

## R-FF1-N-K-DT-M Nylon frame fixing with collar hex head - zink flake

Universal frame fixing with collar and hex head, delta tone plated screw for many applications



### Product information

#### Features and benefits

- Special zinc flake corrosion-resistant coating for anti-corrosion protection
- Collared plug for fixing of hard materials (eg. steel)
- 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

#### Applications

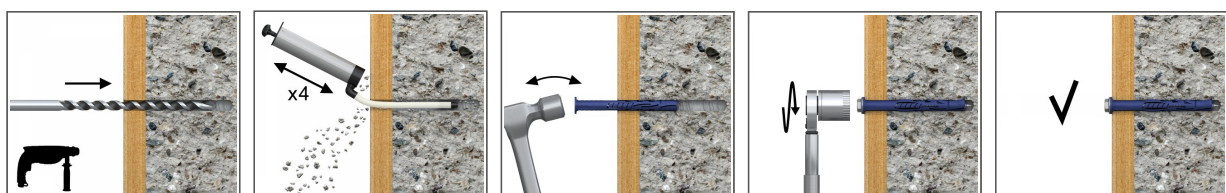
- Door and window frames
- Garage doors
- Gates
- Industrial doors
- Facade (substructures made of wood and metal)
- Wall cabinets
- Satellite dishes
- Shelves
- Handrails
- Cable trays

#### Base materials

##### Approved for use in:

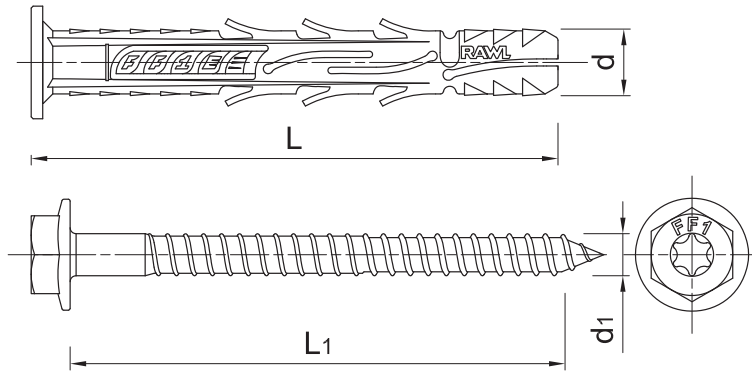
- Concrete  $\geq$  C12/15 (Use category A)
- Solid Brick (Use category B)
- Solid Sand-lime Brick (Use category B)
- Hollow Brick (Use category C)
- Hollow Sand-lime Brick (Use category C)
- Hollow Lightweight Concrete Block (Use category D)
- Aerated Concrete Block (Use category D)
- Cracked concrete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

### Installation guide



1. Drill a hole of required diameter and depth
2. With a hammer, lightly tap the plug through the fixture into hole until fixing depth is reached
3. Tighten the FF1 screw

### Product information



Size	Product Code	Plug		Screw		Fixture		
		Diameter	Length	Diameter	Length	Max. thickness		Hole diameter
		d	l	d <sub>1</sub>	L1	t <sub>fix</sub> 50	t <sub>fix</sub> 70	d <sub>f</sub>
[mm]								
Ø10	R-FF1-N10K080/DT-M	9.8	80	7	89	30	10	10
	R-FF1-N10K100/DT-M	9.8	100	7	109	50	30	10
	R-FF1-N10K120/DT-M	9.8	120	7	129	70	50	10
	R-FF1-N10K140/DT-M	9.8	140	7	149	90	70	10
	R-FF1-N10K160/DT-M	9.8	160	7	169	110	90	10
	R-FF1-N10K200/DT-M	9.8	200	7	209	150	130	10

### Installation data

Size	Ø10		
Hole diameter in substrate	d <sub>0</sub>	[mm]	10
Min. installation depth	h <sub>nom</sub>	[mm]	90
Minimum effective embedment depth	h <sub>ef</sub>	[mm]	90
Min. hole depth in substrate	h <sub>0</sub>	[mm]	h <sub>ef</sub> + 10
Min. substrate thickness	h <sub>min</sub>	[mm]	h <sub>0</sub> + 20
Min. spacing	s <sub>min</sub>	[mm]	50
Min. edge distance	c <sub>min</sub>	[mm]	50
Wrench size	Sw	[mm]	13
Screw drive	-	[-]	T40
Fixing diameter	d	[mm]	9.8

### Basic performance data

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

Substrate		Concrete min. C20/25	Ceramic solid brick M126	Sand-lime solid brick M125	Perforated ceramic brick M125	Lightweight concrete block 10MPa	Autoclaved aerated concrete AAC 6
<b>MEAN ULTIMATE LOAD</b>							
<b>TENSION LOAD N<sub>Ru,m</sub></b>							
Ø10, Effective embedment depth 90 mm	[kN]	30.50	27.63	18.81	-	13.26	5.92
Ø10, Effective embedment depth 110 mm	[kN]	-	-	-	7.88	-	7.38
<b>SHEAR LOAD V<sub>Ru,m</sub></b>							
Ø10, Effective embedment depth 90 mm	[kN]	30.50	-	-	-	-	-
Ø10, Effective embedment depth 110 mm	[kN]	-	-	-	-	-	-
<b>DESIGN LOAD</b>							
<b>TENSION LOAD N<sub>Rd</sub></b>							
Ø10, Effective embedment depth 90 mm	[kN]	5.10	4.37	3.28	-	2.36	1.07
Ø10, Effective embedment depth 110 mm	[kN]	-	-	-	1.32	-	1.21

## Basic performance data

Substrate		Concrete min. C20/25	Ceramic solid brick M126	Sand-lime solid brick M125	Perforated ceramic brick M125	Lightweight concrete block 10MPa	Autoclaved aerated concrete AAC 6
SHEAR LOAD $V_{Rd}$							
Ø10, Effective embedment depth 90 mm	[kN]	5.10	-	-	-	-	-
Ø10, Effective embedment depth 110 mm	[kN]	-	-	-	-	-	-

## Product commercial data

Product Code	Plug	Screw		Quantity [pcs]			Weight [kg]			Bar Codes
	Diameter [mm]	Length [mm]	Box	Outer	Pallet	Box	Outer	Pallet		
R-FF1-N10K080/DT-M	9.8	7	89	250	250	6000	8.7	8.7	237.5	5906675425009
R-FF1-N10K100/DT-M	9.8	7	109	250	250	6000	10.3	10.3	277.4	5906675425016
R-FF1-N10K120/DT-M	9.8	7	129	250	250	6000	11.9	11.9	315.0	5906675425030
R-FF1-N10K140/DT-M	9.8	7	149	180	180	4320	9.8	9.8	265.5	5906675425405
R-FF1-N10K160/DT-M	9.8	7	169	160	160	3840	9.9	9.9	266.5	5906675425436
R-FF1-N10K200/DT-M	9.8	7	209	150	150	3600	11.5	11.5	305.3	5906675425054