

Bellows Coupling

with Clamping Hub

Type 2301A...

Torsion proof bellows coupling for the installation of torque sensors with fixed housing or mounting support into the shaft assembly.

- Low moment of inertia
- Suited for space restricted installations
- Free of wear and maintenance

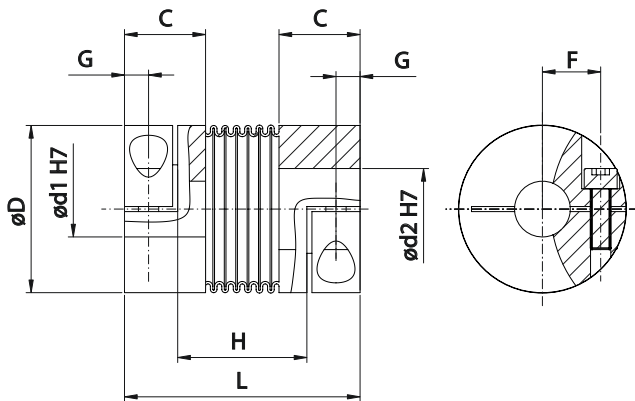
Description

Bellows couplings Type 2301A... are torsionally rigid, but angularly and axially flexible. Bellows made of highly flexible high-grade stainless steel compensate axial, radial and angular misalignment of the shaft assembly.

The bellows coupling Type 2301A... is characterised by low moment of inertia and is especially suited for space restricted installations.

If couplings are properly selected, duly assembled and used, the lifetime is nearly unlimited.

Dimensions



Application

Two double-flexible bellows couplings provide compensation, when torque sensors with fixed housing are required. Compensation of misalignment is always needed to avoid measurement error and damage to the sensor. Installation of sensors with fixed housing or mounting support requires double-flexible couplings on both sides of the sensor. Each coupling is mounted via clamping hubs on both sides. The frictional clamped connection guarantees absolutely backlash-free installation.

Inside diameters ($\varnothing d1$ and $\varnothing d2$) of the clamping hubs can be configured individually. This allows integrating the torque sensor into nearly any application.

Type 2301A...		15	30	60	80	150	200	300	500	800	1500
T_{KN}	N-m	15	30	60	80	150	200	300	500	800	1 500
L	mm	59	69	83	94	95	105	111	133	140	166
Hole diameters $\varnothing d1/\varnothing d2$ (min. ... max.)	mm	8 ... 28	10 ... 30	12 ... 35	14 ... 42	19 ... 42	22 ... 45	24 ... 60	35 ... 60	40 ... 75	50 ... 80
$\varnothing D$	mm	49	55	66	81	81	90	110	124	134	157
C	mm	22	27	31	36	36	41	43	51	45	55
F	mm	17	19	23	27	27	31	39	41	2x 48	2x 55
G	mm	6,5	7,5	9,5	11	11	12,5	13	16,5	18	22,5
H	mm	29	35	41	47	48	51	55	62	65,5	71
M	(ISO 4762)	M5	M6	M8	M10	M10	M12	M12	M16	2x M16	2x M20

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Technical Data

Type 2301A...		15	30	60	80	150	200	300	500	800	1500
Nominal torque	T_{KN} N·m	15	30	60	80	150	200	300	500	800	1 500
Max. torque	T_{Kmax}	Brief overloads are acceptable up to 1,5 times the value specified									
Max. speed	n_{max} rpm	< 10 000 / > 10 000 on request									
Mass approx. ¹⁾	m kg	0,15	0,3	0,4	0,8	1,7	2,5	4	7,5	7	12
Hole diameter $\varnothing d1/\varnothing d2$ min. ²⁾	mm	8	10	12	14	19	22	24	35	40	50
Hole diameter $\varnothing d1/\varnothing d2$ max. ²⁾	mm	28	30	32	42	42	45	60	60	75	80
Tightening torque of fastening screw	N·m	8	15	40	50	70	120	130	200	250	470
Temperature range	°C	-30 ... +120									
Hub material		Al	Al	Al	Al	St	St	St	St	St	St
Permitted axial offset	ΔK_a mm	1	1	1,5	2	2	2	2,5	2,5	3,5	3,5
Permitted radial offset	ΔK_r mm	0,15	0,2	0,2	0,2	0,2	0,25	0,25	0,3	0,35	0,35
Permitted angular offset	ΔK_w °	1	1	1	1	1	1	1	1	1,5	1,5
Rotary spring rate x 10^{-3}	C_{Tdyn} N·m/rad	20	39	76	129	175	191	501	510	780	1 304
Moment of inertia ¹⁾	J $10^{-3} \cdot \text{kg} \cdot \text{m}^2$	0,06	0,12	0,32	0,8	1,9	3,2	7,6	14,3	24,3	49,2

¹⁾ Moment of inertia and mass relative to hubs with maximum hole size

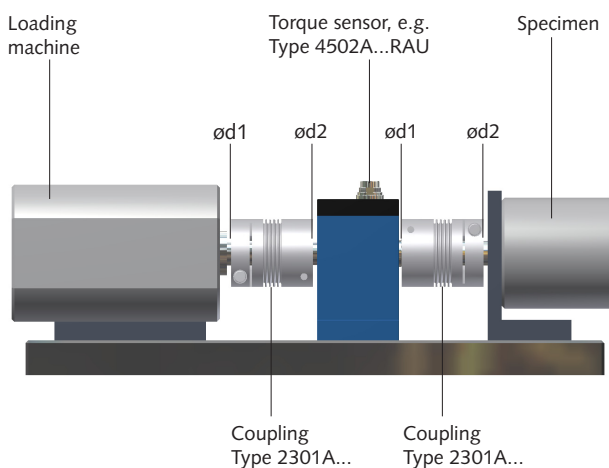
²⁾ Please specify desired hole diameters with order

Maximum misalignment values of ΔK_a , ΔK_r , und ΔK_w can be utilized at the same time.

Included Accessories

- All necessary bolts for coupling assembly are included

Example of Application



Ordering Key

Type 2301A sp

Coupling Size

Nominal torque 15 N·m	15
Nominal torque 30 N·m	30
Nominal torque 60 N·m	60
Nominal torque 80 N·m	80
Nominal torque 150 N·m	150
Nominal torque 200 N·m	200
Nominal torque 300 N·m	300
Nominal torque 500 N·m	500
Nominal torque 800 N·m	800
Nominal torque 1 500 N·m	1500

Please specify desired hole diameters $\varnothing d1$ and $\varnothing d2$ with order (additional plaintext). Take notice of min. and max. diameters (see dimensions table).

Ordering Example:

Bellows coupling, size 60.

Hole diameters $\varnothing d1 = 20$ mm, $\varnothing d2 = 22$ mm.

Type 2301A60sp