



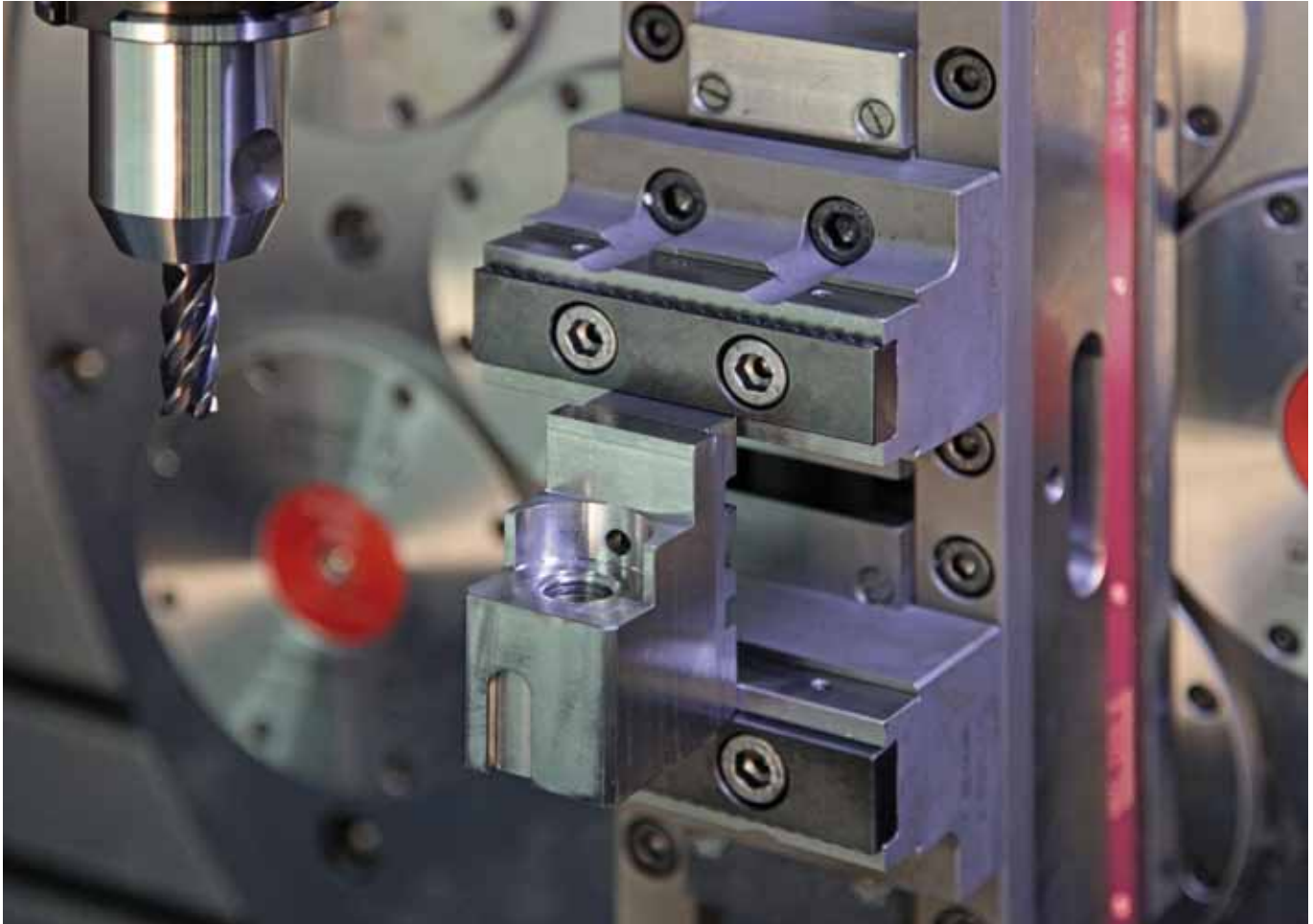
Workholding Systems

MC

for 5-axis machining



5-axis machining requires 5-axis clamping systems



Your benefits at a glance:

■ **Ideal for use on 5-axis machining centres and pallet systems**

The compact design enables machining of the workpiece from all sides and ensures collision-free tool paths. This fulfils the basic requirements for dependable 5-axis machining.

■ **Can be used for clamping both unmachined and machined parts**

Jaws with interchangeable jaw inserts manage every clamping task with minimum set-up effort. First and second clamping with a single clamping system – without having to change jaws.

■ **Concentric or clamping against the fixed jaw, mechanical or hydraulic**

The wide selection of systems in the MC series ensures you always have the perfect clamping system for your individual machining tasks.

The hydraulic systems are particularly suited to applications in automated production processes.

■ **Reduction of tool costs through the use of standard tools**







The compact design enables the use of standard tools which means that investment in this special clamping technology pays off quickly.

■ **Very good protection against swarf thanks to closed lead screw area**

Durability and low cleaning effort are further characteristics which distinguish HILMA's 5-axis clamping systems.



Designs and accessories

| |  Fixed jaw |  mechanical |  hydraulic |  Concentric |  mechanical |  hydraulic | Page |
|-------------------------------------|--|---|--|--|---|--|---------|
| MC 40 | • | • | | • | • | | 4 |
| MC 60 | • | • | • | • | • | | 5 |
| MC 100 | • | • | | • | • | • | 6 |
| MC 125 | | | | • | • | | 7 |
| Clamping jaws/jaw inserts | | | | | | | 8 – 10 |
| Rapid change block Quintus | | | | | | | 11 – 13 |
| Fixation and positioning, operation | | | | | | | 14 |

Series MC Fixed jaw



Series MC Concentric



■ **Stability:**

Long inside guideways

■ **Durability:**

Lead screw area encapsulated

■ **Usability:**

Wide range of jaws

■ **Flexibility:**

Foundation for STARK zero point clamping systems from series MC60




■ **Precision:**

Steel base

■ **Accessibility:**

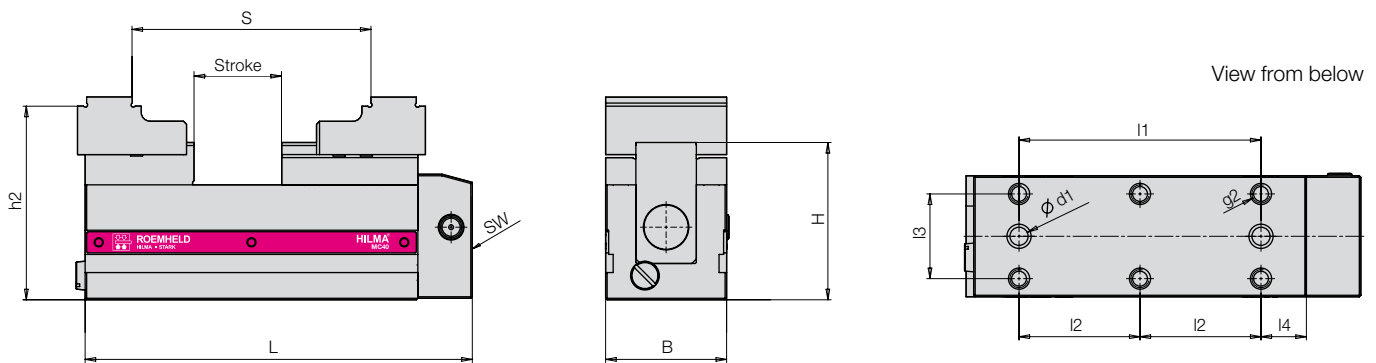
Compact design



| | | |
|-------------------|--|--|
| Design: |  Fixed jaw  Concentric | Application: In micromachining and in pallet systems |
| Operation: |  mechanical | Features: Good protection against swarf and high stability, base made from steel, concentric clamping systems, clamping possible from outside to inside and from inside to outside. |

Series MC 40

Fixed jaw (Figure 9.3581.1102 with clamping jaw 9.3581.6901)



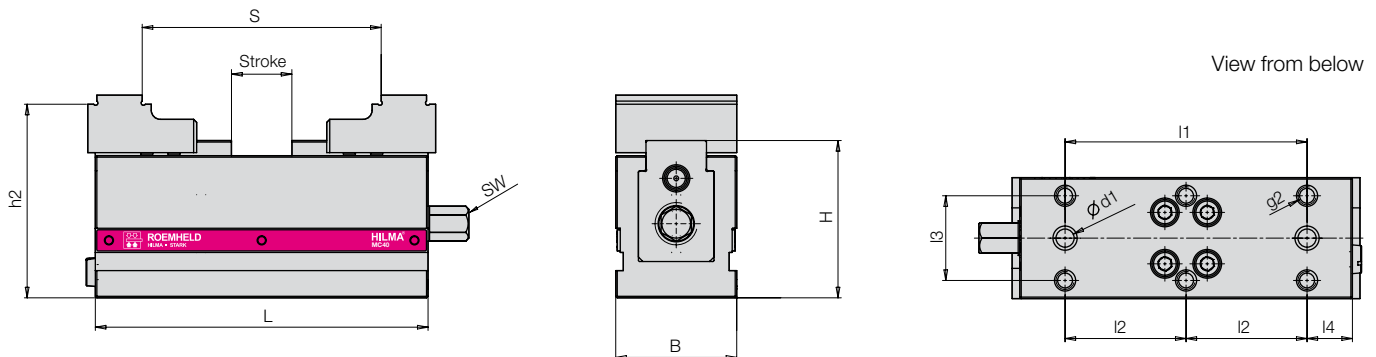
| Type | Part no. without jaws | Part no. with jaws | Clamping force [kN/Nm] | Operation | Jaw opening S max. [mm] | Stroke [mm] | Weight without jaws [kg] |
|------------------|-----------------------|--------------------|------------------------|------------|-------------------------|-------------|--------------------------|
| MC40 | | | | | | | |
| Fixed jaw | 9.3581.0102 | 9.3581.1102 | 8/15 | mechanical | 6 – 79 | 29 | 1.8 |

| L [mm] | B [mm] | H [mm] | d1 | g on both sides | g1 | g2 | h2 [mm] | I1 [mm] | I2 [mm] | I3 [mm] | I4 [mm] | SW |
|--------|--------|--------|-----|-----------------|----|------|---------|---------|---------|---------|---------|----|
| 128 | 40 | 52** | 6H7 | | | M6x7 | 64** | 80** | 40 | 28 | 15 | 6 |

Tolerances: *±0.01 mm ** ±0.02 mm

Series MC 40

Concentric (Figure 9.3581.1302 with clamping jaw 9.3581.6901)



| Type | Part no. without jaws | Part no. with jaws | Clamping force [kN/Nm] | Operation | Jaw opening S max. [mm] | Stroke [mm] | Weight without jaws [kg] |
|-------------------|-----------------------|--------------------|------------------------|------------|-------------------------|-------------|--------------------------|
| MC40 | | | | | | | |
| Concentric | 9.3581.0302 | 9.3581.1302 | 8/23 | mechanical | 6 – 79 | 20 | 1.4 |

| L [mm] | B [mm] | H [mm] | d1 | g on both sides | g1 | g2 | h2 [mm] | I1 [mm] | I2 [mm] | I3 [mm] | I4 [mm] | SW |
|--------|--------|--------|-----|-----------------|----|------|---------|---------|---------|---------|---------|----|
| 110 | 40 | 52** | 6H7 | | | M6x7 | 64** | 80** | 40 | 28 | 15 | 10 |

Tolerances: *±0.01 mm ** ±0.02 mm



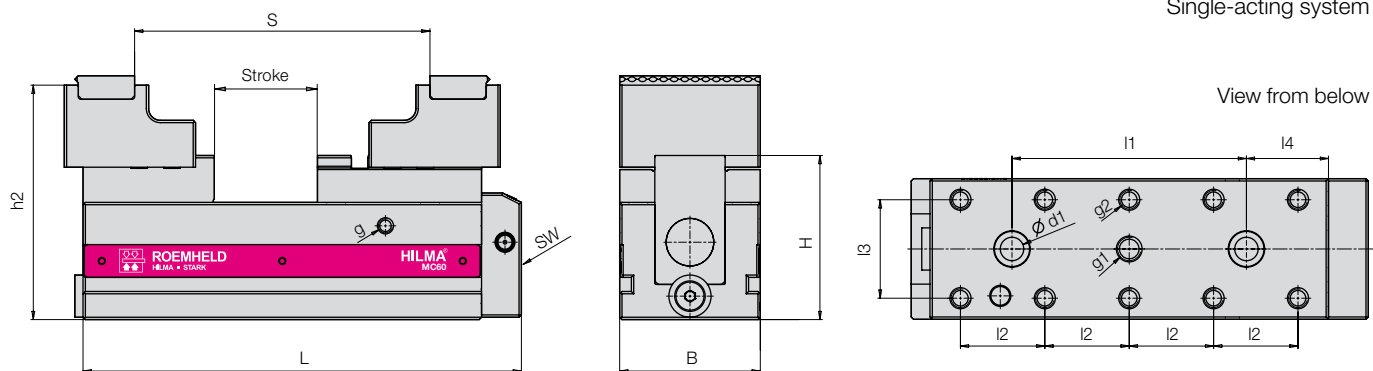
| | | | |
|-------------------|------------|----------------------------|--|
| Design: | Fixed jaw | Concentric | Application: In pallet systems and 5-axis machining centres with small working areas |
| Operation: | mechanical | hydraulic (only fixed jaw) | Features: Good protection against swarf and high stability, base made from steel, concentric clamping systems, clamping possible from outside to inside and from inside to outside. |

Series MC 60

Fixed jaw (Figure 9.3583.1112 with clamping jaw 9.3583.6906)

Hydraulic ports:

1 x G ¼ at the side
1 x plug-type connector Ø 10 from below
Single-acting system



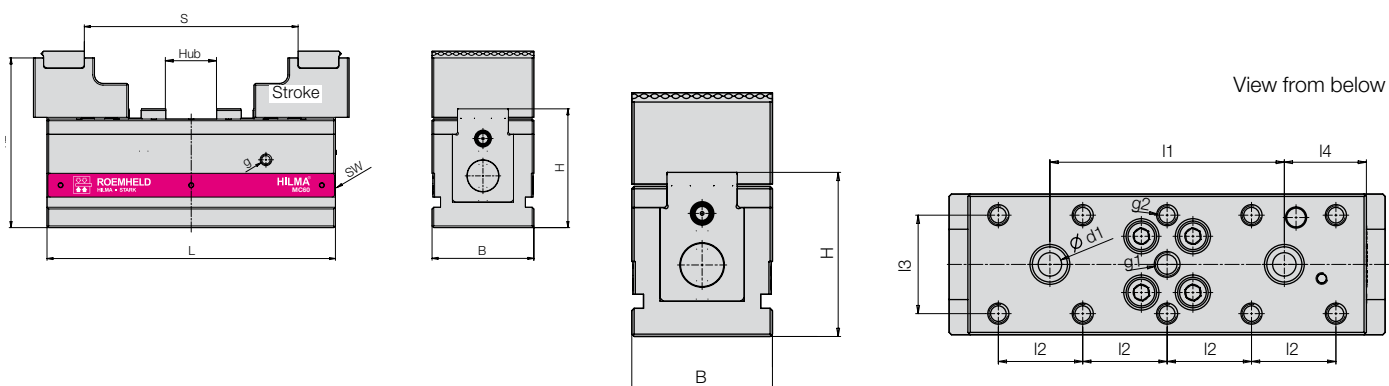
| Type | Part no. without jaws | Part no. with jaws | Clamping force [kN] | Operation | Jaw opening S max. [mm] | Stroke [mm] | Weight without jaws [kg] |
|------------------|-----------------------|--------------------|---------------------|------------|-------------------------|-------------|--------------------------|
| MC60 | | | | | | | |
| Fixed jaw | 9.3583.0112 | 9.3583.1112 | 15/25 Nm | mechanical | 12 – 126 | 44 | 5.0 |
| Fixed jaw | 9.3583.0212 | 9.3583.1212 | 15/260 bar | hydraulic | 12 – 126 | 4 | 5.0 |

| L [mm] | B [mm] | H [mm] | d1 | g on both sides | g1 | g2 | h2 [mm] | I1 [mm] | I2 [mm] | I3 [mm] | I4 [mm] | SW |
|--------|--------|--------|------|-----------------|--------|-------|---------|---------|---------|---------|---------|----|
| 187 | 60 | 70** | 10F7 | M6x10 | M10x11 | M8x12 | 100** | 100** | 36 | 42 | 35 | 8 |
| 204 | 60 | 70** | 10F7 | M6x10 | M10x11 | M8x12 | 100** | 100** | 36 | 42 | 35 | 8 |

Tolerances: *±0.01 mm ** ±0.02 mm

Series MC 60

Concentric (Figure 9.3583.1301 with clamping jaw 9.3583.6906)



| Type | Part no. without jaws | Part no. with jaws | Clamping force [kN/Nm] | Operation | Jaw opening S max. [mm] | Stroke [mm] | Weight without jaws [kg] |
|-------------------|-----------------------|--------------------|------------------------|------------|-------------------------|-------------|--------------------------|
| MC60 | | | | | | | |
| Concentric | 9.3583.0301 | 9.3583.1301 | 15/50 | mechanical | 12 – 126 | 30 | 6.0 |

| L [mm] | B [mm] | H [mm] | d1 | g on both sides | g1 | g2 | h2 [mm] | I1 [mm] | I2 [mm] | I3 [mm] | I4 [mm] | SW |
|--------|--------|--------|------|-----------------|--------|-------|---------|---------|---------|---------|---------|----|
| 170 | 60 | 70** | 10F7 | M6x10 | M10x11 | M8x12 | 100** | 100** | 36 | 42 | 35 | 12 |

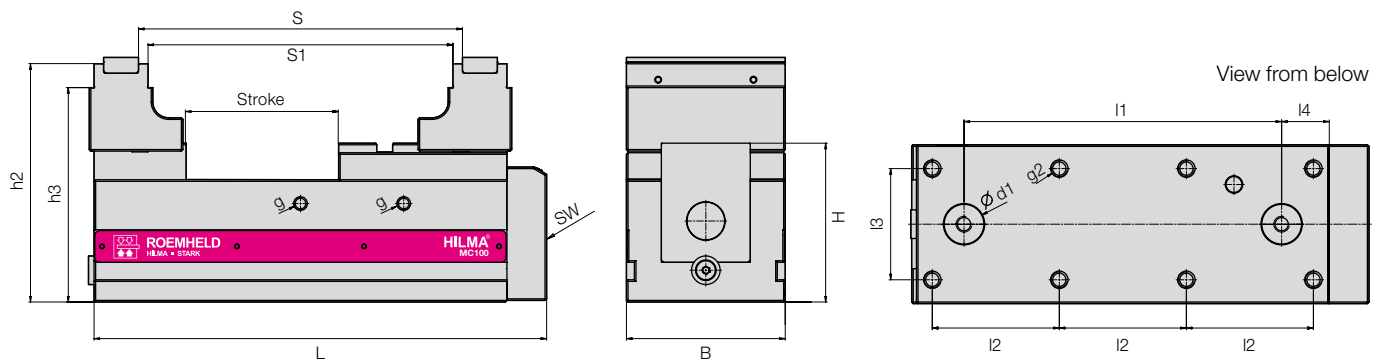
Tolerances: *±0.01 mm ** ±0.02 mm



| | | | |
|-------------------|------------|-----------------------------|--|
| Design: | Fixed jaw | Concentric | Application: In pallet systems and 5-axis machining centres |
| Actuation: | mechanical | hydraulic (only concentric) | Features: Good protection against swarf and high stability, base made from steel, concentric clamping systems, clamping possible from outside to inside and from inside to outside. |

Series MC 100

Fixed jaw (Figure 9.3585.1113 with clamping jaw 9.3585.6910)



| Type | Part no. without jaws | Part no. with jaws | Clamping force [kN] | Operation | Jaw opening S max. [mm] | S1 [mm] | Stroke [mm] | Weight without jaws [kg] |
|------------------|-----------------------|--------------------|---------------------|------------|-------------------------|---------|-------------|--------------------------|
| MC 100 | | | | | | | | |
| Fixed jaw | 9.3585.0113 | 9.3585.1113 | 25/60 Nm | mechanical | 15–204 | 6–192 | 96 | 20 |

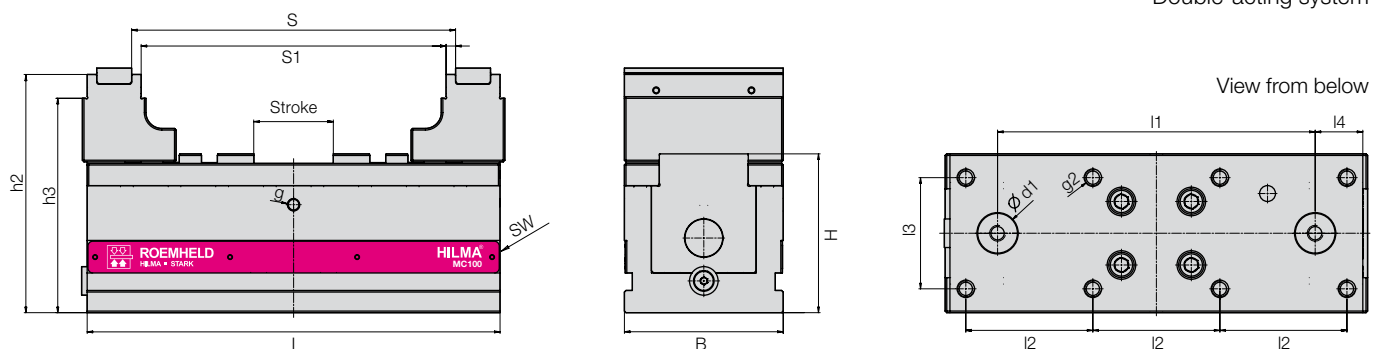
| L [mm] | B [mm] | H [mm] | d1 | g on both sides | g2 | h2 [mm] | h3 [mm] | I1 [mm] | I2 [mm] | I3 [mm] | I4 [mm] | SW |
|--------|--------|--------|--------------------|-----------------|--------|---------|---------|---------|---------|---------|---------|----|
| 285 | 100 | 100** | 25+0.01 x5 /M10x14 | M8x11 | M10x15 | 150** | 135** | 200** | 80 | 70 | 30 | 12 |

Tolerances: * ±0.01 mm ** ±0.02 mm

Series MC 100

Concentric (Figure 9.3585.1303 with clamping jaw 9.3585.6910)

Hydraulic ports:
2 x G¼ at the side
2 x plug-type connector Ø 10 from below
Double-acting system



| Type | Part no. without jaws | Part no. with jaws | Clamping force [kN] | Operation | Jaw opening S max. [mm] | S1 [mm] | Stroke [mm] | Weight without jaws [kg] |
|-------------------|-----------------------|--------------------|---------------------|------------|-------------------------|---------|-------------|--------------------------|
| MC 100 | | | | | | | | |
| Concentric | 9.3585.0303 | 9.3585.1303 | 25/80 Nm | mechanical | 15 – 204 | 6–192 | 50 | 18 |
| Concentric | 9.3585.0413 | 9.3585.1413 | 20/200 bar | hydraulic | 15 – 204 | 6–192 | 50 | 18 |



| L [mm] | B [mm] | H [mm] | d1 | g on both sides | g2 | h2 [mm] | h3 [mm] | I1 [mm] | I2 [mm] | I3 [mm] | I4 [mm] | SW |
|--------|--------|--------|-----------------|-----------------|--------|---------|---------|---------|---------|---------|---------|----|
| 260 | 100 | 100** | 25+0.01 /M10x14 | M8x11 | M10x14 | 150** | 135** | 200** | 80 | 70 | 30 | 14 |
| 291 | 100 | 100** | 25+0.01 /M10x14 | M8x11 | M10x14 | 150** | 135** | 200** | 80 | 70 | | |

Tolerances: * ±0.01 mm ** ±0.02 mm

MC 125 Technical Data

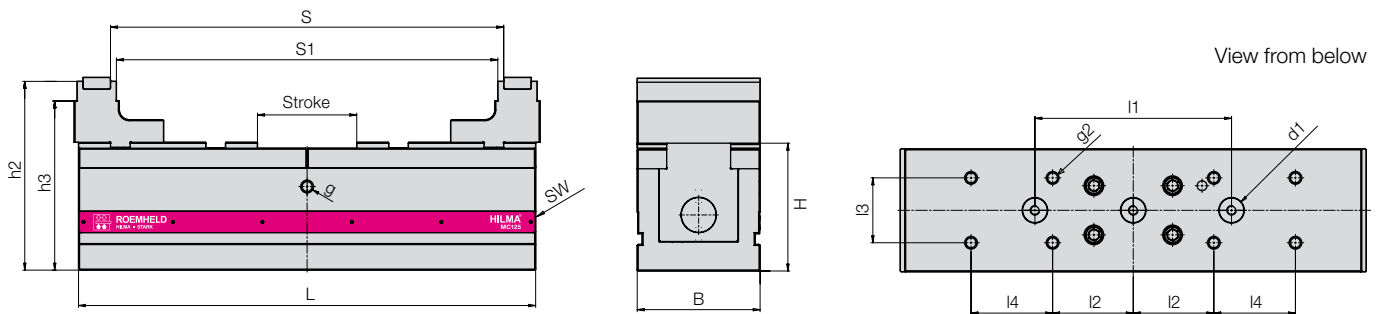


ROEMHELD
HILMA ■ STARK

| | | |
|-------------------|--|---|
| Design: |  Concentric | Application: In pallet systems and 5-axis machining centres |
| Actuation: |  mechanical | Features: Good protection against swarf and high stability, base made from steel, concentric clamping systems, clamping possible from outside to inside. From inside to outside only 9.3586.0304 and 9.3586.1304 |

Series MC 125

Concentric (Figure 9.3586.1304 with clamping jaw 9.3586.6910)



| Type | Part no. without jaws | Part no. with jaws | Clamping force [kN] | Operation | Jaw opening S max. [mm] | S1 [mm] | Stroke [mm] | Weight without jaws [kg] |
|---|-----------------------|--------------------|---------------------|------------|-------------------------|---------|-------------|--------------------------|
| MC 125 | | | | | | | | |
| Concentric | 9.3586.0304 | 9.3586.1304 | 35/200 Nm | mechanical | 15–400 | 6–388 | 100 | 50 |

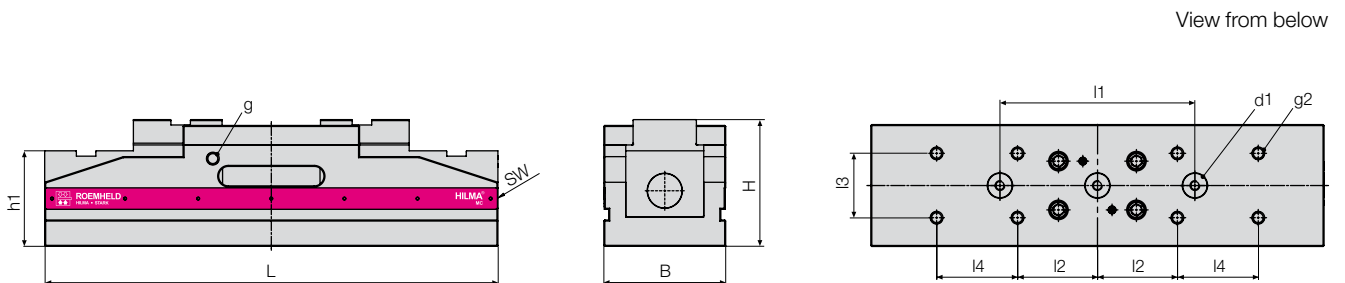
| L [mm] | B [mm] | H [mm] | d1 | g on both sides | g2 | h1 [mm] | h2 [mm] | h3 [mm] | I1 [mm] | I2 [mm] | I3 [mm] | I4 [mm] | SW |
|--------|--------|--------|-----------------|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|----|
| 465 | 125 | 130* | 25+0.01/M 10x14 | M 12x18 | M 12x16 | 98** | 192** | 172** | 200** | 82 | 66 | 83 | 19 |

Tolerances: * ±0.01 mm ** ±0.02 mm

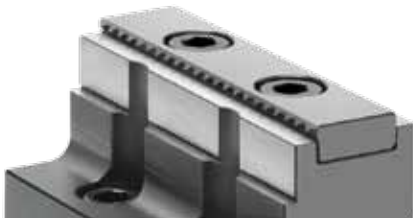
Series MC 125

Concentric

Optional design with chamfered base (Part no. 9.3586.0303)



Customized base design for positioning and mounting on request.



The basis is formed by stable clamping systems with flexible base jaws to accommodate various jaw inserts. Unmachined and machined parts clamped in the same clamping system without additional set-up effort.

The use of jaw inserts significantly reduces the required investment in clamping devices. In many applications, the additional "punching" operation is no longer required.

Jaw inserts with grip serrated



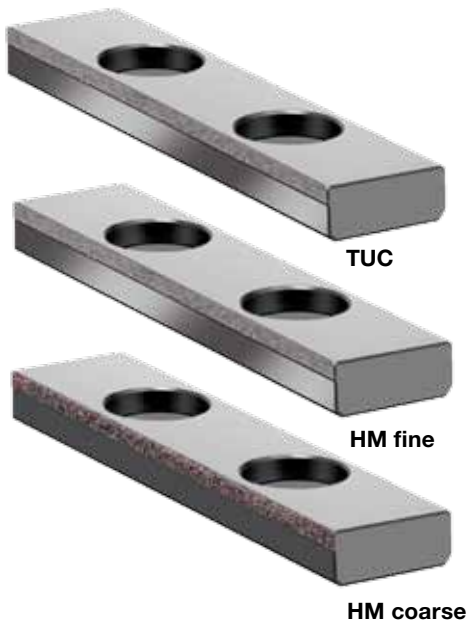
Grip

Particularly suited to first clamping of unmachined parts. Used on saw cuts or casting surfaces with major angular misalignments (0.3 mm)

The "round" jaw inserts are particularly suited to clamping non-cubic workpieces or forgings and castings.

In combination with pendulum jaws, angular misalignments of up to several millimetres can be rectified.

Jaw inserts with coating



TUC

HM fine

HM coarse

Suitable for first clamping of drawn materials or saw cuts with minor angular misalignments (0.1 mm). The type and coarseness of the coating enables a specific selection in accordance with the machining task and material. Retention forces can be increased by a factor of 2.

The inserts can also be used without any problems for clamping (2nd clamping) on machined surfaces. Coating can also be applied subsequently to contour jaws or the existing clamping jaws.

Jaw inserts with coating can also be used without hesitation on clamping systems with power amplifier.

Characteristics of jaw clamping areas

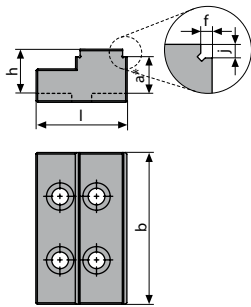
| Insert | Workpiece | Damage on the workpiece surface | Rectification of angular misalignments/100 mm |
|-----------|-----------|---------------------------------|---|
| TUC | | very low (Ra10) | very low |
| HM fine | | low (grain size of 0.1 mm) | 0.1 mm |
| HM coarse | | medium (grain size of 0.3 mm) | 0.2 mm |
| Grip | | high | 0.5 mm |

Increase of retention forces

| Workpiece material | Workpiece surface | rolled/cast/forged | drawn | sawn | milled | ground |
|---|-------------------|--------------------|--------------|-----------------|--------------|--------------|
| | | | | | | |
| Steel, e.g. C45, 20MnCr5, 31 CrMo4V9 | | HM coarse, grip | HM fine, TUC | HM coarse, grip | HM fine, TUC | TUC |
| Heat-treated steel, e.g. C45 induction-hardened, 20 MnCr5 case-hardened, 31 CrMoV9 nitrided | | | | | HM fine, TUC | TUC |
| Cast e.g. GG, red bronze | | HM coarse, grip | | | HM fine, TUC | TUC |
| Titanium | | HM fine | HM fine, TUC | HM fine | HM fine, TUC | HM fine, TUC |
| Aluminium | | HM coarse, grip | | HM fine, grip | HM fine | TIC / TUC |
| NE metals | | | | HM fine, grip | HM fine | TUC |



Accessories Clamping jaws/jaw inserts

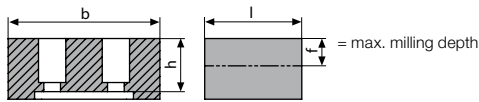


Reversible step jaw with 2 steps, hardened

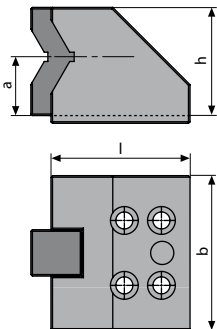
| Type | Part no. | Dimensions [mm] | | | | | | | | | Clamping range min/max |
|--------|-------------|-----------------|-----|----|-----|---|---|---|---|---|------------------------|
| | | l | b | h | a | e | f | i | j | k | |
| MC 40 | 9.3581.6901 | 36 | 40 | 15 | 12* | | 3 | | 3 | | 6-79 |
| MC 60 | 9.3583.6901 | 49 | 60 | 23 | 18* | | 3 | | 5 | | 6-150 |
| MC 100 | 9.3585.6901 | 60 | 100 | 30 | 25* | | 3 | | 5 | | 6-204 |
| MC 125 | 9.3586.6911 | 80 | 125 | 35 | 30* | | 5 | | 5 | | 10-400 |

* Tolerance ±0.01 mm

Block jaw, soft for milling machine of workpiece contours



| Type | Part no. | Dimensions [mm] | | | | | | | | | Clamping range min/max |
|--------|-------------|-----------------|-----|----|---|---|----|---|---|---|------------------------|
| | | l | b | h | a | e | f | i | j | k | |
| MC 40 | 9.3581.6902 | 36 | 40 | 21 | | | 6 | | | | |
| MC 60 | 9.3583.6902 | 42 | 60 | 25 | | | 8 | | | | |
| MC 100 | 9.3585.6902 | 64 | 100 | 35 | | | 18 | | | | |
| MC 125 | 9.3586.6902 | 88 | 125 | 55 | | | 32 | | | | |

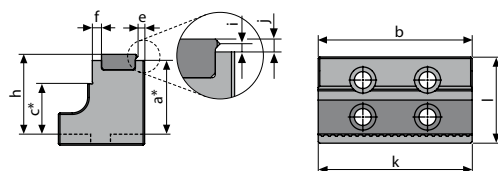


Vee jaw with jaw inserts, hardened

| Type | Part no. | Dimensions [mm] | | | | | | | | | Clamping range min/max |
|--------|-------------|-----------------|-----|----|----|---|---|---|---|---|------------------------|
| | | l | b | h | a | e | f | i | j | k | |
| MC 60 | 9.3583.6905 | 60 | 60 | 70 | 40 | | | | | | D 10-76 ⁽¹⁾ |
| MC 100 | 9.3585.6905 | 90 | 100 | 70 | 38 | | | | | | D 12-86 ⁽²⁾ |

⁽¹⁾ D 10-20 mm, D 20-58 mm, D 58-76 mm
⁽²⁾ D 12-26 mm, D 25-54 mm, D 53-86 mm

Step jaw with jaw insert, grip/smooth, hardened

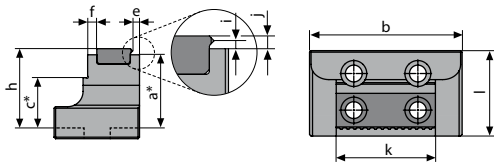


| Type | Part no. | Dimensions [mm] | | | | | | | | | Clamping range min/max | |
|------------|-------------|-----------------|-----|----|-----|-----|-----|---|-----|---|------------------------|--------|
| | | l | b | h | a | c | e | f | i | j | | k |
| MC 60 | 9.3583.6906 | 56 | 60 | 34 | 30* | | 4.5 | 6 | 2.5 | 4 | 60 | 12-126 |
| Jaw insert | 5.5050.0543 | | | | | | | | | | | |
| MC 100 | 9.3585.6906 | 56 | 100 | 54 | 50* | 35* | 4.5 | 6 | 2.5 | 4 | 100 | 15-204 |
| Jaw insert | 5.5050.0542 | | | | | | | | | | | |
| MC 125 | 9.3586.6906 | 88 | 125 | 66 | 62* | 42* | 4.5 | 6 | 2.5 | 4 | 125 | 15-400 |
| Jaw insert | 5.5050.0509 | | | | | | | | | | | |

* Tolerance ±0.01 mm



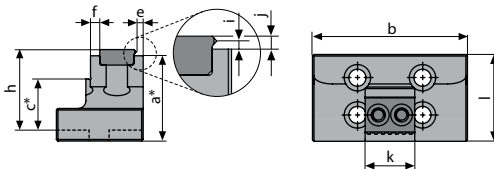
Step jaw with jaw insert, grip/smooth, hardened, various widths



| Type | Part no. | Dimensions [mm] | | | | | | | | | | Clamping range min/max |
|-------------------|--------------------|-----------------|-----|----|-----|-----|-----|---|-----|---|----|------------------------|
| | | l | b | h | a | c | e | f | i | j | k | |
| MC60 | 9.3583.6907 | 56 | 60 | 34 | 30* | | 4.5 | 6 | 2.5 | 4 | 35 | 12-126 |
| Jaw insert | 5.5050.0545 | | | | | | | | | | | |
| MC100 | 9.3585.6907 | 56 | 100 | 54 | 50* | 35* | 4.5 | 6 | 2.5 | 4 | 65 | 15-204 |
| Jaw insert | 5.5050.0471 | | | | | | | | | | | |
| MC125 | 9.3586.6907 | 88 | 125 | 66 | 62* | 42* | 4.5 | 6 | 2.5 | 4 | 80 | 15-400 |
| Jaw insert | 5.5050.0547 | | | | | | | | | | | |

* Tolerance ±0.01 mm

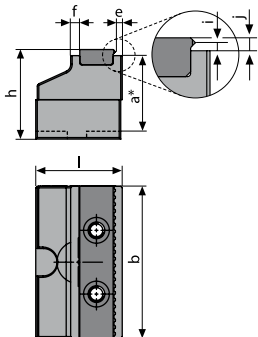
Step jaw with jaw insert, grip/smooth, hardened, various widths



| Type | Part no. | Dimensions [mm] | | | | | | | | | | Clamping range min/max |
|-------------------|--------------------|-----------------|-----|----|-----|-----|-----|---|-----|---|----|------------------------|
| | | l | b | h | a | c | e | f | i | j | k | |
| MC100 | 9.3585.6908 | 56 | 100 | 54 | 50* | 35* | 4.5 | 6 | 2.5 | 4 | 32 | 15-204 |
| Jaw insert | 5.5050.0470 | | | | | | | | | | | |

* Tolerance ±0.01 mm

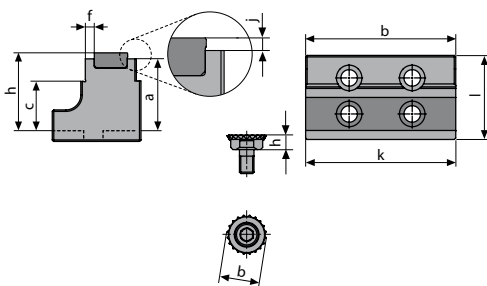
Pendulum jaw with jaw insert, grip/smooth, hardened



| Type | Part no. | Dimensions [mm] | | | | | | | | | | Clamping range min/max |
|-------------------|--------------------|-----------------|-----|----|-----|-----|---|-----|---|-----|--------|------------------------|
| | | l | b | h | a | e | f | i | j | k | | |
| MC100 | 9.3585.6904 | 56 | 100 | 54 | 50* | 4.5 | 6 | 2.5 | 4 | | 15-204 | |
| Jaw insert | 5.5050.0542 | | | | | | | | | | | |
| MC125 | 9.3586.6904 | 88 | 125 | 66 | 62* | 4.5 | 6 | 2.5 | 4 | 125 | 15-400 | |
| Jaw insert | 5.5050.0509 | | | | | | | | | | | |

* Tolerance ±0.01 mm
** Tolerance ±0.02 mm

Step jaw with jaw insert, HM coating coarse / smooth, hardened and 2 off insert round with grip



| Type | Part no. | Dimensions [mm] | | | | | | | | | | Clamping range min/max |
|---------------------|--------------------|-----------------|-----|----|-----|-----|---|---|---|---|-----|------------------------|
| | | l | b | h | a | c | e | f | i | j | k | |
| MC100 | 9.3585.6910 | 59 | 100 | 54 | 50* | 35* | | 6 | | 4 | 100 | 6-192 |
| Jaw insert | 5.5050.0523 | | | | | | | | | | | |
| Round insert | 5.5050.0464 | | 25 | 10 | | | | | | | | |
| MC125 | 9.3586.6910 | 91 | 125 | 66 | 62* | 42* | | 6 | | 4 | 125 | 18-400 |
| Jaw insert | 5.5050.0660 | | | | | | | | | | | |
| Round insert | 5.5050.0486 | | 31 | 12 | | | | | | | | |

* Tolerance ±0.01 mm

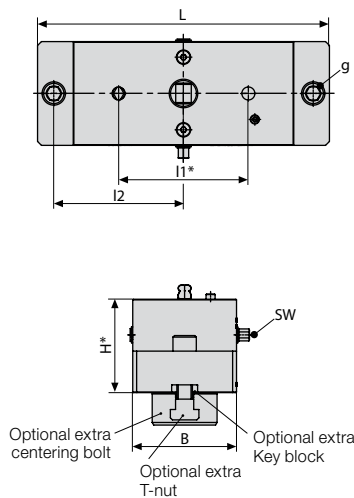


Accessories **Quintus 1**

Rapid change block Quintus 1 for MC 60

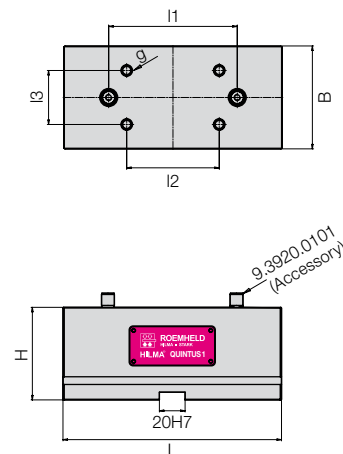
The QUINTUS rapid change block provides the optimum interface for your machine tool. A mechanical zero point clamping system allows rapid and precise changing of different clamping systems taking account of the zero point. This means that machining tasks can be prepared externally and can then be changed without long machine downtimes. Handling is made easier and set-up and production costs are reduced.

Figure with mechanical clamping lock 9.6153.0101



View from above

Figure without mechanical clamping lock 9.6153.0102



| Type Quintus 1 | Part no. | Dimensions [mm] | | | | | | | SW | Insertion force [kN/Nm] | Weight [kg] |
|---|--------------------|-----------------|----|-----|------|-------|-----|----|----|----------------------------|----------------|
| | | L | B | H | g | I1 | I2 | I3 | | | |
| with mechanical clamping lock | 9.6153.0101 | 225 | 80 | 72* | KM12 | 100** | 100 | | 8 | 12/60 | 9 |
| without mechanical clamping lock | 9.6153.0102 | 170 | 80 | 72* | KM8 | 100** | 72 | 42 | | | 7.5 |

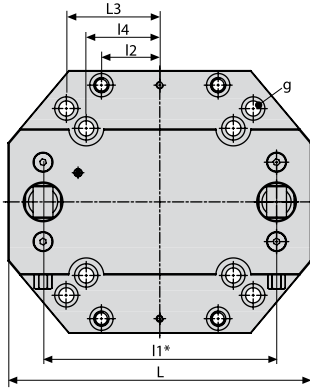
* Tolerance ± 0.01 mm
** Tolerance ± 0.02 mm



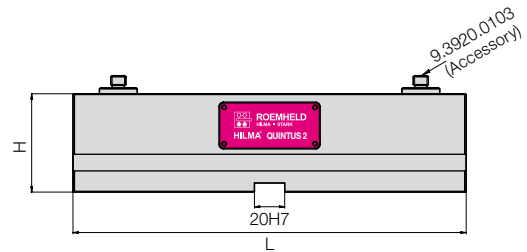
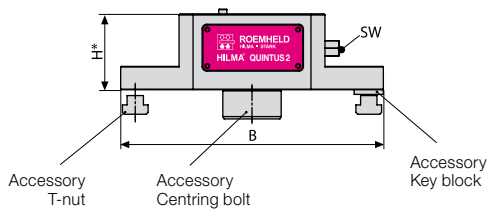
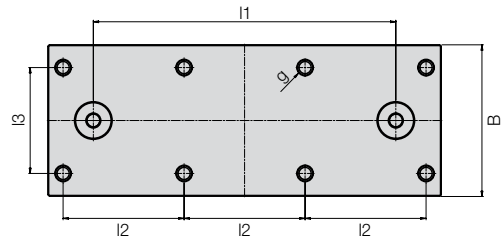
Rapid change block Quintus 2 for MC 100

Figure with mechanical clamping lock 9.6155.0102

Figure without mechanical clamping lock 9.6155.0103



View from above



| Type | Part no. | Dimensions [mm] | | | | | | | | | Insertion force [kN/Nm] | Weight [kg] |
|---|--------------------|-----------------|-----|-----|-------|-------|----|----|----|----|-------------------------|-------------|
| | | L | B | H | g | I1 | I2 | I3 | I4 | SW | | |
| Quintus 2 with mechanical clamping lock | 9.6155.0102 | 260 | 225 | 65* | KM 12 | 200** | 50 | 63 | 80 | 13 | 2x20/80 | 18 |
| without mechanical clamping lock | 9.6155.0103 | 260 | 100 | 65* | KM 10 | 200** | 80 | 70 | | | | 13 |

* Tolerance ±0.01 mm
** Tolerance ±0.02 mm



Accessories **Quintus 3**

Rapid change block Quintus 3 for MC 125

Figure with mechanical clamping lock 9.6156.0102

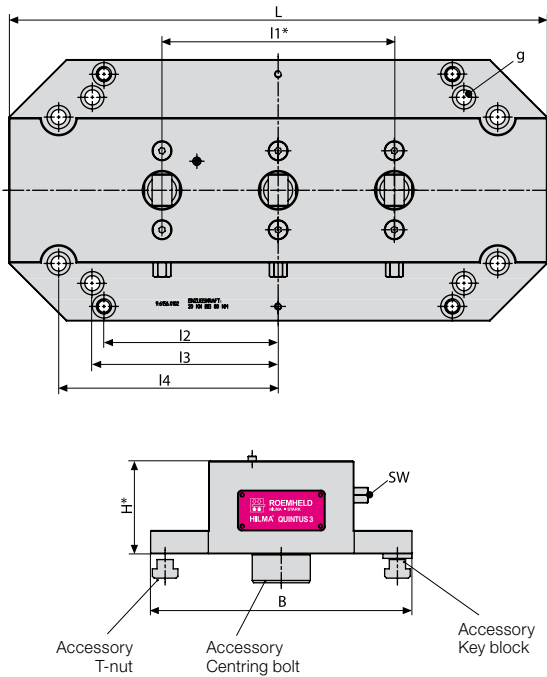
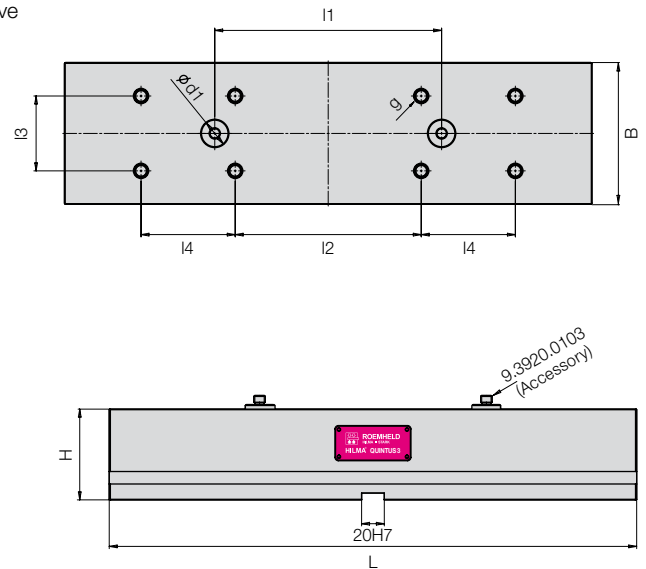


Figure without mechanical clamping lock 9.6156.0103

View from above



| Type Quintus 3 | Part no. | Dimensions [mm] | | | | | | | | | Insertion force [kN/Nm] | Weight [kg] |
|---|--------------------|-----------------|-----|-----|-------|-------|-----|-----|-----|----|-------------------------|-------------|
| | | L | B | H | g | l1 | l2 | l3 | l4 | SW | | |
| with mechanical clamping lock | 9.6156.0102 | 464 | 225 | 80* | KM 12 | 200** | 150 | 160 | 189 | 13 | 3x20/80 | 42 |
| without mechanical clamping lock | 9.6156.0103 | 465 | 125 | 80* | KM 12 | 200** | 164 | 66 | 83 | | | 35 |

* Tolerance ±0.01 mm
** Tolerance ±0.02 mm



Fixation and positioning

Centring bolt

for hub centring on machine table

| Type | Part no. | Ø [mm] | L [mm] |
|----------------------|--------------------|--------|--------|
| Quintus 1/2/3 | 9.6153.5001 | D30 g6 | 15/38 |
| | 9.6153.5002 | D32 g6 | 15/38 |
| | 9.6153.5003 | D50 g6 | 25/48 |
| | 9.6153.5009 | D50 g6 | 18/41 |

Pull-in bolt,

mounting on clamping system

| Type | Part no. | Quantity |
|-------------------------|--------------------|---------------|
| Quintus1/ MC 60 | 9.3920.0201 | 1 off |
| Quintus2/ MC 100 | 9.3920.0202 | 1 set = 2 off |
| Quintus3/ MC 125 | 9.3920.0203 | 1 set = 3 off |

Positioning pins, various diameters, for grid plate

and Quintus, 1 set = 2 off

| Type | Part no. | Ø [mm] |
|------------------------|--------------------|--------|
| MC 60 | 9.3920.0101 | 10/12 |
| MC 100 / MC 125 | 9.3920.0103 | 25/12 |

Clamping claws, 1 set = 4 off, incl. screws

| Type | Part no. | Thread |
|---------------|--------------------|--------|
| MC 40 | 9.3581.7001 | M 8 |
| MC 60 | 9.3583.7001 | M10 |
| MC 60 | 9.3583.7002 | M12 |
| MC 100 | 9.3585.7001 | M12 |
| MC 125 | 9.3777.3011 | M12 |
| MC 125 | 9.3777.3021 | M16 |

Key block with screw for Quintus 1,2,3

| Part no. | | Slot [mm] |
|--------------------|-----------------|-----------|
| 9.6153.5004 | DIN 6322, 1 off | 14 |

T-nut with screw for Quintus 1,2,3

| Part no. | | Slot [mm] |
|--------------------|----------------|-----------|
| 9.6153.5005 | DIN 508, 4 off | 14 |

Operation

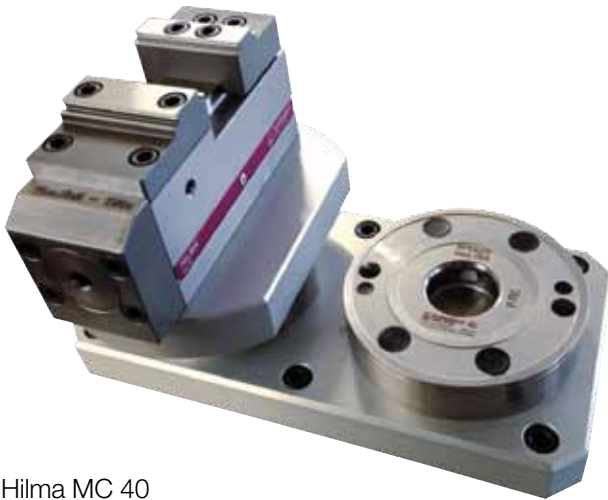
Socket

| Type | Part no. | SW |
|-------------------------|--------------------|----|
| MC40 Fixed jaw | 1.3124.0103 | 6 |
| MC40 Concentric | 1.3124.0025 | 10 |
| MC60 Fixed jaw | 1.3124.0104 | 8 |
| MC60 Concentric | 1.3124.0021 | 12 |
| MC100 Fixed jaw | 1.3124.0024 | 12 |
| MC100 Concentric | 1.3124.0020 | 14 |
| MC 125 | 1.3124.0019 | 19 |

Torque wrench

| Type | Part no. | Torque [Nm] |
|--------------------------|--------------------|-------------|
| MC 40 / 60 | 9.3583.7010 | 5– 60 |
| MC 100 Fixed jaw | 9.3583.7010 | 5– 60 |
| MC 100 Concentric | 9.3792.6610 | 20–120 |
| MC 125 | 9.3792.6620 | 40–200 |

MC Application examples



Hilma MC 40
and STARK Easy Click zero point clamping system



Two clamping systems MC 60 H on reversible
clamping device. Use with special clamping jaws



MC 100 on the
STARK zero point clamping system



ROEMHELD
HILMA ■ STARK

Hilma MC 100 Z and STARK zero point clamping system – combined for maximum flexibility and precision

MC 100 with grip jaw



Three SCS 120 H as a specific set-up in a pallet station. The clamping pressure is controlled by the machine hydraulics.

Grip jaw with steps for first and second clamping

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