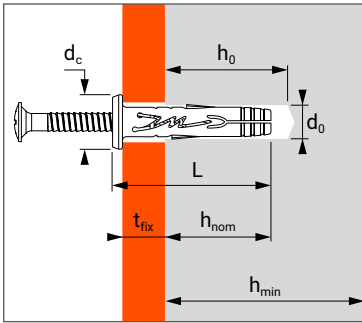




Hammer-set anchor for light duty fixings for concrete and all materials types



CHARACTERISTICS



APPLICATION

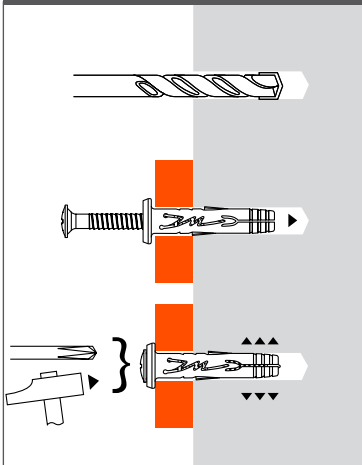
- Drywall track
- Battens and metal frames
- Electrical installations
- Insulation supports
- Signage
- Skirting boards

TECHNICAL DATA

RANGE	Min. embed depth	Max. thick of part to be fixed	Drilling depth through part	Drilling depth in base material	Drilling diameter	Min. thick of base material	Cylinder head Ø	Total anchor length	Type of nail	Code	
	(mm) h _{nom}	(mm) t _{fix} ⁽¹⁾	(mm) L+8	(mm) h ₀	(mm) d ₀	(mm) h _{min}	(mm) d _c	(mm) L		Zinc coated steel nail	Stainless steel A2 nail
TYPE P											
5X25/5 P	20	5	35	30	5	100	9	27	PZ2	050116	-
5X35/15 P		15	45					37		050117	-
6X30/5 P		5	40					35		6	100
6X40/12 P	12	47	39	050119	-						
6X50/25 P	25	60	52	050121	060105						
6X65/40 P	40	75	67	050122	060106						
6X30/5 M7X150	30	-	-	40	6	100	11		32		
8X40/10 P	30	10	50	40	8	100	13	42	PZ2	060090	060107
8X40/10 P20		10	50					42		055378	-
8X60/30 P		30	70					62		060091	060108
8X90/60 P		60	100					92		060092	060109
8X110/80 P		80	120					112		060093	-
8X130/100 P		100	140					132		060094	-
8X160/125 P		125	166					158		057601	-
8X180/145 P		145	186					178		057602	-
8X200/165 P	165	206	198	057603	-						
TYPE V											
6X40/12 V	25	12	47	35	6	100	10	39	PZ2	050129	-
6X50/25 V		25	60					52		050131	-
6X65/40 V		40	75					67		050132	-
8X60/30 V	30	30	70	40	8	100	11,5	62	PZ3	060095	-
8X90/60 V		60	100					92		060096	-
8X110/80 V		80	120					112		060097	-
8X130/100 V		100	140					132		060098	-

⁽¹⁾ In masonry, the thickness of the part to be fixed may fluctuate, to ± 5 mm for Ø5 and Ø6 mm and to ± 10 mm for Ø8 mm, to allow a good contact between collar and the part to be fixed.

INSTALLATION



WARNING:

For anchor sizes
8X160/125P, 8X180/145P &
8X200/165P,
setting only by screwing

MINIMUM THICKNESS OF CONCRETE, CHARACTERISTIC DISTANCES FOR SPACING, EDGE

SIZE		Ø5	Ø6	Ø8	
Embedment depth	h _{nom} [mm]	20	25	30	
Minimum thickness of base material	h _{min} [mm]	100	100	100	
Characteristic edge and spacing distance for full anchor capacity	NON CRACKED CONCRETE	C _{cr} ≥ [mm]	100	100	100
		S _{cr} ≥ [mm]	100	100	100
	MASONRIES	C _{cr} ≥ [mm]	100	100	100
		S _{cr} ≥ [mm]	100	100	100



ZINC COATED & STAINLESS STEEL A2

HIT M

CHARACTERISTIC RESISTANCES [kN]

Characteristic resistances are shown as informative, and have to be used by application of safety factors.

TENSILE				
NON-CRACKED CONCRETE - C20/25				
SIZE	Ø5	Ø6	Ø8	
h_{nom} [mm]	20	25	30	
N_{Rk} [kN]	0,60	0,90	1,20	
MASONRIES				
SIZE	Ø5	Ø6	Ø8	
h_{nom} [mm]	20	25	30	
Solid concrete blocks B120 (fb = 13,5 N/mm ²)				
N_{Rk} [kN]	0,30	0,40	0,50	
Clay bricks (fb = 55 N/mm ²)				
N_{Rk} [kN]	0,20	0,80	1,20	
Hollow concrete blocks B40 not rendered (fb = 6,5 N/mm ²)				
N_{Rk} [kN]	0,20	0,30	0,60	
Hollow concrete blocks B40 rendered (fb = 6,5 N/mm ²)				
N_{Rk} [kN]	0,95	1,70	2,25	
Hollow clay bricks Eco-30 not rendered (fb = 4,5 N/mm ²)				
N_{Rk} [kN]	0,30	0,40	0,50	
Hollow clay bricks Eco-30 rendered (fb = 4,5 N/mm ²)				
N_{Rk} [kN]	0,95	1,30	1,70	
Engineering clay bricks not rendered (fb = 14,5 N/mm ²)				
N_{Rk} [kN]	0,55	0,75	0,95	
Engineering clay bricks rendered (fb = 14,5 N/mm ²)				
N_{Rk} [kN]	0,95	1,30	1,70	
Aerated concrete (Mvn = 500 kg/m ³)				
N_{Rk} [kN]	0,15	0,20	0,30	
Plasterboard BA13				
N_{Rk} [kN]	0,15	0,15	0,18	
Plasterboard BA10 + polystyrene				
N_{Rk} [kN]	0,18	0,18	0,20	

SHEAR						
NON-CRACKED CONCRETE - C20/25						
SIZE	5X25/5 5X25/5	6X30/5 to 6X50/25	6X65/40	8X40/10 to 8X90/60	8X110/80 to 8X200/165	
h_{nom} [mm]	20	25	25	30	30	
V_{Rk} [kN]	1,90	2,80	2,25	4,30	3,55	
MASONRIES						
SIZE	5X25/5 5X25/5	6X30/5 to 6X50/25	6X65/40	8X40/10 to 8X90/60	8X110/80 to 8X200/165	
h_{nom} [mm]	20	25	25	30	30	
Solid concrete blocks B120 (fb = 13,5 N/mm ²)						
V_{Rk} [kN]	1,90	2,80	2,25	4,30	3,55	
Clay bricks (fb = 55 N/mm ²)						
V_{Rk} [kN]	1,90	2,80	2,25	4,30	3,55	
Hollow concrete blocks B40 not rendered (fb = 6,5 N/mm ²)						
V_{Rk} [kN]	1,90	2,25	2,25	2,80	2,80	
Hollow concrete blocks B40 rendered (fb = 6,5 N/mm ²)						
V_{Rk} [kN]	1,90	2,25	2,25	2,80	2,80	
Hollow clay bricks Eco-30 not rendered (fb = 4,5 N/mm ²)						
V_{Rk} [kN]	0,55	0,75	0,75	0,90	0,90	
Hollow clay bricks Eco-30 rendered (fb = 4,5 N/mm ²)						
V_{Rk} [kN]	0,90	1,10	1,30	1,70	1,70	
Engineering clay bricks not rendered (fb = 14,5 N/mm ²)						
V_{Rk} [kN]	1,90	2,25	2,25	2,80	2,80	
Engineering clay bricks rendered (fb = 14,5 N/mm ²)						
V_{Rk} [kN]	1,90	2,80	2,25	4,30	3,55	
Aerated concrete (Mvn = 500 kg/m ³)						
V_{Rk} [kN]	0,15	0,20	0,20	0,30	0,30	
Plasterboard BA13						
V_{Rk} [kN]	0,15	0,15	0,15	0,18	0,18	
Plasterboard BA10 + polystyrene						
V_{Rk} [kN]	0,18	0,18	0,18	0,20	0,20	

RECOMMENDED LOADS OF ONE ANCHOR WITHOUT INFLUENCE OF SPACING & CONCRETE EDGE [kN]

Recommended values are determined from performances given in the ETA, and are guaranteed for spacing $\geq S_{cr}$ and edge distance $\geq C_{cr}$.

TENSILE				
NON-CRACKED CONCRETE - C20/25				
SIZE	Ø5	Ø6	Ø8	
h_{nom} [mm]	20	25	30	
N_{Rec} [kN]	0,21	0,32	0,42	
MASONRIES				
SIZE	Ø5	Ø6	Ø8	
h_{nom} [mm]	20	25	30	
Solid concrete blocks B120 (fb = 13,5 N/mm ²)				
N_{Rec} [kN]	0,11	0,14	0,18	
Clay bricks (fb = 55 N/mm ²)				
N_{Rec} [kN]	0,07	0,28	0,43	
Hollow concrete blocks B40 not rendered (fb = 6,5 N/mm ²)				
N_{Rec} [kN]	0,07	0,11	0,21	
Hollow concrete blocks B40 rendered (fb = 6,5 N/mm ²)				
N_{Rec} [kN]	0,25	0,45	0,60	
Hollow clay bricks Eco-30 not rendered (fb = 4,5 N/mm ²)				
N_{Rec} [kN]	0,10	0,14	0,17	
Hollow clay bricks Eco-30 rendered (fb = 4,5 N/mm ²)				
N_{Rec} [kN]	0,25	0,35	0,45	
Engineering clay bricks not rendered (fb = 14,5 N/mm ²)				
N_{Rec} [kN]	0,15	0,2	0,25	
Engineering clay bricks rendered (fb = 14,5 N/mm ²)				
N_{Rec} [kN]	0,25	0,35	0,45	
Aerated concrete (Mvn = 500 kg/m ³)				
N_{Rec} [kN]	0,04	0,06	0,08	
Plasterboard BA13				
N_{Rec} [kN]	0,04	0,04	0,05	
Plasterboard BA10 + polystyrene				
N_{Rec} [kN]	0,05	0,05	0,06	

$$N_{Rec} = N_{Rd} / \gamma_F; \gamma_F = 1,4$$

SHEAR						
NON-CRACKED CONCRETE - C20/25						
SIZE	5X25/5 5X25/5	6X30/5 to 6X50/25	6X65/40	8X40/10 to 8X90/60	8X110/80 to 8X200/165	
h_{nom} [mm]	20	25	25	30	30	
V_{Rec} [kN]	0,50	0,75	0,60	1,15	0,95	
MASONRIES						
SIZE	5X25/5 5X25/5	6X30/5 to 6X50/25	6X65/40	8X40/10 to 8X90/60	8X110/80 to 8X200/165	
h_{nom} [mm]	20	25	25	30	30	
Solid concrete blocks B120 (fb = 13,5 N/mm ²)						
V_{Rec} [kN]	0,50	0,75	0,60	1,15	0,95	
Clay bricks (fb = 55 N/mm ²)						
V_{Rec} [kN]	0,50	0,75	0,60	0,75	0,95	
Hollow concrete blocks B40 not rendered (fb = 6,5 N/mm ²)						
V_{Rec} [kN]	0,50	0,60	0,60	0,45	0,75	
Hollow concrete blocks B40 rendered (fb = 6,5 N/mm ²)						
V_{Rec} [kN]	0,50	0,60	0,60	0,95	0,75	
Hollow clay bricks Eco-30 not rendered (fb = 4,5 N/mm ²)						
V_{Rec} [kN]	0,15	0,20	0,20	0,25	0,25	
Hollow clay bricks Eco-30 rendered (fb = 4,5 N/mm ²)						
V_{Rec} [kN]	0,25	0,30	0,35	0,45	0,45	
Engineering clay bricks not rendered (fb = 14,5 N/mm ²)						
V_{Rec} [kN]	0,50	0,60	0,60	0,23	0,75	
Engineering clay bricks rendered (fb = 14,5 N/mm ²)						
V_{Rec} [kN]	0,50	0,75	0,60	0,23	0,95	
Aerated concrete (Mvn = 500 kg/m ³)						
V_{Rec} [kN]	0,04	0,06	0,06	0,15	0,08	
Plasterboard BA13						
V_{Rec} [kN]	0,04	0,04	0,04	0,09	0,05	
Plasterboard BA10 + polystyrene						
V_{Rec} [kN]	0,05	0,05	0,05	0,19	0,06	

$$V_{Rec} = V_{Rd} / \gamma_F; \gamma_F = 1,4$$



Design resistances for static loads are guaranteed for spacing $\geq S_{cr}$ and edge distance $\geq C_{cr}$.

For project with reduced spacing and edge distance, we recommend to use SPIT i-Expert software to design your project.

DESIGN RESISTANCE FOR STATIC LOADS IN NON-CRACKED CONCRETE [kN]

TENSILE

NON-CRACKED CONCRETE - C20/25

SIZE	Ø5	Ø6	Ø8
h_{nom} [mm]	20	25	30
N_{Rd} [kN]	0,30	0,45	0,60

Distances S_{cr} and C_{cr} must be fulfilled

$$N_{Rd} = N_{Rk} / \gamma_M$$

$$\gamma_M = 2,0; \gamma_F = 1,4$$

SHEAR

NON-CRACKED CONCRETE - C20/25

SIZE	5X25/5 5X25/5	6X30/5 to 6X50/25	6X65/40	8X40/10 to 8X90/60	8X110/80 to 8X200/165
h_{nom} [mm]	20	25	25	30	30
V_{Rd} [kN]	0,70	1,05	0,84	1,61	1,33

$$V_{Rd} = V_{Rk} / \gamma_M$$

DESIGN RESISTANCE FOR STATIC LOADS IN MASONRIES [kN]

TENSILE

MASONRIES

SIZE	Ø5	Ø6	Ø8
h_{nom} [mm]	20	25	30
Solid concrete blocks B120 (fb = 13,5 N/mm ²)			
N_{Rd} [kN]	0,15	0,20	0,25
Clay bricks (fb = 55 N/mm ²)			
N_{Rd} [kN]	0,10	0,40	0,60
Hollow concrete blocks B40 not rendered (fb = 6,5 N/mm ²)			
N_{Rd} [kN]	0,10	0,15	0,30
Hollow concrete blocks B40 rendered (fb = 6,5 N/mm ²)*			
N_{Rd} [kN]	0,35	0,63	0,84
Hollow clay bricks Eco-30 not rendered (fb = 4,5 N/mm ²)			
N_{Rd} [kN]	0,15	0,20	0,25
Hollow clay bricks Eco-30 rendered (fb = 4,5 N/mm ²)*			
N_{Rd} [kN]	0,35	0,49	0,63
Engineering clay bricks not rendered (fb = 14,5 N/mm ²)*			
N_{Rd} [kN]	0,21	0,28	0,35
Engineering clay bricks rendered (fb = 14,5 N/mm ²)*			
N_{Rd} [kN]	0,35	0,49	0,63
Aerated concrete (Mvn = 500 kg/m ³)*			
N_{Rd} [kN]	0,06	0,08	0,12
Plasterboard BA13*			
N_{Rd} [kN]	0,06	0,06	0,07
Plasterboard BA10 + polystyrene*			
N_{Rd} [kN]	0,07	0,07	0,08

Distances S_{cr} and C_{cr} must be fulfilled

$$N_{Rd} = N_{Rk} / \gamma_M$$

$$\gamma_M = 2,0$$

* Base materials not submitted to ETA

SHEAR

MASONRIES

SIZE	5X25/5 5X25/5	6X30/5 to 6X50/25	6X65/40	8X40/10 to 8X90/60	8X110/80 to 8X200/165
h_{nom} [mm]	20	25	25	30	30
Solid concrete blocks B120 (fb = 13,5 N/mm ²)					
V_{Rd} [kN]	0,70	1,05	0,84	1,61	1,33
Clay bricks (fb = 55 N/mm ²)					
V_{Rd} [kN]	0,70	1,05	0,84	1,05	1,33
Hollow concrete blocks B40 not rendered (fb = 6,5 N/mm ²)					
V_{Rd} [kN]	0,70	0,84	0,84	0,63	1,05
Hollow concrete blocks B40 rendered (fb = 6,5 N/mm ²)*					
V_{Rd} [kN]	0,70	0,84	0,84	1,33	1,05
Hollow clay bricks Eco-30 not rendered (fb = 4,5 N/mm ²)					
V_{Rd} [kN]	0,21	0,28	0,28	0,35	0,35
Hollow clay bricks Eco-30 rendered (fb = 4,5 N/mm ²)*					
V_{Rd} [kN]	0,35	0,42	0,49	0,63	0,63
Engineering clay bricks not rendered (fb = 14,5 N/mm ²)*					
V_{Rd} [kN]	0,70	0,84	0,84	0,32	1,05
Engineering clay bricks rendered (fb = 14,5 N/mm ²)*					
V_{Rd} [kN]	0,70	1,05	0,84	0,32	1,33
Aerated concrete (Mvn = 500 kg/m ³)*					
V_{Rd} [kN]	0,06	0,08	0,08	0,21	0,12
Plasterboard BA13*					
V_{Rd} [kN]	0,06	0,06	0,06	0,13	0,07
Plasterboard BA10 + polystyrene*					
V_{Rd} [kN]	0,07	0,07	0,07	0,27	0,08

$$V_{Rd} = V_{Rk} / \gamma_M$$