Materials & Finishes

Hubs & spacer: Al. Alloy 2014 T6
Clear anodised finish

Membranes: Spring quality stainless steel
Heat treated

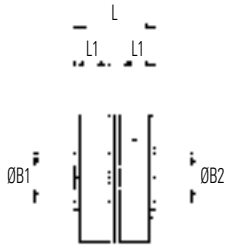
Rivet assembly: Brass rivets flanked by formed steel washers
Steel, zinc plate & colour passivate

Fasteners: Alloy steel, black oiled

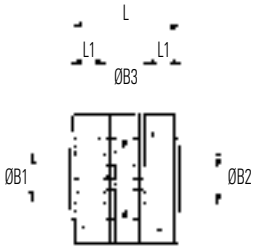
Temperature Range

–40°C to +120°C

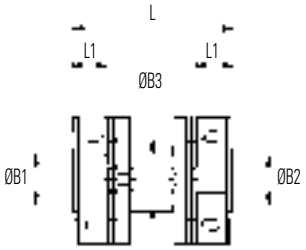
Set screw hubs



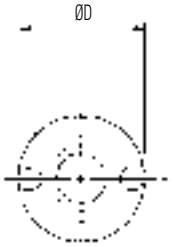
Ref. 460
for use in pairs or with floating shafts



Ref. 464
for precisely aligned shafts

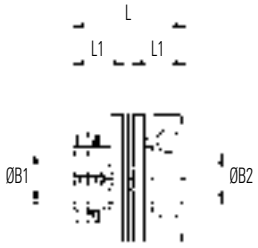


Ref. 468
for greater radial misalignment and lower bearing loads

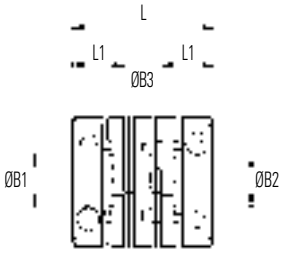


Typical

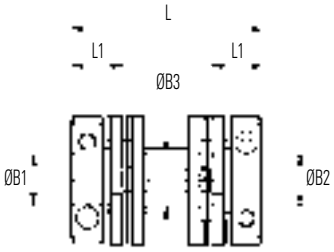
Clamp hubs



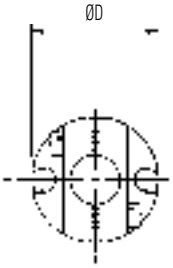
Ref. 462
for use in pairs or with floating shafts



Ref. 466
for precisely aligned shafts



Ref. 470
for greater radial misalignment and lower bearing loads



Typical

Drive shafts

Unless specified otherwise, drive shafts are supplied with set screw hubs inboard.

Drive shafts are supplied to order.

Please specify:

- Coupling size
- Hub style and bore diameter at each end
- Keyway details
- Overall length L2
- Minimum torsional stiffness, if critical
- Quantity

DIMENSIONS & ORDER CODES

Coupling Size	Set Screw Hubs	Clamp Hubs	ØD	L	① L1	ØB1, ØB2 max	② ØB3	Fasteners			④ Moment of inertia kgm2 x 10–8	④ Mass kg x 10–3
	COUPLING REF							Screw	③ Torque Nm	Wrench mm		
19	460.19	–	19.2	13.0	5.6	6.35	N/A	M3	0.94	1.5	30	7
	464.19	–		19.6			7.3				50	10
	468.19	–		27.3							60	12
	–	462.19		20.2	9.2		N/A	M2.5	1.32	2	40	9
	–	466.19		26.8			7.3				60	13
	–	470.19		34.5							60	14
26	460.26	–	25.6	15.8	6.9	10	N/A	M4	2.27	2	120	15
	464.26	–		22.4			11.0				160	18
	468.26	–		30.1							200	23
	–	462.26		21.8	10.0		N/A	M2.5	1.32	2	130	16
	–	466.26		28.4			11.0				160	20
	–	470.26		36.1							210	25
33	460.33	–	33.5	22.5	10.0	12.7	N/A	M5	4.62	2.5	560	37
	464.33	–		32.1			14.1				800	52
	468.33	–		42.8							830	55
	–	462.33		30.5	14.0		N/A	M3	2.43	2.5	520	37
	–	466.33		40.1			14.1				730	51
	–	470.33		50.8							760	55
41	460.41	–	41.5	27.1	12.0	16	N/A	M6	7.61	3	1540	69
	464.41	–		38.5			17.5				2250	97
	468.41	–		50.1							2450	107
	–	462.41		37.1	17.0		N/A	M4	5.66	3	1530	72
	–	466.41		48.5			17.5				2220	100
	–	470.41		60.1							2370	109

PERFORMANCE

Coupling Size	Ref.	⑤ Peak torque	⑦ Max compensation			⑦ Flexural stiffness			
		Nm	Angular deg	Radial mm	Axial ± mm	Torsional Nm / rad	Angular N / deg	Radial N / mm	Axial N / mm
19	460 & 462	0.9	2	0	0.1	220	0.4	–	< 7
	464 & 466		4	0.2	0.2	150	0.25	14	
	468 & 470		4	0.4	0.2	145	0.3	4	
26	460 & 462	2.3	2	0	0.1	585	0.75	–	< 7
	464 & 466		4	0.2	0.2	385	0.5	37	
	468 & 470		4	0.4	0.2	400	0.4	7	
33	460 & 462	5.6	1.5	0	0.1	1560	2	–	< 8
	464 & 466		3	0.2	0.2	935	1	48	
	468 & 470		3	0.4	0.2	980	1.2	13	
41	460 & 462	11.3	1	0	0.1	2710	4	–	< 8
	464 & 466		2	0.2	0.2	1980	2	100	
	468 & 470		2	0.4	0.2	2020	2	25	

IMPORTANT

Load capacity depends on application conditions: ***see page 6*** for details

① Length of supported thro' bore.

② Clearance bore thro' spacer.

③ Maximum recommended tightening torque.

④ Values apply with max bores.

⑤ **Peak torque**. Select a size where Peak Torque exceeds the application torque x service factor. (***see page 6***)

⑥ Max. compensation values are mutually exclusive.

⑦ Torsional stiffness values apply at 50% peak torque with no misalignment, measured shaft-to-shaft with largest standard bores. **Note that in some vendors' catalogues the given torsional stiffness applies to the membrane stack only, giving rise to a greater value.**

STANDARD BORES

Coupling Size	ØB1, ØB2 +0.03/–0mm																	
	3	3.175	4	4.763	5	6	6.350	8	9	9.525	10	11	12	12.700	14	15	15.875	16
19	●	●	●	●	●	●	●											
26			●	●	●	●	●	●	●	●	●							
33						●	●	●	●	●	●	●	●	●				
41							●	●	●	●	●	●	●	●	●	●	●	●
Bore ref.	14	16	18	19	20	22	24	28	30	31	32	33	35	36	38	40	41	42
Corresponding bore adaptor					251		253	255			257			259				260

Diameters for which a bore adaptor is shown can be adapted to smaller shaft sizes.
See *page 60* for details of metallic and electrically insulating adaptors.

Selecting Flexible Couplings

Introduction to couplings

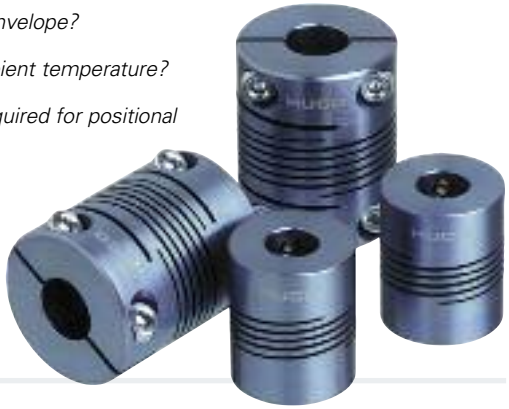
In the simplest of terms a coupling's purpose is to transfer rotational movement from one shaft to another. Reality is somewhat more complicated, though, as flexible shaft couplings have also to compensate for misalignment between two shafts. This ability must be balanced with the need to be pliable in the planes of misalignment while still having the torsional strength to carry out the coupling's main function. This is known as the Compliance mechanism where compliance is the capacity for allowing relative displacement.

Several factors should always be taken into consideration when looking to specify flexible shaft couplings. These are torsional stiffness, backlash, torque, life and attachment system. All of these have bearing on coupling selection.

Selecting the ideal coupling

The choice of couplings available to today's engineers can be daunting, but follow our guidelines and you will arrive at the optimum coupling for your particular application.

- *Does the coupling provide adequate misalignment protection?*
- *Can it transmit the required torque?*
- *Do I need axial motion or axial stiffness?*
- *Can it sustain the required speed of rotation?*
- *Will it fit within the available space envelope?*
- *Can it operate at the designated ambient temperature?*
- *Does it provide torsional stiffness required for positional accuracy?*
- *Does it provide electrical isolation between the shafts?*
- *Will it have the required life expectancy?*



Service Factors

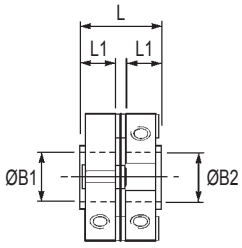
- Peak torque values quoted in the coupling performance tables apply to uniform load conditions at constant speed where there is no misalignment or axial displacement.
- The torque capacity of flexible couplings will reduce when acceleration is present, for example, in stop/start or reversing conditions.
- The more severe the acceleration, the greater reduction in torque capacity.
- Sliding couplings (Oldham and UniLat) are subject to a wear rate dependent on the number of cycles completed.

Peak torque must be greater than application torque x service factor

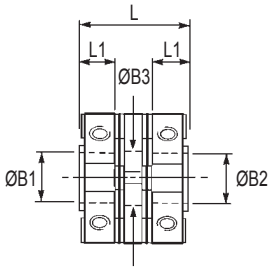
	Load					Duty (Hours/Day)				
	Steady State	Stop/Start	Reversing	Shock	Shock & Reversing	<1	1 - 2	3 - 5	6 - 12	>12
Huco Flex B	1.5	2.0	2.0	3.0	4.0	-	-	-	-	-
Huco Flex K	1.5	2.0	2.0	3.0	4.0	-	-	-	-	-
Huco Flex M	1.5	2.0	2.0	3.0	4.0	-	-	-	-	-
Huco Flex Ni	1.0	2.0	2.0	3.0	4.0	-	-	-	-	-
Huco Flex P	1.0	1.5	1.5	3.0	4.0	-	-	-	-	-
Huco Flex G	1.0	2.0	4.0	4.0	4.0	-	-	-	-	-
Huco MultiBeam	1.0	1.5	2.0	(Note 1)	(Note 1)	-	-	-	-	-
Huco S-Beam	1.0	1.5	2.0	(Note 1)	(Note 1)	-	-	-	-	-
Huco TorqLink	1.0	1.5	2.0	(Note 1)	(Note 1)	-	-	-	-	-
Huco Oldham	-	-	-	-	-	1.0	2.0	4.0	6.0	8.0
Huco Flex - B	-	-	-	-	-	1.0	1.5	2.0	3.0	4.0
Uni-Lat	-	-	-	-	-	1.0	1.5	2.0	3.0	4.0

Note 1: Not recommended in these conditions

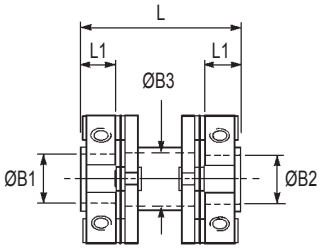
Set screw hubs



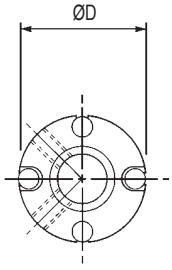
Ref. 460
for use in pairs or with floating shafts



Ref. 464
for precisely aligned shafts

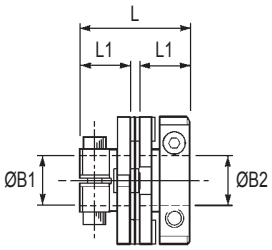


Ref. 468
for greater radial misalignment and lower bearing loads

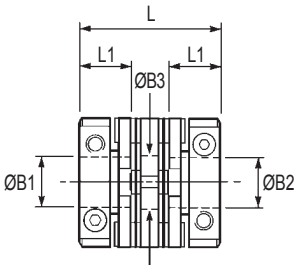


Typical

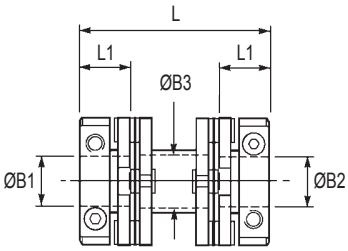
Clamp hubs



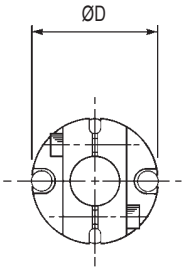
Ref. 462
for use in pairs or with floating shafts



Ref. 466
for precisely aligned shafts

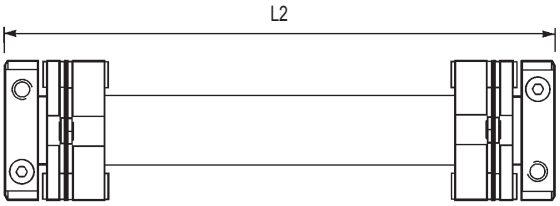


Ref. 470
for greater radial misalignment and lower bearing loads



Typical

Drive shafts



Unless specified otherwise, drive shafts are supplied with inboard hubs cross-pinned and/or bonded to link shaft.

Drive shafts are supplied to order.

Please specify:

- Coupler size
- Hub style and bore diameter at each end
- Keyway details
- Overall length L2
- Minimum torsional stiffness, if critical
- Quantity

Service factors

Peak torque values apply to uniform load, constant speed drives where there is no misalignment or axial motion. Apply the service factors to the application torque as appropriate, eg.,

Application torque = 2 Nm
Service factor = 3
∴ Adjusted torque = 6 Nm

Select a coupler where Peak Torque exceeds 6 Nm.

Note that max compensation values are mutually exclusive. If one parameter is set at maximum, the remaining two must be at zero.

HOW TO ORDER

Combine the COUPLER REF in Main Table with BORE REFS in Standard Bores Table. Please identify both bores e.g.

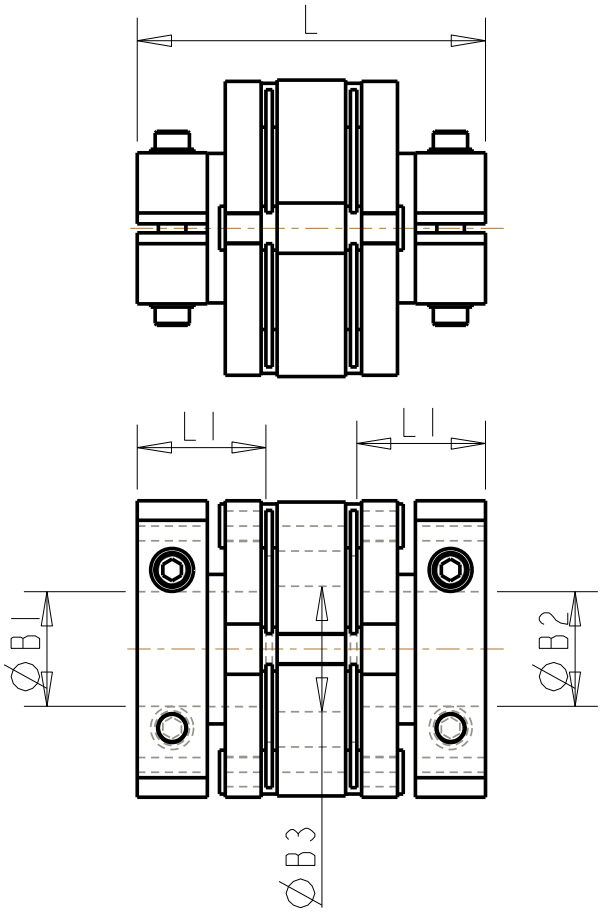
470.41.3236

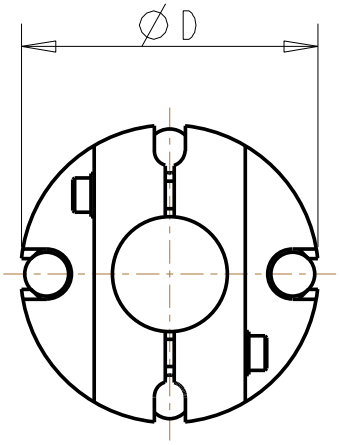
Coupler ref.
Ø B1 ref.
Ø B2 ref.

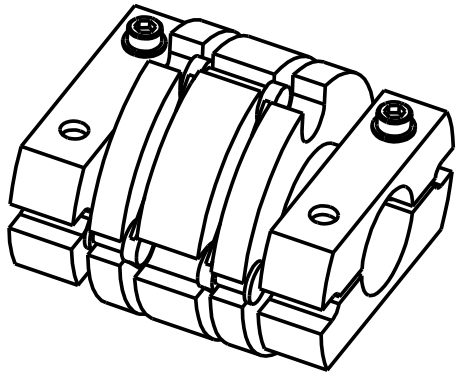
HOW TO INSTALL

Correct installation is important for optimum operation. See *page 12* for details.

Flex-M
Flexible Membrane Coupling, Double Stage with Clamp Style Fixing







All Dimensions in mm

NOT TO SCALE

1. Length of supported through bore. Bolted series only, shafts can near butt.
2. Clearance bore through spacer

	Ref. No.	∅D	L	L1 (1)	∅B1, ∅B2 Max	∅B3 (2)	Screw
Rivetted Series	466.19	19.2	26.8	9.2	6.35	7.3	M2.5
	466.26	25.6	28.4	10	10	11	M2.5
	466.33	33.5	40.1	14	12.7	14.1	M3
	466.41	41.5	48.5	17	16	17.5	M4
Bolted Series	666.41	41.5	47.9	17.1	16	16.8	M4
	666.52	52	60.8	22.9	20	22	M5
	666.66	66	69.6	26	28	28.7	M5