

R-LX-H-ZP Zinc Plated Hex Concrete Screw Anchor

Self-tapping concrete screwbolt



Product information

Features and benefits

- Time-efficient installation through streamlined procedure - simply drill and drive
- Completely removable
- Unique design with patented threadform ensures high performance for relatively small hole diameter
- Non-expansion functioning ensures low risk of damage to base material and makes R-LX ideal for installation near edges and adjacent anchors
- High performance in non-cracked concrete
- Different head types for any application
- Possibility of multiple use
- Excellent product for temporary fixing
- Suitable for standard and reduced embedment depth

Applications

- Through-fixing
- Temporary anchorages
- Formwork support systems
- Balustrading & handrails
- Fencing & gates manufacturing and installation
- Racking systems
- Public seating
- Scaffolding

Base materials

Suitable for use in

- Concrete

Installation guide



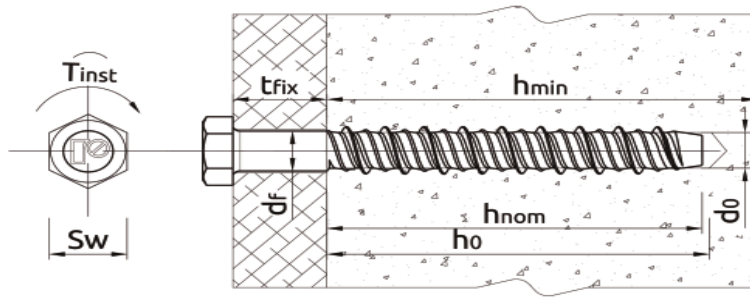
1. Drill a hole of required diameter and depth
2. Clean the hole of drilling dust and debris (using blowpump or equivalent method)
3. Insert anchor through fixture and screw into hole, until installation depth is reached and fixture is secure. Recommended installation torque may be used as a guideline (for use in concrete)

Product information



Size	Product Code	Anchor		Fixture		
		Diameter	Length	Max. thickness	Max. thickness t_{fix} for:	Hole diameter
		d	L	$t_{fix, r}$	$h_{nom, std}$	d_f
		[mm]	[mm]	[mm]	[mm]	[mm]
5	R-LX-05X050-H-ZP	6.3	50	25	10	7
	R-LX-05X075-H-ZP	6.3	75	50	25	7
6	R-LX-06X050-H-ZP	7.5	50	10	-	9
	R-LX-06X075-H-ZP	7.5	75	35	20	9
	R-LX-06X100-H-ZP	7.5	100	60	45	9
	R-LX-06X130-H-ZP	7.5	130	90	75	9
	R-LX-06X150-H-ZP	7.5	150	110	95	9
8	R-LX-08X060-H-ZP	10	60	10	-	12
	R-LX-08X075-H-ZP	10	75	25	5	12
	R-LX-08X090-H-ZP	10	90	40	20	12
	R-LX-08X100-H-ZP	10	100	50	30	12
	R-LX-08X130-H-ZP	10	130	80	60	12
10	R-LX-10X065-H-ZP	12.5	65	10	-	14
	R-LX-10X075-H-ZP	12.5	75	20	-	14
	R-LX-10X085-H-ZP	12.5	85	30	-	14
	R-LX-10X100-H-ZP	12.5	100	45	15	14
	R-LX-10X120-H-ZP	12.5	120	65	35	14
	R-LX-10X140-H-ZP	12.5	140	85	55	14
	R-LX-10X160-H-ZP	12.5	160	105	75	14
14	R-LX-14X080-H-ZP	17	80	5	-	18
	R-LX-14X105-H-ZP	17	105	30	-	18
	R-LX-14X115-H-ZP	17	115	40	-	18
	R-LX-14X135-H-ZP	17	135	60	15	18

Installation data



Size			5	6	8	10	14
Thread diameter	d	[mm]	6.3	7.5	10	12.5	17
Hole diameter in substrate	d ₀	[mm]	5	6	8	10	14
Wrench size	Sw	[mm]	8	10	15	17	22
STANDARD EMBEDMENT DEPTH							
Min. hole depth in substrate	h _{0,s}	[mm]	50	65	80	95	130
Installation depth	h _{nom,s}	[mm]	43	55	70	85	120
Min. substrate thickness	h _{min,s}	[mm]	100	100	110	130	190
Min. spacing	s _{min,s}	[mm]	40	45	50	60	100
Min. edge distance	c _{min,s}	[mm]	40	45	50	60	100
REDUCED EMBEDMENT DEPTH							
Min. hole depth in substrate	h _{0,r}	[mm]	-	50	60	65	85
Installation depth	h _{nom,r}	[mm]	-	43	50	55	75
Min. substrate thickness	h _{min,r}	[mm]	-	100	100	100	110
Min. spacing	s _{min,r}	[mm]	-	45	50	60	100
Min. edge distance	c _{min,r}	[mm]	-	45	50	60	100

Mechanical properties

Size			5	6	8	10	14
Nominal ultimate tensile strength - tension	f _{uk}	[N/mm ²]	1300	1250	1200	1050	1020
Nominal yield strength - tension	f _{yk}	[N/mm ²]	1150	1100	1050	950	800
Cross sectional area - tension	A _s	[mm ²]	19.6	28.3	50.3	78.5	153.9
Elastic section modulus	W _{el}	[mm ³]	12.2	21.2	50.3	98.1	269.3
Characteristic bending resistance	M _{0,Rk,s}	[Nm]	19	31.8	72.4	123.6	329.6
Design bending resistance	M	[Nm]	12.67	21.2	48.27	82.4	219.73

Basic performance data

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

Size		5	6	8	10	14
MEAN ULTIMATE LOAD						
TENSION LOAD $N_{Ru,m}$						
NON-CRACKED CONCRETE C20/25						
Standard embedment depth	[kN]	8.70	14.80	26.04	35.37	59.96
Reduced embedment depth	[kN]	-	11.09	15.19	17.08	27.53
CRACKED CONCRETE C20/25						
Standard embedment depth	[kN]	7.10	11.10	18.33	24.89	41.92
Reduced embedment depth	[kN]	-	7.81	10.69	12.02	19.37
SHEAR LOAD $V_{Ru,m}$						
NON-CRACKED CONCRETE C20/25						
Standard embedment depth	[kN]	8.70	14.80	26.04	49.46	94.19
Reduced embedment depth	[kN]	-	11.09	15.19	17.08	27.53
CRACKED CONCRETE C20/25						
Standard embedment depth	[kN]	7.10	11.10	18.33	49.46	83.83
Reduced embedment depth	[kN]	-	7.81	10.69	12.02	19.37
CHARACTERISTIC LOAD						
TENSION LOAD N_{Rk}						
NON-CRACKED CONCRETE C20/25						
Standard embedment depth	[kN]	7.00	12.00	19.49	26.46	44.56
Reduced embedment depth	[kN]	-	8.00	11.00	12.78	20.00
CRACKED CONCRETE C20/25						
Standard embedment depth	[kN]	4.50	7.00	13.00	18.87	31.77
Reduced embedment depth	[kN]	-	5.50	7.50	8.00	13.00
SHEAR LOAD V_{Rk}						
NON-CRACKED CONCRETE C20/25						
Standard embedment depth	[kN]	7.00	12.00	24.00	41.20	78.50
Reduced embedment depth	[kN]	-	8.00	11.00	13.00	20.00
CRACKED CONCRETE C20/25						
Standard embedment depth	[kN]	4.50	7.00	13.00	38.00	68.00
Reduced embedment depth	[kN]	-	5.50	7.50	8.00	13.00
DESIGN LOAD						
TENSION LOAD N_{Rd}						
NON-CRACKED CONCRETE C20/25						
Standard embedment depth	[kN]	3.89	8.00	12.99	17.64	29.71
Reduced embedment depth	[kN]	-	5.33	7.33	8.52	13.33
CRACKED CONCRETE C20/25						
Standard embedment depth	[kN]	2.50	4.67	8.67	12.58	21.18
Reduced embedment depth	[kN]	-	3.67	5.00	5.33	8.67
SHEAR LOAD V_{Rd}						
NON-CRACKED CONCRETE C20/25						
Standard embedment depth	[kN]	3.89	8.00	16.00	27.47	52.33
Reduced embedment depth	[kN]	-	5.33	7.33	8.67	13.33
CRACKED CONCRETE C20/25						
Standard embedment depth	[kN]	2.50	4.67	8.67	25.33	45.33
Reduced embedment depth	[kN]	-	3.67	5.00	5.33	8.67

Basic performance data

Design performance data

Standard embedment depth

Size			5	6	8	10	14
Installation depth	h_{nom}	[mm]	43.00	55.00	70.00	85.00	120.00
Effective embedment depth	h_{ef}	[mm]	30.00	42.00	53.00	65.00	92.00
TENSION LOAD							
STEEL FAILURE							
Characteristic resistance	$N_{Rk,s}$	[kN]	25.50	35.40	60.40	82.40	157.00
Partial safety factor	γ_{Ms}	-	1.40	1.40	1.40	1.40	1.50
PULL-OUT FAILURE; NON-CRACKED CONCRETE C20/25							
Characteristic resistance	$N_{Rk,p}$	[kN]	7.00	12.00	-	-	-
CONCRETE CONE FAILURE; NON-CRACKED CONCRETE C20/25							
Characteristic resistance	$N_{Rk,c}$	[kN]	-	-	19.49	26.46	44.56
PULL-OUT FAILURE; CRACKED CONCRETE C20/25							
Characteristic resistance	$N_{Rk,p}$	[kN]	4.50	7.00	13.00	-	-
CONCRETE CONE FAILURE; CRACKED CONCRETE C20/25							
Characteristic resistance	$N_{Rk,c}$	[kN]	-	-	-	18.87	31.77
Partial safety factor	[English]: γ_2	-	1.20	1.00	1.00	1.00	1.00
Increasing factors for $N_{Rd,p}$ - C30/37	ψ_c	-	-	-	-	-	-
Increasing factors for $N_{Rd,p}$ - C40/50	ψ_c	-	-	-	-	-	-
Increasing factors for $N_{Rd,p}$ - C50/60	ψ_c	-	-	-	-	-	-
Spacing	$s_{cr,N}$	[mm]	90.00	126.00	160.00	196.00	276.00
Edge distance	$c_{cr,N}$	[mm]	45.00	63.00	80.00	98.00	138.00
SHEAR LOAD							
STEEL FAILURE							
Characteristic resistance without lever arm	$V_{Rk,s}$	[kN]	12.70	17.70	30.20	41.20	78.50
Characteristic resistance with lever arm	$M_{Rk,s}$	[Nm]	19.00	31.80	72.40	123.60	329.60
Partial safety factor	γ_{Ms}	-	1.50	1.50	1.50	1.50	1.50
CONCRETE PRY-OUT FAILURE; NON-CRACKED CONCRETE C20/25							
Characteristic resistance	$V_{Rk,cp}$	[kN]	7.00	12.00	24.00	60.00	100.00
CONCRETE PRY-OUT FAILURE; CRACKED CONCRETE C20/25							
Characteristic resistance	$V_{Rk,cp}$	[kN]	4.50	7.00	13.00	38.00	68.00
	k	-	1.00	1.00	1.00	2.00	2.00
Partial safety factor	[English]: γ_2	-	1.20	1.00	1.00	1.00	1.00

Design performance data

Reduced embedment depth

Size			5	6	8	10	14
Installation depth	h_{nom}	[mm]	-	43.00	50.00	55.00	75.00
Effective embedment depth	h_{ef}	[mm]	-	30.00	37.00	40.00	55.00
TENSION LOAD							
STEEL FAILURE							
Characteristic resistance	$N_{Rk,s}$	[kN]	-	35.40	60.40	82.40	157.00
Partial safety factor	γ_{Ms}	-	-	1.40	1.40	1.40	1.50
PULL-OUT FAILURE; NON-CRACKED CONCRETE C20/25							
Characteristic resistance	$N_{Rk,p}$	[kN]	-	8.00	11.00	-	20.00
CONCRETE CONE FAILURE; NON-CRACKED CONCRETE C20/25							
Characteristic resistance	$N_{Rk,c}$	-	-	-	-	12.78	-
PULL-OUT FAILURE; CRACKED CONCRETE C20/25							
Characteristic resistance	$N_{Rk,p}$	[kN]	-	5.50	7.50	8.00	13.00
CONCRETE CONE FAILURE; CRACKED CONCRETE C20/25							
Characteristic resistance	$N_{Rk,c}$	-	-	-	-	-	-
Partial safety factor	[English]: γ_2	-	-	1.00	1.00	1.00	1.00
Increasing factors for $N_{Rd,p}$ - C30/37	ψ_c	-	-	-	-	-	-
Increasing factors for $N_{Rd,p}$ - C40/50	ψ_c	-	-	-	-	-	-
Increasing factors for $N_{Rd,p}$ - C50/60	ψ_c	-	-	-	-	-	-
Spacing	$s_{cr,N}$	[mm]	-	90.00	112.00	120.00	166.00
Edge distance	$c_{cr,N}$	[mm]	-	45.00	56.00	60.00	83.00
SHEAR LOAD							
STEEL FAILURE							
Characteristic resistance without lever arm	$V_{Rk,s}$	[kN]	-	17.70	30.20	41.20	78.50
Characteristic resistance with lever arm	$M_{Rk,s}$	[Nm]	-	31.80	72.40	123.60	329.60
Partial safety factor	γ_{Ms}	-	-	1.50	1.50	1.50	1.50
CONCRETE PRY-OUT FAILURE; NON-CRACKED CONCRETE C20/25							
Characteristic resistance	$V_{Rk,cp}$	[kN]	-	8.00	11.00	13.00	20.00
CONCRETE PRY-OUT FAILURE; CRACKED CONCRETE C20/25							
Characteristic resistance	$V_{Rk,cp}$	[kN]	-	5.50	7.50	8.00	13.00
	k	-	-	1.00	1.00	1.00	1.00
Partial safety factor	[English]: γ_2	-	-	1.00	1.00	1.00	1.00

Product commercial data

Size	Product Code	Anchor	Quantity [pcs]			Weight [kg]			Bar Codes
		Length [mm]	Box	Outer	Pallet	Box	Outer	Pallet	
5	R-LX-05X050-H-ZP	50	100	100	41600	0.10	0.10	71.6	5906675120126
	R-LX-05X075-H-ZP	75	100	100	41600	0.10	0.10	71.6	5906675120133
6	R-LX-06X050-H-ZP	50	100	100	41600	0.10	0.10	71.6	5906675120164
	R-LX-06X075-H-ZP	75	100	100	41600	0.10	0.10	71.6	5906675120171
	R-LX-06X100-H-ZP	100	100	100	25600	0.10	0.10	55.6	5906675120225
	R-LX-06X130-H-ZP	130	100	100	25600	0.10	0.10	55.6	5906675120324
	R-LX-06X150-H-ZP	150	100	100	25600	0.10	0.10	55.6	5906675120508
8	R-LX-08X060-H-ZP	60	100	100	25600	3.1	3.1	828.7	5906675120768
	R-LX-08X075-H-ZP	75	100	100	25600	3.7	3.7	985.1	5906675120812
	R-LX-08X090-H-ZP	90	100	100	19200	4.4	4.4	873.3	5906675120843
	R-LX-08X100-H-ZP	100	100	100	19200	4.7	4.7	937.4	5906675121055
	R-LX-08X130-H-ZP	130	50	50	12800	3.0	3.0	788.5	5906675121185
	R-LX-08X150-H-ZP	150	50	50	12800	3.4	3.4	886.8	5906675121192
10	R-LX-10X065-H-ZP	65	50	50	15600	2.6	2.6	849.9	5906675121208
	R-LX-10X075-H-ZP	75	50	50	12800	0.05	0.05	42.8	5906675121482

Product commercial data