RULAND

1937

Carefully Made Shaft Collars and Couplings

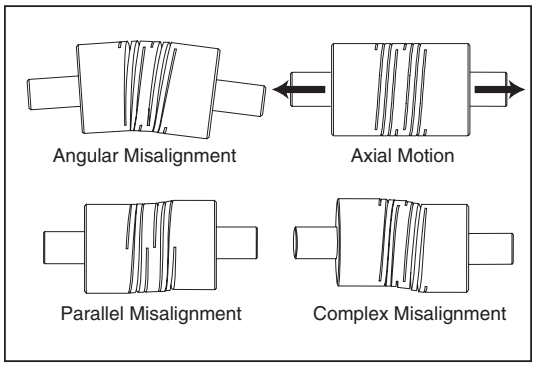
FLEXIBLE BEAM COUPLINGS

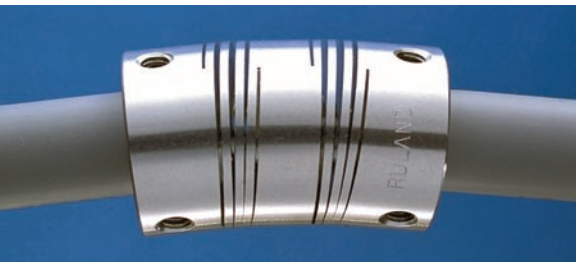
Flexible Beam Couplings from RULAND

Ruland Manufacturing Co., Inc. has been supplying carefully made products since 1937. We have manufactured everything from bicycle pumps to high pressure valves, including the valve that pressurized the spacesuit of the first American to walk in space. In recent years, all of our expertise has been devoted to making the best shaft collars and couplings available.

Three series of zero backlash flexible beam couplings are available with inch and metric bores and outside diameters ranging from 3/8" (9.5mm) to 1-1/2" (38mm). Couplings in all three series are machined from a single piece of aluminum or stainless steel and feature multiple spiral cuts. The multiple cut design provides higher torque capabilities and greatly reduced wind-up compared to commodity-type single beam couplings.

The four beam (P and MW Series) and six beam (F Series) each have two sets of spiral slots, a feature that provides superior parallel misalignment capabilities compared to single beam couplings. Angular misalignment, axial motion and any combination of all three types of misalignment are also easily accommodated by flexible beam couplings. Ruland clamp style flexible beam couplings have the additional benefit of dynamic balancing, due to the unique configuration of the socket head cap screws.





Flexible beam couplings should be used in applications in which misalignment exists between the two shafts being coupled. F series couplings are ideal for light duty power transmission applications such as coupling a servo motor to a lead screw in a motion control system. The couplings feature larger body sizes and stronger beams to provide high torque capacity and very low wind-up, without sacrificing misalignment capabilities. The demanding nature of reversing servo applications make the performance benefits delivered by the F series vital to maintaining the accuracy, repeatability and reliability of the system.

The P and MW series couplings are designed specifically for precision applications, especially those that use delicate components such as encoders and tachometers. The small bearings on these components make low radial forces essential to longevity and continued high performance. The P and MW series couplings provide extra flexibility to yield reduced bearing loads, and shorter industry standard lengths to fit in confined spaces and allow for easy retrofits in existing equipment. At the same time, the multiple cut pattern continues to provide excellent torque capabilities and low wind-up.

In This Catalog

Installation Instructions

1. Assure that the misalignment between shafts is within the coupling's ratings.
2. Align both hubs of the coupling on the shafts that are to be joined.
3. Fully tighten the screw(s) on one hub to their recommended seating torque using an unplated wrench. (See charts below.)
4. Before tightening the screw(s) on the second hub, rotate the coupling by hand to allow it to reach its free length.
5. Tighten the hub on the second shaft such that the misalignment angle remains centered along the length of the coupling and the coupling remains axially relaxed.
6. On relief bore couplings, the shafts may be extended into the relieved area of the coupling without affecting coupling performance.

Hardware Torque Charts

TORQUE RATINGS—CLAMP SCREW

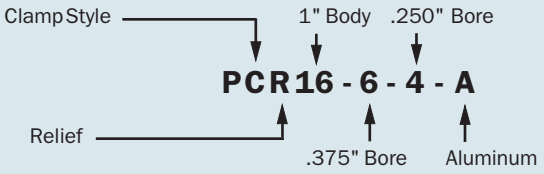
METRIC Clamp Screw	Seating Torque (Nm) ALLOY	STAINLESS STEEL
M1.6	0.29	0.17
M2	0.60	0.36
M2.5	1.21	0.73
M3	2.10	1.10
M4	4.60	2.50
M5	9.50	5.40
M6	16.00	9.60

TORQUE RATINGS—SET SCREW

METRIC Set Screw	Seating Torque (Nm) ALLOY	STAINLESS STEEL
M2	0.21	0.13
M2.5	0.57	0.44
M3	0.92	0.73
M4	2.20	1.76
M5	4.00	3.20
M6	7.20	5.76

HOW TO ORDER

Choose any bore ***b1*** and any bore ***b2*** available in a body size. Part numbers are in the following format with numbers representing sixteenths of an inch:



Materials

Aluminum Products: 7075-T651 Extruded and Drawn Aluminum Bar.

Stainless Steel Products: 18-8 (Type 303) Austentic, Non-magnetic bar or 17-4 ph

Finishes

Aluminum Products: Bright Finish.

Stainless Steel Products: Bright Finish.

Hardware

Inch Couplings in Aluminum and Stainless Steel: Alloy Steel Socket Cap Screws, heat treated. ASA specification B18.3

Metric Couplings in Aluminum and Stainless Steel: Alloy Steel Socket Cap Screws, heat treated, meet or exceed ASA specification B18.3.1M and ASTM A574M property class 12.9

Temperature Range

Aluminum: –40°C (–40°F) to 107°C (225°F)

Stainless Steel: –40°C (–40°F) to 177°C (350°F)

Bore Tolerance

+.002″/–.000″
+.050 mm/–.000 mm

Maximum Speed

6,000 rpm

WARRANTY / DISCLAIMER OF UNSTATED WARRANTIES / LIMITATION OF LIABILITY

Warranty. Ruland warranties that the products sold hereunder meet Ruland's size and materials specifications as set forth in this catalog. Products not meeting Ruland's size and material specifications will, at Ruland's option, be replaced or the purchase price refunded.

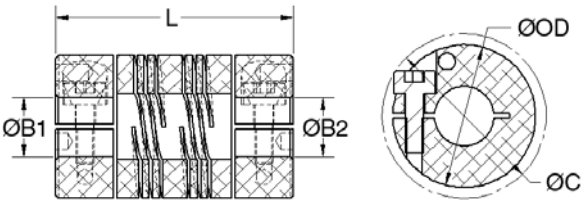
Disclaimer of unstated warranties. THE WARRANTY PRINTED ABOVE IS THE ONLY WARRANTY APPLICABLE TO THESE PRODUCTS. ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. It is the responsibility of the user to determine the suitability of Ruland products for a specific application. No person, including employees of Ruland or agents in the company's channels of distribution is authorized to represent on Ruland's behalf, the suitability of Ruland products for a specific purpose.

Limitation of Liability. IT IS UNDERSTOOD AND AGREED THAT SELLER'S LIABILITY SHALL NOT EXCEED THE AMOUNT OF THE PURCHASE PRICE. SELLER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES. THE PRICE STATED FOR THE PRODUCT IS A CONSIDERATION IN LIMITING RULAND'S LIABILITY.

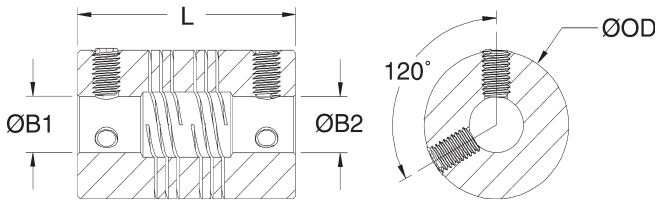
SIX BEAM FLEXIBLE COUPLING

INCH DIMENSION SERIES • ALUMINUM

FCR



FSR



PART NUMBER		SPECIFICATIONS							PERFORMANCE				
CLAMP STYLE	SET SCREW STYLE	BORES B1, B2 (in)	OUTER DIAM. OD (in)	CLEARANCE DIAM C (in) (FCR) MAX	LENGTH L (in)	CAP SCREW (FCR)	SET SCREW (FSR)	SHAFT PENETRATION (in)	STATIC TORQUE (lb-in)	TORSIONAL STIFFNESS (Deg/lb-in)	MISALIGNMENT PARALLEL (in)	MISALIGNMENT AXIAL MOTION (in)	MOMENT OF INERTIA (lb-in²)
FCR10	FSR10	3 (.1875) 4 (.2500)	0.625	0.796	1.000	M2.5	M4	0.472	13 13	0.360 0.360	0.008	0.005	0.0013
FCR12	FSR12	3 (.1875) 4 (.2500) 5 (.3125)	0.750	0.879	1.250	M3	M4	0.593	26 26 20	0.152 0.152 0.229	0.008	0.005	0.0036
FCR16	FSR16	4 (.2500) 5 (.3125) 6 (.3750)	1.000	1.117	1.500	M4	M5	0.704	35 33 33	0.064 0.093 0.093	0.015	0.010	0.0139
FCR20	FSR20	5 (.3125) 6 (.3750) 8 (.5000)	1.250	1.459	1.750	M5	M6	0.820	70 61 50	0.038 0.048 0.072	0.015	0.010	0.0401
FCR24	FSR24	6 (.3750) 8 (.5000) 10 (.6250) 12 (.7500)	1.500	1.642	2.250	M5	M6	1.042	120 110 95 80	0.022 0.029 0.043 0.063	0.030	0.015	0.1023

Note 1 Static torque ratings are at maximum misalignment. To obtain dynamic rating, static ratings should be divided by 2 for non-reversing applications and by 4 for reversing applications.

Note 2 Hardware is alloy steel with black oxide finish. Stainless steel hardware is available upon request. FCR series parts have two socket head Nypatch® cap screws on each end with the exception of the M2.5.

Note 3 Performance ratings are for guidance only. The user must determine suitability for a particular application.

Note 4 Coupling torque and torsional stiffness are determined by the largest bore selected.

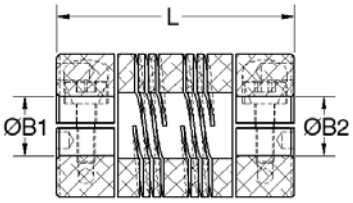
Note 5 Angular misalignment on all couplings is 3°.

Note 6 Shafts may penetrate up to 0.5 x L. Be certain shafts do not touch.

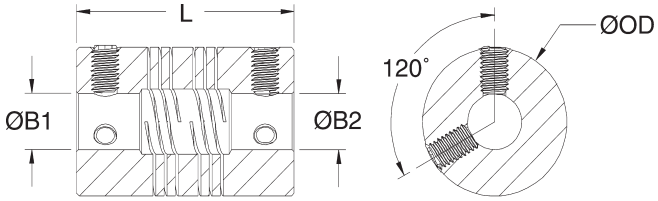
Note 7 Maximum speed 6,000 RPM.

FOR WARRANTY/DISCLAIMER OF UNSTATED WARRANTIES/LIMITATION OF LIABILITY SEE PAGE 3 OR WWW.RULAND.COM

FCR



FSR



PART NUMBER		SPECIFICATIONS							PERFORMANCE				
CLAMP STYLE	SET SCREW STYLE	BORES B1, B2 (in)	OUTER DIAM. OD (in)	CLEARANCE DIAM C (in) (FCR) MAX	LENGTH L (in)	CAP SCREW (FCR)	SET SCREW (FSR)	SHAFT PENETRATION (in)	STATIC TORQUE (lb-in)	TORSIONAL STIFFNESS (Deg/lb-in)	MISALIGNMENT PARALLEL (in)	MISALIGNMENT AXIAL MOTION (in)	MOMENT OF INERTIA ($lb\text{-}in^2$)
FCR10	FSR10	3 (.1875) 4 (.2500)	0.625	0.796	1.000	M2.5	M4	0.472	18 18	0.088 0.088	0.008	0.005	0.0037
FCR12	FSR12	3 (.1875) 4 (.2500) 5 (.3125)	0.750	0.879	1.250	M3	M4	0.593	41 41 31	0.079 0.079 0.096	0.008	0.005	0.0100
FCR16	FSR16	4 (.2500) 5 (.3125) 6 (.3750)	1.000	1.117	1.500	M4	M5	0.704	53 50 50	0.034 0.046 0.046	0.015	0.010	0.0381
FCR20	FSR20	5 (.3125) 6 (.3750) 8 (.5000)	1.250	1.459	1.750	M5	M6	0.820	142 129 107	0.017 0.023 0.037	0.015	0.010	0.1094
FCR24	FSR24	6 (.3750) 8 (.5000) 10 (.6250) 12 (.7500)	1.500	1.642	2.250	M5	M6	1.042	208 190 175 145	0.016 0.021 0.031 0.045	0.030	0.015	0.2814

Note 1 Static torque ratings are at maximum misalignment. To obtain dynamic rating, static ratings should be divided by 2 for non-reversing applications and by 4 for reversing applications.

Note 2 Hardware is alloy steel with black oxide finish. Stainless steel hardware is available upon request. FCR series parts have two socket head Nypatch® cap screws on each end with the exception of the M2.5.

Note 3 Performance ratings are for guidance only. The user must determine suitability for a particular application.

Note 4 Coupling torque and torsional stiffness are determined by the largest bore selected.

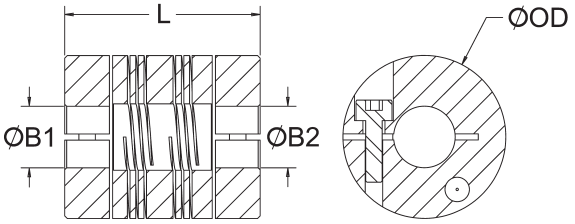
Note 5 Angular misalignment on all couplings is 3°.

Note 6 Shafts may penetrate up to 0.5 x L. Be certain shafts do not touch.

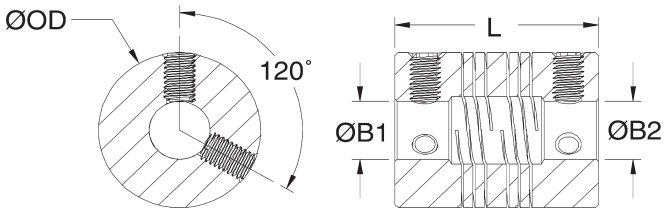
Note 7 Maximum speed 6,000 RPM.

FOR WARRANTY/DISCLAIMER OF UNSTATED WARRANTIES/LIMITATION OF LIABILITY SEE PAGE 3 OR WWW.RULAND.COM

PCR



PSR



PART NUMBER		SPECIFICATIONS						PERFORMANCE				
CLAMP STYLE	SET SCREW STYLE	BORES B1, B2 (in)	OUTER DIAM. OD (in)	LENGTH L (in) (PCR/PSR)	CAP SCREW (PCR)	SET SCREW (PSR)	SHAFT PENETRATION (in)	STATIC TORQUE (lb-in)	TORSIONAL STIFFNESS (Deg/lb-in)	PARALLEL MISALIGNMENT (in)	AXIAL MOTION (in)	MOMENT OF INERTIA ($lb\text{-}in^2$)
PCR6	PSR6	1.5 (.0938)	0.375	0.563	M1.6	M2	0.265	5.5	1.34	0.008	0.005	0.0001
PCR8	PSR8	1.5 (.0938) 2 (.1250)	0.500	0.750	M2	M2	0.356	8 8	0.75 0.75	0.008	0.005	0.0004
PCR10	PSR10	2 (.1250) 2.5 (.1563) 3 (.1875)	0.625	0.800	M2	M3	0.377	15 12 12	0.36 0.54 0.54	0.008	0.005	0.0011
PCR12	PSR12	2 (.1250) 2.5 (.1563) 3 (.1875) 4 (.2500)	0.750	0.900	M2.5	M4	0.422	26 17 17 14	0.18 0.26 0.26 0.33	0.008	0.005	0.0025
PCR14	PSR14	3 (.1875) 4 (.2500) 5 (.3125)	0.875	1.063	M3	M4	0.499	20 18 16	0.17 0.21 0.27	0.008	0.005	0.0056
PCR16	PSR16	4 (.2500) 5 (.3125) 6 (.3750)	1.000	1.250	M4	M4	0.579	36 33 30	0.16 0.18 0.20	0.015	0.010	0.0116
PCR18	PSR18	4 (.2500) 5 (.3125) 6 (.3750) 8 (.5000)	1.125	1.500	M4	M5	0.695	47 44 40 34	0.10 0.11 0.14 0.22	0.015	0.010	0.0217
PCR20	PSR20	4 (.2500) 5 (.3125) 6 (.3750) 8 (.5000)	1.250	1.500	M4	M6	0.695	68 64 60 52	0.06 0.06 0.07 0.12	0.015	0.010	0.0340

Note 1 Static torque ratings are at maximum misalignment. To obtain dynamic rating, static ratings should be divided by 2 for non-reversing applications and by 4 for reversing applications.

Note 2 Hardware is alloy steel with black oxide finish. PCR series parts have socket head cap screws on each end. PSR series parts: sizes 6 through 12 have one set screw on each end; sizes 14 through 20 have two set screws on each end 120° apart.

Note 3 Performance ratings are for guidance only. The user must determine suitability for a particular application.

Note 4 Angular misalignment on all couplings is 3°.

Note 5 Shafts may penetrate up to 0.5 x L. Be certain shafts do not touch.

Note 6 Coupling torque and torsional stiffness are determined by the largest bore selected.

Note 7 Maximum speed 6,000 RPM.

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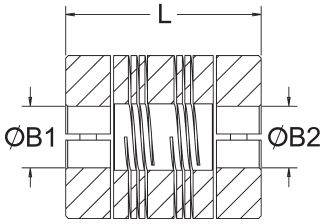
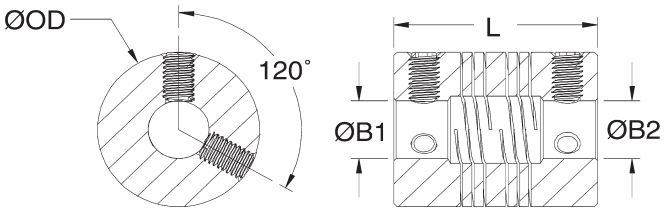
PCR



PSR



PART NUMBER		SPECIFICATIONS						PERFORMANCE				
CLAMP STYLE	SET SCREW STYLE	BORES B1, B2 (in)	OUTER DIAM. OD (in)	L (in) (PCR/PSR)	CAP SCREW (PCR)	SET SCREW (PSR)	SHAFT PENETRATION (in)	STATIC TORQUE (lb-in)	TORSIONAL STIFFNESS (Deg/lb-in)	PARALLEL MISALIGNMENT (in)	AXIAL MOTION (in)	MOMENT OF INERTIA (lb-in^2)
PCR6	PSR6	1.5 (.0938)	0.375	0.563	M1.6	M2	0.265	7.5	0.751	0.008	0.005	0.0003
PCR8	PSR8	1.5 (.0938) 2 (.1250)	0.500	0.750	M2	M2	0.356	11 11	0.368 0.368	0.008	0.005	0.0012
PCR10	PSR10	2 (.1250) 2.5 (.1563) 3 (.1875)	0.625	0.800	M2	M3	0.377	20 16 16	0.184 0.286 0.286	0.008	0.005	0.0030
PCR12	PSR12	2 (.1250) 2.5 (.1563) 3 (.1875) 4 (.2500)	0.750	0.900	M2.5	M4	0.422	35 23 23 19	0.085 0.151 0.151 0.179	0.008	0.005	0.0070
PCR14	PSR14	3 (.1875) 4 (.2500) 5 (.3125)	0.875	1.063	M3	M4	0.499	27 24 22	0.091 0.107 0.135	0.008	0.005	0.0157
PCR16	PSR16	4 (.2500) 5 (.3125) 6 (.3750)	1.000	1.250	M4	M4	0.579	49 44 41	0.079 0.094 0.103	0.015	0.010	0.0317
PCR18	PSR18	4 (.2500) 5 (.3125) 6 (.3750) 8 (.5000)	1.125	1.500	M4	M5	0.695	63 60 54 46	0.053 0.056 0.071 0.111	0.015	0.010	0.0603
PCR20	PSR20	4 (.2500) 5 (.3125) 6 (.3750) 8 (.5000)	1.250	1.500	M4	M6	0.695	92 86 81 70	0.031 0.037 0.044 0.064	0.015	0.010	0.0922

Note 1 Static torque ratings are at maximum misalignment. To obtain dynamic rating, static ratings should be divided by 2 for non-reversing applications and by 4 for reversing applications.

Note 2 Hardware is alloy steel with black oxide finish. PCR series parts have socket head cap screws on each end. PSR series parts: sizes 6 through 12 have one set screw on each end; sizes 14 through 20 have two set screws on each end 120° apart.

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Note 6 Coupling torque and torsional stiffness are determined by the largest bore selected.

Note 7 Maximum speed 6,000 RPM.

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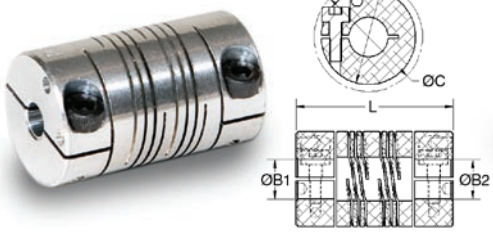
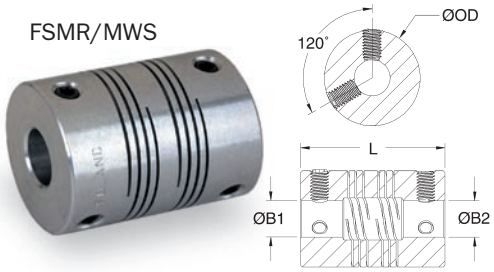
SIX BEAM AND FOUR BEAM COUPLINGS

METRIC DIMENSION SERIES • ALUMINUM

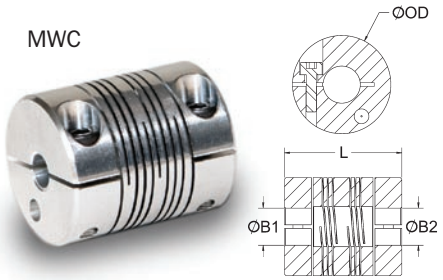
FCMR



FSMR/MWS



MWC



PART NUMBER		SPECIFICATIONS								PERFORMANCE				
CLAMP STYLE	SET SCREW STYLE	BORES B1,B2 (mm)	OUTER DIAM OD (mm)	CLEARANCE DIAM C (mm) (FCMR) MAX	LENGTH L (mm) (FCMR/MWC)	LENGTH L (mm) (FSMR/MWS)	CAP SCREW (FCMR/MWC)	SET SCREW (FSMR/MWS)	SHAFT PENETRATION (MM)	STATIC TORQUE (Nm)	TORSIONAL (Deg/Nm)	PARALLEL MISALIGNMENT (mm)	AXIAL MOTION (mm)	MOMENT OF INERTIA ($x10^{-6}$ kg-m^2)
FCMR16	FSMR16	5 6	15.88	20.22	25.4	25.4	M3	M4	12.00	1.47 1.47	3.211 3.211	0.203	0.127	0.380
FCMR19	FSMR19	5 6 7 8	19.05	22.23	31.75	31.75	M3	M4	15.06	2.94 2.94 2.71 2.26	1.331 1.331 1.666 2.036	0.203	0.127	1.037
FCMR25	FSMR25	6 7 8 9 10 11 12	25.4	28.37	38.1	38.1	M4	M5	17.87	3.95 3.95 3.73 3.73 3.73 3.28 2.82	0.548 0.548 0.862 0.862 0.862 1.097 1.566	0.381	0.254	4.120
FCMR32	FSMR32	8 9 10 11 12 14 15	31.75	37.06	44.45	44.45	M5	M6	20.82	7.91 6.89 6.89 5.65 5.65 5.08 4.86	0.313 0.392 0.392 0.627 0.627 0.705 0.862	0.381	0.254	11.885
FCMR38	FSMR38	10 11 12 14 15 16 19	38.1	41.71	57.15	57.15	M5	M6	26.47	13.56 12.43 12.43 12.43 10.73 10.73 9.04	0.157 0.235 0.235 0.235 0.392 0.392 0.627	0.762	0.381	30.032
MWC15	MWS15	3 4 5	15		22	20	M2	M3	10.41 9.41	0.85 0.85 0.81	4.44 4.44 5.21	0.20	0.12	0.293
MWC20	MWS20	4 5 6	20		28	20	M3	M3	13.34 9.34	1.30 1.30 1.15	2.01 2.01 2.48	0.20	0.12	1.053
MWC25	MWS25	6 8 10	25		30	24	M3	M4	13.79 11.29	3.42 3.42 3.10	1.22 1.22 1.75	0.38	0.25	2.955
MWC30	MWS30	8 10 12	30		38	30	M4	M5	17.65 13.65	6.90 6.90 6.60	0.71 0.71 0.93	0.38	0.25	7.958

Note 1 Static torque ratings are at maximum misalignment. To obtain dynamic rating, static ratings should be divided by 2 for non-reversing applications and by 4 for reversing applications.

Note 2 Hardware is alloy steel with black oxide finish. Stainless steel hardware is available upon request. FCMR and MWC series parts have two socket head Nypatch® cap screws on each end. FSMR and MWS parts have two set screws on each end 120° apart.

Note 3 Performance ratings are for guidance only. The user must determine suitability for a particular application.

Note 4 Coupling torque and torsional stiffness are determined by the largest bore selected.

Note 5 Angular misalignment on all couplings is 3°.

Note 6 Shafts may penetrate up to 0.5 x L. Be certain shafts do not touch.

Note 7 Maximum speed 6,000 RPM.

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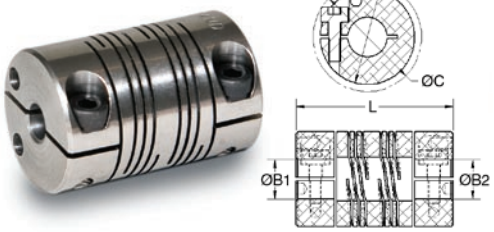
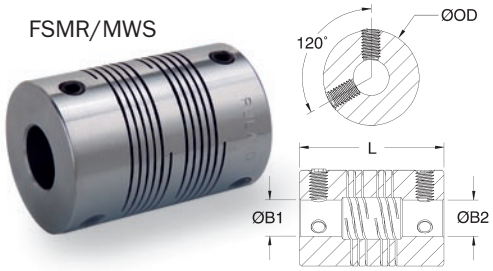
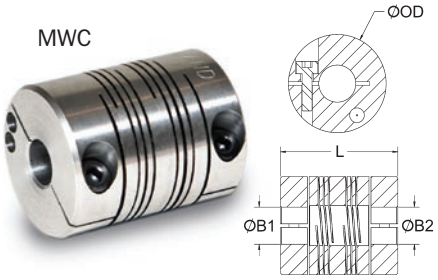
FCMR



FSMR/MWS



MWC



PART NUMBER		SPECIFICATIONS								PERFORMANCE				
CLAMP STYLE	SET SCREW STYLE	BORES B1,B2 (mm)	OUTER DIAM OD (mm)	CLEARANCE DIAM C (mm) (FCMR) MAX	LENGTH L (mm) (FCMR/MWC)	LENGTH L (mm) (FSMR/MWS)	CAP SCREW (FCMR/MWC)	SET SCREW (FSMR/MWS)	SHAFT PENETRATION (MM)	STATIC TORQUE (Nm)	TORTIONAL (Deg/Nm)	PARALLEL MISALIGNMENT (mm)	AXIAL MOTION (mm)	MOMENT OF INERTIA ($x10^{-6}$ kg-m^2)
FCMR16	FSMR16	5 6	15.88	20.22	25.4	25.4	M3	M4	12.00	2.04 2.04	0.78 0.78	0.203	0.127	1.097
FCMR19	FSMR19	5 6 7 8	19.05	22.23	31.75	31.75	M3	M4	15.06	4.64 4.64 3.51 3.51	0.70 0.70 0.85 0.85	0.203	0.127	2.964
FCMR25	FSMR25	6 7 8 9 10 11 12	25.4	28.37	38.1	38.1	M4	M5	17.87	6.00 6.00 5.66 5.66 5.66 4.40 4.40	0.30 0.30 0.41 0.41 0.41 0.74 0.74	0.381	0.254	11.293
FCMR32	FSMR32	8 9 10 11 12 14 15	31.75	37.06	44.45	44.45	M5	M6	20.82	16.08 16.08 16.08 14.60 14.60 11.32 11.32	0.15 0.15 0.15 0.20 0.20 0.33 0.33	0.381	0.254	32.426
FCMR38	FSMR38	10 11 12 14 15 16 19	38.1	41.71	57.15	55	M5	M6	26.47	23.53 21.52 21.52 21.52 19.82 19.82 16.42	0.14 0.19 0.19 0.19 0.27 0.27 0.40	0.762	0.381	83.407
MWC15	MWS15	3 4 5	15		22	20	M2	M3	10.41 9.41	1.30 1.30 1.20	2.23 2.23 2.52	0.20	0.12	0.731
MWC20	MWS20	4 5 6	20		28	20	M3	M3	13.34 9.34	2.00 2.00 1.70	0.98 0.98 1.29	0.20	0.12	2.984
MWC25	MWS25	6 8 10	25		30	24	M3	M4	13.79 11.29	5.10 5.10 4.60	0.58 0.58 0.83	0.38	0.25	7.871
MWC30	MWS30	8 10 12	30		38	30	M4	M5	17.65 13.65	10.40 10.40 10.00	0.33 0.33 0.46	0.38	0.25	20.920

Note 1 Static torque ratings are at maximum misalignment. To obtain dynamic rating, static ratings should be divided by 2 for non-reversing applications and by 4 for reversing applications.

Note 2 Hardware is alloy steel with black oxide finish. Stainless steel hardware is available upon request. FCMR and MWC series parts have two socket head Nypatch® cap screws on each end. FSMR and MWS parts have two set screws on each end 120° apart.

Note 3 Performance ratings are for guidance only. The user must determine suitability for a particular application.

Note 4 Coupling torque and torsional stiffness are determined by the largest bore selected.

Note 5 Angular misalignment on all couplings is 3°.

Note 6 Shafts may penetrate up to 0.5 x L. Be certain shafts do not touch.

Note 7 Maximum speed 6,000 RPM.

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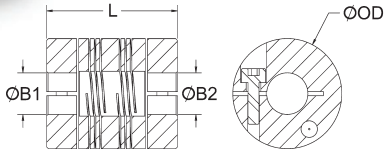
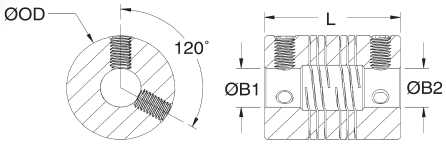
PCMR



PSMR



PART NUMBER		SPECIFICATIONS						PERFORMANCE				
CLAMP STYLE	SET SCREW STYLE	BORES B1, B2 (mm)	OUTER DIAM OD (mm)	LENGTH L (mm) (PCMR/PSMR)	CAP SCREW (PCMR)	SET SCREW (PSMR)	SHAFT PENETRATION (in)	STATIC TORQUE (Nm)	TORSIONAL STIFFNESS (Deg/Nm)	MISALIGNMENT PARALLEL (mm)	MISALIGNMENT AXIAL MOTION (mm)	MOMENT OF INERTIA ($x10^{-6}$ kg-m^2)
PCMR10	PSMR10	3	9.5	14.3	M1.6	M2	6.73	0.62	11.83	0.203	0.127	0.029
PCMR13	PSMR13	3	12.7	19.1	M2	M2	9.05	0.90	6.66	0.203	0.127	0.117
PCMR16	PSMR16	3 4 5	15.9	20.3	M2	M3	9.57	1.70 1.36 1.36	3.21 4.78 4.78	0.203	0.127	0.322
PCMR19	PSMR19	3 4 5 6	19.1	22.9	M2.5	M4	10.73	2.94 1.92 1.92 1.58	1.57 2.27 2.27 2.90	0.203	0.127	0.731
PCMR22	PSMR22	5 6 7 8	22.2	27.0	M3	M4	12.69	2.26 2.03 1.81 1.81	1.49 1.88 2.43 2.43	0.203	0.127	1.639
PCMR25	PSMR25	6 7 8 9	25.4	31.8	M4	M4	14.69	4.07 4.07 3.73 3.39	1.41 1.41 1.57 1.80	0.381	0.254	3.394
PCMR29	PSMR29	6 7 8 9 10 11 12	28.6	38.1	M4	M5	17.65	5.31 5.31 4.97 4.52 4.52 3.84 3.84	0.86 0.86 0.94 1.25 1.25 1.96 1.96	0.381	0.254	6.349
PCMR32	PSMR32	6 7 8 9 10 11 12	31.8	38.1	M4	M6	17.65	7.68 7.68 7.23 6.78 6.78 5.88 5.88	0.53 0.53 0.53 0.53 0.62 1.10 1.10	0.381	0.254	9.948

Note 1 Static torque ratings are at maximum misalignment. To obtain dynamic rating, static ratings should be divided by 2 for non-reversing applications and by 4 for reversing applications.

Note 2 Hardware is alloy steel with black oxide finish. PCMR series parts have socket head cap screws on each end. Parts PSMR10 through PSMR19 have one set screw on each end. PSMR22 through PSMR32 have two set screws 120° apart.

Note 3 Performance ratings are for guidance only. The user must determine suitability for a particular application.

Note 4 Coupling torque and torsional stiffness are determined by the largest bore selected.

Note 5 Angular misalignment on all couplings is 3°.

Note 6 Shafts may penetrate up to 0.5 x L. Be certain shafts do not touch.

Note 7 Maximum speed 6,000 RPM.

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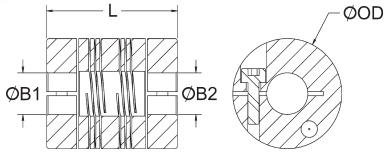
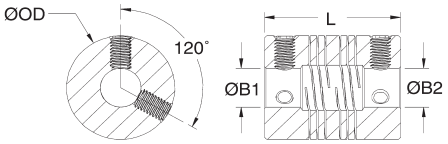
PCMR



PSMR/ISMR



PART NUMBER		SPECIFICATIONS						PERFORMANCE				
CLAMP STYLE	SET SCREW STYLE	BORES B1, B2 (mm)	OD (mm)	LENGTH (mm) (PCMR/ PSMR)	SCREW CAP (PCMR)	SET (PSMR)	SHAFT PENETRATION (in)	STATIC TORQUE (Nm)	TORSIONAL STIFFNESS (Deg/Nm)	MISALIGNMENT PARALLEL (mm)	MISALIGNMENT AXIAL MOTION (mm)	MOMENT OF INERTIA ($x10^{-6}$ kg-m^2)
PCMR10	PSMR10	3	9.5	14.3	M1.6	M2	6.73	0.85	6.65	0.203	0.127	0.088
PCMR13	PSMR13	3	12.7	19.1	M2	M2	9.05	1.24	3.26	0.203	0.127	0.351
PCMR16	PSMR16	3 4 5	15.9	20.3	M2	M3	9.57	2.26 1.81 1.81	1.63 2.53 2.53	0.203	0.127	0.878
PCMR19	PSMR19	3 4 5 6	19.1	22.9	M2.5	M4	10.73	3.95 2.60 2.60 2.15	0.75 1.34 1.34 1.58	0.203	0.127	2.048
PCMR22	PSMR22	5 6 7 8	22.2	27.0	M3	M4	12.69	3.05 2.71 2.49 2.49	0.81 0.95 1.19 1.19	0.203	0.127	4.594
PCMR25	PSMR25	6 7 8 9	25.4	31.8	M4	M4	14.69	5.54 4.97 4.97 4.63	0.70 0.83 0.83 0.91	0.381	0.254	9.275
PCMR29	PSMR29	6 7 8 9 10 11 12	28.6	38.1	M4	M5	17.65	7.12 6.78 6.78 6.10 6.10 5.20 5.20	0.47 0.50 0.50 0.63 0.63 0.98 0.98	0.381	0.254	17.643
PCMR32	PSMR32	6 7 8 9 10 11 12	31.8	38.1	M4	M6	17.65	10.40 9.72 9.72 9.15 9.15 7.91 7.91	0.27 0.33 0.33 0.39 0.39 0.57 0.57	0.381	0.254	26.977

Note 1 Static torque ratings are at maximum misalignment. To obtain dynamic rating, static ratings should be divided by 2 for non-reversing applications and by 4 for reversing applications.

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