



SAS 950/1050 Ø 18-47 mm

SAS 835/1035 Ø 57-75 mm

Katalog

*catalogue*



**SAS SYSTEMS**



SAS 950/1050 Ø 18 - 47 mm

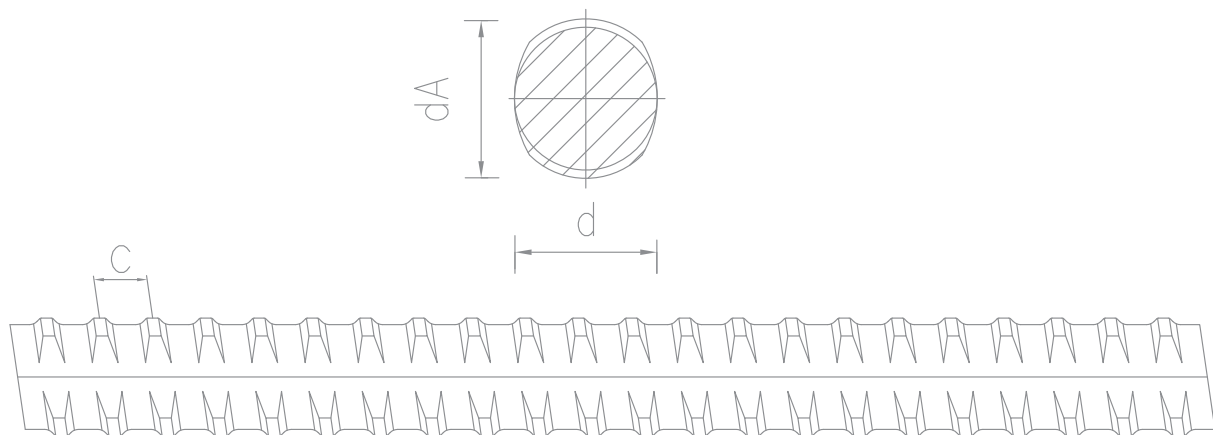
SAS 835/1035 Ø 57 - 75 mm

**SAS Spannstahl**

warmgewalzt, Rippenstahl - rechtsgängig

**SAS stress bar**

hot rolled, ribbed - right hand thread



d Ø	[mm]	18	26,5	32	36	40	47	57	65	75
max dA	[mm]	21	31	37	42	46	53	64	72	82
c	[mm]	8	13	16	18	20	21	21	21	24
$f_{p0,1k} / f_{pk} / A_{10}^{11}$		950 N/mm <sup>2</sup> / 1050 N/mm <sup>2</sup> / ≥ 7 %						835 N/mm <sup>2</sup> /1035 N/mm <sup>2</sup> /≥ 7%		
$F_{yk} (F_{p0,1k})$	[kN]	230	525	760	960	1190	1650	2155	2780	3690
$F_{pk}$	[kN]	255	580	845	1070	1320	1820	2671	3447	4572
A	[mm <sup>2</sup> ]	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

<sup>11</sup> Bruchdehnung bezogen auf den 10-fachen Stabdurchmesser

<sup>11</sup> ultimate elongation in a gauge length to 10 bar diameters (ASTM A722 / ASTM 722 M - 2007)



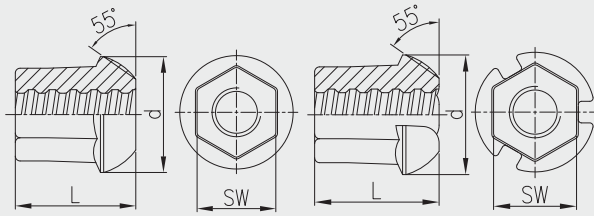
Artikelnummer <i>item number</i>	Bezeichnung <i>specification</i>	Ø [mm]								
		18	26,5	32	36	40	47	57	65	75
SAS 950/1050 SAS 835/1035	SAS Spannstab, warm gewalzt, rechtsgängig <i>SAS stress bar, hot rolled, right hand thread</i>	●	■	■	■	■	○	○	○	○
WR 1928 - Ø	Ankerplatte, Konus 30° <i>anchor plate, cone 30°</i>	○	○	○	○	○	○	○	○	○
WR 2001 - Ø	Kugelbundmutter, 55° <i>domed nut, 55°</i>	□	■	■	■	■	○	—	—	—
WR 2002 - Ø	Ankermutter, gerade <i>anchor nut, flat</i>	○	○	○	○	○	○	○	○	○
WR 2002 - Ø EP	Ankermutter EP, gerade <i>anchor nut EP, flat</i>	○	○	○	○	○	○	—	—	—
WR 2011 - Ø	Ankerplatte, quadratisch, 55° <i>anchor plate, square, 55°</i>	□	■	■	■	■	○	—	—	—
WR 2012 - Ø	Ankerplatte, rechteckig, 55° <i>anchor plate, rectangular, 55°</i>	□	■	■	■	■	—	—	—	—
WR 2099 - Ø	Kugelbundmutter, 55° mit Verpressnuten <i>domed nut, 55° with grout slots</i>	□	■	■	■	■	○	—	—	—
WR 2139 - Ø	Ankerplatte, gerade <i>anchor plate, flat</i>	○	○	○	○	○	○	○	○	○
WR 2801 - Ø	DYN-Mutter, 30° <i>DYN-nut, 30°</i>	○	○	○	○	○	○	—	—	—
WR 2811 - Ø	Ankerplatte, quadratisch, 30° <i>anchor plate, square, 30°</i>	○	○	○	○	○	○	—	—	—
WR 2812 - Ø	Ankerplatte, rechteckig, 30° <i>anchor plate, rectangular, 30°</i>	○	○	○	○	○	○	—	—	—
WR 2899 - Ø	DYN-Verpressmutter, 30° <i>DYN-injection nut, 30°</i>	○	○	○	○	○	○	—	—	—
WR 2963 - Ø	Ankermutter, ballig, 30° <i>bull nose nut, 30°</i>	○	○	○	○	○	○	○	○	○
WR 2963 - Ø EP	Ankermutter EP, ballig, 30° <i>bull nose nut EP, 30°</i>	○	○	○	○	○	○	—	—	—
WR 3003 - Ø	Muffe, Standard <i>coupler, standard</i>	○	■	■	■	■	○	○	○	○
WR 3003 - Ø EP	Muffe EP, Standard <i>coupler EP, standard</i>	○	○	○	○	○	○	—	—	—
WR 3009 - Ø	Sechskantmuffe <i>hexagonal coupler</i>	○	○	○	○	○	—	—	—	—
WR 3009 - Ø EP	Sechskantmuffe EP <i>hexagonal coupler EP</i>	○	○	○	○	○	—	—	—	—
WR 3803 - Ø	DYN-Muffe <i>DYN-coupler</i>	○	○	○	○	○	○	—	—	—
WR 5005 - Ø	Haltemutter <i>fix nut</i>	○	○	○	○	○	○	○	○	○
WR 5005 - Ø EP	Haltemutter EP <i>fix nut EP</i>	○	○	○	○	○	○	—	—	—
WR 8002 - Ø	Spannverankerung <i>stressing-anchorage</i>	○	○	○	○	○	○	○	○	○
WR 8003 - Ø	Spann-Muffe <i>stressing-coupler</i>	○	○	○	○	○	○	○	○	○

■ erhältlich - entsprechend ETA (Europäische Technische Zulassung) 05/122 und Anwendungsregeln des DIBt Z-13.71-50122, Z-13.72-50122 und Z-13.73-50122 / available - acc. to ETA (European Technical Approval) 05/122 and code of practice of DIBt Z-13.71-50122, Z-13.72-50122 and Z-13.73-50122

● erhältlich - zugelassen DIBt (Deutsches Institut für Bautechnik) / available - approved by DIBt (German Institute for construction engineering)

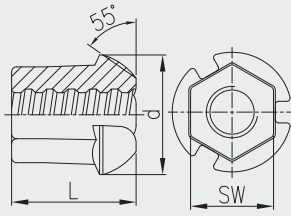
○ erhältlich / available

□ erhältlich auf Anfrage / available on request



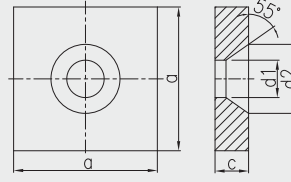
Kugelbundmutter, 55°  
domed nut, 55°

Werkstoff / material S355J2  
<sup>1)</sup> G34CrMo4



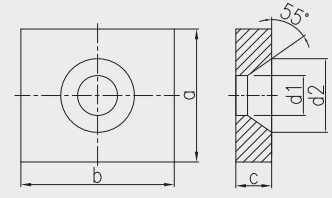
Kugelbundmutter, 55°  
mit Verpressnuten  
domed nut, 55°  
with grout slots

Werkstoff / material S355J2  
<sup>1)</sup> G34CrMo4



Ankerplatte, quadratisch, 55°  
anchor plate, square, 55°

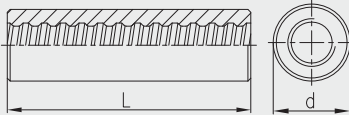
Werkstoff / material S235JR



Ankerplatte, rechteckig, 55°  
anchor plate, rectangular, 55°

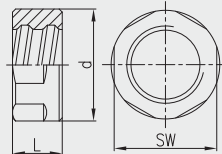
Werkstoff / material S235JR

Ø [mm]	WR 2001 - Ø		WR 2099 - Ø		WR 2011 - Ø		WR 2012 - Ø	
	SW x L x d [mm]	[kg]	SW x L x d [mm]	[kg]	a x c x d <sub>1</sub> x d <sub>2</sub> [mm]	[kg]	a x b x c x d <sub>1</sub> x d <sub>2</sub> [mm]	[kg]
18	36 x 55 x 50	0,42	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	3,06
26,5	50 x 75 x 72	1,13	50 x 75 x 72	1,05	150 x 35 x 39 x 72	5,60	130 x 150 x 35 x 39 x 72	4,50
32	60 x 90 x 80	1,70	60 x 90 x 80	1,50	180 x 40 x 45 x 82	9,30	140 x 180 x 40 x 45 x 82	7,07
36	65 x 100 x 90	2,00	65 x 100 x 90	2,10	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 <sup>1)</sup>	3,00	70 x 115 x 100 <sup>1)</sup>	2,70	220 x 45 x 54 x 100	15,60	160 x 250 x 60 x 54 x 100	17,10
47	80 x 135 x 110 <sup>1)</sup>	4,00	80 x 135 x 110 <sup>1)</sup>	3,60	260 x 50 x 64 x 110	24,53	---	---
57	---	---	---	---	---	---	---	---
65	---	---	---	---	---	---	---	---
75	---	---	---	---	---	---	---	---



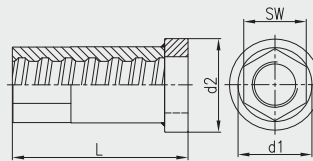
Muffe, Standard  
coupler, standard

Werkstoff / material S355J2  
<sup>1)</sup> C45 <sup>2)</sup> 20MnVS6 <sup>3)</sup> 42CrMo4+QT



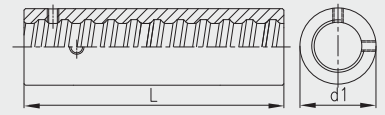
Haltemutter  
fix nut

Werkstoff / material S355J2



Spann-Verankerung  
stressing-anchorage

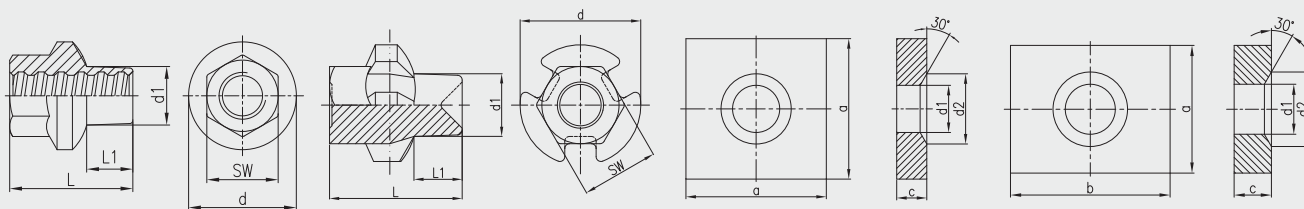
Werkstoff / material 42CrMo4+QT



Spann-Muffe  
stressing-coupler

Werkstoff / material 42CrMo4+QT

Ø [mm]	WR 3003 - Ø		WR 5005 - Ø		WR 8002 - Ø		WR 8003 - Ø	
	d x L [mm]	[kg]	SW x L x d [mm]	[kg]	SW x L x d <sub>1</sub> x d <sub>2</sub> [mm]	[kg]	d <sub>1</sub> x L [mm]	[kg]
18	36 x 100	0,45	30 x 22	0,09	41 x 80 x 45 x 65	0,92	45 x 100	1,00
26,5	50 x 170 <sup>1)</sup>	1,82	36 x 22	0,10	46 x 100 x 50 x 70	1,15	45 x 150	1,17
32	60 x 200 <sup>1)</sup>	3,05	41 x 22	0,11	50 x 120 x 56 x 70	1,45	53 x 180	1,88
36	68 x 210 <sup>1)</sup>	4,20	46 x 25	0,15	55 x 140 x 60 x 80	2,10	58 x 200	2,43
40	70 x 245 <sup>2)</sup>	4,85	50 x 25	0,16	55 x 150 x 65 x 80	2,27	65 x 220	3,44
47	89 x 280	9,70	60 x 30	0,30	65 x 170 x 75 x 90	3,47	75 x 240	4,87
57	95 x 240 <sup>3)</sup>	8,35	85 x 40 x 90	1,37	90 x 160 x 100 x 110	6,75	95 x 270	9,40
65	105 x 260 <sup>3)</sup>	10,60	90 x 40 x 102	1,25	100 x 180 x 120	10,10	108 x 290	13,00
75	114 x 290 <sup>3)</sup>	13,00	105 x 50 x 114	2,10	105 x 200 x 133	13,20	120 x 320	18,10



**DYN-Mutter, 30°**  
**DYN-nut, 30°**

**DYN-Verpressmutter, 30°**  
**DYN-injection nut, 30°**

**Ankerplatte, quadratisch, 30°**  
**anchor plate, square, 30°**

**Ankerplatte, rechteckig, 30°**  
**anchor plate, rectangular, 30°**

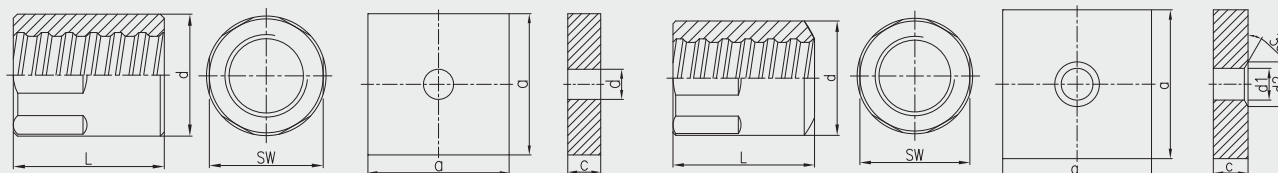
Werkstoff / material S355J2

Werkstoff / material S355J2

Werkstoff / material S235JR

Werkstoff / material S235JR

Ø	WR 2801 - Ø		WR 2899 - Ø		WR 2811 - Ø		WR 2812 - Ø	
[mm]	SW x L x d x d <sub>1</sub> x L <sub>1</sub> [mm]	[kg]	SW x L x d x d <sub>1</sub> x L <sub>1</sub> [mm]	[kg]	a x c x d <sub>1</sub> x d <sub>2</sub> [mm]	[kg]	a x b x c x d <sub>1</sub> x d <sub>2</sub> [mm]	[kg]
18	32 x 55 x 50 x 26 x 20	0,29	32 x 55 x 50 x 26 x 20	0,35	120 x 20 x 37 x 50	2,10	100 x 130 x 20 x 37 x 50	1,83
26,5	46 x 80 x 70 x 38 x 30	0,77	46 x 80 x 70 x 38 x 30	1,13	140 x 30 x 47 x 70	4,20	120 x 150 x 35 x 47 x 70	4,50
32	55 x 98 x 86 x 47 x 40	1,40	55 x 98 x 86 x 47 x 40	1,30	180 x 35 x 56 x 86	8,10	120 x 220 x 50 x 56 x 86	9,45
36	60 x 108 x 90 x 52 x 45	1,60	60 x 108 x 90 x 52 x 45	1,50	200 x 40 x 61 x 90	11,7	150 x 240 x 55 x 61 x 90	14,1
40	70 x 125 x 100 x 58 x 50	2,55	70 x 125 x 100 x 58 x 50	3,00	220 x 45 x 66 x 100	15,4	150 x 290 x 65 x 66 x 100	20,2
47	80 x 145 x 120 x 68 x 58	4,05	80 x 145 x 120 x 68 x 58	3,90	260 x 50 x 75 x 120	24,5	200 x 320 x 50 x 75 x 120	23,0
57	---	---	---	---	---	---	---	---
65	---	---	---	---	---	---	---	---
75	---	---	---	---	---	---	---	---



**Ankermutter, gerade**  
**anchor nut, flat**

**Ankerplatte, gerade**  
**anchor plate, flat**

**Ankermutter, ballig 30°**  
**bull nose nut, 30°**

**Ankerplatte, Konus 30°**  
**anchor plate, cone 30°**

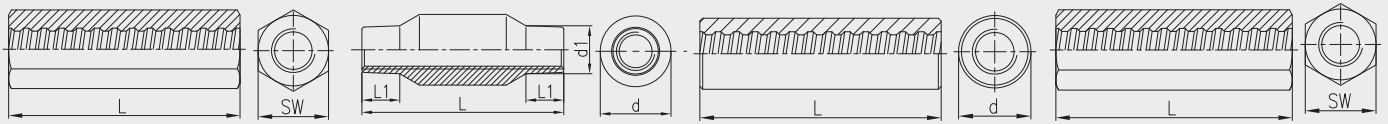
Werkstoff / material S355J2  
<sup>1)</sup> 42CrMo4+QT

Werkstoff / material S235JR

Werkstoff / material S355J2  
<sup>1)</sup> 42CrMo4+QT

Werkstoff / material S235JR

Ø	WR 2002 - Ø		WR 2139 - Ø		WR 2963 - Ø		WR 1928 - Ø	
[mm]	SW x L x d [mm]	[kg]	a x c x d [mm]	[kg]	SW x L x d [mm]	[kg]	a x c x d <sub>1</sub> x d <sub>2</sub> [mm]	[kg]
18	41 x 60	0,56	120 x 20 x 25	2,18	41 x 60	0,54	120 x 20 x 25 x 35	2,18
26,5	46 x 80	0,78	150 x 35 x 32	5,96	46 x 80	0,76	150 x 35 x 32 x 45	5,95
32	55 x 90	1,24	180 x 40 x 38	9,82	55 x 90	1,20	180 x 40 x 38 x 50	9,81
36	60 x 110	1,75	200 x 45 x 45	13,57	60 x 110	1,73	200 x 45 x 45 x 60	13,55
40	70 x 120	2,75	220 x 45 x 50	16,40	70 x 120	2,20	220 x 45 x 50 x 70	16,36
47	80 x 140	3,80	240 x 55 x 58	23,73	80 x 140	3,75	240 x 55 x 58 x 80	23,67
57	90 x 120 x 95 <sup>1)</sup>	4,15	285 x 65 x 70	39,48	90 x 120 x 95 <sup>1)</sup>	3,95	285 x 65 x 70 x 90	39,42
65	100 x 130 x 105 <sup>1)</sup>	5,30	325 x 70 x 78	55,42	100 x 130 x 105 <sup>1)</sup>	4,90	325 x 70 x 78 x 110	55,24
75	105 x 145 x 114 <sup>1)</sup>	6,20	370 x 80 x 88	82,15	105 x 145 x 114 <sup>1)</sup>	6,10	370 x 80 x 88 x 120	82,00



**Sechskantmuffe**  
*hexagonal coupler*

**DYN-Muffe**  
*DYN-coupler*

**Muffe EP, Standard**  
*coupler EP, standard*

**Sechskantmuffe EP**  
*hexagonal coupler EP*

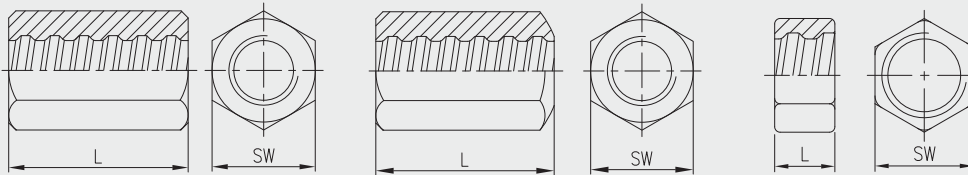
Werkstoff / material S355J2

Werkstoff / material 20MnV6

Werkstoff / material S355J2

Werkstoff / material S355J2

Ø [mm]	WR 3009 - Ø		WR 3803 - Ø		WR 3003 - Ø EP		WR 3009 - Ø EP	
	SW x L [mm]	[kg]	d x d <sub>1</sub> x L x L <sub>1</sub> [mm]	[kg]	d x L [mm]	[kg]	SW x L [mm]	[kg]
18	36 x 100	0,67	40 x 28 x 110 x 20	0,55	36 x 120	0,68	41 x 120	1,10
26,5	50 x 170	2,09	56 x 38 x 160 x 30	1,45	52 x 185	2,18	55 x 185	2,90
32	60 x 200	3,54	60 x 47 x 200 x 40	2,05	65 x 220	4,34	65 x 220	4,77
36	70 x 210	5,19	65 x 52 x 215 x 45	2,48	70 x 240	5,33	70 x 240	5,94
40	70 x 245	5,61	71 x 58 x 250 x 45	3,65	76 x 240	5,26	70 x 265	5,99
47	---	---	85 x 68 x 265 x 50	5,15	89 x 310	10,60	---	---
57	---	---	---	---	---	---	---	---
65	---	---	---	---	---	---	---	---
75	---	---	---	---	---	---	---	---



**Ankermutter EP, gerade**  
*bull nose nut EP, flat*

**Ankermutter EP, ballig 30°**  
*bull nose nut EP, 30°*

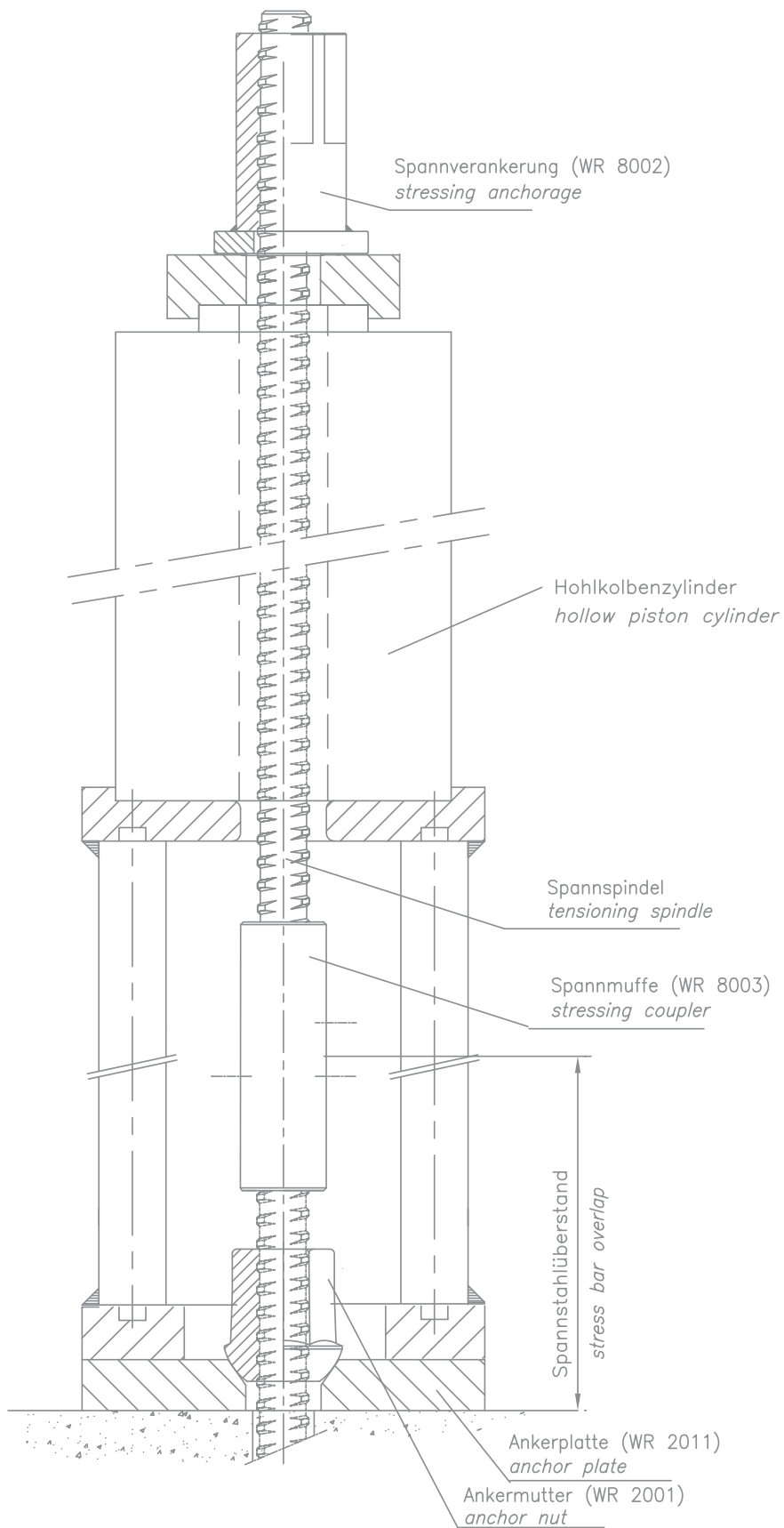
**Haltemutter EP**  
*fix nut EP*

Werkstoff / material S355J2

Werkstoff / material S355J2

Werkstoff / material S355J2

Ø [mm]	WR 2002 - Ø EP		WR 2963 - Ø EP		WR 5005 - Ø EP	
	SW x L [mm]	[kg]	SW x L [mm]	[kg]	SW x L [mm]	[kg]
18	41 x 70	0,64	41 x 70	0,58	32 x 22	0,09
26,5	46 x 90	0,90	46 x 90	0,82	36 x 22	0,10
32	55 x 100	1,45	55 x 100	1,32	41 x 22	0,11
36	60 x 120	2,00	60 x 120	1,82	46 x 25	0,15
40	70 x 130	3,00	70 x 130	2,73	50 x 25	0,16
47	80 x 150	4,34	80 x 150	3,95	60 x 30	0,30
57	---	---	---	---	---	---
65	---	---	---	---	---	---
75	---	---	---	---	---	---







# SAS Gewindestäbe / SAS thread bars

Streckgrenze / Zugfestigkeit <i>yield stress / ultimate stress</i>		Nenn-Ø <i>nom.-Ø</i>	Strecklast <i>yield load</i>	Bruchlast <i>ultimate load</i>	Fläche <i>cross section area</i>	Gewicht <i>weight</i>	Dehnung <i>elongation</i>		
Anwendungsbereiche <i>areas of application</i>		[mm]	[kN]	[kN]	[mm <sup>2</sup> ]	[m/to]	[kg/m]	A <sub>gt</sub> [%]	A <sub>10</sub> [%]
<b>SAS 500 (BSt 500 S) / grade 75</b>									
	<b>B 500 / 550</b>	12	57	62	113	1123,6	0,89	6	10
	Bewehrungstechnik <i>reinforcing systems</i>	14	77	85	154	826,4	1,21		
	Geotechnik <i>geotechnical systems</i>	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			
	40	630	690	1260	101,3	9,87			
	50	980	1080	1960	64,9	15,40			
	<b>S 555 / 700 / grade 80</b>	<b>63,5</b>	1760	2215	3167	40,2	24,86		
Alternativ SAS 550 (BSt 550 S) erhältlich / <i>alternative SAS 550 (BSt 550 S) grade 75 available</i>									
<b>SAS 450 / grade 60</b>									
	<b>S 450 / 700</b>	16	93	145	207	617,3	1,62	15	20
	Bergbau <i>mining</i>	25	220	345	491	259,7	3,85		
<b>SAS 650 / grade 90</b>									
	<b>S 650 / 800</b>	22	247	304	380	335,6	2,98	18	[A5]
	Bergbau <i>mining</i>	25	319	393	491	259,7	3,85		
	28	400	493	616	207,0	4,83			
	30	460	565	707	180,2	5,55			
<b>SAS 670 / grade 97</b>									
	<b>S 670 / 800</b>	18	170	204	254	500,0	2,00	5	10
	Geotechnik <i>geotechnical systems</i>	22	255	304	380	335,6	2,98		
	Ankerteknik <i>tunneling / mining</i>	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			
	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			
neu new									
<b>SAS 950 / 1050 / grade 150</b>									
	<b>St 950 / 1050</b>	18	230	255	241	510,2	1,96	5	7
	Spannteknik <i>post-tensioning systems</i>	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			
<b>St 950 / 1050</b>	<b>47</b>	1650	1820	1735	70,9	14,10	5	7	
<b>St 835 / 1035</b>	<b>57</b>	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				
neu new									
<b>SAS 900 / 1100 – Type FA / grade 160</b>									
	<b>St 900 / 1100 – Type FA</b>	15	159	195	177	694,4	1,44	3	7
	Schalungstechnik <i>formwork ties</i> schweißbar / weldable	20	283	345	314	390,6	2,56		
	<b>Type E</b>	26,5	525	580	551	223,2	4,48	5	7
<b>kaltgerollt SAS 850 / cold rolled grade 120</b>									
	<b>S 850 – Type FS</b>	15	140	170	191	666,7	1,50	10	[A5]
	Schalungstechnik <i>formwork ties</i> schweißbar / weldable	20	245	280	331	384,6	2,60		
	26,5	385	490	586	217,4	4,60			

DIBt Zulassung

ETA Zulassung

DIBt Zulassung

neu new

neu new

neu new

Zubehör für alle Abmessungen und Anwendungen lieferbar / **accessories** for all dimensions and applications available

Stahlwerk Annahütte Max Aicher GmbH & Co. KG, D-83404 Hammerau / Germany  
 Tel. +49 (0)86 54 / 4 87-0 • Fax +49 (0)86 54 / 4 87-964  
 stahlwerk@annahuette.com • www.annahuette.com

