



TOOL FLO



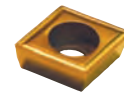
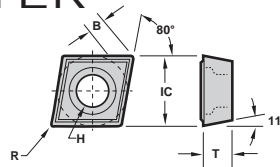
PROFILING

PROFILING



BORING SMALL DIAMETER

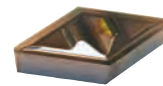
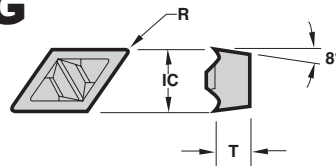
CPGM



| Description | EDP Code | IC | R | T | B | H | TIN Coated | | AITIN Coated | |
|-------------|----------|------|------|------|-------|------|------------|------|--------------|------|
| | | | | | | | GP25 | GP50 | AC25 | AC50 |
| CPGM-21.50 | SA20 | .250 | .004 | .094 | .0672 | .110 | ● | ● | ● | ● |
| CPGM-21.505 | SA205 | .250 | .008 | .094 | .0650 | .110 | ● | ● | ● | ● |
| CPGM-21.51 | SA21 | .250 | .015 | .094 | .0607 | .110 | ● | ● | ● | ● |
| CPGM-21.52 | SA22 | .250 | .031 | .094 | .0521 | .110 | ● | ● | ● | ● |
| CPGM-32.50 | SA30 | .375 | .004 | .156 | .1020 | .173 | ● | ● | ● | ● |
| CPGM-32.505 | SA305 | .375 | .008 | .156 | .0998 | .173 | ● | ● | ● | ● |
| CPGM-32.51 | SA31 | .375 | .015 | .156 | .0855 | .173 | ● | ● | ● | ● |
| CPGM-32.52 | SA32 | .375 | .031 | .156 | .0868 | .173 | ● | ● | ● | ● |

55° DIAMOND PROFILING

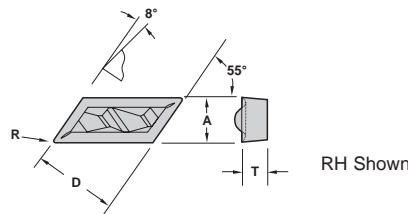
DPGR



| Description | EDP Code | D | T | R | TIN Coated | | AITIN Coated | |
|-------------|----------|------|------|------|------------|------|--------------|------|
| | | | | | GP25 | GP50 | AC25 | AC50 |
| DPGR-432 | 643432 | .500 | .187 | .031 | ● | ● | ● | ● |

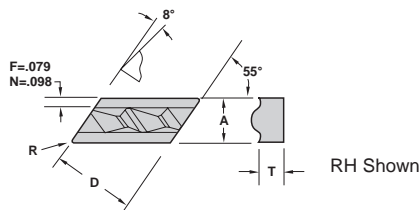
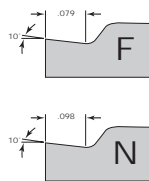
55° PARALLELOGRAM PROFILING

FLPGL/R



| Description | EDP Code | D | T | A | R | TIN Coated | | AITIN Coated | |
|-------------|----------|------|------|------|------|------------|------|--------------|------|
| | | | | | | GP25 | GP50 | AC25 | AC50 |
| FLPGL-51 | 641G51 | .375 | .125 | .250 | .015 | ● | ● | ● | ● |
| FLPGR-51 | 642G51 | .375 | .125 | .250 | .015 | ● | ● | ● | ● |
| FLPGL-52 | 641G52 | .375 | .125 | .250 | .031 | ● | ● | ● | ● |
| FLPGR-52 | 642G52 | .375 | .125 | .250 | .031 | ● | ● | ● | ● |

FLPL/R



| Description | EDP Code | R | T | D | A | TIN Coated | | AITIN Coated | |
|-------------|----------|------|------|------|------|------------|------|--------------|------|
| | | | | | | GP25 | GP50 | AC25 | AC50 |
| FLPR-50.5 | 642505 | .005 | .125 | .375 | .250 | ● | ● | ● | ● |
| FLPL-50.5 | 641505 | .005 | .125 | .375 | .250 | ● | ● | ● | ● |
| FLPR-51 | 64251 | .015 | .125 | .375 | .250 | ● | ● | ● | ● |
| FLPL-51 | 64151 | .015 | .125 | .375 | .250 | ● | ● | ● | ● |
| FLPR-52 | 64252 | .031 | .125 | .375 | .250 | ● | ● | ● | ● |
| FLPL-52 | 64152 | .031 | .125 | .375 | .250 | ● | ● | ● | ● |
| FLPR-130.5 | 6421305 | .005 | .187 | .500 | .375 | ● | ● | ● | ● |
| FLPL-130.5 | 6411305 | .005 | .187 | .500 | .375 | ● | ● | ● | ● |
| FLPR-131F | 642131F | .015 | .187 | .500 | .375 | ● | ● | ● | ● |
| FLPL-131F | 641131F | .015 | .187 | .500 | .375 | ● | ● | ● | ● |
| FLPR-132F | 642132F | .031 | .187 | .500 | .375 | ● | ● | ● | ● |
| FLPL-132F | 641132F | .031 | .187 | .500 | .375 | ● | ● | ● | ● |
| FLPR-132N | 642132N | .031 | .187 | .500 | .375 | ● | ● | ● | ● |
| FLPL-132N | 641132N | .031 | .187 | .500 | .375 | ● | ● | ● | ● |
| FLPR-331N | 642331N | .015 | .187 | .734 | .375 | ● | ● | ● | ● |
| FLPL-331N | 641331N | .015 | .187 | .734 | .375 | ● | ● | ● | ● |
| FLPR-332F | 642332F | .031 | .187 | .734 | .375 | ● | ● | ● | ● |
| FLPL-332F | 641332F | .031 | .187 | .734 | .375 | ● | ● | ● | ● |
| FLPR-332N | 642332N | .031 | .187 | .734 | .375 | ● | ● | ● | ● |
| FLPL-332N | 641332N | .031 | .187 | .734 | .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.

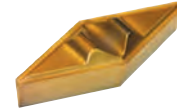
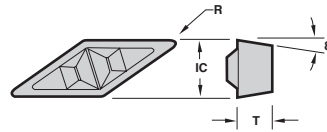
| | GP25 | GP50 | AC25 | AC50 |
|---------------------|------|------|------|------|
| Cast Iron | ▲ | ● | ● | ● |
| Non-Ferrous | ● | ● | ● | ● |
| Stainless/High Temp | ▲ | ● | ● | ● |
| Steel | ● | ▲ | ● | ● |



PROFILING

35° DIAMOND PROFILING

VPGR



| Description | EDP Code | IC | T | R | TIN Coated | | AlTiN Coated | |
|-------------|----------|------|------|------|------------|------|--------------|------|
| | | | | | GP25 | GP50 | AC25 | AC50 |
| VPGR-330.5 | 6443305 | .375 | .187 | .008 | ● | ● | ● | ● |
| VPGR-331 | 644331 | .375 | .187 | .015 | ● | ● | ● | ● |
| VPGR-332 | 644332 | .375 | .187 | .031 | ● | ● | ● | ● |

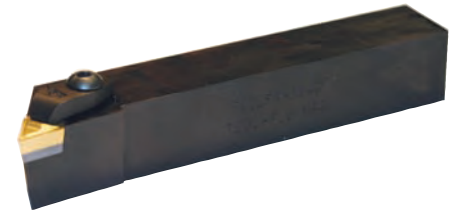
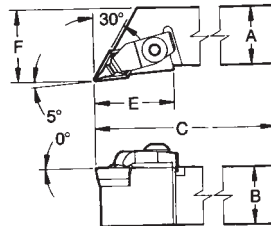
In an effort to improve our stock standard grade offering, there are periodic changes. Please see current price list for up to date grade offering.

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

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

EXTERNAL HOLDERS

FLDLPR/L
Profiling



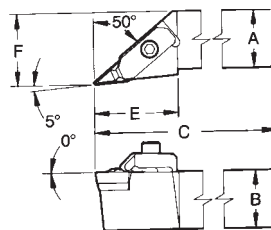
RH SHOWN

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

PARTS

| Description | EDP Code | Insert | A | B | C | E | F | Seat | | Clamp | |
|-------------|----------|----------|-------|-------|---|------|-------|--------|-------|-------|-------|
| | | | | | | | | Seat | Screw | Clamp | Screw |
| FLDLPR-164D | 92831625 | DPGR-432 | 1 | 1 | 6 | 1.38 | 1.250 | SM-414 | S-111 | CM116 | S-532 |
| FLDLPL-164D | 92821625 | DPGR-432 | 1 | 1 | 6 | 1.38 | 1.250 | SM-414 | S-111 | CM117 | S-532 |
| FLDLPR-204D | 92832025 | DPGR-432 | 1-1/4 | 1-1/4 | 6 | 1.38 | 1.500 | SM-414 | S-111 | CM116 | S-532 |
| FLDLPL-204D | 92822025 | DPGR-432 | 1-1/4 | 1-1/4 | 6 | 1.38 | 1.500 | SM-414 | S-111 | CM117 | S-532 |

FLVLCR/L
Profiling



RH SHOWN

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

PARTS

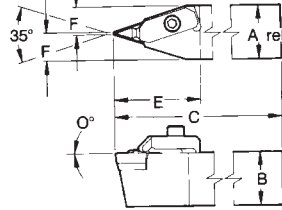
| Description | EDP Code | Insert | A | B | C | E | F | Seat | | Clamp | |
|-------------|----------|----------|-------|-------|-------|------|-------|--------|-------|-------|-------|
| | | | | | | | | Seat | Screw | Clamp | Screw |
| FLVLCR-123B | 93531226 | VPGR-33_ | 3/4 | 3/4 | 4-1/2 | 1.44 | 1.000 | SM-412 | S-959 | CM113 | S-412 |
| FLVLCR-123B | 93521226 | VPGR-33_ | 3/4 | 3/4 | 4-1/2 | 1.44 | 1.000 | SM-412 | S-959 | CM114 | S-412 |
| FLVLCR-163D | 93531626 | VPGR-33_ | 1 | 1 | 6 | 1.44 | 1.250 | SM-412 | S-959 | CM113 | S-412 |
| FLVLCR-163D | 93521626 | VPGR-33_ | 1 | 1 | 6 | 1.44 | 1.250 | SM-412 | S-959 | CM114 | S-412 |
| FLVLCR-203D | 93532026 | VPGR-33_ | 1-1/4 | 1-1/4 | 6 | 1.44 | 1.500 | SM-412 | S-959 | CM113 | S-412 |
| FLVLCR-203D | 93522026 | VPGR-33_ | 1-1/4 | 1-1/4 | 6 | 1.44 | 1.500 | SM-412 | S-959 | CM114 | S-412 |

PROFILING



EXTERNAL HOLDERS

FLVVCN Profiling

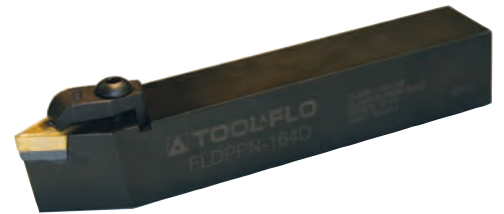
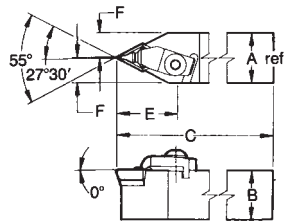


Most holders available with coolant port
(ie: Add CP to end of description)

PARTS

| Description | EDP Code | Insert | A | B | C | E | F | PARTS | | | |
|-------------|----------|---------|-------|-------|---|------|-------|--------|------------|-------|-------------|
| | | | | | | | | Seat | Seat Screw | Clamp | Clamp Screw |
| FLVVCN-163D | 93541626 | VPGR-33 | 1 | 1 | 6 | 1.62 | 0.522 | SM-412 | S-959 | CM113 | S-412 |
| FLVVCN-203D | 93542026 | VPGR-33 | 1-1/4 | 1-1/4 | 6 | 1.62 | 0.647 | SM-412 | S-959 | CM113 | S-412 |

FLDPPN Profiling

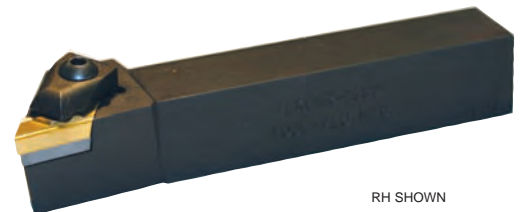
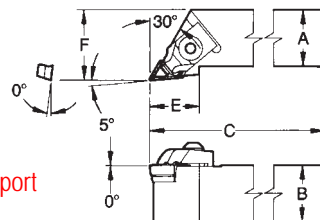


Most holders available with coolant port
(ie: Add CP to end of description)

PARTS

| Description | EDP Code | Insert | A | B | C | E | F | PARTS | | | |
|-------------|----------|----------|-------|-------|---|------|------|--------|------------|-------|-------------|
| | | | | | | | | Seat | Seat Screw | Clamp | Clamp Screw |
| FLDPPN-164D | 92841625 | DPGR-432 | 1 | 1 | 6 | 1.59 | .519 | SM-414 | S-111 | CM116 | S-532 |
| FLDPPN-204D | 92842025 | DPGR-432 | 1-1/4 | 1-1/4 | 6 | 1.59 | .644 | SM-414 | S-111 | CM116 | S-532 |

FLKL Profiling



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

PARTS

| Description | EDP Code | Insert | A | B | C | F | E | PARTS | | | |
|--------------|----------|----------|-------|-------|-------|-------|-------|--------|------------|-------|-------------|
| | | | | | | | | Seat | Seat Screw | Clamp | Clamp Screw |
| FLKLCR-0805V | 93130829 | FLPR-5_* | 1/2 | 1/2 | 3-1/2 | .750 | .875 | SM-285 | S-959 | CM79 | S-524 |
| FLKLCL-0805V | 93120829 | FLPL-5_* | 1/2 | 1/2 | 3-1/2 | .750 | .875 | SM-286 | S-959 | CM71 | S-524 |
| FLKLCR-1205B | 93131229 | FLPR-5_* | 3/4 | 3/4 | 4-1/2 | 1.000 | .875 | SM-285 | S-959 | CM68 | S-524 |
| FLKLCL-1205B | 93121229 | FLPL-5_* | 3/4 | 3/4 | 4-1/2 | 1.000 | .875 | SM-286 | S-959 | CM68 | S-524 |
| FLKLNR-121B | 93131230 | FLPR-13_ | 3/4 | 3/4 | 4-1/2 | 1.000 | 1.250 | SM-272 | SL-344 | CM66 | S-625 |
| FLKLNL-121B | 93121230 | FLPL-13_ | 3/4 | 3/4 | 4-1/2 | 1.000 | 1.250 | SM-271 | SL-344 | CM66 | S-625 |
| FLKLNR-161C | 93131630 | FLPR-13_ | 1 | 1 | 5 | .750 | .875 | SM-272 | SL-344 | CM66 | S-625 |
| FLKLNL-161C | 93121630 | FLPL-13_ | 1 | 1 | 5 | .750 | .875 | SM-271 | SL-344 | CM66 | S-625 |
| FLKLNR-163D | 93131631 | FLPR-33_ | 1 | 1 | 6 | 1.500 | .875 | SM-268 | SL-344 | CM65 | S-625 |
| FLKLNL-163D | 93121631 | FLPL-33_ | 1 | 1 | 6 | 1.500 | .875 | SM-267 | SL-344 | CM65 | S-625 |
| FLKLNR-203D | 93132031 | FLPR-33_ | 1-1/4 | 1-1/4 | 6 | 1.500 | 1.438 | SM-268 | SL-344 | CM65 | S-625 |
| FLKLNL-203D | 93122031 | FLPL-33_ | 1-1/4 | 1-1/4 | 6 | 1.500 | 1.438 | SM-267 | SL-344 | CM65 | S-625 |

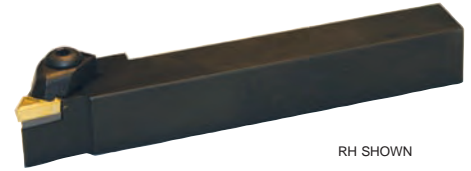
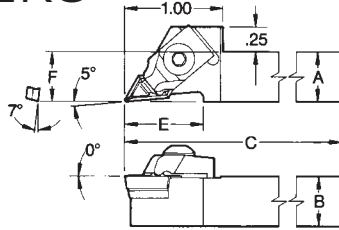
*Also used with inserts FLPR/FLPL.



PROFILING

EXTERNAL HOLDERS

FLKL-F
Profiling



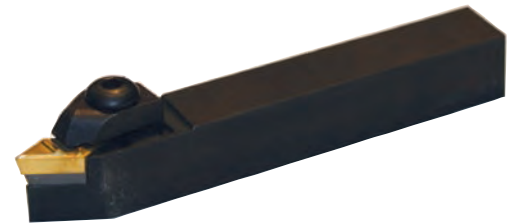
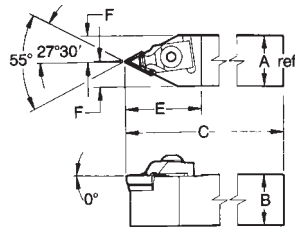
Most holders available with coolant port
(ie: Add CP to end of description)

PARTS

| Description | EDP Code | Insert | A | B | C | E | F | Seat | | | Clamp |
|---------------|----------|----------|-----|-----|-------|------|------|--------|-------|-------|-------|
| | | | | | | | | Seat | Screw | Clamp | Screw |
| FLKLCRF-0805D | 93150829 | FLPR-5_* | 1/2 | 1/2 | 6 | .750 | .500 | SM-285 | S-959 | CM180 | S-524 |
| FLKLCLF-0805D | 93140829 | FLPL-5_* | 1/2 | 1/2 | 6 | .750 | .500 | SM-286 | S-959 | CM181 | S-524 |
| FLKLCRF-1005B | 93151029 | FLPR-5_* | 5/8 | 5/8 | 4-1/2 | .750 | .625 | SM-285 | S-959 | CM180 | S-524 |
| FLKLCLF-1005B | 93141029 | FLPL-5_* | 5/8 | 5/8 | 4-1/2 | .750 | .625 | SM-286 | S-959 | CM181 | S-524 |

*Also used with inserts FLPGR/FLPGL.

FLKPCN
Profiling



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

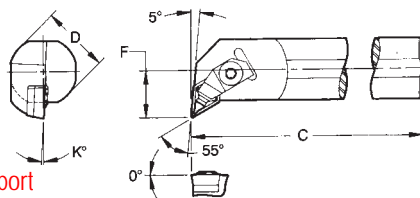
PARTS

| Description | EDP Code | Insert | A | B | C | E | F | Seat | | | Clamp |
|--------------|-----------|----------|-----|-----|-------|-------|------|--------|-------|-------|-------|
| | | | | | | | | Seat | Screw | Clamp | Screw |
| FLKPCN-0805V | 93160829V | FLPR-5_* | 1/2 | 1/2 | 3-1/2 | 1.125 | .260 | SM-285 | S-959 | CM79 | S-524 |
| FLKPCN-0805D | 93160829D | FLPR-5_* | 1/2 | 1/2 | 6 | 1.125 | .260 | SM-285 | S-959 | CM79 | S-524 |
| FLKPCN-1205B | 93161229 | FLPR-5_* | 3/4 | 3/4 | 4-1/2 | 1.125 | .385 | SM-285 | S-959 | CM68 | S-524 |

*Also used with inserts FLPGR/FLPGL.

INTERNAL BARS

A-FLDL
Profiling



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

PARTS

| Description | EDP Code | Insert | D | C | F | K° | Min. Bore | Seat | | | Clamp |
|-------------|----------|----------|-------|----|-------|----|-----------|--------|-------|-------|-------|
| | | | | | | | | Seat | Screw | Clamp | Screw |
| A20-FLDLPR4 | 90522025 | DPGR-432 | 1.250 | 14 | .875 | 3° | 1.585 | SM-414 | S-111 | CM118 | S-532 |
| A20-FLDLPL4 | 90502025 | DPGR-432 | 1.250 | 14 | .875 | 3° | 1.585 | SM-414 | S-111 | CM118 | S-532 |
| A24-FLDLPR4 | 90522425 | DPGR-432 | 1.500 | 14 | 1.000 | 2° | 1.835 | SM-414 | S-111 | CM118 | S-532 |
| A24-FLDLPL4 | 90502425 | DPGR-432 | 1.500 | 14 | 1.000 | 2° | 1.835 | SM-414 | S-111 | CM118 | S-532 |
| A28-FLDLPR4 | 90522825 | DPGR-432 | 1.750 | 14 | 1.125 | 2° | 2.120 | SM-414 | S-111 | CM118 | S-532 |
| A28-FLDLPL4 | 90502825 | DPGR-432 | 1.750 | 14 | 1.125 | 2° | 2.120 | SM-414 | S-111 | CM118 | S-532 |
| A32-FLDLPR4 | 90523225 | DPGR-432 | 2.000 | 16 | 1.250 | 2° | 2.400 | SM-414 | S-111 | CM118 | S-532 |
| A32-FLDLPL4 | 90503225 | DPGR-432 | 2.000 | 16 | 1.250 | 2° | 2.400 | SM-414 | S-111 | CM118 | S-532 |

PROFILING

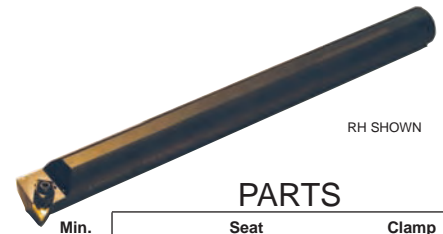
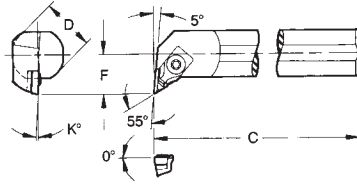
PROFILING



INTERNAL BARS

A-FLKL Profiling

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

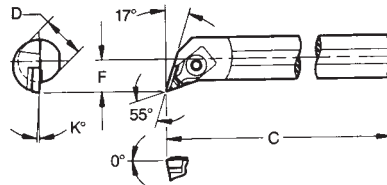


| Description | EDP Code | Insert | D | C | F | K° | Min. Bore | PARTS | | | |
|--------------|----------|----------|-------|----|-------|----|-----------|--------|------------|-------|-------------|
| | | | | | | | | Seat | Seat Screw | Clamp | Clamp Screw |
| A10-FLKLCR05 | 90561029 | FLPL-5_* | .625 | 10 | .500 | 5° | .900 | SM-286 | S-959 | CM79 | S-524 |
| A10-FLKLCL05 | 90541029 | FLPR-5_* | .625 | 10 | .500 | 5° | .900 | SM-285 | S-959 | CM71 | S-524 |
| A12-FLKLCR05 | 90561229 | FLPL-5_* | .750 | 10 | .562 | 5° | .980 | SM-286 | S-959 | CM79 | S-524 |
| A12-FLKLCL05 | 90541229 | FLPR-5_* | .750 | 10 | .562 | 5° | .980 | SM-285 | S-959 | CM71 | S-524 |
| A16-FLKLCR05 | 90561629 | FLPL-5_* | 1.000 | 12 | .750 | 3° | 1.300 | SM-286 | S-959 | CM68 | S-524 |
| A16-FLKLCL05 | 90541629 | FLPR-5_* | 1.000 | 12 | .750 | 3° | 1.300 | SM-285 | S-959 | CM68 | S-524 |
| A20-FLKLCR05 | 90562029 | FLPL-5_* | 1.250 | 14 | .875 | 3° | 1.585 | SM-286 | S-959 | CM68 | S-524 |
| A20-FLKLCL05 | 90542029 | FLPR-5_* | 1.250 | 14 | .875 | 3° | 1.585 | SM-285 | S-959 | CM68 | S-524 |
| A24-FLKLCR05 | 90562429 | FLPL-5_* | 1.500 | 14 | 1.000 | 2° | 1.835 | SM-286 | S-959 | CM68 | S-524 |
| A24-FLKLCL05 | 90542429 | FLPR-5_* | 1.500 | 14 | 1.000 | 2° | 1.835 | SM-285 | S-959 | CM68 | S-524 |
| A32-FLKLCR05 | 90563229 | FLPL-5_* | 2.000 | 16 | 1.250 | 2° | 2.400 | SM-286 | S-959 | CM68 | S-524 |
| A32-FLKLCL05 | 90543229 | FLPR-5_* | 2.000 | 16 | 1.250 | 2° | 2.400 | SM-285 | S-959 | CM68 | S-524 |

*Also used with inserts FLPR/FLPGL.

A-FLKQ Profiling

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

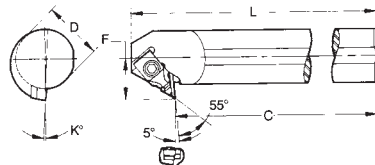


| Description | EDP Code | Insert | D | C | F | K° | Min. Bore | PARTS | | | |
|--------------|----------|----------|-------|----|------|----|-----------|--------|------------|-------|-------------|
| | | | | | | | | Seat | Seat Screw | Clamp | Clamp Screw |
| A08-FLKQCR05 | 90600829 | FLPL-5_* | .500 | 8 | .375 | 6° | .670 | - | - | CM112 | S-518 |
| A08-FLKQCL05 | 90580829 | FLPR-5_* | .500 | 8 | .375 | 6° | .670 | - | - | CM111 | S-518 |
| A12-FLKQCR05 | 90601229 | FLPL-5_* | .750 | 10 | .562 | 6° | .980 | SM-286 | S-959 | CM68 | S-524 |
| A12-FLKQCL05 | 90581229 | FLPR-5_* | .750 | 10 | .562 | 6° | .980 | SM-285 | S-959 | CM68 | S-524 |
| A16-FLKQCR05 | 90601629 | FLPL-5_* | 1.000 | 12 | .750 | 3° | 1.300 | SM-286 | S-959 | CM68 | S-524 |
| A16-FLKQCL05 | 90581629 | FLPR-5_* | 1.000 | 12 | .750 | 3° | 1.300 | SM-285 | S-959 | CM68 | S-524 |

*Also used with inserts FLPR/FLPGL.

A-FLKX Profiling

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

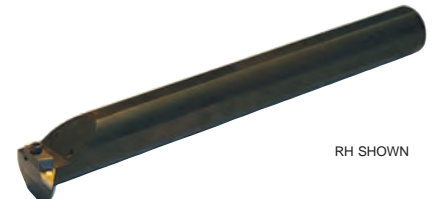
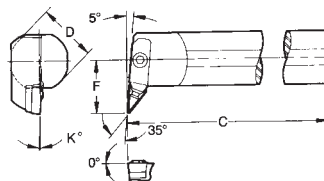


| Description | EDP Code | Insert | D | C | L | F | K° | Min. Bore | PARTS | | | |
|--------------|----------|----------|-------|----|-------|------|----|-----------|--------|------------|-------|-------------|
| | | | | | | | | | Seat | Seat Screw | Clamp | Clamp Screw |
| A12-FLKXCR05 | 90641229 | FLPR-5_* | .750 | 10 | 10.70 | .625 | 5° | 1.060 | SM-285 | S-959 | CM79 | S-524 |
| A12-FLKXCL05 | 90621229 | FLPL-5_* | .750 | 10 | 10.70 | .625 | 5° | 1.060 | SM-286 | S-959 | CM71 | S-524 |
| A16-FLKXCR05 | 90641629 | FLPR-5_* | 1.000 | 12 | 12.70 | .750 | 5° | 1.300 | SM-285 | S-959 | CM79 | S-524 |
| A16-FLKXCL05 | 90621629 | FLPL-5_* | 1.000 | 12 | 12.70 | .750 | 5° | 1.300 | SM-286 | S-959 | CM71 | S-524 |

*Also used with inserts FLPR/FLPGL.

A-FLVL Profiling

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



| Description | EDP Code | Insert | D | C | F | K° | Min. Bore | PARTS | | | |
|-------------|----------|---------|-------|----|-------|----|-----------|--------|------------|-------|-------------|
| | | | | | | | | Seat | Seat Screw | Clamp | Clamp Screw |
| A20-FLVLCR3 | 90682026 | VPGR-33 | 1.250 | 14 | 1.125 | 2° | 1.830 | SM-412 | S-959 | CM113 | S-412 |
| A20-FLVLCL3 | 90662026 | VPGR-33 | 1.250 | 14 | 1.125 | 2° | 1.830 | SM-412 | S-959 | CM114 | S-412 |
| A24-FLVLCR3 | 90682426 | VPGR-33 | 1.500 | 14 | 1.250 | 2° | 2.120 | SM-412 | S-959 | CM113 | S-412 |
| A24-FLVLCL3 | 90662426 | VPGR-33 | 1.500 | 14 | 1.250 | 2° | 2.120 | SM-412 | S-959 | CM114 | S-412 |
| A32-FLVLCR3 | 90683226 | VPGR-33 | 2.000 | 16 | 1.500 | 2° | 2.620 | SM-412 | S-959 | CM113 | S-412 |
| A32-FLVLCL3 | 90663226 | VPGR-33 | 2.000 | 16 | 1.500 | 2° | 2.620 | SM-412 | S-959 | CM114 | S-412 |

PROFILING