

Rigid struts Type 39



Selection

When selecting rigid struts from the below tables, these points must be noted:

1. The specified operating load must be covered by the nominal load.
2. The load group is determined at the same time by the nominal load.
3. The adjustment range available for the rigid struts is given for the specified installation length.
4. The weight is specified at the intersection between load group and adjustment range. If the intersection lies below the red boundary line, it is a matter of an extended length with reduced load that must be checked in the diagram on p. 3.28 for agreement with the specified operating load.
5. When ordering, the type designation is to be completed at the 3rd place by entering the load group number.

Permissible loads and weights

type	adjustment range	'E' middle	nominal load [kN]								nominal load [kN]			
			4	8	18	46	100	200	350	550	1000			
Ⓜ			load group ①											
			2	3	4	5	6	7	8	type	adjustment range	'E' middle	9	0
			weight [kg]											
39.0 34	300 - 450	375	1.4	2.2	2.3					39.0 83	800 - 950	875	71	
39.0 44	400 - 550	475	1.9	2.9	3.0	7.0	7.6			39.0 93	900 - 1050	975	77	
39.0 54	500 - 650	575	2.3	3.6	3.7	8.5	9.1	15.9		39.1 03	1000 - 1150	1075	82	172
39.0 74	600 - 900	750	2.4	3.4	4.9	8.8	13	22		39.1 13	1100 - 1250	1175		182
39.0 84	750 - 900	825							40	39.1 23	1200 - 1350	1275		192
39.1 04	850 - 1150	1000	3.3	4.5	6.5	11	17	28	47	39.1 33	1300 - 1450	1375		231
39.1 24	1100 - 1400	1250	4.1	5.5	8.0	13	21	34	57	39.1 23	1100 - 1400	1250	88	
39.1 54	1350 - 1650	1500	4.9	6.6	10	14	25	40	67	39.1 53	1350 - 1650	1500	121	247
39.1 74	1600 - 1900	1750	(5.8)	7.6	11	16	29	46	77	39.1 73	1600 - 1900	1750	139	270
39.2 04	1850 - 2150	2000	(6.6)	12.5	13	18	33	52	86	39.2 03	1850 - 2150	2000	157	294
39.2 24	2100 - 2400	2250	(7.4)	14.1	15	20	37	58	96	39.2 23	2100 - 2400	2250	175	350
39.2 54	2350 - 2650	2500		15.7	16	22	41	65	106	39.2 53	2350 - 2650	2500	193	379
39.2 74	2600 - 2900	2750			(18)	24	45	71	115	39.2 73	2600 - 2900	2750	211	409
39.3 04	2850 - 3150	3000			(19)	(26)	49	77	125	39.3 03	2850 - 3150	3000	229	438
39.3 24	3100 - 3400	3250			(21)	(28)	53	83	135	39.3 23	3100 - 3400	3250	247	467
39.3 54	3350 - 3650	3500			(23)	(30)	57	89	144	39.3 53	3350 - 3650	3500	265	497
39.3 74	3600 - 3900	3750				(31)	61	95	154	39.3 73	3600 - 3900	3750	283	526
39.4 04	3850 - 4150	4000					(65)	101	164	39.4 03	3850 - 4150	4000	301	555
39.4 24	4100 - 4400	4250					(69)	107	174	39.4 23	4100 - 4400	4250	319	585
39.4 54	4350 - 4650	4500					(73)	113	183	39.4 53	4350 - 4650	4500	337	614
39.4 74	4600 - 4900	4750					(77)	(119)	193	39.4 73	4600 - 4900	4750	355	644
39.5 04	4850 - 5150	5000						(126)	203	39.5 03	4850 - 5150	5000	372	673
										39.5 23	5100 - 5400	5250	390	702
										39.5 53	5350 - 5650	5500	(408)	732
										39.5 73	5600 - 5900	5750	(426)	761
										39.6 03	5850 - 6150	6000		790

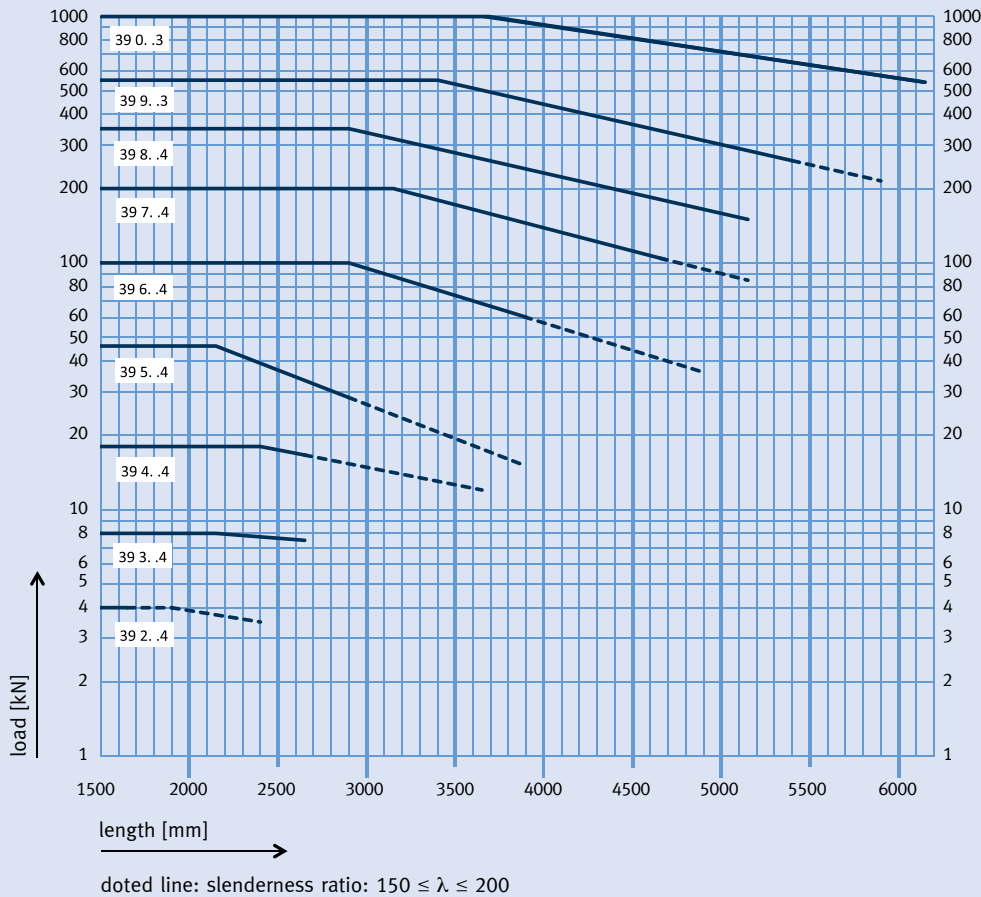
reduced loads for overlength (below red line) see diagram on p. 3.28

slenderness ratio $\lambda \leq 150$, for greater lengths the slenderness ratio can range between

150 and 200; the weight of these rigid struts is given in brackets.

① The type designation is to be completed in the 3rd place with the load group.

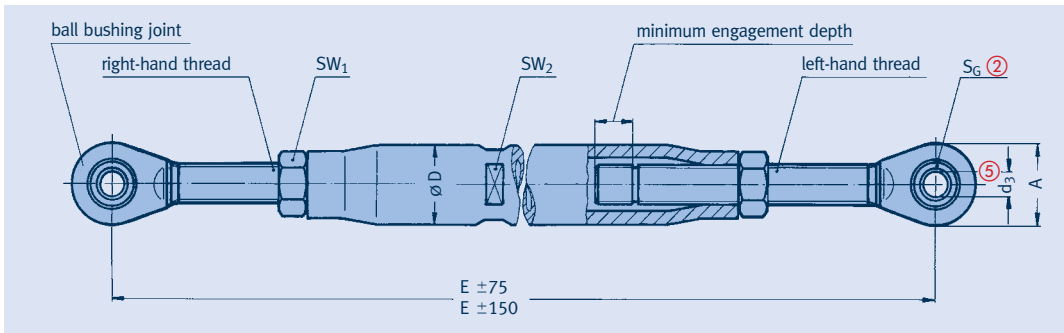
Load diagram for extended lengths



The diagram on the left shows the reduced load values against nominal load that must be taken into account for extended lengths.

Material:
 body P235GH
 P355NH
 strut paddle P250GH
 C45E+QT
 S355J2
 42CrMo4+QT

- ① Minimum engagement depth on the ball bushing joint marked by an undercut.
- ② Ball bushing width.
- ③ The type designation is to be completed by the length index (4th and 5th places in the type designation, p. 3.27).
- ④ Due to their design, the rigid struts have freely variable adjustment, with right-hand / left-hand threads, similar to a turnbuckle. Shorter installation lengths for rigid struts are possible as special designs.
- ⑤ Connection possibilities: see bolt diameters of weld-on brackets type 35 or dynamic clamps type 36 / 37 in product group 3.



type ③	nom. load [kN]	A	ØD	Ød ₃ ⑤	E ④ min	E max	SW ₁	SW ₂	S _G ②
39 2. .4	4	30	(30) 38	10	300	1900	27	(27) 32	9
39 3. .4	8	38	(40) 43/57	12	300	2150	32	(32) 36/46	10
39 4. .4	18	45	(40) 57	15	300	2400	36	(32) 46	12
39 5. .4	46	60	61	20	400	2150	60	50	16
39 6. .4	100	82	(60) 83	30	400	2900	60	(50) 70	22
39 7. .4	200	120	(75) 102	50	500	3150	70/75	(60) 85	35
39 8. .4	350	150	115	60	750	2900	95	100	44
39 9. .3	550	210	115/127	70	800	3400	110	100/110	49
39 0. .3	1000	293	159/169	100	1000	3650	155	135/145	70

(..) Values in brackets: up to $E_{max} = 650\text{mm}$.

Depending on load group and length the struts are subject to alternative manufacturing technologies which may result in designs different to the shown.

Order details:
 rigid strut type 39