

Couplings

Stainless Steel Bellows



Materials & Finishes

Hubs : *Al. Alloy 2014T6 and Clear anodised finish*

Bellows : *Spring quality stainless steel*

Joint assembly : *Copper C106, heat treated Zinc plate, clear passivate*

Fasteners : *Alloy steel, black oiled*

General description

Precision couplings with excellent kinematic properties. The 3 types offer differing combinations of stiffness, radial compensation and axial motion.

Where to use

High-end servo drives, pulse generators, scanners, positioning slides, metering valves, etc.

Speeds

Up to 5000 rpm in standard form.

Peak torque largest size

500 Nm

Standard bores

3mm to 20mm

Temperature range

-40 °C to +120 °C

Electrically isolating

No, unless used with insulating bore adaptors.

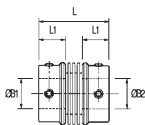
Connection

Clamp, Set Screw or Spigot

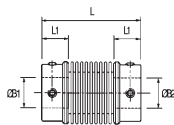
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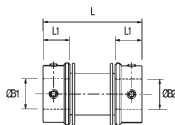
Set screw hubs



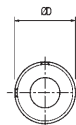
Ref. HPC530
Short type
for precisely
aligned shafts



Ref. HPC532
Long type
for greater angular
offsets or axial motion

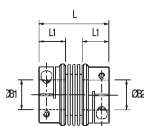


Ref. HPC534
Stretched type
for greater radial
misalignment and lower
bearing loads

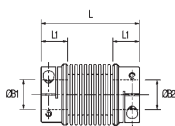


Typical

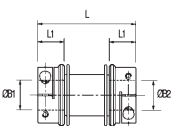
Clamp hubs



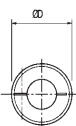
Ref. HPC536
HPC537
Short type
for precisely
aligned shafts



Ref. HPC538
HPC539
Long type
for greater angular
offsets or axial motion

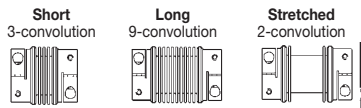


Ref. HPC540
HPC541
Stretched type
for greater radial
misalignment and lower
bearing loads



Typical

Comparative properties



Parameter	Short	Long	Stretched
Peak Torque	2	1	3
Torsional Stiffness	3	1	2
Angular Axial Compensation	2	3	1
Axial Compensation	2	3	1
Radial Compensation	1	3	2

The properties of the 3 types compared on a scale of 1 to 3. 3 = best.



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Performance

PART NUMBER		Coupling Size	① Peak torque Nm	② Max compensation		
Set Screw Hubs	Clamp Hubs			Angular deg	Radial mm	Axial +/- mm
HPC530	HPC537	20	2.0	2	0.06	0.35
HPC532	HPC539		1.0	6	0.50	1.00
HPC534	HPC541		2.5	1.3	0.20	0.20
HPC530	HPC536	26	3.2	2	0.06	0.36
HPC532	HPC538		1.6	6	0.50	1.00
HPC534	HPC540		4.0	1.3	0.20	0.20
HPC530	HPC536	34	7.5	2.5	0.10	0.60
HPC532	HPC538		3.8	8	1.00	1.90
HPC534	HPC540		9.4	1.5	0.30	0.30
HPC530	HPC536	41	10.0	2.5	0.15	0.80
HPC532	HPC538		15.0	8	1.20	2.50
HPC534	HPC540		12.5	1.8	0.40	0.50

- 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

Bore Size Coupling Size	ØB1, ØB2 + 0.03 / - 0 mm										
	3	3.175	4	4.763	5	6	6.350	8	9	9.525	10
20	●	●	●	●	●	●	●	●			
26			●	●	●	●	●	●	●	●	●
34						●	●	●	●	●	●
41							●	●	●	●	●
Bore ref.	14	16	18	19	20	22	24	28	30	31	32
Corresponding bore adaptor					251		253	255			257

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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
HPC530	HPC537	20	315	1.03	115	17.7
HPC532	HPC539		170	0.33	6.7	7.8
HPC534	HPC541		225	0.33	8.2	7.1
HPC530	HPC536	26	755	1.27	238	5.7
HPC532	HPC538		380	0.39	8.2	3.3
HPC534	HPC540		615	1.52	14.6	6.4
HPC530	HPC536	34	1740	1.34	227	6.6
HPC532	HPC538		915	0.62	12.7	3.8
HPC534	HPC540		1455	1.98	23.2	27.9
HPC530	HPC536	41	2880	1.58	144	13.1
HPC532	HPC538		1310	0.52	9.3	3.8
HPC534	HPC540		2245	2.30	19.2	7.2

Coupling Size	Bore Size											
	ØB1, ØB2 + 0.03 / - 0 mm											
	11	12	12.700	14	15	15.875	16	18	19	19.050	20	
20												
26	●	●										
34	●	●	●	●	●	●	●					
41	●	●	●	●	●	●	●	●	●	●	●	
Bore ref.	33	35	36	38	40	41	42	45	46	47	48	
Corresponding bore adaptor			259				260					261



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Dimensions & Order Codes

Couplings Stainless Steel Bellows

PART NUMBER		Coupling Size	ØD	L ±1.0	④ L1	ØB1, ØB2 max
Set Screw Hubs	Clamp Hubs					
HPC530.20.----	-	20	20.0	31.0	11.0	8
HPC532.20.----	-			45.2		
HPC534.20.----	-			43.6		
-	HPC537.20.----			31.0		
-	HPC539.20.----			45.2		
-	HPC541.20.----			43.6		
HPC530.26.----	-	26	26.0	37.5	14.0	12
HPC532.26.----	-			54.3		
HPC534.26.----	-			53.2		
-	HPC536.26.----			37.5		
-	HPC538.26.----			54.3		
-	HPC540.26.----			53.2		
HPC530.34.----	-	34	34.0	40.0	14.0	16
HPC532.34.----	-			57.0		
HPC534.34.----	-			56.6		
-	HPC536.34.----			40.0		
-	HPC538.34.----			57.0		
-	HPC540.34.----			56.6		
HPC530.41.----	-	41	41.0	49.7	18.0	20
HPC532.41.----	-			71.4		
HPC534.41.----	-			70.7		
-	HPC536.41.----			49.7		
-	HPC538.41.----			71.4		
-	HPC540.41.----			70.7		

Order codes: Please combine the coupling part number in the above table with the bore reference in the standard bores table (see pages 3.4 & 3.5).

Please identify both bores to complete the part number eg. HPC530.20.14 28

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			Mi	M	PRICE EACH 1-19
Set Screw Hubs	Clamp Hubs	Screw	Torque Nm	Wrench mm			
HPC530.20.----	-	M4	2.27	2	90	18	£63.42
HPC532.20.----	-				100	19	£66.79
HPC534.20.----	-				90	18	£64.05
-	HPC537.20.----	4-40	2.33	2	90	16	£65.65
-	HPC539.20.----				100	18	£69.06
-	HPC541.20.----				90	17	£66.30
HPC530.26.----	-	M5	4.62	2.5	350	35	£70.38
HPC532.26.----	-				400	39	£76.95
HPC534.26.----	-				370	34	£72.19
-	HPC536.26.----	M3	2.43	2.5	330	34	£71.13
-	HPC538.26.----				380	38	£77.69
-	HPC540.26.----				350	33	£72.94
HPC530.34.----	-	M5	4.62	2.5	975	58	£75.40
HPC532.34.----	-				1128	65	£84.51
HPC534.34.----	-				988	59	£78.94
-	HPC536.34.----	M3	2.43	2.5	925	56	£76.30
-	HPC538.34.----				1078	63	£85.39
-	HPC540.34.----				938	57	£79.90
HPC530.41.----	-	M6	7.61	3	2490	102	£83.28
HPC532.41.----	-				2740	110	£95.25
HPC534.41.----	-				2477	102	£88.71
-	HPC536.41.----	M4	5.66	3	2390	99	£82.54
-	HPC538.41.----				2660	107	£94.54
-	HPC540.41.----				2377	99	£87.97

- ④ Length of support thro' bore. Shafts can near-butt.
 ⑤ Maximum recommended tightening torque.
 ⑥ Values apply with max bores.

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

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

