

# Hollow Core Anchor Easy

Steel, zinc plated



**Range of loading:**  
**Concrete quality:**

**0,7 kN–4,3 kN**  
**≥ C45/55 bzw. B55;**  
**pre-stressed hollow concrete slabs**



## Description

The Hollow Core Anchor Easy is a one-piece unit, specially designed for anchoring in pre-stressed hollow concrete slabs.

When the bolt or nut is tightened, the cone is released from the anchor sleeve and pulled into it. Thereby the anchor expands in the cavity, creating a form fit or anchors itself in the solid material of the pre-stressed hollow concrete slabs. The Hollow Core Anchor Easy can be installed in accordance with the national technical approval Z-21.1-1785, both from the underside of the ceiling, as well as from above the floor. Besides the installation in pre-stressed concrete hollow slab ceilings, the use of the Hollow Core Anchor Easy in reinforced concrete hollow core slabs (e.g. Cobiax system) was tested.

## Advantages

- National technical approval for anchorages of single dowels in pre-stressed concrete hollow core slabs, both from floor as well as from the ceiling side
- Generally approved by the building authorities as multiple anchors for anchoring light suspended ceilings as well as comparable anchorages
- Approved for use in dry interiors

- Approved for use under fire exposure R30-R120
- Versatile application possibilities due to the use of commercially available screws and threaded rods (FKL ≥ 5.8, M6: FKL = 8.8)
- No drill hole cleaning for processing and assembly required

## Applications

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

## Note on screws, threaded rods or bolts, as well as nuts:

- M6: strength class 8.8
- M8 - M12: strength class ≥ 5.8
- In order to securely brace the hollow ceiling anchor, it is preferable to use bolts with full thread (e.g. ISO 4017 / DIN 933) or ensure a sufficiently long thread.
- Minimum screw and minimum bolt length, see installation data on the next page

## Hollow Core Anchor Easy



- Steel, zinc plated
- For use in pre-stressed concrete hollow slab ceilings and reinforced concrete hollow core ceilings
- Mounting possible on floor and on ceiling side

Description	Ref. No.	Drill hole Ø x Depth mm	Thread	Sleeve length (without cone) mm	Package content	Weight per package
					pieces	kg
Easy M 6	51005101	10 x 50	M 6	30	50	0,52
Easy M 8	51100101	12 x 55	M 8	35	50	0,72
Easy M 10	51200101	16 x 60	M 10	40	50	1,66
Easy M 12	51300101	18 x 70	M 12	45	25	1,08



**Extract from Permissible Service Conditions of Z-21.1-1785 for use in precast pre-stressed hollow core slabs**

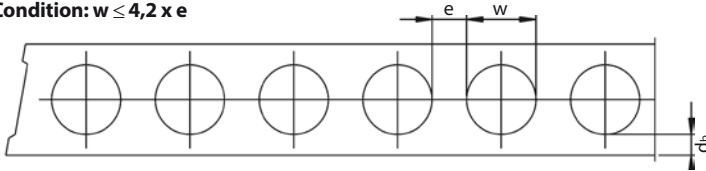
Approved loads for single anchor without influence of spacing and edge distance. Total safety factor included ( $\gamma_M$  and  $\gamma_P$ ). Load capacities under fire exposure see page 197.

Loads and performance data	Easy	M 6				M 8				M 10				M 12				
Precast pre-stressed concrete hollow slabs $\geq$ C45/55																		
Flange thickness	$d_b$	[mm]	$\geq$ 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
<b>Single anchor</b>																		
Approved loads <sup>1)</sup> (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 <sup>1)</sup> (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			
<b>Pair of anchors<sup>2)</sup></b>																		
Approved loads <sup>1)</sup> (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 <sup>1)</sup> (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			
<b>Approved bending moments</b>																		
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			
<b>Installation parameters</b>																		
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	$h_o$	[mm]	50				55				60				70			
Installation torque	$T_{inst}$	[Nm]	10				20				30				40			

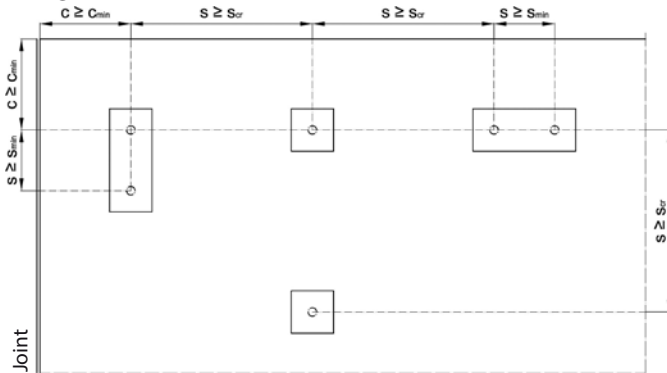
<sup>1)</sup>For edge distance  $c_{min} < c < c_{cr}$  can be determined by linear interpolation.

<sup>2)</sup>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 may 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.

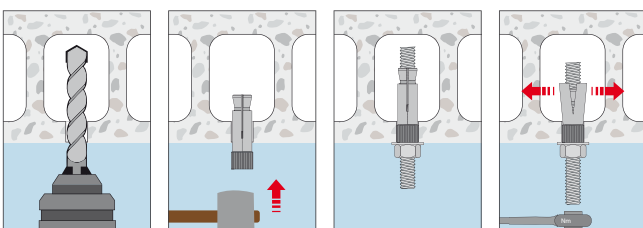
Condition:  $w \leq 4,2 \times e$



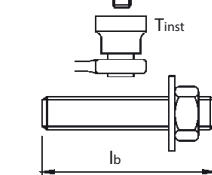
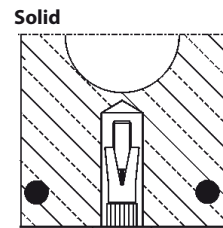
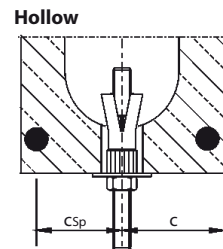
Arrangement of the anchors



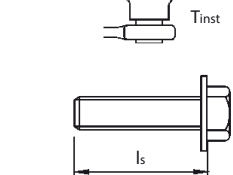
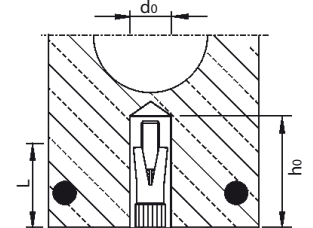
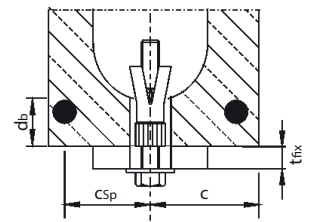
Installation



Installation with a threaded stud



Installation with a screw



$t_{fix}$  = Fixture thickness     $e$  = Web width  
 $d_b$  = Flange thickness     $c_{sp}$  = Spacing to tension wire  
 $w$  = Width of hollow     $c$  = Edge distance

Mechanical Heavy Duty Anchors