

Couplings

Flexible Membrane - Rivetted Series



Materials & Finishes

Hubs :	<i>Al. Alloy 2014 T6 Clear anodised finish</i>
Membranes :	<i>Spring quality stainless steel Heat treated Brass rivets flanked by formed steel</i>
Rivet assembly :	<i>washers. Steel, zinc plate & colour passivate</i>
Fasteners :	<i>Alloy steel</i>

General description

Precision couplings with excellent kinematic properties. dynamically balanced construction.

Single-stage versions make up into 'whirl' free Cardans. The 2-stage versions offer short envelopes and low bearing loads respectively.

Where to use

High-end servo drives, pulse generators, scanners, positioning slides, high speed dynamometers, unsupported drive shafts, etc.

Speeds

Up to 5000 rpm in standard form.

Up to 30000 rpm in balanced form.

Peak torque largest size

100 Nm

Standard bores

3mm to 16mm

Temperature range

-40°C to +120°C

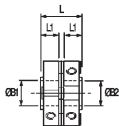
Electrically isolating

No, unless used with insulating bore adaptors.

Connection

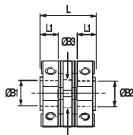
Clamp or Set Screw

Set screw hubs



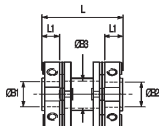
Ref. HPC460

For use in pairs or with floating shafts



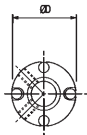
Ref. HPC464

For precisely aligned shafts



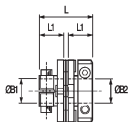
Ref. HPC468

For greater radial misalignment and lower bearing loads



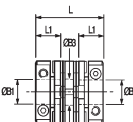
Typical

Clamp hubs



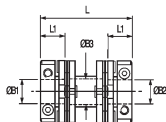
Ref. HPC462

For use in pairs or with floating shafts



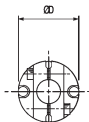
Ref. HPC466

For precisely aligned shafts



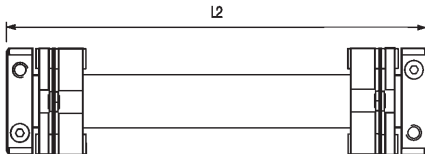
Ref. HPC470

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
- Coupling size
- Overall length L2
- Minimum torsional stiffness, if critical
- Quantity

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Performance

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PART NUMBER		Coupling Size	① Peak torque Nm	② Max compensation		
Set Screw Hubs	Clamp Hubs			Angular deg	Radial mm	Axial +/- mm
HPC460	HPC462	19	0.9	2	0	0.1
HPC464	HPC466			4	0.2	0.2
HPC468	HPC470			4	0.4	0.2
HPC460	HPC462	26	2.3	2	0	0.1
HPC464	HPC466			4	0.2	0.2
HPC468	HPC470			4	0.4	0.2
HPC460	HPC462	33	5.6	1.5	0	0.1
HPC464	HPC466			3	0.2	0.2
HPC468	HPC470			3	0.4	0.2
HPC460	HPC462	41	11.3	1	0	0.1
HPC464	HPC466			2	0.2	0.2
HPC468	HPC470			2	0.4	0.2

① **Peak torque.** Select a size where Peak Torque exceeds the application torque x service factor

② Max. compensation values are mutually exclusive.

③ Torsional stiffness values apply at 50% peak torque with no misalignment, measured shaft-to-shaft with largest standard bores.

Standard Bores

Coupling Size	Bore Size								
	ØB1, ØB2 + 0.03 / - 0 mm								
	3	3.175	4	4.763	5	6	6.350	8	9
19	●	●	●	●	●	●	●		
26			●	●	●	●	●	●	●
33						●	●	●	●
41							●	●	●
Bore ref.	14	16	18	19	20	22	24	28	30
Corresponding bore adaptor					251		253	255	

Diameters for which a bore adaptor is shown can be adapted to smaller shaft sizes.

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PART NUMBER		Coupling Size	Flexural stiffness			
Set Screw Hubs	Clamp Hubs		Torsional Nm/rad	Angular N/deg	Radial N/mm	Axial N/mm
HPC460	HPC462	19	220	0.4	-	< 7
HPC464	HPC466		150	0.25	14	
HPC468	HPC470		145	0.3	4	
HPC460	HPC462	26	585	0.75	-	< 7
HPC464	HPC466		385	0.5	37	
HPC468	HPC470		400	0.4	7	
HPC460	HPC462	33	1560	2	-	< 8
HPC464	HPC466		935	1	48	
HPC468	HPC470		980	1.2	13	
HPC460	HPC462	41	2710	4	-	< 8
HPC464	HPC466		1980	2	100	
HPC468	HPC470		2020	2	25	

Coupling Size	Bore Size									
	ØB1, ØB2 + 0.03 / - 0 mm									
	9.525	10	11	12	12.700	14	15	15.875	16	
19										
26	●	●								
33	●	●	●	●	●					
41	●	●	●	●	●	●	●	●	●	●
<i>Bore ref.</i>	31	32	33	35	36	38	40	41	42	
Corresponding bore adaptor		257			259					260



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Dimensions & Order Codes

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PART NUMBER		Coupling Size	ØD	L	④ L1	ØB1, ØB2 max	⑤ ØB3
Set Screw Hubs	Clamp Hubs						
HPC460.19.----		19	19.2	13.0	5.6	6.35	N/A
HPC464.19.----	-			19.6			7.3
HPC468.19.----	-			27.3			
-	HPC462.19.----			20.2	9.2		N/A
-	HPC466.19.----			26.8			7.3
-	HPC470.19.----			34.5			
HPC460.26.----	-	26	25.6	15.8	6.9	10	N/A
HPC464.26.----	-			22.4			11.0
HPC468.26.----	-			30.1			
-	HPC462.26.----			21.8	10.0		N/A
-	HPC466.26.----			28.4			11.0
-	HPC470.26.----			36.1			
HPC460.33.----	-	33	33.5	22.5	10.0	12.7	N/A
HPC464.33.----	-			32.1			14.1
HPC468.33.----	-			42.8			
-	HPC462.33.----			30.5	14.0		N/A
-	HPC466.33.----			40.1			14.1
-	HPC470.33.----			50.8			
HPC460.41.----	-	41	41.5	27.1	12.0	16	N/A
HPC464.41.----	-			38.5			17.5
HPC468.41.----	-			50.1			
-	HPC462.41.----			37.1	17.0		N/A
-	HPC466.41.----			48.5			17.5
-	HPC470.41.----			60.1			

Order codes: Please combine the coupling part number in the above table with the bore reference in the standard bores table (see pages 3.14 & 3.15).

Please identify both bores to complete the part number eg. HPC460.19. 14 24

Part Number ØB1 ØB2

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DISCOUNTS

1 - 19	20-39	40-59	60-99	100 +
List Price	-15%	-20%	-25%	-30%

PART NUMBER		Fasteners			⑦	⑦	PRICE EACH 1-19
Set Screw Hubs	Clamp Hubs	Screw	⑥ Torque Nm	Wrench mm	Mi	M	
HPC460.19.----	-	M3	0.94	1.5	30	7	£39.06
HPC464.19.----	-				50	10	£57.14
HPC468.19.----	-				60	12	£57.14
-	HPC462.19.----	M2.5	1.32	2	40	9	£47.56
-	HPC466.19.----				60	13	£67.39
-	HPC470.19.----				60	14	£67.39
HPC460.26.----	-	M4	2.27	2	120	15	£42.68
HPC464.26.----	-				160	18	£61.36
HPC468.26.----	-				200	23	£61.36
-	HPC462.26.----	M2.5	1.32	2	130	16	£51.87
-	HPC466.26.----				160	20	£77.85
-	HPC470.26.----				210	25	£77.85
HPC460.33.----	-	M5	4.62	2.5	560	37	£55.74
HPC464.33.----	-				800	52	£77.67
HPC468.33.----	-				830	55	£77.67
-	HPC462.33.----	M3	2.43	2.5	520	37	£79.27
-	HPC466.33.----				730	51	£96.76
-	HPC470.33.----				760	55	£96.76
HPC460.41.----	-	M6	7.61	3	1540	69	£69.25
HPC464.41.----	-				2250	97	£114.72
HPC468.41.----	-				2450	107	£114.72
-	HPC462.41.----	M4	5.66	3	1530	72	£99.50
-	HPC466.41.----				2220	100	£124.74
-	HPC470.41.----				2370	109	£124.74

- ④ Length of support thro' bore.
 ⑤ Clearance bore thro' spacer.
 ⑥ Maximum recommended tightening torque.
 ⑦ Values apply with max bores.

Mi: Moment of inertia $kgm^2 \times 10^{-8}$

M: Mass $kg \times 10^{-3}$

