

R-RBL-PF Rawlbolt - Loose bolt with plastic ferrule

World's most popular all-purpose expanding shield anchor - loose bolt 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
- Installation of metal and plastic pipes in all pipework installations

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

Also suitable for use in:

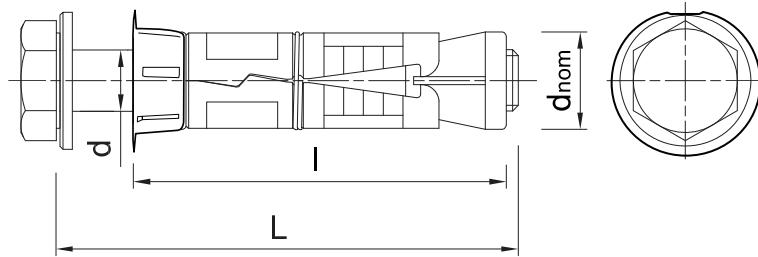
- Non-cracked concrete C20/25-C50/60
- Hollow-core Slab

Installation guide



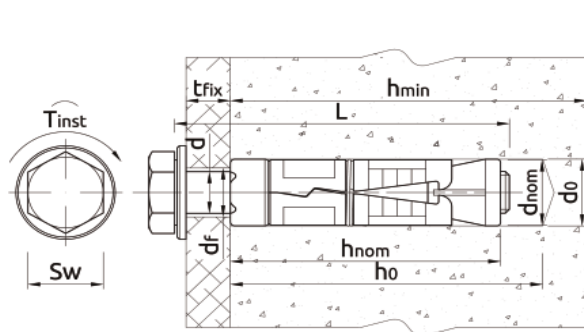
1. Drill a hole of required diameter and depth
2. Remove pre-assembled bolt and washer. Insert shield into hole and tap home with hammer until flush with surface
3. Insert bolt with washer through fixture into the shield
4. Tighten to the recommended torque

Product information

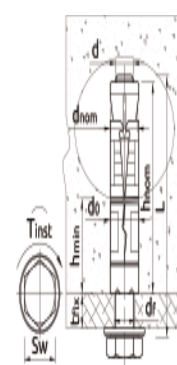


Size	Product Code	Anchor			Fixture	
		Diameter	External diameter	Length	Max. thickness	Hole diameter
		d [mm]	d _{nom} [mm]	L [mm]	t _{fix} [mm]	d _f [mm]
M6	R-RBL-PF-M06/10W	6	12	55	10	6.5
	R-RBL-PF-M06/25W	6	12	70	25	6.5
	R-RBL-PF-M06/40W	6	12	85	40	6.5
M8	R-RBL-PF-M08/10W	8	14	65	10	9
	R-RBL-PF-M08/25W	8	14	80	25	9
	R-RBL-PF-M08/40W	8	14	95	40	9
M10	R-RBL-PF-M10/10W	10	16	75	10	11
	R-RBL-PF-M10/25W	10	16	90	25	11
	R-RBL-PF-M10/50W	10	16	115	50	11
	R-RBL-PF-M10/75W	10	16	140	75	11
M12	R-RBL-PF-M12/10W	12	20	90	10	13
	R-RBL-PF-M12/25W	12	20	105	25	13
	R-RBL-PF-M12/40W	12	20	120	40	13
	R-RBL-PF-M12/60W	12	20	140	60	13
M16	R-RBL-PF-M16/15W	16	25	135	15	17
	R-RBL-PF-M16/30W	16	25	150	30	17
	R-RBL-PF-M16/60W	16	25	180	60	17

Installation data



Installation in solid substrate



Installation in solid substrate

Size			M6	M8	M10	M12	M16
Thread diameter	d	[mm]	6	8	10	12	16
Hole diameter in substrate	d _o	[mm]	12	14	16	20	25
Wrench size	Sw	[mm]	10	13	17	19	24

Installation data

Mechanical properties

Size			M6	M8	M10	M12	M16
Nominal ultimate tensile strength - tension	f_{uk}	[N/mm ²]	500	500	500	500	500
Nominal yield strength - tension	f_{yk}	[N/mm ²]	400	400	400	400	400
Cross sectional area - tension	A_s	[mm ²]	20.1	36.6	58	84.3	157
Elastic section modulus	W_{el}	[mm ³]	12.7	31.2	62.3	109.2	277.5
Characteristic bending resistance	$M_{Rk,s}^b$	[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-RBL-PF-M06/10W	6	55	50	400	16000	1.56	12.5	530.0	5906675380582
	R-RBL-PF-M06/25W	6	70	50	400	16000	1.61	12.9	546.0	5906675380599
	R-RBL-PF-M06/40W	6	85	50	50	8000	1.86	1.86	328.0	5906675380605
M8	R-RBL-PF-M08/10W	8	65	50	400	16000	2.7	21.7	898.0	5906675380612
	R-RBL-PF-M08/25W	8	80	50	50	8000	3.0	3.0	509.2	5906675375915
	R-RBL-PF-M08/40W	8	95	50	50	8000	3.3	3.3	560.0	5906675380629
M10	R-RBL-PF-M10/10W	10	75	50	50	8000	4.6	4.6	768.0	5906675375908
	R-RBL-PF-M10/25W	10	90	50	50	8000	5.0	5.0	832.0	5906675330068
	R-RBL-PF-M10/50W	10	115	50	50	6000	5.7	5.7	715.5	5906675380636
	R-RBL-PF-M10/75W	10	140	50	50	6000	6.4	6.4	799.5	5906675380643
M12	R-RBL-PF-M12/10W	12	90	25	25	4000	4.2	4.2	700.9	5906675380650
	R-RBL-PF-M12/25W	12	105	25	25	4000	4.6	4.6	758.5	5906675380667
	R-RBL-PF-M12/40W	12	120	25	25	3000	4.6	4.6	579.4	5906675380674
	R-RBL-PF-M12/60W	12	140	25	25	4000	5.2	5.2	862.5	5906675380681
M16	R-RBL-PF-M16/15W	16	135	10	10	1600	4.1	4.1	690.9	5906675380698
	R-RBL-PF-M16/30W	16	150	10	10	1600	4.4	4.4	726.1	5906675380704
	R-RBL-PF-M16/60W	16	180	10	10	1200	4.8	4.8	604.9	5906675380711