

Bellows couplings with bronze bellows



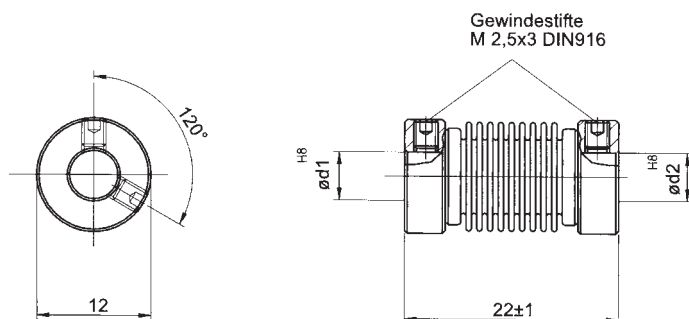
General

Bellows couplings provide backlash-free, angularly synchronous transmission of rotary motion

- very small design with bronze bellows and screwed hubs
- optimum compensation of alignment errors
- high torsional stiffness, low restoring forces
- vibration-damping



Bellows couplings



Order no.	Bore Ø d ₁ / d ₂
BKBS12220303	3 / 3
BKBS12220404	4 / 4
BKBS12220406	4 / 6
BKBS12220505	5 / 5
BKBS12220606	6 / 6

Technical data

Type	BKBS1222 _ _ _ _	
Max. speed	min ⁻¹	10,000
Max. torque	Ncm	15
Max. shaft misalignment		
radial	mm	±0.2
axial	mm	±0.4
angular	deg.	±2.5
Torsional stiffness	Nm/rad	45.0
Radial stiffness	N/mm	30.0
Moment of inertia	gcm ²	1.8
Max. screw torque	Ncm	50
Weight approx.	g	8
Material:	Flange	Nickel-plated brass
	Bellows	Bronze Cu Sn 6, nickel-plated

Bellows couplings

with stainless steel bellows

General

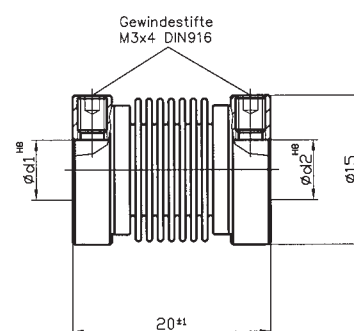
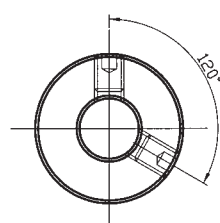
Bellows couplings provide backlash-free, angularly synchronous transmission of rotary motion

- optimum compensation of alignment errors
- very high torsional stiffness, low restoring forces
- vibration-damping
- stainless steel bellows and screwed hubs



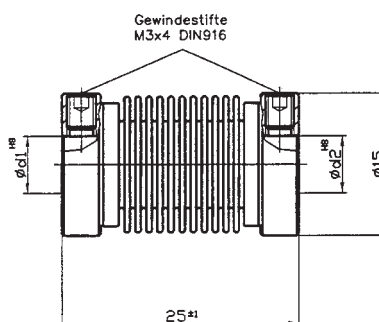
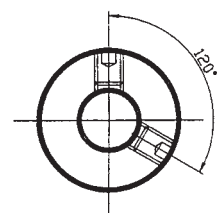
Bellows couplings

Order no.	Bore $\varnothing d_1 / d_2$
BKXS15200303	3 / 3
BKXS15200305	3 / 5
BKXS15200306	3 / 6
BKXS15200404	4 / 4
BKXS15200405	4 / 5
BKXS15200406	4 / 6
BKXS15200505	5 / 5
BKXS15200606	6 / 6



Type BKXS1520 _ _ _ _

Order no.	Bore $\varnothing d_1 / d_2$
BKXS15250303	3 / 3
BKXS15250305	3 / 5
BKXS15250306	3 / 6
BKXS15250404	4 / 4
BKXS15250405	4 / 5
BKXS15250406	4 / 6
BKXS15250505	5 / 5
BKXS15250606	6 / 6

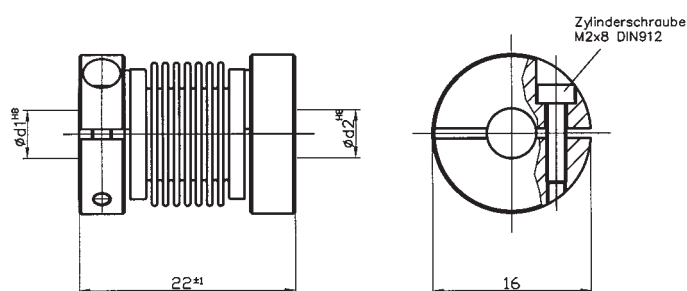


Type BKXS1525 _ _ _ _

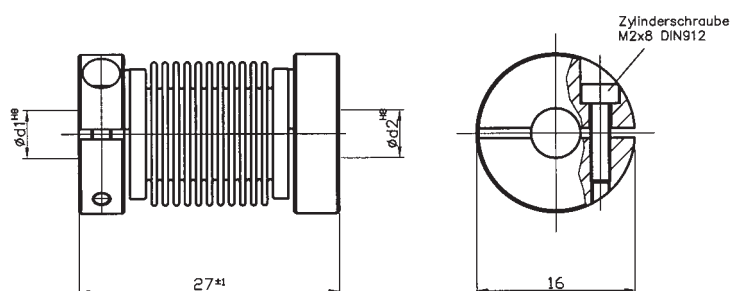
Technical data

Type		BKXS1520 _ _ _ _	BKXS1525 _ _ _ _
Max. speed	min ⁻¹	10,000	10,000
Max. torque	Ncm	40	40
Max. shaft misalignment			
radial	mm	±0.2	±0.3
axial	mm	±0.4	±0.5
angular	deg.	±3	±4
Torsional stiffness	Nm/rad	90	70
Radial stiffness	N/mm	40	15
Moment of inertia	gcm ²	2.0	2.3
Max. screw torque	Ncm	70	70
Weight approx.	g	6	7
Material:	Flange	Anodised aluminium	
	Bellows	Stainless steel	

Bellows couplings with clamping flange with stainless steel bellows



Type BKXX1622 _ _ _ _



Type BKXX1627 _ _ _ _

Order no.	Bore $\phi d_1 / d_2$
BKXX16220303	3 / 3
BKXX16220305	3 / 5
BKXX16220306	3 / 6
BKXX16220404	4 / 4
BKXX16220405	4 / 5
BKXX16220406	4 / 6
BKXX16220505	5 / 5
BKXX16220606	6 / 6

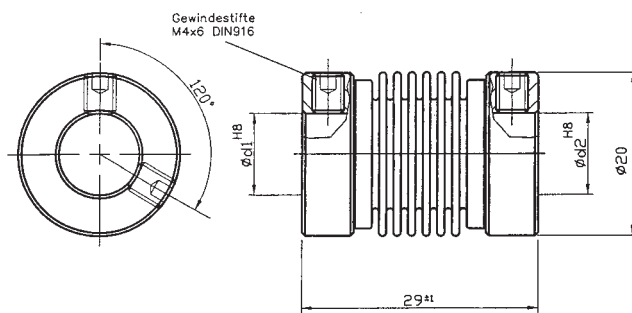
Order no.	Bore $\phi d_1 / d_2$
BKXX16270303	3 / 3
BKXX16270305	3 / 5
BKXX16270306	3 / 6
BKXX16270404	4 / 4
BKXX16270405	4 / 5
BKXX16270406	4 / 6
BKXX16270505	5 / 5
BKXX16270606	6 / 6

Technical data

Type		BKXX1622 _ _ _ _	BKXX1627 _ _ _ _
Max. speed	min ⁻¹	10,000	10,000
Max. torque	Ncm	40	40
Max. shaft misalignment			
radial	mm	±0.2	±0.3
axial	mm	±0.4	±0.5
angular	deg.	±3	±4
Torsional stiffness	Nm/rad	90	70
Radial stiffness	N/mm	40	15
Moment of inertia	gcm ²	2.1	2.6
Max. screw torque	Ncm	50	50
Weight approx.	g	6	7
Material:	Flange	Anodised aluminium	
	Bellows	Stainless steel	

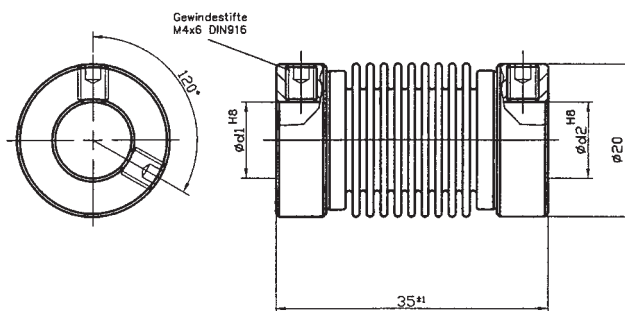
Bellows couplings

with stainless steel bellows



Type BKXS2029 _ _ _ _

Order no.	Bore Ø d ₁ / d ₂
BKXS20290404	4 / 4
BKXS20290406	4 / 6
BKXS20290606	6 / 6
BKXS20290610	6 / 10
BKXS20290808	8 / 8
BKXS20291010	10 / 10
BKXS20291012	10 / 12
BKXS20291212	12 / 12



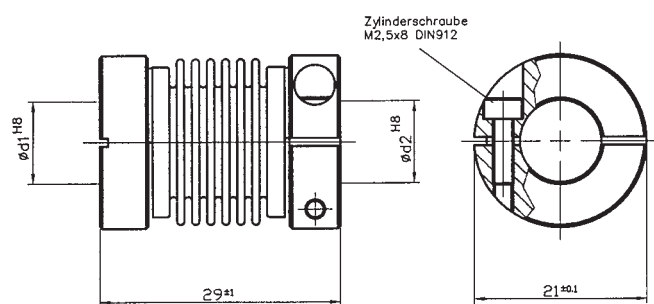
Type BKXS2035 _ _ _ _

Order no.	Bore Ø d ₁ / d ₂
BKXS20350404	4 / 4
BKXS20350406	4 / 6
BKXS20350606	6 / 6
BKXS20350610	6 / 10
BKXS20350808	8 / 8
BKXS20351010	10 / 10
BKXS20351012	10 / 12
BKXS20351212	12 / 12

Technical data

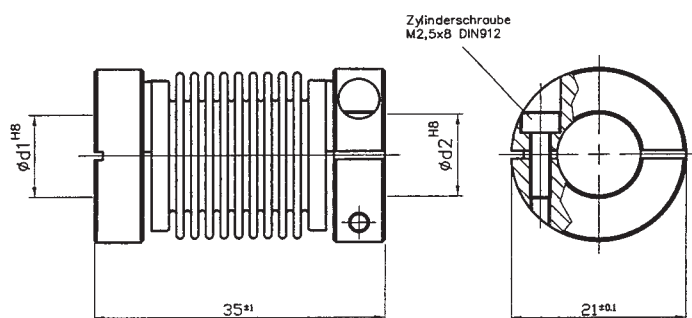
Type		BKXS2029 _ _ _ _	BKXS2035 _ _ _ _
Max. speed	min ⁻¹	10,000	10,000
Max. torque	Ncm	80	80
Max. shaft misalignment			
radial	mm	±0.25	±0.3
axial	mm	±0.4	±0.5
angular	deg.	±4	±4
Torsional stiffness	Nm/rad	150	140
Radial stiffness	N/mm	25	10
Moment of inertia	gcm ²	8	9
Max. screw torque	Ncm	150	150
Weight approx.	g	15	16
Material:	Flange	Anodised aluminium	
	Bellows	Stainless steel	

Bellows couplings with clamping flange with stainless steel bellows



Type BKXX2129 _ _ _ _

Order no.	Bore $\phi d_1 / d_2$
BKXX21290606	6 / 6
BKXX21290610	6 / 10
BKXX21290808	8 / 8
BKXX21291010	10 / 10



Type BKXX2135 _ _ _ _

Order no.	Bore $\phi d_1 / d_2$
BKXX21350606	6 / 6
BKXX21350610	6 / 10
BKXX21350808	8 / 8
BKXX21351010	10 / 10

Technical data

Type		BKXX2129 _ _ _ _	BKXX2135 _ _ _ _
Max. speed	min ⁻¹	10,000	10,000
Max. torque	Ncm	80	80
Max. shaft misalignment			
radial	mm	±0.25	±0.3
axial	mm	±0.4	±0.5
angular	deg.	±4	±4
Torsional stiffness	Nm/rad	150	140
Radial stiffness	N/mm	25	10
Moment of inertia	gcm ²	9	9.5
Max. screw torque	Ncm	100	100
Weight approx.	g	15	16
Material:	Flange	Anodised aluminium	
	Bellows	Stainless steel	

Bellows couplings with nickel bellows

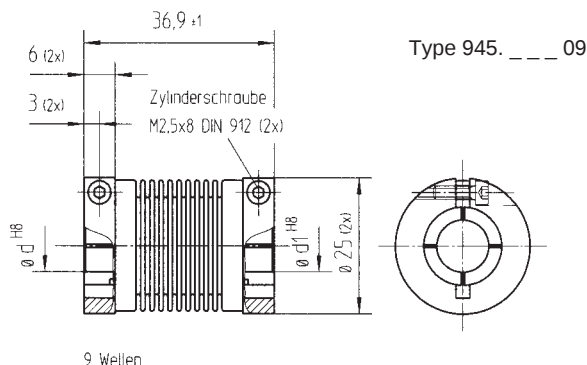
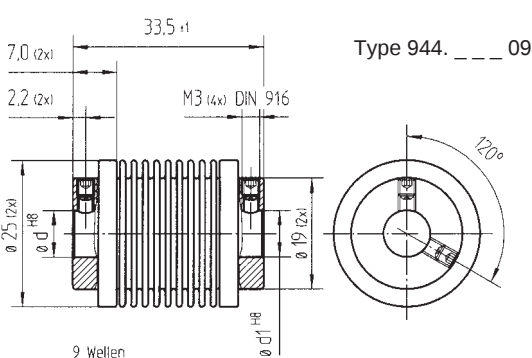
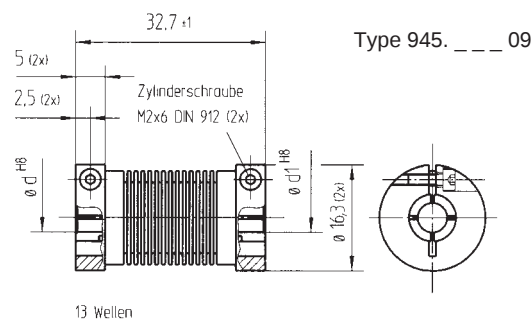
Order no.	Bore Ø d ₁ / d ₂
945.050 09	3 / 3
945.100 09	3 / 4
945.150 09	3 / 5
945.200 09	3 / 6
945.250 09	4 / 4
945.300 09	4 / 5
945.350 09	4 / 6
945.400 09	5 / 5
945.450 09	5 / 6
945.500 09	6 / 6

Order no.	Bore Ø d ₁ / d ₂
944.050 09	6 / 6
944.100 09	6 / 7
944.150 09	6 / 8
944.200 09	6 / 10
944.250 09	6 / 12
944.300 09	7 / 7
944.350 09	7 / 8
944.400 09	7 / 10

Order no.	Bore Ø d ₁ / d ₂
944.450 09	7 / 12
944.500 09	8 / 8
944.510 09	8 / 10
944.520 09	8 / 12
944.530 09	10 / 10
944.540 09	10 / 12
944.550 09	12 / 12

Order no.	Bore Ø d ₁ / d ₂
945.510 09	6 / 6
945.520 09	6 / 7
945.530 09	6 / 8
945.540 09	6 / 10
945.550 09	6 / 12
945.560 09	7 / 7
945.570 09	7 / 8
945.580 09	7 / 10

Order no.	Bore Ø d ₁ / d ₂
945.590 09	7 / 12
945.600 09	8 / 8
945.610 09	8 / 10
945.620 09	8 / 12
945.630 09	10 / 10
945.640 09	10 / 12
945.650 09	12 / 12



Technical data

Type		945.050 09 – 945.500 09	944.050 09 – 944.550 09	945.510 09 – 945.650 09
Max. speed	min ⁻¹	10,000	10,000	10,000
Max. torque	Ncm	39	328	328
Max. shaft misalignment				
radial	mm	±0.72	±0.46	±0.46
axial	mm	±3.09	±2.77	±2.77
angular	deg.	±14	±8	±8
Torsional stiffness	Nm/rad	80	462	462
Radial stiffness	N/mm	5.8	38.1	38.1
Moment of inertia	gcm ²	4.89	16.1	25.4
Max. screw torque	Ncm	35	132	66
Weight approx.	g	11.5	19.5	28.5
Material:	Flange	Anodised aluminium		
	Bellows	Nickel		

Bellows couplings

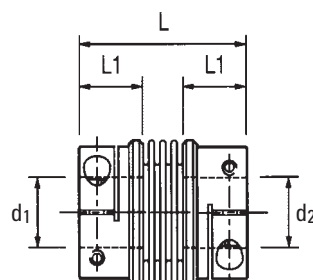
with stainless steel bellows

Short design

[for precisely aligned shafts]

Order no.	d1 + d2* $\varnothing$ min	max	$\varnothing D$	L	L ₁
536.34	6.00	16	34	40.0	14
536.41	6.35	20	41	49.7	18

*Please state d1 + d2 according to the table when ordering



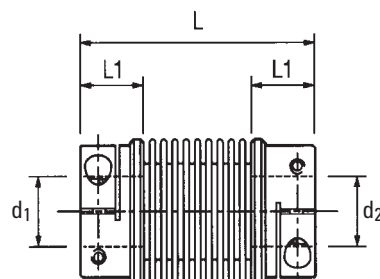
Type 536. __

Long design

[for larger shaft misalignment]

Order no.	d1 + d2* $\varnothing$ min	max	$\varnothing D$	L	L ₁
538.34	6.00	16	34	57.0	14
538.41	6.35	20	41	71.4	18

*Please state d1 + d2 according to the table when ordering



Type 538. __

*Standard bores $d_1, d_2 +0.03 / -0.00$ up to 20 mm diameter

Size	3.00	3.175	4.00	4.763	5.00	6.00	6.35	8.00	9.00	9.525	10.00	11.00	12.00	12.70	14.00	15.00	15.875	16.00	18.00	19.00	19.05	20.00
34						■	■	■	■	■	■	■	■	■	■	■	■	■				
41							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

○ If required, d1 + d2 can be reduced using bore bushes [reducing bushes page 42].

Technical data

Type		536.34	536.41	538.34	538.41
Max. speed	min ⁻¹	5000	5000	5000	5000
Max. torque	Ncm	750	1000	380	500
Max. radial misalignment	mm	±0.1	±0.15	±1.0	±1.2
Max. angular error	deg.	±2.5	±2.5	±8.0	±8.0
Max. axial misalignment	mm	±0.6	±0.8	±1.9	±2.5
Torsional spring constant	Nm/rad	1740	2880	915	1310
Moment of inertia	g cm ²	92.5	239.0	107.8	266.0
Screw thread diameter		M 3	M 4	M 3	M 4
Max. tightening torque of clamping screws	Ncm	243	566	243	566
Weight approx.	g	56	99	63	107
Material:	Flange	Aluminium alloy, clear anodised			
	Bellows	stainless spring steel			
	Screw	Heat-treated steel, black-oxide finished			

Bellows couplings with clamping hub

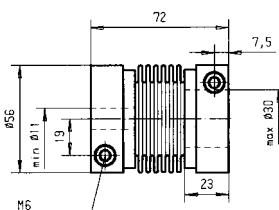
with stainless steel bellows



Type BK _ _ _

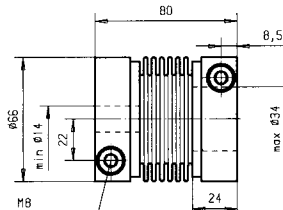
BK15

Nominal torque 15 Nm



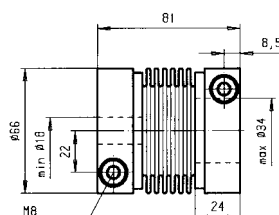
BK40

Nominal torque 40 Nm



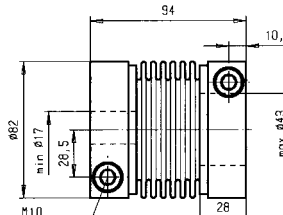
BK60

Nominal torque 60 Nm



BK100

Nominal torque 100 Nm



General

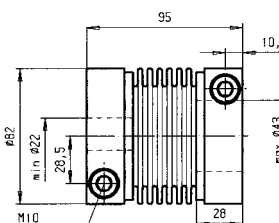
- Very low moment of inertia
- Easy to mount
- Small installation space
- Balanced
- Special versions on request

The couplings must always be selected so that the nominal torque is above the highest torque to be transmitted [acceleration or peak torque]. If the permissible shaft misalignment is exceeded, the service life of the bellows coupling is severely reduced.

Hub material: aluminium alloy
Bellows material: stainless steel

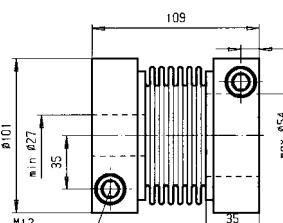
BK150

Nominal torque 150 Nm



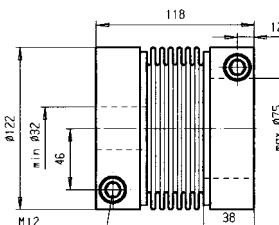
BK200

Nominal torque 200 Nm



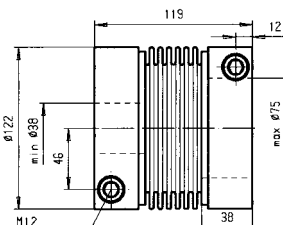
BK350

Nominal torque 350 Nm



BK500

Nominal torque 500 Nm



Bellows couplings with clamping hub with stainless steel bellows



Technical data

Order no.:	Nom. torque [Nm]	Torsional stiffn. 10^3 [Nm/rad]	Spring stiffn. lateral [N/mm]	axial [N/mm]	Max. shaft misalignment		Mom. inertia 10^{-3} [kgm ²]	Mass approx. [kg]	Clamping screws DIN 912-10.9	Tight. torque M_A [Nm]
					lateral [mm]	axial [mm]				
BK15	15	9.3	87	13.0	±0.20	±1.00	0.14	0.3	M6	14
BK40	40	26.5	175	27.5	±0.18	±1.00	0.28	0.5	M8	30
BK60	60	37.7	262	49.0	±0.18	±0.90	0.29	0.5	M8	30
BK100	100	63.2	384	45.0	±0.20	±1.30	0.80	0.8	M10	50
BK150	150	76.5	473	80.0	±0.20	±1.20	0.82	0.8	M10	65
BK200	200	89.3	502	78.5	±0.20	±1.25	2.20	1.4	M12	115
BK350	350	179.9	611	60.0	±0.20	±1.50	2.40	1.5	M12	115
BK500	500	217.6	765	80.0	±0.17	±1.30	4.60	2.1	M12	115

* Max. tightening torque only necessary for min. bore diameter; for max. bore diameter $M_A = 0.6 \times M_A \text{ max.}$
The bores are machined to customer specification; please state when ordering.