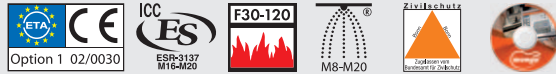


HL Heavy Duty Anchor



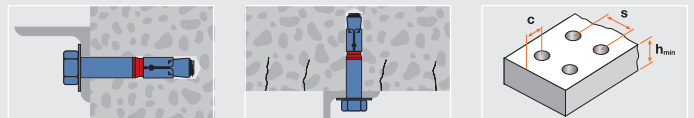
Features

- European Technical Approval Option 1 for cracked and non-cracked concrete
- ICC-ES Report ESR-3137
- Fire resistance test certification F30-F120
- Approved for use with fixed water sprinkler systems from M8 to M20
- Shock proof fastening in civil defence projects
- Torque controlled expansion
- Zinc plated > 5µm
- Through fixing
- Indoor applications



Applications

machines, cable trays, pipes, gates, substructures, railings

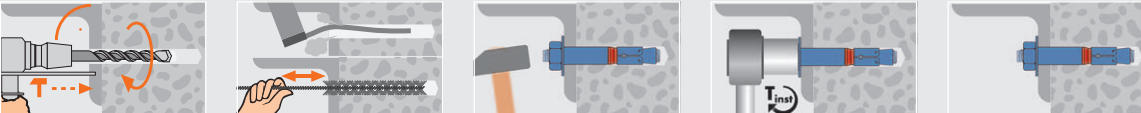


Technical Data

	Non-cracked concrete C20/25 tension load (kN)	Cracked concrete C20/25 tension load (kN)	Shear load (kN), SZ-B	Shear load (kN), SZ-S/SZ-SK	Bending moment (Nm)	Distance betw. anchors mm $s (3h_{ef})$	Edge distance mm $c (1.5h_{ef})$	Distance betw. anchors mm $s (5h_{ef})$	Edge distance mm $c (2.5h_{ef})$	Min. distance betw. anchors/at edge distance mm s_{min}/c	Min. edge distance/at distance betw. anchors mm c_{min}/s	Minimum thickness of concrete member mm h_{min}	Wrench size SZ-S/SZ-B	Installation torque (Nm), SZ-S/SZ-B	Installation torque (Nm), SZ-SK	Wrench size SZ-SK
SZ M6	8.5	2.4	9.1	10.1	6.9	150	75	250	125	50/80	50/100	100	SW 10	15	-	-
SZ M8	9.5	5.7	14	17.1	17.1	180	90	300	150	60/100	60/120	120	13	30	-	-
SZ M10	14.3	7.6	20.7	27.5	34.3	213	106	355	177	70/120	70/175	140	17	50	55	6
SZ M12	16.7	11.9	35.1	41.5	60.0	240	120	400	200	80/160	80/200	160	19	80	70	8
SZ M16	24	17.1	52.1	72	152.0	300	150	500	250	100/180	100/220	200	24	160	-	-
SZ M20	34	23.8	70	85	297	375	187	625	312	125/300	180/540	250	30	280	-	-

The partial safety factors of the resistances as well as a partial safety factor of the load of $\gamma_F = 1.4$ are considered / The technical data is only valid for single fixings without consideration of edge and anchor distances / 1 kN \approx 100 kg

Installation



HL-S (SZ-S) Heavy Duty Anchor with hexagon screw



Article code	Thread	Plug and drill \varnothing mm $d_{nom} = d_0$	Usable length mm t_{fix}	Drilling depth mm h_0	Effective anchorage depth mm h_{ef}	Length mm L	Box content \varnothing
1221000	M6	10	2	65	50	60	100 \varnothing 41
1221001	M6	10	10	65	50	70	50 \varnothing 31
1221003	M6	10	30	65	50	90	50 \varnothing 31
1221005	M6	10	50	65	50	110	50 \varnothing 31
1221200	M8	12	2	80	60	70	50 \varnothing 31
1221201	M8	12	10	80	60	80	50 \varnothing 41
1221203	M8	12	30	80	60	100	25 \varnothing 31
1221205	M8	12	50	80	60	120	25 \varnothing 31
1221500	M10	15	2	95	71	85	25 \varnothing 31
1221501	M10	15	15	95	71	100	25 \varnothing 31
1221502	M10	15	25	95	71	110	25 \varnothing 31
1221504	M10	15	45	95	71	130	25 \varnothing 31
1221509	M10	15	95	95	71	180	25 \varnothing 31
1221800	M12	18	2	105	80	100	20 \varnothing 31
1221801	M12	18	10	105	80	110	20 \varnothing 31
1221802	M12	18	20	105	80	120	20 \varnothing 31
1221804	M12	18	40	105	80	140	20 \varnothing 31
1221807	M12	18	70	105	80	170	20 \varnothing 31
1222400	M16	24	2	130	100	120	10 \varnothing 31
1222402	M16	24	20	130	100	140	10 \varnothing 31
1222405	M16	24	50	130	100	170	10 \varnothing 31
1222801	M20	28	10	160	125	170	5 \varnothing 41
1222803	M20	28	30	160	125	190	5 \varnothing 41
1222806	M20	28	60	160	125	220	5 \varnothing 41
1222810	M20	28	100	160	125	260	5 \varnothing 41