

Metal Bellows Coupling with Intermediate Pipe I Series WDE

- /// cost-effective version with reduced operational parameters
- /// variable length up to 3 m // simple installation // split-hub design
- /// backlash-free, precise torque transfer // no additional intermediate bearing

technical data:

| WDE | T _N [Nm] | T _{max} [Nm] | torsional stiffness [Nm/arcmin] | | | moment of inertia [10 ⁻³ kgm ²] | | | max. speed approx. [min ⁻¹] | | | mass approx. [kg] | | |
|-----|------------------------|--------------------------|------------------------------------|------|------|---|------|------|--|-------|-----|----------------------|-----|-----|
| | | | 1m | 2m | 3m | 1m | 2m | 3m | 1m | 2m | 3m | 1m | 2m | 3m |
| 40 | 40 | 80 | 0,46 | 0,23 | 0,15 | 0,4 | 0,6 | 0,8 | 2.900 | 700 | 300 | 1,1 | 1,8 | 2,5 |
| 80 | 80 | 160 | 1,1 | 0,5 | 0,4 | 1,2 | 1,6 | 2,0 | 3.000 | 900 | 400 | 1,7 | 2,6 | 3,5 |
| 160 | 160 | 320 | 2,0 | 1,0 | 0,6 | 2,0 | 2,7 | 3,4 | 3.000 | 1.100 | 500 | 2,3 | 3,4 | 4,6 |
| 250 | 250 | 500 | 4,9 | 2,4 | 1,6 | 4,8 | 6,7 | 8,7 | 3.000 | 1.500 | 650 | 3,6 | 5,4 | 7,1 |
| 500 | 500 | 1000 | 10,5 | 5,2 | 3,5 | 10,5 | 14,5 | 18,5 | 3.000 | 1.900 | 850 | 5,3 | 7,5 | 9,7 |

maximum temperature range: -40°C up to +90°C

maximum axial shaft misalignment: $\Delta A = \pm 1,5 \text{ mm}$

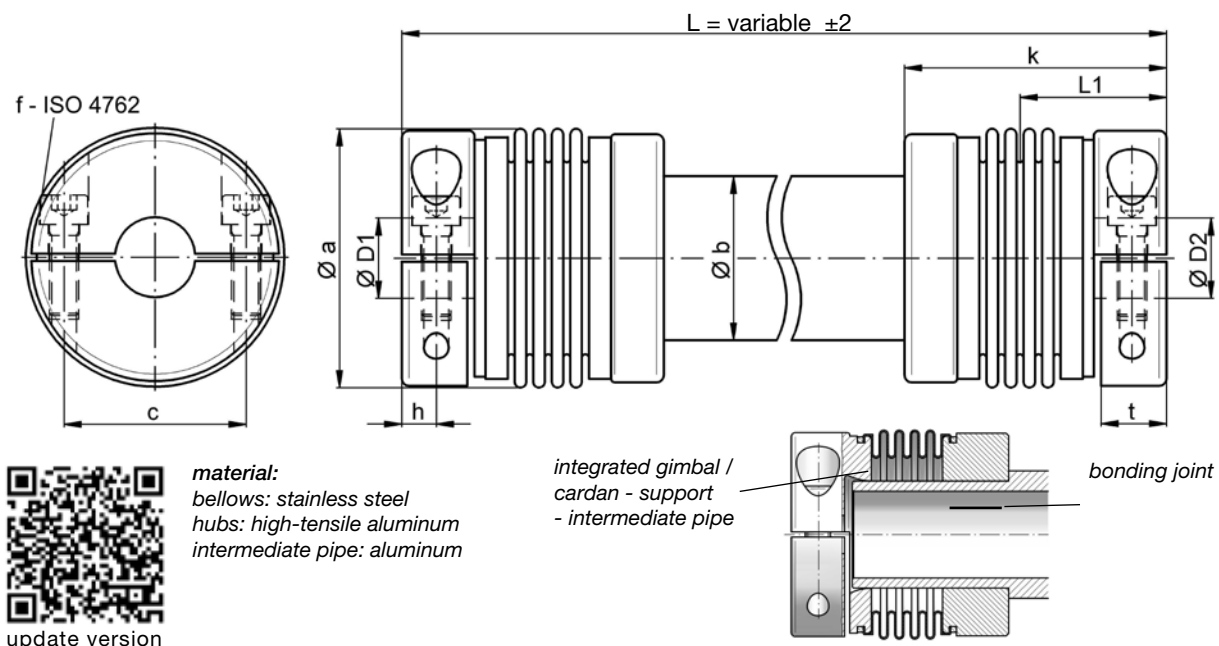
maximum angular shaft misalignment: $\alpha = 1^\circ$

maximum lateral shaft misalignment: $\Delta R = \tan \alpha \cdot L_x = L - (2 \cdot L_1) / \tan 1^\circ = 0,0174$

calculation example:

WDE 80 / L = 900 mm -> $\Delta R = \tan \alpha \cdot L_x$

with $L_x = 900 - (2 \cdot 40) = 820 \text{ mm}$; $\alpha = 1^\circ$ $\Delta R = \tan 1^\circ \cdot 820 \text{ mm} \approx 14 \text{ mm}$



update version

material:
bellows: stainless steel
hubs: high-tensile aluminum
intermediate pipe: aluminum

integrated gimbal /
cardan - support
- intermediate pipe

bonding joint

Dimensions [mm]: length dimensions according to DIN ISO 2768 cH

| WDE | Øa | Øb | c | f-tightening torque* | h | L1 | k | t | L _{min} | ØD1/2 min | ØD1/2 max(*) |
|-----|-----|----|----|----------------------|------|----|------|----|------------------|--------------|-----------------|
| 40 | 57 | 35 | 38 | 2x M6 - 14Nm | 8 | 37 | 62 | 16 | 112 | 14 | 30 |
| 80 | 72 | 45 | 50 | 2x M8 - 35Nm (30) | 9,5 | 40 | 72 | 18 | 124 | 22 | 38 (31) |
| 160 | 83 | 55 | 57 | 2x M10 - 65Nm (50) | 10,5 | 45 | 84,5 | 21 | 144 | 22 | 43 (37) |
| 250 | 103 | 70 | 70 | 2x M12 - 115Nm (90) | 12,5 | 49 | 92,5 | 24 | 155 | 25 | 55 (44) |
| 500 | 123 | 90 | 87 | 2x M14 - 180Nm (140) | 15 | 61 | 109 | 30 | 190 | 32 | 70 (54) |

(*) note: reduced tightening torque (see brackets) for bigger hub bore diameter - see also Ø D 1/2max!

order example: WDE 250 - D1 = 28 F6 D2 = 38 F6 L = 980