

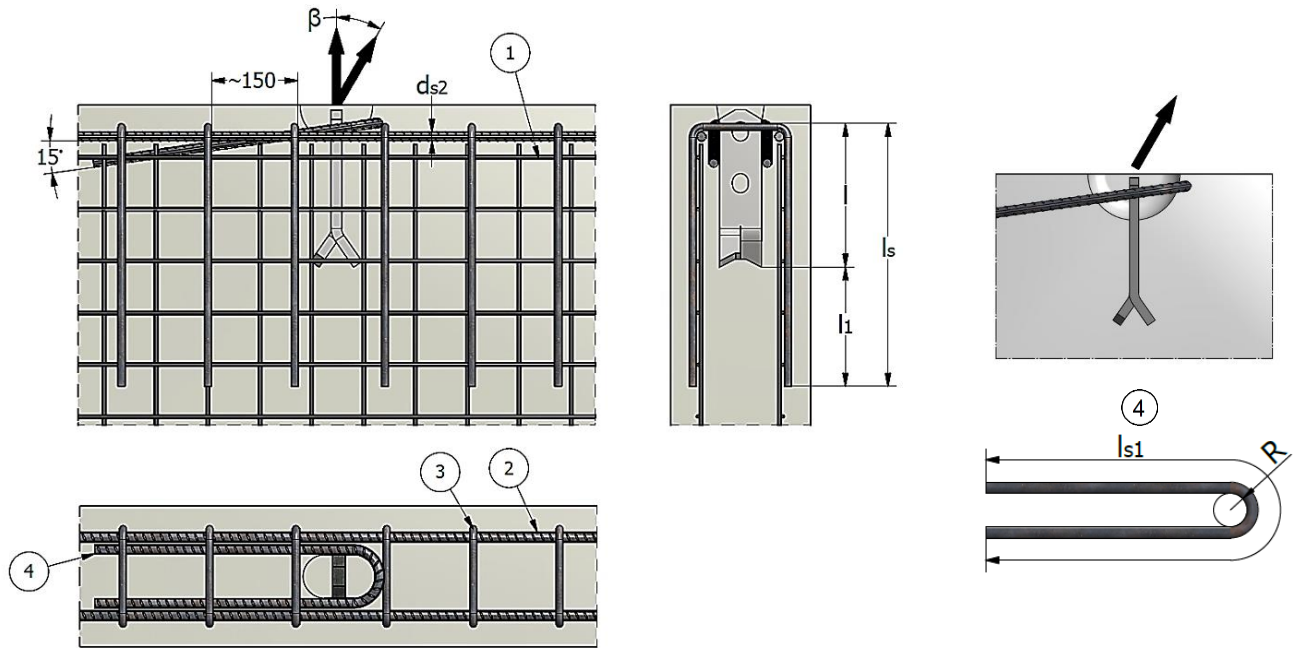
## MOUNTING INSTRUCTIONS



### 2D - LIFTING SYSTEMS | **SA-B SPREAD ANCHOR**



## SA-B ANCHOR - INSTALLATION AND REINFORCEMENT



**Note:** The bend radius will be determined according to EN 1992.

The diagonal reinforcement must be placed as close as possible to the recess former and installed in contact with the lifting anchor.

The reinforced zone must be  $\geq 3 \times$  anchor length "L".

Length  $l_s = l_1 + \text{Anchor length}$

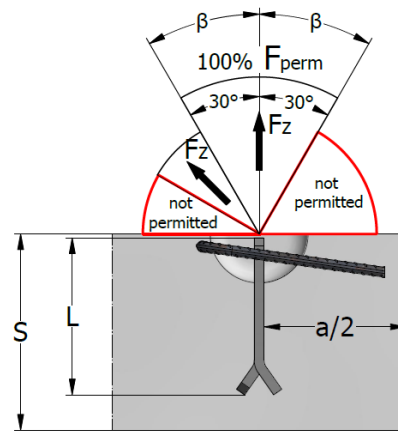
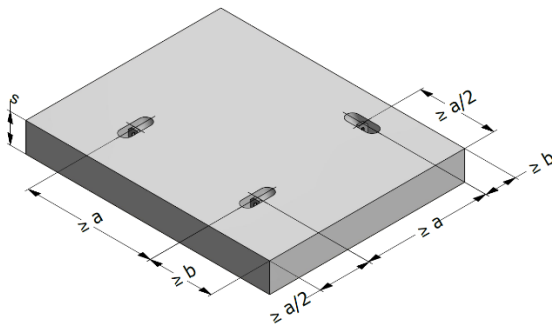
The dimensions in the illustrations are in [mm]

SA-B ANCHOR, INSTALLATION AND REINFORCEMENT						
Anchor type	Load group [kN]	Pull $\beta < 30^\circ$	Edge reinforcement (2) ds1 [mm]	Angled pull $\beta > 30^\circ$ max. $45^\circ$		
		Mesh reinforcement (both sides) (1) [mm <sup>2</sup> /m]		Stirrups (3)		Angled pull reinforcement $\varnothing \times l_{s1}$ (4) [mm]
				$\varnothing \times l_1$ [mm]	Number of stirrups [pcs.]	
<b>Lifting clutch load group 25 kN</b>						
SA -B 7 kN	7	2x131	Ø 8	Ø 6 x 400	4	Ø 6 x 900
SA -B 14 kN	14		Ø 8	Ø 6 x 400	4	Ø 6 x 900
SA -B 20 kN	20		Ø 8	Ø 6 x 500	4	Ø 8 x 1000
SA -B 25 kN	25		Ø 10	Ø 8 x 600	4	Ø 8 x 1200
<b>Lifting clutch load group 50 kN</b>						
SA -B 30 kN	30	2x131	Ø 10	Ø 8 x 700	4	Ø10 x 1150
SA -B 40 kN	40		Ø 12	Ø 8 x 800	4	Ø10 x 1500
SA -B 50 kN	50		Ø12	Ø10 x 800	4	Ø12 x 1550
<b>Lifting clutch load group 100 kN</b>						
SA -B 53 kN	53	2x188	Ø12	Ø10 x 800	4	Ø14 x 1800
SA -B 75 kN	75		Ø12	Ø10 x 800	4	Ø14 x 2000
SA -B 100 kN	100		Ø14	Ø10 x1000	6	Ø16 x 2300
<b>Lifting clutch load group 260 kN</b>						
SA -B 140 kN	140	2x257	Ø14	Ø10 x1000	8	Ø20 x 2600
SA -B 220 kN	220		Ø16	Ø10 x1200	8	Ø28 x 3450

### INSTALLATION OF SA-B IN SLABS

For the lifting procedure, the position of the anchor in the concrete element is very important. The axial spacing for SA-B anchors in slabs can be seen in the table below.

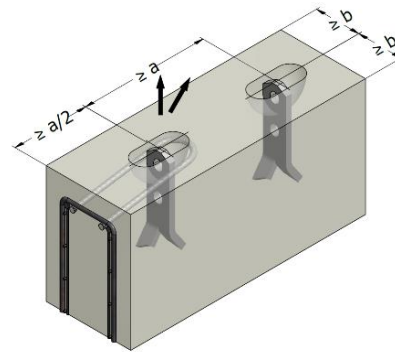
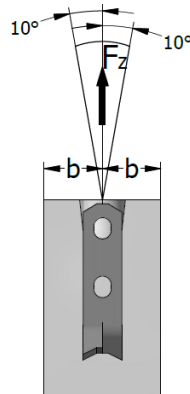
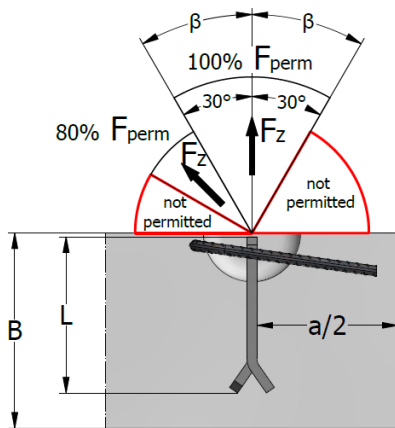
**Note:** The minimum accepted concrete cover is 25 mm. A thinner slab can only be permitted if there is special corrosion protection.  
For angled lifting reinforcement steel, please see page 23.



INSTALLATION OF SA-B IN SLABS – LOAD CAPACITY, INSTALLATION DIMENSIONS

Anchor type	Anchor length "L" [mm]	Load group [kN]	Minimum thickness of precast unit "S" [mm]	Minimum edge distance "b"			Load capacity $f_{cu} \geq 15 \text{ MPa}$		Minimum spacing between anchors "a" [mm]
				$f_{cu} \geq 15 \text{ MPa}$	$f_{cu} \geq 15 \text{ MPa}$	$f_{cu} \geq 15 \text{ MPa}$	Axial pull	Angled pull $\beta > 30^\circ$ max. $45^\circ$	
				[mm]	[mm]	[mm]	[kN]	[kN]	
<b>Lifting clutch load group 25 kN</b>									
SA -B 7 kN – 110	110	7	145	45	40	35	7	5.6	280
SA -B 14 kN – 110	110	14	145	70	50	40	14	11.2	380
SA -B 14 kN – 160	160	20	195	50	35	35	14	11.2	540
SA -B 20 kN – 130	130	20	165	100	70	55	20	16.0	440
SA -B 20 kN – 160	160	20	195	85	65	45	20	16.0	520
SA -B 20 kN – 210	210	20	195	70	50	40	20	16.0	770
SA -B 25 kN – 150	150	25	185	120	85	70	25	20.0	530
SA -B 25 kN – 200	200	25	235	90	64	50	25	20.0	720
SA -B 25 kN – 250	250	25	285	80	55	40	25	20.0	920
<b>Lifting clutch load group 50 kN</b>									
SA -B 30 kN – 160	160	30	195	145	102	80	30	24.0	550
SA -B 30 kN – 200	200	30	255	110	78	61	30	24.0	750
SA -B 30 kN – 280	280	30	315	105	75	58	30	24.0	950
SA -B 40 kN – 180	180	40	215	190	135	105	40	32.0	610
SA -B 40 kN – 240	240	40	275	145	100	80	40	32.0	850
SA -B 40 kN – 320	320	40	355	110	75	60	40	32.0	1170
SA -B 50 kN – 180	180	50	215	260	180	145	50	40.0	600
SA -B 50 kN – 240	240	50	275	195	140	110	50	40.0	840
SA -B 50 kN – 400	400	50	435	115	85	65	50	40.0	1480
<b>Lifting clutch load group 100 kN</b>									
SA -B 53 kN – 220	220	53	260	240	175	155	53	42.4	660
SA -B 53 kN – 260	260	53	300	200	145	135	53	42.4	780
SA -B 53 kN – 340	340	53	380	170	120	110	53	42.4	1020
SA -B 75 kN – 260	260	75	300	300	215	175	75	60.0	900
SA -B 75 kN – 300	300	75	340	265	190	150	75	60.0	1060
SA -B 75 kN – 420	420	75	460	190	135	110	75	60.0	1540
SA -B 100 kN – 300	300	100	340	390	275	220	100	80.0	1030
SA -B 100 kN – 370	370	100	410	315	225	180	100	80.0	1310
SA -B 100 kN – 520	520	100	560	225	160	130	100	80.0	1910
<b>Lifting clutch load group 260 kN</b>									
SA -B 140 kN – 370	370	140	410	500	355	285	140	112.0	1230
SA -B 140 kN – 460	460	140	500	400	285	230	140	112.0	1590
SA -B 220 kN – 500	500	220	540	675	480	385	220	176.0	1700
SA -B 220 kN – 620	620	220	660	540	385	310	220	176.0	2180

### INSTALLATION OF SA-B IN BEAMS AND WALLS

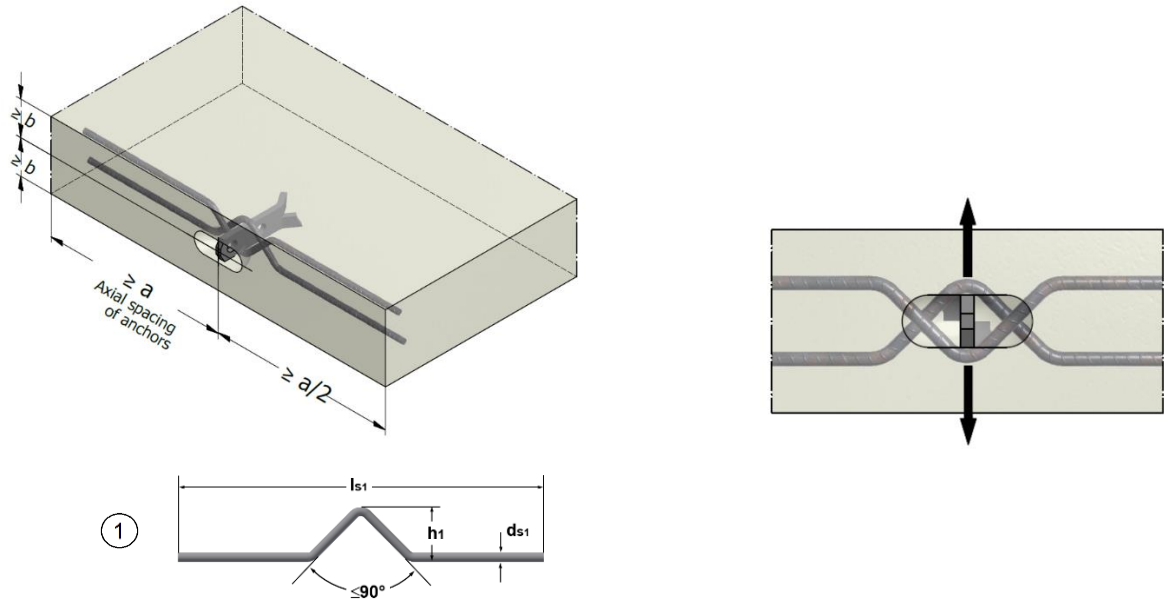


The angled pull reinforcement must be mounted opposite the direction of the load

INSTALLATION OF SA-B IN BEAMS AND WALLS – LOAD CAPACITY, INSTALLATION DIMENSIONS									
Product name	Anchor length "L"	Load group	Minimum beam height "B"	Minimum thickness of precast unit "2 x b"			100 % F <sub>perm</sub> pull β < 30°	80 % F <sub>perm</sub> pull β > 30° max. 45°	Minimum spacing between anchors "a"
				f <sub>cu</sub> ≥ 15 MPa	f <sub>cu</sub> ≥ 15 MPa	f <sub>cu</sub> ≥ 15 MPa			
	[mm]	[kN]	[mm]	[mm]	[mm]	[mm]			[mm]
<b>Lifting clutch load group 25 kN</b>									
SA -B 7 kN – 110	110	7	240	70	60	60	7	5.6	375
SA -B 14 kN – 110	110	14	240	80	64	65	14	11	375
SA -B 14 kN – 160	160	20	340	80	64	65	14	11	540
SA -B 20 kN – 130	130	20	280	100	80	72	20	16	440
SA -B 20 kN – 160	160	20	350	100	80	72	20	16	520
SA -B 20 kN – 210	210	20	385	100	80	72	20	16	770
SA -B 25 kN – 150	150	25	320	120	95	85	25	20	530
SA -B 25 kN – 200	200	25	420	120	95	85	25	20	720
SA -B 25 kN – 250	250	25	520	120	95	85	25	20	920
<b>Lifting clutch load group 50 kN</b>									
SA -B 30 kN – 160	160	30	340	160	110	100	30	24	550
SA -B 30 kN – 200	200	30	450	130	100	90	30	24	750
SA -B 30 kN – 280	280	30	580	120	95	85	30	24	950
SA -B 40 kN – 180	180	40	380	210	150	130	40	32	610
SA -B 40 kN – 240	240	40	500	200	140	120	40	32	850
SA -B 40 kN – 320	320	40	660	180	130	115	40	32	1170
SA -B 50 kN – 180	180	50	380	350	245	190	50	40	600
SA -B 50 kN – 240	240	50	500	220	155	140	50	40	840
SA -B 50 kN – 400	400	50	820	200	140	130	50	40	1480
<b>Lifting clutch load group 100 kN</b>									
SA -B 53 kN – 220	220	53	460	350	210	150	53	42.4	710
SA -B 53 kN – 260	260	53	545	180	150	120	53	42.4	835
SA -B 53 kN – 340	340	53	700	180	150	120	53	42.4	1080
SA -B 75 kN – 260	260	75	550	340	240	190	75	60	900
SA -B 75 kN – 300	300	75	630	240	170	135	75	60	1060
SA -B 75 kN – 420	420	75	870	200	160	150	75	60	1540
SA -B 100 kN – 300	300	100	630	450	300	200	100	80	1030
SA -B 100 kN – 370	370	100	770	270	216	170	100	80	1310
SA -B 100 kN – 520	520	100	1070	250	200	160	100	80	1910
<b>Lifting clutch load group 260 kN</b>									
SA -B 140 kN – 370	370	140	770	610	420	320	140	112	1230
SA -B 140 kN – 460	460	140	950	350	250	200	140	112	1590
SA -B 220 kN – 500	500	220	1030	760	500	360	220	176	1700
SA -B 220 kN – 620	620	220	1270	450	315	260	220	176	2180

**Note:** For required reinforcement and angled pull, please see the table and illustrations on page 23. Angled pull using cable or chain with β > 45° is **not permitted**.

### SA-B ANCHOR - INSTALLATION AND REINFORCEMENT FOR TURNING AND TILTING



**Note:** The bend radius and length  $l_s$  will be determined according to EN 1992.  
 The additional reinforcement and the anchor position will be positioned as in the illustration above.  
 The  $h_1$  dimension will be determined in function of the thickness of the element.

SA-B ANCHOR – INSTALLATION DIMENSIONS AND REINFORCEMENT FOR TILTING AND TURNING								
Anchor type	Load group	$f_{cu} \geq 15 \text{ MPa}$			Tilting and turning reinforcement		$f_{cu} \geq 15 \text{ MPa}$	
		100 % $F_{perm}$ LIFTING $\beta < 30^\circ$	80 % $F_{perm}$ LIFTING $\beta > 30^\circ$ max. 45°	50 % $F_{perm}$ TILTING	①		Minimum spacing between anchors "a"	Minimum edge distance "b"
		[kN]	[kN]	[kN]	ds1	ls1		
<b>Lifting clutch load group 25 kN</b>								
SA -B 7 kN – 110	7	7	5.6	3.5	Ø 8	600	700	100
SA -B 14 kN – 160	14	14	11.2	7	Ø 10	700	700	100
SA -B 20 kN – 210	20	20	16	10	Ø 10	750	800	100
SA -B 25 kN – 250	25	25	20	12.5	Ø 12	800	875	100
<b>Lifting clutch load group 50 kN</b>								
SA -B 30 kN – 280	30	30	24	15	Ø 12	850	950	150
SA -B 40 kN – 320	40	40	32	20	Ø 14	950	1050	150
SA -B 50 kN – 400	50	50	40	25	Ø 16	1000	1435	150
<b>Lifting clutch load group 100 kN</b>								
SA -B 53 kN – 340	53	53	42.4	26.5	Ø16	1000	1200	150
SA -B 75 kN – 420	75	75	60	37.5	Ø 20	1200	1470	250
SA -B 100 kN – 520	100	100	80	50	Ø 20	1500	1820	300
<b>Lifting clutch load group 260 kN</b>								
SA -B 140 kN – 460	140	140	112	70	Ø 25	1800	1800	525
SA -B 220 kN – 620	220	220	176	110	Ø 28	1800	2200	710

## CONTACT



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