

Driven Toolholders for OKUMA Machines

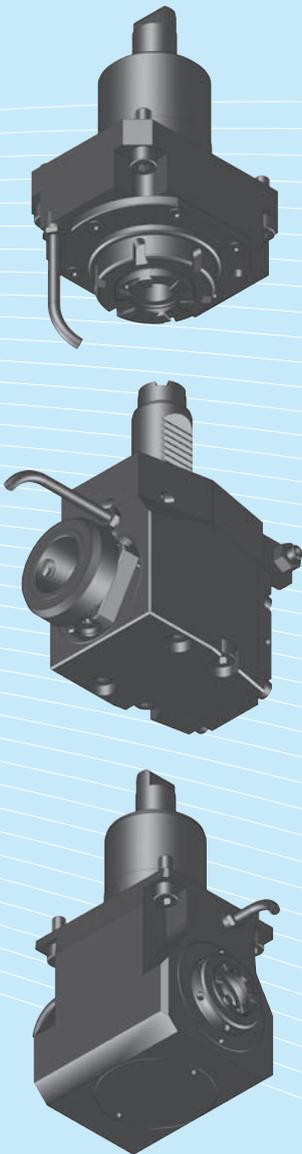


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mimatic[®] Tool Systems for Sustainability and Efficiency

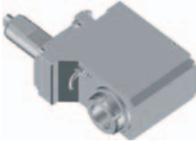
BLUECOMPETENCE

Alliance Member

Partner of the Engineering Industry
Sustainability Initiative

Tools according to the policy of BLUECOMPETENCE are marked in this catalogue. More information on the program (Initiative) of the VDMA see pages 16-17 in the main catalogue.

Selection According to Tool Type

| | | Manufacturer | Page |
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| Straight Unit |  | | 12, 20, 26, 32, 36, 40, 44 |
| Straight Unit, Offset Type |  | | 13, 21 |
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| Angle Unit, 2-Axis |  | | 46 |
| Angle Unit, adjustable 0-100° |  | | 16, 23 |

Economical Complete Machining with Driven Toolholders

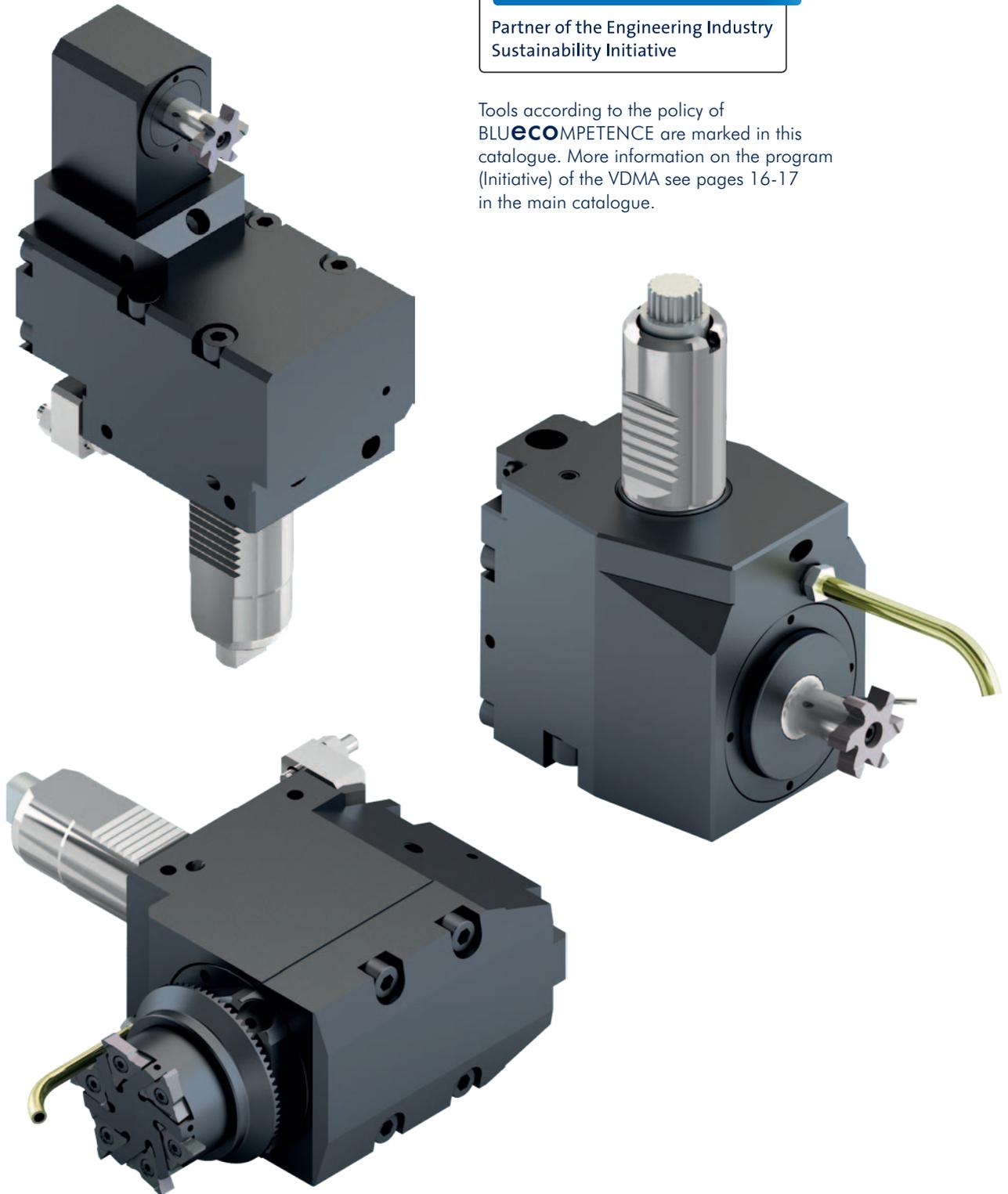
mimatic[®] Tool Systems for Sustainability and Efficiency

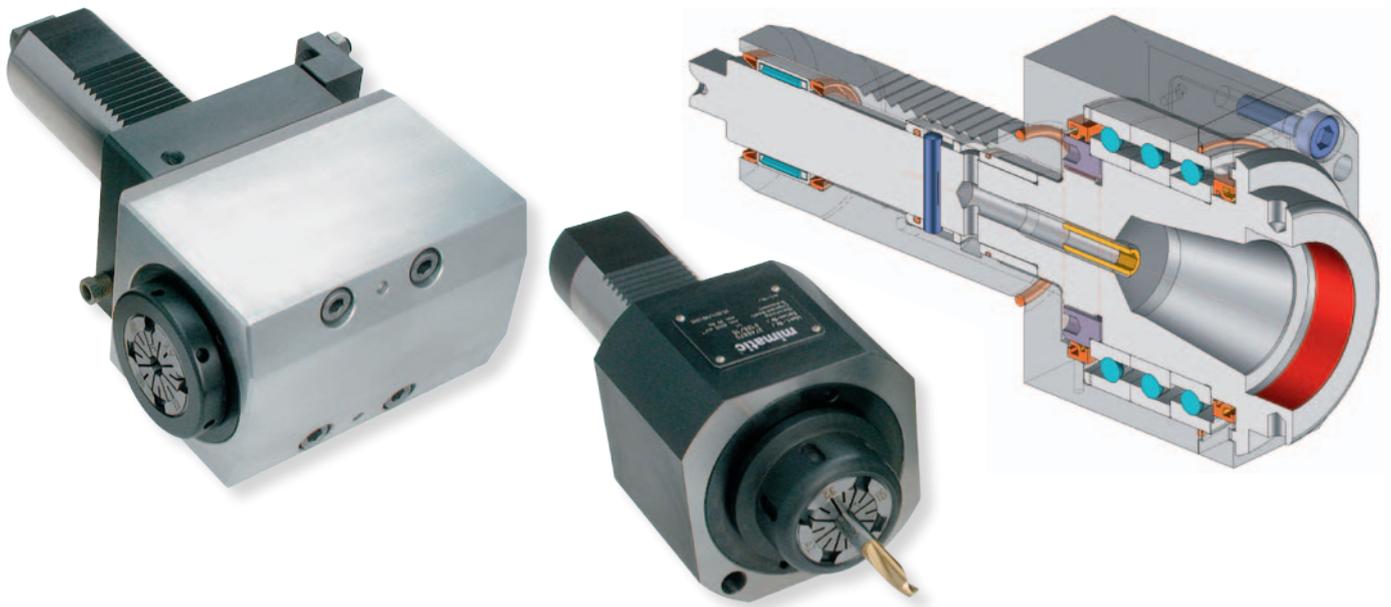
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Sustainability Initiative

Tools according to the policy of
BLUeCOMPETENCE are marked in this
catalogue. More information on the program
(Initiative) of the VDMA see pages 16-17
in the main catalogue.





As a medium-size company with global activities, we are developing and producing CNC precision standard and special tools for the automotive, mechanical engineering, aircraft and woodworking industries since 1974.

The mimatic® brand is acknowledged worldwide for its compliance with strict quality requirements in the context of integrated system solutions for the machining segment.

The philosophy of the Company is based upon synergy between highly motivated staff and excellent standards in the areas of technology and quality development. These attributes enable us to provide the perfect solution to every specific customer requirement.

Products from mimatic®

- Driven toolholders for CNC lathes and machining centers
- Cutting tools
- Clamping systems

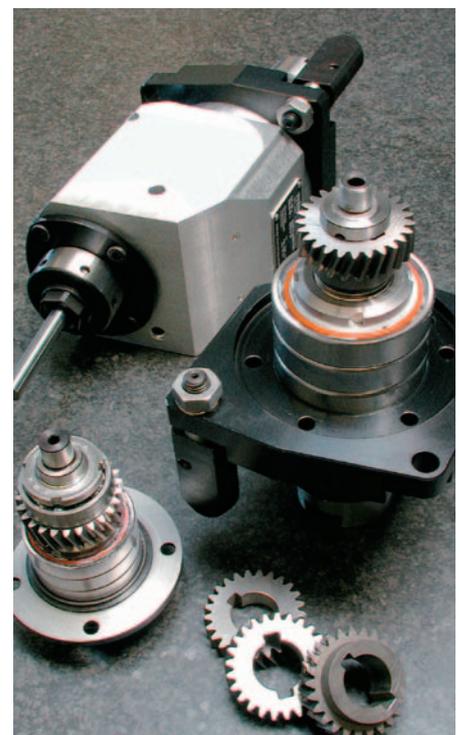
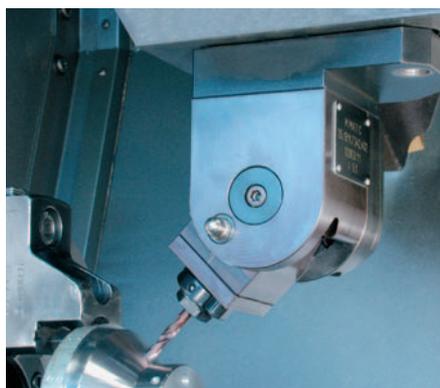
Our quality systems have been approved since 1998 and we are certified to DIN EN ISO 9001:2000.

The know-how of our 140 employees worldwide is available to you at any time on location.

Many years ago we started to specialize in the production of driven toolholder units for metal processing. These are installed on CNC lathes.

Our products are used for large volume manufacturing and facilitate complete processing without multiple clamping of complex workpieces.

Our products contribute towards constant improvements in our customers production processes due to the use of the most modern technology allied to the highest levels of quality.



Versions

Our boring and milling units are suitable for most of the popular turning machines and lathe equipment manufacturers. We produce the following types:

- Straight and offset units
- Internal and/or external coolant supply
- Gear multiplication or reduction
- Single or multi-spindle versions
- Angle heads for the production of angled holes, by means of adjustable and fixed angles
- Sawblade holders for sawing or slotting of workpieces
- Every popular type of tool system can be supplied

Technology and quality is at the forefront of our business:

- Highly precise bearing technology (high quality spindle and taper roller bearings)
- Specially optimized gears guarantee an excellently smooth run
- High torque transmission, rigidity and RPM`s
- Highest concentricity and facing accuracy $< 3 \mu\text{m}$
- Internal coolant supply up to 70 bar
- Use of high pressure seals und friction optimized special seals
- Additional labyrinth seals protect the bearings from the penetration of dirt and coolant

- Internal clamping nut guarantees a compact tool length and optimum bearing positioning ensures maximum axial and radial support at the spindle and high stability
- Alignment pins/blocks on angle units for minimum setup time and fine centreline adjustment
- Limited dry usage of driven toolholders with internal coolant through the spindle (i.C.). Running in dry condition should be avoided. Tools should frequently run with coolant. Easily changeable from internal or external coolant supply.
- The coolant filtering capabilities of the machine should be $40 \mu\text{m}$ or less.

Modular Quick Change System „mimatic mi“

Advantages

- Universal tool clamping system for all production areas
- Presetting of the tools off-line by length adjustment screw
- Tool change within seconds
- Concentricity of the interface $< 0,002 \text{ mm}$
- Secure holding force by form-locking
- Very short design
- Toolholders in different sizes
- All toolholders with internal coolant

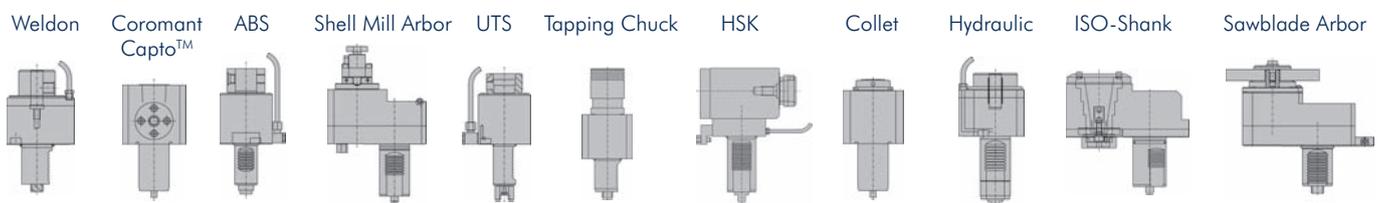
Modular Toolholders in different Sizes for all Production Areas

- Tapping toolholders
- Collet toolholders (internal and external nut)
- Hydro-Flex hydraulic toolholders
- Thread tightening toolholder cutters
- Morse taper shank toolholders
- Weldon and Whistle Notch toolholders
- Shell mill toolholders

All toolholders are available for use with your presetter.

Find more information of „mimatic mi“ on pages 48-59.

Tool System Examples



Performance Values

The torques M_{max} specified in the tables below refer to shock-free processing (e.g. threaded cutting). For processes involving major shock loads (e.g. milling or multi-edge knocking), a value reduction of up to 50 % and more needs to be taken into account. The values n_{max} and P_{max} rendered are guideline values for short-time operation.

The permissible relative operating duration depends

- on the version of the spindle unit (with or without gear)
- on the presence of a cooling system and the type of cooling (external or internal through the tool spindle)
- on the processing torque

At a charge of about 60 % of the maximum values the working life calculated amounts to approx. 2.000 hours. Spindle units with gears produce more noise at higher speeds!

Operating Instructions

Initial Start-up: To ensure long tool life it is important to properly “run-in” the tools. This procedure serves to reduce the internal friction in the driven unit and to evenly distribute the grease in the precision bearings.

- **Max. RPM in the first operation hour should not exceed 70 % of the maximum permissible RPM.**
- **Never run the tool above the maximum permissible torque rate and/or maximum permissible RPM (see also the drawing of the unit).**

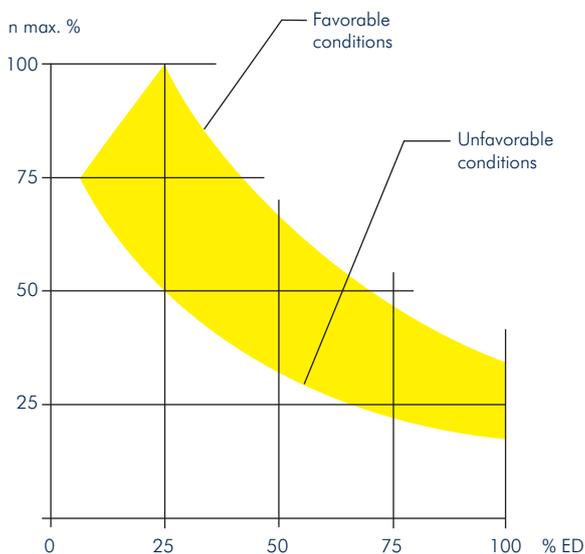
Tools with internal coolant through the spindle (i.C.): To avoid premature wear and damage to the seal system we recommend to filter the coolant to 40 μm minimum.

Filter grades of 40 μm worked in operation with very good results. The maximum permissible coolant pressure can be taken from the technical data of the driven toolholder.

Driven Toolholders with internal coolant through the spindle (i.C.) should **never run without coolant**. The coolant should flow through the tool, before the tool drive is switched on. Running in dry condition damages the internal seals.

Service interval: The tool life of the driven toolholder depends strongly on the application. Wear parts such as bearings and seals should be exchanged. We recommend to send the tools at least once annually to our service center for cleaning and regreasing. Tools with internal coolant through the spindle should be serviced every 6 months.

Optimum Relative Cycle Times (Guideline Values)

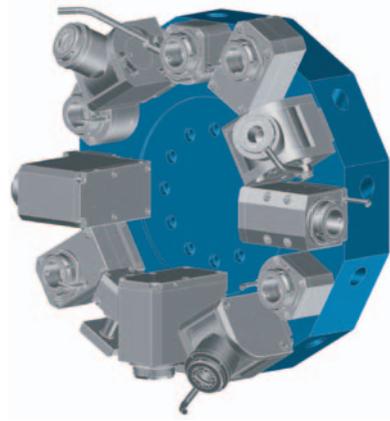


Determination of the maximum permissible cycle times per minute ED_{max}

The maximum permissible cycle times per minute may not be under any circumstances exceeded.

CT max: maximum permissible cycle times in percent per minute (%/min.)

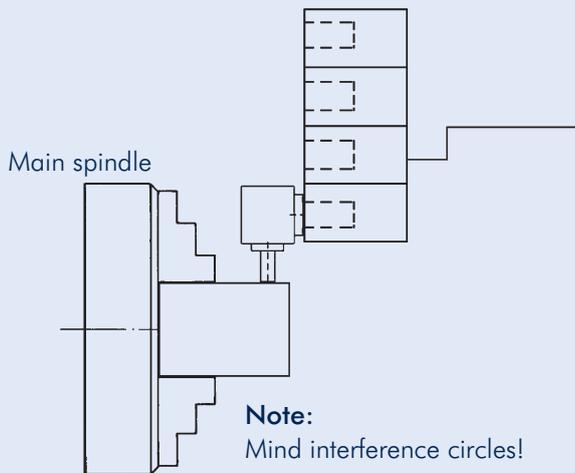
Operation with Disc-type Turrets



Tools are fixed on the the revolver face!

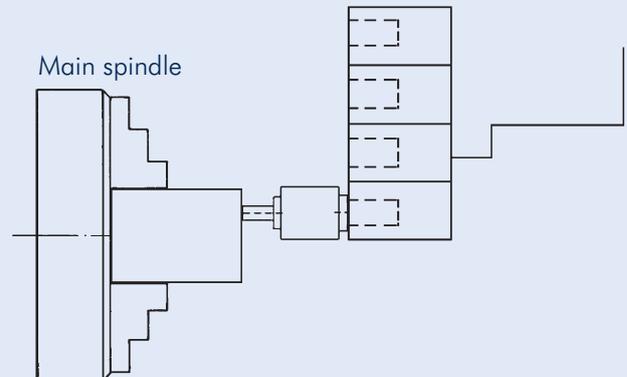
Radial Operation

Radial tool holders with 90° angle

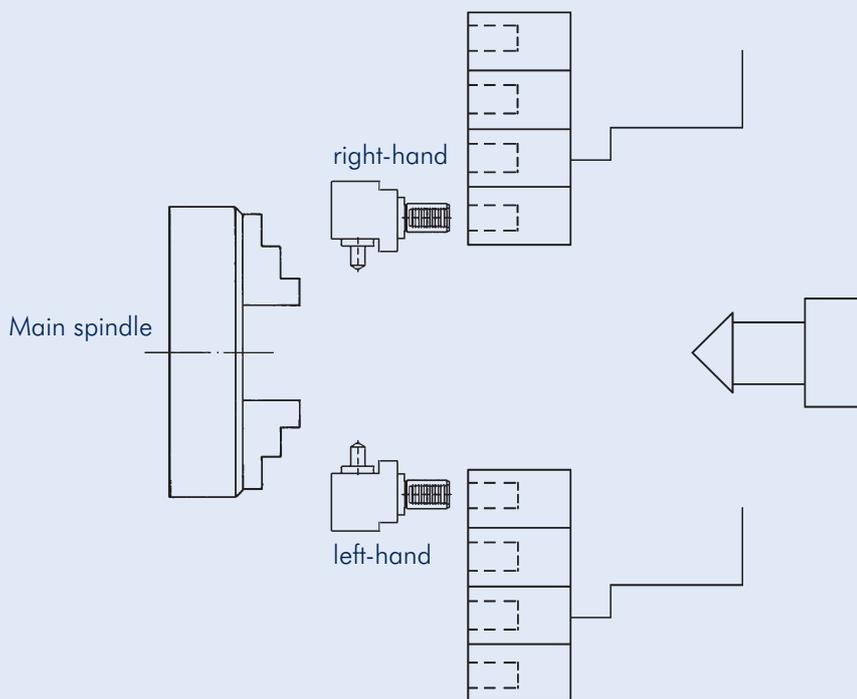


Axial Operation

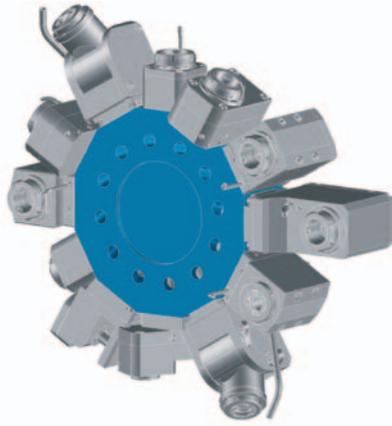
Axial tool holders straight version



Right- and Left-hand Versions of the Driven Toolholders



Operation with Star-type Turrets

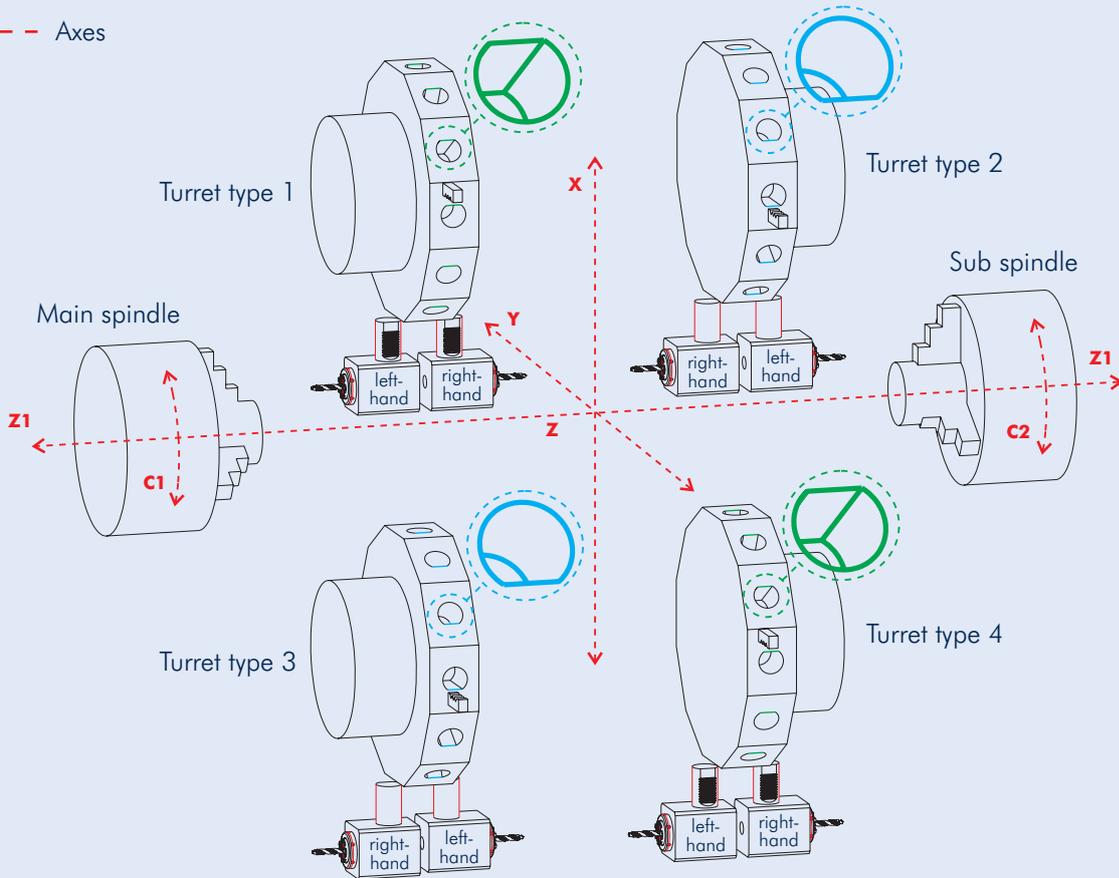


Tools are fixed on the the revolver circuit!

The orientation of the revolver to the spindle is important. Machines with Star-type Turrets often come with a sub spindle.

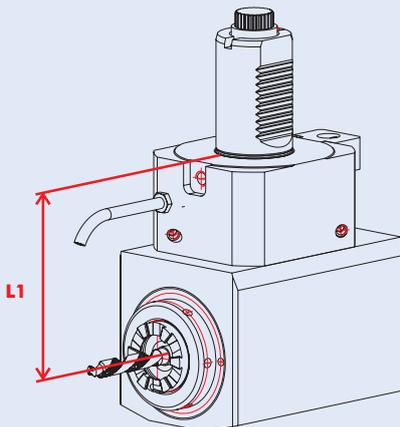
Right- and Left-hand Versions on Star-type Turrets with Main- and Sub-Spindle

--- Axes



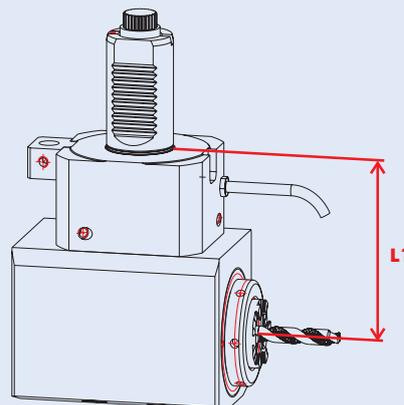
Left-hand Version

Please note dimension L1



Right-hand Version

Please note dimension L1



Please check interference circles with fixed tools!

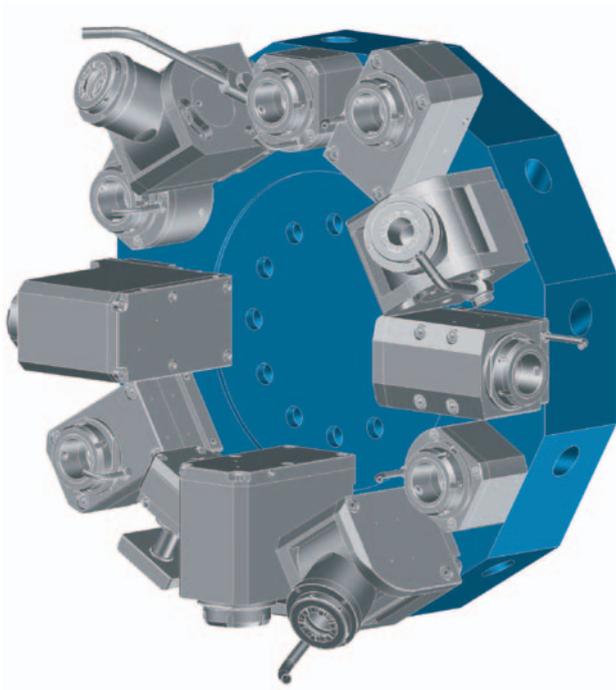
LOKUMA LB 200 - M + ECO - M

Data

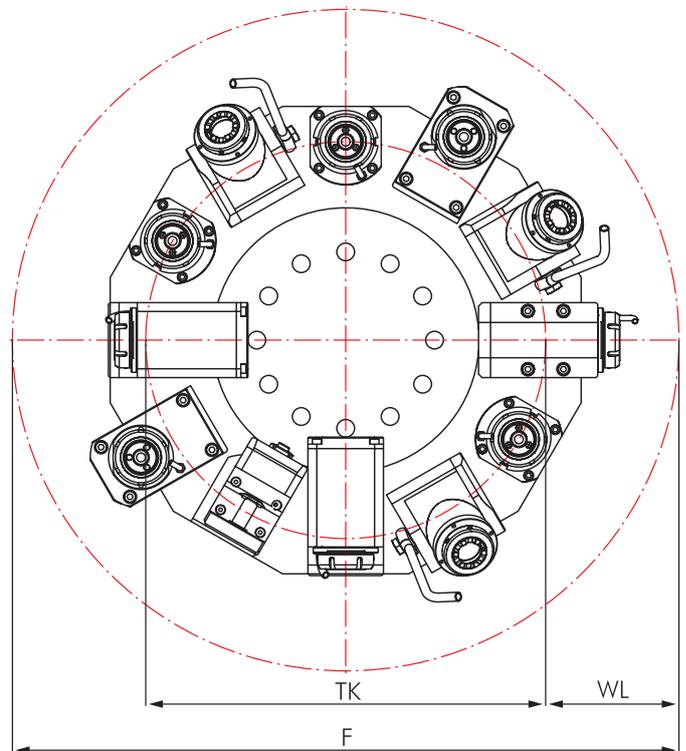
| Machine type Series | | Turret Stations |
|---------------------|----------|-----------------|
| LB 200 | M | 12 |
| ECO ES-L8II | M | 12 |
| ECO ES-L6II | M | 12 |
| Genos L200 | M | 12 |



Disc-type Turret VDI 30

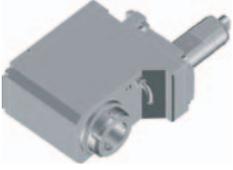


Interference Circles

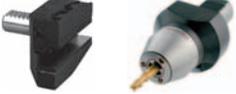


| Machine type Series | F | TK | WL |
|---------------------|-----|-----|-----|
| LB 200+ECO | 590 | 310 | 115 |
| ECO ES-L6II | | | |
| Genos L200 | | | |

Driven Toolholders

| | Page | | Page |
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| Angle Unit | |  | 14 |
| Straight Unit, Offset Type | 13 |  | |
| Angle Unit, Offset Type | |  | 15 |
| Angle Unit, adjustable 0-100° | |  | 16 |

Options and Accessories

| | | | |
|---------------------------------|---|--|----------------------------|
| mi Toolholders |  | mi System Description Toolholders Accessories | 49 51-55 56-57 |
| Standard VDI Toolholders |  | VDI Toolholders Accessories | 62-68 69-71 |
| Accessories |  | Collets DIN 6499 Threading Collets Wrenches Clamping Nuts Sleeves and Bushings | 69 69 69 69 71 |



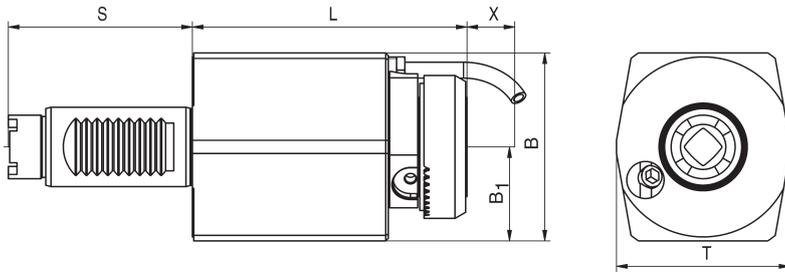
Delivery information

Driven toolholders with mi quick-change interface are supplied with operating wrench (see spare parts on page 57).
Driven toolholders with other interfaces are supplied without clamping wrench (see accessories on page 69).

Straight Unit

Connectable in accordance with **BLUECOMPETENCE** » mimatic mi » PolyMILL » TriMILL » TrioCut » PolyREAM

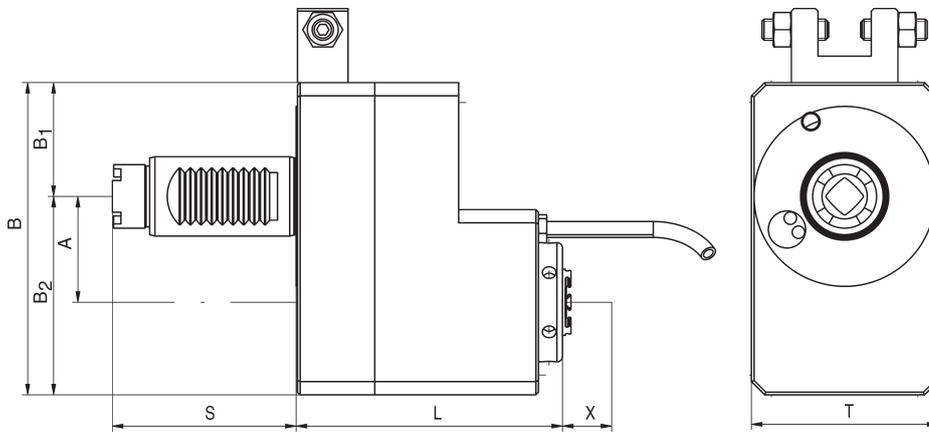
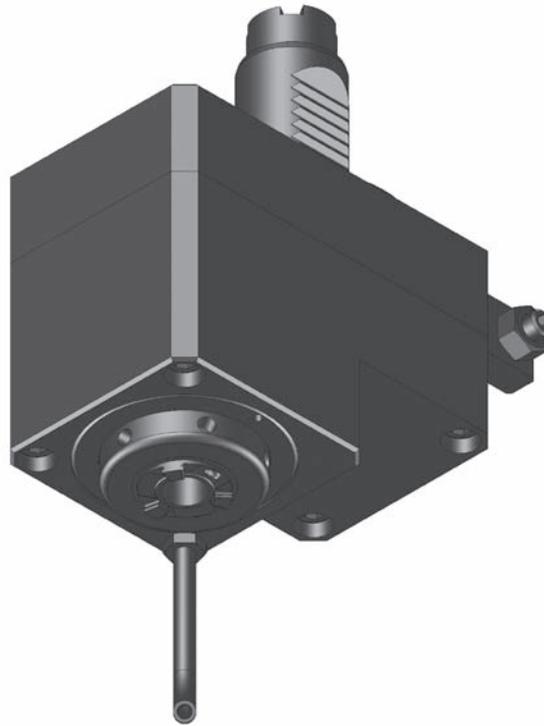
| | |
|---|------------------|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LB 200-M, ECO ES-L6 / L8II-M, Genos L200-M | |
| Dimensions | |
| Revolver type | Disc-type Turret |
| Shank | VDI 30 |
| Drive | single level |
| Graduation | 30 / 60° |
| Modular Interfaces | |
| mimaticMi | |



| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | B mm | B1 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|------|-------|------|------|--------------------|
| 133715 | ER 25 | 0,5-16 | 40 Nm | 6.500 / 6.500 | i = 1:1 | external | 81 | 70 | 35,0 | 69 | 70 | ↺ ↻ |
| 133710 | ER 25* | 0,5-16 | 40 Nm | 6.500 / 6.500 | i = 1:1 | internal | 81 | 70 | 35,0 | 69 | 70 | ↺ ↻ |
| 133734 | mi 40 | - | 40 Nm | 6.500 / 6.500 | i = 1:1 | internal | 92 | 71 | 35,5 | 69 | 65 | ↺ ↻ |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Straight Unit, Offset Type

| | |
|---|------------------|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LB 200-M, ECO ES-L6/L8II-M, Genos L200-M | |
| Dimensions | |
| Revolver type | Disc-type Turret |
| Shank | VDI 30 |
| Drive | single level |
| Graduation | 30 / 60° |

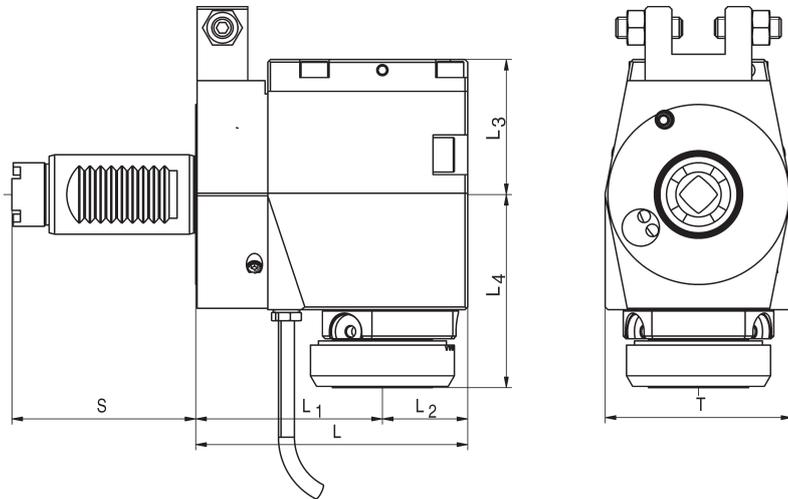
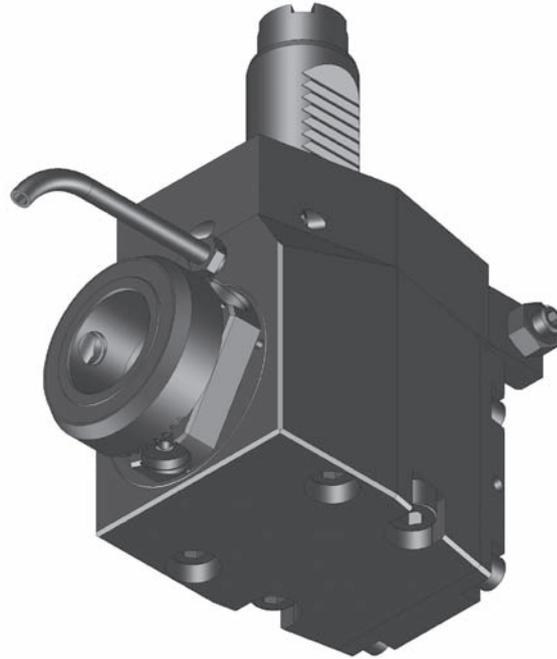


| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | A mm | B mm | B1 mm | B2 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|------|------|-------|-------|------|------|--------------------|
| 176305 | ER 25 | 0,5-16 | 10 Nm | 6.500 / 13.000 | i = 1:2 | external | 100 | 40 | 118 | 75 | 43 | 69 | 70 | ↺ ↻ |
| 176304 | ER 25* | 0,5-16 | 10 Nm | 6.500 / 13.000 | i = 1:2 | internal | 100 | 40 | 118 | 75 | 43 | 69 | 70 | ↻ ↺ |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

* With clamping nuts with sealing, seals see page 70

Angle Unit

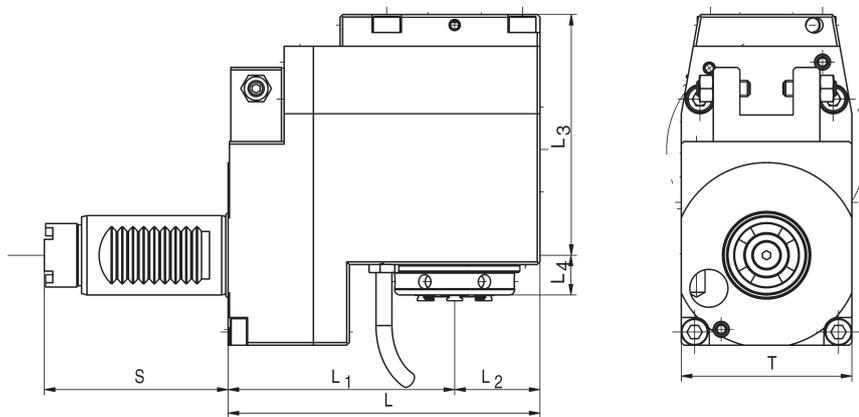
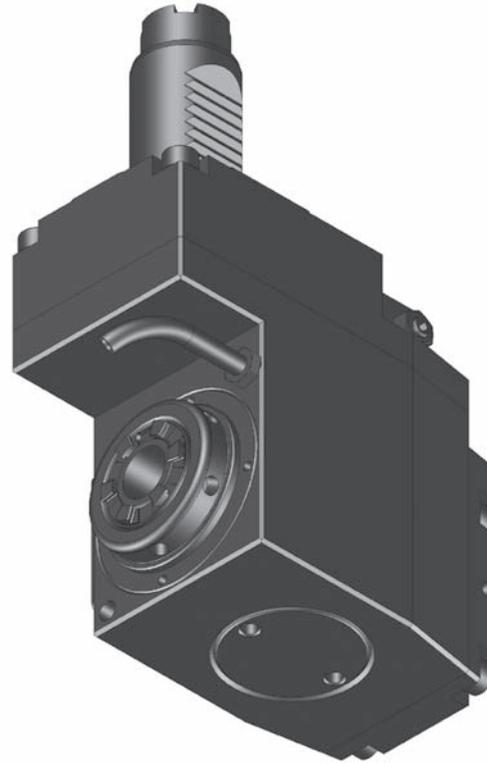
| | |
|---|---|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LB 200-M, ECO ES-L6 / L8II-M, Genos L200-M | |
| Dimensions | |
| Revolver type | Disc-type Turret |
| Shank | VDI 30 |
| Drive | single level |
| Graduation | 30 / 60° |
| Note | no reversion of Rotating (drive side direction = output side direction) |
| Modular Interfaces | |
| mimaticMi | |



| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | L1 mm | L2 mm | L3 mm | L4 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|-------|-------|-------|-------|------|------|--------------------|
| 103496 | ER 25 | 0,5-16 | 30 Nm | 6.500 / 6.500 | i = 1:1 | external | 104 | 70 | 34 | 60,5 | 58 | 69 | 76 | ↻ ↻ |
| 103520 | ER 25* | 0,5-16 | 30 Nm | 6.500 / 6.500 | i = 1:1 | internal | 104 | 70 | 34 | 60,5 | 58 | 69 | 76 | ↻ ↻ |
| 103537 | mi 40 | - | 30 Nm | 6.500 / 6.500 | i = 1:1 | internal | 102 | 70 | 32 | 51,0 | 73 | 69 | 70 | ↻ ↻ |
| 176325 | ER 20 | 0,5-13 | 20 Nm | 6.500 / 12.000 | i = 1:2 | external | 105 | 70 | 35 | 62,0 | 62 | 69 | 70 | ↻ ↻ |
| 176324 | ER 20* | 0,5-13 | 20 Nm | 6.500 / 12.000 | i = 1:2 | internal | 105 | 70 | 35 | 62,0 | 62 | 69 | 70 | ↻ ↻ |

Angle Unit, Offset Type

| | |
|---|---|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LB 200-M, ECO ES-L6/L8II-M, Genos L200-M | |
| Dimensions | |
| Revolver type | Disc-type Turret |
| Shank | VDI 30 |
| Drive | single level |
| Graduation | 30 / 60° |
| Note | no reversion of Rotating (drive side direction = output side direction) |

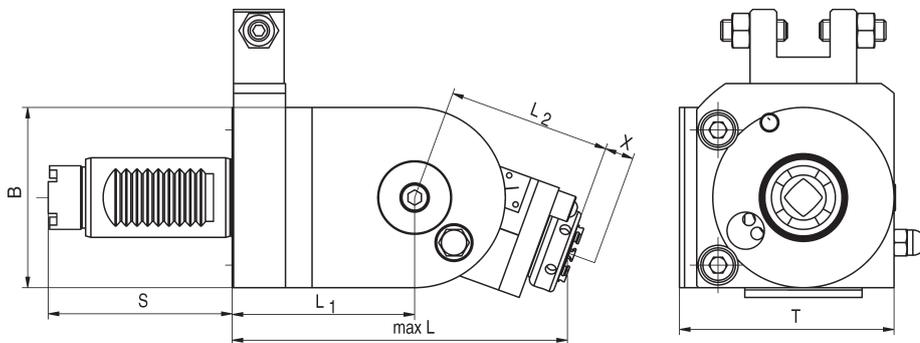
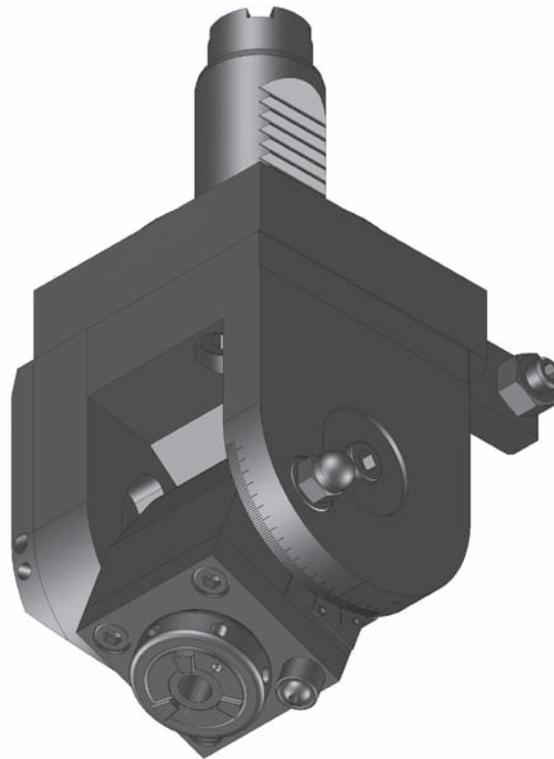


| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | L1 mm | L2 mm | L3 mm | L4 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|-------|-------|-------|-------|------|------|--------------------|
| 176270 | ER 25 | 0,5-16 | 30 Nm | 6.500 / 6.500 | i = 1:1 | external | 117 | 85 | 32 | 91 | 15 | 69 | 64 | ↻ ↻ |
| 176271 | ER 25* | 0,5-16 | 30 Nm | 6.500 / 6.500 | i = 1:1 | internal | 117 | 85 | 32 | 91 | 15 | 69 | 64 | ↻ ↻ |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

* With clamping nuts with sealing, seals see page 70

Angle Unit, Adjustable 0-100°

| | |
|---|---|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LB 200-M, ECO ES-L6/L8II-M, Genos L200-M | |
| Dimensions | |
| Revolver type | Disc-type Turret |
| Shank | VDI 30 |
| Drive | single level |
| Graduation | 30 / 60° |
| Note | no reversion of Rotating (drive side direction = output side direction) |



| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | L1 mm | L2 mm | B mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|-------|-------|------|------|------|--------------------|
| 176291 | ER 16 | 0,5-10 | 6 Nm | 6.500 / 6.500 | i = 1:1 | external | 131 | 68,5 | 62 | 77 | 69 | 81 | ↻ ↻ |
| 176293 | ER 16* | 0,5-10 | 6 Nm | 6.500 / 6.500 | i = 1:1 | internal | 131 | 68,5 | 62 | 77 | 69 | 81 | ↻ ↻ |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
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AGMILL

The mimatic Concept of Sustainability
for the Milling Operation

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Alliance Member

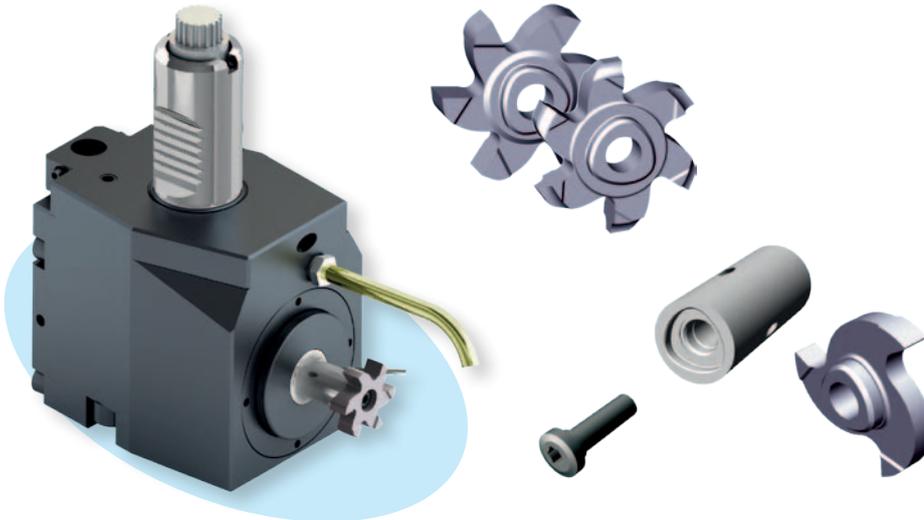
Partner of the Engineering Industry
Sustainability Initiative

AGMILL =

Driven Tool Holder + Polygon Interface + PolyMILL Insert

AGMILL

PolyMILL



Advantages

Fewer Interfaces

- lower tolerances
- better true running
- longer operating life
- shorter form of structure

Rapid Changing of the CT-CI

- loosen a screw
- planar arrangement
- no pre-adjustment necessary
- self-centring

The mimatic Modular Set

- ✓ 4,000 Driven Tool Holders
- ✓ 2,000 Angle Heads
- ✓ 2,500 PolyMILL Inserts

Modular Sets Available to mimatic Customers

4,000 completed driven tool holders for turning machines, 250 of which are from the mimatic main catalogue

2,000 completed angle heads for machining centers, 108 of which are from the mimatic main catalogue

4 different sizes of polygonal PolyMILL interface

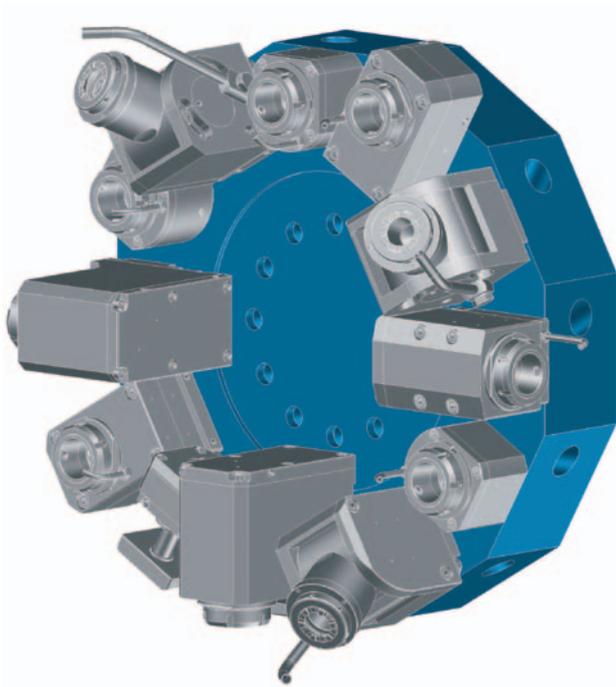
Approx. 2,500 completed PolyMILL CI inserts for cutting threads and grooves, fronts or contours. 200 of these are from the mimatic main catalogue from stock.

Data

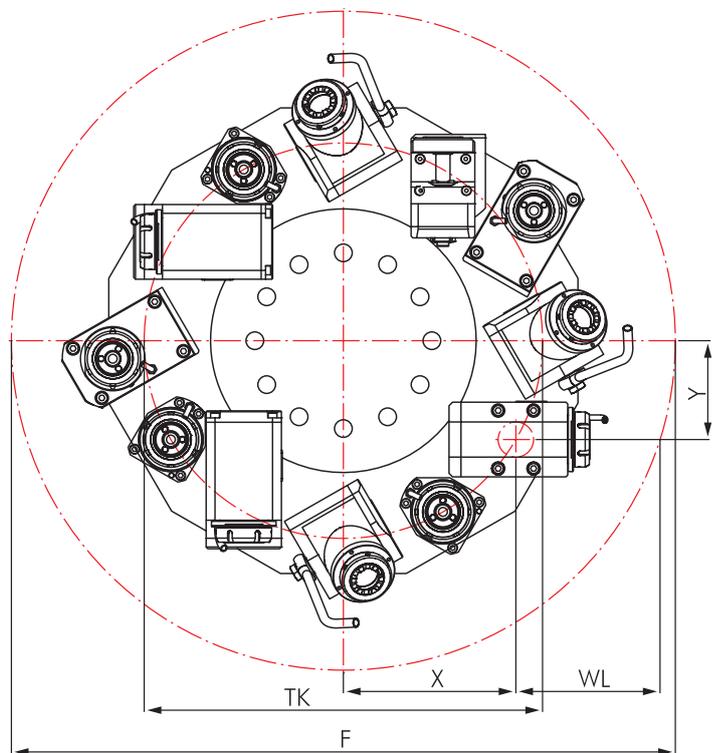
| Machine type Series | | Turret Stations |
|----------------------|---------------|-----------------|
| LB 300 | M / MY | 12 |
| LU 300 | M / MY | 12 |
| ES-L 10 | M | |
| Captain L 370 | | |
| Genos L 300 | M | |



Disc-type Turret VDI 40



Interference Circles



| Machine type Series | F | TK | X | Y | WL |
|----------------------|-----|-----|-----|-----|-----|
| LB/LU 300 M | 690 | 386 | 185 | 55 | 155 |
| LB/LU 300 MY | 700 | 448 | 175 | 140 | 145 |
| ES-L 10 M | | | | | |
| Captain L 370 | | | | | |
| Genos L 300 M | | | | | |

Driven Toolholders

| | Page | | Page |
|--------------------------------------|------|---|------|
| Straight Unit | 20 |  | |
| Angle Unit | |  | 22 |
| Straight Unit, Offset Type | 21 |  | |
| Angle Unit, adjustable 0-100° | |  | 23 |

Options and Accessories

| | | | |
|---------------------------------|---|--|----------------------------|
| mi Toolholders |  | mi System Description Toolholders Accessories | 49 51-55 56-57 |
| Standard VDI Toolholders |  | VDI Toolholders Accessories | 62-68 69-71 |
| Accessories |  | Collets DIN 6499 Threading Collets Wrenches Clamping Nuts Sleeves and Bushings | 69 69 69 69 71 |



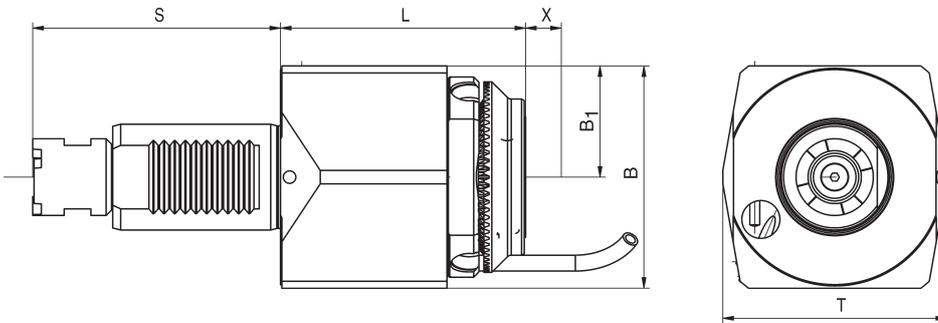
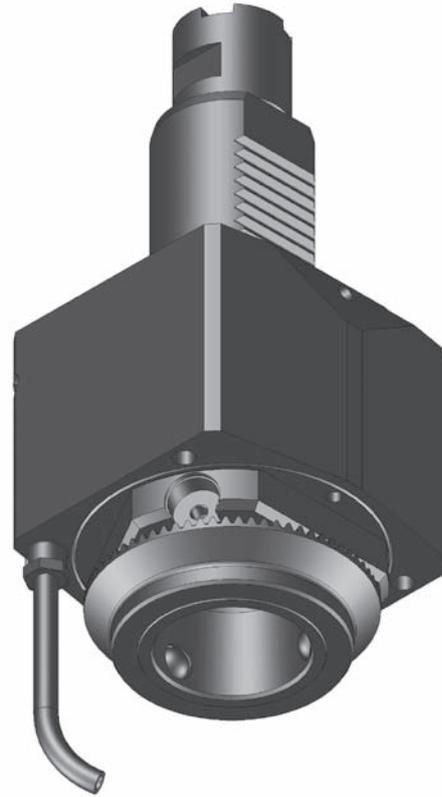
Delivery information

Driven toolholders with mi quick-change interface are supplied with operating wrench (see spare parts on page 57).
Driven toolholders with other interfaces are supplied without clamping wrench (see accessories on page 69).

Straight Unit

Connectable in accordance with **BLUECOMPETENCE** » mimatic mi » PolyMILL » TriMILL » TrioCut » PolyREAM

| | |
|---|------------------|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LB/LU 300 - M/MY, ES-L 10 M Captain L 370, Genos L 300 M | |
| Dimensions | |
| Revolver type | Disc-type Turret |
| Shank | VDI 40 |
| Drive | single level |
| Graduation | 30 / 60° |
| Modular Interfaces | |
| mimaticMi | |

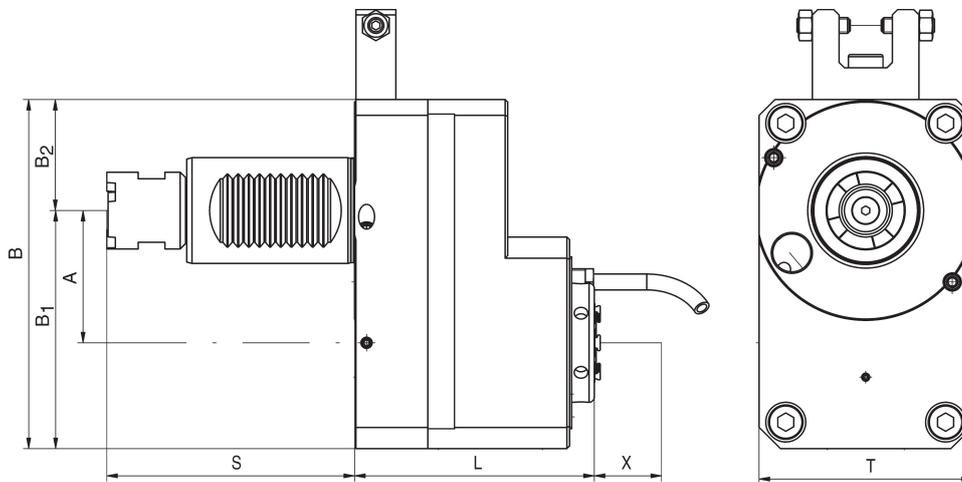
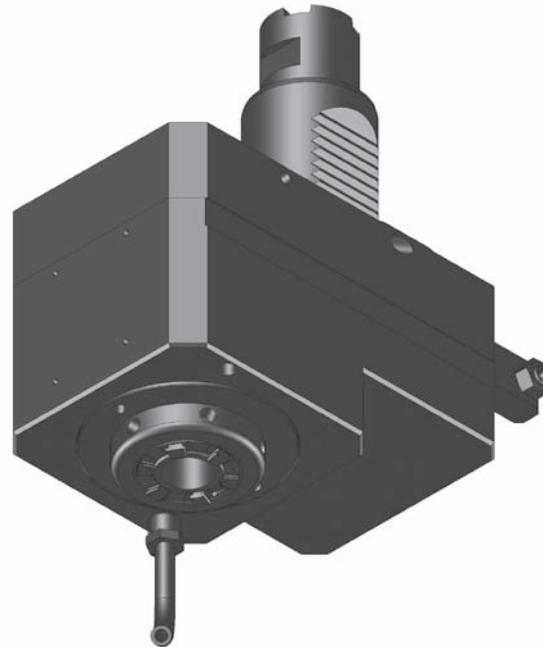


| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | B mm | B1 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|------|-------|------|------|--------------------|
| 103441 | ER 32 | 1,0-20 | 80 Nm | 6.500 / 6.500 | i = 1:1 | external | 75,5 | 87 | 38 | 93 | 75 | ↻ ↻ |
| 133711 | ER 32* | 1,0-20 | 80 Nm | 6.500 / 6.500 | i = 1:1 | internal | 75,5 | 87 | 38 | 93 | 75 | ↻ ↻ |
| 133712 | mi 50 | - | 80 Nm | 6.500 / 6.500 | i = 1:1 | internal | 92,0 | 84 | 42 | 93 | 84 | ↻ ↻ |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Straight Unit, Offset Type

Connectable in accordance with **BLUECOMPETENCE** » PolyMILL » TriMILL » TrioCut » PolyREAM

| | |
|---|------------------|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LB/LU 300 - M/MY, ES-L 10 M Captain L 370, Genos L 300 M | |
| Dimensions | |
| Revolver type | Disc-type Turret |
| Shank | VDI 40 |
| Drive | single level |
| Graduation | 30 / 60° |



| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | A mm | B mm | B1 mm | B2 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|------|------|-------|-------|------|------|--------------------|
| 176332 | ER 25 | 0,5-16 | 20 Nm | 6.500 / 13.000 | i = 1:2 | external | 90 | 50 | 132 | 90 | 42 | 93 | 80 | ↺ ↻ |
| 176331 | ER 25 | 0,5-16 | 20 Nm | 6.500 / 13.000 | i = 1:2 | external | 90 | 50 | 132 | 90 | 42 | 93 | 80 | ↻ ↺ |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

Angle Unit

Connectable in accordance with **BLUECOMPETENCE** » mimatic mi » PolyMILL » TriMILL » TrioCut » PolyREAM

for Manufacturer

LOKUMA

for Machine type

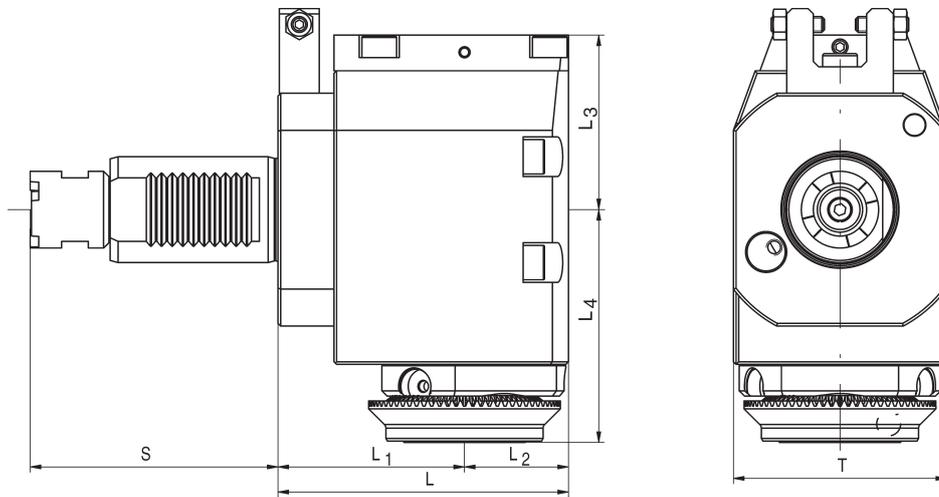
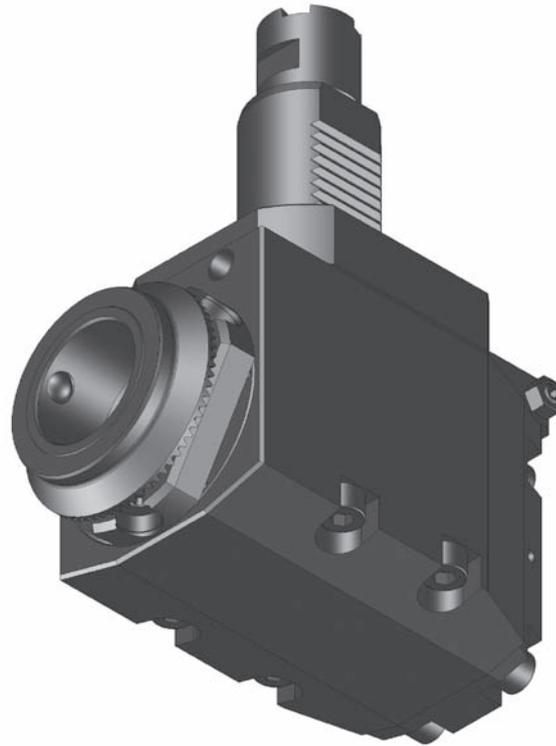
**LB/LU 300 - M/MY, ES-L 10 M
Captain L 370, Genos L 300 M**

Dimensions

| | |
|---------------|---|
| Revolver type | Disc-type Turret |
| Shank | VDI 40 |
| Drive | single level |
| Graduation | 30 / 60° |
| Note | no reversion of Rotating (drive side direction = output side direction) |

Modular Interfaces

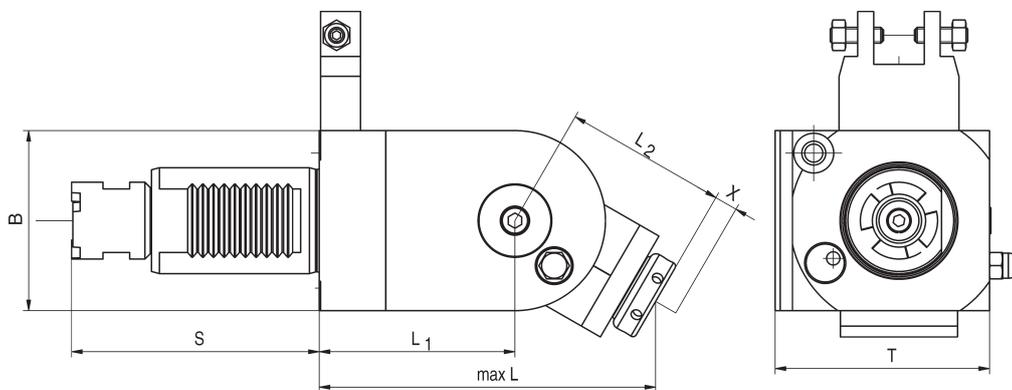
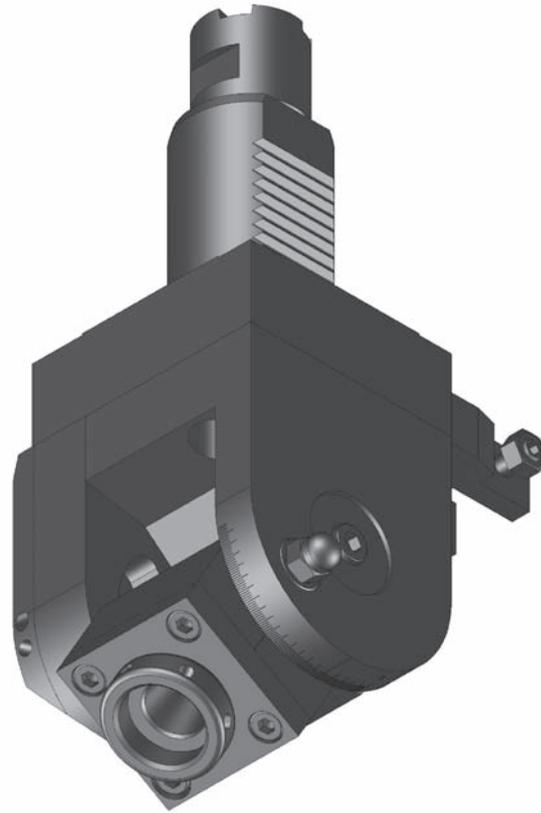
mimaticMi



| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | L1 mm | L2 mm | L3 mm | L4 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|-------|-------|-------|-------|------|------|--------------------|
| 103497 | ER 32 | 1,0-20 | 50 Nm | 6.500 / 6.500 | i = 1:1 | external | 109 | 70 | 39 | 66 | 70 | 93 | 80 | ↻ ↻ |
| 133716 | ER 32* | 1,0-20 | 50 Nm | 6.500 / 6.500 | i = 1:1 | internal | 109 | 70 | 39 | 66 | 70 | 93 | 80 | ↻ ↻ |
| 133705 | mi 50 | - | 50 Nm | 6.500 / 6.500 | i = 1:1 | internal | 109 | 70 | 39 | 66 | 88 | 93 | 80 | ↻ ↻ |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

Angle Unit, Adjustable 0-100°

| | |
|---|------------------|
| for Turret Manufacturer | |
| LOKUMA | |
| with Drive | |
| LB/LU 300 - M/MY, ES-L 10 M Captain L 370, Genos L 300 M | |
| Dimensions | |
| Revolver type | Disc-type Turret |
| Shank | VDI 40 |
| Drive | 30 / 60° |



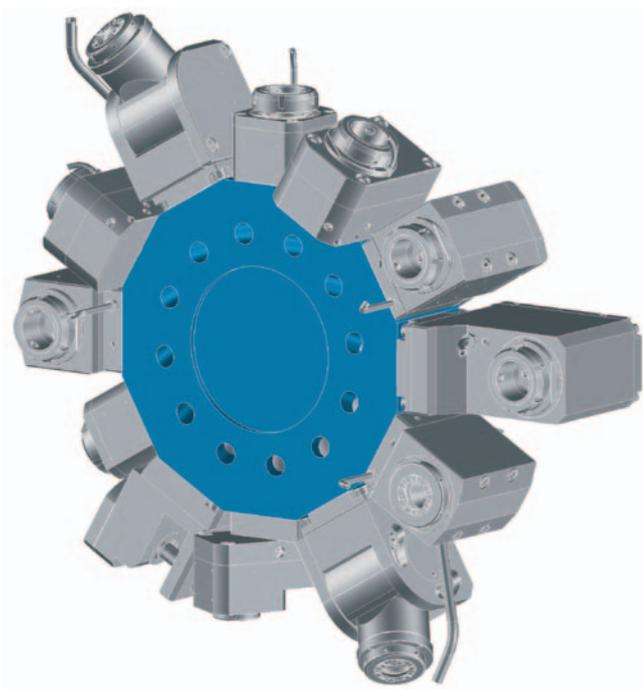
| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | L1 mm | L2 mm | B mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|-------|-------|-------|------|------|------|--------------------|
| 101727 | ER 16 | 0,5-10 | 6 Nm | 6.500 / 6.500 | i = 1:1 | external | 134,5 | 73,5 | 61 | 68 | 93 | 90 | ↺ ↻ |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

Data

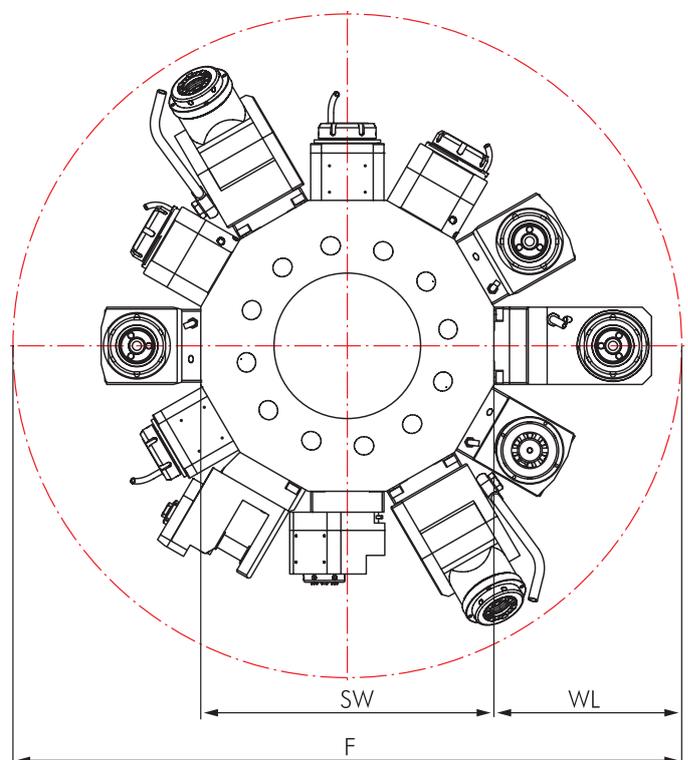
| Machine type Series | | Turret Stations |
|---------------------|-----------------|-----------------|
| LB 300 | MW / MYW | 12 |
| LT 300 | M / MY | 12 |



Star-type Turret VDI 40



Interference Circles



| Machine type Series | F | SW | WL |
|----------------------|-----|-----|-----|
| LB 300 MW/MYW | 610 | 340 | 135 |
| LT 300 M/MY | 650 | 380 | 135 |

Driven Toolholders

| | Page | | Page |
|----------------------|------|---|-------|
| Straight Unit | 26 |  | |
| | | Angle Unit | 27-28 |
| | |  | |

Options and Accessories

| | | | |
|---------------------------------|---|--|----------------------------|
| mi Toolholders |  | mi System Description Toolholders Accessories | 49 51-55 56-57 |
| Standard VDI Toolholders |  | VDI Toolholders Accessories | 62-68 69-71 |
| Accessories |  | Collets DIN 6499 Threading Collets Wrenches Clamping Nuts Sleeves and Bushings | 69 69 69 69 71 |



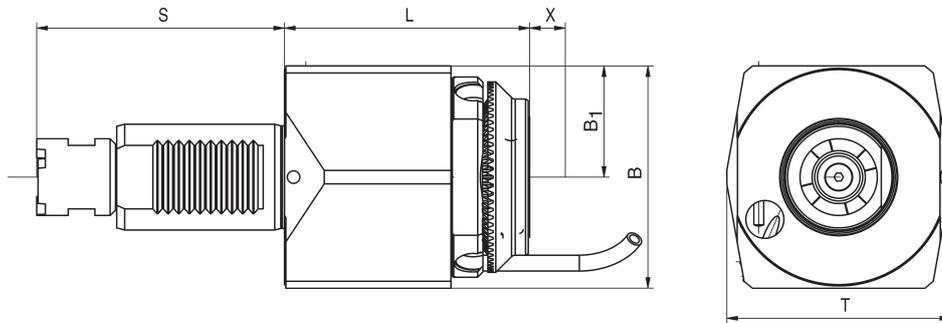
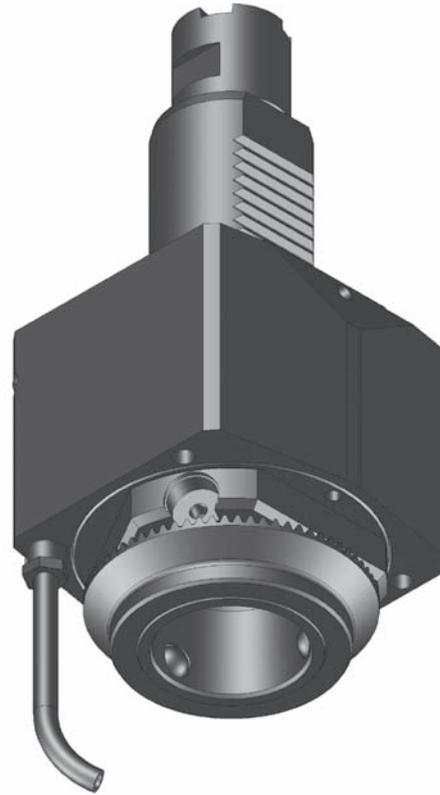
Delivery information

Driven toolholders with mi quick-change interface are supplied with operating wrench (see spare parts on page 57).
Driven toolholders with other interfaces are supplied without clamping wrench (see accessories on page 69).

Straight Unit

Connectable in accordance with **BLUECOMPETENCE** » mimatic mi » PolyMILL » TriMILL » TrioCut » PolyREAM

| | |
|--|-----------------------------|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LB 300 - MW / MYW LT 300 - M / MY | |
| Dimensions | |
| Revolver type | Star-type Turret |
| Shank | VDI 40 |
| Drive | Layer gear; single level |
| Graduation | 30 / 60° |
| Modular Interfaces | |
| mimaticMi | |

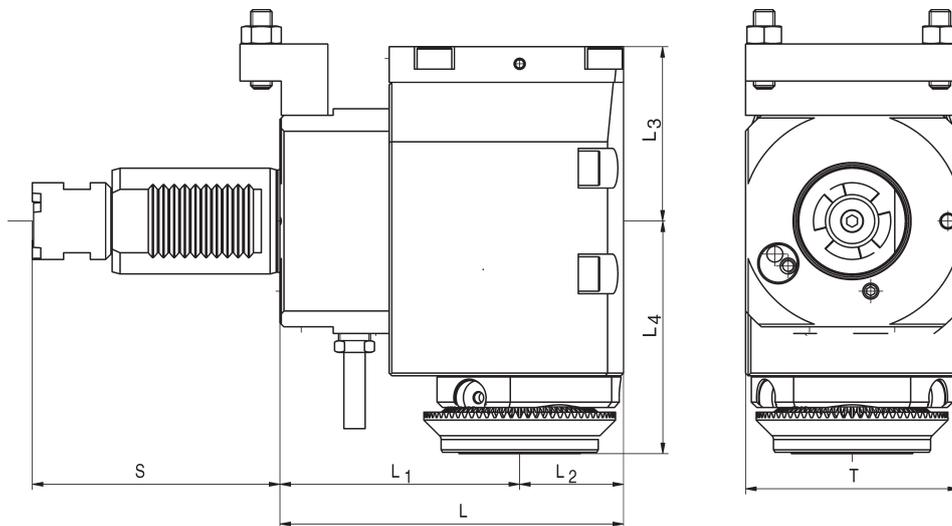
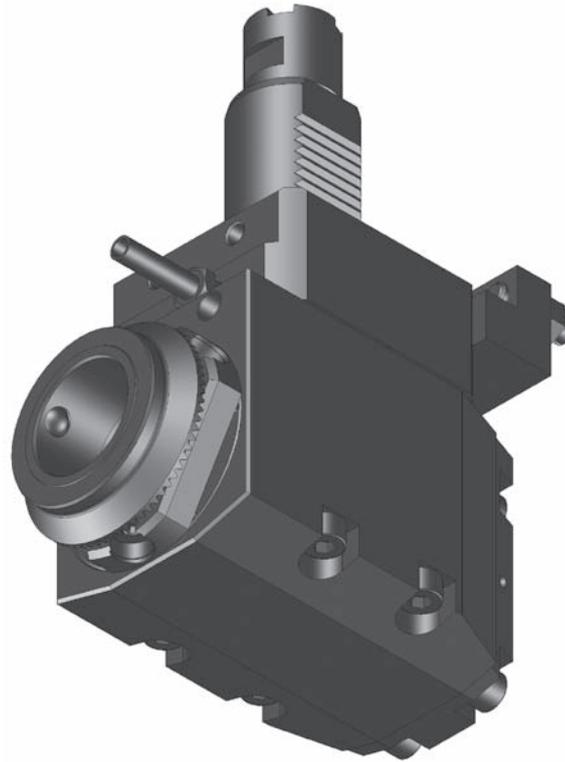


| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | X mm | L mm | B mm | B1 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|------|------|-------|------|------|--------------------|
| 103441 | ER 32 | 1,0-20 | 80 Nm | 6.500 / 6.500 | i = 1:1 | external | 59,5 | 75,5 | 87 | 38 | 93 | 75 | ↺ ↻ |
| 133711 | ER 32* | 1,0-20 | 80 Nm | 6.500 / 6.500 | i = 1:1 | internal | 59,5 | 75,5 | 87 | 38 | 93 | 75 | ↺ ↻ |
| 133712 | mi 50 | - | 80 Nm | 6.500 / 6.500 | i = 1:1 | internal | 50,0 | 92,0 | 84 | 42 | 93 | 84 | ↺ ↻ |
| 103644** | ER 25* | 0,5-16 | 20 Nm | 6.500 / 13.000 | i = 1:2 | internal | - | 90,0 | 140 | 50 | 93 | 80 | ↺ ↻ |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

Angle Unit, Left-hand Version for Main-Spindle

Connectable in accordance with **BLUECOMPETENCE** » mimatic mi » PolyMILL » TriMILL » TrioCut » PolyREAM

| | |
|--|---|
| for Manufacturer | |
| | |
| for Machine type | |
| LB 300 - MW / MYW LT 300 - M / MY | |
| Dimensions | |
| Revolver type | Star-type Turret |
| Shank | VDI 40 |
| Drive | Layer gear; single level |
| Graduation | 30 / 60° |
| Note | no reversion of Rotating (drive side direction = output side direction) |
| Modular Interfaces | |
| | |



| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | L1 mm | L2 mm | L3 mm | L4 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|-------|-------|-------|-------|------|------|--------------------|
| 133704 | ER 32 | 1,0-20 | 50 Nm | 6.500 / 6.500 | i = 1:1 | external | 129 | 90 | 39 | 66,0 | 70 | 93 | 80 | |
| 103478 | ER 32* | 1,0-20 | 50 Nm | 6.500 / 6.500 | i = 1:1 | internal | 129 | 90 | 39 | 66,0 | 70 | 93 | 80 | |
| 103462 | mi 50 | - | 50 Nm | 6.500 / 6.500 | i = 1:1 | internal | 129 | 90 | 39 | 66,0 | 88 | 93 | 80 | |
| 133818** | mi 40 | - | 25 Nm | 6.500 / 13.000 | i = 1:2 | | 129 | 90 | 39 | 72,5 | 97 | 93 | 85 | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

* With clamping nuts with sealing, seals see page 70

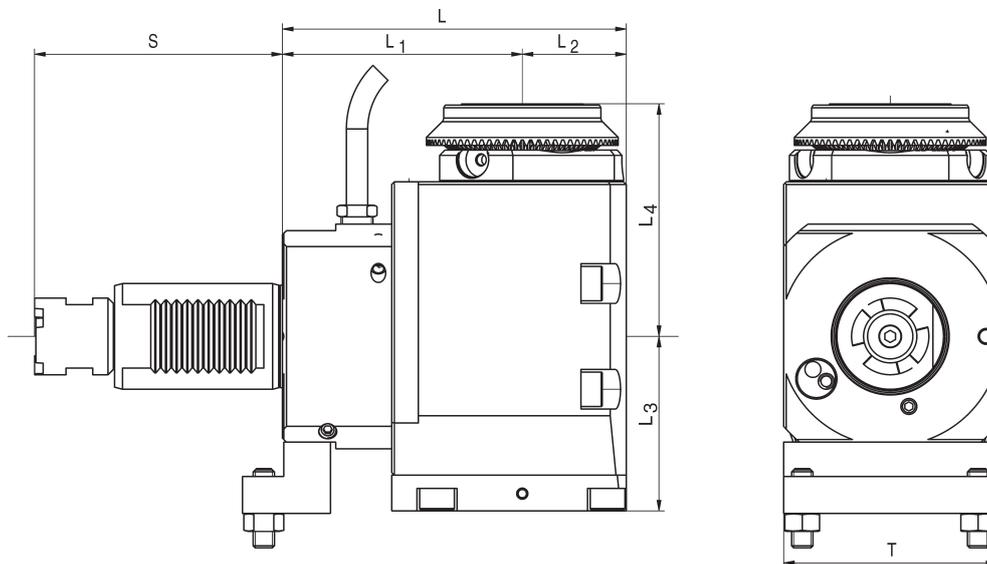
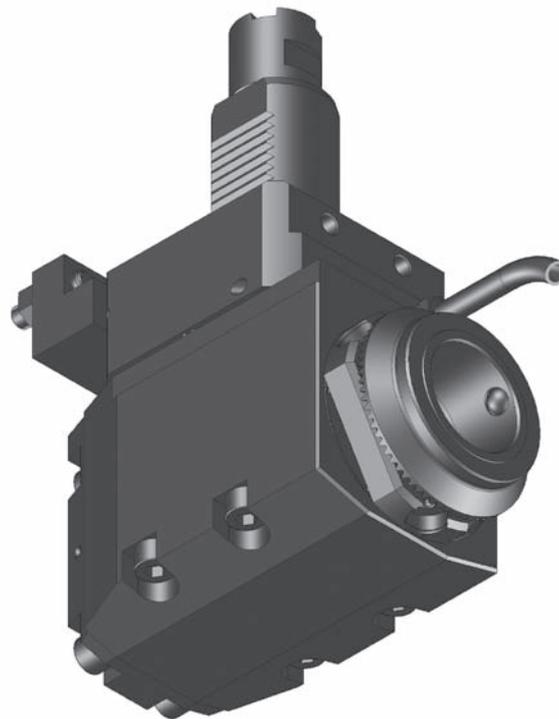
** Reversion of Rotating

Angle Unit, Right-hand Version for Sub-Spindle

Connectible in accordance with
BLUECOMPETENCE

» mimatic mi
» PolyMILL » TriMILL » TrioCut » PolyREAM

| | |
|--|---|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LB 300 - MW / MYW LT 300 - M / MY | |
| Dimensions | |
| Revolver type | Star-type Turret |
| Shank | VDI 40 |
| Drive | Layer gear; single level |
| Graduation | 30 / 60° |
| Note | no reversion of Rotating (drive side direction = output side direction) |
| Modular Interfaces | |
| mimaticMi | |



| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | L1 mm | L2 mm | L3 mm | L4 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|-------|-------|-------|-------|------|------|--------------------|
| 103471 | ER 32 | 1,0-20 | 50 Nm | 6.500 / 6.500 | i = 1:1 | external | 129 | 90 | 39 | 66 | 70 | 93 | 80 | ↻ ↻ |
| 124845 | ER 32* | 1,0-20 | 50 Nm | 6.500 / 6.500 | i = 1:1 | internal | 129 | 90 | 39 | 66 | 70 | 93 | 80 | ↻ ↻ |
| 103523 | mi 50 | - | 50 Nm | 6.500 / 6.500 | i = 1:1 | internal | 129 | 90 | 39 | 66 | 88 | 93 | 80 | ↻ ↻ |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |



Picture shows the mimatic[®] mi interface, a very innovative modular quick change system with one hand operation by Mimatic Tool Systems. It helps you to reduce machine downtimes because all units can be preset outside the machine.

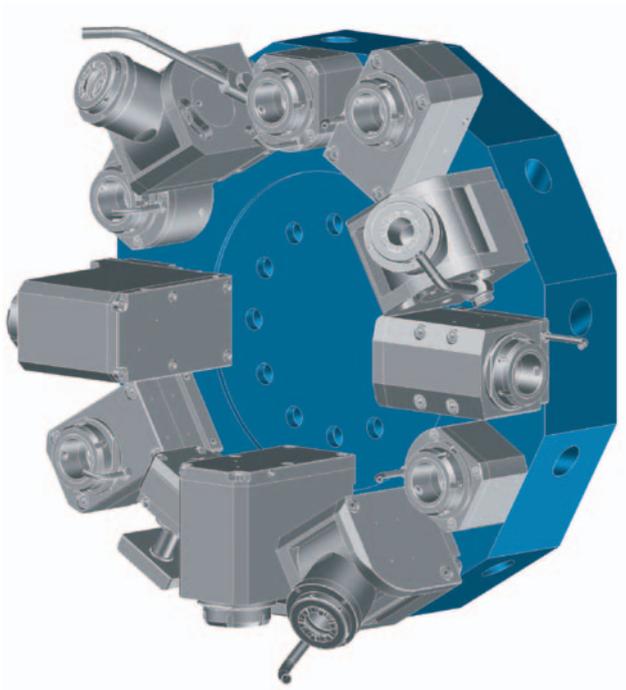
OKUMA LVT 300 - M

Data

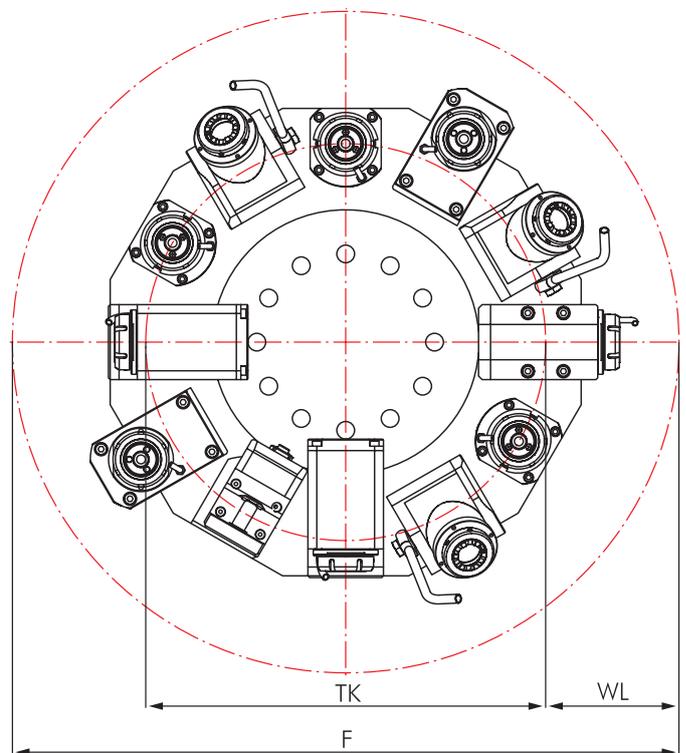
| Machine type Series | Turret Stations |
|---------------------|-----------------|
| LVT 300 M | 12 |



Disc-type Turret VDI 40



Interference Circles



| Machine type Series | F | TK | WL |
|---------------------|-----|-----|-----|
| LVT 300 | 731 | 376 | 177 |

Driven Toolholders

| | Page | | Page |
|----------------------|------|---|------|
| Straight Unit | |  | |
| | 32 | | |
| Angle Unit | |  | |
| | | | 33 |

Options and Accessories

| | | | |
|---------------------------------|---|--|----------------------------|
| mi Toolholders |  | mi System Description Toolholders Accessories | 49 51-55 56-57 |
| Standard VDI Toolholders |  | VDI Toolholders Accessories | 62-68 69-71 |
| Accessories |  | Collets DIN 6499 Threading Collets Wrenches Clamping Nuts Sleeves and Bushings | 69 69 69 69 71 |



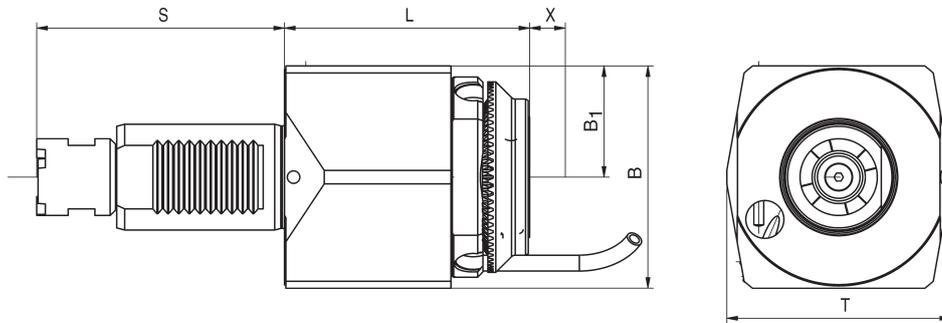
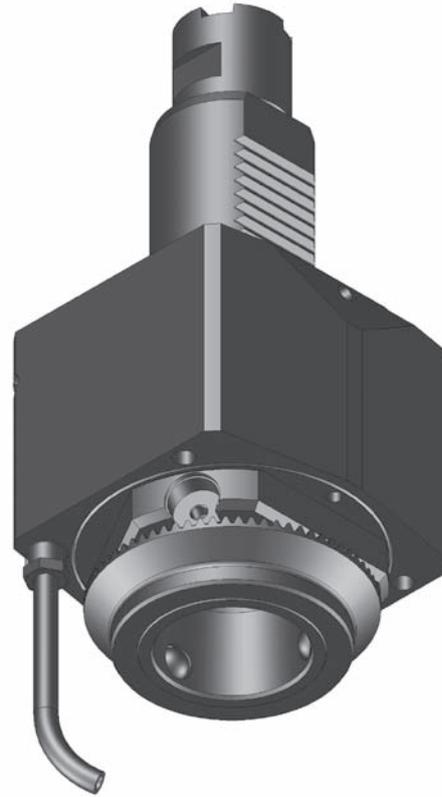
Delivery information

Driven toolholders with mi quick-change interface are supplied with operating wrench (see spare parts on page 57).
Driven toolholders with other interfaces are supplied without clamping wrench (see accessories on page 69).

Straight Unit

Connectable in accordance with **BLUECOMPETENCE** » mimatic mi » PolyMILL » TriMILL » TrioCut » PolyREAM

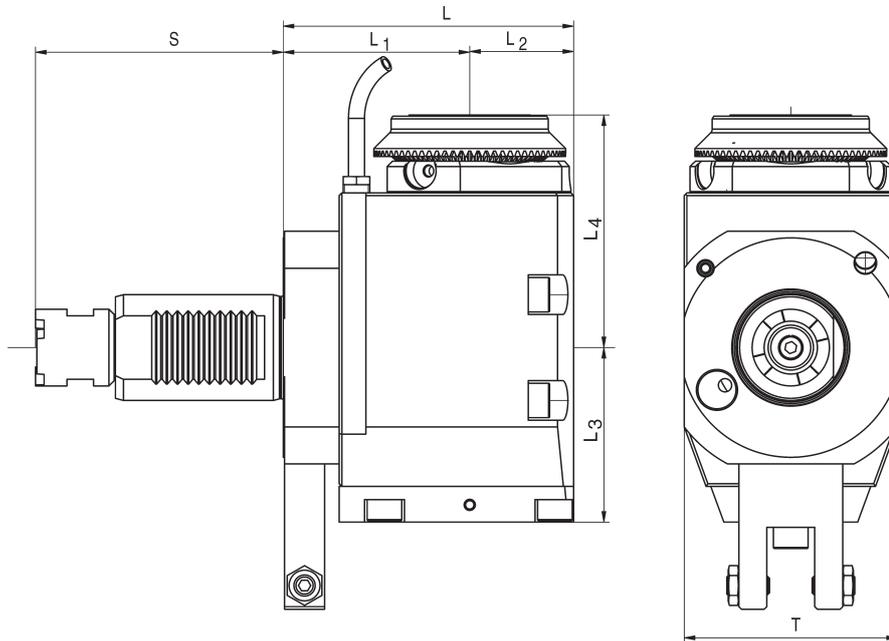
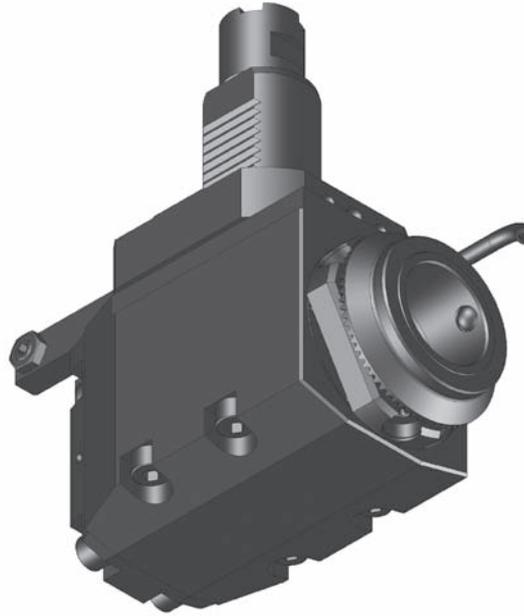
| | |
|--------------------|-----------------------------|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LVT 300 - M | |
| Dimensions | |
| Revolver type | Disc-type Turret |
| Shank | VDI 40 |
| Drive | Layer gear; single level |
| Graduation | 30 / 60° |
| Modular Interfaces | |
| mimaticMi | |



| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | B mm | B1 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|------|-------|------|------|--------------------|
| 103441 | ER 32 | 1,0-20 | 80 Nm | 6.500 / 6.500 | i = 1:1 | external | 75,5 | 87 | 38 | 93 | 75 | ↺ ↻ |
| 133711 | ER 32* | 1,0-20 | 80 Nm | 6.500 / 6.500 | i = 1:1 | internal | 75,5 | 87 | 38 | 93 | 75 | ↺ ↻ |
| 133712 | mi 50 | - | 80 Nm | 6.500 / 6.500 | i = 1:1 | internal | 92,0 | 84 | 42 | 93 | 84 | ↺ ↻ |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Angle Unit

| | |
|--------------------|---|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LVT 300 - M | |
| Dimensions | |
| Revolver type | Disc-type Turret |
| Shank | VDI 40 |
| Drive | Layer gear; single level |
| Graduation | 30 / 60° |
| Note | no reversion of Rotating (drive side direction = output side direction) |
| Modular Interfaces | |
| mimaticMi | |



| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | L1 mm | L2 mm | L3 mm | L4 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|-------|-------|-------|-------|------|------|--------------------|
| 103528 | ER 32 | 1,0-20 | 50 Nm | 6.500 / 6.500 | i = 1:1 | external | 109 | 70 | 39 | 66 | 70 | 93 | 80 | ↺ ↻ |
| 133717 | ER 32* | 1,0-20 | 50 Nm | 6.500 / 6.500 | i = 1:1 | internal | 109 | 70 | 39 | 66 | 70 | 93 | 80 | ↻ ↺ |
| 103486 | mi 50 | - | 50 Nm | 6.500 / 6.500 | i = 1:1 | internal | 109 | 70 | 39 | 66 | 88 | 93 | 80 | ↻ ↺ |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

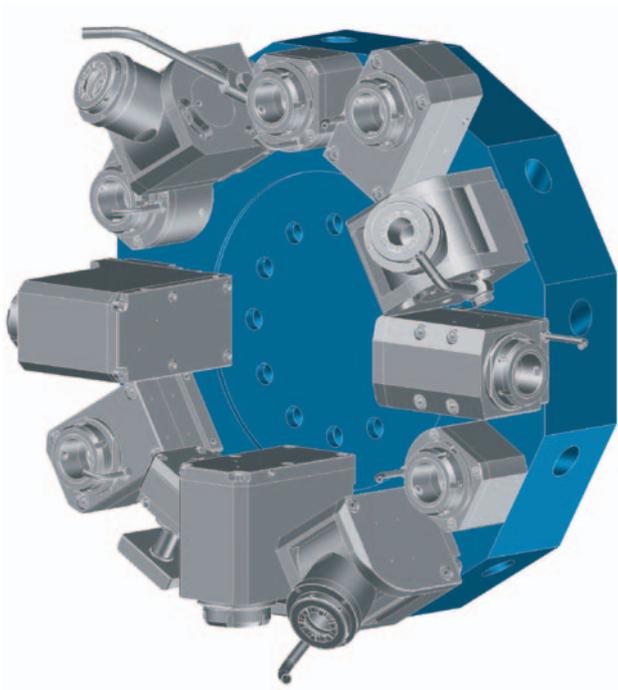
* With clamping nuts with sealing, seals see page 70

Data

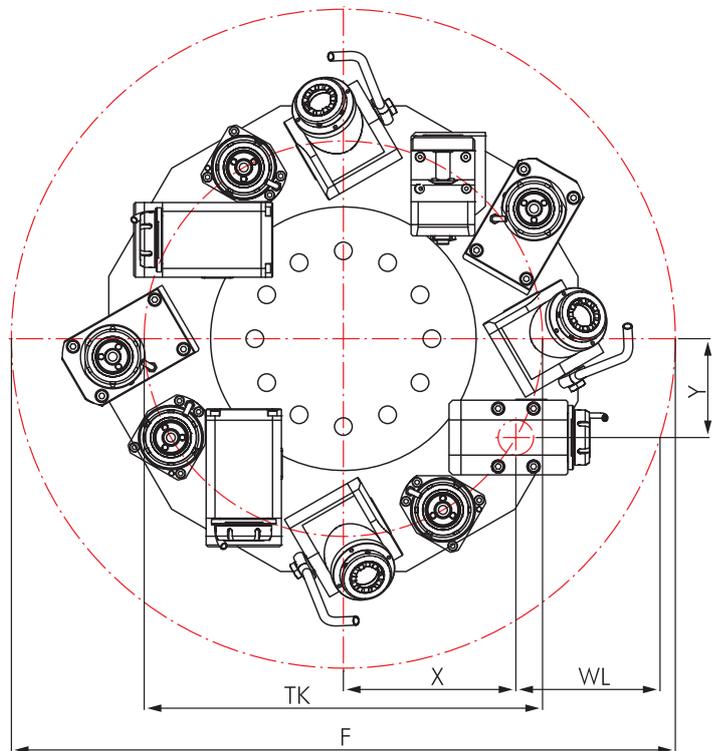
| Machine type Series | | Turret Stations |
|---------------------|----------|-----------------|
| LB 400 | M | 12 |
| LU 400 | M | 12 |



Disc-type Turret VDI 40



Interference Circles

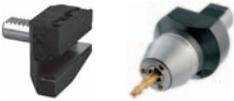


| Machine type Series | F | TK | X | Y | WL |
|---------------------|-----|-----|-----|----|-----|
| LB/LU400 | 736 | 446 | 215 | 60 | 148 |

Driven Toolholders

| | Page | | Page |
|----------------------|------|---|------|
| Straight Unit | |  | |
| | 36 | | |
| Angle Unit | |  | |
| | | | 37 |

Options and Accessories

| | | | |
|---------------------------------|---|--|----------------------------|
| mi Toolholders |  | mi System Description Toolholders Accessories | 49 51-55 56-57 |
| Standard VDI Toolholders |  | VDI Toolholders Accessories | 62-68 69-71 |
| Accessories |  | Collets DIN 6499 Threading Collets Wrenches Clamping Nuts Sleeves and Bushings | 69 69 69 69 71 |



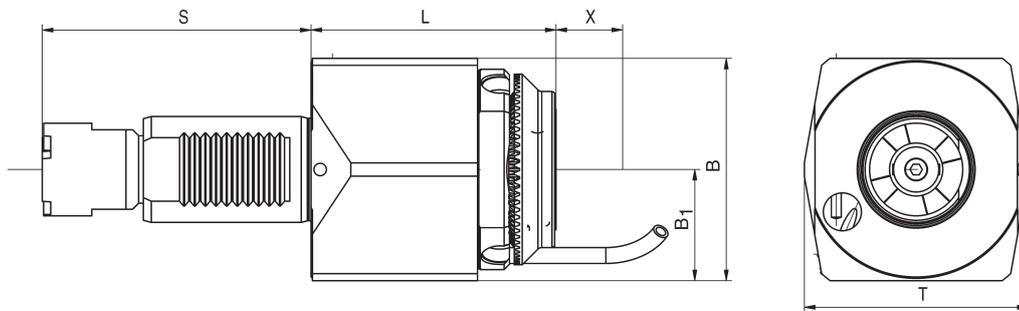
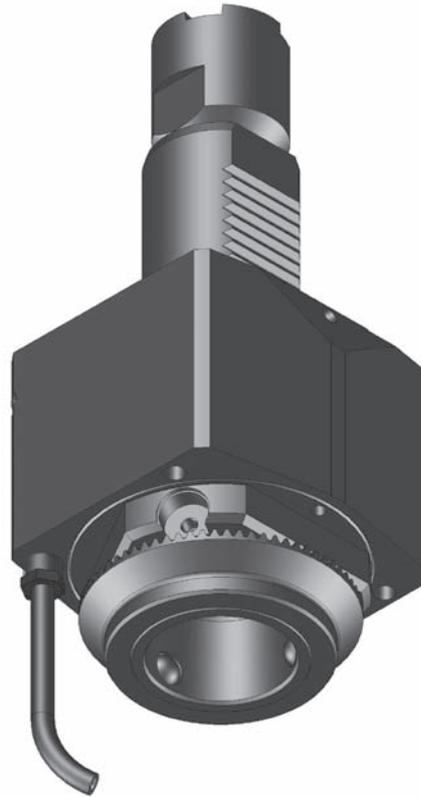
Delivery information

Driven toolholders with mi quick-change interface are supplied with operating wrench (see spare parts on page 57).
Driven toolholders with other interfaces are supplied without clamping wrench (see accessories on page 69).

Straight Unit

Connectable in accordance with **BLUECOMPETENCE** » mimatic mi » PolyMILL » TriMILL » TrioCut » PolyREAM

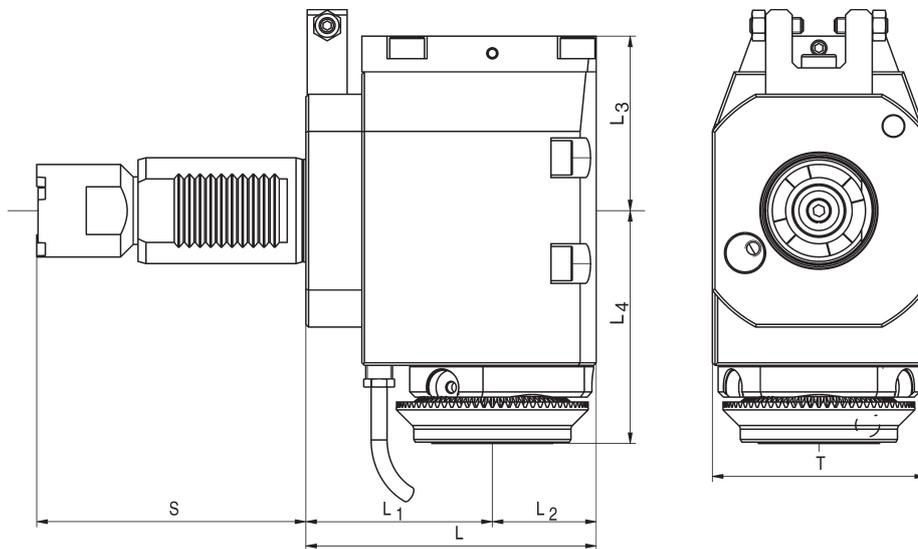
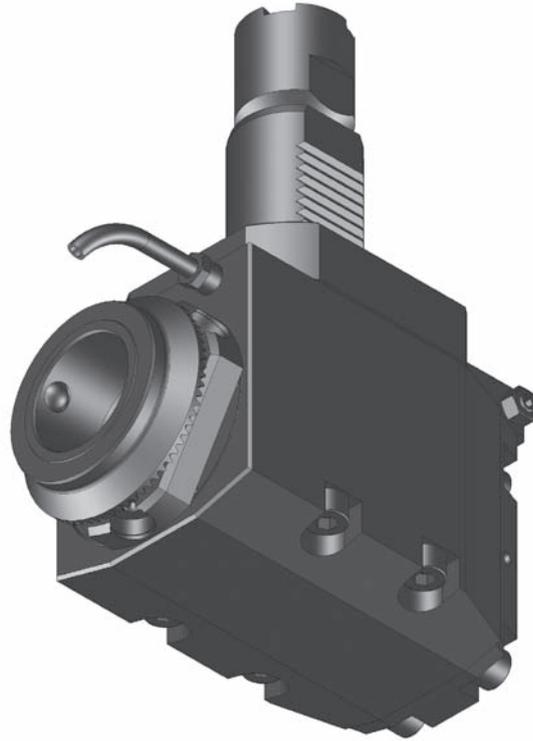
| | |
|--|-----------------------------|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LB 400-M LU 400-M (Only for Upper Turret) | |
| Dimensions | |
| Revolver type | Disc-type Turret |
| Shank | VDI 40 |
| Drive | Layer gear; single level |
| Graduation | 30 / 60° |
| Modular Interfaces | |
| mimaticMi | |



| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | B mm | B1 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|------|-------|------|------|--------------------|
| 103505 | ER 32 | 1,0-20 | 80 Nm | 6.500 / 6.500 | i = 1:1 | external | 75,5 | 87 | 38 | 101 | 75 | ↺ ↻ |
| 103509 | ER 32* | 1,0-20 | 80 Nm | 6.500 / 6.500 | i = 1:1 | internal | 75,5 | 87 | 38 | 101 | 75 | ↺ ↻ |
| 103521 | mi 50 | - | 80 Nm | 6.500 / 6.500 | i = 1:1 | internal | 92,0 | 84 | 42 | 101 | 84 | ↺ ↻ |
| 124010** | ER 32 | 1,0-20 | 50 Nm | 6.500 / 6.500 | i = 1:1 | external | 95,0 | 160 | 70 | 101 | 80 | ↺ ↻ |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Angle Unit

| | |
|--|---|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LB 400-M LU 400-M (Only for Upper Turret) | |
| Dimensions | |
| Revolver type | Disc-type Turret |
| Shank | VDI 40 |
| Drive | Layer gear; single level |
| Graduation | 30 / 60° |
| Note | no reversion of Rotating (drive side direction = output side direction) |
| Modular Interfaces | |
| mimaticMi | |



| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | L1 mm | L2 mm | L3 mm | L4 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|-------|-------|-------|-------|------|------|--------------------|
| 103542 | ER 32 | 1,0-20 | 50 Nm | 6.500 / 6.500 | i = 1:1 | external | 109 | 70 | 39 | 66 | 70 | 101 | 80 | ↻ ↻ |
| 103492 | ER 32* | 1,0-20 | 50 Nm | 6.500 / 6.500 | i = 1:1 | internal | 109 | 70 | 39 | 66 | 70 | 101 | 80 | ↻ ↻ |
| 103538 | mi 50 | - | 50 Nm | 6.500 / 6.500 | i = 1:1 | internal | 109 | 70 | 39 | 66 | 88 | 101 | 80 | ↻ ↻ |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
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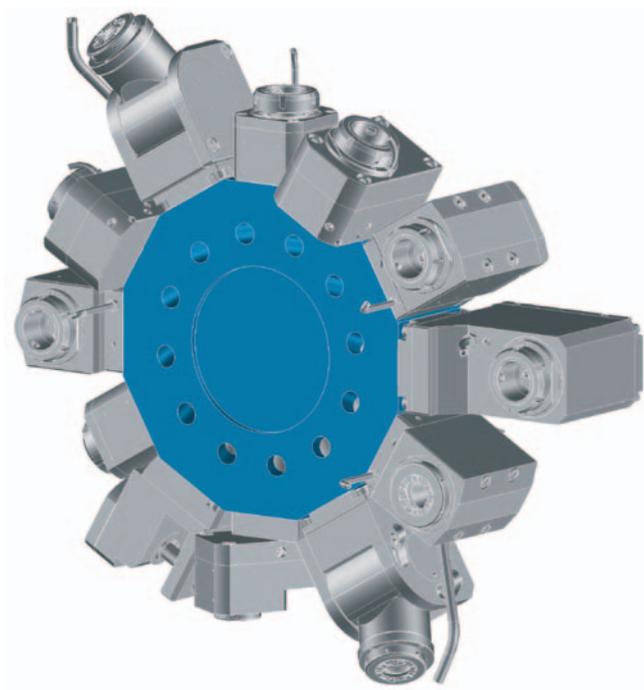
* With clamping nuts with sealing, seals see page 70

Data

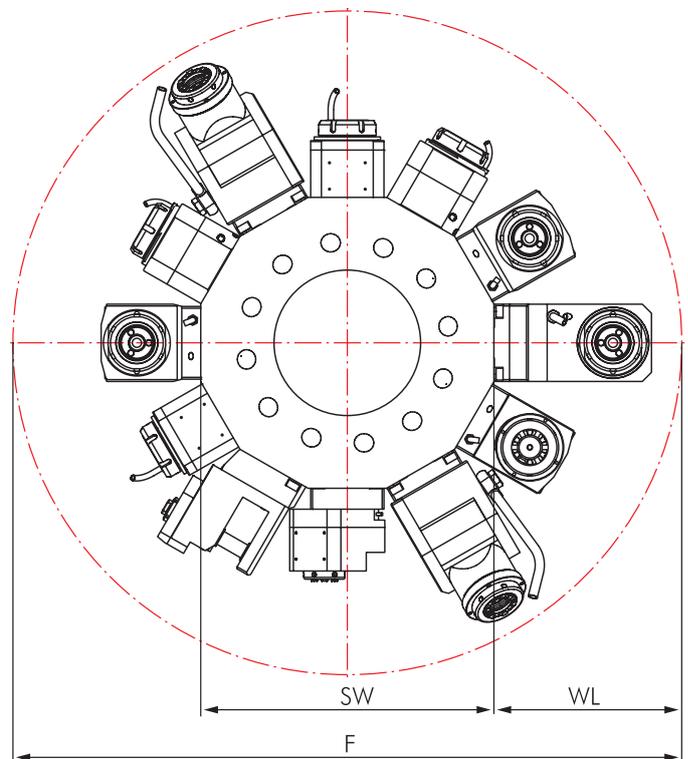
| Machine type Series | Turret Stations |
|---------------------|-----------------|
| LB 3000 EX | 12 |



Star-type Turret „BMT“



Interference Circles



| Machine type Series | F | SW | WL |
|---------------------|---|----|----|
| LB 3000 EX | | | |
| | | | |

Driven Toolholders

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| Straight Unit | |  | |
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Options and Accessories

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| mi Toolholders |  | mi System Description | 49 |
| | | Toolholders | 51-55 |
| | | Accessories | 56-57 |
| Accessories |  | Collets DIN 6499 | 69 |
| | | Threading Collets | 69 |
| | | Wrenches | 69 |
| | | Clamping Nuts | 69 |
| | | Sleeves and Bushings | 71 |



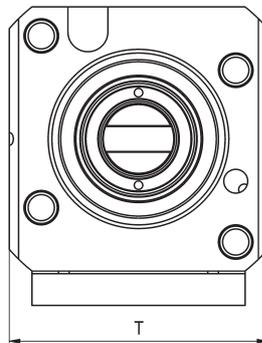
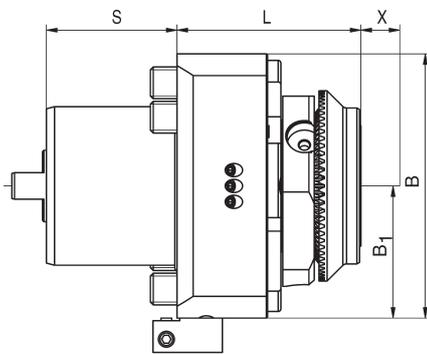
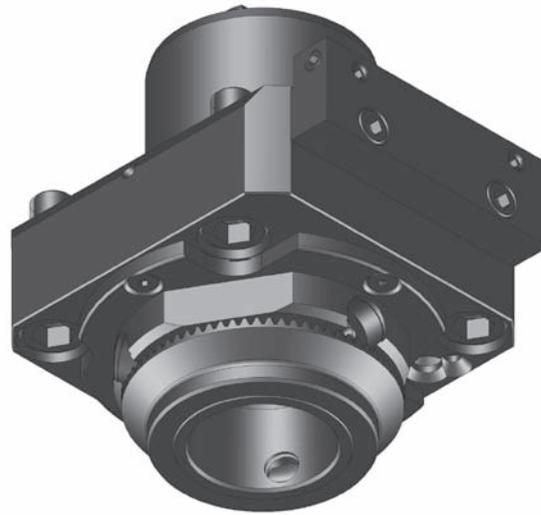
Delivery information

Driven toolholders with mi quick-change interface are supplied with operating wrench (see spare parts on page 57).
Driven toolholders with other interfaces are supplied without clamping wrench (see accessories on page 69).

Straight Unit

Connectable in accordance with **BLUECOMPETENCE** » mimatic mi » PolyMILL » TriMILL » TrioCut » PolyREAM

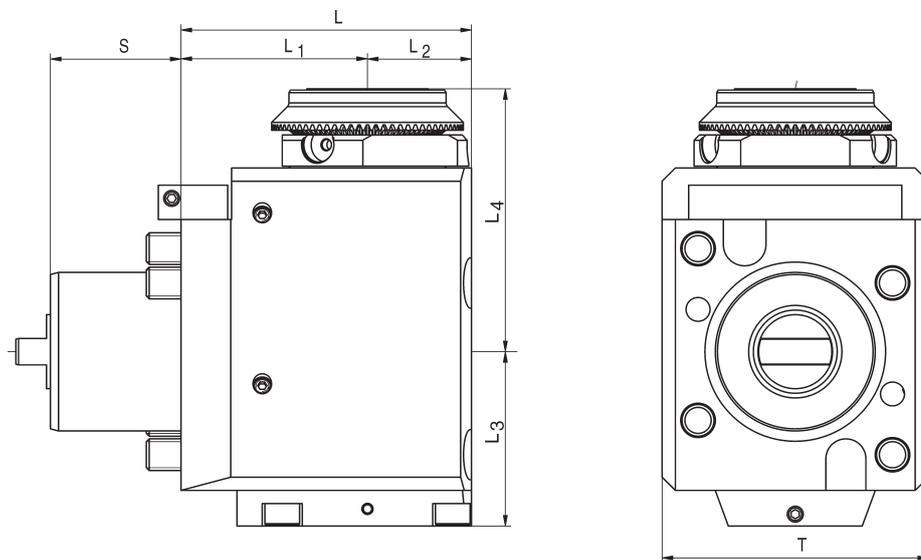
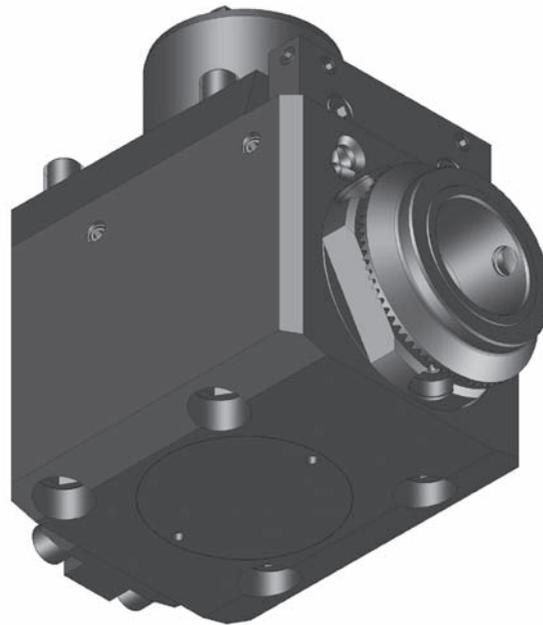
| | |
|--------------------|------------------|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LB 3000 | |
| Dimensions | |
| Turret type | Star-type Turret |
| Shank | BMT Ø 60 mm |
| Drive | Tang |
| SW | 10 mm |
| Modular Interfaces | |
| mimaticMi | |



| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | B mm | B1 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|------|-------|------|------|--------------------|
| 167718 | ER 32* | 1,0-20 | 80 Nm | 6.000 / 6.000 | i = 1:1 | internal | 65 | 100 | 50 | 49 | 97 | ↺ ↻ |
| 167714 | mi 50 | - | 80 Nm | 6.000 / 6.000 | i = 1:1 | internal | 69 | 100 | 50 | 49 | 97 | ↺ ↻ |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Angle Unit

| | |
|--------------------|---|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LB 3000 | |
| Dimensions | |
| Turret type | Star-type Turret |
| Shank | BMT Ø 60 mm |
| Drive | Tang |
| SW | 10 mm |
| Note | no reversion of Rotating (drive side direction = output side direction) |
| Modular Interfaces | |
| mimaticMi | |



| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | L1 mm | L2 mm | L3 mm | L4 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|-------|-------|-------|-------|------|------|--------------------|
| 167731 | ER 32* | 1,0-20 | 50 Nm | 6.500 / 6.500 | i = 1:1 | internal | 109 | 70 | 39 | 66 | 84,5 | 49 | 100 | ↻ ↻ |
| 167710 | mi 50 | - | 50 Nm | 6.500 / 6.500 | i = 1:1 | internal | 109 | 70 | 39 | 66 | 99,5 | 49 | 100 | ↻ ↻ |
| | | | | | | | | | | | | | | |
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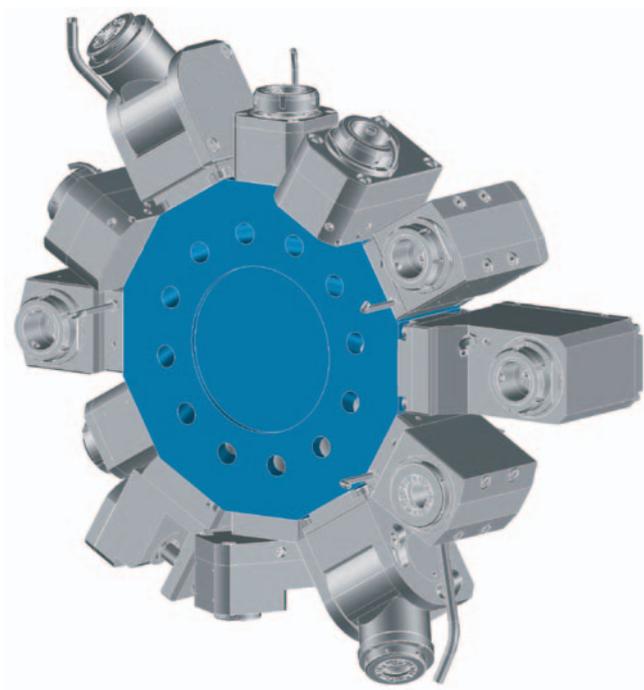
* With clamping nuts with sealing, seals see page 70

Data

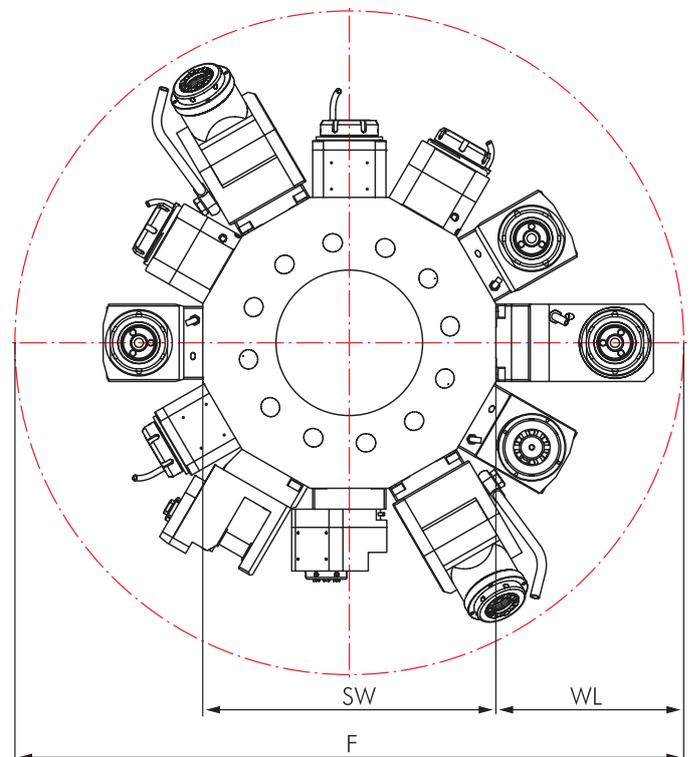
| Machine type Series | Turret Stations |
|---------------------|-----------------|
| LT 2000 EX | 16 |



Star-type Turret „BMT“



Interference Circles



| Machine type Series | F | SW | WL |
|---------------------|-----|-----|-----|
| LT 2000 EX | 650 | 420 | 115 |

Driven Toolholders

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Options and Accessories

| | | | |
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| mi Toolholders |  | mi System Description Toolholders Accessories | 49 51-55 56-57 |
| Accessories |  | Collets DIN 6499 Threading Collets Wrenches Clamping Nuts Sleeves and Bushings | 69 69 69 69 71 |

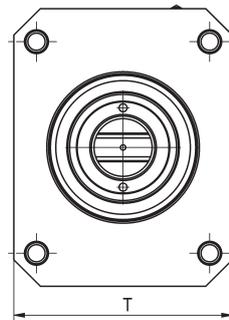
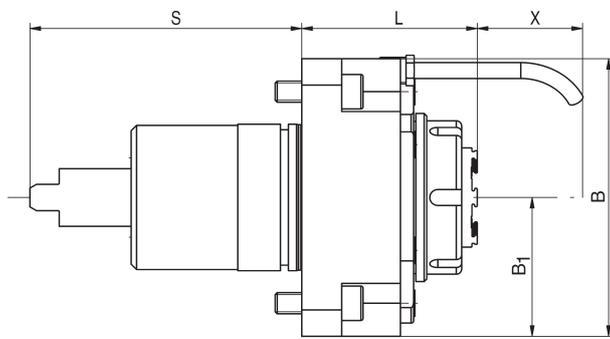
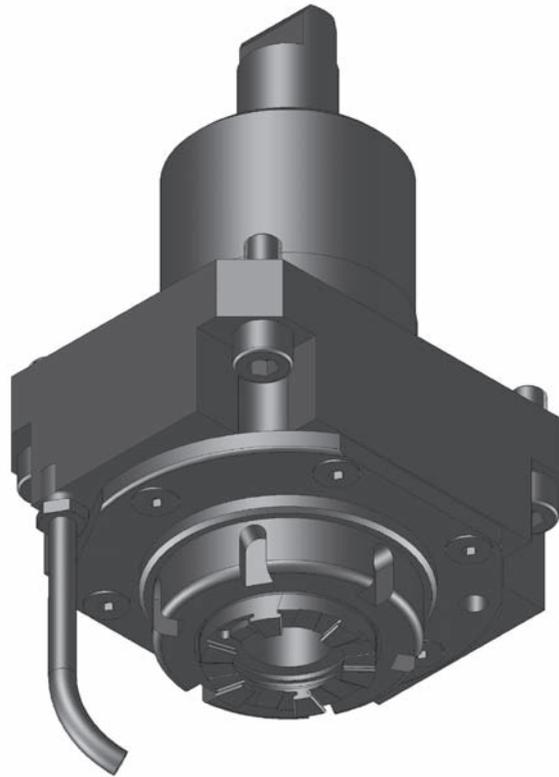


Delivery information

Driven toolholders with mi quick-change interface are supplied with operating wrench (see spare parts on page 57).
Driven toolholders with other interfaces are supplied without clamping wrench (see accessories on page 69).

Straight Unit

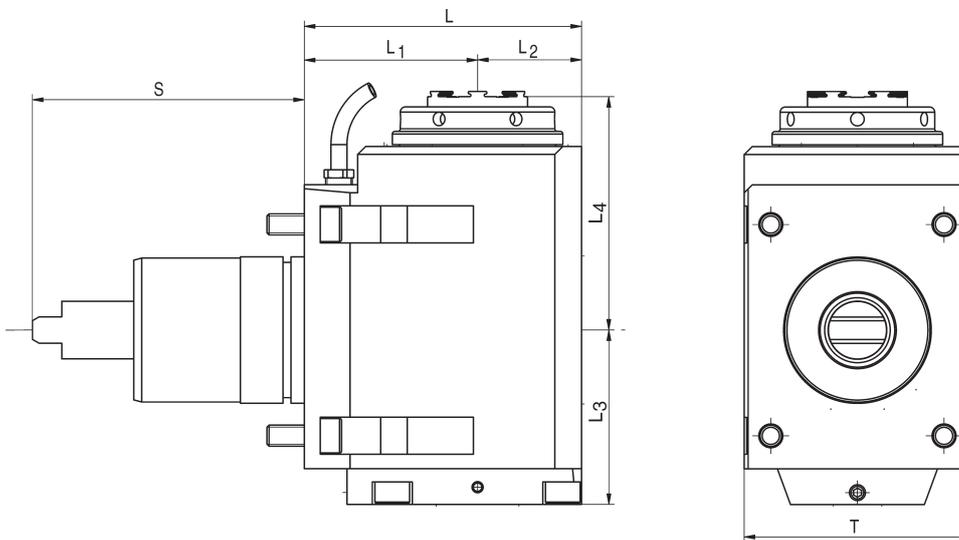
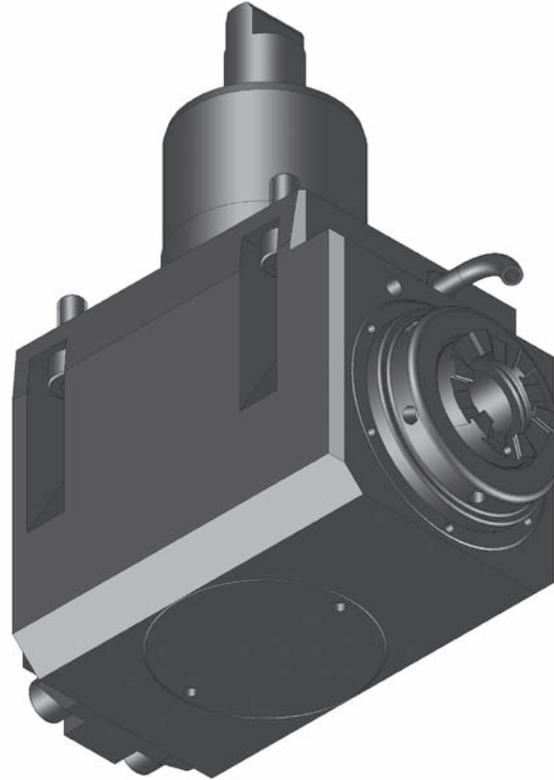
| | |
|------------------|------------------|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LT 2000 | |
| Dimensions | |
| Turret type | Star-type Turret |
| Shank | BMT Ø 55,4 mm |
| Drive | Tang |
| SW | 10 mm |



| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | B mm | B1 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|------|-------|------|------|--------------------|
| 176394 | ER 32 | 1,0-20 | 80 Nm | 6.500 / 6.500 | i = 1:1 | external | 65 | 105 | 50 | 105 | 82 | ↺ ↻ |
| 176393 | ER 32* | 1,0-20 | 80 Nm | 6.500 / 6.500 | i = 1:1 | internal | 65 | 105 | 50 | 105 | 82 | ↻ ↺ |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Angle Unit

| | |
|------------------|---|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LT 2000 | |
| Dimensions | |
| Turret type | Star-type Turret |
| Shank | BMT Ø 55,4 mm |
| Drive | Tang |
| SW | 10 mm |
| Note | no reversion of Rotating (drive side direction = output side direction) |

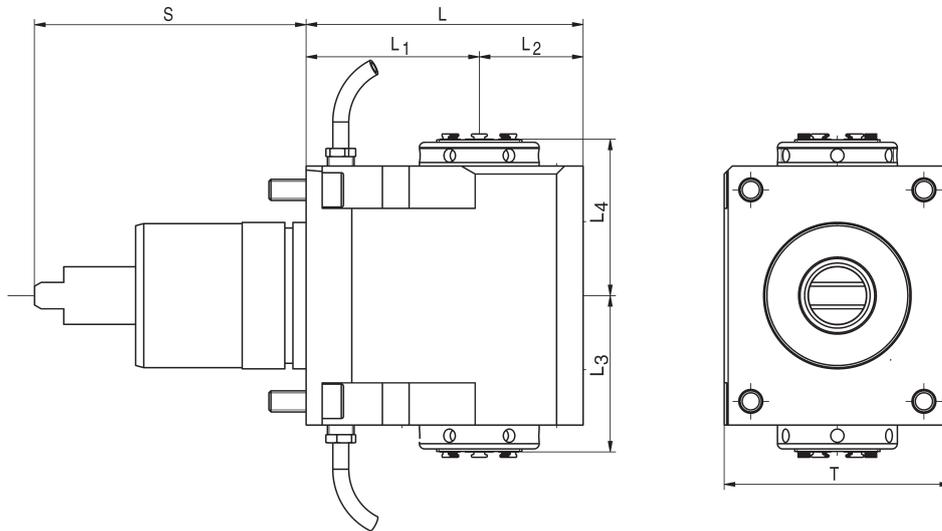
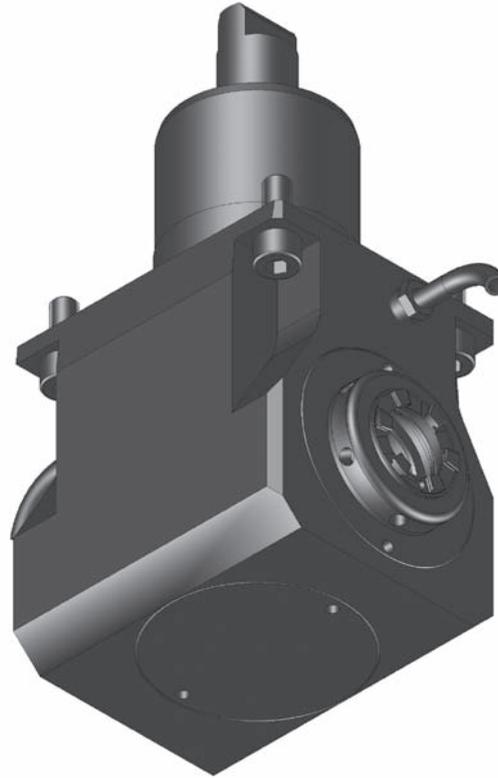


| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | L1 mm | L2 mm | L3 mm | L4 mm | S mm | T mm | Rotating direction |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|-------|-------|-------|-------|------|------|--------------------|
| 176401 | ER 32 | 1,0-20 | 70 Nm | 6.500 / 6.500 | i = 1:1 | external | 102 | 65 | 37 | 68 | 88 | 102 | 85 | ↻ ↻ |
| 176400 | ER 32* | 1,0-20 | 70 Nm | 6.500 / 6.500 | i = 1:1 | internal | 102 | 65 | 37 | 68 | 88 | 102 | 85 | ↻ ↻ |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

* With clamping nuts with sealing, seals see page 70

Angle Unit, 2-Axis

| | |
|------------------|---|
| for Manufacturer | |
| LOKUMA | |
| for Machine type | |
| LT 2000 | |
| Dimensions | |
| Turret type | Star-type Turret |
| Shank | BMT Ø 55,4 mm |
| Drive | Tang |
| SW | 10 mm |
| Note | no reversion of Rotating (drive side direction = output side direction) |



| Order No. | Tool holder | Clamping range mm | Torque max. | n1/n2 (max.) (r.p.m.) | Gear Ratio | Coolant | L mm | L1 mm | L2 mm | L3 mm | L4 mm | S mm | T mm |
|-----------|-------------|-------------------|-------------|-----------------------|------------|----------|------|-------|-------|-------|-------|------|------|
| 176655 | ER 25 | 0,5-16 | 30 Nm | 6.500 / 6.500 | i = 1:1 | external | 104 | 65 | 39 | 60 | 60 | 102 | 85 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |



Management Service

CERTIFICATE

The Certification Body of
TÜV SÜD Management Service GmbH
certifies that

mimatic[®]

T o o l S y s t e m s

MIMATIC Zettl GmbH
CNC-Präzisions- u. Sonderwerkzeuge
Westendstraße 3
87488 Betzigau

has established and applies
a Quality Management System for

Development, Design, Production,
Sales and Service of Driven Toolholders,
Cutting Tools, Clamping Systems and
Special Tools

An audit was performed, Report No. **70006182**
Proof has been furnished that the requirements

according to

ISO 9001: 2008

are fulfilled. The certificate is valid until **2014-02-06**
Certification Registration No. **12 100 15724 TMS**

M. Wegner

München, 2011-02-14



QMS-TGA-ZM-07-92

TÜV SÜD
 ZERTIFIKAT ♦ CERTIFICATE ♦ 認證證書 ♦ CERTIFICADO ♦ CERTIFICAT

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| Weldon Toolholders Whistle-Notch Toolholders  | Ø 6-25 mm Ø 1/4"-1/0" | DIN 1835 B DIN 1835 B | 52 52 |
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Advantages

- Universal tool clamping system for all production areas
- Presetting of the tools off-line by length adjustment screw
- Tool change within seconds
- Concentricity of the interface < 0,002 mm
- Secure holding force by form-locking
- Very short design
- Toolholders in different sizes
- All toolholders with internal coolant

Use on CNC-Turning Machines and Machining Centers

Driven toolholders for all turning machines, machining centers, milling machines, turn/mill centers as well as transfer and special machines. Driven toolholders / basic holders are available in many different versions:

- Shafts such as VDI, SK, BT, CAT, HSK, Capto, ...
- Straight and angle units
- Single or multi-spindle versions
- Gear multiplication or reduction
- Internal and/or external coolant supply
- Central or offset

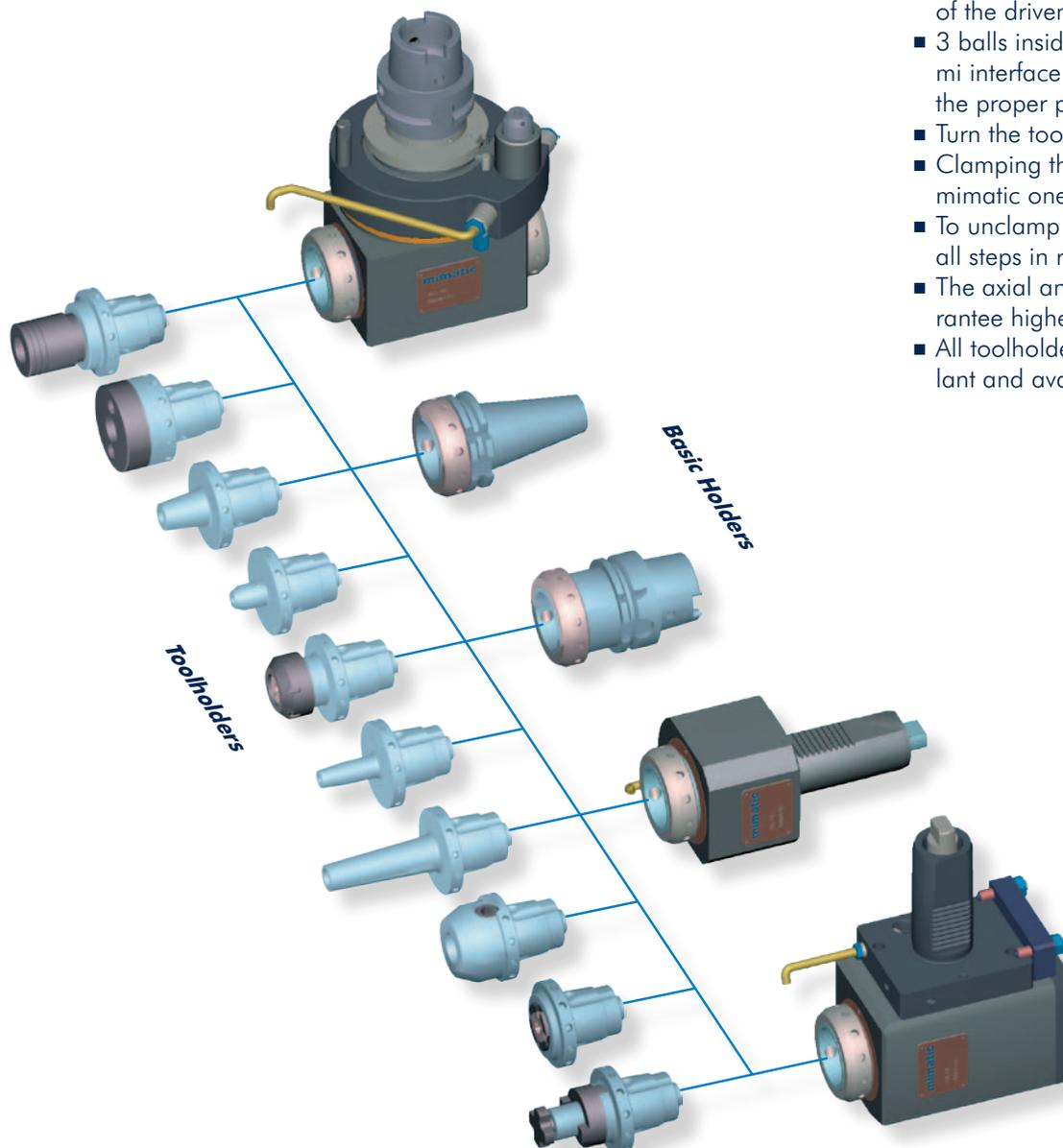
Modular Toolholders in Different Sizes for All Production Areas

- Tapping toolholders
- Collet toolholders (internal and external nut)
- Hydro-Flex hydraulic toolholders
- Thread tightening toolholder cutters
- Morse taper shank toolholders
- Weldon and Whistle Notch toolholders
- Shell mill toolholders

All toolholders are available for use with your presetter.

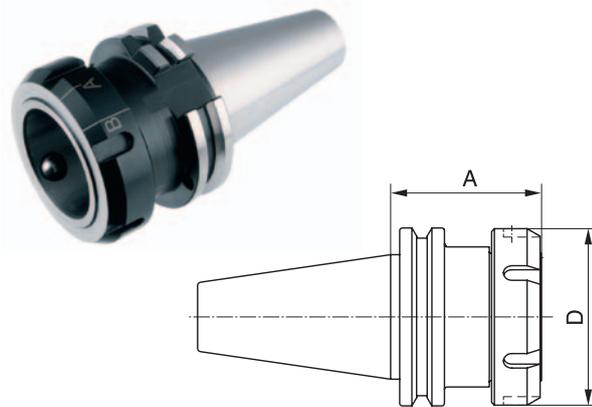
mi Operation

- Insert the toolholder into the spindle of the driven toolholder
- 3 balls inside the modular mimatic mi interface guide the toolholder into the proper position
- Turn the toolholder until it is locked
- Clamping the sleeve nut by using the mimatic one hand key
- To unclamp the toolholder just follow all steps in reverse order
- The axial and conical surface guarantee highest concentricity
- All toolholders are with internal coolant and available in different sizes



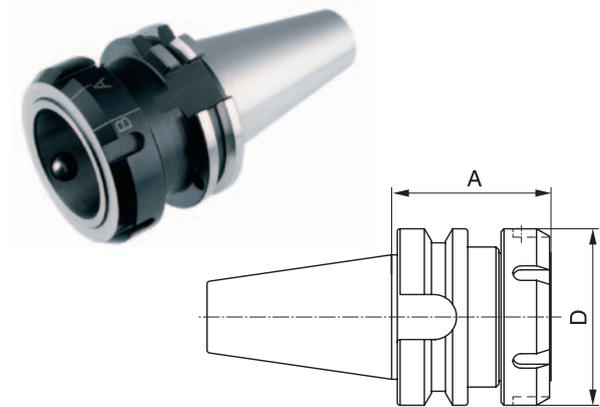
Basic Holders

DIN 69871 AD/B



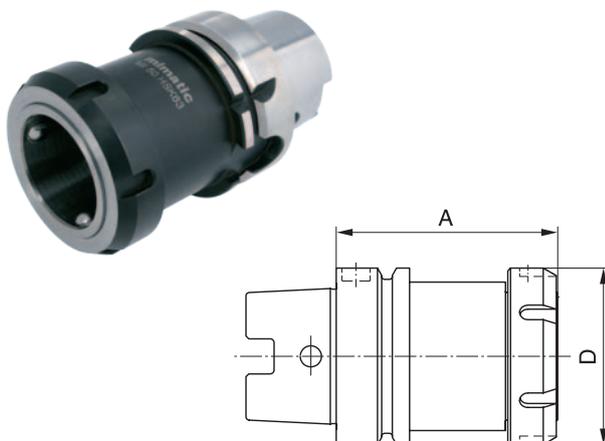
| Order No. | Size | SK | A mm | D mm |
|-----------|-------|-------|------|------|
| 121454 | mi 32 | SK 30 | 53,5 | 45 |
| 155404 | mi 40 | SK 40 | 53,5 | 54 |
| 155502 | mi 50 | SK 40 | 53,5 | 63 |
| 155481 | mi 50 | SK 50 | 53,5 | 63 |
| 155477 | mi 63 | SK 50 | 58,5 | 77 |

MAS-BT JIS 6339



| Order No. | Size | BT | A mm | D mm |
|-----------|-------|-------|------|------|
| 121481 | mi 32 | BT 30 | 45,0 | 45 |
| 121512 | mi 40 | BT 40 | 48,5 | 54 |
| 155469 | mi 50 | BT 40 | 56,5 | 63 |
| 155457 | mi 50 | BT 50 | 61,5 | 63 |
| 121552 | mi 63 | BT 50 | 70,0 | 77 |

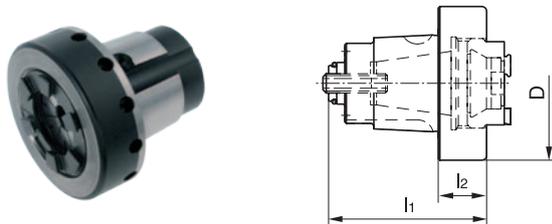
DIN 69893 A



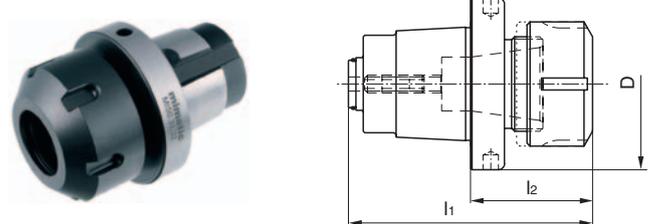
| Order No. | Size | HSK | A mm | D mm |
|-----------|-------|---------|-------|------|
| 155410 | mi 40 | HSK 50 | 60,0 | 54 |
| 155458 | mi 50 | HSK 63 | 78,5 | 63 |
| 121562 | mi 50 | HSK 100 | 85,0 | 63 |
| 121577 | mi 63 | HSK 100 | 100,0 | 77 |

Collet Chucks DIN 6499 – Type ER

- short type
- clamping nut inside
- with internal coolant



- long type
- clamping nut outside
- with internal coolant

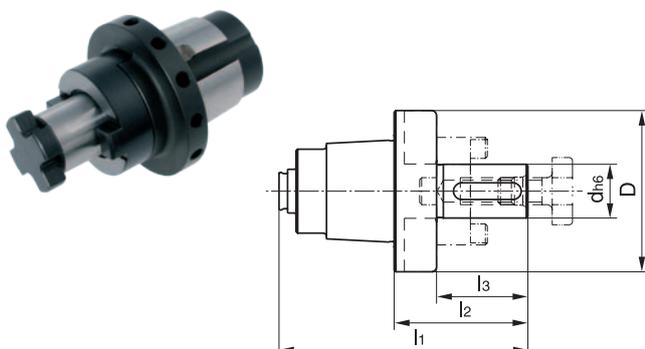


| Order No. | Size | Collet | l1 mm | l2 mm | D mm |
|-----------|-------|--------|-------|-------|------|
| 121479 | mi 32 | ER 11 | 41,5 | 15 | 42 |
| 155357 | mi 32 | ER 16 | 41,5 | 15 | 42 |
| 171839 | mi 32 | ER 20 | 59,0 | 32 | 36 |
| 155388 | mi 40 | ER 16 | 45,0 | 11 | 48 |
| 155335 | mi 40 | ER 20 | 49,0 | 15 | 48 |
| 155367 | mi 40 | ER 25 | 55,0 | 21 | 48 |
| 155418 | mi 50 | ER 25 | 55,0 | 14 | 58 |
| 155460 | mi 50 | ER 32 | 59,0 | 18 | 58 |
| 155471 | mi 63 | ER 32 | 63,0 | 14 | 75 |
| 155496 | mi 63 | ER 40 | 69,0 | 20 | 75 |

| Order No. | Size | Collet | l1 mm | l2 mm | D mm |
|-----------|-------|--------|-------|-------|------|
| 155358 | mi 32 | ER 11 | 72,5 | 46,0 | 42 |
| 155319 | mi 32 | ER 16 | 64,5 | 38,0 | 42 |
| 121460 | mi 40 | ER 16 | 73,0 | 39,0 | 48 |
| 121502 | mi 40 | ER 20 | 80,0 | 46,6 | 48 |
| 155448 | mi 50 | ER 25 | 82,0 | 41,0 | 58 |
| 155445 | mi 50 | ER 32 | 88,0 | 47,0 | 58 |
| 155475 | mi 63 | ER 32 | 96,0 | 47,0 | 75 |
| 155451 | mi 63 | ER 40 | 94,5 | 45,5 | 75 |

Combination Shell End Mill Arbor

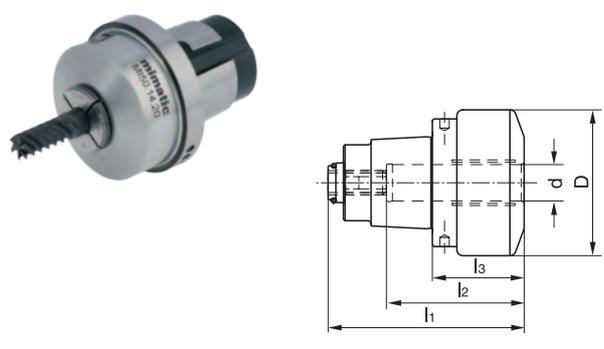
without internal coolant



| Order No. | Size | l1 mm | l2 mm | l3 mm | d h6 mm | D mm |
|-----------|-------|-------|-------|-------|---------|------|
| 121486 | mi 32 | 66,0 | 39,5 | 27 | 16 | 42 |
| 155365 | mi 40 | 73,5 | 39,5 | 25 | 16 | 48 |
| 155447 | mi 50 | 82,0 | 41,0 | 27 | 16 | 58 |
| 155413 | mi 50 | 88,0 | 47,0 | 31 | 22 | 58 |
| 155512 | mi 63 | 96,0 | 47,0 | 31 | 22 | 75 |
| 155465 | mi 63 | 98,0 | 49,0 | 33 | 27 | 75 |

Hydraulic Chuck

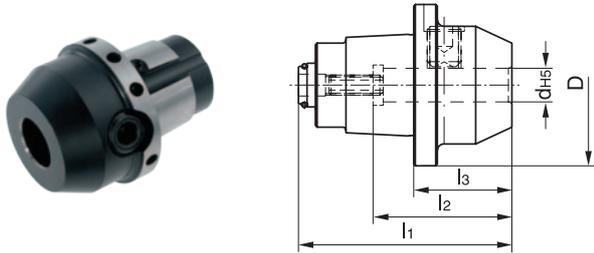
with internal coolant



| Order No. | Size | l1 mm | l2 mm | l3 mm | d h6 mm | D mm |
|-----------|-------|-------|-------|-------|---------|------|
| 155391 | mi 40 | 64 | 45 | 30 | 12 | 48 |
| 155417 | mi 50 | 71 | 52 | 30 | 20 | 58 |

Weldon Toolholder DIN 1835 B

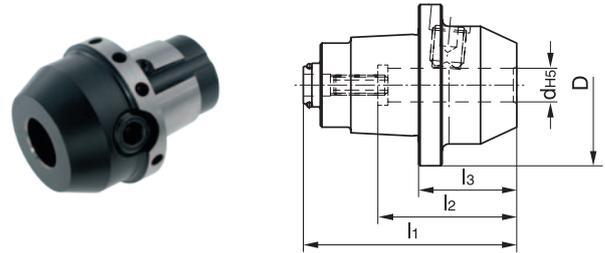
with internal coolant



| Order No. | Size | l1 mm | l2 mm | l3 mm | d H5 mm / " | D mm |
|-----------|-------|----------|----------|----------|----------------|---------|
| 121436 | mi 32 | 52,5 | 37 | 26,0 | 6 | 42 |
| 121478 | mi 32 | 52,5 | 37 | 26,0 | 8 | 42 |
| 121469 | mi 32 | 55,5 | 41 | 29,0 | 10 | 42 |
| 121439 | mi 32 | 57,5 | 46 | 31,0 | 12 | 42 |
| 121449 | mi 32 | 52,5 | 37 | 26,0 | 1/4" | 42 |
| 121472 | mi 32 | 55,5 | 41 | 29,0 | 3/8" | 42 |
| 121448 | mi 32 | 57,5 | 46 | 31,0 | 1/2" | 42 |
| 155330 | mi 40 | 60,0 | 37 | 26,0 | 6 | 48 |
| 155346 | mi 40 | 60,0 | 37 | 26,0 | 8 | 48 |
| 155321 | mi 40 | 63,0 | 41 | 29,0 | 10 | 48 |
| 155331 | mi 40 | 65,0 | 46 | 31,0 | 12 | 48 |
| 155326 | mi 40 | 65,0 | 46 | 31,0 | 14 | 48 |
| 155379 | mi 40 | 68,0 | 49 | 34,0 | 16 | 48 |
| 121497 | mi 40 | 60,0 | 37 | 26,0 | 1/4" | 48 |
| 121475 | mi 40 | 63,0 | 41 | 29,0 | 3/8" | 48 |
| 121474 | mi 40 | 65,0 | 46 | 31,0 | 1/2" | 48 |
| 121499 | mi 40 | 68,0 | 49 | 34,0 | 5/8" | 48 |
| 155419 | mi 50 | 65,0 | 37 | 24,0 | 6 | 58 |
| 155411 | mi 50 | 66,0 | 37 | 25,0 | 8 | 58 |
| 155400 | mi 50 | 70,0 | 41 | 29,0 | 10 | 58 |
| 155406 | mi 50 | 73,0 | 46 | 32,0 | 12 | 58 |
| 155412 | mi 50 | 73,0 | 46 | 32,0 | 14 | 58 |
| 155407 | mi 50 | 74,0 | 49 | 33,0 | 16 | 58 |
| 155427 | mi 50 | 78,0 | 51 | 37,0 | 20 | 58 |
| 121489 | mi 50 | 65,0 | 37 | 24,0 | 1/4" | 58 |
| 121529 | mi 50 | 40,0 | 41 | 29,0 | 3/8" | 58 |
| 121525 | mi 50 | 73,0 | 46 | 32,0 | 1/2" | 58 |
| 121520 | mi 50 | 75,0 | 49 | 34,0 | 5/8" | 58 |
| 121526 | mi 50 | 78,0 | 51 | 37,0 | 3/4" | 58 |
| 155470 | mi 63 | 81,0 | 37 | 32,0 | 6 | 75 |
| 155459 | mi 63 | 82,0 | 37 | 33,0 | 8 | 75 |
| 155490 | mi 63 | 85,0 | 41 | 36,0 | 10 | 75 |
| 155509 | mi 63 | 88,5 | 46 | 39,5 | 12 | 75 |
| 155463 | mi 63 | 88,5 | 46 | 39,5 | 14 | 75 |
| 155482 | mi 63 | 91,0 | 49 | 42,0 | 16 | 75 |
| 155474 | mi 63 | 93,0 | 51 | 44,0 | 20 | 75 |
| 155464 | mi 63 | 110 | 59 | 61,0 | 25 | 75 |
| 166815 | mi 63 | 81,0 | 37 | 32,0 | 1/4" | 75 |
| 166805 | mi 63 | 85,0 | 41 | 36,0 | 3/8" | 75 |
| 166813 | mi 63 | 88,5 | 46 | 39,5 | 1/2" | 75 |
| 166807 | mi 63 | 91,0 | 49 | 42,0 | 5/8" | 75 |
| 166804 | mi 63 | 93,0 | 51 | 44,0 | 3/4" | 75 |
| 166812 | mi 63 | 110 | 59 | 61,0 | 1/0" | 75 |

Whistle Notch Toolholder DIN 1835 E

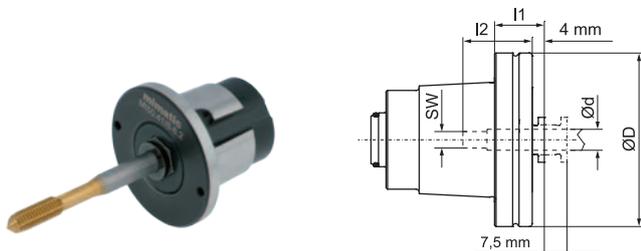
with internal coolant



| Order No. | Size | l1 mm | l2 mm | l3 mm | d H5 mm / " | D mm |
|-----------|-------|----------|----------|----------|----------------|---------|
| 121463 | mi 32 | 52,5 | 36 | 26,0 | 6 | 42 |
| 121464 | mi 32 | 52,5 | 36 | 26,0 | 8 | 42 |
| 121443 | mi 32 | 55,5 | 40 | 29,0 | 10 | 42 |
| 121453 | mi 32 | 57,5 | 45 | 31,0 | 12 | 42 |
| 121442 | mi 32 | 52,5 | 36 | 26,0 | 1/4" | 42 |
| 121485 | mi 32 | 55,5 | 40 | 29,0 | 3/8" | 42 |
| 121480 | mi 32 | 57,5 | 45 | 31,0 | 1/2" | 42 |
| 155369 | mi 40 | 60,0 | 36 | 26,0 | 6 | 48 |
| 155363 | mi 40 | 60,0 | 36 | 26,0 | 8 | 48 |
| 155370 | mi 40 | 63,0 | 40 | 29,0 | 10 | 48 |
| 155364 | mi 40 | 65,0 | 45 | 31,0 | 12 | 48 |
| 155333 | mi 40 | 65,0 | 45 | 31,0 | 14 | 48 |
| 155382 | mi 40 | 68,0 | 48 | 34,0 | 16 | 48 |
| 121492 | mi 40 | 60,0 | 36 | 26,0 | 1/4" | 48 |
| 121493 | mi 40 | 63,0 | 40 | 29,0 | 3/8" | 48 |
| 121455 | mi 40 | 65,0 | 45 | 31,0 | 1/2" | 48 |
| 121494 | mi 40 | 68,0 | 48 | 34,0 | 5/8" | 48 |
| 169197 | mi 40 | 89,0 | 50 | 55,0 | 20 | 52 |
| 155416 | mi 50 | 65,0 | 36 | 24,0 | 6 | 58 |
| 155401 | mi 50 | 66,0 | 36 | 25,0 | 8 | 58 |
| 155383 | mi 50 | 70,0 | 40 | 29,0 | 10 | 58 |
| 155408 | mi 50 | 73,0 | 45 | 32,0 | 12 | 58 |
| 155435 | mi 50 | 73,0 | 45 | 32,0 | 14 | 58 |
| 155436 | mi 50 | 75,5 | 48 | 34,5 | 16 | 58 |
| 155384 | mi 50 | 78,0 | 50 | 37,0 | 20 | 58 |
| 166816 | mi 50 | 65,0 | 36 | 24,0 | 1/4" | 58 |
| 155440 | mi 50 | 70,0 | 40 | 29,0 | 3/8" | 58 |
| 155434 | mi 50 | 73,0 | 45 | 32,0 | 1/2" | 58 |
| 155428 | mi 50 | 75,0 | 48 | 34,0 | 5/8" | 58 |
| 155385 | mi 50 | 78,0 | 50 | 37,0 | 3/4" | 58 |
| 166104 | mi 63 | 81,0 | 36 | 32,0 | 6 | 75 |
| 166105 | mi 63 | 82,0 | 36 | 33,0 | 8 | 75 |
| 166110 | mi 63 | 85,0 | 40 | 36,0 | 10 | 75 |
| 166112 | mi 63 | 88,5 | 45 | 39,5 | 12 | 75 |
| 166113 | mi 63 | 88,5 | 45 | 39,5 | 14 | 75 |
| 166114 | mi 63 | 91,0 | 48 | 42,0 | 16 | 75 |
| 166115 | mi 63 | 93,0 | 50 | 44,0 | 20 | 75 |
| 166116 | mi 63 | 110 | 56 | 61,0 | 25 | 75 |
| 166797 | mi 63 | 81,0 | 36 | 32,0 | 1/4" | 75 |
| 166799 | mi 63 | 85,0 | 40 | 36,0 | 3/8" | 75 |
| 166796 | mi 63 | 88,5 | 45 | 39,5 | 1/2" | 75 |
| 166803 | mi 63 | 91,0 | 48 | 42,0 | 5/8" | 75 |
| 166798 | mi 63 | 93,0 | 50 | 44,0 | 3/4" | 75 |
| 166795 | mi 63 | 110 | 56 | 61,0 | 1/0" | 75 |

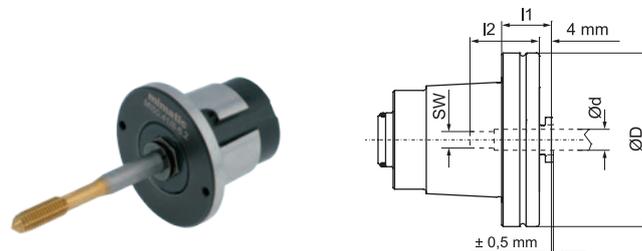
SYNAX® Tapping Quick Change Holder

without internal coolant,
with synchronisation and length compensation



| Order No. | Size | l1 mm | l2 mm | d mm | D mm | SW |
|-----------|-------|-------|-------|------|------|------|
| 121510 | mi 40 | 17,0 | 25 | 3,5 | 48 | 2,7 |
| 155397 | mi 40 | 17,0 | 25 | 4,5 | 48 | 3,4 |
| 155377 | mi 40 | 17,0 | 27 | 6,0 | 48 | 4,9 |
| 155378 | mi 40 | 17,0 | 27 | 8,0 | 48 | 6,2 |
| 155403 | mi 40 | 38,0 | 28 | 9,0 | 48 | 7,0 |
| 121451 | mi 40 | 38,0 | 29 | 10,0 | 48 | 8,0 |
| 121498 | mi 40 | 38,0 | 30 | 12,0 | 48 | 9,0 |
| 155450 | mi 50 | 16,5 | 25 | 3,5 | 58 | 2,7 |
| 155487 | mi 50 | 16,5 | 25 | 4,5 | 58 | 3,4 |
| 155422 | mi 50 | 16,5 | 27 | 6,0 | 58 | 4,9 |
| 155497 | mi 50 | 16,5 | 27 | 7,0 | 58 | 5,5 |
| 155455 | mi 50 | 16,5 | 27 | 8,0 | 58 | 6,2 |
| 155423 | mi 50 | 16,5 | 28 | 9,0 | 58 | 7,0 |
| 155466 | mi 50 | 16,5 | 29 | 10,0 | 58 | 8,0 |
| 155472 | mi 50 | 44,0 | 36 | 11,0 | 58 | 9,0 |
| 155449 | mi 50 | 16,5 | 30 | 12,0 | 58 | 9,0 |
| 155479 | mi 50 | 44,0 | 33 | 16,0 | 58 | 12,0 |

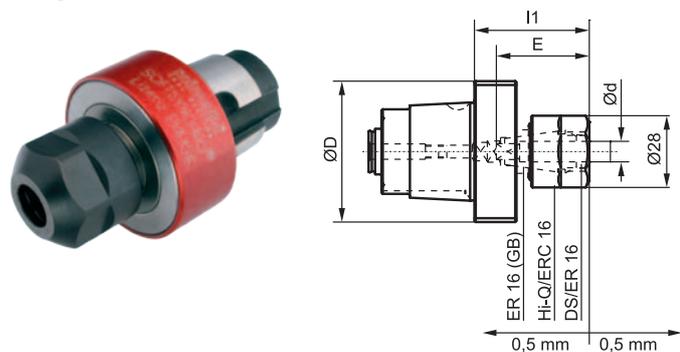
with internal coolant (70 bar),
only synchronisation



| Order No. | Size | l1 mm | l2 mm | d mm | D mm | SW |
|-----------|-------|-------|-------|------|------|------|
| 155389 | mi 40 | 17,0 | 27 | 6 | 48 | 4,9 |
| 121522 | mi 40 | 17,0 | 27 | 8 | 48 | 6,2 |
| 121515 | mi 40 | 38,0 | 28 | 9 | 48 | 7,0 |
| 121504 | mi 40 | 38,0 | 29 | 10 | 48 | 8,0 |
| 121517 | mi 40 | 38,0 | 30 | 12 | 48 | 9,0 |
| 155432 | mi 50 | 16,5 | 27 | 6 | 58 | 4,9 |
| 172720 | mi 50 | 16,5 | 27 | 7 | 58 | 5,5 |
| 155498 | mi 50 | 16,5 | 27 | 8 | 58 | 6,2 |
| 155473 | mi 50 | 16,5 | 28 | 9 | 58 | 7,0 |
| 155467 | mi 50 | 16,5 | 29 | 10 | 58 | 8,0 |
| 155446 | mi 50 | 16,5 | 30 | 12 | 58 | 9,0 |
| 121534 | mi 50 | 44,0 | 33 | 16 | 58 | 12,0 |

Softsynchro Chuck (Licence Emuge)

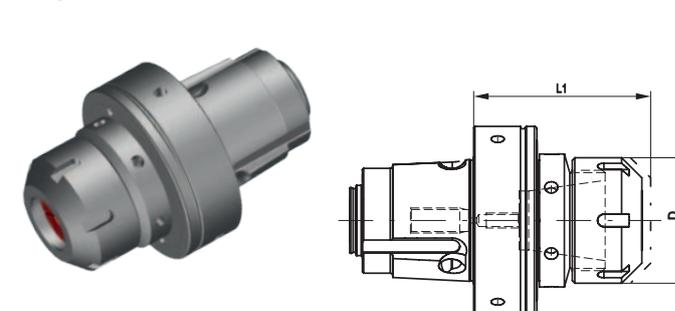
with internal coolant,
with push and pull length
compensation 0,5 mm



| Order No. | Size | Collet | Thread | l1 mm | d mm | D mm |
|-----------|-------|----------|--------|-------|--------|------|
| 121503 | mi 40 | ER-GB 16 | M4-M12 | 47,5 | 4,5-10 | 45 |
| 121530 | mi 50 | ER-GB 16 | M4-M12 | 44,5 | 4,5-10 | 50 |

Chuck for GB Collets

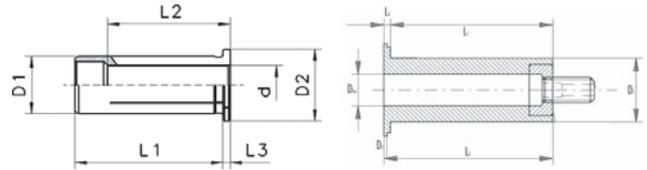
with internal coolant,
with push and pull length
compensation ±0,5 mm



| Order No. | Size | Collet | L1 mm | D mm |
|-----------|-------|----------------|-------|------|
| 121518 | mi 40 | ER 20 GB(1-13) | 60 | 28 |
| 155488 | mi 50 | ER 25 GB(1-16) | 60 | 42 |
| 155491 | mi 63 | ER 32 GB(2-20) | 70 | 50 |

Accessory for Hydraulic Chucks

Sleeve



without horizontal adjustment

with horizontal adjustment

| Order No. | D1 mm | d h6 mm / " | L1 mm | L2 mm | L3 mm | D2 mm |
|-----------|----------|----------------|----------|----------|----------|----------|
| 119790 | 12 | 3 | 40 | 29 | 4 | 16 |
| 119793 | 12 | 1/8" | 40 | 29 | 4 | 16 |
| 119797 | 12 | 4 | 40 | 29 | 4 | 16 |
| 119798 | 12 | 3/16" | 40 | 29 | 4 | 16 |
| 119819 | 12 | 5 | 40 | 29 | 4 | 16 |
| 119812 | 12 | 6 | 40 | 36 | 4 | 16 |
| 119813 | 12 | 1/4" | 40 | 36 | 4 | 16 |
| 119791 | 12 | 7 | 40 | 37 | 4 | 16 |
| 119799 | 12 | 5/16" | 40 | 37 | 4 | 16 |
| 119810 | 12 | 8 | 40 | 37 | 4 | 16 |
| 119792 | 12 | 9 | 40 | 37 | 4 | 16 |
| 119815 | 12 | 3/8" | 40 | 40 | 4 | 16 |
| 119814 | 12 | 10 | 40 | 40 | 4 | 16 |
| 119816 | 20 | 3 | 50 | 28 | 4 | 25 |
| 119823 | 20 | 1/8" | 50 | 28 | 4 | 25 |
| 119817 | 20 | 4 | 50 | 28 | 4 | 25 |
| 119837 | 20 | 3/16" | 50 | 28 | 4 | 25 |
| 119800 | 20 | 5 | 50 | 28 | 4 | 25 |
| 119801 | 20 | 6 | 50 | 36 | 4 | 25 |
| 119822 | 20 | 1/4" | 50 | 36 | 4 | 25 |
| 119818 | 20 | 7 | 50 | 38 | 4 | 25 |
| 119839 | 20 | 5/16" | 50 | 37 | 4 | 25 |
| 119820 | 20 | 8 | 50 | 37 | 4 | 25 |
| 119802 | 20 | 9 | 50 | 38 | 4 | 25 |
| 119838 | 20 | 3/8" | 50 | 38 | 4 | 25 |
| 119824 | 20 | 10 | 50 | 40 | 4 | 25 |
| 119825 | 20 | 11 | 50 | 40 | 4 | 25 |
| 119830 | 20 | 7/16" | 50 | 45 | 4 | 25 |
| 119826 | 20 | 12 | 50 | 45 | 4 | 25 |
| 119821 | 20 | 1/2" | 50 | 45 | 4 | 25 |
| 119827 | 20 | 14 | 50 | 45 | 4 | 25 |
| 119846 | 20 | 9/16" | 50 | 45 | 4 | 25 |
| 119829 | 20 | 5/8" | 50 | 48 | 4 | 25 |
| 119828 | 20 | 16 | 50 | 48 | 4 | 25 |
| 119847 | 25 | 3 | 56 | 29 | 4 | 30 |
| 119848 | 25 | 4 | 56 | 29 | 4 | 30 |
| 119831 | 25 | 5 | 56 | 29 | 4 | 30 |
| 119849 | 25 | 6 | 56 | 37 | 4 | 30 |
| 119832 | 25 | 7 | 56 | 37 | 4 | 30 |
| 119833 | 25 | 8 | 56 | 37 | 4 | 30 |
| 119834 | 25 | 9 | 56 | 38 | 4 | 30 |
| 119850 | 25 | 10 | 56 | 40 | 4 | 30 |
| 119835 | 25 | 12 | 56 | 46 | 4 | 30 |
| 119851 | 25 | 14 | 56 | 47 | 4 | 30 |
| 119836 | 25 | 16 | 56 | 48 | 4 | 30 |
| 119841 | 25 | 18 | 56 | 48 | 4 | 30 |
| 119842 | 25 | 20 | 56 | 50 | 4 | 30 |
| 119844 | 32 | 6 | 60 | 36 | 4 | 36 |

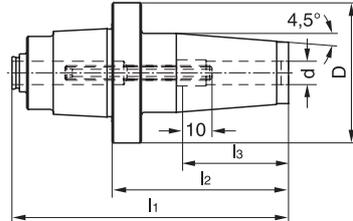
| Order No. | D1 mm | d h6 mm / " | L1 mm | L2 mm | L3 mm | D2 mm |
|-----------|----------|----------------|----------|----------|----------|----------|
| 119857 | 32 | 1/4" | 60 | 36 | 4 | 36 |
| 119845 | 32 | 7 | 60 | 37 | 4 | 36 |
| 119879 | 32 | 5/16" | 60 | 36 | 4 | 36 |
| 119852 | 32 | 8 | 60 | 36 | 4 | 36 |
| 119855 | 32 | 9 | 60 | 37 | 4 | 36 |
| 119884 | 32 | 3/8" | 60 | 37 | 4 | 36 |
| 119864 | 32 | 10 | 60 | 40 | 4 | 36 |
| 119853 | 32 | 11 | 60 | 40 | 4 | 36 |
| 119858 | 32 | 12 | 60 | 45 | 4 | 36 |
| 119856 | 32 | 1/2" | 60 | 45 | 4 | 36 |
| 119859 | 32 | 13/16" | 60 | 45 | 4 | 36 |
| 119865 | 32 | 14 | 60 | 46 | 4 | 36 |
| 119854 | 32 | 15/16" | 60 | 46 | 4 | 36 |
| 119861 | 32 | 5/8" | 60 | 46 | 4 | 36 |
| 119866 | 32 | 16 | 60 | 48 | 4 | 36 |
| 119870 | 32 | 18 | 60 | 49 | 4 | 36 |
| 119878 | 32 | 3/4" | 60 | 50 | 4 | 36 |
| 119877 | 32 | 20 | 60 | 50 | 4 | 36 |
| 119867 | 32 | 25 | 60 | 56 | 4 | 36 |

with horizontal adjustment

| | | | | | | |
|--------|----|----|----|----|---|----|
| 119909 | 20 | 6 | 50 | 52 | - | 28 |
| 119889 | 20 | 8 | 50 | 52 | - | 28 |
| 152696 | 20 | 10 | 50 | 52 | - | 28 |
| 119910 | 20 | 12 | 50 | 52 | - | 28 |
| 119901 | 20 | 14 | 50 | 52 | - | 28 |
| 119911 | 20 | 16 | 50 | 52 | - | 28 |
| 119892 | 20 | 18 | 50 | 52 | - | 28 |
| 119893 | 25 | 10 | 56 | 59 | - | 32 |
| 119912 | 25 | 12 | 56 | 59 | - | 32 |
| 119894 | 25 | 14 | 56 | 59 | - | 32 |
| 119895 | 25 | 16 | 56 | 59 | - | 32 |
| 167144 | 25 | 18 | 56 | 59 | - | 32 |
| 167045 | 25 | 20 | 56 | 59 | - | 32 |

Shrink fit Chuck

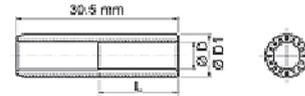
with internal coolant



| Order No. | Size | l1 mm | l2 mm | l3 mm | d h6 mm | D mm |
|-----------|-------|-------|-------|-------|---------|------|
| 155381 | mi 40 | 94 | 60 | 36 | 8 | 48 |
| 121482 | mi 40 | 94 | 60 | 42 | 10 | 48 |
| 155334 | mi 40 | 99 | 65 | 47 | 12 | 48 |
| 121501 | mi 40 | 104 | 70 | 50 | 16 | 48 |
| 155421 | mi 50 | 101 | 60 | 36 | 8 | 58 |
| 155409 | mi 50 | 101 | 60 | 42 | 10 | 58 |
| 155444 | mi 50 | 106 | 65 | 47 | 12 | 58 |
| 155438 | mi 50 | 106 | 65 | 47 | 14 | 58 |
| 155430 | mi 50 | 111 | 70 | 50 | 16 | 58 |
| 155431 | mi 50 | 116 | 75 | 50 | 18 | 58 |
| 155454 | mi 50 | 116 | 75 | 52 | 20 | 58 |

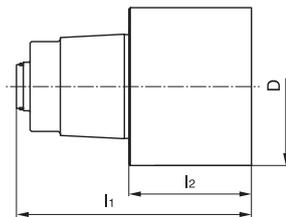
Accessory for Shrink fit Chucks

Sleeve



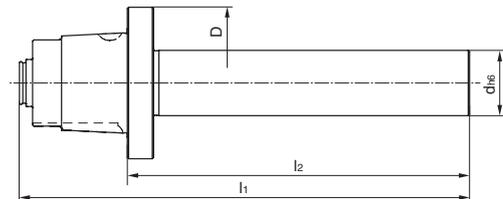
| Order No. | L mm | L1 mm | d h6 mm | D mm |
|-----------|------|-------|---------|------|
| 119807 | 30,5 | 7,5 | 2,5 | 8 |
| 119787 | 30,5 | 9,0 | 3,0 | 8 |
| 119808 | 30,5 | 10,5 | 3,5 | 8 |
| 119809 | 30,5 | 12,0 | 4,0 | 8 |
| 119788 | 30,5 | 13,5 | 4,5 | 8 |
| 119789 | 30,5 | 15,0 | 5,0 | 8 |
| 119796 | 30,5 | 16,5 | 5,5 | 8 |
| | | | | |
| | | | | |

Blank



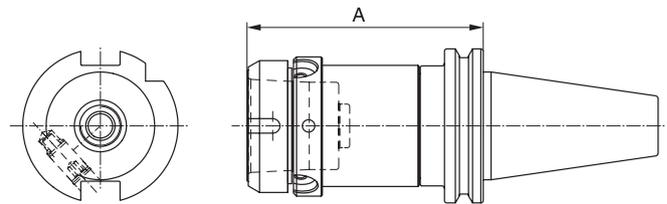
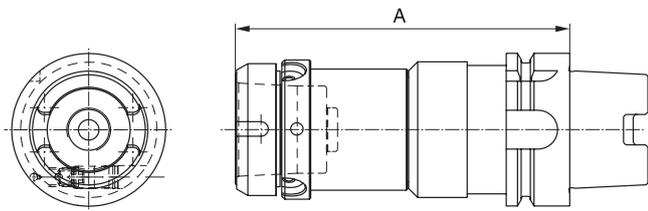
| Order No. | Size | l1 mm | l2 mm | D mm |
|-----------|-------|-------|-------|------|
| 121457 | mi 32 | 76,5 | 50 | 42 |
| 166791 | mi 40 | 94,0 | 60 | 48 |
| 166789 | mi 50 | 111,0 | 70 | 58 |
| 121557 | mi 63 | 129,0 | 80 | 75 |

Test Mandrel



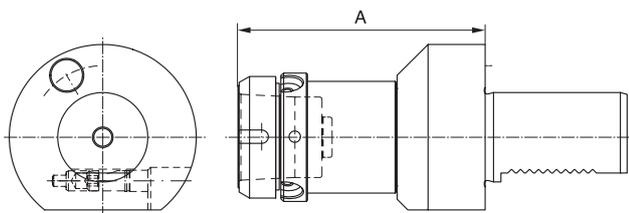
| Order No. | Size | l1 mm | l2 mm | d h6 mm | D mm |
|-----------|-------|-------|-------|---------|------|
| 170569 | mi 25 | | 110 | | 14 |
| 172991 | mi 32 | | 110 | | 18 |
| 156208 | mi 40 | | 130 | | 20 |
| 156082 | mi 50 | | 130 | | 25 |
| 172992 | mi 63 | | 150 | | 32 |

Tool Presetting Unit



| Order No. | Size | HSK | A mm |
|-----------|-------|-----|-------|
| 171098 | mi 25 | 63 | 130,0 |
| 155352 | mi 32 | 63 | 130,0 |
| 155380 | mi 40 | 63 | 134,5 |
| 173224 | mi 40 | 100 | 143,0 |
| 155429 | mi 50 | 63 | 136,9 |
| 168301 | mi 50 | 100 | 143,0 |
| 166990 | mi 63 | 63 | 147,0 |
| 169267 | mi 63 | 100 | 155,0 |

| Order No. | Size | SK | A mm |
|-----------|-------|----|------|
| 121471 | mi 40 | 40 | 95 |
| 121491 | mi 40 | 50 | 128 |
| 155405 | mi 50 | 40 | 97 |
| 121527 | mi 50 | 50 | 140 |
| 155504 | mi 63 | 50 | 140 |



| Order No. | Size | VDI | A mm |
|-----------|-------|-----|------|
| 155368 | mi 40 | 40 | 108 |
| 155356 | mi 50 | 40 | 110 |
| 155372 | mi 40 | 50 | 108 |
| 121524 | mi 50 | 50 | 110 |

Accessories for mi-system

Complete Wrench for One-hand Operation



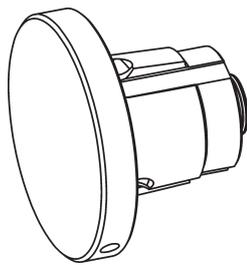
| Order No. | Size |
|-----------|---------------------|
| 170734 | mi 25, mi 32, mi 40 |
| 170419 | mi 50, mi 63 |

Socket Wrench for Torque Wrench



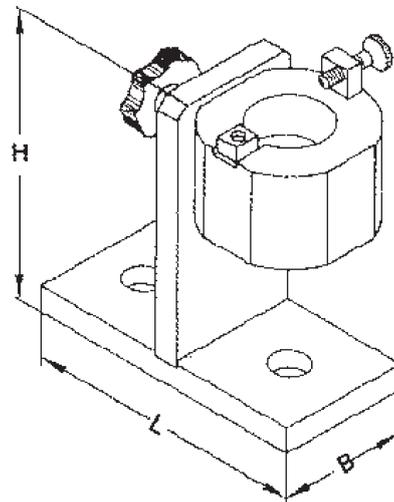
| Order No. | Size | L mm | Wrench size |
|-----------|---------------------|------|-------------|
| 173988 | mi 25, mi 32, mi 40 | 50 | 1/4" |
| 173985 | mi 50, mi 63 | 50 | 1/4" |

Protection Plug



| Order No. | Size |
|-----------|-------|
| 174460 | mi 32 |
| 174458 | mi 40 |
| 174457 | mi 50 |
| 174459 | mi 63 |

Assembling Jig



| Order No. | Size | L mm | B mm | H mm |
|-----------|--------|------|------|------|
| 166774 | SK 40 | 130 | 64 | 136 |
| 166775 | HSK 63 | 130 | 64 | 136 |
| 121571 | VDI 40 | 130 | 64 | 136 |

mimatic mi – An Epitome of BlueCompetence

BLUECOMPETENCE

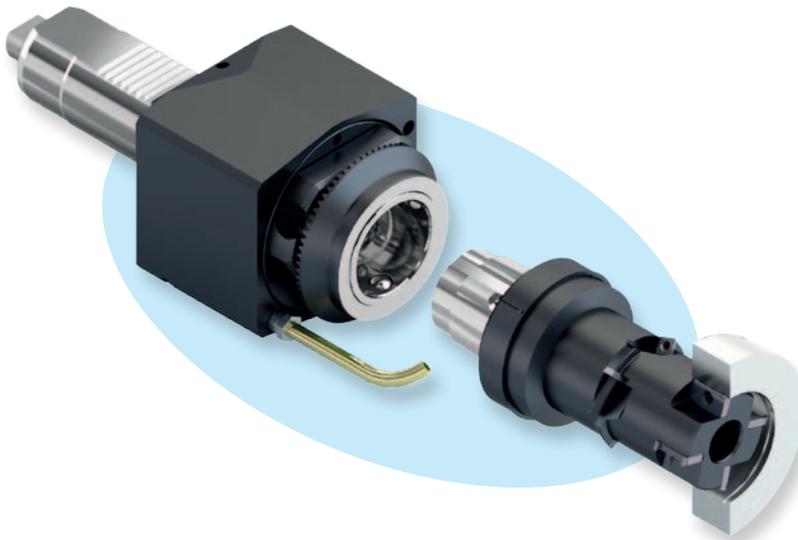
Alliance Member

Partner of the Engineering Industry Sustainability Initiative

mimatic® Tool Systems for Sustainability and Efficiency

Tools according to the policy of BLUECOMPETENCE are marked in this catalogue. More information on the program (Initiative) of the VDMA see pages 16-17.

mi – The Integrated Tool Solution = Driven Tool Holder + mi Interface + mi Tool



Advantages

mi – Interface, Driven Tool Sided

- short taper + planar arrangement
- shorter construction
- convenient single-hand operation
- symmetrical 3-point intake

mi – Fast Change

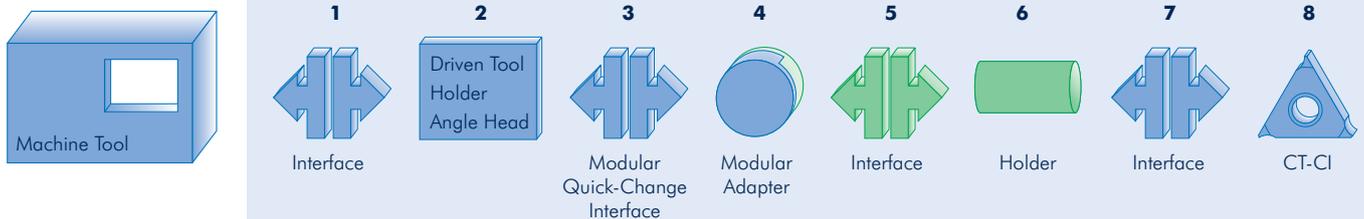
- in the machine
- minimal tool changing time
- no pre-adjustment necessary

mi – Chipping Tool

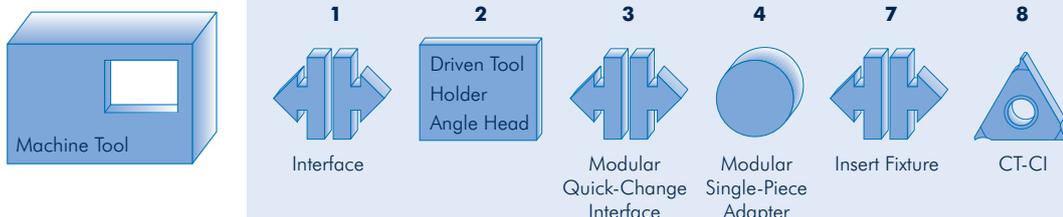
- compact – one-piece design
- milling, counterboring, planing, chamfering
- shells, shaft, ...

BlueCompetence – Implemented with mimatic mi

Old = Industrial Standard



New = mimatic Innovation



mi System Solutions for Special Production Assignments

Driven tool holders with mi quick-change interface must be adapted to the machining task in your dimensioning, and/or take this task into account:

- as regards the cutting forces and/or torque occurring and
- as regards the precision required » rigidity of the system

It is thus necessary to describe the planned machining processes as exactly as possible, so that the optimal technical and economic suggestion can be worked out. Because then it is ensured that the requirements for precision, efficiency and sustainability are fulfilled.

Driven Tool Holder - mi
Straight Unit

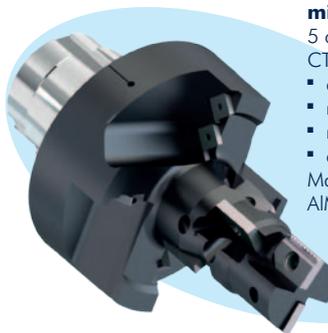


Driven Tool Holder - mi
Angle Unit



mi - Milling Tool

- 5 different CT plates
 - chamfering
 - milling threads
 - milling planes
 - counterboring
- Material: AlMgSi1 (DIN 3.2315)



mi - Cutting Tool

- jiggering
 - chamfering
- Materials:
1. 20MnVS6
2. X15 CrNiSi20 (DIN 1.4828)



mi - Cutting Tool

- twist drill
 - jiggering
 - planing
- Material: Al-Si7Mg



mi - Cutting Tool

- drilling
- planing
- VHM twist drill
- chamfering



mi - Milling Tool

- groove milling
- Material: steel



mi - Milling Tool

- groove milling
- Material: steel



mi - Milling Tool

- contour milling
- Material: 16MnCrS5



mi - Counterboring Tool

- (jiggering)
- preturning
 - finish-turning
 - planing
 - chamfering
- Material: Al-Si7Mg



mi - Milling Tool

- groove milling
- Material: steel



mi - Milling Tool

- groove milling
- Material: steel



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VDI Toolholders

Our toolholders for CNC lathes feature cylindrical shanks acc. to DIN 69880/VDI 3425. They are made from case hardened steel, the hardness of the wearing surfaces is 58 ± 2 HRC.

All functional surfaces are ground and browned. The tooling on the shank is ground.

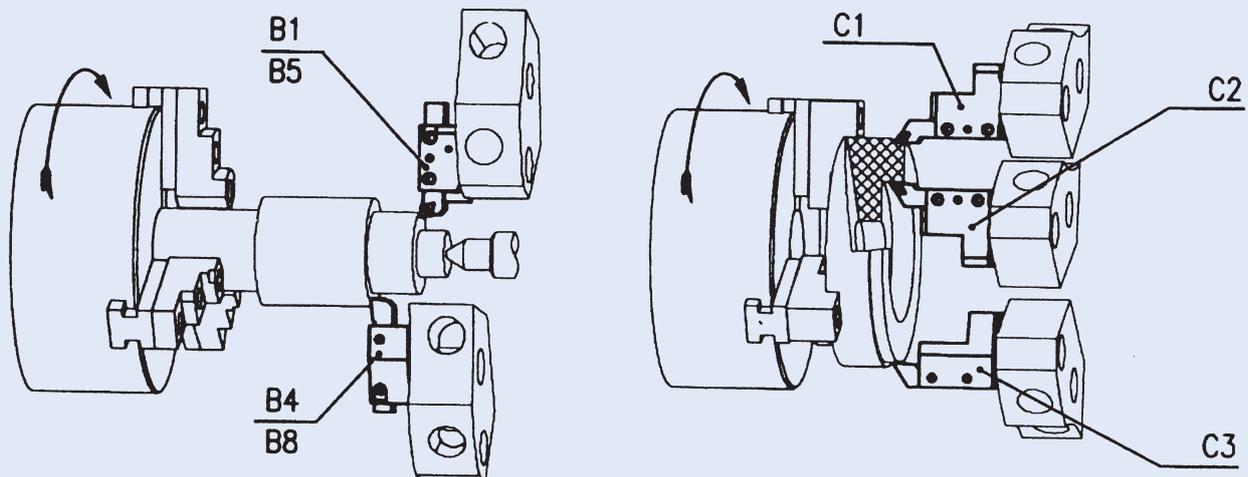
As far as technically possible, all tool holders are provided with internal coolant supply and adjustable ball-type nozzles.

They are fitted with a spring-loaded pressure plate.

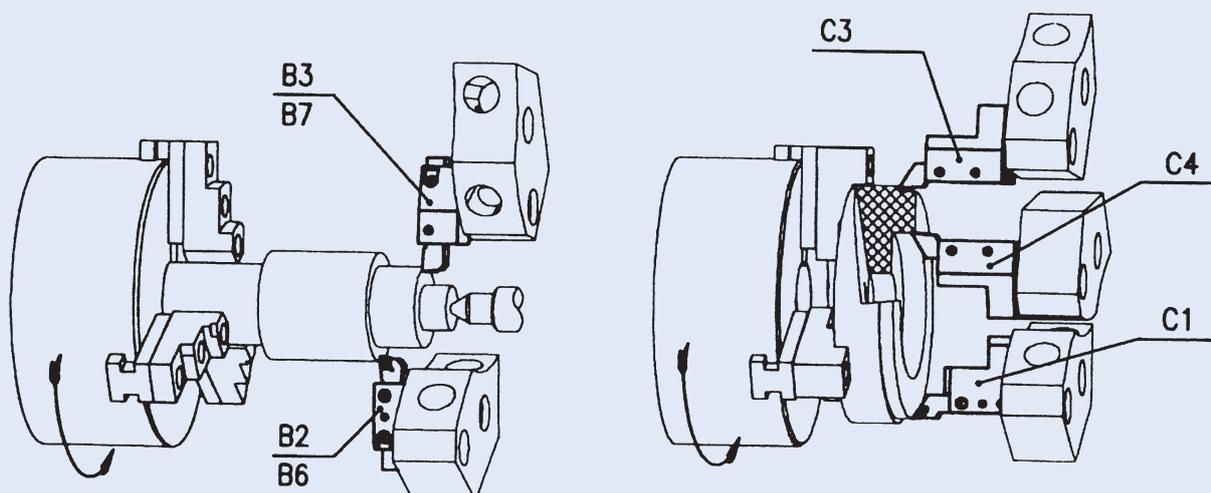
Further designs on request.



Operation with Toolholders in Anti-clockwise Rotation

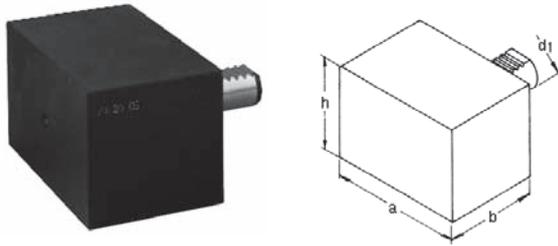


Operation with Toolholders in Clockwise Rotation



VDI Toolholders

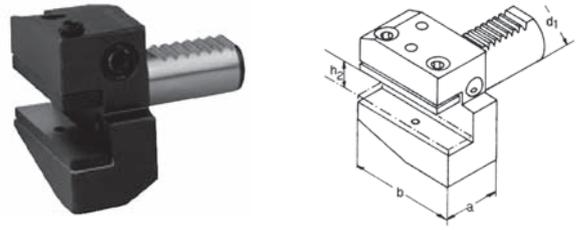
Blanks



A1 rectangular

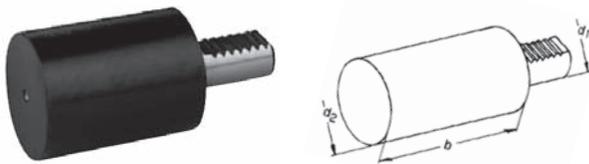
| Order No. | d1 mm | a mm | h mm | b mm |
|-----------|----------|---------|---------|---------|
| 105111 | 16 | 78 | 44 | 44 |
| 105163 | 20 | 100 | 60 | 65 |
| 105136 | 30 | 130 | 76 | 85 |
| 105154 | 40 | 151 | 96 | 100 |
| 105143 | 50 | 160 | 120 | 125 |
| 105171 | 60 | 165 | 125 | 160 |

Radial Toolholders



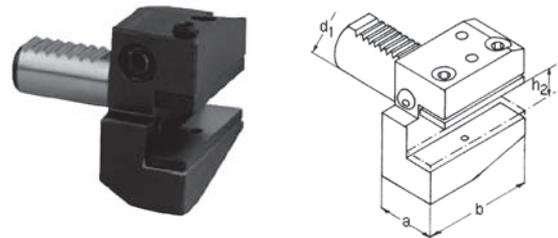
B1 right-hand, short

| Order No. | d1 mm | h2 mm | a mm | b mm |
|-----------|----------|----------|---------|---------|
| 104930 | 16 | 12/10 | 24 | 42 |
| 104900 | 20 | 16/12 | 30 | 55 |
| 104938 | 30 | 20/16 | 40 | 70 |
| 104939 | 40 | 25/20 | 44 | 85 |
| 104908 | 50 | 32/25 | 55 | 100 |
| 104909 | 60 | 32/25 | 60 | 125 |



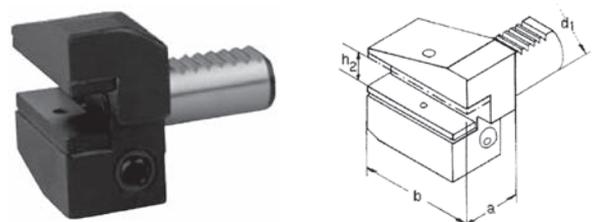
A2 round

| Order No. | d1 mm | d2 mm | b mm |
|-----------|----------|----------|---------|
| 105161 | 16 | 40 | 60 |
| 105135 | 20 | 50 | 70 |
| 105092 | 30 | 68 | 100 |
| 105169 | 30 | 68 | 240 |
| 105137 | 40 | 83 | 120 |
| 105156 | 40 | 83 | 320 |
| 105157 | 50 | 98 | 135 |
| 105093 | 50 | 98 | 400 |
| 105170 | 60 | 123 | 150 |
| 105177 | 60 | 123 | 480 |



B2 left-hand, short

| Order No. | d1 mm | h2 mm | a mm | b mm |
|-----------|----------|----------|---------|---------|
| 104981 | 16 | 12/10 | 24 | 42 |
| 104958 | 20 | 16/12 | 30 | 55 |
| 104960 | 30 | 20/16 | 40 | 70 |
| 104988 | 40 | 25/20 | 44 | 85 |
| 104965 | 50 | 32/25 | 55 | 100 |
| 105025 | 60 | 32/25 | 60 | 125 |

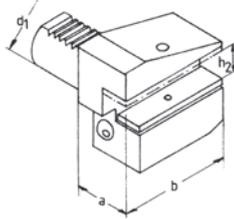


B3 overhead, right-hand, short

| Order No. | d1 mm | h2 mm | a mm | b mm |
|-----------|----------|----------|---------|---------|
| 104910 | 16 | 12/10 | 24 | 42 |
| 104904 | 20 | 16/12 | 30 | 55 |
| 104924 | 30 | 20/16 | 40 | 70 |
| 104949 | 40 | 25/20 | 44 | 85 |
| 104943 | 50 | 32/25 | 55 | 100 |
| 104970 | 60 | 32/25 | 60 | 125 |

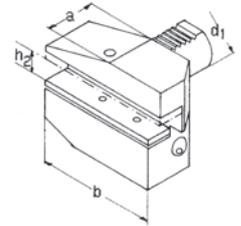
VDI Toolholders

Radial Toolholders



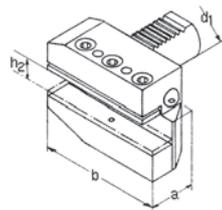
B4 overhead, left-hand, short

| Order No. | d1 mm | h2 mm | a mm | b mm |
|-----------|----------|----------|---------|---------|
| 104912 | 16 | 12/10 | 24 | 42 |
| 104927 | 20 | 16/12 | 30 | 55 |
| 104964 | 30 | 20/16 | 40 | 70 |
| 104956 | 40 | 25/20 | 44 | 85 |
| 104973 | 50 | 32/25 | 55 | 100 |
| 104935 | 60 | 32/25 | 60 | 125 |



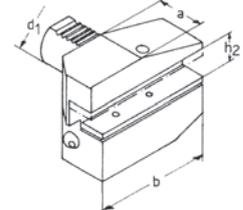
B7 overhead, right-hand, long

| Order No. | d1 mm | h2 mm | a mm | b mm |
|-----------|----------|----------|---------|---------|
| 104001 | 16 | 12/10 | 24 | 58 |
| 104025 | 20 | 16/12 | 30 | 75 |
| 104042 | 30 | 20/16 | 40 | 100 |
| 103985 | 40 | 25/20 | 44 | 118 |
| 104033 | 50 | 32/25 | 55 | 130 |
| 104008 | 60 | 32/25 | 60 | 145 |



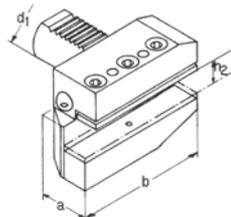
B5 right-hand, long

| Order No. | d1 mm | h2 mm | a mm | b mm |
|-----------|----------|----------|---------|---------|
| 104024 | 16 | 12/10 | 24 | 58 |
| 104032 | 20 | 16/12 | 30 | 75 |
| 103983 | 30 | 20/16 | 40 | 100 |
| 104007 | 40 | 25/20 | 44 | 118 |
| 103994 | 50 | 32/25 | 55 | 130 |
| 104050 | 60 | 32/25 | 60 | 145 |



B8 overhead, left-hand, long

| Order No. | d1 mm | h2 mm | a mm | b mm |
|-----------|----------|----------|---------|---------|
| 104060 | 16 | 12/10 | 24 | 58 |
| 103986 | 20 | 16/12 | 30 | 75 |
| 104061 | 30 | 20/16 | 40 | 100 |
| 104062 | 40 | 25/20 | 44 | 118 |
| 104034 | 50 | 32/25 | 55 | 130 |
| 104054 | 60 | 32/25 | 60 | 145 |

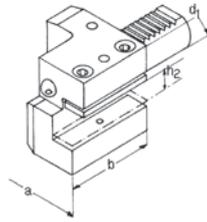


B6 left-hand, long

| Order No. | d1 mm | h2 mm | a mm | b mm |
|-----------|----------|----------|---------|---------|
| 104036 | 16 | 12/10 | 24 | 58 |
| 104003 | 20 | 16/12 | 30 | 75 |
| 104009 | 30 | 20/16 | 40 | 100 |
| 104043 | 40 | 25/20 | 44 | 118 |
| 104063 | 50 | 32/25 | 55 | 130 |
| 104077 | 60 | 32/25 | 60 | 145 |

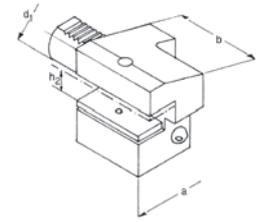
VDI Toolholders

Axial Toolholders



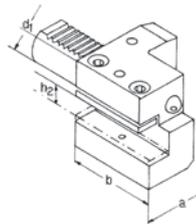
C1 right-hand

| Order No. | d1 mm | h2 mm | b mm | a mm |
|-----------|-------|-------|------|------|
| 103999 | 16 | 12/10 | 44 | 43 |
| 103928 | 20 | 16/12 | 50 | 52 |
| 103971 | 30 | 20/16 | 70 | 76 |
| 103992 | 40 | 25/20 | 85 | 85 |
| 103993 | 50 | 32/25 | 100 | 100 |
| 103982 | 60 | 32/25 | 125 | 125 |



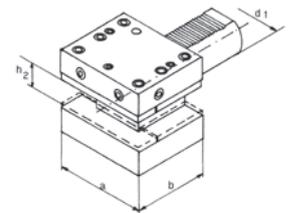
C4 overhead, left-hand

| Order No. | d1 mm | h2 mm | b mm | a mm |
|-----------|-------|-------|------|------|
| 104613 | 16 | 12/10 | 44 | 43 |
| 104569 | 20 | 16/12 | 50 | 52 |
| 104605 | 30 | 20/16 | 70 | 76 |
| 104606 | 40 | 25/20 | 85 | 85 |
| 104644 | 50 | 32/25 | 100 | 100 |
| 104570 | 60 | 32/25 | 125 | 125 |



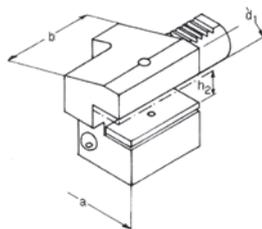
C2 left-hand

| Order No. | d1 mm | h2 mm | b mm | a mm |
|-----------|-------|-------|------|------|
| 104651 | 16 | 12/10 | 44 | 43 |
| 104715 | 20 | 16/12 | 50 | 52 |
| 104761 | 30 | 20/16 | 70 | 76 |
| 104661 | 40 | 25/20 | 85 | 85 |
| 104669 | 50 | 32/25 | 100 | 100 |
| 104753 | 60 | 32/25 | 125 | 125 |



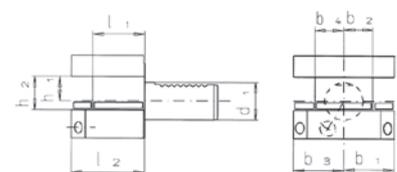
D1 Axial multiple Toolholder

| Order No. | d1 mm | h2 mm | b mm | a mm |
|-----------|-------|-------|------|------|
| 104064 | 30 | 20/16 | 60 | 76 |
| 104069 | 40 | 25/20 | 72 | 90 |
| 104056 | 50 | 32/25 | 85 | 105 |



C3 overhead, right-hand

| Order No. | d1 mm | h2 mm | b mm | a mm |
|-----------|-------|-------|------|------|
| 104184 | 16 | 12/10 | 44 | 43 |
| 104199 | 20 | 16/12 | 50 | 52 |
| 104209 | 30 | 20/16 | 70 | 76 |
| 104240 | 40 | 25/20 | 85 | 85 |
| 104201 | 50 | 32/25 | 100 | 100 |
| 104211 | 60 | 32/25 | 125 | 125 |

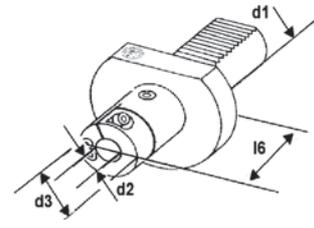
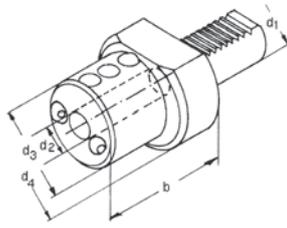


D2 Axial multiple Toolholder, overhead

| Order No. | d1 mm | h2 mm | a mm | b mm |
|-----------|-------|-------|------|------|
| 104086 | 30 | 20/16 | 60 | 76 |
| 104087 | 40 | 25/20 | 72 | 90 |
| 104013 | 50 | 32/25 | 85 | 105 |

VDI Toolholders

Boring Bar Holder



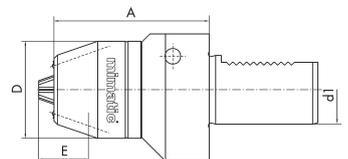
E2

| Order No. | d1 mm | d2 mm | d4 mm | b mm |
|-----------|-------|-------|-------|------|
| 104139 | 16 | 6 | 40 | 44 |
| 104084 | 16 | 8 | 40 | 44 |
| 104085 | 16 | 10 | 40 | 44 |
| 104125 | 16 | 12 | 40 | 44 |
| 104149 | 16 | 16 | 40 | 44 |
| 104158 | 20 | 8 | 50 | 50 |
| 104126 | 20 | 10 | 50 | 50 |
| 104115 | 20 | 12 | 50 | 50 |
| 104159 | 20 | 16 | 50 | 50 |
| 104167 | 20 | 20 | 50 | 50 |
| 104150 | 20 | 25 | 50 | 60 |
| 104142 | 30 | 8 | 68 | 60 |
| 104195 | 30 | 10 | 68 | 60 |
| 104108 | 30 | 12 | 68 | 60 |
| 104130 | 30 | 16 | 68 | 60 |
| 104186 | 30 | 20 | 68 | 60 |
| 104178 | 30 | 25 | 68 | 60 |
| 104179 | 30 | 32 | 68 | 75 |
| 104153 | 40 | 8 | 83 | 75 |
| 104187 | 40 | 10 | 83 | 75 |
| 104109 | 40 | 12 | 83 | 75 |
| 104110 | 40 | 16 | 83 | 75 |
| 104155 | 40 | 20 | 83 | 75 |
| 104145 | 40 | 25 | 83 | 75 |
| 104119 | 40 | 32 | 83 | 75 |
| 104189 | 40 | 40 | 83 | 90 |
| 104168 | 50 | 12 | 98 | 90 |
| 104206 | 50 | 16 | 98 | 90 |
| 104182 | 50 | 20 | 98 | 90 |
| 104148 | 50 | 25 | 98 | 90 |
| 104207 | 50 | 32 | 98 | 90 |
| 104198 | 50 | 40 | 98 | 90 |
| 104157 | 50 | 50 | 98 | 100 |
| 104221 | 60 | 12 | 123 | 90 |
| 104192 | 60 | 16 | 123 | 90 |
| 104169 | 60 | 20 | 123 | 90 |
| 104164 | 60 | 25 | 123 | 90 |
| 104222 | 60 | 32 | 123 | 90 |
| 104165 | 60 | 40 | 123 | 90 |
| 104166 | 60 | 50 | 123 | 100 |

E2S slotted

| Order No. | d1 mm | d2 mm | d3 mm | l6 mm |
|-----------|-------|-------|-------|-------|
| 104194 | 30 | 6 | 30 | 57 |
| 104129 | 30 | 8 | 30 | 57 |
| 104107 | 30 | 10 | 36 | 57 |
| 104143 | 30 | 12 | 36 | 57 |
| 104203 | 30 | 16 | 40 | 57 |
| 104160 | 30 | 20 | 44 | 57 |
| 104204 | 30 | 25 | 49 | 72 |
| 104196 | 30 | 32 | 56 | 72 |
| 104144 | 40 | 10 | 36 | 62 |
| 104188 | 40 | 12 | 36 | 62 |
| 104111 | 40 | 16 | 40 | 62 |
| 104181 | 40 | 20 | 44 | 62 |
| 104118 | 40 | 25 | 49 | 77 |
| 104146 | 40 | 32 | 56 | 77 |
| 104163 | 40 | 40 | 64 | 77 |

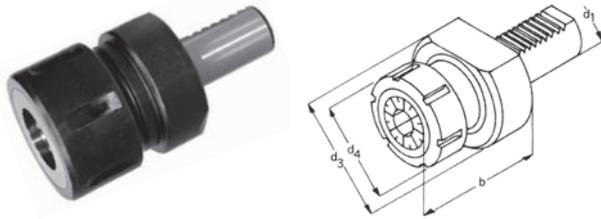
Universal Chuck



| Order No. | d1 mm | Range | A mm | D mm | E mm |
|-----------|-------|--------|------|------|------|
| 131983 | 20 | 0,5-10 | 40 | 48,5 | 27 |
| 132019 | 30 | 0,5-13 | 90 | 56,5 | 29 |
| 132046 | 30 | 3,0-16 | 90 | 56,5 | 29 |
| 132006 | 40 | 0,5-13 | 90 | 56,5 | 29 |
| 132047 | 40 | 3,0-16 | 90 | 56,5 | 29 |
| 132033 | 50 | 0,5-13 | 90 | 56,5 | 29 |
| 132039 | 50 | 3,0-16 | 90 | 56,5 | 29 |

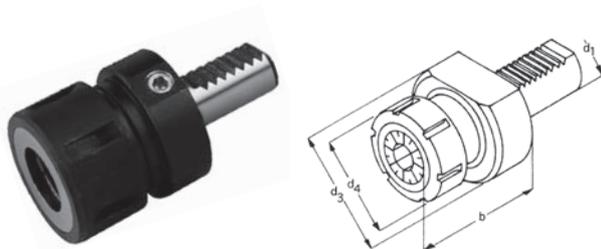
VDI Toolholders

Collet Chuck



OZ E3 DIN 6388

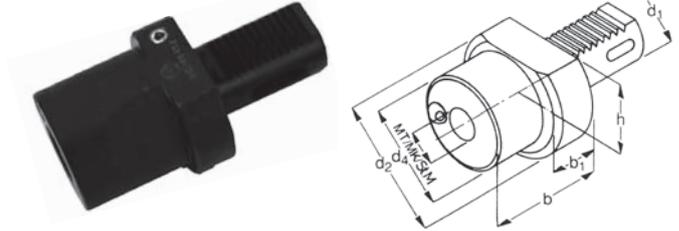
| Order No. | d1 mm | Range | OZ | d3 mm | b mm |
|-----------|-------|--------|-------|-------|------|
| 104653 | 16 | 1,5-16 | 415 E | 40 | 65 |
| 104662 | 20 | 1,5-16 | 415 E | 50 | 57 |
| | 20 | 2,0-20 | | | 62 |
| 104579 | 30 | 1,5-25 | 462 E | 68 | 75 |
| 104655 | 40 | 1,5-25 | 462 E | 83 | 75 |
| 104673 | 40 | 3,5-32 | 467 E | 83 | 90 |
| 104631 | 50 | 1,5-25 | 462 E | 98 | 75 |
| 104656 | 50 | 3,5-32 | 467 E | 98 | 90 |
| 104642 | 60 | 3,5-32 | 467 E | 123 | 90 |



ER E4 DIN 6499

| Order No. | d1 mm | Range | ER | d3 mm | b mm |
|-----------|-------|--------|-------|-------|------|
| 104614 | 16 | 0,5-10 | ER 16 | 40 | 40 |
| | 16 | | ER 20 | | 44 |
| 104576 | 20 | 0,5-10 | ER 16 | 50 | 40 |
| 104628 | 20 | 0,5-16 | ER 25 | 50 | 54 |
| 104571 | 30 | 0,5-16 | ER 25 | 68 | 57 |
| 104629 | 30 | 1,0-20 | ER 32 | 68 | 74 |
| 104645 | 30 | 2,0-30 | ER 40 | 68 | 74 |
| 104646 | 40 | 0,5-16 | ER 25 | 83 | 70 |
| 104615 | 40 | 1,0-20 | ER 32 | 83 | 84 |
| 104594 | 40 | 2,0-30 | ER 40 | 83 | 75 |
| 104616 | 50 | 2,0-30 | ER 40 | 98 | 90 |
| 104619 | 60 | 2,0-30 | ER 40 | 123 | 75 |

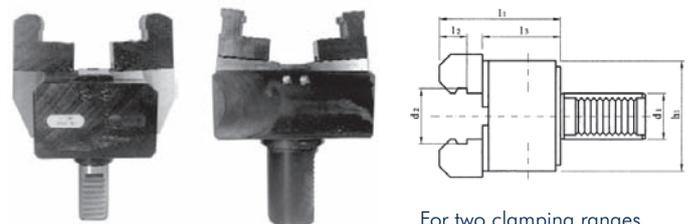
Morse Taper Holder



F

| Order No. | d1 mm | MK | h mm | d2 mm | b mm |
|-----------|-------|----|------|-------|------|
| 104347 | 20 | 1 | 23,0 | 50 | 22 |
| | 20 | 2 | | | 90 |
| 104265 | 30 | 1 | 28,0 | 68 | 27 |
| 104297 | 30 | 2 | 28,0 | 68 | 36 |
| 104350 | 30 | 3 | 28,0 | 68 | 66 |
| 104352 | 40 | 2 | 32,5 | 83 | 36 |
| 104307 | 40 | 3 | 32,5 | 83 | 50 |
| 104299 | 40 | 4 | 32,5 | 83 | 80 |
| 104319 | 50 | 2 | 35,0 | 98 | 36 |
| 104383 | 50 | 3 | 35,0 | 98 | 45 |
| 104332 | 50 | 4 | 35,0 | 98 | 55 |
| 104328 | 50 | 5 | 35,0 | 98 | 68 |
| 104335 | 60 | 3 | 42,5 | 123 | 36 |
| 104393 | 60 | 4 | 42,5 | 123 | 50 |
| 104394 | 60 | 5 | 42,5 | 123 | 81 |

Bar Puller



For two clamping ranges with reverse jaws

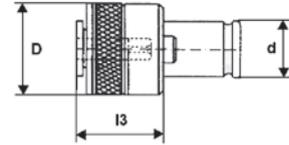
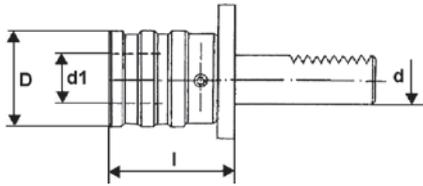
KH

| Order No. | d1 mm | Range #1 | Range #2 | b1 mm | h1 mm | l1 mm | l2 mm | l3 mm |
|-----------|-------|----------|----------|-------|-------|-------|-------|-------|
| 104733 | 16 | 6-56 | | | | | | |
| 104757 | 20 | 6-45 | 45-100 | 50 | 72 | 46 | 4 | 51 |
| 104806 | 30 | 6-56 | 54-100 | 50 | 72 | 46 | 4 | 51 |
| 104798 | 40* | 6-60 | 54-110 | 60 | 110 | 48 | 4 | 53 |
| 104789 | 50 | 6-75 | 62-110 | 65 | 130 | 67 | 5 | 73 |

* With reversible clamping jaws

VDI Toolholders

Quick Change Tapping Chucks



With length compensation on traction and pressure

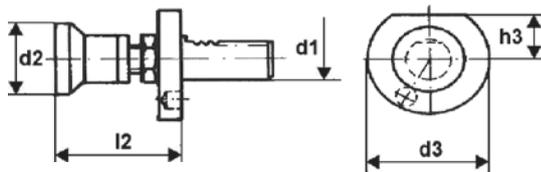
| Order No. | d mm | Size | D mm | d1 mm | l mm |
|-----------|---------|-------|---------|----------|---------|
| 104815 | 20 | SES 1 | 36 | 19 | 52,2 |
| 104800 | 30 | SES 1 | 38 | 19 | 55,0 |
| 104739 | 30 | SES 2 | 54 | 31 | 77,0 |
| 104758 | 40 | SES 1 | 38 | 19 | 55,0 |
| 104780 | 40 | SES 2 | 54 | 31 | 77,0 |
| 104807 | 40 | SES 3 | 78 | 48 | 122,0 |
| 104759 | 50 | SES 1 | 36 | 19 | 52,2 |
| 104781 | 50 | SES 2 | 53 | 31 | 76,0 |
| 104740 | 50 | SES 3 | 78 | 48 | 108,0 |
| 104801 | 50 | SES 4 | 96 | 60 | 122,0 |
| 104802 | 60 | SES 4 | 96 | 60 | 119,0 |

Quick change insert with safety coupling

| Order No. | Range | Size | d mm | D mm | l3 mm |
|------------|---------|-------|---------|---------|----------|
| 104819 | M10 | SES 1 | 19 | 32,6 | 25 |
| 12.4605Mxx | M8 -M20 | SES 2 | 31 | 50,5 | 31 |
| 12.4606Mxx | M14-M33 | SES 3 | 48 | 72,0 | 45 |
| 12.4608Mxx | M22-M48 | SES 4 | 60 | 95,0 | 68 |

Please specify the thread or the dimension of the tap. Represents new order numbers from 104767 to 104860.

Material Stop



MW travelling, adjustable

| Order No. | d1 mm | d2 mm | d3 mm | l2 mm | h3 mm |
|-----------|----------|----------|----------|----------|----------|
| 104308 | 20 | 26 | 50 | 50-70 | 23,0 |
| 104341 | 20 | 32 | 50 | 50-70 | 23,0 |
| 104377 | 20 | 42 | 50 | 50-70 | 23,0 |
| 104326 | 30 | 32 | 68 | 62-95 | 28,0 |
| 104309 | 30 | 42 | 68 | 62-95 | 28,0 |
| 104358 | 30 | 58 | 68 | 62-95 | 28,0 |
| 104334 | 40 | 32 | 83 | 62-95 | 32,5 |
| 104283 | 40 | 42 | 83 | 62-95 | 32,5 |
| 104301 | 40 | 58 | 83 | 62-95 | 32,5 |

Protection Plug



Z2 Steel/Plastic

| Order No. | d1 mm | Material | D mm | l mm |
|-----------|----------|----------|---------|---------|
| 104611 | 16 | steel | 40 | 13 |
| 104561 | 16 | plastic | 40 | 13 |
| 104567 | 20 | steel | 50 | 16 |
| 104601 | 20 | plastic | 50 | 16 |
| 104602 | 30 | steel | 68 | 16 |
| 104532 | 30 | plastic | 68 | 16 |
| 104603 | 40 | steel | 83 | 20 |
| 104612 | 40 | plastic | 83 | 20 |
| 104562 | 50 | steel | 98 | 20 |
| 104575 | 50 | plastic | 98 | 20 |
| 104604 | 60 | steel | 123 | 20 |
| 104635 | 60 | plastic | 123 | 20 |

Accessories

Wrenches and Clamping Nuts



Wrench for ER Clamping Nuts

| Order No. | Size | Type |
|-----------|-------|----------|
| 112912 | ER 11 | inlying |
| 112954 | ER 16 | inlying |
| 112929 | ER 20 | inlying |
| 112913 | ER 25 | inlying |
| 112900 | ER 32 | inlying |
| 112867 | ER 40 | inlying |
| 107628 | ER 40 | outlying |

ER Clamping Nuts

| Order No. | Size | Type | Internal coolant |
|-----------|-------|----------|------------------|
| 112953 | ER 11 | inlying | |
| 112860 | ER 16 | inlying | |
| 112938 | ER 20 | inlying | |
| 112961 | ER 25 | inlying | |
| 112977 | ER 32 | inlying | |
| 112946 | ER 40 | inlying | |
| 112962 | ER 16 | inlying | ✓ |
| 112940 | ER 20 | inlying | ✓ |
| 112901 | ER 25 | inlying | ✓ |
| 112963 | ER 32 | inlying | ✓ |
| 112978 | ER 40 | inlying | ✓ |
| 112513 | ER 40 | outlying | |
| 117744 | ER 40 | outlying | ✓ |

Hook wrench to hold against

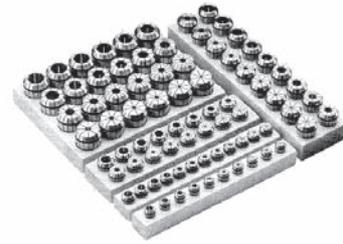
DIN 1810 A



DIN 1810 B



Collet Sets



DIN 6499-B, Class 2

| Order No. | Pieces | Size | Range |
|-----------|--------|-------|-------|
| 152712 | 10 | ER 16 | 1-10 |
| 120174 | 12 | ER 20 | 2-13 |
| 152713 | 15 | ER 25 | 2-16 |
| 152715 | 18 | ER 32 | 3-20 |
| 152716 | 23 | ER 40 | 4-26 |

DIN 6499-B, (6 µm)

| Order No. | Pieces | Size | Range |
|-----------|--------|-------|-------|
| 120131 | 10 | ER 16 | 1-10 |
| 120154 | 12 | ER 20 | 2-13 |
| 120349 | 15 | ER 25 | 2-16 |
| 120612 | 18 | ER 32 | 3-20 |
| 120730 | 23 | ER 40 | 4-26 |

Threading Collets Type ET with length compensation

| Order No. | ET | Pieces | Size | Range |
|-----------|----|--------|--------|--------|
| 152717 | 16 | 9 | 2,5-6 | M1-M8 |
| 152718 | 25 | 8 | 2,8-9 | M2-M12 |
| 120847 | 32 | 8 | 4,5-12 | M4-M16 |
| 120827 | 40 | 9 | 6,0-16 | M4-M22 |

| Order No. | Size | Type | DIN |
|-----------|-------|------------------|--------|
| 107557 | ER 16 | inlying | 1810-B |
| 107608 | ER 20 | inlying | 1810-B |
| 107446 | ER 25 | inlying | 1810-B |
| 107558 | ER 25 | outlying | 1810-A |
| 107642 | ER 32 | inlying | 1810-B |
| 107607 | ER 32 | outlying | 1810-B |
| 107566 | ER 40 | inlying | 1810-B |
| 107446 | ER 40 | outlying | 1810-A |
| 107605 | | Sawblade holder | 1810-A |
| 107447 | | Milling arbor 22 | 1810-B |

Accessories

ER Seal Disc

| Order No. | Size | Tightness range (mm) |
|-----------|-----------|----------------------|
| 172713 | ER 16 | 3,0-2,5 |
| 173372 | | 4,0-3,5 |
| 163515 | | 5,0-4,5 |
| 112891 | | 6,0-5,5 |
| 163516 | | 7,0-6,5 |
| 112897 | | 8,0-7,5 |
| 163517 | | 9,0-8,5 |
| 172458 | | 10,0-9,5 |
| 163519 | | 3,0-2,5 |
| 163518 | | 4,0-3,5 |
| 163520 | 5,0-4,5 | |
| 112744 | 6,0-5,5 | |
| 112855 | 7,0-6,5 | |
| 112865 | 8,0-7,5 | |
| 163521 | 9,0-8,5 | |
| 112844 | 10,0-9,5 | |
| 163522 | 11,0-10,5 | |
| 112892 | 12,0-11,5 | |
| 112863 | ER 20 | 3,0-2,5 |
| 112833 | | 4,0-3,5 |
| 112753 | | 5,0-4,5 |
| 112871 | | 6,0-5,5 |
| 112839 | | 7,0-6,5 |
| 112817 | | 8,0-7,5 |
| 112890 | | 9,0-8,5 |
| 112811 | | 10,0-9,5 |
| 112752 | | 11,0-10,5 |
| 112861 | | 12,0-11,5 |
| 112870 | 13,0-12,5 | |
| 112798 | 14,0-13,5 | |
| 112862 | 15,0-14,5 | |
| 112837 | 16,0-15,5 | |
| 112704 | ER 25 | 3,0-2,5 |
| 112705 | | 4,0-3,5 |
| 112726 | | 5,0-4,5 |
| 112831 | | 6,0-5,5 |
| 112832 | | 7,0-6,5 |
| 112834 | | 8,0-7,5 |
| 112835 | | 9,0-8,5 |
| 112725 | | 10,0-9,5 |
| 112779 | | 11,0-10,5 |
| 112733 | | 12,0-11,5 |
| 112804 | 13,0-12,5 | |
| 112827 | 14,0-13,5 | |
| 112688 | 15,0-14,5 | |
| 112806 | 16,0-15,5 | |
| 112809 | 17,0-16,5 | |
| 112769 | 18,0-17,5 | |
| 112797 | 19,0-18,5 | |
| 112829 | 20,0-19,5 | |
| | ER 32 | |
| | | |
| | | |
| | | |
| | | |
| | | |
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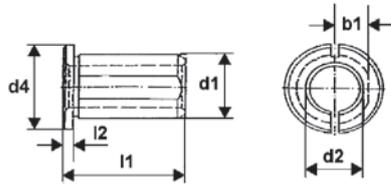
| Order No. | Size | Tightness range (mm) |
|-----------|-----------|----------------------|
| 112910 | ER 40 | 3,0-2,5 |
| 112951 | | 4,0-3,5 |
| 112884 | | 5,0-4,5 |
| 112959 | | 6,0-5,5 |
| 112846 | | 7,0-6,5 |
| 112911 | | 8,0-7,5 |
| 112952 | | 9,0-8,5 |
| 112821 | | 10,0-9,5 |
| 112916 | | 11,0-10,5 |
| 112924 | | 12,0-11,5 |
| 112894 | 13,0-12,5 | |
| 112881 | 14,0-13,5 | |
| 112942 | 15,0-14,5 | |
| 112822 | 16,0-15,5 | |
| 112770 | 17,0-16,5 | |
| 112762 | 18,0-17,5 | |
| 112882 | 19,0-18,5 | |
| 112845 | 20,0-19,5 | |
| 112823 | 21,0-20,5 | |
| 112934 | 22,0-21,5 | |
| 112944 | 23,0-22,5 | |
| 112858 | 24,0-23,5 | |
| 112771 | 25,0-24,5 | |
| 112824 | 26,0-25,5 | |

Set of Seal Disc

| Order No. | Size | Piece | Tightness range (mm) | Grading |
|-----------|-------|-------|----------------------|---------|
| 167490 | ER 16 | 14 | 3-10 | 0,5 |
| 112907 | ER 20 | 20 | 3-13 | 0,5 |
| 112735 | ER 25 | 26 | 3-16 | 0,5 |
| 112715 | ER 32 | 34 | 3-20 | 0,5 |
| 166918 | ER 40 | 46 | 3,5-26 | 0,5 |

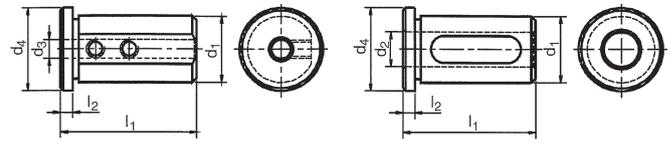
Accessories for Toolholder VDI 3425

Reducing Sleeve, Slotted



| Order No. | d1 mm | d2 mm | d4 mm | l1 mm | l2 mm |
|-----------|----------|----------|----------|----------|----------|
| 104510 | 20 | 6 | 24 | 30 | 4 |
| 104492 | 20 | 8 | 24 | 30 | 4 |
| 104481 | 20 | 10 | 24 | 30 | 4 |
| 104461 | 20 | 12 | 24 | 30 | 4 |
| 104462 | 20 | 14 | 24 | 30 | 4 |
| 104501 | 20 | 15 | 24 | 30 | 4 |
| 104451 | 20 | 16 | 24 | 30 | 4 |
| 104418 | 25 | 6 | 29 | 40 | 4 |
| 104536 | 25 | 8 | 29 | 40 | 4 |
| 104493 | 25 | 10 | 29 | 40 | 4 |
| 104484 | 25 | 12 | 29 | 40 | 4 |
| 104504 | 25 | 14 | 29 | 40 | 4 |
| 104463 | 25 | 15 | 29 | 40 | 4 |
| 104545 | 25 | 16 | 29 | 40 | 4 |
| 104485 | 25 | 18 | 29 | 40 | 4 |
| 104511 | 25 | 20 | 29 | 40 | 4 |
| 104453 | 32 | 8 | 36 | 50 | 4 |
| 104529 | 32 | 10 | 36 | 50 | 4 |
| 104486 | 32 | 12 | 36 | 50 | 4 |
| 104563 | 32 | 14 | 36 | 50 | 4 |
| 104497 | 32 | 15 | 36 | 50 | 4 |
| 104547 | 32 | 16 | 36 | 50 | 4 |
| 104488 | 32 | 18 | 36 | 50 | 4 |
| 104498 | 32 | 20 | 36 | 50 | 4 |
| 104543 | 32 | 25 | 36 | 50 | 4 |
| 104508 | 40 | 10 | 44 | 78 | 4 |
| 104565 | 40 | 12 | 44 | 78 | 4 |
| 104550 | 40 | 14 | 44 | 78 | 4 |
| 104523 | 40 | 15 | 44 | 78 | 4 |
| 104582 | 40 | 16 | 44 | 78 | 4 |
| 104524 | 40 | 18 | 44 | 78 | 4 |
| 104591 | 40 | 20 | 44 | 78 | 4 |
| 104584 | 40 | 25 | 44 | 78 | 4 |
| 104608 | 40 | 32 | 44 | 78 | 4 |

Reducing Sleeve



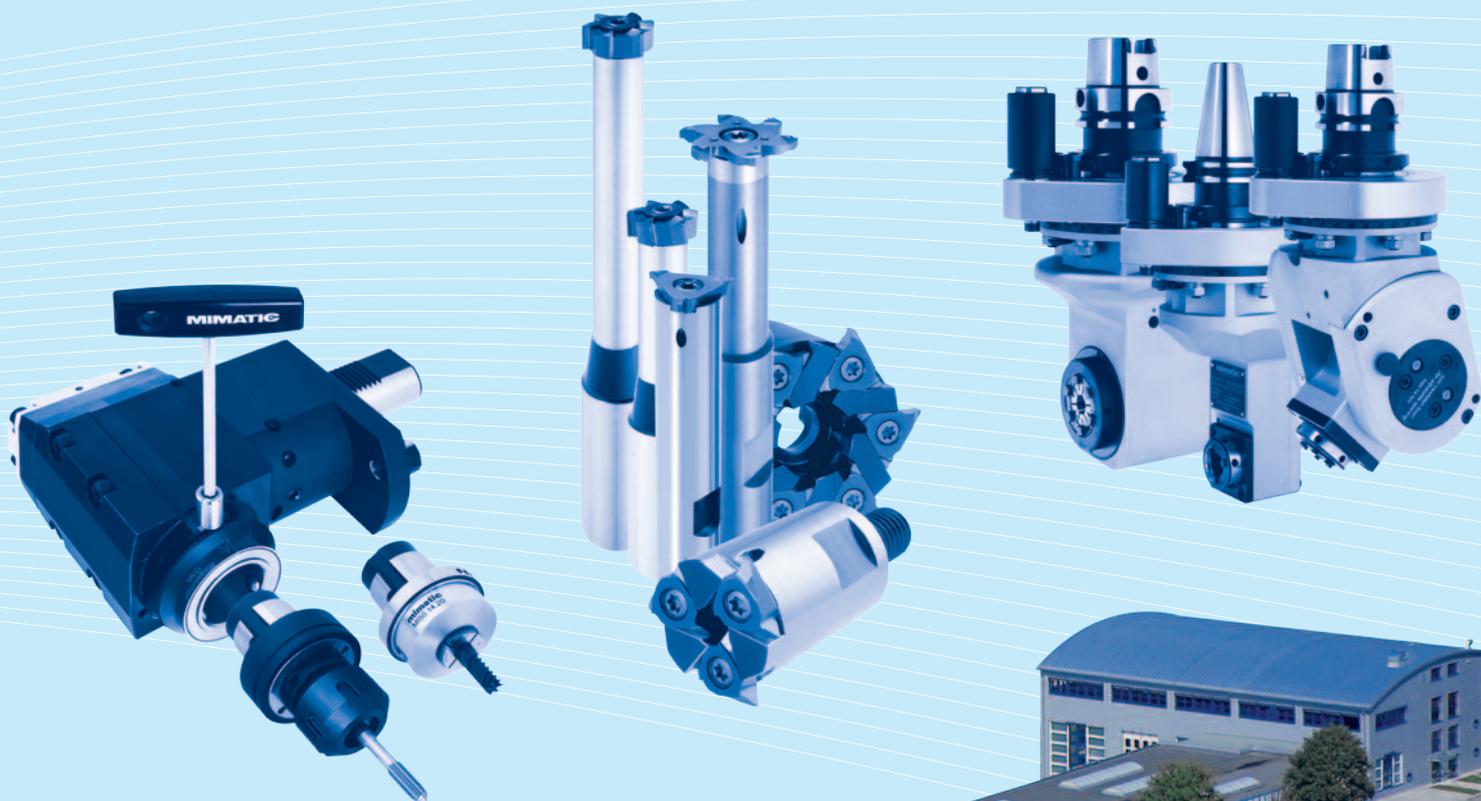
Pict. 1

Pict. 2

| Order No. | Pict. | d1 mm | d2 mm | d3 mm | d4 mm | l1 mm | l2 mm |
|-----------|-------|----------|----------|----------|----------|----------|----------|
| 104527 | 1 | 25 | | 6 | 29 | 50 | 4 |
| 104444 | 1 | 25 | | 8 | 29 | 50 | 4 |
| 104445 | 1 | 25 | | 10 | 29 | 50 | 4 |
| 104494 | 1 | 25 | | 12 | 29 | 50 | 4 |
| 104537 | 2 | 25 | 16 | | 29 | 50 | 4 |
| 104469 | 2 | 25 | 20 | | 29 | 50 | 4 |
| 104528 | 1 | 32 | | 6 | 36 | 58 | 5 |
| 104519 | 1 | 32 | | 8 | 36 | 58 | 5 |
| 104454 | 1 | 32 | | 10 | 36 | 58 | 5 |
| 104487 | 1 | 32 | | 12 | 36 | 58 | 5 |
| 104548 | 2 | 32 | 16 | | 36 | 58 | 5 |
| 104489 | 2 | 32 | 20 | | 36 | 58 | 5 |
| 104522 | 2 | 32 | 25 | | 36 | 58 | 5 |
| 104513 | 1 | 40 | | 6 | 44 | 58 | 5 |
| 104507 | 1 | 40 | | 8 | 44 | 58 | 5 |
| 104549 | 1 | 40 | | 10 | 44 | 58 | 5 |
| 104531 | 1 | 40 | | 12 | 44 | 58 | 5 |
| 104514 | 2 | 40 | 16 | | 44 | 58 | 5 |
| 104555 | 2 | 40 | 20 | | 44 | 58 | 5 |
| 104551 | 2 | 40 | 25 | | 44 | 58 | 5 |
| 104609 | 2 | 40 | 32 | | 44 | 58 | 5 |
| 168951 | 1 | 50 | | 6 | 54 | 75 | 5 |
| 104585 | 1 | 50 | | 8 | 54 | 75 | 5 |
| 104552 | 1 | 50 | | 10 | 54 | 75 | 5 |
| 104558 | 1 | 50 | | 12 | 54 | 75 | 5 |
| 104525 | 2 | 50 | 16 | | 54 | 75 | 5 |
| 104586 | 2 | 50 | 20 | | 54 | 75 | 5 |
| 104587 | 2 | 50 | 25 | | 54 | 75 | 5 |
| 104588 | 2 | 50 | 32 | | 54 | 75 | 5 |
| 104559 | 2 | 50 | 40 | | 54 | 75 | 5 |

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