

THE NEW VALUE FRONTIER



AD-bar

Anti-Vibration boring bar

- Suppressed chattering with the anti-vibration dampener.
- A wide variety of internal machining applications due to interchangeable head mechanism.



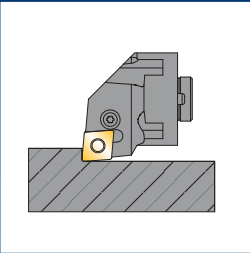
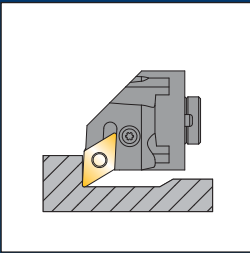
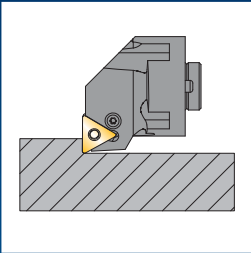
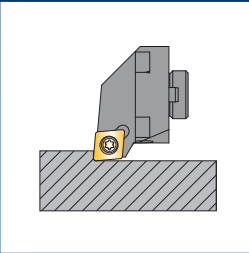
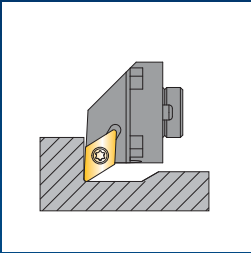
AD-bar

Anti-vibration boring bar

Feature

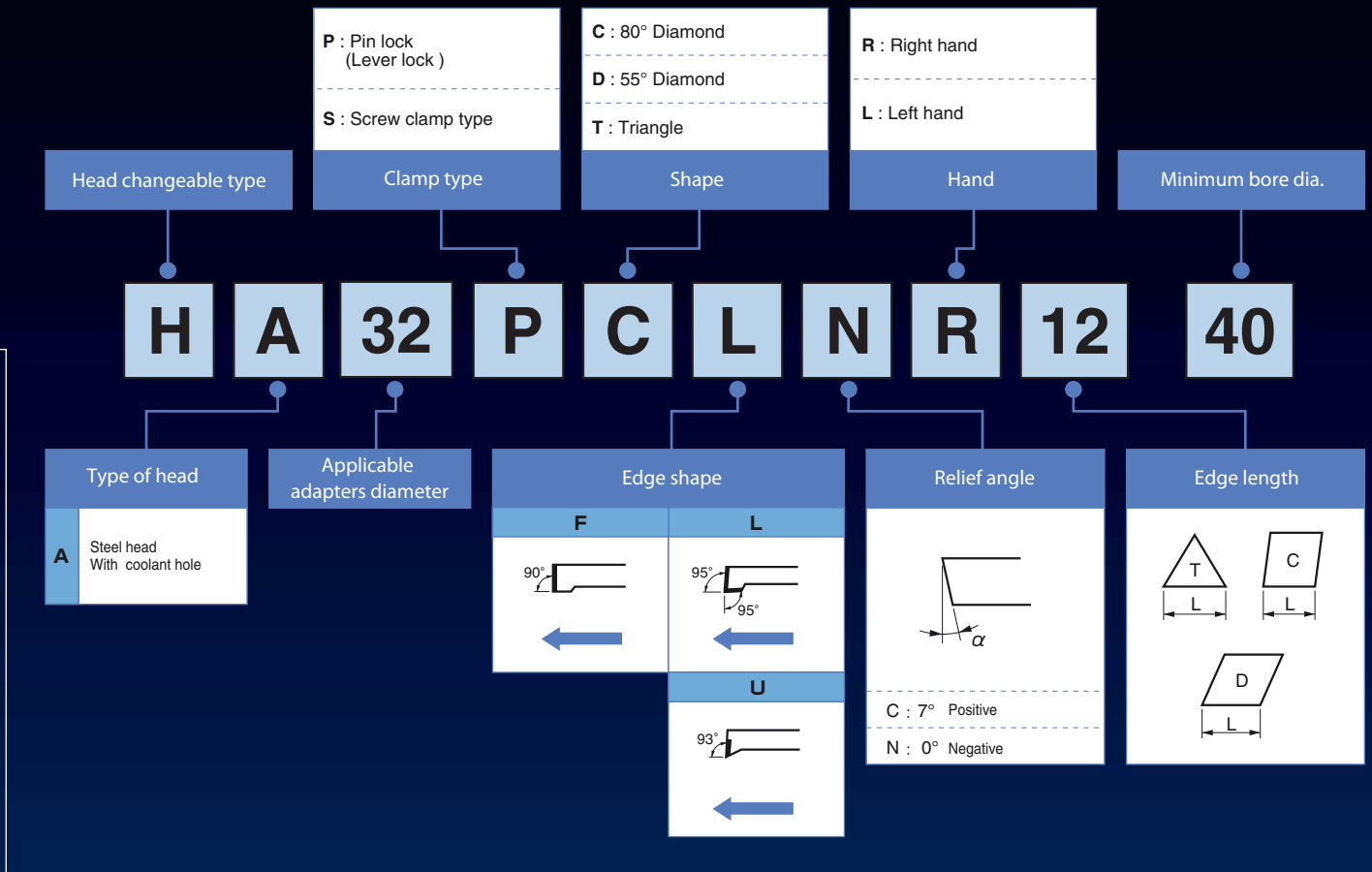
- Applicable for maximum 6 times of L/D with the advanced damper effect.
- By anti vibration damper effect, it can be applicable for large D.O.C and high feed rate. Achieve high efficient machining.
- High efficient and high precision internal boring (Shank dia 32mm, 40mm, and 50mm).
- Applicable to various machining by changeable head system.

● Changeable heads

| HA..PCLN12 | HA..PDUN15 | HA..PTFN16 | HA..SCLC09 | HA..SDUC11 | |
|---|---|---|--|---|------------|
|  |  |  |  |  | |
| Applicable Insert | | Applicable Insert | | Applicable Insert | |
| CN · G CN · M CN · A | 1204.. | DN · G DN · M DN · A | 1506.. | DN · G DN · M DN · A | 1504.. |
| | | TN · G TN · M TN · A | 1604.. | Applicable Insert | |
| | | | | CC..09T3... | DC..11T3.. |

It is necessary changing shim (purchase separately : will be in stock) when DN-1504 type insert is used.

● Changeable heads of boring bar identification system

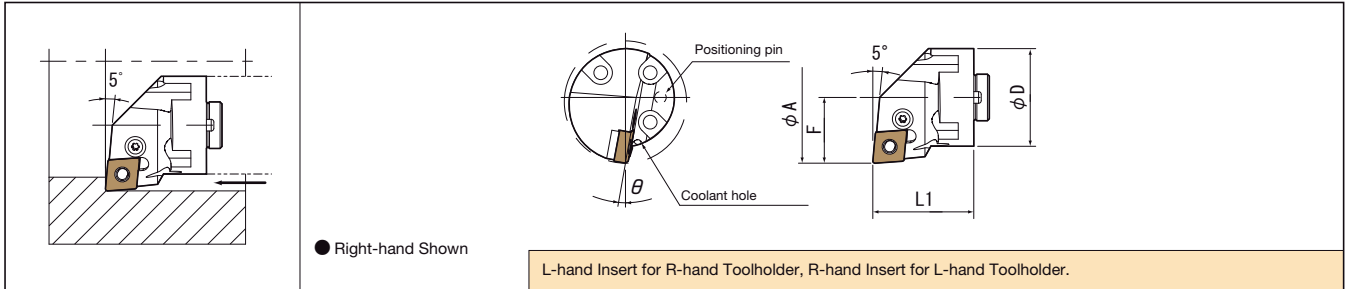


● Structure of anti vibration damper system



HA...PCLN12 Type

(Internal/Facing : With coolant hole)



Toolholder Dimension

| Description | Stock | | Min. Bore Dia. | Dimension (mm) | | | θ | (rε) Std. Corner-R | Spare Parts | | | | | | Applicable AD bar |
|-------------------------------|-------|---|----------------|----------------|----------|----|----------|--------------------|-------------|-------|------------|------|----------|-------|-------------------|
| | R | L | | ϕA | ϕD | L1 | | | F | Lever | Lock Screw | Shim | Shim Pin | Punch | |
| HA32PCLN ^{R/L} 12-40 | ● | ● | 40 | 32 | 41 | 22 | 10° | 0.8 | | | | | | | AD32U |
| HA40PCLN ^{R/L} 12-50 | ● | ● | 50 | 40 | | 27 | | | | | | | | | AD40V |
| HA50PCLN ^{R/L} 12-63 | ● | ● | 63 | 50 | | 35 | | | | | | | | | AD50W |

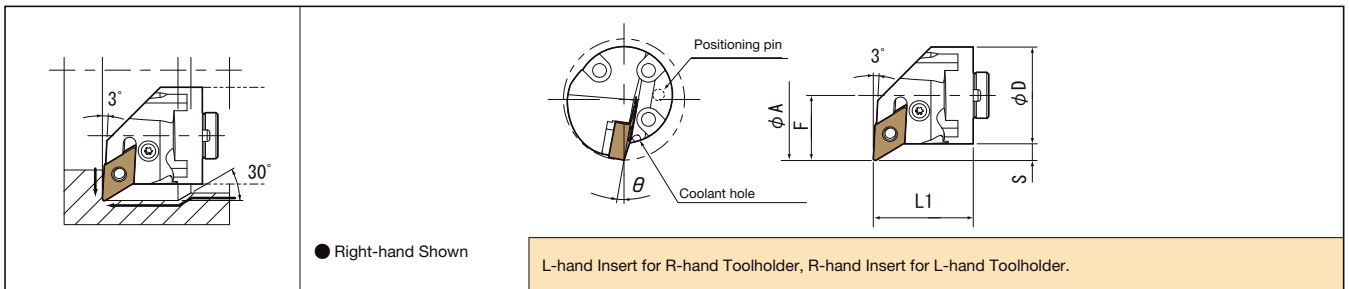
● : Std Stock

Applicable Insert

| Toolholder Description | Insert Description | |
|-------------------------------|--------------------|--------|
| HA32PCLN ^{R/L} 12-40 | CN·G | 1204.. |
| HA40PCLN ^{R/L} 12-50 | CN·M | |
| HA50PCLN ^{R/L} 12-63 | CN·A | |

HA...PDUN15 Type

(Copying : With coolant hole)



Toolholder Dimension

| Description | Stock | | Min. Bore Dia. | Dimension (mm) | | | | θ | (rε) Std. Corner-R | Spare Parts | | | | | | Applicable AD bar | | | | |
|-------------------------------|-------|---|----------------|----------------|----------|----|----|----------|--------------------|-------------|-------|------------|------|----------|-------|-------------------|--------|-------|--------|-------|
| | R | L | | ϕA | ϕD | L1 | F | | | S | Lever | Lock Screw | Shim | Shim Pin | Punch | | Wrench | | | |
| HA32PDUN ^{R/L} 15-43 | ● | ● | 43 | 32 | 41 | 25 | 9 | 12° | 0.8 | | | | | | | AD32U | | | | |
| HA40PDUN ^{R/L} 15-50 | ● | ● | 50 | 40 | | 27 | 7 | 10° | | | | | | | | LD-4K | LSP-3K | PC-2K | LTP-15 | AD40V |
| HA50PDUN ^{R/L} 15-63 | ● | ● | 63 | 50 | | 35 | 10 | | | | | | | | | (LD-4K43) | | | | AD50W |

● : Std Stock

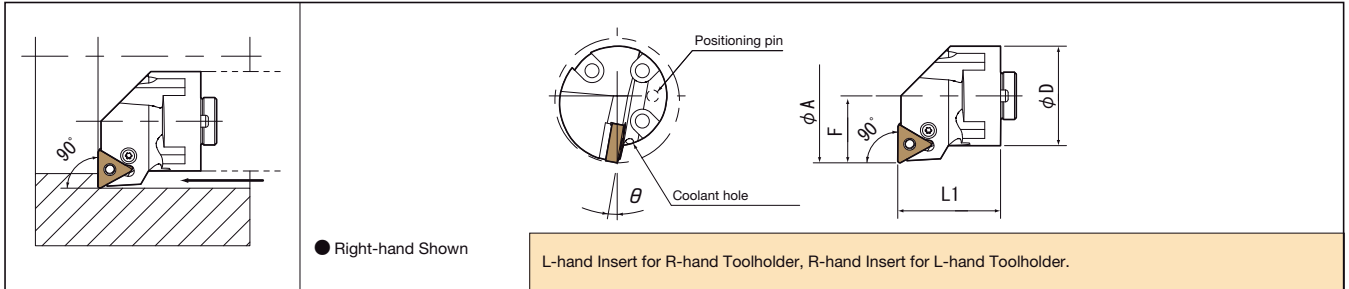
Applicable Insert

| Toolholder Description | Insert Description | | | |
|-------------------------------|--------------------|--------|----------------|--------|
| | Shim : LD-4K | | Shim : LD-4K43 | |
| HA32PDUN ^{R/L} 15-43 | DN·G | 1506.. | DN·G | 1504.. |
| HA40PDUN ^{R/L} 15-50 | DN·M | | DN·M | |
| HA50PDUN ^{R/L} 15-63 | DN·A | | DN·A | |

※5 h m: LD-4K is included in the boringhead as standard parts. If you use DNxx1504 Type inserts, please purchase LD-4K43 (will be in stock)separately.

HA...PTFN16 Type

(Internal : With coolant hole)



Toolholder Dimension

| Description | Stock | | Min. Bore Dia. | Dimension (mm) | | | | θ | (r ε) Std. Corner-R | Spare Parts | | | | | | Applicable AD bar |
|-------------|-------|----|----------------|----------------|----------|----|-----|----------|------------------------|-------------|------------|-------|----------|--------|--------|-------------------|
| | R | L | | ϕA | ϕD | L1 | F | | | Lever | Lock Screw | Shim | Shim Pin | Punch | Wrench | |
| | ● ● | 40 | | 32 | | 22 | 10° | | | 0.8 | LL-1K | LS-1P | LT-3K | LSP-2K | PC-2K | |
| ● ● | 50 | 40 | 41 | 27 | AD40V | | | | | | | | | | | |
| ● ● | 63 | 50 | | 35 | 8° | | | | | | | | AD50W | | | |

● : Std Stock

Applicable Insert

| Toolholder Description | Insert Description | |
|-------------------------------|--------------------|--------|
| HA32PTFN ^{R/L} 16-40 | TN · G | 1604.. |
| HA40PTFN ^{R/L} 16-50 | TN · M | |
| HA50PTFN ^{R/L} 16-63 | TN · A | |



HA...SCLC09 Type

(Internal/Facing : With coolant hole)

● Right-hand Shown

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

Toolholder Dimension

| Description | Stock | | Min. Bore Dia. | Dimension (mm) | | | | θ | (r ϵ) Std. Corner-R | Spare Parts | | Applicable AD bar | Applicable Insert |
|-------------|------------------------------------|---|----------------|----------------|----------|----|----|----------|-------------------------------|-------------|-------------|-------------------|-------------------|
| | R | L | | ϕA | ϕD | L1 | F | | | S | Clamp Screw | | |
| | HA32SCLC^{R/L}09-40 | ● | ● | 40 | 32 | 25 | 22 | | | — | 3° | | |

●: Std Stock

HA...SDUC11 Type

(Copying : With coolant hole)

● Right-hand Shown

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

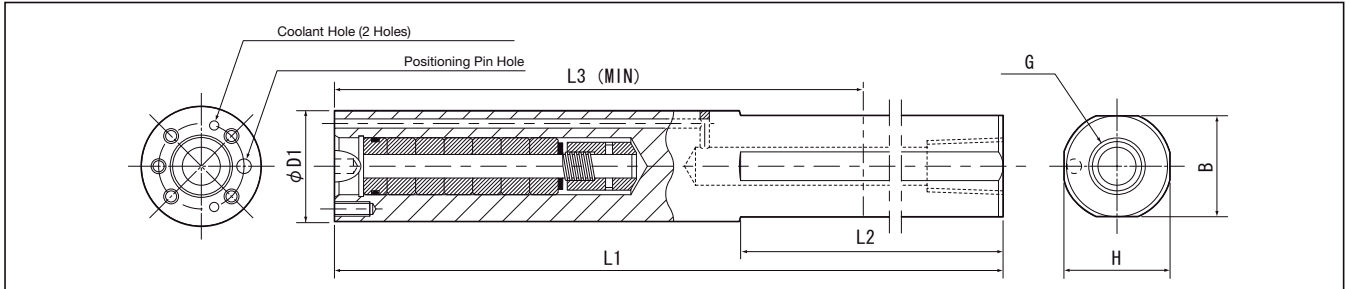
Toolholder Dimension

| Description | Stock | | Min. Bore Dia. | Dimension (mm) | | | | θ | (r ϵ) Std. Corner-R | Spare Parts | | Applicable AD bar | Applicable Insert |
|-------------|------------------------------------|---|----------------|----------------|----------|----|----|----------|-------------------------------|-------------|-------------|-------------------|-------------------|
| | R | L | | ϕA | ϕD | L1 | F | | | S | Clamp Screw | | |
| | HA32SDUC^{R/L}11-40 | ● | ● | 40 | 32 | 25 | 22 | | | 6 | 3° | | |



●: Std Stock

Boring Adapter

(With coolant hole)



Dimension

| Description | Stock | Dimension (mm) | | | | | | | Spare Parts | | |
|---------------|-------|----------------|----|----|-----|-----|----------|-------|---|---|--------|
| | | | | | | | | | Clamp Bolt | | Wrench |
| | | φD1 | H | B | L1 | L2 | L3 (MIN) | G |  |  | |
| AD 32U | ● | 32 | 31 | 29 | 310 | 200 | 200 | Rp3/8 | HH5×20 (2pcs) | HH5×30 (1pc) | LW-4 |
| AD 40V | ● | 40 | 39 | 37 | 360 | 248 | 228 | | | | |
| AD 50W | ● | 50 | 47 | 47 | 410 | 280 | 276 | | | | |

● : Std Stock

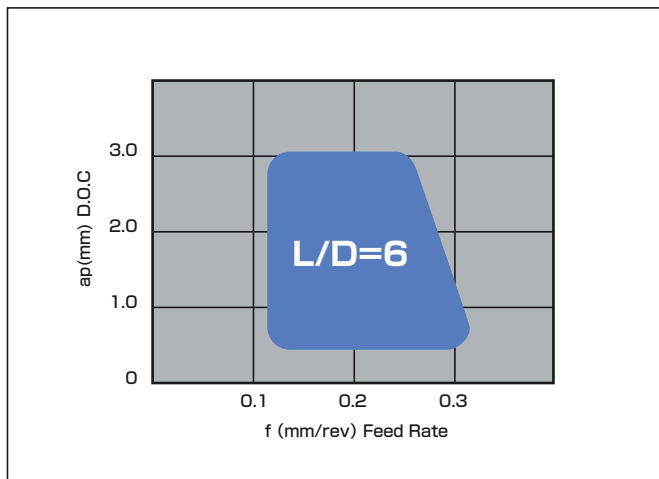
※Remark: In case of using back portion of boring adapter with short cut, L3 (MIN) dimension indicates minimum length. Please do not apply shorter length dimension than L3 (MIN) dimension.

Combinations of boring adapter and changeable head

| Changeable head Description | Boring adapter | | | | | | | | | | |
|---|----------------|------------|--------|--------|---|--------------|---|--------------|--------|--------|------|
| | Description | Clamp Bolt | | Wrench | | | | | | | |
| HA32 PCLN ^{R/L} 12-40 PDUN ^{R/L} 15-40 PTFN ^{R/L} 16-40 SCLC ^{R/L} 09-40 SDUC ^{R/L} 11-40 | AD32U | HH5×20 | HH5×30 | LW-4 | | | | | | | |
| | | | | | HA40 PCLN ^{R/L} 12-50 PDUN ^{R/L} 15-50 PTFN ^{R/L} 16-50 | AD40V | | | | | |
| | | | | | | | HA50 PCLN ^{R/L} 12-63 PDUN ^{R/L} 15-63 PTFN ^{R/L} 16-63 | AD50W | HH6×20 | HH6×30 | LW-5 |

■ Possible machining area

(SCM435 Vc=150m/min ap=0.5~3mm f=0.1~0.3mm/rev CNMG120408)



■ How to change head



1. Remove the boring head.



2. Align the boring head with the installing position.



3. Tighten three screws to clamp the boring head. Use short screws for upper clamping hole and long screw for bottom clamping hole.

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