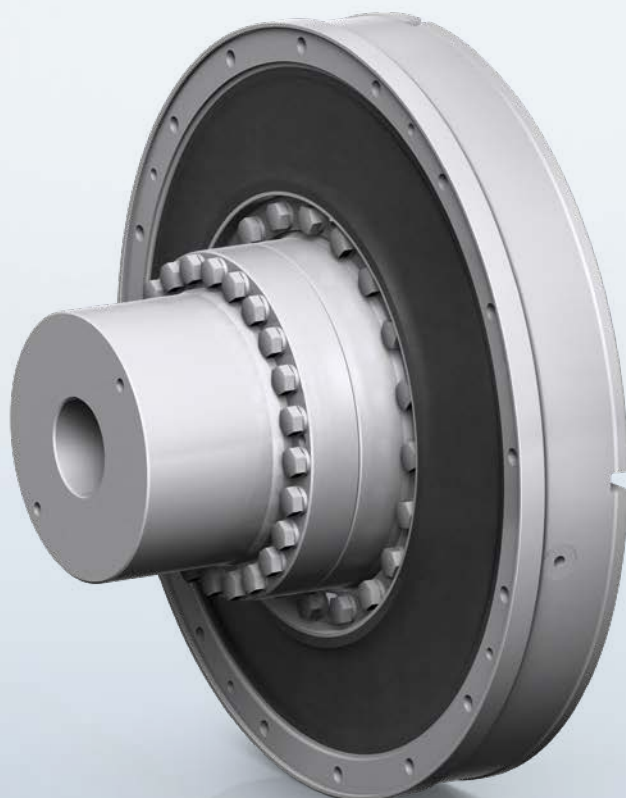


We ensure that systems work better.

VULKAN

RATO DS / RATO DS+

TECHNISCHE DATEN TECHNICAL DATA





08/2022

Das Handsymbol kennzeichnet Seiten, auf denen es eine Veränderung zur Vorgängerversion gibt.
The hand symbol appears on pages which differ from the previous catalogue version.

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RATO DS / RATO DS+

EIGENSCHAFTEN CHARACTERISTICS

DREHMOMENT TORQUE

6,3 kNm – 160,0 kNm

EINSATZGEBIETE

Starr aufgestellte Anlagen

Die RATO DS und RATO DS+ sind hochelastische Kupplungen, die speziell für Anwendungen in Antriebsanlagen mit der Forderung nach hoher Dreh- und mittlerer Verlagerungsnachgiebigkeit entwickelt wurden. In Ergänzung zu den Allround-Kupplungen RATO S und RATO S+ wurden die RATO DS und RATO DS+ Kupplungen entwickelt, um anwendungsspezifische Kupplungsvarianten speziell für starr aufgestellte Schiffshauptantriebe anbieten zu können. Die zur Verfügung stehenden Drehsteifigkeiten bieten die Möglichkeit einer günstigen Abstimmung mit Hinblick auf stationäres und transientes Drehschwingungsverhalten. In der Tradition der VULKAN-Kupplungen wurde eine spielfreie Elementausführung realisiert.

PRODUKTVORTEILE

- ⊕ Das Hochleistungselastomer der ACOTEC Größen erlaubt den Einsatz einer kleineren Baugröße und bietet so einen kommerziellen Vorteil
- ⊕ Ausstattung mit Durchdrehsicherung zum Schutz des Antriebssystems möglich
- ⊕ Maximale Lösungsflexibilität durch hohe Modularität und eine Bandbreite an Sonderausführungen
- ⊕ Die Elementausführung garantiert spielfreie Drehmomentübertragung. Optimale Wärmeabfuhr gewährleistet Funktionalität und Verfügbarkeit der Antriebsanlage unter härtesten Bedingungen
- ⊕ Die kompakte Abmessung der Kupplung sorgt für eine signifikante Gewichtsreduktion und damit für mehr Effizienz im Antrieb sowie niedrigere Projektkosten

AREAS OF APPLICATION

Rigidly mounted engines

The highly flexible RATO DS and RATO DS+ couplings has been specially designed for use in installations requiring a high level of torsional flexibility and medium level of misalignment capacity. Supplementing the all-round couplings RATO S and RATO S+. The RATO DS / RATO DS+ couplings has been developed to offer an application-orientated coupling design. Specially for rigidly mounted ship's main propulsion. The available stiffnesses enable a good tuning of the system with respect to both the transient and steady-state torsional vibration response. In the tradition of VULKAN Couplings, a backlash-free torque transmission is achieved.

PRODUCT BENEFITS

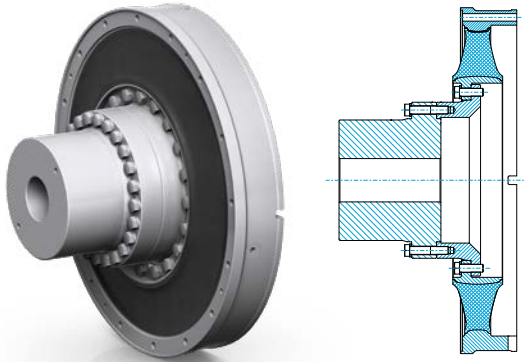
- ⊕ High-performance elastomer of the ACOTEC sizes allows the use of a smaller size and thus offers a commercial benefit.
- ⊕ It is possible to provide a safety device against racing to protect the drive system
- ⊕ Maximum flexibility for the solution and a range of special design
- ⊕ The element design delivers torque transmission without any play. Optimal heat dissipation ensures functionality and availability of the drive system even under the harshest conditions
- ⊕ The compact dimensions of the coupling ensure considerable weight reduction and therefore greater efficiency in the drive as well as lower project costs

RATO DS / RATO DS+

BAUREIHENÜBERSICHT SUMMARY OF SERIES

2200

Baureihe Series
Seite 10 Page 10



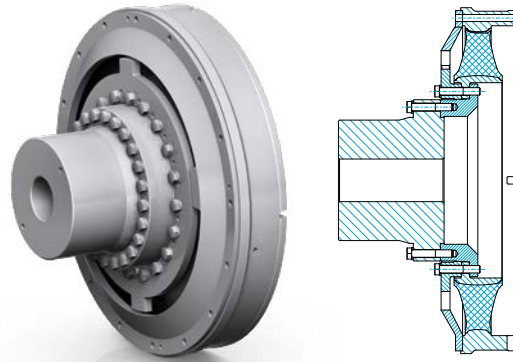
Zur Verbindung eines Schwungrades mit einer Welle.

For connecting a flywheel with a shaft.

Baugruppe Dimension Group	A 2K10 - A 3DD0
Nenn Drehmoment Nominal Torque	22,00 kNm - 110,00 kNm

2201

Baureihe Series
Seite 12 Page 12



Zur Verbindung eines Schwungrades mit einer Welle.

For connecting a flywheel with a shaft.

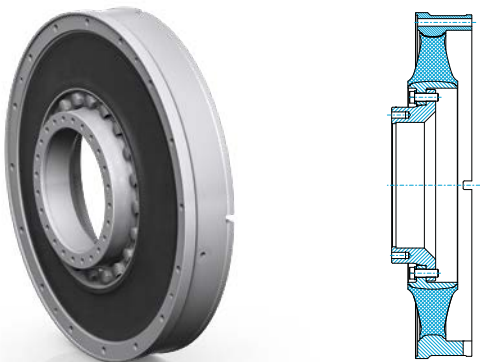
Mit Durchdrehsicherung.

With torsional limit device.

Baugruppe Dimension Group	A 2K10 - A 3DD0
Nenn Drehmoment Nominal Torque	22,00 kNm - 110,00 kNm

2300

Baureihe Series
Seite 14 Page 14



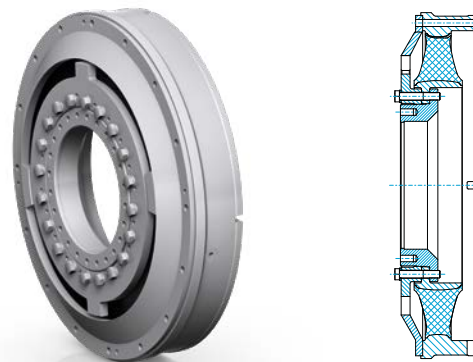
Zur Verbindung eines Schwungrades mit einem Flansch.

For connecting a flywheel with a flange.

Baugruppe Dimension Group	A 2K10 - A 3DD0
Nenn Drehmoment Nominal Torque	22,00 kNm - 110,00 kNm

2301

Baureihe Series
Seite 16 Page 16



Zur Verbindung eines Schwungrades mit einem Flansch.

For connecting a flywheel with a flange.

Mit Durchdrehsicherung.

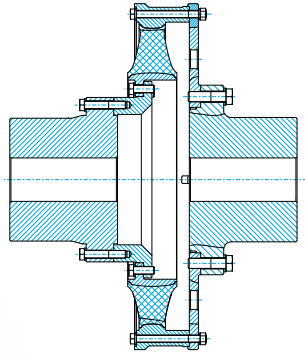
With torsional limit device.

Baugruppe Dimension Group	A 2K10 - A 3DD0
Nenn Drehmoment Nominal Torque	22,00 kNm - 110,00 kNm

2400
BAUREIHE SERIES
Seite 18 Page 18



Zur Verbindung zweier Wellen.



For the connection of two shafts.

Baugruppe	Dimension Group	A 2K10 – A 3DD0
Nenn Drehmoment	Nominal Torque	22,00 kNm – 110,00 kNm

RATO DS / RATO DS+

LEISTUNGSDATEN PERFORMANCE DATA

Kupplungstyp Type of Coupling		T_{KN}	T_{Kmax1}	T_{Kmax2}	ΔT_{Kmax}	T_{KW}	P_{KV30}	$n_{Kmax}^{1)}$	ΔK_s	$\Delta K_r^{1)}$	ΔK_w	$C_{axdyn}^{2)}$	$C_{rdyn}^{2)}$	$C_{wdyn}^{2)}$	$C_{Tdyn}^{2)}$	$\psi^{2)}$
Größe Size	Baugruppe Dimension Group	Nennrehmoment Nominal Torque	Max. Drehmoment ₁ Max. Torque ₁	Max. Drehmoment ₂ Max. Torque ₂	Drehmomentbereich Torque Range	Wechseldrehmoment Vibratory Torque	Verlustleistung Power Loss	Drehzahl Rotational Speed	Axialer Kupplungsversatz Axial Coupling Displacement	Radialer Kupplungsversatz Radial Coupling Displacement	Winkliger Kupplungsversatz Angular Coupling Displacement	Axiale Federsteife Axial Stiffness	Dyn. Radiale Federsteife Dyn. Radial Stiffness	Dyn. Winkliger Federsteife Dyn. Angular Stiffness	Dynamische Drehfedersteife Dynamic Torsional Stiffness	Verhältnismäßige Dämpfung Relative Damping
		[kNm]	[kNm]	[kNm]	[kNm]	[kNm]	[kW]	[1/min]	[mm]	[mm]	[°]	[kN/mm]	[kN/mm]	[kNm/°]	[kNm/rad]	[-]
A 211Z	A2110	6,3	7,5	28,0	9,0	2,4	0,48	2.100	7,7	1,4	0,5	0,5	1,9	0,26	32	0,90
A 2111	A2110	8,0	8,5	36,0	10,5	2,4	0,48	2.100	7,7	1,4	0,5	0,6	2,4	0,33	40	1,13
A 2115	A2110	10,0	11,0	45,0	13,5	3,0	0,48	2.100	5,9	1,1	0,5	0,8	3,2	0,43	53	1,13
A 2116	A2110	10,0	13,5	45,0	16,5	3,0	0,48	2.100	3,9	0,7	0,5	1,2	4,8	0,65	80	1,13
A 21DZ	A21D0	12,5	15,0	56,5	18,0	4,8	0,95	2.100	7,7	1,4	0,5	1,0	3,8	0,71	64	0,90
A 21D1	A21D0	16,0	17,0	72,0	20,5	4,8	0,95	2.100	7,7	1,4	0,5	1,2	4,8	0,88	80	1,13
A 21D5	A21D0	20,0	22,0	90,0	26,5	6,0	0,95	2.100	5,9	1,1	0,5	1,6	6,3	1,16	105	1,13
A 21D6	A21D0	20,0	27,5	90,0	33,0	6,0	0,95	2.100	3,9	0,7	0,5	2,4	9,6	1,77	160	1,13
A 231Z	A2310	8,0	9,5	36,0	11,5	3,0	0,49	2.050	8,4	1,5	0,5	0,5	2,1	0,33	40	0,90
A 2311	A2310	10,0	10,5	45,0	13,0	3,0	0,49	2.050	8,4	1,5	0,5	0,6	2,6	0,41	50	1,13
A 2315	A2310	12,5	14,0	56,5	16,5	3,8	0,49	2.050	6,4	1,1	0,5	0,8	3,4	0,54	66	1,13
A 2316	A2310	12,5	17,0	56,5	20,5	3,8	0,49	2.050	4,2	0,8	0,5	1,3	5,2	0,82	100	1,13
A 23DZ	A23D0	16,0	19,0	72,0	22,5	6,0	1,00	2.050	8,4	1,5	0,5	1,0	4,2	0,88	80	0,90
A 23D1	A23D0	20,0	21,5	90,0	25,5	6,0	1,00	2.050	8,4	1,5	0,5	1,2	5,2	1,10	100	1,13
A 23D5	A23D0	25,0	28,0	112,5	33,5	7,5	1,00	2.050	6,4	1,1	0,5	1,6	6,8	1,45	131	1,13
A 23D6	A23D0	25,0	34,0	112,5	41,0	7,5	1,00	2.050	4,2	0,8	0,5	2,6	10,4	2,21	200	1,13
A 251Z	A2510	10,0	12,0	45,0	14,0	3,8	0,55	1.800	9,1	1,7	0,5	0,5	2,2	0,41	50	0,90
A 2511	A2510	12,5	13,5	56,5	16,0	3,8	0,55	1.800	9,1	1,7	0,5	0,7	2,8	0,51	63	1,13
A 2515	A2510	16,0	18,0	71,0	21,5	4,7	0,55	1.800	6,9	1,3	0,5	0,9	3,7	0,68	83	1,13
A 2516	A2510	16,0	22,0	71,0	26,5	4,7	0,55	1.800	4,6	0,8	0,5	1,3	5,6	1,02	125	1,13
A 25DZ	A25D0	20,0	23,5	90,0	28,5	7,5	1,08	1.800	9,1	1,7	0,5	1,0	4,4	1,10	100	0,90
A 25D1	A25D0	25,0	27,0	112,5	32,0	7,5	1,08	1.800	9,1	1,7	0,5	1,4	5,6	1,38	125	1,13
A 25D5	A25D0	31,5	35,5	142,0	42,5	9,5	1,08	1.800	6,9	1,3	0,5	1,8	7,4	1,82	165	1,13
A 25D6	A25D0	31,5	44,0	142,0	52,5	9,5	1,08	1.800	4,6	0,8	0,5	2,6	11,2	2,76	250	1,13
A 271Z	A2710	12,5	15,0	56,5	18,0	4,7	0,59	1.700	9,8	1,8	0,5	0,6	2,4	0,51	63	0,90
A 2711	A2710	16,0	17,0	71,0	20,5	4,7	0,59	1.700	9,8	1,8	0,5	0,7	3,0	0,64	79	1,13
A 2715	A2710	20,0	22,0	90,0	26,5	6,0	0,59	1.700	7,5	1,4	0,5	0,9	4,0	0,86	105	1,13
A 2716	A2710	20,0	27,5	90,0	33,0	6,0	0,59	1.700	4,9	0,9	0,5	1,4	6,0	1,29	158	1,13
A 27DZ	A27D0	25,0	30,0	112,5	36,0	9,5	1,16	1.700	9,8	1,8	0,5	1,2	4,8	1,39	126	0,90
A 27D1	A27D0	31,5	34,5	142,0	41,0	9,5	1,16	1.700	9,8	1,8	0,5	1,4	6,0	1,75	158	1,13
A 27D5	A27D0	40,0	44,5	180,0	53,5	12,0	1,16	1.700	7,5	1,4	0,5	1,8	7,9	2,32	210	1,13
A 27D6	A27D0	40,0	54,5	180,0	65,5	12,0	1,16	1.700	4,9	0,9	0,5	2,8	12,0	3,49	316	1,13
A 2K1S	A2K10	22,0	29,0	90,0	22,5	6,0	0,63	1.600	10,7	2,0	0,5	0,7	3,0	0,73	90	0,75
A 2K1M	A2K10	27,5	36,0	112,5	25,5	7,5	0,63	1.600	10,7	2,0	0,5	0,9	3,8	0,94	115	0,75
A 2K1H	A2K10	35,0	45,5	142,0	33,5	9,5	0,63	1.600	8,2	1,5	0,5	1,3	5,0	1,22	150	1,00
A 2KDS	A2KD0	44,0	58,0	180,0	45,5	12,0	1,25	1.600	10,7	2,0	0,5	1,4	6,0	1,99	180	0,75
A 2KDM	A2KD0	55,0	72,0	225,0	51,5	15,0	1,25	1.600	10,7	2,0	0,5	1,8	7,6	2,54	230	0,75
A 2KDH	A2KD0	70,0	91,0	284,0	66,5	18,9	1,25	1.600	8,2	1,5	0,5	2,6	10,0	3,31	300	1,00

Siehe Erläuterung der Technischen Daten

- 1) Der Betriebszustand der Anlage kann eine Korrektur der gegebenen Werte notwendig machen.
- 2) Materialbedingte Steifigkeitstoleranz von +/-15% möglich. Die verhältnismäßige Dämpfung kann eine Toleranz von -30% bis +10% aufweisen.

See Explanation of the Technical Data

- 1) The operating state of the system can make it necessary to correct the values given.
- 2) Material caused stiffness tolerance of +/-15% possible. The relative damping can be subject to a tolerance of -30% to +10%.

Kupplungstyp Type of Coupling		T_{KN}	T_{Kmax1}	T_{Kmax2}	ΔT_{Kmax}	T_{KW}	P_{KV30}	n_{Kmax}^{11}	ΔK_s	ΔK_r^{11}	ΔK_w	C_{axdyn}^{21}	C_{rdyn}^{21}	C_{wdyn}^{21}	C_{tdyn}^{21}	ψ^{21}
		[kNm]	[kNm]	[kNm]	[kNm]	[kNm]	[kW]	[1/min]	[mm]	[mm]	[°]	[kN/mm]	[kN/mm]	[kNm/°]	[kNm/rad]	[-]
Größe Size	Baugruppe Dimension Group	Nennreh- moment Nominal Torque	Max. Dreh- moment ₁ Max. Torque ₁	Max. Dreh- moment ₂ Max. Torque ₂	Drehmoment Bereich Torque Range	Wechsel- drehmoment Vibratory Torque	Verlust- leistung Power Loss	Drehzahl Rotational Speed	Axialer Kupplungs- versatz Axial Coupling Displacement	Radialer Kupplungs- versatz Radial Coupling Displacement	Winkliger Kupplungs- versatz Angular Coupling Displacement	Axiale Federsteife Axial Stiffness	Dyn. Radiale Federsteife Dyn. Radial Stiffness	Dyn. Winklige Federsteife Dyn. Angular Stiffness	Dynamische Drehfedersteife Dynamic Torsional Stiffness	Verhältnis- mäßige Dämpfung Relative Damping
A 311Z	A3110	20,0	23,5	90,0	28,5	7,5	0,67	1.410	11,2	2,0	0,5	0,7	2,8	0,82	100	0,90
A 3111	A3110	25,0	27,0	112,5	32,0	7,5	0,67	1.410	11,2	2,0	0,5	0,9	3,6	1,02	125	1,13
A 3115	A3110	31,5	35,0	142,0	42,0	9,5	0,67	1.410	8,5	1,5	0,5	1,2	4,8	1,35	166	1,13
A 3116	A3110	31,5	43,0	142,0	51,5	9,5	0,67	1.410	5,6	1,0	0,5	1,7	7,1	2,04	250	1,13
A 31DZ	A31D0	40,0	47,0	180,0	56,5	15,0	1,33	1.410	11,2	2,0	0,5	1,4	5,6	2,21	200	0,90
A 31D1	A31D0	50,0	53,5	225,0	64,5	15,0	1,33	1.410	11,2	2,0	0,5	1,8	7,2	2,76	250	1,13
A 31D5	A31D0	63,0	70,0	283,5	84,0	18,9	1,33	1.410	8,5	1,5	0,5	2,4	9,5	3,66	331	1,13
A 31D6	A31D0	63,0	86,0	283,5	103,5	18,9	1,33	1.410	5,6	1,0	0,5	3,4	14,2	5,52	500	1,13
A 3D1S	A3D10	35,0	45,5	142,0	35,5	10,0	0,76	1.350	12,5	2,3	0,5	0,8	3,6	1,22	150	0,75
A 3D1M	A3D10	44,0	57,0	180,0	40,5	12,0	0,76	1.350	12,5	2,3	0,5	1,2	4,8	1,63	200	0,75
A 3D1H	A3D10	55,0	71,5	225,0	53,5	15,0	0,76	1.350	9,5	1,8	0,5	1,4	5,7	1,96	240	1,00
A 3DDS	A3DD0	70,0	91,0	284,0	71,5	20,0	1,52	1.350	12,5	2,3	0,5	1,6	7,2	3,31	300	0,75
A 3DDM	A3DD0	88,0	114,0	360,0	81,0	24,0	1,52	1.350	12,5	2,3	0,5	2,4	9,6	4,42	400	0,75
A 3DDH	A3DD0	110,0	143,0	450,0	107,0	30,0	1,52	1.350	9,5	1,8	0,5	2,8	11,4	5,30	480	1,00
A 341Z	A3410	31,5	37,5	142,0	45,5	12,0	0,83	1.250	13,5	2,5	0,5	0,8	3,2	1,30	160	0,90
A 3411	A3410	40,0	43,0	180,0	51,5	12,0	0,83	1.250	13,5	2,5	0,5	1,0	4,0	1,63	200	1,13
A 3415	A3410	50,0	55,5	225,0	66,5	15,0	0,83	1.250	10,3	2,0	0,5	1,3	5,3	2,14	263	1,13
A 3416	A3410	50,0	68,5	225,0	82,0	15,0	0,83	1.250	6,8	1,3	0,5	2,0	8,0	3,26	400	1,13
A 34DZ	A34D0	63,0	75,5	283,5	90,5	24,0	1,64	1.250	13,5	2,5	0,5	1,6	6,4	3,53	320	0,90
A 34D1	A34D0	80,0	86,0	360,0	103,0	24,0	1,64	1.250	13,5	2,5	0,5	2,0	8,0	4,42	400	1,13
A 34D5	A34D0	100,0	111,0	450,0	133,5	30,0	1,64	1.250	10,3	2,0	0,5	2,6	10,5	5,80	525	1,13
A 34D6	A34D0	100,0	137,0	450,0	164,0	30,0	1,64	1.250	6,8	1,3	0,5	4,0	16,0	8,84	800	1,13
A 391Z	A3910	50,0	55,5	225,0	66,5	18,8	0,88	1.040	15,5	3,0	0,5	1,0	4,5	2,04	250	0,90
A 3911	A3910	63,0	66,0	281,5	80,5	18,8	0,88	1.040	14,0	2,7	0,5	1,5	6,0	2,55	313	1,13
A 3915	A3910	80,0	85,0	360,0	103,0	24,0	0,88	1.040	11,0	2,5	0,5	1,9	7,9	3,43	420	1,13
A 3916	A3910	80,0	105,0	360,0	125,0	24,0	0,88	1.040	7,5	1,7	0,5	2,6	11,5	5,22	640	1,13
A 39DZ	A39D0	100,0	111,0	450,0	133,0	37,5	1,76	1.040	15,5	3,0	0,5	2,0	9,0	5,52	500	0,90
A 39D1	A39D0	125,0	132,0	562,5	161,0	37,5	1,76	1.040	14,0	2,7	0,5	3,0	12,0	6,90	625	1,13
A 39D5	A39D0	160,0	170,0	720,0	206,0	48,0	1,76	1.040	11,0	2,5	0,5	3,8	15,8	9,28	840	1,13
A 39D6	A39D0	160,0	210,0	720,0	250,0	48,0	1,76	1.040	7,5	1,7	0,5	5,2	23,0	14,14	1.280	1,13

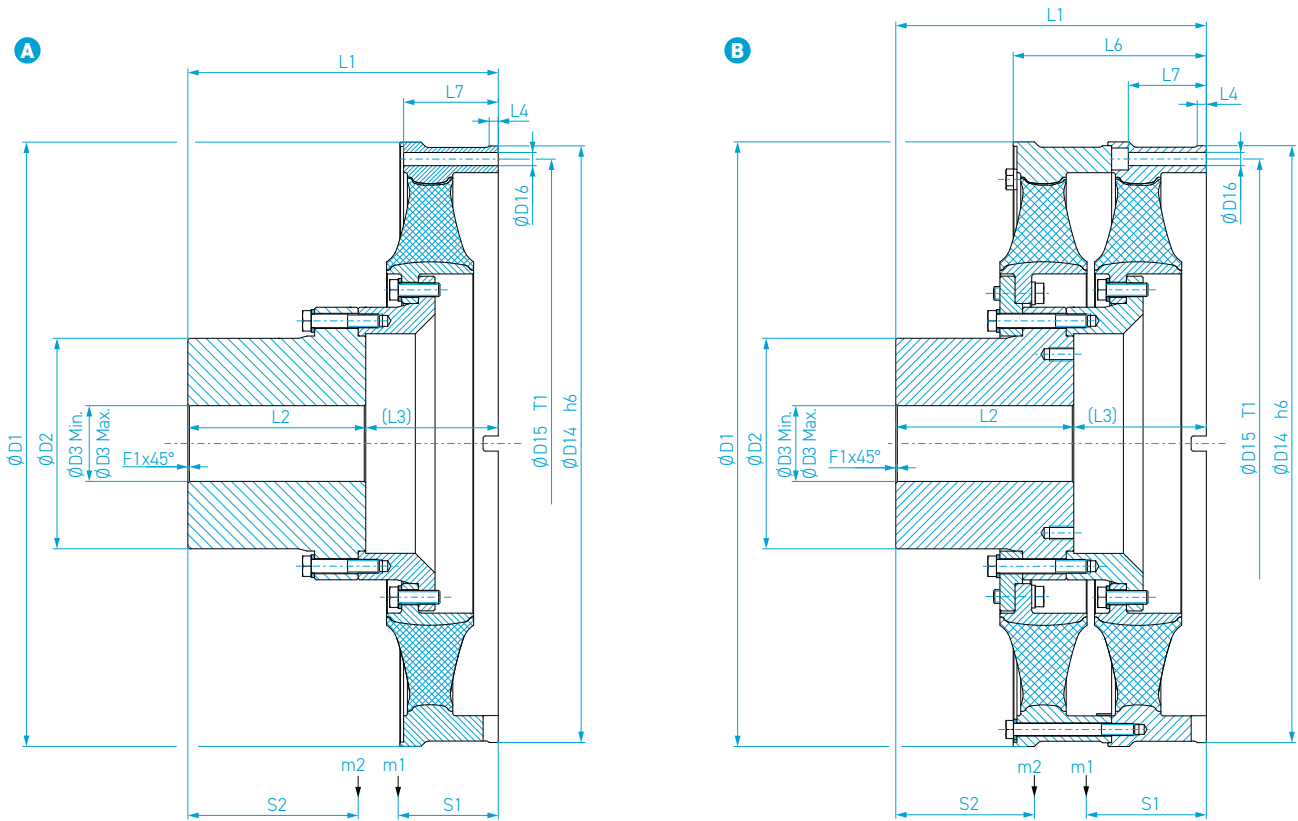
Siehe Erläuterung der Technischen Daten

- Der Betriebszustand der Anlage kann eine Korrektur der gegebenen Werte notwendig machen.
- Materialbedingte Steifigkeitstoleranz von +/-15% möglich. Die verhältnismäßige Dämpfung kann eine Toleranz von -30% bis +10% aufweisen.

See Explanation of the Technical Data

- The operating state of the system can make it necessary to correct the values given.
- Material caused stiffness tolerance of +/-15% possible. The relative damping can be subject to a tolerance of -30% to +10%.

GEOMETRISCHE DATEN GEOMETRIC DATA



Baugruppe
Dimension Group

Abbildung
Figure

Abmessungen
Dimension

		D ₁	D ₂	D ₃		D ₁₄	D ₁₅	T ₁	D ₁₆	L ₁	L ₂	L ₃
		[mm]	[mm]	[mm] Min.	[mm] Max.	[mm]	[mm]	[-] Teilung / Pitch	[mm]	[mm]	[mm]	[mm]
A 2110	A	645,0	223,0	80,0	160,0	635,0	608,0	16	13,5	325,0	185,0	140,0
A 21D0	B	645,0	223,0	80,0	160,0	635,0	608,0	32	13,5	325,0	185,0	140,0
A 2310	A	690,0	238,0	110,0	170,0	680,0	650,0	16	15,5	350,0	195,0	155,0
A 23D0	B	690,0	238,0	110,0	170,0	680,0	650,0	32	15,5	350,0	195,0	155,0
A 2510	A	740,0	258,0	110,0	185,0	730,0	700,0	16	15,5	385,0	225,0	160,0
A 25D0	B	740,0	258,0	110,0	185,0	730,0	700,0	32	15,5	385,0	225,0	160,0
A 2710	A	800,0	278,0	100,0	200,0	790,0	755,0	16	17,5	410,0	235,0	175,0
A 27D0	B	800,0	278,0	100,0	200,0	790,0	755,0	32	17,5	410,0	235,0	175,0
A 2910	A	870,0	306,0	110,0	220,0	860,0	820,0	16	20,0	440,0	250,0	190,0
A 29D0	B	870,0	306,0	110,0	220,0	860,0	820,0	32	20,0	440,0	250,0	190,0
A 2K10	A	870,0	306,0	110,0	220,0	860,0	820,0	16	20,0	440,0	250,0	190,0
A 2KD0	B	870,0	306,0	110,0	220,0	860,0	820,0	32	20,0	440,0	250,0	190,0
A 3110	A	935,0	325,0	115,0	235,0	920,0	880,0	16	20,0	475,0	285,0	190,0
A 31D0	B	935,0	325,0	115,0	235,0	920,0	880,0	32	20,0	475,0	285,0	190,0
A 3310	A	1.010,0	357,0	150,0	255,0	995,0	950,0	16	22,0	495,0	300,0	195,0
A 33D0	B	1.010,0	357,0	150,0	255,0	995,0	950,0	32	22,0	495,0	300,0	195,0
A 3D10	A	1.010,0	357,0	150,0	255,0	995,0	950,0	16	22,0	495,0	300,0	195,0
A 3DD0	B	1.010,0	357,0	150,0	255,0	995,0	950,0	32	22,0	495,0	300,0	195,0
A 3410	A	1.085,0	385,0	160,0	275,0	1.070,0	1.025,0	16	24,0	530,0	310,0	220,0
A 34D0	B	1.085,0	385,0	160,0	275,0	1.070,0	1.025,0	32	24,0	530,0	310,0	220,0
A 3910	A	1.255,0	448,0	200,0	320,0	1.240,0	1.190,0	16	26,0	635,0	385,0	250,0
A 39D0	B	1.255,0	448,0	200,0	320,0	1.240,0	1.190,0	32	26,0	635,0	385,0	250,0

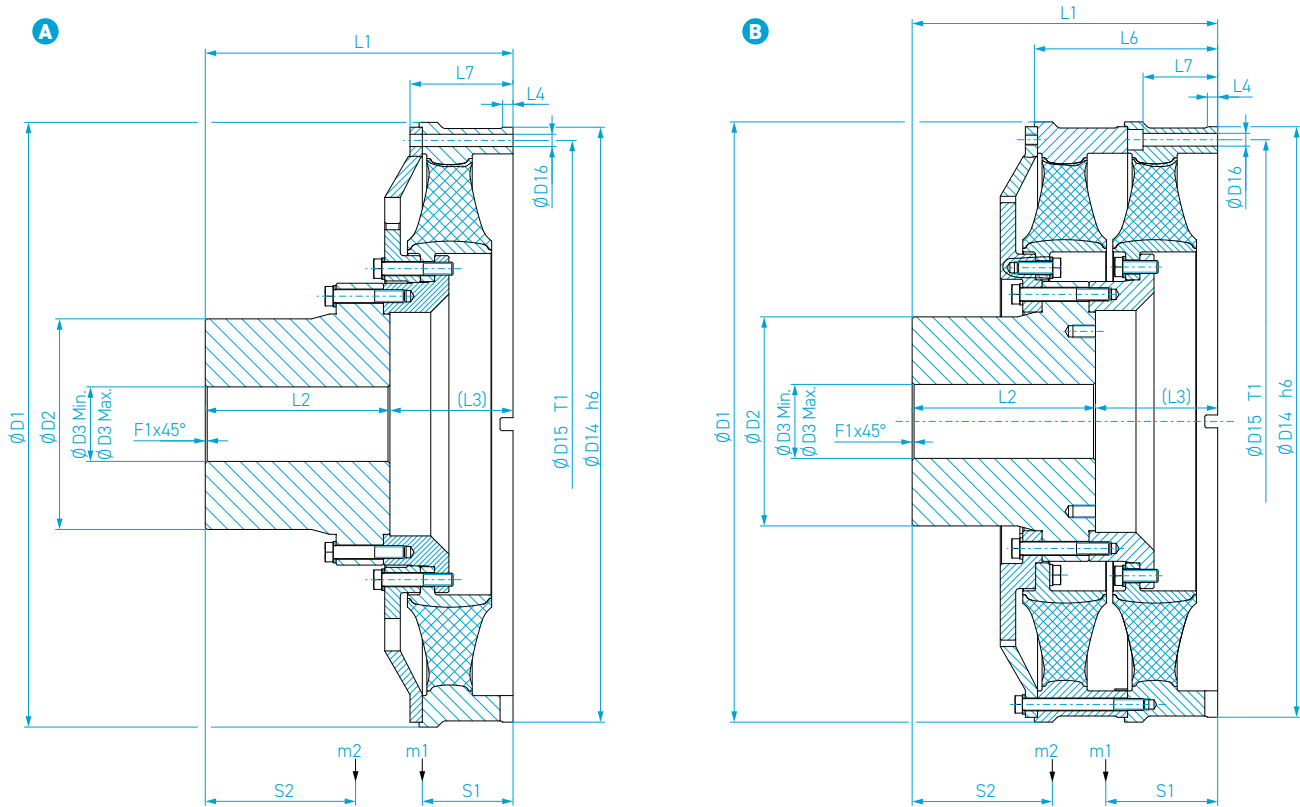
Abmessungen Dimension				Massenträgheitsmomente Mass moments of inertia			Masse Mass		Schwerpunktsabstand Distance to center of gravity		Anmerkungen Notes
L_4	L_6	L_7	F_1	J_1	J_2	m_1	m_2	S_1	S_2		
[mm]	[mm]	[mm]	[mm]	[kgm ²]	[kgm ²]	[kg]	[kg]	[mm]	[mm]		
12,0	-	100,0	1,6	4,5	1,5	50,0	98,0	57,0	153,0		
12,0	205,0	82,0	1,6	8,8	2,3	99,0	123,0	109,0	150,0		
12,0	-	110,0	1,6	6,7	2,1	67,0	112,0	62,0	169,0		
12,0	225,0	90,0	1,6	13,3	3,2	131,0	146,0	120,0	163,0		
12,0	-	115,0	2,0	8,9	3,2	75,0	148,0	65,0	184,0		
12,0	235,0	95,0	2,0	17,5	4,8	149,0	188,0	125,0	181,0		
12,0	-	125,0	2,0	13,5	4,5	98,0	187,0	70,0	192,0		
12,0	255,0	103,0	2,0	26,6	6,9	194,0	238,0	136,0	189,0		
12,0	-	135,0	2,0	21,0	6,8	128,0	238,0	75,0	204,0		
12,0	275,0	111,0	2,0	41,2	10,3	254,0	299,0	146,0	200,0		
12,0	-	135,0	2,0	21,0	6,8	128,0	238,0	75,0	204,0		
12,0	275,0	111,0	2,0	41,2	10,3	254,0	299,0	146,0	200,0		
16,0	-	140,0	3,0	28,1	10,0	151,0	306,0	78,0	225,0		
16,0	285,0	116,0	3,0	55,7	15,0	299,0	381,0	152,0	223,0		
16,0	-	150,0	3,0	39,8	14,2	182,0	363,0	84,0	236,0		
16,0	305,0	124,0	3,0	78,9	21,6	360,0	449,0	163,0	231,0		
16,0	-	150,0	3,0	39,9	14,2	182,0	363,0	84,0	236,0		
16,0	305,0	124,0	3,0	78,8	21,6	360,4	459,5	162,7	231,4		
16,0	-	160,0	3,0	55,7	20,5	220,0	446,0	89,0	250,0		
16,0	325,0	132,0	3,0	110,3	31,1	435,0	563,0	173,0	246,0		
21,0	-	182,0	4,0	112,0	44,6	327,0	717,0	102,0	307,0		
21,0	369,0	152,0	4,0	221,0	67,1	647,0	900,0	197,0	304,0		

Alle Massen, Schwerpunkte und Massenträgheitsmomente beziehen sich auf min. Nabenbohrung (Ø D3 min).

All masses, focal points and mass moments of inertia refer to min. hub bore (Ø D3 min).



GEOMETRISCHE DATEN GEOMETRIC DATA



Baugruppe
Dimension Group

Abbildung
Figure

Abmessungen
Dimension

		D_1	D_2	D_3		D_{14}	D_{15}	T_1	D_{16}	L_1	L_2	L_3
		[mm]	[mm]	[mm] Min.	[mm] Max.	[mm]	[mm]	[-] Teilung / Pitch	[mm]	[mm]	[mm]	[mm]
A 2110	A	645,0	223,0	80,0	160,0	635,0	608,0	16	13,5	325,0	185,0	140,0
A 21D0	B	645,0	223,0	80,0	160,0	635,0	608,0	32	13,5	325,0	185,0	140,0
A 2310	A	690,0	238,0	80,0	170,0	680,0	650,0	16	15,5	350,0	195,0	155,0
A 23D0	B	690,0	238,0	80,0	170,0	680,0	650,0	32	15,5	350,0	195,0	155,0
A 2510	A	740,0	258,0	110,0	185,0	730,0	700,0	16	15,5	385,0	225,0	160,0
A 25D0	B	740,0	258,0	110,0	185,0	730,0	700,0	32	15,5	385,0	225,0	160,0
A 2710	A	800,0	278,0	100,0	200,0	790,0	755,0	16	17,5	410,0	235,0	175,0
A 27D0	B	800,0	278,0	100,0	200,0	790,0	755,0	32	17,5	410,0	235,0	175,0
A 2910	A	870,0	306,0	110,0	220,0	860,0	820,0	16	20,0	440,0	250,0	190,0
A 29D0	B	870,0	306,0	110,0	220,0	860,0	820,0	32	20,0	440,0	250,0	190,0
A 2K10	A	870,0	306,0	110,0	220,0	860,0	820,0	16	20,0	440,0	250,0	190,0
A 2KD0	B	870,0	306,0	110,0	220,0	860,0	820,0	32	20,0	440,0	250,0	190,0
A 3110	A	935,0	325,0	115,0	235,0	920,0	880,0	16	20,0	475,0	285,0	190,0
A 31D0	B	935,0	325,0	115,0	235,0	920,0	880,0	32	20,0	475,0	285,0	190,0
A 3310	A	1.010,0	357,0	150,0	255,0	995,0	950,0	16	22,0	495,0	300,0	195,0
A 33D0	B	1.010,0	357,0	150,0	255,0	995,0	950,0	32	22,0	495,0	300,0	195,0
A 3D10	A	1.010,0	357,0	150,0	255,0	995,0	950,0	16	22,0	495,0	300,0	195,0
A 3DD0	B	1.010,0	357,0	150,0	255,0	995,0	950,0	32	22,0	495,0	300,0	195,0
A 3410	A	1.085,0	385,0	160,0	275,0	1.070,0	1.025,0	16	24,0	530,0	310,0	220,0
A 34D0	B	1.085,0	385,0	160,0	275,0	1.070,0	1.025,0	32	24,0	530,0	310,0	220,0
A 3910	A	1.255,0	448,0	200,0	320,0	1.240,0	1.190,0	16	26,0	635,0	385,0	250,0
A 39D0	B	1.255,0	448,0	200,0	320,0	1.240,0	1.190,0	32	26,0	635,0	385,0	250,0

Abmessungen Dimension				Massenträgheitsmomente Mass moments of inertia		Masse Mass		Schwerpunktsabstand Distance to center of gravity		Anmerkungen Notes
L_4	L_6	L_7	F_1	J_1	J_2	m_1	m_2	S_1	S_2	
[mm]	[mm]	[mm]	[mm]	[kgm ²]	[kgm ²]	[kg]	[kg]	[mm]	[mm]	
12,0	-	113,0	1,6	5,7	2,0	66,0	110,0	68,0	160,0	
12,0	205,0	82,0	1,6	9,9	2,7	113,0	133,0	122,0	146,0	
12,0	-	124,0	1,6	8,8	2,6	90,0	123,0	74,0	162,0	
12,0	225,0	90,0	1,6	14,9	3,7	149,5	159,0	134,0	159,0	
12,0	-	130,0	2,0	11,4	3,8	99,0	171,0	79,0	189,0	
12,0	235,0	95,0	2,0	19,9	5,4	172,0	202,0	141,0	177,0	
12,0	-	141,0	2,0	17,0	6,1	126,0	216,0	84,0	201,0	
12,0	255,0	103,0	2,0	29,7	8,1	219,0	261,0	151,0	183,0	
12,0	-	152,0	2,0	26,6	8,6	167,0	268,0	90,0	212,0	
12,0	275,0	111,0	2,0	46,2	11,8	288,0	325,0	164,0	194,0	
12,0	-	152,0	2,0	25,8	8,6	163,4	269,2	92,5	210,5	
12,0	275,0	111,0	2,0	46,2	11,8	288,0	325,0	164,0	194,0	
16,0	-	159,0	3,0	35,6	12,5	197,0	343,0	98,0	232,0	
16,0	285,0	116,0	3,0	63,2	17,2	344,0	413,0	171,0	218,0	
16,0	-	171,0	3,0	52,4	19,0	246,0	428,0	103,0	242,0	
16,0	305,0	124,0	3,0	89,9	25,1	418,0	502,0	185,0	224,0	
16,0	-	171,0	3,0	52,4	19,0	246,0	428,0	103,0	242,0	
16,0	305,0	124,0	3,0	89,9	25,1	418,0	502,0	185,0	224,0	
16,0	-	183,0	3,0	73,7	25,0	300,0	516,0	111,0	256,0	
16,0	325,0	132,0	3,0	126,0	35,8	505,0	613,0	197,0	239,0	
21,0	-	182,0	4,0	139,0	55,5	421,0	837,0	130,0	312,0	
21,0	369,0	152,0	4,0	255,0	77,7	759,0	980,0	226,0	296,0	

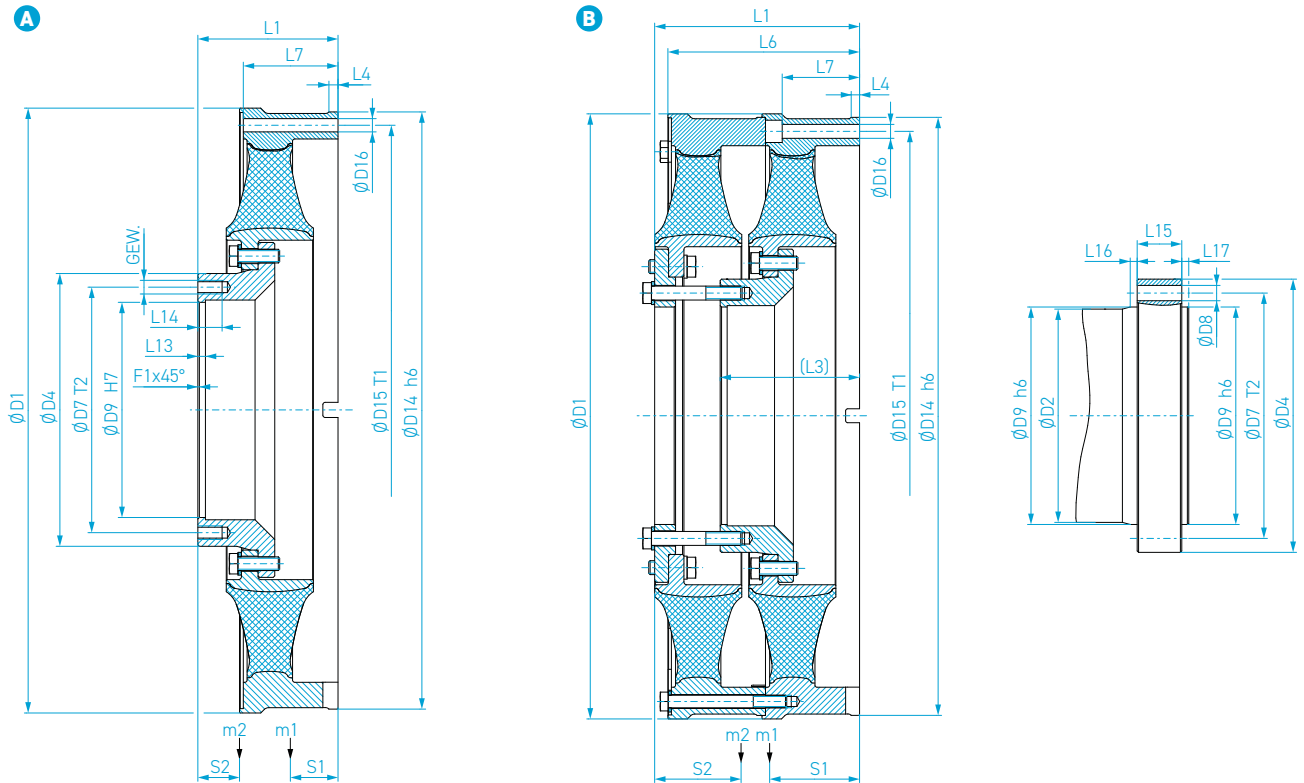
Anmerkungen
Notes

Alle Massen, Schwerpunkte und Massenträgheitsmomente beziehen sich auf min. Nabenbohrung (Ø D3 min).

All masses, focal points and mass moments of inertia refer to min. hub bore (Ø D3 min).



GEOMETRISCHE DATEN GEOMETRIC DATA



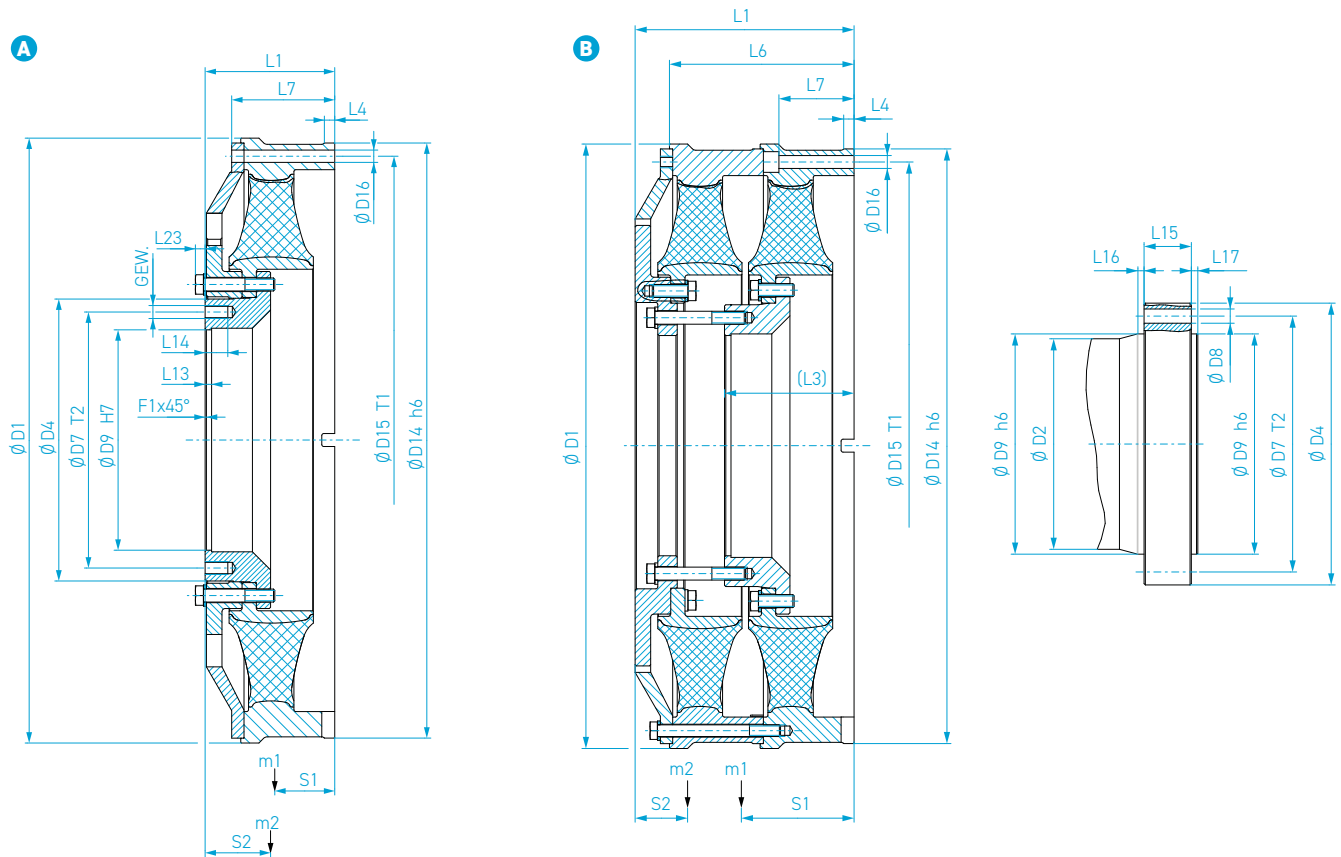
Baugruppe Dimension Group
Abbildung Figure
Abmessungen Dimension

		D ₁	D ₂	D ₄	D ₇	T ₂	GEW.	D ₈	D ₉	D ₁₄	D ₁₅	T ₁	D ₁₆	L ₁	L ₃	L ₄	L ₆
		[mm]	[mm]	[mm]	[mm]	[-]	[mm]	[mm]	[mm]	[mm]	[mm]	[-]	[mm]	[mm]	[mm]	[mm]	[mm]
						Teilung / Pitch						Teilung / Pitch					
A 2110	A	645,0	-	296,0	264,0	20	M16	-	230,0	635,0	608,0	16	13,5	148,0	-	12,0	-
A 21D0	B	645,0	223,0	296,0	264,0	20	-	17,5	230,0	635,0	608,0	32	13,5	215,0	140,0	12,0	205,0
A 2310	A	690,0	-	307,0	275,0	24	M16	-	242,0	680,0	650,0	16	15,5	164,0	-	12,0	-
A 23D0	B	690,0	238,0	307,0	275,0	24	-	17,5	242,0	680,0	650,0	32	15,5	237,0	155,0	12,0	225,0
A 2510	A	740,0	-	342,0	310,0	24	M16	-	270,0	730,0	700,0	16	15,5	169,0	-	12,0	-
A 25D0	B	740,0	258,0	342,0	310,0	24	-	17,5	270,0	730,0	700,0	32	15,5	248,0	160,0	12,0	235,0
A 2710	A	800,0	-	360,0	324,0	24	M18	-	284,0	790,0	755,0	16	17,5	185,0	-	12,0	-
A 27D0	B	800,0	278,0	360,0	324,0	24	-	20,0	284,0	790,0	755,0	32	17,5	272,5	175,0	12,0	255,0
A 2910	A	870,0	-	392,0	352,0	24	M20	-	312,0	860,0	820,0	16	20,0	200,0	-	12,0	-
A 29D0	B	870,0	306,0	392,0	352,0	24	-	22,0	312,0	860,0	820,0	32	20,0	294,0	190,0	12,0	275,0
A 3110	A	935,0	-	435,0	395,0	24	M20	-	340,0	920,0	880,0	16	20,0	200,0	-	16,0	-
A 2K10	A	870,0	-	392,0	352,0	24	M20	-	312,0	860,0	820,0	16	20,0	200,0	-	12,0	-
A 2KD0	B	870,0	306,0	392,0	352,0	24	-	22,0	312,0	860,0	820,0	32	20,0	294,0	190,0	12,0	275,0
A 31D0	B	935,0	325,0	435,0	395,0	24	-	22,0	340,0	920,0	880,0	32	20,0	303,0	190,0	16,0	285,0
A 3310	A	1.010,0	-	457,0	413,0	24	M22	-	365,0	995,0	950,0	16	22,0	205,0	-	16,0	-
A 3D10	A	1.010,0	-	457,0	413,0	24	M22	-	365,0	995,0	950,0	16	22,0	205,0	-	16,0	-
A 3DD0	B	1.010,0	357,0	457,0	413,0	24	-	24,0	365,0	995,0	950,0	32	22,0	335,0	195,0	16,0	305,0
A 33D0	B	1.010,0	357,0	457,0	413,0	24	-	24,0	365,0	995,0	950,0	32	22,0	325,0	195,0	16,0	305,0
A 3410	A	1.085,0	-	495,0	445,0	24	M24	-	395,0	1.070,0	1.025,0	16	24,0	231,0	-	16,0	-
A 34D0	B	1.085,0	385,0	495,0	445,0	24	-	26,0	395,0	1.070,0	1.025,0	32	24,0	347,0	220,0	16,0	325,0
A 3910	A	1.255,0	-	580,0	525,0	24	M27	-	465,0	1.240,0	1.190,0	16	26,0	262,0	-	21,0	-
A 39D0	B	1.255,0	448,0	580,0	525,0	24	-	30,0	465,0	1.240,0	1.190,0	32	26,0	396,0	250,0	21,0	369,0

Abmessungen Dimension							Massenträgheitsmomente Mass moments of inertia		Masse Mass		Schwerpunktsabstand Distance to center of gravity		Anmerkungen Notes
L ₇	L ₁₃	L ₁₄	L ₁₅	L ₁₆	L ₁₇	F ₁	J ₁	J ₂	m ₁	m ₂	S ₁	S ₂	
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kgm ²]	[kgm ²]	[kg]	[kg]	[mm]	[mm]	
100,0	8,0	28,0	-	-	-	1,6	4,6	1,1	52,0	37,0	56,0	58,0	
82,0	-	-	44,0	8,0	8,0	-	9,3	1,9	104,0	65,0	106,0	87,0	
110,0	9,0	26,0	-	-	-	1,6	6,7	1,4	67,0	47,0	62,0	66,0	
90,0	-	-	46,0	9,0	9,0	-	14,1	2,6	139,0	81,0	116,0	95,0	
115,0	9,0	31,0	-	-	-	2,0	9,2	2,0	78,0	55,0	64,0	67,0	
95,0	-	-	52,0	9,0	9,0	-	18,4	3,8	156,0	98,0	122,0	99,0	
125,0	10,0	32,0	-	-	-	2,0	13,5	2,9	98,0	68,0	70,0	73,0	
103,0	-	-	57,5	10,0	10,0	-	28,1	5,7	204,0	125,0	132,0	108,0	
135,0	10,0	35,0	-	-	-	2,0	21,8	4,4	134,0	86,0	74,0	78,0	
111,0	-	-	64,0	10,0	10,0	-	43,1	8,1	268,0	153,0	142,0	116,0	
140,0	10,0	35,0	-	-	-	2,0	29,3	6,2	157,0	103,0	78,0	75,0	
135,0	10,0	35,0	-	-	-	2,0	21,8	4,4	134,0	86,0	74,0	78,0	
111,0	-	-	64,0	10,0	10,0	-	43,1	8,1	268,0	153,0	142,0	116,0	
116,0	-	-	73,0	10,0	10,0	-	58,7	11,6	314,0	184,0	148,0	120,0	
150,0	10,0	30,0	-	-	-	2,0	41,8	9,0	191,0	127,0	83,0	19,0	
150,0	10,0	30,0	-	-	-	2,0	41,8	9,0	191,0	127,0	83,0	19,0	
124,0	-	-	85,0	12,0	10,0	-	83,5	16,6	381,0	227,0	159,0	131,0	
124,0	-	-	85,0	12,0	10,0	-	83,5	16,6	381,0	227,0	159,0	131,0	
160,0	11,0	44,0	-	-	-	2,0	58,7	12,4	232,0	156,0	89,0	88,0	
132,0	-	-	81,0	11,0	11,0	-	117,4	22,7	464,0	273,0	169,0	137,0	
182,0	12,0	45,0	-	-	-	2,0	112,0	27,0	327,0	248,0	102,0	102,0	
152,0	-	-	92,0	12,0	12,0	-	214,0	48,0	630,0	417,0	193,0	161,0	



GEOMETRISCHE DATEN GEOMETRIC DATA



Baugruppe Dimension Group
Abbildung Figure
Abmessungen Dimension

		D ₁	D ₂	D ₄	D ₇	T ₂	GEW.	D ₈	D ₉	D ₁₄	D ₁₅	T ₁	D ₁₆	L ₁	L ₃	L ₄	L ₆
		[mm]	[mm]	[mm]	[mm]	[-]	[mm]	[mm]	[mm]	[mm]	[mm]	[-]	[mm]	[mm]	[mm]	[mm]	[mm]
						Teilung / Pitch						Teilung / Pitch					
A 2110	A	645,0	-	296,0	264,0	20	M16	-	230,0	635,0	608,0	16	13,5	148,0	-	12,0	-
A 21D0	B	645,0	223,0	296,0	264,0	20	-	17,5	230,0	635,0	608,0	32	13,5	242,0	140,0	12,0	205,0
A 2310	A	690,0	-	307,0	275,0	24	M16	-	242,0	680,0	650,0	16	15,5	164,0	-	12,0	-
A 23D0	B	690,0	238,0	307,0	275,0	24	-	17,5	242,0	680,0	650,0	32	15,5	265,0	155,0	12,0	225,0
A 2510	A	740,0	-	342,0	310,0	24	M16	-	270,0	730,0	700,0	16	15,5	169,0	-	12,0	-
A 25D0	B	740,0	258,0	342,0	310,0	24	-	17,5	270,0	730,0	700,0	32	15,5	278,0	160,0	12,0	235,0
A 2710	A	800,0	-	360,0	324,0	24	M18	-	284,0	790,0	755,0	16	17,5	185,0	-	12,0	-
A 27D0	B	800,0	278,0	360,0	324,0	24	-	20,0	284,0	790,0	755,0	32	17,5	304,5	175,0	12,0	255,0
A 2910	A	870,0	-	392,0	352,0	24	M20	-	312,0	860,0	820,0	16	20,0	200,0	-	12,0	-
A 29D0	B	870,0	306,0	392,0	352,0	24	-	22,0	312,0	860,0	820,0	32	20,0	327,0	190,0	12,0	275,0
A 2K10	A	870,0	-	392,0	352,0	24	M20	-	312,0	860,0	820,0	16	20,0	200,0	-	12,0	-
A 2KD0	B	870,0	306,0	392,0	352,0	24	-	22,0	312,0	860,0	820,0	32	20,0	327,0	190,0	12,0	275,0
A 3110	A	935,0	-	435,0	395,0	24	M20	-	340,0	920,0	880,0	16	20,0	200,0	-	16,0	-
A 31D0	B	935,0	325,0	435,0	395,0	24	-	22,0	340,0	920,0	880,0	32	20,0	338,0	190,0	16,0	285,0
A 3310	A	1.010,0	-	457,0	413,0	24	M22	-	365,0	995,0	950,0	16	22,0	205,0	-	16,0	-
A 33D0	B	1.010,0	357,0	457,0	413,0	24	-	24,0	365,0	995,0	950,0	32	22,0	363,0	195,0	16,0	305,0
A 3D10	A	1.010,0	-	457,0	413,0	24	M22	-	365,0	995,0	950,0	16	22,0	205,0	-	16,0	-
A 3DD0	B	1.010,0	357,0	457,0	413,0	24	-	24,0	365,0	995,0	950,0	32	22,0	363,0	195,0	16,0	305,0
A 3410	A	1.085,0	-	495,0	445,0	24	M24	-	395,0	1.070,0	1.025,0	16	24,0	231,0	-	16,0	-
A 34D0	B	1.085,0	385,0	495,0	445,0	24	-	26,0	395,0	1.070,0	1.025,0	32	24,0	387,0	220,0	16,0	325,0
A 3910	A	1.255,0	-	580,0	525,0	24	M27	-	465,0	1.240,0	1.190,0	16	26,0	262,0	-	20,0	-
A 39D0	B	1.255,0	448,0	580,0	525,0	24	-	30,0	465,0	1.240,0	1.190,0	32	26,0	444,0	250,0	20,0	369,0

Abmessungen
Dimension

Massenträgheitsmomente
Mass moments of inertia

Masse
Mass

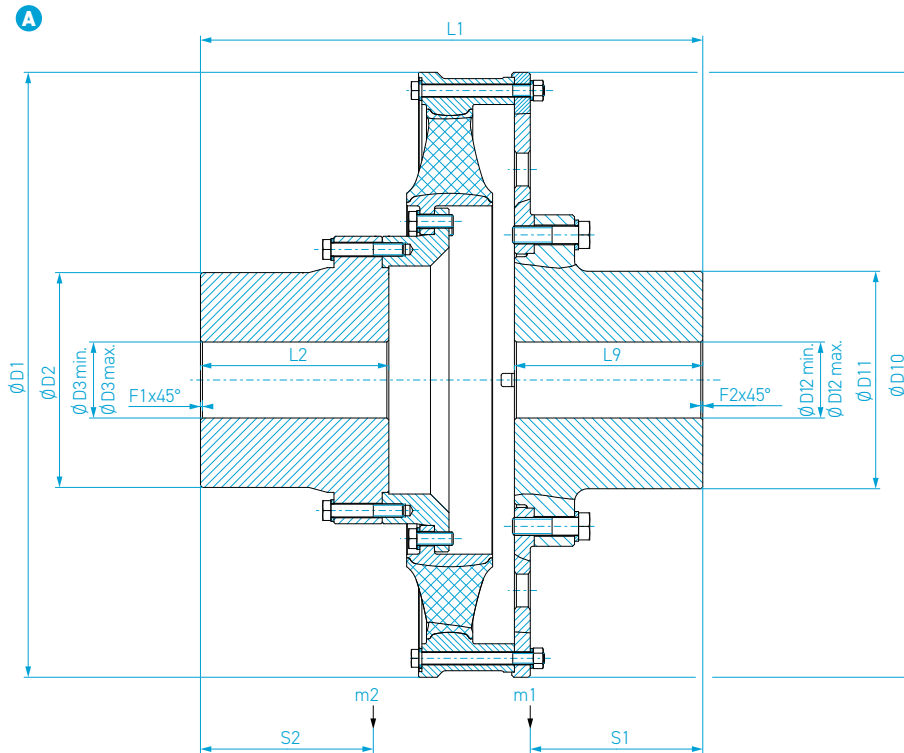
Schwerpunktsabstand
Distance to center of gravity

Anmerkungen
Notes

L ₇	L ₁₃	L ₁₄	L ₁₅	L ₁₆	L ₁₇	L ₂₃	F ₁	J ₁	J ₂	m ₁	m ₂	S ₁	S ₂
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kgm ²]	[kgm ²]	[kg]	[kg]	[mm]	[mm]
113,0	8,0	28,0	-	-	-	7,5	2,0	5,7	1,5	66,0	50,0	68,0	49,0
82,0	-	-	44,0	8,0	8,0	-	-	10,4	2,2	118,0	74,0	119,0	108,0
124,0	9,0	26,0	-	-	-	5,5	2,0	8,8	1,9	90,0	62,0	74,0	58,0
90,0	-	-	46,0	9,0	9,0	-	-	15,8	2,9	159,0	91,0	131,0	117,0
130,0	9,0	31,0	-	-	-	8,5	2,0	11,4	2,7	99,0	73,0	79,0	57,0
95,0	-	-	52,0	9,0	9,0	-	-	20,6	4,3	177,0	110,0	137,0	127,0
141,0	10,0	32,0	-	-	-	10,5	2,0	17,0	4,5	126,0	100,0	84,0	60,0
103,0	-	-	57,5	10,0	10,0	-	-	31,0	6,5	228,0	145,0	146,0	130,0
152,0	10,0	35,0	-	-	-	9,0	2,0	26,6	6,2	167,0	118,0	90,0	65,0
111,0	-	-	64,0	10,0	10,0	-	-	47,9	9,4	301,0	176,0	158,0	139,0
152,0	10,0	35,0	-	-	-	9,0	2,0	26,6	6,2	167,0	118,0	90,0	65,0
111,0	-	-	64,0	10,0	10,0	-	-	47,9	9,4	301,0	176,0	158,0	139,0
159,0	10,0	35,0	-	-	-	15,0	2,0	36,4	8,7	201,0	140,0	96,0	61,0
116,0	-	-	73,0	10,0	10,0	-	-	65,8	13,5	358,0	211,0	167,0	148,0
171,0	10,0	30,0	-	-	-	26,5	2,0	52,4	13,0	246,0	178,0	103,0	61,0
124,0	-	-	85,0	12,0	10,0	-	-	94,1	19,7	436,0	264,0	180,0	157,0
171,0	10,0	30,0	-	-	-	26,5	2,0	52,4	13,0	246,0	178,0	103,0	61,0
124,0	-	-	85,0	12,0	10,0	-	-	94,1	19,7	436,0	264,0	180,0	157,0
183,0	11,0	44,0	-	-	-	15,5	2,0	73,7	17,4	300,0	218,0	111,0	70,0
132,0	-	-	81,0	11,0	11,0	-	-	132,4	26,8	532,0	317,0	191,0	165,0
211,0	12,0	45,0	-	-	-	23,0	2,0	139,0	38,5	421,0	342,0	130,0	81,0
152,0	-	-	92,0	12,0	12,0	-	-	246,0	57,5	736,0	487,0	193,0	181,0



GEOMETRISCHE DATEN GEOMETRIC DATA

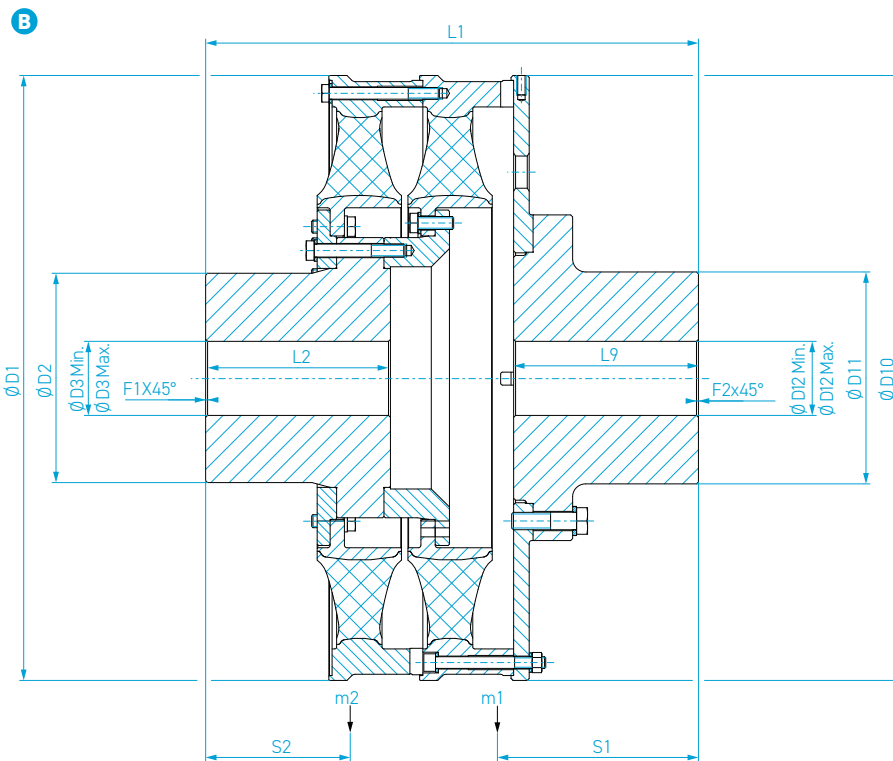


Baugruppe
Dimension Group

Abbildung
Figure

Abmessungen
Dimension

		D ₁	D ₂	D ₃		D ₁₀	D ₁₁	D ₁₂		L ₁	L ₂	L ₉	F ₁	F ₂
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
A 2K10	A	870,0	306,0	110,0	220,0	870,0	308,0	110,0	220,0	690,0	250,0	250,0	2,0	2,0
A 2KD0	B	870,0	306,0	110,0	220,0	870,0	308,0	110,0	220,0	690,0	250,0	250,0	2,0	2,0
A 3D10	A	1.010,0	357,0	150,0	255,0	1.010,0	357,0	150,0	255,0	795,0	300,0	300,0	3,0	3,0
A 3DD0	B	1.010,0	357,0	150,0	255,0	1.010,0	357,0	150,0	255,0	795,0	300,0	300,0	3,0	3,0



Massenträgheitsmomente Mass moments of inertia		Masse Mass		Schwerpunktsabstand Distance to center of gravity	
J_1	J_2	m_1	m_2	S_1	S_2
[kgm ²]	[kgm ²]	[kg]	[kg]	[mm]	[mm]
35,8	6,8	409,0	238,0	225,0	204,0
57,3	10,3	541,0	299,0	282,0	200,0
71,2	14,2	623,0	364,0	265,0	236,0
112,4	21,6	811,0	460,0	327,0	232,0

Anmerkungen
Notes

Alle Massen, Schwerpunkte und Massenträgheitsmomente beziehen sich auf min. Nabenbohrung (\emptyset D3 min).

All masses, focal points and mass moments of inertia refer to min. hub bore (\emptyset D3 min).

RATO DS / RATO DS+

ERLÄUTERUNGEN DES PRODUKTCODES EXPLANATIONS OF THE PRODUCT CODE

Alle VULKAN Produkte sind mit einem Produktcode gekennzeichnet. Dieser Code setzt sich aus verschiedenen Parameter-Angaben zusammen und ermöglicht es, unsere Produkte eindeutig zu identifizieren.

All VULKAN products are identified by a product code. This code consists of several parameters and it enables the clear identification of all products.

PRODUKTCODE BEISPIEL RATO DS

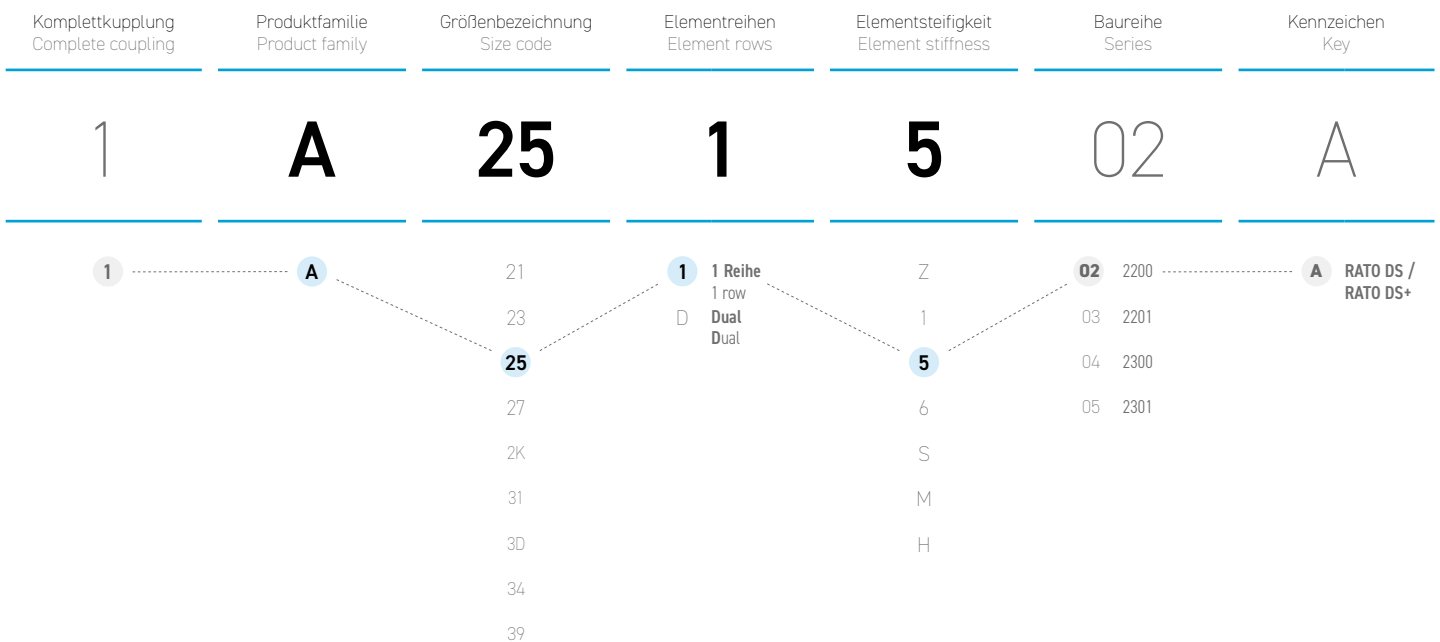
Hier haben wir den Code am Beispiel einer RATO DS (A 2515), Größe 25, 1-reihig, Elementsteifigkeit 5, Baureihe 2200 entschlüsselt dargestellt.

LEISTUNGSDATEN PERFORMANCE DATA				
Kupplungstyp Type of Coupling		T_{KN}	T_{Kmax1}	T_K
		[kNm]	[kNm]	[kNm]
Größe Size	Baugruppe Dimension Group	Nennrehmoment Nominal Torque	Max. Drehmoment Max. Torque	M Drehmoment Max. Torque
A 2515	A 2510	16,00	18,00	7

PRODUCT CODE EXAMPLE RATO DS

We have decoded here the product code of a RATO DS (A 2515), Size 25, 1 row, Element stiffness 5, Series 2200.

Auszug aus den Leistungsdaten.
Für vollständige Daten siehe Seite 08 ff.
Excerpt from performance data.
Complete data see page 08 ff.



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The image shows a technical drawing grid. The grid is composed of small squares, each divided into four triangles by a diagonal line from the top-left to the bottom-right. A central rectangular area is defined by a double-line border and contains four horizontal lines for writing. To the right of the grid, there is a vertical scale with numerical markings from 0 to 220 in increments of 10. The scale is represented by a vertical line with short horizontal tick marks extending to the right.

GÜLTIGKEITSKLAUSEL

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- Haupt- und Nebenantriebe auf Schiffen
- Generatorsätze auf Schiffen
- Antriebe für stationäre Energieerzeugung mit Diesel- oder Gasmotoren

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VULKAN Drehschwingungsanalysen berücksichtigen in der Regel nur das rein mechanische Schwingungssystem. Als reiner Komponentenhersteller übernimmt VULKAN mit der Analyse des Drehschwingungssystems (stationär, transient) nicht die Systemverantwortung! Die Genauigkeit der Analyse hängt von der Genauigkeit der verwendeten bzw. der VULKAN zur Verfügung gestellten Daten ab.

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Stand: 08/2022

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- Main propulsion and auxiliary drives on ships
- Generator sets on ships
- Drives for stationary energy production with diesel or gas engines

v

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VULKAN torsional vibration analysis usually only consider the pure mechanical mass-elastic system. Being a component manufacturer exclusively, VULKAN assumes no system responsibility with the analysis of the torsional vibration system (stationary, transiently)! The accuracy of the analysis depends on the exactness of the used data and the data VULKAN is provided with, respectively.

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