

# Shaft couplings

## Properties of different shaft couplings



Coupling	Nickel bellow coupling	Membrane coupling	Sliding disc coupling (Oldham type)	Double loop coupling
<b>Description</b>	High-performance precision coupling with excellent kinematic properties.	Precision coupling with excellent kinematic properties. Dynamically balanced construction.	Multi-purpose coupling. Robust, user-friendly three-part coupling. Easy to fit.	Coupling with high tolerance for angular, radial and axial movements.
<b>Areas of application</b>	First-class applications with high requirements for measurement accuracy.	High-speed applications where high accuracy is required. Harsh environments with independent drive shafts.	Applications where simple installation and electrical insulation is required.	Normal applications with limited speed and with low accuracy requirements.
<b>Speeds</b>	Max 5000 rpm	Max 5000 rpm	Max 3000 rpm	Max 3000 rpm
<b>Max torque for a Ø 10 mm shaft coupling</b>	328 Ncm	5,6 Nm	4 Nm	1,8 Nm
<b>Max misalignment compensation for a Ø 10 mm shaft coupling</b>	Angular 10° Radial 0,43 mm Axial 1,78 mm	Angular 3° Radial 0,2 mm Axial ±0,2 mm	Angular 0,5° Radial 0,2 mm Axial ±0,1 mm	Angular 15° Radial 3,2 mm Axial ±7,5 mm
<b>Temperature</b>	-40°C .. +120°C	-40°C .. +120°C	-20°C .. +60°C	-40°C .. +100°C
<b>Electrical insulation</b>	No	No	Yes	Yes
<b>Type of fitting for encoder shaft</b>	Set screw	Clamping or set screw	Set screw	Set screw



<b>Coupling</b>	<b>Stainless steel bellow coupling</b>
<b>Description</b>	For optimal balance of misalignments, anti-vibration, and very large torsional stiffness.
<b>Areas of application</b>	High performance with runflat and mechanical redundancy.
<b>Speeds</b>	Max 10000 rpm
<b>Max torque for a Ø 10 mm shaft coupling</b>	200 Ncm
<b>Max misalignment compensation for a Ø 10 mm shaft coupling</b>	Angular 3° Radial 0,3 mm Axial 0.45 mm
<b>Temperature</b>	-30°C .. +120°C
<b>Electrical insulation</b>	No
<b>Type of fitting for encoder shaft</b>	Set screw
<b>Runflat</b>	DIN6885

# Shaft couplings



## Bellow couplings

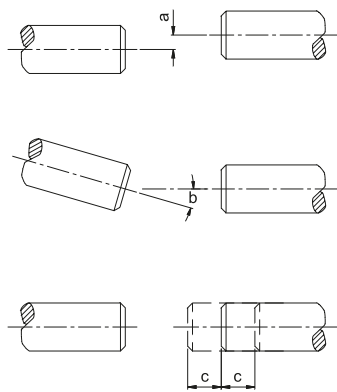
- High-performance precision coupling
- Excellent kinematic properties
- For applications with strict requirements for measurement accuracy



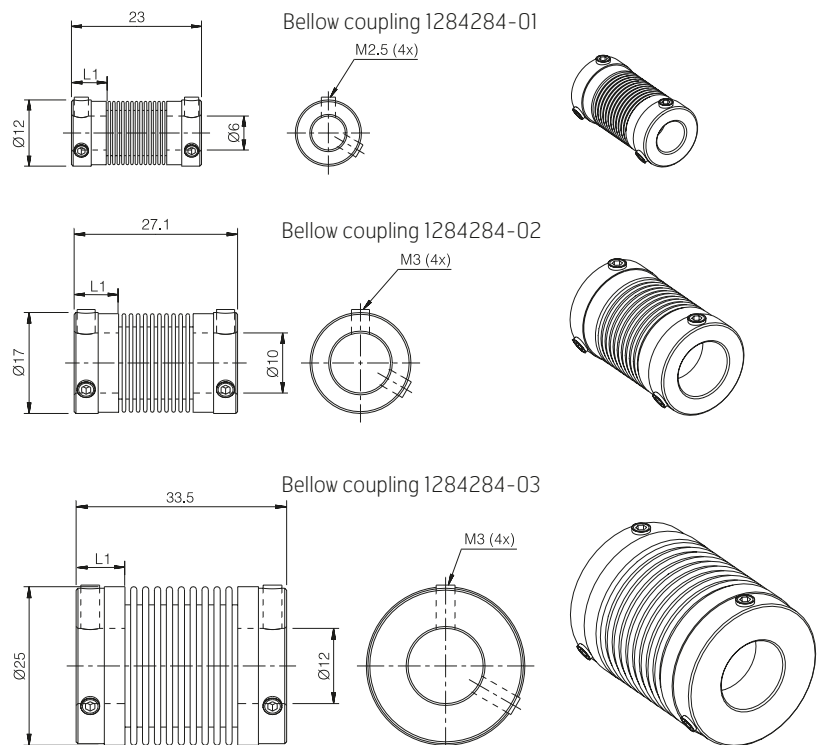
## Mechanical specification

Article number	1284284-01	1284284-02	1284284-03
Bore diameter (mm)	6-6	10-10	12-12
Type	Set screw	Set screw	Set screw
Dimensions (mm);			
L Length	23	27,1	33,5
L1 Bore length	6	7	7
ØD Diameter	12	17	25
Key size	1,3	1,5	1,5
Moment of inertia (kgm <sup>2</sup> )	1,85 x 10 <sup>-7</sup>	3,62 x 10 <sup>-7</sup>	16,1 x 10 <sup>-7</sup>
Weight	10 g	8,5 g	19,5 g
Max misalignment;			
Radial (a)	0,54 mm	0,43 mm	0,46 mm
Angular (b)	15°	10°	8°
Axial (c)	1,72 mm	1,78 mm	2,07 mm
Torsional rigidity	28 Nm/rad	102 Nm/rad	447 Nm/rad
Peak torque	13 Ncm	50 Ncm	328 Ncm

## Alignment



## Dimensions



# Shaft couplings



1322847-01

CE

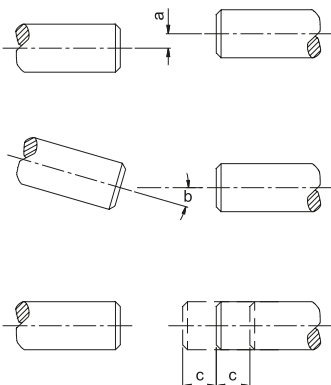
## Stainless steel Bellows couplings

- High-performance precision coupling
- Excellent kinematic properties
- For applications with high accuracy requirements

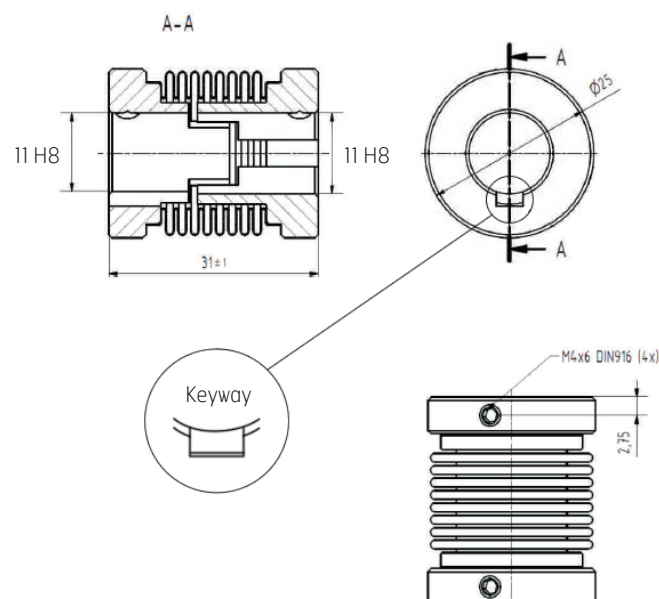
## Mechanical specification

Article number	1322847-01
Bore diameter (mm)	11-11
Type	Set screw
Dimensions (mm);	
L Length	31
L1 Bore length	8
ØD Diameter	25
Key size	4
Moment of inertia (kgm <sup>2</sup> )	9,1 x 10 <sup>-7</sup>
Weight	54 g
Max misalignment;	
Radial (a)	0,3 mm
Angular (b)	3°
Axial (c)	0,45 mm
Torsional rigidity	3 Nm/rad
Peak torque	200 Ncm
Shaft insertion	min. 6 mm / max. 11 mm

## Alignment



## Dimensions



# Shaft couplings

## Membrane couplings

- Precision coupling with excellent kinematic properties
- Dynamically balanced construction
- For high-speed applications where high accuracy is required

1282894, 1282926



1283872, 1283920



1284197, 1284215



1284234, 1284235

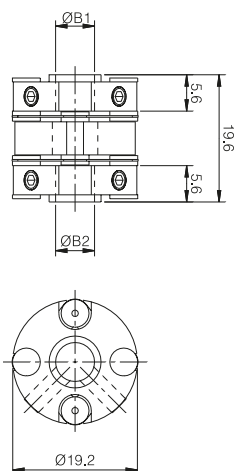


## Mechanical specification - Precisely aligned shafts

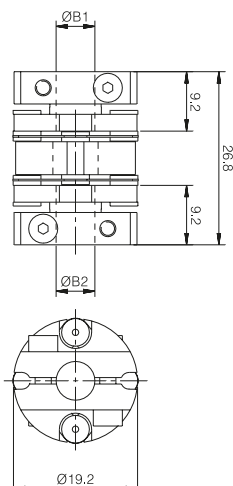
Other sizes available, contact LeineLinde.

Article number YYYYYYY-XX -XX to be replaced with bore diameter code	1282894-XX	1283872-XX	1282926-XX	1283920-XX
<b>Bore diameter (mm)</b>	-01: 6-6	-01: 6-6	-01: 6-6 -02: 6-10 -03: 8-8 -04: 8-10	-05: 10-10 -06: 10-11 -07: 10-12 -08: 12-12 -09: 11-12
<b>Type</b>	Set screw, short	Clamp, short	Set screw, short	Clamp, short
<b>Dimensions (mm);</b>				
<b>L Length</b>	19,6	26,8	32,1	40,1
<b>L1 Bore length</b>	5,6	9,2	10,0	14,0
<b>ØD Diameter</b>	19,2	19,2	33,5	33,5
<b>Key size</b>	1,5	2,0	2,5	2,5
<b>Moment of inertia (kgm<sup>2</sup>)</b>	5 x 10 <sup>-7</sup>	6 x 10 <sup>-7</sup>	80 x 10 <sup>-7</sup>	73 x 10 <sup>-7</sup>
<b>Weight</b>	10 g	13 g	52 g	51 g
<b>Max misalignment;</b>				
<b>Angular (b)</b>	4°	4°	3°	3°
<b>Radial (a)</b>	0,2 mm	0,2 mm	0,2 mm	0,2 mm
<b>Axial (c)</b>	± 0,2 mm	± 0,2 mm	± 0,2 mm	± 0,2 mm
<b>Torsional rigidity</b>	150 Nm/rad	150 Nm/rad	935 Nm/rad	935 Nm/rad
<b>Peak torque</b>	0,9 Nm	0,9 Nm	5,6 Nm	5,6 Nm

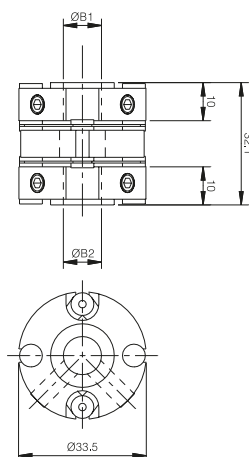
1282894



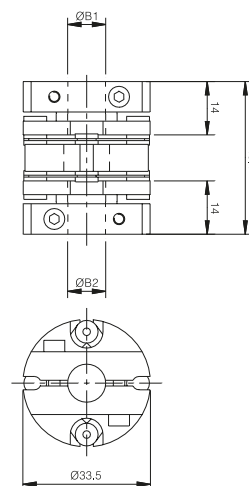
1283872



1282926



1283920

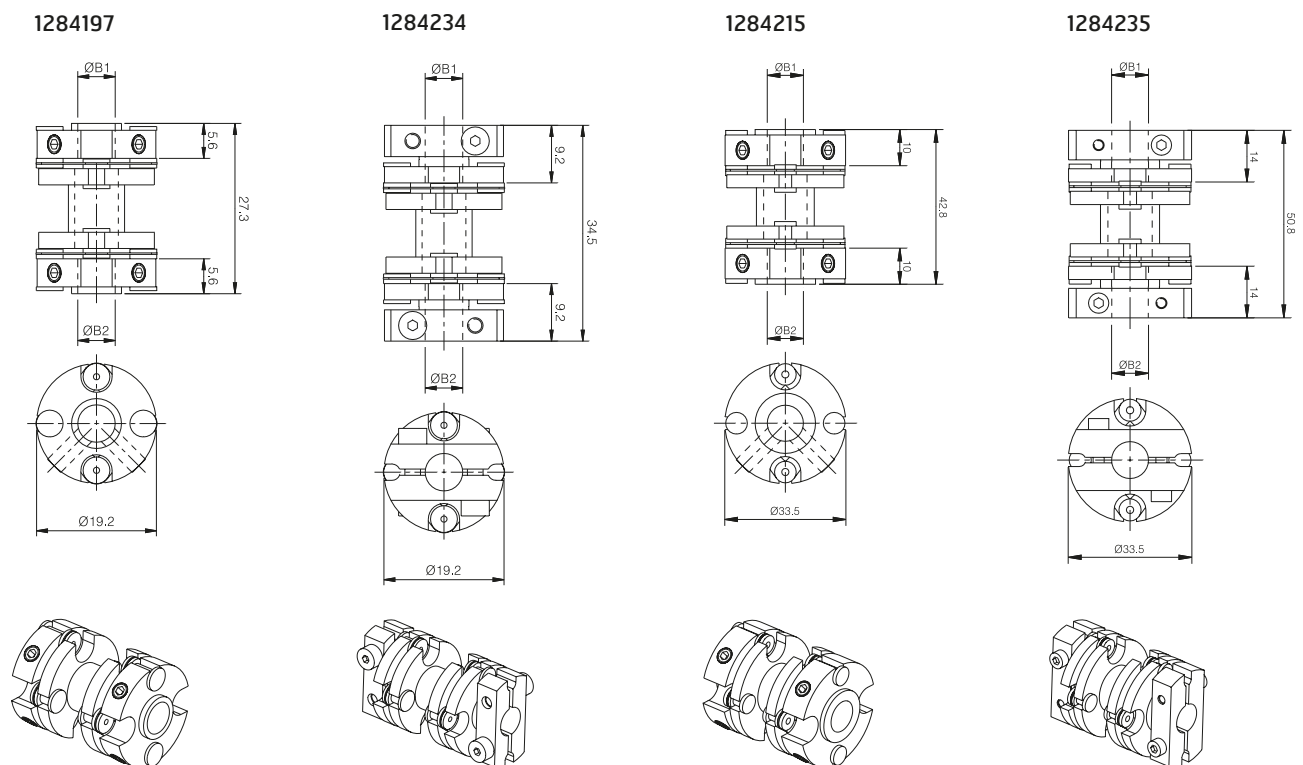


# Shaft couplings

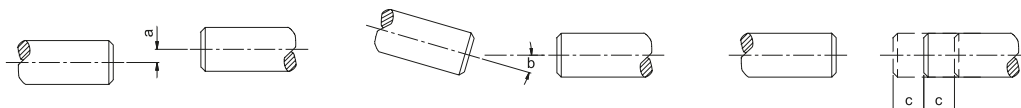
## Mechanical specification - For greater radial misalignment

Other sizes available, contact LeineLinde.

Article number	1284197	1284234	1284215	1284235	
Bore diameter (mm)	-01: 6-6	-01: 5-6 -02: 6-6	-01: 6-6 -02: 6-10 -03: 10-10 -04: 10-12 -05: 12-12	-01: 6-6 -02: 6-10 -03: 9,52-9,52 -04: 9,52-11 -05: 10-10	-06: 10-11 -07: 10-12 -08: 11-11 -09: 12-12
(Other bore diameters on request)					
Type	Set screw, long	Clamp, long	Set screw, long	Clamp, long	
Dimensions (mm);					
L Length	27,3	34,5	42,8	50,8	
L1 Bore length	5,6	9,2	10,0	14,0	
ØD Diameter	19,2	19,2	33,5	33,5	
Key size	1,5	2,0	2,5	2,5	
Moment of inertia (kgm <sup>2</sup> )	6 x 10 <sup>-7</sup>	6 x 10 <sup>-7</sup>	83 x 10 <sup>-7</sup>	76 x 10 <sup>-7</sup>	
Weight	12 g	14 g	55 g	55 g	
Max misalignment;					
Radial (a)	0,4 mm	0,4 mm	0,4 mm	0,4 mm	
Angular (b)	4°	4°	3°	3°	
Axial (c)	± 0,2 mm	± 0,2 mm	± 0,2 mm	± 0,2 mm	
Torsional rigidity	145 Nm/rad	145 Nm/rad	980 Nm/rad	980 Nm/rad	
Peak torque	0,9 Nm	0,9 Nm	5,6 Nm	5,6 Nm	



## Alignment



# Shaft couplings



## Oldham coupling with set screw hubs

- Simple to mount and commission
- Electrical insulation between shafts
- Suitable for normal industrial applications

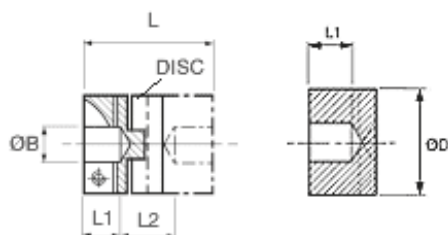


## Technical data

Material and finishes	Brass BS 2874 CZ121. Alocrom, chromate and passivated finish
Fasteners	Alloy steel, black oiled
Torque discs	Acetal (black)
Temperature range (°C)	-20 .. +60
Maximum rotational speed	3000 rev/min

## Dimensions

Coupling size	Ø D mm	L mm	L1 mm	L2 mm	Ø B mm	Fastener screw	Fastener torque Nm	Fastener wrench mm	Moment of inertia kgm <sup>-2</sup> x 10 <sup>-8</sup>	Weight gram
25	25.4	28.4	8.6	11.2	6.10 or 11	M3	2.43	2.5	252	31



## Performance (at 20°C with standard acetal disc)

Coupling size	Peak torque Nm	Max compensation at 3000 rpm	Torsional stiffness Nm/rad	Static break torque Nm		
		Angular °	Radial mm	Axial mm		
25	4	0.5	0.2	0.1	205	13

## Ordering information

750858-01	Shaft coupling, Sliding disc type Ø 6 mm - Ø 6 mm set screw
750858-02	Shaft coupling, Sliding disc type Ø 10 mm - Ø 10 mm set screw
750858-03	Shaft coupling, Sliding disc type Ø 6 mm - Ø 10 mm set screw
750858-04	Shaft coupling, Sliding disc type Ø 11 mm - Ø 11 mm set screw

Other variants available upon request.

### Table notes

Peak torque; Select a size where peak torque exceeds the application torque x service factor.

Couplings can provide up to (Ø D x 0.1) radial compensation in extreme cases.

Observe given values for temperature and speed to achieve maximum backlash-free life.

Axial compensation is set on installation.

Electrical isolation between shafts >3kV.

Values apply at 50% peak torque with no misalignment, measured shaft-to-shaft with largest standard bores.

# Shaft couplings



## Double loop coupling with steel hubs

- Maximum rotational speed 3000 rpm
- Electrical insulation between shafts
- Suitable for applications with low accuracy requirements

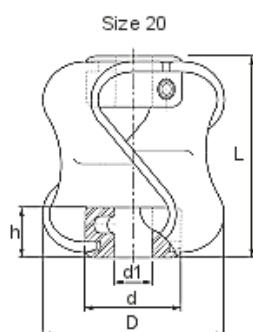


## Technical data

Max rotational speed (rpm)	3000
Material and finishes; Hubs	Steel 230M07 Pb, zinc plated with clear passivate
Material and finishes; Double loop element	HYRTEL®
Temperature range (°C)	-40 .. +100

## Dimensions

Coupling size	Max dia. D, mm	Ø d1 mm	Length L, mm	Hub height h, mm	Fastener size	Fastener torque, Nm	Fastener wrench, mm	Weight gram
20	48	6,10 or 12	48	12.70	M4	2.27	2	92



## Performance

Coupling size	Max torque Nm	Maximum misalignment /displacement		
		Angular °	Radial mm	Axial mm
20	3	15	3.2	7.5

## Ordering information

1322863-01	Shaft coupling, Double loop type, Ø 6 mm - Ø 6 mm
1322863-02	Shaft coupling, Double loop type, Ø 10 mm - Ø 10 mm
1322863-03	Shaft coupling, Double loop type, Ø 10 mm - Ø 12 mm
1322863-04	Shaft coupling, Double loop type, Ø 10 mm - Ø 6 mm

### Table notes

Maximum torque at maximum displacement.  
Maximum torque at displacement 1° angular, 2 mm axial, 0.5 mm radial.