TECHNICAL DATA SHEET

TCH PE 300 - TCH PE 165
Professional styrene free chemical anchor

APPLICATION

Injection polyester based and styrene free anchor, compliant with the European technical report for masonry and non-cracked concrete use.

FEATURES AND BENEFITS

> Suitable for **average loads** and non-critical applications.
> **Fast** reaction time and workload capacity for time-sensitive applications.
> **It doesn't contain styrene**, it is suitable for internal and indoors use.
> It can be used in **wet and moist environments,** or in **flooded holes**.
> Extremely **versatile**, suitable for full masonry, hollow bricks and aerated concrete.
> It can be used to repair cracks and fissures on concrete, **both vertically and horizontally.**
> Resin-catalyst **Ratio of 10:1** is available in two cartridge sizes.
> Thanks to the new static mixer and the chance to close the cap after use, **the cartridge can be used until its expiration date.**
> Use **reticulated sleeves** for applications on punctured supports.
> Patented turbo **mixer with 9 internal helixes for an instant and easy mixture** of the components and a very little waste of material. It also helps to make extrusion easier.

CERTIFICATIONS

> **15/0008 - ETA ETAG 001-05** option 7 M8-M16 threaded rods on non-cracked concrete.
> **11/0032 - ETA ETAG 029** M10 threaded rods on brickworks.
> **ITB Approval** (Poland) 0978/W
> **LEED tested 2009** EQ. c4, 1 SCAQMD rule 1168 (2005)
> **VOC A+ Rating** (Volatile Organic Content)
> It can be used also **on lamellar wooden supports and/or solid materials.**
Since this kind of supports can be very different from each other in terms of composition and structure, the amount of load that can be supported by the chemical anchor depends on the kind of support itself. Therefore, it is recommended to test the product on site in order to estimate the average fixing payload on wood.

ETAG 001-05 Opzione 7
M8-M16
for non-cracked concrete

ETAG 029 Categoria:c,w/d Ø M10
Steel elements with reference to chart 2
Attachment 5 of ETA-11/0032
Use on masonry and hollow brick

Tested for LEED compliancy

Styrene Free

ISTITUTO GIORDANO
Test report nr. 276986
dated 14/12/2010 on wood

VOC CLASSIFICATION
A+
A+ A B C

COD	TYPE	Description	Storage life	Storage temperatures
155001	TCH PE165	Polyester chemical anchor 165 ml - 2 mix.	12 months	+5°C / +25°C
155006	TCH PE300	Polyester chemical anchor 300 ml - 2 mix.	12 months	+5°C / +25°C

FIXING ON CONCRETE

Fixing of galvanized steel threaded rods - class 5.8 - on concrete C20/25.

Dimensions / Features		M8	M10	M12
Hole Ø	mm	10	12	14
Hole depth	mm	90	100	120
Anchoring depth	mm	80	90	110
Base material min. thickness	mm	115	125	145
Tightening torque	Nm	8	10	15
Centre to centre distance	mm	170	180	220
Distance from the edge	mm	85	100	120
Min. centre-to-centre distance	mm	43	50	60
Min. distance from the hedge	mm	43	50	60
Wrench	mm	13	17	19
Hole Ø in the object to fix	mm	9	12	14

RECOMMENDED LOADS

		M8	M10	M12
Tensile strength	daN	680	750	920
Shear load	daN	510	850	1200

These payloads refer to a single anchor, without the influence of either the centre-to centre distance or the distance from the edge h ≥ 2hef . The effect of the shear load is not pointed towards the edge. 1 daN = 1 kg.
Safety load already applied.

FIIXING ON MASONRY

		Solid brick			Hollow brick		
Rods dimensions cl. 5.8		M8	M10	M12	M8	M10	M12
Reticulated plug dimensions					12x80	15x85	20x85
Hole Ø	mm	10	12	14	12	16	20HO
Anchoring depth	hef mm	80	85	95	80	85	85
Hole depth	h1 mm	hef + 5 mm	hef + 5 mm	hef + 5 mm	hef + 5 mm	hef + 5 mm	hef + 5 mm
Tightening torque	Nm	5	8	10	3	4	6
Fixing thickness	tfix,min mm	> 0	> 0	> 0	> 0	> 0	> 0
	tfix,max mm	< 150	< 150	< 150	< 150	< 150	< 150
Min. centre-to-centre distance	mm	50	50	50	100	110	120
Min. distance from the edge	mm	50	50	50	100	110	120

RECOMMENDED LOADS ACCORDING TO ETA 11/0032 - M10 Hollow brick (classe ≥15), according to EN 771-1

				M8	M10	M12
Solid brick		trazione	daN	65	100	115
		taglio	daN	130	150	200
Double brick UNI EN 771-1		trazione	daN	110	130	200
		taglio	daN	120	125	200
Hollow brick		trazione	daN	29	73	80
		taglio	daN	93	108	86
Porotherm		trazione	daN	92	91	102
		taglio	daN	78	106	100

These payloads refer to a single anchor, without the influence of either the centre-to centre distance or the distance from the edge. The effect of the shear load is not pointed towards the edge. Overall safety coefficient is included.

MATERIALS TECHNICAL DATA

ANCHOR MATERIAL

Two-components polyester resin - STYRENE FREE

BASE MATERIAL

Concrete / Natural stone / Solid brick / Wood / Hollow brick

Approved for
> masonry and hollow brick walls ETAG 029 for installations with M10 threaded rods and steel items, ad referred to table 2.
> non-cracked concrete for installations with M8-M16 threaded rods.

Tested for
> lamellar wood GL24

Also suitable for
> non-cracked concrete for installations with rods which dimensions are different from those established by ETA.
> solid natural stone
> solid brick

These exceptions are not included in the ETA regulations, hence it is necessary to test the product on site.

MINIMUM HARDENING TIME

Concrete temperature	Manipulation time	Min. time in dry concrete	Min. hardening time in wet concrete
-10°C *	50 min	50 min	x2
-5°C *	40 min	40 min	x2
5°C	20 min	20 min	x2
15°C	9 min	9 min	x2
25°C	5 min	5 min	x2
35°C	3 min	3 min	x2

*Resin temperature must be at least 20°C
- Total hardening time: 24h
- All data are based on the mixer provided with the product.

TEMPERATURE RANGE

Temperatures range	Concrete temperature range	Max. exposure for long periods	Max. exposure for short periods
Range I	da -40°C a +40°C	+24°C	+40°C
Range II	da -40°C a +80°C	+50°C	+80°C

- Concrete temperature range: temperature range in the environment after installation and the product's life span.
- Maximum exposure for short periods: temperature's change during short periods of time (es. day time/night time cycle and cooling cycle) in the overall temperatures range.
- Maximum exposure for long periods: During the overall temperature range, the temperature remains roughly constant on significant periods of time.

TECHNICAL DATA FOR INSTALLATIONS ON WOOD

Recommended loads for anchorings on lamellar wood is determined according to UNI EN 1194

Lamellar wood features according to UNI EN 1194		
Resistance	**N/mm²**	**GL24**
Bending	$f_{m,k}$	24
Parallel traction	$f_{t,0,k}$	16,5
Perpendicular traction	$f_{t,90,k}$	0,4
Parallel compression	$f_{c,0,k}$	24
Perpendicular compression	$f_{c,90,k}$	2,7
Carving	$f_{v,k}$	2,7
Plastic coefficient	$E_{0,mean}$	11.600
Shear coefficient	G_{mean}	720
Mass volume	P_k	380

Tecnical data and recommended loads on lamellar fir wood - class GL24			
Rod dimension	**Hole Ø (mm)**	**Hole depth (mm)**	**Recommended loads (kN)**
		80	
M8	10	90	3,3
M10	12	100	4,5
M12	14		8,1

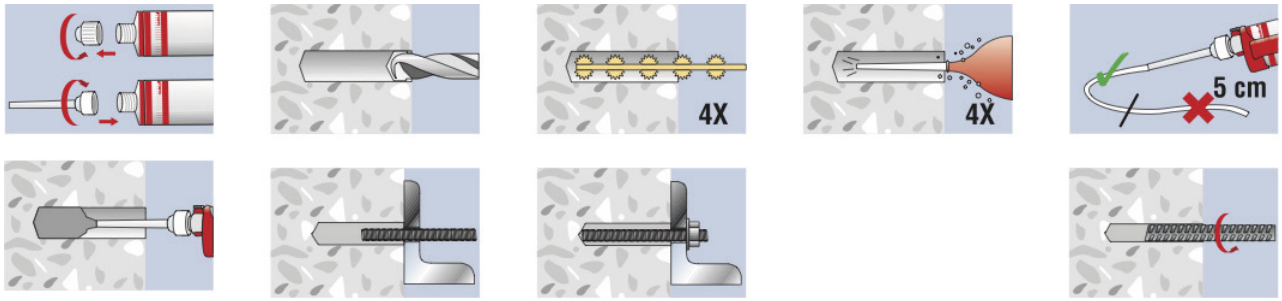
ISTITUTO GIORDANO

Test report nr. 276986
dated 14/12/2010

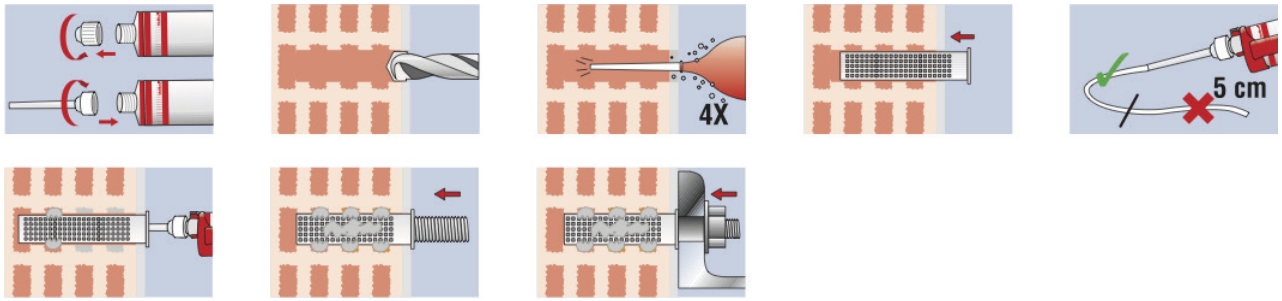
INSTALLATION

Drill and clean the hole up carefully by using the proper iron pipe cleaners. Make sure to remove any rest of material or drilling dust from the hole by brushing and blowing with a manual pump.

SOLID MATERIALS



HOLLOW BRICKS WALL



PACKAGING

In cardboard box

RELATED ITEMS

Gun for chemical anchor cartridge / Brush / Chemical anchor mixer

DATA 09-2020 REV. 00

The current technical data sheet substitutes and cancels the previous ones. Information correspond with our current knowledge of the product. It cannot lead us to any sort of responsibility or compensation.
Gia S.p.A. reserves the right of changing techical features and molds without notice.