

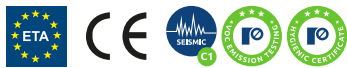
# R-KEX II with Rebars as an Anchor

Premium pure epoxy resin approved for use with reinforcement bars



## Approvals and Reports

• ETA-13/0455



## Product information

### Features and benefits

- The strongest resin in the epoxy resin class
- Approved for use in cracked and non-cracked concrete (EAD 330499-00-0601)
- Suitable for use in dry and wet substrates including flooded holes (use category I1 & I2)
- Diamond and hammer drilling
- Seismic category C1
- Very high chemical resistance – suitable for applications exposed to influence of various agents (industrial or marine environment)
- Minimal shrinkage provides option of use in diamond-drilled holes and oversized holes
- Extended working time ensures easy installation of metal components (up to 30 min. in 20°C)
- For use in positive temperatures

### Applications

- Safety barriers
- Temporary works/formworks support systems
- Rebar
- Curtain walling
- Formwork support systems
- Masonry support
- Platforms
- Structural steelwork
- Rebar dowelling
- Starter bars
- Rebar missed-outs

### Base materials

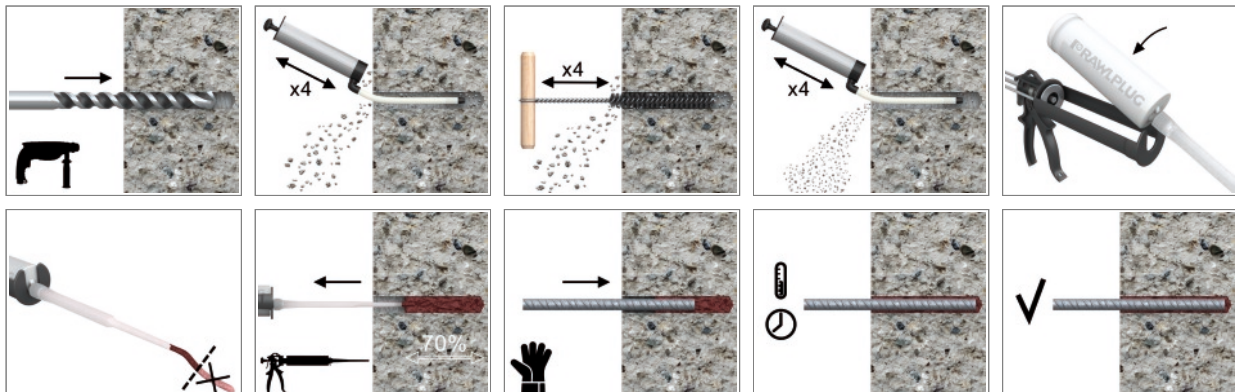
#### Approved for use in:

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

#### Also suitable for use in:

- High-Density Natural Stone

## Installation guide



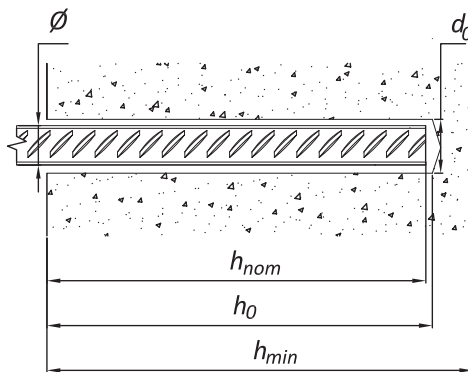
## Product information

1. Drill hole to the required diameter and depth for rebar size being used.
2. Clean the hole with brush and hand pump at least four times each. It is very important and necessary before installation.
3. Insert cartridge into gun and attach nozzle.
4. Dispense to waste until even colour is obtained.
5. Insert the mixer nozzle to the bottom of the drill hole and inject resin, slowly withdrawing the nozzle as the hole is filled to 70% of its depth.
6. Immediately insert the rebar, slowly and with slight twisting motion. Remove any excess resin around the hole before it sets and leave it undisturbed until the curing time elapses.

Size	Product Code	Resin	Description / Resin Type	Volume
				[ml]
M8	R-KEX-II-385	R-KEX II	Epoxy Resin	385
M30	R-KEX-II-600			600

Product Code	Resin	Description / Resin Type	Volume
			[ml]
R-KEX-II-385	R-KEX II	Epoxy Resin	385
R-KEX-II-600			600

## Installation data



### REBARS AS ANCHORS

Size			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø32
Rebar diameter	$d_s$	[mm]	8	10	12	14	16	20	25	32
Hole diameter in substrate	$d_0$	[mm]	12	14	18	18	22	26	32	40
Min. hole depth in substrate	$h_0$	[mm]	$h_{nom}+5$	$h_{nom}+5$	$h_{nom}+5$	$h_{nom}+5$	$h_{nom}+5$	$h_{nom}+5$	$h_{nom}+5$	$h_{nom}+5$
Min. substrate thickness	$h_{min}$	[mm]	$h_{nom}+30$ $\geq 100$	$h_{nom}+30$ $\geq 100$	$h_{nom}+30$ $\geq 100$	$h_{nom}+30$ $\geq 100$	$h_{nom}+2d_0$	$h_{nom}+2d_0$	$h_{nom}+2d_0$	$h_{nom}+2d_0$
Min. spacing	$s_{min}$	[mm]	40	40	40	40	50	60	70	85
Min. edge distance	$c_{min}$	[mm]	40	40	40	40	50	60	70	85
<b>MINIMUM EMBEDMENT DEPTH</b>										
Installation depth	$h_{nom, min}$	[mm]	60	70	80	80	100	120	140	165
<b>MAXIMUM EMBEDMENT DEPTH</b>										
Installation depth	$h_{nom, max}$	[mm]	160	200	240	280	320	400	500	640

### Minimum working and curing time

Resin temperature	Concrete temperature	Curing time*	Working time
[°C]	[°C]	[min]	[min]
5	5	150	2880
10	10	120	1080
20	20	35	480
25	30	12	300

## Mechanical properties

### REBARS AS ANCHORS

Size			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø32
<b>f<sub>uk</sub> = 540 (e.g. 500 B acc. to BS 4449; B 500 B acc. to SS 560)</b>										
Nominal ultimate tensile strength - tension	f <sub>uk</sub>	[N/mm <sup>2</sup> ]	540	540	540	540	540	540	540	540
Nominal yield strength - tension	f <sub>yk</sub>	[N/mm <sup>2</sup> ]	500	500	500	500	500	500	500	500
Cross sectional area - tension	A <sub>s</sub>	[mm <sup>2</sup> ]	50.3	78.5	113.1	153.9	201.1	314.2	490.9	804.2
Elastic section modulus	W <sub>el</sub>	[mm <sup>3</sup> ]	50.3	98.2	169.6	269.4	402.1	785.4	1534	3217
<b>f<sub>uk</sub> = 575 (e.g. B 500 SP acc. to EC2)</b>										
Nominal ultimate tensile strength - tension	f <sub>uk</sub>	[N/mm <sup>2</sup> ]	575	575	575	575	575	575	575	575
Nominal yield strength - tension	f <sub>yk</sub>	[N/mm <sup>2</sup> ]	500	500	500	500	500	500	500	500
Cross sectional area - tension	A <sub>s</sub>	[mm <sup>2</sup> ]	50.3	78.5	113.1	153.9	201.1	314.2	490.9	804.2
Elastic section modulus	W <sub>el</sub>	[mm <sup>3</sup> ]	50.3	98.2	169.6	269.4	402.1	785.4	1534	3217
<b>f<sub>uk</sub> = 620 (e.g. G-60 acc. to ASTM 615)</b>										
Nominal ultimate tensile strength - tension	f <sub>uk</sub>	[N/mm <sup>2</sup> ]	620	620	620	620	620	620	620	620
Nominal yield strength - tension	f <sub>yk</sub>	[N/mm <sup>2</sup> ]	420	420	420	420	420	420	420	420
Cross sectional area - tension	A <sub>s</sub>	[mm <sup>2</sup> ]	50.3	78.5	113.1	153.9	201.1	314.2	490.9	804.2
Elastic section modulus	W <sub>el</sub>	[mm <sup>3</sup> ]	50.3	98.2	169.6	269.4	402.1	785.4	1534	3217

## Basic performance data

### REBARS AS ANCHORS

Size		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø32	Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø32
Substrate		Non-cracked concrete								Cracked concrete							
<b>MEAN ULTIMATE LOAD</b>																	
TENSION LOAD N <sub>Ru,m</sub>																	
f <sub>uk</sub> = 540 (e.g. 500 B acc. to BS 4449; B 500 B acc. to SS 560)																	
Minimum embedment depth	[kN]	24.7	34.0	43.3	45.7	67.5	88.7	111.8	143.1	18.7	27.8	34.0	34.0	47.5	62.4	78.7	100.7
Maximum embedment depth	[kN]	28.5	44.5	61.1	87.3	114.0	178.1	278.3	456.0	28.5	44.5	64.1	87.3	114.0	178.1	278.3	456.0
f <sub>uk</sub> = 575 (e.g. B 500 SP acc. to EC2)																	
Minimum embedment depth	[kN]	24.7	34.0	43.3	45.7	67.5	88.7	111.8	143.1	18.7	27.8	34.0	34.0	47.5	62.4	78.7	100.7
Maximum embedment depth	[kN]	30.6	47.4	68.3	92.9	121.4	189.7	296.4	485.6	30.4	47.4	68.3	92.9	121.4	189.7	296.4	485.6
f <sub>uk</sub> = 620 (e.g. G-60 acc. to ASTM 615)																	
Minimum embedment depth	[kN]	24.7	34.0	43.3	45.7	67.5	88.7	111.8	143.1	18.7	27.8	34.0	34.0	47.5	62.4	78.7	100.7
Maximum embedment depth	[kN]	32.7	51.1	73.6	100.2	130.9	204.5	319.6	523.6	33.7	51.1	73.6	100.2	130.9	204.5	319.6	523.6
SHEAR LOAD V <sub>Ru,m</sub>																	
f <sub>uk</sub> = 540 (e.g. 500 B acc. to BS 4449; B 500 B acc. to SS 560)																	
Minimum embedment depth	[kN]	17.1	26.7	38.5	52.4	68.4	106.9	167.0	273.6	17.1	26.7	38.5	44.2	68.4	106.9	157.4	273.6
Maximum embedment depth	[kN]	17.1	26.7	38.5	52.4	68.4	106.9	167.0	273.6	17.1	26.7	38.5	52.4	68.4	106.9	167.0	273.6
f <sub>uk</sub> = 575 (e.g. B 500 SP acc. to EC2)																	
Minimum embedment depth	[kN]	18.2	28.5	41.0	55.8	72.8	113.8	177.8	286.1	18.2	28.5	41.0	55.8	72.8	113.8	157.4	291.4
Maximum embedment depth	[kN]	18.2	28.5	41.0	55.8	72.8	113.8	177.8	291.3	18.2	28.5	41.0	55.8	72.8	113.8	177.8	291.3
f <sub>uk</sub> = 620 (e.g. G-60 acc. to ASTM 615)																	
Minimum embedment depth	[kN]	19.6	30.7	44.2	60.1	78.5	122.7	191.7	286.1	19.6	30.7	44.2	60.1	78.5	122.7	157.4	291.4
Maximum embedment depth	[kN]	19.6	30.7	44.2	60.1	78.5	122.7	191.7	314.1	19.6	30.7	44.2	60.1	78.5	122.7	191.7	314.1

### Basic performance data

Size		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø32	Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø32
<b>CHARACTERISTIC LOAD</b>																	
<b>TENSION LOAD <math>N_{Rk}</math></b>																	
<b><math>f_{uk} = 540</math> (e.g. 500 B acc. to BS 4449; B 500 B acc. to SS 560)</b>																	
Minimum embedment depth	[kN]	16.6	26.4	36.1	35.2	50.5	66.4	83.7	107.0	8.29	11.0	16.6	19.4	25.1	37.7	59.6	66.4
Maximum embedment depth	[kN]	27.1	42.4	61.1	83.1	108.6	169.7	265.1	434.3	22.1	31.4	49.8	58.1	80.4	125.7	216.0	257.4
<b><math>f_{uk} = 575</math> (e.g. B 500 SP acc. to EC2)</b>																	
Minimum embedment depth	[kN]	16.6	26.4	36.1	35.2	50.5	66.4	83.7	107.0	8.29	11.0	16.6	19.4	25.1	37.7	59.6	66.4
Maximum embedment depth	[kN]	28.9	45.2	65.0	88.5	115.6	180.6	282.3	462.4	22.1	31.4	49.8	58.1	80.4	125.7	216.0	257.4
<b><math>f_{uk} = 620</math> (e.g. G-60 acc. to ASTM 615)</b>																	
Minimum embedment depth	[kN]	16.6	26.4	36.1	35.2	50.5	66.4	83.7	107.0	8.29	11.0	16.6	19.4	25.1	37.7	59.6	66.4
Maximum embedment depth	[kN]	31.2	48.7	70.1	95.4	124.7	194.8	304.3	482.6	22.1	31.4	49.8	58.1	80.4	125.7	216.0	257.4
<b>SHEAR LOAD <math>V_{Rk}</math></b>																	
<b><math>f_{uk} = 540</math> (e.g. 500 B acc. to BS 4449; B 500 B acc. to SS 560)</b>																	
Minimum embedment depth	[kN]	13.6	21.2	30.5	41.6	54.3	84.8	132.5	214.1	13.6	21.2	30.5	33.5	50.3	75.4	119.3	90.1
Maximum embedment depth	[kN]	13.6	21.2	30.5	41.6	54.3	84.8	132.5	217.2	13.6	21.2	30.5	41.6	54.3	84.8	132.5	217.2
<b><math>f_{uk} = 575</math> (e.g. B 500 SP acc. to EC2)</b>																	
Minimum embedment depth	[kN]	14.5	22.6	32.5	44.3	57.8	90.3	141.1	214.1	14.5	22.0	32.5	38.7	50.3	75.4	119.3	132.7
Maximum embedment depth	[kN]	14.5	22.6	32.5	44.3	57.8	90.3	141.1	231.2	14.5	22.6	32.5	44.3	57.8	90.3	141.1	231.2
<b><math>f_{uk} = 620</math> (e.g. G-60 acc. to ASTM 615)</b>																	
Minimum embedment depth	[kN]	15.6	24.4	35.1	46.9	62.3	97.4	152.2	214.1	15.6	22.0	33.2	38.7	50.3	75.4	119.3	132.7
Maximum embedment depth	[kN]	15.6	24.4	35.1	47.7	62.3	97.4	152.2	249.3	15.6	24.4	35.1	47.7	62.3	97.4	152.2	249.3

### Basic performance data

Size		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø32	Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø32
<b>DESIGN LOAD</b>																	
TENSION LOAD $N_{Rd}$																	
f <sub>uk</sub> = 540 (e.g. 500 B acc. to BS 4449; B 500 B acc. to SS 560)																	
Minimum embedment depth	[kN]	9.22	14.7	20.1	19.6	28.1	36.9	46.5	59.5	4.61	6.11	9.22	10.8	14.0	20.9	33.1	36.9
Maximum embedment depth	[kN]	19.4	30.3	43.6	58.6	77.6	121.2	189.3	303.8	12.3	17.5	27.7	32.3	44.7	69.8	120.0	143.0
f <sub>uk</sub> = 575 (e.g. B 500 SP acc. to EC2)																	
Minimum embedment depth	[kN]	9.22	14.7	20.1	19.6	28.1	36.9	46.5	59.5	4.61	6.11	9.22	10.8	14.0	20.9	33.1	36.9
Maximum embedment depth	[kN]	20.6	32.3	46.5	58.6	82.6	129.0	201.6	303.8	12.3	17.5	27.7	32.3	44.7	69.8	120.0	143.0
f <sub>uk</sub> = 620 (e.g. G-60 acc. to ASTM 615)																	
Minimum embedment depth	[kN]	9.22	14.7	20.1	19.6	28.1	36.9	46.5	59.5	4.61	6.11	9.22	10.8	14.0	20.9	33.1	36.9
Maximum embedment depth	[kN]	22.3	34.8	50.1	58.6	89.0	139.1	207.3	303.8	12.3	17.5	27.7	32.3	44.7	69.8	120.0	143.0
SHEAR LOAD $V_{Rd}$																	
f <sub>uk</sub> = 540 (e.g. 500 B acc. to BS 4449; B 500 B acc. to SS 560)																	
Minimum embedment depth	[kN]	9.05	14.1	20.4	27.7	36.2	56.6	88.4	142.7	9.05	14.1	20.4	22.3	33.5	50.3	79.5	60.1
Maximum embedment depth	[kN]	9.05	14.1	20.4	27.7	36.2	56.6	88.4	144.8	9.05	14.1	20.4	27.7	36.2	56.6	88.4	144.8
f <sub>uk</sub> = 575 (e.g. B 500 SP acc. to EC2)																	
Minimum embedment depth	[kN]	9.63	15.1	21.7	29.5	38.5	60.2	94.1	142.7	9.63	14.7	21.7	25.8	33.5	50.3	79.5	88.5
Maximum embedment depth	[kN]	9.63	15.1	21.7	29.5	38.5	60.2	94.1	154.2	9.63	15.1	21.7	29.5	38.5	60.2	94.1	154.2
f <sub>uk</sub> = 620 (e.g. G-60 acc. to ASTM 615)																	
Minimum embedment depth	[kN]	10.4	16.2	23.4	31.3	41.6	64.9	101.5	142.7	10.4	14.7	22.1	25.8	33.5	50.3	79.5	88.5
Maximum embedment depth	[kN]	10.4	16.2	23.4	31.8	41.6	64.9	101.5	166.2	10.4	16.2	23.4	31.8	41.6	64.9	101.5	166.2
<b>RECOMMENDED LOAD</b>																	
TENSION LOAD $N_{rec}$																	
f <sub>uk</sub> = 540 (e.g. 500 B acc. to BS 4449; B 500 B acc. to SS 560)																	
Minimum embedment depth	[kN]	6.58	10.5	14.3	14.0	20.0	26.3	33.2	42.5	3.29	4.36	6.58	7.68	9.97	15.0	23.7	26.3
Maximum embedment depth	[kN]	13.9	21.6	31.2	41.9	55.4	86.6	135.2	217.0	8.78	12.5	19.8	23.0	31.9	49.9	85.7	102.1
f <sub>uk</sub> = 575 (e.g. B 500 SP acc. to EC2)																	
Minimum embedment depth	[kN]	6.58	10.5	14.3	14.0	20.0	26.3	33.2	42.5	3.29	4.36	6.58	7.68	9.97	15.0	23.7	26.3
Maximum embedment depth	[kN]	14.8	23.0	33.2	41.9	59.0	92.2	144.0	217.0	8.78	12.5	19.8	23.0	31.9	49.9	85.7	102.1
f <sub>uk</sub> = 620 (e.g. G-60 acc. to ASTM 615)																	
Minimum embedment depth	[kN]	6.58	10.5	14.3	14.0	20.0	26.3	33.2	42.5	3.29	4.36	6.58	7.68	9.97	15.0	23.7	26.3
Maximum embedment depth	[kN]	15.9	24.8	35.8	41.9	63.6	99.4	148.0	217.0	8.78	12.5	19.7	23.0	31.9	49.9	85.7	102.1
SHEAR LOAD $V_{rec}$																	
f <sub>uk</sub> = 540 (e.g. 500 B acc. to BS 4449; B 500 B acc. to SS 560)																	
Minimum embedment depth	[kN]	6.46	10.1	14.5	19.8	25.9	40.4	63.1	101.9	6.46	10.1	14.5	15.9	23.9	35.9	56.8	42.9
Maximum embedment depth	[kN]	6.46	10.1	14.5	19.8	25.9	40.4	63.1	103.4	6.46	10.1	14.5	19.8	25.9	40.4	63.1	103.4
f <sub>uk</sub> = 575 (e.g. B 500 SP acc. to EC2)																	
Minimum embedment depth	[kN]	6.88	10.8	15.5	21.1	27.5	43.0	67.2	101.9	6.88	10.5	15.5	18.4	23.9	35.9	56.8	63.2
Maximum embedment depth	[kN]	6.88	10.8	15.5	21.1	27.5	43.0	67.2	110.1	6.88	10.8	15.5	21.1	27.5	43.0	67.2	110.1
f <sub>uk</sub> = 620 (e.g. G-60 acc. to ASTM 615)																	
Minimum embedment depth	[kN]	7.42	11.6	16.7	22.4	29.7	46.4	72.5	101.9	7.42	10.5	15.8	18.4	23.9	35.9	56.8	63.2
Maximum embedment depth	[kN]	7.42	11.6	16.7	22.7	29.7	46.4	72.5	118.7	7.42	11.6	16.7	22.7	29.7	46.4	72.5	118.7

## Design performance data

REBARS AS ANCHORS

Size			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø32
<b>TENSION LOAD</b>										
<b>STEEL FAILURE; F<sub>UK</sub> = 540 (E.G. 500 B ACC. TO BS 4449; B 500 B ACC. TO SS 560)</b>										
Characteristic resistance	N <sub>Rk,s</sub>	[kN]	27.14	42.41	61.07	83.13	108.57	169.65	265.07	434.29
Partial safety factor	γ <sub>Ms</sub>	-	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40
<b>STEEL FAILURE; F<sub>UK</sub> = 575 (E.G. B 500 SP ACC. TO EC2)</b>										
Characteristic resistance	N <sub>Rk,s</sub>	[kN]	28.90	45.16	65.03	88.51	115.61	180.64	282.25	462.44
Partial safety factor	γ <sub>Ms</sub>	-	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40
<b>STEEL FAILURE; F<sub>UK</sub> = 620 (E.G. G-60 ACC. TO ASTM 615)</b>										
Characteristic resistance	N <sub>Rk,s</sub>	[kN]	31.16	48.69	70.12	95.44	124.66	194.78	304.34	498.63
Partial safety factor	γ <sub>Ms</sub>	-	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40
<b>COMBINED PULL-OUT AND CONCRETE CONE FAILURE; NON-CRACKED CONCRETE, C20/25 (40°C/24°C)</b>										
Characteristic bond resistance	T <sub>Rk</sub>	[N/mm <sup>2</sup> ]	11.00	12.00	12.00	10.00	12.00	12.00	9.50	8.50
<b>COMBINED PULL-OUT AND CONCRETE CONE FAILURE; NON-CRACKED CONCRETE, C20/25 (80°C/50°C)</b>										
Characteristic bond resistance	T <sub>Rk</sub>	[N/mm <sup>2</sup> ]	10.00	11.00	11.00	9.00	11.00	11.00	8.50	7.50
<b>COMBINED PULL-OUT AND CONCRETE CONE FAILURE; CRACKED CONCRETE, C20/25 (40°C/24°C)</b>										
Characteristic bond resistance	T <sub>Rk</sub>	[N/mm <sup>2</sup> ]	5.50	5.00	5.50	5.50	5.00	5.00	5.50	4.00
<b>COMBINED PULL-OUT AND CONCRETE CONE FAILURE; CRACKED CONCRETE, C20/25 (80°C/50°C)</b>										
Characteristic bond resistance	T <sub>Rk</sub>	[N/mm <sup>2</sup> ]	5.00	4.50	5.00	5.00	4.50	4.50	5.00	3.00
<b>COMBINED PULL-OUT AND CONCRETE CONE FAILURE</b>										
Installation safety factor	γ <sub>2</sub>	-	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Increasing factors for N <sub>Rd,p</sub> - C30/37	ψ <sub>c</sub>	-	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Increasing factors for N <sub>Rd,p</sub> - C40/50	ψ <sub>c</sub>	-	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Increasing factors for N <sub>Rd,p</sub> - C50/60	ψ <sub>c</sub>	-	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
<b>CONCRETE CONE FAILURE</b>										
Installation safety factor	γ <sub>2</sub>	-	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Factor for cracked concrete	k	-	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20
Factor for cracked concrete	k <sub>cr,N</sub>	-	7.70	7.70	7.70	7.70	7.70	7.70	7.70	7.70
Factor for non-cracked concrete	k	-	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10
Factor for non-cracked concrete	k <sub>ucr,N</sub>	-	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
Edge distance	c <sub>cr,N</sub>	[mm]	1.5*h <sub>ef</sub>	1.5*h <sub>ef</sub>	1.5*h <sub>ef</sub>	1.5*h <sub>ef</sub>	1.5*h <sub>ef</sub>	1.5*h <sub>ef</sub>	1.5*h <sub>ef</sub>	1.5*h <sub>ef</sub>
Spacing	s <sub>cr,N</sub>	[mm]	3.0*h <sub>ef</sub>	3.0*h <sub>ef</sub>	3.0*h <sub>ef</sub>	3.0*h <sub>ef</sub>	3.0*h <sub>ef</sub>	3.0*h <sub>ef</sub>	3.0*h <sub>ef</sub>	3.0*h <sub>ef</sub>
<b>CONCRETE SPLITTING FAILURE</b>										
Installation safety factor	γ <sub>2</sub>	-	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20

## Design performance data

Size			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø32
<b>SHEAR LOAD</b>										
<b>STEEL FAILURE; F<sub>UK</sub> = 540 (E.G. 500 B ACC. TO BS 4449; B 500 B ACC. TO SS 560)</b>										
Characteristic resistance without lever arm	V <sub>Rk,s</sub>	[kN]	13.57	21.21	30.54	41.56	54.29	84.82	132.54	217.15
Ductility factor	k <sub>γ</sub>	-	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Characteristic resistance with lever arm	M <sub>Rk,s</sub>	[Nm]	32.57	63.62	109.93	174.57	260.58	508.94	994.02	2084.61
Partial safety factor	γ <sub>Ms</sub>	-	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
<b>STEEL FAILURE; F<sub>UK</sub> = 575 (E.G. B 500 SP ACC. TO EC2)</b>										
Characteristic resistance without lever arm	V <sub>Rk,s</sub>	[kN]	14.45	22.59	32.52	44.26	57.81	90.32	141.13	231.22
Ductility factor	k <sub>γ</sub>	-	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Characteristic resistance with lever arm	M <sub>Rk,s</sub>	[Nm]	34.68	67.74	117.06	185.88	277.47	541.92	1058.45	2219.72
Partial safety factor	γ <sub>Ms</sub>	-	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
<b>STEEL FAILURE; F<sub>UK</sub> = 620 (E.G. G-60 ACC. TO ASTM 615)</b>										
Characteristic resistance without lever arm	V <sub>Rk,s</sub>	[kN]	15.58	24.35	35.06	47.72	62.33	97.39	152.17	249.32
Ductility factor	k <sub>γ</sub>	-	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Characteristic resistance with lever arm	M <sub>Rk,s</sub>	[Nm]	37.40	73.04	126.22	200.43	299.18	584.34	1141.28	2393.44
Partial safety factor	γ <sub>Ms</sub>	-	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
<b>CONCRETE PRY-OUT FAILURE</b>										
Factor	k	-	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Installation safety factor	γ <sub>2</sub>	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<b>CONCRETE EDGE FAILURE</b>										
Anchor diameter	d <sub>nom</sub>	[mm]	8.00	10.00	12.00	14.00	16.00	20.00	25.00	32.00
Effective length of anchor	ℓ <sub>f</sub>	[mm]	min (h <sub>ef</sub> ; 8d <sub>nom</sub> )	min (h <sub>ef</sub> ; 8d <sub>nom</sub> )	min (h <sub>ef</sub> ; 8d <sub>nom</sub> )	min (h <sub>ef</sub> ; 8d <sub>nom</sub> )	min (h <sub>ef</sub> ; 8d <sub>nom</sub> )	min (h <sub>ef</sub> ; 8d <sub>nom</sub> )	min (h <sub>ef</sub> ; 8d <sub>nom</sub> )	min (h <sub>ef</sub> ; 8d <sub>nom</sub> )
Installation safety factor	γ <sub>2</sub>	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Combined pull-out and concrete cone failure (TR 029, p.5.2.2.3. acc. to formula 5.2a -  $N_{Rk,p}^0 = n \cdot d \cdot h_{ef} \cdot \tau_{Rk}$ ).

Concrete cone failure (TR 029, p.5.2.2.4. acc. to formula 5.3a -  $N_{Rk,c}^0 = k_1 \cdot f_{ck,cube}^{0.5} \cdot h_{ef}^{1.5}$ ).

$h_{ef} = h_{nom}$

## Product commercial data

Size	Product Code	Volume [m <sup>3</sup> ]	Quantity [pcs]			Weight [kg]			Bar Codes
			Box	Outer	Pallet	Box	Outer	Pallet	
Ø32	R-KEX-II-385 <sup>1)</sup>	385	10	10	380	6.7	6.7	285.0	5906675028538
	R-KEX-II-600 <sup>1)</sup>	600	7	7	441	7.0	7.0	472.7	5906675293721

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