

## Drop-In Anchor AN ES

Group: 1401

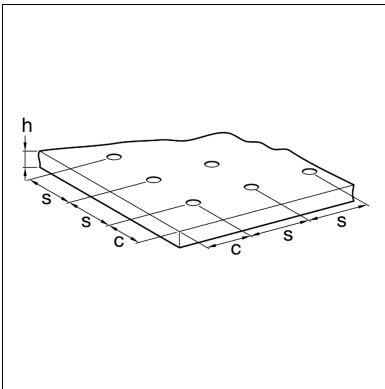
### Application

Drop-In Anchor for single fixing in non-cracked concrete and multiple fixing in cracked concrete. Suitable for fixing pipelines, channels, etc. meeting the respective approval requirements. The anchor must only be used for dry interiors. For damp locations and outdoor constructions the stainless steel version is required.

- ◆ No special drill required
- ◆ Setting tool for distance-controlled forced expansion
- ◆ Suitable for push-through mounting

### Installation

As expansion tool use the respective Setting Tool for Drop-In Anchor or the Plug-on Setting Tool ASW. The "intelligent" expansion cone facilitates the mounting with bore dia. tolerances or varying concrete quality. By the controlled deformation of the cone during installation, the needed edge and centre distances are decreasing considerably.



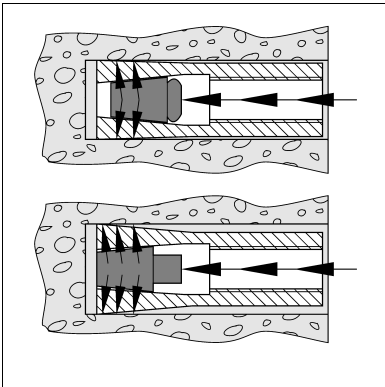
### Technical Data

Single fixing:

Extract from application conditions of ETA-10/0257

Admissible loads not affected by centre and edge distances.

Total safety factor respected according ETAG 001 ( $Y_M Y_F$ ).



Anchor size	M8x30*	M8x40	M10x30	M10x40	M12x50	M16
Nominal diameter of drill $d_0 =$ [mm]	10	10	12	12	15	20
Depth of bore hole $h_0 =$ [mm]	30	40	30	40	50	65
Installation torque $T_{inst} =$ [Nm]	8	8	15	15	35	60
Diameter of clearance hole in the connecting element $d_f \leq$ [mm]	9	9	12	12	14	18
Thread length $L_{th}$ [mm]	13	20	12	15	18	23
Min. screwing depth $L_{smin}$ [mm]	9	9	10	11	13	18
Min. thickness of concrete slab $h_{min}$ [mm]	100	100	120	120	130	160
Min. centre distance $s_{min}$ [mm]	60	80	100	100	120	150
Min. edge distance $c_{min}$ [mm]	95	95	115	135	165	200
Perm. tensile load in non-cracked concrete (Screw 5.6 up to 8.8)						
C20/25 [kN]	3.3	3.6	3.3	5.1	7.1	10.5
C25/30 [kN]	3.6	3.8	3.6	5.6	7.8	11.5
C30/37 [kN]	4	4	4	6.2	8.6	12.8
C40/50 [kN]	4.7	4.4	4.7	7.2	10	14.9
C50/60 [kN]	5.1	4.6	5.1	7.9	11	16.3
Lateral load (Screw 5.6) $\geq$ C20/25 zul. V [kN]	3.9	3.9	4	4.1	9	16.8
Lateral load (Screw 5.8) $\geq$ C20/25 zul. V [kN]	3.9	3.9	4	4.1	11.1	18
Lateral load (Screw 8.8) $\geq$ C20/25 zul. V [kN]	3.9	3.9	4	4.1	11.1	18
Perm. bending moment (Screw 5.6) $M_{zul}$ [Nm]	8.1	8.1	15.8	15.8	27.8	71
Perm. bending moment (Screw 5.8) $M_{zul}$ [Nm]	10.9	10.9	21.1	21.1	37.1	94.9
Perm. bending moment (Screw 8.8) $M_{zul}$ [Nm]	17.1	17.1	33.7	34.3	60	152
Charact. centre distance $s_{cr}$ [mm]	90	120	90	120	150	195
Charact. edge distance $c_{cr}$ [mm]	45	60	45	60	75	97,5
Loads under fire exposure steel $\geq$ 5.6						
Perm. load R30 perm. F [kN]	0.9	1.8	0.9	1.8	3.2	4.7
Perm. load R60 perm. F [kN]	0.9	1.3	0.9	1.8	3.1	4.7
Perm. load R90 perm. F [kN]	0.8	0.8	0.9	1.2	1.8	3.3
Perm. load R120 perm. F [kN]	0.5	0.5	0.7	0.8	1.2	2.2

\* Application for indetermined static systems

Multiple fixing:

Extract from application conditions of ETA-10/0258

For multiple mounting solutions of non-load-bearing systems acc. ETAG 001, part 6.

Safety factor acc. ETAG 001 is included ( $Y_M Y_F$ ).

The perm. loads per fixing point for the respective countries are regulated in ETAG 001, part 6.

Anchor size	M8x25	M8x30	M8x40
Nominal diameter of drill $d_0$ [mm]	10	10	10
Depth of bore hole $h_0$ [mm]	25	30	40
Installation torque $T_{inst}$ [Nm]	8	8	8
Diameter of clearance hole in the connecting element $d_f \leq$ [mm]	9	9	9
Thread length $L_{th}$ [mm]	12	13	20
Min. screw depth $L_{sdmin}$ [mm]	8	9	9
Standard/Min. thickness of component $h_{min1} / h_{min2}$ [mm]	100/80	100	100
Min. centre distance $s_{min}$ [mm]	50	60	80
Min. edge distance $c_{min}$ [mm]	100	95	95
Perm. tensile load cracked/non-cracked concrete			
C12/15 and C16/20 [kN]	1.2	-	-
C20/25 to C50/60 [kN]	1.9	1.7	2
Perm. bending moment (Steel 4.6) $M_{zul}$ [Nm]	6.4	6.4	6.4
Perm. bending moment (Steel 5.6) $M_{zul}$ [Nm]	8.1	8.1	8.1
Perm. bending moment (Steel 5.8) $M_{zul}$ [Nm]	10.9	10.9	10.9
Perm. bending moment (Steel 8.8) $M_{zul}$ [Nm]	17.1	17.1	17.1
Charact. centre distance $s_{cr}$ [mm]	75	180	210
Charact. edge distance $c_{cr}$ [mm]	38	90	105
Loads under fire exposure screw $\geq 4.8$			
Perm. load R30 perm. F [kN]	0.6	0.9	1.1
Perm. load R60 perm. F [kN]	0.6	0.9	0.9
Perm. load R90 perm. F [kN]	0.6	0.6	0.6
Perm. load R120 perm. F [kN]	0.5	0.5	0.5
Loads under fire exposure screw $\geq 5.6$			
Perm. load R30 perm. F [kN]	0.6	0.9	1.5
Perm. load R60 perm. F [kN]	0.6	0.9	1.5
Perm. load R90 perm. F [kN]	0.6	0.9	0.9
Perm. load R120 perm. F [kN]	0.5	0.5	0.5
Charact. centre distance $s_{cr,fi}$ [mm]	100	180	210
Charact. edge distance $c_{cr,fi}$ [mm]	50	90	105

Anchor size	M10x25	M10x30	M10x40	M12x25	M12x50	M16
Nominal diameter of drill $d_0 =$ [mm]	12	12	12	15	15	20
Depth of bore hole $h_0 =$ [mm]	25	30	40	25	50	65
Installation torque $T_{inst} =$ [Nm]	15	15	15	35	35	60
Diameter of clearance hole in the connecting element $d_f \leq$ [mm]	12	12	12	14	14	18
Thread length $L_{th}$ [mm]	12	12	15	12	18	23
Min. screw depth $L_{smin}$ [mm]	10	10	11	12	13	18
Standard/Min. thickness of component $h_{min1} / h_{min2}$ [mm]	100/80	120	120	100/80	130	160
Min. centre distance $s_{min}$ [mm]	60	100	100	100	120	150
Min. edge distance $c_{min}$ [mm]	100	115	135	110	165	200
Perm. tensile load cracked/non-cracked concrete						
C12/15 and C16/20 [kN]	1.7	-	-	1.7	-	-
C20/25 to C50/60 [kN]	2.1	2	2	2.1	2.4	6.3
perm. bending moment (Steel 4.6) $M_{zul}$ [Nm]	12.8	12.8	12.8	22.2	22.2	56.9
perm. bending moment (Steel 5.6) $M_{zul}$ [Nm]	15.8	15.8	15.8	27.8	27.8	71
perm. bending moment (Steel 5.8) $M_{zul}$ [Nm]	21.1	21.1	21.1	37.1	37.1	94.9
perm. bending moment (Steel 8.8) $M_{zul}$ [Nm]	34.3	33.7	34.3	60	60	152
Charact. centre distance $s_{cr}$ [mm]	75	230	170	75	170	400
Charact. edge distance $c_{cr}$ [mm]	38	115	85	38	85	200
Loads under fire exposure $\geq$ 4.8						
Perm. load R30 perm. F [kN]	0.6	0.9	1.5	0.6	1.5	4
Perm. load R60 perm. F [kN]	0.6	0.9	1.5	0.6	1.5	4
Perm. load R90 perm. F [kN]	0.6	0.9	1.1	0.6	1.5	3
Perm. load R120 perm. F [kN]	0.5	0.7	0.9	0.5	1.2	2.4
Loads under fire exposure screw $\geq$ 5.6						
Perm. load R30 perm. F [kN]	0.6	0.9	1.5	0.6	1.5	4
Perm. load R60 perm. F [kN]	0.6	0.9	1.5	0.6	1.5	4
Perm. load R90 perm. F [kN]	0.6	0.9	1.5	0.6	1.5	3.7
Perm. load R120 perm. F [kN]	0.5	0.7	1.0	0.5	1.2	2.4
Charact. centre distance $s_{cr,fi}$ [mm]	100	170	170	100	200	400
Charact. edge distance $c_{cr, fi}$ [mm]	50	85	85	50	100	200

Valid are the values of the mentioned approval which can be seen on our website [www.sikla.com/downloads](http://www.sikla.com/downloads).

Material: Steel, galvanised

#### Approvals / Conformity

For the multiple use for non-structural applications Sikla approval ETA-10/0258 (M8 - M12), for installation in non-cracked concrete Sikla approval ETA-10/0257, fire protection testing, VdS-conform, FM-Approval  $\geq$  M10



<sup>1)</sup> Delivery date on request - goods are procured order-related.

Type	Drill hole Ø x depth [mm]	Thread Ø x length [mm]	W [kg]	Quantity [pack]	Part number
ES M8 x 25	10 x 25	M8 x 12	0.01	100	<b>116618</b>
ES M8 x 30	10 x 30	M8 x 13	0.01	100	<b>110467</b>
ES M8 x 40	10 x 40	M8 x 20	0.01	100	<b>110468</b>
ES M10 x 25	12 x 25	M10 x 12	0.02	50	<b>116619</b>
ES M10 x 30	12 x 30	M10 x 12	0.02	50	<b>110506</b>
ES M10 x 40	12 x 40	M10 x 15	0.02	50	<b>110469</b>
ES M12 x 25 <sup>1)</sup>	15 x 25	M12 x 12	0.02	50	<b>116620</b>
ES M12 x 50	15 x 50	M12 x 18	0.04	50	<b>110470</b>
ES M16 x 65	20 x 65	M16 x 23	0.10	25	<b>110471</b>