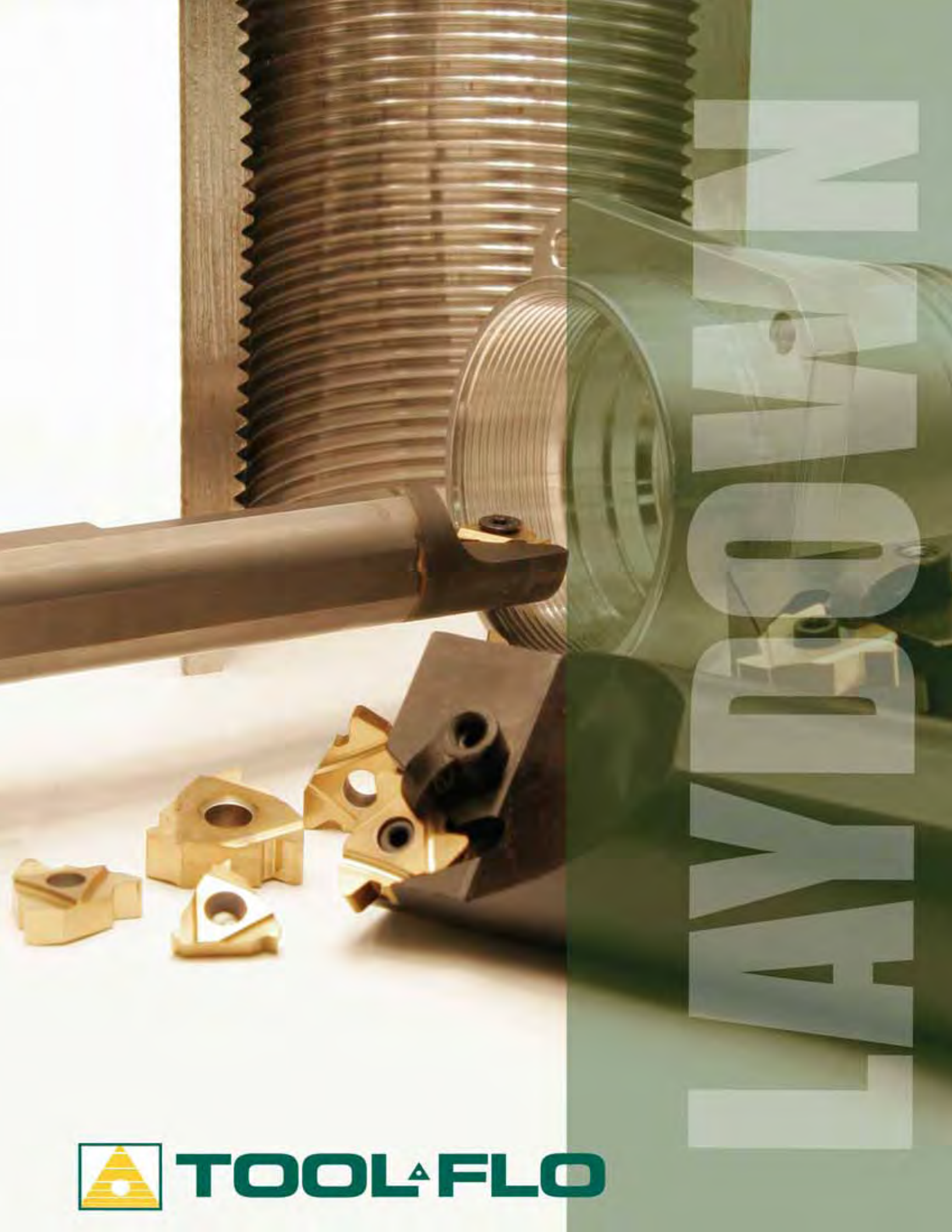




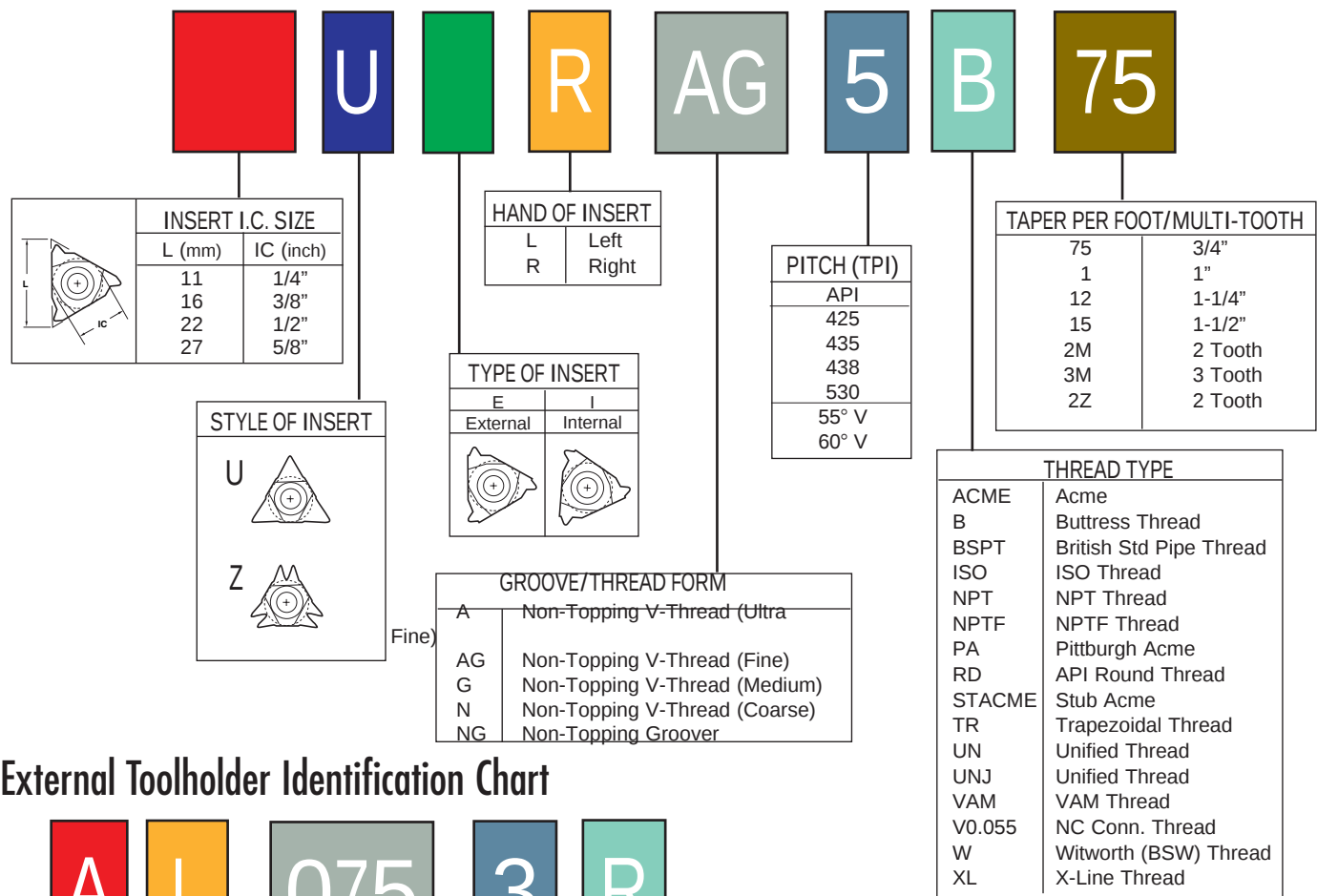
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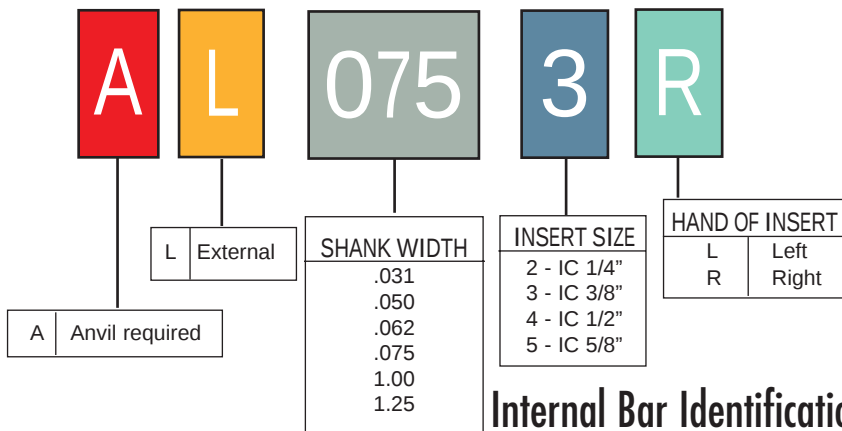
TOOL FLO



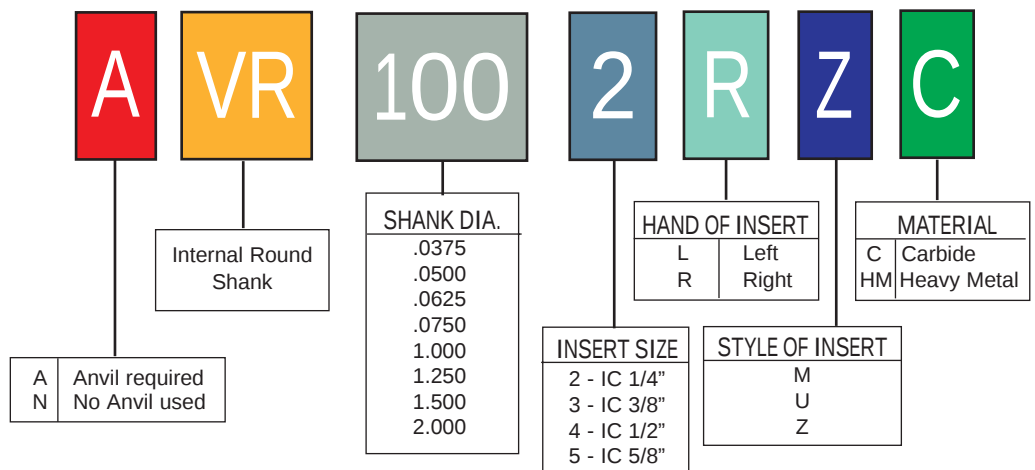
LT Style Laydown Insert Nomenclature Chart



External Toolholder Identification Chart



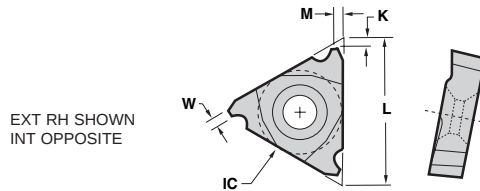
Internal Bar Identification Chart





ACME THREADING

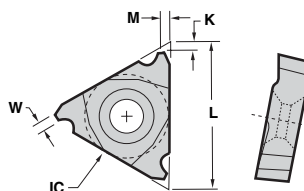
16/22/27



Insert Description	TPI	W	IC	L	M	K	Coating				
							Uncoated	TIN Coated	ATIN Coated		
							C22	GP22	GP50	AT22	AT50
16ER 16ACME	16	.0206	3/8	.63	.04	.04	●	●			
16EL 16ACME	16	.0206	3/8	.63	.04	.04	●				
16ER 14ACME	14	.0239	3/8	.63	.05	.04	●	●			
16EL 14ACME	14	.0239	3/8	.63	.05	.04	●				
16ER 12ACME	12	.0283	3/8	.63	.05	.04	●	●			
16EL 12ACME	12	.0283	3/8	.63	.05	.04	●				
16ER 10ACME	10	.0319	3/8	.63	.06	.05	●	●			
16EL 10ACME	10	.0319	3/8	.63	.06	.05	●				
16ER 8ACME	8	.0411	3/8	.63	.06	.06	●	●			
16EL 8ACME	8	.0411	3/8	.63	.06	.06	●				
22ER 6ACME	6	.0566	1/2	.87	.08	.07	●	●			
22EL 6ACME	6	.0566	1/2	.87	.08	.07					
22ER 5ACME	5	.0689	1/2	.87	.09	.08	●	●			
22EL 5ACME	5	.0689	1/2	.87	.09	.08					
27ER 4ACME	4	.0875	5/8	1.06	.11	.09	●	●			
27EL 4ACME	4	.0875	5/8	1.06	.11	.09					
16NR 16ACME	16	.0206	3/8	.63	.04	.04	●	●			
16NL 16ACME	16	.0206	3/8	.63	.04	.04	●				
16NR 14ACME	14	.0239	3/8	.63	.05	.04	●	●			
16NL 14ACME	14	.0239	3/8	.63	.05	.04					
16NR 12ACME	12	.0283	3/8	.63	.05	.05	●	●			
16NL 12ACME	12	.0283	3/8	.63	.05	.05					
16NR 10ACME	10	.0319	3/8	.63	.05	.05	●	●			
16NL 10ACME	10	.0319	3/8	.63	.05	.05					
16NR 8ACME	8	.0411	3/8	.63	.06	.06	●	●			
16NL 8ACME	8	.0411	3/8	.63	.06	.06					
22NR 6ACME	6	.0566	1/2	.87	.08	.07	●	●			
22NL 6ACME	6	.0566	1/2	.87	.08	.07					
22NR 5ACME	5	.0689	1/2	.87	.09	.08	●	●			
22NL 5ACME	5	.0689	1/2	.87	.09	.08					
27NR 4ACME	4	.0875	5/8	1.06	.10	.09	●	●			
27NL 4ACME	4	.0875	5/8	1.06	.10	.09					
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.							Material				
							Cast Iron				
							Non-Ferrous				
							Stainless/High Temp				
							Steel				

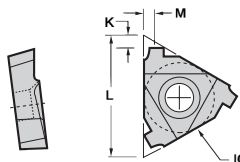


ACME STUB THREADING

EXT RH SHOWN
INT OPPOSITE

Insert Description	TPI	W	IC	L	M	K	Coating				
							Uncoated	TIN Coated	ATIN Coated		
							C22	GP22	GP50	AT22	AT50
16ER 16STACME	16	.0238	3/8	.63	.04	.04		●	●		
16EL 16STACME	16	.0238	3/8	.63	.04	.04		●			
16ER 14STACME	14	.0276	3/8	.63	.04	.04		●	●		
16EL 14STACME	14	.0276	3/8	.63	.04	.04		●			
16ER 12STACME	12	.0326	3/8	.63	.05	.05		●	●		
16EL 12STACME	12	.0326	3/8	.63	.05	.05		●			
16ER 10STACME	10	.0370	3/8	.63	.05	.05		●	●		
16EL 10STACME	10	.0370	3/8	.63	.05	.05		●			
16ER 8STACME	8	.0476	3/8	.63	.06	.06		●	●		
16EL 8STACME	8	.0476	3/8	.63	.06	.06		●			
22ER 6STACME	6	.0652	1/2	.87	.07	.07		●	●		
22EL 6STACME	6	.0652	1/2	.87	.07	.07		●			
22ER 5STACME	5	.0793	1/2	.87	.08	.08		●	●		
22EL 5STACME	5	.0793	1/2	.87	.08	.08		●			
27ER 4STACME	4	.1004	5/8	1.06	.09	.11		●	●		
27EL 4STACME	4	.1004	5/8	1.06	.09	.11		●			
16NR 16STACME	16	.0238	3/8	.63	.04	.04		●	●		
16NL 16STACME	16	.0238	3/8	.63	.04	.04		●			
16NR 14STACME	14	.0276	3/8	.63	.04	.04		●	●		
16NL 14STACME	14	.0276	3/8	.63	.04	.04		●			
16NR 12STACME	12	.0326	3/8	.63	.05	.04		●	●		
16NL 12STACME	12	.0326	3/8	.63	.05	.04		●			
16NR 10STACME	10	.0370	3/8	.63	.05	.05		●	●		
16NL 10STACME	10	.0370	3/8	.63	.05	.05		●			
16NR 8STACME	8	.0476	3/8	.63	.06	.06		●	●		
16NL 8STACME	8	.0476	3/8	.63	.06	.06		●			
22NR 6STACME	6	.0652	1/2	.87	.07	.07		●	●		
22NL 6STACME	6	.0652	1/2	.87	.07	.07		●			
22NR 5STACME	5	.0793	1/2	.87	.09	.08		●	●		
22NL 5STACME	5	.0793	1/2	.87	.09	.08		●			
27NR 4STACME	4	.1004	5/8	1.06	.09	.09		●	●		
27NL 4STACME	4	.1004	5/8	1.06	.09	.09		●			

API BUTTRESS THREADING

EXT SHOWN
INT OPPOSITE

Insert Description	TPITPF	IC	L	M	K	Conn. No.		C22	GP22	GP50	AT50
22ER 8B75	8	3/4	1/2	.87	.102	.073	U.S. Improved Buttress			●	
22ER 5B75	5	3/4	1/2	.87	.087	.087	4-1/2 - 13-3/8				●
22ER 5B1	5	1	1/2	.87	.095	.087	16 and larger				●
22NR 8B75	8	3/4	1/2	.87	.102	.073	U.S. Improved Buttress			●	
22NR 5B75	5	3/4	1/2	.87	.081	.087	4-1/2 - 13-3/8				●
22NR 5B1	5	1	1/2	.87	.081	.090	16 and larger				●
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.							Cast Iron		●		
							Non-Ferrous		●		
							Stainless/High Temp		●		
							Steel			▲	

TOOLFLO



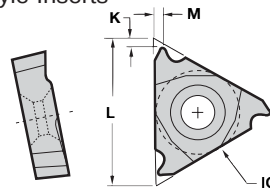
LAYDOWN

LT-Style Inserts

1 2 1

API ROTARY SHOULDER CONNECTION THREADING

EXT RH SHOWN
INT OPPOSITE



Insert Description	TPI	TPF	IC	L	M	K	Conn. No.	Coating				
								Uncoated	TIN Coated	ATIN Coated		
								C22	GP22	GP50	AT22	AT50
22ER 530	5	3	1/2	.87	.10	.08	3-1/2FH, 2-3/8, 4-1/2 Reg.					
22ER 4PAC	4	1-1/2	1/2	.87	.11	.08	American Open Hole					
22ER 438	4	3	1/2	.87	.11	.11	NC56 - NC71					
22ER 435	4	3	1/2	.87	.11	.08	5-1/2, 7-5/8, 8-5/8 Reg.					
22ER 42F*	4	2	1/2	.87	.11	.08	VO.065*					
22ER 428	4	2	1/2	.87	.10	.08	NC23-NC50, 2-3/8 - 5-1/2IF					
22ER 425	4	2	1/2	.87	.10	.08	5-1/2, 6-5/8FH, 6-5/8 Reg.					
22NR 530	5	3	1/2	.87	.10	.08	3-1/2FH, 2-3/8, 4-1/2 Reg.					
22NR 4PAC	4	1-1/2	1/2	.87	.11	.08	American Open Hole					
22NR 438	4	3	1/2	.87	.11	.11	NC56 - NC71					
22NR 435	4	3	1/2	.87	.11	.08	5-1/2, 7-5/8, 8-5/8 Reg.					
22NR 42F*	4	2	1/2	.87	.11	.08	VO.065*					
22NR 428	4	2	1/2	.87	.10	.08	NC23-NC50, 2-3/8 - 5-1/2IF					
22NR 425	4	2	1/2	.87	.10	.08	5-1/2, 6-5/8FH, 6-5/8 Reg.					
27ER 530	5	3	5/8	.126	.11	.07	3-1/2FH, 2-3/8, 4-1/2 Reg.					
27ER 438	4	3	5/8	.126	.11	.08	NC56 - NC71					
27ER 435	4	3	5/8	.126	.12	.08	5-1/2, 7-5/8, 8-5/8 Reg.					
27ER 428	4	2	5/8	.126	.11	.08	NC23-NC50, 2-3/8 - 5-1/2IF					
27ER 425	4	2	5/8	.126	.12	.08	5-1/2, 6-5/8FH, 6-5/8 Reg.					
27NR 530	5	3	5/8	.126	.11	.08	3-1/2FH, 2-3/8, 4-1/2 Reg.					
27NR 438	4	3	5/8	.126	.11	.08	NC56 - NC71					
27NR 435	4	3	5/8	.126	.12	.08	5-1/2, 7-5/8, 8-5/8 Reg.					
27NR 428	4	2	5/8	.126	.11	.08	NC23-NC50, 2-3/8 - 5-1/2IF					
27NR 425	4	2	5/8	.126	.12	.08	5-1/2, 6-5/8FH, 6-5/8 Reg.					

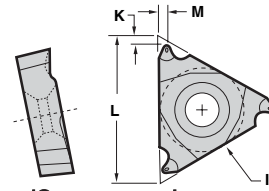
* Obsolete thread form, See A.P.I. Spec 7, 35th Edition, May 1, 1995, Section 9.4

API ROUND THREADING

CHIPBREAKER

Exclusive patented design!

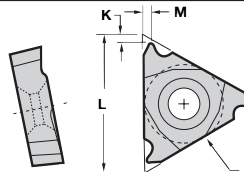
EXT RH SHOWN
INT OPPOSITE



Insert Description	TPI	IC	L	M	K	Coating				
						Uncoated	TIN Coated	ATIN Coated		
						C22	GP22	GP50	AT22	AT50
16ER 8RD-CB	8	3/8	.63	.051	.059					
16ER 10RD-CB	10	3/8	.63	.047	.059					

API ROUND THREADING

EXT RH SHOWN
INT OPPOSITE



Insert Description	TPI	IC	L	M	K	Coating				
						Uncoated	TIN Coated	ATIN Coated		
						C22	GP22	GP50	AT22	AT50
16ER 8RD	8	3/8	.65	.059	.056					
16ER 10RD	10	3/8	.65	.059	.056					
22ER 8RD	8	1/2	.87	.060	.056					
22ER 10RD	10	1/2	.87	.046	.048					
16NR 8RD	8	3/8	.65	.059	.056					
16NR 10RD	10	3/8	.65	.059	.056					
22NR 8RD	8	1/2	.87	.060	.056					
22NR 10RD	10	1/2	.87	.046	.048					

TOOL FLO

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.

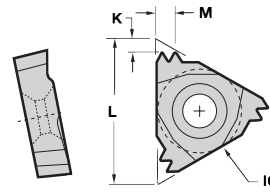
Cast Iron					
Non-Ferrous					
Stainless/High Temp					
Steel					

LAYDOWN



API ROUND THREADING

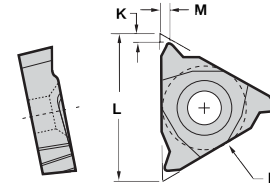
MULTI-TOOTH

EXT RH SHOWN
INT OPPOSITE

Insert Description

	TPI	IC	L	M	K	Coating				
						C22	GP22	GP50	AT22	AT50
27ER 8RD2M	8	5/8	1.08	.177	.114				●	●
22ER 10RD2M	10	1/2	.87	.146	.094				●	●
27NR 8RD2M	8	5/8	1.08	.177	.114				●	●
22NR 10RD2M	10	1/2	.87	.146	.094				●	●

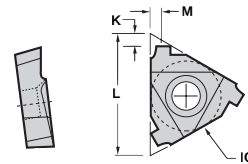
API VO.055

EXT RH SHOWN
INT OPPOSITE

Insert Description

	TPI	TPF	IC	L	M	K	Coating				
							C22	GP22	GP50	AT22	AT50
16ER VO.055	6	1-1/2	3/8	.65	.059	.051			●	●	
22ER VO.055	6	1-1/2	1/2	.87	.072	.060			●	●	
16NR VO.055	6	1-1/2	3/8	.65	.059	.051			●	●	
22NR VO.055	6	1-1/2	1/2	.87	.072	.060			●	●	

API VAM THREADING

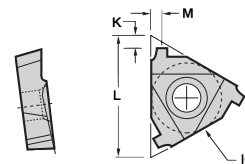
EXT RH SHOWN
INT OPPOSITE

Insert Description

	TPI	IC	L	M	K	Coating				
						C22	GP22	GP50	AT22	AT50
22ER 8VAM	8	1/2	.87	.059	.059			●		
22ER 6VAM	6	1/2	.87	.079	.079			●		
22ER 5VAM	5	1/2	.87	.079	.079			●		
22NR 8VAM	8	1/2	.87	.059	.059			●		
22NR 6VAM	6	1/2	.87	.079	.079			●		
22NR 5VAM	5	1/2	.87	.079	.079			●		

API X-LINE

EXT RH SHOWN



Insert Description

	TPI	TPF	IC	L	M	K	Conn. No.	Coating				
								C22	GP22	GP50	AT22	AT50
22ER 6XL75	6	3/4	1/2	.87	.075	.078				●		
22ER 6XL15	6	1-1/2	1/2	.87	.075	.086	5 - 7-5/8			●		
22ER 5XL12	5	1-1/4	1/2	.87	.087	.083	8-5/8 - 10-3/4			●		
22NR 6XL75	6	3/4	1/2	.87	.075	.078				●		
22NR 6XL15	6	1-1/2	1/2	.87	.075	.086	5 - 7-5/8			●		
22NR 5XL12	5	1-1/4	1/2	.87	.087	.083	8-5/8 - 10-3/4			●		

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.

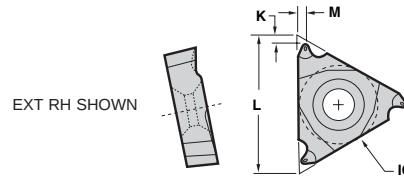
Cast Iron
Non-Ferrous
Stainless/High Temp
Steel



BSPT THREADING

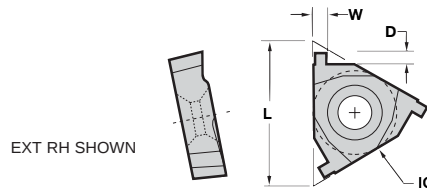
55°
CHIPBREAKER

Exclusive patented design!



Insert Description	TPI	IC	L	M	K					
						C22	GP22	GP50	AT22	AT50
16ER 28BSPT-CB	28	3/8	.63	.031	.028		●			
16ER 19BSPT-CB	19	3/8	.63	.031	.028		●			
16ER 14BSPT-CB	14	3/8	.63	.059	.059		●			
16ER 11BSPT-CB	11	3/8	.63	.059	.059		●			
16NR 28BSPT-CB	28	3/8	.63	.031	.031		●			
16NR 19BSPT-CB	19	3/8	.63	.031	.031		●			

GROOVING



Insert Description	IC	W	D	L					
					C22	GP22	GP50	AT22	AT50
16ER NG W.031	3/8	.031	.050	.63		●			
16EL NG W.031	3/8	.031	.050	.63					
16ER NG W.047	3/8	.047	.070	.63		●			
16EL NG W.047	3/8	.047	.070	.63					
16ER NG W.062	3/8	.062	.080	.63		●			
16EL NG W.062	3/8	.062	.080	.63					
16ER NG W.093	3/8	.093	.070	.63		●			
16EL NG W.093	3/8	.093	.070	.63					
16ER NG W.125	3/8	.125	.045	.63		●			
16EL NG W.125	3/8	.125	.045	.63					
16NR NG W.031	3/8	.031	.050	.63		●			
16NL NG W.031	3/8	.031	.050	.63					
16NR NG W.047	3/8	.047	.070	.63		●			
16NL NG W.047	3/8	.047	.070	.63					
16NR NG W.062	3/8	.062	.080	.63		●			
16NL NG W.062	3/8	.062	.080	.63					
16NR NG W.093	3/8	.093	.070	.63		●			
16NL NG W.093	3/8	.093	.070	.63					
16NR NG W.125	3/8	.125	.045	.63		●			
16NL NG W.125	3/8	.125	.045	.63					

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.

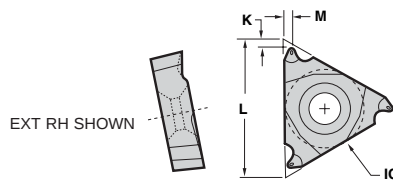
● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

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



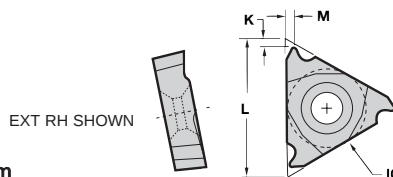
ISO THREADING CHIPBREAKER

Exclusive patented chipbreaker!



Insert Description	mm Pitch	IC	L	M	K	Coating				
						C22	GP22	GP50	AT22	AT50
16NR 0.75ISO-CB	0,75	3/8	.63	.02	.04		●	●	●	●
16NR 1.0ISO-CB	1,00	3/8	.63	.03	.03		●	●	●	●
16NR 1.25ISO-CB	1,25	3/8	.63	.03	.03		●	●	●	●
16NR 1.5ISO-CB	1,50	3/8	.63	.03	.03		●	●	●	●
16NR 1.75ISO-CB	1,75	3/8	.63	.06	.04		●	●	●	●
16NR 2.0ISO-CB	2,00	3/8	.63	.06	.04		●	●	●	●
16NR 2.5ISO-CB	2,50	3/8	.63	.06	.04				●	
16NR 3.0ISO-CB	3,00	3/8	.63	.06	.04				●	
16ER 0.75ISO-CB	0,75	3/8	.63	.02	.04		●	●	●	●
16ER 1.0ISO-CB	1,00	3/8	.63	.03	.03		●	●	●	●
16ER 1.25ISO-CB	1,25	3/8	.63	.03	.03		●	●	●	●
16ER 1.5ISO-CB	1,50	3/8	.63	.03	.03		●	●	●	●
16ER 1.75ISO-CB	1,75	3/8	.63	.06	.04		●	●	●	●
16ER 2.0ISO-CB	2,00	3/8	.63	.06	.04		●	●	●	●
16ER 2.5ISO-CB	2,50	3/8	.63	.06	.04				●	
16ER 3.0ISO-CB	3,00	3/8	.63	.06	.04				●	

ISO THREADING



Insert Description	mm Pitch	IC	L	M	K	Coating				
						C22	GP22	GP50	AT22	AT50
11NR 0.5ISO	0,50	1/4	.43	.02	.015		●	●		
11NR 0.75ISO	0,75	1/4	.43	.02	.02		●	●		
11NR 1.0ISO	1,0	1/4	.43	.03	.03		●	●		
16NR 1.0ISO	1,0	3/8	.63	.03	.02		●	●	●	●
16NR 1.5ISO	1,5	3/8	.63	.04	.03		●	●	●	●
16NR 2.0ISO	2,0	3/8	.63	.05	.04		●	●	●	●
22NR 3.5ISO	3,5	1/2	.87	.09	.06		●		●	
22NR 4.0ISO	4,0	1/2	.87	.09	.06		●		●	
22NR 5.0ISO	5,0	1/2	.87	.09	.06		●		●	
27NR 5.5ISO	5,5	5/8	1.06	.09	.06		●		●	
27NR 6.0ISO	6,0	5/8	1.06	.10	.07		●		●	
11ER 0.5ISO	0,50	1/4	.43	.02	.02		●	●		
11ER 0.75ISO	0,75	1/4	.43	.02	.02		●	●		
11ER 1.0ISO	1,0	1/4	.43	.03	.02		●	●		
16ER 1.0ISO	1,0	3/8	.63	.03	.03		●	●	●	●
16ER 1.5ISO	1,5	3/8	.63	.04	.03		●	●	●	●
16ER 2.0ISO	2,0	3/8	.63	.05	.04		●	●	●	●
22ER 3.5ISO	3,5	1/2	.87	.09	.06		●		●	
22ER 4.0ISO	4,0	1/2	.87	.09	.07		●		●	
22ER 5.0ISO	5,0	1/2	.87	.10	.07		●		●	
27ER 5.5ISO	5,5	5/8	1.06	.11	.07		●		●	
27ER 6.0ISO	6,0	5/8	1.06	.11	.08		●		●	

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

Cast Iron
Non-Ferrous
Stainless/High Temp
Steel



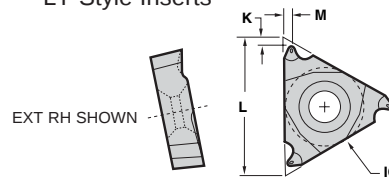
LAYDOWN

LT-Style Inserts

1 2 5

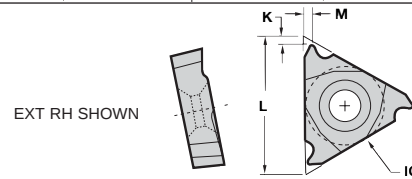
NPT THREADING CHIPBREAKER

Exclusive patented design!



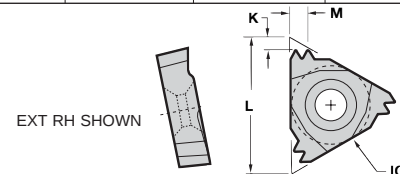
Insert Description	TPI	IC	L	M	K	Coating				
						Uncoated	TIN Coated	ATIN Coated		
						C22	GP22	GP50	AT22	AT50
16ER 27NPT-CB	27	3/8	.63	.03	.02					
16ER 18NPT-CB	18	3/8	.63	.03	.02					
16ER 14NPT-CB	14	3/8	.63	.06	.04					
16ER 11.5NPT-CB	11.5	3/8	.63	.06	.04					
16ER 8NPT-CB	8	3/8	.63	.06	.04					
16NR 27NPT-CB	27	3/8	.63	.03	.02					
16NR 18NPT-CB	18	3/8	.63	.03	.02					
16NR 14NPT-CB	14	3/8	.63	.06	.04					
16NR 11.5NPT-CB	11.5	3/8	.63	.06	.04					
16NR 8NPT-CB	8	3/8	.63	.06	.04					

NPT THREADING



Insert Description	TPI	IC	L	M	K	Coating				
						Uncoated	TIN Coated	ATIN Coated		
						C22	GP22	GP50	AT22	AT50
16ER 27NPT	27	3/8	.63	.03	.03					
16EL 27NPT	27	3/8	.63	.03	.03					
16ER 18NPT	18	3/8	.63	.04	.03					
16EL 18NPT	18	3/8	.63	.04	.03					
16ER 14NPT	14	3/8	.63	.05	.04					
16EL 14NPT	14	3/8	.63	.05	.04					
16ER 11.5NPT	11.5	3/8	.63	.06	.04					
16EL 11.5NPT	11.5	3/8	.63	.06	.04					
16ER 8NPT	8	3/8	.63	.07	.05					
16EL 8NPT	8	3/8	.63	.07	.05					
11NR 18NPT	18	1/4	.43	.04	.03					
11NR 27NPT	27	1/4	.43	.03	.03					
16NR 27NPT	27	3/8	.63	.03	.03					
16NL 27NPT	27	3/8	.63	.03	.03					
16NR 18NPT	18	3/8	.63	.04	.03					
16NL 18NPT	18	3/8	.63	.04	.03					
16NR 14NPT	14	3/8	.63	.05	.04					
16NL 14NPT	14	3/8	.63	.05	.04					
16NR 11.5NPT	11.5	3/8	.63	.06	.04					
16NL 11.5NPT	11.5	3/8	.63	.06	.04					
16NR 8NPT	8	3/8	.63	.06	.05					
16NL 8NPT	8	3/8	.63	.06	.05					

NPT THREADING MULTI-TOOTH



Insert Description	TPI	IC	L	M	K	Coating				
						Uncoated	TIN Coated	ATIN Coated		
						C22	GP22	GP50	AT22	AT50
22ER 11.5NPT2M	11.5	1/2	.87	.13	.09					
27ER 11.5NPT3M	11.5	5/8	1.06	.22	.14					
27ER 8NPT2M	8	5/8	1.06	.19	.11					
22NR 11.5NPT2M	11.5	1/2	.87	.13	.09					
27NR 11.5NPT3M	11.5	5/8	1.06	.22	.14					
27NR 8NPT2M	8	5/8	1.06	.19	.11					

TOOL FLO

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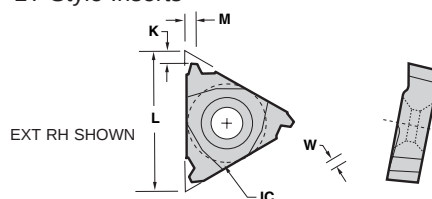
● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

Cast Iron
Non-Ferrous
Stainless/High Temp
Steel

Coating	C22	GP22	GP50	AT22	AT50
Cast Iron		▲			●
Non-Ferrous		▲			●
Stainless/High Temp		▲			●
Steel			▲		●



TRAPEZOIDAL THREADING

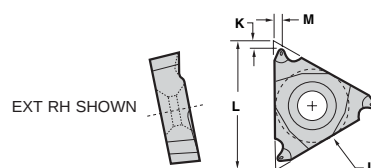


Insert Description	PITCH	IC	L	M	K	Coating				
						C22	GP22	GP50	AT22	AT50
16ER 1.5TR	1.5	3/8	.63	.04	.04		●	●	●	
16ER 2.0TR	2.0	3/8	.63	.05	.04		●	●	●	
16ER 3.0TR	3.0	3/8	.63	.06	.05		●	●	●	
16NR 1.5TR	1.5	3/8	.63	.04	.04		●	●	●	
16NR 2.0TR	2.0	3/8	.63	.05	.04		●	●	●	
16NR 3.0TR	3.0	3/8	.63	.06	.05		●	●	●	

NPTF DRY SEAL THREADING

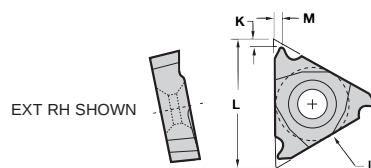
CHIPBREAKER

Exclusive patented design!



Insert Description	TPI	IC	L	M	K	Coating				
						C22	GP22	GP50	AT22	AT50
16ER 27NPTF-CB	27	3/8	.63	.03	.03		●			
16ER 18NPTF-CB	18	3/8	.63	.04	.03		●			
16ER 14NPTF-CB	14	3/8	.63	.05	.04		●			
16ER 11.5NPTF-CB	11.5	3/8	.63	.06	.04		●			
16ER 8NPTF-CB	8	3/8	.63	.07	.05		●			
16NR 27NPTF-CB	27	3/8	.63	.03	.03		●			
16NR 18NPTF-CB	18	3/8	.63	.03	.02		●			
16NR 14NPTF-CB	14	3/8	.63	.06	.04		●			
16NR 11.5NPTF-CB	11.5	3/8	.63	.06	.04		●			
16NR 8NPTF-CB	8	3/8	.63	.06	.04		●			

NPTF DRY SEAL THREADING



Insert Description	TPI	IC	L	M	K	Coating				
						C22	GP22	GP50	AT22	AT50
16ER 27NPTF	27	3/8	.63	.03	.03		●			
16EL 27NPTF	27	3/8	.63	.03	.03		●			
16ER 18NPTF	18	3/8	.63	.04	.03		●			
16EL 18NPTF	18	3/8	.63	.04	.03		●			
16ER 14NPTF	14	3/8	.63	.05	.04		●			
16EL 14NPTF	14	3/8	.63	.05	.04		●			
16ER 11.5NPTF	11.5	3/8	.63	.06	.04		●			
16EL 11.5NPTF	11.5	3/8	.63	.06	.04		●			
16ER 8NPTF	8	3/8	.63	.07	.05		●			
16EL 8NPTF	8	3/8	.63	.07	.05		●			
11NR 27NPTF	27	1/4	.43	.03	.03		●			
11NL 18NPTF	18	1/4	.43	.04	.03		●			
16NR 27NPTF	27	3/8	.63	.03	.03		●			
16NL 27NPTF	27	3/8	.63	.03	.03		●			
16NR 18NPTF	18	3/8	.63	.04	.03		●			
16NL 18NPTF	18	3/8	.63	.04	.03		●			
16NR 14NPTF	14	3/8	.63	.05	.04		●			
16NL 14NPTF	14	3/8	.63	.05	.04		●			
16NR 11.5NPTF	11.5	3/8	.63	.06	.04		●			
16NL 11.5NPTF	11.5	3/8	.63	.06	.04		●			
16NR 8NPTF	8	3/8	.63	.07	.05		●			
16NL 8NPTF	8	3/8	.63	.07	.05		●			

TOOL FLO

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



LAYDOWN

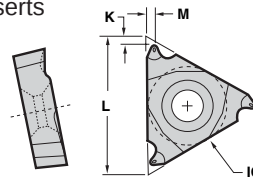
LT-Style Inserts

1 2 7

UN THREADING - EXTERNAL CHIPBREAKER

Exclusive patented chipbreaker!

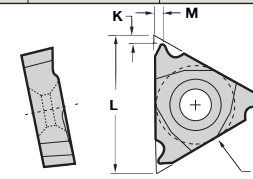
EXT RH SHOWN



Insert Description	TPI	IC	L	M	K	Coating				
						Uncoated	TIN Coated	ATIN Coated	GP22	GP50
16ER 32UN-CB	32	3/8	.63	.01	.05	●	●	●	●	●
16ER 28UN-CB	28	3/8	.63	.03	.03	●	●	●	●	●
16ER 24UN-CB	24	3/8	.63	.03	.03	●	●	●	●	●
16ER 20UN-CB	20	3/8	.63	.03	.03	●	●	●	●	●
16ER 18UN-CB	18	3/8	.63	.03	.03	●	●	●	●	●
16ER 16UN-CB	16	3/8	.63	.03	.03	●	●	●	●	●
16ER 14UN-CB	14	3/8	.63	.06	.05	●	●	●	●	●
16ER 13UN-CB	13	3/8	.63	.06	.05	●	●	●	●	●
16ER 12UN-CB	12	3/8	.63	.06	.05	●	●	●	●	●
16ER 10UN-CB	10	3/8	.63	.06	.05	●	●	●	●	●
16ER 8UN-CB	8	3/8	.63	.06	.05	●	●	●	●	●

UN THREADING - EXTERNAL

EXT RH SHOWN



Insert Description	TPI	IC	L	M	K	Coating				
						Uncoated	TIN Coated	ATIN Coated	GP22	GP50
16ER 32UN	32	3/8	.63	.02	.02	●	●	●	●	●
16EL 32UN	32	3/8	.63	.02	.02	●	●	●	●	●
16ER 28UN	28	3/8	.63	.03	.02	●	●	●	●	●
16EL 28UN	28	3/8	.63	.03	.02	●	●	●	●	●
16ER 24UN	24	3/8	.63	.03	.03	●	●	●	●	●
16EL 24UN	24	3/8	.63	.03	.03	●	●	●	●	●
16ER 20UN	20	3/8	.63	.04	.03	●	●	●	●	●
16EL 20UN	20	3/8	.63	.04	.03	●	●	●	●	●
16ER 18UN	18	3/8	.63	.04	.03	●	●	●	●	●
16EL 18UN	18	3/8	.63	.04	.03	●	●	●	●	●
16ER 16UN	16	3/8	.63	.04	.04	●	●	●	●	●
16EL 16UN	16	3/8	.63	.04	.04	●	●	●	●	●
16ER 14UN	14	3/8	.63	.05	.04	●	●	●	●	●
16EL 14UN	14	3/8	.63	.05	.04	●	●	●	●	●
16ER 13UN	13	3/8	.63	.05	.04	●	●	●	●	●
16EL 13UN	13	3/8	.63	.05	.04	●	●	●	●	●
16ER 12UN	12	3/8	.63	.06	.04	●	●	●	●	●
16EL 12UN	12	3/8	.63	.06	.04	●	●	●	●	●
16ER 11UN	11	3/8	.63	.06	.04	●	●	●	●	●
16EL 11UN	11	3/8	.63	.06	.04	●	●	●	●	●
16ER 10UN	10	3/8	.63	.06	.04	●	●	●	●	●
16EL 10UN	10	3/8	.63	.06	.04	●	●	●	●	●
16ER 9UN	9	3/8	.63	.07	.05	●	●	●	●	●
16EL 9UN	9	3/8	.63	.07	.05	●	●	●	●	●
16ER 8UN	8	3/8	.63	.06	.05	●	●	●	●	●
16EL 8UN	8	3/8	.63	.06	.05	●	●	●	●	●
22ER 7UN	7	1/2	.87	.09	.06	●	●	●	●	●
22EL 7UN	7	1/2	.87	.09	.06	●	●	●	●	●
22ER 6UN	6	1/2	.87	.09	.06	●	●	●	●	●
22EL 6UN	6	1/2	.87	.09	.06	●	●	●	●	●
22ER 5UN	5	1/2	.87	.10	.07	●	●	●	●	●
22EL 5UN	5	1/2	.87	.10	.07	●	●	●	●	●
27ER 4.5UN	4.5	5/8	1.06	.11	.07	●	●	●	●	●
27EL 4.5UN	4.5	5/8	1.06	.11	.07	●	●	●	●	●
27ER 4UN	4	5/8	1.06	.12	.08	●	●	●	●	●
27EL 4UN	4	5/8	1.06	.12	.08	●	●	●	●	●

TOOL FLO

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Cast Iron
Non-Ferrous
Stainless/High Temp
Steel

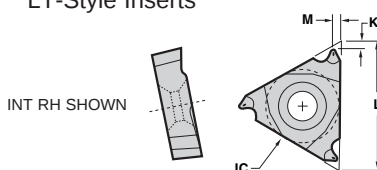
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LAYDOWN



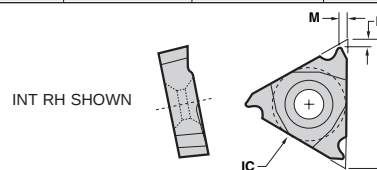
UN THREADING - INTERNAL CHIPBREAKER

Exclusive patented chipbreaker!



Insert Description	TPI	IC	L	M	K	C22	GP22	GP50	AT22	AT50
16NR 32UN-CB	32	3/8	.63	.02	.04					
16NR 28UN-CB	28	3/8	.63	.03	.02		●	●	●	●
16NR 24UN-CB	24	3/8	.63	.03	.03		●	●	●	●
16NR 20UN-CB	20	3/8	.63	.03	.02		●	●	●	●
16NR 18UN-CB	18	3/8	.63	.03	.02		●	●	●	●
16NR 16UN-CB	16	3/8	.63	.03	.03		●	●	●	●
16NR 14UN-CB	14	3/8	.63	.05	.04		●	●	●	●
16NR 13UN-CB	13	3/8	.63	.05	.04		●	●	●	●
16NR 12UN-CB	12	3/8	.63	.05	.04		●	●	●	●
16NR 10UN-CB	10	3/8	.63	.05	.04		●	●	●	●
16NR 8UN-CB	8	3/8	.63	.05	.04		●	●	●	●

UN THREADING - INTERNAL



Insert Description	TPI	IC	L	M	K	C22	GP22	GP5	AT2	AT5
11NR 32UN	32	1/4	.43	.02	.02		●	●		
11NR 28UN	28	1/4	.43	.03	.02		●	●		
11NR 24UN	24	1/4	.43	.03	.03		●	●		
11NR 20UN	20	1/4	.43	.04	.03		●	●		
11NR 18UN	18	1/4	.43	.04	.03		●	●		
16NR 32UN	32	3/8	.63	.02	.02		●	●	●	●
16NL 32UN	32	3/8	.63	.02	.02					
16NR 28UN	28	3/8	.63	.03	.02		●	●	●	●
16NL 28UN	28	3/8	.63	.03	.02					
16NR 24UN	24	3/8	.63	.03	.03		●	●	●	●
16NL 24UN	24	3/8	.63	.03	.03					
16NR 20UN	20	3/8	.63	.04	.03		●	●	●	●
16NL 20UN	20	3/8	.63	.04	.03					
16NR 18UN	18	3/8	.63	.04	.03		●	●	●	●
16NL 18UN	18	3/8	.63	.04	.03					
16NR 16UN	16	3/8	.63	.04	.04		●	●	●	●
16NL 16UN	16	3/8	.63	.04	.04					
16NR 14UN	14	3/8	.63	.05	.04		●	●	●	●
16NL 14UN	14	3/8	.63	.05	.04					
16NR 13UN	13	3/8	.63	.05	.04		●	●	●	●
16NL 13UN	13	3/8	.63	.05	.04					
16NR 12UN	12	3/8	.63	.06	.04		●	●	●	●
16NL 12UN	12	3/8	.63	.06	.04					
16NR 11UN	11	3/8	.63	.06	.04		●	●	●	●
16NL 11UN	11	3/8	.63	.06	.04					
16NR 10UN	10	3/8	.63	.06	.04		●	●	●	●
16NL 10UN	10	3/8	.63	.06	.04					
16NR 9UN	9	3/8	.63	.07	.05		●	●	●	●
16NL 9UN	9	3/8	.63	.07	.05					
16NR 8UN	8	3/8	.63	.06	.04		●	●	●	●
16NL 8UN	8	3/8	.63	.06	.04					
22NR 7UN	7	1/2	.87	.09	.06		●	●	●	●
22NL 7UN	7	1/2	.87	.09	.06					
22NR 6UN	6	1/2	.87	.09	.06		●	●	●	●
22NL 6UN	6	1/2	.87	.09	.06					
22NR 5UN	5	1/2	.87	.09	.06		●	●	●	●
22NL 5UN	5	1/2	.87	.09	.06					
27NR 4.5UN	4.5	5/8	1.06	.09	.07		●	●	●	●
27NL 4.5UN	4.5	5/8	1.06	.09	.07					
27NR 4UN	4	5/8	1.06	.11	.07		●	●	●	●
27NL 4UN	4	5/8	1.06	.11	.07					

TOOL FLO

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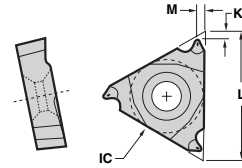
Cast Iron
Non-Ferrous
Stainless/High Temp
Steel



UNJ THREADING - INTERNAL CHIPBREAKER

Exclusive patented chipbreaker!

INT RH SHOWN

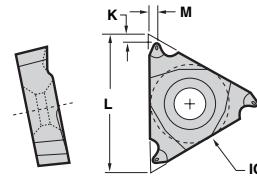


Insert Description	TPI	IC	L	M	K	Coating				
						C22	GP22	GP50	AT22	AT50
16NR 32UNJ-CB	32	3/8	.63	.02	.04		●		●	
16NR 28UNJ-CB	28	3/8	.63	.03	.02		●		●	
16NR 24UNJ-CB	24	3/8	.63	.03	.02		●		●	
16NR 20UNJ-CB	20	3/8	.63	.03	.02		●		●	
16NR 18UNJ-CB	18	3/8	.63	.03	.02		●		●	
16NR 16UNJ-CB	16	3/8	.63	.03	.02		●		●	
16NR 14UNJ-CB	14	3/8	.63	.06	.04		●		●	
16NR 12UNJ-CB	12	3/8	.63	.06	.04		●		●	
16NR 10UNJ-CB	10	3/8	.63	.06	.04		●		●	

UNJ THREADING - EXTERNAL CHIPBREAKER

Exclusive patented chipbreaker!

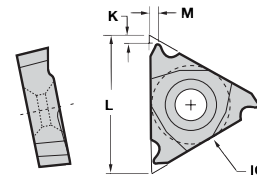
EXT RH SHOWN



Insert Description	TPI	IC	L	M	K	Coating				
						C22	GP22	GP50	AT22	AT50
16ER 32UNJ-CB	32	3/8	.63	.02	.05		●		●	
16ER 28UNJ-CB	28	3/8	.63	.03	.03		●		●	
16ER 24UNJ-CB	24	3/8	.63	.03	.03		●		●	
16ER 20UNJ-CB	20	3/8	.63	.03	.03		●		●	
16ER 18UNJ-CB	18	3/8	.63	.03	.03		●		●	
16ER 16UNJ-CB	16	3/8	.63	.03	.03		●		●	
16ER 14UNJ-CB	14	3/8	.63	.06	.05		●		●	
16ER 12UNJ-CB	12	3/8	.63	.06	.05		●		●	
16ER 10UNJ-CB	10	3/8	.63	.06	.05		●		●	

UNJ THREADING - EXTERNAL

EXT RH SHOWN



Insert Description	TPI	IC	L	M	K	Coating				
						C22	GP22	GP50	AT22	AT50
16ER 32UNJ	32	3/8	.63	.03	.02		●		●	
16ER 28UNJ	28	3/8	.63	.03	.03		●		●	
16ER 24UNJ	24	3/8	.63	.03	.03		●		●	
16ER 20UNJ	20	3/8	.63	.04	.03		●		●	
16ER 18UNJ	18	3/8	.63	.04	.03		●		●	
16ER 16UNJ	16	3/8	.63	.04	.04		●		●	
16ER 14UNJ	14	3/8	.63	.05	.04		●		●	
16ER 12UNJ	12	3/8	.63	.05	.04		●		●	
16ER 10UNJ	10	3/8	.63	.06	.05		●		●	
16ER 8UNJ	8	3/8	.63	.06	.05		●		●	

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

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

1 3 0 V-THREADING

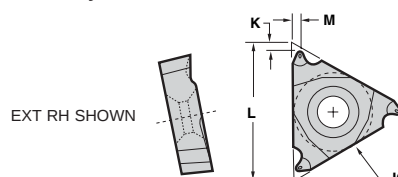
60°

CHIPBREAKER

Exclusive patented chipbreaker!

L A Y D O W N

LT-Style Inserts



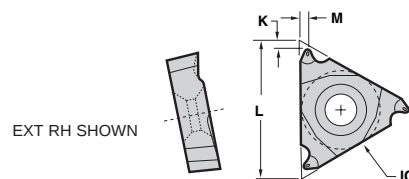
Insert Description	TPI/IC	L	M	K	R		Coatings				
							Uncoated	TIN Coated	AITN Coated		
16ER A60-CB	16-48	3/8	.63	.03	.02	.002	C22	GP22	GP50	AT22	AT50
16ER AG60-CB	8-48	3/8	.63	.06	.04	.003		●	●	●	●
16ER G60-CB	8-14	3/8	.63	.06	.04	.011		●	●	●	●
16NR A60-CB	16-48	3/8	.63	.03	.03	.002		●	●	●	●
16NR AG60-CB	8-48	3/8	.63	.06	.04	.002		●	●	●	●
16NR G60-CB	8-14	3/8	.63	.06	.04	.004		●	●	●	●

V-THREADING

55°

CHIPBREAKER

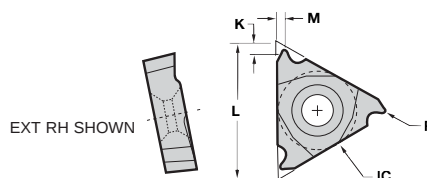
Exclusive patented chipbreaker!



Insert Description	TPI/IC	L	M	K	R		Coatings				
							Uncoated	TIN Coated	AITN Coated		
16ER A55-CB	16-48	3/8	.63	.03	.02	.002	C22	GP22	GP50	AT22	AT50
16ER AG55-CB	8-48	3/8	.63	.06	.04	.003		●	●	●	●
16ER G55-CB	8-14	3/8	.63	.06	.04	.008		●	●	●	●
16NR A55-CB	16-48	3/8	.63	.03	.02	.002		●	●	●	●
16NR AG55-CB	8-48	3/8	.63	.06	.04	.003		●	●	●	●
16NR G55-CB	8-14	3/8	.63	.06	.04	.008		●	●	●	●

V-THREADING

55° AND 60°



Insert Description	TPI/IC	L	M	K	R		Coatings				
							Uncoated	TIN Coated	AITN Coated		
16ER A60	16-48	3/8	.63	.04	.03	.003	C22	GP22	GP50	AT22	AT50
16EL A60	16-48	3/8	.63	.04	.03	.003		●	●	●	●
16ER AG60	8-48	3/8	.63	.07	.05	.003		●	●	●	●
16EL AG60	8-48	3/8	.63	.07	.05	.003		●	●	●	●
16ER G60	8-14	3/8	.63	.07	.05	.007		●	●	●	●
16EL G60	8-14	3/8	.63	.07	.05	.007		●	●	●	●
22ER N60	5-7	1/2	.87	.10	.07	.016		●	●	●	●
22EL N60	5-7	1/2	.87	.10	.07	.016		●	●	●	●
11NR A55	16-48	1/4	.43	.04	.03	.003		●	●	●	●
11NR A60	16-48	1/4	.43	.04	.03	.003		●	●	●	●
16NR A60	16-48	3/8	.63	.04	.03	.003		●	●	●	●
16NL A60	16-48	3/8	.63	.04	.03	.003		●	●	●	●
16NR AG60	8-48	3/8	.63	.07	.05	.003		●	●	●	●
16NL AG60	8-48	3/8	.63	.07	.05	.003		●	●	●	●
16NR G60	8-14	3/8	.63	.07	.05	.007		●	●	●	●
16NL G60	8-14	3/8	.63	.07	.05	.007		●	●	●	●
22NR N60	5-7	1/2	.87	.10	.07	.010		●	●	●	●
22NL N60	5-7	1/2	.87	.10	.07	.010		●	●	●	●

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▲ Recommended grade under general conditions.

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

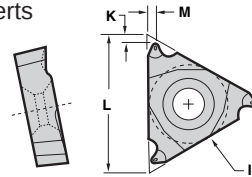
TOOL FLO



WHITWORTH THREADING CHIPBREAKER

L A Y D O W N
LT-Style Inserts
Exclusive patented design!

EXT RH SHOWN

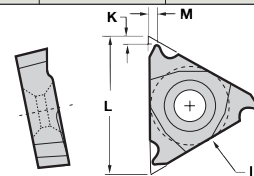


1 3 1

Insert Description	TPI	IC	L	M	K	Uncoated				
						C22	GP22	GP50	AT22	AT50
16ER 36W-CB	36	3/8	.63	.02	.05		●			
16ER 32W-CB	32	3/8	.63	.02	.05		●			
16ER 28W-CB	28	3/8	.63	.03	.03		●			
16ER 24W-CB	24	3/8	.63	.03	.03		●			
16ER 20W-CB	20	3/8	.63	.03	.03		●			
16ER 19W-CB	19	3/8	.63	.03	.03		●			
16ER 18W-CB	18	3/8	.63	.03	.03		●			
16ER 16W-CB	16	3/8	.63	.03	.03		●			
16ER 14W-CB	14	3/8	.63	.06	.05		●			
16ER 12W-CB	12	3/8	.63	.06	.05		●			
16ER 11W-CB	11	3/8	.63	.06	.05		●			
16ER 10W-CB	10	3/8	.63	.06	.05		●			
16ER 8W-CB	8	3/8	.63	.06	.05		●			
16NR 28W-CB	28	3/8	.63	.03	.03		●			
16NR 24W-CB	24	3/8	.63	.03	.03		●			
16NR 20W-CB	20	3/8	.63	.03	.03		●			
16NR 19W-CB	19	3/8	.63	.03	.03		●			

WHITWORTH THREADING

EXT RH SHOWN



Insert Description	TPI	IC	L	M	K	Uncoated				
						C22	GP22	GP50	AT22	AT50
16ER 28W	28	3/8	.63	.03	.02		●			
16ER 20W	20	3/8	.63	.04	.03		●			
16ER 19W	19	3/8	.63	.04	.03		●			
16ER 18W	18	3/8	.63	.04	.03		●			
16ER 16W	16	3/8	.63	.04	.04		●			
16ER 14W	14	3/8	.63	.05	.04		●			
16ER 12W	12	3/8	.63	.06	.04		●			
16ER 11W	11	3/8	.63	.06	.04		●			
16ER 10W	10	3/8	.63	.06	.04		●			
16ER 9W	9	3/8	.63	.07	.05		●			
16ER 8W	8	3/8	.63	.06	.05		●			
22ER 7W	7	1/2	.87	.09	.06		●			
22ER 6W	6	1/2	.87	.09	.06		●			
22ER 5W	5	1/2	.87	.09	.07		●			
27ER 4W	4	5/8	1.06	.11	.08		●			
16NR 28W	28	3/8	.63	.03	.02		●			
16NR 20W	20	3/8	.63	.04	.03		●			
16NR 19W	19	3/8	.63	.04	.03		●			
16NR 18W	18	3/8	.63	.04	.03		●			
16NR 16W	16	3/8	.63	.04	.04		●			
16NR 14W	14	3/8	.63	.05	.04		●			
16NR 12W	12	3/8	.63	.06	.04		●			
16NR 11W	11	3/8	.63	.06	.04		●			
16NR 10W	10	3/8	.63	.06	.04		●			
16NR 9W	9	3/8	.63	.07	.05		●			
16NR 8W	8	3/8	.63	.08	.05		●			
22NR 7W	7	1/2	.87	.06	.05		●			
22NR 6W	6	1/2	.87	.09	.06		●			
22NR 5W	5	1/2	.87	.09	.07		●			
27NR 4W	4	5/8	1.06	.11	.08		●			

TOOL FLO

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Cast Iron
Non-Ferrous
Stainless/High Temp
Steel

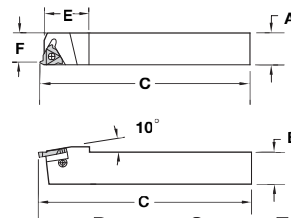
L A Y D O W N



EXTERNAL HOLDER

AL

Threading, Grooving



RH SHOWN

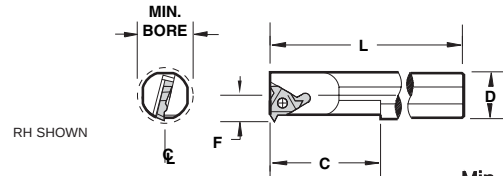
RH Holder uses RH Inserts

Holder Description	Insert	A	B	C	E	F*	Insert Screw	Seat Screw	Wrench	Seat
AL0500-3R	16ER	1/2	1/2	5	1.15	.63	SA3	SY3	K3	YE3
AL0500-3L	16EL	1/2	1/2	5	1.15	.63	SA3	SY3	K3	YI3
AL0625-3R	16ER	5/8	5/8	5	1.15	.63	SA3	SY3	K3	YE3
AL075-3R	16ER	3/4	3/4	5	1.2	.75	SA3	SY3	K3	YE3
AL075-3L	16EL	3/4	3/4	5	1.2	.75	SA3	SY3	K3	YI3
AL100-3R	16ER	1	1	6	1.2	1.0	SA3	SY3	K3	YE3
AL100-3L	16EL	1	1	6	1.2	1.0	SA3	SY3	K3	YI3
AL100-4R	22ER	1	1	6	1.42	1.0	SA4	SY4	K4	YE4
AL100-4L	22EL	1	1	6	1.42	1.0	SA4	SY4	K4	YI4
AL125-4R	22ER	1-1/4	1-1/4	7	1.42	1.125	SA4	SY4	K4	YE4
AL125-5R	27ER	1-1/4	1-1/4	7	1.57	1.125	SA5	SY5	K5	YE5
AL125-5L	27EL	1-1/4	1-1/4	7	1.57	1.125	SA5	SY5	K5	YI5

INTERNAL BAR

AVR/NVR

Threading, Grooving



RH SHOWN

Holder Description	Insert	D	F**	L	C	Min. Bore	Insert Screw	Seat Screw & Washer	Wrench	Seat
NVR 375-2R*	11NR	.375	.280	7	1.00	.500	SA3	-	K3	-
NVR 500-2R*	11NR	.500	.370	7	1.25	.625	SA3	-	K3	-
NVR 500-3R*	16NR	.500	.400	7	1.25	.670	SA3	-	K3	-
NVR 625-3R*	16NR	.625	.312	7	2.50	.700	SA3	-	K3	-
NVR 625-3L*	16NL	.625	.312	7	2.50	.700	SA3	-	K3	-
AVR 750-3R	16NR	.750	.510	7	2.75	.950	SA3	SY3	K3	YI3
AVR 750-3L	16NL	.750	.510	7	2.75	.950	SA3	SY3	K3	YE3
AVR 100-3R	16NR	1.000	.640	10	3.00	1.150	SA3	SY3	K3	YI3
AVR 100-3L	16NL	1.000	.640	10	3.00	1.150	SA3	SY3	K3	YE3
AVR 125-3R	16NR	1.250	.770	10	3.00	1.400	SA3	SY3	K3	YI3
AVR 125-3L	16NL	1.250	.770	10	3.00	1.400	SA3	SY3	K3	YE3
AVR 150-3R	16NR	1.500	.900	12	3.00	1.700	SA3	SY3	K3	YI3
AVR 150-3L	16NL	1.500	.900	12	3.00	1.700	SA3	SY3	K3	YE3
AVR 750-4R	22NR	.750	.610	7	2.75	1.100	SA4	-	K4	-
AVR 750-4L	22NL	.750	.610	7	2.75	1.100	SA4	-	K4	-
AVR 100-4R	22NR	1.000	.710	10	3.00	1.200	SA4	SY4	K4	YI4
AVR 100-4L	22NL	1.000	.710	10	3.00	1.200	SA4	SY4	K4	YE4
AVR 125-4R	22NR	1.250	.840	10	3.00	1.500	SA4	SY4	K4	YI4
AVR 125-4L	22NL	1.250	.840	10	3.00	1.500	SA4	SY4	K4	YE4
AVR 150-4R	22NR	1.500	.980	12	3.00	1.800	SA4	SY4	K4	YI4
AVR 150-4L	22NL	1.500	.980	12	3.00	1.800	SA4	SY4	K4	YE4
AVR 125-5R	27NR	1.250	.880	10	3.00	1.800	SA5	SY5	K4	YI5
AVR 125-5L	27NL	1.250	.880	10	3.00	1.800	SA5	SY5	K4	YE5
AVR 150-5R	27NR	1.500	1.000	12	3.00	1.900	SA5	SY5	K4	YI5
AVR 150-5L	27NL	1.500	1.000	12	3.00	1.900	SA5	SY5	K4	YE5
AVR 200-5R	27NR	2.000	1.125	12	3.00	2.400	SA5	SY5	K4	YI5
AVR 200-5L	27NL	2.000	1.125	12	3.00	2.400	SA5	SY5	K4	YE5

*Over NV Insert

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



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	ER/NL	YE3-3P	YE3-2P	YE3-1P	YE3	YE3-1N	YE3-1.5N	YE3-2N	YE3-1N
	.63	EL/NR	YI3-3P	YI3-2P	YI3-1P	YI3	YI3-1N	YI3-1.5N	YI3-2N	YI3-1N
1/2"	.87	ER/NL	YE4-3P	YE4-2P	YE4-1P	YE4	YE4-1N	YE4-1.5N	YE4-2N	YE4-1N
	.87	EL/NR	YI4-3P	YI4-2P	YI4-1P	YI4	YI4-1N	YI4-1.5N	YI4-2N	YI4-1N
5/8"	1.06	ER/NL	YE5-3P	YE5-2P	YE5-1P	YE5	YE5-1N	YE5-1.5N	YE5-2N	YE5-1N
	1.06	EL/NR	YI5-3P	YI5-2P	YI5-1P	YI5	YI5-1N	YI5-1.5N	YI5-2N	YI5-1N
3/8"M	.63	ER/NL				YE3M	YE3M-1N	YE3M-1.5N	YE3M-2N	
	.63	EL/NR				YI3M	YI3M-1N	YI3M-1.5N		
1/2"M	.87	ER/NL				YE4M	YE4M-1N	YE4M-1.5N	YE4M-2N	
	.87	EL/NR				YI4M	YI4M-1N	YI4M-1.5N		
5/8"M	1.06	ER/NL				YE5M	YE5M-1N	YE5M-1.5N		
	1.06	EL/NR				YI5M	YI5M-1N	YI5M-1.5N		
1/2"Z										
	.87	EL/NR			YI4Z-1P					
1/2"U	.87	ER/NL	YE4U-3P	YE4U-2P	YE4U-1P	YE4U	YE4U-1N	YE4U-1.5N	YE4U-2N	YE4U-1N
	.87	EL/NR	YI4U-3P	YI4U-2P	YI4U-1P	YI4U	YI4U-1N	YI4U-1.5N	YI4U-2N	YI4U-1N

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

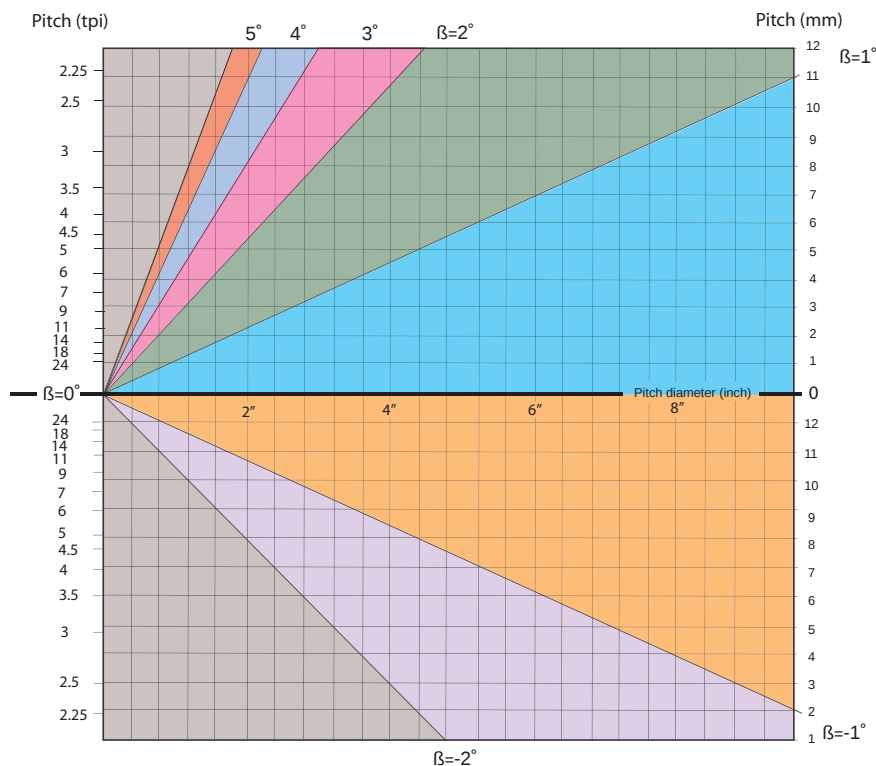
1/2"	YE4-11.5NPT-2M YI4-11.5NPT-2M
5/8"	YE5-8NPT-2M, YE5-8RD-2M YI5-8NPT-2M, YI5-8RD-2M

HELIX ANGLE TABLE (FOR GIVEN PITCH AND DIAMETER)

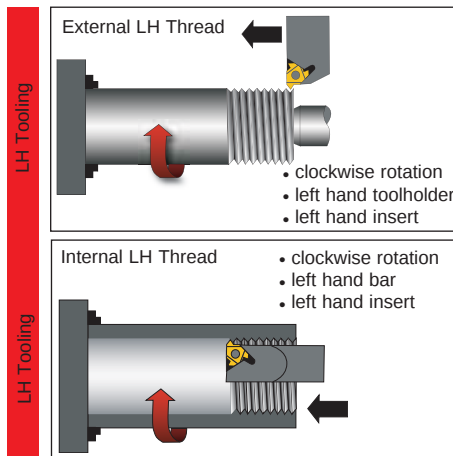
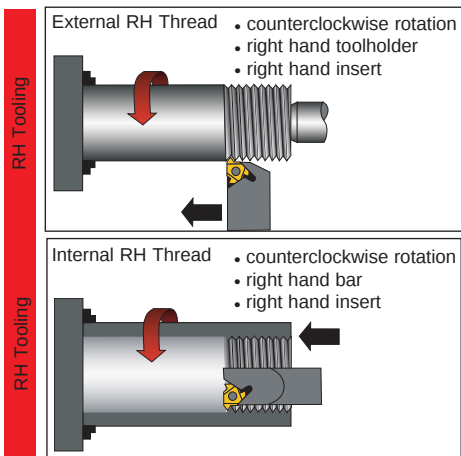
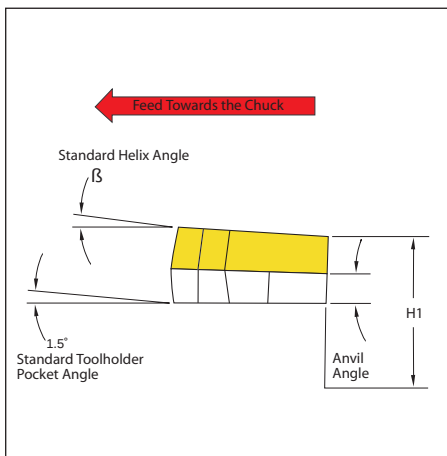
thread per inch	4.5°	3.5°	2.5°	1.5°	0.5°	4.5°	-0.5°	-1.5°
48			0.12 - 0.18	0.18 - 0.48	0.48 - 1.28	> 1.28	1.28 - 0.48	0.48 - 0.18
44			0.13 - 0.20	0.20 - 0.52	0.52 - 1.40	> 1.40	1.40 - 0.52	0.52 - 0.20
40		0.11 - 0.14	0.14 - 0.22	0.22 - 0.57	0.57 - 1.52	> 1.52	1.52 - 0.57	0.57 - 0.22
36		0.12 - 0.16	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 - 0.84	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	> 6.08	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 - .081	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 - .095	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



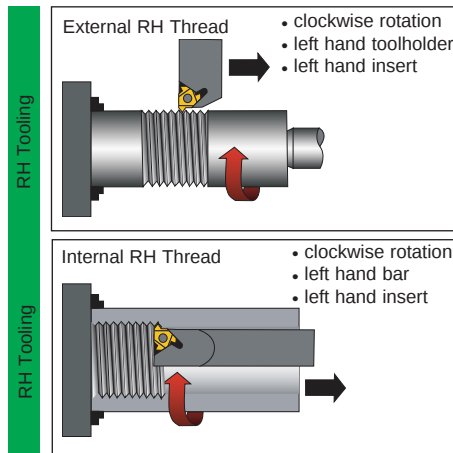
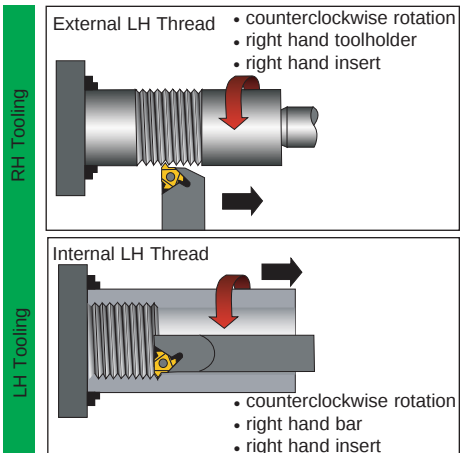
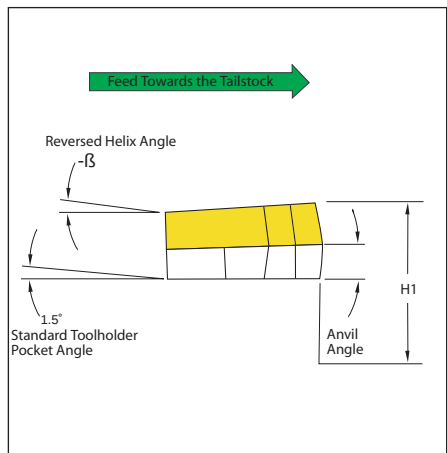
Helix Angle Diagram



Feed direction towards the chuck

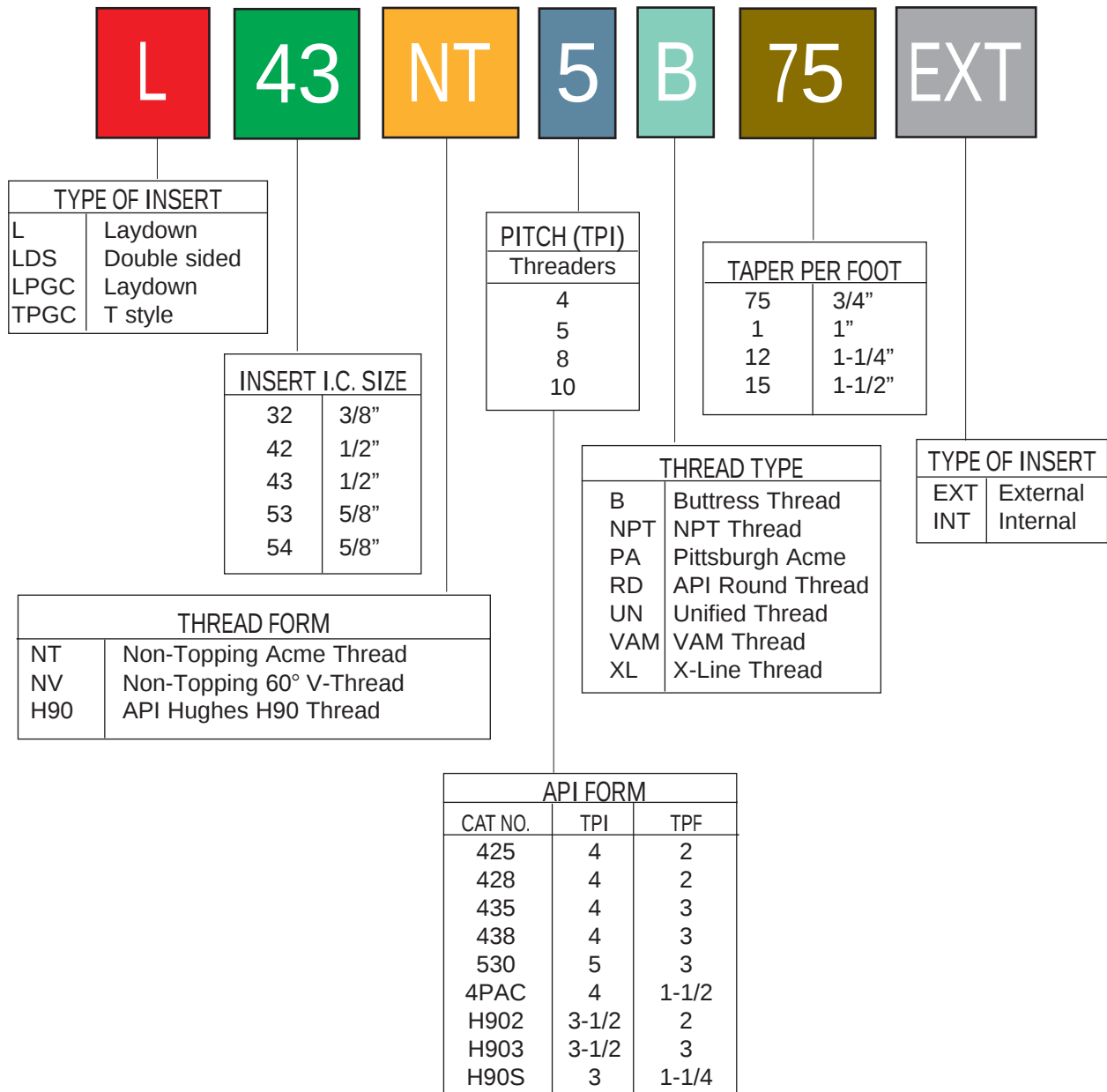


Feed direction towards the tailstock



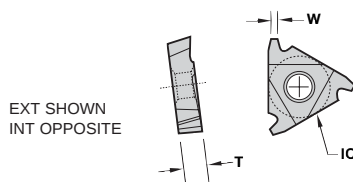


L-Style Laydown Insert Nomenclature Chart



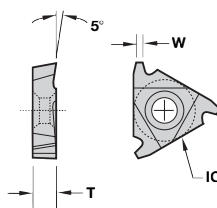
ACME THREADING

L43/L53



Insert Description	TPI	W	IC	T	GP22	GP50	GP5	AT22	AT50	AT5
L43 NT 8P EXT	8	.0411	.500	.189		●				
L43 NT 6P EXT	6	.0566	.500	.189		●				
L43 NT 5P EXT	5	.0689	.500	.189		●				
L53 NT 4P EXT	4	.0875	.625	.189		●				
L43 NT 8P INT	8	.0411	.500	.189		●				
L43 NT 6P INT	6	.0566	.500	.189		●				
L43 NT 5P INT	5	.0689	.500	.189		●				
L53 NT 4P INT	4	.0875	.625	.189		●				

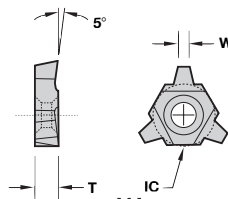
LPGC



Insert Description	TPI	W	IC	T	GP225	GP50	GP5	AT25	AT5
LPGC 32 NT 12P INT RH	12	.0283	.375	.127			●		
LPGC 32 NT 10P INT RH	10	.0319	.375	.127			●		
LPGC 32 NT 8P INT RH	8	.0411	.375	.127			●		
LPGC 42 NT 8P INT RH	8	.0411	.500	.127			●		
LPGC 42 NT 6P INT RH	6	.0566	.500	.127			●		
LPGC 42 NT 5P INT RH	5	.0689	.500	.127			●		
LPGC 42 NT 4P INT RH*	4	.0875	.500	.127			●		
LPGC 43 NT 8P INT RH	8	.0411	.500	.189			●		
LPGC 43 NT 6P INT RH	6	.0566	.500	.189			●		
LPGC 43 NT 5P INT RH	5	.0689	.500	.189			●		
LPGC 43 NT 4P INT RH*	4	.0875	.500	.189			●		

*Bar must be modified to clear depth.

TPGC



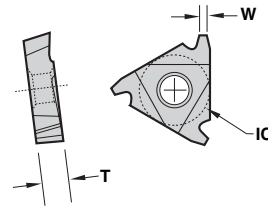
Insert Description	TPI	W	IC	T	GP2	GP5	GP5	AT2	AT5	AT5
TPGC 32 NT 10P	10	.0319	.375	.127			●			
TPGC 32 NT 8P	8	.0411	.375	.127			●			
TPGC 32 NT 6P	6	.0566	.375	.127			●			
TPGC 32 NT 5P	5	.0689	.375	.127			●			
TPGC 42 NT 8P	8	.0411	.500	.127			●			
TPGC 42 NT 6P	6	.0566	.500	.127			●			
TPGC 42 NT 5P	5	.0689	.500	.127			●			
TPGC 42 NT 4P	4	.0875	.500	.127			●			
TPGC 43 NT 5P	5	.0689	.500	.189			●			
TPGC 43 NT 4P	4	.0875	.500	.189			●			



ACME STUB THREADING

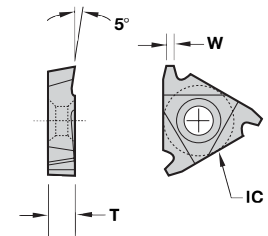
L43/L53

INT SHOWN



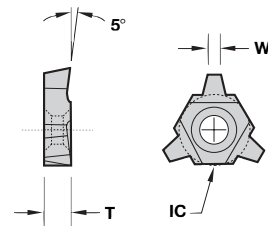
	TPI	W	IC	T	TIN Coated			AlTiN Coated		
					GP22	GP50	GP54	AT22	AT50	AT54
L43 NT 8P STUB EXT	8	.0476	.500	.189		●				
L43 NT 6P STUB EXT	6	.0652	.500	.189		●				
L43 NT 5P STUB EXT	5	.0793	.500	.189		●				
L53 NT 4P STUB EXT	4	.1004	.625	.189		●				
L43 NT 8P STUB INT	8	.0476	.500	.189		●				
L43 NT 6P STUB INT	6	.0652	.500	.189		●				
L43 NT 5P STUB INT	5	.0793	.500	.189		●				
L53 NT 4P STUB INT	4	.1004	.625	.189		●				

LPGC



Insert Description	TPI	W	IC	T	TIN Coated			AlTiN Coated		
					GP22	GP50	GP54	AT22	AT50	AT54
LPGC 32 NT 8P STUB INT	8	.0476	.375	.127		●				
LPGC 42 NT 8P STUB INT	8	.0476	.500	.127		●				
LPGC 42 NT 6P STUB INT	6	.0652	.500	.127		●				
LPGC 42 NT 5P STUB INT	5	.0793	.500	.127		●				
LPGC 42 NT 4P STUB INT	4	.1004	.500	.127		●				
LPGC 43 NT 8P STUB INT	8	.0476	.500	.189		●				
LPGC 43 NT 6P STUB INT	6	.0652	.500	.189		●				
LPGC 43 NT 5P STUB INT	5	.0793	.500	.189		●				
LPGC 43 NT 4P STUB INT	4	.1004	.500	.189		●				

TPGC



Insert Description	TPI	W	IC	T	TIN Coated			AlTiN Coated		
					GP22	GP50	GP54	AT22	AT50	AT54
TPGC 32 NT 8P STUB	8	.0476	.375	.127		●				
TPGC 32 NT 6P STUB	6	.0652	.375	.127		●				
TPGC 32 NT 5P STUB	5	.0793	.375	.127		●				
TPGC 42 NT 8P STUB	8	.0476	.500	.127		●				
TPGC 42 NT 6P STUB	6	.0652	.500	.127		●				
TPGC 42 NT 5P STUB	5	.0793	.500	.127		●				
TPGC 42 NT 4P STUB	4	.1004	.500	.127		●				
TPGC 43 NT 5P STUB	5	.0793	.500	.189		●				
TPGC 43 NT 4P STUB	4	.1004	.500	.189		●				

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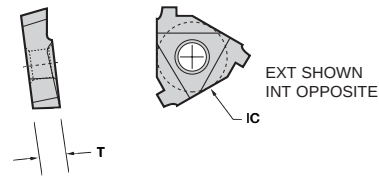
● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

Cast Iron
Non-Ferrous
Stainless/High Temp
Steel



API BUTTRESS THREADING

L43/L53

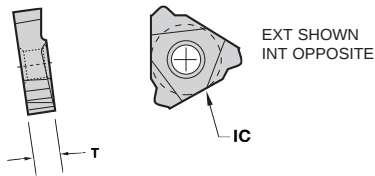


Insert Description	TPI/TPF	IC	T	Conn. No.	TIN Coated			A/TIN Coated		
					GP22	GP50	GP54	AT22	AT50	AT54
L43 5B75 EXT	5	3/4	.500	.189	4-1/2 - 13-3/8	●			●	
L43 5B1 EXT	5	1	.500	.189	16 and larger	●			●	
L43 8B75 EXT	8	3/4	.500	.189	US Improved Buttress	●				
L43 5B75 EXT-FC	5	3/4	.500	.189	4-1/2 - 13-3/8	●				
L43 5B1 EXT-FC	5	1	.500	.189	16 and larger	●				
L53 5B75 EXT	5	3/4	.625	.189	4-1/2 - 13-3/8	●			●	
L53 5B1 EXT	5	1	.625	.189	16 and larger	●			●	
L53 8B75 EXT	8	3/4	.625	.189	US Improved Buttress	●			●	
L53 5B75 EXT-FC	5	3/4	.625	.189	4-1/2 - 13-3/8	●				
L53 5B1 EXT-FC	5	1	.625	.189	16 and larger	●				
L43 5B75 INT	5	3/4	.500	.189	4-1/2 - 13-3/8	●			●	
L43 5B1 INT	5	1	.500	.189	16 and larger	●			●	
L43 8B75 INT	8	3/4	.500	.189	US Improved Buttress	●				
L43 5B75 INT-FC	5	3/4	.500	.189	4-1/2 - 13-3/8	●				
L43 5B1 INT-FC	5	1	.500	.189	16 and larger	●				
L53 5B75 INT	5	3/4	.625	.189	4-1/2 - 13-3/8	●			●	
L53 5B1 INT	5	1	.625	.189	16 and larger	●			●	
L53 8B75 INT	8	3/4	.625	.189	US Improved Buttress	●			●	
L53 5B75 INT-FC	5	3/4	.625	.189	4-1/2 - 13-3/8	●				
L53 5B1 INT-FC	5	1	.625	.189	16 and larger	●				

FC designates 5° flank clearance

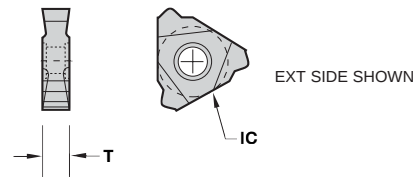
API HUGHES H90 THREADING

L53



Insert Description	TPI	TPF	IC	T	Conn. No.	TIN Coated			A/TIN Coated		
						GP22	GP50	GP54	AT22	AT50	AT54
L53 H902 EXT	3-1/2	2	.625	.189	3-1/2 - 6-5/8 H90	●					
L53 H903 EXT	3-1/2	3	.625	.189	7 - 8-5/8 H90	●					
L53 H90S EXT	3	1-1/4	.625	.189	2-3/8 - 3-1/2 Slimline	●					
L53 H902 INT	3-1/2	2	.625	.189	3-1/2 - 6-5/8 H90	●					
L53 H903 INT	3-1/2	3	.625	.189	7 - 8-5/8 H90	●					
L53 H90S INT	3	1-1/4	.625	.189	2-3/8 - 3-1/2 Slimline	●					

LDS DOUBLE SIDED



Insert Description	TPI	TPF	IC	T	Conn. No.	TIN Coated			A/TIN Coated		
						GP22	GP50	GP54	AT22	AT50	AT54
LDS 54 H902	3-1/2	2	.625	.252	3-1/2 - 6-5/8 H90			●			
LDS 54 H903	3-1/2	3	.625	.252	7 - 8-5/8 H90			●			
LDS 54 H90S	3	1-1/4	.625	.252	2-3/8 - 3-1/2 Slimline			●			

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

Cast Iron
Non-Ferrous
Stainless/High Temp
Steel

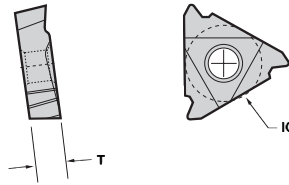
TOOL FLO



LAYDOWN

1 3 9

API ROTARY SHOULDER CONNECTION THREADING L43/L53

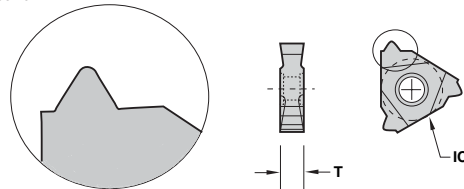


EXT SHOWN
INT OPPOSITE

Insert Description	TPI	TPF	IC	T	Conn. No. or Size	TIN Coated		ATTN Coated	
						GP22	GP50	GP54	AT22
L43 425 EXT	4	2	.500	.189	5-1/2 FH 6-5/8 FH 6-5/8 Reg.	●	●	●	●
L43 428 EXT	4	2	.500	.189	NC 23-NC50 2-3/8 - 5-1/2 IF	●	●	●	●
L43 42F EXT*	4	2	.500	.189	V0.065*				
L43 435 EXT	4	3	.500	.189	5-1/2 Rg. 7-5/8 Reg. 8-5/8 Reg.	●	●	●	●
L43 438 EXT	4	3	.500	.189	NC56 - NC71	●	●	●	●
L43 530 EXT	5	3	.500	.189	3-1/2 FH 2-3/8 - 4-1/2 Reg.	●	●	●	●
L43 4PAC EXT	4	1-1/2	.500	.189	American Open Hole	●	●	●	●
L53 425 EXT	4	2	.625	.189	5-1/2 FH 6-5/8 FH 6-5/8 Reg.	●	●	●	●
L53 428 EXT	4	2	.625	.189	NC 23-NC50 2-3/8 - 5-1/2 IF	●	●	●	●
L53 42F EXT*	4	2	.625	.189	V0.065*				
L53 435 EXT	4	3	.625	.189	5-1/2 Rg. 7-5/8 Reg. 8-5/8 Reg.	●	●	●	●
L53 438 EXT	4	3	.625	.189	NC56 - NC71	●	●	●	●
L53 530 EXT	5	3	.625	.189	3-1/2 FH 2-3/8 - 4-1/2 Reg.	●	●	●	●
L53 4PAC EXT	4	1-1/2	.625	.189	American Open Hole	●	●	●	●
L43 425 INT	4	2	.500	.189	5-1/2 FH 6-5/8 FH 6-5/8 Reg.	●	●	●	●
L43 428 INT	4	2	.500	.189	NC 23-NC50 2-3/8 - 5-1/2 IF	●	●	●	●
L43 42F INT*	4	2	.500	.189	V0.065*				
L43 435 INT	4	3	.500	.189	5-1/2 Rg. 7-5/8 Reg. 8-5/8 Reg.	●	●	●	●
L43 438 INT	4	3	.500	.189	NC56 - NC71	●	●	●	●
L43 530 INT	5	3	.500	.189	3-1/2 FH 2-3/8 - 4-1/2 Reg.	●	●	●	●
L43 4PAC INT	4	1-1/2	.500	.189	American Open Hole	●	●	●	●
L53 425 INT	4	2	.625	.189	5-1/2 FH 6-5/8 FH 6-5/8 Reg.	●	●	●	●
L53 428 INT	4	2	.625	.189	NC 23-NC50 2-3/8 - 5-1/2 IF	●	●	●	●
L53 42F INT*	4	2	.625	.189	V0.065*				
L53 435 INT	4	3	.625	.189	5-1/2 Rg. 7-5/8 Reg. 8-5/8 Reg.	●	●	●	●
L53 438 INT	4	3	.625	.189	NC56 - NC71	●	●	●	●
L53 530 INT	5	3	.625	.189	3-1/2 FH 2-3/8 - 4-1/2 Reg.	●	●	●	●
L53 4PAC INT	4	1-1/2	.625	.189	American Open Hole	●	●	●	●

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

LDS DOUBLE SIDED FULL TOPPING



Insert Description	TPI	TPF	IC	T	Conn. No. or Size	TIN Coated		ATTN Coated	
						GP22	GP50	GP54	AT22
LDS 54 428 #1	4	2	.625	.252	NC23-NC50, 2-3/8-5-1/2 IF			●	●
LDS 54 438 #2	4	3	.625	.252	NC56-NC71			●	●
LDS 54 425 #3	4	2	.625	.252	5-1/2 FH, 6-5/8 FH, 6-5/8 Reg.			●	●
LDS 54 435 #4	4	3	.625	.252	5-1/2 Reg. 7-5/8 Reg 8-5/8 Reg.			●	●
LDS 54 530 #5	5	3	.625	.252	3-1/2 FH 2-3/8 - 4-1/2 Reg.			●	●
LDS 54 42F*	4	2	.625	.252	V0.065*				
LDS 54 4PAC	4	1-1/2	.625	.252	American Open Hole			●	●

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

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- ▲ Recommended grade under general conditions.

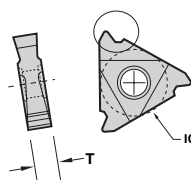
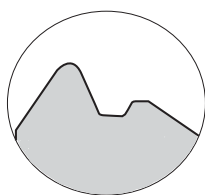
Cast Iron				●	
Non-Ferrous				●	
Stainless/High Temp				●	
Steel	▲	▲		●	●

TOOL FLO

LAYDOWN



LDS DOUBLE SIDED FOLLOW TOPPING



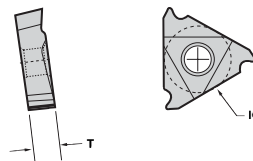
EXT SIDE SHOWN

Insert Description	TPI	TPF	IC	T	Conn. No. or Size	TIN Coated			ATTIN Coated		
						GP22	GP50	GP54	AT22	AT50	AT54
LDS 54 428 #1 FT	4	2	.625	.252	NC23-NC50, 2-3/8-5-1/2 IF			●	●	●	●
LDS 54 438 #2 FT	4	3	.625	.252	NC56-NC71			●	●	●	●
LDS 54 425 #3 FT	4	2	.625	.252	5-1/2 FH, 6-5/8 FH, 6-5/8 Reg.			●	●	●	●
LDS 54 435 #4 FT	4	3	.625	.252	5-1/2 Reg. 7-5/8 Reg 8-5/8 Reg.			●	●	●	●
LDS 54 530 #5 FT	5	3	.625	.252	3-1/2 FH 2-3/8 - 4-1/2 Reg.			●	●	●	●
LDS 54 42F* FT	4	2	.625	.252	V0.065*						
LDS 54 4PAC FT	4	1-1/2	.625	.252	American Open Hole			●			

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

API ROUND THREADING

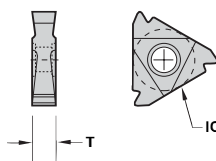
L43/L53



EXT SIDE SHOWN

Insert Description	TPI	TPF	IC	T	TIN Coated			ATTIN Coated		
					GP22	GP50	GP54	AT22	AT50	AT54
L43 10RD EXT	10	3/4	.500	.189		●			●	
L43 8RD EXT	8	3/4	.500	.189		●			●	
L53 8RD EXT	8	3/4	.625	.189		●			●	
L43 8RD INT	8	3/4	.500	.189		●			●	
L43 10RD INT	10	3/4	.500	.189		●			●	
L53 8RD INT	8	3/4	.625	.189		●			●	

LDS DOUBLE SIDED



EXT SIDE SHOWN

Insert Description	TPI	TPF	IC	T	TIN Coated			ATTIN Coated		
					GP22	GP50	GP54	AT22	AT50	AT54
LDS 43 10RD	10	3/4	.500	.189			●	●		
LDS 43 8RD	8	3/4	.500	.189			●	●		
LDS 54 10RD	10	3/4	.625	.252			●	●		
LDS 54 8RD	8	3/4	.625	.252			●	●		

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

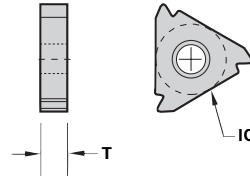
Cast Iron
Non-Ferrous
Stainless/High Temp
Steel

			●		
			●		
			●		
▲	▲		●	●	●



API ROUND THREADING

TFNA



EXT SIDE SHOWN

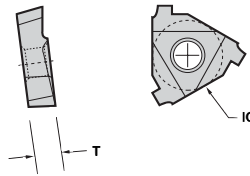
Insert Description

	TPI	TPF	IC	T	GP22	GP50	GP54	AT22	AT50	AT54
TNFA 43 8RD	8	3/4	.500	.187		●				

TIN Coated			A/TIN Coated		
GP22	GP50	GP54	AT22	AT50	AT54
	●				

API VAM THREADING

L43

EXT SHOWN
INT OPPOSITE

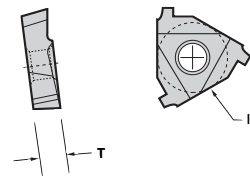
Insert Description

	TPI	TPF	IC	T	GP22	GP50	GP54	AT22	AT50	AT54
L43 5VAM EXT	5	3/4	.500	.189		●				
L43 6VAM EXT	6	3/4	.500	.189		●				
L43 8VAM EXT	8	3/4	.500	.189		●				
L43 5VAM INT	5	3/4	.500	.189		●				
L43 6VAM INT	6	3/4	.500	.189		●				
L43 8VAM INT	8	3/4	.500	.189		●				

TIN Coated			A/TIN Coated		
GP22	GP50	GP54	AT22	AT50	AT54
	●				
	●				
	●				
	●				
	●				

API X-LINE THREADING

L43/L53

EXT SHOWN
INT OPPOSITE

Insert Description

	TPI	TPF	IC	T	Conn. No. or Size	GP22	GP50	GP54	AT22	AT50	AT54
L43 6XL15 EXT	6	1-1/2	.500	.189	5 - 7-5/8		●				
L43 6XL75 EXT	6	3/4	.500	.189	-		●				
L43 5XL12 EXT	5	1-1/4	.500	.189	8-5/8 - 10-3/4		●				
L53 6XL15 EXT	6	1-1/2	.625	.252	5 - 7-5/8		●				
L53 6XL75 EXT	6	3/4	.625	.252	-		●				
L53 5XL12 EXT	5	1-1/4	.625	.252	8-5/8 - 10-3/4		●				
L43 6XL15 INT	6	1-1/2	.500	.189	5 - 7-5/8		●				
L43 6XL75 INT	6	3/4	.500	.189	-		●				
L43 5XL12 INT	5	1-1/4	.500	.189	8-5/8 - 10-3/4		●				
L53 6XL15 INT	6	1-1/2	.625	.252	5 - 7-5/8		●				
L53 6XL75 INT	6	3/4	.625	.252	-		●				
L53 5XL12 INT	5	1-1/4	.625	.252	8-5/8 - 10-3/4		●				

TIN Coated			A/TIN Coated		
GP22	GP50	GP54	AT22	AT50	AT54
	●				
	●				
	●				
	●				
	●				
	●				
	●				
	●				
	●				

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there are periodic changes.
Please see current price list for up to date grade offering.

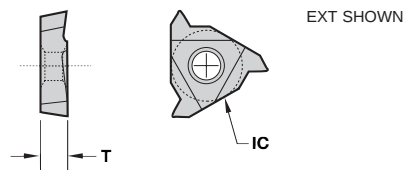
- High performance choice in optimal conditions.
- ▲ Recommended grade under general conditions.

Cast Iron					
Non-Ferrous					
Stainless/High Temp					
Steel	▲				



NPT THREADING

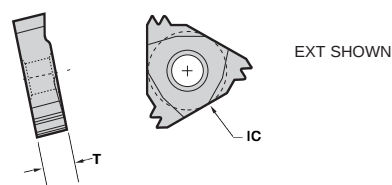
L43



Insert Description

Insert Description	TPI	TPF	IC	T	TIN Coated			AlTiN Coated		
					GP22	GP50	GP54	AT22	AT50	AT54
L43 11.5NPT EXT	11.5	3/4	.500	.189		●				
L43 8NPT EXT	8	3/4	.500	.189		●				
L43 11.5NPT INT	11.5	3/4	.500	.189		●				
L43 8NPT INT	8	3/4	.500	.189		●				

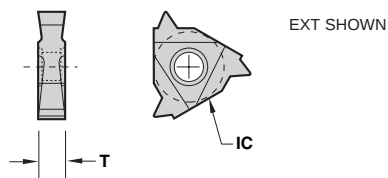
L43 MULTI-TOOTH



Insert Description

Insert Description	TPI	TPF	IC	T	TIN Coated			AlTiN Coated		
					GP22	GP50	GP54	AT22	AT50	AT54
L43 11.5NPT2M EXT	11.5	3/4	.500	.189				●		
L43 11.5NPT2M INT	11.5	3/4	.500	.189				●		

LDS DOUBLE SIDED

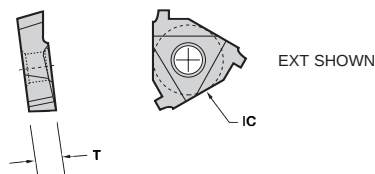


Insert Description

Insert Description	TPI	TPF	IC	T	TIN Coated			AlTiN Coated		
					GP22	GP50	GP54	AT22	AT50	AT54
LDS 43 14NPT	14	3/4	.500	.189			●			
LDS 43 11.5NPT	11.5	3/4	.500	.189			●			
LDS 43 8NPT	8	3/4	.500	.189			●			

PITTSBURG ACME

L43/L53



Insert Description

Insert Description	TPI	TPF	IC	T	TIN Coated			AlTiN Coated		
					GP22	GP50	GP54	AT22	AT50	AT54
L43 8PA75 EXT	8	3/4	.500	.189		●				
L53 8PA75 EXT	8	3/4	.625	.189		●				
L43 8PA75 INT	8	3/4	.500	.189		●				
L53 8PA75 INT	8	3/4	.625	.189		●				

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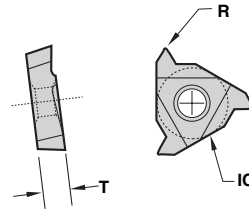
- High performance choice in optimal conditions.
- ▲ Recommended grade under general conditions.

Cast Iron
Non-Ferrous
Stainless/High Temp
Steel



V-THREAD - 60°

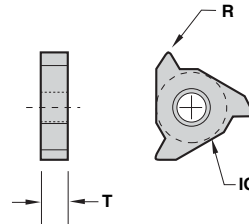
L43

EXT SHOWN
INT OPPOSITE

	TPI	R	IC	T	TIN Coated			A1TIN Coated		
					GP22	GP50	GP54	AT22	AT50	AT54
L43 NV EXT	8-48	.006/.005	.500	.189		●			●	
L53 NV EXT	5-32	.006/.005	.625	.189		●			●	
L43 NV INT	8-48	.006/.005	.500	.189		●			●	
L53 NV EXT	5-32	.006/.005	.625	.189		●			●	

LN DOUBLE SIDED

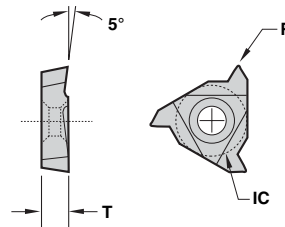
EXT SIDE SHOWN



Insert Description	TPI	R	IC	T	TIN Coated			A1TIN Coated		
					GP22	GP50	GP54	AT22	AT50	AT54
LN 43 NV	8-48	.006/.005	.500	.189		●				

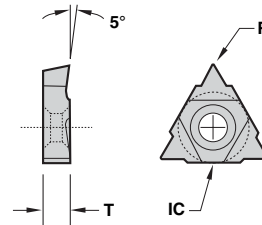
LPGC

INT SHOWN



Insert Description	TPI	R	IC	T	TIN Coated			A1TIN Coated		
					GP22	GP50	GP54	AT22	AT50	AT54
LPGC 32 NV INT RH	8-48	.004/.006	.375	.127		●				
LPGC 32 NV INT LH	8-48	.004/.006	.375	.127		●				
LPGC 42 NV INT RH	8-20	.006/.008	.500	.127		●				
LPGC 42 NV INT LH	8-20	.006/.008	.500	.127		●				
LPGC 43 NV INT RH	5-16	.006/.008	.500	.189		●				
LPGC 43 NV INT LH	5-16	.006/.008	.500	.189		●				

TPGC



Insert Description	TPI	R	IC	T	TIN Coated			A1TIN Coated		
					GP22	GP50	GP54	AT22	AT50	AT54
TPGC 32 NV	8-48	.006/.005	.375	.127		●				
TPGC 42 NV	5-32	.006/.005	.500	.127		●				
TPGC 43 NV	4-16	.006/.005	.500	.189		●				

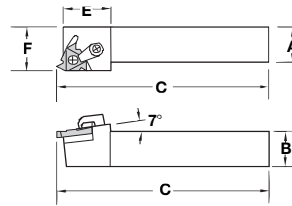
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▲ Recommended grade under general conditions.

Cast Iron
Non-Ferrous
Stainless/High Temp
Steel



EXTERNAL HOLDER

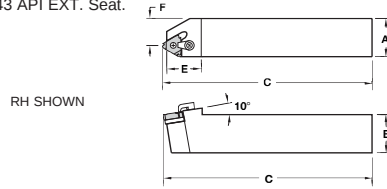
MTVNR/L
Threading, Grooving

RH Holder uses RH Inserts RH SHOWN

PARTS

Holder Description	Stock Status	Insert	A	B	C	E	F*	Seat	Lock Pin	Clamp	Clamp Screw
MTVNR-164	●	L43	1	1	6	1.27	1.250	LS43*	NL46	TC-190	STC5
MTVNL-164	○	L43	1	1	6	1.27	1.250	LS43*	NL46	TC-190	STC5
MTVNR-204	●	L43	1-1/4	1-1/4	7	1.27	1.500	LS43*	NL46	TC-190	STC5
MTVNR-165	●	L53	1	1	6	1.53	1.250	LS53*	NL58	TC-250	STC11
MTVNL-165	○	L53	1	1	6	1.53	1.250	LS53*	NL58	TC-250	STC11
MTVNR-205	○	L53	1-1/4	1-1/4	7	1.53	1.500	LS53*	NL58	TC-250	STC11
MTVNR-2054	○	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.

MTENR/L
Threading

RH SHOWN

PARTS

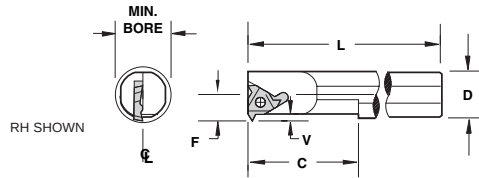
Holder Description	Stock Status	Insert	A	B	C	E	F*	Seat	Lock Pin	Clamp	Clamp Screw
MTENR-164	○	TNPGC 43	1	1	6	1.47	.63	TS43*	NL46	TC-190	STC5
MTENR-204	○	TNPGC 43	1-1/4	1-1/4	7	1.47	.88	TS43*	NL46	TC-190	STC5

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

INTERNAL BAR

LFL/R

Threading, Grooving



RH SHOWN

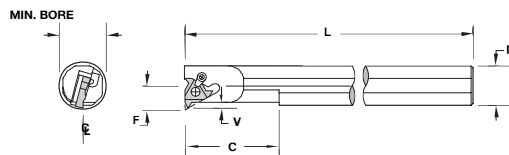
Holder Description	Stock Status	Insert	Min. Bore	L	D	C	F	V	Torx Screw
LFR 625-32	●	LPGC 32	.625	8	.625	2-1/2	.312	.100	SF40
LFL 625-32	●	LPGC 32	.625	8	.625	2-1/2	.312	.100	SF40
LFR 750-32	●	LPGC 32	.750	8	.750	2-3/4	.375	.100	SF40
LFL 750-32	●	LPGC 32	.750	8	.750	2-3/4	.375	.100	SF40
LFR 100-32	○	LPGC 32	1.000	10	1.000	2-3/4	.500	.100	SF40
LFL 100-32	○	LPGC 32	1.000	10	1.000	2-3/4	.500	.100	SF40
LFR 750-42	●	LPGC 42	.750	8	.750	2-3/4	.375	.100	SF60
LFL 750-42	●	LPGC 42	.750	8	.750	2-3/4	.375	.100	SF60
LFR 100-43	●	LPGC 43	1.000	10	1.000	2-3/4	.500	.125	SF60
LFL 100-43	●	LPGC 43	1.000	10	1.000	2-3/4	.500	.125	SF60
LFR 125-43	●	LPGC 43	1.250	12	1.250	2-3/4	.625	.125	SF60
LFL 125-43	○	LPGC 43	1.250	12	1.250	2-3/4	.625	.125	SF60
LFR 150-43	●	LPGC 43	1.500	14	1.500	3-3/4	.750	.125	SF60
LFL 150-43	○	LPGC 43	1.500	14	1.500	3-3/4	.750	.125	SF60
LFR 200-43	○	LPGC 43	2.000	14	2.000	3-3/4	1.000	.125	SF60
LFL 200-43	○	LPGC 43	2.000	14	2.000	3-3/4	1.000	.125	SF60
LFR 150-53	●	LPGC 53	1.500	14	1.500	3-3/4	.750	.150	SF85
LFL 150-53	○	LPGC 53	1.500	14	1.500	3-3/4	.750	.150	SF85
LFR 200-53	○	LPGC 53	2.000	14	2.000	3-3/4	1.000	.150	SF85

*Over NV Insert



LNFL/R

Threading, Grooving



RH SHOWN

PARTS

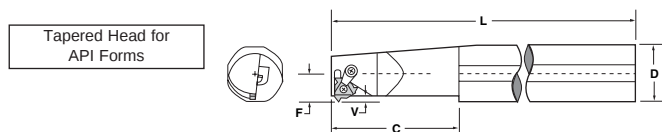
Holder Description	Insert	Min. Bore	L	D	C	F	V*	Seat	Screw/ Lock Pin	Clamp	Clamp Screw
LNFR 100-43	L43	1.031	10	1	2-3/4	.564	.125	-	TS60	-	-
LNFL 100-43	L43	1.031	10	1	2-3/4	.564	.125	-	TS60	-	-
LNFR 125-43	L43	1.250	12	1-1/4	2-3/4	.625	.125	-	NL44	TC190	STC-9
LNFL 125-43	L43	1.250	12	1-1/4	2-3/4	.625	.125	-	NL44	TC190	STC-9
LNFR 150-43	L43	1.500	14	1-1/2	3-3/4	.750	.125	-	NL44	TC190	STC-9
LNFL 150-43	L43	1.500	14	1-1/2	3-3/4	.750	.125	-	NL44	TC190	STC-9
LNFR 200-43	L43	2.000	14	2	3-3/4	1.000	.125	LS43*	NL46	TC190	STC-9
LNFL 200-43	L43	2.000	14	2	3-3/4	1.000	.125	LS43*	NL46	TC190	STC-9
LNFR 150-53	L53	1.500	14	1-1/2	3-3/4	.750	.150	-	NL56	TC250	STC-11
LNFL 150-53	L53	1.500	14	1-1/2	3-3/4	.750	.150	-	NL56	TC250	STC-11
LNFR 200-53	L53	2.000	14	2	3-3/4	1.000	.150	LS53*	NL58	TC250	STC-11
LNFL 200-53	L53	2.000	14	2	3-3/4	1.000	.150	LS53*	NL58	TC250	STC-11
LNFR 150-54	LDS54	1.500	14	1-1/2	3-3/4	.750	.150	-	NL56	TC250	STC-11
LNFL 150-54	LDS54	1.500	14	1-1/2	3-3/4	.750	.150	-	NL56	TC250	STC-11
LNFR 200-54	LDS54	2.000	14	2	3-3/4	1.000	.150	-	NL58	TC250	STC-11
LNFL 200-54	LDS54	2.000	14	2	3-3/4	1.000	.150	-	NL58	TC250	STC-11

*Seat can be ordered as NO FORM or a FORM can be specified. EX: LS 43 API INT SEAT

** Over Sharp

LNFL/R-API

Threading



RH SHOWN RH Bars use RH inserts

PARTS

Holder Description	Insert	Min. Bore	L	D	C	F	V*	Lock Pin	Clamp	Clamp Screw
LNFR 150-43API	L43	1.500	14	1-1/2	4-1/2	.750	.167	NL44	TC190	STC-9
LNFR 200-43API	L43	2.000	14	2	4-1/2	1.000	.167	NL44	TC190	STC-9
LNFR 150-53API	L53	1.500	16	1-1/2	4-1/2	.750	.200	NL56	TC250	STC-11
LNFR 200-53API	L53	2.000	16	2	4-1/2	1.000	.200	NL56	TC250	STC-11
LNFR 200-54API	LDS 54	2.000	16	2	4-1/2	1.000	.200	NL58	TC250	STC-11

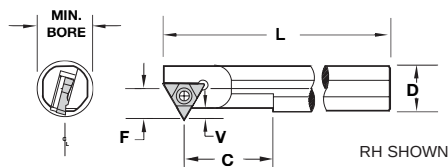
*Seat can be ordered as NO FORM or a FORM can be specified. EX: LS 43 API INT SEAT



INTERNAL BAR

LTNL/R

Threading

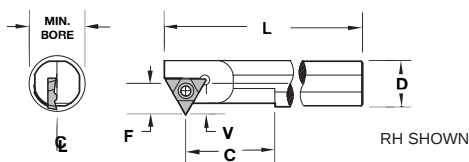


Holder Description	Insert	Min. Bore	L	D	C	F*	Y	Torx Screw
LNTR 880-43	TNPGC 43	.880	8	1.000	2.750	.440	.199	SF60
LNTL 880-43	TNPGC 43	.880	8	1.000	2.750	.440	.199	SF60
LNTR 100-43	TNPGC 43	1.000	10	1.000	2.750	.490	.213	SF60
LNTL 100-43	TNPGC 43	1.000	10	1.000	2.750	.490	.213	SF60
LNTR 125-43	TNPGC 43	1.250	12	1.250	2.750	.640	.213	SF60
LNTL 125-43	TNPGC 43	1.250	12	1.250	2.750	.640	.213	SF60
LNTR 150-43	TNPGC 43	1.500	14	1.500	3.750	.740	.213	SF60
LNTL 150-43	TNPGC 43	1.500	14	1.500	3.750	.740	.213	SF60
LNTR 200-43	TNPGC 43	2.000	14	2.000	3.750	.990	.213	SF60
LNTL 200-43	TNPGC 43	2.000	14	2.000	3.750	.990	.213	SF60

*Over NV Insert

LTL/R

Threading, Grooving



Holder Description	Stock Status	Insert	Min. Bore	L	D	C	F	V*	Torx Screw
LTR 625-32	●	TPGC 32	.625	8	.625	2.500	.375	.150	SF40
LTL 625-32	●	TPGC 32	.625	8	.625	2.500	.375	.150	SF40
LTR 750-32	●	TPGC 32	.750	8	.750	2.750	.375	.150	SF40
LTL 750-32	●	TPGC 32	.750	8	.750	2.750	.375	.150	SF40
LTR 100-32	○	TPGC 32	1.000	10	1.000	2.750	.500	.150	SF40
LTL 100-32	○	TPGC 32	1.000	10	1.000	2.750	.500	.150	SF40
LTR 750-42	●	TPGC 42	.750	8	.750	2.750	.390	.125	SF60
LTL 750-42	●	TPGC 42	.750	8	.750	2.750	.390	.125	SF60
LTR 100-43	●	TPGC 43	1.000	10	1.000	2.750	.500	.213	SF60
LTL 100-43	●	TPGC 43	1.000	10	1.000	2.750	.500	.213	SF60
LTR 125-43	●	TPGC 43	1.250	12	1.250	2.750	.625	.213	SF60
LTL 125-43	○	TPGC 43	1.250	12	1.250	2.750	.625	.213	SF60
LTR 150-43	●	TPGC 43	1.500	14	1.500	3.750	.750	.213	SF60
LTL 150-43	○	TPGC 43	1.500	14	1.500	3.750	.750	.213	SF60
LTR 200-43	○	TPGC 43	2.000	14	2.000	3.750	1.000	.213	SF60
LTL 200-43	○	TPGC 43	2.000	14	2.000	3.750	1.000	.213	SF60
LTR 150-53	●	TPGC 53	1.500	14	1.500	3.750	.750	.300	SF85
LTL 150-53	○	TPGC 53	1.500	14	1.500	3.750	.750	.300	SF85
LTR 200-53	○	TPGC 53	2.000	14	2.000	3.750	1.000	.300	SF85
LTL 200-53	○	TPGC 53	2.000	14	2.000	3.750	1.000	.300	SF85

*Over NV Insert