



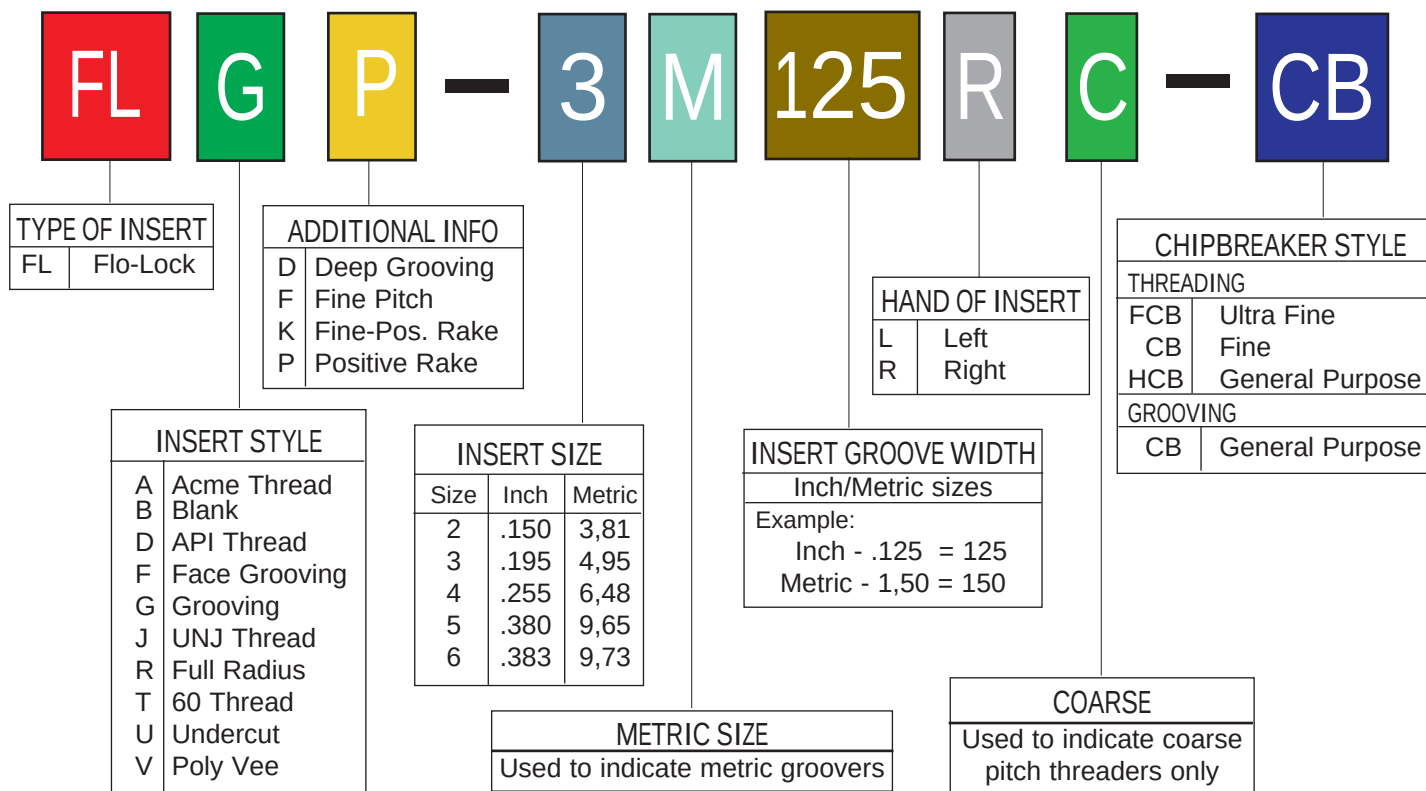
TOOL FLO

TOOL FLO





Flo-Lock Grooving/Threading Insert Identification Chart



Flo-Lock Cross Reference Chart

STYLE	TOOL-FLO	KENNAMETAL®	SANDVIK®*
ACME	FLA	NA	TLA
ACME STUB	FLAS	NAS	TLAS
API-NON TOPPING	FLD	ND	TLD
API-TOPPING	FLDC	NDC	TLDC
DEEP GROOVING	FLGD	NGD	-
FACE GROOVING	FLF	NF	TLF
GROOVING	FLG	NG	TLG
GROOVING-POSITIVE	FLGP	NGP	TLGP
UNJ	FLJ	NJ	TLJ
UNJ-FINE PITCH	FLJF	NJF	TLJF
UNJ-FINE PITCH-POSITIVE	FLJK	NJK	TLJK
UNJ-POSITIVE	FLJP	NJP	TLJP
PROFILING - LH	FLPL	NPL	-
PROFILING - RH	FLPR	NPR	-
GROOVING - FNR	FLR	NR	TLR
GROOVING - FNR POS.	FLRP	NRP	TLRP
60° V	FLT	NT	TLT
AM. STD. BUTTRESS	FLTB	NTB	TLTB
UN - UNIFIED	FLTC	NTC	TLTC
60° V - FINE PITCH	FLTF	NTF	TLTF
60° V - FINE PITCH POSITIVE	FLTK	NTK	TLTK
60° V - POSITIVE	FLTP	NTP	TLTP
POLY-V GROOVING	FLV	NV	TLV

*Top Clamp change is required when converting from SANDVIK®



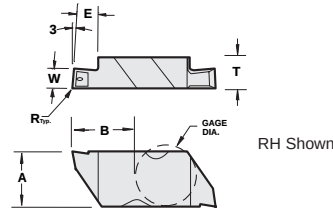
GROOVING - CHIP-FLO

Exclusive patented design!

FLG-CB

Features:

- Patented chipbreaker - Patent No. 6,146,064
- Maximum chip control
- Industry standard widths



Insert Description	W		R	E	T	A	B	Gage Dia.					
	Inch	Metric							C3	GP3	GP50	AT3	AT50
FLG-2062R-CB	.062	1,57	.005/.010	.110	.150	.219	.2700	.1875		●	●	●	
FLG-2062L-CB	.062	1,57	.005/.010	.110	.150	.219	.2700	.1875		●	●	●	
FLG-2078R-CB	.078	1,98	.005/.010	.110	.150	.219	.2700	.1875		●	●	●	
FLG-2078L-CB	.078	1,98	.005/.010	.110	.150	.219	.2700	.1875		●	●	●	
FLG-2094R-CB	.094	2,39	.005/.010	.110	.150	.219	.2700	.1875		●	●	●	
FLG-2094L-CB	.094	2,39	.005/.010	.110	.150	.219	.2700	.1875		●	●	●	
FLG-2125R-CB	.125	3,18	.005/.010	.110	.150	.219	.2700	.1875		●	●	●	
FLG-2125L-CB	.125	3,18	.005/.010	.110	.150	.219	.2700	.1875		●	●	●	
FLG-3031R-CB	.031	0,79	.002/.005	.050	.195	.344	.4050	.3750		●	●	●	
FLG-3031L-CB	.031	0,79	.002/.005	.050	.195	.344	.4050	.3750		●	●	●	
FLG-3047R-CB	.047	1,19	.005/.010	.075	.195	.344	.4050	.3750		●	●	●	
FLG-3047L-CB	.047	1,19	.005/.010	.075	.195	.344	.4050	.3750		●	●	●	
FLG-3062R-CB	.062	1,57	.005/.010	.120	.195	.344	.4050	.3750		●	●	●	
FLG-3062L-CB	.062	1,57	.005/.010	.120	.195	.344	.4050	.3750		●	●	●	
FLG-3072R-CB	.072	1,83	.005/.010	.120	.195	.344	.4050	.3750		●	●	●	
FLG-3072L-CB	.072	1,83	.005/.010	.120	.195	.344	.4050	.3750		●	●	●	
FLG-3078R-CB	.078	1,98	.005/.010	.120	.195	.344	.4050	.3750		●	●	●	
FLG-3078L-CB	.078	1,98	.005/.010	.120	.195	.344	.4050	.3750		●	●	●	
FLG-3088R-CB	.088	2,24	.005/.010	.180	.195	.344	.4050	.3750		●	●	●	
FLG-3088L-CB	.088	2,24	.005/.010	.180	.195	.344	.4050	.3750		●	●	●	
FLG-3094R-CB	.094	2,39	.005/.010	.180	.195	.344	.4050	.3750		●	●	●	
FLG-3094L-CB	.094	2,39	.005/.010	.180	.195	.344	.4050	.3750		●	●	●	
FLG-3097R-CB	.097	2,46	.005/.010	.180	.195	.344	.4050	.3750		●	●	●	
FLG-3097L-CB	.097	2,46	.005/.010	.180	.195	.344	.4050	.3750		●	●	●	
FLG-3125R-CB	.125	3,18	.005/.010	.180	.195	.344	.4050	.3750		●	●	●	
FLG-3125L-CB	.125	3,18	.005/.010	.180	.195	.344	.4050	.3750		●	●	●	
FLG-3189R-CB	.189	4,80	.020/.025	.180	.195	.344	.4050	.3750		●	●	●	
FLG-3189L-CB	.189	4,80	.020/.025	.180	.195	.344	.4050	.3750		●	●	●	
FLG-4125R-CB	.125	3,18	.005/.010	.250	.255	.453	.6360	.3750		●	●	●	
FLG-4125L-CB	.125	3,18	.005/.010	.250	.255	.453	.6360	.3750		●	●	●	
FLG-4189R-CB	.189	4,80	.020/.025	.250	.255	.453	.6360	.3750		●	●	●	
FLG-4189L-CB	.189	4,80	.020/.025	.250	.255	.453	.6360	.3750		●	●	●	
FLG-4250R-CB	.250	6,35	.020/.025	.250	.255	.453	.6360	.3750		●	●	●	
FLG-4250L-CB	.250	6,35	.020/.025	.250	.255	.453	.6360	.3750		●	●	●	
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					▲		



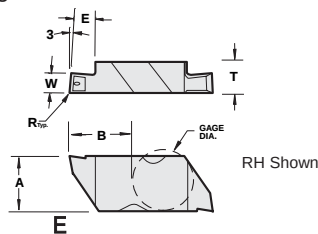
GROOVING - CHIP-FLO

METRIC

FLG-CB

Features:

- Patented chipbreaker - Patent No. 6,146,064
- Maximum chip control
- Industry standard widths



Insert Description	W		E						Gage	GP3	GP50	AT22	AT3	AT50
	Metric	Inch	R	Metric	Inch	T	A	B						
FLG-2M100R-CB	1,00	.039	.005/.010	1,90	.075	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M100L-CB	1,00	.039	.005/.010	1,90	.075	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M150R-CB	1,50	.059	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M150L-CB	1,50	.059	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M170R-CB	1,70	.067	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M170L-CB	1,70	.067	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M195R-CB	1,95	.077	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M195L-CB	1,95	.077	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M200R-CB	2,00	.079	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M200L-CB	2,00	.079	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M220R-CB	2,20	.087	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M220L-CB	2,20	.087	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M225R-CB	2,25	.089	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M225L-CB	2,25	.089	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M250R-CB	2,50	.098	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M250L-CB	2,50	.098	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M300R-CB	3,00	.118	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M300L-CB	3,00	.118	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M325R-CB	3,25	.128	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-2M325L-CB	3,25	.128	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●
FLG-3M100R-CB	1,00	.039	.005/.010	1,90	.075	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M100L-CB	1,00	.039	.005/.010	1,90	.075	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M120R-CB	1,20	.047	.005/.010	1,90	.075	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M120L-CB	1,20	.047	.005/.010	1,90	.075	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M150R-CB	1,50	.059	.005/.010	3,05	.120	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M150L-CB	1,50	.059	.005/.010	3,05	.120	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M170R-CB	1,70	.067	.005/.010	3,05	.120	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M170L-CB	1,70	.067	.005/.010	3,05	.120	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M175R-CB	1,75	.069	.005/.010	3,05	.120	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M175L-CB	1,75	.069	.005/.010	3,05	.120	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M200R-CB	2,00	.079	.005/.010	3,05	.120	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M200L-CB	2,00	.079	.005/.010	3,05	.120	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M220R-CB	2,20	.087	.005/.010	4,57	.180	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M220L-CB	2,20	.087	.005/.010	4,57	.180	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M225R-CB	2,25	.089	.005/.010	4,57	.180	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M225L-CB	2,25	.089	.005/.010	4,57	.180	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M250R-CB	2,50	.098	.005/.010	4,57	.180	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M250L-CB	2,50	.098	.005/.010	4,57	.180	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M300R-CB	3,00	.118	.005/.010	4,57	.180	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M300L-CB	3,00	.118	.005/.010	4,57	.180	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M320R-CB	3,20	.126	.005/.010	4,57	.180	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M320L-CB	3,20	.126	.005/.010	4,57	.180	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M325R-CB	3,25	.128	.005/.010	4,57	.180	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M325L-CB	3,25	.128	.005/.010	4,57	.180	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M400R-CB	4,00	.156	.010/.015	6,35	.180	.195	.344	.4050	.3750	●	●	●	●	●
FLG-3M400L-CB	4,00	.156	.010/.015	6,35	.180	.195	.344	.4050	.3750	●	●	●	●	●
FLG-4M320R-CB	3,20	.126	.020/.025	6,35	.250	.255	.453	.6360	.3750	●	●	●	●	●
FLG-4M320L-CB	3,20	.126	.020/.025	6,35	.250	.255	.453	.6360	.3750	●	●	●	●	●

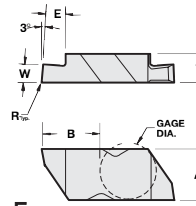


GROOVING

FLG

FLO-LOCK

Grooving



9 5

Insert Description	W			E			A	B	Gage Dia.	C3	GP3	GP50	AT3	AT50
	Inch	Metric	R	Inch	Metric	T								
FLG-2031R	.031	0,79	.002/.005	.050	1,27	.150	.219	.2700	.1875		●	●	●	●
FLG-2031L	.031	0,79	.002/.005	.050	1,27	.150	.219	.2700	.1875		●	●	●	●
FLG-2041R	.041	1,04	.002/.005	.050	1,27	.150	.219	.2700	.1875		●	●	●	●
FLG-2041L	.041	1,04	.002/.005	.050	1,27	.150	.219	.2700	.1875		●	●	●	●
FLG-2047R	.047	1,19	.002/.005	.050	1,27	.150	.219	.2700	.1875		●	●	●	●
FLG-2047L	.047	1,19	.002/.005	.050	1,27	.150	.219	.2700	.1875		●	●	●	●
FLG-2058R	.058	1,47	.005/.010	.050	1,27	.150	.219	.2700	.1875		●	●	●	●
FLG-2058L	.058	1,47	.005/.010	.050	1,27	.150	.219	.2700	.1875		●	●	●	●
FLG-2062R	.062	1,57	.005/.010	.110	2,79	.150	.219	.2700	.1875		●	●	●	●
FLG-2062L	.062	1,57	.005/.010	.110	2,79	.150	.219	.2700	.1875		●	●	●	●
FLG-2094R	.094	2,39	.005/.010	.110	2,79	.150	.219	.2700	.1875		●	●	●	●
FLG-2094L	.094	2,39	.005/.010	.110	2,79	.150	.219	.2700	.1875		●	●	●	●
FLG-2125R	.125	3,18	.005/.010	.110	2,79	.150	.219	.2700	.1875		●	●	●	●
FLG-2125L	.125	3,18	.005/.010	.110	2,79	.150	.219	.2700	.1875		●	●	●	●
FLG-3031R	.031	0,79	.002/.005	.050	1,27	.195	.344	.4050	.3750		●	●	●	●
FLG-3031L	.031	0,79	.002/.005	.050	1,27	.195	.344	.4050	.3750		●	●	●	●
FLG-3047R	.047	1,19	.005/.010	.075	1,90	.195	.344	.4050	.3750		●	●	●	●
FLG-3047L	.047	1,19	.005/.010	.075	1,90	.195	.344	.4050	.3750		●	●	●	●
FLG-3062R	.062	1,57	.005/.010	.120	3,05	.195	.344	.4050	.3750		●	●	●	●
FLG-3062L	.062	1,57	.005/.010	.120	3,05	.195	.344	.4050	.3750		●	●	●	●
FLG-3072R	.072	1,83	.005/.010	.120	3,05	.195	.344	.4050	.3750		●	●	●	●
FLG-3072L	.072	1,83	.005/.010	.120	3,05	.195	.344	.4050	.3750		●	●	●	●
FLG-3078R	.078	1,98	.005/.010	.120	3,05	.195	.344	.4050	.3750		●	●	●	●
FLG-3078L	.078	1,98	.005/.010	.120	3,05	.195	.344	.4050	.3750		●	●	●	●
FLG-3088R	.088	2,24	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3088L	.088	2,24	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3094R	.094	2,39	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3094L	.094	2,39	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3097R	.097	2,46	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3097L	.097	2,46	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3105R	.105	2,67	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3105L	.105	2,67	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3110R	.110	2,79	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3110L	.110	2,79	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3122R	.122	3,10	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3122L	.122	3,10	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3125R	.125	3,18	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3125L	.125	3,18	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3142R	.142	3,61	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3142L	.142	3,61	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3156R	.156	3,96	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3156L	.156	3,96	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3178R	.178	4,52	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3178L	.178	4,52	.005/.010	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3185R	.185	4,70	.020/.025	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3185L	.185	4,70	.020/.025	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3189R	.189	4,80	.020/.025	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3189L	.189	4,80	.020/.025	.180	4,57	.195	.344	.4050	.3750		●	●	●	●
FLG-3250R	.250	6,35	.020/.025	.180	4,57	.250	.344	.4050	.3750			●		
FLG-3250L	.250	6,35	.020/.025	.180	4,57	.250	.344	.4050	.3750			●		

TOOL FLO

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

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

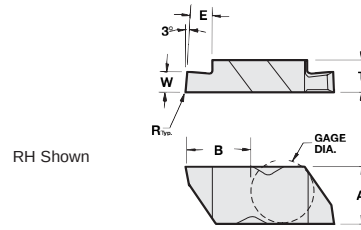
Cast Iron	▲	●	●	●	●
Non-Ferrous	▲	●	●	●	●
Stainless/High Temp	▲	●	●	●	●
Steel	▲	●	●	●	●

FLO-LOCK



GROOVING

FLG



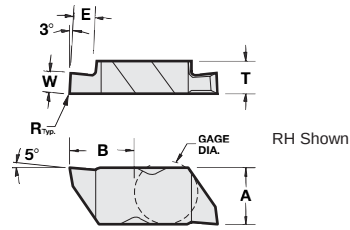
Insert Description	W			E			T	A	B	Gage Dia.	GP3	GP5	GP50	AT3	AT50
	Inch	Metric	R	Inch	Metric										
FLG-4125R	.125	3,18	.005/.010	.250	6,35	.255	.453	.6360	.3750	●		●	●	●	
FLG-4125L	.125	3,18	.005/.010	.250	6,35	.255	.453	.6360	.3750	●		●	●	●	
FLG-4189R	.189	4,80	.020/.025	.250	6,35	.255	.453	.6360	.3750	●		●	●	●	
FLG-4189L	.189	4,80	.020/.025	.250	6,35	.255	.453	.6360	.3750	●		●	●	●	
FLG-4213R	.213	5,41	.005/.010	.250	6,35	.255	.453	.6360	.3750	●		●			
FLG-4213L	.213	5,41	.005/.010	.250	6,35	.255	.453	.6360	.3750	●		●			
FLG-4219R	.219	5,56	.020/.025	.250	6,35	.255	.453	.6360	.3750	●		●			
FLG-4219L	.219	5,56	.020/.025	.250	6,35	.255	.453	.6360	.3750	●		●			
FLG-4250R	.250	6,35	.020/.025	.250	6,35	.255	.453	.6360	.3750	●		●	●	●	
FLG-4250L	.250	6,35	.020/.025	.250	6,35	.255	.453	.6360	.3750	●		●	●	●	
FLG-4312R	.312	7,92	.030/.035	.250	6,35	.312	.453	.6360	.3750			●			
FLG-4312L	.312	7,92	.030/.035	.250	6,35	.312	.453	.6360	.3750			●			
FLG-5250R	.250	6,35	.020/.025	.375	9,53	.380	.688	.9520	.5000		●				
FLG-5250L	.250	6,35	.020/.025	.375	9,53	.380	.688	.9520	.5000		●				
FLG-5281R	.281	7,14	.030/.035	.375	9,53	.380	.688	.9520	.5000		●				
FLG-5281L	.281	7,14	.030/.035	.375	9,53	.380	.688	.9520	.5000		●				
FLG-5312R	.312	7,92	.030/.035	.375	9,53	.380	.688	.9520	.5000		●				
FLG-5312L	.312	7,92	.030/.035	.375	9,53	.380	.688	.9520	.5000		●				
FLG-5344R	.344	8,74	.030/.035	.375	9,53	.380	.688	.9520	.5000		●				
FLG-5344L	.344	8,74	.030/.035	.375	9,53	.380	.688	.9520	.5000		●				
FLG-5375R	.375	9,53	.030/.035	.375	9,53	.380	.688	.9520	.5000		●				
FLG-5375L	.375	9,53	.030/.035	.375	9,53	.380	.688	.9520	.5000		●				
FLG-6281R	.281	7,14	.030/.035	.250	6,35	.383	.453	.6360	.3750			●			
FLG-6281L	.281	7,14	.030/.035	.250	6,35	.383	.453	.6360	.3750			●			
FLG-6312R	.312	7,92	.030/.035	.250	6,35	.383	.453	.6360	.3750			●			
FLG-6312L	.312	7,92	.030/.035	.250	6,35	.383	.453	.6360	.3750			●			
FLG-6375R	.375	9,53	.030/.035	.250	6,35	.383	.453	.6360	.3750			●			
FLG-6375L	.375	9,53	.030/.035	.250	6,35	.383	.453	.6360	.3750			●			
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				▲	▲	●		



GROOVING

FLGP

Positive Rake



Insert Description	W		R	E		T	A	B	Gage Dia.				
	Inch	Metric		Inch	Metric					Uncoated	TIN Coated	AlTiN Coated	
FLGP-2031R	.031	0,79	.002/.005	.050	1,27	.150	.219	.2700	.1875	GP3	GP50	AT3	AT50
FLGP-2031L	.031	0,79	.002/.005	.050	1,27	.150	.219	.2700	.1875	GP3	GP50	AT3	AT50
FLGP-2062R	.062	1,57	.005/.010	.110	2,79	.150	.219	.2700	.1875	GP3	GP50	AT3	AT50
FLGP-2062L	.062	1,57	.005/.010	.110	2,79	.150	.219	.2700	.1875	GP3	GP50	AT3	AT50
FLGP-2125R	.125	3,18	.005/.010	.110	2,79	.150	.219	.2700	.1875	GP3	GP50	AT3	AT50
FLGP-2125L	.125	3,18	.005/.010	.110	2,79	.150	.219	.2700	.1875	GP3	GP50	AT3	AT50
FLGP-3047R	.047	1,19	.005/.010	.075	1,90	.195	.344	.4050	.3750	GP3	GP50	AT3	AT50
FLGP-3047L	.047	1,19	.005/.010	.075	1,05	.195	.344	.4050	.3750	GP3	GP50	AT3	AT50
FLGP-3062R	.062	1,57	.005/.010	.120	3,05	.195	.344	.4050	.3750	GP3	GP50	AT3	AT50
FLGP-3062L	.062	1,57	.005/.010	.120	3,05	.195	.344	.4050	.3750	GP3	GP50	AT3	AT50
FLGP-3088R	.088	2,24	.005/.010	.180	4,57	.195	.344	.4050	.3750	GP3	GP50	AT3	AT50
FLGP-3088L	.088	2,24	.005/.010	.180	4,57	.195	.344	.4050	.3750	GP3	GP50	AT3	AT50
FLGP-3094R	.094	2,39	.005/.010	.180	4,57	.195	.344	.4050	.3750	GP3	GP50	AT3	AT50
FLGP-3094L	.094	2,39	.005/.010	.180	4,57	.195	.344	.4050	.3750	GP3	GP50	AT3	AT50
FLGP-3125R	.125	3,18	.005/.010	.180	4,57	.195	.344	.4050	.3750	GP3	GP50	AT3	AT50
FLGP-3125L	.125	3,18	.005/.010	.180	4,57	.195	.344	.4050	.3750	GP3	GP50	AT3	AT50
FLGP-3156R	.156	3,96	.005/.010	.180	4,57	.195	.344	.4050	.3750	GP3	GP50	AT3	AT50
FLGP-3156L	.156	3,96	.005/.010	.180	4,57	.195	.344	.4050	.3750	GP3	GP50	AT3	AT50
FLGP-3189R	.189	4,80	.020/.025	.180	4,57	.195	.344	.4050	.3750	GP3	GP50	AT3	AT50
FLGP-3189L	.189	4,80	.020/.025	.180	4,57	.195	.344	.4050	.3750	GP3	GP50	AT3	AT50
FLGP-4125R	.125	3,18	.005/.010	.250	6,35	.255	.453	.6360	.3750	GP3	GP50	AT3	AT50
FLGP-4125L	.125	3,18	.005/.010	.250	6,35	.255	.453	.6360	.3750	GP3	GP50	AT3	AT50
FLGP-4189R	.189	4,80	.020/.025	.250	6,35	.255	.453	.6360	.3750	GP3	GP50	AT3	AT50
FLGP-4189L	.189	4,80	.020/.025	.250	6,35	.255	.453	.6360	.3750	GP3	GP50	AT3	AT50
FLGP-4250R	.250	6,35	.020/.025	.250	6,35	.255	.453	.6360	.3750	GP3	GP50	AT3	AT50
FLGP-4250L	.250	6,35	.020/.025	.250	6,35	.255	.453	.6360	.3750	GP3	GP50	AT3	AT50

GROOVING - CHIP-FLO

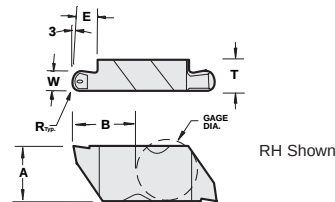
Exclusive patented design!

FLR-CB

Full Nose Radius

Features:

- Patented chipbreaker - Patent No. 6,146,064
- Maximum chip control
- Industry standard widths



Insert Description	W		R	E		T	A	B	Gage Dia.				
	Inch	Metric		Inch	Metric					Uncoated	TIN Coated	AlTiN Coated	
FLR-3062R-CB	.125	3,18	.062	.180	4,57	.150	.219	.2667	.1875	GP3	GP50	AT3	AT50
FLR-3062L-CB	.125	3,18	.062	.180	4,57	.150	.219	.2667	.1875	GP3	GP50	AT3	AT50

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.

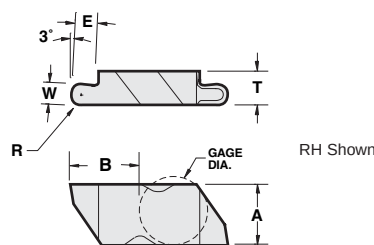
Cast Iron	GP3	GP50	AT3	AT50
Non-Ferrous	GP3	GP50	AT3	AT50
Stainless/High Temp	GP3	GP50	AT3	AT50
Steel	GP3	GP50	AT3	AT50



GROOVING

FLR

Full Nose Radius

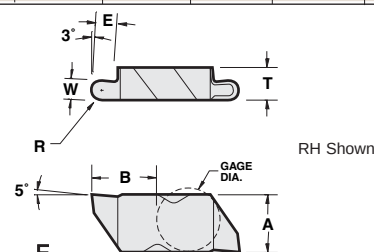


Insert Description	W		R	E		T	A	B	Gage Dia.	Coating				
	Inch	Metric		Inch	Metric					Uncoated	TIN Coated	ATIN Coated	GP3	AT50
FLR-2031R	.062	1,57	.031	.110	2,79	.150	.219	.2683	.1875					
FLR-2031L	.062	1,57	.031	.110	2,79	.150	.219	.2683	.1875					
FLR-2047R	.094	2,39	.047	.110	2,79	.150	.219	.2675	.1875					
FLR-2047L	.094	2,39	.047	.110	2,79	.150	.219	.2675	.1875					
FLR-2062R	.125	3,18	.062	.110	2,79	.150	.219	.2667	.1875					
FLR-2062L	.125	3,18	.062	.110	2,79	.150	.219	.2667	.1875					
FLR-3031R	.062	1,57	.031	.125	3,18	.195	.344	.4033	.3750					
FLR-3031L	.062	1,57	.031	.125	3,18	.195	.344	.4033	.3750					
FLR-3047R	.094	2,39	.047	.180	4,57	.195	.344	.4025	.3750					
FLR-3047L	.094	2,39	.047	.180	4,57	.195	.344	.4025	.3750					
FLR-3062R	.125	3,18	.062	.180	4,57	.195	.344	.4017	.3750					
FLR-3062L	.125	3,18	.062	.180	4,57	.195	.344	.4017	.3750					
FLR-3078R	.156	3,96	.078	.180	4,57	.195	.344	.4008	.3750					
FLR-3078L	.156	3,96	.078	.180	4,57	.195	.344	.4008	.3750					
FLR-3094R	.189	4,80	.094	.180	4,57	.195	.344	.4000	.3750					
FLR-3094L	.189	4,80	.094	.180	4,57	.195	.344	.4000	.3750					
FLR-4062R	.125	3,18	.062	.250	6,35	.255	.453	.6327	.3750					
FLR-4062L	.125	3,18	.062	.250	6,35	.255	.453	.6327	.3750					
FLR-4094R	.189	4,80	.094	.250	6,35	.255	.453	.6310	.3750					
FLR-4094L	.189	4,80	.094	.250	6,35	.255	.453	.6310	.3750					
FLR-4125R	.250	6,35	.125	.250	6,35	.255	.453	.6293	.3750					
FLR-4125L	.250	6,35	.125	.250	6,35	.255	.453	.6293	.3750					

GROOVING

FLRP

Full Nose Radius-Positive Rake



Insert Description	W		R	Inch	E		T	A	B	Dia.	Gage	Coating				
	Inch	Metric			Metric							Uncoated	TIN Coated	ATIN Coated	GP3	AT50
FLRP-3031R	.062	1,57	.031	0,79	.125	.195	.344	.4033	.3750							
FLRP-3031L	.062	1,57	.031	0,79	.125	.195	.344	.4033	.3750							
FLRP-3047R	.094	2,39	.047	.180	4,57	.195	.344	.4025	.3750							
FLRP-3047L	.094	2,39	.047	.180	4,57	.195	.344	.4025	.3750							
FLRP-3062R	.125	3,18	.062	.180	4,57	.195	.344	.4017	.3750							
FLRP-3062L	.125	3,18	.062	.180	4,57	.195	.344	.4017	.3750							
FLRP-3078R	.156	3,96	.078	.180	4,57	.195	.344	.4008	.3750							
FLRP-3078L	.156	3,96	.078	.180	4,57	.195	.344	.4008	.3750							
FLRP-3094R	.189	4,80	.094	.180	4,57	.195	.344	.4000	.3750							
FLRP-3094L	.189	4,80	.094	.180	4,57	.195	.344	.4000	.3750							
FLRP-4062R	.125	3,18	.062	.250	6,35	.255	.453	.6327	.3750							
FLRP-4062L	.125	3,18	.062	.250	6,35	.255	.453	.6327	.3750							
FLRP-4094R	.189	4,80	.094	.250	6,35	.255	.453	.6310	.3750							
FLRP-4094L	.189	4,80	.094	.250	6,35	.255	.453	.6310	.3750							
FLRP-4125R	.250	6,35	.125	.250	6,35	.255	.453	.6293	.3750							
FLRP-4125L	.250	6,35	.125	.250	6,35	.255	.453	.6293	.3750							

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			▲	●



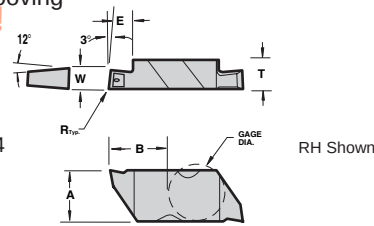
FLO-LOCK

FACE GROOVING - CHIP-FLO

FLF-CB

Features:

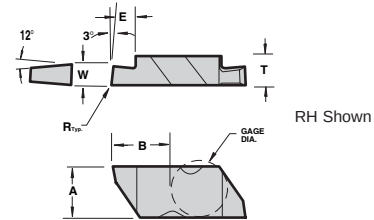
- Patented chipbreaker - Patent No. 6,146,064
- Maximum chip control
- Industry standard widths



Insert Description	W		R	E	T	A	B	Gage Dia.	Coating					
	Inch	Metric							C3	GP3	GP50	AT3	AT50	
FLF-3125R-CB	.125	3,18	.005/.010	.180	.195	.344	.4050	.3750			●	●		
FLF-3125L-CB	.125	3,18	.005/.010	.180	.195	.344	.4050	.3750			●	●		
FLF-3156R-CB	.156	3,96	.005/.010	.180	.195	.344	.4050	.3750			●	●		
FLF-3156L-CB	.156	3,96	.005/.010	.180	.195	.344	.4050	.3750			●	●		
FLF-3188R-CB	.188	4,77	.020/.025	.180	.255	.344	.4050	.3750			●	●		
FLF-3188L-CB	.188	4,77	.020/.025	.180	.255	.344	.4050	.3750			●	●		

FACE GROOVING

FLF



Insert Description	W		R	E	T	A	B	Gage Dia.					
	Inch	Metric							C3	GP3	GP50	AT3	AT50
FLF-3125R	.125	3,18	.005/.010	.180	.195	.344	.4050	.3750		●	●		
FLF-3125L	.125	3,18	.005/.010	.180	.195	.344	.4050	.3750		●	●		
FLF-3156R	.156	3,96	.005/.010	.180	.195	.344	.4050	.3750		●	●		
FLF-3156L	.156	3,96	.005/.010	.180	.195	.344	.4050	.3750		●	●		
FLF-3188R	.188	4,77	.020/.025	.180	.195	.344	.4050	.3750		●	●		
FLF-3188L	.188	4,77	.020/.025	.180	.195	.344	.4050	.3750		●	●		
FLF-4250R	.250	6,35	.020/.025	.250	.255	.453	.6360	.3750		●	●		
FLF-4250L	.250	6,35	.020/.025	.250	.255	.453	.6360	.3750		●	●		
FLF-6218R	.218	5,54	.030/.035	.383	.250	.453	.6360	.3750					
FLF-6218L	.218	5,54	.030/.035	.383	.250	.453	.6360	.3750					
FLF-6250R	.250	6,35	.030/.035	.383	.250	.453	.6360	.3750					
FLF-6250L	.250	6,35	.030/.035	.383	.250	.453	.6360	.3750					
FLF-6375R	.375	9,53	.030/.035	.383	.250	.453	.6360	.3750					
FLF-6375L	.375	9,53	.030/.035	.383	.250	.453	.6360	.3750					

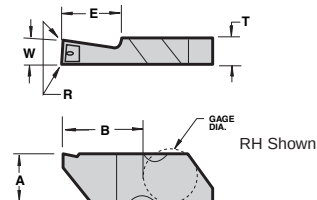
DEEP GROOVING - CHIP-FLO

FLGD-CB

SINGLE ENDED

Features:

- Patented chipbreaker - Patent No. 6,146,064
- Maximum chip control
- Industry standard widths



Insert Description	W		E	T	A	B	Gage Dia.		C3	Coating						
	Inch	Metric R								Uncoated	TiN Coated	AlTiN Coated	C3	GP3	GP50	AT3
FLGD-3094R-CB	.094	2,39	.005/.010	.250	.195	.344	.5050	.3750								
FLGD-3094L-CB	.094	2,39	.005/.010	.250	.195	.344	.5050	.3750								
FLGD-3125R-CB	.125	3,18	.005/.010	.250	.195	.344	.5050	.3750								
FLGD-3125L-CB	.125	3,18	.005/.010	.250	.195	.344	.5050	.3750								
FLGD-3189R-CB	.189	4,80	.020/.025	.250	.195	.344	.5050	.3750								
FLGD-3189L-CB	.189	4,80	.020/.025	.250	.195	.344	.5050	.3750								
FLGD-4189R-CB	.189	4,80	.020/.025	.375	.255	.453	.7610	.3750								
FLGD-4189L-CB	.189	4,80	.020/.025	.375	.255	.453	.7610	.3750								
FLGD-4250R-CB	.250	6,35	.020/.025	.500	.255	.453	.8860	.3750								
FLGD-4250L-CB	.250	6,35	.020/.025	.500	.255	.453	.8860	.3750								

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.

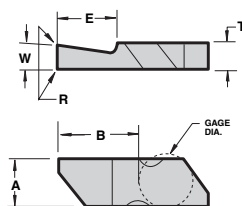
Cast Iron		▲		▲	
Non-Ferrous		▲		▲	
Stainless/High Temp		▲		▲	
Steel			▲		●

TOOL FLO

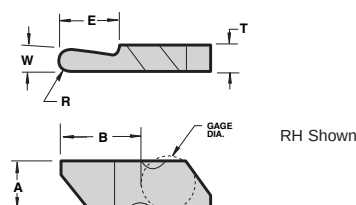


DEEP GROOVING

FLGD - SINGLE ENDED



Insert Description	W		R	E	T	A	B	Gage Dia.					
	Inch	Metric							Uncoated	TIN Coated	ATIN Coated		
									C3	GP3	GP50	AT3	AT50
FLGD-3094R	.094	2,39	.005/.010	.250	.195	.344	.5050	.3750		●	●		
FLGD-3094L	.094	2,39	.005/.010	.250	.195	.344	.5050	.3750		●	●		
FLGD-3125R	.125	3,18	.005/.010	.250	.195	.344	.5050	.3750		●	●		
FLGD-3125L	.125	3,18	.005/.010	.250	.195	.344	.5050	.3750		●	●		
FLGD-3189R	.189	4,8	.020/.025	.250	.195	.344	.5050	.3750		●	●		
FLGD-3189L	.189	4,8	.020/.025	.250	.195	.344	.5050	.3750		●	●		
FLGD-4125R	.125	3,18	.005/.010	.250	.255	.453	.6360	.3750		●	●		
FLGD-4125L	.125	3,18	.005/.010	.250	.255	.453	.6360	.3750		●	●		
FLGD-4189R	.189	4,8	.020/.025	.375	.255	.453	.7610	.3750		●	●		
FLGD-4189L	.189	4,8	.020/.025	.375	.255	.453	.7610	.3750		●	●		
FLGD-4250R	.250	6,35	.020/.025	.500	.255	.453	.8860	.3750		●	●		
FLGD-4250L	.250	6,35	.020/.025	.500	.255	.453	.8860	.3750		●	●		

FLRD - SINGLE ENDED
FULL NOSE RADIUS

Insert Description	W		R	E	T	A	B	Gage Dia.					
	Inch	Metric							Uncoated	TIN Coated	ATIN Coated		
									C3	GP3	GP50	AT3	AT50
FLRD-3062R	.125	3,19	.062	.250	.195	.344	.5016	.3750		●	●	●	●
FLRD-3062L	.125	3,19	.062	.250	.195	.344	.5016	.3750		●	●	●	●
FLRD-3094R	.189	4,8	.094	.250	.195	.344	.5016	.3750		●	●	●	●
FLRD-3094L	.189	4,8	.094	.250	.195	.344	.5016	.3750		●	●	●	●
FLRD-4094R	.189	4,8	.094	.500	.255	.453	.8860	.3750		●	●	●	●
FLRD-4094L	.189	4,8	.094	.500	.255	.453	.8860	.3750		●	●	●	●
FLRD-4125R	.250	6,35	.125	.500	.255	.453	.8860	.3750		●	●	●	●
FLRD-4125L	.250	6,35	.125	.500	.255	.453	.8860	.3750		●	●	●	●

INTERNAL DEEP FACE GROOVING - CHIP-FLO

Exclusive patented design!

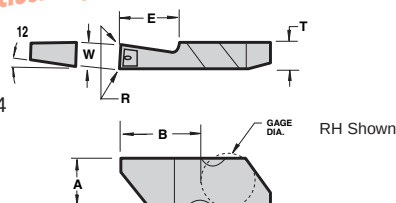
SINGLE ENDED

DEEP GROOVING

FLFD-I-CB

Features:

- Patented chipbreaker - Patent No. 6,146,064
- Maximum chip control
- Industry standard widths



Insert Description	W		R	E	T	A	B	Gage Dia.					
	Inch	Metric							Uncoated	TIN Coated	ATIN Coated		
									C3	GP3	GP50	AT3	AT50
FLFD-3125R-I-CB	.125	3,18	.005/.010	.250	.195	.344	.5050	.3750		●	●		
FLFD-3125L-I-CB	.125	3,18	.005/.010	.250	.195	.344	.5050	.3750		●	●		
FLFD-3189R-I-CB	.189	4,80	.020/.025	.250	.195	.344	.5050	.3750		●	●		
FLFD-3189L-I-CB	.189	4,80	.020/.025	.250	.195	.344	.5050	.3750		●	●		

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

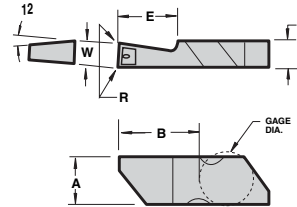


DEEP FACE GROOVING

SINGLE ENDED

DEEP GROOVING

FLFD-CB



RH Shown

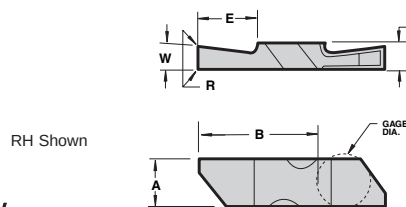
Insert Description	W		R	E	T	A	B	Gage Dia.	Uncoated			
	Inch	Metric							C3	GP3	GP50	AT3
FLFD-3125R-CB	.125	3,18	.005/.010	.250	.195	.344	.5050	.3750			●	●
FLFD-3125L-CB	.125	3,18	.005/.010	.250	.195	.344	.5050	.3750			●	●
FLFD-3189R-CB	.189	4,80	.020/.025	.250	.195	.344	.5050	.3750			●	●
FLFD-3189L-CB	.189	4,80	.020/.025	.250	.195	.344	.5050	.3750			●	●

DEEP GROOVING

Exclusive 2 edge design!

FLGT - DOUBLE ENDED

Fits FLSLT/RT Holders.



RH Shown

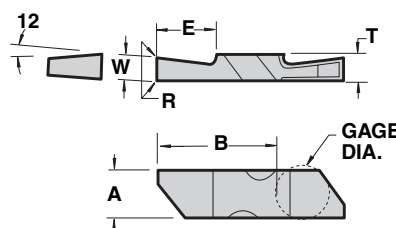
Insert Description	W		R	E	T	A	B	Gage Dia.	Uncoated			
	Inch	Metric							C3	GP3	GP50	AT3
FLGT-3094R	.094	2,39	.005/.010	.275	.195	.344	.855	.3750		●	●	●
FLGT-3094L	.094	2,39	.005/.010	.275	.195	.344	.855	.3750		●	●	●
FLGT-3125R	.125	3,18	.005/.010	.437	.195	.344	.855	.3750		●	●	●
FLGT-3125L	.125	3,18	.005/.010	.437	.195	.344	.855	.3750		●	●	●
FLGT-3189R	.189	4,8	.020/.025	.437	.195	.344	.855	.3750		●	●	●
FLGT-3189L	.189	4,8	.020/.025	.437	.195	.344	.855	.3750		●	●	●
FLGT-4125R	.125	3,18	.005/.010	.550	.255	.453	1.136	.3750		●	●	●
FLGT-4125L	.125	3,18	.005/.010	.550	.255	.453	1.136	.3750		●	●	●
FLGT-4189R	.189	4,8	.020/.025	.550	.255	.453	1.136	.3750		●	●	●
FLGT-4189L	.189	4,8	.020/.025	.550	.255	.453	1.136	.3750		●	●	●
FLGT-4250R	.250	6,35	.020/.025	.550	.255	.453	1.136	.3750		●	●	●
FLGT-4250L	.250	6,35	.020/.025	.550	.255	.453	1.136	.3750		●	●	●

DEEP FACE GROOVING

FLFT - DOUBLE ENDED

Exclusive 2 edge design!

Fits FLSLT/RT Holders.



RH Shown

Insert Description	W		R	E	T	A	B	Gage Dia.	Uncoated			
	Inch	Metric							C3	GP3	GP50	AT3
FLFT-3125R	.125	3,18	.005/.010	.375	.195	.344	.885	.3750		●	●	
FLFT-3125L	.125	3,18	.005/.010	.375	.195	.344	.885	.3750		●	●	
FLFT-4189R	.189	4,8	.020/.025	.550	.255	.453	1.136	.3750		●	●	
FLFT-4189L	.189	4,8	.020/.025	.550	.255	.453	1.136	.3750		●	●	
FLFT-4250R	.250	6,35	.020/.025	.550	.255	.453	1.136	.3750		●	●	
FLFT-4250L	.250	6,35	.020/.025	.550	.255	.453	1.136	.3750		●	●	

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			▲	●

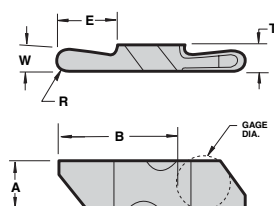
1 0 2 DEEP GROOVING

FLRT - DOUBLE ENDED

FULL NOSE RADIUS

Exclusive 2 edge design!

FLO-LOCK Grooving



RH Shown

Fits FLSLT/RT Holders.

Insert Description	W		R	E	T	A	B	Gage Dia.					
	Inch	Metric							Uncoated	TIN Coated	ATIN Coated	GP3	GP50
FLRT-3062R	.125	3,18	.062	.437	.195	.344	.855	.3750					
FLRT-3062L	.125	3,18	.062	.437	.195	.344	.855	.3750					
FLRT-3094R	.189	4,80	.094	.437	.195	.344	.855	.3750					
FLRT-3094L	.189	4,80	.094	.437	.195	.344	.855	.3750					
FLRT-4062R	.125	3,18	.062	.550	.255	.453	1.136	.3750					
FLRT-4062L	.125	3,18	.062	.550	.255	.453	1.136	.3750					
FLRT-4094R	.189	4,8	.094	.550	.255	.453	1.136	.3750					
FLRT-4094L	.189	4,8	.094	.550	.255	.453	1.136	.3750					
FLRT-4125R	.250	6,35	.125	.550	.255	.453	1.136	.3750					
FLRT-4125L	.250	6,35	.125	.550	.255	.453	1.136	.3750					

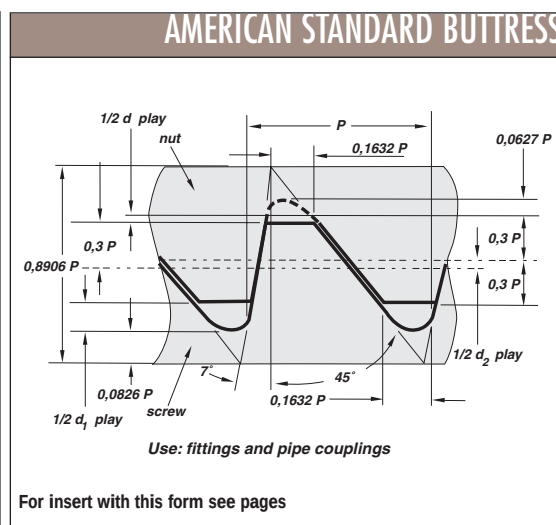
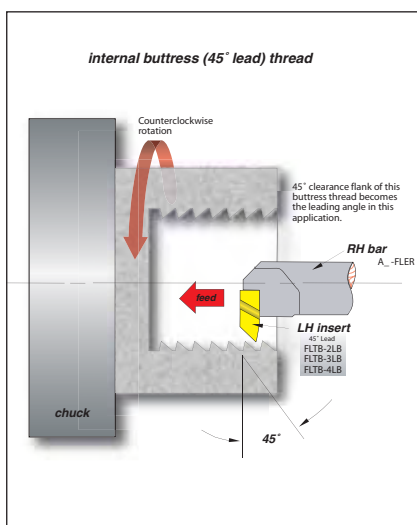
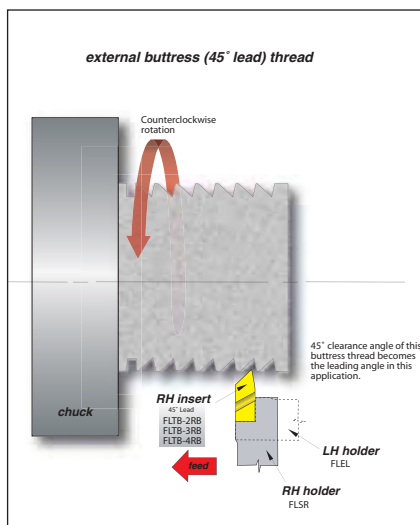
In an effort to improve our stock standard grade offering, there are periodic changes. Please see current price list for up to date grade offering.

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

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

American Standard Buttress Thread Designations

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



internal threading limitations		
threads per inch	nominal thread size	minimum minor diameter
8	1-3/4	1.600
10	1-5/8	1.505
12	1-1/2	1.400
16	1-1/4	1.175
20	1-1/16	1.002

internal threading limitations		
threads per inch	nominal thread size	minimum minor diameter
4*	2-1/2	2.200
5	2-1/4	2.010
6	2	1.800
8	1-3/4	1.600
10	1-5/8	1.505
12**	1-1/2	1.400

* FLTB-4B insert only

** Sixteen or 20 threads per inch can be cut providing minor diameter is 1.375 or larger.

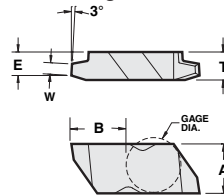
TOOL FLO



ACME THREADING

FLA

Threading

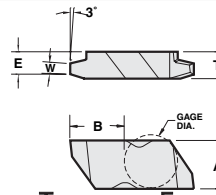


RH Shown

Insert Description	TPI	W	T	E	A	B	Gage Dia.	Coating				
								Uncoated	TIN Coated	ATIN Coated		
								C3	GP3	GP50	AT3	AT50
FLA-3R16	16	.0206	.195	.149	.344	.4026	.3750			●		
FLA-3L16	16	.0206	.195	.149	.344	.4026	.3750			●		
FLA-3R14	14	.0239	.195	.149	.344	.4026	.3750			●		
FLA-3L14	14	.0239	.195	.149	.344	.4026	.3750			●		
FLA-3R12	12	.0283	.195	.149	.344	.4026	.3750			●		
FLA-3L12	12	.0283	.195	.149	.344	.4026	.3750			●		
FLA-3R10	10	.0319	.195	.149	.344	.4026	.3750	●	●			
FLA-3L10	10	.0319	.195	.149	.344	.4026	.3750	●	●			
FLA-3R8	8	.0411	.195	.149	.344	.4026	.3750	●	●	●	●	●
FLA-3L8	8	.0411	.195	.149	.344	.4026	.3750	●	●	●	●	●
FLA-3R6	6	.0566	.195	.149	.344	.4026	.3750	●	●	●	●	●
FLA-3L6	6	.0566	.195	.149	.344	.4026	.3750	●	●	●	●	●
FLA-3R5	5	.0689	.195	.149	.344	.4026	.3750	●	●	●	●	●
FLA-3L5	5	.0689	.195	.149	.344	.4026	.3750	●	●	●	●	●
FLA-3R4	4	.0875	.195	.133	.344	.4018	.3750	●	●	●	●	●
FLA-3L4	4	.0875	.195	.133	.344	.4018	.3750	●	●	●	●	●
FLA-4R8	8	.0411	.255	.202	.453	.6332	.3750	●	●			
FLA-4L8	8	.0411	.255	.202	.453	.6332	.3750	●	●			
FLA-4R6	6	.0566	.255	.202	.453	.6332	.3750	●	●			
FLA-4L6	6	.0566	.255	.202	.453	.6332	.3750	●	●			
FLA-4R5	5	.0689	.255	.202	.453	.6332	.3750	●	●			
FLA-4L5	5	.0689	.255	.202	.453	.6332	.3750	●	●			
FLA-4R4	4	.0875	.255	.202	.453	.6332	.3750	●	●	●	●	●
FLA-4L4	4	.0875	.255	.202	.453	.6332	.3750	●	●	●	●	●
FLA-6R3	3	.1184	.383	.283	.453	.6308	.3750			●		
FLA-6L3	3	.1184	.383	.283	.453	.6308	.3750			●		
FLA-6R2.5	2.5	.1431	.383	.283	.453	.6308	.3750			●		
FLA-6L2.5	2.5	.1431	.383	.283	.453	.6308	.3750			●		
FLA-6R2	2	.1802	.383	.283	.453	.6308	.3750			●		
FLA-6L2	2	.1802	.383	.283	.453	.6308	.3750			●		

ACME STUB THREADING

FLAS (cont. on following page)



Insert Description	TPI	W	T	E	A	B	Gage Dia.	Coating				
								Uncoated	TIN Coated	ATIN Coated		
								C3	GP3	GP50	AT3	AT50
FLAS-3R16	16	.0238	.195	.149	.344	.4026	.375			●		
FLAS-3L16	16	.0238	.195	.149	.344	.4026	.375			●		
FLAS-3R14	14	.0276	.195	.149	.344	.4026	.375			●		
FLAS-3L14	14	.0276	.195	.149	.344	.4026	.375			●		
FLAS-3R12	12	.0326	.195	.149	.344	.4026	.375			●		
FLAS-3L12	12	.0326	.195	.149	.344	.4026	.375			●		
FLAS-3R10	10	.0370	.195	.149	.344	.4026	.375	●	●			
FLAS-3L10	10	.0370	.195	.149	.344	.4026	.375	●	●			
FLAS-3R8	8	.0476	.195	.149	.344	.4026	.375	●	●	●	●	●
FLAS-3L8	8	.0476	.195	.149	.344	.4026	.375	●	●	●	●	●
FLAS-3R6	6	.0652	.195	.149	.344	.4026	.375	●	●	●	●	●
FLAS-3L6	6	.0652	.195	.149	.344	.4026	.375	●	●	●	●	●
FLAS-3R5	5	.0793	.195	.149	.344	.4026	.375	●	●	●	●	●
FLAS-3L5	5	.0793	.195	.149	.344	.4026	.375	●	●	●	●	●

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.

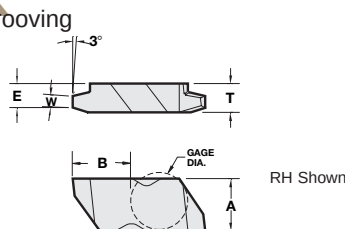
- High performance choice in optimal conditions.
- ▲ Recommended grade under general conditions.

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



ACME STUB THREADING

FLAS (cont. from previous page)

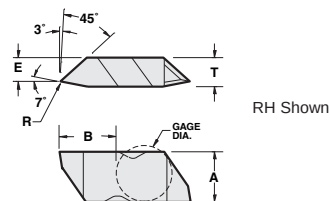


Insert Description	TPI	W	T	E	A	B	Gage Dia.					
								C3	GP3	GP50	AT3	AT50
FLAS-3R4	4	.1004	.195	.149	.344	.4026	.375		●	●	●	●
FLAS-3L4	4	.1004	.195	.149	.344	.4026	.375		●	●	●	●
FLAS-4R3	3	.1356	.255	.202	.453	.6332	.375		●	●	●	●
FLAS-4L3	3	.1356	.255	.202	.453	.6332	.375		●	●	●	●
FLAS-6R2	2	.2060	.383	.283	.453	.6308	.375		●	●	●	●
FLAS-6L2	2	.2060	.383	.283	.453	.6308	.375		●	●	●	●

AMERICAN STANDARD BUTTRESS
7° LEAD

FLTB

For ASB specifications and application see pg. 102

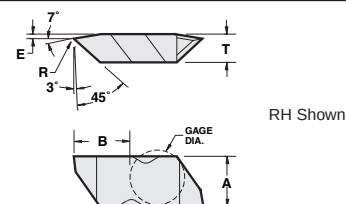


Insert Description	TPI	R	T	E	A	B	Gage Dia.					
								C3	GP3	GP50	AT3	AT50
FLTB-2RA	16-20	.002/.004	.150	.126	.219	.2688	.1875		●	●	●	●
FLTB-2LA	16-20	.002/.004	.150	.126	.219	.2688	.1875		●	●	●	●
FLTB-3RA	8-16	.005/.008	.195	.164	.344	.4034	.3750		●	●	●	●
FLTB-3LA	8-16	.005/.008	.195	.164	.344	.4034	.3750		●	●	●	●
FLTB-4RA	4-6	.008/.012	.255	.206	.453	.6334	.3750		●	●	●	●
FLTB-4LA	4-6	.008/.012	.255	.206	.453	.6334	.3750		●	●	●	●

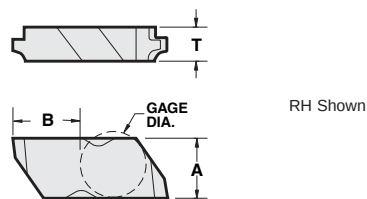
AMERICAN STANDARD BUTTRESS
45° LEAD

FLTB

For ASB specifications and application see pg. 102



Insert Description	TPI	R	T	E	A	B	Gage Dia.					
								C3	GP3	GP50	AT3	AT50
FLTB-2RB	16-20	.002/.004	.150	.010	.219	.2627	.1875		●	●	●	●
FLTB-2LB	16-20	.002/.004	.150	.010	.219	.2627	.1875		●	●	●	●
FLTB-3RB	8-16	.005/.008	.195	.012	.344	.3954	.3750		●	●	●	●
FLTB-3LB	8-16	.005/.008	.195	.012	.344	.3954	.3750		●	●	●	●
FLTB-4RB	4-6	.008/.012	.255	.016	.453	.6235	.3750		●	●	●	●
FLTB-4LB	4-6	.008/.012	.255	.016	.453	.6235	.3750		●	●	●	●

API BUTTRESS THREADING
FLDC

Insert Description	TPI	TPF	T	A	B	Gage Dia.					
							C3	GP3	GP50	AT3	AT50
FLDC-3-5B75E	5	3/4	.250	.344	.4026	.3750		●	●	●	●
FLDC-3-5B75I	5	3/4	.250	.344	.4026	.3750		●	●	●	●
FLDC-3-5B1E	5	1	.250	.344	.4026	.3750		●	●	●	●
FLDC-3-5B1I	5	1	.250	.344	.4026	.3750		●	●	●	●
FLDC-4-5B75E	5	3/4	.255	.453	.6320	.3750		●	●	●	●
FLDC-4-5B75I	5	3/4	.255	.453	.6320	.3750		●	●	●	●
FLDC-4-5B1E	5	1	.255	.453	.6320	.3750		●	●	●	●
FLDC-4-5B1I	5	1	.255	.453	.6320	.3750		●	●	●	●

TOOL[▲]FLO

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

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

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

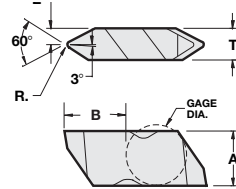


FLO-LOCK

105

API THREADING NON-TOPPING FLD

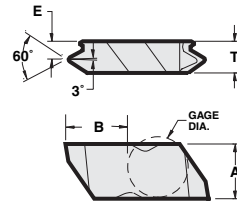
Grooving



RH Shown

Insert Description	TPI	R	E	T	A	B	Gage Dia.	Coating				
								Uncoated	TIN Coated	ATIN Coated	GP3	GP50
FLD-3038R	4	.033/.038	.082	.195	.344	.3991	.3750					
FLD-3038L	4	.033/.038	.082	.195	.344	.3991	.3750					
FLD-3040R	5	.015/.020	.082	.195	.344	.3991	.3750					
FLD-3040L	5	.015/.020	.082	.195	.344	.3991	.3750					
FLD-4038R	4	.033/.038	.128	.255	.453	.6293	.3750					
FLD-4038L	4	.033/.038	.128	.255	.453	.6293	.3750					
FLD-4040R	5	.015/.020	.128	.255	.453	.6293	.3750					
FLD-4040L	5	.015/.020	.128	.255	.453	.6293	.3750					
FLD-4050R	4	.020/.025	.128	.255	.453	.6293	.3750					
FLD-4050L	4	.020/.025	.128	.255	.453	.6293	.3750					

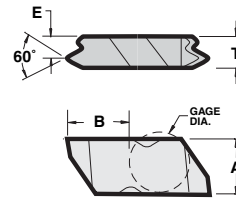
API ROTARY SHOULDER CONNECTION THREADING FLDC



RH Shown

Insert Description	TPI	TPF	E	T	A	B	Gage Dia.	Conn. No. or Size	Coating				
									Uncoated	TIN Coated	ATIN Coated	GP3	GP50
FLDC-3-530E	5	3	.147	.250	.344	.4026	.3750	3-1/2 FH, 2-3/8-4-1/2 Reg.					
FLDC-3-530I	5	3	.147	.250	.344	.4026	.3750	3-1/2 FH, 2-3/8-4-1/2 Reg.					
FLDC-4-425E	4	2	.183	.312	.453	.6320	.3750	5-1/2 FH, 6-5/8 FH & Reg.					
FLDC-4-425I	4	2	.183	.312	.453	.6320	.3750	5-1/2 FH, 6-5/8 FH & Reg.					
FLDC-4-428E	4	2	.183	.312	.453	.6320	.3750	NC23-NC50, 2-3/8-5-1/2IF					
FLDC-4-428I	4	2	.183	.312	.453	.6320	.3750	NC23-NC50, 2-3/8-5-1/2IF					
FLDC-4-435E	4	3	.183	.312	.453	.6320	.3750	5-1/2, 7-5/8, 8-5/8 Reg.					
FLDC-4-435I	4	3	.183	.312	.453	.6320	.3750	5-1/2, 7-5/8, 8-5/8 Reg.					
FLDC-4-438E	4	3	.183	.312	.453	.6320	.3750	NC56 - NC71					
FLDC-4-438I	4	3	.183	.312	.453	.6320	.3750	NC56 - NC71					

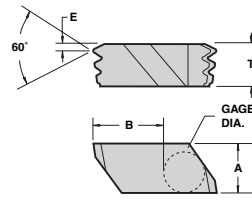
API ROUND THREADING FLDC



RH Shown

Insert Description	TPI	TPF	E	T	A	B	Gage Dia.	Coating				
								Uncoated	TIN Coated	ATIN Coated	GP3	GP50
FLDC-3-8RDR75	8	3/4	.195	.125	.344	.4010	.3750					
FLDC-3-8RDL75	8	3/4	.195	.125	.344	.4010	.3750					
FLDC-3-10RDR75	10	3/4	.195	.125	.344	.4010	.3750					
FLDC-3-10RDL75	10	3/4	.195	.125	.344	.4010	.3750					

FLDC MULTI TOOTH



RH Shown

Insert Description	TPI	TPF	E	T	A	B	Gage Dia.	Coating				
								Uncoated	TIN Coated	ATIN Coated	GP3	GP50
FLDC-6-8RDR-75M	8	3/4	.070	.383	.453	.6360	.3750					
FLDC-6-10RDR-75M	10	3/4	.134	.383	.453	.6360	.3750					

TOOL FLO

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

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

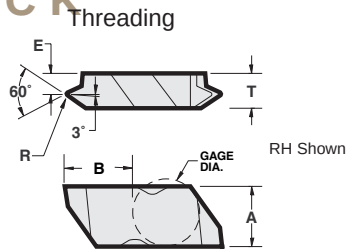
Cast Iron												
Non-Ferrous												
Stainless/High Temp												
Steel												

106

NPT THREADING

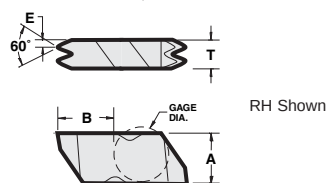
FLDC

FLO-LOCK



Insert Description	TPI	TPF	E	T	A	B	Gage Dia.	Coating				
								Uncoated	TIN Coated	ATIN Coated		
								C3	GP3	GP50	AT3	AT50
FLDC-38VR-75	8	3/4	.100	.195	.344	.4000	.3750		●	●	●	●
FLDC -38VL-75	8	3/4	.100	.195	.344	.4000	.3750		●	●	●	●
FLDC-3115VR-75	11.5	3/4	.144	.195	.344	.4000	.3750		●	●	●	●
FLDC-3115VL-75	11.5	3/4	.144	.195	.344	.4000	.3750		●	●	●	●
FLDC-314VR-75	14	3/4	.148	.195	.344	.4023	.3750		●	●	●	●
FLDC-314VL-75	14	3/4	.148	.195	.344	.4023	.3750		●	●	●	●
FLDC-318VR-75	18	3/4	.154	.195	.344	.4023	.3750		●	●	●	●
FLDC-318VL-75	18	3/4	.154	.195	.344	.4023	.3750		●	●	●	●
FLDC-327VR-75	27	3/4	.162	.195	.344	.4023	.3750		●	●	●	●
FLDC-327VL-75	27	3/4	.162	.195	.344	.4023	.3750		●	●	●	●

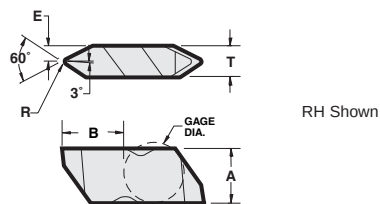
FLDC -MULTI-TOOTH



Insert Description	TPI	TPF	E	T	A	B	Gage Dia.	Coating				
								Uncoated	TIN Coated	ATIN Coated		
								C3	GP3	GP50	AT3	AT50
FLDC-3-8P NPT-2E	8	3/4	.058	.250	.344	.4050	.3750			●	●	
FLDC -3-8P NPT-2I	8	3/4	.058	.250	.344	.4050	.3750			●	●	
FLDC-3-11.5P NPT-2E	11.5	3/4	.048	.250	.344	.4050	.3750			●	●	
FLDC-3-11.5P NPT-2I	11.5	3/4	.048	.250	.344	.4050	.3750			●	●	

UNJ THREADING

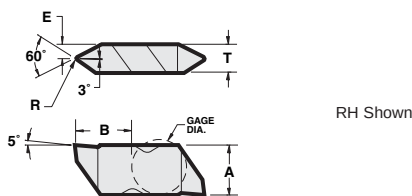
FLJ



Insert Description	TPI	R	E	T	A	B	Gage Dia.	Coating				
								Uncoated	TIN Coated	ATIN Coated		
								C3	GP3	GP50	AT3	AT50
FLJ-3010R16	16	.0094/.0104	.098	.195	.344	.3999	.3750		●	●	●	●
FLJ-3010L16	16	.0094/.0104	.098	.195	.344	.3999	.3750		●	●	●	●
FLJ-3014R12	12	.0125/.0135	.098	.195	.344	.3999	.3750		●	●	●	●
FLJ-3014L12	12	.0125/.0135	.098	.195	.344	.3999	.3750		●	●	●	●
FLJ-3020R8	8	.0188/.0198	.098	.195	.344	.3999	.3750		●	●	●	●
FLJ-3020L8	8	.0188/.0198	.098	.195	.344	.3999	.3750		●	●	●	●

FLJP

Positive Rake



Insert Description	TPI	R	E	T	A	B	Gage Dia.	Coating				
								Uncoated	TIN Coated	ATIN Coated		
								C3	GP3	GP50	AT3	AT50
FLJP-3010R16	16	.0094/.0104	.098	.195	.344	.3999	.3750		●	●	●	●
FLJP-3010L16	16	.0094/.0104	.098	.195	.344	.3999	.3750		●	●	●	●
FLJP-3014R12	12	.0125/.0135	.098	.195	.344	.3999	.3750		●	●	●	●
FLJP-3014L12	12	.0125/.0135	.098	.195	.344	.3999	.3750		●	●	●	●
FLJP-3020R8	8	.0188/.0198	.098	.195	.344	.3999	.3750		●	●	●	●
FLJP-3020L8	8	.0188/.0198	.098	.195	.344	.3999	.3750		●	●	●	●

TOOL FLO

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

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

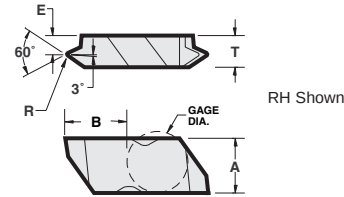
Cast Iron
Non-Ferrous
Stainless/High Temp
Steel

	▲		●	
	▲		●	
	▲		●	
	▲		●	



UNJ FINE PITCH THREADING

FLJF - Cut to shoulder

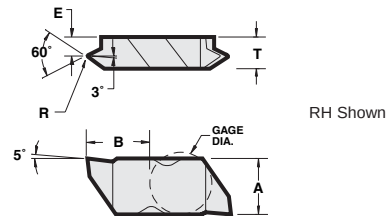


Insert Description	TPI	R	E	T	A	B	Gage Dia.	Coating				
								Uncoated	TIN Coated	ATIN Coated	GP3	GP50
FLJF-3005R32	32	.0047/.0057	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJF-3005L32	32	.0047/.0057	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJF-3006R28	28	.0054/.0064	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJF-3006L28	28	.0054/.0064	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJF-3007R24	24	.0063/.0073	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJF-3007L24	24	.0063/.0073	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJF-3008R20	20	.0075/.0085	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJF-3008L20	20	.0075/.0085	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJF-3009R18	18	.0083/.0093	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJF-3009L18	18	.0083/.0093	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJF-3010R16	16	.0094/.0104	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJF-3010L16	16	.0094/.0104	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJF-3012R14	14	.0107/.0117	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJF-3012L14	14	.0107/.0117	.141	.195	.344	.4022	.3750	●	●	●	●	●

UNJ FINE PITCH THREADING

FLJK

Positive Rake



Insert Description	TPI	R	E	T	A	B	Gage Dia.	Coating				
								Uncoated	TIN Coated	ATIN Coated	GP3	GP50
FLJK-3005R32	32	.0047/.0057	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJK-3005L32	32	.0047/.0057	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJK-3006R28	28	.0054/.0064	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJK-3006L28	28	.0054/.0064	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJK-3007R24	24	.0063/.0073	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJK-3007L24	24	.0063/.0073	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJK-3008R20	20	.0075/.0085	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJK-3008L20	20	.0075/.0085	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJK-3009R18	18	.0083/.0093	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJK-3009L18	18	.0083/.0093	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJK-3010R16	16	.0094/.0104	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJK-3010L16	16	.0094/.0104	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJK-3012R14	14	.0107/.0117	.141	.195	.344	.4022	.3750	●	●	●	●	●
FLJK-3012L14	14	.0107/.0117	.141	.195	.344	.4022	.3750	●	●	●	●	●

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.

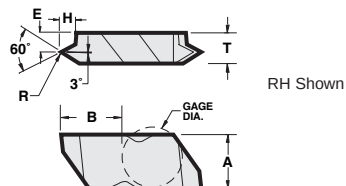
● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

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

108 UN THREADING

FLTC
Crest Topping

FLO-LOCK Threading & Grooving



Insert Description	TPI	R	E	H	T	A	B	Gage Dia.	Coating				
									Uncoated	TiN Coated	AlTiN Coated	C3	GP3
FLTC-3R7E	7	.017	.107	.108	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3L7E	7	.017	.107	.108	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3R7I	7	.009	.107	.092	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3L7I	7	.009	.107	.092	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3R8E	8	.015	.107	.094	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3L8E	8	.015	.107	.094	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3R8I	8	.007	.107	.081	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3L8I	8	.007	.107	.081	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3R9E	9	.013	.107	.084	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3L9E	9	.013	.107	.084	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3R9I	9	.006	.107	.072	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3L9I	9	.006	.107	.072	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3R10E	10	.012	.107	.076	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3L10E	10	.012	.107	.076	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3R10I	10	.005	.107	.065	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3L10I	10	.005	.107	.065	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3R11E	11	.011	.107	.069	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3L11E	11	.011	.107	.069	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3R11I	11	.005	.107	.059	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3L11I	11	.005	.107	.059	.195	.344	.4004	.3750	●	●	●	●	●
FLTC-3R12E	12	.010	.148	.051	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3L12E	12	.010	.148	.051	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3R12I	12	.004	.148	.048	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3L12I	12	.004	.148	.048	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3R14E	14	.009	.148	.054	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3L14E	14	.009	.148	.054	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3R14I	14	.003	.148	.044	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3L14I	14	.003	.148	.044	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3R16E	16	.008	.148	.046	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3L16E	16	.008	.148	.046	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3R16I	16	.003	.148	.040	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3L16I	16	.003	.148	.040	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3R18E	18	.007	.148	.041	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3L18E	18	.007	.148	.041	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3R18IE	18	.003	.148	.036	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3L18I	18	.003	.148	.036	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3R20E	20	.006	.148	.037	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3L20E	20	.006	.148	.037	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3R20I	20	.003	.148	.031	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3L20I	20	.003	.148	.031	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3R24E	24	.005	.148	.031	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3L24E	24	.005	.148	.031	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3R24I	24	.003	.148	.026	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3L24I	24	.003	.148	.026	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3R28*	28	.003	.148	.023	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3L28*	28	.003	.148	.023	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3R32*	32	.003	.148	.021	.195	.344	.4025	.3750	●	●	●	●	●
FLTC-3L32*	32	.003	.148	.021	.195	.344	.4025	.3750	●	●	●	●	●

*Will work for either internal or external.

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

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

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

TOOL FLO



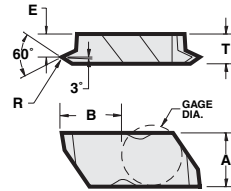
FLO-LOCK

109

60° V- THREADING

FLTF

Fine Pitch

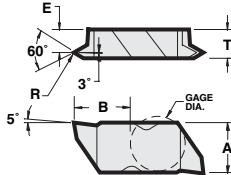


RH Shown

Insert Description	TPI								Gage Dia.						
	Int	Ext	R	E	T	A	B	C25		GP3	GP4	GP50	AT3	AT50	
FLTF-2R	12-24	14-44	.002/.004	.110	.150	.219	.2679	.1875	●	●		●		●	●
FLTF-2L	12-24	14-44	.002/.004	.110	.150	.219	.2679	.1875	●	●		●		●	●
FLTF-3R	9-24	10-44	.002/.004	.141	.195	.344	.4022	.3750	●	●		●		●	●
FLTF-3L	9-24	10-44	.002/.004	.141	.195	.344	.4022	.3750	●	●		●		●	●
FLTF-4R	9-24	10-44	.002/.004	.201	.255	.453	.6322	.3750	●	●		●		●	●
FLTF-4L	9-24	10-44	.002/.004	.201	.255	.453	.6322	.3750	●	●		●		●	●

FLTK

POSITIVE RAKE



RH Shown

Insert Description	TPI					A	B	Gage Dia.							
	Int	Ext	R	E	T				C25	GP3	GP4	GP50	GP520	AT3	AT50
FLTK-2R	12-24	14-44	.002/.004	.110	.150	.219	.2679	.1875	●	●	●	●	●	●	●
FLTK-2L	12-24	14-44	.002/.004	.110	.150	.219	.2679	.1875	●	●	●	●	●	●	●
FLTK-3R	9-24	10-44	.002/.004	.141	.195	.344	.4022	.3750	●	●	●	●	●	●	●
FLTK-3L	9-24	10-44	.002/.004	.141	.195	.344	.4022	.3750	●	●	●	●	●	●	●
FLTK-4R	9-24	10-44	.002/.004	.201	.255	.453	.6322	.3750	●	●	●	●	●	●	●
FLTK-4L	9-24	10-44	.002/.004	.201	.255	.453	.6322	.3750	●	●	●	●	●	●	●

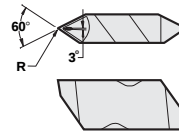
60° V- THREADING - CHIP-FLO

Exclusive patented design!

FLT-CB

Features:

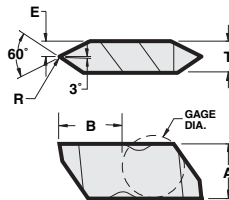
- Patented chipbreaker - Patent No. 6,146,064
- Maximum chip control
- Fewer scarred threads
- For coarse and fine pitches



RH Shown

Insert Description	TPI							Gage Dia.	C25	GP22	GP4	GP50	GP520	AT22	AT50
	Int	Ext	R	E	T	A	B								
FLT-3R-HCB	5-12	6-20	.005/.008	.098	.195	.344	.3999	.3750		●		●		●	●
FLT-3L-HCB	5-12	6-20	.005/.008	.098	.195	.344	.3999	.3750		●		●		●	●
FLT-3RC-HCB	5-6	6-11	.012/.015	.098	.195	.344	.3999	.3750		●		●		●	●
FLT-3LC-HCB	5-6	6-11	.012/.015	.098	.195	.344	.3999	.3750		●		●		●	●
FLT-3R-CB	8-12	8-20	.005/.008	.098	.195	.344	.3999	.3750		●		●		●	●
FLT-3L-CB	8-12	8-20	.005/.008	.098	.195	.344	.3999	.3750		●		●		●	●
FLT-3R-FCB	7-20	8-36	.003/.005	.098	.195	.344	.3999	.3750		●		●		●	●
FLT-3L-FCB	7-20	8-36	.003/.005	.098	.195	.344	.3999	.3750		●		●		●	●

FLT



RH Shown

Insert Description	TPI								Gage Dia.						
	Int	Ext	R	E	T	A	B	C25		GP3	GP4	GP50	GP520	AT3	AT50
FLT-2R	7-20	8-36	.003/.005	.075	.150	.219	.2661	.1875	●	●	●	●	●	●	●
FLT-2L	7-20	8-36	.003/.005	.075	.150	.219	.2661	.1875	●	●	●	●	●	●	●
FLT-3R	5-12	6-20	.005/.008	.098	.195	.344	.3999	.3750	●	●	●	●	●	●	●
FLT-3L	5-12	6-20	.005/.008	.098	.195	.344	.3999	.3750	●	●	●	●	●	●	●
FLT-3010R	5-12	6-18	.009/.011	.098	.195	.344	.3999	.3750	●	●	●	●	●	●	●
FLT-3010L	5-12	6-18	.009/.011	.098	.195	.344	.3999	.3750	●	●	●	●	●	●	●
FLT-4R	4-12	4-20	.005/.008	.128	.255	.453	.6298	.3750	●	●	●	●	●	●	●
FLT-4L	4-12	4-20	.005/.008	.128	.255	.453	.6298	.3750	●	●	●	●	●	●	●

TOOL FLO

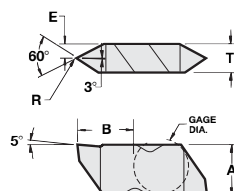
In an effort to improve our stock standard grade offering, there are periodic changes. Please see current price list for up to date grade offering.

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

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



60° V- THREADING

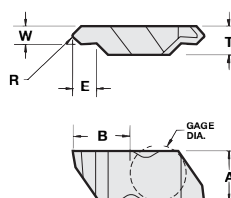
FLTP
POSITIVE RAKE

RH Shown

Insert Description	TPI		R	E	T	A	B	Gage Dia.	Coating				
	Int	Ext							Uncoated	TIN Coated	AlTiN Coated		
									C25	GP3	GP50	AT3	AT50
FLTP-2R	7-20	8-36	.003/.005	.075	.150	.219	.2661	.1875	●	●	●	●	●
FLTP-2L	7-20	8-36	.003/.005	.075	.150	.219	.2661	.1875	●	●	●	●	●
FLTP-3R	5-12	6-20	.005/.008	.098	.195	.344	.3999	.3750	●	●	●	●	●
FLTP-3L	5-12	6-20	.005/.008	.098	.195	.344	.3999	.3750	●	●	●	●	●
FLTP-4R	4-12	4-20	.005/.008	.128	.255	.453	.6293	.3750	●	●	●	●	●
FLTP-4L	4-12	4-20	.005/.008	.128	.255	.453	.6293	.3750	●	●	●	●	●

UNDERCUTTING

FLU

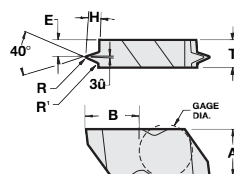


RH Shown

Insert Description	W		R	E	T	A	B	Gage Dia.	Coating				
	Inch	Metric							Uncoated	TIN Coated	AlTiN Coated		
									C3	GP3	GP50	AT3	AT50
FLU-3094R	.094	2,39	.020	.125	.195	.344	.4050	.3750	●	●	●	●	●
FLU-3094L	.094	2,39	.020	.125	.195	.344	.4050	.3750	●	●	●	●	●
FLU-3125R	.125	3,18	.047	.188	.195	.344	.4050	.3750	●	●	●	●	●
FLU-3125L	.125	3,18	.047	.188	.195	.344	.4050	.3750	●	●	●	●	●
FLU-3156R	.156	3,96	.047	.188	.195	.344	.4050	.3750	●	●	●	●	●
FLU-3156L	.156	3,96	.047	.188	.195	.344	.4050	.3750	●	●	●	●	●

POLY-V

FLV



RH Shown

Insert Description	R	R ¹	E	T	H	A	B	Gage Dia.	Coating				
									Uncoated	TIN Coated	AlTiN Coated		
									C3	GP3	GP50	AT3	AT50
FLV-3RJ	.012	.008	.125	.195	.087	.344	.4013	.3750	●	●	●	●	●
FLV-3LJ	.012	.008	.125	.195	.087	.344	.4013	.3750	●	●	●	●	●
FLV-4RJ	.012	.015	.118	.255	.201	.453	.6288	.3750	●	●	●	●	●
FLV-4LJ	.012	.015	.118	.255	.201	.453	.6288	.3750	●	●	●	●	●

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

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

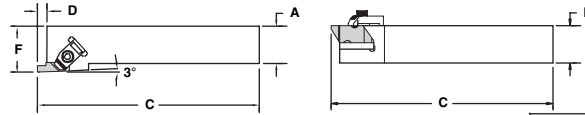


EXTERNAL HOLDER (INCH)

FLSR/L

Threading, Grooving

RH SHOWN



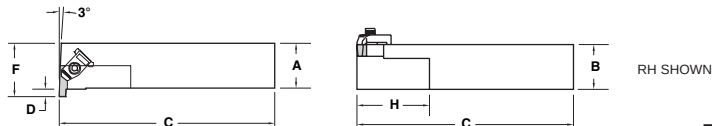
Holder Description	Insert	A	B	C	D	F*	Seat	Seat Screw	Clamp	Clamp Screw
FLSR-62	FL_-2R	3/8	3/8	2-1/2	.14	.562	-	-	TF-74	S-310
FLSL-62	FL_-2L	3/8	3/8	2-1/2	.14	.562	-	-	TF-75	S-310
FLSR-82V	FL_-2R	1/2	1/2	3-1/2	.14	.750	-	-	TF-74	S-310
FLSL-82V	FL_-2L	1/2	1/2	3-1/2	.14	.750	-	-	TF-75	S-310
FLSR-102B	FL_-2R	5/8	5/8	4-1/2	.14	1.000	-	-	TF-74	S-310
FLSR-122B	FL_-2R	3/4	3/4	4-1/2	.14	1.000	-	-	TF-74	S-310
FLSL-122B	FL_-2L	3/4	3/4	4-1/2	.14	1.000	-	-	TF-75	S-310
FLSR-162C	FL_-2R	1.000	1.000	5	.14	1.250	-	-	TF-74	S-310
FLSL-162C	FL_-2L	1.000	1.000	5	.14	1.250	-	-	TF-75	S-310
FLSR-123B	FL_-3R	3/4	3/4	4-1/2	.21	1.000	-	-	TF-72	S-412
FLSL-123B	FL_-3L	3/4	3/4	4-1/2	.21	1.000	-	-	TF-73	S-412
FLSR-163C	FL_-3R	1	1	5	.21	1.250	-	-	TF-72	S-412
FLSL-163C	FL_-3L	1	1	5	.21	1.250	-	-	TF-73	S-412
FLSR-163D	FL_-3R	1	1	6	.21	1.250	-	-	TF-72	S-412
FLSL-163D	FL_-3L	1	1	6	.21	1.250	-	-	TF-73	S-412
FLSR-203D	FL_-3R	1-1/4	1-1/4	6	.21	1.500	-	-	TF-72	S-412
FLSL-203D	FL_-3L	1-1/4	1-1/4	6	.21	1.500	-	-	TF-73	S-412
FLSR-164D	FL_-4R	1	1	6	.29	1.250	SM-420	SL-344	TF-72	S-412
FLSL-164D	FL_-4L	1	1	6	.29	1.250	SM-420	SL-344	TF-73	S-412
FLSR-204D	FL_-4R	1-1/4	1-1/4	6	.29	1.500	SM-420	SL-344	TF-72	S-412
FLSL-204D	FL_-4L	1-1/4	1-1/4	6	.29	1.500	SM-420	SL-344	TF-73	S-412
FLSR-205D	FL_-5R	1-1/4	1-1/4	6	.40	1.500	-	-	TF-80	S-352
FLSL-205D	FL_-5L	1-1/4	1-1/4	6	.40	1.500	-	-	TF-81	S-352
FLSR-206D	FL_-6R	1-1/4	1-1/4	6	.29	1.500	SM-416	S-111	TF-120	S-412
FLSL-206D	FL_-6L	1-1/4	1-1/4	6	.29	1.500	SM-416	S-111	TF-121	S-412

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

EXTERNAL HOLDER (INCH)

FLER/L

Threading, Grooving



RH SHOWN

Holder Description	Insert	A	B	C*	D	F*	H	Clamp	Clamp Screw
FLER-82V	FL_-2L	1/2	1/2	3-1/2	.14	.750	1	TF-75	S-310
FLER-122B	FL_-2L	3/4	3/4	4-1/2	.14	1.000	1	TF-75	S-310
FLEL-122B	FL_-2R	3/4	3/4	4-1/2	.14	1.000	1	TF-74	S-310
FLER-162C	FL_-2L	1	1	5	.14	1.250	1	TF-75	S-310
FLEL-162C	FL_-2R	1	1	5	.14	1.250	1	TF-74	S-310
FLER-123B	FL_-3L	3/4	3/4	4-1/2	.21	1.125	2	TF-73	S-412
FLEL-123B	FL_-3R	3/4	3/4	4-1/2	.21	1.125	2	TF-72	S-412
FLER-163D	FL_-3L	1	1	6.000	.21	1.250	2	TF-73	S-412
FLEL-163D	FL_-3R	1	1	6.000	.21	1.250	2	TF-72	S-412
FLER-203D	FL_-3L	1-1/4	1-1/4	6.000	.21	1.500	2	TF-73	S-412
FLEL-203D	FL_-3R	1-1/4	1-1/4	6.000	.21	1.500	2	TF-72	S-412
FLER-164D	FL_-4L	1	1	6.000	.29	1.375	2	TF-73	S-412
FLEL-164D	FL_-4R	1	1	6.000	.29	1.375	2	TF-72	S-412
FLER-204D	FL_-4L	1-1/4	1-1/4	6.000	.29	1.625	2	TF-73	S-412
FLEL-204D	FL_-4R	1-1/4	1-1/4	6.000	.29	1.625	2	TF-72	S-412
FLER-205D	FL_-5L	1-1/4	1-1/4	6.000	.29	2.000	2	TF-81	S-352
FLEL-205D	FL_-5R	1-1/4	1-1/4	6.000	.29	2.000	2	TF-80	S-352
FLER-206D	FL_-6L	1-1/4	1-1/4	6.000	.29	1.625	2	TF-121	S-412
FLEL-206D	FL_-6R	1-1/4	1-1/4	6.000	.29	1.625	2	TF-120	S-412

* C&F measured over sharp point of grooving insert

1 1 2

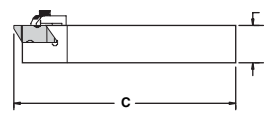
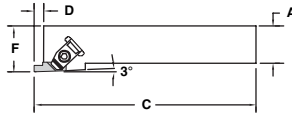
FLO-LOCK[®] Holders

EXTERNAL HOLDER (METRIC)

FLSR/L

Threading, Grooving

RH SHOWN



Holder Description	Insert	A	B	C	D	F*	Seat			
							Seat	Screw	Clamp	Clamp Screw
FLSR-2020M2	FL_-2R	20,0	20,0	125,0	3,0	25,0	-	-	TF-74	S-310
FLSL-2020M2	FL_-2L	20,0	20,0	125,0	3,0	25,0	-	-	TF-75	S-310
FLSR-2525M2	FL_-2R	25,0	25,0	150,0	3,0	32,0	-	-	TF-74	S-310
FLSL-2525M2	FL_-2L	25,0	25,0	150,0	3,0	32,0	-	-	TF-75	S-310
FLSR-2020M3	FL_-3R	20,0	20,0	125,0	5,0	32,0	-	-	TF-72	S-412
FLSL-2020M3	FL_-3L	20,0	20,0	125,0	5,0	32,0	-	-	TF-73	S-412
FLSR-2525M3	FL_-3R	25,0	25,0	150,0	5,0	32,0	-	-	TF-72	S-412
FLSL-2525M3	FL_-3L	25,0	25,0	150,0	5,0	32,0	-	-	TF-73	S-412

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

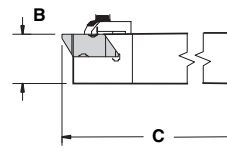
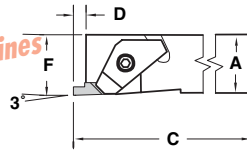
EXTERNAL HOLDER (INCH)

FLASR/L

Threading, Grooving

Design for Swiss machines!

RH SHOWN



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

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

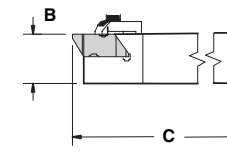
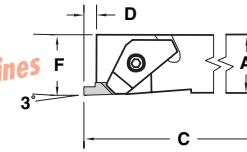
EXTERNAL HOLDER (METRIC)

FLASR/L

Threading, Grooving

Design for Swiss machines!

RH SHOWN



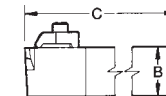
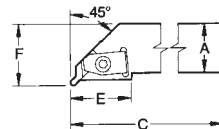
Holder Description	Insert	A	B	C	D	F	Clamp	
							Clamp	Screw
FLASR-1010M2	FL_-2R	10,0	10,0	150,0	3,51	10,0	TF-182	S-310
FLASL-1010M2	FL_-2L	10,0	10,0	150,0	3,51	10,0	TF-183	S-310
FLASR-1212M2	FL_-2R	12,0	12,0	150,0	3,51	12,0	TF-182	S-310
FLASL-1212M2	FL_-2L	12,0	12,0	150,0	3,51	12,0	TF-183	S-310
FLASR-1616M2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

EXTERNAL HOLDER (INCH)

FLRR/L

Undercutting

RH SHOWN

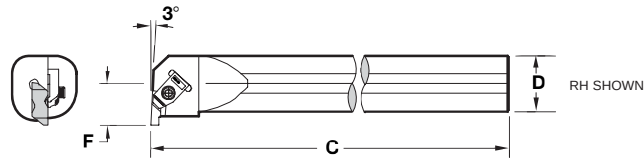


Holder Description	Insert	A	B	C	D	F	Clamp	
							Clamp	Screw
FLRR-123B	FLU-3L	3/4	3/4	4-1/2	1-1/4	1.000	TF-73	S-412
FLRL-123B	FLU-3R	3/4	3/4	4-1/2	1-1/4	1.000	TF-72	S-412
FLRR-163D	FLU-3L	1	1	6	1-1/4	1.250	TF-73	S-412
FLRL-163D	FLU-3R	1	1	6	1-1/4	1.250	TF-72	S-412
FLRR-203D	FLU-3L	1-1/4	1-1/4	6	1-1/4	1.500	TF-73	S-412
FLRL-203D	FLU-3R	1-1/4	1-1/4	6	1-1/4	1.500	TF-72	S-412

TOOL[▲]FLO

**INTERNAL BAR (INCH)**

A-FLER/L - with coolant hole
Threading, Grooving

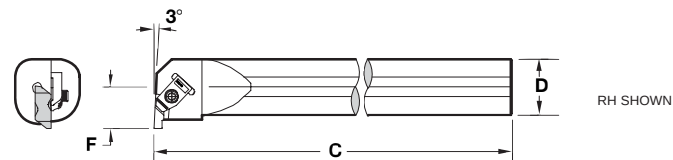


Holder Description	Stock Status	Insert	Min. Bore	D	C	F	Clamp	Clamp Screw
A08-FLER2	●	FL-2L	.730	.500	8	.437	TF-75	S-310
A08-FLER2	●	FL-2R	.730	.500	8	.437	TF-74	S-310
A10-FLER2	●	FL-2L	1.000	.625	10	.500	TF-75	S-310
A12-FLER2	●	FL-2L	1.125	.750	10	.562	TF-75	S-310
A12-FLEL2	●	FL-2R	1.125	.750	10	.562	TF-74	S-310
A16-FLER2	●	FL-2L	1.375	1.000	12	.688	TF-75	S-310
A16-FLEL2	●	FL-2R	1.375	1.000	12	.688	TF-74	S-310
A16-FLER3	●	FL-3L	1.375	1.000	12	.688	TF-73	S-412
A16-FLEL3	●	FL-3R	1.375	1.000	12	.688	TF-72	S-412
A20-FLER3	○	FL-3L	1.750	1.250	14	.875	TF-73	S-412
A20-FLEL3	○	FL-3R	1.750	1.250	14	.875	TF-72	S-412
A24-FLER3	●	FL-3L	2.000	1.500	14	1.000	TF-73	S-412
A24-FLEL3	●	FL-3R	2.000	1.500	14	1.000	TF-72	S-412
A28-FLER3	○	FL-3L	2.250	1.750	14	1.125	TF-73	S-412
A32-FLER3	●	FL-3L	2.500	2.000	16	1.250	TF-73	S-412
A32-FLEL3	●	FL-3R	2.500	2.000	16	1.250	TF-72	S-412
A28-FLER4	●	FL-4L	2.250	1.750	16	1.250	TF-73	S-412
A28-FLEL4	●	FL-4R	2.250	1.750	16	1.250	TF-72	S-412
A32-FLER4	●	FL-4L	2.750	2.000	16	1.296	TF-73	S-412
A32-FLEL4	●	FL-4R	2.750	2.000	16	1.296	TF-72	S-412
A32-FLER5	●	FL-5L	2.812	2.000	16	1.406	CM-81	S-352
A32-FLER6	●	FL-6L	2.750	2.000	16	1.375	CM-121	S-412

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

INTERNAL BAR (METRIC)

A_M-FLER/L - with coolant hole
Threading, Grooving



Holder Description	Stock Status	Insert	Min. Bore	D	C	F	Clamp	Clamp Screw
A16M-FLER2	●	FL-2L	25,4	16,0	250,0	12,65	TF-75	S-310
A20M-FLER2	●	FL-2L	28,6	20,0	250,0	13,8	TF-75	S-310
A25M-FLER2	●	FL-2L	34,9	25,0	300,0	17,7	TF-75	S-310
A25M-FLEL2	●	FL-2R	34,9	25,0	300,0	17,7	TF-74	S-310
A25M-FLER3	●	FL-3L	34,9	25,0	300,0	17,7	TF-73	S-412
A25M-FLEL3	●	FL-3R	34,9	25,0	300,0	17,7	TF-72	S-412
A32M-FLER3	○	FL-3L	44,45	32,0	350,0	22,1	TF-73	S-412
A32M-FLEL3	○	FL-3R	44,45	32,0	350,0	22,1	TF-72	S-412
A40M-FLER3	●	FL-3L	50,8	40,0	350,0	24,45	TF-73	S-412
A40M-FLEL3	●	FL-3R	50,8	40,0	350,0	24,45	TF-72	S-412
A50M-FLER4	●	FL-4L	63,5	50,0	400,0	35,3	TF-72	S-412
A50M-FLEL4	●	FL-4R	63,5	50,0	400,0	35,3	TF-72	S-412

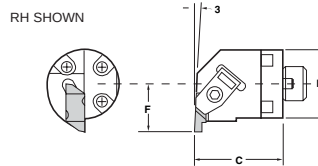
"F" and "C" Dim. over sharp point of grooving insert.



INTERCHANGEABLE HEADS

H-FLER

Threading, Grooving



Holder Description	Insert	D	C	F	Min. Bore	Clamp	Clamp Screw
H20-FLER3W	FL-3L	1-1/4	1.625	.875	1.750	TF-73	S-412
H24-FLER3W	FL-3L	1-1/2	1.625	1.000	2.000	TF-73	S-412
H28-FLER3W	FL-3L	1-3/4	1.625	1.125	2.250	TF-73	S-412
H32-FLER3W	FL-3L	2	1.625	1.250	2.500	TF-73	S-412
H40-FLER3W	FL-3L	2-1/2	1.625	1.500	3.000	TF-73	S-412
H28-FLER4W	FL-4L	1-3/4	1.625	1.250	2.500	TF-73	S-412
H32-FLER4W	FL-4L	2	1.625	1.375	2.750	TF-73	S-412
H36-FLER4W	FL-4L	2-1/4	1.625	1.500	3.000	TF-73	S-412
H40-FLER4W	FL-4L	2-1/2	1.625	1.625	3.250	TF-73	S-412
H28-FLER6W	FL-6L	1-3/4	1.625	1.250	2.500	CM-121	S-412
H32-FLER6W	FL-6L	2	1.625	1.375	2.750	CM-121	S-412
H40-FLER6W	FL-6L	2-1/2	1.625	1.625	3.250	CM-121	S-412

*Left hand quoted on request

Recommended Feed rate - inch/rev (mm/rev)

Workpiece Group	Insert Rake Configuration	
	FLG-Neutral	FLG-CB
Free Machining Carbon Steels	.004-.010	.005-.014
Plain Carbon Steels	.004-.010	.005-.014
Alloy Steels 190-330 HB	.004-.010	.005-.014
Alloy Steels 330-450 HB	.003-.009	.005-.012
Martensitic/Ferritic Stainless Steel 400 Series	.004-.010	.005-.014
Austenitic Stainless 300 Series	.003-.006	.004-.008
Gray Cast Iron 190-330 HB	.004-.010	---
Gray Cast Iron 330-450 HB	.003-.009	---
Alloy / Ductile Irons	.004-.010	.005-.014
Free Machining Aluminum Alloys	.005-.012	.006-.016
High-Silicon Aluminum Alloys	.003-.006	---
Copper / Zinc / Brass	.005-.012	.006-.016
Non-Metallics	.005-.012	---
High Temperature Alloys 200-260 HB	.003-.006	.004-.007
High Temperature Alloys 260-450 HB	.003-.006	.004-.007
Titanium Alloys (Ti 6Al-4V)	.003-.006	.004-.008
Hardened Materials 48-65 HRC	.0015-.005	---

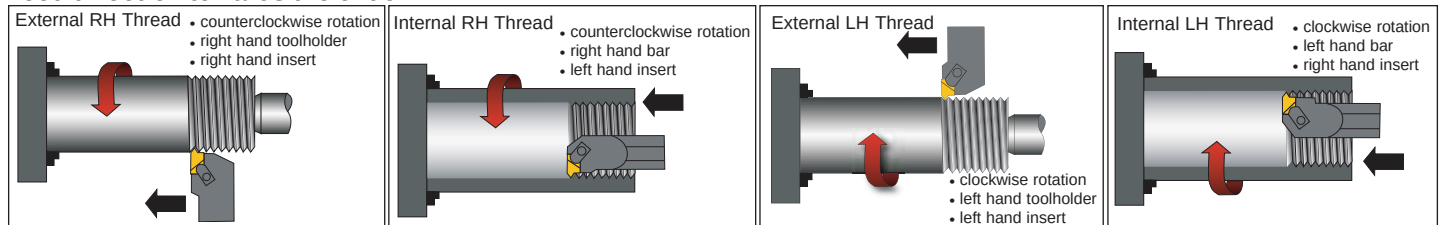


Recommended SFM for Grooving Applications

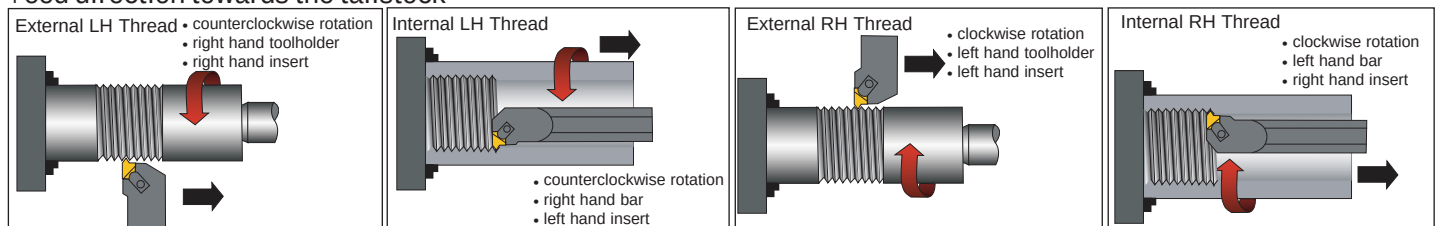
Workpiece Group	Uncoated	TiN PVD Coated				AlTiN PVD Coated			TiN Cermet	CBN		PCD
	C3	GP22	GP3	GP4	GP50	AT22	AT3	AT50	GPM6	CB200	CB400	PC33
Free Machining Carbon Steels	---	150-300	200-400	60-175	200-600	200-400	250-450	400-800	600-1500	---	---	---
Plain Carbon Steels	---	150-300	200-400	60-175	200-600	200-400	250-450	450-800	600-1200	---	---	---
Alloy Steels 190-330 HB	---	150-300	200-400	60-150	200-500	200-350	250-400	400-800	500-1100	---	---	---
Alloy Steels 330-450 HB	---	150-300	200-350	60-150	200-450	200-350	250-400	400-750	600-800	---	---	---
Martensitic/Ferritic Stainless Steel 400 Series	---	150-300	200-400	60-150	200-500	200-400	250-450	350-700	500-800	---	---	---
Austenitic Stainless 300 Series	200-400	150-400	200-500	60-150	---	300-600	250-700	---	500-1000	---	---	---
Gray Cast Iron 190-330 HB	100-375	150-400	200-600	60-150	---	300-600	250-700	---	400-1100	1400-2500	---	---
Gray Cast Iron 330-450 HB	100-350	150-350	200-500	60-150	---	200-550	250-600	---	350-950	1200-1800	---	---
Alloy / Ductile Irons	100-350	150-300	200-400	60-150	200-500	250-450	200-450	300-700	350-950	---	---	---
Free Machining Aluminum Alloys	500-2000	150-2000	300-2000	60-150	---	600-2200	600-2500	---	---	---	---	1000-8000
High-Silicon Aluminum Alloys	---	---	---	---	---	---	---	---	---	---	---	1000-5000
Copper / Zinc / Brass	200-700	150-700	200-900	---	---	300-900	400-1000	---	---	---	---	1000-4000
Non-Metallics	400-1400	150-1500	300-1500	---	---	350-1200	400-1500	---	---	---	---	1000-4500
High Temperature Alloys 200-260 HB	80-130	100-175	100-200	50-80	---	80-200	100-250	---	---	300-600	---	---
High Temperature Alloys 260-450 HB	50-100	80-150	100-175	50-80	---	80-175	100-200	---	---	250-450	---	---
Titanium Alloys (Ti 6Al-4V)	100-200	100-250	150-300	50-80	---	80-300	100-300	---	---	---	---	---
Hardened Materials 48-65 HRC	---	---	---	---	---	---	80-150	---	---	150-350	200-550	---

Bold print items denote the top choices for the materials listed, provided it can be machined within the SFM stated under the appropriate machining conditions. For the best performance in optimal machining conditions, select the grade that will provide you with the highest allowable SFM.

Feed direction towards the chuck



Feed direction towards the tailstock





SAVE!

Buy in Kits

Flo-Lock Series Kits

THREADING KITS

V-THREADING

KIT #1A

Kit Contents

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

V-THREADING

KIT #1B

Kit Contents

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

GROOVING KITS

W.125 GROOVING

KIT #2A

Kit Contents

1	FLSR-163D
4	FLG-3125R-CB GP50
1	S-412 SCREW

W.125 GROOVING

KIT #2B

Kit Contents

1	FLSR-163D
4	FLG-3125R-CB GP3
1	S-412 SCREW

W.094 GROOVING

KIT #3A

Kit Contents

1	FLSR-163D
4	FLG-3094R-CB GP50
1	S-412 SCREW

W.094 GROOVING

KIT #3B

Kit Contents

1	FLSR-163D
4	FLG-3094R-CB GP3
1	S-412 SCREW

W.062 GROOVING

KIT #4A

Kit Contents

1	FLSR-163D
4	FLG-3062R-CB GP50
1	S-412 SCREW

W.062 GROOVING

KIT #4B

Kit Contents

1	FLSR-163D
4	FLG-3062R-CB GP3
1	S-412 SCREW

W.047 GROOVING

KIT #5A

Kit Contents

1	FLSR-163D
4	FLG-3047R-CB GP50
1	S-412 SCREW

W.047 GROOVING

KIT #5B

Kit Contents

1	FLSR-163D
4	FLG-3047R-CB GP3
1	S-412 SCREW

DEEP GROOVING KITS

W.125 GROOVING

KIT #6

Kit Contents

1	FLSR-163D
4	FLGD-3125R-CB AT3
1	S-412 SCREW

W.094 GROOVING

KIT #7

Kit Contents

1	FLSR-163D
4	FLGD-3094R-CB AT3
1	S-412 SCREW

