



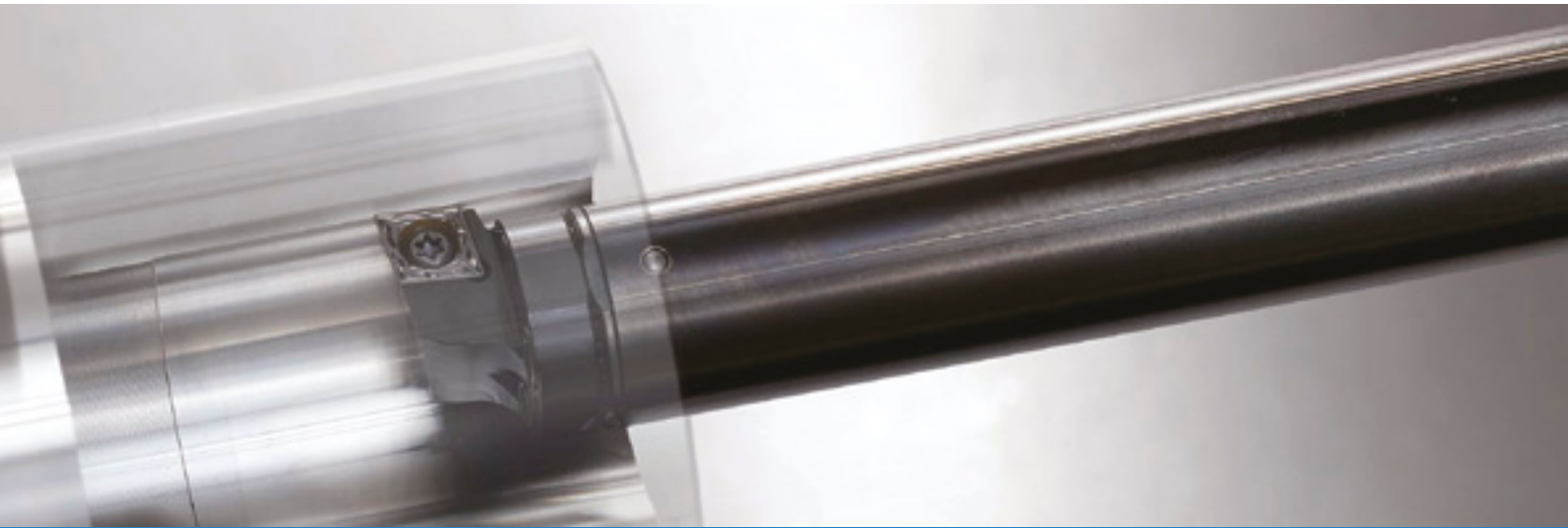
Interchangeable head boring bars
with anti-vibration dampener system

KAV series

THIEME Zerspanen
Spannen
Messen

KAV series

NEW



»Max L/D = 10« solves deep-boring challenges with superior chatter resistance

Unique anti-vibration mechanism provides superior anti-chatter performance

Shank diameters from 16 mm to 40 mm (Max L/D = 7, 10)

Variety of internal machining processes possible with interchangeable heads

Strong hold with serrated joint structure

Easy cutting edge adjustment with E-sleeve design

Easy machining setup.



**KEEPS YOU
AHEAD**



Interchangeable head boring bars with anti-vibration dampener system

KAV Series

"Max L/D = 10" solves deep-boring challenges

Excellent anti-chatter performance due to unique anti-vibration design and available for a wide range of machining operations

| Anti-vibration | Controlled deep boring



Shank line-up

Shank diameters, from 16 mm to 40 mm with L/D = 7 and 10, are available. Carbide reinforced style also available.

| Shank diameter | Available overhang length range | Type |
|-------------------|---|-----------------------|
| ø16 ø20 |  $L/D = 4 \sim 7$ | Steel |
| |  $L/D = 7 \sim 10$ | Carbide reinforcement |
| ø25 ø32 ø40 |  $L/D = 4 \sim 7$ | Steel |
| |  $L/D = 7 \sim 10$ | Steel |



Unique anti-vibration mechanism

Built-in proprietary damper technology dampens vibration. Superior anti-chatter performance over carbide.



Interchangeable head type

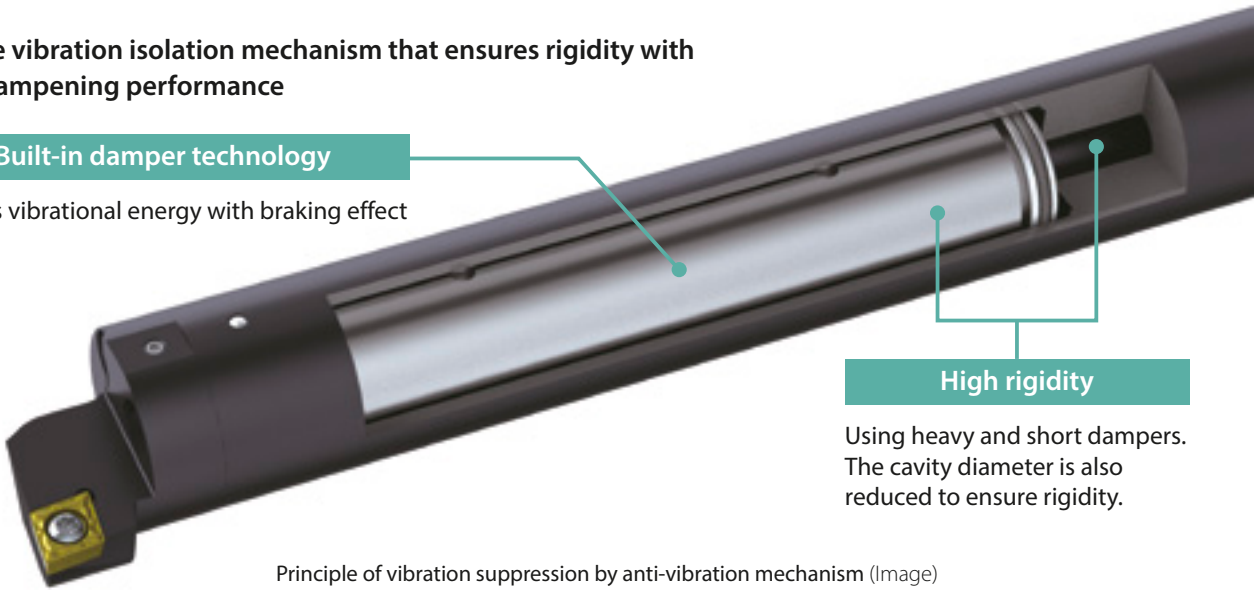
Interchangeable heads for a variety of machining applications. Strong fastening with serrated joint structure.

1 Unique anti-vibration mechanism provides superior chatter resistance

Unique vibration isolation mechanism that ensures rigidity with high dampening performance

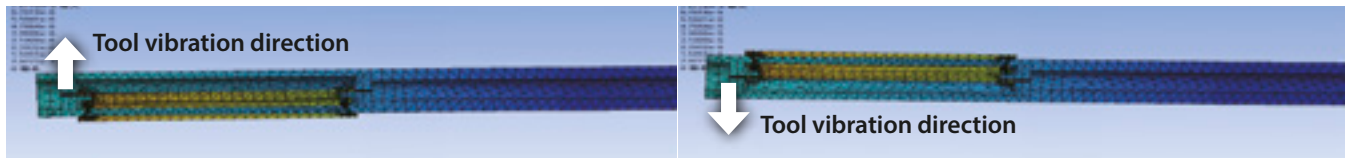
Built-in damper technology

Absorbs vibrational energy with braking effect



Using heavy and short dampers. The cavity diameter is also reduced to ensure rigidity.

Principle of vibration suppression by anti-vibration mechanism (Image)



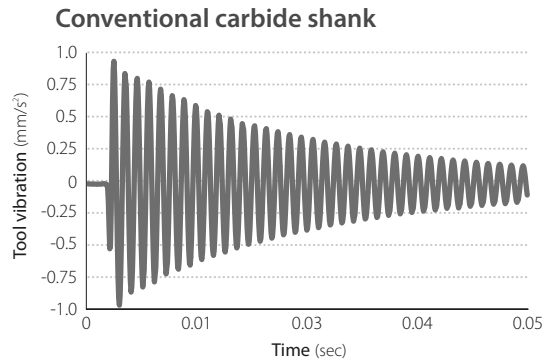
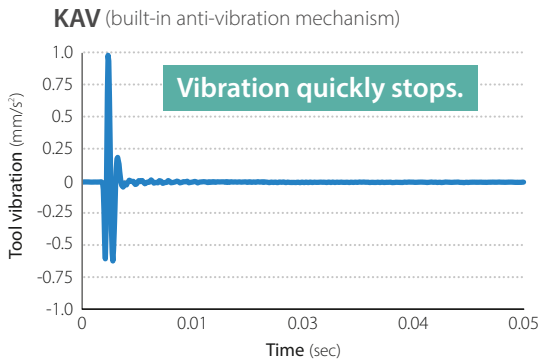
The damper vibrates late against the shank. Effective for vibration damping



Available up to L/D = 10. Excellent anti-vibration performance over conventional carbide shanks

Hammering test (Internal evaluation)

Hammer impacts to the head of the tool (ø20, Overhang length 10D)



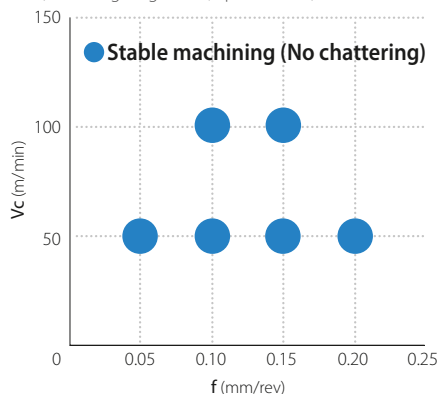
10D Shank Anti-vibration performance (Internal evaluation)

KAV maintains stable machining

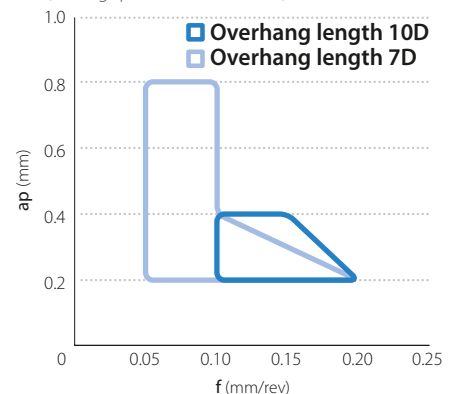


KAV-G20-10D / KAVH20-SCLCR09
CCMT09T304PP
Overhang length: 140 mm (7D) / 200 mm (10D)
Workpiece: SCM435

Stable machining area map (Overhang length 10D, ap = 0.4 mm)



Stable machining area map (Cutting speed Vc = 100 m/min)



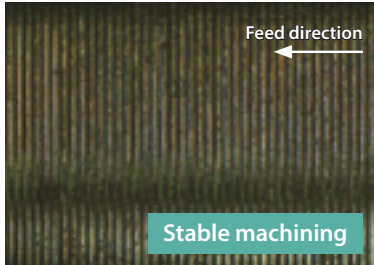
Unique anti-vibration mechanism provides superior anti-chatter performance against competitors

Anti-vibration performance comparison (Internal evaluation)

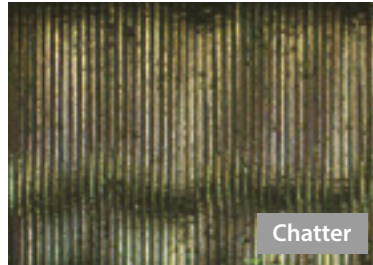
Competitors produced chattering. KAV maintains stable machining.



KAV



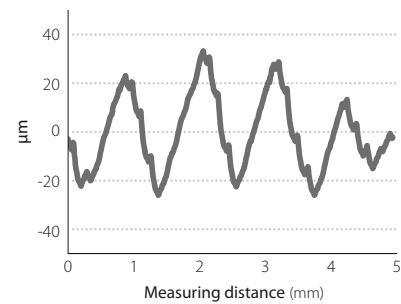
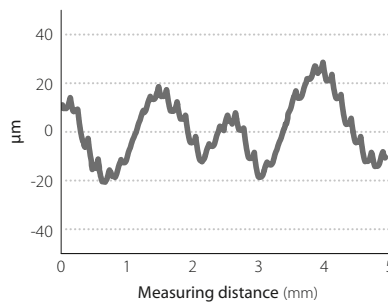
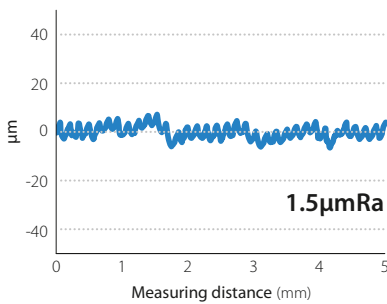
Competitor A (anti-vibration type)



Competitor B (anti-vibration type)



Surface roughness



Cutting conditions: $V_c = 150$ m/min, $a_p = 0.4$ mm, $f = 0.15$ mm/rev Workpiece: SCM435 Overhang length 320 mm

Case studies

1 Mechanical parts (Worm gears) S45C

Shank: KAV-G16-10D
Head: KAVH16-SDUCR07
Insert: DCGT070202EL-U (PV720)

$V_c = 50$ m/min
 $A_p = 0.05$ mm
 $f = 0.2$ mm/rev Wet

Overhang length: $\phi 16$ -160 mm (10D)



(User evaluation)

2 Mechanical parts (Worm gears) SCM435

Shank: KAV-D32-10D
Head: KAVH32-PDUNR11
Insert: DNMG110404HQ (CA515)

$V_c = 180$ m/min
 $A_p = 0.15$ mm
 $f = 0.2$ mm/rev Wet

Overhang length: $\phi 32$ -200 mm (6.2D)



(User evaluation)

3 Auto parts (Differential case) FCD700

Shank: KAV-G20-10D
Head: KAVH20-STLPR11
Insert: TPGB110308 (PV7005)

$V_c = 140$ m/min
 $A_p = 0.2$ mm
 $f = 0.12$ mm/rev Wet

Overhang length: $\phi 20$ -160 mm (8D)



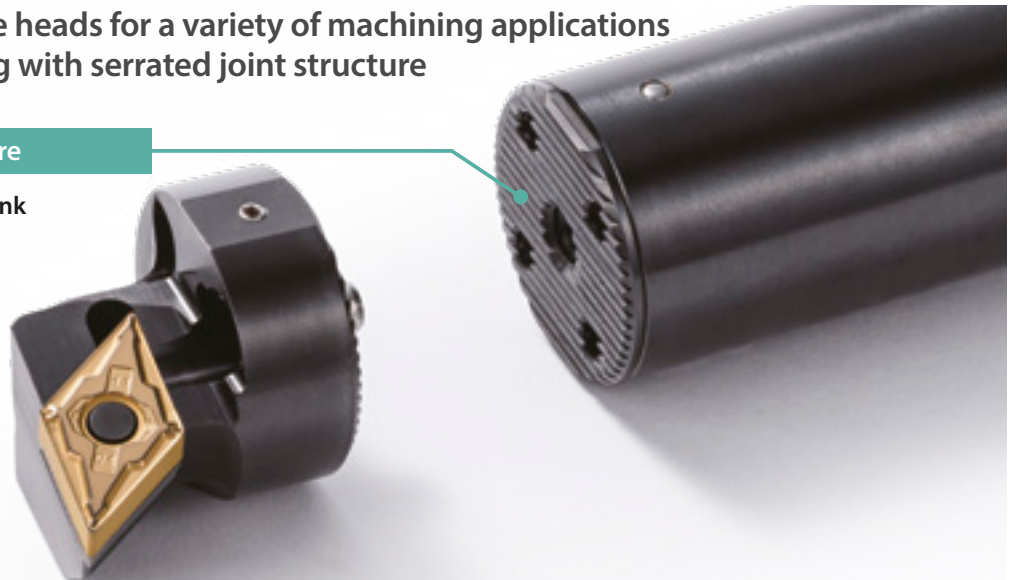
(User evaluation)

2

Interchangeable heads for a variety of machining applications Strong fastening with serrated joint structure

Serrated structure

Securely fastens head and shank



Internal coolant recommended

Internal coolant recommended to prevent damage to anti-vibration mechanism

When using our plumbing parts:
Supports pressures up to 7 MPa
(some items are only recommended up to 1 MPa)



Coolant pipe connections: See page 11

Head line-up

| Shank diameter | Positive type (Screw clamp) | | | | Negative type (Lever lock) | | |
|----------------|-----------------------------|------|------|------|----------------------------|------|------|
| | SCLC | SDUC | STLP | SVUB | PCLN | PDUN | PTFN |
| ø16 | ● | ● | ● | | | | |
| ø20 | ● | ● | ● | ● | | | |
| ø25 | ● | ● | ● | ● | | | |
| ø32 | ● | ● | ● | ● | ● | ● | ● |
| ø40 | ● | ● | ● | ● | ● | ● | ● |

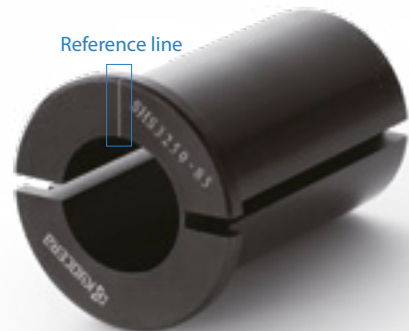
3

Easy cutting edge adjustment with E-sleeve Smooth machining setup

E-sleeve (Sold separately)

Separated structure with printed reference lines
Easy adjustment reduces setup time

Reference line



Adjusting the cutting edge position

Exclusive sleeve (E-sleeve)

Adjusting the cutting edge position with a reference line



Reference line

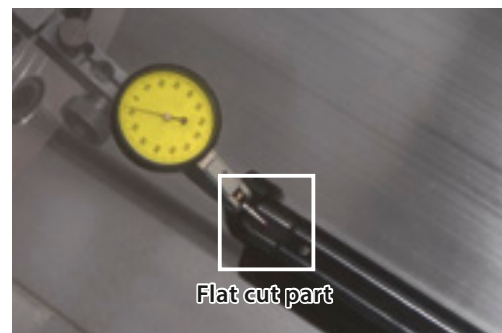


Instruction video

Adjusting the cutting edge position is easy by simply aligning the reference line between the shank and the sleeve.

Conventional sleeve

Adjusting the cutting edge position with the flat cut part of the head



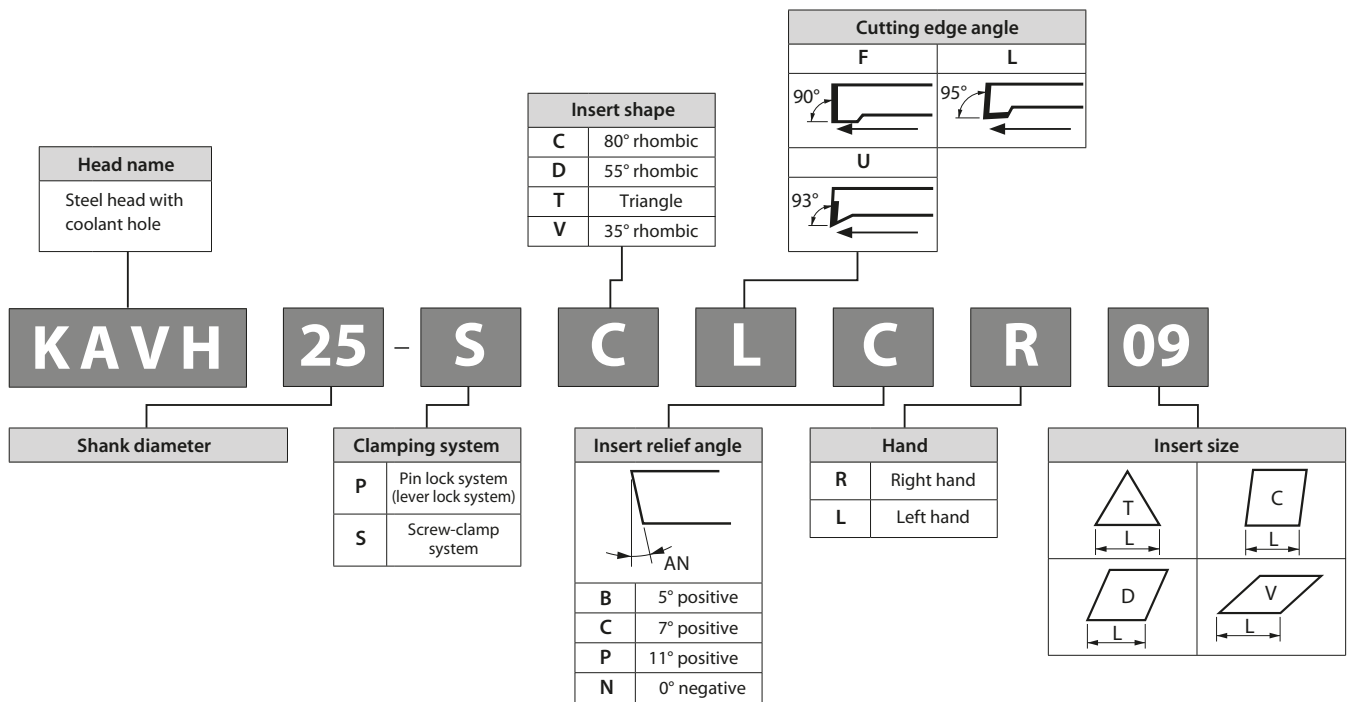
Flat cut part



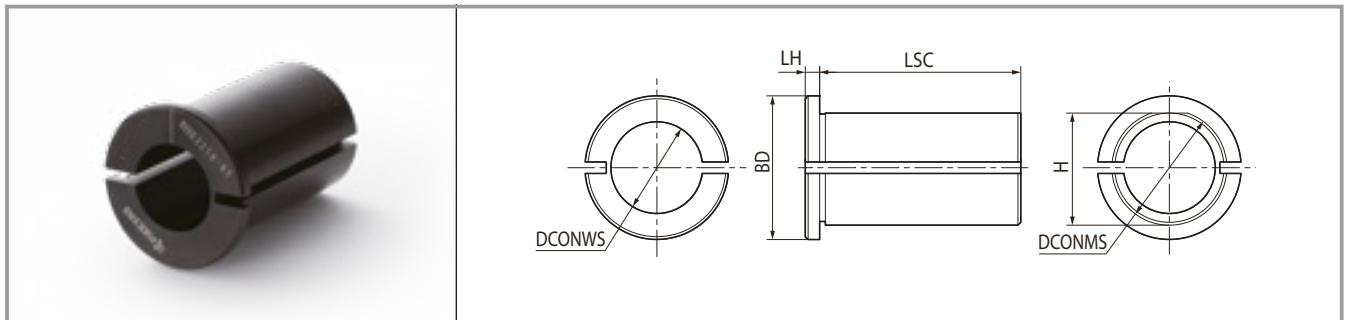
Instruction video

Adjust the flat cut part of the head by moving the tool while applying a dial gauge, etc.

Replaceable boring bar head identification system



Sleeve for KAV (E-sleeve)



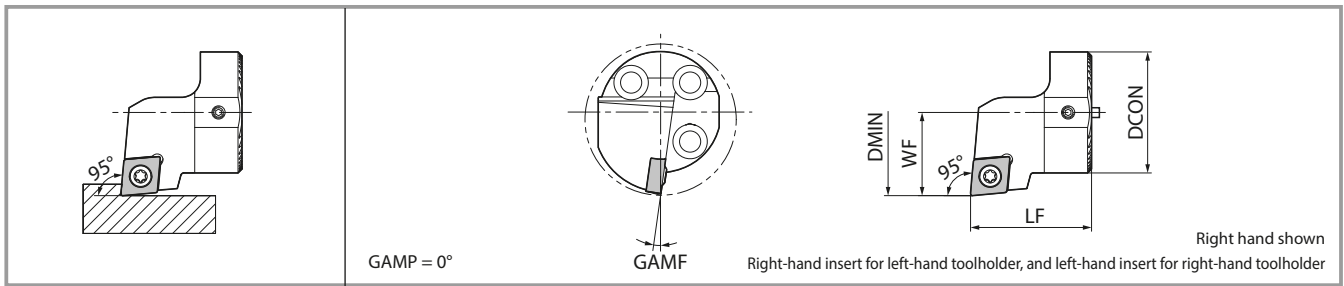
Sleeve dimensions

| Description | Availability | Dimensions (mm) | | | | | | Applicable shank |
|-------------|--------------|-----------------|--------|----|-----|----|------|------------------|
| | | DCONMS | DCONWS | BD | LSC | LH | H | |
| SHS 1640-75 | ● | 40 | 16 | 50 | 70 | 5 | 39 | KAV-D16-7D/10D |
| | ● | | 20 | | | | | KAV-D20-7D/10D |
| | ● | | 25 | | | | | KAV-G20-10D |
| | ● | | 32 | | | | | KAV-D25-7D/10D |
| SHS 2550-85 | ● | 50 | 25 | 60 | 80 | 5 | 48.5 | KAV-D25-7D/10D |
| | ● | | 32 | | | | | KAV-D32-7D/10D |
| | ● | | 40 | | | | | KAV-D40-7D/10D |


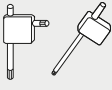
Choose the sleeve DCONWS together with the shank DCONMS.

●: Available

KAVH-SCLC (Internal/internal facing, screw clamp)



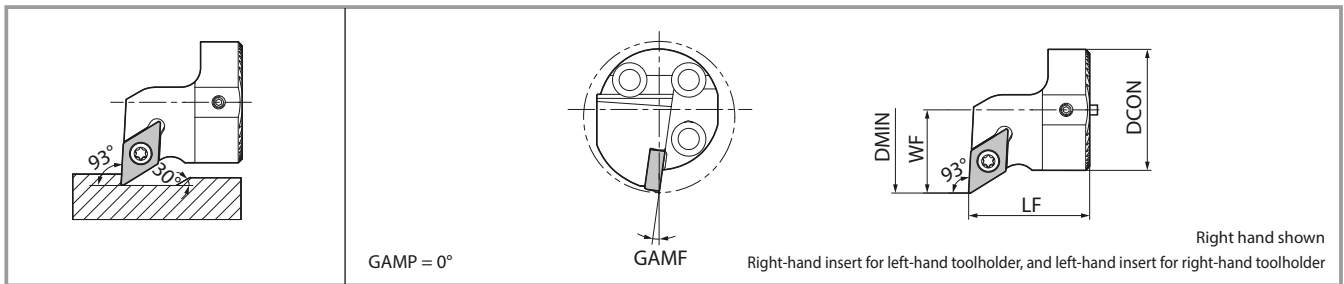
Toolholder dimensions

| Description | Availability | | Dimensions (mm) | | | | LAMS (°) | Std. Corner R (RE) | Spare parts | | Applicable shank | Applicable insert |
|--------------------|--------------|---|-----------------|------|----|----|----------|--------------------|---|--|------------------|--|
| | R | L | DMIN | DCON | LF | WF | | | Clamp screw | Wrench | | |
| | | | | | | | | |  |  | | |
| KAVH 16-SCLC 95/06 | ● | ● | 20 | 16 | 20 | 11 | -7 | 0.4 | SB-2545TR | FT-8 | KAV-D16/G16... | CC <input type="checkbox"/> T0602... CC <input type="checkbox"/> W0602... |
| KAVH 20-SCLC 95/09 | ● | ● | 25 | 20 | 20 | 13 | -8 | 0.4 | SB-4065TR | FT-15 | KAV-D20/G20... | CC <input type="checkbox"/> T09T3... CC <input type="checkbox"/> W09T3... |
| 25-SCLC 95/09 | ● | ● | 32 | 25 | | 17 | | | | | | |
| 32-SCLC 95/09 | ● | ● | 40 | 32 | | 22 | | | | | | |
| 40-SCLC 95/09 | ● | ● | 50 | 40 | 32 | 27 | -7 | | | | KAV-D40... | |


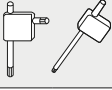
When using the P chipbreaker, use right-hand insert for right-hand toolholder and left-hand insert for left-hand toolholder.

● Available

KAVH-SDUC (Copying, screw clamp)



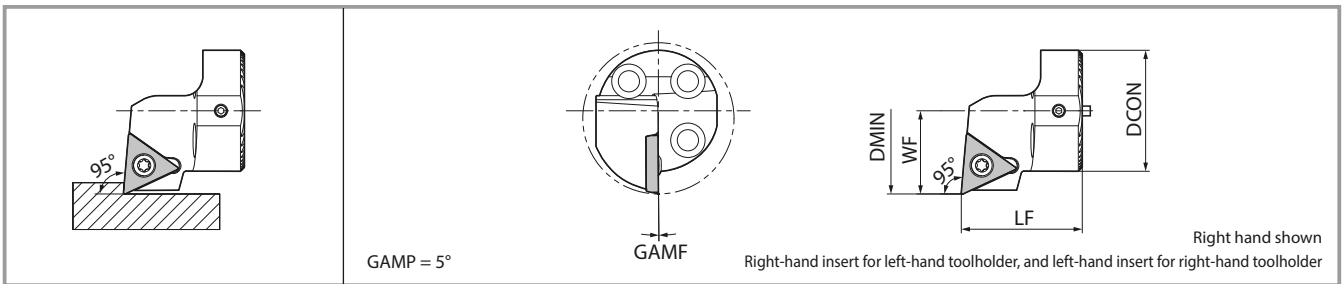
Toolholder dimensions

| Description | Availability | | Dimensions (mm) | | | | LAMS (°) | Std. corner R (RE) | Spare parts | | Applicable shank | Applicable insert |
|--------------------|--------------|---|-----------------|------|----|----|----------|--------------------|---|--|------------------|--|
| | R | L | DMIN | DCON | LF | WF | | | Clamp screw | Wrench | | |
| | | | | | | | | |  |  | | |
| KAVH 16-SDUC 95/07 | ● | ● | 20 | 16 | 20 | 11 | -7 | 0.4 | SB-2545TR | FT-8 | KAV-D16/G16... | DC <input type="checkbox"/> T0702... DC <input type="checkbox"/> W0702... DC <input type="checkbox"/> X0702... |
| KAVH 20-SDUC 95/11 | ● | ● | 25 | 20 | 20 | 13 | -8 | 0.4 | SB-4065TR | FT-15 | KAV-D20/G20... | DC <input type="checkbox"/> T11T3... DC <input type="checkbox"/> W11T3... DC <input type="checkbox"/> X11T3... |
| 25-SDUC 95/11 | ● | ● | 32 | 25 | | 17 | | | | | | |
| 32-SDUC 95/11 | ● | ● | 40 | 32 | | 22 | | | | | | |
| 40-SDUC 95/11 | ● | ● | 50 | 40 | 32 | 27 | -7 | | | | KAV-D40... | |


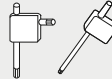
When using a WP chipbreaker, you need to correct the cutting edge position or the machining program.

● Available

KAVH-STLP (Internal/external facing, screw Ccamp)



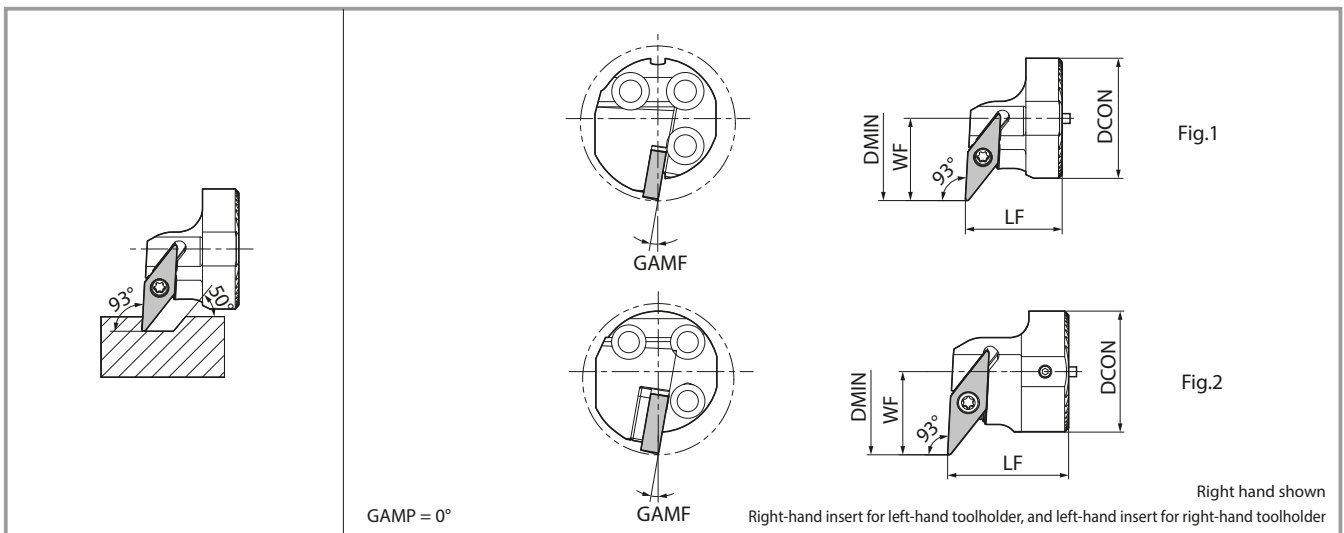
Toolholder dimensions

| Description | Availability | | Dimensions (mm) | | | | LAMS (°) | Std. corner R (RE) | Spare parts | | Applicable shank | Applicable insert |
|-------------------------------|--------------|---|-----------------|------|----|----|----------|--------------------|---|--|--------------------------------------|--|
| | R | L | DMIN | DCON | LF | WF | | | Clamp screw | Wrench | | |
| | | | | | | | | |  |  | | |
| KAVH 16-STLP $\frac{R}{L}$ 11 | ● | ● | 20 | 16 | 20 | 11 | -3.5 | 0.4 | SB-3060TR | FT-10 | KAV-D16/G16... | TP <input type="checkbox"/> T1103... |
| 20-STLP $\frac{R}{L}$ 11 | ● | ● | 25 | 20 | | 13 | -2 | | KAV-D20/G20... | | TP <input type="checkbox"/> H1103... | |
| 25-STLP $\frac{R}{L}$ 11 | ● | ● | 32 | 25 | | 17 | 0 | | KAV-D25... | | TP <input type="checkbox"/> X1103... | |
| KAVH 32-STLP $\frac{R}{L}$ 16 | ● | ● | 40 | 32 | 32 | 22 | 0 | 0.4 | SB-4065TR | FT-15 | KAV-D32... | TP <input type="checkbox"/> T1603... |
| 40-STLP $\frac{R}{L}$ 16 | ● | ● | 50 | 40 | | 27 | | | | | KAV-D40... | TP <input type="checkbox"/> H1603... TP <input type="checkbox"/> B1603... |






When using a WP chipbreaker insert, you need to correct the cutting edge position or the machining program.
When using the P chipbreaker, use right-hand insert for right-hand toolholder and left-hand insert for left-hand toolholder.

●: Available

KAVH-SVUB (Copying, screw clamp)



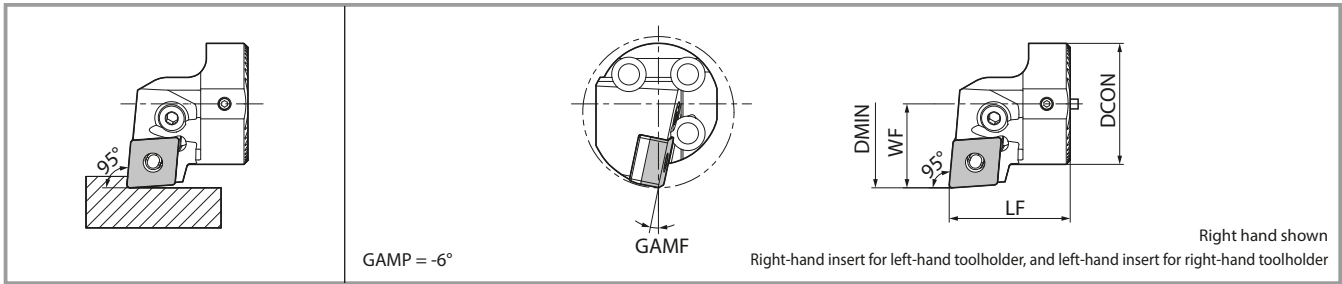
Toolholder dimensions

| Description | Availability | | Dimensions (mm) | | | | LAMS (°) | Std. corner R (RE) | Spare parts | | | | | Shape | Applicable shank | Applicable insert |
|-------------------------------|--------------|---|-----------------|------|----|----|----------|--------------------|---|---|--|---|---|-------|------------------|--|
| | R | L | DMIN | DCON | LF | WF | | | Clamp screw | Wrench | Sheet | Shim screw | Wrench (for shim screws) | | | |
| | | | | | | | | |  |  |  |  |  | | | |
| KAVH 20-SVUB $\frac{R}{L}$ 11 | ● | ● | 25 | 20 | 20 | 13 | -10 | 0.4 | SB-2570TR | FT-8 | - | - | - | Fig.1 | KAV-D20/G20... | VB <input type="checkbox"/> T1103... |
| 25-SVUB $\frac{R}{L}$ 11 | ● | ● | 32 | 25 | | 17 | | | | | KAV-D25... | VB <input type="checkbox"/> W1103... | | | | |
| KAVH 32-SVUB $\frac{R}{L}$ 16 | ● | ● | 40 | 32 | 32 | 22 | -10 | 0.4 | SB-40125TRN | FT-15 | SVN-32N *(SVN-32S) | SS-4N | LW-4 | Fig.2 | KAV-D32... | VB <input type="checkbox"/> T1604... |
| 40-SVUB $\frac{R}{L}$ 16 | ● | ● | 50 | 40 | | 27 | -9 | | | | | | | | KAV-D40... | VB <input type="checkbox"/> W1604... VB <input type="checkbox"/> T1604... |

When using a corner R (RE) = 0.2 or 0.4 mm insert, we recommend using a sheet marked with * (sold separately).

●: Available

KAVH-PCLN (Internal/internal facing, lever lock)



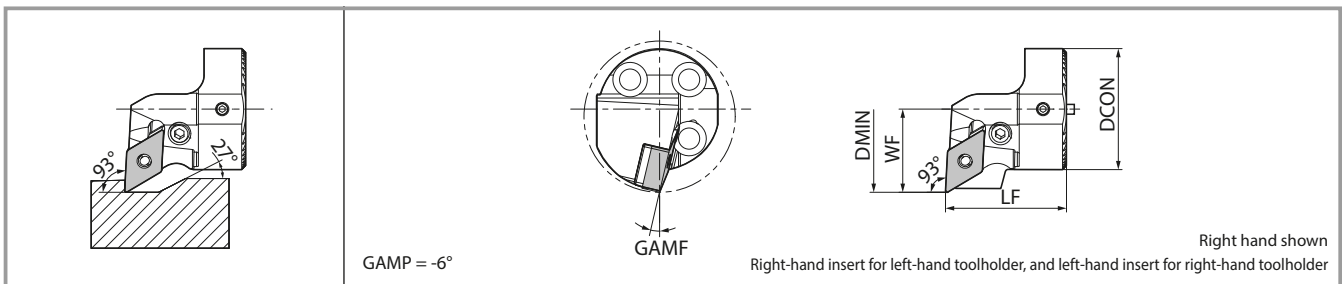
Toolholder dimensions

| Description | Availability | | Dimensions (mm) | | | | LAMS (°) | Std. corner R (RE) | Spare parts | | | | | | Applicable shank | Applicable insert |
|-----------------------|--------------|---|-----------------|------|----|------|----------|--------------------|-------------|------------|------------|----------|-------|--------|------------------|--------------------------------------|
| | R | L | DMIN | DCON | LF | WF | | | Lever | Lock screw | Sheet | Shim pin | Punch | Wrench | | |
| KAVH 32-PCLN %/L12 | ● | ● | 40 | 32 | 32 | 22.2 | -11.5 | 0.8 | | | | | | | KAV-D32... | CN <input type="checkbox"/> A1204... |
| | ● | ● | 50 | 40 | | 27 | -10 | | LL-2N | LS-2N | LC-42N %/L | LSP-2 | PC-2 | LW-3 | | KAV-D40... |
| 40-PCLN %/L12 | ● | ● | 50 | 40 | | | | | | | | | | | | CN <input type="checkbox"/> M1204... |

Sheet: LC-42NR for right-hand toolholder, LC-42NL for left-hand toolholder

● Available

KAVH-PDUN (Copying, lever lock)



Toolholder dimensions

| Description | Availability | | Dimensions (mm) | | | | LAMS (°) | Std. corner R (RE) | Spare parts | | | | | | Applicable Shank | Applicable insert |
|-----------------------|--------------|---|-----------------|------|----|----|----------|--------------------|-------------|------------|-------|----------|-------|--------|------------------|--------------------------------------|
| | R | L | DMIN | DCON | LF | WF | | | Lever | Lock screw | Sheet | Shim pin | Punch | Wrench | | |
| KAVH 32-PDUN %/L11 | ● | ● | 40 | 32 | 32 | 22 | -13 | 0.4 | | | | | | | KAV-D32... | DN <input type="checkbox"/> G1104... |

● Available

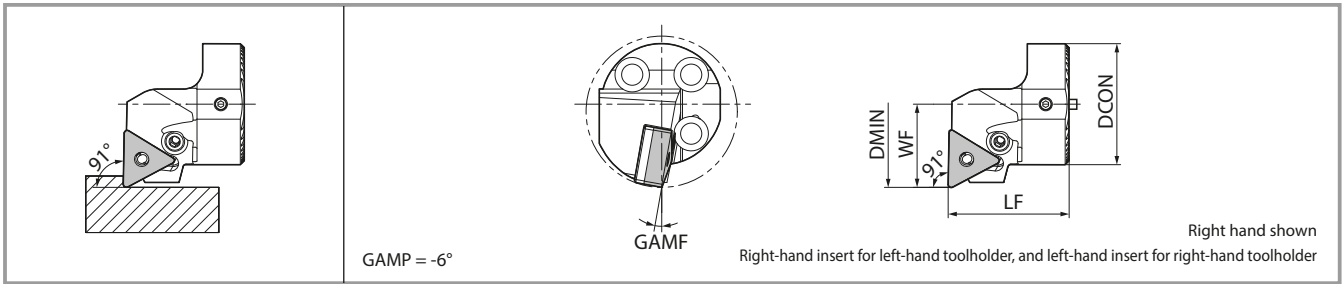
| Description | Availability | | Dimensions (mm) | | | | LAMS (°) | Std. Corner R (RE) | Spare parts | | | | | Applicable shank | Applicable insert |
|-----------------------|--------------|---|-----------------|------|----|----|----------|--------------------|-------------|-------------|-------|-------------|---------------------------|------------------|--------------------------------------|
| | R | L | DMIN | DCON | LF | WF | | | Wrench | Locking pin | Sheet | Clamp screw | Wrench (for clamp screws) | | |
| KAVH 32-PDUN %/L15 | ● | ● | 40 | 32 | 32 | 22 | -12.5 | 0.8 | | | | | | KAV-D32... | DN <input type="checkbox"/> A1504... |
| | ● | ● | 50 | 40 | | 27 | | | LW-3 | PP-4 | PD-42 | SB-2050TR | FT-6 | | KAV-D40... |
| 40-PDUN %/L15 | ● | ● | 50 | 40 | | | | | | | | | | | DN <input type="checkbox"/> M1504... |
| | | | | | | | | | | | | | | | DN <input type="checkbox"/> X1504... |

● Available

When using a WF chipbreaker insert, you need to correct the cutting edge position or machining program.

When using inserts with corner-R (RE) greater than 1.6 mm, additional modifications to the sheet are necessary to prevent workpiece and sheet from interfering with each other.

KAVH-PTFN (Internal, lever lock)



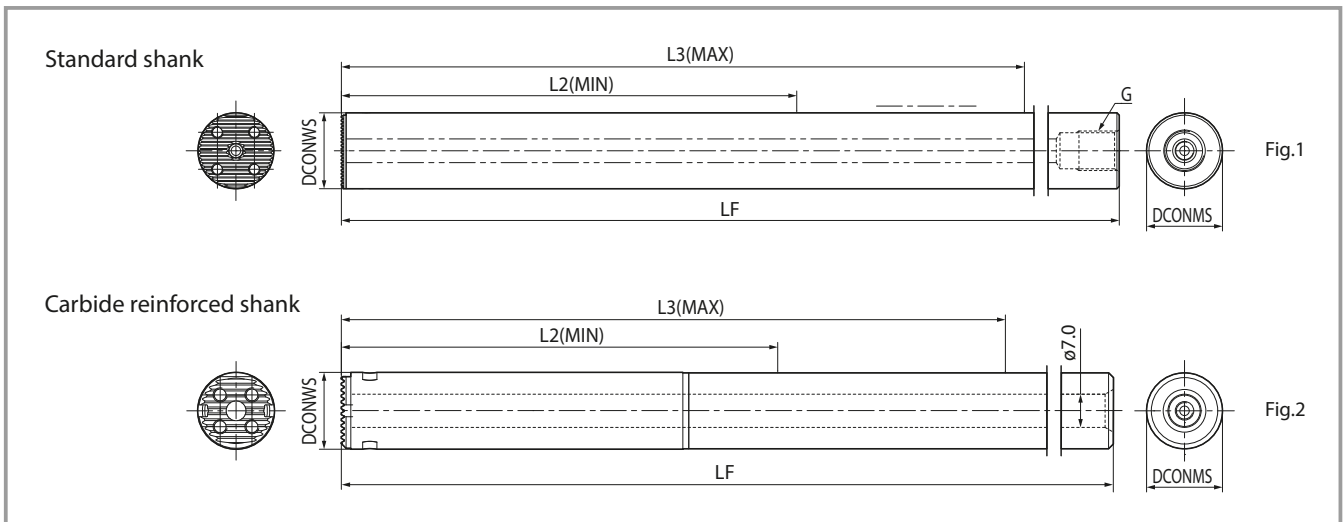
Toolholder dimensions

| Description | Availability | | Dimensions (mm) | | | | LAM S (°) | Std. Corner R (RE) | Spare parts | | | | | | Applicable shank | Applicable insert | | |
|-------------|--------------|---|-----------------|------|----|----|-----------|--------------------|-------------|------------|-------|----------|-------|--------|------------------|-------------------|--------------------------------------|--------------------------------------|
| | R | L | DMIN | DCON | LF | WF | | | Lever | Lock screw | Sheet | Shim pin | Punch | Wrench | | | | |
| | | | | | | | | | | | | | | | | | | |
| KAVH | 32-PTFN 9/16 | ● | ● | 40 | 32 | 32 | 22 | -10 | 0.8 | | | | | | | KAV-D32... | TN <input type="checkbox"/> A1604... | TN <input type="checkbox"/> G1604... |
| | 40-PTFN 9/16 | ● | ● | 50 | 40 | | 27 | -9 | | | | | | | | KAV-D40... | TN <input type="checkbox"/> M1604... | TN <input type="checkbox"/> X1604... |

* When using inserts with a corner-R (RE) greater than 1.6 mm, purchase a sheet marked with * (sold separately) to prevent workpiece and sheet from interfering with each other.

●: Available

Shank



Toolholder dimensions

| Description | Availability | Dimensions (mm) | | | | | | G | Spare parts | | | Shape |
|--------------------------|--------------|-----------------|--------|----|------------------------------------|------------------------------------|--------------------------|------|-------------|---------|----------|--------|
| | | DCONWS | DCONMS | LF | L2(MIN) Minimum overhang length | L3(MAX) Maximum overhang length | Head fastening bolts (3) | | Wrench | O-ring | | |
| | | | | | | | | | | | | |
| Standard shank | KAV- D16-7D | ● | 16 | 16 | 157.5 | 44 | 92 | G1/8 | HH3X10S | LW-2.5 | GR-006-2 | Fig. 1 |
| | D20-7D | ● | 20 | 20 | 201.5 | 60 | 120 | G1/4 | HH3.5X10S | | | |
| | D25-7D | ● | 25 | 25 | 256.5 | 80 | 155 | | HH4X12S | LW-3 | | |
| | D25-10D | ● | | | 321.5 | 155 | 230 | | G3/8 | HH5X12 | | |
| | D32-7D | ● | 32 | 32 | 321.5 | 96 | 192 | G1/2 | | HHX6X12 | | |
| | D32-10D | ● | | | 417.5 | 192 | 288 | | G1/2 | HHX6X12 | | |
| | D40-7D | ● | 40 | 40 | 409.5 | 128 | 248 | G1/2 | | HHX6X12 | | |
| D40-10D | ● | 529.5 | | | 248 | 368 | | | | | | |
| Carbide reinforced shank | KAV- G16-10D | ● | 16.2 | 16 | 205.5 | 92 | 140 | - | HH3X10S | LW-2.5 | - | Fig. 2 |
| | G20-10D | ● | 20.2 | 20 | 261.5 | 120 | 180 | - | HH3.5X10S | | | |

When cutting the back end, consider the length of the shank grip in addition to the amount of overhang length: See page 14.

●: Available

Head fastening bolt

| Shape | Description | Availability | Dimensions (mm) | | | | |
|-------|-------------|--------------|-----------------|----|-----|---|-----|
| | | | A | B | C | D | E |
| | HH3X10S | ● | M3X0.5 | 10 | 5 | 3 | 2.5 |
| | HH3.5X10S | ● | M3.5X0.6 | 10 | 5.5 | 3 | 2.5 |
| | HH4X12S | ● | M4X0.7 | 12 | 7 | 4 | 3 |
| | HH5X12 | ● | M5X0.8 | 12 | 8.5 | 5 | 4 |
| | HH6X12 | ● | M6X1.0 | 12 | 10 | 6 | 5 |

● Available

Recommended tightening torque

| Shank diameter | Tightening torque |
|----------------|-------------------|
| ø16 | 2.2 [N·m] |
| ø20 | 2.2 [N·m] |
| ø25 | 3.0 [N·m] |
| ø32 | 5.0 [N·m] |
| ø40 | 8.5 [N·m] |

Internal coolant: Piping connections

1 Screw standard for shank back end (pipe connection)

- The thread standard depends on the description. Please refer to the dimension chart "G" on page 10 when using commercially available piping parts.
- When using our piping components, they must be converted to "UNF3/8" or "G1/8." Check the table below and select the required joint parts (sold separately).

● Steel shank (Pressure ~ 7MPa)

| Type | Thread standards and conversion joints |
|----------------------|---|
| ø16-7D | G1/8 |
| ø20-7D ø25-7D/10D | G1/8 ⇐ G1/4 J-ST-G1/4-G1/8 |
| ø32-7D/10D | G1/8 ⇐ G1/4 ⇐ G3/8 J-ST-G3/8-G1/4 J-ST-G1/4-G1/8 |
| ø40-7D/10D | G1/8 ⇐ G1/4 ⇐ G3/8 ⇐ G1/2 J-ST-G1/2-G3/8 J-ST-G3/8-G1/4 J-ST-G1/4-G1/8 |

If a leak occurs, use a commercially available washer.

Joint

| Shape | Description | Availability | M1 | M2 | L1 | L2 |
|-------|----------------|--------------|------|------|----|----|
| | J-ST-G1/4-G1/8 | ● | G1/8 | G1/4 | 27 | 12 |
| | J-ST-G3/8-G1/4 | ● | G1/4 | G3/8 | 33 | 13 |
| | J-ST-G1/2-G3/8 | ● | G3/8 | G1/2 | 37 | 17 |

● Available

● Carbide reinforced shank (Pressure ~ 1MPa)

| Type | Thread standards and conversion joints |
|--------------------|---|
| ø16-10D ø20-10D | UNF3/8 ⇐ ø7 Straight hole *The shank side is not threaded. |

Resin joint (with O-ring)

| Shape | Description | Availability | Thread standard |
|-------|----------------|--------------|-----------------|
| | PRO7-ST-UNF3/8 | ● | UNF3/8 |

You can order only the included O-ring (GR-004-2).

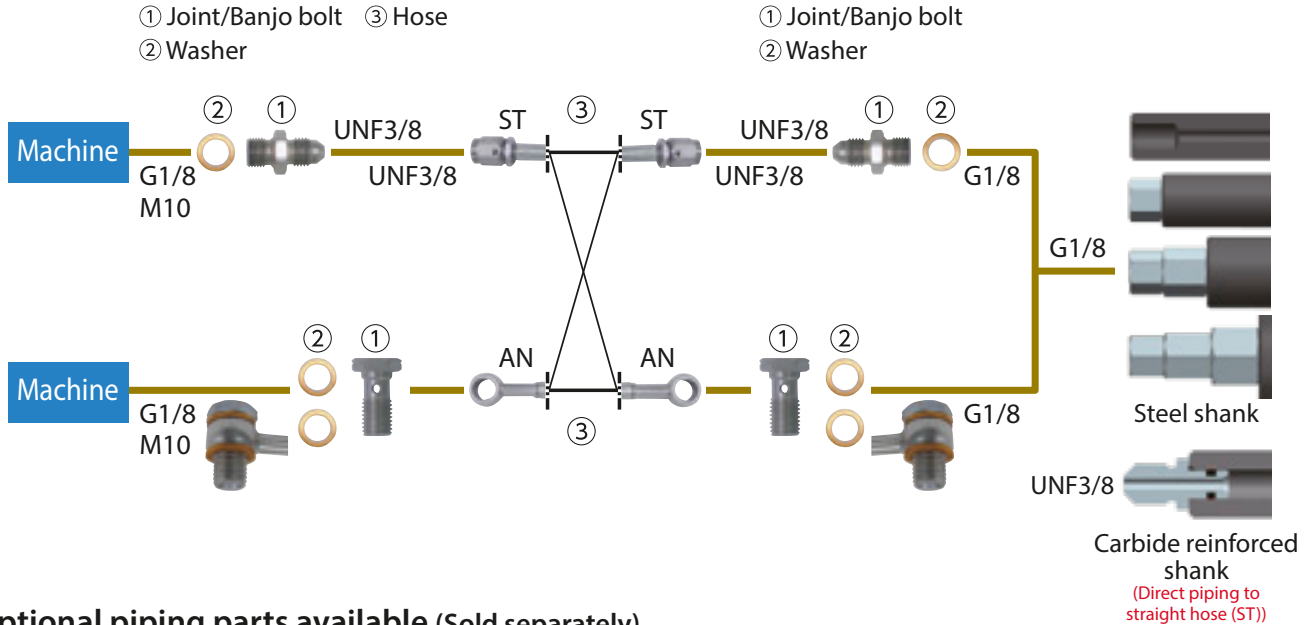
● Available

2 How to connect when using our plumbing parts

Easy to use with high pressure capable hoses and joints

- Can be used as internal coolant at normal pressure without a high-pressure pump unit
- Banjo bolts for angle hoses available. Supports a wide variety of machines

Piping installation guide



Optional piping parts available (Sold separately)

Choose from parts below to match your machine specifications and piping method.

① Joint or banjo bolt × 2, ② 2 ~ 4 washers, ③ 1 hose

① Joint/ Banjo bolt

Pressure: ~ 30 MPa

| Shape | Description | Availability | Thread Standard | |
|---|------------------|--------------|-----------------|----------------------------------|
| | | | Thread | Thread connection to the machine |
| | J-G1/8-UNF3/8 | ● | G1/8 | UNF3/8 |
| | J-M10X1.5-UNF3/8 | ● | M10X1.5 | UNF3/8 |
| Banjo bolt available for angled hose connection | BB-G1/8 | ● | G1/8 | G1/8 (M10) |
| | BB-M10X1.5 | ● | M10X1.5 | G1/8 (M10) |

●: Available

② Washer

Pressure: ~ 30 MPa

| Shape | Description | Availability |
|-------|-------------|--------------|
| | WS-10 | ● |

*Two washers are required when using banjo bolts

●: Available

③ Hose

Pressure: ~ 30 MPa

| Shape | Description | Availability | Thread Standard | | Dimensions (mm) |
|-----------------------|--------------|--------------|-----------------|--------------|-----------------|
| | | | Thread | Thread | L |
| Straight/straight | HS-ST-ST-200 | ● | UNF3/8 | UNF3/8 | 200 |
| | HS-ST-ST-250 | ● | | | 250 |
| Straight/angle | HS-ST-AN-200 | ● | UNF3/8 | (Banjo Bolt) | 200 |
| | HS-ST-AN-250 | ● | | | 250 |
| Angle/angle | HS-AN-AN-200 | ● | (Banjo Bolt) | (Banjo Bolt) | 200 |
| | HS-AN-AN-250 | ● | | | 250 |

●: Available

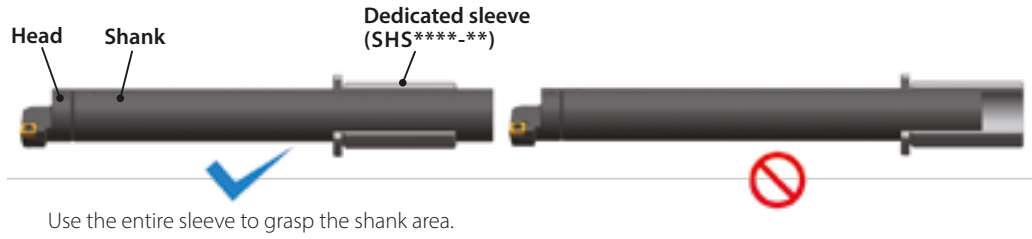
Precautions

1. Make sure machine door is completely closed before use of these parts.
2. Use appropriate seal for the male thread of the piping parts and make sure the connection is secure. Use plugs to seal off unused coolant holes.
3. Connect and fasten the coolant hose firmly.
4. The use of copper washers may cause leakage but will have no effect on the performance.
5. Commercial piping parts can be used if the thread standards are same. Check the pressure resistance before use.
6. Regularly changing the coolant filter is recommended.

Precautions

About the dedicated E-sleeve

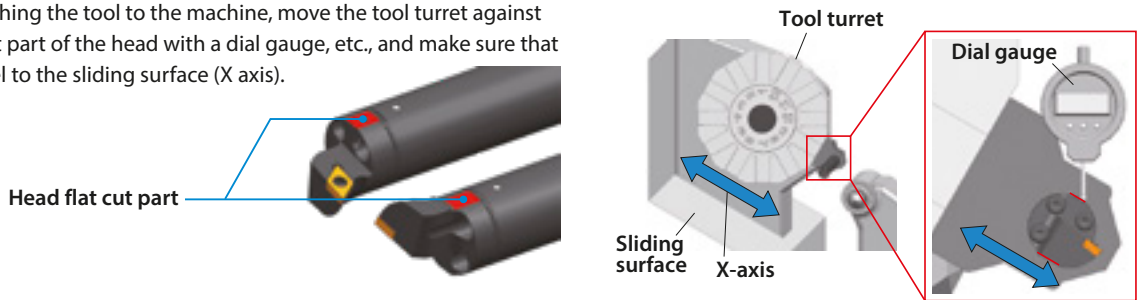
The shank does not have a flat cut. In order to ensure vibration-proof performance, we recommend using a special sleeve (SHS ****_**) that is sold separately.



How to adjust cutting edge position

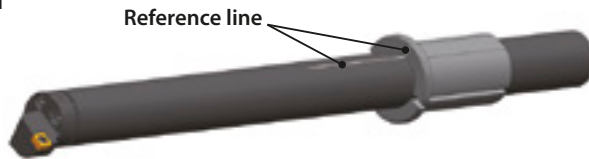
When using a head flat cut part

After attaching the tool to the machine, move the tool turret against the flat cut part of the head with a dial gauge, etc., and make sure that it is parallel to the sliding surface (X axis).



When using the reference lines of the shank/dedicated sleeve (E-sleeve)

Align the reference lines printed on the shank and the dedicated sleeve (SHS ****_*). It is possible to more easily adjust the cutting edge position than using the head flat cut part.



Recommendations for internal coolant

Under high temperatures, the anti-vibration mechanism may deteriorate or be damaged.

Please use with **internal coolant**.

The coolant pressure resistance of the shank is 7 MPa. However, when using coolant parts (PR07-ST-UNF 3/8) for internal coolant in the carbide reinforced shank (KAV-G ***), the coolant pressure is 1 MPa. Please be careful.

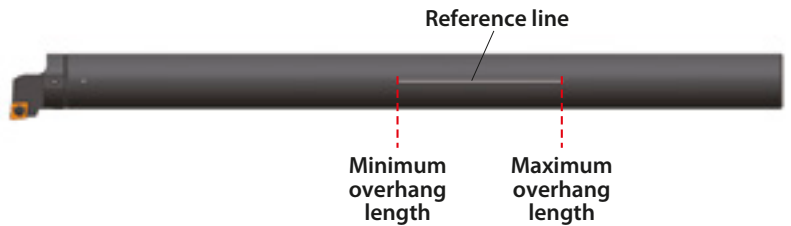


Available overhang length range

Available overhang length is set for this tool.

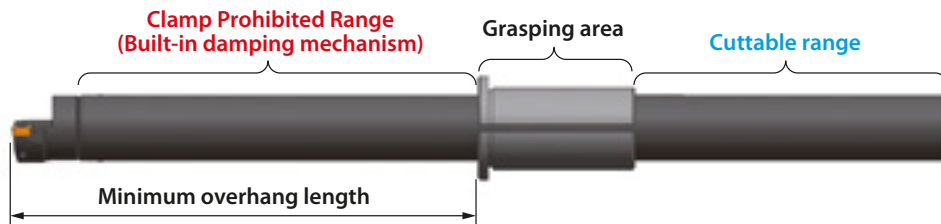
To adjust the overhang length, please use the reference line printed on the shank.

| Available overhang length range | | |
|---------------------------------|-------------------------|-------------------------|
| Description | Minimum overhang length | Maximum overhang length |
| KAV-***-10D | Shank diameter × 7 | Shank diameter × 10 |
| KAV-***-7D | Shank diameter × 4 | Shank diameter × 7 |



Shank cut

If the shank needs to be cut or modified, do so within the cutting range and do not clamp the built-in damping mechanism.



- Use the appropriate inserts and parts. Use of damaged parts may result in tool breakage and injury.
- Do not touch the cutting edge of the insert directly with your bare hands. There is a risk of injury.
- Make sure that there are no foreign materials such as chips in the insert seating area, serrated area, or shank grip area before mounting.
- Do not use the product under chattering conditions. This can lead to damage of the built-in damping mechanism.
- If tool falls or hits the part while machining, do not use it. The impact can cause tool damage and lead to large chattering.
- Avoid high humidity and store at room temperature (about 20°C).

| Anti-Vibration |

Max L/D = 10



Interchangeable head boring bars
with anti-vibration dampener system

KAV Series



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