



SAS
Steel Turkey

Katalog | *catalogue*

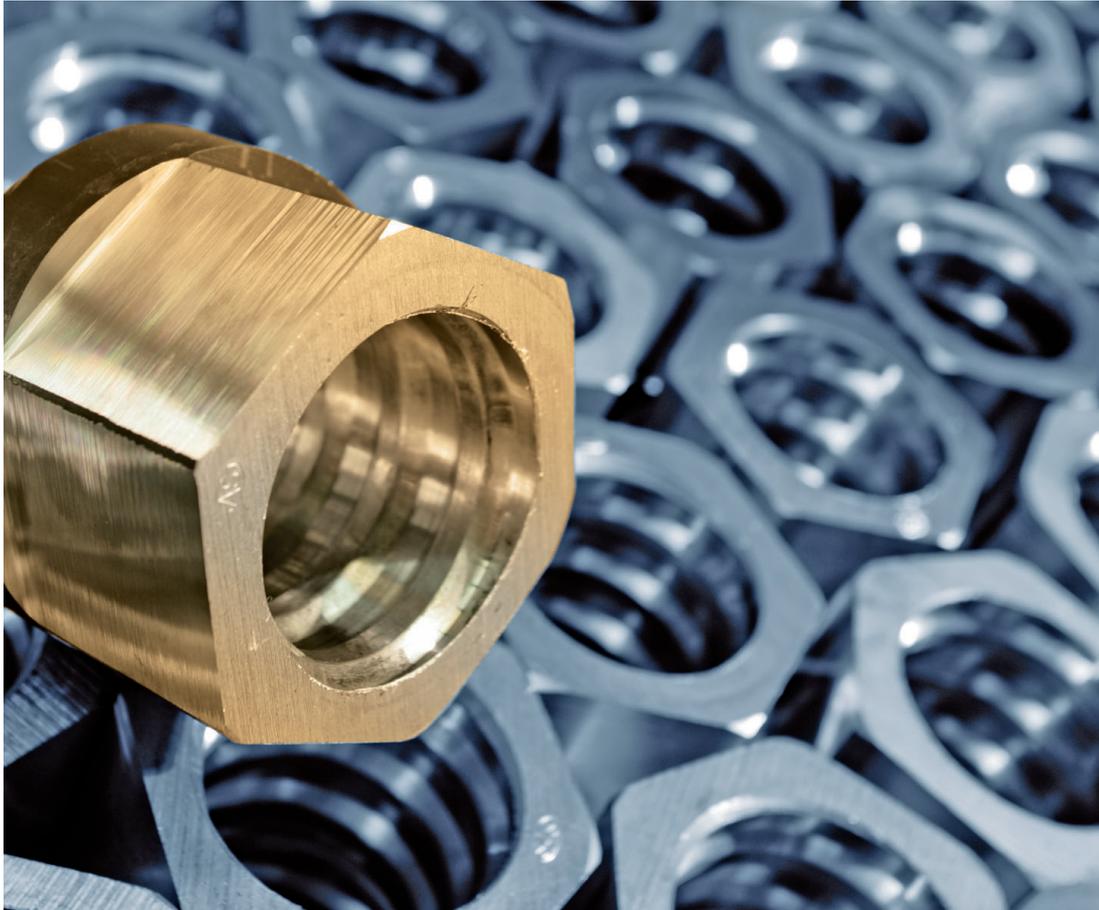
SAS 500 / 550 | SAS 550 / 620 | *grade 75*

SAS 555 / 700 | *grade 80*

SAS 670 / 800 | *grade 97*

SAS 950 / 1050 | SAS 835 / 1035 | *grade 150*

SAS SYSTEMS



MAX AICHER



SAS dişli çubuk sıcak haddelenmiş, nervürlü - soldan dişli | SAS thread bar hot rolled, ribbed - left hand thread

SAS 500 / 550 Ø 12 - 50 mm + 75 mm | grade 75

SAS 555 / 700 Ø 57,5 mm + 63,5 mm | grade 80

Ø _{NENM} / Ø _{NOM}	[mm]	12	14	16	20	25	28	32	36	40	43	50	57,5	63,5	75
max d _A	[mm]	14	16	19	23	29	32	36	41	45	48	56	63	70	82
c	[mm]	7	7,5	8	10	12,5	14	16	18	20	21,5	26	20	21	24
f _{yk} (f _{0,2k}) / f _{tk} / A _{gt} ¹		500 N/mm ² / 550 N/mm ² / ≥ 6%											555 N/mm ² 700 N/mm ² ≥ 5%	500 N/mm ² 550 N/mm ² ≥ 5%	
F _{yk} [F _{0,2k}]	[kN]	57	77	100	160	245	310	405	510	630	726	980	1441	1760	2209
F _{tk}	[kN]	62	85	110	175	270	340	440	560	690	799	1080	1818	2215	2430
A	[mm ²]	113	154	201	314	491	616	804	1020	1260	1452	1960	2597	3167	4418
G	[kg/m]	0,89	1,21	1,58	2,47	3,85	4,83	6,31	7,99	9,87	11,40	15,40	20,38	24,86	34,68

SAS 550 / 620 Ø 12 - 50 mm | grade 75

Ø _{NENM} / Ø _{NOM}	[mm]	12	14	16	20	25	26	28	30	32	36	40	43	50	
max d _A	[mm]	14	16	19	23	29	30	32	34	36	41	45	48	56	
c	[mm]	7	7,5	8	10	12,5	13	14	15	16	18	20	21,5	26	
f _{yk} (f _{0,2k}) / A _{gt} ¹		550 N/mm ² / 620 N/mm ² / ≥ 6%													
F _{yk} [F _{0,2k}]	[kN]	62	85	110	175	270	290	340	390	440	560	690	799	1080	
F _{tk} = 1,08 x F _{yk}	[kN]	67	92	119	189	292	313	367	421	475	605	745	862	1166	
A	[mm ²]	113	154	201	314	491	531	616	707	804	1020	1260	1452	1960	
G	[kg/m]	0,89	1,21	1,58	2,47	3,85	4,17	4,83	5,55	6,31	7,99	9,87	11,40	15,40	

¹ Maksimum kuvvette toplam uzama yüzdesi | Percentage total elongation at maximum force

Çubuğun ve aksesuarların ağırlık değerleri ortalama olarak verilmiştir. Gerçek değerler, üretim toleransları nedeniyle farklı olabilir. | Weight specifications of bar and accessories are average values. The actual values may deviate due to fabrication tolerances.

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Ø [mm]	ankraj somunu anchor nut		uzun ankraj somunu anchor nut long		flanşlı ankraj somunu anchor nut with flange		düz ankraj plakası anchor plate flat	
	SW x L x d [mm]	[kg]	SW x L [mm]	[kg]	SW x L x d [mm]	[kg]	a x t x d [mm]	[kg]
	T 2002 - Ø		T 2024 - Ø		T 2163 - Ø		T 2139 - Ø **	
12	22 x 25	0,10	22 x 35	0,08	-	-	50 x 8 x 16	0,14
14	27 x 35	0,12	27 x 45	0,16	-	-	50 x 8 x 18	0,14
16	32 x 40	0,20	32 x 50	0,25	-	-	50 x 8 x 20	0,15
20	36 x 45	0,27	32 x 65	0,25	-	-	70 x 12 x 25	0,42
25	41 x 50	0,34	41 x 75	0,52	-	-	90 x 15 x 30	0,87
26	46 x 50	0,45	41 x 80	0,56	-	-	100 x 15 x 33	1,08
28	46 x 55	0,48	41 x 85	0,48	-	-	100 x 15 x 33	1,08
30	50 x 60	0,65	46 x 90	0,77	-	-	120 x 20 x 36	2,10
32	55 x 60	0,78	50 x 90	0,90	-	-	120 x 20 x 40	2,06
36	60 x 65	1,00	55 x 95	1,17	-	-	150 x 30 x 44	4,94
40	65 x 70	1,19	60 x 100	1,30	65 x 70 x 85	1,20	150 x 30 x 47	4,89
43	70 x 75	1,51	-	-	70 x 80 x 90	1,81	160 x 40 x 50	7,42
50	79 x 90	2,17	79 x 120	3,00	80 x 85 x 100	2,35	190 x 45 x 58	11,82
57,5	90 x 110 x 102	4,13	-	-	90 x 100 x 110	3,50	220 x 50 x 67	17,61
63,5	100 x 115 x 108	4,72	-	-	100 x 115 x 125	4,90	245 x 50 x 70	22,05
75	100 x 100 x 108	2,99	-	-	100 x 120 x 115	4,15	275 x 65 x 88	35,48

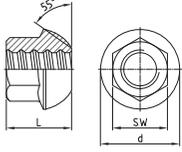
SAS SYSTEMS

Ø [mm]	düz, küçük ankraj plakası anchor plate flat small		uzun kilit somunu lock nut long		kısa kilit somunu lock nut short		ankraj parçası anchor piece	
	a x t x d [mm]	[kg]	SW x L x d [mm]	[kg]	SW x L x d [mm]	[kg]	SW x L x d [mm]	[kg]
	T 2008 - Ø **		T 2003 - Ø		T 2040 - Ø		T 2073 - Ø	
12	40 x 6 x 16	0,06	19 x 20	0,04	19 x 13	0,03	-	-
14	-	-	27 x 25	0,09	27 x 15	0,06	-	-
16	50 x 8 x 20	0,10	32 x 30	0,15	32 x 20	0,10	30 x 33 x 50	0,25
20	60 x 10 x 25	0,16	32 x 40	0,16	32 x 20	0,09	36 x 40 x 70	0,43
25	70 x 12 x 30	0,40	41 x 40	0,25	41 x 20	0,14	41 x 45 x 70	0,50
26	-	-	41 x 45	0,35	41 x 25	0,20	41 x 50 x 90	0,70
28	85 x 14 x 33	0,70	41 x 45	0,26	41 x 25	0,15	46 x 50 x 90	0,77
30	-	-	50 x 50	0,55	50 x 30	0,35	50 x 55 x 95	1,00
32	100 x 15 x 38	1,00	50 x 50	0,47	50 x 30	0,30	50 x 60 x 100	1,40
36	-	-	55 x 55	0,85	55 x 30	0,40	60 x 65 x 110	1,64
40	120 x 17 x 47	1,69	60 x 65	0,85	60 x 35	0,45	65 x 70 x 120	2,10
43	-	-	70 x 65	1,31	70 x 40	0,80	70 x 80 x 130	2,43
50	150 x 20 x 58	3,12	79 x 80	2,10	79 x 50	1,30	80 x 85 x 150	3,88
57,5	-	-	90 x 80 x 102	2,87	90 x 60 x 102	2,08	90 x 100 x 175	6,09
63,5	-	-	90 x 115 x 102	3,74	90 x 75 x 102	2,28	100 x 115 x 190	7,38
75	-	-	100 x 80 x 108	2,37	100 x 80 x 108	2,37	-	-

** Depolama ve nakliye koşulları nedeniyle pas oluşumu göz ardı edilemez | Rust formation cannot be ruled out due to storage and transport conditions

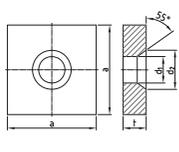
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bombeli somun 55°
domed nut 55°



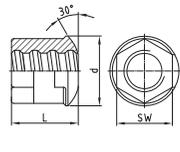
Ø [mm] SW x L x d [mm] [kg]

konik ankraj plakası 55°
anchor plate cone 55°



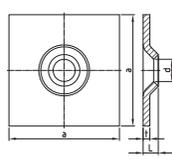
a x t x d₁ x d₂ [mm] [kg]

bombeli somun 30°
dome nut 30°



SW x L x d [mm] [kg]

bombeli pul 30°/55°
domed washer 30°/55°

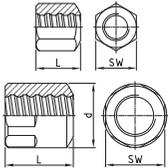


a x L x t x d [mm] [kg]

	T 2044 - Ø		T 2011 - Ø **		T 2944 - Ø		T 2132 - Ø **	
12	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-
16	27 x 33 x 35	0,11	60 x 10 x 25 x 33	0,24	-	-	150 x 25 x 10 x 22	1,77
20	36 x 42 x 49	0,30	70 x 12 x 30 x 44	0,37	36 x 40 x 51	0,30	150 x 25 x 10 x 26	1,76
25	41 x 45 x 55	0,35	90 x 15 x 35 x 49	0,81	41 x 45 x 54	0,32	150 x 25 x 10 x 34	1,74
26	-	-	-	-	-	-	-	-
28	41 x 54 x 62	0,45	100 x 15 x 40 x 54	0,99	41 x 50 x 58	0,38	200 x 25 x 10 x 34	3,11
30	-	-	-	-	-	-	-	-
32	46 x 57 x 70	0,60	120 x 20 x 52 x 60	1,91	50 x 60 x 62	0,70	200 x 27 x 12 x 40	3,70
36	-	-	-	-	-	-	-	-
40	60 x 70 x 88	1,50	150 x 30 x 65 x 76	4,48	65 x 70 x 85	1,79	200 x 42 x 20 x 53	5,90
43	70 x 80 x 100	2,12	160 x 40 x 75 x 93	6,54	-	-	-	-
50	80 x 85 x 107	2,57	190 x 45 x 83 x 96	10,78	80 x 85 x 100	2,96	-	-
57,5	90 x 100 x 120	3,79	220 x 50 x 92 x 110	16,25	-	-	-	-
63,5	100 x 115 x 144	5,51	245 x 50 x 104 x 121	20,09	-	-	-	-
75	100 x 120 x 160	6,62	275 x 65 x 118 x 145	32,60	-	-	-	-

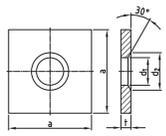
SAS SYSTEMS

kesik burunlu somun 30°
bull nose nut 30°



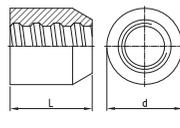
Ø [mm] SW x L x d [mm] [kg]

konik ankraj plakası 30°
anchor plate cone 30°



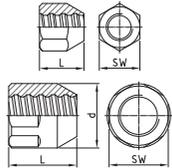
a x t x d₁ x d₂ [mm] [kg]

kaynak civatası
welding bolt



d x L [mm] [kg]

altigen kaynak civatası
welding bolt hexagonal



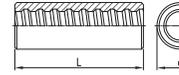
SW x L x d [mm] [kg]

	T 2963 - Ø		T 1928 - Ø **		T 3022 - Ø		T 3026 - Ø	
12	22 x 25	0,05	50 x 8 x 16 x 26	0,14	30 x 30	0,12	32 x 40	0,21
14	27 x 35	0,12	50 x 8 x 18 x 28	0,14	36 x 40	0,24	36 x 50	0,34
16	32 x 40	0,18	60 x 8 x 20 x 30	0,20	40 x 45	0,33	41 x 55	0,48
20	36 x 45	0,25	70 x 12 x 25 x 35	0,41	45 x 50	0,44	46 x 65	0,70
25	41 x 50	0,33	90 x 15 x 30 x 40	0,87	50 x 55	0,55	50 x 75	0,89
26	46 x 50	0,42	100 x 15 x 33 x 45	1,07	50 x 55	0,53	50 x 75	0,89
28	46 x 55	0,47	100 x 15 x 33 x 45	1,07	55 x 60	0,73	55 x 85	1,21
30	50 x 60	0,61	120 x 20 x 36 x 46	2,09	60 x 65	1,02	60 x 90	1,20
32	55 x 60	0,75	120 x 20 x 40 x 50	2,06	60 x 65	0,91	60 x 90	1,20
36	60 x 65	0,94	150 x 30 x 44 x 59	4,92	70 x 70	1,45	70 x 95	1,20
40	65 x 70	1,15	150 x 30 x 47 x 60	4,88	80 x 80	2,11	79 x 100	2,66
43	70 x 75	1,47	160 x 40 x 58 x 78	7,16	90 x 90	3,07	80 x 100 x 90	3,11
50	79 x 90	2,15	190 x 45 x 58 x 75	11,79	90 x 90	2,77	90 x 120 x 100	4,51
57,5	90 x 110 x 102	3,92	220 x 50 x 67 x 87	17,56	110 x 110	5,29	100 x 120 x 110	5,44
63,5	100 x 115 x 108	4,65	245 x 50 x 70 x 100	21,92	114 x 120	5,88	100 x 120 x 114	5,25
75	100 x 100 x 108	2,90	275 x 65 x 88 x 110	35,40	-	-	-	-

** Depolama ve nakliye koşulları nedeniyle pas oluşumu göz ardı edilemez | Rust formation cannot be ruled out due to storage and transport conditions

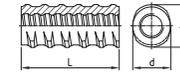
SAS SYSTEMS

standart kaplin
coupler standard



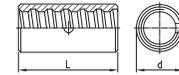
Ø [mm] d x L [mm] [kg]

dişli kaplin
thread coupler



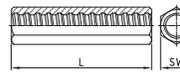
d x d₁ x L [mm] [kg]

temas kaplini
contact coupler



d x L [mm] [kg]

uzun altigen kaplin
hexagonal coupler long

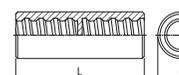


SW x L [mm] [kg]

	T 3003 - Ø		T 3087 - Ø		T 3006 - Ø		T 3010 - Ø	
12	22 x 60	0,11	-	-	-	-	22 x 80	0,20
14	27 x 75	0,22	-	-	-	-	27 x 100	0,34
16	32 x 90	0,37	26,5 x 31 x 90	0,27	27 x 65	0,17	32 x 120	0,60
20	36 x 105	0,52	32 x 37 x 105	0,40	32 x 70	0,25	32 x 140	0,55
25	40 x 115	0,62	40 x 46 x 115	0,68	36 x 80	0,30	41 x 160	1,10
26	45 x 120	0,80	47 x 53 x 120	1,13	36 x 80	0,30	41 x 170	1,10
28	45 x 125	0,85	47 x 53 x 125	1,09	40 x 85	0,40	41 x 180	1,05
30	50 x 135	1,37	47 x 53 x 135	1,10	45 x 90	0,60	50 x 180	1,75
32	52 x 140	1,32	57 x 64 x 140	1,93	45 x 90	0,50	50 x 180	1,76
36	60 x 150	2,10	57 x 64 x 150	1,78	50 x 120	1,25	60 x 190	2,75
40	65 x 160	2,34	65 x 72 x 160	2,52	54 x 120	0,82	65 x 210	3,67
43	80 x 170	4,49	75 x 82 x 170	3,79	60 x 130	1,19	70 x 220	4,46
50	80 x 200	4,49	-	-	63 x 160	1,09	79 x 240	5,97
57,5	102 x 230	9,54	-	-	83 x 170	3,36	-	-
63,5	102 x 260	9,45	-	-	90 x 200	4,28	-	-
75	108 x 240	8,01	-	-	102 x 210	5,33	-	-

SAS SYSTEMS

ortadan stoperli standart kaplin
coupler standard with center stop



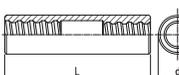
Ø [mm] d x L [mm] [kg]

ortadan stoperli dişli kaplin
thread coupler with center stop



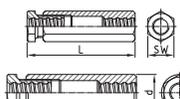
d x L [mm] [kg]

redüktör kaplin
reducing coupler



Ø x d x L [mm] [kg]

turnbuckle
turnbuckle

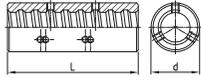


SW x L x d [mm] [kg]

	T 3002 - Ø		T 3043 - Ø		T 3102 - Ø		T 3105 - Ø	
12	22 x 60	0,12	-	-	-	-	32 x 126	0,65
14	27 x 75	0,23	-	-	-	-	32 x 138	0,66
16	32 x 90	0,38	32 x 90	0,40	16/14 x 32 x 120	0,55	36 x 150	0,92
20	36 x 105	0,54	36 x 105	0,53	20/16 x 36 x 130	0,65	41 x 175	1,28
25	40 x 115	0,65	40 x 115	0,62	25/20 x 40 x 150	0,84	46 x 190	1,64
26	45 x 120	0,83	45 x 120	0,91	26/20 x 40 x 155	0,88	50 x 205	2,17
28	45 x 125	0,89	45 x 125	0,86	28/26 x 45 x 170	1,20	50 x 205	2,04
30	50 x 135	1,41	50 x 135	1,21	30/28 x 50 x 180	1,62	60 x 225	3,58
32	52 x 140	1,37	52 x 140	1,32	32/30 x 52 x 185	1,72	60 x 225	3,41
36	-	-	60 x 150	1,96	36/32 x 60 x 205	2,61	70 x 250	5,39
40	-	-	65 x 160	2,38	40/36 x 65 x 215	3,26	79 x 270	7,31
43	-	-	80 x 170	4,49	43/40 x 80 x 225	5,93	90 x 290 x 105	13,46
50	-	-	80 x 200	4,55	50/40 x 80 x 240	6,00	100 x 310 x 115	16,89
57,5	-	-	102 x 230	9,54	57,5/50 x 90 x 280	7,99	100 x 340 x 125	20,37
63,5	-	-	102 x 260	9,45	63,5/57,5 x 102 x 310	11,56	100 x 395 x 130	24,11
75	-	-	108 x 240	8,08	75/63,5 x 110 x 290	11,63	110 x 370 x 130	19,67

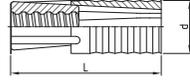
SAS SYSTEMS

tespit vidalı kaplin
coupler with set screws



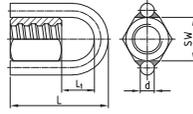
Ø [mm] d x L [mm] [kg]

genleşme kovani
expansion shell



d x L [mm] [kg]

halka somun
ring nut

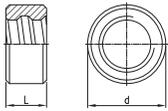


SW x L x L, x d [mm] [kg]

T 3020 - Ø			T 2136 - Ø *		T 2927 - Ø *	
12	-	-	-	-	-	-
14	-	-	-	-	32 x 110 x 54 x 16	0,58
16	-	-	32 x 92	0,22	32 x 110 x 54 x 16	0,57
20	-	-	39 x 109	0,44	36 x 120 x 59 x 16	0,67
25	-	-	49 x 121	0,60	41 x 135 x 69 x 16	0,78
26	-	-	-	-	-	-
28	45 x 125	0,82	49 x 121	0,60	46 x 145 x 74 x 16	0,97
30	-	-	-	-	-	-
32	52 x 140	1,35	59 x 149	1,00	55 x 165 x 89 x 16	1,34
36	60 x 150	1,94	-	-	-	-
40	65 x 160	2,35	-	-	65 x 193 x 103 x 20	2,10
43	80 x 170	4,41	-	-	70 x 200 x 105 x 20	2,56
50	80 x 200	4,50	-	-	79 x 220 x 110 x 20	3,33
57,5	102 x 230	9,45	-	-	90 x 270 x 140 x 20	5,57
63,5	102 x 260	9,41	-	-	100 x 279 x 144 x 20	6,07
75	108 x 240	8,02	-	-	100 x 279 x 159 x 20	4,43

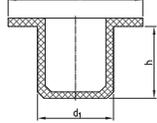
SAS SYSTEMS

tespit halkası
fix ring



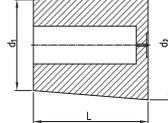
Ø [mm] d x L [mm] [kg]

iç kapak
inner cap



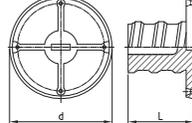
d1 x d2 x h [mm] [kg]

oyuk konik
recess cone



d1 x d2 x L [mm] [kg]

ince plaka
nail plate



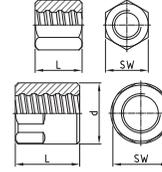
d x L [mm] [kg]

T 5003 - Ø			T 5025 - Ø		T 5050 - Ø		T 5979 - Ø	
12	-	-	12 x 19 x 7	0,01	36 x 42 x 40	0,02	36 x 20	0,01
14	-	-	14 x 19 x 7	0,01	41 x 49 x 49	0,03	42 x 20	0,01
16	-	-	16 x 25 x 9	0,01	48 x 58 x 64	0,05	48 x 25	0,01
20	-	-	20 x 25 x 9	0,01	50 x 62 x 74	0,07	48 x 30	0,01
25	-	-	25 x 30 x 9	0,01	63 x 76 x 78	0,10	58 x 35	0,02
26	-	-	26 x 31 x 9	0,01	-	-	58 x 35	0,02
28	-	-	28 x 35 x 9	0,01	74 x 89 x 89	0,14	58 x 40	0,02
30	-	-	30 x 35 x 9	0,01	-	-	68 x 45	0,03
32	-	-	32 x 37 x 9	0,01	77 x 93 x 98	0,14	68 x 45	0,03
36	50 x 25	0,15	36 x 42 x 9	0,01	-	-	-	-
40	55 x 25	0,18	40 x 48 x 10	0,01	-	-	-	-
43	65 x 25	0,33	-	-	-	-	-	-
50	65 x 30	0,25	50 x 58 x 10	0,01	-	-	-	-
57,5	81 x 35	0,60	-	-	-	-	-	-
63,5	89 x 40	0,85	64 x 74 x 10	0,01	-	-	-	-
75	102 x 40	1,01	-	-	-	-	-	-

* taşıma kapasitesi ve uygulama ile ilgili olarak, lütfen ana sayfada bulunan bilgi formunu dikkate alın
with regard to load capacity and installation, please note data sheet available on the homepage

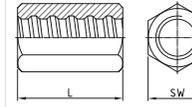
SAS SYSTEMS

düz ankraj somunu EP
anchor nut EP flat



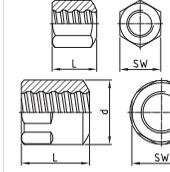
Ø [mm] SW x L x d [mm] [kg]

uzun ankraj somunu EP
anchor nut EP long



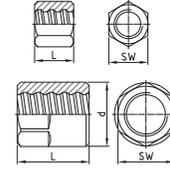
SW x L [mm] [kg]

kesik burunlu somun EP 30°
bull nose nut EP 30°



SW x L x d [mm] [kg]

kesik burunlu somun EP 30°
lock nut EP long

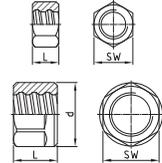


SW x L x d [mm] [kg]

T 2002 - Ø EP			T 2024 - Ø EP		T 2963 - Ø EP		T 2003 - Ø EP	
12	22 x 30	0,06	22 x 35	0,08	22 x 30	0,06	19 x 25	0,05
14	27 x 40	0,14	27 x 45	0,16	27 x 40	0,14	27 x 30	0,12
16	32 x 50	0,25	32 x 50	0,25	32 x 50	0,24	32 x 35	0,18
20	36 x 55	0,31	32 x 65	0,26	32 x 55	0,31	32 x 45	0,19
25	41 x 60	0,40	41 x 75	0,51	41 x 60	0,40	41 x 50	0,35
26	46 x 60	0,57	41 x 80	0,52	-	-	41 x 55	0,36
28	46 x 65	0,55	41 x 85	0,49	46 x 65	0,55	41 x 55	0,31
30	50 x 75	0,79	46 x 90	0,71	-	-	50 x 60	0,63
32	55 x 75	0,97	50 x 90	0,87	55 x 75	0,96	50 x 60	0,57
36	60 x 80	1,22	55 x 95	1,08	60 x 80	1,18	55 x 65	1,01
40	65 x 85	1,43	60 x 100	1,31	65 x 85	1,43	60 x 75	1,00
43	70 x 90	1,81	-	-	70 x 90	1,77	70 x 75	1,51
50	79 x 105	2,71	79 x 120	2,97	79 x 105	2,62	79 x 95	2,50
57,5	90 x 125 x 102	4,72	-	-	90 x 125 x 102	4,53	90 x 100 x 102	3,68
63,5	100 x 130 x 108	5,53	-	-	100 x 130 x 108	5,30	90 x 130 x 102	4,26
75	100 x 115 x 108	3,48	-	-	100 x 115 x 108	3,38	100 x 100 x 108	2,97

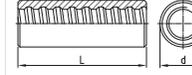
SAS SYSTEMS

uzun kilit somunu EP
lock nut EP short



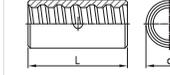
Ø [mm] SW x L x d [mm] [kg]

standart kaplin EP
coupler EP standard



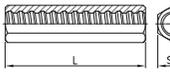
d x L [mm] [kg]

temas kaplini EP
contact coupler EP



d x L [mm] [kg]

uzun altgen kaplin EP
hexagonal coupler EP long



SW x L [mm] [kg]

T 2040 - Ø EP			T 3003 - Ø EP		T 3006 - Ø EP		T 3010 - Ø EP	
12	19 x 20	0,03	22 x 75	0,15	-	-	22 x 80	0,17
14	27 x 25	0,09	27 x 90	0,32	-	-	27 x 100	0,34
16	32 x 30	0,15	32 x 105	0,46	-	-	32 x 120	0,60
20	32 x 40	0,17	36 x 120	0,59	32 x 70	0,25	32 x 140	0,56
25	41 x 40	0,28	40 x 135	0,71	36 x 80	0,30	41 x 160	1,10
26	41 x 45	0,29	45 x 140	1,06	36 x 80	0,24	41 x 170	1,11
28	41 x 45	0,41	45 x 145	0,97	40 x 85	0,40	41 x 200	1,22
30	50 x 50	0,52	50 x 155	1,38	45 x 90	0,53	50 x 180	1,89
32	50 x 50	0,50	52 x 160	1,49	45 x 90	0,50	50 x 180	1,75
36	55 x 55	0,73	60 x 170	2,30	50 x 120	0,74	60 x 190	2,90
40	60 x 65	0,85	65 x 190	3,07	54 x 120	0,90	65 x 210	3,66
43	70 x 65	1,30	80 x 200	5,28	60 x 130	1,18	70 x 220	4,44
50	79 x 80	2,10	80 x 235	5,60	64 x 160	1,35	79 x 240	5,95
57,5	90 x 80 x 102	2,85	102 x 260	10,75	80 x 170	2,90	-	-
63,5	90 x 85 x 102	2,62	102 x 300	10,87	90 x 200	4,25	-	-
75	100 x 80 x 108	2,36	108 x 270	9,00	102 x 210	5,30	-	-



SAS dişli çubuk sıcak haddelenmiş, nervürlü - sağdan dişli | SAS thread bar hot rolled, ribbed - right hand thread

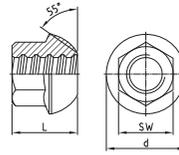
SAS 670 / 800 Ø 18 - 75mm | grade 97

Ø _{NENM} / Ø _{NEM}	[mm]	18	22	25	28	30	35	43	50	57,5	63,5	75
max d _A	[mm]	21	25	28	32	34	40	48	55	63	70	82
c	[mm]	8	8	10	11	11	14	17	18	20	21	24
f _{yk} (f _{0,2k}) / f _{tk} / A _{gt} ¹⁾		670 N/mm ² / 800 N/mm ² / ≥ 5%										
F _{yk} [F _{0,2k}]	[kN]	170	255	329	413	474	645	973	1315	1740	2122	2960
F _{tk}	[kN]	204	304	393	493	565	770	1162	1570	2077	2534	3535
A	[mm ²]	254	380	491	616	707	962	1452	1963	2597	3167	4418
G	[kg/m]	2,00	2,98	3,85	4,83	5,55	7,55	11,40	15,40	20,38	24,86	34,68

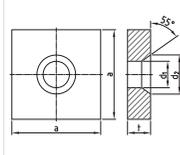
¹⁾ Maksimum kuvvette toplam uzama yüzdesi | Percentage total elongation at maximum force
Çubuğun ve aksesuarların ağırlık değerleri ortalama olarak verilmiştir. Gerçek değerler, üretim toleransları nedeniyle farklı olabilir. | Weight specifications of bar and accessories are average values. The actual values may deviate due to fabrication tolerances.

SAS SYSTEMS

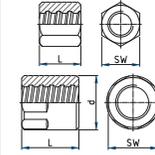
bombeli somun 55°
dome nut 55°



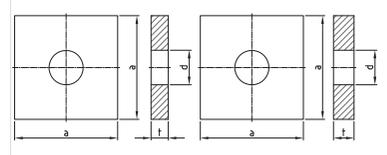
konik ankraj plakası 55°
anchor plate cone 55°



ankraj somunu
anchor nut



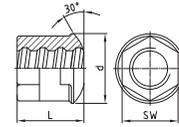
düz ankraj plakası
anchor plate flat



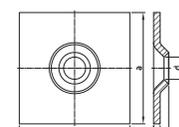
Ø [mm]	SW x L x d [mm]	[kg]	a x t x d ₂ [mm]	[kg]	SW x L x d [mm]	[kg]	a x t x d [mm]	[kg]	a x t x d [mm]	[kg]
TR 2001 - Ø		TR 2011 - Ø **		TR 2002 - Ø		TR 2138 - Ø **		TR 2139 - Ø **		
18	32 x 35 x 43	0,18	100 x 25 x 27 x 39	1,83	36 x 45	0,29	100 x 20 x 23	1,51	100 x 25 x 23	1,88
22	36 x 45 x 53	0,27	110 x 30 x 32 x 47	2,62	41 x 50	0,39	110 x 25 x 27	2,26	110 x 30 x 27	2,72
25	41 x 50 x 60	0,47	125 x 30 x 35 x 53	3,40	46 x 55	0,53	110 x 25 x 30	2,20	115 x 30 x 30	2,95
28	46 x 55 x 67	0,62	135 x 35 x 40 x 59	4,59	50 x 60	0,67	115 x 30 x 34	2,90	120 x 30 x 34	3,18
30	50 x 60 x 71	0,66	145 x 35 x 40 x 63	5,32	55 x 65	0,90	130 x 30 x 36	3,74	130 x 35 x 36	4,36
35	60 x 70 x 83	1,40	170 x 40 x 47 x 73	8,36	65 x 70	1,41	150 x 35 x 42	5,80	150 x 40 x 42	6,63
43	70 x 85 x 102	2,22	210 x 50 x 58 x 90	15,96	79 x 90	2,62	185 x 45 x 50	11,40	185 x 55 x 50	13,93
50	80 x 100 x 116	3,44	240 x 55 x 70 x 110	22,59	79 x 100	2,53	215 x 50 x 60	17,03	215 x 60 x 60	20,44
57,5	90 x 115 x 137	5,69	275 x 60 x 75 x 119	32,77	90 x 120 x 102	4,53	250 x 55 x 67	25,46	245 x 65 x 67	28,83
63,5	100 x 125 x 151	7,52	300 x 65 x 82 x 131	42,19	100 x 145 x 114	6,97	265 x 60 x 74	31,05	270 x 70 x 74	37,70
75	120 x 150 x 178	12,94	325 x 70 x 100 x 159	51,89	100 x 130 x 108	3,86	320 x 70 x 86	53,10	325 x 70 x 86	54,85

SAS SYSTEMS

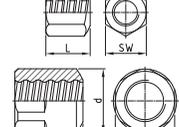
bombeli somun 30°
dome nut 30°



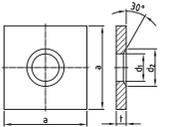
bombeli pul 30°
domed washer 30°



kesik burunlu somun 30°
bull nose nut 30°



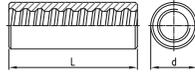
konik ankraj plakası 30°
anchor plate cone 30°



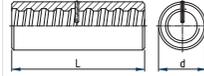
Ø [mm]	SW x L x d [mm]	[kg]	a x L x t x d [mm]	[kg]	SW x L x d [mm]	[kg]	a x t x d ₂ [mm]	[kg]
TR 2944 - Ø		TR 2132 - Ø **		TR 2963 - Ø		TR 1928 - Ø **		
18	30 x 35 x 46	0,20	150 x 25 x 10 x 26	1,76	36 x 45	0,28	70 x 10 x 25 x 35	0,34
22	36 x 40 x 51	0,29	150 x 25 x 10 x 34	1,74	41 x 50	0,39	90 x 12 x 30 x 40	0,69
25	41 x 50 x 58	0,45	200 x 25 x 10 x 34	3,11	46 x 55	0,53	100 x 12 x 33 x 45	0,85
28	46 x 60 x 62	0,67	200 x 27 x 12 x 40	3,70	50 x 60	0,66	120 x 20 x 40 x 50	2,06
30	46 x 60 x 62	0,65	200 x 27 x 12 x 40	3,70	55 x 65	0,82	120 x 20 x 40 x 50	2,06
35	-	-	-	-	65 x 70	1,35	150 x 30 x 47 x 60	4,88
43	-	-	-	-	79 x 90	2,50	190 x 45 x 58 x 75	11,79
50	-	-	-	-	79 x 100	2,46	215 x 50 x 60 x 80	16,99
57,5	-	-	-	-	90 x 120 x 102	4,32	245 x 50 x 70 x 90	22,00
63,5	-	-	-	-	100 x 145 x 114	6,67	280 x 60 x 78 x 100	34,60
75	-	-	-	-	100 x 130 x 108	3,93	325 x 70 x 88 x 120	54,52

** Depolama ve nakliye koşulları nedeniyle pas oluşumu göz ardı edilemez | Rust formation cannot be ruled out due to storage and transport conditions

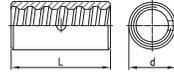
standart kaplin
coupler standard



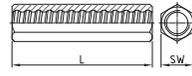
dişli kaplin çubuğu
thread bar coupler



temas kaplin
contact coupler

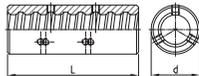


uzun altgen kaplin
hexagonal coupler long

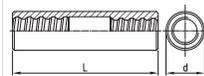


Ø [mm]	d x L [mm]	[kg]	d x L [mm]	[kg]	d x L [mm]	[kg]	SW x L [mm]	[kg]
	TR 3003 - Ø		TR 3043 - Ø		TR 3006 - Ø		TR 3010 - Ø	
18	36 x 100	0,57	36 x 100	0,57	27 x 70	0,16	36 x 120	0,78
22	40 x 110	0,55	40 x 110	0,71	32 x 75	0,22	41 x 135	1,08
25	45 x 130	1,05	45 x 130	1,05	40 x 80	0,43	46 x 150	1,49
28	50 x 140	1,36	50 x 140	1,39	45 x 90	0,67	50 x 170	1,96
30	55 x 150	1,84	55 x 150	1,85	45 x 90	0,60	55 x 185	2,63
35	65 x 180	3,14	65 x 180	3,17	50 x 120	0,82	60 x 210	3,36
43	80 x 200	5,42	80 x 200	5,35	65 x 160	2,08	79 x 245	7,27
50	90 x 210	6,92	90 x 210	6,92	70 x 170	2,23	-	-
57,5	102 x 250	10,37	102 x 250	10,38	83 x 180	3,55	-	-
63,5	114 x 300	15,85	114 x 300	15,86	90 x 200	4,24	-	-
75	108 x 260	8,98	108 x 260	8,76	102 x 230	5,83	-	-

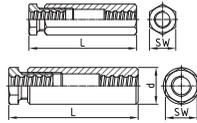
tespit vidalı kaplin
coupler with set screws



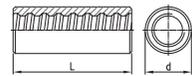
redüktör kaplin
reducing coupler



germe tertibatı
turnbuckle

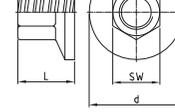


temperli kaplin
coupler tempered

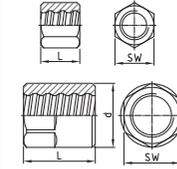


Ø [mm]	d x L [mm]	[kg]	Ø x d x L [mm]	[kg]	SW x L x d [mm]	[kg]	d x L [mm]	[kg]
	TR 3020 - Ø		TR 3102 - Ø		TR 3105 - Ø		TR 3927 - Ø	
18	36 x 100	0,56	-	-	41 x 175	1,34	-	-
22	40 x 110	0,70	22/18 x 40 x 145	1,00	46 x 190	1,78	36 x 90	0,41
25	45 x 130	1,03	25/22 x 45 x 160	1,40	55 x 205	2,94	38 x 100	0,45
28	50 x 140	1,37	28/25 x 50 x 180	2,00	60 x 225	3,74	42 x 120	0,64
30	55 x 150	1,85	30/28 x 55 x 195	2,50	65 x 260	5,11	50 x 130	1,18
35	65 x 180	3,13	35/30 x 60 x 215	3,00	79 x 275	8,27	55 x 150	1,52
43	80 x 200	5,40	43/35 x 80 x 250	5,50	90 x 330 x 105	15,14	65 x 170	2,26
50	90 x 210	6,82	50/43 x 85 x 270	7,68	100 x 350 x 115	19,04	75 x 180	3,17
57,5	102 x 250	10,00	57,5/50 x 100 x 295	11,94	100 x 405 x 125	24,46	85 x 220	4,92
63,5	114 x 300	14,70	63,5/57,5 x 110 x 305	14,89	100 x 425 x 120	21,56	95 x 240	6,81
75	108 x 260	8,90	75/63,5 x 110 x 335	13,24	110 x 460 x 130	25,20	-	-

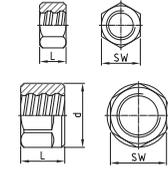
ankraj parçası
anchor piece



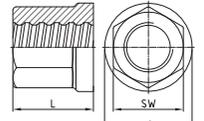
ankraj parçası
lock nut long



kısa kilit somunu
lock nut short

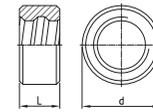


flanşlı ankraj somunu
anchornut with flange

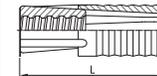


Ø [mm]	SW x L x d [mm]	[kg]	SW x L x d [mm]	[kg]	SW x L x d [mm]	[kg]	SW x L x d [mm]	[kg]
	TR 2073 - Ø		TR 2003 - Ø		TR 2040 - Ø		TR 2163 - Ø	
18	32 x 35 x 55	0,28	30 x 40	0,16	30 x 22	0,10	36 x 45 x 42	0,31
22	36 x 45 x 65	0,43	36 x 45	0,25	36 x 22	0,12	41 x 50 x 47	0,43
25	41 x 50 x 75	0,62	41 x 50	0,37	41 x 22	0,16	46 x 55 x 53	0,59
28	46 x 55 x 85	0,85	46 x 55	0,50	46 x 30	0,26	50 x 65 x 58	0,80
30	50 x 60 x 90	1,03	50 x 60	0,67	50 x 30	0,31	55 x 65 x 64	0,98
35	60 x 70 x 105	1,66	55 x 65	0,78	55 x 40	0,47	65 x 70 x 75	1,51
43	70 x 85 x 130	2,74	70 x 80	1,60	70 x 50	1,00	80 x 90 x 92	2,99
50	80 x 100 x 150	3,63	79 x 90	2,27	79 x 50	1,26	80 x 100 x 92	2,84
57,5	90 x 115 x 175	6,96	90 x 100 x 102	3,71	90 x 60 x 102	2,04	90 x 120 x 102	4,15
63,5	100 x 125 x 190	8,78	100 x 115 x 114	5,45	100 x 70 x 114	3,07	100 x 145 x 114	6,23
75	120 x 150 x 230	15,03	100 x 120 x 108	4,20	100 x 80 x 108	2,70	-	-

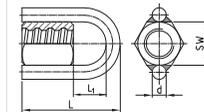
tespit halkası
fix ring



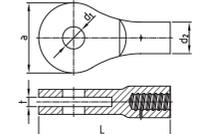
genleşme kovani
expansion shell



halka somun
ring nut



çatal parça
fork piece

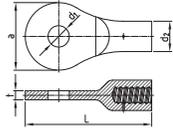


Ø [mm]	d x L [mm]	[kg]	d x L [mm]	[kg]	SW x L x d x L1 [mm]	[kg]	a x L x t x d1 x d2 [mm]	[kg]
	TR 5003 - Ø		TR 2136 - Ø *		TR 2927 - Ø *		TR 2090 - Ø EP	
18	-	-	39 x 109	0,44	36 x 120 x 16 x 59	0,68	-	-
22	31 x 20	0,06	49 x 121	0,60	41 x 135 x 16 x 69	0,83	-	-
25	-	-	49 x 121	0,60	46 x 145 x 16 x 74	1,02	-	-
28	45 x 20	0,14	59 x 149	1,00	50 x 155 x 16 x 79	1,19	-	-
30	45 x 20	0,06	59 x 149	1,00	55 x 165 x 16 x 84	1,46	-	-
35	50 x 20	0,13	-	-	65 x 193 x 20 x 103	2,42	147 x 315 x 27 x 53 x 75	7,40
43	65 x 25	0,33	-	-	79 x 220 x 20 x 110	3,78	197 x 384 x 29 x 63 x 92	12,80
50	70 x 30	0,39	-	-	79 x 220 x 20 x 100	3,69	221 x 406 x 35 x 75 x 94	14,75
57,5	81 x 35	0,60	-	-	90 x 270 x 20 x 130	5,97	248 x 454 x 42 x 88 x 96	20,40
63,5	89 x 40	0,85	-	-	100 x 305 x 20 x 140	8,60	298 x 553 x 42 x 98 x 114	34,50
75	102 x 40	1,01	-	-	100 x 279 x 20 x 129	5,30	328 x 627 x 54 x 108 x 116	44,40

* taşıma kapasitesi ve uygulama ile ilgili olarak, lütfen ana sayfada bulunan bilgi formunu dikkate alın
with regard to load capacity and installation, please note data sheet available on the homepage

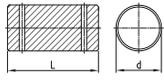
SAS SYSTEMS

gözlü parça
eye piece



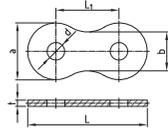
Ø [mm] a x L x t x d₁ x d₂ [mm] [kg]

gözlü civata parçası
bolt eye piece



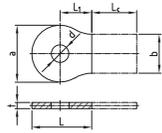
d x L [mm] [kg]

eritli bağlantı gözlü parçası
strap connection eye piece



a x L x t x d x L₁ x b [mm] [kg]

kaynak plakası gözlü parçası
welding plate eye piece

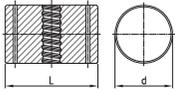


a x L x L₁ x t x d x b [mm] [kg+Lc]

	TR 2080 - Ø EP **		TR 2081 - Ø		TR 3080 - Ø **		TR 3081 - Ø **	
18	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-
35	167 x 315 x 23 x 53 x 75	7,18	50 x 100	1,52	167 x 354 x 18 x 53 x 187 x 114	7,00	167 x 177 x 94 x 18 x 53 x 114 x Lc	3,10 + Lc
43	197 x 384 x 25 x 63 x 92	12,54	60 x 110	2,40	197 x 414 x 20 x 63 x 217 x 134	9,60	197 x 207 x 109 x 20 x 63 x 134 x Lc	4,72 + Lc
50	221 x 406 x 31 x 75 x 92	17,99	72 x 105	3,31	-	-	-	-
57,5	248 x 469 x 38 x 88 x 96	21,57	85 x 145	6,45	248 x 526 x 30 x 88 x 278 x 160	22,00	248 x 263 x 139 x 30 x 88 x 160 x Lc	10,95 + Lc
63,5	298 x 558 x 38 x 98 x 114	33,45	95 x 145	8,02	298 x 626 x 30 x 98 x 328 x 200	31,80	298 x 313 x 164 x 30 x 98 x 200 x Lc	17,95 + Lc
75	328 x 627 x 50 x 108 x 116	46,13	105 x 165	11,21	328 x 691 x 35 x 108 x 363 x 220	45,80	328 x 346 x 182 x 35 x 108 x 220 x Lc	22,75 + Lc

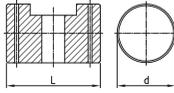
SAS SYSTEMS

bağlantı somunu
joint nut



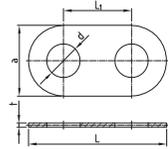
Ø [mm] d x L [mm] [kg]

bağlantı civatası
joint bolt



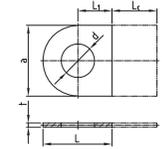
d x L [mm] [kg]

eritli bağlantı civatası ve somunu
strap connection joint bolt & nut



a x L x t x d x L₁ [mm] [kg]

kaynak plakası bağlantı civatası ve somunu
welding plate joint bolt & nut



a x L x t x d x L₁ x Lc [mm] [kg+Lc]

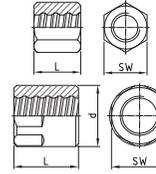
	TR 2020 - Ø		TR 2021 - Ø		TR 2022 - Ø **		TR 2023 - Ø **	
18	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-
35	120 x 193	16,00	120 x 193	14,60	260 x 512 x 15 x 123 x 252	11,00	260 x 256 x 15 x 123 x 126 x Lc	5,60 + Lc
43	140 x 212	23,80	140 x 212	21,20	320 x 626 x 15 x 145 x 306	16,60	320 x 313 x 15 x 145 x 153 x Lc	8,55 + Lc
50	-	-	-	-	-	-	-	-
57,5	150 x 222	27,00	150 x 222	24,60	420 x 780 x 20 x 155 x 360	40,20	420 x 390 x 20 x 155 x 180 x Lc	19,80 + Lc
63,5	190 x 265	53,40	190 x 265	51,06	460 x 894 x 25 x 195 x 434	59,60	460 x 447 x 25 x 195 x 217 x Lc	30,05 + Lc
75	190 x 279	55,00	190 x 279	52,00	470 x 912 x 35 x 195 x 442	88,40	470 x 456 x 35 x 195 x 221 x Lc	44,20 + Lc

Lc a petición del cliente / Lc on customer request

** Depolama ve nakliye koşulları nedeniyle pas oluşumu göz ardı edilemez | Rust formation cannot be ruled out due to storage and transport conditions

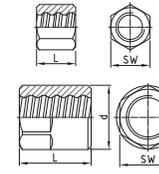
SAS SYSTEMS

düz ankraj somunu EP
anchor nut EP flat



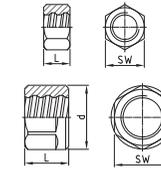
Ø [mm] SW x L x d [mm] [kg]

uzun kilit somunu EP
lock nut EP long



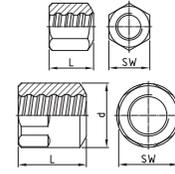
SW x L x d [mm] [kg]

kısa kilit somunu EP
lock nut EP short



SW x L x d [mm] [kg]

kesik buruntu 30°
butt nose EP 30°

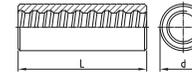


SW x L x d [mm] [kg]

	TR 2002 - Ø EP			TR 2003 - Ø EP		TR 2040 - Ø EP		TR 2963 - Ø EP	
18	36 x 55	0,40		30 x 50	0,20	30 x 40	0,15	36 x 55	0,38
22	41 x 60	0,45		36 x 60	0,33	36 x 45	0,24	41 x 60	0,43
25	46 x 70	0,65		41 x 65	0,44	41 x 50	0,36	46 x 70	0,64
28	50 x 75	0,90		46 x 70	0,59	46 x 55	0,50	50 x 75	0,67
30	55 x 80	1,00		50 x 75	0,77	50 x 60	0,66	55 x 80	0,98
35	65 x 85	1,75		55 x 80	0,94	55 x 65	0,76	65 x 85	1,70
43	79 x 105	3,30		70 x 100	2,00	70 x 80	1,65	79 x 105	3,20
50	79 x 115	2,91		79 x 110	2,78	79 x 90	2,26	79 x 115	2,83
57,5	90 x 140 x 102	5,34		90 x 120 x 102	4,51	90 x 100 x 102	3,54	90 x 140 x 102	5,14
63,5	100 x 170 x 114	8,27		100 x 140 x 114	6,73	100 x 115 x 114	5,44	100 x 170 x 114	7,79
75	100 x 150 x 108	4,67		100 x 140 x 108	4,32	100 x 120 x 108	3,65	100 x 150 x 108	4,60

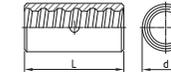
SAS SYSTEMS

standart kaplin EP
coupler EP standard



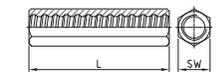
Ø [mm] d x L [mm] [kg]

temas kaplini EP
contact coupler EP



d x L [mm] [kg]

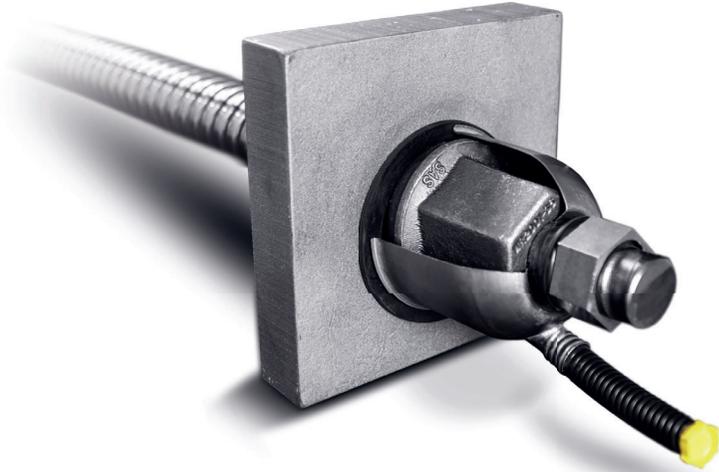
uzun altgen kaplin EP
hexagonal coupler EP long



SW x L [mm] [kg]

	TR 3003 - Ø EP			TR 3006 - Ø EP		TR 3010 - Ø EP	
18	36 x 120	0,69		27 x 70	0,16	36 x 120	0,77
22	40 x 125	0,81		32 x 75	0,25	41 x 135	1,08
25	45 x 150	1,24		40 x 80	0,47	46 x 150	1,49
28	50 x 160	1,56		45 x 90	0,67	50 x 170	1,94
30	55 x 165	2,02		45 x 90	0,60	55 x 185	2,62
35	65 x 190	3,30		50 x 120	0,82	60 x 210	3,34
43	80 x 225	6,10		65 x 160	2,08	79 x 245	7,24
50	90 x 235	7,72		70 x 170	2,21	-	-
57,5	102 x 275	11,36		83 x 180	3,53	-	-
63,5	108 x 285	12,71		90 x 200	4,24	-	-
75	108 x 290	9,70		102 x 230	5,79	-	-

SAS germe çubuğu | SAS stress bars



SAS germe çubuğu sıcak haddelenmiş, sağdan dişli | SAS thread bar hot rolled, ribbed - right hand thread

SAS 950 / 1050 Ø 18 - 47 mm | SAS 835 / 1035 Ø 57 - 75 mm | grade 150

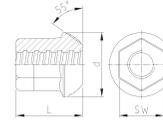
$\bar{\theta}_{REIN} / \bar{\theta}_{NOM}$	[mm]	18	26,5	32	36	40	47	57	65	75
max d_A	[mm]	21	31	37	42	46	53	64	72	82
c	[mm]	8	13	16	18	20	21	21	21	24
$f_{p0,1k} / f_{pk} / A_{gt}^{11}$		950 N/mm ² / 1050 N/mm ² / $\geq 5\%$						835 N/mm ² / 1035 N/mm ² / $\geq 4\%$		
$F_{yk} (F_{0,1k})$	[kN]	230	525	760	960	1190	1650	2155	2780	3690
F_{pk}	[kN]	255	580	845	1070	1320	1820	2671	3447	4572
A	[mm ²]	241	551	804	1020	1257	1735	2581	3331	4418
G	[kg/m]	1,96	4,48	6,53	8,27	10,21	14,10	20,95	27,10	35,90

¹¹ Maksimum kuvvette toplam uzama yüzdesi | Percentage total elongation at maximum force
Çubuğun ve aksesuarların ağırlık değerleri ortalama olarak verilmiştir. Gerçek değerler, üretim toleransları nedeniyle farklı olabilir. | Weight specifications of bar and accessories are average values. The actual values may deviate due to fabrication tolerances.

aksesuarlar | accessories

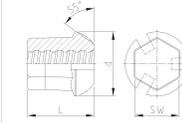
SAS SYSTEMS

bombeli somun 55° dome nut 55°



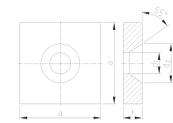
$\bar{\theta}$ [mm] SW x L x d [mm] [kg]

dotgu yuvalarına sahip bombeli somun 55° dome nut 55° with grout slots



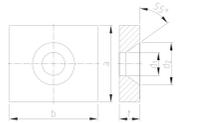
SW x L x d [mm] [kg]

kare ankrāj plakası 55° anchor plate square 55°



a x t x d_s [mm] [kg]

dikdörtgen ankrāj plakası 55° anchor plate rectangular 55°

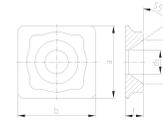


a x b x t x d_s [mm] [kg]

	WR 2001 - Ø		WR 2099 - Ø		WR 2011 - Ø **		WR 2012 - Ø **	
18	36 x 55 x 50	0,43	36 x 55 x 50	0,40	110 x 30 x 28 x 45	2,66	100 x 130 x 30 x 28 x 45	2,39
26,5	50 x 75 x 72	1,09	50 x 75 x 72	1,02	150 x 35 x 39 x 72	5,61	130 x 150 x 35 x 39 x 72	4,50
32	60 x 90 x 80	1,70	60 x 90 x 80	1,65	180 x 40 x 45 x 82	9,33	140 x 180 x 40 x 45 x 82	7,07
36	65 x 100 x 90	2,24	65 x 100 x 90	2,13	200 x 45 x 49 x 92	12,95	150 x 220 x 50 x 49 x 92	11,70
40	70 x 115 x 100	2,91	70 x 115 x 100	2,71	220 x 45 x 54 x 100	15,64	160 x 250 x 60 x 54 x 100	17,10
47	80 x 135 x 110	4,09	80 x 135 x 110	3,79	260 x 50 x 64 x 110	24,49	200 x 280 x 60 x 64 x 110	24,12
57	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-
75	-	-	-	-	-	-	-	-

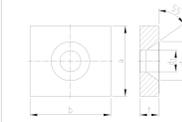
SAS SYSTEMS

QR plakası QR plate



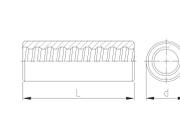
$\bar{\theta}$ [mm] b x a x t x d_s [mm] [kg]

dikdörtgen ankrāj plakası 55°, küçük anchor plate rectangular 55°, small



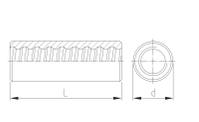
a x b x t x d_s [mm] [kg]

standart kaplin coupler standard



d x L [mm] [kg]

uzun kaplin coupler long

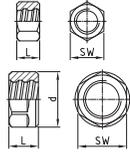


d x L [mm] [kg]

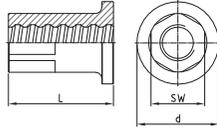
	WR 2074 - Ø **		WR 2076 - Ø **		WR 3003 - Ø		WR 3303 - Ø	
18	-	-	80 x 90 x 25 x 28 x 45	1,25	36 x 100	0,56	36 x 115	0,64
26,5	130 x 120 x 30 x 39 x 72	2,00	120 x 130 x 30 x 39 x 72	3,15	50 x 170	1,73	50 x 195	2,00
32	165 x 140 x 35 x 45 x 82	3,30	140 x 165 x 35 x 45 x 82	5,57	60 x 200	2,91	60 x 230	3,40
36	180 x 160 x 40 x 49 x 93	4,90	160 x 180 x 40 x 49 x 92	7,94	68 x 210	3,98	68 x 245	4,68
40	195 x 180 x 45 x 54 x 100	7,20	180 x 195 x 45 x 54 x 100	10,95	70 x 245	4,59	70 x 285	5,38
47	-	-	210 x 235 x 55 x 64 x 110	19,20	83 x 270	7,23	-	-
57	-	-	-	-	95 x 240	7,75	-	-
65	-	-	-	-	106 x 260	10,37	-	-
75	-	-	-	-	114 x 290	12,14	-	-

** Depolama ve nakliye koşulları nedeniyle pas oluşumu göz ardı edilemez | Rust formation cannot be ruled out due to storage and transport conditions

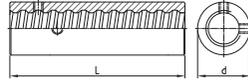
sabit somun
fix nut



gerdirme ankraji
stressing anchorage

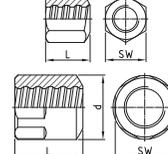


gerdirme kaplini
stressing-coupler

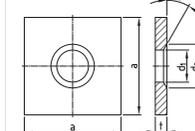


Ø [mm]	SW x L x d [mm]	[kg]	SW x L x d [mm]	[kg]	d x L [mm]	[kg]
	WR 5005 - Ø		WR 8002 - Ø		WR 8003 - Ø	
18	30 x 22	0,08	41 x 70 x 65	0,82	45 x 100	1,00
26,5	36 x 22	0,08	46 x 90 x 70	1,03	45 x 150	1,17
32	41 x 22	0,09	50 x 110 x 70	1,30	55 x 180	2,02
36	46 x 25	0,12	55 x 120 x 80	1,78	60 x 200	2,55
40	50 x 25	0,13	55 x 130 x 80	1,90	65 x 220	3,44
47	60 x 30	0,24	65 x 140 x 90	2,81	75 x 240	4,87
57	85 x 40 x 90	1,02	90 x 160 x 110	7,28	95 x 270	9,40
65	90 x 40 x 102	1,15	100 x 180 x 120	9,66	110 x 290	13,13
75	105 x 50 x 114	1,90	105 x 200 x 135	12,85	120 x 320	15,45

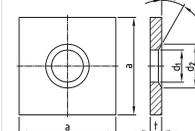
halka somunu (halıkanın çalışma yükü maks. 60 kN)
ring nut (working load of ring max. 60 kN)



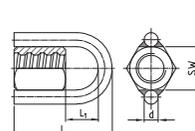
altı köşeli kaplin
hexagonal coupler



standart kaplin EP
coupler EP standard

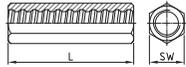


altı köşeli kaplin EP
hexagonal coupler EP

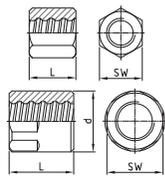


Ø [mm]	SW x L x L ₁ x d [mm]	[kg]	SW x L [mm]	[kg]	d x L [mm]	[kg]	SW x L [mm]	[kg]
	WR 2963 - Ø *		WR 1928 - Ø **		WR 1929 - Ø **		WR 2027 - Ø	
18	41 x 60	0,52	120 x 20 x 25 x 35	2,18	-	-	41 x 135 x 59 x 16	0,99
26,5	46 x 80	0,71	150 x 35 x 32 x 45	5,95	-	-	46 x 165 x 69 x 16	1,28
32	55 x 90	1,14	180 x 40 x 38 x 50	9,81	-	-	55 x 190 x 84 x 16	1,81
36	60 x 110	1,57	200 x 45 x 45 x 60	13,55	-	-	60 x 219 x 89 x 20	2,78
40	70 x 120	2,53	220 x 45 x 50 x 70	16,36	-	-	70 x 244 x 104 x 20	3,87
47	79 x 140	3,60	240 x 55 x 58 x 80	23,50	-	-	79 x 274 x 114 x 20	5,10
57	90 x 120 x 95	3,67	285 x 65 x 70 x 90	39,30	220 x 50 x 70 x 90	17,43	90 x 255 x 115 x 20	5,08
65	100 x 130 x 106	4,90	325 x 70 x 78 x 110	55,50	245 x 60 x 78 x 110	25,86	100 x 280 x 130 x 20	6,48
75	105 x 145 x 114	5,51	370 x 80 x 88 x 120	82,00	275 x 70 x 88 x 120	38,03	105 x 305 x 140 x 20	7,31

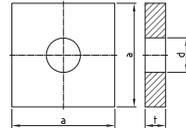
düz ankraj somunu
anchor nut flat



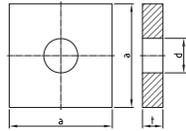
düz ankraj plakası
anchor plate flat



kesik burunlu somun 30°
bull nose nut 30°

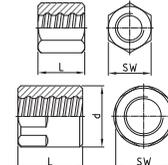


konik ankraj plakası 30°
anchor plate cone 30°

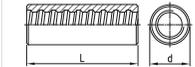
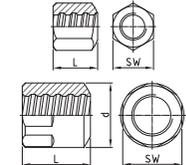


Ø [mm]	SW x L [mm]	[kg]	SW x L x d [mm]	[kg]	a x t x d [mm]	[kg]	a x t x d [mm]	[kg]
	WR 3009 - Ø		WR 2002 - Ø		WR 2139 - Ø**		WR 2140 - Ø**	
18	36 x 100	0,67	41 x 60	0,55	120 x 20 x 25	2,20	-	-
26,5	50 x 170	2,09	46 x 80	0,73	150 x 35 x 32	5,90	-	-
32	60 x 200	3,54	55 x 90	1,18	180 x 40 x 38	9,82	-	-
36	70 x 210	5,01	60 x 110	1,63	200 x 45 x 45	13,57	-	-
40	70 x 245	5,61	70 x 120	2,63	220 x 45 x 50	16,40	-	-
47	79 x 270	7,49	79 x 140	3,72	240 x 55 x 58	23,73	-	-
57	-	-	90 x 120 x 95	3,79	285 x 65 x 70	39,48	220 x 50 x 70	17,49
65	-	-	100 x 130 x 106	4,99	325 x 70 x 78	55,42	245 x 60 x 78	26,02
75	-	-	105 x 145 x 114	5,68	370 x 80 x 88	82,15	275 x 70 x 88	38,21

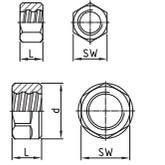
tuerca hexagonal EP
anchor nut EP flat



kesik burunlu somun 30°
bull nose nut EP 30°



sabit somun EP
fix nut EP



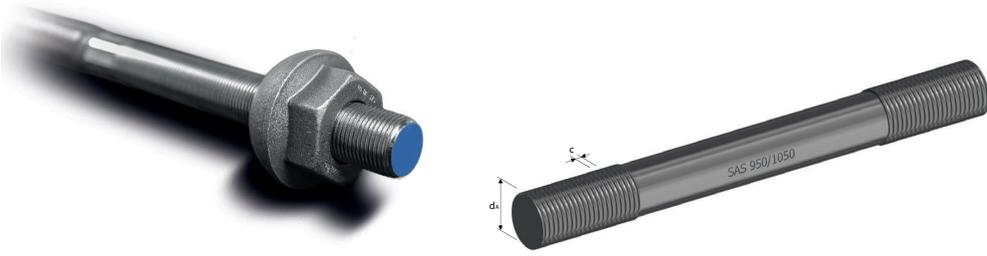
Ø [mm]	SW x L x d [mm]	[kg]	SW x L x d [mm]	[kg]	d x L [mm]	[kg]	SW x L x d [mm]	[kg]
	WR 2002 - Ø EP		WR 2963 - Ø EP		WR 3003 - Ø EP		WR 5005 - Ø EP	
18	41 x 70	0,62	41 x 70	0,60	36 x 120	0,69	30 x 22	0,08
26,5	46 x 90	0,81	46 x 90	0,79	50 x 185	1,94	36 x 22	0,08
32	55 x 100	1,30	55 x 100	1,27	60 x 220	3,33	41 x 22	0,09
36	60 x 120	1,75	60 x 120	1,71	68 x 240	4,72	46 x 25	0,11
40	70 x 130	2,77	70 x 130	2,70	70 x 270	5,26	50 x 25	0,12
47	79 x 150	3,92	79 x 150	3,81	83 x 310	8,65	60 x 30	0,23
57	90 x 145 x 95	4,59	90 x 145 x 95	4,46	95 x 270	9,32	85 x 40 x 90	1,01
65	100 x 155 x 106	5,82	100 x 155 x 106	5,66	106 x 290	12,01	90 x 40 x 102	1,13
75	105 x 180 x 114	7,60	105 x 180 x 114	6,96	114 x 320	14,15	105 x 50 x 114	1,92

** Depolama ve nakliye koşulları nedeniyle pas oluşumu göz ardı edilemez | Rust formation cannot be ruled out due to storage and transport conditions

* taşıma kapasitesi ve uygulama ile ilgili olarak, lütfen ana sayfada bulunan bilgi formunu dikkate alın
with regard to load capacity and installation, please note data sheet available on the homepage

** Depolama ve nakliye koşulları nedeniyle pas oluşumu göz ardı edilemez | Rust formation cannot be ruled out due to storage and transport conditions

SAS pürüzsüz çubuk | SAS smooth bars



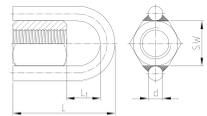
SAS germe çubuğu haddelenmiş dişi yuvarlak, pürüzsüz | SAS smooth bar with cold rolled thread - right hand thread

SAS 950 / 1050 Ø 32 - 36 mm | grade 150 | pürüzsüz | smooth

Ø _{NEMN} / Ø _{NEM}	[mm]	32	36
c	[mm]	3	3
$f_{p0,1k}/f_{p0,1k} / A_{gt}$		950 N/mm ² / 1050 N/mm ² / ≥ 7%	
F _{yk} (F _{0,1k})	[kN]	760	960
F _{pk}	[kN]	845	1070
A	[mm ²]	804	1018
G	[kg/m]	6,31	7,99

SAS SYSTEMS

halka somunu
(halkanın çalışma yükü maks. 60 kN)
ring nut (working load of ring max. 60 kN)

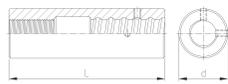


Ø [mm] SW x L x L₁ x d [mm] [kg]

WS 2927 - Ø *

32	55 x 125 x 59 x 16	1,22
36	60 x 149 x 64 x 20	1,86

WS için gerdirme kaplini
stressing coupler for WS



d x L [mm] [kg]

WS 8004 - Ø

32	60 x 190	2,74
36	65 x 230	3,80

geçiş kaplini
transition coupler



d x L [mm] [kg]

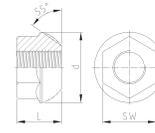
WS 3004 - Ø

32	60 x 200	2,94
36	68 x 235	4,47

aksesuarlar | accessories

SAS SYSTEMS

bombeli somun 55°
dome nut 55°

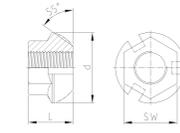


Ø [mm] SW x L x d [mm] [kg]

WS 2001 - Ø

32	55 x 46 x 72	0,78
36	65 x 60 x 90	1,55

doglu yuvalarına sahip bombeli somun 55°
domed nut 55° with grout slots

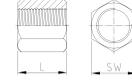


SW x L x d [mm] [kg]

WS 2099 - Ø

32	55 x 46 x 72	0,74
36	65 x 60 x 90	1,41

düz ankraj somunu
anchor nut flat

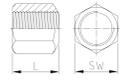


SW x L [mm] [kg]

WS 2002 - Ø

32	55 x 50	0,79
36	60 x 65	1,06

kesik burunlu somun 30°
bull nose 30°



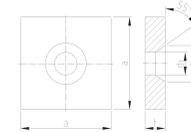
SW x L [mm] [kg]

WS 2963 - Ø

32	55 x 50	0,68
36	60 x 65	1,03

SAS SYSTEMS

kare ankraj plakası 55°
anchor plate square 55°

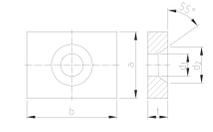


Ø [mm] a x t x d₁ x d₂ [mm] [kg]

WS 2011 - Ø **

32	180 x 40 x 45 x 72	9,50
36	200 x 45 x 49 x 92	12,95

dikdörtgen ankraj plakası 55°
anchor plate rectangular 55°

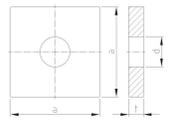


a x b x t x d₁ x d₂ [mm] [kg]

WS 2012 - Ø **

32	140 x 180 x 40 x 45 x 72	7,24
36	150 x 220 x 50 x 49 x 92	11,70

düz ankraj plakası
anchor plate flat



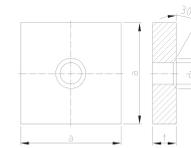
a x t x d [mm] [kg]

WS 2139 - Ø **

32	180 x 40 x 38	9,82
36	200 x 45 x 45	13,57

SAS SYSTEMS

dikdörtgen ankraj plakası 30°
anchor plate rectangular 30°

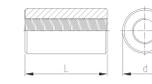


Ø [mm] a x t x d₁ x d₂ [mm] [kg]

WS 1928 - Ø **

32	180 x 40 x 38 x 50	9,81
36	200 x 45 x 45 x 60	13,55

standart kaplin
coupler standard

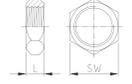


d x L [mm] [kg]

WS 3003 - Ø

32	60 x 110	1,74
36	68 x 160	3,25

sabit somun
fix nut



SW x L [mm] [kg]

WS 5005 - Ø

32	41 x 15	0,08
36	46 x 15	0,09

* taşıma kapasitesi ve uygulama ile ilgili olarak, lütfen ana sayfada bulunan bilgi formunu dikkate alın
with regard to load capacity and installation, please note data sheet available on the homepage

** Depolama ve nakliye koşulları nedeniyle pas oluşumu göz ardı edilemez | Rust formation cannot be ruled out due to storage and transport conditions

SAS yivli demir çubuk | SAS thread bar

akma dayanımı / çekme dayanımı | yield stress / ultimate stress
uygulama alanları | areas of application

min.-ø
nom.-ø

akma yükü
yield load

kopma yükü
ultimate load

kesit alanı
cross section area

ağırlık
weight

uzama
elongation

[mm]

[kN]

[kN]

[mm²]

[m/to]

[kg/m]

A_{gt} [%]

A₁₀ [%]

SAS 500 / 550 – grade 75

 donatı sistemleri |
reinforcing systems

12	57	62	113	1123,6	0,89	6	10
14	77	85	154	826,4	1,21		
16	100	110	201	632,9	1,58		
20	160	175	314	404,9	2,47		
25	245	270	491	259,7	3,85		
28	310	340	616	207,0	4,83		
32	405	440	804	158,5	6,31		
36	510	560	1020	125,2	7,99		
40	630	690	1260	101,3	9,87		
43	726	799	1452	87,7	11,40		
50	980	1080	1960	64,9	15,40		

 geoteknik sistemler | geotechnical systems

SAS 555 / 700 – grade 80

57,5	1441	1818	2597	49,1	20,38	5	10
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SAS 555 / 700 – grade 80

63,5	1760	2215	3167	40,2	24,86	5	---
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SAS 500 / 550 – grade 75

75	2209	2430	4418	28,8	34,68	5	---
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alternatif olarak SAS 550 grade 75 mevcuttur | alternative SAS 550 grade 75 available

SAS 450 / 700 – grade 60

 madencilik | mining

16	93	145	207	617,3	1,62	(A ₃) 15
25	220	345	491	259,7	3,85	(A ₃) 20

SAS 650 / 800 – grade 90

 madencilik | mining

22	247	304	380	335,6	2,98	(A ₃) 18
25	319	393	491	259,7	3,85	
28	400	493	616	207,0	4,83	
30	460	565	707	180,2	5,55	

SAS 670 / 800 – grade 97

 geoteknik sistemler | geotechnical systems

18	170	204	254	500,0	2,00	5	10	
22	255	304	380	335,6	2,98			
25	329	393	491	259,7	3,85			
28	413	493	616	207,0	4,83			
30	474	565	707	180,2	5,55			
35	645	770	962	132,5	7,55			
43	973	1162	1452	87,7	11,40			
50	1315	1570	1963	64,9	15,40			
57,5	1740	2077	2597	49,1	20,38			---
63,5	2122	2534	3167	40,2	24,86			---
75	2960	3535	4418	28,8	34,68	---		

 tünellerlik & madencilik | tunneling & mining

 donatı manşonu sistemi | high-strength reinforcement

SAS 950 / 1050 – grade 150

 ard germe sistemleri | post-tensioning systems

18	230	255	241	510,2	1,96	5	7
26,5	525	580	551	223,2	4,48		
32	760	845	804	153,1	6,53		
36	960	1070	1020	120,9	8,27		
40	1190	1320	1257	97,9	10,21		
47	1650	1820	1735	70,9	14,10		

 geoteknik sistemler | geotechnical systems

SAS 835 / 1035 – grade 150

 geoteknik sistemler | geotechnical systems

57	2155	2671	2581	47,7	20,95	4	---
65	2780	3447	3331	36,9	27,10		---
75	3690	4572	4418	27,9	35,90		---

SAS 900 / 1100 FA – grade 160 FA

 kalıp ankraj milleri | formwork ties

15	159	195	177	694,4	1,44	3	7
20	283	345	314	390,6	2,56		
26,5	495	606	551	223,2	4,48		

SAS 900 / 1050 FC – grade 150 FC

 kalıp ankraj milleri | formwork ties

15	159	186	177	694,4	1,44	3	7
20	283	330	314	390,6	2,56		
26,5	525	580	551	223,2	4,48		

SAS 950 / 1050 E – grade 150

26,5	525	580	551	223,2	4,48	5	7
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SAS 750 / 875 FS – soğuk haddelenmiş | cold rolled – grade 120 FS

 kalıp ankraj milleri | formwork ties

12,5	90	120	132,5	961,5	1,04	2	5,5
15	142	165	189	675,7	1,48		
20	245	285	326	390,6	2,56		

tüm boyut ve uygulamalar için aksesuarlar mevcuttur | accessories for all dimensions and applications available

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