

TECHNICAL DATA SHEET

KFX Polyester Resin - Styrene Free (300ml)

High Performance Chemical Anchor

Injection Mortar System

For Standard Applications in Concrete, Masonry and Perforated Brick

Fast Curing in Normal Conditions

Versatile All-Round Resin

Suitable For Use in Natural Stone



Order Code 03004

APPROVALS

Approvals

ETA Approval: ETA-18/0833

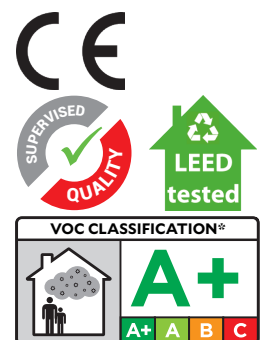
- For injection anchors for use in masonry acc. to EAD 330076-00-0604

ETA Approval: ETA-11/0285

- For bonded fasteners acc. to EAD 330499-01-0601 (Option 7)

Base Material

Non-cracked concrete, light-concrete, porous concrete, solid masonry, hollow brick, natural stone (Attention! natural stone, can discolour; shall be checked in advance; solid anchoring base: hammer drilled bore holes, perforated bricks: rotary drilled bore holes.



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Product Overview

Description

KFX RPF is a 2 component reaction resin mortar based on a styrene-free polyester and will be delivered in a 2 component cartridge system. This product may be used in combination of a hand-, battery-, or pneumatic tool and a static mixer. It was designed as a cost effective alternative for the anchoring of threaded rods for approved applications. By using a perforated sleeve, an easy and save application in hollow bricks is guaranteed. The KFX RPF product is characterised by manifold applications with an ambient temperature up to 80°C.

Properties & Benefits

- European Technical Assessment for injection anchors for use in masonry acc. to EAD 330076-00-0604: ETA-18/0833.
- European Technical Assessment for bonded fasteners acc. to EAD 330499-01-0601 (Option 7): ETA-11/0285.
- Overhead application.
- Suitable for attachment points with small edge and axial distances due to an anchoring free of expansion forces.
- Reduced chemical resistance.
- High bending and pressure strength.
- Cartridge can be reused up to the end of the shelf life by replacing the static mixer or resealing cartridge with the sealing cap.

Applications Samples

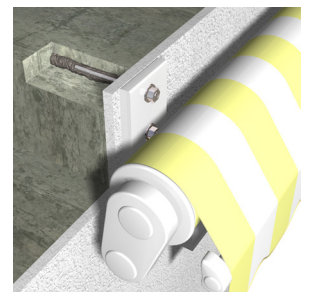
Suitable for the fixation of facades, roofs, wood constructions, metal constructions; metal profiles, columns, beams, consoles, railings, sanitary devices, cable trays, piping, etc.

Handling & Storage

- Storage: store in a cold and dark place, storage temperature: from +5°C up to +25 °C
- Shelf life: 18 months for cartridges.

Applications & Intended Use

- **Base material:**
Non-cracked concrete, light-concrete, porous-concrete, solid masonry, hollow brick, natural stone (Attention! natural stone, can discolour; shall be checked in advance; solid anchoring base: hammer drilled bore holes, perforated bricks: rotary drilled bore holes.
- **Anchor elements:**
Threaded rods (zinc plated or hot dip, stainless steel and high corrosion resistance steel), profiled rod, steel section with undercuts (e.g. perforated section) *See page 6 for recommended studs.*
- **Temperature range:**
-5°C up to +40°C installation temperature
cartridge temperature min. +5°C; optimal +40°C,
base material temperature after full curing -40°C to +80°C



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Mortar Properties

Properties	Test Method	Result
UV resistance	-	Pass
Watertightness	DIN EN 12390-8	0 mm
Temperature stability	-	120 °C
pH-value	-	> 12
Density	-	1,79 kg / dm ³
Compressive strength	EN 196 Teil1	88 N / mm ²
Flexural strength	EN 196 Teil1	31 N / mm ²
E modulus	EN 12504-4	14000 N / mm ²
Shrinkage	-	< 0,3 %
Hardness Shore D	-	90
Electrical resistance	IEC 93	1,5 10 ⁸ W m
Thermal conductivity	DIN EN 993-15	0,49 W/m·K

Reactivity

Concrete temperature			RPF Polyester Resin - Styrene Free	
			Max. working time	Min. curing time ¹⁾
0 °C	to	+4°C	45 min	3 h
+5 °C	to	+9°C	25 min	2 h
+ 10 °C	to	+14°C	20 min	100 min
+ 15 °C	to	+19°C	15 min	80 min
+ 20 °C	to	+29°C	6 min	45 min
+ 30 °C	to	+34°C	4 min	25 min
+ 35 °C	to	+39°C	2 min	20 min
Cartridge temperature			+5 °C to +40 °C	

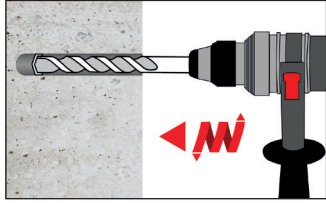
¹⁾ The curing times in wet concrete will need to be doubled.

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Anchorage in Concrete

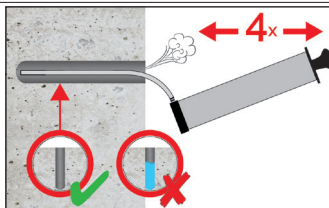
Installation Instructions

Drilling of the bore hole



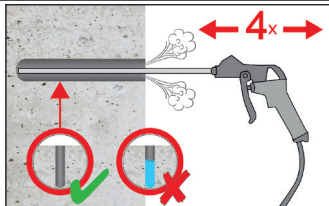
- 1a. Drill a hole with a hammer drill (HD) into the base material to the size and embedment depth required by the selected anchor (see page 7). In case of aborted drill hole; the drill hole should be filled with mortar.

Attention! Standing water must be removed before cleaning.

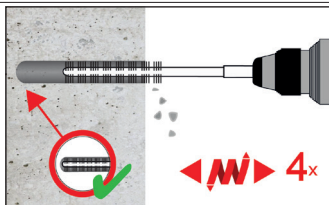


- 2a. Starting from the bottom or back of the bore hole, blow the hole clean with compressed air (min. 6 bar) or a hand pump (see page 12) a minimum of four times. If the bore hole ground is not reached an extension shall be used.

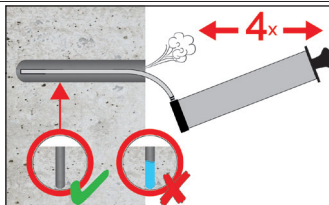
or



The hand-pump can be used for anchor sizes up to bore hole diameter 20 mm. For bore holes larger than 20 mm or deeper 240 mm, compressed air (min. 6 bar) must be used.

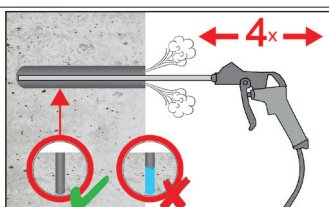


- 2b. Check brush diameter and attach the brush to a drilling machine or a battery screwdriver. Brush the hole with an appropriate sized wire brush $> d_{b,min}$ (see page 6) a minimum of four times. If the bore hole ground is not reached with the brush, a brush extension will need to be used.



- 2c. Starting from the bottom / back of the bore hole, blow the hole clean with compressed air (min. 6 bar) or a hand pump a minimum of four times. If the bore hole ground is not reached an extension should be used.

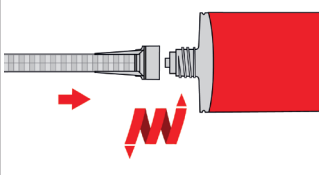
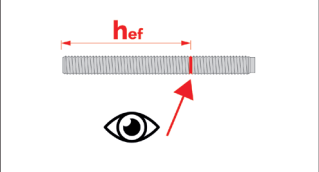
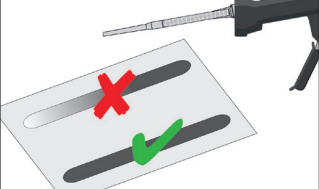
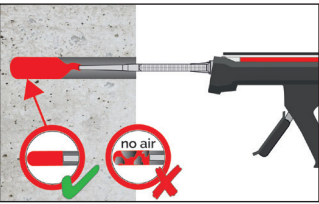
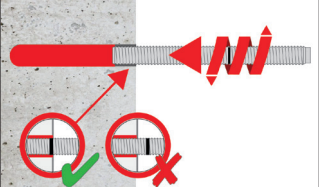
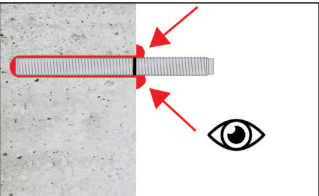
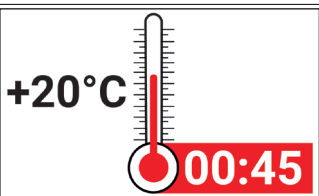
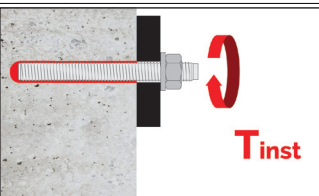
or



For bore holes larger than 20 mm or deeper 240 mm, compressed air (min. 6 bar) must be used.

After cleaning, the bore hole has to be protected against re-contamination until the mortar is injected. If necessary, the cleaning has to be repeated directly before dispensing the mortar. In-flowing water must not contaminate the bore hole again.


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	<p>3. Attach a supplied static-mixing nozzle to the cartridge and load the cartridge into the correct dispensing tool. Cut off the foil tube clip before use. For every working interruption longer than the recommended working time (see page 3) as well for new cartridges, a new static-mixer should be used.</p>
	<p>4. Prior to inserting the anchor rod into the filled bore hole, the position of the embedment depth should be marked on the anchor rods.</p>
	<p>5. Prior to dispensing into the anchor hole, squeeze out separately a minimum of three full strokes and discard non-uniformly mixed adhesive components until the mortar shows a consistent grey colour.</p>
	<p>6. Starting from the bottom resp. back of the cleaned anchor hole fill the hole up to approximately two-thirds with adhesive. Slowly withdraw of the static mixing nozzle as the hole is filled avoids creating air pockets. If the bore hole ground is not reached with the static-mixing nozzle, a appropriate extension must be used. Observe the gel-/ working times given (see page 3).</p>
	<p>7. Push the threaded rod or reinforcing bar into the anchor hole while turning slightly to ensure positive distribution of the adhesive until the embedment depth is reached.</p> <p>The anchor should be free of dirt, grease, oil or other foreign material.</p>
	<p>8. Be sure that the anchor is fully seated at the bottom of the hole and that excess mortar is visible at the top of the hole. If these requirements are not maintained, the application has to be renewed.</p> <p>For overhead application the anchor rod should be fixed (e. g. wedges).</p>
	<p>9. Allow the adhesive to cure to the specified time prior to applying any load or torque. Do not move or load the anchor until it is fully cured.</p>
 <p>T_{inst}</p>	<p>10. After full curing, the add-on part can be installed with the max. torque by using a calibrated torque wrench.</p>


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Installation Accessories

Blow Out Pump	
Order Code	Description
03079	Hand held blow out pump. For use with Hole Cleaning Brush for hole preparation prior to resin injection.

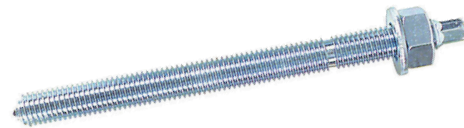


Hole Cleaning Brush	
Order Code	Description
03081	Wire Brush for 10mm Hole
03082	Wire Brush for 12mm Hole
03083	Wire Brush for 14mm Hole
03084	Wire Brush for 16mm Hole
03085	Wire Brush for 18mm Hole
03086	Wire Brush for 20mm Hole
03087	Wire Brush for 22mm Hole
03088	Wire Brush for 24mm Hole
03089	Wire Brush Handle



Anchor Studs

The following studs must be used with KFX Resin to guarantee the anchor loadings on Page 7



Order Code	Size (mm)	Finish	Hole Cleaning Brush Req'd	Box Qty
03060	M8 x 110	BZP	03081	10
03061	M10 x 130	BZP	03082	10
03062	M12 x 160	BZP	03083	10
03063	M16 x 190	BZP	03085	10
03064	M20 x 260	BZP	03087	5
03090	M8 x 110	HDG	03081	10
03091	M10 x 130	HDG	03082	10
03092	M12 x 160	HDG	03083	10
03093	M16 x 190	HDG	03085	10
03094	M20 x 260	HDG	03087	5
03071	M8 x 110	A4 S/S	03081	10
03072	M10 x 130	A4 S/S	03082	10
03073	M12 x 160	A4 S/S	03083	10
03074	M16 x 190	A4 S/S	03085	10
03075	M20 x 260	A4 S/S	03087	5

See Page 7 for Loadings & Setting Parameters

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Anchor Studs (Continued)

Setting Parameters

Anchor size			M8	M10	M12	M16	M20
Outer diameter of anchor	$d = d_{nom}$	[mm]	8	10	12	16	20
Nominal drill hole diameter	d_o	[mm]	10	12	14	18	24
Effective embedment depth	$h_{ef,min}$	[mm]	60	60	70	80	90
	$h_{ef,max}$	[mm]	160	200	240	320	400
Diameter of clearance hole in the fixture	$d_f \leq$	[mm]	9	12	14	18	22
Maximum torque moment	$T_{inst} \leq$	[Nm]	10	20	40	80	120
Minimum thickness of member	h_{min}	[mm]	$h_{ef} + 30 \text{ mm} \geq 100 \text{ mm}$			$h_{ef} + 2d_o$	
Minimum spacing	S_{min}	[mm]	40	50	60	80	100
Minimum edge distance	C_{min}	[mm]	40	50	60	80	100

Recommended Loads

The recommended loads are only valid for single anchors for a roughly design, if the following conditions are valid:

- $c \geq 1,5 \times h_{ef}$ $s \geq 3,0 \times h_{ef}$ $h \geq 2 \times h_{ef}$
- $\psi_{sus} = 1,0$; percentage of dead load $\leq \psi_{sus}^{0}$ see table below
- The recommended loads have been calculated using the partial safety factors for resistances stated in the ETA and with a partial safety factor for actions of $\gamma_f=1.4$.
The partial safety factor for seismic action is $\gamma_1 = 1,0$.

If the conditions are not fulfilled the loads must be calculated acc. to EN 1992-4.

For further details observe the specifications of ETA-11/0285.

<ul style="list-style-type: none"> • Property class 8.8 • Concrete - C20/25 • Hammer drilling (HD) • Dry, wet concrete 			M8	M10	M12	M16	M20	
Recommended tension load	40°C / 24°C ¹⁾	uncracked	$N_{rec,stat}$ [kN]	6,8	9,0	13,2	19,9	33,9
	80°C / 50°C ¹⁾		$N_{rec,stat}$ [kN]	5,2	6,7	9,9	15,0	25,4
Recommended shear load without lever arm ²⁾	$V_{rec,stat}$ [kN]		6,3	9,7	14,3	20,8	34,1	
Embedment depth	h_{ef}	[mm]	80	90	110	125	170	
Edge distance	$c \geq$	[mm]	120	135	165	187,5	255	
Axial distance	$s \geq$	[mm]	240	270	330	375	510	

¹⁾ Short term temperature/ Long term temperature.

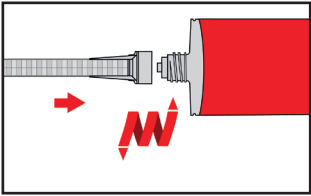
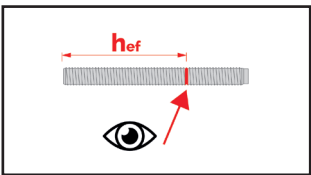
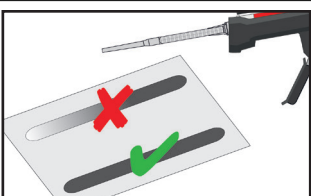
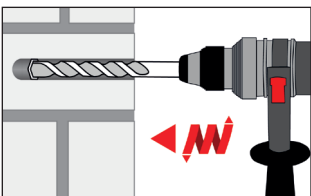
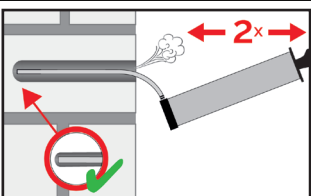
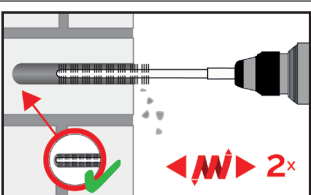
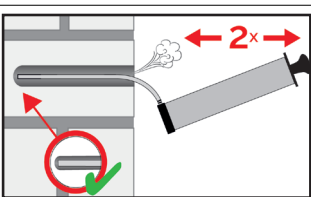
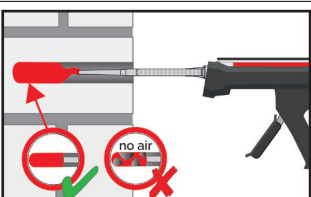
²⁾ Shear loads are valid for all specified temperature ranges.

$N_{rec,stat}$, $V_{rec,stat}$ = Recommended load under static and quasi-static action

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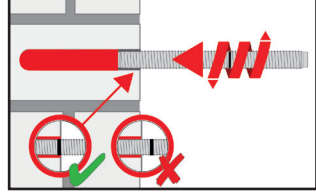
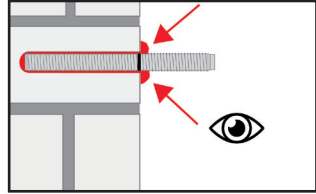
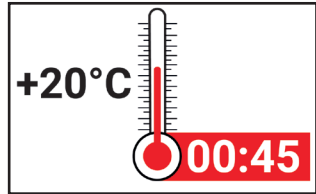
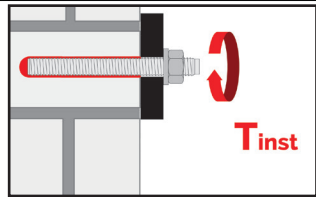
Anchorage in Masonry

Installation Instructions

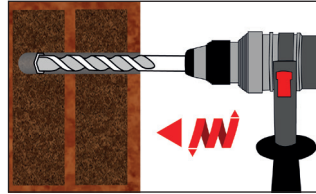
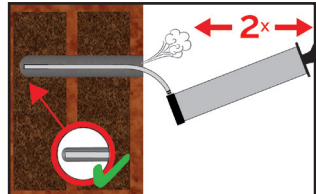
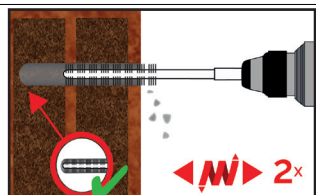
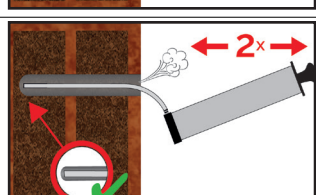
Preparation of cartridge	
	1. Remove the cap and attach the supplied static-mixing nozzle to the cartridge and load the cartridge into the correct dispensing tool. For every working interruption longer than the recommended working time (see page 3) as well as for new cartridges, a new static-mixer should be used.
	2. Prior to inserting the anchor rod into the filled bore hole, the position of the embedment depth should be marked on the anchor rods.
	3. Prior to dispensing into the anchor hole, separately squeeze out a minimum of three full strokes and discard non-uniformly mixed adhesive components until the mortar shows a consistent grey colour.
Installation in solid masonry (without sleeve)	
	4. Holes to be drilled perpendicular to the surface of the base material by using a hard-metal tipped hammer drill bit. Drill a hole, with the drilling method (according to page 11), into the base material. Ensure nominal drill hole diameter and bore hole depth is according to the size and embedment depth required by the selected anchor. In case of aborted drill hole the drill hole shall be filled with mortar.
	2a. Starting from the bottom or back of the bore hole, blow the hole clean with handpump a minimum to two times.
	2b. Attach an appropriate sized wire brush $> d_{b,min}$ (see page 6) to a drill or a cordless screwdriver and brush the hole clean a minimum of two times with a twisting motion. If the bottom of the bore hole is not reached with the brush, a brush extension must be used.
	c. Finally blow the hole clean again with handpump, a minimum of two times.
	6. Starting from the bottom / back of the cleaned anchor hole, fill the hole up to approximately two-thirds with adhesive. Slowly withdraw of the static mixing nozzle as the hole is filled to avoid creating air pockets. Observe the gel-/ working times given (see page 7).

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Installation in solid masonry (without sleeve) - Continued

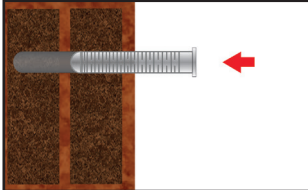

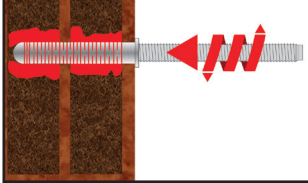
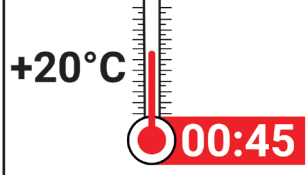
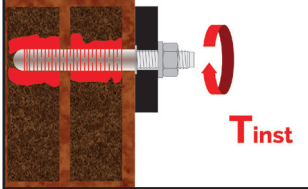
	<p>7. Push the threaded rod or reinforcing bar into the anchor hole while turning slightly to ensure positive distribution of the adhesive, until the embedment depth is reached.</p> <p>The anchor should be free of dirt, grease, oil or other foreign material.</p>
	<p>8. Be sure that the anchor is fully seated at the bottom of the hole and that excess mortar is visible at the top of the hole. If these requirements are not maintained, the application has to be renewed.</p>
	<p>9. Allow the adhesive to cure to the specified time prior to applying any load or torque. Do not move or load the anchor until it is fully cured. (See page 7).</p>
	<p>10. After full curing, the fixture can be installed with up to the max. installation torque (see page 7) by using a calibrated torque wrench.</p>

Installation in solid and hollow masonry (with sleeve)

	<p>4. Holes to be drilled perpendicular to the surface of the base material by using a hard-metal tipped hammer drill bit. Drill a hole, with drill method according to page 11, into the base material, with nominal drill hole diameter and bore hole depth, according to the size and embedment depth required by the selected anchor. In case of aborted drill hole the drill hole shall be filled with mortar.</p>
	<p>5a. Starting from the bottom / back of the bore hole, blow the hole clean with handpump a minimum of two times.</p>
	<p>5b. Attach an appropriate sized wire brush $> d_{b,min}$ (see page 6) to a drill or a cordless screwdriver and brush the hole $d_{b,min}$ clean with a minimum of two times in a twisting motion. If the bore hole ground is not reached with the brush, a brush extension must be used.</p>
	<p>5c. Finally blow the hole clean again with handpump a minimum of two times.</p>

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Installation in solid and hollow masonry (with sleeve) - Continued

	<p>6. Insert the perforated sleeve flush with the surface of the masonry or plaster. Only use sleeves that have the right length. Never cut the sleeve.</p>
	<p>7. Starting from the bottom or back fill the sleeve with adhesive. For quantity of mortar attend cartridges label or installation instructions.</p> <p>Observe the gel-/working times given in table on page 3.</p>
	<p>8. Push the threaded rod into the anchor hole while turning slightly to ensure positive distribution of the adhesive until the embedment depth is reached. The anchor shall be free of dirt, grease, oil or other foreign material.</p>
	<p>9. Allow the adhesive to cure to the specified curing time prior to applying any load or torque. Do not move or load the anchor until it is fully cured (attend tables on page 3).</p>
	<p>10. After full curing, the fixture can be installed with up to the max. installation torque (see parameters of brick on pages 14-15) by using a calibrated torque wrench.</p>

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Installation Parameters


Solid brick and autoclaved aerated concrete			M8	M10	M12	M16
Nominal drill hole diameter	d_o	[mm]	10	12	14	18
Effective anchorage depth	h_{ef}	[mm]	80	90	100	100
Drill hole depth	h_o	[mm]	80	90	100	100
Minimum wall thickness	h_{min}	[mm]	$h_{ef} + 30$			
Diameter of clearance hole in the fixture	d_f	[mm]	9	12	14	18
Brushes		[-]	03081	03082	03083	03086
Min. brush diameter	$d_{b,min} \geq$	[mm]	10,5	12,5	14,5	18,5
Max. installation torque	$T_{inst,max}$	[Nm]	see tables on pages 14-15			

Hollow brick and solid brick with sleeve			M8	M8/M10			M12 /M16		
Perforated sleeve			03013	03013	03013	03013	03015	03015	03015
Nominal drill hole diameter	d_o	[mm]	12	16	16	16	20	20	20
Effective anchorage depth	h_{ef}	[mm]	80	85	130	130	85	130	200
Drill hole depth	h_o	[mm]	85	90	135	$135 + t_{fix}^{1)}$	90	135	205
Minimum wall thickness	h_{min}	[mm]	115	115	175	175	115	175	240
Diameter of clearance hole in the fixture	d_f	[mm]	9	9 (M8) / 12 (M10)			14 (M12) / 18 (M16)		
Brushes		[-]	03082	03084			03086		
Min. brush diameter	$d_{b,min} \geq$	[mm]	12,5	16,5			20,5		
Max. installation torque	$T_{inst,max}$	[Nm]	see tables on pages 14-15						
¹⁾ $t_{fix} < 200$ mm									


TECHNICAL DATA SHEET

Installation Accessories


Blow Out Pump	
Order Code	Description
03079	Hand held blow out pump.



Hole Cleaning Brush	
Order Code	Description
03081	Wire Brush for 10mm Hole
03082	Wire Brush for 12mm Hole
03083	Wire Brush for 14mm Hole
03084	Wire Brush for 16mm Hole
03085	Wire Brush for 18mm Hole
03086	Wire Brush for 20mm Hole
03087	Wire Brush for 22mm Hole
03088	Wire Brush for 24mm Hole
03089	Wire Brush Handle



Mesh Resin Sleeves				
Order Code	Type	Size (mm)	Drill Hole Ø (mm)	Stud Ø
03013	Plastic	16 x 85	16	M8/M10
03015	Plastic	20 x 85	20	M12/M16
03023	Wire	16 x 1000	22	M16
03024	Wire	20 x 1000	28	M20



TECHNICAL DATA SHEET

Calculation of Recommended Loads

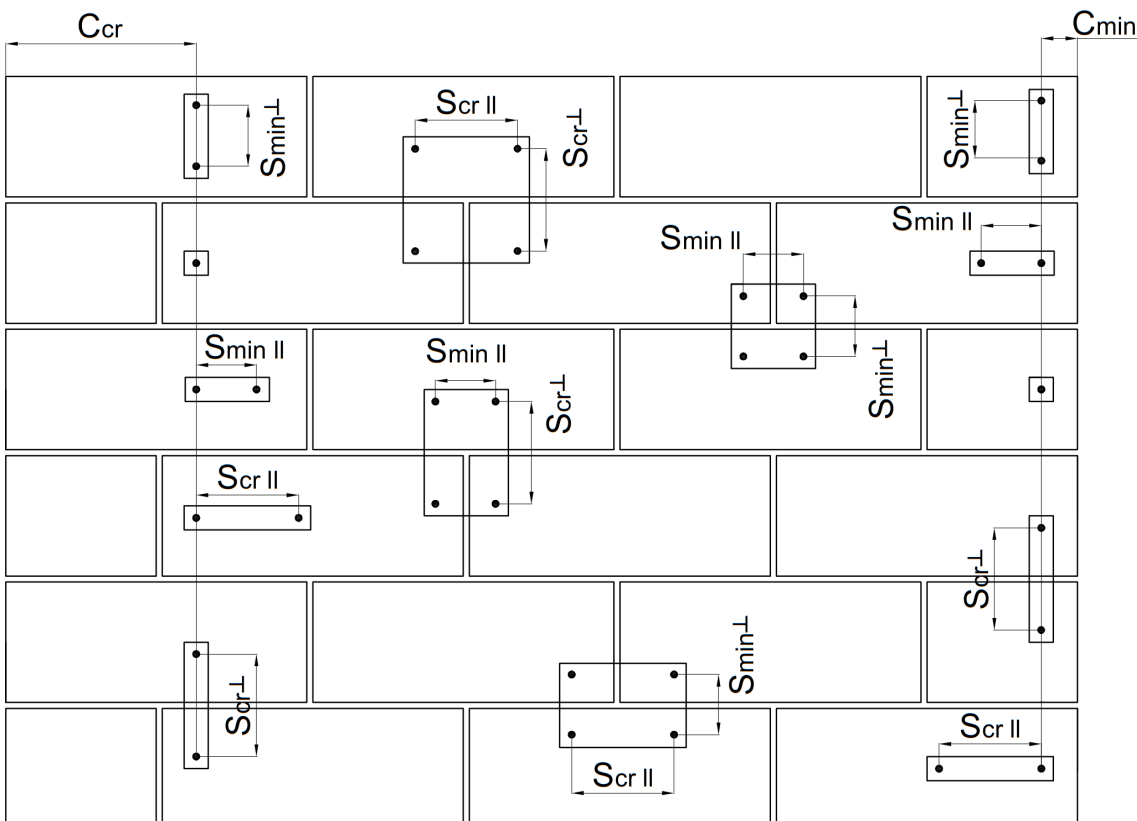
The recommended loads given are for preliminary planning purposes only and do not replace dimensioning.

The following conditions must be met:

- Dry environment
- Temperature range 24/40°C (long-term/short-term)
- Spacing distance $s \geq s_{cr}$
- Edge distance $c \geq c_{cr}$
- Strength class of masonry mortar at least M2.5
- Brick strength as well as density and dimensions
- Joints are visible
- Vertical joint is mortared
- Strength class of the threaded rod is min. 5.8 or higher
- Drilling method:
 "rotary drilling" in hollow brick and autoclaved aerated concrete (AAC),
 "hammer drilling" in solid brick

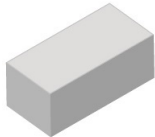




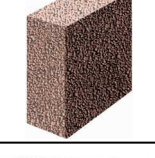

The recommended loads take into account all partial safety factors (resistance 2.5; action 1.4) and all failure modes. An interaction between tension and transverse tension was not taken into account.

If one or more of the conditions listed above are not fulfilled, the application must be recalculated according to TR054 and the requirements of the relevant ETA.



TECHNICAL DATA SHEET

Recommended Loads

Naming Compressive strength Density Dimensions	Picture	Anchor rods	Perforated sleeve	T_{inst}	C_{cr}	C_{min}	S_{cr}	S_{min}	N_{empf}	V_{empf}
				[Nm]	[mm]	[mm]	[mm]	[mm]	[kN]	[kN]
Calcium silica solid bricks acc. to EN 771-2										
Solid limestone KS $\geq 10 \text{ N/mm}^2$ $r \geq 2,0 \text{ kg/dm}^3$ $\geq 240 \times 115 \times 71 \text{ mm}$		M8 to M16	without 12x80 16x85; 16x130 20x85; 20x130; 20x200	10	240	120	240	240	0,71	0,71
Perforated limestone KS-L 3DF $\geq 12 \text{ N/mm}^2$ $r \geq 1,4 \text{ kg/dm}^3$ $\geq 240 \times 175 \times 113 \text{ mm}$		M8 to M16	12x80 16x85; 16x130 20x85; 20x130; 20x200	8	240	100	240	113	0,43	0,26
Perforated limestone KS-L 12DF $\geq 12 \text{ N/mm}^2$ $r \geq 1,4 \text{ kg/dm}^3$ $\geq 498 \times 175 \times 238 \text{ mm}$		M8 to M16	12x80 16x85; 16x130 20x85; 20x130;	2	500	100	500	240	0,11	0,36
Autoclaved aerated concrete acc. to EN 771-4										
AAC 2 $\geq 2 \text{ N/mm}^2$ $r \geq 0,35 \text{ kg/dm}^3$ $\geq 449 \times 240 \times 249 \text{ mm}$		M8 to M16	without 12x80 16x85; 16x130 20x85; 20x130; 20x200	2	450	120	240	240	0,26	0,43
AAC 4 $\geq 4 \text{ N/mm}^2$ $r \geq 0,5 \text{ kg/dm}^3$ $\geq 449 \times 240 \times 249 \text{ mm}$		M8 to M16	without 12x80 16x85; 16x130 20x85; 20x130; 20x200	2	450	120	240	240	0,26	0,43
AAC 6 $\geq 6 \text{ N/mm}^2$ $r \geq 0,6 \text{ kg/dm}^3$ $\geq 449 \times 240 \times 249 \text{ mm}$		M8 to M16	without 12x80 16x85; 16x130 20x85; 20x130; 20x200	2	450	120	240	240	0,57	1,57
Lightweight concrete solid block acc. to EN 771-3										
VBL $\geq 2 \text{ N/mm}^2$ $r \geq 0,6 \text{ kg/dm}^3$ $\geq 240 \times 300 \times 113 \text{ mm}$		M8 to M16	without	6	240	120	240	240	0,57	0,6
Leca Lex harkko RUH 200 Kulma $\geq 3 \text{ N/mm}^2$ $r \geq 0,78 \text{ kg/dm}^3$ $\geq 498 \times 200 \times 195 \text{ mm}$		M8 to M16	12x80 16x85; 16x130 20x85; 20x130	6	500	120	240	240	0,57	0,73

TECHNICAL DATA SHEET

Naming Compressive strength Density Dimensions	Picture	Anchor rods	Perforated sleeve	T _{inst}	C _{cr}	C _{min}	S _{cr}	S _{min}	N _{empf}	V _{empf}
				[Nm]	[mm]	[mm]	[mm]	[mm]	[kN]	[kN]
Hollow light weight concrete brick acc. to EN 771-3										
Bloc Creux B40 ≥ 5 N/mm ² r ≥ 0,8 kg/dm ³ ≥ 495x195x190 mm		M8 to M16	16x130 20x130	2	500	100	500	190	0,11	0,26
Leca Lex harkko RUH 200 ≥ 2,7 N/mm ² r ≥ 0,7 kg/dm ³ ≥ 498x200x195 mm		M8 to M16	12x80 16x85; 16x130 20x85; 20x130	8	500	120	500	195	0,57	0,26
Solid clay brick acc. to EN 771-1										
Solid clay brick Mz-1DF ≥ 20 N/mm ² r ≥ 2,0 kg/dm ³ ≥ 240x115x55 mm		M8 to M16	without 12x80 16x85; 16x130 20x85; 20x130; 20x200	6	240	120	240	240	0,43	0,86
Hollow clay brick acc. to EN 771-1										
Hollow clay brick HLZ 16DF ≥ 6 N/mm ² r ≥ 0,8 kg/dm ³ ≥ 497x240x238 mm		M8 to M16	12x80 16x85; 16x130 20x85; 20x130; 20x200	6	500	100	500	238	0,34	0,36
Hollow clay brick BGV Thermo ≥ 4 N/mm ² r ≥ 0,60 kg/dm ³ ≥ 500x200x314 mm		M8 to M16	12x80 16x85; 16x130 20x85; 20x130	2	500	100	500	314	0,11	0,36
Hollow clay brick Calibric R+ ≥ 6 N/mm ² r ≥ 0,6 kg/dm ³ ≥ 500x200x314 mm		M8 to M16	12x80 16x85; 16x130 20x85; 20x130	2	500	100	500	314	0,21	0,36
Hollow clay brick Urbanbric ≥ 6 N/mm ² r ≥ 0,7 kg/dm ³ ≥ 560x200x274 mm		M8 to M16	12x80 16x85; 16x130 20x85; 20x130	2	560	100	560	274	0,26	0,36
Hollow clay brick Porotherm Homebric ≥ 6 N/mm ² r ≥ 0,7 kg/dm ³ ≥ 500x200x299 mm		M8 to M16	12x80 16x85; 16x130 20x85; 20x130	2	500	100	500	300	0,26	0,36
Hollow clay brick Blocchi Leggeri ≥ 4 N/mm ² r ≥ 0,55 kg/dm ³ ≥ 250x120x250 mm		M8 to M16	12x80 16x85; 16x130 20x85; 20x130; 20x200	4	250	100	250	250	0,11	0,43
Hollow clay brick Doppio Uni ≥ 10 N/mm ² r ≥ 0,9 kg/dm ³ ≥ 250x120x120 mm		M8 to M16	12x80 16x85; 16x130 20x85; 20x130; 20x200	4	250	100	250	120	0,26	0,34

TECHNICAL DATA SHEET

Chemical Resistance

Chemical Agent	Concentration	Resistant	Not resistant
Accumulator acid		x	
Acetic acid	10%	x	
Acetic acid	40%		x
Laitance			x
Acetone	5%		x
Acetone	10%		x
Acetone	100%		x
Ammonia, aqueous solution	5%	x	
Ammonia, aqueous solution	32%		x
Aniline	100%		x
Beer	100%	x	
Chlorine	All		x
Benzol	100%		x
Boric Acid, aqueous solution		x	
Calcium carbonate, suspended in water	All	x	
Calcium chloride, suspended in water		x	
Calcium hydroxide, suspended in water		x	
Chlorinated lime (Calcium hypochlorite)	10%		x
Carbon tetrachloride	100%	x	
Caustic soda solution	10%	x	
Caustic soda solution	40%		x
Citric acid	10%		x
Citric acid	50%		x
Citric acid	All	x	
Chlorine water, swimming pool	All	x	
Demineralized water	All		x
Diesel oil	100%	x	
Ethyl alcohol, aqueous solution	100%		x
Ethyl alcohol, aqueous solution	50%		x
Formic acid	10%		x
Formic acid	30%		x
Formic acid	100%		x
Formaldehyde, aqueous solution	20%		x
Formaldehyde, aqueous solution	30%	x	
Freon		x	
Fuel Oil		x	
Gasoline (premium grade)	100%	x	
Glycol (Ethylene glycol)		x	
Hydraulic fluid	Conc.	x	
Hydrochloric acid (Muriatic Acid)	Conc.		x
Hydrogen peroxide	10%		x
Hydrogen peroxide	30%		x
Isopropyl alcohol	100%		x
Lactic acid	10%		x
Lactic acid	All	x	
Linseed oil	100%	x	
Lubricating oil	100%	x	
Magnesium chloride, aqueous solution	All	x	
Methanol	100%		x
Standard benzene		x	
Motor oil (SAE 20 W-50)	100%	x	
Nitric acid	10%		x
Oleic acid	100%	x	
Perchloroethylene	100%	x	

Results shown in the table are applicable to brief periods of chemical contact with full cured adhesive (e.g. temporary contact with adhesive during a spill).

TECHNICAL DATA SHEET

Chemical Agent	Concentration	Resistant	Not resistant
Petroleum	100%	x	
Phenol, aqueous solution	8%		x
Benzyl alcohol	100%		x
Phosphoric acid	85%	x	
Phosphoric acid	10%		x
Potash lye (Potassium hydroxide)	10%	x	
Potash lye (Potassium hydroxide)	40%	x	
Potassium carbonate, aqueous solution	All	x	
Potassium chlorite, aqueous solution	All	x	
Potassium nitrate, aqueous solution	All	x	
Sea water, salty	All	x	
Sodium carbonate	All	x	
Sodium chloride, aqueous solution	All	x	
Sodium phosphate, aqueous solution	All	x	
Sodium silicate	All	x	
Sulfuric acid	10%	x	
Sulfuric acid	30%		x
Sulfuric acid	70%		x
Tartaric acid	All	x	
Tetrachloroethylene	100%	x	
Toluene			x
Trichloroethylene	100%		x
Turpentine	100%	x	

Results shown in the table are applicable to brief periods of chemical contact with full cured adhesive (e.g. temporary contact with adhesive during a spill).

Note: This technical data sheet replaces all previous versions. The instructions in this documentation are based on tests and experience and have been prepared to the best of our knowledge and conscience. Due to the variety of different materials and substrates and the many different possible applications beyond our control, we assume no responsibility for the results achieved. Since the construction and nature of the substrate and the processing conditions are beyond our control, we do not accept any liability for this publication. In any case, it is recommended to carry out appropriate tests before use.