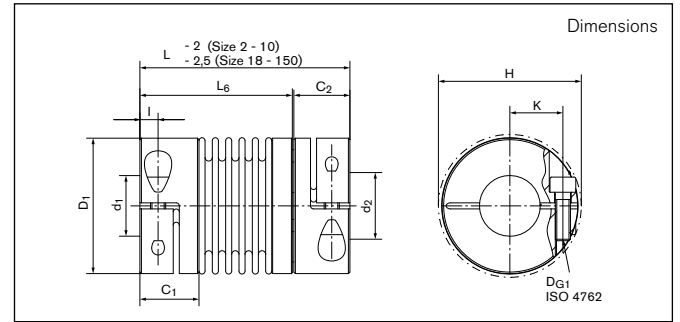


Backlash-free Metal Bellows Couplings

GERWAH® PKN



Dimensions

d₁, d_{2min} = Min. bore diameter

d₁, d_{2max} = Max. bore diameter

d_{1k}, d_{2kmin} = Min. bore diameter with keyway
acc. to DIN 6885-1

d_{1k}, d_{2kmax} = Max. bore diameter with keyway
acc. to DIN 6885-1

C₁ = Guided length in hub boring

C₂ = Guided length in hub boring d₂

D₁ = Outer diameter hub

H = Clearance diameter

I = Distance between center screw hole
and hub end

K = Distance shaft axis - clamping screw axis

L = Total length

L₆ = Length of basic part

| Size | d ₁ min-max | | d ₂ min-max | | d _{1k} min-max | | d _{2k} min-max | | C ₁ | C ₂ | D ₁ | H | I | K | L | L ₆ |
|------|------------------------|-------------|------------------------|-------------|-------------------------|-------------|-------------------------|-------------|----------------|----------------|----------------|----|----|---|----|----------------|
| | Without keyway | With keyway | Without keyway | With keyway | Without keyway | With keyway | Without keyway | With keyway | | | | | | | | |
| | mm | | mm | | mm | | mm | | mm | | mm | | mm | | mm | |
| 2 | 3 - 14 | 3 - 9 | 6 - 14 | 6 - 9 | 11 | 11,5 | 25 | 28 | 4 | 9 | 39 | 26 | | | | |
| 4,5 | 6 - 17 | 6 - 16 | 6 - 17 | 6 - 16 | 13 | 13 | 33 | 35 | 5 | 12 | 47,5 | 33 | | | | |
| 10 | 6 - 24 | 6 - 22 | 6 - 24 | 6 - 22 | 14 | 13 | 40 | 42 | 5 | 16 | 53,5 | 39 | | | | |
| 18 | 8 - 26 | 8 - 22 | 8 - 26 | 8 - 22 | 20 | 18,5 | 45 | 48 | 6 | 18 | 70,5 | 50 | | | | |
| 30 | 10 - 30 | 10 - 28 | 10 - 30 | 10 - 28 | 25 | 22 | 55 | 56 | 8 | 20 | 72 | 48 | | | | |
| 60 | 10 - 35 | 10 - 30 | 10 - 35 | 10 - 30 | 29 | 29 | 66 | 67 | 10 | 24 | 88,5 | 57 | | | | |
| 80 | 14 - 42 | 14 - 42 | 14 - 42 | 14 - 42 | 34 | 33 | 80 | 85 | 12 | 28 | 102,5 | 67 | | | | |
| 150 | 14 - 42 | 14 - 42 | 14 - 42 | 14 - 42 | 34 | 33 | 80 | 85 | 12 | 28 | 102,5 | 67 | | | | |

Transmission of the couplings transmissible torque T can not longer be guaranteed for certain with borings < d_{min}. Types with borings < d_{min}, however, can be supplied.

Moment of inertia and weight (mass) are calculated with reference to the largest bore size.

To continue see next page

Backlash-free Metal Bellows Couplings
GERWAH® PKN
Technical Data

| | | |
|---|--|---|
| T = Transmissible torque at given T_A | C_a = Axial spring stiffness | J = Total moment of inertia |
| n_{max} = Max. rotation speed | ΔKa = Max. permissible axial misalignment | Gw = Weight |
| C_{Tdyn} = Dynamic torsional stiffness | ΔKw = Max. permissible angularly misalignment | D_{G1} = Thread diameter |
| C_r = Radial spring stiffness | ΔKr = Max. permissible radial misalignment | T_{A1} = Tightened torque of clamping screw (G1) |

| Size | T | n _{max} | C _{Tdyn} | C _r | C _a | ΔKa | ΔKw | ΔKr | J | Gw | D _{G1} | T _{A1} |
|------|-----|------------------|------------------------|----------------|----------------|-----|--------|------|------------------------------------|-------|-----------------|-----------------|
| | Nm | 1/min | 10 ³ Nm/rad | N/mm | | mm | Degree | mm | 10 ⁻³ Kg ^m ² | kg | mm | Nm |
| 2 | 2,4 | 22900 | 1,5 | 147 | 18 | 0,4 | 1,2 | 0,2 | 0,02 | 0,032 | 1 x M3 | 1,5 |
| 4,5 | 5,5 | 17600 | 6,5 | 444 | 47 | 0,3 | 1,2 | 0,1 | 0,03 | 0,066 | 1 x M4 | 3 |
| 10 | 12 | 14100 | 8 | 361 | 46 | 0,4 | 1,2 | 0,15 | 0,04 | 0,092 | 1 x M4 | 3 |
| 18 | 22 | 12700 | 8 | 50 | 200 | 0,5 | 1,5 | 0,2 | 0,054 | 0,164 | 1 x M5 | 6 |
| 30 | 36 | 10200 | 35 | 50 | 720 | 0,4 | 1 | 0,1 | 0,123 | 0,280 | 1 x M6 | 12 |
| 60 | 75 | 8600 | 75 | 90 | 1100 | 0,4 | 1 | 0,1 | 0,325 | 0,494 | 1 x M8 | 30 |
| 80 | 95 | 6800 | 130 | 80 | 1200 | 0,4 | 1 | 0,2 | 0,884 | 0,855 | 1 x M10 | 60 |
| 150 | 180 | 6800 | 150 | 150 | 2000 | 0,4 | 1 | 0,2 | 0,884 | 0,855 | 1 x M10 | 85 |

Transmissible torque T [Nm]

| Size | Ø3 | Ø4 | Ø5 | Ø6 | Ø8 | Ø10 | Ø12 | Ø14 | Ø15 | Ø18 | Ø20 | Ø21 | Ø24 | Ø27 | Ø28 | Ø30 | Ø32 | Ø35 | Ø36 | Ø38 | Ø41 | |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 2 | 1,7 | 2,3 | 2,4 | 2,4 | 2,4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4,5 | --- | --- | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | --- | --- | --- | 8 | 11 | 12 | 12 | 12 | 12 | 12 | 12 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 18 | --- | --- | --- | --- | --- | 18 | 22 | 22 | 22 | 22 | 22 | 22 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 30 | --- | --- | --- | --- | --- | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | --- | --- | --- | --- | --- | --- | --- | --- |
| 60 | --- | --- | --- | --- | --- | --- | --- | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | --- | --- | --- | --- | --- | --- | --- |
| 80 | --- | --- | --- | --- | --- | --- | --- | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| 150 | --- | --- | --- | --- | --- | --- | --- | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 |

Ordering example: PKN

| Series/Size | Bore diameter d ₁ | Bore diameter d ₂ | Further details |
|-------------|------------------------------|------------------------------|-----------------|
| PKN 150 | 30 | 35 | * |

* Keyway or stainless steel

Subject to technical changes.