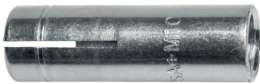


# Drop-in anchor SA plus & SAK plus



## Advantages



SA plus, zinc plated



SAK plus with lip, zinc plated



Setting tool ESW PRO



Setting tool ESW

- The drop-in anchor SA plus is approved for single use in non-cracked concrete and for multiple use for non-structural applications in cracked concrete
- The high expansion ability of the drop-in anchor enables a low drill hole depth and low anchorage depth
- The setting tool is necessary for the correct installation

## Approvals and certificates



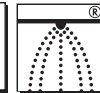
European Technical Assessment  
Option 7 for non-cracked concrete  
(M8 - M16)



For multiple use for non-structural  
applications in cracked concrete  
(M6 - M10)



see assessment  
M6 - M10



M8 - M10

## Suitable building materials

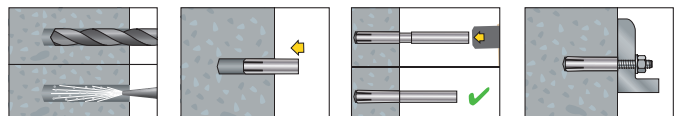
### Very suitable



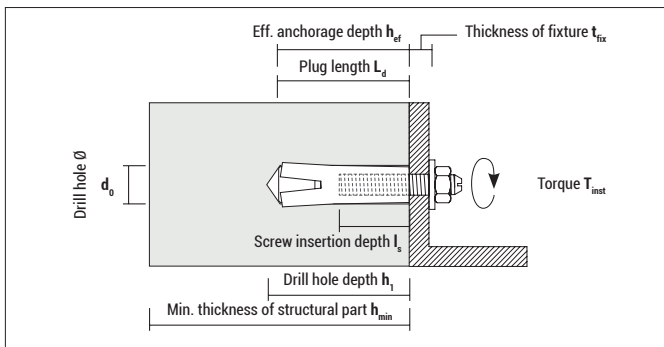
- Concrete



## Mounting



## Drop-in anchor SA plus & SAK plus



### SA plus, zinc plated

Type	Art-No	$d_0$ [mm]	$h_1$ [mm]	$L_d = h_{ef}$ [mm]	$l_{s, min-max}^*$ [mm]	Thread		€/ 100 pcs	[pcs]	[pcs]
SA plus 6	96SAP	8	27	25	6 - 11	M6	●		100	1.800
SA plus 8	98SAP	10	32	30	8 - 13	M8	●		100	1.000
SA plus 10	910SAP	12	43	40	10 - 16	M10	●		50	500
SA plus 12	912SAP	15	54	50	12 - 23	M12	●		50	300
SA plus 16	916SAP	20	70	65	16 - 32	M16	●		25	150

\* Min. / max. screw insertion depth in drop-in anchor



### SAK plus with lip, zinc plated

Type	Art-No	$d_0$ [mm]	$h_1$ [mm]	$L_d = h_{ef}$ [mm]	$l_{s, min-max}^*$ [mm]	Thread		€/ 100 pcs	[pcs]	[pcs]
SAK plus 6	96SAPK	8	27	25	6 - 11	M6	●		100	1.800
SAK plus 8-25	9825SAPK	10	27	25	6 - 12	M8	●		100	1.000
SAK plus 8	98SAPK	10	32	30	8 - 13	M8	●		100	1.000
SAK plus 10-25	91025SAPK	12	27	25	8 - 12	M10	●		50	900
SAK plus 10	910SAPK	12	43	40	10 - 16	M10	●		50	500
SAK plus 12	912SAPK	15	54	50	12 - 23	M12	●		50	300
SAK plus 16	916SAPK	20	70	65	16 - 32	M16	●		25	150

\* Min. / max. screw insertion depth in drop-in anchor




### ESW PRO for SA plus, SAK plus, SA and SA-N with hand protection

Type	Art-No	Suitable for	€/ pcs	[pcs]
ESW PRO 6	96ESWP	SA plus 6, SAK plus 6, SA-N 6		1
ESW PRO 8	98ESWP	SA plus 8, SAK plus 8 and SAK plus 8-25, SA-N 8		1
ESW PRO 10-25	91025ESWP	SAK plus 10-25		1
ESW PRO 10	910ESWP	SA plus 10, SAK plus 10 and SA-N 10		1
ESW PRO 12	912ESWP	SA plus 12, SAK plus 12 and SA 12D, SA-N 12		1
ESW PRO 16	916ESWP	SA plus 16, SAK plus 16 and SA-N 16		1

## Drop-in anchor SA plus & SAK plus



**ESW** for SA plus, SAK plus, SA and SA-N

Type	Art-No	Suitable for	€ / pcs	 [pcs]
ESW 6	96ESW	SA plus 6, SAK plus 6, SA-N 6		1
ESW 8	98ESW	SA plus 8, SAK plus 8 and SAK plus 8-25, SA-N 8		1
ESW 10-25	91025ESW	SAK plus 10-25		1
ESW 10	910ESW	SA plus 10, SAK plus 10 and SA-N 10		1
ESW 12	912ESW	SA plus 12, SAK plus 12 and SA 12D, SA-N 12		1
ESW 16	916ESW	SA plus 16, SAK plus 16 and SA-N 16		1

### Loads, spacing and edge distance for single anchor in non-cracked concrete C20/25

Type	Permissible tension load <sup>1),2),3)</sup> [screw 4.6-8.8]	Permissible shear load <sup>1),2)</sup>		Permissible bending moment <sup>2)</sup>		Spacing $S_{min}$ [mm]	Edge distance $C_{min}$ [mm]	Min. thickness of structural part $h_{min}$ [mm]	Max. torque $T_{inst. \leq}$ [Nm]	Ø of clearance hole in fixture $d_f$ [mm]
	$N_{per}$ [kN]	[screw 4.6] $V_{per}$ [kN]	[screw 8.8] $V_{per}$ [kN]	[screw 4.6] $M_{per}$ [Nm]	[screw 8.8] $M_{per}$ [Nm]					
SA/SAK plus 8	3,6	3,1	4,0	6,4	17,1	105	105	100	8	9
SA/SAK plus 10	4,8	4,5	4,5	12,8	34,2	105	140	100	15	12
SA/SAK plus 12	6,3	7,3	7,3	22,4	59,8	125	175	120	35	14
SA/SAK plus 16	10,5	12,2	12,2	56,8	151,7	180	230	160	60	18

<sup>1)</sup> Permissible loads for single anchor without influence of spacing and edge distance.

<sup>2)</sup> Load figures include the resistances' partial safety factors as per ETA assessment and a partial safety factor on the action of  $v_F = 1,4$

<sup>3)</sup> For higher concrete strengths up to C50/55 the values increase by max. 55%.

$h_{min}$ ,  $S_{min}$  and  $C_{min}$  must be observed.

### Loads, spacing and edge distance for multiple use for non-structural applications in cracked concrete C20/25-C50/60

Type	Permissible load in any direction <sup>1),2)</sup> [screw 4.6-8.8]	Permissible bending moment <sup>2)</sup>		Spacing $S_{min}$ [mm]	Edge distance $C_{min}$ [mm]	Min. thickness of structural part $h_{min}$ [mm]	Max. torque $T_{inst. \leq}$ [Nm]	Ø of clearance hole in fixture $d_f$ [mm]
	$F_{per}$ [kN]	[screw 4.6] $M_{per}$ [Nm]	[screw 8.8] $M_{per}$ [Nm]					
SA/SAK plus 6	0,5	2,6	7,0	70	105	100	4	7
SAK plus 8-25	1,0	6,4	17,1	120	110	100	8	9
SA/SAK plus 8	1,2	6,4	17,1	105	105	100	8	9
SAK plus 10-25	1,0	12,8	34,2	130	140	100	15	12
SA/SAK plus 10	3,0	12,8	34,2	105	140	100	15	12

<sup>1)</sup> Permissible loads without influence of spacing and edge distance.

<sup>2)</sup> Load figures include the resistances' partial safety factors as per ETA assessment and a partial safety factor on the action of  $v_F = 1,4$

$h_{min}$ ,  $S_{min}$  and  $C_{min}$  must be observed.