

## The installation-friendly fixing in non-cracked concrete



Ladders



Collision protection

### VERSIONS

- zinc-plated steel

### BUILDING MATERIALS

#### Approved for:

- Concrete C20/25 to C50/60, non-cracked

#### Also suitable for:

- Concrete C12/15
- Natural stone with dense structure

### APPROVALS



### ADVANTAGES

- The two clips increase the expansion range and reduce the torque slippage. This allows for a fast and simple installation.
- The drive-in pin protects the thread from damage, and thus ensures a faster installation and dismantling of the fixture.
- The short version EXA K\*) can be used in thinner components due to the low anchorage depth.
- Also available as internal threaded version EXA IG\*).

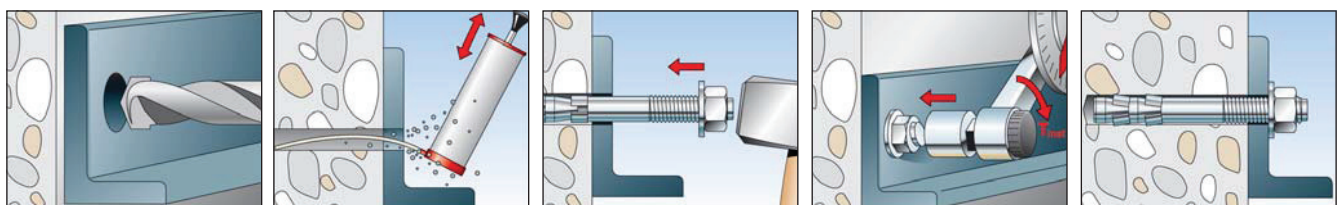
### APPLICATIONS

- Steel constructions
- Guard rails
- Consoles
- Ladders
- Cable conduits
- Machines
- Staircases
- Gates
- Façades

### FUNCTIONING

- The EXA is suitable for pre-positioned and push-through installation.
- Prior to installation, place the hexagon nut in the optimal position (the drive-in pin projects by approx. 3 mm out of the hexagon nut).
- When applying the torque, the cone bolt is pulled into the expansion clips and expands these against the drill hole wall.
- In the case of series installation, we recommend using the FABS bolt anchor setting tool.

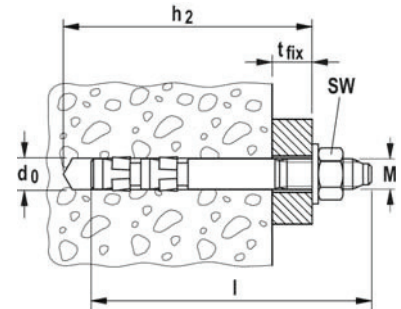
\*) not covered by technical approval



## TECHNICAL DATA



Bolt anchor EXA

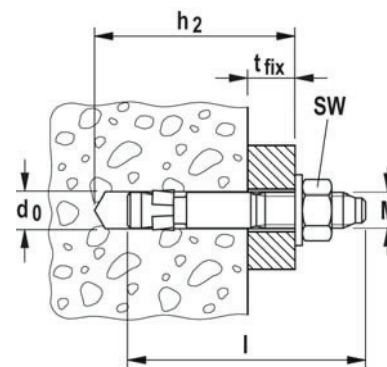


	zinc-plated steel	Approval	Drill hole diameter	Min. drill-hole depth for through fixings	Anchor length	Max. fixture thickness	Thread	Width across nut	Sales unit
	Art.-No.	ETA	d <sub>0</sub> [mm]	h <sub>2</sub> [mm]	l [mm]	t <sub>fix</sub> [mm]	Ø x length [mm]	○ SW [mm]	[pcs]
Item	gvz								
EXA 6/5	097729	—	6	50	50	5	M 6 x 17	10	100
EXA 6/10	097730	—	6	70	70	10	M 6 x 17	10	100
EXA 6/40	097731	—	6	100	100	40	M 6 x 17	10	100
EXA 8/5	097732	—	8	60	60	5	M 8 x 22	13	50
EXA 8/15	097733	■	8	80	85	15	M 8 x 22	13	50
EXA 8/28	097734	■	8	95	98	28	M 8 x 22	13	50
EXA 8/55	097735	■	8	120	125	55	M 8 x 22	13	50
EXA 8/100	097736	■	8	165	170	100	M 8 x 22	13	50
EXA 10/5	097737	—	10	65	70	5	M 10 x 28	17	50
EXA 10/15	097738	■	10	85	92	15	M 10 x 28	17	50
EXA 10/45	097739	■	10	115	122	45	M 10 x 28	17	50
EXA 10/90	097740	■	10	160	167	90	M 10 x 28	17	50
EXA 10/140	097741	■	10	210	217	140	M 10 x 28	17	25
EXA 10/160	097937	■	10	230	237	160	M 10 x 28	17	25
EXA 12/5	097742	—	12	75	76	5	M 12 x 30	19	25
EXA 12/15	097743	■	12	105	112	15	M 12 x 33	19	25
EXA 12/35	097744	■	12	125	132	35	M 12 x 33	19	25
EXA 12/55	097745	■	12	145	152	55	M 12 x 33	19	25
EXA 12/85	097746	■	12	175	182	85	M 12 x 33	19	25
EXA 12/105	097747	■	12	195	202	105	M 12 x 33	19	25
EXA 16/10	097751	—	16	100	110	10	M 16 x 44	24	20
EXA 16/30	097752	■	16	140	153	30	M 16 x 44	24	10
EXA 16/75	097753	■	16	185	198	75	M 16 x 44	24	20
EXA 20/10	097756	—	20	110	127	10	M 20 x 60	30	10
EXA 20/25	097757	■	20	155	172	25	M 20 x 60	30	10
EXA 20/80	097758	■	20	210	227	80	M 20 x 60	30	10
EXA 20/220	512253	■	20	350	367	220	M 20 x 60	30	10
EXA 24/40	512254	—	24	230	253	40	M 24 x 70	36	10

## TECHNICAL DATA



EXA-K Bolt anchor, short



	zinc-plated steel, short version		Drill hole diameter	Min. drill-hole depth for through fixings	Anchor length	Max. fixture thickness	Thread	Width across nut	Sales unit
	Art.-No.		$d_0$ [mm]	$h_2$ [mm]	$l$ [mm]	$t_{fix}$ [mm]	$\emptyset \times$ length [mm]	$\bigcirc$ SW [mm]	[pcs]
Item	gvz								
EXA M 8 K	512256		8	50	52	5	M 8 x 22	11	100
EXA M 10 K	512257		10	55	58	5	M 10 x 28	17	50

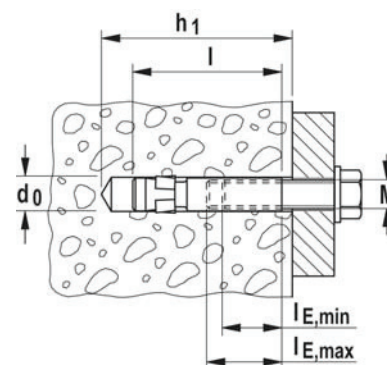
## TECHNICAL DATA



Express Anchor EXA-IG M



Express Anchor EXA-IG M



	zinc-plated steel	stainless steel	Drill diameter	Min. drill-hole depth for pre-positioned installation	Total length	Min. bolt penetration	Max. bolt penetration	Sales unit	
	Art.-No.	Art.-No.	$d_0$ [mm]	$h_1$ [mm]	$l$ [mm]	$l_{E,min}$ [mm]	$l_{E,max}$ [mm]	[pcs]	
Item	gvz	A4							
EXA-IG M6	512258	512263	8	60	48	6	15	100	
EXA-IG M8	512259	512264	10	60	50	8	20	100	
EXA-IG M10	512260	512265	12	65	53	10	25	50	
EXA-IG M12	512262	512266	16	95	85	12	30	25	

## ACCESSORIES



fischer Anchor bolt setting tool FABS

Item	Art.-No.	Fits anchor	Sales unit [pcs]
FABS	077937	FAZ II, FBN II, EXA for diameter from M6 - M12	1

## LOADS

### Express anchor EXA

Highest permissible loads for a single anchor<sup>1)</sup> in concrete C20/25<sup>4)</sup>

For the design the complete approval ETA - 05/0185 has to be considered.

Type	Effective anchorage depth $h_{ef}$ [mm]	Minimum member thickness $h_{min}$ [mm]	Installation torque $T_{inst}$ [Nm]	Non-cracked concrete			
				Permissible tensile load $N_{perm}^{3)}$ [kN]	Permissible shear load $V_{perm}^{3)}$ [kN]	Min. spacing $s_{min}^{2)}$ [mm]	Min. edge distance $c_{min}^{2)}$ [mm]
EXA M8	47	100	14,0	4,1	6,2	45	40
EXA M10	49	100	30,0	6,3	8,2	50	65
EXA M12	67	135	60,0	9,9	11,0	75	90
EXA M16	85	170	80,0	16,7	27,8	85	90
EXA M20	103	205	140,0	24,8	40,9	105	100

<sup>1)</sup> The partial safety factors for material resistance as regulated in the approval as well as a partial safety factor for load actions of  $\gamma_L = 1,4$  are considered. As a single anchor counts e.g. an anchor with a spacing  $s \geq 3 \times h_{ef}$  and an edge distance  $c \geq 1,5 \times h_{ef}$ . Accurate data see approval.

<sup>2)</sup> Minimum possible axial spacings resp. edge distance while reducing the permissible load.

<sup>3)</sup> For combinations of tensile loads, shear loads, bending moments as well as reduced edge distances or spacings (anchor groups) see approval.

<sup>4)</sup> For higher concrete strength classes up to C50/60 higher permissible loads may be possible.

## LOADS

### Express anchor EXA-K

Highest recommended loads<sup>1)</sup> for a single anchor in concrete C20/25.

Type	Effective anchorage depth $h_{ef}$ [mm]	Min. member thickness $h_{min}$ [mm]	Installation torque $T_{inst}$ [Nm]	Non-cracked concrete	
				Recommended tensile load $N_{rec}^{3)}$ [kN]	Recommended shear load $V_{rec}^{3)}$ [kN]
EXA M6 K	24	70	5,0	1,5	1,6
EXA M8 K	28	90	15,0	2,1	2,8
EXA M10 K	30	100	25,0	3,0	4,0

<sup>1)</sup> Required safety factors are considered.

<sup>3)</sup> For combinations of tensile loads and shear loads the given loads have to be reduced.

## LOADS

### Express anchor EXA-IG

Highest recommended loads<sup>1)</sup> for a single anchor in concrete C20/25.

Type	Effective anchorage depth $h_{ef}$ [mm]	Min. member thickness $h_{min}$ [mm]	Installation torque $T_{inst}$ [Nm]	Non-cracked concrete	
				Recommended tensile load $N_{rec}^{3)}$ [kN]	Recommended shear load $V_{rec}^{3)}$ [kN]
EXA-IG M6	45	100	8,0	3,4	1,5
EXA-IG M8	45	110	15,0	4,0	2,6
EXA-IG M10	45	120	25,0	7,4	3,9
EXA-IG M12	75	150	50,0	12,3	6,3

<sup>1)</sup> Required safety factors are considered.

<sup>3)</sup> For combinations of tensile loads and shear loads the given loads have to be reduced.

## LOADS

### Express anchor EXA-IG A4

Highest recommended loads<sup>1)</sup> for a single anchor in concrete C20/25.

Type	Effective anchorage depth $h_{ef}$ [mm]	Min. member thickness $h_{min}$ [mm]	Installation torque $T_{inst}$ [Nm]	Non-cracked concrete	
				Recommended tensile load $N_{rec}^{3)}$ [kN]	Recommended shear load $V_{rec}^{3)}$ [kN]
EXA-IG M6 A4	45	100	8,0	2,7	1,5
EXA-IG M8 A4	45	110	15,0	4,0	2,6
EXA-IG M10 A4	45	120	25,0	6,6	3,9
EXA-IG M12 A4	75	150	50,0	12,3	6,3

<sup>1)</sup> Required safety factors are considered.

<sup>3)</sup> For combinations of tensile loads and shear loads the given loads have to be reduced.