# **Brake Calipers HW 180 HUK**

## **RINGSPANN®**

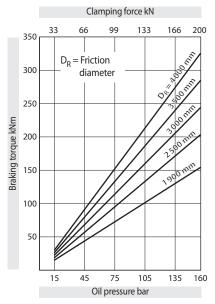
# hydraulically activated – non-releasing as yaw brake in wind turbines



Features	Code	
Brake Caliper	Н	
Standard	W	
With piston diameter 2 x 90 mm	180	
Hydraulically activated	Н	
Non-releasing	U	
No adjustment to accommodate friction block wear	K	
Max. clamping force 200 kN	200	
Example for ordering		
Brake Caliper HW 180 HUK, max. clamping force 200 kN:		

HW 180 HUK - 200

## **Technical Data**



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

Oil pressure: min. 15 bar

max. 160 bar

Oil volume: max. 190 cm<sup>3</sup>

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

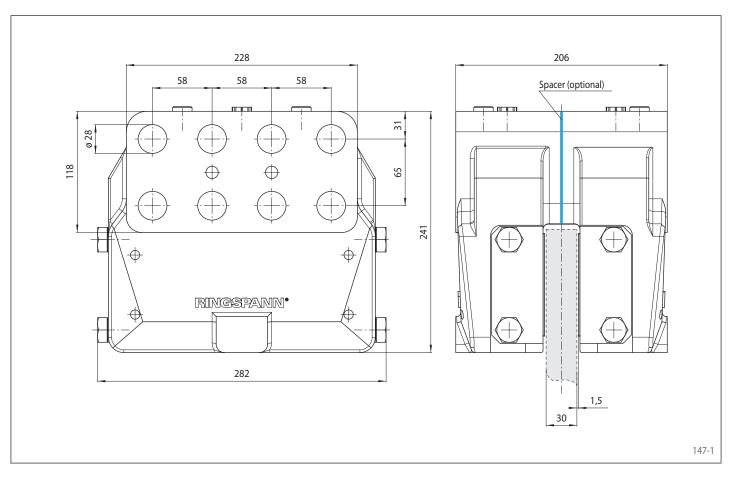
#### **Accessories**

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

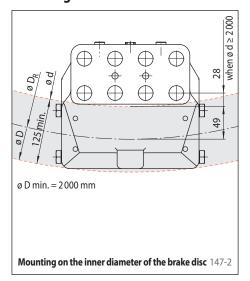
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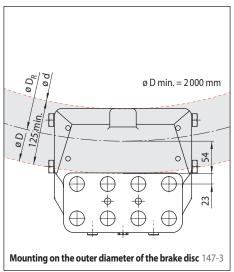


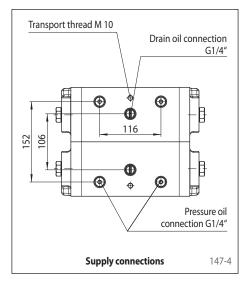
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## Mounting







#### Calculation of the friction diameter

Mounting on the inner diameter of the brake disc:

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

(when  $d \ge 2000 \text{ mm}$ )

Mounting on the outer diameter of the brake disc:

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

## Calculation of the braking torque

$$M_B = \frac{D_R}{0.786} \cdot p \cdot \mu$$

### Formula symbols

 $M_R = Braking torque [Nm]$ 

D = Outer diameter brake disc [mm]

d = Inner diameter brake disc [mm]

 $D_R = Friction diameter [mm]$ 

p = Oil pressure [bar]

 $\mu$  = Friction coefficient