D2C
Designed to Customer

Reich

ELBO

Flexible Pin-type Coupling

www.reich-kupplungen.com

SIMPLY **POWERFUL.**

D2C – Designed to Customer

The guiding principle of Designed to Customer is the recipe for success behind REICH. In addition to the catalogue products, we supply our customers with couplings developed to their specific requirements. The designs are mainly based on modular components to provide effective and efficient customer solutions. The special nature of our close cooperation with our partners ranges from; consulting, development, design, manufacture and integration to existing environments, to customer-specific production, logistics concepts and after-sales service - worldwide.
This customer-oriented concept applies to both standard products and production in small batch sizes.

The company policy at REICH embraces, first and foremost, principles such as customer satisfaction, flexibility, quality, prompt delivery and adaptability to the requirements of our customers.

REICH provides you with not only a coupling, but a solution:
Designed to Customer – SIMPLY **POWERFUL.**

D2C
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ELBO
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Coupling Information

ELBO

General Technical Description

ELBO

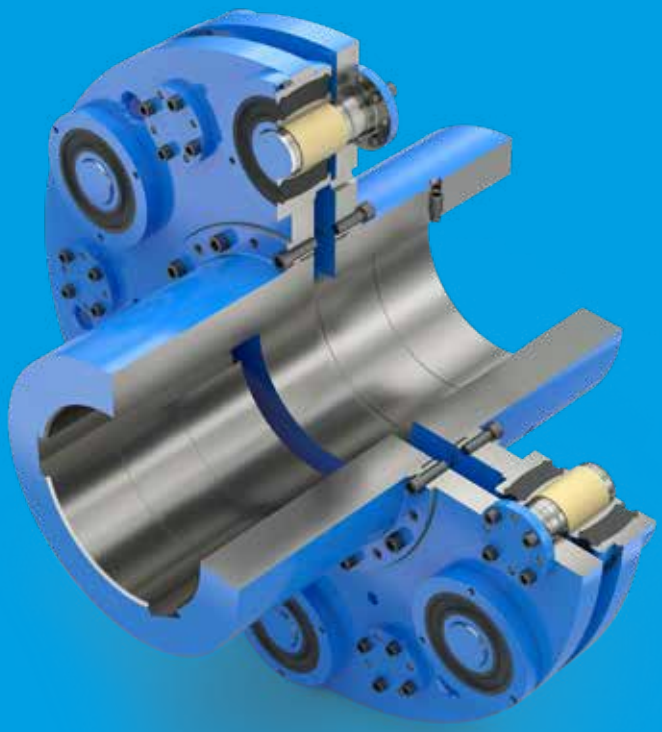
Flexible Pin-type Coupling

ELBO couplings are flexible pin-type couplings and designed to compensate for axial, radial and angular shaft displacements.
They provide for positive torque and speed transmission and dampen torque shocks and vibrations. The input and output sides of the coupling are of identical design.

Being mounted on either side, a maximum number of coupling elements can be accommodated on the flange on even the smallest of diameters. The specific design of the elastomer elements which are vulcanized onto the inner sleeve and the outer ring allows for axial length compensation with very low restorative forces. The maintenance-friendly coupling elements can be replaced without moving the coupled machine parts.

The ELBO series covers a torque range from 200 000 to 1 300 000 Nm.

REICH can also develop an optimised solution for non-standard designs following the principle “D2C - Designed to Customer”.



ELBO

Nominal torques from 200 000 Nm to 1 300 000 Nm

ELBO
Advantages

Salient features and advantages of ELBO couplings:

- Modular type
- Torque transmission up to 1 300 kNm
- Standard shaft-hub connection designed as a keyway connection. Alternative types of connection like internally or externally clamping shrink disk connections available on request
- Compensation of axial, radial and angular displacements
- Coupling elements available in different stiffnesses
- Ease of assembly thanks to the plug-in axial design
- Low axial restoring forces due to the slide bearing
- Fail-safe
- Maintenance-free
- Suited for ambient temperatures from -40 °C to +80 °C
- Typical applications: Cableways, mills, crushers, large scale compressors

ELBO

General Technical Data

Standard Types

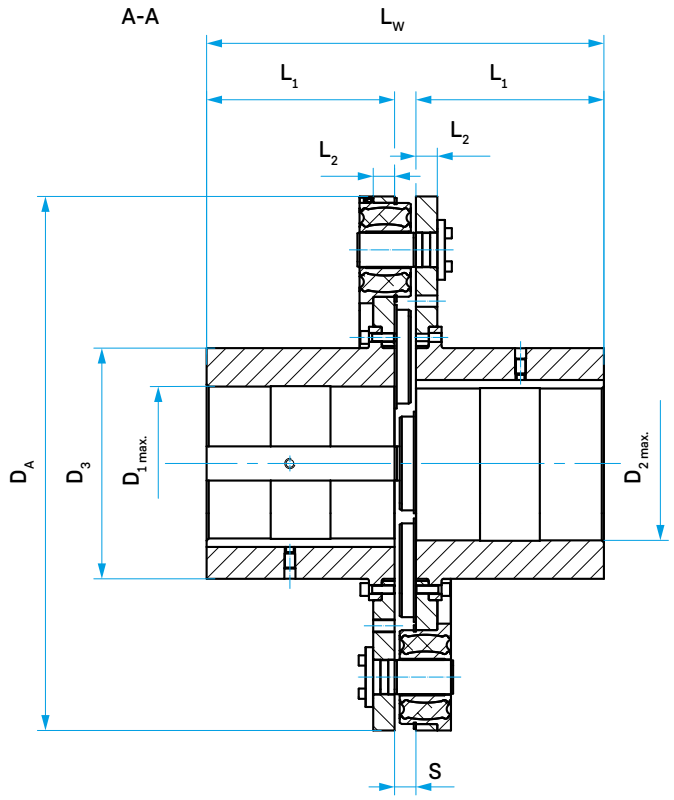
Coupling size	Element version	Nominal torque T_{KN} [kNm]	Maximum torque $T_{K\,max}$ [kNm]	Fatigue torque T_{KW} [kNm]	Dynamic torsional stiffness $C_{T\,dyn}$ [1)] [Nm/rad]	Relative damping Ψ [-]	Maximum speed n_{max} [min^{-1}]	Maximum shaft displacement Axial ΔK_a [mm]	Radial ΔK_r [mm]	Angular ΔK_w [°]
ELBO 200	NN	140	280	42	30000	0.8	1100	± 10	1.5	0.09
	SN	200	400	60	42000	0.9	1100	± 10	1.5	0.09
ELBO 250	NN	175	350	53	37000	0.8	1000	± 10	1.5	0.08
	SN	250	500	75	52000	0.9	1000	± 10	1.5	0.08
ELBO 350	NN	245	490	74	61200	0.8	850	± 10	1.5	0.07
	SN	350	700	105	86400	0.9	850	± 10	1.5	0.07
ELBO 500	NN	350	700	105	91200	0.8	800	± 10	1.5	0.07
	SN	500	1000	150	126400	0.9	800	± 10	1.5	0.07
ELBO 750	NN	525	1050	158	160000	0.8	700	± 10	1.5	0.06
	SN	750	1500	225	224000	0.9	700	± 10	1.5	0.06
ELBO 1000	NN	700	1400	210	124000	0.8	650	± 10	1.5	0.06
	SN	1000	2000	300	173000	0.9	650	± 10	1.5	0.06
ELBO 1300	NN	910	1820	273	178800	0.8	600	± 10	1.5	0.05
	SN	1300	2600	390	248400	0.9	600	± 10	1.5	0.05

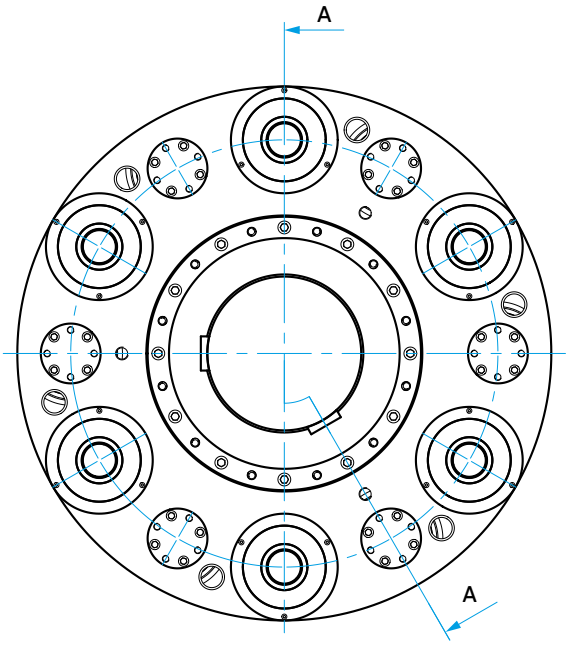
1) The values stated in the table for the dynamic torsional stiffness apply to a capacity utilization of 50% T_{KN}, an amplitude of 50% T_{KW} at a frequency of 10 Hz at an ambient temperature of 20 °C

Technical Note

The technical data applies only to the complete coupling or the corresponding coupling elements. It is the customer's/user's responsibility to ensure there are no inadmissible loads acting on any of the components. In particular, existing connections, e.g. bolted connections, must be checked with regard to the torques to be transmitted. If necessary, further measures, such as additional reinforcement with pins, may be necessary. It is the customer's/user's responsibility to make sure the dimensioning of the shaft and keyed or other connection, e.g. shrinking or clamping connection, is correct. All components that can rust are protected against corrosion as standard.

REICH have an extensive range of couplings and coupling systems to cover nearly every drive configuration. Customized solutions can be developed and manufactured even in small batches or as prototypes. In addition calculation programs are available for all necessary dimensioning.





Coupling details

Coupling size	L_W [mm]	L_1 [mm]	L_2 [mm]	D_A [mm]	D_3 [mm]	$D_{1\,max.}$ or $D_{2\,max.}$ [mm]	S [mm]	Number of elements [-]	Mass moment of inertia [kgm²]	Total mass [kg]
ELBO 200	730	340	50	1025	420	280	50	10	110.04	1030
ELBO 250	770	360	50	1100	450	300	50	10	145.01	1200
ELBO 350	930	440	50	1250	540	360	50	12	255.81	1750
ELBO 500	1010	480	50	1300	600	400	50	16	330.03	2130
ELBO 750	1210	580	50	1500	720	480	50	20	637.10	3280
ELBO 1000	1342	630	100	1635	780	520	82	10	1292.21	5040
ELBO 1300	1522	720	100	1760	900	600	82	12	1941.30	6730

Balancing

All ELBO couplings are balanced as standard to a balancing grade G 40 for n = 600 min^{-1} according to DIN ISO 21940 which is sufficient for typical speed ranges. Should a higher balancing grade be required, please specify the speed and the desired balancing grade when ordering.

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Industrial solutions:

- Power generation
- Mobile applications
- Test benches
- Pumps & compressors
- Industry
- Ship & port engineering

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