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European Organisation for
Technical Assessment
Organisation Européenne
pour l'évaluation technique

European Technical Assessment - ETA 17/0202 of 13/04/2017

Version: 01

(English language translation; the original version is in Italian)

GENERAL PART

Trade name of the construction product

“SPIT UNIVERSAL FRAME FIXING PROLONG”
in the alternatives **“PROLONG-H, PROLONG-F,
PROLONG-H SSA4, PROLONG-F SSA4”**

Product family to which the construction
product belongs

PAC 33 – Fixings
**Plastic anchors for multiple use in concrete
and masonry for non-structural applications**

Manufacturer

ITW Construction Products Italy S.r.l.
V.le Regione Veneto, 5 - I - 35127
Padova (PD) - Italy

Manufacturing plant

V.le Regione Veneto, 5 - I - 35127
Padova (PD) - Italy

This European Technical Assessment
contains:

**14 pages, including 8 annexes which form an
integral part of this assessment**

This European Technical Assessment is
issued in accordance with Regulation (EU)
n° 305/2011, on the basis of

**ETAG 020 edition March 2012 used as
European Assessment Document (EAD)**

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SPECIFIC PARTS

1 TECHNICAL DESCRIPTION OF THE PRODUCT

“Spit Universal Frame Fixing Prolong” in the alternatives “Prolong-H”, “Prolong-F”, “Prolong-H SSA4” and “Prolong-F SSA4”, is a plastic anchor for use in normal weight concrete (Use category “a”), in solid masonry (Use category “b”) and in hollow or perforated masonry (Use category “c”) for non-structural applications.

It comprises the following components whose dimensions are given Table 1 and Table 2:

- a plastic sleeve made in polymeric material,
- a special screw made in carbon steel of a strength class of 6.8 (zinc coated) or in stainless steel of a strength class A4-80.

The plastic sleeve is expanded by screwing in the specific screw which presses the sleeve against the wall of the drilled hole. The installed anchor is shown in Annex 1.

The dimensions of the components are the following:

Trade name of the sleeve	$\varnothing d_{nom}$ mm	h_{nom} mm	$t_{fix,min}$ mm	$t_{fix,max}$ mm	$L_{a,min}$	$L_{a,max}$
Prolong 10 ¹	10	70	10	140	80	210

Table 1: Dimensions of the sleeve

Trade name of the screws ²	$\varnothing d_s$ mm	$\varnothing d_{k,nom}$ mm	$L_{s,min}$ mm	$L_{s,max}$ mm
IDEX 7 X L CK- 45°	7	5.6	85	215
IDEX 7 X L HEX- 45°	7	5.6	85	215
IDEX 7 X L CK- 35°	7	5.6	87	220
IDEX 7 X L HEX- 35°	7	5.6	87	220

Table 2: Dimensions of special screws

The difference in the alternatives of anchor lays only in the type of screw used, as follows:

“Prolong-H”: Carbon steel screw with hexagonal head; geometry of the end of the screw: 35°, 45°.

“Prolong-F”: Carbon steel screw with countersunk head; geometry of the end of the screw: 35°, 45°.

“Prolong-H SSA4”: Stainless steel screw with hexagonal head; geometry of the end of the screw: 35°.

“Prolong-F SSA4”: Stainless steel screw with countersunk head; geometry of the end of the screw: 35°.

The components are factory-made by the Manufacturer or by his suppliers. The Manufacturer is ultimately responsible for the kit.

2 SPECIFICATION OF THE INTENDED USE IN ACCORDANCE WITH ETAG 020 USED AS EUROPEAN ASSESSMENT DOCUMENT (EAD)

The anchor is intended to be used for anchorages for which requirements for safety in use in the sense of the Basic Requirement 4 of the Regulation (EU) 305/2011 shall be fulfilled and failure of the fixture represents an immediate risk to human life.

The anchor may only be used for multiple fixing for non-structural applications in concrete and masonry. The base material shall consist of reinforced or unreinforced normal weight concrete of strength class C12/15 at minimum according to EN 206-1:2000-12 and of masonry walls according to Annex 6. The anchor may be used in cracked and non-cracked concrete. The mortar strength class of the masonry has to be M 2,5 according to EN 998-2:2010 at minimum.

The performances shown in Section 3 are only valid if the anchor is used under the conditions given in § 2.1 hereafter and in compliance with the specifications given in Annex 8.

The assumed working life of the anchor for the intended use is at least 50 years.

¹ Manufacturer: ITW Construction Products Italy S.r.l., Padova, Italy

² Manufacturers: Codes F00993 and F03120.

2.1 Aspects related to the performance of the product

The specific screw made of galvanised steel may only be used in structures subject to dry internal conditions. The specific screw made of stainless steel may be used in structures subject to dry internal conditions and also in structures subject to external atmospheric exposure (including industrial and marine environment), or exposure in permanently damp internal conditions, if no particularly aggressive conditions exist. Such particularly aggressive conditions are e. g. permanent, alternating immersion in seawater or the splash zone of seawater, chloride atmosphere of indoor swimming pools or atmosphere with extreme chemical pollution (e. g. in desulphurization plants or road tunnels where de-icing materials are used).

The specific screw made of galvanised steel may also be used in structures subject to external atmospheric exposure, if the area of the head of the screw is protected against moisture and driving rain after mounting of the fixing unit in such a way that intrusion of moisture into the anchor shaft is prevented. Therefore there shall be an external cladding or a ventilated rain-screen mounted in front of the head of the screw and the head of the screw itself shall be coated with a soft plastic, permanently elastic bitumen-oil-combination coating (e. g. undercoating or body cavity protection for cars).

The anchor may be used in the following temperature range:

- Temperature range b): -40 °C to +80 °C (max long term temperature +50 °C and max short term temperature +80 °C).
- Temperature range c): -40 °C to +50 °C (max long term temperature +30 °C and max short term temperature +50 °C).

This ETA is issued for “Spit Universal Frame Fixing Prolong” on the basis of admitted information/data, deposited at ITC-CNR, which identify the product that was assessed and judged. Changes to the production process of the components or to the components which could result in deposited information/data being incorrect, shall be notified to ITC-CNR before they are introduced and ITC-CNR will assess whether or not such changes affect the European Technical Assessment (ETA) and, consequently, the validity of CE marking on the basis of ETA and, if so, whether further assessment and/or alteration to the ETA shall be necessary. Manufacturing process scheme is deposited with ITC-CNR.

The minimum spacing and dimensions of anchorage member according to Annex 5, Table 8 and Annex 7, Tables 11 and 12 shall be observed depending on the base material.

2.2 Job site tests according to ETAG 020, Annex B

2.2.1 General

In the absence of national requirements the characteristic resistance of the plastic anchor may be determined by job site tests in use categories “a”, “b” and “c”, if the plastic anchor has already characteristic values for the same base material (of the corresponding use category) as it is present on the construction works.

The characteristic resistances given in Annex 6 for use in solid masonry are valid for the base material and the bricks which have been used in the tests or larger brick sizes and higher compressive strengths of the masonry unit. The characteristic resistances given in Annex 6 for use in hollow or perforated masonry are only valid for the bricks and blocks which have been used in the tests regarding base material, size of the units, compressive strength and configuration of the voids.

The characteristic resistance of the plastic anchor has to be determined by job site tests to evaluate the influence of hammer or impact drilling, if drill holes in the performance assessment tests have been drilled using the rotary drill but hammer or impact drilling shall be used for anchor installation on the construction site.

This characteristic resistance to be applied to a plastic anchor shall be determined by means of at least 15 pull-out tests carried out on the construction works with a concentric tension load acting on the plastic anchor. These tests may also be performed in a laboratory under equivalent conditions as used on the construction works.

Execution and evaluation of the tests as well as issue of the test report and determination of the characteristic resistance shall be supervised by the person responsible for execution of works on site and be carried out by a competent person.

Number and position of the plastic anchors to be tested shall be adapted to the relevant special conditions of the construction works in question and, for example, in the case of blind and larger areas be increased such that a reliable information about the characteristic resistance of the plastic anchor embedded in the base material in question can be derived. The tests shall take account of the unfavourable conditions of practical execution.

2.2.2 Assembly

The plastic anchor to be tested shall be installed (e.g. preparation of drill hole, drilling tool to be used, drill bit, type of drilling hammer or rotation, thickness of fixture) and, as far as spacing and edge distances are concerned, be distributed in the same way as foreseen for the intended use. Depending on the drilling tool, hard metal hammer-drill bits or hard metal impact drill bits according to ISO 5468 shall be used. New drill bits shall be used for one test series or drill bits with $d_{cut} \geq d_{cut,m}$.

2.2.3 Execution of test

The test rig used for the pull-out tests shall allow a continuous slow increase of the load recorded by a calibrated measuring equipment. The load shall act perpendicular to the surface of the base material and shall be transmitted to the anchor via a hinge. The reaction forces shall be transmitted to the base material such that possible breakout of the masonry is not restricted. This condition is considered as fulfilled, if the support reaction forces are transmitted either in adjacent masonry units or at a distance of at least 150 mm from the plastic anchors. The load shall be progressively increased so that the ultimate load is achieved after not less than about 1 minute. Recording of load is carried out when the ultimate load is achieved.

If no pull-out failure occurs, other test methods are needed, e.g. proof-loading.

2.2.4 Test report

The test report shall include all information necessary to assess the resistance of the tested anchor. It shall be given to the person responsible for the design of the fastening. The following information is necessary e.g.:

- Name of product
- Construction works
- Building's owner
- Date and place of tests
- Test rig
- Type of structure to be fixed
- Masonry (type of brick, strength class, all dimensions of bricks, mortar group if possible); visual assessment of masonry (flush joints, joint clearance, regularity)
- Plastic anchors and screws or nails
- Cutting diameter of hard metal hammer-drill bits, value measured before and after drilling if no new drill bits are used
- Results of tests including the indication of value N_1 ; mode of failure
- Tests carried out or supervised by ...; signature.

2.2.5 Evaluation of test results

The characteristic resistance F_{Rk1} is obtained from the measured values N_1 as follows:

$$F_{Rk1} = 0.5 \cdot N_1$$

The characteristic resistance F_{Rk1} has to be equal or smaller than the characteristic resistance F_{Rk} which is given in the ETA for equivalent base material (according to use category a, b and c) with

N_1 = the mean value of the five smallest measured values at ultimate load.

In absence of national regulations the partial safety factors for the resistance of the plastic anchor shall be taken as $\gamma_{Mc} = 1.8$ for use in concrete and $\gamma_{Mm} = 2.5$ for use in masonry.

3 PERFORMANCE OF THE PRODUCT AND REFERENCES TO THE METHODS USED FOR ITS ASSESSMENT

The tests for performance assessment of “Spit Universal Frame Fixing Prolong” were carried out in compliance with ETAG 020 edition March 2012 according to the test methods reported herein on the basis of use categories “a”, “b”, “c”; performances are valid as long as the product fully corresponds to that described in Annexes 2-3.

BWR	Essential characteristic/Requirement	Performance
1	The essential characteristics regarding BWR 1 “Mechanical Resistance and stability” are included under BWR 4	/
2	Reaction to fire	The metal parts of anchors can be classified A1 in accordance with EC Decision 96/603/EC
2	Resistance to fire	Not applicable
3	Release of dangerous substances	Regarding dangerous substances there may be requirements applicable to the product falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need to be complied with, when and where they apply.
4	Characteristic resistance in concrete and masonry	See Annexes 4, 6
4	Displacements	See Annexes 5, 6
4	Minimum thickness of member, edge distance and spacing	See Annexes 5, 7
5	Protection against noise	Not applicable
6	Energy economy and heat retention	Not applicable
7	Sustainable use of natural resources	Performance not assessed

4 ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE (AVCP) SYSTEM APPLIED, WITH REFERENCE TO ITS LEGAL BASE

4.1 System of assessment and verification of constancy of performance

According to the European Commission decision n. 97/463/EC³ the system of assessment and verification of constancy of performance applied to this product (see Annex V to Regulation (EU) n. 305/2011) is System 2+.

4.2 Technical details necessary for the implementation of the AVCP system, as envisaged in ETAG 020 used as European Assessment Document - EAD

Technical details necessary for the implementation of the AVCP system will have to be laid down in a control plan which shall be agreed between the Manufacturer and the Notified Body.

Issued in San Giuliano Milanese, on 13/04/2017

by

Prof. ing. Antonio Occhiuzzi
(ITC Director)



³ Of 27th June 1997

ANNEX 1 of ETA 17/0202

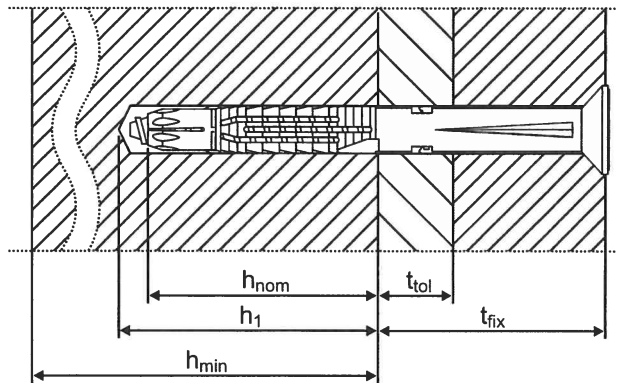


Fig 1: Installed anchor in concrete and solid masonry

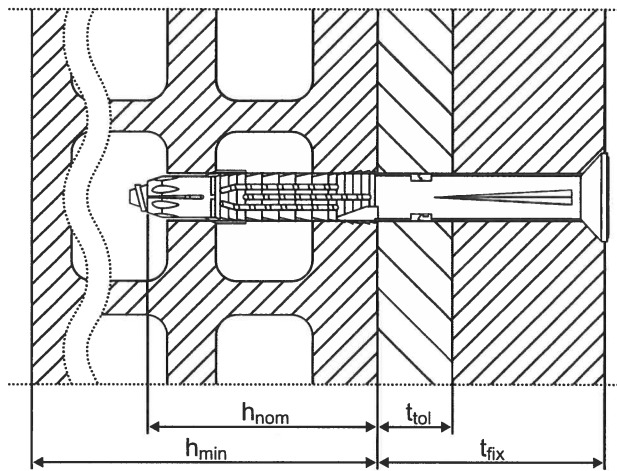


Fig 2: Installed anchor in hollow masonry in bricks (h_{nom} 70 mm, > of the dimension of the hole)

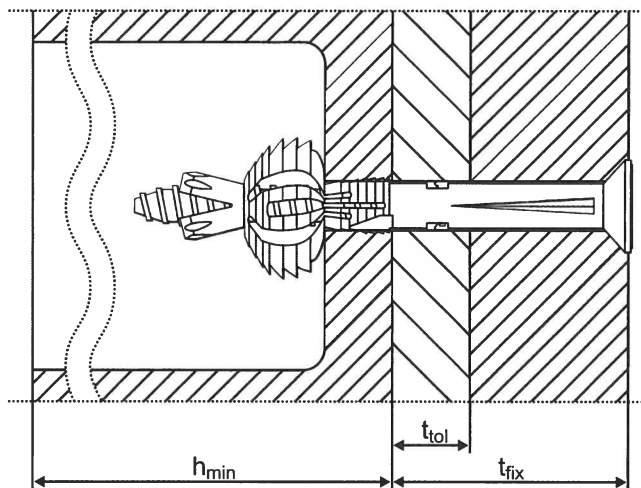


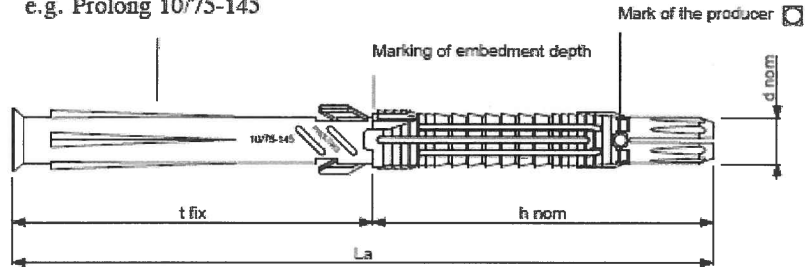
Fig 3: Installed anchor in hollow concrete units (h_{nom} 70 mm, < of the dimension of the hole)

- h_{nom} Overall plastic anchor embedment depth in the base material
- h_1 Depth of drilled hole to deepest point
- h Thickness of member (wall)
- t_{fix} Thickness of fixture
- t_{tot} Thickness of layer or non-load bearing coating

View of installed anchor	Annex 1 ETA 17/0202 "SPIT UNIVERSAL FRAME FIXING PROLONG"
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ANNEX 2 of ETA 17/0202

- Marking:**
 - Commercial name
 - Drill hole diameter
 - t fix max
 - Length of plastic sleeve
 e.g. Prolong 10/75-145



	$\varnothing d_{nom}$ mm	h_{nom} mm	$t_{fix,min}$ mm	$t_{fix,max}$ mm	$L_{a,min}$	$L_{a,max}$
Prolong 10	10	70	10	140	80	210

Fig. 4: View and Dimensions of sleeve

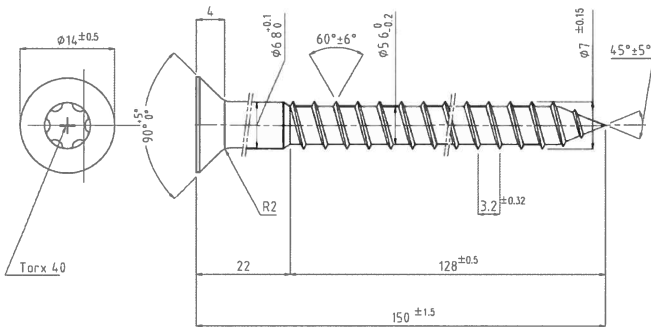


Fig. 5: IDEX 7 X L CK- 45°

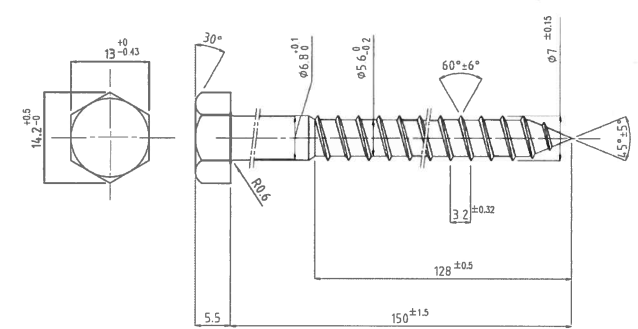


Fig. 6 : IDEX 7 X L HEX - 45°

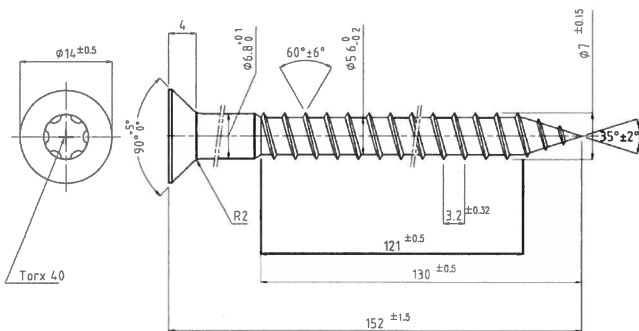


Fig. 7: IDEX 7 X L CK- 35°

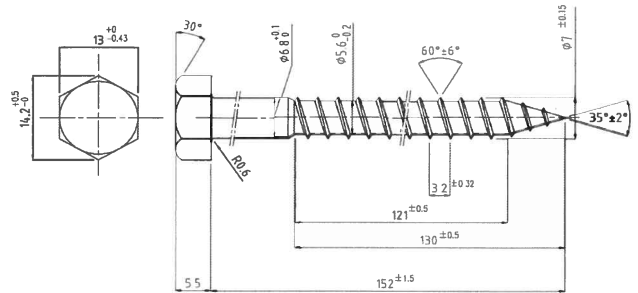


Fig. 8: IDEX 7 X L HEX- 35°

	$\varnothing d_s$ mm	$\varnothing d_{k,nom}$ mm	$\varnothing d_{k,min}$ mm	$L_{s,min}$ mm	$L_{s,max}$ mm
IDEX 7 X L CK- 45°	7	5.6	5.4	85	215
IDEX 7 X L HEX- 45°	7	5.6	5.4	85	215
IDEX 7 X L CK- 35°	7	5.6	5.4	87	220
IDEX 7 X L HEX- 35°	7	5.6	5.4	87	220

Tab.1: Dimensions of special screws

View and dimensions of sleeve and of screws	Annex 2 of the ETA 17/0202 "SPIT UNIVERSAL FRAME FIXING PROLONG"
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ANNEX 3 of ETA 17/0202

Components	Material
Anchor sleeve	Polyamide PA66, colour: grey
Special screw	Carbon steel, strength class 6.8, electrogalvanic coating Zn ≥ 5 µm ($f_{yk} \geq 480 \text{ N/mm}^2$, $f_{uk} \geq 600 \text{ N/mm}^2$)
	Stainless steel A4-80 ($f_{yk} \geq 600 \text{ N/mm}^2$, $f_{uk} \geq 800 \text{ N/mm}^2$)

Table 2: Materials

Installation parameters of the Anchor		
Drill hole diameter	$d_0 = [\text{mm}]$	10
Cutting diameter of drill bit	$d_{cut} \leq [\text{mm}]$	10.45
Depth of drilled hole to deepest point 1)	$h_1 \geq [\text{mm}]$	85
Overall plastic anchor embedment depth in the base material 1), 2)	$h_{nom} \geq [\text{mm}]$	70
Diameter of clearance hole in the fixture	$d_f \leq [\text{mm}]$	10.5

Table 3: Installation parameters

1) See Annex 1

2) For hollow and perforated masonry the influence of $h_{nom} > 70 \text{ mm}$ has to be detected by job site tests according to § 2.2

Materials and installation parameters	Annex 3 of the ETA 17/..... “SPIT UNIVERSAL FRAME FIXING PROLONG”
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ANNEX 4 of ETA 17/.....

Screw		Characteristic bending resistance	
		Galvanized	Stainless steel
Characteristic bending resistance	$M_{Rk,s}$ [Nm]	11.12	14.83
Partial safety factor	γ_{Ms} 1)	1.25	1.33

Table 4: Characteristic bending resistance of the screw in concrete and masonry

1) In absence of other national regulations

Failure of expansion element (special screw)		Galvanized screw	Stainless steel screw
Characteristic tension resistance	$N_{Rk,s}$ [kN]	13.73	18.31
Partial safety factor	γ_{Ms} 1)	1.5	1.6
Characteristic shear resistance	$V_{Rk,s}$ [kN]	6.87	9.16
Partial safety factor	γ_{Ms} 1)	1.25	1.33

Table 5: Characteristic resistance of the screw for use in concrete and masonry

1) In absence of other national regulations

Pull-out failure (plastic sleeve)		Temperature range 30/50°C	Temperature range 50/80°C
Concrete \geq C16/20			
Characteristic resistance	$N_{Rk,p}$ [kN]	2.5	2.5
Partial safety factor	γ_{Mc} 1)	1.8	1.8
Concrete C12/15			
Characteristic resistance	$N_{Rk,p}$ [kN]	2.0	2.0
Partial safety factor	γ_{Mc} 1)	1.8	1.8
Concrete cone failure and concrete edge failure for single anchor and anchor group			
Tension load ²⁾ :			
$N_{Rk,c} = 7.2 \cdot \sqrt{f_{ck,cube}} \cdot h_{ef}^{1.5} \cdot \frac{c}{c_{cr,N}} = N_{Rk,p} \cdot \frac{c}{c_{cr,N}}$		with $h_{ef}^{1.5} = \frac{N_{Rk,p}}{7.2 \cdot \sqrt{f_{ck,cube}}}$ $\frac{c}{c_{cr,N}} \leq 1$	
Shear Load ²⁾ :			
$V_{Rk,c} = 0.45 \cdot \sqrt{d_{nom}} \cdot (h_{nom}/d_{nom})^{0.2} \cdot \sqrt{f_{ck,cube}} \cdot c_1^{1.5} \cdot \left(\frac{c_2}{1.5c_1}\right) \cdot \left(\frac{h}{1.5c_1}\right)^{0.5}$		with $\left(\frac{c_2}{1.5c_1}\right) \leq 1$ $\left(\frac{h}{1.5c_1}\right)^{0.5} \leq 1$	
c_1	Edge distance closest to the edge in loading direction		
c_2	Edge distance perpendicular to direction 1		
$f_{ck,cube}$	Nominal characteristic concrete compression strength (based on cubes), value for C50/60 at maximum		
Partial safety factor	γ_{Mc} 1)	1.8	

Table 6: Characteristic resistance for use in concrete

1) In absence of other national regulations

2) The design method according to ETAG 020, Annex C is to be used

Characteristic resistance in concrete For use in concrete and masonry	Annex 4 of the ETA 17/0202 "SPIT UNIVERSAL FRAME FIXING PROLONG"
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ANNEX 5 of ETA 17/0202

Type	Tension load			Shear load		
	F ₁) [kN]	δ _{N0} [mm]	δ _{N∞} [mm]	F ₁) [kN]	δ _{V0} [mm]	δ _{V∞} [mm]
Concrete	0.99	0.07	0.15	2.73	1.65	2.48

Table 7: Displacements under tension and shear loading in concrete

1) Intermediate values by linear interpolation

Type	Minimum thickness h _{min}	Characteristic edge distance C _{cr,N}	Minimum allowable edge distances C _{min}	Minimum allowable spacing S _{min}
	[mm]	[mm]	[mm]	[mm]
Concrete C12/15	140	98	85	70
Concrete ≥ C16/20	140	70	60	50

Table 8: Minimum thickness of member, edge distance and spacing in concrete

Note: Fixing points with a spacing $s \leq 85$ mm are considered as a group with a max characteristic resistance $N_{Rk,p}$ acc. to Table 6 of Annex 4.

For $s > 85$ mm the anchors are considered as single anchors, each with a characteristic resistance $N_{Rk,p}$ acc. to Table 5 of Annex 4.

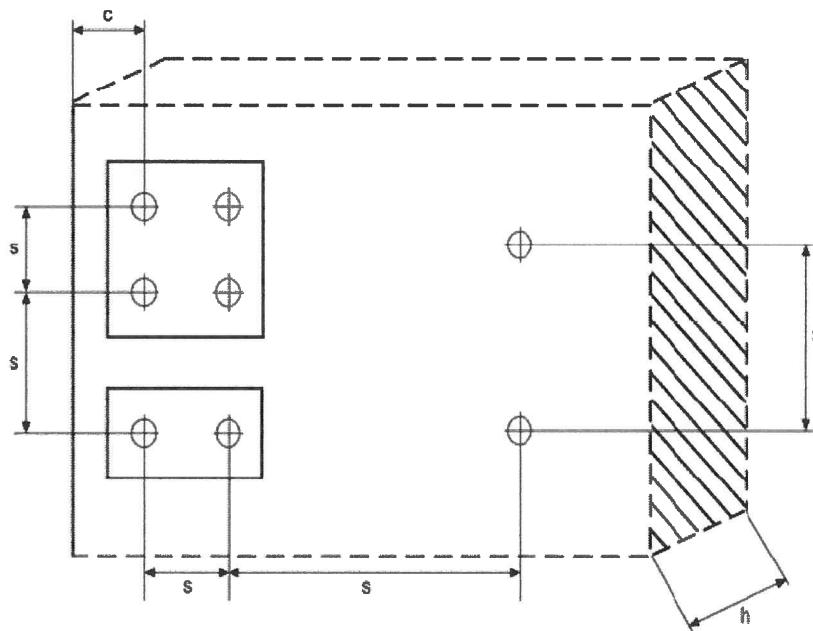


Fig. 10: Scheme of distance and spacing in concrete

<p>Displacements under tension und shear loading in concrete Minimum thickness of member, edge distance and spacing in concrete</p>	<p>Annex 5 of the ETA 17/0202 “SPIT UNIVERSAL FRAME FIXING PROLONG”</p>
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ANNEX 6 of ETA 17/0202

Use category	Base material	Min. DF or min.size mm	Bulk density class ρ Kg/dm ³	Minimum compressive strength f_b N/mm ²	Drill method	Thickness of wall h mm	Figure	Characteristic resistance	
								$F_{Rk}^{1)}$ [kN]	
								temperature range 30/50°C 50/80°C	
b	Clay brick DIN EN 771-1	240x110x60	≥ 1.6	> 10	H ²⁾	110	//	1.5 ⁷⁾⁸⁾	1.5 ⁷⁾⁸⁾
				> 20				2.5 ⁷⁾⁸⁾	2.5 ⁷⁾⁸⁾
				> 10		240		2.5 ⁷⁾ 3.5 ⁸⁾	2.5 ⁷⁾ 3.5 ⁸⁾
				> 20				4 ⁷⁾ 5 ⁸⁾	4 ⁷⁾ 5 ⁸⁾
c	Hollow clay bricks ³⁾	370x250x249	≥ 0.7	8	R ⁴⁾	250	See annex 7	1	1
	Hollow concrete units ⁵⁾	500x200x200	0.9	4	R ⁴⁾	200		1	1
Partial safety factor ⁶⁾						γ_{Mm}	2.5		

Table 9: Characteristic resistance F_{Rk} in [kN] in solid and hollow or perforated masonry (Use category "b" and "c")

1) Resistance F_{Rk} for tension, shear or combined tension and shear loading.

The characteristic resistance is valid for single plastic anchor or for a group of two or four plastic anchors with a spacing equal or larger than the minimum spacing s_{min} according to Table 11 and 12. The specific conditions for the design method have to be considered according to chapter 4.2.5 of the ETA.

2) Hammer drilling

3) Porotherm Biomur R37 - Wienerberger sas

4) Rotary drilling

5) Creux B40 - FABEMI

6) In absence of other national regulations

7) Only valid for an edge distance of $c \geq 100$ mm

8) Only valid for an edge distance of $c \geq 150$ mm

Base material for masonry for range b and c	F kN	Displacement			
		Tension load		Shear load	
		δ_{No}	$\delta_{N\infty}$	δ_{v0}	$\delta_{v\infty}$
Solid clay brick		0.03	0.06	1.19	1.79
Hollow clay brick		0.10	0.20	0.57	0.86
Hollow concrete units		0.08	0.16	0.57	0.86

Table 10: Displacements under tension und shear loading in solid and hollow or perforated masonry

Characteristic resistance F_{Rk} in solid and hollow or perforated masonry (Use category "b" and "c") Displacements under tension und shear loading in solid and hollow or perforated masonry	Annex 6 of the ETA 17/0202 "SPIT UNIVERSAL FRAME FIXING PROLONG"
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ANNEX 7 of ETA 17/0202

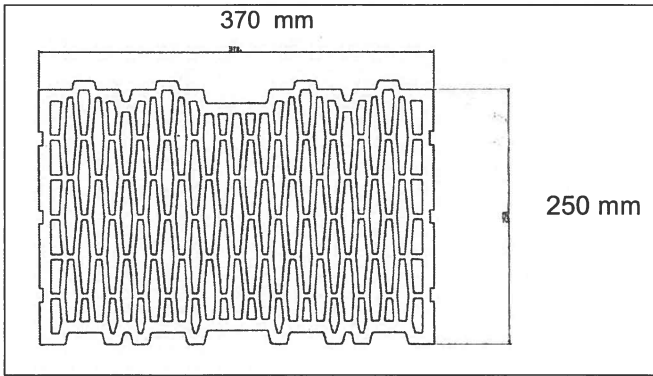


Fig.9: Geometry of the hollow brick

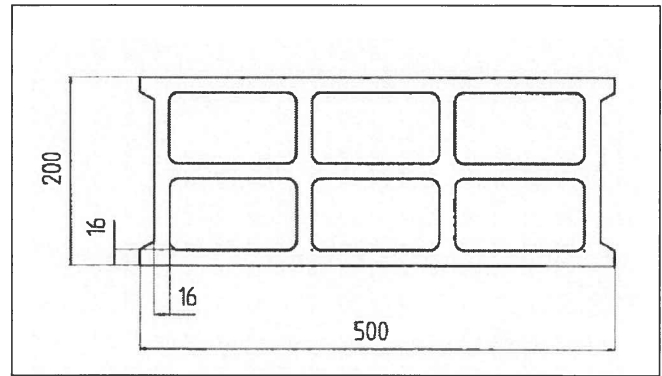


Fig.10: Geometry of the hollow concrete unit

Minimum thickness of member	h_{min}	mm	110
Single anchor			
Minimum allowable spacing	S_{min}	mm	250
Minimum allowable edge distance	C_{min}	mm	100
Anchor Group			
Minimum allowable spacing perpendicular to free edge	$S_{1,min}$	mm	200
Minimum allowable spacing parallel to free edge	$S_{2,min}$	mm	400
Minimum allowable edge distance	C_{min}	mm	100

Table 11: Minimum distances and dimensions in solid masonry

			Hollow clay bricks ¹⁾	Hollow concrete units ¹⁾
Minimum thickness of member	h_{min}	mm	250	200
Single anchor				
Minimum allowable spacing	S_{min}	mm	250	250
Minimum allowable edge distance	C_{min}	mm	100	100
Anchor Group				
Minimum allowable spacing perpendicular to free edge	$S_{1,min}$	mm	200	200
Minimum allowable spacing parallel to free edge	$S_{2,min}$	mm	400	400
Minimum allowable edge distance	C_{min}	mm	100	100

Table 12: Minimum distances and dimensions in hollow or perforated masonry. - 1) See Annex 6

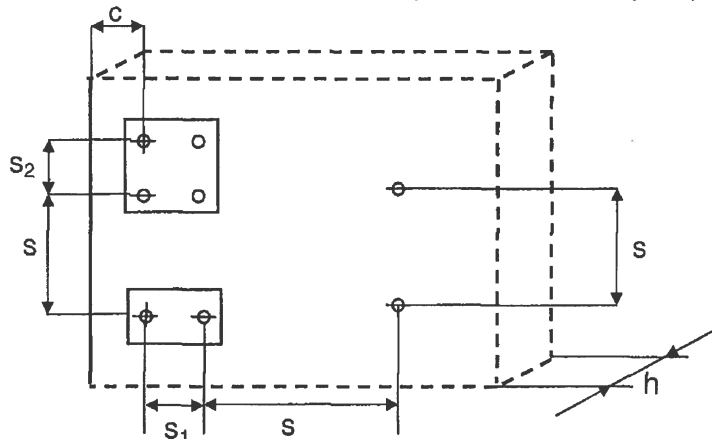


Fig.11: Scheme of distance and spacing in masonry

Geometry of the hollow brick Minimum thickness of member, edge distance and spacing in solid and hollow masonry	Annex 7 of the ETA 17/0202 "SPIT UNIVERSAL FRAME FIXING PROLONG"
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ANNEX 8 of ETA 17/0202 : Specifications of the intended use

- Anchor installation in accordance with the Manufacturer's specifications.
- Checks before placing the anchor, to ensure that the characteristic values of the base material in which the anchor is to be placed, are identical with the values which the characteristic loads apply to.
- Observation of the drill method according to Annex 6 (drill holes in hollow or perforated masonry may only be drilled using the rotary drill. Other drilling methods may also be used if job-site tests according to § 2.2 evaluate the influence of hammer or impact drilling).
- Placing drill holes without damaging the reinforcement.
- Holes to be cleaned of drilling dust.
- In case of aborted hole: new drilling at a minimum distance away of twice the depth of the aborted hole or smaller distance if the aborted drill hole is filled with high strength mortar.
- The plastic sleeve is inserted through the fixture by slight hammer blows and the special screw is screwed in until the head of the screw touches the sleeve. The anchor is correctly mounted in concrete or in solid clay masonry and in hollow masonry with $h_{nom} >$ of the dimension of the hole if there is no turn-through of the plastic sleeve in the drill hole and if slightly move on turning of the screw is impossible after the complete turn-in of the screw; for the use in concrete this condition is verified when a torque moment is approximately 13 Nm (see Annex 1 fig. 1 and fig. 2). For the use in hollow masonry with $h_{nom} <$ of the dimension of the unit hole, the correct mounting takes place when, after the head of the screw has touched the sleeve, approximately further 12 turns of the screw are applied (see Annex 1 fig. 3).
- Temperature during installation of the anchor $\geq - 5^{\circ}\text{C}$ (plastic sleeve and base material).

Specifications of the intended use	Annex 8 of the ETA 17/0202 "SPIT UNIVERSAL FRAME FIXING PROLONG"
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