



S 670 Ø 18-75 mm
catalogue

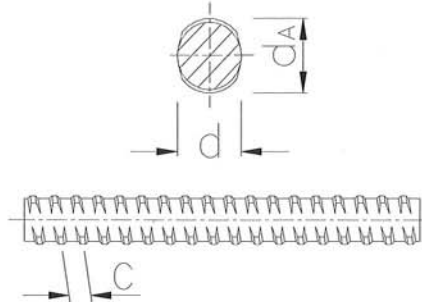


SAS SYSTEMS

SAS 670

SAS Thread-Bar
hot rolled, ribbed - right hand thread

\emptyset [mm]	item-number
18	180AT
22	220AT
25	250AT
28	280AT
30	300AT
35	350AT
43	430AT
57,5	575AT
63,5	635AT
75	750AT



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

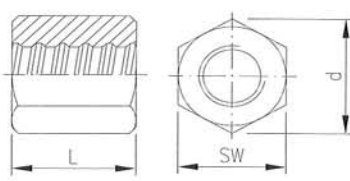
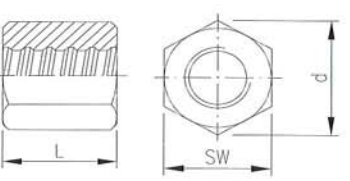
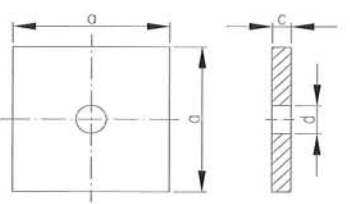
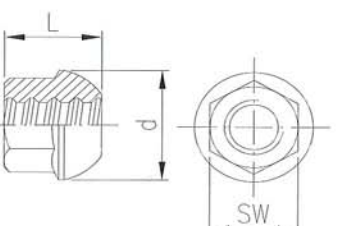
1) percentage total elongation at maximum force

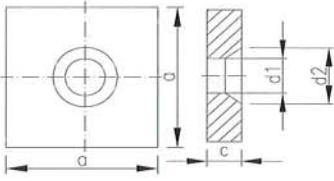
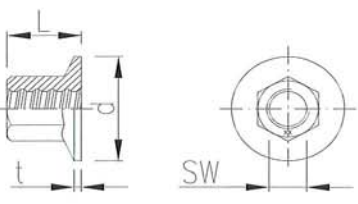
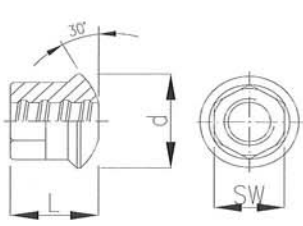
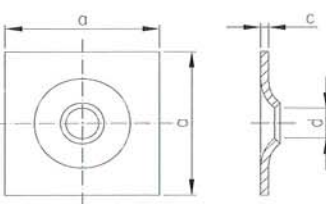
item number	specification	page	Ø [mm]										
			18	22	25	28	30	35	43	57,5	63,5	75	
SAS 670	SAS Thread-Bar, hot rolled	1	0	0	0	0	0	0	0	0	0	0	0
TR 1928 - Ø	anchor plate, cone 30°	6	0	0	0	0	0	0	0	0	0	0	0
TR 2001 - Ø	dome nut	4	0	0	0	0	0	0	0	0	0	0	—
TR 2002 - Ø	anchor nut, flat	4	0	0	0	0	0	0	0	0	0	0	0
TR 2002 - Ø EP	anchor nut EP, flat	4	0	0	0	0	0	0	0	0	0	0	—
TR 2003 - Ø	lock nut, long	9	0	0	0	0	0	0	0	0	0	0	0
TR 2003 - Ø EP	lock nut EP, long	9	—	—	—	—	—	0	0	0	0	0	—
TR 2011 - Ø	anchor plate, cone 55°	5	0	0	0	0	0	0	0	0	0	0	—
TR 2040 - Ø	lock nut, short	9	0	0	0	0	0	0	0	0	0	0	0
TR 2040 - Ø EP	lock nut EP, short	9	0	0	0	0	0	0	0	0	0	0	—
TR 2073 - Ø	anchor piece	5	0	0	0	0	0	0	0	0	0	0	—
TR 2132 - Ø	domed washer, 30°	5	0	0	0	0	0	—	—	—	—	—	—
TR 2136 - Ø	expansion shell	10	0	0	0	0	0	—	—	—	—	—	—
TR 2139 - Ø	anchor plate, flat	4	0	0	0	0	0	0	0	0	0	0	0
TR 2926 - Ø	shackle nut	10	—	0	0	—	—	—	—	—	—	—	—
TR 2927 - Ø	ring nut	10	0	0	0	0	0	—	—	—	—	—	—

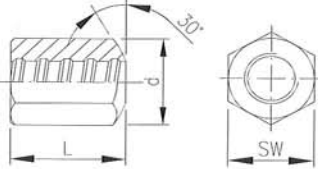
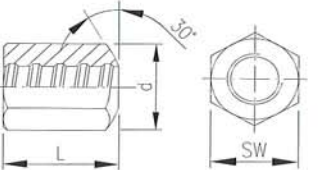
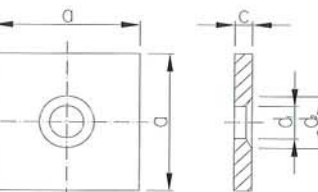
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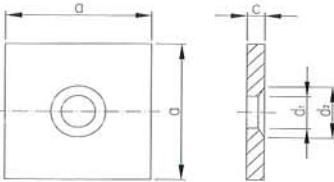


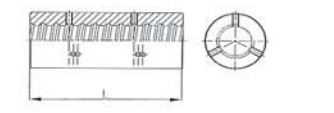
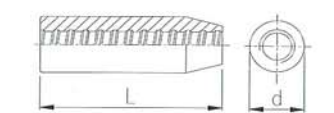
item number	specification	page	Ø [mm]									
			18	22	25	28	30	35	43	57,5	63,5	75
TR 2928 - Ø	<i>domed plate, big, 30°</i>	7	—	—	0	0	0	—	—	—	—	—
TR 2944 - Ø	<i>dome nut, 30°</i>	5	0	0	0	0	0	—	—	—	—	—
TR 2963 - Ø	<i>bull nose nut, 30°</i>	6	—	—	—	—	0	0	0	0	0	0
TR 2963 - Ø EP	<i>bull nose nut EP, 30°</i>	6	0	0	0	0	0	0	0	0	0	—
TR 3003 - Ø	<i>coupler, standard</i>	7	0	0	0	0	0	0	0	0	0	0
TR 3003 - Ø EP	<i>coupler, standard EP</i>	7	0	0	0	0	0	0	0	0	0	—
TR 3006 - Ø	<i>contact coupler</i>	8	0	0	0	0	0	0	0	0	0	0
TR 3006 - Ø EP	<i>contact coupler EP</i>	9	0	0	0	0	0	0	0	0	0	—
TR 3009 - Ø	<i>hexagonal coupler</i>	8	0	0	0	0	0	0	0	—	—	—
TR 3009 - Ø EP	<i>hexagonal coupler EP</i>	8	0	0	0	0	0	0	—	—	—	—
TR 3020 - Ø	<i>coupler with set screws</i>	7	0	0	0	0	0	0	0	0	0	—
TR 3105 - Ø	<i>turnbuckle</i>	8	0	0	0	0	0	0	0	0	0	0
TR 3901 - Ø	<i>coupler, chamfred</i>	7	0	0	0	0	0	0	—	—	—	—
TR 3927 - Ø	<i>coupler, tempered</i>	8	—	—	—	—	—	0	0	0	0	—
TR 9001 - Ø	<i>chisel tip</i>	10	0	0	0	0	—	—	—	—	—	—
TR 9002 - Ø	<i>point tip</i>	10	0	0	0	0	0	—	—	—	—	—
TR 9003 - Ø	<i>saw tip</i>	10	0	0	0	0	0	—	—	—	—	—

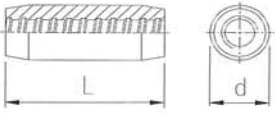
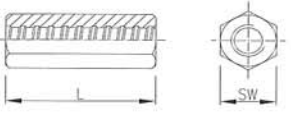
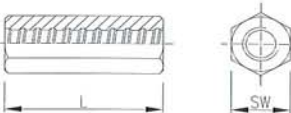
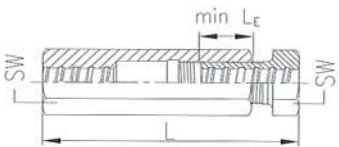
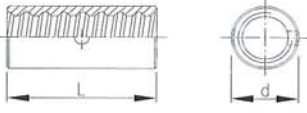
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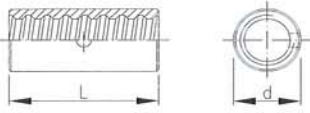
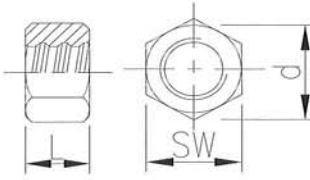
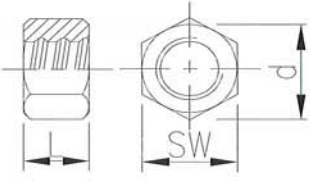
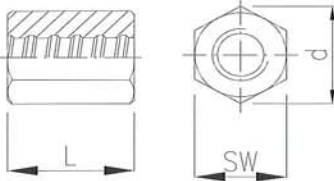
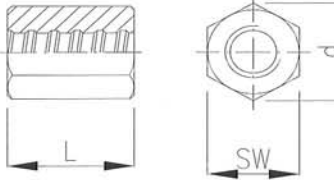
accessories	Ø mm	18	22	25	28	30	35	43	57,5	63,5	75
TR 2002 - Ø anchor nut, flat  material S 355J2 1) 42CrMo4+QT	SW [mm]	36	41	46	50	55	65	80	90	100	100 ¹⁾
	d [mm]	—	—	—	—	—	—	—	102	114	108
	L [mm]	45	50	55	60	65	70	90	120	145	130
	G [kg]	0,30	0,35	0,50	0,65	0,85	1,45	2,70	4,60	7,30	4,60
TR 2002 - Ø EP anchor nut EP, flat  material S 355J2	SW [mm]	36	41	46	50	55	65	80	90	100	—
	d [mm]	—	—	—	—	—	—	—	102	114	—
	L [mm]	55	60	70	75	80	85	105	140	140	—
	G [kg]	0,37	0,49	0,72	0,90	1,18	1,77	3,30	5,60	8,60	—
TR 2139 - Ø anchor plate, flat  material S 235JR	a [mm]	100	110	125	135	145	170	210	275	300	325
	c [mm]	25	30	30	35	35	40	50	60	65	70
	d [mm]	27	32	35	40	40	47	58	75	82	88
	G [kg]	1,85	2,66	3,45	4,66	5,43	8,83	16,27	33,54	43,23	54,70
TR 2001 - Ø domed nut, 55°  material GS-34CrMo4	SW [mm]	32	36	41	46	50	60	70	90	100	—
	d [mm]	43	53	59	67	71	83	102	137	151	—
	L [mm]	35	45	50	55	60	70	85	115	125	—
	G [kg]	0,16	0,27	0,39	0,54	0,66	1,10	1,90	4,90	6,90	—

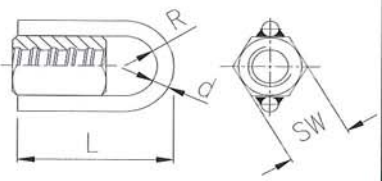
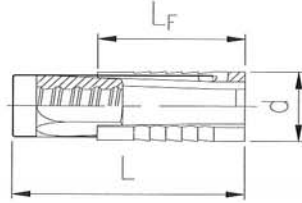
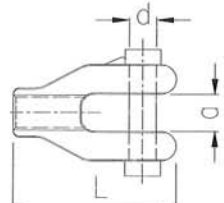
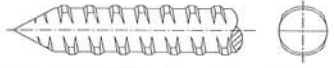


accessories	Ø mm	18	22	25	28	30	35	43	57,5	63,5	75
TR 2011 - Ø anchor plate, cone, 55°  material S 235JR	a [mm]	100	110	125	135	145	170	210	275	300	—
	c [mm]	25	30	30	35	35	40	50	60	65	—
	d₁ [mm]	27	32	35	40	40	47	58	75	82	—
	d₂ [mm]	39	47	53	59	63	73	90	119	131	—
	G [kg]	1,84	2,62	3,40	4,50	5,30	8,30	15,90	32,70	42,00	—
TR 2073 - Ø anchor piece  material GS-34CrMo4	SW [mm]	32	36	41	46	50	60	70	90	100	—
	L [mm]	35	45	50	55	60	70	85	115	125	—
	d [mm]	55	65	75	85	90	105	130	175	190	—
	G [kg]	0,28	0,42	0,60	0,82	1,00	1,82	2,64	6,80	7,47	—
TR 2944 - Ø dome nut, 30°  material EN-GJMW-400-5	SW [mm]	30	36	41	46	46	—	—	—	—	—
	L [mm]	35	40	50	60	60	—	—	—	—	—
	d [mm]	46	51	58	62	62	—	—	—	—	—
	G [kg]	0,20	0,30	0,45	0,65	0,65	—	—	—	—	—
TR 2132 - Ø domed washer, 30°  material S 235JR	a [mm]	150	150	200	200	200	—	—	—	—	—
	c [mm]	10	10	10	12	12	—	—	—	—	—
	d [mm]	26	34	34	40	40	—	—	—	—	—
	G [kg]	1,75	1,70	3,10	3,68	3,68	—	—	—	—	—

accessories	Ø mm	18	22	25	28	30	35	43	57,5	63,5	75
TR 2963 - Ø bull nose nut, 30°  <p>material S 355J2 1) 42CrMo4+QT</p>	SW [mm]	—	—	—	—	55	65	80	90	100	100 ¹⁾
	L [mm]	—	—	—	—	65	70	90	120	145	130
	d [mm]	—	—	—	—	—	—	—	102	114	108
	G [kg]	—	—	—	—	0,90	1,36	2,60	4,40	7,00	4,55
TR 2963 - Ø EP bull nose nut EP, 30°  <p>material S 355J2</p>	SW [mm]	36	41	46	50	55	65	80	90	100	—
	L [mm]	55	60	70	75	80	85	105	140	140	—
	d [mm]	—	—	—	—	—	—	—	102	114	—
	G [kg]	0,38	0,43	0,68	0,85	1,12	1,65	1,70	5,50	6,90	—
TR 1928 - Ø anchor plate, cone 30°  <p>material S 235JR</p>	a [mm]	100	110	125	135	145	170	210	275	300	325
	c [mm]	25	30	30	35	35	40	50	60	65	70
	d ₁ [mm]	25	30	33	40	40	47	58	70	78	88
	d ₂ [mm]	35	40	45	50	50	60	75	90	100	120
	G [kg]	1,86	2,68	3,47	4,65	5,42	8,51	16,24	33,75	43,41	54,52

accessories	Ø mm	18	22	25	28	30	35	43	57,5	63,5	75
TR 2928 - Ø anchor plate, big, 30°  material S 235JR	a [mm]	—	—	200	200	200	—	—	—	—	—
	c [mm]	—	—	20	20	20	—	—	—	—	—
	d ₁ [mm]	—	—	33	40	40	—	—	—	—	—
	d ₂ [mm]	—	—	45	50	50	—	—	—	—	—
	G [kg]	—	—	6,15	6,10	6,10	—	—	—	—	—
TR 3003 - Ø coupler, standard  S 355J2 material 1) 42CrMo4+QT	d [mm]	36	40	45	50	55	65	80	102	114	108 ¹⁾
	L [mm]	100	100	120	140	150	170	200	250	300	260
	G [kg]	0,58	0,70	0,98	1,40	1,85	3,10	5,50	10,00	16,50	9,50
TR 3003 - Ø EP coupler EP, standard  S 355J2 material 2) 20MnV6	d [mm]	36	40	45	50	55	65	80	102	108 ²⁾	—
	L [mm]	115	125	150	160	165	190	225	275	285	—
	G [kg]	0,65	0,81	1,24	1,63	2,07	3,41	6,14	11,90	13,21	—
TR 3020 - Ø coupler with set screws  material S 355J2	d [mm]	36	40	45	50	55	65	80	102	114	—
	L [mm]	100	110	120	140	150	170	200	250	300	—
	G [kg]	0,58	0,70	0,98	1,40	1,85	3,10	5,50	10,00	16,50	—
TR 3901 - Ø coupler, chamferes  material S 355J2	d [mm]	36	40	45	50	55	65	—	—	—	—
	L [mm]	100	110	120	140	150	170	—	—	—	—
	G [kg]	0,55	0,65	0,92	1,40	1,80	3,05	—	—	—	—

accessories	Ø mm	18	22	25	28	30	35	43	57,5	63,5	75
TR 3927 - Ø coupler, tempered  material 42CrMo4V	d [mm]	—	—	—	—	—	56	65	85	95	—
	L [mm]	—	—	—	—	—	150	170	220	240	—
	G [kg]	—	—	—	—	—	2,10	3,40	5,00	8,30	—
TR 3009 - Ø contact coupler  material S 355J2	SW [mm]	36	41	46	50	55	60	80	—	—	—
	L [mm]	120	135	145	170	180	205	235	—	—	—
	G [kg]	0,80	1,11	1,49	2,03	2,65	3,41	7,45	—	—	—
TR 3009 - Ø EP contact coupler EP  material S 355J2	SW [mm]	36	41	46	50	55	65	—	—	—	—
	L [mm]	115	125	150	160	165	190	—	—	—	—
	G [kg]	0,77	1,02	1,55	1,91	2,43	3,96	—	—	—	—
TR 3105 - Ø turnbuckle  S 355J2 material 1) 42CrMo4+QT	SW [mm]	41	46	50	60	65	80	90	100	100	110 ¹⁾
	L [mm]	175	190	205	230	260	275	325	395	405	405
	L _E [mm]	30	35	40	40	50	55	65	75	75	80
	G [kg]	—	—	—	—	—	—	13,95	21,75	23,40	21,75
TR 3006 - Ø contact coupler  material S 355J2	d [mm]	—	32	40	45	45	50	65	80	90	102
	L [mm]	—	75	80	90	90	120	160	180	200	230
	G [kg]	—	0,25	0,47	0,67	0,60	1,00	2,35	4,10	4,80	6,63

accessories	Ø mm	18	22	25	28	30	35	43	57,5	63,5	75
TR 3006 - Ø EP contact coupler EP  material S 355J2	d [mm]	—	32	40	45	45	50	65	80	90	—
	L [mm]	—	75	80	90	90	120	160	180	200	—
	G [kg]	—	0,25	0,47	0,67	0,60	1,00	2,35	4,10	4,80	—
TR 2040 - Ø lock nut, short  material S 355J2 1) 42CrMo4+QT	SW [mm]	30	36	41	46	50	55	70	90	100	100 ¹⁾
	L [mm]	22	22	22	30	30	40	50	60	70	80
	d [mm]	—	—	—	—	—	—	—	102	114	108
	G [kg]	0,09	0,12	0,16	0,26	0,26	0,50	1,05	2,20	3,25	2,50
TR 2040 - Ø EP lock nut EP, short  material S 355J2	SW [mm]	30	36	41	46	50	55	70	90	100	—
	L [mm]	30	30	30	40	40	65	80	100	115	—
	d [mm]	—	—	—	—	—	—	—	102	114	—
	G [kg]	0,11	0,16	0,22	0,25	0,33	0,81	1,69	3,80	5,00	—
TR 2003 - Ø lock nut, long  material S 355J2 1) 42CrMo4+QT	SW [mm]	30	36	41	46	50	55	70	90	100	100 ¹⁾
	L [mm]	40	45	50	55	60	65	80	100	115	120
	d [mm]	—	—	—	—	—	—	—	102	114	108
	G [kg]	0,16	0,25	0,37	0,50	0,67	0,80	1,70	3,60	5,10	4,20
TR 2003 - Ø EP lock nut EP, long  material S 355J2 1) 20MnV6	SW [mm]	—	—	—	—	—	55	70	90	100 ¹⁾	—
	L [mm]	—	—	—	—	—	80	100	120	140	—
	d [mm]	—	—	—	—	—	—	—	102	108	—
	G [kg]	—	—	—	—	—	1,00	2,12	4,70	6,20	—

accessories	Ø mm	18	22	25	28	30	35	43	57,5	63,5	75
TR 2927 - Ø ring nut  material S 355J2	SW [mm]	36	41	46	50	55	—	—	—	—	—
	L [mm]	85	90	105	110	115	—	—	—	—	—
	d [mm]	16	16	16	16	16	—	—	—	—	—
	R [mm]	18	20	23	25	27	—	—	—	—	—
	G [kg]	0,35	0,50	0,65	0,80	1,05	—	—	—	—	—
TR 2136 - Ø expansion shell  material EN-GJMW-400-5	d [mm]	39	49	49	59	59	—	—	—	—	—
	L [mm]	110	120	120	150	150	—	—	—	—	—
	L _F [mm]	70	70	70	90	90	—	—	—	—	—
	G [kg]	0,43	0,65	0,62	1,09	1,00	—	—	—	—	—
TR 2926 - Ø lshackle nut  material S 355J2	a [mm]	—	70	70	—	—	—	—	—	—	—
	d [mm]	—	40	40	—	—	—	—	—	—	—
	L [mm]	—	120	120	—	—	—	—	—	—	—
	G [kg]	—	1,15	1,10	—	—	—	—	—	—	—
TR 9001 - Ø chisel tip 	< [°]	60	60	60	60	—	—	—	—	—	—
TR 9002 - Ø point tip 	< [°]	60	60	60	60	60	—	—	—	—	—
TR 9003 - Ø saw tip 	< [°]	45	45	45	45	45	—	—	—	—	—



SAS Thread-Bars

	yield stress / ultimate stress areas of application	nom.-Ø	yield load	ultimate load	cross section area	weight	elongation		
	[N/mm ²]	[mm]	[kN]	[kN]	[mm ²]	[m/to]	Ag _t [%]	A ₁₀ [%]	
SAS 500 (BSt 500 S) / grade 75									
	B 500 / 550 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		
	geotechnical systems	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		
		40	630	690	1260	101,3	9,87		
		50	980	1080	1960	64,9	15,40		
	S 555 / 700 / grade 80	63,5	1760	2215	3167	40,2	24,86		
<i>alternative SAS 550 (BSt 550 S) grade 75 available</i>									
SAS 450 / grade 60									
	S 450 / 700 mining	16	93	145	207	617,3	1,62	15	
		25	220	345	491	259,7	3,85	(A ₅)	
SAS 650 / grade 90									
	S 650 / 800 mining	22	247	304	380	335,6	2,98	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 / grade 97									
	S 670 / 800 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		
	tunneling / mining	30	474	565	707	180,2	5,55		
		35	645	770	962	132,5	7,55		
		43	973	1162	1452	87,7	11,40		
		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		
SAS 950 / 1050 / grade 150									
	Y 950 / 1050 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		
	Y 950 / 1050	47	1650	1820	1735	70,9	14,10	5	7
	Y 835 / 1035	57	2155	2671	2581	47,7	20,95	4	7
		65	2780	3447	3331	36,9	27,10		
		75	3690	4572	4418	27,9	35,90		
SAS 900 / 1100 - Type FA / grade 160									
	Y 900 / 1100 - Type FA formwork ties weldable	15	159	195	177	694,4	1,44	3	7
		20	283	345	314	390,6	2,56		
	Type E	26,5	461	568	551	223,2	4,48	4	7
SAS 850 / cold rolled grade 120									
	S 850 - Type FS formwork ties weldable	15	140	170	191	666,7	1,50	10	
		20	245	280	331	384,6	2,60		
		26,5	385	490	586	217,4	4,60		

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Approval

ETA
Approval

DIBt
Approval

accessories for all dimensions and applications available