CENTA

CENTAX-TT

ENGLISH

RegalRexnord

CX-TT-EN-05-22

CENTAX-TT

Questions on product selection?
We will gladly assist –› www.centa.info/contact

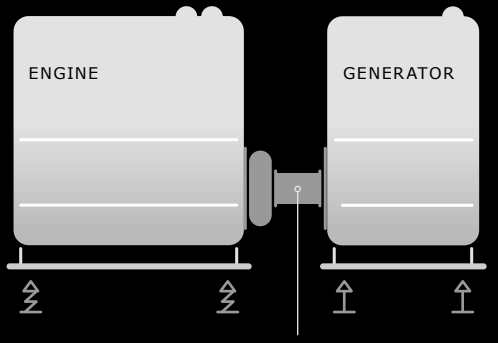
SYSTEM

TECHNICAL DATA

DIMENSIONS

APPENDIX

CENTAX-TT
AT A GLANCE



ENGINE : GENERATOR

Compact coupling with high performance density.
For heavy duty applications with high speeds.

Design with segmented rubber elements, each consisting of two concentrically arranged precompressed rubber segments, which jointly transmit the torque. Extremely short and high-performing design. Characterised by medium torsional stiffness, especially variable adaption to the torsional system by adjusting the number and the arrangement of the elements. Dampens torsional vibrations and shocks and compensates axial and radial misalignments. Effectively ventilated and with high admissible energy loss.

Mounted with minimum effort, replaceable without movement of the coupled units.

Features

High flexiblity in design
High flexibility in all directions
High flexibility in torsional elasticity
High allowable power loss

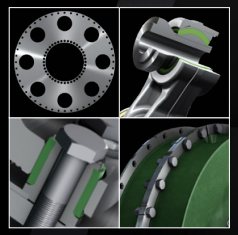
Areas of Application

Torque range

17,6 to 500 kNm

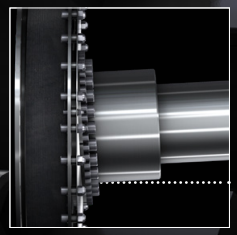
For efficient torque transmission and long lifespans at a maximum design flexibility.

CENTAX-TT SYSTEM



MODULARITY

Multiple combinations of the CENTAX-SEC coupling progamm components are available. This modularity allows for adequate design for any application. For efficient and fast customized solutions.



FUNCTIONS

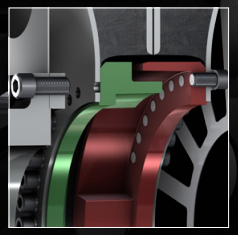
The CENTAX-SEC coupling programm offers many functions to protect your drive from harmful torsional vibrations, to compensate misalignment and to dampen vibrations and noise. Reliable power transmission for your applications with an optimum of features.

COMPENSATION OF MISALIGNMENT

The CENTAX-SEC rubber elements are torsionally and radially highly flexible. Combined with three optional components (membranes, links or bolts) each application gets the necessary flexibility in axial and angular direction.

DAMPING

The torsional elasticity of each application is variably tuned by the components applied. Shocks and vibrations are dampened, resonances shifted to subcritical ranges and a very low noise level for more comfort on bord is achieved.



FAIL SAFE DEVICE

All design types of the CENTAX-SEC series are optionally available with an additional fail-safe device. In case of damage to the rubber elements, the fail-safe device prevents disconnection of any coupled units. Their positive interlocking will not be disrupted. In order to ensure fulfilling the emergency operation requirements which numerous classification societies demand for marine single-engine main propulsions the torque of the system has to be reduced in case of damage.

QUALITY

When the going get's tough, quality is priceless. With an exemplary Quality Management, CENTA ensures products that withstand the roughest assignments. CENTA's coupling systems are more than the sum of their parts. CENTA entertains the vision of intelligent products that meet the highest requirements in terms of design and quality.

CENTAX-TT

SERIES T1

ONE ROW OF ELEMENTS

TECHNICAL DATA | **↓ SIZES 130-820 – 250-1090** | → SIZES 260-1180 – 460-1840

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Size	Rubber quality [Shore A]	Nominal torque T_{KN} [kNm]	Maximum torque T_{Kmax} [kNm]	Continuous vibratory torque T_{KW} [kNm]	Permissible power loss P_{KV} [kW]	Dynamic torsional stiffness C_{Tdyn} [kNm/rad]	Relative damping Ψ	Speed n_{max} [min^{-1}]	Permissible axial displacement ΔK_a [mm]	Axial stiffness C_a [kN/mm]	Permissible radial displacement ΔK_r [mm]	Radial stiffness C_{rdyn} [kN/mm]	Zulässiger Winkelversatz ΔK_W [°]
130-820	50	17,6	52,8	7,00	0,83	200	1,05	2000	3,0	3,0	0,5	18,4	0,5
	60	19,9	59,7	8,00	0,88	370	1,10		2,5	4,0	0,4	27,6	
	70	22,2	66,6	9,00	0,92	590	1,15		2,0	6,3	0,3	41,4	
140-820	50	23,5	70,5	9,40	1,13	260	1,05	2000	3,0	4,0	0,5	24,5	0,5
	60	26,6	79,8	10,60	1,20	490	1,10		2,5	6,0	0,4	36,8	
	70	29,6	88,8	11,80	1,26	780	1,15		2,0	8,4	0,3	55,2	
140-850	50	25,0	75,0	10,00	1,13	300	1,05	2000	3,0	4,0	0,5	24,5	0,5
	60	28,0	84,0	11,20	1,20	560	1,10		2,5	6,0	0,4	36,8	
	70	31,5	94,5	12,60	1,26	890	1,15		2,0	8,4	0,3	55,2	
150-850	50	32,0	96,0	12,80	1,43	380	1,05	2000	3,0	5,0	0,5	30,7	0,5
	60	38,0	114	15,20	1,50	700	1,10		2,5	7,4	0,4	46,0	
	70	40,0	120	16,00	1,60	1110	1,15		2,0	10,5	0,3	69,0	
160-925	50	42,0	126	16,80	1,73	560	1,05	2000	3,0	6,0	0,5	36,8	0,5
	60	47,0	141	18,80	1,83	1050	1,10		2,5	9,0	0,4	55,2	
	70	52,0	156	20,80	1,93	1670	1,15		2,0	12,6	0,3	82,5	
240-1090	50	55,0	165	22,00	1,43	630	1,05	1400	3,5	5,0	0,6	29,5	0,5
	60	60,0	180	24,00	1,50	930	1,10		3,0	7,5	0,5	43,0	
	70	68,0	204	27,20	1,60	1480	1,15		2,5	10,5	0,4	62,0	
250-1090	50	70,0	210	28,00	1,73	790	1,05	1400	3,5	6,3	0,6	36,8	0,5
	60	75,0	225	30,00	1,83	1160	1,10		3,0	9,3	0,5	55,0	
	70	85,0	255	34,00	1,93	1850	1,15		2,5	13,1	0,4	83,0	

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SERIES T1

ONE ROW OF ELEMENTS

TECHNICAL DATA | **↓ SIZES 260-1180 – 460-1840** | ← SIZES 130-820 – 250-1090

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Size	Rubber quality [Shore A]	Nominal torque T_{KN} [kNm]	Maximum torque T_{Kmax} [kNm]	Continuous vibratory torque T_{KW} [kNm]	Permissible power loss P_{KV} [kW]	Dynamic torsional stiffness C_{Tdyn} [kNm/rad]	Relative damping Ψ	Speed n_{max} [min^{-1}]	Permissible axial displacement ΔK_a [mm]	Axial stiffness C_a [kN/mm]	Permissible radial displacement ΔK_r [mm]	Radial stiffness C_{rdyn} [kN/mm]	Zulässiger Winkelversatz ΔK_W [°]
260-1180	50	90	270	36,00	2,10	1190	1,05	1400	3,5	7,5	0,6	44,0	0,5
	60	100	300	40,00	2,20	1750	1,10		3,0	11,2	0,5	66,0	
	70	110	330	44,00	2,30	2780	1,15		2,5	15,6	0,4	100,0	
340-1340	50	112	336	44,80	1,80	750	1,05	1100	4,0	6,3	0,7	35,4	0,5
	60	118	354	47,20	1,90	1160	1,10		3,5	9,4	0,6	51,6	
	70	130	390	52,00	2,00	1860	1,15		3,0	13,2	0,6	74,4	
350-1340	50	140	420	56,00	2,20	930	1,05	1100	4,0	7,9	0,7	44,3	0,5
	60	150	450	60,00	2,30	1450	1,10		3,5	11,8	0,6	64,5	
	70	160	480	64,00	2,40	2330	1,15		3,0	16,5	0,6	93,0	
360-1460	50	190	570	76,00	2,60	1400	1,05	1100	4,0	9,5	0,7	53,2	0,5
	60	200	600	80,00	2,80	2180	1,10		3,5	14,2	0,6	77,4	
	70	220	660	88,00	2,90	3500	1,15		3,0	19,8	0,6	111,6	
440-1685	50	250	750	100,00	2,20	1700	1,05	1000	5,0	7,9	0,9	44,6	0,5
	60	265	795	106,00	2,30	2600	1,10		4,5	11,8	0,8	65,0	
	70	290	870	116,00	2,40	4100	1,15		4,0	16,6	0,8	93,7	
450-1685	50	315	945	126,00	2,80	2100	1,05	1000	5,0	9,9	0,9	55,8	0,5
	60	336	1008	134,40	2,90	3300	1,10		4,5	14,9	0,8	81,3	
	70	360	1080	144,00	3,10	5100	1,15		4,0	20,8	0,8	117,2	
460-1840	50	425	1275	170,00	3,30	3200	1,05	900	5,0	12,0	0,9	67,0	0,5
	60	450	1350	180,00	3,50	4900	1,10		4,5	17,9	0,8	97,5	
	70	500	1500	200,00	3,80	7700	1,15		4,0	25,0	0,8	140,6	

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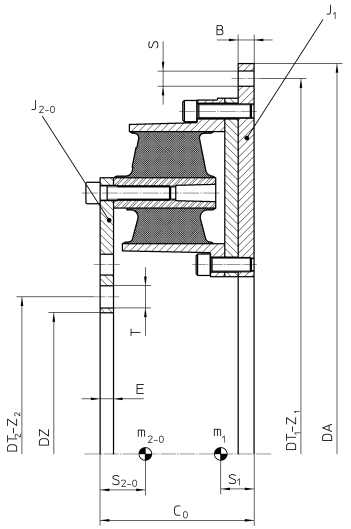
SERIES TFF1

FLANGE VERSION, WITHOUT HUB



DIMENSIONS **↓ SIZES 130-820 – 460-1840**

Size	Nominal torque T_{KN} [kNm]	Dimensions											Distance centre of gravity, moments of inertia and masses						
		B	C_0	E	T	D_Z [H7]	D_{T2}	Z_2	D_A	D_{T1}	Z_1	S	S_1	S_{2-0}	J_1	J_{2-0}	m_1	m_{2-0}	$m_{total-0}$
130 - 820	17,6 - 22,2	22	177	15	25	316	24x15°	795	820	24x15°	279	17 M16	31,1	29,7	12,59	2,34	129,8	36,6	166,4
140 - 820	23,5 - 29,6	22	177	15	25	316	24x15°	795	820	24x15°	279	17 M16	34,4	34,0	14,37	2,78	148,8	41,6	190,5
140 - 850	25 - 31,5	22	177	15	25	316	24x15°	825	850	24x15°	279	17 M16	33,5	32,0	16,32	3,17	154,8	44,3	199,0
150 - 850	32 - 40	22	177	15	31	350	20x18°	825	850	24x15°	303	17 M16	35,8	36,3	18,23	3,53	173,1	46,9	220,0
160 - 925	42 - 52	22	177	15	31	350	20x18°	900	925	32x11,25°	303	17 M16	36,5	34,8	25,87	5,41	202,1	59,6	261,6
240 - 1090	55 - 68	27	225	20	31	435	24x15°	1055	1090	32x11,25°	388	21,5 M20	43,6	40,6	55,15	10,98	322,8	92,1	414,9
250 - 1090	70 - 85	27	225	20	31	435	24x15°	1055	1090	32x11,25°	388	21,5 M20	46,8	44,8	62,00	12,31	363,8	101,1	464,8
260 - 1180	90 - 110	27	225	20	31	470	32x11,25°	1145	1180	32x11,25°	420	21,5 M20	47,9	43,7	87,61	18,71	423,5	125,2	548,7
340 - 1340	112 - 130	27	272	30	31	600	40x9°	1300	1340	32x11,25°	554	25 M24	51,4	50,4	132,11	35,14	499,9	184,7	684,7
350 - 1340	140 - 160	27	272	30	31	600	40x9°	1300	1340	32x11,25°	554	25 M24	55,2	55,6	149,67	39,04	568,5	201,4	769,9
360 - 1460	190 - 220	27	272	30	31	720	45x8°	1418	1460	36x10°	674	25 M24	56,2	56,7	213,80	57,56	666,2	234,9	901,1
440 - 1685	250 - 290	32	356	36	34	840	50x7,2°	1636	1685	32x11,25°	750	33 M30	69,0	73,7	430,38	114,27	1017,2	366,2	1383,3
450 - 1685	315 - 360	32	356	36	34	840	50x7,2°	1636	1685	32x11,25°	750	33 M30	73,8	80,9	492,16	128,61	1165,9	405,1	1571,0
460 - 1840	425 - 500	32	356	36	39	960	50x7,2°	1785	1840	32x11,25°	900	39 M36	75,0	83,7	703,85	187,4	1369,6	465,8	1835,3

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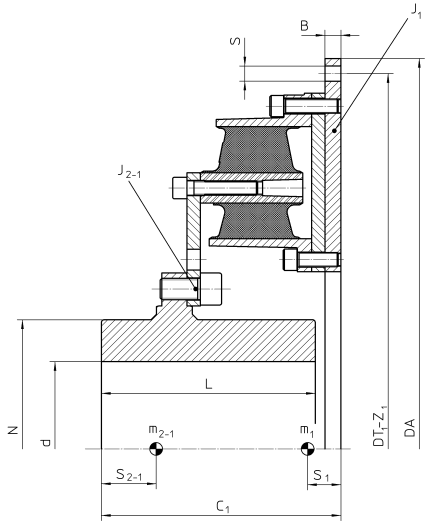
SERIES TFS1-HUB 1



FLANGE VERSION

DIMENSIONS ↓ **SIZES 130-820 – 460-1840**

Size	Nominal torque T_{KN} [kNm]	Dimensions B	C_1	d min	d max	L	N	Flange dimensions D_A*	D_{T1}	Z_1	S	Distance centre of gravity, moments of inertia and masses S_1	S_{2-1}	J_1	J_{2-1}	m_1	m_{2-1}	$m_{total-1}$
130 - 820	17,6 - 22,2	22	-	70	200	220	278	820	795	24x15°	17 M16	31,1	-	12,59	-	129,8	-	-
140 - 820	23,5 - 29,6	22	-	70	200	220	278	820	795	24x15°	17 M16	34,4	-	14,37	-	148,8	-	-
140 - 850	25 - 31,5	22	-	70	200	220	278	850	825	24x15°	17 M16	33,5	-	16,32	-	154,8	-	-
150 - 850	32 - 40	22	-	80	225	250	315	850	825	24x15°	17 M16	35,8	-	18,23	-	173,1	-	-
160 - 925	42 - 52	22	-	80	225	250	315	925	900	32x11,25°	17 M16	36,5	-	25,87	-	202,1	-	-
240 - 1090	55 - 68	27	-	80	275	280	388	1090	1055	32x11,25°	21,5 M20	43,6	-	55,15	-	322,8	-	-
250 - 1090	70 - 85	27	-	80	275	280	388	1090	1055	32x11,25°	21,5 M20	46,8	-	62,00	-	363,8	-	-
260 - 1180	90 - 110	27	397	140	300	360	418	1180	1145	32x11,25°	21,5 M20	47,9	192,5	87,61	26,67	423,5	344,7	768,2
340 - 1340	112 - 130	27	437	170	345	400	485	1340	1300	32x11,25°	25 M24	51,4	200,5	132,11	53,48	499,9	539,7	1039,6
350 - 1340	140 - 160	27	437	170	345	400	485	1340	1300	32x11,25°	25 M24	55,2	202,9	149,67	57,37	568,5	556,3	1124,8
360 - 1460	190 - 220	27	497	140	380	460	530	1460	1418	36x10°	25 M24	56,2	244,9	213,80	90,11	666,2	731,0	1397,2
440 - 1685	250 - 290	32	562	215	430	520	600	1685	1636	32x11,25°	33 M30	69,0	257,6	430,38	171,07	1017,2	1063,1	2080,2
450 - 1685	315 - 360	32	562	215	430	520	600	1685	1636	32x11,25°	33 M30	73,8	261,0	492,16	185,41	1165,9	1102,0	2267,9
460 - 1840	425 - 500	32	592	235	470	550	660	1840	1785	32x11,25°	39 M36	75,0	280,0	703,85	296,2	1369,6	1458,4	2828,0

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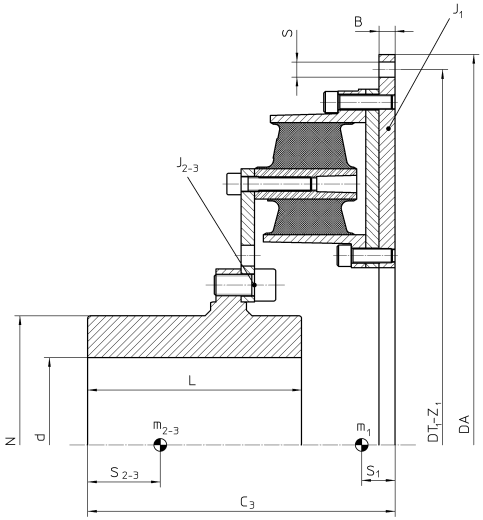
SERIES TFS1-HUB 2



FLANGE VERSION

DIMENSIONS **↓ SIZES 130-820 – 460-1840**

Size	Nominal torque T_{KN} [kNm]	Dimensions						Flange dimensions				Distance centre of gravity, moments of inertia and masses						
		B	C_3	d min	d max	L	N	D_A*	D_{T1}	Z_1	S	S_1	S_{2-3}	J_1	J_{2-3}	m_1	m_{2-3}	$m_{total-3}$
130 - 820	17,6 - 22,2	22	393	70	200	220	278	820	795	24x15°	17 M16	31,1	173,1	12,59	3,38	129,8	99,1	228,9
140 - 820	23,5 - 29,6	22	393	70	200	220	278	820	795	24x15°	17 M16	34,4	177,8	14,37	3,73	148,8	103,5	252,3
140 - 850	25 - 31,5	22	393	70	200	220	278	850	825	24x15°	17 M16	33,5	179,3	16,32	4,21	154,8	106,8	261,6
150 - 850	32 - 40	22	422	80	225	250	315	850	825	24x15°	17 M16	35,8	193,3	18,23	5,50	173,1	140,0	313,1
160 - 925	42 - 52	22	422	80	225	250	315	925	900	32x11,25°	17 M16	36,5	200,3	25,87	7,41	202,1	153,4	355,4
240 - 1090	55 - 68	27	500	80	275	280	388	1090	1055	32x11,25°	21,5 M20	43,6	219,7	55,15	15,84	322,8	246,9	569,7
250 - 1090	70 - 85	27	500	80	275	280	388	1090	1055	32x11,25°	21,5 M20	46,8	224,8	62,00	17,18	363,8	255,8	619,6
260 - 1180	90 - 110	27	443	140	300	360	418	1180	1145	32x11,25°	21,5 M20	47,9	213,5	87,61	26,67	423,5	344,7	768,2
340 - 1340	112 - 130	27	540	170	345	400	485	1340	1300	32x11,25°	25 M24	51,4	248,9	132,11	53,48	499,9	539,7	1039,6
350 - 1340	140 - 160	27	540	170	345	400	485	1340	1300	32x11,25°	25 M24	55,2	252,8	149,67	57,37	568,5	556,3	1124,8
360 - 1460	190 - 220	27	540	140	380	460	530	1460	1418	36x10°	25 M24	56,2	265,2	213,80	90,11	666,2	731,0	1397,2
440 - 1685	250 - 290	32	710	215	430	520	600	1685	1636	32x11,25°	33 M30	69,0	327,4	430,38	171,07	1017,2	1063,1	2080,2
450 - 1685	315 - 360	32	710	215	430	520	600	1685	1636	32x11,25°	33 M30	73,8	333,6	492,16	185,41	1165,9	1102,0	2267,9
460 - 1840	425 - 500	32	713	235	470	550	660	1840	1785	32x11,25°	39 M36	75,0	340,6	703,85	296,2	1369,6	1458,4	2828,0

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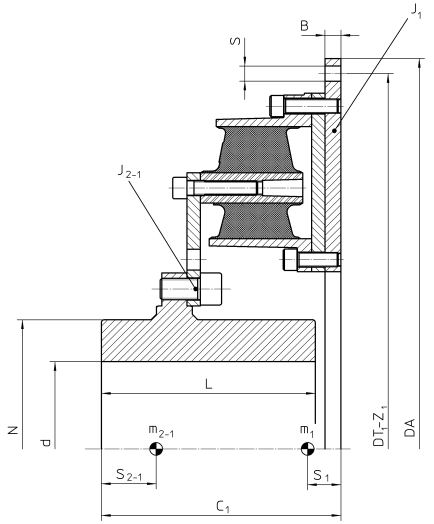
SERIES TFS1-HUB 3



FLANGE VERSION

DIMENSIONS ↓ **SIZES 130-820 – 460-1840**

Size	Nominal torque T_{KN} [kNm]	Dimensions						Flange dimensions				Distance centre of gravity, moments of inertia and masses						
		B	C_1	d min	d max	L	N	D_A*	D_{T1}	Z_1	S	S_1	S_{2-1}	J_1	J_{2-1}	m_1	m_{2-1}	$m_{total-1}$
130 - 820	17,6 - 22,2	22	-	70	200	220	278	820	795	24x15°	17 M16	31,1	-	12,59	-	129,8	-	-
140 - 820	23,5 - 29,6	22	-	70	200	220	278	820	795	24x15°	17 M16	34,4	-	14,37	-	148,8	-	-
140 - 850	25 - 31,5	22	-	70	200	220	278	850	825	24x15°	17 M16	33,5	-	16,32	-	154,8	-	-
150 - 850	32 - 40	22	-	80	225	250	315	850	825	24x15°	17 M16	35,8	-	18,23	-	173,1	-	-
160 - 925	42 - 52	22	-	80	225	250	315	925	900	32x11,25°	17 M16	36,5	-	25,87	-	202,1	-	-
240 - 1090	55 - 68	27	-	80	275	280	388	1090	1055	32x11,25°	21,5 M20	43,6	-	55,15	-	322,8	-	-
250 - 1090	70 - 85	27	-	80	275	280	388	1090	1055	32x11,25°	21,5 M20	46,8	-	62,00	-	363,8	-	-
260 - 1180	90 - 110	27	397	140	300	360	418	1180	1145	32x11,25°	21,5 M20	47,9	192,5	87,61	26,67	423,5	344,7	768,2
340 - 1340	112 - 130	27	437	170	345	400	485	1340	1300	32x11,25°	25 M24	51,4	200,5	132,11	53,48	499,9	539,7	1039,6
350 - 1340	140 - 160	27	437	170	345	400	485	1340	1300	32x11,25°	25 M24	55,2	202,9	149,67	57,37	568,5	556,3	1124,8
360 - 1460	190 - 220	27	497	140	380	460	530	1460	1418	36x10°	25 M24	56,2	244,9	213,80	90,11	666,2	731,0	1397,2
440 - 1685	250 - 290	32	562	215	430	520	600	1685	1636	32x11,25°	33 M30	69,0	257,6	430,38	171,07	1017,2	1063,1	2080,2
450 - 1685	315 - 360	32	562	215	430	520	600	1685	1636	32x11,25°	33 M30	73,8	261,0	492,16	185,41	1165,9	1102,0	2267,9
460 - 1840	425 - 500	32	592	235	470	550	660	1840	1785	32x11,25°	39 M36	75,0	280,0	703,85	296,2	1369,6	1458,4	2828,0

* see page 19

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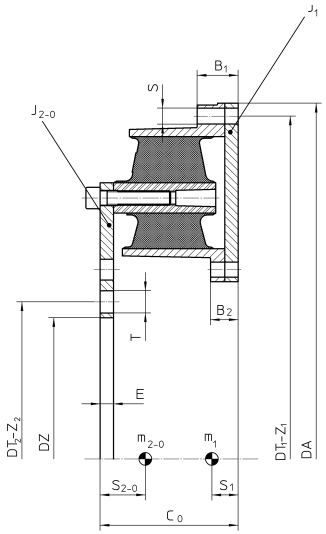
SERIES T0F1

WITHOUT FLANGE, WITHOUT HUB



DIMENSIONS **↓ SIZES 130-770 – 460-1728**

Size	Nominal torque T_{KN} [kNm]	Dimensions												Distance centre of gravity, moments of inertia and masses						
		B_1	B_2	C_0	E	T	D_Z [H7]	D_{T2}	Z_2	D_A*	D_{T1}*	Z_1*	S	S_1	S_{2-0}	J_1	J_{2-0}	m_1	m_{2-0}	$m_{total-0}$
130 - 770	17,6 - 22,2	46	31	155	15	279	316	24x15°	25	770	737,7	*	18 M16	34,8	29,7	5,07	2,34	55,0	36,6	91,6
140 - 770	23,5 - 29,6	46	31	155	15	279	316	24x15°	25	770	737,7	*	18 M16	34,8	34,0	6,75	2,78	73,3	41,6	114,9
140 - 799	25 - 31,5	46	31	155	15	279	316	24x15°	25	799	770,0	*	18 M16	34,8	32,0	7,51	3,17	73,3	44,3	117,6
150 - 799	32 - 40	46	31	155	15	303	350	20x18°	31	799	770,0	*	18 M16	34,8	36,3	9,39	3,53	91,7	46,9	138,5
160 - 869	42 - 52	46	31	155	15	303	350	20x18°	31	869	833,6	*	18 M16	34,8	34,8	13,70	5,41	110,0	59,6	169,5
240 - 1020	55 - 68	62	62	198	20	388	435	24x15°	31	1020	986,0	*	21 M20	45,6	40,6	26,05	10,98	158,4	92,1	250,5
250 - 1020	70 - 85	62	62	198	20	388	435	24x15°	31	1020	986,0	*	21 M20	45,6	44,8	32,56	12,31	197,9	101,1	299,0
260 - 1110	90 - 110	62	62	198	20	420	470	32x11,25°	31	1110	1067,8	*	21 M20	45,6	43,7	47,60	18,71	237,5	125,2	362,7
340 - 1260	112 - 130	77	77	245	30	554	600	40x9°	31	1260	1225,0	*	23 M20	55,4	50,4	70,19	35,14	274,2	184,7	458,9
350 - 1260	140 - 160	77	77	245	30	554	600	40x9°	31	1260	1225,0	*	23 M20	55,4	55,6	87,73	39,04	342,7	201,4	544,1
360 - 1372	190 - 220	77	77	245	30	674	720	45x8°	31	1372	*	*	23 M20	55,4	56,7	128,22	57,56	411,3	234,9	646,2
440 - 1588	250 - 290	102	102	324	36	750	840	50x7,2°	34	1588	1544,0	*	28 M24	74,9	73,7	232,46	114,27	570,4	366,2	936,6
450 - 1588	315 - 360	102	102	324	36	750	840	50x7,2°	34	1588	1544,0	*	28 M24	74,9	80,9	290,58	128,61	713,0	405,1	1118,1
460 - 1728	425 - 500	102	102	324	36	900	960	50x7,2°	39	1728	*	*	28 M24	74,9	83,7	423,82	187,40	855,7	465,8	1321,4

* see page 19

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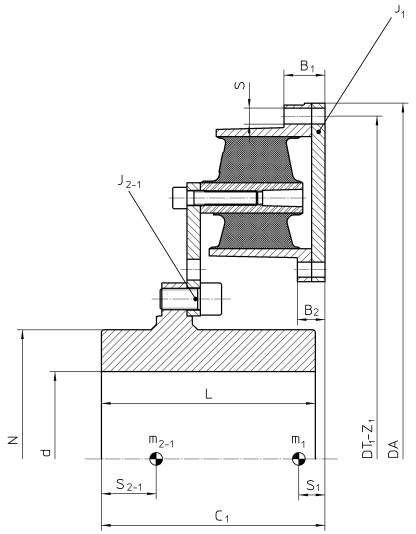
SERIES T0S1 - HUB 1



WITHOUT FLANGE

DIMENSIONS **↓ SIZES 130-770 – 460-1728**

Size	Nominal torque T_{KN} [kNm]	Dimensions							Flange dimensions				Distance centre of gravity, moments of inertia and masses						
		B_1	B_2	C_1	d min	d max	L	N	D_A*	D_{T1}*	Z_1*	S	S_1	S_{2-1}	J_1	J_{2-1}	m_1	m_{2-1}	$m_{total-1}$
130 - 770	17,6 - 22,2	46	31	-	70	200	220	278	770	737,7	*	18 M16	34,8	-	5,07	-	55,0	-	-
140 - 770	23,5 - 29,6	46	31	-	70	200	220	278	770	737,7	*	18 M16	34,8	-	6,75	-	73,3	-	-
140 - 799	25 - 31,5	46	31	-	70	200	220	278	799	770,0	*	18 M16	34,8	-	7,51	-	73,3	-	-
150 - 799	32 - 40	46	31	-	80	225	250	315	799	770,0	*	18 M16	34,8	-	9,39	-	91,7	-	-
160 - 869	42 - 52	46	31	-	80	225	250	315	869	833,6	*	18 M16	34,8	-	13,70	-	110,0	-	-
240 - 1020	55 - 68	62	62	-	80	275	280	388	1020	986,0	*	21 M20	45,6	-	26,05	-	158,4	-	-
250 - 1020	70 - 85	62	62	-	80	275	280	388	1020	986,0	*	21 M20	45,6	-	32,56	-	197,9	-	-
260 - 1110	90 - 110	62	62	370	140	300	360	418	1110	1067,8	*	21 M20	45,6	192,5	47,60	26,67	237,5	344,7	582,2
340 - 1260	112 - 130	77	77	410	170	345	400	485	1260	1225,0	*	23 M20	55,4	200,5	70,19	53,48	274,2	539,7	813,9
350 - 1260	140 - 160	77	77	410	170	345	400	485	1260	1225,0	*	23 M20	55,4	202,9	87,73	57,37	342,7	556,3	899,0
360 - 1372	190 - 220	77	77	470	140	380	460	530	1372	*	*	23 M20	55,4	244,9	128,22	90,11	411,3	731,0	1142,3
440 - 1588	250 - 290	102	102	530	215	430	520	600	1588	1544,0	*	28 M24	74,9	257,6	232,46	171,07	570,4	1063,1	1633,5
450 - 1588	315 - 360	102	102	530	215	430	520	600	1588	1544,0	*	28 M24	74,9	261,0	290,58	185,41	713,0	1102,0	1815,0
460 - 1728	425 - 500	102	102	560	235	470	550	660	1728	*	*	28 M24	74,9	280,0	423,82	296,2	855,7	1458,4	2314,1

* see page 19

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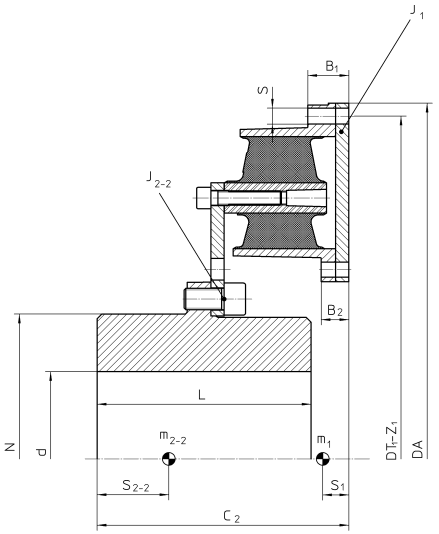
SERIES T0S1 - HUB 2

WITHOUT FLANGE



DIMENSIONS **↓ SIZES 130-770 – 460-1728**

Size	Nominal torque T_{KN} [kNm]	Dimensions							Flange dimensions				Distance centre of gravity, moments of inertia and masses						
		B_1	B_2	C_2	d min	d max	L	N	D_A*	D_{T1}*	Z_1*	S	S_1	S_{2-2}	J_1	J_{2-2}	m_1	m_{2-2}	$m_{total-2}$
130 - 770	17,6 - 22,2	46	31	275	70	200	220	278	770	737,7	*	18 M16	34,8	126,2	5,07	3,39	55,0	99,5	154,5
140 - 770	23,5 - 29,6	46	31	275	70	200	220	278	770	737,7	*	18 M16	34,8	128,9	6,75	3,74	73,3	103,8	177,1
140 - 799	25 - 31,5	46	31	275	70	200	220	278	799	770,0	*	18 M16	34,8	128,8	7,51	4,22	73,3	107,2	180,5
150 - 799	32 - 40	46	31	284	80	225	250	315	799	770,0	*	18 M16	34,8	135,6	9,39	5,34	91,7	133,4	225,1
160 - 869	42 - 52	46	31	284	80	225	250	315	869	833,6	*	18 M16	34,8	138,5	13,70	7,26	110,0	146,8	256,8
240 - 1020	55 - 68	62	62	347	80	275	280	388	1020	986,0	*	21 M20	45,6	159,2	26,05	15,86	158,4	246,8	405,2
250 - 1020	70 - 85	62	62	347	80	275	280	388	1020	986,0	*	21 M20	45,6	162,0	32,56	17,20	197,9	255,8	453,7
260 - 1110	90 - 110	62	62	-	140	300	360	418	1110	1067,8	*	21 M20	45,6	-	47,60	-	237,5	-	-
340 - 1260	112 - 130	77	77	-	170	345	400	485	1260	1225,0	*	23 M20	55,4	-	70,19	-	274,2	-	-
350 - 1260	140 - 160	77	77	-	170	345	400	485	1260	1225,0	*	23 M20	55,4	-	87,73	-	342,7	-	-
360 - 1372	190 - 220	77	77	-	140	380	460	530	1372	*	*	23 M20	55,4	-	128,22	-	411,3	-	-
440 - 1588	250 - 290	102	102	-	215	430	520	600	1588	1544,0	*	28 M24	74,9	-	232,46	-	570,4	-	-
450 - 1588	315 - 360	102	102	-	215	430	520	600	1588	1544,0	*	28 M24	74,9	-	290,58	-	713,0	-	-
460 - 1728	425 - 500	102	102	-	235	470	550	660	1728	*	*	28 M24	74,9	-	423,82	-	855,7	-	-

* see page 19

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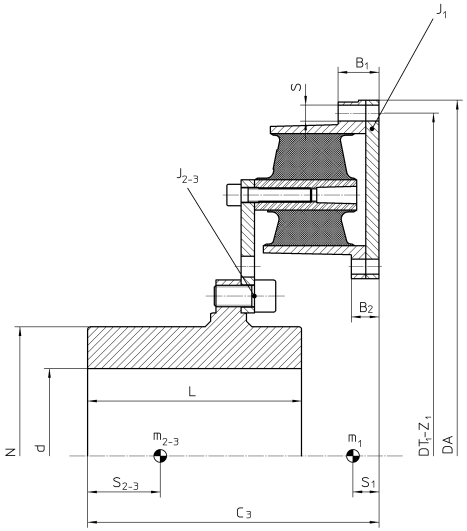
SERIES T0S1 - HUB 3



WITHOUT FLANGE

DIMENSIONS **↓ SIZES 130-770 – 460-1728**

Size	Nominal torque T_{KN} [kNm]	Dimensions							Flange dimensions				Distance centre of gravity, moments of inertia and masses						
		B_1	B_2	C_3	d_1 min	d_1 max	L	N	D_A*	D_{T1}*	Z_1*	S	S_1	S_{2-3}	J_1	J_{2-3}	m_1	m_{2-3}	$m_{total-3}$
130 - 770	17,6 - 22,2	46	31	371	70	200	220	278	770	737,7	*	18 M16	34,8	173,1	5,07	3,38	55,0	99,1	154,1
140 - 770	23,5 - 29,6	46	31	371	70	200	220	278	770	737,7	*	18 M16	34,8	177,8	6,75	3,73	73,3	103,5	176,8
140 - 799	25 - 31,5	46	31	371	70	200	220	278	799	770,0	*	18 M16	34,8	179,3	7,51	4,21	73,3	106,8	180,1
150 - 799	32 - 40	46	31	400	80	225	250	315	799	770,0	*	18 M16	34,8	193,3	9,39	5,50	91,7	140,0	231,6
160 - 869	42 - 52	46	31	400	80	225	250	315	869	833,6	*	18 M16	34,8	200,3	13,70	7,41	110,0	153,4	263,3
240 - 1020	55 - 68	62	62	473	80	275	280	388	1020	986,0	*	21 M20	45,6	219,7	26,05	15,84	158,4	246,9	405,2
250 - 1020	70 - 85	62	62	473	80	275	280	388	1020	986,0	*	21 M20	45,6	224,8	32,56	17,18	197,9	255,8	453,8
260 - 1110	90 - 110	62	62	416	140	300	360	418	1110	1067,8	*	21 M20	45,6	213,5	47,60	26,67	237,5	344,7	582,2
340 - 1260	112 - 130	77	77	513	170	345	400	485	1260	1225,0	*	23 M20	55,4	248,9	70,19	53,48	274,2	539,7	813,9
350 - 1260	140 - 160	77	77	513	170	345	400	485	1260	1225,0	*	23 M20	55,4	252,8	87,73	57,37	342,7	556,3	899,0
360 - 1372	190 - 220	77	77	513	140	380	460	530	1372	*	*	23 M20	55,4	265,2	128,22	90,11	411,3	731,0	1142,3
440 - 1588	250 - 290	102	102	678	215	430	520	600	1588	1544,0	*	28 M24	74,9	327,4	232,46	171,07	570,4	1063,1	1633,5
450 - 1588	315 - 360	102	102	678	215	430	520	600	1588	1544,0	*	28 M24	74,9	333,6	290,58	185,41	713,0	1102,0	1815,0
460 - 1728	425 - 500	102	102	681	235	470	550	660	1728	*	*	28 M24	74,9	340,6	423,82	296,20	855,7	1458,4	2314,1

* see page 19

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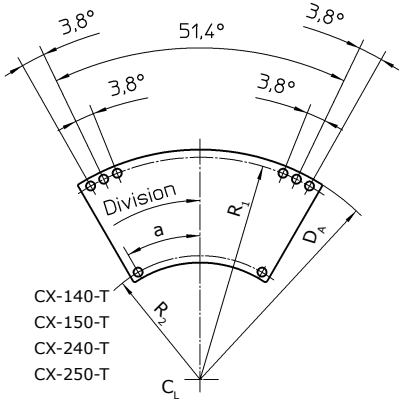
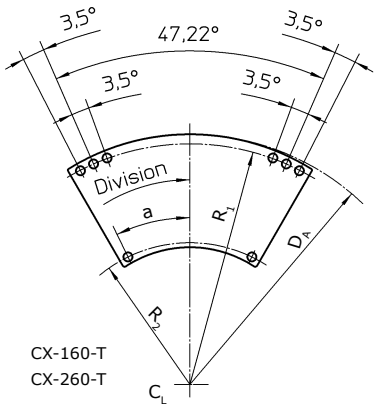
BOLT PATTERN FOR SERIES T0

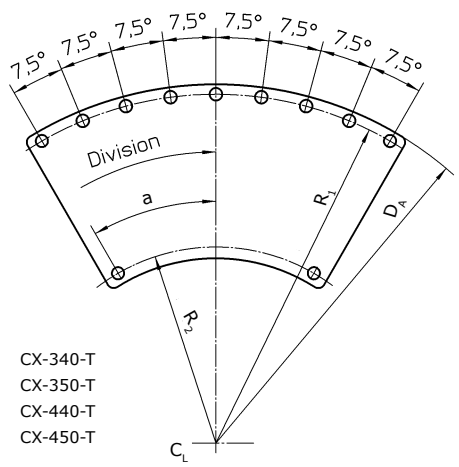
WITHOUT FLYWHEEL FLANGE
SEGMENTS DIRECTLY BOLTED TO THE FLYWHEEL



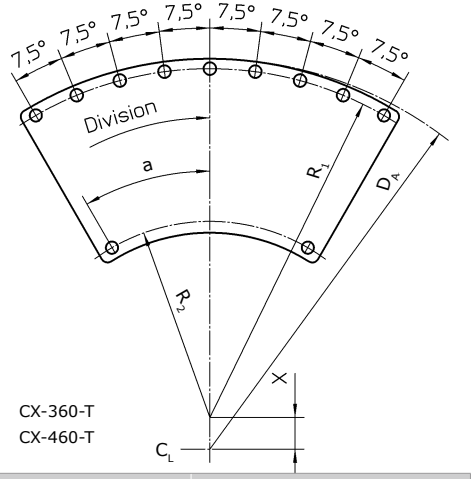
CX-140-T
CX-150-T
CX-240-T
CX-250-T



CX-160-T
CX-260-T



CX-340-T
CX-350-T
CX-440-T
CX-450-T



CX-360-T
CX-460-T

Size	D_A	R_1 ±0,1	R_2 ±0,1	a ±0,02° [ϑ°]	X	Divison	Thread in flywheel
130	440						
140	770						
140	799	385,0	212,5	30	-	4x90°	M16
150	799	385,0	212,5	30	-	5x72°	M16
160	869	416,8	243,4	25,88	-	6x60°	M16
240	1020	493,0	272,0	30	-	4x90°	M20
250	1020	493,0	272,0	30	-	5x72°	M20
260	1110	533,9	311,8	25,86	-	6x60°	M20
340	1260	612,5	346,0	30	-	4x90°	M20
350	1260	612,5	346,0	30	-	5x72°	M20
360	1372	612,5	346,0	30	56	6x60°	M20
440	1588	772,0	434,5	30	-	4x90°	M27
450	1588	772,0	434,5	30	-	5x72°	M27
460	1728	772,0	434,5	30	70	6x60°	M27

Bolt pattern excentric outwards by dimen-sion X on sizes 360 and 460.
Additional bolts on inner pcd "R2" only for high speed applications. Please contact us.

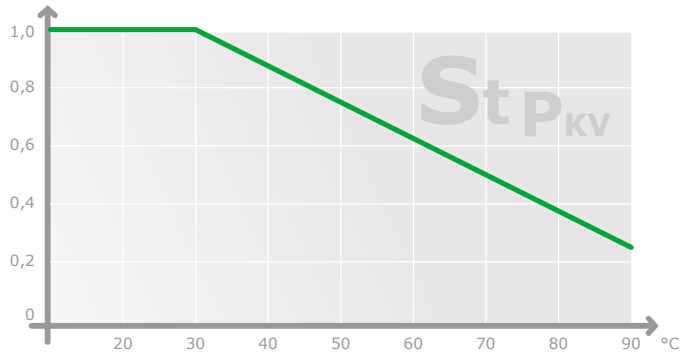
EXPLANATION OF THE TECHNICAL DATA

This appendix shows all explanations of the technical data for all CENTA products.

the green marked explanations are relevant for this catalog:

Are these technical explanations up to date?
click here for an update check!

EXPLANATION OF THE TECHNICAL DATA



1

Size

This spontaneously selected figure designates the size of the coupling.

2

Rubber quality

Shore A

This figure indicates the nominal shore hardness of the elastic element.

The nominal value and the effective value may deviate within given tolerance ranges.

3

Nominal torque

T_{KN} [kNm]

Average torque which can be transmitted continuously over the entire speed range.

4

Maximum torque

[kNm]

T_{Kmax}	This is the torque that may occur occasionally and for a short period up to 1.000 times and may not lead to a substantial temperature rise in the rubber element.

In addition the following maximum torques may occur:

$\Delta T_{Kmax} = 1,8 \times T_{KN}$	Peak torque range (peak to peak) between maximum and minimum torque, e.g. switching operation.
$T_{Kmax1} = 1,5 \times T_{KN}$	Temporary peak torque (e.g. passing through resonances). ΔT_{Kmax} or T_{Kmax1} may occur 50.000 times alternating or 100.000 times swelling.
$T_{Kmax2} = 4,5 \times T_{KN}$	Transient torque rating for very rare, extraordinary conditions (e.g. short circuits).

5

Continuous vibratory torque

T_{KW} [kNm]

Amplitude of the continuously permissible periodic torque fluctuation with a basic load up to the value T_{KN}.

The frequency of the amplitude has no influence on the permissible continuous vibratory torque. Its main influence on the coupling temperature is taken into consideration in the calculation of the power loss.

Operating torque

T_{Bmax} [kNm]

The maximum operating torque results of T_{KN} and T_{KW}.

6

Permissible Power Loss

P_{KV} [kW] or [W]

Damping of vibrations and displacement results in power loss within the rubber element.

The permissible power loss is the maximum heat (converted damping work into heat), which the rubber element can dissipate continuously to the environment (i.e. without time limit) without the maximum permissible temperature being exceeded.

The given permissible power loss refers to an ambient temperature of 30° C.

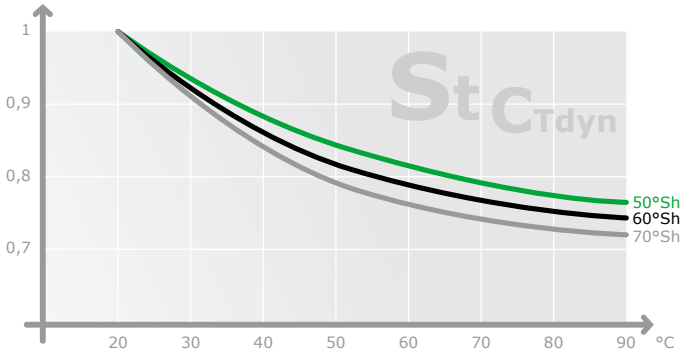
If the coupling is to be operated at a higher ambient temperature, the temperature factor S_{tPKV} has to be taken into consideration in the calculation.

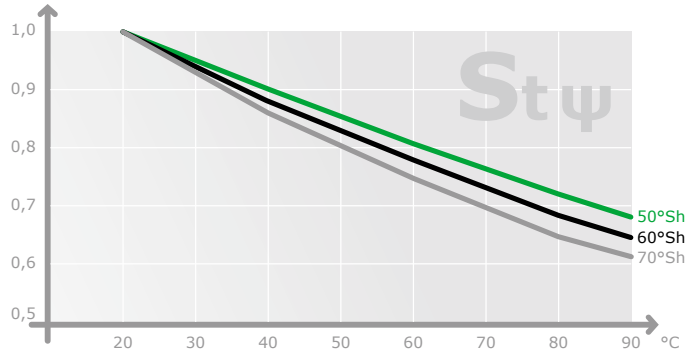
The coupling can momentarily withstand an increase of the permissible power loss for a short period under certain operation modes (e.g. misfiring).

P_{KVZ} [kW]

Defines an individual and proven guide for power loss under misfiring. This value acknowledges general information of the engine suppliers, in particular the real appearance of misfiring and implemented control and protection devices. Values on request.

EXPLANATION OF THE TECHNICAL DATA





7 Dynamic torsional stiffness C_{Tdyn} [kNm/rad]

The dynamic torsional stiffness is the relation of the torque to the torsional angle under dynamic loading.

The torsional stiffness may be linear or progressive depending on the coupling design and material.

The value given for couplings with linear torsional stiffness considers following terms:

- Pre-load: 50% of T_{KN}
- Amplitude of vibratory torque: 25% of T_{KN}
- Ambient temperature: 20°C
- Frequency: 10 Hz

For couplings with progressive torsional stiffness only the pre-load value changes as stated.

The tolerance of the torsional stiffness is ±15% if not stated otherwise.

The following influences need to be considered if the torsional stiffness is required for other operating modes:

- Temperature
  Higher temperature reduces the dynamic torsional stiffness.
  Temperature factor $S_{t\,C_{Tdyn}}$ has to be taken into consideration in the calculation.
- Frequency of vibration
  Higher frequencies increase the torsional stiffness.
  By experience the dynamic torsional stiffness is 30% higher than the static stiffness. CENTA keeps record of exact parameters.
- Amplitude of vibratory torque
  Higher amplitudes reduce the torsional stiffness, therefore small amplitudes result in higher dynamic stiffness. CENTA keeps record of exact parameters.

8 Relative damping ψ

The relative damping is the relationship of the damping work to the elastic deformation during a cycle of vibration.

The larger this value [ψ], the lower is the increase of the continuous vibratory torque within or close to resonance.

The tolerance of the relative damping is ±20%, if not otherwise stated.

The relative damping is reduced at higher temperatures.

Temperature factor $S_{t\psi}$ has to be taken into consideration in the calculation.

The vibration amplitude and frequency only have marginal effect on the relative damping.

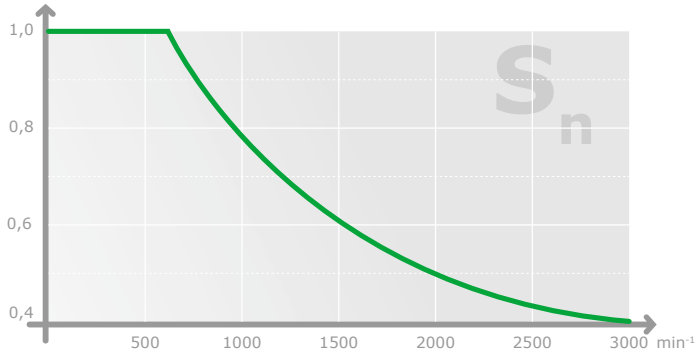
9 Speed [min^{-1}]

n_{max}	The maximum speed of the coupling element, which may occur occasionally and for a short period (e.g. overspeed). The characteristics of mounted parts may require a reduction of the maximum speed (e.g. outer diameter or material of brake discs).
n_d	The maximum permissible speed of highly flexible coupling elements is normally 90% thereof.

10 Permissible axial displacement [mm]

ΔK_a	The continuous permissible axial displacement of the coupling. This is the sum of displacement by assembly as well as static and dynamic displacements during operation.
$\Delta K_{a\,max}$	The maximum axial displacement of the coupling, which may occur occasionally for a short period (e.g. extreme load). The concurrent occurrence of different kinds of displacements is handled in technical documents (displacement diagrams, data sheets, assembly instructions).

EXPLANATION OF THE TECHNICAL DATA



11 Axial stiffness [kN/mm]

C_a	The axial stiffness determines the axial reaction force on the input and output sides upon axial displacement.
$C_{a\ dyn}$	By experience the dynamic stiffness is higher than the static one. The factor depends on the coupling series.

12 Permissible radial displacement [mm]

ΔK_r	The continuous permissible radial displacement of the coupling. This is the sum of displacement by assembly as well as static and dynamic displacements during operation. The continuous permissible radial displacement depends on the operation speed and may require adjustment (see diagrams S_n of the coupling series).
$\Delta K_{r\ max}$	The maximum radial displacement of the coupling, which may occur occasionally and for a short period without consideration of the operation speed (e.g. extreme overload). The concurrent occurrence of different kinds of displacements is handled in technical documents (displacement diagrams, data sheets, assembly instructions).

13 Radial stiffness [kN/mm]

C_r	The radial stiffness determines the radial reaction force on the input and output sides upon radial displacement.
C_{rdyn}	By experience the dynamic stiffness is higher than the static one. The factor depends on the coupling series.

14 Permissible angular displacement [∢°]

ΔK_w	The continuous permissible angular displacement of the coupling. This is the sum of displacement by assembly as well as static and dynamic displacements during operation. The continuous permissible angular displacement depends on the operation speed and may require adjustment (see diagrams S_n of the coupling series).
$\Delta K_{w\ max}$	The maximum angular displacement of the coupling, which may occur occasionally and for a short period without consideration of the operation speed (e.g. extreme overload). The concurrent occurrence of different kinds of displacements is handled in technical documents (displacement diagrams, data sheets, assembly instructions).

15 Angular stiffness [kNm/°]

C_w	The angular stiffness determines the restoring bending moment on the input and output sides upon angular displacement.
C_{wdyn}	By experience the dynamic stiffness is higher than the static one. The factor depends on the coupling series.

CENTAX-SEC

Rev. CX-TT-EN-05-22

1. This catalog supersedes previous editions.

   This catalog shows the extent of our CENTAX®-SEC coupling range at the time of printing. This program is still being extended with further sizes and series. Any changes due to technological progress are reserved.

   We reserve the right to amend any dimensions or detail specified or illustrated in this publication without notice and without incurring any obligation to provide such modification to such couplings previously delivered. Please ask for an application drawing and current data before making a detailed coupling selection.

2. We would like to draw your attention to the need of preventing accidents or injury. No safety guards are included in our supply.

3. TRADEMARKS

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4. Torsional responsibility

   The responsibility for ensuring the torsional vibration compatibility of the complete drive train, rests with the final assembler. As a component supplier CENTA is not responsible for such calculations, and cannot accept any liability for gear noise/ -damage or coupling damage caused by torsional vibrations.

   CENTA recommends that a torsional vibration analysis (TVA) is carried out on the complete drive train prior to start up of the machinery. In general torsional vibration analysis can be undertaken by engine manufacturers, consultants or classicfication societies. CENTA can assist with such calculations using broad experience in coupling applications and torsional vibration analysis.

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6. The dimensions on the flywheel side of the couplings are based on the specifications given by the purchaser. The responsibility for ensuring dimensional compatibility rests with the assembler of the drive train. CENTA cannot accept liability for interference between the coupling and the flywheel or gearbox or for damage caused by such interference.

7. All technical data in this catalog are according to the metric SI system. All dimensions are in mm. All hub dimensions (N, N_1 and N_2) may vary, depending on the required finished bore. All dimensions for masses (m), inertias (J) and centres of gravity (S) refer to the maximum bore diameter.

Motion Control Solutions
CENTA Antriebe Kirschey GmbH

Bergische Strasse 7
42781 Haan
Germany

+49-2129-912-0 Phone
+49-2129-2790 Fax

Contact us: centa.de@regalrexnord.com

www.regalrexnord.com/brands/centa