

FF1 NYLON FRAME FIXING

Universal frame fixing for many applications



Nylon frame fixing
FF1-L

Nylon frame fixing with collar hex head
FF1-K



FEATURES AND BENEFITS ✓

- The stainless steel screw for best anti-corrosion protection and external applications
- The countersunk plug for flush fixing of soft material (eg. timber)
- 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 ≥ C12/15
 - Solid Brick
 - Solid Sand-lime Brick
 - Hollow Brick
 - Hollow Sand-lime Brick
 - Hollow Lightweight Concrete Block
 - Aerated Concrete Block

FF1 NYLON FRAME FIXING COUNTERSUNK



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

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FIXING



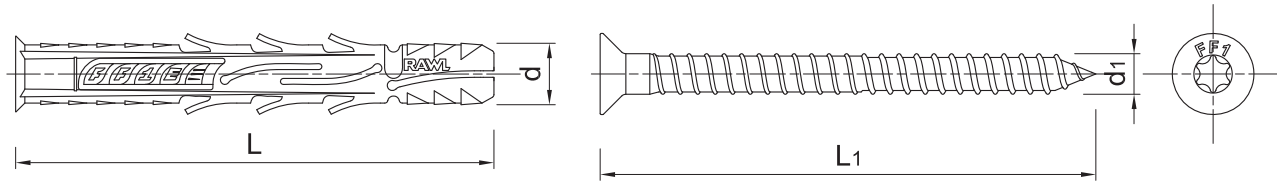
INSTALLATION GUIDE ▾



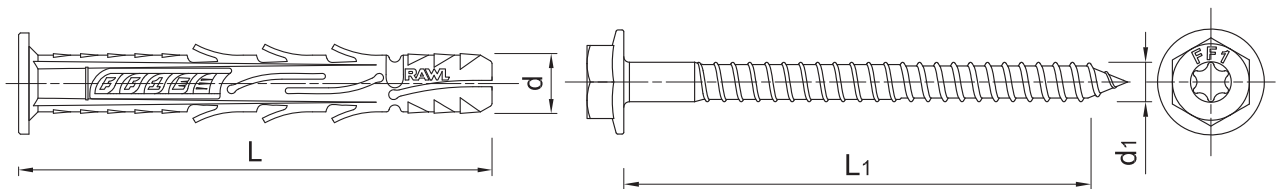
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PRODUCT INFORMATION ▾

COUNTERSUNK VERSION



HEX HEAD VERSION WITH COLLARED PLUG



PRODUCT INFORMATION ▾

Size	Product Code	Plug [mm]		Screw [mm]		Fixture [mm]		
		Diameter	Length	Diameter	Length	Max. thickness		Hole diameter
		d	L	d ₁	L ₁	t _{fix 50}	t _{fix 70}	d _f
FF1-N-L Frame Fixing Countersunk - Stainless Steel Screw								
Ø8	R-FF1-N-08L080-A4	7.8	80	5.8	87	30	10	8
	R-FF1-N-08L100-A4	7.8	100	5.8	107	50	30	8
	R-FF1-N-08L120-A4	7.8	120	5.8	127	70	50	8
Ø10	R-FF1-N-10L080-A4	9.8	80	7	87	30	10	10
	R-FF1-N-10L100-A4	9.8	100	7	107	50	30	10
	R-FF1-N-10L120-A4	9.8	120	7	127	70	50	10
	R-FF1-N-10L140-A4	9.8	140	7	147	90	70	10
	R-FF1-N-10L160-A4	9.8	160	7	167	110	90	10
	R-FF1-N-10L200-A4	9.8	200	7	207	150	130	10
	R-FF1-N-10L240-A4	9.8	240	7	247	190	170	10
	R-FF1-N-10L300-A4	9.8	300	7	307	250	230	10

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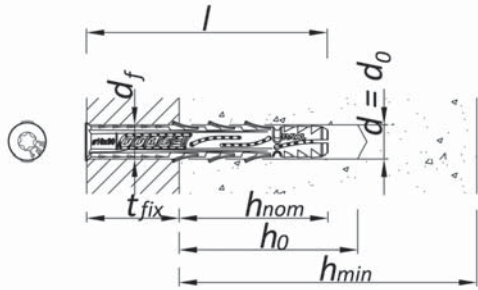
PRODUCT INFORMATION (cont.)

Size	Product Code	Plug [mm]		Screw [mm]		Fixture [mm]		
		Diameter	Length	Diameter	Length	Max. thickness		Hole diameter
		d	L	d ₁	L ₁	t _{fix 50}	t _{fix 70}	d _f
FF1-N-L Frame Fixing Countersunk - Zinc Flake Screw								
Ø8	R-FF1-N-08L080/ZF	7.8	80	5.8	87	30	10	8
	R-FF1-N-08L100/ZF	7.8	100	5.8	107	50	30	8
	R-FF1-N-08L120/ZF	7.8	120	5.8	127	70	50	8
Ø10	R-FF1-N-10L080/DT	9.8	80	7	87	30	10	10
	R-FF1-N-10L100/DT	9.8	100	7	107	50	30	10
	R-FF1-N-10L120/DT	9.8	120	7	127	70	50	10
	R-FF1-N-10L140/DT	9.8	140	7	147	90	70	10
	R-FF1-N-10L160/DT	9.8	160	7	167	110	90	10
	R-FF1-N-10L200/DT	9.8	200	7	207	150	130	10
	R-FF1-N-10L240/DT	9.8	240	7	247	190	170	10
	R-FF1-N-10L300/DT	9.8	300	7	307	250	230	10
FF1-N-L Frame Fixing Countersunk - Zinc Plated Screw								
Ø8	R-FF1-N-08L080	7.8	80	5.8	87	30	10	8
	R-FF1-N-08L100	7.8	100	5.8	107	50	30	8
	R-FF1-N-08L120	7.8	120	5.8	127	70	50	8
Ø10	R-FF1-N-10L080	9.8	80	7	87	30	10	10
	R-FF1-N-10L100	9.8	100	7	107	50	30	10
	R-FF1-N-10L120	9.8	120	7	127	70	50	10
	R-FF1-N-10L140	9.8	140	7	147	90	70	10
	R-FF1-N-10L160	9.8	160	7	167	110	90	10
	R-FF1-N-10L200	9.8	200	7	207	150	130	10
	R-FF1-N-10L240	9.8	240	7	247	190	170	10
	R-FF1-N-10L300	9.8	300	7	307	250	230	10
FF1-N-K Frame Fixing with Collar - Stainless Steel Screw								
Ø10	R-FF1-N-10K080-A4	9.8	80	7	89	30	10	10
	R-FF1-N-10K100-A4	9.8	100	7	109	50	30	10
	R-FF1-N-10K120-A4	9.8	120	7	129	70	50	10
	R-FF1-N-10K140-A4	9.8	140	7	149	90	70	10
	R-FF1-N-10K160-A4	9.8	160	7	169	110	90	10
	R-FF1-N-10K200-A4	9.8	200	7	209	150	130	10
	R-FF1-N-10K240-A4	9.8	240	7	249	190	170	10
	R-FF1-N-10K300-A4	9.8	300	7	309	250	230	10
FF1-N-K Frame Fixing with Collar - Zinc Flake Screw								
Ø10	R-FF1-N-10K080/DT	9.8	80	7	89	30	10	10
	R-FF1-N-10K100/DT	9.8	100	7	109	50	30	10
	R-FF1-N-10K120/DT	9.8	120	7	129	70	50	10
	R-FF1-N-10K140/DT	9.8	140	7	149	90	70	10
	R-FF1-N-10K160/DT	9.8	160	7	169	110	90	10
	R-FF1-N-10K200/DT	9.8	200	7	209	150	130	10
	R-FF1-N-10K240/DT	9.8	240	7	249	190	170	10
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	R-FF1-N-10K100	9.8	100	7	109	50	30	10
	R-FF1-N-10K120	9.8	120	7	129	70	50	10
	R-FF1-N-10K140	9.8	140	7	149	90	70	10
	R-FF1-N-10K160	9.8	160	7	169	110	90	10
	R-FF1-N-10K200	9.8	200	7	209	150	130	10
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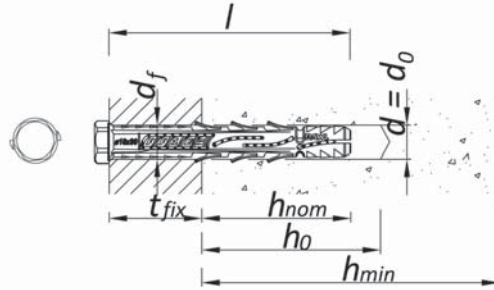
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INSTALLATION DATA ▼

FF1-L



FF1-K



Size			Ø8	Ø8	Ø10	Ø10
Effective embedment depth	h_{ef}		50	70	50	70
Fixing diameter	d	[mm]	7.8	7.8	9.8	9.8
Hole diameter in substrate	d_0	[mm]	8	8	10	10
Min. hole depth in substrate	h_0	[mm]	60	80	60	80
Min. installation depth	h_{nom}	[mm]	50	70	50	70
Min. substrate thickness	h_{min}	[mm]	100	100	100	100
Min. spacing	s_{min}	[mm]	60	100	90	95
Min. edge distance	c_{min}	[mm]	60	100	80	80
Screw drive	-	[-]	T30	T30	T40	T40

BASIC PERFORMANCE DATA ▼

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

Substrate	Substrate types														
	Concrete C12/15	Concrete min. C16/20	Solid clay brick min. 20MPa (eg Mizzu/2.0)	Solid silicate brick min. 20MPa (eg KS NF 20/2.0)	Perforated ceramic blocks min. 15MPa (eg MEGA MAX)	Perforated ceramic blocks min. 15MPa (eg Wienerberger Porotherm)	Sand-lime hollow block min. 20MPa	Lightweight concrete hollow block min. 2.0MPa	Hollow brick min. 12MPa	Hollow brick min. 15MPa	Autoclaved aerated concrete AAC 2	Autoclaved aerated concrete AAC 6	Solid brick min. 50MPa	Sand-lime brick min. 30MPa	Hollow clay block min. 7.5MPa
CHARACTERISTIC LOAD F_{rk}															
Ø8, Embedment depth 50 mm	[kN]	1.50	2.00	1.50	1.50	0.75	0.40	0.50	0.90	0.60	1.20	-	-	-	-
Ø8, Embedment depth 70 mm	[kN]	-	-	-	-	-	-	-	-	-	0.40	0.90	-	-	-
Ø10, Embedment depth 50 mm	[kN]	1.20	2.00	-	-	-	-	-	-	-	-	-	-	-	-
Ø10, Embedment depth 70 mm	[kN]	2.50	4.00	-	-	1.50	1.50	3.50	0.90	0.90	0.75	0.40	0.90	5.00	0.75
DESIGN LOAD F_{rd}															
Ø8, Embedment depth 50 mm	[kN]	0.83	1.11	0.60	0.60	0.30	0.16	0.20	0.36	0.24	0.48	-	-	-	-
Ø8, Embedment depth 70 mm	[kN]	-	-	-	-	-	-	-	-	-	-	0.20	0.45	-	-
Ø10, Embedment depth 50 mm	[kN]	0.67	1.11	-	-	-	-	-	-	-	-	-	-	0.60	-
Ø10, Embedment depth 70 mm	[kN]	1.39	2.22	-	-	0.60	0.60	1.40	0.36	0.36	0.30	0.20	0.45	2.00	0.30
RECOMMENDED LOAD F_{rc}															
Ø8, Embedment depth 50 mm	[kN]	0.60	0.79	0.43	0.43	0.21	0.11	0.14	0.26	0.17	0.34	-	-	-	-
Ø8, Embedment depth 70 mm	[kN]	-	-	-	-	-	-	-	-	-	-	0.14	0.32	-	-
Ø10, Embedment depth 50 mm	[kN]	0.48	0.79	-	-	-	-	-	-	-	-	-	-	0.43	-
Ø10, Embedment depth 70 mm	[kN]	0.99	1.59	-	-	0.43	0.43	1.00	0.26	0.26	0.21	0.14	0.32	1.43	0.21