

Micro-adjustable drilling head M040

Sturdy – Accurate – Easy to use

With the M040 micro-adjustable drilling head, slide adjustment is still recorded directly by means of an electronic measurement system. The measurement result is evaluated by a microprocessor and displayed on an LCD display with a resolution of 1 μm . This reduces errors in adjustment and read-off to a minimum.

• Sturdy design

By using new technology we have been able to make the new M040 even sturdier. With its water and dustproof design (IP67), it is not affected by either chips or coolant.

• Direct measurement = accurate measurement

Even with the most highly accurate translation of adjustment sequences, other micro-adjustable drilling heads only show the adjustment value indirectly. Our M040 micro-adjustable head works directly in conjunction with the actual measurement process, making the operation considerably easier for the operator.

• Easy to use

The head has been made even easier to use, switching from absolute to differential dimensions with only two keys and also allowing the differential to be set to zero.

Concentricity or balanced position can be easily located again in the Absolute mode without need for a setting device.

• Extended setting range

The adjustment value has been increased to 5 mm in the diameter.

• Replaceable bridges

In conjunction with the new replaceable bridges it is possible to machine bores up to 103 mm. These replaceable bridges are in lightweight metal with hard surface coating and integral balancing.

Features

- large adjustment range from -0.4 to +4.6 mm on dia.
- easy to use with only 2 keys
- waterproof and dustproof (IP67 standard)
- direct measuring system on slide
- display resolution 0.001 mm in the diameter
- display in mm or inches
- can be switched between differential and absolute mode
- easy to read LCD display
- energy saving function, i.e. M040 automatically switches off after 30 seconds
- central coolant supply up to 50 bar
- ABS 32 spindle connection – 16 mm cylindrical shank
- can be adapted for any machine tool with standard tool adaptors
- maximum spindle speed: 12,500 min^{-1} (in central slide position)
- head diameter: 70 mm
- weight: 1,1 kg

Construction

can be adapted for any machine tool with ABS standard tool adaptors

operating keys

battery compartment

digital display with position display energy saving function: Display automatically switches off after 30 seconds

ABS 32 on tool side or 16 mm cylindrical shank connection

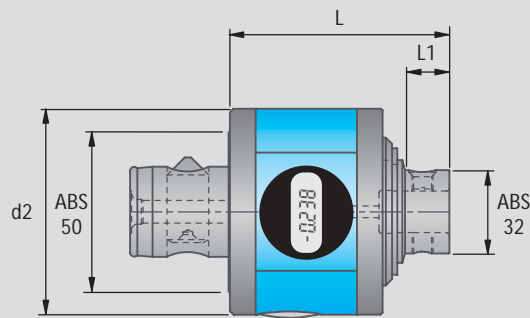


Adjustment is carried out manually with an hexagonal key; this allows the slide to be adjusted extremely accurately. One turn of the key equals to a diameter change of 70 μm .



Micro-adjustable drilling head M040

with ABS® connection



Display panel shown at 90° angle

| Order No. | ABS size d | ABS size d1 | d2 | L | L1 | kg | Spares | | | | |
|-----------|------------|-------------|----|----|------|------|----------------------|-----------------------------|---------------------|------------------------------|----------------------------|
| | | | | | | | Battery Order No. | Battery spring Order No. | O-ring Order No. | Positioning pin Order No. | Battery cover Order No. |
| M04 00151 | 50 | 32 | 70 | 69 | 13,5 | 1,19 | 7500012150 | 5271000053 | 5291401615 | N00 05480 | M04 00150.11 |

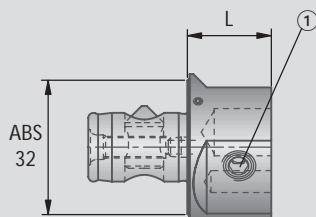
Note: The micro-adjustable drilling head is balanced in the zero position..

Supply includes micro-adjustable drilling head:

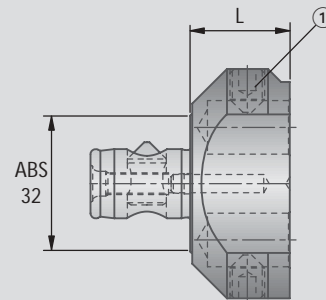
Micro-adjustable drilling head with battery. Please order intermediate adaptors and replaceable bridges as extras.

Intermediate adaptor with ABS® connection

for Ø 38 – 63 mm



for Ø 62 – 103 mm



| Order No. | ABS size d1 | L | kg | Spares |
|-----------|-------------|------|-------|----------------------------------|
| | | | | Clamping screw ① Order No. |
| M04 01310 | 32 | 19,5 | 0,135 | M03 20090.15 |

| Order No. | ABS size d1 | L | kg | Spares |
|-----------|-------------|----|-------|----------------------------------|
| | | | | Clamping screw ① Order No. |
| M04 01320 | 32 | 23 | 0,286 | M03 20090.15 |

Supply includes: Intermediate adaptor:

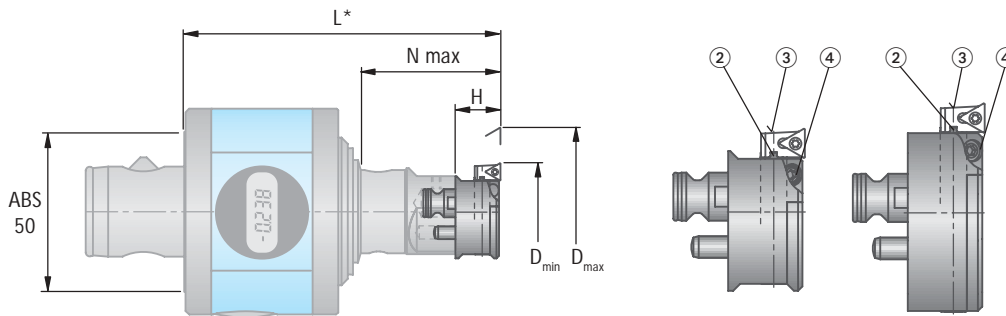
Intermediate adaptor with clamping screw ① for replaceable bridge

Note:

The application details shown depend on the environmental and application conditions (e.g. machine, ambient temperature, use of lubricant/coolant and the machining result required). These are subject to correct operating conditions, correct application and compliance with the spindle speed limits given for the tools.

Micro-adjustable drilling head M040

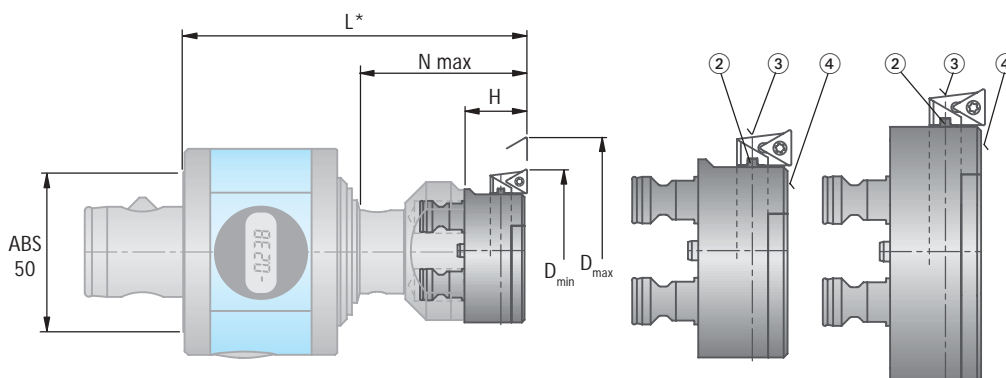
Replaceable bridge Ø 38 - 63 mm



* For 'L' dimension see insert holder table on following page

| D _{min} - D _{max} | Order No. | H | N max | kg | Spares | | |
|-------------------------------------|-----------|------|-------|------|-----------------------|--|---|
| | | | | | ② Holder Order No. | ③ Location screw for insert holder Order No. | ④ Clamping screw for holder Order No. |
| 38 - 51 | M03 20180 | 17,5 | 50 | 0,06 | M03 20180.16 | N00 56210 | 5505104008 |
| 50 - 63 | M03 20190 | 17,5 | 50 | 0,08 | | | |

Replaceable bridge Ø 62 - 103 mm



* For 'L' dimension see insert holder table on following page

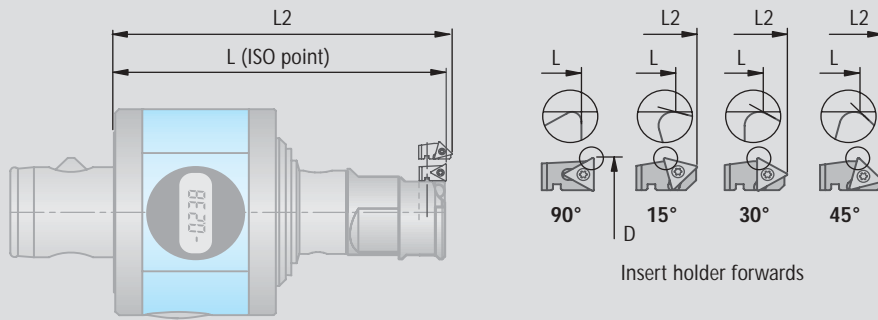
| D _{min} - D _{max} | Order No. | H | N max | kg | Spares | | |
|-------------------------------------|-----------|----|-------|------|-----------------------|--|---|
| | | | | | ② Holder Order No. | ③ Location screw for insert holder Order No. | ④ Clamping screw for holder Order No. |
| 62 - 83 | M03 20150 | 24 | 60 | 0,20 | M03 20150.16 | N00 56210 | 5505104008 |
| 82 - 103 | M03 20160 | 24 | 60 | 0,24 | | | |

Supply includes replaceable bridge:

Replaceable bridge with location screw ③, holder ② and clamping screw ④. Insert holder - please order as extra

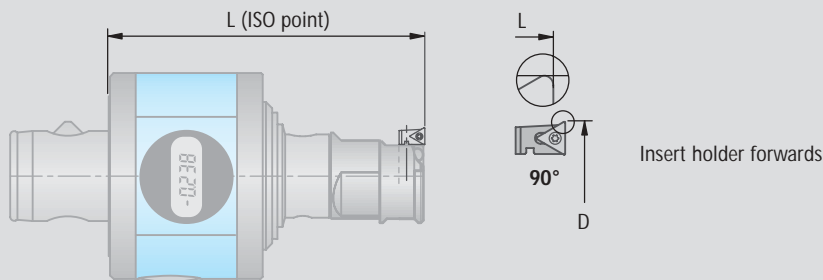
Micro-adjustable drilling head M040

Insert holder
 Ø 38,0 – 103,0 mm



| Micro-adjustable drilling head | Insert holder forwards | | | | | | Insert | | Spares | |
|--------------------------------|------------------------|-----------|-----|-------|-------|-------|---------------------------------|-----------------------------|---------------------------|--------------------------|
| | D | Order No. | α | L | L2 | | size ▼▼ | size ▼▼ | Order No. Article | Order No. Article |
| M04 00151 (ABS50) | 38 - 63 | M03 10033 | 90° | 106 | 106 | 0,002 | W57 04040..... TOHX 06T1.... | W30 04..... TOHX 06T1... | N00 56030 Tx S/M2x4,8 | L05 00020 Tx 6 |
| | | M03 11120 | 15° | 101,5 | 107,7 | 0,002 | W57 04120..... TOHG 06T1.... | | | |
| | | M03 11220 | 30° | 102,5 | 108 | 0,002 | W57 04140..... TOHG 06T1.... | | | |
| | | M03 11320 | 45° | 103,5 | 108 | 0,002 | | | | |
| | 62 - 103 | M03 10043 | 90° | 116 | 116 | 0,005 | W57 14040..... TOHX 0902.... | W30 14..... TOHX 0902... | N00 56100 TxS/M2,6x5,1 | L05 00040 Tx 8 |
| | | M03 11130 | 15° | 109,5 | 117,9 | 0,005 | W57 14120..... TOHG 0902.... | | | |
| | | M03 11230 | 30° | 110,5 | 118 | 0,005 | W57 14140..... TOHG 0902.... | | | |
| | | M03 11330 | 45° | 112,8 | 118,9 | 0,005 | | | | |

Insert holder for machining aluminium
 Ø 38,0 – 103,0 mm
 Insert tilt of +5° over cutting edge



| Micro-adjustable drilling head | Insert holder forwards | | | | | Insert | | Spares | |
|--------------------------------|------------------------|-----------|-----|-----|-------|-------------------------------------|-----------------------------|---------------------------|--------------------------|
| | D | Order No. | α | L | | size ▼▼ | size ▼▼ | Order No. Article | Order No. Article |
| M04 00151 (ABS50) | 38-63 | M03 10133 | 90° | 106 | 0,002 | W58 03120.0423 TPGX 060104 FN-12 | W32 03..... TPHB 0601... | N00 56030 Tx S/M2x4,8 | L05 00020 Tx 6 |
| | 62-103 | M03 10143 | 90° | 116 | 0,005 | W58 13120.0423 TPGX 090204 FN-12 | W32 13..... TPHB 0902... | N00 56100 TxS/M2,6x5,1 | L05 00040 Tx 8 |

Supply includes insert holder:
 Insert holder with clamping screw and screwdriver. Insert not included.

Further inserts and approach angles available on request.

Micro-adjustable drilling head M040

Set in case

Ø 8 mm - Ø 44 mm

A



Set in case complete
Order No. M04 01230

| | Qty. | Article | Order No. |
|---------------|------|-------------------------------------|-----------------------|
| ① | 1 | Micro-adjustable drilling head M040 | M04 00151 |
| ② | 1 | Boring bar ABS32 Ø 7,9 - 12,9 | B00 25610 |
| | 1 | Boring bar ABS32 Ø 11,9 - 16,9 | B00 25630 |
| | 1 | Boring bar ABS32 Ø 15,9 - 20,9 | B00 25650 |
| | 1 | Boring bar ABS32 Ø 19,9 - 24,9 | B00 25671 |
| | 1 | Boring bar ABS32 Ø 23,9 - 28,9 | B00 25691 |
| | 1 | Boring bar ABS32 Ø 27,9 - 44,0 | B30 02020 |
| ③ | 5 | Inserts | W57 04140.0284 |
| | 5 | Inserts | W57 14140.0284 |
| ④ optional | 1 | Adaptor DIN69871 ISO40AD/B-ABS50 | A50 55150 |
| | | Adaptor DIN69871 ISO50AD/B-ABS50 | A50 55350 |
| | | Adaptor HSK-A63 ABS50 | A06 30150 |
| ⑤ | 1 | Control key SW4 | 1859110040 |

B

Ø 38 mm - Ø 103 mm



Set in case complete
Order No. M04 01240

| | Qty. | Article | Order No. |
|---------------|------|-------------------------------------|-----------------------|
| ① | 1 | Micro-adjustable drilling head M040 | M04 00151 |
| ② | 1 | Adaptor ABS32 Ø38 - 63 mm | M04 01310 |
| ③ | 1 | Adaptor ABS32 Ø62 - 103 mm | M04 01320 |
| ④ | 1 | Replaceable bridge Ø38 - 51 mm | M03 20180 |
| | 1 | Replaceable bridge Ø50 - 63 mm | M03 20190 |
| | 1 | Replaceable bridge Ø62 - 83 mm | M03 20150 |
| | 1 | Replaceable bridge Ø82 - 103 mm | M03 20160 |
| ⑤ | 2 | Insert holder 90° forwards | M03 10033 |
| | 2 | Insert holder 90° forwards | M03 10043 |
| ⑥ | 5 | Inserts | W57 04140.0284 |
| | 5 | Inserts | W57 14140.0284 |
| ⑦ optional | 1 | Adaptor DIN69871 ISO40AD/B-ABS50 | A50 55150 |
| | | Adaptor DIN69871 ISO50AD/B-ABS50 | A50 55350 |
| | | Adaptor HSK-A63 ABS50 | A06 30150 |
| ⑧ | 1 | Control key SW4 | 1859110040 |

The possible combinations can be supplied in various additional options

Supply includes the case with foam lining and 5 inserts for each size

Please ask our representative.

B1 Basic set for machining Ø 38 - 63 mm Set in case – Order No. M04 01241

| Qty. | Article | Order No. |
|---------------|-------------------------------------|-----------|
| 1 | Micro-adjustable drilling head M040 | M04 00151 |
| 1 | Adaptor ABS32 Ø38 - 63 mm | M04 01310 |
| 1 | Replaceable bridge Ø38 - 51 mm | M03 20180 |
| 1 | Replaceable bridge Ø50 - 63 mm | M03 20190 |
| 2 | Insert holder 90° forwards | M03 10033 |
| 1 optional | Adaptor DIN69871 ISO40AD/B-ABS50 | A50 55150 |
| | Adaptor DIN69871 ISO50AD/B-ABS50 | A50 55350 |
| | Adaptor HSK-A63 ABS50 | A06 30150 |

B2 Basic set for machining Ø 62 - 103 mm Set in case – Order No. M04 01242



| Qty. | Article | Order No. |
|---------------|-------------------------------------|-----------|
| 1 | Micro-adjustable drilling head M040 | M04 00151 |
| 1 | Adaptor ABS32 Ø62 - 103 mm | M04 01320 |
| 1 | Replaceable bridge Ø62 - 83 mm | M03 20150 |
| 1 | Replaceable bridge Ø82 - 103 mm | M03 20160 |
| 2 | Insert holder 90° forwards | M03 10043 |
| 1 optional | Adaptor DIN69871 ISO40AD/B-ABS50 | A50 55150 |
| | Adaptor DIN69871 ISO50AD/B-ABS50 | A50 55350 |
| | Adaptor HSK-A63 ABS50 | A06 30150 |

B3 Extension set for machining Ø 38 - 63 mm Set in case – Order No. M04 01243

| Qty. | Article | Order No. |
|------|--------------------------------|-----------|
| 1 | Adaptor ABS32 Ø38 - 63 mm | M04 01310 |
| 1 | Replaceable bridge Ø38 - 51 mm | M03 20180 |
| 1 | Replaceable bridge Ø50 - 63 mm | M03 20190 |
| 2 | Insert holder 90° forwards | M03 10033 |

B4 Extension set for machining Ø 62 - 103 mm Set in case – Order No. M04 01244

| Qty. | Article | Order No. |
|------|---------------------------------|-----------|
| 1 | Adaptor ABS32 Ø62 - 103 mm | M04 01320 |
| 1 | Replaceable bridge Ø62 - 83 mm | M03 20150 |
| 1 | Replaceable bridge Ø82 - 103 mm | M03 20160 |
| 2 | Insert holder 90° forwards | M03 10043 |

B5 Extension set for machining Ø 38 - 103 mm Set in case – Order No. M04 01245

| Qty. | Article | Order No. |
|------|---------------------------------|-----------|
| 1 | Adaptor ABS32 Ø38 - 63 mm | M04 01310 |
| 1 | Adaptor ABS32 Ø62 - 103 mm | M04 01320 |
| 1 | Replaceable bridge Ø38 - 51 mm | M03 20180 |
| 1 | Replaceable bridge Ø50 - 63 mm | M03 20190 |
| 1 | Replaceable bridge Ø62 - 83 mm | M03 20150 |
| 1 | Replaceable bridge Ø82 - 103 mm | M03 20160 |
| 2 | Insert holder 90° forwards | M03 10033 |
| 2 | Insert holder 90° forwards | M03 10043 |

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