GP26						
AC26						
C2	883					
GP2						
AC2						
C3		K313	H13A			
GP3		KC730				VKX
AC3		KC5010				VTX
GP50	CP30	KC810/KC850	225G		VN8	
AC50	CP300	KC5025	225G			VSX
AG50	560	KC950				
G50						
C5H	P30	K420	S4			
GP5		KC710/KC810	GC135		VN5	
AC5						
C6H	S10M		SM			V30
GP6	550					VN8
AC6						VSX
M6		KT175		SD5	VC671	VX5
GPM6		KT315				
M3						
CB200		KD120			VC722	
CB400		KD050	CB20		VC734	
DX200						
PC33		KD100			VC727	

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