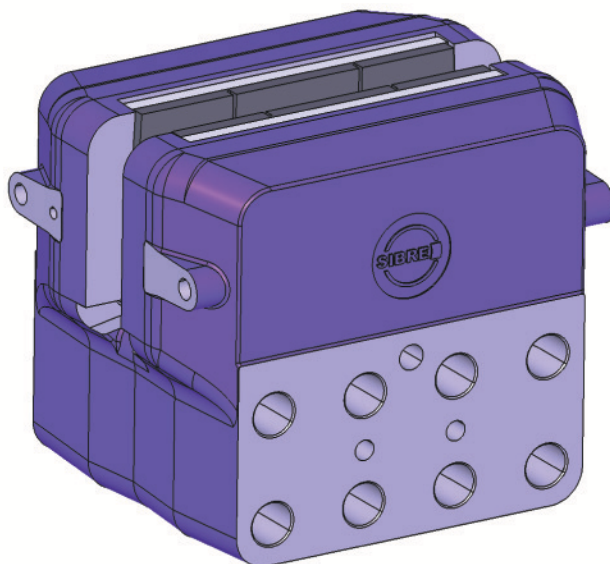




## Description:

- The ABT 75/90 G brake is an Active Brake, Hydraulically Applied, braking force by variation of operating pressure.
- The ABT 75/90 G brake consists of two independent caliper halves with opposite hydraulic cylinders. ABT brakes are suitable for horizontal and vertical brake discs under any angular displacement.

## Design Advantage:

- Compact and Robust construction
- Fast response time, fast braking for maximum safety
- Special design to reduce braking noise
- Stainless steel piston
- High performance lining with stable friction coefficient
- Suitable for low temperature application
- Long life time
- Easy maintenance

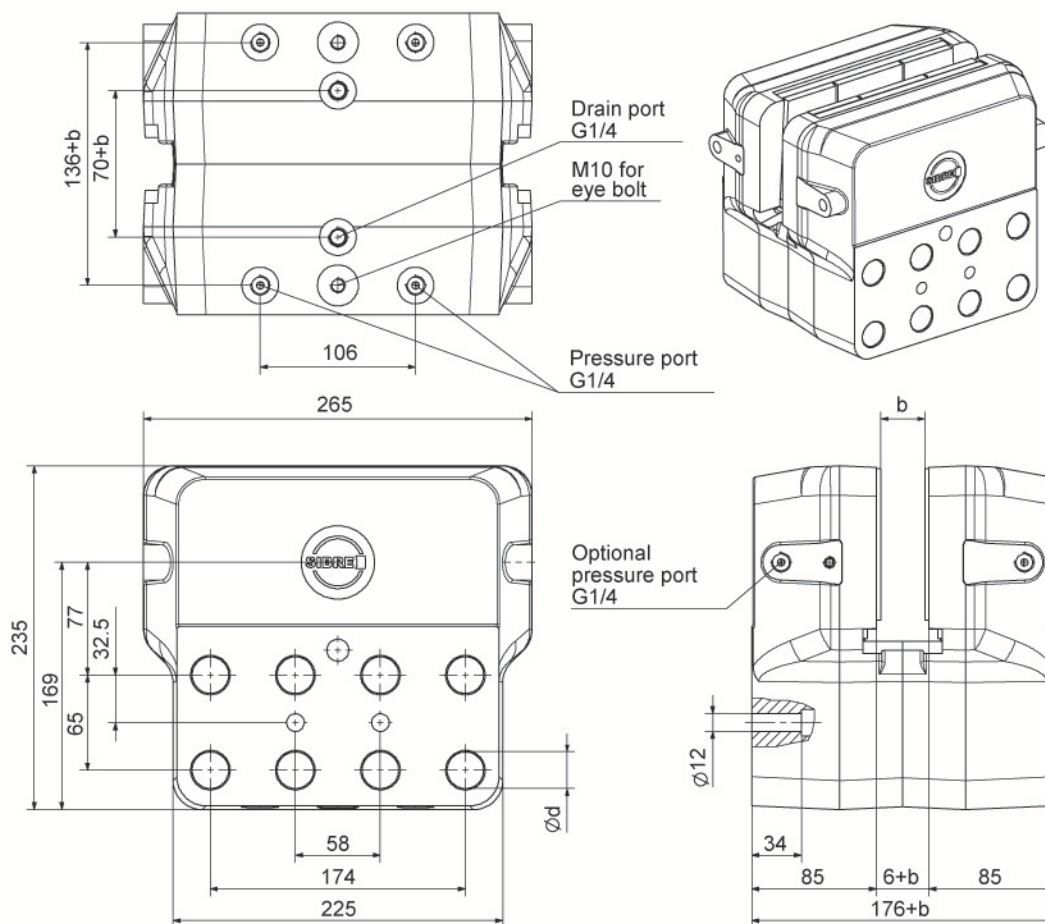
## Application:

**Stopping and / or Holding brake for Wind Power Generator**



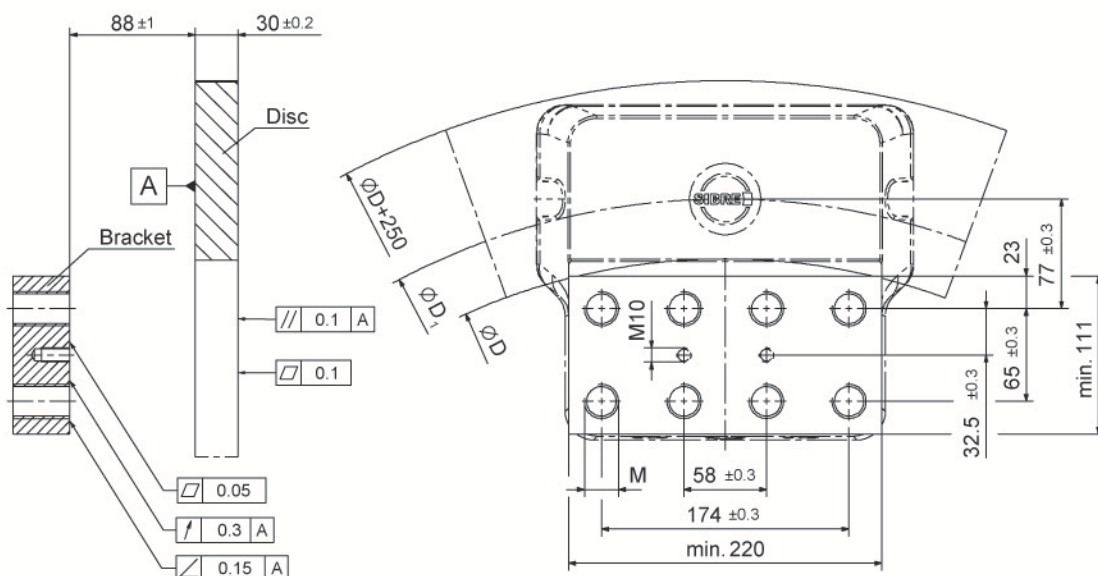
# Disc Brake / Yaw Calliper ABT 75 G + ABT 90 G

M 1501 334 EN  
05.2008



|                                                                 |                   | ABT 75 G             | ABT 90 G              |
|-----------------------------------------------------------------|-------------------|----------------------|-----------------------|
| Piston diameter                                                 | $\varnothing d_p$ | 75 mm                | 90 mm                 |
| Piston area each side                                           | $A_p$             | 8835 mm <sup>2</sup> | 12723 mm <sup>2</sup> |
| Operating pressure                                              | p                 | 160 bar              |                       |
| Max. plant pressure                                             | $p_{max}$         | 180 bar              |                       |
| Oil volume per 1 mm stroke                                      | $V_{oil}$         | 18 cm <sup>3</sup>   | 26 cm <sup>3</sup>    |
| Lining type                                                     |                   | organic              |                       |
| Lining surface                                                  | $A_L$             | 206 cm <sup>2</sup>  |                       |
| Max. lining wear                                                | $s_L$             | 7 mm                 |                       |
| Nominal friction static                                         | $\mu$             | 0.4                  |                       |
| Max. braking force                                              | $F_{Br max}$      | 113 000 N            | 162 000 N             |
| Disc thickness                                                  | b                 | 20 – 70 mm           |                       |
| Mounting boreholes                                              | $\varnothing d$   | $\varnothing 25$ mm  | $\varnothing 28$ mm   |
| Temperature range<br>(for lower temperatures please contact us) | T                 | -20°C to 70°C        |                       |
| Weight                                                          | m                 | 65 kg                |                       |

## Example for inside mounting (b = 30)



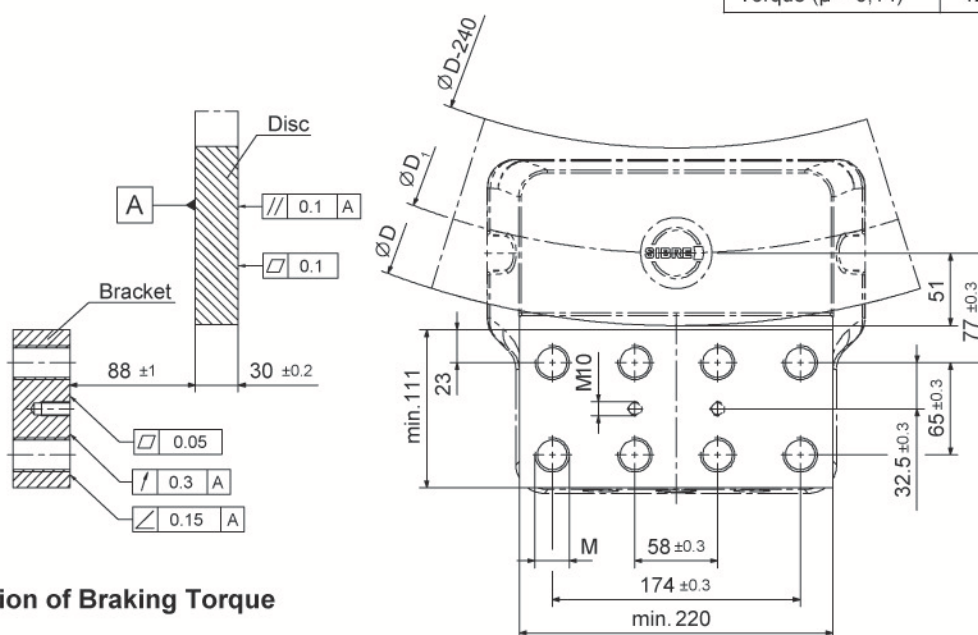
| ØD    | ØD1   |
|-------|-------|
| 900   | 984   |
| 1000  | 1087  |
| 1200  | 1290  |
| 1400  | 1493  |
| 1600  | 1695  |
| 1800  | 1897  |
| 2000  | 2099  |
| >2000 | D+100 |

### Calculation of Braking Torque

$$M_{Br} = F_{Br} \cdot \frac{D_1}{2} = 2 \cdot A_P \cdot p \cdot \mu \cdot \frac{D_1}{2} = A_P \cdot p \cdot \mu \cdot D_1$$

|                         | ABT 75 G | ABT 90 G |
|-------------------------|----------|----------|
| Mounting bolts M        | M24-12.9 | M27-12.9 |
| Torque ( $\mu = 0,14$ ) | 1200 Nm  | 1800 Nm  |

## Example for outside mounting (b = 30)



|                         | ABT 75 G | ABT 90 G |
|-------------------------|----------|----------|
| Mounting bolts M        | M24-12.9 | M27-12.9 |
| Torque ( $\mu = 0,14$ ) | 1200 Nm  | 1800 Nm  |

### Calculation of Braking Torque

$$D_1 = D - 102$$

$$M_{Br} = F_{Br} \cdot \frac{D_1}{2} = 2 \cdot A_P \cdot p \cdot \mu \cdot \frac{D_1}{2} = 2 \cdot A_P \cdot p \cdot \mu \cdot \left( \frac{D}{2} - 51 \right)$$