



**Building 3 - Training Center**

**8930 Tallyho • Houston, TX 77061**

Technical training for end users, distributors and representatives.



**Building 4 - Sales/Shipping/Coating**

**7815 Hansen Road • Houston, TX 77061**

Houses the sales, shipping and material preparation departments as well as the coating facilities.





# TOOL-FLO

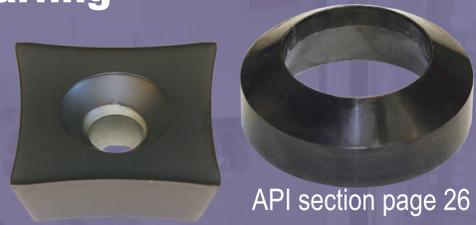
## Chipbreakers for chasers



API section page 7/Chaser section pages 67 & 68

**with coolant cavity and grooves**

## Tube scarfing



API section page 26

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## Chip control



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**8 & 10 round Rotary shoulder connections**

## Cut off system



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## Partial Topping Acme Threading



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Flo-Lock section page 101

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## Coolant through holders/bars



# NEW PRODUCTS

TOOL-FLO  
CR-8R-3E  
TF19310 AT50

TOOL-FLO  
CR-8R-3E  
TF19310 GP50

TOOL-FLO  
CR-8R-3E  
TF19310 GP50

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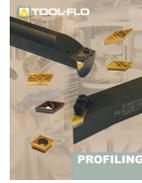
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# TOOLFLO

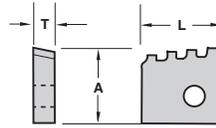


**API**  
Oil & Gas

# CHASERS

## External API Buttress

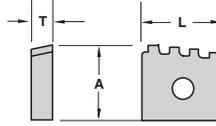
■ For holders see pg. 68



Description	EDP Code	TPI	TPF	L	A	T	No. of Teeth	Coating			
								G50	GP50	AC3	AC50
CR-5B75-3E #1	M16415188	5	3/4	.670	.573	.205	3	●	●	●	●
CR-5B75-3E #2	M16415189	5	3/4	.670	.582	.205	3	●	●	●	●
CR-5B75-3E #3	M16426149	5	3/4	.670	.590	.205	3	●	●	●	●
CR-5B75-4E	M16422675	5	3/4	.804	.625	.200	4	●	●	●	●
CR-5B1-4E	M1741130	5	1	.800	.640	.200	4	●	●	●	●
CR-8B75-4E	M2145353	8	3/4	.800	.605	.200	4	●	●	●	●

## Internal API Buttress

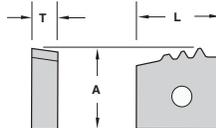
■ For bars see pg. 69



Description	EDP Code	TPI	TPF	L	A	T	No. of Teeth	Coating			
								G50	GP50	AC3	AC50
CR-5B75-3I	M1681847	5	3/4	.630	.577	.204	3	●	●	●	●
CR-5B75-4I	M1681347	5	3/4	.800	.582	.205	4	●	●	●	●
CR-5B75-5I	M16815688	5	3/4	1.000	.590	.205	5	●	●	●	●
CR-5B1-3I	M1782052	5	1	.635	.635	.200	3	●	●	●	●
CR-5B1-4I	M1782051	5	1	.800	.640	.200	4	●	●	●	●
CR-8B75-4I	M2185353	8	3/4	.800	.590	.205	4	●	●	●	●

## External API Round

■ For holders see pg. 68

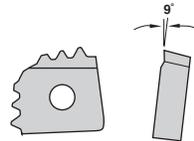


Description	EDP Code	TPI	TPF	L	A	T	No. of Teeth	Coating			
								G50	GP50	AC3	AC50
CR-8R-3E #1	M32416731	8	3/4	.630	.577	.204	3	●	●	●	●
CR-8R-3E #2	M32416732	8	3/4	.630	.586	.204	3	●	●	●	●
CR-8R-3E #3	M32416733	8	3/4	.630	.591	.204	3	●	●	●	●
CR-8R-3E	M32419310	8	3/4	.630	.592	.204	3	●	●	●	●
CR-8R-4E 6°	M3241136	8	3/4	.640	.625	.200	4	●	●	●	●
CR-8R-4E 12°	M3241163	8	3/4	.635	.625	.200	4	●	●	●	●
CR-10R-3E #1	M34416728	10	3/4	.628	.563	.204	3	●	●	●	●
CR-10R-3E #2	M34416729	10	3/4	.628	.572	.204	3	●	●	●	●
CR-10R-3E #3	M34416730	10	3/4	.628	.575	.204	3	●	●	●	●
CR-10R-3E	M3441291	10	3/4	.630	.625	.204	3	●	●	●	●

## External API Round and Buttress Chaser Style

CNGA - Double Sided (2 cutting edges)

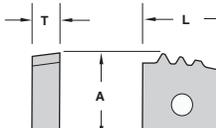
■ For holders see pg. 68



Description	EDP Code	TPI	TPF	No. of Teeth	Coating			
					G50	GP50	AC3	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	●	●	●	●

## Internal API Round

■ For bars see pg. 69



Description	EDP Code	TPI	TPF	L	A	T	No. of Teeth	Coating			
								G50	GP50	AC3	AC50
CR-8R-3I	M3287464	8	3/4	.640	.592	.200	3	●	●	●	●
CR-8R-4I 6°	M3281136	8	3/4	.640	.625	.200	4	●	●	●	●
CR-8R-4I	M32825150	8	3/4	.640	.625	.200	4	●	●	●	●
CR-8R-7I	M32814828	8	3/4	1.000	.625	.200	7	●	●	●	●
CR-8R-7I	M32817968	8	3/4	1.000	.625	.200	7	●	●	●	●
CR-10R-3I	M3481291	10	3/4	.630	.625	.200	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.

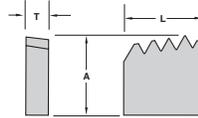
J-Series	▲	●
K-Series	▲	●
L-Series	▲	●
N-Series	●	▲
P-Series	●	▲
Q-Series	●	●



# CHASERS

## External LPT/NPT

■ For holders see pg. 68

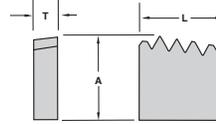


	CVD Coated	TiN Coated	AlTiN* Coated
G50	●	●	●
GP50	●	●	●
AC3	●	●	●
AC50	●	●	●

Description	EDP Code	TPI	TPF	L	A	T	No. of Teeth
CR-8NPT-4E	M3648996	8	3/4	.625	.620	.203	4
CR-11.5NPT-4E	M3649668	11.5	3/4	.625	.620	.1875	4

## Internal LPT/NPT

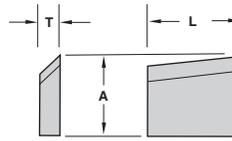
■ For bars see pg. 69



Description	EDP Code	TPI	TPF	L	A	T	No. of Teeth
CR-8NPT-4I	M3689804	8	3/4	.625	.620	.2030	4
CR-11.5NPT-4I	M3689804	11.5	3/4	.625	.620	.1875	4
CR-8NPT-7I	M3689804	8	3/4	1.000	.615	.2000	7

# CHIPBREAKERS

## External

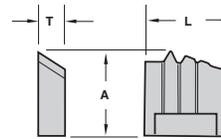


Description	EDP Code	L	A	T	Inserts
CR-5B75/5B1-4E-CB	TF2993	.800	.500	.125	CR-5B75-4E/CR-5B1-4E
CR-8R/10R-3E/4E-CB	TF1353E	.630	.460	.125	CR-8R-3E/CR-8R-4E/CR-10R-3E/CR-8NPT-4E
#3 CB W/O COOLANT GROOVES .170	TF26424	.618	.460	.170	CR-8R-3E/CR-8R-4E/CR-10R-3E/CR-8NPT-4E

## External

with coolant grooves

Also available at **-.010, -.020 and -.030** off the A dimension.

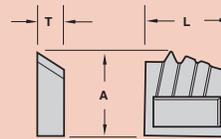


Description	EDP Code	L	A	T	Coolant Grooves	Inserts
TD4601 5B75-1-CB	TF16660	.665	.550	.170	✓	CR-5B75-3E #1
TD4602 5B75-2-CB	TF16661	.668	.550	.170	✓	CR-5B75-3E #2
TD4603 5B75-3-CB	TF16662	.665	.560	.170	✓	CR-5B75-3E #3
TD3931 8R-1-CB	TF16657	.628	.518	.165	✓	CR-8R-3E #1
TD3932 8R-2-CB	TF16658	.635	.526	.165	✓	CR-8R-3E #2
TD3933 8R-3-CB	TF27129	.628	.520	.165	✓	CR-8R-3E #3
TA2237 10R-1-CB	TF16760	.628	.503	.175	✓	CR-10R-3E #1
TA2238 10R-2-CB	TF16761	.628	.512	.175	✓	CR-10R-3E #2
TA2239 10R-3-CB	TF16762	.628	.515	.175	✓	CR-10R-3E #3
#3 CB W/COOLANT GROOVES .170	TF26423	.618	.460	.170	✓	CR-8R-3E

## External

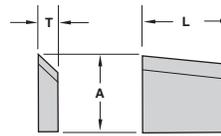
with coolant grooves and cavity

Also available at **-.010, -.020 and -.030** off the A dimension.



Description	EDP Code	L	A	T	Coolant Grooves	Inserts
TD4601 5B75-1-CB W/CAVITY	TF30297	.665	.550	.170	✓	CR-5B75-3E #1
TD4602 5B75-2-CB W/CAVITY	TF30298	.668	.550	.170	✓	CR-5B75-3E #2
TD4603 5B75-3-CB W/CAVITY	TF30299	.665	.560	.170	✓	CR-5B75-3E #3
TD3931 8R-1-CB W/CAVITY	TF28130	.628	.518	.165	✓	CR-8R-3E #1
TD3932 8R-2-CB W/CAVITY	TF28131	.635	.526	.165	✓	CR-8R-3E #2
TD3933 8R-3-CB W/CAVITY	TF28132	.628	.520	.165	✓	CR-8R-3E #3

## Internal



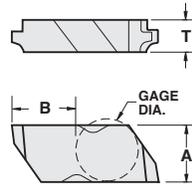
Description	EDP Code	L	A	T	Coolant Grooves	Inserts
CR-5B75/5B1-4I-CB	TF16104	.800	.500	.125		CR-5B75-4I/CR-5B1-4I
CR-8R/10R-3I/4I-CB	TF1353I	.630	.488	.125		CR-8R-3I/CR-8R-4I/CR-10R-3I/CR-8LPT-4I
CR-5B75-5I-CB	TF28765	1.000	.540	.125	✓	CR-5B75-5I
CR-8R-7I-CB	TF3435	1.000	.520	.125		CR-8R-7I
CR-8R-7I-CB	TF18096	1.000	.510	.125	✓	CR-8R-7I



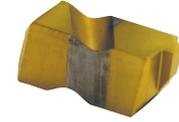
# FLO-LOCK

## API Buttress Threading

■ For holders and bars see pgs. 107-109



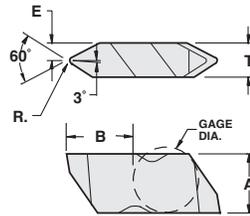
RH Shown



Description	EDP Code	TPI	TPF	T	A	B	Gage Dia.							
								C3	GP3	GP50	AC3	AC50		
FLDC-3-5B75E	553616E	5	3/4	.250	.344	.4026	.3750							
FLDC-3-5B75I	553616I	5	3/4	.250	.344	.4026	.3750			●				
FLDC-3-5B1E	553617E	5	1	.250	.344	.4026	.3750			●				
FLDC-3-5B1I	553617I	5	1	.250	.344	.4026	.3750			●				
FLDC-4-5B75E	554616E	5	3/4	.255	.453	.6320	.3750			●				
FLDC-4-5B75I	554616I	5	3/4	.255	.453	.6320	.3750			●				
FLDC-4-5B1E	554617E	5	1	.255	.453	.6320	.3750			●				
FLDC-4-5B1I	554617I	5	1	.255	.453	.6320	.3750			●				

## API Threading Non-Topping

■ For holders and bars see pgs. 107-109



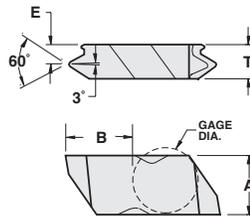
RH Shown



Description	EDP Code	TPI	R	T	E	A	B	Gage Dia.						
									C3	GP3	GP50	AC3	AC50	
FLD-3038R	553438R	4	.033/.038	.195	.082	.344	.3991	.3750			●			
FLD-3038L	553438L	4	.033/.038	.195	.082	.344	.3991	.3750			●			
FLD-3040R	553440R	5	.015/.020	.195	.082	.344	.3991	.3750			●			
FLD-3040L	553440L	5	.015/.020	.195	.082	.344	.3991	.3750			●			
FLD-4038R	554438R	4	.033/.038	.255	.128	.453	.6293	.3750			●			
FLD-4038L	554438L	4	.033/.038	.255	.128	.453	.6293	.3750			●			
FLD-4040R	554440R	5	.015/.020	.255	.128	.453	.6293	.3750			●			
FLD-4040L	554440L	5	.015/.020	.255	.128	.453	.6293	.3750			●			
FLD-4050R	554450R	4	.020/.025	.255	.128	.453	.6293	.3750			●			
FLD-4050L	554450L	4	.020/.025	.255	.128	.453	.6293	.3750			●			

## API Rotary Shoulder Connexion Threading

■ For holders and bars see pgs. 107-109



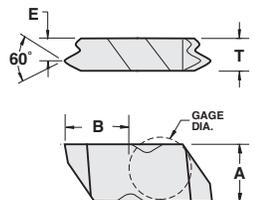
RH Shown



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

## API Round Threading

■ For holders and bars see pgs. 107-109



RH Shown



Description	EDP Code	TPI	TPF	T	E	A	B	Gage Dia.						
									C3	GP3	GP50	AC3	AC50	
FLDC-3-8RDR75	553632R	8	3/4	.195	.125	.344	.4010	.3750			●	●	●	
FLDC-3-8RDL75	553632L	8	3/4	.195	.125	.344	.4010	.3750			●	●	●	
FLDC-3-10RDR75	553634R	10	3/4	.195	.125	.344	.4010	.3750			●	●	●	
FLDC-3-10RDL75	553634L	10	3/4	.195	.125	.344	.4010	.3750			●	●	●	

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

Cast Iron				
Non-Ferrous				
Stainless/High Temp				
Steel			▲	

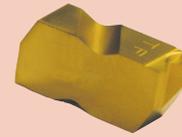
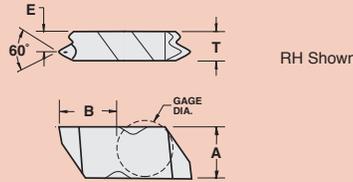


# FLO-LOCK

## API Round Threading with Chipbreaker

*Exclusive patented design!*

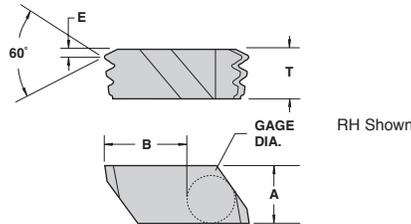
■ For holders and bars see pgs. 107-109



Description	EDP Code	TPI	TPF	T	E	A	B	Gage Dia.	Coating				
									C3	GP3	GP50	AC3	AC50
FLDC-3-8RDR75-CB	553632PR	8	3/4	.195	.125	.344	.4010	.3750			●	●	●
FLDC-3-8RDL75-CB	553632PL	8	3/4	.195	.125	.344	.4010	.3750			●	●	●

# API Round Threading Multi-Tooth

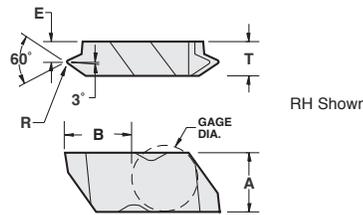
■ For holders and bars see pgs. 107-109



Description	EDP Code	TPI	TPF	E	T	A	B	Gage Dia.	Coating				
									C3	GP3	GP50	AC3	AC50
FLDC-6-8RDR-75M	5566323R	8	3/4	.070	.383	.453	.636	.3750			●	●	●
FLDC-6-10RDR-75M	556634R	10	3/4	.184	.383	.453	.636	.3750			●	●	●

# NPT Threading

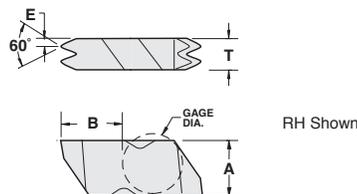
■ For holders and bars see pgs. 107-109



Description	EDP Code	TPI	TPF	T	E	A	B	Gage Dia.	Coating				
									C3	GP3	GP50	AC3	AC50
FLDC-38VR-75	553608R	8	3/4	.195	.100	.344	4.000	.3750		●	●	●	●
FLDC-38VL-75	553608L	8	3/4	.195	.100	.344	4.000	.3750		●	●	●	●
FLDC-3115VR-75	553611R	11.5	3/4	.195	.144	.344	4.000	.3750		●	●	●	●
FLDC-3115VL-75	553611L	11.5	3/4	.195	.144	.344	4.000	.3750		●	●	●	●
FLDC-314VR-75	553614R	14	3/4	.195	.148	.344	4.023	.3750		●	●	●	●
FLDC-314VL-75	553614L	14	3/4	.195	.148	.344	4.023	.3750		●	●	●	●
FLDC-318VR-75	553618R	18	3/4	.195	.154	.344	4.023	.3750		●	●	●	●
FLDC-318VL-75	553618L	18	3/4	.195	.154	.344	4.023	.3750		●	●	●	●
FLDC-327VR-75	553627R	27	3/4	.195	.162	.344	4.023	.3750	●				
FLDC-327VL-75	553627L	27	3/4	.195	.162	.344	4.023	.3750					

# NPT Threading Multi-Tooth

■ For holders and bars see pgs. 107-109



Description	EDP Code	TPI	TPF	T	E	A	B	Gage Dia.	Coating				
									C3	GP3	GP50	AC3	AC50
FLDC-3-8 NPT-2E	553708E	8	3/4	.250	.058	.344	.4050	.3750			●	●	●
FLDC-3-8 NPT-2I	553708I	8	3/4	.250	.058	.344	.4050	.3750			●	●	●
FLDC-3-11.5 NPT-2E	553711E	11.5	3/4	.250	.048	.344	.4050	.3750			●	●	●
FLDC-3-11.5 NPT-2I	553711I	11.5	3/4	.250	.048	.344	.4050	.3750			●	●	●

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

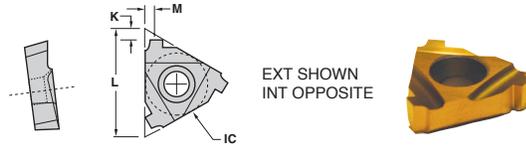
Cast Iron			▲		●
Non-Ferrous			▲		●
Stainless/High Temp			▲		●
Steel			▲		●



# LAYDOWN-LT

## API Buttress Threading

■ For holders and bars see pgs. 125-126

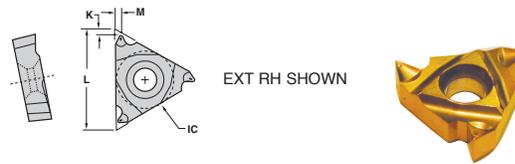


Description	EDP Code	TPI	TPF	IC	L	M	K	Connection	Coatings					
									C22	GP22	GP50	AC22	AC50	
22ER 8B75	5102100	8	3/4	1/2	.87	.102	.073	U.S. Improved Buttress		●	●	●	●	●
22ER 5B75	5101600	5	3/4	1/2	.87	.087	.087	4-1/2 - 13-3/8		●	●	●	●	●
22ER 5B1	5101700	5	1	1/2	.87	.095	.087	16 and larger		●	●	●	●	●
22NR 8B75	5122100	8	3/4	1/2	.87	.102	.073	U.S. Improved Buttress			●	●	●	●
22NR 5B75	5121600	5	3/4	1/2	.87	.087	.087	4-1/2 - 13-3/8			●	●	●	●
22NR 5B1	5121700	5	1	1/2	.87	.095	.090	16 and larger			●	●	●	●

## NPT Threading with Chipbreaker

*Exclusive patented design!*

■ For holders and bars see pgs. 125-126



Description	EDP Code	TPI	IC	L	M	K	Coatings					
							C22	GP22	GP50	AC22	AC50	
16ER 27NPT-CB	5003627P	27	3/8	.65	.03	.02		●	●	●	●	●
16ER 18NPT-CB	5003618P	18	3/8	.65	.03	.02		●	●	●	●	●
16ER 14NPT-CB	5003614P	14	3/8	.65	.06	.04		●	●	●	●	●
16ER 11.5NPT-CB	5003611P	11.5	3/8	.65	.06	.04		●	●	●	●	●
16ER 8NPT-CB	5003608P	8	3/8	.65	.06	.04		●	●	●	●	●
16NR 27NPT-CB	5023627P	27	3/8	.65	.03	.02		●	●	●	●	●
16NR 18NPT-CB	5023618P	18	3/8	.65	.03	.02		●	●	●	●	●
16NR 14NPT-CB	5023614P	14	3/8	.65	.06	.04		●	●	●	●	●
16NR 11.5NPT-CB	5023611P	11.5	3/8	.65	.06	.04		●	●	●	●	●
16NR 8NPT-CB	5023608P	8	3/8	.65	.06	.04		●	●	●	●	●

## NPT Threading

■ For holders and bars see pgs. 125-126



Description	EDP Code	TPI	IC	L	M	K	Coatings					
							C22	GP22	GP50	AC22	AC50	
16ER 27NPT	5003627	27	3/8	.65	.03	.03		●	●	●	●	●
16EL 27NPT	5043627	27	3/8	.65	.03	.03		●	●	●	●	●
16ER 18NPT	5003618	18	3/8	.65	.04	.03		●	●	●	●	●
16EL 18NPT	5043618	18	3/8	.65	.04	.03		●	●	●	●	●
16ER 14NPT	5003614	14	3/8	.65	.05	.04		●	●	●	●	●
16EL 14NPT	5043614	14	3/8	.65	.05	.04		●	●	●	●	●
16ER 11.5NPT	5003611	11.5	3/8	.65	.06	.04		●	●	●	●	●
16EL 11.5NPT	5043611	11.5	3/8	.65	.06	.04		●	●	●	●	●
16ER 8NPT	5003608	8	3/8	.65	.07	.05		●	●	●	●	●
16EL 8NPT	5043608	8	3/8	.65	.07	.05		●	●	●	●	●
11NR 18NPT	4923618	18	1/4	.43	.04	.03		●	●	●	●	●
11NR 27NPT	4923627	27	1/4	.43	.03	.03		●	●	●	●	●
16NR 27NPT	5023627	27	3/8	.65	.03	.03		●	●	●	●	●
16NL 27NPT	5063627	27	3/8	.65	.03	.03		●	●	●	●	●
16NR 18NPT	5023618	18	3/8	.65	.04	.03		●	●	●	●	●
16NL 18NPT	5063618	18	3/8	.65	.04	.03		●	●	●	●	●
16NR 14NPT	5023614	14	3/8	.65	.05	.04		●	●	●	●	●
16NL 14NPT	5063614	14	3/8	.65	.05	.04		●	●	●	●	●
16NR 11.5NPT	5023611	11.5	3/8	.65	.06	.04		●	●	●	●	●
16NL 11.5NPT	5063611	11.5	3/8	.65	.06	.04		●	●	●	●	●
16NR 8NPT	5023608	8	3/8	.65	.06	.05		●	●	●	●	●
16NL 8NPT	5063608	8	3/8	.65	.06	.05		●	●	●	●	●

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▲ Recommended grade under general conditions.

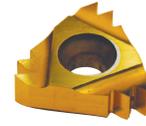
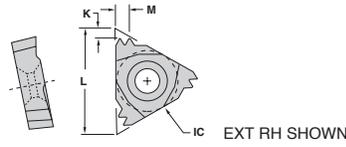
Material	C22	GP22	GP50	AC22	AC50
Cast Iron		▲	▲	▲	▲
Non-Ferrous				▲	▲
Stainless/High Temp		▲	▲	▲	▲
Steel			▲	▲	▲



# LAYDOWN-LT

## NPT Threading Multi-Tooth

■ For holders and bars see pgs. 125-126



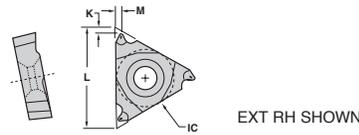
Description	EDP Code	No of Teeth	TPI	IC	L	M	K	TIN Coated				AlTiN Coated	
								GP22	GP25	GP50	GP54	AC22	AC50
22ER 11.5NPT2M	5103811	2	11.5	1/2	.87	.13	.09	●				●	●
27ER 11.5NPT3M	5203811	3	11.5	5/8	1.08	.22	.14		●				
27ER 8NPT2M	5203808	2	8	5/8	1.08	.19	.11		●			●	●
22NR 11.5NPT2M	5123811	2	11.5	1/2	.87	.13	.09	●	●	●		●	●
27NR 11.5NPT3M	5223811	3	11.5	5/8	1.08	.22	.14						
27NR 8NPT2M	5223808	2	8	5/8	1.08	.19	.11		●			●	●

## NPTF Threading Chipbreaker

For Dry Seal listing see page

**Exclusive patented design!**

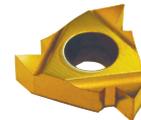
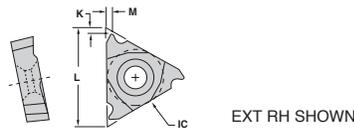
■ For holders and bars see pgs. 125-126



Description	EDP Code	TPI	IC	L	M	K	Uncoated		TIN Coated		AlTiN Coated	
							C22	GP22	GP50	AC22	AC50	
16ER 27NPTF-CB	5004027P	27	3/8	.65	.03	.03		●				
16ER 18NPTF-CB	5004018P	18	3/8	.65	.04	.03		●				
16ER 14NPTF-CB	5004014P	14	3/8	.65	.05	.04		●				
16ER 11.5NPTF-CB	5004011P	11.5	3/8	.65	.06	.04		●				
16ER 8NPTF-CB	5004008P	8	3/8	.65	.07	.05		●				
16NR 27NPTF--CB	5024027P	27	3/8	.65	.03	.03		●				
16NR 18NPTF-CB	5024018P	18	3/8	.65	.03	.02		●				
16NR 14NPTF-CB	5024014P	14	3/8	.65	.06	.04		●				
16NR 11.5NPTF-CB	5024011P	11.5	3/8	.65	.06	.04		●				
16NR 8NPTF-CB	5024008P	8	3/8	.65	.06	.04		●				

## NPTF Threading

■ For holders and bars see pgs. 125-126



Description	EDP Code	TPI	IC	L	M	K	Uncoated		TIN Coated		AlTiN Coated	
							C22	GP22	GP50	AC22	AC50	
16ER 27NPTF	5004027	27	3/8	.65	.03	.03		●				
16EL 27NPTF	5044027	27	3/8	.65	.03	.03						
16ER 18NPTF	5004018	18	3/8	.65	.04	.03		●				
16EL 18NPTF	5044018	18	3/8	.65	.04	.03						
16ER 14NPTF	5004014	14	3/8	.65	.05	.04		●				
16EL 14NPTF	5044014	14	3/8	.65	.05	.04						
16ER 11.5NPTF	5004011	11.5	3/8	.65	.06	.04		●				
16EL 11.5NPTF	5044011	11.5	3/8	.65	.06	.04						
16ER 8NPTF	5004008	8	3/8	.65	.07	.05		●				
16EL 8NPTF	5044008	8	3/8	.65	.07	.05						
11NR 27NPTF	4923827	27	1/4	.43	.03	.03		●				
11NR 18NPTF	4924018	18	1/4	.43	.04	.03		●		●		
16NR 27NPTF	5024027	27	3/8	.65	.03	.03		●				
16NL 27NPTF	5064027	27	3/8	.65	.03	.03						
16NR 18NPTF	5024018	18	3/8	.65	.04	.03		●				
16NL 18NPTF	5064018	18	3/8	.65	.04	.03						
16NR 14NPTF	5024014	14	3/8	.65	.05	.04		●				
16NL 14NPTF	5064014	14	3/8	.65	.05	.04						
16NR 11.5NPTF	5024011	11.5	3/8	.65	.06	.04		●				
16NL 11.5NPTF	5064011	11.5	3/8	.65	.06	.04						
16NR 8NPTF	5024008	8	3/8	.65	.07	.05		●				
16NL 8NPTF	5064008	8	3/8	.65	.07	.05						

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- ▲ Recommended grade under general conditions.

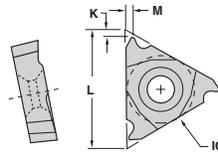
Cast Iron		▲	●
Non-Ferrous		▲	●
Stainless/High Temp		▲	●
Steel			●



# LAYDOWN-LT

## API Rotary Shoulder Connection Threading

■ For holders and bars see pgs. 125-126



EXT SHOWN INT OPPOSITE

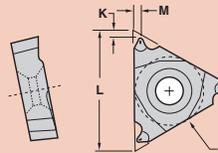


Description	EDP Code	TPI	TPF	IC	L	M	K	Connection	Coating				
									C22	GP22	GP50	AC22	AC50
22ER 530	5101300	5	3	1/2	.87	.10	.08	3-1/2FH, 2-3/8, 4-1/2 Reg.			●	●	●
22ER 4PAC	5101500	4	1-1/2	1/2	.87	.11	.08	American Open Hole			●	●	●
22ER 438	5101200	4	3	1/2	.87	.11	.11	NC56 - NC71			●	●	●
22ER 435	5101100	4	3	1/2	.87	.11	.08	5-1/2, 7-5/8, 8-5/8 Reg.			●	●	●
22ER 42F	5101400	4	2	1/2	.87	.11	.08	VO.065*			●	●	●
22ER 428	5101000	4	2	1/2	.87	.10	.08	NC23-NC50, 2-3/8 - 5-1/2IF			●	●	●
22ER 425	5100900	4	2	1/2	.87	.10	.08	5-1/2, 6-5/8FH, 6-5/8 Reg.	●		●	●	●
22NR 530	5121300	5	3	1/2	.87	.10	.08	3-1/2FH, 2-3/8, 4-1/2 Reg.			●	●	●
22NR 4PAC	5121500	4	1-1/2	1/2	.87	.11	.08	American Open Hole			●	●	●
22NR 438	5121200	4	3	1/2	.87	.11	.11	NC56 - NC71			●	●	●
22NR 435	5121100	4	3	1/2	.87	.11	.08	5-1/2, 7-5/8, 8-5/8 Reg.			●	●	●
22NR 42F	5121400	4	2	1/2	.87	.11	.08	VO.065*			●	●	●
22NR 428	5121000	4	2	1/2	.87	.10	.08	NC23-NC50, 2-3/8 - 5-1/2IF			●	●	●
22NR 425	5120900	4	2	1/2	.87	.10	.08	5-1/2, 6-5/8FH, 6-5/8 Reg.			●	●	●
27ER 530	5201300	5	3	5/8	.108	.11	.07	3-1/2FH, 2-3/8, 4-1/2 Reg.			●	●	●
27ER 438	5201200	4	3	5/8	.108	.11	.08	NC56 - NC71			●	●	●
27ER 435	5201100	4	3	5/8	.108	.12	.08	5-1/2, 7-5/8, 8-5/8 Reg.			●	●	●
27ER 428	5201000	4	2	5/8	.108	.11	.08	NC23-NC50, 2-3/8 - 5-1/2IF			●	●	●
27ER 425	5200900	4	2	5/8	.108	.12	.08	5-1/2, 6-5/8FH, 6-5/8 Reg.			●	●	●
27NR 530	5221300	5	3	5/8	.108	.11	.08	3-1/2FH, 2-3/8, 4-1/2 Reg.			●	●	●
27NR 438	5221200	4	3	5/8	.108	.11	.08	NC56 - NC71			●	●	●
27NR 435	5221100	4	3	5/8	.108	.12	.08	5-1/2, 7-5/8, 8-5/8 Reg.			●	●	●
27NR 428	5221000	4	2	5/8	.108	.11	.08	NC23-NC50, 2-3/8 - 5-1/2IF			●	●	●
27NR 425	5220900	4	2	5/8	.108	.12	.08	5-1/2, 6-5/8FH, 6-5/8 Reg.			●	●	●

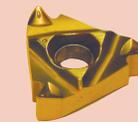
\* Obsolete thread form, See A.P.I. Spec 7, 35th Edition, May 1, 1995, Section 9.4

## API Round Threading Chipbreaker

■ For holders and bars see pgs. 125-126



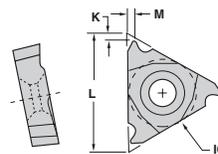
EXT SHOWN INT OPPOSITE



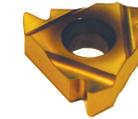
Description	EDP Code	TPI	IC	L	M	K	Coating				
							GP22	GP50	AC22	AC3	AC50
16ER 8RD-CB	5003200HC	8	3/8	.65	.051	.059	●	●	●	●	●
16ER 10RD-CB	5003400HC	10	3/8	.65	.047	.059	●	●	●	●	●
16NR 8RD-CB	5023200HC	8	3/8	.65	.051	.059	●	●	●	●	●
16NR 10RD-CB	5023400HC	10	3/8	.65	.047	.059	●	●	●	●	●

## API Round Threading

■ For holders and bars see pgs. 125-126



EXT SHOWN INT OPPOSITE



Description	EDP Code	TPI	TPF	IC	L	M	K	Coating						
								C22	GP22	GP50	AC22	AC50		
16ER 8RD	5003200	8	3/4	3/8	.65	.059	.056							
16ER 10RD	5003400	10	3/4	3/8	.65	.059	.056		●	●	●	●	●	
22ER 8RD	5103200	8	3/4	1/2	.87	.060	.056			●	●	●	●	
22ER 10RD	5103400	10	3/4	1/2	.87	.046	.048			●	●	●	●	
16NR 8RD	5023200	8	3/4	3/8	.65	.059	.056		●	●	●	●	●	
16NR 10RD	5023400	10	3/4	3/8	.65	.059	.056		●	●	●	●	●	
22NR 8RD	5123200	8	3/4	1/2	.87	.060	.056			●	●	●	●	
22NR 10RD	5123400	10	3/4	1/2	.87	.046	.048			●	●	●	●	

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.

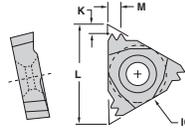
Material	Cast Iron	Non-Ferrous	Stainless/High Temp	Steel
Coating	▲	▲	▲	▲



# LAYDOWN-LT

## API Round Threading Multi-Tooth

■ For holders and bars see pgs. 125-126



EXT SHOWN  
INT OPPOSITE

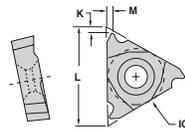


Description	EDP Code	TPI	IC	L	M	K	Coatings								
							C22	GP22	GP50	AC22	AC50				
22ER 10RD2M	5103500	10	1/2	.87	.146	.094									
27ER 8RD2M	5203300	8	5/8	1.08	.177	.114									
22NR 10RD2M	5123500	10	1/2	.87	.146	.094									
27NR 8RD2M	5223300	8	5/8	1.08	.177	.114									

## API VO.055

### American MT, AMT & AMMT\*

■ For holders and bars see pgs. 125-126



EXT SHOWN  
INT OPPOSITE

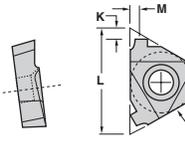


Description	EDP Code	TPI	TPF	IC	L	M	K	Connection	Coatings					
									C22	GP22	GP50	AC22	AC50	
16ER 6P VO.055 MT	5004300	6	1-1/2	3/8	.65	.059	.051	NC10-NC16, VO.055, 1, 1-1/2 REG						
22ER 6P VO.055 MT	5104300	6	1-1/2	1/2	.87	.072	.060	NC10-NC16, VO.055, 1, 1-1/2 REG						
16NR 6P VO.055 MT	5024300	6	1-1/2	3/8	.65	.059	.051	NC10-NC16, VO.055, 1, 1-1/2 REG						
22NR 6P VO.055 MT	5124300	6	1-1/2	1/2	.87	.072	.060	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 VAM Threading

■ For holders and bars see pgs. 125-126



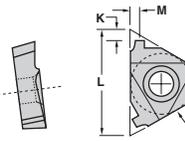
EXT SHOWN  
INT OPPOSITE



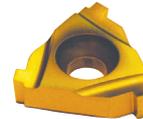
Description	EDP Code	TPI	IC	L	M	K	Coatings							
							C22	GP22	GP50	AC22	AC50			
22ER 8VAM	5102500	8	1/2	.87	.059	.059								
22ER 6VAM	5102400	6	1/2	.87	.079	.079								
22ER 5VAM	5102300	5	1/2	.87	.079	.079								
22NR 8VAM	5122500	8	1/2	.87	.059	.059								
22NR 6VAM	5122400	6	1/2	.87	.079	.079								
22NR 5VAM	5122300	5	1/2	.87	.079	.079								

## API X-Line Threading

■ For holders and bars see pgs. 125-126



EXT RH SHOWN



Description	EDP Code	TPI	TPF	IC	L	M	K	Connection	Coatings					
									C22	GP22	GP50	AC22	AC50	
22ER 6XL75	5102000	6	3/4	1/2	.87	.075	.078							
22ER 6XL15	5101900	6	1-1/2	1/2	.87	.075	.086	5 - 7-5/8						
22ER 5XL12	5101800	5	1-1/4	1/2	.87	.087	.083	8-5/8 - 10-3/4						
22NR 6XL75	5122000	6	3/4	1/2	.87	.075	.078							
22NR 6XL15	5121900	6	1-1/2	1/2	.87	.075	.086	5 - 7-5/8						
22NR 5XL12	5121800	5	1-1/4	1/2	.87	.087	.083	8-5/8 - 10-3/4						

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- ▲ Recommended grade under general conditions.

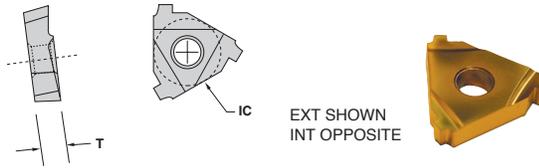
Cast Iron															
Non-Ferrous															
Stainless/High Temp															
Steel															



# LAYDOWN

## API Buttress Threading

■ For holders and bars see pgs. 136-138

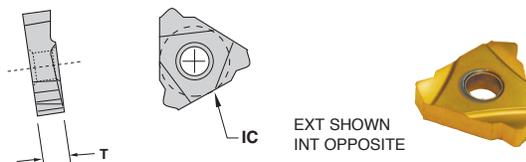


Description	EDP Code	TPI	TPF	IC	T	Connection	Coating				
							C6H	GP50	GP54	AC50	AC54
L43 5B75 EXT-FC	16154F	5	3/4	.500	.189	4-1/2 - 13-3/8					
L43 5B1 EXT-FC	17514F	5	1	.500	.189	16 and larger	●				
L43 8B75 EXT-FC	21154F	8	3/4	.500	.189	US Improved Buttress	●				
L53 5B75 EXT-FC	16474F	5	3/4	.625	.189	4-1/2 - 13-3/8	●				
L53 5B1 EXT-FC	17474F	5	1	.625	.189	16 and larger	●				
L53 8B75 EXT-FC	21474F	8	3/4	.625	.189	US Improved Buttress	●				
L43 5B75 INT-FC	16158F	5	3/4	.500	.189	4-1/2 - 13-3/8	●				
L43 5B1 INT-FC	17518F	5	1	.500	.189	16 and larger	●				
L43 8B75 INT-FC	21158F	8	3/4	.500	.189	US Improved Buttress	●				
L53 5B75 INT-FC	16478F	5	3/4	.625	.189	4-1/2 - 13-3/8	●				
L53 5B1 INT-FC	17478F	5	1	.625	.189	16 and larger	●				
L53 8B75 INT-FC	21478F	8	3/4	.625	.189	US Improved Buttress	●				

FC designates 5° flank clearance

## API Hughes H90 Threading

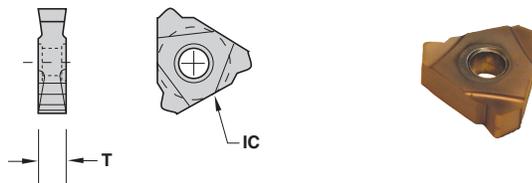
■ For holders and bars see pgs. 136-138



Description	EDP Code	TPI	TPF	IC	T	Connection	Coating				
							C6H	GP50	GP54	AC50	AC54
L53 H902 EXT	28474	3-1/2	2	.625	.189	3-1/2 - 6-5/8 H90					
L53 H903 EXT	29474	3-1/2	3	.625	.189	7 - 8-5/8 H90	●				
L53 H90S EXT	27474	3	1-1/4	.625	.189	2-3/8 - 3-1/2 Slimline	●				
L53 H902 INT	28478	3-1/2	2	.625	.189	3-1/2 - 6-5/8 H90	●				
L53 H903 INT	29478	3-1/2	3	.625	.189	7 - 8-5/8 H90	●				
L53 H90S INT	27478	3	1-1/4	.625	.189	2-3/8 - 3-1/2 Slimline	●				

## API Hughes H90 Threading LDS Double Sided Internal/External

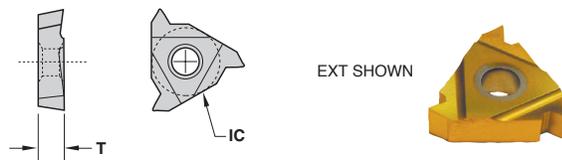
■ For holders and bars see pgs. 136-138



Description	EDP Code	TPI	TPF	IC	T	Connection	Coating				
							C6H	GP50	GP54	AC50	AC54
LDS 54 H902	28490	3-1/2	2	.625	.252	3-1/2 - 6-5/8 H90					
LDS 54 H903	29490	3-1/2	3	.625	.252	7 - 8-5/8 H90		●			
LDS 54 H90S	27490	3	1-1/4	.625	.252	2-3/8 - 3-1/2 Slimline		●			

## NPT Threading

■ For holders and bars see pgs. 136-138



Description	EDP Code	TPI	TPF	IC	T	Coating				
						C22	GP22	GP50	AC22	AC50
L43 8NPT EXT	3615084	8	3/4	.500	.189					
L43 11.5NPT EXT	3615114	11.5	3/4	.500	.189			●		
L43 8NPT INT	3615088	8	3/4	.500	.189			●		
L43 11.5NPT INT	3615118	11.5	3/4	.500	.189			●		●

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.

Material	Uncoated	TIN Coated	AlTiN Coated
Cast Iron		▲	●
Non-Ferrous		▲	●
Stainless/High Temp		▲	●
Steel		▲	●



# LAYDOWN-LT

## NPT Threading Multi-Tooth

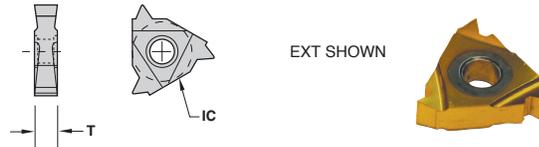
■ For holders and bars see pgs. 136-138



Description	EDP Code	TPI	TPF	IC	T	Coating				
						C22	GP22	GP50	AC22	AC50
L43 11.5NPT2M EXT	3615114T	11.5	3/4	.500	.189				●	
L43 11.5NPT2M INT	3615118T	11.5	3/4	.500	.189			●	●	●

## NPT Threading LDS Double Sided Internal/External

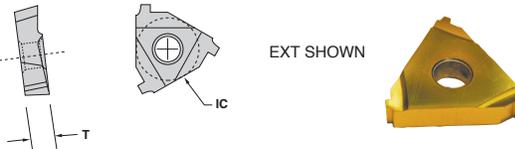
■ For holders and bars see pgs. 136-138



Description	EDP Code	TPI	TPF	IC	T	Coating				
						C22	GP22	GP50	GP54	AC22
LDS 43 8NPT	361808	8	3/4	.500	.189					
LDS 43 11.5NPT	361811	11.5	3/4	.500	.189				●	
LDS 43 14NPT	361814	14	3/4	.500	.189				●	

## Pittsburg Acme Threading

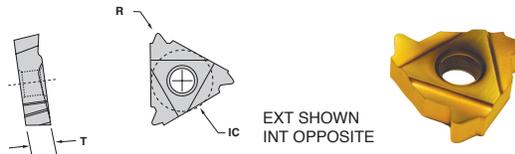
■ For holders and bars see pgs. 136-138



Description	EDP Code	TPI	TPF	IC	T	Coating				
						C22	GP22	GP50	GP54	AC22
L43 8PA75 EXT	22154	8	3/4	.500	.189					
L53 8PA75 EXT	22474	8	3/4	.625	.189				●	
L43 8PA75 INT	22158	8	3/4	.500	.189				●	
L53 8PA75 INT	22478	8	3/4	.625	.189				●	

## API Rotary Shoulder Connection Threading

■ For holders and bars see pgs. 136-138



Description	EDP Code	TPI	TPF	R	IC	T	Connection	Coating				
								GP50	GP54	AC22	AC50	AC54
L43 425 EXT	09154	4	2	.025	.500	.189	5-1/2 FH 6-5/8 FH 6-5/8 Reg.	●		●	●	
L43 428 EXT	10154	4	2	.038	.500	.189	NC 23-NC50 2-3/8 - 5-1/2 IF	●		●	●	
L43 42F EXT*	14154	4	2	---	.500	.189	V0.065*					
L43 435 EXT	11154	4	3	.025	.500	.189	5-1/2 Rg. 7-5/8 Reg. 8-5/8 Reg.	●			●	
L43 438 EXT	12154	4	3	.038	.500	.189	NC56 - NC71	●			●	
L43 530 EXT	13154	5	3	.020	.500	.189	3-1/2 FH 2-3/8 - 4-1/2 Reg.	●		●	●	
L43 4PAC EXT	15154	4	1-1/2	---	.500	.189	American Open Hole	●				
L53 425 EXT	09474	4	2	.025	.625	.189	5-1/2 FH 6-5/8 FH 6-5/8 Reg.	●		●	●	
L53 428 EXT	10474	4	2	.038	.625	.189	NC 23-NC50 2-3/8 - 5-1/2 IF	●		●	●	
L53 42F EXT*	14474	4	2	---	.625	.189	V0.065*					
L53 435 EXT	11474	4	3	.025	.625	.189	5-1/2 Rg. 7-5/8 Reg. 8-5/8 Reg.	●		●	●	
L53 438 EXT	12474	4	3	.038	.625	.189	NC56 - NC71	●			●	
L53 530 EXT	13474	5	3	.020	.625	.189	3-1/2 FH 2-3/8 - 4-1/2 Reg.	●		●	●	
L53 4PAC EXT	15474	4	1-1/2	---	.625	.189	American Open Hole	●				
L43 425 INT	09158	4	2	.025	.500	.189	5-1/2 FH 6-5/8 FH 6-5/8 Reg.	●		●	●	
L43 428 INT	10158	4	2	.038	.500	.189	NC 23-NC50 2-3/8 - 5-1/2 IF	●		●	●	
L43 42F INT*	14158	4	2	---	.500	.189	V0.065*					
L43 435 INT	11158	4	3	.025	.500	.189	5-1/2 Rg. 7-5/8 Reg. 8-5/8 Reg.	●			●	
L43 438 INT	12158	4	3	.038	.500	.189	NC56 - NC71	●		●	●	
L43 530 INT	13158	5	3	.020	.500	.189	3-1/2 FH 2-3/8 - 4-1/2 Reg.	●		●	●	
L43 4PAC INT	15158	4	1-1/2	---	.500	.189	American Open Hole	●				
L53 425 INT	09478	4	2	.025	.625	.189	5-1/2 FH 6-5/8 FH 6-5/8 Reg.	●		●	●	
L53 428 INT	10478	4	2	.038	.625	.189	NC 23-NC50 2-3/8 - 5-1/2 IF	●		●	●	
L53 42F INT*	14478	4	2	---	.625	.189	V0.065*					
L53 435 INT	11478	4	3	.025	.625	.189	5-1/2 Rg. 7-5/8 Reg. 8-5/8 Reg.	●		●	●	
L53 438 INT	12478	4	3	.038	.625	.189	NC56 - NC71	●			●	
L53 530 INT	13478	5	3	.020	.625	.189	3-1/2 FH 2-3/8 - 4-1/2 Reg.	●		●	●	
L53 4PAC INT	15478	4	1-1/2	---	.625	.189	American Open Hole	●				

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

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

Material	GP50	GP54	AC22	AC50	AC54
Cast Iron					●
Non-Ferrous					●
Stainless/High Temp					●
Steel			▲	▲	

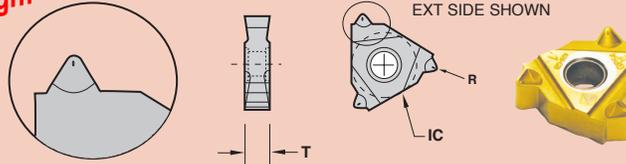


# LAYDOWN

## API Rotary Shoulder Connection Threading

LDS Double Sided  
Lead Follow Topping  
Internal/External  
**with patented chipbreaker**

*Exclusive patented design!*



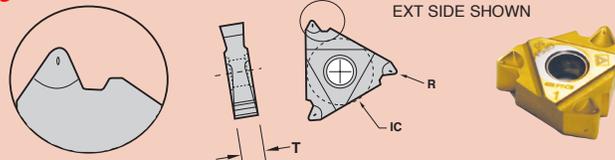
■ For holders and bars see pgs. 136-138

Description	EDP Code	TPI	TPF	R	IC	T	Connection	Coating					
								Uncoated	TIN Coated	AlTiN Coated	C6H	GP54	AC22
LDS 54 428-CB #1	10490HC	4	2	.038	.625	.252	NC23-NC50, 2-3/8-5-1/2 IF		●	●	●	●	●
LDS 54 438-CB #2	12490HC	4	3	.038	.625	.252	NC56-NC71		●	●	●	●	●
LDS 54 425-CB #3	09490HC	4	2	.025	.625	.252	5-1/2 FH, 6-5/8 FH, 6-5/8 Reg.		●	●	●	●	●
LDS 54 435-CB #4	11490HC	4	3	.025	.625	.252	5-1/2 Reg. 7-5/8 Reg 8-5/8 Reg.		●	●	●	●	●
LDS 54 530-CB #5	13490HC	5	3	.020	.625	.252	3-1/2 FH 2-3/8 - 4-1/2 Reg.		●	●	●	●	●

## API Rotary Shoulder Connection Threading

LDS Double Sided  
Follow Topping  
Internal/External  
**with patented chipbreaker**

*Exclusive patented design!*



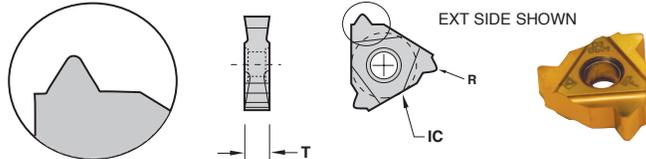
■ For holders and bars see pgs. 136-138

Description	EDP Code	TPI	TPF	R	IC	T	Connection	Coating					
								TIN Coated	AlTiN Coated	GP50	GP54	AC22	AC50
LDS 54 428 FT-CB #1	10495HC	4	2	.038	.625	.252	NC23-NC50, 2-3/8-5-1/2 IF		●	●	●	●	●
LDS 54 438 FT-CB #2	12495HC	4	3	.038	.625	.252	NC56-NC71		●	●	●	●	●
LDS 54 425 FT-CB #3	09495HC	4	2	.025	.625	.252	5-1/2 FH, 6-5/8 FH, 6-5/8 Reg.		●	●	●	●	●
LDS 54 435 FT-CB #4	11495HC	4	3	.025	.625	.252	5-1/2 Reg. 7-5/8 Reg 8-5/8 Reg.		●	●	●	●	●
LDS 54 530 FT-CB #5	13495HC	5	3	.020	.625	.252	3-1/2 FH 2-3/8 - 4-1/2 Reg.		●	●	●	●	●

## API Rotary Shoulder Connection Threading

LDS Double Sided  
Lead Follow Topping  
Internal/External

■ For holders and bars see pgs. 136-138



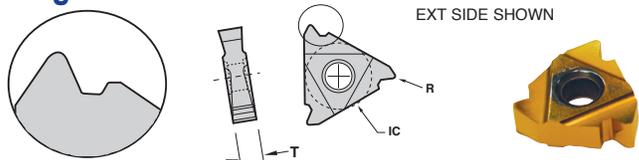
Description	EDP Code	TPI	TPF	R	IC	T	Connection	Coating					
								Uncoated	TIN Coated	AlTiN Coated	C6H	GP54	AC22
LDS 54 428 #1	10490	4	2	.038	.625	.252	NC23-NC50, 2-3/8-5-1/2 IF		●	●	●	●	●
LDS 54 438 #2	12490	4	3	.038	.625	.252	NC56-NC71		●	●	●	●	●
LDS 54 425 #3	09490	4	2	.025	.625	.252	5-1/2 FH, 6-5/8 FH, 6-5/8 Reg.		●	●	●	●	●
LDS 54 435 #4	11490	4	3	.025	.625	.252	5-1/2 Reg. 7-5/8 Reg 8-5/8 Reg.		●	●	●	●	●
LDS 54 530 #5	13490	5	3	.020	.625	.252	3-1/2 FH 2-3/8 - 4-1/2 Reg.		●	●	●	●	●
LDS 54 42F	14490	4	2	---	.625	.252	V0.065*		●	●	●	●	●
LDS 54 4PAC	15490	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 Rotary Shoulder Connection Threading

LDS Double Sided  
Follow Topping  
Internal/External

■ For holders and bars see pgs. 136-138



Description	EDP Code	TPI	TPF	R	IC	T	Connection	Coating					
								TIN Coated	AlTiN Coated	GP50	GP54	AC22	AC50
LDS 54 428 #1-FT	10495	4	2	.038	.625	.252	NC23-NC50, 2-3/8-5-1/2 IF		●	●	●	●	●
LDS 54 438 #2-FT	12495	4	3	.038	.625	.252	NC56-NC71		●	●	●	●	●
LDS 54 425 #3-FT	09495	4	2	.025	.625	.252	5-1/2 FH, 6-5/8 FH, 6-5/8 Reg.		●	●	●	●	●
LDS 54 435 #4-FT	11495	4	3	.025	.625	.252	5-1/2 Reg. 7-5/8 Reg 8-5/8 Reg.		●	●	●	●	●
LDS 54 530 #5-FT	13495	5	3	.020	.625	.252	3-1/2 FH 2-3/8 - 4-1/2 Reg.		●	●	●	●	●
LDS 54 42F-FT	11495	4	2	---	.625	.252	V0.065*		●	●	●	●	●
LDS 54 4PAC-FT	15495	4	1-1/2	---	.625	.252	American Open Hole		●	●	●	●	●

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

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.

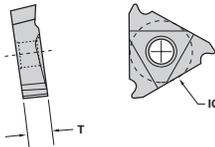
Material	GP50	GP54	AC22	AC50	AC54
Cast Iron			●	●	●
Non-Ferrous			●	●	●
Stainless/High Temp			●	●	●
Steel	▲	▲		●	●



# LAYDOWN

## API Round Threading

■ For holders and bars see pgs. 136-138



EXT SHOWN



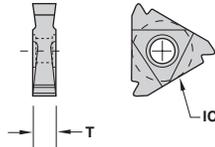
Description	EDP Code	TPI	TPF	IC	T	TIN Coated		A1TIN Coated		
						GP50	GP54	AC22	AC50	AC54
L43 8RD EXT	32154	8	3/4	.500	.189	●	●	●	●	●
L43 10RD EXT	34154	10	3/4	.500	.189	●	●	●	●	●
L53 8RD EXT	32474	8	3/4	.625	.189	●	●	●	●	●
L43 8RD INT	32158	8	3/4	.500	.189	●	●	●	●	●
L43 10RD INT	34158	10	3/4	.500	.189	●	●	●	●	●
L53 8RD INT	32478	8	3/4	.625	.189	●	●	●	●	●

## API Round Threading

### LDS Double Sided

### Internal/External

■ For holders and bars see pgs. 136-138



EXT SIDE SHOWN



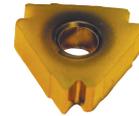
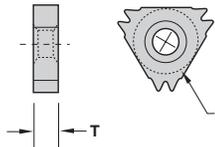
Description	EDP Code	TPI	TPF	IC	T	TIN Coated		A1TIN Coated		
						GP50	GP54	AC22	AC50	AC54
LDS 43 8RD	32180	8	3/4	.500	.189	●	●	●	●	●
LDS 43 10RD	34180	10	3/4	.500	.189	●	●	●	●	●
LDS 54 8RD	32490	8	3/4	.625	.252	●	●	●	●	●
LDS 54 10RD	34490	10	3/4	.625	.252	●	●	●	●	●

## API Round Threading

### Double Sided

### Internal/External

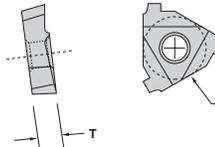
■ For holders and bars see pgs. 136-138



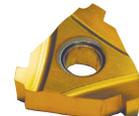
Description	EDP Code	TPI	TPF	IC	T	C6H	Uncoated		TIN Coated		A1TIN Coated	
							GP50	GP54	AC50	AC54		
TNFA 43 8RD	32N70	8	3/4	.500	.187	●	●	●	●	●	●	

## API VAM Threading

■ For holders and bars see pgs. 136-138



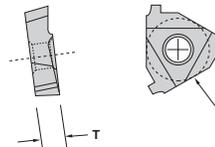
EXT SHOWN  
INT OPPOSITE



Description	EDP Code	TPI	TPF	IC	T	C6H	Uncoated		TIN Coated		A1TIN Coated	
							GP50	GP54	AC50	AC54		
L43 5VAM EXT	23154	5	3/4	.500	.189	●	●	●	●	●	●	
L43 6VAM EXT	24154	6	3/4	.500	.189	●	●	●	●	●	●	
L43 8VAM EXT	25154	8	3/4	.500	.189	●	●	●	●	●	●	
L43 5VAM INT	23158	5	3/4	.500	.189	●	●	●	●	●	●	
L43 6VAM INT	24158	6	3/4	.500	.189	●	●	●	●	●	●	
L43 8VAM INT	25158	8	3/4	.500	.189	●	●	●	●	●	●	

## API X-Line Threading

■ For holders and bars see pgs. 136-138



EXT SHOWN  
INT OPPOSITE



Description	EDP Code	TPI	TPF	IC	T	Connection	C6H	Uncoated		TIN Coated		A1TIN Coated	
								GP50	GP54	AC50	AC54		
L43 6XL15 EXT	19154	6	1-1/2	.500	.189	5 - 7-5/8	●	●	●	●	●	●	
L43 6XL75 EXT	20154	6	3/4	.500	.189	-	●	●	●	●	●	●	
L43 5XL12 EXT	18154	5	1-1/4	.500	.189	8-5/8 - 10-3/4	●	●	●	●	●	●	
L53 6XL15 EXT	19474	6	1-1/2	.625	.252	5 - 7-5/8	●	●	●	●	●	●	
L53 6XL75 EXT	20474	6	3/4	.625	.252	-	●	●	●	●	●	●	
L53 5XL12 EXT	18474	5	1-1/4	.625	.252	8-5/8 - 10-3/4	●	●	●	●	●	●	
L43 6XL15 INT	19158	6	1-1/2	.500	.189	5 - 7-5/8	●	●	●	●	●	●	
L43 6XL75 INT	20158	6	3/4	.500	.189	-	●	●	●	●	●	●	
L43 5XL12 INT	18158	5	1-1/4	.500	.189	8-5/8 - 10-3/4	●	●	●	●	●	●	
L53 6XL15 INT	19478	6	1-1/2	.625	.252	5 - 7-5/8	●	●	●	●	●	●	
L53 6XL75 INT	20478	6	3/4	.625	.252	-	●	●	●	●	●	●	
L53 5XL12 INT	18478	5	1-1/4	.625	.252	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.

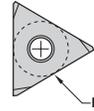
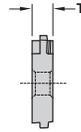
● High performance choice in optimal conditions.  
▲ Recommended grade under general conditions.

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

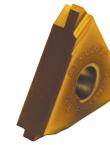
# ON-EDGE

## API Buttress Threading

### Straight Hole



EXT SHOWN  
INT OPPOSITE



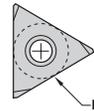
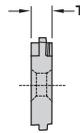
■ For holders and bars see pgs. 156-158

Description	EDP Code	TPI	TPF	IC	T	Connection	Uncoated		TIN Coated		A/TIN Coated	
							C3	C6H	GP3	GP50	AC3	AC50
TNMA 43 8B75 EXT	21394	8	3/4	.500	.189	U.S. Improved Buttress						
TNMA 44 5B75 EXT	16434	5	3/4	.500	.252	4-1/2 - 13-3/8						
TNMA 54 5B1 EXT -FC*	17514F	5	1	.625	.252	16 and larger						
TNMA 54 5B75 EXT-FC	16514F	5	3/4	.625	.252	4-1/2 - 13-3/8						
TNMA 43 8B75 INT	21398	8	3/4	.500	.189	U.S. Improved Buttress						
TNMA 44 5B75 INT	16438	5	3/4	.500	.252	4-1/2 - 13-3/8						
TNMA 54 5B1 INT-FC	17518F	5	1	.625	.252	16 and larger						
TNMA 54 5B75 INT-FC	16518F	5	3/4	.625	.252	4-1/2 - 13-3/8						

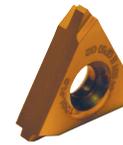
\*FC indicates 5° flank clearance

## API Buttress Threading

### Countersink Hole



EXT SHOWN  
INT OPPOSITE



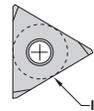
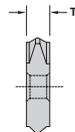
■ For holders and bars see pgs. 156-158

Description	EDP Code	TPI	TPF	IC	T	Connection	Uncoated		TIN Coated		A/TIN Coated	
							C3	C6H	GP3	GP50	AC3	AC50
TNMC 43 8B75 EXT	21414	8	3/4	.500	.189	U.S. Improved Buttress						
TNMC 54 5B75 EXT-FC*	16534F	5	3/4	.625	.252	4-1/2 - 13-3/8						
TNMC 54 5B1 EXT-FC	17534F	5	1	.625	.252	16 and larger						
TNMC 43 8B75 INT	21418	8	3/4	.500	.189	U.S. Improved Buttress						
TNMC 54 5B75 INT-FC	16538F	5	3/4	.625	.252	4-1/2 - 13-3/8						
TNMC 54 5B1 INT-FC	17538F	5	1	.625	.252	16 and larger						

\*FC indicates 5° flank clearance

## API Hughes H90 Threading

### Straight Hole



EXT SHOWN  
INT OPPOSITE

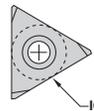
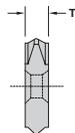


■ For holders and bars see pgs. 156-158

Description	EDP Code	TPI	TPF	IC	T	Connection	Uncoated		TIN Coated		A/TIN Coated	
							C3	C6H	GP3	GP50	AC3	AC50
TNMA 55 H902 EXT	28554	3-1/2	2	.625	.314	3-1/2 - 6-5/8 H90						
TNMA 55 H903 EXT	29554	3-1/2	3	.625	.314	7 - 8-5/8 H90						
TNMA 56 H90S EXT	27Q14	3	1-1/4	.625	.377	2-3/8 - 3-1/2 Slimline						
TNMA 55 H902 INT	28558	3-1/2	2	.625	.314	3-1/2 - 6-5/8 H90						
TNMA 55 H903 INT	29558	3-1/2	3	.625	.314	7 - 8-5/8 H90						
TNMA 56 H90S INT	27Q18	3	1-1/4	.625	.377	2-3/8 - 3-1/2 Slimline						

## API Hughes H90 Threading

### Countersink Hole



EXT SHOWN  
INT OPPOSITE



■ For holders and bars see pgs. 156-158

Description	EDP Code	TPI	TPF	IC	T	Connection	Uncoated		TIN Coated		A/TIN Coated	
							C3	C6H	GP3	GP50	AC3	AC50
TNMC 55 H902 EXT	28564	3-1/2	2	.625	.314	3-1/2 - 6-5/8 H90						
TNMC 55 H903 EXT	29564	3-1/2	3	.625	.314	7 - 8-5/8 H90						
TNMC 56 H90S EXT	27Q34	3	1-1/4	.625	.377	2-3/8 - 3-1/2 Slimline						
TNMC 55 H902 INT	28568	3-1/2	2	.625	.314	3-1/2 - 6-5/8 H90						
TNMC 55 H903 INT	29568	3-1/2	3	.625	.314	7 - 8-5/8 H90						
TNMC 56 H90S INT	27Q38	3	1-1/4	.625	.377	2-3/8 - 3-1/2 Slimline						

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

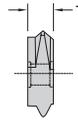


# ON-EDGE

## API Rotary Shoulder Connection Threading

### Straight Hole

■ For holders and bars see pgs. 156-158



EXT SHOWN  
INT OPPOSITE



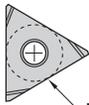
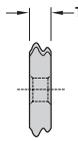
Description	EDP Code	TPI	TPF	IC	T	Connection	Coating					
							C3	C6H	GP3	GP50	AC3	AC50
TNMA 54 530 EXT	13514	5	3	.625	.252	3-1/2 FH 2-3/8 - 4-1/2 Reg.				●		●
TNMA 55 425 EXT	09554	4	2	.625	.314	5-1/2 FH 6-5/8 FH 6-5/8 Reg.				●		●
TNMA 55 428 EXT	10554	4	2	.625	.314	NC 23-NC50 2-3/8 - 5-1/2 IF				●		●
TNMA 55 42F EXT	14554	4	2	.625	.314	V0.065*				●		●
TNMA 55 435 EXT	11554	4	3	.625	.314	5-1/2 Reg. 7-5/8 Reg 8-5/8 Reg.				●		●
TNMA 55 438 EXT	12554	4	3	.625	.314	NC56-NC71				●		●
TNMA 55 530 EXT	13554	5	3	.625	.314	3-1/2 FH 2-3/8 - 4-1/2 Reg.				●		●
TNMA 55 4PAC EXT	15554	4	1-1/2	.625	.314	American Open Hole				●		●
TNMA 54 530 INT	13518	5	3	.625	.252	3-1/2 FH 2-3/8 - 4-1/2 Reg.				●		●
TNMA 55 425 INT	09558	4	2	.625	.314	5-1/2 FH 6-5/8 FH 6-5/8 Reg.				●		●
TNMA 55 428 INT	10558	4	2	.625	.314	NC 23-NC50 2-3/8 - 5-1/2 IF				●		●
TNMA 55 42F INT	14558	4	2	.625	.314	V0.065*				●		●
TNMA 55 435 INT	11558	4	3	.625	.314	5-1/2 Reg. 7-5/8 Reg 8-5/8 Reg.				●		●
TNMA 55 438 INT	12558	4	3	.625	.314	NC56-NC71				●		●
TNMA 55 530 INT	13558	5	3	.625	.314	3-1/2 FH 2-3/8 - 4-1/2 Reg.				●		●
TNMA 55 4PAC INT	15558	4	1-1/2	.625	.314	American Open Hole				●		●

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

## API Round Threading

### Straight Hole

■ For holders and bars see pgs. 156-158



INT SHOWN  
EXT OPPOSITE

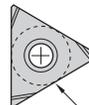
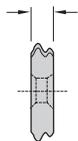


Description	EDP Code	TPI	TPF	IC	T	Coating					
						C3	GP3	GP50	AC22	AC3	AC50
TNMA 43 8RD EXT	32394	8	3/4	.500	.189				●		●
TNMA 43 10RD EXT	34394	10	3/4	.500	.189				●		●
TNMA 54 8RD EXT	32514	8	3/4	.625	.252				●		●
TNMA 43 8RD INT	32398	8	3/4	.500	.189				●		●
TNMA 43 10RD INT	34398	10	3/4	.500	.189				●		●
TNMA 54 8RD INT	32518	8	3/4	.625	.252				●		●

## API Round Threading

### Countersink Hole

■ For holders and bars see pgs. 156-158



INT SHOWN  
EXT OPPOSITE

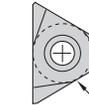
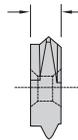


Description	EDP Code	TPI	TPF	IC	T	Coating					
						C3	GP3	GP50	AC22	AC3	AC50
TNMC 43 8RD EXT	32414	8	3/4	.500	.189				●		●
TNMC 43 10RD EXT	34414	10	3/4	.500	.189				●		●
TNMC 54 8RD EXT	32534	8	3/4	.625	.252				●		●
TNMC 43 8RD INT	32418	8	3/4	.500	.189				●		●
TNMC 43 10RD INT	34418	10	3/4	.500	.189				●		●
TNMC 54 8RD INT	32538	8	3/4	.625	.252				●		●

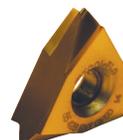
## API Rotary Shoulder Connection Threading

### Countersink Hole

■ For holders and bars see pgs. 156-158



EXT SHOWN  
INT OPPOSITE



Description	EDP Code	TPI	TPF	IC	T	Connection	Coating					
							C3	C6H	GP3	GP50	AC3	AC50
TNMC 54 530 EXT	13534	5	3	.625	.252	3-1/2 FH 2-3/8 - 4-1/2 Reg.				●		●
TNMC 55 425 EXT	09564	4	2	.625	.312	5-1/2 FH 6-5/8 FH 6-5/8 Reg.				●		●
TNMC 55 428 EXT	10564	4	2	.625	.312	NC 23-NC50 2-3/8 - 5-1/2 IF				●		●
TNMC 55 42F EXT*	14564	4	2	.625	.312	V0.065*				●		●
TNMC 55 435 EXT	11564	4	3	.625	.312	5-1/2 Reg. 7-5/8 Reg 8-5/8 Reg.				●		●
TNMC 55 438 EXT	12564	4	3	.625	.312	NC56-NC71				●		●
TNMC 55 530 EXT	13564	5	3	.625	.312	3-1/2 FH 2-3/8 - 4-1/2 Reg.				●		●
TNMC 55 4PAC EXT	15564	4	1-1/2	.625	.312	American Open Hole				●		●
TNMC 54 530 INT	13538	5	3	.625	.252	3-1/2 FH 2-3/8 - 4-1/2 Reg.				●		●
TNMC 55 425 INT	09568	4	2	.625	.312	5-1/2 FH 6-5/8 FH 6-5/8 Reg.				●		●
TNMC 55 428 INT	10568	4	2	.625	.312	NC 23-NC50 2-3/8 - 5-1/2 IF				●		●
TNMC 55 42F INT*	14568	4	2	.625	.312	V0.065*				●		●
TNMC 55 435 INT	11568	4	3	.625	.312	5-1/2 Reg. 7-5/8 Reg 8-5/8 Reg.				●		●
TNMC 55 438 INT	12568	4	3	.625	.312	NC56-NC71				●		●
TNMC 55 530 INT	13568	5	3	.625	.312	3-1/2 FH 2-3/8 - 4-1/2 Reg.				●		●
TNMC 55 4PAC INT	15568	4	1-1/2	.625	.312	American Open Hole				●		●

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

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.

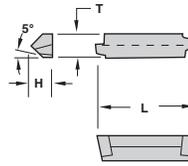
Material	Cast Iron	Non-Ferrous	Stainless/High Temp	Steel
Coating				●

# VEE-BOTTOM

## API Buttress Threading



■ For holders and bars see pgs. 215-218



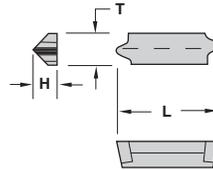
EXT SHOWN  
INT OPPOSITE

Description	EDP Code	TPI	TPF	T	L	H	Connection	Coating						
								C3	C6H	GP3	GP50	AC3	AC50	
V84 5B75 EXT-FC*	16614F	5	3/4	.250	1.000	.250	4-1/2 - 13-3/8				●			
V84 5B1 EXT-FC	17614F	5	1	.250	1.000	.250	16 AND LARGER				●			
V84 8B75 EXT-FC	21614F	8	3/4	.250	1.000	.250	U.S. IMPROVED BUTTRESS				●			
V84 5B75 INT-FC	16618F	5	3/4	.250	1.000	.250	4-1/2 - 13-3/8				●			
V84 5B1 INT-FC	17618F	5	1	.250	1.000	.250	16 AND LARGER				●			
V84 8B75 INT-FC	21618F	8	3/4	.250	1.000	.250	U.S. IMPROVED BUTTRESS				●			

\*FC indicates 5° flank clearance

## API Rotary Shoulder Connection Threading

■ For holders and bars see pgs. 215-218



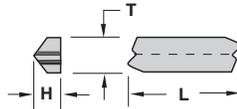
EXT SHOWN  
INT OPPOSITE

Description	EDP Code	TPI	TPF	T	L	H	Connection	Coating					
								C3	C6H	GP3	GP50	AC3	AC50
V85 425 EXT	09634	4	2	.312	1.000	.250	5-1/2 - 6-5/8 FH, 6-5/8 REG				●	●	●
V85 428 EXT	10634	4	2	.312	1.000	.250	NC23 - 50, 2-3/8 - 5-1/2 IF				●	●	●
V85 42F EXT*	14634	4	2	.312	1.000	.250	VO.065*				●	●	●
V85 435 EXT	11634	4	3	.312	1.000	.250	5-1/2 REG, 7-5/8 REG, 8-5/8 REG				●	●	●
V85 438 EXT	12634	4	3	.312	1.000	.250	NC56 - NC71				●	●	●
V85 530 EXT	13634	5	3	.312	1.000	.250	3-1/2FH, 2-3/8 - 4-1/2 REG				●	●	●
V85 4PAC EXT	15634	4	1-1/2	.312	1.000	.250	American Open Hole				●	●	●
V85 425 INT	09638	4	2	.312	1.000	.250	5-1/2 - 6-5/8 FH, 6-5/8 REG				●	●	●
V85 428 INT	10638	4	2	.312	1.000	.250	NC23 - 50, 2-3/8 - 5-1/2 IF				●	●	●
V85 42F INT*	14638	4	2	.312	1.000	.250	VO.065*				●	●	●
V85 435 INT	11638	4	3	.312	1.000	.250	5-1/2 REG, 7-5/8 REG, 8-5/8 REG				●	●	●
V85 438 INT	12638	4	3	.312	1.000	.250	NC56 - NC71				●	●	●
V85 530 INT	13638	5	3	.312	1.000	.250	3-1/2FH, 2-3/8 - 4-1/2 REG				●	●	●
V85 4PAC INT	15638	4	1-1/2	.312	1.000	.250	American Open Hole				●	●	●

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

## API Round Threading

■ For holders and bars see pgs. 215-218

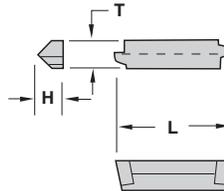


EXT SHOWN  
INT OPPOSITE

Description	EDP Code	TPI	TPF	T	L	H	Coating							
							C3	C6H	GP3	GP50	AC3	AC50		
V84 10RD EXT	34614		10		3/4	.250	1.000	.250				●	●	●
V84 10RD INT	34618		10		3/4	.250	1.000	.250				●	●	●
V84 8RD EXT	32614		8		3/4	.250	1.000	.250				●	●	●
V84 8RD INT	32618		8		3/4	.250	1.000	.250				●	●	●

## API VAM Threading

■ For holders and bars see pgs. 215-218



EXT SHOWN  
INT OPPOSITE

Description	EDP Code	TPI	TPF	T	L	H	Coating							
							C3	C6H	GP3	GP50	AC3	AC50		
V84 5 VAM EXT	23614		5		3/4	.250	1.000	.250				●	●	●
V84 5 VAM INT	23618		5		3/4	.250	1.000	.250				●	●	●
V84 6 VAM EXT	24614		6		3/4	.250	1.000	.250				●	●	●
V84 6 VAM INT	24618		6		3/4	.250	1.000	.250				●	●	●
V84 8 VAM EXT	25614		8		3/4	.250	1.000	.250				●	●	●
V84 8 VAM INT	25618		8		3/4	.250	1.000	.250				●	●	●

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.

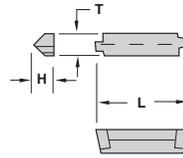
- High performance choice in optimal conditions.
- ▲ Recommended grade under general conditions.

Material	C3	C6H	GP3	GP50	AC3	AC50
Cast Iron						●
Non-Ferrous						●
Stainless/High Temp						●
Steel				▲		●



# VEE-BOTTOM API X-LINE THREADING

■ For holders and bars see pgs. 215-218



EXT SHOWN  
INT OPPOSITE

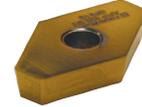
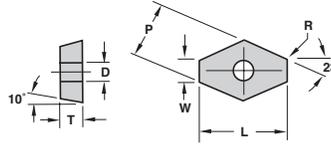


Description	EDP Code	TPI	TPF	T	L	H	Connection	C3	CGH	GP3	GP50	AC3	AC50
V84 5XL12 EXT	18614	5	1-1/4	.250	1.000	.250	8-5/8 - 10-3/4				●		●
V84 5XL12 INT	18618	5	1-1/4	.250	1.000	.250	8-5/8 - 10-3/4				●		●
V84 6XL15 EXT	19614	6	1-1/2	.250	1.000	.250	5 - 7-5/8				●		●
V84 6XL15 INT	19618	6	1-1/2	.250	1.000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

# API 46° RING GROOVERS

APIP

■ For holders see pg. 22



Description	EDP Code	R	W	P	T	L	D	Style	Coating									
									CGH	GP25	GP6	AC25	AC6	Uncoated	TIN Coated	AITIN Coated		
APIP 086-3	754000	.015	.079	.372	.187	3/4	-	Clamp										
APIP 131-3	754005	.031	.125	.407	.187	3/4	-	Clamp	●									
APIP (PGN-1A)	754003	.031	.131	.414	.187	3/4	-	Clamp	●									
APIP 162-3 (PGN-6A)	75403	.031	.156	.437	.187	3/4	-	Clamp	●									
APIP (PGN-7A)	75887	.031	.203	.484	.187	3/4	-	Clamp	●									
APIP 203-3 (PGN-2A)	75413	.031	.197	.574	.187	1"	-	Clamp	●									
APIP 203-3H	75413H	.031	.197	.574	.187	1"	.203	Lock Pin										
APIP 213-3	75423	.062	.206	.574	.187	1"	.203	Lock Pin	●									
APIP 265-3	75433	.031	.260	.633	.187	1"	.250	Lock Pin										
APIP 281-3	75443	.031	.277	.645	.187	1"	.250	Lock Pin										
APIP 300-3	75463	.031	.295	.662	.187	1"	.250	Lock Pin										
APIP 329-3	75473	.031	.324	.683	.187	1"	.250	Lock Pin										
APIP 355-3	75476	.031	.350	.712	.187	1"	.250	Lock Pin										
APIP 420-3	75490	.031	.415	.772	.187	1"	.250	Lock Pin	●									

## HEAVY DUTY

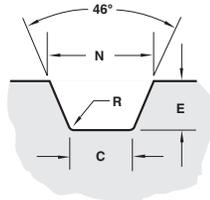
APIP 284-3	75753	.062	.278	.713	.187	1-3/16	.250	Lock Pin										
APIP 162-4NL	75404NL	.031	.156	.733	.250	1-1/2	.250	Lock Pin	●									
APIP 162-4 (Counter sink hole)	75404	.031	.156	.733	.250	1-1/2	.250	Screw	●									
APIP 203-4NL	75414NL	.031	.197	.773	.250	1-1/2	.250	Lock Pin	●									
APIP 203-4 (Counter sink hole)	75414	.031	.197	.773	.250	1-1/2	.250	Screw	●									
APIP 213-4 (Counter sink hole)	75424	.062	.206	.773	.250	1-1/2	.250	Screw	●									
APIP 265-4 (Counter sink hole)	75436	.031	.260	.773	.250	1-3/8	.250	Screw										
APIP 281-4 (Counter sink hole)	75444	.031	.277	.773	.250	1-5/16	.250	Screw										
APIP 300-4 (Counter sink hole)	75464	.031	.295	.773	.250	1-9/32	.250	Screw										
APIP 329-4	75474	.031	.324	.773	.250	1-7/32	.250	Lock Pin										
APIP 355-4	75484	.031	.350	.773	.250	1-5/32	.250	Lock Pin										
APIP 420-4	75492	.031	.415	.773	.250	1"	.250	Lock Pin	●									

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

Material	CGH	GP25	GP6	AC25	AC6
Cast Iron					
Non-Ferrous					
Stainless/High Temp					
Steel			▲		●

# RING GROOVE SPECIFICATIONS

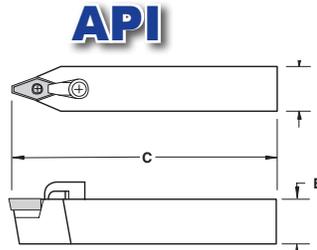


Groove Description	C	E	N	R	Insert Description
BX-150	.260	.220	.450	.031	APIP 265-3 or APIP 265-4
BX-151	.277	.220	.466	.031	APIP 281-3 or APIP 281-4
BX-152	.295	.230	.498	.031	APIP 300-3 or APIP 300-4
BX-153	.324	.270	.554	.031	APIP 329-3 or APIP 329-4
BX-154	.350	.300	.606	.031	APIP 355-3 or APIP 355-4
BX-155	.415	.330	.698	.031	APIP 420-3 or APIP 420-4
R19, 20, 22, 25, 29, 33, 36, 40, 43, 48, 52, 56, 59, 64, 68, 72, 76 & RX-20	.125	.250	.344	.031	APIP 131-3
R21, 23, 24, 26, 27, 30, 31, 34, 35, 37, 39, 41, 44, 45, 49, 53, 57, 61, 65, 69, 82, 84, 92, 99 & RX-215	.197	.310	.469	.031	APIP 203-3, 203-3H, 203-4
R28, 32, 46, 73 & 85	.206	.380	.531	.062	APIP 213-4
R38, 50, 54, 62, 66, 77, 86 & 87	.278	.440	.656	.062	APIP 213-4, 284-3
R42, 47, 70, 74, 83, 88, 89 & 93	.350	.500	.781	.062	APIP 213-4
R51, 58 & 90	.422	.560	.906	.062	APIP 213-4
RX-201 & 205	.079	.160	.219	.015	APIP 086-3
RX-210	.156	.250	.375	.031	APIP 162-3, PGN-1A

# RING GROOVING HOLDERS

## FGNR

Most holders and bars available with coolant port  
(ie: Add CP to end of description)



RH SHOWN

### PARTS

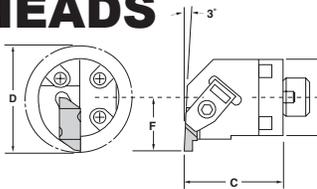
Description	EDP Code	Insert	A	B	C	Seat/Insert		Clamp	Clamp Screw
						Seat	Screw		
FGNR 16-0863	92801600	APIP 086-3	1	1	6	-	-	TC-311	STC-8
FGNR-16-1A/1313	92801604	PGN 1A/131/3	1	1	6	FGS1A	SF10	TC-311	XNS-510
FGNR-16-2A*	92801612	PGN 2A/213-3	1	1	6	FGS2ANL	S46	TC-311	STC-4
FGNR-20-2A*	92802012	PGN 2A/213-3	1-1/4	1-1/4	7	FGS2ANL	S46	TC-311	STC-4
FGNR 16-6A	92801606	PGN 6A	1	1	6	-	-	CL-30	STC-4
FGNR-16-7A	92801615	PGN 7A	1	1	6	-	-	CL-30	STC-4
FGNR-20-1624	92802013	APIP 162-4	1-1/4	1-1/4	7	-	SD-3	CL-30	XNS-510
FGNR-24-1624	92802413	APIP 162-4	1-1/2	1-1/2	7	-	SD-3	CL-30	XNS-510
FGNR-20-2034	92802014	APIP 203-4	1-1/4	1-1/4	7	-	SD-3	CL-30	XNS-510
FGNR-24-2034	92802414	APIP 203-4	1-1/2	1-1/2	7	-	SD-3	CL-30	XNS-510
FGNR-20-2134	92802015	APIP 213-4	1-1/4	1-1/4	7	-	SD-3	CL-30	XNS-510
FGNR-20-2654	92802016	APIP 265-4	1-1/4	1-1/4	7	-	SD-3	CL-30	STC-4
FGNR-20-2814	92802811	APIP 281-4	1-1/4	1-1/4	7	-	SD-3	CL-30	STC-4
FGNR-20-3004	92802034	APIP 300-4	1-1/4	1-1/4	7	-	SD-3	CL-30	STC-4
FGNR-20-4203	92802019	APIP 420-3	1-1/4	1-1/4	7	-	NL-56	CL-30	STC-4

\* Holder can be used with APIP 203-3H (w/whole) insert. Order NL-46 lock pin to replace the S46 seat screw.

# INTERCHANGEABLE HEADS

## FLO-LOCK

### H-FLEL/R\*



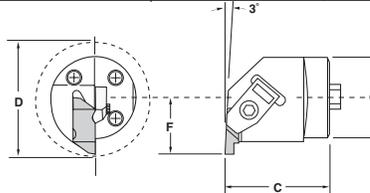
RH SHOWN

### PARTS

Description	EDP Code	Insert	d	C	F	Min. Bore (D)	PARTS	
							Clamp	Clamp Screw
H20-FLER3W	93502016W	FL-3L	1.250	1.625	0.875	1.750	TF-73	S-412
H24-FLER3W	93502416W	FL-3L	1.500	1.625	1.000	2.000	TF-73	S-412
H28-FLER3W	93502816E	FL-3L	1.750	1.625	1.125	2.250	TF-73	S-412
H32-FLER3W	93503216W	FL-3L	2.000	1.625	1.250	2.500	TF-73	S-412
H40-FLER3W	93504016W	FL-3L	2.500	1.625	1.500	3.000	TF-73	S-412
H28-FLER4W	93502820W	FL-4L	1.750	1.625	1.250	2.250	TF-73	S-412
H32-FLER4W	93503220W	FL-4L	2.000	1.625	1.375	2.500	TF-73	S-412
H36-FLER4W	93503620W	FL-4L	2.250	1.625	1.500	2.500	TF-73	S-412
H40-FLER4W	93504020W	FL-4L	2.500	1.625	1.625	3.000	TF-73	S-412
H28-FLER6W	93502828W	FL-6L	1.750	1.625	1.250	2.500	TF-121	S-412
H32-FLER6W	93503228W	FL-6L	2.000	1.625	1.375	2.750	TF-121	S-412
H40-FLER6W	93504028W	FL-6L	2.500	1.625	1.625	3.250	TF-121	S-412

\*Left hand quoted on request.

### HS-FLEL/R\*



RH SHOWN

### PARTS

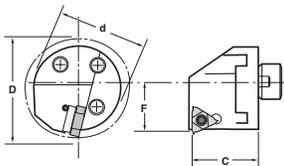
Description	EDP Code	Insert	d	C	F	Min. Bore (D)	PARTS	
							Clamp	Clamp Screw
HS32-FLER3W	9IHS65032M16	FL-3L	1.25	1.34	0.866	1.730	TF-73	S-412
HS40-FLER3W	9IHS65040M16	FL-3L	1.57	1.58	1.102	2.210	TF-73	S-412
HS50-FLER3W	9IHS65050M16	FL-3L	1.97	1.65	1.380	2.760	TF-73	S-412
HS60-FLER3W	9IHS65060M16	FL-3L	2.36	1.75	1.740	3.480	TF-73	S-412
HS50-FLER4W	9IHS65050M20	FL-4L	1.97	1.65	1.380	2.760	TF-73	S-412
HS60-FLER4W	9IHS65060M20	FL-4L	2.36	1.75	1.740	3.480	TF-73	S-412

\*Left hand quoted on request.

# LAYDOWN

### H-LNFR/L\*

Most heads available with coolant port  
(ie: Add CP to end of description)



RH SHOWN

### PARTS

Description	EDP Code	Insert	d	C	F	Min. Bore (D)	PARTS			Lock Pin
							Seat	Clamp	Clamp Screw	
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-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
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

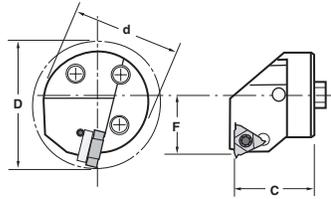
\*Non API heads only for 8RD, 10RD, 5B75, 5B1 threads. API heads required for rotary shoulder connections threads.



# INTERCHANGEABLE HEADS

## HS-LNFR/L\*

Most heads available with coolant port  
(ie: Add CP to end of description)



RH SHOWN

### PARTS

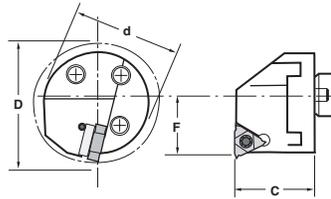
Description	EDP Code	Insert	d	C	F	Min. Bore (D)	PARTS		
							Clamp	Clamp Screw	Lock Pin
HS32-LNFR-43	9IHS42032M56	L43	1.25	1.26	0.866	1.570	TC-190	STC-9	NL-44
HS40-LNFR-43	9IHS42040M56	L43	1.57	1.26	1.063	1.970	TC-190	STC-9	NL-44
HS50-LNFR-43	9IHS42050M56	L43	1.97	1.57	1.378	2.480	TC-190	STC-9	NL-44
HS40-LNFR-53API	9IHS4440M62	L53	1.57	1.26	1.063	1.970	TC-250	STC-11	NL-56
HS50-LNFR-53API	9IHS4450M62	L53	1.97	1.57	1.378	2.480	TC-250	STC-11	NL-56
HS40-LNFR-54API	9IHS4440M64	LDS 54	1.57	1.26	1.063	1.970	TC-250	STC-11	H410-1
HS50-LNFR-54API	9IHS4450M64	LDS 54	1.97	1.57	1.378	2.480	TC-250	STC-11	NL-56

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

# LAYDOWN

## H-AVR/L\*

Most heads available with coolant port  
(ie: Add CP to end of description)



RH SHOWN

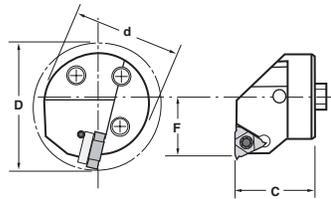
### PARTS

Description	EDP Code	Insert	D	C	F	Min. Bore	PARTS		
							Insert Screw	Seat Screw	Seat
H16-AVR-3R	9IH18064361	16NR	1.000	1.625	0.650	1.200	SA-3	SY-3	Y13
H20-AVR-3R	9IH18068361	16NR	1.250	1.625	0.765	1.450	SA-3	SY-3	Y13
H24-AVR-3R	9IH18072361	16NR	1.500	1.625	0.890	1.760	SA-3	SY-3	Y13
H32-AVR-3R	9IH18080361	16NR	2.000	1.625	1.281	2.400	SA-3	SY-3	Y13
H24-AVR-4R	9IH18072401	22NR	1.500	1.625	0.978	1.760	SA-4	SY-4	Y14
H32-AVR-4R	9IH18080401	22NR	2.000	1.625	1.281	2.400	SA-4	SY-4	Y14

\*Left hand quoted on request.

# HS-AVR/L\*

Most heads available with coolant port  
(ie: Add CP to end of description)



RH SHOWN

### PARTS

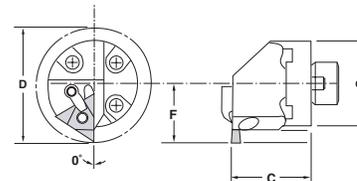
Description	EDP Code	Insert	D	C	F	Min. Bore	PARTS		
							Insert Screw	Seat Screw	Seat
HS25-AVR-3R	9IHS18025M361	16NR	0.98	0.98	0.669	1.260	SA-3	SY-3	Y13
HS32-AVR-3R	9IHS18032M361	16NR	1.26	1.26	0.866	1.570	SA-3	SY-3	Y13
HS40-AVR-3R	9IHS18040M361	16NR	1.57	1.26	1.063	1.970	SA-3	SY-3	Y13
HS50-AVR-3R	9IHS18050M361	16NR	1.97	1.57	1.378	2.480	SA-3	SY-3	Y13
HS40-AVR-4R	9IHS18040M401	22NR	1.57	1.26	1.063	1.970	SA-4	SY-4	Y14
HS50-AVR-4R	9IHS18050M401	22NR	1.97	1.57	1.378	2.480	SA-4	SY-4	Y14

\*Left hand quoted on request.

# ON-EDGE

## H-MTHOR/L\*

Most heads available with coolant port  
(ie: Add CP to end of description)



RH SHOWN

### PARTS

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

\*Left hand quoted on request.

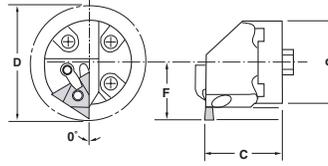


# INTERCHANGEABLE HEADS

## ON-EDGE

### HS-MTHOR/L\*

Most heads available with coolant port  
(ie: Add CP to end of description)



RH SHOWN

#### PARTS

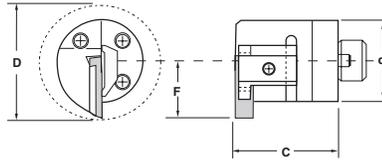
Description	EDP Code	Insert	D	C	F	Min. Bore	PARTS		
							Clamp	Clamp Screw	Lock Pin
HS25-MTHOR-3	9IHS73025M48	TNMA/C 32	0.98	0.98	0.678	1.690	TC-190	STC-5	NL-33
HS32-MTHOR-3	9IHS73032M48	TNMA/C 32	1.26	1.26	0.800	1.788	TC-190	STC-5	NL-33
HS40-MTHOR-3	9IHS73040M48	TNMA/C 32	1.57	1.26	0.933	1.875	TC-190	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-190	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.

# VEE BOTTOM

## H-CDHOR/L\*

Most heads available with coolant port  
(ie: Add CP to end of description)



RH SHOWN

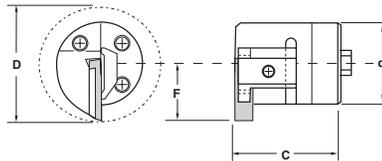
#### PARTS

Description	EDP Code	Insert	d	C	F	Min. Bore (D)	PARTS	
							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.

## HS-CDHOR/L\*

Most heads available with coolant port  
(ie: Add CP to end of description)



RH SHOWN

#### PARTS

Description	EDP Code	Insert	d	C	F	Min. Bore (D)	PARTS	
							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.

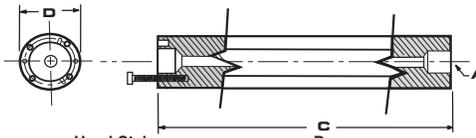


API

API

**S-4400W**

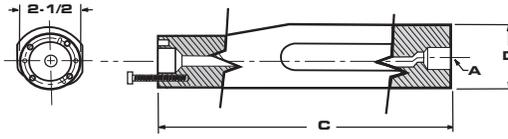
Steel Shank with Through Coolant



Description	EDP Code	Head Style	D	C	A	Screw (4 req/d)
S-4416W	9IBS4416W	H16-	1.000	9.000	1/4 - 18NPT	SS61
S-4420W	9IBS4420W	H20-	1.250	9.000	3/8 - 18NPT	SS81
S-4424W	9IBS4424W	H24-	1.500	10.000	3/8 - 18NPT	SS85
S-4428W	9IBS4428W	H28-	1.750	12.000	3/8 - 18NPT	SS100
S-4432W	9IBS4432W	H32-	2.000	13.000	3/8 - 18NPT	SS100
S-4436W	9IBS4436W	H36-	2.250	15.000	3/8 - 18NPT	SS100
S-4440W	9IBS4440W	H40-	2.500	17.000	3/8 - 18NPT	SS83

**S-4400W48**

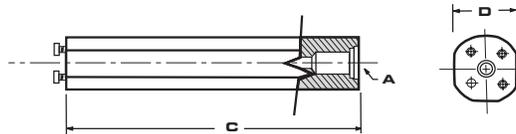
Steel Shank with Through Coolant



Description	EDP Code	Head Style	D	C	A	Screw (4 req/d)
S-4440W48	9IBS4440W48	H40-	3.000	18.000	3/8 - 18NPT	SS89

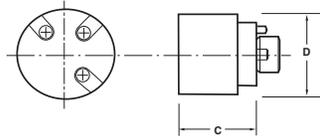
**S-570**

Steel Shank with Through Coolant



Description	EDP Code	Head Style	D	C	A	Screw (4 req/d)
S-570-10-16	9IBS5701016	HS16-	0.625	4.210	1/8 - 27NPT	SS62
S-570-12-20	9IBS5701220	HS20-	0.750	5.200	1/4 - 18NPT	SS63
S-570-16-25	9IBS5701625	HS25-	1.000	7.200	1/4 - 18NPT	SS64
S-570-20-32	9IBS5702032	HS32-	1.250	8.740	3/8 - 18NPT	SS81
S-570-24-40	9IBS5702440	HS40-	1.500	10.750	1/2 - 14NPT	SS100
S-570-32-50	9IBS5703250	HS50-	2.000	14.410	1/2 - 14NPT	SS94
S-570-40-60	9IBS5704060	HS60-	2.500	18.430	1/2 - 14NPT	SS95

**H/HS-BLANKS**



Description	EDP Code	D	C
H16-BLANK RH/LH*	9IH16BLKRH/LH	1.500	1.630
H20-BLANK RH/LH*	9IH20BLKRH/LH	1.625	1.630
H24-BLANK RH/LH*	9IH24BLKRH/LH	2.000	1.630
H28-BLANK RH/LH*	9IH28BLKRH/LH	2.000	1.630
H32-BLANK RH/LH*	9IH32BLKRH/LH	2.750	1.630
H40-BLANK RH/LH*	9IH40BLKRH/LH	2.750	1.900
HS25-BLANK RH/LH*	9IHS25BLKRH/LH	1.340	1.500
HS32-BLANK RH/LH*	9IHS32BLKRH/LH	1.740	1.665
HS40-BLANK RH/LH*	9IHS40BLKRH/LH	2.100	1.675
HS50-BLANK RH/LH*	9IHS50BLKRH/LH	2.708	1.650
HS60-BLANK RH/LH*	9IHS60BLKRH/LH	3.480	1.800

\*Specify right or left hand when ordering.

**CROSSOVER CHART**

INTERCHANGEABLE HEAD

TOOL-FLO DESCRIPTION

KENAMETAL®

SANDVIK®

H Style	TOOL-FLO DESCRIPTION	KENAMETAL®	SANDVIK®
	H_-FLER_W	H_-FLER_W	
	H_-AVR_	H_-LSER-	
	H_-MTHOR_	H_-MTHOR_	
	H_-MCLNR_	H_-MCLNR_	
	H_-MDUNR_	H_-MDUNR_	
	H_-MSKNR_	H_-MSKNR_	
	H_-MTFNR_	H_-MTFNR_	
	H_-MVUNR_	H_-MVUNR_	
	H_-MWLNR_	H_-MWLNR_	
		HS_-FLER_W	
HS_-AVR_			R566-4KFC-_-_-
HS_-MTHOR_			
HS_-MCLNR_			R571.31C-_-_-
HS_-MDUNR_			R571.35C-_-_-
HS_-MSKNR_			
HS_-MTFNR_			
HS_-MVUNR_			
HS_-MWLNR_			

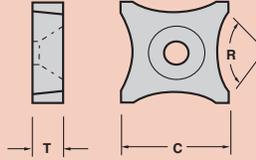


# EXTERNAL SCARFING INSERTS

## SPUB-63 - EXTERNAL

3/4" Square 4-sided - OD

■ Holders may be quoted upon request.

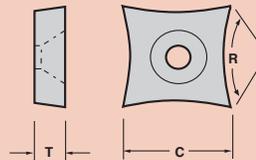


Description	EDP Code	Tube Diameter	T	C	R - Radius	TIN Coated		A11TIN Coated		
						GP50	GP54	AC22	AC50	ZA50
SPUB-63B-E	SI63EB	up to 7/8"	3/16"	3/4"	.475	●			●	●
SPUB-63C-E	SI63EC	7/8" - 1-1/8"	3/16"	3/4"	.590	●			●	●
SPUB-63D-E	SI63ED	1-1/8" - 1-1/2"	3/16"	3/4"	.785	●			●	●
SPUB-63E-E	SI63EE	1-1/2" - 1-7/8"	3/16"	3/4"	.985	●			●	●
SPUB-63F-E	SI63EF	1-7/8" - 2-1/4"	3/16"	3/4"	1.180	●			●	●
SPUB-63G-E	SI63EG	2-1/4" - 3-1/8"	3/16"	3/4"	1.575	●			●	●
SPUB-63H-E	SI63EH	3-1/8" - 3-7/8"	3/16"	3/4"	1.970	●			●	●
SPUB-63I-E	SI63EI	3-7/8" - 4-7/8"	3/16"	3/4"	2.470	●			●	●
SPUB-63J-E	SI63EJ	4-7/8" - 5-7/8"	3/16"	3/4"	2.970	●			●	●
SPUB-63K-E	SI63EK	5-7/8" - 6-7/8"	3/16"	3/4"	3.470	●			●	●
SPUB-63L-E	SI63EL	6-7/8" - 7-7/8"	3/16"	3/4"	3.970	●			●	●
SPUB-63M-E	SI63EM	7-7/8" and up	3/16"	3/4"	None	●			●	●
SPUB-63M-30-E	SI63EM30	30° Relief	3/16"	3/4"	None	●			●	●

## SQ86 - EXTERNAL

1" Square 4-sided - OD

■ Holders may be quoted upon request.

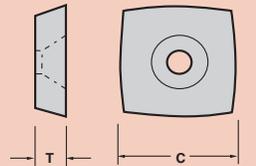


Description	EDP Code	Tube Diameter	T	C	R - Radius	TIN Coated		A11TIN Coated		
						GP50	GP54	AC22	AC50	ZA50
SQ86-14-0-E	SI86E0	ANY	3/8"	1.000	0.000	●			●	●
SQ86-14-2.5-E	SI86E25	3" - 4-3/4"	3/8"	1.000	2.500	●			●	●
SQ86-10-3.4-E	SI86E34	4-3/4" - 6-3/4"	3/8"	1.000	3.400	●			●	●
SQ86-14-4.5-E	SI86E45	6-3/4" - 8-3/4"	3/8"	1.000	4.500	●			●	●
SQ86-10-9.5-E	SI86E95	8-3/4" - 18"	3/8"	1.000	9.500	●			●	●

## SQ86 - INTERNAL

1" Square 4-sided - ID

■ Holders may be quoted upon request.

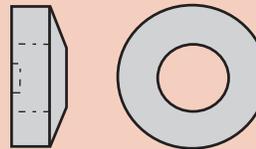


Description	EDP Code	Tube Diameter	T	C	R - Radius	TIN Coated		A11TIN Coated		
						GP50	GP54	AC22	AC50	ZA50
SQ86-14-0-I	SI86I0	ANY	3/8"	1.000	0.000	●			●	●
SQ86-14-2.5-I	SI86I25	3" - 4-3/4"	3/8"	1.000	2.500	●			●	●
SQ86-10-3.4-I	SI86I34	4-3/4" - 6-3/4"	3/8"	1.000	3.400	●			●	●

# INTERNAL SCARFING INSERTS

## IDR

■ Holders may be quoted upon request.

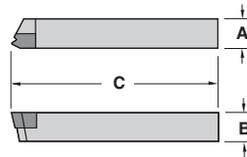


Description	EDP Code	Int'l Tube Diameter	Description	TIN Coated		A11TIN Coated		
				GP50	GP54	AC22	AC50	ZA50
IDR-2010	IDSR2010	9/16" - 11/16"	#1					
IDR-2020	IDSR2020	11/16" - 13/16"	#2			●	●	●
IDR-2030	IDSR2030	13/16" - 1-1/32"	#3			●	●	●
IDR-2040	IDSR2040	1-1/32" - 1-3/8"	#4			●	●	●
IDR-2050	IDSR2050	5/16" - 1-7/16"	#5			●	●	●
IDR-2060	IDSR2060	1-1/32" - 1-1/8"	#6			●	●	●
IDR-2070	IDSR2070	1-1/8" - 1-3/16"	#7			●	●	●
IDR-2080	IDSR2080	1-3/16" - 1-3/8"	#8			●	●	●
IDR-2090	IDSR2090	1-1/4" - 1-5/8"	#9			●	●	●
IDR-2100	IDSR2100	1-5/8" - 2"	#10			●	●	●
IDR-2110	IDSR2110	1-7/8" - 2-7/8"	#11			●	●	●
IDR-2120	IDSR2120	2-3/4" - 3-3/8"	#12			●	●	●
IDR-2130	IDSR2130	3-3/8" - 4"	#13			●	●	●
IDR-2140	IDSR2140	4" - 5"	#14			●	●	●
IDR-2150	IDSR2150	5" - 6-1/4"	#15			●	●	●
IDR-2160	IDSR2160	6" - 10-1/4"	#16			●	●	●



# BRAZED TOOLS

## API THREADING



Description	EDP Code	TPI	TPF	A	B	C	Conn No orSize	C5H
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 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	
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 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	

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

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.

Cast Iron
Non-Ferrous
Stainless/High Temp
Steel

## Cross Reference Chart

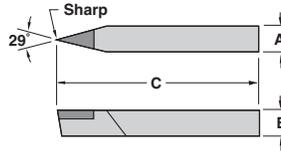
TOOL-FLO	VALENITE®	CARBOLOY®	VARDEX®	ISCAR®	TGI®	KENNAMETAL®
L43	TNEM 43					
LDS 43	TNEG 43					
L53						
LDS 54	TNEG 54					
LDS 54 - FT	TNEGX 54					
TNMC	TNEC/TNMC					
TNFA	TNFA					
16ER		16ER	3ER	16ER		
16NR		16NR	3IR	16IR		
22ER		22ER	4ER	22ER		
22NR		22NR	4IR	22IR		
27ER		27ER	5ER	27ER		
27NR		27NR	5NR	27IR		
V84					LCE/LPE 444	
V85					LCE/LPE 454	
FLD						ND
FLDC						NDC
FLTC						NTC



# BRAZED TOOLS

## ACME THREADING

NO PITCH



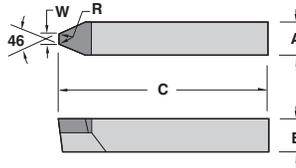
Description	EDP Code	TPI	A	B	C	C5H
B6 NT NO PITCH	77104A	6-16	3/8	3/8	2-1/2	●
B8 NT NO PITCH	77304A	4-16	1/2	1/2	3-1/2	●
B10 NT NO PITCH	77504A	2-16	5/8	5/8	4	●
B12 NT NO PITCH	77604A	2-16	3/4	3/4	4-1/2	●

Uncoated

C5H

## RING GROOVING

NO PITCH



Description	EDP Code	W	R	A	B	C	Conn No or Size	C5H
B10 RG125	77506V	.125	1/32	5/8	5/8	4	R19, 20, 22, 25, 29, 33, 36, 40, 43, 48, 52, 56, 59, 64, 68, 72 & 76	●
B12 RG156	77706W	.156	1/32	3/4	3/4	5	RX210	●
B64 RG197	77806X	.197	1/32	3/4	1	6	R21, 23, 24, 27, 30, 31, 34, 35, 37, 39, 41, 44, 45, 49, 53, 57, 61, 65, 69, 84, 92, 99 & RX-215	●
B85 RG197	77906X	.197	1/32	1	1-1/4	7	R21, 23, 24, 27, 30, 31, 34, 35, 37, 39, 41, 44, 45, 49, 53, 57, 61, 65, 69, 84, 92, 99 & RX-215	●
B64 RG206	77806Y	.206	1/16	3/4	1	6	R26, 32, 46, 73 & 85	●
B85 RG206	77906Y	.206	1/16	1	1-1/4	7	R26, 32, 46, 73 & 85	●
B86 RG278	77907C	.278	1/16	1	1-1/2	8	BX-151	●
B86 RG350	77907Z	.350	1/16	1	1-1/2	8	BX-154	●

Uncoated

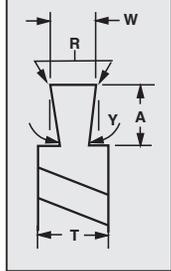
C5H

\* See page 21 for ring groove specs.

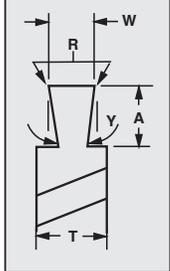
In an effort to improve our stock standard grade offering, there are periodic changes. Please see current price list for up to date grade offering.

Cast Iron	
Non-Ferrous	
Stainless/High Temp	
Steel	

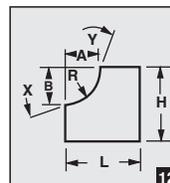
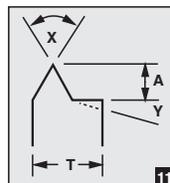
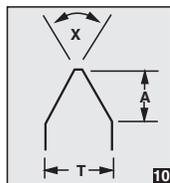
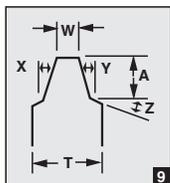
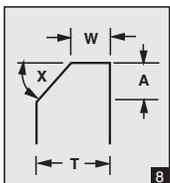
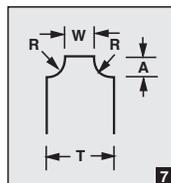
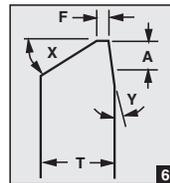
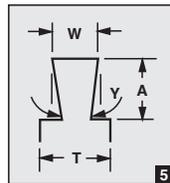
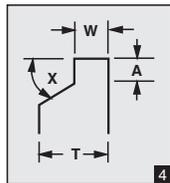
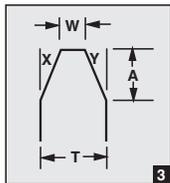
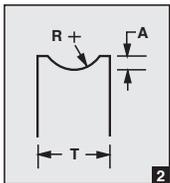
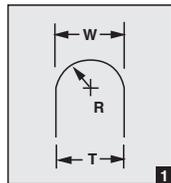
FLO-LOCK LEFT HAND



FLO-LOCK RIGHT HAND



*We welcome specials!  
Please call us with your specs.*





**TECHNICAL INFORMATION**

thread form	Tool-Flo insert		tool joint application	minimum box size
	cresting	non-cresting		
V-.038R 2" tpf 4 tpi	TNMA 55 428 FLDC-4-428 E/I 22ER/NR 428 27ER/NR 428 L53 428 L43 428 V85 428	FLD-3038R/L	2-3/8 API Internal Flush 2-7/8 API Internal Flush 3-1/2 API Internal Flush 4 API Internal Flush 4-1/2 API Internal Flush 5-1/2 API Internal Flush 4 API Full Hole NC23 NC26 NC31 NC35 NC38 NC40 NC44 NC46 NC50	NC31 2-7/8 IF
V-.038R 3" tpf 4 tpi	FLDC-4-438 E/I 22ER/NR 438	FLD-3038R/L	NC56 NC61 NC70 NC77	NC56
V-.050 2" tpf 4 tpi	FLDC-4-425 E/I 27ER/NR 425	FLD-4050R/L	5-1/2 API Full Hole 6-5/8 API Regular 6-5/8 API Full Hole	5-1/2 API Full Hole
V-.050 3" tpf 4 tpi	FLDC-4-435 E/I 22ER/NR 435	FLD-4050R/L	5-1/2 API Regular 7-5/8 API Regular 8-5/8 API Regular	5-1/2 API Regular
V-.040 3" tpf 5 tpi	FLDC-3-530 E/I FLDC-4-530 E/I 22ER/NR 530	FLD-3040R/L FLD-4040R/L	2-3/8 API Regular 2-7/8 API Regular 3-1/2 API Regular 4-1/2 API Regular 3-1/2 API Full Hole 4-1/2 API Full Hole	3-1/2 API Regular

API NC SPECIFICATIONS				
Conn. No. of Size	Thread Form	TPI	TPF	Cat. No.
NC10	V-0.055	6	1-1/2	VO.055
NC12	V-0.055	6	1-1/2	VO.055
NC13	V-0.055	6	1-1/2	VO.055
NC16	V-0.055	6	1-1/2	VO.055
NC23	V-0.038	4	2	428
NC26	V-0.038	4	2	428
NC31	V-0.038	4	2	428
NC35	V-0.038	4	2	428
NC38	V-0.038	4	2	428
NC40	V-0.038	4	2	428
NC44	V-0.038	4	2	428
NC46	V-0.038	4	2	428
NC50	V-0.038	4	2	428
NC56	V-0.038	4	3	438
NC61	V-0.038	4	3	438
NC70	V-0.038	4	3	438
NC71	V-0.038	4	3	438

API REGULAR SPECIFICATIONS					
Conn. No. of Size	Thread Form	TPI	TPF	Cat. No.	
1, 1-1/2 REG	V0.055	6	1-1/2	MT	
2-3/8 REG.	V-0.040	5	3	530	
2-7/8 REG.	V-0.040	5	3	530	
3-1/2 REG.	V-0.040	5	3	530	
4-1/2 REG.	V-0.040	5	3	530	
5-1/2 REG.	V-0.050	4	3	435	
6-5/8 REG.	V-0.050	4	2	425	
7-5/8 REG.	V-0.050	4	3	435	
8-5/8 REG.	V-0.050	4	3	435	

API INTERNAL FLUSH SPECIFICATIONS				
Conn. No. of Size	Thread Form	TPI	TPF	Cat. No.
2-3/8 IF	V-0.038	4	2	428
2-7/8 IF	V-0.038	4	2	428
3-1/2 IF	V-0.038	4	2	428
4 IF	V-0.038	4	2	428
5-1/2 IF	V-0.038	4	2	428

API FULL HOLE SPECIFICATIONS				
Conn. No. of Size	Thread Form	TPI	TPF	Cat. No.
3-1/2 FH	V-0.040	5	3	530
4 FH	V-0.038	4	2	428
4-1/2 FH	V-0.040	5	3	530
5-1/2 FH	V-0.050	4	2	425
6-5/8 FH	V-0.050	4	2	425

API THREAD FORM SPECIFICATIONS					
Thread Form	TPI	TPF	Width or Flat Crest	Root Radius	Cat. No.
V-0.038	4	2	.065	-.038	428
V-0.038	4	3	.065	-.038	438
V-0.040	5	3	.040	-.020	530
V-0.050	4	3	.050	-.025	435
V-0.050	4	2	.050	-.025	425
V-0.065*	4	2	.065	.056	42F*
V-0.076	4	1-1/2	.076	.067	4PAC
V-0.055	6	1-1/2	.055	.047	VO.055

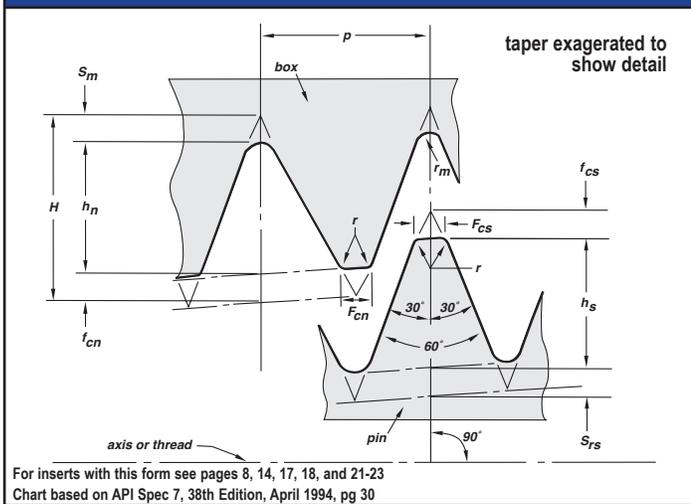
\*Obsolescent thread form - See API Spec 7, 35th Edition, May 1, 1985, Section 9.4



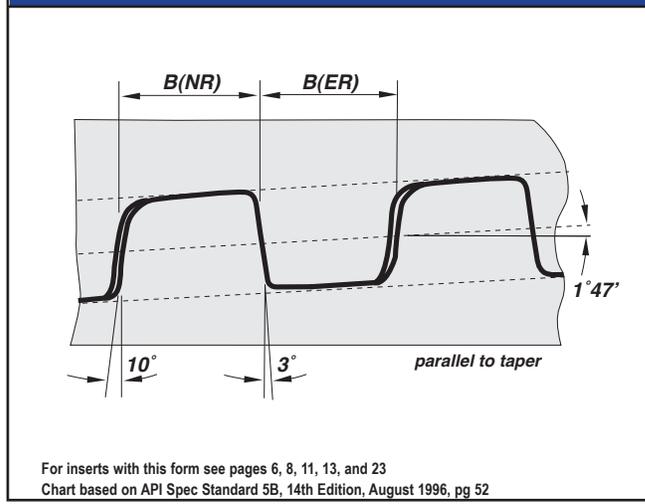
**PRODUCT THREAD DIMENSIONS - ROTARY SHOULDER CONNECTIONS**

thread form	taper in. per ft.	thread height not truncated H	thread height truncated $h_n = h_s$	root truncation $S_m = S_{rs}$ $f_m = f_{rs}$	crest truncation $f_{cn} = f_{cs}$	width of flat		root radius $r_m = r_{rs}$	radius at thread corners r	pitch p
						crest $f_{cn} = f_{cs}$	crest $f_m = f_{rs}$			
V-038R	2	.216005	.121844	.038000	.056161	.065	-	.038	.015	.250
V-038R	3	.215379	.121381	.038000	.055998	.065	-	.038	.015	.250
V-040	3	.172303	.117842	.020000	.034461	.040	-	.020	.015	.200
V-050	3	.215379	.147303	.025000	.043076	.050	-	.025	.015	.250
V-050	2	.216005	.147804	.025000	.043201	.050	-	.025	.015	.250

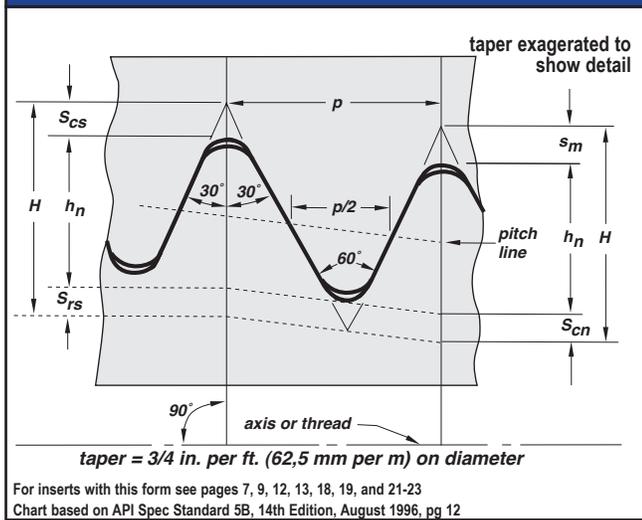
**V-040 AND V-050 PRODUCT THREAD FORM**



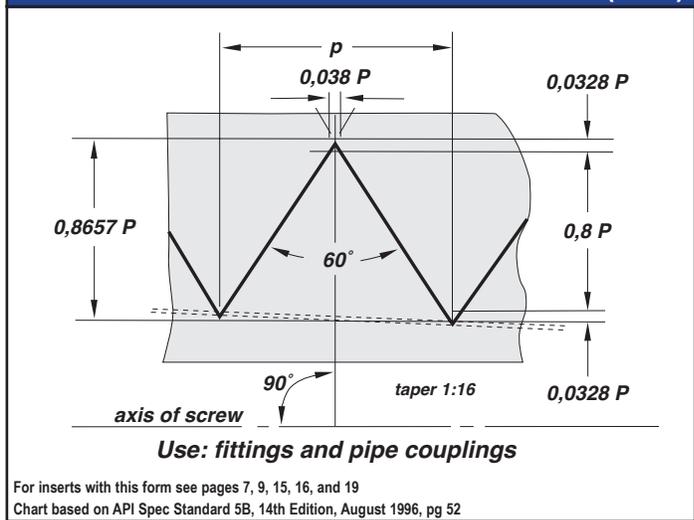
**API BUTTRESS**



**API CASING AND TUBING ROUND THREAD FORM**



**AMERICAN NATIONAL PIPE THREAD (NPT)**



**CASING AND TUBING ROUND THREAD (Height Dimensions)**

thread element		10 threads per inch p=.1000	8 threads per inch p=.1250
H	=	.866p	.10825
$H_s = h_n$	=	.626p - .007	.07125
$S_{rs} = S_m$	=	.120p + .002	.01700
$S_{cs} = S_{cn}$	=	.120p + .005	.02000

**NPT PIPE SIZE CROSSOVER**

pipe size	NPT thread per inch
1/16", 1/8"	27 NPT
1/4", 3/8"	18NPT
1/2", 3/4"	14 NPT
1" - 2"	11.5 NPT
2-1/2" and up	8 NPT