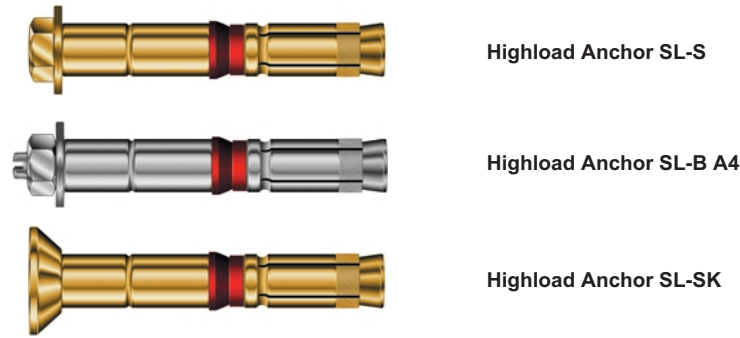


MKT[®] Highload Anchor SL
 ... a solid connection Steel, zinc plated / Stainless steel A4/316



Description

The DIBt and Socotec (France) approved Highload Anchor SL is a torque controlled anchor system for through fastenings in non-cracked concrete, available in three versions.

Applications

Medium to heavy duty anchorings of base plates, supports, pallet racks, brackets, railings in non-cracked concrete.

Range of concrete quality: C20/25 - C50/60



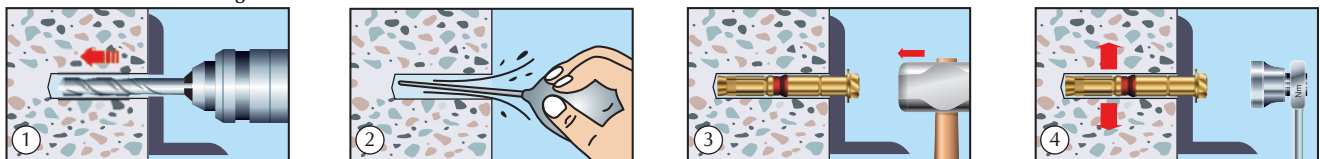
Loads and performance data

| | | | SL 10 M6 | SL 12 M8 | SL 14 M10 | SL 18 M12 | SL 24 M16 | SL 28 M20 |
|---|--------|------|-------------|-------------|--------------|--------------|--------------|--------------|
| Non-cracked concrete C25/30 | | | | | | | | |
| Recommended loads, tension | rec. N | [kN] | 4.70 | 6.90 | 10.20 | 15.50 | 25.00 | 33.00 |
| Recommended loads, shear | rec. V | [kN] | 5.00 | 8.40 | 12.30 | 22.10 | 36.80 | 51.10 |
| Recommended loads, shear (A4-70 st. steel) | rec. V | [kN] | 5.40 | 8.20 | 11.40 | 20.00 | 35.40 | 52.20 |
| Recommended bending moments (8.8 Steel) | rec. M | [Nm] | 7.00 | 17.10 | 34.20 | 60.00 | 152.00 | 297.00 |
| Recommended bending moments (A4-70 st. steel) | rec. M | [Nm] | 4.90 | 12.10 | 24.10 | 42.10 | 107.00 | 209.00 |

Installation parameters

| | | | SL 10 M6 | SL 12 M8 | SL 14 M10 | SL 18 M12 | SL 24 M16 | SL 28 M20 |
|---|-------------------|------|-------------|-------------|--------------|--------------|--------------|--------------|
| Drill hole diameter | d _o | [mm] | 10 | 12 | 14 | 18 | 24 | 28 |
| Diameter of clearance hole in the fixture | d _f | [mm] | 12 | 14 | 16 | 20 | 26 | 31 |
| Depth of drill hole | h ₁ | [mm] | 60 | 70 | 85 | 100 | 125 | 150 |
| Effective anchorage depth | h _{ef} | [mm] | 45 | 55 | 65 | 80 | 100 | 125 |
| Minimum thickness of concrete slab | h | [mm] | 120 | 140 | 165 | 200 | 235 | 300 |
| Installation torque | T _{inst} | [Nm] | 10 | 25 | 50 | 80 | 200 | 400 |
| Width across nut | SW | [mm] | 10 | 13 | 17 | 19 | 24 | 30 |

Installation of MKT SL Highload Anchor

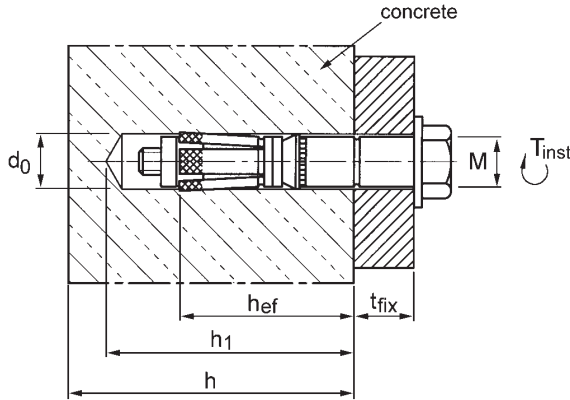


1. Drill to specified diameter and depth.
2. Clean the hole with blow-out bulb.
3. Using a hammer, tap the anchor through the fixture into the hole until the bolt head is firmly seated against the fixture.
4. Tighten the anchor to the specified torque. Refer to approval and listing for design and building code compliance.

Highload Anchor SL



- Steel, zinc plated
- DIBt approval for non-cracked concrete



Recommended tension loads for single anchor without influence of spacing and edge distance, total safety factor 3.

| Concrete strength | Non-cracked concrete | | | | | |
|-------------------|----------------------|----------|-----------|-----------|-----------|-----------|
| | SL10 /M6 | SL12 /M8 | SL14 /M10 | SL18 /M12 | SL24 /M16 | SL28 /M20 |
| C20/25 | 4.23 | 6.21 | 9.18 | 13.95 | 22.50 | 29.70 |
| C25/30 | 4.70 | 6.90 | 10.20 | 15.50 | 25.00 | 33.00 |
| C30/37 | 5.17 | 7.59 | 11.22 | 17.05 | 27.50 | 36.30 |
| C40/50 | 5.96 | 8.76 | 12.95 | 19.68 | 31.75 | 41.91 |
| C50/60 | 6.58 | 9.66 | 14.28 | 21.70 | 35.00 | 46.20 |

Recommended shear loads for single anchor without influence of spacing and edge distance, total safety factor 3. C20/25 up to C50/60 in non-cracked concrete.

(Zinc Plated Steel)

| Concrete strength | Non-cracked concrete | | | | | |
|-------------------|----------------------|----------|-----------|-----------|-----------|-----------|
| | SL10 /M6 | SL12 /M8 | SL14 /M10 | SL18 /M12 | SL24 /M16 | SL28 /M20 |
| ≥ C20/25 | 5.00 | 8.40 | 12.30 | 22.10 | 36.80 | 51.10 |

Recommended shear loads for single anchor without influence of spacing and edge distance, total safety factor 3. C20/25 up to C50/60 in non-cracked concrete.

(A4-70 Stainless Steel)

| Concrete strength | Non-cracked concrete | | | | | |
|-------------------|----------------------|----------|-----------|-----------|-----------|-----------|
| | SL10 /M6 | SL12 /M8 | SL14 /M10 | SL18 /M12 | SL24 /M16 | SL28 /M20 |
| ≥ C20/25 | 5.40 | 8.20 | 11.40 | 20.00 | 35.40 | 52.20 |

| Item No Type SL-S | Item No Type SL-B | Description | Drill hole Ø x depth mm | Setting depth mm | Anchor length l | | Fixture thickness t _{fix} mm | Thread | Pkg. cont. pcs. | Weight per pkg. kg |
|-------------------|-------------------|-------------|-------------------------|------------------|-----------------|-----------|---------------------------------------|--------|-----------------|--------------------|
| | | | | | Type S mm | Type B mm | | | | |
| 2021110000 | 2021310000 | SL 10/0 | 10 x 60 | 53 | 55 | 60 | 0 | M6 | 100 | 3.20 |
| 2021110010 | 2021310010 | SL 10/10 | 10 x 60 | 53 | 65 | 70 | 10 | M6 | 50 | 1.85 |
| 2021110025 | 2021310025 | SL 10/25 | 10 x 60 | 53 | 80 | 85 | 25 | M6 | 50 | 2.25 |
| 2021110050 | 2021310050 | SL 10/50 | 10 x 60 | 53 | 100 | 110 | 50 | M6 | 50 | 3.10 |
| - | 2021310075 | SL 10/75 | 10 x 60 | 53 | - | 140 | 75 | M6 | 25 | 1.83 |
| 2021110100 | 2021310100 | SL 10/100 | 10 x 60 | 53 | 150 | 160 | 100 | M6 | 25 | 2.10 |
| 2021112000 | 2021312000 | SL 12/0 | 12 x 70 | 63 | 65 | 75 | 0 | M8 | 50 | 2.87 |
| 2021112010 | 2021312010 | SL 12/10 | 12 x 70 | 63 | 75 | 85 | 10 | M8 | 50 | 3.20 |
| 2021112025 | 2021312025 | SL 12/25 | 12 x 70 | 63 | 90 | 100 | 25 | M8 | 50 | 3.85 |
| 2021112050 | 2021312050 | SL 12/50 | 12 x 70 | 63 | 115 | 125 | 50 | M8 | 25 | 2.40 |
| 2021112075 | 2021312075 | SL 12/75 | 12 x 70 | 63 | 140 | 150 | 75 | M8 | 25 | 3.04 |
| 2021112100 | 2021312100 | SL 12/100 | 12 x 70 | 63 | 160 | 170 | 100 | M8 | 25 | 3.36 |
| 2021114000 | 2021314000 | SL 14/0 | 14 x 85 | 73 | 75 | 90 | 0 | M10 | 25 | 2.50 |
| 2021114010 | 2021314010 | SL 14/10 | 14 x 85 | 73 | 85 | 100 | 10 | M10 | 25 | 2.75 |
| 2021114025 | 2021314025 | SL 14/25 | 14 x 85 | 73 | 100 | 115 | 25 | M10 | 25 | 3.15 |
| 2021114050 | 2021314050 | SL 14/50 | 14 x 85 | 73 | 125 | 140 | 50 | M10 | 25 | 3.90 |
| 2021114075 | 2021314075 | SL 14/75 | 14 x 85 | 73 | 150 | 165 | 75 | M10 | 25 | 4.30 |
| 2021114100 | 2021314100 | SL 14/100 | 14 x 85 | 73 | 170 | 185 | 100 | M10 | 25 | 5.40 |
| - | 2021314125 | SL 14/125 | 14 x 85 | 73 | - | 210 | 125 | M10 | 25 | 5.42 |
| - | 2021314160 | SL 14/160 | 14 x 85 | 73 | - | 245 | 160 | M10 | 20 | 5.18 |
| 2021118000 | 2021318000 | SL 18/0 | 18 x 100 | 93 | 95 | 110 | 0 | M12 | 20 | 3.75 |
| 2021118015 | 2021318015 | SL 18/15 | 18 x 100 | 93 | 105 | 120 | 15 | M12 | 20 | 4.20 |
| 2021118025 | 2021318025 | SL 18/25 | 18 x 100 | 93 | 115 | 130 | 25 | M12 | 20 | 4.53 |
| 2021118040 | 2021318040 | SL 18/40 | 18 x 100 | 93 | 130 | 145 | 40 | M12 | 20 | 5.00 |
| 2021118070 | 2021318070 | SL 18/70 | 18 x 100 | 93 | 160 | 175 | 70 | M12 | 20 | 5.95 |
| 2021118100 | 2021318100 | SL 18/100 | 18 x 100 | 93 | 190 | 205 | 100 | M12 | 10 | 3.75 |
| 2021124000 | 2021324000 | SL 24/0 | 24 x 125 | 107 | 110 | 135 | 0 | M16 | 10 | 4.00 |
| 2021124025 | 2021324025 | SL 24/25 | 24 x 125 | 107 | 140 | 160 | 25 | M16 | 10 | 4.75 |
| 2021124050 | 2021324050 | SL 24/50 | 24 x 125 | 107 | 160 | 180 | 50 | M16 | 10 | 5.50 |
| 2021124100 | 2021324100 | SL 24/100 | 24 x 125 | 107 | 210 | 230 | 100 | M16 | 5 | 3.60 |
| 2021128000 | 2021328000 | SL 28/0 | 28 x 150 | 135 | 140 | 165 | 0 | M20 | 10 | 7.00 |
| 2021128030 | 2021328030 | SL 28/30 | 28 x 150 | 135 | 170 | 190 | 30 | M20 | 10 | 8.50 |
| 2021128060 | 2021328060 | SL 28/60 | 28 x 150 | 135 | 200 | 220 | 60 | M20 | 5 | 5.05 |
| 2021128100 | 2021328100 | SL 28/100 | 28 x 150 | 135 | 240 | 260 | 100 | M20 | 5 | 5.75 |

Highload Anchor SL A4



- Stainless steel A4/316
- DIBt approval for non-cracked concrete

| Item No Type SL-S | Item No Type SL-B | Description | Drill hole Ø x depth mm | Setting depth mm | Anchor length l | | Fixture thickness t _{fix} mm | Thread | Pkg. cont. pcs. | Weight per pkg. kg |
|-------------------|-------------------|-------------|-------------------------|------------------|-----------------|-----------|---------------------------------------|--------|-----------------|--------------------|
| | | | | | Type S mm | Type B mm | | | | |
| 2021010010 | 2021210010 | SL 10/10 A4 | 10 x 60 | 53 | 65 | 70 | 10 | M6 | 50 | 1.85 |
| 2021010025 | 2021210025 | SL 10/25 A4 | 10 x 60 | 53 | 80 | 85 | 25 | M6 | 50 | 2.25 |
| 2021010050 | 2021210050 | SL 10/50 A4 | 10 x 60 | 53 | 100 | 110 | 50 | M6 | 50 | 3.10 |
| 2021012010 | 2021212010 | SL 12/10 A4 | 12 x 70 | 63 | 75 | 85 | 10 | M8 | 50 | 3.20 |
| 2021012025 | 2021212025 | SL 12/25 A4 | 12 x 70 | 63 | 90 | 100 | 25 | M8 | 50 | 3.85 |
| 2021012050 | 2021212050 | SL 12/50 A4 | 12 x 70 | 63 | 115 | 125 | 50 | M8 | 25 | 2.40 |
| 2021014010 | 2021214010 | SL 14/10 A4 | 14 x 85 | 73 | 85 | 100 | 10 | M10 | 25 | 2.75 |
| 2021014025 | 2021214025 | SL 14/25 A4 | 14 x 85 | 73 | 100 | 115 | 25 | M10 | 25 | 3.15 |
| 2021014050 | 2021214050 | SL 14/50 A4 | 14 x 85 | 73 | 125 | 140 | 50 | M10 | 25 | 3.90 |
| 2021018015 | 2021218015 | SL 18/15 A4 | 18 x 100 | 93 | 105 | 120 | 15 | M12 | 20 | 4.20 |
| 2021018025 | 2021218025 | SL 18/25 A4 | 18 x 100 | 93 | 115 | 130 | 25 | M12 | 20 | 4.53 |
| 2021018040 | 2021218040 | SL 18/40 A4 | 18 x 100 | 93 | 130 | 145 | 40 | M12 | 20 | 5.00 |
| 2021024025 | 2021224025 | SL 24/25 A4 | 24 x 125 | 107 | 140 | 160 | 25 | M16 | 10 | 4.75 |
| 2021024050 | 2021224050 | SL 24/50 A4 | 24 x 125 | 107 | 160 | 180 | 50 | M16 | 10 | 5.50 |
| 2021028030 | 2021228030 | SL 28/30 A4 | 28 x 150 | 135 | 170 | 190 | 30 | M20 | 5 | 4.30 |
| 2021028060 | 2021228060 | SL 28/60 A4 | 28 x 150 | 135 | 200 | 220 | 60 | M20 | 5 | 5.05 |

Other lengths, special assemblies and SK version in stainless steel A4 on demand.

Highload Anchor SL-SK



- Steel, zinc plated; with countersunk head
- DIBt approval for non-cracked concrete

| Item No Type SL-SK | Description | Drill hole Ø x depth mm | Setting depth mm | Anchor length l mm | Fixture thickness mm | Thread | Pkg. cont. pcs. | Weight per pkg. kg |
|--------------------|-------------|-------------------------|------------------|--------------------|----------------------|--------|-----------------|--------------------|
| 2021410015 | SL-SK 10/10 | 10 x 60 | 53 | 65 | 15 | M6 | 50 | 1.85 |
| 2021410030 | SL-SK 10/25 | 10 x 60 | 53 | 80 | 30 | M6 | 50 | 2.25 |
| 2021410055 | SL-SK 10/50 | 10 x 60 | 53 | 100 | 55 | M6 | 50 | 3.10 |
| 2021412020 | SL-SK 12/10 | 12 x 70 | 63 | 75 | 20 | M8 | 50 | 3.20 |
| 2021412035 | SL-SK 12/25 | 12 x 70 | 63 | 90 | 35 | M8 | 50 | 3.85 |
| 2021412060 | SL-SK 12/50 | 12 x 70 | 63 | 115 | 60 | M8 | 25 | 2.40 |
| 2021414020 | SL-SK 14/10 | 14 x 85 | 73 | 85 | 20 | M10 | 25 | 2.75 |
| 2021414035 | SL-SK 14/25 | 14 x 85 | 73 | 100 | 35 | M10 | 25 | 3.15 |
| 2021414060 | SL-SK 14/50 | 14 x 85 | 73 | 125 | 60 | M10 | 25 | 3.90 |
| 2021418025 | SL-SK 18/15 | 18 x 100 | 93 | 105 | 25 | M12 | 20 | 4.20 |
| 2021418050 | SL-SK 18/40 | 18 x 100 | 93 | 130 | 50 | M12 | 20 | 5.00 |

Dimensions countersunk head see page 5-18.