BASE MATERIALS

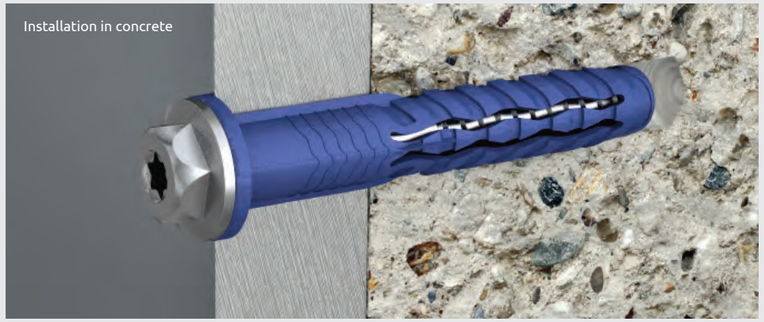
Cracked and non-cracked concrete ≥ C12/15 (Use category A)
Solid Brick (Use category B)
Solid Sand-lime Brick (Use category B)
Hollow Sand-lime Brick (Use category C)
Hollow Brick (Use category C)
Hollow Lightweight Concrete Block (Use category D)
Aerated Concrete Block (Use category D)

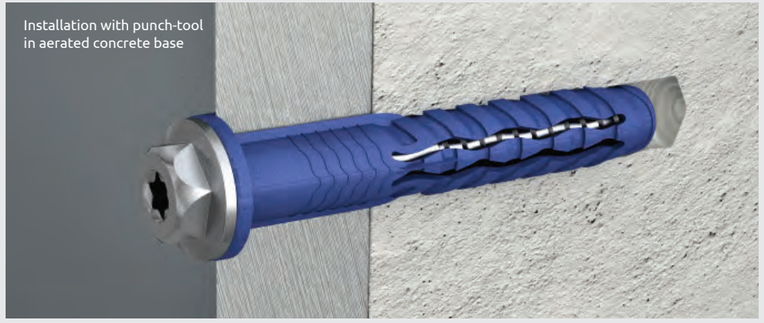
PRODUCT INFORMATION

Product Code	Plug		Screw		Fixture			Quantity	
	Diameter	Length	Diameter	Length	Max. thickness $t_{fix,hef}$=40mm	Max. thickness $t_{fix,hef}$=50mm	Hole diameter	Box	Outer
	mm	mm	mm	mm	mm	mm	mm	pcs	pcs
R-FFS-N-10K050	10	50	7	59	10	-	12,5	50	800
R-FFS-N-10K060	10	60	7	69	20	10	12,5	50	600
R-FFS-N-10K080	10	80	7	89	40	30	12,5	50	400
R-FFS-N-10K100	10	100	7	109	60	50	12,5	25	300
R-FFS-N-10K120	10	120	7	129	80	70	12,5	25	300

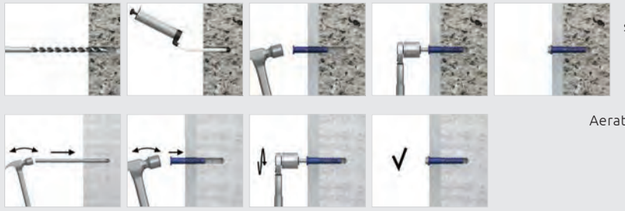
Substrate		Concrete C12/15	Concrete C16/20	Solid clay brick min 20MPa (eg Mz20/2.0)	Sand-lime solid brick	Sand-lime hollow block min. 20MPa	Perforated clay brick HLz	Silicate hollow block min 12 MPa (eg KS Ratio Block 8 DF)	Lightweight concrete hollow block	Autoclaved aerated concrete AAC 4MPa
Effective embedment depth 40 mm	[kN]	3.00	4.00	-	-	-	-	-	-	-
Effective embedment depth 50 mm	[kN]	-	-	2.00	3.50	4.00	0.60	2.00	0.75	1.50
Effective embedment depth 40 mm	[kN]	1.66	2.22	-	-	-	-	-	-	-
Effective embedment depth 50 mm	[kN]	-	-	0.80	1.40	1.60	0.24	0.80	0.30	0.75
Effective embedment depth 40 mm	[kN]	1.19	1.58							
Effective embedment depth 50 mm	[kN]			0.57	1.00	1.14	0.17	0.57	0.21	0.53

FFS frame fixing has been created for mounting in concrete, however its unique design allows to obtain **high parameters in brick**





INSTALLATION GUIDE



Concrete and solid substrates (A,B,C)

Aerated concrete (D)

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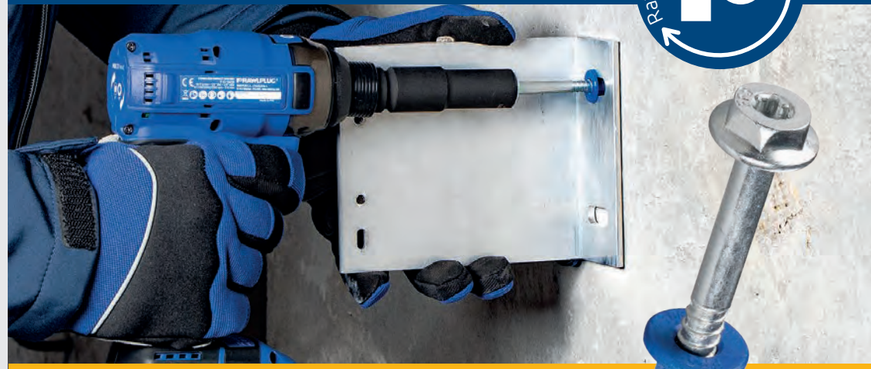
R-FFS

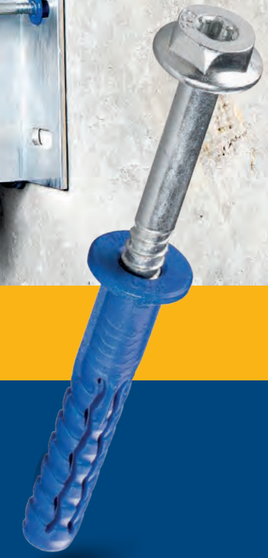
"FRAME FIXING WITH THE SHORTEST ANCHORING ZONE

Quick assembly, thanks to two reduced anchoring depths

Rawlplug at your service



Universal frame fixing



100 years 1919-2019 RAWLPLUG®

www.rawlplug.com

TWO ANCHORING DEPTHS

to ensure the highest performance in concrete and masonry materials

UNIVERSAL FIXING

The unique expansion zone ensures **optimal anchorage depth,** guaranteeing the highest fastener load capacity. Thanks to this, it can be used in all types of substrates.

Quick assembly is ensured by shallow anchoring - **only 40 mm** in concrete and solid brick* and **50 mm** in other materials. R-FFS can also be used for outside conditions with the use of a bituminous coating - which is confirmed in the European technical assessment (ETA). The thickened flange excludes contact corrosion between the material screw and the fixed structure (aluminum or steel).

solid brick based on RAD data, 50 mm anchoring according to data in ETA

APPLICATIONS

Ventilated facades
High load capacity, 40 mm anchoring, many certified base materials, A1 fire classification and fire resistance R90 makes R-FFS ideal for fixing facades. Quick installation thanks to the punch-tool in aerated concrete significantly speeds up and easier to work.

Window frames
Thanks to quick and easy installation they are ideal for mounting window frames.

Balustrades and handrails
High load capacities and the use of steel class 6.8 make it recommended for light steel structures like balustrades, handrails and porte-fenêtre.

Garage Doors
With a very high strength is an ideal combination for installation of garage doors.

Door frames
Use of a fixing with the shortest anchorage zone ensures the fastest frame fitting.

Wooden constructions
It enables mounting of wooden structures and elements to a thickness of 80mm.

Light constructions
Ideal for home installations - mounting a satellite dish, TV mount, cabinet or shelf.

www.rawlplug.com

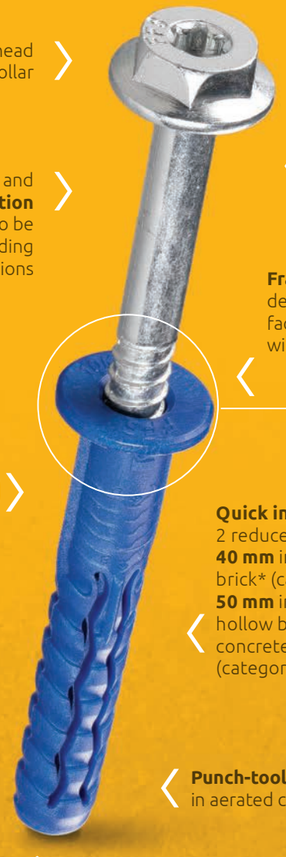
Speed of work. Versatility!

Hexagonal head with collar

R90 fire resistance and **A1 fire classification** allow the product to be used in the most demanding assembly applications

Minimized installation time - only 40 mm

A unique anchoring zone guarantees achievement of the highest technical parameters for professional applications



High shear strength thanks the use of steel grade **6.8**

Frame fixing with collar designed for fixing the façade ventilated and window frames

Quick installation thanks 2 reduced anchoring depths: **40 mm** in concrete and solid brick* (categories A and B*) **50 mm** in substrates with hollow brick and aerated concrete (categories C and D)

Punch-tool to increase a performance in aerated concrete

Available lengths in the range of **50 - 120 mm**

SPEED +40%

The shortest anchoring depth limited to 40mm in solid materials ensures shortening of the holes drilling time and cost effectiveness due to the shortening of the length of the drill bits necessary for drilling. In addition, the option of using a punch-tool reduces assembly time by 40%.

VERSATILITY

The innovative design of the expansion zones enables work in all typical substrates (A, B, C, D). This allows the use of one type of fastener for mounting the substructure of ventilated façades, regardless of the amount of application - both in reinforced concrete construction and solid or hollow masonry substrates.

SECURITY

The new R-FFS Rawlplug fixing not only meets all the requirements of laboratory tests, but also works in the toughest construction conditions. Thanks to the technical parameters confirmed in ETA and fire resistance R90 is a solution recommended for the most demanding building connections.

HIGH STRENGTH

High shear strength thanks to the thickened screw and the use of steel grade 6.8. This is particularly important when installing ventilated façades and other structures that are exposed to shear forces.

Hexagonal head with collar
Plastic sleeve with collar