

## R-FFS-K-A4 Frame fixing with the shortest anchoring zone and collar hex head - stainless steel

Universal frame fixing with collar and hex head screw for many applications



### Approvals and Reports

- ETA-18/0818
- UKTA-22/6347



### Product information

#### Features and benefits

- Shortest anchoring depth - only 40/50 mm
- Frame fixing made of A4 steel intended for outdoor use
- Quick assembly thanks to the short anchoring zone and the possibility of using a punch-tool in aerated concrete
- Specially-formulated nylon allows best performance installation for use in all base material categories according to ETAG 020 (A, B, C, D)
- Internal plug geometry designed to fit the screw head
- Plug design ensures multi-axis expansion
- Collared plug for fixing of hard materials (eg. steel)

#### Applications

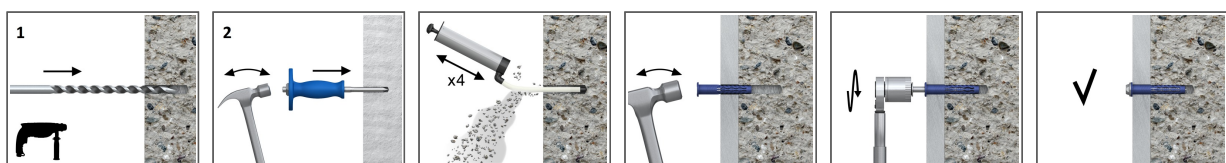
- Ventilated facades
- Door and window frames
- Garage doors
- Gates
- Industrial doors
- Facade (substructures made of wood and metal)
- Wall cabinets
- Satellite dishes
- Shelves
- Handrails
- Cable trays

#### Base materials

##### Approved for use in:

- Cracked concrete  $\geq$  C12/15 (Use category A)
- Solid Brick (Use category B)
- Solid Sand-lime Brick (Use category B)
- Hollow Sand-lime Brick (Use category C)
- Hollow Brick (Use category C)
- Hollow Lightweight Concrete Block (Use category D)
- Aerated Concrete Block (Use category D)
- Concrete  $\geq$  C12/15 (Use category A)

### Installation guide



1. Drill a hole of required diameter and depth (figure 1 - base material A,B,C,D) or use punch-tool in aerated concrete (figure 2 - base material D)
2. With a hammer, lightly tap the plug through the fixture into hole until fixing depth is reached
3. Tighten the R-FFS screw

## Product information

Size	Product Code	Plug		Screw		Fixture	Screw drive
		Diameter	Length	Diameter	Length	Hole diameter	
		d	l	d <sub>i</sub>	L1	d <sub>f</sub>	
[mm]							
Ø10	R-FFS-N-10K050-A4	10	50	7	59	12,5	T40
	R-FFS-N-10K060-A4	10	60	7	69	12,5	T40
	R-FFS-N-10K080-A4	10	80	7	89	12,5	T40
	R-FFS-N-10K100-A4	10	100	7	109	12,5	T40
	R-FFS-N-10K120-A4	10	120	7	129	12,5	T40

## Installation data

Size			Ø10	Ø10
Hole diameter in substrate	d <sub>0</sub>	[mm]	10	10
Min. hole depth in substrate	h <sub>0</sub>	[mm]	50	60
Min. installation depth	h <sub>nom</sub>	[mm]	40	50
Min. substrate thickness	h <sub>min</sub>	[mm]	100	100
Min. spacing	s <sub>min</sub>	[mm]	70	80
Min. edge distance	c <sub>min</sub>	[mm]	50	70
Head size	s <sub>w</sub>	[mm]	13	13
Screw drive	-	[-]	T40	T40
Effective embedment depth	h <sub>ef</sub>	[mm]	40	50

## Basic performance data

Performance data for single fixing without influence of edge distance and spacing

Substrate		Substrate									
		Concrete C12/15	Concrete C16/20	Solid clay brick min 20MPa (eg Mz20/2.0)	Sand-lime brick 40MPa	Sand-lime hollow block min. 20MPa	Perforated ceramic brick HLzB 5MPa	Silicate hollow block min 12MPa (eg KS Ratio Block 8 DF)	Hollow lightweight aggregate concrete 4MPa	Autoclaved aerated concrete AAC 4MPa	
<b>CHARACTERISTIC LOAD F<sub>Rk</sub></b>											
Ø10, Effective embedment depth 40 mm	[kN]	3.00	4.00	-	-	-	-	-	-	-	-
Ø10, Effective embedment depth 50 mm	[kN]	-	-	2.00	3.50	4.00	0.60	2.00	0.75	1.50	
<b>DESIGN LOAD F<sub>Rd</sub></b>											
Ø10, Effective embedment depth 40 mm	[kN]	1.66	2.22	-	-	-	-	-	-	-	
Ø10, Effective embedment depth 50 mm	[kN]	-	-	0.80	1.40	1.60	0.24	0.80	0.30	0.75	
<b>RECOMMENDED LOAD F<sub>rec</sub></b>											
Ø10, Effective embedment depth 40 mm	[kN]	1.19	1.58	-	-	-	-	-	-	-	
Ø10, Effective embedment depth 50 mm	[kN]	-	-	0.57	1.00	1.14	0.17	0.57	0.21	0.53	

## Product commercial data

Product Code	Plug	Screw		Quantity [pcs]			Weight [kg]			Bar Codes
	Diameter [mm]	Length [mm]	Box	Outer	Pallet	Box	Outer	Pallet		
R-FFS-N-10K050-A4 1)	10	7	59	50	800	19200	1.31	21.0	534.6	5906675485058
R-FFS-N-10K060-A4 1)	10	7	69	50	600	14400	1.49	17.9	458.5	5906675485065
R-FFS-N-10K080-A4 1)	10	7	89	50	400	9600	1.85	14.8	385.2	5906675485072
R-FFS-N-10K100-A4 1)	10	7	109	25	300	7200	1.11	13.3	349.1	5906675485089
R-FFS-N-10K120-A4 1)	10	7	129	25	300	7200	1.28	15.4	399.5	5906675485096

1) ETA-18/0818