

Torsion Proof Miniature Coupling

Type 2303A...

Double-flexible with Clamping Hub

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

- High speed range
- Low weight, low moment of inertia
- High torsion resistance
- Free of wear and maintenance
- Non-corroding
- Antimagnetic

Description

Miniature couplings Type 2303A... are torsionally rigid, but angularly and axially flexible. The flexible discs or disc assemblies are connected alternately to both hubs and the center part by rivets.

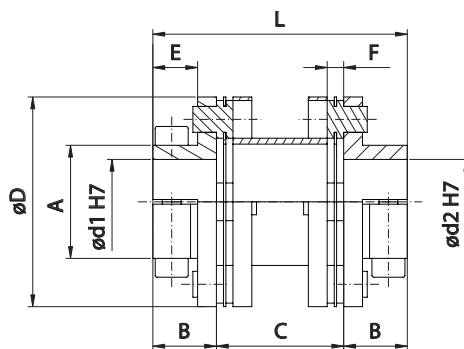
Axial, radial and angular misalignment of the shaft assembly can be applied in that way.

All supporting parts (hubs and center part) are made of light metal alloy. Miniature couplings Type 2303A... are therefore characterised by low weight, low moment of inertia and are non-corroding and antimagnetic.

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



Dimensions



Application

Two double-flexible couplings provide compensation, when torque sensors with fixed housing must be installed.

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 halves.

Inside diameters ($\phi d1^{H7}$ and $\phi d2^{H7}$) of the clamping hubs can be configured individually. This allows integrating the torque sensor into nearly any application.

Type 2303A...		25	37	50	62	75
Nominal torque T_{KN}	N·m	0.39	1.56	6.17	24.7	36.2
ϕD	mm	25.4	35.8	44.5	57.4	64
Hole diameters $\phi d1/\phi d2$ (min. ... max.) H7	mm	3 ... 10	4 ... 14	6 ... 18	10 ... 24	12 ... 28
A	mm	13	19	24	30	34
B	mm	9	13.2	13.4	16.1	18
C	mm	16	21.6	27.2	33.8	35
E	mm	6.6	10	9.4	11.1	13
F	mm	2.2	2.7	3.3	4.4	5
L	mm	34	48	54	66	71

Technical Data

Type 2303A...			25	37	50	62	75
Nominal torque	T_{KN}	N·m	0.39	1.56	6.17	24.7	36.2
Max. torque	T_{Kmax}	N·m	0.54	2.19	8.64	34.6	50.7
Permitted axial offset	ΔK_a	mm	0.8	0.8	0.8	0.8	0.8
Permitted radial offset	ΔK_r	mm	0.7	0.7	0.7	0.7	0.7
Permitted angular offset (1 package)	ΔK_w	°	2	1.5	1	0.7	0.7
Rotary spring rate x 10 ⁻³	C_{Tdyn}	N·m/rad	0.425	1.324	2.984	5.179	8.088
Max. speed	n_{max}	rpm	64 000	44 000	36 000	28 000	24 000
Moment of inertia ¹⁾	J	kgmm ²	2.023	11.1	31.7	115.673	201.8
Mass ¹⁾	m	kg	0.028	0.077	0.133	0.26	0.355
Hole diameters $\phi d1/\phi d2$ (min. ... max.) ²⁾		mm	3 ... 10	4 ... 14	6 ... 18	10 ... 24	12 ... 28
Fastening torque clamping screws		N·m	0.78	1.35	3.07	6.1	10.4

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

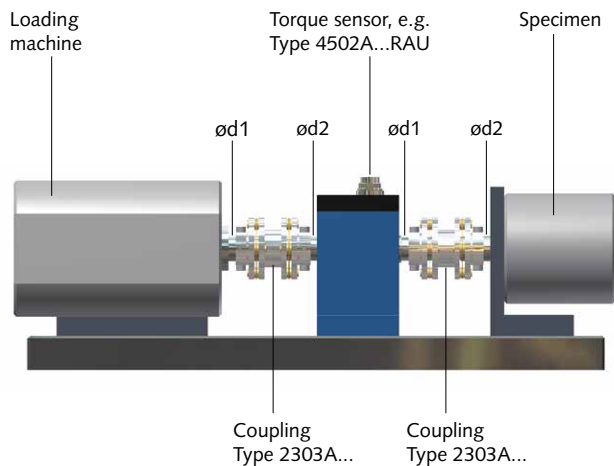
²⁾ Can only be ordered in whole numbers without decimal places

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

Coupling size

Nominal torque 0.39 N·m	25
Nominal torque 1.56 N·m	37
Nominal torque 6.17 N·m	50
Nominal torque 24.7 N·m	62
Nominal torque 36.2 N·m	75

Hole diameter $\phi H7$ in mm	xxx
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Hole diameter $\phi H7$ in mm	xxx
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Type 2303A

Observe min. and max. diameters (see dimensions table).

Ordering Example:

Type 2303A37-010-012

Torsion proof miniature coupling Type 2303A,
size 37,

hole diameter $\phi d1$ H7 = 10 mm: 010,

hole diameter $\phi d2$ H7 = 12 mm: 012