Shield Anchors

RAWLBOLT™:

R-RBL
• Loose Bolt

R-RBP
• Bolt Projecting

R-RBL-E
• Eye Bolt

R-RBL-H
• Hook Bolt

R-RB
• Rawlbolt Shield

R-RBL, R-RBP RAWLBOLT

World's most popular all-purpose expanding shield anchor

R-RBL

R-RBP

Approvals and Reports

- ETA-11/0479; ETAG 001-2, Option 1

Versions

- R-RBL - Loose Bolt
- R-RBP - Bolt Projecting

Installation movie

Product overview

Features and benefits

- For use in cracked and non-cracked concrete (ETA option 1), hollow-core slabs, flooring blocks and ceramics
- RAWLBOLT® - first ever mechanical anchor in the world, forerunner of all of the later mechanical anchors
- Product recommended for applications requiring fire resistance
- Three-pieces expanding sleeve of maximum expansion provides optimal load and safety of use in any substrate
- Wide range of diameters (M6 to M24)

Applications

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

Base materials

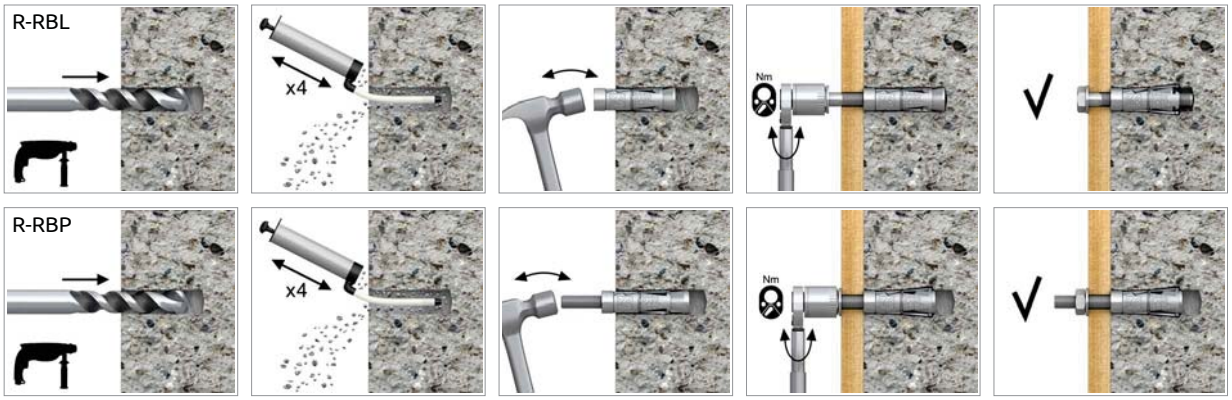
Approved for use in:

- Cracked concrete C20/25-C50/60
- Non-cracked concrete C20/25-C50/60

Also suitable for use in:

- Natural Stone
- Hollow-core Slab
- Hollow Brick

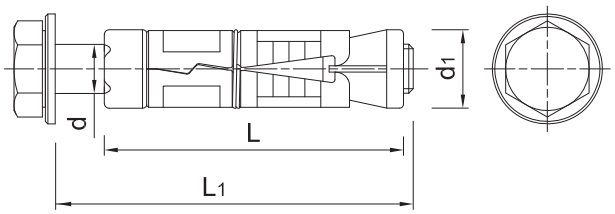
Installation guide



1. Drill a hole of required diameter and depth. Note: When fixing into brickwork. mortar joints should be avoided
2. Clear the hole of drilling dust and debris (using blowpump or equivalent method)
3. Remove pre-assembled bolt and washer. Insert shield into hole and tap home with hammer until flush with surface
4. Insert bolt with washer through fixture into the shield
5. Tighten to the recommended torque

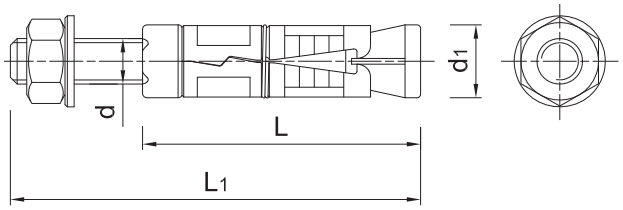
Product information

R-RBL



Size	Product Code	Anchor			Fixture		
		Bolt diameter	External diameter	Bolt length	Max. thickness	Min. thickness	Hole diameter
		d	d_1	L_1	t_{fix}		d_f
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
M6	R-RBL-M06/10W	6	12	55	10	0	6.5
	R-RBL-M06/25W	6	12	70	25	0	6.5
	R-RBL-M06/40W	6	12	85	40	0	6.5
M8	R-RBL-M08/10W	8	14	65	10	0	9
	R-RBL-M08/25W	8	14	80	25	0	9
	R-RBL-M08/40W	8	14	95	40	0	9
M10	R-RBL-M10/10W	10	16	75	10	0	11
	R-RBL-M10/25W	10	16	90	25	0	11
	R-RBL-M10/50W	10	16	115	50	0	11
	R-RBL-M10/75W	10	16	140	75	0	11
M12	R-RBL-M12/10W	12	20	90	10	0	13
	R-RBL-M12/25W	12	20	105	25	0	13
	R-RBL-M12/40W	12	20	120	40	0	13
	R-RBL-M12/60W	12	20	140	60	0	13
M16	R-RBL-M16/15W	16	25	135	15	0	17
	R-RBL-M16/30W	16	25	150	30	10	17
	R-RBL-M16/60W	16	25	180	60	30	17
M20	R-RBL-M20/60W	20	32	195	60	25	22
	R-RBL-M20/100W	20	32	235	110	60	22
M24	R-RBL-M24/100W	24	38	255	100	25	26
	R-RBL-M24/150W	24	38	300	150	100	26

R-RBP



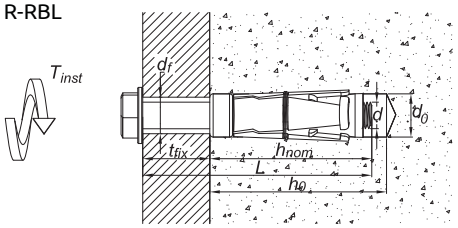
Size	Product Code	Anchor			Fixture		
		Bolt diameter	External diameter	Length	Max. thickness	Min. thickness	Hole diameter
		d	d_1	L_1	t_{fix}		d_f
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
M6	R-RBP-M06/10W	6	12	65	10	0	6.5
	R-RBP-M06/25W	6	12	80	25	0	6.5
	R-RBP-M06/60W	6	12	115	60	0	6.5
M8	R-RBP-M08/10W	8	14	75	10	0	9
	R-RBP-M08/25W	8	14	90	25	0	9
	R-RBP-M08/60W	8	14	125	60	0	9

Product information (cont.)

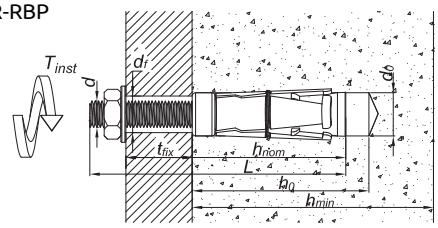
Size	Product Code	Anchor			Fixture		
		Bolt diameter	External diameter	Length	Max. thickness	Min. thickness	Hole diameter
		d	d_1	L_1	t_{fix}		d_f
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
M10	R-RBP-M10/15W	10	16	90	15	0	11
	R-RBP-M10/30W	10	16	105	30	0	11
	R-RBP-M10/60W	10	16	135	60	0	11
M12	R-RBP-M12/15W	12	20	110	15	0	13
	R-RBP-M12/30W	12	20	125	30	0	13
	R-RBP-M12/75W	12	20	170	75	0	13
M16	R-RBP-M16/15W	16	25	150	15	0	17
	R-RBP-M16/35W	16	25	170	35	10	17
	R-RBP-M16/75W	16	25	210	75	35	17
M20	R-RBP-M20/15W	20	32	170	15	0	22
	R-RBP-M20/30W	20	32	185	30	10	22
	R-RBP-M20/100W	20	32	255	100	30	22
M24	R-RBP-M24/75W	24	38	255	75	0	26

Installation data

R-RBL



R-RBP



Size			M6	M8	M10	M12	M16	M20	M24
Thread diameter	d	[mm]	6	8	10	12	16	20	24
Hole diameter in substrate	d_0	[mm]	12	14	16	20	25	32	38
Installation torque	T_{inst}	[Nm]	6.5	15	27	50	120	230	400
Min. hole depth in substrate	h_0	[mm]	50	55	65	85	125	140	160
Installation depth	h_{nom}	[mm]	45	50	60	80	120	135	155
Min. substrate thickness	h_{min}	[mm]	100				142.5	172.5	240
Min. spacing	s_{min}	[mm]	35	40	50	60	95	115	210
Min. edge distance	c_{min}	[mm]	53	60	75	90	143	173	188

Mechanical properties

Size			M6	M8	M10	M12	M16	M20	M24
Nominal ultimate tensile strength - tension	f_{uk}	[N/mm²]	500	500	500	500	500	500	500
Nominal yield strength - tension	f_{yk}	[N/mm²]	400	400	400	400	400	400	400
Cross sectional area - tension	A_s	[mm²]	20.1	36.6	58.0	84.3	157.0	245.0	353.0
Elastic section modulus	W_{el}	[mm³]	12.7	31.2	62.3	109.2	277.5	540.9	935.5
Characteristic bending resistance	$M^0_{Rk,s}$	[Nm]	7.60	19.0	37.0	66.0	166.0	325.0	561.0
Design bending resistance	M	[Nm]	6.10	15.0	30.0	52.0	133.0	260.0	449.0

Basic performance data

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

Size		M6	M8	M10	M12	M16	M20	M24
Embedment depth h_{ef}	[mm]	35	40	50	60	95	115	125
MEAN ULTIMATE LOAD								
TENSION LOAD $N_{Ru,m}$								
NON-CRACKED CONCRETE	[kN]	6.36	8.35	15.2	18.4	48.8	56.6	94.3
CRACKED CONCRETE	[kN]	4.06	5.31	7.12	12.0	18.2	34.2	-
SHEAR LOAD $V_{Ru,m}$								
NON-CRACKED CONCRETE	[kN]	6.04	11.0	17.4	25.3	47.1	73.5	105.9
CRACKED CONCRETE	[kN]	6.04	11.0	17.4	25.3	47.1	73.5	-
CHARACTERISTIC LOAD								
TENSION LOAD N_{Rk}								
NON-CRACKED CONCRETE	[kN]	6.00	7.50	12.0	16.0	40.0	50.0	70.0
CRACKED CONCRETE	[kN]	4.00	5.00	6.00	12.0	16.0	30.0	-
SHEAR LOAD V_{Rk}								
NON-CRACKED CONCRETE	[kN]	5.03	7.50	12.0	21.1	39.3	61.2	88.3
CRACKED CONCRETE	[kN]	4.00	5.00	6.00	21.1	32.0	60.0	-
DESIGN LOAD								
TENSION LOAD N_{Rd}								
NON-CRACKED CONCRETE	[kN]	3.33	4.17	6.67	8.89	22.2	27.8	38.9
CRACKED CONCRETE	[kN]	2.22	2.78	3.33	6.67	8.89	16.7	-
SHEAR LOAD V_{Rd}								
NON-CRACKED CONCRETE	[kN]	3.33	4.17	6.67	16.9	31.4	49.0	70.6
CRACKED CONCRETE	[kN]	2.22	2.78	3.3	13.3	17.8	33.3	-
RECOMMENDED LOAD								
TENSION LOAD N_{rec}								
NON-CRACKED CONCRETE	[kN]	2.38	2.98	4.76	6.35	15.9	19.8	27.8
CRACKED CONCRETE	[kN]	1.59	1.99	2.38	4.76	6.35	11.9	-
SHEAR LOAD V_{rec}								
NON-CRACKED CONCRETE	[kN]	2.38	2.98	4.76	12.1	22.4	35.0	50.4
CRACKED CONCRETE	[kN]	1.59	1.99	2.38	9.52	12.7	23.8	-

Product commercial data

Size	Product Code	Anchor		Quantity [pcs]			Weight [kg]			Bar Code
		Diameter [mm]	Length [mm]	Box	Outer	Pallet	Box	Outer	Pallet	
Rawlbolt R-RBL Loose Bolt										
M6	R-RBL-M06/10W	6	55	50	50	15750	1.55	1.55	518.3	5906675283210
	R-RBL-M06/25W	6	70	50	50	15750	1.60	1.60	534.0	5906675283234
	R-RBL-M06/40W	6	85	50	50	9000	1.85	1.85	363.0	5906675283258
M8	R-RBL-M08/10W	8	65	50	50	15750	2.7	2.7	880.5	5906675283272
	R-RBL-M08/25W	8	80	50	50	9000	3.0	3.0	570.0	5906675283296
	R-RBL-M08/40W	8	95	50	50	9000	3.3	3.3	624.0	5906675283319
M10	R-RBL-M10/10W	10	75	50	50	9000	4.6	4.6	858.0	5906675283333
	R-RBL-M10/25W	10	90	50	50	7500	5.0	5.0	780.0	5906675283357
	R-RBL-M10/50W	10	115	50	50	4500	5.7	5.7	543.0	5906675283371
	R-RBL-M10/75W	10	140	50	50	5400	6.4	6.4	721.2	5906675283395
M12	R-RBL-M12/10W	12	90	25	25	4500	4.3	4.3	808.5	5906675283401
	R-RBL-M12/25W	12	105	25	25	2700	4.6	4.6	521.4	5906675283418
	R-RBL-M12/40W	12	120	25	25	2250	4.6	4.6	441.8	5906675283425
	R-RBL-M12/60W	12	140	25	25	2250	5.2	5.2	500.3	5906675283432

Product commercial data (cont.)

Size	Product Code	Anchor		Quantity [pcs]			Weight [kg]			Bar Code
		Diameter [mm]	Length [mm]	Box	Outer	Pallet	Box	Outer	Pallet	
M16	R-RBL-M16/15W	16	135	10	10	900	4.1	4.1	401.7	5906675283449
	R-RBL-M16/30W	16	150	10	10	900	4.4	4.4	421.5	5906675283456
	R-RBL-M16/60W	16	180	10	10	900	4.8	4.8	461.1	5906675283463
M20	R-RBL-M20/60W	20	195	10	10	690	8.8	8.8	634.4	5906675283487
	R-RBL-M20/100W	20	235	10	10	360	9.8	9.8	383.5	5906675283470
M24	R-RBL-M24/100W	24	255	5	5	144	7.3	7.3	238.8	5906675283494
	R-RBL-M24/150W	24	300	2	10	190	3.3	16.3	339.7	5906675283500
Rawlbolt R-RBP Bolt Projecting										
M6	R-RBP-M06/10W	6	65	50	50	6300	2.8	2.8	382.8	5906675283593
	R-RBP-M06/25W	6	80	50	50	15750	1.65	1.65	549.8	5906675283616
	R-RBP-M06/60W	6	115	50	50	9000	2.0	2.0	390.0	5906675283630
M8	R-RBP-M08/10W	8	75	50	50	15750	2.8	2.8	912.0	5906675283654
	R-RBP-M08/25W	8	90	50	50	9000	3.1	3.1	588.0	5906675283678
	R-RBP-M08/60W	8	125	50	50	9000	3.6	3.6	678.0	5906675283692
M10	R-RBP-M10/15W	10	90	50	50	7500	4.9	4.9	765.0	5906675283715
	R-RBP-M10/30W	10	105	50	50	7500	5.3	5.3	825.0	5906675283739
	R-RBP-M10/60W	10	135	50	50	5400	6.0	6.0	678.0	5906675283753
M12	R-RBP-M12/15W	12	110	25	25	4500	4.1	4.1	759.0	5906675283760
	R-RBP-M12/30W	12	125	25	25	2250	5.0	5.0	475.5	5906675283777
	R-RBP-M12/75W	12	170	25	25	2250	5.8	5.8	552.0	5906675283784
M16	R-RBP-M16/15W	16	150	10	10	900	4.1	4.1	397.2	5906675283791
	R-RBP-M16/35W	16	170	10	10	900	4.7	4.7	448.5	5906675283807
	R-RBP-M16/75W	16	210	10	10	690	5.3	5.3	392.3	5906675283814
M20	R-RBP-M20/15W	20	170	10	10	600	7.6	7.6	487.8	5906675283821
	R-RBP-M20/30W	20	185	10	10	690	8.3	8.3	603.4	5906675283838
	R-RBP-M20/100W	20	255	10	10	300	9.9	9.9	328.2	5906675284781
M24	R-RBP-M24/75W	24	255	5	5	330	7.1	7.1	498.6	5906675283852

R-RBL-PF, R-RBP-PF RAWLBOLT Colar

World's most popular all-purpose expanding shield anchor

Approvals and Reports

- AT-15-7280/2014

Product overview

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

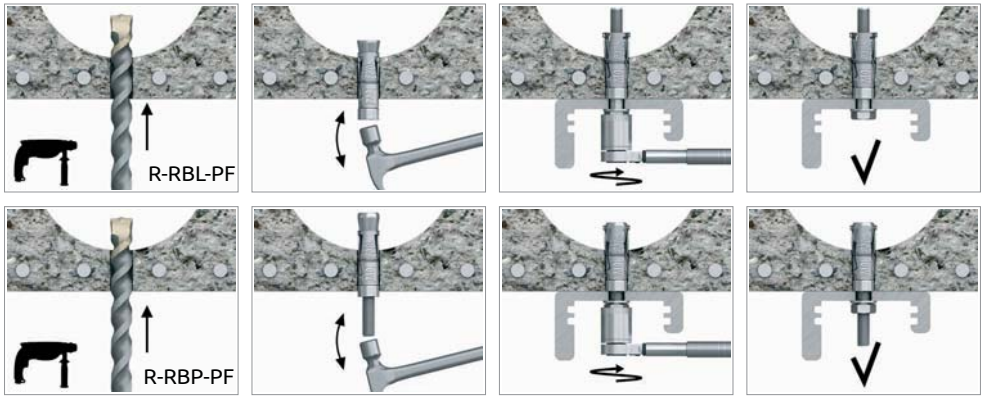
- Roller shutter doors
- Fire doors
- Steelwork
- Security grills
- Machinery
- Pipework/ductwork supports

Base materials

Approved for use in:

- Hollow concrete slab min. C20/25
- Solid brick
- Hollow send-lime brick min. C20/25
- Hollow lightweight
- Concrete block

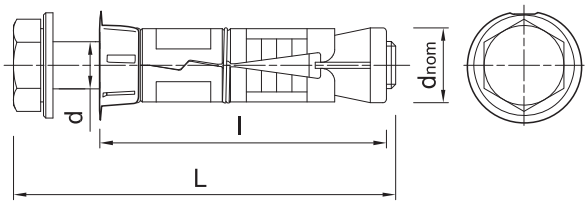
Installation guide



1. Drill a hole of required diameter and depth. Note: When fixing into brickwork. mortar joints should be avoided
2. Clear the hole of drilling dust and debris (using blowpump or equivalent method)
3. Remove pre-assembled bolt and washer. Insert shield into hole and tap home with hammer until flush with surface
4. Insert bolt with washer through fixture into the shield
5. Tighten to the recommended torque

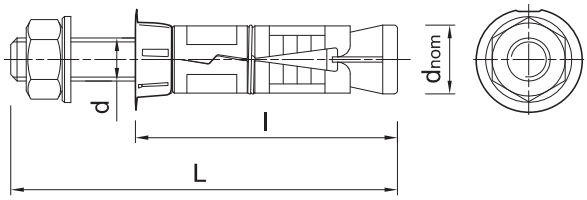
Product information

R-RBL-PF



Size	Product Code	Anchor			Fixture	
		Bolt diameter	External diameter	Bolt length	Max. thickness	Hole diameter
		d	d_1	L_1	t_{fix}	d_f
		[mm]	[mm]	[mm]	[mm]	[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

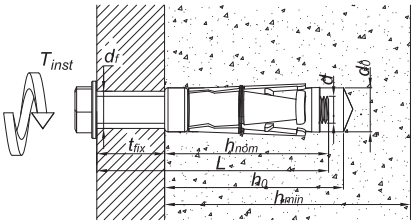
R-RBP-PF



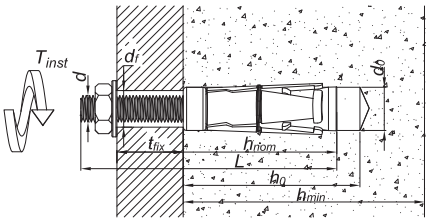
Size	Product Code	Anchor			Fixture	
		Bolt diameter	External diameter	Bolt length	Max. thickness	Hole diameter
		d	d_1	L_1	t_{fix}	d_f
		[mm]	[mm]	[mm]	[mm]	[mm]
M6	R-RBP-PF-M06/10W	6	12	65	10	6.5
	R-RBP-PF-M06/25W	6	12	80	25	6.5
	R-RBP-PF-M06/60W	6	12	115	60	6.5
M8	R-RBP-PF-M08/10W	8	14	75	10	9
	R-RBP-PF-M08/25W	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

R-RBL-PF



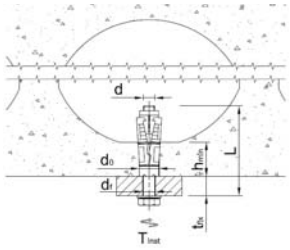
R-RBP-PF



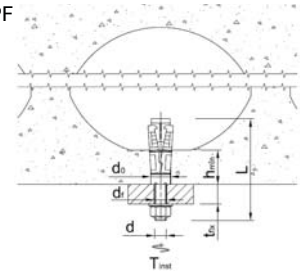
Installation data for solid material

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
Installation torque	T_{inst}	[Nm]	6.5	15	27	50	120
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

R-RBL-PF



R-RBP-PF



Installation data for hollow material

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
Installation torque	T_{inst}	[Nm]	3	5	8	10	15
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

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 $F_{RU,m}$								
Concrete Hollow Slab								
	THICKNESS	Class						
CONCRETE HOLLOW SLAB	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	—	—	—
CONCRETE HOLLOW SLAB	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	—	—

Basic performance data (cont.)

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 $F_{RU,m}$								
Concrete Hollow Slab								
CONCRETE HOLLOW SLAB	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	—
CONCRETE HOLLOW SLAB	50	C20/25	[kN]	10.31	10.96	10.96	10.96	10.96
LIGHWEIGHT CONCRETE LAC LAC		5	[kN]	8.34	8.78	8.78	8.78	8.78
SOLID BRICK		20	[kN]	9.97	9.64	9.64	9.64	9.64
SEND-LINE BRICK		15	[kN]	4.27	—	—	—	—
CHARACTERISTIC LOAD								
TENSION and SHEAR LOAD F_{RK}								
Concrete Hollow Slab								
	THICKNESS	Class						
CONCRETE HOLLOW SLAB	23	C30/37	[kN]	4.36	5.44	—	—	—
		C35/45	[kN]	4.82	6.02	—	—	—
		C45/55	[kN]	5.35	6.67	—	—	—
		C50/60	[kN]	5.81	7.25	—	—	—
CONCRETE HOLLOW SLAB	35	C30/37	[kN]	6.61	11.42	16.07	—	—
		C35/45	[kN]	7.31	12.64	17.78	—	—
		C45/55	[kN]	8.11	14.01	19.71	—	—
		C50/60	[kN]	8.81	15.23	21.42	—	—
CONCRETE HOLLOW SLAB	40	C30/37	[kN]	7.30	16.94	19.19	25.46	—
		C35/45	[kN]	8.08	18.75	21.23	28.18	—
		C45/55	[kN]	8.95	20.78	23.53	31.23	—
		C50/60	[kN]	9.73	22.59	25.58	33.95	—
CONCRETE HOLLOW SLAB	50	C20/25	[kN]	8.45	8.93	8.93	8.93	8.93
LIGHWEIGHT CONCRETE LAC LAC		5	[kN]	5.98	5.99	5.99	5.99	5.99
SOLID BRICK		20	[kN]	6.25	6.37	6.37	6.37	6.37
SEND-LINE BRICK		15	[kN]	1.90	—	—	—	—
DESIGN LOAD								
TENSION and SHEAR LOAD F_{Rd}								
Concrete Hollow Slab								
	THICKNESS	Class						
CONCRETE HOLLOW SLAB	23	C30/37	[kN]	1,73	2,16	—	—	—
		C35/45	[kN]	1,91	2,39	—	—	—
		C45/55	[kN]	2,12	2,65	—	—	—
		C50/60	[kN]	2,31	2,88	—	—	—
CONCRETE HOLLOW SLAB	35	C30/37	[kN]	2,62	4,53	6,38	—	—
		C35/45	[kN]	2,90	5,02	7,06	—	—
		C45/55	[kN]	3,22	5,56	7,82	—	—
		C50/60	[kN]	3,50	6,04	8,50	—	—
CONCRETE HOLLOW SLAB	40	C30/37	[kN]	2,90	6,72	7,62	10,10	—
		C35/45	[kN]	3,21	7,44	8,42	11,18	—
		C45/55	[kN]	3,55	8,25	9,34	12,39	—
		C50/60	[kN]	3,86	8,96	10,15	13,47	—
CONCRETE HOLLOW SLAB	50	C20/25	[kN]	3,35	3,54	3,54	3,54	3,54
LIGHWEIGHT CONCRETE LAC LAC		5	[kN]	1,95	1,96	1,96	1,96	1,96
SOLID BRICK		20	[kN]	2,16	2,20	2,20	2,20	2,20
SEND-LINE BRICK		15	[kN]	0,75	—	—	—	—

Basic performance data (cont.)

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

Size				M6	M8	M10	M12	M16
RECOMMENDED LOAD								
TENSION and SHEAR LOAD F_{Rec**}								
Concrete Hollow Slab								
	THICKNESS	Class						
CONCRETE HOLLOW SLAB	23	C30/37	[kN]	1,24	1,54	—	—	—
		C35/45	[kN]	1,37	1,71	—	—	—
		C45/55	[kN]	1,52	1,89	—	—	—
		C50/60	[kN]	1,65	2,05	—	—	—
CONCRETE HOLLOW SLAB	35	C30/37	[kN]	1,87	3,24	4,55	—	—
		C35/45	[kN]	2,07	3,58	5,04	—	—
		C45/55	[kN]	2,30	3,97	5,59	—	—
		C50/60	[kN]	2,50	4,32	6,07	—	—
CONCRETE HOLLOW SLAB	40	C30/37	[kN]	2,07	4,80	5,44	7,22	—
		C35/45	[kN]	2,29	5,31	6,02	7,99	—
		C45/55	[kN]	2,54	5,89	6,67	8,85	—
		C50/60	[kN]	2,76	6,40	7,25	9,62	—
CONCRETE HOLLOW SLAB	50	C20/25	[kN]	2,40	2,53	2,53	2,53	2,53
LIGHWEIGHT CONCRETE LAC LAC		5	[kN]	1,40	1,40	1,40	1,40	1,40
SOLID BRICK		20	[kN]	1,54	1,57	1,57	1,57	1,57
SEND-LINE BRICK		15	[kN]	0,54	—	—	—	—

Product commercial data

Size	Product Code	Anchor		Quantity [pcs]			Weight [kg]			Bar Code
		Diameter [mm]	Length [mm]	Box	Outer	Pallet	Box	Outer	Pallet	
Rawlbolt R-RBL-PF Loose Bolt										
M6	R-RBL-PF-M06/10W	6	55	50	400	22400	1.6	12.4	694.4	5906675117485
	R-RBL-PF-M06/25W	6	70	50	400	22400	1.6	12.8	716.8	5906675117492
	R-RBL-PF-M06/40W	6	85	50	50	20800	1.9	1.9	769.6	5906675117508
M8	R-RBL-PF-M08/10W	8	65	50	400	22400	2.7	21.6	1209.6	5906675117515
	R-RBL-PF-M08/25W	8	80	50	50	20800	3.0	3.0	1248.0	5906675117522
	R-RBL-PF-M08/40W	8	95	50	50	20800	3.3	3.3	1372.8	5906675117539
M10	R-RBL-PF-M10/10W	10	75	50	50	20800	4.6	4.6	1913.6	5906675117546
	R-RBL-PF-M10/25W	10	90	50	50	12800	5.0	5.0	1280.0	5906675117560
	R-RBL-PF-M10/50W	10	115	50	50	15600	5.7	5.7	1778.4	5906675117577
	R-RBL-PF-M10/75W	10	140	50	50	12800	6.4	6.4	1638.4	5906675117584
M12	R-RBL-PF-M12/10W	12	90	25	25	10400	4.3	4.3	1799.2	5906675117591
	R-RBL-PF-M12/25W	12	105	25	25	6400	4.6	4.6	1164.8	5906675117607
	R-RBL-PF-M12/40W	12	120	25	25	7800	4.6	4.6	1427.4	5906675117614
	R-RBL-PF-M12/60W	12	140	25	25	7800	5.2	5.2	1630.2	5906675117621
M16	R-RBL-PF-M16/15W	16	135	10	10	2560	4.1	4.1	1057.3	5906675117638
	R-RBL-PF-M16/30W	16	150	10	10	2560	4.4	4.4	1113.6	5906675117645
	R-RBL-PF-M16/60W	16	180	10	10	2560	4.8	4.8	1226.2	5906675117652

Product commercial data

Size	Product Code	Anchor		Quantity [pcs]			Weight [kg]			Bar Code
		Diameter [mm]	Length [mm]	Box	Outer	Pallet	Box	Outer	Pallet	
Rawlbolt R-RBP-PF Bolt Projecting										
M6	R-RBP-PF-M06/10W	6	65	50	400	22400	2.8	22.4	1254.4	5906675117669
	R-RBP-PF-M06/25W	6	80	50	400	22400	1.7	13.2	739.2	5906675117676
	R-RBP-PF-M06/60W	6	115	50	50	20800	2.0	2.0	832.0	5906675117683
M8	R-RBP-PF-M08/10W	8	75	50	400	22400	2.8	22.4	1254.4	5906675117690
	R-RBP-PF-M08/25W	8	90	50	50	20800	3.1	3.1	1289.6	5906675117706
	R-RBP-PF-M08/60W	8	125	50	50	20800	3.6	3.6	1497.6	5906675117713
M10	R-RBP-PF-M10/15W	10	90	50	50	12800	4.9	4.9	1254.4	5906675117720
	R-RBP-PF-M10/30W	10	105	50	50	15600	5.3	5.3	1653.6	5906675117737
	R-RBP-PF-M10/60W	10	135	50	50	12800	6.0	6.0	1536.0	5906675117744
M12	R-RBP-PF-M12/15W	12	110	25	25	10400	4.1	4.1	1684.8	5906675117751
	R-RBP-PF-M12/30W	12	125	25	25	6400	5.0	5.0	1267.2	5906675117768
	R-RBP-PF-M12/75W	12	170	25	25	7800	5.8	5.8	1809.6	5906675117775
M16	R-RBP-PF-M16/15W	16	150	10	10	2560	4.1	4.1	1044.5	5906675117782
	R-RBP-PF-M16/35W	16	170	10	10	2560	4.7	4.7	1190.4	5906675117799
	R-RBP-PF-M16/75W	16	210	10	10	2560	5.3	5.3	1344.0	5906675117805

R-RBL-E, R-RBL-H, R-RB RAWLBOLT

World's most popular all-purpose expanding shield anchor

R-RBL-E

R-RBL-H

R-RB

Installation movie

Versions

- R-RBL-E Eye Bolt
- R-RBL-H Hook Bolt
- R-RB Shield

Product overview

Features and benefits

- For use in concrete, hollowcore slabs, flooring blocks and ceramics
- Eyebolt and hook designed & manufactured for maximum performance
- Product recommended for applications requiring fire resistance
- Three-pieces expanding sleeve of maximum expansion provides optimal load and safety of use in any substrate

Applications

- Supporting guy ropes, stays and cables
- Supporting ladder restraints

Base materials

Suitable for use in:

- Concrete
- Natural Stone
- Hollow-core Slab
- Hollow Brick

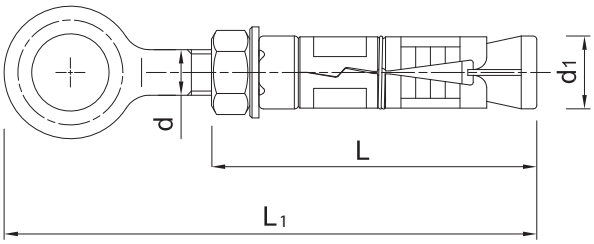
Installation guide

Installation guide

1. Drill a hole of required diameter and depth. Note: When fixing into brickwork, mortar joints should be avoided
2. Clear the hole of drilling dust and debris (using blowpump or equivalent method)
3. Insert the anchor (tap home until flush with surface) and position eye/hook accordingly
4. Tighten to recommended torque, using the hex nut (not the eye/hook)

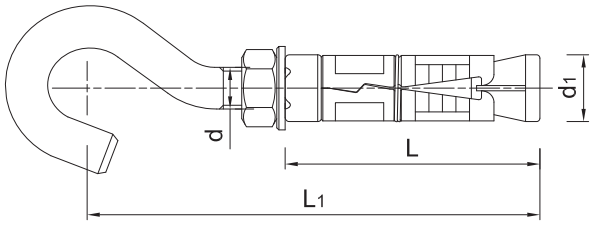
Product information

R-RBL-E



Size	Product Code	Anchor		
		Bolt diameter	External diameter	Length
		d	d_1	L_1
		[mm]	[mm]	[mm]
M6	R-RBL-06EW	6	12	73
M8	R-RBL-08EW	8	14	87
M10	R-RBL-10EW	10	16	108
M12	R-RBL-12EW	12	20	130

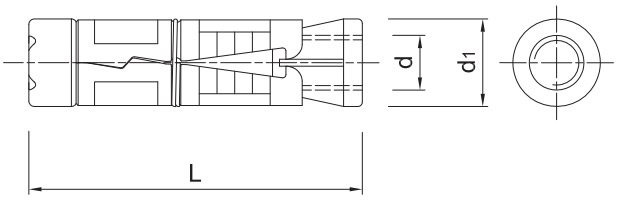
R-RBL-H



Size	Product Code	Anchor		
		Bolt diameter	External diameter	Length
		d	d_1	L_1
		[mm]	[mm]	[mm]
M6	R-RBL-06HW	6	12	83
M8	R-RBL-08HW	8	14	98
M10	R-RBL-10HW	10	16	120
M12	R-RBL-12HW	12	20	145

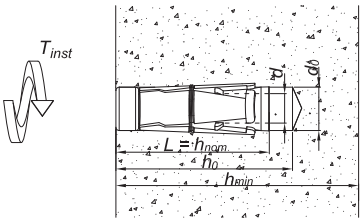
Product information (cont.)

R-RB



Size	Product Code	Anchor			Fixture
		Thread diameter	External diameter	Length	Hole diameter
		d	d_1	L	d_f
		[mm]	[mm]	[mm]	[mm]
M6	R-RB-M06W	6	12	45	6.5
M8	R-RB-M08W	8	14	50	9
M10	R-RB-M10W	10	16	60	11
M12	R-RB-M12W	12	20	75	13
M16	R-RB-M16W	16	25	115	17
M20	R-RB-M20W	20	32	130	22
M24	R-RB-M24W	24	38	150	26

Installation data



Size			M6	M8	M10	M12	M16	M20	M24
Thread diameter	d	[mm]	6	8	10	12	16	20	24
Hole diameter in substrate	d_0	[mm]	12	14	16	20	25	32	38
Installation torque	T_{inst}	[Nm]	6.5	15	27	50	120	230	400
Min. hole depth in substrate	h_0	[mm]	50	55	65	85	125	140	160
Installation depth	h_{nom}	[mm]	45	50	60	80	120	135	155
Min. substrate thickness	h_{min}	[mm]	100				142.5	172.5	240
Min. spacing	s_{min}	[mm]	35	40	50	60	95	115	210
Min. edge distance	c_{min}	[mm]	53	60	75	90	143	173	188

Product commercial data

Size	Product Code	Anchor		Quantity [pcs]			Weight [kg]			Bar Code
		Diameter [mm]	Length [mm]	Box	Outer	Pallet	Box	Outer	Pallet	
Rawlbolt R-RBL-E Eye Bolt										
M6	R-RBL-06HW	6	83	25	25	7875	0.95	0.95	329.3	5906675283135
M8	R-RBL-08HW	8	98	25	25	4500	1.60	1.60	318.0	5906675283159
M10	R-RBL-10HW	10	120	25	25	4500	3.1	3.1	583.5	5906675283173
M12	R-RBL-12HW	12	145	25	25	2250	5.9	5.9	561.0	5906675283197
R-RBL-H Hook Bolt										
M6	R-RBL-06EW	6	73	25	25	7875	0.95	0.95	329.3	5906675283128
M8	R-RBL-08EW	8	87	25	25	7875	1.60	1.60	534.0	5906675283142
M10	R-RBL-10EW	10	108	25	25	3750	2.9	2.9	465.0	5906675283166
M12	R-RBL-12EW	12	130	25	25	2250	5.2	5.2	500.3	5906675283180

Product commercial data (cont.)

Size	Product Code	Anchor		Quantity [pcs]			Weight [kg]			Bar Code
		Diameter [mm]	Length [mm]	Box	Outer	Pallet	Box	Outer	Pallet	
R-RB Shield										
M6	R-RB-M06W	6	45	100	100	31500	1.74	1.74	578.3	5906675283517
M8	R-RB-M08W	8	50	100	100	18000	2.6	2.6	494.4	5906675283524
M10	R-RB-M10W	10	60	100	100	10800	4.1	4.1	472.8	5906675283531
M12	R-RB-M12W	12	75	50	50	7500	4.1	4.1	645.0	5906675283548
M16	R-RB-M16W	16	115	25	25	2250	4.3	4.3	414.8	5906675283555
M20	R-RB-M20W	20	130	15	15	1620	5.3	5.3	601.9	5906675283562
M24	R-RB-M24W	24	150	5	5	720	2.6	2.6	400.1	5906675283579