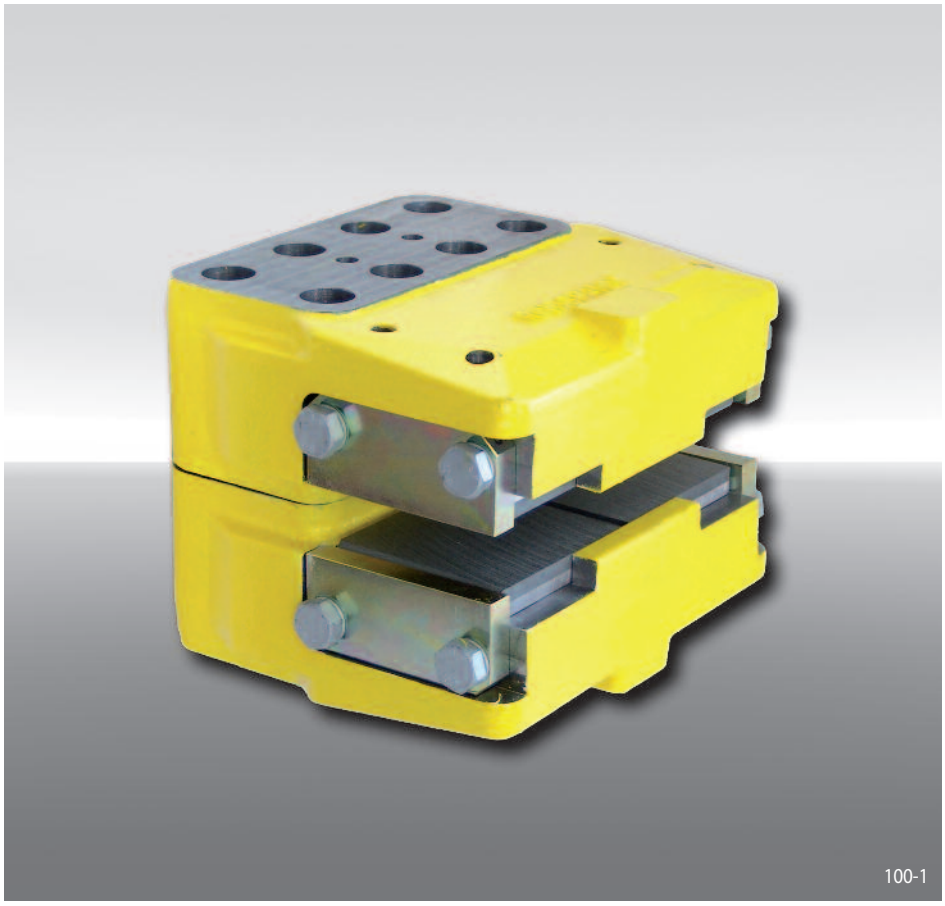
# Brake Calipers HW 150 HUK and HW 180 HUK

RINGSPANN®

## hydraulically activated – non-releasing as yaw brake in wind turbines




| Features | Code |
|---|---|
| Brake Caliper | H |
| Standard | W |
| With piston diameter 2 x 75 mm<br>or piston diameter 2 x 90 mm | 150<br>180 |
| Hydraulically activated | H |
| Non-releasing | U |
| No adjustment to accommodate friction block wear | K |
| Max. clamping force 140 kN (HW 150)<br>Max. clamping force 200 kN (HW 180) | 140<br>200 |

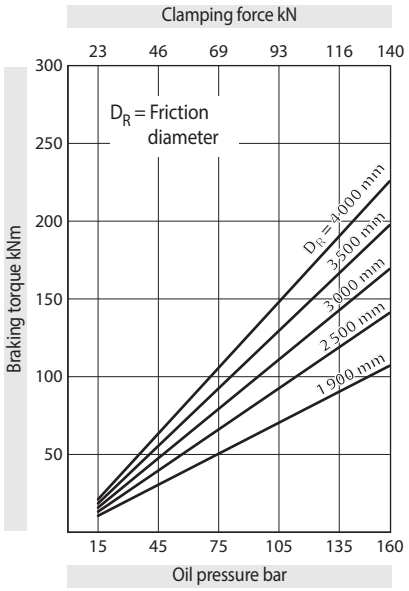
### Example for ordering

Brake Caliper HW 150 HUK,
max. clamping force 140 kN:

HW 150 HUK - 140

## Technical Data

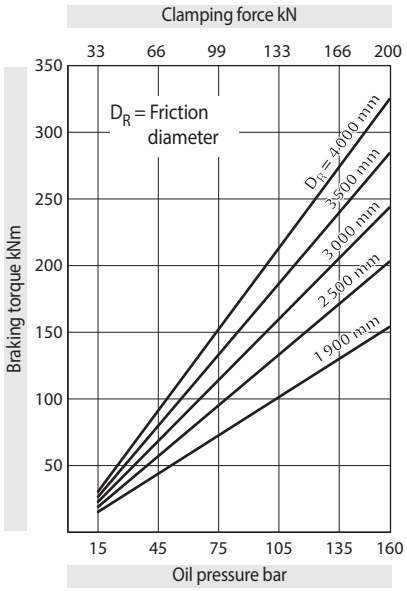
Brake Caliper HW 150 HUK




The braking torques shown in the diagram are based on a theoretical friction coefficient of 0,4.

| | |
|---|---|
| Oil pressure: | min. 15 bar<br>max. 160 bar |
| Oil volume: | max. 133 $cm^3$ |
| Weight: | ca. 65 kg |

Brake Caliper HW 180 HUK




The braking torques shown in the diagram are based on a theoretical friction coefficient of 0,4.

| | |
|---|---|
| Oil pressure: | min. 15 bar<br>max. 160 bar |
| Oil volume: | max. 190 $cm^3$ |
| Weight: | ca. 65 kg |

## Other features

- High safety against leakage
- Easy change of friction blocks
- Painted with surface coating class C4-L according to ISO 12944
- For brake disc thickness W = 30 mm; larger brake disc thicknesses can be achieved with the use of a spacer installed by the customer

## Accessories

- Optional painting with surface coating class C4-H or C5M-H (offshore) according to ISO 12944

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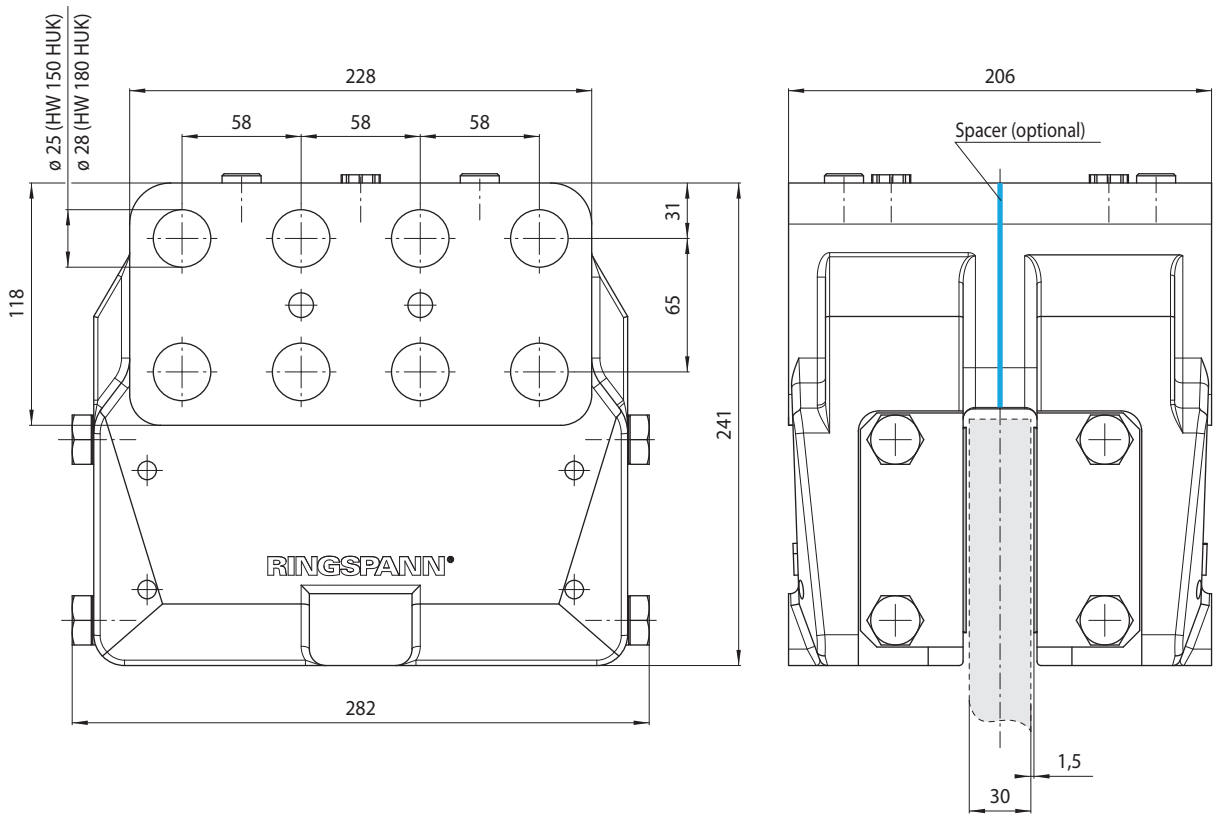
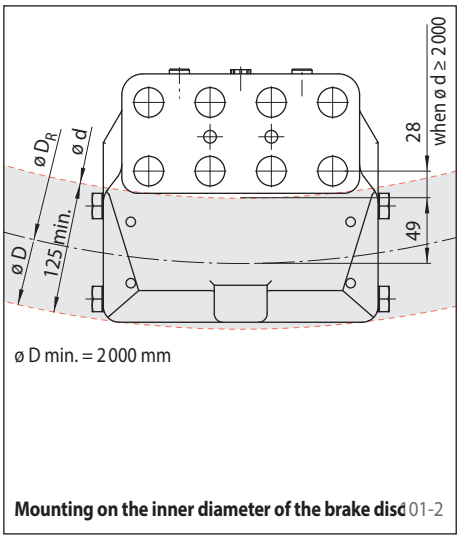
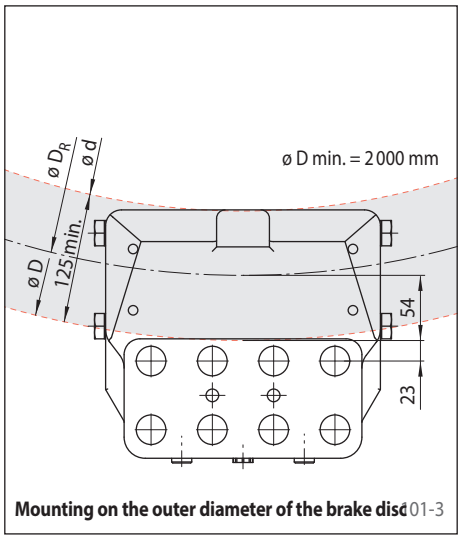



101-1

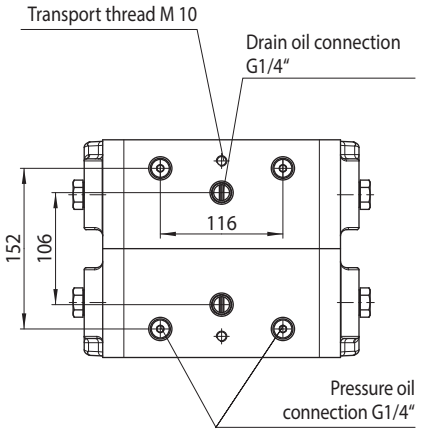
## Mounting




**Mounting on the inner diameter of the brake disc** 101-2




**Mounting on the outer diameter of the brake disc** 101-3




**Supply connections** 101-4

## Calculation of the friction diameter

Mounting on the inner diameter of the brake disc:

$D_R = d + (2 \cdot 49\ mm)$

(when d ≥ 2000 mm)

Mounting on the outer diameter of the brake disc:

$D_R = D - (2 \cdot 54\ mm)$

## Calculation of the braking torque

HW 150 HUK:

$$M_B = \frac{D_R}{1{,}132} \cdot p \cdot \mu$$

HW 180 HUK:

$$M_B = \frac{D_R}{0{,}786} \cdot p \cdot \mu$$

## Formula symbols

| | | |
|---|---|---|
| $M_B$ | = | Braking torque [Nm] |
| D | = | Outer diameter brake disc [mm] |
| d | = | Inner diameter brake disc [mm] |
| $D_R$ | = | Friction diameter [mm] |
| p | = | Oil pressure [bar] |
| μ | = | Friction coefficient |