



# TOOL-FLO

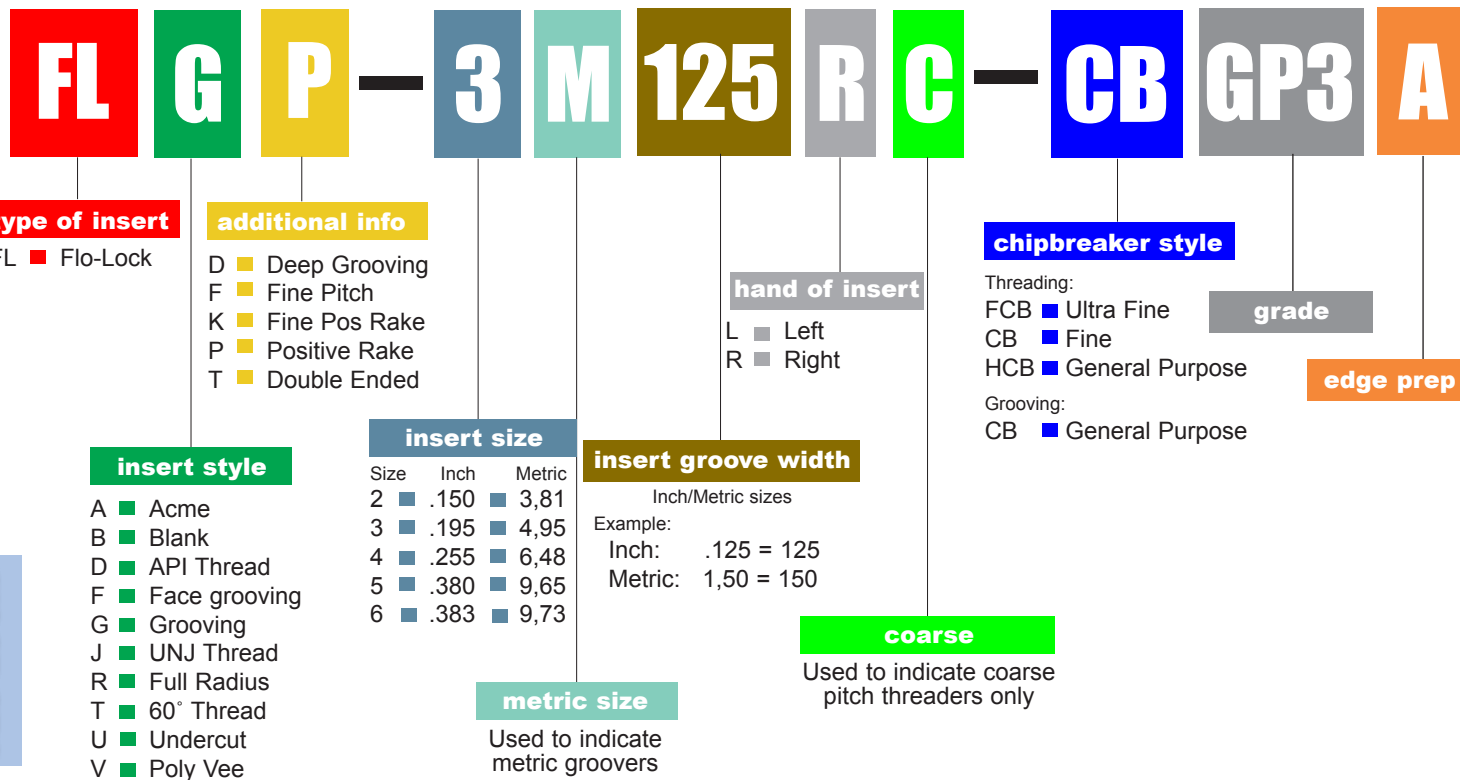


## FLO-LOCK

Threading & Grooving



## Flo-Lock Grooving/Threading Insert Identification Chart



## Flo-Lock Cross Reference Chart

| STYLE                       | TOOL-FLO | KENAMETAL® | SANDVIK® | VALENITE® | HORIZON® | RTW® |
|-----------------------------|----------|------------|----------|-----------|----------|------|
| ACME                        | FLA      | NA         | TLA      | VLA       | HA       | PA   |
| ACME STUBFLAS               | NAS      | TLAS       | VLAS     | HAS       | PAS      |      |
| API-NON TOPPING             | FLD      | ND         | TLD      | #         | #        | #    |
| API-TOPPING                 | FLDC     | NDC        | TLDC     | #         | HDC      | PDC  |
| DEEP GROOVING               | FLGD     | NGD        | #        | #         | HGD      | #    |
| FACE GROOVING               | FLF      | NF         | TLF      | #         | HF       | #    |
| GROOVING                    | FLG      | NG         | TLG      | VLG       | HG       | PG   |
| GROOVING-POSITIVE           | FLGP     | NGP        | TLGP     | VLGD      | HGD      | PGD  |
| UNJ                         | FLJ      | NJ         | TLJ      | #         | HJ       | #    |
| UNJ-FINE PITCH              | FLJF     | NJF        | TLJF     | #         | HJF      | #    |
| 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      | VLR       | HR       | PR   |
| GROOVING - FNR POS.         | FLRP     | NRP        | TLRP     | VLRD      | HRP      | PRP  |
| 60° V                       | FLT      | NT         | TLT      | VLRT      | HT       | PT   |
| AMERICAN STANDARD BUTTRESS  | FLTB     | NTB        | TLTB     | #         | HTB      | #    |
| UN - UNIFIED                | FLTC     | NTC        | TLTC     | VLTC      | HTC      | PTC  |
| 60° V - FINE PITCH          | FLTF     | NTF        | TLTF     | VLTF      | HTF      | PTF  |
| 60° V - FINE PITCH POSITIVE | FLTK     | NTK        | TLTK     | VLTK      | HTK      | PTK  |
| 60° V - POSITIVE            | FLTP     | NTP        | TLTP     | VLTP      | HTP      | PTP  |
| POLY-V GROOVING             | FLV      | NV         | TLV      | #         | HV       | #    |

\*Top Clamp change is required when converting from SANDVIK®



# FLO-LOCK

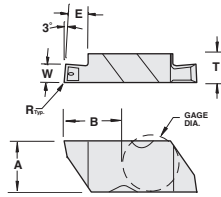
## GROOVING-CHIP-FLO

FLG-CB

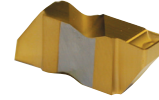
w/patented chipbreaker *Exclusive patented design!*

### Features:

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



RH Shown



| Description  | EDP Code | W    |      | Metric    | R    | E    |        | T    | A     | B     | Gage Dia. | C25 | C3 | GP3 | GP50 | AC22 | AC3 | AC50 |
|--------------|----------|------|------|-----------|------|------|--------|------|-------|-------|-----------|-----|----|-----|------|------|-----|------|
|              |          | Inch |      |           |      | Inch | Metric |      |       |       |           |     |    |     |      |      |     |      |
| FLG-2047R-CB | 562647PR | .047 | 1,20 | .002/.005 | .050 | 1,27 | .150   | .219 | .2700 | .1875 |           |     |    |     |      |      |     |      |
| FLG-2047L-CB | 562647PL | .047 | 1,20 | .002/.005 | .050 | 1,27 | .150   | .219 | .2700 | .1875 |           |     |    |     |      |      |     |      |
| FLG-2062R-CB | 562662PR | .062 | 1,57 | .005/.010 | .110 | 2,79 | .150   | .219 | .2700 | .1875 |           |     |    |     |      |      |     |      |
| FLG-2062L-CB | 562662PL | .062 | 1,57 | .005/.010 | .110 | 2,79 | .150   | .219 | .2700 | .1875 |           |     |    |     |      |      |     |      |
| FLG-2078R-CB | 562678PR | .078 | 1,98 | .005/.010 | .110 | 2,79 | .150   | .219 | .2700 | .1875 |           |     |    |     |      |      |     |      |
| FLG-2078L-CB | 562678PL | .078 | 1,98 | .005/.010 | .110 | 2,79 | .150   | .219 | .2700 | .1875 |           |     |    |     |      |      |     |      |
| FLG-2094R-CB | 562694PR | .094 | 2,39 | .005/.010 | .110 | 2,79 | .150   | .219 | .2700 | .1875 |           |     |    |     |      |      |     |      |
| FLG-2094L-CB | 562694PL | .094 | 2,39 | .005/.010 | .110 | 2,79 | .150   | .219 | .2700 | .1875 |           |     |    |     |      |      |     |      |
| FLG-2125R-CB | 562825PR | .125 | 3,18 | .005/.010 | .110 | 2,79 | .150   | .219 | .2700 | .1875 |           |     |    |     |      |      |     |      |
| FLG-2125L-CB | 562825PL | .125 | 3,18 | .005/.010 | .110 | 2,79 | .150   | .219 | .2700 | .1875 |           |     |    |     |      |      |     |      |
| FLG-3031R-CB | 563631PR | .031 | 0,79 | .002/.005 | .050 | 1,27 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3031L-CB | 563631PL | .031 | 0,79 | .002/.005 | .050 | 1,27 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3047R-CB | 563647PR | .047 | 1,19 | .005/.010 | .075 | 1,90 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3047L-CB | 563647PL | .047 | 1,19 | .005/.010 | .075 | 1,90 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3062R-CB | 563662PR | .062 | 1,57 | .005/.010 | .120 | 3,05 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3062L-CB | 563662PL | .062 | 1,57 | .005/.010 | .120 | 3,05 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3072R-CB | 563672PR | .072 | 1,83 | .005/.010 | .120 | 3,05 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3072L-CB | 563672PL | .072 | 1,83 | .005/.010 | .120 | 3,05 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3078R-CB | 563678PR | .078 | 1,98 | .005/.010 | .120 | 3,05 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3078L-CB | 563678PL | .078 | 1,98 | .005/.010 | .120 | 3,05 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3088R-CB | 563688PR | .088 | 2,24 | .005/.010 | .180 | 4,57 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3088L-CB | 563688PL | .088 | 2,24 | .005/.010 | .180 | 4,57 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3094R-CB | 563694PR | .094 | 2,39 | .005/.010 | .180 | 4,57 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3094L-CB | 563694PL | .094 | 2,39 | .005/.010 | .180 | 4,57 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3097R-CB | 563697PR | .097 | 2,46 | .005/.010 | .180 | 4,57 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3097L-CB | 563697PL | .097 | 2,46 | .005/.010 | .180 | 4,57 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3125R-CB | 563825PR | .125 | 3,18 | .005/.010 | .180 | 4,57 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3125L-CB | 563825PL | .125 | 3,18 | .005/.010 | .180 | 4,57 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3189R-CB | 563889PR | .189 | 4,80 | .020/.025 | .180 | 4,57 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-3189L-CB | 563889PL | .189 | 4,80 | .020/.025 | .180 | 4,57 | .195   | .344 | .4050 | .3750 |           |     |    |     |      |      |     |      |
| FLG-4125R-CB | 564825PR | .125 | 3,18 | .005/.010 | .250 | 6,35 | .255   | .453 | .6360 | .3750 |           |     |    |     |      |      |     |      |
| FLG-4125L-CB | 564825PL | .125 | 3,18 | .005/.010 | .250 | 6,35 | .255   | .453 | .6360 | .3750 |           |     |    |     |      |      |     |      |
| FLG-4189R-CB | 564889PR | .189 | 4,80 | .020/.025 | .250 | 6,35 | .255   | .453 | .6360 | .3750 |           |     |    |     |      |      |     |      |
| FLG-4189L-CB | 564889PL | .189 | 4,80 | .020/.025 | .250 | 6,35 | .255   | .453 | .6360 | .3750 |           |     |    |     |      |      |     |      |
| FLG-4250R-CB | 574050PR | .250 | 6,35 | .020/.025 | .250 | 6,35 | .255   | .453 | .6360 | .3750 |           |     |    |     |      |      |     |      |
| FLG-4250L-CB | 574050PL | .250 | 6,35 | .020/.025 | .250 | 6,35 | .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.

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

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

FLO-LOCK



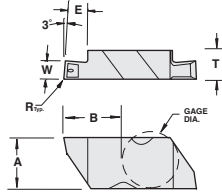


## GROOVING-CHIP-FLO

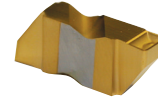
FLG-CB - METRIC

w/patented chipbreaker

Exclusive patented design!



RH Shown



### Features:

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

| Description   | EDP Code  | W      |      | R         | E      |      | T    | A    | B     | Gage Dia. | Coating    |     |      |      |     |
|---------------|-----------|--------|------|-----------|--------|------|------|------|-------|-----------|------------|-----|------|------|-----|
|               |           | Metric | Inch |           | Metric | Inch |      |      |       |           | TIN Coated | GP3 | GP50 | AC22 | AC3 |
| FLG-2M100R-CB | 562M100PR | 1,00   | .039 | .005/.010 | 1,90   | .050 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M100L-CB | 562M100PL | 1,00   | .039 | .005/.010 | 1,90   | .050 | .150 | .219 | .270  | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M150R-CB | 562M150PR | 1,50   | .059 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M150L-CB | 562M150PL | 1,50   | .059 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M170R-CB | 562M170PR | 1,70   | .067 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M170L-CB | 562M170PL | 1,70   | .067 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M195R-CB | 562M195PR | 1,95   | .077 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M195L-CB | 562M195PL | 1,95   | .077 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M200R-CB | 562M200PR | 2,00   | .079 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M200L-CB | 562M200PL | 2,00   | .079 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M220R-CB | 562M220PR | 2,20   | .087 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M220L-CB | 562M220PL | 2,20   | .087 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M225R-CB | 562M225PR | 2,25   | .089 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M225L-CB | 562M225PL | 2,25   | .089 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M250R-CB | 562M250PR | 2,50   | .098 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M250L-CB | 562M250PL | 2,50   | .098 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M300R-CB | 562M300PR | 3,00   | .118 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M300L-CB | 562M300PL | 3,00   | .118 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M325R-CB | 562M325PR | 3,25   | .128 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-2M325L-CB | 562M325PL | 3,25   | .128 | .005/.010 | 2,79   | .110 | .150 | .219 | .2700 | .1875     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M100R-CB | 563M100PR | 1,00   | .039 | .005/.010 | 1,90   | .050 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M100L-CB | 563M100PL | 1,00   | .039 | .005/.010 | 1,90   | .050 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M120R-CB | 563M120PR | 1,20   | .047 | .005/.010 | 1,90   | .075 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M120L-CB | 563M120PL | 1,20   | .047 | .005/.010 | 1,90   | .075 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M150R-CB | 563M150PR | 1,50   | .059 | .005/.010 | 3,05   | .120 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M150L-CB | 563M150PL | 1,50   | .059 | .005/.010 | 3,05   | .120 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M170R-CB | 563M170PR | 1,70   | .067 | .005/.010 | 3,05   | .120 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M170L-CB | 563M170PL | 1,70   | .067 | .005/.010 | 3,05   | .120 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M175R-CB | 563M175PR | 1,75   | .069 | .005/.010 | 3,05   | .120 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M175L-CB | 563M175PL | 1,75   | .069 | .005/.010 | 3,05   | .120 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M200R-CB | 563M200PR | 2,00   | .079 | .005/.010 | 3,05   | .120 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M200L-CB | 563M200PL | 2,00   | .079 | .005/.010 | 3,05   | .120 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M220R-CB | 563M220PR | 2,20   | .087 | .005/.010 | 4,57   | .180 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M220L-CB | 563M220PL | 2,20   | .087 | .005/.010 | 4,57   | .180 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M225R-CB | 563M225PR | 2,25   | .089 | .005/.010 | 4,57   | .180 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M225L-CB | 563M225PL | 2,25   | .089 | .005/.010 | 4,57   | .180 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M250R-CB | 563M250PR | 2,50   | .098 | .005/.010 | 4,57   | .180 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M250L-CB | 563M250PL | 2,50   | .098 | .005/.010 | 4,57   | .180 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M300R-CB | 563M300PR | 3,00   | .118 | .005/.010 | 4,57   | .180 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M300L-CB | 563M300PL | 3,00   | .118 | .005/.010 | 4,57   | .180 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M320R-CB | 563M320PR | 3,20   | .126 | .005/.010 | 4,57   | .180 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M320L-CB | 563M320PL | 3,20   | .126 | .005/.010 | 4,57   | .180 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M325R-CB | 563M325PR | 3,25   | .128 | .005/.010 | 4,57   | .180 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M325L-CB | 563M325PL | 3,25   | .128 | .005/.010 | 4,57   | .180 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M400R-CB | 563M400PR | 4,00   | .157 | .010/.015 | 6,35   | .180 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-3M400L-CB | 563M400PL | 4,00   | .157 | .010/.015 | 6,35   | .180 | .195 | .344 | .4050 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-4M320R-CB | 564M320PR | 3,20   | .126 | .020/.025 | 6,35   | .250 | .255 | .453 | .6360 | .3750     | ●          | ●   | ●    | ●    | ●   |
| FLG-4M320L-CB | 564M320PL | 3,20   | .126 | .020/.025 | 6,35   | .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.

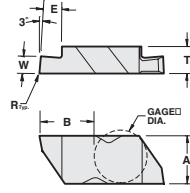
- High performance choice in optimal conditions.
- ▲ Recommended grade under general conditions.

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

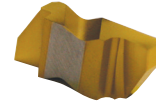


# FLO-LOCK

## GROOVING FLG



RH Shown



| Description | EDP Code | W    |        |           | E    |        |      | Gage |       |       | C25 | C3 | GP3 | GP50 | AC22 | AC3 | AC50 |
|-------------|----------|------|--------|-----------|------|--------|------|------|-------|-------|-----|----|-----|------|------|-----|------|
|             |          | Inch | Metric | R         | Inch | Metric | T    | A    | B     | Dia.  |     |    |     |      |      |     |      |
| FLG-2031R   | 562631R  | .031 | 0,79   | .002/.005 | .050 | 1,27   | .150 | .219 | .2700 | .1875 |     |    |     |      |      |     |      |
| FLG-2031L   | 562631L  | .031 | 0,79   | .002/.005 | .050 | 1,27   | .150 | .219 | .2700 | .1875 |     |    |     |      |      |     |      |
| FLG-2041R   | 562641R  | .041 | 1,04   | .002/.005 | .050 | 1,27   | .150 | .219 | .2700 | .1875 |     |    |     |      |      |     |      |
| FLG-2041L   | 562641L  | .041 | 1,04   | .002/.005 | .050 | 1,27   | .150 | .219 | .2700 | .1875 |     |    |     |      |      |     |      |
| FLG-2047R   | 562647R  | .047 | 1,19   | .002/.005 | .050 | 1,27   | .150 | .219 | .2700 | .1875 |     |    |     |      |      |     |      |
| FLG-2047L   | 562647L  | .047 | 1,19   | .002/.005 | .050 | 1,27   | .150 | .219 | .2700 | .1875 |     |    |     |      |      |     |      |
| FLG-2058R   | 562658R  | .058 | 1,47   | .005/.010 | .050 | 1,27   | .150 | .219 | .2700 | .1875 |     |    |     |      |      |     |      |
| FLG-2058L   | 562658L  | .058 | 1,47   | .005/.010 | .050 | 1,27   | .150 | .219 | .2700 | .1875 |     |    |     |      |      |     |      |
| FLG-2062R   | 562662R  | .062 | 1,57   | .005/.010 | .110 | 2,79   | .150 | .219 | .2700 | .1875 |     |    |     |      |      |     |      |
| FLG-2062L   | 562662L  | .062 | 1,57   | .005/.010 | .110 | 2,79   | .150 | .219 | .2700 | .1875 |     |    |     |      |      |     |      |
| FLG-2094R   | 562694R  | .094 | 2,39   | .005/.010 | .110 | 2,79   | .150 | .219 | .2700 | .1875 |     |    |     |      |      |     |      |
| FLG-2094L   | 562694L  | .094 | 2,39   | .005/.010 | .110 | 2,79   | .150 | .219 | .2700 | .1875 |     |    |     |      |      |     |      |
| FLG-2125R   | 562825R  | .125 | 3,18   | .005/.010 | .110 | 2,79   | .150 | .219 | .2700 | .1875 |     |    |     |      |      |     |      |
| FLG-2125L   | 562825L  | .125 | 3,18   | .005/.010 | .110 | 2,79   | .150 | .219 | .2700 | .1875 |     |    |     |      |      |     |      |
| FLG-3031R   | 563631R  | .031 | 0,79   | .002/.005 | .050 | 1,27   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3031L   | 563631L  | .031 | 0,79   | .002/.005 | .050 | 1,27   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3047R   | 563647R  | .047 | 1,19   | .005/.010 | .075 | 1,90   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3047L   | 563647L  | .047 | 1,19   | .005/.010 | .075 | 1,90   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3062R   | 563662R  | .062 | 1,57   | .005/.010 | .120 | 3,05   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3062L   | 563662L  | .062 | 1,57   | .005/.010 | .120 | 3,05   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3072R   | 563672R  | .072 | 1,83   | .005/.010 | .120 | 3,05   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3072L   | 563672L  | .072 | 1,83   | .005/.010 | .120 | 3,05   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3078R   | 563678R  | .078 | 1,98   | .005/.010 | .120 | 3,05   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3078L   | 563678L  | .078 | 1,98   | .005/.010 | .120 | 3,05   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3088R   | 563688R  | .088 | 2,24   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3088L   | 563688L  | .088 | 2,24   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3094R   | 563694R  | .094 | 2,39   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3094L   | 563694L  | .094 | 2,39   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3097R   | 563697R  | .097 | 2,46   | .010/.015 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3097L   | 563697L  | .097 | 2,46   | .010/.015 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3105R   | 563805R  | .105 | 2,67   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3105L   | 563805L  | .105 | 2,67   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3110R   | 563810R  | .110 | 2,79   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3110L   | 563810L  | .110 | 2,79   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3122R   | 563822R  | .122 | 3,10   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3122L   | 563822L  | .122 | 3,10   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3125R   | 563825R  | .125 | 3,18   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3125L   | 563825L  | .125 | 3,18   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3142R   | 563842R  | .142 | 3,61   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3142L   | 563842L  | .142 | 3,61   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3156R   | 563856R  | .156 | 3,96   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3156L   | 563856L  | .156 | 3,96   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3178R   | 563878R  | .178 | 4,52   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3178L   | 563878L  | .178 | 4,52   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3185R   | 563885R  | .185 | 4,70   | .020/.025 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3185L   | 563885L  | .185 | 4,70   | .020/.025 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3189R   | 563889R  | .189 | 4,80   | .020/.025 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3189L   | 563889L  | .189 | 4,80   | .020/.025 | .180 | 4,57   | .195 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3250R   | 573050R  | .250 | 6,35   | .020/.025 | .180 | 4,57   | .250 | .344 | .4050 | .3750 |     |    |     |      |      |     |      |
| FLG-3250L   | 573050L  | .250 | 6,35   | .020/.025 | .180 | 4,57   | .250 | .344 | .4050 | .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.

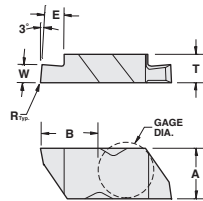
|                     |  |  |  |   |  |   |
|---------------------|--|--|--|---|--|---|
| Cast Iron           |  |  |  | ▲ |  | ● |
| Non-Ferrous         |  |  |  | ▲ |  | ● |
| Stainless/High Temp |  |  |  | ▲ |  | ● |
| Steel               |  |  |  | ▲ |  | ● |

FLO-LOCK

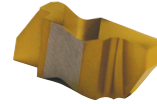


## GROOVING

FLG



RH Shown



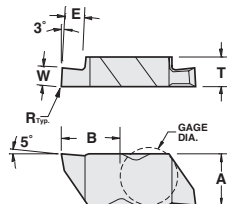
| Uncoated | TIN Coated | AlTiN Coated |
|----------|------------|--------------|
| C3       | GP3        | GP5          |
| GP3      | GP5        | AC3          |
| GP5      | AC3        | AC50         |

| Description | EDP Code | Inch | Metric | R         | Inch | Metric | T    | A    | B     | Gage Dia. |
|-------------|----------|------|--------|-----------|------|--------|------|------|-------|-----------|
| FLG-4125R   | 564825R  | .125 | 3,18   | .005/.010 | .250 | 6,35   | .255 | .453 | .6360 | .3750     |
| FLG-4125L   | 564825L  | .125 | 3,18   | .005/.010 | .250 | 6,35   | .255 | .453 | .6360 | .3750     |
| FLG-4189R   | 564889R  | .189 | 4,80   | .020/.025 | .250 | 6,35   | .255 | .453 | .6360 | .3750     |
| FLG-4189L   | 564889L  | .189 | 4,80   | .020/.025 | .250 | 6,35   | .255 | .453 | .6360 | .3750     |
| FLG-4213R   | 574013R  | .213 | 5,41   | .005/.010 | .250 | 6,35   | .255 | .453 | .6360 | .3750     |
| FLG-4213L   | 574013L  | .213 | 5,41   | .005/.010 | .250 | 6,35   | .255 | .453 | .6360 | .3750     |
| FLG-4219R   | 574019R  | .219 | 5,56   | .020/.025 | .250 | 6,35   | .255 | .453 | .6360 | .3750     |
| FLG-4219L   | 574019L  | .219 | 5,56   | .020/.025 | .250 | 6,35   | .255 | .453 | .6360 | .3750     |
| FLG-4250R   | 574050R  | .250 | 6,35   | .020/.025 | .250 | 6,35   | .255 | .453 | .6360 | .3750     |
| FLG-4250L   | 574050L  | .250 | 6,35   | .020/.025 | .250 | 6,35   | .255 | .453 | .6360 | .3750     |
| FLG-4312R   | 574212R  | .312 | 7,92   | .030/.035 | .250 | 6,35   | .312 | .453 | .6360 | .3750     |
| FLG-4312L   | 574212L  | .312 | 7,92   | .030/.035 | .250 | 6,35   | .312 | .453 | .6360 | .3750     |
| FLG-5250R   | 575050R  | .250 | 6,35   | .020/.025 | .375 | 9,53   | .380 | .688 | .9520 | .5000     |
| FLG-5250L   | 575050L  | .250 | 6,35   | .020/.025 | .375 | 9,53   | .380 | .688 | .9520 | .5000     |
| FLG-5281R   | 575081R  | .281 | 7,14   | .030/.035 | .375 | 9,53   | .380 | .688 | .9520 | .5000     |
| FLG-5281L   | 575081L  | .281 | 7,14   | .030/.035 | .375 | 9,53   | .380 | .688 | .9520 | .5000     |
| FLG-5312R   | 575212R  | .312 | 7,92   | .030/.035 | .375 | 9,53   | .380 | .688 | .9520 | .5000     |
| FLG-5312L   | 575212L  | .312 | 7,92   | .030/.035 | .375 | 9,53   | .380 | .688 | .9520 | .5000     |
| FLG-5344R   | 575244R  | .344 | 8,74   | .030/.035 | .375 | 9,53   | .380 | .688 | .9520 | .5000     |
| FLG-5344L   | 575244L  | .344 | 8,74   | .030/.035 | .375 | 9,53   | .380 | .688 | .9520 | .5000     |
| FLG-5375R   | 575275R  | .375 | 9,53   | .030/.035 | .375 | 9,53   | .380 | .688 | .9520 | .5000     |
| FLG-5375L   | 575275L  | .375 | 9,53   | .030/.035 | .375 | 9,53   | .380 | .688 | .9520 | .5000     |
| FLG-6281R   | 576081R  | .281 | 7,14   | .030/.035 | .250 | 6,35   | .383 | .453 | .6360 | .3750     |
| FLG-6281L   | 576081L  | .281 | 7,14   | .030/.035 | .250 | 6,35   | .383 | .453 | .6360 | .3750     |
| FLG-6312R   | 576212R  | .312 | 7,92   | .030/.035 | .250 | 6,35   | .383 | .453 | .6360 | .3750     |
| FLG-6312L   | 576212L  | .312 | 7,92   | .030/.035 | .250 | 6,35   | .383 | .453 | .6360 | .3750     |
| FLG-6375R   | 576275R  | .375 | 9,53   | .030/.035 | .250 | 6,35   | .383 | .453 | .6360 | .3750     |
| FLG-6375L   | 576275L  | .375 | 9,53   | .030/.035 | .250 | 6,35   | .383 | .453 | .6360 | .3750     |

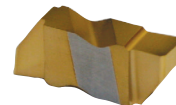
## GROOVING

FLGP

w/positive rake



RH Shown



| Uncoated | TIN Coated | AlTiN Coated | TIN Coated Cermet |
|----------|------------|--------------|-------------------|
| C3       | GP3        | GP5          | GP6               |
| GP3      | GP5        | AC3          | AC50              |
| GP5      | AC3        | AC50         | GP6               |

| Description | EDP Code | Inch | Metric | R         | Inch | Metric | T    | A    | B     | Gage Dia. |
|-------------|----------|------|--------|-----------|------|--------|------|------|-------|-----------|
| FLGP-2031R  | 572431R  | .031 | 0,79   | .002/.005 | .050 | 1,27   | .150 | .219 | .2700 | .1875     |
| FLGP-2031L  | 572431L  | .031 | 0,79   | .002/.005 | .050 | 1,27   | .150 | .219 | .2700 | .1875     |
| FLGP-2062R  | 572462R  | .062 | 1,57   | .005/.010 | .110 | 2,79   | .150 | .219 | .2700 | .1875     |
| FLGP-2062L  | 572462L  | .062 | 1,57   | .005/.010 | .110 | 2,79   | .150 | .219 | .2700 | .1875     |
| FLGP-2125R  | 572625R  | .125 | 3,18   | .005/.010 | .110 | 2,79   | .150 | .219 | .2700 | .1875     |
| FLGP-2125L  | 572625L  | .125 | 3,18   | .005/.010 | .110 | 2,79   | .150 | .219 | .2700 | .1875     |
| FLGP-3047R  | 573447R  | .047 | 1,19   | .005/.010 | .075 | 1,90   | .195 | .344 | .4050 | .3750     |
| FLGP-3047L  | 573447L  | .047 | 1,19   | .005/.010 | .075 | 1,90   | .195 | .344 | .4050 | .3750     |
| FLGP-3062R  | 573462R  | .062 | 1,57   | .005/.010 | .120 | 3,05   | .195 | .344 | .4050 | .3750     |
| FLGP-3062L  | 573462L  | .062 | 1,57   | .005/.010 | .120 | 3,05   | .195 | .344 | .4050 | .3750     |
| FLGP-3088R  | 573488R  | .088 | 2,24   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750     |
| FLGP-3088L  | 573488L  | .088 | 2,24   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750     |
| FLGP-3094R  | 573494R  | .094 | 2,39   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750     |
| FLGP-3094L  | 573494L  | .094 | 2,39   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750     |
| FLGP-3125R  | 573625R  | .125 | 3,18   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750     |
| FLGP-3125L  | 573625L  | .125 | 3,18   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750     |
| FLGP-3156R  | 573656R  | .156 | 3,96   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750     |
| FLGP-3156L  | 573656L  | .156 | 3,96   | .005/.010 | .180 | 4,57   | .195 | .344 | .4050 | .3750     |
| FLGP-3189R  | 573689R  | .189 | 4,80   | .020/.025 | .180 | 4,57   | .195 | .344 | .4050 | .3750     |
| FLGP-3189L  | 573689L  | .189 | 4,80   | .020/.025 | .180 | 4,57   | .195 | .344 | .4050 | .3750     |
| FLGP-4125R  | 574625R  | .125 | 3,18   | .005/.010 | .250 | 6,35   | .255 | .453 | .6360 | .3750     |
| FLGP-4125L  | 574625L  | .125 | 3,18   | .005/.010 | .250 | 6,35   | .255 | .453 | .6360 | .3750     |
| FLGP-4189R  | 574689R  | .189 | 4,80   | .020/.025 | .250 | 6,35   | .255 | .453 | .6360 | .3750     |
| FLGP-4189L  | 574689L  | .189 | 4,80   | .020/.025 | .250 | 6,35   | .255 | .453 | .6360 | .3750     |
| FLGP-4250R  | 574850R  | .250 | 6,35   | .020/.025 | .250 | 6,35   | .255 | .453 | .6360 | .3750     |
| FLGP-4250L  | 574850L  | .250 | 6,35   | .020/.025 | .250 | 6,35   | .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.

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

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



# FLO-LOCK

## GROOVING - CHIP-FLO

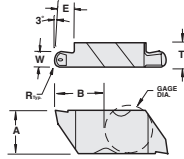
### FLR-CB

w/full nose radius

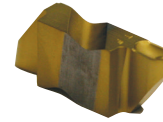
#### Features:

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

Exclusive patented design!



RH Shown

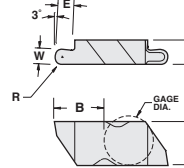


| Description  | EDP Code | W    |        | R    |        | E    |        | T    | A    | B     | Gage Dia. | Coating  |            |     |      |      |
|--------------|----------|------|--------|------|--------|------|--------|------|------|-------|-----------|----------|------------|-----|------|------|
|              |          | Inch | Metric | Inch | Metric | Inch | Metric |      |      |       |           | Uncoated | TIN Coated | AC3 | AC50 | AC50 |
| FLR-3031R-CB | 593031PR | .062 | 1,57   | .031 | 0,78   | .125 | 3,18   | .195 | .344 | .4033 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-3031L-CB | 593031PL | .062 | 1,57   | .031 | 0,78   | .125 | 3,18   | .195 | .344 | .4033 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-3047R-CB | 593047PR | .094 | 2,39   | .047 | 1,19   | .180 | 4,57   | .195 | .344 | .4025 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-3047L-CB | 593047PL | .094 | 2,39   | .047 | 1,19   | .180 | 4,57   | .195 | .344 | .4025 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-3062R-CB | 593062PR | .125 | 3,18   | .062 | 1,57   | .180 | 4,57   | .195 | .344 | .4017 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-3062L-CB | 593062PL | .125 | 3,18   | .062 | 1,57   | .180 | 4,57   | .195 | .344 | .4017 | .3750     | ●        | ●          | ●   | ●    | ●    |

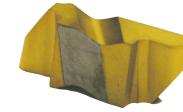
## GROOVING

### FLR

w/full nose radius



RH Shown

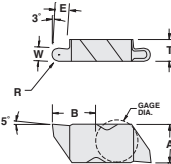


| Description                     | EDP Code | W    |        | R    |        | E    |        | T    | A    | B     | Gage Dia. | Coating  |            |     |      |      |
|---------------------------------|----------|------|--------|------|--------|------|--------|------|------|-------|-----------|----------|------------|-----|------|------|
|                                 |          | Inch | Metric | Inch | Metric | Inch | Metric |      |      |       |           | Uncoated | TIN Coated | AC3 | AC50 | AC50 |
| FLR-2031R                       | 592031R  | .062 | 1,57   | .031 | 0,78   | .110 | 2,79   | .150 | .219 | .2683 | .1875     | ●        | ●          | ●   | ●    | ●    |
| FLR-2031L                       | 592031L  | .062 | 1,57   | .031 | 0,78   | .110 | 2,79   | .150 | .219 | .2683 | .1875     | ●        | ●          | ●   | ●    | ●    |
| FLR-2047R                       | 592047R  | .094 | 2,39   | .047 | 1,19   | .110 | 2,79   | .150 | .219 | .2675 | .1875     | ●        | ●          | ●   | ●    | ●    |
| FLR-2047L                       | 592047L  | .094 | 2,39   | .047 | 1,19   | .110 | 2,79   | .150 | .219 | .2675 | .1875     | ●        | ●          | ●   | ●    | ●    |
| FLR-2062R                       | 592062R  | .125 | 3,18   | .062 | 1,57   | .110 | 2,79   | .150 | .219 | .2667 | .1875     | ●        | ●          | ●   | ●    | ●    |
| FLR-2062L                       | 592062L  | .125 | 3,18   | .062 | 1,57   | .110 | 2,79   | .150 | .219 | .2667 | .1875     | ●        | ●          | ●   | ●    | ●    |
| FLR-3031R                       | 593031R  | .062 | 1,57   | .031 | 0,78   | .125 | 3,18   | .195 | .344 | .4033 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-3031L                       | 593031L  | .062 | 1,57   | .031 | 0,78   | .125 | 3,18   | .195 | .344 | .4033 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-3047R                       | 593047R  | .094 | 2,39   | .047 | 1,19   | .180 | 4,57   | .195 | .344 | .4025 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-3047L                       | 593047L  | .094 | 2,39   | .047 | 1,19   | .180 | 4,57   | .195 | .344 | .4025 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-3062R                       | 593062R  | .125 | 3,18   | .062 | 1,57   | .180 | 4,57   | .195 | .344 | .4017 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-3062L                       | 593062L  | .125 | 3,18   | .062 | 1,57   | .180 | 4,57   | .195 | .344 | .4017 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-3078R                       | 593078R  | .156 | 3,96   | .078 | 1,98   | .180 | 4,57   | .195 | .344 | .4008 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-3078L                       | 593078L  | .156 | 3,96   | .078 | 1,98   | .180 | 4,57   | .195 | .344 | .4008 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-3094R                       | 593094R  | .189 | 4,80   | .094 | 2,39   | .180 | 4,57   | .195 | .344 | .4000 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-3094L                       | 593094L  | .189 | 4,80   | .094 | 2,39   | .180 | 4,57   | .195 | .344 | .4000 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-4062R (Same E dim. as FLRD) | 594062R  | .125 | 3,18   | .062 | 1,57   | .250 | 6,35   | .255 | .453 | .6327 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-4062L (Same E dim. as FLRD) | 594062L  | .125 | 3,18   | .062 | 1,57   | .250 | 6,35   | .255 | .453 | .6327 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-4094R                       | 594094R  | .189 | 4,80   | .094 | 2,39   | .250 | 6,35   | .255 | .453 | .6310 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-4094L                       | 594094L  | .189 | 4,80   | .094 | 2,39   | .250 | 6,35   | .255 | .453 | .6310 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-4125R                       | 594225R  | .250 | 6,35   | .125 | 3,18   | .250 | 6,35   | .255 | .453 | .6293 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLR-4125L                       | 594225L  | .250 | 6,35   | .125 | 3,18   | .250 | 6,35   | .255 | .453 | .6293 | .3750     | ●        | ●          | ●   | ●    | ●    |

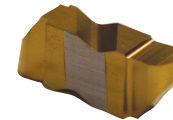
## GROOVING

### FLRP

w/full nose radius and positive rake



RH Shown



| Description | EDP Code | W    |        | R    |        | E    |        | T    | A    | B     | Gage Dia. | Coating  |            |     |      |      |
|-------------|----------|------|--------|------|--------|------|--------|------|------|-------|-----------|----------|------------|-----|------|------|
|             |          | Inch | Metric | Inch | Metric | Inch | Metric |      |      |       |           | Uncoated | TIN Coated | AC3 | AC50 | AC50 |
| FLRP-3031R  | 593831R  | .062 | 1,57   | .031 | 0,78   | .125 | 0,79   | .195 | .344 | .4033 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLRP-3031L  | 593831L  | .062 | 1,57   | .031 | 0,78   | .125 | 0,79   | .195 | .344 | .4033 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLRP-3047R  | 593847R  | .094 | 2,39   | .047 | 1,19   | .180 | 4,57   | .195 | .344 | .4025 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLRP-3047L  | 593847L  | .094 | 2,39   | .047 | 1,19   | .180 | 4,57   | .195 | .344 | .4025 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLRP-3062R  | 593862R  | .125 | 3,18   | .062 | 1,57   | .180 | 4,57   | .195 | .344 | .4017 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLRP-3062L  | 593862L  | .125 | 3,18   | .062 | 1,57   | .180 | 4,57   | .195 | .344 | .4017 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLRP-3078R  | 593878R  | .156 | 3,96   | .078 | 1,98   | .180 | 4,57   | .195 | .344 | .4008 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLRP-3078L  | 593878L  | .156 | 3,96   | .078 | 1,98   | .180 | 4,57   | .195 | .344 | .4008 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLRP-3094R  | 593894R  | .189 | 4,80   | .094 | 2,39   | .180 | 4,57   | .195 | .344 | .4000 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLRP-3094L  | 593894L  | .189 | 4,80   | .094 | 2,39   | .180 | 4,57   | .195 | .344 | .4000 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLRP-4062R  | 594862R  | .125 | 3,18   | .062 | 1,57   | .250 | 6,35   | .255 | .453 | .6327 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLRP-4062L  | 594862L  | .125 | 3,18   | .062 | 1,57   | .250 | 6,35   | .255 | .453 | .6327 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLRP-4094R  | 594894R  | .189 | 4,80   | .094 | 2,39   | .250 | 6,35   | .255 | .453 | .6310 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLRP-4094L  | 594894L  | .189 | 4,80   | .094 | 2,39   | .250 | 6,35   | .255 | .453 | .6310 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLRP-4125R  | 604025R  | .250 | 6,35   | .125 | 3,18   | .250 | 6,35   | .255 | .453 | .6293 | .3750     | ●        | ●          | ●   | ●    | ●    |
| FLRP-4125L  | 604025L  | .250 | 6,35   | .125 | 3,18   | .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               | ▲ | ● | ● | ● | ● | ● |



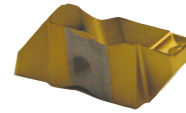
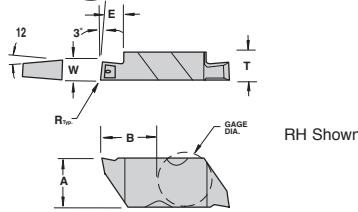
## FACE GROOVING - CHIP-FLO

### FLF-CB

Exclusive patented design!

#### Features:

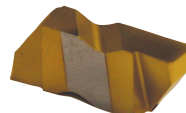
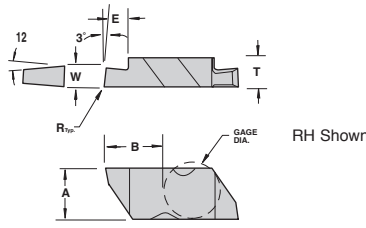
- Patented chipbreaker - Patent No. 6,146,064
- Maximum chip control
- Industry standard widths



| Description  | EDP Code | Inch | Metric | R         | E    | T    | A    | B     | Gage Dia. | Coatings |            |              |    |      |
|--------------|----------|------|--------|-----------|------|------|------|-------|-----------|----------|------------|--------------|----|------|
|              |          |      |        |           |      |      |      |       |           | Uncoated | TIN Coated | AlTiN Coated | C3 | AC50 |
| FLF-3125R-CB | 563025PR | .125 | 3,18   | .005/.010 | .180 | .195 | .344 | .4050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-3125L-CB | 563025PL | .125 | 3,18   | .005/.010 | .180 | .195 | .344 | .4050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-3156R-CB | 563056PR | .156 | 3,96   | .005/.010 | .180 | .195 | .344 | .4050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-3156L-CB | 563056PL | .156 | 3,96   | .005/.010 | .180 | .195 | .344 | .4050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-3188R-CB | 563088PR | .188 | 4,77   | .020/.025 | .180 | .195 | .344 | .4050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-3188L-CB | 563088PL | .188 | 4,77   | .020/.025 | .180 | .195 | .344 | .4050 | .3750     | ●        | ●          | ●            | ●  | ●    |

## FACE GROOVING

### FLF



| Description | EDP Code | Inch | Metric | R         | E    | T    | A    | B     | Gage Dia. | Coatings |            |              |    |      |
|-------------|----------|------|--------|-----------|------|------|------|-------|-----------|----------|------------|--------------|----|------|
|             |          |      |        |           |      |      |      |       |           | Uncoated | TIN Coated | AlTiN Coated | C3 | AC50 |
| FLF-3125R   | 563025R  | .125 | 3,18   | .005/.010 | .180 | .195 | .344 | .4050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-3125L   | 563025L  | .125 | 3,18   | .005/.010 | .180 | .195 | .344 | .4050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-3156R   | 563056R  | .156 | 3,96   | .005/.010 | .180 | .195 | .344 | .4050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-3156L   | 563056L  | .156 | 3,96   | .005/.010 | .180 | .195 | .344 | .4050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-3188R   | 563088R  | .188 | 4,77   | .020/.025 | .180 | .195 | .344 | .4050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-3188L   | 563088L  | .188 | 4,77   | .020/.025 | .180 | .195 | .344 | .4050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-4250R   | 564250R  | .250 | 6,35   | .020/.025 | .250 | .255 | .453 | .6360 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-4250L   | 564250L  | .250 | 6,35   | .020/.025 | .250 | .255 | .453 | .6360 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-6218R   | 566218R  | .218 | 5,54   | .030/.035 | .250 | .383 | .453 | .6360 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-6218L   | 566218L  | .218 | 5,54   | .030/.035 | .250 | .383 | .453 | .6360 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-6250R   | 566250R  | .250 | 6,35   | .030/.035 | .250 | .383 | .453 | .6360 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-6250L   | 566250L  | .250 | 6,35   | .030/.035 | .250 | .383 | .453 | .6360 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-6375R   | 566475R  | .375 | 9,53   | .030/.035 | .250 | .383 | .453 | .6360 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLF-6375L   | 566475L  | .375 | 9,53   | .030/.035 | .250 | .383 | .453 | .6360 | .3750     | ●        | ●          | ●            | ●  | ●    |

## DEEP GROOVING - CHIP-FLO

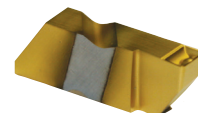
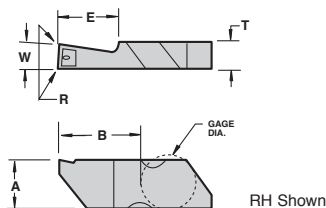
### FLGD-CB

Single ended

Exclusive patented design!

#### Features:

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



| Description                   | EDP Code  | Inch | Metric | R         | E    | T    | A    | B     | Gage Dia. | Coatings |            |              |    |      |
|-------------------------------|-----------|------|--------|-----------|------|------|------|-------|-----------|----------|------------|--------------|----|------|
|                               |           |      |        |           |      |      |      |       |           | Uncoated | TIN Coated | AlTiN Coated | C3 | AC50 |
| FLGD-3062R-CB (FLG-3062R-CB)* | 563662PR  | .062 | 1,57   | .005/.010 | .120 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLGD-3062L-CB (FLG-3062L-CB)* | 563662PL  | .062 | 1,57   | .005/.010 | .120 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLGD-3094R-CB                 | 6335094PR | .094 | 2,39   | .005/.010 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLGD-3094L-CB                 | 6335094PL | .094 | 2,39   | .005/.010 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLGD-3125R-CB                 | 6335125PR | .125 | 3,18   | .005/.010 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLGD-3125L-CB                 | 6335125PL | .125 | 3,18   | .005/.010 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLGD-3189R-CB                 | 6335189PR | .189 | 4,80   | .020/.025 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLGD-3189L-CB                 | 6335189PL | .189 | 4,80   | .020/.025 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLGD-4189R-CB                 | 6345189PR | .189 | 4,80   | .020/.025 | .375 | .255 | .453 | .7610 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLGD-4189L-CB                 | 6345189PL | .189 | 4,80   | .020/.025 | .375 | .255 | .453 | .7610 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLGD-4250R-CB                 | 6345250PR | .250 | 6,35   | .020/.025 | .500 | .255 | .453 | .8860 | .3750     | ●        | ●          | ●            | ●  | ●    |
| FLGD-4250L-CB                 | 6345250PL | .250 | 6,35   | .020/.025 | .500 | .255 | .453 | .8860 | .3750     | ●        | ●          | ●            | ●  | ●    |

\*Inserts are double ended.

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               | ▲ | ● | ● | ● | ● |



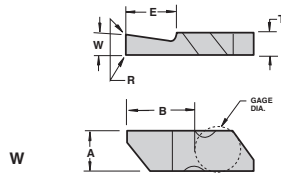


# FLO-LOCK

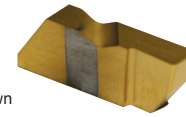
## DEEP GROOVING

FLGD

Single ended



RH Shown



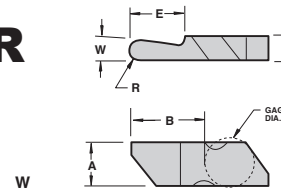
| Description             | EDP Code | Inch | Metric | R         | E    | T    | A    | B     | Gage Dia. | Coatings |            |     |      |             |
|-------------------------|----------|------|--------|-----------|------|------|------|-------|-----------|----------|------------|-----|------|-------------|
|                         |          |      |        |           |      |      |      |       |           | Uncoated | TIN Coated | AC3 | AC50 | ATIN Coated |
| FLGD-3062R (FLG-3062R)* | 563662R  | .062 | 1,57   | .005/.010 | .120 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLGD-3062L (FLG-3062L)* | 563662L  | .062 | 1,57   | .005/.010 | .120 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLGD-3094R              | 6334094R | .094 | 2,39   | .005/.010 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLGD-3094L              | 6334094L | .094 | 2,39   | .005/.010 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLGD-3125R              | 6334125R | .125 | 3,18   | .005/.010 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLGD-3125L              | 6334125L | .125 | 3,18   | .005/.010 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLGD-3189R              | 6334189R | .189 | 4,8    | .020/.025 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLGD-3189L              | 6334189L | .189 | 4,8    | .020/.025 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLGD-4125R (FLG-4125R)* | 564825R  | .125 | 3,18   | .005/.010 | .250 | .255 | .453 | .6360 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLGD-4125L (FLG-4125L)* | 564825L  | .125 | 3,18   | .005/.010 | .250 | .255 | .453 | .6360 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLGD-4189R              | 6344189R | .189 | 4,8    | .020/.025 | .375 | .255 | .453 | .7610 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLGD-4189L              | 6344189L | .189 | 4,8    | .020/.025 | .375 | .255 | .453 | .7610 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLGD-4250R              | 6344250R | .250 | 6,35   | .020/.025 | .500 | .255 | .453 | .8860 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLGD-4250L              | 6344250L | .250 | 6,35   | .020/.025 | .500 | .255 | .453 | .8860 | .3750     | ●        | ●          | ●   | ●    | ●           |

\*Inserts are double ended.

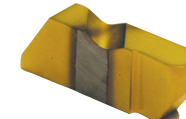
## DEEP GROOVING - FNR

FLRD

Full nose radius - Single ended



RH Shown



| Description             | EDP Code | Inch | Metric | R    | E    | T    | A    | B     | Gage Dia. | Coatings |            |     |      |             |
|-------------------------|----------|------|--------|------|------|------|------|-------|-----------|----------|------------|-----|------|-------------|
|                         |          |      |        |      |      |      |      |       |           | Uncoated | TIN Coated | AC3 | AC50 | ATIN Coated |
| FLRD-3031R (FLR-3031R)* | 593031R  | .062 | 1,57   | .031 | .125 | .195 | .344 | .5016 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLRD-3031L (FLR-3031L)* | 593031L  | .062 | 1,57   | .031 | .125 | .195 | .344 | .5016 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLRD-3062R              | 6336062R | .125 | 3,19   | .062 | .250 | .195 | .344 | .5016 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLRD-3062L              | 6336062L | .125 | 3,19   | .062 | .250 | .195 | .344 | .5016 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLRD-3094R              | 6336094R | .189 | 4,8    | .094 | .250 | .195 | .344 | .5016 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLRD-3094L              | 6336094L | .189 | 4,8    | .094 | .250 | .195 | .344 | .5016 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLRD-4094R              | 6346094R | .189 | 4,8    | .094 | .500 | .255 | .453 | .8860 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLRD-4094L              | 6346094L | .189 | 4,8    | .094 | .500 | .255 | .453 | .8860 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLRD-4125R              | 6346125R | .250 | 6,35   | .125 | .500 | .255 | .453 | .8860 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLRD-4125L              | 6346125L | .250 | 6,35   | .125 | .500 | .255 | .453 | .8860 | .3750     | ●        | ●          | ●   | ●    | ●           |

\*Inserts are double ended.

## INTERNAL DEEP FACE GROOVING - CHIP-FLO

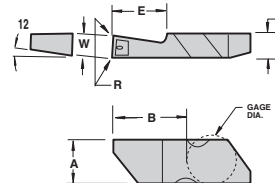
FLFD-I-CB

Single ended

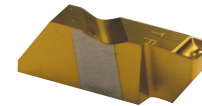
Exclusive patented design!

Features:

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



RH Shown



| Description     | EDP Code   | Inch | Metric | R         | E    | T    | A    | B     | Gage Dia. | Coatings |            |     |      |             |
|-----------------|------------|------|--------|-----------|------|------|------|-------|-----------|----------|------------|-----|------|-------------|
|                 |            |      |        |           |      |      |      |       |           | Uncoated | TIN Coated | AC3 | AC50 | ATIN Coated |
| FLFD-3125R-I-CB | 6338125PRI | .125 | 3,18   | .005/.010 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLFD-3125L-I-CB | 6338125PLI | .125 | 3,18   | .005/.010 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLFD-3189R-I-CB | 6338189PRI | .189 | 4,80   | .020/.025 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLFD-3189L-I-CB | 6338189PLI | .189 | 4,80   | .020/.025 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●   | ●    | ●           |

## DEEP FACE GROOVING CHIP-FLO

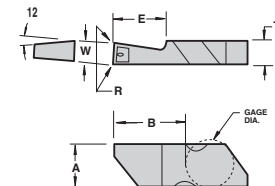
FLFD-CB

Single ended

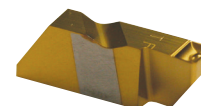
Exclusive patented design!

Features:

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



RH Shown



| Description   | EDP Code  | Inch | Metric | R         | E    | T    | A    | B     | Gage Dia. | Coatings |            |     |      |             |
|---------------|-----------|------|--------|-----------|------|------|------|-------|-----------|----------|------------|-----|------|-------------|
|               |           |      |        |           |      |      |      |       |           | Uncoated | TIN Coated | AC3 | AC50 | ATIN Coated |
| FLFD-3125R-CB | 6338125PR | .125 | 3,18   | .005/.010 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLFD-3125L-CB | 6338125PL | .125 | 3,18   | .005/.010 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLFD-3189R-CB | 6338189PR | .189 | 4,80   | .020/.025 | .250 | .195 | .344 | .5050 | .3750     | ●        | ●          | ●   | ●    | ●           |
| FLFD-3189L-CB | 6338189PL | .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



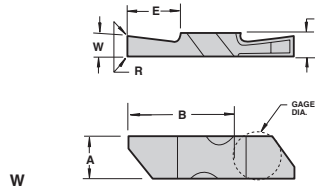
## DEEP GROOVING

FLGT

Double ended

Exclusive 2 edge design!

Fits FLSLT/RT Holders. See page 110



| Description | EDP Code | Inch | Metric | R         | E    | T    | A    | B     | Gage Dia. | Coating  |            |              |     |      |
|-------------|----------|------|--------|-----------|------|------|------|-------|-----------|----------|------------|--------------|-----|------|
|             |          |      |        |           |      |      |      |       |           | Uncoated | TiN Coated | AlTiN Coated | GP3 | GP50 |
| FLGT-3094R  | 6332094R | .094 | 2,39   | .005/.010 | .275 | .195 | .344 | .855  | .3750     |          |            |              |     |      |
| FLGT-3094L  | 6332094L | .094 | 2,39   | .005/.010 | .275 | .195 | .344 | .855  | .3750     |          |            |              |     |      |
| FLGT-3125R  | 6332125R | .125 | 3,18   | .005/.010 | .437 | .195 | .344 | .855  | .3750     |          |            |              |     |      |
| FLGT-3125L  | 6332125L | .125 | 3,18   | .005/.010 | .437 | .195 | .344 | .855  | .3750     |          |            |              |     |      |
| FLGT-3189R  | 6332189R | .189 | 4,8    | .020/.025 | .437 | .195 | .344 | .855  | .3750     |          |            |              |     |      |
| FLGT-3189L  | 6332189L | .189 | 4,8    | .020/.025 | .437 | .195 | .344 | .855  | .3750     |          |            |              |     |      |
| FLGT-4125R  | 6342125R | .125 | 3,18   | .005/.010 | .550 | .255 | .453 | 1.136 | .3750     |          |            |              |     |      |
| FLGT-4125L  | 6342125L | .125 | 3,18   | .005/.010 | .550 | .255 | .453 | 1.136 | .3750     |          |            |              |     |      |
| FLGT-4189R  | 6342189R | .189 | 4,8    | .020/.025 | .550 | .255 | .453 | 1.136 | .3750     |          |            |              |     |      |
| FLGT-4189L  | 6342189L | .189 | 4,8    | .020/.025 | .550 | .255 | .453 | 1.136 | .3750     |          |            |              |     |      |
| FLGT-4250R  | 6342250R | .250 | 6,35   | .020/.025 | .550 | .255 | .453 | 1.136 | .3750     |          |            |              |     |      |
| FLGT-4250L  | 6342250L | .250 | 6,35   | .020/.025 | .550 | .255 | .453 | 1.136 | .3750     |          |            |              |     |      |

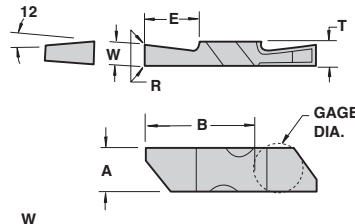
## DEEP FACE GROOVING

FLFT

Double ended

Exclusive 2 edge design!

Fits FLSLT/RT Holders. See page 110



| Description | EDP Code | Inch | Metric | R         | E    | T    | A    | B     | Gage Dia. | Coating  |            |              |     |      |
|-------------|----------|------|--------|-----------|------|------|------|-------|-----------|----------|------------|--------------|-----|------|
|             |          |      |        |           |      |      |      |       |           | Uncoated | TiN Coated | AlTiN Coated | GP3 | GP50 |
| FLFT-3125R  | 6339125R | .125 | 3,18   | .005/.010 | .375 | .195 | .344 | .885  | .3750     |          |            |              |     |      |
| FLFT-3125L  | 6339125L | .125 | 3,18   | .005/.010 | .375 | .195 | .344 | .885  | .3750     |          |            |              |     |      |
| FLFT-4189R  | 6349189R | .189 | 4,8    | .020/.025 | .550 | .255 | .453 | 1.136 | .3750     |          |            |              |     |      |
| FLFT-4189L  | 6349189L | .189 | 4,8    | .020/.025 | .550 | .255 | .453 | 1.136 | .3750     |          |            |              |     |      |
| FLFT-4250R  | 6349250R | .250 | 6,35   | .020/.025 | .550 | .255 | .453 | 1.136 | .3750     |          |            |              |     |      |
| FLFT-4250L  | 6349250L | .250 | 6,35   | .020/.025 | .550 | .255 | .453 | 1.136 | .3750     |          |            |              |     |      |

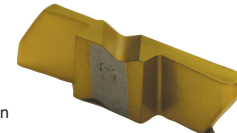
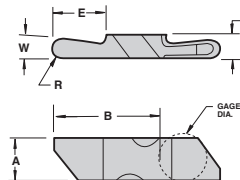
## DEEP GROOVING - FNR

FLRT

Double ended

Exclusive 2 edge design!

Fits FLSLT/RT Holders. See page 110



| Description | EDP Code | Inch | Metric | R    | E    | T    | A    | B     | Gage Dia. | Coating  |            |              |     |      |
|-------------|----------|------|--------|------|------|------|------|-------|-----------|----------|------------|--------------|-----|------|
|             |          |      |        |      |      |      |      |       |           | Uncoated | TiN Coated | AlTiN Coated | GP3 | GP50 |
| FLRT-3062R  | 6337062R | .125 | 3,18   | .062 | .437 | .195 | .344 | .855  | .3750     |          |            |              |     |      |
| FLRT-3062L  | 6337062L | .125 | 3,18   | .062 | .437 | .195 | .344 | .855  | .3750     |          |            |              |     |      |
| FLRT-3094R  | 6337094R | .189 | 4,80   | .094 | .437 | .195 | .344 | .855  | .3750     |          |            |              |     |      |
| FLRT-3094L  | 6337094L | .189 | 4,80   | .094 | .437 | .195 | .344 | .855  | .3750     |          |            |              |     |      |
| FLRT-4062R  | 6347062R | .125 | 3,18   | .062 | .550 | .255 | .453 | 1.136 | .3750     |          |            |              |     |      |
| FLRT-4062L  | 6347062L | .125 | 3,18   | .062 | .550 | .255 | .453 | 1.136 | .3750     |          |            |              |     |      |
| FLRT-4094R  | 6347094R | .189 | 4,8    | .094 | .550 | .255 | .453 | 1.136 | .3750     |          |            |              |     |      |
| FLRT-4094L  | 6347094L | .189 | 4,8    | .094 | .550 | .255 | .453 | 1.136 | .3750     |          |            |              |     |      |
| FLRT-4125R  | 6347125R | .250 | 6,35   | .125 | .550 | .255 | .453 | 1.136 | .3750     |          |            |              |     |      |
| FLRT-4125L  | 6347125L | .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               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



# FLO-LOCK

## Flo-Lock Series Kits



### 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                | ---       |

### 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 AC3  
1 S-412 SCREW

#### W.094 GROOVING

##### KIT #7

Kit Contents  
1 FLSR-163D  
4 FLGD-3094R-CB AC3  
1 S-412 SCREW



FLO-LOCK

### Recommended SFM for Grooving Applications

| Workpiece Group                                 | Uncoated | TiN PVD Coated |          |        |         | AlTiN PVD Coated |          |         | TiN Cermet | CBN       |         | PCD       |
|---|----------|----------------|----------|--------|---------|------------------|----------|---------|------------|-----------|---------|-----------|
|   | C3       | GP22           | GP3      | GP4    | GP50    | AC22             | AC3      | AC50    | 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 | ---       |

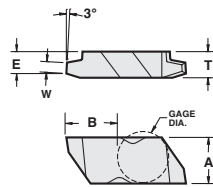
Bold print items denote the top choices for the materials listed, provided it can be machined within the SFM stated under the appropriate machining conditions. For the best performance in optimal machining conditions, select the grade that will provide you with the highest allowable SFM.



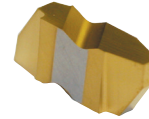
## ACME THREADING

### FLA

For Flo-Lock acme thread limits see pg. 111,112.



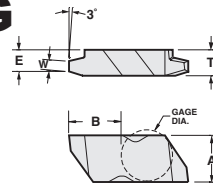
RH Shown



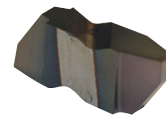
| Description | EDP Code | TPI | W     | T    | E    | A    | B     | Gage Dia. | Coating  |            |              |    |     |
|-------------|----------|-----|-------|------|------|------|-------|-----------|----------|------------|--------------|----|-----|
|             |          |     |       |      |      |      |       |           | Uncoated | TiN Coated | AlTiN Coated | C3 | GP3 |
| FLA-3R16    | 553016R  | 16  | .0206 | .195 | .149 | .344 | .4026 | .3750     |          |            |              |    |     |
| FLA-3L16    | 553016L  | 16  | .0206 | .195 | .149 | .344 | .4026 | .3750     |          |            |              |    |     |
| FLA-3R14    | 553014R  | 14  | .0239 | .195 | .149 | .344 | .4026 | .3750     |          |            |              |    |     |
| FLA-3L14    | 553014L  | 14  | .0239 | .195 | .149 | .344 | .4026 | .3750     |          |            |              |    |     |
| FLA-3R12    | 553012R  | 12  | .0283 | .195 | .149 | .344 | .4026 | .3750     |          |            |              |    |     |
| FLA-3L12    | 553012L  | 12  | .0283 | .195 | .149 | .344 | .4026 | .3750     |          |            |              |    |     |
| FLA-3R10    | 553010R  | 10  | .0319 | .195 | .149 | .344 | .4026 | .3750     |          |            |              |    |     |
| FLA-3L10    | 553010L  | 10  | .0319 | .195 | .149 | .344 | .4026 | .3750     |          |            |              |    |     |
| FLA-3R8     | 553008R  | 8   | .0411 | .195 | .149 | .344 | .4026 | .3750     |          |            |              |    |     |
| FLA-3L8     | 553008L  | 8   | .0411 | .195 | .149 | .344 | .4026 | .3750     |          |            |              |    |     |
| FLA-3R6     | 553006R  | 6   | .0566 | .195 | .149 | .344 | .4026 | .3750     |          |            |              |    |     |
| FLA-3L6     | 553006L  | 6   | .0566 | .195 | .149 | .344 | .4026 | .3750     |          |            |              |    |     |
| FLA-3R5     | 553005R  | 5   | .0689 | .195 | .149 | .344 | .4026 | .3750     |          |            |              |    |     |
| FLA-3L5     | 553005L  | 5   | .0689 | .195 | .149 | .344 | .4026 | .3750     |          |            |              |    |     |
| FLA-3R4     | 553004R  | 4   | .0875 | .195 | .133 | .344 | .4018 | .3750     |          |            |              |    |     |
| FLA-3L4     | 553004L  | 4   | .0875 | .195 | .133 | .344 | .4018 | .3750     |          |            |              |    |     |
| FLA-4R8     | 554008R  | 8   | .0411 | .255 | .202 | .453 | .6332 | .3750     |          |            |              |    |     |
| FLA-4L8     | 554008L  | 8   | .0411 | .255 | .202 | .453 | .6332 | .3750     |          |            |              |    |     |
| FLA-4R6     | 554006R  | 6   | .0566 | .255 | .202 | .453 | .6332 | .3750     |          |            |              |    |     |
| FLA-4L6     | 554006L  | 6   | .0566 | .255 | .202 | .453 | .6332 | .3750     |          |            |              |    |     |
| FLA-4R5     | 554005R  | 5   | .0689 | .255 | .202 | .453 | .6332 | .3750     |          |            |              |    |     |
| FLA-4L5     | 554005L  | 5   | .0689 | .255 | .202 | .453 | .6332 | .3750     |          |            |              |    |     |
| FLA-4R4     | 554004R  | 4   | .0875 | .255 | .202 | .453 | .6332 | .3750     |          |            |              |    |     |
| FLA-4L4     | 554004L  | 4   | .0875 | .255 | .202 | .453 | .6332 | .3750     |          |            |              |    |     |
| FLA-6R3     | 556003R  | 3   | .1184 | .383 | .283 | .453 | .6308 | .3750     |          |            |              |    |     |
| FLA-6L3     | 556003L  | 3   | .1184 | .383 | .283 | .453 | .6308 | .3750     |          |            |              |    |     |
| FLA-6R2.5   | 5560025R | 2.5 | .1431 | .383 | .283 | .453 | .6308 | .3750     |          |            |              |    |     |
| FLA-6L2.5   | 5560025L | 2.5 | .1431 | .383 | .283 | .453 | .6308 | .3750     |          |            |              |    |     |
| FLA-6R2     | 556002R  | 2   | .1802 | .383 | .283 | .453 | .6308 | .3750     |          |            |              |    |     |
| FLA-6L2     | 556002L  | 2   | .1802 | .383 | .283 | .453 | .6308 | .3750     |          |            |              |    |     |

## ACME STUB THREADING

### FLAS



RH Shown



| Description | EDP Code | TPI | W     | T    | E    | A    | B     | Gage Dia. | Coating  |            |              |    |     |
|-------------|----------|-----|-------|------|------|------|-------|-----------|----------|------------|--------------|----|-----|
|             |          |     |       |      |      |      |       |           | Uncoated | TiN Coated | AlTiN Coated | C3 | GP3 |
| FLAS-3R16   | 553216R  | 16  | .0238 | .195 | .149 | .344 | .4026 | .375      |          |            |              |    |     |
| FLAS-3L16   | 553216L  | 16  | .0238 | .195 | .149 | .344 | .4026 | .375      |          |            |              |    |     |
| FLAS-3R14   | 553214R  | 14  | .0276 | .195 | .149 | .344 | .4026 | .375      |          |            |              |    |     |
| FLAS-3L14   | 553214L  | 14  | .0276 | .195 | .149 | .344 | .4026 | .375      |          |            |              |    |     |
| FLAS-3R12   | 553212R  | 12  | .0326 | .195 | .149 | .344 | .4026 | .375      |          |            |              |    |     |
| FLAS-3L12   | 553212L  | 12  | .0326 | .195 | .149 | .344 | .4026 | .375      |          |            |              |    |     |
| FLAS-3R10   | 553210R  | 10  | .0370 | .195 | .149 | .344 | .4026 | .375      |          |            |              |    |     |
| FLAS-3L10   | 553210L  | 10  | .0370 | .195 | .149 | .344 | .4026 | .375      |          |            |              |    |     |
| FLAS-3R8    | 553208R  | 8   | .0476 | .195 | .149 | .344 | .4026 | .375      |          |            |              |    |     |
| FLAS-3L8    | 553208L  | 8   | .0476 | .195 | .149 | .344 | .4026 | .375      |          |            |              |    |     |
| FLAS-3R6    | 553206R  | 6   | .0652 | .195 | .149 | .344 | .4026 | .375      |          |            |              |    |     |
| FLAS-3L6    | 553206L  | 6   | .0652 | .195 | .149 | .344 | .4026 | .375      |          |            |              |    |     |
| FLAS-3R5    | 553205R  | 5   | .0793 | .195 | .149 | .344 | .4026 | .375      |          |            |              |    |     |
| FLAS-3L5    | 553205L  | 5   | .0793 | .195 | .149 | .344 | .4026 | .375      |          |            |              |    |     |
| FLAS-3R4    | 553204R  | 4   | .1004 | .195 | .149 | .344 | .4026 | .375      |          |            |              |    |     |
| FLAS-3L4    | 553204L  | 4   | .1004 | .195 | .149 | .344 | .4026 | .375      |          |            |              |    |     |
| FLAS-4R3    | 554203R  | 3   | .1356 | .255 | .202 | .453 | .6332 | .375      |          |            |              |    |     |
| FLAS-4L3    | 554203L  | 3   | .1356 | .255 | .202 | .453 | .6332 | .375      |          |            |              |    |     |
| FLAS-6R2    | 556202R  | 2   | .2060 | .383 | .283 | .453 | .6308 | .375      |          |            |              |    |     |
| FLAS-6L2    | 556202L  | 2   | .2060 | .383 | .283 | .453 | .6308 | .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               | ▲ | ▲ | ● |

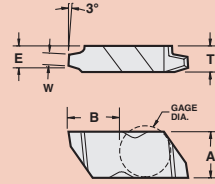




## PARTIAL TOPPING ACME THREADING

**FLA-PT** (with corner radii)

For Flo-Lock acme thread limits see pg. 111,112.



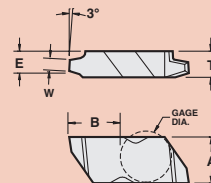
RH Shown



| Description  | EDP Code  | TPI | W     | T    | E    | A    | B     | Gage Dia. | Coating  |            |             |     |      |
|--------------|-----------|-----|-------|------|------|------|-------|-----------|----------|------------|-------------|-----|------|
|              |           |     |       |      |      |      |       |           | Uncoated | TIN Coated | ATIN Coated | AC3 | AC50 |
| FLA-3R16-PT  | 553016PTR | 16  | .0206 | .195 | .149 | .344 | .4026 | .3750     |          |            |             |     |      |
| FLA-3L16-PT  | 553016PTL | 16  | .0206 | .195 | .149 | .344 | .4026 | .3750     |          |            |             |     |      |
| FLA-3R14-PT  | 553014PTR | 14  | .0239 | .195 | .149 | .344 | .4026 | .3750     |          |            |             |     |      |
| FLA-3L14-PT  | 553014PTL | 14  | .0239 | .195 | .149 | .344 | .4026 | .3750     |          |            |             |     |      |
| FLA-3R12-PT  | 553012PTR | 12  | .0283 | .195 | .149 | .344 | .4026 | .3750     |          |            |             |     |      |
| FLA-3L12-PT  | 553012PTL | 12  | .0283 | .195 | .149 | .344 | .4026 | .3750     |          |            |             |     |      |
| FLA-3R10-PT  | 553010PTR | 10  | .0319 | .195 | .149 | .344 | .4026 | .3750     |          |            |             |     |      |
| FLA-3L10-PT  | 553010PTL | 10  | .0319 | .195 | .149 | .344 | .4026 | .3750     |          |            |             |     |      |
| FLA-3R8-PT   | 553008PTR | 8   | .0411 | .195 | .149 | .344 | .4026 | .3750     |          |            |             |     |      |
| FLA-3L8-PT   | 553008PTL | 8   | .0411 | .195 | .149 | .344 | .4026 | .3750     |          |            |             |     |      |
| FLA-3R6-PT   | 553006PTR | 6   | .0566 | .195 | .149 | .344 | .4026 | .3750     |          |            |             |     |      |
| FLA-3L6-PT   | 553006PTL | 6   | .0566 | .195 | .149 | .344 | .4026 | .3750     |          |            |             |     |      |
| FLA-3R5-PT   | 553005PTR | 5   | .0689 | .195 | .149 | .344 | .4026 | .3750     |          |            |             |     |      |
| FLA-3L5-PT   | 553005PTL | 5   | .0689 | .195 | .149 | .344 | .4026 | .3750     |          |            |             |     |      |
| FLA-3R4-PT   | 553004PTR | 4   | .0875 | .195 | .133 | .344 | .4018 | .3750     |          |            |             |     |      |
| FLA-3L4-PT   | 553004PTL | 4   | .0875 | .195 | .133 | .344 | .4018 | .3750     |          |            |             |     |      |
| FLA-4R8-PT   | 554008PTR | 8   | .0411 | .255 | .202 | .453 | .6332 | .3750     |          |            |             |     |      |
| FLA-4L8-PT   | 554008PTL | 8   | .0411 | .255 | .202 | .453 | .6332 | .3750     |          |            |             |     |      |
| FLA-4R6-PT   | 554006PTR | 6   | .0566 | .255 | .202 | .453 | .6332 | .3750     |          |            |             |     |      |
| FLA-4L6-PT   | 554006PTL | 6   | .0566 | .255 | .202 | .453 | .6332 | .3750     |          |            |             |     |      |
| FLA-4R5-PT   | 554005PTR | 5   | .0689 | .255 | .202 | .453 | .6332 | .3750     |          |            |             |     |      |
| FLA-4L5-PT   | 554005PTL | 5   | .0689 | .255 | .202 | .453 | .6332 | .3750     |          |            |             |     |      |
| FLA-4R4-PT   | 554004PTR | 4   | .0875 | .255 | .202 | .453 | .6332 | .3750     |          |            |             |     |      |
| FLA-4L4-PT   | 554004PTL | 4   | .0875 | .255 | .202 | .453 | .6332 | .3750     |          |            |             |     |      |
| FLA-6R3-PT   | 556003PTR | 3   | .1184 | .383 | .283 | .453 | .6308 | .3750     |          |            |             |     |      |
| FLA-6L3-PT   | 556003PTL | 3   | .1184 | .383 | .283 | .453 | .6308 | .3750     |          |            |             |     |      |
| FLA-6R2.5-PT | 556025PTR | 2.5 | .1431 | .383 | .283 | .453 | .6308 | .3750     |          |            |             |     |      |
| FLA-6L2.5-PT | 556025PTL | 2.5 | .1431 | .383 | .283 | .453 | .6308 | .3750     |          |            |             |     |      |
| FLA-6R2-PT   | 556002PTR | 2   | .1802 | .383 | .283 | .453 | .6308 | .3750     |          |            |             |     |      |
| FLA-6L2-PT   | 556002PTL | 2   | .1802 | .383 | .283 | .453 | .6308 | .3750     |          |            |             |     |      |

## PARTIAL TOPPING ACME STUB THREADING

**FLAS-PT** (with corner radii)



RH Shown



| Description  | EDP Code  | TPI | W     | T    | E    | A    | B     | Gage Dia. | Coating  |            |             |     |      |
|--------------|-----------|-----|-------|------|------|------|-------|-----------|----------|------------|-------------|-----|------|
|              |           |     |       |      |      |      |       |           | Uncoated | TIN Coated | ATIN Coated | AC3 | AC50 |
| FLAS-3R16-PT | 553216PTR | 16  | .0238 | .195 | .149 | .344 | .4026 | .375      |          |            |             |     |      |
| FLAS-3L16-PT | 553216PTL | 16  | .0238 | .195 | .149 | .344 | .4026 | .375      |          |            |             |     |      |
| FLAS-3R14-PT | 553214PTR | 14  | .0276 | .195 | .149 | .344 | .4026 | .375      |          |            |             |     |      |
| FLAS-3L14-PT | 553214PTL | 14  | .0276 | .195 | .149 | .344 | .4026 | .375      |          |            |             |     |      |
| FLAS-3R12-PT | 553212PTR | 12  | .0326 | .195 | .149 | .344 | .4026 | .375      |          |            |             |     |      |
| FLAS-3L12-PT | 553212PTL | 12  | .0326 | .195 | .149 | .344 | .4026 | .375      |          |            |             |     |      |
| FLAS-3R10-PT | 553210PTR | 10  | .0370 | .195 | .149 | .344 | .4026 | .375      |          |            |             |     |      |
| FLAS-3L10-PT | 553210PTL | 10  | .0370 | .195 | .149 | .344 | .4026 | .375      |          |            |             |     |      |
| FLAS-3R8-PT  | 553208PTR | 8   | .0476 | .195 | .149 | .344 | .4026 | .375      |          |            |             |     |      |
| FLAS-3L8-PT  | 553208PTL | 8   | .0476 | .195 | .149 | .344 | .4026 | .375      |          |            |             |     |      |
| FLAS-3R6-PT  | 553206PTR | 6   | .0652 | .195 | .149 | .344 | .4026 | .375      |          |            |             |     |      |
| FLAS-3L6-PT  | 553206PTL | 6   | .0652 | .195 | .149 | .344 | .4026 | .375      |          |            |             |     |      |
| FLAS-3R5-PT  | 553205PTR | 5   | .0793 | .195 | .149 | .344 | .4026 | .375      |          |            |             |     |      |
| FLAS-3L5-PT  | 553205PTL | 5   | .0793 | .195 | .149 | .344 | .4026 | .375      |          |            |             |     |      |
| FLAS-3R4-PT  | 553204PTR | 4   | .1004 | .195 | .149 | .344 | .4026 | .375      |          |            |             |     |      |
| FLAS-3L4-PT  | 553204PTL | 4   | .1004 | .195 | .149 | .344 | .4026 | .375      |          |            |             |     |      |
| FLAS-4R3-PT  | 554203PTR | 3   | .1356 | .255 | .202 | .453 | .6332 | .375      |          |            |             |     |      |
| FLAS-4L3-PT  | 554203PTL | 3   | .1356 | .255 | .202 | .453 | .6332 | .375      |          |            |             |     |      |
| FLAS-6R2-PT  | 556202PTR | 2   | .2060 | .383 | .283 | .453 | .6308 | .375      |          |            |             |     |      |
| FLAS-6L2-PT  | 556202PTL | 2   | .2060 | .383 | .283 | .453 | .6308 | .375      |          |            |             |     |      |

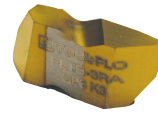
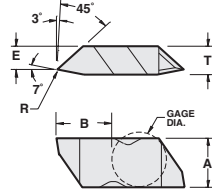
In an effort to improve our stock standard grade offering, there are periodic changes. Please see current price list for up to date grade offering.

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

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



## AMERICAN STANDARD BUTTRESS 7° LEAD FLT B



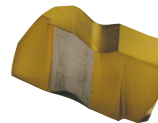
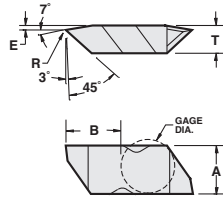
RH Shown

For ASB specifications and application see pg. 111.

| Description | EDP Code | TPI   | R         | T    | E    | A    | B     | Gage Dia. |  |  |  |  |  |
|-------------|----------|-------|-----------|------|------|------|-------|-----------|--|--|--|--|--|
| FLT B-2RA   | 602801R  | 16-20 | .002/.004 | .150 | .126 | .219 | .2688 | .1875     |  |  |  |  |  |
| FLT B-2LA   | 602801L  | 16-20 | .002/.004 | .150 | .126 | .219 | .2688 | .1875     |  |  |  |  |  |
| FLT B-3RA   | 603801R  | 8-16  | .005/.008 | .195 | .164 | .344 | .4034 | .3750     |  |  |  |  |  |
| FLT B-3LA   | 603801L  | 8-16  | .005/.008 | .195 | .164 | .344 | .4034 | .3750     |  |  |  |  |  |
| FLT B-4RA   | 604801R  | 4-6   | .008/.012 | .255 | .206 | .453 | .6334 | .3750     |  |  |  |  |  |
| FLT B-4LA   | 604801L  | 4-6   | .008/.012 | .255 | .206 | .453 | .6334 | .3750     |  |  |  |  |  |

| C3 | Uncoated |      | TIN Coated |      | ATIN Coated |   |
|----|----------|------|------------|------|-------------|---|
|    | GP3      | GP50 | AC3        | AC50 |             |   |
|    | ●        | ●    | ●          | ●    | ●           | ● |
|    | ●        | ●    | ●          | ●    | ●           | ● |
|    | ●        | ●    | ●          | ●    | ●           | ● |
|    | ●        | ●    | ●          | ●    | ●           | ● |
|    | ●        | ●    | ●          | ●    | ●           | ● |

## AMERICAN STANDARD BUTTRESS 45° LEAD FLT B



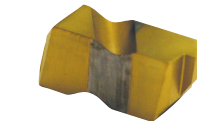
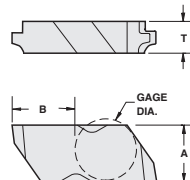
RH Shown

For ASB specifications and application see pg. 111.

| Description | EDP Code | TPI   | R         | T    | E    | A    | B     | Gage Dia. |  |  |  |  |  |
|-------------|----------|-------|-----------|------|------|------|-------|-----------|--|--|--|--|--|
| FLT B-2RB   | 602802R  | 16-20 | .002/.004 | .150 | .010 | .219 | .2627 | .1875     |  |  |  |  |  |
| FLT B-2LB   | 602802L  | 16-20 | .002/.004 | .150 | .010 | .219 | .2627 | .1875     |  |  |  |  |  |
| FLT B-3RB   | 603802R  | 8-16  | .005/.008 | .195 | .012 | .344 | .3954 | .3750     |  |  |  |  |  |
| FLT B-3LB   | 603802L  | 8-16  | .005/.008 | .195 | .012 | .344 | .3954 | .3750     |  |  |  |  |  |
| FLT B-4RB   | 604802R  | 4-6   | .008/.012 | .255 | .016 | .453 | .6235 | .3750     |  |  |  |  |  |
| FLT B-4LB   | 604802L  | 4-6   | .008/.012 | .255 | .016 | .453 | .6235 | .3750     |  |  |  |  |  |

| C3 | Uncoated |      | TIN Coated |      | ATIN Coated |   |
|----|----------|------|------------|------|-------------|---|
|    | GP3      | GP50 | AC3        | AC50 |             |   |
|    | ●        | ●    | ●          | ●    | ●           | ● |
|    | ●        | ●    | ●          | ●    | ●           | ● |
|    | ●        | ●    | ●          | ●    | ●           | ● |
|    | ●        | ●    | ●          | ●    | ●           | ● |
|    | ●        | ●    | ●          | ●    | ●           | ● |

## API BUTTRESS THREADING FLDC

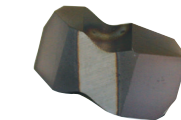
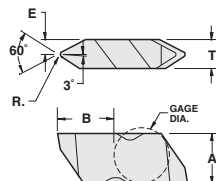


RH EXT Shown

| Description  | EDP Code | TPI | TPF | T    | A    | B     | Gage Dia. |  |  |  |  |  |
|--------------|----------|-----|-----|------|------|-------|-----------|--|--|--|--|--|
| 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     |  |  |  |  |  |

| C3 | Uncoated |      | TIN Coated |      | ATIN Coated |   |
|----|----------|------|------------|------|-------------|---|
|    | GP3      | GP50 | AC3        | AC50 |             |   |
|    | ●        | ●    | ●          | ●    | ●           | ● |
|    | ●        | ●    | ●          | ●    | ●           | ● |
|    | ●        | ●    | ●          | ●    | ●           | ● |
|    | ●        | ●    | ●          | ●    | ●           | ● |
|    | ●        | ●    | ●          | ●    | ●           | ● |

## API THREADING NON TOPPING FLD



RH Shown

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

| C3 | Uncoated |      | TIN Coated |      | ATIN Coated |   |
|----|----------|------|------------|------|-------------|---|
|    | GP3      | GP50 | AC3        | AC50 |             |   |
|    | ●        | ●    | ●          | ●    | ●           | ● |
|    | ●        | ●    | ●          | ●    | ●           | ● |
|    | ●        | ●    | ●          | ●    | ●           | ● |
|    | ●        | ●    | ●          | ●    | ●           | ● |
|    | ●        | ●    | ●          | ●    | ●           | ● |

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.

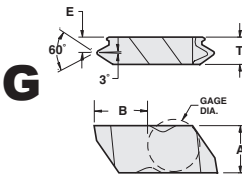
|                     |   |   |   |   |
|---------------------|---|---|---|---|
| Cast Iron           | ▲ | ● | ● | ● |
| Non-Ferrous         | ▲ | ● | ● | ● |
| Stainless/High Temp | ▲ | ● | ● | ● |
| Steel               | ▲ | ● | ● | ● |



# FLO-LOCK

## API ROTARY SHOULDER CONNECTION THREADING

FLDC



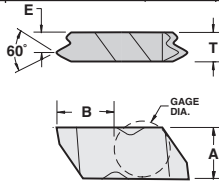
RH EXT Shown



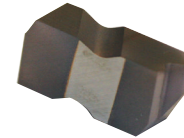
| Description | EDP Code | TPI | TPF | E    | T    | A    | B     | Gage Dia. | Conn. No. or Size          | GP3 | GP50 | AC22 | AC3 | AC50 |
|-------------|----------|-----|-----|------|------|------|-------|-----------|----------------------------|-----|------|------|-----|------|
| FLDC-3-530E | 553613E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

## API ROUND THREADING

FLDC



RH Shown

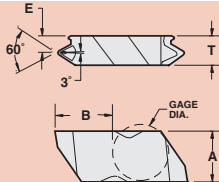


| Description    | EDP Code | TPI | TPF | E    | T    | A    | B     | Gage Dia. |  | C3 | GP3 | GP50 | AC3 | AC50 |
|----------------|----------|-----|-----|------|------|------|-------|-----------|--|----|-----|------|-----|------|
| FLDC-3-8RDR75  | 553632R  | 8   | 3/4 | .195 | .125 | .344 | .4010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

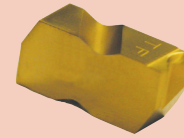
FLDC

with chipbreaker

Exclusive patented design!



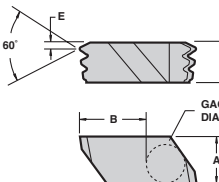
RH Shown



| Description      | EDP Code | TPI | TPF | E    | T    | A    | B     | Gage Dia. |  | 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     |  |    |     | ●    | ●   | ●    |

FLDC

Multi-tooth



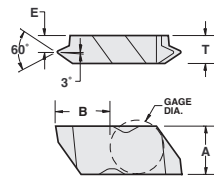
RH Shown



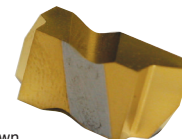
| Description     | EDP Code | TPI | TPF | E    | T    | A    | B     | Gage Dia. |  | C3 | GP3 | GP50 | AC3 | AC50 |
|-----------------|----------|-----|-----|------|------|------|-------|-----------|--|----|-----|------|-----|------|
| FLDC-6-8RDR75M  | 556633R  | 8   | 3/4 | .070 | .383 | .453 | .6360 | .3750     |  |    |     | ●    | ●   | ●    |
| FLDC-6-10RDR75M | 556635R  | 10  | 3/4 | .134 | .383 | .453 | .6360 | .3750     |  |    |     | ●    | ●   | ●    |

## NPT THREADING

FLDC



RH Shown



| Description    | EDP Code | TPI  | TPF | E    | T    | A    | B     | Gage Dia. |  | C3 | GP3 | GP50 | AC3 | AC50 |
|----------------|----------|------|-----|------|------|------|-------|-----------|--|----|-----|------|-----|------|
| FLDC-38VR-75   | 553608R  | 8    | 3/4 | .100 | .195 | .344 | .4000 | .3750     |  |    | ●   | ●    | ●   | ●    |
| FLDC-38VL-75   | 553608L  | 8    | 3/4 | .100 | .195 | .344 | .4000 | .3750     |  |    | ●   | ●    | ●   | ●    |
| FLDC-3115VR-75 | 553611R  | 11.5 | 3/4 | .144 | .195 | .344 | .4000 | .3750     |  |    | ●   | ●    | ●   | ●    |
| FLDC-3115VL-75 | 553611L  | 11.5 | 3/4 | .144 | .195 | .344 | .4000 | .3750     |  |    | ●   | ●    | ●   | ●    |
| FLDC-314VR-75  | 553614R  | 14   | 3/4 | .148 | .195 | .344 | .4023 | .3750     |  |    | ●   | ●    | ●   | ●    |
| FLDC-314VL-75  | 553614L  | 14   | 3/4 | .148 | .195 | .344 | .4023 | .3750     |  |    | ●   | ●    | ●   | ●    |
| FLDC-318VR-75  | 553618R  | 18   | 3/4 | .154 | .195 | .344 | .4023 | .3750     |  |    | ●   | ●    | ●   | ●    |
| FLDC-318VL-75  | 553618L  | 18   | 3/4 | .154 | .195 | .344 | .4023 | .3750     |  |    | ●   | ●    | ●   | ●    |
| FLDC-327VR-75  | 553627R  | 27   | 3/4 | .162 | .195 | .344 | .4023 | .3750     |  |    | ●   | ●    | ●   | ●    |
| FLDC-327VL-75  | 553627L  | 27   | 3/4 | .162 | .195 | .344 | .4023 | .3750     |  |    | ●   | ●    | ●   | ●    |

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- ▲ Recommended grade under general conditions.

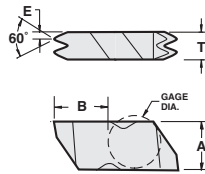
Cast Iron  
Non-Ferrous  
Stainless/High Temp  
Steel



## NPT THREADING

FLDC

Multi-tooth



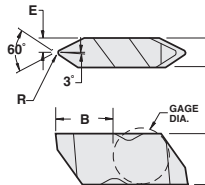
RH Shown



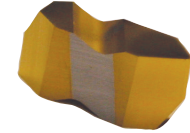
| Description        | EDP Code | TPI  | TPF | E    | T    | A    | B     | Gage Dia. | C3 | GP3 | GP50 | AC3 | AC50 |
|--------------------|----------|------|-----|------|------|------|-------|-----------|----|-----|------|-----|------|
| FLDC-3-8 NPT-2E    | 553708E  | 8    | 3/4 | .058 | .250 | .344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

## UNJ THREADING

FLJ



RH Shown

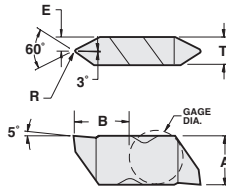


| Description | EDP Code | TPI | R           | E    | T    | A    | B     | Gage Dia. | C3 | GP3 | GP50 | AC3 | AC50 |
|-------------|----------|-----|-------------|------|------|------|-------|-----------|----|-----|------|-----|------|
| FLJ-3010R16 | 583216R  | 16  | .0094/.0104 | .098 | .195 | .344 | .3999 | .3750     |    |     |      |     |      |
| FLJ-3010L16 | 583216L  | 16  | .0094/.0104 | .098 | .195 | .344 | .3999 | .3750     |    |     |      |     |      |
| FLJ-3014R12 | 583212R  | 12  | .0125/.0135 | .098 | .195 | .344 | .3999 | .3750     |    |     |      |     |      |
| FLJ-3014L12 | 583212L  | 12  | .0125/.0135 | .098 | .195 | .344 | .3999 | .3750     |    |     |      |     |      |
| FLJ-3020R8  | 583208R  | 8   | .0188/.0198 | .098 | .195 | .344 | .3999 | .3750     |    |     |      |     |      |
| FLJ-3020L8  | 583208L  | 8   | .0188/.0198 | .098 | .195 | .344 | .3999 | .3750     |    |     |      |     |      |

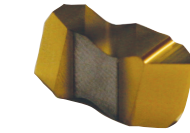
## UNJ THREADING

FLJP

Positive rake



RH Shown

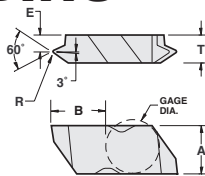


| Description  | EDP Code | TPI | R           | E    | T    | A    | B     | Gage Dia. | C3 | GP3 | GP50 | AC3 | AC50 |
|--------------|----------|-----|-------------|------|------|------|-------|-----------|----|-----|------|-----|------|
| FLJP-3010R16 | 583816R  | 16  | .0094/.0104 | .098 | .195 | .344 | .3999 | .3750     |    |     |      |     |      |
| FLJP-3010L16 | 583816L  | 16  | .0094/.0104 | .098 | .195 | .344 | .3999 | .3750     |    |     |      |     |      |
| FLJP-3014R12 | 583812R  | 12  | .0125/.0135 | .098 | .195 | .344 | .3999 | .3750     |    |     |      |     |      |
| FLJP-3014L12 | 583812L  | 12  | .0125/.0135 | .098 | .195 | .344 | .3999 | .3750     |    |     |      |     |      |
| FLJP-3020R8  | 583808R  | 8   | .0188/.0198 | .098 | .195 | .344 | .3999 | .3750     |    |     |      |     |      |
| FLJP-3020L8  | 583808L  | 8   | .0188/.0198 | .098 | .195 | .344 | .3999 | .3750     |    |     |      |     |      |

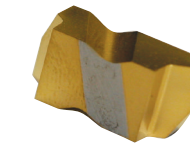
## UNJ FINE PITCH THREADING

FLJF

For cutting close to shoulder



RH Shown



| Description  | EDP Code | TPI | R           | E    | T    | A    | B     | Gage Dia. | C3 | GP3 | GP50 | AC3 | AC50 |
|--------------|----------|-----|-------------|------|------|------|-------|-----------|----|-----|------|-----|------|
| FLJF-3005R32 | 583432R  | 32  | .0047/.0057 | .141 | .195 | .344 | .4022 | .3750     |    |     |      |     |      |
| FLJF-3005L32 | 583432L  | 32  | .0047/.0057 | .141 | .195 | .344 | .4022 | .3750     |    |     |      |     |      |
| FLJF-3006R28 | 583428R  | 28  | .0054/.0064 | .141 | .195 | .344 | .4022 | .3750     |    |     |      |     |      |
| FLJF-3006L28 | 583428L  | 28  | .0054/.0064 | .141 | .195 | .344 | .4022 | .3750     |    |     |      |     |      |
| FLJF-3007R24 | 583424R  | 24  | .0063/.0073 | .141 | .195 | .344 | .4022 | .3750     |    |     |      |     |      |
| FLJF-3007L24 | 583424L  | 24  | .0063/.0073 | .141 | .195 | .344 | .4022 | .3750     |    |     |      |     |      |
| FLJF-3008R20 | 583420R  | 20  | .0075/.0085 | .141 | .195 | .344 | .4022 | .3750     |    |     |      |     |      |
| FLJF-3008L20 | 583420L  | 20  | .0075/.0085 | .141 | .195 | .344 | .4022 | .3750     |    |     |      |     |      |
| FLJF-3009R18 | 583418R  | 18  | .0083/.0093 | .141 | .195 | .344 | .4022 | .3750     |    |     |      |     |      |
| FLJF-3009L18 | 583418L  | 18  | .0083/.0093 | .141 | .195 | .344 | .4022 | .3750     |    |     |      |     |      |
| FLJF-3010R16 | 583416R  | 16  | .0094/.0104 | .141 | .195 | .344 | .4022 | .3750     |    |     |      |     |      |
| FLJF-3010L16 | 583416L  | 16  | .0094/.0104 | .141 | .195 | .344 | .4022 | .3750     |    |     |      |     |      |
| FLJF-3012R14 | 583414R  | 14  | .0107/.0117 | .141 | .195 | .344 | .4022 | .3750     |    |     |      |     |      |
| FLJF-3012L14 | 583414L  | 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               |  |  |  |  |



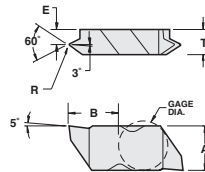


# FLO-LOCK

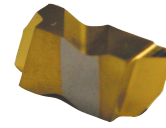
## UNJ FINE PITCH THREADING

FLJK

Positive rake



RH Shown

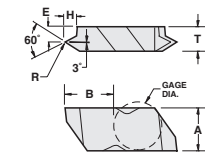


| Description  | EDP Code | TPI | R           | E    | T    | A    | B     | Gage Dia. | Coating  |            |     |      |      |
|--------------|----------|-----|-------------|------|------|------|-------|-----------|----------|------------|-----|------|------|
|              |          |     |             |      |      |      |       |           | Uncoated | TIN Coated | AC3 | AC50 | AC50 |
| FLJK-3005R32 | 583632R  | 32  | .0047/.0057 | .141 | .195 | .344 | .4022 | .3750     |          |            |     |      |      |
| FLJK-3005L32 | 583632L  | 32  | .0047/.0057 | .141 | .195 | .344 | .4022 | .3750     |          |            |     |      |      |
| FLJK-3006R28 | 583628R  | 28  | .0054/.0064 | .141 | .195 | .344 | .4022 | .3750     |          |            |     |      |      |
| FLJK-3006L28 | 583628L  | 28  | .0054/.0064 | .141 | .195 | .344 | .4022 | .3750     |          |            |     |      |      |
| FLJK-3007R24 | 583624R  | 24  | .0063/.0073 | .141 | .195 | .344 | .4022 | .3750     |          |            |     |      |      |
| FLJK-3007L24 | 583624L  | 24  | .0063/.0073 | .141 | .195 | .344 | .4022 | .3750     |          |            |     |      |      |
| FLJK-3008R20 | 583620R  | 20  | .0075/.0085 | .141 | .195 | .344 | .4022 | .3750     |          |            |     |      |      |
| FLJK-3008L20 | 583620L  | 20  | .0075/.0085 | .141 | .195 | .344 | .4022 | .3750     |          |            |     |      |      |
| FLJK-3009R18 | 583618R  | 18  | .0083/.0093 | .141 | .195 | .344 | .4022 | .3750     |          |            |     |      |      |
| FLJK-3009L18 | 583618L  | 18  | .0083/.0093 | .141 | .195 | .344 | .4022 | .3750     |          |            |     |      |      |
| FLJK-3010R16 | 583616R  | 16  | .0094/.0104 | .141 | .195 | .344 | .4022 | .3750     |          |            |     |      |      |
| FLJK-3010L16 | 583616L  | 16  | .0094/.0104 | .141 | .195 | .344 | .4022 | .3750     |          |            |     |      |      |
| FLJK-3012R14 | 583614R  | 14  | .0107/.0117 | .141 | .195 | .344 | .4022 | .3750     |          |            |     |      |      |
| FLJK-3012L14 | 583614L  | 14  | .0107/.0117 | .141 | .195 | .344 | .4022 | .3750     |          |            |     |      |      |

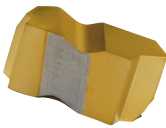
## UN THREADING

FLTC

Crest topping



RH EXT Shown



| Description | EDP Code | TPI | R    | E    | H    | T    | A    | B     | Gage Dia. | Coating  |            |     |      |      |
|-------------|----------|-----|------|------|------|------|------|-------|-----------|----------|------------|-----|------|------|
|             |          |     |      |      |      |      |      |       |           | Uncoated | TIN Coated | AC3 | AC50 | AC50 |
| FLTC-3R7E   | 613007R  | 7   | .017 | .107 | .108 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3L7E   | 613007L  | 7   | .017 | .107 | .108 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3R7I   | 613207R  | 7   | .009 | .107 | .092 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3L7I   | 613207L  | 7   | .009 | .107 | .092 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3R8E   | 613008R  | 8   | .015 | .107 | .094 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3L8E   | 613008L  | 8   | .015 | .107 | .094 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3R8I   | 613208R  | 8   | .007 | .107 | .081 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3L8I   | 613208L  | 8   | .007 | .107 | .081 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3R9E   | 613009R  | 9   | .013 | .107 | .084 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3L9E   | 613009L  | 9   | .013 | .107 | .084 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3R9I   | 613209R  | 9   | .006 | .107 | .072 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3L9I   | 613209L  | 9   | .006 | .107 | .072 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3R10E  | 613010R  | 10  | .012 | .107 | .076 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3L10E  | 613010L  | 10  | .012 | .107 | .076 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3R10I  | 613210R  | 10  | .005 | .107 | .065 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3L10I  | 613210L  | 10  | .005 | .107 | .065 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3R11E  | 613011R  | 11  | .011 | .107 | .069 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3L11E  | 613011L  | 11  | .011 | .107 | .069 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3R11I  | 613211R  | 11  | .005 | .107 | .059 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3L11I  | 613211L  | 11  | .005 | .107 | .059 | .195 | .344 | .4004 | .3750     |          |            |     |      |      |
| FLTC-3R12E  | 613012R  | 12  | .010 | .148 | .051 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3L12E  | 613012L  | 12  | .010 | .148 | .051 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3R12I  | 613212R  | 12  | .004 | .148 | .048 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3L12I  | 613212L  | 12  | .004 | .148 | .048 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3R14E  | 613014R  | 14  | .009 | .148 | .054 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3L14E  | 613014L  | 14  | .009 | .148 | .054 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3R14I  | 613214R  | 14  | .003 | .148 | .044 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3L14I  | 613214L  | 14  | .003 | .148 | .044 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3R16E  | 613016R  | 16  | .008 | .148 | .046 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3L16E  | 613016L  | 16  | .008 | .148 | .046 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3R16I  | 613216R  | 16  | .003 | .148 | .040 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3L16I  | 613216L  | 16  | .003 | .148 | .040 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3R18E  | 613018R  | 18  | .007 | .148 | .041 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3L18E  | 613018L  | 18  | .007 | .148 | .041 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3R18I  | 613218R  | 18  | .003 | .148 | .036 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3L18I  | 613218L  | 18  | .003 | .148 | .036 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3R20E  | 613020R  | 20  | .006 | .148 | .037 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3L20E  | 613020L  | 20  | .006 | .148 | .037 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3R20I  | 613220R  | 20  | .003 | .148 | .031 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3L20I  | 613220L  | 20  | .003 | .148 | .031 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3R24E  | 613024R  | 24  | .005 | .148 | .031 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3L24E  | 613024L  | 24  | .005 | .148 | .031 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3R24I  | 613224R  | 24  | .003 | .148 | .026 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3L24I  | 613224L  | 24  | .003 | .148 | .026 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3R28*  | 613028R  | 28  | .003 | .148 | .023 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3L28*  | 613028L  | 28  | .003 | .148 | .023 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3R32*  | 613228R  | 32  | .003 | .148 | .021 | .195 | .344 | .4025 | .3750     |          |            |     |      |      |
| FLTC-3L32*  | 613228L  | 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               |  |  |  |  |  |

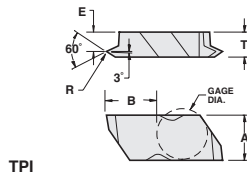


## 60° V-THREADING

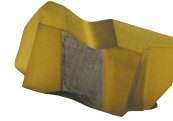
FLTF

Fine pitch

For 60° V-thread limits see pg. 112.



RH Shown

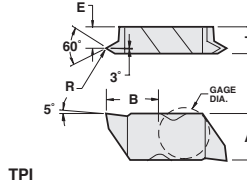


| Description | EDP Code | TPI   |       | R         | E    | T    | A    | B     | Gage Dia. | Coatings |            |             |     |     |      |
|-------------|----------|-------|-------|-----------|------|------|------|-------|-----------|----------|------------|-------------|-----|-----|------|
|             |          | Int   | Ext   |           |      |      |      |       |           | Uncoated | TIN Coated | ATIN Coated | C25 | GP3 | AC50 |
| FLTF-2R     | 612400R  | 12-24 | 14-44 | .002/.004 | .110 | .150 | .219 | .2679 | .1875     | ●        | ●          | ●           | ●   | ●   | ●    |
| FLTF-2L     | 612400L  | 12-24 | 14-44 | .002/.004 | .110 | .150 | .219 | .2679 | .1875     | ●        | ●          | ●           | ●   | ●   | ●    |
| FLTF-3R     | 613400R  | 9-24  | 10-44 | .002/.004 | .141 | .195 | .344 | .4022 | .3750     | ●        | ●          | ●           | ●   | ●   | ●    |
| FLTF-3L     | 613400L  | 9-24  | 10-44 | .002/.004 | .141 | .195 | .344 | .4022 | .3750     | ●        | ●          | ●           | ●   | ●   | ●    |
| FLTF-4R     | 614400R  | 9-24  | 10-44 | .002/.004 | .201 | .255 | .453 | .6322 | .3750     | ●        | ●          | ●           | ●   | ●   | ●    |
| FLTF-4L     | 614400L  | 9-24  | 10-44 | .002/.004 | .201 | .255 | .453 | .6322 | .3750     | ●        | ●          | ●           | ●   | ●   | ●    |

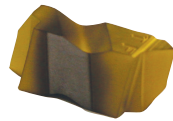
## 60° V-THREADING

FLTK

Positive rake



RH Shown



| Description | EDP Code | TPI   |       | R         | E    | T    | A    | B     | Gage Dia. | Coatings |            |             |     |     |      |
|-------------|----------|-------|-------|-----------|------|------|------|-------|-----------|----------|------------|-------------|-----|-----|------|
|             |          | Int   | Ext   |           |      |      |      |       |           | Uncoated | TIN Coated | ATIN Coated | C25 | GP3 | AC50 |
| FLTK-2R     | 612600R  | 12-24 | 14-44 | .002/.004 | .110 | .150 | .219 | .2679 | .1875     | ●        | ●          | ●           | ●   | ●   | ●    |
| FLTK-2L     | 612600L  | 12-24 | 14-44 | .002/.004 | .110 | .150 | .219 | .2679 | .1875     | ●        | ●          | ●           | ●   | ●   | ●    |
| FLTK-3R     | 613600R  | 9-24  | 10-44 | .002/.004 | .141 | .195 | .344 | .4022 | .3750     | ●        | ●          | ●           | ●   | ●   | ●    |
| FLTK-3L     | 613600L  | 9-24  | 10-44 | .002/.004 | .141 | .195 | .344 | .4022 | .3750     | ●        | ●          | ●           | ●   | ●   | ●    |
| FLTK-4R     | 614600R  | 9-24  | 10-44 | .002/.004 | .201 | .255 | .453 | .6322 | .3750     | ●        | ●          | ●           | ●   | ●   | ●    |
| FLTK-4L     | 614600L  | 9-24  | 10-44 | .002/.004 | .201 | .255 | .453 | .6322 | .3750     | ●        | ●          | ●           | ●   | ●   | ●    |

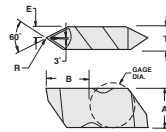
## 60° V-THREADING - CHIP-FLO

FLT-CB

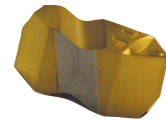
Features:

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

Exclusive patented design!



RH Shown

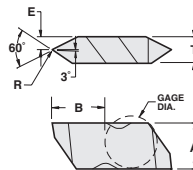


| Description | EDP Code  | TPI  |      | R         | E    | T    | A    | B     | Gage Dia. | Coatings |            |             |     |    |      |
|-------------|-----------|------|------|-----------|------|------|------|-------|-----------|----------|------------|-------------|-----|----|------|
|             |           | Int  | Ext  |           |      |      |      |       |           | Uncoated | TIN Coated | ATIN Coated | C25 | C3 | AC50 |
| FLT-3R-HCB  | 603600HCR | 5-12 | 6-20 | .005/.008 | .098 | .195 | .344 | .3999 | .3750     | ●        | ●          | ●           | ●   | ●  | ●    |
| FLT-3L-HCB  | 603600HCL | 5-12 | 6-20 | .005/.008 | .098 | .195 | .344 | .3999 | .3750     | ●        | ●          | ●           | ●   | ●  | ●    |
| FLT-3RC-HCB | 603612HCR | 5-6  | 6-11 | .012/.015 | .098 | .195 | .344 | .3999 | .3750     | ●        | ●          | ●           | ●   | ●  | ●    |
| FLT-3LC-HCB | 603612HCL | 5-6  | 6-11 | .012/.015 | .098 | .195 | .344 | .3999 | .3750     | ●        | ●          | ●           | ●   | ●  | ●    |
| FLT-3R-CB   | 603600CR  | 8-12 | 8-20 | .005/.008 | .098 | .195 | .344 | .3999 | .3750     | ●        | ●          | ●           | ●   | ●  | ●    |
| FLT-3L-CB   | 603600CL  | 8-12 | 8-20 | .005/.008 | .098 | .195 | .344 | .3999 | .3750     | ●        | ●          | ●           | ●   | ●  | ●    |
| FLT-3R-FCB  | 603600FCR | 7-20 | 8-36 | .003/.005 | .098 | .195 | .344 | .3999 | .3750     | ●        | ●          | ●           | ●   | ●  | ●    |
| FLT-3L-FCB  | 603600FCL | 7-20 | 8-36 | .003/.005 | .098 | .195 | .344 | .3999 | .3750     | ●        | ●          | ●           | ●   | ●  | ●    |
| FLT-4R-HCB  | 604600HCR | 4-12 | 4-20 | .005/.008 | .128 | .255 | .453 | .6298 | .3750     | ●        | ●          | ●           | ●   | ●  | ●    |
| FLT-4L-HCB  | 604600HCL | 4-12 | 4-20 | .005/.008 | .128 | .255 | .453 | .6298 | .3750     | ●        | ●          | ●           | ●   | ●  | ●    |

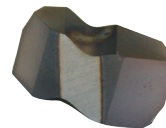
## 60° V-THREADING

FLT

For 60° V-thread limits see pg. 112.



RH Shown



| Description | EDP Code | TPI  |      | R         | E    | T    | A    | B     | Gage Dia. | Coatings |            |             |     |     |      |
|-------------|----------|------|------|-----------|------|------|------|-------|-----------|----------|------------|-------------|-----|-----|------|
|             |          | Int  | Ext  |           |      |      |      |       |           | Uncoated | TIN Coated | ATIN Coated | C25 | GP3 | AC50 |
| FLT-2R      | 602600R  | 7-20 | 8-36 | .003/.005 | .075 | .150 | .219 | .2661 | .1875     | ●        | ●          | ●           | ●   | ●   | ●    |
| FLT-2L      | 602600L  | 7-20 | 8-36 | .003/.005 | .075 | .150 | .219 | .2661 | .1875     | ●        | ●          | ●           | ●   | ●   | ●    |
| FLT-3R      | 603600R  | 5-12 | 6-20 | .005/.008 | .098 | .195 | .344 | .3999 | .3750     | ●        | ●          | ●           | ●   | ●   | ●    |
| FLT-3L      | 603600L  | 5-12 | 6-20 | .005/.008 | .098 | .195 | .344 | .3999 | .3750     | ●        | ●          | ●           | ●   | ●   | ●    |
| FLT-3010R   | 603610R  | 5-12 | 6-18 | .009/.011 | .098 | .195 | .344 | .3999 | .3750     | ●        | ●          | ●           | ●   | ●   | ●    |
| FLT-3010L   | 603610L  | 5-12 | 6-18 | .009/.011 | .098 | .195 | .344 | .3999 | .3750     | ●        | ●          | ●           | ●   | ●   | ●    |
| FLT-4R      | 604600R  | 4-12 | 4-20 | .005/.008 | .128 | .255 | .453 | .6298 | .3750     | ●        | ●          | ●           | ●   | ●   | ●    |
| FLT-4L      | 604600L  | 4-12 | 4-20 | .005/.008 | .128 | .255 | .453 | .6298 | .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               |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



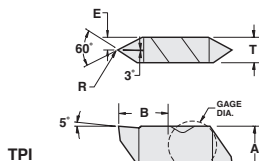
# FLO-LOCK

## 60° V-THREADING

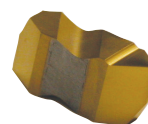
FLTP

Positive rake

For 60° V-thread limits see pg. 112.



RH Shown

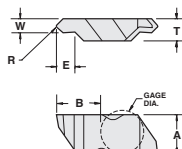


| Description | EDP Code | Int  | Ext  | R         | E    | T    | A    | B     | Gage Dia. | C25 | GP3 | GP50 | AC3 | AC50 |
|-------------|----------|------|------|-----------|------|------|------|-------|-----------|-----|-----|------|-----|------|
| FLTP-2R     | 612800R  | 7-20 | 8-36 | .003/.005 | .075 | .150 | .219 | .2661 | .1875     | ●   | ●   | ●    | ●   | ●    |
| FLTP-2L     | 612800L  | 7-20 | 8-36 | .003/.005 | .075 | .150 | .219 | .2661 | .1875     | ●   | ●   | ●    | ●   | ●    |
| FLTP-3R     | 613800R  | 5-12 | 6-20 | .005/.008 | .098 | .195 | .344 | .3999 | .3750     | ●   | ●   | ●    | ●   | ●    |
| FLTP-3L     | 613800L  | 5-12 | 6-20 | .005/.008 | .098 | .195 | .344 | .3999 | .3750     | ●   | ●   | ●    | ●   | ●    |
| FLTP-4R     | 614800R  | 4-12 | 4-20 | .005/.008 | .128 | .255 | .453 | .6293 | .3750     | ●   | ●   | ●    | ●   | ●    |
| FLTP-4L     | 614800L  | 4-12 | 4-20 | .005/.008 | .128 | .255 | .453 | .6293 | .3750     | ●   | ●   | ●    | ●   | ●    |

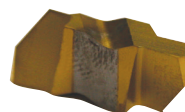
## UNDERCUTTING

FLU

For use in FLRR/L holders



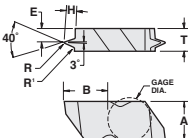
RH Shown



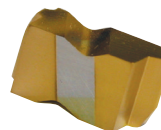
| Description | EDP Code | Inch | Metric | R    | E    | T    | A    | B     | Gage Dia. | C3 | GP3 | GP50 | AC3 | AC50 |
|-------------|----------|------|--------|------|------|------|------|-------|-----------|----|-----|------|-----|------|
| FLU-3094R   | 623094R  | .094 | 2.39   | .020 | .125 | .195 | .344 | .4050 | .3750     | ●  | ●   | ●    | ●   | ●    |
| FLU-3094L   | 623094L  | .094 | 2.39   | .020 | .125 | .195 | .344 | .4050 | .3750     | ●  | ●   | ●    | ●   | ●    |
| FLU-3125R   | 623125R  | .125 | 3.18   | .047 | .188 | .195 | .344 | .4050 | .3750     | ●  | ●   | ●    | ●   | ●    |
| FLU-3125L   | 623125L  | .125 | 3.18   | .047 | .188 | .195 | .344 | .4050 | .3750     | ●  | ●   | ●    | ●   | ●    |
| FLU-3156R   | 623156R  | .156 | 3.96   | .047 | .188 | .195 | .344 | .4050 | .3750     | ●  | ●   | ●    | ●   | ●    |
| FLU-3156L   | 623156L  | .156 | 3.96   | .047 | .188 | .195 | .344 | .4050 | .3750     | ●  | ●   | ●    | ●   | ●    |

## POLY-V

FLV



RH Shown



| Description | EDP Code | R    | R1   | E    | T    | H    | A    | B     | Gage Dia. | C25 | GP3 | GP50 | AC3 | AC50 |
|-------------|----------|------|------|------|------|------|------|-------|-----------|-----|-----|------|-----|------|
| FLV-3RJ     | 623800R  | .012 | .008 | .125 | .195 | .087 | .344 | .4013 | .3750     | ●   | ●   | ●    | ●   | ●    |
| FLV-3LJ     | 623800L  | .012 | .008 | .125 | .195 | .087 | .344 | .4013 | .3750     | ●   | ●   | ●    | ●   | ●    |
| FLV-4RL     | 624800R  | .012 | .015 | .118 | .255 | .201 | .453 | .6288 | .3750     | ●   | ●   | ●    | ●   | ●    |
| FLV-4LL     | 624800L  | .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.

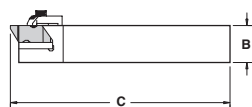
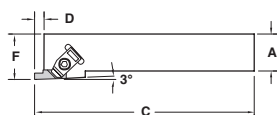
|                     |   |   |   |   |   |
|---------------------|---|---|---|---|---|
| Cast Iron           | ▲ | ● | ● | ● | ● |
| Non-Ferrous         | ▲ | ● | ● | ● | ● |
| Stainless/High Temp | ▲ | ● | ● | ● | ● |
| Steel               | ▲ | ● | ● | ● | ● |

## EXTERNAL HOLDER (INCH)

FLSR/L

Threading and Grooving

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



RH SHOWN

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

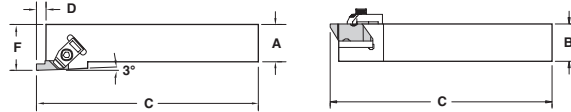
\* "F" Dim. over sharp point of grooving insert.



## EXTERNAL HOLDER (METRIC)

FLSR/L

Threading and Grooving



RH SHOWN

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

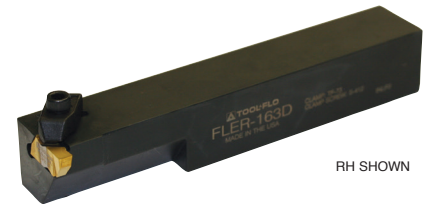
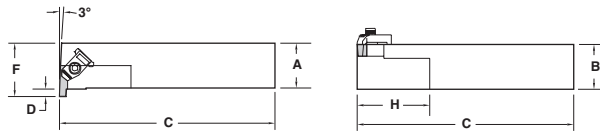
| Description | EDP Code | Insert | A    | B    | C     | D   | F*   | Seat | Seat Screw | Clamp | Clamp Screw |
|-------------|----------|--------|------|------|-------|-----|------|------|------------|-------|-------------|
| FLSR-2020M2 | 93412008 | FL_-2R | 20,0 | 20,0 | 125,0 | 3,0 | 25,0 | -    | -          | TF-74 | S-310       |
| FLSL-2020M2 | 93312008 | FL_-2L | 20,0 | 20,0 | 125,0 | 3,0 | 25,0 | -    | -          | TF-75 | S-310       |
| FLSR-2525M2 | 93412508 | FL_-2R | 25,0 | 25,0 | 150,0 | 3,0 | 32,0 | -    | -          | TF-74 | S-310       |
| FLSL-2525M2 | 93312508 | FL_-2L | 25,0 | 25,0 | 150,0 | 3,0 | 32,0 | -    | -          | TF-75 | S-310       |
| FLSR-2020M3 | 93412016 | FL_-3R | 20,0 | 20,0 | 125,0 | 5,0 | 32,0 | -    | -          | TF-72 | S-412       |
| FLSL-2020M3 | 93312016 | FL_-3L | 20,0 | 20,0 | 125,0 | 5,0 | 32,0 | -    | -          | TF-73 | S-412       |
| FLSR-2525M3 | 93412516 | FL_-3R | 25,0 | 25,0 | 150,0 | 5,0 | 32,0 | -    | -          | TF-72 | S-412       |
| FLSL-2525M3 | 93312516 | 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)

FLER/L

Threading and Grooving



RH SHOWN

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

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

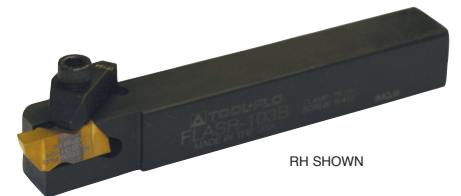
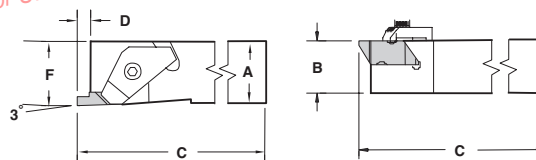
\* C&F measured over sharp point of grooving insert.

## EXTERNAL HOLDER (INCH)

FLASR/L

Threading and Grooving

Design for Swiss machines



RH SHOWN

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

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

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





# FLO-LOCK

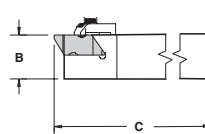
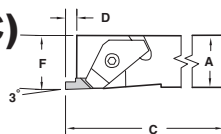
## EXTERNAL HOLDER (METRIC)

### FLASR/L

Threading and Grooving

Design for Swiss machines

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



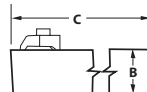
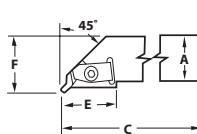
| Description  | EDP Code | Insert | A    | B    | C     | D    | F    | Clamp  | Clamp Screw |
|--------------|----------|--------|------|------|-------|------|------|--------|-------------|
| FLASR-1010M2 | 92711008 | FL_-2R | 10,0 | 10,0 | 150,0 | 3,51 | 10,0 | TF-182 | S-310       |
| FLASL-1010M2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

## EXTERNAL HOLDER (INCH)

### FLRR/L

Undercutting

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



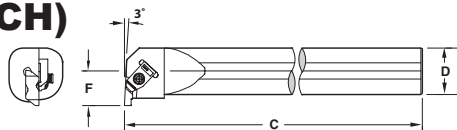
| Description | EDP Code  | Insert | A     | B     | C     | E     | F     | Clamp | Clamp Screw |
|-------------|-----------|--------|-------|-------|-------|-------|-------|-------|-------------|
| FLRR-123B   | 93201216B | FLU-3L | 3/4   | 3/4   | 4-1/2 | 1-1/4 | 1.000 | TF-73 | S-412       |
| FLRL-123B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

## INTERNAL HOLDER (INCH)

### A-FLER/L

Threading and Grooving

Coolant hole



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

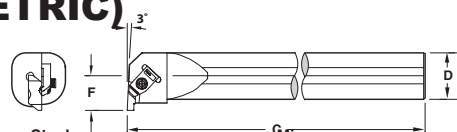
\*F" and "C" Dim. over sharp point of grooving insert.

## INTERNAL HOLDER (METRIC)

### A\_M-FLER/L

Threading and Grooving

Coolant hole



| Description | EDP Code | Stock Status | Insert | Min. Bore | D    | C     | F     | Clamp | Clamp Screw |
|-------------|----------|--------------|--------|-----------|------|-------|-------|-------|-------------|
| A16M-FLER2  | 96441608 | ●            | FL-2L  | 25,4      | 16,0 | 250,0 | 12,65 | TF-75 | S-310       |
| A20M-FLER2  | 96442008 | ●            | FL-2L  | 28,6      | 20,0 | 250,0 | 13,8  | TF-75 | S-310       |
| A25M-FLER2  | 96442508 | ●            | FL-2L  | 34,9      | 25,0 | 300,0 | 17,7  | TF-75 | S-310       |
| A25M-FLEL2  | 96432508 | ●            | FL-2R  | 34,9      | 25,0 | 300,0 | 17,7  | TF-74 | S-310       |
| A25M-FLER3  | 96442516 | ●            | FL-3L  | 34,9      | 25,0 | 300,0 | 17,7  | TF-73 | S-412       |
| A25M-FLEL3  | 96432516 | ●            | FL-3R  | 34,9      | 25,0 | 300,0 | 17,7  | TF-72 | S-412       |
| A32M-FLER3  | 96443216 | ○            | FL-3L  | 44,45     | 32,0 | 350,0 | 22,1  | TF-73 | S-412       |
| A32M-FLEL3  | 96433216 | ○            | FL-3R  | 44,45     | 32,0 | 350,0 | 22,1  | TF-72 | S-412       |
| A40M-FLER3  | 96444016 | ●            | FL-3L  | 50,8      | 40,0 | 350,0 | 24,45 | TF-73 | S-412       |
| A40M-FLEL3  | 96434016 | ●            | FL-3R  | 50,8      | 40,0 | 350,0 | 24,45 | TF-72 | S-412       |
| A50M-FLER4  | 96445020 | ●            | FL-4L  | 63,5      | 50,0 | 400,0 | 35,3  | TF-72 | S-412       |
| A50M-FLEL4  | 96435020 | ●            | FL-4R  | 63,5      | 50,0 | 400,0 | 35,3  | TF-72 | S-412       |

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



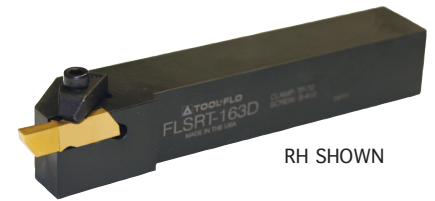
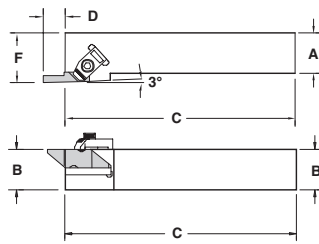
## EXTERNAL HOLDER

### FLSRLT

For double ended FLGT/FLRT inserts  
Inch

Exclusive TOOL-FLO design!

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



| Description | EDP Code  | Insert  | A     | B     | C     | D    | F     | Clamp | Clamp Screw |
|-------------|-----------|---------|-------|-------|-------|------|-------|-------|-------------|
| FLSRT-163D  | 93431616D | FLGT-3R | 1.000 | 1.000 | 6.000 | .440 | 1.250 | TF-72 | S-412       |
| FLSLT-163D  | 93421616D | FLGT-3L | 1.000 | 1.000 | 6.000 | .440 | 1.250 | TF-73 | S-412       |
| FLSRT-203D  | 93432016D | FLGT-3R | 1.250 | 1.250 | 6.000 | .440 | 1.500 | TF-72 | S-412       |
| FLSLT-203D  | 93422016D | FLGT-3L | 1.250 | 1.250 | 6.000 | .440 | 1.500 | TF-73 | S-412       |
| FLSRT-164D  | 93431620D | FLGT-4R | 1.000 | 1.000 | 6.000 | .560 | 1.250 | TF-72 | S-412       |
| FLSLT-164D  | 93421620D | FLGT-4L | 1.000 | 1.000 | 6.000 | .560 | 1.250 | TF-73 | S-412       |
| FLSRT-204D  | 93432020D | FLGT-4R | 1.250 | 1.250 | 6.000 | .560 | 1.500 | TF-72 | S-412       |
| FLSLT-204D  | 93422020D | FLGT-4L | 1.250 | 1.250 | 6.000 | .560 | 1.500 | TF-73 | S-412       |

## METRIC

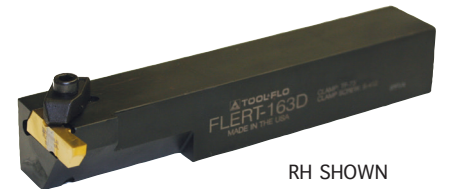
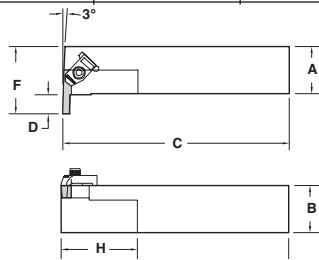
| Description  | EDP Code  | Insert     | A    | B    | C     | D    | F    | Clamp | Clamp Screw |
|--------------|-----------|------------|------|------|-------|------|------|-------|-------------|
| FLSRT-2525M3 | 934325M16 | FLGT/RT-3R | 25,0 | 25,0 | 152,4 | 11,2 | 32,0 | TF-72 | S-412       |
| FLSLT-2525M3 | 934225M16 | FLGT/RT-3L | 25,0 | 25,0 | 152,4 | 11,2 | 32,0 | TF-73 | S-412       |
| FLSRT-3232M3 | 934332M16 | FLGT/RT-3R | 32,0 | 32,0 | 152,4 | 11,2 | 40,0 | TF-72 | S-412       |
| FLSLT-3232M3 | 934232M16 | FLGT/RT-3L | 32,0 | 32,0 | 152,4 | 11,2 | 40,0 | TF-73 | S-412       |
| FLSRT-2525M4 | 934325M20 | FLGT/RT-4R | 25,0 | 25,0 | 152,4 | 14,2 | 32,0 | TF-72 | S-412       |
| FLSLT-2525M4 | 934225M20 | FLGT/RT-4L | 25,0 | 25,0 | 152,4 | 14,2 | 32,0 | TF-73 | S-412       |
| FLSRT-3232M4 | 934332M20 | FLGT/RT-4R | 32,0 | 32,0 | 152,4 | 14,2 | 40,0 | TF-72 | S-412       |
| FLSLT-3232M4 | 934232M20 | FLGT/RT-4L | 32,0 | 32,0 | 152,4 | 14,2 | 40,0 | TF-73 | S-412       |

### FLERLT

For double ended FLGT/FLRT inserts

Exclusive TOOL-FLO design!

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



| Description | EDP Code  | Insert  | A     | B     | C     | D    | F     | Clamp | Clamp Screw |
|-------------|-----------|---------|-------|-------|-------|------|-------|-------|-------------|
| FLERT-163D  | 93111616D | FLGT-3L | 1.000 | 1.000 | 6.000 | .440 | 1.582 | TF-72 | S-412       |
| FLELT-163D  | 93011616D | FLGT-3R | 1.000 | 1.000 | 6.000 | .440 | 1.582 | TF-73 | S-412       |
| FLERT-203D  | 93112016D | FLGT-3L | 1.250 | 1.250 | 6.000 | .440 | 1.832 | TF-72 | S-412       |
| FLELT-203D  | 93012016D | FLGT-3R | 1.250 | 1.250 | 6.000 | .440 | 1.832 | TF-73 | S-412       |
| FLERT-164D  | 93111620D | FLGT-4L | 1.000 | 1.000 | 6.000 | .560 | 1.582 | TF-72 | S-412       |
| FLELT-164D  | 93011620D | FLGT-4R | 1.000 | 1.000 | 6.000 | .560 | 1.582 | TF-73 | S-412       |
| FLERT-204D  | 93112020D | FLGT-4L | 1.250 | 1.250 | 6.000 | .560 | 1.832 | TF-72 | S-412       |
| FLELT-204D  | 93012020D | FLGT-4R | 1.250 | 1.250 | 6.000 | .560 | 1.832 | TF-73 | S-412       |

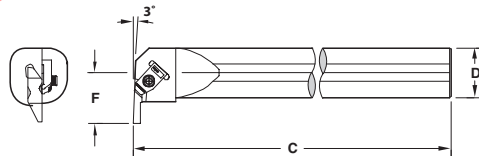
## INTERNAL BAR

### A\_FLERLT

For double ended FLGT/FLRT inserts  
Inch

Exclusive TOOL-FLO design!

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



| Description | EDP Code | Insert     | D     | C     | F     | Min. Bore | Clamp | Clamp Screw |
|-------------|----------|------------|-------|-------|-------|-----------|-------|-------------|
| A20-FLERT3  | 96552016 | FLGT/RT-3L | 1.250 | 6.000 | 1.082 | 1.807     | TF-72 | S-412       |
| A20-FLELT3  | 96452016 | FLGT/RT-3R | 1.250 | 6.000 | 1.082 | 1.807     | TF-73 | S-412       |
| A24-FLERT3  | 96552416 | FLGT/RT-3L | 1.500 | 6.000 | 1.207 | 2.057     | TF-72 | S-412       |
| A24-FLELT3  | 96452416 | FLGT/RT-3R | 1.500 | 6.000 | 1.207 | 2.057     | TF-73 | S-412       |
| A28-FLERT4  | 96552820 | FLGT/RT-4L | 1.750 | 6.000 | 1.500 | 2.475     | TF-72 | S-412       |
| A28-FLELT4  | 96452820 | FLGT/RT-4R | 1.750 | 6.000 | 1.500 | 2.475     | TF-73 | S-412       |

## METRIC

| Description | EDP Code | Insert     | D    | C     | F     | Min. Bore | Clamp | Clamp Screw |
|-------------|----------|------------|------|-------|-------|-----------|-------|-------------|
| A32M-FLERT3 | 96442016 | FLGT/RT-3L | 32,0 | 152,4 | 27,48 | 46,0      | TF-72 | S-412       |
| A32M-FLELT3 | 96432016 | FLGT/RT-3R | 32,0 | 152,4 | 27,48 | 46,0      | TF-73 | S-412       |
| A40M-FLERT3 | 96442416 | FLGT/RT-3L | 40,0 | 152,4 | 31,60 | 54,15     | TF-72 | S-412       |
| A40M-FLELT3 | 96432416 | FLGT/RT-3R | 40,0 | 152,4 | 31,60 | 54,15     | TF-73 | S-412       |
| A50M-FLERT4 | 96442820 | FLGT/RT-4L | 50,0 | 152,4 | 40,87 | 68,43     | TF-72 | S-412       |
| A50M-FLELT4 | 96432820 | FLGT/RT-4R | 50,0 | 152,4 | 40,87 | 68,43     | TF-73 | S-412       |

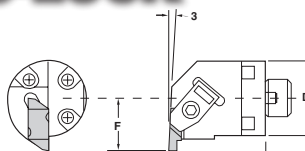


# FLO-LOCK

## INTERCHANGEABLE HEADS

### H-FLER

#### Threading and Grooving



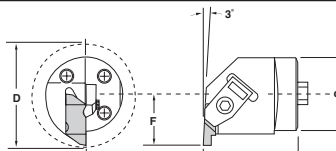
RH SHOWN

PARTS

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

\*Left hand quoted on request

### HS-FLEL/R\*



RH SHOWN

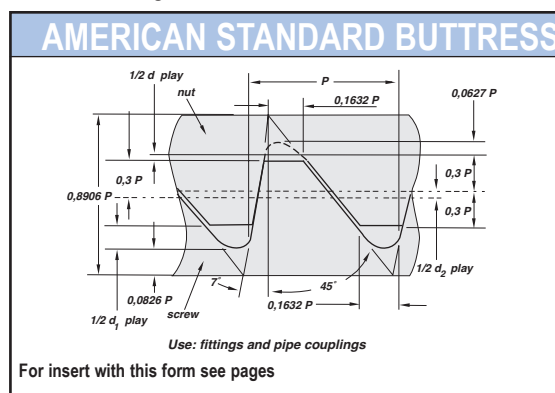
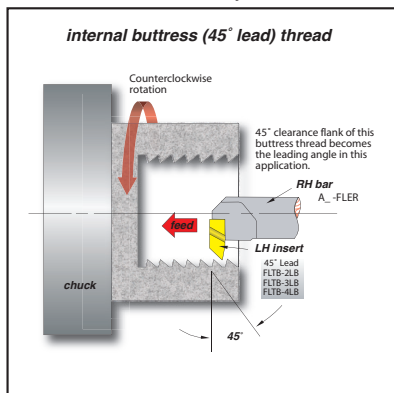
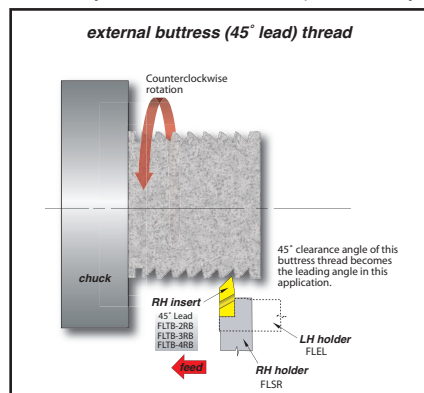
PARTS

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

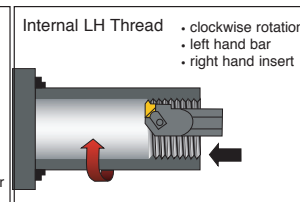
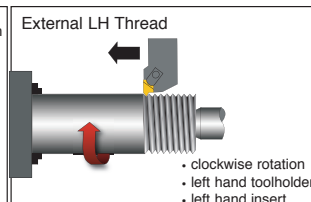
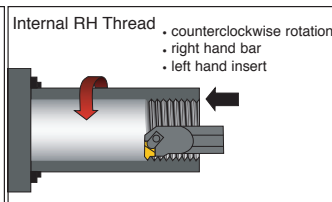
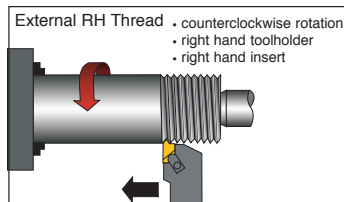
\*Left hand quoted on request.

## American Standard Buttress Thread Designations

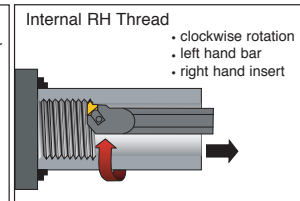
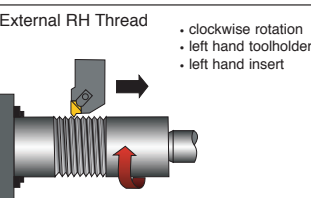
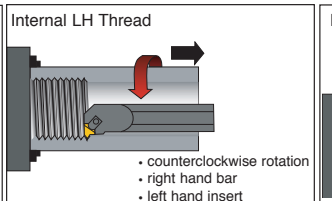
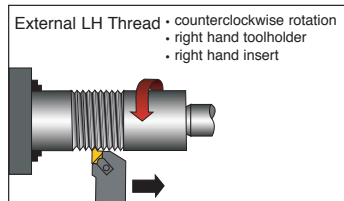
- When only the designation BUTT is used, the thread is a "pull" type buttress (external thread pulls) with the clearance flank (45°) leading and the pressure flank (7°) following.
- When the designation PUSH-BUTT is used, the thread is a push type buttress (external thread pushes) with the load flank (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.



### Feed direction towards the chuck



### Feed direction towards the tailstock





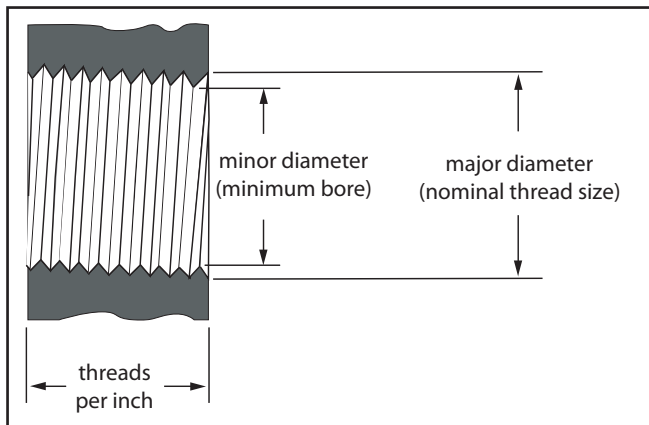
## Threading Limits with Standard Flo-Lock Inserts

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

### 60° V-Threading Limits

| FLT-2 Inserts internal threading limitations |                     |                        |
|--|---------------------|------------------------|
| threads per inch                             | nominal thread size | minimum minor diameter |
| 6  | 1-7/8               | 1.695                  |
| 7  | 1-3/4               | 1.595                  |
| 8  | 1-5/8               | 1.490                  |
| 9  | 1-9/16              | 1.442                  |
| 10   | 1-1/2               | 1.392                  |
| 11   | 1-7/16              | 1.339                  |
| 12   | 1-3/8               | 1.285                  |
| 13   | 1-5/16              | 1.229                  |
| 14   | 1-1/4               | 1.173                  |
| 16   | 1-1/4               | 1.182                  |
| 18   | 1-1/8               | 1.065                  |
| 20   | 1-1/8               | 1.071                  |
| 24   | 1-1/16              | 1.017                  |

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



| FLT-3 & 4 Inserts internal threading limitations |                     |                        |
|--|---------------------|------------------------|
| threads per inch                                 | nominal thread size | minimum minor diameter |
| 4**  | 3                   | 2.729                  |
| 4-1/2**  | 2-7/8               | 2.634                  |
| 5  | 2-3/4               | 2.534                  |
| 6  | 2-1/2               | 2.320                  |
| 7  | 2-1/4               | 2.095                  |
| 8  | 2                   | 1.865                  |
| 9  | 1-15/16             | 1.817                  |
| 10   | 1-7/8               | 1.767                  |
| 11   | 1-13/16             | 1.714                  |
| 12   | 1-3/4               | 1.660                  |
| 13   | 1-5/8               | 1.542                  |
| 14   | 1-9/16              | 1.485                  |
| 16*  | 1-7/16              | 1.370                  |

\*16 pitch V threads and finer can be cut provided the minor diameter is 1.370 or larger.  
\*\*FLT-4 only.

| FLTB-2A & 2B 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                  |

| FLTB-3A & 4A 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-4A insert only  
\*\* Sixteen or 20 threads per inch can be cut providing minor diameter is 1.375 or larger.

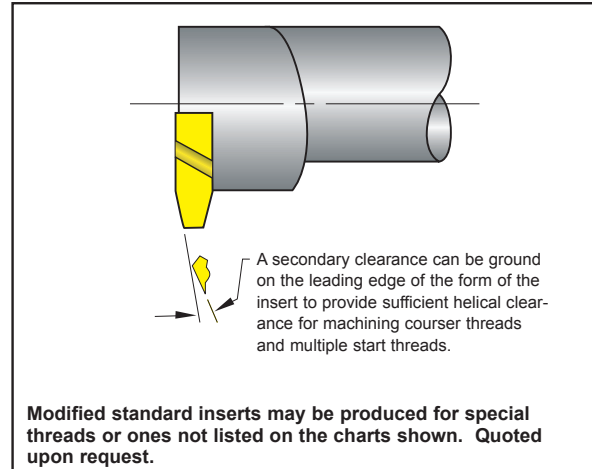
| FLTB-3B & 4B internal threading limitations |                     |                        |
|---|---------------------|------------------------|
| threads per inch                            | nominal thread size | minimum minor diameter |
| 4   | *2-7/8              | 2.575                  |
| 5   | 2-3/4               | 2.510                  |
| 6   | 2-3/8               | 1.175                  |
| 8   | 2-1/8               | 1.975                  |
| 10  | 1-7/8               | 1.755                  |
| 12  | 1-5/8               | 1.525                  |
| 16  | 1-1/2               | 1.407                  |
| 20  | 1-7/16              | 1.378                  |

\* FLTB-4B insert only

### Acme Threading Limits

| FLA-2 internal threading limitations |                     |                        |
|--------------------------------------|---------------------|------------------------|
| threads per inch                     | nominal thread size | minimum minor diameter |
| 6                                    | 2-1/2               | 2.333                  |
| 8                                    | 2-1/4               | 2.125                  |
| 10                                   | 2                   | 1.900                  |
| 12                                   | 1-3/4               | 1.667                  |
| 14                                   | 1-5/8               | 1.554                  |
| 16*                                  | 1-1/2               | 1.438                  |

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



| FLA-3, 4 & 6 internal threading limitations |                     |                        |
|---|---------------------|------------------------|
| threads per inch                            | nominal thread size | minimum minor diameter |
| 2**   | 5                   | 4.500                  |
| 2-1/2**                                     | 4-1/2               | 4.100                  |
| 3**   | 4                   | 3.665                  |
| 4   | 3-1/2               | 3.250                  |
| 5   | 3                   | 2.800                  |
| 6   | 2-1/2               | 2.333                  |
| 8   | 2-1/4               | 2.125                  |
| 10  | 2                   | 1.900                  |
| 12  | 1-3/4               | 1.667                  |
| 14  | 1-5/8               | 1.554                  |
| 16*   | 1-1/2               | 1.438                  |

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

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

