voith.com

VOITH

Safe power transfer in small installation spaces

Flexible CT-H Coupling

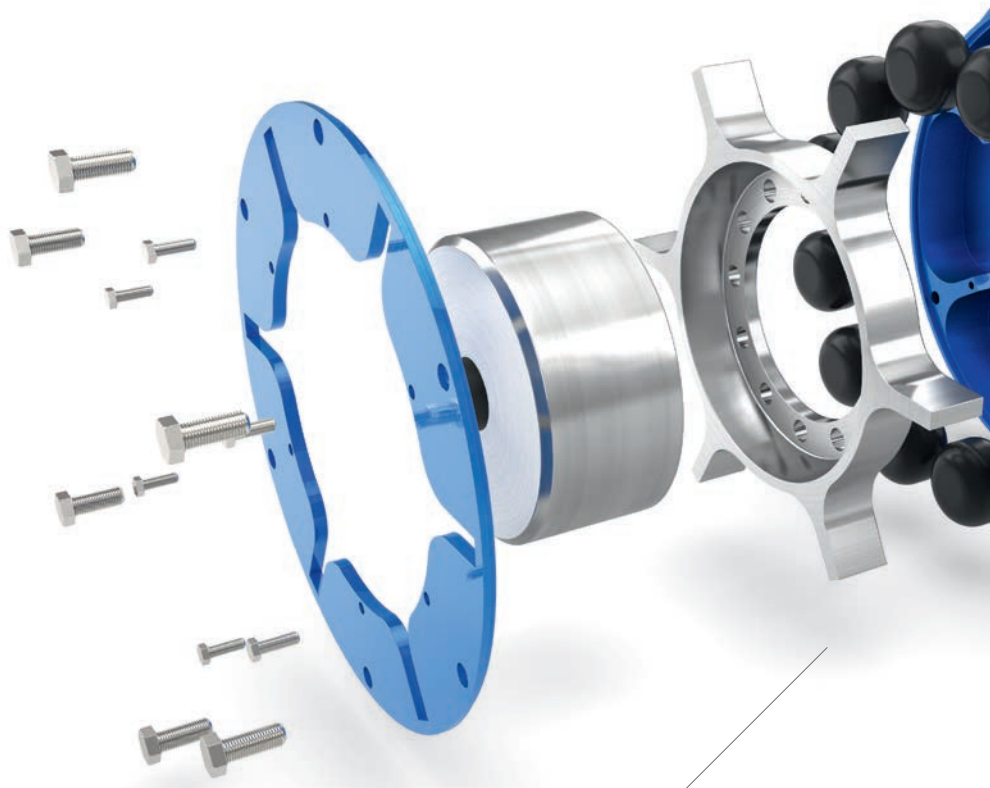
CT-H couplings are the only CT coupling type that provides a plug-in connection. They are also heat-resistant up to 200°C. As a result, CT-H couplings are ideally suited for industry drives where the driven machine is directly connected to the engine housing.

Depending on the size, up to 60 000 Nm can be safely transferred. In addition, brief shock loads in the driveline are dampened and backlash forces eliminated. They are the fail-safe solution for generator systems, pumps, compressors, fans and blowers.

In the case of the CT-H 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-H is also virtually fail-safe and does not require lubrication. It provides long-term protection against unscheduled downtime.

CT-H coupling – advantages and benefits at a glance

The coupling works without creating backlash forces to the system. This increases safety and the availability of all connected components. The net result is a positive impact on the total cost of ownership for your equipment or system – not to mention reducing downtimes and associated costs.



24/7

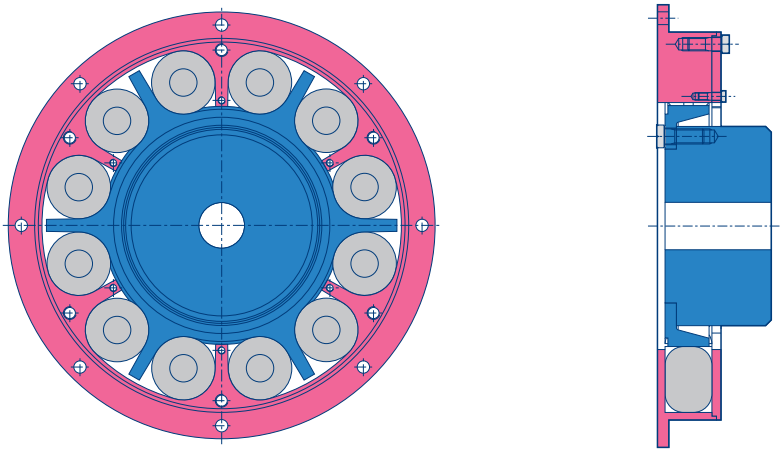
The CT Coupling design makes it virtually failure-free. In the highly unlikely event of damage of the elastomer elements, the coupling will continue to transmit torque. Only the coupling's damping characteristics are affected. You have the option of emergency operation of your equipment or system. This prevents sudden stoppages.

CT-H couplings are certified by Bureau Veritas.

Resonance frequencies are shifted into non-critical speed ranges. The system runs quieter, increasing comfort when operating the equipment or system.

The coupling is virtually maintenance-free and requires no lubrication. The elastomer elements are the only parts subject to natural wear. Replacing the elements is very simple since the coupling consists of only three main components. This helps reduce downtimes and associated costs. Lower maintenance costs optimize your life cycle costs.

Coupling parameters



Size	Flange size	Nominal torque	Maximum torque	Vibratory torque	Allowable dissipated heat	Maximum speed	Dynamic magnifier	Relative damping
	SAE J620	T_{KN} (kNm)	T_{Kmax} (kNm)	T_{KW} (kNm)	P_{KW} (W)	(1 rpm)	(M)	ψ
1 200	11.5	1.2	3.6	0.40	430	3 730	7.5	0.83
	14	1.2	3.6	0.40	430	2 820	7.5	0.83
3 000	14	3.0	9.0	1.00	600	2 820	7.5	0.83
	18	3.0	9.0	1.00	600	2 300	7.5	0.83
4 500	14	4.5	13.5	1.50	760	2 820	7.5	0.83
	18	4.5	13.5	1.50	760	2 300	7.5	0.83
6 000	18	6.0	18.0	2.00	735	2 300	7.5	0.83
	21	6.0	18.0	2.00	735	1 950	7.5	0.83
10 000	21	10.0	30.0	3.30	900	1 950	7.5	0.83
12 000	18	12.0	36.0	4.00	1 150	2 300	7.5	0.83
	21	12.0	36.0	4.00	1 150	1 950	7.5	0.83
20 000	21	20.0	60.0	6.60	1 425	1 950	7.5	0.83
40 000	–	40.0	120.0	13.33	1 800	1 500	7.5	0.83
60 000	–	60.0	180.0	19.95	2 700	1 500	7.5	0.83

T_{KN}: Continous transferable torque

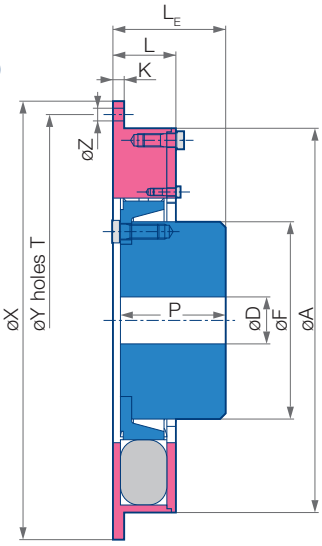
T_{Kmax}: Maximum transferable torque. risingly to be endured at least 10^5 times and alternatingly at least 5×10^4 times

T_{KW}: Torque amplitude. to be continously endured at 10 Hz and 20°C environment temperature

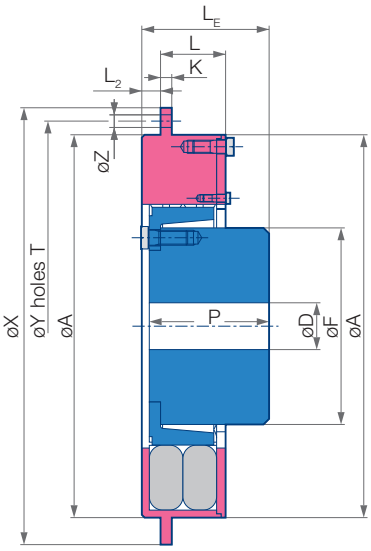
Size	Flange size	Dynamic torsional stiffness C_{Tdyn} (MNm/rad)					Radial stiffness		Axial stiffness	
	SAE J620	10% T_{KN}	25% T_{KN}	50% T_{KN}	75% T_{KN}	100% T_{KN}	No load (N/mm)	at T_{KN} (N/mm)	No load (N/mm)	at T_{KN} (N/mm)
1 200	11.5	0.003	0.008	0.022	0.043	0.074	520	1 655	195	840
	14	0.003	0.008	0.022	0.043	0.074	520	1 655	195	840
3 000	14	0.008	0.021	0.109	0.109	0.178	710	2 275	275	1 180
	18	0.008	0.021	0.109	0.109	0.178	710	2 275	275	1 180
4 500	14	0.012	0.032	0.162	0.162	0.265	1 050	3 360	515	2 210
	18	0.012	0.032	0.210	0.162	0.265	1 050	3 360	515	2 210
6 000	18	0.015	0.040	0.105	0.205	0.335	900	2 875	345	1 490
	21	0.015	0.040	0.105	0.205	0.335	900	2 875	345	1 490
10 000	21	0.027	0.072	0.188	0.367	0.600	1 040	3 325	415	1 790
12 000	18	0.030	0.080	0.210	0.410	0.670	1 800	5 740	980	4 230
	21	0.030	0.080	0.210	0.410	0.670	1 800	5 740	980	4 230
20 000	21	0.054	0.143	0.376	0.734	1.200	2 080	6 640	1 150	4 770
40 000	–	0.117	0.310	0.819	1.597	2.609	2 430	7 750	2 650	8 560
60 000	–	0.176	0.465	1.229	2.396	3.914	3 645	11 625	3 975	12 840

Dimensions

Size
1 200 – 10 000

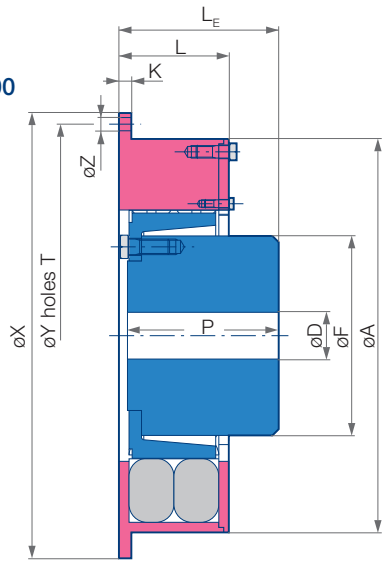


Size
4 500



Size	Flange size	Flywheel connection dimensions (mm)					Hub dimensions (mm)							
	SAE J620	X_{g7}	$Y_{\pm 0,2}$	$T_{(Stück)}$	Z	K	D_{min}	D_{max}	F	P	A	L_E	L	L_2
1 200	11.5	352.4	333.4	8	10.5	10.0	40.0	85.0	156.0	100.0	304.0	106.6	50.0	–
	14	466.7	438.2	8	13.5	10.0	40.0	85.0	156.0	100.0	304.0	106.6	50.0	–
3 000	14	466.7	438.2	8	13.5	12.0	50.0	115.0	210.0	112.0	409.0	120.0	67.0	–
	18	571.5	542.9	6	17.0	12.0	50.0	115.0	210.0	112.0	409.0	120.0	67.0	–
4 500	14	466.7	438.2	8	13.5	12.0	50.0	115.0	210.0	128.0	409.0	116.0	69.5	20.0
	18	571.5	542.9	6	17.0	12.0	50.0	115.0	210.0	128.0	409.0	116.0	69.5	20.0
6 000	18	571.5	542.9	6	17.0	16.0	60.0	150.0	256.0	139.0	505.0	150.0	84.0	–
	21	673.1	641.4	12	17.0	16.0	60.0	150.0	256.0	139.0	505.0	150.0	84.0	–
10 000	21	673.1	641.4	12	17.0	20.0	60.0	170.0	308.0	166.0	600.0	180.0	103.0	–
12 000	18	571.5	542.9	6	17.0	16.0	60.0	150.0	256.0	194.0	505.0	205.0	141.0	–
	21	673.1	641.4	12	17.0	16.0	60.0	150.0	256.0	194.0	505.0	205.0	141.0	–
20 000	21	673.1	641.4	12	17.0	20.0	60.0	170.0	308.0	236.0	600.0	250.0	173.0	–
40 000	–	860.0	820.0	32	21.0	22.0	110.0	220.0	416.0	276.0	778.0	300.0	215.0	–
60 000	–	860.0	820.0	32	21.0	22.0	110.0	220.0	416.0	276.0	778.0	330.0	305.0	–

Size
12 000 – 60 000



Size	Flange size	Weight (kg)				Inertia (kgm^2)			Allowable misalignment (mm)				
	SAE J620	W1	W2	W3	Total	J1	J2	J3	$Radial_{Min}$	$Radial_{Max}$	$Axial_{Min}$	$Axial_{Max}$	Conical (°)
1 200	11.5	3.0	10.0	12.1	25.1	0.03	0.19	0.04	0.25	1.00	1.00	2.00	0.50
	14	3.0	15.2	12.2	30.4	0.03	0.42	0.04	0.25	1.00	1.00	2.00	0.50
3 000	14	7.0	22.1	22.9	52.0	0.09	0.75	0.14	0.40	1.50	1.00	2.50	0.50
	18	7.0	29.2	22.9	59.1	0.09	0.93	0.14	0.40	1.50	1.00	2.50	0.50
4 500	14	10.6	26.4	22.9	59.9	0.15	0.88	0.17	0.40	1.50	1.00	2.50	0.50
	18	10.6	34.5	22.9	68.0	0.15	0.92	0.17	0.40	1.50	1.00	2.50	0.50
6 000	18	16.0	43.2	42.0	101.2	0.26	2.26	0.37	0.40	1.50	1.00	2.50	0.50
	21	16.0	55.1	42.0	113.1	0.26	3.35	0.37	0.40	1.50	1.00	2.50	0.50
10 000	21	24.4	77.9	46.7	149.0	0.64	5.39	1.00	0.40	1.50	1.00	2.50	0.50
12 000	18	41.7	58.6	65.1	165.4	0.98	2.79	0.58	0.40	1.50	1.00	2.50	0.50
	21	41.7	70.5	65.1	177.3	0.98	3.95	0.58	0.40	1.50	1.00	2.50	0.50
20 000	21	56.0	112.1	114.5	282.6	1.92	6.63	1.47	0.40	1.50	1.00	2.50	0.50
40 000	–	98.3	199.7	262.6	560.6	5.97	23.68	5.96	0.40	1.50	1.00	2.50	0.50
60 000	–	142.5	261.8	262.6	666.9	9.30	32.03	5.96	0.40	1.50	1.00	2.50	0.50

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.

Voith Group
St. Poeltener Str. 43
89522 Heidenheim
Germany

www.voith.com/highflex

Contact:
Phone +49 201 557-8361
highflex@voith.com