Hollow Core Anchor Easy

Steel, zinc plated

Range of loading: **0,7 kN - 4,3 kN**
Concrete quality: **≥ C45/55 respectively B55;**
pre-stressed hollow concrete slabs

G 4070019
M8-M12

R30-R120

Description
The Hollow-Core Anchor Easy is a one -piece unit, specially designed for anchoring in pre-stressed hollow concrete slabs. Tightening the screw or nut pulls the expansion cone inside the anchor sleeve which keys into in the cavity or provides strong expansion in solid concrete. The approval Z-21.1-1785 allows the anchor to be installed even if the drill hole does not hit the cavity.

Applications
Suspension of ventilation, sprinkler system, false ceilings, brackets with threaded studs or screws, ducts, anchoring prefabricated panels on hollow concrete floors/ceilings.

Advantages:
- Simple and flexible to use
- Even approved if the drill hole does not hit the cavity
- To be used with standard screws or threaded rods

Hollow Core Anchor Easy

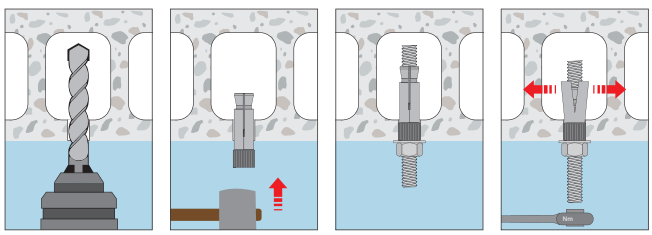
- Steel, zinc plated
- For pre-stressed hollow concrete slabs

Description	Ref. No.	Drill hole Ø mm	Thread Ø mm	Package content pieces	Weight per package kg
Easy M 6	51005101	10	M 6	50	0,52
Easy M 8	51100101	12	M 8	50	0,72
Easy M 10	51200101	16	M 10	50	1,66
Easy M 12	51300101	18	M 12	25	1,08

Note on the used screws:
- The screws must have a sufficiently long thread in order to expand the anchor safely.
- Recommended screws to be used DIN 933 / DIN EN ISO 898
- The required screw length is determined by the „minimum length of screw" (see table page 53) + the thickness of the fixture (t_{fix})
- screws M6 at least have the strength 8.8
  M8 - M12 at least 5.8

Note to the threaded stud and nuts used:
- The minimum required stud length is determined by the „minimum length of stud" (see table page 53) + the thickness of the fixture (t_{fix}), if exist
- M6 threaded stud must have at least the strength of 8.8, M6 nut must have strength class 8
- M8-M12 threaded stud must have at least the strength of 5.8, M8-M12 nut must have strength class 5

Installation



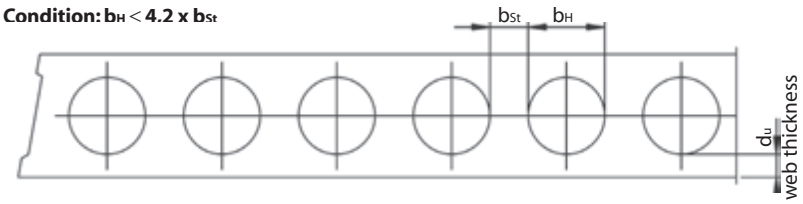
Extract from Permissible Service Conditions of Z-21.1-1785

Approved loads for single anchor without influence of spacing and edge distance.
Total safety factor as per ETAG 001 included (γ_M and γ_F). Load capacities under fire exposure see page 167.

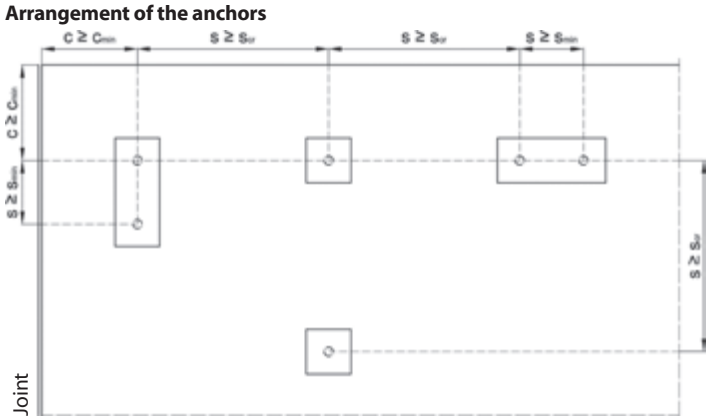
Loads and performance data	Easy			M 6				M 8				M 10				M 12			
				Precast pre-stressed hollow concrete slabs ≥ C45/55															
Flange thickness	d_u	[mm]	≥	25	30	40	50	25	30	40	50	25	30	40	50	25	30	40	50
Mean ultimate loads, tension	C45/55 N_{um}	[kN]		6,6	8,6	8,6	8,6	7,0	9,3	11,7	11,7	9,1	12,0	18,4	18,4	9,4	12,3	19,0	22,7
Mean ultimate loads, shear	C45/55 V_{um}	[kN]		6,9	8,1	8,1	8,1	7,3	8,7	9,2	9,2	8,0	9,4	12,2	14,5	8,3	9,8	12,7	15,5
Single anchor																			
Approved loads[1] (for $c \geq c_{cr}$)	$F^{1)}$	[kN]		0,7	0,9	2,0	2,9	0,7	0,9	2,0	3,6	0,9	1,2	3,0	3,6	1,0	1,2	3,0	4,3
Edge distance	c_{cr}	[mm]		150				150				150				150			
Approved loads[1] (for c_{min})	$F^{1)}$	[kN]		0,35	0,8	1,8	2,4	0,35	0,8	1,8	3,0	0,8	1,0	2,7	3,0	0,8	1,0	2,7	3,6
Minimum edge distance	c_{min}	[mm]		100				100				100				100			
Spacing	s_{cr}	[mm]		300				300				300				300			
Pair of anchors[2]																			
Approved loads[1] (for $c \geq c_{cr}$)	$F^{1)}$	[kN]		0,7	1,4	2,6	3,9	0,7	1,4	2,6	4,8	1,1	2,0	4,8	4,8	1,2	2,0	4,8	5,7
Minimum spacing	s_{min}	[mm]		70	80	100	100	70	80	100	100	70	80	100	100	70	80	100	100
Edge distance	c_{cr}	[mm]		150				150				150				150			
Approved loads[1] (for c_{min})	$F^{1)}$	[kN]		0,35	1,25	2,35	3,2	0,35	1,25	2,35	4,0	0,9	1,8	4,3	4,3	1,0	1,8	4,3	4,8
Minimum spacing	s_{min}	[mm]		70	80	100	100	70	80	100	100	70	80	100	100	70	80	100	100
Minimum edge distance	c_{min}	[mm]		100				100				100				100			
Approved bending moments																			
Stud / Screw, steel 5.8		[Nm]		-				10,7				21,4				37,4			
Stud / Screw, steel 8.8		[Nm]		4,4				17,1				34,2				59,8			
Installation parameters																			
Length of sleeve (without cone)	L	[mm]		30				35				40				45			
Minimum length of screw	min l_s	[mm]		42 + t_{fix}				47 + t_{fix}				55 + t_{fix}				61 + t_{fix}			
Minimum length of stud	min l_b	[mm]		47 + t_{fix}				53 + t_{fix}				63 + t_{fix}				71 + t_{fix}			
Minimum strength of stud / screw				8.8				5.8				5.8				5.8			
Drill hole diameter	d_o	[mm]		10				12				16				18			
Clearance hole in the fixture	d_f	[mm]		7				9				12				14			
Depth of drill hole	h_0	[mm]		50				55				60				70			
Installation torque	T_{inst}	[Nm]		10				20				30				40			

[1] For edge distance $c_{min} < c \leq c_{cr}$ can be determined by linear interpolation.
[2] Approved loads valid for double anchorage. Recommended load of the most stressed anchor may not exceed the recommended load of a single anchor. On double anchorages with spacing $s_{min} < s < s_{cr}$ the recommended load my be determined by linear interpolation, assuming the limiting value $s = s_{cr}$ for the double anchorage exposed to tension is twice the recommended load of a single anchor.

Condition: $b_H < 4.2 \times b_{St}$



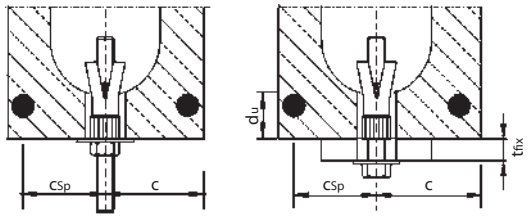
Arrangement of the anchors



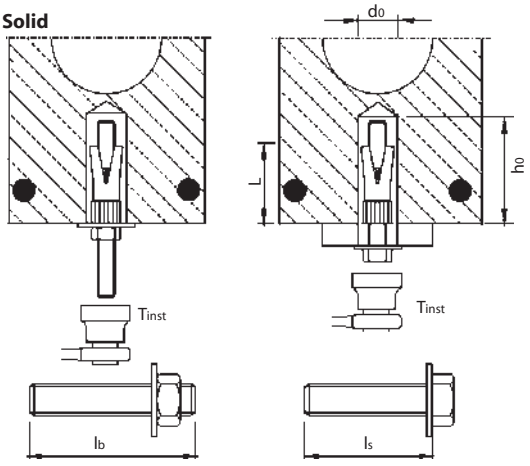
Installation with a threaded stud

Installation with a screw

Hollow



Solid



t_{fix} = Fixture thickness
d_u = Flange thickness
b_H = Width of hollow
b_{St} = Web width
c_{sp} = Spacing to tension wire
c = Edge distance