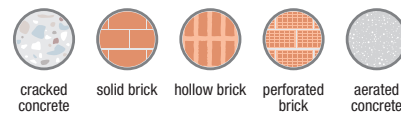
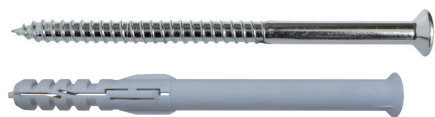


# Vorpa MFR CE

Multi-purpose nylon fixing with European Technical Assessment for cracked concrete



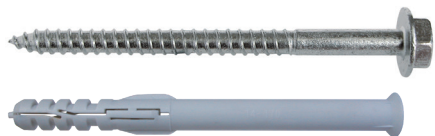
## products group



**MFR CE TSP**  
with countersunk head  
screw and Torx recess

- Approved for**
- cracked and non-cracked concrete C12/15 - C50/60
  - building materials use category a-b-c-d ETAG 020

- To fix**
- window and door frames
  - light structural works
  - wooden substructures
  - handrail



**MFR CE TE**  
with hexagonal head  
special wood screw  
and Torx recess

- Also suitable for**
- solid brick
  - hollow brick
  - perforated brick
  - aerated poroton



ETAG 020  
for use categories a-b-c-d



## product information

### Characteristics

- extra long nylon fixing suitable for applications on compact and hollow materials. Supplied with different types of screws
- special anti-rotation wings that prevents the plug turning in the hole on installation
- the plug's neck avoid the introduction of the plug inside the hole
- resistant to temperatures from -40°C to +80°C
- European Technical Assessment ETAG 020
- temperature resistant from -40°C to + 80°C
- the special anti-rotation wings on the nylon sleeve provides easy and safe installation on all types of material, avoiding any rotation of the nylon sleeve while the screw is installed
- ideal for fixing of facade, frames and general fastenings

### Installation

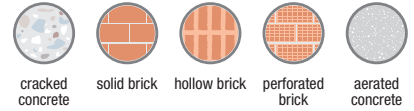
- through setting anchor

### Suggestion for use

- always consider an appropriate safety factor
- check load bearing capacity values
- respect the installation data
- clean the hole before the installation

### Examples of applications



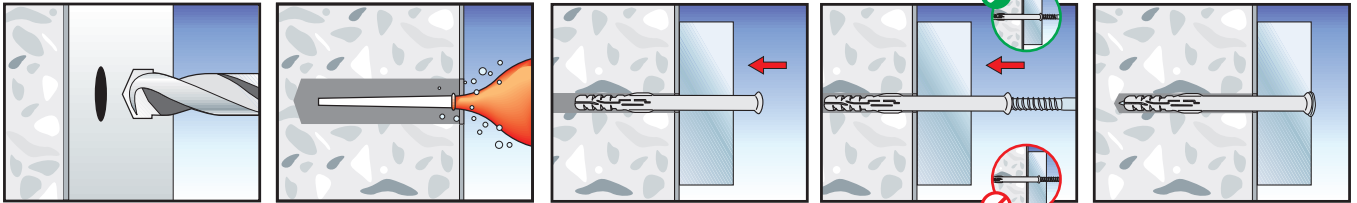


# Vorpa MFR CE

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## installation sequence

### On solid brick



Make a drill hole with a hammer drill

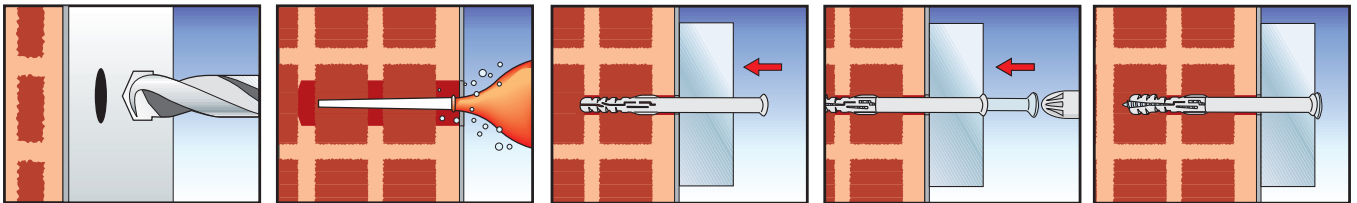
Clean the hole

Place the fixture and then insert the anchor into the hole

Put the anchor by hammering softly on the screw head until the fixture stops the nylon plug

Make sure that the fixture is supported by the anchor (nylon plug and screw)

### On hollow brick



Make a drill hole just by rotary drilling

Clean the hole

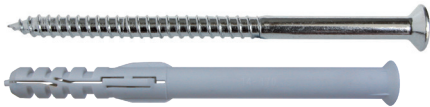
Place the fixture and the anchor into the hole by hand

Put the anchor by hammering softly on the screw head until the fixture stops the nylon plug

Sent the screw by screw driver or by hand. Make sure that the fixture is supported by the anchor (nylon plug and screw)

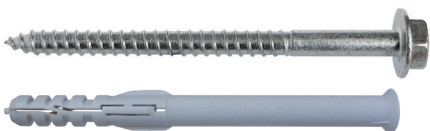
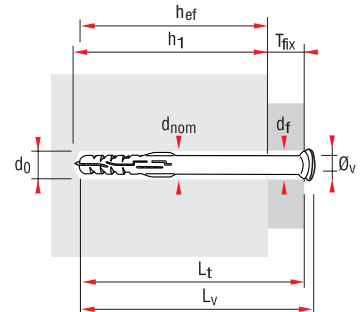
### Clean the hole before the installation

## product code and technical data



MFR CE TSP with countersunk head screw and Torx recess

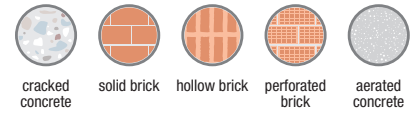
Code	Description	$d_{nom} \times L_t$ mm	$\emptyset_v \times L_v$ mm	$h_1$ mm	$T_{fix}$ mm	$d_o$ mm	$h_{ef}$ mm	$d_f$ mm	Torx
7860	MFR TSP 14/110	14x110	10x115	80	40	14	70	15	50
7861	MFR TSP 14/140	14x140	10x145	80	70	14	70	15	50
7862	MFR TSP 14/170	14x170	10x175	80	100	14	70	15	50
7863	MFR TSP 14/200	14x200	10x205	80	130	14	70	15	50
7864	MFR TSP 14/230	14x230	10x235	80	160	14	70	15	50



MFR CE TE with hexagonal head special wood screw and Torx recess

Code	Description	$d_{nom} \times L_t$ mm	$\emptyset_v \times L_v$ mm	$h_1$ mm	$T_{fix}$ mm	$d_o$ mm	$h_{ef}$ mm	$d_f$ mm	Ch	Torx
7870	MFR TE 14/110	14x110	10x115	80	40	14	70	15	17	50
7871	MFR TE 14/140	14x140	10x145	80	70	14	70	15	17	50
7872	MFR TE 14/170	14x170	10x175	80	100	14	70	15	17	50
7873	MFR TE 14/200	14x200	10x205	80	130	14	70	15	17	50
7874	MFR TE 14/230	14x230	10x235	80	160	14	70	15	17	50

- $L_t$  = Plug length
- $h_1$  = Min. hole depth
- $d_o$  = Hole diameter
- $T_{fix}$  = Fixture thickness
- $\emptyset_v$  = Screw diameter
- $L_v$  = Screw length
- $d_f$  = Diameter hole in the fixture
- $d_{nom}$  = Plug diameter
- $h_{ef}$  = Embedment depth
- Ch = Spanner



# Vorpa MFR CE

Multi-purpose nylon fixing with European Technical Assessment for cracked concrete

technical data

## Use category "a"

**Cracked and non-cracked concrete C16/20 - C12/15**

Installation data		≥ C16/20	C12/15
Minimum spacing	S <sub>min</sub> mm	100	140
Minimum edge distance	C <sub>min</sub> mm	100	140
Minimum thickness of the member	h <sub>min</sub> mm	120	120

Pull out characteristic values		≥ C16/20		C12/15	
Temperature range	T °C	24-40	50-80	24-40	50-80
Characteristic resistance	N <sub>RR,p</sub> kN	4.5	3.0	3.0	2.0

## Use category "b"

**1) Hollow sand-lime brick 250x240x237**

**Density ≥ 1.8 Kg/dm<sup>3</sup>**

**Min.compression strenght ≥ 20 N/mm<sup>2</sup>**

**2) Hollow sand-lime brick 250x240x237**

**Density ≥ 1.8 Kg/dm<sup>3</sup>**

**Min.compression strenght ≥ 10 < 20 N/mm<sup>2</sup>**

Installation data		≥ C16/20	C12/15
Single anchor			
Minimum edge distance	C <sub>min</sub> mm	100	-
Group of anchors			
Minimum edge distance	C <sub>min</sub> mm	100	-
Minimum spacing (perpendicular to free edge)	S <sub>1min</sub> mm	200	-
Minimum spacing (parallel to free edge)	S <sub>2min</sub> mm	400	-
Minimum thickness of the member	h <sub>min</sub> mm	240	-

Pull out characteristic values		24/40°C		50/80°C	
Characteristic resistance	N <sub>RR,p</sub> kN	1) 5.0 - 2) 3.5	1) 4.5 - 2) 3.0		

## Use category "b"

**1) Solid brick 115x240x71**

**Density ≥ 1.8 Kg/dm<sup>3</sup>**

**Min.compression strenght ≥ 20 N/mm<sup>2</sup>**

**2) Solid brick 116x240x71**

**Density ≥ 1.8 Kg/dm<sup>3</sup>**

**Min.compression strenght ≥ 10 < 20 N/mm<sup>2</sup>**

Installation data		≥ C16/20	C12/15
Single anchor			
Minimum edge distance	C <sub>min</sub> mm	100	-
Group of anchors			
Minimum edge distance	S <sub>1min</sub> mm	100	-
Minimum spacing (perpendicular to free edge)	S <sub>2min</sub> mm	200	-
Minimum spacing (parallel to free edge)	C <sub>min</sub> mm	400	-
Minimum thickness of the member	h <sub>min</sub> mm	115	-

Pull out characteristic values		24/40°C		50/80°C	
Characteristic resistance	N <sub>RR,p</sub> kN	1) 4.5 - 2) 3.0	1) 3.0 - 2) 2.0		

## Use category "b"

**1) Hollow sand-lime brick 240x115x113**

**Density ≥ 1.8 Kg/dm<sup>3</sup>**

**Min.compression strenght ≥ 20 N/mm<sup>2</sup>**

**2) Hollow sand-lime brick 240x115x113**

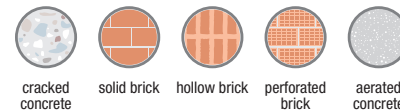
**Density ≥ 1.8 Kg/dm<sup>3</sup>**

**Min.compression strenght ≥ 10 < 20 N/mm<sup>2</sup>**

Installation data		≥ C16/20	C12/15
Single anchor			
Minimum edge distance	C <sub>min</sub> mm	100	-
Group of anchors			
Minimum edge distance	C <sub>min</sub> mm	100	-
Minimum spacing (perpendicular to free edge)	S <sub>1min</sub> mm	200	-
Minimum spacing (parallel to free edge)	S <sub>2min</sub> mm	400	-
Minimum thickness of the member	h <sub>min</sub> mm	115	-

Pull out characteristic values		24/40°C		50/80°C	
Characteristic resistance	N <sub>RR,p</sub> kN	1) 4.5 - 2) 3.0	1) 4.0 - 2) 2.5		

universal and frame fixings



# Vorpa MFR CE

Multi-purpose nylon fixing with European Technical Assessment for cracked concrete

technical data

## Use category "c"

**Hollow brick 235x115x113**  
**Density  $\geq 1.0 \text{ Kg/dm}^3$**   
**Min.compression strenght 12 N/mm<sup>2</sup>**

Installation data		MFR 14	
Single anchor			
Minimum edge distance	C <sub>min</sub> mm	120	
Group of anchors			
Minimum edge distance	S <sub>1min</sub> mm	120	
Minimum spacing (perpendicular to free edge)	S <sub>2min</sub> mm	240	
Minimum spacing (parallel to free edge)	C <sub>min</sub> mm	480	
Minimum thicknes of the member	h <sub>min</sub> mm	115	

Pull out characteristic values		24/40°C	50/80°C
Characteristic resistance	N <sub>RR,p</sub> kN	0.75	0.5

## Use category "c"

**Hollow brick 250x240x237**  
**Density  $\geq 1.4 \text{ Kg/dm}^3$**   
**Min.compression strenght 12 N/mm<sup>2</sup>**

Installation data		MFR 14	
Single anchor			
Minimum edge distance	C <sub>min</sub> mm	100	
Group of anchors			
Minimum edge distance	S <sub>1min</sub> mm	100	
Minimum spacing (perpendicular to free edge)	S <sub>2min</sub> mm	200	
Minimum spacing (parallel to free edge)	C <sub>min</sub> mm	400	
Minimum thicknes of the member	h <sub>min</sub> mm	240	

Pull out characteristic values		24/40°C	50/80°C
Characteristic resistance	N <sub>RR,p</sub> kN	1.2	0.75

## Use category "d"

**Non-cracked aerated concrete**  
**Density 0.35 Kg/dm<sup>3</sup>**

Installation data		AAC 2		AAC 4		AAC 6	
Single anchor							
Minimum edge distance	C <sub>min</sub> mm	50		75		150	
Group of anchors							
Minimum spacing (perpendicular to free edge)	S <sub>1min</sub> mm	100		150		200	
Minimum spacing (parallel to free edge)	S <sub>2min</sub> mm	200		300		400	
Minimum thicknes of the member	h <sub>min</sub> mm	100		100		100	

Pull out characteristic values		24/40°C - 50/80°C		24/40°C - 50/80°C		24/40°C - 50/80°C	
Characteristic resistance	N <sub>RR,p</sub> kN	0.4	0.3	1.2	0.9	2.0	1.5

### Examples of applications

