



Tool Holders with Straight Shank

Chapter 5 of the Product Catalogue 2010/2011 Precision Tools





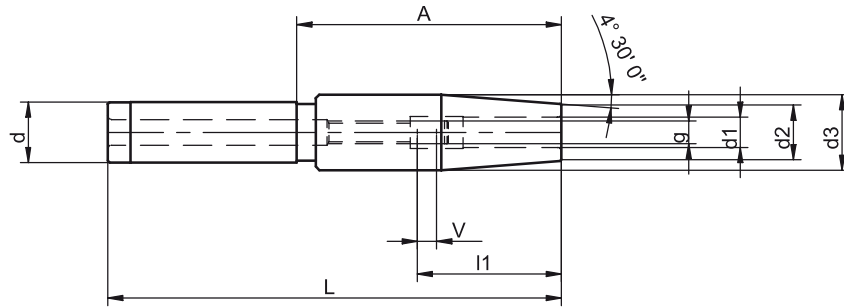
Straight Shanks



Tool Holders with Straight Shank and Quick Change Inserts

| | |
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i-tec® Shrink Fit Chuck Extensions



| d | d1 | L | Ref.no. | d2 | d3 | l1 | g | A | V | kg |
|----|----|-----|----------------|----|------|----|---------|-----|----|-----|
| 20 | 6 | 160 | 311.811 | 15 | 19.9 | 36 | M 5 | 110 | 10 | 0.4 |
| 20 | 8 | 160 | 311.812 | 15 | 19.9 | 36 | M 6 | 110 | 10 | 0.4 |
| 25 | 10 | 160 | 311.863 | 18 | 24.9 | 41 | M 8 x 1 | 110 | 10 | 0.4 |
| 25 | 12 | 160 | 311.864 | 18 | 24.9 | 47 | M10 x 1 | 110 | 10 | 0.4 |
| 32 | 12 | 160 | 311.823 | 18 | 32 | 47 | M10 x 1 | - | 10 | 0.5 |
| 32 | 14 | 160 | 311.829 | 21 | 32 | 47 | M10 x 1 | - | 10 | 0.5 |
| 32 | 16 | 160 | 311.824 | 21 | 32 | 53 | M12 x 1 | - | 10 | 0.6 |
| 32 | 20 | 160 | 311.825 | 27 | 32 | 55 | M16 x 1 | - | 10 | 0.5 |

For adjusting screws see accessories page 7.13.

Use

To be used in i-tec® shrink fit chucks, hydraulic expansion chucks or collet chucks.

Design

Straight shank according to DIN 1835 type A, slim version.

Permissible concentricity deviation of straight shank to location hole $d1 = 0.003$ mm.

The clamping diameter is designed for a shank tolerance of h6.

Standard Specification

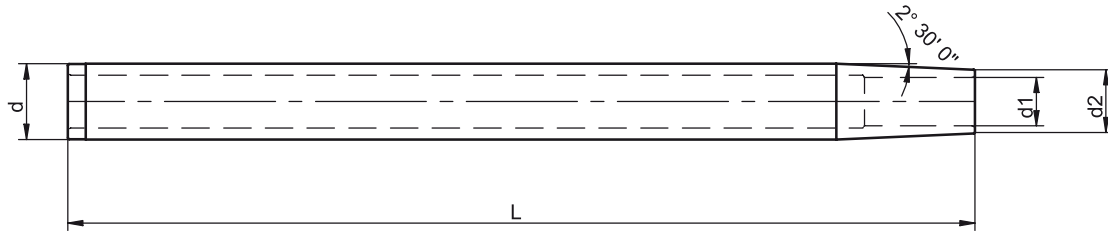
Adjusting screw for length adjustment is not included.

Note

Other designs and sizes are available on request.

i-tec® Shrink Fit Chuck Extensions

Bored Through, Extremely Slim Version



| d | d1 | L | Ref.no. | d2 | kg |
|----|----|-----|----------------|----|-----|
| 12 | 3 | 160 | 311.610 | 8 | 0.1 |
| 12 | 4 | 160 | 311.611 | 9 | 0.1 |
| 16 | 5 | 160 | 311.622 | 10 | 0.2 |
| 16 | 6 | 160 | 311.623 | 11 | 0.2 |
| 20 | 6 | 160 | 311.633 | 11 | 0.3 |
| 20 | 6 | 300 | 311.663 | 11 | 0.5 |
| 20 | 8 | 160 | 311.634 | 13 | 0.3 |
| 20 | 8 | 300 | 311.664 | 13 | 0.5 |
| 20 | 10 | 160 | 311.635 | 15 | 0.2 |
| 20 | 12 | 160 | 311.636 | 17 | 0.2 |
| 25 | 10 | 160 | 311.645 | 15 | 0.3 |
| 25 | 10 | 300 | 311.675 | 15 | 0.8 |
| 25 | 12 | 300 | 311.676 | 17 | 0.7 |
| 25 | 14 | 160 | 311.648 | 19 | 0.4 |

Use

To be used in i-tec® shrink fit chucks, hydraulic expansion chucks or collet chucks.

Design

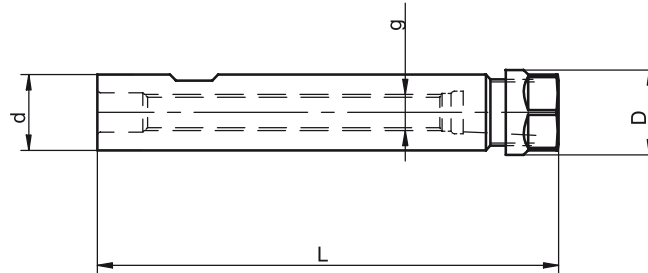
Straight shank according to DIN 1835 type A, extremely slim version. Permissible concentricity deviation of straight shank to location hole $d_1 = 0.003$ mm. The clamping diameter is designed for a shank tolerance of h6.

Note

Other designs and sizes are available on request.

Collet Chuck Extensions

ER Version



| d | Clamping range | L | Ref.no. | D | g | kg |
|----|----------------|-----|----------------|----|-----|-----|
| 20 | 0.5 - 7 | 145 | 151.011 | 19 | M 8 | 0.3 |
| 25 | 0.5 - 10 | 155 | 151.012 | 28 | M12 | 0.3 |

For accessories such as collets, clamping nuts or clamping keys see accessories from page 7.3 to page 7.8.

Use

If standard collet chucks cannot be used due to lack of space.

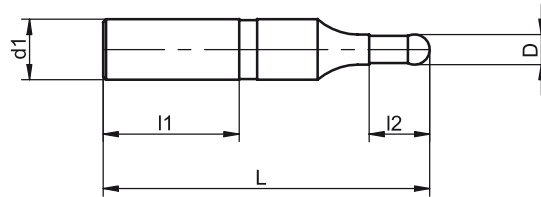
Design

Straight shank with clamping surface according to DIN 1835 type B.
Permissible concentricity deviation of straight shank to inner taper 0.003 mm.

Standard Specification

Collet chuck extension including clamping nut.

Probes



| d1 | l1 | l2 | Ref.no. | D | L | kg |
|----|----|----|---------|----|-----|-----|
| 20 | 45 | 20 | 025.012 | 10 | 107 | 0.3 |

Use

For measurement in 3 directions (X,Y and Z) of steps, grooves, outer contours of work piece reference surfaces or edges and for determining boring centres that are central to the work spindle.

Design

The probe has a straight shank of 20 mm \varnothing according to DIN 1835 and can be held in a reduction sleeve according to

DIN 6359, type B or in a collet chuck with a collet.

The sensor has a resilient sensing ball and allows in the Z axis a deflection of 4 mm.

Standard Specification

Complete with battery and operation manual.

Function

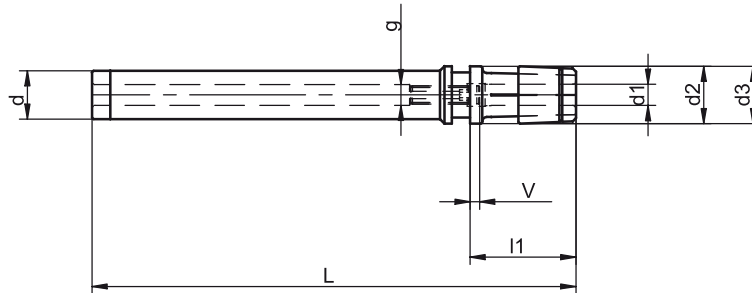
As soon as the sensor touches the electrically conductive work piece, a red LED flashes up on the probe's body, which can be seen from all sides. The sensor reacts with an accuracy of 0.001 mm.

For the measuring result the sensor's radius of 5 mm has to be considered.

Measuring internal dimensions = travel range + 10 mm.

Measuring external dimensions = travel range - 10 mm.

i-tec® SLOTT Extensions



| d | d1 | L | Ref.no. | d2 | d3 | l1 | g | V | kg |
|----|------|-----|----------------|----|----|----|-----|---|-----|
| 16 | 3.5 | 160 | 285.801 | 19 | 19 | 30 | - | - | 0.2 |
| 16 | 4.0 | 160 | 285.802 | 19 | 19 | 30 | - | - | 0.2 |
| 16 | 4.5 | 160 | 285.803 | 19 | 19 | 30 | - | - | 0.2 |
| 16 | 6.0 | 160 | 285.804 | 19 | 19 | 35 | M 5 | 5 | 0.3 |
| 16 | 7.0 | 160 | 285.805 | 19 | 19 | 35 | M 6 | 5 | 0.3 |
| 16 | 8.0 | 160 | 285.806 | 19 | 19 | 35 | M 6 | 5 | 0.3 |
| 16 | 9.0 | 160 | 285.807 | 19 | 19 | 37 | M 6 | 5 | 0.3 |
| 16 | 10.0 | 160 | 285.808 | 22 | 22 | 37 | M 6 | 5 | 0.3 |
| 16 | 12.0 | 160 | 285.810 | 22 | 22 | 37 | M 6 | 5 | 0.3 |
| 16 | 12.0 | 160 | 285.820 | 27 | 30 | 37 | M 6 | 5 | 0.3 |

For adjusting screws see accessories page 7.13.

For shrink rings see accessories page 7.2.

Use

To be used in i-tec® shrink fit chucks, hydraulic expansion chucks or collet chucks.

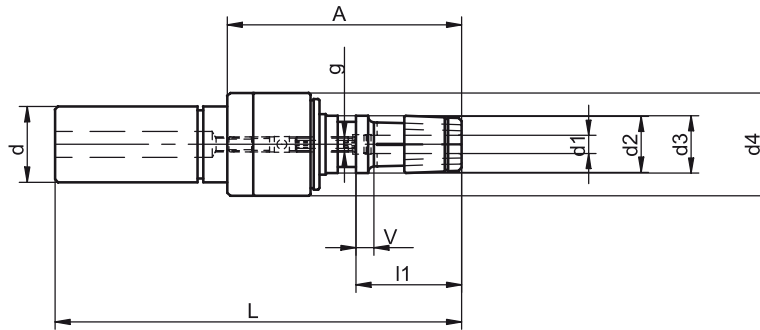
Design

Straight shank according to DIN 1835. The clamping diameter is designed for a shank tolerance of h9.

Standard Specification

Shrink ring and adjusting screw for length adjustment (from Ø 6) included.

i-tec® SLOTT Synchro with Straight Shank



| d | d1 | A | Ref.no. | d2 | d3 | d4 | l1 | l2 | g | L | V | kg |
|----|------|------|----------------|----|----|----|----|----|---------|-------|---|-----|
| 25 | 3.0 | 77.5 | 285.200 | 19 | 20 | 34 | - | 47 | - | 134.5 | - | 0.5 |
| 25 | 3.5 | 77.5 | 285.201 | 19 | 20 | 34 | - | 47 | - | 134.5 | - | 0.5 |
| 25 | 4.0 | 77.5 | 285.202 | 19 | 20 | 34 | - | 47 | - | 134.5 | - | 0.5 |
| 25 | 4.5 | 77.5 | 285.203 | 19 | 20 | 34 | - | 47 | - | 134.5 | - | 0.5 |
| 25 | 5.0 | 77.5 | 285.204 | 19 | 20 | 34 | - | 47 | - | 134.5 | - | 0.5 |
| 25 | 6.0 | 77.5 | 285.205 | 19 | 20 | 34 | 35 | 47 | M 5 | 134.5 | 5 | 0.5 |
| 25 | 7.0 | 77.5 | 285.206 | 19 | 20 | 34 | 35 | 47 | M 5 | 134.5 | 5 | 0.5 |
| 25 | 8.0 | 77.5 | 285.207 | 19 | 20 | 34 | 35 | 47 | M 6 | 134.5 | 5 | 0.5 |
| 25 | 9.0 | 77.5 | 285.208 | 19 | 20 | 34 | 37 | 47 | M 6 | 134.5 | 5 | 0.5 |
| 25 | 10.0 | 88.5 | 285.220 | 22 | 30 | 45 | 37 | 52 | M 8 x 1 | 145.5 | 5 | 0.7 |
| 25 | 11.0 | 88.5 | 285.221 | 22 | 30 | 45 | 37 | 52 | M 8 x 1 | 145.5 | 5 | 0.7 |
| 25 | 12.0 | 93.5 | 285.222 | 27 | 30 | 45 | 37 | 57 | M10 x 1 | 150.5 | 5 | 0.8 |
| 25 | 14.0 | 93.5 | 285.223 | 27 | 30 | 45 | 40 | 57 | M10 x 1 | 150.5 | 5 | 0.8 |
| 25 | 16.0 | 93.5 | 285.224 | 27 | 30 | 45 | 40 | 57 | M12 x 1 | 150.5 | 5 | 0.8 |

For adjusting screws see accessories page 7.13.

For shrink rings see accessories page 7.2.

Design

Straight shank according to DIN 1835 type B and E.
The clamping diameter is designed for a shank tolerance of h9.

Standard Specification

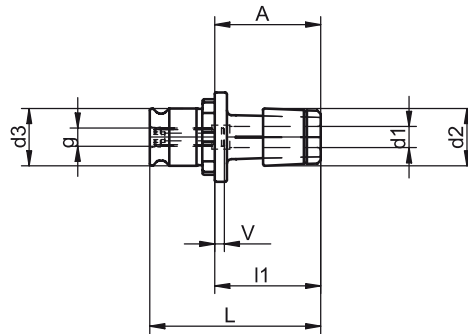
Shrink ring and adjusting screw for length adjustment (from Ø 6) are included.

Note

Other designs and sizes are available on request.

i-tec® SLOTT Quick Change Inserts

Size KA



| d3 | d1 | A | Ref.no. | d2 | l1 | g | L | V | kg |
|----|------|----|----------------|----|----|-----|------|---|-----|
| 19 | 3.5 | 35 | 285.001 | 19 | 30 | - | 56.5 | - | 0.1 |
| 19 | 4.0 | 35 | 285.002 | 19 | 30 | - | 56.5 | - | 0.1 |
| 19 | 4.5 | 35 | 285.003 | 19 | 30 | - | 56.5 | - | 0.1 |
| 19 | 6.0 | 35 | 285.004 | 19 | 35 | M 6 | 56.5 | 5 | 0.1 |
| 19 | 7.0 | 35 | 285.005 | 19 | 35 | M 6 | 56.5 | 5 | 0.1 |
| 19 | 8.0 | 35 | 285.006 | 19 | 35 | M 6 | 56.5 | 5 | 0.1 |
| 19 | 9.0 | 40 | 285.007 | 19 | 37 | M 6 | 61.5 | 5 | 0.1 |
| 19 | 10.0 | 40 | 285.008 | 22 | 37 | M 6 | 61.5 | 5 | 0.1 |

For adjusting screws see accessories page 7.13.

For shrink rings see accessories page 7.2.

Use

Quick change inserts to be used in quick change tapping chucks.

Design

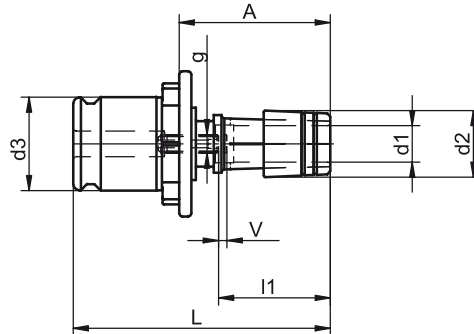
Quick change inserts size KA according to DIN 6393-19. The clamping diameter is designed for a shank tolerance of h9.

Standard Specification

Shrink ring and adjusting screw for length adjustment are included.

i-tec® SLOTT Quick Change Inserts

Size KB



| d3 | d1 | A | Ref.no. | d2 | l1 | g | L | V | kg |
|----|----|----|----------------|----|----|-----|----|---|-----|
| 31 | 10 | 50 | 285.108 | 22 | 37 | M 6 | 85 | 5 | 0.3 |
| 31 | 11 | 50 | 285.109 | 22 | 37 | M 6 | 85 | 5 | 0.3 |
| 31 | 12 | 55 | 285.120 | 27 | 37 | M 6 | 90 | 5 | 0.3 |
| 31 | 14 | 55 | 285.111 | 27 | 40 | M 6 | 90 | 5 | 0.4 |
| 31 | 16 | 55 | 285.112 | 27 | 40 | M 6 | 90 | 5 | 0.4 |

For adjusting screws see accessories page 7.13.

For shrink rings see accessories page 7.2.

Use

Quick change inserts to be used in quick change tapping chucks.

Design

Quick change inserts size KB according to DIN 6393-31.

The clamping diameter is designed for a shank tolerance of h9.

Standard Specification

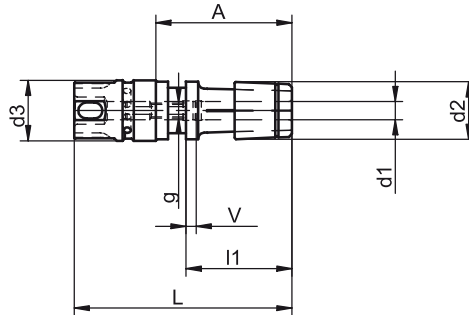
Shrink ring and adjusting screw for length adjustment are included.

Note

Other designs and sizes are available on request.

i-tec® SLOTT Quick Change Inserts

for Tapping Chucks with Minimum Length Compensation



| d3 | d1 | A | Ref.no. | d2 | l1 | g | L | V | kg |
|----|------|----|----------------|----|----|-----|----|---|-----|
| 20 | 3.5 | 45 | 285.301 | 19 | 30 | - | 72 | - | 0.1 |
| 20 | 4.0 | 45 | 285.302 | 19 | 30 | - | 72 | - | 0.1 |
| 20 | 4.5 | 45 | 285.303 | 19 | 30 | - | 72 | - | 0.1 |
| 20 | 6.0 | 45 | 285.304 | 19 | 35 | M 6 | 72 | 5 | 0.1 |
| 20 | 7.0 | 45 | 285.305 | 19 | 35 | M 6 | 72 | 5 | 0.1 |
| 20 | 8.0 | 45 | 285.306 | 19 | 35 | M 6 | 72 | 5 | 0.1 |
| 20 | 9.0 | 45 | 285.307 | 19 | 37 | M 6 | 72 | 5 | 0.1 |
| 20 | 10.0 | 50 | 285.308 | 22 | 37 | M 6 | 77 | 5 | 0.1 |

For adjusting screws see accessories page 7.13.

For shrink rings see accessories page 7.2.

Use

Quick change inserts to be used in quick change tapping chucks with minimum length compensation.

Design

Quick change insert for minimum length compensation.

The clamping diameter is designed for a shank tolerance of h9.

Standard Specification

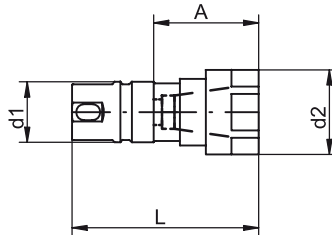
Shrink ring and adjusting screw for length adjustment are included.

Note

Other designs and sizes are available on request.

Quick Change Inserts

for Minimum Length Compensation with ER Collets



| d1 | Clamping range | A | Ref.no. | d2 | L |
|----|----------------|----|----------------|----|----|
| 20 | 0.5 - 10 | 24 | 148.510 | 28 | 42 |
| 32 | 1 - 16 | 28 | 148.530 | 42 | 59 |

For accessories such as collets, clamping nuts or clamping keys see accessories from page 7.3 to page 7.8.

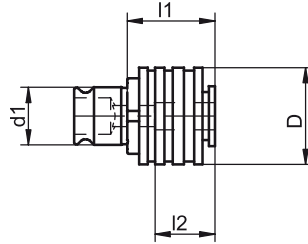
Use

Quick change inserts to be used in quick change tapping chucks with minimum length compensation.

Standard Specification

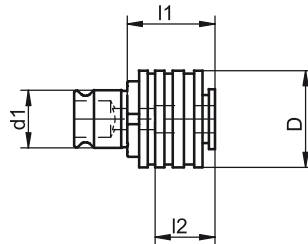
Quick change insert including clamping nut.

Quick Change Inserts with Safety Clutch



| d1 | D | l1 | Ref.no. | Thread | Shank | Square | l2 |
|----|----|----|----------------|---------|-------|--------|----|
| 19 | 32 | 25 | 147.550 | M 3 | 3.5 | 2.7 | 17 |
| 19 | 32 | 25 | 147.551 | M 4 | 4.5 | 3.4 | 17 |
| 19 | 32 | 25 | 147.552 | M 4.5 | 6.0 | 4.9 | 17 |
| 19 | 32 | 25 | 147.553 | M 5 | 6.0 | 4.9 | 17 |
| 19 | 32 | 25 | 147.554 | M 6 | 6.0 | 4.9 | 17 |
| 19 | 32 | 25 | 147.555 | M 6 | 4.5 | 3.4 | 17 |
| 19 | 32 | 25 | 147.556 | M 7 | 7.0 | 5.5 | 17 |
| 19 | 32 | 25 | 147.557 | M 7 | 6.0 | 4.9 | 17 |
| 19 | 32 | 25 | 147.558 | M 8 | 8.0 | 6.2 | 17 |
| 19 | 32 | 25 | 147.559 | M 8 | 6.0 | 4.9 | 17 |
| 19 | 32 | 25 | 147.560 | M 9 | 9.0 | 7.0 | 17 |
| 19 | 32 | 25 | 147.561 | M 9 | 7.0 | 5.5 | 17 |
| 19 | 32 | 25 | 147.562 | M10 | 10.0 | 8.0 | 17 |
| 19 | 32 | 25 | 147.563 | M10 | 7.0 | 5.5 | 17 |
| 19 | 32 | 25 | 147.564 | M11 | 8.0 | 6.2 | 17 |
| 19 | 32 | 25 | 147.577 | M11 | 8.0 | 6.2 | 17 |
| 19 | 32 | 25 | 147.565 | M12 | 9.0 | 7.0 | 17 |
| 19 | 32 | 25 | 147.566 | M 6 | 5.5 | 4.3 | 17 |
| 19 | 32 | 25 | 147.568 | M14 | 11.0 | 9.0 | 17 |
| 19 | 32 | 25 | 147.570 | M 4 | 4.0 | 3.15 | 17 |
| 19 | 32 | 25 | 147.580 | M 4 | 4.0 | 3.15 | 17 |
| 19 | 32 | 25 | 147.571 | M 4.5 | 4.5 | 3.55 | 17 |
| 19 | 32 | 25 | 147.572 | M 5 | 5.0 | 4.0 | 17 |
| 19 | 32 | 25 | 147.573 | M 6 | 6.3 | 5.0 | 17 |
| 19 | 32 | 25 | 147.574 | M 7 | 7.1 | 5.6 | 17 |
| 19 | 32 | 25 | 147.575 | M 8 | 8.0 | 6.3 | 17 |
| 19 | 32 | 25 | 147.579 | M 4.5 | 3.55 | 2.8 | 17 |
| 19 | 32 | 25 | 147.581 | M 6 | 4.5 | 3.55 | 17 |
| 19 | 32 | 25 | 147.583 | M 7/M 9 | 7.1 | 5.6 | 17 |
| 19 | 32 | 25 | 147.584 | M10 | 8.0 | 6.3 | 17 |
| 19 | 32 | 25 | 147.585 | M12 | 9.0 | 7.1 | 17 |
| 19 | 32 | 25 | 147.589 | M 3.5 | 4.0 | 3.0 | 17 |
| 31 | 50 | 34 | 147.651 | M 8 | 8.0 | 6.2 | 30 |
| 31 | 50 | 34 | 147.652 | M 8 | 6.0 | 4.9 | 30 |
| 31 | 50 | 34 | 147.653 | M 9 | 9.0 | 7.0 | 30 |
| 31 | 50 | 34 | 147.654 | M 9 | 7.0 | 5.5 | 30 |
| 31 | 50 | 34 | 147.655 | M10 | 10.0 | 8.0 | 30 |
| 31 | 50 | 34 | 147.656 | M10 | 7.0 | 5.5 | 30 |
| 31 | 50 | 34 | 147.657 | M11 | 8.0 | 6.2 | 30 |
| 31 | 50 | 34 | 147.658 | M12 | 9.0 | 7.0 | 30 |
| 31 | 50 | 34 | 147.659 | M14 | 11.0 | 9.0 | 30 |

Quick Change Inserts with Safety Clutch



| d1 | D | l1 | Ref.no. | Thread | Shank | Square | l2 |
|----|----|----|---------|--------|-------|--------|----|
| 31 | 50 | 34 | 147.660 | M16 | 12.0 | 9.0 | 30 |
| 31 | 50 | 34 | 147.661 | M18 | 14.0 | 11.0 | 30 |
| 31 | 50 | 34 | 147.662 | M20 | 16.0 | 12.0 | 30 |
| 31 | 50 | 34 | 147.663 | M24 | 18.0 | 14.5 | 30 |
| 31 | 50 | 34 | 147.667 | M 6 | 6.0 | 4.9 | 30 |
| 31 | 50 | 34 | 147.668 | M 5 | 6.0 | 4.9 | 30 |
| 31 | 50 | 34 | 147.669 | M 6 | 6.3 | 5.0 | 30 |
| 31 | 50 | 34 | 147.670 | M 8 | 8.0 | 6.3 | 30 |
| 31 | 50 | 34 | 147.671 | M 9 | 9.0 | 7.1 | 30 |
| 31 | 50 | 34 | 147.673 | M14 | 11.2 | 9.0 | 30 |
| 31 | 50 | 34 | 147.674 | M16 | 12.5 | 10.0 | 30 |
| 31 | 50 | 34 | 147.675 | M18 | 14.0 | 11.2 | 30 |
| 31 | 50 | 34 | 147.676 | M22 | 16.0 | 12.5 | 30 |
| 31 | 50 | 34 | 147.678 | M10 | 8.0 | 6.3 | 30 |
| 31 | 50 | 34 | 147.679 | M12 | 9.0 | 7.1 | 30 |
| 31 | 50 | 34 | 147.680 | M20 | 14.0 | 11.2 | 30 |
| 31 | 50 | 34 | 147.681 | M22 | 18.0 | 14.5 | 30 |

Use

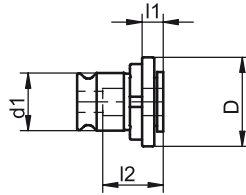
Quick change inserts facilitate a fast exchange of the tap without the use of any auxiliary tools. With adjustable safety clutch for thread cutting in blind holes.

Note

When placing an order, indicate the shank type and the square type of the tap with their DIN number. Quick change inserts for coolant supply are available on request.

Quick Change Inserts

without Safety Clutch



| d1 | D | l1 | Ref.no. | Thread | Shank | Square | l2 |
|----|----|----|----------------|-------------|-------|--------|----|
| 19 | 30 | 7 | 148.110 | M 3.0 | 3.5 | 2.7 | 17 |
| 19 | 30 | 7 | 148.111 | M 4.0/M 6.0 | 4.5 | 3.4 | 17 |
| 19 | 30 | 7 | 148.112 | M 6.0/M 7.0 | 5.5 | 4.3 | 17 |
| 19 | 30 | 7 | 148.113 | M 4.5/M 8.0 | 6.0 | 4.9 | 17 |
| 19 | 30 | 7 | 148.114 | M 7.0/M10.0 | 7.0 | 5.5 | 17 |
| 19 | 30 | 7 | 148.115 | M 8.0/M11.0 | 8.0 | 6.2 | 17 |
| 19 | 30 | 7 | 148.116 | M 9.0/M12.0 | 9.0 | 7.0 | 17 |
| 19 | 30 | 7 | 148.117 | M10.0 | 10.0 | 8.0 | 17 |
| 19 | 30 | 7 | 148.118 | M14.0 | 11.0 | 9.0 | 17 |
| 19 | 30 | 7 | 148.119 | M 3.5 | 4.0 | 3.0 | 17 |
| | | | | | | | |
| 31 | 48 | 11 | 148.213 | M 5 | 6.0 | 4.9 | 30 |
| 31 | 48 | 11 | 148.214 | M 7 | 7.0 | 5.5 | 30 |
| 31 | 48 | 11 | 148.215 | M 8 | 8.0 | 6.2 | 30 |
| 31 | 48 | 11 | 148.216 | M 9 | 9.0 | 7.0 | 30 |
| 31 | 48 | 11 | 148.217 | M10 | 10.0 | 8.0 | 30 |
| 31 | 48 | 11 | 148.218 | M14 | 11.0 | 9.0 | 30 |
| 31 | 48 | 11 | 148.219 | M16 | 12.0 | 9.0 | 30 |
| 31 | 48 | 11 | 148.220 | M18 | 14.0 | 11.2 | 30 |
| 31 | 48 | 11 | 148.221 | M20 | 16.0 | 12.5 | 30 |
| 31 | 48 | 11 | 148.222 | M22 | 18.0 | 14.5 | 30 |

Use

Quick change inserts facilitate a fast exchange of the tap without the use of any auxiliary tools.

Without safety clutch for thread cutting in through holes.

Note

When placing an order, indicate the shank type and the square type of the tap with their DIN number.

Quick change inserts for coolant supply are available on request.

www.kelchgmbh.de

As of September 2010 · Technical and design modifications are subject to change without notice.



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