

Boring

F1~F88

New Products

F2~F4

Guide Line / Product Lineup / Identification System

F4~F11

Solid Tip-Bars for Micro Boring

F12~F25

| | |
|-----------------|-----------------------------------|
| Twin Bar | TWB / TWBT |
| System Bar | VNB-S / VNB / VNBT / VNBX-S |
| 2 Edges Tip-Bar | HPB / HPBT |
| Tip-Bar | PSB-S / PSBT-S |
| | → will be switched to HPB / HPBT. |

Boring Bars for Positive Inserts

F26~F62

| | |
|-----------------------------|-----------------------------------------------|
| CC □□ Insert | Dynamic Bar / Boring Bars for General Purpose |
| CP □□ Insert | Dynamic Bar / Boring Bars for General Purpose |
| DC □□ Insert | Dynamic Bar / Boring Bars for General Purpose |
| JC □□ Insert | Boring Bars for General Purpose |
| TC □□ Insert | Dynamic Bar |
| TB / TP □□ Insert | Dynamic Bar / Boring Bars for General Purpose |
| VB / VC / VP □□ Insert | Dynamic Bar / Boring Bars for General Purpose |
| WB / WP □□ Insert | Dynamic Bar / Boring Bars for General Purpose |
| SP □□ Insert | Boring Bars for General Purpose |
| TP □□ Insert (without Hole) | Boring Bars for General Purpose |
| YP □□ Insert | Boring Bars for General Purpose |

Boring Toolholders for Bearing Machining (Square Shank)

F63

AD Bars

F64~F67

| | |
|----------------|----------------------------------------------------|
| CN □□ Insert | |
| DN □□ Insert | |
| TN □□ Insert | |
| CC □□ Insert | |
| DC □□ Insert | |
| Boring Adapter | (with coolant hole / anti-vibration damper system) |

Boring Bars for Negative Inserts

F68~F72

| | |
|--------------|--|
| CN □□ Insert | |
| DN □□ Insert | |
| TN □□ Insert | |
| WN □□ Insert | |

Boring Bars for Ceramic Tools

F73~F74

Boring Bars for Solid CBN Tools

F75

Sleeves

F76~F81

| | |
|----------------------|-------------------|
| PSH | |
| SHA / SH / SHC / SJS | |
| PH | |
| SHE / SHEM | Adjustable Sleeve |

Recommended Cutting Conditions

F82~F83

Assembly (AS) List / Former Parts List

F84

Alternative Toolholder Reference Table for Boring Bar

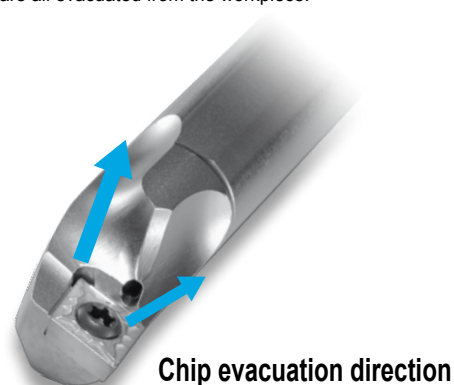
F85~F88

Parts Compatibility of Lever Lock Toolholders  **R42**

Superior chip evacuation (External coolant)

| | Dynamic Bar | Competitor A | Competitor B |
|----------------------|-------------|--------------|--------------|
| Inside the workpiece | | | |

In the products of competitor A and B chips remain inside the workpiece, but chips from the Dynamic Bar are all evacuated from the workpiece.

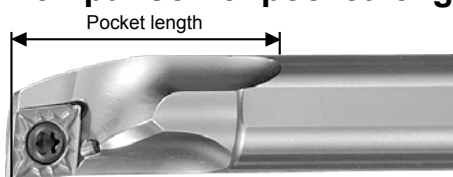


- Tool holder design developed through stress analysis
- Maximum structural thickness for high tool holder rigidity
- Controls chattering to achieve stable machining

- Large chip pocket produces superior chip evacuation

Dynamic design driven by the latest computer simulation technology

Comparison of pocket length



| Description | Pocket length (mm) | |
|---------------------|--------------------|--------------|
| | Dynamic Bar | Competitor A |
| A16-SCLPR09-18 type | 37 | 29 |
| A20-SCLCR09-22 type | 48 | 32 |

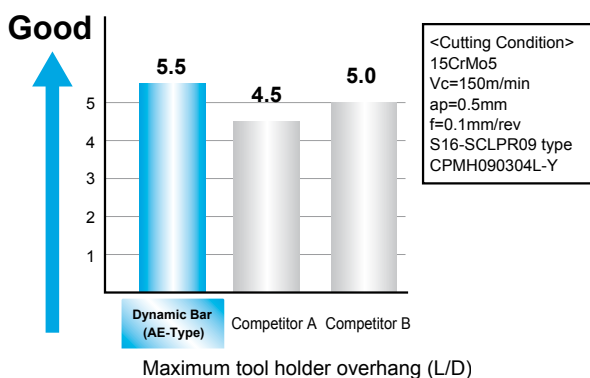
Chip evacuation direction

| SCLC (P) type | STLB (P) type |
|-----------------------------------------|---------------|
| | |
| Better evacuation by backward chip flow | |

The dynamic Bar achieves superior chip evacuation

High rigidity and chattering resistance are ensured through the use of a special alloy and stress analysis technology. Previously unattained surface finish and dimensional accuracy are now achieved.

Anti chatter vibration performance



Comparison of surface finish

Vibration of the Dynamic Bar was minimal even at high cutting speeds, enabling stable machining.

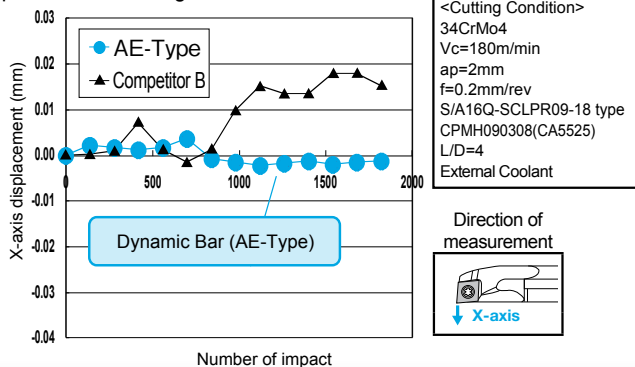
| | Dynamic Bar | Competitor A | Competitor B |
|----------------------|-------------|--------------|--------------|
| Surface wall | | | |
| Surface Roughness | | | |
| Oscillatory waveform | | | |

<Cutting Condition>
15CrMo5
Vc=210m/min
ap=0.5mm
f=0.1mm/rev
A16Q-SCLPR09-18 type
CPMT090304XP (PV7020)
L/D=4
External coolant

Direction of vibration measurement

Cutting Point Precision

The AE Dynamic Bar maintains precise cutting edge positional accuracy through the use of a special alloy, thereby achieving high precision machining.



Toolholder Lineup

• Excellent Bar (AE-Type)

Excellent Bar with coolant hole (internal coolant) (A..AE) provides better chip evacuation.



• Steel Bar

The steel shank bar (without coolant hole) provides superior cost performance



Advantages of Dynamic Bar SDUC

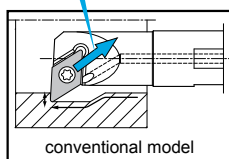
New design and concept focusing on chip evacuation

New design

Streamlined pocket provides effective chip evacuation

Large chip pocket allows chips to flow through the backside of the bar

Chip flow

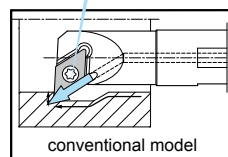


Side chip pocket directs chips to outside of workpiece

New concept

Coolant flows toward workpiece internal wall

Coolant flow



Coolant flow towards internal workpiece wall allows smooth chip evacuation

HP Type 2-Edges Tip-Bar for Micro Boring

- Economically excellent 2-Edges
- Min. Bore Dia. Line Up from $\phi 2.0$ to Up
- Easy-to-Use Adjustable Overhang Length
- Integral No. shank is adopted to enable installation to standard sleeves
- Special sleeves to fit to target machine makers specifications are fulfilled



| Boring | Back boring | Grooving | Face Grooving | Threading |
|------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| | | | | |
| HPB \oplus F22 | HPBT \oplus F22 | HPG \oplus G44 | HPFG \oplus G65 | HPT \oplus J24 |
| Min. Bore Dia.: $\phi 2 \sim \phi 7$ Corner-R (r): 0.05 | Min. Bore Dia.: $\phi 4 \sim \phi 5$ Corner-R (r): 0.05 | Min. Bore Dia.: $\phi 4 \sim \phi 7$ Edge Width: 1.0~2.0 mm Depth: 1.0~2.0 mm | Min. Face Groove Dia.: $\phi 8$ Edge Width: 1.0~3.0mm Depth: 2.0~3.0mm | Min. Pilot Hole Dia.: $\phi 4.5 \sim \phi 8$ M: 0.75~1.5 mm UN: 28~16 TPI W: 24~18 TPI Rc: 28~19 TPI |

F



Boring



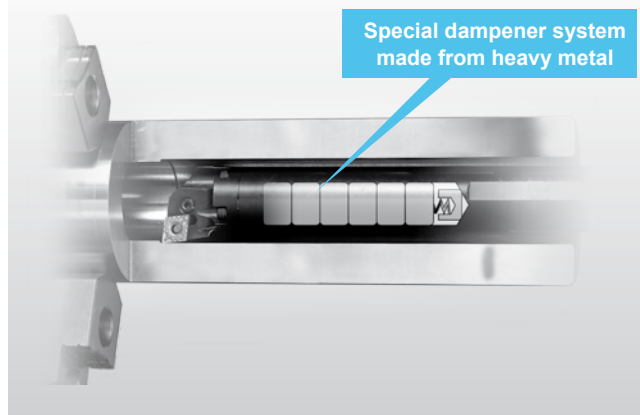
Interchangeable head boring bars with anti-vibration dampener system

- The AD (Advanced Dampener) system provides a maximum overhang of 6 times L/D.
- Achieve high efficient machining: Anti-vibration dampener effect allows for large depths of cut and high feed rates.
- Applicable for a variety of machining conditions due to the interchangeable head design



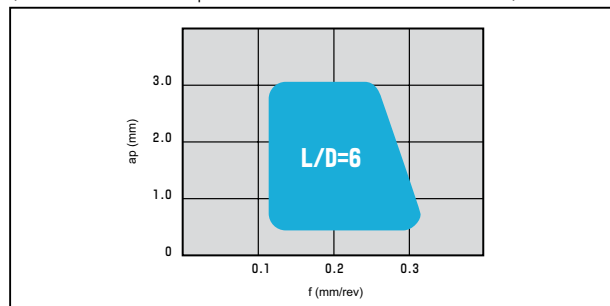
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Structure of Anti-Vibration dampener system



Possible machining area

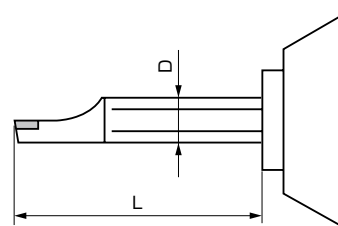
(34CrMo4 Vc=150m/min ap=0.5~3mm f=0.1~0.3mm/rev TNMG160408)



Guide Line for Boring Bars

Guide Line for Overhang Length of Boring Bar (Workpiece: C45)

| Shank Material | L/D | Toolholder Type Example |
|-----------------------------------------|-----|-------------------------|
| Steel | 3 | S...SCLP |
| Steel (Dynamic Bar) | 4 | S...SCLP-A |
| Excellent Bar | 5 | S...SCLP-E |
| Excellent Bar (Dynamic Bar) | 5.5 | A...SCLP-AE |
| Anti-vibration dampener system (AD Bar) | 6 | HA...PCLN |
| Carbide | 7 | C...SCLP |



D: Bar Diameter
L: Overhang Length

Carbide Shank Boring Bar

○ Short Shank Series

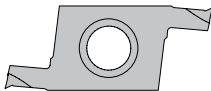
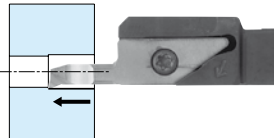
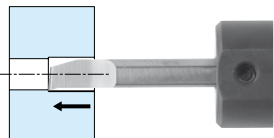
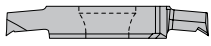


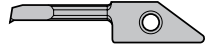



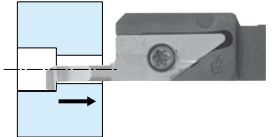
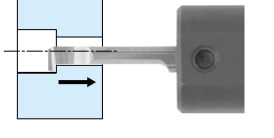


- Short Shank Type with length of 1/2 and 2/3 of standard type are available. (-1/2 or -2/3 is shown at the end of the description)
- Economical

Standard Size

← 2/3 Size

← 1/2 Size

Solid Tip-Bars for Micro Boring

| Application | Solid Tip-Bar Type | Shape | Shank Type Max. Overhang Length (L/D) | Min. Bore Dia. ϕA | | | | | | | Ref. Page for Toolholder | Summary | | | |
|-------------|------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|-------------------------|-----|---|-----|---|-----|---|--------------------------|---------|---|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | 1 | 1.5 | 2 | 2.5 | 3 | 3.5 | 4 | | | 5 | 6 | 7 |
| Boring | TWB Twin Bar ➡ F12 |  | Solid | ● | ● | ● | ● | ● | | | | | | F12 |   |
| | TWBT Twin Bar ➡ F13 |  | Solid | ● | ● | ● | ● | ● | | | | | | F13 | |
| | VNB-S System Tip-Bar ➡ F14 |  | Solid | ● | ● | ● | | ● | | | | | | F16 F17 F18 | |
| | VNB System Tip-Bar ➡ F15 |  | Solid | | | ● | | ● | | ● | ● | ● | | F18 | |
| | VNBX-S System Tip-Bar ➡ F20 |  | Solid | ● | ● | ● | | ● | ● | | | | | F21 | |
| | HPB 2-Edges Tip-Bar ➡ F22 |  | Solid L/D= \sim 5 | | | ● | | ● | | ● | ● | ● | | F23 | |
| | PSB-S Tip-Bar ➡ F24 |  | Solid L/D= \sim 5 | | | ● | | ● | | ● | ● | ● | | F25 | |
| Back Boring | VNBT System Tip-Bar ➡ F15 |  | Solid | | | | | | | ● | ● | | | F16 F17 F18 |   |
| | HPBT 2-Edges Tip-Bar ➡ F22 |  | Solid L/D= \sim 5 | | | | | | | ● | ● | | | F23 | |
| | PSBT-S Tip-Bar ➡ F24 |  | Solid L/D= \sim 5 | | | | | | | | ● | ● | | F25 | |

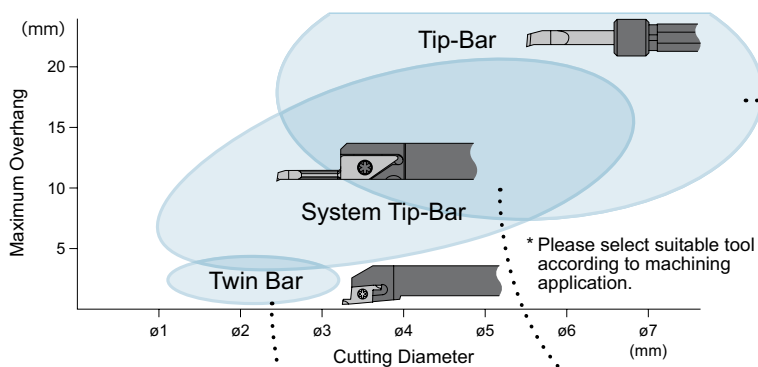
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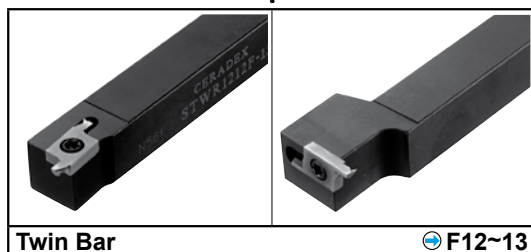
Boring




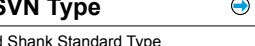
Toolholder Dimension

Solid Tip-Bar Type: Minimum cutting Dia. 1mm



2-Edges Tip-Bar HPB



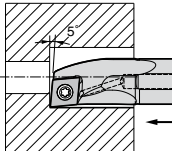
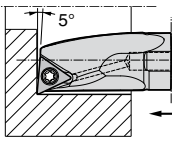
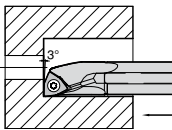
| | |
|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
|  SVN Type ➡ F16~17 Square Shank (Straight) |  SVNS Type ➡ F16~17 System Tip-Bar ➡ F14 |
|  S...SVN Type ➡ F18 Round Shank Standard Type | |
|  System Tip-Bar | |

Product Lineup

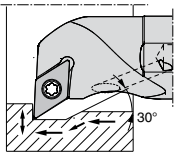
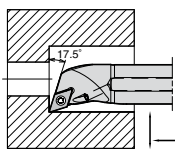
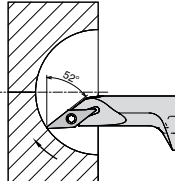
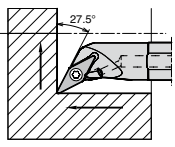
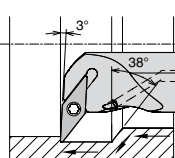
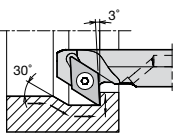
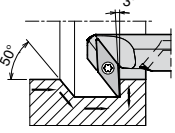
Dynamic Bar

F

Boring

| Application | Overview Shape | Boring Bar Type | Shank Type Max. Overhang Length (L/D) | Coolant Hole | | Min. Bore Dia. ϕA | | | | | | | | | | | | | | | | | | | | | | | | Refer Page for Toolholder |
|--------------------------|-------------------------------------------------------------------------------------|-----------------|------------------------------------------|--------------|----|-------------------------|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|---------------------------|
| | | | | Yes | No | 5 | 6 | 7 | 8 | 10 | 12 | 13 | 14 | 16 | 18 | 20 | 22 | 23 | 25 | 26 | 27 | 30 | 31 | 32 | 34 | 40 | 50 | | | |
| Boring / Internal Facing |  | A...SCLC-AE | Excellent L/D = ~5.5 | ● | | | | | | ● | ● | | ● | | ● | | ● | | | | ● | | | | | | | F26 | | |
| | | S...SCLC-AE | Excellent L/D = ~5.5 | ○ | | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | |
| | | S...SCLC-A | Steel L/D = ~4 | ○ | | | | | | ● | ● | | ● | | ● | | ● | | | | ● | | | | | | | | | |
| | | C...SCLC-A | Carbide L/D = ~7 | ○ | | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | |
| | | E...SCLC-A | Carbide L/D = ~7 | ● | | | | | | ● | ● | | ● | | ● | | ● | | | | ● | | | | | | | | | |
| |  | A...SCLP-AE | Excellent L/D = ~5.5 | ● | | | | | | | ● | | | ● | ● | ● | | ● | | | ● | | | | | | | F30 | | |
| | | S...SCLP-A | Steel L/D = ~4 | ○ | | | | | | | ● | | | ● | ● | ● | | ● | | | ● | | | | | | | | | |
| | | E...SCLP-A | Carbide L/D = ~7 | ● | | | | | | | ● | | | ● | | ● | | ● | | | ● | | | | | | | | | |
| | | E...STLP-A | Carbide | ● | | | | | | | ● | ● | | ● | | ● | | ● | | | ● | | | | | | | | | |
| | | C...STLB-A | L/D = ~7 | ○ | | | | | ● | | | | | | | | | | | | | | | | | | | | | |
| | | A...STLP-AE | Excellent | ● | | | | | | ● | ● | | ● | | ● | | ● | | | | ● | | | | | | | | | |
| | | S...STLB-AE | L/D = ~5.5 | ○ | | | | | ● | | | | | | | | | | | | | | | | | | | | | |
| | | S...STLB(P)-A | Steel L/D = ~4 | ○ | | | | | ● | ● | ● | | ● | | ● | | ● | | | | ● | | | | | | | | | |
| Boring |  | A...STLC-AE | Excellent L/D = ~5.5 | ● | | | | | | ● | ● | | ● | | ● | | ● | | | | | | | | | | F41 | | | |
| | | S...STLC-A | Steel L/D = ~4 | ○ | | | | | | | ● | ● | | ● | | ● | | ● | | | | | | | | | | | | |
| | | S...SWUB(P)-A | Steel L/D = ~4 | ○ | | ● | ● | ● | ● | ● | | | ● | | ● | | ● | | | | | | | | | | | | | |
| | | S...SWUB-AE | Excellent L/D = ~5.5 | ○ | | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | |
| | | A...SWUB(P)-AE | Excellent L/D = ~5.5 | ● | | | | | | | ● | ● | | ● | | ● | | ● | | | | | | | | | | | F56 | |
| C...SWUB-A | Carbide L/D = ~7 | ○ | | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| | | E...SWUB(P)-A | Carbide L/D = ~7 | ● | | | | | | ● | ● | | ● | | ● | | ● | | | | | | | | | | | | | |

Dynamic Bar

| Application | Overview Shape | Boring Bar Type | Shank Type Max. Overhang Length (L/D) | Coolant Hole | | Min. Bore Dia. ϕA | | | | | | | | | | | | | | | | | | | | | | Refer Page for Toolholder |
|--------------|-------------------------------------------------------------------------------------|-----------------|---------------------------------------------|--------------|----|-------------------------|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---------------------------|
| | | | | Yes | No | 5 | 6 | 7 | 8 | 10 | 12 | 13 | 14 | 16 | 18 | 20 | 22 | 23 | 25 | 26 | 27 | 30 | 31 | 32 | 34 | 40 | 50 | |
| Copying |  | A...SDUC-AE | Excellent L/D = ~5.5 | ● | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | ● | | | | F34 |
| | | S...SDUC-A | Steel L/D = ~4 | ○ | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | ● | | | | |
| | | E...SDUC-A | Carbide L/D = ~7 | ● | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | ● | | | | |
| |  | A...SDQC-AE | Excellent L/D = ~5.5 | ● | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | | | | F36 |
| | | S...SDQC-A | Steel L/D = ~4 | ○ | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | | | | |
| | | E...SDQC-A | Carbide L/D = ~7 | ● | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | | | | |
| |  | A...SVJB(C)-AE | Excellent L/D = ~5.5 | ● | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | ● | ● | | F50 |
| | | A...SVJP-AE | Steel L/D = ~4 | ○ | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | ● | ● | | |
| | | S...SVJB(C)-A | Steel L/D = ~4 | ○ | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | ● | ● | | |
| | | S...SVJP-A | Steel L/D = ~4 | ○ | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | ● | ● | | |
| |  | A...SVPB(C)-AE | Excellent L/D = ~5.5 | ● | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | ● | ● | | F50 |
| | | S...SVPB(C)-A | Steel L/D = ~4 | ○ | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | ● | ● | | |
| | | E...SVPB(C)-A | Carbide L/D = ~7 | ● | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | ● | ● | | |
| |  | A...SVUB(C)-AE | Excellent L/D = ~5.5 | ● | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | ● | ● | | F52 |
| | | S...SVUB(C)-A | Steel L/D = ~4 | ○ | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | ● | ● | | |
| | | E...SVUB(C)-A | Carbide L/D = ~7 | ● | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | ● | ● | | |
| Back Copying |  | A...SDZC-AE | Excellent L/D = ~5.5 | ● | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | ● | ● | | F37 |
| | | S...SDZC-A | Steel L/D = ~4 | ○ | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | ● | ● | | |
| | | E...SDZC-A | Carbide L/D = ~7 | ● | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | ● | ● | | |
| |  | A...SVZB(C)-AE | Excellent L/D = ~5.5 | ● | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | ● | ● | | F52 |
| | | S...SVZB(C)-A | Steel L/D = ~4 | ○ | | | | | | | | | ● | ● | | ● | ● | ● | | ● | | | | | ● | ● | | |

For Min. Bore Dia. ϕA , the figure under ● may be applied depending on the toolholder type.

F



Boring



F7

Product Lineup

Boring Bars for General Purpose

| Application | Boring Bar Type | Shape | Shank Type Max. Overhang Length (L/D) | Coolant Hole | | Insert Type | Min. Bore Dia. ϕA | | | | | | | | | | | | | | | | | Ref. Page for Toolholder |
|--------------------------|-----------------|---------------------------|---------------------------------------------|--------------|----------|-------------|-------------------------|---|----------|--------|---------|----|----|----|----|----|---------|----|---------|----|-----|------------|-----|--------------------------------|
| | | | | Yes | No | | 5 | 6 | 7 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 25 | 30 | 32 | 40 | 50 | | | |
| Boring / Internal Facing | S...SCLC | | Steel L/D \sim 3 | | | Positive | | | | | ● | | | | | | | | | | | F28 | | |
| | S...SCLC-E | | Excellent L/D \sim 5 | | | Positive | ● | ● | ● | ● | ● | | | | | | | | | | | | | |
| | C...SCLC | | Carbide L/D \sim 7 | | | Positive | ● | ● | ● | ● | ● | | | | | | | | | | | | | |
| | A...SCLC-E | | Excellent L/D \sim 5 | ● | | Positive | | | | | ● | | | | | | | | | | | F29 | | |
| | E...SCLC | | Carbide L/D \sim 7 | ● | | Positive | | | | | ● | | | | | | | | | | | | | |
| | S...SCLP | | Steel L/D \sim 3 | | | Positive | | | | | | ● | ● | ● | ● | ● | ● | ● | | | | F32 | | |
| | S...SCLP-E | | Excellent L/D \sim 5 | | | Positive | | | | | | ● | ● | ● | ● | ● | ● | | | | | | | |
| | C...SCLP | | Carbide L/D \sim 7 | | | Positive | | | | | | ● | | ● | | ● | ● | | | | | | | |
| | A...SCLP-E | | Excellent L/D \sim 5 | ● | | Positive | | | | | | ● | ● | ● | ● | ● | ● | | | | | | | |
| | E...SCLP | | Carbide L/D \sim 7 | ● | | Positive | | | | | | ● | | ● | | ● | ● | | | | | | | |
| | S...PCLN○○ | | Steel L/D \sim 3 | | | Negative | | | | | | | | | | ● | ● 27 | | ● | ● | ● | F68 | | |
| | A...PCLN09 | | Steel L/D \sim 3 | ● | | Negative | | | | | | | | | | ● | ● 27 | | ● | | | | | |
| | S...PWLN○○ | | Steel L/D \sim 3 | | | Negative | | | | | | | | | | ● | ● 27 | | ● | ● | ● | F71 F72 | | |
| | A...PWLN06 | | Steel L/D \sim 3 | ● | | Negative | | | | | | | | | | ● | ● 27 | | ● | | | | | |
| | S...WWLN08-E | | Excellent L/D \sim 5 | | | Negative | | | | | | | | | | | ● 28 | | ● 34 | ● | | F72 | | |
| | C...STXP(B) | | Carbide L/D \sim 7 | | | Positive | | | ● 7.5 | ● 9 | ● 11 | | | | | | | | | | | | | |
| | C...SJLC | | Carbide L/D \sim 7 | | | Positive | ● 5.5 | | | | | | | | | | | | | | | F40 | | |
| | S...STWP | | Steel L/D \sim 3 | | | Positive | | | | | | ● | | ● | | ● | ● | | | | | | F47 | |
| | S...STWP-E | | Excellent L/D \sim 5 | | | Positive | | | | | | ● | | ● | | ● | ● | | ● | | | | | |
| | S...SYXP-E | | Excellent L/D \sim 5 | | | Positive | | | | | | ● | | ● | | | | | | | | F62 | | |
| S...SDUC | | Steel L/D \sim 3 | | | Positive | | | | | | | ● | ● | | ● | ● | | | | | F38 | | | |
| S...SDUC-E | | Excellent L/D \sim 5 | | | Positive | | | | | | | ● | ● | | ● | ● | | ● | | | | | | |
| C...SDUC | | Carbide L/D \sim 7 | | | Positive | | | | | | | ● | ● | | ● | ● | | ● | | | | | | |

For Min. Bore Dia. ϕA , the figure under ● may be applied depending on the toolholder type.

| Application | Boring Bar Type | Shape | Shank Type Max. Overhang Length (L/D) | Coolant Hole | | Insert Type | Min. Bore Dia. ϕA | | | | | | | | | | | | | | | | | Ref. Page for Toolholder |
|--------------|-----------------|-----------------------|---------------------------------------------|--------------|----------|-------------|-------------------------|----------|---|----------|----|----|----|----|----|----|----|---------|----|----|----|--|-----|--------------------------------|
| | | | | Yes | No | | 5 | 6 | 7 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 25 | 30 | 32 | 40 | 50 | | | |
| Copying | S...PDUN11 | | Steel L/D \sim 3 | | | Negative | | | | | | | | | | | | ● 27 | | ● | ● | | F69 | |
| | A...PDUN11 | | Steel L/D \sim 3 | ● | | Negative | | | | | | | | | | | | ● 27 | | ● | ● | | | |
| | S...SVJB(C)-E | | Excellent L/D \sim 5 | | | Positive | | | | | | | | ● | | ● | ● | ● | | ● | ● | | F54 | |
| | S...SVJP-E | | Excellent L/D \sim 5 | | | Positive | | | | | | | | ● | | | | | | | | | | |
| | S...SVPB(C)-E | | Excellent L/D \sim 5 | | | Positive | | | | | | | | ● | | ● | ● | | ● | ● | | | | |
| | S...SVUB(C)-E | | Excellent L/D \sim 5 | | | Positive | | | | | | | | ● | | ● | ● | | ● | ● | | | | |
| Back Copying | C...STZB | | Carbide L/D \sim 7 | | | Positive | | | | ● 8.5 | | | | | | | | | | | | | F48 | |
| | C...SJZC | | Carbide L/D \sim 7 | | | Positive | | ● 6.5 | | | | | | | | | | | | | | | F40 | |
| | S...SDZC | | Steel L/D \sim 3 | | | Positive | | | | | | | ● | ● | | ● | ● | | | | | | F39 | |
| | S...SDZC-E | | Excellent L/D \sim 5 | | | Positive | | | | | | | ● | ● | | ● | ● | | ● | | | | | |
| | S...SVZB(C)-E | | Excellent L/D \sim 5 | | | Positive | | | | | | | | ● | | ● | ● | | ● | ● | | | F54 | |
| Boring | S...STUP(B) | | Steel L/D \sim 3 | | | Positive | | | | ● | ● | ● | | ● | | ● | ● | | ● | | | | F44 | |
| | S...STUP(B)-E | | Excellent L/D \sim 5 | | | Positive | | | | ● | ● | ● | ● | ● | ● | ● | ● | | ● | | | | | |
| | C...STUP(B) | | Carbide L/D \sim 7 | | | Positive | | | | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | |
| | A...STUP-E | | Excellent L/D \sim 5 | ● | | Positive | | | | | ● | ● | ● | ● | ● | ● | ● | | ● | | | | F46 | |
| | E...STUP | | Carbide L/D \sim 7 | ● | | Positive | | | | | ● | ● | ● | ● | ● | ● | ● | | | | | | | |
| | S...CTUP | | Steel L/D \sim 3 | | | Positive | | | | | | | | ● | | ● | ● | | ● | ● | ● | | F61 | |
| | S...PTUN ○○ | | Steel L/D \sim 3 | | | Negative | | | | | | | | | | ● | ● | ● | ● | ● | ● | | F70 | |
| | A...PTUN11 | | Steel L/D \sim 3 | ● | | Negative | | | | | | | | | | ● | ● | | ● | | | | | |
| | S...SWUB | | Steel L/D \sim 3 | | | Positive | | ● | ● | ● | | | | | | | | | | | | | F58 | |
| | S...SWUP(B)-E | | Excellent L/D \sim 5 | | | Positive | | | | | ● | ● | ● | ● | ● | ● | ● | | | | | | | |
| | C...SWUP(B) | | Carbide L/D \sim 7 | | | Positive | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | |
| | S...SSKP | | Steel L/D \sim 3 | | | Positive | | | | | | | | | | ● | ● | | ● | ● | | | F60 | |
| S...CSKP | | Steel L/D \sim 3 | | | Positive | | | | | | | | | | ● | ● | | ● | ● | | | | | |

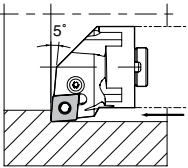
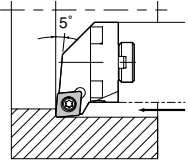
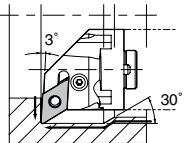
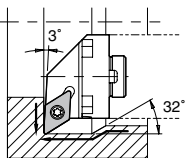
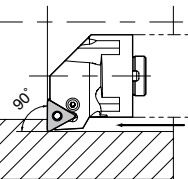
For Min.Bore Dia. ϕA , the figure under ● may be applied depending on the toolholder type.

F



Boring

AD Bar Interchangeable Head Boring Bars with Anti-vibration Dampener System

| Application | Boring Bar Type | Shape | Shank Type Max. Overhang Length (L/D) | Coolant Hole | | Insert Type | Min. Bore Dia. ϕA | | | | | | | | | | | | | | | | Ref. Page for Toolholder |
|--------------------------|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------|--------------|----|-------------|-------------------------|---|----|----|----|----|----|----|----|----|----|----|----|----|----|---|--------------------------------|
| | | | | Yes | No | | 7 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 25 | 30 | 32 | 40 | 43 | 50 | 63 | | |
| Boring / Internal Facing | HA---PCLN12 |  | <div>Anti-Vibration Dampener</div> L/D=~-5.5 | ● | | Negative | | | | | | | | | | | | | ● | | ● | ● | F64 |
| | HA---SCLC09 |  | <div>Anti-Vibration Dampener</div> L/D=~-6 | ● | | Positive | | | | | | | | | | | | | ● | | | | F66 |
| Copying | HA---PDUN15 |  | <div>Anti-Vibration Dampener</div> L/D=~-6 | ● | | Negative | | | | | | | | | | | | | | ● | ● | ● | F65 |
| | HA---SDUC11 |  | <div>Anti-Vibration Dampener</div> L/D=~-6 | ● | | Positive | | | | | | | | | | | | | ● | | | | F66 |
| Boring | HA---PTFN16 |  | <div>Anti-Vibration Dampener</div> L/D=~-6 | ● | | Negative | | | | | | | | | | | | | ● | | ● | ● | F65 |

Toolholders for Bearing Machining (Square Shank)







| Application | Boring Bar Type | Shape | Min. Bore Dia. ϕA | | | | | | Ref. Page for Toolholder |
|-------------|-----------------|-------|-------------------------|----|----|----|----|----|--------------------------------|
| | | | 20 | 25 | 30 | 32 | 40 | 50 | |
| Boring | SRCP-B | | ● | | | ● | | | F63 |

| Application | Boring Bar Type | Shape | Min. Bore Dia. ϕA | | | | | | Ref. Page for Toolholder |
|------------------|-----------------|-------|-------------------------|----|----|----|----|----|--------------------------------|
| | | | 20 | 25 | 30 | 32 | 40 | 50 | |
| Round-Chamfering | CBSN-B | | ● | | | | | | F63 |

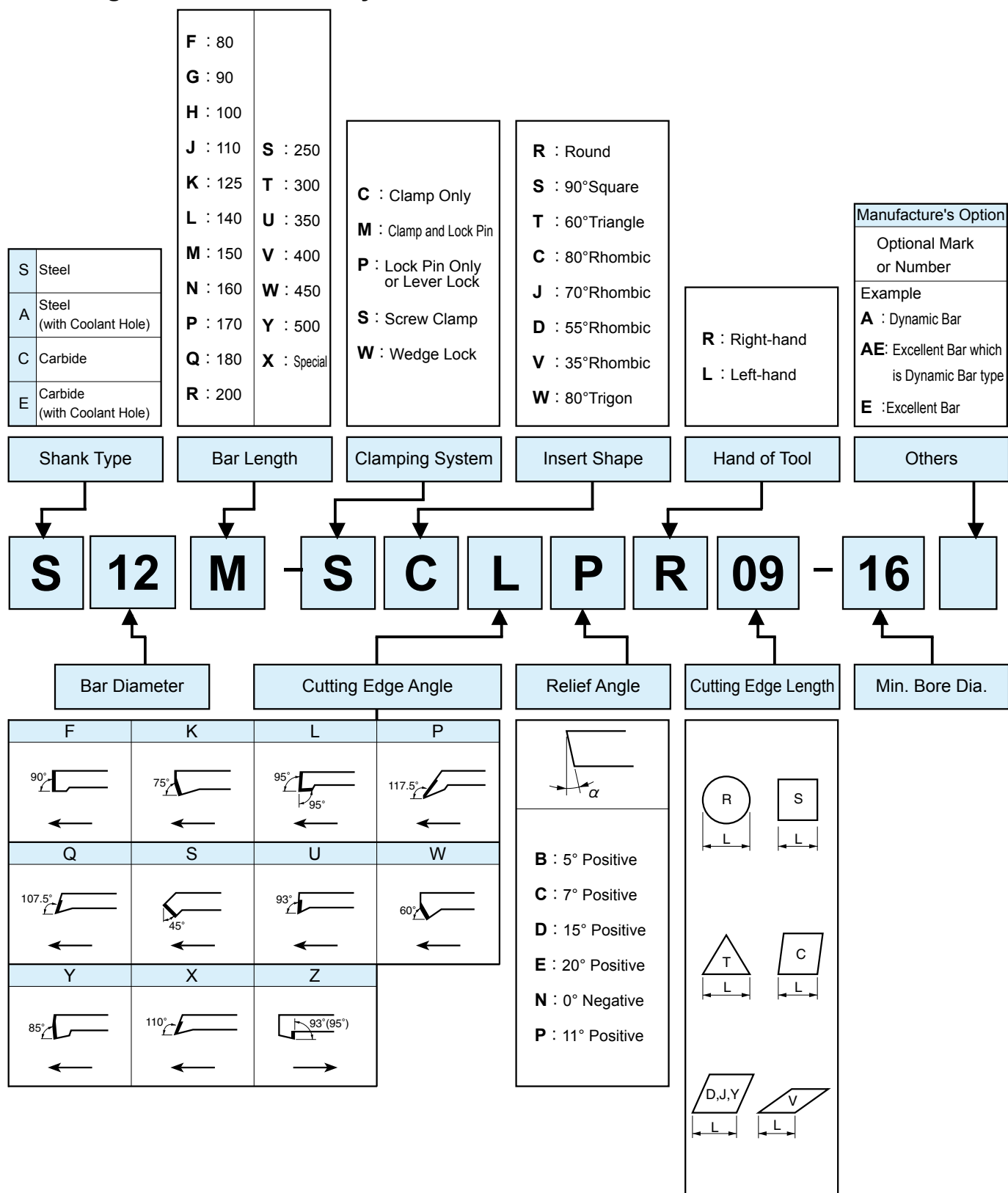
Boring Bars for Ceramic / Solid CBN Tools (L/D=~3)

| Application | Boring Bar Type | Shape | Min. Bore Dia. ϕA | | | | | | | | Ref. Page for Toolholder |
|------------------------------------|-----------------|-------|-------------------------|----|----|----|----|----|----|----|--------------------------------|
| | | | 16 | 18 | 20 | 25 | 30 | 32 | 40 | 50 | |
| Boring / Internal Facing Machining | S...CELN | | | | | | | | | ● | F73 |
| Boring | S...CTUP | | ● | | | ● | | ● | ● | ● | F61 |
| | S...CTUC | | | | | | | | | ● | F73 |
| | S...CSKP | | | | | ● | ● | ● | ● | | F60 |
| | S...CSKN | | | | | | | | | ● | F73 |

For Min. Bore Dia. ϕA , the figure under ● may be applied depending on the toolholder type.

| Application | Boring Bar Type | Shape | Min. Bore Dia. ϕA | | | | | | Ref. Page for Toolholder | |
|---------------------------------------------|-----------------|---------------------------------------------------------------------------------------|-------------------------|----|----|----|----|----|--------------------------------|-----|
| | | | 20 | 25 | 30 | 32 | 40 | 50 | | |
| Boring / Internal Facing Machining | S...CCLN-GX |  | | | | | | ● | ● | F74 |
| Boring / Copying Machining | S...CDUN-GX |  | | | | | | ● | ● | F74 |
| Boring Machining | S...CSKN-GX |  | | | | | | ● | ● | F74 |
| Boring / Internal Facing Machining | S...CCLN-A |  | | | | ● | | ● | | F75 |
| Boring | S...CTUN-A |  | | | | ● | | | | F75 |
| | S...CSKN-A |  | | | | ● | | ● | | F75 |

■ Boring Bar Identification System (Round Shank)



● Anti-vibration interchangeable head mechanism Boring Bar “AD Bar”

For boring interchangeable head identification system, see page [F64](#).

Twin Bar


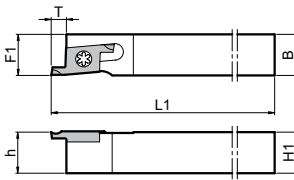
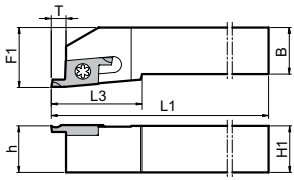
TWB (Micro Boring : Lay-down type) [Corner-R (rε) Tolerance: +0/-0.02mm, +0/-0.03mm]

| Description | Min. Bore Dia. | Dimension (mm) | | | Insert Grade | |
|---------------------------------------------------------------------------|----------------|----------------|------|----------|--------------|--------------------|
| | | øA | F | S | rε | PVD Coated Carbide |
| | | | | | | |
| TWBR 01003-005 01503-005 02003-005 02503-005 03003-005 | 1.0 | 0.85 | 0.2 | +0/-0.02 | PR1025 | KW10 |
| | 1.5 | 1.30 | 0.2 | | | |
| | 2.0 | 1.75 | 0.25 | | | |
| | 2.5 | 2.10 | 0.3 | | | |
| | 3.0 | 2.40 | 0.4 | | | |
| TWBR 01503-010 02003-010 02503-010 03003-010 | 1.5 | 1.30 | 0.2 | +0/-0.03 | PR1025 | KW10 |
| | 2.0 | 1.75 | 0.25 | | | |
| | 2.5 | 2.10 | 0.3 | | | |
| | 3.0 | 2.30 | 0.4 | | | |

• Right-hand shown

STW (Square shank for Lay-down type insert)

(For Left-hand toolholder for grooving, please see G66.)

| | | |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |
| | | |

• Right-hand shown


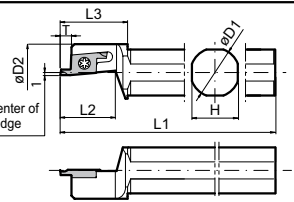
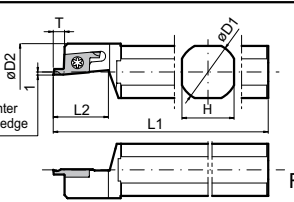
R-hand Insert for R-hand Toolholder, L-hand Insert for L-hand Toolholder.

Toolholder Dimensions

| Description | Std. | Dimension (mm) | | | | | | | | Drawing | Spare Parts | | Applicable Insert |
|----------------------------------------------------------------------------------------------|------|----------------|----|-----|----|----|----|----|---|---------|-------------|---------|-------------------|
| | | H1=h | B | L1 | L2 | L3 | F1 | F2 | T | | Clamp Screw | Wrench | |
| STWR 1010F-15 1212F-15 1010K-15 1212K-15 1616K-15 2020K-15 2525M-15 | □ | 10 | 10 | 80 | - | - | 10 | - | - | Fig.1 | SB-3080TR | LTW-10S | TWBR ○○○○○○ - ○○○ |
| | ● | 12 | 12 | 80 | - | - | 12 | - | - | | | | |
| | □ | 10 | 10 | 125 | - | - | 10 | - | 3 | Fig.2 | SB-3080TR | LTW-10S | TWBR ○○○○○○ - ○○○ |
| | ● | 12 | 12 | 125 | - | - | 12 | - | 3 | | | | |
| | ● | 16 | 16 | 125 | - | - | 16 | - | 3 | | | | |
| | ● | 20 | 20 | 125 | - | - | 20 | - | 3 | | | | |
| | ● | 25 | 25 | 150 | - | - | 25 | - | 3 | | | | |

S.-STW (Round shank for Lay-down type insert)

(For Left-hand toolholder for grooving, please see G66.)

| | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |
| | | |

• Right-hand shown

R-hand Insert for R-hand Toolholder, L-hand Insert for L-hand Toolholder.

Toolholder Dimensions

| Description | Std. | Dimension (mm) | | | | | | | Drawing | Spare Parts | | Applicable Insert |
|-----------------------|------|----------------|------|----|-----|----|----|---|---------|-------------|---------|-------------------|
| | | øD1 | øD2 | H | L1 | L2 | L3 | T | | Clamp Screw | Wrench | |
| S12F- STWR15 | ● | 12 | 20 | 11 | 80 | 18 | 22 | 3 | Fig.1 | SB-3080TR | LTW-10S | TWBR ○○○○○○ - ○○○ |
| S14H- STWR15 | ● | 14 | | 13 | 100 | | | | | | | |
| S15F- STWR15 | ● | 15.875 | | 15 | 85 | | | | | | | |
| S16F- STWR15 | ● | 16 | | 15 | 85 | | | | | | | |
| S19G- STWR15 | ● | 19.05 | 18.5 | 17 | 90 | 22 | 22 | 3 | Fig.2 | SB-3080TR | LTW-10S | TWBR ○○○○○○ - ○○○ |
| S19K- STWR15 | ● | 19.05 | 18.5 | 17 | 120 | | | | | | | |
| S20G- STWR15 | ● | 20 | 19.5 | 18 | 90 | | | | | | | |
| S20K- STWR15 | ● | 20 | 19.5 | 18 | 120 | | | | | | | |
| S22K- STWR15 | ● | 22 | 21.5 | 20 | 125 | 22 | 22 | 3 | Fig.2 | SB-3080TR | LTW-10S | TWBR ○○○○○○ - ○○○ |
| S25.0J- STWR15 | ● | 25 | 24.5 | 23 | 110 | | | | | | | |
| S25K- STWR15 | ● | 25.4 | 25 | 23 | 120 | | | | | | | |


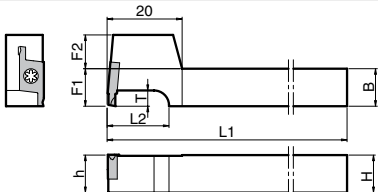
Twin Bars are sold in 5 piece boxes.

● : Std. Item ○ : Check Availability □ : Deleted from the next catalogue




TWBT (Micro Boring : Up-right type) [Corner-R (r_ε) Tolerance: +0/-0.02mm, +0/-0.03mm]

| Description | Min. Bore Dia. | Dimension (mm) | | | | Insert Grade | |
|--------------------------------------------------------------------------------------------------------|----------------|----------------|-----|------|----------------|--------------------|------|
| | | øA | F | S | r _ε | PVD Coated Carbide | |
| | | | | | | PR1025 | KW10 |
| TWBTR 01003-005 01503-005 02003-005 02503-005 03003-005 | 1.0 | 0.85 | 0.2 | 0.05 | +0/-0.02 | ● | □ |
| | 1.5 | 1.30 | | | | ● | □ |
| | 2.0 | 1.75 | | | | ● | □ |
| | 2.5 | 2.10 | | | | ● | □ |
| | 3.0 | 2.30 | | | | ● | □ |
| TWBTR 01503-010 02003-010 02503-010 03003-010 | 1.5 | 1.30 | 0.2 | 0.1 | +0/-0.03 | ● | □ |
| | 2.0 | 1.75 | | | | ● | □ |
| | 2.5 | 2.10 | | | | ● | □ |
| | 3.0 | 2.30 | | | | ● | □ |

STWS (Square shank for Up-right type insert: L-shape type)

| | | |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------|
|  |  | ● Right-hand shown |
| | | |

● Toolholder Dimensions

| Description | | Std. | Dimension (mm) | | | | | | | | | Drawing | Spare Parts | | Applicable Insert | |
|-------------|------------|------|----------------|----|-----|----|----|----|----|---|---|-----------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----|
| | | | H1=h | B | L1 | L2 | L3 | F1 | F2 | T | | | Clamp Screw | Wrench |  | |
| | | | | | | | | | | | | |  |  | | |
| STWSR | 1010JX-15T | ● | 10 | 10 | 120 | 16 | - | 10 | 9 | 3 | - | SB-3080TR | LTW-10S | TWBTR ○○○○○○ - ○○○○ TWFGTR ○○○○ | | |
| | 1212JX-15T | ● | 12 | 12 | | | | 12 | 7 | | | | | | | |
| | 1616JX-15T | ● | 16 | 16 | | 20 | | 16 | 3 | | | | | | | |
| STWSR | 1010F-15T | ● | 10 | 10 | 85 | 16 | - | 10 | 9 | 3 | - | SB-3080TR | LTW-10S | TWBTR ○○○○○○ - ○○○○ TWFGTR ○○○○ | | |
| | 1212F-15T | ● | 12 | 12 | | | | | | | | | | | 12 | 7 |
| | 1010K-15T | □ | 10 | 10 | | | | | | | | | | | 10 | 9 |
| | 1212K-15T | □ | 12 | 12 | 125 | 20 | | 12 | 7 | 3 | | | SB-3080TR | LTW-10S | TWBTR ○○○○○○ - ○○○○ TWFGTR ○○○○ | |
| | 1616K-15T | □ | 16 | 16 | | | | | | | | | | | | 16 |

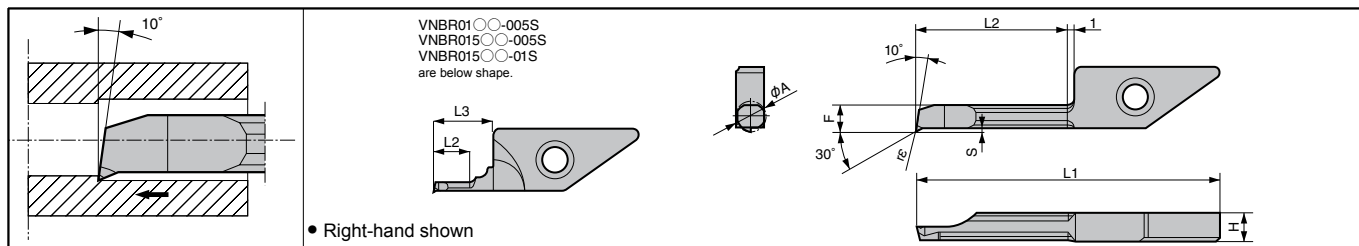
◆ Recommended Cutting Conditions

| Workpiece Material | Recommended Insert Grade (Cutting Speed: m/min) | | TWBR01003 Type TWBR01503 Type TWBTR01003 Type TWBTR01503 Type | | TWBR02003 Type TWBR02503 Type TWBR03003 Type TWBTR02003 Type TWBTR02503 Type TWBTR03003 Type | | Remarks |
|--------------------|----------------------------------------------------|-----------|------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------------------------------|-------|---------|
| | PVD Coated Carbide | Carbide | | | | | |
| | PR1025 | KW10 | Cut: ap (mm), Feed: f (mm/rev) | | | | |
| | | | ap | f | ap | f | |
| Carbon Steel | ★ 30~100 | | ~0.1 | ~0.01 | ~0.2 | ~0.03 | Coolant |
| Alloy Steel | | | | | | | |
| Stainless Steel | ★ 30~80 | | ~0.1 | ~0.01 | ~0.2 | ~0.02 | |
| Non-ferrous Metals | | ★ ~100 | ~0.1 | ~0.02 | ~0.2 | ~0.05 | |

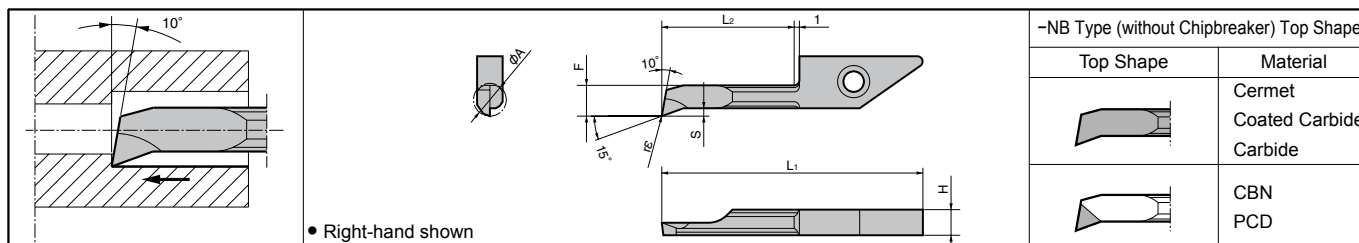
★ : 1st Recommendation

System Tip-Bar

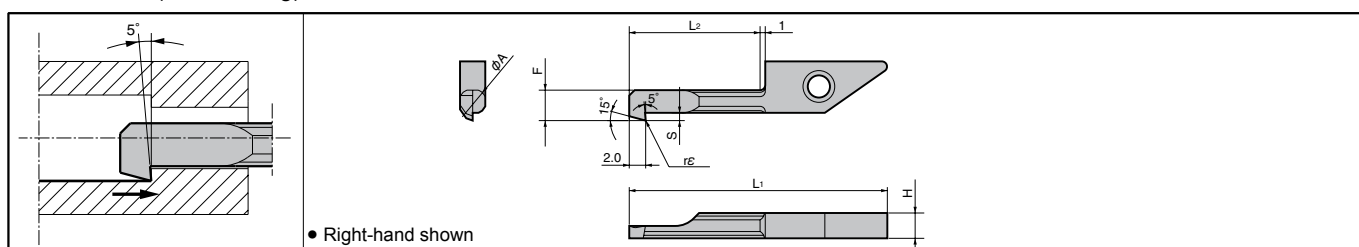
VNB-S (Boring) [Corner-R (rε): Minus tolerance]



VNB (Boring)



VNBT (Back Boring)



Insert Dimensions

| Description | | Min. Bore Dia. | Dimension (mm) | | | | | | | Insert Grade | | | | | | | |
|-------------|-------------|----------------------|----------------|------|-----|------|------|------|----------------------------------------|--------------|-----------------------|------|---------------------------------------|-------|------|--------|--------|
| | | | | | | | | | | Cermet | PVD Coated Carbide | | Carbide | CBN | PCD | | |
| | | | øA | H | L1 | L2 | L3 | F | S | rε | | TC60 | PR915 | PR930 | KW10 | KBN510 | KPD001 |
| VNBR | 0103-005S | 1.0 | 3.9 | 26.5 | 3 | 7 | 0.85 | 0.2 | ⁺⁰ _{-0.02} 0.05 | | | | ● | | | | |
| | 0105-005S | | | | 5 | | | | | | | | | | | | |
| | 01503-005S | 1.5 | | | 3 | 1.3 | | | | | ● | | | | | | |
| | 01505-005S | | | | 5 | | | | | | | | | | | | |
| | 0206-005S | 2.0 | | | 6 | - | 1.8 | 0.25 | | | | | ● | | | | |
| | 025075-005S | 2.5 | | 28.1 | 7.5 | | 2.1 | 0.4 | | | | | ● | | | | |
| | 0311-005S | 3.0 | | 30.8 | 11 | | 2.6 | 0.4 | | | | | ● | | | | |
| | 03515-005S | 3.5 | | 34.8 | 15 | | 2.9 | 0.5 | | | | | ● | | | | |
| | 0411-005S | 4.0 | | 30.8 | 11 | | 3.5 | 0.5 | | | | | ● | | | | |
| | 0420-005S | | | 39.8 | 20 | | | | | | | ● | | | | | |
| VNBR | 01503-01S | 1.5 | 3.9 | 26.5 | 3 | 7 | 1.3 | 0.2 | ⁺⁰ _{-0.03} 0.1 | | | | ● | | | | |
| | 01505-01S | | | | 5 | | | | | | | | | | | | |
| | 0206-01S | 2.0 | | | 6 | 1.8 | 0.25 | | | | | ● | | | | | |
| | 025075-01S | 2.5 | | 28.1 | 7.5 | 2.1 | 0.4 | | | | | ● | | | | | |
| | 0311-01S | 3.0 | | 30.8 | 11 | 2.6 | 0.4 | | | | | ● | | | | | |
| | 03515-01S | 3.5 | | 34.8 | 15 | 2.9 | 0.5 | | | | | ● | | | | | |
| | 0411-01S | 4.0 | | 30.8 | 11 | 3.5 | 0.5 | | | | | ● | | | | | |
| | 0420-01S | | | 39.8 | 20 | | | | | | | ● | | | | | |
| | VNBR | 0411-02S | | 4.0 | 3.9 | 30.8 | 11 | - | | | 3.5 | 0.5 | ⁺⁰ _{-0.04} 0.2 | | | | ● |
| 0420-02S | | 39.8 | 20 | | | | | | ● | | | | | | | | |

Recommended Cutting Conditions (In the case of VNB-S)

| Workpiece Material | Recommended Insert Grade (Cutting Speed: m/min) | | | | | | | VNB01-S Type VNB015-S Type | | VNB02-S Type } VNB04-S Type | | Remarks |
|----------------------------|-------------------------------------------------|--------------------|-------------|---------|--------|--------|--------|--------------------------------|-------|-----------------------------------|-------|---------|
| | Cermet | PVD Coated Carbide | | Carbide | CBN | PCD | | | | | | |
| | TC60 | PR915 | PR930 | KW10 | KBN510 | KPD001 | KPD010 | Cut: ap (mm), Feed: f (mm/rev) | | | | |
| | | | | | | | | ap | | f | | |
| | | | | | | | | ap | | f | | |
| Carbon Steel / Alloy Steel | | | ★ 30~100 | | | | | ~0.1 | ~0.01 | ~0.2 | ~0.03 | Coolant |
| Stainless Steel | | | ★ 30~80 | | | | | ~0.1 | ~0.01 | ~0.2 | ~0.02 | |

★ : 1st Recommendation
● : Std. Item ○ : Check Availability

● Insert Dimensions

| Description | | Min. Bore Dia. | Dimension (mm) | | | | | | | | Insert Grade | | | | | | |
|-------------|------------|-------------------|----------------|------|----|-----|------|------|----|--|--------------|-----------------------|-------|---------|------|--------|--------|
| | | | | | | | | | | | Cermet | PVD Coated Carbide | | Carbide | CBN | PCD | |
| | | | øA | H | L1 | L2 | F | S | rε | | | TC60 | PR915 | PR930 | KW10 | KBN510 | KPD001 |
| VNBR | 0206-003 | 2 | 3.9 | 26.5 | 6 | 1.8 | 0.25 | 0.03 | | | | | ● | ● | | | |
| | 0311-003 | 3 | | 30.8 | 11 | 2.6 | 0.4 | | | | | | ● | ● | | | |
| | 0411-003 | 4 | | 30.8 | 11 | 3.5 | 0.5 | | | | ● | | ● | ● | | | |
| | 0420-003 | | | 39.8 | 20 | | | | | | ● | ● | | | | | |
| | 0511-003 | 5 | | 30.8 | 11 | 4.5 | 0.7 | | | | ● | | ● | ● | | | |
| | 0520-003 | 6 | | 39.8 | 20 | 5.3 | 1.0 | | | | ● | | ● | ● | | | |
| | 0620-003 | | | 39.8 | 20 | | | | | | ● | | ● | ● | | | |
| | 0630-003 | | | 49.8 | 30 | | | | | | ● | | ● | ● | | | |
| | 0720-003 | 7 | | 39.8 | 20 | 6.2 | 1.0 | | | | □ | | ● | ● | | | |
| | 0730-003 | | | 49.8 | 30 | | | | | | □ | | ● | ● | | | |
| VNBR | 0206-02 | 2 | 3.9 | 26.5 | 6 | 1.8 | 0.25 | 0.2 | | | | | ● | ● | | | |
| | 0311-02 | 3 | | 30.8 | 11 | 2.6 | 0.4 | | | | | □ | ● | ● | | | |
| | 0411-02 | 4 | | 30.8 | 11 | 3.5 | 0.5 | | | | | □ | ● | ● | | | |
| | 0420-02 | | | 39.8 | 20 | | | | | | ● | ● | | | | | |
| | 0511-02 | 5 | | 30.8 | 11 | 4.5 | 0.7 | | | | | | ● | ● | | | |
| | 0520-02 | 6 | | 39.8 | 20 | 5.3 | 1.0 | | | | | | ● | ● | | | |
| | 0620-02 | | | 39.8 | 20 | | | | | | ● | | ● | ● | | | |
| | 0630-02 | | | 49.8 | 30 | | | | | | ● | | ● | ● | | | |
| | 0720-02 | 7 | | 39.8 | 20 | 6.2 | 1.0 | | | | | | ● | ● | | | |
| | 0730-02 | | | 49.8 | 30 | | | | | | ● | | ● | ● | | | |
| VNBR | 0206-01 | 2 | 3.9 | 26.5 | 6 | 1.8 | 0.25 | 0.1 | | | | | ● | ● | | | |
| | 0311-01 | 3 | | 30.8 | 11 | 2.6 | 0.4 | | | | | | ● | ● | | | |
| | 0411-01 | 4 | | 30.8 | 11 | 3.5 | 0.5 | | | | | | ● | ● | | | |
| | 0420-01 | | | 39.8 | 20 | | | | | | ● | ● | | | | | |
| | 0511-01 | 5 | | 30.8 | 11 | 4.5 | 0.7 | | | | | | ● | ● | | | |
| | 0520-01 | 6 | | 39.8 | 20 | 5.3 | 1.0 | | | | | | ● | ● | | | |
| | 0620-01 | | | 39.8 | 20 | | | | | | ● | | ● | ● | | | |
| | 0630-01 | | | 49.8 | 30 | | | | | | ● | | □ | ● | | | |
| | 0720-01 | 7 | | 39.8 | 20 | 6.2 | 1.0 | | | | | | ● | ● | | | |
| | 0730-01 | | | 49.8 | 30 | | | | | | ● | | □ | ● | | | |
| VNBR | 0206-003NB | 2 | 3.9 | 26.5 | 6 | 1.8 | 0.25 | 0.03 | | | | | ● | ● | | | |
| | 0311-003NB | 3 | | 30.8 | 11 | 2.6 | 0.4 | | | | | | ● | ● | | | |
| | 0411-003NB | 4 | | 30.8 | 11 | 3.5 | 0.5 | | | | | | ● | ● | | | |
| | 0420-003NB | | | 39.8 | 20 | | | | | | ● | ● | | | | | |
| | 0511-003NB | 5 | | 30.8 | 11 | 4.5 | 0.7 | | | | | | ● | ● | | | |
| | 0520-003NB | 6 | | 39.8 | 20 | 5.3 | 1.0 | | | | | | ● | ● | | | |
| | 0620-003NB | | | 39.8 | 20 | | | | | | ● | | ● | ● | | | |
| | 0630-003NB | | | 49.8 | 30 | | | | | | ● | | ● | ● | | | |
| | 0720-003NB | 7 | | 39.8 | 20 | 6.2 | 1.0 | | | | | | ● | ● | | | |
| | 0730-003NB | | | 49.8 | 30 | | | | | | ● | | ● | ● | | | |
| VNBR | 0206-02NB | 2 | 3.9 | 26.5 | 6 | 1.8 | 0.25 | 0.2 | | | | | | ● | | | |
| | 0311-02NB | 3 | | 30.8 | 11 | 2.6 | 0.4 | | | | | | | ● | | | |
| | 0411-02NB | 4 | | 30.8 | 11 | 3.5 | 0.5 | | | | | | | ● | | ● | ● |
| | 0420-02NB | | | 39.8 | 20 | | | | | | ● | ● | | | | | |
| | 0511-02NB | 5 | | 30.8 | 11 | 4.5 | 0.7 | | | | | | | ● | | ● | ● |
| | 0520-02NB | 6 | | 39.8 | 20 | 5.3 | 1.0 | | | | | | | ● | | ● | ● |
| | 0620-02NB | | | 39.8 | 20 | | | | | | ● | | ● | ● | | | |
| | 0630-02NB | | | 49.8 | 30 | | | | | | ● | | ● | ● | | | |
| | 0720-02NB | 7 | | 39.8 | 20 | 6.2 | 1.0 | | | | | | | ● | | ● | ● |
| | 0730-02NB | | | 49.8 | 30 | | | | | | ● | | ● | ● | | | |
| VNBTR | 0411-003 | 4 | 3.9 | 30.8 | 11 | 3.6 | 1.0 | 0.03 | | | | | ● | ● | | | |
| | 0420-003 | | | 39.8 | 20 | | | | | | | | ● | ● | | | |
| | 0511-003 | 5 | | 30.8 | 11 | 4.6 | 1.3 | | | | | | ● | ● | | | |
| | 0520-003 | | | 39.8 | 20 | | | | | | ● | ● | | | | | |
| VNBTR | 0411-01 | 4 | 3.9 | 30.8 | 11 | 3.6 | 1.0 | 0.1 | | | | | ● | ● | | | |
| | 0420-01 | | | 39.8 | 20 | | | | | | | | ● | ● | | | |
| | 0511-01 | 5 | | 30.8 | 11 | 4.6 | 1.3 | | | | | | ● | ● | | | |
| | 0520-01 | | | 39.8 | 20 | | | | | | ● | ● | | | | | |

◆ Recommended Cutting Conditions (In the case of VNB / VNB-NB / VNBT)

| Workpiece Material | Recommended Insert Grade (Cutting Speed: m/min) | | | | | | | VNB02 Type | | VNB03 Type | | VNB04 VNB04 Type | | VNB05 VNB06 VNB07 VNB05 Type | | Remarks |
|----------------------------|-------------------------------------------------|--------------------|-------------|-----------|--------|-----------|-----------|------------|-------|------------|-------|---------------------|-------|---------------------------------------|-------|---------|
| | Cermet | PVD Coated Carbide | | Carbide | CBN | PCD | | | | | | | | | | |
| | TC60 | PR915 | PR930 | KW10 | KBN510 | KPD001 | KPD010 | | | | | | | | | |
| | Cut: ap(mm), Feed: f(mm/rev) | | | | | | | ap | f | ap | f | ap | f | | | |
| | ap | f | ap | f | ap | f | ap | f | | | | | | | | |
| Carbon Steel / Alloy Steel | ☆ 60~120 | ☆ 50~150 | ★ 30~100 | | | | | ~0.3 | ~0.03 | ~0.4 | ~0.04 | ~0.45 | ~0.07 | ~0.5 | ~0.1 | Coolant |
| Stainless Steel | ☆ 50~100 | ☆ 50~150 | ★ 30~80 | | | | | ~0.3 | ~0.02 | ~0.4 | ~0.03 | ~0.45 | ~0.05 | ~0.5 | ~0.07 | |
| Non-ferrous Metals | | | | ☆ ~100 | | ★ ~300 | ☆ ~300 | ~0.3 | ~0.05 | ~0.4 | ~0.06 | ~0.45 | ~0.1 | ~0.5 | ~0.15 | |

★ : 1st Recommendation ☆ : 2nd Recommendation

● : Std. Item ○ : Check Availability □ : Deleted from the next catalogue

System-Tip-Bars are sold in 5 piece boxes.

F



Boring

System Tip-Bar

SVN-N (without side stopper)

SVNS-N (without side stopper / without setscrew)

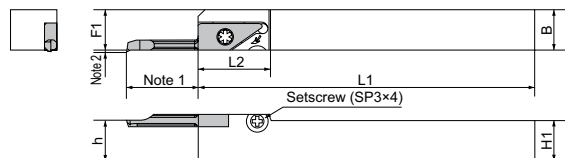


Fig.1 (SVN-N)

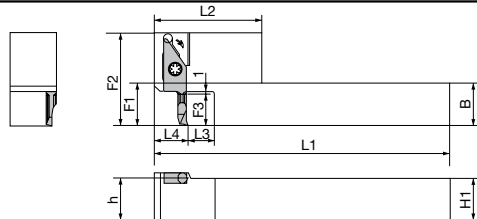


Fig.2 (SVNS-N)

• Right-hand shown

R-hand Insert for R-hand Toolholder.

Note 1 & Note 2 : For insert dimensions, see page [F14~F15](#)

Toolholder Dimensions

| Description | Std. | Dimension (mm) | | | | | | | | | | Drawing | Spare Parts | | | Applicable Inserts |
|---------------------|---------------------|----------------|--------|-----|--------------|----|----|----|---------------|----|-------------------------------------------------------------------------------------------|---------|-------------|----------|-------|--------------------|
| | | H1=h | B | L1 | L2 | L3 | L4 | F1 | F2 | F3 | Clamp Screw | | Wrench | Setscrew | | |
| | | | FT | | | | | | | | | | | | | |
| SVNR | 1010H-12N | ● | 10 | 10 | 100 | 22 | - | - | 10 | - | - | Fig.1 | SB-3080TR | FT-10 | SP3×4 | VNBR○○○○-○○○ |
| 1212K-12N | ● | 12 | 12 | | 12 | | | | VNBTR○○○○-○○○ | | | | | | | |
| 1616K-12N | ● | 16 | 16 | 125 | 16 | | | | VNGR○○○○-○○ | | | | | | | |
| 2020K-12N | ● | 20 | 20 | | 20 | | | | VNFR○○○○-○○ | | | | | | | |
| 2525M-12N | ● | 25 | 25 | 150 | 25 | | | | VNTR○○○-○○ | | | | | | | |
| SVNSR | 1010K-12-06N | ● | 10 | 10 | 125 | 45 | 10 | 12 | 10 | 29 | 6 | Fig.2 | SB-3080TR | LTW-10S | - | (VNBR○○06-○○○)* |
| 1010K-12-11N | ● | 10 | 10 | 125 | 10 | | 12 | 10 | 33 | 11 | (VNBR○○11-○○○)* (VNBTR○○11-○○○)* (VNGR○○○○-11)* (VNTR○○○-11)* | | | | | |
| 1212M-12-06N | ● | 12 | 12 | 150 | 10 | | 12 | 12 | 29 | 6 | (VNBR○○06-○○○)* (VNBR○○11-○○○)* (VNBTR○○11-○○○)* (VNGR○○○○-11)* (VNTR○○○-11)* | | | | | |
| 1212M-12-11N | ● | 12 | 12 | 150 | 10 | | 12 | 12 | 33 | 11 | (VNBR○○20-○○○)* (VNBTR○○20-○○○)* (VNGR○○○○-20)* | | | | | |
| 1212M-12-20N | ● | 12 | 12 | 150 | 10 | | 13 | 12 | 42 | 20 | (VNBR○○06-○○○)* (VNBR○○11-○○○)* (VNBTR○○11-○○○)* (VNGR○○○○-11)* (VNTR○○○-11)* | | | | | |
| 1616M-12-06N | ● | 16 | 16 | 150 | 16 | | 12 | 16 | 29 | 6 | (VNBR○○20-○○○)* (VNBTR○○20-○○○)* (VNGR○○○○-20)* | | | | | |
| 1616M-12-11N | ● | 16 | 16 | 150 | 16 | | 12 | 16 | 33 | 11 | (VNBR○○06-○○○)* (VNBR○○11-○○○)* (VNBTR○○11-○○○)* (VNGR○○○○-11)* (VNTR○○○-11)* | | | | | |
| 1616M-12-20N | ● | 16 | 16 | 150 | 16 | | 13 | 16 | 42 | 20 | (VNBR○○20-○○○)* (VNBTR○○20-○○○)* (VNGR○○○○-20)* | | | | | |

- SVN-N (without side stopper) retains high index accuracy by simple restraint.
- SVN-N (without side stopper) has a setscrew SP3X4. Changing the setscrew SP3X4 to a screw HS3X4 (sold separately) enables the holder to be used as a binding effect holder like with the side stopper holder.
- In case of machining insert emphasizing on binding effect, (e.g. varying loading direction of under cutting, internal and external or face cutting by one tool) please use [SVN and SVNS Holders] with attached side stoppers.

All System Tip-Bar Inserts are used with a SVNSR-N Toolholder, however, When setting the cutting edge at the face level of the toolholder as shown in Fig.2, use the insert shown in (). In these cases, the F3 dimension of the toolholder corresponds to the L2 dimension of the insert.

Spare Parts (Optional)

| Screw (Side Stopper) | Wrench |
|-------------------------|--------|
| | |
| HS3x4 | LW-1.5 |

● : Std. Item ○ : Check Availability

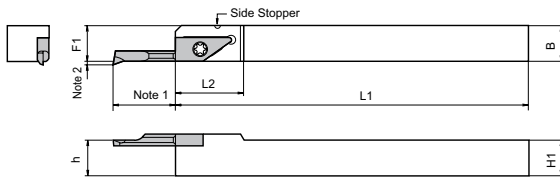
SVN Square Shank (Straight)**SVNS** Square Shank (L-shape)

Fig.1 (SVN)

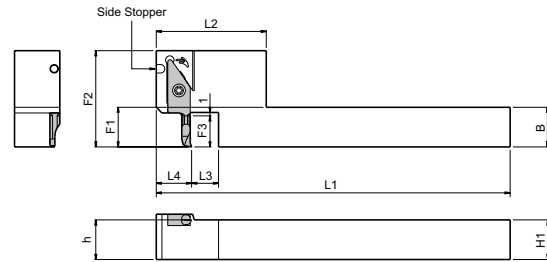






Fig.2 (SVNS)

• Right-hand shown

R-hand Insert for R-hand Toolholder.

Note 1 & Note 2 : For insert dimensions, see page [F14~F15](#)

● Toolholder Dimensions

| Description | Std. | Dimension (mm) | | | | | | | | | | Drawing | Spare Parts | | | | Applicable Inserts | | | |
|--------------------------|--------------------------|----------------|----|-----|----|------|------|---------------|----|-----------|-----------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------|-------|--------|-------------------------------------------------------------------------------------------|
| | | H1=h | B | L1 | L2 | L3 | L4 | F1 | F2 | F3 | Clamp Screw | | Wrench | Screw (Side Stopper) | Wrench | | | | | |
| | | | | | | | | | | |  | |  |  |  | | | | | |
| SVNR 1010H-12 | <input type="checkbox"/> | 10 | 10 | 100 | 22 | - | - | 10 | - | - | Fig.1 | SB-3080TR | FT-10 | HS3×4 | LW-1.5 | VNBR○○○○-○○○ | | | | |
| 1212K-12 | <input type="checkbox"/> | 12 | 12 | 12 | | | | VNBTR○○○○-○○○ | | | | | | | | | | | | |
| 1616K-12 | <input type="checkbox"/> | 16 | 16 | 125 | | | | 16 | | | | | | VNGR○○○○-○○ | | | | | | |
| 2020K-12 | <input type="checkbox"/> | 20 | 20 | 20 | | | | VNFRG○○○○-○○ | | | | | | | | | | | | |
| 2525M-12 | <input type="checkbox"/> | 25 | 25 | 150 | | | | 25 | | | | | | VNTR○○○-○○ | | | | | | |
| SVNSR 1010K-12-06 | <input type="checkbox"/> | 10 | 10 | 125 | 45 | 10 | 12 | 10 | 29 | 6 | Fig.2 | SB-3080TR | LTW-10S | HS3×4 | LW-1.5 | (VNBR○○06-○○○)* | | | | |
| 1010K-12-11 | <input type="checkbox"/> | 10 | 10 | 125 | | 10 | 12 | 10 | 33 | 11 | | | | | | (VNBR○○11-○○○)* (VNBTR○○11-○○○)* (VNGR○○○○-11)* (VNTR○○○-11)* | | | | |
| 1212M-12-06 | <input type="checkbox"/> | 12 | 12 | 150 | 45 | 10 | 12 | 12 | 29 | 6 | | SB-3080TR | LTW-10S | HS3×4 | LW-1.5 | (VNBR○○06-○○○)* (VNBR○○11-○○○)* (VNBTR○○11-○○○)* (VNGR○○○○-11)* (VNTR○○○-11)* | | | | |
| 1212M-12-11 | <input type="checkbox"/> | 12 | 12 | 150 | | 10 | 12 | 12 | 33 | 11 | | | | | | (VNBR○○20-○○○)* (VNBTR○○20-○○○)* (VNGR○○○○-20)* | | | | |
| 1212M-12-20 | <input type="checkbox"/> | 12 | 12 | 150 | | 10 | 12.5 | 12 | 42 | 20 | | | | | | SB-3080TR | LTW-10S | HS3×4 | LW-1.5 | (VNBR○○06-○○○)* (VNBR○○11-○○○)* (VNBTR○○11-○○○)* (VNGR○○○○-11)* (VNTR○○○-11)* |
| 1616M-12-06 | <input type="checkbox"/> | 16 | 16 | 150 | | 16 | 12 | 16 | 29 | 6 | | | | | | | | | | (VNBR○○20-○○○)* (VNBTR○○20-○○○)* (VNGR○○○○-20)* |
| 1616M-12-11 | <input type="checkbox"/> | 16 | 16 | 150 | 16 | 12 | 16 | 33 | 11 | SB-3080TR | | LTW-10S | HS3×4 | LW-1.5 | (VNBR○○06-○○○)* (VNBR○○11-○○○)* (VNBTR○○11-○○○)* (VNGR○○○○-11)* (VNTR○○○-11)* | | | | | |
| 1616M-12-20 | <input type="checkbox"/> | 16 | 16 | 150 | 16 | 12.5 | 16 | 42 | 20 | | | | | | (VNBR○○20-○○○)* (VNBTR○○20-○○○)* (VNGR○○○○-20)* | | | | | |

All System Tip-Bar Inserts are used with a SVNSR Toolholder, however, When setting the cutting edge at the face level of the toolholder as shown in Fig.2, use the insert shown in ().
In these cases, the F3 dimension of the toolholder corresponds to the L2 dimension of the insert.



S...SVN-N Round Shank (Standard, without side stopper)

S...SVN-SN Round Shank (Straight, without side stopper)

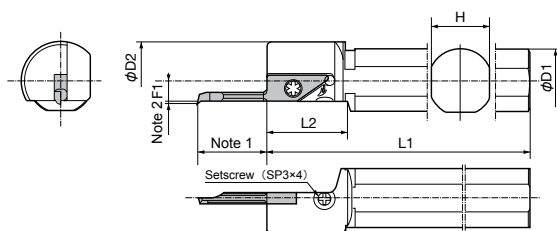


Fig.1 (S...SVN-N)

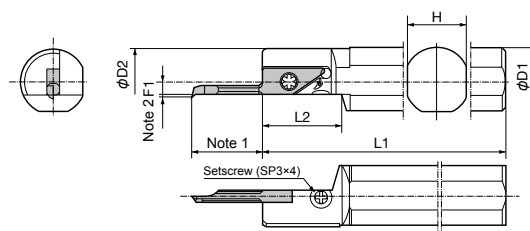


Fig.2 (S...SVN-SN)

• Right-hand shown

R-hand Insert for R-hand Toolholder.

Note 1 & Note 2 : For insert dimensions, see page [F14~F15](#)

S...SVN Round Shank (Standard)

S...SVN-S Round Shank (Straight)

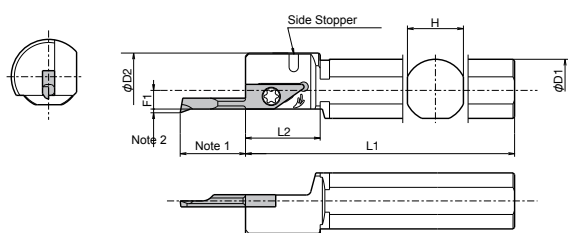


Fig.3 (S...SVN)

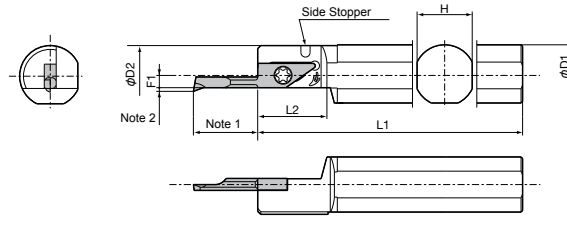







Fig.4 (S...SVN-S)

• Right-hand shown

R-hand Insert for R-hand Toolholder.

Note 1 & Note 2 : For insert dimensions, see page [F14~F15](#)

Toolholder Dimensions

| Description | Std. | Dimension (mm) | | | | | | Drawing | Spare Parts | | | | | Applicable Inserts | | | | | | | | |
|-----------------|------|----------------|------|----|------|----|--------|---------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----|-----|-----|--|--|--|--|
| | | øD1 | øD2 | H | L1 | L2 | F1 | | Clamp Screw | Wrench | Screw (Side Stopper) | Setscrew | Wrench | | | | | | | | | |
| | | | | | | | | |  |  |  |  |  | | | | | | | | | |
| S12F-SVNR12N | ● | 12 | 20 | 11 | 80 | 23 | 4 | Fig.1 | SB-3080TR | FT-10 | - | SP3×4 | - | <div>➡ F14~F15</div> <div>➡ G43</div> <div>➡ G64</div> <div>➡ J27</div> | | | | | | | | |
| S14G-SVNR12N | ● | 14 | 20 | 13 | 90 | | | | | | | | | | | | | | | | | |
| S16H-SVNR12N | ● | 16 | 24 | 15 | 100 | 24 | 6 | | | | | | | | | | | | | | | |
| S19H-SVNR12N | ● | 19.05 | 24 | 17 | 100 | | | | | | | | | | | | | | | | | |
| S19N-SVNR12N | ● | | | | 160 | | | | | | | | | | | | | | | | | |
| S20H-SVNR12N | ● | | | | 20 | | | | | | | | | | 24 | 18 | 100 | | | | | |
| S25H-SVNR12N | ● | | | | 25.4 | | | | | | | | | | 30 | 23 | 100 | | | | | |
| S25Q-SVNR12N | ● | 25.4 | 30 | 23 | 180 | | | | | | | | | | | | | | | | | |
| S19H-SVNR12SN | ● | 19.05 | 18.5 | 17 | 100 | 23 | 4 | Fig.2 | SB-3080TR | FT-10 | - | SP3×4 | - | | | | | | | | | |
| S20H-SVNR12SN | ● | 20 | 19.5 | 18 | | | | | | | | | | | | | | | | | | |
| S22K-SVNR12SN | ● | 22 | 21.5 | 20 | | | 125 | | | | | | | | | | | | | | | |
| S25.0G-SVNR12SN | ● | 25 | 24.5 | 23 | | | 90 | | | | | | | | | | | | | | | |
| S12F-SVNR12 | □ | 12 | 20 | 11 | 80 | 23 | 4 | Fig.3 | SB-3080TR | FT-10 | HS3×4 | - | LW-1.5 | | <div>VNBRO○○○○-○○</div> <div>VNBTR○○○○-○○○</div> <div>VNGRO○○○○-○○</div> <div>VNFGR○○○○-○○</div> <div>VNTR○○○-○○</div> | | | | | | | |
| S14G-SVNR12 | □ | 14 | 20 | 13 | 90 | | | | | | | | | | | | | | | | | |
| S16H-SVNR12 | □ | 16 | 24 | 15 | 100 | 24 | 6 | | | | | | | | | | | | | | | |
| S19H-SVNR12 | □ | 19.05 | 24 | 17 | 100 | | | | | | | | | | | | | | | | | |
| S19N-SVNR12 | □ | | | | 160 | | | | | | | | | | | | | | | | | |
| S20H-SVNR12 | □ | | | | 20 | | | | | | | | | | | 24 | 18 | 100 | | | | |
| S25H-SVNR12 | □ | | | | 25.4 | | | | | | | | | | | 30 | 23 | 100 | | | | |
| S25Q-SVNR12 | □ | 25.4 | 30 | 23 | 180 | | HS3×12 | | | | | | | | | | | | | | | |
| S19H-SVNR12S | □ | 19.05 | 18.5 | 17 | 100 | 23 | 4 | Fig.4 | SB-3080TR | FT-10 | HS3×4 | - | LW-1.5 | | | | | | | | | |
| S20H-SVNR12S | □ | 20 | 19.5 | 18 | | | | | | | | | | | | | | | | | | |
| S22K-SVNR12S | □ | 22 | 21.5 | 20 | 125 | | | | | | | | | | | | | | | | | |
| S25.0G-SVNR12S | □ | 25 | 24.5 | 23 | 90 | | | | | | | | | | | | | | | | | |

1. S...SVN-N and S...SVN-SN (without side stopper) retain high index accuracy by simple restrain.
2. S...SVN-N and S...SVN-SN (without side stopper) have a setscrew SP3X4. Changing the setscrew SP3X4 to a screw HS3X4 (sold separately) enables the holder to be used as a binding effect holder like with the side stopper holder.
3. In case of machining insert emphasizing on binding effect, (e.g. varying loading direction of under cutting, internal and external or face cutting by one tool) please use [S...SVN and S...SVN-S Holders] with attached side stoppers.

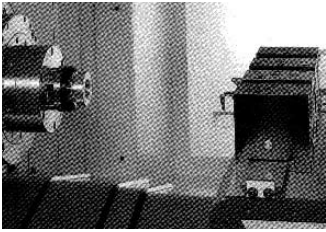
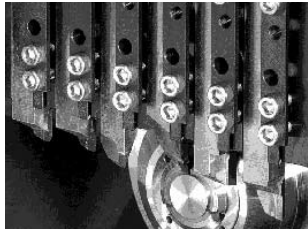
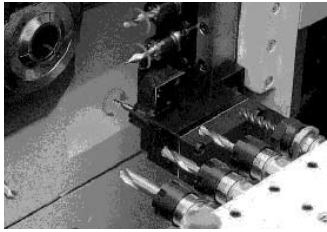
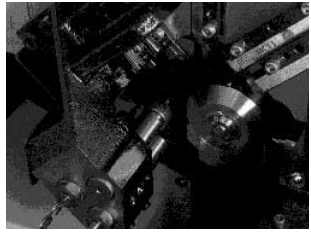




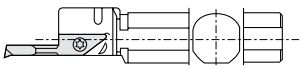
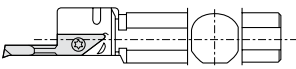

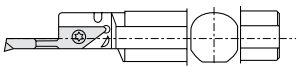
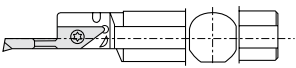
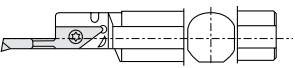
Spare Parts (Optional)

| Screw (Side Stopper) | Wrench |
|----------------------|--------|
| | |
| HS3x4 | LW-1.5 |

● : Std. Item ○ : Check Availability □ : Deleted from the next catalogue

Selection of Solid Tip-Bars

Recommended toolholder may change according to machines used and actual position.
Automatic Lathes have various toolpost types other than those below.

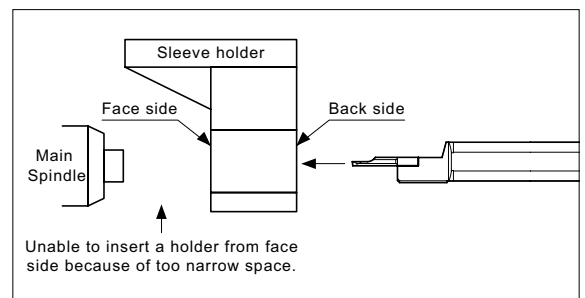
| Gang-Type (Horizontal) | Gang-Type | Gang-Type (Front Loading Sleeve Type) | Gang-Type (Back Loading Sleeve Type) |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
|  |  |  |  |
| Square Shank (Straight)  | Square Shank (L-shape)  | Square Shank  | Square Shank  |
| Round Shank (Standard)  | | Round Shank (Standard)  | Round Shank (Standard)  |
| Round Shank (Straight)  | | Round Shank (Straight)  | Round Shank (Straight)  |

Q: There are standard type (head dia. Is larger than shank) and straight type for round shank.

What are the usages for each one?

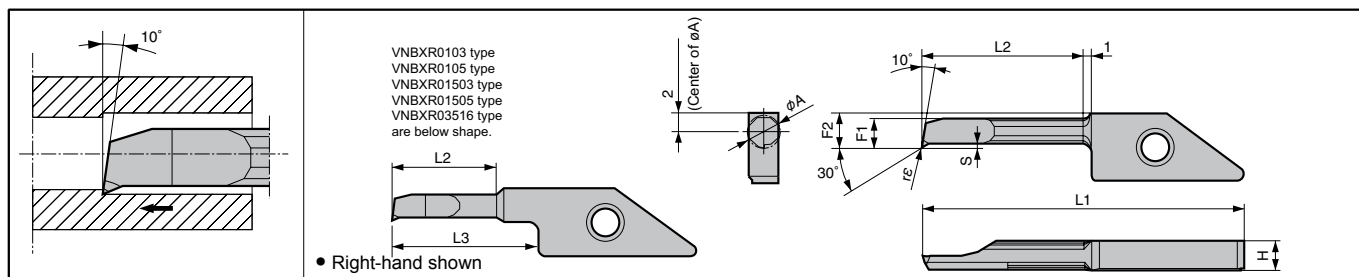
A: The straight type is used when it cannot be inserted from the face side of the sleeve holder and can be inserted only from the back side due to space limitation (Refer to Fig. on the right).

On the other hand, the standard type should be installed when it can be inserted from the face side, and the head end is used for positioning as stopper.



System Tip-Bar

VNBX-S (Boring) [Corner-R (rε): Minus tolerance]



● Insert Dimensions (VNBX-S)

| Description | | Min. Bore Dia. | Dimension (mm) | | | | | | | Insert Grade | | | | | | | | |
|-------------|------------|----------------------|----------------|------|------|----|------|------|------|-------------------------------------------------------------|-----------------------|-------|-------|---------|------|--------|--------|--------|
| | | | | | | | | | | Cermet | PVD Coated Carbide | | | Carbide | CBN | PCD | | |
| | | øA | H | L1 | L2 | L3 | F1 | F2 | S | rε | TC60 | PR630 | PR915 | PR930 | KW10 | KBN510 | KPD001 | KPD010 |
| VNBXR | 0103-005S | 1.0 | 3.9 | 26.5 | 3 | 7 | 0.85 | 2.5 | 0.2 | $\begin{smallmatrix} +0 \\ -0.02 \\ 0.05 \end{smallmatrix}$ | | | | ● | | | | |
| | 5 | | | | | | | ● | | | | | | | | | | |
| | 01503-005S | 1.5 | | | 3 | | 1.3 | 2.75 | | | | | ● | | | | | |
| | 01505-005S | | | | 5 | | | | | | ● | | | | | | | |
| | 0206-005S | 2.0 | | 6 | 1.8 | 3 | 0.25 | | | | ● | | | | | | | |
| | 0311-005S | 3.0 | | 30.8 | 11 | - | 2.6 | 3.5 | 0.4 | | | | ● | | | | | |
| | 03511-005S | 3.5 | | | 39.8 | 16 | 21 | 3.1 | 3.75 | | 0.45 | | | ● | | | | |
| | 03516-005S | | | 30.8 | | 11 | | | | | ● | | | | | | | |
| | 0411-005S | 4.0 | | 39.8 | 20 | - | 3.5 | 4 | 0.5 | | | | ● | | | | | |
| 0420-005S | | | | | | | | ● | | | | | | | | | | |
| VNBXR | 01503-01S | 1.5 | 3.9 | 26.5 | 3 | 7 | 1.3 | 2.75 | 0.2 | $\begin{smallmatrix} +0 \\ -0.03 \\ 0.1 \end{smallmatrix}$ | | | | ● | | | | |
| | 01505-01S | | | | 5 | | | | ● | | | | | | | | | |
| | 0206-01S | 2.0 | | | 6 | | 1.8 | 3 | 0.25 | | | | ● | | | | | |
| | 0311-01S | 3.0 | | 30.8 | 11 | - | 2.6 | 3.5 | 0.4 | | | | ● | | | | | |
| | 03511-01S | 3.5 | | | 39.8 | 16 | 21 | 3.1 | 3.75 | | 0.45 | | | ● | | | | |
| | 03516-01S | | | 30.8 | | 11 | | | | | ● | | | | | | | |
| | 0411-01S | 4.0 | | 39.8 | 20 | - | 3.5 | 4 | 0.5 | | | | ● | | | | | |
| | 0420-01S | | | | | | | | | | ● | | | | | | | |
| VNBXR | 0411-02S | 4.0 | 3.9 | 30.8 | 11 | - | 3.5 | 4 | 0.5 | $\begin{smallmatrix} +0 \\ -0.04 \\ 0.2 \end{smallmatrix}$ | | | | ● | | | | |
| | 0420-02S | | | 39.8 | 20 | | | | | ● | | | | | | | | |

◆ Recommended Cutting Conditions

| Workpiece Material | Recommended Insert Grade (Cutting Speed: m/min) | | | | | | | | VNBX01-S Type VNBX015-S Type | | VNBX02-S Type } VNBX04-S Type | | Remarks |
|----------------------------|-------------------------------------------------|--------------------|-------|-------------|------|--------|--------|--------|---------------------------------|-------|-------------------------------------|-------|---------|
| | Cermet | PVD Coated Carbide | | Carbide | CBN | PCD | | | | | | | |
| | TC60 | PR630 | PR915 | PR930 | KW10 | KBN510 | KPD001 | KPD010 | | | | | |
| | Cut: ap (mm), Feed: f (mm/rev) | | | | | | | | | | | | |
| | ap | f | | ap | f | | | | | | | | |
| Carbon Steel / Alloy Steel | | | | ★ 30~100 | | | | | ~0.1 | ~0.01 | ~0.2 | ~0.03 | Coolant |
| Stainless Steel | | | | ★ 30~80 | | | | | ~0.1 | ~0.01 | ~0.2 | ~0.02 | |

● Attachment holder for VNBX-S System Tip-Bar

★ : 1st Recommendation

1. Attachment holder of VNBX-S System Tip-Bar is below three types (See page F21).

- ① SVNS-XN Type (without Side Stopper)
- ② S...SVN-XN Type (without Side Stopper)
- ③ S...SVN-SXN Type (without Side Stopper)

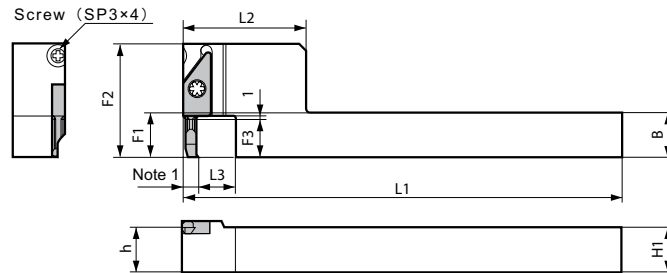
2. Above holders assure high index accuracy by easy restraint.

3. Clamp screws (SP3×4) are attached. Holders without Side Stopper can be used as a binding effect holder when removing the clamp screws and inserting screws (HS3×4: sold separately) with a wrench (LW-1.5: sold separately).

● Spare Parts (Optional)

| Screw (Side Stopper) | Wrench |
|----------------------|--------|
| | |
| HS3×4 | LW-1.5 |

● : Std. Item ○ : Check Availability

SVNS-XN Square Shank (L-shape)

• Right-hand shown

R-hand insert for R-hand Toolholder.

Note 1 : The dimension of Note 1 is same size as the applicable insert (VNBX \rightarrow F20) F2 dimension.

● Toolholder Dimensions (L-shape square shank applicable to gang tool post)

| Description | Std. | Dimension (mm) | | | | | | | | | Spare Parts | | | *Applicable Inserts \rightarrow F20 |
|----------------------------|------|----------------|----|-----|----|----|----|----|----|-----------|-----------------|------------|-----------|------------------------------------------|
| | | H1=h | B | L1 | L2 | L3 | F1 | F2 | F3 | | Clamp Screw | Wrench | Screw | |
| SVNSR 1010K-12-06XN | ● | 10 | 10 | 125 | 45 | 10 | 10 | 29 | 6 | SB-3080TR | LTW-10S | SP3×4 | | (VNBXR02..) |
| 1010K-12-11XN | ● | | | | | | | 33 | 11 | | | | | (VNBXR0011..) |
| 1212M-12-06XN | ● | | | | | | | 29 | 6 | | | | | (VNBXR02..) |
| 1212M-12-11XN | ● | 12 | 12 | 150 | 45 | 12 | 12 | 33 | 11 | | | | | (VNBXR0011..) |
| 1212M-12-20XN | ● | | | | | | | 42 | 20 | | | | | (VNBXR0420..) |
| 1616M-12-06XN | ● | 16 | 16 | 150 | 45 | 16 | 16 | 29 | 6 | | | | | (VNBXR02..) |
| 1616M-12-11XN | ● | | | | | | | 33 | 11 | | | | | (VNBXR0011..) |
| 1616M-12-20XN | ● | | | | | | | 42 | 20 | | | | | (VNBXR0420..) |

* All System Tip-Bar Inserts are used with a SVNS-XN Toolholder, however, When setting the cutting edge at the face level of the toolholder as shown in Fig., use the insert shown in ().

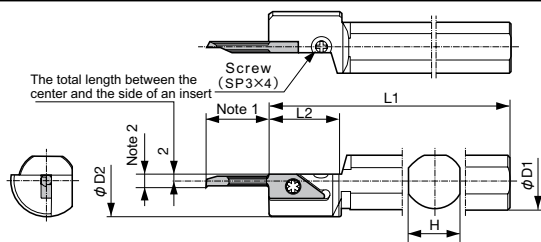
S...SVN-XN (Round Shank: Standard type)**S...SVN-SXN** (Round Shank: Straight type)

Fig.1 (S...SVN-XN)

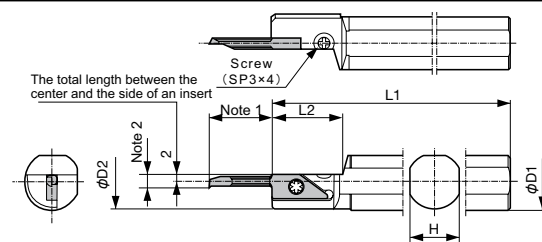





Fig.2 (S...SVN-SXN)

• Right-hand shown

R-hand insert for R-hand Toolholder.

Note 1 : The dimension of Note 1 shows the applicable insert (VNBX \rightarrow F20) L2 dimension + 1 mm.Note 2 : The dimension of Note 2 is the same as the applicable insert (VNBX \rightarrow F20) F2 dimension.

● Toolholder Dimensions (Holder center axis core and insert center are coaxial type)

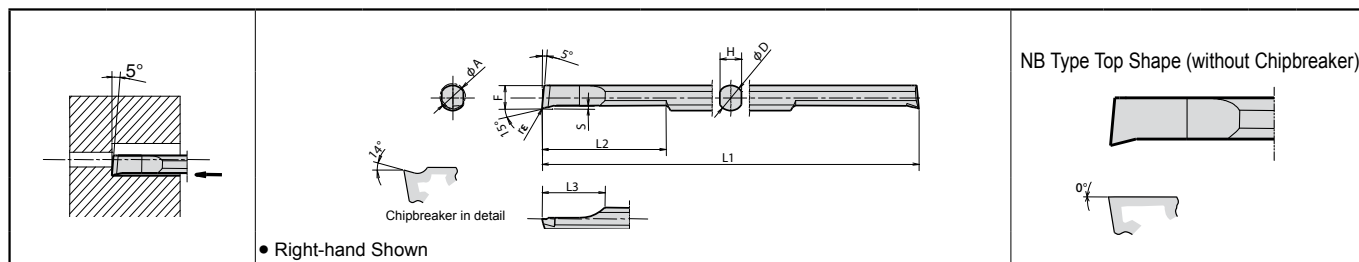
| Description | Std. | Dimension (mm) | | | | | | | | Drawing | Spare Parts | | | Applicable Inserts F20 |
|-------------------|------|----------------|------|----|-----|----|--|--|--|---------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------|
| | | øD1 | øD2 | H | L1 | L2 | | | | | Clamp Screw | Wrench | Screw | |
| | | | | | | | | | | |  |  |  | |
| S12F -SVNR12XN | ● | 12 | 20 | 11 | 80 | 23 | | | | Fig.1 | SB-3080TR | FT-10 | SP3×4 | VNBXR... |
| S14G -SVNR12XN | ● | 14 | | 13 | 90 | | | | | | | | | |
| S15H -SVNR12XN | □ | 15.875 | 24 | 15 | 100 | | | | | | | | | |
| S16H -SVNR12XN | ● | 16 | | 17 | 160 | | | | | | | | | |
| S19H -SVNR12XN | ● | 19.05 | 20 | 18 | 100 | | | | | | | | | |
| S19N -SVNR12XN | ● | | | 18 | 180 | | | | | | | | | |
| S20H -SVNR12XN | ● | 25.4 | 30 | 23 | 180 | | | | | | | | | |
| S25H -SVNR12XN | ● | 25.4 | 30 | 23 | 180 | | | | | | | | | |
| S25Q -SVNR12XN | ● | 25.4 | 30 | 23 | 180 | | | | | | | | | |
| S19H -SVNR12SXN | ● | 19.05 | 18.5 | 17 | 100 | 23 | | | | Fig.2 | SB-3080TR | FT-10 | | |
| S20H -SVNR12SXN | ● | 20 | 19.5 | 18 | 125 | | | | | | | | | |
| S22K -SVNR12SXN | ● | 22 | 21.5 | 20 | 125 | | | | | | | | | |
| S25.0G -SVNR12SXN | ● | 25 | 24.5 | 23 | 90 | | | | | | | | | |

* Reminder of applicable insert.

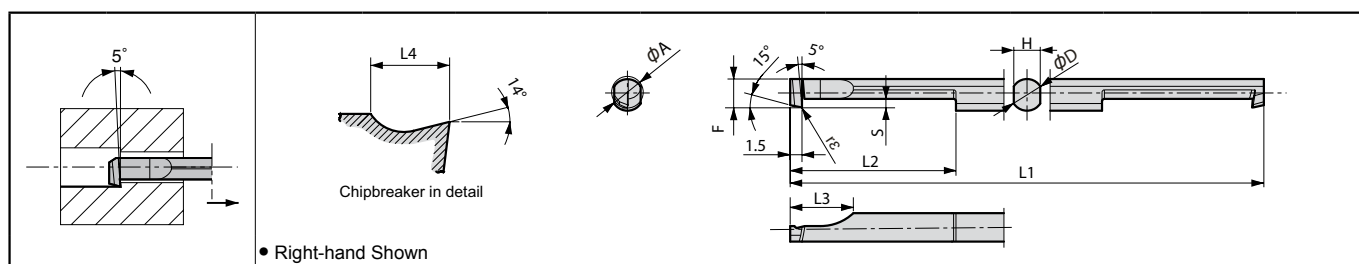
● : Std. Item ○ : Check Availability □ : Deleted from the next catalogue

2 Edges Tip-Bar HPB / HPBT

HPB (Boring)



HPBT (Back Boring)



Tip-Bar Dimensions

| Description | | Min. Bore Dia. | Dimension (mm) | | | | | | | Insert Grade | | | | Refer Page for Applicable Sleeve | |
|-------------------------------|------------|-------------------|----------------|------|----|----|----|------|------|------------------------------|----|---------|---|-------------------------------------|------|
| | | | | | | | | | | PVD Coated Carbide | | Carbide | | | |
| | | | øA | øD | H | L1 | L2 | L3 | F | S | rε | PR930 | | | KW10 |
| R | L | R | | | | | | | | | | L | | | |
| HPB ^{R/L} 0202-005 | 0202-005 | 2 | 2 | 1.7 | 50 | 10 | 5 | 1.75 | 0.25 | 0.05 ^{+0 -0.02} | ● | ● | ● | | F23 |
| | 0303-005 | 3 | 3 | 2.5 | | 15 | 7 | 2.7 | 0.3 | | ● | ● | ● | | |
| | 0404-005 | 4 | 4 | 3.35 | 60 | 20 | 10 | 3.65 | 0.5 | | ● | ● | ● | | |
| | 0505-005 | 5 | 5 | 4.3 | 70 | 25 | 12 | 4.55 | | | ● | ● | ● | | |
| | 0606-005 | 6 | 6 | 5.2 | | | | 5.5 | | | ● | ● | ● | | |
| | 0707-005 | 7 | 7 | 6.2 | 80 | | | 6.45 | | | ● | ● | ● | | |
| HPB ^{R/L} 0202-005NB | 0202-005NB | 2 | 2 | 1.7 | 50 | 10 | 5 | 1.75 | 0.25 | 0.05 ^{+0 -0.02} | ● | | ● | | |
| | 0303-005NB | 3 | 3 | 2.5 | | 15 | 7 | 2.7 | 0.3 | | ● | | ● | | |
| | 0404-005NB | 4 | 4 | 3.35 | 60 | 20 | 10 | 3.65 | 0.5 | | ● | | ● | | |
| | 0505-005NB | 5 | 5 | 4.3 | 70 | 25 | 12 | 4.55 | | | ● | | ● | | |
| | 0606-005NB | 6 | 6 | 5.2 | | | | 5.5 | | | ● | | ● | | |
| | 0707-005NB | 7 | 7 | 6.2 | 80 | | | 6.45 | | | ● | | ● | | |
| HPBT ^{R/L} 0404-005 | 0404-005 | 4 | 4 | 3.35 | 60 | 21 | 8 | 3.65 | 1.0 | 0.05 ^{+0 -0.02} | ● | ● | ● | ● | F23 |
| | 0505-005 | 5 | 5 | 4.3 | 70 | 26 | | 4.55 | 1.3 | | ● | ● | ● | ● | |

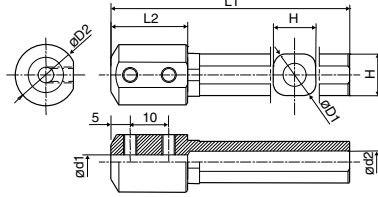
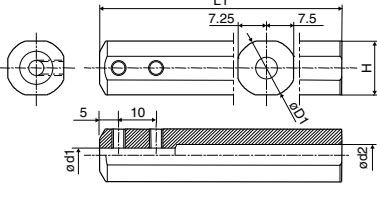
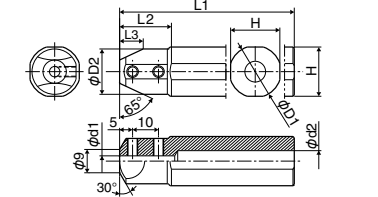
Recommended Cutting Conditions



[Cut: ap (mm), Feed: f (mm/rev)]

| Workpiece Material | Recommended Insert Grade (Cutting Speed: m/min) | | HPB02 Type | | HPB03 Type | | HPB04 Type HPBT04 Type | | HPB05 / 06 / 07 Type HPBT05 Type | | Remarks |
|----------------------------|----------------------------------------------------|---------|--------------------------------|-------|------------|-------|---------------------------|-------|-------------------------------------|-------|---------|
| | PVD Coated Carbide | Carbide | Cut: ap (mm), Feed: f (mm/rev) | | | | | | | | |
| | PR930 | KW10 | ap | f | ap | f | ap | f | ap | f | |
| Carbon Steel / Alloy Steel | 30~100 | - | ~0.3 | ~0.03 | ~0.4 | ~0.04 | ~0.45 | ~0.07 | ~0.5 | ~0.1 | Coolant |
| Stainless Steel | 30~80 | - | ~0.3 | ~0.02 | ~0.4 | ~0.03 | ~0.45 | ~0.05 | ~0.5 | ~0.07 | |
| Non-ferrous Metals | - | 30~100 | ~0.3 | ~0.05 | ~0.4 | ~0.06 | ~0.45 | ~0.1 | ~0.5 | ~0.15 | |

● : Std. Item ○ : Check Availability

● Applicable Sleeve

| | | |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |
| (2 Edges Tip-Bar installation side) Fig.1 | (2 Edges Tip-Bar installation side) Fig.2 | (2 Edges Tip-Bar installation side) Fig.3 |

| Description | Std. | Dimension (mm) | | | | | | | | Drawing | Spare Parts | | Applicable Machine Manufacturer | Ref. Page for 2 Edges Tip-Bar (Ref. Page for Other Application 2 Edges Tip-Bar) | |
|----------------|------|----------------|-------|------|-----|------|-----|----|------|---------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|------|
| | | * ød1 | øD1 | øD2 | ød2 | H | L1 | L2 | L3 | | Screw | Wrench | | | |
| | | | | | | | | | | |  |  | | | |
| PSH 0212-80 | ● | 2 | 12 | 16 | 6 | 11 | 80 | 20 | - | Fig.1 | HS3×4P | LW-1.5 | (General use) | Boring (HPB Type) ⇒ F22 | |
| 0312-80 | ● | 3 | | | | | | | | | 8 | HS4×4P | | | LW-2 |
| 0412-80 | ● | 4 | | | | | | | | | | HS4×4P | | | LW-2 |
| 0512-80 | ● | 5 | | | | | | | | | | | | | |
| 0612-80 | ● | 6 | | | | | | | | | | | | | |
| 0712-80 | ● | 7 | | | | | | | | | | | | | |
| PSH 0216-100 | ● | 2 | 16 | - | 6 | 15 | 100 | - | - | Fig.2 | HS3×4P | LW-1.5 | | | |
| 0316-100 | ● | 3 | | | | | | | | | 8 | HS4×4P | | | LW-2 |
| 0416-100 | ● | 4 | | | | | | | | | | | | | |
| 0516-100 | ● | 5 | | | | | | | | | | | | | |
| 0616-100 | ● | 6 | | | | | | | | | | | | | |
| 0716-100 | ● | 7 | | | | | | | | | | | | | |
| PSH 0220-120 | ● | 2 | 20 | 17.5 | 6 | 19 | 120 | 20 | 11 | Fig.3 | HS3×4P | LW-1.5 | Amada Wasino Eguro Citizen Machinery Precision Tsugami Miyano (General use) | | |
| 0320-120 | ● | 3 | | | | | | | | | 8 | HS4×4P | | | LW-2 |
| 0420-120 | ● | 4 | | | | | | | | | | | | | |
| 0520-120 | ● | 5 | | | | | | | | | | | | | |
| 0620-120 | ● | 6 | | | | | | | | | | | | | |
| 0720-120 | ● | 7 | | | | | | | | | | | | | |
| PSH 0225.0-135 | ● | 2 | 25 | 18 | 6 | 24 | 135 | 23 | 11.5 | Fig.3 | HS3×4P | LW-1.5 | Amada Wasino Eguro Precision Tsugami Miyano (General use) | Internal Back Boring (HPBT Type) ⇒ F22 | |
| 0325.0-135 | ● | 3 | | | | | | | | | 8 | HS4×4P | | | LW-2 |
| 0425.0-135 | ● | 4 | | | | | | | | | | | | | |
| 0525.0-135 | ● | 5 | | | | | | | | | | | | | |
| 0625.0-135 | ● | 6 | | | | | | | | | | | | | |
| 0725.0-135 | ● | 7 | | | | | | | | | | | | | |
| PSH 0219-120 | ● | 2 | 19.05 | 17.5 | 6 | 18 | 120 | 20 | 11 | Fig.3 | HS3×4P | LW-1.5 | Citizen Machinery | Internal Face Grooving (HPFG Type) ⇒ G65 | |
| 0319-120 | ● | 3 | | | | | | | | | 8 | HS4×4P | | | LW-2 |
| 0419-120 | ● | 4 | | | | | | | | | | | | | |
| 0519-120 | ● | 5 | | | | | | | | | | | | | |
| 0619-120 | ● | 6 | | | | | | | | | | | | | |
| 0719-120 | ● | 7 | | | | | | | | | | | | | |
| PSH 0225-120 | ● | 2 | 25.4 | 18 | 6 | 24.4 | 120 | 23 | 11.5 | Fig.3 | HS3×4P | LW-1.5 | Star Micronics Nomura VTC | Internal Threading (HPT Type) ⇒ J24 | |
| 0325-120 | ● | 3 | | | | | | | | | 8 | HS4×4P | | | LW-2 |
| 0425-120 | ● | 4 | | | | | | | | | | | | | |
| 0525-120 | ● | 5 | | | | | | | | | | | | | |
| 0625-120 | ● | 6 | | | | | | | | | | | | | |
| 0725-120 | ● | 7 | | | | | | | | | | | | | |
| PSH 0222-135 | ● | 2 | 22 | 18 | 6 | 21 | 135 | 22 | 11.5 | Fig.3 | HS3×4P | LW-1.5 | Star Micronics Nomura VTC | | |
| 0322-135 | ● | 3 | | | | | | | | | 8 | HS4×4P | | LW-2 | |
| 0422-135 | ● | 4 | | | | | | | | | | | | | |
| 0522-135 | ● | 5 | | | | | | | | | | | | | |
| 0622-135 | ● | 6 | | | | | | | | | | | | | |
| 0722-135 | ● | 7 | | | | | | | | | | | | | |
| PSH 0223-120 | ● | 2 | 23 | 18 | 6 | 22 | 120 | 22 | 11.5 | Fig.3 | HS3×4P | LW-1.5 | Nomura VTC | | |
| 0323-120 | ● | 3 | | | | | | | | | 8 | HS4×4P | | LW-2 | |
| 0423-120 | ● | 4 | | | | | | | | | | | | | |
| 0523-120 | ● | 5 | | | | | | | | | | | | | |
| 0623-120 | ● | 6 | | | | | | | | | | | | | |
| 0723-120 | ● | 7 | | | | | | | | | | | | | |

*: Length of ød1...20 mm (PH02, PH03, PH04 type)
...25 mm (PH05, PH06, PH07 type)

- Choose sleeves (ød1) to meet with øD dimension of 2 Edges Tip-Bar.
- Machine manufactures in random order.

● : Std. Item ○ : Check Availability

F



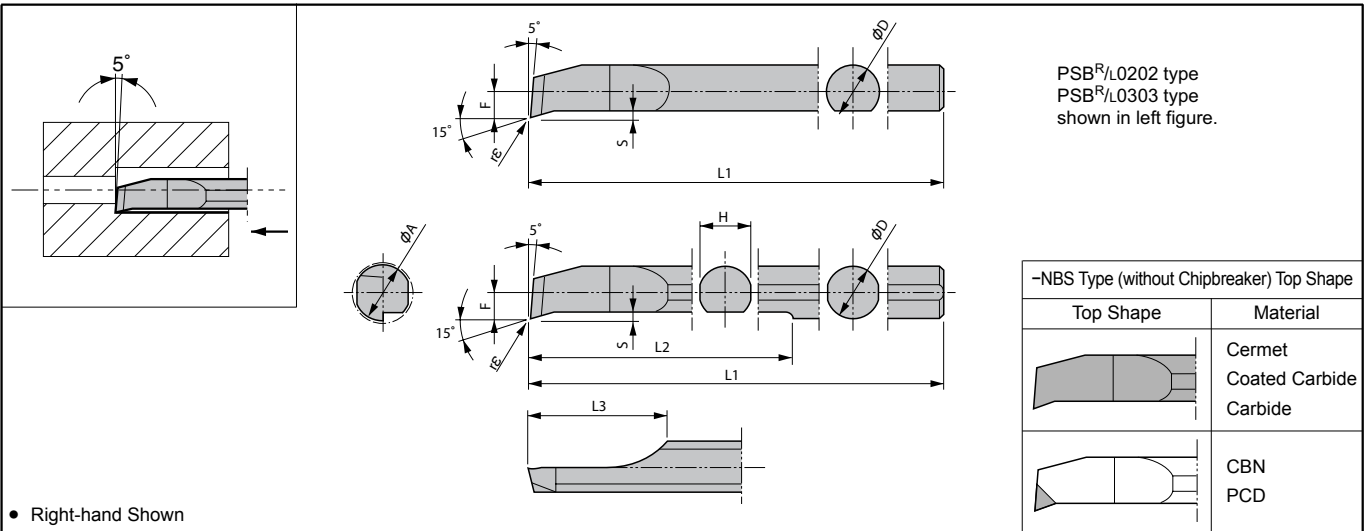
Boring



Tip-Bar for Micro Boring

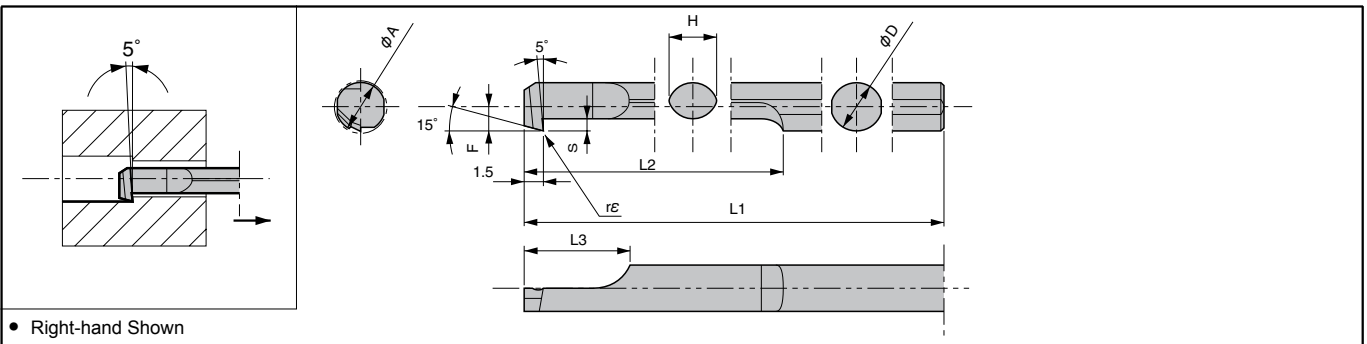
PSB-S (Boring) <Adjustable Overhang Length>

This insert will be switched to **HPB** Type (2 Edges. Ref. Page [F22](#)).



PSBT-S (Back Boring) <Adjustable Overhang Length>

This insert will be switched to **HPBT** Type (2 Edges. Ref. Page [F22](#)).




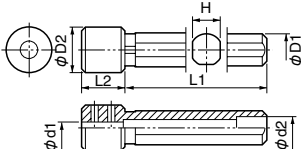


















Tip-Bar Dimension

| Description | | Min. Bore Dia. | Dimension (mm) | | | | | | | | Insert Grade | | | | | | | |
|----------------------------------|------------|----------------------|----------------|-----|----|----|-----|-----|------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | | | | | | | | | | | Cermet | | PVD Coated | | Carbide | | CBN | |
| | | | øA | øD | H | L1 | L2 | L3 | F | S | rε | TC60M | PR915 | PR930 | KW10 | KBN510 | KBN525 | KPD001 |
| PSB ^R / _L | 0202-50S | 2 | 1.8 | - | 50 | - | 5 | 0.9 | 0.25 | 0.05 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | 0303-50S | 3 | 2.8 | | | | 7 | 1.4 | 0.3 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | 0404-60S | 4 | 3.8 | 3.6 | 60 | 30 | 10 | 1.9 | 0.5 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | 0505-70S | 5 | 4.8 | 4.4 | 70 | 40 | 12 | 2.4 | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | 0606-70S | 6 | 5.8 | 5.2 | | | | 45 | | | 2.9 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | 0707-80S | 7 | 6.8 | 6.2 | 80 | 50 | | 3.4 | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| PSB ^R / _L | 0202-50NBS | 2 | 1.8 | - | 50 | - | | 5 | 0.9 | 0.25 | 0.05 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | 0303-50NBS | 3 | 2.8 | | | | 7 | 1.4 | 0.3 | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> | R | R | R | R | <input type="checkbox"/> |
| | 0404-60NBS | 4 | 3.8 | 3.6 | 60 | 30 | 10 | 1.9 | 0.5 | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | R | R | R | R |
| | 0505-70NBS | 5 | 4.8 | 4.4 | 70 | 40 | 12 | 2.4 | | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | R | R | R | R |
| | 0606-70NBS | 6 | 5.8 | 5.2 | | | | 45 | | 2.9 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | R | R | R | R |
| | 0707-80NBS | 7 | 6.8 | 6.2 | 80 | 50 | | 3.4 | | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> | R | R | R | R | R |
| PSBT ^R / _L | 0415-60S | 4 | 3.8 | 3.6 | 60 | 20 | | 8 | 1.9 | 1.0 | 0.05 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | 0515-70S | 5 | 4.8 | 4.6 | 70 | | 2.4 | | 1.3 | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

● Applicable Sleeve

This sleeve is for 1-Edge Tip-Bar. For 2-Edges Tip-Bar, use **F23**.

| Shape | Description | (Previous Description) | Std. | Dimension (mm) | | | | | | | | Spare Parts | | Applicable Tip-Bar  F24 |
|------------------------------------------------------------------------------------------------------------------|-------------------|------------------------|-----------------------------------------------------------------------------------|----------------|-----|-----|-------------------------------------------|----|----|----|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| | | | | øD1 | øD2 | ød1 | ød2 | H | L1 | L2 |  |  | | |
| | | | | | | | | | | | | | | |
|  (Tip-Bar installation side) | PH 0212-60 | PH -0212 |  | 12 | 19 | 1.8 | 6 | 11 | 60 | 20 |  |  | PSB [®] /0202-50S / NBS | |
| | 0312-60 | -0312 |  | | | 2.8 | | | | | | | PSB [®] /0303-50S / NBS | |
| | 0412-60 | -0412 |  | | | 3.8 | | | | | | | PSB [®] /0404-60S / NBS PSBT [®] /0415-60S | |
| | 0512-60 | -0512 |  | | | 4.8 | | | | | | | PSB [®] /0505-70S / NBS PSBT [®] /0515-70S | |
| | 0612-60 | -0612 |  | | | 5.8 | | | | | | | PSB [®] /0606-70S / NBS | |
| | 0712-60 | -0712 |  | | | 6.8 | | | | | | | PSB [®] /0707-80S / NBS | |
| | PH 0216-80 | PH -0216 |  | 16 | 22 | 1.8 | Rp ^{1/4} (PS ^{1/4}) | 15 | 80 | 20 |  |  | PSB [®] /0202-50S / NBS | |
| | 0316-80 | -0316 |  | | | 2.8 | | | | | | | PSB [®] /0303-50S / NBS | |
| | 0416-80 | -0416 |  | | | 3.8 | | | | | | | PSB [®] /0404-60S / NBS PSBT [®] /0415-60S | |
| | 0516-80 | -0516 |  | | | 4.8 | | | | | | | PSB [®] /0505-70S / NBS PSBT [®] /0515-70S | |
| | 0616-80 | -0616 |  | | | 5.8 | | | | | | | PSB [®] /0606-70S / NBS | |
| | 0716-80 | -0716 |  | | | 6.8 | | | | | | | PSB [®] /0707-80S / NBS | |

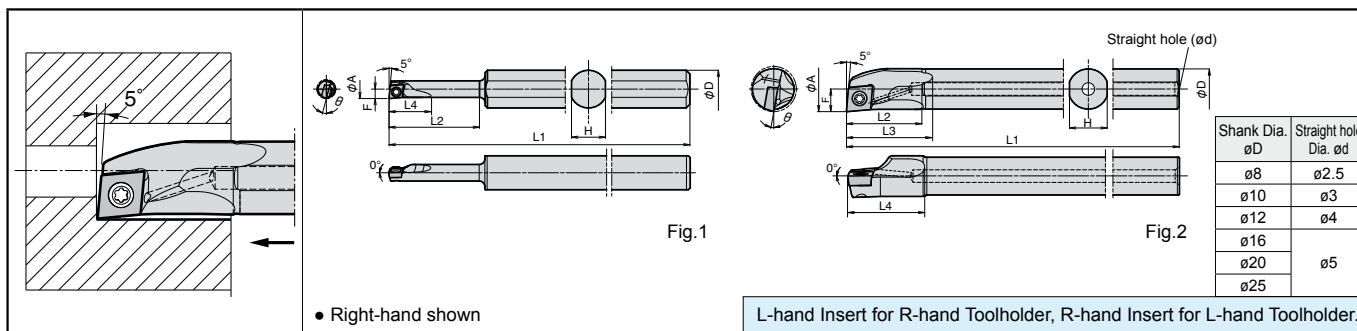
◆ Recommended Cutting Conditions

| Workpiece Material | Recommended Insert Grade (Cutting Speed: m/min) | | | | | | | PSB02 Type | | PSB03 Type | | PSB04 PSBT04 Type | | PSB05 PSB06 PSB07 PSBT05 Type | | Remarks | |
|----------------------------|-------------------------------------------------|-------|--------------------|-----------|------------------|-----------|-----------|------------|------|------------|-------|-------------------|-------|-------------------------------|-------|---------|---------|
| | Cermet | | PVD Coated Carbide | | Carbide | CBN | PCD | | | | | | | | | | |
| | TC60 | PR915 | PR930 | KW10 | KBN510 KBN525 | KPD001 | KPD010 | | | | | | | | | | |
| | Cut: ap (mm), Feed: f (mm/rev) | | | | | | | | | | | | | | | | |
| | ap | f | ap | f | ap | f | ap | f | ap | f | ap | f | | | | | |
| Carbon Steel / Alloy Steel | ☆ 60~120 | | ★ 30~100 | | | | | | ~0.3 | ~0.03 | ~0.4 | ~0.04 | ~0.45 | ~0.07 | ~0.5 | ~0.1 | Coolant |
| Stainless Steel | ☆ 50~100 | | ★ 30~80 | | | | | | ~0.3 | ~0.02 | ~0.4 | ~0.03 | ~0.45 | ~0.05 | ~0.5 | ~0.07 | |
| Non-ferrous Metals | | | | ☆ ~100 | | ★ ~300 | ☆ ~300 | | ~0.3 | ~0.05 | ~0.4 | ~0.06 | ~0.45 | ~0.1 | ~0.5 | ~0.15 | |
| Hard Materials | | | | | ★ ~100 | | | | - | - | ~0.07 | ~0.03 | ~0.10 | ~0.05 | ~0.15 | ~0.07 | |

★ : 1st Recommendation ☆ : 2nd Recommendation

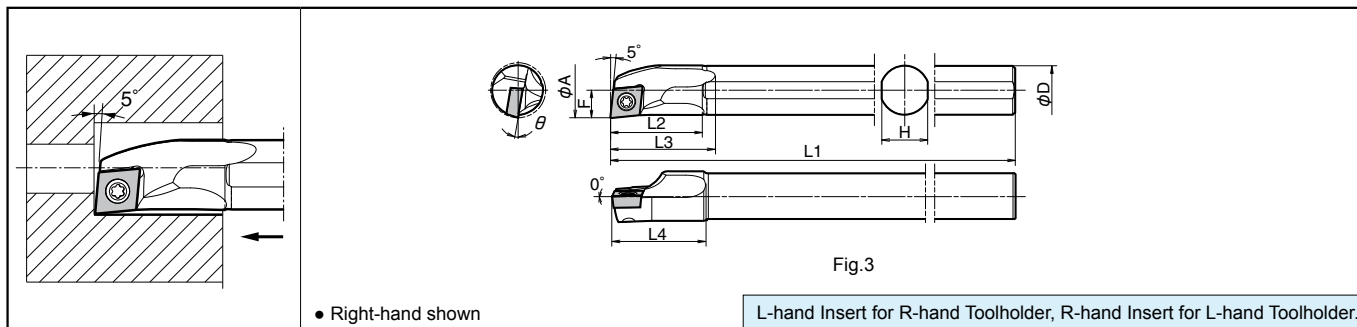
A / S-SCLC-AE Excellent Bar (Boring / Internal Facing)

Max. Overhang Length L/D≈5.5



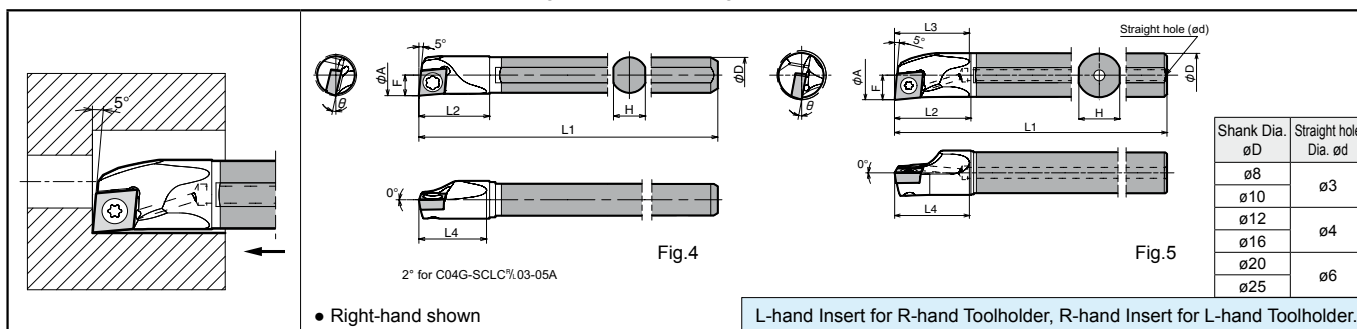
S-SCLC-A Steel Bar (Boring / Internal Facing)

Max. Overhang Length L/D≈4



C / E-SCLC-A Carbide Shank Bar (Boring / Internal Facing)







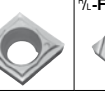
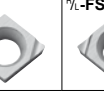
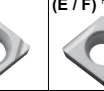


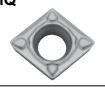



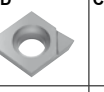
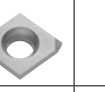
Max. Overhang Length L/D≈7



● Toolholder Dimensions

| Description | | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | θ | Standard Corner-R (rε) | Coolant Hole | Drawing | Spare Parts | | |
|---------------|---------------------------------------|------|---|----------------------|----------------|-----|-----|----|----|----|------|-----|------------------------|--------------|---------|-------------|-------------|--------|
| | | R | L | | øA | øD | H | L1 | L2 | L3 | L4 | | | | | F | Clamp Screw | Wrench |
| | | | | | | | | | | | | | | | | | | |
| Excellent Bar | S10H-SCLC ^{R/L} 03-05AE | ● | ● | 5 | 10 | 9 | 100 | 24 | - | 11 | 2.5 | 15° | 0.2 | No | Fig.1 | SB-1635TR | FT-6 | |
| | S10H-SCLC ^{R/L} 03-06AE | ● | ● | 6 | | | | 28 | | 13 | 3 | 13° | | | | | | |
| | S10H-SCLC ^{R/L} 04-07AE | ● | ● | 7 | | | | 32 | | 15 | 3.5 | 13° | | | | | | |
| | S10H-SCLC ^{R/L} 04-08AE | ● | ● | 8 | | | | 37 | | 15 | 4 | 11° | | | | | | |
| | A08X-SCLC ^{R/L} 06-10AE | ● | ● | 10 | 8 | 7 | 120 | 16 | 20 | 17 | 5 | 14° | 0.4 | Yes | Fig.2 | SB-2545TR | FT-8 | |
| | A10L-SCLC ^{R/L} 06-12AE | ● | ● | 12 | 10 | 9 | 140 | 20 | 25 | 21 | 6 | 12° | | | | | | |
| | A12M-SCLC ^{R/L} 06-14AE | ● | ● | 14 | 12 | 11 | 150 | 24 | 30 | 25 | 7 | 10° | | | | | | |
| | A16Q-SCLC ^{R/L} 09-18AE | ● | ● | 18 | 16 | 15 | 180 | 30 | 34 | 31 | 9 | 8° | | | | | | |
| | A20R-SCLC ^{R/L} 09-22AE | ● | ● | 22 | 20 | 19 | 200 | 36 | 49 | 37 | 11 | 8° | | | | | | |
| | A25S-SCLC ^{R/L} 09-27AE | ● | ● | 27 | 25 | 24 | 250 | 46 | 55 | 46 | 13.5 | 6° | | | | | | |
| Steel | S08X-SCLC ^{R/L} 06-10A | ● | ● | 10 | 8 | 7 | 120 | 16 | 20 | 17 | 5 | 14° | 0.4 | No | Fig.3 | SB-2545TR | FT-6 | |
| | S10L-SCLC ^{R/L} 06-12A | ● | ● | 12 | 10 | 9 | 140 | 20 | 25 | 21 | 6 | 12° | | | | SB-4065TR | FT-15 | |
| | S12M-SCLC ^{R/L} 06-14A | ● | ● | 14 | 12 | 11 | 150 | 24 | 30 | 25 | 7 | 10° | | | | | | |
| | S16Q-SCLC ^{R/L} 09-18A | ● | ● | 18 | 16 | 15 | 180 | 30 | 34 | 31 | 9 | 10° | | | | | | |
| | S20R-SCLC ^{R/L} 09-22A | ● | ● | 22 | 20 | 19 | 200 | 36 | 49 | 37 | 11 | 8° | | | | | | |
| | S25S-SCLC ^{R/L} 09-27A | ● | ● | 27 | 25 | 24 | 250 | 46 | 55 | 46 | 13.5 | 6° | | | | | | |
| Carbide | C04G-SCLC ^{R/L} 03-05A | ● | ● | 5 | 4 | 3.8 | 90 | 9 | - | 8 | 2.5 | 15° | 0.2 | No | Fig.4 | SB-1635TR | FT-6 | |
| | C05H-SCLC ^{R/L} 03-06A | ● | ● | 6 | 5 | 4.4 | 100 | 11 | | 11 | 3 | 13° | | | | | | |
| | C06J-SCLC ^{R/L} 04-07A | ● | ● | 7 | 6 | 5.4 | 110 | 12 | | 12 | 3.5 | 13° | | | | | | |
| | C07K-SCLC ^{R/L} 04-08A | ● | ● | 8 | 7 | 6.4 | 125 | 13 | | 13 | 4 | 11° | | | | | | |
| | E08L-SCLC ^{R/L} 06-10A | ● | ● | 10 | 8 | 7 | 140 | 16 | 15 | 15 | 5 | 14° | 0.4 | Yes | Fig.5 | SB2545TR | FT-8 | |
| | E08L-SCLC ^{R/L} 06-10A-2 / 3 | ● | ● | | | | 90 | | | | | | | | | | | |
| | E10N-SCLC ^{R/L} 06-12A | ● | ● | 12 | 10 | 9 | 160 | 20 | 19 | 19 | 6 | 12° | | | | | | |
| | E10N-SCLC ^{R/L} 06-12A-2 / 3 | ● | ● | | | | 105 | | | | | | | | | | | |
| | E12Q-SCLC ^{R/L} 06-14A | ● | ● | 14 | 12 | 11 | 180 | 23 | 22 | 22 | 7 | 10° | | | | | | |
| | E12Q-SCLC ^{R/L} 06-14A-2 / 3 | ● | ● | | | | 120 | | | | | | | | | | | |
| | E16X-SCLC ^{R/L} 09-18A | ● | ● | 18 | 16 | 15 | 220 | 28 | 27 | 27 | 9 | 10° | | | | | | |
| | E16X-SCLC ^{R/L} 09-18A-2 / 3 | ● | ● | | | | 145 | | | | | | | | | | | |
| | E20S-SCLC ^{R/L} 09-22A | ● | ● | 22 | 20 | 19 | 250 | 32 | 31 | 31 | 11 | 8° | | | | | | |
| | E20S-SCLC ^{R/L} 09-22A-2 / 3 | ● | ● | | | | 165 | | | | | | | | | | | |
| | E25T-SCLC ^{R/L} 09-27A | ● | ● | 27 | 25 | 24 | 300 | 38 | 37 | 37 | 13.5 | 6° | | | | | | |
| | E25T-SCLC ^{R/L} 09-27A-2 / 3 | ● | ● | | | | 200 | | | | | | | | | | | |

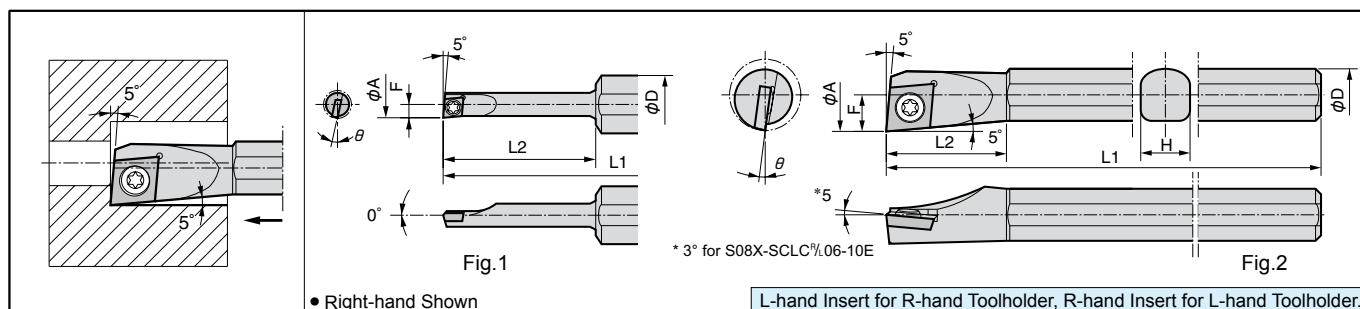
● Applicable Inserts

| Applications | Minute ap | Finishing | Finishing-Medium | Finishing-Medium | Medium | Medium | Finishing-Medium | Finishing | Finishing / Precision | Low Feed |
|--------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Ref. Page | B45 | B45 | B45 | B45 | B46 | B46 | B45 | B47 | B47 | B48 |
| Insert | CF | GF | GK | HQ | FN-Z | Standard | GQ | ^{R/L} -F | ^{R/L} -FSF | (E / F) ^{R/L} -U |
| Toolholder |  |  |  |  |  |  |  |  |  |  |
|SCLC ^{R/L} 03.... | CCGT0301.. | - | - | - | - | - | - | CCGT0301.. | CCET0301.. | - |
|SCLC ^{R/L} 04.... | CCGT0401.. | - | - | - | - | - | - | CCGT0401.. | CCET0401.. | - |
|SCLC ^{R/L} 06.... | - | CCGT0602.. | CCMT0602.. | CCMT0602.. | CCGT0602.. | CCGT0602.. | CCGT0602.. | - | - | CCGT0602.. |
|SCLC ^{R/L} 09.... | - | - | CCMT09T3.. | CCMT09T3.. | CCGT09T3.. | CCGT09T3.. | - | - | - | CCGT09T3.. |
| Applications | Low Feed / Precision | Stainless Steel | Cast Iron | Non-ferrous Metals | Non-ferrous Metals | Non-ferrous Metals | Hard Materials | | | |
| Ref. Page | B48 | B46 | B47 | B46 | B46 | C18 | C10 | | | |
| Insert | ^{R/L} -USF | MQ | Without Chipbreaker | AH | A3 | PCD | CBN | | | |
| Toolholder |  |  |  |  |  |  |  | | | |
|SCLC ^{R/L} 03.... | - | - | - | - | - | - | CCMW0301.. | | | |
|SCLC ^{R/L} 04.... | - | - | - | - | - | CCGW0401.. | CCMW0401.. | | | |
|SCLC ^{R/L} 06.... | CCET0602.. | - | CCGW0602.. | - | - | CCMT0602.. CCGW0602.. | CCMW0602.. | | | |
|SCLC ^{R/L} 09.... | CCET09T3.. | CCMT09T3.. | CCGW09T3.. | CCGT09T3.. | CCGT09T3.. | CCMT09T3.. CCGW09T3.. | CCMW09T3.. | | | |

For recommended cutting conditions, see page ● F82~F83

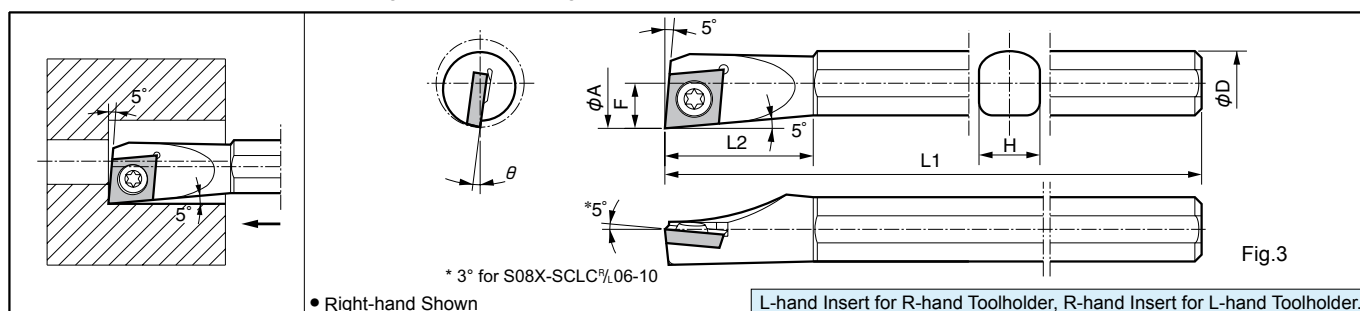
S...SCLPC Excellent Bar (Boring / Internal Facing)

Max. Overhang Length L/D≈5



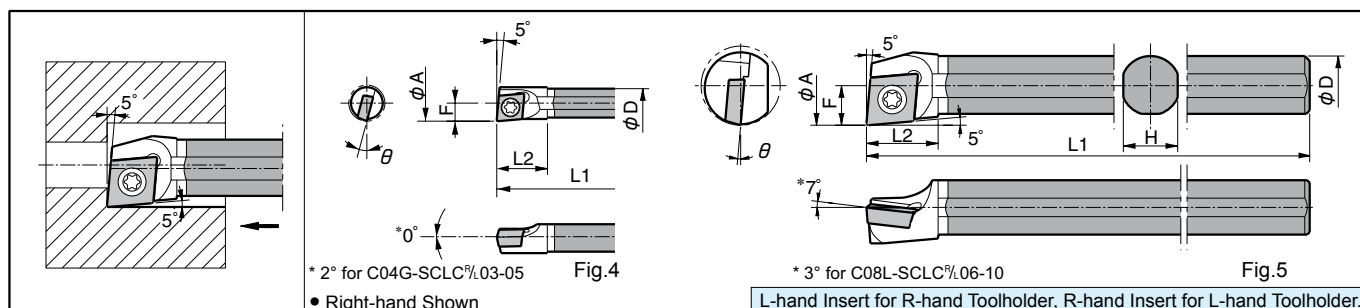
S...SCLC Steel Bar (Boring / Internal Facing)

Max. Overhang Length L/D≈3



C...SCLC Carbide Shank Bar (Boring / Internal Facing)

Max. Overhang Length L/D≈7

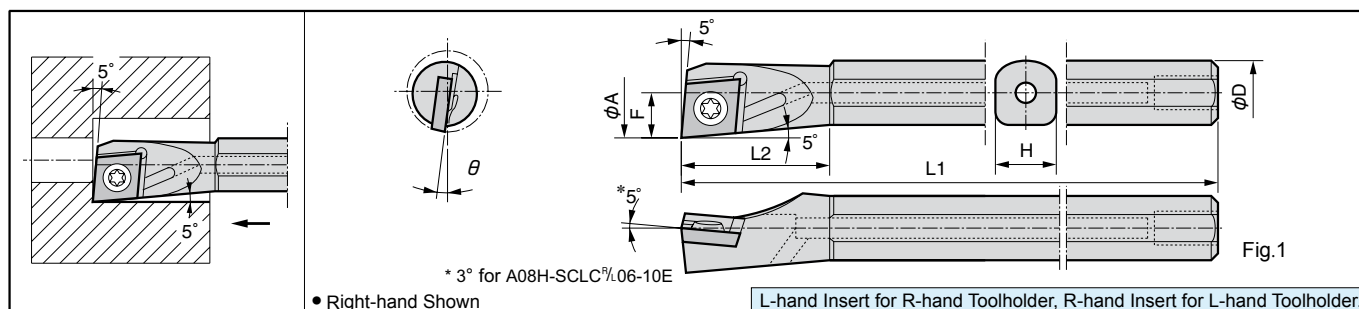


● Toolholder Dimensions [Will be switched to Dynamic Bar, see **F85~F88** (Alternative Toolholder Reference Table for Boring Bar)].

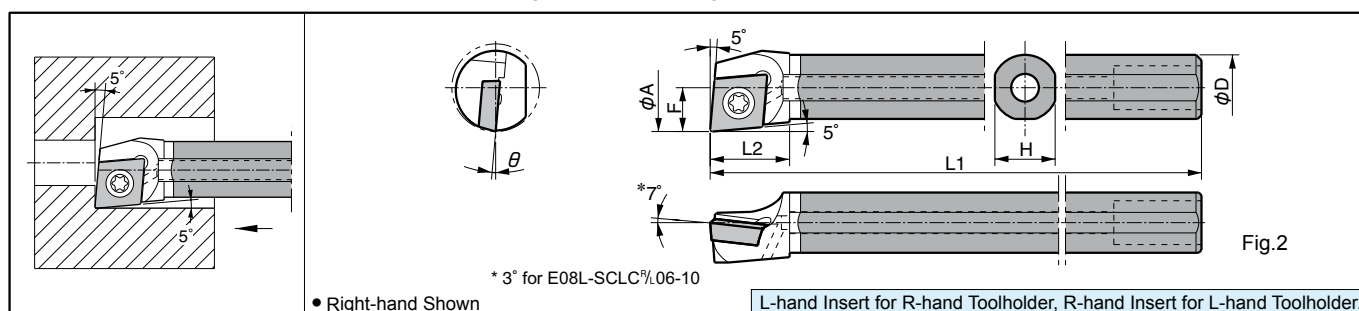
| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | θ | Standard Corner-R (r) | Drawing | Spare Parts | |
|-------------------|------------------------|--------------------------|--------------------------|-------------------|----------------|-----|-----|----|----|----|----|-----|-----------------------|---------|-------------|--------|
| | | R | L | | φA | φD | H | L1 | L2 | L3 | L4 | F | | | Clamp Screw | Wrench |
| S10H -SCLC%03-05E | SCLC%0510B-03E | <input type="checkbox"/> | <input type="checkbox"/> | 5 | | | | | | | | 2.5 | 15° | Fig.1 | SB-1635TR | FT-6 |
| SCLC%03-06E | | <input type="checkbox"/> | <input type="checkbox"/> | 6 | 10 | 9 | 100 | 24 | 28 | - | - | 3.0 | 13° | | | |
| S10J -SCLC%04-07E | SCLC%0710B-04E | <input type="checkbox"/> | <input type="checkbox"/> | 7 | 10 | 9 | 110 | 32 | - | - | - | 3.5 | 13° | Fig.2 | SB-2040TR | FT-8 |
| SCLC%04-08E | | <input type="checkbox"/> | <input type="checkbox"/> | 8 | | | | 37 | | | | 4.0 | 11° | | | |
| S08X -SCLC%06-10E | SCLC%1008B-06E | <input type="checkbox"/> | <input type="checkbox"/> | 10 | | | | | | | | | | Fig.3 | SB-2545TR | FT-8 |
| S08X -SCLC%06-10 | | <input type="checkbox"/> | <input type="checkbox"/> | | 8 | 7 | 120 | 17 | - | - | - | 5 | 12° | | | |
| C04G -SCLC%03-05 | SCLC%0504B-03W | <input type="checkbox"/> | <input type="checkbox"/> | 5 | 4 | 3.8 | 90 | 7 | - | - | - | 2.5 | 15° | Fig.4 | SB-1635TR | FT-6 |
| C05H -SCLC%03-06 | | <input type="checkbox"/> | <input type="checkbox"/> | 6 | 5 | 4.4 | 100 | 9 | - | - | - | 3.0 | 13° | | | |
| C06J -SCLC%04-07 | SCLC%0706B-04W | <input type="checkbox"/> | <input type="checkbox"/> | 7 | 6 | 5.4 | 110 | 10 | - | - | - | 3.5 | 13° | Fig.5 | SB-2040TR | FT-8 |
| C07K -SCLC%04-08 | | <input type="checkbox"/> | <input type="checkbox"/> | 8 | 7 | 6.4 | 125 | 11 | - | - | - | 4.0 | 11° | | | |
| C08L -SCLC%06-10 | SCLC%1008B-06W | <input type="checkbox"/> | <input type="checkbox"/> | 10 | 8 | 7 | 140 | 10 | - | - | - | 5 | 10° | Fig.5 | SB-2545TR | FT-8 |

A...SCLC-E Excellent Twin-Hole Bar (Boring / Internal Facing: with Coolant Hole)

Max. Overhang Length L/D≈5

**E...SCLC** Carbide Twin-Hole Bar (Boring / Internal Facing: with Coolant Hole)

Max. Overhang Length L/D≈7



- Toolholder Dimensions [Will be switched to Dynamic Bar, see **F85~F88** (Alternative Toolholder Reference Table for Boring Bar)].
(For applicable sleeve / Joint, please see **F77~F79**.)

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | θ | Standard Corner-R (r) | Drawing | Spare Parts | |
|--------------------------|-------------------------|--------------------------|--------------------------|-------------------|----------------|----------|-----|----|----|----|----|----------|-----------------------|---------|-------------|--------|
| | | R | L | | ϕA | ϕD | H | L1 | L2 | L3 | L4 | F | | | Clamp Screw | Wrench |
| A08H -SCLC%06-10E | SCLC% 1008B-06EH | <input type="checkbox"/> | <input type="checkbox"/> | 10 | 8 | 7 | 100 | 17 | - | - | - | 5 | 12° | Fig.1 | SB-2545TR | FT-8 |
| E08L -SCLC%06-10 | SCLC% 1008B-06WH | <input type="checkbox"/> | <input type="checkbox"/> | 10 | 8 | 7 | 140 | 11 | - | - | - | 5 | 10° | Fig.2 | | |

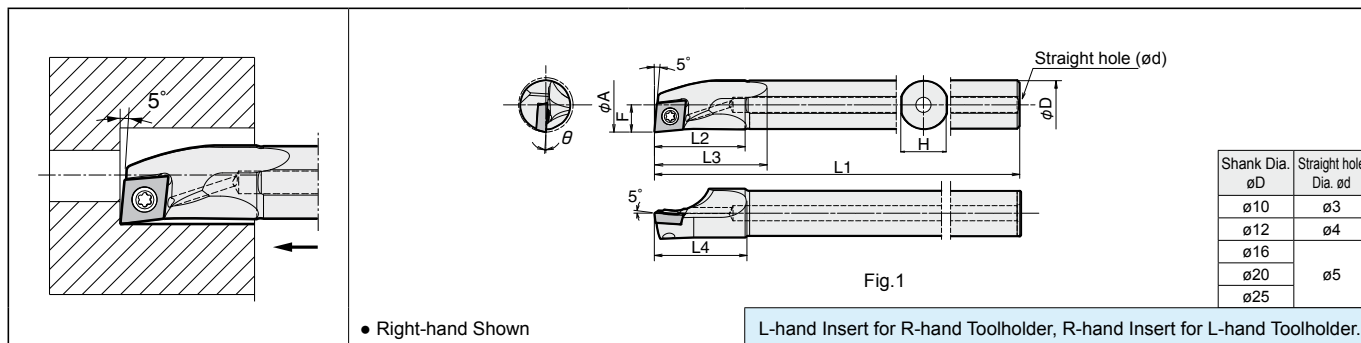
● Applicable Inserts

| Applications | Minute ap | Finishing | Finishing-Medium | Medium | Finishing-Medium | Medium | Finishing-Medium | Finishing | Finishing / Precision | Low Feed |
|-----------------|----------------------|---------------------|--------------------------|----------------|------------------|------------|------------------|------------|-----------------------|------------|
| Ref. Page | B45 | B45 | B45 | B46 | B45 | B45 | B45 | B47 | B47 | B48 |
| Insert | CF | GF | GK | FN-Z | HQ | Standard | GQ | %-F | %-FSF | (E/F)%-U |
| Toolholder | | | | | | | | | | |
|SCLC%03.... | CCGT0301.. | - | - | - | - | - | - | CCGT0301.. | CCET0301.. | - |
|SCLC%04.... | CCGT0401.. | - | - | - | - | - | - | CCGT0401.. | CCET0401.. | - |
|SCLC%06.... | - | CCGT0602.. | CCMT0602.. | CCGT0602.. | CCMT0602.. | CCGT0602.. | CCGT0602.. | - | - | CCGT0602.. |
| Applications | Low Feed / Precision | Cast Iron | Non-ferrous Metals | Hard materials | | | | | | |
| Ref. Page | B48 | B47 | C18 | C10 | | | | | | |
| Insert | F%-USF | Without Chipbreaker | PCD | CBN | | | | | | |
| Toolholder | | | | | | | | | | |
|SCLC%03.... | - | - | - | CCMW0301.. | | | | | | |
|SCLC%04.... | - | - | CCGW0401.. | CCMW0401.. | | | | | | |
|SCLC%06.... | CCET0602.. | CCGW0602.. | CCMT0602.. CCGW0602.. | CCMW0602.. | | | | | | |

For recommended cutting conditions, see page **F82~F83**

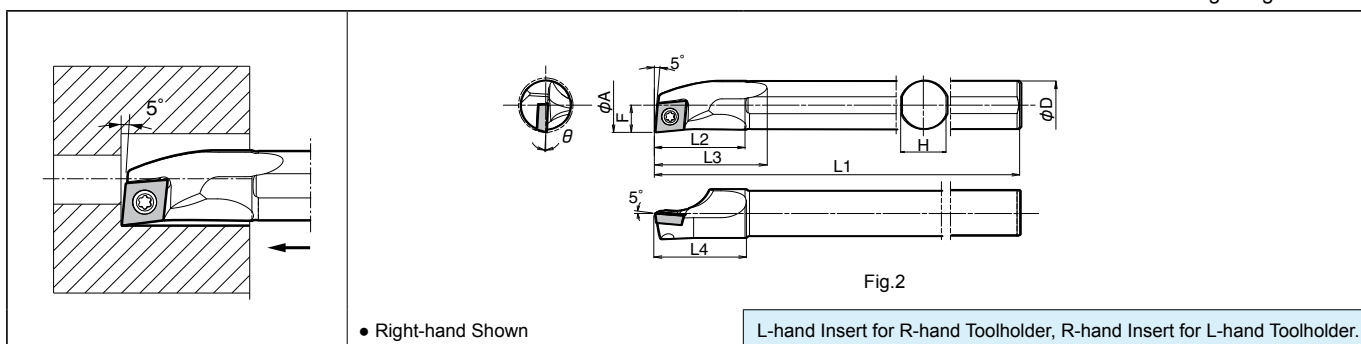
A-SCLP-AE Excellent Bar (Boring / Internal Facing)

Max. Overhang Length L/D≈5.5



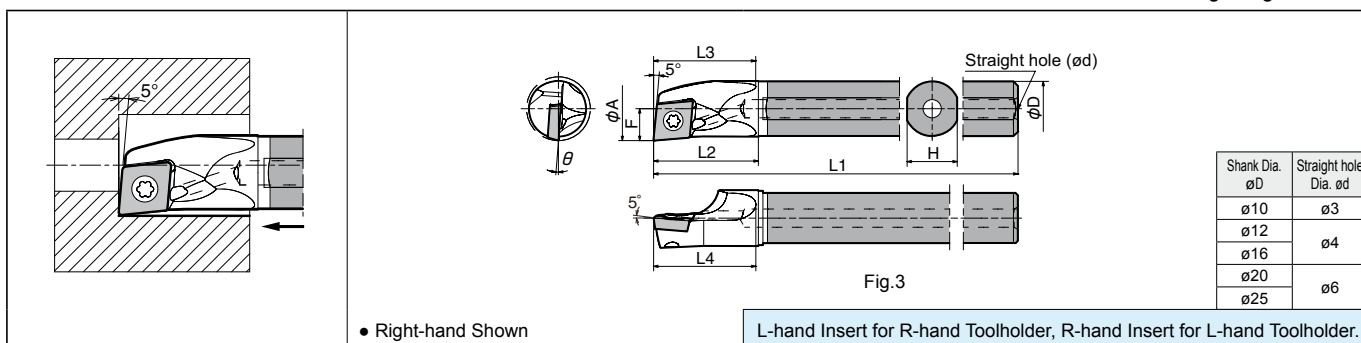
S-SCLP-A Steel Bar (Boring / Internal Facing)

Max. Overhang Length L/D≈4



E-SCLP-A Carbide Shank Bar (Boring / Internal Facing)










Max. Overhang Length L/D≈7



● Toolholder Dimensions

| Description | | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | θ | Standard Corner-R (R) | Coolant Hole | Drawing | Spare Parts | | | | | |
|---------------|---------------------------------------|------|---|-------------------|----------------|----|-----|----|----|----|------|------|-----------------------|--------------|---------|-------------|-----------|-------|----|------|----|
| | | R | L | øA | øD | H | L1 | L2 | L3 | L4 | F | | | | | Clamp Screw | Wrench | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| Excellent Bar | A10L-SCLP ^{R/L} 08-12AE | ● | ● | 12 | 10 | 9 | 140 | 20 | 25 | 20 | 6 | 5° | 0.4 | Yes | Fig.1 | SB-3060TR | FT-10 | | | | |
| | A12M-SCLP ^{R/L} 08-14AE | ● | ● | 14 | 12 | 11 | 150 | 24 | 29 | 24 | 7 | 4° | | | | | | | | | |
| | A12M-SCLP ^{R/L} 09-16AE | ● | ● | 16 | | | | | 31 | 24 | 8 | | | | | | | | | | |
| | A16Q-SCLP ^{R/L} 09-18AE | ● | ● | 18 | | | | | 37 | 30 | 9 | | | | | 3.5° | | | | | |
| | A20R-SCLP ^{R/L} 09-22AE | ● | ● | 22 | | | | | 20 | 19 | 200 | | | | | | 36 | 47 | 37 | 11 | 2° |
| | A25S-SCLP ^{R/L} 09-27AE | ● | ● | 27 | | | | | 25 | 24 | 250 | | | | | | 46 | 55 | 46 | 13.5 | |
| Steel | S10L-SCLP ^{R/L} 08-12A | ● | ● | 12 | 10 | 9 | 140 | 20 | 25 | 20 | 6 | 5° | 0.4 | No | Fig.2 | | SB-3060TR | FT-10 | | | |
| | S12M-SCLP ^{R/L} 08-14A | ● | ● | 14 | 12 | 11 | 150 | 24 | 29 | 24 | 7 | 4° | | | | | | | | | |
| | S12M-SCLP ^{R/L} 09-16A | ● | ● | 16 | | | | | 31 | 24 | 8 | | | | | | | | | | |
| | S16Q-SCLP ^{R/L} 09-18A | ● | ● | 18 | | | | | 37 | 30 | 9 | | | | | 3.5° | | | | | |
| | S20R-SCLP ^{R/L} 09-22A | ● | ● | 22 | | | | | 20 | 19 | 200 | | | | | | 36 | 47 | 37 | 11 | 2° |
| | S25S-SCLP ^{R/L} 09-27A | ● | ● | 27 | | | | | 25 | 24 | 250 | | | | | | 46 | 55 | 46 | 13.5 | |
| Carbide | E10N-SCLP ^{R/L} 08-12A | ● | ● | 12 | 10 | 9 | 160 | 20 | 19 | 19 | 6 | 5° | 0.4 | Yes | Fig.3 | | SB-3060TR | FT-10 | | | |
| | E10N-SCLP ^{R/L} 08-12A-2 / 3 | ● | | | | | 105 | | | | | | | | | | | | | | |
| | E10N-SCLP ^{R/L} 08-12A-1 / 2 | ● | | | | | 80 | | | | | | | | | | | | | | |
| | E12Q-SCLP ^{R/L} 08-14A | ● | ● | 14 | 12 | 11 | 180 | 23 | 22 | 22 | 7 | 4° | | | | | | | | | |
| | E12Q-SCLP ^{R/L} 08-14A-2 / 3 | ● | | | | | 120 | | | | | | | | | | | | | | |
| | E12Q-SCLP ^{R/L} 08-14A-1 / 2 | ● | | | | | 90 | | | | | | | | | | | | | | |
| | E16X-SCLP ^{R/L} 09-18A | ● | ● | 18 | 16 | 15 | 220 | 28 | 27 | 27 | 9 | 3.5° | | | | | | | | | |
| | E16X-SCLP ^{R/L} 09-18A-2 / 3 | ● | | | | | 145 | | | | | | | | | | | | | | |
| | E16X-SCLP ^{R/L} 09-18A-1 / 2 | ● | | | | | 110 | | | | | | | | | | | | | | |
| | E20S-SCLP ^{R/L} 09-22A | ● | ● | 22 | 20 | 19 | 250 | 32 | 31 | 31 | 11 | 2° | | | | | | | | | |
| | E20S-SCLP ^{R/L} 09-22A-2 / 3 | ● | | | | | 165 | | | | | | | | | | | | | | |
| | E20S-SCLP ^{R/L} 09-22A-1 / 2 | ● | | | | | 125 | | | | | | | | | | | | | | |
| | E25T-SCLP ^{R/L} 09-27A | ● | ● | 27 | 25 | 24 | 300 | 38 | 37 | 37 | 13.5 | 0° | | | | | | | | | |
| | E25T-SCLP ^{R/L} 09-27A-2 / 3 | ● | | | | | 200 | | | | | | | | | | | | | | |

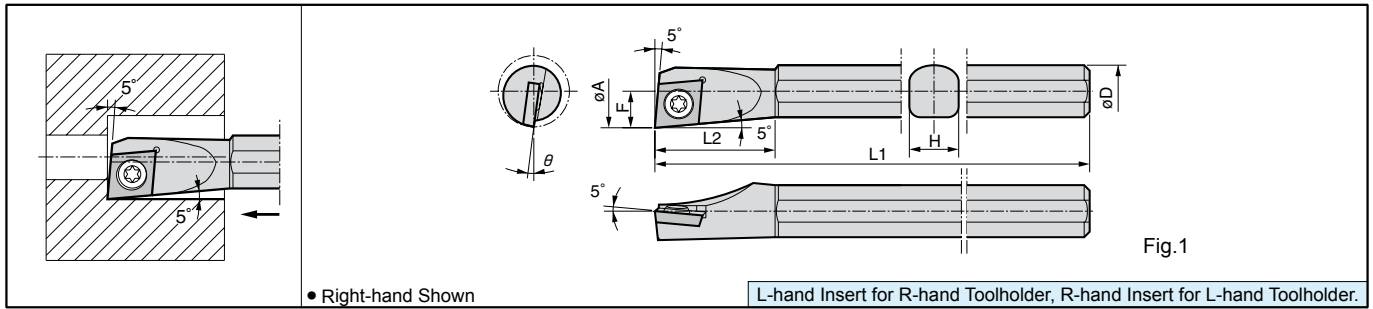
● Applicable Inserts

| Applications | Finishing | Finishing-Medium | Medium | Finishing-Medium | Soft Steel Finishing | Soft Steel Finishing-Medium | Cast Iron | Non-ferrous Metals | Hard Materials | |
|--------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--|
| Ref. Page | B50 | B50 | B50 | B50 | B50 | B50 | B50 | C18 | C10 | |
| Insert | GP | HQ | Standard | ^{R/L} -Y | XP | XQ | Without Chipbreaker | PCD | CBN | |
| Toolholder |  |  |  |  |  |  |  |  |  | |
|SCLP ^{R/L} 08.... | CPMT0802.. | CPMH0802.. | CPMH0802.. | CPMH0802.. | CPMT0802.. | - | CPMB0802.. | CPMH0802.. | CPGB0802.. | |
|SCLP ^{R/L} 09.... | CPMT0903.. | CPMH0903.. | CPMH0903.. | CPMH0903.. | CPMT0903.. | CPMT0903.. | CPMB0903.. | CPMH0903.. | CPGB0903.. | |

For recommended cutting conditions, see page ● F82~F83

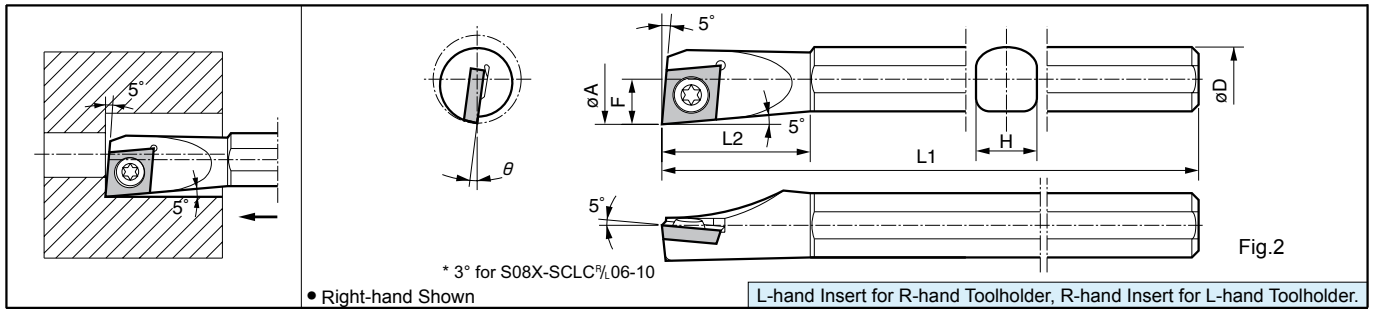
S...SCLP-E Excellent Bar (Boring / Internal Facing)

Max. Overhang Length $L/D \sim 5$



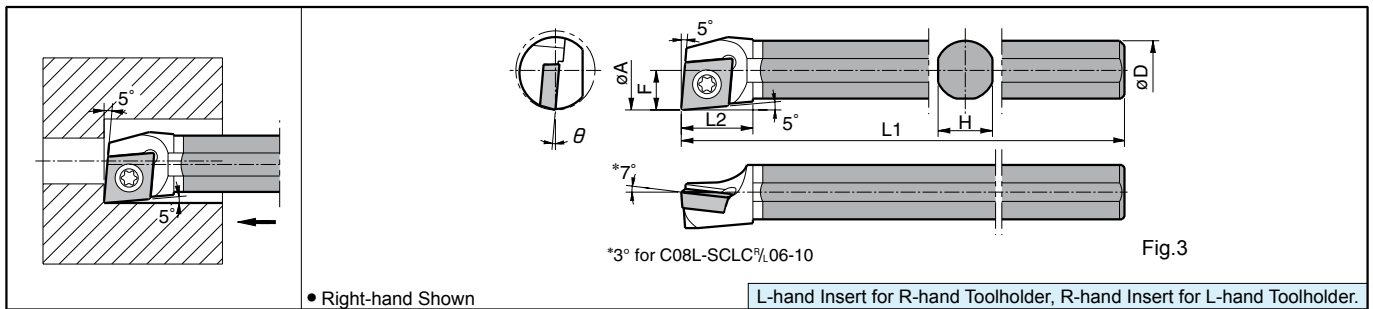
S...SCLP Steel Bar (Boring / Internal Facing)

Max. Overhang Length $L/D \sim 3$



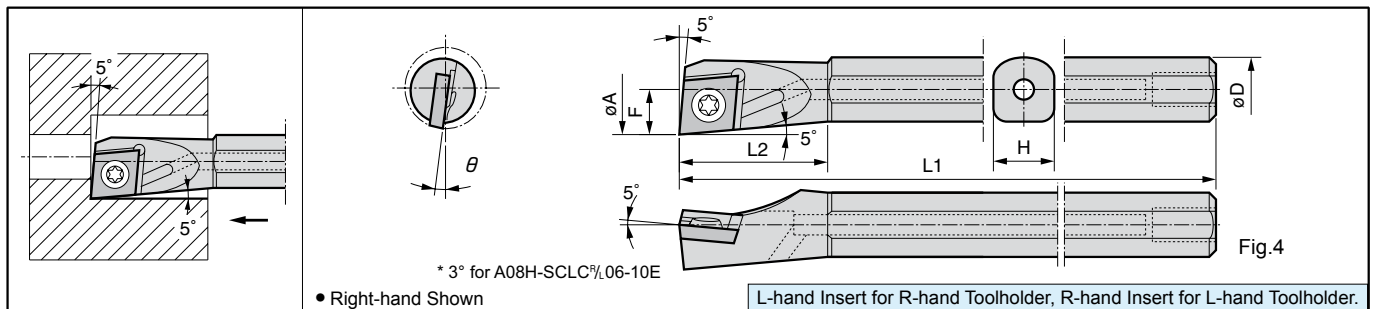
C...SCLP Carbide Shank Bar (Boring / Internal Facing)

Max. Overhang Length $L/D \sim 7$



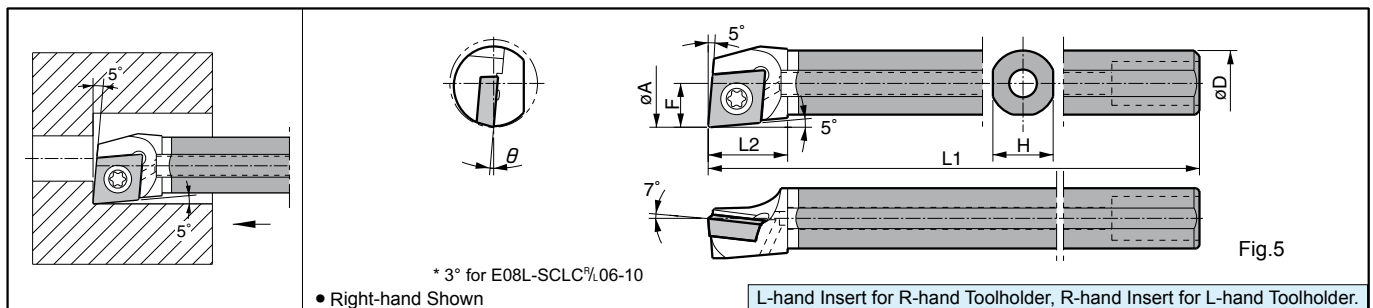
A...SCLP-E Excellent Twin-Hole Bar (Boring / Internal Facing: with Coolant Hole)

Max. Overhang Length $L/D \sim 5$



E...SCLP Carbide Twin-Hole Bar (Boring / Internal Facing: with Coolant Hole)

Max. Overhang Length $L/D \sim 7$











● Toolholder Dimensions [Will be switched to Dynamic Bar, see ● F85~F88 (Alternative Toolholder Reference Table for Boring Bar)].

| Description | (Previous Description) | Std. | | Min. | Dimension (mm) | | | | | | | θ | Standard Corner-R (°) | Drawing | Spare Parts | | | | |
|---------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------|----------------|-----|-----|-----|----|------|------|------|-----------------------|---------|-------------|--------|--------|---------|---------|
| | | R | L | Bore Dia. | øD | H | L1 | L2 | L3 | L4 | F | | | | Clamp Screw | Wrench | | | |
| | | | | | | | | | | | | | | | | | | | |
| S10M-SCLP ^{R/L} 08-12E | SCLP ^{R/L} 1210B-08E | <input type="checkbox"/> | <input type="checkbox"/> | 12 | 10 | 9 | 150 | 23 | - | - | 6 | 5° | 0.4 | Fig.1 | SB-3STR | FT-10 | | | |
| S12M-SCLP ^{R/L} 08-14E | | <input type="checkbox"/> | <input type="checkbox"/> | 14 | 12 | 11 | 150 | 25 | - | - | 7 | 4° | | | | | | | |
| S12M-SCLP ^{R/L} 09-16E | | 1612B-09E | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 150 | 29 | - | - | 8 | 4° | | 0.4 | Fig.1 | SB-4TR | FT-15 | |
| S16Q-SCLP ^{R/L} 09-18E | | 1816B-09E | <input type="checkbox"/> | <input type="checkbox"/> | 18 | 16 | 15 | 180 | 31 | - | - | 9 | 3.5° | | | | | | |
| S16R-SCLP ^{R/L} 09-20E | | 2016B-09E | <input type="checkbox"/> | <input type="checkbox"/> | 20 | 16 | 15 | 200 | 34 | - | - | 10 | 3° | | | | | | |
| S20X-SCLP ^{R/L} 09-25E | | 2520B-09E | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 19 | 220 | 37 | - | - | 12.5 | 0° | | | | | | |
| S10M-SCLP ^{R/L} 08-12 | SCLP ^{R/L} 1210B-08 | <input type="checkbox"/> | <input type="checkbox"/> | 12 | 10 | 9 | 150 | 23 | - | - | 6 | 5° | 0.4 | Fig.2 | SB-3STR | FT-10 | | | |
| S12M-SCLP ^{R/L} 08-14 | | 1412B-08 | <input type="checkbox"/> | <input type="checkbox"/> | 14 | 12 | 11 | 150 | 25 | - | - | 7 | | | | | 4° | | |
| S12M-SCLP ^{R/L} 09-16 | 1612B-09 | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 150 | 29 | - | - | 8 | 4° | 0.4 | | Fig.2 | SB-4TR | FT-15 | | |
| S16N-SCLP ^{R/L} 09-18 | 1816B-09 | <input type="checkbox"/> | <input type="checkbox"/> | 18 | 16 | 15 | 160 | 31 | - | - | 9 | 3.5° | | | | | | | |
| S16Q-SCLP ^{R/L} 09-20 | 2016B-09 | <input type="checkbox"/> | <input type="checkbox"/> | 20 | 16 | 15 | 180 | 34 | - | - | 10 | 3° | | | | | | | |
| S20R-SCLP ^{R/L} 09-25 | 2520B-09 | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 19 | 200 | 37 | - | - | 12.5 | 0° | | | | | | | |
| S25S-SCLP ^{R/L} 09-30 | 3025B-09 | <input type="checkbox"/> | <input type="checkbox"/> | 30 | 25 | 24 | 250 | 40 | - | - | 15 | 0° | | | | | | | |
| C10N-SCLP ^{R/L} 08-12 | SCLP ^{R/L} 1210B-08W | <input type="checkbox"/> | <input type="checkbox"/> | | | | 160 | | | | | | | 0.4 | | | | Fig.3 | SB-3STR |
| SCLP ^{R/L} 08-12-1/2 | | <input type="checkbox"/> | <input type="checkbox"/> | 12 | 10 | 9 | 80 | 12 | - | - | 6 | 8° | | | | | | | |
| SCLP ^{R/L} 08-12-2/3 | | <input type="checkbox"/> | <input type="checkbox"/> | | | | 105 | | | | | | | | | | | | |
| C12Q-SCLP ^{R/L} 09-16 | 1612B-09W | <input type="checkbox"/> | <input type="checkbox"/> | | | | 180 | | | | | | 0.4 | Fig.3 | SB-4TR | FT-15 | | | |
| SCLP ^{R/L} 09-16-1/2 | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 90 | 14 | - | - | 8 | 5° | | | | | | | | |
| SCLP ^{R/L} 09-16-2/3 | <input type="checkbox"/> | <input type="checkbox"/> | | | | 120 | | | | | | | | | | | | | |
| C16X-SCLP ^{R/L} 09-20 | 2016B-09W | <input type="checkbox"/> | <input type="checkbox"/> | | | | 220 | | | | | | 0.4 | | | | Fig.3 | SB-4TR | FT-15 |
| SCLP ^{R/L} 09-20-1/2 | <input type="checkbox"/> | <input type="checkbox"/> | 20 | 16 | 15 | 110 | 16 | - | - | 10 | 3° | | | | | | | | |
| SCLP ^{R/L} 09-20-2/3 | <input type="checkbox"/> | <input type="checkbox"/> | | | | 145 | | | | | | | | | | | | | |
| C20S-SCLP ^{R/L} 09-25 | 2520B-09W | <input type="checkbox"/> | <input type="checkbox"/> | | | | 250 | | | | | | 0.4 | Fig.3 | SB-4TR | FT-15 | | | |
| SCLP ^{R/L} 09-25-1/2 | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 19 | 125 | 17 | - | - | 12.5 | 0° | | | | | | | | |
| SCLP ^{R/L} 09-25-2/3 | <input type="checkbox"/> | <input type="checkbox"/> | | | | 165 | | | | | | | | | | | | | |
| A10X-SCLP ^{R/L} 08-12E | SCLP ^{R/L} 1210B-08EH | <input type="checkbox"/> | <input type="checkbox"/> | 12 | 10 | 9 | 120 | 23 | - | - | 6 | 5° | 0.4 | | | | Fig.4 | SB-3STR | FT-10 |
| A12X-SCLP ^{R/L} 08-14E | | <input type="checkbox"/> | <input type="checkbox"/> | 14 | 12 | 11 | 120 | 25 | - | - | 7 | 4° | | | | | | | |
| A12X-SCLP ^{R/L} 09-16E | | 1612B-09EH | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 120 | 29 | - | - | 8 | 4° | | | | | 0.4 | Fig.4 |
| A16M-SCLP ^{R/L} 09-18E | | 1816B-09EH | <input type="checkbox"/> | <input type="checkbox"/> | 18 | 16 | 15 | 150 | 31 | - | - | 9 | 3.5° | | | | | | |
| -SCLP ^{R/L} 09-20E | | 2016B-09EH | <input type="checkbox"/> | <input type="checkbox"/> | 20 | | | 34 | | | 10 | 3° | | | | | | | |
| A20Q-SCLP ^{R/L} 09-25E | | 2520B-09EH | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 19 | 180 | 37 | - | - | 12.5 | 0° | | | | | | |
| E10N-SCLP ^{R/L} 08-12 | SCLP ^{R/L} 1210B-08WH | <input type="checkbox"/> | <input type="checkbox"/> | 12 | 10 | 9 | 160 | 12 | - | - | 6 | 8° | 0.4 | Fig.5 | SB-3STR | FT-10 | | | |
| E12Q-SCLP ^{R/L} 09-16 | | 1612B-09WH | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 180 | 15 | - | - | 8 | | | | | 5° | | |
| E16X-SCLP ^{R/L} 09-20 | | 2016B-09WH | <input type="checkbox"/> | <input type="checkbox"/> | 20 | 16 | 15 | 220 | 16 | - | - | 10 | 3° | | 0.4 | Fig.5 | SB-4TR | FT-15 | |
| E20S-SCLP ^{R/L} 09-25 | | 2520B-09WH | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 19 | 250 | 17 | - | - | 12.5 | 0° | | | | | | |

For applicable sleeve / Joint, please see ● F77~F79

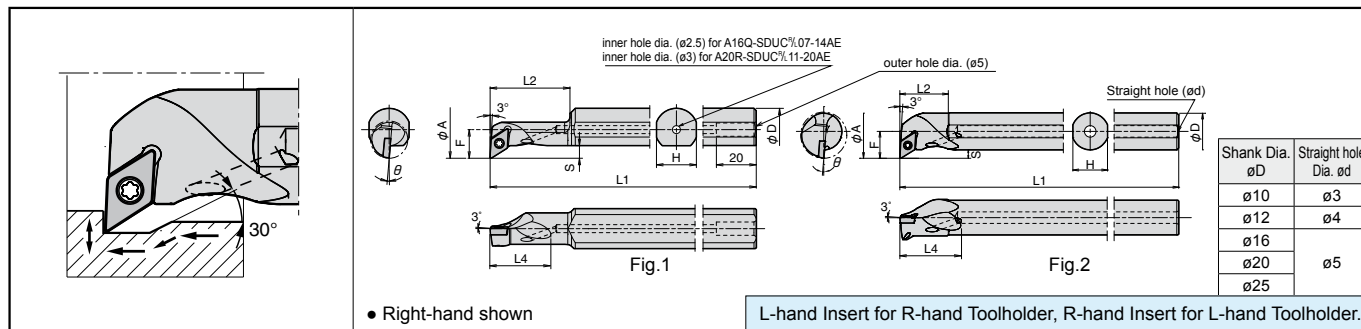
● Applicable Inserts

| Applications | Finishing | Finishing-Medium | Medium | Finishing-Medium | Low Carbon Steel / Finishing | Low Carbon Steel / Finishing-Medium | Cast Iron | Non-ferrous Metals | Hard materials | |
|--------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--|
| Ref. Page | B50 | B50 | B50 | B50 | B50 | B50 | B50 | C18 | C10 | |
| Insert | GP | HQ | Standard | ^{R/L} -Y | XP | XQ | Without Chipbreaker | PCD | CBN | |
| Toolholder |  |  |  |  |  |  |  |  |  | |
|SCLP ^{R/L} 08.... | CPMT0802.. | CPMH0802.. | CPMH0802.. | CPMH0802.. | CPMT0802.. | - | CPMB0802.. | CPMH0802.. | CPGB0802.. | |
|SCLP ^{R/L} 09.... | CPMT0903.. | CPMH0903.. | CPMH0903.. | CPMH0903.. | CPMT0903.. | CPMT0903.. | CPMB0903.. | CPMH0903.. | CPGB0903.. | |

For recommended cutting conditions, see page ● F82~F83

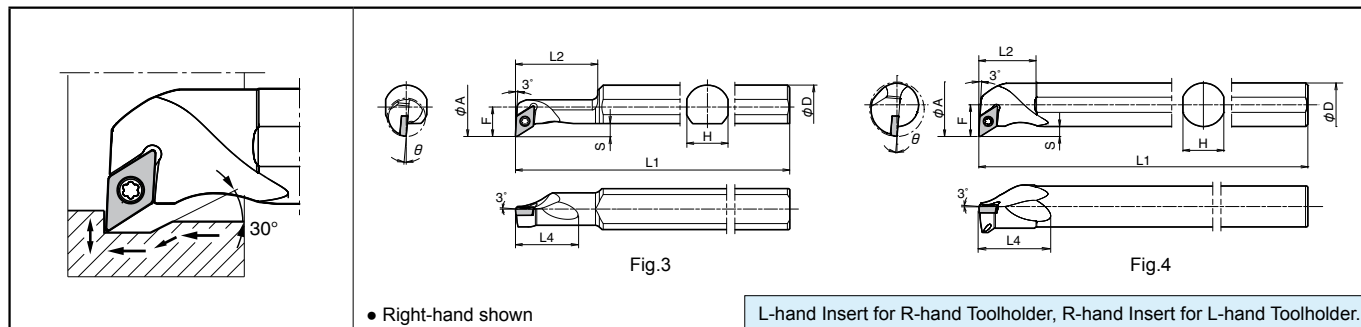
A-SDUC-AE Excellent Bar (Copying)

Max. Overhang Length $L/D \sim 5.5$



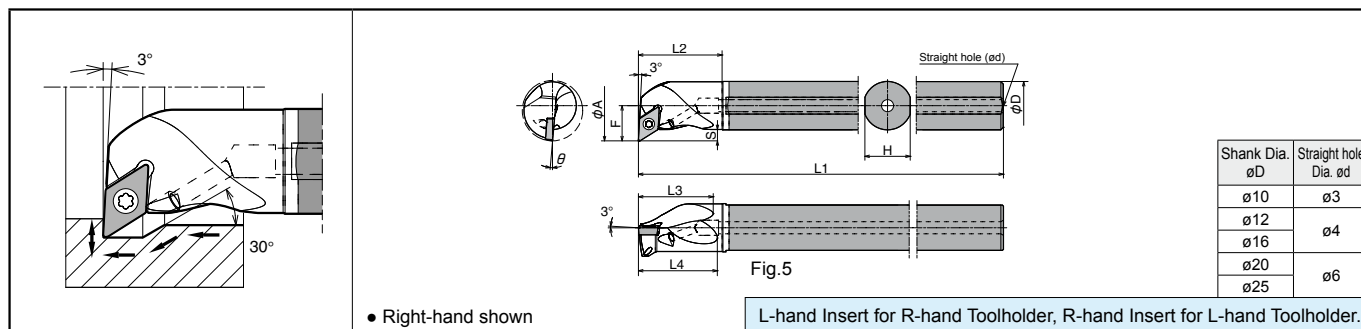
S-SDUC-A Steel Bar (Copying)

Max. Overhang Length $L/D \sim 4$



E-SDUC-A Carbide Shank Bar (Copying)



Max. Overhang Length $L/D \sim 7$























F

Boring

● Toolholder Dimensions

| Description | | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | | θ | Standard Corner-R (r) | Coolant Hole | Drawing | Spare Parts | | | | | | | |
|---------------|---------------------------------------|------|---|-------------------|----------------|----|-----|----|----|----|------|------|----|-----------------------|--------------|---------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------|----|-----|-------|-----------|-------|
| | | R | L | øA | øD | H | L1 | L2 | L3 | L4 | F | S | | | | | Clamp Screw | Wrench | | | | | | |
| | | | | | | | | | | | | | | | | |  |  | | | | | | |
| Excellent Bar | A16Q-SDUC ^{R/L} 07-14AE | ● | ● | 14 | 16 | 15 | 180 | 28 | - | 23 | 10.8 | 4.4 | 5° | 0.4 | Yes | Fig.1 | SB-2560TR | FT-8 | | | | | | |
| | A20R-SDUC ^{R/L} 11-20AE | ● | ● | 20 | 20 | 19 | 200 | 48 | - | 30 | 15.6 | 6.1 | | | | | SB-4065TR | FT-15 | | | | | | |
| | A10L-SDUC ^{R/L} 07-14AE | ● | ● | 14 | 10 | 9 | 140 | 19 | - | 20 | 8.7 | 3.3 | 5° | 0.4 | | Fig.2 | SB-2560TR | FT-8 | | | | | | |
| | A12M-SDUC ^{R/L} 07-16AE | ● | ● | 16 | 12 | 11 | 150 | 21 | - | 24 | 9.7 | | | | | | 6.1 | SB-4065TR | FT-15 | | | | | |
| | A16Q-SDUC ^{R/L} 07-20AE | ● | ● | 20 | 16 | 15 | 180 | | - | 26 | 11.7 | | | | | | | | | | | | | |
| | A16Q-SDUC ^{R/L} 11-23AE | ● | ● | 23 | | | | | - | 31 | 14.5 | | | | | | | | | | | | | |
| | A20R-SDUC ^{R/L} 11-27AE | ● | ● | 27 | 20 | 19 | 200 | 23 | - | 36 | 16.5 | 6.1 | 5° | 0.4 | | Fig.3 | SB-2560TR | FT-8 | | | | | | |
| | A25S-SDUC ^{R/L} 11-32AE | ● | ● | 32 | 25 | 24 | 250 | 24 | - | 39 | 19 | | | | | | SB-4065TR | FT-15 | | | | | | |
| Steel | S16Q-SDUC ^{R/L} 07-14A | ● | ● | 14 | 16 | 15 | 180 | 28 | - | 23 | 10.8 | 4.4 | 5° | 0.4 | No | Fig.3 | SB-2560TR | FT-8 | | | | | | |
| | S20R-SDUC ^{R/L} 11-20A | ● | ● | 20 | 20 | 19 | 200 | 48 | - | 30 | 15.6 | 6.1 | | | | | SB-4065TR | FT-15 | | | | | | |
| | S10L-SDUC ^{R/L} 07-14A | ● | ● | 14 | 10 | 9 | 140 | 19 | - | 20 | 8.7 | 3.3 | 5° | 0.4 | | Fig.4 | SB-2560TR | FT-8 | | | | | | |
| | S12M-SDUC ^{R/L} 07-16A | ● | ● | 16 | 12 | 11 | 150 | 21 | - | 24 | 9.7 | | | | | | 6.1 | SB-4065TR | FT-15 | | | | | |
| | S16Q-SDUC ^{R/L} 07-20A | ● | ● | 20 | 16 | 15 | 180 | | - | 26 | 11.7 | | | | | | | | | | | | | |
| | S16Q-SDUC ^{R/L} 11-23A | ● | ● | 23 | | | | | - | 31 | 14.5 | | | | | | | | | | | | | |
| | S20R-SDUC ^{R/L} 11-27A | ● | ● | 27 | 20 | 19 | 200 | 23 | - | 36 | 16.5 | 6.1 | | | | | | | | 5° | 0.4 | Fig.5 | SB-2560TR | FT-8 |
| | S25S-SDUC ^{R/L} 11-32A | ● | ● | 32 | 25 | 24 | 250 | 24 | - | 39 | 19 | | | | | | | | | | | | SB-4065TR | FT-15 |
| Carbide | E10N-SDUC ^{R/L} 07-14A | ● | ● | 14 | 10 | 9 | 160 | 20 | - | 19 | 8.7 | 3.3 | 5° | 0.4 | Yes | Fig.5 | SB-2560TR | FT-8 | | | | | | |
| | E10N-SDUC ^{R/L} 07-14A-2 / 3 | ● | ● | | | | 105 | | | | 23 | | | | | | | | - | 22 | 9.7 | 26 | 11.7 | 6.1 |
| | E12Q-SDUC ^{R/L} 07-16A | ● | ● | 16 | 12 | 11 | 180 | 28 | - | 27 | | 14.5 | 32 | - | | | 31 | 16.5 | | | | | | |
| | E12Q-SDUC ^{R/L} 07-16A-2 / 3 | ● | ● | | | | 120 | | | | 32 | | | | | | | | - | 37 | 19 | | | |
| | E16X-SDUC ^{R/L} 07-20A | ● | ● | 20 | 16 | 15 | 220 | 38 | - | 37 | | 19 | | | | | | | | | | | | |
| | E16X-SDUC ^{R/L} 07-20A-2 / 3 | ● | ● | | | | 145 | | | | | | | | | | | | | | | | | |
| | E16X-SDUC ^{R/L} 11-23A | ● | ● | 23 | 20 | 19 | 220 | 38 | - | 37 | 19 | | | | | | | | | | | | | |
| | E16X-SDUC ^{R/L} 11-23A-2 / 3 | ● | ● | | | | 145 | | | | | | | | | | | | | | | | | |
| | E20S-SDUC ^{R/L} 11-27A | ● | ● | 27 | 20 | 19 | 250 | 38 | - | 37 | 19 | | | | | | | | | | | | | |
| | E20S-SDUC ^{R/L} 11-27A-2 / 3 | ● | ● | | | | 165 | | | | | | | | | | | | | | | | | |
| | E25T-SDUC ^{R/L} 11-32A | ● | ● | 32 | 25 | 24 | 300 | 38 | - | 37 | 19 | | | | | | | | | | | | | |
| | E25T-SDUC ^{R/L} 11-32A-2 / 3 | ● | ● | | | | 200 | | | | | | | | | | | | | | | | | |

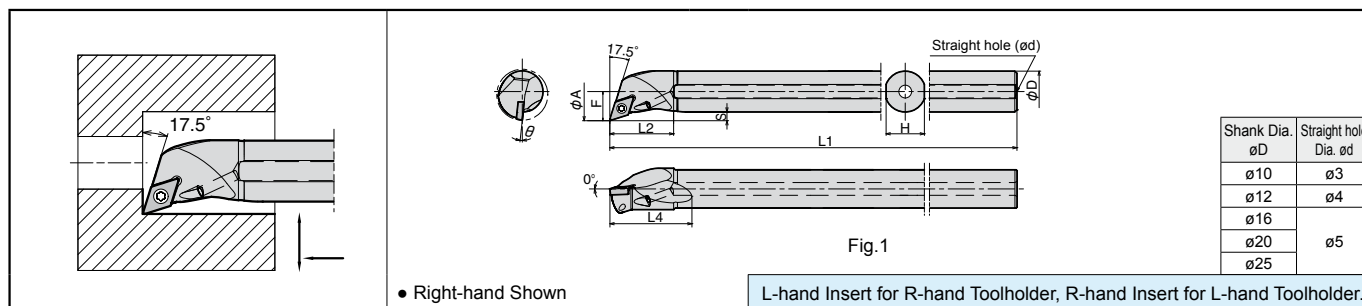
● Applicable Inserts

| Applications | Minute ap | Finishing | Finishing | Finishing-Medium | Finishing-Medium | Medium-Roughing | Finishing | Finishing / Precision | Low Feed | Low Feed / Precision |
|--------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Ref. Page | B52 | B52 | B52 | B53 | B53 | B53 | B55 | B55 | B56 | B56 |
| Insert | CF | CK | GP | GK | HQ | Standard | ^{R/L} -F | ^{R/L} -FSF | (E / F) ^{R/L} -U | F ^{R/L} -USF |
| Toolholder |  |  |  |  |  |  |  |  |  |  |
| ...-SDUC ^{R/L} 07-... | DCGT0702.. | DCGT0702.. | DCMT0702.. | DCMT0702.. | DCMT0702.. | DCGT0702.. | DCGT0702.. | DCET0702.. | DCGT0702.. | DCET0702.. |
| ...-SDQC ^{R/L} 07-... | | | | | | | | | | |
| ...-SDZC ^{R/L} 07-... | | | | | | | | | | |
| ...-SDUC ^{R/L} 11-... | DCGT11T3.. | DCGT11T3.. | DCMT11T3.. | DCMT11T3.. | DCMT11T3.. | DCMT11T3.. DCGT11T3.. | DCGT11T3.. | DCET11T3.. | DCGT11T3.. | DCET11T3.. |
| ...-SDQC ^{R/L} 11-... | | | | | | | | | | |
| ...-SDZC ^{R/L} 11-... | | | | | | | | | | |
| Applications | Low Feed | Low Feed / Precision | Soft Steel Finishing | Soft Steel Finishing-Medium | Stainless Steel | Cast Iron | Non-ferrous Metals | Non-ferrous Metals | Non-ferrous Metals | Hard Materials |
| Ref. Page | B57 | B57 | B54 | B54 | B54 | B57 | B57 | B57 | C19 | C11 |
| Insert | (E / F) ^{R/L} -J | F ^{R/L} -JSF | XP | XQ | MQ | Without Chipbreaker | AH | ^{R/L} -A3 | PCD | CBN |
| Toolholder |  |  |  |  |  |  |  |  |  |  |
| ...-SDUC ^{R/L} 07-... | | | DCMT0702.. | | DCMT0702.. | DCGW0702.. | | | DCMT0702.. | DCMW0702.. |
| ...-SDQC ^{R/L} 07-... | - | - | | | | | | | | |
| ...-SDZC ^{R/L} 07-... | | | | | | | | | | |
| ...-SDUC ^{R/L} 11-... | DCGT11T3.. | DCET11T3.. | DCMT11T3.. | DCMT11T3.. | DCMT11T3.. | DCGW11T3.. | DCGT11T3.. | DCGT11T3.. | DCMT11T3.. | DCMW11T3.. |
| ...-SDQC ^{R/L} 11-... | | | | | | | | | | |
| ...-SDZC ^{R/L} 11-... | | | | | | | | | | |

For recommended cutting conditions, see page ● F82~F83

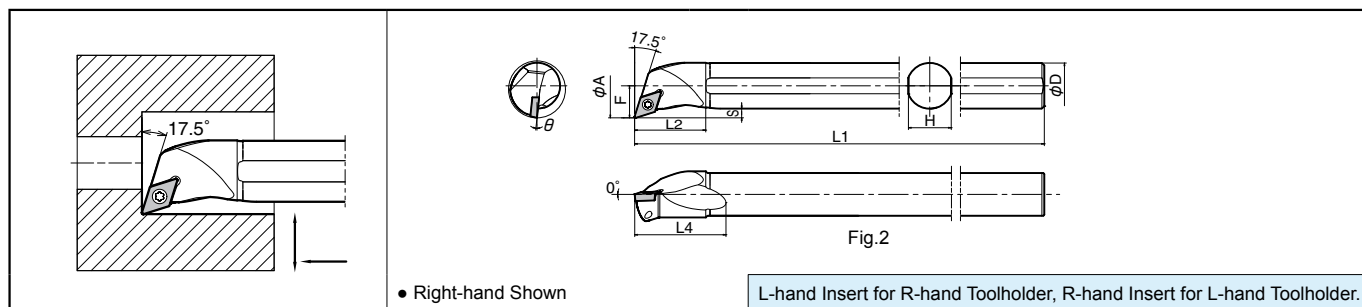
A-SDQC-AE Excellent Bar (Copying)

Max. Overhang Length L/D≈5.5



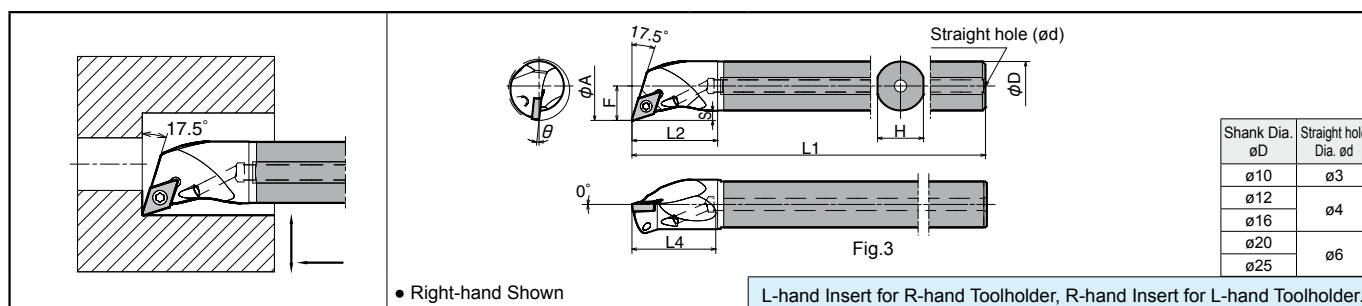
S-SDQC-A Steel Bar (Copying)

Max. Overhang Length L/D≈4






E-SDQC-A Carbide Shank Bar (Copying)

Max. Overhang Length L/D≈7

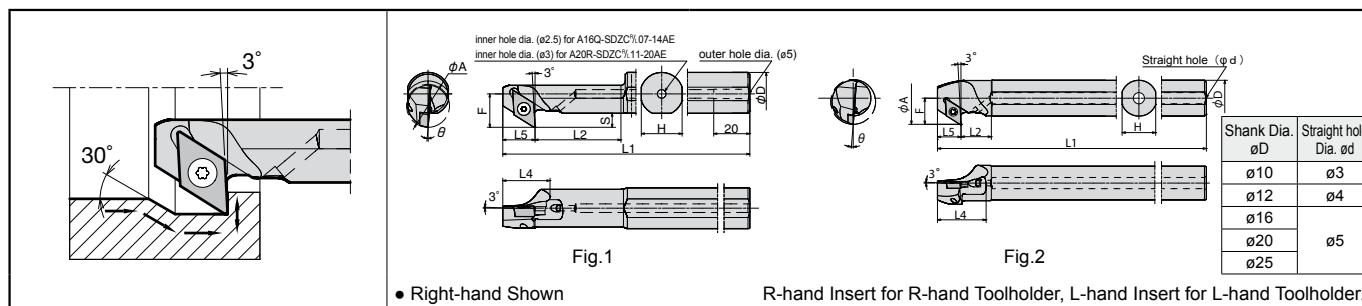


Toolholder Dimensions

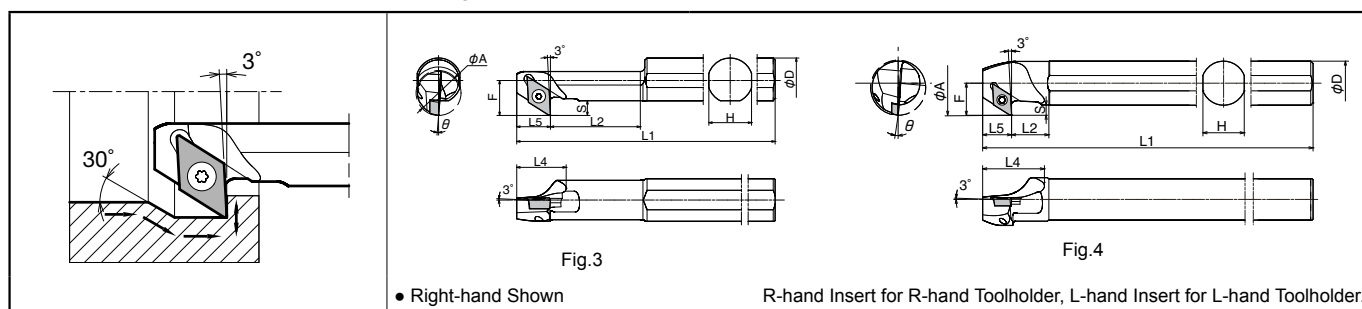
| Description | | | | Std. | | Min. Cutting Dia. | Dimension (mm) | | | | | | | | θ | Standard Corner-R (R) | Coolant Hole | Drawing | Spare Parts | | |
|---------------|---------------------------------------|---|---|------|----|-------------------|----------------|----|---|----|------|-----|-----|-----|-----|-----------------------|---------------------------------------------------------------------------------------|-----------|-------------|-------------|--------|
| | | | | R | L | | øA | øD | H | L1 | L2 | L3 | L4 | F | | | | | S | Clamp Screw | Wrench |
| | | | | | | | | | | | | | | | | | | | | | |
| Excellent Bar | A10L -SDQC ^{R/L} 07-13AE | ● | ● | 13 | 10 | 9 | 140 | 19 | | 21 | 7.5 | 2.1 | 10° | 0.4 | Yes | Fig.1 |  | SB-2560TR | FT-8 | | |
| | A12M-SDQC ^{R/L} 07-16AE | ● | ● | 16 | 12 | 11 | 150 | 22 | | 25 | 9.25 | 2.6 | 8° | | | | | | | | |
| | A16Q-SDQC ^{R/L} 07-20AE | ● | ● | 20 | 16 | 15 | 180 | 25 | - | 32 | 11.3 | 2.6 | 6° | | | | | | | | |
| | A20R-SDQC ^{R/L} 11-25AE | ● | ● | 25 | 20 | 19 | 200 | 31 | | 37 | 14.4 | 3.7 | 5° | | | | | | | | |
| | A25S-SDQC ^{R/L} 11-30AE | ● | ● | 30 | 25 | 24 | 250 | 38 | | 45 | 16.9 | 3.7 | 4° | | | | | | | | |
| Steel | S10L-SDQC ^{R/L} 07-13A | ● | ● | 13 | 10 | 9 | 140 | 19 | | 21 | 7.5 | 2.1 | 10° | 0.4 | No | Fig.2 |  | SB-2560TR | FT-8 | | |
| | S12M-SDQC ^{R/L} 07-16A | ● | ● | 16 | 12 | 11 | 150 | 22 | | 25 | 9.25 | 2.6 | 8° | | | | | | | | |
| | S16Q-SDQC ^{R/L} 07-20A | ● | ● | 20 | 16 | 15 | 180 | 25 | - | 32 | 11.3 | 2.6 | 6° | | | | | | | | |
| | S20R-SDQC ^{R/L} 11-25A | ● | ● | 25 | 20 | 19 | 200 | 31 | | 37 | 14.4 | 3.7 | 5° | | | | | | | | |
| | S25S-SDQC ^{R/L} 11-30A | ● | ● | 30 | 25 | 24 | 250 | 38 | | 45 | 16.9 | 3.7 | 4° | | | | | | | | |
| Carbide | E10N-SDQC ^{R/L} 07-13A | ● | ● | 13 | 10 | 9 | 160 | 20 | - | 19 | 7.5 | 2.1 | 10° | 0.4 | Yes | Fig.3 |  | SB-2560TR | FT-8 | | |
| | E10N-SDQC ^{R/L} 07-13A-2 / 3 | ● | ● | | | | 105 | | | | | | | | | | | | | | |
| | E12Q-SDQC ^{R/L} 07-16A | ● | ● | 16 | 12 | 11 | 180 | 23 | - | 22 | 9.25 | 2.6 | 8° | | | | | | | | |
| | E12Q-SDQC ^{R/L} 07-16A-2 / 3 | ● | ● | | | | 120 | | | | | | | | | | | | | | |
| | E16X-SDQC ^{R/L} 07-20A | ● | ● | 20 | 16 | 15 | 220 | 28 | - | 27 | 11.3 | 2.6 | 6° | | | | | | | | |
| | E16X-SDQC ^{R/L} 07-20A-2 / 3 | ● | ● | | | | 145 | | | | | | | | | | | | | | |
| | E20S-SDQC ^{R/L} 11-25A | ● | ● | 25 | 20 | 19 | 250 | 32 | - | 31 | 14.4 | 3.7 | 5° | | | | | | | | |
| | E20S-SDQC ^{R/L} 11-25A-2 / 3 | ● | ● | | | | 165 | | | | | | | | | | | | | | |
| | E25T-SDQC ^{R/L} 11-30A | ● | ● | 30 | 25 | 24 | 300 | 38 | - | 37 | 16.9 | 3.7 | 4° | | | | | | | | |
| | E25T-SDQC ^{R/L} 11-30A-2 / 3 | ● | ● | | | | 200 | | | | | | | | | | | | | | |

A-SDZC-AE Excellent Bar (Back Boring)

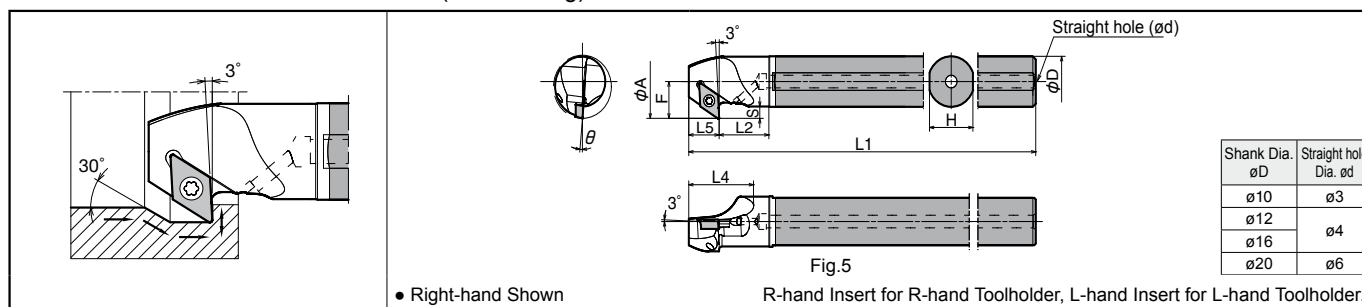
Max. Overhang Length L/D≈5.5

**S-SDZC-A** Steel Bar (Back Boring)



Max. Overhang Length L/D≈4

**E-SDZC-A** Carbide Shank Bar (Back Boring)

Max. Overhang Length L/D≈7



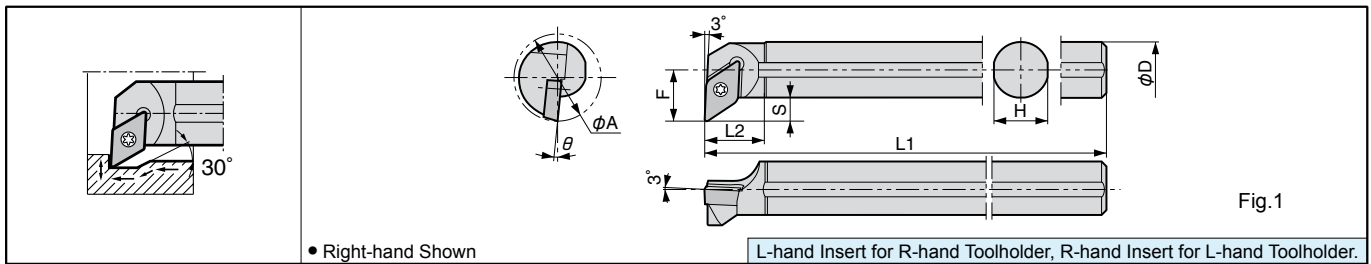
● Toolholder Dimensions

| Description | | Std. | | Min. Cutting Dia. | Dimension (mm) | | | | | | | | θ | Standard Corner-R (R _ε) | Coolant Hole | Drawing | Spare Parts | | |
|---------------|----------------------------------|------|---|----------------------|----------------|----|-----|------|----|------|------|-----|----|-------------------------------------|--------------|---------|-------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| | | R | L | | øA | øD | H | L1 | L2 | L4 | L5 | F | | | | | S |  |  |
| | | | | | | | | | | | | | | | | | | | |
| Excellent Bar | A16Q-SDZC ^{R/L} 07-14AE | ● | ● | 14 | 16 | 15 | 180 | 30 | 17 | 10 | 10.8 | 4.4 | 5° | 0.4 | Yes | Fig.1 | SB-2545TR | FT-8 | |
| | A20R-SDZC ^{R/L} 11-20AE | ● | ● | 20 | 20 | 19 | 200 | 40 | 24 | 15 | 15.6 | 6.1 | | | | | SB-4065TR | FT-15 | |
| | A10L-SDZC ^{R/L} 07-14AE | ● | ● | 14 | 10 | 9 | 140 | 14 | 16 | 9.5 | 8.7 | 3.3 | | | | Fig.2 | SB-2545TR | FT-8 | |
| | A12M-SDZC ^{R/L} 07-16AE | ● | ● | 16 | 12 | 11 | 150 | 14 | 20 | 10.5 | 9.7 | 3.3 | | | | | SB-2560TR | | |
| | A16Q-SDZC ^{R/L} 07-20AE | ● | ● | 20 | 16 | 15 | 180 | 14 | 22 | 10.5 | 11.7 | 3.3 | | | | | SB-4065TR | FT-15 | |
| | A16Q-SDZC ^{R/L} 11-23AE | ● | ● | 23 | 16 | 15 | 180 | 15 | 22 | 15 | 14.5 | 6.1 | | | | | | | |
| | A20R-SDZC ^{R/L} 11-27AE | ● | ● | 27 | 20 | 19 | 200 | 15 | 25 | 15 | 16.5 | 6.1 | | | | | | | |
| | A25S-SDZC ^{R/L} 11-32AE | ● | ● | 32 | 25 | 24 | 250 | 15 | 26 | 15 | 19 | 6.1 | | | | | | | |
| Steel | S16Q-SDZC ^{R/L} 07-14A | ● | ● | 14 | 16 | 15 | 180 | 30 | 17 | 10 | 10.8 | 4.4 | 5° | 0.4 | No | Fig.3 | SB-2545TR | FT-8 | |
| | S20R-SDZC ^{R/L} 11-20A | ● | ● | 20 | 20 | 19 | 200 | 40 | 24 | 15 | 15.6 | 6.1 | | | | | SB-4065TR | FT-15 | |
| | S10L-SDZC ^{R/L} 07-14A | ● | ● | 14 | 10 | 9 | 140 | 14 | 16 | 9.5 | 8.7 | 3.3 | | | | Fig.4 | SB-2545TR | FT-8 | |
| | S12M-SDZC ^{R/L} 07-16A | ● | ● | 16 | 12 | 11 | 150 | 14 | 20 | 10.5 | 9.7 | 3.3 | | | | | SB-2560TR | | |
| | S16Q-SDZC ^{R/L} 07-20A | ● | ● | 20 | 16 | 15 | 180 | 14 | 22 | 10.5 | 11.7 | 3.3 | | | | | SB-4065TR | FT-15 | |
| | S16Q-SDZC ^{R/L} 11-23A | ● | ● | 23 | 16 | 15 | 180 | 15 | 22 | 15 | 14.5 | 6.1 | | | | | | | |
| | S20R-SDZC ^{R/L} 11-27A | ● | ● | 27 | 20 | 19 | 200 | 15 | 25 | 15 | 16.5 | 6.1 | | | | | | | |
| | S25S-SDZC ^{R/L} 11-32A | ● | ● | 32 | 25 | 24 | 250 | 15 | 26 | 15 | 19 | 6.1 | | | | | | | |
| Carbide | E10N-SDZC ^{R/L} 07-14A | ● | | 14 | 10 | 9 | 160 | 10.5 | 16 | 9.5 | 8.7 | 3.3 | 5° | 0.4 | Yes | Fig.5 | SB-2545TR | FT-8 | |
| | E12Q-SDZC ^{R/L} 07-16A | ● | | 16 | 12 | 11 | 180 | 12.5 | 20 | 10.5 | 9.7 | 3.3 | | | | | SB-2560TR | | |
| | E16X-SDZC ^{R/L} 07-20A | ● | | 20 | 16 | 15 | 220 | 17.5 | 22 | 10.5 | 11.7 | 3.3 | | | | | SB-4065TR | FT-15 | |
| | E16X-SDZC ^{R/L} 11-23A | ● | | 23 | 16 | 15 | 220 | 17 | 22 | 15 | 14.5 | 6.1 | | | | | | | |
| | E20S-SDZC ^{R/L} 11-27A | ● | | 27 | 20 | 19 | 250 | 23 | 25 | 15 | 16.5 | 6.1 | | | | | | | |

● : Std. Item ○ : Check Availability □ : Deleted from the next catalogue

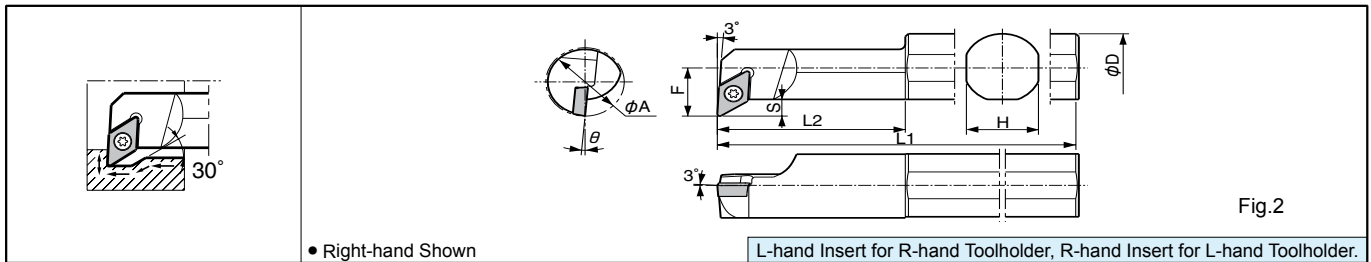
S...SDUC-E Excellent Bar (Copying)

Max. Overhang Length L/D≈5



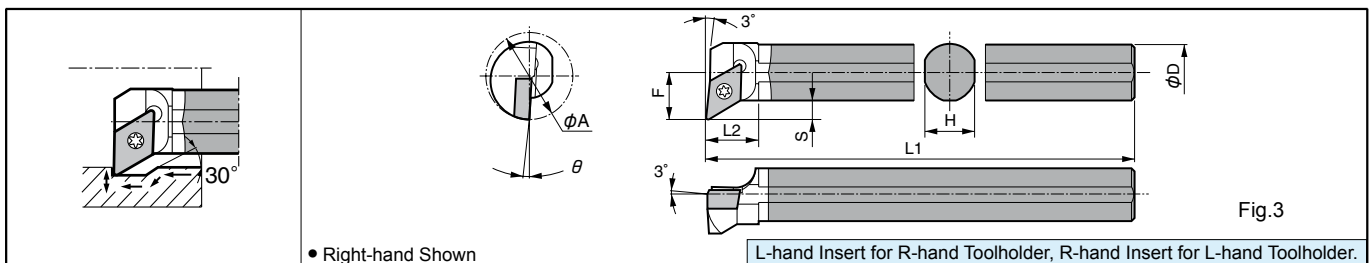
S...SDUC Steel Bar (Copying)

Max. Overhang Length L/D≈3



C...SDUC Carbide Shank Bar (Copying)

Max. Overhang Length L/D≈7



● Toolholder Dimensions [Will be switched to Dynamic Bar, see ● F85~F88 (Alternative Toolholder Reference Table for Boring Bar)].

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | | θ | Standard Corner-R (R) | Drawing | Spare Parts | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------|--------------------------|----------------|----|-----|-----|----|----|----|------|-----|--------------------------|---------|-------------|-------------|-----------|------|--|--|------|-----|------|-----|-----|-----|------|-----|------|------|--|--|--|------|------|--|----|
| | | R | L | | øA | øD | H | L1 | L2 | L3 | L4 | F | | | | S | Clamp Screw | Wrench | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S10M-SDUC ^{R/L} 07-14E | SDUC ^{R/L} 1410B-07E 1612B-07E 2016B-07E 2516B-11E 3220B-11E | <input type="checkbox"/> | <input type="checkbox"/> | 14 | 10 | 9 | 150 | 18 | | | | | 8.3 | 3.3 | 5° | 0.4 | Fig.1 | SB-2560TR | FT-8 | | | | | | | | | | | | | | | | | | | |
| S12M-SDUC ^{R/L} 07-16E | | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 150 | 20 | | | | | | | | | | | | | | | 9.3 | 6.1 | 5° | 0.8 | | | | | | | | | | | | |
| S16Q-SDUC ^{R/L} 07-20E | | <input type="checkbox"/> | <input type="checkbox"/> | 20 | 16 | 15 | 180 | 20 | | | | | | | | | | | | | | | | | | | | | | 11.3 | | | | | | | | |
| S16Q-SDUC ^{R/L} 11-25E | | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 16 | 15 | 180 | 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 14.1 | | |
| S20Q-SDUC ^{R/L} 11-32E | | <input type="checkbox"/> | <input type="checkbox"/> | 32 | 20 | 19 | 180 | 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S16Q-SDUC ^{R/L} 07-14 | SDUC ^{R/L} 1416B-07 1616B-07 2020B-11 2525B-11 | <input type="checkbox"/> | <input type="checkbox"/> | 14 | 16 | 14 | 180 | 30 | | | | 10.4 | 4.4 | 5° | 0.4 | Fig.2 | SB-2560TR | FT-8 | | | | | | | | | | | | | | | | | | | | |
| S16Q-SDUC ^{R/L} 07-16 | | <input type="checkbox"/> | <input type="checkbox"/> | 16 | | | | 35 | | | | | | | | | | | | | | 11.4 | | | | | | | | | | | | | | | | |
| S20R-SDUC ^{R/L} 11-20 | | <input type="checkbox"/> | <input type="checkbox"/> | 20 | 20 | 18 | 200 | 50 | | | | | | | | | | | | | | | | | | | | 15.1 | 6.1 | 5° | 0.8 | | | | | | | |
| S25X-SDUC ^{R/L} 11-25 | | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 25 | 23 | 220 | 60 | | | | | | | | | | | | | | | | | | | | | | | | | | | 17.6 | | | |
| C10N-SDUC ^{R/L} 07-14 | | SDUC ^{R/L} 1410B-07W 1612B-07W 2012B-11W 2516B-11W 3220B-11W | <input type="checkbox"/> | <input type="checkbox"/> | 14 | 10 | 9 | 160 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 11 |
| C12Q-SDUC ^{R/L} 07-16 | <input type="checkbox"/> | | <input type="checkbox"/> | 16 | 12 | 11 | 180 | 12 | | | | 9.2 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C12Q-SDUC ^{R/L} 11-20 | <input type="checkbox"/> | | <input type="checkbox"/> | 20 | 12 | 11 | 180 | 15 | | | | | | | | | | 12.3 | | | | | | | | | | | | | | | | | | | | |
| C16X-SDUC ^{R/L} 11-25 | <input type="checkbox"/> | | <input type="checkbox"/> | 25 | 16 | 15 | 220 | 16 | | | | | | | | | | | | | | | | 14.3 | 6.1 | 5° | 0.8 | | | | | | | | | | | |
| C20S-SDUC ^{R/L} 11-32 | <input type="checkbox"/> | | <input type="checkbox"/> | 32 | 20 | 19 | 250 | 17 | | | | | | | | | | | | | | | | | | | | | | | 16.3 | | | | | | | |

● Applicable Inserts

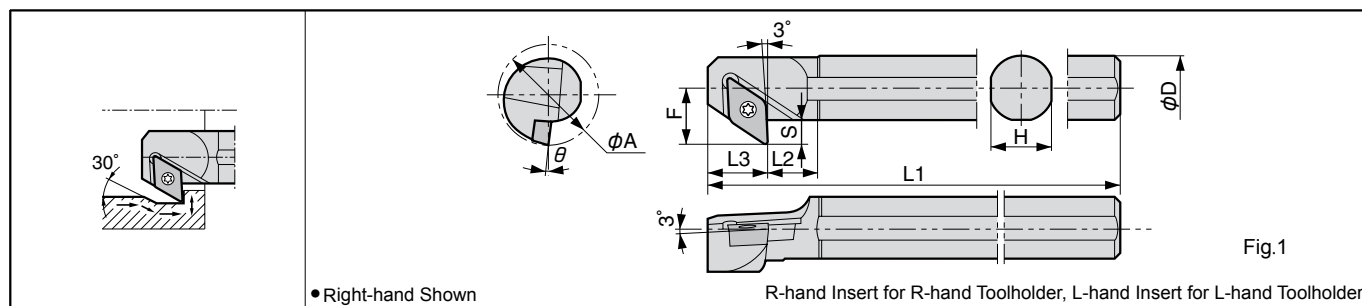
| Applications | Minute ap | Finishing | Finishing-Medium | Finishing-Medium | Medium | Medium-Roughing | Finishing | Finishing / Precision | Low Feed | Low Feed / Precision |
|-----------------------------|--------------------------|----------------------|----------------------|-----------------------------|-----------------|---------------------|--------------------|-----------------------|--------------------------|----------------------|
| Ref. Page | B52 | B52 | B53 | B53 | B54 | B53 | B55 | B55 | B56 | B56 |
| Insert | CF | GP | GK | HQ | FN-Z | Standard | $\frac{R}{L}$ -F | $\frac{R}{L}$ -FSF | (E / F) $\frac{R}{L}$ -U | F $\frac{R}{L}$ -USF |
| Toolholder | | | | | | | | | | |
| ...SDUC $\frac{R}{L}$ 07... | DCGT0702.. | DCMT0702.. | DCMT0702.. | DCMT0702.. | DCGT0702.. | DCGT0702.. | DCGT0702.. | DCET0702.. | DCGT0702.. | DCET0702.. |
| ...SDUC $\frac{R}{L}$ 11... | DCGT11T3.. | DCMT11T3.. | DCMT11T3.. | DCMT11T3.. | DCGT11T3.. | DCMT11T3.. | DCGT11T3.. | DCET11T3.. | DCGT11T3.. | DCET11T3.. |
| Applications | Low Feed | Low Feed / Precision | Soft Steel Finishing | Soft Steel Finishing-Medium | Stainless Steel | Cast Iron | Non-ferrous Metals | Non-ferrous Metals | Non-ferrous Metals | Hard Materials |
| Ref. Page | B57 | B57 | B54 | B54 | B54 | B57 | B57 | B57 | C19 | C11 |
| Insert | (E / F) $\frac{R}{L}$ -J | F $\frac{R}{L}$ -JSF | XP | XQ | MQ | Without Chipbreaker | AH | $\frac{R}{L}$ -A3 | PCD | CBN |
| Toolholder | | | | | | | | | | |
| ...SDUC $\frac{R}{L}$ 07... | - | - | DCMT0702.. | - | DCMT0702.. | DCGW0702.. | - | - | DCMT0702.. | DCMW0702.. |
| ...SDUC $\frac{R}{L}$ 11... | DCGT11T3.. | DCET11T3.. | DCMT11T3.. | DCMT11T3.. | DCMT11T3.. | DCGW11T3.. | DCGT11T3.. | DCGT11T3.. | DCMT11T3.. | DCMW11T3.. |

For recommended cutting conditions, see page ● F82~F83

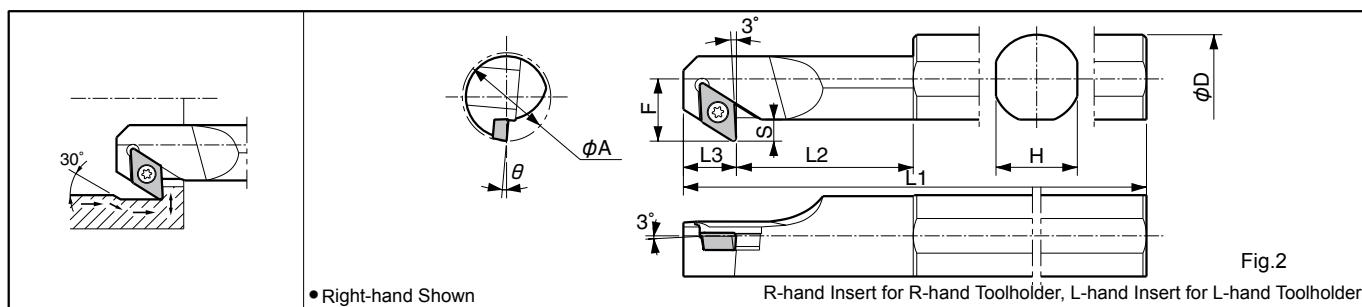
● : Std. Item ○ : Check Availability □ : Deleted from the next catalogue

S...SDZC-E Excellent Bar (Back Boring)






Max. Overhang Length L/D≈5

**S...SDZC** Steel Bar (Back Boring)





















Max. Overhang Length L/D≈3



● Toolholder Dimensions [Will be switched to Dynamic Bar, see **F85~F88** (Alternative Toolholder Reference Table for Boring Bar)].

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | | θ | Standard Corner-R (°) | Drawing | Spare Parts | |
|-----------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------|----------------|-----|-----|-----|------|------|------|-----|-----|--------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| | | | | | | | | | | | | | | | | Clamp Screw | Wrench |
| | | R | L | | øA | øD | H | L1 | L2 | L3 | L4 | F | | | | S |  |
| S10M-SDZC [®] /L 07 -14E | SDZC [®] /L 1410B-07E | <input type="checkbox"/> | <input type="checkbox"/> | 14 | 10 | 9 | 150 | 14 | 9.5 | - | 8.3 | | | Fig.1 |  |  | |
| S12M-SDZC [®] /L 07 -16E | | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 150 | 16 | 10.5 | | 9.3 | 3.3 | 5° | | | | 0.4 |
| S16Q-SDZC [®] /L 07 -20E | | <input type="checkbox"/> | <input type="checkbox"/> | 20 | 16 | 15 | 180 | 16 | 10.5 | | 11.3 | | | | | | |
| S16Q-SDZC [®] /L 11 -25E | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 16 | 15 | 180 | 12 | 15 | 14.1 | | 6.1 | 5° | 0.8 | | | | |
| S20Q-SDZC [®] /L 11 -32E | 3220B-11E | <input type="checkbox"/> | <input type="checkbox"/> | 32 | 20 | 19 | | | | | 16.1 | | | | Fig.2 |  |  |
| S16Q-SDZC [®] /L 07 -14 | SDZC [®] /L 1416B-07 | <input type="checkbox"/> | <input type="checkbox"/> | 14 | 16 | 14 | 180 | 30 | 10 | 10.4 | 4.4 | 5° | 0.4 | | | | |
| S16Q-SDZC [®] /L 07 -16 | | <input type="checkbox"/> | <input type="checkbox"/> | 16 | | | | 35 | 12.5 | 11.4 | | | | | | | |
| S20R-SDZC [®] /L 11 -20 | | 2020B-11 | <input type="checkbox"/> | <input type="checkbox"/> | 20 | 20 | 18 | 200 | 40 | | 15.1 | 6.1 | 5° | 0.8 | | | |
| S25X-SDZC [®] /L 11 -25 | 2525B-11 | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 25 | 23 | 220 | 50 | 15 | 17.6 | | | | | | | |

● Applicable Inserts

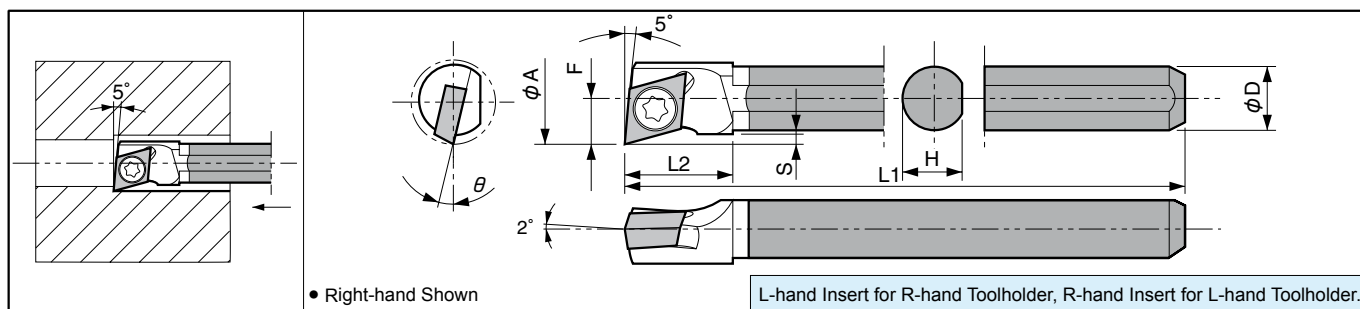
| Applications | Minute ap | Finishing | Finishing-Medium | Finishing-Medium | Medium | Medium-Roughing | Finishing | Finishing / Precision | Low Feed | Low Feed / Precision |
|--------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Ref. Page | B52 | B52 | B53 | B53 | B54 | B53 | B55 | B55 | B56 | B56 |
| Insert | CF | GP | GK | HQ | FN-Z | Standard | [®] /L -F | [®] /L -FSF | (E / F) [®] /L -U | F [®] /L -USF |
| Toolholder |  |  |  |  |  |  |  |  |  |  |
| ...SDZC[®]/L 07 -... | DCGT0702.. | DCMT0702.. | DCMT0702.. | DCMT0702.. | DCGT0702.. | DCGT0702.. | DCGT0702.. | DCET0702.. | DCGT0702.. | DCET0702.. |
| ...SDZC[®]/L 11 -... | DCGT11T3.. | DCMT11T3.. | DCMT11T3.. | DCMT11T3.. | DCGT11T3.. | DCMT11T3.. DCGT11T3.. | DCGT11T3.. | DCET11T3.. | DCGT11T3.. | DCET11T3.. |
| Applications | Low Feed | Low Feed / Precision | Soft Steel Finishing | Soft Steel Finishing-Medium | Stainless Steel | Cast Iron | Non-ferrous Metals | Non-ferrous Metals | Non-ferrous Metals | Hard Materials |
| Ref. Page | B57 | B57 | B54 | B54 | B54 | B57 | B57 | B57 | C19 | C11 |
| Insert | (E / F) [®] /L -J | F [®] /L -JSF | XP | XQ | MQ | Without Chipbreaker | AH | [®] /L -A3 | PCD | CBN |
| Toolholder |  |  |  |  |  |  |  |  |  |  |
| ...SDZC[®]/L 07 -... | - | - | DCMT0702.. | - | DCMT0702.. | DCGW0702.. | - | - | DCMT0702.. | DCMW0702.. |
| ...SDZC[®]/L 11 -... | DCGT11T3.. | DCET11T3.. | DCMT11T3.. | DCMT11T3.. | DCMT11T3.. | DCGW11T3.. | DCGT11T3.. | DCGT11T3.. | DCMT11T3.. | DCMW11T3.. |

For recommended cutting conditions, see page **F82~F83**

Boring Bar [JC □□ Insert]

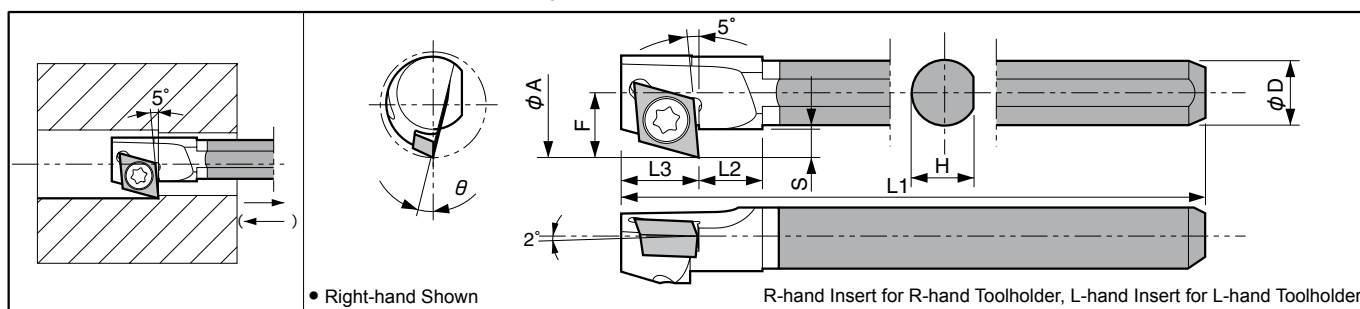
C...SJLC Carbide Shank Bar (Boring / Internal Facing)

Max. Overhang Length L/D≈7





C...SJZC Carbide Shank Bar (Back Boring)

Max. Overhang Length L/D≈7





* When using R-hand Toolholder, use R-hand insert if machining from back to front in this direction (→).
Use L-hand insert if machining from front to back in this direction (←).

● Toolholder Dimensions

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | | θ | Standard Corner-R (°) | Spare Parts | |
|---------------------------------|--------------------------------|------|---|-------------------|----------------|-----|----|----|-----|------|------|-----|------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| | | R | L | | øA | øD | H | L1 | L2 | L3 | F | S | | |  |  |
| | | | | | | | | | | | | | | | | |
| C04X-SJLC ^{R/L} 03-055 | SJLC ^{R/L} 05504B-03W | ● | ● | 5.5 | 4 | 3.8 | 91 | 7 | - | 2.95 | 0.65 | 15° | 0.03 | SB-1635TR | FT-6 | |
| C04X-SJZC ^{R/L} 03-065 | SJZC ^{R/L} 06504B-03W | ● | ● | 6.5 | | | 93 | 4 | 4.8 | 4.0 | 1.8 | | | | | |

● Applicable Inserts

| Applications | Finishing | Finishing / Precision | | | | | | | | | | | | | | |
|-------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Ref. Page | B60 | B60 | | | | | | | | | | | | | | |
| Insert |  |  | | | | | | | | | | | | | | |
| Toolholder | | | | | | | | | | | | | | | | |
| ...SJLC ^{R/L} 03-... | JCGT0301.. | JCET0301.. | | | | | | | | | | | | | | |
| ...SJZC ^{R/L} 03-... | JCGT0301.. | JCET0301.. | | | | | | | | | | | | | | |

For recommended cutting conditions, see page ● F82~F83

● Features of C...SJLC

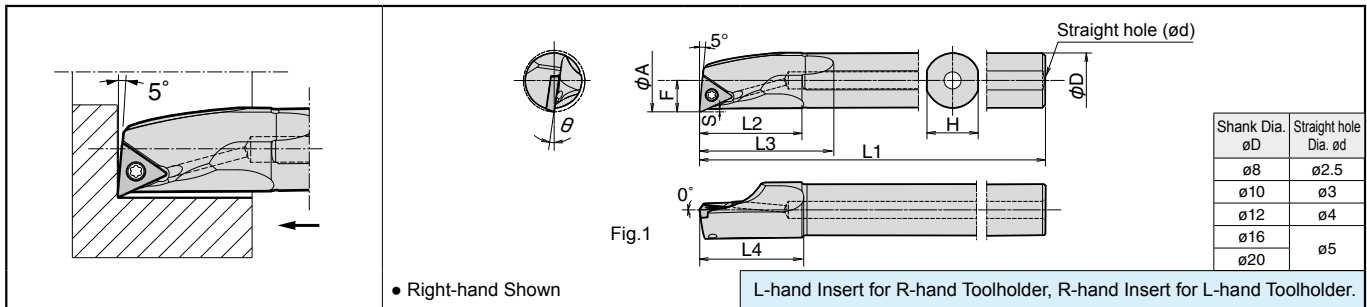
1. Well balanced design of smaller edge and minimized bore dia. as much as possible.
2. As relief angle is introduced as 15°, flexibility of tool pass is high during necking.
3. Retaining front relief angle 5° and good surface roughness at internal facing.

● Features of C...SJZC

1. Back boring bars for workpiece which requires high concentric circle accuracy and unavailable of chuck change.
2. Available for back boring and necking
3. Despite the small size of minimum boring dia. as ø6.5, the edge gap is retained as large as 1.8 mm.

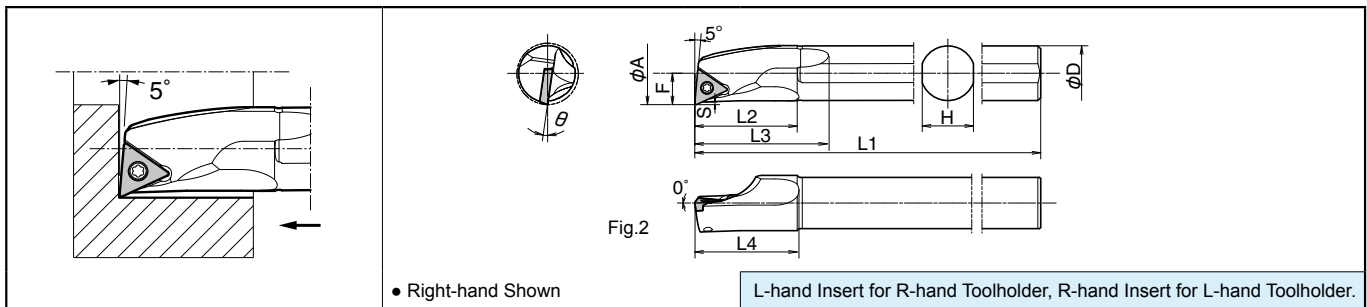
A-STLC-AE Excellent Bar (Boring / Internal Facing)

Max. Overhang Length L/D≈5.5



S-STLC-A Steel Bar (Boring / Internal Facing)

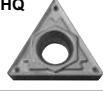
Max. Overhang Length L/D≈4



Toolholder Dimensions

| Description | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | | θ | Standard Corner-R (r) | Coolant Hole | Drawing | Spare Parts | |
|---------------|------|---|----------------|----------------|----|-----|----|----|----|------|-----|-----|-----------------------|--------------|---------|-------------|--------|
| | R | L | | øA | øD | H | L1 | L2 | L3 | L4 | F | S | | | | Clamp Screw | Wrench |
| Excellent Bar | ● | ● | 10 | 8 | 7 | 120 | 16 | 22 | 16 | 5 | 0.5 | 14° | 0.4 | Yes | Fig.1 | SB-2250TR | FT-7 |
| | ● | ● | 12 | 10 | 9 | 140 | 20 | 26 | 20 | 6.2 | 0.9 | 12° | | | | | |
| | ● | ● | 14 | 12 | 11 | 150 | 24 | 30 | 25 | 7.2 | 0.7 | 10° | | | | | |
| | ● | ● | 18 | 16 | 15 | 180 | 30 | 39 | 31 | 9.2 | 0.7 | 8° | | | | | |
| | ● | ● | 22 | 20 | 19 | 200 | 36 | 44 | 36 | 11.2 | 0.7 | 6° | | | | | |
| | ● | ● | 22 | 20 | 19 | 200 | 36 | 44 | 36 | 11.2 | 0.7 | 6° | | | | | |
| Steel | ● | ● | 10 | 8 | 7 | 120 | 16 | 22 | 16 | 5 | 0.5 | 14° | 0.4 | No | Fig.2 | SB-2250TR | FT-7 |
| | ● | ● | 12 | 10 | 9 | 140 | 20 | 26 | 20 | 6.2 | 0.9 | 12° | | | | | |
| | ● | ● | 14 | 12 | 11 | 150 | 24 | 30 | 25 | 7.2 | 0.7 | 10° | | | | | |
| | ● | ● | 18 | 16 | 15 | 180 | 30 | 39 | 31 | 9.2 | 0.7 | 8° | | | | | |
| | ● | ● | 22 | 20 | 19 | 200 | 36 | 44 | 36 | 11.2 | 0.7 | 6° | | | | | |
| | ● | ● | 22 | 20 | 19 | 200 | 36 | 44 | 36 | 11.2 | 0.7 | 6° | | | | | |

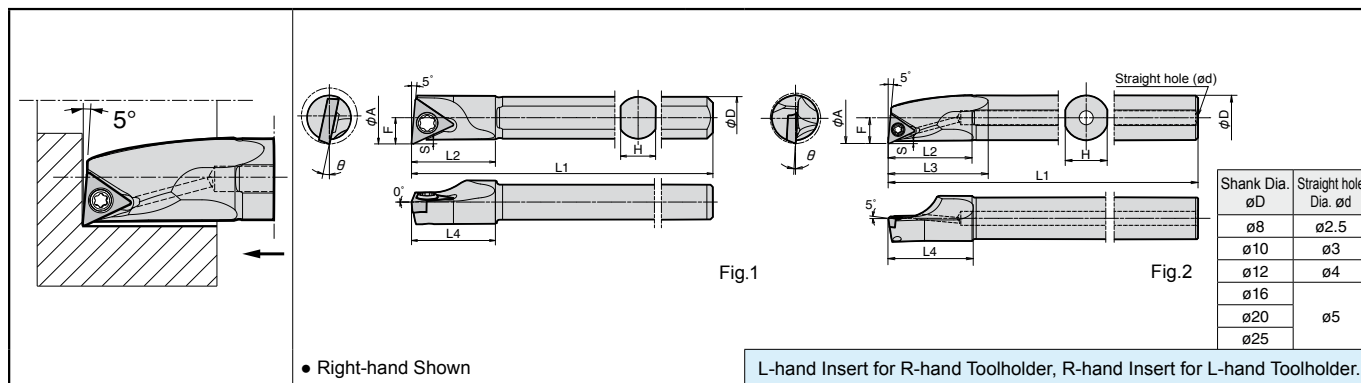
Applicable Inserts

| Applications | Finishing-Medium | | | | | | | | | | | | | | | | |
|-------------------------------|-------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Ref. Page | B63 | | | | | | | | | | | | | | | | |
| Insert | HQ | | | | | | | | | | | | | | | | |
| Toolholder |  | | | | | | | | | | | | | | | | |
| ...-STLC [®] /09-... | TCMT0902.. | | | | | | | | | | | | | | | | |
| ...-STLC [®] /11-... | TCMT1102.. | | | | | | | | | | | | | | | | |

For recommended cutting conditions, see page [F82~F83](#)

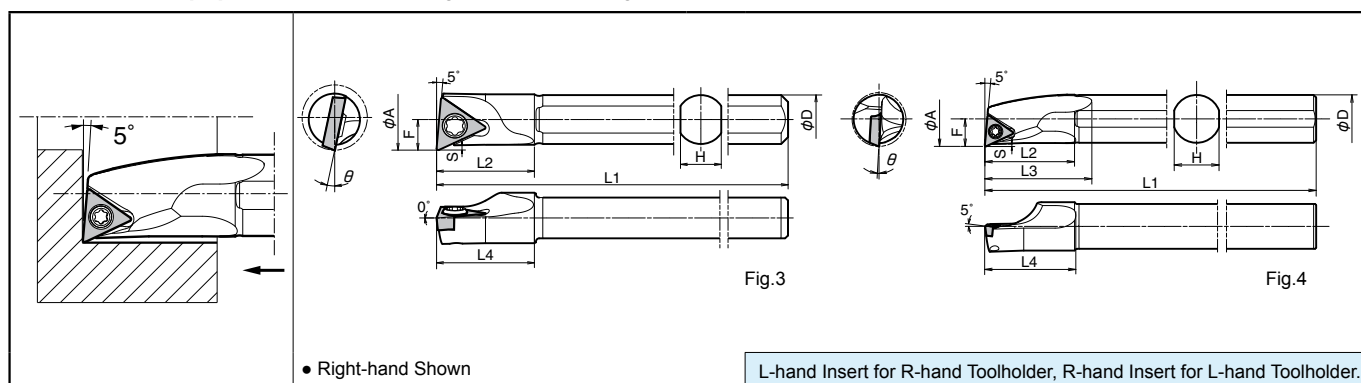
A / S-STLB(P)-AE Excellent Bar (Boring / Internal Facing)

Max. Overhang Length L/D≈5.5



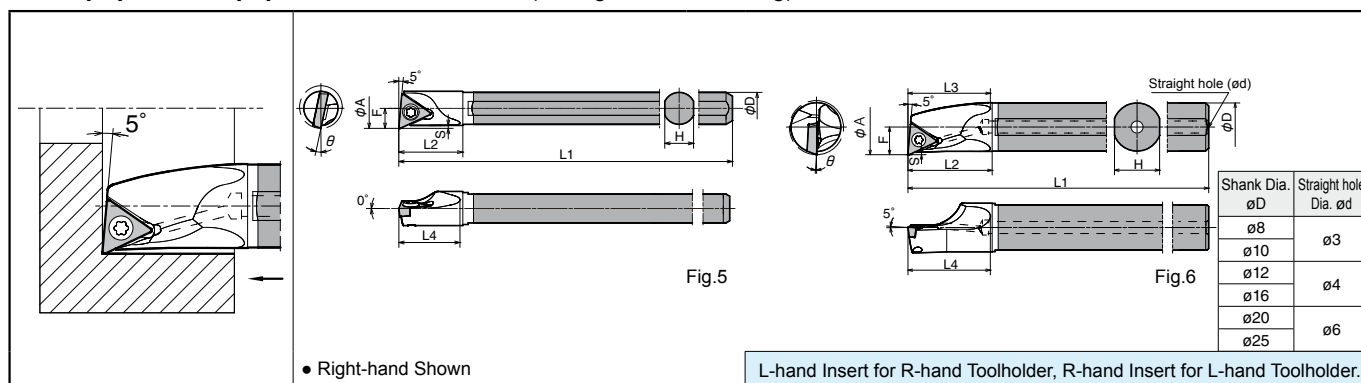
S-STLB(P)-A Steel Bar (Boring / Internal Facing)

Max. Overhang Length L/D≈4





E(C)-STLB(P)-A Carbide Shank Bar (Boring / Internal Facing)














Max. Overhang Length L/D≈7



● Toolholder Dimensions

| Description | | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | | θ | Standard Corner-R (R) | Coolant Hole | Drawing | Spare Parts | | | | | | |
|----------------------------------|---------------------------------------|------|----|-------------------|----------------|-----|-----|----|----|------|------|------|-----------|-----------------------|--------------|---------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------|-------|--|--|--|
| | | R | L | øA | øD | H | L1 | L2 | L3 | L4 | F | S | | | | |  |  | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| Excellent Bar | S06H-STLB ^{R/L} 06-08AE | ● | ● | 8 | 6 | 5 | 100 | 12 | - | 12 | 3.8 | 0.5 | 12° | 0.2 | No | Fig.1 | SB-2035TR | FT-6 | | | | | |
| | A08X-STLP ^{R/L} 09-10AE | ● | ● | 10 | 8 | 7 | 120 | 16 | 22 | 16 | 5 | 0.5 | 10° | 0.4 | Yes | Fig.2 | SB-2545TR | FT-8 | | | | | |
| | A10L-STLP ^{R/L} 09-12AE | ● | ● | 12 | 10 | 9 | 140 | 20 | 25 | 20 | 6.2 | 0.9 | 8° | | | | SB-3060TR | FT-10 | | | | | |
| | A10L-STLP ^{R/L} 11-12AE | ● | ● | | | | | | | | 6 | 0.7 | 10° | | | | | | | | | | |
| | A12M-STLP ^{R/L} 11-14AE | ● | ● | 14 | 12 | 11 | 150 | 24 | 30 | 24 | 7.2 | 0.8 | 7° | | | | | | SB-4065TR | FT-15 | | | |
| | A16Q-STLP ^{R/L} 11-18AE | ● | ● | 18 | 16 | 15 | 180 | 30 | 36 | 30 | 9.2 | 3.5° | | | | | | | | | | | |
| | A20R-STLP ^{R/L} 11-22AE | ● | ● | 22 | 20 | 19 | 200 | 36 | 46 | 37 | 11.2 | 0.7 | 2° | | | | SB-4065TR | FT-15 | | | | | |
| A25S-STLP ^{R/L} 16-27AE | ● | ● | 27 | 25 | 24 | 250 | 46 | 55 | 46 | 13.7 | 0° | | | | | | | | | | | | |
| Steel | S06H-STLB ^{R/L} 06-08A | ● | ● | 8 | 6 | 5 | 100 | 12 | - | 12 | 3.8 | 0.5 | 12° | 0.2 | No | Fig.3 | SB-2035TR | FT-6 | | | | | |
| | S08X-STLP ^{R/L} 09-10A | ● | ● | 10 | 8 | 7 | 120 | 16 | 22 | 16 | 5 | 0.5 | 10° | 0.4 | | Fig.4 | SB-2545TR | FT-8 | | | | | |
| | S10L-STLP ^{R/L} 09-12A | ● | ● | 12 | 10 | 9 | 140 | 20 | 25 | 20 | 6.2 | 0.9 | 8° | | | | SB-3060TR | FT-10 | | | | | |
| | S10L-STLP ^{R/L} 11-12A | ● | ● | | | | | | | | 6 | 0.7 | 10° | | | | | | | | | | |
| | S12M-STLP ^{R/L} 11-14A | ● | ● | 14 | 12 | 11 | 150 | 24 | 30 | 24 | 7.2 | 0.8 | 7° | | | | | | SB-4065TR | FT-15 | | | |
| | S16Q-STLP ^{R/L} 11-18A | ● | ● | 18 | 16 | 15 | 180 | 30 | 36 | 30 | 9.2 | 3.5° | | | | | | | | | | | |
| | S20R-STLP ^{R/L} 11-22A | ● | ● | 22 | 20 | 19 | 200 | 36 | 46 | 37 | 11.2 | 0.7 | 2° | | | | | | | | | | |
| | S25S-STLP ^{R/L} 16-27A | ● | ● | 27 | 25 | 24 | 250 | 46 | 55 | 46 | 13.7 | 0° | | | | | | | | | | | |
| Carbide | C06J-STLB ^{R/L} 06-08A | ● | ● | 8 | 6 | 5.4 | 110 | 12 | - | 12 | 3.8 | 0.5 | 12° | 0.2 | No | Fig.5 | SB-2035TR | FT-6 | | | | | |
| | E08L-STLP ^{R/L} 09-10A | ● | ● | 10 | 8 | 7 | 140 | 16 | 15 | 15 | 5 | 0.5 | 10° | 0.4 | Yes | Fig.6 | SB-2545TR | FT-8 | | | | | |
| | E10N-STLP ^{R/L} 09-12A | ● | ● | 12 | 10 | 9 | 160 | 20 | 19 | 19 | 6.2 | 0.9 | 8° | | | | | | | | | | |
| | E10N-STLP ^{R/L} 09-12A-2 / 3 | ● | | | | | 105 | | | | | | | | | | | | | | | | |
| | E10N-STLP ^{R/L} 09-12A-1 / 2 | ● | | | | | 80 | | | | | | | | | | | | | | | | |
| | E10N-STLP ^{R/L} 11-12A | ● | ● | | | | 160 | | | | | | SB-3060TR | | | | FT-10 | | | | | | |
| | E10N-STLP ^{R/L} 11-12A-2 / 3 | ● | | | | | 105 | | | | | | | | | | | | | | | | |
| | E10N-STLP ^{R/L} 11-12A-1 / 2 | ● | | | | | 80 | | | | | | | | | | | | | | | | |
| | E12Q-STLP ^{R/L} 11-14A | ● | ● | 14 | 12 | 11 | 180 | 23 | 22 | 22 | 7.2 | 0.8 | | | | | | 7° | | | | | |
| | E12Q-STLP ^{R/L} 11-14A-2 / 3 | ● | | | | | 120 | | | | | | | | | | | | | | | | |
| | E12Q-STLP ^{R/L} 11-14A-1 / 2 | ● | | | | | 90 | | | | | | | | | | | | | | | | |
| | E16X-STLP ^{R/L} 11-18A | ● | ● | | | | 220 | | | | | | | | | | | | | | | | |
| | E16X-STLP ^{R/L} 11-18A-2 / 3 | ● | | 18 | 16 | 15 | 145 | 28 | 27 | 27 | 9.2 | | | | | | | 3.5° | | | | | |
| | E16X-STLP ^{R/L} 11-18A-1 / 2 | ● | | | | | 110 | | | | | | | | | | | | | | | | |
| | E20S-STLP ^{R/L} 11-22A | ● | ● | | | | 250 | | | | | | | | | | | | | | | | |
| | E20S-STLP ^{R/L} 11-22A-2 / 3 | ● | | | | | 165 | | | | | | | | | | | | | | | | |
| | E20S-STLP ^{R/L} 11-22A-1 / 2 | ● | | 22 | 20 | 19 | 125 | 32 | 31 | 31 | 11.2 | 0.7 | | | | | | 2° | | | | | |
| | E25T-STLP ^{R/L} 16-27A | ● | ● | | | | 300 | | | | | | SB-4065TR | | | | FT-15 | | | | | | |
| | E25T-STLP ^{R/L} 16-27A-2 / 3 | ● | | | | | 200 | | | | | | | | | | | | | | | | |

● Applicable Inserts

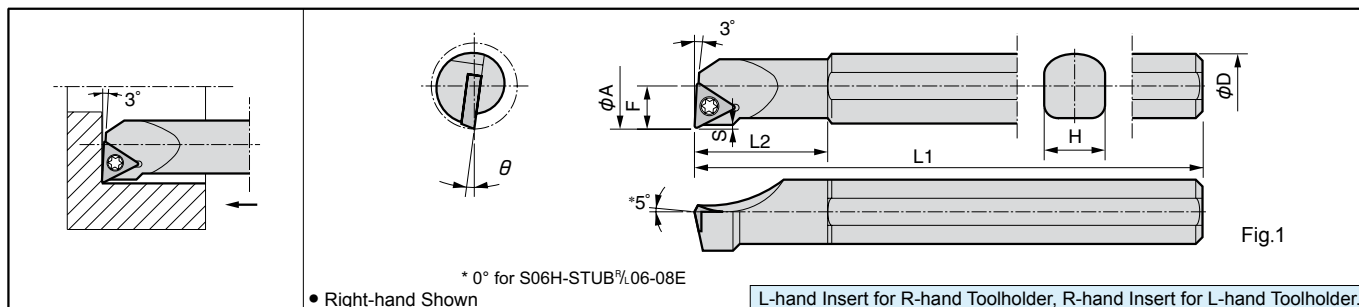
| Applications | Minute ap | Finishing | Finishing | Finishing-Medium | Finishing | Finishing / Precision | Medium | Low Feed / Precision | Soft Steel Finishing | Soft Steel Finishing-Medium |
|--------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Ref. Page | B63, B66 | B66 | B63 | B66 | B63, B67 | B68 | B67 | B68 | B66 | B66 |
| Insert | CF | GP | DP | HQ | ^{R/L} | ^{R/L} -FSF | ^{R/L} -H | ^{R/L} -USF | XP | XQ |
| Toolholder |  |  |  |  |  |  |  |  |  |  |
| ...-STLB ^{R/L} 06-... | TBGT0601.. | - | TBMT0601.. | - | TBGT0601.. | - | - | - | - | - |
| ...-STLP ^{R/L} 09-... | TPGT0902.. | TPMT0902.. | - | TPMT0902.. | TPGH0902.. | - | - | - | TPMT0902.. | - |
| ...-STLP ^{R/L} 11-... | - | TPMT1103.. | - | TPMT1103.. | TPGH1103.. | TPET1103.. | TPGH1103.. | TPET1103.. | TPMT1103.. | TPMT1103.. |
| ...-STLP ^{R/L} 16-... | - | TPMT1603.. | - | TPMT1603.. | TPGH1603.. | - | TPGH1603.. | - | TPMT1603.. | TPMT1603.. |
| Applications | Cast Iron | Non-ferrous Metals | Hard Materials | | | | | | | |
| Ref. Page | B63, B68 | C19, C20, C21 | C12 | | | | | | | |
| Insert | Without Chipbreaker | PCD | CBN | | | | | | | |
| Toolholder |  |  |  | | | | | | | |
| ...-STLB ^{R/L} 06-... | TBGW0601.. | TBMT0601.. TBGW0601.. | - | | | | | | | |
| ...-STLP ^{R/L} 09-... | TPGB0902.. | TPMH0902.. TPGB0902.. | TPGB0902.. | | | | | | | |
| ...-STLP ^{R/L} 11-... | TPGB1103.. | TPMH1103.. TPGB1103.. | TPGB1103.. | | | | | | | |
| ...-STLP ^{R/L} 16-... | TPGB1603.. | TPMH1603.. TPGB1603.. | TPGB1603.. | | | | | | | |

For recommended cutting conditions, see page ● F82~F83

● : Std. Item ○ : Check Availability

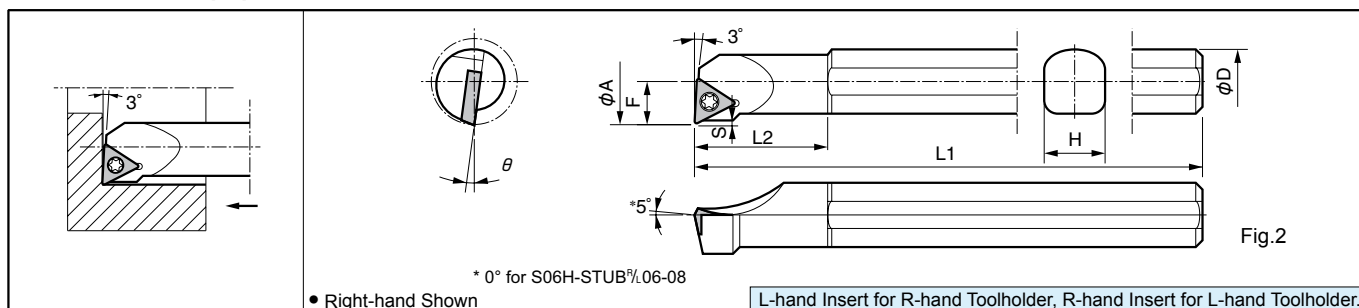
S...STUP(B)-E Excellent Bar (Boring)

Max. Overhang Length L/D≈5



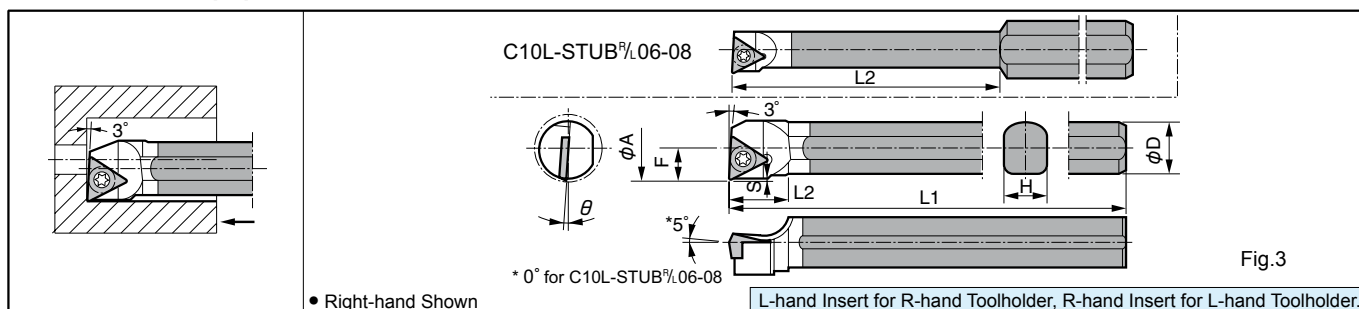
S...STUP(B) Steel Bar (Boring)

Max. Overhang Length L/D≈5





C...STUP(B) Carbide Shank Bar (Boring)

Max. Overhang Length L/D≈7
















● Toolholder Dimensions [Will be switched to Dynamic Bar, see ● F85~F88 (Alternative Toolholder Reference Table for Boring Bar)].

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | | θ | Standard Corner-R (r) | Drawing | Spare Parts | |
|---------------------------------|-------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------------------|----------------|------|-----|----|-----|----|------|-----|---------------------------------------------------------------------------------------|-----------------------|---------|-------------|-------------|
| | | R | L | | øA | øD | H | L1 | L2 | L3 | L4 | F | | | | S | Clamp Screw |
| | | | |  | | | | | | | | |  | | | | |
| S06H-STUB ^{R/L} 06-08E | STUB ^{R/L} 0806B-06E | <input type="checkbox"/> | <input type="checkbox"/> | 8 | 6 | 5.4 | 100 | 12 | - | - | 4 | 0.6 | 12° | 0.2 | Fig.1 | SB-1STR | FT-6 |
| S08K-STUP ^{R/L} 08-10E | STUP ^{R/L} 1008B-08E | <input type="checkbox"/> | <input type="checkbox"/> | 10 | 8 | 7 | 125 | 17 | - | - | 5 | 0.4 | 10° | 0.4 | | SB-1TR | |
| S10M-STUP ^{R/L} 09-12E | 1210B-09E | <input type="checkbox"/> | <input type="checkbox"/> | 12 | 10 | 9 | 150 | 20 | - | - | 6 | 0.5 | 8° | 0.4 | | SB-2TR | FT-8 |
| S12M-STUP ^{R/L} 09-16E | 1612B-09E | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 150 | 25 | - | - | 8 | 0.5 | 5° | | | | |
| S10M-STUP ^{R/L} 11-12E | 1210B-11E | <input type="checkbox"/> | <input type="checkbox"/> | 12 | 10 | 9 | 150 | 20 | - | - | 6 | 0.5 | 8° | 0.4 | | SB-3TR | FT-10 |
| S12M-STUP ^{R/L} 11-14E | 1412B-11E | <input type="checkbox"/> | <input type="checkbox"/> | 14 | 12 | 11 | 150 | 25 | | | 7 | 0.6 | 7° | | | | |
| STUP ^{R/L} 11-16E | 1612B-11E | <input type="checkbox"/> | <input type="checkbox"/> | 16 | | | | 8 | | | 0.5 | 5° | | | | | |
| S16R-STUP ^{R/L} 11-18E | 1816B-11E | <input type="checkbox"/> | <input type="checkbox"/> | 18 | 16 | 15 | 200 | 27 | | | 9 | 0.7 | 4° | | | | |
| STUP ^{R/L} 11-20E | 2016B-11E | <input type="checkbox"/> | <input type="checkbox"/> | 20 | | | | 10 | 0.9 | 3° | | | | | | | |
| S20X-STUP ^{R/L} 11-25E | 2520B-11E | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 19 | 220 | 33 | | | 12.5 | 0.9 | 0° | 0.8 | SB-4TR | FT-15 | |
| S20X-STUP ^{R/L} 16-25E | 2520B-16E | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 19 | 220 | 33 | - | - | 12.5 | 0.9 | 0° | | | | |
| S25X-STUP ^{R/L} 16-32E | 3225B-16E | <input type="checkbox"/> | <input type="checkbox"/> | 32 | 25 | 23.4 | 270 | 42 | - | - | 16 | 0.6 | 0° | | | | |
| S06H-STUB ^{R/L} 06-08 | STUB ^{R/L} 0806B-06 | <input type="checkbox"/> | <input type="checkbox"/> | 8 | 6 | 5.4 | 100 | 12 | - | - | 4 | 0.6 | 12° | 0.2 | Fig.2 | SB-1STR | FT-6 |
| S08K-STUP ^{R/L} 08-10 | STUP ^{R/L} 1008B-08 | <input type="checkbox"/> | <input type="checkbox"/> | 10 | 8 | 7 | 125 | 17 | - | - | 5 | 0.4 | 10° | 0.4 | | SB-1TR | FT-6 |
| S10M-STUP ^{R/L} 09-12 | 1210B-09 | <input type="checkbox"/> | <input type="checkbox"/> | 12 | 10 | 9 | 150 | 20 | - | - | 6 | 0.5 | 8° | 0.4 | | SB-2TR | FT-8 |
| S12M-STUP ^{R/L} 09-16 | 1612B-09 | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 150 | 25 | - | - | 8 | 0.5 | 5° | | | | |
| S16Q-STUP ^{R/L} 11-20 | 2016B-11 | <input type="checkbox"/> | <input type="checkbox"/> | 20 | 16 | 15 | 180 | 27 | - | - | 10 | 0.9 | 3° | 0.4 | | SB-3TR | FT-10 |
| S20R-STUP ^{R/L} 11-25 | 2520B-11 | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 19 | 200 | 33 | - | - | 12.5 | 0.9 | 0° | | | | |
| S25X-STUP ^{R/L} 16-32 | 3225B-16 | <input type="checkbox"/> | <input type="checkbox"/> | 32 | 25 | 23.4 | 220 | 42 | - | - | 16 | 0.6 | 0° | 0.8 | SB-4TR | FT-15 | |

● Toolholder Dimensions [Will be switched to Dynamic Bar, see ● F85~F88 (Alternative Toolholder Reference Table for Boring Bar)].

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | | θ | Standard Corner-R (r) | Drawing | Spare Parts | | |
|---------------------------------|-------------------------------|--------------------------|--------------------------|-------------------|----------------|----|-----|----|----|----|------|-----|-----|-----------------------|---------|-------------|-------------|--------|
| | | R | L | | øA | øD | H | L1 | L2 | L3 | L4 | F | | | | S | Clamp Screw | Wrench |
| | | | | | | | | | | | | | | | | | | |
| C10L -STUB ^{R/L} 06-08 | STUB ^{R/L} 0810B-06W | <input type="checkbox"/> | <input type="checkbox"/> | 8 | 10 | 9 | 140 | 50 | - | - | 4 | 0.5 | 12° | 0.2 | Fig.3 | SB-1STR | FT-6 | |
| C08L -STUB ^{R/L} 08-10 | STUB ^{R/L} 1008B-08W | <input type="checkbox"/> | <input type="checkbox"/> | 10 | 8 | 7 | 140 | 10 | - | - | 5 | 0.5 | 10° | 0.4 | | SB-1TR | | |
| C10N -STUB ^{R/L} 09-12 | 1210B-09W | <input type="checkbox"/> | <input type="checkbox"/> | | | | 160 | | | | | | | 0.4 | SB-2TR | FT-8 | | |
| STUP ^{R/L} 09-12-1/2 | 1210B-09W-1/2 | <input type="checkbox"/> | <input type="checkbox"/> | 12 | 10 | 9 | 80 | 11 | - | - | 6 | 0.5 | 8° | | | | | |
| STUP ^{R/L} 09-12-2/3 | 1210B-09W-2/3 | <input type="checkbox"/> | <input type="checkbox"/> | | | | 105 | | | | | | | | | | | |
| C12Q -STUB ^{R/L} 09-16 | 1612B-09W | <input type="checkbox"/> | <input type="checkbox"/> | | | | 180 | | | | | | | 5° | SB-2TR | FT-8 | | |
| STUP ^{R/L} 09-16-1/2 | 1612B-09W-1/2 | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 90 | 12 | - | - | 8 | 0.7 | | | | | | |
| STUP ^{R/L} 09-16-2/3 | 1612B-09W-2/3 | <input type="checkbox"/> | <input type="checkbox"/> | | | | 120 | | | | | | | | | | | |
| C10N -STUB ^{R/L} 11-12 | 1210B-11W | <input type="checkbox"/> | <input type="checkbox"/> | | | | 160 | | | | | | | 8° | SB-3TR | FT-10 | | |
| STUP ^{R/L} 11-12-1/2 | 1210B-11W-1/2 | <input type="checkbox"/> | <input type="checkbox"/> | 12 | 10 | 9 | 80 | 11 | - | - | 6 | 0.5 | | | | | | |
| STUP ^{R/L} 11-12-2/3 | 1210B-11W-2/3 | <input type="checkbox"/> | <input type="checkbox"/> | | | | 105 | | | | | | | | | | | |
| C12Q -STUB ^{R/L} 11-14 | 1412B-11W | <input type="checkbox"/> | <input type="checkbox"/> | | | | 180 | | | | | | | 7° | SB-3TR | FT-10 | | |
| STUP ^{R/L} 11-14-1/2 | 1412B-11W-1/2 | <input type="checkbox"/> | <input type="checkbox"/> | 14 | 12 | 11 | 90 | 13 | - | - | 7 | 0.5 | | | | | | |
| STUP ^{R/L} 11-14-2/3 | 1412B-11W-2/3 | <input type="checkbox"/> | <input type="checkbox"/> | | | | 120 | | | | | | | | | | | |
| C12Q -STUB ^{R/L} 11-16 | 1612B-11W | <input type="checkbox"/> | <input type="checkbox"/> | | | | 180 | | | | | | | 5° | SB-3TR | FT-10 | | |
| STUP ^{R/L} 11-16-1/2 | 1612B-11W-1/2 | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 90 | 13 | - | - | 8 | 0.3 | | | | | | |
| STUP ^{R/L} 11-16-2/3 | 1612B-11W-2/3 | <input type="checkbox"/> | <input type="checkbox"/> | | | | 120 | | | | | | | | | | | |
| C16X -STUB ^{R/L} 11-18 | 1816B-11W | <input type="checkbox"/> | <input type="checkbox"/> | | | | 220 | | | | | | | 4° | SB-3TR | FT-10 | | |
| STUP ^{R/L} 11-18-1/2 | 1816B-11W-1/2 | <input type="checkbox"/> | <input type="checkbox"/> | 18 | 16 | 15 | 110 | 14 | - | - | 9 | 0.3 | | | | | | |
| STUP ^{R/L} 11-18-2/3 | 1816B-11W-2/3 | <input type="checkbox"/> | <input type="checkbox"/> | | | | 145 | | | | | | | | | | | |
| C16X -STUB ^{R/L} 11-20 | 2016B-11W | <input type="checkbox"/> | <input type="checkbox"/> | | | | 220 | | | | | | | 3° | SB-3TR | FT-10 | | |
| STUP ^{R/L} 11-20-1/2 | 2016B-11W-1/2 | <input type="checkbox"/> | <input type="checkbox"/> | 20 | 16 | 15 | 110 | 14 | - | - | 10 | 0.8 | | | | | | |
| STUP ^{R/L} 11-20-2/3 | 2016B-11W-2/3 | <input type="checkbox"/> | <input type="checkbox"/> | | | | 145 | | | | | | | | | | | |
| C20S -STUB ^{R/L} 11-25 | 2520B-11W | <input type="checkbox"/> | <input type="checkbox"/> | | | | 250 | | | | | | | 0° | SB-3TR | FT-10 | | |
| STUP ^{R/L} 11-25-1/2 | 2520B-11W-1/2 | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 19 | 125 | 16 | - | - | 12.5 | 0.7 | | | | | | |
| STUP ^{R/L} 11-25-2/3 | 2520B-11W-2/3 | <input type="checkbox"/> | <input type="checkbox"/> | | | | 165 | | | | | | | | | | | |
| C20S -STUB ^{R/L} 16-25 | 2520B-16W | <input type="checkbox"/> | <input type="checkbox"/> | | | | 250 | | | | | | | 0° | SB-4TR | FT-15 | | |
| STUP ^{R/L} 16-25-1/2 | 2520B-16W-1/2 | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 19 | 125 | 18 | - | - | 12.5 | 0.3 | | | | | | |
| STUP ^{R/L} 16-25-2/3 | 2520B-16W-2/3 | <input type="checkbox"/> | <input type="checkbox"/> | | | | 165 | | | | | | | | | | | |

● Applicable Inserts

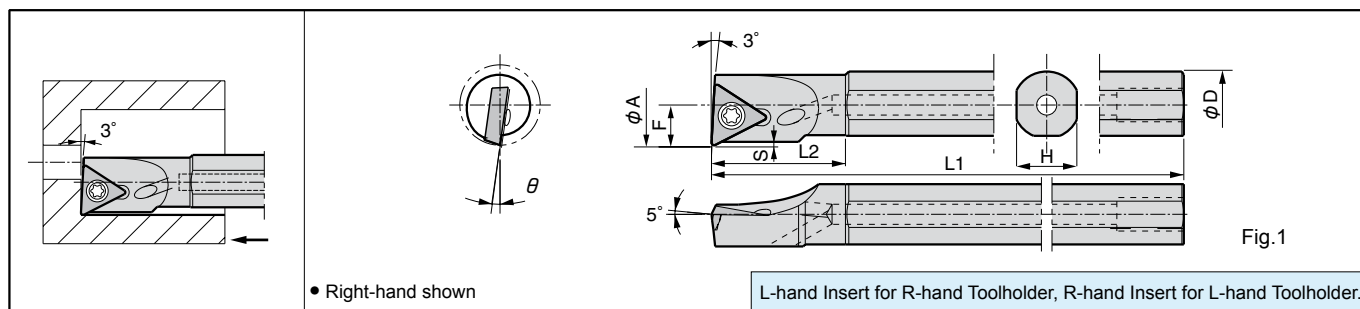
| Applications | Minute ap | Finishing | Finishing | Finishing-Medium | Finishing | Finishing / Precision | Medium | Low Feed / Precision | Soft Steel Finishing | Soft Steel Finishing-Medium |
|--------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Ref. Page | B63, B66 | B66 | B63 | B66 | B63, B67 | B68 | B67 | B68 | B66 | B66 |
| Insert | CF | GP | DP | HQ | $\frac{P}{L}$ | $\frac{P}{L}$ -FSF | $\frac{P}{L}$ -H | F $\frac{P}{L}$ -USF | XP | XQ |
| Toolholder |  |  |  |  |  |  |  |  |  |  |
|STUB ^{R/L} 06.... | TBGT0601.. | - | TBMT0601.. | - | TBGT0601.. | - | - | - | - | - |
|STUB ^{R/L} 08.... | TPGT0802.. | - | - | - | TPGH0802.. | TPET0802.. | - | TPET0802.. | - | - |
|STUB ^{R/L} 09.... | TPGT0902.. | TPMT0902.. | - | TPMT0902.. | TPGH0902.. | - | - | - | TPMT0902.. | - |
|STUB ^{R/L} 11.... | - | TPMT1103.. | - | TPMT1103.. | TPGH1103.. | TPET1103.. | TPGH1103.. | TPET1103.. | TPMT1103.. | TPMT1103.. |
|STUB ^{R/L} 16.... | - | TPMT1603.. | - | TPMT1603.. | TPGH1603.. | - | TPGH1603.. | - | TPMT1603.. | TPMT1603.. |
| Applications | Cast Iron | Non-ferrous Metals | Hard Materials | | | | | | | |
| Ref. Page | B63, B68 | C19~C21 | C12 | | | | | | | |
| Insert | Without Chipbreaker | PCD | CBN | | | | | | | |
| Toolholder |  |  |  | | | | | | | |
|STUB ^{R/L} 06.... | TBGW0601.. | TBMT0601.. TBGW0601.. | - | | | | | | | |
|STUB ^{R/L} 08.... | TPGB0802.. | TPMH0802.. TPGB0802.. | TPGB0802.. | | | | | | | |
|STUB ^{R/L} 09.... | TPGB0902.. | TPMH0902.. TPGB0902.. | TPGB0902.. | | | | | | | |
|STUB ^{R/L} 11.... | TPGB1103.. | TPMH1103.. TPGB1103.. | TPGB1103.. | | | | | | | |
|STUB ^{R/L} 16.... | TPGB1603.. | TPMH1603.. TPGB1603.. | TPGB1603.. | | | | | | | |

For recommended cutting conditions, see page ● F82~F83

Boring Bar [TP ☐ ☐ Insert]

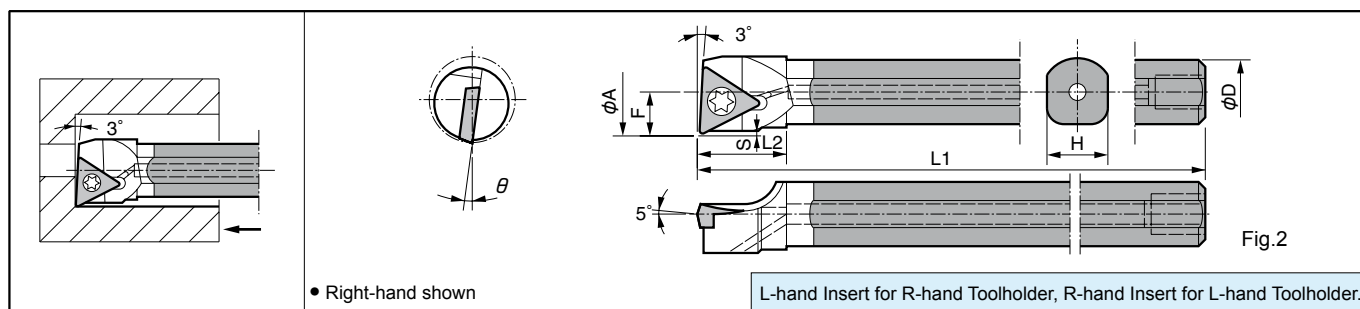
A...STUP-E Excellent Twin-Hole Bar (Boring: with Coolant Hole)

Max. Overhang Length L/D≈5



E...STUP Carbide Twin-Hole Bar (Boring: with Coolant Hole)

Max. Overhang Length L/D≈7



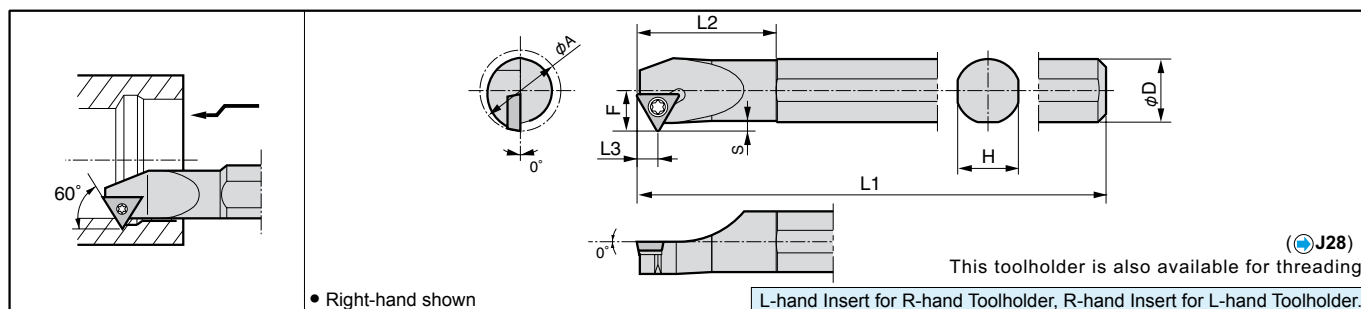
- Toolholder Dimensions [Will be switched to Dynamic Bar, see ● F85~F88 (Alternative Toolholder Reference Table for Boring Bar)].
(Applicable Inserts list ● F45)

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | | θ | Standard Corner-R (R) | Drawing | Spare Parts | | |
|----------------------------------|--------------------------------|--------------------------|--------------------------|-------------------|----------------|------|-----|----|------|-----|------|-----|-------|-----------------------|---------|-------------|-------------|--------|
| | | R | L | | øA | øD | H | L1 | L2 | L3 | L4 | F | | | | S | Clamp Screw | Wrench |
| | | | | | | | | | | | | | | | | | | |
| A08H -STUP ^{R/L} 08-10E | STUP ^{R/L} 1008B-08EH | <input type="checkbox"/> | <input type="checkbox"/> | 10 | 8 | 7 | 100 | 17 | - | - | 5 | 0.4 | 10° | 0.4 | Fig.1 | SB-1TR | FT-6 | |
| A10X -STUP ^{R/L} 09-12E | 1210B-09EH | <input type="checkbox"/> | <input type="checkbox"/> | 12 | 10 | 9 | 120 | 20 | | | 6 | 0.5 | 8° | 0.4 | | SB-2TR | FT-8 | |
| A12X -STUP ^{R/L} 09-16E | 1612B-09EH | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 120 | 25 | | | 8 | 0.5 | 5° | 0.4 | | SB-2TR | FT-8 | |
| A10X -STUP ^{R/L} 11-12E | 1210B-11EH | <input type="checkbox"/> | <input type="checkbox"/> | 12 | 10 | 9 | 120 | 20 | | | 6 | 0.6 | 8° | 0.4 | | Fig.1 | SB-3TR | FT-10 |
| A12X -STUP ^{R/L} 11-14E | 1412B-11EH | <input type="checkbox"/> | <input type="checkbox"/> | 14 | 12 | 11 | 120 | 25 | | | 7 | 0.6 | 7° | | | | | |
| STUP ^{R/L} 11-16E | 1612B-11EH | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 120 | 25 | | | 8 | 0.5 | 5° | | | | | |
| A16M -STUP ^{R/L} 11-18E | 1816B-11EH | <input type="checkbox"/> | <input type="checkbox"/> | 18 | 16 | 15 | 150 | 27 | | | 9 | 0.7 | 4° | 0.8 | | Fig.1 | SB-3TR | FT-10 |
| STUP ^{R/L} 11-20E | 2016B-11EH | <input type="checkbox"/> | <input type="checkbox"/> | 20 | 16 | 15 | 150 | 27 | | | 10 | 0.9 | 3° | | | | | |
| A20Q -STUP ^{R/L} 11-25E | 2520B-11EH | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 19 | 180 | 33 | | | 12.5 | 0.9 | 0° | 0.8 | | Fig.1 | SB-4TR | FT-15 |
| A20Q -STUP ^{R/L} 16-25E | 2520B-16EH | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 19 | 180 | 33 | 12.5 | 0.9 | 0° | | | | | | | |
| A25R -STUP ^{R/L} 16-32E | 3225B-16EH | <input type="checkbox"/> | <input type="checkbox"/> | 32 | 25 | 23.4 | 200 | 42 | 16 | 0.6 | 0° | | | | | | | |
| E08L -STUP ^{R/L} 08-10 | STUP ^{R/L} 1008B-08WH | <input type="checkbox"/> | <input type="checkbox"/> | 10 | 8 | 7 | 140 | 10 | - | - | 5 | 0.4 | 10° | 0.4 | Fig.2 | SB-1TR | FT-6 | |
| E10N -STUP ^{R/L} 09-12 | 1210B-09WH | <input type="checkbox"/> | <input type="checkbox"/> | 12 | 10 | 9 | 160 | 11 | | | 6 | 0.5 | 8° | 0.4 | | SB-2TR | FT-8 | |
| E12Q -STUP ^{R/L} 09-16 | 1612B-09WH | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 180 | 12 | | | 8 | 0.5 | 5° | 0.4 | | SB-2TR | FT-8 | |
| E10N -STUP ^{R/L} 11-12 | 1210B-11WH | <input type="checkbox"/> | <input type="checkbox"/> | 12 | 10 | 9 | 160 | 11 | | | 6 | 0.6 | 8° | 0.4 | | Fig.2 | SB-3TR | FT-10 |
| E12Q -STUP ^{R/L} 11-14 | 1412B-11WH | <input type="checkbox"/> | <input type="checkbox"/> | 14 | 12 | 11 | 180 | 12 | | | 7 | 0.6 | 7° | | | | | |
| STUP ^{R/L} 11-16 | 1612B-11WH | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 180 | 12 | | | 8 | 0.5 | 5° | | | | | |
| E16X -STUP ^{R/L} 11-18 | 1816B-11WH | <input type="checkbox"/> | <input type="checkbox"/> | 18 | 16 | 15 | 220 | 14 | | | 9 | 0.7 | 4° | 0.8 | | Fig.2 | SB-3TR | FT-10 |
| STUP ^{R/L} 11-20 | 2016B-11WH | <input type="checkbox"/> | <input type="checkbox"/> | 20 | 16 | 15 | 220 | 14 | | | 10 | 0.9 | 3° | | | | | |
| E20S -STUP ^{R/L} 11-25 | 2520B-11WH | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 19 | 250 | 17 | | | 12.5 | 0.9 | 0° | | | | | |
| E20S -STUP ^{R/L} 16-25 | 2520B-16WH | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 19 | 250 | 17 | 12.5 | 0.9 | 0° | 0.8 | Fig.2 | SB-4TR | FT-15 | | | |

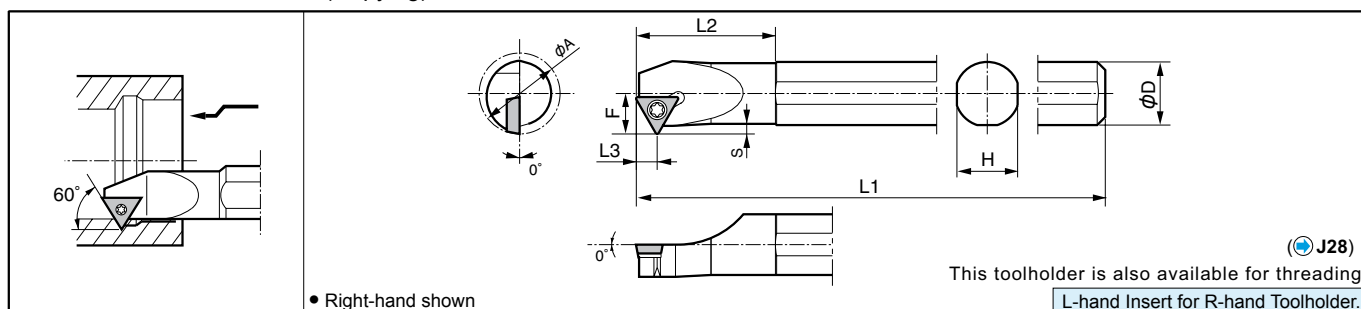
• Refer Page for details of the applicable Coolant Sleeve / Joint ● F77~F79

S...STWP-E Excellent Bar (Copying)

Max. Overhang Length L/D≈5

**S...STWP** Steel Bar (Copying)

Max. Overhang Length L/D≈3



● Toolholder Dimensions

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | θ | Standard Corner-R (°) | Spare Parts | |
|----------------------------------------|----------------------------------|------|---|-------------------|----------------|-----|-----|----|-----|------|-----|----|--------------------------|-------------|--------|
| | | R | L | | ØA | ØD | H | L1 | L2 | L3 | F | S | | Clamp Screw | Wrench |
| S10M-STWP^{R/L} 11 -12E | - | ● | ● | 12 | 10 | 9.2 | 150 | 23 | 5.5 | 6 | 1.0 | 0° | 0.1 | SB-3STR | FT-10 |
| S12M-STWP^{R/L} 11 -16E | | ● | ● | 16 | 12 | 11 | 150 | 30 | | | | | | | |
| S16R-STWP^{R/L} 11 -20E | | ● | ● | 20 | 16 | 15 | 200 | 35 | | | | | | | |
| S20X-STWP^{R/L} 11 -25E | | ● | ● | 25 | 20 | 19 | 220 | 40 | 7.7 | 14 | 4.0 | 0° | 0.8 | SB-4TR | FT-15 |
| S20X-STWP^{R/L} 16 -25E | | ● | ● | 25 | 20 | 19 | 220 | 40 | | | | | | | |
| S25X-STWP^{R/L} 16 -32E | | ● | ● | 32 | 25 | 23 | 270 | 42 | | 16.5 | | | | | |
| S10M-STWP^{R/L} 11 -12 | SIT^{R/L} 1210-11 | ● | | 12 | 10 | 9.2 | 150 | 23 | 5.5 | 6 | 1.0 | 0° | 0.1 | SB-3STR | FT-10 |
| S12M-STWP^{R/L} 11 -16 | SIT^{R/L} 1612-11 | ● | | 16 | 12 | 11 | 150 | 30 | | | | | | | |
| S16Q-STWP^{R/L} 11 -20 | 2016-11 | ● | | 20 | 16 | 15 | 180 | 35 | | | | | | | |
| S20R-STWP^{R/L} 11 -25 | 2520-11 | ● | | 25 | 20 | 19 | 200 | 40 | | | | | | | |

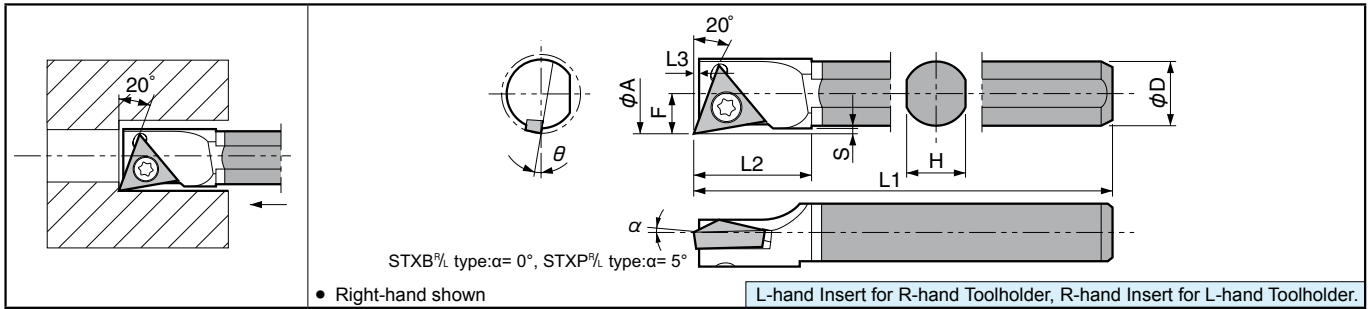
● Applicable Inserts

| Applications | Finishing | Finishing-Medium | Finishing | Finishing / Precision | Medium cutting | Low Feed / Precision | Soft Steel Finishing | Soft Steel Finishing-Medium | Cast Iron |
|-----------------------------------------|--------------------------|------------------|------------|-----------------------|----------------|----------------------|----------------------|-----------------------------|---------------------|
| Ref. Page | B66 | B66 | B67 | B68 | B67 | B68 | B66 | B66 | B68 |
| Insert | GP | HQ | % | %-FSF | %-H | F%-USF | XP | XQ | Without Chipbreaker |
| Toolholder | | | | | | | | | |
| S10M-STWP^{R/L} 11-12(E) | - | - | TPGH1102.. | - | - | - | - | - | TPGB1102.. |
|STWP^{R/L} 11.... | TPMT1103.. | TPMT1103.. | TPGH1103.. | TPET1103.. | TPGH1103.. | TPET1103.. | TPMT1103.. | TPMT1103.. | TPGB1103.. |
|STWP^{R/L} 16.... | TPMT1603.. | TPMT1603.. | TPGH1603.. | - | TPGH1603.. | - | TPMT1603.. | TPMT1603.. | TPGB1603.. |
| Applications | Non-ferrous Metals | Hard Materials | | | | | | | |
| Ref. Page | C20, C21 | C12 | | | | | | | |
| Insert | PCD | CBN | | | | | | | |
| Toolholder | | | | | | | | | |
| S10M-STWP^{R/L} 11-12(E) | - | - | | | | | | | |
|STWP^{R/L} 11.... | TPMH1103.. TPGB1103.. | TPGB1103.. | | | | | | | |
|STWP^{R/L} 16.... | TPMH1603.. TPGB1603.. | TPGB1603.. | | | | | | | |

For recommended cutting conditions, see page ● F82~F83

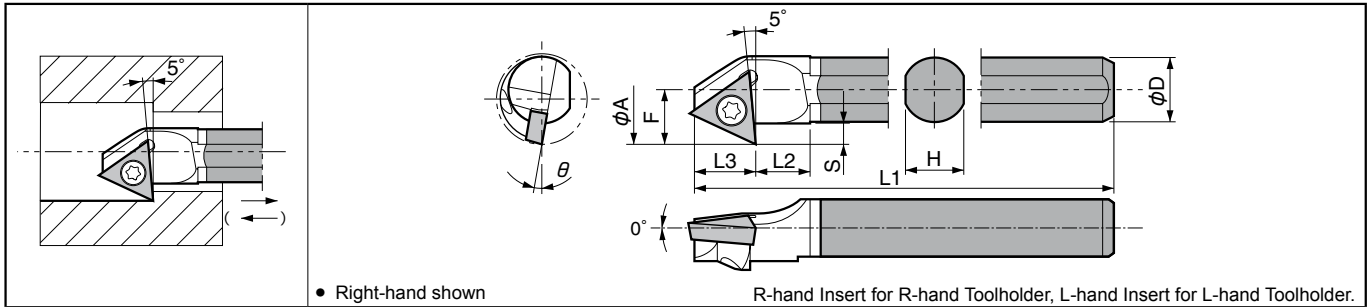
C...STXP(B) Carbide Shank Bar (Boring / Internal Facing)

Max. Overhang Length L/D≈7



C...STZB Carbide Shank Bar (Back Boring)

Max. Overhang Length L/D≈7



* When using R-hand Toolholder, use R-hand insert if machining from front to back in this direction (→).
Use L-hand insert if machining from back to front in this direction (←).

Toolholder Dimensions

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | θ | Standard Corner-R (°) | Spare Parts | |
|----------------------------------|--------------------------------|------|---|-------------------|----------------|----------|-----|----|-----|------|-----|----------|-----------------------|-------------|--------|
| | | R | L | | ϕA | ϕD | H | L1 | L2 | L3 | F | S | | Clamp Screw | Wrench |
| C06J-STXB ^{R/L} .06-075 | STXB ^{R/L} 07506B-06W | ● | ● | 7.5 | 6 | 5.4 | 110 | 11 | 0.5 | 3.75 | | | 10° 0.03 | SB-1STR | FT-6 |
| C08X-STXP ^{R/L} .08-09 | STXP ^{R/L} 09008B-08W | ● | ● | 9.0 | 8 | 7.0 | 143 | 14 | 0.6 | 4.6 | 0.5 | | | | |
| C10X-STXP ^{R/L} .09-11 | 11010B-09W | ● | ● | 11.0 | 10 | 9.0 | 164 | 17 | | 5.6 | | | | | |
| C06J-STZB ^{R/L} .06-085 | STZB ^{R/L} 08506B-06W | ● | ● | 8.5 | 6 | 5.4 | 110 | 5 | 5.7 | 5.1 | 2.0 | | | | |

Applicable Inserts

| Applications | Minute ap | Finishing | Finishing | Finishing-Medium | Finishing | Finishing / Precision | Low Feed / Precision | Soft Steel Finishing | Cast Iron | Non-ferrous Metals |
|-------------------------------|----------------|------------|------------|------------------|------------|-----------------------|----------------------|----------------------|---------------------|--------------------|
| Ref. Page | B63, B66 | B66 | B63 | B66 | B63, B67 | B68 | B68 | B66 | B63, B68 | C19~C21 |
| Insert | CF | GP | DP | HQ | % | %/FSF | F%/USF | XP | Without Chipbreaker | PCD |
| Toolholder | | | | | | | | | | |
| ---STXB ^{R/L} .06--- | TBGT0601.. | - | TBMT0601.. | - | TBGT0601.. | - | - | - | TBGW0601.. | TBMT0601.. |
| ---STXP ^{R/L} .08--- | TPGT0802.. | - | - | - | TPGH0802.. | TPET0802.. | TPET0802.. | - | TPGB0802.. | TP..0802.. |
| ---STXP ^{R/L} .09--- | TPGT0902.. | TPMT0902.. | - | TPMT0902.. | TPGH0902.. | - | - | TPMT0902.. | TPGB0902.. | TP..0902.. |
| ---STZB ^{R/L} .06--- | TBGT0601.. | - | TBMT0601.. | - | TBGT0601.. | - | - | - | TBGW0601.. | TBMT0601.. |
| Applications | Hard Materials | | | | | | | | | |
| Ref. Page | C12 | | | | | | | | | |
| Insert | CBN | | | | | | | | | |
| Toolholder | | | | | | | | | | |
| ---STXB ^{R/L} .06--- | - | | | | | | | | | |
| ---STXP ^{R/L} .08--- | TPGB0802.. | | | | | | | | | |
| ---STXP ^{R/L} .09--- | TPGB0902.. | | | | | | | | | |
| ---STZB ^{R/L} .06--- | - | | | | | | | | | |

C...STXP(B) Type Boring Bar Cutting Conditions

For recommended cutting conditions, see page [F82~F83](#)

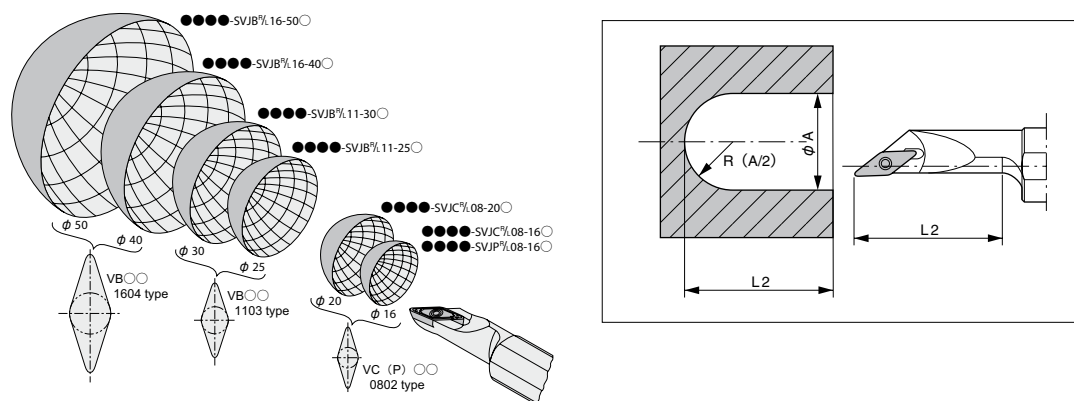
| Toolholder | Insert Description (Grade) | Vc (m/min) | ap (mm) | f (mm/rev) | Coolant |
|----------------------------------|-------------------------------------------------|------------|-----------|------------|---------|
| C06J-STXB ^{R/L} .06-075 | TBGT0601003 ^{1/2} _R (PR930) | 30~100 | 0.02~0.1 | 0.02~0.04 | Yes |
| C08X-STXP ^{R/L} .08-09 | TPGH080201 ^{1/2} _R (PR930) | 30~100 | 0.05~0.15 | 0.03~0.08 | Yes |
| C10X-STXP ^{R/L} .09-11 | TPGH090201 ^{1/2} _R (PR930) | 30~100 | 0.05~0.15 | 0.03~0.08 | Yes |

(Workpiece Material: Alloy Steel)

Application of ○··SVJB (C) - ○, S··SVJP- ○

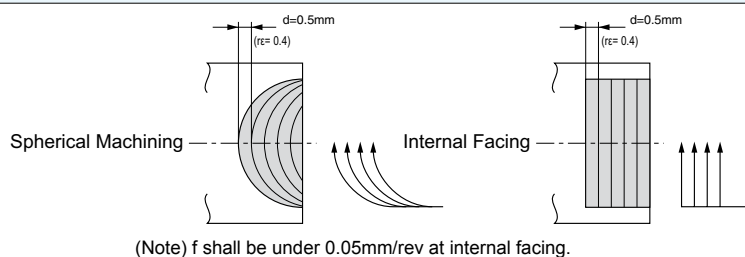
[Toolholder Refer Page for details [F50](#) (Dynamic Bar), [F54](#)]

1. Application Range

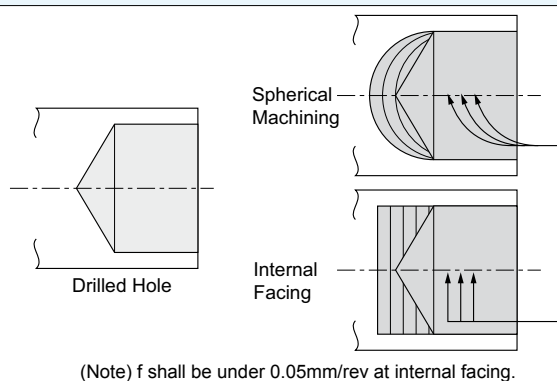


2. Machining method

Case with No Existing Hole

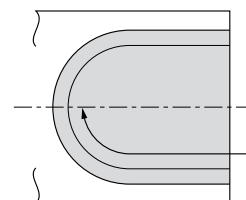


Case with Drilled Hole

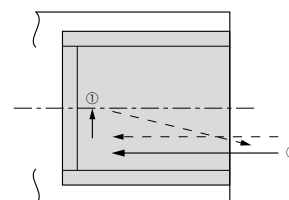


Finishing

Spherical Machining

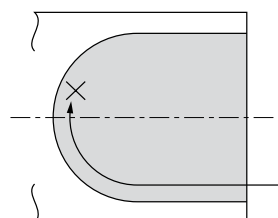


Internal Facing

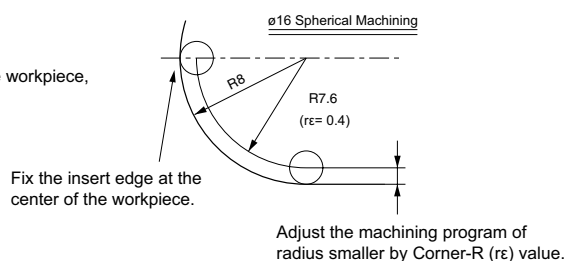


Machining Process
① Finish the internal face first.
② Next, finish the internal diameter.

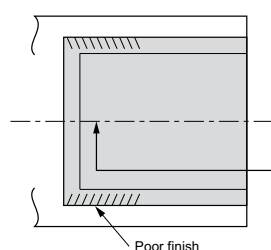
3. Caution



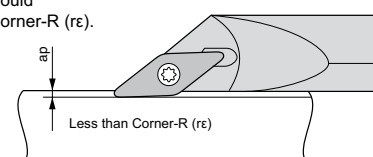
When machining past the center of the workpiece, insert breakage may occur.



For internal profiling, ap should be less than the value of Corner-R (rε).



Machining of this kind is available, but the oblique part may be scratched by chips.

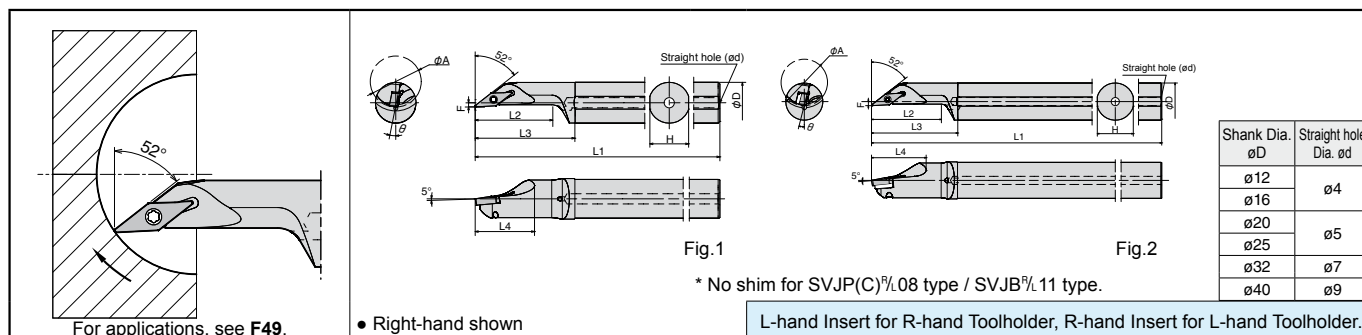
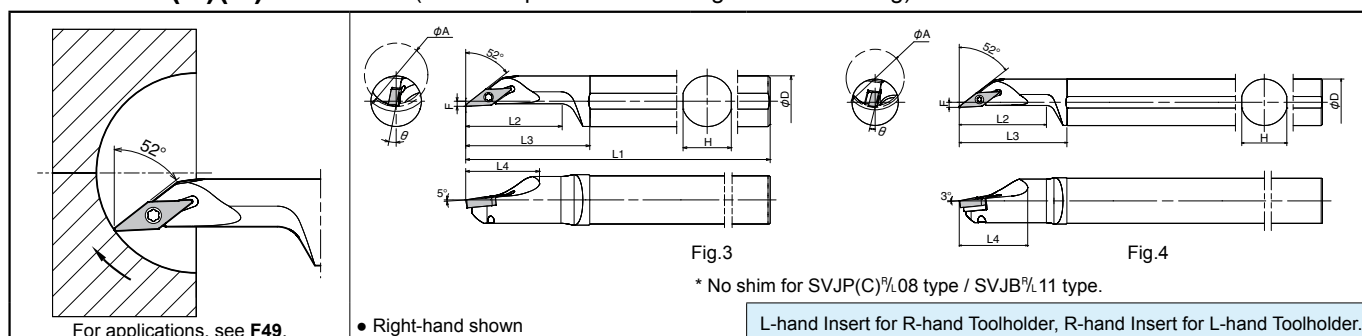
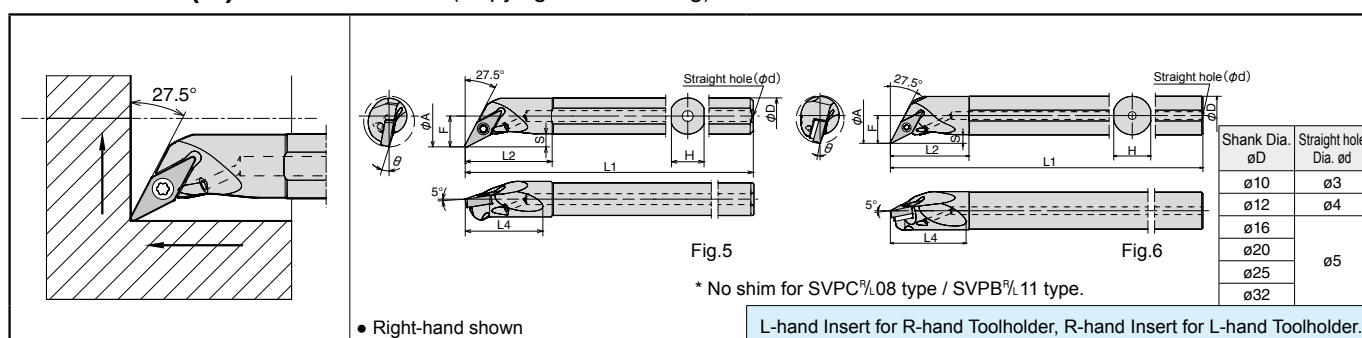
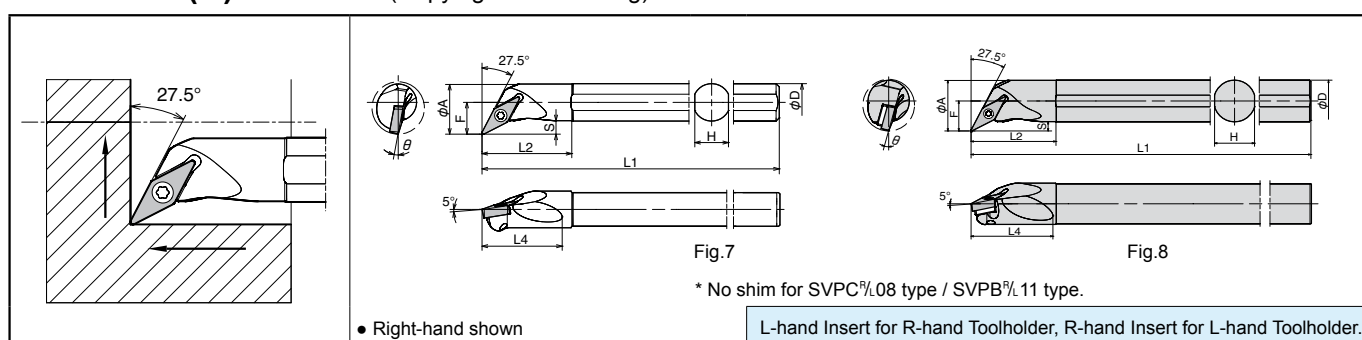
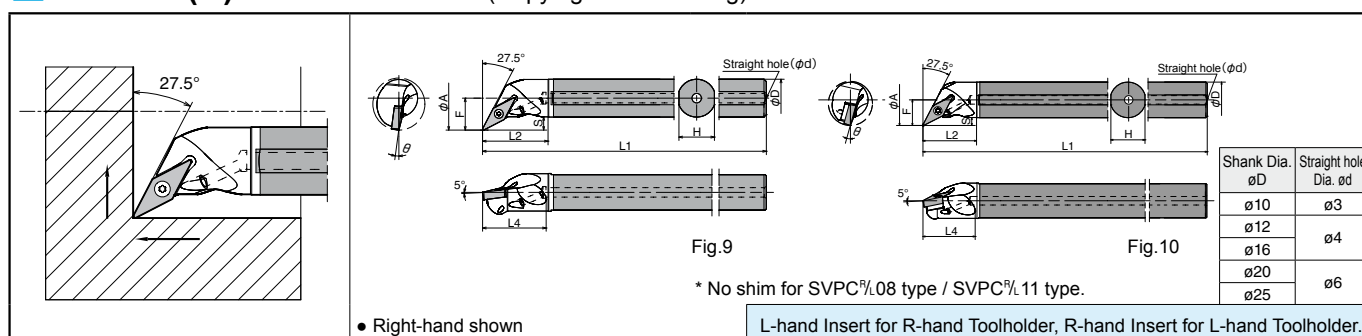


[Burs may occur, if ap is bigger than Corner-R (rε).]


F



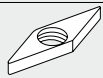


Boring

A-SVJP(C)(B)-AE Excellent Bar (Internal Spherical Machining / Internal Facing)Max. Overhang Length $L/D \sim 5.5$ **S-SVJP(C)(B)-A** Steel Bar (Internal Spherical Machining / Internal Facing)Max. Overhang Length $L/D \sim 4$ **A-SVPC(B)-AE** Excellent Bar (Copying / Undercutting)Max. Overhang Length $L/D \sim 5.5$ **S-SVPC(B)-A** Steel Bar (Copying / Undercutting)Max. Overhang Length $L/D \sim 4$ **E-SVPC(B)-A** Carbide Shank Bar (Copying / Undercutting)Max. Overhang Length $L/D \sim 7$ 













● Toolholder Dimensions

| Description | | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | | θ | Standard Corner-R (°) | Coolant Hole | Drawing | Spare Parts | |
|----------------------------------|----------------------------------|------|----|-------------------------------------------------------------------------------------|----------------|-----|-----|------|----|------|------|-----|-----|-----------------------|--------------|-----------|-------------|-------------|
| | | R | L | | øA | øD | H | L1 | L2 | L3 | L4 | F | | | | | S | Clamp Screw |
| | | | |  | | | | | | | | | | | | | | |
| Excellent Bar | A12M-SVJP ^{R/L} 08-16AE | ● | ● | 16 | 12 | 11 | 150 | 26 | 33 | 21 | 2 | - | 5° | 0.2 | Yes | Fig.1 | SB-2050TR | FT-6 |
| | A12M-SVJC ^{R/L} 08-16AE | ● | ● | 16 | 12 | 11 | 150 | 26 | 33 | 20 | 2 | - | 5° | | | | | |
| | A16Q-SVJC ^{R/L} 08-20AE | ● | ● | 20 | 16 | 15 | 180 | 36 | 43 | 22 | 2 | - | 5° | | | | | |
| | A20R-SVJB ^{R/L} 11-25AE | ● | ● | 25 | 20 | 19 | 200 | 37.5 | 48 | 30 | 2 | - | 5° | Fig.2 | | SB-2570TR | FT-8 | |
| | A25S-SVJB ^{R/L} 11-30AE | ● | ● | 30 | 25 | 24 | 250 | 45 | 58 | 33 | 3.5 | - | 5° | | | | | |
| | A32S-SVJB ^{R/L} 16-40AE | ● | ● | 40 | 32 | 31 | 250 | 60 | 74 | 45 | 3.5 | - | 8° | | | | | |
| A40T-SVJB ^{R/L} 16-50AE | ● | ● | 50 | 40 | 39 | 300 | 75 | 91 | 49 | 4.5 | - | 7° | | | | | | |
| Steel | S12M-SVJP ^{R/L} 08-16A | ● | ● | 16 | 12 | 11 | 150 | 26 | 33 | 21 | 2 | - | 5° | 0.2 | No | Fig.3 | SB-2050TR | FT-6 |
| | S12M-SVJC ^{R/L} 08-16A | ● | ● | 16 | 12 | 11 | 150 | 26 | 33 | 20 | 2 | - | 5° | | | | | |
| | S16Q-SVJC ^{R/L} 08-20A | ● | ● | 20 | 16 | 15 | 180 | 36 | 43 | 22 | 2 | - | 5° | | | | | |
| | S20R-SVJB ^{R/L} 11-25A | ● | ● | 25 | 20 | 19 | 200 | 37.5 | 48 | 30 | 2 | - | 5° | Fig.4 | | SB-2570TR | FT-8 | |
| | S25S-SVJB ^{R/L} 11-30A | ● | ● | 30 | 25 | 24 | 250 | 45 | 58 | 33 | 3.5 | - | 5° | | | | | |
| | S32S-SVJB ^{R/L} 16-40A | ● | ● | 40 | 32 | 31 | 250 | 60 | 74 | 45 | 3.5 | - | 8° | | | | | |
| S40T-SVJB ^{R/L} 16-50A | ● | ● | 50 | 40 | 39 | 300 | 75 | 91 | 49 | 4.5 | - | 7° | | | | | | |
| Excellent Bar | A10L-SVPC ^{R/L} 08-14AE | ● | ● | 14 | 10 | 9 | 140 | 24 | - | 21 | 8.5 | 3 | 8° | 0.4 | Yes | Fig.5 | SB-2050TR | FT-6 |
| | A12M-SVPB ^{R/L} 11-18AE | ● | ● | 18 | 12 | 11 | 150 | 29 | - | 26 | 11 | 4.5 | 8° | | | | | |
| | A16Q-SVPB ^{R/L} 11-22AE | ● | ● | 22 | 16 | 15 | 180 | 35 | - | 33 | 13.5 | 5 | 5° | | | | | |
| | A20R-SVPB ^{R/L} 11-26AE | ● | ● | 26 | 20 | 19 | 200 | 41 | - | 39 | 15.5 | 5 | 5° | | | Fig.6 | SB-40125TRN | FT-15 |
| | A25S-SVPB ^{R/L} 16-31AE | ● | ● | 31 | 25 | 24 | 250 | 51 | - | 49 | 18 | 5 | 13° | | | | | |
| | A32S-SVPB ^{R/L} 16-40AE | ● | ● | 40 | 32 | 31 | 250 | 54 | - | 53 | 23 | 6.5 | 9° | | | | | |
| Steel | S10L-SVPC ^{R/L} 08-14A | ● | ● | 14 | 10 | 9 | 140 | 24 | - | 21 | 8.5 | 3 | 8° | 0.4 | No | Fig.7 | SB-2050TR | FT-6 |
| | S12M-SVPB ^{R/L} 11-18A | ● | ● | 18 | 12 | 11 | 150 | 29 | - | 26 | 11 | 4.5 | 8° | | | | | |
| | S16Q-SVPB ^{R/L} 11-22A | ● | ● | 22 | 16 | 15 | 180 | 35 | - | 33 | 13.5 | 5 | 5° | | | | | |
| | S20R-SVPB ^{R/L} 11-26A | ● | ● | 26 | 20 | 19 | 200 | 41 | - | 39 | 15.5 | 5 | 5° | | | Fig.8 | SB-40125TRN | FT-15 |
| | S25S-SVPB ^{R/L} 16-31A | ● | ● | 31 | 25 | 24 | 250 | 51 | - | 49 | 18 | 5 | 13° | | | | | |
| | S32S-SVPB ^{R/L} 16-40A | ● | ● | 40 | 32 | 31 | 250 | 54 | - | 53 | 23 | 6.5 | 9° | | | | | |
| Carbide | E10N-SVPC ^{R/L} 08-14A | ● | | 14 | 10 | 9 | 160 | 20 | - | 18.5 | 8.5 | 3 | 8° | 0.4 | Yes | Fig.9 | SB-2050TR | FT-6 |
| | E12Q-SVPB ^{R/L} 11-18A | ● | | 18 | 12 | 11 | 180 | 23 | - | 22 | 11 | 4.5 | 8° | | | | | |
| | E16X-SVPB ^{R/L} 11-22A | ● | | 22 | 16 | 15 | 220 | 28 | - | 27 | 13.5 | 5 | 5° | | | | | |
| | E20S-SVPB ^{R/L} 11-26A | ● | | 26 | 20 | 19 | 250 | 32 | - | 31 | 15.5 | 5 | 5° | | | Fig.10 | SB-40125TRN | FT-15 |
| | E25T-SVPB ^{R/L} 16-31A | ● | | 31 | 25 | 24 | 300 | 38 | - | 37 | 18 | 5 | 13° | | | | | |

● Spare Parts

| Description | Spare Parts | | |
|--------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | Shim | Shim Screw | Wrench (for Shim Screw) |
| |  |  |  |
| 32S-SVJB ^{R/L} 16-40A | SVN-32N | SS-4N | LW-4 |
| 40T-SVJB ^{R/L} 16-50A | | | |
| 25S-SVPB ^{R/L} 16-31A | | | |
| 32S-SVPB ^{R/L} 16-40A | | | |

● Applicable Inserts

| Applications | Finishing | Finishing | Finishing | Finishing-Medium | Finishing | Finishing / Precision | Finishing-Medium | Low Feed / Precision | Non-ferrous Metals | Non-ferrous Metals |
|-------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Ref. Page | B75 | B72, B73 | B72 | B72, B73 | B72 | B72, B76 | B73 | B76 | B73 | B73 |
| Insert | CK | VF | GP | HQ | ^{R/L} -F | ^{R/L} -FSF | ^{R/L} -Y | F ^{R/L} -USF | AH | ^{R/L} -A3 |
| Toolholder |  |  |  |  |  |  |  |  |  |  |
| ...SVJP ^{R/L} 08-... | VPGT0802.. | - | - | - | - | VPET0802.. | - | VPET0802.. | - | - |
| ...SVJC ^{R/L} 08-... | - | VCMT0802.. | - | VCMT0802.. | - | - | - | - | - | - |
| ...SVJB ^{R/L} 11-... | - | VBMT1103.. | VBMT1103.. | VBMT1103.. | VBGT1103.. | VBET1103.. | VBGT1103.. | - | - | - |
| ...SVJB ^{R/L} 16-... | - | VBMT1604.. | VBMT1604.. | VBMT1604.. | - | - | VBGT1604.. | - | VCGT1604.. | VCGT1604.. |
| ...SVPC ^{R/L} 08-... | - | VCMT0802.. | - | VCMT0802.. | - | - | - | - | - | - |
| ...SVPB ^{R/L} 11-... | - | VBMT1103.. | VBMT1103.. | VBMT1103.. | VBGT1103.. | VBET1103.. | VBGT1103.. | - | - | - |
| ...SVPB ^{R/L} 16-... | - | VBMT1604.. | VBMT1604.. | VBMT1604.. | - | - | VBGT1604.. | - | VCGT1604.. | VCGT1604.. |
| Applications | Non-ferrous Metals | Hard Materials | | | | | | | | |
| Ref. Page | C22 | C14 | | | | | | | | |
| Insert | PCD | CBN | | | | | | | | |
| Toolholder |  |  | | | | | | | | |
| ...SVJP ^{R/L} 08-... | - | - | | | | | | | | |
| ...SVJC ^{R/L} 08-... | VCMT0802.. | VCGW0802.. | | | | | | | | |
| ...SVJB ^{R/L} 11-... | VBMT1103.. | VBGW1103.. | | | | | | | | |
| ...SVJB ^{R/L} 16-... | VBMT1604.. | VBGW1604.. | | | | | | | | |
| ...SVPC ^{R/L} 08-... | VCMT0802.. | VCGW0802.. | | | | | | | | |
| ...SVPB ^{R/L} 11-... | VBMT1103.. | VBGW1103.. | | | | | | | | |
| ...SVPB ^{R/L} 16-... | VBMT1604.. | VBGW1604.. | | | | | | | | |

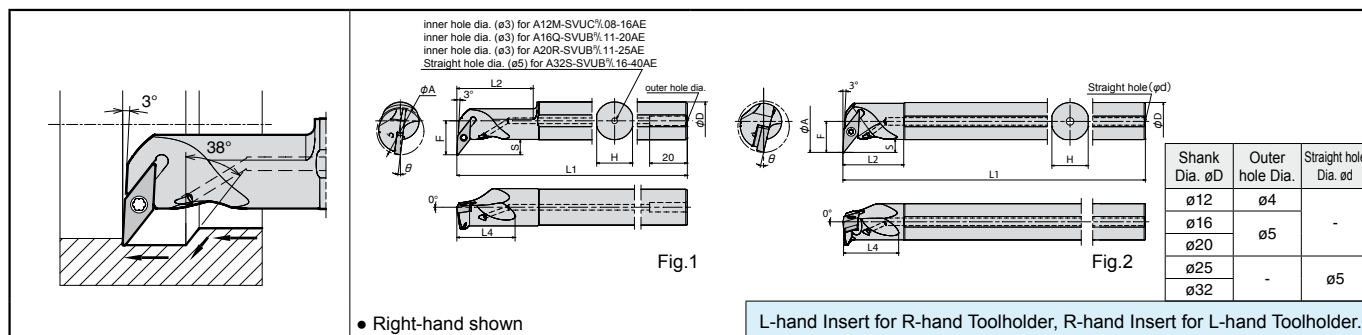
* Use of VBGT1103...Y / VBGT1604...Y with A-SVJB-AE / S-SVJB-A is not recommended. For recommended cutting conditions, see page ● F82~F83

● : Std. Item



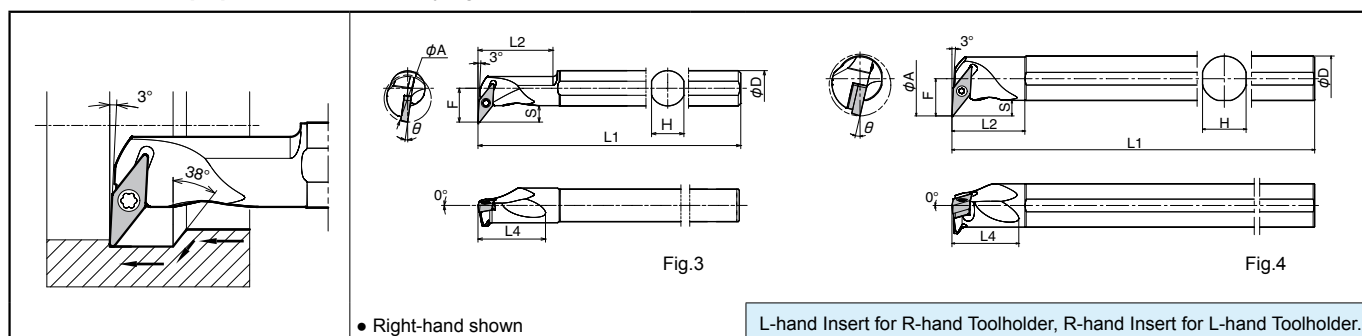
A-SVUC(B)-AE Excellent Bar (Copying)

Max. Overhang Length L/D≈5.5



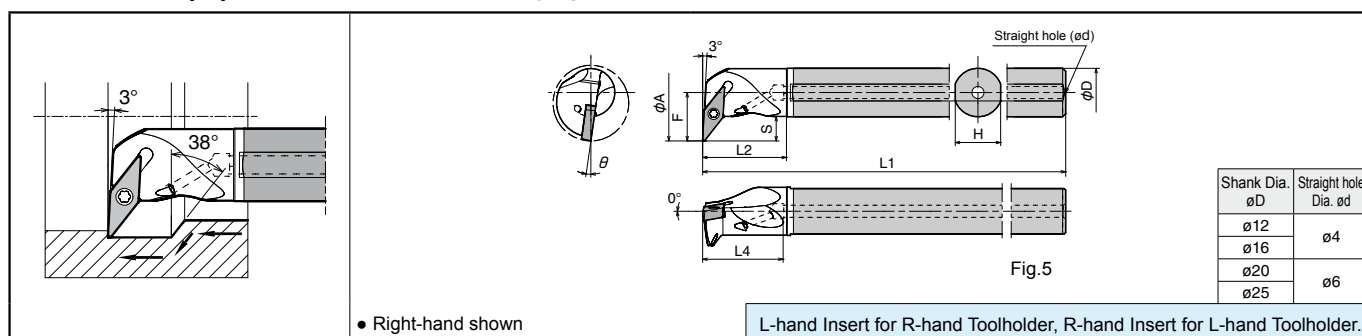
S-SVUC(B)-A Steel Bar (Copying)

Max. Overhang Length L/D≈4



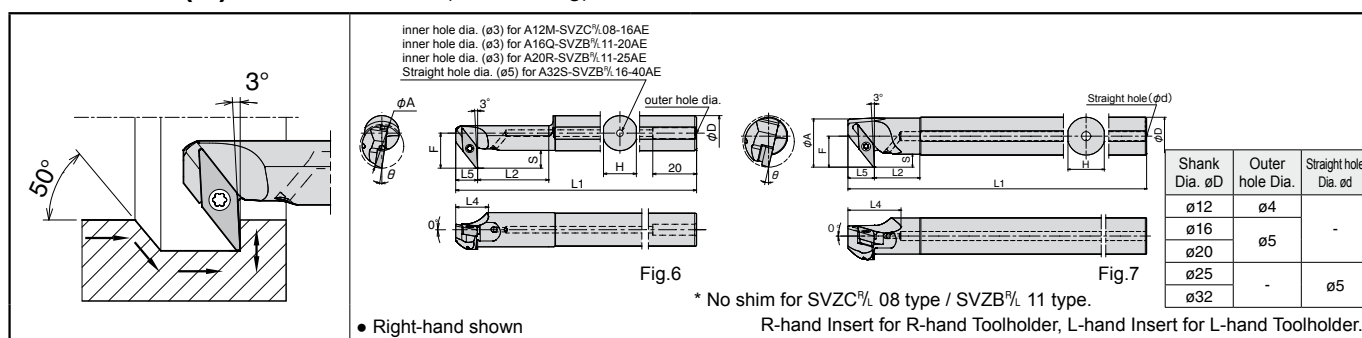
E-SVUC(B)-A Carbide Shank Bar (Copying)

Max. Overhang Length L/D≈7



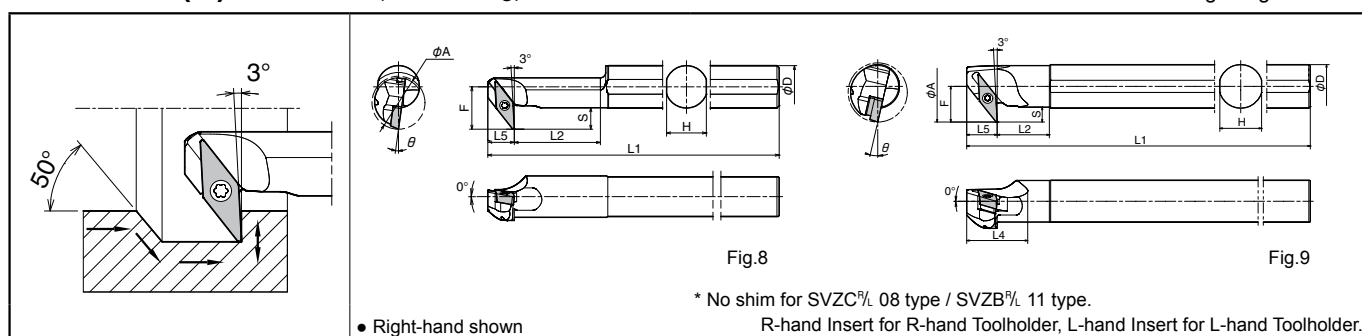
A-SVZC(B)-AE Excellent Bar (Back Boring)

Max. Overhang Length L/D≈5.5



S-SVZC(B)-A Steel Bar (Back Boring)




Max. Overhang Length L/D≈4









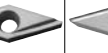





● Toolholder Dimensions

| Description | | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | | θ | Standard Corner-R (°) | Coolant Hole | Drawing | Spare Parts | |
|---------------|----------------------------------|------|---|----------------|----------------|----|-----|------|----|------|------|-----|-----|-----------------------|--------------|---------|-------------|--------|
| | | R | L | øA | øD | H | L1 | L2 | L4 | L5 | F | S | | | | | Clamp Screw | Wrench |
| | | | | | | | | | | | | | | | | | | |
| Excellent Bar | A12M-SVUC ^{R/L} 08-16AE | ● | ● | 16 | 12 | 11 | 150 | 25.5 | 23 | - | 11.5 | 5.5 | 8° | 0.4 | Yes | Fig.1 | SB-2050TR | FT-6 |
| | A16Q-SVUB ^{R/L} 11-20AE | ● | ● | 20 | 16 | 15 | 180 | 32.5 | 27 | - | 16 | 8 | 8° | | | | SB-2570TR | FT-8 |
| | A20R-SVUB ^{R/L} 11-25AE | ● | ● | 25 | 20 | 19 | 200 | 40.5 | 31 | - | 18 | 8 | 7° | | | | SB-40125TRN | FT-15 |
| | A25S-SVUB ^{R/L} 16-34AE | ● | ● | 34 | 25 | 24 | 250 | 40 | 37 | - | 20.5 | 8.5 | 13° | | | | | |
| | A32S-SVUB ^{R/L} 16-40AE | ● | ● | 40 | 32 | 31 | 250 | 84 | 47 | - | 28 | 12 | 9° | | | | | |
| Steel | S12M-SVUC ^{R/L} 08-16A | ● | ● | 16 | 12 | 11 | 150 | 25.5 | 23 | - | 11.5 | 5.5 | 8° | 0.4 | No | Fig.3 | SB-2050TR | FT-6 |
| | S16Q-SVUB ^{R/L} 11-20A | ● | ● | 20 | 16 | 15 | 180 | 32.5 | 27 | - | 16 | 8 | 8° | | | | SB-2570TR | FT-8 |
| | S20R-SVUB ^{R/L} 11-25A | ● | ● | 25 | 20 | 19 | 200 | 40.5 | 31 | - | 18 | 8 | 7° | | | | | |
| | S25S-SVUB ^{R/L} 16-34A | ● | ● | 34 | 25 | 24 | 250 | 40 | 37 | - | 20.5 | 8.5 | 13° | | | | | |
| | S32S-SVUB ^{R/L} 16-40A | ● | ● | 40 | 32 | 31 | 250 | 84 | 47 | - | 28 | 12 | 9° | | | | | |
| Carbide | E12Q-SVUC ^{R/L} 08-18A | ● | | 18 | 12 | 11 | 180 | 23 | 22 | - | 11.5 | 5.5 | 8° | 0.4 | Yes | Fig.5 | SB-2050TR | FT-6 |
| | E16X-SVUB ^{R/L} 11-25A | ● | | 25 | 16 | 15 | 220 | 28 | 27 | - | 16 | 8 | 8° | | | | SB-2570TR | FT-8 |
| | E20S-SVUB ^{R/L} 11-29A | ● | | 29 | 20 | 19 | 250 | 32 | 30 | - | 18 | 8 | 7° | | | | SB-40125TRN | FT-15 |
| | E25T-SVUB ^{R/L} 16-34A | ● | | 34 | 25 | 24 | 300 | 38 | 37 | - | 21 | 8.5 | 13° | | | | | |
| Excellent Bar | A12M-SVZC ^{R/L} 08-16AE | ● | ● | 16 | 12 | 11 | 150 | 25.5 | 14 | 7.5 | 11.5 | 5.5 | 8° | 0.4 | Yes | Fig.6 | SB-2050TR | FT-6 |
| | A16Q-SVZB ^{R/L} 11-20AE | ● | ● | 20 | 16 | 15 | 180 | 32.5 | 20 | 10 | 16 | 8 | 8° | | | | SB-2570TR | FT-8 |
| | A20R-SVZB ^{R/L} 11-25AE | ● | ● | 25 | 20 | 19 | 200 | 40.5 | 23 | 10 | 18 | 8 | 7° | | | | | |
| | A25S-SVZB ^{R/L} 16-34AE | ● | ● | 34 | 25 | 24 | 250 | 30 | 34 | 17.5 | 20.5 | 8.5 | 13° | | | | | |
| | A32S-SVZB ^{R/L} 16-40AE | ● | ● | 40 | 32 | 31 | 250 | 72.5 | 36 | 17.5 | 28 | 12 | 9° | | | | | |
| Steel | S12M-SVZC ^{R/L} 08-16A | ● | ● | 16 | 12 | 11 | 150 | 25.5 | 14 | 7.5 | 11.5 | 5.5 | 8° | 0.4 | No | Fig.8 | SB-2050TR | FT-6 |
| | S16Q-SVZB ^{R/L} 11-20A | ● | ● | 20 | 16 | 15 | 180 | 32.5 | 20 | 10 | 16 | 8 | 8° | | | | SB-2570TR | FT-8 |
| | S20R-SVZB ^{R/L} 11-25A | ● | ● | 25 | 20 | 19 | 200 | 40.5 | 23 | 10 | 18 | 8 | 7° | | | | | |
| | S25S-SVZB ^{R/L} 16-34A | ● | ● | 34 | 25 | 24 | 250 | 30 | 34 | 17.5 | 20.5 | 8.5 | 13° | | | | | |
| | S32S-SVZB ^{R/L} 16-40A | ● | ● | 40 | 32 | 31 | 250 | 72.5 | 36 | 17.5 | 28 | 12 | 9° | | | | | |

● Spare Parts

| Description | Spare Parts | | |
|--------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | Shim | Shim Screw | Wrench (for Shim Screw) |
| |  |  |  |
| <u>25-SVUB^{R/L} 16-34A</u> | SVN-32N | SS-4N | LW-4 |
| <u>32S-SVUB^{R/L} 16-40A</u> | | | |
| <u>25S-SVZB^{R/L} 16-34A</u> | | | |
| <u>32S-SVZB^{R/L} 16-40A</u> | | | |

● Applicable Inserts

| Applications | Finishing | Finishing | Finishing | Finishing-Medium | Finishing | Finishing / Precision | Finishing-Medium | Low Feed / Precision | Non-ferrous Metals | Non-ferrous Metals |
|-------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Ref. Page | - | B72, B73 | B72 | B72, B73 | B72 | B72 | B73 | - | B73 | B73 |
| Insert | CK | VF | GP | HQ | ^{R/L} -F | ^{R/L} -FSF | ^{R/L} -Y | ^{R/L} -USF | AH | ^{R/L} -A3 |
| Toolholder |  |  |  |  |  |  |  |  |  |  |
| ... | ... | VCMT0802.. | - | VCMT0802.. | - | - | - | - | - | - |
| ...SVUC ^{R/L} 08-... | - | VBMT1103.. | VBMT1103.. | VBMT1103.. | VBGT1103.. | VBET1103.. | VBGT1103.. | - | - | - |
| ...SVUB ^{R/L} 11-... | - | VBMT1604.. | VBMT1604.. | VBMT1604.. | - | - | VBGT1604.. | - | VCGT1604.. | VCGT1604.. |
| ...SVUB ^{R/L} 16-... | - | VCMT0802.. | - | VCMT0802.. | - | - | - | - | - | - |
| ...SVZC ^{R/L} 08-... | - | VBMT1103.. | VBMT1103.. | VBMT1103.. | VBGT1103.. | VBET1103.. | VBGT1103.. | - | - | - |
| ...SVZB ^{R/L} 11-... | - | VBMT1604.. | VBMT1604.. | VBMT1604.. | - | - | VBGT1604.. | - | VCGT1604.. | VCGT1604.. |
| ...SVZB ^{R/L} 16-... | - | VBMT1604.. | VBMT1604.. | VBMT1604.. | - | - | VBGT1604.. | - | VCGT1604.. | VCGT1604.. |
| Applications | Non-ferrous Metals | Hard Materials | | | | | | | | |
| Ref. Page | C22 | C14 | | | | | | | | |
| Insert | PCD | CBN | | | | | | | | |
| Toolholder |  |  | | | | | | | | |
| ... | VCMT0802.. | VCGW0802.. | | | | | | | | |
| ...SVUC ^{R/L} 08-... | VBMT1103.. | VBGW1103.. | | | | | | | | |
| ...SVUB ^{R/L} 11-... | VBMT1604.. | VBGW1604.. | | | | | | | | |
| ...SVUB ^{R/L} 16-... | VCMT0802.. | VCGW0802.. | | | | | | | | |
| ...SVZC ^{R/L} 08-... | VBMT1103.. | VBGW1103.. | | | | | | | | |
| ...SVZB ^{R/L} 11-... | VBMT1604.. | VBGW1604.. | | | | | | | | |
| ...SVZB ^{R/L} 16-... | VBMT1604.. | VBGW1604.. | | | | | | | | |

For recommended cutting conditions, see page ●F82~F83

● : Std. Item ○ : Check Availability

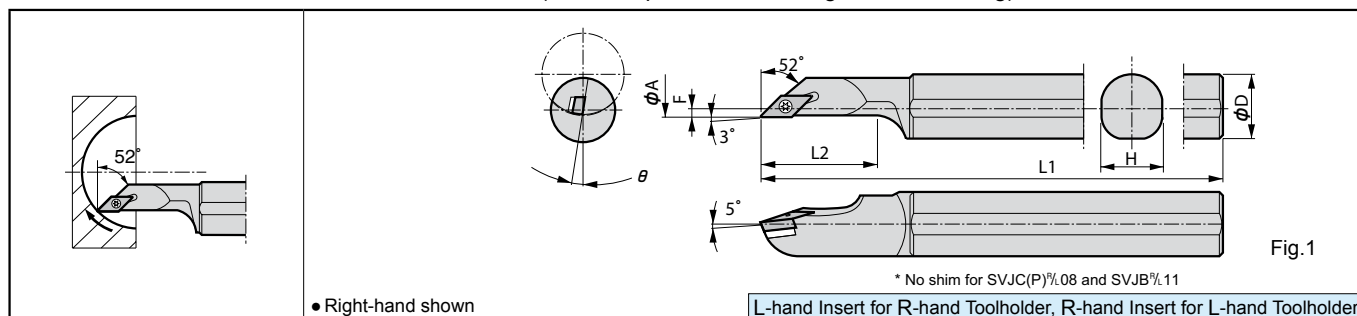
F



Boring

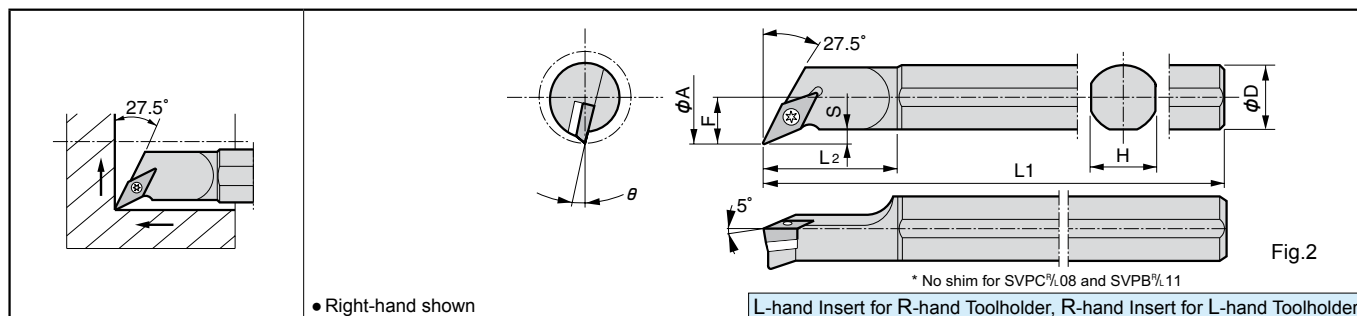
S...SVJB(C)-E / S...SVJP-E Excellent Bar (Internal Spherical Machining / Internal Facing)

Max. Overhang Length L/D≈5



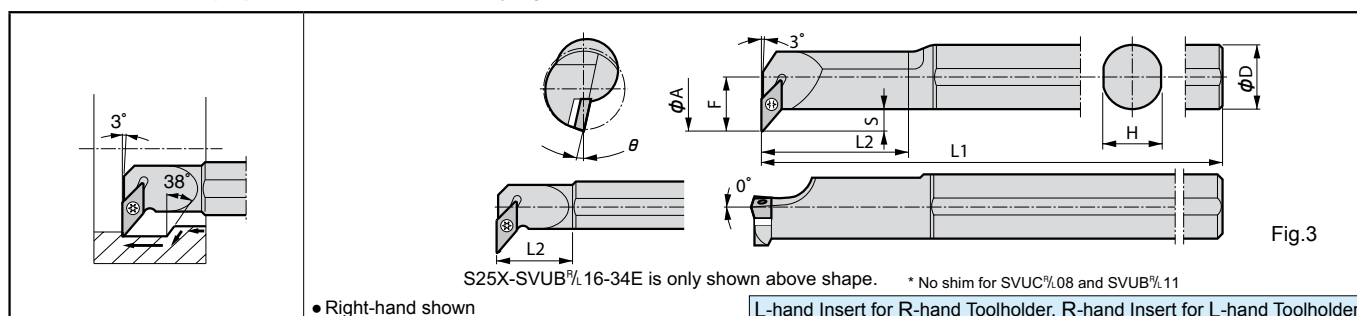
S...SVPB(C)-E Excellent Bar (Copying / Undercutting)

Max. Overhang Length L/D≈5



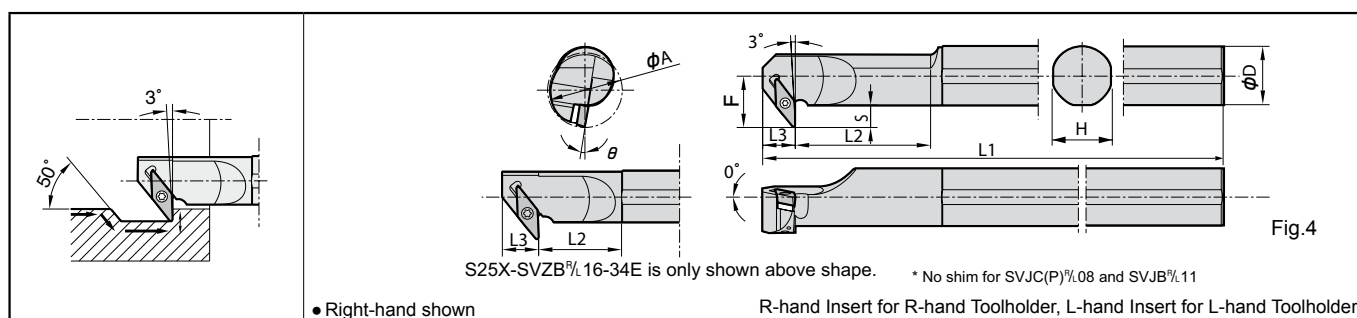
S...SVUB(C)-E Excellent Bar (Copying)

Max. Overhang Length L/D≈5



S...SVZB(C)-E Excellent Bar (Back Boring)

Max. Overhang Length L/D≈5



● Toolholder Dimensions [Will be switched to Dynamic Bar, see ● F85~F88 (Alternative Toolholder Reference Table for Boring Bar)].

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | | θ | Standard Corner-R (r) | Drawing |
|--------------------|------------------------|------|---|----------------|----------------|------|-----|------|----|------|-----|---|-----|-----------------------|---------|
| | | R | L | | φA | φD | H | L1 | L2 | L3 | F | S | | | |
| S12M-SVJP%.08-16E | SVJP%.1612B-08E | □ | □ | 16 | 12 | 11 | 150 | 26 | - | 2 | - | - | 5° | 0.2 | Fig.1 |
| S12M-SVJC%.08-16E | SVJC%.1612B-08E | □ | □ | 16 | 12 | 11 | 150 | 26 | - | 2 | - | - | 5° | 0.4 | |
| S16Q-SVJC%.08-20E | 2016B-08E | □ | □ | 20 | 16 | 15 | 180 | 36 | - | 2 | - | - | 5° | 0.4 | |
| S20R-SVJB%.11-25E | SVJB%.2520B-11E | □ | □ | 25 | 20 | 19 | 200 | 37.5 | - | 2 | - | - | 5° | 0.4 | |
| S25S-SVJB%.11-30E | 3025B-11E | □ | □ | 30 | 25 | 24 | 250 | 45 | - | 3.5 | - | - | 5° | 0.4 | |
| S32S-SVJB%.16-40EN | - | □ | □ | 40 | 32 | 31 | 250 | 60 | - | 3.5 | - | - | 8° | 0.8 | Fig.2 |
| S40T-SVJB%.16-50EN | - | □ | □ | 50 | 40 | 39 | 300 | 75 | - | 4.5 | - | - | 7° | 0.8 | |
| S10M-SVPC%.08-16E | SVQC%.1610B-08E | □ | □ | 16 | 10 | 9 | 150 | 25 | - | 8 | 3 | - | 8° | 0.4 | |
| S12M-SVPB%.11-20E | SVQB%.2012B-11E | □ | □ | 20 | 12 | 10.6 | 150 | 28 | - | 10 | 4.5 | - | 8° | 0.4 | |
| S16Q-SVPB%.11-25E | 2516B-11E | □ | □ | 25 | 16 | 14.6 | 180 | - | - | 12.5 | 5 | - | 5° | 0.4 | |
| S25X-SVPB%.16-34EN | - | □ | □ | 34 | 25 | 23.6 | 220 | 50 | - | 17 | 5 | - | 13° | 0.8 | Fig.2 |
| S32S-SVPB%.16-40EN | - | □ | □ | 40 | 32 | 30.6 | 250 | 55 | - | 22 | 6.5 | - | 9° | 0.8 | |






* For applications of S- SVJO type, see F49.

□ : Deleted from the next catalogue















● Toolholder Dimensions [Will be switched to Dynamic Bar, see ● F85~F88 (Alternative Toolholder Reference Table for Boring Bar)].

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | | θ | Standard Corner-R (r) | Drawing |
|----------------------------------|-------------------------------|--------------------------|--------------------------|----------------|----------------|------|-----|------|------|------|-----|---|-----|-----------------------|---------|
| | | R | L | | φA | φD | H | L1 | L2 | L3 | F | S | | | |
| S12M-SVUC ^{R/L} 08-16E | SVUC ^{R/L} 1612B-08E | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 150 | 25.5 | - | 11 | 5.5 | | 8° | 0.4 | Fig.3 |
| S16Q-SVUB ^{R/L} 11-20E | SVUB ^{R/L} 2016B-11E | <input type="checkbox"/> | <input type="checkbox"/> | 20 | 16 | 14.6 | 180 | 32.5 | - | 15.5 | 8 | | 8° | 0.4 | |
| S20R-SVUB ^{R/L} 11-25E | 2520B-11E | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 18.6 | 200 | 40.5 | - | 17.5 | 8 | | 7° | 0.4 | |
| S25X-SVUB ^{R/L} 16-34EN | - | <input type="checkbox"/> | <input type="checkbox"/> | 34 | 25 | 23.6 | 220 | 40 | - | 20.5 | 8.5 | | 13° | 0.8 | |
| S32S-SVUB ^{R/L} 16-40EN | - | <input type="checkbox"/> | <input type="checkbox"/> | 40 | 32 | 30.6 | 250 | 84 | - | 27.5 | 12 | | 9° | 0.8 | Fig.4 |
| S12M-SVZC ^{R/L} 08-16E | - | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 150 | 25.5 | 7.5 | 11 | 5.5 | | 8° | 0.4 | |
| S16Q-SVZB ^{R/L} 11-20E | - | <input type="checkbox"/> | <input type="checkbox"/> | 20 | 16 | 15 | 180 | 32.5 | 10 | 15.5 | 8 | | 8° | 0.4 | |
| S20R-SVZB ^{R/L} 11-25E | - | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 19 | 200 | 40.5 | | 17.5 | | | 7° | 0.4 | |
| S25X-SVZB ^{R/L} 16-34EN | - | <input type="checkbox"/> | <input type="checkbox"/> | 34 | 25 | 24 | 220 | 40 | 17.5 | 20.5 | 8.5 | | 13° | 0.8 | |
| S32S-SVZB ^{R/L} 16-40EN | - | <input type="checkbox"/> | <input type="checkbox"/> | 40 | 32 | 31 | 250 | 72.5 | | 27.5 | 12 | | 9° | 0.8 | |

● Spare Parts

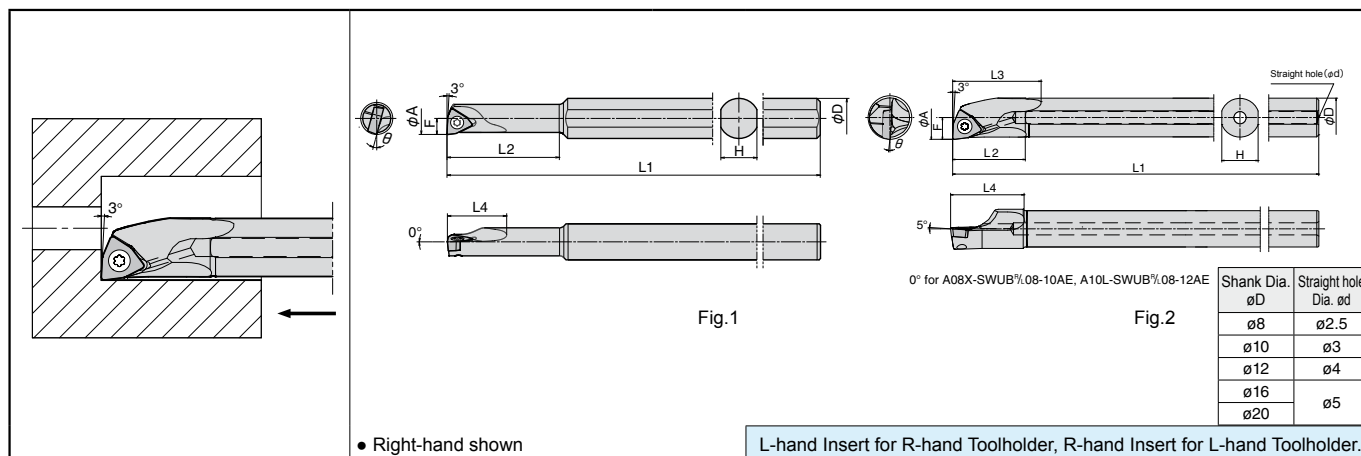
| Description | Spare Parts | | | | | | | |
|----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|--|--|
| | Clamp Screw | Wrench | Shim | Shim Screw | Wrench (for Shim Screw) | | | |
| |  |  |  |  |  | | | |
| S12M-SVJP ^{R/L} 08-16E | SB-2050TR | FT-6 | - | - | - | | | |
| S12M-SVJC ^{R/L} 08-16E | | | | | | | | |
| S16Q-SVJC ^{R/L} 08-20E | | | | | | | | |
| S20R-SVJB ^{R/L} 11-25E | SB-2570TR | FT-8 | - | - | - | | | |
| S25S-SVJB ^{R/L} 11-30E | | | | | | | | |
| S32S-SVJB ^{R/L} 16-40EN | SB-40125TRN | FT-15 | SVN-32N | SS-4N | LW-4 | | | |
| S40T-SVJB ^{R/L} 16-50EN | | | | | | | | |
| S10M-SVPC ^{R/L} 08-16E | SB-2050TR | FT-6 | - | - | - | | | |
| S12M-SVPB ^{R/L} 11-20E | SB-2570TR | FT-8 | | | | | | |
| S16Q-SVPB ^{R/L} 11-25E | | | | | | | | |
| S25X-SVPB ^{R/L} 16-34EN | SB-40125TRN | FT-15 | SVN-32N | SS-4N | LW-4 | | | |
| S32S-SVPB ^{R/L} 16-40EN | | | | | | | | |
| S12M-SVUC ^{R/L} 08-16E | SB-2050TR | FT-6 | - | - | - | | | |
| S16Q-SVUB ^{R/L} 11-20E | SB-2570TR | FT-8 | | | | | | |
| S20R-SVUB ^{R/L} 11-25E | | | | | | | | |
| S25X-SVUB ^{R/L} 16-34EN | SB-40125TRN | FT-15 | SVN-32N | SS-4N | LW-4 | | | |
| S32S-SVUB ^{R/L} 16-40EN | | | | | | | | |
| S12M-SVZC ^{R/L} 08-16E | SB-2050TR | FT-6 | - | - | - | | | |
| S16Q-SVZB ^{R/L} 11-20E | SB-2570TR | FT-8 | | | | | | |
| S20R-SVZB ^{R/L} 11-25E | | | | | | | | |
| S25X-SVZB ^{R/L} 16-34EN | SB-40125TRN | FT-15 | SVN-32N | SS-4N | LW-4 | | | |
| S32S-SVZB ^{R/L} 16-40EN | | | | | | | | |

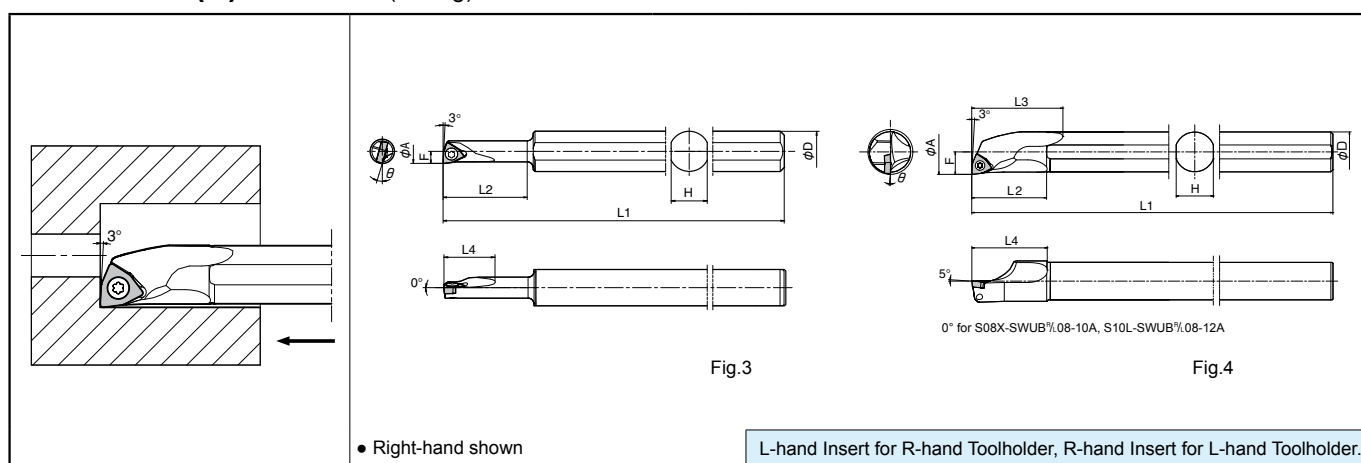
● Applicable Inserts

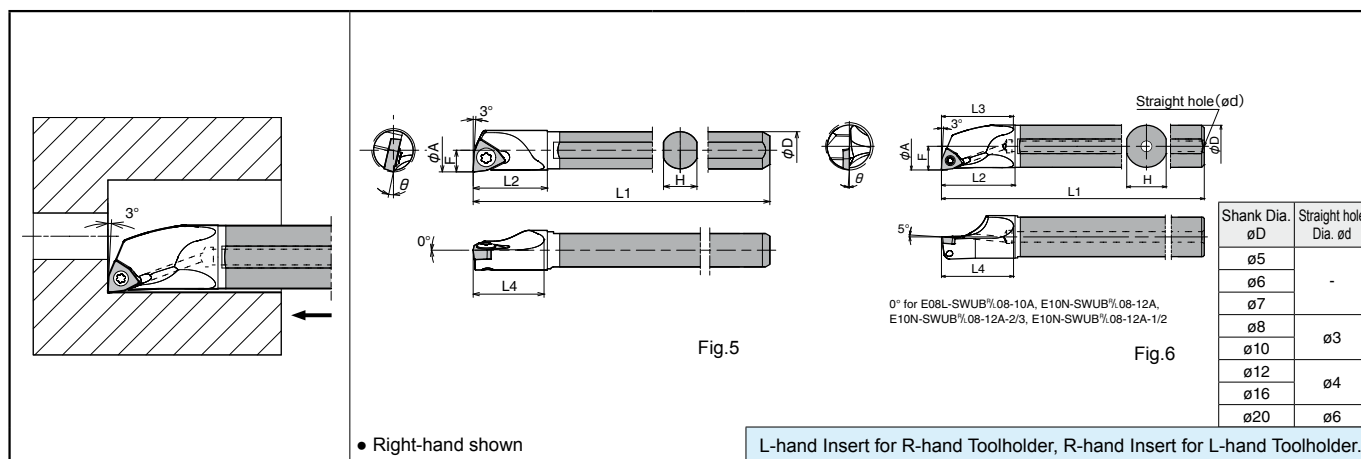
| Applications | Finishing | Finishing | Finishing | Finishing-Medium | Finishing | Finishing / Precision | Finishing-Medium | Medium | Low Feed / Precision | Non-ferrous Metals |
|--------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Ref. Page | B75 | B72, B73 | B72 | B72, B73 | B72 | B72, B76 | B73 | B72 | B76 | B73 |
| Insert | CK | VF | GP | HQ | ^{R/L} -F | ^{R/L} -FSF | ^{R/L} -Y | FN-Z | F ^{R/L} -USF | Without Indication |
| Toolholder |  |  |  |  |  |  |  |  |  |  |
| ...-SVOP ^{R/L} 08-... | VPGT0802.. | - | - | - | - | VPET0802.. | - | - | VPET0802.. | - |
| ...-SVOC ^{R/L} 08-... | - | VCMT0802.. | - | VCMT0802.. | - | - | - | - | - | - |
| ...-SVOB ^{R/L} 11-... | - | VBMT1103.. | VBMT1103.. | VBMT1103.. | VBGT1103.. | VBET1103.. | VBGT1103.. | VBGT1103.. | - | - |
| ...-SVOB ^{R/L} 16-... | - | VBMT1604.. | VBMT1604.. | VBMT1604.. | - | - | VBGT1604.. | - | - | VCGT1604.. |
| Applications | Non-ferrous Metals | Non-ferrous Metals | Non-ferrous Metals | Hard Materials | | | | | | |
| Ref. Page | B73 | B73 | C22 | C14 | | | | | | |
| Insert | AH | ^{R/L} -A3 | PCD | CBN | | | | | | |
| Toolholder |  |  |  |  | | | | | | |
| ...-SVOP ^{R/L} 08-... | - | - | - | - | | | | | | |
| ...-SVOC ^{R/L} 08-... | - | - | VCMT0802.. | VCGW0802.. | | | | | | |
| ...-SVOB ^{R/L} 11-... | - | - | VBMT1103.. | VBGW1103.. | | | | | | |
| ...-SVOB ^{R/L} 16-... | VCGT1604.. | VCGT1604.. | VBMT1604.. | VBGW1604.. | | | | | | |

* Use of VBGT1103..-Y / VBGT1604..-Y with A-SVJB-AE / S-SVJB-A is not recommended. For recommended cutting conditions, see page ● F82~F83



S / A-SWUB(P)-AE Excellent Bar (Boring)

Max. Overhang Length L/D \sim 5.5

S-SWUB(P)-A Steel Bar (Boring)

Max. Overhang Length L/D \sim 4

E(C)-SWUB(P)-A Carbide Shank Bar (Boring)

Max. Overhang Length L/D \sim 7


● Toolholder Dimensions

| Description | | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | | θ | Standard Corner-R (R) | Coolant Hole | Drawing | Spare Parts | | | | | | | |
|---------------|---------------------------------------|------|---|-------------------|----------------|-----|-----|------|----|----|-----|---|------|-----------------------|--------------|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------|-----------|------|-------|-----------|-------|
| | | R | L | øA | øD | H | L1 | L2 | L3 | L4 | F | S | | | | |  |  | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| Excellent Bar | S10H-SWUB ^{R/L} 06-06AE | ● | ● | 6 | 10 | 9 | 100 | 21 | - | 13 | 3 | - | 15° | 0.2 | No | Fig.1 | SB-2035TR | FT-6 | | | | | | |
| | S10H-SWUB ^{R/L} 06-07AE | ● | ● | 7 | 10 | 9 | 100 | 24.5 | - | 15 | 3.5 | - | 13° | | | | | | | | | | | |
| | S10H-SWUB ^{R/L} 08-08AE | ● | ● | 8 | 10 | 9 | 100 | 28 | - | 15 | 4 | - | 15° | | | | | | | | | | | |
| | A08X-SWUB ^{R/L} 08-10AE | ● | ● | 10 | 8 | 7 | 120 | 16 | 21 | 16 | 5 | - | 13° | | | | | | | | | | | |
| | A10L-SWUB ^{R/L} 08-12AE | ● | ● | 12 | 10 | 9 | 140 | 20 | 25 | 20 | 6 | - | 10° | 0.4 | Yes | Fig.2 | SB-2050TR | FT-8 | | | | | | |
| | A12M-SWUP ^{R/L} 11-14AE | ● | ● | 14 | 12 | 11 | 150 | 24 | 30 | 24 | 7 | - | 4° | | | | | | | | | | | |
| | A16Q-SWUP ^{R/L} 11-18AE | ● | ● | 18 | 16 | 15 | 180 | 30 | 37 | 30 | 9 | - | 1° | | | | | | | | | | | |
| | A16Q-SWUP ^{R/L} 16-18AE | ● | ● | | | | | | | | | | 3.5° | | | | | | | | | | | |
| | A20R-SWUP ^{R/L} 16-22AE | ● | ● | 22 | 20 | 19 | 200 | 36 | 46 | 37 | 11 | - | 2° | 0.8 | | SB-4065TR | FT-15 | | | | | | | |
| Steel | S10H-SWUB ^{R/L} 06-06A | ● | ● | 6 | 10 | 9 | 100 | 21 | - | 13 | 3 | - | 15° | 0.2 | | Fig.3 | SB-2035TR | FT-6 | | | | | | |
| | S10H-SWUB ^{R/L} 06-07A | ● | ● | 7 | 10 | 9 | 100 | 25 | - | 15 | 3.5 | - | 13° | | | | | | | | | | | |
| | S10H-SWUB ^{R/L} 08-08A | ● | ● | 8 | 10 | 9 | 100 | 28 | - | 15 | 4 | - | 15° | | | | | | | | | | | |
| | S08X-SWUB ^{R/L} 08-10A | ● | ● | 10 | 8 | 7 | 120 | 16 | 21 | 16 | 5 | - | 13° | | | | | | | | | | | |
| | S10L-SWUB ^{R/L} 08-12A | ● | ● | 12 | 10 | 9 | 140 | 20 | 25 | 20 | 6 | - | 10° | 0.4 | | Fig.4 | SB-2545TR | FT-8 | | | | | | |
| | S12M-SWUP ^{R/L} 11-14A | ● | ● | 14 | 12 | 11 | 150 | 24 | 30 | 24 | 7 | - | 4° | | | | | | | | | | | |
| | S16Q-SWUP ^{R/L} 11-18A | ● | ● | 18 | 16 | 15 | 180 | 30 | 37 | 30 | 9 | - | 1° | | | | | | | | | | | |
| | S16Q-SWUP ^{R/L} 16-18A | ● | ● | | | | | | | | | | 3.5° | | | | | | | | | | | |
| | S20R-SWUP ^{R/L} 16-22A | ● | ● | 22 | 20 | 19 | 200 | 36 | 46 | 37 | 11 | - | 2° | 0.8 | | SB-4065TR | FT-15 | | | | | | | |
| Carbide | C05H-SWUB ^{R/L} 06-06A | ● | ● | 6 | 5 | 4.4 | 100 | 11 | - | 11 | 3 | - | 13° | 0.2 | No | Fig.5 | SB-2035TR | FT-6 | | | | | | |
| | C06J-SWUB ^{R/L} 06-07A | ● | ● | 7 | 6 | 5.4 | 110 | 12 | - | 12 | 3.5 | - | 13° | | | | | | | | | | | |
| | C07K-SWUB ^{R/L} 08-08A | ● | ● | 8 | 7 | 6.4 | 125 | 13 | - | 13 | 4 | - | 13° | | | | | | | | | | | |
| | E08L-SWUB ^{R/L} 08-10A | ● | ● | 10 | 8 | 7 | 140 | 16 | 15 | 15 | 5 | - | 13° | | | | | | | | | | | |
| | E10N-SWUB ^{R/L} 08-12A | ● | ● | 12 | 10 | 9 | 160 | 20 | 19 | 19 | 6 | - | 10° | 0.4 | | Fig.6 | SB-2050TR | FT-8 | | | | | | |
| | E10N-SWUB ^{R/L} 08-12A-2 / 3 | ● | | | | | 105 | | | | | - | | | | | | | | | | | | |
| | E10N-SWUB ^{R/L} 08-12A-1 / 2 | ● | | | | | 80 | | | | | - | | | | | | | | | | | | |
| | E12Q-SWUP ^{R/L} 11-14A | ● | ● | 14 | 12 | 11 | 180 | 23 | 22 | 22 | 7 | - | 4° | | | | 0.4 | Yes | Fig.6 | SB-2545TR | FT-8 | | | |
| | E12Q-SWUP ^{R/L} 11-14A-2 / 3 | ● | | | | | 120 | | | | | - | | | | | | | | | | | | |
| | E12Q-SWUP ^{R/L} 11-14A-1 / 2 | ● | | | | | 90 | | | | | - | | | | | | | | | | | | |
| | E16X-SWUP ^{R/L} 11-18A | ● | ● | 18 | 16 | 15 | 220 | 28 | 27 | 27 | 9 | - | 1° | | | | | | | 0.8 | | Fig.6 | SB-4065TR | FT-15 |
| | E16X-SWUP ^{R/L} 11-18A-2 / 3 | ● | | | | | 145 | | | | | - | | | | | | | | | | | | |
| | E16X-SWUP ^{R/L} 11-18A-1 / 2 | ● | | | | | 110 | | | | | - | | | | | | | | | | | | |
| | E16X-SWUP ^{R/L} 16-18A | ● | ● | | | | 220 | | | | | - | 3.5° | | | | | | | | | | | |
| | E16X-SWUP ^{R/L} 16-18A-2 / 3 | ● | | | | | 145 | | | | | - | | | | | | | | | | | | |
| | E16X-SWUP ^{R/L} 16-18A-1 / 2 | ● | | | | | 110 | | | | | - | | | | | | | | | | | | |
| | E20S-SWUP ^{R/L} 16-22A | ● | ● | 22 | 20 | 19 | 250 | 32 | 31 | 31 | 11 | - | 2° | | | Fig.6 | SB-4065TR | FT-15 | | | | | | |
| | E20S-SWUP ^{R/L} 16-22A-2 / 3 | ● | | | | | 165 | | | | | - | | | | | | | | | | | | |
| | E20S-SWUP ^{R/L} 16-22A-1 / 2 | ● | | | | | 125 | | | | | - | | | | | | | | | | | | |

● Applicable Inserts

| Applications | Minute ap | Finishing | Finishing | Finishing-Medium | Finishing | Finishing-Medium | Cast Iron | Non-ferrous Metals | Hard Materials | |
|--------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--|
| Ref. Page | B77 | B79 | B77 | B79 | B77 | B79 | B77, B79 | C22 | C15 | |
| Insert | CF | GP | ^{R/L} -DP | HQ | ^{R/L} -F | ^{R/L} -Y | Without Chipbreaker | PCD | CBN | |
| Toolholder |  |  |  |  |  |  |  |  |  | |
| ...-SWUB ^{R/L} 06-... | WBG0601.. | - | WBMT0601.. | - | WBG0601.. | - | WBGW0601.. | WBMT0601.. | WBGW0601.. | |
| ...-SWUB ^{R/L} 08-... | - | - | WBMT0802.. | - | WBG0802.. | - | WBGW0802.. | WBMT0802.. | WBGW0802.. | |
| ...-SWUP ^{R/L} 11-... | - | WPMT1102.. | - | WPMT1102.. | - | WPGT1102.. | WPGW1102.. | WPMT1102.. | - | |
| ...-SWUP ^{R/L} 16-... | - | WPMT1603.. | - | WPMT1603.. | - | WPGT1603.. | WPGW1603.. | - | - | |

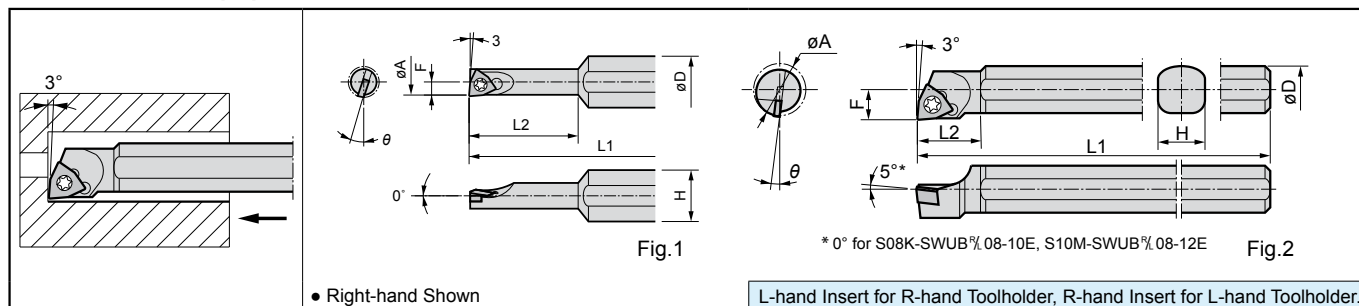
For recommended cutting conditions, see page ● F82~F83

● : Std. Item ○ : Check Availability



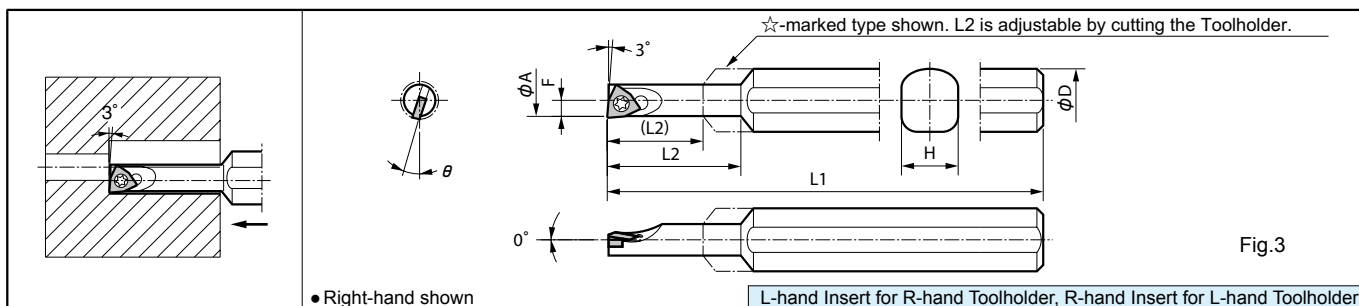
S...SWUP(B)-E Excellent Bar (Boring)

Max. Overhang Length $L/D \sim 5$



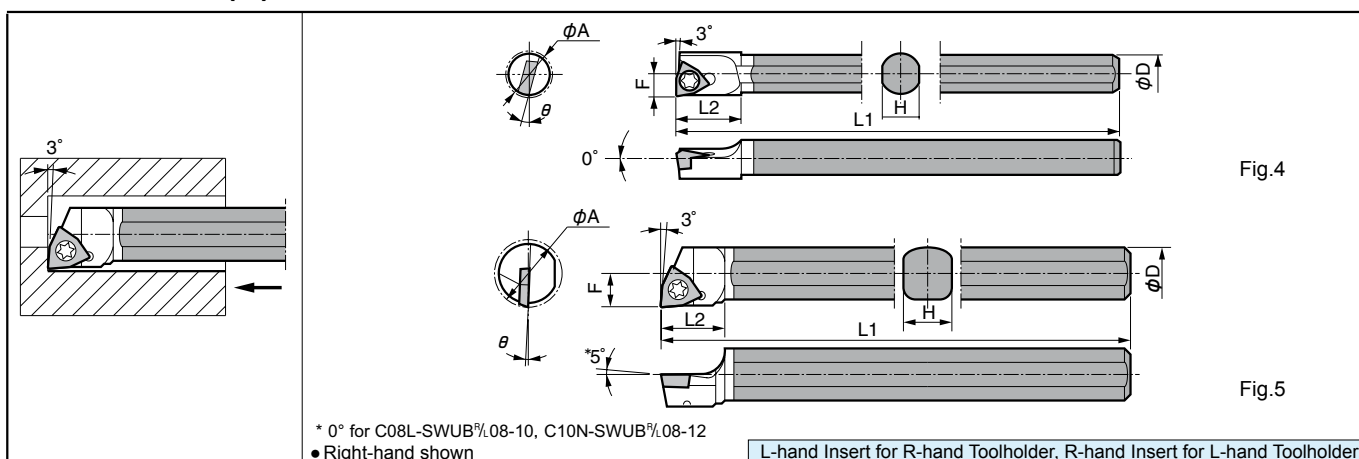
S...SWUB Steel Bar (Boring)

Max. Overhang Length $L/D \sim 3$





C...SWUP (B) Carbide Shank Bar (Boring)



Max. Overhang Length $L/D \sim 7$



● Toolholder Dimensions [Will be switched to Dynamic Bar, see ● F85~F88 (Alternative Toolholder Reference Table for Boring Bar)].

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | θ | Standard Corner-R (°) | Drawing | Spare Parts | | |
|-------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------|--------------------------|----------------|----------------|-----|-----|------|------|---|--|-----|-----------------------|---------|-------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | | R | L | | øA | øD | H | L1 | L2 | F | | | | | | Clamp Screw | Wrench |
| | | | | | | | | | | | | | | | |  |  |
| S10H -SWUB ^{R/L} 06-06E SWUB ^{R/L} 06-07E | - | <input type="checkbox"/> | <input type="checkbox"/> | 6 | 10 | 9 | 100 | 28 | 3 | | | 15° | 0.2 | Fig.1 | SB-2040TR | FT-6 | |
| S10J -SWUB ^{R/L} 08-08E | | <input type="checkbox"/> | <input type="checkbox"/> | 7 | 10 | 9 | 100 | 32 | 3.5 | | | 13° | | | SB-2050TR | | |
| S10K -SWUB ^{R/L} 08-10E | | <input type="checkbox"/> | <input type="checkbox"/> | 8 | 10 | 9 | 110 | 37 | 4 | | | 15° | | | SB-2050TR | | |
| S08K -SWUB ^{R/L} 08-10E | SWUB ^{R/L} 1008B-08E | <input type="checkbox"/> | <input type="checkbox"/> | 10 | 8 | 7 | 125 | 17 | 5 | | | 13° | 0.2 | | SB-2050TR | | |
| S10M -SWUB ^{R/L} 08-12E | | <input type="checkbox"/> | <input type="checkbox"/> | 12 | 10 | 9 | 150 | 23 | 6 | | | 10° | | | SB-2050TR | | |
| S12M -SWUP ^{R/L} 11-14E SWUP ^{R/L} 11-16E | SWUP ^{R/L} 1412B-11E | <input type="checkbox"/> | <input type="checkbox"/> | 14 | 12 | 11 | 150 | 26 | 7 | | | 4° | 0.4 | Fig.2 | SB-2545TR | FT-8 | |
| S16N -SWUP ^{R/L} 11-18E | | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 150 | 29 | 8 | | | 2° | | | SB-2560TR | | |
| S16Q -SWUP ^{R/L} 16-20E | 1816B-11E | <input type="checkbox"/> | <input type="checkbox"/> | 18 | 16 | 15 | 160 | 32 | 9 | | | 1° | 0.8 | | SB-4065TR | FT-15 | |
| S20R -SWUP ^{R/L} 16-25E | | <input type="checkbox"/> | <input type="checkbox"/> | 20 | 16 | 15 | 180 | 34 | 10 | | | 3° | | | SB-4065TR | | |
| S10H -SWUB ^{R/L} 06-06 SWUB ^{R/L} 06-06-15 | ☆ 0610B-06 | <input type="checkbox"/> | <input type="checkbox"/> | 6 | 10 | 9 | 100 | 21 | 3 | | | 15° | 0.2 | Fig.3 | SB-2040TR | FT-6 | |
| S10H -SWUB ^{R/L} 06-07 | | <input type="checkbox"/> | <input type="checkbox"/> | 7 | 10 | 9 | 100 | 24.5 | 3.5 | | | 13° | | | SB-2050TR | | |
| S10J -SWUB ^{R/L} 08-08 SWUB ^{R/L} 08-08-20 | ☆ 0810B-08 | <input type="checkbox"/> | <input type="checkbox"/> | 8 | 10 | 9 | 110 | 28 | 4 | | | 15° | 0.2 | | SB-2050TR | | |
| | | <input type="checkbox"/> | <input type="checkbox"/> | 8 | 10 | 9 | 110 | 28 | 4 | | | 15° | | | SB-2050TR | | |
| C05H -SWUB ^{R/L} 06-06 C06J -SWUB ^{R/L} 06-07 | SWUB ^{R/L} 0605B-06W | <input type="checkbox"/> | <input type="checkbox"/> | 6 | 5 | 4.4 | 100 | 8 | 3 | | | 15° | 0.2 | Fig.4 | SB-2040TR | FT-6 | |
| C07K -SWUB ^{R/L} 08-08 C08L -SWUB ^{R/L} 08-10 | | <input type="checkbox"/> | <input type="checkbox"/> | 7 | 6 | 5.4 | 110 | 9 | 3.5 | | | 13° | | | SB-2050TR | | |
| C10N -SWUB ^{R/L} 08-12 SWUB ^{R/L} 08-12-1 / 2 SWUB ^{R/L} 08-12-2 / 3 | 1210B-08W | <input type="checkbox"/> | <input type="checkbox"/> | 12 | 10 | 9 | 160 | 12 | 6 | | | 10° | 0.2 | Fig.5 | SB-2050TR | | |
| | | <input type="checkbox"/> | <input type="checkbox"/> | 12 | 10 | 9 | 80 | 12 | 6 | | | 10° | | | SB-2050TR | | |
| C12Q -SWUP ^{R/L} 11-14 SWUP ^{R/L} 11-14-1 / 2 SWUP ^{R/L} 11-14-2 / 3 | SWUP ^{R/L} 1412B-11W | <input type="checkbox"/> | <input type="checkbox"/> | 14 | 12 | 11 | 180 | 14 | 7 | | | 4° | 0.4 | Fig.5 | SB-2545TR | FT-8 | |
| C12Q -SWUP ^{R/L} 11-16 SWUP ^{R/L} 11-16-1 / 2 SWUP ^{R/L} 11-16-2 / 3 | | <input type="checkbox"/> | <input type="checkbox"/> | 16 | 12 | 11 | 180 | 14 | 8 | | | 2° | | | SB-2560TR | | |
| C16X -SWUP ^{R/L} 11-18 SWUP ^{R/L} 11-18-1 / 2 SWUP ^{R/L} 11-18-2 / 3 | 1816B-11W | <input type="checkbox"/> | <input type="checkbox"/> | 18 | 16 | 15 | 220 | 14 | 9 | | | 1° | 0.8 | | SB-4065TR | FT-15 | |
| C16X -SWUP ^{R/L} 16-20 SWUP ^{R/L} 16-20-1 / 2 SWUP ^{R/L} 16-20-2 / 3 | | <input type="checkbox"/> | <input type="checkbox"/> | 20 | 16 | 15 | 110 | 17 | 10 | | | 3° | | | SB-4065TR | | |
| C20S -SWUP ^{R/L} 16-25 SWUP ^{R/L} 16-25-1 / 2 SWUP ^{R/L} 16-25-2 / 3 | 2520B-16W | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 19 | 250 | 19 | 12.5 | | | 2° | | | SB-4065TR | | |
| | | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 20 | 19 | 125 | 19 | 12.5 | | | 2° | | | SB-4065TR | | |

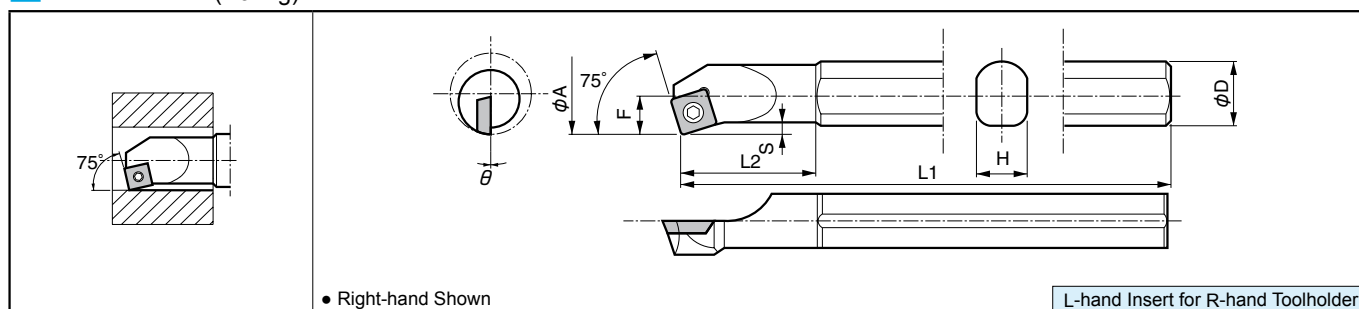
● Applicable Inserts

| Applications | Finishing | Finishing | Finishing-Medium | Finishing | Finishing-Medium | Cast Iron | Non-ferrous Metals | Hard Materials | | |
|------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--|--|
| Ref. Page | B79 | B77 | B79 | B77 | B79 | B77, B79 | C22 | C15 | | |
| Insert | GP | ^{R/L} -DP | HQ | ^{R/L} -F | ^{R/L} -Y | Without Chipbreaker | PCD | CBN | | |
| Toolholder |  |  |  |  |  |  |  |  | | |
| ---SWUB ^{R/L} 06--- | - | WBMT0601.. | - | WBGTO601.. | - | WBGW0601.. | WBMT0601.. | WBGW0601.. | | |
| ---SWUB ^{R/L} 08--- | - | WBMT0802.. | - | WBGTO802.. | - | WBGW0802.. | WBMT0802.. | WBGW0802.. | | |
| ---SWUP ^{R/L} 11--- | WPMT1102.. | - | WPMT1102.. | - | WPGT1102.. | WPGW1102.. | WPMT1102.. | - | | |
| ---SWUP ^{R/L} 16--- | WPMT1603.. | - | WPMT1603.. | - | WPGT1603.. | WPGW1603.. | - | - | | |

For recommended cutting conditions, see page ● F82~F83

S...SSKP (Boring)

Max. Overhang Length L/D≈3



Toolholder Dimensions

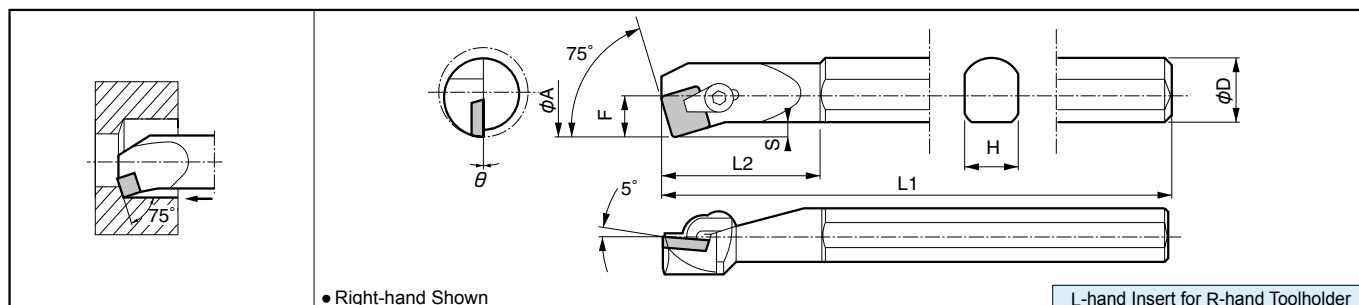
| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | θ | Standard Corner-R (r) | Spare Parts | |
|---------------------------------|------------------------------|------|---|----------------|----------------|----------|-----|----|------|-----|----------|-----------------------|-------------|--------|
| | | R | L | | ϕA | ϕD | H | L1 | L2 | F | S | | Clamp Screw | Wrench |
| S16Q-SSKP ^{R/L} 09 -20 | SSKP ^{R/L} 2016B-09 | ● | | 20 | 16 | 14 | 180 | 30 | 10 | 2.0 | -3° | 0.8 | SB-4TR | FT-15 |
| S20R-SSKP ^{R/L} 09 -25 | | ● | | 25 | 20 | 18 | 200 | 35 | 12.5 | 2.5 | 0° | 0.8 | GS-50S | FT-15 |
| S25X-SSKP ^{R/L} 12 -32 | 3225B-12 | □ | | 32 | 25 | 23 | 220 | 45 | 16 | 3.5 | 0° | 0.8 | GS-50S | LW-3 |
| S32S-SSKP ^{R/L} 12 -40 | 4032B-12 | □ | | 40 | 32 | 30 | 250 | 60 | 20 | 4.0 | 0° | 0.8 | GS-50 | LW-3 |

Applicable Inserts

| Applications | Finishing | | | | | | | | | | | | | |
|------------------------------|------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Ref. Page | B61 | | | | | | | | | | | | | |
| Insert | | | | | | | | | | | | | | |
| Toolholder | | | | | | | | | | | | | | |
| ...SSKP ^{R/L} 09... | SPGH0903.. | | | | | | | | | | | | | |
| ...SSKP ^{R/L} 12... | SPGH1203.. | | | | | | | | | | | | | |

S...CSKP (Boring)

Max. Overhang Length L/D≈3



Toolholder Dimensions

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | θ | Standard Corner-R (r) | Spare Parts | | | |
|---------------------------------|------------------------------|------|---|----------------|----------------|----|-----|----|------|-----|----------|-----------------------|-------------|--------|------|---------------|
| | | R | L | | ϕA | D | H | L1 | L2 | F | S | | Clamp Set | Wrench | Shim | Shim Screw |
| S16N-CSKP ^{R/L} 09 -20 | CSKP ^{R/L} 2016B-09 | ● | | 20 | 16 | 14 | 160 | 40 | 10 | 2.0 | 0° | 0.8 | CPS-2 | FH-2.5 | - | - |
| S20Q-CSKP ^{R/L} 09 -27 | | ● | | 27 | 20 | 18 | 180 | 45 | 13.5 | 3.5 | 0° | 0.8 | CPS-2 | FH-2.5 | - | - |
| S25X-CSKP ^{R/L} 12 -34 | 3425B-12 | ● | | 34 | 25 | 23 | 220 | 60 | 17 | 4.5 | 0° | 0.8 | CPS-3 | - | LW-3 | - |
| S32S-CSKP ^{R/L} 12 -43 | 4332B-12 | ● | | 43 | 32 | 30 | 250 | 75 | 21.5 | 5.5 | 0° | 0.8 | CPS-3 | - | LW-3 | KPS-42 SP3X10 |

Applicable Inserts

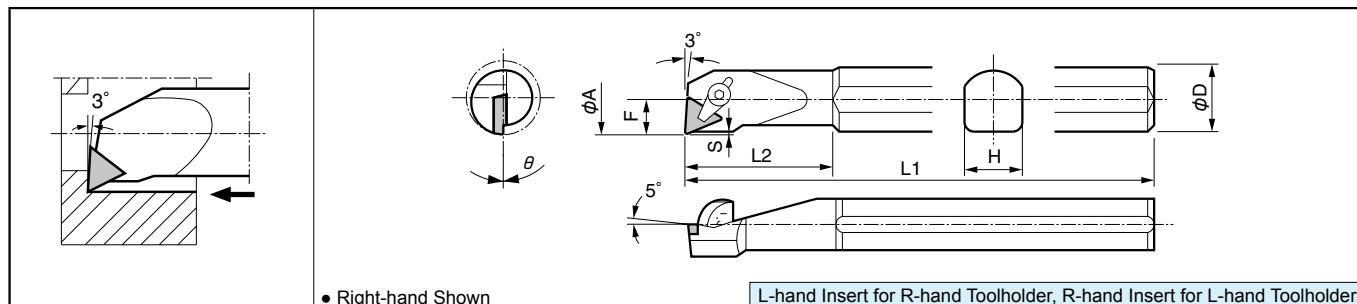
| Applications | Medium | Medium | Finishing-Medium | Cast Iron | Cast Iron | Non-ferrous Metals | | | | | | | | |
|------------------------------|------------|------------|------------------|---------------------|------------|--------------------|--|--|--|--|--|--|--|--|
| Ref. Page | B61 | B61 | B61 | B61 | B92 | C23 | | | | | | | | |
| Insert | G | Standard | | Without Chipbreaker | Ceramic | PCD | | | | | | | | |
| Toolholder | | | | | | | | | | | | | | |
| ...CSKP ^{R/L} 09... | SPMR0903.. | SPMR0903.. | SPGR0903.. | SPMN0903.. | SPGN0903.. | - | | | | | | | | |
| ...CSKP ^{R/L} 12... | SPMR1203.. | SPMR1203.. | SPGR1203.. | SPMN1203.. | SPGN1203.. | SPGN1203.. | | | | | | | | |

For recommended cutting conditions, see page [F82~F83](#)







● : Std. Item ○ : Check Availability □ : Deleted from the next catalogue

S...CTUP (Boring)

Max. Overhang Length L/D≈~3



Toolholder Dimensions

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | θ | Standard Corner-R (r) | Spare Parts | | | | | | | | |
|--------------------------------|------------------------------|----------|---|-----------------------------------------------------------------------------------|----------------|----|-----|-----|----|------|----|-----------------------|-------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------|---|---|
| | | R | L | | øA | øD | H | L1 | L2 | F | | | S | Clamp Set | | Wrench | | Shim | Shim Screw | | |
| | | | |  | | | | | | | | | |  |  |  |  |  | | | |
| S12L-CTUP ^{R/L} 09-16 | CTUP ^{R/L} 1612B-09 | ● | □ | 16 | 12 | 11 | 140 | 32 | 8 | 0.5 | 0° | 0.4 | CPS-1 | - | FH-2 | - | - | - | | | |
| S16N-CTUP ^{R/L} 11-20 | 2016B-11 | ● | ● | 20 | 16 | 14 | 160 | 30 | 10 | 0.5 | 0° | 0.4 | - | CPS-2 | FH-2.5 | - | - | - | | | |
| S20Q-CTUP ^{R/L} 11-27 | | 2720B-11 | ● | ● | 27 | 20 | 18 | 180 | 40 | 13.5 | | | 1.3 | - | CPS-2 | FH-2.5 | - | - | - | | |
| S25X-CTUP ^{R/L} 16-34 | | 3425B-16 | ● | ● | 34 | 25 | 23 | 220 | 60 | 17 | | | 1.0 | 0° | 0.8 | - | CPS-3 | - | LW-3 | - | - |
| S32S-CTUP ^{R/L} 16-43 | | 4332B-16 | ● | ● | 43 | 32 | 30 | 250 | 70 | 21.5 | | | | | | | | | | - | - |
| S40X-CTUP ^{R/L} 16-50 | 5040B-16 | ● | ● | 50 | 40 | 37 | 315 | 80 | 25 | | | | | | | | | | | | |

Applicable Inserts

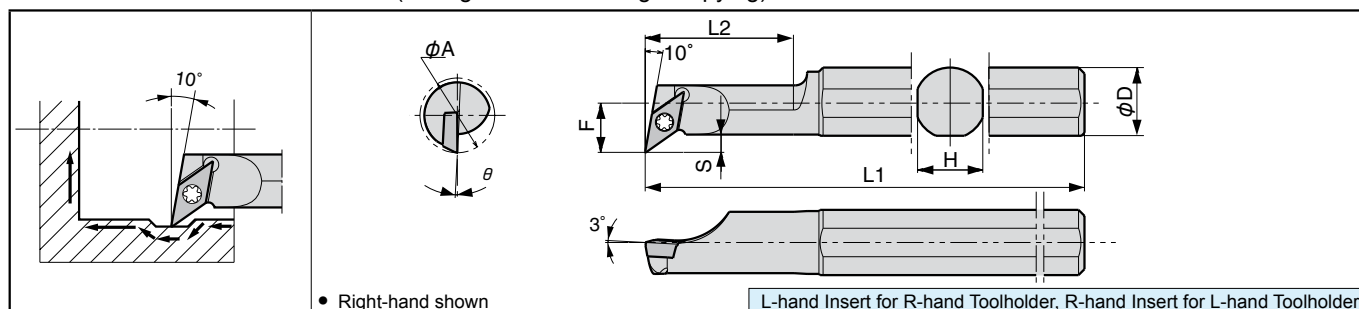
| Applications | Finishing | Finishing-Medium | Medium | Medium | Finishing | Finishing-Medium | Cast Iron | Cast Iron | Non-ferrous Metals | Hard Materials |
|--------------------------------------|------------|------------------|------------|------------|------------|------------------|--------------------------|------------|--------------------|----------------|
| Ref. Page | B70 | B70 | B70 | B70 | B70 | B70 | B70 | B92 | C23 | C15 |
| Insert | GP | HQ | G | Standard | 1/4-F | 1/4-□ | Without Chipbreaker | Ceramic | PCD | CBN |
| Toolholder | | | | | | | | | | |
|CTUP^{R/L} 09.... | - | - | TPMR0902.. | - | TPGR0902.. | - | TPGN0902.. | - | TPGN0902.. | - |
|CTUP^{R/L} 11.... | TPMR1103.. | TPMR1103.. | TPMR1103.. | TPMR1103.. | - | TPGR1103.. | TPMN1103.. TPGN1103.. | TPGN1103.. | TPGN1103.. | TPGN1103.. |
|CTUP^{R/L} 16.... | TPMR1603.. | TPMR1603.. | TPMR1603.. | TPMR1603.. | - | TPGR1603.. | TPMN1603.. TPGN1603.. | TPGN1603.. | TPGN1603.. | TPGN1603.. |

For recommended cutting conditions, see page **F82~F83**

Boring Bar [YP ☐ ☐ Insert]

S...SYXP-E Excellent Bar (Boring / Internal Facing / Copying)



Max. Overhang Length L/D≈5



Toolholder Dimensions

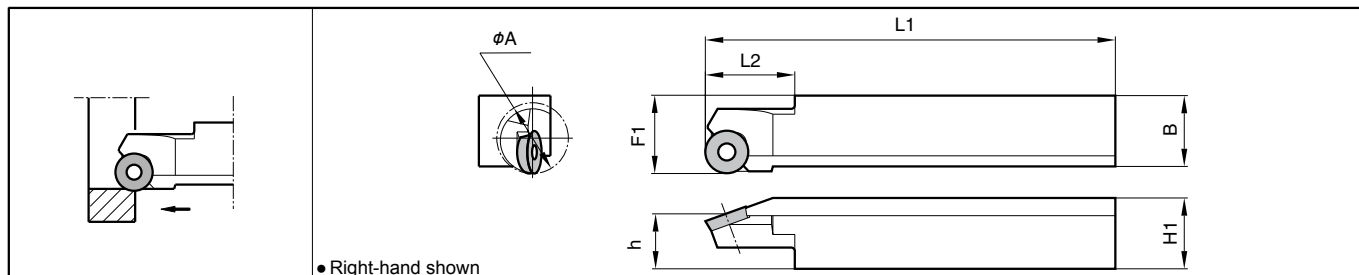
| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | θ | Standard Corner-R (°) | Spare Parts | |
|---------------------------------|------------------------|------|---|-------------------|----------------|----|-----|----|-----|---|---|----|--------------------------|-------------|--------|
| | | R | L | | ØA | ØD | H | L1 | L2 | F | S | | | Clamp Screw | Wrench |
| S12M-SYXP ^{R/L} 06-12E | - | ● | □ | 12 | 12 | 11 | 150 | 25 | 8.3 | 3 | | 3° | 0.2 | SB-2040TR | FT-6 |
| S16Q-SYXP ^{R/L} 06-16E | | ● | □ | 16 | 16 | 15 | 180 | 30 | 10 | | | | | SB-2045TR | |

Applicable Inserts





| Applications | Finishing | Low Feed | | | | | | | | | | | | | |
|--------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Ref. Page | B80 | B80 | | | | | | | | | | | | | |
| Insert | ^{R/L} -F | F ^{R/L} -U | | | | | | | | | | | | | |
| Toolholder |  |  | | | | | | | | | | | | | |
|SYXP ^{R/L} 06.... | YPGT0602... | YPGT0602... | | | | | | | | | | | | | |

For recommended cutting conditions, see page [F82~F83](#)

SRCP-B (Boring)



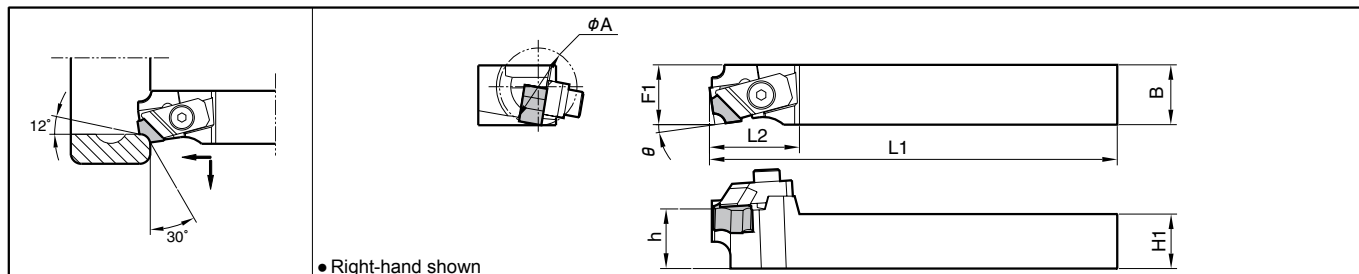
Toolholder Dimensions

| Description | | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | Spare Parts | | | Applicable Inserts  B80 |
|---------------------------|---------------------|------|---|-------------------|----------------|------|----|-----|----|----|----|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| | | R | L | | øA | H1 | h | B | L1 | L2 | F1 | Clamp Screw | Wrench | | |
| | | | | | | | | | | | |  |  |  | |
| SRCP^{R/L} | 2020B-12-A20 | ● | ● | 20 | 20 | 15.5 | 20 | 125 | 25 | 22 | | SB-4TR | FT-15 | - | RPMT1203M0-BB |
| | 2525B-16-A32 | ● | ● | 32 | 25 | 20 | 25 | 150 | 31 | 27 | | SB-5090TR | - | LTW-20 | RPMT1604M0-BB |



Applicable Inserts

| Insert | Description | Dimension (mm) | | | Angle (°) |
|--------|-----------------------------|----------------|------|-----|--------------|
| | | A | T | φd | |
| | RPMT 1203M0-BB 1604M0-BB | 12.0 | 3.18 | 4.4 | 11° |
| | | 16.0 | 4.76 | 5.5 | |

CBSN-B (Internal Round Chamfering)



Toolholder Dimensions

| Description | | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | θ | Spare Parts | | | Applicable Inserts ⓘ B80 | |
|---------------------|--------------|------|---|-------------------|----------------|----|----|-----|----|----|----|----------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------|--|
| | | R | L | | øA | H1 | h | B | L1 | L2 | | F1 | Clamp Set | Wrench | | |
| | | | | | | | | | | | | |  |  | | |
| CBSN ^{R/L} | 2020B-12-A20 | ● | ● | 20 | 20 | 21 | 20 | 125 | 32 | 20 | 9° | CP-RC ^{R/L} | LW-5 | | SNMF1204 ○○ -21 | |
| | 2525B-12-A20 | ● | ● | | 25 | 26 | 25 | 150 | | 25 | | | | | | |

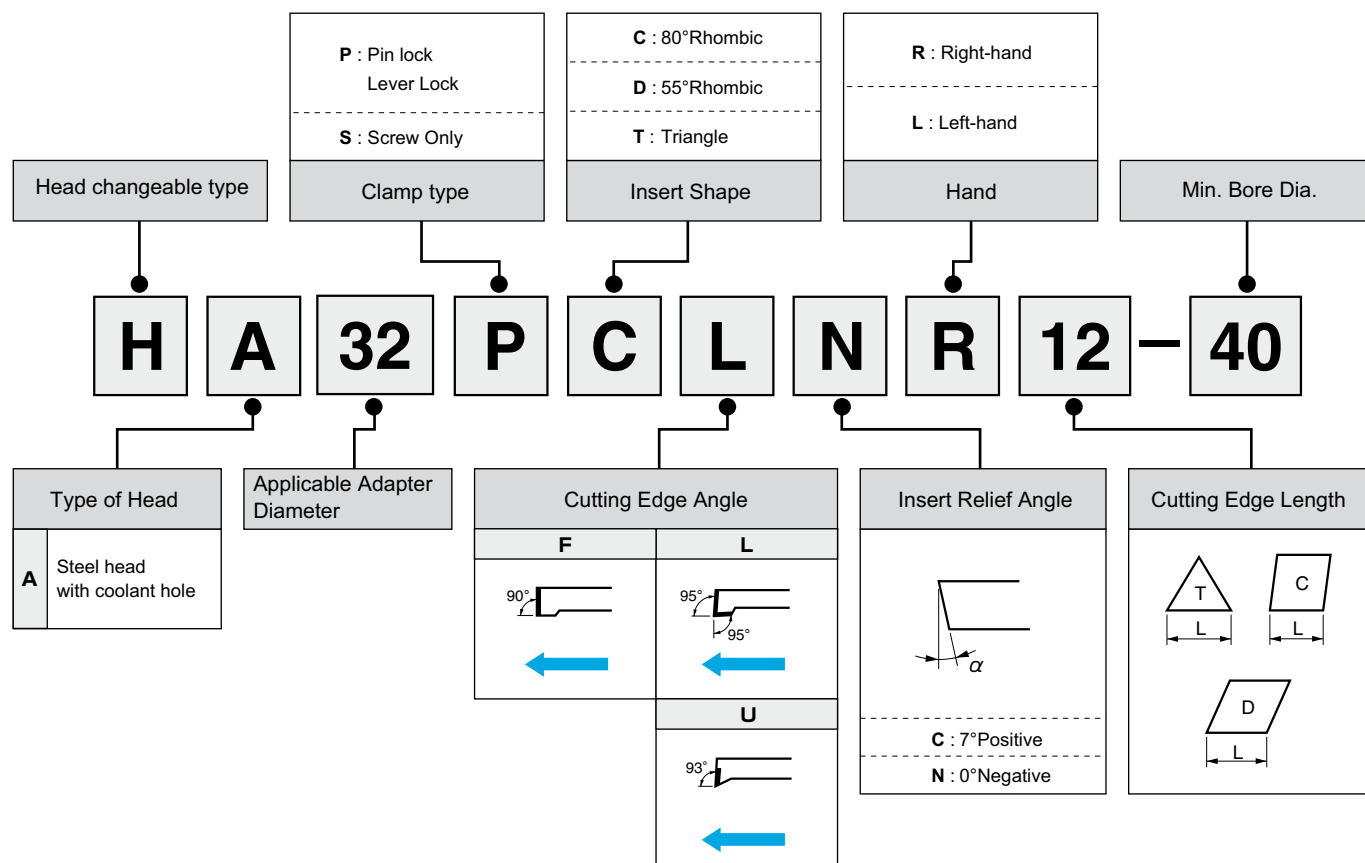
● : Std. Item ○ : Check Availability

Applicable Inserts

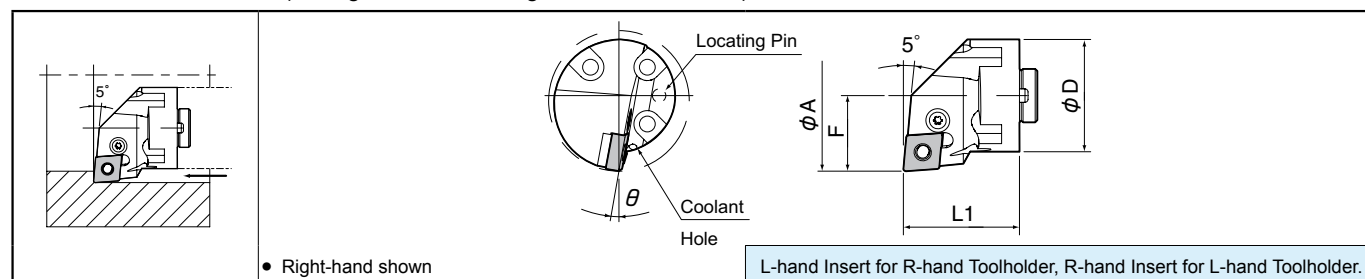
| Insert | Description | Dimension (mm) | | | | Angle (°) |
|--------|----------------|----------------|------|-----|-----|--------------|
| | | A | T | B | rε | |
| | SNMF 120406-21 | 12.70 | 4.76 | 1.5 | 0.6 | 21° |
| | 120410-21 | | | 3.0 | 1.0 | |
| | 120416-21 | | | 3.1 | 1.6 | |
| | 120421-21 | | | 3.2 | 2.1 | |
| | 120426-21 | | | 3.3 | 2.6 | |

AD Bar Interchangeable Head Boring Bars with Anti-vibration Dampener System

Identification System for Interchangeable Heads



HA...PCLN12 (Boring / Internal Facing: with Coolant Hole)



Toolholder Dimensions

| Description | Std. | | Min. Bore Dia. | Dimension (mm) | | | | θ | Standard Corner-R (R) | Spare Parts | | | | | | Applicable Boring Adapter F67 |
|---------------------------|------|---|----------------|----------------|----|----|----|-----|-----------------------|-------------|------------|-------|----------|---------|--------|----------------------------------|
| | R | L | | φA | φD | L1 | F | | | Lever | Lock Screw | Shim | Shim Pin | * Punch | Wrench | |
| HA32PCLN ¹²⁻⁴⁰ | ● | ● | 40 | 32 | 41 | 22 | 27 | 10° | 0.8 | LL-2K | LS-2P | LC-4K | LSP-3K | *PC-2K | LTP-15 | AD32U |
| HA40PCLN ¹²⁻⁵⁰ | ● | ● | 50 | 40 | | | | | | | | | | | | AD40V |
| HA50PCLN ¹²⁻⁶³ | ● | ● | 63 | 50 | | | | | | | | | | | | AD50W |

* Punch: Not included. Purchase separately.

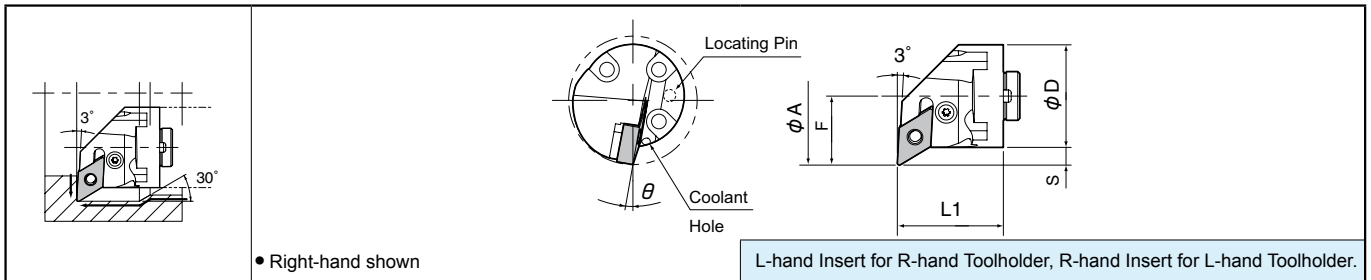
Applicable Inserts

| Toolholder | Description | | Ref. Page | | | |
|---------------------------|-------------|--------|-----------------------------------|---------|-----|-----|
| | | | Cermet / Coated Carbide / Carbide | Ceramic | PCD | CBN |
| HA32PCLN ¹²⁻⁴⁰ | CN○A | 1204.. | B14~B18 | B85 | C17 | C5 |
| HA40PCLN ¹²⁻⁵⁰ | CN○G | | | | | |
| HA50PCLN ¹²⁻⁶³ | CN○M | | | | | |

For recommended cutting conditions, see page F82~F83

● : Std. Item ○ : Check Availability

HA...PDUN15 (Copying: with Coolant Hole)



Toolholder Dimensions

| Description | Std. | | Min. Bore Dia. | Dimension (mm) | | | | θ | Standard Corner-R (r) | Spare Parts | | | | | | Applicable Boring Adapter F67 |
|-------------------------------|------|---|----------------|----------------|----|----|----|-----|-----------------------|-------------|------------|------|----------|---------|--------|----------------------------------|
| | R | L | | ϕA | ϕD | L1 | F | | | Lever | Lock Screw | Shim | Shim Pin | * Punch | Wrench | |
| HA32PDUN ^{R/L} 15-43 | ● | ● | 43 | 32 | | 25 | 9 | 12° | 0.8 | | | | | | | AD32U |
| HA40PDUN ^{R/L} 15-50 | ● | ● | 50 | 40 | 41 | 27 | 7 | 10° | | | | | | | | AD40V |
| HA50PDUN ^{R/L} 15-63 | ● | ● | 63 | 50 | | 35 | 10 | | | | | | | | | AD50W |

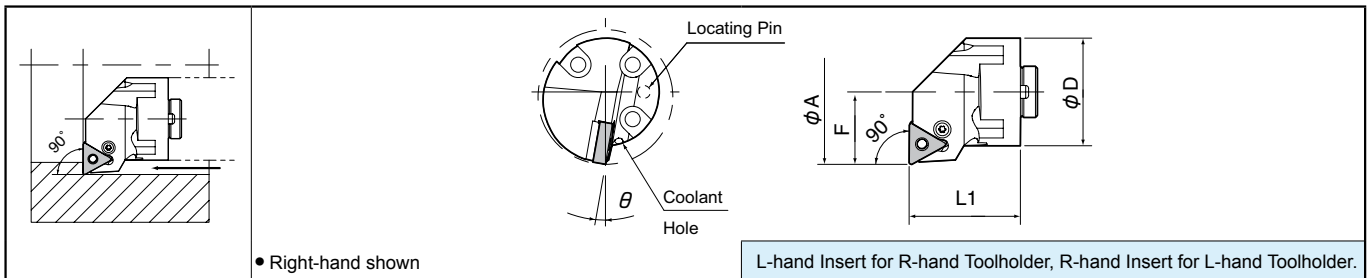
* Punch: Not included. Purchase separately.

* Shim: LD-4K43 is attached to Toolholder. When using DN □ □ 1506 Insert, purchase LD-4K separately.

Applicable Inserts

| Toolholder | Description | | | | Ref. Page | | | |
|-------------------------------|---------------|--------|-------------|--------|-----------------------------------|---------|-----|-----|
| | Shim: LD-4K43 | | Shim: LD-4K | | Cermet / Coated Carbide / Carbide | Ceramic | PCD | CBN |
| HA32PDUN ^{R/L} 15-43 | DN○A | | DN○A | | B20~B23 | B86 | C17 | C6 |
| HA40PDUN ^{R/L} 15-50 | DN○G | 1504.. | DN○G | 1506.. | | | | |
| HA50PDUN ^{R/L} 15-63 | DN○M | | DN○M | | | | | |

HA...PTFN16 (Internal: with Coolant Hole)



Toolholder Dimensions

| Description | Std. | | Min. Bore Dia. | Dimension (mm) | | | | θ | Standard Corner-R (r) | Spare Parts | | | | | | Applicable Boring Adapter F67 |
|-------------------------------|------|---|----------------|----------------|----|----|---|-----|-----------------------|-------------|------------|------|----------|---------|--------|----------------------------------|
| | R | L | | ϕA | ϕD | L1 | F | | | Lever | Lock Screw | Shim | Shim Pin | * Punch | Wrench | |
| HA32PTFN ^{R/L} 16-40 | ● | ● | 40 | 32 | | 22 | | 10° | 0.8 | | | | | | | AD32U |
| HA40PTFN ^{R/L} 16-50 | ● | ● | 50 | 40 | 41 | 27 | | | | | | | | | | AD40V |
| HA50PTFN ^{R/L} 16-63 | ● | ● | 63 | 50 | | 35 | | 8° | | | | | | | | AD50W |

* Punch: Not included. Purchase separately.

Applicable Inserts

| Toolholder | Description | | Ref. Page | | | |
|-------------------------------|-------------|--------|-----------------------------------|---------|-----|-----|
| | | | Cermet / Coated Carbide / Carbide | Ceramic | PCD | CBN |
| HA32PTFN ^{R/L} 16-40 | TN○A | | B30~B34 | B90 | C17 | C7 |
| HA40PTFN ^{R/L} 16-50 | TN○G | 1604.. | | | | |
| HA50PTFN ^{R/L} 16-63 | TN○M | | | | | |

For recommended cutting conditions, see page F82~F83

Reference

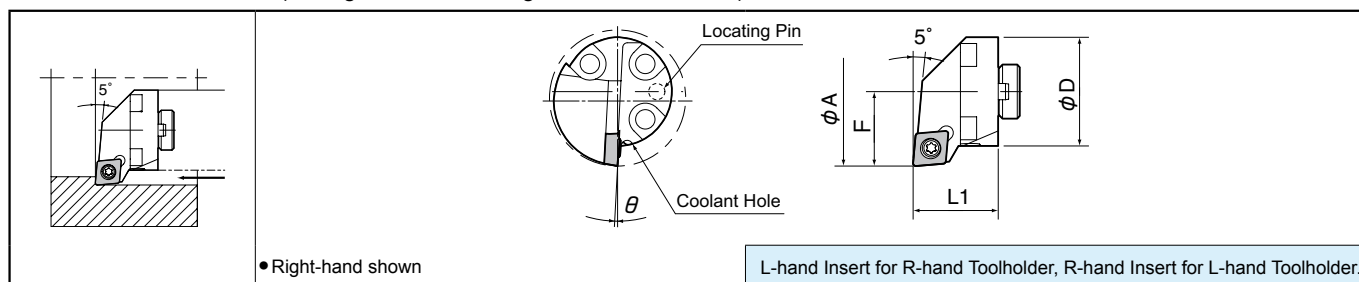
Wrenches (LTP-10, LTP-15) are Torx Plus.

The size of Torx Plus is engraved on the long shaft.

| Wrench description | LTP-10 | LTP-15 |
|--------------------|--------|--------|
| Engraved size | 10IP | 15IP |

AD Bar Interchangeable Head Boring Bars with Anti-vibration Dampener System

HA...SCLC09 (Boring / Internal Facing: with Coolant Hole)



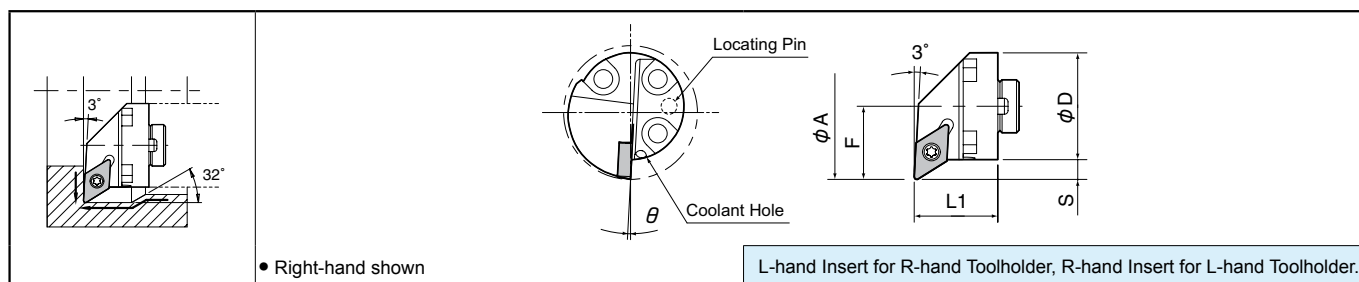
Toolholder Dimensions

| Description | Std. | | Min. Bore Dia. | Dimension (mm) | | | | θ | Standard Corner-R (r) | Spare Parts | | Applicable Boring Adapter F67 | Applicable Inserts |
|-------------------------------|------|---|----------------|----------------|----------|----|---|----------|-----------------------|-------------|--------|----------------------------------|--------------------|
| | R | L | | ϕA | ϕD | L1 | F | | | Clamp Screw | Wrench | | |
| HA32SCLC ^{R/L} 09-40 | ● | ● | 40 | 32 | 25 | 22 | - | 3° | 0.8 | SB-3580TR | FTS-15 | AD32U | CC..09T3.. |

Applicable Inserts

| Description | Ref. Page | | |
|-------------|-----------------------------------|-----|-----|
| | Cermet / Coated Carbide / Carbide | PCD | CBN |
| CC..09T3.. | B45~B48 | C18 | C10 |

HA...SDUC11 (Copying: with Coolant Hole)



Toolholder Dimensions

| Description | Std. | | Min. Bore Dia. | Dimension (mm) | | | | θ | Standard Corner-R (r) | Spare Parts | | Applicable Boring Adapter F67 | Applicable Inserts |
|-------------------------------|------|---|----------------|----------------|----------|----|---|----------|-----------------------|-------------|--------|----------------------------------|--------------------|
| | R | L | | ϕA | ϕD | L1 | F | | | Clamp Screw | Wrench | | |
| HA32SDUC ^{R/L} 11-40 | ● | ● | 40 | 32 | 25 | 22 | 6 | 3° | 0.8 | SB-3580TR | FTS-15 | AD32U | DC..11T3.. |

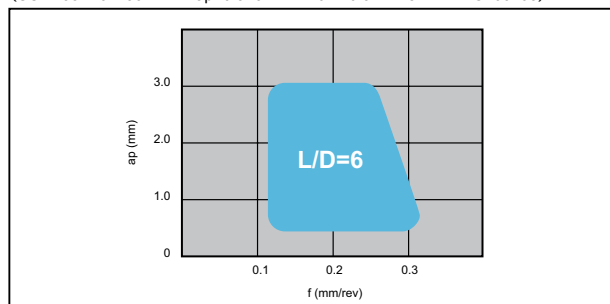
Applicable Inserts

| Description | Ref. Page | | |
|-------------|-----------------------------------|-----|-----|
| | Cermet / Coated Carbide / Carbide | PCD | CBN |
| DC..11T3.. | B52~B57 | C19 | C11 |

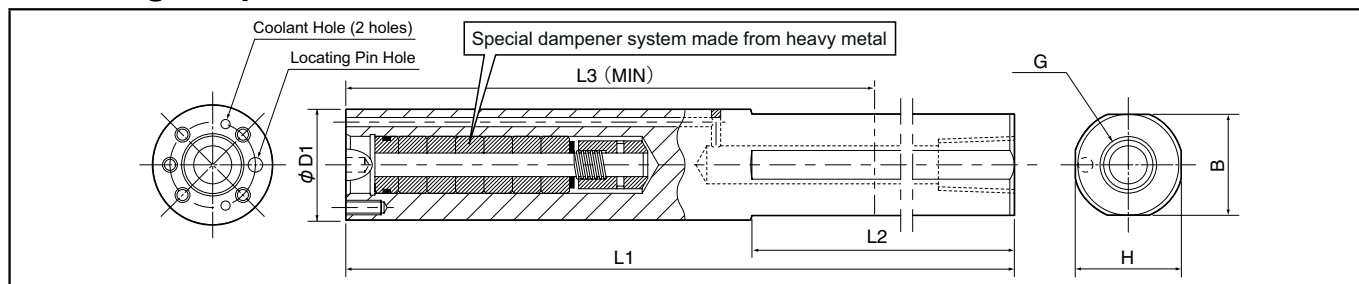
For recommended cutting conditions, see page F82~F83

Possible machining Area (Guide-Line for Overhang Length of AD Bar)

(SCM435 $V_c=150\text{m/min}$ $a_p=0.5\sim 3\text{mm}$ $f=0.1\sim 0.3\text{mm/rev}$ TNMG160408)



Boring Adapter (with Coolant Hole / Anti-Vibration Dampener System)



Dimensions

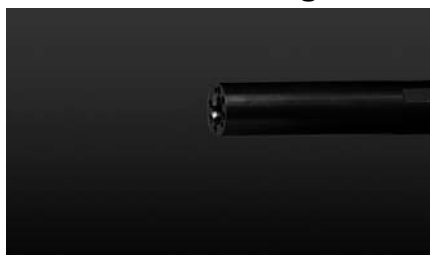
| Description | Std. | Dimension (mm) | | | | | | | Spare Parts | | |
|-------------|------|----------------|----|----|-----|-----|----------|-------|-------------------|------------------|--------|
| | | $\phi D1$ | H | B | L1 | L2 | L3 (MIN) | G | Clamp Bolt | | Wrench |
| | | | | | | | | | | | |
| AD 32U | ● | 32 | 31 | 29 | 310 | 200 | 200 | Rp3/8 | HH5×20 (3 pcs) | HH5×30 (1 pc) | LW-4 |
| AD 40V | ● | 40 | 39 | 37 | 360 | 248 | 228 | | HH6×20 (3 pcs) | HH6×30 (1 pc) | LW-5 |
| AD 50W | ● | 50 | 47 | 47 | 410 | 280 | 276 | | HH6×20 (3 pcs) | HH6×30 (1 pc) | LW-5 |

* Note: L3 (MIN) dimension indicates the minimum length in case of the back end of boring adapter is cut for use.
Do not shorten it at less than L3 (MIN) for use.

Combination of Boring Adapter and Interchangeable Head

| Interchangeable Head Description | | Boring Adapter | | | |
|----------------------------------|----------------------------|------------------|------------|--------|--------|
| | | Base Description | Clamp Bolt | | Wrench |
| HA32 | PCLN [®] /L 12-40 | AD32U | HH5×20 | HH5×30 | LW-4 |
| | PDUN [®] /L 15-43 | | | | |
| | PTFN [®] /L 16-40 | | HH5×20 | | |
| | SCLC [®] /L 09-40 | | | | |
| | SDUC [®] /L 11-40 | | | | |
| HA40 | PCLN [®] /L 12-50 | AD40V | HH5×20 | HH5×30 | |
| | PDUN [®] /L 15-50 | | | | |
| | PTFN [®] /L 16-50 | | | | |
| HA50 | PCLN [®] /L 12-63 | AD50W | HH6×20 | HH6×30 | LW-5 |
| | PDUN [®] /L 15-63 | | | | |
| | PTFN [®] /L 16-63 | | | | |

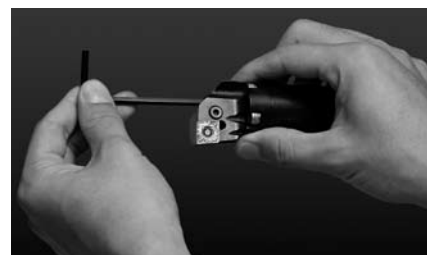
How to exchange heads



1. No head attached



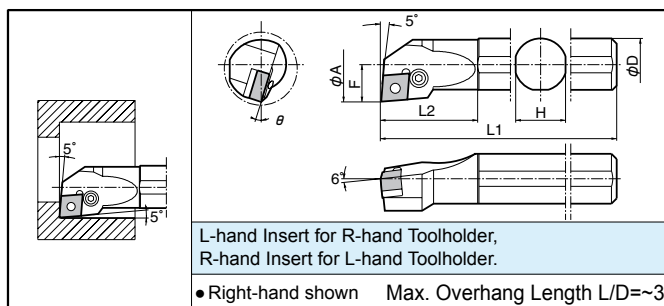
2. Align hole positions



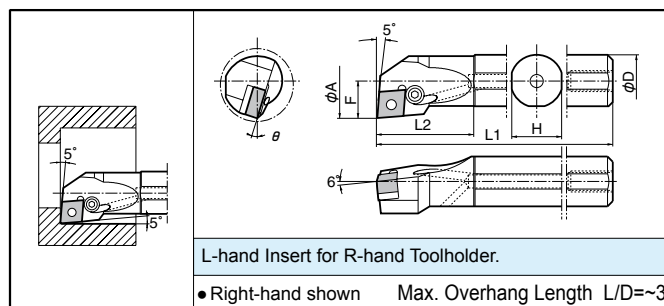
3. Tighten 3 bolts to attach the head

For lever lock type Interchangeable head, use 2 short bolts for upper side and 1 long bolt for lower side.
For HA32 SCLC[®]/L 09-40 and HA32 SDUC[®]/L 11-40, use HH5 X 20 for all 3 bolts.











S...PCLN ○○ (Boring / Internal Facing)



A...PCLN09 Twin-Hole Bar
(Boring / Internal Facing: with Coolant Hole)




































- Toolholder Dimensions

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | θ | Standard Corner-R (°) | Spare Parts | | | | | | |
|----------------------------------|-------------------------------|------|---|-----------------------------------------------------------------------------------|----------------|----|-----|----|------|-----|-----------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------|
| | | R | L | | øA | øD | H | L1 | L2 | | | F | Lever | Lock Screw | Shim | Shim Pin | Punch | Wrench |
| | | | |  | | | | | | | | |  |  |  |  |  | |
| S16M-PCLN ^{R/L} 09 -20 | PCLN ^{R/L} 2016B-09 | ● | ● | 20 | 16 | 15 | 150 | 34 | 11 | 16° | 0.8 |  |  | - | P-03S | - | FH-2.5 | |
| S20Q-PCLN ^{R/L} 09 -27 | PCLN ^{R/L} 2720B-09 | ● | ● | 27 | 20 | 19 | 180 | 37 | 14.2 | 17° | | LL-1N | LS-1SN | LC-32N | LSP-1 | PC-1 | | |
| S25R-PCLN ^{R/L} 09 -32 | 3225B-09 | ● | ● | 32 | 25 | 24 | 200 | 42 | 15.7 | 15° | | | | | | | | |
| S32S -PCLN ^{R/L} 12 -40 | PCLN ^{R/L} 4032B-12 | ● | ● | 40 | 32 | 30 | 250 | 50 | 21 | 10° | 0.8 |  |  | LC-42N ^{R/L} | LSP-2 | PC-2 | LW-3 | |
| S40T -PCLN ^{R/L} 12 -50 | 5040B-12 | ● | ● | 50 | 40 | 37 | 300 | 60 | 25 | | | | | | | | | |
| A16M-PCLN ^{R/L} 09 -20 | PCLN ^{R/L} 2016B-09H | ● | ● | 20 | 16 | 15 | 150 | 34 | 11 | | | 16° | LL-03SN | LS-03SN | - | P-03S | | - |
| A20Q-PCLN ^{R/L} 09 -27 | PCLN ^{R/L} 2720B-09H | ● | ● | 27 | 20 | 19 | 180 | 37 | 14.2 | 17° | 0.8 | LL-1N | LS-1SN | LC-32N | LSP-1 | PC-1 | | |
| A25R-PCLN ^{R/L} 09 -32 | 3225B-09H | ● | | 32 | 25 | 24 | 200 | 42 | 15.7 | 15° | | | | | | | | |

• Shim: LC-42NR for R-hand Toolholder. LC-42NL for L-hand Toolholder.

● Applicable Inserts

| Applications | Finishing | Finishing-Medium | Finishing | Finishing-Medium | Finishing-Medium | Finishing-Medium | Finishing-Medium | Medium-Roughing | Medium-Roughing | Medium-Roughing |
|---------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Ref. Page | B14 | B14 | B14 | B14 | B14 | B14 | B14 | B15 | B15 | B15 |
| <div>Insert</div> <div>Toolholder</div> | WP <small>(Wiper)</small> | WQ <small>(Wiper)</small> | GP | HQ | CQ | CJ | TK | GS | PS | HS / CS |
| |  |  |  |  |  |  |  |  |  |  |
| | ...-PCLN ^R / _L 09-... | - | - | CNMG0904.. | CNMG0904.. | - | - | - | CNMG0904.. | - |
| ...-PCLN ^R / _L 12-... | CNMG1204.. | CNMG1204.. | CNMG1204.. | CNMG1204.. | CNMG1204.. | CNMG1204.. | CNMP1204.. | CNMG1204.. | CNMG1204.. | CNMG1204.. |
| Applications | Medium-Roughing | Medium-Roughing High Feed Rate | Roughing | One side / Roughing* High Feed Rate | Finishing | Medium cutting | Medium-Roughing / Low Cutting Resistance type | Soft Steel Finishing | Soft Steel / Medium cutting | Soft Steel / Roughing |
| Ref. Page | B15 | B15 | B16 | B16 | B18 | B18 | B18 | B16 | B16 | B16 |
| <div>Insert</div> <div>Toolholder</div> | PT | GT | Standard | PX | ^R / _L -S | ^R / _L | ^R / _L -25R | XP (-T) | XQ | XS |
| |  |  |  |  |  |  |  |  |  |  |
| | ...-PCLN ^R / _L 09-... | - | - | - | - | CNMG0904.. | CNMG0904.. | - | - | - |
| ...-PCLN ^R / _L 12-... | CNMG1204.. | CNMG1204.. | CNMG1204.. | CNMM1204.. | — | CNMG1204.. | CNMG1204.. | CNMG1204.. | CNMG1204.. | CNMG1204.. |
| Applications | Stainless Finishing | Stainless Medium-Roughing | Stainless Medium to Roughing | Stainless Medium to Roughing | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Non-ferrous Metals |
| Ref. Page | B17 | B17 | B17 | B17 | B17 | B17 | B18 | B18 | B85 | B18 |
| <div>Insert</div> <div>Toolholder</div> | MQ | MS | MU | TK | C | ZS | GC | Without Chipbreaker | Ceramic | AH |
| |  |  |  |  |  |  |  |  |  |  |
| | ...-PCLN ^R / _L 09-... | - | - | - | - | - | - | - | - | - |
| ...-PCLN ^R / _L 12-... | CNMG1204.. | CNMG1204.. | CNMG1204.. | CNMG1204.. | CNMG1204.. | CNMG1204.. | CNMG1204.. | CNMA1204.. CNGA1204.. | CNMA1204.. CNGA1204.. | CN_G1204.. |
| Applications | Non-ferrous Metals | Non-ferrous Metals | Hard Materials | | | | | | | |
| Ref. Page | B18 | C17 | C5 | | | | | | | |
| <div>Insert</div> <div>Toolholder</div> | ^R / _L -A3 | PCD | CBN | | | | | | | |
| |  |  |  | | | | | | | |
| | ...-PCLN ^R / _L 09-... | - | - | - | | | | | | |
| ...-PCLN ^R / _L 12-... | CNMG1204.. | CNMM1204.. | CNGA1204.. | | | | | | | |

For recommended cutting conditions, see page  **F82~F83**

● Applicable Coolant Sleeve / Joint

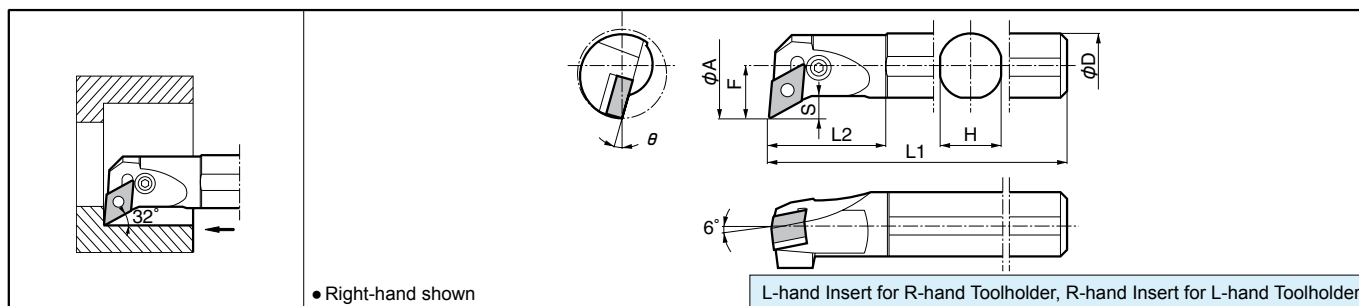
| Toolholder | Applicable Coolant Sleeve | Applicable Coolant Joint |
|------------------------------------|---------------------------|--------------------------|
| A16M-PCLN[®]/09-20 | SHC1640-70, SHC1650-95 | SJS-8 |
| A20Q-PCLN[®]/09-27 | SHC2040-70, SHC2050-95 | |
| A25R-PCLN[®]/09-32 | SHC2540-70, SHC2550-95 | |

• For Coolant Sleeve, Coolant Joint, see **F78~F79.**

● : Std. Item ○ : Check Availability

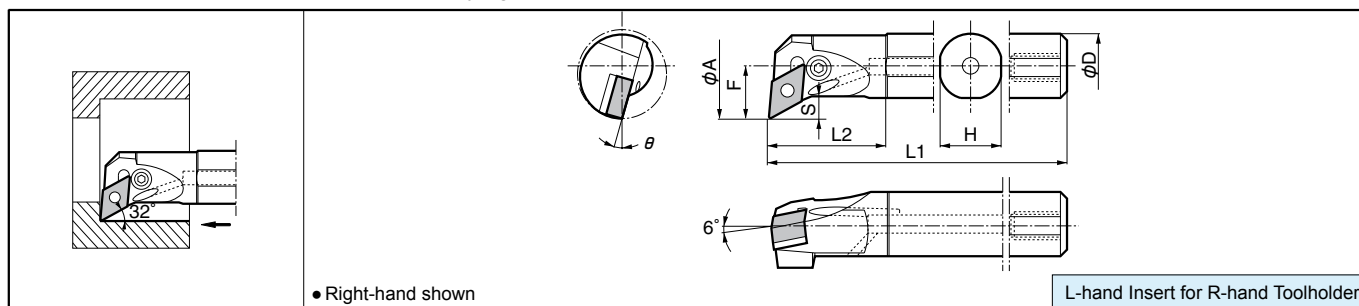
S...PDUN11 (Copying)

Max. Overhang Length L/D≈3



A...PDUN11 Twin-Hole Bar (Copying: with Coolant Hole)

Max. Overhang Length L/D≈3



Toolholder Dimensions

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | | θ | Standard Corner-R (r) | Spare Parts | | | | | |
|---------------------------------|-------------------------------|------|---|----------------|----------------|----------|-----|----|----|-----|-----|----------|-----------------------|-------------|------------|--------|----------|-------|--------|
| | | R | L | | ϕA | ϕD | H | L1 | L2 | F | S | | | Lever | Lock Screw | Shim | Shim Pin | Punch | Wrench |
| S20Q -PDUN ^{R/L} 11-27 | PDUN ^{R/L} 2720B-11 | ● | ● | 27 | 20 | 19 | 180 | 35 | 16 | 7.6 | 17° | 0.4 | | LL-1DN | LS-1SN | LD-32N | LSP-1 | PC-1 | FH-2.5 |
| S25R -PDUN ^{R/L} 11-32 | 3225B-11 | ● | ● | 32 | 25 | 24 | 200 | 40 | 17 | 7.6 | 15° | | | | | | | | |
| S32S -PDUN ^{R/L} 11-40 | 4032B-11 | ● | ● | 40 | 32 | 31 | 250 | 45 | 22 | 8.5 | 12° | | | | | | | | |
| A20Q -PDUN ^{R/L} 11-27 | PDUN ^{R/L} 2720B-11H | ● | | 27 | 20 | 19 | 180 | 35 | 16 | 7.6 | 17° | 0.4 | | LL-1DN | LS-1SN | LD-32N | LSP-1 | PC-1 | FH-2.5 |
| A25R -PDUN ^{R/L} 11-32 | 3225B-11H | ● | | 32 | 25 | 24 | 200 | 40 | 17 | 7.6 | 15° | | | | | | | | |
| A32S -PDUN ^{R/L} 11-40 | 4032B-11H | ● | | 40 | 32 | 31 | 250 | 45 | 22 | 8.5 | 12° | | | | | | | | |

Applicable Inserts

| Applications | Finishing | Finishing-Medium | Medium-Roughing | Finishing | Medium | | | | | |
|------------------------------|------------|------------------|-----------------|-------------------|----------------|--|--|--|--|--|
| Ref. Page | B20 | B20 | B21 | B23 | B23 | | | | | |
| Insert | GP | HQ | GS | ^{R/L} -S | ^{R/L} | | | | | |
| Toolholder | | | | | | | | | | |
| ...PDUN ^{R/L} 11... | DNMG1104.. | DNMG1104.. | DNMG1104.. | DNGG1104.. | DNGG1104.. | | | | | |

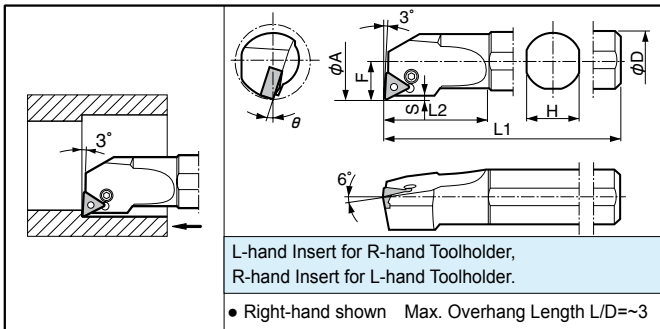
For recommended cutting conditions, see page [F82~F83](#)

Applicable Coolant Sleeve / Joint

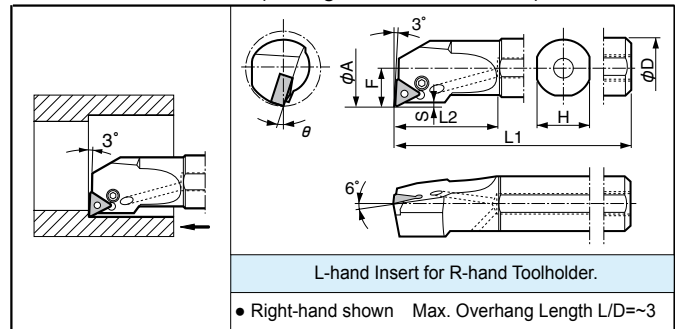
| Toolholder | Applicable Coolant Sleeve | Applicable Coolant Joint |
|---------------------------------|---------------------------|--------------------------|
| A20Q -PDUN ^{R/L} 11-27 | SHC2040-70, SHC2050-95 | SJS-8 |
| A25R -PDUN ^{R/L} 11-32 | SHC2540-70, SHC2550-95 | |
| A32S -PDUN ^{R/L} 11-40 | - | |

• For Coolant Sleeve, Coolant Joint, see [F78~F79](#)








S...PTUN ○○ (Boring)



A...PTUN11 Twin-Hole Bar (Boring: with Coolant Hole)



Toolholder Dimensions

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | θ | Standard Corner-R (°) | Spare Parts | | | | | |
|--------------------------------|-------------------------------|------|---|-----------------------------------------------------------------------------------|----------------|----|-----|----|------|-----|-----------------------------------------------------------------------------------|-----------------------|-------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------|
| | | R | L | | øA | øD | H | L1 | L2 | F | | | S | Lever | Lock Screw | Shim | Shim Pin | Punch |
| | | | |  | | | | | | |  | | |  |  LSP P  |  |  | |
| S16M-PTUN ^{R/L} 11-20 | PTUN ^{R/L} 2016B-11 | ● | ● | 20 | 16 | 15 | 150 | 34 | 11 | 0.3 | 18° | 0.8 | LL-03TN | LS-03SN | - | P-03S | - | FH-2.5 |
| S20Q-PTUN ^{R/L} 11-25 | 2520B-11 | ● | ● | 25 | 20 | 19 | 180 | 37 | 13.2 | 0.2 | 17° | | LL-03TN | LS-03SN | - | P-03S | - | FH-2.5 |
| S25R-PTUN ^{R/L} 11-32 | 3225B-11 | ● | ● | 32 | 25 | 24 | 200 | 42 | 15.7 | 0.3 | 16° | | LL-03TN | LS-03SN | - | P-03S | - | FH-2.5 |
| S25R-PTUN ^{R/L} 16-30 | - | ● | ● | 30 | 25 | 24 | 200 | 42 | 15.5 | 1.5 | 13° | 0.8 | LL-03SN | LS-03SN | - | P-03S | - | FH-2.5 |
| S32S-PTUN ^{R/L} 16-40 | | ● | ● | 40 | 32 | 30 | 250 | 50 | 22 | 2.0 | 13° | | LL-1N | LS-1N | LT-32N *LT-32N-20 | LSP-1 | PC-1 | FH-2.5 |
| S40T-PTUN ^{R/L} 16-50 | | ● | ● | 50 | 40 | 37 | 300 | 60 | 27 | 1.8 | 11° | | LL-1N | LS-1N | LT-32N *LT-32N-20 | LSP-1 | PC-1 | FH-2.5 |
| A16M-PTUN ^{R/L} 11-20 | PTUN ^{R/L} 2016B-11H | ● | | 20 | 16 | 15 | 150 | 34 | 11 | 0.3 | 18° | 0.8 | LL-03TN | LS-03SN | - | P-03S | - | FH-2.5 |
| A20Q-PTUN ^{R/L} 11-25 | 2520B-11H | ● | | 25 | 20 | 19 | 180 | 37 | 13.2 | 0.2 | 17° | | LL-03TN | LS-03SN | - | P-03S | - | FH-2.5 |
| A25R-PTUN ^{R/L} 11-32 | 3225B-11H | ● | | 32 | 25 | 24 | 200 | 42 | 15.7 | 0.3 | 16° | | LL-03TN | LS-03SN | - | P-03S | - | FH-2.5 |

• When using insert with corner R = 1.6mm or larger, purchase and use shim with * mark separately to prevent interference between workpiece and shim.

Applicable Inserts

| Applications | Finishing | Finishing-Medium | Finishing-Medium | Finishing-Medium | Medium-Roughing | Medium-Roughing | Medium-Roughing | Medium-Roughing / High Feed Rate | Medium-Roughing / High Feed Rate | Roughing |
|--------------------------------|------------------------------------|-------------------|-------------------|-----------------------------------------------|--------------------------|-----------------------------|-----------------------|----------------------------------|----------------------------------|------------------------------|
| Ref. Page | B30 | B30 | B30 | B30 | B30 | B30 | B30 | B31 | B31 | B31 |
| Insert | GP | HQ | CQ | TK | GS | PS | HS/CS | PT | GT | Standard |
| Toolholder | | | | | | | | | | |
|PTUN ^{R/L} 11.... | TNMG1104.. | TNMG1104.. | - | - | TNMG1104.. | - | - | - | - | - |
|PTUN ^{R/L} 16.... | TNMG1604.. | TNMG1604.. | TNMG1604.. | TNMP1604.. | TNMG1604.. | TNMG1604.. | TNMG1604.. | TNMG1604.. | TNMG1604.. | TNMG1604.. |
| Applications | One side / Roughing High Feed Rate | Finishing | Medium-Roughing | Medium-Roughing / Low Cutting Resistance type | Soft Steel Finishing | Soft Steel / Medium cutting | Soft Steel / Roughing | Stainless Finishing | Stainless Medium to Roughing | Stainless Medium to Roughing |
| Ref. Page | B31 | B34 | B34 | B34 | B31 | B31 | B31 | B32 | B32 | B32 |
| Insert | PX | ^{R/L} -S | ^{R/L} -□ | ^{R/L} -25R | XP (-T) | XQ | XS | MQ | MS | TK |
| Toolholder | | | | | | | | | | |
|PTUN ^{R/L} 11.... | - | TNMG1104.. | TNMG1104.. | - | - | - | - | - | - | - |
|PTUN ^{R/L} 16.... | TNMG1604.. | TNMG1604.. | TNMG1604.. | TNMG1604.. | TNMG1604.. | TNMG1604.. | TNMG1604.. | TNMG1604.. | TNMG1604.. | TNMG1604.. |
| Applications | Stainless Medium to Roughing | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Non-ferrous Metals | Non-ferrous Metals | Non-ferrous Metals | Hard Materials |
| Ref. Page | B32 | B33 | B33 | B33 | B33 | B90 | B33 | B33 | C17 | C7 |
| Insert | ^{R/L} -ST | C | ZS | GC | Without Chipbreaker | Ceramic | AH | ^{R/L} -A3 | PCD | CBN |
| Toolholder | | | | | | | | | | |
|PTUN ^{R/L} 11.... | - | - | - | - | - | - | - | - | - | - |
|PTUN ^{R/L} 16.... | TNMG1604.. | TNMG1604.. | TNMG1604.. | TNMG1604.. | TNMA1604.. TNGA1604.. | TNGA1604.. | TN_G1604.. | TNMG1604.. | TNMG1604.. | TNGA1604.. |

For recommended cutting conditions, see page [F82~F83](#)

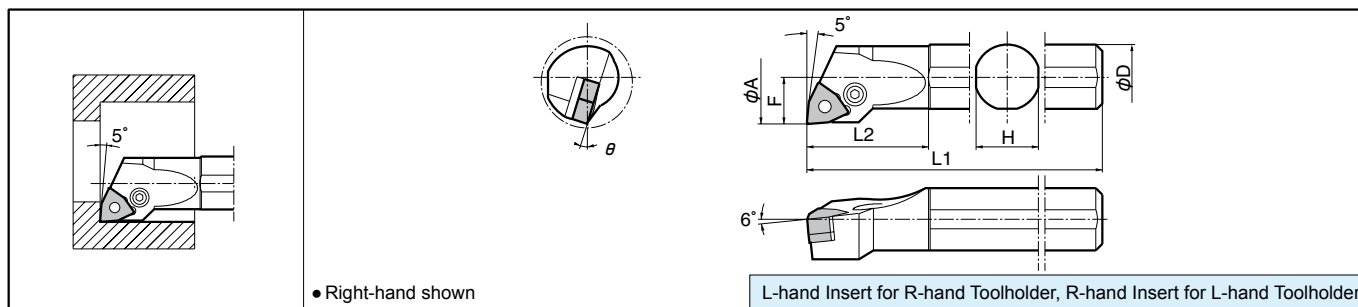
Applicable Coolant Sleeve / Joint

| Toolholder | Applicable Coolant Sleeve | Applicable Coolant Joint |
|--------------------------------|---------------------------|--------------------------|
| A16M-PTUN ^{R/L} 11-20 | SHC1640-70, SHC1650-95 | SJS-8 |
| A20Q-PTUN ^{R/L} 11-25 | SHC2040-70, SHC2050-95 | |
| A25R-PTUN ^{R/L} 11-32 | SHC2540-70, SHC2550-95 | |

• For Coolant Sleeve, Coolant Joint, see [F78~F79](#).

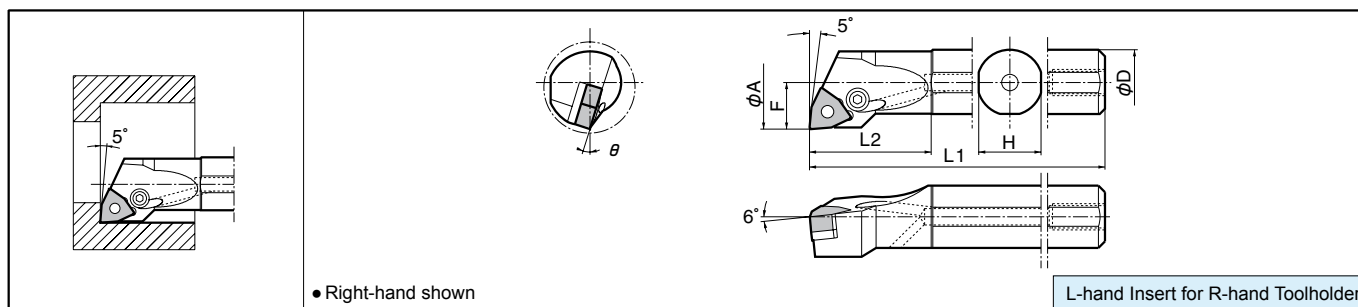
S...PWLN06 (Boring / Internal Facing)

Max. Overhang Length L/D≈3










A...PWLN06 Twin-Hole Bar (Boring / Internal Facing: with Coolant Hole)

Max. Overhang Length L/D≈3



Toolholder Dimensions

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | θ | Standard Corner-R (r) | Spare Parts | | | | | | |
|--------------------------------|-------------------------------|------|---|----------------|----------------|----|-----|----|------|-----|-----------------------|-------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| | | R | L | | øA | øD | H | L1 | L2 | | | F | Lever | Lock Screw | Shim | Shim Pin | Punch | Wrench |
| | | | | | | | | | | | | |  |  |  |  LSP P  |  |  |
| S16M-PWLN ^{R/L} 06-20 | PWLN ^{R/L} 2016B-06 | ● | ● | 20 | 16 | 15 | 150 | 34 | 11 | 16° | 0.8 | LL-03SN | LS-03SN | - | P-03S | - | FH-2.5 | |
| S20Q-PWLN ^{R/L} 06-27 | PWLN ^{R/L} 2720B-06 | ● | ● | 27 | 20 | 19 | 180 | 37 | 14.2 | 17° | | LL-1N | LS-1SN | LW-32N | LSP-1 | PC-1 | | |
| S25R-PWLN ^{R/L} 06-32 | 3225B-06 | ● | ● | 32 | 25 | 24 | 200 | 42 | 15.7 | 15° | | | | | | | | |
| A16M-PWLN ^{R/L} 06-20 | PWLN ^{R/L} 2016B-06H | ● | | 20 | 16 | 15 | 150 | 34 | 11 | 16° | 0.8 | LL-03SN | LS-03SN | - | P-03S | - | FH-2.5 | |
| A20Q-PWLN ^{R/L} 06-27 | PWLN ^{R/L} 2720B-06H | ● | | 27 | 20 | 19 | 180 | 37 | 14.2 | 17° | | | | | | | | |
| A25R-PWLN ^{R/L} 06-32 | 3225B-06H | ● | | 32 | 25 | 24 | 200 | 42 | 15.7 | 15° | | LL-1N | LS-1SN | LW-32N | LSP-1 | PC-1 | | |

Applicable Inserts

| Applications | Finishing | Finishing-Medium | Medium-Roughing | Finishing | Medium | | | | | | |
|--------------------------------|------------|------------------|-----------------|-------------------|----------------|--|--|--|--|--|--|
| Ref. Page | B38 | B38 | B38 | B40 | B40 | | | | | | |
| Insert | GP | HQ | GS | ^{R/L} -S | ^{R/L} | | | | | | |
| Toolholder | | | | | | | | | | | |
|PWLN ^{R/L} 06.... | WNMG0604.. | WNMG0604.. | WNMG0604.. | WNGG0604.. | WNGG0604.. | | | | | | |

For recommended cutting conditions, see page [F82~F83](#)

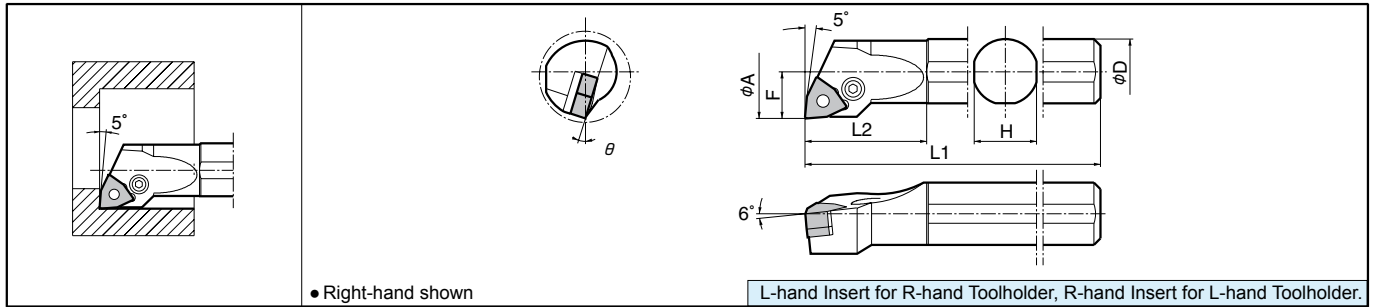
Applicable Coolant Sleeve / Joint

| Toolholder | Applicable Coolant Sleeve | Applicable Coolant Joint |
|--------------------------------|---------------------------|--------------------------|
| A16M-PWLN ^{R/L} 06-20 | SHC1640-70, SHC1650-95 | SJS-8 |
| A20M-PWLN ^{R/L} 06-27 | SHC2040-70, SHC2050-95 | |
| A25R-PWLN ^{R/L} 06-32 | SHC2540-70, SHC2550-95 | |

● For Coolant Sleeve, Coolant Joint, see [F78~F79](#).

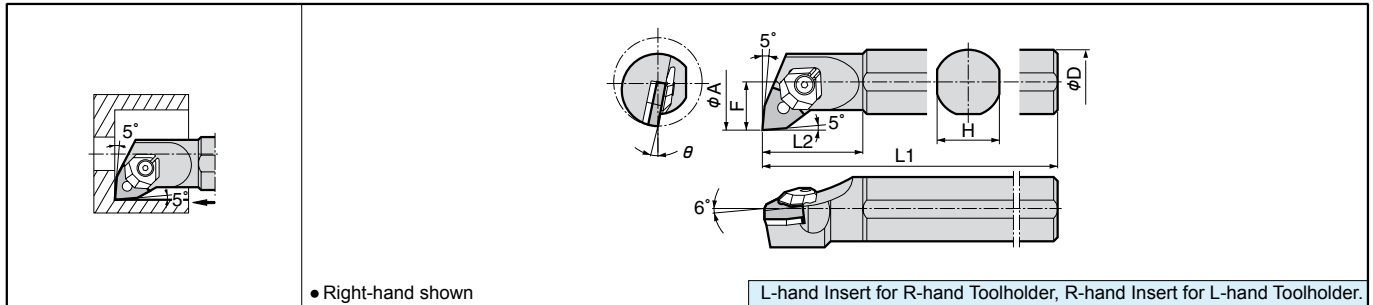
S...PWLN08 (Boring / Internal Facing)

Max. Overhang Length L/D≈3



S...WWLN08-E Excellent Bar (Boring / Internal Facing)







Max. Overhang Length L/D≈5



F

Boring

Toolholder Dimensions

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | θ | Standard Corner-R (R) | Spare Parts | | | | | |
|--------------------------------------------------------------------|------------------------|--------|--------|-----------------------------------------------------------------------------------|----------------|----------|------------|----------|----------|-----|-----------------------|-------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| | | R | L | | øA | øD | H | L1 | L2 | | | F | Lever | Lock Screw | Shim | Shim Pin | Punch |
| | | | |  | | | | | | | | |  |  |  |  |  |
| S32S-PWLN ^{R/L} 08 -40 S40T-PWLN ^{R/L} 08 -50 | - | ● ● | ● ● | 40 50 | 32 40 | 30 37 | 250 300 | 50 60 | 22 27 | 10° | 0.8 | LL-2N | LS-2N | LW-42N ^{R/L} | LSP-2 | PC-2 | LW-3 |

• Shim: LW-42NR for R-hand Toolholder, LW-42NL for L-hand Toolholder

Toolholder Dimensions

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | | θ | Standard Corner-R (R) | Spare Parts | | | | | |
|----------------------------------|-------------------------------|------|---|----------------|----------------|----------|-----|----|----|-----|----------|-----------------------|-------------|------------|--------|----------|--------|--|
| | | R | L | | ϕA | ϕD | H | L1 | L2 | F | | | Clamp Set | Wrench | Shim | Shim Pin | Wrench | |
| S25S-WWLN ^{R/L} 08 -28E | WWLN ^{R/L} 2825B-08E | ● | ● | 28 | 25 | 24 | 250 | 36 | 14 | 13° | 1.2 | WCS-8 | LW-3 | WWP-42 | WP5X11 | LW-2 | | |
| S25S-WWLN ^{R/L} 08 -34E | 3425B-08E | ● | ● | 34 | 25 | 24 | 250 | 40 | 17 | 11° | 1.2 | WCS-8 | LW-3 | *WWP-42-16 | WP5X11 | LW-2 | | |
| S32S-WWLN ^{R/L} 08 -40E | 4032B-08E | ● | ● | 40 | 32 | 30 | 250 | 50 | 20 | 10° | 1.2 | WCS-8 | LW-3 | WWP-42 | WP5X11 | LW-2 | | |

• When using insert with corner R = 1.6mm or larger, purchase and use shim with * mark separately to prevent interference between workpiece and shim.

Applicable Inserts

| Applications | Finishing | Finishing-Medium | Finishing | Finishing-Medium | Finishing-Medium | Finishing-Medium | Medium-Roughing | Medium-Roughing | Medium-Roughing | Medium-Roughing / High Feed Rate | Medium-Roughing / High Feed Rate |
|--------------------------------|--------------------|----------------------|-----------------------------|-----------------------|---------------------------|---------------------|------------------------------|------------------------------|------------------------------|----------------------------------|----------------------------------|
| Ref. Page | B38 | B38 | B38 | B38 | B38 | B38 | B38 | B38 | B38 | B39 | B39 |
| Insert | WP (Wiper) | WQ (Wiper) | GP | HQ | CQ | CJ | TK | GS | PS | PT | GT |
| Toolholder | | | | | | | | | | | |
| ...PWLN ^{R/L} 08 -... | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMP0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. |
| ...WWLN ^{R/L} 08 -... | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMP0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. |
| Applications | Roughing | Soft Steel Finishing | Soft Steel / Medium cutting | Soft Steel / Roughing | Stainless Steel Finishing | Stainless Finishing | Stainless Medium to Roughing | Stainless Medium to Roughing | Stainless Medium to Roughing | Cast Iron | Cast Iron |
| Ref. Page | B39 | B39 | B39 | B39 | B39 | B39 | B40 | B40 | B40 | B40 | B40 |
| Insert | Standard | XP | XQ | XS | GU | MQ | MS | MU | TK | C(GC) | ZS |
| Toolholder | | | | | | | | | | | |
| ...PWLN ^{R/L} 08 -... | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMA0804.. |
| ...WWLN ^{R/L} 08 -... | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMG0804.. | WNMA0804.. |
| Applications | Non-ferrous Metals | Non-ferrous Metals | Hard Materials | | | | | | | | |
| Ref. Page | B40 | C17 | C8 | | | | | | | | |
| Insert | AH | PCD | CBN | | | | | | | | |
| Toolholder | | | | | | | | | | | |
| ...PWLN ^{R/L} 08 -... | WNGG0804.. | WNMM0804.. | WNGA0804.. | | | | | | | | |
| ...WWLN ^{R/L} 08 -... | WNGG0804.. | WNMM0804.. | WNGA0804.. | | | | | | | | |

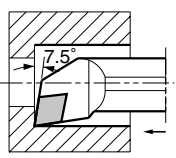
• In wedge lock, use of TN30 / PV30 and ceramic insert other than silicon nitride insert is not recommended due to strong restraint force.

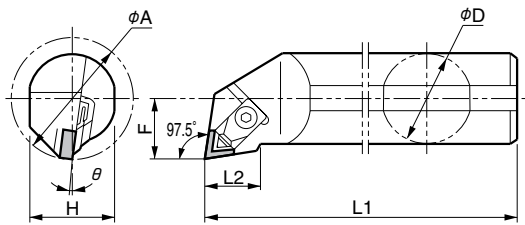
For recommended cutting conditions, see page [F82~F83](#)

● : Std. Item ○ : Check Availability


S...CELN (Boring / Internal Facing)

Max. Overhang Length L/D≈3










● Applicable Inserts

| |
|-------------------------------------------------------------------------------------|
| Cast Iron / Hard Materials |
| ● B87 |
| Ceramic |
|  |
| ENG1307.. |

● Right-hand shown

● Toolholder Dimensions

Recommended Cutting Conditions ● **F82~F83**

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | θ | Standard Corner-R (rε) | Spare Parts | | | | |
|--------------------------------------|------------------------------------|------|---|----------------|----------------|----|-----|----|----|-----|------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | | R | L | | φA | φD | H | L1 | L2 | F | | Chipbreaker | Clamp Set | Wrench | Shim | Shim Screw |
| S40T-CELN^{R/L} 13-50 | CELN^{R/L} 5040B-13 | ● | | 50 | 40 | 37 | 300 | 32 | 27 | 12° | 0.8 |  |  |  |  |  |

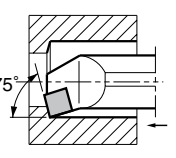
F

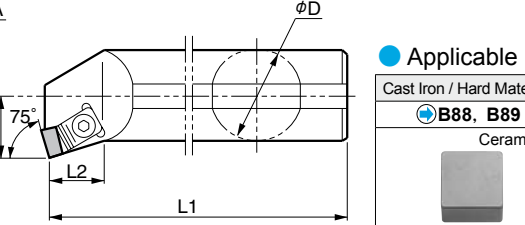


Boring




S...CSKN (Boring)

Max. Overhang Length L/D≈3










● Applicable Inserts

| | | |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Cast Iron / Hard Materials | Cast Iron | Cast Iron / Hard Materials |
| ● B88, B89 | ● B28 | ● C9 |
| Ceramic | Coated / Carbide | CBN(KBN900) |
|  |  |  |
| SNGN1207..(1204..) SNMN1207.. | (SNMN1204..) | (SNMN1204..) |

● Right-hand shown

● Toolholder Dimensions

Recommended Cutting Conditions ● **F82~F83**

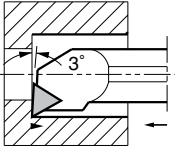
| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | θ | Standard Corner-R (rε) | Spare Parts | | | | |
|--------------------------------------|------------------------------------|------|---|----------------|----------------|----|-----|----|----|-------|------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| | | R | L | | φA | φD | H | L1 | L2 | F | | Chipbreaker | Clamp Set | Wrench | Shim | Shim Screw |
| S40T-CSKN^{R/L} 12-50 | CSKN^{R/L} 5040B-12 | ● | ● | 50 | 40 | 37 | 300 | 26 | 27 | 10.5° | 0.8 |  |  |  |  |  |

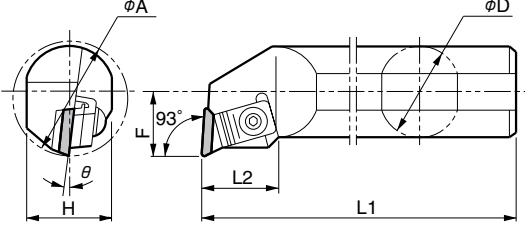
• Chipbreaker: CB-13 for R-hand Toolholder, CB-12 for L-hand Toolholder.

• Shim & Shim Screw: When using SN □□ 1204 type Insert, purchase spare parts in () separately.


S...CTUC (Boring)

Max. Overhang Length L/D≈3










● Applicable Inserts

| |
|---------------------------------------------------------------------------------------|
| Cast Iron |
| ● B92 |
| Ceramic |
|  |
| TCGN1604.. |

● Right-hand shown

● Toolholder Dimensions

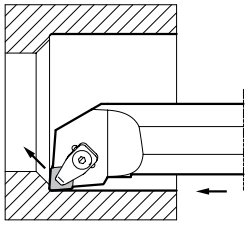
Recommended Cutting Conditions ● **F82~F83**

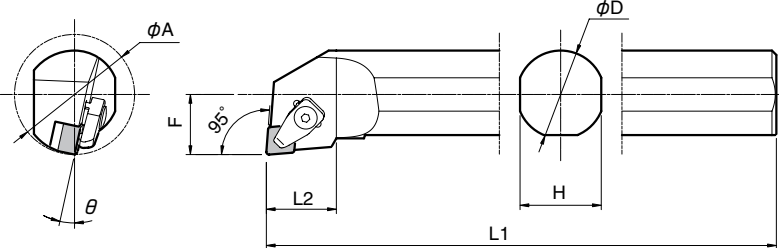
| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | θ | Standard Corner-R (rε) | Spare Parts | | | | |
|--------------------------------------|------------------------------------|------|---|----------------|----------------|----|-----|----|----|------|------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| | | R | L | | φA | φD | H | L1 | L2 | F | | Chipbreaker | Clamp Set | Wrench | Shim | Shim Screw |
| S32S-CTUC^{R/L} 16-40 | CTUC^{R/L} 4032B-16 | □ | | 40 | 32 | 30 | 250 | 27 | 22 | 6.5° | 0.8 |  |  |  |  |  |

• Chipbreaker: CB-13 for R-hand Toolholder, CB-12 for L-hand Toolholder.

S...CCLN-GX (Boring / Internal Facing)


Max. Overhang Length L/D≈3







• Right-hand shown

● Applicable Inserts

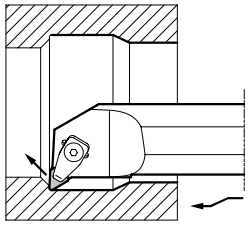
| | |
|------------|-------------------------------------------------------------------------------------|
| Cast Iron | ● B85 |
| Ceramic |  |
| CNGX1207.. | |

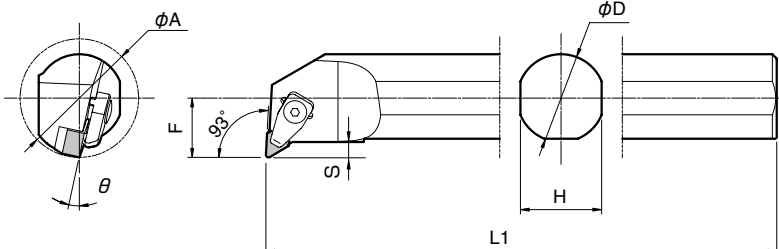
● Toolholder Dimensions

| Description | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | θ | Standard Corner-R (rε) | Spare Parts | | | | Recommended Cutting Conditions |
|-----------------------------------|------|---|----------------|----------------|----|-----|----|----|-----|------------------------|-----------------------------------------------------------------------------------|--------|---------|------------|--------------------------------|
| | R | L | | ϕA | ϕD | H | L1 | L2 | F | | Clamp Set | Wrench | Shim | Shim Screw | |
| S32S- CCLN ^{R/L} 12-40GX | ● | ● | 40 | 32 | 30 | 250 | 32 | 22 | 14° | 1.2 |  | LW-4 | - | - | F82~F83 |
| S40T- CCLN ^{R/L} 12-50GX | ● | ● | 50 | 40 | 37 | 300 | 32 | 27 | 12° | 1.2 |  | LW-4 | SP-441P | M3X8 | |

S...CDUN-GX (Boring / Copying)


Max. Overhang Length L/D≈3







• Right-hand shown

● Applicable Inserts

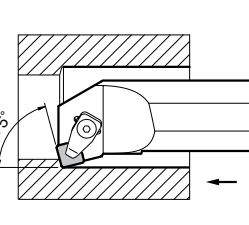
| | |
|------------|---------------------------------------------------------------------------------------|
| Cast Iron | ● B86 |
| Ceramic |  |
| DNGX1207.. | |

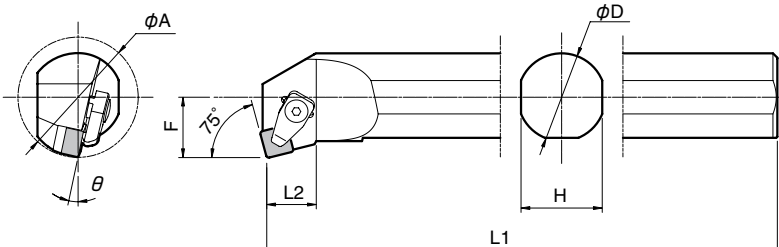
● Toolholder Dimensions

| Description | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | θ | Standard Corner-R (rε) | Spare Parts | | | | Recommended Cutting Conditions |
|-----------------------------------|------|---|----------------|----------------|----|-----|-----|----|-----|------------------------|-------------------------------------------------------------------------------------|--------|---------|------------|--------------------------------|
| | R | L | | ϕA | ϕD | H | L1 | S | F | | Clamp Set | Wrench | Shim | Shim Screw | |
| S32S- CDUN ^{R/L} 12-40GX | ● | ● | 40 | 32 | 30 | 250 | 7.5 | 22 | 14° | 1.2 |  | LW-4 | - | - | F82~F83 |
| S40T- CDUN ^{R/L} 12-50GX | ● | ● | 50 | 40 | 37 | 300 | 7.5 | 27 | 12° | 1.2 |  | LW-4 | SP-521P | M3X8 | |

S...CSKN-GX (Boring)


Max. Overhang Length L/D≈3







• Right-hand shown

● Applicable Inserts

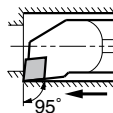
| | |
|------------|---------------------------------------------------------------------------------------|
| Cast Iron | ● B89 |
| Ceramic |  |
| SNGX1207.. | |

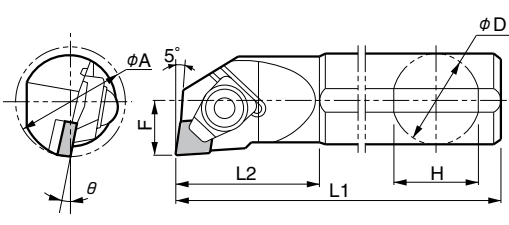
● Toolholder Dimensions

| Description | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | θ | Standard Corner-R (rε) | Spare Parts | | | | Recommended Cutting Conditions |
|-----------------------------------|------|---|----------------|----------------|----|-----|------|----|-----|------------------------|-------------------------------------------------------------------------------------|--------|---------|------------|--------------------------------|
| | R | L | | ϕA | ϕD | H | L1 | L2 | F | | Clamp Set | Wrench | Shim | Shim Screw | |
| S32S- CSKN ^{R/L} 12-40GX | ● | ● | 40 | 32 | 30 | 250 | 22.5 | 22 | 14° | 1.2 |  | LW-4 | - | - | F82~F83 |
| S40T- CSKN ^{R/L} 12-50GX | ● | ● | 50 | 40 | 37 | 300 | 22.5 | 27 | 12° | 1.2 |  | LW-4 | SP-141P | M3X8 | |


● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

S...CCLN-A (Boring / Internal Facing)













● Applicable Inserts

| |
|-------------------------------------------------------------------------------------|
| Cast Iron / Hard Materials |
| ● C9 |
| CBN(KBN900) |
|  |
| CNMN0903.. |

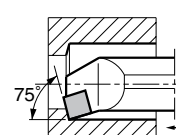
● Right-hand shown

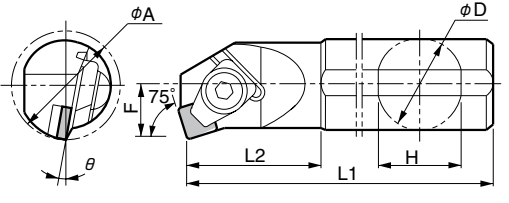
For recommended cutting conditions, see page [F82~F83](#)

● Toolholder Dimensions


| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | θ | Standard Corner-R (rε) | Spare Parts | | | | | |
|---------------------------------------|-------------------------------------|--------------------------|-------------------------------------|----------------|----------------|----|-----|----|----|-----|------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|
| | | R | L | | øA | øD | H | L1 | L2 | | | F |  |  |  |  | |
| | | | | | | | | | | | | | | | | | |
| S25X-CCLN^{R/L} 09-30A | CCLN^{R/L} 3025B-09A | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 30 | 25 | 24 | 220 | 40 | 15 | 10° | 0.8 |  |  |  |  | | |
| S32S-CCLN^{R/L} 09-40A | 4032B-09A | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 40 | 32 | 30 | 250 | 50 | 22 | 8° | | | | | | | |

S...CSKN-A (Boring)

















● Applicable Inserts

| |
|---------------------------------------------------------------------------------------|
| Cast Iron / Hard Materials |
| ● C9 |
| CBN(KBN900) |
|  |
| SNMN0903.. |

● Right-hand shown

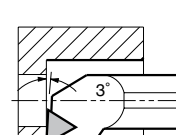
For recommended cutting conditions, see page [F82~F83](#)

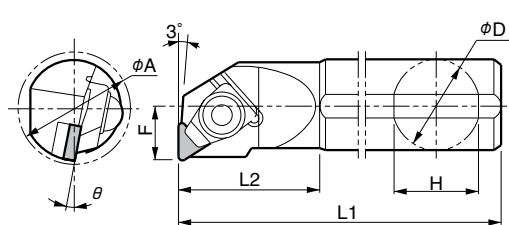
● Toolholder Dimensions

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | θ | Standard Corner-R (R) | Spare Parts | | | | | |
|---------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------|----------------|----|-----|----|----|-----|-----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--|
| | | R | L | | øA | øD | H | L1 | L2 | | | F |  |  |  |  | |
| | | | | | | | | | | | | | | | | | |
| S25X-CSKN^{R/L} 09-30A | CSKN^{R/L} 3025B-09A | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 30 | 25 | 24 | 220 | 40 | 15 | 10° | 1.2 |  |  |  |  | | |
| S32S-CSKN^{R/L} 09-40A | 4032B-09A | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 40 | 32 | 30 | 250 | 50 | 22 | 8° | 1.2 |  |  |  |  | | |



* Toolholders for SNMN1204 Type Insert are described in [F73](#).

S...CTUN-A (Boring)









● Applicable Inserts

| | |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Cast Iron / Hard Materials | Cast Iron / Hard Materials |
| ● C9 | ● B90 |
| CBN(KBN900) | Ceramic |
|  |  |
| TNMN1103.. | TNGN1103.. |

● Right-hand shown

For recommended cutting conditions, see page [F82~F83](#)

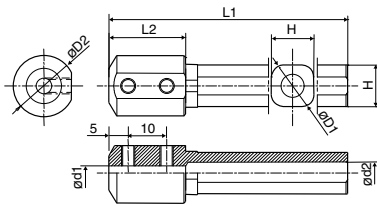
● Toolholder Dimensions

| Description | (Previous Description) | Std. | | Min. Bore Dia. | Dimension (mm) | | | | | θ | Standard Corner-R (rε) | Spare Parts | | | | | |
|---------------------------------|-------------------------------|------|---|----------------|----------------|----|-----|----|----|-----|------------------------|-------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--|
| | | R | L | | øA | øD | H | L1 | L2 | | | F |  |  |  |  | |
| | | | | | | | | | | | | | | | | | |
| S25X-CTUN ^{R/L} 11-30A | CTUN ^{R/L} 3025B-11A | ● | | 30 | 25 | 24 | 220 | 40 | 15 | 10° | 0.8 | CE-360S | LW-4 | SP-210A | BH3X6 | | |

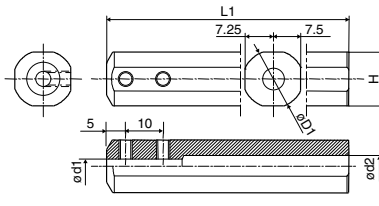
● : Std. Item ○ : Check Availability □ : Deleted from the next catalogue

Sleeves for Boring Bars

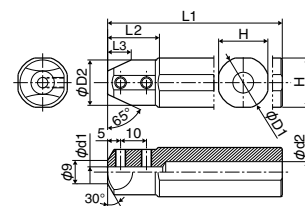
Sleeves for 2-Edge Tip-Bar







(2 Edges Tip-Bar installation side) Fig.1



(2 Edges Tip-Bar installation side) Fig.2



(2 Edges Tip-Bar installation side) Fig.3

| Description | Std. | Dimension (mm) | | | | | | | | Drawing | Spare Parts | | Applicable Machine Manufacturer | Ref. Page for 2 Edges Tip-Bar (Ref. Page for Other Application 2 Edges Tip-Bar) |
|--------------------------------------------------------------------------------------|------|----------------|-------|------|--------|------|-----|-----|------|---------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | * ød1 | øD1 | øD2 | ød2 | H | L1 | L2 | L3 | | Screw | Wrench | | |
| | | | | | | | | | | |  |  | | |
| PSH 0212-80 0312-80 0412-80 0512-80 0612-80 0712-80 | ● | 2 | 12 | 16 | 6 | 11 | 80 | 20 | - | Fig.1 | HS3×4P | LW-1.5 | (General use) | <div>Internal Back Boring (HPBT Type) ⇒ F22</div> <div></div> <div>Internal Grooving (HPG Type) ⇒ G44</div> <div>Internal Face Grooving (HPFG Type) ⇒ G65</div> <div></div> <div>Internal Threading (HPT Type) ⇒ J24</div> |
| | ● | 3 | | | | | | | | | HS4×4P | LW-2 | | |
| | ● | 4 | | | | | | | | | | | | |
| | ● | 5 | | | | | | | | | | | | |
| | ● | 6 | | | HS4×4P | | | | | | LW-2 | | | |
| | ● | 7 | | | | | | | | | | | | |
| PSH 0216-100 0316-100 0416-100 0516-100 0616-100 0716-100 | ● | 2 | 16 | - | | 6 | 15 | 100 | - | - | | Fig.2 | | |
| | ● | 3 | | | HS4×4P | | | | | | LW-2 | | | |
| | ● | 4 | | | | | | | | | | | | |
| | ● | 5 | | | | | | | | | | | | |
| | ● | 6 | | | | | | | | | | | | |
| | ● | 7 | | | | | | | | | | | | |
| PSH 0220-120 0320-120 0420-120 0520-120 0620-120 0720-120 | ● | 2 | 20 | 17.5 | 6 | 19 | 120 | 20 | 11 | Fig.3 | HS3×4P | LW-1.5 | Amada Wasino Eguro Citizen Machinery Precision Tsugami Miyano (General use) | |
| | ● | 3 | | | | | | | | | HS4×4P | LW-2 | | |
| | ● | 4 | | | | | | | | | | | | |
| | ● | 5 | | | 7.5 | | | | | | | | | |
| | ● | 6 | | | | | | | | | | | | |
| | ● | 7 | | | | | | | | | | | | |
| PSH 0225.0-135 0325.0-135 0425.0-135 0525.0-135 0625.0-135 0725.0-135 | ● | 2 | 25 | 18 | 6 | 24 | 135 | 23 | 11.5 | Fig.3 | HS3×4P | LW-1.5 | Amada Wasino Eguro Precision Tsugami Miyano (General use) | |
| | ● | 3 | | | | | | | | | HS4×4P | LW-2 | | |
| | ● | 4 | | | | | | | | | | | | |
| | ● | 5 | | | 8 | | | | | | | | | |
| | ● | 6 | | | | | | | | | | | | |
| | ● | 7 | | | | | | | | | | | | |
| PSH 0219-120 0319-120 0419-120 0519-120 0619-120 0719-120 | ● | 2 | 19.05 | 17.5 | 6 | 18 | 120 | 20 | 11 | Fig.3 | HS3×4P | LW-1.5 | Citizen Machinery | |
| | ● | 3 | | | | | | | | | HS4×4P | LW-2 | | |
| | ● | 4 | | | | | | | | | | | | |
| | ● | 5 | | | 7.5 | | | | | | | | | |
| | ● | 6 | | | | | | | | | | | | |
| | ● | 7 | | | | | | | | | | | | |
| PSH 0225-120 0325-120 0425-120 0525-120 0625-120 0725-120 | ● | 2 | 25.4 | 18 | 6 | 24.4 | 120 | 23 | 11.5 | Fig.3 | HS3×4P | LW-1.5 | Star Micronics Nomura VTC | |
| | ● | 3 | | | | | | | | | HS4×4P | LW-2 | | |
| | ● | 4 | | | | | | | | | | | | |
| | ● | 5 | | | 8 | | | | | | | | | |
| | ● | 6 | | | | | | | | | | | | |
| | ● | 7 | | | | | | | | | | | | |
| PSH 0222-135 0322-135 0422-135 0522-135 0622-135 0722-135 | ● | 2 | 22 | 18 | 6 | 21 | 135 | 22 | 11.5 | Fig.3 | HS3×4P | LW-1.5 | Star Micronics Nomura VTC | |
| | ● | 3 | | | | | | | | | HS4×4P | LW-2 | | |
| | ● | 4 | | | | | | | | | | | | |
| | ● | 5 | | | 8 | | | | | | | | | |
| | ● | 6 | | | | | | | | | | | | |
| | ● | 7 | | | | | | | | | | | | |
| PSH 0223-120 0323-120 0423-120 0523-120 0623-120 0723-120 | ● | 2 | 23 | 18 | 6 | 22 | 120 | 22 | 11.5 | Fig.3 | HS3×4P | LW-1.5 | Nomura VTC | |
| | ● | 3 | | | | | | | | | HS4×4P | LW-2 | | |
| | ● | 4 | | | | | | | | | | | | |
| | ● | 5 | | | 8 | | | | | | | | | |
| | ● | 6 | | | | | | | | | | | | |
| | ● | 7 | | | | | | | | | | | | |

*: Length of ød1...20 mm (PH02, PH03, PH04 type)

...25 mm (PH05, PH06, PH07 type)

• Choose sleeves (ød1) to meet with øD dimension of 2 Edges Tip-Bar.

• Machine manufactures in random order.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Sleeves for Boring Bars

PSH Sleeves and Applicable Toolholders

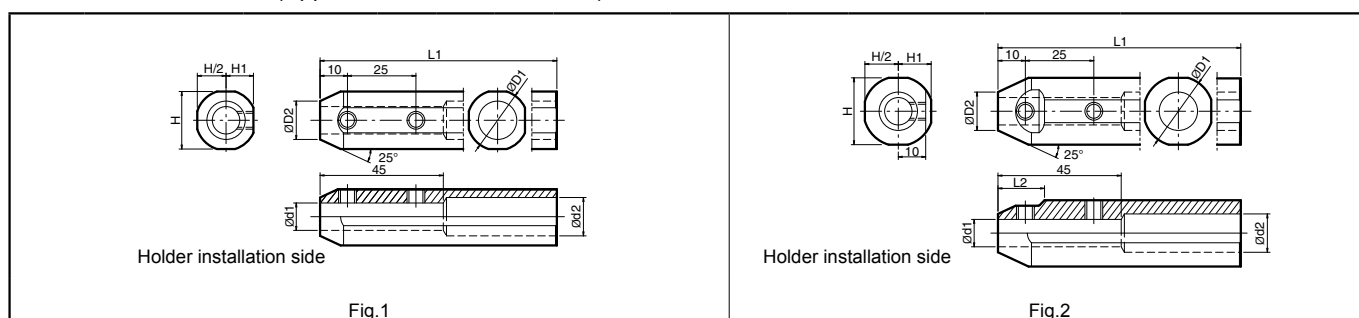
| Shank Size (Hole dia.:mm) | | 02 (2mm) | 03 (3mm) | 04 (4mm) | 05 (5mm) | 06 (6mm) | 07 (7mm) |
|------------------------------|--------------------|--------------------------|--------------------------|---------------------------|---------------------------|--------------------------|--------------------------|
| PSH Sleeve Description | | PSH0212-80 | PSH0312-80 | PSH0412-80 | PSH0512-80 | PSH0612-80 | PSH0712-80 |
| | | PSH0216-100 | PSH0316-100 | PSH0416-100 | PSH0516-100 | PSH0616-100 | PSH0716-100 |
| | | PSH0219-120 | PSH0319-120 | PSH0419-120 | PSH0519-120 | PSH0619-120 | PSH0719-120 |
| | | PSH0220-120 | PSH0320-120 | PSH0420-120 | PSH0520-120 | PSH0620-120 | PSH0720-120 |
| | | PSH0222-135 | PSH0322-135 | PSH0422-135 | PSH0522-135 | PSH0622-135 | PSH0722-135 |
| | | PSH0223-120 | PSH0323-120 | PSH0423-120 | PSH0523-120 | PSH0623-120 | PSH0723-120 |
| | | PSH0225.0-135 | PSH0325.0-135 | PSH0425.0-135 | PSH0525.0-135 | PSH0625.0-135 | PSH0725.0-135 |
| | | PSH0225-120 | PSH0325-120 | PSH0425-120 | PSH0525-120 | PSH0625-120 | PSH0725-120 |
| 2-Edge Tip-Bar | Boring Bars | HPB [®] /L0202- | HPB [®] /L0303- | HPB [®] /L0404- | HPB [®] /L0505- | HPB [®] /L0606- | HPB [®] /L0707- |
| | Internal Grooving | | | HPBT [®] /L0404- | HPBT [®] /L0505- | | |
| | Face Grooving | | | HPG [®] /L0404- | HPG [®] /L0505- | HPG [®] /L0606- | HPG [®] /L0707- |
| | Internal Threading | | | HPTR04504- | HPTR06005- | | HPTR07507- |
| Boring Bars | | | | C04-..... | C05-..... | C06-..... S06-..... | C07-..... |



F



Boring

SHA sleeves (Applicable Toolholders F79)



| Fig.1 | | | | | | | | | | | Fig.2 | | Spare Parts | | Applicable Machine Manufacturer | |
|----------------|------|----------------|-------|-----|-----|------|------|-----|----|---------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------|--------|---------------------------------|-------------------------------|
| Description | Std. | Dimension (mm) | | | | | | | | Drawing | Screw | Wrench | | | | |
| | | ød1 | øD1 | øD2 | ød2 | H | H1 | L1 | L2 | |  |  | | | | |
| SHA 0820-120 | ● | 8 | 20 | 14 | 12 | 19 | 9.25 | 120 | - | Fig.1 | HS6x4P | LW-3 | Amada Wasino Eguro Tsugami Miyano | | | |
| 1020-120 | ● | 10 | | | | | | | | | | | | | | |
| SHA 0825.0-135 | ● | 8 | 25 | 14 | 14 | 24 | 11.5 | 135 | 17 | Fig.2 | | | | | | |
| 1025.0-135 | ● | 10 | | | | | | | | | | | | | | |
| 1225.0-135 | ● | 12 | | | | | | | | | | | | | | |
| SHA 0819-120 | ● | 8 | 19.05 | 14 | 12 | 18 | 8.75 | 120 | - | Fig.1 | HS6x4P | LW-3 | Citizen Machinery | | | |
| 1019-120 | ● | 10 | | | | | | | | | | | | | | |
| SHA 0820-120 | ● | 8 | 20 | 14 | 12 | 19 | 9.25 | 120 | - | Fig.1 | | | | | | |
| 1020-120 | ● | 10 | | | | | | | | | | | | | | |
| SHA 0825.4-120 | ● | 8 | 25.4 | 14 | 14 | 24.4 | 12 | 120 | 17 | Fig.2 | | | | | | |
| 1025.4-120 | ● | 10 | | | | | | | | | | | | | | |
| 1225.4-120 | ● | 12 | | | | | | | | | | | | | | |
| SHA 0822-125 | ● | 8 | 22 | 14 | 14 | 21 | 10 | 125 | - | Fig.1 | HS6x4P | LW-3 | Star Micronics Nomura VTC Automatic Lathe | | | |
| 1022-125 | ● | 10 | | | | | | | | | | | | | | |
| 1222-125 | ● | 12 | | | | | | | | | | | | | | |
| SHA 0823-120 | ● | 8 | 23 | 14 | 14 | 22 | 10.5 | 120 | 16 | Fig.2 | | | | HS6x4P | LW-3 | Nomura VTC Automatic Lathe |
| 1023-120 | ● | 10 | | | | | | | | | | | | | | |
| 1223-120 | ● | 12 | | | | | | | | | | | | | | |



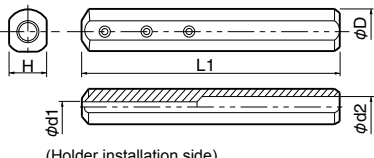
* : Length of ød1...45mm (All of SHA sleeves)

- Choose sleeves(ød1) to meet with øD dimension of toolholder.
- Machine manufacturers in random order.

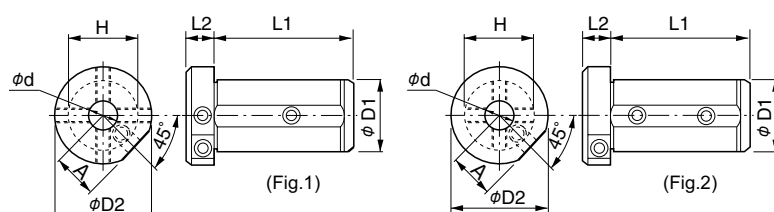
● : Std. Item

Sleeves for Boring Bars

Sleeves for Boring Bars

| Shape | Description | | (Previous Description) | Std. | Dimension (mm) | | | | | Spare Parts | | | | | |
|-----------------------------------------------------------------------------------------------------------------|-------------|----------|------------------------|-------|----------------|-----|-----|----|----|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|----|----|-----|
| | | | | | øD | ød1 | ød2 | H | L1 | Screw | Wrench | | | | |
| | | | | | | | | | |  |  | | | | |
|  (Holder installation side) | SH | 0416-100 | SH | -0516 | ● | 16 | 4 | 5 | 14 | 100 | HS4X4 | LW-2 | | | |
| | | 0516-100 | | -0616 | ● | | 5 | 6 | | | | | | | |
| | | 0616-100 | | -0716 | ● | | 6 | 7 | | | | | | | |
| | | 0716-100 | | -0816 | ● | | 7 | 8 | | | | | | | |
| | | | | | | | | | | | | | | | |
| | SH | 0820-120 | SH | -1020 | ● | 20 | 8 | 9 | 18 | 120 | HS4X4 | LW-2 | | | |
| | | 1020-120 | | -1220 | ● | | 10 | 11 | | | | | | | |
| | | 1225-150 | | -1625 | ● | | 25 | 12 | | | | | 13 | 23 | 150 |
| | | 1632-180 | | -2032 | ● | | 32 | 16 | | | | | 18 | | |
| | | 2032-180 | | -2532 | ● | | | 20 | | | | | 22 | | |

Coolant Sleeve Dimension



Accessories

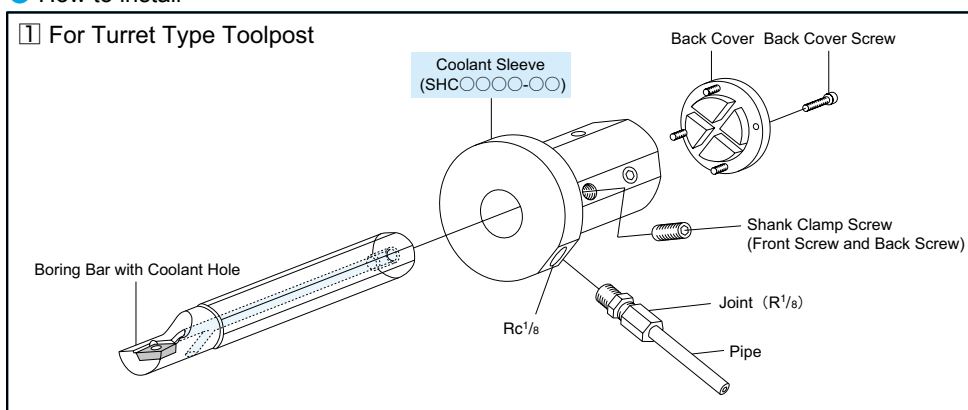
- Back Cover / SHL-4...SHC○○○○40-70
SHL-5...SHC○○○○50-95
- Back Cover Screw
- Shank Clamp Screw

(Note) To stabilize the Toolholder and to prevent coolant leaks, tighten all 4 screws of coolant sleeve securely.

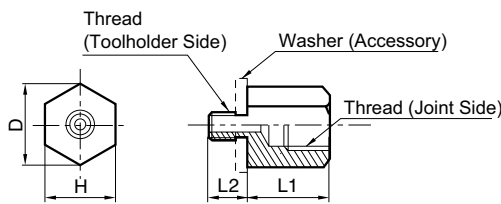
| Description | (Previous Description) | Std. | Dimension (mm) | | | | | | | Drawing | Spare Parts | | | | | |
|-------------|------------------------|------|----------------|-----|----|----|----|----|------|---------|-------------|--------|------------|--------|------------|------------------|
| | | | øD1 | øD2 | ød | L1 | L2 | H | A | | Front Screw | Wrench | Back Screw | Wrench | Back Cover | Back Cover Screw |
| SHC 0840-70 | SHC -084070 | ● | 40 | 56 | 8 | 70 | 16 | 38 | 27 | Fig.1 | HS6X22 | LW-3 | HS6X14 | LW-3 | SHL-4 | HH3X6 |
| 1040-70 | -104070 | ● | | | 10 | | | | | Fig.2 | HS10X10 | LW-5 | HS10X10 | LW-5 | | |
| 1240-70 | -124070 | ● | | | 12 | | | | | | HS10X10 | LW-5 | HS6X6 | LW-3 | | |
| 1640-70 | -164070 | ● | | | 16 | | | | | Fig.1 | HS10X10 | LW-5 | HS6X6 | LW-3 | | |
| 2040-70 | -204070 | ● | | | 20 | | | | | | HS10X10 | LW-5 | HS6X6 | LW-3 | | |
| 2540-70 | -254070 | ● | | | 25 | | | | | | HS10X10 | LW-5 | HS6X6 | LW-3 | | |
| SHC 0850-95 | SHC -085095 | ● | 50 | 65 | 8 | 95 | 16 | 47 | 30.5 | Fig.1 | HS6X22 | LW-3 | HS6X14 | LW-3 | SHL-5 | HH3X12 |
| 1050-95 | -105095 | ● | | | 10 | | | | | Fig.2 | HS10X10 | LW-5 | HS10X10 | LW-5 | | |
| 1250-95 | -125095 | ● | | | 12 | | | | | | HS10X10 | LW-5 | HS10X10 | LW-5 | | |
| 1650-95 | -165095 | ● | | | 16 | | | | | | HS10X10 | LW-5 | HS10X10 | LW-5 | | |
| 2050-95 | -205095 | ● | | | 20 | | | | | | HS10X10 | LW-5 | HS10X10 | LW-5 | | |
| 2550-95 | -255095 | ● | | | 25 | | | | | | HS10X10 | LW-5 | HS10X10 | LW-5 | | |

How to install

1 For Turret Type Toolpost



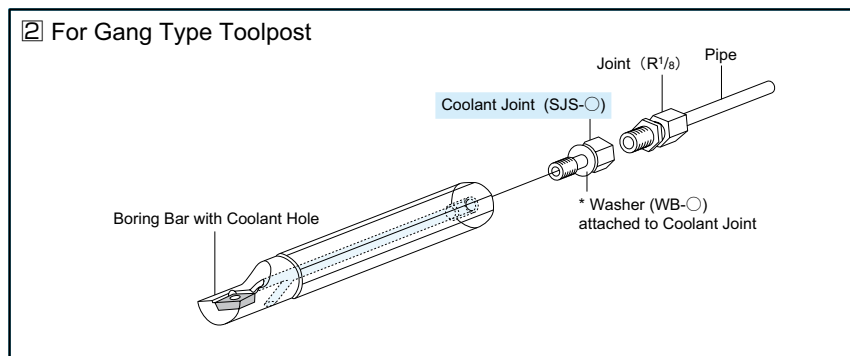
● Coolant Joint Dimension

|  | Description | Std. | Dimension (mm) | | | | Thread (Toolholder Side) | Thread (Joint Side) | Spare Parts | |
|-----------------------------------------------------------------------------------|-------------|------|----------------|----|----|----|--------------------------|---------------------|-------------|------|
| | | | D | L1 | L2 | H | | | Washer | |
| | SJS-5 | ● | 15 | 15 | 7 | 13 | M5XP0.8 | Rc1/8 (PT1/8) | | WB-5 |
| | SJS-6 | ● | | | 9 | | M6XP1.0 | | | WB-6 |
| | SJS-8 | ● | | | 13 | | M8XP1.25 | | | WB-8 |

● List of toolholders and applicable joints

| Toolholder | Applicable Coolant Joint |
|------------|--------------------------|
| A08- | SJS-5 |
| A10- | |
| A12- | |
| A16- | SJS-8 |
| A20- | |
| A25- | |
| E08- | SJS-5 |
| E10- | |
| E12- | |
| E16- | SJS-6 |
| E20- | |
| E20- | SJS-8 |

2 For Gang Type Toolpost



F



Boring





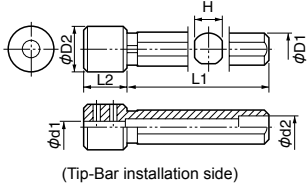
SHA / SH / SHC Sleeves and Applicable Toolholders

| Shank Size Hole dia.: mm | 04 (4mm) | 05 (5mm) | 06 (6mm) | 07 (7mm) | 08 (8mm) | 10 (10mm) | 12 (12mm) | 16 (16mm) | 20 (20mm) | 25 (25mm) |
|----------------------------------------------------|-------------|-------------|-------------|-------------|------------------|------------------|------------------|---------------|---------------|---------------|
| Sleeve Description | SH0416-100 | SH0516-100 | SH0616-100 | SH0716-100 | SH0820-120 | SH1020-120 | SH1225-150 | SH1632-180 | SH2032-180 | |
| | | | | | SHA0819-120 | SHA1019-120 | | | | |
| | | | | | SHA0820-120 | SHA1020-120 | | | | |
| | | | | | SHA0822-125 | SHA1022-125 | SHA1222-125 | | | |
| | | | | | SHA0823-120 | SHA1023-120 | SHA1223-120 | | | |
| | | | | | SHA0825.0-135 | SHA1025.0-135 | SHA1225.0-135 | | | |
| | | | | | SHA0825.4-120 | SHA1025.4-120 | SHA1225.4-120 | | | |
| | | | | | SHC0840-70 | SHC1040-70 | SHC1240-70 | SHC1640-70 | SHC2040-70 | SHC2540-70 |
| Boring Bar Description | | | | | SHC0850-95 | SHC1050-95 | SHC1250-95 | SHC1650-95 | SHC2050-95 | SHC2550-95 |
| | C04-.... | C05-.... | C06-.... | C07-.... | A08-.... | A10-.... | A12-.... | A16-.... | A20-.... | A25-.... |
| | | | | | E08-.... | E10-.... | E12-.... | E16-.... | E20-.... | E25-.... |
| Internal Grooving Toolholder Description | | | S06-.... | | S08-.... | S10-.... | S12-.... | S16-.... | S20-.... | S25-.... |
| | | | | | SIGER1008A-EH | SIGER1010B-EH | SIGER1412C-EH | SIGER1616C-EH | SIGER2020D-EH | SIGER2525E-EH |
| | | | | | | SIGER1210B-EH | SIGER1612C-EH | | | KIGBA13525-16 |
| | | | | | SIGER1008A-WH | SIGER1010B-WH | SIGER1412C-WH | KIGM12016B-3V | KIGM12520B-3V | KIGM13225B-4V |
| | | | | | | SIGER1210B-WH | SIGER1612C-WH | | | KITG13525T-16 |
| | | | | | SIGER1008B-WH-90 | SIGER1210B-WH-90 | SIGER1412C-WH-90 | | | |
| | | | | | | | GIV1412-1SE | GIV1216-1SS | GIV1420-1S | GIV12025-1B |
| | | | | | | | GIV1612-1AE | GIV12016-1BE | GIV1620-1A | GIV12025-2B |
| | | | | | | | | GIV12016-2BE | GIV12520-1CE | GIV13225-1CE |
| | | | | | | | | GIV1616-1AW | GIV12720-2CE | GIV13225-2CE |
| Internal Threading Toolholder Description | | | | | | | | | GIV12020-1BW | GIV12525-1CW |
| | | | | | | | | | GIV12020-2BW | GIV12525-2CW |
| | | | | | | | SINR0612S-06E | SINR0816S-08E | SIN12420S-16 | CIN13025S-16 |
| | | | | | | | | SIN1216S-11E | SINR2420S-22 | CINR3025S-22 |
| | | | | | | | | SIN1516S-11 | | |
| | | | | | | | | SIN12016S-16 | | |

* For SHA sleeves, please see F77.

● : Std. Item

Sleeves for Tip-Bar

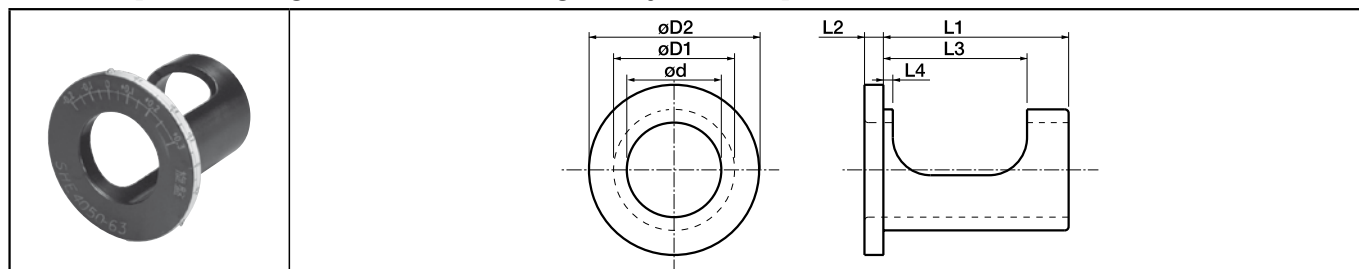
| Shape | Description | (Previous Description) | Std. | Dimension (mm) | | | | | | | Spare Parts | |
|------------------------------------------------------------------------------------------------------------------|-------------|------------------------|------|----------------|-----|-----|------------------|----|----|----|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | | | | | | | | | | | Screw | Wrench |
| | | | | øD1 | øD2 | ød1 | ød2 | H | L1 | L2 |  |  |
|  (Tip-Bar installation side) | PH 0212-60 | PH -0212 | ○ | 12 | 19 | 1.8 | 6 | 11 | 60 | 20 | HS3X4 | LW-1.5 |
| | 0312-60 | -0312 | ○ | | | 2.8 | | | | | | |
| | 0412-60 | -0412 | ○ | | | 3.8 | | | | | | |
| | 0512-60 | -0512 | ○ | | | 4.8 | 8 | | | | HS4X4 | LW-2 |
| | 0612-60 | -0612 | ○ | | | 5.8 | | | | | | |
| | 0712-60 | -0712 | ○ | | | 6.8 | | | | | | |
| | PH 0216-80 | PH -0216 | ○ | 16 | 22 | 1.8 | Rp1/4 (PS1/4) | 15 | 80 | 20 | HS3X4 | LW-1.5 |
| | 0316-80 | -0316 | ○ | | | 2.8 | | | | | | |
| | 0416-80 | -0416 | ○ | | | 3.8 | | | | | | |
| | 0516-80 | -0516 | ○ | | | 4.8 | | | | | HS4X4 | LW-2 |
| | 0616-80 | -0616 | ○ | | | 5.8 | | | | | | |
| | 0716-80 | -0716 | ○ | | | 6.8 | | | | | | |

Description Table for PH Sleeves and Applicable Toolholders

| Shank Size (Hole dia. : mm) | | 02 (1.8mm) | 03 (2.8mm) | 04 (3.8mm) | 05 (4.8mm) | 06 (5.8mm) | 07 (6.8mm) |
|--------------------------------|--------------------|--------------------------|--------------------------|---------------------------|---------------------------|--------------------------|---------------------------|
| PH Sleeve Description | | PH0212-60 | PH0312-60 | PH0412-60 | PH0512-60 | PH0612-60 | PH0712-60 |
| | | PH0216-80 | PH0316-80 | PH0416-80 | PH0516-80 | PH0616-80 | PH0716-80 |
| 1-Edge Tip-Bars | Boring Bars | PSB [®] /L0202- | PSB [®] /L0303- | PSB [®] /L0404- | PSB [®] /L0505- | PSB [®] /L0606- | PSB [®] /L0707- |
| | | | | PSBT [®] /L0415- | PSBT [®] /L0515- | | |
| | Internal Grooving | | | PSG [®] /L0510- | PSG [®] /L0610- | PSG [®] /L0710- | PSG [®] /L0810- |
| | | | | PSG [®] /L0520- | PSG [®] /L0620- | PSG [®] /L0720- | PSG [®] /L0820- |
| | Face Grooving | | | | | | PSFG [®] /L0810- |
| | | | | | | | PSFG [®] /L0820- |
| | Internal Threading | | | | | | PSFG [®] /L0830- |
| | | | | PSTR0604- | PSPR0805- | | |

Adjustable Sleeve

SHE [For cutting dia. / center height adjustment]

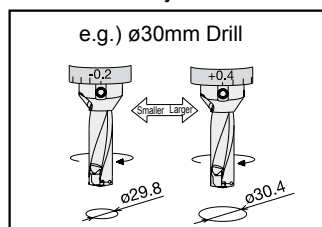


Sleeve Dimensions

| Description | Std. | Dimension (mm) | | | | | | | * Cutting Dia. Adjustable Range | Center Height Adjustable Range |
|--------------------|------|----------------|-----|-----|----|----|----|-----|---------------------------------|--------------------------------|
| | | ød | øD1 | øD2 | L1 | L2 | L3 | L4 | | |
| SHE 2025-43 | ● | 20 | 25 | 41 | 43 | 4 | 36 | 3.0 | +0.4~-0.2 | +0.2~-0.15 |
| 2532-48 | ● | 25 | 32 | 49 | 48 | 6 | 38 | 2.5 | +0.4~-0.2 | +0.2~-0.15 |
| 3240-53 | ● | 32 | 40 | 58 | 53 | 6 | 43 | 2.5 | +0.4~-0.2 | +0.2~-0.15 |
| 4050-63 | ● | 40 | 50 | 74 | 63 | 6 | 49 | 3.0 | +0.6~-0.2 | +0.2~-0.2 |

• Diameter Adjustment Range adjusts the cutting diameter.

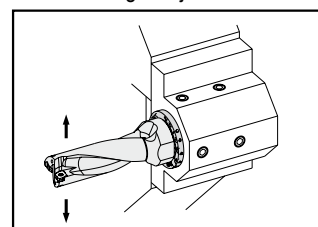
1. Diameter Adjustment ~For Machining Center~



● Diameter Adjustment Range (mm)

| Shank Dia. | Adjustment Range |
|------------|------------------|
| ø20 | +0.4~-0.2 |
| ø25 | |
| ø32 | |
| ø40 | +0.6~-0.2 |

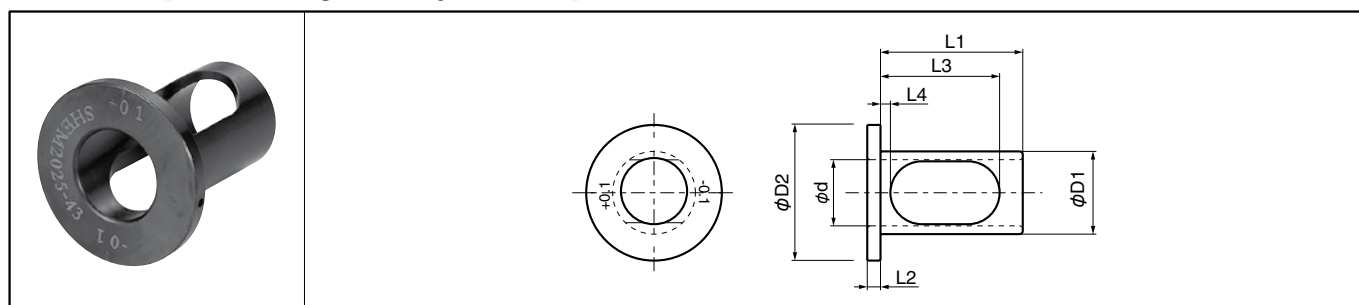
2. Center Height Adjustment ~Relief trouble by height adjustment at lathes~



● Center Height Adjustment Range (mm)

| Shank Dia. | Adjustment Range |
|------------|------------------|
| ø20 | +0.2~-0.15 |
| ø25 | |
| ø32 | |
| ø40 | +0.3~-0.2 |

SHEM [For cutting dia. adjustment]



Sleeve Dimensions

| Description | Std. | Dimension (mm) | | | | | | | *Dia. Adjustment Range |
|---------------------|------|----------------|-----|-----|----|----|----|-----|------------------------|
| | | ød | øD1 | øD2 | L1 | L2 | L3 | L4 | |
| SHEM 2025-43 | ● | 20 | 25 | 41 | 43 | 4 | 36 | 3.0 | +0.1, -0.1 |
| 2032-43 | ● | | 32 | 49 | | 6 | | 2.5 | +0.1, -0.1 |

• Diameter Adjustment Range adjusts the cutting diameter.

Applications of Eccentric Sleeves (SHE/SHEM) (For Side Lock Toolholders)

- When using with a boring bar
 - Simple adjustment of diameter when fine boring is performed by the machining center.
- When using with an indexable end mill
 - Adjustment of groove width (If in use with 1 edge, the groove width can be adjusted within the range of diameter allowed by the eccentric sleeve.)
 - Widening of groove width (If in use with 2 or more edges, only widening is possible for groove width.)
 - Although multiple edges are used, Feed should be input as 1 edge.
- When using with a MEF counterboring end mill
 - Adjustment of counterbore diameter (If in use with 1 edge, the diameter can be adjusted within the range of diameter allowed by the eccentric sleeve.)
 - Broadening of counterbore diameter (If in use with 2 or more edges, only broadening is possible for the diameter.)
 - Although multiple edges are used, Feed should be input as 1 edge.

● How to adjust the processing diameter (See SHE ⚙️ K35, SHEM ⚙️ K41)

- Match the cutting edge (of the reference edge) to the "0" point of diameter adjustment scale of eccentric sleeve.
- For 1 edge
 - Set the point within the range allowed by the diameter adjustment scale of eccentric sleeve.
- For multiple edges
 - Set the point at "0" or more on the diameter adjustment scale of eccentric sleeve.
 - A negative value cannot be specified.

● : Std. Item

F



Boring

Recommended Cutting Conditions

Recommended Cutting Conditions - Boring (Positive Insert: Cutting Dia under 10mm) [ap indicates radius]

| ISO Classification | Workpiece Material | Hardness | Cutting Range | Application | Recommended Chipbreaker | Recommended Grade | Corner R (rε) | Lower Limit - Recommendation - Upper Limit | | |
|--------------------|--------------------------------------------|-----------|--------------------------------------------|-------------------------|-------------------------|-------------------|---------------|--------------------------------------------|----------------------------------------|------------------------------------------|
| | | | | | | | | Vc(m/min) | ap(mm) | f(mm/rev) |
| *P | Low-carbon Steel Low-carbon Alloy | HB ≤ 300 | Finishing (Solid Type) | Continuous Interruption | (VNB) | PR930 | 0.03 0.2 | 30 - 60 - 100 30 - 60 - 80 | 0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | | | Finishing | Continuous Interruption | F, FSF | PR1025 | 0.1 0.2 | 30 - 60 - 100 30 - 60 - 80 | 0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | | | Finishing-Medium | Continuous Interruption | GQ | PR1025 | 0.2 0.4 | 30 - 60 - 100 30 - 60 - 80 | 0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | Medium-carbon Steel Medium-carbon Alloy | HB ≤ 300 | Finishing (Solid Type) | Continuous Interruption | (VNB) | PR930 | 0.03 0.2 | 30 - 60 - 100 30 - 60 - 80 | 0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | | | Finishing | Continuous Interruption | F, FSF | PR1025 | 0.1 0.2 | 30 - 60 - 100 30 - 60 - 80 | 0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | | | Finishing-Medium cutting | Continuous Interruption | GQ | PR1025 | 0.2 0.4 | 30 - 60 - 100 30 - 60 - 80 | 0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | High-carbon Alloy | HB ≤ 280 | Finishing (Solid Type) | Continuous Interruption | (VNB) | PR930 | 0.03 0.2 | 30 - 60 - 100 30 - 50 - 80 | 0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | | | Finishing | Continuous Interruption | F, FSF | PR1225 | 0.1 0.2 | 30 - 60 - 100 30 - 50 - 80 | 0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | | | Finishing-Medium | Continuous Interruption | GQ | PR1225 | 0.2 0.4 | 30 - 60 - 100 30 - 50 - 80 | 0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | Stainless Steel | HB ≤ 220 | Finishing (Solid Type) | Continuous Interruption | (VNB) | PR930 | 0.03 0.2 | 30 - 60 - 100 30 - 50 - 70 | 0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | | | Finishing | Continuous Interruption | F, FSF | PR1225 | 0.1 0.2 | 30 - 60 - 100 30 - 50 - 70 | 0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | | | Finishing-Medium | Continuous Interruption | GQ | PR1225 | 0.2 0.4 | 30 - 60 - 100 30 - 50 - 70 | 0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | | HB ≤ 300 | Finishing (Solid Type) | Continuous Interruption | (VNB) | PR930 | 0.03 0.2 | 30 - 60 - 80 20 - 40 - 60 | 0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | | | Finishing | Continuous Interruption | F, FSF | PR1225 | 0.1 0.2 | 30 - 60 - 80 20 - 40 - 60 | 0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | | | Finishing-Medium | Continuous Interruption | GQ | PR1225 | 0.2 0.4 | 30 - 60 - 80 20 - 40 - 60 | 0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| K | Gray Cast Iron | HB ≤ 250 | Finishing (Solid Type) | Continuous Interruption | (VNB) (VNB-NB) | KW10 | 0.03 0.2 | 30 - 60 - 100 30 - 60 - 100 | 0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | | | Finishing | Continuous Interruption | F | KW10 | 0.1 0.2 | 30 - 60 - 100 30 - 60 - 80 | 0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | | | Finishing-Medium | Continuous Interruption | HQ | CA4505 CA4515 | 0.2 0.4 | 30 - 60 - 100 30 - 60 - 80 | 0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | Nodular Cast Iron | HB ≤ 270 | Finishing (Solid Type) | Continuous Interruption | (VNB) (VNB-NB) | KW10 | 0.03 0.2 | 30 - 60 - 80 30 - 60 - 80 | 0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | | | Finishing | Continuous Interruption | F, U | KW10 | 0.1 0.2 | 30 - 60 - 80 30 - 60 - 80 | 0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| | | | Finishing-Medium | Continuous Interruption | Standard | CA4505 CA4515 | 0.2 0.4 | 30 - 60 - 100 30 - 60 - 80 | 0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3 | 0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1 |
| N | Non-ferrous Metals | HB ≤ 100 | High Speed Cutting (Rainbow Surface Gross) | Continuous | Without Chipbreaker | KPD001 | 0.05 | 150 - 200 - 300 | 0.05 - 0.1 - 0.3 | 0.05 - 0.1 - 0.15 |
| | | | Finishing | Continuous Interruption | F, U | KW10 | 0.1 0.2 | 100 - 150 - 200 100 - 150 - 200 | 0.05 - 0.3 - 0.5 0.05 - 0.3 - 0.5 | 0.03 - 0.1 - 0.2 0.03 - 0.1 - 0.2 |
| S | Titanium Alloy | HB ≤ 400 | Precision Cutting (Rainbow Surface Gross) | Continuous Interruption | Without Chipbreaker | KPD001 | 0.1 0.2 | 100 - 120 - 150 70 - 100 - 120 | 0.05 - 0.1 - 0.3 0.05 - 0.1 - 0.3 | 0.03 - 0.07 - 0.1 0.03 - 0.07 - 0.1 |
| | | | Finishing | Continuous Interruption | F, U | KW10 | 0.1 0.2 | 20 - 40 - 60 20 - 40 - 60 | 0.05 - 0.2 - 0.5 0.05 - 0.2 - 0.5 | 0.03 - 0.1 - 0.2 0.03 - 0.1 - 0.2 |
| | Heat-resistant Alloys | HB ≤ 350 | Finishing (Solid Type) | Continuous Interruption | (VNB) | KW10 | 0.2 0.2 | 10 - 30 - 50 10 - 30 - 50 | 0.05 - 0.1 - 0.3 0.05 - 0.1 - 0.3 | 0.03 - 0.05 - 0.1 0.03 - 0.05 - 0.08 |
| | | | Finishing | Continuous Interruption | F, U | KW10 | 0.2 0.2 | 10 - 30 - 50 10 - 30 - 50 | 0.05 - 0.2 - 0.4 0.05 - 0.2 - 0.4 | 0.03 - 0.05 - 0.1 0.03 - 0.05 - 0.1 |
| H | Hard Materials | 40~50 HRC | Finishing | Continuous Interruption | (VNB) | PR930 | 0.2 0.2 | 30 - 50 - 70 30 - 50 - 70 | 0.05 - 0.1 - 0.4 0.05 - 0.1 - 0.2 | 0.01 - 0.02 - 0.05 0.01 - 0.02 - 0.03 |
| | | 45~68 HRC | Finishing | Continuous Interruption | SE SET | KBN25M | 0.2 0.4 | 60 - 100 - 120 60 - 80 - 100 | 0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2 | 0.02 - 0.05 - 0.1 0.02 - 0.05 - 0.1 |

* Please use it with PR1005 set to Vc=150m/min or below, for machining of free-cutting steel such as small size 11SMn (SUM). For ap and feed, see low carbon steel.

Recommended Cutting Conditions

Recommended Cutting Conditions - Boring (Positive Insert: Cutting Dia over 10mm) [ap indicates radius]

| ISO Classification | Workpiece Material | Hardness | Cutting Range | Application | Recommended Chipbreaker | Recommended Grade | Corner R (rε) | Lower Limit - Recommendation - Upper Limit | | |
|--------------------|--------------------------------------------|-------------|--------------------------------------------|-------------------------|----------------------------------|--------------------|---------------|--------------------------------------------|--------------------------------------|----------------------------------------|
| | | | | | | | | Vc(m/min) | ap(mm) | f(mm/rev) |
| * P | Low-carbon Steel Low-carbon Alloy | HB ≤ 300 | Precision Cutting | Continuous Interruption | FSF, USF | TN6020 PR1025 | 0.1 0.2 | 250 - 300 - 350 100 - 150 - 200 | 0.05 - 0.3 - 0.5 0.05 - 0.3 - 0.5 | 0.03 - 0.1 - 0.15 0.03 - 0.1 - 0.15 |
| | | | Finishing | Continuous Interruption | XP | PV7010 CA5525 | 0.4 0.4 | 200 - 250 - 300 150 - 200 - 250 | 0.2 - 0.5 - 1.0 0.2 - 0.5 - 1.0 | 0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2 |
| | | | Finishing-Medium | Continuous Interruption | XQ | PV7010 CA5525 | 0.4 0.4 | 150 - 200 - 250 100 - 150 - 200 | 0.5 - 1.0 - 2.0 0.5 - 1.0 - 1.5 | 0.1 - 0.15 - 0.25 0.1 - 0.15 - 0.2 |
| | | | Medium cutting | Continuous Interruption | Standard | PV7020 CA5525 | 0.8 0.8 | 100 - 150 - 200 80 - 120 - 150 | 1.0 - 1.5 - 2.5 1.0 - 1.5 - 2.0 | 0.1 - 0.15 - 0.3 0.1 - 0.15 - 0.2 |
| | Medium-carbon Steel Medium-carbon Alloy | HB ≤ 300 | Precision Cutting | Continuous Interruption | FSF, USF | TN6020 PR1025 | 0.2 0.4 | 150 - 200 - 250 100 - 120 - 150 | 0.05 - 0.3 - 0.5 0.05 - 0.3 - 0.5 | 0.03 - 0.1 - 0.15 0.03 - 0.1 - 0.15 |
| | | | Finishing | Continuous Interruption | GP | PV7010 CA5525 | 0.4 0.4 | 150 - 200 - 250 120 - 180 - 200 | 0.2 - 0.5 - 1.0 0.2 - 0.5 - 1.0 | 0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2 |
| | | | Finishing-Medium | Continuous Interruption | HQ | PV7010 CA5525 | 0.4 0.4 | 120 - 180 - 220 100 - 150 - 200 | 0.5 - 1.0 - 2.0 0.5 - 1.0 - 1.5 | 0.1 - 0.15 - 0.25 0.1 - 0.15 - 0.2 |
| | | | Medium cutting | Continuous Interruption | Standard | PV7020 CA5525 | 0.8 0.8 | 100 - 150 - 200 80 - 120 - 150 | 1.0 - 1.5 - 2.5 1.0 - 1.5 - 2.0 | 0.1 - 0.15 - 0.3 0.1 - 0.15 - 0.2 |
| | High-carbon Alloy | HB ≤ 280 | Precision Cutting | Continuous Interruption | FSF, USF | TN6020 PR1025 | 0.2 0.4 | 120 - 150 - 180 100 - 120 - 150 | 0.05 - 0.3 - 0.5 0.05 - 0.3 - 0.5 | 0.03 - 0.1 - 0.15 0.03 - 0.1 - 0.15 |
| | | | Finishing | Continuous Interruption | GP | PV7010 CA5525 | 0.4 0.4 | 120 - 150 - 180 100 - 120 - 150 | 0.2 - 0.5 - 1.0 0.2 - 0.5 - 1.0 | 0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2 |
| | | | Finishing-Medium | Continuous Interruption | HQ | PV7010 CA5525 | 0.4 0.4 | 120 - 150 - 180 100 - 120 - 150 | 0.5 - 1.0 - 2.0 0.5 - 1.0 - 1.5 | 0.1 - 0.15 - 0.25 0.1 - 0.15 - 0.2 |
| | | | Medium cutting | Continuous Interruption | Standard | CA5515 CA5525 | 0.8 0.8 | 100 - 120 - 150 80 - 100 - 120 | 1.0 - 1.5 - 2.5 1.0 - 1.5 - 2.0 | 0.1 - 0.15 - 0.3 0.1 - 0.15 - 0.2 |
| M | Stainless Steel | HB ≤ 220 | Finishing | Continuous Interruption | MQ | CA6525 | 0.4 0.8 | 120 - 150 - 180 100 - 120 - 150 | 0.2 - 0.5 - 0.8 0.2 - 0.5 - 0.8 | 0.05 - 0.08 - 0.1 0.05 - 0.08 - 0.1 |
| | | | Medium cutting | Continuous Interruption | Standard | CA6525 | 0.4 0.8 | 120 - 150 - 180 100 - 120 - 150 | 0.5 - 1.0 - 1.5 0.5 - 1.0 - 1.5 | 0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2 |
| | Stainless Steel | HB ≤ 300 | Finishing | Continuous Interruption | MQ | CA6525 | 0.4 0.8 | 80 - 100 - 120 60 - 80 - 100 | 0.2 - 0.7 - 1.0 0.2 - 0.7 - 1.0 | 0.05 - 0.1 - 0.15 0.05 - 0.1 - 0.15 |
| | | | Medium cutting | Continuous Interruption | Standard | CA6525 | 0.4 0.8 | 80 - 100 - 120 60 - 80 - 100 | 0.5 - 1.0 - 1.5 0.5 - 1.0 - 1.5 | 0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2 |
| K | Gray Cast Iron | HB ≤ 250 | High Speed Cutting | Continuous Interruption | Without Chipbreaker | KBN60M PT600M | 0.4 0.8 | 400 - 500 - 600 200 - 250 - 350 | 0.05 - 0.2 - 0.5 0.2 - 0.5 - 1.0 | 0.05 - 0.1 - 0.15 0.05 - 0.1 - 0.15 |
| | | | Finishing (Gloss Oriented) | Continuous Interruption | Standard | PV7005 TN6020 | 0.8 0.8 | 200 - 250 - 300 100 - 150 - 200 | 0.2 - 0.5 - 1.0 0.2 - 0.5 - 1.0 | 0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2 |
| | | | Finishing | Continuous Interruption | Standard | CA4505 CA4515 | 0.4 0.8 | 150 - 180 - 200 100 - 150 - 180 | 0.2 - 0.5 - 1.0 0.2 - 0.5 - 1.0 | 0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2 |
| | | | Medium cutting | Continuous Interruption | Conventional Without Chipbreaker | CA4505 CA4515 | 0.8 0.8 | 100 - 150 - 200 80 - 120 - 150 | 0.5 - 1.0 - 2.0 0.5 - 1.0 - 2.0 | 0.1 - 0.15 - 0.2 0.05 - 0.1 - 0.15 |
| | Nodular Cast Iron | HB ≤ 270 | High Speed Cutting | Continuous Interruption | Without Chipbreaker | KBN60M PT600M | 0.4 0.8 | 200 - 300 - 400 150 - 200 - 250 | 0.05 - 0.2 - 0.5 0.2 - 0.5 - 1.0 | 0.03 - 0.05 - 0.1 0.05 - 0.1 - 0.15 |
| | | | Finishing (Gloss Oriented) | Continuous Interruption | Standard | PV7005 TN6020 | 0.8 0.8 | 150 - 200 - 250 100 - 120 - 150 | 0.2 - 0.5 - 1.0 0.2 - 0.5 - 1.0 | 0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2 |
| | | | Finishing | Continuous Interruption | Standard | CA4505 CA4515 | 0.4 0.8 | 120 - 150 - 180 100 - 120 - 150 | 0.2 - 0.5 - 1.0 0.2 - 0.5 - 1.0 | 0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2 |
| | | | Medium cutting | Continuous Interruption | Standard | CA4505 CA4515 | 0.8 0.8 | 100 - 120 - 150 80 - 100 - 120 | 0.5 - 1.0 - 2.0 0.5 - 1.0 - 2.0 | 0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.15 |
| N | Non-ferrous Metals | HB ≤ 100 | High Speed Cutting (Rainbow Surface Gross) | Continuous | Without Chipbreaker | KPD001 | 0.2 | 200 - 400 - 1000 | 0.05 - 0.1 - 0.3 | 0.05 - 0.1 - 0.15 |
| | | | Finishing | Continuous Interruption | FSF, USF | KW10 | 0.4 0.4 | 100 - 200 - 400 100 - 200 - 400 | 0.05 - 0.5 - 1.0 0.05 - 0.5 - 1.0 | 0.03 - 0.1 - 0.2 0.03 - 0.1 - 0.2 |
| S | Titanium Alloy | HB ≤ 400 | Precision Cutting (Rainbow Surface Gross) | Continuous Interruption | Without Chipbreaker | KPD001 | 0.2 0.4 | 100 - 120 - 150 70 - 100 - 120 | 0.05 - 0.1 - 0.3 0.05 - 0.1 - 0.3 | 0.03 - 0.07 - 0.1 0.03 - 0.07 - 0.1 |
| | | | Finishing | Continuous Interruption | F, U | KW10 | 0.2 0.4 | 30 - 50 - 70 30 - 50 - 70 | 0.05 - 0.5 - 1.0 0.05 - 0.5 - 1.0 | 0.03 - 0.1 - 0.2 0.03 - 0.1 - 0.2 |
| | Heat-resistant Alloys | HB ≤ 350 | Finishing | Continuous Interruption | F, U | KW10 | 0.4 0.4 | 10 - 30 - 50 10 - 30 - 50 | 0.05 - 0.5 - 1.0 0.05 - 0.5 - 1.0 | 0.03 - 0.1 - 0.2 0.03 - 0.1 - 0.2 |
| | | | Finishing | Continuous Interruption | MQ | PR1310 | 0.4 0.8 | 40 - 60 - 80 40 - 60 - 80 | 0.1 - 0.3 - 0.5 0.1 - 0.3 - 0.5 | 0.03 - 0.05 - 0.1 0.03 - 0.05 - 0.1 |
| H | Hard Materials | 40 ~ 50 HRC | Finishing | Continuous Interruption | HQ Without Chipbreaker | CA5515 | 0.8 0.8 | 60 - 80 - 100 30 - 50 - 70 | 0.05 - 0.3 - 0.5 0.05 - 0.3 - 0.5 | 0.05 - 0.08 - 0.1 0.05 - 0.08 - 0.1 |
| | | 45 ~ 68 HRC | Finishing | Continuous Interruption | Without Chipbreaker | KBN05M SET, MET | 0.4 0.8 | 80 - 120 - 150 60 - 100 - 120 | 0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3 | 0.02 - 0.07 - 0.1 0.02 - 0.07 - 0.1 |
| | | | Medium cutting | Continuous | Without Chipbreaker (Negative) | KBN900 | 0.8 | 60 - 80 - 100 | 0.3 - 0.7 - 1.0 | 0.03 - 0.1 - 0.15 |

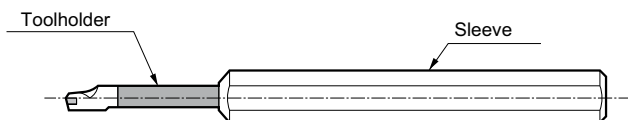
* When machining free-cutting steel such as 11SMn (SUM), please use PR1005 for Vc=200m/min or under and use PV7020 / CA5515, etc. for Vc=200m/min or over.



Boring

C...-AS (Assembly List)

C...-AS (Assembly List)







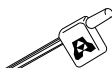
Assembly configuration

| Assembly | Toolholder | Sleeve |
|----------------------------|------------------|-------------|
| Description | Description | Description |
| C04G- SCLCR03-05-AS | C04G- SCLCR03-05 | SH0416-100 |
| SCLCL03-05-AS | SCLCL03-05 | |
| C05H- SWUBR06-06-AS | C05H- SWUBR06-06 | SH0516-100 |
| SWUBL06-06-AS | SWUBL06-06 | |
| C05H- SCLCR03-06-AS | C05H- SCLCR03-06 | SH0516-100 |
| SCLCL03-06-AS | SCLCL03-06 | |
| C06J- SWUBR06-07-AS | C06J- SWUBR06-07 | SH0616-100 |
| SWUBL06-07-AS | SWUBL06-07 | |
| C06J- SCLCR04-07-AS | C06J- SCLCR04-07 | SH0616-100 |
| SCLCL04-07-AS | SCLCL04-07 | |
| C07K- SWUBR08-08-AS | C07K- SWUBR08-08 | SH0716-100 |
| SWUBL08-08-AS | SWUBL08-08 | |
| C07K- SCLCR04-08-AS | C07K- SCLCR04-08 | SH0716-100 |
| SCLCL04-08-AS | SCLCL04-08 | |
| C08L- STUPR08-10-AS | C08L- STUPR08-10 | SH0820-120 |
| C10N- STUPR09-12-AS | C10N- STUPR09-12 | SH1020-120 |
| C10N- STUPR11-12-AS | C10N- STUPR11-12 | |
| C12Q- STUPR09-16-AS | C12Q- STUPR09-16 | SH1225-150 |
| C12Q- STUPR11-14-AS | C12Q- STUPR11-14 | |
| C12Q- STUPR11-16-AS | C12Q- STUPR11-16 | |
| C16X- STUPR11-18-AS | C16X- STUPR11-18 | SH1632-180 |
| C16X- STUPR11-20-AS | C16X- STUPR11-20 | |
| C20S- STUPR11-25-AS | C20S- STUPR11-25 | SH2032-180 |
| C20S- STUPR16-25-AS | C20S- STUPR16-25 | |

* "AS" indicates an assembly of toolholder and sleeve.

You can purchase the toolholder and sleeve and assemble them to make the corresponding assembly part.

Former Parts List (Boring Bar)

| Description (Previous Description) | Spare Parts | | | | |
|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| | Clamp Screw | Wrench | Shim | Shim Screw | Wrench |
| |  |  |  |  |  |
| S32S-SVJB^{R/L} 16-40E S40T-SVJB^{R/L} 16-50E | SB-40115TR | FT-15 | SVN-32 | SB-2050TR | FT-6 |
| S25X-SVPB^{R/L} 16-34E S32S-SVPB^{R/L} 16-40E | | | | | |
| S25X-SVUB^{R/L} 16-34E S32S-SVUB^{R/L} 16-40E | | | | | |
| S25X-SVZB^{R/L} 16-34E S32S-SVZB^{R/L} 16-40E | | | | | |

• S32S-SVJB^{R/L} 16-40E and S40T-SVJB^{R/L} 16-50E have been shifted to A32S-SVJB^{R/L} 16-40AE and A40T-SVJB^{R/L} 16-50AE respectively. See [F51](#)

• S25X-SVPB^{R/L} 16-34E and S32S-SVPB^{R/L} 16-40E have been shifted to A25S-SVPB^{R/L} 16-31AE and A32S-SVPB^{R/L} 16-40AE respectively. See [F51](#)

• S25X-SVUB^{R/L} 16-34E and S32S-SVUB^{R/L} 16-40E have been shifted to A25S-SVUB^{R/L} 16-34AE and A32S-SVUB^{R/L} 16-40AE respectively. See [F53](#)

• S25X-SVZB^{R/L} 16-34E and S32S-SVZB^{R/L} 16-40E have been shifted to A25S-SVZB^{R/L} 16-34AE and A32S-SVZB^{R/L} 16-40AE respectively. See [F53](#)

Alternative Toolholder Reference Table for Boring Bar

Alternative Toolholder Reference Table for Boring Bar

| Conventional Boring Bar | | | | Alternative Toolholder | | | | | | | | | | | |
|---------------------------------|--------------------------------|--------------------------------|--------------------------------|----------------------------------|---------------------------------|---------------------------------|----------------------------------|--------------------------------|--------------------------------|---------------------------------|-----|----|--------------------------------|-----|-----|
| | | | | Dynamic Bar (1st Recommendation) | | | Dynamic Bar (2nd Recommendation) | | | | | | | | |
| Shank | Insert Shape | Coolant Hole | Description | Coolant Hole | Description | Reference Page | Coolant Hole | Description | Reference Page | | | | | | |
| Excellent Bar | CC.. | No | S08X-SCLC [®] /06-10E | Yes | A08X-SCLC [®] /06-10AE | F27 | No | S08X-SCLC [®] /06-10A | F27 | | | | | | |
| | | | S10H-SCLC [®] /03-05E | No | S10H-SCLC [®] /03-05AE | | - | - | | | | | | | |
| | | | S10H-SCLC [®] /03-06E | | S10H-SCLC [®] /03-06AE | | | | | | | | | | |
| | | | S10J-SCLC [®] /04-07E | | S10H-SCLC [®] /04-07AE | | | | | | | | | | |
| | | | S10J-SCLC [®] /04-08E | | S10H-SCLC [®] /04-08AE | | | | | | | | | | |
| | | Yes | A08H-SCLC [®] /06-10E | Yes | A08X-SCLC [®] /06-10AE | No | S08X-SCLC [®] /06-10A | F27 | | | | | | | |
| | | CP.. | No | S10M-SCLP [®] /08-12E | Yes | A10L-SCLP [®] /08-12AE | F31 | No | S10L-SCLP [®] /08-12A | F31 | | | | | |
| | | | | S12M-SCLP [®] /08-14E | | A12M-SCLP [®] /08-14AE | | | S12M-SCLP [®] /08-14A | | | | | | |
| | | | | S12M-SCLP [®] /09-16E | | A12M-SCLP [®] /09-16AE | | | S12M-SCLP [®] /09-16A | | | | | | |
| | | | | S16Q-SCLP [®] /09-18E | | A16Q-SCLP [®] /09-18AE | | | S16Q-SCLP [®] /09-18A | | | | | | |
| | S16R-SCLP [®] /09-20E | | | | | | | | | | | | | | |
| | S20X-SCLP [®] /09-25E | | | A20R-SCLP [®] /09-22AE | | S20R-SCLP [®] /09-22A | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | Yes | | A10X-SCLP [®] /08-12E | Yes | A10L-SCLP [®] /08-12AE | F31 | No | S10L-SCLP [®] /08-12A | F31 | | | | | | |
| | | | A12X-SCLP [®] /08-14E | | A12M-SCLP [®] /08-14AE | | | S12M-SCLP [®] /08-14A | | | | | | | |
| | | | A12X-SCLP [®] /09-16E | | A12M-SCLP [®] /09-16AE | | | S12M-SCLP [®] /09-16A | | | | | | | |
| | | | A16M-SCLP [®] /09-18E | | A16Q-SCLP [®] /09-18AE | | | S16Q-SCLP [®] /09-18A | | | | | | | |
| | | | A16M-SCLP [®] /09-20E | | | | | | | | | | | | |
| | | | A20Q-SCLP [®] /09-25E | | A20R-SCLP [®] /09-22AE | | | S20R-SCLP [®] /09-22A | | | | | | | |
| | | | | | | | | | | | | | | | |
| | DC.. | | No | S10M-SDUC [®] /07-14E | Yes | A10L-SDUC [®] /07-14AE | F35 | No | S10L-SDUC [®] /07-14A | F35 | | | | | |
| | | | | S12M-SDUC [®] /07-16E | | A12M-SDUC [®] /07-16AE | | | S12M-SDUC [®] /07-16A | | | | | | |
| | | | | S16Q-SDUC [®] /07-20E | | A16Q-SDUC [®] /07-20AE | | | S16Q-SDUC [®] /07-20A | | | | | | |
| | | | | S16Q-SDUC [®] /11-25E | | A16Q-SDUC [®] /11-23AE | | | S16Q-SDUC [®] /11-23A | | | | | | |
| | | S20Q-SDUC [®] /11-32E | | A20R-SDUC [®] /11-27AE | | S20R-SDUC [®] /11-27A | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | No | S10M-SDZC [®] /07-14E | Yes | A10L-SDZC [®] /07-14AE | F37 | No | S10L-SDZC [®] /07-14A | F37 | | | | | | |
| | | | S12M-SDZC [®] /07-16E | | A12M-SDZC [®] /07-16AE | | | S12M-SDZC [®] /07-16A | | | | | | | |
| | | | S16Q-SDZC [®] /07-20E | | A16Q-SDZC [®] /07-20AE | | | S16Q-SDZC [®] /07-20A | | | | | | | |
| | | | S16Q-SDZC [®] /11-25E | | A16Q-SDZC [®] /11-23AE | | | S16Q-SDZC [®] /11-23A | | | | | | | |
| | | | S20Q-SDZC [®] /11-32E | | A20R-SDZC [®] /11-27AE | | | S20R-SDZC [®] /11-27A | | | | | | | |
| | | | | | | | | | | | | | | | |
| | TB.. | No | S06H-STUB [®] /06-08E | No | S06H-STLB [®] /06-08AE | F43 | No | S06H-STLB [®] /06-08A | F43 | | | | | | |
| | TP.. | No | S08K-STUP [®] /08-10E | Yes | A08X-STLP [®] /09-10AE | F43 | No | S08X-STLP [®] /09-10A | F43 | | | | | | |
| | | | S10M-STUP [®] /09-12E | | A10L-STLP [®] /09-12AE | | | S10L-STLP [®] /09-12A | | | | | | | |
| | | | S10M-STUP [®] /11-12E | | A10L-STLP [®] /11-12AE | | | S10L-STLP [®] /11-12A | | | | | | | |
| | | | S12M-STUP [®] /11-14E | | A12M-STLP [®] /11-14AE | | | S12M-STLP [®] /11-14A | | | | | | | |
| | | | S12M-STUP [®] /09-16E | | A16Q-STLP [®] /11-18AE | | | S16Q-STLP [®] /11-18A | | | | | | | |
| | | | S12M-STUP [®] /11-16E | | A20R-STLP [®] /11-22AE | | | S20R-STLP [®] /11-22A | | | | | | | |
| | | | S16R-STUP [®] /11-18E | | A25S-STLP [®] /16-27AE | | | S25S-STLP [®] /16-27A | | | | | | | |
| | | | S16R-STUP [®] /11-20E | | | | | | | | | | | | |
| | | | S20X-STUP [®] /11-25E | | | | | | | | | | | | |
| | | | S20X-STUP [®] /16-25E | | | | | | | | | | | | |
| | | | S25X-STUP [®] /16-32E | | | | | | | | | | | | |
| | | | Yes | | A08H-STUP [®] /08-10E | | | Yes | | A08X-STLP [®] /09-10AE | F43 | No | S08X-STLP [®] /09-10A | F43 | |
| | | A10X-STUP [®] /09-12E | | A10L-STLP [®] /09-12AE | S10L-STLP [®] /09-12A | | | | | | | | | | |
| | | A10X-STUP [®] /11-12E | | A10L-STLP [®] /11-12AE | S10L-STLP [®] /11-12A | | | | | | | | | | |
| | | A12X-STUPR09-16E | | A12M-STLPR11-14AE | S12M-STLPR11-14A | | | | | | | | | | |
| | | A12X-STUPR11-16E | | | | | | | | | | | | | |
| | | A12X-STUP [®] /11-14E | | A12M-STLP [®] /11-14AE | S12M-STLP [®] /11-14A | | | | | | | | | | |
| | | A16M-STUP [®] /11-18E | | A16Q-STLP [®] /11-18AE | S16Q-STLP [®] /11-18A | | | | | | | | | | |
| | | A16M-STUP [®] /11-20E | | | | | | | | | | | | | |
| | | A20Q-STUP [®] /11-25E | | A20R-STLP [®] /11-22AE | S20R-STLP [®] /11-22A | | | | | | | | | | |
| | | A20Q-STUP [®] /16-25E | | | | | | | | | | | | | |
| | | A25R-STUP [®] /16-32E | | A25S-STLP [®] /16-27AE | S25S-STLP [®] /16-27A | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | VB.. | | No | S20R-SVJB [®] /11-25E | Yes | A20R-SVJB [®] /11-25AE | | F51 | No | | | S20R-SVJB [®] /11-25A | | F51 |
| | | | | | S25S-SVJB [®] /11-30E | | A25S-SVJB [®] /11-30AE | | | | | | S25S-SVJB [®] /11-30A | | |
| S32S-SVJB [®] /16-40EN | | | | | A32S-SVJB [®] /16-40AE | | S32S-SVJB [®] /16-40A | | | | | | | | |
| S40T-SVJB [®] /16-50EN | | | | | A40T-SVJB [®] /16-50AE | | S40T-SVJB [®] /16-50A | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Note) The corresponding replacements may be different from the conventional parts in minimum processing diameter or applicable insert size. Make sure their specifications referring to the catalog or other documents.



Alternative Toolholder Reference Table for Boring Bar

Alternative Toolholder Reference Table for Boring Bar

| Conventional Boring Bar | | | | Alternative Toolholder | | | | | |
|-------------------------|--------------|--------------|-----------------------------------|----------------------------------|-----------------------------------|----------------|----------------------------------|-----------------------------------|----------------|
| Shank | Insert Shape | Coolant Hole | Description | Dynamic Bar (1st Recommendation) | | | Dynamic Bar (2nd Recommendation) | | |
| | | | | Coolant Hole | Description | Reference Page | Coolant Hole | Description | Reference Page |
| F Excellent Bar | VB.. | No | S12M-SVPB [®] /L 11-20E | Yes | A12M-SVPB [®] /L 11-18AE | F51 | No | S12M-SVPB [®] /L 11-18A | F51 |
| | | | S16Q-SVPB [®] /L 11-25E | | A16Q-SVPB [®] /L 11-22AE | | | S16Q-SVPB [®] /L 11-22A | |
| | | | S25X-SVPB [®] /L 16-34EN | | A25S-SVPB [®] /L 16-31AE | | | S25S-SVPB [®] /L 16-31A | |
| | | | S32S-SVPB [®] /L 16-40EN | | A32S-SVPB [®] /L 16-40AE | | | S32S-SVPB [®] /L 16-40A | |
| | | No | S16Q-SVUB [®] /L 11-20E | Yes | A16Q-SVUB [®] /L 11-20AE | F53 | No | S16Q-SVUB [®] /L 11-20A | F53 |
| | | | S20R-SVUB [®] /L 11-25E | | A20R-SVUB [®] /L 11-25AE | | | S20R-SVUB [®] /L 11-25A | |
| | | | S25X-SVUB [®] /L 16-34EN | | A25S-SVUB [®] /L 16-34AE | | | S25S-SVUB [®] /L 16-34A | |
| | | | S32S-SVUB [®] /L 16-40EN | | A32S-SVUB [®] /L 16-40AE | | | S32S-SVUB [®] /L 16-40A | |
| | | No | S16Q-SVZB [®] /L 11-20E | Yes | A16Q-SVZB [®] /L 11-20AE | F53 | No | S16Q-SVZB [®] /L 11-20A | F53 |
| | | | S20R-SVZB [®] /L 11-25E | | A20R-SVZB [®] /L 11-25AE | | | S20R-SVZB [®] /L 11-25A | |
| | | | S25X-SVZB [®] /L 16-34EN | | A25S-SVZB [®] /L 16-34AE | | | S25S-SVZB [®] /L 16-34A | |
| | | | S32S-SVZB [®] /L 16-40EN | | A32S-SVZB [®] /L 16-40AE | | | S32S-SVZB [®] /L 16-40A | |
| | VC.. | No | S12M-SVJC [®] /L 08-16E | Yes | A12M-SVJC [®] /L 08-16AE | F51 | No | S12M-SVJC [®] /L 08-16A | F51 |
| | | | S16Q-SVJC [®] /L 08-20E | | A16Q-SVJC [®] /L 08-20AE | | | S16Q-SVJC [®] /L 08-20A | |
| | | No | S10M-SVPC [®] /L 08-16E | Yes | A10L-SVPC [®] /L 08-14AE | F51 | No | S10L-SVPC [®] /L 08-14A | F51 |
| | | No | S12M-SVUC [®] /L 08-16E | Yes | A12M-SVUC [®] /L 08-16AE | F53 | No | S12M-SVUC [®] /L 08-16A | F53 |
| | VP.. | No | S12M-SVZC [®] /L 08-16E | Yes | A12M-SVZC [®] /L 08-16AE | F53 | No | S12M-SVZC [®] /L 08-16A | F53 |
| | | | S12M-SVJP [®] /L 08-16E | | A12M-SVJP [®] /L 08-16AE | | | S12M-SVJP [®] /L 08-16A | |
| | WB.. | No | S08K-SWUB [®] /L 08-10E | Yes | A08X-SWUB [®] /L 08-10AE | F57 | No | S08X-SWUB [®] /L 08-10A | F57 |
| | | | S10M-SWUB [®] /L 08-12E | | A10L-SWUB [®] /L 08-12AE | | | S10L-SWUB [®] /L 08-12A | |
| | | | S10H-SWUB [®] /L 06-06E | No | S10H-SWUB [®] /L 06-06AE | | | S10H-SWUB [®] /L 06-06A | |
| | | | S10H-SWUB [®] /L 06-07E | | S10H-SWUB [®] /L 06-07AE | | | S10H-SWUB [®] /L 06-07A | |
| | | | S10J-SWUB [®] /L 08-08E | | S10H-SWUB [®] /L 08-08AE | | | S10H-SWUB [®] /L 08-08A | |
| | WP.. | No | S12M-SWUP [®] /L 11-14E | Yes | A12M-SWUP [®] /L 11-14AE | F57 | No | S12M-SWUP [®] /L 11-14A | F57 |
| | | | S12M-SWUP [®] /L 11-16E | | A16Q-SWUP [®] /L 11-18AE | | | S16Q-SWUP [®] /L 11-18A | |
| | | | S16N-SWUP [®] /L 11-18E | | A16Q-SWUP [®] /L 16-18AE | | | S16Q-SWUP [®] /L 16-18A | |
| | | | S16Q-SWUP [®] /L 16-20E | | A20R-SWUP [®] /L 16-22AE | | | S20R-SWUP [®] /L 16-22A | |
| | | | S20R-SWUP [®] /L 16-25E | | | | | | |
| | | Yes | A12X-SWUP [®] /L 11-14E | Yes | A12M-SWUP [®] /L 11-14AE | F57 | No | S12M-SWUP [®] /L 11-14A | F57 |
| | | | A12X-SWUP [®] /L 11-16E | | A16Q-SWUP [®] /L 11-18AE | | | S16Q-SWUP [®] /L 11-18A | |
| | | | A16M-SWUP [®] /L 11-18E | | A16Q-SWUP [®] /L 16-18AE | | | S16Q-SWUP [®] /L 16-18A | |
| | | | A16M-SWUP [®] /L 16-20E | | A20R-SWUP [®] /L 16-22AE | | | S20R-SWUP [®] /L 16-22A | |
| | | | A20Q-SWUP [®] /L 16-25E | | | | | | |
| Steel Bar | CC.. | Yes | S08X-SCLC [®] /L 06-10 | No | S08X-SCLC [®] /L 06-10A | F27 | Yes | A08X-SCLC [®] /L 06-10AE | F27 |
| | | | A08H-SCLC [®] /L 06-10 | | S10L-SCLC [®] /L 06-12A | | | A10L-SCLC [®] /L 06-12AE | |
| | | | A10X-SCLC [®] /L 06-12 | | | | | | |
| | | | A12X-SCLC [®] /L 06-14 | | S12M-SCLC [®] /L 06-14A | | | A12M-SCLC [®] /L 06-14AE | |
| | | | A12X-SCLC [®] /L 06-16 | | | | | | |
| | | | A12X-SCLC [®] /L 09-16 | | S16Q-SCLC [®] /L 09-18A | | | A16Q-SCLC [®] /L 09-18AE | |
| | | | A16M-SCLC [®] /L 06-20 | | | | | | |
| | | | A16M-SCLC [®] /L 09-18 | | S20R-SCLC [®] /L 09-22A | | | A20R-SCLC [®] /L 09-22AE | |
| | | | A16M-SCLC [®] /L 09-20 | | | | | | |
| | | | A20Q-SCLC [®] /L 09-25 | | | | | | |
| | CP.. | No | S10M-SCLP [®] /L 08-12 | No | S10L-SCLP [®] /L 08-12A | F31 | - | | - |
| | | | S12M-SCLP [®] /L 08-14 | | S12M-SCLP [®] /L 08-14A | | | | |
| | | | S12M-SCLP [®] /L 09-16 | | S12M-SCLP [®] /L 09-16A | | | | |
| | | | S16N-SCLP [®] /L 09-18 | | S16Q-SCLP [®] /L 09-18A | | | | |
| | | | S16Q-SCLP [®] /L 09-20 | | | | | | |
| | | | S20R-SCLP [®] /L 09-25 | | S20R-SCLP [®] /L 09-22A | | | | |
| | | | S25S-SCLP [®] /L 09-30 | | S25S-SCLP [®] /L 09-27A | | | | |
| | DC.. | No | S16Q-SDUC [®] /L 07-14 | No | S16Q-SDUC [®] /L 07-14A | F35 | - | | - |
| | | | S16Q-SDUC [®] /L 07-16 | | S20R-SDUC [®] /L 11-20A | | | | |
| | | | S20R-SDUC [®] /L 11-20 | | S16Q-SDUC [®] /L 11-23A | | | | |
| | | | S25X-SDUC [®] /L 11-25 | | | | No | S25S-SDUC [®] /L 11-32A | F35 |
| | | | S25X-SDUC [®] /L 11-25 | | | | | | |
| | | No | S16Q-SDZC [®] /L 07-14 | No | S16Q-SDZC [®] /L 07-14A | F37 | - | | - |
| | | | S16Q-SDZC [®] /L 07-16 | | S20R-SDZC [®] /L 11-20A | | | | |
| | | | S20R-SDZC [®] /L 11-20 | | S16Q-SDZC [®] /L 11-23A | | | | |
| | | | S25X-SDZC [®] /L 11-25 | | | | No | S25S-SDZC [®] /L 11-32A | F37 |
| | | | S25X-SDZC [®] /L 11-25 | | | | | | |

Note) The corresponding replacements may be different from the conventional parts in minimum processing diameter or applicable insert size. Make sure their specifications referring to the catalog or other documents.

Alternative Toolholder Reference Table for Boring Bar

Alternative Toolholder Reference Table for Boring Bar

| Conventional Boring Bar | | | | Alternative Toolholder | | | | | |
|-------------------------|--------------|--------------|------------------------------------|----------------------------------|----------------------------------|----------------|----------------------------------|-------------|----------------|
| | | | | Dynamic Bar (1st Recommendation) | | | Dynamic Bar (2nd Recommendation) | | |
| Shank | Insert Shape | Coolant Hole | Description | Coolant Hole | Description | Reference Page | Coolant Hole | Description | Reference Page |
| Steel Bar | TB.. | No | S06H-STUB [®] /L 06-08 | No | S06H-STLB [®] /L 06-08A | F43 | - | - | - |
| | TP.. | No | S08K-STUP [®] /L 08-10 | No | S08X-STLP [®] /L 09-10A | F43 | - | - | - |
| | | | S10M-STUP [®] /L 09-12 | | S10L-STLP [®] /L 09-12A | | | | |
| | | | S12M-STUP [®] /L 09-16 | | S12M-STLP [®] /L 11-14A | | | | |
| | | | S16Q-STUP [®] /L 11-20 | | S16Q-STLP [®] /L 11-18A | | | | |
| | | | S20R-STUP [®] /L 11-25 | | S20R-STLP [®] /L 11-22A | | | | |
| | | | S25X-STUP [®] /L 16-32 | | S25S-STLP [®] /L 16-27A | | | | |
| | WB.. | No | S10H-SWUB [®] /L 06-06 | No | S10H-SWUB [®] /L 06-06A | F57 | - | - | - |
| | | | S10H-SWUB [®] /L 06-06-15 | | S10H-SWUB [®] /L 06-07A | | | | |
| | | | S10H-SWUB [®] /L 06-07 | | S10H-SWUB [®] /L 08-08A | | | | |
| | | | S10J-SWUB [®] /L 08-08 | | | | | | |
| | | | S10J-SWUB [®] /L 08-08-20 | | | | | | |
| | | | | | | | | | |
| Carbide Shank Bar | CC.. | No | C04G-SCLC [®] /L 03-05 | No | C04G-SCLC [®] /L 03-05A | F27 | - | - | - |
| | | | C05H-SCLC [®] /L 03-06 | | C05H-SCLC [®] /L 03-06A | | | | |
| | | | C06J-SCLC [®] /L 04-07 | | C06J-SCLC [®] /L 04-07A | | | | |
| | | | C07K-SCLC [®] /L 04-08 | | C07K-SCLC [®] /L 04-08A | | | | |
| | | | C08L-SCLC [®] /L 06-10 | | E08L-SCLC [®] /L 06-10A | | | | |
| | | | E08L-SCLC [®] /L 06-10 | | E08L-SCLC [®] /L 06-10A | | | | |
| | CP.. | No | C10N-SCLP [®] /L 08-12 | Yes | E10N-SCLP [®] /L 08-12A | F31 | - | - | - |
| | | | C10N-SCLPR08-12-1/2 | | E10N-SCLPR08-12A-1/2 | | | | |
| | | | C10N-SCLPR08-12-2/3 | | E10N-SCLPR08-12A-2/3 | | | | |
| | | | C12Q-SCLP [®] /L 09-16 | | E12Q-SCLP [®] /L 08-14A | | | | |
| | | | C12Q-SCLPR09-16-1/2 | | E12Q-SCLPR08-14A-1/2 | | | | |
| | | | C12Q-SCLPR09-16-2/3 | | E12Q-SCLPR08-14A-2/3 | | | | |
| | | | C16X-SCLP [®] /L 09-20 | | E16X-SCLP [®] /L 09-18A | | | | |
| | | | C16X-SCLPR09-20-1/2 | | E16X-SCLPR09-18A-1/2 | | | | |
| | | | C16X-SCLPR09-20-2/3 | | E16X-SCLPR09-18A-2/3 | | | | |
| | | | C20S-SCLP [®] /L 09-25 | | E20S-SCLP [®] /L 09-22A | | | | |
| | | | C20S-SCLPR09-25-1/2 | | E20S-SCLPR09-22A-1/2 | | | | |
| | | | C20S-SCLPR09-25-2/3 | | E20S-SCLPR09-22A-2/3 | | | | |
| | | Yes | E10N-SCLP [®] /L 08-12 | Yes | E10N-SCLP [®] /L 08-12A | F31 | - | - | - |
| | | | E12Q-SCLP [®] /L 09-16 | | E12Q-SCLP [®] /L 08-14A | | | | |
| | | | E16X-SCLP [®] /L 09-20 | | E16X-SCLP [®] /L 09-18A | | | | |
| | | | E20S-SCLP [®] /L 09-25 | | E20S-SCLP [®] /L 09-22A | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | DC.. | No | C10N-SDUC [®] /L 07-14 | Yes | E10N-SDUC [®] /L 07-14A | F35 | - | - | - |
| | | | C12Q-SDUC [®] /L 07-16 | | E12Q-SDUC [®] /L 07-16A | | | | |
| | | | C12Q-SDUC [®] /L 11-20 | | E12Q-SDUC [®] /L 07-16A | | | | |
| | | | C16X-SDUC [®] /L 11-25 | | E16X-SDUC [®] /L 11-23A | | | | |
| | | | C20S-SDUC [®] /L 11-32 | | E20S-SDUC [®] /L 11-27A | | | | |
| | | | | | | | | | |
| | TB.. | No | C10L-STUB [®] /L 06-08 | No | C06J-STLB [®] /L 06-08A | F43 | - | - | - |
| | TP.. | No | C08L-STUP [®] /L 08-10 | Yes | E08L-STLP [®] /L 09-10A | | | | |
| | | | C10N-STUP [®] /L 09-12 | | E10N-STLP [®] /L 09-12A | | | | |
| | | | C10N-STUPR09-12-1/2 | | E10N-STLPR09-12A-1/2 | | | | |
| | | | C10N-STUPR09-12-2/3 | | E10N-STLPR09-12A-2/3 | | | | |
| | | | C10N-STUP [®] /L 11-12 | | E10N-STLP [®] /L 11-12A | | | | |
| | | | C10N-STUPR11-12-1/2 | | E10N-STLPR11-12A-1/2 | | | | |
| | | | C10N-STUPR11-12-2/3 | | E10N-STLPR11-12A-2/3 | | | | |
| | | | C12Q-STUP [®] /L 11-14 | | E12Q-STLP [®] /L 11-14A | | | | |
| | | | C12Q-STUPR11-14-1/2 | | E12Q-STLPR11-14A-1/2 | | | | |
| | | | C12Q-STUPR11-14-2/3 | | E12Q-STLPR11-14A-2/3 | | | | |
| | | | C12Q-STUP [®] /L 09-16 | | E12Q-STLP [®] /L 11-14A | | | | |
| | | | C12Q-STUPR09-16-1/2 | | E12Q-STLPR11-14A-1/2 | | | | |
| | | | C12Q-STUPR09-16-2/3 | | E12Q-STLPR11-14A-2/3 | | | | |
| | | | C12Q-STUP [®] /L 11-16 | | E12Q-STLP [®] /L 11-14A | | | | |
| | | | C12Q-STUPR11-16-1/2 | | E12Q-STLPR11-14A-1/2 | | | | |
| | | | C12Q-STUPR11-16-2/3 | | E12Q-STLPR11-14A-2/3 | | | | |

Note) The corresponding replacements may be different from the conventional parts in minimum processing diameter or applicable insert size. Make sure their specifications referring to the catalog or other documents.



Alternative Toolholder Reference Table for Boring Bar

Alternative Toolholder Reference Table for Boring Bar

| Conventional Boring Bar | | | | Alternative Toolholder | | | | | |
|-------------------------|--------------|--------------|--------------------------------|----------------------------------|---------------------------------|----------------|----------------------------------|-------------|----------------|
| | | | | Dynamic Bar (1st Recommendation) | | | Dynamic Bar (2nd Recommendation) | | |
| Shank | Insert Shape | Coolant Hole | Description | Coolant Hole | Description | Reference Page | Coolant Hole | Description | Reference Page |
| Excellent Bar | TP.. | No | C16X-STUP [®] /L11-18 | Yes | E16X-STLP [®] /L11-18A | F43 | - | - | - |
| | | | C16X-STUPR11-18-1/2 | | E16X-STLPR11-18A-1/2 | | | | |
| | | | C16X-STUPR11-18-2/3 | | E16X-STLPR11-18A-2/3 | | | | |
| | | | C16X-STUP [®] /L11-20 | | E16X-STLP [®] /L11-18A | | | | |
| | | | C16X-STUPR11-20-1/2 | | E16X-STLPR11-18A-1/2 | | | | |
| | | | C16X-STUPR11-20-2/3 | | E16X-STLPR11-18A-2/3 | | | | |
| | | | C20S-STUP [®] /L11-25 | | E20S-STLP [®] /L11-22A | | | | |
| | | | C20S-STUPR11-25-1/2 | | E20S-STLPR11-22A-1/2 | | | | |
| | | | C20S-STUPR11-25-2/3 | | E20S-STLPR11-22A-2/3 | | | | |
| | | | C20S-STUP [®] /L16-25 | | E20S-STLP [®] /L11-22A | | | | |
| | | | C20S-STUPR16-25-1/2 | | E20S-STLPR11-22A-1/2 | | | | |
| | | | C20S-STUPR16-25-2/3 | | E20S-STLPR11-22A-2/3 | | | | |
| | | Yes | E08L-STUP [®] /L08-10 | Yes | E08L-STLP [®] /L09-10A | F43 | - | - | - |
| | | | E10N-STUP [®] /L09-12 | | E10N-STLP [®] /L09-12A | | | | |
| | | | E10N-STUP [®] /L11-12 | | E10N-STLP [®] /L11-12A | | | | |
| | | | E12Q-STUP [®] /L09-16 | | E12Q-STLP [®] /L11-14A | | | | |
| | | | E12Q-STUP [®] /L11-14 | | E12Q-STLP [®] /L11-14A | | | | |
| | | | E12Q-STUP [®] /L11-16 | | E12Q-STLP [®] /L11-14A | | | | |
| | | | E16X-STUP [®] /L11-18 | | E16X-STLP [®] /L11-18A | | | | |
| | | | E16X-STUP [®] /L11-20 | | E16X-STLP [®] /L11-18A | | | | |
| | | | E20S-STUPR11-25 | | E20S-STLPR11-22A | | | | |
| | | | E20S-STUPR16-25 | | E20S-STLPR11-22A | | | | |
| | WB.. | No | C05H-SWUB [®] /L06-06 | No | C05H-SWUB [®] /L06-06A | F57 | - | - | - |
| | | | C06J-SWUB [®] /L06-07 | | C06J-SWUB [®] /L06-07A | | | | |
| | | | C07K-SWUB [®] /L08-08 | | C07K-SWUB [®] /L08-08A | | | | |
| | | | C08L-SWUB [®] /L08-10 | Yes | E08L-SWUB [®] /L08-10A | | | | |
| | | | C10N-SWUB [®] /L08-12 | | E10N-SWUB [®] /L08-12A | | | | |
| | | | C10N-SWUBR08-12-1/2 | | E10N-SWUBR08-12A-1/2 | | | | |
| | WP.. | No | C10N-SWUBR08-12-2/3 | Yes | E10N-SWUBR08-12A-2/3 | F57 | - | - | - |
| | | | C12Q-SWUP [®] /L11-14 | | E12Q-SWUP [®] /L11-14A | | | | |
| | | | C12Q-SWUPR11-14-1/2 | | E12Q-SWUPR11-14A-1/2 | | | | |
| | | | C12Q-SWUPR11-14-2/3 | | E12Q-SWUPR11-14A-2/3 | | | | |
| | | | C12Q-SWUP [®] /L11-16 | | E12Q-SWUP [®] /L11-14A | | | | |
| | | | C12Q-SWUPR11-16-1/2 | | E12Q-SWUPR11-14A-1/2 | | | | |
| | | | C12Q-SWUPR11-16-2/3 | | E12Q-SWUPR11-14A-2/3 | | | | |
| | | | C16X-SWUP [®] /L11-18 | | E16X-SWUP [®] /L11-18A | | | | |
| | | | C16X-SWUPR11-18-1/2 | | E16X-SWUPR11-18A-1/2 | | | | |
| | | | C16X-SWUPR11-18-2/3 | | E16X-SWUPR11-18A-2/3 | | | | |
| | | | C16X-SWUP [®] /L16-20 | | E16X-SWUP [®] /L16-18A | | | | |
| | | | C16X-SWUPR16-20-1/2 | | E16X-SWUPR16-18A-1/2 | | | | |
| | | | C16X-SWUPR16-20-2/3 | | E16X-SWUPR16-18A-2/3 | | | | |
| | | | C20S-SWUP [®] /L16-25 | | E20S-SWUP [®] /L16-22A | | | | |
| | | | C20S-SWUPR16-25-1/2 | | E20S-SWUPR16-22A-1/2 | | | | |
| | | | C20S-SWUPR16-25-2/3 | | E20S-SWUPR16-22A-2/3 | | | | |

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