R-RBP-PF Rawlbolt - Bolt Projecting with plastic ferrule

World's most popular all-purpose expanding shield anchor - bolt projecting version

Product information

Features and benefits

- For use in concrete, hollowcore slabs, flooring blocks and ceramics
- Plastic ferrule simplifies installation in hollow substrates
- Product recommended for applications requiring fire resistance
- Wide range of diameters (M6 to M24)
- Three-pieces expanding sleeve of maximum expansion provides optimal load and safety of use in any substrate

Applications

- Roller shutter doors
- Fire doors
- Steelwork
- Security grills
- Heavy machinery
- Pipework/ductwork supports

Base materials

Approved for use in:

- Solid clay brick 20MPa
- Hollow Sand-lime Brick 15MPa
- Hollow Lightweight Concrete Block
- Concrete hollow floor block (eg. Teriva)
- Hollow-core Slab

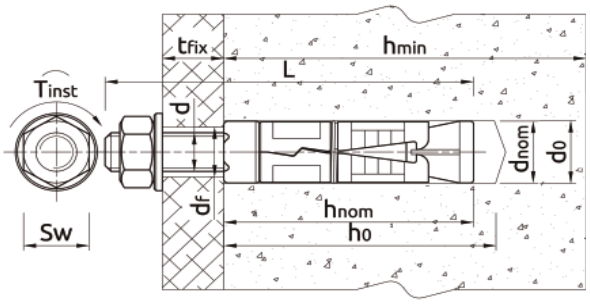
Installation guide

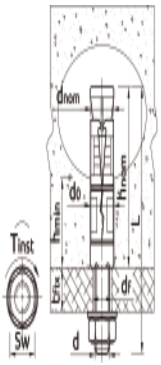
1. Drill a hole of required diameter and depth
2. Remove nut and washer and insert anchor into hole. Tap home with hammer until flush with surface
3. Position fixture over the projecting bolt
4. Add washer and nut and tighten to recommended torque

Product information

Size	Product Code	Anchor			Fixture	
		Diameter	External diameter	Length	Max. thickness	Hole diameter
		d	d_{nom}	L	t_{fix}	d_f
		[mm]	[mm]	[mm]	[mm]	[mm]
M6	R-RBP-PF-M06/10W	6	12	65	10	6,5
	R-RBP-PF-M06/25W	6	12	80	25	6,5
	R-RBP-PF-M06/60W	6	12	115	60	6,5
M8	R-RBP-PF-M08/10W	8	14	75	10	9
	R-RBP-PF-M08/25W	8	14	90	25	9
	R-RBP-PF-M08/60W	8	14	125	60	9
M10	R-RBP-PF-M10/15W	10	16	90	15	11
	R-RBP-PF-M10/30W	10	16	105	30	11
	R-RBP-PF-M10/60W	10	16	135	60	11
M12	R-RBP-PF-M12/15W	12	20	110	15	13
	R-RBP-PF-M12/30W	12	20	125	30	13
	R-RBP-PF-M12/75W	12	20	170	75	13
M16	R-RBP-PF-M16/15W	16	25	150	15	17
	R-RBP-PF-M16/35W	16	25	170	35	17
	R-RBP-PF-M16/75W	16	25	210	75	17

Installation data





Size			M6	M8	M10	M12	M16
Thread diameter	d	[mm]	6	8	10	12	16
Hole diameter in substrate	d_0	[mm]	12	14	16	20	25
Wrench size	Sw	[mm]	10	13	17	19	24
SOLID SUBSTRATES							
Installation torque	T_{inst}	[Nm]	6.5	15	27	50	120
Min. hole depth in substrate	h_0	[mm]	50	55	65	85	125
Installation depth	h_{nom}	[mm]	45	50	60	80	120
Min. substrate thickness	h_{min}	[mm]	100	100	100	100	142
Min. spacing	s_{min}	[mm]	35	40	50	60	95
Min. edge distance	c_{min}	[mm]	53	60	75	90	143
CERAMIC AND HOLLOW SUBSTRATES							
Installation torque	T_{inst}	[Nm]	3	5	8	10	15
Min. hole depth in substrate	h_0	[mm]	-	-	-	-	-
Installation depth	h_{nom}	[mm]	45	50	60	80	120
Min. substrate thickness	h_{min}	[mm]	23	23	35	40	50
Min. spacing	s_{min}	[mm]	100	100	100	100	100
Min. edge distance	c_{min}	[mm]	100	100	100	100	143

Mechanical properties

Size			M6	M8	M10	M12	M16
Nominal ultimate tensile strength - tension	f_{uk}	[N/mm²]	500	500	500	500	500
Nominal yield strength - tension	f_{yk}	[N/mm²]	400	400	400	400	400
Cross sectional area - tension	A_s	[mm²]	20.1	36.6	58	84.3	157
Elastic section modulus	W_{el}	[mm³]	12.7	31.2	62.3	109.2	277.5
Characteristic bending resistance	$M^0_{Rk,s}$	[Nm]	7.6	19	37	66	166
Design bending resistance	M	[Nm]	6.1	15	30	52	133

Basic performance data

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

Size			M6	M8	M10	M12	M16
MEAN ULTIMATE LOAD							
TENSION AND SHEAR LOAD $F_{Ru,m}$							
Hollow core slab min. C20/25							
Wall thickness	Material class						
23	C30/37	[kN]	8.91	10.40	-	-	-
	C35/45	[kN]	9.86	11.50	-	-	-
	C45/55	[kN]	10.93	12.75	-	-	-
	C50/60	[kN]	11.88	13.86	-	-	-
35	C30/37	[kN]	9.93	16.33	18.84	-	-
	C35/45	[kN]	10.99	18.07	20.85	-	-
	C45/55	[kN]	12.18	20.03	23.11	-	-
	C50/60	[kN]	13.24	21.77	25.12	-	-
40	C30/37	[kN]	9.52	18.46	28.04	34.82	-
	C35/45	[kN]	10.53	20.43	31.03	38.54	-
	C45/55	[kN]	11.67	22.64	34.39	42.72	-
	C50/60	[kN]	12.69	24.61	37.38	46.43	-
50	C20/25	[kN]	10.31	10.96	10.96	10.96	10.96
Beam-and-block floor (eg.Terriva 4.0/2), min. 25mm wall thickness		[kN]	2.07	2.65	-	-	-
Lightweight concrete LAC class 5		[kN]	8.34	8.78	8.78	8.78	8.78
Solid clay brick class 20		[kN]	9.97	9.64	9.64	9.64	9.64
Silicate hollow block class 15		[kN]	4.27	-	-	-	-

Basic performance data

Product commercial data

Size	Product Code	Anchor		Quantity [pcs]			Weight [kg]			Bar Codes
		Diameter [mm]	Length [mm]	Box	Outer	Pallet	Box	Outer	Pallet	
M6	R-RBP-PF-M06/10W	6	65	50	400	16000	2.8	22.5	930.0	5906675380728
	R-RBP-PF-M06/25W	6	80	50	400	16000	1.66	13.3	562.0	5906675380735
	R-RBP-PF-M06/60W	6	115	50	50	8000	2.0	2.0	352.0	5906675380742
M8	R-RBP-PF-M08/10W	8	75	50	400	16000	2.9	23.0	950.8	5906675380759
	R-RBP-PF-M08/25W	8	90	50	50	8000	3.1	3.1	528.0	5906675380766
	R-RBP-PF-M08/60W	8	125	50	50	8000	3.7	3.7	616.8	5906675380773
M10	R-RBP-PF-M10/15W	10	90	50	50	8000	4.9	4.9	816.0	5906675380780
	R-RBP-PF-M10/30W	10	105	50	50	6000	5.3	5.3	667.5	5906675330075
	R-RBP-PF-M10/60W	10	135	50	50	8000	6.0	6.0	992.0	5906675380797
M12	R-RBP-PF-M12/15W	12	110	25	25	4000	4.1	4.1	678.5	5906675380803
	R-RBP-PF-M12/30W	12	125	25	25	4000	5.0	5.0	822.5	5906675380810
	R-RBP-PF-M12/75W	12	170	25	25	3000	5.8	5.8	722.2	5906675380827
M16	R-RBP-PF-M16/15W	16	150	10	10	1600	4.1	4.1	682.9	5906675380834
	R-RBP-PF-M16/35W	16	170	10	10	1600	4.7	4.7	774.1	5906675380841
	R-RBP-PF-M16/75W	16	210	10	10	1200	5.3	5.3	660.1	5906675380858