

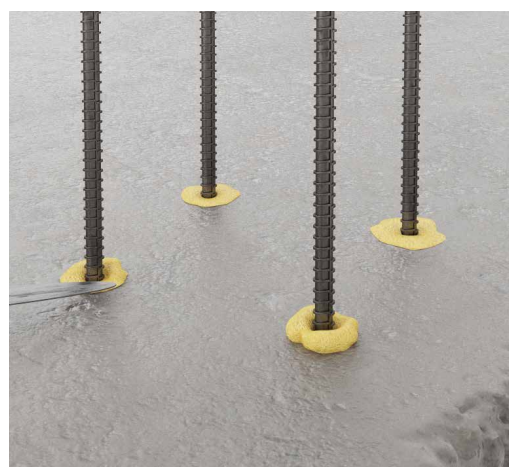
V-NEX



ETA-20/0363
ETA-21/0892

VINYL ESTER CHEMICAL ANCHOR WITHOUT STYRENE

- CE option 1 for cracked and uncracked concrete
- Certified use for post-installed threaded rods and reinforcing rods according to ETA-20/0363 Option 1
- C2 Seismic performance category (M12-M16)
- Complies with LEED®, IEQ Credit 4.1
- A+ Class: emission of volatile organic compounds (VOC) in living environments
- Certified for masonry use in solid and semi-hollow material (categories b, c, d)
- Dry, wet concrete or submerged holes
- Certified for use on aerated autoclaved concrete blocks (AAC)



CODE	format		pcs
	[ml]	[US fl oz]	
VNEX300	300	10.14	12
VNEX420	420	14.20	12

Shelf life from date of manufacture: 12 months for 300 ml, 18 months for 420 ml.
Storage temperature between +5 and 25° C.
Nozzle included in the package.

AVAILABLE ACCESSORIES

CODE	description	pcs
STING	spare nozzle for 300 and 420 ml cartridges	1

RELATED PRODUCTS



FLY HARD
ANCHORS GUN



FLY LITE
PROFESSIONAL GUN FOR
310 ml CARTRIDGES

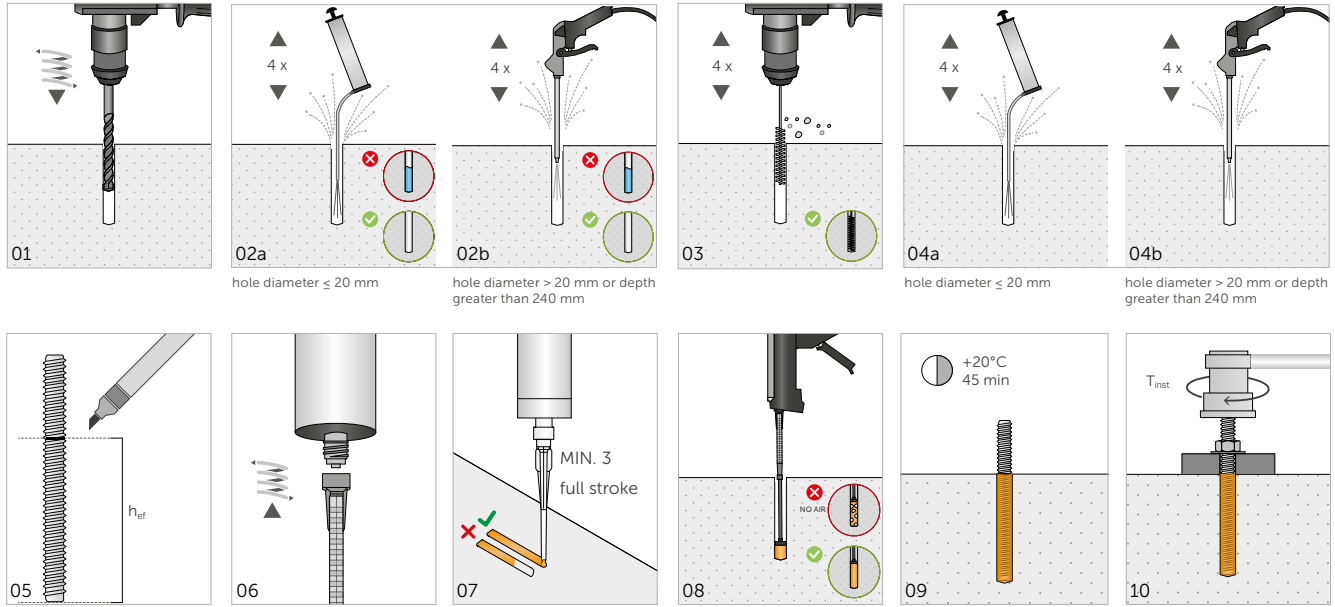


INA
THREADED ROD CL. 5.8
WITH NUT AND WASHER

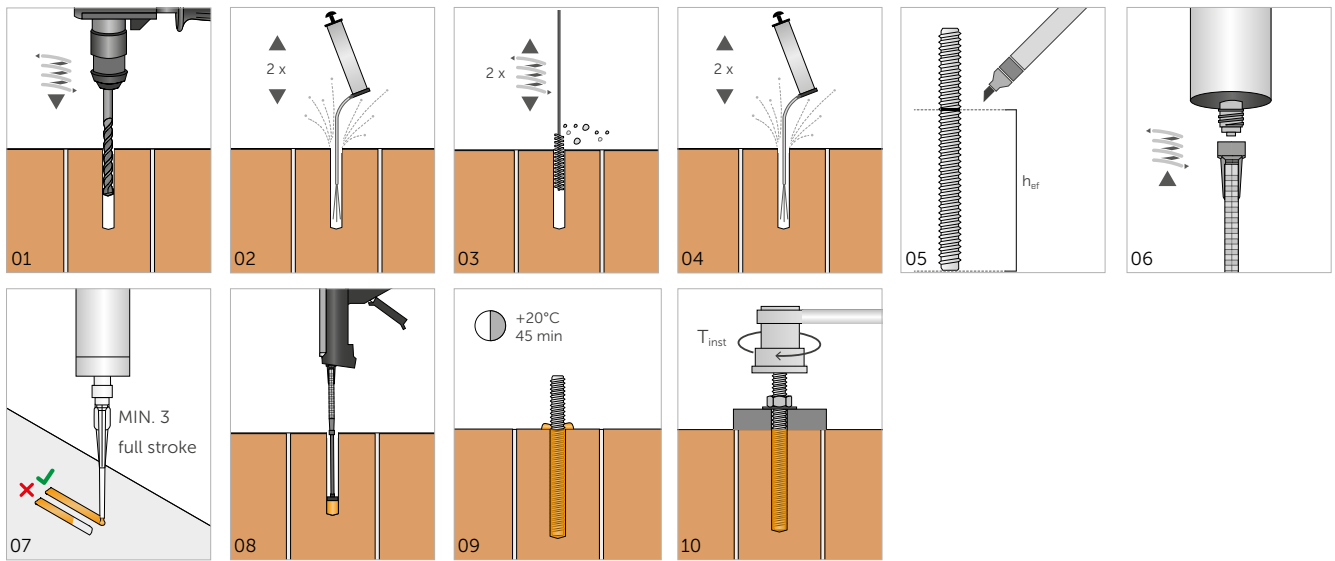


IHM | IHP
BUSHINGS FOR
PERFORATED MATERIALS

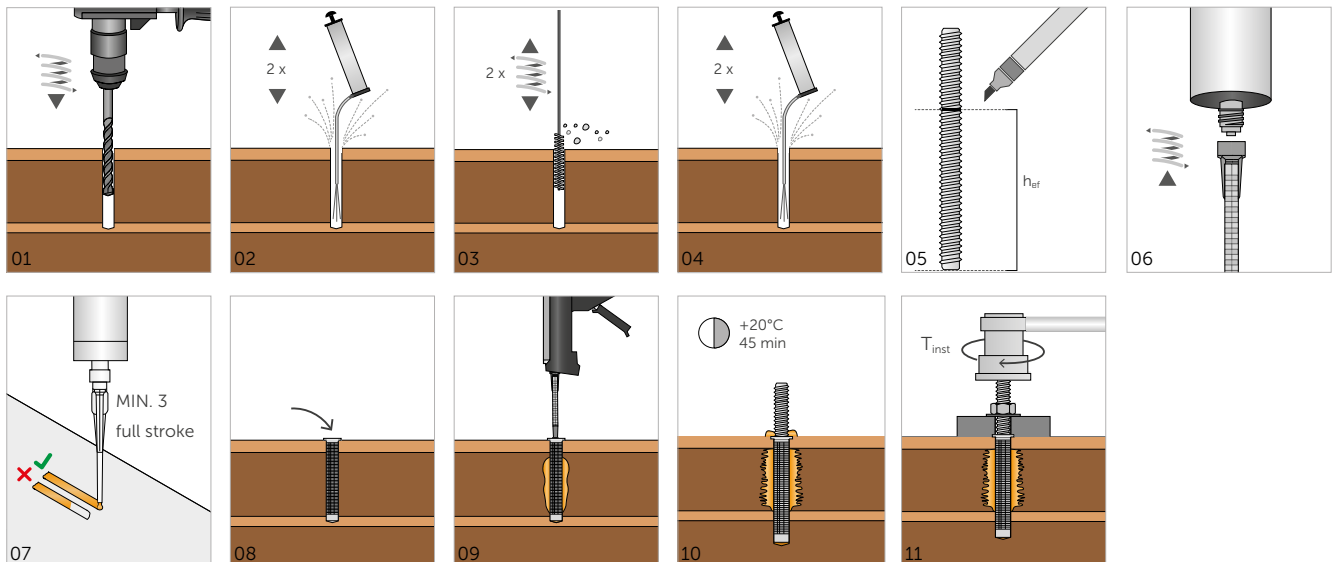
**ASSEMBLY
CONCRETE**



SOLID MASONRY

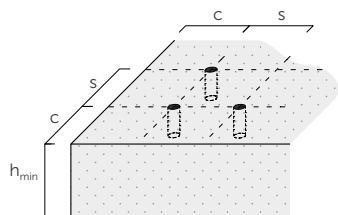
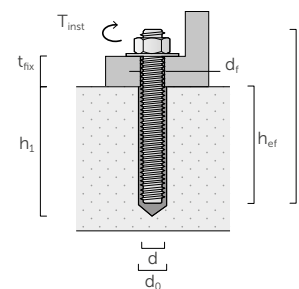


HOLLOW MASONRY



INSTALLATION

d	anchor diameter
d₀	hole diameter in the concrete support
h_{ef,min}	effective anchor depth
d_f	diameter hole in the element to be fastened
T_{inst}	maximum tightening torque
L	anchor length
t_{fix}	maximum fastening thickness
h₁	minimum hole depth



	d	[mm]	M8	M10	M12	M16	M20	M24
d₀	[mm]		10	12	14	18	24	28
h_{ef,min}	[mm]		60	60	70	80	90	96
h_{ef,max}	[mm]		160	200	240	320	400	480
d_f	[mm]		9	12	14	18	22	26
T_{inst}	[Nm]		10	20	40	80	120	160

			M8	M10	M12	M16	M20	M24
Minimum spacing	s_{min}	[mm]	40	50	60	80	100	120
Minimum edge distance	c_{min}	[mm]	40	50	60	80	100	120
Minimum thickness of concrete support	h_{min}	[mm]	h _{ef} + 30 ≥ 100 mm			h _{ef} + 2 d ₀		

For spacing and distances smaller than the critical ones, strength values have to be reduced depending on the installation parameters.

INSTALLATION TIME AND TEMPERATURE

support temperature	cartridge temperature	workability time	curing time before loading
-5 ÷ -1 °C(*)	+5 ÷ +40	90 min	6 h
0 ÷ +4 °C		45 min	3 h
+5 ÷ +9 °C		25 min	2 h
+10 ÷ +14 °C		20 min	100 min
+15 ÷ +19 °C		15 min	80 min
+20 ÷ +29 °C		6 min	45 min
+30 ÷ +34 °C		4 min	25 min
+35 ÷ +39 °C		2 min	20 min

(*) Temperatures not permitted for masonry.

Component A classification: Skin Sens. 1; Aquatic Chronic 3. May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.
Component B classification: Eye Irrit. 2; Skin Sens. 1. Causes serious eye irritation. May cause an allergic skin reaction.

STRUCTURAL CHARACTERISTIC VALUES

Valid for a single threaded rod (INA or MGS) when installed in C20/25 grade concrete with a thin reinforcing layer, considering spacing, edge-distance, and base-concrete thickness as non-limiting parameters.

UNCRACKED CONCRETE⁽¹⁾

TENSION

rod	h _{ef,standard} [mm]	N _{Rk,p} ⁽²⁾ [kN]				h _{ef,max} [mm]	N _{Rk,s} ⁽³⁾ [kN]			
		5.8 steel	γ _{Mp}	8.8 steel	γ _{Mp}		5.8 steel	γ _{Ms}	8.8 steel	γ _{Ms}
M8	80	17,1	1,8	17,1	1,8	160	18	29	1,5	
M10	90	22,6		22,6		200	29	46		
M12	110	33,2		33,2		240	42	67		
M16	128	51,5		51,5		320	79	125		
M20	170	85,5		85,5		400	123	196		
M24	210	126,7		126,7		480	177	282		

SHEAR

rod	h _{ef} [mm]	V _{Rk,s} ⁽³⁾ [kN]			
		5.8 steel	γ _{Ms}	8.8 steel	γ _{Ms}
M8	≥60	11	1,25	15	1,25
M10	≥60	17		23	
M12	≥70	25		34	
M16	≥80	47		63	
M20	≥100	74		98	
M24	≥125	106		141	

incremental factor for N _{Rk,p} ⁽⁴⁾		
ψ _c	C25/30	1,04
	C30/37	1,08
	C40/50	1,15
	C50/60	1,19

NOTES

- (1) For the calculation of anchors in masonry or in case of high bond rods, please see ETA document.
- (2) Combined pull-out and concrete failure.
- (3) Steel failure mode.
- (4) Tensile-strength increment factor (excluding steel failure) for uncracked concrete.

GENERAL PRINCIPLES

- Characteristic values according to ETA-20/0363.
- The design values are obtained from the characteristic values as follows: R_d = R_k/γ_M. Coefficients γ_M are listed in the table in accordance with the failure characteristics and product certificates.
- For the calculation of anchors with reduced spacing, or too close to the edge, please refer to ETA. Similarly, in case of fastening on concrete-supports with a better-grade, limited thickness or a thick reinforcing layer please see ETA.

STRUCTURAL CHARACTERISTIC VALUES

Valid for a single threaded rod (INA or MGS) when installed in C20/25 grade concrete with a thin reinforcing layer, considering spacing, edge-distance, and base-concrete thickness as non-limiting parameters.

CRACKED CONCRETE⁽¹⁾

TENSION

rod	h _{ef,standard} [mm]	N _{Rk,p} ⁽²⁾ [kN]				h _{ef,max} [mm]	N _{Rk,s} /N _{Rk,p} [kN]			
		5.8 steel	γ _{Mp}	8.8 steel	γ _{Mp}		5.8 steel	γ _{Ms}	8.8 steel	γ _{Ms}
M8	80	9,0	1,8	9,0	1,8	160	1,5 ⁽³⁾	18,0	1,8 ⁽²⁾	18,1
M10	90	12,7		12,7		200		28,3		28,3
M12	110	18,7		18,7		240		40,7		40,7
M16	128	29,0		29,0		320		72,4		72,4

SHEAR

rod	h _{ef,standard} [mm]	V _{Rk,s} [kN]			
		5.8 steel	γ _{Ms}	8.8 steel	γ _{Ms}
M8	80	11	1,25 ⁽³⁾	15	1,25 ⁽³⁾
M10	90	17		23	
M12	110	25		34	
M16	128	47		58	

incremental factor for N _{Rk,p} ⁽⁴⁾		
ψ _c	C25/30	1,02
	C30/37	1,04
	C40/50	1,07
	C50/60	1,09

NOTES

- (1) Refer to the relevant ETA document for use of rebars.
- (2) Combined pull-out and concrete failure.
- (3) Steel failure mode.
- (4) Tensile-strength increment factor (excluding steel failure) for cracked concrete.
- (5) Pry-out failure mode.

GENERAL PRINCIPLES

- Characteristic values according to ETA-20/0363.
- The design values are obtained from the characteristic values as follows: R_d = R_k/γ_M. Coefficients γ_M are listed in the table in accordance with the failure characteristics and product certificates.
- For the calculation of anchors with reduced spacing, or too close to the edge, please refer to ETA. Similarly, in case of fastening on concrete-supports with a better-grade, limited thickness or a thick reinforcing layer please see ETA.
- For the design of anchors subjected to seismic loading refer to ETA and to EN 1992-4.
- For specifications of the diameters covered by the various certifications (cracked concrete, uncracked concrete, seismic applications), please refer to ETA.