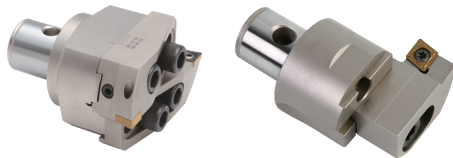


**NEW
PRODUCT!**

Boring Series Products



- ARB rough boring series
 - Blind hole rough boring tools - 2 edges
 - Through hole rough boring tools - 2 edges
 - Back-boring(rough) tools



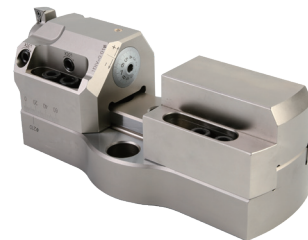
- MLR series large diameter boring tool
 - Standard rough boring
 - Lightweight rough boring



- AFB fine boring series
 - A type of cartridge fine boring
 - B type of cartridge fine boring
 - C type of cartridge fine boring



- MLF series large diameter fine boring tool
 - Standard fine boring
 - Lightweight fine boring



- DFB anti-vibration fine boring series
 - Mono-block anti-vibration fine boring
 - Modular anti-vibration fine boring

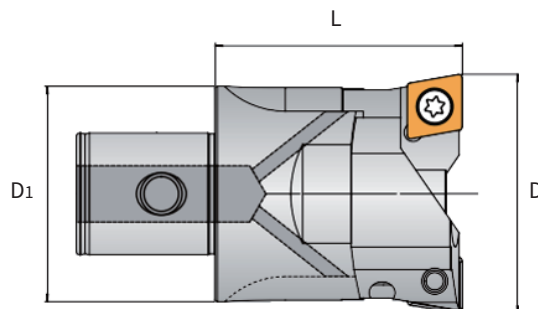
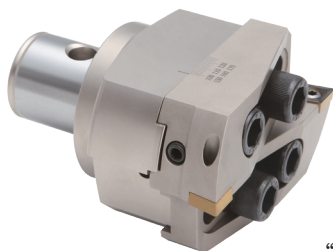


- EFB external fine boring series
 - External fine boring
 - Large diameter external fine boring



ARB Series 2 edge Rough Boring Tools

Diameter range $\Phi 20-203\text{mm}$.
 Cover wide applications.
 With high precision, high rigidity, flexible on tool combination.
 Adjusting scale marked on tool body, easy for handling.



Product code

ARB-____-____-AK_-W
 1 2 3 4 5

- "1" Series name
- "2" Minimum boring diameter
- "3" Maximum boring diameter
- "4" Coupling size: AK1/AK2/AK3/AK4/AK5/AK6/AK7
- "5" W means without cartridge, L means extra long rough boring

| Dia range | Product code (For blind holes) | Coupling | D1 | L | Cartridge (Standard Option) | | Screw | Tool weight |
|-----------|-----------------------------------|----------|----|------|--------------------------------|--------|----------|-------------|
| | | | | | Standard | Option | | |
| 20-26 | ARB-020-026-AK1 | AK1 | 19 | 32.5 | RC-020-CC06 | ● | SH040160 | 0.07 |
| | | | | | RC-020-SC06 | ○ | | |
| 25-33 | ARB-025-033-AK2 | AK2 | 24 | 35.5 | RC-025-CC06 | ● | SH050200 | 0.12 |
| | | | | | RC-025-SC06 | ○ | | |
| 32-42 | ARB-032-042-AK3 | AK3 | 31 | 40 | RC-032-CC09 | ● | SH060200 | 0.2 |
| | | | | | RC-032-SC09 | ○ | | |
| 41-54 | ARB-041-054-AK4 | AK4 | 39 | 47 | RC-041-CC09 | ● | SH080250 | 0.38 |
| | | | | | RC-041-SC09 | ○ | | |
| 53-70 | ARB-053-070-AK5 | AK5 | 50 | 57 | RC-041-CC12 | ● | SH100300 | 0.75 |
| | | | | | RC-041-SC12 | ○ | | |
| 68-90 | ARB-068-110-AK6 | AK6 | 63 | 71 | RC-068-CC12 | ● | SH100350 | 1.6 |
| | | | | | RC-068-SC12 | ○ | | |
| 88-110 | ARB-068-110-AK6-L | AK6 | 63 | 71 | RC-088-CC12 | ● | SH120400 | 1.8 |
| | | | | | RC-088-SC12 | ○ | | |
| 98-126 | ARB-098-153-AK6 | AK6 | 63 | 71 | RC-098-CC12 | ● | SH120400 | 2.3 |
| | | | | | RC-098-SC12 | ○ | | |
| 125-153 | ARB-098-153-AK6-L | AK6 | 63 | 71 | RC-125-CC12 | ● | SH120400 | 2.6 |
| | | | | | RC-125-SC12 | ○ | | |
| 98-126 | ARB-098-153-AK7 | AK7 | 90 | 87 | RC-098-CC12 | ● | SH120400 | 3.9 |
| | | | | | RC-098-SC12 | ○ | | |
| 125-153 | ARB-098-153-AK7-L | AK7 | 90 | 87 | RC-125-CC12 | ● | SH120400 | 4.1 |
| | | | | | RC-125-SC12 | ○ | | |
| 148-176 | ARB-148-203-AK6 | AK6 | 63 | 71 | RC-098-CC12 | ● | SH120400 | 2.9 |
| | | | | | RC-098-SC12 | ○ | | |
| 175-203 | ARB-148-203-AK6-L | AK6 | 63 | 71 | RC-125-CC12 | ● | SH120400 | 3.2 |
| | | | | | RC-125-SC12 | ○ | | |

● Tool body is assembled with blind hole boring cartridges as standard package. For through hole, the tool body and cartridges need to be ordered separately. Example: ARB-148-203-AK6-W and RC-098-SC12

● Tool body without cartridge also can be ordered. Example: ARB-148-203-AK6-W.

● Spare parts including: clamping bolt, washer, wrench. The inserts need to be ordered separately.

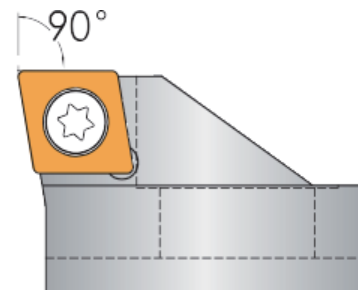
● ARB double edge rough boring tool is with internal coolant.

● The boring tool must be assembled properly with all the screws and bolts tightened.

● For the ideal axial runout, the inserts need to be indexed at the same time.

● ARB Series 2 edge Rough Boring Tools

Blind hole rough boring cartridges



Product code

RC-__-CC__-B

1 2 3 4

“1” Series name

“2” Minimum boring diameter

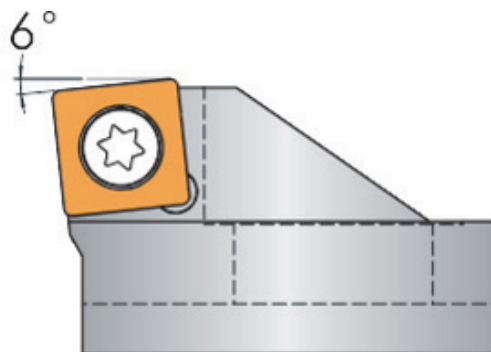
“3” Insert

“4” B means back boring, without B means front boring

| Cartridge | Tool body | Insert | Screw & Wrench |
|-------------|-------------------------------------------------------|------------|--------------------|
| RC-020-CC06 | ARB-020-026-AK1 | CC__0602__ | ST025060 TT-T8 |
| RC-025-CC06 | ARB-025-033-AK2 | | |
| RC-032-CC09 | ARB-032-042-AK3 | CC__09T3__ | ST040100 TT-T15 |
| RC-041-CC09 | ARB-041-054-AK4 | | |
| RC-053-CC12 | ARB-053-070-AK5 | CC__1204__ | ST050120 TT-T20 |
| RC-068-CC12 | ARB-068-110-AK6 | | |
| RC-088-CC12 | ARB-068-110-AK6 | | |
| RC-098-CC12 | ARB-098-153-AK6 ARB-098-153-AK7 ARB-148-203-AK6 | | |
| RC-125-CC12 | ARB-098-153-AK6 ARB-098-153-AK7 ARB-148-203-AK6 | | |

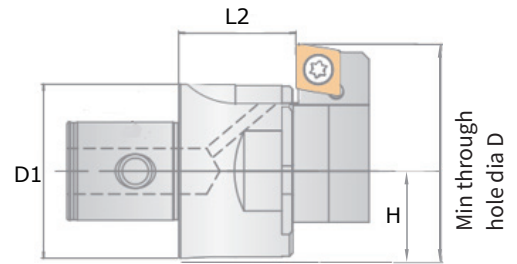
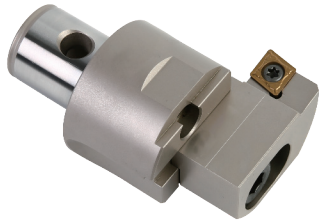
• ARB Series 2 edge Rough Boring Tools

Through hole rough boring cartridges



| Cartridge | Tool body | Insert | Screw & Wrench |
|-------------|-------------------------------------------------------|------------|--------------------|
| RC-020-SC06 | ARB-020-026-AK1 | SC__0602__ | ST025060 TT-T8 |
| RC-025-SC06 | ARB-025-033-AK2 | | |
| RC-032-SC09 | ARB-032-042-AK3 | SC__09T3__ | ST040100 TT-T15 |
| RC-041-SC09 | ARB-041-054-AK4 | | |
| RC-053-SC12 | ARB-053-070-AK5 | SC__1204__ | ST050120 TT-T20 |
| RC-068-SC12 | ARB-068-110-AK6 | | |
| RC-088-SC12 | ARB-068-110-AK6 | | |
| RC-098-SC12 | ARB-098-153-AK6 ARB-098-153-AK7 ARB-148-203-AK6 | | |
| RC-125-SC12 | ARB-098-153-AK6 ARB-098-153-AK7 ARB-148-203-AK6 | | |

● ARB Rough Back Boring Series



Min. through hole diameter=(back boring diameter/2)+H

| D | Tool body | Coupling | Back boring cartridge | D1 | L2 | Screw | H | Weight (kg) | Insert | Screw & Wrench |
|---------|-------------------|----------|-----------------------|------|------|----------|------|-------------|---------|--------------------|
| 25-31 | ARB-020-026-AK1-W | AK1 | RC-025-CC06-B | 18.7 | 21.5 | SH040160 | 10 | 0.06 | CC 0602 | ST025060 TT-18 |
| 30-35 | | | RC-030-CC06-B | | | | | 0.06 | | |
| 32-40 | ARB-025-033-AK2-W | AK2 | RC-032-CC06-B | 23.5 | 23.5 | SH050200 | 12.5 | 0.11 | | |
| 39-47 | | | RC-039-CC06-B | | | | 0.11 | | | |
| 41-51 | ARB-032-042-AK3-W | AK3 | RC-041-CC09-B | 30.5 | 23.5 | SH060200 | 16 | 0.18 | CC 09T3 | ST040100 TT-T20 |
| 50-60 | | | RC-05060-CC09-B | | | | 0.19 | | | |
| 50-63 | ARB-041-054-AK4-W | AK4 | RC-05063-CC09-B | 38.5 | 28.5 | SH080250 | 20 | 0.36 | | |
| 61-74 | | | RC-061-CC09-B | | | | 0.38 | | | |
| 65-82 | ARB-053-070-AK5-W | AK5 | RC-065-CC12-B | 49.5 | 33.5 | SH100300 | 25.5 | 0.70 | CC 1204 | ST050120 TT-T20 |
| 78-95 | | | RC-078-CC12-B | | | | 0.75 | | | |
| 80-102 | ARB-068-110-AK6-W | AK6 | RC-080-CC12-B | 63 | 45.5 | SH100350 | 32.5 | 1.5 | | |
| 100-122 | | | RC-100-CC12-B | | | | 1.6 | | | |
| 98-126 | ARB-098-153-AK6-W | AK6 | RC-098-CC12-B | 63 | 45.5 | SH120400 | 46.5 | 2.25 | | |
| 125-153 | | | RC-125-CC12-B | | | | 2.45 | | | |

● Back boring tool: please order tool body without cartridge, e.g.ARB-020-026-AK1-W, RC-020-CC06-B;

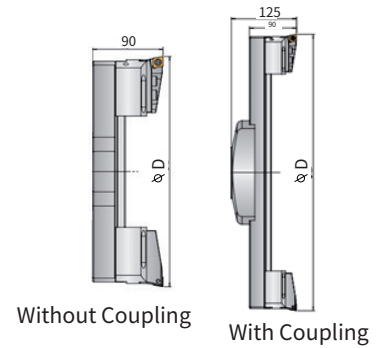
● MLR Series Large Diameter Rough Boring Tools

Diameter range $\Phi 150-850\text{mm}$;
 Modular design, flexible on tool combination. Easy for handling.
 To reduce the tool weight, lightweight rough boring tool is available.

Product code

 MLR-__-__-__-LD
 1 2 3 4

- "1" Series name
- "2" Minimum boring diameter
- "3" Maximum boring diameter
- "4" LD means light weight, without LD means standard


Standard (With Steel Boring Bridge)

| Dia range | Product code (Tool body+cartridge) | Weight (Kg) | Coupling | Bridge | Slider | Cartridge | Insert |
|-----------|---------------------------------------|-------------|----------|------------|--------|-----------|----------|
| 150-210 | MLR-150-210 | 5.5 | / | BS-150-210 | RB-150 | RC-150 | CC__1204 |
| 210-290 | MLR-210-290 | 6.7 | | BS-210-290 | | | |
| 290-370 | MLR-290-370 | 8.1 | | BS-290-370 | | | |
| 370-450 | MLR-370-450 | 9.8 | | BS-370-450 | | | |
| 450-530 | MLR-450-530 | 11.4 | | BS-450-530 | | | |
| 530-610 | MLR-530-610 | 17.2 | LP40-200 | BS-530-610 | RB-150 | RC-150 | CC__1204 |
| 610-690 | MLR-610-690 | 18.7 | | BS-610-690 | | | |
| 690-770 | MLR-690-770 | 20.4 | | BS-690-770 | | | |
| 770-850 | MLR-770-850 | 22.7 | | BS-770-850 | | | |

Lightweight (With Aluminium Boring Bridge)

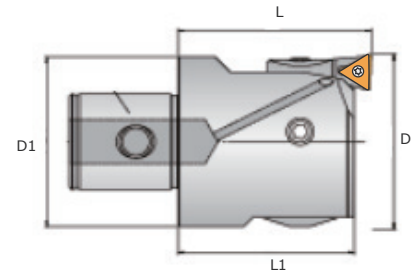
| Dia range | Product code (Tool body+cartridge) | Weight (Kg) | Coupling | Aluminium bridge | Slider | Cartridge | Insert |
|-----------|---------------------------------------|-------------|----------|---------------------|--------|-----------|----------|
| 150-210 | MLR-150-210-LD | 3.9 | / | BS-150-210-LD | RB-150 | RC-150 | CC__1204 |
| 210-290 | MLR-210-290-LD | 4.3 | | BS-210-290-LD | | | |
| 290-370 | MLR-290-370-LD | 5 | | BS-290-370-LD | | | |
| 370-450 | MLR-370-450-LD | 5.5 | | BS-370-450-LD | | | |
| 450-530 | MLR-450-530-LD | 6 | | BS-450-530-LD | | | |
| 530-610 | MLR-530-610-LD | 11.2 | LP40-200 | BS-530-610-LD | RB-150 | RC-150 | CC__1204 |
| 610-690 | MLR-610-690-LD | 12 | | BS-610-690-LD | | | |
| 690-770 | MLR-690-770-LD | 13.2 | | BS-690-770-LD | | | |
| 770-850 | MLR-770-850-LD | 13.9 | | BS-770-850-LD | | | |

● Tool body assembled with cartridges as standard package.

For the ideal axial runout, the inserts need to be indexed at the same time.

AFB fine boring series

Diameter range $\Phi 20-203\text{mm}$;
 Fine boring cartridge can be switched for different applications;


Product code

AFB-__-__-__-AK_-W
 1 2 3 4 5

- "1" Series name
- "2" Minimum boring diameter
- "3" Maximum boring diameter
- "4" Coupling size
- "5" "W" means without cartridge, without "W" means including A type of cartridge

| Product code (Tool body+cartridge) | Coupling | Cartridge | | Dia range | L | L1 | D1 | Weight (kg) | Insert | |
|---------------------------------------|----------|------------|----------|-----------|------|------|----|----------------|--------|--------|
| | | ● Standard | ○ Option | | | | | | | |
| AFB-020-036-AK1 | AK1 | FCT-10A | ● | 20-26 | 32.5 | 30.5 | 19 | 0.07 | TP0802 | / |
| | | FCT-10B | ○ | 25-31 | | | | | | |
| | | FCT-10C | ○ | 30-36 | | | | | | |
| AFB-025-047-AK2 | AK2 | FCT-20A | ● | 25-33 | 35.5 | 33 | 24 | 0.12 | TP0802 | / |
| | | FCT-20B | ○ | 35-40 | | | | | | |
| | | FCT-20C | ○ | 39-47 | | | | | | |
| AFB-032-060-AK3 | AK3 | FCT-30A | ● | 32-42 | 40 | 37 | 31 | 0.22 | TP0802 | / |
| | | FCT-30B | ○ | 41-51 | | | | | | |
| | | FCT-30C | ○ | 50-60 | | | | | | |
| AFB-041-074-AK4 | AK4 | FCT-40A | ● | 41-54 | 47 | 43 | 40 | 0.42 | TC1102 | CC0602 |
| | | FCT-40B | ○ | 50-63 | | | | | | |
| | | FCT-40C | ○ | 61-74 | | | | | | |
| AFB-053-095-AK5 | AK5 | FCT-50A | ● | 53-70 | 57 | 52 | 50 | 0.85 | TC1102 | CC0602 |
| | | FCT-50B | ○ | 65-82 | | | | | | |
| | | FCT-50C | ○ | 78-95 | | | | | | |
| AFB-068-150-AK6 | AK6 | FCT-60A | ● | 68-100 | 71 | 67 | 64 | 1.85 | TC1102 | CC09T3 |
| | | FCT-60B | ○ | 94-126 | | | | | | |
| | | FCT-60C | ○ | 118-150 | | | | | | |
| AFB-100-203-AK6 | AK6 | FCT-60A | ● | 100-153 | 71 | 67 | 64 | 2.7 | TC1102 | CC09T3 |
| | | FCT-60B | ○ | 126-179 | | | | | | |
| | | FCT-60C | ○ | 150-203 | | | | | | |
| AFB-100-203-AK7 | AK7 | FCT-60A | ● | 100-153 | 87 | 83 | 90 | 4.05 | TC1102 | CC09T3 |
| | | FCT-60B | ○ | 126-179 | | | | | | |
| | | FCT-60C | ○ | 150-203 | | | | | | |

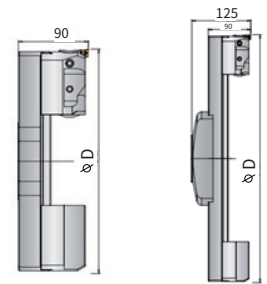
- Tool body assembled with A type of boring cartridge as standard package.
- The minimum scale of adjustment range is 0.002mm on radial direction.
- Tool body and cartridge need to be ordered separately if B or C type of cartridge need to be used.
 Example: AFB-020-036-AK1-W and FCT-10B. Insert need to ordered separately.
- All AFB boring tool is with internal coolant.
- Regularly use grease for the internal lubrication to extend the boring holder tool life.

Fine boring cartridge

| | Cartridge | Tool body | Diameter range(D) | Insert | Screw & Wrench | | |
|---------|-----------------|-----------------|-------------------|----------|--------------------|----------|-------------------|
| | FCT-10A | AFB-020-036-AK1 | 20-26 | TP__0802 | ST020040 TT-T6 | | |
| | FCT-10B | | 25-31 | | | | |
| | FCT-10C | | 30-36 | | | | |
| | FCT-20A | AFB-025-047-AK2 | 25-33 | | | | |
| | FCT-20B | | 35-40 | | | | |
| | FCT-20C | | 39-47 | | | | |
| | FCT-30A | AFB-032-060-AK3 | 32-42 | | | | |
| | FCT-30B | | 41-51 | | | | |
| | FCT-30C | | 50-60 | | | | |
| | FCT-40A | AFB-041-074-AK4 | 41-54 | | | TC__1102 | ST025060 TT-T8 |
| | FCT-40B | | 50-63 | | | | |
| | FCT-40C | | 61-74 | | | | |
| | FCT-50A | AFB-053-095-AK5 | 53-70 | | | | |
| | FCT-50B | | 65-82 | | | | |
| | FCT-50C | | 78-95 | | | | |
| | FCT-60A | AFB-068-150-AK6 | 68-153 | | | | |
| FCT-60B | AFB-100-203-AK6 | 94-179 | | | | | |
| FCT-60C | AFB-100-203-AK7 | 118-203 | | | | | |
| | FCT-40A00 | AFB-041-074-AK4 | 41-54 | TC__1102 | ST025060 TT-T8 | | |
| | FCT-50A00 | AFB-053-095-AK5 | 53-70 | | | | |
| | FCT-60A00 | AFB-068-150-AK6 | 68-100 | | | | |
| | | AFB-100-203-AK6 | 100-153 | | | | |
| | | AFB-100-203-AK7 | 100-153 | | | | |
| | FCC-40A00 | AFB-041-074-AK4 | 41-54 | CC__0602 | ST040100 TT-T15 | | |
| | FCC-50A00 | AFB-053-095-AK5 | 53-70 | CC__09T3 | | | |
| | FCC-60A00 | AFB-068-150-AK6 | 68-100 | | | | |
| | | AFB-100-203-AK6 | 100-153 | | | | |
| | | AFB-100-203-AK7 | 100-153 | | | | |
| | FCT-40A45 | AFB-041-074-AK4 | 41-54 | TC__1102 | ST025060 TT-T8 | | |
| | FCT-50A45 | AFB-053-095-AK5 | 53-70 | | | | |
| | FCT-60A45 | AFB-068-150-AK6 | 68-100 | | | | |
| | | AFB-100-203-AK6 | 100-153 | | | | |
| | | AFB-100-203-AK7 | 100-153 | | | | |
| | FCT-30A25 | AFB-032-060-AK3 | 32-42 | TP__0802 | ST020040 TT-T6 | | |
| | FCT-40A25 | AFB-041-074-AK4 | 41-54 | | | | |
| | FCT-50A25 | AFB-053-095-AK5 | 53-70 | | | | |
| | FCT-60A25 | AFB-068-150-AK6 | 68-100 | TC__1102 | ST025060 TT-T8 | | |
| | | AFB-100-203-AK6 | 100-153 | | | | |
| | | AFB-100-203-AK7 | 100-153 | | | | |

MLF Series Large Diameter Fine Boring Tools

Diameter range $\Phi 150-850\text{mm}$
 Modular design, for both tool body balancing and machining precision.
 Flexible on tool combination. Easy to use.
 Including steel or Aluminium bridge.



Without Coupling With Coupling

Product code

MLF-__-__-__-LD
 1 2 3 4

“1” Series name
 “2” Minimum boring diameter
 “3” Maximum boring diameter
 “4” “LD” means light weight, without “LD” means standard

Standard (With Steel Boring Bridge)

| Dia range | Product code (Tool body+cartridge) | Weight (kg) | Coupling | Steel bridge | Slider | Balance Block | Cartridge | Insert |
|-----------|---------------------------------------|----------------|----------|--------------|--------|------------------|---------------------------------------|----------|
| 150-210 | MLF-150-210 | 6.2 | / | BS-150-210 | FB-150 | BB-150 | FCT-60AStandard FCT-60B FCT-60C | TC__1102 |
| 210-290 | MLF-210-290 | 7.5 | | BS-210-290 | | BB-200 | | |
| 290-370 | MLF-290-370 | 8.5 | | BS-290-370 | | | | |
| 370-450 | MLF-370-450 | 10.2 | | BS-370-450 | | | | |
| 450-530 | MLF-450-530 | 11.6 | | BS-450-530 | | | | |
| 530-610 | MLF-530-610 | 17.5 | LP40-200 | BS-530-610 | | BB-200 | FCC-60A FCC-60B FCC-60C | CC__09T3 |
| 610-690 | MLF-610-690 | 19 | | BS-610-690 | | | | |
| 690-770 | MLF-690-770 | 20.8 | | BS-690-770 | | | | |
| 770-850 | MLF-770-850 | 23 | | BS-770-850 | | | | |

Aluminium Boring Bridge

| Dia range | Product code (Tool body+cartridge) | Weight (kg) | Coupling | Aluminium bridge | Slider | Balance block | Cartridge | Insert |
|-----------|---------------------------------------|----------------|----------|---------------------|--------|------------------|---------------------------------------|----------|
| 150-210 | MLF-150-210-LD | 4.6 | / | BS-150-210-LD | FB-150 | BB-150 | FCT-60AStandard FCT-60B FCT-60C | TC__1102 |
| 210-290 | MLF-210-290-LD | 5.1 | | BS-210-290-LD | | BB-200 | | |
| 290-370 | MLF-290-370-LD | 5.5 | | BS-290-370-LD | | | | |
| 370-450 | MLF-370-450-LD | 5.9 | | BS-370-450-LD | | | | |
| 450-530 | MLF-450-530-LD | 6.2 | | BS-450-530-LD | | | | |
| 530-610 | MLF-530-610-LD | 11.5 | LP40-200 | BS-530-610-LD | | BB-200 | FCC-60A FCC-60B FCC-60C | CC__09T3 |
| 610-690 | MLF-610-690-LD | 12.3 | | BS-610-690-LD | | | | |
| 690-770 | MLF-690-770-LD | 13.6 | | BS-690-770-LD | | | | |
| 770-850 | MLF-770-850-LD | 14.2 | | BS-770-850-LD | | | | |

- Tool body assembled with FCT-60A fine boring cartridge as standard package.
- Tool body and cartridge need to be ordered separately if FCT-60B or FCT-60C are needed.
Example: MLF-150-210-W and FCT-60B.
- Inserts need to be ordered separately.

● **MLF big diameter series fine boring**

| Dia range | Bridge boring set | Cartridge (○Optional) | |
|-----------|-------------------|-----------------------|---|
| 150-210 | MLF-150-210 | FC_-60A | ○ |
| 176-236 | | FC_-60B | ○ |
| 200-260 | | FC_-60C | ○ |
| 210-290 | MLF-210-290 | FC_-60A | ○ |
| 236-315 | | FC_-60B | ○ |
| 260-340 | | FC_-60C | ○ |
| 290-370 | MLF-290-370 | FC_-60A | ○ |
| 316-396 | | FC_-60B | ○ |
| 340-420 | | FC_-60C | ○ |

| Dia range | Bridge boring set | Cartridge (○Optional) | |
|-----------|-------------------|-----------------------|---|
| 370-450 | MLF-370-450 | FC_-60A | ○ |
| 396-476 | | FC_-60B | ○ |
| 420-500 | | FC_-60C | ○ |
| 450-530 | MLF-450-530 | FC_-60A | ○ |
| 476-556 | | FC_-60B | ○ |
| 500-580 | | FC_-60C | ○ |
| 530-610 | MLF-530-610 | FC_-60A | ○ |
| 556-636 | | FC_-60B | ○ |
| 580-660 | | FC_-60C | ○ |

| Dia range | Bridge boring set | Cartridge (○Optional) | |
|-----------|-------------------|-----------------------|---|
| 610-690 | MLF-610-690 | FC_-60A | ○ |
| 636-716 | | FC_-60B | ○ |
| 660-740 | | FC_-60C | ○ |
| 610-770 | MLF-610-770 | FC_-60A | ○ |
| 716-746 | | FC_-60B | ○ |
| 740-820 | | FC_-60C | ○ |
| 770-850 | MLF-770-850 | FC_-60A | ○ |
| 796-876 | | FC_-60B | ○ |
| 820-900 | | FC_-60C | ○ |

● **DFB Series Anti-Vibration Fine Boring**

Mono-block Type

DFB-____-____-BT50-L____

1 2 3 4 5

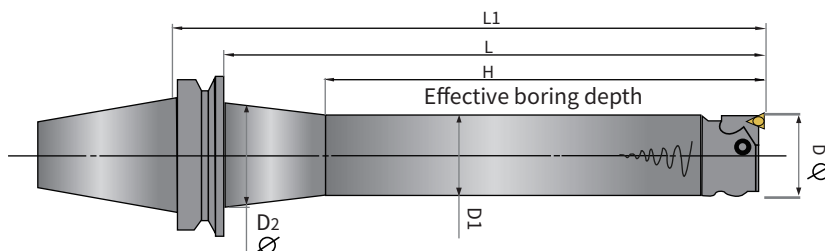
“1” Series name

“2” Minimum boring diameter

“3” Maximum boring diameter

“4” Shank size (BT50)

“5” Effective boring depth



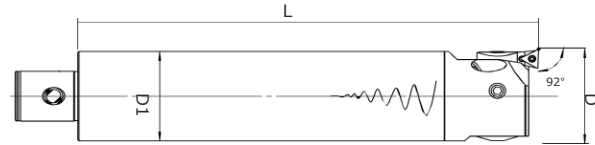
| Product code (Tool body+cartridge) | Cartridge | Dia range | H | L | L1 | Weight (kg) | D1 | D2 | Insert |
|---------------------------------------|-----------|-----------|-----|-----|-----|----------------|----|----|--------|
| DFB-021-036-BT50-L130 | FCT-10A | 21-26 | 130 | 160 | 198 | 4.2 | 20 | 30 | TP0802 |
| | FCT-10B | 25-31 | | | | | | | |
| | FCT-10C | 30-36 | | | | | | | |
| DFB-021-036-BT50-L170 | FCT-10A | 21-26 | 170 | 200 | 238 | 4.4 | 25 | 35 | |
| | FCT-10B | 25-31 | | | | | | | |
| | FCT-10C | 30-36 | | | | | | | |
| DFB-026-047-BT50-L165 | FCT-20A | 26-33 | 165 | 200 | 238 | 4.7 | 25 | 35 | |
| | FCT-20B | 35-40 | | | | | | | |
| | FCT-20C | 39-47 | | | | | | | |
| DFB-026-047-BT50-L215 | FCT-20A | 26-33 | 215 | 250 | 288 | 4.9 | 32 | 45 | |
| | FCT-20B | 35-40 | | | | | | | |
| | FCT-20C | 39-47 | | | | | | | |
| DFB-033-060-BT50-L210 | FCT-30A | 33-42 | 210 | 256 | 294 | 5.7 | 40 | 55 | |
| | FCT-30B | 41-51 | | | | | | | |
| | FCT-30C | 50-60 | | | | | | | |
| DFB-033-060-BT50-L275 | FCT-30A | 33-42 | 275 | 320 | 358 | 6.1 | 50 | 65 | |
| | FCT-30B | 41-51 | | | | | | | |
| | FCT-30C | 50-60 | | | | | | | |
| DFB-041-074-BT50-L260 | FCT-40A | 41-54 | 260 | 320 | 358 | 7.4 | 50 | 65 | |
| | FCT-40B | 50-63 | | | | | | | |
| | FCT-40C | 61-71 | | | | | | | |
| DFB-041-074-BT50-L340 | FCT-40A | 41-54 | 340 | 400 | 438 | 8.2 | 50 | 65 | |
| | FCT-40B | 50-63 | | | | | | | |
| | FCT-40C | 61-71 | | | | | | | |
| DFB-053-095-BT50-L325 | FCT-50A | 50-70 | 325 | 400 | 438 | 11 | 50 | 65 | |
| | FCT-50B | 65-82 | | | | | | | |
| | FCT-50C | 78-95 | | | | | | | |
| DFB-053-095-BT50-L425 | FCT-50A | 50-70 | 425 | 500 | 538 | 12.4 | 50 | 65 | |
| | FCT-50B | 65-82 | | | | | | | |
| | FCT-50C | 78-95 | | | | | | | |

| Product code (Tool body+cartridge) | Cartridge | Dia range | H | L | L1 | Weight (Kg) | D1 | D2 | Insert |
|---------------------------------------|-----------|-----------|-----|-----|-----|----------------|----|----|--------|
| DFB-068-150-BT50-L420 | FCT-60A | 68-100 | 420 | 512 | 550 | 18.9 | 64 | 80 | TC1102 |
| | FCT-60B | 94-126 | | | | | | | |
| | FCT-60C | 118-150 | | | | | | | |
| DFB-068-150-BT50-L550 | FCT-60A | 68-100 | 550 | 640 | 678 | 21.8 | 64 | 80 | TC1102 |
| | FCT-60B | 94-126 | | | | | | | |
| | FCT-60C | 118-150 | | | | | | | |
| DFB-100-203-BT50-L455 | FCT-60A | 100-153 | 455 | 560 | 598 | 24.2 | 70 | 85 | TC1102 |
| | FCT-60B | 126-179 | | | | | | | |
| | FCT-60C | 150-203 | | | | | | | |
| DFB-100-203-BT50-L595 | FCT-60A | 100-153 | 595 | 700 | 738 | 28.2 | 70 | 85 | TC1102 |
| | FCT-60B | 126-179 | | | | | | | |
| | FCT-60C | 150-203 | | | | | | | |

- Tool body assembled with FC*-60A fine boring cartridge as standard package.
- Tool body and cartridge need to be ordered separately if FC*-60B or FC*-60C cartridge is needed.
Example: DFB-021-036-BT50-L130-W and FC*-60B.
- Inserts need to be ordered separately.

DFB Series Anti-Vibration Fine Boring

Modular Type



| Product code (Tool body+cartridge) | Cartridge | Dia range | Coupling | L | D1 | Weight (kg) | Insert (Option) |
|---------------------------------------|-----------|-----------|----------|-----|----|-------------|-----------------|
| DFB-041-074-AK4-L165 | FC*-40A | 41-54 | AK4 | 165 | 40 | 2.2 | TC1102 |
| | FC*-40B | 50-63 | | | | | |
| | FC*-40C | 61-71 | | | | | |
| DFB-053-095-AK5-L235 | FC*-50A | 50-70 | AK5 | 235 | 50 | 4.7 | |
| | FC*-50B | 65-82 | | | | | |
| | FC*-50C | 78-95 | | | | | |
| DFB-068-150-AK6-L252 | FC*-60A | 68-100 | AK6 | 252 | 63 | 8.9 | |
| | FC*-60B | 94-126 | | | | | |
| | FC*-60C | 118-150 | | | | | |

- Tool body assembled with FC*-60A fine boring cartridge as standard package.
- Tool body and cartridge need to be ordered separately if FC*-60B or FC*-60C cartridge is needed.
Example: DFB-068-150-AK6-L252-W and FC*-60B.
- Inserts need to be ordered separately.

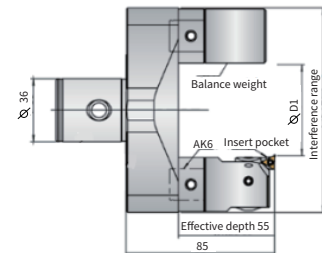
EPB external fine boring series

Diameter range $\Phi 25-102\text{mm}$

Modular design, for both tool body balancing and machining precision.

Flexible on tool combination. Easy to used.

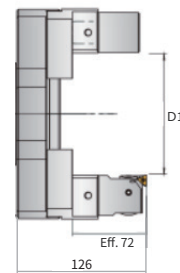
The spindle needs to rotate in anti-clockwise direction while external turning.



| D1 | Tool body | | | Fine boring unit | | Balance block | | Cartridge | Insert |
|--------|---------------------------------------|----------------|------------------|------------------|----------------|-----------------|----------------|-----------|-----------|
| | Product code (Tool body+cartridge) | Weight (kg) | Coupling size | Product code | Weight (kg) | Product code | Weight (kg) | | |
| 25-34 | EFB-025-052-AK6 | 1.5 | 118 | AFB-032-060-AK3 | 0.22 | EB-AK32 | 0.22 | FCT-30C | TP_ _0802 |
| 34-43 | | | | | | | | | |
| 43-52 | | | | | | | | | |
| 50-59 | | | | | | | | | |
| 59-68 | EFB-050-077-AK6 | 1.8 | 143 | | | | | | |
| 68-77 | | | | | | | | | |
| 75-84 | | | | | | | | | |
| 84-93 | EFB-075-102-AK6 | 1.9 | 168 | | | | | | |
| 93-102 | | | | | | | | | |

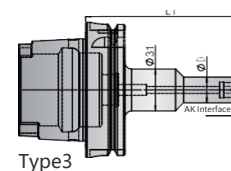
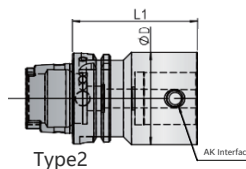
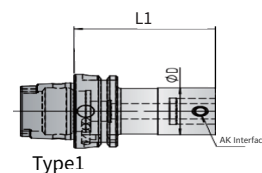
EPB external fine boring series

Fine boring for big diameter



| Dia range | Coupling | | Boring bridge | Slider | Fine boring unit | Cartridge | Insert | Balance weight |
|-----------|--------------|-------------|---------------|------------|------------------|-----------|---------|----------------|
| | Product code | Weight (Kg) | | | | | | |
| 41-96 | / | / | BS-150-210 | EB-150-AK4 | AFB-041-074-AK4 | FCT-40A | TC 1102 | EB-AK4 |
| 80-160 | | | BS-210-290 | | | | | |
| 160-240 | | | BS-290-370 | | | | | |
| 240-320 | | | BS-370-450 | | | | | |
| 320-400 | | | BS-450-530 | | | | | |
| 400-480 | LP40-200 | 4.7 | BS-530-610 | | | | | |
| 480-560 | | | BS-610-690 | | | | | |
| 560-640 | | | BS-690-770 | | | | | |
| 640-720 | | | BS-770-850 | | | | | |

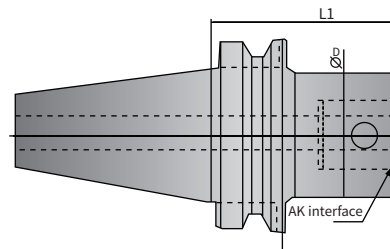
HSK-A modular adaptor



| Product code | Coupling | D | L1 | Weight (kg) | Type |
|-----------------|----------|----|-----|-------------|------|
| HSK-A63-AK1-75 | AK1 | 19 | 75 | 0.9 | 1 |
| HSK-A63-AK1-100 | AK1 | 19 | 100 | 1.3 | 1 |
| HSK-A63-AK2-85 | AK2 | 24 | 85 | 1.7 | 1 |
| HSK-A63-AK2-100 | AK2 | 24 | 100 | 2.2 | 1 |
| HSK-A63-AK3-95 | AK3 | 31 | 95 | 2.3 | 1 |
| HSK-A63-AK3-125 | AK3 | 31 | 125 | 2.6 | 1 |
| HSK-A63-AK4-85 | AK4 | 39 | 85 | 2.1 | 1 |
| HSK-A63-AK4-130 | AK4 | 39 | 130 | 2.7 | 1 |
| HSK-A63-AK5-75 | AK5 | 50 | 75 | 2.3 | 1 |
| HSK-A63-AK5-135 | AK5 | 50 | 135 | 2.8 | 1 |
| HSK-A63-AK6-75 | AK6 | 64 | 75 | 2.3 | 2 |
| HSK-A63-AK6-115 | AK6 | 64 | 115 | 2.8 | 2 |
| HSK-A63-AK6-165 | AK6 | 64 | 165 | 3.1 | 2 |

| Product code | Coupling | D | L1 | Weight(kg) | Type |
|------------------|----------|----|-----|------------|------|
| HSK-A100-AK1-105 | AK1 | 19 | 105 | 2.6 | 3 |
| HSK-A100-AK2-115 | AK2 | 24 | 115 | 2.7 | 1 |
| HSK-A100-AK3-125 | AK3 | 31 | 125 | 2.9 | 1 |
| HSK-A100-AK4-120 | AK4 | 39 | 120 | 3.1 | 1 |
| HSK-A100-AK4-180 | AK4 | 39 | 180 | 3.7 | 1 |
| HSK-A100-AK5-110 | AK5 | 50 | 110 | 3.5 | 1 |
| HSK-A100-AK5-185 | AK5 | 50 | 185 | 4.6 | 1 |
| HSK-A100-AK6-95 | AK6 | 64 | 95 | 3.6 | 1 |
| HSK-A100-AK6-170 | AK6 | 64 | 170 | 5.5 | 1 |
| HSK-A100-AK6-230 | AK6 | 64 | 230 | 7.1 | 1 |

BT modular adaptor

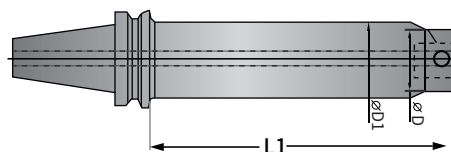


| Product code | Coupling | D | L1 | Weight(kg) | Type |
|--------------|----------|----|----|------------|------|
| BT30-AK1-70 | AK1 | 19 | 70 | 0.5 | 2 |
| BT30-AK2-80 | AK2 | 24 | 80 | 0.6 | 2 |
| BT30-AK3-80 | AK3 | 31 | 80 | 0.7 | 2 |
| BT30-AK4-70 | AK4 | 39 | 70 | 0.8 | 2 |
| BT30-AK5-70 | AK5 | 50 | 70 | 0.8 | 2 |
| BT30-AK6-70 | AK6 | 64 | 70 | 1.2 | 2 |

◆ **BT modular adaptor**

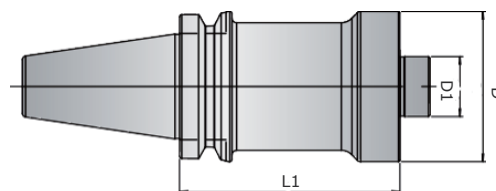
| Product code | Coupling | D | L1 | Weight (Kg) | Type |
|--------------|----------|----|-----|-------------|------|
| BT40-AK1-75 | AK1 | 19 | 75 | 1 | 2 |
| BT40-AK1-105 | AK1 | 19 | 105 | 1.2 | 2 |
| BT40-AK2-85 | AK2 | 24 | 85 | 1.1 | 2 |
| BT40-AK2-115 | AK2 | 24 | 115 | 1.4 | 2 |
| BT40-AK3-95 | AK3 | 31 | 95 | 1.2 | 2 |
| BT40-AK3-125 | AK3 | 31 | 125 | 1.5 | 2 |
| BT40-AK4-85 | AK4 | 39 | 85 | 1.3 | 2 |
| BT40-AK4-130 | AK4 | 39 | 130 | 1.9 | 2 |
| BT40-AK4-175 | AK4 | 39 | 175 | 2.2 | 2 |
| BT40-AK5-50 | AK5 | 50 | 50 | 1.2 | 2 |
| BT40-AK5-75 | AK5 | 50 | 75 | 1.3 | 2 |
| BT40-AK5-125 | AK5 | 50 | 125 | 2.4 | 2 |
| BT40-AK5-175 | AK5 | 50 | 175 | 3 | 2 |
| BT40-AK6-65 | AK6 | 64 | 65 | 1.3 | 2 |
| BT40-AK6-115 | AK6 | 64 | 115 | 2.7 | 2 |
| BT40-AK6-165 | AK6 | 64 | 165 | 3.9 | 2 |
| BT50-AK1-115 | AK1 | 19 | 115 | 4 | 1 |
| BT50-AK2-85 | AK2 | 24 | 85 | 3.8 | 2 |
| BT50-AK2-110 | AK2 | 24 | 110 | 3.9 | 2 |
| BT50-AK3-90 | AK3 | 31 | 90 | 3.9 | 2 |
| BT50-AK3-125 | AK3 | 31 | 125 | 4.1 | 2 |
| BT50-AK4-115 | AK4 | 39 | 115 | 4.3 | 2 |
| BT50-AK4-145 | AK4 | 39 | 145 | 4.5 | 2 |
| BT50-AK4-175 | AK4 | 39 | 175 | 4.8 | 2 |
| BT50-AK5-65 | AK5 | 50 | 65 | 3.9 | 2 |
| BT50-AK5-105 | AK5 | 50 | 105 | 4.5 | 2 |
| BT50-AK5-150 | AK5 | 50 | 150 | 5.1 | 2 |
| BT50-AK5-180 | AK5 | 50 | 180 | 5.5 | 2 |
| BT50-AK5-240 | AK5 | 64 | 240 | 6.2 | 2 |
| BT50-AK6-95 | AK6 | 64 | 95 | 4.5 | 2 |
| BT50-AK6-170 | AK6 | 64 | 170 | 6.3 | 2 |
| BT50-AK6-230 | AK6 | 64 | 230 | 7.7 | 2 |
| BT50-AK6-290 | AK6 | 64 | 290 | 9 | 2 |
| BT50-AK7-170 | AK7 | 90 | 170 | 6.1 | 2 |
| BT50-AK7-230 | AK7 | 90 | 230 | 11.8 | 2 |
| BT50-AK7-290 | AK7 | 90 | 290 | 14.6 | 2 |
| BT50-AK7-350 | AK7 | 90 | 350 | 17.4 | 2 |

BT modular reinforced adaptor



| Product code | Coupling | D | D1 | L1 | Weight (Kg) |
|------------------|----------|----|----|-----|-------------|
| BT50-AK4-190-P46 | AK4 | 39 | 46 | 190 | 5.6 |
| BT50-AK4-235-P48 | AK4 | 39 | 48 | 235 | 6.2 |
| BT50-AK5-240-P61 | AK5 | 50 | 61 | 240 | 8.2 |
| BT50-AK5-300-P61 | AK5 | 50 | 61 | 300 | 9.6 |
| BT50-AK6-260-P72 | AK6 | 64 | 72 | 260 | 10.3 |
| BT50-AK6-315-P72 | AK6 | 64 | 72 | 315 | 12.2 |
| BT50-AK6-290-P80 | AK6 | 64 | 80 | 290 | 13.2 |
| BT50-AK6-350-P80 | AK6 | 64 | 80 | 350 | 15.2 |

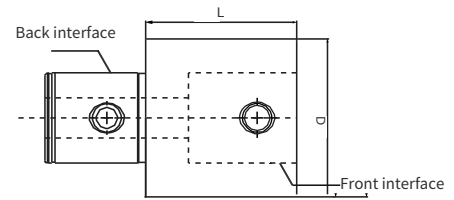
Boring adaptor



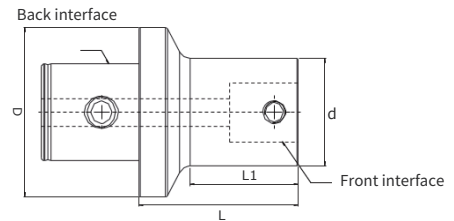
| Product code | Coupling | D | D1 | L1 | Screw | Weight(Kg) |
|---------------|----------|-----|----|-----|----------|------------|
| BT40-BA40-70 | BA40 | 100 | 40 | 70 | SH120350 | 2.8 |
| BT50-BA40-100 | BA40 | 100 | 40 | 100 | | 6.1 |
| BT50-BA40-150 | BA40 | 100 | 40 | 150 | | 7.9 |
| BT50-BA40-200 | BA40 | 100 | 40 | 200 | | 9.7 |
| BT50-BA40-250 | BA40 | 100 | 40 | 250 | | 10.9 |
| BT50-BA40-300 | BA40 | 100 | 40 | 300 | | 12.5 |
| BT50-BA40-350 | BA40 | 100 | 40 | 350 | | 13.9 |

HSK-A100 step boring tool

| Product code | Coupling | D | D1 | L1 | Screw | Weight(Kg) |
|-------------------|----------|-----|----|-----|----------|------------|
| HSK-A100-BA40-80 | BA40 | 100 | 40 | 80 | SH120350 | 5.1 |
| HSK-A100-BA40-150 | BA40 | 100 | 40 | 150 | | 7.3 |

Extention bar


| Product code | Back coupling | Front coupling | D | L | Weight (Kg) |
|--------------|---------------|----------------|----|-----|-------------|
| AK11-30 | AK1 | AK1 | 19 | 30 | 0.07 |
| AK22-30 | AK2 | AK2 | 24 | 30 | 0.1 |
| AK33-30 | AK3 | AK3 | 31 | 30 | 0.15 |
| AK44-45 | AK4 | AK4 | 39 | 45 | 0.4 |
| AK44-60 | AK4 | AK4 | 39 | 60 | 0.53 |
| AK55-60 | AK5 | AK5 | 50 | 60 | 0.8 |
| AK55-90 | AK5 | AK5 | 50 | 90 | 1.25 |
| AK66-60 | AK6 | AK6 | 64 | 60 | 1.4 |
| AK66-100 | AK6 | AK6 | 64 | 100 | 2.33 |

Reduction bar


| Model | Back coupling | Front coupling | D | d | L | L1 | Weight (Kg) |
|---------|---------------|----------------|----|----|----|----|-------------|
| AK21-36 | AK2 | AK1 | 24 | 19 | 36 | 30 | 0.1 |
| AK31-41 | AK3 | AK1 | 31 | 19 | 41 | 30 | 0.15 |
| AK32-37 | AK3 | AK2 | 31 | 24 | 37 | 25 | 0.15 |
| AK41-58 | AK4 | AK1 | 39 | 19 | 58 | 40 | 0.3 |
| AK42-50 | AK4 | AK2 | 39 | 24 | 50 | 36 | 0.3 |
| AK43-50 | AK4 | AK3 | 39 | 31 | 50 | 37 | 0.35 |
| AK51-60 | AK5 | AK1 | 50 | 19 | 60 | 40 | 0.45 |
| AK52-54 | AK5 | AK2 | 50 | 24 | 54 | 35 | 0.45 |
| AK52-75 | AK5 | AK2 | 50 | 24 | 75 | 55 | 0.47 |
| AK53-47 | AK5 | AK3 | 50 | 31 | 47 | 29 | 0.5 |
| AK53-75 | AK5 | AK3 | 50 | 31 | 75 | 55 | 0.57 |
| AK54-42 | AK5 | AK4 | 50 | 39 | 42 | 25 | 0.5 |
| AK54-75 | AK5 | AK4 | 50 | 39 | 75 | 55 | 0.66 |
| AK61-70 | AK6 | AK1 | 64 | 19 | 70 | 40 | 0.9 |
| AK62-63 | AK6 | AK2 | 64 | 24 | 63 | 45 | 0.7 |
| AK62-90 | AK6 | AK2 | 64 | 24 | 90 | 72 | 0.72 |
| AK63-56 | AK6 | AK3 | 64 | 31 | 56 | 39 | 0.75 |
| AK63-90 | AK6 | AK3 | 64 | 31 | 90 | 73 | 0.88 |
| AK64-51 | AK6 | AK4 | 64 | 39 | 51 | 35 | 0.85 |
| AK64-90 | AK6 | AK4 | 64 | 39 | 90 | 75 | 1.08 |
| AK65-41 | AK6 | AK5 | 64 | 50 | 41 | 25 | 0.85 |
| AK65-90 | AK6 | AK5 | 64 | 50 | 90 | 74 | 1.45 |

● Boring insert

| Insert | Product code | | | Grade | | | | |
|--------|------------------|--------|--------|--------|--------|--------|--------|--------|
| | | l (mm) | r (mm) | AP301U | AP301M | ACK15A | AW100K | API00S |
| | CCGT 060204F-NC2 | 6.45 | 0.4 | | | | ● | |
| | 09T304F-NC2 | 9.67 | 0.4 | | | | ● | |
| | 09T308F-NC2 | 9.67 | 0.8 | | | | ● | |
| | 120404F-NC2 | 12.7 | 0.4 | | | | ● | ● |
| | CCMT 060204E-KC2 | 6.45 | 0.4 | | ● | ● | | |
| | 09T304E-KC2 | 9.67 | 0.4 | | ● | ● | | |
| | 09T308E-KC2 | 9.67 | 0.8 | | ● | ● | | |
| | 120404E-KC2 | 12.7 | 0.4 | | ○ | ● | | |
| | 120408E-KC2 | 12.7 | 0.8 | | ● | ● | | |
| | 120412E-KC2 | 12.7 | 1.2 | | ○ | ● | | |
| | CCET 09T304FR-M | 9.67 | <0.4 | | ● | ● | | |
| | 09T304FL-M | 9.67 | <0.4 | | ● | ● | | |
| | SCMT 09T304E-KC2 | 9.67 | 0.4 | | | ● | | |
| | 09T308E-KC2 | 9.67 | 0.8 | | | ● | | |
| | 120408E-KC2 | 12.7 | 0.8 | | | ● | | |
| | 120412E-KC2 | 12.7 | 1.2 | | | ● | | |
| | TCGT 110204F-NC2 | 11 | 0.4 | | | | ○ | |
| | TPEH 080202FL-F | 08 | <0.2 | | ○ | | | |
| | 080204FL-F | 08 | <0.4 | | ○ | | | |
| | TCGT 110204E-UF | 11 | 0.4 | | ● | | | |
| | 110202F-UF | 11 | 0.2 | | ● | | | |

| Insert | Product code | r (mm) | Grade | | |
|-------------------------|-------------------------|--------|-------|------|------|
| | | | PB30 | PB60 | PB90 |
| | CCGW 060202-S01020-SL-2 | 0.2 | ● | ● | ● |
| | CCGW 060204-S01020-SL-2 | 0.4 | ● | ● | ● |
| | CCGW 060208-S01020-SL-2 | 0.8 | ● | ● | ● |
| | CCGW 09T302-S01020-SL-2 | 0.2 | ● | ● | ● |
| | CCGW 09T304-S01020-SL-2 | 0.4 | ● | ● | ● |
| | CCGW 09T308-S01020-SL-2 | 0.8 | ● | ● | ● |
| | CCGW 120402-S01020-SL-2 | 0.2 | ● | ● | ● |
| | CCGW 120404-S01020-SL-2 | 0.4 | ● | ● | ● |
| | CCGW 120408-S01020-SL-2 | 0.8 | ● | ● | ● |
| | TPGW 080202-S01020-SL-3 | 0.2 | ● | ● | ● |
| TPGW 080204-S01020-SL-3 | 0.4 | ● | ● | ● | |
| TPGW 110302-S01020-SL-3 | 0.2 | ● | ● | ● | |
| TPGW 110304-S01020-SL-3 | 0.4 | ● | ● | ● | |

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