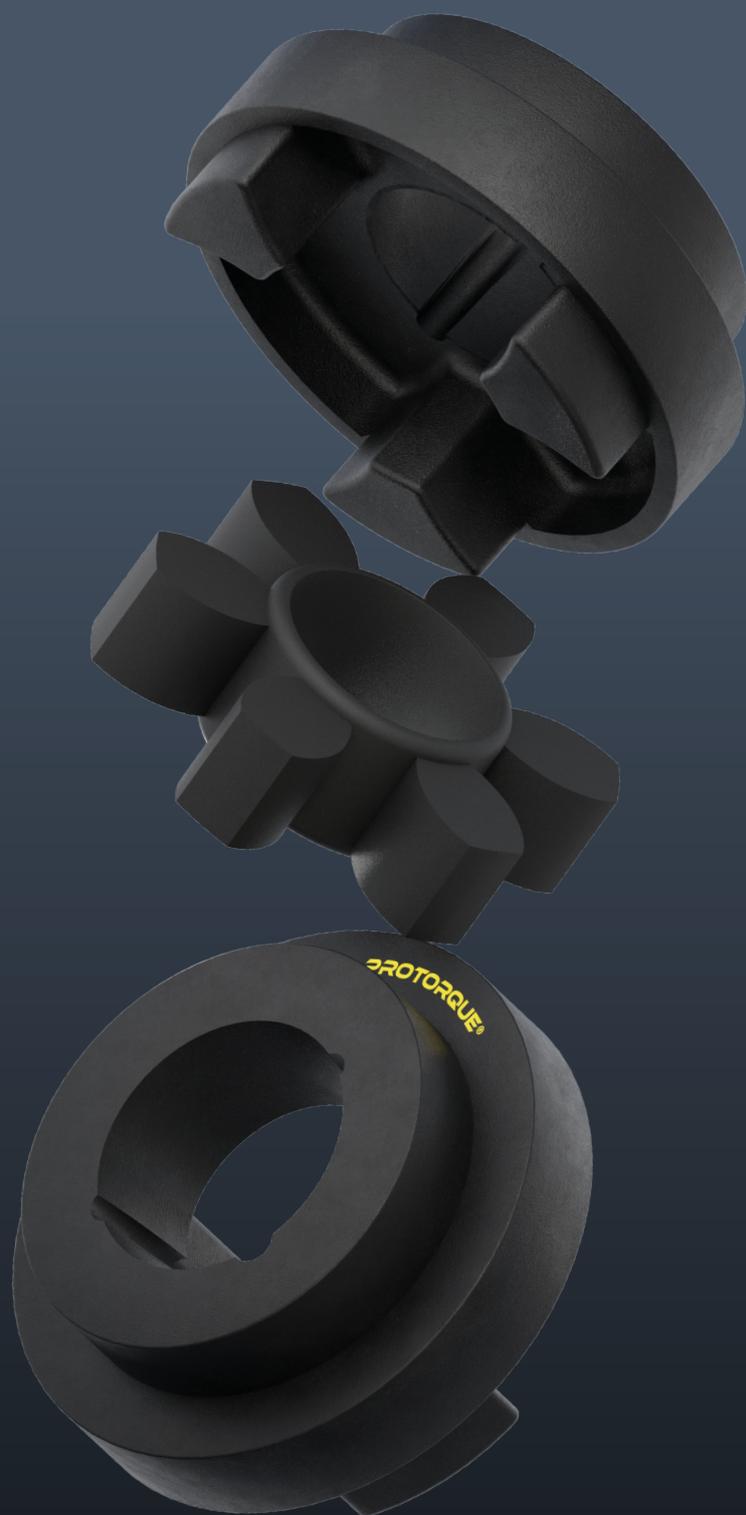


/ PRC COUPLINGS



PROTORQUE®

/ PRC Coupling

Elastic coupling offers versatile, general purpose, and cost-effective product for easy installation and maintenance.



Protorque PRC Elastic Couplings are engineered for easy installation, minimal maintenance, and cost-effective performance across a wide range of industrial applications.

A durable elastomeric element forms the core of the PRC coupling, enabling reliable torque transmission while absorbing shock and vibration. Designed for general-purpose use, this coupling ensures smooth operation by accommodating angular and parallel misalignments. With its robust construction and minimal maintenance needs, the PRC coupling is an ideal long-term solution for a broad spectrum of industrial machinery.

The user-friendly design, versatile application range, and excellent vibration dampening ensure the PRC Coupling delivers reliable, low-maintenance performance, while helping reduce operational costs.

PRC COUPLING

Reliable and efficient general-purpose coupling with simple installation and minimal upkeep.

Coupling Size	Torque Range (Nm)	Bore Range (mm)
PRC 70 H	31	9 - 25
PRC 90 H	80	12 - 28
PRC 110 H	160	14 - 38
PRC 130 H	315	19 - 52
PRC 150 H	600	19 - 55
PRC 180 H	950	24 - 65
PRC 230 H	2000	25 - 80
PRC 280 H	3150	32 - 90

BENEFITS AT A GLANCE

MISALIGNMENT TOLERANCE

Accommodates angular and parallel misalignments for smooth, trouble-free performance.

SHOCK & VIBRATION ABSORPTION

The elastomeric insert cushions and protects equipment from shocks and vibrations.

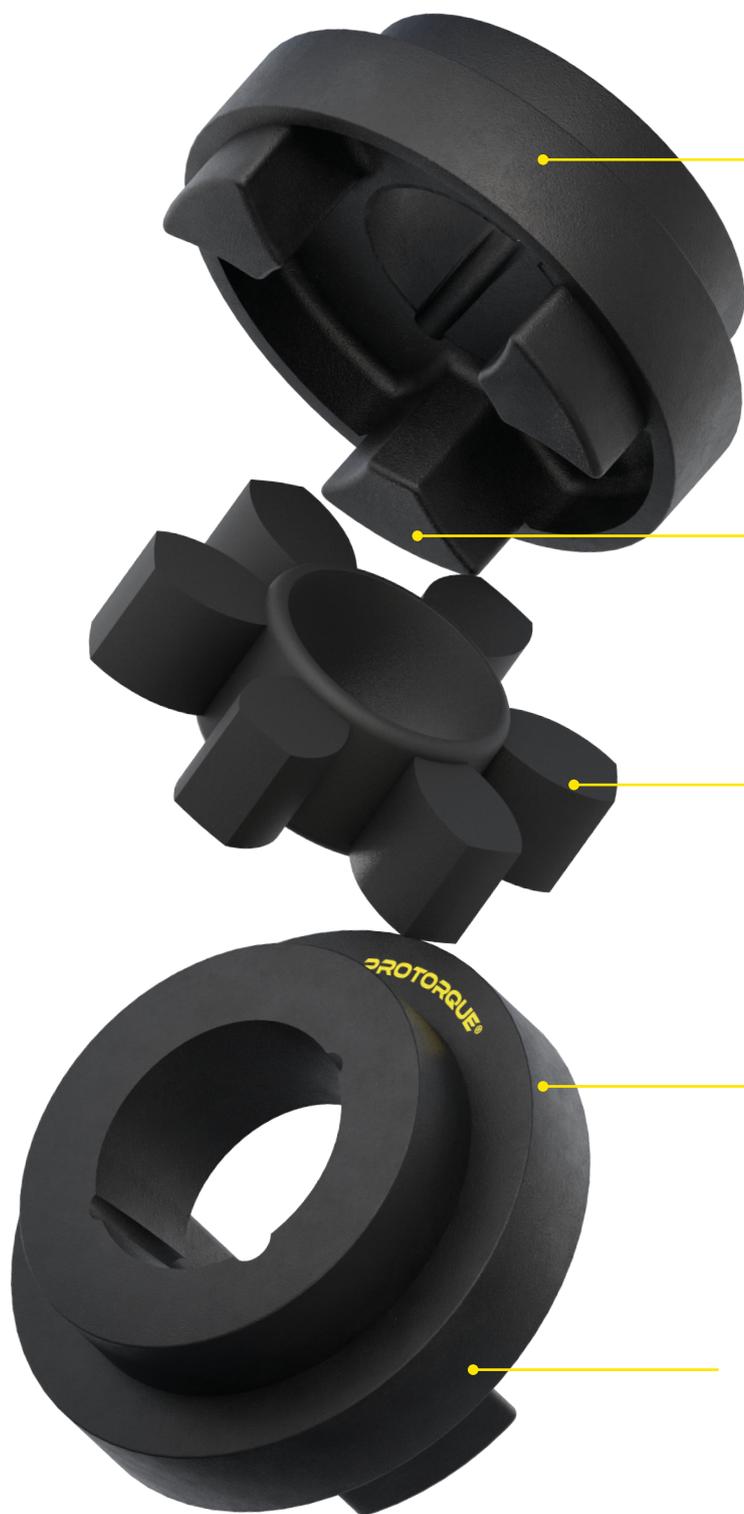
LOW MAINTENANCE

Engineered for durability with long-lasting components and fewer service interventions.

WIDE APPLICATION COMPATIBILITY

Adaptable for use across various industries and mechanical systems.

/ Design Features



Phosphate coated for improved corrosion resistance.

Fail-safe design due to interlocking jaw design.

Nitrile element for oil-resistant, flexible shock absorption.

Finished bore and pilot bore variations available.

Ease of alignment and fitting due to fully machine outside surfaces to allow alignment with a simple straight edge.

/ Selection

Selection

EXAMPLE

A shaft coupling is required to transmit 70kW between a 1200 rev/min diesel engine and a hoist running over 16 hrs/day. Engine shaft is 70mm and the hoist shaft is 75mm.

a) Service Factor

Determine appropriate Service Factors from table below.

a) Service Factor

The appropriate service factor is 2.5.

b) Design Power

Multiply running power of driven machinery by the service factor. This gives the design power which is used as a basis for coupling selection.

b) Design Power

Design power $70 \times 2.5 = 175\text{kW}$.

c) Coupling Size

Refer to Power Ratings table below and read across from the appropriate speed until a power equal to or greater than the design power is found. The size of coupling is given at the head of that column.

c) Coupling Size

Reading across from 1200 rev/min in the speed column of Power Ratings table below, 25kW is the first power to exceed the required 175kW (design power). The size of the coupling at the head of this column is 230.

d) Bore Size

From dimensions table check that the required bores can be accommodated.

d) Bore Size

The Dimensions table shows that both shaft diameters are within the bore range available.

Service Torque

$$TK = 9550 \times P/n \text{ (Nm)}$$

Coupling Torque

$$TK_N \geq Tk \times K \text{ (Nm)}$$

$$P = \text{Power per kW}$$

$$n = r/m$$

/ Service Factor & Power Rating

Service Factor (K)

SPECIAL CASES

For applications where substantial shock, vibration and torque fluctuation occur, and for reciprocating machines e.g., internal combustion engines, piston type pumps and compressors, refer to your local Authorised Distributor, with full machine details for torsional analysis.

UNIFORM

Agitators, brewing machinery, centrifugal blowers, centrifugal compressors, conveyors, centrifugal fans and pumps, generators, sewage disposal equipment.

MODERATE SHOCK

Clay working machinery, crane hoists, laundry machinery, wood working machinery, machine tools, rotary mills, paper mill machinery, textile machinery, non-uniformly loaded centrifugal pumps.

HEAVY SHOCK

Reciprocating conveyors, crushers, shakers, metal mills, rubber machinery (banbury mixers and mills), reciprocating compressors, welding sets.

Type of driving unit

Electric motors
Steam Turbines

Internal combustion engines
4-6 cylinders
Steam engines
Water turbines

Hours per day duty

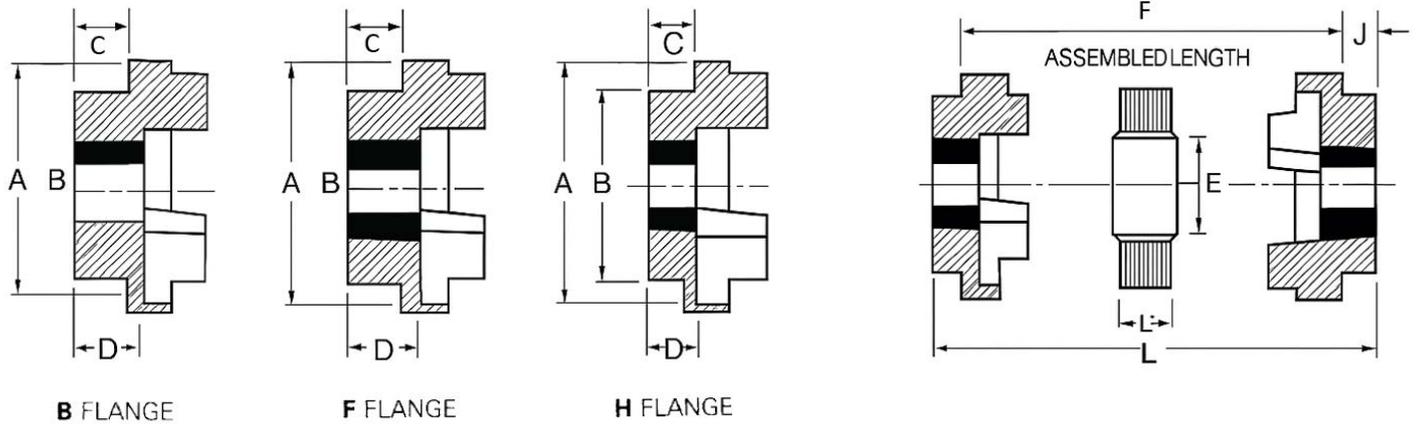
Hours per day duty

≤ 8	> 8 ≤ 16	>16	≤ 8	> 8 ≤ 16	>16
1.0	1.2	1.3	1.3	1.4	4.0
1.6	1.8	2.0	2.0	2.3	2.5
2.5	2.8	3.2	3.2	3.6	1.6

Power Ratings

Speed	Coupling size							
	70	90	110	130	150	180	230	280
r/min	kW							
50	0.16	0.42	0.84	1.65	3.14	4.97	10.47	16.49
100	0.33	0.84	1.68	3.3	6.28	9.95	20.94	32.98
200	0.66	1.68	3.35	6.6	12.57	19.9	41.88	65.97
300	0.99	2.51	5.03	9.9	18.85	29.84	62.83	98.95
400	1.32	3.35	6.7	13.19	25.13	39.79	83.77	131.94
500	1.65	4.19	8.38	16.49	31.41	49.75	104.71	164.92
600	1.98	5.03	10.05	19.79	37.7	59.69	125.65	197.91
700	2.31	5.86	11.73	23.09	43.98	69.63	146.6	230.89
720	2.37	6.03	12.06	23.75	45.24	71.62	150.79	237.49
800	2.64	6.7	13.4	26.39	50.26	79.58	167.54	263.87
900	2.97	7.54	15.08	29.69	56.54	89.53	188.48	296.86
960	3.17	8.04	16.08	31.66	60.3	95.5	201.05	316.65
1000	3.3	8.38	16.75	32.98	62.83	99.48	209.42	329.84
1200	3.96	10.05	20.1	39.58	75.39	119.37	251.31	395.81
1400	4.62	11.73	23.46	46.18	87.96	139.27	293.19	461.78
1440	4.75	12.06	24.13	47.5	90.47	143.25	301.57	474.97
1600	5.28	13.4	26.81	52.77	100.52	159.16	335.08	527.75
1800	5.94	15.08	30.16	59.37	113.09	179.06	376.96	593.72
2000	6.6	16.75	33.51	65.97	125.65	198.95	418.85	659.69
2200	7.26	18.43	36.86	72.57	138.22	218.85	460.73	725.65
2400	7.92	20.1	40.21	79.16	150.79	238.74	502.62	-
2600	8.58	21.78	43.56	85.76	163.35	258.64	544.5	-
2800	9.24	23.46	46.91	92.36	175.92	278.53	-	-
2880	9.5	24.13	48.25	94.99	180.94	286.49	-	-
3000	9.9	25.13	50.26	98.95	188.48	298.43	-	-
3600	11.87	30.16	60.31	118.74	226.18	-	-	-
Nominal torque Nm	31	80	160	315	600	950	2000	3150
Max. torque Nm	72	180	360	720	1500	2350	5000	7200

/ Dimensions



Size	Bushing No.	A	B	E	F	G	Max. Bore		C	D	J
							mm	inch			
70 F	1008	69	60	31	25.0	18.0	25	1	20.0	23.75	29
70 H	1008	69	60	31	25.0	18.0	25	1	20.0	23.75	29
90 F	1108	85	70	32	30.5	22.5	28	1 1/8	19.5	23.25	29
90 H	1108	85	70	32	30.5	22.5	28	1 1/8	19.5	23.25	29
110 F	1210	112	100	45	45.0	29.0	42	1 5/8	18.5	26.75	38
110 H	1210	112	100	45	45.0	29.0	42	1 5/8	18.5	26.75	38
130 F	1610	130	105	50	53.0	36.0	42	1 5/8	18.0	26.50	38
130 H	1610	130	105	50	53.0	36.0	42	1 5/8	18.0	26.50	38
150 F	2012	150	115	62	60.0	40.0	50	2	23.5	33.50	42
150 H	2012	150	115	62	60.0	40.0	50	2	23.5	33.50	42
180 F	2517	180	125	77	73.0	49.0	60	2 1/2	34.5	46.50	48
180 H	2517	180	125	77	73.0	49.0	60	2 1/2	34.5	46.50	48
230 F	3020	225	155	99	85.5	59.5	75	3	39.5	52.50	55
230 H	3020	225	155	99	85.5	59.5	75	3	39.5	52.50	55
280 F	3535	275	185	119	105.5	74.5	90	3 1/2	74.0	90.00	67
280 H	3535	275	185	119	105.5	74.5	90	3 1/2	74.0	90.00	67

Size	Assembled Length (L*) FF, FH, HH	Weight (kg)	Inertia (Mr ² kgm)	Dynamic Stiffness (Nm/°)	Maximum Misalignment			Nominal torque (Nm)
					Parallel	Axial	Angular	
70	65.0	1.00	0.00085	-	0.3	+0.2	1	31
90	69.5	1.17	0.00115	-	0.3	+0.5	1	80
110	82.0	5.00	0.00400	65	0.3	+0.6	1	160
130	89.0	5.46	0.00780	130	0.4	+0.8	1	315
150	107.0	7.11	0.01810	175	0.4	+0.9	1	600
180	142.0	16.60	0.04340	229	0.4	+1.1	1	950
230	164.5	26.00	0.12068	587	0.5	+1.3	1	2000
280	207.5	55.30	0.44653	1025	0.5	+1.7	1	3150

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