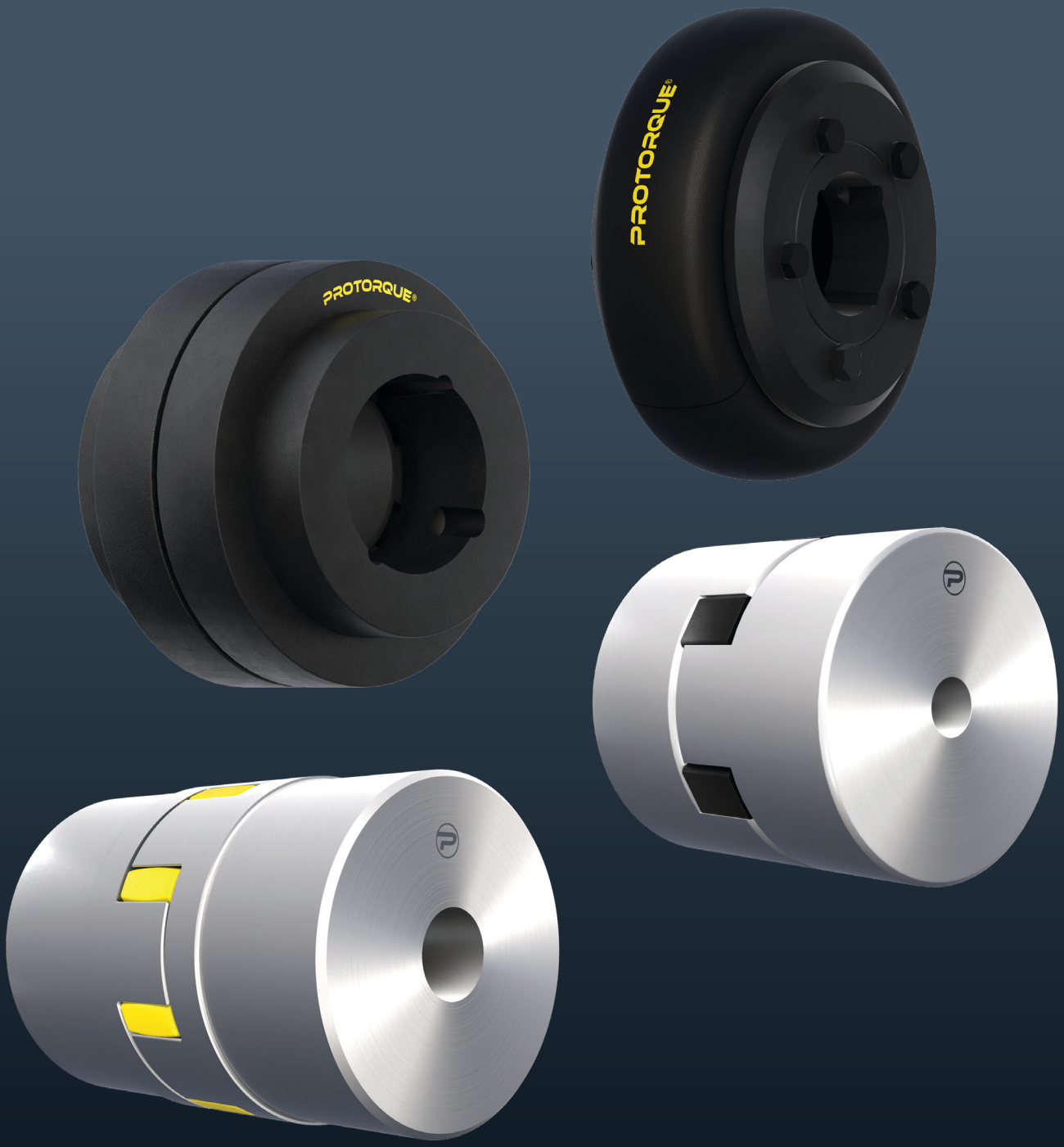
PROTORQUE®



/ COUPLINGS

/ Contents

/ About Protorque

1 ACCOUNTABILITY

A good reputation cannot be forged or built overnight. Our world-renowned reputation is built with transparency, integrity and a commitment to safe working practices.

2 COLLABORATION

We work closely with our partners to ensure a consistent and reliable supply chain. Our employees benefit from our inclusive business model which ensures that every voice in the organisation is heard. By working closely together, we can continue to develop our business and remain at the forefront of the power transmission industry.

3 KNOWLEDGE

Our innovative product range has been developed in conjunction with a panel of power transmission experts. These experts are also on hand to support our customers with every stage of their journey, from the initial application design through to improvements in plant and equipment efficiency.

4 INNOVATION

We pride ourselves on being a forward-thinking company with big ambitions. We work closely with our customers to understand their biggest challenges, so that we can create ground-breaking product solutions which really benefit their businesses.

5 SUSTAINABILITY

Everything that we do as a business puts sustainability at the forefront. From our carefully considered supply chain and our manufacturing processes to our logistics network and partners, our business model is based on contributing to a sustainable future for the modern world.

/ 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.

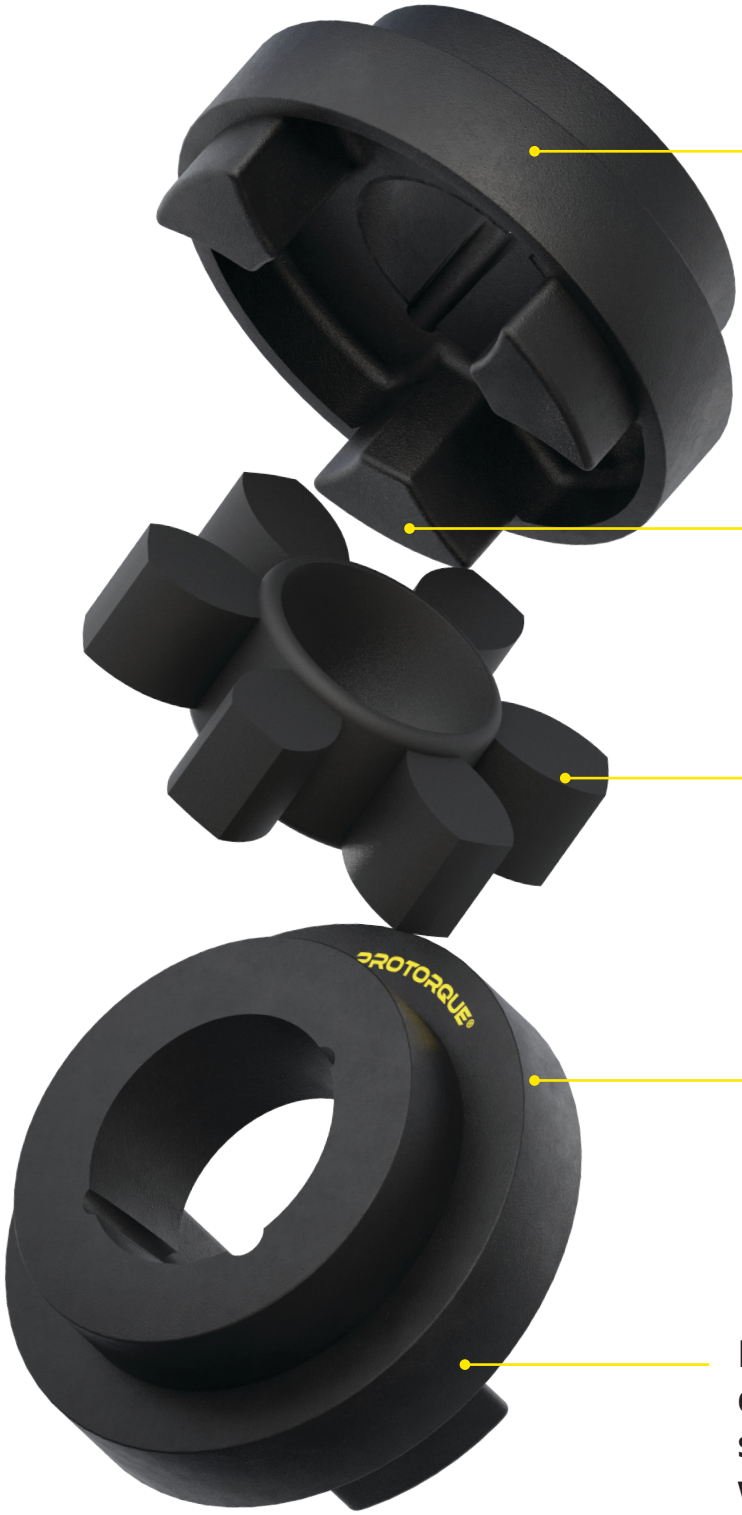
LOW MAINTENANCE

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 absorbtion.

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 x 2.5 = 175kW.
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 251kW (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 moment	TK = 9550x P/n (Nm)
Coupling moment	TK N ≥Tk x K (Nm) P = 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.

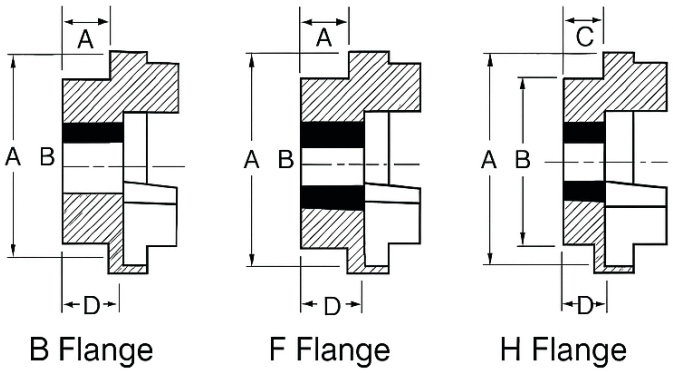
HEAVY SHOCK
Reciprocating conveyors, crushers, shakers, metal mills, rubber machinery (banbury mixers and mills), reciprocating compressors, welding sets.

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

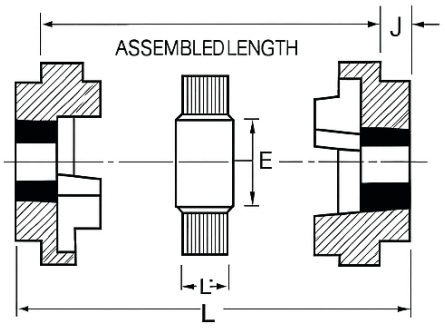
Power Ratings

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	30.31	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



B Flange F Flange H Flange



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

/ Tyre Coupling

Highly flexible and durable coupling designed to accommodate greater misalignment and absorb vibration.

Protorque PTC Tyre Couplings are engineered for demanding industrial applications requiring high-flexibility, superior misalignment compensation, and excellent vibration absorption.

PTC Tyre Couplings feature a robust, highly elastic tyre elements that allows for significant angular and parallel misalignments, all while delivering smooth, reliable power transmission. Their shock-absorbing properties reduce torsional fluctuations and vibrations, protecting connected machinery and extending equipment life.

With fast, user-friendly installation, minimal maintenance, and wide compatibility across industries, the Protorque Tyre Coupling delivers consistent, reliable performance in even the toughest conditions.

FEATURES

MISALIGNMENT

Accommodates significant angular, parallel, and axial misalignment. Ensures smooth operation even in challenging conditions.

SHOCK AND VIBRATION ABSORPTION

The tyre element absorbs shocks and vibrations. Provides a cushioned effect that protects connected machinery.

EASY INSTALLATION

User-friendly design allows for quick and easy installation.

MINIMAL MAINTENANCE

Durable tyre element resists wear and tear. Low maintenance requirements reduce downtime and costs.

BENEFITS

FLEXIBILITY AND MISALIGNMENT COMPENSATION

The PTC tyre coupling is designed to accommodate significant misalignment, both angular and parallel, without compromising performance. This flexibility ensures smooth operation even in challenging conditions, reducing the risk of equipment damage and downtime.

VERSATILE APPLICATION RANGE

The versatility of the PTC tyre coupling makes it suitable for a wide range of applications across various industries. From manufacturing and processing plants to mining and construction equipment, this coupling can be integrated into different systems with ease. Its adaptability ensures that you can rely on the PTC tyre coupling for consistent performance.

/ Design Features

Phosphate coated for reduced corrosion resistance

Durable tyre resists wear and tear for low maintenance

Designed to accommodate angular and parallel misalignment

Tyre design absorbs shock and vibrations, protecting connected machinery

/ Selection & Service Factor

Selection	
EXAMPLE A tyre coupling is required to transmit 30 kW from an electric motor running at 1440 r/min to a centrifugal pump for 16 hours per day. The diameter of the motor shaft is 30mm. The diameter of the pump shaft is 25mm.	
a) Service Factor Determine appropriate Service Factors from table below.	**a) Service Factor** The appropriate service factor is 1.
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 30 x 1 = 30 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 1440 rev/min in the speed column of Power Ratings table below, 37.70kW is the first power to exceed the required 30kW (design power). The size of the coupling at the head of this column is 70.
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 moment	TK = 9550x P/n (Nm)
Coupling moment	TK N ≥Tk x K (Nm) P = effect per kW n = r/m

Service Factor (K)

SPECIAL CASES
For applications where substantial shock, vibration and torque fluctuations occur, and for reciprocating machines (e.g. internal combustion engines, piston pumps and compressors).

CLASS 1
Agitators, brewing machinery, centrifugal compressors and pumps, belts conveyors, dunamometers, lineshafts, fans up to 7.5kW, blowers and exhausters (except positive displacement), generators.

CLASS 2
Clay working machinery, general machine tools, papermill beaters and winders, rotary pumps, rubber extruders, rotary screens, textile machinery, marine propellers and fans over 7.5kW.

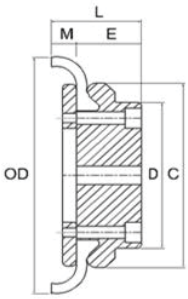
CLASS 3
Bucket elevators, cooling tower fans, piston compressors and pumps, foundry machinery, metal presses, paper mill calenders, hammermills, press and pulp grinders, rubber calendars, pulverisers and positive displacement blowers.

CLASS 4
Reciprocating conveyors, gyratory crushers, mills (ball, pebble and rod), rubber machinery (banbury mixers and mills) and vibratory screens.

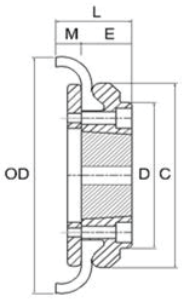
Class	Type of driving unit					
	Electric motors steam turbines			Internal combustion engines Steam engines Water turbines		
Hours per day duty	≤ 10	> 10 ≤ 16	>16	≤ 10	> 10 ≤ 16	>16
Class 1	0.8	0.9	1.0	1.3	1.4	1.5
Class 2	1.3	1.4	1.5	1.8	1.9	2.0
Class 3	1.8	1.9	2.0	2.3	2.4	2.5
Class 4	2.3	2.4	2.5	2.8	2.9	3.0

/ Power Rating

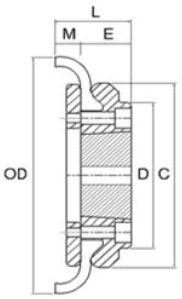
SIZES:F40-F60



Pilot Bore
(B)

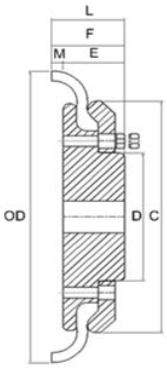


Taper Flange
(F)

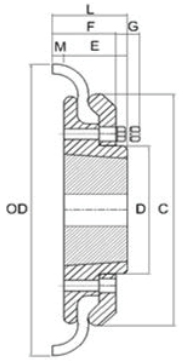


Taper Flange
(H)

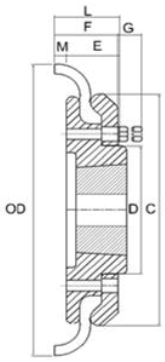
SIZES:F70-F250



Pilot Bore
(B)



Taper Flange
(F)



Taper Flange
(H)

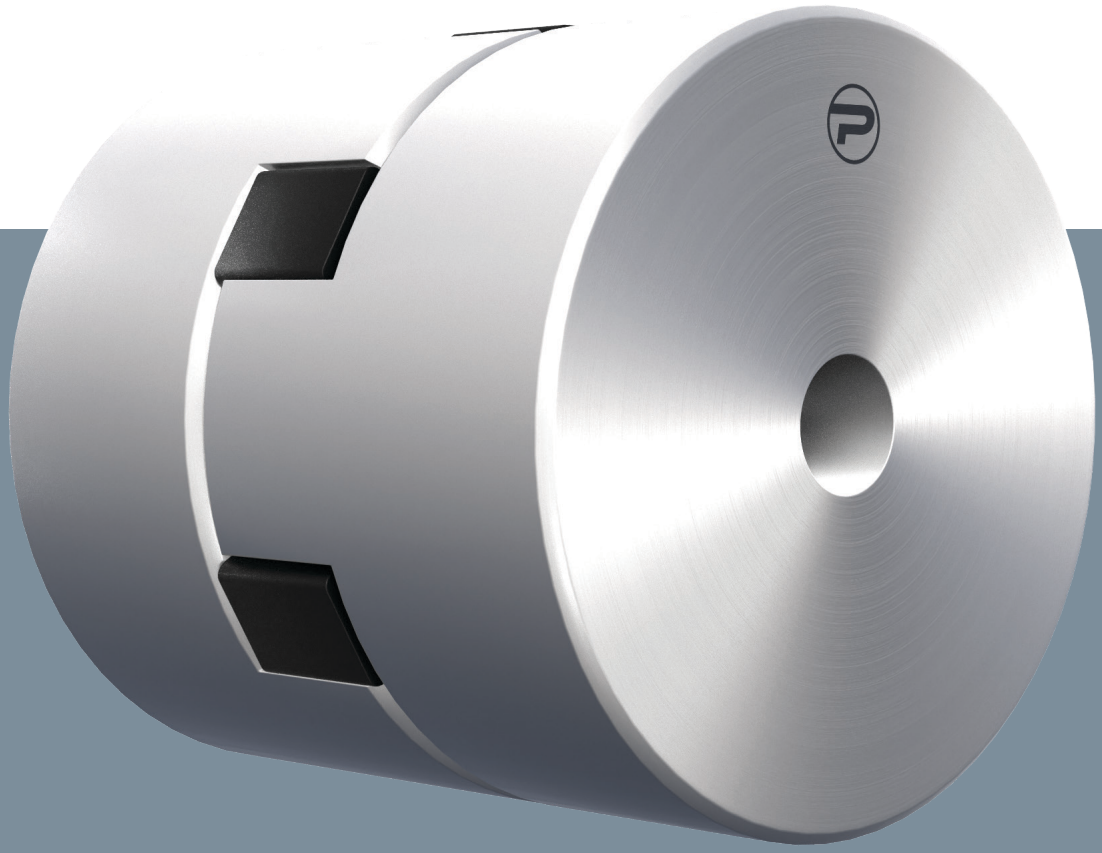
Power Ratings															
Speed	Coupling size														
	40	50	60	70	80	90	100	110	120	140	160	180	200	220	250
r/min	kW														
50	0.13	0.35	0.66	1.31	1.96	2.62	3.53	4.58	6.96	12.17	19.74	32.83	48.82	60.73	76.83
100	0.25	0.69	1.33	2.62	3.93	5.24	7.07	9.16	13.93	24.35	39.48	65.65	97.64	121.47	153.66
200	0.50	1.38	2.66	5.24	7.85	10.47	14.14	18.32	27.85	48.69	78.95	131.31	195.29	242.93	307.33
300	0.75	2.07	3.99	7.85	11.78	15.71	21.20	27.49	41.78	73.04	118.43	196.96	292.93	364.40	460.99
400	1.01	2.76	5.32	10.47	15.71	20.94	28.27	36.65	55.71	97.38	157.91	262.62	390.58	485.86	614.66
500	1.26	3.46	6.65	13.09	19.63	26.18	35.34	45.81	69.63	121.73	197.38	328.27	488.22	607.33	768.32
600	1.51	4.15	7.98	15.71	23.56	31.41	42.41	54.97	83.56	146.07	236.86	393.93	585.86	728.80	921.99
700	1.76	4.84	9.31	18.32	27.49	36.65	49.48	64.14	97.49	170.42	276.34	459.58	683.51	850.26	1075.65
720	1.81	4.98	9.57	18.85	28.27	37.70	50.89	65.97	100.27	175.29	284.23	472.71	703.04	874.55	1106.39
800	2.01	5.53	10.64	20.94	31.41	41.88	56.54	73.30	111.1	194.76	315.81	525.24	781.15	971.73	1229.32
900	2.26	6.22	11.97	23.56	35.34	47.12	63.61	82.46	125.34	219.11	355.29	590.89	878.80	1093.19	1382.98
960	2.41	6.63	12.77	25.13	37.70	50.26	67.85	87.96	133.70	233.72	378.97	630.28	937.38	1166.07	1475.18
1000	2.51	6.91	13.30	26.18	39.27	52.36	70.68	91.62	139.27	243.46	394.76	656.54	976.44	1214.66	1536.65
1200	3.02	8.29	15.96	31.41	47.12	62.83	84.82	109.95	167.12	292.15	473.72	787.85	1171.73	-	-
1400	3.52	9.68	18.62	36.65	54.97	73.30	98.95	128.27	194.97	340.84	552.67	919.16	-	-	-
1440	3.62	9.95	19.15	37.70	56.54	75.39	101.78	131.94	200.54	350.58	568.46	945.42	-	-	-
1600	4.02	11.06	21.28	41.88	62.83	83.77	113.09	146.60	222.83	389.53	631.62	-	-	-	-
1800	4.52	12.44	23.94	47.12	70.68	94.24	127.23	164.92	250.68	438.22	-	-	-	-	-
2000	5.03	13.82	26.60	52.36	78.53	104.71	141.36	183.25	278.53	-	-	-	-	-	-
2200	5.53	15.20	29.26	57.59	86.39	115.18	155.50	201.57	-	-	-	-	-	-	-
2400	6.03	16.59	31.92	62.83	94.24	125.65	169.63	-	-	-	-	-	-	-	-
2600	6.53	17.97	34.58	68.06	102.09	136.13	183.77	-	-	-	-	-	-	-	-
2800	7.04	19.35	37.24	73.30	109.95	146.60	-	-	-	-	-	-	-	-	-
2880	7.24	19.90	38.30	75.39	113.09	150.79	-	-	-	-	-	-	-	-	-
3000	7.54	20.73	39.90	78.53	117.80	157.07	-	-	-	-	-	-	-	-	-
3600	9.05	24.88	47.87	94.24	-	-	-	-	-	-	-	-	-	-	-
Nominal torque Nm	24	66	127	250	375	500	675	875	1330	2325	3770	6270	9325	1160	14675
Max. torque Nm	64	160	318	487	759	1096	1517	2137	3547	5642	9339	16455	23508	33125	42740

/ Dimensions

Size	Type	Min Bore (mm)	Max bore (mm)	Type B		Type F&H		Dimensions						Inertia (kg/m2)	Materi-als	Approx weight
				L	E	L	E	OD	C	D	F	G	M			
40	B	-	32	33	22	-	-	104	82	-	-	-	11	0.00074	Steel	0.8
40	F	9	25	-	-	33	22	104	82	-	-	-	11	0.00074	Steel	0.8
40	H	9	25	-	-	33	22	104	82	-	-	-	11	0.00074	Steel	0.8
50	B	-	38	45	32	-	-	133	100	79	-	-	12.5	0.00115	Steel	1.2
50	F	11	32	-	-	38	25	133	100	79	-	-	12.5	0.00115	Steel	1.2
50	H	11	32	-	-	38	25	133	100	79	-	-	12.5	0.00115	Steel	1.2
60	B	-	45	55	38	-	-	165	125	70	-	-	16.5	0.0052	Steel	2
60	F	14	42	-	-	42	25	165	125	103	-	-	16.5	0.0052	Steel	2
60	H	14	42	-	-	42	25	165	125	103	-	-	16.5	0.0052	Steel	2
70	B	-	50	47	35	-	-	187	144	80	50	13	11.5	0.009	Steel	3.1
70	F	14	50	-	-	44	32	187	144	80	50	13	11.5	0.009	Steel	3.1
70	H	14	42	-	-	42	30.5	187	144	80	50	13	11.5	0.009	Steel	3
80	B	-	60	55	42	-	-	211	167	98	54	16	12.5	0.018	Steel	4.9
80	F	16	60	-	-	58	45	211	167	97	54	16	12.5	0.018	Steel	4.9
80	H	14	50	-	-	45	32	211	167	98	54	16	12.5	0.017	Steel	4.6
90	B	-	70	64	49	-	-	235	188	112	60	16	13.5	0.032	Steel	7.1
90	F	16	60	-	-	59.5	45	235	188	108	60	16	13.5	0.031	Steel	7
90	H	16	60	-	-	59.5	45	235	188	108	60	16	13.5	0.031	Steel	7
100	B	-	80	71	56	-	-	254	216	125	62	16	13.5	0.055	Steel	9.9
100	F	25	75	-	-	65.5	51	254	216	120	62	16	13.5	0.055	Steel	9.9
100	H	16	60	-	-	59.5	45	254	216	113	62	16	13.5	0.054	Steel	9.4
110	B	-	90	76	63	-	-	279	233	128	62	16	12.5	0.081	Steel	12.5
110	F	25	75	-	-	63.5	51	279	233	134	62	16	12.5	0.078	Steel	11.7
110	H	25	75	-	-	63.5	51	279	233	134	62	16	12.5	0.078	Steel	11.7
120	B	-	100	85	70	-	-	314	264	143	67	16	14.5	0.137	Steel	16.9
120	F	35	100	-	-	79.5	65	314	264	140	67	16	14.5	0.137	Steel	16.5
120	H	25	75	-	-	65.5	51	314	264	140	67	16	14.5	0.13	Steel	15.9
140	B	-	130	111	94	-	-	359	311	178	73	17	16	0.254	Steel	22.2
140	F	35	100	-	-	81.5	65	359	311	178	73	17	16	0.255	Steel	22.3
140	H	35	100	-	-	81.5	65	359	311	178	73	17	16	0.255	Steel	22.3
160	B	40	140	117	102	-	-	402	345	187	78	19	15	0.469	Steel	35.8
160	F	-	115	-	-	92	76	402	345	197	78	19	15	0.38	Steel	32.5
160	H	-	115	-	-	92	76	402	345	197	78	19	15	0.38	Steel	32.5
180	B	-	150	137	114	-	-	470	398	200	94	19	23	0.871	Steel	49.1
180	F	-	125	-	-	112	89	470	398	205	94	19	23	0.847	Steel	42.2
180	H	-	125	-	-	112	89	470	398	205	94	19	23	0.847	Steel	42.2
200	B	-	150	138	114	-	-	508	429	200	103	19	24	1.301	Cast Iron	58.2
200	F	-	125	-	-	113	89	508	429	205	103	19	24	1.281	Cast Iron	53.6
200	H	-	125	-	-	113	89	508	429	205	103	19	24	1.281	Cast Iron	53.6
220	B	-	160	155	127	-	-	562	474	218	118	20	27.5	2.142	Cast Iron	79.6
220	F	-	125	-	-	130	102	562	474	223	118	20	27.5	2.104	Cast Iron	72
220	H	-	125	-	-	130	102	562	474	223	118	20	27.5	2.104	Cast Iron	72
250	B	-	190	162	132	-	-	628	532	254	125	25	29.5	3.505	Cast Iron	104
250	F	-	125	-	-	132	102	628	448	254	132	25	29.5	3.468	Cast Iron	92
250	H	-	125	-	-	132	102	628	448	254	132	25	29.5	3.468	Cast Iron	92

/ Straight Jaw Couplings

Reliable, cost-effective couplings for smooth power transmission and shock absorption in general industrial applications.



Protorque Straight Jaw Couplings (PSJC) are engineered for dependable power transmission in general industrial applications, offering excellent shock absorption, vibration damping, and misalignment tolerance.

Renowned for their availability to cushion moderate shock loads, minimise vibrations, and handle mild shaft misalignments. Straight Jaw Couplings ensure stable and efficient mechanical performance. Their robust, wear-resistant design eliminates the need for lubrication, delivering consistent operation with minimal upkeep.

Available with flexible nitrile elastomer elements for torque and space optimisation, these couplings provide quick, simple installation and long service life, making them a cost-effective solution for a wide range of power transmission needs.

STRAIGHT JAW COUPLING

Reliable and economical coupling solution for general power transmission with quick installation and minimal maintenance.

Coupling Size	Torque Range (Nm)	Max Bore (mm)
PSJC 070	5.70	19
PSJC 075	11.90	24
PSJC 090	19.20	24
PSJC 095	25.80	28
PSJC 100	55.40	35
PSJC 110	105.00	42
PSJC 150	150.00	48
PSJC 190	200.00	55
PSJC 225	280.00	60

BENEFITS AT A GLANCE

ABSORB IMPACTS & VIBRATIONS

Flexible nitrile elastomer insert dampens shock loads and absorbs operational vibrations.

REDUCED MAINTENANCE

Fail-safe, wear-resistant design needs no lubrication; components can fail without hub damage.

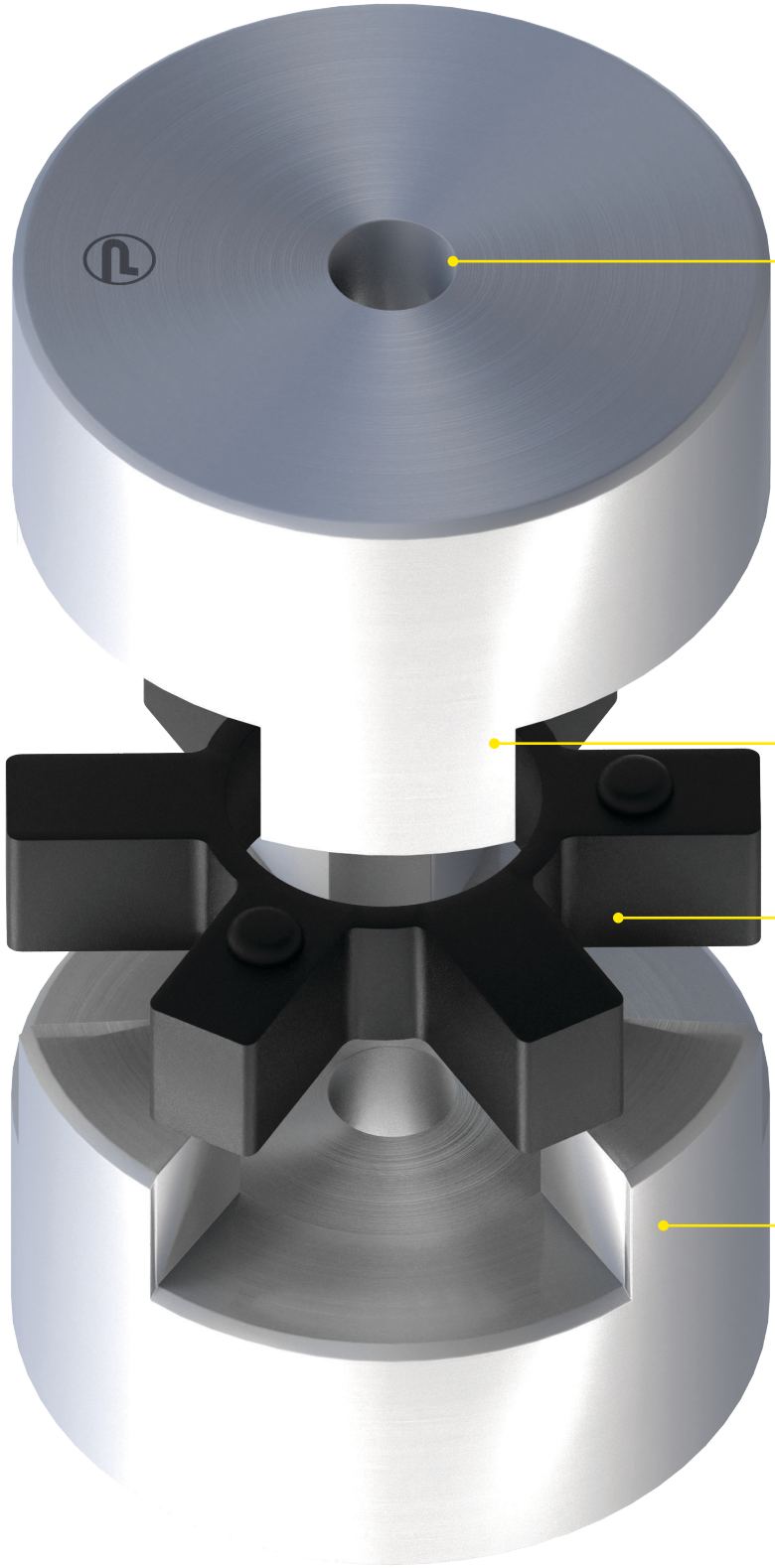
TORSIONAL RESILIENCE

Handles dynamic loads and mild misalignments, protecting connected equipment.

ELEMENT DESIGN

Nitrile wrap elements are available which allow quick replacement without dismantling surrounding machinery.

/ Design Features



Available in finished bore and pilot bore variations

Fail-safe design due to interlocking jaw design

Durable nitrile insert for flexible shock absorption

Precision-machined outer surfaces allow quick, accurate alignment with straight edge

/ Selection

Selection	
EXAMPLE A jaw coupling is required to transmit 7.5 kW from an electric motor running at 800 r/min to a rotary pump for 16 hours per day. The motor shaft is 28mm diameter and the pump shaft diameter is 30mm.	
a) Service Factor Determine appropriate Service Factors from table below.	**a) Service Factor** The appropriate service factor is 1.25.
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 7.5 x 1.25 = 9.38 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 750 r/min in the speed column of Power Ratings table below, 12.6 kW is the first power to exceed the required 9.0kW. In this case, the appropriate element can be used with coupling size is 150.
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 moment	TK = 9550x P/n (Nm)
Coupling moment	TK N ≥Tk x K (Nm) P = effect per kW n = r/m

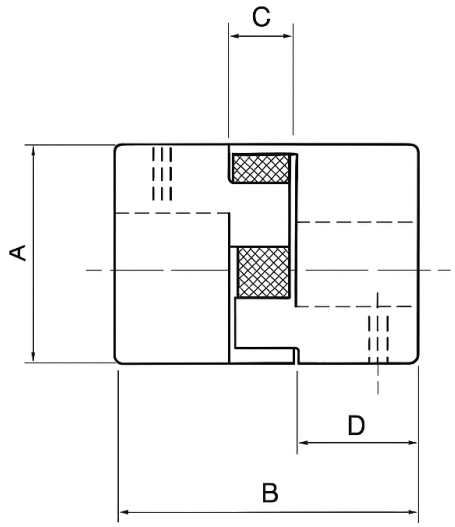
Service Factors (K)

Shock type	Application type	Electric motors with standard torque
	≤ 8 hrs/day	
UNIFORM	Blowers (centrifugal), car pullers, conveyors (apron, assembly belt, chain), elevator (bucket), fan, pumps (centrifugal), crushers (roll), oil wheel pumps (beam type), washing machinery (domestic), hand elevator, line shaft, steel mill drives (slab table)	1.0
MODERATE	Car dumpers, conveyors (belt and screw), mixers (continuous), screens (rotary), compressors (rotary, lobe or vane), crushers (jaw), pumps (rotary gear), pulpers (beater & hog), tumbling barrel, tire shredder, fans (induced draft), paper mill equipment (rewinder, supercalendar, winder), agitators (vertical)	1.25
	Agitators (horizontal), clarifier or mixer, compressors (1 cyl, single acting), conveyors (screw), crushers (stone), dryers (drum, rotary), elevator (bucket with brake), laundry washers or tumbler, mixers (cooked cereals, general), pulverizer, pumps (gear), shakers (general), winches (mine haulage), wire drawing or flattening, windlasses, woodworking machinery, wind turbines	1.5
	Pulpers (paper mill)	1.6
	Compressors (2 cyl, single acting), conveyors (flight, screw - heavily loaded), crushers (jaw, loaded), elevator (skip hoist), hoist (platform), machine tools (shapers, planers, punch press), mixers (batch medium), pumps (plunger uniform load), tire shredder, tumbling barrel	1.75
HEAVY	Agitators (large with high viscosity fluids), compressors (2 cyl, double acting), crushers (hammer), laundry washer (heavy), mixers (heavy batch), pumps (plunger, non-uniform load), screens (vibrating), shakers (heavy), steel mill drives (coilers), pulpers (pulp mill), wind turbines (reversing)	2.0
	Compressors (3 or more cylinders), crushers (metal), mixers (heavy duty with sand or gravel), reciprocating saws, screens (vibratory), winches (reversing), welding sets	2.5
	Compressors (4 or more cylinders, double acting), crushers (reciprocating), rubber machinery (mills), metal mills (reversing), winders/unwinders (reversing)	3.0
	Crushers (reciprocating, heavily loaded), rubber machinery (banbury mixer), steel mill drives (reversing cold mill), winders/unwinders (high torque)	3.5

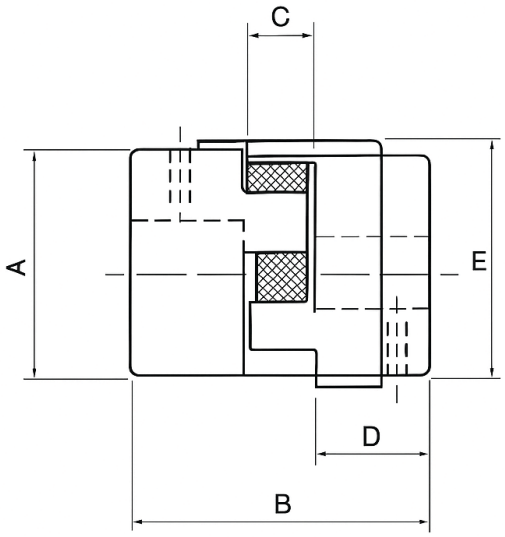
Power Ratings

Speed	Coupling size									
	50	**70**	**75**	**90**	**95**	**100**	**110**	**150**	**190**	**225**
r/min	**kW**									
50	0.018	0.030	0.06	0.10	0.14	0.3	0.5	0.8	1.1	1.5
100	0.037	0.060	0.12	0.20	0.27	0.6	1.1	1.6	2.1	2.9
200	0.074	0.121	0.25	0.40	0.54	1.2	2.2	3.1	4.2	5.9
300	0.110	0.181	0.37	0.60	0.81	1.7	3.3	4.7	6.3	8.8
400	0.147	0.242	0.50	0.80	1.08	2.3	4.4	6.3	8.4	11.7
500	0.184	0.302	0.62	1.01	1.35	2.9	5.5	7.9	10.5	14.7
600	0.221	0.363	0.75	1.21	1.62	3.5	6.6	9.4	12.6	17.6
700	0.257	0.423	0.87	1.41	1.89	4.1	7.7	11.0	14.7	20.5
720	0.265	0.435	0.90	1.45	1.95	4.2	7.9	11.3	15.1	21.1
800	0.294	0.483	1.00	1.61	2.16	4.6	8.8	12.6	16.8	23.5
900	0.331	0.544	1.12	1.81	2.43	5.2	9.9	14.1	18.8	26.4
960	0.353	0.580	1.20	1.93	2.59	5.6	10.6	15.1	20.1	28.1
1000	0.368	0.604	1.25	2.01	2.70	5.8	11.0	15.7	20.9	29.3
1200	0.441	0.725	1.50	2.41	3.24	7.0	13.2	18.8	25.1	35.2
1400	0.515	0.846	1.74	2.81	3.78	8.1	15.4	22.0	29.3	41.1
1440	0.529	0.870	1.79	2.90	3.89	8.4	15.8	22.6	30.2	42.2
1600	0.588	0.967	1.99	3.22	4.32	9.3	17.6	25.1	33.5	46.9
1800	0.662	1.088	2.24	3.62	4.86	10.4	19.8	28.3	37.7	52.8
2000	0.735	1.208	2.49	4.02	5.40	11.6	22.0	31.4	41.9	58.6
2200	0.809	1.329	2.74	4.42	5.94	12.8	24.2	34.6	46.1	64.5
2400	0.882	1.450	2.99	4.83	6.48	13.9	26.4	37.7	50.3	70.4
2600	0.956	1.571	3.24	5.23	7.02	15.1	28.6	40.8	54.5	76.2
2800	1.029	1.692	3.49	5.63	7.56	16.2	30.8	44.0	58.6	82.1
2880	1.059	1.740	3.59	5.79	7.78	16.7	31.7	45.2	60.3	84.4
3000	1.103	1.813	3.74	6.03	8.10	17.4	33.0	47.1	62.8	88.0
3600	1.323	2.175	4.49	7.24	9.73	20.9	39.6	56.5	75.4	105.5
Nominal torque Nm	3.51	5.77	11.9	19.2	25.8	55.4	105	150	200	280

/ Dimensions



TYPE1



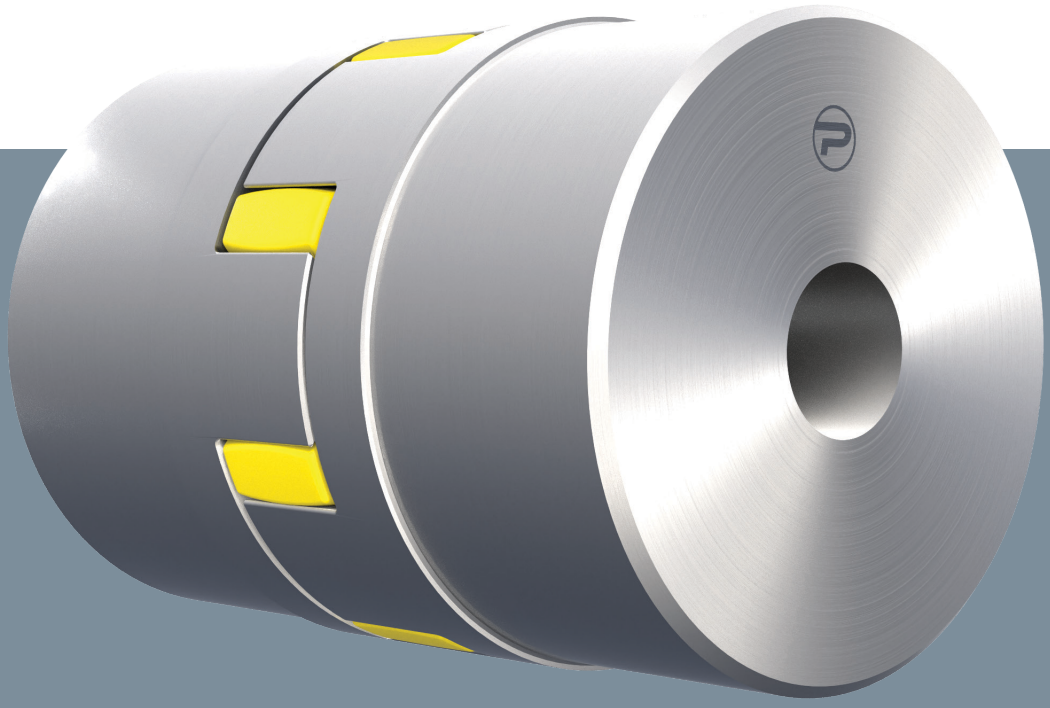
TYPE2

Coupling	Type	Coupling Hubs						
		Dimension (mm)				Stock Bore (mm)	Max Bore (mm)	Weight (kg)
		A	B	C	D			
070	1	34.53	50.801	12.70	19.05	6.35	19.05	0.27
075	1	44.45	53.98	12.70	20.64	6.35	22.23	0.45
090	1	53.58	53.98	12.70	20.64	6.35	25.40	0.67
095	1	53.58	63.50	12.70	25.40	11.11	28.58	0.79
100	1	64.29	88.90	19.05	34.93	11.11	34.93	1.55
110	1	84.14	107.95	22.23	42.86	15.88	41.28	2.93
150	1	95.25	114.30	25.40	44.45	15.88	47.63	4.06
190	2	101.60	123.83	25.40	49.21	19.05	53.98	4.01
225	2	107.95	136.53	25.40	55.56	19.05	60.33	5.57

Performance		
Coupling	Max RPM	Torque (Nm)
070	14000	5.77
075	11000	11.90
090	9000	19.20
095	9000	25.80
100	7000	55.40
110	5000	105.00
150	5000	150.00
190	5000	200.00
225	4200	280.00

/ Curve Jaw Coupling

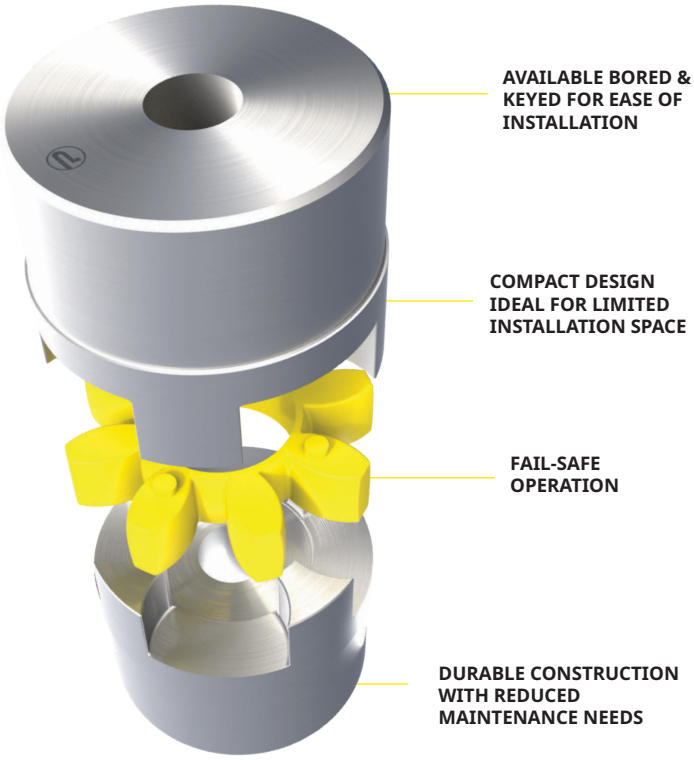
Compact, torsionally flexible coupling engineered for high torque transmission and effective vibration damping.



Protorque Curve Jaw Couplings (PCJC) are engineered for high torque transmission, space-saving installation, and reliable performance across a wide range of industrial applications.

A torsionally flexible elastomer element enables Curve Jaw couplings to transmit high torque efficiently, while absorbing shock and vibration. Designed for general-purpose use, they accommodate radial, axial, and angular misalignment for smooth, trouble-free operation.

Their compact, lightweight design with low inertia ensures robust performance in demanding conditions, while durable construction and fail-safe operation deliver long service life with minimal maintenance.



BENEFITS AT A GLANCE

MISALIGNMENT TOLERANCE

Accommodates radial, axial, and angular misalignments for enhanced operational flexibility.

LONG SERVICE LIFE

Durable construction and precision machining provide extended service life.

WIDE TEMPERATURE RANGE

Performs reliably in environments from -40°C to +140°C

POLYURETHANE MATERIAL OPTIONS

Available in 92 A, 98 A, and 64 D shore hardness to suit specific application needs.

/ Selection & Service Factor

Selection	
EXAMPLE A curve jaw coupling is required to transmit 5.5 kW from an electric motor running at 5,600 r/min to heavy-duty mixer. The motor shaft is 28 mm diameter and the pump shaft is 30 mm.	
a) Service Factor Determine appropriate Service Factors from table below.	**a) Service Factor** The appropriate service factor is 1.3.
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 5.5 x 1.3 = 7.15kW
c) Torque Rating Using the design power rating, multiply by 9550 and divide by the required r/min to find the required coupling torque.	**c) Torque Rating** Convert design power to required torque (9550 x 7.15) ÷ 5600 = 12.19 Nm
d) 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** The coupling has a nominal torque rating of ≥ 12.19 Nm for the chosen size/element, checking the bore diameter and reading across from 5,600 the first size that accommodates both bore size and the design power is 2/4/32 with a 92/94 Shore A element.

Service torque	TK = 9550x P/n (Nm)
Coupling torque	TK N ≥Tk x K (Nm) P = effect per kW n = r/m

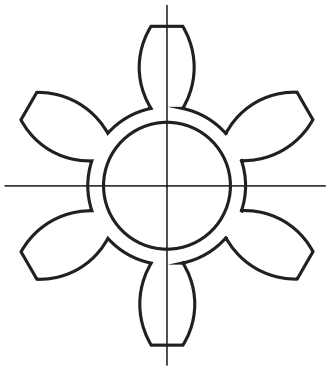
Service Factor (K)	
Application type	**Electric motors with standard torque**
Uniform operation with small masses to be accelerated. Hydraulic and centrifugal pumps, light generators, blowers,fans, ventilators, belt/screw conveyors.	1.0
Uniform operation with medium masses to be accelerated. Sheet metal bending machines, wood working machines, mills, textile machines, mixers.	1.2
Irregular operation, with medium masses to be accelerated. Rotating ovens, printing presses, generators, shredders, winders, spinning machines, pumps for viscous fluids.	1.3
Irregular operation and shocks, with medium masses to be accelerated concrete mixers, drop hammers, cable cars, paper mills, compression pumps, propeller pumps, rope winders, centrifuges.	1.4
Irregular operation and very heavy shocks, with large masses to be accelerated. Excavators, hammer mills, piston pumps, presses, rotary boring machines, shears, forge presses, stone crushers.	1.6
Irregular operation and very heavy shocks, with very large masses to be accelerated. Piston type compressors and pumps without speed variations, heavy roll sets, welding machines, brick presses, stone crushers.	1.8

/ Power Rating

Power Ratings										
Speed	Coupling size									
	19/24	24/32	28/38	38/45	42/55	48/60	55/70	65/75	75/90	90/100
r/min	kW									
92/94 Shore A (Yellow)										
14,000	15	-	-	-	-	-	-	-	-	-
10,600	11	39	-	-	-	-	-	-	-	-
8,500	9	31	85	-	-	-	-	-	-	-
7,100	7	26	71	141	-	-	-	-	-	-
6,000	6	22	60	119	167	-	-	-	-	-
5,600	6	21	56	111	155	182	-	-	-	-
4,750	5	17	47	95	132	154	204	-	-	-
4,250	4	16	52	85	118	138	182	278	-	-
3,550	4	13	35	71	99	115	152	232	475	-
2,800	3	10	28	56	78	91	120	183	375	704
Nominal torque Nm	10	35	95	190	265	310	410	625	1279	2400
96/98 Shore A (Red)										
14,000	19	-	-	-	-	-	-	-	-	-
10,600	14	19	-	-	-	-	-	-	-	-
8,500	12	15	53	-	-	-	-	-	-	-
7,100	10	13	45	119	-	-	-	-	-	-
6,000	8	11	38	101	204	-	-	-	-	-
5,600	8	10	35	94	191	264	-	-	-	-
4,750	6	8	30	80	162	224	261	-	-	-
4,250	6	8	27	71	145	200	234	305	-	-
3,550	5	6	22	59	121	167	195	255	349	-
2,800	4	5	18	47	95	132	154	201	276	563
Nominal torque Nm	17	60	160	325	450	525	685	940	1920	3600
64 Shore D (Green)										
14,000	31	-	-	-	-	-	-	-	-	-
10,600	23	83	-	-	-	-	-	-	-	-
8,500	19	67	178	-	-	-	-	-	-	-
7,100	16	56	149	301	-	-	-	-	-	-
6,000	13	47	126	254	352	-	-	-	-	-
5,600	12	44	117	237	328	384	-	-	-	-
4,750	10	37	99	201	279	326	410	-	-	-
4,250	9	33	89	180	249	291	367	522	-	-
3,550	8	28	74	151	208	243	307	436	892	-
2,800	6	22	59	119	164	192	242	344	704	1319
Nominal torque Nm	21	75	200	405	560	655	825	1174	2400	4499

/ Dimensions

Size 19



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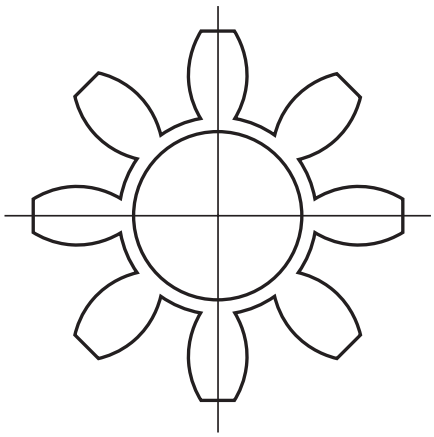

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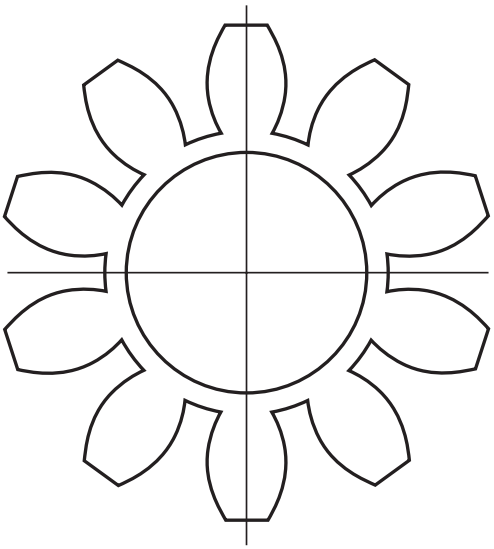

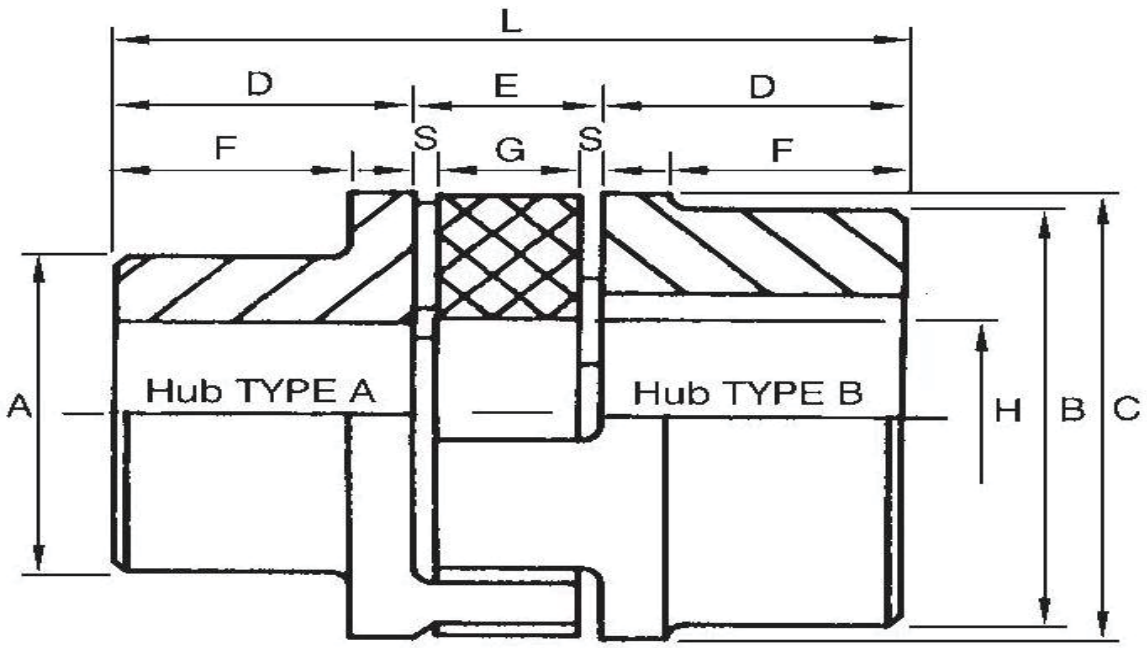

Size	Bore diameters (mm) HUB 'A'		Bore diameters (mm) HUB 'B'		Dimensions									Weight (kg)	Inertia (KG/ CM$^{2)}$
	Min	Max	Min	Max	A	B	C	D	E	F	G	H	L		
19/24	-	19	-	24	30	40	40	25	16	19	12	18	66	0.30	0.8
24/32	-	24	-	32	40	55	55	30	18	24	14	27	78	0.78	3
28/38	-	28	-	38	48	65	65	35	20	27.5	15	30	90	1.29	7
38/45	-	38	-	45	66	78	80	45	24	36.5	18	38	114	2.37	20
42/55	-	42	-	55	75	94	95	50	26	40	20	46	126	3.67	50
48/60	-	48	-	60	85	104	105	56	28	45	21	-	140	4.97	80
55/70	-	55	-	70	98	118	120	65	30	52	22	60	160	7.37	160
65/75	-	65	-	75	115	134	135	75	35	61	26	68	185	10.89	310
75/90	-	75	-	90	135	158	160	85	40	69	30	80	210	17.73	680
90/100	38	90	38	100	160	180	200	100	45	81	34	100	245	30.25	1590

Size	Hardness spider		Torque			Dynamic torsional rigidity					Max Speed	Max misalignment		
	Colour	Shore	Nom (Nm)	Max (Nm)	Reverse (Nm)	n (rpm)	1 Tn	0.75 Tn	0.5 Tn	0.25 Tn		Angular	Radial	Axial
19/24	Yellow	92 Sh A	10	20	2.7	19000	1280	1050	800	470	14000	1.2°	0.2°	1.2°
	Red	98 Sh A	17	34	4.4	19000	2920	2390	1810	1070	14000	1.2°	0.2°	1.2°
	Green	64 Sh D	21	42	5.5	19000	5350	4390	3320	1970	14000	1.2°	0.2°	1.2°
24/32	Yellow	92 Sh A	35	70	9	14000	4860	3960	3010	1790	10600	0.9°	0.2°	1.4°
	Red	98 Sh A	60	120	16	14000	9930	8140	6160	3650	10600	0.9°	0.2°	1.4°
	Green	64 Sh D	75	150	19.5	14000	15110	12390	9370	5550	10600	0.9°	0.2°	1.4°
28/38	Yellow	92 Sh A	95	190	25	11800	10900	8940	6760	4010	8500	0.9°	0.25°	1.5°
	Red	98 Sh A	160	320	42	11800	26770	21950	16600	9840	8500	0.9°	0.25°	1.5°
	Green	64 Sh D	200	400	52	11800	27520	22570	17060	10120	8500	0.9°	0.25°	1.5°
38/45	Yellow	92 Sh A	190	380	49	9500	21050	17260	13050	7740	7100	1.0°	0.28°	1.8°
	Red	98 Sh A	325	650	85	9500	48570	39830	30110	17850	7100	1.0°	0.28°	1.8°
	Green	64 Sh D	405	810	105	9500	70150	57520	43490	25780	7100	1.0°	0.28°	1.8°
42/55	Yellow	92 Sh A	265	530	69	8000	23740	19470	14720	8730	6000	1.0°	0.32°	2°
	Red	98 Sh A	450	900	117	8000	54500	44690	33790	20030	6000	1.0°	0.32°	2°
	Green	64 Sh D	560	1120	145	8000	79860	65490	49520	29350	6000	1.0°	0.32°	2°
48/60	Yellow	92 Sh A	310	620	81	7100	36700	30090	22750	13490	5600	1.1°	0.36°	2.1°
	Red	98 Sh A	525	1050	137	7100	65290	53540	40480	24000	5600	1.1°	0.36°	2.1°
	Green	64 Sh D	655	1310	170	7100	95510	78320	59220	35100	5600	1.1°	0.36°	2.1°
55/70	Yellow	92 Sh A	410	820	107	6300	50720	41590	31450	18640	4750	1.1°	0.38°	2.2°
	Red	98 Sh A	680	1250	178	6300	94970	77880	58880	34900	4750	1.1°	0.38°	2.2°
	Green	64 Sh D	825	1650	215	6300	107920	88500	66910	39660	4750	1.1°	0.38°	2.2°
65/75	Yellow	92 Sh A	625	1250	163	5600	97130	79650	60220	35700	4250	1.2°	0.42°	2.6°
	Red	98 Sh A	950	1900	215	5600	129510	106200	80300	47600	4250	1.2°	0.42°	2.6°
	Green	64 Sh D	1175	2350	305	5600	151090	123900	93680	55530	4250	1.2°	0.42°	2.6°
75/90	Yellow	92 Sh A	1280	2560	333	4750	113320	92920	70260	41650	3500	1.2°	0.48°	3°
	Red	98 Sh A	1950	3900	500	4750	197500	161950	122450	72580	3500	1.2°	0.48°	3°
	Green	64 Sh D	2410	4820	325	4750	248220	203540	153900	91220	3500	1.2°	0.48°	3°
90/100	Yellow	92 Sh A	2400	4800	624	3750	190090	155870	117860	69860	2800	1.2°	0.5°	3.4°
	Red	98 Sh A	3600	7200	936	3750	312200	256000	193560	114730	2800	1.2°	0.5°	3.4°
	Green	64 Sh D	4500	9000	1170	3750	674520	553110	418200	247890	2800	1.2°	0.5°	3.4°

/ AUTHORISED DISTRIBUTORS

Acorn Industrial Services Ltd

Unit A, Denby Way,
Hellaby Industrial Estate,
Rotherham, S66 8HR, UK.

T: +441709 789 999
E: enquiries@acorn-ind.co.uk
W: www.acorn-ind.co.uk

Arkov, SPOL. S R.O.

Secska 861, 538 21
Slatinany, Czechia.

T: +420 469 364 111
E: arkov@arkov.cz
W: www.arkov.cz

Bell

Ptujska cesta 13, Miklavž na
Dravskem polje, Slovenija.

T: +386 26296920
E: info@bell.si
W: www.bell.si

Industrial CZ, SPOL. S R.O.

K Hutím 1040/4, 198 00
Praha 9, Czechia.

T: +420 283 891 466
E: industrial@industrial.cz
W: www.industrial.cz

Jens S. Tranmissioner A/S

Hørskætten 7, DK-2630
Taastrup, Danmark.

T: +45 70 13 83 33
E: info@jens-s.dk
W: www.jens-s.dk

OY Jens S. AB

Martinkyläntie 52, 01720
Vantaa, Suomi.

T: +3589 867 6730
E: myynti@jens-s.fi
W: www.jens-s.fi

Jens S. Transmisjoner A/S

Enebakkveien 117, Oslo,
Norway 0680, Norge.

T: +47 23 06 04 00
E: post@jens-s.no
W: www.jens-s.no

Jens S. Transmissioner AB

Koppargatan 9,
Norrköping, Östergötland
602 23, Sverige.

T: +46 11 19 80 00
E: info@jens-s.se
W: www.jens-s.se

Spruit Transmissies BV

Ivoorstraat 4, 1812 RE
Alkmaar, PO Box 85, 1800
AB Alkmaar, Nederland.

T: +31 072 5412000
E: sales@spruit.nl
W: www.spruit.nl

Town & County Engineering Services

Wardentree Lane,
Pinchbeck, Spalding,
PE11 3UG, UK.

T: +441775 725 678
E: sales@tces.co.uk
W: www.tces.co.uk

Axel Johnson International

Protorque

Registered address:
Unit A, Denby Way,
Hellaby Industrial Estate,
Rotherham, S66 8HR, UK.

W: www.protorque.net