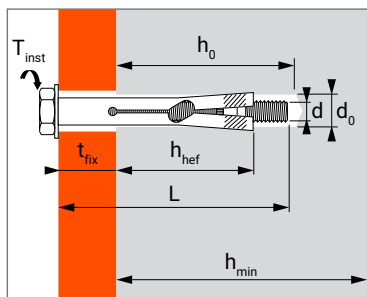




Sleeve type expansion anchor for use in concrete, solid masonries and beam slab



APPLICATION

- Wall plates
- Porches
- Signs
- Angle rion
- hand rails

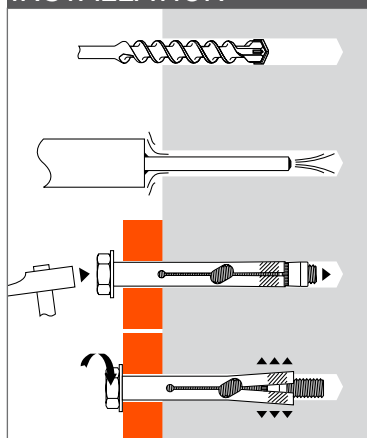
TECHNICAL DATA

RANGE	Mini. anchor depth h_{ef} (mm)	Max. thick. of part to be fixed t_{fix} (mm)	Thread diameter d (mm)	Drilling depth h_0 (mm)	Drilling diameter d_0 (mm)	Min. thick. of base material h_{min} (mm)	Total screw length L (mm)	Tighten torque T_{inst} (Nm)	Code
M6X45/8 HB	25	8					45		050252
M6X70/30 HB	30	30	6	45	8	55	70	9	050253
M8X55/10 HB	28	8	8	50	10	65	55	20	050255
M8X80/35 HB	34	35	8	50	10	65	80		050256
M10X65/10 HB		12					65		050258
M10X75/20 HB	44	18	10	65	12	80	75	40	050259
M10X105/45 HB		46					105		050260
M12X110/50 HB	44	49	12	65	16	95	110	70	050262

ANCHOR MECHANICAL PROPERTIES

SIZE		M6	M8	M10	M12
Threaded part					
f_{uk} [N/mm ²]	Min. tensile strength	600	600	600	600
f_{yk} [N/mm ²]	Yield strength	480	480	480	480
$M^{0}_{Rk,s}$ [Nm]	Characteristic bending moment	9,15	22,5	44,8	72,0
M [Nm]	Recommended bending moment	4,5	11,2	22,4	36,0
W_{el} [mm ³]	Elastic section modulus	12,7	31,2	62,3	109,2
SW [mm]	Key size	10	13	17	19

INSTALLATION



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	M6	M8	M10	M12
h_{ef} [mm]	30	34	44	46
N_{Rk} [kN]	5,7	8,1	12,9	13,7

ENGINEERING CLAY BRICK BP400

SIZE	M6	M8	M10	M12
h_{ef} [mm]	30	34	44	46
N_{Rk} [kN]	5,7	8,2	12,8	13,6

HOLLOW CONCRETE BEAM SLAB

SIZE	M12
C_{min} [mm]	50
S_{min} [mm]	125
N_{Rk} [kN]	8,6

SHEAR

NON CRACKED CONCRETE - C20/25 to C50/60

SIZE	M6	M8	M10	M12
h_{ef} [mm]	30	34	44	46
V_{Rk} [kN]	6,1	11,0	17,4	23,3

ENGINEERING CLAY BRICK BP400

SIZE	M6	M8	M10	M12
h_{ef} [mm]	30	34	44	46
V_{Rk} [kN]	6,1	11,0	17,4	23,3

HOLLOW CONCRETE BEAM SLAB

SIZE	M12
C_{min} [mm]	50
S_{min} [mm]	125
V_{Rk} [kN]	8,6



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

Recommended values are given for spacing $\geq S_{cr}$ and edge distance $\geq C_{cr}$.

TENSILE

NON CRACKED CONCRETE - C20/25

SIZE	M6	M8	M10	M12
h_{ef} [mm]	30	34	44	46
N_{Rec} [kN]	1,9	2,8	4,4	4,7

ENGINEERING CLAY BRICK BP400

SIZE	M6	M8	M10	M12
h_{ef} [mm]	30	34	44	46
N_{Rec} [kN]	2,2	2,9	5,3	5,9

HOLLOW CONCRETE BEAM SLAB

SIZE	M12
C_{min} [mm]	50 100 200
S_{min} [mm]	125 125 125
N_{Rec} [kN]	2,9 3,2 4,8

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

SHEAR

NON CRACKED CONCRETE - C20/25 to C50/60

SIZE	M6	M8	M10	M12
h_{ef} [mm]	30	34	44	46
V_{Rec} [kN]	2,7	4,9	7,8	11,3

ENGINEERING CLAY BRICK BP400

SIZE	M6	M8	M10	M12
h_{ef} [mm]	30	34	44	46
V_{Rec} [kN]	2,8	5,1	8,1	11,8

HOLLOW CONCRETE BEAM SLAB

SIZE	M12
C_{min} [mm]	50 100 200
S_{min} [mm]	125 125 125
V_{Rec} [kN]	2,9 3,2 4,8

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

Design resistances for static loads are given 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.



i-Expert Software

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

TENSILE

SIZE	M6	M8	M10	M12
h_{ef} [mm]	30	34	44	46
N_{Rd} [kN]	2,7	3,9	6,1	6,5

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

$$N_{Rd} = N_{Rk} / \gamma_{Mc}; \gamma_{Mc} = 2,1$$

SHEAR

SIZE	M6	M8	M10	M12
h_{ef} [mm]	30	34	44	46
V_{Rd} [kN]	3,8	6,9	10,9	15,8

$$V_{Rd} = V_{Rk} / \gamma_{Ms}; \gamma_{Ms} = 1,6$$

DESIGN RESISTANCE FOR STATIC LOADS IN ENGINEERING CLAY BRICK BP400 [kN]

TENSILE

SIZE	M6	M8	M10	M12
h_{ef} [mm]	30	34	44	46
N_{Rd} [kN]	3,1	4,1	7,4	8,2

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

$$N_{Rd} = N_{Rk} / \gamma_{Mc}; \gamma_{Mc} = 2,1$$

SHEAR

SIZE	M6	M8	M10	M12
h_{ef} [mm]	30	34	44	46
V_{Rd} [kN]	3,8	6,9	10,9	15,8

$$V_{Rd} = V_{Rk} / \gamma_{Ms}; \gamma_{Ms} = 1,6$$

DESIGN RESISTANCE FOR STATIC LOADS IN HOLLOW CONCRETE SLAB [kN]

TENSILE

SIZE	M12
C_{min} [mm]	50 100 200
S_{min} [mm]	125 125 125
N_{Rd} [kN]	4,1 4,5 6,7

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

$$N_{Rd} = N_{Rk} / \gamma_{Mc}; \gamma_{Mc} = 2,1$$

SHEAR

SIZE	M12
C_{min} [mm]	50 100 200
S_{min} [mm]	125 125 125
V_{Rd} [kN]	4,1 4,5 6,7

$$V_{Rd} = V_{Rk} / \gamma_{Mc}; \gamma_{Mc} = 2,1$$