

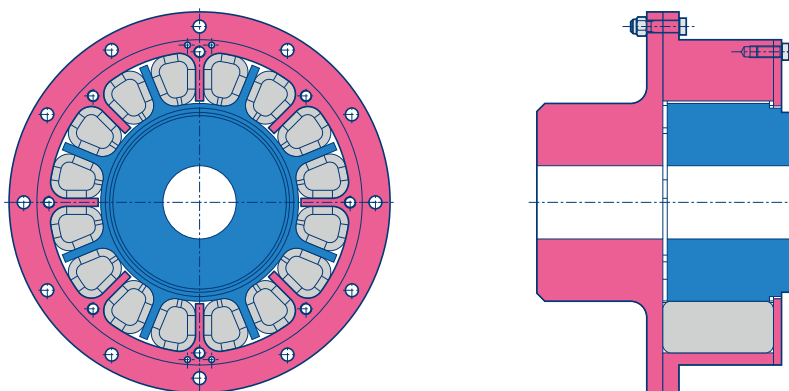


# Transmitting maximum torques safely Flexible CT-P coupling

CT-P couplings can safely transmit the highest torques of all CT couplings. This can be up to 43 000 Nm depending on their size. Additionally, axial and radial misalignments in the driveline are compensated, backlash forces eliminated and shock-loads dampened.

This coupling type thus provides an optimal solution for heavy industry drives where the engine and the driven equipment are mounted separately. Typical applications are shredder and crusher systems, generator sets, compressors, fans and roller conveyor drives in steel plants.

## Coupling parameters



Size	Nominal torque	Maximum torque	Vibratory torque	Allowable dissipated heat	Maximum speed
	$T_{KN}$ (kNm)	$T_{Kmax}$ (kNm)	$T_{KW}$ (kNm)	$P_{KW}$ (W)	(1 rpm)
27	9.0	27.0	3.375	870	2650
40	13.3	40.0	5.0	1 018	2380
60	20.0	60.0	7.5	1 159	2050
90	30.0	90.0	11.25	1 209	1830
130	43.3	130.0	16.25	1 369	1600

$T_{KN}$ : Continuous transferable torque

$T_{Kmax}$ : Maximum transferable torque, risingly to be endured at least  $10^5$  times and alternatingly at least  $5 \times 10^4$  times

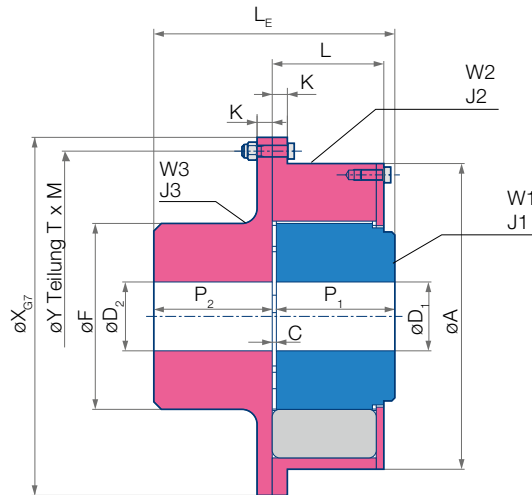
$T_{KW}$ : Torque amplitude, to be continuously endured at 10 Hz and 20°C environment temperature

Size	Dynamic torsional stiffness CTdyn (MNm/rad)											
	100% $T_{KN}$			75% $T_{KN}$			50% $T_{KN}$			25% $T_{KN}$		
	SM 60	SM 70	SM 80	SM 60	SM 70	SM 80	SM 60	SM 70	SM 80	SM 60	SM 70	SM 80
27	1.008	1.247	1.720	0.693	0.895	1.191	0.466	0.624	0.813	0.328	0.466	0.605
40	1.493	1.848	2.548	1.027	1.325	1.764	0.691	0.924	1.204	0.485	0.691	0.896
60	2.240	2.772	3.822	1.540	1.988	2.646	1.036	1.386	1.806	0.728	1.036	1.344
90	3.360	4.158	5.733	2.310	2.982	3.969	1.554	2.079	2.709	1.092	1.554	2.016
130	4.853	6.006	8.281	3.337	4.307	5.733	2.245	3.003	3.913	1.577	2.245	2.912

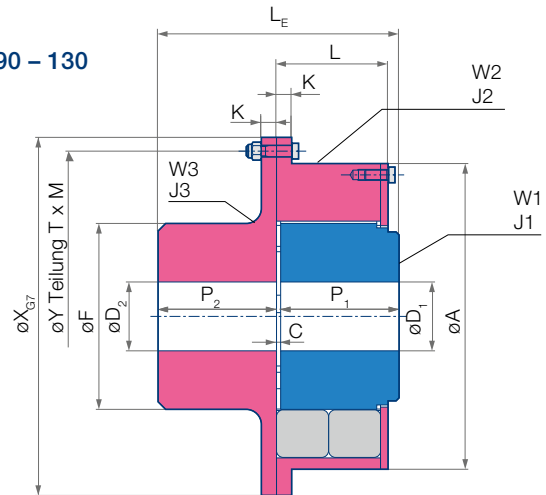
Size	Radial stiffness						Axial stiffness						Max. axial force		
	no load (N/mm)			at 50% $T_{Kmax}$ (N/mm)			no load (N/mm)			at 50% $T_{Kmax}$ (N/mm)			at 50% $T_{Kmax}$ (N)		
	SM 60	SM 70	SM 80	SM 60	SM 70	SM 80	SM 60	SM 70	SM 80	SM 60	SM 70	SM 80	SM 60	SM 70	SM 80
27	10460	14000	19000	21970	23000	27500	1766	4580	6867	6867	4580	6870	2502	2747	3728
40	11069	15960	21660	25050	26220	31350	2010	5220	7828	7828	5220	7830	2845	3139	4265
60	12680	18280	24810	28700	30040	35910	2306	5980	8968	8968	5980	8970	3267	3581	4866
90	14500	20916	28200	32820	34360	41100	2638	6840	10260	10260	6840	10260	3728	4101	5572
130	16400	23646	32100	37110	38850	46450	2980	7740	11600	11600	7740	11600	4218	4640	6298

## Dimensions

### Size 27 – 60



### Size 90 – 130



Size	Driving shaft connection dimensions (mm)										Hub dimensions (mm)				
	$X_{g7}$	Y	T x M	F	$D_2$ min	$D_2$ max	$P_2$	K	L	$L_E$	A	$D_1$ min	$D_1$ max	$P_1$	C
27	440	407	12 x M16	220	90	143	143	18.5	134	290.5	367	85	143	143	4.5
40	490	458	16 x M16	252	105	162	162	21	152.7	329	418	105	162	162	5
60	568	528	12 x M20	288	120	186	186	24	175	377.5	479	110	186	186	5.5
90	638	598	16 x M20	330	140	213	213	26.5	200	432.5	548	140	213	213	6.5
130	728	680	16 x M24	373	160	240	240	31	226	487	620	160	240	240	7

Size	Weight (kg)				Inertia (kg per m <sup>2</sup> )			Allowable misalignment (mm)			Rubber elements	
	W1	W2	W3	Total	J1	J2	J3	Radial	Axial	Conical (degree)	Per cavity	Per coupling
27	40.18	35.34	47.80	123.3	0.392	1.041	0.748	1.9	2.25	0.5	1	16
40	59.5	50.47	69.32	179.3	0.756	1.898	1.345	2.1	2.5	0.5	1	16
60	89.45	77.80	104.63	271.9	1.491	3.867	2.719	2.4	2.75	0.5	1	16
90	132.0	111.96	151.78	395.7	2.872	7.188	4.955	2.8	3.25	0.5	2	32
130	191.11	165.24	222.39	578.7	5.330	13.680	9.565	3.3	3.5	0.5	2	32

Valid for all charts:

When selecting the size, not all catalogue values need necessarily to be observed.

If the catalogue values are exceeded, it is however mandatory to consult Voith.

Sizes bigger than CT-P 130 are available on request.

In the CT-P coupling, the damping effect is achieved by elastomer elements that are compressed under torque. Just like all of our CT couplings, the design of the CT-P is also virtually fail-safe and does not require lubrication. It provides long-term protection against unscheduled downtime.

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### Components of a CT-P coupling



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