

Selection table

	Identification	Characteristics	Working temperature	Details	Illustration	
Standard tensioner devices	SE Standard component	Steel parts ROSTA blue painted. Rubber quality Rubmix 10.	Housing and inner core made out of steel.	–40° to +80° C	Page 4.6	
	SE-G Oil resistant	Steel parts galvanized. Rubber quality Rubmix 20. Marked with yellow dot.		–30° to +90° C	Page 4.6	
	SE-W Heat resistant	Steel parts ROSTA blue painted. Rubber quality Rubmix 40. Marked with red dot. Tension force 40% less than SE.		–35° to +120° C max.	Page 4.6	
Additional tensioner devices	SE-R Reinforced lever arm	Arm and inner core especially welded for use on combustion engines and compressors. Steel parts ROSTA blue painted. Marked with white ring.	Housing and inner core made out of steel, inserts Rubmix 10.		Page 4.6	
	SE-I Stainless steel	For the use in food- and pharmaceutic industries. Material: GX5CrNi19-10. Exception: SE-I 40 made out of X5CrNi18-10.			Page 4.6	
	SE-B Boomerang®	For the tensioning of very long chain and belt drives (triple compensation). Steel parts ROSTA blue painted.		–40° to +80° C	Page 4.7	
	SE-F Front mounting device	For installations on blind-hole frames (fixation from the front only). Steel parts ROSTA blue painted. Hex socket screw quality 12.9.			Page 4.7	
	SE-FE Front mounting device	For installations on blind-hole frames (fixation from the front only). Steel parts black painted. Hex socket screw quality 12.9. Especially designed for engine applications.	see page 4.7		Page 4.7	
Accessories chain drives	Sprocket wheel set N	Allows accurate positioning of relevant chain track. Ball-bearings 2Z/C3, permanently lubricated.	–40° to +100° C	Page 4.8		
	Sprocket wheel N					
	Chain rider set P	For double sided use. Max. allowed chain speed 1.5 m/sec. Material: POM-H.	–40° to +100° C	Page 4.9		
	Chain rider P					
Accessories belt drives	Tensioning roller R	Material: PA 6. Ball-bearings 2Z/C3, permanently lubricated.	–35° to +100° C	Page 4.10		
	Tensioning roller light RL	Material: PA 6. Ball-bearings 2Z/C3, permanently lubricated.	–35° to +80° C	Page 4.10		

Further information to customized elements and installation examples as from page 4.12.

General technology

The ROSTA tensioners should be installed on a stiff, even and clean machine part by means of the central bolt. The frictional connection on flange is usually fully sufficient for final positioning. The positioning notch on flange can be used to assure the tensioner additionally on uneven and dirty surfaces by setting a roller-pin.

Tensioning force F

The tensioning force can be continuously adjusted. The max. pre-tensioning angle is $+30^\circ$ out of neutral position. Tensioning force table for types **SE / SE-G / SE-R / SE-F / SE-I** by using **hole-position "normal"** for sprocket-, rider- and roller fixation.

Size SE	Pre-tension $\leq 10^\circ$		Pre-tension $\leq 20^\circ$		Pre-tension $\leq 30^\circ$	
	F [N]	s [mm]	F [N]	s [mm]	F [N]	s [mm]
11	18	14	48	27	96	40
15	25	17	65	34	135	50
18	75	17	185	34	350	50
27	150	23	380	44	810	65
38	280	30	720	60	1500	88
45	520	39	1350	77	2650	113
50	740	43	2150	86	4200	125

SE-I 40: same tensioning force like SE 38.

SE-W: 40% lower tensioning force than standard versions (Rubmix 40 inserts).

SE-FE: see page 4.7

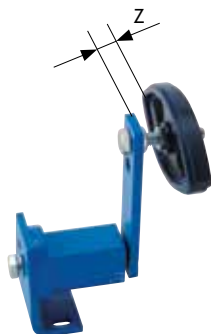
When fixing the sprockets, riders and rollers in arm-position "hard", tensioning force will increase on about 25%.

Mounting instructions

For further mounting instructions please consult the pages 4.9–4.11.

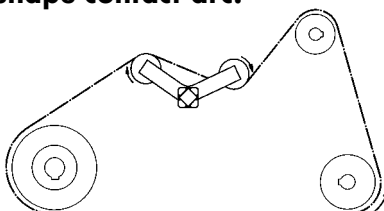
Z-configuration of sprockets or riders

If there is the need to install sprockets, riders or rollers on the outer arm-side of the tensioner, then the distance "Z" should be as little as possible to avoid a misalignment in element parallelism. Furthermore the pre-tension force should not exceed 50% of the capacity = max. pre-tension angle of $\sim 20^\circ$.



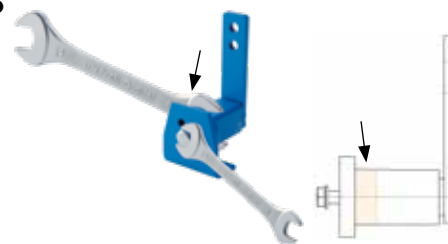
Use of SE-B Boomerang® tensioners

In very long chain and belt drives it was recommendable to install on the slack-side several tensioners, in order to compensate occurring elongation. The "Boomerang" with its bent double-arm equipped with two chain sprockets or a combination of grooved pulley and flat-roller (belt-drives) **offers a triple-compensation of chain and belt elongations, due to S-shape contact-arc.**

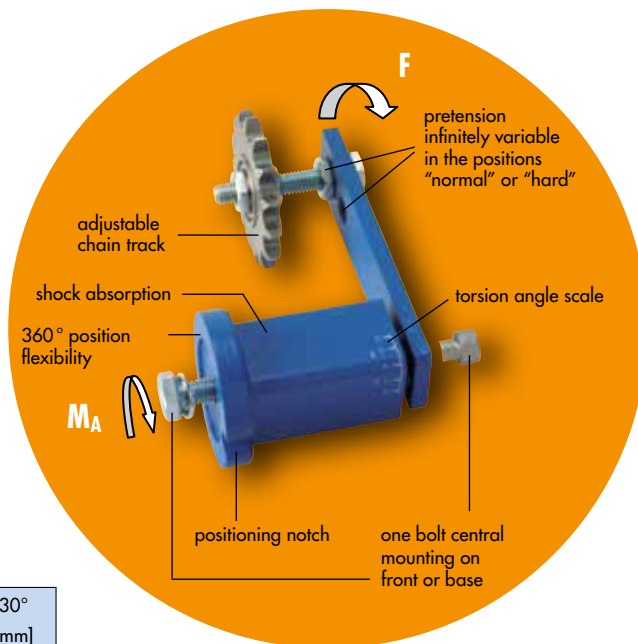


Tensioner mounting

Tighten the flange screw slightly. Grip the housing with flat-wrench and set needful pre-tension by rotating the housing in the required direction. Tighten the central screw according the above mentioned tightening moment M_A . **Position flat-wrench close by the flange-bottom.**



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Tightening moment M_A for attachment screw

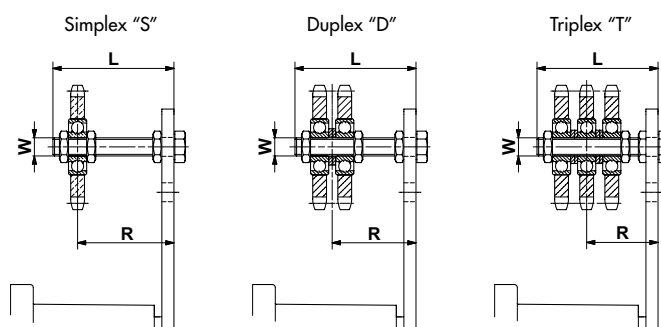
Table mentioning the tightening moment for the central screw (included in scope of delivery).

	Quality 8.8	Quality 12.9 for SE-F / SE-FE
M6	10 Nm	17 Nm
M8	25 Nm	41 Nm
M10	49 Nm	83 Nm
M12	86 Nm	145 Nm
M16	210 Nm	355 Nm
M20	410 Nm	690 Nm
M24	750 Nm	



Sprocket wheel set type N

Sprocket wheel set type N



Roller chain ANSI DIN 8187		Type	Art. No.	Number of teeth	W	L	Torque hex nut 0.5 d [Nm]	Adjusting range track R	Size SE	Weight [kg]
Simplex "S"										
35	ISO 06 B-1	N3/8"-10 S	06 510 001	15	M10	55	20	22-43 / 23-43	15/18	0.15
40	ISO 08 B-1	N1/2"-10 S	06 510 002	15	M10	55	20	23-44	18	0.20
50	ISO 10 B-1	N5/8"-12 S	06 510 003	15	M12	80	35	27-65	27	0.35
60	ISO 12 B-1	N3/4"-12 S	06 510 004	15	M12	80	35	27-65	27	0.55
60	ISO 12 B-1	N3/4"-20 S	06 510 005	15	M20	100	165	40-80	38	0.85
80	ISO 16 B-1	N1"-20 S	06 510 006	13	M20	100	165	40-80	38	1.25
100	ISO 20 B-1	N1 1/4"-20 S	06 510 007	13	M20	100	165	40-80 / 48-80	45 / 50	2.00
120	ISO 24 B-1	N1 1/2"-20 S	06 510 008	11	M20	140	165	40-120 / 48-120	45 / 50	2.35
Duplex "D"										
35	ISO 06 B-2	N3/8"-10 D	06 520 001	15	M10	55	20	27-39 / 28-39	15/18	2.00
40	ISO 08 B-2	N1/2"-10 D	06 520 002	15	M10	55	20	30-37	18	0.35
50	ISO 10 B-2	N5/8"-12 D	06 520 003	15	M12	80	35	36-57	27	0.60
60	ISO 12 B-2	N3/4"-12 D	06 520 004	15	M12	80	35	37-56	27	1.05
60	ISO 12 B-2	N3/4"-20 D	06 520 005	15	M20	120	165	50-90	38	1.35
80	ISO 16 B-2	N1"-20 D	06 520 006	13	M20	120	165	55-84	38	2.10
100	ISO 20 B-2	N1 1/4"-20 D	06 520 007	13	M20	140	165	60-102 / 68-102	45 / 50	3.60
120	ISO 24 B-2	N1 1/2"-20 D	06 520 008	11	M20	140	165	65-97 / 73-97	45 / 50	4.25
Triplex "T"										
35	ISO 06 B-3	N3/8"-10 T	06 530 001	15	M10	70	20	33-48	18	0.25
40	ISO 08 B-3	N1/2"-12 T	06 530 002	15	M12	80	35	41-51	27	0.50
50	ISO 10 B-3	N5/8"-12 T	06 530 003	15	M12	80	35	43-50	27	0.95
50	ISO 10 B-3	N5/8"-20 T	06 530 004	15	M20	120	165	56-84	38	1.25
60	ISO 12 B-3	N3/4"-20 T	06 530 005	15	M20	120	165	59-80	38	1.50
80	ISO 16 B-3	N1"-20 T	06 530 006	13	M20	160	165	74-108	45	2.90
100	ISO 20 B-3	N1 1/4"-20 T	06 530 007	13	M20	160	165	78-105 / 86-105	45 / 50	5.20
120	ISO 24 B-3	N1 1/2"-20 T	06 530 008	11	M20	180	165	90-111 / 98-111	45 / 50	6.20

Sprocket wheel type N

Roller chain ANSI DIN 8187		Type	Art. No.	Number of teeth	A	B	C	D	Weight [kg]
35	ISO 06 B	N3/8"-10	06 500 001	15	10	5.3	9	45.81	0.06
40	ISO 08 B	N1/2"-10	06 500 002	15	10	7.2	9	61.08	0.15
40	ISO 08 B	N1/2"-12	06 500 003	15	12	7.2	12	61.08	0.15
50	ISO 10 B	N5/8"-12	06 500 004	15	12	9.1	12	76.36	0.27
50	ISO 10 B	N5/8"-20	06 500 005	15	20	9.1	15	76.36	0.29
60	ISO 12 B	N3/4"-12	06 500 006	15	12	11.1	12	91.63	0.47
60	ISO 12 B	N3/4"-20	06 500 007	15	20	11.1	15	91.63	0.47
80	ISO 16 B	N1"-20	06 500 008	13	20	16.1	15	106.14	0.88
100	ISO 20 B	N1 1/4"-20	06 500 009	13	20	18.5	15	132.67	1.60
120	ISO 24 B	N1 1/2"-20	06 500 010	11	20	24.1	15	135.23	1.93

