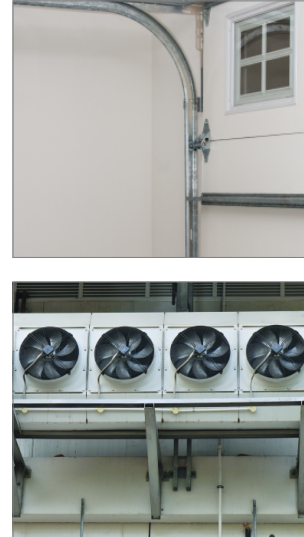


R-RLK-P Rawlok - Bolt Projecting

All purpose expansion anchor for use in medium weight applications



Product information

Features and benefits

- Medium weight applications anchor
- Anchor designed for optimum performance in most base materials
- Integral collapse feature to ensure maximum clamping force is applied to the fixture
- Bolt and drill size marked on sleeve for accurate installation

Applications

- Radiators
- Signs
- Stadium seating
- Satellite dishes
- Wall plates
- Shutter
- Garage doors

Base materials

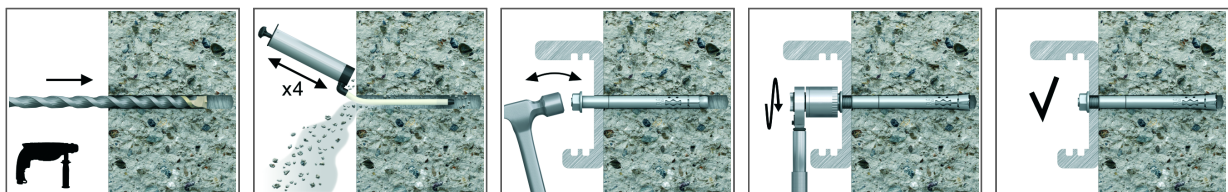
Approved for use in:

- Non-cracked concrete C20/25-C50/60
- Solid Brick
- Reinforced concrete

Also suitable for use in:

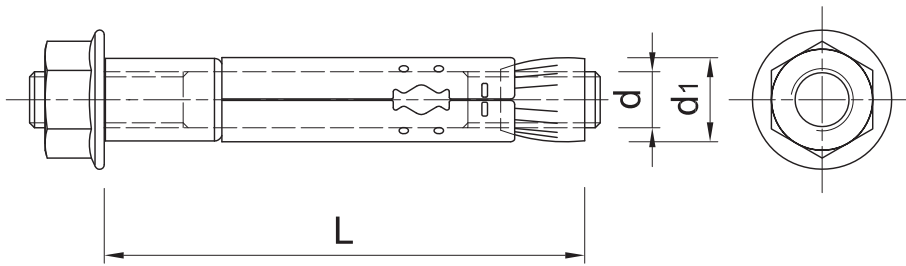
- Natural Stone

Installation guide



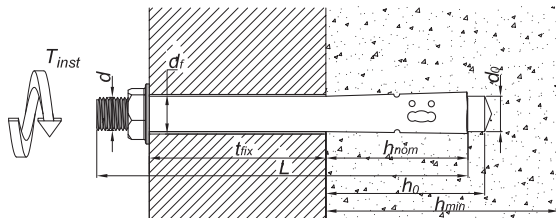
1. Drill a hole of required diameter and depth. Note: When fixing into brickwork, mortar joints should be avoided
2. Remove debris and thoroughly clean hole with brush and pum
3. Insert Rawlock through the fixture into the hole
4. Tighten to the recommended torque

Product information



Size	Product Code	Anchor		Fixture	
		Diameter	Length	Max. thickness	Hole diameter
		d	L	t_{fix}	d_f
		[mm]	[mm]	[mm]	[mm]
M5	R-RLK-P-05056	5	56	25	8
M6	R-RLK-P-06040	6	40	10	10
	R-RLK-P-06065	6	65	35	10
M8	R-RLK-P-08050	8	50	10	12
	R-RLK-P-08075	8	75	36	12
	R-RLK-P-08095	8	95	55	12
M10	R-RLK-P-10060	10	60	10	14
	R-RLK-P-10075	10	75	27	14
	R-RLK-P-10100	10	100	50	14
	R-RLK-P-10130	10	130	80	14
M12	R-RLK-P-12110	12	110	55	18
	R-RLK-P-12145	12	145	85	18

Installation data



Size	M5	M6	M8	M10	M12		
Thread diameter	d	[mm]	6.5	8	10	12	16
Hole diameter in substrate	d_0	[mm]	6.5	8	10	12	16
Installation torque (Concrete)	T_{inst}	[Nm]	2.5	6	11	22	38
Installation torque (Blockwork 14.0MPa)	T_{inst}	[Nm]	1.5	3	6	11	25
Installation torque (Blockwork 7.0MPa)	T_{inst}	[Nm]	1	2	4	8	12
Min. hole depth in substrate	h_0	[mm]	30	35	45	55	60
Installation depth	h_{nom}	[mm]	30	35	45	55	60
Min. substrate thickness	h_{min}	[mm]	50	55	65	85	90
Min. spacing	s_{min}	[mm]	40	50	60	70	90
Min. edge distance	c_{min}	[mm]	40	50	60	70	90

Basic performance data

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

Size		M5	M6	M8	M10	M12
BLOCKWORK 7.0MPA						
Embedment depth h_{ef}	[mm]	26.0	26.0	36.0	43.0	50.0
NON-CRACKED CONCRETE						
Embedment depth h_{ef}	[mm]	26.0	26.0	36.0	43.0	50.0
CHARACTERISTIC LOAD						
TENSION LOAD N_{Rk}						
BLOCKWORK 7.0MPA	[kN]	1.50	2.40	3.50	4.50	5.80
NON-CRACKED CONCRETE	[kN]	5.00	6.90	9.30	11.4	14.5
SHEAR LOAD V_{Rk}						
BLOCKWORK 7.0MPA	[kN]	2.30	2.50	2.70	3.10	3.40
NON-CRACKED CONCRETE	[kN]	3.60	5.40	9.00	12.6	19.8
DESIGN LOAD						
TENSION LOAD N_{Rd}						
BLOCKWORK 7.0MPA	[kN]	0.69	1.11	1.62	2.08	2.69
NON-CRACKED CONCRETE	[kN]	2.31	3.19	4.31	5.28	6.71
SHEAR LOAD V_{Rd}						
BLOCKWORK 7.0MPA	[kN]	1.28	1.39	1.50	1.72	1.89
NON-CRACKED CONCRETE	[kN]	2.00	3.00	5.00	7.00	11.0
RECOMMENDED LOAD						
TENSION LOAD N_{rec}						
BLOCKWORK 7.0MPA	[kN]	0.50	0.79	1.16	1.49	1.92
NON-CRACKED CONCRETE	[kN]	1.65	2.28	3.08	3.77	4.79
SHEAR LOAD V_{rec}						
BLOCKWORK 7.0MPA	[kN]	0.91	0.99	1.07	1.23	1.35
NON-CRACKED CONCRETE	[kN]	1.43	2.14	3.57	5.00	7.86

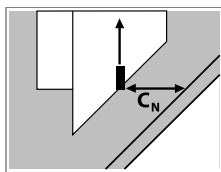
Design performance data

Data based on AT-15-7555/2011

Size			M5	M6	M8	M10	M12
Embedment depth	h_{ef}	[mm]	26.0	26.0	36.0	43.0	50.0
TENSION LOAD							
PULL-OUT FAILURE; NON-CRACKED CONCRETE C20/25							
Characteristic resistance	$N_{Rk,p}$	[kN]	5.00	6.90	9.30	11.4	14.5
Design resistance $V_{M1} = 2.16$	$N_{Rd,p}$	[kN]	2.31	3.19	4.31	5.28	6.71
PULL-OUT FAILURE; BLOCKWORK 7.0MPA							
Characteristic resistance	$N_{Rk,p}$	[kN]	1.50	2.40	3.50	4.50	5.80
Design resistance $V_{M1} = 2.16$	$N_{Rd,p}$	[kN]	0.69	1.11	1.62	2.08	2.69
PULL-OUT FAILURE; BLOCKWORK 14.0MPA							
Characteristic resistance	$N_{Rk,p}$	[kN]	1.90	3.20	4.50	5.60	6.90
Design resistance $V_{M1} = 2.16$	$N_{Rd,p}$	[kN]	0.88	1.48	2.08	2.59	3.19
PULL-OUT FAILURE; BLOCKWORK 20.5MPA							
Characteristic resistance	$N_{Rk,p}$	[kN]	2.40	3.70	5.00	6.00	7.30
Design resistance $V_{M1} = 2.16$	$N_{Rd,p}$	[kN]	1.11	1.71	2.31	2.78	3.38
SHEAR LOAD							
NON-CRACKED CONCRETE C20/25							
Characteristic resistance	V_{Rk}	[kN]	3.60	5.40	9.00	12.6	19.8
Design resistance $V_{M2} = 1.8$	V_{Rd}	[kN]	2.00	3.00	5.00	7.00	11.0
BLOCKWORK 7.0MPA							
Characteristic resistance	V_{Rk}	[kN]	2.30	2.50	2.70	3.10	3.40
Design resistance $V_{M2} = 1.8$	V_{Rd}	[kN]	1.28	1.39	1.50	1.72	1.89
BLOCKWORK 14.0MPA							
Characteristic resistance	V_{Rk}	[kN]	3.40	5.20	8.60	10.3	13.1
Design resistance $V_{M2} = 1.8$	V_{Rd}	[kN]	1.89	2.89	4.78	5.72	7.28
BLOCKWORK 20.5MPA							
Characteristic resistance	V_{Rk}	[kN]	3.40	5.20	8.60	10.3	13.1
Design resistance $V_{M2} = 1.8$	V_{Rd}	[kN]	1.89	2.89	4.78	5.72	7.28

Reduction / increasing resistance factors for edge distance and spacing

Edge distance (tension)

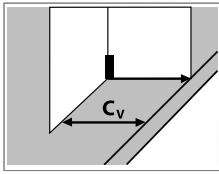


Reduction factors for edge distance $< C_{cr,N}$ applicable to N_{Rd} or N_{Rk} for non-cracked and cracked concrete from 'Basic Performance' table

C_N [mm]	M5	M6	M8	M10	M12
40	0.75				
50	0.87	0.79			
60	1.00	0.89	0.81		
70		1.00	0.91	0.77	
80			1.00	0.85	
90				0.92	0.81
100				1.00	0.87
120					1.00

Design performance data

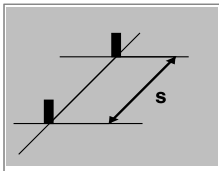
Edge distance (shear)



Increasing factors for edge distance $>C_{min}$ applicable to $V_{Rd,c}$ for non-cracked concrete from 'Design Performance' table

C_v [mm]	M5	M6	M8	M10	M12
40	0.58				
50	0.79	0.53			
60	1.00	0.69	0.50		
70		0.84	0.62	0.48	
80		1.00	0.75	0.58	
90			0.87	0.69	0.45
100			1.00	0.79	0.53
120				1.00	0.69
140					0.84
160					1.00

Spacing



Reduction factors for spacing $<S_{cr,N}$ applicable to N_{Rd} / V_{Rd} or N_{rec} / V_{rec} for non-cracked concrete from 'Basic Performance' table

s [mm]	M5	M6	M8	M10	M12
40	0.80				
50	0.90	0.77			
60	1.00	0.85	0.76		
70		0.92	0.82	0.75	
80		1.00	0.88	0.80	
90			0.94	0.85	0.74
100			1.00	0.90	0.77
120				1.00	0.85
140					0.92
160					1.00

Product commercial data

Size	Product Code	Anchor		Quantity [pcs]			Weight [kg]			Bar Codes	Art No.
		Diameter [mm]	Length [mm]	Box	Outer	Pallet	Box	Outer	Pallet		
M5	R-RLK-P-05056	5	56	100	100	18000	1.30	1.30	264.0	5010445695063	55181
M6	R-RLK-P-06040	6	40	100	100	18000	1.80	1.80	354.0	5010445695087	55182
	R-RLK-P-06065	6	65	50	50	9000	1.30	1.30	264.0	5010445695100	55183
M8	R-RLK-P-08050	8	50	50	50	9000	1.75	1.75	345.0	5010445695148	55184
	R-RLK-P-08075	8	75	50	50	15000	2.4	2.4	750.0	5010445695162	55185
	R-RLK-P-08095	8	95	25	25	7500	1.53	1.53	487.5	5010445695186	55186
M10	R-RLK-P-10060	10	60	25	25	7500	1.58	1.58	502.5	5010445695209	55187
	R-RLK-P-10075	10	75								
	R-RLK-P-10100	10	100	10	10	3000	0.93	0.93	309.0	5010445695247	55189
M12	R-RLK-P-10130	10	130	10	10	3000	1.14	1.14	372.0	5010445695254	55190
	R-RLK-P-12110	12	110	10	10	3000	1.63	1.63	519.0	5010445695285	55191
	R-RLK-P-12145	12	145	10	10	1800	2.1	2.1	406.2	5010445695308	55192