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BELLOWS COUPLINGS

Major Feature: Low Intertia and super speeds up to 25,000 rpm.
Bore Range: 8 mm - 60 mm
Torque Range: 15 Nm - 600 Nm

Major Feature: Easy Mount and Maximum Misalignment.
Bore Range: 3 mm - 76 mm
Torque Range: 0.4 Nm - 900 Nm

Major Feature: Easy Mount, High Stiffness and Short Length.
Bore Range: 3 mm - 75 mm
Torque Range: 2 Nm - 550 Nm

Major Feature: Easy Mount, High Stiffness and Maximum Misalignment.
Bore Range: 14 mm - 75 mm
Torque Range: 25 Nm - 540 Nm

Major Feature: High Clamping Forces, Maximum Misalignment and Short Length.
Bore Range: 15 mm - 97 mm
Torque Range: 20 Nm - 2500 Nm

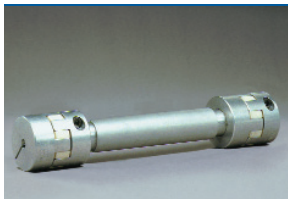
Major Feature: High Clamping Forces, High Stiffness and Maximum Misalignment.
Bore Range: 15 mm - 97 mm
Torque Range: 25 Nm - 2500 Nm

Major Feature: Low Cost, High Stiffness and Modular Bushing Design.
Bore Range: 10 mm - 68 mm
Torque Range: 25 Nm - 400 Nm

ELASTOMER COUPLINGS

Major Feature: Easy Mount and Excellent Dampening Capabilities.
Bore Range: 8 mm - 70 mm
Torque Range: 8 Nm - 700 Nm

Major Feature: All Aluminum Design, Lengths up to 2 Meters and Excellent Dampening Capabilities.
Bore Range: 10 mm - 70 mm
Torque Range: 20 Nm - 700 Nm



Major Feature: High Speeds and Excellent Dampening Capabilities.
Bore Range: 6 mm - 60 mm
Torque Range: 10 Nm - 700 Nm

SPECIALTY COUPLINGS

26-27 **KH Series**
Major Feature: Quick Installation without Removing Drive Components.
Bore Range: 8 mm - 59 mm
Torque Range: 10 Nm - 320 Nm

28-29 **WB Series**
Major Feature: All Steel Design and Lengths up to 3 Meters.
Bore Range: 11 mm - 63 mm
Torque Range: 20 Nm - 320 Nm

DIRECT DRIVE SAFETY COUPLINGS

32-33 **SBA/SBB Series**
Major Feature: High Torques and Single Point 360° Re-engagement.
Bore Range: 10 mm - 97 mm
Torque Range: 2 Nm - 2500 Nm

34-35 **SBE Series**
Major Feature: Single Point Re-engagment through Motor Reversal Only.
Bore Range: 10 mm - 75mm
Torque Range: 2 Nm - 1500 Nm

36-37 **SEA Series**
Major Feature: Single Point 360° Re-engagement and Dampening Capabilities.
Bore Range: 8 mm - 70 mm
Torque Range: 2 Nm - 550 Nm

SMA Series 38-39
Major Feature: Single Point 360° Re-engagement and Low Intertia.
Bore Range: 8 mm - 62 mm
Torque Range: 2 Nm - 550 Nm

INDIRECT DRIVE SAFETY COUPLINGS

SKD Series 40-41
Major Feature: Single Point Re-engagement through Motor Reversal only.
Bore Range: 10 mm - 62 mm
Torque Range: 2 Nm - 1500 Nm

SKG Series 42-43
Major Feature: Single Point 360° Re-engagement and Integrated Bearing for Pulley Support.
Bore Range: 12 mm - 62 mm
Torque Range: 2 Nm - 1500 Nm

SKL Series 44-45
Major Feature: Single Point 360° Re-engagement and Sliding Bearing for Small Pulleys.
Bore Range: 10 mm - 62 mm
Torque Range: 2 Nm - 1500 Nm

SKM Series 46-47
Major Feature: Single Point 360° Re-engagement and Short Length.
Bore Range: 10 mm - 62 mm
Torque Range: 2 Nm - 1500 Nm

COUPLING OVERVIEW

Our strategic partner in Germany, Jakob Antriebstechnik, designed our original couplings over 25 years ago and they have become the standard for today's dynamic servo applications. Our wide coupling selection is the result of many years of research and development with various performance characteristics to meet your specific requirements. Due to the modularity of our products, we also have the capability to develop new designs quickly and affordably. Our product portfolio consists of three major product groups: Bellow, Elastomer and Specialty Couplings.

MAJOR FEATURES
Bellow, Elastomer and Specialty Couplings

Low Inertia
The combination of compact dimensions and the use of advanced light-weight materials results in excellent servo response.

Compensation of Misalignment
The compensation of lateral, angular and axial misalignments allow for thermal expansion and bearing protection.

Zero Backlash
The frictional shaft/hub connections of the radial clamping hubs or conical bushings require no keyways for a smooth torque transmission.

No Maintenance
No lubrication or wearing components provides for lifetime operations assuming that torque values or shaft misalignments are not exceeded.

SPECIFIC FEATURES
Bellow Couplings

High Torque Range
Torque values from 0.44 Nm to 44,000 Nm allow servo motors to be used from semi-conductor to paper mill applications.

High Torsional Stiffness
High torsional rigidity and low lateral spring rates provide accurate rotational positioning with low bearing loads.

High Temperatures
In temperature sensitive environments, bellow couplings can be used at temperatures up to 570°F without any limitations.

Patented Connection Method
The press fit method of joining the bellow to the hubs are ideal to methods such as welding due to material property changes and glue connections that lose their bonding properties over time.

High Speeds
Rotational speeds up to 25,000 RPM without additional balancing are ideal for high-speed spindle applications.

SPECIFIC FEATURES
Elastomer Couplings

Excellent Dampening Capabilities
The use of elastomer spiders with shore hardness ratings from 72 D to 98 A permit dampening of vibration caused by system resonance.

Low Cost
An affordable alternative if high stiffness is not critical in the application.

Blind Assembly
The involute shaped teeth of the elastomer spider and jaws are preloaded and will not loosen over time ensuring a zero backlash coupling and allowing for easy plug-in assembly.

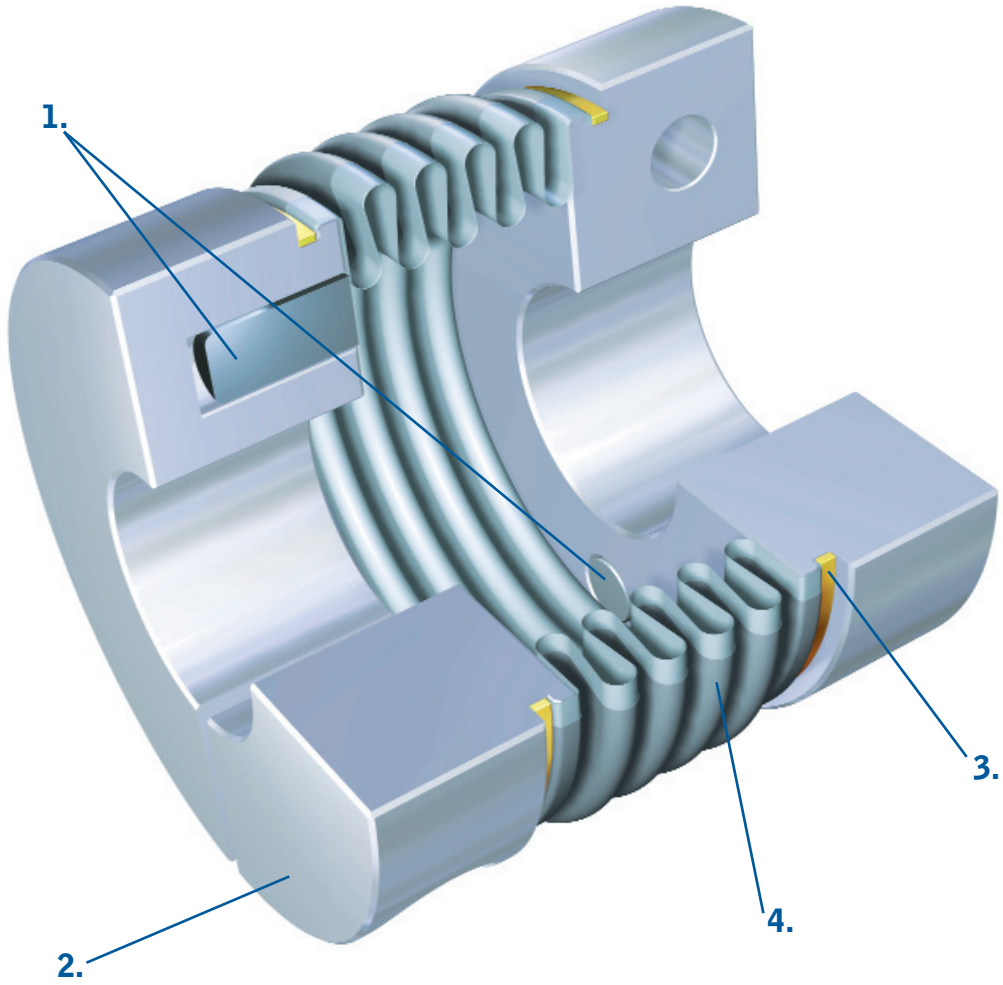
SPECIFIC FEATURES
Specialty Couplings

Quick Installation
Due to the two-piece design, the couplings can be mounted effortlessly without mounting or dismounting motor or driven components.

Accommodates Large Shaft Distances
Lengths up to 3 meters can be achieved and installation only requires one person for assembly.

INDUSTRIES

MACHINE TOOLS
PAPER CONVERTING
PRINTING
PACKAGING
ROBOTICS
WOODWORKING
FOOD PROCESSING
TEXTILE
GANTRY'S
TRANSFER LINE
SEMI-CONDUCTOR
MEDICAL



Component Index

1. Balancing Element
(Balances coupling to allow for high speed applications)

2. Clamping Hub
(Aluminum hubs clamp onto any shaft size by tightening a single bolt)

3. Brass Wire
(A press fit that connects the bellows to the hub)

4. Bellows
(Stainless steel flexible bellow allows for misalignment)

KHS Series

Major features of the KHS series are:

- High speed applications up to 25000 RPM
- Low moment of inertia and high torsional stiffness
- Ideal for test stands, spindle drives, and other high speed applications
- Zero Backlash

Material: Stainless Steel Bellow and Aluminum Hubs

Technical Data

Size	Nominal Torque	Moment of Inertia	Torsion Resistance	Maximum Speed	Max. Misalignment		Axial Spring Rate	Lateral Spring Rate	Mass	Torque to Tighten Screws
					Lateral	Axial				
	Nm (lb-in)	10^{-3}kgm^2 (lb-in^2)	10^3Nm/rad (lb-ft/Deg)	RPM	mm (inch)	mm (inch)	N/mm (lb-in)	N/mm (lb-in)	kg (lbs)	Nm (lb-in)
KHS-15	15 (133)	0.03 (0.1)	6.5 (84)	25000	0.1 (0.004)	0.5 (0.02)	27 (154)	120 (686)	0.15 (0.33)	3 (27)
KHS-40	40 (354)	0.13 (0.44)	30 (386)	25000	0.1 (0.004)	0.5 (0.02)	82 (469)	810 (4629)	0.3 (0.66)	4 (35)
KHS-100	100 (885)	0.37 (1.26)	65 (837)	25000	0.1 (0.004)	0.6 (0.024)	132 (754)	1700 (9716)	0.55 (1.21)	8 (71)
KHS-200	200 (1770)	0.86 (2.93)	140 (1803)	25000	0.1 (0.004)	0.7 (0.028)	175 (1000)	2300 (13145)	0.83 (1.83)	12 (106)
KHS-400	400 (3540)	2.5 (8.53)	235 (3026)	25000	0.1 (0.004)	0.7 (0.028)	190 (1086)	3000 (17145)	1.6 (3.53)	30 (266)
KHS-600	600 (5310)	5.3 (18.07)	330 (4249)	25000	0.1 (0.004)	0.7 (0.028)	170 (972)	4200 (24003)	2.5 (5.51)	45 (399)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

Dimensions: mm (inch)

Size	øA mm (inch)	øB mm (inch)	øC mm (inch)	E mm (inch)	F screw size	G mm (inch)	H mm (inch)	L mm (inch)	øD min. mm (inch)	øD max. mm (inch)
KHS-15	39.5 (1.56)	38 (1.50)	27 (1.06)	60 (2.36)	6xM4	18 (0.71)	32 (1.26)	66 (2.60)	6 (0.24)	15 (0.59)
KHS-40	56 (2.2)	53 (2.09)	40 (1.57)	65 (2.56)	6xM4	21 (0.83)	35 (1.38)	69 (2.72)	14 (0.55)	22 (0.87)
KHS-100	71 (2.8)	66 (2.6)	52 (2.05)	75 (2.95)	6xM5	23 (0.91)	39 (1.54)	78 (3.07)	17 (0.67)	32 (1.26)
KHS-200	82 (3.23)	78 (3.07)	62 (2.44)	86 (3.39)	6xM6	28 (1.1)	46 (1.81)	91 (3.58)	22 (0.87)	40 (1.57)
KHS-400	101 (3.98)	98 (3.86)	78 (3.07)	103 (4.06)	6xM8	33 (1.3)	55 (2.17)	109 (4.29)	26 (1.02)	50 (1.97)
KHS-600	122 (4.8)	113 (4.45)	91 (3.58)	122 (4.8)	6xM10	36 (1.42)	62 (2.44)	127 (5.00)	30 (1.18)	60 (2.36)

Bore diameters smaller than $øD_{min}$ are possible but reliable transmission of nominal torque M_N cannot be guaranteed.

KM Series

Major features of the KM Series are:

- Maximum flexibility in the angular, axial, and lateral direction and high torsional stiffness
- One screw per hub locks the coupling absolutely free of backlash
- Advantageous for space constrained or blind assembly installations
- The clamping hubs allow a maximum clearance of 0.02mm (0.0008 inches) between shaft diameter and hub bore
- 24 Hour delivery available

Technical Data

Size	Nominal Torque	Moment of Inertia	Torsion Resistance	Nominal Speed	Max. Misalignment			Axial Spring Rate	Lateral Spring Rate	Mass	Torque to Tighten Screws
					Lateral	Axial	Angular				
	Nm (lb-in)	10^{-3}kgm^2 (lb-in^2)	10^3Nm/rad (lb-ft/Deg)	RPM	mm (inch)	mm (inch)	Degrees	N/mm (lb-in)	N/mm (lb-in)	kg (lbs)	Nm (lb-in)
KM-0.4	0.4 (3.54)	0.0004 (0.001)	0.2 (2.57)	15000	0.1 (0.004)	0.35 (0.014)	±1°	10 (57)	20 (114)	0.01 (0.022)	1 (8.85)
KM-0.9	0.9 (7.97)	0.0004 (0.001)	0.4 (5.15)	15000	0.1 (0.004)	0.3 (0.012)	±1°	21 (120)	30 (171)	0.01 (0.022)	1 (8.85)
KM-2	2 (18)	0.003 (0.01)	0.9 (11.59)	8000	0.1 (0.004)	0.5 (0.02)	±1°	10 (57)	20 (114)	0.03 (0.07)	2 (18)
KM-4	4 (35)	0.003 (0.01)	1.8 (23)	8000	0.1 (0.004)	0.4 (0.016)	±1°	43 (246)	80 (457)	0.04 (0.09)	2 (18)
KM-8	8 (71)	0.028 (0.096)	5 (64)	8000	0.27 (0.011)	0.8 (0.031)	±1°	17 (97)	30 (171)	0.13 (0.29)	6 (53)
KM-12	12 (106)	0.03 (0.103)	6.8 (88)	8000	0.21 (0.008)	0.7 (0.028)	±1°	35 (200)	70 (400)	0.14 (0.31)	7 (62)
KM-20	20 (177)	0.14 (0.478)	18 (233)	4500	0.2 (0.008)	0.8 (0.031)	±1°	51 (291)	190 (1086)	0.3 (0.66)	14 (124)
KM-35	35 (310)	0.14 (0.478)	22 (283)	4500	0.2 (0.008)	0.8 (0.031)	±1°	51 (291)	190 (1086)	0.3 (0.66)	14 (124)
KM-60	60 (531)	0.29 (0.991)	33 (425)	4500	0.2 (0.008)	0.9 (0.035)	±1°	49 (280)	260 (1486)	0.5 (1.1)	30 (266)
KM-80	80 (708)	0.79 (2.7)	53 (682)	4500	0.2 (0.008)	1.3 (0.051)	±1°	45 (257)	280 (1600)	0.8 (1.76)	50 (443)
KM-170	170 (1505)	0.83 (2.84)	63 (811)	4500	0.2 (0.008)	1.2 (0.047)	±1°	80 (457)	470 (2686)	0.8 (1.76)	65 (575)
KM-270	270 (2390)	2.21 (7.45)	111 (1429)	3000	0.2 (0.008)	1.2 (0.047)	±1°	78 (446)	500 (2858)	1.4 (3.09)	115 (1018)
KM-400	400 (3540)	2.42 (8.27)	162 (2085)	3000	0.2 (0.008)	1 (0.039)	±1°	120 (686)	700 (4001)	1.5 (3.31)	115 (1018)
KM-550	550 (4868)	4.63 (15.82)	238 (3064)	3000	0.2 (0.008)	1 (0.039)	±1°	100 (572)	980 (5601)	2.1 (4.63)	115 (1018)
KM-900	900 (7965)	8.90 (30.42)	335 (4312)	3000	0.15 (0.006)	1.2 (0.047)	±1°	102 (583)	1050 (6001)	3.3 (7.28)	200 (1770)
KM-1300	1300 (11,505)	13.8 (47.17)	504 (6487)	3000	0.15 (0.006)	1 (0.039)	±1°	130 (743)	926 (5292)	4.2 (9.27)	290 (2567)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

Dimensions: mm (inch)

Size	øA mm (inch)	C mm (inch)	F screw size	G mm (inch)	H mm (inch)	L mm (inch)	øD min. mm (inch)	øD max. mm (inch)
KM-0.4	16.5 (0.65)	4.6 (0.181)	M2.5	12 (0.472)	3.3 (0.13)	30 (1.181)	3 (0.118)	6 (0.236)
KM-0.9	16.5 (0.65)	4.6 (0.181)	M2.5	13.5 (0.531)	3.3 (0.13)	31.5 (1.24)	3 (0.118)	6 (0.236)
KM-2	24.5/27.5 (.964/1.082)	7.5 (0.295)	M3	16 (0.63)	4.5 (0.177)	42 (1.654)	3 (0.118)	10/14 (.394/.551)
KM-4	24.5/27.5 (.964/1.082)	7.5 (0.295)	M3	17.6 (0.693)	4.5 (0.177)	43.5 (1.713)	3 (0.118)	10/14 (.394/.551)
KM-8	39.5/44.5 (1.555/1.752)	13 (0.512)	M5	26.5 (1.043)	6 (0.236)	59.5 (2.343)	6 (0.236)	19/21 (.748/.826)
KM-12	39.5/44.5 (1.555/1.752)	13 (0.512)	M5	29 (1.142)	6 (0.236)	62 (2.441)	10 (0.394)	19/21 (.748/.826)
KM-20	56 (2.205)	19 (0.748)	M6	30 (1.181)	7.5 (0.295)	70 (2.756)	9 (0.354)	30 (1.181)
KM-35	56 (2.205)	19 (0.748)	M6	30 (1.181)	7.5 (0.295)	70 (2.756)	14 (.551)	30 (1.181)
KM-60	66 (2.598)	22 (0.866)	M8	33 (1.299)	8.5 (0.335)	77 (3.031)	18 (0.709)	34 (1.339)
KM-80	82 (3.228)	28.5 (1.122)	M10	38 (1.496)	10.5 (0.413)	90 (3.543)	17 (0.669)	43 (1.693)
KM-170	82 (3.228)	28.5 (1.122)	M10	40 (1.575)	10.5 (0.413)	92 (3.622)	22 (0.866)	43 (1.693)
KM-270	101 (3.976)	35 (1.378)	M12	42 (1.654)	12 (0.472)	100 (3.937)	27 (1.063)	55 (2.145)
KM-400	101 (3.976)	35 (1.378)	M12	48 (1.89)	12 (0.472)	106 (4.173)	34 (1.339)	55 (2.145)
KM-550	122 (4.803)	45.5 (1.791)	M12	52 (2.047)	12.5 (0.492)	112 (4.409)	38 (1.496)	75 (2.953)
KM-900	133 (5.236)	47 (1.85)	M14	53 (2.087)	18.5 (0.728)	143 (5.63)	40 (1.575)	76 (2.992)

Bore diameters smaller than $øD_{min}$ are possible but reliable transmission of nominal torque M_N cannot be guaranteed.

KP Series

Major features of the KP series are:

- Higher torsional stiffness and a shorter overall length
- Tightening only one screw per hub locks the coupling absolutely free of backlash
- Advantageous for space constrained or blind assembly installations.
- The clamping hubs allow a maximum clearance of 0.02mm (0.0008 inches) between shaft diameter and hub bore

Material: Stainless Steel Bellow and Aluminum Hubs

Technical Data

Size	Nominal Torque	Moment of Inertia	Torsion Resistance	Nominal Speed	Max. Misalignment			Axial Spring Rate	Lateral Spring Rate	Mass	Torque to Tighten Screws
					Lateral	Axial	Angular				
	Nm (lb-in)	10^{-3}kgm^2 (lb-in^2)	10^3Nm/rad (lb-ft/Deg)	rpm	mm (inch)	mm (inch)	Degrees	N/mm (lb-in)	N/mm (lb-in)	kg (lbs)	Nm (lb-in)
KP-2	2 (17.702)	0.01 (0.034)	1.4 (18)	8000	0.03 (0.0012)	0.25 (0.012)	±1°	20 (114)	148 (843)	0.03 (0.066)	2 (17)
KP-8	8 (70.808)	0.02 (0.068)	6.5 (84)	8000	0.1 (0.004)	0.5 (0.020)	±1°	27 (154)	120 (684)	0.1 (0.22)	8 (71)
KP-20	20 (177)	0.13 (0.444)	30 (386)	4500	0.1 (0.004)	0.5 (0.020)	±1°	82 (467)	810 (4617)	0.3 (0.66)	14 (124)
KP-35	35 (266)	0.13 (0.444)	32 (412)	4500	0.1 (0.004)	0.5 (0.024)	±1°	82 (467)	810 (4617)	0.3 (0.66)	14 (124)
KP-60	60 (531)	0.27 (0.923)	46 (592)	4500	0.1 (0.004)	0.6 (0.024)	±1°	80 (456)	1100 (6287)	0.4 (0.88)	30 (266)
KP-100	100 (708)	0.35 (1.197)	64 (1004)	4500	0.1 (0.004)	0.6 (0.024)	±1°	130 (411)	1700 (6858)	0.5 (1.76)	30 (266)
KP-170	170 (1505)	0.76 (2.6)	94 (1210)	4500	0.1 (0.004)	0.8 (0.031)	±1°	130 (743)	2000 (11430)	0.8 (1.76)	65 (575)
KP-270	270 (2390)	2 (6.84)	158 (2034)	3000	0.1 (0.004)	0.8 (0.031)	±1°	130 (743)	2150 (12287)	1.3 (2.87)	115 (1018)
KP-400	400 (3540)	2.15 (7.35)	238 (3064)	3000	0.1 (0.004)	0.7 (0.028)	±1°	190 (1086)	3000 (17145)	1.4 (3.09)	115 (1018)
KP-550	550 (4868)	4.2 (14.35)	336 (4325)	3000	0.1 (0.004)	0.7 (0.028)	±1°	170 (972)	4200 (24003)	2 (4.41)	115 (1018)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

Dimensions: mm (inch)

Size	øA mm (inch)	C mm (inch)	F screw size	G mm (inch)	H mm (inch)	L mm (inch)	øD min. mm (inch)	øD max. mm (inch)
KP-2	24.5/27.5 (0.964/1.082)	7.5 (0.295)	M3	9 (0.354)	4.5 (0.177)	35 (1.378)	3 (0.118)	10/14 (0.394/0.551)
KP-8	39.5/44.5 (2.205)	13 (0.748)	M5	18 (0.827)	6 (0.236)	51.2 (2.016)	6 (0.236)	19/21 (0.748/0.826)
KP-20	56 (2.205)	19 (0.748)	M6	21 (0.827)	7.5 (0.295)	61 (2.402)	9 (0.433)	30 (1.181)
KP-35	56 (2.205)	19 (0.748)	M6	21 (0.827)	7.5 (0.295)	61 (2.402)	14 (0.551)	30 (1.181)
KP-60	66 (2.598)	22 (0.866)	M8	23 (0.906)	8.5 (0.335)	67 (2.638)	18 (0.709)	34 (1.339)
KP-100	71 (2.795)	25 (0.866)	M8	23 (0.906)	8.5 (0.335)	68 (2.677)	22 (0.866)	38 (1.496)
KP-170	82 (3.228)	28.5 (1.122)	M10	28 (1.102)	10.5 (0.413)	80 (3.15)	22 (0.866)	43 (1.693)
KP-270	101 (3.976)	35 (1.378)	M12	29 (1.142)	12 (0.472)	87 (3.425)	27 (1.063)	55 (2.145)
KP-400	101 (3.976)	35 (1.378)	M12	33 (1.299)	12 (0.472)	91 (3.583)	34 (1.339)	55 (2.145)
KP-550	122 (4.803)	45.5 (1.791)	M12	36 (1.417)	12.5 (0.492)	96 (3.78)	38 (1.496)	75 (2.953)

Bore diameters smaller than $øD_{min}$ are possible but reliable transmission of nominal torque M_N cannot be guaranteed.

KR Series

Major features of the KR series are:

- High Torsional stiffness with low lateral spring rates for reduced bearing loads
- Transmission of high torque values without compromising accuracy
- Tightening only one screw per hub locks the coupling absolutely free of backlash
- Advantageous for space constrained or blind assembly installations
- The clamping hubs allow a maximum clearance of 0.02mm (0.0008 inches) between shaft diameter and hub bore

Material: Stainless Steel Bellow and Aluminum Hubs

Technical Data

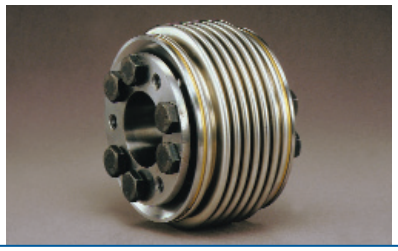
Size	Nominal Torque	Moment of Inertia	Torsion Resistance	Max. Speed	Max. Misalignment			Axial Spring Rate	Lateral Spring Rate	Mass	Torque to Tighten Screws
					Lateral	Axial	Angular				
	Nm (lb-in)	10^{-3}kgm^2 (lb-in^2)	10^3Nm/rad (lb-ft/Deg)	RPM	mm (inch)	mm (inch)	Degrees	N/mm (lb-in)	N/mm (lb-in)	kg (lbs)	Nm (lb-in)
KR-25	25 (221)	0.12 (0.41)	24 (309)	4500	0.12 (0.005)	0.3 (0.012)	±1°	78 (446)	110 (629)	0.3 (0.66)	14 (124)
KR-50	50 (443)	0.12 (0.41)	30 (386)	4500	0.12 (0.005)	0.3 (0.012)	±1°	85 (486)	130 (743)	0.3 (0.66)	14 (124)
KR-65	65 (575)	0.25 (0.854)	48 (618)	4500	0.15 (0.006)	0.3 (0.012)	±1°	89 (509)	85 (486)	0.4 (0.88)	34 (301)
KR-75	75 (664)	0.66 (2.26)	50 (644)	4500	0.2 (0.008)	0.45 (0.018)	±1°	75 (429)	55 (314)	0.7 (1.54)	50 (443)
KR-160	160 (1416)	0.72 (2.46)	94 (1210)	4500	0.2 (0.008)	0.4 (0.016)	±1°	155 (886)	90 (514)	0.8 (1.76)	65 (575)
KR-190	190 (1682)	0.8 (2.73)	115 (1480)	4500	0.2 (0.008)	0.35 (0.014)	±1°	260 (1486)	145 (829)	0.8 (1.76)	67 (593)
KR-250	250 (2213)	1.95 (6.66)	154 (1982)	3000	0.2 (0.008)	0.45 (0.018)	±1°	125 (714)	100 (572)	1.3 (2.87)	115 (1018)
KR-300	300 (2655)	2 (6.84)	186 (2394)	3000	0.2 (0.008)	0.4 (0.016)	±1°	255 (1457)	180 (1029)	1.3 (2.87)	115 (1018)
KR-450	450 (3983)	2.15 (7.35)	225 (2896)	3000	0.2 (0.008)	0.3 (0.012)	±1°	380 (2172)	270 (1543)	1.4 (3.09)	115 (1018)
KR-540	540 (4779)	4 (13.67)	279 (3592)	3000	0.25 (0.01)	0.5 (0.02)	±1°	300 (1715)	370 (2115)	2 (4.41)	115 (1018)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

Dimensions: mm (inch)

Size	øA mm (inch)	C mm (inch)	F screw size	G mm (inch)	H mm (inch)	L mm (inch)	øD min. mm (inch)	øD max. mm (inch)
KR-25	56 (2.205)	19 (0.748)	M6	33 (1.299)	7.5 (0.295)	73 (2.874)	14 (0.551)	30 (1.181)
KR-50	56 (2.205)	19 (0.748)	M6	33 (1.299)	7.5 (0.295)	73 (2.874)	20 (0.787)	30 (1.181)
KR-65	66 (2.598)	22 (0.866)	M8	41 (1.614)	8.5 (0.335)	85 (3.346)	18 (0.709)	34 (1.339)
KR-75	82 (3.228)	28.5 (1.122)	M10	50 (1.969)	10.5 (0.413)	102 (4.016)	16 (0.63)	43 (1.693)
KR-160	82 (3.228)	28.5 (1.122)	M10	56 (2.205)	10.5 (0.413)	108 (4.252)	22 (0.866)	43 (1.693)
KR-190	82 (3.228)	28.5 (1.122)	M10	56 (2.205)	10.5 (0.413)	108 (4.252)	22 (0.866)	43 (1.693)
KR-250	101 (3.976)	35 (1.378)	M12	65 (2.559)	12 (0.472)	123 (4.843)	25 (0.984)	55 (2.145)
KR-300	101 (3.976)	35 (1.378)	M12	65 (2.559)	12 (0.472)	123 (4.843)	30 (1.181)	55 (2.145)
KR-450	101 (3.976)	35 (1.378)	M12	65 (2.559)	12 (0.472)	123 (4.843)	45 (1.772)	55 (2.145)
KR-540	122 (4.803)	45.5 (1.791)	M12	72 (2.835)	12.5 (0.492)	132 (5.197)	38 (1.496)	75 (2.953)

Bore diameters smaller than $øD_{min}$ are possible but reliable transmission of nominal torque M_N cannot be guaranteed.



KSD Series

Major features of the KSD couplings are:

- Maximum flexibility in the angular, axial and lateral direction
- Self centering conical bushings
- High clamping forces
- Zero Backlash
- Draw off holes for easy hub removal

Material: Stainless Steel Bellow and Steel Hubs

Technical Data

Size	Nominal Torque	Moment of Inertia	Torsion Resistance	Nominal Speed	Max. Misalignment			Axial Spring Rate	Lateral Spring Rate	Mass	Torque to Tighten Screws
					Lateral	Axial	Angular				
	Nm (lb-in)	10^{-3}kgm^2 (lb-in^2)	10^3Nm/rad (lb-ft/Deg)	RPM	mm (inch)	mm (inch)	Degrees	N/mm (lb-in)	N/mm (lb-in)	kg (lbs)	Nm (lb-in)
KSD-20	20 (177)	0.1 (0.342)	20 (258)	6000	0.2 (0.008)	0.8 (0.031)	±1°	51 (291)	190 (1086)	0.4 (0.88)	4 (36)
KSD-35	35 (310)	0.1 (0.342)	23 (335)	6000	0.2 (0.008)	0.8 (0.031)	±1°	51 (154)	190 (1086)	0.4 (0.88)	4 (36)
KSD-60	60 (531)	0.3 (1.03)	33 (425)	6000	0.2 (0.008)	0.9 (0.035)	±1°	49 (280)	260 (1482)	0.8 (1.76)	14 (124)
KSD-80	80 (708)	0.9 (3.08)	54 (695)	6000	0.25 (0.01)	1.3 (0.051)	±1°	48 (274)	220 (1254)	1.3 (2.86)	14 (124)
KSD-170	170 (1505)	0.9 (3.08)	66 (850)	6000	0.2 (0.008)	1.2 (0.047)	±1°	80 (457)	400 (2286)	1.3 (2.86)	14 (124)
KSD-270	270 (2390)	2.5 (8.54)	108 (1390)	5000	0.2 (0.008)	1.2 (0.047)	±1°	78 (446)	500 (2858)	2.4 (5.29)	34 (301)
KSD-400	400 (3540)	2.8 (9.57)	164 (2111)	5000	0.2 (0.008)	1 (0.039)	±1°	120 (686)	700 (4001)	2.5 (5.51)	34 (301)
KSD-550	550 (4868)	5.5 (18.8)	233 (2999)	5000	0.25 (0.01)	1.4 (0.055)	±1°	140 (800)	980 (5601)	3.6 (7.94)	65 (575)
KSD-900	900 (7965)	10.4 (35.54)	335 (4312)	3500	0.15 (0.006)	1.2 (0.047)	±1°	102 (583)	1050 (6001)	5.5 (12.13)	65 (575)
KSD-1300	1300 (11505)	20.1 (68.7)	504 (6487)	3500	0.15 (0.006)	1 (0.039)	±1°	130 (743)	926 (5292)	7.7 (16.98)	115 (1018)
KSD-2500	2500 (22125)	107 (365.7)	1260 (16220)	2000	0.15 (0.006)	1 (0.039)	±1°	180 (1029)	1713 (9790)	24 (52.92)	290 (1416)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

Dimensions: mm (inch)

Size	øA mm (inch)	øB mm (inch)	øC mm (inch)	E mm (inch)	F screw size	G mm (inch)	H mm (inch)	L mm (inch)	øD min. mm (inch)	øD max. mm (inch)
KSD-20	56 (2.205)	52 (2.047)	30 (1.181)	48 (1.89)	M4	12 (0.472)	44 (1.732)	54 (2.126)	15 (0.591)	19 (0.748)
KSD-35	56 (2.205)	52 (2.047)	30 (1.181)	48 (1.89)	M4	12 (0.472)	44 (1.732)	54 (2.126)	16 (0.63)	19 (0.748)
KSD-60	66 (2.598)	62 (2.441)	36 (1.417)	53 (2.087)	M6	5 (0.197)	47 (1.85)	61 (2.402)	18 (0.709)	24 (0.945)
KSD-80	82 (3.228)	78 (3.071)	50 (1.969)	58 (2.283)	M6	4 (0.157)	52 (2.047)	66 (2.598)	22 (0.866)	35 (1.378)
KSD-170	82 (3.228)	78 (3.071)	50 (1.969)	60 (2.362)	M6	6 (0.236)	54 (2.126)	68 (2.677)	22 (0.866)	35 (1.378)
KSD-270	101 (3.976)	96 (3.78)	62 (2.441)	66 (2.598)	M8	2 (0.079)	58 (2.283)	77 (3.031)	28 (1.102)	42 (1.654)
KSD-400	101 (3.976)	96 (3.78)	62 (2.441)	72 (2.835)	M8	8 (0.315)	64 (2.52)	83 (3.268)	28 (1.181)	42 (1.654)
KSD-550	122 (4.803)	112 (4.409)	70 (2.756)	78 (3.071)	M10	6 (0.236)	68 (2.677)	91 (3.583)	35 (1.181)	48 (1.89)
KSD-900	132 (5.197)	127 (5)	83 (3.268)	94 (3.701)	M10	6 (0.236)	76 (2.992)	107 (4.213)	40 (1.575)	60 (2.362)
KSD-1300	157 (6.181)	140 (5.512)	98 (3.858)	96 (3.78)	M12	6 (0.236)	78 (3.071)	111 (4.37)	40 (1.575)	70 (2.756)
KSD-2500	203 (7.992)	194 (7.638)	138 (5.433)	145 (5.709)	M16	6 (0.236)	95 (3.74)	165 (6.496)	40 (1.575)	97 (3.819)

Bore diameters smaller than $øD_{min}$ are possible but reliable transmission of nominal torque M_N cannot be guaranteed.

KSS Series

Major features of the KSS Series are:

- Transmission of high torque values without compromising accuracy or smooth performance
- For use in corrosive or washdown environments
- Self-centering conical hubs for keyless shaft-hub connections and high clamping forces
- Very high torsion-resistant flexible metal bellow

Material: Stainless Steel Bellow and Hubs

Technical Data

Size	Nominal Torque	Moment of Inertia	Torsion Resistance	Nominal Speed	Max. Misalignment			Axial Spring Rate	Lateral Spring Rate	Mass	Torque to Tighten Screws
					Lateral	Axial	Angular				
	Nm (lb-in)	10^{-3}kgm^2 (lb-in^2)	10^3Nm/rad (lb-ft/Deg)	RPM	mm (inch)	mm (inch)	Degrees	N/mm (lb-in)	N/mm (lb-in)	kg (lbs)	Nm (lb-in)
KSS-25	25 (221)	0.10 (0.34)	16 (206)	6000	0.13 (0.005)	0.30 (0.012)	±1°	78 (445)	110 (627)	0.40 (0.88)	4 (35.40)
KSS-50	50 (442)	0.10 (0.34)	34 (437)	6000	0.12 (0.005)	0.30 (0.012)	±1°	85 (485)	130 (741)	0.40 (0.88)	4 (35.40)
KSS-65	65 (575)	0.30 (1.02)	50 (644)	6000	0.15 (0.008)	0.30 (0.012)	±1°	90 (513)	85 (485)	0.70 (1.54)	14 (124)
KSS-75	75 (664)	0.70 (2.38)	51 (656)	6000	0.20 (0.008)	0.45 (0.018)	±1°	75 (428)	55 (314)	1.20 (2.64)	14 (124)
KSS-160	160 (1416)	0.80 (2.72)	98 (1260)	6000	0.20 (0.008)	0.40 (0.016)	±1°	155 (885)	90 (513)	1.20 (2.64)	14 (124)
KSS-190	190 (1681)	0.80 (2.72)	119 (1530)	6000	0.20 (0.008)	0.35 (0.014)	±1°	260 (1485)	145 (828)	1.20 (2.64)	14 (124)
KSS-250	250 (2212)	2.20 (7.48)	159 (2045)	5000	0.20 (0.008)	0.45 (0.018)	±1°	125 (714)	100 (570)	2.20 (4.84)	34 (301)
KSS-300	300 (2832)	2.30 (7.87)	193 (2111)	5000	0.20 (0.008)	0.40 (0.039)	±1°	255 (673)	180 (1026)	2.20 (4.84)	34 (301)
KSS-450	450 (3982)	2.40 (8.18)	225 (2880)	5000	0.20 (0.008)	0.30 (0.012)	±1°	380 (2166)	270 (1539)	2.30 (5.06)	34 (301)
KSS-540	540 (4779)	4.80 (16.30)	288 (3686)	5000	0.25 (0.010)	0.50 (0.020)	±1°	300 (1713)	370 (2109)	3.40 (7.48)	67 (593)
KSS-700	700 (6195)	5.00 (17.05)	382 (4890)	5000	0.15 (0.006)	0.35 (0.014)	±1°	500 (2855)	750 (4275)	3.40 (7.48)	67 (593)
KSS-850	850 (7522)	17.80 (60.70)	475 (6080)	3500	0.35 (0.014)	0.65 (0.025)	±1°	200 (1142)	170 (969)	7.50 (15.84)	115 (1018)
KSS-1150	1150 (10177)	18.30 (62.40)	645 (8256)	3500	0.35 (0.014)	0.60 (0.023)	±1°	360 (2170)	300 (1710)	7.60 (16.72)	115 (1018)
KSS-1500	1500 (13275)	18.90 (64.45)	856 (10957)	3500	0.30 (0.012)	0.55 (0.021)	±1°	530 (3015)	480 (2736)	7.70 (16.94)	115 (1018)
KSS-2500	2500 (22125)	104 (355)	1670 (21497)	2000	0.30 (0.012)	0.3 (0.012)	±1°	550 (3132)	520 (2964)	24 (52.80)	290 (2567)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

Dimensions: mm (inch)

Size	øA mm (inch)	øB mm (inch)	øC mm (inch)	E mm (inch)	F screw size	G mm (inch)	H mm (inch)	L mm (inch)	øD min. mm (inch)	øD max. mm (inch)
KSS-25	56 (2.204)	52 (2.047)	30 (1.181)	51 (2.007)	M4	15 (0.590)	47 (1.850)	57 (2.244)	15 (0.590)	19 (0.748)
KSS-50	56 (2.204)	52 (2.047)	30 (1.181)	51 (2.007)	M4	15 (0.590)	47 (1.850)	57 (2.244)	15 (0.590)	19 (0.748)
KSS-65	66 (2.598)	62 (2.440)	36 (1.417)	61 (2.401)	M6	13 (0.512)	55 (2.165)	69 (2.716)	18 (0.709)	24 (0.945)
KSS-75	82 (3.228)	78 (3.071)	50 (1.968)	70 (2.756)	M6	16 (0.630)	64 (2.520)	78 (3.071)	22 (0.866)	35 (1.378)
KSS-160	82 (3.228)	78 (3.071)	50 (1.968)	76 (2.992)	M6	22 (0.866)	70 (2.756)	84 (3.307)	22 (0.866)	35 (1.378)
KSS-190	82 (3.228)	78 (3.071)	50 (1.968)	76 (2.992)	M6	22 (0.866)	70 (2.756)	84 (3.307)	22 (0.866)	35 (1.378)
KSS-250	101 (3.976)	96 (3.779)	62 (2.441)	89 (3.504)	M8	25 (0.984)	81 (3.189)	100 (3.937)	28 (1.102)	42 (1.653)
KSS-300	101 (3.976)	96 (3.779)	62 (2.441)	89 (3.504)	M8	25 (0.984)	81 (3.189)	100 (3.937)	28 (1.102)	42 (1.653)
KSS-450	101 (3.976)	96 (3.779)	62 (2.441)	89 (3.504)	M8	25 (0.984)	81 (3.189)	100 (3.937)	28 (1.102)	42 (1.653)
KSS-540	122 (4.803)	112 (4.409)	70 (2.756)	98 (3.858)	M10	26 (1.024)	88 (3.464)	111 (4.370)	35 (1.378)	48 (1.890)
KSS-700	122 (4.803)	112 (4.409)	70 (2.756)	98 (3.858)	M10	26 (1.024)	88 (3.464)	111 (4.370)	35 (1.378)	48 (1.890)
KSS-850	157 (6.181)	140 (5.512)	98 (3.858)	137 (5.394)	M12	44 (1.732)	119 (4.685)	152 (5.984)	40 (1.575)	70 (2.756)
KSS-1150	157 (6.181)	140 (5.512)	98 (3.858)	137 (5.394)	M12	44 (1.732)	119 (4.685)	152 (5.984)	40 (1.575)	70 (2.756)
KSS-1500	157 (6.181)	140 (5.512)	98 (3.858)	137 (5.394)	M12	44 (1.732)	119 (4.685)	152 (5.984)	40 (1.575)	70 (2.756)
KSS-2500	203 (7.992)	194 (7.638)	138 (5.433)	211 (8.307)	M16	69 (2.717	161 (6.339)	231 (9.094)	40 (1.575)	97 (3.819)

Bore diameters smaller than $øD_{min}$ are possible but reliable transmission of nominal torque M_N cannot be guaranteed.

KLC Series

Major features of the KLC series are:

- High stiffness
- All steel design
- Low cost
- Modular clamping system allows for custom bored hubs or standard bored bushings
- Quick delivery
- Simple installation

Technical Data

Size	Nominal Torque	Moment of Inertia	Torsion Resistance	Max. Misalignment			Mass	Torque to Tighten Screws
	Nm (lb-in)	10^{-3}kgm^2 (lb-in^2)	10 Nm/rad (lb-ft/Deg)	Axial	Lateral	Angular		
				mm (inch)	mm (inch)	Degrees	kg (lbs)	Nm (lb-in)
KLC-25	25 (221)	0.09 (0.3069)	12 (154)	0.5 (0.0195)	0.2 (0.008)	2° (0.078)	0.22 (0.4796)	10 (88.5)
KLC-50	50 (443)	0.22 (0.7502)	22 (282)	0.5 (0.0195)	0.2 (0.008)	2° (0.078)	0.43 (0.9374)	18 (159.3)
KLC-100	100 (885)	0.75 (2.5575)	44 (565)	0.5 (0.0195)	0.2 (0.008)	2° (0.078)	0.90 (1.962)	40 (354)
KLC-200	200 (1770)	2.1 (7.161)	95 (1219)	0.5 (0.0195)	0.2 (0.008)	2° (0.078)	1.70 (3.706)	80 (708)
KLC-400	400 (3540)	5.2 (17.732)	170 (2182)	0.5 (0.0195)	0.2 (0.008)	2° (0.078)	2.90 (6.322)	140 (1239)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration).
Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.
Overall length tolerance is +/- 1-2mm.

Ordering example:

without bushing:

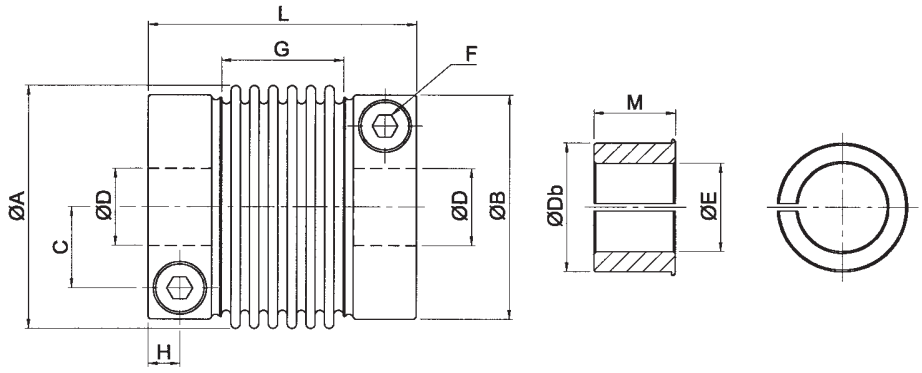
KLC 50 D1=22^{G7} D2=25.4^{G7}

Series:
Size:
Hub 1 D1:
Hub 2 D2:

with bushing:

KLC 50 B1=19^{G7} B2=25^{G7}

Series:
Size:
Hub 1 B1:
Hub 2 B2:



Dimensions: mm (inch)

Size	øA mm (inch)	øB mm (inch)	C mm (inch)	D_b mm (inch)	G mm (inch)	H mm (inch)	L mm (inch)	F screw size	M mm (inch)	øD min. mm (inch)	øD max. mm (inch)
KLC-25	50 (1.97)	46 (1.81)	17 (0.67)	28 (1.102)	35 (1.38)	6.5 (0.256)	61 (2.40)	M5	20 (0.78)	10 (.039)	28 (1.102)
KLC-50	61 (2.40)	56 (2.20)	20.5 (0.81)	28 (1.102)	33 (1.30)	8 (0.314)	66 (2.60)	M6	20 (0.78)	15 (0.590)	34 (1.339)
KLC-100	80 (3.15)	73 (2.87)	27 (1.06)	28/42 (1.102/1.65)	42 (1.65)	9.5 (0.374)	81 (3.19)	M8	20/27 (0.78/1.06)	16 (0.630)	44 (1.732)
KLC-200	98 (3.86)	88 (3.46)	33 (1.30)	42 (1.65)	46 (1.81)	11.5 (0.453)	93 (3.66)	M10	27 (1.06)	20 (0.787)	54 (2.126)
KLC-400	118 (4.65)	108 (4.25)	41 (1.61)	42 (1.65)	46 (1.81)	13 (0.512)	98 (3.86)	M12	27 (1.06)	26 (1.024)	68 (2.677)

Bore diameters smaller than $øD_{min}$ are possible but reliable transmission of nominal torque M_N cannot be guaranteed. The frictional shaft/clamping hub connection allows a minimum clearance of 0.01 mm and a maximum clearance of 0.04 mm (i.e. H7/k6).

Bushings are available in the following diameter øE with finish bore sizes:

KLC 25	KLC 50	KLC 100	KLC 200	KLC 400
14mm	-	-	-	-
15mm	15mm	-	-	-
16mm	16mm	16mm	-	-
19mm	19mm	19mm	-	-
24mm	24mm	24mm	24mm	-
25mm	25mm	25mm	25mm	-
-	-	-	28mm	28mm
-	-	30 mm	30mm	30mm
-	-	32mm	32mm	32mm
-	-	35mm	35mm	35mm
0.500 inch	-	-	-	-
0.625 inch	0.625 inch	0.625 inch	-	-
0.750 inch	0.750 inch	0.750 inch	-	-
0.875 inch	0.875 inch	0.875 inch	0.875 inch	-
1.000 inch	1.000 inch	1.000 inch	1.000 inch	1.000 inch
-	-	1.125 inch	1.125 inch	1.125 inch
-	-	1.250 inch	1.250 inch	1.250 inch
-	-	1.375 inch	1.375 inch	1.375 inch

EKM Series

Major features of the EKM series are:

- Easy-to-mount radial clamping hubs
- A star-shaped elastomer element with involute tooth profile and high shore hardness ensures zero backlash over the life of the product
- Electronically insulating and dampens oscillation resonance
- The elastomer spider compensates for small shaft misalignments
- 24 Hour delivery available

Material: Aluminum Hubs; Polyurethane 72 shore D Spider
Aluminum Hubs; Polyurethane 98 Shore A Spider

Technical Data

Size	Nominal Torque	Elastomer Hardness	Moment of Inertia	Torsion Resistance	Max. Speed	Max. Misalignment			Lateral Spring Rate	Mass	Torque to Tighten Screws
						Lateral	Axial	Angular			
	Nm (lb-in)	Shore	10^{-3}kgm^2 (lb-in^2)	10^3Nm/rad (lb-ft/Deg)	RPM	mm (inch)	mm (inch)	Degrees	N/mm (lb./in.)	kg (lbs.)	Nm (lb.-in.)
EKM-8	8 (71)	98 Sh-A	0.01 (0.03)	.160 (2.1)	6000	0.1 (0.004)	0.5 (0.02)	±1°	600 (3429)	0.06 (0.13)	4 (35)
EKM-15	15 (133)	98 Sh-A	0.03 (0.1)	.820 (10.6)	4500	0.1 (0.004)	0.5 (0.02)	±1°	2100 (12002)	0.12 (0.26)	8 (71)
EKM-20	20 (177)	72 Sh-D	0.03 (0.1)	1.20 (15.4)	4500	0.07 (0.003)	0.5 (0.02)	±1°	2900 (16574)	0.12 (0.26)	8 (71)
EKM-30	30 (266)	98 Sh-A	0.09 (0.31)	1.40 (18)	4500	0.1 (0.004)	0.5 (0.02)	±1°	2500 (14288)	0.21 (0.46)	14 (124)
EKM-45	45 (398)	72 Sh-D	0.09 (0.31)	2.00 (25.7)	4500	0.07 (0.003)	0.5 (0.02)	±1°	3600 (20574)	0.21 (0.46)	14 (124)
EKM-60	60 (531)	98 Sh-A	0.18 (0.62)	2.10 (27)	4500	0.1 (0.004)	0.5 (0.02)	±1°	2600 (14859)	0.32 (0.71)	35 (310)
EKM-90	90 (797)	72 Sh-D	0.18 (0.62)	3.10 (39.9)	4500	0.07 (0.003)	0.5 (0.02)	±1°	3700 (21146)	0.32 (0.71)	35 (310)
EKM-150	150 (1328)	98 Sh-A	0.38 (1.3)	3.60 (46.3)	4500	0.1 (0.004)	1 (0.039)	±1°	3300 (18860)	0.52 (1.15)	35/67 (310/593)
EKM-200	200 (1770)	72 Sh-D	0.38 (1.3)	5.20 (66.9)	4500	0.07 (0.003)	1 (0.039)	±1°	4600 (26289)	0.52 (1.15)	67 (593)
EKM-300	300 (2655)	98 Sh-A	1 (3.42)	6.80 (87.5)	3000	0.12 (0.005)	1 (0.039)	±1°	4500 (25718)	0.9 (1.98)	67/115 (593/1018)
EKM-400	400 (3540)	72 Sh-D	1 (3.42)	9.80 (126.2)	3000	0.1 (0.004)	1 (0.039)	±1°	6500 (37148)	0.9 (1.98)	115 (1018)
EKM-500	500 (4425)	98 Sh-A	2.2 (7.52)	20.0 (257.5)	3000	0.15 (0.006)	1 (0.039)	±1°	5900 (33719)	1.5 (3.31)	115 (1018)
EKM-700	700 (6195)	98 Sh-A	5.2 (17.77)	24.0 (309)	3000	0.15 (0.006)	1 (0.039)	±1°	7000 (40005)	2.5 (5.51)	185 (1637)

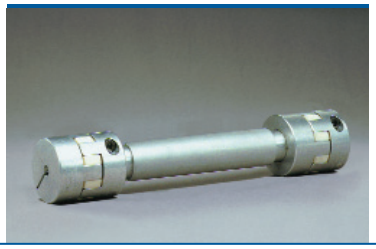
Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

Dimensions: mm (inch)

Size	øA mm (inch)	C mm (inch)	E mm (inch)	F screw size	G mm (inch)	H mm (inch)	L mm (inch)	øM mm (inch)	N mm (inch)	O mm (inch)	øP mm (inch)	øD min. mm (inch)	øD max. mm (inch)
EKM-8	32 (1.26)	10.5 (0.413)	13.5 (0.531)	M4	13 (0.512)	6 (0.236)	40 (1.575)	10.5 (0.413)	2 (0.079)	10 (0.394)	8.5 (0.335)	8 (0.315)	15 (0.591)
EKM-15	40 (1.575)	13.5 (0.531)	17 (0.669)	M5	16 (0.63)	8 (0.315)	50 (1.969)	18 (0.709)	3 (0.118)	12 (0.472)	9.5 (0.374)	10 (0.394)	19 (0.748)
EKM-20	40 (1.575)	13.5 (0.531)	17 (0.669)	M5	16 (0.63)	8 (0.315)	50 (1.969)	18 (0.709)	3 (0.118)	12 (0.472)	9.5 (0.374)	12 (0.472)	19 (0.748)
EKM-30	50 (1.969)	16.5 (0.65)	20 (0.787)	M6	18 (0.709)	9 (0.354)	58 (2.283)	27 (1.063)	3 (0.118)	14 (0.551)	12.5 (0.492)	13 (0.512)	26 (1.024)
EKM-45	50 (1.969)	16.5 (0.65)	20 (0.787)	M6	18 (0.709)	9 (0.354)	58 (2.283)	27 (1.063)	3 (0.118)	14 (0.551)	12.5 (0.492)	18 (0.709)	26 (1.024)
EKM-60	60 (2.362)	19.5 (0.768)	22 (0.866)	M8	18 (0.709)	10 (0.394)	62 (2.441)	27 (1.063)	3 (0.118)	14 (0.551)	12.5 (0.492)	15 (0.591)	29 (1.142)
EKM-90	60 (2.362)	19.5 (0.768)	22 (0.866)	M8	18 (0.709)	10 (0.394)	62 (2.441)	27 (1.063)	3 (0.118)	14 (0.551)	12.5 (0.492)	20 (0.787)	29 (1.142)
EKM-150	70 (2.756)	23/25 (0.906/0.984)	26.5 (1.043)	M8 M10	20 (0.787)	12 (0.472)	73 (2.874)	30 (1.181)	4 (0.157)	15 (0.591)	14.5 (0.571)	22/30 (0.866/1.181)	33/38 (1.30/1.496)
EKM-200	70 (2.756)	23 (0.906)	26.5 (1.043)	M10	20 (0.787)	12 (0.472)	73 (2.874)	30 (1.181)	4 (0.157)	15 (0.591)	14.5 (0.571)	26 (1.024)	33 (1.299)
EKM-300	85 (3.346)	29/30 (1.142/1.181)	31 (1.22)	M10 M12	24 (0.945)	14 (0.551)	86 (3.386)	38 (1.496)	4 (0.157)	18 (0.709)	16.5 (0.65)	30/38 (1.181/1.50)	42/46 (1.811/1.654)
EKM-400	85 (3.346)	29 (1.142)	31 (1.22)	M12	24 (0.945)	14 (0.551)	86 (3.386)	38 (1.496)	4 (0.157)	18 (0.709)	16.5 (0.65)	35 (1.378)	42 (1.654)
EKM-500	100 (3.937)	36 (1.417)	33 (1.299)	M12	28 (1.102)	16 (0.63)	94 (3.701)	47 (1.85)	5 (0.197)	22 (0.866)	20.5 (0.807)	38 (1.496)	56 (2.205)
EKM-700	120 (4.724)	44 (1.732)	38 (1.496)	M14	33 (1.299)	18 (0.709)	109 (4.291)	58 (2.283)	6 (0.236)	25 (0.984)	22.2 (0.874)	40 (1.575)	70 (2.756)

Bore diameters smaller than $øD_{min}$ are possible but reliable transmission of nominal torque M_N cannot be guaranteed.

The EKM150 and EKM 300 are available with smaller screws in order to allow larger bore diameters.



EKZ Series

Major features of the series EKZ are:

- The special design makes a "one person assembly" possible, even with an extremely long intermediate pipe
- During maintenance, the EKZ coupling can be exchanged without disassembling the drive or output units
- The elastomer spider can compensate slight shaft misalignments
- Electrically insulating, and dampens oscillation resonance
- The frictional shaft-hub connection is backlash free and ensures a safe torque transfer without keyways

Material: Aluminum Shaft and Aluminum Hubs; Polyurethane 72 Shore D Spider

Technical Data

Size	Nominal Torque	Moment of Inertia			Torsional Stiffness			Mass			Torque to tighten screws
		10^{-3}kgm² (lb-in²)			10^{3}Nm/rad (lb-ft/Deg)			kg (lbs)			
	Nm (lb-in)	0.5m	1.0m	2.0m	0.5m	1.0m	2.0m	0.5m	1.0m	2.0m	Nm (lb-in)
EKZ-20	20 (177)	0.07 (0.24)	0.09 (0.31)	-	.250 (3.2)	.150 (1.9)	-	0.5 (1.1)	0.8 (1.8)	-	8 (71)
EKZ-45	45 (398)	0.27 (0.92)	0.36 (1.23)	0.53 (1.81)	.780 (10)	.630 (8.1)	.460 (5.9)	1 (2.2)	1.6 (3.5)	2.8 (6.2)	14 (124)
EKZ-90	90 (797)	0.45 (1.53)	0.54 (1.84)	0.72 (2.46)	1.10 (14.2)	.800 (10.3)	.540 (7)	1.3 (2.9)	1.9 (4.2)	3 (6.6)	35 (310)
EKZ-200	200 (1770)	0.9 (3.07)	1.1 (3.75)	1.4 (4.77)	1.90 (24.5)	1.50 (19.3)	1.05 (13.5)	1.8 (4)	2.5 (5.5)	4 (8.8)	67 (593)
EKZ-400	400 (3540)	2.4 (8.18)	2.8 (9.55)	3.6 (12.28)	3.65 (47)	2.90 (37.3)	2.05 (26.4)	2.8 (6.2)	3.9 (8.6)	6 (13.2)	115 (1018)
EKZ-700	700 (6195)	11.2 (38.19)	12.1 (41.26)	13.8 (47.06)	8.75 (112.7)	6.80 (87.6)	4.70 (60.5)	6.5 (14.3)	8.1 (17.9)	11.3 (24.9)	185 (1637)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

Maximum allowable axial misalignment: +/- 1 mm

Maximum allowable lateral misalignment: +/- 5 mm/meter

Caution: Applications with a speed higher than 1500 RPM or a length longer than 2 m are possible. Please contact GAM for information on these types of applications

Dimensions: mm (inch)

Size	øA mm (inch)	øB mm (inch)	C mm (inch)	F screw size	H mm (inch)	K mm (inch)	L_{min} mm (inch)	S mm (inch)	T min mm (inch)	T max mm (inch)	øD min. mm (inch)	øD max. mm (inch)
EKZ-20	40 (1.575)	20 (0.787)	13.5 (0.531)	M5	8 (0.315)	50 (1.969)	132 (5.197)	16 (0.63)	16 (0.63)	20 (0.787)	10 (0.394)	19 (0.748)
EKZ-45	50 (1.969)	30 (1.181)	16.5 (0.65)	M6	9 (0.354)	58 (2.283)	152 (5.984)	18 (0.709)	18 (0.709)	25 (0.984)	13 (0.512)	26 (1.024)
EKZ-90	60 (2.362)	30 (1.181)	19.5 (0.768)	M8	10 (0.394)	62 (2.441)	160 (6.299)	18 (0.709)	20 (0.787)	26 (1.024)	15 (0.591)	29 (1.142)
EKZ-200	70 (2.756)	35 (1.378)	23 (0.906)	M10	12 (0.472)	73 (2.874)	186 (7.323)	20 (0.787)	23 (0.906)	30 (1.181)	22 (0.866)	33 (1.299)
EKZ-400	85 (3.346)	45 (1.772)	29 (1.142)	M12	14 (0.551)	86 (3.386)	220 (8.661)	24 (0.945)	28 (1.102)	35 (1.378)	30 (1.181)	42 (1.654)
EKZ-700	120 (4.724)	55 (2.165)	44 (1.732)	M14	18 (0.709)	109 (4.291)	284 (11.181)	33 (1.299)	35 (1.378)	42 (1.654)	40 (1.575)	70 (2.756)

Bore diameters smaller than $øD_{min}$ are possible but reliable transmission of nominal torque M_N cannot be guaranteed.

The combination of the easy mounting elastomer coupling EKM and press fits on both sides of the intermediate pipe are the guarantee for quick and easy assembly and disassembly. A displacement of the drive or driven shaft is not necessary because the inner hubs can be temporarily pushed back toward the center of the pipe to allow for the necessary clearence. (see picture below)

L= Distance between Shaft + 2(T)

ESM Series

Major features of the ESM series are:

- High speed capability
- Backlash free shaft couplings for small and medium torque values
- A star-shaped elastomer element with involute tooth profile and high shore hardness ensures zero backlash over the life of the product
- The elastomer spider compensates for small shaft misalignments

Material: Steel Hubs and Polyurethane 72 Shore D Spider
Steel Hubs and Polyurethane 98 Shore A Spider

Technical Data

Size	Nominal Torque	Elastomer Hardness	Moment of Inertia	Moment of Inertia	Torsion Resistance	Max. Speed	Max. Misalignment			Lateral Spring Rate	Mass	Mass	Torque to Tighten Screws
							Lateral	Axial	Angular				
	Nm (lb-in)	Shore	10^{-3}kgm^2 (lb-in^2)	Aluminum Version	10^3Nm/rad (lb-ft/Deg)	RPM	mm (inch)	mm (inch)	Degrees	N/mm (lb/in)	kg (lbs)	Aluminum Version	Nm (lb-in)
ESM-10	10 (89)	98 Sh-A	0.02 (0.07)	0.015 (0.05)	.160 (2.1)	20000	0.1 (0.004)	0.5 (0.02)	±1°	600 (3429)	0.15 (0.33)	0.11 (0.24)	1.8 (16)
ESM-14	14 (124)	98 Sh-A	0.08 (0.27)	0.05 (0.17)	.670 (8.6)	19000	0.1 (0.004)	0.5 (0.02)	±1°	2000 (11430)	0.3 (0.66)	0.23 (0.51)	4 (35)
ESM-17	17 (150)	98 Sh-A	0.1 (0.34)	0.06 (0.21)	.820 (10.6)	18000	0.1 (0.004)	0.5 (0.02)	±1°	2100 (12002)	0.35 (0.77)	0.28 (0.62)	4 (35)
ESM-25	25 (221)	72 Sh-D	0.1 (0.34)	0.06 (0.21)	1.20 (15.4)	18000	0.07 (0.003)	0.5 (0.02)	±1°	2900 (16574)	0.35 (0.77)	0.28 (0.62)	4 (35)
ESM-43	43 (381)	98 Sh-A	0.29 (0.99)	0.19 (0.65)	1.40 (18)	14500	0.1 (0.004)	0.5 (0.02)	±1°	2500 (14288)	0.65 (1.43)	0.4 (0.88)	8 (71)
ESM-50	50 (443)	72 Sh-D	0.29 (0.99)	0.19 (0.65)	2.00 (25.7)	14500	0.07 (0.003)	0.5 (0.02)	±1°	3600 (20574)	0.65 (1.43)	0.4 (0.88)	8 (71)
ESM-60	60 (531)	98 Sh-A	0.43 (1.47)	0.28 (0.96)	2.10 (27)	13000	0.1 (0.004)	0.5 (0.02)	±1°	2600 (14859)	0.9 (1.98)	0.6 (1.32)	8 (71)
ESM-90	90 (797)	72 Sh-D	0.43 (1.47)	0.28 (0.96)	3.10 (39.9)	13000	0.07 (0.003)	0.05 (0.002)	±1°	3700 (21146)	0.9 (1.98)	0.6 (1.32)	8 (71)
ESM-150	150 (1328)	98 Sh-A	0.92 (3.14)	0.65 (2.22)	3.60 (46.3)	11000	0.1 (0.004)	1 (0.039)	±1°	3300 (18860)	1.2 (2.65)	0.9 (1.98)	8 (71)
ESM-200	200 (1770)	72 Sh-D	0.92 (3.14)	0.65 (2.22)	5.20 (66.9)	11000	0.07 (0.003)	1 (0.039)	±1°	4600 (26289)	1.2 (2.65)	0.9 (1.98)	8 (71)
ESM-320	320 (2832)	98 Sh-A	2.7 (9.23)	2 (6.84)	6.80 (87.5)	9000	0.12 (0.005)	1 (0.039)	±1°	4500 (25718)	2.6 (5.73)	1.9 (4.19)	35 (310)
ESM-400	400 (3540)	72 Sh-D	2.7 (9.23)	2 (6.84)	9.80 (126.2)	9000	0.1 (0.004)	1 (0.039)	±1°	6500 (371476)	2.6 (5.73)	1.9 (4.19)	35 (310)
ESM-500	500 (4425)	98 Sh-A	8.8 (30.08)	5.6 (19.14)	20.0 (257.5)	7500	0.15 (0.006)	1 (0.039)	±1°	5900 (33719)	6 (13.23)	4.5 (9.92)	67 (593)
ESM-700	700 (6195)	98 Sh-A	20.5 (70.06)	13 (44.43)	24. 0 (309)	6000	0.15 (0.006)	1 (0.039)	±1°	7000 (40005)	9.5 (20.95)	7 (15.44)	115 (1018)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

Dimensions: mm (inch)

Size	øA mm (inch)	øB mm (inch)	E screw size	F screw size	G mm (inch)	K mm (inch)	L mm (inch)	øM mm (inch)	N mm (inch)	O mm (inch)	øP mm (inch)	øD min. mm (inch)	øD max. mm (inch)
ESM-10	32 (1.26)	17 (0.669)	18.5 (0.728)	4xM3	13 (0.512)	15.5 (0.61)	50 (1.969)	10.5 (0.413)	2 (0.079)	10 (0.394)	8.5 (0.335)	6 (0.236)	14 (0.551)
ESM-14	37.5 (1.476)	19 (0.748)	25 (0.984)	6xM4	16 (0.63)	21 (0.827)	66 (2.598)	18 (0.709)	3 (0.118)	12 (0.472)	9.5 (0.374)	9 (0.354)	16 (0.63)
ESM-17	40 (1.575)	22 (0.866)	25 (0.984)	6xM4	16 (0.63)	21 (0.827)	66 (2.598)	18 (0.709)	3 (0.118)	12 (0.472)	9.5 (0.374)	9 (0.354)	19 (0.748)
ESM-25	40 (1.575)	22 (0.866)	25 (0.984)	6xM4	16 (0.63)	21 (0.827)	66 (2.598)	18 (0.709)	3 (0.118)	12 (0.472)	9.5 (0.374)	10 (0.394)	19 (0.748)
ESM-43	50 (1.969)	29 (1.142)	30 (1.181)	4xM5	18 (0.709)	25 (0.984)	78 (3.071)	27 (1.063)	3 (0.118)	14 (0.551)	12.5 (0.492)	12 (0.472)	24 (0.945)
ESM-50	50 (1.969)	29 (1.142)	30 (1.181)	4xM5	18 (0.709)	25 (0.984)	78 (3.071)	27 (1.063)	3 (0.118)	14 (0.551)	12.5 (0.492)	15 (0.591)	24 (0.945)
ESM-60	55 (2.165)	30 (1.181)	30 (1.181)	4xM5	18 (0.709)	25 (0.984)	78 (3.071)	27 (1.063)	3 (0.118)	14 (0.551)	12.5 (0.492)	12 (0.472)	25 (0.984)
ESM-90	55 (2.165)	30 (1.181)	30 (1.181)	4xM5	18 (0.709)	25 (0.984)	78 (3.071)	27 (1.063)	3 (0.118)	14 (0.551)	12.5 (0.492)	16 (0.63)	25 (0.984)
ESM-150	65 (2.559)	40 (1.575)	35 (1.378)	8xM5	20 (0.787)	30 (1.181)	90 (3.543)	30 (1.181)	4 (0.157)	15 (0.591)	14.5 (0.571)	17 (0.669)	35 (1.378)
ESM-200	65 (2.559)	40 (1.575)	35 (1.378)	8xM5	20 (0.787)	30 (1.181)	90 (3.543)	30 (1.181)	4 (0.157)	15 (0.591)	14.5 (0.571)	19 (0.748)	35 (1.378)
ESM-320	80 (3.15)	46 (1.811)	45 (1.772)	4xM8	24 (0.945)	40 (1.575)	114 (4.488)	38 (1.496)	4 (0.157)	18 (0.709)	16.5 (0.65)	20 (0.787)	40 (1.575)
ESM-400	80 (3.15)	46 (1.811)	45 (1.772)	4xM8	24 (0.945)	40 (1.575)	114 (4.488)	38 (1.496)	4 (0.157)	18 (0.709)	16.5 (0.65)	25 (0.984)	40 (1.575)
ESM-500	100 (3.937)	58 (2.283)	55 (2.165)	4xM10	28 (1.102)	49 (1.929)	138 (5.433)	47 (1.85)	5 (0.197)	22 (0.866)	20.5 (0.807)	22 (0.866)	48 (1.89)
ESM-700	120 (4.724)	72 (2.835)	61 (2.402)	4xM12	33 (1.299)	54 (2.126)	155 (6.102)	58 (2.283)	6 (0.236)	25 (0.984)	22.5 (0.886)	25 (0.984)	60 (2.362)

Bore diameters smaller than $øD_{min}$ are possible but reliable transmission of nominal torque M_N cannot be guaranteed.

KH Series

Major features of the KH series are:

- Combine the advantages of a torsion resistant flexible coupling with the easy installation of a split hub coupling.
- Allows installation without removing the motor or other drive components
- Advantageous in space constrained applications or for retrofits
- Does not require keyways
- Allows smaller shaft diameters or the transmission of higher torques
- The clamping hubs allow a maximum clearance of 0.04mm (0.0015 inches) between shaft diameter and hub bore

Material: All Aluminum Coupling

Technical Data

Size	Nominal Torque	Moment of Inertia	Torsion Resistance	Nominal Speed	Max. Misalignment		Mass	Torque to Tighten Screws
					Lateral	Angular		
	Nm (lb-in)	10^{-3}kgm^2 (lb-in^2)	10^3 (lb-ft/deg)	RPM	mm (inch)	Degrees	kg (lbs)	Nm (lb-in)
KH-10	10 (89)	0.17 (0.58)	12 (154)	6000	0.1 (0.004)	±1°	0.3 (0.66)	12 (106)
KH-20	20 (177)	0.17 (0.58)	15 (193)	6000	0.1 (0.004)	±1°	0.3 (0.66)	14 (124)
KH-40	40 (354)	0.36 (1.23)	30 (386)	6000	0.1 (0.004)	±1°	0.5 (1.1)	16 (142)
KH-80	80 (708)	1.33 (4.55)	37 (476)	6000	0.1 (0.004)	±1°	0.9 (1.98)	33 (292)
KH-160	160 (1416)	2.27 (7.76)	65 (837)	6000	0.1 (0.004)	±1°	1.6 (3.53)	60 (531)
KH-320	320 (2832)	3.8 (12.99)	90 (1159)	6000	0.1 (0.004)	±1°	2.6 (5.73)	110 (974)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

Dimensions: mm (inch)

Size	øA mm (inch)	C mm (inch)	F screw size	G mm (inch)	H mm (inch)	L mm (inch)	øD min. mm (inch)	øD max. mm (inch)
KH-10	59 (2.323)	42 (1.654)	M6	14 (0.551)	7 (0.276)	69 (2.717)	8 (0.315)	28 (1.102)
KH-20	59 (2.323)	42 (1.654)	M6	14 (0.551)	7 (0.276)	69 (2.717)	11 (0.433)	28 (1.102)
KH-40	69 (2.717)	53 (2.087)	M6	14 (0.551)	7 (0.276)	78 (3.071)	14 (0.551)	37 (1.457)
KH-80	89 (3.504)	70 (2.756)	M8	21 (0.827)	10 (0.394)	90 (3.543)	17 (0.669)	49 (1.929)
KH-160	99 (3.898)	77 (3.031)	M10	56 (2.205)	10.5 (0.413)	100 (3.937)	25 (0.984)	54 (2.126)
KH-320	109 (4.291)	84 (3.307)	M12	25 (0.984)	12.5 (0.492)	116 (4.567)	30 (1.181)	59 (2.323)

Bore diameters smaller than $øD_{min}$ are possible but reliable transmission of nominal torque M_N cannot be guaranteed.

WB Series

Major features of the WB series are:

- Three piece all steel design allows installation or removal of the coupling without moving the motor or other drive components
- Similar in basic design to the split hub coupling KH series
- Variable length of up to 3M (9.84 ft),
- WB couplings can compensate for a maximum shaft misalignment of up to 6mm (.236 in)
- Typical applications of this special coupling type are paper and printing machinery and other applications where long shaft to shaft distances have to be connected

Material: All Steel Coupling

Technical Data

Size	Nominal Torque Nm (lb-in)	Moment of Inertia* 10^{-3}kgm^2 (lb-in^2)	Torsion Resistance* 10^3Nm/rad (lb-ft/Deg)	Max Misalignment			Mass	Torque to Tighten Screws
				Lateral	Axial*	Angular		
				mm (inch)	mm (lbs)	Degrees	kg (lbs)	Nm (lb-in)
WB-20	20 (177)	1.5 (5.13)	7 (90.09)	2 (0.079)	0.4 (0.016)	±1°	4.5 (3.02)	14 (124)
WB-40	40 (354)	3 (6.42)	15 (193.05)	2 (0.079)	0.4 (0.016)	±1°	6 (4.02)	14 (124)
WB-80	80 (708)	7.5 (25.65)	27 (347.49)	2 (0.079)	0.4 (0.016)	±1°	8.5 (5.70)	33 (292)
WB-160	160 (1416)	12 (41.04)	50 643.5)	2 (0.079)	0.4 (0.016)	±1°	11 (7.37)	65 (575)
WB-320	320 (2832)	19.5 (66.69)	65 (836.55)	2 (0.079)	0.4 (0.016)	±1°	15 (10.05)	110 (974)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

*Recommended values for coupling lengths of L=1 meter; intermediate values see page 31.

*Recommended values are for Steel Shafts, for values on Aluminum shafts contact GAM Enterprises.

Dimensions: mm (inch)

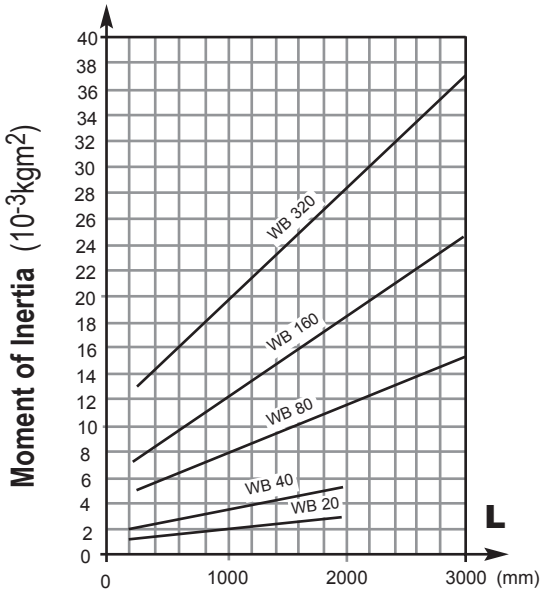
Size	øA mm (inch)	øB mm (inch)	C mm (inch)	E screw size	F screw size	G		H_1 mm (inch)	H_2 mm (inch)	K mm (inch)	øD	
						min. mm (inch)	max. mm (inch)				min. mm (inch)	max. mm (inch)
WB-20	59 (2.323)	35 (1.378)	42 (1.654)	M5	M6	13 (0.512)	23 (0.906)	7 (0.276)	31 (1.22)	39 (1.535)	11 (0.433)	32 (1.26)
WB-40	69 (2.717)	45 (1.772)	53 (2.087)	M5	M6	13 (0.512)	23 (0.906)	7 (0.276)	31 (1.22)	39 (1.535)	14 (0.551)	42 (1.654)
WB-80	89 (3.504)	55 (2.165)	70 (2.756)	M6	M8	18 (0.709)	29 (1.142)	10 (0.394)	40 (1.575)	50 (1.969)	17 (0.669)	54 (2.126)
WB-160	99 (3.898)	62 (2.441)	77 (3.031)	M6	M10	18 (0.709)	30 (1.181)	10.5 (0.413)	41.5 (1.634)	52 (2.047)	25 (0.984)	60 (2.362)
WB-320	109 (4.291)	65 (2.559)	84 (3.307)	M6	M12	20 (0.787)	40 (1.575)	12 (0.472)	51 (2.008)	63 (2.48)	30 (1.181)	63 (2.48)

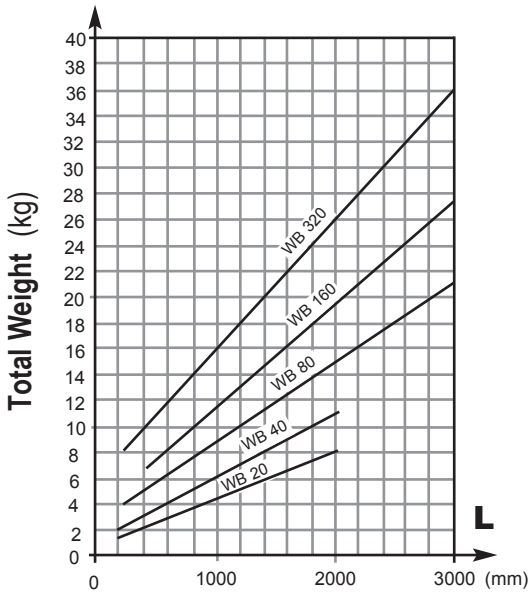
Bore diameters smaller than øD_{min} are possible but reliable transmission of nominal torque M_N cannot be guaranteed.

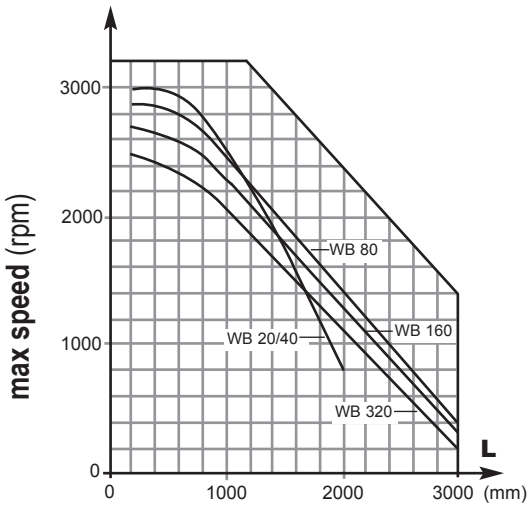
L=Distance between shaft + 2(G)

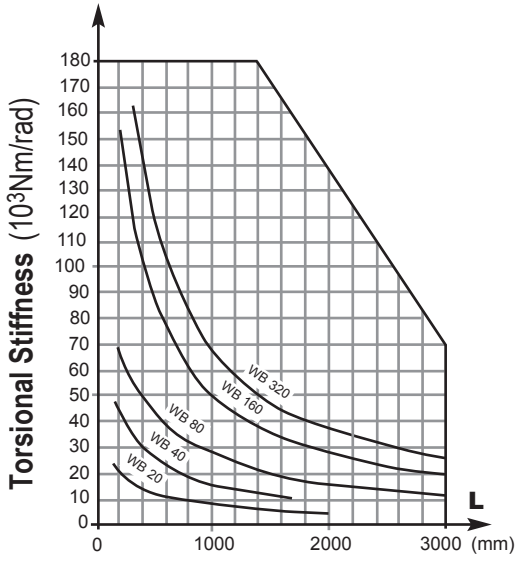
A.

Technical Data of WB couplings dependant on length:









SAFETY COUPLING OVERVIEW

Safety Couplings prevent expensive damage that often results when a collision occurs in a high performance servo drive system. At impact, the motor transmits peak torque before the current overload relay reacts. The relay will probably protect the motor from overheating but will not protect the equipment from the destructive internal forces. When a collision occurs, one is not only faced with the repair costs of the damaged equipment but also the expensive downtime due to lost production. Safety Couplings are a cost-effective solution to minimize these costs.

OPERATION

Safety Couplings are spring loaded form fit couplings that transmit torque through the use of a special cup spring in which the hardened and polished steel balls are preloaded and pressed into spherical indentations. The backlash-free mechanism is connected to either a flexible bellow when used in direct drive applications, or to a pulley for indirect drives.

In the presence of an overload, the hub with its ball cage will overtwist and press the balls out of the indentations to disengage. Only the balls and cup spring move axially, resulting in a very low disengagement mass.

In contrast, acceleration of ordinary mechanical torque limiters, with their high disengagement mass, produces a dynamic torque that exceeds static torque by a factor of two or three. The high dynamic torque, in turn, results in a higher destructive force.

Special cup springs are key components in the operation of our safety couplings. In conventional spring- loaded couplings, springs experience additional stress when activated (*see figure 1*). Therefore, they create a certain amount of additional spring tension and torque until the couplings completely disengage. This tends to delay decoupling after a collision. Our cup springs function on the diminishing side of the spring characteristic curve (*see figure 2*), causing torque to drop off immediately upon activation.

Since only the balls and cup spring move axially, a proximity switch can be used to initiate an emergency stop to shut the servo motor down. We have versions that will automatically re-engage after torque drops off or to remain disengaged until drive rotation has reversed. The machine reference point is retained regardless of the re-engagement mode.

STANDARD FEATURES

Low Inertia - **Compensation of Misalignment**
Zero Backlash - **High Torsional Stiffness**
High Temperatures - **Patented Connection Method**

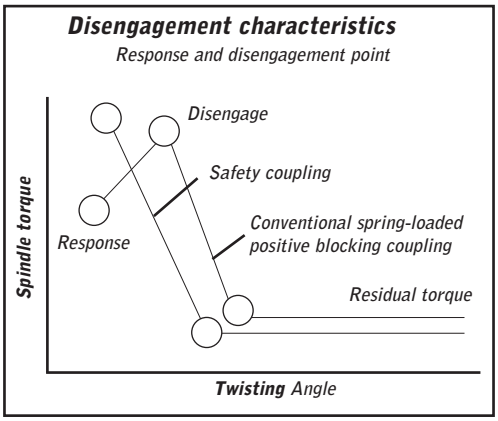


figure 1

SPECIAL FEATURES

Automatic Re-engagement Versions

Re-engagement occurs at the same reference point every 360 degrees. Versions are available that will automatically re-engage after torque drops off or remain disengaged until drive rotation is reversed.

Integrated Bearing Support

Versions are available that include an integrated bearing to support the pulley. This eliminates the need for support inside the pulley and allows for a more compact overall design.

Degressive Cup Spring Characteristic

These special cup springs were developed to operate on the diminishing side of the spring characteristic curve resulting in immediate torque drop off at activation and reduced destructive forces and damage.

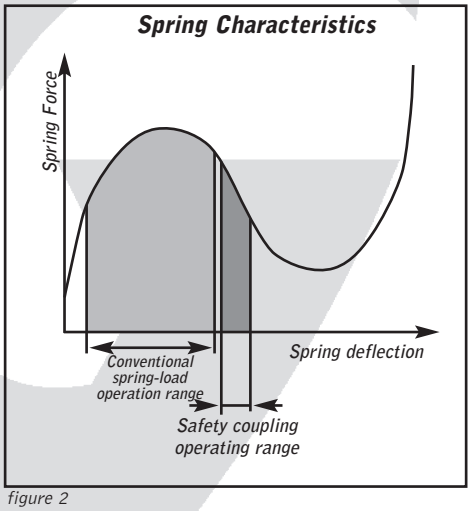
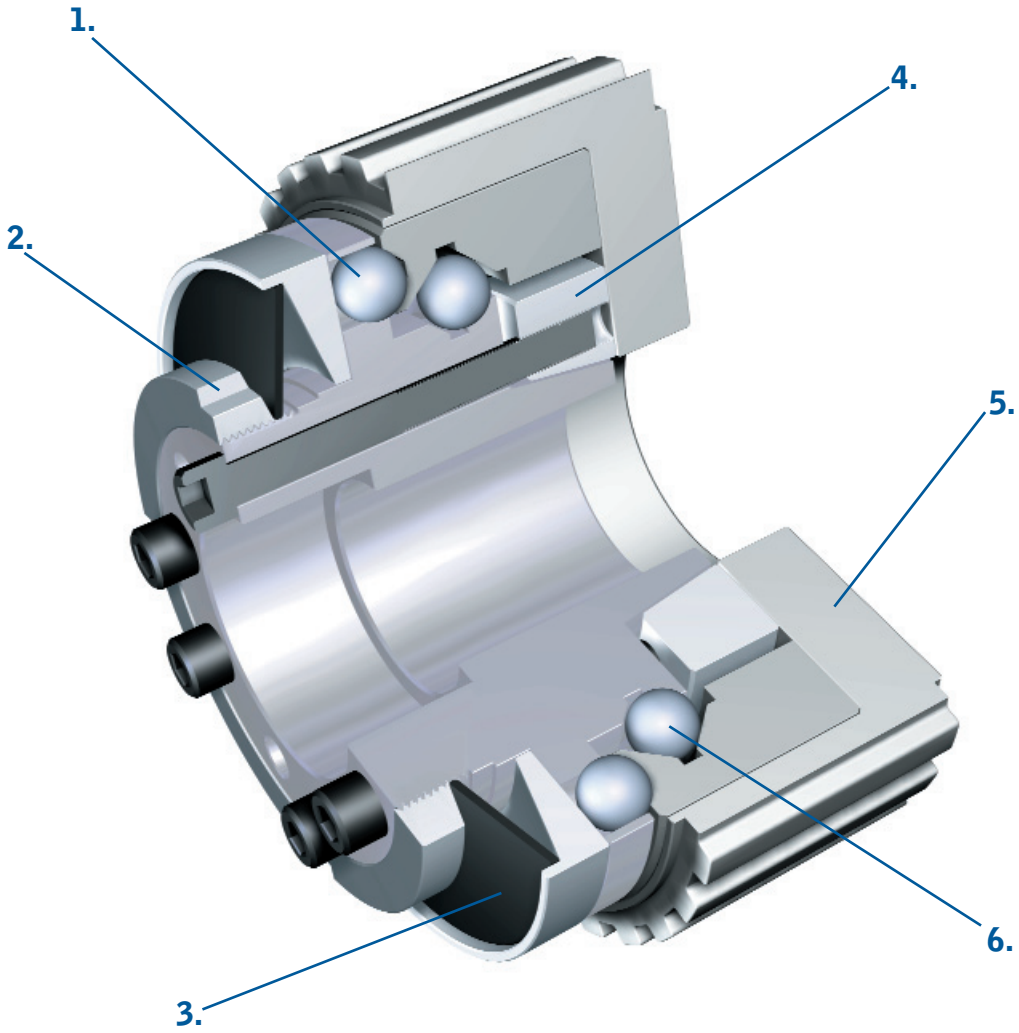


figure 2



COMPONENT INDEX

1. Ball Detent System
(Asymmetric detents cause the coupling to re-engage at the same point of reference)

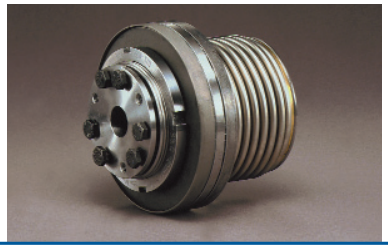
2. Adjustment Nut
(Allows the disengagement torque to be adjusted)

3. Spring Washer
(Preloads the steel balls between the ball cage and the detents to ensure a back-lash free torque transfer)

4. Clamping Ring
(Compresses the coupling onto the shaft)

5. Pulley
(Not included with the coupling)

6. Integrated Bearing
(Supports the coupling while dis-engaged)



SBA Series

Major features of the SBA series are:

- In the event of an overload, the coupling will disengage and click over once per revolution until the torque drops or the drive stops
- The coupling will re-engage automatically at only one point per revolution and retains the drive's reference point
- SBA couplings are combined with a torsion resistant flexible metal bellows to compensate for axial, lateral, and angular misalignment
- The clamping hubs allow a maximum clearance of 0.02mm (0.0008 inches) between shaft diameter and hub bore

Material: Stainless Steel Bellow and Aluminum or Steel Hubs and Steel Safety Element

Technical Data

Size	Disengagement Torque Range	Moment of Inertia	Torsion Resistance	Nominal Speed	Max. Misalignment			Axial Spring Rate	Lateral Spring Rate	Mass	Torque to Tighten Screws
					Lateral	Axial	Angular				
	Nm (lb-in)	10^{-3}kgm² (lb-in²)	10^{3}Nm/rad (lb-ft/Deg)	RPM	mm (inch)	mm (inch)	Degrees	N/mm (lb-in)	N/mm (lb-in)	kg (lbs)	Nm (lb-in)
SBA-4	2-4 (17.7-35.4)	0.25 (0.85)	21 (269)	2500	0.20 (0.008)	0.80 (0.031)	±1°	51 (291)	189 (1077)	0.70 (1.54)	4 (35.40)
SBA-9	4-9 (35.4-79.65)	0.25 (0.85)	21 (269)	2500	0.20 (0.008)	0.80 (0.031)	±1°	51 (291)	189 (1077)	0.70 (1.54)	4 (35.40)
SBA-18	9-18 (79.96-159.3)	0.26 (.88)	21 (269)	2500	0.20 (0.008)	0.80 (0.039)	±1°	51 (291)	189 (1077)	0.70 (1.54)	4 (35.40)
SBA-23	9-23 (79.65-203.55)	0.76 (2.58)	20 (257)	4000	0.20 (0.008)	1 (0.039)	±1°	27 (154)	175 (997)	1.30 (2.86)	14 (124)
SBA-35	18-35 (159.3-309.75)	0.76 (2.58)	25 (320)	4000	0.20 (0.008)	1 (0.031)	±1°	27 (154)	175 (997)	1.30 (2.86)	14 (124)
SBA-75	25-75 (221.25-663.75)	0.76 (2.58)	33 (422)	4000	0.20 (0.008)	0.9 (0.035)	±1°	49 (279)	262 (1493)	1.30 (2.86)	14 (124)
SBA-100	50-100 (442.5-885)	2 (6.80)	54 (691)	4000	0.25 (0.010)	1.30 (0.051)	±1°	48 (273)	218 (1241)	2.20 (4.84)	14 (124)
SBA-170	65-170 (575.25-1504.5)	3.1 (10.20)	66 (845)	4000	0.20 (0.008)	1.20 (0.047)	±1°	80 (456)	401 (2283)	2.70 (5.94)	14 (124)
SBA-270	100-270 (885-2389.5)	10 (34.0)	108 (1382)	3500	0.20 (0.008)	1.20 (0.047)	±1°	78 (445)	503 (2867)	5.40 (11.88)	34 (304)
SBA-550	200-550 (1770-4867.5)	12.8 (43.52)	217 (2778)	3500	0.17 (0.007)	1 (0.039)	±1°	102 (581)	1200 (6833)	6.10 (13.42)	34/70 (301/619.5)
SBA-900	330-900 (2920.5-7965)	70 (238.0)	335 (4287)	2500	0.15 (0.006)	1.20 (0.047)	±1°	102 (581)	1050 (5979)	17.00 (37.40)	70/100 (619.5/885)
SBA-1500	600-1500 (5310-13275)	73 (248.2)	637 (8154)	2500	0.15 (0.006)	1 (0.039)	±1°	160 (911)	1500 (8541)	18.70 (41.14)	115 (1018)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

SBA Series Bore Ranges for Conical Bushings: mm (inch)

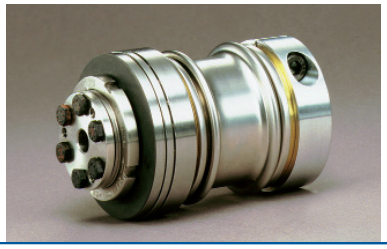
SIZE	SBA-4	SBA-9	SBA-18	SBA-23	SBA-35	SBA-75	SBA-100	SBA-170	SBA-270	SBA-550	SBA-900	SBA-1500
$ØD_{1/2}$ min (.394)	10 (.394)	10 (.394)	10 (.709)	18 (.709)	18 (.709)	18 (.866)	22 (.866)	22 (1.122)	28.5 (1.378/1.122)	35/28.5 (1.575)	40 (1.575)	40 (1.575)
$ØD_{1/2}$ max	19/16 (.748/.630)	19/16 (.748/.630)	19/16 (.748/.630)	24 (.945)	24 (.945)	24 (.945)	35 (1.378)	35 (1.378)	41 (1.614)	48/41 (1.89/1.614)	60/67 (2.362/2.638)	70/67 (2.756/2.362)

Dimensions: mm (inch)

Size	øA mm (inch)	øB mm (inch)	øC$_1$ mm (inch)	øC$_2$ mm (inch)	F$_1$ screw size	F$_2$ screw size	F$_3$ screw size	G mm (inch)	H$_1$ mm (inch)	H$_2$ mm (inch)	H$_3$ mm (inch)	I mm (inch)	J mm (inch)	L$_1$ mm (inch)	L$_2$ mm (inch)	S mm (inch)
SBA-4	60 (2.362)	56 (2.205)	30 (1.181)	27 (1.063)	6 x M4	6 x M4	M6	19 (0.748)	18 (0.709)	18 (0.709)	20 (0.787)	15.2 (0.598)	7.5 (0.295)	80 (3.15)	87 (3.425)	1 (0.039)
SBA-9	60 (2.362)	56 (2.205)	30 (1.181)	27 (1.063)	6 x M4	6 x M4	M6	19 (0.748)	18 (0.709)	18 (0.709)	20 (0.787)	15.2 (0.598)	7.5 (0.295)	80 (3.15)	87 (3.425)	1 (0.039)
SBA-18	60 (2.362)	56 (2.205)	30 (1.181)	27 (1.063)	6 x M4	6 x M4	M6	18 (0.709)	18 (0.709)	18 (0.709)	20 (0.787)	15.2 (0.598)	7.5 (0.295)	80 (3.15)	87 (3.425)	1 (0.039)
SBA-23	77 (3.031)	66 (2.598)	36 (1.417)	36 (1.417)	6 x M6	6 x M6	M8	22 (0.866)	24 (0.945)	24 (0.945)	22 (0.866)	18.7 (0.736)	8.5 (0.335)	93 (3.661)	100 (3.937)	1.4 (0.055)
SBA-35	77 (3.031)	66 (2.598)	36 (1.417)	36 (1.417)	6 x M6	6 x M6	M8	22 (0.866)	24 (0.945)	24 (0.945)	22 (0.866)	18.7 (0.736)	8.5 (0.335)	93 (3.661)	100 (3.937)	1.4 (0.055)
SBA-75	77 (3.031)	66 (2.598)	36 (1.417)	36 (1.417)	6 x M6	6 x M6	M8	22 (0.866)	24 (0.945)	24 (0.945)	22 (0.866)	18.7 (0.736)	8.5 (0.335)	93 (3.661)	100 (3.937)	1.4 (0.055)
SBA-100	92 (3.622)	82 (3.228)	50 (1.969)	50 (1.969)	6 x M6	6 x M6	M10	28.5 (1.122)	27 (1.063)	27 (1.063)	26 (1.024)	18.5 (0.728)	10.5 (0.413)	102 (4.015)	114 (4.488)	1.4 (0.055)
SBA-170	105 (4.134)	82 (3.228)	50 (1.969)	50 (1.969)	6 x M6	6 x M6	M10	28.5 (1.122)	27 (1.063)	27 (1.063)	26 (1.024)	18.6 (0.732)	10.5 (0.413)	108 (4.252)	119.5 (4.705)	2 (0.079)
SBA-270	135 (5.315)	101 (3.976)	62 (2.441)	62 (2.441)	6 x M8	6 x M8	M12	35 (1.378)	32 (1.26)	32 (1.26)	29 (1.142)	23.5 (0.925)	12.5 (0.492)	127 (5)	138 (5.433)	2.2 (0.087)
SBA-550	135 (5.315)	122 (4.803)	70 (2.756)	62 (2.441)	6 x M10	6 x M8	M12	45.5 (1.791)	36 (1.417)	32 (1.26)	30 (1.181)	23.5 (0.925)	13.5 (0.531)	139 (5.472)	150 (5.906)	2.2 (0.087)
SBA-1000	190 (7.48)	132 (5.197)	83 (3.268)	95 (3.74)	6 x M10	6 x M12	M14	47 (1.85)	46.5 (1.831)	46.5 (1.831)	45 (1.772)	47.5 (1.87)	18.5 (0.728)	190 (7.48)	208 (8.189)	3.4 (0.134)
SBA-1500	190 (7.48)	157 (6.181)	98 (3.858)	95 (3.74)	6 x M12	6 x M12			46.5 (1.831)	46.5 (1.831)		47.5 (1.87)		193 (7.598)		3.4 (0.134)

SBB Series Bore Ranges for Conical Bushings: mm (inch)

SIZE	SBB-4	SBB-9	SBB-18	SBB-23	SBB-35	SBB-75	SBB-100	SBB-170	SBB-270	SBB-550	SBB-900
ØD$_{2/3}$ min	8/10 (.315/.394)	8/10 (.315/.394)	8/10 (.315/.394)	14/18 (.551/.709)	14/18 (.551/.709)	18 (.709)	16/22 (.630/.866)	22 (.866)	25/28 (0.984/1.102)	28/38 (1.102/1.496)	40 (1.575)
ØD$_{2/3}$ max	16/30 (.630/1.181)	16/30 (.630/1.181)	16/30 (.630/1.181)	24/34 (.945/1.139)	24/34 (.945/1.139)	24/34 (.945/1.139)	35/43 (1.378/1.693)	35/43 (1.378/1.693)	41/55 (1.614/2.165)	41/75 (1.614/2.953)	67/75 (2.638/2.953)
Torque to Tighten F3 Screws	14 (124)	14 (124)	14 (124)	34 (301)	34 (301)	34 (301)	60 (531)	65 (575)	115 (1018)	115 (1018)	200 (1770)



SBE Series

Major features of the SBE series are:

- In the event of an overload, the coupling will disengage and remain in its disengaged position until drive rotation is reversed
- The coupling will re-engage at only one point per revolution and retains the drive's reference point
- SBE couplings are combined with a torsion resistant flexible metal bellows
- Compensates for axial, lateral, and angular misalignment
- The clamping hubs allow a maximum clearance of 0.02mm (0.0008 inches) between shaft diameter and hub bore

Material: Stainless Steel Bellows and Aluminum or Steel Hubs, Steel Safety Element

Technical Data

Size	Disengagement Torque Range	Moment of Inertia	Torsion Resistance	Nominal Speed	Max. Misalignment			Axial Spring Rate	Lateral Spring Rate	Mass	Torque to Tighten Screws	
					Lateral	Axial	Angular				$F_{1/2}$	F_3
	Nm (lb-in)	10^{-3}kgm^2 (lb-in^2)	10^3Nm/rad (lb-ft/Deg)	RPM	mm (inch)	mm (inch)	Degrees	N/mm (lb-in)	N/mm (lb-in)	kg (lbs)	Nm (lb-in)	Nm (lb-in)
SBE-4	2-4 (17.7-35.4)	0.25 (0.85)	16 (206)	2500	0.13 (0.005)	0.3 (0.012)	±1°	40 (229)	55 (314)	0.7 (1.54)	4 (35)	14 (124)
SBE-9	4-9 (35.4-79)	0.25 (0.85)	16 (206)	2500	0.13 (0.005)	0.3 (0.012)	±1°	40 (229)	55 (314)	0.7 (1.54)	4 (35)	14 (124)
SBE-26	9-26 (79-230)	0.9 (3.08)	50 (644)	4000	0.15 (0.006)	0.3 (0.012)	±1°	89 (509)	85 (486)	1.4 (3.09)	14 (124)	34 (301)
SBE-65	26-65 (230-575)	0.9 (3.08)	50 (644)	4000	0.15 (0.006)	0.3 (0.012)	±1°	89 (509)	85 (486)	1.4 (3.09)	14 (124)	34 (301)
SBE-75	30-75 (265-663)	3.4 (11.62)	51 (657)	4000	0.2 (0.008)	0.45 (0.018)	±1°	75 (429)	55 (314)	3 (6.62)	14 (124)	50 (443)
SBE-160	65-160 (575-1416)	3.5 (11.96)	98 (1262)	4000	0.2 (0.008)	0.4 (0.016)	±1°	155 (886)	86 (491)	3 (6.62)	14 (124)	65 (576)
SBE-250	100-250 (885-2212)	10.5 (35.89)	159 (2047)	3500	0.2 (0.008)	0.45 (0.018)	±1°	125 (714)	96 (549)	5.6 (12.35)	34 (301)	115 (1019)
SBE-540	200-540 (1770-4779)	12.4 (42.38)	288 (3707)	3500	0.25 (0.01)	0.5 (0.02)	±1°	300 (1715)	365 (2086)	6.4 (14.11)	34/60 (301/531)	115 (1019)
SBE-850	350-850 (3097-7522)	74 (252.91)	475 (6115)	2500	0.35 (0.014)	0.65 (0.026)	±1°	200 (1143)	164 (937)	20 (44.1)	115 (1018)	-
SBE-1500	700-1500 (6195-13275)	76 (259.75)	856 (11019)	2500	0.3 (0.012)	0.55 (0.022)	±1°	528 (3018)	483 (2760)	20 (44.1)	115 (1018)	-

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

WITH CLAMPING HUB

WITH CONICAL BUSHING

Disengagement Motion

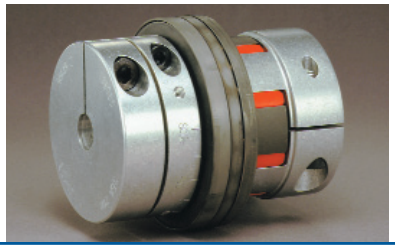
Dimensions: mm (inch)

Size	øA mm (inch)	øB mm (inch)	øC_1/C_2 mm (inch)	C_3 mm (inch)	$F_{1/2}$ screw size	F_3 screw size	H_1 mm (inch)	H_2 mm (inch)	I mm (inch)	J mm (inch)	L_1 mm (inch)	L_2 mm (inch)	S mm (inch)
SBE-4	60 (2.362)	56 (2.205)	30/27 (1.181/1.063)	19 (0.748)	6xM4	M6	18 (0.709)	20 (0.787)	14.5 (0.571)	7.5 (0.295)	88 (3.465)	95 (3.74)	1 (0.039)
SBE-9	60 (2.362)	56 (2.205)	30/27 (1.181/1.063)	19 (0.748)	6xM4	M6	18 (0.709)	20 (0.787)	14.5 (0.571)	7.5 (0.295)	88 (3.465)	95 (3.74)	1 (0.039)
SBE-26	77 (3.031)	66 (2.598)	36 (1.417)	22 (0.866)	6xM6	M8	24 (0.945)	22 (0.866)	17.1 (0.673)	8.5 (0.335)	107 (4.213)	114 (4.488)	1.4 (0.055)
SBE-65	77 (3.031)	66 (2.598)	36 (1.417)	22 (0.866)	6xM6	M8	24 (0.945)	22 (0.866)	17.1 (0.673)	8.5 (0.335)	107 (4.213)	114 (4.488)	1.4 (0.055)
SBE-75	105 (4.134)	82 (3.228)	50 (1.969)	28.5 (1.122)	6xM6	M10	27 (1.063)	26 (1.024)	18 (0.709)	10.5 (0.413)	124 (4.882)	136 (5.354)	2 (0.079)
SBE-160	105 (4.134)	82 (3.228)	50 (1.969)	28.5 (1.122)	6xM6	M10	27 (1.063)	26 (1.024)	18 (0.709)	10.5 (0.413)	130 (5.118)	142 (5.591)	2 (0.079)
SBE-250	135 (5.315)	101 (3.976)	62 (2.441)	35 (1.378)	6xM8	M12	32 (1.26)	29 (1.142)	22.6 (0.89)	12 (0.472)	157 (6.181)	169 (6.654)	2.5 (0.098)
SBE-540	135 (5.315)	122 (4.803)	70/62 (2.756/2.441)	45.5 (1.791)	6xM8/M10	M12	36/32 (1.417/1.259)	30 (1.181)	22.6 (0.89)	13.5 (0.531)	166 (6.535)	177 (6.969)	2.5 (0.098)
SBE-850	190 (7.48)	157 (6.181)	90 (3.543)		6xM12		46.5 (8.858)		46.8 (1.831)		240 (9.449)		3.7 (0.146)
SBE-1500	190 (7.48)	157 (6.181)	90 (3.543)		6xM12		46.5 (1.831)		46.8 (1.843)		240 (9.449)		3.7 (0.146)

*On the bellows side of the safety coupling

Bore Ranges for Conical Bushings and Radial Clamping Hubs: mm (inch)

SIZE	SBE-4	SBE-9	SBE-26	SBE-65	SBE-75	SBE-160	SBE-250	SBE-540	SBE-850	SBE-1500
Ø$D_{1/2}$ min	10 (0.394)	10 (0.394)	18 (0.708)	18 (0.708)	22 (0.866)	22 (0.866)	28.5 (1.122)	35/28.5 (1.378/1.122)	41.5 (1.634)	41.5 (1.634)
Ø$D_{1/2}$ max	19/16 (.748/.630)	19/16 (.748/.630)	24 (0.945)	24 (0.945)	35 (1.378)	35 (1.378)	41 (1.614)	48/41 (1.890/1.614)	62 (2.441)	62 (2.441)
ØD_3 min	8 (0.315)	8 (0.315)	14 (0.551)	18 (0.708)	16 (0.630)	22 (0.866)	25 (0.984)	38 (1.496)		
ØD_3 max	30 (1.181)	30 (1.181)	34 (1.338)	34 (1.338)	43 (1.693)	43 (1.693)	55 (2.165)	75 (2.953)		



SEA Series

Major features of the SEA series are:

- In the event of an overload, the coupling will disengage and click over once per revolution until the torque drops or the drive stops
- The coupling will re-engage automatically at only one point per revolution and retains the drive's reference point
- A star-shaped elastomer element with involute tooth profile and high shore hardness ensures zero backlash over the life of the product
- The elastomer spider compensates for small shaft misalignments, non-conducting and is a good oscillation absorber

Material: Aluminum Hubs, 98 Shore A Spider and Steel Safety Element

Technical Data

Size	Disengagement Torque Range	Moment of Inertia	Torsion Resistance	Max. Misalignment			Mass	Torque to Tighten Screws
				Axial	Lateral	Angular		
	Nm (lb-in)	10^{-3}kgm^2 (lb-in^2)	10^3Nm/rad (lb-ft/deg)	mm (inch)	mm (inch)	Degrees	kg (lbs)	Nm (lb-in)
SEA-5	2-5 (18-44)	0.35 (1.2)	1.30 (17)	0.5 (0.02)	0.1 (0.004)	±1°	0.7 (1.54)	10 (89)
SEA-10	4-10 (35-89)	0.35 (1.2)	1.30 (17)	0.5 (0.02)	0.1 (0.004)	±1°	0.7 (1.54)	12 (106)
SEA-20	8-20 (71-177)	0.35 (1.2)	1.30 (17)	0.5 (0.02)	0.1 (0.004)	±1°	0.7 (1.54)	14 (124)
SEA-40	15-40 (133-354)	1 (3.42)	3.20 (41)	1 (0.039)	0.1 (0.004)	±1°	1.3 (2.87)	30 (266)
SEA-80	30-80 (266-708)	1 (3.42)	3.20 (41)	1 (0.039)	0.1 (0.004)	±1°	1.3 (2.87)	35 (310)
SEA-120	50-120 (443-1062)	3 (10.25)	6.70 (86)	1 (0.039)	0.1 (0.004)	±1°	2.2 (4.85)	60 (531)
SEA-200	80-200 (708-1770)	3.5 (11.96)	6.70 (86)	1 (0.039)	0.1 (0.004)	±1°	2.7 (5.95)	67 (593)
SEA-300	100-300 (885-2655)	11 (37.6)	19.0 (245)	1 (0.039)	0.15 (0.006)	±1°	5 (11.03)	115 (1018)
SEA-550	200-550 (1770-4868)	12.5 (42.72)	23.0 (296)	1 (0.039)	0.15 (0.006)	±1°	6 (13.23)	115/185 (1018/1637)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

Dimensions: mm (inch)

Size	øA mm (inch)	øB$_1$ mm (inch)	øB$_2$ mm (inch)	F screw size	G$_1$ mm (inch)	G$_2$ mm (inch)	H$_1$ mm (inch)	H$_2$ mm (inch)	L$_a$±1 mm (inch)	S mm (inch)	T$_1$ mm (inch)	T$_2$ mm (inch)	X±1 mm (inch)	øD$_1$ min/max mm (inch)	øD$_2$ min/max mm (inch)
SEA-5	64 (2.52)	50 (1.969)	57 (2.244)	M6	16.5 (0.65)	20 (0.787)	9 (0.354)	7.5 (0.295)	87 (3.425)	1 (0.039)	21 (0.827)	36 (1.417)	33 (1.299)	9/26 (.354/1.024)	8/27 (.315/1.063)
SEA-10	64 (2.52)	50 (1.969)	57 (2.244)	M6	16.5 (0.65)	20 (0.787)	9 (0.354)	7.5 (0.295)	87 (3.425)	1 (0.039)	21 (0.827)	36 (1.417)	33 (1.299)	9/26 (.354/1.024)	8/27 (.315/1.063)
SEA-20	64 (2.52)	50 (1.969)	57 (2.244)	M6	16.5 (0.65)	20 (0.787)	9 (0.354)	7.5 (0.295)	87 (3.425)	1 (0.039)	21 (0.827)	36 (1.417)	33 (1.299)	10/26 (.393/1.024)	8/27 (.315/1.063)
SEA-40	79 (3.11)	70 (2.756)	69 (2.717)	M8	25 (0.984)	24 (0.945)	12 (0.472)	9 (0.354)	105 (4.134)	1.4 (0.055)	27 (1.063)	44 (1.732)	37 (1.457)	15/38 (.591/1.496)	15/37 (.591/1.457)
SEA-80	79 (3.11)	70 (2.756)	69 (2.717)	M8	25 (0.984)	24 (0.945)	12 (0.472)	9 (0.354)	105 (4.134)	1.4 (0.055)	27 (1.063)	44 (1.732)	37 (1.457)	20/38 (.787/1.496)	20/37 (.787/1.457)
SEA-120	94 (3.701)	85 (3.346)	89 (3.504)	M10	30.5 (1.201)	31 (1.22)	14 (0.551)	11 (0.433)	123 (4.843)	1.4 (0.055)	32 (1.26)	49 (1.929)	44 (1.732)	20/46 (.787/1.811)	18/48 (.709/1.890)
SEA-200	105 (4.134)	85 (3.346)	89 (3.504)	M10	30.5 (1.201)	31 (1.22)	14 (0.551)	11 (0.433)	126 (4.961)	2 (0.079)	32 (1.26)	51 (2.008)	44 (1.732)	28/46 (1.102/1811)	20/48 (.787/1890)
SEA-300	135 (5.315)	100 (3.937)	112 (4.409)	M12	36 (1.417)	43 (1.693)	16 (0.63)	12 (0.472)	146 (5.748)	2.2 (0.087)	34 (1.339)	60 (2.362)	50 (1.969)	28/56 (1.102/2.205)	28/62 (1.102/2.441)
SEA-550	135 (5.315)	120 (4.724)	112 (4.409)	M12/14	44 (1.732)	43 (1.693)	18 (0.709)	12 (0.472)	158 (6.22)	2.2 (0.087)	39 (1.535)	62 (2.441)	52 (2.047)	35/70 (1.378/2.756)	38/62 (1.496/2.441)

Bore diameters smaller than øD$_{min}$ are possible but reliable transmission of nominal torque M$_N$ cannot be guaranteed.

SMA Series

Major features of the SMA series are:

- In the event of an overload, the coupling will disengage and click over once per revolution until the torque drops or the drive stops
- The coupling will re-engage automatically at only one point per revolution and retains the drive's reference point
- SMA couplings are a three-piece modular design with aluminum membrane hubs
- Low weight and low moment of inertia with high torsional stiffness
- Can accept a wide range of shaft sizes per coupling size

Material: Aluminum Hubs and Steel Safety Element

Technical Data

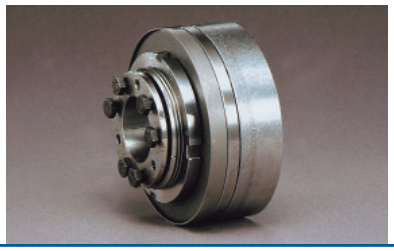
Size	Disengagement Torque Range	Moment of Inertia	Torsion Resistance	Max. Misalignment			Mass	Torque to Tighten Screws	
				Axial	Lateral	Angular		F	I
	Nm (lb-in)	10^{-3}kgm^2 (lb-in^2)	10^3Nm/rad (lb-ft/deg)	mm (inch)	mm (inch)	Degrees	kg (lbs)	Nm (lb-in)	Nm (lb-in)
SMA-5	2-5 (18-44)	0.4 (1.37)	25.0 (322)	0.3 (0.012)	0.2 (0.008)	±1°	0.8 (1.76)	14 (124)	8 (71)
SMA-10	4-10 (35-89)	0.4 (1.37)	25.0 (322)	0.3 (0.012)	0.2 (0.008)	±1°	0.8 (1.76)	14 (124)	8 (71)
SMA-20	8-20 (71-177)	0.4 (1.37)	25.0 (322)	0.3 (0.012)	0.2 (0.008)	±1°	0.8 (1.76)	14 (124)	8 (71)
SMA-40	15-40 (133-354)	1 (3.42)	40.0 (515)	0.3 (0.012)	0.2 (0.008)	±1°	1.5 (3.31)	35 (310)	14 (124)
SMA-80	30-80 (266-708)	1 (3.42)	40.0 (515)	0.3 (0.012)	0.2 (0.008)	±1°	1.5 (3.31)	35 (310)	14 (124)
SMA-120	50-120 (443-1062)	3 (10.25)	70.0 (901)	0.5 (0.02)	0.2 (0.008)	±1°	2.5 (5.51)	60 (531)	35 (310)
SMA-200	80-200 (708-1770)	3.5 (11.96)	70.0 (901)	0.5 (0.02)	0.2 (0.008)	±1°	3 (6.62)	67 (593)	35 (310)
SMA-300	100-300 (885-2655)	12 (41.01)	150 (1931)	0.5 (0.02)	0.2 (0.008)	±1°	6 (13.23)	115 (1018)	65 (575)
SMA-550	200-550 (1770-4868)	12 (41.01)	150. (1931)	0.5 (0.02)	0.2 (0.008)	±1°	6 (13.23)	115 (1018)	65 (575)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

Dimensions: mm (inch)

Size	øA mm (inch)	øB mm (inch)	G mm (inch)	H mm (inch)	L mm (inch)	S mm (inch)	T_1 mm (inch)	T_2 mm (inch)	X mm (inch)	F screw size	I screw size	øD min. mm (inch)	øD max. mm (inch)
SMA-5	64 (2.52)	59 (2.323)	21 (0.827)	7.5 (0.295)	89 (3.504)	1 (0.039)	31 (1.22)	42 (1.654)	51 (2.008)	M6	M5	8 (.315)	27 (1.063)
SMA-10	64 (2.52)	59 (2.323)	21 (0.827)	7.5 (0.295)	89 (3.504)	1 (0.039)	31 (1.22)	42 (1.654)	51 (2.008)	M6	M5	8 (.315)	27 (1.063)
SMA-20	64 (2.52)	59 (2.323)	21 (0.827)	7.5 (0.295)	89 (3.504)	1 (0.039)	31 (1.22)	42 (1.654)	51 (2.008)	M6	M5	10 (.394)	27 (1.063)
SMA-40	79 (3.11)	69 (2.717)	24 (0.945)	9 (0.354)	103 (4.055)	1.4 (0.055)	34 (1.339)	49 (1.929)	59 (2.323)	M8	M6	15 (.591)	37 (1.460)
SMA-80	79 (3.11)	69 (2.717)	24 (0.945)	9 (0.354)	103 (4.055)	1.4 (0.055)	34 (1.339)	49 (1.929)	59 (2.323)	M8	M6	18 (.709)	37 (1.460)
SMA-120	94 (3.701)	89 (3.504)	31 (1.22)	10.5 (0.413)	120 (4.724)	1.4 (0.055)	41 (1.614)	55 (2.165)	70 (2.756)	M10	M8	18 (.709)	48 (1.890)
SMA-200	105 (4.134)	89 (3.504)	31 (1.22)	10.5 (0.413)	122 (4.803)	2 (0.079)	41 (1.614)	56 (2.205)	73 (2.874)	M10	M8	25 (.984)	48 (1.890)
SMA-300	135 (5.315)	109 (4.291)	41 (1.614)	12 (0.472)	152 (5.984)	2.2 (0.087)	47 (1.85)	75 (2.953)	92 (3.622)	M12	M10	28 (1.102)	62 (2.441)
SMA-550	135 (5.315)	109 (4.291)	41 (1.614)	12 (0.472)	154 (6.063)	2.2 (0.087)	47 (1.85)	75 (2.953)	92 (3.622)	M12	M10	38 (1.496)	62 (2.441)

Bore diameters smaller than $øD_{min}$ are possible but reliable transmission of nominal torque M_N cannot be guaranteed.



SKD Series

Major features of the SKD series are:

- In the event of an overload, the coupling will disengage and remain in its disengaged position until drive rotation is reversed
- The coupling will re-engage at only one point per revolution and retains the drive's reference point
- Compact dimensions
- SKD safety couplings can easily be integrated into belt pulleys, gears, or chain wheels

Material: Steel Hub and Steel Safety Element

Technical Data

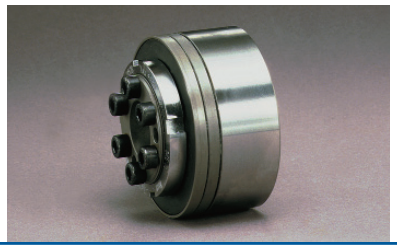
Size	Disengagement Torque Range	Moment of Inertia	Nominal Speed	Mass	Torque to Tighten Hub Screws
	Nm (lb-in)	10^{-3} kgm^2 (lb-in^2)	RPM	kg (lbs)	Nm (lb-in)
SKD-4	2-4 (17.7-35.4)	0.23 (0.79)	2500	0.6 (1.32)	4 (35)
SKD-9	4-9 (35.4-79.65)	0.23 (0.79)	2500	0.6 (1.32)	4 (35)
SKD-26	9-26 (79.65-230.10)	0.85 (2.91)	4000	1.2 (2.65)	14 (124)
SKD-65	26-25 (230.10-575.25)	0.85 (2.91)	4000	1.2 (2.65)	14 (124)
SKD-75	30-75 (265.50-663.75)	3.6 (12.3)	4000	2.5 (5.51)	14 (124)
SKD-160	65-160 (575.25-1416)	3.6 (12.3)	4000	2.5 (5.51)	14 (124)
SKD-250	100-250 (885-2212.5)	11.4 (38.96)	3500	5 (11.03)	34 (301)
SKD-540	200-540 (1770-4779)	11.8 (40.33)	3500	5 (11.03)	34 (301)
SKD-850	350-850 (3097.50-7522.5)	76 (259.75)	2500	17 (37.49)	115 (1018)
SKD-1500	600-1500 (5310-13275)	78 (266.58)	2500	17 (37.49)	115 (1018)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

Dimensions: mm (inch)

Size	øA mm (inch)	øB mm (inch)	øC mm (inch)	øE mm (inch)	F screw size	G mm (inch)	H mm (inch)	L mm (inch)	N thread size	S mm (inch)	øD min. mm (inch)	øD max. mm (inch)
SKD-4	60 (2.362)	53 (2.087)	27 (1.063)	42 (1.654)	6 x M4	14.5 (0.571)	18 (0.709)	43 (1.693)	4 x M4	1 (0.039)	10 (0.394)	16 (0.63)
SKD-9	60 (2.362)	53 (2.087)	27 (1.063)	42 (1.654)	6 x M4	14.5 (0.571)	18 (0.709)	43 (1.693)	4 x M4	1 (0.039)	10 (0.394)	16 (0.63)
SKD-26	77 (3.031)	65 (2.559)	36 (1.417)	50 (1.969)	6 x M6	17.1 (0.673)	24 (0.945)	54 (2.126)	4 x M6	1.4 (0.055)	18 (0.709)	24 (0.945)
SKD-65	77 (3.031)	65 (2.559)	36 (1.417)	50 (1.969)	6 x M6	17.1 (0.673)	24 (0.945)	54 (2.126)	4 x M6	1.4 (0.055)	18 (0.709)	24 (0.945)
SKD-75	105 (4.134)	92 (3.622)	50 (1.969)	80 (3.15)	6 x M6	18 (0.709)	27 (1.063)	65 (2.559)	4 x M6	2 (0.079)	22 (0.866)	35 (1.378)
SKD-160	105 (4.134)	92 (3.622)	50 (1.969)	80 (3.15)	6 x M6	18 (0.709)	27 (1.063)	65 (2.559)	4 x M6	2 (0.079)	22 (0.866)	35 (1.378)
SKD-250	135 (5.315)	120 (4.724)	62 (2.441)	100 (3.937)	6 x M8	22.6 (0.89)	32 (1.26)	81 (3.189)	6 x M8	2.5 (0.098)	28.5 (1.122)	41 (1.614)
SKD-540	135 (5.315)	120 (4.724)	62 (2.441)	100 (3.937)	6 x M8	22.6 (0.89)	32 (1.26)	81 (3.189)	6 x M8	2.5 (0.098)	28.5 (1.122)	41 (1.614)
SKD-850	190 (7.48)	168 (6.614)	90 (3.543)	140 (5.512)	6 x M12	46.8 (1.843)	46.5 (1.831)	124 (4.882)	6 x M12	3.7 (0.146)	41.5 (1.634)	62 (2.441)
SKD-1500	190 (7.48)	168 (6.614)	90 (3.543)	140 (5.512)	6 x M12	46.8 (1.843)	46.5 (1.831)	124 (4.882)	6 x M12	3.7 (0.146)	41.5 (1.634)	62 (2.441)

Bore diameters smaller than $øD_{min}$ are possible but reliable transmission of nominal torque M_N cannot be guaranteed.



SKG Series

Major features of the SKG are:

- In the event of an overload, the coupling will disengage and click over once per revolution until the torque drops or the drive stops
- The coupling will re-engage automatically at only one point per revolution and retains the drive's reference point
- SKG safety couplings feature an integrated ball bearing to support pulleys
- Ideal for integration into belt pulleys, gears, or chains.
- The clamping hubs allow a maximum clearance of 0.04mm (0.0015 inches) between shaft diameter and hub bore

Material: Steel Hub and Steel Safety Element

Technical Data

Size	Disengagement Torque Range	Moment of Inertia	Nominal Speed	Mass	Torque to Tighten Hub Screws
	Nm (lb-in)	10^{-3} kgm^2 (lb-in^2)	RPM	kg (lbs)	Nm (lb-in)
SKG-4	2-4 (17.7-35.4)	0.22 (0.75)	2500	0.6 (1.32)	4 (35)
SKG-9	4-9 (35.4-79.65)	0.22 (0.75)	2500	0.6 (1.32)	4 (35)
SKG-18	9-18 (79.65-159.3)	0.23 (0.79)	2500	0.6 (1.32)	4 (35)
SKG-23	9-23 (79.65-203.55)	1 (3.42)	4000	1.5 (3.31)	10 (89)
SKG-35	18-35 (159.3-309.75)	1 (3.42)	4000	1.5 (3.31)	10 (89)
SKG-75	25-75 (221.25-663.75)	1 (3.42)	4000	1.5 (3.31)	10 (89)
SKG-100	50-100 (442.5-885)	2.3 (7.86)	4000	2.1 (4.63)	12 (106)
SKG-170	65-170 (575.25-1504.5)	5 (17.09)	4000	3.7 (8.16)	12 (106)
SKG-270	100-270 (885-2389.5)	16 (54.68)	3500	7 (15.44)	34 (301)
SKG-550	200-550 (1770-4867.5)	16 (54.68)	3500	7 (15.44)	34 (301)
SKG-1000	400-1000 (3540-8850)	93 (317.85)	2500	22 (48.51)	115 (1018)
SKG-1500	600-1500 (5310-13275)	95 (324.69)	2500	22 (48.51)	115 (1018)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

Disengagement Motion

Dimensions: mm (inch)

Size	øA mm (inch)	øB mm (inch)	øC mm (inch)	E mm (inch)	F screw size	L mm (inch)	N thread size	S mm (inch)	øD min. mm (inch)	øD max. mm (inch)
SKG-4	60 (2.362)	53 (2.087)	27 (1.063)	11 (0.433)	6 x M4	40 (1.575)	4 x M4	1 (0.039)	12 (0.472)	18 (0.709)
SKG-9	60 (2.362)	53 (2.087)	27 (1.063)	11 (0.433)	6 x M4	40 (1.575)	4 x M4	1 (0.039)	12 (0.472)	18 (0.709)
SKG-18	60 (2.362)	53 (2.087)	27 (1.063)	11 (0.433)	6 x M4	40 (1.575)	4 x M4	1 (0.039)	12 (0.472)	18 (0.709)
SKG-23	77 (3.031)	69 (2.717)	36 (1.417)	17 (0.669)	6 x M6	55 (2.165)	4 x M6	1.4 (0.055)	18 (0.709)	24 (0.945)
SKG-35	77 (3.031)	69 (2.717)	36 (1.417)	17 (0.669)	6 x M6	55 (2.165)	4 x M6	1.4 (0.055)	18 (0.709)	24 (0.945)
SKG-75	77 (3.031)	69 (2.717)	36 (1.417)	17 (0.669)	6 x M6	55 (2.165)	4 x M6	1.4 (0.055)	18 (0.709)	24 (0.945)
SKG-100	92 (3.622)	83 (3.268)	54 (2.126)	17 (0.669)	6 x M6	55 (2.165)	4 x M6	1.4 (0.055)	22 (0.866)	39 (1.535)
SKG-170	105 (4.134)	94 (3.701)	54 (2.126)	17 (0.669)	6 x M6	66 (2.598)	4 x M6	1.7 (0.067)	22 (0.866)	39 (1.535)
SKG-270	135 (5.315)	120 (4.724)	66 (2.598)	26 (1.024)	6 x M8	85 (3.346)	6 x M8	2.2 (0.087)	29 (1.142)	44 (1.732)
SKG-550	135 (5.315)	120 (4.724)	66 (2.598)	26 (1.024)	6 x M8	85 (3.346)	6 x M8	2.2 (0.087)	29 (1.142)	44 (1.732)
SKG-1000	190 (7.48)	168 (6.614)	90 (3.543)	38 (1.496)	6 x M12	134 (5.276)	6 x M12	3.2 (0.126)	41 (1.614)	62 (2.441)
SKG-1500	190 (7.48)	168 (6.614)	90 (3.543)	38 (1.496)	6 x M12	134 (5.276)	6 x M12	3.2 (0.126)	41 (1.614)	62 (2.441)

Bore diameters smaller than $øD_{min}$ are possible but reliable transmission of nominal torque M_N cannot be guaranteed.

SKL Series

Major features of the SKL series are:

- In the event of an overload, the coupling will disengage and click over once per revolution until the torque drops or the drive stops
- The coupling will re-engage automatically at only one point per revolution and retains the drive's reference point
- SKL safety couplings feature an extended hub with an integrated bearing which eliminates the need for an additional support for the driving element
- Compact dimensions
- SKL safety couplings can easily be integrated into belt pulleys, gears, or chain wheels

Material: Steel Hubs and Steel Safety Element

Technical Data

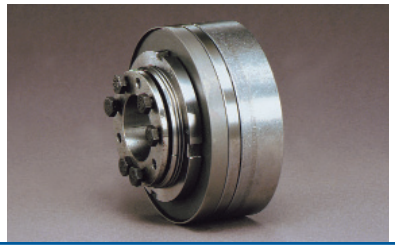
Size	Disengagement Torque Range	Moment of Inertia	Nominal Speed	Mass	Torque to Tighten Hub Screws
	Nm (lb-in)	10^{-3} kgm^2 (lb-in^2)	RPM	kg (lbs)	Nm (lb-in)
SKL-4	2-4 (17.7-35.4)	0.2 (0.68)	2500	0.5 (1.1)	4 (35)
SKL-9	4-9 (35.4-79.65)	0.2 (0.68)	2500	0.5 (1.1)	4 (35)
SKL-18	9-18 (79.65-159.3)	0.2 (0.68)	2500	0.5 (1.1)	4 (35)
SKL-23	9-23 (79.65-203.55)	0.7 (2.39)	4000	1.1 (2.43)	14 (124)
SKL-35	18-35 (159.3-309.75)	0.7 (2.39)	4000	1.1 (2.43)	14 (124)
SKL-75	25-75 (221.25-663.75)	0.7 (2.39)	4000	1.1 (2.43)	14 (124)
SKL-100	50-100 (442.5-885)	1.8 (6.15)	4000	1.9 (4.19)	14 (124)
SKL-170	65-170 (575.25-1504.5)	3 (10.25)	4000	2.4 (5.29)	14 (124)
SKL-270	100-270 (885-2389.5)	10.4 (35.54)	3500	5 (11.03)	34 (301)
SKL-550	200-550 (1770-4867.5)	10.7 (36.57)	3500	5.3 (11.69)	34 (301)
SKL-1000	400-1000 (3540-8850)	65.4 (223.52)	2500	16 (35.28)	115 (1018)
SKL-1500	600-1500 (5310-13275)	67.3 (230.01)	2500	16.3 (35.94)	115 (1018)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

Dimensions: mm (inch)

Size	øA mm (inch)	øB mm (inch)	øC mm (inch)	F screw size	G mm (inch)	H_1 mm (inch)	H_2 mm (inch)	I mm (inch)	L mm (inch)	N thread size	øM mm (inch)	S mm (inch)	øD min. mm (inch)	øD max. mm (inch)
SKL-4	60 (2.362)	40 (1.575)	27 (1.063)	6 x M4	9 (0.354)	18 (0.709)	10 (0.394)	15.3 (0.602)	46 (1.811)	6 x M5	30 (1.181)	1 (0.039)	10 (0.394)	16 (0.63)
SKL-9	60 (2.362)	40 (1.575)	27 (1.063)	6 x M4	9 (0.354)	18 (0.709)	10 (0.394)	15.3 (0.602)	46 (1.811)	6 x M5	30 (1.181)	1 (0.039)	10 (0.394)	16 (0.63)
SKL-18	60 (2.362)	40 (1.575)	27 (1.063)	6 x M4	9 (0.354)	18 (0.709)	10 (0.394)	14.7 (0.579)	46 (1.811)	6 x M5	30 (1.181)	1 (0.039)	10 (0.394)	16 (0.63)
SKL-23	77 (3.031)	50 (1.969)	36 (1.417)	6 x M6	16 (0.63)	24 (0.945)	15 (0.591)	18.7 (0.736)	61.5 (2.421)	6 x M6	36 (1.417)	1.4 (0.055)	18 (0.709)	24 (0.945)
SKL-35	77 (3.031)	50 (1.969)	36 (1.417)	6 x M6	16 (0.63)	24 (0.945)	15 (0.591)	18.7 (0.736)	61.5 (2.421)	6 x M6	36 (1.417)	1.4 (0.055)	18 (0.709)	24 (0.945)
SKL-75	77 (3.031)	50 (1.969)	36 (1.417)	6 x M6	16 (0.63)	24 (0.945)	15 (0.591)	18.7 (0.736)	61.5 (2.421)	6 x M6	36 (1.417)	1.4 (0.055)	18 (0.709)	24 (0.945)
SKL-100	92 (3.622)	65 (2.559)	50 (1.969)	6 x M6	22 (0.866)	27 (1.063)	20 (0.787)	19 (0.748)	71 (2.795)	6 x M6	48 (1.89)	1.4 (0.055)	22 (0.866)	35 (1.378)
SKL-170	105 (4.134)	65 (2.559)	50 (1.969)	6 x M6	22 (0.866)	27 (1.063)	20 (0.787)	18.6 (0.732)	74.4 (2.929)	6 x M6	48 (1.89)	2 (0.079)	22 (0.866)	35 (1.378)
SKL-270	135 (5.315)	76 (2.992)	62 (2.441)	6 x M8	31 (1.22)	32 (1.26)	20 (0.787)	23.5 (0.925)	99.5 (3.917)	6 x M8	58 (2.283)	2.2 (0.087)	28.5 (1.122)	41 (1.614)
SKL-550	135 (5.315)	76 (2.992)	62 (2.441)	6 x M8	31 (1.22)	32 (1.26)	20 (0.787)	23.5 (0.925)	99.5 (3.917)	6 x M8	58 (2.283)	2.2 (0.087)	28.5 (1.122)	41 (1.614)
SKL-1000	190 (7.48)	125 (4.921)	90 (3.543)	6 x M12	35 (1.378)	46.5 (1.831)	20 (0.787)	47.5 (1.87)	143.5 (5.65)	6 x M12	90 (3.543)	3.4 (0.134)	41.5 (1.634)	62 (2.441)
SKL-1500	190 (7.48)	125 (4.921)	90 (3.543)	6 x M12	35 (1.378)	46.5 (1.831)	20 (0.787)	47.5 (1.87)	143.5 (5.65)	6 x M12	90 (3.543)	3.4 (0.134)	41.5 (1.634)	62 (2.441)

Bore diameters smaller than $øD_{min}$ are possible but reliable transmission of nominal torque M_N cannot be guaranteed.



SKM Series

Major features of the SKM Couplings are:

- In the event of an overload, the coupling will disengage and click over once per revolution until the torque drops or the drive stops.
- The coupling will re-engage automatically at only once per revolution and retains the drive's reference point
- Compact dimensions
- SKM Safety couplings can easily be integrated into belt pulleys, gears or chain wheels

Material: Steel Hubs and Steel Safety Element

Technical Data

Size	Disengagement Torque Range	Moment of Inertia	Nominal Speed	Mass	Torque to Tighten Hub Screws
	Nm (lb-in)	10^{-3} kgm^2 (lb-in^2)	RPM	kg (lbs)	Nm (lb-in)
SKM-4	2-4 (17.7-35.4)	0.20 (0.67)	2500	0.4 (.88)	4 (35)
SKM-9	4-9 (35.4-79.65)	0.20 (0.67)	2500	0.4 (.88)	4 (35)
SKM-26	9-26 (79.65-230.10)	0.70 (2.40)	4000	1.0 (2.20)	14 (124)
SKM-65	26-25 (230.10-575.25)	0.70 (2.40)	4000	1.0 (2.20)	14 (124)
SKM-75	30-75 (265.50-663.75)	3.0 (10.79)	4000	2.1 (4.62)	14 (124)
SKM-90	45-90 (398.25-796.50)	1.7 (5.83)	4000	1.6 (3.52)	14 (124)
SKM-160	65-160 (575.25-1416)	3.0 (10.79)	4000	2.1 (4.62)	14 (124)
SKM-250	100-250 (885-2212.5)	9.5 (32.59)	3500	4.3 (9.46)	34 (301)
SKM-540	200-540 (1770-4779)	10 (34.30)	3500	4.4 (9.68)	34 (301)
SKM-850	350-850 (3097.50-7522.5)	66.4 (227.75)	3500	14.7 (32.34)	115 (1018)
SKM-1500	600-1500 (5310-13275)	68.3 (227.75)	2500	15 (33.00)	115 (1018)

Coupling must be selected so that the nominal torque M_N is higher than the highest operational torque of the application (i.e., during acceleration). Exceeding the nominal torque M_N can result in a permanent distortion of the metal bellow.

Dimensions: mm (inch)

Size	øA mm (inch)	øB mm (inch)	øC mm (inch)	F screw size	G mm (inch)	H mm (inch)	L mm (inch)	N thread size	S mm (inch)	øD min. mm (inch)	øD max. mm (inch)
SKM-4	60 (2.340)	48 (1.872)	27 (1.053)	6 x M4	15.3 (0.597)	18 (0.702)	38.5 (1.502)	4 x M4	1 (0.039)	10 (0.394)	16 (0.624)
SKM-9	60 (2.340)	48 (1.872)	27 (1.053)	6 x M4	15.3 (0.597)	18 (0.702)	38.5 (1.502)	4 x M4	1 (0.039)	10 (0.394)	16 (0.624)
SKM-26	77 (3.003)	65 (2.535)	36 (1.404)	6 x M6	18.7 (0.729)	24 (0.936)	48.5 (1.892)	4 x M6	1.4 (0.055)	18 (0.702)	24 (0.936)
SKM-65	77 (3.003)	65 (2.535)	36 (1.404)	6 x M6	18.7 (0.729)	24 (0.936)	48.5 (1.892)	4 x M6	1.4 (0.055)	18 (0.702)	24 (0.936)
SKM-75	105 (4.095)	82 (3.198)	50 (1.950)	6 x M6	18.3 (0.714)	27 (1.053)	55.5 (2.165)	4 x M6	1.7 (0.066)	22 (0.858)	35 (1.365)
SKM-90	92 (3.588)	65 (2.535)	50 (1.950)	6 x M6	19 (0.741)	27 (1.053)	50 (1.950)	4 x M6	1.4 (0.055)	22 (0.858)	35 (1.365)
SKM-160	105 (4.095)	82 (3.198)	50 (1.950)	6 x M6	18.6 (0.725)	27 (1.053)	55.5 (2.165)	4 x M6	2 (0.078)	22 (0.858)	35 (1.365)
SKM-250	135 (5.265)	108 (4.212)	62 (2.418)	6 x M8	23.5 (0.917)	32 (1.248)	68.5 (2.672)	6 x M8	2.2 (0.086)	28.5 (1.112)	41 (1.599)
SKM-540	135 (5.265)	108 (4.212)	62 (2.418)	6 x M8	23.5 (0.917)	32 (1.248)	68.5 (2.672)	6 x M8	2.2 (0.086)	28.5 (1.112)	41 (1.599)
SKM-850	190 (7.410)	168 (6.552)	90 (3.510)	6 x M12	47.5 (1.853)	46.5 (1.814)	114.5 (4.466)	6 x M12	3.4 (0.133)	41.5 (1.619)	62 (2.418)
SKM-1500	190 (7.410)	168 (6.552)	90 (3.510)	6 x M12	47.5 (1.853)	46.5 (1.814)	114.5 (4.466)	6 x M12	3.4 (0.133)	41.5 (1.619)	62 (2.418)

Bore diameters smaller than $øD_{min}$ are possible but reliable transmission of nominal torque M_N cannot be guaranteed.

Calculation Information

Couplings (Bellows/Elastomer/Specialty)

M_N based on acceleration

$$M_N = M_a \bullet \frac{J_{mach}}{J_{mach} + J_{mot}} \bullet 2.5$$

M_N based on cutting force

$$M_N = \frac{F_A \bullet s}{\eta \bullet 6280} \bullet C_2$$

Elastic Deformation of Coupling

$$\alpha = 3440 \bullet \frac{M}{C_t} \text{ (in angular minutes)}$$

Resonant Frequency of Coupling

$$f_r = \sqrt{C_t}$$

Resonant Frequency of Drive

$$f_r = \frac{1}{2\pi} \sqrt{C_t \bullet \frac{J_{mot} + J_{mach}}{J_{mot} + J_{mach}}} \quad [H_Z]$$

M_N	***Nominal Torque of Coupling***
M_{max}	***Peak torque of Motor***
M_a	***Acceleration Torque of Motor***
F_A	***Cutting Force in Axial Direction***
s	***Ball Screw Pitch***
C_t	***Torsion Resistance***
f_r	***Resonant Frequency***
J_{mot}	***Inertia of motor plus 1/2 of the coupling's inertia***
J_{mach}	***Inertia of Machine*** *(combined inertia of ball screw, slide workpiece and 1/2 of the coupling's inertia)*
C_2	***Correction for overload*** *(approximately 2-3)*
η	***Efficiency of ball screw and bearings*** *(approximately 0.9)*

Data needed before selection can be performed:

1. Coupling Series
2. Coupling Size
3. Shaft Diameters with Tolerances

If you should have any questions, contact GAM or your local representative.

Calculation Information

Safety Couplings

M_d based on acceleration *(Direct Drive Applications)*

$$M_d = M_a \bullet \frac{J_{mach}}{(J_{mach} + J_{drive})} \bullet 2.5$$

M_d based on acceleration *(Indirect Drive Applications)*

$$M_d = M_a \bullet \frac{J_{mach}}{(J_{mach} + J_{drive})} \bullet 2.5 \bullet i$$

M_d based on cutting force

$$M_d = \frac{F_A \bullet s}{\eta \bullet 6280} \bullet C_2$$

M_d	***Disengagement Torque of Coupling***
M_{max}	***Peak torque of Motor***
i	***Gear Ration n_1/n_2***
M_a	***Acceleration Torque of Motor***
J_{mot}	***Inertia of motor plus 1/2 of the coupling's inertia***
J_{mach}	***Inertia of Machine*** *(combined inertia of ball screw, slide workpiece and 1/2 of the coupling's inertia)*
J_{drive}	***Jmot i^2 + Inertia of Gear on the output side***
η	***Efficiency of ball screw and bearings*** *(approximately 0.9)*
F_A	***Cutting Force in Axial Direction***
s	***Ball Screw Pitch***
C_t	***Torsion Resistance***

Data needed before selection can be performed:

1. Safety Coupling Series
2. Coupling Size
3. Desired Disengagement Torque
4. Peak Torque of Motor
5. Shaft Diameters with Tolerances
6. Shaft-to-Shaft Distance (direct drive applications only)

If you should have any questions, contact GAM or your local representative.