

# CLAMPING AND BRAKING ELEMENTS | HYDRAULIC KBH4512ES1A

## ▶ PRODUCT ADVANTAGES



- ▶ **broad range of products**  
For all common profile rail guides
- ▶ **Energize to close (NO)**  
Closing with pressure
- ▶ **extremely durable**  
Up to 10 million static clamping cycles

## ▶ TECHNICAL DETAILS



- ① **Profile rail guide**
  - Available for all common profile rail guides
- ② **Return spring**
  - Interlocked integration in the jaws
- ③ **Clamping jaws and brake shoes**
  - Pressed at the free surfaces of the profile rail guide
- ④ **Housing**
- ⑤ **Membran**
  - For pressurization
- ⑥ **Scraper**
  - Can also be ordered as an option

## ▶ INFORMATION ON THE PRODUCTS

### APPLICATION SCENARIOS

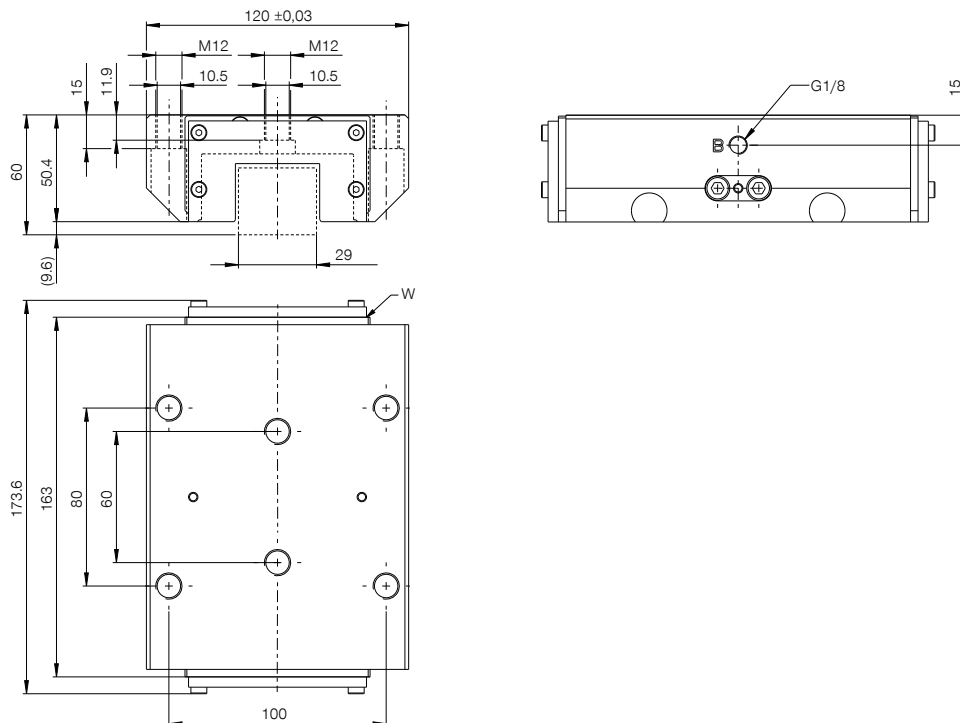
- ▶ **Machine table clamping of heavy cutting work centres**
- ▶ **Clamping and braking of heavy handling systems**
- ▶ **Braking**

### FURTHER INFORMATION

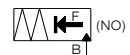
- ▶ **Spacer plate**  
In addition, a spacer plate might have to be ordered as height compensation, depending on the height of the rail carriage (dimension D).
- ▶ **Special variants on request, e.g.**  
With additional hydraulic connection (from above, from the front)
- ▶ **Also available for rail size 85/100/125**

|                    |                 |             |                  |
|--------------------|-----------------|-------------|------------------|
| Track manufacturer | Rail type       | Rail size   | Carriage type    |
| <b>HIWIN</b> ✓     | <b>HG(QH)</b> ✓ | <b>45</b> ✓ | <b>QHW..HC</b> ✓ |

## ► TECHNICAL DRAWINGS



Ⓑ Connection closing (both sides possible, only one connection necessary)



## ► TECHNICAL DATA

| Order No.                               | KBH4512ES1A                              |
|-----------------------------------------|------------------------------------------|
| Operation                               | hydraulic                                |
| Holding force                           | 9900 [N]                                 |
| Theoretical holding force ( $\mu=0,1$ ) | 12,375 [N]                               |
| PLUS connection possible                | No                                       |
| Operating pressure                      | 5 ... 160 [bar]                          |
| Nominal operating pressure              | 150.0 [bar]                              |
| B10d value                              | 10,000,000                               |
| Positioning accuracy +/-                | 0,02 [mm]                                |
| Opening time                            | 0.07 [s]                                 |
| Closing time                            | 0.1 [s]                                  |
| Operating temperature                   | -10 ... +70 [°C]                         |
| Weight                                  | 5.4 [kg]                                 |
| Function                                | Clamping and braking                     |
| Condition                               | NO (Normally Open) open without pressure |
| Installation direction                  | from the front                           |
| Masking tape can be used                | with masking tape                        |
| Wiper                                   | yes                                      |
| Displacement                            | 2 [cm³]                                  |

Schematic drawing. General tolerances in accordance with DIN ISO 2768 T1-f/T2-H. Edges in accordance with ISO 13715. Stop face can be used on both sides. Center fixing holes must be used. Element offers no guiding properties. Guidance must be external. The holding force is the maximum force that can be applied in the axial direction. Each clamping and braking element is tested in a 100% inspection before delivery for the specified holding forces on a hardened steel rail with a lightly oiled lubricating layer (ISO-VG 68). The use of other lubricants or rail coatings can influence the coefficient of friction. The operating instructions must be observed before commissioning. We reserve the right to make technical changes in the course of further development. The latest and further data can be found online and in the operating instructions at [www.zimmer-group.com](http://www.zimmer-group.com).