



## Workholding Systems ZH

### concentric clamping, hydraulically operated

### jaw widths 100, 125 and 160 mm



#### Advantages

- High repetitive clamping and positioning accuracy of  $\pm 0.01$  mm
- Opening stroke limitation by means of adjusting screw or optionally proximity switch
- High stability and very good protection against swarf
- Clamping edge for clamping claws
- Customer-specific mounting holes
- Fitting key, positioning and mounting holes for standard and special clamping jaws
- Crosswise keyway for positioning
- Central lubrication

#### Description

Due to the play-free adjustment of the synchronisation mechanism clamping and positioning accuracies of  $\pm 0.01$  mm are obtained. Long slide guides and the compact encapsulation of the moving parts ensure high process safety and durability.

The large clamping strokes enable the production of a large number of workpieces in one workholding system. Also large jaw openings can be realised in very compact workholding systems. The opening stroke can be adjusted by means of an adjusting screw or optionally by a proximity switch.

#### Application

Hydraulically-operated concentric workholding systems for clamping of workpieces on machining centres, automatic saws or end machining. The workholding systems are also used in special machines or as a fixture element. Particularly suitable for automated processes or harsh environmental conditions.

#### Accessories

- Clamping jaws on request
- Accessories for fixing and positioning see page 2
- Hydraulic pressure generators on request

#### Consultation

Our experts will be pleased to advise you also on site, and work with you to find the optimum clamping solution.

Extensive information such as drawings and CAD models are available on request.

#### Technical data

Clamping principle: **concentric clamping**  
 Operation: **hydraulic double acting**  
 Max. operating pressure: **150 bar**

#### Z 100 H

Jaw width: 100 mm  
 Clamping force: 16 kN at 150 bar  
 Clamping stroke: 22 mm / slide  
 Max. jaw opening: 316 mm

#### Z 125 H

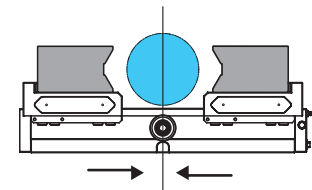
Jaw width: 125 mm  
 Clamping force: 25 kN at 150 bar  
 Clamping stroke: 35 mm / slide  
 Max. jaw opening: 436 mm

#### Z 160 H

Jaw width: 160 mm  
 Clamping force: 40 kN at 150 bar  
 Clamping stroke: 45 mm / slide  
 Max. jaw opening: 520 mm

#### Use of Vee jaws

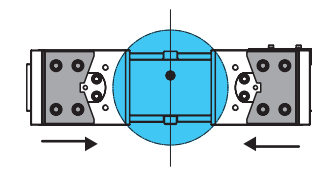
##### Clamping diameter



**Z 100H**  $\varnothing 15$  mm –  $\varnothing 120$  mm

**Z 125H**  $\varnothing 22$  mm –  $\varnothing 170$  mm

**Z 160H**  $\varnothing 28$  mm –  $\varnothing 224$  mm



**Z 100H**  $\varnothing 150$  mm –  $\varnothing 260$  mm

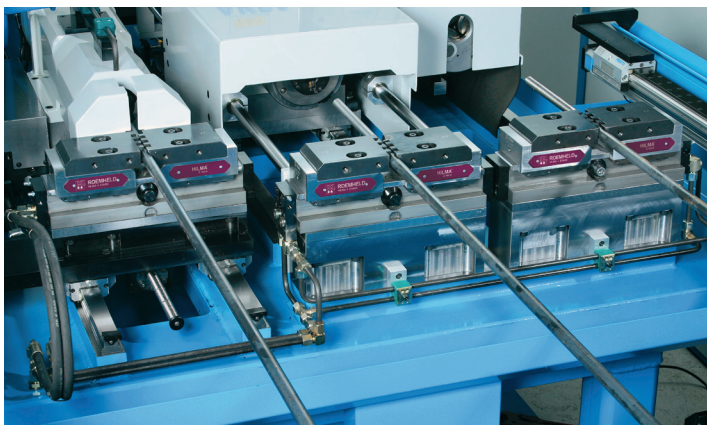
**Z 125H**  $\varnothing 180$  mm –  $\varnothing 360$  mm

**Z 160H**  $\varnothing 200$  mm –  $\varnothing 450$  mm

#### Retention force and holding torque

For calculation of the retention force  $F_H$  and holding torque  $M_H$  when using Vee jaws for pipe or shaft end machining we are pleased to provide you with our brochure 0.5000.1676.

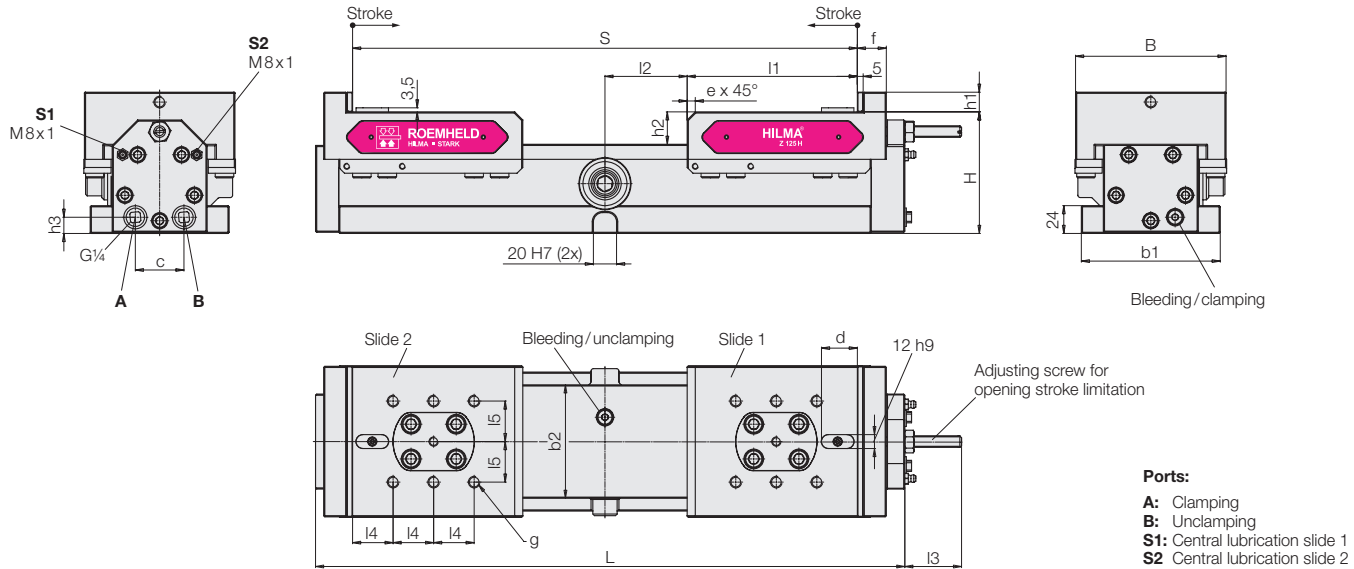
#### Application example



Workholding systems ZH in use

# Technical data Dimensions

## Dimensions

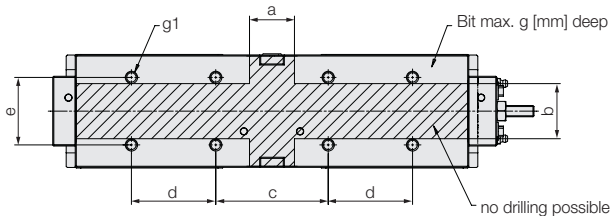


| Type           | L   | B   | H   | S   | g      | b1  | b2  | c  | d  | e  | f  | h1 | h2 | h3 | l1  | l2 | l3 | l4 | l5 |
|----------------|-----|-----|-----|-----|--------|-----|-----|----|----|----|----|----|----|----|-----|----|----|----|----|
| <b>Z 100 H</b> | 395 | 100 | 95  | 316 | M 8x12 | 100 | 74  | 36 | 25 | 12 | 25 | 16 | 26 | 13 | 115 | 43 | 33 | 25 | 30 |
| <b>Z 125 H</b> | 509 | 130 | 105 | 436 | M10x15 | 120 | 98  | 42 | 32 | 7  | 25 | 17 | 28 | 14 | 147 | 71 | 49 | 35 | 35 |
| <b>Z 160 H</b> | 605 | 160 | 125 | 520 | M12x18 | 142 | 122 | 46 | 32 | 22 | 30 | 20 | 34 | 16 | 185 | 75 | 60 | 50 | 40 |

All dimensions in [mm]

| Type  | Z 100 H            | Z 125 H          | Z 160 H          |     |
|---|--------------------|------------------|------------------|-----|
| <b>Clamping principle</b>                                       | concentric         | concentric       | concentric       |     |
| <b>Operation</b>  | hydraulic          | hydraulic        | hydraulic        |     |
| <b>Clamping force</b>   | [kN]               | 16               | 25               | 40  |
| <b>Max. operating pressure clamping</b>                         | [bar]              | 150              | 150              | 150 |
| <b>Max. operating pressure unclamping</b>                       | [bar]              | 20               | 20               | 20  |
| <b>Stroke / slide</b>   | [mm]               | 22               | 35               | 45  |
| <b>Oil volume total stroke clamping/unclamping</b>              | [cm <sup>3</sup> ] | 61               | 138              | 280 |
| <b>Weight without clamping jaws</b>                             | [kg]               | 22               | 39               | 68  |
| <b>Part no. opening stroke limitation with adjusting screw</b>  | <b>935420101</b>   | <b>935430101</b> | <b>935440101</b> |     |
| <b>Part no. opening stroke limitation with proximity switch</b> | <b>935420201</b>   | <b>935430201</b> | <b>935440201</b> |     |

## Free space for customised mounting hole pattern

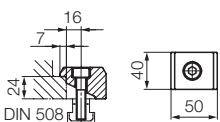


| Type           | a  | b  | c   | d   | e  | available thread g1 | g  |
|----------------|----|----|-----|-----|----|---------------------|----|
| <b>Z 100 H</b> | 40 | 49 | 100 | 75  | 60 | M10x15              | 20 |
| <b>Z 125 H</b> | 45 | 55 | 164 | 83  | 68 | M12x20              | 22 |
| <b>Z 160 H</b> | 55 | 60 | 160 | 120 | 80 | M12x20              | 22 |

## Accessories

### Set of clamping claws with screws M 12x45

For safe clamping on the machine table  
(1 set = 4 off)



Part no. 937772011

### Set of key blocks DIN 6323

(1 set = 2 off)

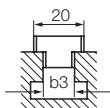


Table slot 14h6 (b3) Part no. 939174121

Table slot 18h6 (b3) Part no. 939174141