

## **TURNLINE** TAC boring bars

# **STREAMJETBAR**

Extended  
version

**Highly rigid internal toolholders  
with excellent chip evacuation**



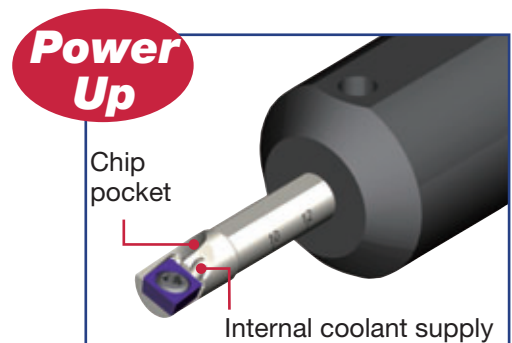
*Extensive simulation analysis has enabled Tungaloy to develop a highly-rigid Stream Jet Bar with the ideal tool geometry for excellent chip evacuation.*



## Features

### ● Excellent performance for small diameter machining operations

- Minimum bore diameter from  $\varnothing.177"$  ( $\varnothing 4.5$  mm)
- Steel and carbide shank available
- Straight shank type available
- Can be used with internal coolant supply
- Well designed chip pocket for excellent chip evacuation
- Easy to adjust overhang due to marked scale on shank
- Improved rigidity for minimizing bar deflection and chatter by FEM (Finite Element Method)
- Added Z cutting edge style for back boring



### ● Applicable for a wide variety of machines

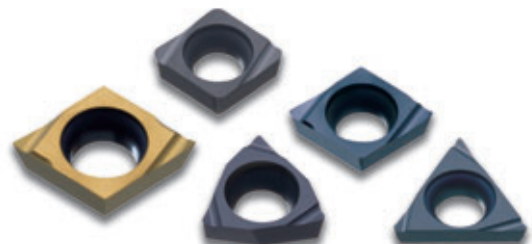
- Applicable sleeve for a variety of small lathes
- Supplied with Seal cap (optional)
- Suitably designed sleeve for directed external coolant flow (see picture below)



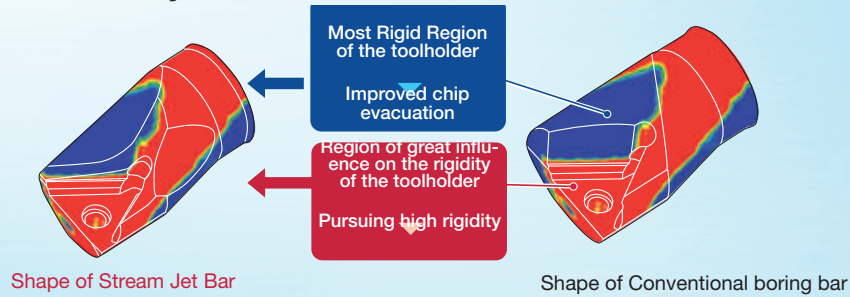
Attention: Please use the installation tools (e.g. a plastic hammer etc.), if difficult to ensure proper alignment

### ● Stable tool life and excellent chip control

- W08 type chipbreaker
- Superior cutting edge due to fine grain carbide grade
- Two grades of inserts: **SH730** (for general purpose), TH10 (for non-ferrous)
- Expansion of corner radius  $r\epsilon = .0039"$  (0.1 mm) spec on **“EPGT52”** and **“WBG52”** insert types



## ● Finite Analysis of the load transition



## ● Increased rigidity for minimizing bar deflection and chatter

### ● Rigidity comparison with a conventional boring bar (Illustrations)

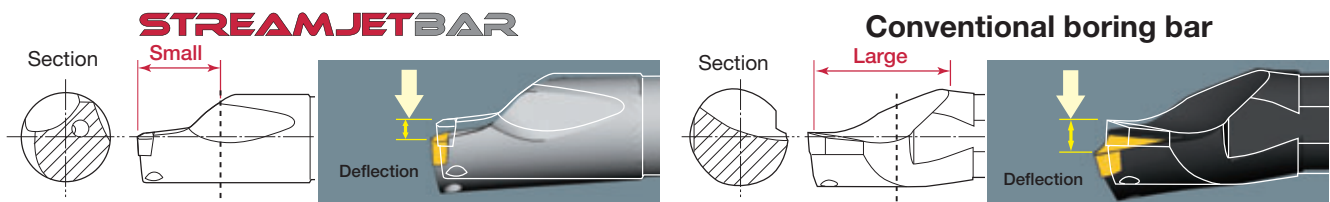
The rigidity of the bar in the direction of the principal force is maximized because the thickest portion of the head is located as close as possible to the cutting edge.

Note: Load 1000N ( $V_c = 490$  sfm,  $a_p = .059$ ",  $f = .008$  ipr are assumed) A10-STUPR2-D14

Large head design provides both high rigidity and good chip evacuation.



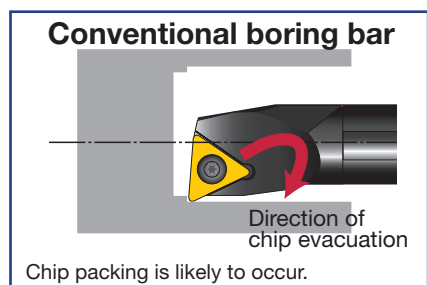
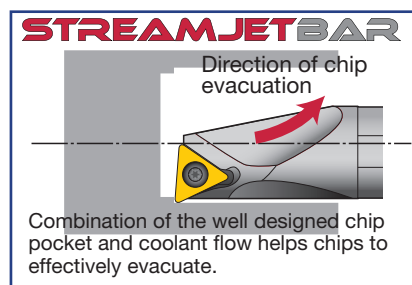
**About 20% reduction in deflection compared with conventional bar**



## ● New pocket design for excellent chip evacuation

### ● Cutting performance

The excellent chip evacuation minimizes tool failure caused by re-cutting chips and poor chip control. Damage to the work surface from chips is also eliminated.



## ● The oil hole is positioned as close as possible to the cutting edge to ensure fluid is fed directly to the cutting point.

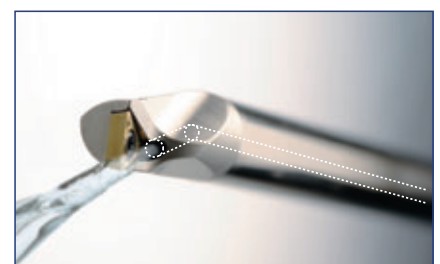
### ● Oil hole design

Distance between the cutting edge and the oil hole is minimized. (Distance is reduced by 50% compared to existing boring bars.)

### ● Screw for oil hole\*

In the case of not using the oil hole, a special screw can be inserted to prevent chip coiling (optional).

\* Negative type only



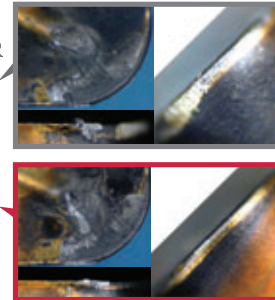
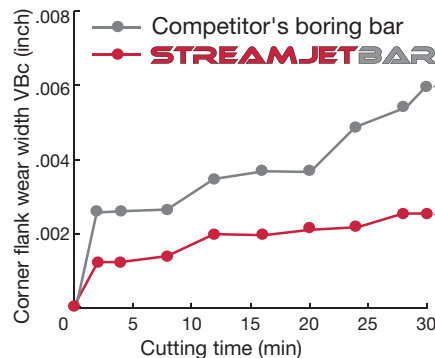




## ● Improved tool life

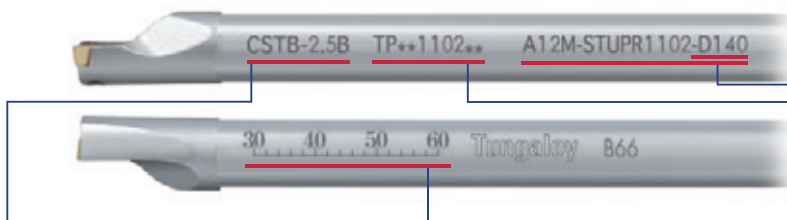
By supplying the optimum level of cutting fluid, flank wear and rake face wear are suppressed, considerably improving tool life.

Toolholder : A16Q-STUPR1103-D180  
 Insert : TPMT221-PS GT730  
 Work material : 1045 (220HB)  
 : Boring (ø30 ~ 50 mm)  
 Cutting speed :  $V_c = 320$  sfm  
 Depth of cut :  $a_p = .020$ "  
 Feed :  $f = .008$  ipr  
 Cutting fluid : Water soluble type



## ● Easy to use

### ● Marking specifications



**Applicable clamping screw Cat. No. (Positive type only)**  
 If screw is missing this detail simplifies locating a replacement with Cat. No.

**Scale of overhang length**  
 Useful for easy setting of the toolholder.

**Tool holder Cat. No.**  
 The minimum bore diameter is indicated in the Cat. No.  
 The three-digit number at the end of the text indicates the minimum bore diameter.  
 Example:  
 Metric: D140 → 14.0 mm  
 Inch : D14 → .875"

**Applicable insert Cat. No.**  
 Can identify the insert size and relief angle at a glance. Simplified tool management.

## ● Carbide shank type

Combination of the highly rigid carbide shank and the head geometry can increase the tool rigidity and improve chip evacuation.



### ● Guide to L/D

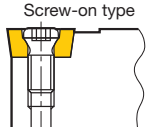
| Steel shank  | Carbide shank |
|--------------|---------------|
| $L/D \leq 3$ | $L/D \leq 5$  |

(Note) L : Overhang length, D: Shank diameter

### ● For precision boring

The increased rigidity suppresses chatter, producing excellent surface finishes.  
 Excellent chip evacuation minimizes damage to the surface caused by chip re-cutting. This further improves surface finish.

# Designation System for TAC Boring Toolholders

|                                                                                                                                                                                                                               |                                                     |                             |                                                                                    |               |           |                                                                                    |                                                         |                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------|------------------------------------------------------------------------------------|---------------|-----------|------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>P</b> Lever-lock type<br><br><b>S</b> Screw-on type<br> | <b>C</b> Rhombic 80°                                | <b>Symbol</b>               | <b>Style</b>                                                                       | <b>Offset</b> | <b>G</b>  | <b>with</b>                                                                        | <b>S</b>                                                | <b>with</b>                                                                         |
|                                                                                                                                                                                                                               | <b>D</b> Rhombic 55°                                | <b>A</b>                    |   | without       | <b>J</b>  |   | <b>U</b>                                                |  |
|                                                                                                                                                                                                                               | <b>E</b> Rhombic 75°                                |                             |                                                                                    |               |           |                                                                                    |                                                         |                                                                                     |
|                                                                                                                                                                                                                               | <b>S</b> Square                                     | <b>B</b>                    |   | without       | <b>K</b>  |   | <b>X*</b>                                               |  |
|                                                                                                                                                                                                                               | <b>T</b> Triangular                                 | <b>C</b>                    |   | without       | <b>L</b>  |   | <b>Y</b>                                                |  |
|                                                                                                                                                                                                                               | <b>V</b> Rhombic 35°                                | <b>D</b>                    |   | without       | <b>N</b>  |   | <b>Z</b>                                                |  |
|                                                                                                                                                                                                                               | <b>Y</b> Y-shape Rhombic 25°<br>(Tungaloy's symbol) | <b>E</b>                    |   | without       | <b>P*</b> |   | Note: *mark.-Tungaloy Standard<br>No mark: ISO standard |                                                                                     |
|                                                                                                                                                                                                                               | <b>W</b> Trigon                                     | <b>F</b>                    |  | with          | <b>Q*</b> |  |                                                         |                                                                                     |
| <b>3</b> Clamping mechanism                                                                                                                                                                                                   | <b>4</b> Insert shape                               | <b>5</b> Cutting edge style |                                                                                    |               |           |                                                                                    |                                                         | <b>6</b> Relief angle of insert                                                     |

**A12-S TUPR 2 - D14**

| 1 Shank composition |                                            |
|---------------------|--------------------------------------------|
| <b>A</b>            | Steel shank with oil hole                  |
| <b>E</b>            | Carbide shank with steel head and oil hole |

| 2 Shank diameter                                                      |
|-----------------------------------------------------------------------|
| Shank dia in shown in 16th of an inch.<br>Ex. 12: $\varnothing .750"$ |

| 7 Hand of tool |                                                                                     |
|----------------|-------------------------------------------------------------------------------------|
| <b>R</b>       |  |
| <b>L</b>       |  |

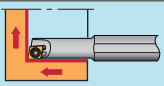
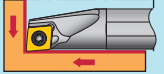
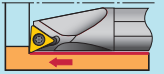
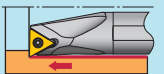
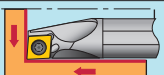
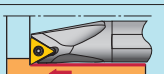
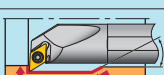
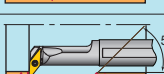
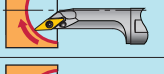
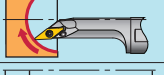
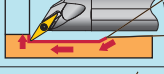
| 8 Insert size (I.C.)                                                                |                                                                                      |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |
| I.C.                                                                                | I.C.                                                                                 | I.C.                                                                                  | I.C.                                                                                  |

| 9 Min. bore. diameter                                                                |
|--------------------------------------------------------------------------------------|
| Minimum boring diameter in shown in 16th of an inch.<br>Ex. D14: $\varnothing .875"$ |

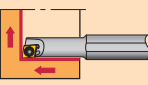
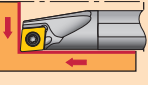
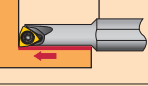
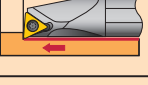
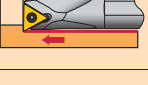
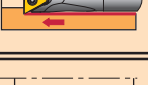
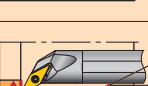
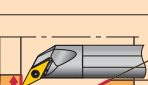
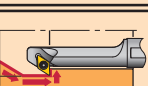
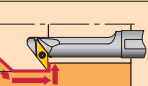
## List of Stream Jet Bars

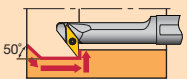
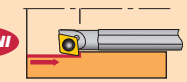
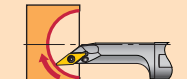
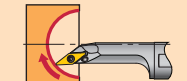
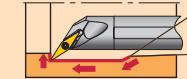
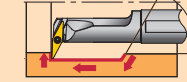
A wide range of styles and sizes available

Inch

|                 | Style                                                                                                                                                        | Shank type                 | Shank diameter                                     | Minimum bore diameter (inch) |                             |                   |       |                         |       |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------|------------------------------|-----------------------------|-------------------|-------|-------------------------|-------|
|                 |                                                                                                                                                              |                            |                                                    | 0                            | .375                        | .750              | 1.125 | 1.500                   | 2.000 |
| <b>New MINI</b> |  <b>SEXPR/L</b> P. 22<br>Boring and facing<br>Insert type: EP□□             | Steel<br>Carbide           | ø.313<br>ø.313                                     | ø.250  <br>ø.250             |                             |                   |       |                         |       |
| <b>New MINI</b> |  <b>SCLCR/L</b> P. 8<br>Boring and facing<br>Insert type: CC□□              | Steel<br>Carbide<br>S-type | ø.500 ~ ø1.250<br>ø.500 ~ ø1.250<br>ø.375 ~ ø1.000 |                              | ø.500  <br>ø.500  <br>ø.500 |                   |       | ø1.25<br>ø1.25<br>ø1.28 |       |
| <b>New MINI</b> |  <b>STUPR/L</b> P. 16<br>Boring<br>Insert type: WB□□                        | Steel<br>Carbide           | ø.313 ~ ø1.000<br>ø.313 ~ ø.625                    |                              | ø.438  <br>ø.438            |                   |       | ø1.250<br>ø.875         |       |
|                 |  <b>STFPR/L</b> P. 14<br>Boring<br>Insert type: TP□□                        | Carbide                    | ø.375 ~ ø.700                                      |                              | ø.500                       |                   |       | ø1.000                  |       |
| <b>New</b>      |  <b>SCLPR/L</b> P. 10<br>Boring<br>Insert type: TP□□                        | Steel<br>Carbide           | ø.375 ~ ø.625<br>ø.375 ~ ø.625                     |                              | ø.500  <br>ø.500            |                   |       | ø875<br>ø.875           |       |
|                 |  <b>STFCR/L</b> P. 14<br>Through boring<br>Insert type: CP□□                | Carbide                    | ø.340 ~ ø.700<br>ø.375 ~ ø.750                     |                              | ø.500                       |                   |       | ø1.000                  |       |
|                 |  <b>SDUCR/L</b> P. 12<br>Boring<br>Insert type: SP□□                        | Steel<br>Carbide           | ø.375 ~ ø.625<br>ø.375 ~ ø.750                     |                              | ø.625  <br>ø.625            |                   |       | ø.875<br>ø1.000         |       |
|                 |  <b>SVUCR/L</b> P. 19<br>Through boring<br>Insert type: SP□□               | Steel                      | ø.625 ~ ø.750                                      |                              |                             | ø.875             |       | ø1.000                  |       |
|                 |  <b>SVUBR/L</b> P. 18<br>Internal profiling<br>Insert type: DC□□          | Steel                      | ø.750                                              |                              |                             | ø1.000            |       |                         |       |
|                 |  <b>SDQCR/L</b> P. 11<br>Internal profiling<br>Insert type: VC□□          | Steel                      | ø.500 ~ ø.625                                      |                              | ø.625                       |                   |       | ø.875                   |       |
|                 |  <b>SVQBR/L</b> P. 17<br>Internal profiling<br>Insert type: VB□□          | Steel                      | ø.625                                              |                              |                             | ø1.000            |       |                         |       |
|                 |  <b>SDZCR/L</b> P. 13<br>Internal profiling<br>Insert type: DC□□          | Steel                      | ø.875                                              |                              |                             | ø.875             |       |                         |       |
|                 |  <b>SVZCR/L</b> P. 20<br>Internal profiling<br>Insert type: VC□□          | Steel                      | ø.500 ~ ø.750                                      |                              |                             | ø.750             |       | ø1.000                  |       |
|                 |  <b>SVZBR/L</b> P. 19<br>Internal profiling<br>Insert type: VB□□          | Steel                      | ø1.000                                             |                              |                             | ø1.000            |       |                         |       |
|                 |  <b>SVJBR/L</b> P. 21<br>Internal retracting<br>Insert type: DC□□         | Steel                      | ø.625                                              |                              |                             | ø1.000            |       |                         |       |
|                 |  <b>SVJCR/L</b> P. 22<br>Internal retracting<br>Insert type: VC□□         | Steel                      | ø.625                                              |                              |                             | ø1.000            |       |                         |       |
|                 |  <b>SYQBR/L</b> P. 24<br>Internal undercut&prifiling<br>Insert type: YW□□ | Steel<br>Carbide           | ø.625<br>ø.625                                     |                              |                             | ø.750  <br>ø.750  |       | ø.875<br>ø.875          |       |
|                 |  <b>SYUBR/L</b> P. 25<br>Boring&internal profiling<br>Insert type: YW□□   | Steel<br>Carbide           | ø.625<br>ø.500 ~ ø.625                             |                              |                             | ø1.000  <br>ø.875 |       | ø1.000                  |       |

# Metric

|          | Style                                                                                                                                                | Shank type       | Shank diameter         | Minimum bore diameter (mm)   | 20                       | 30 | 40 | 50 |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------------|------------------------------|--------------------------|----|----|----|
| New MINI |  <b>SEXPR/L</b> P. 22<br>Boring and facing<br>Insert type: EP□□     | Steel<br>Carbide | ø4 ~ ø8<br>ø4 ~ ø8     | ø4.5 ~ ø7<br>ø4.5 ~ ø7       |                          |    |    |    |
| New MINI |  <b>SCLCR/L</b> P. 8<br>Boring and facing<br>Insert type: CC□□      | Steel<br>Carbide | ø4 ~ ø25<br>ø4 ~ ø25   | ø5 ~ ø27<br>ø5 ~ ø27         |                          |    |    |    |
| New MINI |  <b>SWUBR/L</b> P. 20<br>Boring<br>Insert type: WB□□                | Steel<br>Carbide | ø5 ~ ø8<br>ø5 ~ ø8     | ø6 ~ ø8<br>ø6 ~ ø8           |                          |    |    |    |
| New MINI |  <b>STUPR/L</b> P. 14<br>Boring<br>Insert type: TP□□                | Steel<br>Carbide | ø7 ~ ø32<br>ø7 ~ ø25   | ø8 ~ ø34<br>ø8 ~ ø27         |                          |    |    |    |
|          |  <b>STFPR/L</b> P. 15<br>Boring<br>Insert type: TP□□                | Steel<br>Carbide | ø8 ~ ø25<br>ø8 ~ ø20   | ø10 ~ ø27<br>ø10 ~ ø22       |                          |    |    |    |
| New      |  <b>SCLPR/L</b> P. 8<br>Through boring<br>Insert type: CP□□         | Steel<br>Carbide | ø8 ~ ø25<br>ø8 ~ ø16   | ø10 ~ ø27<br>ø10 ~ ø20       |                          |    |    |    |
|          |  <b>STFCR/L</b> P. 14<br>Boring<br>Insert type: SP□□               | Steel<br>Carbide | ø8 ~ ø25<br>ø8 ~ ø25   | ø10 ~ ø27<br>ø10 ~ ø27       |                          |    |    |    |
|          |  <b>SSKPR/L</b> P. 13<br>Through boring<br>Insert type: SP□□      | Steel            | ø16 ~ ø25              |                              | ø20 ~ ø31                |    |    |    |
|          |  <b>SDUCR/L</b> P. 12<br>Internal profiling<br>Insert type: DC□□  | Steel<br>Carbide | ø10 ~ ø25<br>ø10 ~ ø20 | ø13 ~ ø32<br>ø13 ~ ø27       |                          |    |    |    |
|          |  <b>SVUCR/L</b> P. 19<br>Internal profiling<br>Insert type: VC□□  | Steel<br>Carbide | ø12 ~ ø40<br>ø12 ~ ø25 |                              | ø16 ~ ø50<br>ø18 ~ ø32   |    |    |    |
|          |  <b>SVUBR/L</b> P. 18<br>Internal profiling<br>Insert type: VB□□  | Steel<br>Carbide | ø16 ~ ø25<br>ø16 ~ ø25 |                              | ø20 ~ ø34<br>ø24.5 ~ ø34 |    |    |    |
| New      |  <b>SDQCR/L</b> P. 11<br>Internal profiling<br>Insert type: DC□□  | Steel<br>Carbide | ø10 ~ ø25<br>ø10 ~ ø20 | ø13 ~ ø30<br>ø13 ~ ø25       |                          |    |    |    |
|          |  <b>SVQCR/L</b> P. 18<br>Internal profiling<br>Insert type: VC□□  | Steel<br>Carbide | ø10 ~ ø40<br>ø10 ~ ø16 | ø13.5 ~ ø50<br>ø13.5 ~ ø21.5 |                          |    |    |    |
|          |  <b>SVQBR/L</b> P. 17<br>Internal profiling<br>Insert type: VB□□  | Steel<br>Carbide | ø12 ~ ø25<br>ø12 ~ ø25 | ø17 ~ ø30.5<br>ø17 ~ ø30.5   |                          |    |    |    |
|          |  <b>SDZCR/L</b> P. 13<br>Internal retracting<br>Insert type: DC□□ | Steel<br>Carbide | ø12 ~ ø25<br>ø12 ~ ø16 | ø14 ~ ø25<br>ø18 ~ ø22       |                          |    |    |    |
|          |  <b>SVZCR/L</b> P. 20<br>Internal retracting<br>Insert type: VC□□ | Steel            | ø12                    | ø16                          |                          |    |    |    |

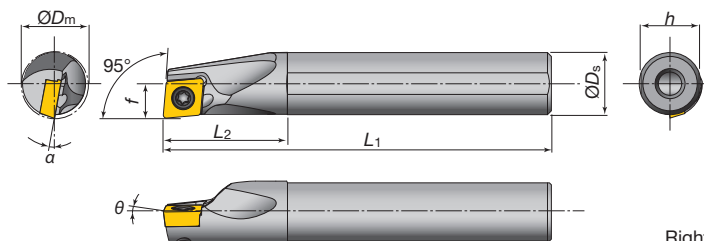
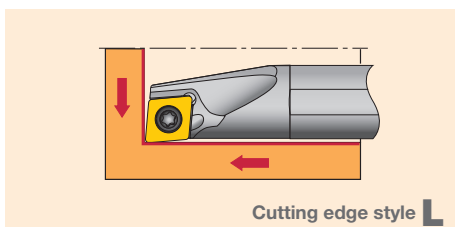
| Style                                                                             | Shank type                                                                   | Shank diameter   | Minimum bore diameter (mm) |              |              |            |                |    |     |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------|----------------------------|--------------|--------------|------------|----------------|----|-----|
|                                                                                   |                                                                              |                  | 0                          | 10           | 20           | 30         | 40             | 50 |     |
|  | <b>SVZBR/L</b> P. 19<br>Internal retracting<br>Insert type: VB□□             | Steel<br>Carbide | ø16 ~ ø32                  |              |              | ø20        |                |    | ø40 |
|  | <b>SEZPR/L</b> P. 21<br>Internal retracting<br>Insert type: EP□□             | Steel<br>Carbide | ø4 ~ ø5<br>ø4 ~ ø5         | ø5.5<br>ø5.5 | ø6.5<br>ø6.5 |            |                |    |     |
|  | <b>SVJCR/L</b> P. 22<br>Internal sphere cutting<br>Insert type: VC□□         | Steel            | ø12 ~ ø16                  |              | ø16          | ø20        |                |    |     |
|  | <b>SVJBR/L</b> P. 21<br>Internal sphere cutting<br>Insert type: VB□□         | Steel            | ø20 ~ ø25                  |              |              | ø25        | ø30            |    |     |
|  | <b>SYQBR/L</b> P. 24<br>Internal undercut and profiling<br>Insert type: YW□□ | Steel<br>Carbide | ø12 ~ ø16<br>ø12 ~ ø16     |              |              | ø17<br>ø17 | ø21.5<br>ø21.5 |    |     |
|  | <b>SYUBR/L</b> P. 25<br>Internal profiling<br>Insert type: YW□□              | Steel<br>Carbide | ø16<br>ø12 ~ ø16           |              |              | ø20<br>ø20 | ø24.5          |    |     |

## Internal toolholders

### SCLCR/L

### Boring & internal facing

### S-type (Positive, screw-on)



Right hand (R) shown

### Steel shank

Inch

| Toolholder Cat. No. | Stock |   | Min<br>bore dia.<br>øDm | Dimensions (in) |      |       |       |      |    |    | Std.<br>corner<br>radius<br>rE | Applicable<br>inserts | Parts     |                   | Torque<br>(ft-lb) |        |
|---------------------|-------|---|-------------------------|-----------------|------|-------|-------|------|----|----|--------------------------------|-----------------------|-----------|-------------------|-------------------|--------|
|                     | R     | L |                         | øDs             | f    | L1    | L2    | h    | f2 | θ  |                                |                       | α         | Clamping<br>screw |                   | Wrench |
| A06-SCLCR/L2-D08    | ●     | ● | .500                    | .375            | .281 | 5.000 | .750  | .350 | -  | 0° | -9°                            | .016                  | CC□□21.5□ | CSTB-2.5S         | T-8F              | .89    |
| A08-SCLCR/L2-D11    | ●     | ● | .687                    | .500            | .406 | 5.000 | 1.000 | .475 | -  | 0° | -6°                            |                       |           |                   |                   |        |
| A10-SCLCR/L3-D14    | ●     | ● | .875                    | .625            | .531 | 7.000 | 1.250 | .600 | -  | 0° | -7°                            |                       |           |                   |                   |        |
| A12-SCLCR/L3-D16    | ●     | ● | 1.000                   | .750            | .594 | 7.000 | 1.438 | .725 | -  | 0° | -5°                            | .031                  | CC□□32.5□ | CSTB-4S           | T-15F             | 2.21   |
| A16-SCLCR/L3-D20    | ●     | ● | 1.250                   | 1.000           | .687 | 7.000 | 1.750 | .975 | -  | 0° | -4°                            |                       |           |                   |                   |        |

Metric

| Toolholder Cat. No.        | Stock |   | Min<br>bore,dia.<br>øDm | Dimensions (mm) |     |     |    |      |    |    | Std.<br>corner<br>radius<br>rE | Applicable<br>inserts | Parts    |                   | Torque<br>(N·m) |        |
|----------------------------|-------|---|-------------------------|-----------------|-----|-----|----|------|----|----|--------------------------------|-----------------------|----------|-------------------|-----------------|--------|
|                            | R     | L |                         | øDs             | f   | L1  | L2 | h    | f2 | θ  |                                |                       | α        | Clamping<br>screw |                 | Wrench |
| <b>A04F-SCLCR/L03-D050</b> | ●     | ● | 5                       | 4               | 2.5 | 80  | 8  | 3.8  | -  | 0° | -15°                           | 0.2                   | CC□□03X1 | CSTA-1.6          | T-6F            | 0.6    |
| <b>A05F-SCLCR/L03-D060</b> | ●     | ● | 6                       | 5               | 3   | 80  | 9  | 4.8  | -  | 0° | -13°                           |                       |          |                   |                 |        |
| <b>A06G-SCLCR/L04-D070</b> | ●     | ● | 7                       | 6               | 3.5 | 90  | 11 | 5.75 | -  | 0° | -13°                           | 0.2                   | CC□□04T1 | CSTB-2            | T-6F            | 0.6    |
| <b>A07G-SCLCR/L04-D080</b> | ●     | ● | 8                       | 7               | 4   | 90  | 12 | 6.75 | -  | 0° | -11°                           |                       |          |                   |                 |        |
| <b>A08H-SCLCR/L06-D100</b> | ●     | ● | 10                      | 8               | 5.5 | 100 | 16 | 7.5  | -  | 0° | -13°                           | 0.4                   | CC□□0602 | CSTB-2.5S         | T-8F            | 1.2    |
| <b>A10F-SCLCR/L06-D120</b> | ●     | ● | 12                      | 10              | 6   | 80  | 20 | 9    | -  | 0° | -10°                           | 0.4                   |          |                   |                 |        |
| <b>A10K-SCLCR/L06-D120</b> | ●     | ● | 12                      | 10              | 6   | 125 | 20 | 9    | -  | 0° | -10°                           | 0.4                   |          |                   |                 |        |
| <b>A12H-SCLCR/L06-D140</b> | ●     | ● | 14                      | 12              | 7   | 100 | 24 | 11   | -  | 0° | -8°                            | 0.4                   |          |                   |                 |        |
| <b>A12M-SCLCR/L06-D140</b> | ●     | ● | 14                      | 12              | 7   | 150 | 24 | 11   | -  | 0° | -8°                            | 0.4                   |          |                   |                 |        |

● : Stocked items



## Metric

| Toolholder Cat. No.                 | Stock |   | Min. bore dia. $\phi D_m$ | Dimensions (mm) |      |       |       |     |       |          |          | Std. corner radius $r_c$ | Applicable inserts | Parts          |        | Torque (N·m) |
|-------------------------------------|-------|---|---------------------------|-----------------|------|-------|-------|-----|-------|----------|----------|--------------------------|--------------------|----------------|--------|--------------|
|                                     | R     | L |                           | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$ | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |              |
| <b>New MINI</b> A12H-SCLCR/L06-D160 | ●     |   | 16                        | 12              | 9    | 100   | 24    | 11  | -     | 0°       | -7°      | 0.4                      | CC□□0602           | CSTB-2.5S      | T-8F   | 1.2          |
| <b>New MINI</b> A12M-SCLCR/L06-D160 | ●     | ● | 16                        | 12              | 9    | 150   | 24    | 11  | -     | 0°       | -7°      | 0.4                      |                    |                |        |              |
| <b>New MINI</b> A16K-SCLCR/L09-D180 | ●     |   | 18                        | 16              | 9    | 125   | 32    | 15  | -     | 0°       | -9°      | 0.8                      |                    |                |        |              |
| <b>New MINI</b> A16Q-SCLCR/L09-D180 | ●     | ● | 18                        | 16              | 9    | 180   | 32    | 15  | -     | 0°       | -10°     | 0.8                      | CC□□09T3           | CSTB-4S        | T-15F  | 3.0          |
| A16K-SCLCR/L09-D200                 | ●     |   | 20                        | 16              | 11   | 125   | 32    | 15  | -     | 0°       | -9°      | 0.8                      |                    |                |        |              |
| A16Q-SCLCR/L09-D200                 | ●     | ● | 20                        | 16              | 11   | 180   | 32    | 15  | -     | 0°       | -9°      | 0.8                      |                    |                |        |              |
| A20R-SCLCR/L09-D220                 | ●     | ● | 22                        | 20              | 11   | 200   | 32    | 18  | -     | 0°       | -8°      | 0.8                      |                    |                |        |              |
| A25S-SCLCR/L09-D270                 | ●     | ● | 27                        | 25              | 13.5 | 250   | 45    | 23  | -     | 0°       | -6°      | 0.8                      |                    |                |        |              |

## Carbide shank

## Inch

| Toolholder Cat. No. | Stock |   | Min. bore dia. $\phi D_m$ | Dimensions (in) |      |        |       |      |       |          |          | Std. corner radius $r_c$ | Applicable inserts | Parts          |        | Torque (ft·lb) |
|---------------------|-------|---|---------------------------|-----------------|------|--------|-------|------|-------|----------|----------|--------------------------|--------------------|----------------|--------|----------------|
|                     | R     | L |                           | $\phi D_s$      | $f$  | $L_1$  | $L_2$ | $h$  | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |                |
| E06-SCLCR/L2-D08    | ●     | ● | .500                      | .375            | .281 | 5.000  | .750  | .350 | -     | 0°       | -9°      | .016                     | CC□□21.5□          | CSTB-2.5S      | T-8F   | .89            |
| E08-SCLCR/L2-D11    | ●     | ● | .688                      | .500            | .406 | 5.000  | 1.000 | .475 | -     | 0°       | -6°      |                          |                    |                |        |                |
| E10-SCLCR/L2-D14    | ●     | ● | .875                      | .625            | .531 | 7.000  | 1.250 | .600 | -     | 0°       | -4°      |                          |                    |                |        |                |
| E12-SCLCR/L3-D16    | ●     | ● | 1.000                     | .750            | .594 | 7.000  | 1.438 | .725 | -     | 0°       | -5°      | .031                     | CC□□32.5□          | CSTB-4S        | T-15F  | 2.21           |
| E16-SCLCR/L3-D20    | ●     | ● | 1.250                     | 1.000           | .687 | 10.000 | 1.750 | .975 | -     | 0°       | -4°      |                          |                    |                |        |                |

## Metric

| Toolholder Cat. No. | Stock |   | Min<br>bore.dia.<br>øDm | Dimensions (mm) |      |                |                |     |                |    |      | Std.<br>corner<br>radius<br>rE | Applicable<br>inserts | Parts             |        | Torque<br>(N·m) |
|---------------------|-------|---|-------------------------|-----------------|------|----------------|----------------|-----|----------------|----|------|--------------------------------|-----------------------|-------------------|--------|-----------------|
|                     | R     | L |                         | øDs             | f    | L <sub>1</sub> | L <sub>2</sub> | h   | f <sub>2</sub> | θ  | α    |                                |                       | Clamping<br>screw | Wrench |                 |
| E08G-SCLCR/L06-D100 | ●     |   | 10                      | 8               | 5.5  | 90             | 22             | 7.5 | -              | 0° | -13° | 0.4                            | CC□□0602              | CSTB-2.5S         | T-8F   | 1.2             |
| E08K-SCLCR/L06-D100 | ●     | ● | 10                      | 8               | 5.5  | 125            | 22             | 7.5 | -              | 0° | -13° | 0.4                            |                       |                   |        |                 |
| E10F-SCLCR/L06-D120 | ●     |   | 12                      | 10              | 6    | 80             | 25             | 9   | -              | 0° | -10° | 0.4                            |                       |                   |        |                 |
| E10H-SCLCR/L06-D120 | ●     |   | 12                      | 10              | 6    | 100            | 25             | 9   | -              | 0° | -10° | 0.4                            |                       |                   |        |                 |
| E10M-SCLCR/L06-D120 | ●     | ● | 12                      | 10              | 6    | 150            | 25             | 9   | -              | 0° | -10° | 0.4                            |                       |                   |        |                 |
| E12G-SCLCR/L06-D140 | ●     |   | 14                      | 12              | 7    | 90             | 27             | 11  | -              | 0° | -8°  | 0.4                            | CC□□0602              | CSTB-2.5S         | T-8F   | 1.2             |
| E12J-SCLCR/L06-D140 | ●     |   | 14                      | 12              | 7    | 110            | 27             | 11  | -              | 0° | -8°  | 0.4                            |                       |                   |        |                 |
| E12Q-SCLCR/L06-D140 | ●     | ● | 14                      | 12              | 7    | 180            | 27             | 11  | -              | 0° | -8°  | 0.4                            |                       |                   |        |                 |
| E12G-SCLCR/L06-D160 | ●     |   | 16                      | 12              | 9    | 90             | 27             | 11  | -              | 0° | -7°  | 0.4                            |                       |                   |        |                 |
| E12J-SCLCR/L06-D160 | ●     |   | 16                      | 12              | 9    | 110            | 27             | 11  | -              | 0° | -7°  | 0.4                            |                       |                   |        |                 |
| E12Q-SCLCR/L06-D160 | ●     | ● | 16                      | 12              | 9    | 180            | 27             | 11  | -              | 0° | -7°  | 0.4                            | CC□□09T3              | CSTB-4L060        | T-15F  | 3.0             |
| E16H-SCLCR/L09-D180 | ●     |   | 18                      | 16              | 9    | 100            | 32             | 15  | -              | 0° | -10° | 0.8                            |                       |                   |        |                 |
| E16L-SCLCR/L09-D180 | ●     |   | 18                      | 16              | 9    | 130            | 32             | 15  | -              | 0° | -10° | 0.8                            |                       |                   |        |                 |
| E16R-SCLCR/L09-D180 | ●     | ● | 18                      | 16              | 9    | 200            | 32             | 15  | -              | 0° | -10° | 0.8                            |                       |                   |        |                 |
| E16H-SCLCR/L09-D200 | ●     |   | 20                      | 16              | 11   | 100            | 32             | 15  | -              | 0° | -9°  | 0.8                            |                       |                   |        |                 |
| E16L-SCLCR/L09-D200 | ●     |   | 20                      | 16              | 11   | 130            | 32             | 15  | -              | 0° | -9°  | 0.8                            |                       |                   |        |                 |
| E16R-SCLCR/L09-D200 | ●     | ● | 20                      | 16              | 11   | 200            | 32             | 15  | -              | 0° | -9°  | 0.8                            |                       |                   |        |                 |
| E20S-SCLCR/L09-D220 | ●     |   | 22                      | 20              | 11   | 250            | 36             | 18  | -              | 0° | -8°  | 0.8                            |                       |                   |        |                 |
| E25T-SCLCR/L09-D270 | ●     |   | 27                      | 25              | 13.5 | 300            | 45             | 23  | -              | 0° | -6°  | 0.8                            |                       |                   |        |                 |
|                     |       |   |                         |                 |      |                |                |     |                |    |      |                                |                       | CSTB-4S           |        |                 |
|                     |       |   |                         |                 |      |                |                |     |                |    |      |                                |                       |                   |        |                 |

## S-type

|                | Toolholder Cat. No. | Stock |   | Min. bore dia. $\phi D_m$ | Dimensions (in) |      |       |      |          | Applicable inserts | Parts          |        |
|----------------|---------------------|-------|---|---------------------------|-----------------|------|-------|------|----------|--------------------|----------------|--------|
|                |                     | R     | L |                           | $\phi D_s$      | $f$  | $L_1$ | $h$  | $\alpha$ |                    | Clamping screw | Wrench |
| Steel          | S06-SCLCR/L2        | ●     | ● | .500                      | .375            | .250 | 5.000 | .335 | 12°      | CC□□21.5□□         | CSTB-2.5       | T-8F   |
|                | S08-SCLCR/L2        | ●     | ● | .625                      | .500            | .313 | 6.000 | .461 | 10°      |                    |                |        |
|                | S10-SCLCR/L3        | ●     | ● | .813                      | .625            | .406 | 7.000 | .547 | 10°      | CC□□32.5□□         | CSTB-4B        | T-15F  |
|                | S12-SCLCR/L3        | ●     | ● | 1.000                     | .750            | .500 | 8.000 | .670 | 8°       |                    |                |        |
| Carbide        | C06-SCLCR/L2        | ●     |   | .470                      | .375            | .245 | 5.000 | .350 | 15°      | CC□□21.5□□         | CSTB-2.5       | T-8F   |
|                | C08-SCLCR/L2        | ●     |   | .592                      | .500            | .308 | 5.000 | .475 | 15°      |                    |                |        |
|                | C10-SCLCR/L2        | ●     |   | .760                      | .625            | .401 | 7.000 | .600 | 12°      |                    |                |        |
|                | C10-SCLCR/L3        | ●     |   | .760                      | .625            | .401 | 7.000 | .600 | 12°      | CC□□32.5□□         | CSTB-4S        | T-15F  |
|                | C12-SCLCR/L3        | ●     |   | .920                      | .750            | .495 | 7.000 | .725 | 8°       |                    |                |        |
|                | C16-SCLCR/L3        |       |   | 1.280                     | 1.000           | .640 | 7.000 | -    | -        |                    |                |        |
| Carbide w/Hole | E06-SCLCR/L2        | ●     | ● | .470                      | .375            | .245 | 5.000 | .350 | 15°      | CC□□21.5□□         | CSTB-2.5       | T-8F   |
|                | E08-SCLCR/L2        | ●     | ● | .592                      | .500            | .308 | 5.000 | .475 | 15°      |                    |                |        |
|                | E10-SCLCR/L2        | ●     | ● | .760                      | .625            | .401 | 7.000 | .600 | 12°      |                    |                |        |
|                | E10-SCLCR/L3        | ●     | ● | .760                      | .625            | .401 | 7.000 | .600 | 12°      | CC□□32.5□□         | CSTB-4S        | T-15F  |
|                | E12-SCLCR/L3        | ●     | ● | .920                      | .750            | .495 | 7.000 | .725 | 8°       |                    |                |        |
|                | E16-SCLCR/L3        | ●     | ● | 1.250                     | 1.000           | .687 | 7.000 | .975 | 4°       |                    |                |        |

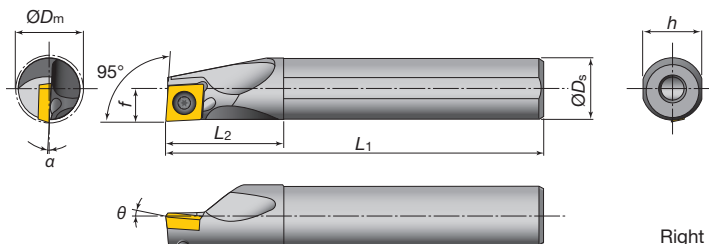
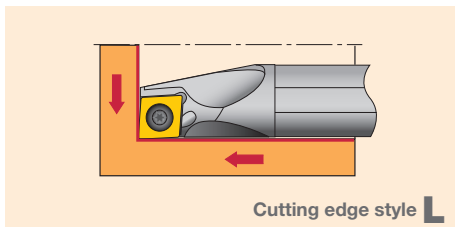
When using a right or left hand insert, the right hand insert (R) is used for the left hand toolholders (SCLCL □□ type), and the left hand insert (L) is used for the right hand toolholders (SCLCR □□ type).

● : Stocked items

## SCLPR/L

## Boring & internal facing

## S-type (Positive, screw-on)



Right hand (R) shown

### Steel shank

Inch

| Toolholder Cat. No. | Stock |   | Min. bore dia. $\phi D_m$ | Dimensions (in) |      |       |       |      |       |          |          | Std. corner radius $r\epsilon$ | Applicable inserts | Parts          |        | Torque (ft-lb) |
|---------------------|-------|---|---------------------------|-----------------|------|-------|-------|------|-------|----------|----------|--------------------------------|--------------------|----------------|--------|----------------|
|                     | R     | L |                           | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$  | $f_2$ | $\theta$ | $\alpha$ |                                |                    | Clamping screw | Wrench |                |
| A06-SCLPR/L2-D08    | ●     | ● | .500                      | .375            | .281 | 5.000 | .750  | .350 | -     | +5°      | -5°      | .016                           | CP□□21.5□          | CSTB-2.5L042   | T-8F   | .89            |
| A08-SCLPR/L2-D11    | ●     | ● | .687                      | .500            | .406 | 5.000 | 1.000 | .475 | -     | +5°      | -2°      |                                | CP□□21.5□          | CSTB-2.5S      | T-8F   |                |
| A10-SCLPR/L3-D14    | ●     | ● | .875                      | .625            | .531 | 7.000 | 1.250 | .600 | -     | +5°      | -2°      |                                | CP□□32.5□          | CSTB-4L070     | T-15F  |                |

Metric

| Toolholder Cat. No.     | Stock |   | Min. bore dia. $\phi D_m$ | Dimensions (mm) |      |       |       |     |       |          |          | Std. corner radius $r\epsilon$ | Applicable inserts | Parts          |        | Torque (N-m) |
|-------------------------|-------|---|---------------------------|-----------------|------|-------|-------|-----|-------|----------|----------|--------------------------------|--------------------|----------------|--------|--------------|
|                         | R     | L |                           | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$ | $f_2$ | $\theta$ | $\alpha$ |                                |                    | Clamping screw | Wrench |              |
| New A08H-SCLPR/L06-D100 | ●     | ● | 10                        | 8               | 5.5  | 100   | 16    | 7.5 | -     | +5°      | -8°      | 0.4                            | CP□□0602           | CSTB-2.5S      | T-8F   | 1.2          |
| New A10K-SCLPR/L06-D120 | ●     | ● | 12                        | 10              | 6    | 125   | 20    | 9   | -     | +5°      | -5°      | 0.4                            | CP□□0602           | CSTB-2.5S      | T-8F   | 1.2          |
| A10K-SCLPR/L08-D120     | ●     | ● | 12                        | 10              | 6    | 125   | 20    | 9   | -     | +5°      | -5°      | 0.4                            | CP□□0802           | CSTB-3L042     | T-9F   | 1.4          |
| New A12M-SCLPR/L06-D140 | ●     | ● | 14                        | 12              | 7    | 150   | 24    | 11  | -     | +5°      | -4°      | 0.4                            | CP□□0602           | CSTB-2.5S      | T-8F   | 1.2          |
| A12M-SCLPR/L08-D140     | ●     | ● | 14                        | 12              | 7    | 150   | 24    | 11  | -     | +5°      | -4°      | 0.4                            | CP□□0802           | CSTB-3L050     | T-9F   | 1.4          |
| A12M-SCLPR/L08-D160     | ●     | ● | 16                        | 12              | 9    | 150   | 24    | 11  | -     | +5°      | -3°      | 0.4                            | CP□□0903           | CSTB-4L060     | T-15F  | 3.0          |
| A16Q-SCLPR/L09-D180     | ●     | ● | 18                        | 16              | 9    | 180   | 32    | 15  | -     | +5°      | -3.5°    | 0.8                            |                    |                |        |              |
| A16Q-SCLPR/L09-D200     | ●     | ● | 20                        | 16              | 11   | 180   | 32    | 15  | -     | +5°      | -3°      | 0.8                            |                    |                |        |              |
| A20R-SCLPR/L09-D220     | ●     | ● | 22                        | 20              | 11   | 200   | 36    | 18  | -     | +5°      | -2°      | 0.8                            |                    |                |        |              |
| A25S-SCLPR/L09-D270     | ●     | ● | 27                        | 25              | 13.5 | 250   | 45    | 23  | -     | +5°      | -1°      | 0.8                            |                    |                |        |              |

### Carbide shank

Inch

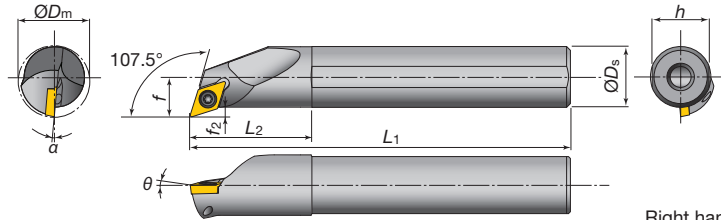
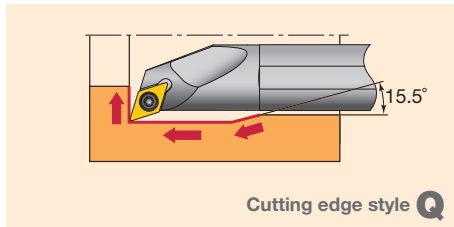
| Toolholder Cat. No. | Stock |   | Min. bore dia. $\phi D_m$ | Dimensions (in) |      |       |       |      |       |          |          | Std. corner radius $r\epsilon$ | Applicable inserts | Parts          |        | Torque (ft-lb) |
|---------------------|-------|---|---------------------------|-----------------|------|-------|-------|------|-------|----------|----------|--------------------------------|--------------------|----------------|--------|----------------|
|                     | R     | L |                           | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$  | $f_2$ | $\theta$ | $\alpha$ |                                |                    | Clamping screw | Wrench |                |
| E06-SCLPR/L2-D08    | ●     | ● | .500                      | .375            | .281 | 5.000 | .750  | .350 | -     | 0°       | -9°      | .016                           | CP□□21.5□          | CP□□21.5□      | T-8F   | .89            |
| E08-SCLPR/L2-D11    | ●     | ● | .688                      | .500            | .406 | 5.000 | 1.000 | .475 | -     | 0°       | -6°      |                                | CP□□21.5□          | CP□□21.5□      | T-8F   |                |
| E10-SCLPR/L3-D14    | ●     | ● | .875                      | .625            | .531 | 7.000 | 1.250 | .600 | -     | 0°       | -7°      | .031                           | CP□□32.5□          | CP□□32.5□      | T-15F  |                |

Metric

| Toolholder Cat. No.     | Stock |   | Min. bore dia. $\phi D_m$ | Dimensions (mm) |     |       |       |     |       |          |          | Std. corner radius $r\epsilon$ | Applicable inserts | Parts          |        | Torque (N-m) |
|-------------------------|-------|---|---------------------------|-----------------|-----|-------|-------|-----|-------|----------|----------|--------------------------------|--------------------|----------------|--------|--------------|
|                         | R     | L |                           | $\phi D_s$      | $f$ | $L_1$ | $L_2$ | $h$ | $f_2$ | $\theta$ | $\alpha$ |                                |                    | Clamping screw | Wrench |              |
| New E08K-SCLPR/L06-D100 | ●     | ● | 10                        | 8               | 5.5 | 125   | 22    | 7.5 | -     | +5°      | -8°      | 0.4                            | CP□□0602           | CSTB-2.5S      | T-8F   | 1.2          |
| New E10M-SCLPR/L06-D120 | ●     | ● | 12                        | 10              | 6   | 150   | 25    | 9   | -     | +5°      | -5°      | 0.4                            | CP□□0602           | CSTB-2.5S      | T-8F   | 1.2          |
| E10H-SCLPR/L08-D120     | ●     | ● | 12                        | 10              | 6   | 100   | 25    | 9   | -     | +5°      | -5°      | 0.4                            | CP□□0802           | CSTB-3L042     | T-9F   | 1.4          |
| E10M-SCLPR/L08-D120     | ●     | ● | 12                        | 10              | 6   | 150   | 25    | 9   | -     | +5°      | -5°      | 0.4                            |                    |                |        |              |
| New E12Q-SCLPR/L06-D140 | ●     | ● | 14                        | 12              | 7   | 180   | 27    | 11  | -     | +5°      | -4°      | 0.4                            | CP□□0602           | CSTB-2.5S      | T-8F   | 1.2          |
| E12G-SCLPR/L08-D140     | ●     | ● | 14                        | 12              | 7   | 90    | 27    | 11  | -     | +5°      | -4°      | 0.4                            | CP□□0802           | CSTB-3L050     | T-9F   | 1.4          |
| E12J-SCLPR/L08-D140     | ●     | ● | 14                        | 12              | 7   | 110   | 27    | 11  | -     | +5°      | -4°      | 0.4                            |                    |                |        |              |
| E12Q-SCLPR/L08-D140     | ●     | ● | 14                        | 12              | 7   | 180   | 27    | 11  | -     | +5°      | -4°      | 0.4                            |                    |                |        |              |
| E12G-SCLPR/L08-D160     | ●     | ● | 16                        | 12              | 9   | 90    | 27    | 11  | -     | +5°      | -3°      | 0.4                            |                    |                |        |              |
| E12J-SCLPR/L08-D160     | ●     | ● | 16                        | 12              | 9   | 110   | 27    | 11  | -     | +5°      | -3°      | 0.4                            | CP□□0903           | CSTB-4L060     | T-15F  | 3.0          |
| E12Q-SCLPR/L08-D160     | ●     | ● | 16                        | 12              | 9   | 180   | 27    | 11  | -     | +5°      | -3°      | 0.4                            |                    |                |        |              |
| E16H-SCLPR/L09-D180     | ●     | ● | 18                        | 16              | 9   | 100   | 32    | 15  | -     | +5°      | -3.5°    | 0.8                            |                    |                |        |              |
| E16L-SCLPR/L09-D180     | ●     | ● | 18                        | 16              | 9   | 130   | 32    | 15  | -     | +5°      | -3.5°    | 0.8                            |                    |                |        |              |
| E16R-SCLPR/L09-D180     | ●     | ● | 18                        | 16              | 9   | 200   | 32    | 15  | -     | +5°      | -3.5°    | 0.8                            |                    |                |        |              |
| E16H-SCLPR/L09-D200     | ●     | ● | 20                        | 16              | 11  | 100   | 32    | 15  | -     | +5°      | -3°      | 0.8                            |                    |                |        |              |
| E16L-SCLPR/L09-D200     | ●     | ● | 20                        | 16              | 11  | 130   | 32    | 15  | -     | +5°      | -3°      | 0.8                            |                    |                |        |              |
| E16R-SCLPR/L09-D200     | ●     | ● | 20                        | 16              | 11  | 200   | 32    | 15  | -     | +5°      | -3°      | 0.8                            |                    |                |        |              |

When using a right or left hand insert, the right hand (R) insert is used for the left hand toolholders (SCLPL □□ type), and the left hand insert (L) is used for the right hand toolholders (SCLPR □□ type).

● : Stocked items



## Steel shank

Inch

| Toolholder Cat. No. | Stock |   | Min bore dia.<br>øDm | Dimensions (in) |      |       |       |      |    |    |     | Std. corner radius<br>rε | Applicable inserts | Parts          |        | Torque (ft-lb) |
|---------------------|-------|---|----------------------|-----------------|------|-------|-------|------|----|----|-----|--------------------------|--------------------|----------------|--------|----------------|
|                     | R     | L |                      | øDs             | f    | L1    | L2    | h    | f2 | θ  | α   |                          |                    | Clamping screw | Wrench |                |
| A06-SDQCR2-D10      | ●     |   | .625                 | .375            | .406 | 5.000 | .750  | .350 | -  | 0° | -7° | .016                     | DC□□0702           | CSTB-2.5B      | T-8F   | .89            |
| A08-SDQCR2-D11      | ●     |   | .688                 | .500            | .406 | 5.000 | 1.000 | .475 | -  | 0° | -6° |                          |                    |                |        |                |
| A10-SDQCR2-D14      | ●     |   | .875                 | .625            | .531 | 7.000 | 1.250 | .600 | -  | 0° | -4° |                          |                    |                |        |                |

Metric

| Toolholder Cat. No. | Stock |   | Min bore dia.<br>øDm | Dimensions (mm) |      |     |    |    |     |    |     | Std. corner radius<br>rε | Applicable inserts | Parts          |        | Torque (N·m) |
|---------------------|-------|---|----------------------|-----------------|------|-----|----|----|-----|----|-----|--------------------------|--------------------|----------------|--------|--------------|
|                     | R     | L |                      | øDs             | f    | L1  | L2 | h  | f2  | θ  | α   |                          |                    | Clamping screw | Wrench |              |
| A10K-SDQCR/L07-D130 | ●     | ● | 13                   | 10              | 7.6  | 125 | 20 | 9  | 2.6 | 0° | -8° | 0.4                      | DC□□0702           | CSTB-2.5S      | T-8F   | 1.2          |
| A12M-SDQCR/L07-D160 | ●     | ● | 16                   | 12              | 8.6  | 150 | 24 | 11 | 2.6 | 0° | -6° | 0.4                      |                    |                |        |              |
| A16Q-SDQCR/L07-D200 | ●     | ● | 20                   | 16              | 10.6 | 180 | 32 | 15 | 2.6 | 0° | -5° | 0.4                      |                    |                |        |              |
| A20R-SDQCR/L11-D250 | ●     | ● | 25                   | 20              | 13.7 | 200 | 36 | 18 | 3.7 | 0° | -7° | 0.8                      | DC□□11T3           | CSTB-4S        | T-15F  | 3.0          |
| A25S-SDQCR/L11-D300 | ●     | ● | 30                   | 25              | 16.2 | 250 | 45 | 23 | 3.7 | 0° | -4° | 0.8                      |                    |                |        |              |

## Carbide shank

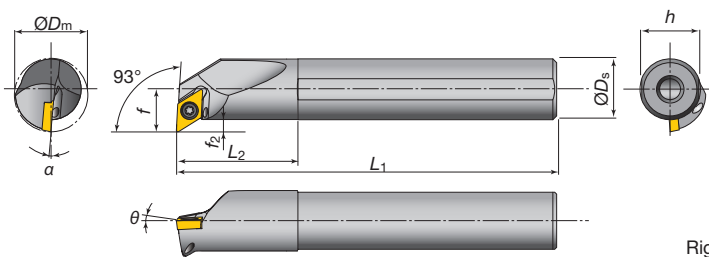
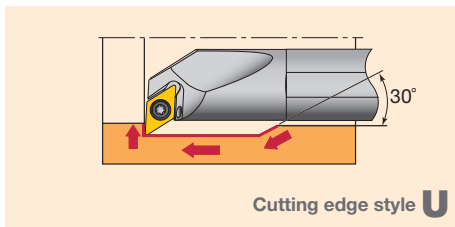
| Toolholder Cat. No. | Stock |   | Min bore dia.<br>øDm | Dimensions (mm) |      |     |    |    |     |    |     | Std. corner radius<br>rε | Applicable inserts | Parts          |        | Torque (N·m) |
|---------------------|-------|---|----------------------|-----------------|------|-----|----|----|-----|----|-----|--------------------------|--------------------|----------------|--------|--------------|
|                     | R     | L |                      | øDs             | f    | L1  | L2 | h  | f2  | θ  | α   |                          |                    | Clamping screw | Wrench |              |
| E10H-SDQCR/L07-D130 | ●     |   | 13                   | 10              | 7.6  | 100 | 25 | 9  | 2.5 | 0° | -8° | 0.4                      | DC□□0702           | CSTB-2.5S      | T-8F   | 1.2          |
| E10M-SDQCR/L07-D130 | ●     | ● | 13                   | 10              | 7.6  | 150 | 25 | 9  | 2.6 | 0° | -8° | 0.4                      |                    |                |        |              |
| E12J-SDQCR/L07-D160 | ●     |   | 16                   | 12              | 8.6  | 110 | 27 | 11 | 2.5 | 0° | -6° | 0.4                      |                    |                |        |              |
| E12Q-SDQCR/L07-D160 | ●     | ● | 16                   | 12              | 8.6  | 180 | 27 | 11 | 2.6 | 0° | -6° | 0.4                      |                    |                |        |              |
| E16L-SDQCR/L07-D200 | ●     |   | 20                   | 16              | 10.6 | 130 | 32 | 15 | 2.5 | 0° | -5° | 0.4                      |                    |                |        |              |
| E16R-SDQCR/L07-D200 | ●     | ● | 20                   | 16              | 10.6 | 200 | 32 | 15 | 2.6 | 0° | -5° | 0.4                      |                    |                |        |              |
| E20S-SDQCR/L11-D250 | ●     | ● | 25                   | 20              | 13.7 | 250 | 36 | 18 | 3.7 | 0° | -7° | 0.8                      | DC□□11T3           | CSTB-4S        | T-15F  | 3.0          |

When using a right or left hand insert, the right hand insert (R) is used for the left hand toolholders (SDQCL □□ type), and the left hand insert (L) is used for the right hand toolholders (SDQCR □□ type).

## SDUCR/L

## Boring & internal profiling

## S-type (Positive, screw-on)



Right hand (R) shown

### Steel shank

Inch

| Toolholder Cat. No. | Stock |   | Min. bore dia. $\phi D_m$ | Dimensions (inch) |      |       |       |      |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (ft-lb) |
|---------------------|-------|---|---------------------------|-------------------|------|-------|-------|------|-------|----------|----------|--------------------------|--------------------|----------------|--------|----------------|
|                     | R     | L |                           | $\phi D_s$        | $f$  | $L_1$ | $L_2$ | $h$  | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |                |
| A06-SDUCR2-D10      | ●     |   | .625                      | .375              | .406 | 5.00  | .750  | .350 | -     | 0°       | -8°      | .016                     | DC□□21.5□          | CSTB-2.5       |        | .89            |
| A08-SDUCR/L2-D11    | ●     | ● | .688                      | .500              | .406 | 5.00  | 1.00  | .475 | .156  | 0°       | -6°      |                          |                    | CSTB-2.5B      | T-8F   |                |
| A10-SDUCR2-D14      | ●     |   | .875                      | .625              | .531 | 7.00  | 1.25  | .600 | .219  | 0°       | -4°      |                          |                    | CSTB-2.5       |        |                |

Metric

| Toolholder Cat. No. | Stock |   | Min. bore dia. $\phi D_m$ | Dimensions (mm) |      |       |       |     |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (N-m) |
|---------------------|-------|---|---------------------------|-----------------|------|-------|-------|-----|-------|----------|----------|--------------------------|--------------------|----------------|--------|--------------|
|                     | R     | L |                           | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$ | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |              |
| A10K-SDUCR/L07-D130 | ●     | ● | 13                        | 10              | 7    | 125   | 20    | 9   | 2.0   | 0°       | -10°     | 0.4                      | DC□□0702           | CSTB-2.5S      | T-8F   | 1.2          |
| A12M-SDUCR/L07-D160 | ●     | ● | 16                        | 12              | 9.3  | 150   | 24    | 11  | 3.3   | 0°       | -6°      | 0.4                      |                    | CSTB-2.5       |        |              |
| A16Q-SDUCR/L07-D200 | ●     | ● | 20                        | 16              | 11.3 | 180   | 32    | 15  | 3.3   | 0°       | -5°      | 0.4                      |                    |                |        |              |
| A20R-SDUCR/L11-D270 | ●     | ● | 27                        | 20              | 16.1 | 200   | 36    | 18  | 6.1   | 0°       | -5°      | 0.8                      | DC□□11T3           | CSTB-4S        | T-15F  | 3.0          |
| A25S-SDUCR/L11-D320 | ●     | ● | 32                        | 25              | 18.6 | 250   | 45    | 23  | 6.1   | 0°       | -4°      | 0.8                      |                    |                |        |              |

### Carbide shank

Inch

| Toolholder Cat. No. | Stock |   | Min. bore dia. $\phi D_m$ | Dimensions (in) |      |       |       |      |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (ft-lb) |
|---------------------|-------|---|---------------------------|-----------------|------|-------|-------|------|-------|----------|----------|--------------------------|--------------------|----------------|--------|----------------|
|                     | R     | L |                           | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$  | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |                |
| E06-SDUCR2-D10      | ●     |   | .625                      | .375            | .406 | 5.000 | 1.000 | .375 | -     | 0°       | -7°      | .016                     | DC□□21.5□          | CSTB-2.5       | T-8F   | .89            |
| E08-SDUCR2-D11      | ●     |   | .688                      | .500            | .406 | 5.000 | 1.062 | .475 | .156  |          | -6°      |                          |                    | CSTB-2.5B      |        |                |
| E10-SDUCR2-D14      | ●     |   | .875                      | .625            | .531 | 7.000 | 1.250 | .600 | .219  |          | -4°      |                          |                    | CSTB-2.5       |        |                |
| E12-SDUCR/L3-D16    | ●     | ● | 1.000                     | .750            | .594 | 7.000 | 1.438 | .750 | .219  |          | -5°      | .031                     | DC□□31.5□          | CSTB-4S        | T-15F  | 2.21           |

Metric

| Toolholder Cat. No. | Stock |   | Min. bore dia. $\phi D_m$ | Dimensions (mm) |      |       |       |     |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (N-m) |
|---------------------|-------|---|---------------------------|-----------------|------|-------|-------|-----|-------|----------|----------|--------------------------|--------------------|----------------|--------|--------------|
|                     | R     | L |                           | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$ | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |              |
| E10H-SDUCR/L07-D130 | ●     |   | 13                        | 10              | 7    | 100   | 25    | 9   | 1.9   | 5°       | -3.5°    | 0.4                      | DC□□0702           | CSTB-2.5S      | T-8F   | 1.2          |
| E10M-SDUCR/L07-D130 | ●     | ● | 13                        | 10              | 7    | 150   | 25    | 9   | 2.0   | 0°       | -10°     | 0.4                      |                    |                |        |              |
| E12J-SDUCR/L07-D160 | ●     |   | 16                        | 12              | 9.3  | 110   | 27    | 11  | 3.2   | 0°       | -6°      | 0.4                      |                    |                |        |              |
| E12Q-SDUCR/L07-D160 | ●     | ● | 16                        | 12              | 9.3  | 180   | 27    | 11  | 3.3   | 0°       | -6°      | 0.4                      |                    |                |        |              |
| E16L-SDUCR/L07-D200 | ●     |   | 20                        | 16              | 11.3 | 130   | 32    | 15  | 3.2   | 0°       | -5°      | 0.4                      |                    |                |        |              |
| E16R-SDUCR/L07-D200 | ●     | ● | 20                        | 16              | 11.3 | 200   | 32    | 15  | 3.3   | 0°       | -5°      | 0.4                      |                    | CSTB-2.5       |        |              |
| E20S-SDUCR/L11-D270 | ●     |   | 27                        | 20              | 16.1 | 250   | 36    | 18  | 6.1   | 0°       | -5°      | 0.8                      | DC□□11T3           | CSTB-4S        | T-15F  | 3.0          |

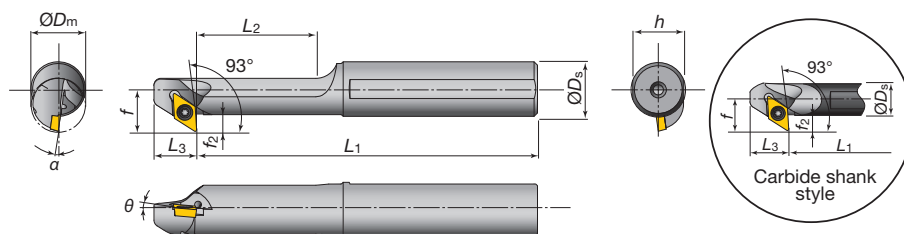
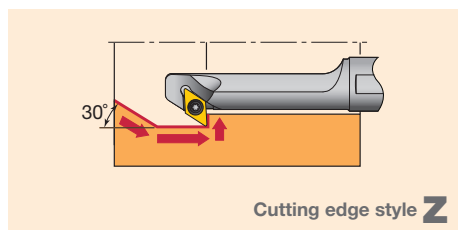
When using a right or left hand insert, the right hand insert (R) is used for the left hand toolholders (SDUCL □□ type), and the left hand insert (L) is used for the right hand toolholders (SDUCR □□ type).

● : Stocked items

# SDZCR/L

## Internal retracting

## S-type (Positive, screw-on)



### Steel shank

Inch

| Toolholder Cat. No. | Stock |   | Min<br>bore dia.<br>øDm | Dimensions (in) |      |       |       |      |      |      |    |     | Std.<br>corner<br>radius<br>rE | Applicable<br>inserts | Parts             |        | Torque<br>(ft-lb) |
|---------------------|-------|---|-------------------------|-----------------|------|-------|-------|------|------|------|----|-----|--------------------------------|-----------------------|-------------------|--------|-------------------|
|                     | R     | L |                         | øDs             | f    | L1    | L2    | L3   | h    | f2   | θ  | α   |                                |                       | Clamping<br>screw | Wrench |                   |
| A10-SDZCR2-D14      | ●     |   | .875                    | .625            | .531 | 7.000 | 1.250 | .500 | .600 | .219 | 0° | -4° | .016                           | DC□□21.5□             | CSTB-2.5          | T-8F   | .89               |

Metric

| Toolholder Cat. No. | Stock |   | Min<br>bore dia.<br>øDm | Dimensions (mm) |      |     |    |      |    |     |    | Std.<br>corner<br>radius<br>rE | Applicable<br>Inserts | Parts    |                   | Torque<br>(N·m) |        |
|---------------------|-------|---|-------------------------|-----------------|------|-----|----|------|----|-----|----|--------------------------------|-----------------------|----------|-------------------|-----------------|--------|
|                     | R     | L |                         | øDs             | f    | L1  | L2 | L3   | h  | f2  | θ  |                                |                       | α        | Clamping<br>screw |                 | Wrench |
| A12M-SDZCR/L07-D140 | ●     | ● | 14                      | 12              | 10.5 | 150 | 30 | 12.5 | 11 | 4.5 | 0° | -9°                            | 0.4                   | DC□□0702 | CSTB-2.5          | T-8F            | 1.2    |
| A16Q-SDZCR/L07-D160 | ●     | ● | 16                      | 16              | 12.5 | 180 | 35 | 12.5 | 15 | 4.5 | 0° | -8°                            | 0.4                   |          |                   |                 |        |
| A20R-SDZCR/L11-D200 | ●     | ● | 20                      | 20              | 15.5 | 200 | 40 | 15   | 18 | 5.5 | 0° | -8°                            | 0.8                   | DC□□11T3 | CSTB-4S           | T-15F           | 3.0    |
| A25S-SDZCR/L11-D250 | ●     | ● | 25                      | 25              | 18   | 250 | 50 | 15   | 23 | 5.5 | 0° | -6°                            | 0.8                   |          |                   |                 |        |

### Carbide shank

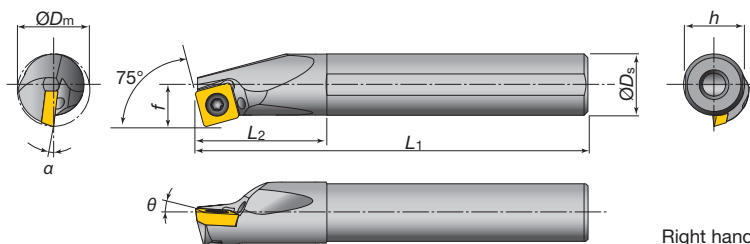
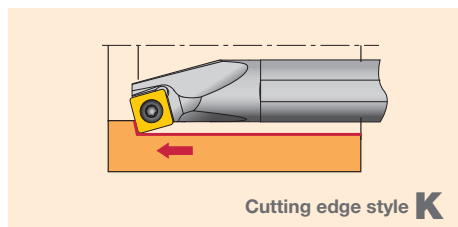
| Toolholder Cat. No. | Stock |   | Min<br>bore dia.<br>øDm | Dimensions (mm) |      |     |    |      |    |     |    |     | Std.<br>corner<br>radius<br>rE | Applicable<br>inserts | Parts             |        | Torque<br>(N·m) |
|---------------------|-------|---|-------------------------|-----------------|------|-----|----|------|----|-----|----|-----|--------------------------------|-----------------------|-------------------|--------|-----------------|
|                     | R     | L |                         | øDs             | f    | L1  | L2 | L3   | h  | f2  | θ  | α   |                                |                       | Clamping<br>screw | Wrench |                 |
| E12Q-SDZCR/L07-D180 | ●     | ● | 18                      | 12              | 10.5 | 180 | -  | 12.5 | 11 | 4.5 | 0° | -8° | 0.4                            | DC□□0702              | CSTB-2.5          | T-8F   | 1.2             |
| E16R-SDZCR/L07-D220 | ●     | ● | 22                      | 16              | 12.5 | 200 | -  | 12.5 | 15 | 4.5 | 0° | -6° | 0.4                            |                       |                   |        |                 |

When using a right or left hand insert, the right hand insert (R) is used for the right hand toolholders (SDZCR □□ type), and the left hand insert (L) is used for the left hand toolholders (SDZCL □□ type).

# SSKPR/L

## Through boring

## S-type (Positive, screw-on)



### Steel shank

| Toolholder Cat. No. | Stock |   | Min. bore dia.<br>øDm | Dimensions (mm) |    |     |    |    |    |     |     | Std. corner radius<br>rE | Applicable inserts | Parts          |        | Torque<br>(N·m) |
|---------------------|-------|---|-----------------------|-----------------|----|-----|----|----|----|-----|-----|--------------------------|--------------------|----------------|--------|-----------------|
|                     | R     | L |                       | øDs             | f  | L1  | L2 | h  | f2 | θ   | α   |                          |                    | Clamping screw | Wrench |                 |
| A16Q-SSKPR/L09-D200 | ●     |   | 20                    | 16              | 11 | 180 | 32 | 15 | -  | +5° | -6° | 0.8                      | SP□□0903           | CSTB-4L060     | T-15F  | 3.0             |
| A20R-SSKPR/L09-D240 | ●     |   | 24                    | 20              | 13 | 200 | 36 | 18 | -  | +5° | -2° | 0.8                      | SP□□1204           | CSTB-5S        | T-20F  | 6.0             |
| A25S-SSKPR/L12-D310 | ●     |   | 31                    | 25              | 17 | 250 | 45 | 23 | -  | +5° | -2° | 0.8                      | SP□□1204           | CSTB-5S        | T-20F  | 6.0             |

When using a right or left hand insert, the right hand insert (R) is used for the left hand toolholders (SSKPL □□ type), and the left hand insert (L) is used for the right hand toolholders (SSKPR □□ type).

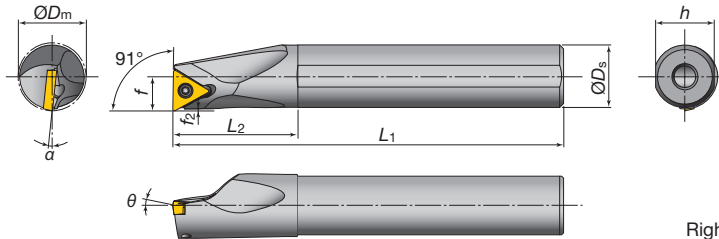
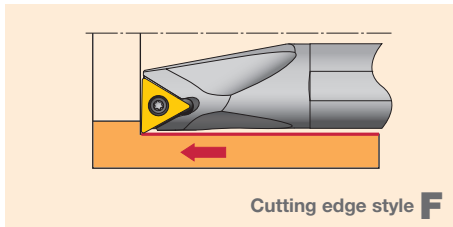
● : Stocked items



## STFCR/L

## Boring

## S-type (Positive, screw-on)



Right hand (R) shown

### Steel shank

Inch

| Toolholder Cat. No. | Stock |   | Min. bore dia. ØDm | Dimensions (in) |      |        |       |      |    |     | Std. corner radius rE | Applicable inserts | Parts          |  |
|---------------------|-------|---|--------------------|-----------------|------|--------|-------|------|----|-----|-----------------------|--------------------|----------------|--|
|                     | R     | L |                    | ØDs             | f    | L1     | L2    | h    | θ  | α   |                       |                    | Clamping screw |  |
| A06M-STFCR/L-2      | ●     | ● | .480               | .375            | .256 | 6.000  | .625  | .340 | 0° | 11° | .016                  | TC□□21.5□          | TS-25.45-6M2   |  |
| A08R-STFCR/L-2      | ●     | ● | .600               | .500            | .312 | 8.000  | .748  | .460 | 0° | 9°  | .016                  |                    |                |  |
| A10S-STFCR/L-2      | ●     | ● | .770               | .625            | .406 | 10.000 | 1.250 | .575 | 0° | 7°  | .016                  |                    |                |  |
| A12S-STFCR/L-3      | ●     | ● | .930               | .750            | .500 | 10.000 | 1.875 | .700 | 0° | 6°  | .031                  | TC□□32.5□          | TS-4.7-10M1    |  |

### Metric

| Toolholder Cat. No.       | Stock |   | Min. bore dia. ØDm | Dimensions (mm) |      |     |    |     |     |    |      | Std. corner radius rE | Applicable inserts | Parts          |        | Torque (N·m) |
|---------------------------|-------|---|--------------------|-----------------|------|-----|----|-----|-----|----|------|-----------------------|--------------------|----------------|--------|--------------|
|                           | R     | L |                    | ØDs             | f    | L1  | L2 | h   | f2  | θ  | α    |                       |                    | Clamping screw | Wrench |              |
| A08H-STFCR/L09-D100       |       |   | 10                 | 8               | 5.5  | 100 | 16 | 7.5 | 0.6 | 0° | -12° | 0.4                   | TC□□0902           | CSTB-2.2S      | T-7F   | 0.9          |
| A10K-STFCR/L09-D120       |       |   | 12                 | 10              | 6.5  | 125 | 20 | 9   | 0.6 | 0° | -10° | 0.4                   |                    |                |        |              |
| A10K-STFCR/L1102-D120     |       |   | 12                 | 10              | 6.5  | 125 | 20 | 9   | 0.6 | 0° | -10° | 0.4                   | TC□□1102           | CSTB-2.5       | T-8F   | 1.2          |
| New A10K-STFCR/L1103-D120 | ●     | ● | 12                 | 10              | 6.5  | 125 | 20 | 9   | 0.6 | 0° | -13° | 0.4                   | TC□□1103           | CSTB-2.5       | T-8F   | 1.2          |
| A12M-STFCR/L09-D140       |       |   | 14                 | 12              | 7    | 150 | 24 | 11  | 0.5 | 0° | -8°  | 0.4                   | TC□□0902           | CSTB-2.2       | T-7F   | 0.9          |
| A12M-STFCR/L1102-D140     |       |   | 14                 | 12              | 7    | 150 | 24 | 11  | 0.5 | 0° | -8°  | 0.4                   | TC□□1102           | CSTB-2.5       | T-8F   | 1.2          |
| New A12M-STFCR/L1103-D140 | ●     | ● | 14                 | 12              | 7    | 150 | 24 | 11  | 0.5 | 0° | -10° | 0.4                   | TC□□1103           | CSTB-2.5       | T-8F   | 1.2          |
| A16Q-STFCR/L09-D180       |       |   | 18                 | 16              | 9    | 180 | 32 | 15  | 0.6 | 0° | -6°  | 0.4                   | TC□□0902           | CSTB-2.2       | T-7F   | 0.9          |
| A16Q-STFCR/L1102-D180     |       |   | 18                 | 16              | 9    | 180 | 32 | 15  | 0.6 | 0° | -6°  | 0.4                   | TC□□1102           | CSTB-2.5       | T-8F   | 1.2          |
| New A16Q-STFCR/L1103-D180 | ●     | ● | 18                 | 16              | 9    | 180 | 32 | 15  | 0.5 | 0° | -7°  | 0.4                   | TC□□1103           | CSTB-2.5       | T-8F   | 1.2          |
| A20R-STFCR/L1102-D220     |       |   | 22                 | 20              | 11   | 200 | 36 | 18  | 0.5 | 0° | -4°  | 0.4                   | TC□□1102           | CSTB-2.5       | T-8F   | 1.2          |
| A20R-STFCR/L16-D220       |       |   | 22                 | 20              | 11   | 200 | 36 | 18  | 0.4 | 0° | -7°  | 0.8                   | TC□□16T3           | CSTB-4M        | T-15F  | 3.0          |
| A25S-STFCR/L16-D270       |       |   | 27                 | 25              | 13.5 | 250 | 45 | 23  | 0.4 | 0° | -5°  | 0.8                   |                    |                |        |              |

### Carbide shank

Inch

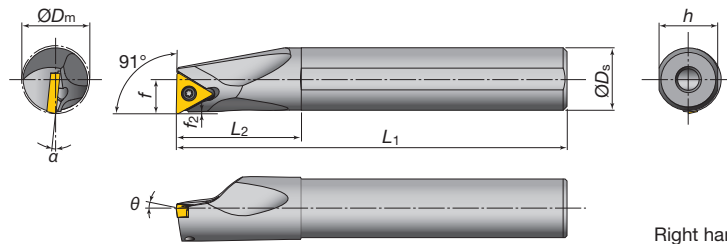
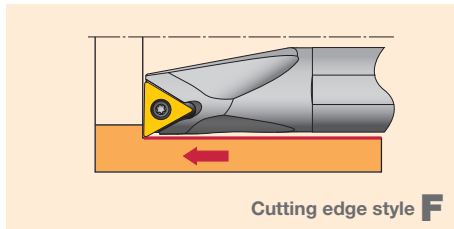
| Toolholder Cat. No. | Stock |   | Min. bore dia. ØDm | Dimensions (in) |      |       |       |      |      |    |     | Std. corner radius rE | Applicable inserts | Parts          |        | Torque (ft·lb) |
|---------------------|-------|---|--------------------|-----------------|------|-------|-------|------|------|----|-----|-----------------------|--------------------|----------------|--------|----------------|
|                     | R     | L |                    | ØDs             | f    | L1    | L2    | h    | f2   | θ  | α   |                       |                    | Clamping screw | Wrench |                |
| E06-STFCR/L2-D08    | ●     | ● | .500               | .375            | .281 | 5.000 | 1.000 | .350 | .024 | 0° | -9° | .016                  | TC□□21.5□          | CSTB-2.5       | T-8F   | .89            |
| E08-STFCR2-D11      | ●     | ● | .688               | .500            | .406 | 5.000 | 1.062 | .475 | .024 | 0° | -6° | .016                  |                    |                |        |                |
| E10-STFCR2-D14      | ●     | ● | .875               | .625            | .531 | 7.000 | 1.250 | .600 | .024 | 0° | -5° | .016                  |                    |                |        |                |
| E12-STFCR3-D16      | ●     | ● | 1.000              | .750            | .594 | 7.000 | 1.438 | .750 | .039 | 0° | -5° | .031                  | TC□□32.5□          | CSTB-4S        | T15-F  | 2.21           |

### Metric

| Toolholder Cat. No.       | Stock |   | Min. bore dia. ØDm | Dimensions (mm) |      |     |    |     |     |    |      | Std. corner radius rE | Applicable inserts | Parts          |        | Torque (N·m) |
|---------------------------|-------|---|--------------------|-----------------|------|-----|----|-----|-----|----|------|-----------------------|--------------------|----------------|--------|--------------|
|                           | R     | L |                    | ØDs             | f    | L1  | L2 | h   | f2  | θ  | α    |                       |                    | Clamping screw | Wrench |              |
| E08K-STFCR/L09-D100       |       |   | 10                 | 8               | 5.5  | 125 | 22 | 7.5 | 0.6 | 0° | -12° | 0.4                   | TC□□0902           | CSTB-2.2S      | T-7F   | 0.9          |
| E10M-STFCR/L09-D120       |       |   | 12                 | 10              | 6.5  | 150 | 25 | 9   | 0.6 | 0° | -10° | 0.4                   |                    |                |        |              |
| E10M-STFCR/L1102-D120     |       |   | 12                 | 10              | 6.5  | 150 | 25 | 9   | 0.6 | 0° | -10° | 0.4                   | TC□□1102           | CSTB-2.5       | T-8F   | 1.2          |
| New E10M-STFCR/L1103-D120 | ●     | ● | 12                 | 10              | 6.5  | 150 | 25 | 9   | 0.7 | 0° | -13° | 0.4                   | TC□□1103           | CSTB-2.5       | T-8F   | 1.2          |
| E12Q-STFCR/L09-D140       |       |   | 14                 | 12              | 7    | 180 | 27 | 11  | 0.6 | 0° | -8°  | 0.4                   | TC□□0902           | CSTB-2.2       | T-7F   | 0.9          |
| E12Q-STFCR/L1102-D140     |       |   | 14                 | 12              | 7    | 180 | 27 | 11  | 0.6 | 0° | -8°  | 0.4                   | TC□□1102           | CSTB-2.5       | T-8F   | 1.2          |
| New E12Q-STFCR/L1103-D140 | ●     | ● | 14                 | 12              | 7    | 180 | 27 | 11  | 0.5 | 0° | -10° | 0.4                   | TC□□1103           | CSTB-2.5       | T-8F   | 1.2          |
| E16R-STFCR/L09-D180       |       |   | 18                 | 16              | 9    | 200 | 32 | 15  | 0.6 | 0° | -6°  | 0.4                   | TC□□0902           | CSTB-2.2       | T-7F   | 0.9          |
| E16R-STFCR/L1102-D180     |       |   | 18                 | 16              | 9    | 200 | 32 | 15  | 0.6 | 0° | -6°  | 0.4                   | TC□□1102           | CSTB-2.5       | T-8F   | 1.2          |
| New E16R-STFCR/L1103-D180 | ●     | ● | 18                 | 16              | 9    | 200 | 32 | 15  | 0.5 | 0° | -7°  | 0.4                   | TC□□1103           | CSTB-2.5       | T-8F   | 1.2          |
| E20S-STFCR/L1102-D220     |       |   | 22                 | 20              | 11   | 250 | 36 | 18  | 0.6 | 0° | -4°  | 0.4                   | TC□□1102           | CSTB-2.5       | T-8F   | 1.2          |
| E20S-STFCR/L16-D220       |       |   | 22                 | 20              | 11   | 250 | 36 | 18  | 0.6 | 0° | -7°  | 0.8                   | TC□□16T3           | CSTB-4M        | T-15F  | 3.0          |
| E25T-STFCR/L16-D270       |       |   | 27                 | 25              | 13.5 | 300 | 45 | 23  | 0.5 | 0° | -5°  | 0.8                   |                    |                |        |              |

When using a right or left hand insert, the right hand insert (R) is used for the left hand toolholders (STFCL □□ type), and the left hand insert (L) is used for the right hand toolholders (STFCR □□ type).

● : Stocked items



## Steel shank

| Toolholder Cat. No.   | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (mm) |      |       |       |     |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (N·m) |
|-----------------------|-------|---|--------------------------|-----------------|------|-------|-------|-----|-------|----------|----------|--------------------------|--------------------|----------------|--------|--------------|
|                       | R     | L |                          | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$ | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |              |
| A08H-STFPR/L09-D100   | ●     | ● | 10                       | 8               | 5.5  | 100   | 16    | 7.5 | 0.7   | +5°      | -8°      | 0.4                      | TP□□0902           | CSTB-2.2S      | T-7F   | 0.9          |
| A10K-STFPR/L1102-D120 | ●     | ● | 12                       | 10              | 6.5  | 125   | 20    | 9   | 0.7   | +5°      | -6°      | 0.4                      | TP□□1102           | CSTB-2.5B      | T-8F   | 1.2          |
| A10K-STFPR/L1103-D120 |       |   | 12                       | 10              | 6.5  | 125   | 20    | 9   | 0.7   | +5°      | -7°      | 0.4                      | TP□□1103*          | CSTB-3L050     | T-9F   | 1.4          |
| A12M-STFPR/L1102-D140 | ●     | ● | 14                       | 12              | 7    | 150   | 24    | 11  | 0.6   | +5°      | -4°      | 0.4                      | TP□□1102           | CSTB-2.5       | T-8F   | 1.2          |
| A12M-STFPR/L1103-D140 |       |   | 14                       | 12              | 7    | 150   | 24    | 11  | 0.6   | +5°      | -4°      | 0.4                      | TP□□1103*          | CSTB-3S        | T-9F   | 1.4          |
| A16Q-STFPR/L1103-D180 |       |   | 18                       | 16              | 9    | 180   | 32    | 15  | 0.7   | +5°      | -2°      | 0.4                      |                    |                |        |              |
| A16Q-STFPR/L13-D180   | ●     | ● | 18                       | 16              | 9    | 180   | 32    | 15  | 0.7   | +5°      | -2°      | 0.4                      | TP□□1303           | CSTB-3S        | T-9F   | 1.4          |
| A20R-STFPR/L13-D220   | ●     |   | 22                       | 20              | 11   | 200   | 36    | 18  | 0.8   | +5°      | -2°      | 0.4                      |                    | CSTB-3         |        |              |
| A25S-STFPR/L16-D270   | ●     |   | 27                       | 25              | 13.5 | 250   | 45    | 23  | 0.6   | +5°      | -1°      | 0.4                      | TP□□16T3           | CSTB-4M        | T-15F  | 3.0          |

## Carbide shank

Inch

| Toolholder Cat. No. | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (in) |      |       |       |      |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (ft·lb) |
|---------------------|-------|---|--------------------------|-----------------|------|-------|-------|------|-------|----------|----------|--------------------------|--------------------|----------------|--------|----------------|
|                     | R     | L |                          | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$  | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |                |
| E06-STFPR2-D08      | ●     |   | .500                     | .375            | .281 | 5.000 | 1.000 | .350 | .024  | 0°       | -5°      |                          |                    | CSTB-2.5B      |        |                |
| E08-STFPR2-D11      | ●     |   | .688                     | .500            | .406 | 5.000 | 1.062 | .475 | .028  | 0°       | -3°      | .016                     | TP□□21.5□          |                | T-8F   | .89            |
| E10-STFPR2-D14      | ●     |   | .875                     | .625            | .531 | 7.000 | 1.250 | .605 | .031  | 0°       | -2°      |                          |                    | CSTB-2.5       |        |                |
| E12-STFPR/L3-D16    | ●     | ● | 1.000                    | .750            | .594 | 7.000 | 1.438 | .725 | .028  | 0°       | -2°      | .031                     | TP□□32.5□          | CSTB-4S        | T-15F  | 2.21           |

Metric

| Toolholder Cat. No.   | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (mm) |     |       |       |     |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (N·m) |
|-----------------------|-------|---|--------------------------|-----------------|-----|-------|-------|-----|-------|----------|----------|--------------------------|--------------------|----------------|--------|--------------|
|                       | R     | L |                          | $\phi D_s$      | $f$ | $L_1$ | $L_2$ | $h$ | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |              |
| E08K-STFPR/L09-D100   | ●     | ● | 10                       | 8               | 5.5 | 125   | 22    | 7.5 | 0.7   | +5°      | -8°      | 0.4                      | TP□□0902           | CSTB-2.2S      | T-7F   | 0.9          |
| E10M-STFPR/L1102-D120 | ●     | ● | 12                       | 10              | 6.5 | 150   | 25    | 9   | 0.7   | +5°      | -6°      | 0.4                      | TP□□1102           | CSTB-2.5B      | T-8F   | 1.2          |
| E10M-STFPR/L1103-D120 |       |   | 12                       | 10              | 6.5 | 150   | 25    | 9   | 0.7   | +5°      | -7°      | 0.4                      | TP□□1103*          | CSTB-3L050     | T-9F   | 1.4          |
| E12Q-STFPR/L1102-D140 | ●     | ● | 14                       | 12              | 7   | 180   | 27    | 11  | 0.6   | +5°      | -4°      | 0.4                      | TP□□1102           | CSTB-2.5       | T-8F   | 1.2          |
| E12Q-STFPR/L1103-D140 |       |   | 14                       | 12              | 7   | 180   | 27    | 11  | 0.6   | +5°      | -4°      | 0.4                      | TP□□1103*          | CSTB-3S        | T-9F   | 1.4          |
| E16R-STFPR/L1103-D180 |       |   | 18                       | 16              | 9   | 200   | 32    | 15  | 0.7   | +5°      | -2°      | 0.4                      |                    |                |        |              |
| E16R-STFPR/L13-D180   | ●     |   | 18                       | 16              | 9   | 200   | 32    | 15  | 0.7   | +5°      | -2°      | 0.4                      | TP□□1303           | CSTB-3S        | T-9F   | 1.4          |
| E20S-STFPR/L13-D220   | ●     |   | 22                       | 20              | 11  | 250   | 36    | 18  | 0.8   | +5°      | -2°      | 0.4                      |                    | CSTB-3         |        |              |

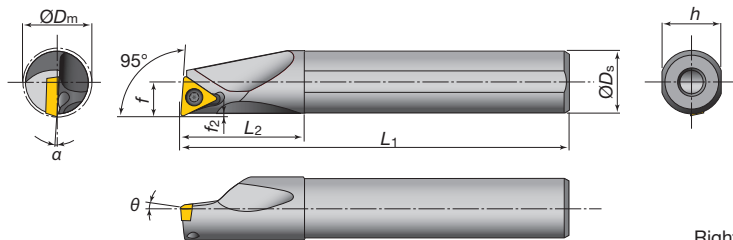
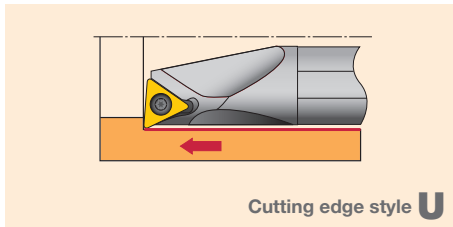
When using a right or left hand insert, the right hand insert (R) is used for the left hand toolholders (STFPL □□ type), and the left hand insert (L) is used for the right hand toolholders (STFPR □□ type).

\* TPGH1103 □□ is not applicable.

## STUPR/L

## Boring

## S-type (Positive, screw-on)



Right hand (R) shown

### Steel shank

Inch

| Toolholder Cat. No. | Stock |   | Min<br>bore.dia.<br>øDm | Dimensions (in) |      |       |       |      |    |    |     | Std.<br>corner<br>radius<br>rε | Applicable<br>inserts | Parts             |        | Torque<br>(ft-lb) |  |
|---------------------|-------|---|-------------------------|-----------------|------|-------|-------|------|----|----|-----|--------------------------------|-----------------------|-------------------|--------|-------------------|--|
|                     | R     | L |                         | øDs             | f    | L1    | L2    | h    | f2 | θ  | α   |                                |                       | Clamping<br>screw | Wrench |                   |  |
| A05-STUPR/L7-D07    | ●     | ● | .438                    | .313            | .250 | 5.000 | .625  | .288 | -  | 5° | -7° | .016                           | TP□□73□               | CSTB-2.2S         | T-7F   | .66               |  |
| A06-STUPR/L2-D08    | ●     | ● | .500                    | .375            | .281 | 5.000 | .750  | .350 | -  | 5° | -5° |                                | TP□□21.5□             | CSTB-2.5S         | T-8F   | .89               |  |
| A08-STUPR/L2-D11    | ●     | ● | .688                    | .500            | .406 | 5.000 | 1.000 | .475 | -  | 5° | -3° |                                |                       | CSTB-2.5B         |        |                   |  |
| A10-STUPR/L2-D14    | ●     | ● | .875                    | .625            | .531 | 7.000 | 1.250 | .600 | -  | 5° | 0°  |                                |                       | CSTB-2.5          |        |                   |  |
| A10-STUPR/L2.5-D14  | ●     |   | .875                    | .625            | .531 | 7.000 | 1.250 | .600 | -  | 5° | -2° |                                | TP□□2.52□             |                   |        |                   |  |
| A12-STUPR/L3-D16    | ●     | ● | 1.000                   | .750            | .594 | 7.000 | 1.437 | .725 | -  | 5° | -2° | .031                           | TP□□32.5□             | CSTB-4M           | T-15F  | 2.21              |  |
| A16-STUPR/L3-D20    | ●     | ● | 1.250                   | 1.000           | .688 | 7.000 | 1.750 | .975 | -  | 5° | 0°  |                                |                       |                   |        |                   |  |

### Metric

| Toolholder Cat. No.   | Stock |   | Min<br>bore.dia.<br>øDm | Dimensions (mm) |      |                |                |      |                |     |      | Std.<br>corner<br>radius<br>rε | Applicable<br>inserts | Parts             |        | Torque<br>(N·m) |
|-----------------------|-------|---|-------------------------|-----------------|------|----------------|----------------|------|----------------|-----|------|--------------------------------|-----------------------|-------------------|--------|-----------------|
|                       | R     | L |                         | øDs             | f    | L <sub>1</sub> | L <sub>2</sub> | h    | f <sub>2</sub> | θ   | α    |                                |                       | Clamping<br>screw | Wrench |                 |
| A07G-STUPR/L07-D080   | ●     | ● | 8                       | 7               | 4    | 90             | 12             | 6.75 | 0.4            | +5° | -10° | 0.4                            | TP□□0701              | CSTB-2.2L038      | T-7F   | 0.9             |
| A08H-STUPR/L07-D080   | ●     | ● | 8                       | 8               | 4    | 100            | 19.5           | 7.5  | 0.5            | +5° | -10° | 0.4                            | TP□□0701              | CSTB-2.2L038      | T-7F   | 0.9             |
| A08H-STUPR/L09-D100   | ●     | ● | 10                      | 8               | 5.5  | 100            | 16             | 7.5  | 0.6            | +5° | -8°  | 0.4                            | TP□□0902              | CSTB-2.2L038      | T-7F   | 0.9             |
| A10F-STUPR/L1102-D120 | ●     |   | 12                      | 10              | 6.5  | 80             | 20             | 9    | 1.4            | +5° | -6°  | 0.4                            | TP□□1102              | CSTB-2.5S         | T-8F   | 1.2             |
| A10K-STUPR/L1102-D120 | ●     | ● | 12                      | 10              | 6.5  | 125            | 20             | 9    | 0.7            | +5° | -6°  | 0.4                            |                       |                   |        |                 |
| A10K-STUPR/L1103-D120 | ●     | ● | 12                      | 10              | 6.5  | 125            | 20             | 9    | 0.6            | +5° | -10° | 0.4                            | TP□□1103*             | CSTB-3L050        | T-9F   | 1.4             |
| A12H-STUPR/L1102-D140 | ●     |   | 14                      | 12              | 7    | 100            | 24             | 11   | 0.9            | +5° | -4°  | 0.4                            | TP□□1102              | CSTB-2.5B         | T-8F   | 1.2             |
| A12M-STUPR/L1102-D140 | ●     | ● | 14                      | 12              | 7    | 150            | 24             | 11   | 0.7            | +5° | -4°  | 0.4                            |                       |                   |        |                 |
| A12M-STUPR/L1103-D140 | ●     | ● | 14                      | 12              | 7    | 150            | 24             | 11   | 0.6            | +5° | -6°  | 0.4                            | TP□□1103*             | CSTB-3L050        | T-9F   | 1.4             |
| A12H-STUPR/L1102-D160 | ●     |   | 16                      | 12              | 9    | 100            | 24             | 11   | 0.6            | +5° | -3°  | 0.4                            | TP□□1102              | CSTB-2.5B         | T-8F   | 1.2             |
| A12M-STUPR/L1102-D160 | ●     | ● | 16                      | 12              | 9    | 150            | 24             | 11   | 0.6            | +5° | -3°  | 0.4                            |                       |                   |        |                 |
| A16K-STUPR/L13-D180   | ●     |   | 18                      | 16              | 9    | 125            | 32             | 15   | 0.9            | +5° | -3°  | 0.4                            | TP□□1303              | CSTB-3S           | T-9F   | 1.4             |
| A16Q-STUPR/L1103-D180 | ●     | ● | 18                      | 16              | 9    | 180            | 32             | 15   | 0.8            | +5° | -4°  | 0.4                            | TP□□1103*             | CSTB-3S           | T-9F   | 1.4             |
| A16Q-STUPR/L13-D180   | ●     | ● | 18                      | 16              | 9    | 180            | 32             | 15   | 0.6            | +5° | -3°  | 0.4                            | TP□□1303              | CSTB-3S           | T-9F   | 1.4             |
| A16K-STUPR/L13-D200   | ●     |   | 20                      | 16              | 11   | 125            | 32             | 15   | 0.6            | +5° | -3°  | 0.4                            | TP□□1303              | CSTB-3S           | T-9F   | 1.4             |
| A16Q-STUPR/L13-D200   | ●     | ● | 20                      | 16              | 11   | 180            | 32             | 15   | 0.6            | +5° | -3°  | 0.4                            |                       |                   |        |                 |
| A20R-STUPR/L1103-D220 | ●     | ● | 22                      | 20              | 11   | 200            | 36             | 18   | 0.7            | +5° | -2°  | 0.4                            | TP□□1103*             | CSTB-3            | T-9F   | 1.4             |
| A20R-STUPR/L13-D220   | ●     | ● | 22                      | 20              | 11   | 200            | 36             | 18   | 0.7            | +5° | -2°  | 0.4                            | TP□□1303              |                   |        |                 |
| A25S-STUPR/L16-D270   | ●     | ● | 27                      | 25              | 13.5 | 250            | 45             | 23   | 0.5            | +5° | -1°  | 0.8                            | TP□□16T3              | CSTB-4M           | T-15F  | 3.0             |
| A32T-STUPR/L16-D340   | ●     | ● | 34                      | 32              | 17   | 300            | 50             | 30   | 0.7            | +5° | 0°   | 0.8                            |                       |                   |        |                 |

### Carbide shank

Inch

| Toolholder Cat. No. | Stock |   | Min<br>bore dia.<br>øDm | Dimensions (in) |      |       |       |      |    |    |     | Std.<br>corner<br>radius<br>rε | Applicable<br>inserts | Parts             |        | Torque<br>(ft-lb) |
|---------------------|-------|---|-------------------------|-----------------|------|-------|-------|------|----|----|-----|--------------------------------|-----------------------|-------------------|--------|-------------------|
|                     | R     | L |                         | øDs             | f    | L1    | L2    | h    | f2 | θ  | α   |                                |                       | Clamping<br>screw | Wrench |                   |
| E05-STUPR7-D07      | ●     |   | .438                    | .313            | .250 | 5.000 | .875  | .288 | -  | 5° | -7° | .016                           | TP□□73□               | CSTB-2.2S         | T-7F   | .66               |
| E06-STUPR2-D08      | ●     |   | .500                    | .375            | .281 | 5.000 | 1.000 | .350 | -  | 5° | -5° |                                | TP□□21.5□             | CSTB-2.5S         | T-8F   | .89               |
| E08-STUPR2-D11      | ●     |   | .688                    | .500            | .406 | 5.000 | 1.062 | .475 | -  | 5° | -3° |                                | TP□□2.5□              | CSTB-2.5B         | T-8F   |                   |
| E10-STUPR2.5-D14    | ●     |   | .875                    | .625            | .531 | 7.000 | 1.250 | .600 | -  | 5° | -2° |                                | TP□□2.52□             | CSTB-3            | T-9F   | 1.03              |

### Metric

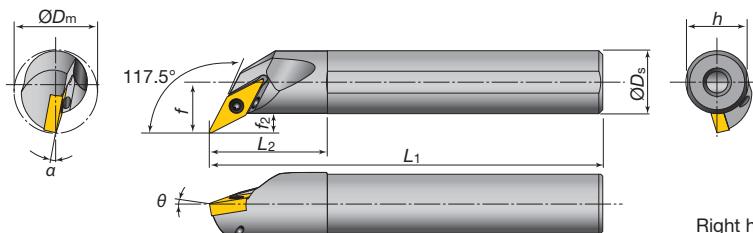
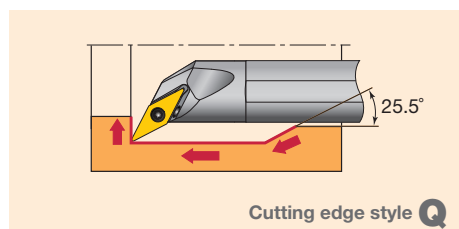
| Toolholder Cat. No. | Stock |   | Min.<br>bore.dia.<br>øDm | Dimensions (mm) |     |     |      |      |     |     |      | Std.<br>corner<br>radius<br>rε | Applicable<br>inserts | Parts             |        | Torque<br>(N·m) |
|---------------------|-------|---|--------------------------|-----------------|-----|-----|------|------|-----|-----|------|--------------------------------|-----------------------|-------------------|--------|-----------------|
|                     | R     | L |                          | øDs             | f   | L1  | L2   | h    | f2  | θ   | α    |                                |                       | Clamping<br>screw | Wrench |                 |
| E07H-STUPR/L07-D080 | ●     | ● | 8                        | 7               | 4   | 100 | 14   | 6.75 | 0.3 | +5° | -10° | 0.4                            | TP□□0701              | CSTB-2.2L038      | T-7F   | 0.9             |
| E08G-STUPR/L07-D080 | ●     |   | 8                        | 8               | 4   | 90  | 44.5 | 7.5  | 0.5 | +5° | -10° | 0.4                            | TP□□0701              | CSTB-2.2L038      | T-7F   | 0.9             |
| E08K-STUPR/L07-D080 | ●     | ● | 8                        | 8               | 4   | 125 | 44.5 | 7.5  | 0.5 | +5° | -10° | 0.4                            |                       |                   |        |                 |
| E08G-STUPR/L09-D100 | ●     |   | 10                       | 8               | 5.5 | 90  | 22   | 7    | 0.6 | +5° | -8°  | 0.4                            | TP□□0902              | CSTB-2.2L038      | T-7F   | 0.9             |
| E08K-STUPR/L09-D100 | ●     | ● | 10                       | 8               | 5.5 | 125 | 22   | 7    | 0.6 | +5° | -8°  | 0.4                            |                       |                   |        |                 |

● : Stocked items

| Toolholder Cat. No.   | Stock |   | Min<br>bore, dia.<br>øDm | Dimensions (mm) |      |     |    |    |     |     | Std.<br>corner<br>radius<br>rε | Applicable<br>inserts | Parts     |                   | Torque<br>(N·m) |        |
|-----------------------|-------|---|--------------------------|-----------------|------|-----|----|----|-----|-----|--------------------------------|-----------------------|-----------|-------------------|-----------------|--------|
|                       | R     | L |                          | øDs             | f    | L1  | L2 | h  | f2  | θ   |                                |                       | α         | Clamping<br>screw |                 | Wrench |
| E10F-STUPR/L1102-D120 | ●     |   | 12                       | 10              | 6.5  | 80  | 25 | 9  | 0.5 | +5° | -6°                            | 0.4                   | TP□□1102  | CSTB-2.5S         | T-8F            | 1.2    |
| E10H-STUPR/L1102-D120 | ●     |   | 12                       | 10              | 6.5  | 100 | 25 | 9  | 0.6 | +5° | -6°                            | 0.4                   |           |                   |                 |        |
| E10M-STUPR/L1102-D120 | ●     | ● | 12                       | 10              | 6.5  | 150 | 25 | 9  | 0.6 | +5° | -6°                            | 0.4                   |           |                   |                 |        |
| E10M-STUPR/L1103-D120 | ●     | ● | 12                       | 10              | 6.5  | 150 | 25 | 9  | 0.7 | +5° | -10°                           | 0.4                   | TP□□1103* | CSTB-3L050        | T-9F            | 1.4    |
| E12G-STUPR/L1102-D140 | ●     |   | 14                       | 12              | 7    | 90  | 27 | 11 | 0.9 | +5° | -4°                            | 0.4                   | TP□□1102  | CSTB-2.5S         | T-8F            | 1.2    |
| E12J-STUPR/L1102-D140 | ●     |   | 14                       | 12              | 7    | 110 | 27 | 11 | 0.6 | +5° | -4°                            | 0.4                   |           | CSTB-2.5B         | T-8F            | 1.2    |
| E12Q-STUPR/L1102-D140 | ●     | ● | 14                       | 12              | 7    | 180 | 27 | 11 | 0.6 | +5° | -4°                            | 0.4                   |           |                   |                 |        |
| E12Q-STUPR/L1103-D140 | ●     | ● | 14                       | 12              | 7    | 180 | 27 | 11 | 0.7 | +5° | -6°                            | 0.4                   | TP□□1103* |                   |                 |        |
| E12G-STUPR/L1102-D160 | ●     |   | 16                       | 12              | 9    | 90  | 27 | 11 | 0.6 | +5° | -3°                            | 0.4                   | TP□□1102  | CSTB-2.5B         | T-8F            | 1.2    |
| E12J-STUPR/L1102-D160 | ●     |   | 16                       | 12              | 9    | 110 | 27 | 11 | 0.6 | +5° | -3°                            | 0.4                   |           |                   |                 |        |
| E12Q-STUPR/L1102-D160 | ●     | ● | 16                       | 12              | 9    | 180 | 27 | 11 | 0.6 | +5° | -3°                            | 0.4                   |           |                   |                 |        |
| E16H-STUPR/L13-D180   | ●     |   | 18                       | 16              | 9    | 100 | 32 | 15 | 0.9 | +5° | -3°                            | 0.4                   | TP□□1303  | CSTB-3S           | T-9F            | 1.4    |
| E16R-STUPR/L1103-D180 | ●     | ● | 18                       | 16              | 9    | 200 | 32 | 15 | 0.8 | +5° | -4°                            | 0.4                   | TP□□1103* | CSTB-3S           | T-9F            | 1.4    |
| E16L-STUPR/L13-D180   | ●     |   | 18                       | 16              | 9    | 130 | 32 | 15 | 0.6 | +5° | -3°                            | 0.4                   | TP□□1303  | CSTB-3S           | T-9F            | 1.4    |
| E16R-STUPR/L13-D180   | ●     | ● | 18                       | 16              | 9    | 200 | 32 | 15 | 0.6 | +5° | -3°                            | 0.4                   |           |                   |                 |        |
| E16H-STUPR/L13-D200   | ●     |   | 20                       | 16              | 11   | 100 | 32 | 15 | 0.6 | +5° | -3°                            | 0.4                   |           |                   |                 |        |
| E16L-STUPR/L13-D200   | ●     |   | 20                       | 16              | 11   | 130 | 32 | 15 | 0.6 | +5° | -3°                            | 0.4                   | TP□□1303  | CSTB-3S           | T-9F            | 1.4    |
| E16R-STUPR/L13-D200   | ●     | ● | 20                       | 16              | 11   | 200 | 32 | 15 | 0.6 | +5° | -3°                            | 0.4                   |           |                   |                 |        |
| E20S-STUPR/L1103-D220 | ●     |   | 22                       | 20              | 11   | 250 | 36 | 18 | 0.7 | +5° | -2°                            | 0.4                   |           |                   |                 |        |
| E20S-STUPR/L13-D220   | ●     |   | 22                       | 20              | 11   | 250 | 36 | 18 | 0.6 | +5° | -2°                            | 0.4                   | TP□□1303  | CSTB-3            | T-9F            | 1.4    |
| E25T-STUPR/L16-D270   | ●     |   | 27                       | 25              | 13.5 | 300 | 45 | 23 | 0.5 | +5° | -1°                            | 0.8                   | TP□□16T3  | CSTB-4M           | T-15F           | 3.0    |

\* TPGH1103 □□ is not applicable.

### S-type (Positive, screw-on)



Right hand (R) shown

■ **Steel shank**

| Toolholder Cat. No.   | Stock |   | Min<br>bore dia.<br>øDm | Dimensions (in) |      |       |      |      |      |     | Std.<br>corner<br>radius<br>rE | Applicable<br>inserts | Parts    |                   | Torque<br>(ft-lb) |        |
|-----------------------|-------|---|-------------------------|-----------------|------|-------|------|------|------|-----|--------------------------------|-----------------------|----------|-------------------|-------------------|--------|
|                       | R     | L |                         | øDs             | f    | L1    | L2   | h    | f2   | θ   |                                |                       | α        | Clamping<br>screw |                   | Wrench |
| <b>A10-SVQBR2-D16</b> | ●     |   | 1.000                   | .625            | .500 | 7.000 | 1.25 | .600 | .188 | -5° | -6°                            | .016                  | VB□□1103 | CSTB-2.5          | T-8F              | .89    |

| Toolholder Cat. No.        | Stock |   | Min<br>bore.dia.<br>øDm | Dimensions (mm) |      |     |    |    |     |     | Std.<br>corner<br>radius<br>rE | Applicable<br>inserts | Parts    |                   | Torque<br>(N.m) |        |
|----------------------------|-------|---|-------------------------|-----------------|------|-----|----|----|-----|-----|--------------------------------|-----------------------|----------|-------------------|-----------------|--------|
|                            | R     | L |                         | øDs             | f    | L1  | L2 | h  | f2  | θ   |                                |                       | α        | Clamping<br>screw |                 | Wrench |
| <b>A12M-SVQBR/L11-D170</b> | ●     | ● | 17                      | 12              | 10.5 | 150 | 24 | 11 | 4.5 | -5° | -10°                           | 0.4                   | VB□□1103 | CSTB-2.5          | T-8F            | 1.2    |
| <b>A16Q-SVQBR/L11-D215</b> | ●     | ● | 21.5                    | 16              | 13   | 180 | 30 | 15 | 5   | -5° | -8°                            | 0.4                   |          |                   |                 |        |
| <b>A20R-SVQBR/L11-D255</b> | ●     | ● | 25.5                    | 20              | 15   | 200 | 36 | 18 | 5   | -5° | -6°                            | 0.4                   |          |                   |                 |        |
| <b>A25S-SVQBR/L16-D305</b> | ●     | ● | 30.5                    | 25              | 17.5 | 250 | 45 | 23 | 5   | -5° | -8°                            | 0.8                   | VB□□1604 | CSTB-3.5          | T-15F           | 3.0    |

■ Carbide shank

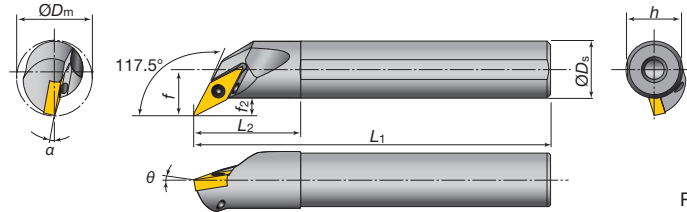
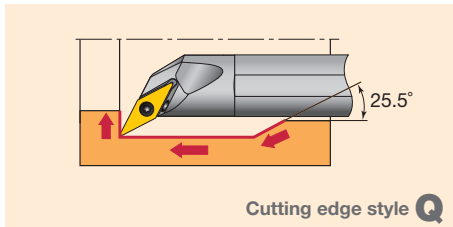
| Toolholder Cat. No. | Stock |   | Min<br>bore, dia.<br>øDm | Dimensions (mm) |      |                |                |    |                |     | Std.<br>corner<br>radius<br>rε | Applicable<br>inserts | Parts    |                   | Torque<br>(N·m) |        |
|---------------------|-------|---|--------------------------|-----------------|------|----------------|----------------|----|----------------|-----|--------------------------------|-----------------------|----------|-------------------|-----------------|--------|
|                     | R     | L |                          | øDs             | f    | L <sub>1</sub> | L <sub>2</sub> | h  | f <sub>2</sub> | θ   |                                |                       | α        | Clamping<br>screw |                 | Wrench |
| E12Q-SVQBR/L11-D170 | ●     | ● | 17                       | 12              | 10.5 | 180            | 27             | 11 | 4.5            | -5° | -10°                           | 0.4                   | VB□□1103 | CSTB-2.5          | T-8F            | 1.2    |
| E16R-SVQBR/L11-D215 | ●     | ● | 21.5                     | 16              | 13   | 200            | 32             | 15 | 5              | -5° | -8°                            | 0.4                   |          |                   |                 |        |
| E20S-SVQBR/L11-D255 | ●     | ● | 25.5                     | 20              | 15   | 250            | 36             | 18 | 5              | -5° | -6°                            | 0.4                   |          |                   |                 |        |
| E25T-SVQBR/L16-D305 | ●     | ● | 30.5                     | 25              | 17.5 | 300            | 45             | 23 | 5              | -5° | -8°                            | 0.8                   | VB□□1604 | CSTB-3.5          | T-15F           | 3.0    |

● : Stocked items

## SVQCR/L

## Boring & internal profiling

## S-type (Positive, screw-on)



### Steel shank

Inch

| Toolholder Cat. No. | Stock |   | Min<br>bore.dia.<br>øDm | Dimensions (in) |      |        |       |      |      |     | Std.<br>corner<br>radius<br>rE | Applicable<br>inserts | Parts   |                   | Torque<br><br>(ft-lb) |        |
|---------------------|-------|---|-------------------------|-----------------|------|--------|-------|------|------|-----|--------------------------------|-----------------------|---------|-------------------|-----------------------|--------|
|                     | R     | L |                         | øDs             | f    | L1     | L2    | h    | f2   | θ   |                                |                       | α       | Clamping<br>screw |                       | Wrench |
| A08-SVQCR2-D11      | ●     |   | .688                    | .500            | .375 | 5.000  | 1.000 | .475 | .125 | -5° | -6°                            | .016                  | VC□□63□ | CSTB-2L           | T-6F                  | .44    |
| A10-SVQCR2-D16      | ●     |   | 1.000                   | .625            | .500 | 10.000 | 1.250 | .600 | .188 | -5° | -4°                            | .016                  | VC□□22□ | CSTB-2.5          | T-8F                  | .89    |

Metric

| Toolholder Cat. No. | Stock |   | Min<br>bore.dia.<br>øDm | Dimensions (mm) |    |     |    |    |     |     | Std.<br>corner<br>radius<br>rE | Applicable<br>inserts | Parts    |                   | Torque<br>(N·m) |        |
|---------------------|-------|---|-------------------------|-----------------|----|-----|----|----|-----|-----|--------------------------------|-----------------------|----------|-------------------|-----------------|--------|
|                     | R     | L |                         | øDs             | f  | L1  | L2 | h  | f2  | θ   |                                |                       | α        | Clamping<br>screw |                 | Wrench |
| A10K-SVQCR/L08-D135 | ●     | ● | 13.5                    | 10              | 8  | 125 | 20 | 9  | 3   | -5° | -8°                            | 0.4                   | VC□□0802 | CSTB-2L           | T-6F            | 0.6    |
| A16Q-SVQCR/L11-D215 | ●     | ● | 21.5                    | 16              | 13 | 180 | 30 | 15 | 4.9 | -5° | -8°                            | 0.4                   | VC□□1103 | CSTB-2.5          | T-8F            | 1.2    |
| A25S-SVQCR/L16-D320 |       |   | 32                      | 25              | 17 | 250 | 45 | 23 | 4.5 | 0°  | -5°                            | 0.8                   | VC□□1604 | CSTB-3.5          | T-15F           | 3.0    |
| A32T-SVQCR/L16-D400 |       |   | 40                      | 32              | 22 | 300 | 50 | 23 | 6   | 0°  | -3°                            | 0.8                   |          |                   |                 |        |
| A40U-SVQCR/L16-D500 |       |   | 50                      | 40              | 27 | 350 | 60 | 23 | 7   | 0°  | -1°                            | 0.8                   |          |                   |                 |        |

### Carbide shank

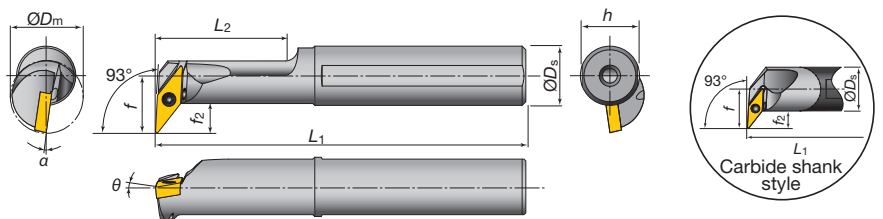
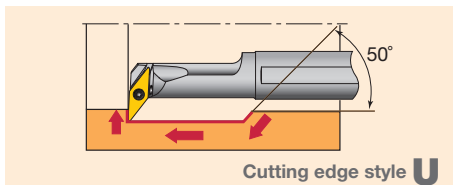
| Toolholder Cat. No. | Stock |   | Min<br>bore.dia.<br>øDm | Dimensions (mm) |    |     |    |    |     |     | Std.<br>corner<br>radius<br>rE | Applicable<br>inserts | Parts    |                   | Torque<br>(N·m) |        |
|---------------------|-------|---|-------------------------|-----------------|----|-----|----|----|-----|-----|--------------------------------|-----------------------|----------|-------------------|-----------------|--------|
|                     | R     | L |                         | øDs             | f  | L1  | L2 | h  | f2  | θ   |                                |                       | α        | Clamping<br>screw |                 | Wrench |
| E10M-SVQCR/L08-D135 | ●     | ● | 13.5                    | 10              | 8  | 150 | 25 | 9  | 3   | -5° | -8°                            | 0.4                   | VC□□0802 | CSTB-2L           | T-6F            | 0.6    |
| E16R-SVQCR/L11-D215 | ●     | ● | 21.5                    | 16              | 13 | 200 | 32 | 15 | 4.9 | -5° | -8°                            | 0.4                   | VC□□1103 | CSTB-2.5          | T-8F            | 1.2    |

When using a right or left hand insert, the right hand insert (R) is used for the left hand toolholders (SVQCL □□ type), and the left hand insert (L) is used for the right hand toolholders (SVQCR □□ type).

## SVUBR/L

## Boring & internal profiling

## S-type (Positive, screw-on)



### Steel shank

Inch

| Toolholder Cat. No. | Stock |   | Min<br>bore.dia.<br>øDm | Dimensions (in) |      |        |       |      |      |    |     | Std.<br>corner<br>radius<br>rE | Applicable<br>inserts | Parts             |        | Torque<br><br>(ft-lb) |
|---------------------|-------|---|-------------------------|-----------------|------|--------|-------|------|------|----|-----|--------------------------------|-----------------------|-------------------|--------|-----------------------|
|                     | R     | L |                         | øDs             | f    | L1     | L2    | h    | f2   | θ  | α   |                                |                       | Clamping<br>screw | Wrench |                       |
| A12-SVUBR2-D16      | ●     |   | 1.000                   | .750            | .594 | 10.000 | 1.425 | .725 | .219 | 0° | -6° | .016                           | VB□□1103              | CSTB-2.5          | T-8F   | .89                   |

Metric

| Toolholder Cat. No. | Stock |   | Min<br>bore dia.<br>øD <sub>m</sub> | Dimensions (mm) |      |                |                |    |                |    |     | Std.<br>corner<br>radius<br>r <sub>E</sub> | Applicable<br>inserts | Parts             |        | Torque<br>(N·m) |
|---------------------|-------|---|-------------------------------------|-----------------|------|----------------|----------------|----|----------------|----|-----|--------------------------------------------|-----------------------|-------------------|--------|-----------------|
|                     | R     | L |                                     | øDs             | f    | L <sub>1</sub> | L <sub>2</sub> | h  | f <sub>2</sub> | θ  | α   |                                            |                       | Clamping<br>screw | Wrench |                 |
| A16Q-SVUBR/L11-D200 | ●     | ● | 20                                  | 16              | 15.5 | 180            | 35             | 15 | 8              | 0° | -8° | 0.4                                        | VB□□1103              | CSTB-2.5          | T-8F   | 1.2             |
| A20R-SVUBR/L11-D250 | ●     | ● | 25                                  | 20              | 17.5 | 200            | 40             | 19 | 8              | 0° | -7° | 0.4                                        |                       |                   |        |                 |
| A25S-SVUBR/L16-D320 | ●     | ● | 32                                  | 25              | 20.5 | 250            | 50             | 23 | 8.5            | 0° | -6° | 0.8                                        | VB□□1604              | CSTB-3.5          | T-15F  | 3.0             |

### Carbide shank

| Toolholder Cat. No. | Stock |   | Min<br>bore.dia.<br>øDm | Dimensions (mm) |    |     |    |    |     |    |     | Std.<br>corner<br>radius<br>rE | Applicable<br>inserts | Parts             |        | Torque<br>(N·m) |
|---------------------|-------|---|-------------------------|-----------------|----|-----|----|----|-----|----|-----|--------------------------------|-----------------------|-------------------|--------|-----------------|
|                     | R     | L |                         | øDs             | f  | L1  | L2 | h  | f2  | θ  | α   |                                |                       | Clamping<br>screw | Wrench |                 |
| E16R-SVUBR/L11-D245 | ●     | ● | 24.5                    | 16              | 16 | 200 | -  | 15 | 8   | 0° | -8° | 0.4                            | VB□□1103              | CSTB-2.5          | T-8F   | 1.2             |
| E20S-SVUBR/L11-D285 | ●     | ● | 28.5                    | 20              | 18 | 250 | -  | 19 | 8   | 0° | -7° | 0.4                            |                       |                   |        |                 |
| E25T-SVUBR/L16-D340 | ●     | ● | 34                      | 25              | 21 | 300 | -  | 23 | 8.5 | 0° | -6° | 0.8                            | VB□□1604              | CSTB-3.5          | T-15F  | 3.0             |

When using a right or left hand insert, the right hand insert (R) is used for the left hand toolholders (SVUBL □□ type), and the left hand insert (L) is used for the right hand toolholders (SVUBR □□ type).

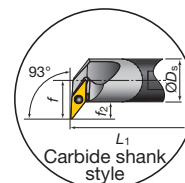
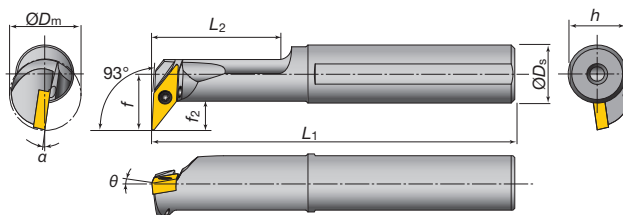
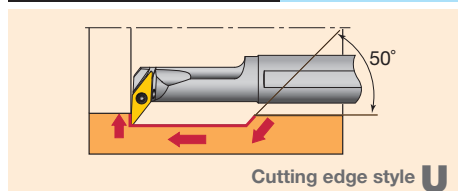
● : Stocked items



# SVUCR/L

## Boring & internal profiling

## S-type (Positive, screw-on)



Right hand (R) shown

### Steel shank

Inch

| Toolholder Cat. No. | Stock |   | Min. bore dia. $\phi D_m$ | Dimensions (in) |      |        |       |      |       |          |          | Std. corner radius $r\epsilon$ | Applicable inserts | Parts          |        | Torque (N·m) |
|---------------------|-------|---|---------------------------|-----------------|------|--------|-------|------|-------|----------|----------|--------------------------------|--------------------|----------------|--------|--------------|
|                     | R     | L |                           | $\phi D_s$      | $f$  | $L_1$  | $L_2$ | $h$  | $f_2$ | $\theta$ | $\alpha$ |                                |                    | Clamping screw | Wrench |              |
| A10-SVUCR6-D14      | ●     |   | .875                      | .625            | .531 | 7.000  | 1.250 | .600 | .219  | 0°       | -5°      | .016                           | VC□□63□            | CSTB-2L        | T-6F   | .44          |
| A12-SVUCR2-D16      | ●     |   | 1.000                     | .750            | .594 | 10.000 | 1.420 | .725 | .219  | 0°       | -5°      | .016                           | VC□□22□            | CSTB-2.5       | T-8F   | .89          |

Metric

| Toolholder Cat. No. | Stock |   | Min<br>bore dia.<br>øD <sub>m</sub> | Dimensions (mm) |    |                |                |    |                |    |     | Std.<br>corner<br>radius<br>r <sub>ε</sub> | Applicable<br>inserts | Parts             |        | Torque<br>(N·m) |
|---------------------|-------|---|-------------------------------------|-----------------|----|----------------|----------------|----|----------------|----|-----|--------------------------------------------|-----------------------|-------------------|--------|-----------------|
|                     | R     | L |                                     | øD <sub>s</sub> | f  | L <sub>1</sub> | L <sub>2</sub> | h  | f <sub>2</sub> | θ  | α   |                                            |                       | Clamping<br>screw | Wrench |                 |
| A12M-SVUCR/L08-D160 | ●     | ● | 16                                  | 12              | 11 | 150            | 30             | 11 | 5.5            | 0° | -8° | 0.4                                        | VC□□0802              | CSTB-2L           | T-6F   | 0.6             |
| A25S-SVUCR/L16-D320 | ●     | ● | 32                                  | 25              | 19 | 250            | 45             | 23 | 6.5            | 0° | -5° | 0.8                                        | VC□□1604              | CSTB-3.5          | T-15F  | 3.0             |
| A32T-SVUCR/L16-D400 |       |   | 40                                  | 32              | 22 | 300            | 50             | 30 | 6              | 0° | -3° | 0.8                                        |                       | CSTB-3.5L         |        |                 |
| A40U-SVUCR/L16-D500 |       |   | 50                                  | 40              | 27 | 350            | 60             | 37 | 7              | 0° | -1° | 0.8                                        |                       |                   |        |                 |

### Carbide shank

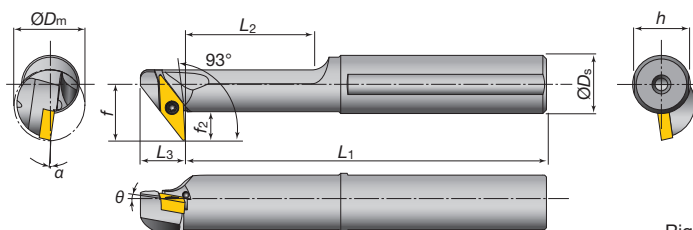
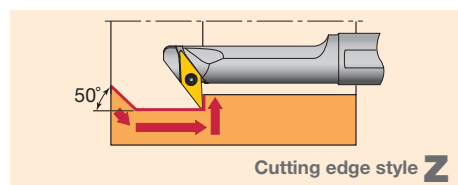
| Toolholder Cat. No. | Stock |   | Min. bore dia. $\phi D_m$ | Dimensions (mm) |      |       |       |     |       |          |          | Std. corner radius $r\epsilon$ | Applicable inserts | Parts          |        | Torque (N·m) |
|---------------------|-------|---|---------------------------|-----------------|------|-------|-------|-----|-------|----------|----------|--------------------------------|--------------------|----------------|--------|--------------|
|                     | R     | L |                           | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$ | $f_2$ | $\theta$ | $\alpha$ |                                |                    | Clamping screw | Wrench |              |
| E12Q-SVUCR/L08-D180 | ●     | ● | 18                        | 12              | 11.5 | 180   | -     | 11  | 5.5   | 0°       | -8°      | 0.4                            | VC□□0802           | CSTB-2L        | T-6F   | 0.6          |
| E25T-SVUCR/L16-D320 | ●     | ● | 32                        | 25              | 19   | 300   | -     | 23  | 6.5   | 0°       | -5°      | 0.8                            | VC□□1604           | CSTB-3.5       | T-15F  | 3.0          |

When using a right or left hand insert, the right hand insert (R) is used for the left hand toolholders (SVUCL □□ type), and the left hand insert (L) is used for the right hand toolholders (SVUCR □□ type).

# SVZBR/L

## Internal retracting

## S-type (Positive, screw-on)



Right hand (R) shown

### Steel shank

Inch

| Toolholder Cat. No. | Stock |   | Min<br>bore.dia.<br>øDm | Dimensions (in) |      |        |       |      |      |      |    |     | Std.<br>corner<br>radius<br>rε | Applicable<br>inserts | Parts             |        | Torque<br>(ft-lb) |
|---------------------|-------|---|-------------------------|-----------------|------|--------|-------|------|------|------|----|-----|--------------------------------|-----------------------|-------------------|--------|-------------------|
|                     | R     | L |                         | øDs             | f    | L1     | L2    | L3   | h    | f2   | θ  | α   |                                |                       | Clamping<br>screw | Wrench |                   |
| A12-SVZBR2-D16      | ●     |   | 1.000                   | .750            | .594 | 10.000 | 1.425 | .500 | .725 | .219 | 0° | -7° | .016                           | VB□□22□               | CSTB-2.5          | T-8F   | .89               |

Metric

| Toolholder Cat. No. | Stock |   | Min<br>bore.dia.<br>øDm | Dimensions (mm) |      |     |    |      |    |    |    | Std.<br>corner<br>radius<br>rε | Applicable<br>inserts | Parts    |                       | Torque<br>(N·m) |        |
|---------------------|-------|---|-------------------------|-----------------|------|-----|----|------|----|----|----|--------------------------------|-----------------------|----------|-----------------------|-----------------|--------|
|                     | R     | L |                         | øDs             | f    | L1  | L2 | L3   | h  | f2 | θ  |                                |                       | α        | Clamping<br>screw     |                 | Wrench |
| A16Q-SVZBR/L11-D200 | ●     | ● | 20                      | 16              | 15.5 | 180 | 35 | 12.5 | 15 | 8  | 0° | -8°                            | 0.4                   | VB□□1103 | CSTB-2.5              | T-8F            | 1.2    |
| A20R-SVZBR/L11-D250 | ●     | ● | 25                      | 20              | 17.5 | 200 | 40 | 12.5 | 18 | 8  | 0° | -7°                            | 0.4                   |          |                       |                 |        |
| A25S-SVZBR/L16-D320 | ●     | ● | 32                      | 25              | 24   | 250 | 50 | 17.5 | 23 | 12 | 0° | -6°                            | 0.8                   | VB□□1604 | CSTB-3.5<br>CSTB-3.5L | T-15F           | 3.0    |
| A32T-SVZBR/L16-D400 | ●     | ● | 40                      | 32              | 27.5 | 300 | 72 | 17.5 | 30 | 12 | 0° | -5°                            | 0.8                   |          |                       |                 |        |

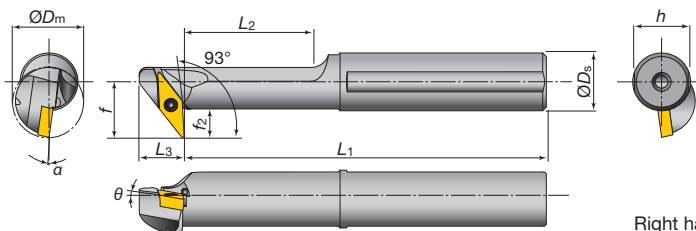
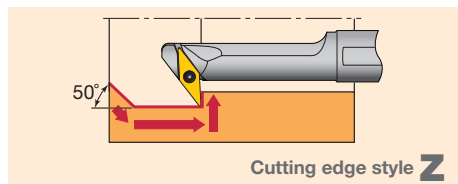
When using a right or left hand insert, the right hand insert (R) is used for the right hand toolholders (SVZBR □□ type), and the left hand insert (L) is used for the left hand toolholders (SVZBL □□ type).

● : Stocked items

## SVZCR/L

## Internal retracting

## S-type (Positive, screw-on)



Right hand (R) shown

### Steel shank

Inch

| Toolholder Cat. No. | Stock |   | Min bore dia.<br>ØDm | Dimensions (in) |      |        |       |      |      |      |    |     | Std. corner radius<br>rε | Applicable inserts | Parts          |        | Torque<br>(ft-lb) |
|---------------------|-------|---|----------------------|-----------------|------|--------|-------|------|------|------|----|-----|--------------------------|--------------------|----------------|--------|-------------------|
|                     | R     | L |                      | ØDs             | f    | L1     | L2    | L3   | h    | f2   | θ  | α   |                          |                    | Clamping screw | Wrench |                   |
| A08-SVZCR6-D12      | ●     |   | .750                 | .500            | .438 | 5.000  | 1.000 | .395 | .475 | .188 | 0° | -6° | .016                     | VC□□63□            | CSTB-2L        | T-6F   | .44               |
| A12-SVZCR2-D16      | ●     |   | 1.000                | .750            | .593 | 10.000 | 1.425 | .500 | .725 | .219 | 0° | -7° | .016                     | VC□□22□            | CSTB-2.5       | T-8F   | .89               |

Metric

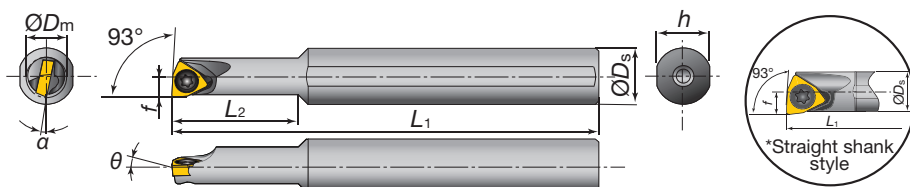
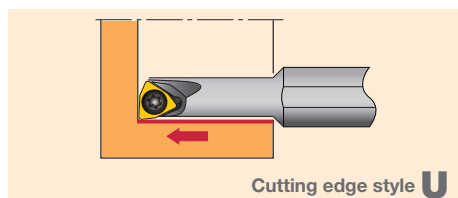
| Toolholder Cat. No. | Stock |   | Min bore dia.<br>ØDm | Dimensions (mm) |    |     |    |    |    |     |    |     | Std. corner radius<br>rε | Applicable inserts | Parts          |        | Torque<br>(N·m) |
|---------------------|-------|---|----------------------|-----------------|----|-----|----|----|----|-----|----|-----|--------------------------|--------------------|----------------|--------|-----------------|
|                     | R     | L |                      | ØDs             | f  | L1  | L2 | L3 | h  | f2  | θ  | α   |                          |                    | Clamping screw | Wrench |                 |
| A12M-SVZCR/L08-D160 | ●     | ● | 16                   | 12              | 11 | 150 | 30 | 10 | 11 | 5.5 | 0° | -8° | 0.4                      | VC□□0802           | CSTB-2L        | T-6F   | 0.6             |

When using a right or left hand insert, the right hand insert (R) is used for the right hand toolholders (SVZCR □□ type), and the left hand insert (L) is used for the left hand toolholders (SVZCL □□ type).

## SWUBR/L

## Boring

## S-type (Positive, screw-on)



Right hand (R) shown

### Steel shank

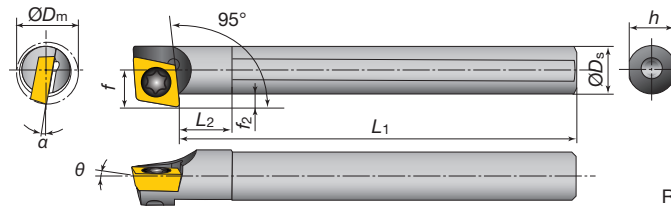
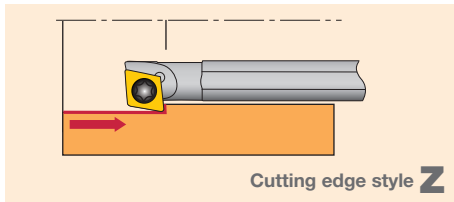
| Toolholder Cat. No.  | Stock |   | Min<br>bore.dia.<br>øDm | Dimensions (mm) |     |     |    |      |    |    |      | Std.<br>corner<br>radius<br>rε | Applicable<br>inserts | Parts             |        | Torque<br>(N·m) |
|----------------------|-------|---|-------------------------|-----------------|-----|-----|----|------|----|----|------|--------------------------------|-----------------------|-------------------|--------|-----------------|
|                      | R     | L |                         | øDs             | f   | L1  | L2 | h    | f2 | θ  | α    |                                |                       | Clamping<br>screw | Wrench |                 |
| *A05F-SWUBR/L03-D060 | ●     | ● | 6                       | 5               | 3   | 80  | 9  | 4.8  | -  | 0° | -13° | 0.4                            | WB□□0301              | CSTB-2            | T-6F   | 0.6             |
| *A06G-SWUBR/L03-D070 | ●     | ● | 7                       | 6               | 3.5 | 90  | 11 | 5.75 |    |    | -12° |                                |                       |                   |        |                 |
| *A07G-SWUBR/L03-D080 | ●     | ● | 8                       | 7               | 4   | 90  | 12 | 6.75 |    |    | -11° |                                |                       |                   |        |                 |
| A08H-SWUBR03-D060    | ●     |   | 6                       | 8               | 3.1 | 100 | 18 | 7.5  | -  | 0° | -12° | 0.4                            | WB□□0301              | CSTB-2            | T-6F   | 0.6             |
| A08H-SWUBR03-D070    | ●     |   | 7                       | 8               | 3.6 | 100 | 20 | 7.5  | -  | 0° | -12° |                                |                       |                   |        |                 |

### Carbide shank

| Toolholder Cat. No.  | Stock |   | Min<br>bore.dia.<br>øDm | Dimensions (mm) |     |     |    |      |    |    |      | Std.<br>corner<br>radius<br>rε | Applicable<br>inserts | Parts             |        | Torque<br>(N·m) |
|----------------------|-------|---|-------------------------|-----------------|-----|-----|----|------|----|----|------|--------------------------------|-----------------------|-------------------|--------|-----------------|
|                      | R     | L |                         | øDs             | f   | L1  | L2 | h    | f2 | θ  | α    |                                |                       | Clamping<br>screw | Wrench |                 |
| *E05G-SWUBR/L03-D060 | ●     | ● | 6                       | 5               | 3   | 90  | 10 | 4.8  | -  | 0° | -13° | 0.4                            | WB□□0301              | CSTB-2            | T-6F   | 0.6             |
| *E06H-SWUBR/L03-D070 | ●     | ● | 7                       | 6               | 3.5 | 100 | 12 | 5.75 |    |    | -12° |                                |                       |                   |        |                 |
| *E07H-SWUBR/L03-D080 | ●     | ● | 8                       | 7               | 4   | 100 | 14 | 6.75 |    |    | -11° |                                |                       |                   |        |                 |
| E08K-SWUBR03-D060    | ●     |   | 6                       | 8               | 3.1 | 125 | 30 | 7.5  | -  | 0° | -12° | 0.4                            | WB□□0301              | CSTB-2            | T-6F   | 0.6             |
| E08K-SWUBR03-D070    | ●     |   | 7                       | 8               | 3.6 | 125 | 40 | 7.5  | -  | 0° | -12° | 0.4                            |                       |                   |        |                 |

When using a right or left hand insert, the right hand insert (R) is used for the left hand toolholders (SWUBL □□ type), and the left hand insert (L) is used for the right hand toolholders (SWUBR □□ type).

● : Stocked items

**SEZPR/L****Internal retracting****S-type (Positive, screw-on)**

Right hand (R) shown

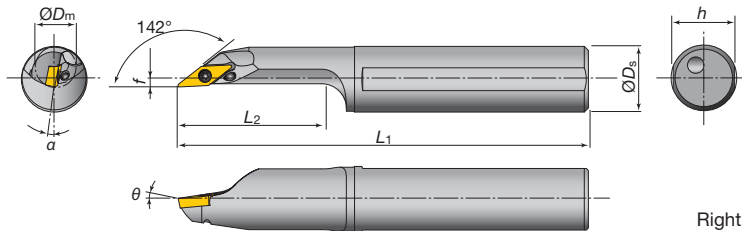
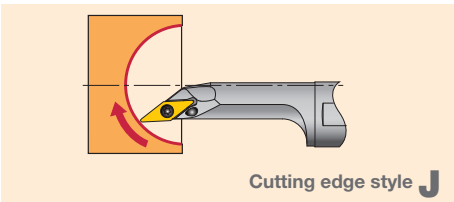
**Steel shank**

| Toolholder Cat. No.                 | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (mm) |     |       |       |     |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (N·m) |
|-------------------------------------|-------|---|--------------------------|-----------------|-----|-------|-------|-----|-------|----------|----------|--------------------------|--------------------|----------------|--------|--------------|
|                                     | R     | L |                          | $\phi D_s$      | $f$ | $L_1$ | $L_2$ | $h$ | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |              |
| <b>New MINI</b> A04F-SEZPR/L03-D055 | ●     | ● | 5.5                      | 4               | 3.2 | 80    | 4     | 3.8 | 1.2   | 0°       | -8°      | 0.2                      | EP□□03X1           | CSTA-1.6       | T-6F   | 0.6          |
| <b>New MINI</b> A05F-SEZPR/L03-D065 | ●     | ● | 6.5                      | 5               | 3.7 | 80    | 5     | 4.8 | 1.2   | 0°       | -6°      | 0.2                      | EP□□03X1           | CSTA-1.6       | T-6F   | 0.6          |

**Carbide shank**

| Toolholder Cat. No.                 | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (mm) |     |       |       |     |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (N·m) |
|-------------------------------------|-------|---|--------------------------|-----------------|-----|-------|-------|-----|-------|----------|----------|--------------------------|--------------------|----------------|--------|--------------|
|                                     | R     | L |                          | $\phi D_s$      | $f$ | $L_1$ | $L_2$ | $h$ | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |              |
| <b>New MINI</b> E04G-SEZPR/L03-D055 | ●     | ● | 5.5                      | 4               | 3.2 | 90    | 5     | 3.8 | 1.2   | 0°       | -8°      | 0.2                      | EP□□03X1           | CSTA-1.6       | T-6F   | 0.6          |
| <b>New MINI</b> E05G-SEZPR/L03-D065 | ●     | ● | 6.5                      | 5               | 3.7 | 90    | 6     | 4.8 | 1.2   | 0°       | -6°      | 0.2                      | EP□□03X1           | CSTA-1.6       | T-6F   | 0.6          |

When using a right or left hand insert, the right hand insert (R) is used for the right hand toolholders (SEZPR □□ type), and the left hand insert (L) is used for the left hand toolholders (SEZPL □□ type).

**SVJBR/L****Internal sphere cutting****S-type (Positive, screw-on)**

Right hand (R) shown

**Steel shank**

Inch

| Toolholder Cat. No. | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (in) |      |       |       |      |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (ft·lb) |
|---------------------|-------|---|--------------------------|-----------------|------|-------|-------|------|-------|----------|----------|--------------------------|--------------------|----------------|--------|----------------|
|                     | R     | L |                          | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$  | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |                |
| A10-SVJBR2-D16      | ●     |   | 1.000                    | .625            | .156 | 7.000 | 1.500 | .600 | -     | -5°      | -6°      | .016                     | VB□□1103           | CSTB-2.5       | T-8F   | .89            |

Metric

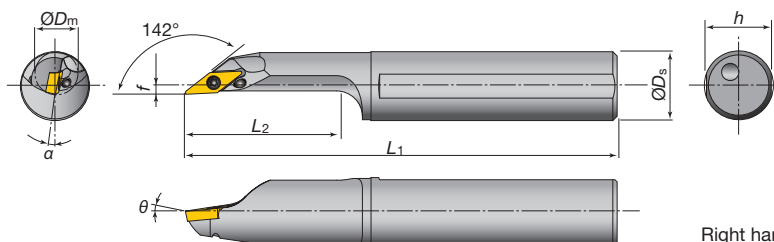
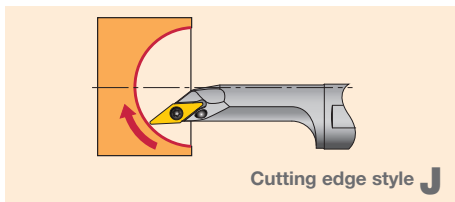
| Toolholder Cat. No. | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (mm) |     |       |       |     |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (N·m) |
|---------------------|-------|---|--------------------------|-----------------|-----|-------|-------|-----|-------|----------|----------|--------------------------|--------------------|----------------|--------|--------------|
|                     | R     | L |                          | $\phi D_s$      | $f$ | $L_1$ | $L_2$ | $h$ | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |              |
| A20R-SVJBR/L11-D250 | ●     | ● | 25                       | 20              | 2   | 200   | 40    | 18  | -     | -5°      | -5°      | 0.4                      | VB□□1103           | CSTB-2.5       | T-8F   | 1.2          |
| A25S-SVJBR/L11-D300 | ●     | ● | 30                       | 25              | 3.5 | 250   | 50    | 23  | -     | -5°      | -5°      | 0.4                      | VB□□1103           | CSTB-2.5       | T-8F   | 1.2          |

When using a right or left hand insert, the right hand insert (R) is used for the left hand toolholders (SVJBL □□ type), and the left hand insert (L) is used for the right hand toolholders (SVJBR □□ type).

## SVJCR/L

## Internal sphere cutting

## S-type (Positive, screw-on)



### Steel shank

Inch

| Toolholder Cat. No. | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (in) |      |       |       |      |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (N·m) |
|---------------------|-------|---|--------------------------|-----------------|------|-------|-------|------|-------|----------|----------|--------------------------|--------------------|----------------|--------|--------------|
|                     | R     | L |                          | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$  | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |              |
| A10-SVJCR2-D16      | ●     |   | 1.000                    | .625            | .156 | 7.000 | 1.500 | .600 | -     | -5°      | -6°      | .016                     | VC□□22□            | CSTB-2.5       | T-8F   | .89          |

Metric

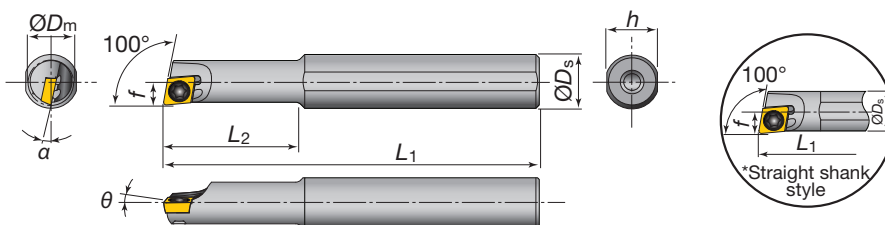
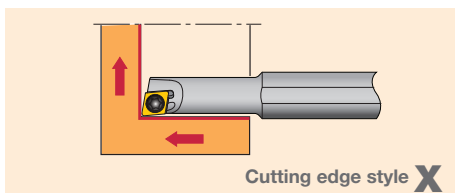
| Toolholder Cat. No. | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (mm) |     |       |       |     |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (N·m) |
|---------------------|-------|---|--------------------------|-----------------|-----|-------|-------|-----|-------|----------|----------|--------------------------|--------------------|----------------|--------|--------------|
|                     | R     | L |                          | $\phi D_s$      | $f$ | $L_1$ | $L_2$ | $h$ | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |              |
| A12M-SVJCR/L08-D160 | ●     | ● | 16                       | 12              | 2   | 150   | 28    | 11  | -     | -5°      | -5°      | 0.4                      | VC□□0802           | CSTB-2L        | T-6F   | 0.6          |
| A16Q-SVJCR/L08-D200 | ●     | ● | 20                       | 16              | 2   | 180   | 35    | 15  | -     | -5°      | -5°      | 0.4                      |                    |                |        |              |

When using a right or left hand insert, the right hand insert (R) is used for the left hand toolholders (SVJCL □□ type), and the left hand insert (L) is used for the right hand toolholders (SVJCR □□ type).

## SEXPR/L

## Boring & internal facing

## S-type (Positive, screw-on)



### Steel shank

Inch

| Toolholder Cat. No. | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (in) |      |       |       |      |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (ft·lb) |
|---------------------|-------|---|--------------------------|-----------------|------|-------|-------|------|-------|----------|----------|--------------------------|--------------------|----------------|--------|----------------|
|                     | R     | L |                          | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$  | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |                |
| A05-SEXPR/L04-D04   | ●     | ● | .250                     | .313            | .125 | 5.000 | .812  | .287 | -     | 0°       | -12°     | .016                     | EPGT0401           | CSTB-2         | T-6F   | .44            |

Metric

| Toolholder Cat. No.                  | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (mm) |      |       |       |      |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (N·m) |
|--------------------------------------|-------|---|--------------------------|-----------------|------|-------|-------|------|-------|----------|----------|--------------------------|--------------------|----------------|--------|--------------|
|                                      | R     | L |                          | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$  | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |              |
| <b>New MINI</b> *A04F-SEXPR/L03-D045 | ●     | ● | 4.5                      | 4               | 2.3  | 80    | 8     | 3.8  | -     | 0°       | -15°     | 0.2                      | EP□□03X1           | CSTA-1.6       | T-6F   | 0.6          |
| <b>New MINI</b> *A04F-SEXPR/L03-D050 | ●     | ● | 5                        | 4               | 2.5  | 80    | 8     | 3.8  | -     | 0°       | -13°     | 0.2                      |                    |                |        |              |
| <b>New MINI</b> *A05F-SEXPR/L04-D055 | ●     | ● | 5.5                      | 5               | 2.75 | 80    | 9     | 4.8  | -     | 0°       | -12°     | 0.4                      | EP□□0401           | CSTB-2         | T-6F   | 0.6          |
| <b>New MINI</b> *A06G-SEXPR/L04-D070 | ●     | ● | 7                        | 6               | 3.6  | 90    | 11    | 5.75 | -     | 0°       | -12°     | 0.4                      | EP□□0401           | CSTB-2         | T-6F   | 0.6          |
| A08H-SEXPR/L04-D055                  | ●     | ● | 5.5                      | 8               | 2.75 | 100   | 16    | 7.5  | -     | 0°       | -12°     | 0.4                      | EP□□0401           | CSTB-2         | T-6F   | 0.6          |
| A08H-SEXPR/L04-D070                  | ●     | ● | 7                        | 8               | 3.6  | 100   | 20    | 7.5  | -     | 0°       | -12°     | 0.4                      |                    |                |        | 0.6          |

### Carbide shank

Inch

| Toolholder Cat. No. | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (in) |      |       |       |      |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (ft·lb) |
|---------------------|-------|---|--------------------------|-----------------|------|-------|-------|------|-------|----------|----------|--------------------------|--------------------|----------------|--------|----------------|
|                     | R     | L |                          | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$  | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |                |
| E05-SEXPR04-D04     | ●     |   | .250                     | .313            | .125 | 5.000 | 1.562 | .287 | -     | 0°       | -12°     | .016                     | EPGT0401           | CSTB-2         | T-6F   | .44            |

Metric

| Toolholder Cat. No.                  | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (mm) |      |       |       |      |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (N·m) |
|--------------------------------------|-------|---|--------------------------|-----------------|------|-------|-------|------|-------|----------|----------|--------------------------|--------------------|----------------|--------|--------------|
|                                      | R     | L |                          | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$  | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |              |
| <b>New MINI</b> *E04G-SEXPR/L03-D045 | ●     | ● | 4.5                      | 4               | 2.3  | 90    | 9     | 3.8  | -     | 0°       | -15°     | 0.2                      | EP□□03X1           | CSTA-1.6       | T-6F   | 0.6          |
| <b>New MINI</b> *E04G-SEXPR/L03-D050 | ●     | ● | 5                        | 4               | 2.5  | 90    | 9     | 3.8  | -     | 0°       | -13°     | 0.2                      |                    |                |        |              |
| <b>New MINI</b> *E05G-SEXPR/L04-D055 | ●     | ● | 5.5                      | 5               | 2.75 | 90    | 10    | 4.8  | -     | 0°       | -12°     | 0.4                      | EP□□0401           | CSTB-2         | T-6F   | 0.6          |
| <b>New MINI</b> *E06H-SEXPR/L04-D070 | ●     | ● | 7                        | 6               | 3.6  | 100   | 12    | 5.75 | -     | 0°       | -12°     | 0.4                      | EP□□0401           | CSTB-2         | T-6F   | 0.6          |
| E08K-SEXPR/L04-D055                  | ●     | ● | 5.5                      | 8               | 2.75 | 125   | 28    | 7.5  | -     | 0°       | -12°     | 0.4                      | EP□□0401           | CSTB-2         | T-6F   | 0.6          |
| E08K-SEXPR/L04-D070                  | ●     | ● | 7                        | 8               | 3.6  | 125   | 40    | 7.5  | -     | 0°       | -12°     | 0.4                      |                    |                |        | 0.6          |

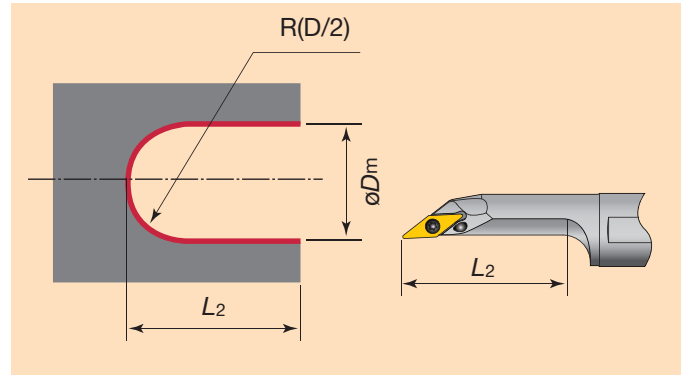
When using a right or left hand insert, the right hand insert (R) is used for the left hand toolholders (SEXPL □□ type), and the left hand insert (L) is used for the right hand toolholders (SEXPR □□ type).

● : Stocked items

# How to use SVJC(B)R/L-type tools

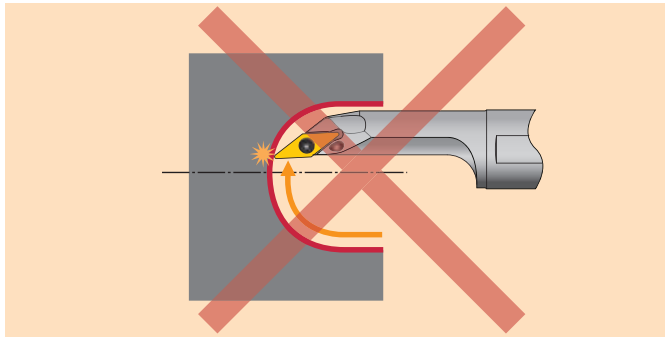
## General machining information

The minimum machinable radius ( $R$ ) of the internal sphere is  $1/2$  of the minimum bore diameter ( $\phi D_m$ ).  
The maximum machinable depth of the bore is within the  $L_2$  size of the tool.

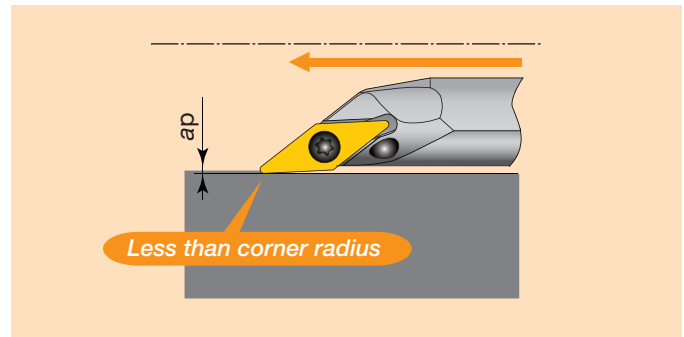


## Cautionary points

To avoid insert breakage the tool point should not overrun the bore center.



To avoid burr, the depth of cut should be within the corner radius.

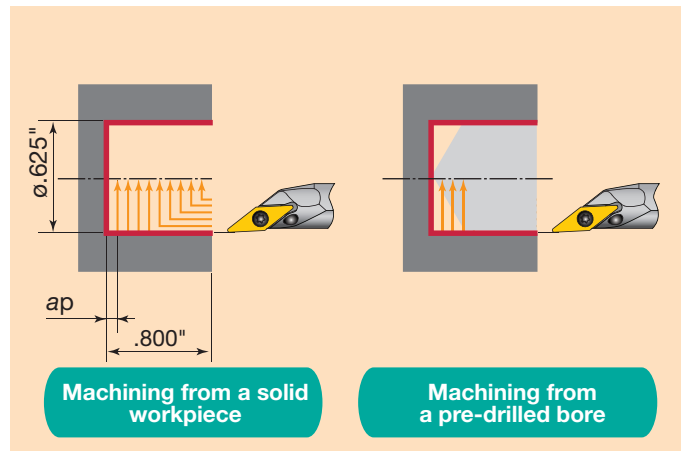
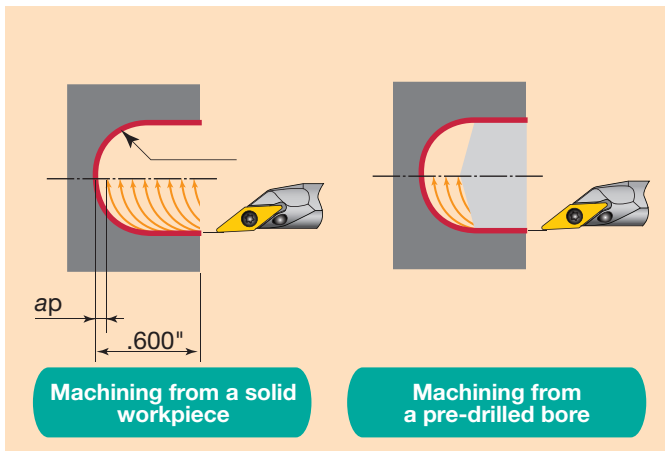


## Machining examples

### Machining of internal sphere

Work material : 1045  
Toolholder : A12M-SVJCR08-D160  
Insert : VCMT2.51.51-PF (NS730)  
Cutting speed :  $V_c = \sim 330$  sfm  
No of revs. :  $n = 3000 \text{ min}^{-1}$  (constant)  
Feed :  $f = .004$  ipr  
Depth of cut :  $a_p = .020$ "

Work material : 1045  
Toolholder : A12M-SVJCR08-D160  
Insert : VCMT2.51.51-PF (T9015)  
Cutting speed :  $V_c = \sim 330$  sfm  
No of revs. :  $n = 3000 \text{ min}^{-1}$  (constant)  
Feed :  $f = .004$  ipr  
 $f = .002$  ipr (only for plunging)  
Depth of cut :  $a_p = .020$ "

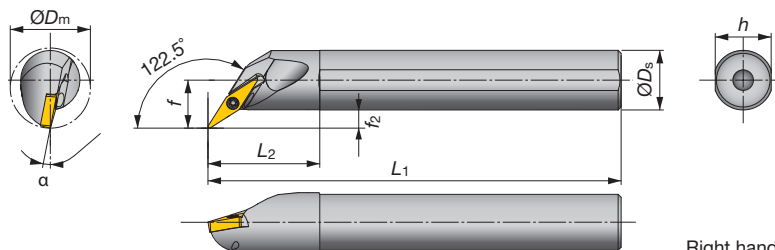
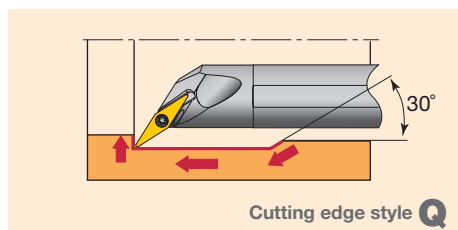




## SYQBR/L

## Internal undercut & profiling

## S-type (Positive, screw-on)



Right hand (R) shown

### Steel shank

Inch

| Toolholder Cat. No. | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (in) |      |       |       |      |       |          |          | Std. corner radius $r\epsilon$ | Applicable inserts | Parts          |        | Torque (ft-lb) |
|---------------------|-------|---|--------------------------|-----------------|------|-------|-------|------|-------|----------|----------|--------------------------------|--------------------|----------------|--------|----------------|
|                     | R     | L |                          | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$  | $f_2$ | $\theta$ | $\alpha$ |                                |                    | Clamping screw | Wrench |                |
| A08-SYQBR/L2-D12    | ●     |   | .750                     | .500            | .438 | 5.000 | 1.000 | .475 | .181  | 0°       | -10°     | .016                           | YW□□21.7□          | CSTB-2L        | T-6F   | .44            |
| A10-SYQBR/L2-D14    | ●     |   | .875                     | .625            | .500 | 7.000 | 1.250 | .600 |       | 0°       | -8°      | .016                           |                    |                |        |                |

Metric

| Toolholder Cat. No. | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (mm) |      |       |       |     |       |          |          | Std. corner radius $r\epsilon$ | Applicable inserts | Parts          |        | Torque (N·m) |
|---------------------|-------|---|--------------------------|-----------------|------|-------|-------|-----|-------|----------|----------|--------------------------------|--------------------|----------------|--------|--------------|
|                     | R     | L |                          | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$ | $f_2$ | $\theta$ | $\alpha$ |                                |                    | Clamping screw | Wrench |              |
| A12M-SYQBR/L11-D170 | ●     | ● | 17                       | 12              | 10.5 | 150   | 24    | 11  | 4.5   | -5°      | -10°     | 0.4                            | YW□□11T2           | CSTB-2L        | T-6F   | 0.6          |
| A16Q-SYQBR/L11-D215 | ●     | ● | 21.5                     | 16              | 13   | 180   | 30    | 15  | 5     | -5°      | -8°      | 0.4                            |                    |                |        |              |

### Carbide shank

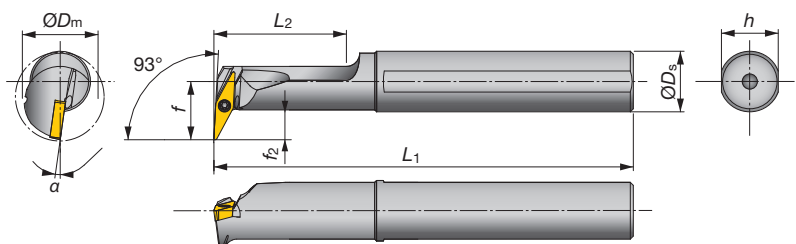
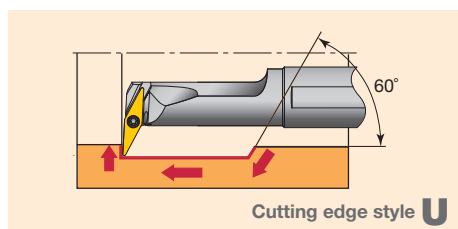
Inch

| Toolholder Cat. No. | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (in) |      |       |       |      |       |          |          | Std. corner radius $r\epsilon$ | Applicable inserts | Parts          |        | Torque (ft-lb) |
|---------------------|-------|---|--------------------------|-----------------|------|-------|-------|------|-------|----------|----------|--------------------------------|--------------------|----------------|--------|----------------|
|                     | R     | L |                          | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$  | $f_2$ | $\theta$ | $\alpha$ |                                |                    | Clamping screw | Wrench |                |
| E08-SYQBR/L2-D12    | ●     |   | .750                     | .500            | .438 | 5.000 | 1.000 | .475 | .181  | 0°       | -10°     | .016                           | YW□□21.7□          | CSTB-2L        | T-6F   | .44            |
| E10-SYQBR/L2-D14    | ●     |   | .875                     | .625            | .500 | 7.000 | 1.250 | .600 |       | 0°       | -8°      | .016                           |                    |                |        |                |

Metric

| Toolholder Cat. No. | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (mm) |      |       |       |     |       |          |          | Std. corner radius $r\epsilon$ | Applicable inserts | Parts          |        | Torque (N·m) |
|---------------------|-------|---|--------------------------|-----------------|------|-------|-------|-----|-------|----------|----------|--------------------------------|--------------------|----------------|--------|--------------|
|                     | R     | L |                          | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$ | $f_2$ | $\theta$ | $\alpha$ |                                |                    | Clamping screw | Wrench |              |
| E12Q-SYQBR/L11-D170 | ●     | ● | 17                       | 12              | 10.5 | 180   | 27    | 11  | 4.5   | -5°      | -10°     | 0.4                            | YW□□11T2           | CSTB-2L        | T-6F   | 0.6          |
| E16R-SYQBR/L11-D215 | ●     | ● | 21.5                     | 16              | 13   | 200   | 32    | 15  | 5     | -5°      | -8°      | 0.4                            |                    |                |        |              |

● : Stocked items



Right hand (R) shown

### Steel shank

Inch

| Toolholder Cat. No. | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (in) |      |       |       |      |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (ft-lb) |
|---------------------|-------|---|--------------------------|-----------------|------|-------|-------|------|-------|----------|----------|--------------------------|--------------------|----------------|--------|----------------|
|                     | R     | L |                          | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$  | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |                |
| A10-SYUBR/L-D16     | ●     | ● | 1.000                    | .625            | .625 | 7.000 | 1.250 | .600 | .312  | 0°       | -8°      | .016                     | YW□□21.7□          | CSTB-2L        | T-6F   | .44            |

Metric

| Toolholder Cat. No. | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (mm) |      |       |       |     |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (N·m) |
|---------------------|-------|---|--------------------------|-----------------|------|-------|-------|-----|-------|----------|----------|--------------------------|--------------------|----------------|--------|--------------|
|                     | R     | L |                          | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$ | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |              |
| A16Q-SYUBR/L11-D200 | ●     | ● | 20                       | 16              | 15.5 | 180   | 35    | 15  | 8     | 0°       | -8°      | 0.4                      | YW□□11T2           | CSTB-2L        | T-6F   | 0.6          |

### Carbide shank

Inch

| Toolholder Cat. No. | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (in) |      |       |       |      |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (ft-lb) |
|---------------------|-------|---|--------------------------|-----------------|------|-------|-------|------|-------|----------|----------|--------------------------|--------------------|----------------|--------|----------------|
|                     | R     | L |                          | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$  | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |                |
| E08-SYUBR/L2-D14    | ●     |   | .875                     | .500            | .563 | 5.000 | 1.063 | .475 | .307  | 0°       | -8°      | .016                     | YW□□21.7□          | CSTB-2L        | T-6F   | .44            |
| E10-SYUBR/L2-D16    | ●     | ● | 1.000                    | .625            | .625 | 7.000 | 1.250 | .600 | .307  | 0°       | -8°      | .016                     |                    | CSTB-2L        | T-6F   |                |

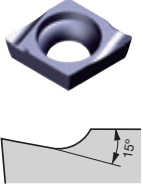
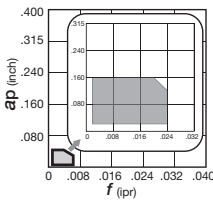
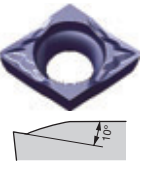
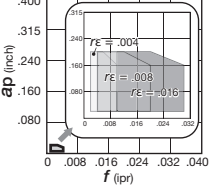
Metric

| Toolholder Cat. No. | Stock |   | Min bore dia. $\phi D_m$ | Dimensions (mm) |      |       |       |     |       |          |          | Std. corner radius $r_E$ | Applicable inserts | Parts          |        | Torque (N·m) |
|---------------------|-------|---|--------------------------|-----------------|------|-------|-------|-----|-------|----------|----------|--------------------------|--------------------|----------------|--------|--------------|
|                     | R     | L |                          | $\phi D_s$      | $f$  | $L_1$ | $L_2$ | $h$ | $f_2$ | $\theta$ | $\alpha$ |                          |                    | Clamping screw | Wrench |              |
| E12Q-SYUBR/L11-D200 | ●     | ● | 20                       | 12              | 13.5 | 180   | 27    | 11  | 7.5   | 0°       | -8°      | 0.4                      | YW□□11T2           | CSTB-2L        | T-6F   | 0.6          |
| E16R-SYUBR/L11-D245 | ●     | ● | 24.5                     | 16              | 16   | 200   | 32    | 15  | 8     | 0°       | -8°      | 0.4                      |                    | CSTB-2L        | T-6F   |              |

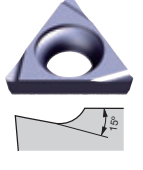
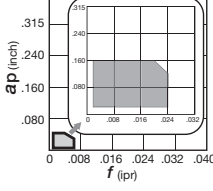
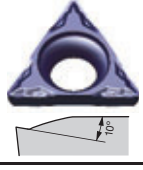
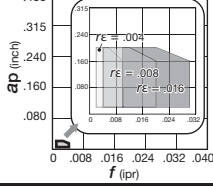
● : Stocked items

## Inserts for small diameter applications

80° Rhombic, 7° positive with hole

| Application | Chipbreaker                                                                                         | $f - a_p$                                                                          | Cat. No.<br>(in)  | Dimensions (in)       |                  |                                       |                           | Grades |         |
|-------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------|-----------------------|------------------|---------------------------------------|---------------------------|--------|---------|
|             | Appearance<br>(Cross section)                                                                       |                                                                                    |                   | I.C. dia.<br>$\phi d$ | Thickness<br>$s$ | Hole dia.<br>( $\phi$ )<br>$\phi d_1$ | Corner<br>radius<br>$r_E$ | Coated | Carbide |
|             |                                                                                                     |                                                                                    |                   |                       |                  |                                       |                           | SH730  | TH10    |
| Finishing   | <b>W08 (G)</b><br> |   | CCGT03X100R-W08   | .141                  | .055             | .075                                  | .0012                     | ●      | ●       |
|             |                                                                                                     |                                                                                    | CCGT03X100L-W08   |                       |                  |                                       |                           | ●      | ●       |
|             |                                                                                                     |                                                                                    | CCGT03X101R-W08   |                       |                  |                                       | .004                      | ●      | ●       |
|             |                                                                                                     |                                                                                    | CCGT03X101L-W08   |                       |                  |                                       |                           | ●      | ●       |
|             |                                                                                                     |                                                                                    | CCGT03X102R-W08   |                       |                  |                                       | .008                      | ●      | ●       |
|             |                                                                                                     |                                                                                    | CCGT03X102L-W08   |                       |                  |                                       |                           | ●      | ●       |
|             |                                                                                                     |                                                                                    | CCGT03X104R-W08   |                       |                  |                                       | .016                      | ●      | ●       |
|             |                                                                                                     |                                                                                    | CCGT03X104L-W08   |                       |                  |                                       |                           | ●      | ●       |
|             |                                                                                                     |                                                                                    | CCGT04T100R-W08   | .172                  | .070             | .091                                  | .0012                     | ●      | ●       |
|             |                                                                                                     |                                                                                    | CCGT04T100L-W08   |                       |                  |                                       |                           | ●      | ●       |
|             |                                                                                                     |                                                                                    | CCGT04T101R-W08   |                       |                  |                                       | .004                      | ●      | ●       |
|             |                                                                                                     |                                                                                    | CCGT04T101L-W08   |                       |                  |                                       |                           | ●      | ●       |
|             |                                                                                                     |                                                                                    | * CCGT04T102R-W08 |                       |                  |                                       | .008                      | ●      | ●       |
|             |                                                                                                     |                                                                                    | CCGT04T102L-W08   |                       |                  |                                       |                           | ●      | ●       |
|             |                                                                                                     |                                                                                    | CCGT04T104R-W08   |                       |                  |                                       | .016                      | ●      | ●       |
|             |                                                                                                     |                                                                                    | CCGT04T104L-W08   |                       |                  |                                       |                           | ●      | ●       |
|             | <b>JS (G)</b><br> |  | CCGT03X101-JS     | .141                  | .055             | .075                                  | .004                      | ●      |         |
|             |                                                                                                     |                                                                                    | CCGT03X102-JS     |                       |                  |                                       | .008                      | ●      |         |
|             |                                                                                                     |                                                                                    | CCGT03X104-JS     |                       |                  |                                       | .016                      | ●      |         |
|             |                                                                                                     |                                                                                    | * CCGT04T101-JS   |                       |                  |                                       | .004                      | ●      |         |
|             |                                                                                                     |                                                                                    | CCGT04T102-JS     | .172                  | .070             | .091                                  | .008                      | ●      |         |
|             |                                                                                                     |                                                                                    | CCGT04T104-JS     |                       |                  |                                       | .016                      | ●      |         |
|             |                                                                                                     |                                                                                    |                   |                       |                  |                                       |                           |        |         |
|             |                                                                                                     |                                                                                    |                   |                       |                  |                                       |                           |        |         |

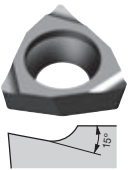
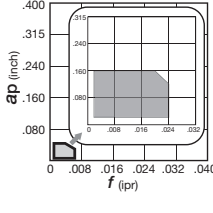
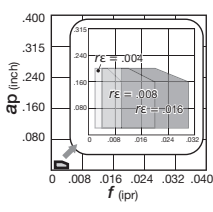
60° Triangular, 11° positive with hole

| Application | Chipbreaker                                                                                           | $f - a_p$                                                                           | Cat. No.<br>(in)  | Dimensions (in)       |                  |                                       |                           | Grades |         |
|-------------|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------|-----------------------|------------------|---------------------------------------|---------------------------|--------|---------|
|             | Appearance<br>(Cross section)                                                                         |                                                                                     |                   | I.C. dia.<br>$\phi d$ | Thickness<br>$s$ | Hole dia.<br>( $\phi$ )<br>$\phi d_1$ | Corner<br>radius<br>$r_E$ | Coated | Carbide |
|             |                                                                                                       |                                                                                     |                   |                       |                  |                                       |                           | SH730  | TH10    |
| Finishing   | <b>W08 (G)</b><br> |  | TPGT070100R-W08   | .172                  | .063             | .102                                  | .0012                     | ●      | ●       |
|             |                                                                                                       |                                                                                     | TPGT070100L-W08   |                       |                  |                                       |                           | ●      | ●       |
|             |                                                                                                       |                                                                                     | TPGT070101R-W08   |                       |                  |                                       | .004                      | ●      | ●       |
|             |                                                                                                       |                                                                                     | TPGT070101L-W08   |                       |                  |                                       |                           | ●      | ●       |
|             |                                                                                                       |                                                                                     | TPGT070102R-W08   |                       |                  |                                       | .008                      | ●      | ●       |
|             |                                                                                                       |                                                                                     | TPGT070102L-W08   |                       |                  |                                       |                           | ●      | ●       |
|             |                                                                                                       |                                                                                     | TPGT070104R-W08   |                       |                  |                                       | .016                      | ●      | ●       |
|             |                                                                                                       |                                                                                     | * TPGT070104L-W08 |                       |                  |                                       |                           | ●      | ●       |
|             | <b>JS (G)</b><br>  |  | * TPGT070101-JS   | .172                  | .063             | .102                                  | .004                      | ●      |         |
|             |                                                                                                       |                                                                                     | TPGT070102-JS     |                       |                  |                                       | .008                      | ●      |         |
|             |                                                                                                       |                                                                                     | TPGT070104-JS     |                       |                  |                                       | .016                      | ●      |         |
|             |                                                                                                       |                                                                                     |                   |                       |                  |                                       |                           |        |         |
|             |                                                                                                       |                                                                                     |                   |                       |                  |                                       |                           |        |         |
|             |                                                                                                       |                                                                                     |                   |                       |                  |                                       |                           |        |         |

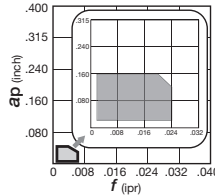
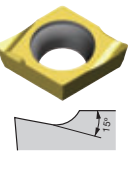
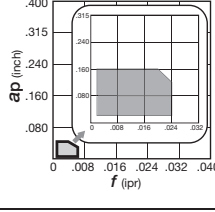
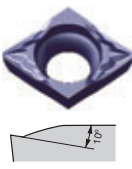
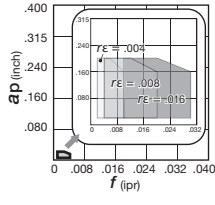
Note: Chipbreaker cross-sections are of \* marked inserts.

● : Stocked items

# 80° Hexagon, 5° positive with hole

| Application | Chipbreaker                   | $f - a_p$                                                                                                                                                           | Cat. No.<br>(in) | Dimensions (in) |                |                         |                                  | Grades |       |        |         |      |
|-------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------|----------------|-------------------------|----------------------------------|--------|-------|--------|---------|------|
|             | Appearance<br>(Cross section) |                                                                                                                                                                     |                  | I.C. dia.<br>ød | Thickness<br>s | Hole dia.<br>(ø)<br>ød1 | Corner<br>radius<br>$r_\epsilon$ | Coated |       | Cermet | Carbide |      |
|             |                               |                                                                                                                                                                     |                  |                 |                |                         |                                  | SH730  | GH110 | NS530  | TH10    | UX30 |
| Finishing   | <b>W08 (G)</b>                |   | WBG030100R-W08   | .156            | .063           | .091                    | .0012                            | ●      |       |        |         |      |
|             |                               |                                                                                                                                                                     | WBG030100L-W08   |                 |                |                         |                                  | ●      |       | ●      | ●       | ●    |
|             |                               |                                                                                                                                                                     | WBG030101R-W08   |                 |                |                         |                                  | ●      |       |        |         |      |
|             |                               |                                                                                                                                                                     | WBG030101L-W08   |                 |                |                         |                                  | ●      |       |        |         |      |
|             |                               |                                                                                                                                                                     | *WBG030102R-W08  |                 |                |                         | .004                             | ●      |       |        | ●       |      |
|             |                               |                                                                                                                                                                     | WBG030102L-W08   |                 |                |                         |                                  | ●      | ●     | ●      | ●       | ●    |
|             |                               |                                                                                                                                                                     | WBG030104R-W08   |                 |                |                         | .016                             | ●      |       |        |         |      |
|             |                               |                                                                                                                                                                     | WBG030104L-W08   |                 |                |                         |                                  | ●      | ●     | ●      | ●       | ●    |
|             | <b>JS (G)</b>                 |   | *WBG030101R-JS   | .156            | .063           | .091                    | .004                             | ●      |       |        |         |      |
|             |                               |                                                                                                                                                                     | WBG030101L-JS    |                 |                |                         |                                  | ●      |       |        |         |      |
|             |                               |                                                                                                                                                                     | WBG030102R-JS    |                 |                |                         | .008                             | ●      |       |        |         |      |
|             |                               |                                                                                                                                                                     | WBG030102L-JS    |                 |                |                         |                                  | ●      |       |        |         |      |
|             |                               |                                                                                                                                                                     | WBG030104R-JS    |                 |                |                         | .016                             | ●      |       |        |         |      |
|             |                               |                                                                                                                                                                     | WBG030104L-JS    |                 |                |                         |                                  | ●      |       |        |         |      |
|             |                               |                                                                                                                                                                     |                  |                 |                |                         |                                  |        |       |        |         |      |
|             |                               |                                                                                                                                                                     |                  |                 |                |                         |                                  |        |       |        |         |      |

# 75° Rhombus, 11° positive with hole

| Application | Chipbreaker                   | $f - a_p$                                                                           | Cat. No.<br>(in)                                                                    | Dimensions (in) |                                                                                     |                                                                                     |                        | Grades |      |        |         |       |      |      |   |   |  |  |  |
|-------------|-------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|--------|------|--------|---------|-------|------|------|---|---|--|--|--|
|             | Appearance<br>(Cross section) |                                                                                     |                                                                                     | I.C. dia.<br>ød | Thickness<br>s                                                                      | Hole dia.<br>(ø)<br>ød1                                                             | Corner<br>radius<br>rε | Coated |      | Cermet | Carbide |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        | SH730  | J740 | GH110  | NS530   | GT530 | TH10 | UX30 |   |   |  |  |  |
| Finishing   | W08 (G)                       |  |  | EPGT03X100R-W08 | .141                                                                                | .055                                                                                | .075                   | .0012  | ●    |        |         |       |      |      | ● |   |  |  |  |
|             | EPGT03X100L-W08               | ●                                                                                   |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        | ●       |       |      |      |   |   |  |  |  |
|             | EPGT03X101R-W08               | ●                                                                                   |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        | ●       |       |      |      |   |   |  |  |  |
|             | EPGT03X101L-W08               | ●                                                                                   |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        | ●       |       |      |      |   |   |  |  |  |
|             | *EPGT03X102R-W08              | .004                                                                                | ●                                                                                   |                 |                                                                                     |                                                                                     |                        |        |      |        | ●       |       |      |      |   |   |  |  |  |
|             | EPGT03X102L-W08               |                                                                                     | ●                                                                                   |                 |                                                                                     |                                                                                     |                        |        |      |        | ●       |       |      |      |   |   |  |  |  |
|             | EPGT03X104R-W08               |                                                                                     | .016                                                                                | ●               |                                                                                     |                                                                                     |                        |        |      |        |         | ●     |      |      |   |   |  |  |  |
|             | EPGT03X104L-W08               |                                                                                     |                                                                                     | ●               |                                                                                     |                                                                                     |                        |        |      |        |         | ●     |      |      |   |   |  |  |  |
|             | EPGT040100R-W08               | .156                                                                                | .063                                                                                | .091            |                                                                                     |                                                                                     |                        | .0012  | ●    |        |         |       |      |      | ● |   |  |  |  |
|             | EPGT040100L-W08               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        | ●    |        | ●       | ●     |      |      | ● |   |  |  |  |
|             | EPGT040101R-W08               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        | .004 | ●      |         |       |      |      |   | ● |  |  |  |
|             | EPGT040101L-W08               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      | ●      |         |       |      |      |   | ● |  |  |  |
|             | EPGT040102R-W08               |                                                                                     |                                                                                     |                 | .008                                                                                | ●                                                                                   |                        | ●      | ●    |        |         | ●     |      |      |   |   |  |  |  |
|             | EPGT040102L-W08               |                                                                                     |                                                                                     |                 |                                                                                     | ●                                                                                   |                        | ●      | ●    | ●      |         | ●     | ●    |      |   |   |  |  |  |
|             | EPGT040104R-W08               |                                                                                     |                                                                                     |                 |                                                                                     | .016                                                                                | ●                      |        | ●    | ●      |         |       | ●    |      |   |   |  |  |  |
|             | EPGT040104L-W08               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     | ●                      |        | ●    | ●      | ●       |       | ●    | ●    |   |   |  |  |  |
|             | J08 (G)                       |                                                                                     |                                                                                     |                 |  |  | EPGT040100L-J08        | .156   | .063 | .091   | .0012   | ●     | ●    |      |   |   |  |  |  |
|             | *EPGT040102L-J08              |                                                                                     |                                                                                     |                 | .008                                                                                | ●                                                                                   | ●                      |        |      |        |         |       |      |      |   |   |  |  |  |
|             | EPGT040104L-J08               |                                                                                     |                                                                                     |                 | .016                                                                                | ●                                                                                   | ●                      |        |      |        |         |       |      |      |   |   |  |  |  |
|             | JS (G)                        |                                                                                     |                                                                                     |                 |  |  | EPGT03X101-JS          | .141   | .055 | .075   | .004    | ●     |      |      |   |   |  |  |  |
|             | EPGT03X102-JS                 | .008                                                                                | ●                                                                                   |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             | EPGT03X104-JS                 | .016                                                                                | ●                                                                                   |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
|             |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |
| </          |                               |                                                                                     |                                                                                     |                 |                                                                                     |                                                                                     |                        |        |      |        |         |       |      |      |   |   |  |  |  |

Note: Chipbreaker cross-sections are of \* marked inserts.

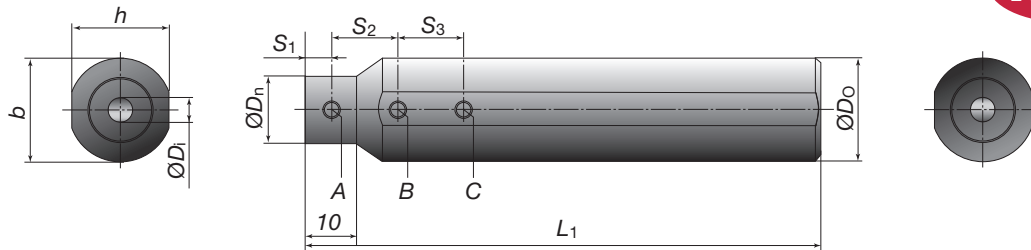
● : Stocked items

## Standard cutting conditions

| Work material                                       | Chip-breaker | Grades | Cutting Speed<br>Vc (sfm) | Depth of cut<br>ap (in) | Feed: $f$ (ipr) |                |                |                |
|-----------------------------------------------------|--------------|--------|---------------------------|-------------------------|-----------------|----------------|----------------|----------------|
|                                                     |              |        |                           |                         | $r_E = .0012''$ | $r_E = .004''$ | $r_E = .008''$ | $r_E = .016''$ |
| Steels<br>1008 - 1045 SAE etc.                      | W08<br>J08   | SH730  | 160 - 500                 | .002 - .040             | .0002 - .0008   | .0004 - .002   | .0008 - .004   | .002 - .006    |
| Stainless steels<br>303, 304 etc.                   |              |        | 100 - 500                 |                         |                 |                |                |                |
| Gray cast irons<br>Ductile cast irons<br>No35B etc. |              | TH10   | 100 - 330                 |                         |                 |                |                |                |
| Aluminum alloys<br>Copper alloys<br>Si < 13%        |              |        | 330 - 1650                |                         |                 |                |                |                |
| Titanium<br>Titanium alloys<br>Ti-6Al-4V etc.       |              | SH730  | 100 - 330                 |                         |                 |                |                |                |

## Sleeves

**BLM** type (Round shank for Stream Jet Bar Mini)



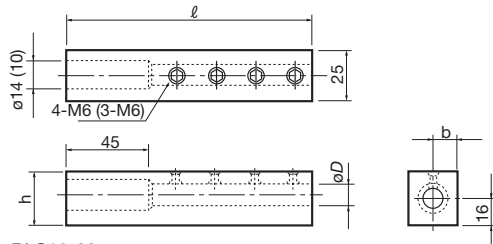
\*Optional

| Cat. No.  | Stock | Dimensions (mm)   |     |     |     |    |        |    |    |    | Replacement parts |         |         |        |                            |         |         |         |
|-----------|-------|-------------------|-----|-----|-----|----|--------|----|----|----|-------------------|---------|---------|--------|----------------------------|---------|---------|---------|
|           |       | øDo               | øDi | øDn | L1  | h  | b      | S1 | S2 | S3 | Clamping screws   |         |         | Wrench | Seal cap*<br>(inner screw) |         |         |         |
|           |       |                   |     |     |     |    |        |    |    |    | A                 | B       | C       |        |                            |         |         |         |
| BLM159-04 | ●     | 15.875<br>(.625") | 4   | 15  | 100 | 15 | 15.875 | 5  | 15 | 15 | SSHM4-4           | SSHM4-4 | SSHM4-4 | P-2    | CA-16<br>(M6)              |         |         |         |
| BLM159-05 | ●     |                   | 5   |     |     |    |        |    | 20 | 20 |                   |         |         |        |                            |         |         |         |
| BLM159-06 | ●     |                   | 6   |     |     |    |        |    |    |    |                   |         |         |        |                            |         |         |         |
| BLM159-07 | ●     |                   | 7   |     |     |    |        |    |    |    |                   |         |         |        |                            |         |         |         |
| BLM16-04  | ●     | 16                | 4   | 15  | 100 | 15 | 16     | 5  | 15 | 15 | SSHM4-4           | SSHM4-4 | SSHM4-4 | P-2    | CA-16<br>(M6)              |         |         |         |
| BLM16-05  | ●     |                   | 5   |     |     |    |        |    | 20 | 20 |                   |         |         |        |                            |         |         |         |
| BLM16-06  | ●     |                   | 6   |     |     |    |        |    |    |    |                   |         |         |        |                            |         |         |         |
| BLM16-07  | ●     |                   | 7   |     |     |    |        |    |    |    |                   |         |         |        |                            |         |         |         |
| BLM19-04  | ●     | 19.05<br>(.750")  | 4   | 18  | 100 | 18 | 19.05  | 5  | 15 | 15 | SSHM4-4           | SSHM4-6 | SSHM4-6 | P-2    | CA-16<br>(M6)              |         |         |         |
| BLM19-05  | ●     |                   | 5   |     |     |    |        |    | 20 | 20 |                   | SSHM4-4 | SSHM4-4 |        |                            | SSHM4-4 |         |         |
| BLM19-06  | ●     |                   | 6   |     |     |    |        |    |    |    |                   |         |         |        |                            |         |         |         |
| BLM19-07  | ●     |                   | 7   |     |     |    |        |    |    |    |                   |         |         |        |                            |         |         |         |
| BLM20-04  | ●     | 20                | 4   | 13  | 100 | 19 | 20     | 5  | 15 | 15 | SSHM4-4           | SSHM4-6 | SSHM4-6 | P-2    | CA-16<br>(M6)              |         |         |         |
| BLM20-05  | ●     |                   | 5   | 14  |     |    |        |    | 20 | 20 |                   | SSHM4-4 | SSHM4-4 |        |                            | SSHM4-4 |         |         |
| BLM20-06  | ●     |                   | 6   | 15  |     |    |        |    |    |    |                   |         |         |        |                            |         |         |         |
| BLM20-07  | ●     |                   | 7   | 16  |     |    |        |    |    |    |                   |         |         |        |                            |         |         |         |
| BLM22-04  | ●     | 22                | 4   | 13  | 125 | 21 | 22     | 5  | 15 | 15 | SSHM4-4           | SSHM4-6 | SSHM4-6 | P-2    | CA-16<br>(M6)              |         |         |         |
| BLM22-05  | ●     |                   | 5   | 14  |     |    |        |    | 20 | 20 |                   |         |         |        |                            | SSHM4-4 | SSHM4-6 | SSHM4-6 |
| BLM22-06  | ●     |                   | 6   | 15  |     |    |        |    |    |    |                   |         |         |        |                            |         |         |         |
| BLM22-07  | ●     |                   | 7   | 16  |     |    |        |    |    |    |                   |         |         |        |                            |         |         |         |
| BLM25-04  | ●     | 25                | 4   | 13  | 125 | 24 | 25     | 5  | 15 | 15 | SSHM4-4           | SSHM4-8 | SSHM4-8 | P-2    | CA-16<br>(M6)              |         |         |         |
| BLM25-05  | ●     |                   | 5   | 14  |     |    |        |    | 20 | 20 |                   | SSHM4-4 | SSHM4-8 |        |                            | SSHM4-8 |         |         |
| BLM25-06  | ●     |                   | 6   | 15  |     |    |        |    |    |    |                   |         |         |        |                            |         |         |         |
| BLM25-07  | ●     |                   | 7   | 16  |     |    |        |    |    |    |                   |         |         |        |                            |         |         |         |
| BLM254-04 | ●     | 25.4<br>(1.000")  | 4   | 13  | 125 | 24 | 25.4   | 5  | 15 | 15 | SSHM4-4           | SSHM4-8 | SSHM4-8 | P-2    | CA-16<br>(M6)              |         |         |         |
| BLM254-05 | ●     |                   | 5   | 14  |     |    |        |    | 20 | 20 |                   | SSHM4-4 | SSHM4-8 |        |                            | SSHM4-8 |         |         |
| BLM254-06 | ●     |                   | 6   | 15  |     |    |        |    |    |    |                   |         |         |        |                            |         |         |         |
| BLM254-07 | ●     |                   | 7   | 16  |     |    |        |    |    |    |                   |         |         |        |                            |         |         |         |

● : Stocked items



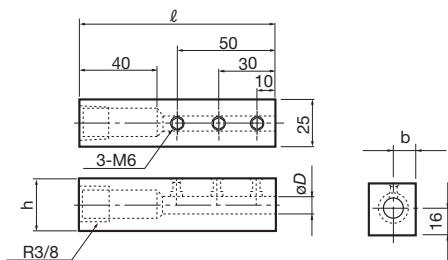
### BLS type (Square shank)



( ) is for BLS16-08

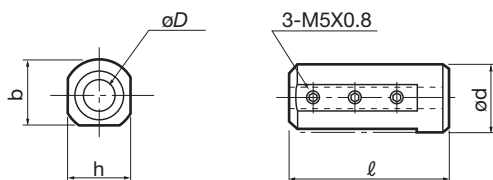
| Cat. No. | Stock | Applicable shank dia. $\phi D$ | Dimensions (mm) |    |      |
|----------|-------|--------------------------------|-----------------|----|------|
|          |       |                                | $\ell$          | h  | b    |
| BLS16-08 | ●     | 8                              | 125             | 28 | 12.5 |
| BLS16-10 | ●     | 10                             |                 |    |      |
| BLS16-12 | ●     | 12                             |                 |    |      |
|          |       |                                |                 |    |      |

### BLS-C type (Square shank)



| Cat. No.  | Stock | Applicable shank dia. $\phi D$ | Dimensions (mm) |    |      |
|-----------|-------|--------------------------------|-----------------|----|------|
|           |       |                                | $\ell$          | h  | b    |
| BLS16-08C | ●     | 8                              | 100             | 28 | 12.5 |
| BLS16-10C | ●     | 10                             |                 |    |      |
| BLS16-12C | ●     | 12                             |                 |    |      |
|           |       |                                |                 |    |      |

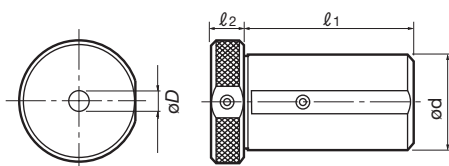
### BLM type (Round shank)



Above drawing shows BLM25-\*\*C type.

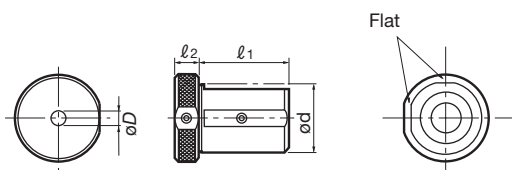
| Cat. No.  | Stock | Applicable<br>shank dia.<br><i>øD</i> | Dimensions (mm) |          |    |    |    |    |
|-----------|-------|---------------------------------------|-----------------|----------|----|----|----|----|
|           |       |                                       | <i>ød</i>       | <i>ℓ</i> | h  | b  |    |    |
| BLM19-08  | ●     | 8                                     | 19.05           | 100      | 18 | 18 |    |    |
| BLM20-08  | ●     |                                       | 20              |          | 19 |    |    |    |
| BLM22-08  | ●     |                                       | 22              | 125      | 21 | 21 |    |    |
| BLM254-08 | ●     |                                       | 25.4            |          | 24 | 24 | 24 |    |
| BLM25-08C | ●     | 10                                    | 25              | 55       |    |    |    | 23 |
| BLM25-10C | ●     |                                       |                 |          |    |    |    |    |
| BLM25-12C | ●     | 12                                    |                 |          |    |    |    |    |

### BLC type (Standard type)



| Cat. No. | Stock | Applicable shank dia. $\phi D$ | Dimensions (mm) |          |          |
|----------|-------|--------------------------------|-----------------|----------|----------|
|          |       |                                | $\ell_1$        | $\ell_2$ | $\phi d$ |
| BLC40-8  | ●     | 8                              | 73              | 13       | 40       |
| BLC40-10 | ●     | 10                             |                 |          |          |
| BLC40-12 | ●     | 12                             |                 |          |          |
| BLC40-16 | ●     | 16                             |                 |          |          |
|          |       |                                |                 |          |          |

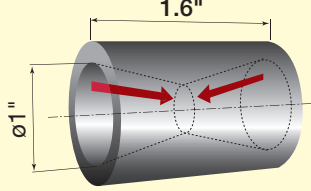
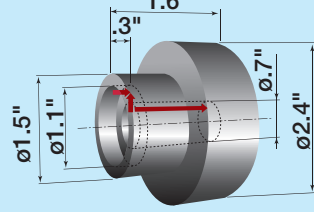
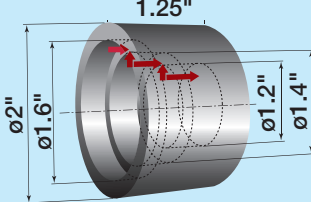
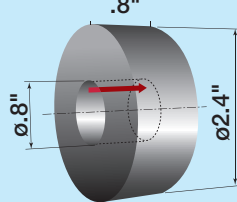
### BLC type (Short type)

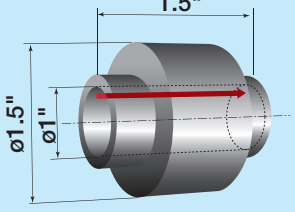
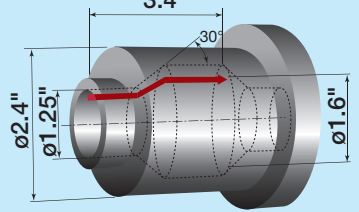
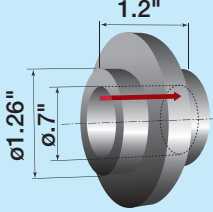
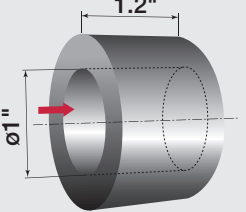


| Cat. No.  | Stock | Applicable shank dia. $\phi D$ | Dimensions (mm) |          |          |
|-----------|-------|--------------------------------|-----------------|----------|----------|
|           |       |                                | $\ell_1$        | $\ell_2$ | $\phi d$ |
| BLC32-8C  | ●     | 8                              | 45              | 20       | 32       |
| BLC32-10C | ●     | 10                             |                 |          |          |
| BLC32-12C | ●     | 12                             |                 |          |          |
| BLC40-8C  | ●     | 8                              | 55              | 13       | 40       |
| BLC40-10C | ●     | 10                             |                 |          |          |
| BLC40-12C | ●     | 12                             |                 |          |          |
| BLC40-16C | ●     | 16                             |                 |          |          |

● : Stocked items

## Practical examples

| Work piece type    |                             | Machine parts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Automotive parts                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Toolholder         |                             | A10-STUPR2.5-D14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | A12M-SDUCR07-D160                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Insert             |                             | TPMT222-PS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | DCMT21.51-PS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Grade              |                             | T6030                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | GT730                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Work material      |                             | 304                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1045                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                    |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                          |
| Cutting conditions | Cutting speed : $V_c$ (sfm) | 390                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 560                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                    | Feed : $f$ (ipr)            | .006                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | .006                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                    | Depth of cut : $ap$ (in)    | .004 - .118                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | .010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                    | Coolant                     | wet (External supply)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | wet (Internal supply)                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Results            |                             | <p><b>Increased tool life and machining stability</b></p> <p>Number of work-pieces machined:</p> <p><b>STREAMJETBAR</b> 150 pcs.</p> <p>Competitor 50 ~ 100 pcs.</p> <p>When competitor's tools are used, inserts often fractured due to chip re-cutting and tool life is unstable. With excellent chip control, the Stream Jet Bar excels in chip control and eliminates unexpected insert breakage caused by chip re-cutting and delivers consistent tool life. The tool also disposes of chip tangling and gives outstanding chip evacuation when taper boring.</p> | <p><b>50 % increased tool life</b></p> <p>Number of work-pieces machined:</p> <p><b>STREAMJETBAR</b> 300 pcs.</p> <p>Competitor 200 pcs.</p> <p>Compared with the previously used competitor's tool, the tool life was increased by 50 % and the surface finish was also improved. Even when machining the small diameter (<math>\phi 17</math>) portion, chip control was improved.</p>                                                                                                    |
|                    |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Work piece type    |                             | Automotive parts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Automotive parts                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Toolholder         |                             | A10-SDQCR2-D14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | A10-SCLPR3-D14                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Insert             |                             | DCMT21.52-PS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | CPMT322-PS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Grade              |                             | GH730                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | NS730                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Work material      |                             | 5120                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 4130                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                    |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                        |
| Cutting conditions | Cutting speed : $V_c$ (sfm) | 230                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 600                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                    | Feed : $f$ (ipr)            | .007                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | .006                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                    | Depth of cut : $ap$ (in)    | .008                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | .016                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                    | Coolant                     | Wet (Internal supply)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Wet (Internal supply)                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Results            |                             | <p><b>Increased tool life and machining stability</b></p> <p>Number of work-pieces machined:</p> <p><b>STREAMJETBAR</b> 40 pcs. Fixed number</p> <p>Competitor <math>\times 20 \sim 40</math> pcs. Fractured</p> <p>Competitor tools often showed unexpected fracture of the cutting edge and tool life was inconsistent. The Stream Jet Bar could suppress unexpected fracture and provide consistently long tool life.</p>                                                                                                                                           | <p><b>20 % increased productivity</b></p> <p>Productivity</p> <p><b>STREAMJETBAR</b> 600 pcs./H</p> <p>Competitor 500 pcs./H</p> <p>Competitor's tooling often showed chips tangling around the toolholder resulting in the machine having to be stopped to remove chips. This drastically reduces productivity. The Stream Jet Bar suppressed chip tangling and prevented unnecessary machine stoppages. The productivity per hour was improved by 20 % from 500 pcs./H to 600 pcs./H.</p> |
|                    |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

|                    |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Work piece type    |                             | Automotive parts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Machine parts                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Toolholder         |                             | A08-STUPR2-D11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | E12-SDUCR3-D16                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Insert             |                             | TPMT221-PM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DCMT32.51-PS                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Grade              |                             | GH730                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | T9115                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Work material      |                             | 1025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1035                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                    |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                               |
| Cutting conditions | Cutting speed : $V_c$ (sfm) | 720                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 230 - 520                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                    | Feed : $f$ (ipr)            | .008                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | .005 - .008                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                    | Depth of cut : $ap$ (in)    | .020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | .040                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                    | Coolant                     | Wet (External supply)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Wet (Internal supply)                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Results            |                             | <p><b>Increased cutting speeds</b><br/>(Productivity increased 20 %)</p> <p>Number of work-pieces machined / H</p> <p><b>STREAMJET BAR</b> <math>V_c = 720</math> sfm</p> <p>Competitor <math>V_c = 590</math> sfm</p> <p>Previously the cutting speed was limited to 590 sfm to suppress chatter. When using the Stream Jet Bar, chatter did not occur at speeds up to 720 sfm and the surface finish after machining the same number of parts was superior to those obtained with previous tools. The dimensional accuracy of the machined bore was also improved.</p> | <p><b>67 % increased tool life</b> Number of work-pieces machined:</p> <p><b>STREAMJET BAR</b> 100 pcs.</p> <p>Competitor 60 pcs.</p> <p>Compared with a competitor chipbreaker tool for medium cutting, the PS-type chipbreaker improved chip control. Under stable machining, the Stream Jet Bar improved chip evacuation and eliminated insert fracturing caused by chip re-cutting. The result is improved tool life and surface finish.</p> |
| Work piece type    |                             | Automotive parts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Automotive parts                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Toolholder         |                             | E08-SCLCR2-D11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | E12-SDUCR3-D16                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Insert             |                             | CCMT21.52-PM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2QP-DCGW32.51                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Grade              |                             | T9125                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | BXM10                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Work material      |                             | 1045                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1045                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                    |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                             |
| Cutting conditions | Cutting speed : $V_c$ (sfm) | 660                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 660                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                    | Feed : $f$ (ipr)            | .012                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | .002                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                    | Depth of cut : $ap$ (in)    | .040                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | .003                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                    | Coolant                     | Wet (External supply)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Dry                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Results            |                             | <p><b>Twice the productivity</b> Number of work-pieces machined:</p> <p><b>STREAMJET BAR</b> One pass</p> <p>Competitor Two pass</p> <p>When using a competitor's tool, roughing and medium finishing processes were needed to machine this component. The high level of rigidity with the Stream Jet Bar allowed one-pass machining. Chip control and surface finish were also improved.</p>                                                                                                                                                                            | <p>By switching from internal grinding, the productivity was increased due to the shortened machining process.</p> <p>In addition, the machining costs could be reduced by eliminating the grinding-sludge disposal cost.</p>                                                                                                                                                                                                                    |



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