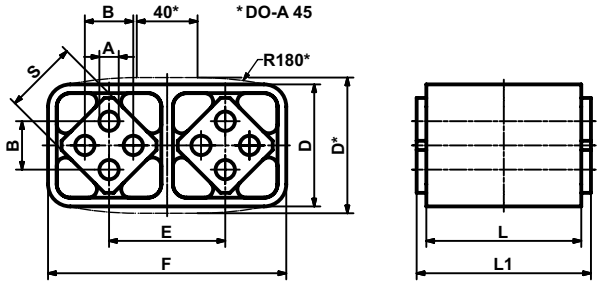
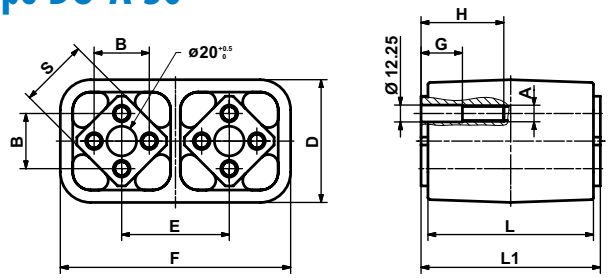
Rubber Suspension Units

Type DO-A 15 to 45



Type DO-A 50



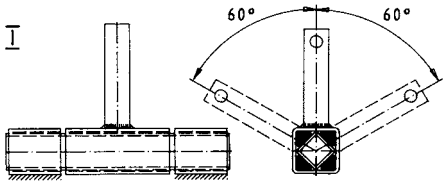
DO-A												Weight
Art. No.	Type	ø A $^{+0.5}_{0}$	B	D	E	F	□S	G	H	L	L1 ±0.2	[kg]
01 041 001	DO-A 15x 25									25	30	0.07
01 041 002	DO-A 15x 40	5	10 ±0.2	28 ±0.15	25.5	53.5 ±0.2	15	-	-	40	45	0.10
01 041 003	DO-A 15x 60									60	65	0.15
01 041 004	DO-A 18x 30									30	35	0.12
01 041 005	DO-A 18x 50	6	12 ±0.3	34 ±0.15	31	65 ±0.2	18	-	-	50	55	0.20
01 041 006	DO-A 18x 80									80	85	0.30
01 041 007	DO-A 27x 40									40	45	0.32
01 041 008	DO-A 27x 60	8	20 ±0.4	47 ±0.15	44	91 ±0.2	27	-	-	60	65	0.47
01 041 009	DO-A 27x100									100	105	0.78
01 041 010	DO-A 38x 60									60	70	0.87
01 041 011	DO-A 38x 80	10	25 ±0.4	63 ±0.2	60	123 ±0.3	38	-	-	80	90	1.15
01 041 012	DO-A 38x120									120	130	1.68
01 041 013	DO-A 45x 80									80	90	1.85
01 041 014	DO-A 45x100	12	35 ±0.5	85 ±0.5	73	150 ±1	45	-	-	100	110	2.25
01 041 015	DO-A 45x150									150	160	3.35
01 041 016	DO-A 50x120							30	60	120	130	5.50
01 041 019	DO-A 50x160	M12	40 ±0.5	ca. 89	78	ca. 168	50	30	60	160	170	7.40
01 041 017	DO-A 50x200							40	70	200	210	8.50

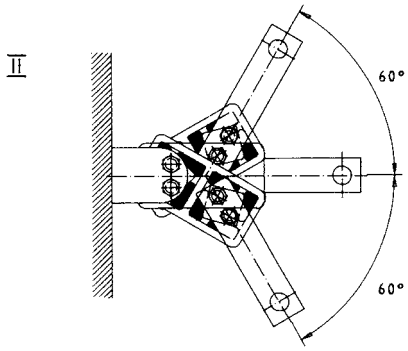
List of torque and loads on page 1.5.
Further information to customized elements and installation examples as from page 1.14.

Rubber Suspension Units

Serial Connection

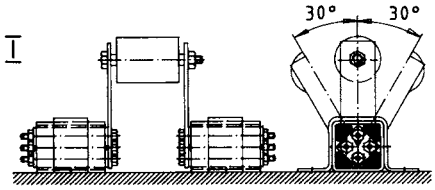
Doubled oscillating angle
(±60°) at constant torque of a single unit.

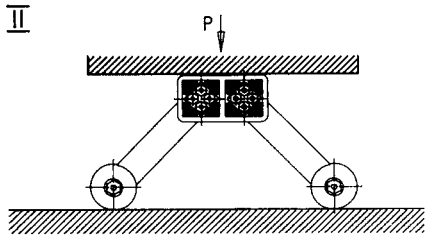




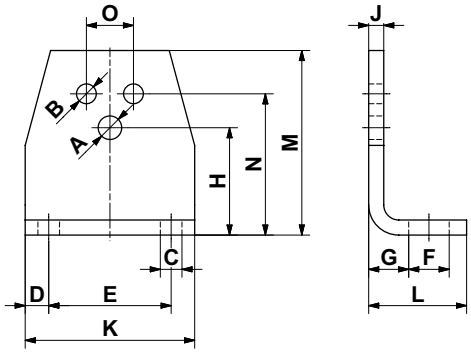
Parallel Connection

Doubled torque momentum
at constant oscillating angle (±30°).



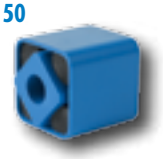
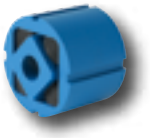
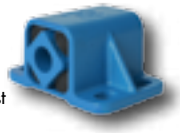
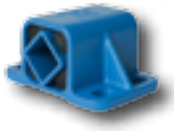


Accessory Bracket WS



Bracket WS		Fit for tensioner devices			Fit for DR-A, DK-A, DW-A													Weight
Art. No.	Type	SE size	øA	H	Element size	øB	N	O	C	D	E	F	G	J	K	L	M	[kg]
06 590 001	WS 11–15	11	6.5	27	15	5.5	35	10	7	7.5	30	13	11.5	4	45	30	46	0.08
06 590 002	WS 15–18	15	8.5	34	18	6.5	44	12	7	7.5	40	13	13.5	5	55	32	58	0.15
06 590 003	WS 18–27	18	10.5	43	27	8.5	55	20	9.5	10	50	15.5	16.5	6	70	38	74	0.28
06 590 004	WS 27–38	27	12.5	57	38	10.5	75	25	11.5	12.5	65	21.5	21	8	90	52	98	0.70
06 590 005	WS 38–45	38	16.5	66	45	12.5	85	35	14	15	80	24	21	8	110	55	116	0.90
06 590 006	WS 45–50	45	20.5	80	50	12.5	110	40	18	20	100	30	26	10	140	66	140	1.80

Selection chart for rubber suspension standard elements with Rubmix 10

Inner square / Housing	A Light metal profile, as from size 60 in steel	C Light metal profile	S Steel tube for plug-in connection	Accessories for housing Steel parts
DR Steel tube	**DR-A 15 to 50** Page 1.6	**DR-C 15 to 50** Page 1.6 	**DR-S 11 to 50** Page 1.7	**Bracket BR 11 to 50** Page 1.7
DK Light metal profile	**DK-A 15 to 50** Page 1.8	**DK-C** on request 	**DK-S 11 to 50** Page 1.8	**Bracket BK 11 to 50** Page 1.9
DW Light metal profile	**DW-A 15 to 38** Page 1.10	**DW-C 15 to 38** Page 1.10	**DW-S 15 to 38** Page 1.10	**Accessories** for inner square A Steel parts
DW Nodular cast iron	**DW-A 45 and 50** Page 1.11	**DW-C 45 and 50** on request 	**DW-S 45 and 50** Page 1.11 	**WS 11 to 50** Page 1.13
DW Steel welded construction	**DW-A 60 to 100** Page 1.11			
DO Light metal profile Size 50 in nodular cast iron	**DO-A 15 to 50** Page 1.12	**DO-C** on request	**DO-S** on request	
Housing / Specification inner squares	Ideal for alternating motions over neutral element position. For sizes DR 15–45: Fixation by means of 2 to 4 persistent threaded bars (sizes DR 27–45 also available with threaded holes).	Friction locking of the core by means of one central bolt, can be positioned in full 360° angle-range. For ideal friction locking, please remove paint cover on face side. For alternating element motion of max. ±10°.	For plug-in connection with square profile*. Plug-in length min. 2 x width across flat "C". Connection is not recommendable by alternating motions – play between the plugged squares.	

* The square should be made out of bright steel, tolerance h9–h11. Possibly, the edges have to be overwinded (edge-radius in element profile max. 1.5 mm).

Specification

DR-A 15 x 25

- Effective element length
- Size S
- Inner square
- Housing

General

- Light metal profiles: extruded profiles, seawater resistant (DIN 1725).
- Blue protection paint: water-soluble paint, coating thickness 40–80 µm.
- Fixation screws: minimum strength class of 8.8
- Welding on elements: do not weld on rubber suspensions – welding heat will affect or destroy the rubber inserts – ask for customized elements
- Most of the elements can be supplied in stainless steel version – also zinc-plated versions or special paintings are available.

Further customized elements: see examples on page 1.14 to 1.19.

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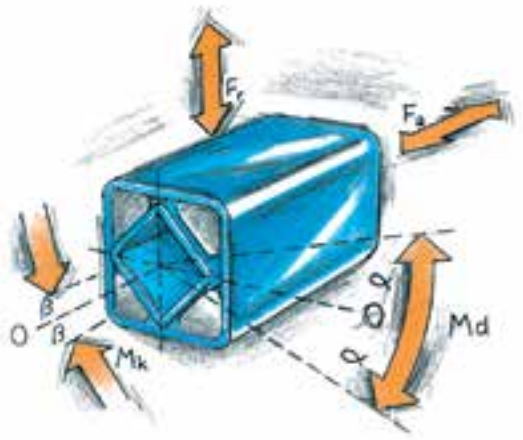
List of torque and loads

The values stated in the below mentioned list have been measured statically and are valid for the standard rubber quality "Rubmix 10". Intermediate values can be interpolated. By applications with combined dynamic forces and high angles of oscillation please consult our ROSTA general catalogue, chapter "Technology" or contact ROSTA.



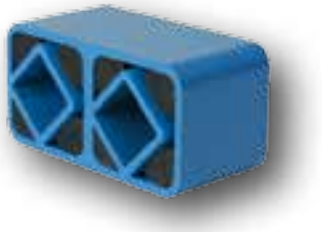
Element			Torque						Cardanic	Radial		Axial	
Nominal size	x	Length	Md [Nm] angle ±α°						Mk [Nm] angle ±β°	Deflection ± s_r	Load F_r	Deflection ± s_a	Load F_a
			5°	10°	15°	20°	25°	30°	1°	[mm]	[N]	[mm]	[N]
11	x	20	0.3	0.8	1.3	2.0	2.9	4.0	0.4		200		60
		30	0.4	1.2	2.0	3.1	4.3	6.0	1.1	0.25	340	0.25	80
		50	0.7	2.0	3.4	5.1	7.2	10.0	5.6		600		150
15	x	25	0.7	1.6	2.6	4.0	5.7	8.2	0.6		200		70
		40	1.1	2.5	4.2	6.4	9.2	13.2	2.0	0.25	300	0.25	100
		60	1.6	3.8	6.3	9.6	13.8	19.8	5.5		500		160
18	x	30	1.9	4.5	7.5	11.0	15.0	20.6	1.6		400		80
		50	3.2	7.5	12.5	18.3	25.0	34.4	7.0	0.25	700	0.25	160
		80	5.1	12.0	20.0	29.3	40.0	55.0	28.0		1000		300
27	x	40	4.7	10.7	17.5	26.9	39.5	57.0	3.8		800		200
		60	7.0	16.0	26.3	40.3	59.3	85.5	11.5	0.5	1300	0.5	300
		100	11.7	26.7	43.8	67.2	98.8	142.5	48.0		2400		600
38	x	60	13.0	30.4	50.6	78.0	113.0	162.0	11.4		1500		300
		80	17.3	40.5	67.5	104.0	151.0	216.0	24.7	0.5	2000	0.5	500
		120	26.0	60.8	101.2	156.0	226.0	324.0	76.0		3000		600
45	x	80	27.6	62.4	104.0	160.0	222.0	320.0	28.0		1900		560
		100	34.5	78.0	130.0	200.0	278.0	400.0	54.0	0.5	3000	0.5	700
		150	51.8	117.0	195.0	300.0	420.0	600.0	140.0		4800		1000
50	x	120	51	133	250	395	570	780	80		2800		800
		160	77	197	363	570	820	1115	145	0.5	4500	0.5	950
		200	102	260	475	745	1070	1450	250		6300		1100
		300	150	385	700	1100	1590	2160	1200		8600		2200
60	x	150	75	170	300	460	700	1010	90		5400		1600
		200	95	220	385	610	930	1380	250	1.0	7200	1.0	2200
		300	140	365	630	995	1550	2240	900		9400		3200
70	x	200	140	380	650	1040	1490	2120	280		9000		2200
		300	190	525	910	1470	2160	3150	1200	1.0	12'000	1.0	3600
		400	250	765	1315	2160	3175	4750	2200		14'000		4000
80	x	200	200	500	850	1300	1900	2700	680		10'000		2500
		300	300	800	1300	2000	2900	4100	1500	1.0	15'000	1.0	3800
		400	400	1060	1800	2800	3900	5600	4600		19'000		4700
100	x	250	400	1080	1800	2800	4100	6300	1200		15'000		3200
		400	640	1700	2900	4500	6600	10'000	4300	1.0	28'000	1.0	5800
		500	800	2160	3600	5600	8200	12'000	8000		38'000		7500

ROSTA Rubber Suspension Units

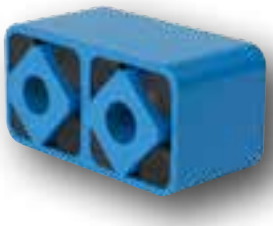
Short delivery time for the following special elements:

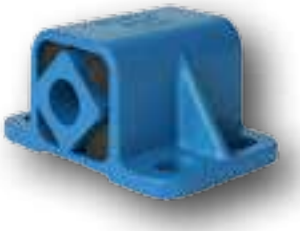
- Delivery summary for ROSTA rubber qualities

Rubber quality	Factor in relation to the list "torque and loads" (page 1.5)	Working temperature	Rubber	Specification
Rubmix 10	**1.0**	–40 ° to +80 °C	NR	– Standard quality – Highest elasticity – Lowest cold flow
Rubmix 15	**approx. 1.4**	–40 ° to +85 °C	SBR	– High torque values – Elements marked with black dot
Rubmix 20	**approx. 1.0**	–30 ° to +90 °C	CR	– Good oil-resistance – Elements marked with yellow dot
Rubmix 40	**approx. 0.6**	from +80 ° to +120 °C	EPDM-Silicone	– High temperature resistance – Elements marked with red dot
Rubmix 50	**approx. 3.0**	–35 ° to +90 °C	PUR	– Max. oscillation angle ±20° – Limited oscillation frequencies – No permanent water contact – Elements marked with green dot



- Elements with different length of housings and/or inner squares.
- DW light metal profiles with customized bores in the flange plates (quantity and position).
- Element with threaded bores in inner square: selectable for A or C inner squares, or full steel profile with required bores.
- Elements **DK-C**, **DO-C**, **DW-C** and **DO-S** (see page 1.4):





Not all sizes are available in all combinations.
Please contact ROSTA.

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