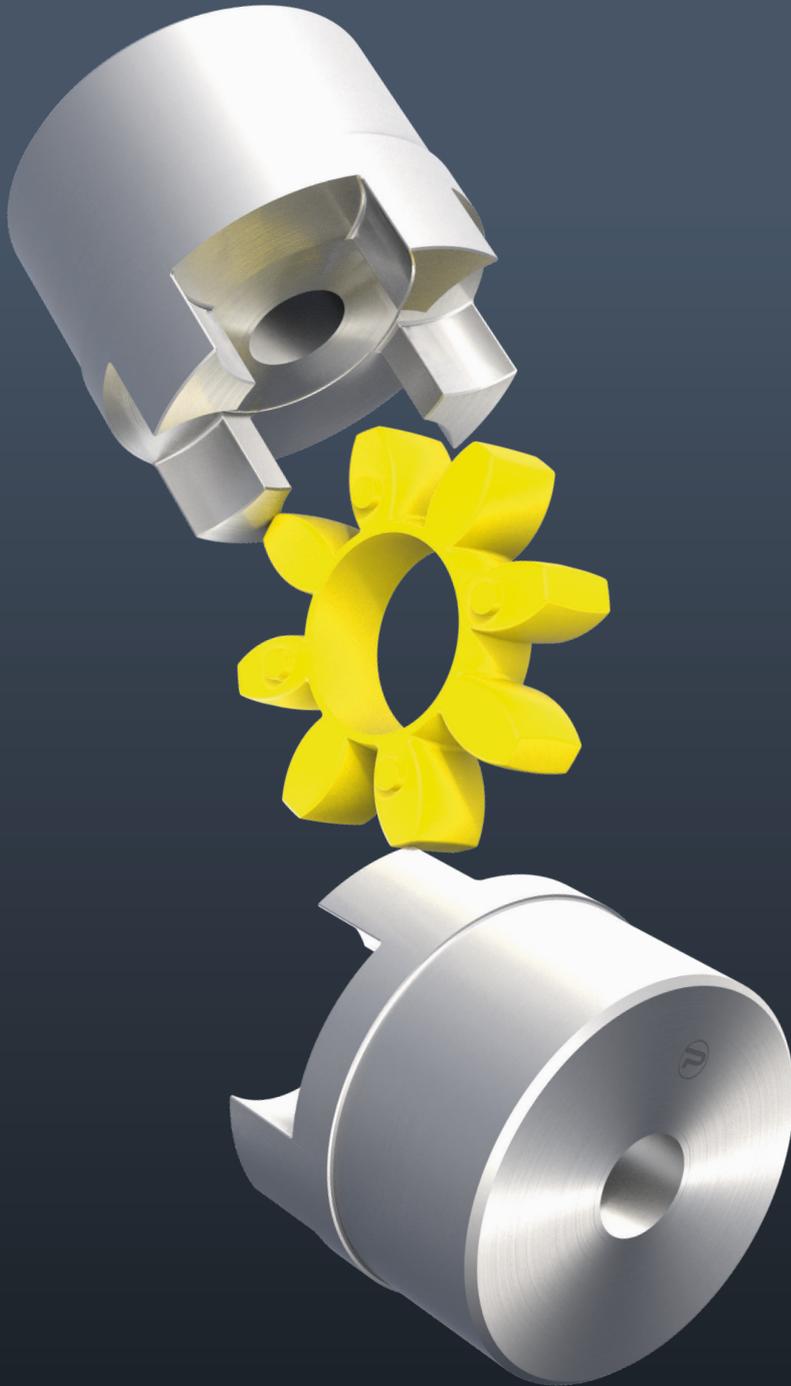


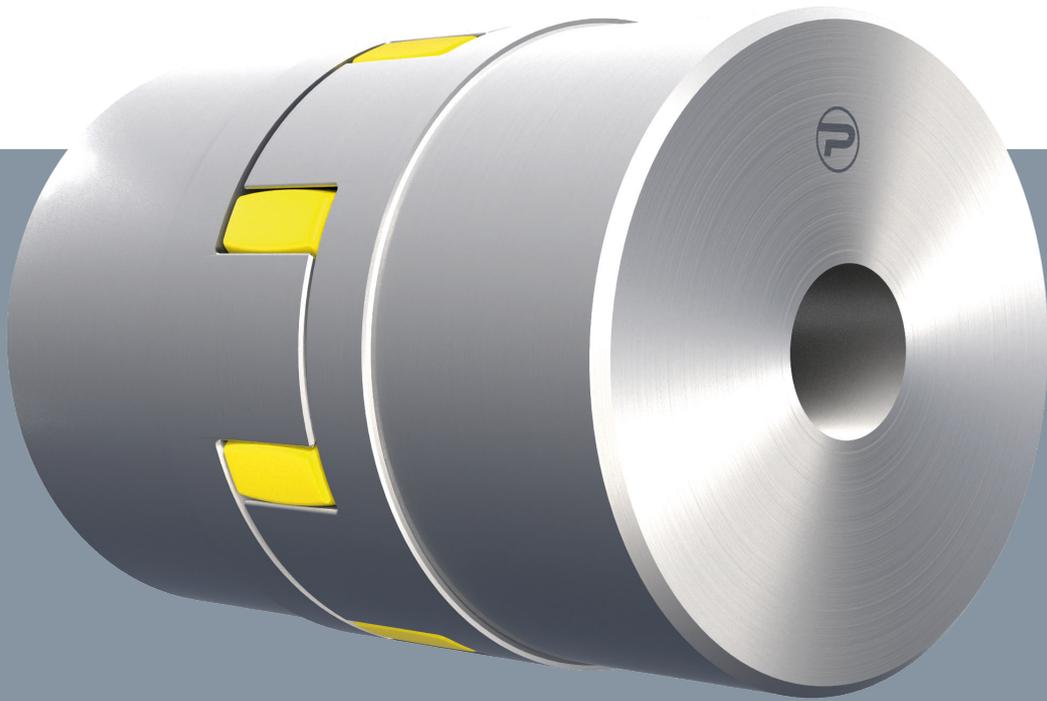
/ CURVE JAW COUPLINGS



PROTORQUE®

/ Curve Jaw Coupling

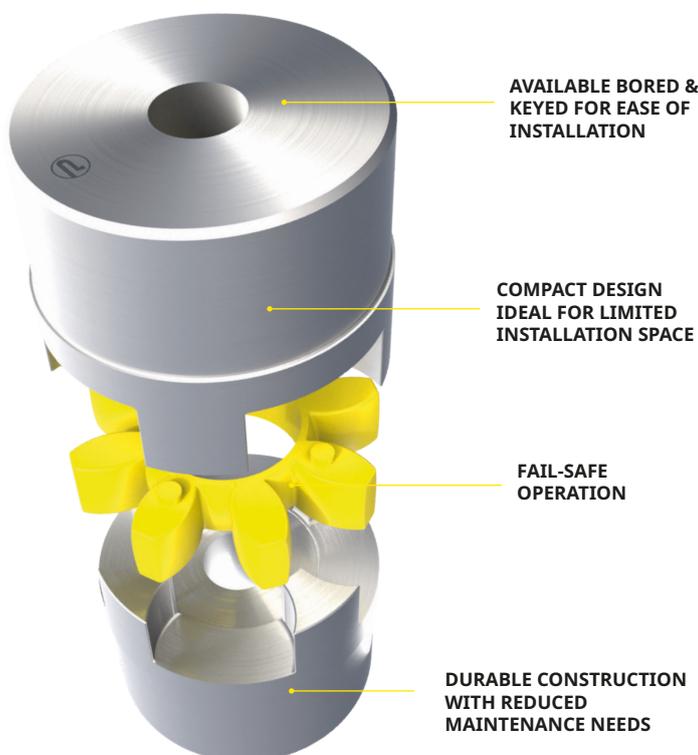
Compact, torsionally flexible coupling engineered for high torque transmission and effective vibration damping.



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

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 $5.5 \times 1.3 = 7.15\text{kW}$

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

$$(9550 \times 7.15) \div 5600 = 12.19 \text{ Nm}$$

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	$TK = 9550 \times P/n \text{ (Nm)}$
Coupling torque	$TK \text{ N} \geq Tk \times K \text{ (Nm)}$ $P = \text{effect per kW}$ $n = \text{r/m}$

Service Factor (K)

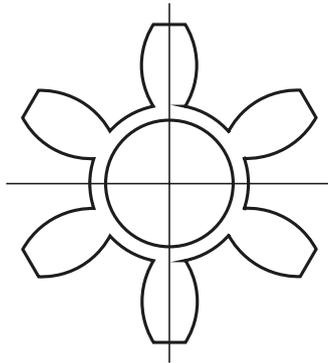
Application type	Electric motors with standard torque
Uniform operation with small masses to be accelerated. Hydraulic and centrifugal pumps, light generators, blowers, fans, ventilators, belt/screw conveyors.	1.0
Uniform operation with medium masses to be accelerated. Sheet metal bending machines, wood 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 Ratings

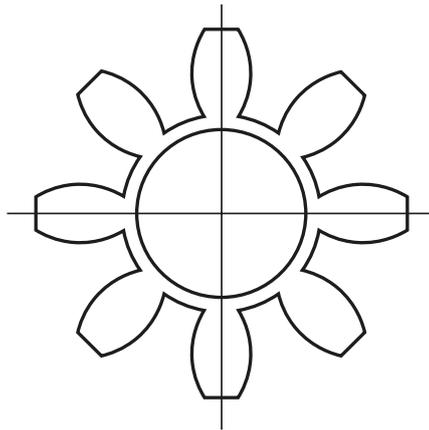
Speed	Coupling size									
	19/24	24/32	28/38	38/45	42/55	48/60	55/70	65/75	75/90	90/100
r/min	kW									
92/94 Shore A (Yellow)										
14,000	15	-	-	-	-	-	-	-	-	-
10,600	11	39	-	-	-	-	-	-	-	-
8,500	9	31	85	-	-	-	-	-	-	-
7,100	7	26	71	141	-	-	-	-	-	-
6,000	6	22	60	119	167	-	-	-	-	-
5,600	6	21	56	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

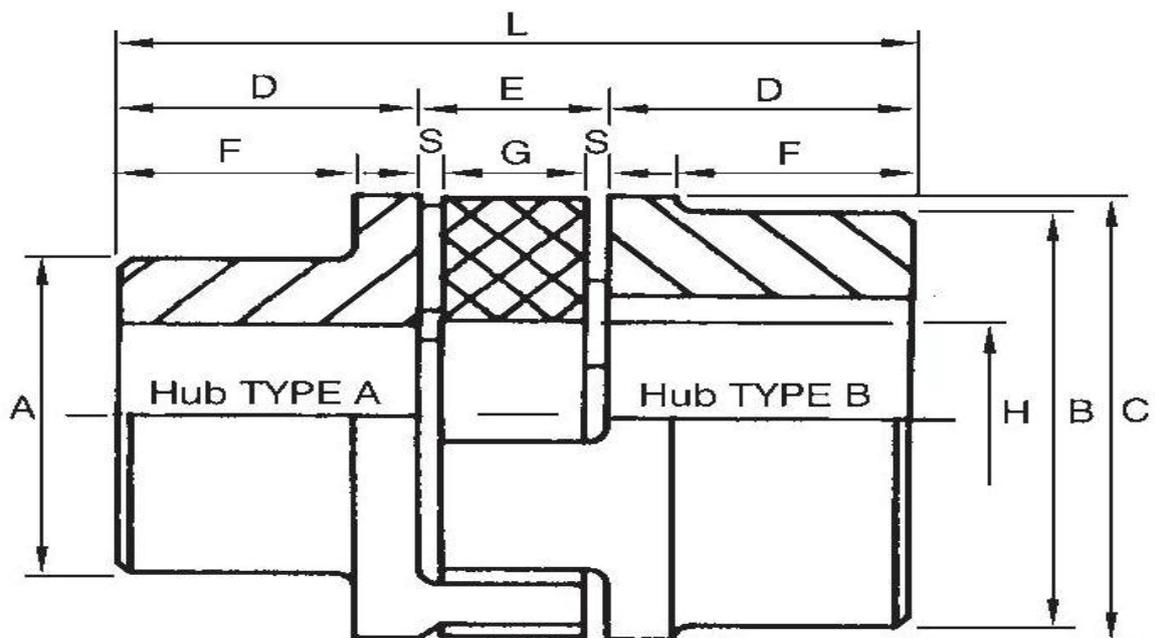
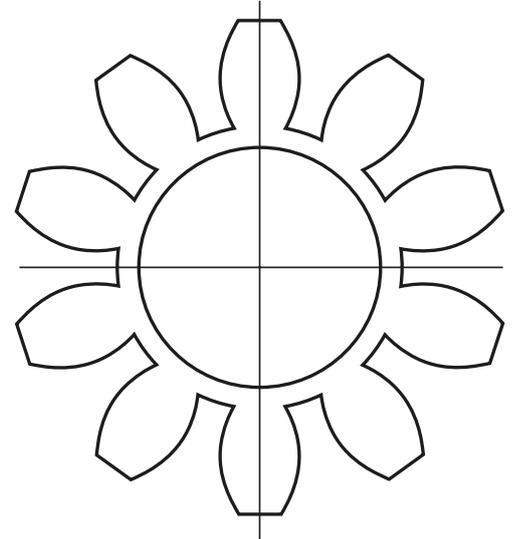
Size 19



Size 24 - 65



Size 75 - 160



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 A	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 A	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 A	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	6550	85	9500	48570	39830	30110	17850	7100	1.0°	0.28°	1.8°
	Green	64 Sh A	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 A	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 A	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 A	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 A	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 A	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 A	4500	9000	1170	3750	674520	553110	418200	247890	2800	1.2°	0.5°	3.4°

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