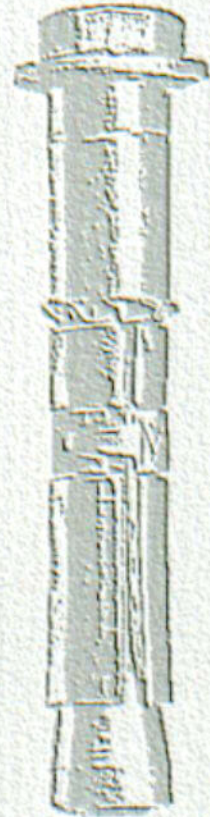
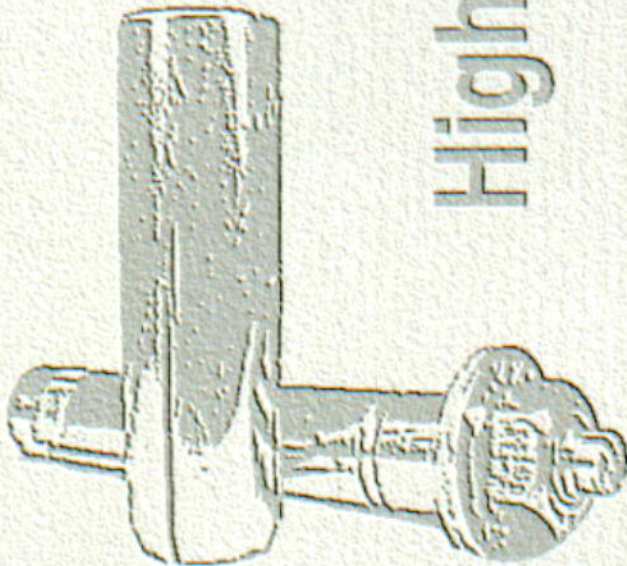




**AnchorsPlus.Com**

**MILLER-KARR TECHNOLOGIES, INC.  
800-698-9607**

# High-Load Anchor SL



# High-Load Anchor SL



G 4920059  
Association of  
assurers  
in Cologne  
SL M5 - M 20



Approved by the  
fire prevention service



Torque-controlled expansion anchor with

- Hex head
- Threaded rod with hex nut
- Counter-sunk head

Deformable center ring insuring positive fixing.

Suitable for through fixing.

Steel zinc plated with a supplementary chromate treatment and stainless steel A4 (grade 316)



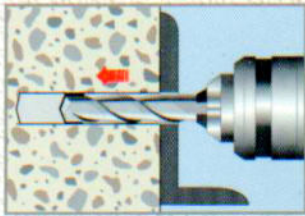
Type S, with hex head bolt, steel zinc plated with a supplementary chromate treatment



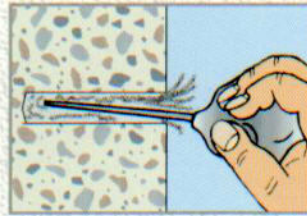
Type B, threaded rod with hex nut, steel zinc plated with a supplementary chromate treatment



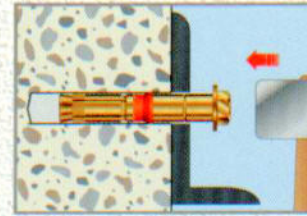
Type SK\*, with counter-sunk head, steel zinc plated with a supplementary chromate treatment



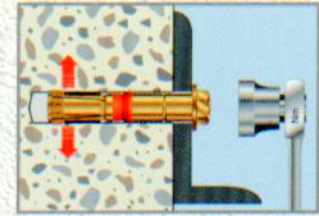
1. Drill to specified diameter and depth.



2. Clean the hole with blow-out bulb.



3. Using a hammer, tap the anchor through the fixture into the hole until the bolt head is firmly seated against the fixture.



4. Tighten the anchor to the specified torque. Refer to approval and listing for design and building code compliance.

## Installation of High-Load Anchor SL

### Technical data - High-Load Anchor SL

Part Number Type S	Type B	Type SK*	Thread diameter	Drill diameter mm	Anchor length l		Fixture thickness d <sub>a</sub> mm	Box Qty.
					Type S/SK mm	Type B mm		
SLS 10/0	SLB 10/0	-	M 6	10	55	60	0	100
SLS 10/10	SLB 10/10	SLSK 10/10	M 6	10	65	70	10	50
SLS 10/25	SLB 10/25	SLSK 10/25	M 6	10	80	85	25	50
SLS 10/50	SLB 10/50	SLSK 10/50	M 6	10	100	110	50	50
-	SLB 10/75	-	M 6	10	-	140	75	25
SLS 10/100	SLB 10/100	-	M 6	10	150	160	100	25
SLS 12/0	SLB 12/0	-	M 8	12	65	75	0	50
SLS 12/10	SLB 12/10	SLSK 12/10	M 8	12	75	85	10	50
SLS 12/25	SLB 12/25	SLSK 12/25	M 8	12	90	100	25	50
SLS 12/50	SLB 12/50	SLSK 12/50	M 8	12	115	125	50	25
SLS 12/75	SLB 12/75	-	M 8	12	140	150	75	25
SLS 12/100	SLB 12/100	-	M 8	12	160	170	100	25
SLS 14/0	SLB 14/0	-	M 10	14	75	90	0	25
SLS 14/10	SLB 14/10	SLSK 14/10	M 10	14	85	100	10	25
SLS 14/25	SLB 14/25	SLSK 14/25	M 10	14	100	115	25	25
SLS 14/50	SLB 14/50	SLSK 14/50	M 10	14	125	140	50	25
SLS 14/75	SLB 14/75	-	M 10	14	150	165	75	25
SLS 14/100	SLB 14/100	-	M 10	14	170	185	100	25
-	SLB 14/125	-	M 10	14	-	210	125	25
-	SLB 14/160	-	M 10	14	-	250	160	20
SLS 18/0	SLB 18/0	-	M 12	18	95	110	0	20
SLS 18/15	SLB 18/15	SLSK 18/15	M 12	18	105	120	15	20
SLS 18/25	SLB 18/25	-	M 12	18	115	130	25	20
SLS 18/40	SLB 18/40	SLSK 18/40	M 12	18	130	145	40	20
SLS 18/70	SLB 18/70	-	M 12	18	160	175	70	20
SLS 18/100	SLB 18/100	-	M 12	18	190	205	100	10
SLS 24/0	SLB 24/0	-	M 16	24	110	135	0	10
SLS 24/25	SLB 24/25	-	M 16	24	140	160	25	10
SLS 24/50	SLB 24/50	-	M 16	24	160	180	50	10
SLS 24/100	SLB 24/100	-	M 16	24	210	230	100	5
SLS 28/0	SLB 28/0	-	M 20	28	140	165	0	10
SLS 28/30	SLB 28/30	-	M 20	28	170	190	30	10
SLS 28/60	SLB 28/60	-	M 20	28	200	220	60	5
SLS 28/100	SLB 28/100	-	M 20	28	240	260	100	5

\* Not subject of approval. For further information please refer to DIBt-approval Number Z-21.12-1092

# High-Load Anchor SL

Design criteria extract from approval Number Z-21.12-1092

Thread diameter			M6	M8	M10	M12	M16	M20
Permissible loads (zul. F) of single anchor in kN in non-cracked concrete. Values applicable to straight tension and shear loads under any angle for concrete class	B 15		2,2	3,0	4,9	7,3	10,5	15,4
	B 25		3,2	4,3	7,1	10,5	15,0	22,0
	B 35		3,7	5,0	8,3	12,3	17,7	25,9
	B 45		4,1	5,7	9,5	14,0	20,1	29,4
	B 55		4,1	6,3	10,5	15,5	22,2	32,5
Load reduction factor of permissible load capacities, should reinforcement bar be positioned 15 cm spacing within the fixing area.			0,7	0,75	0,8	0,9	1,0	1,0
Hole Depth	t	[mm]	60	70	85	100	125	150
Embedment depth	$h_v$	[mm]	45	55	65	80	100	125
Spacing of anchor	a b	[cm]	36	44	52	60	90	120
Edge distance	$a_r$ *)	[cm]	18	22	26	30	45	60
Base material thickness	d	[cm]	13	16	20	24	30	35
Clearance hole through fastened material	through fixing	$b_{\Delta}$ [mm]	11	13	16	21	26	31
	fixing on threaded rod		7	9	12	14	18	22
Fixing torque $M_D$		[Nm]	10	25	50	80	200	400

\*) If installation of anchor is not in corner of construction material but rather at an edge, edge distance can be reduced by using multiplier 0,72. For further information please refer to DIBt-approval Number Nr. Z-21.12-1092

Recommended anchor  $F_{30}$  in kN, uncracked concrete  $f_{cc} = 30 \text{ N/mm}^2$ , safety factor  $\nu = 3$  for concrete failure

Anchor Sizes		M6	M8	M10	M12	M16	M20
Axial tension	0°	4,0	6,9	10,4	15,0	25,7	34,6
	30°	4,8	7,9	12,5	18,2	31,3	42,6
Angle tension	45°	5,1	8,4	13,6	19,8	34,2	46,6
	60°	5,3	8,8	14,6	21,3	37,0	50,6
Shear tension	90°	5,5	9,8	16,7	24,5	42,8	58,6

