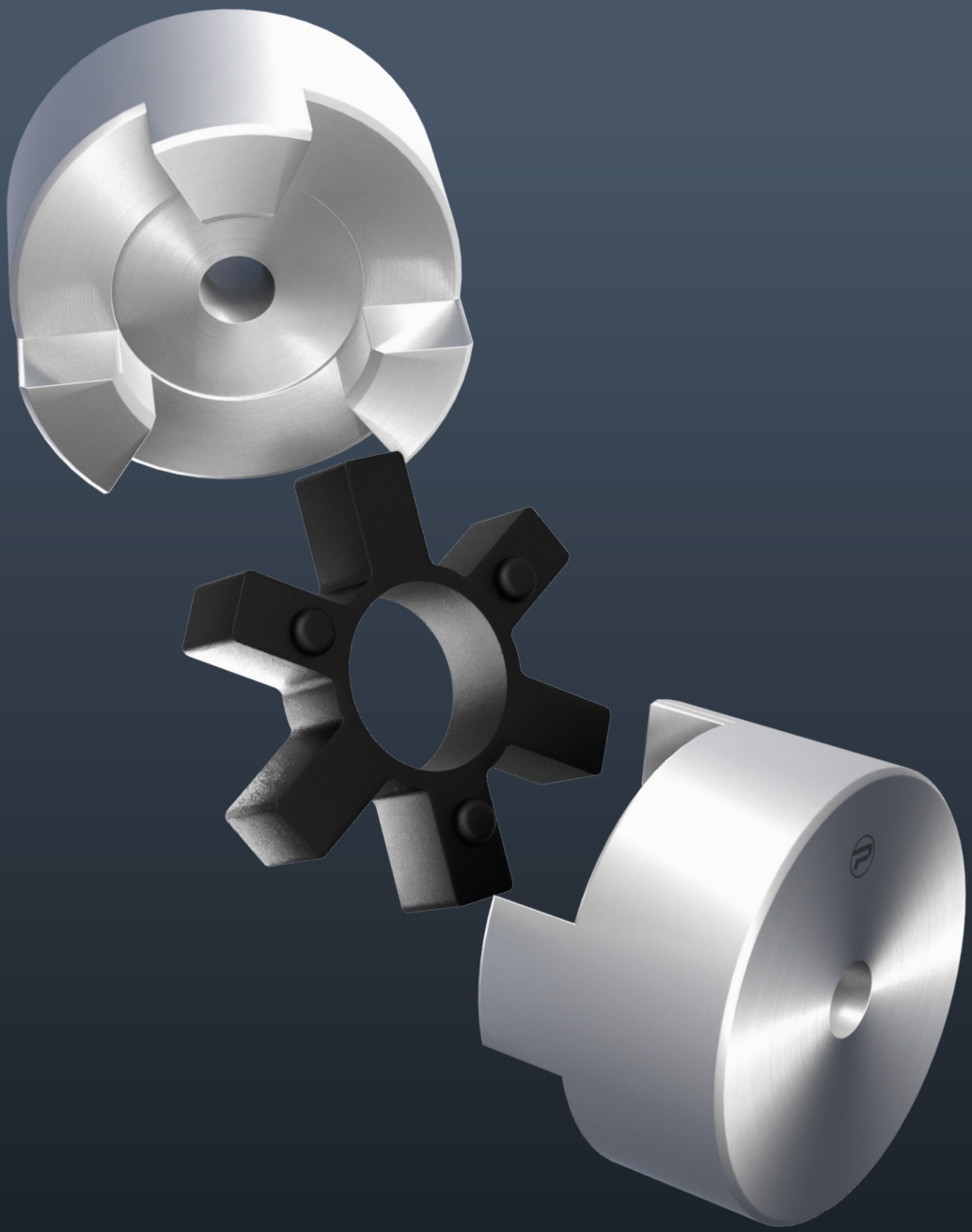
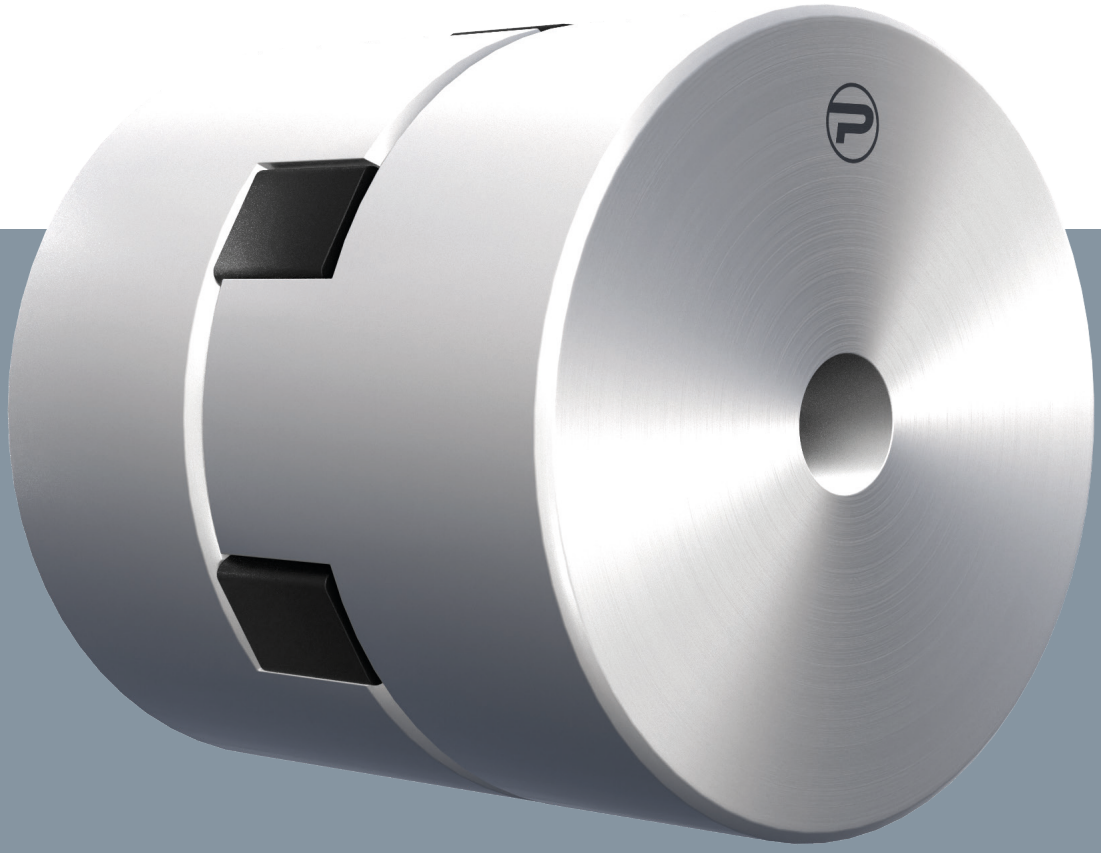
/ STRAIGHT JAW COUPLINGS



PROTORQUE®

/ 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.

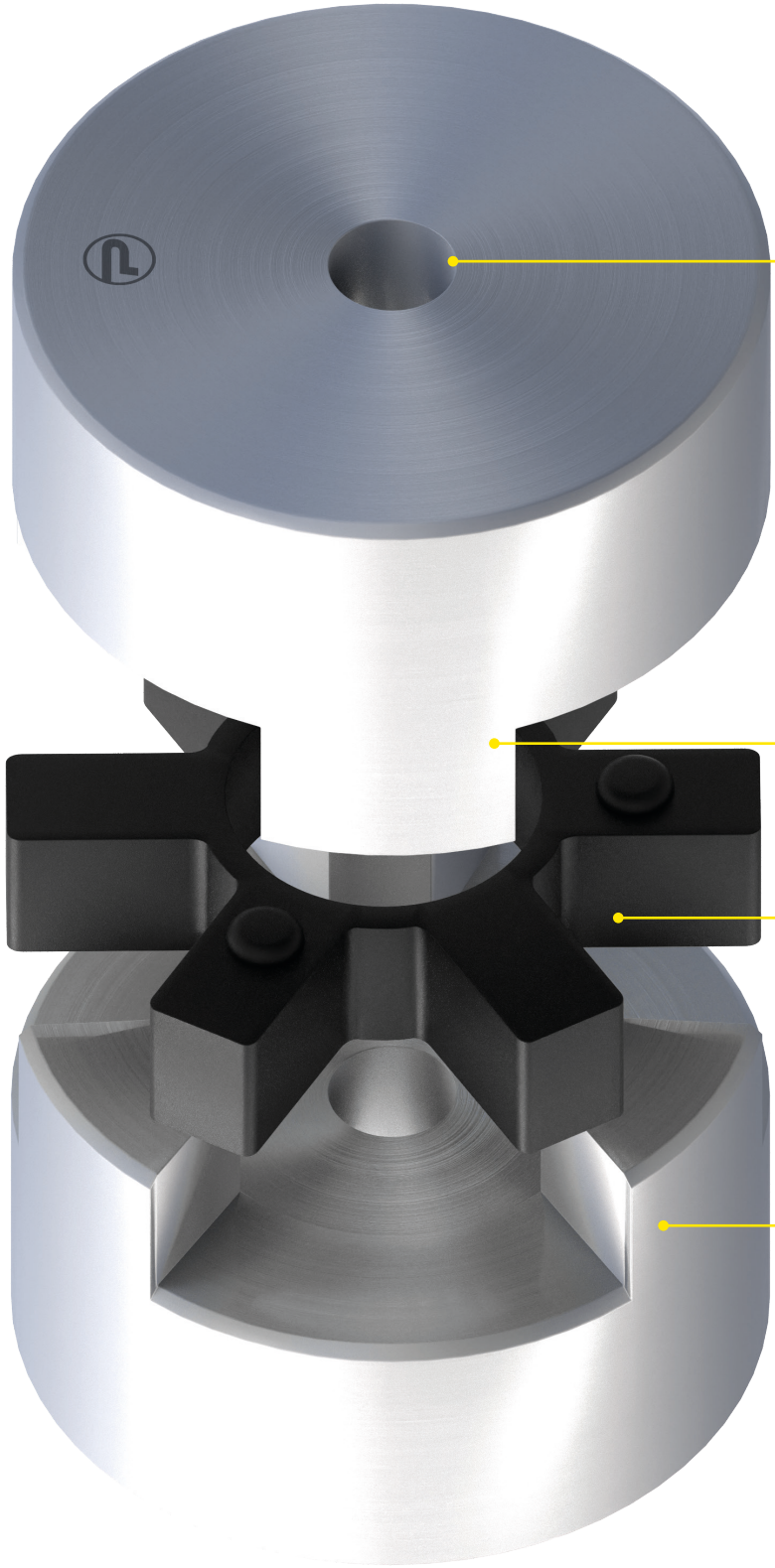
TORSIONAL RESILIENCE

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

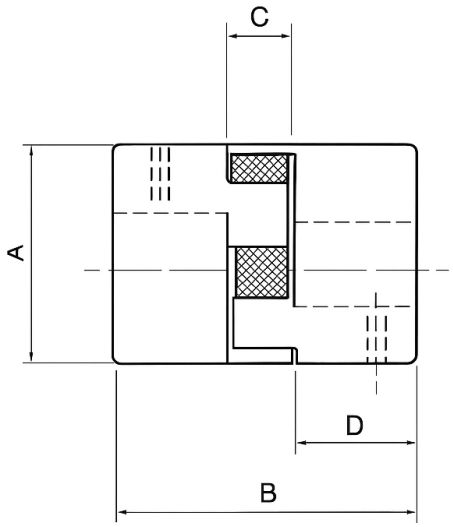
Service Factors (K)

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

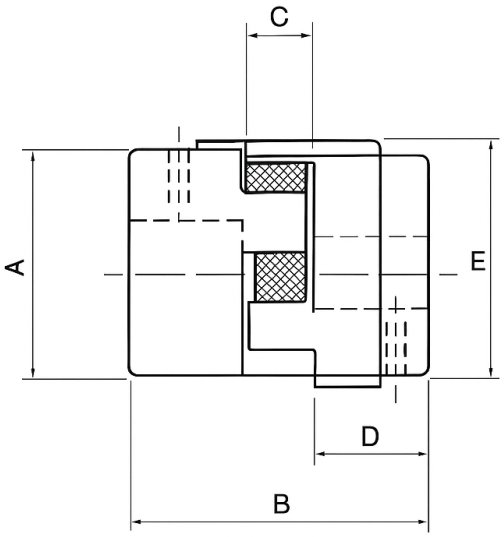
Power Ratings

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

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