

# Wedge Anchors

## R-DCA

- Wedge Anchors

## R-DCL

- Lipped Wedge Anchors

## R-DCA-A4

- Stainless Steel Wedge Anchors

Easy to install  
by hammer  
action

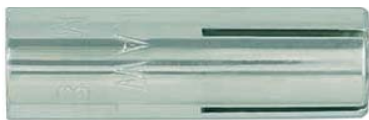
Internally  
threaded to take  
stud or bolt

Slotted sleeve  
and internal wedge  
component facilitate  
easy setting



# R-DCA, R-DCL Wedge Anchors

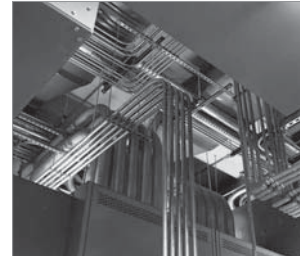
Internally-threaded wedge anchor for simple hammer-set installation



R-DCA



R-DCL



## Approvals and Reports

- ETA-13/0584;  
ETAG 001, Part 6



## Versions

- R-DCA - Wedge Anchor
- R-DCL - Lipped Wedge Anchor



Installation movie

## Product overview

### Features and benefits

- High performance in cracked and non-cracked concrete confirmed by ETA Option 1
- Product recommended for applications requiring fire resistance
- Internally-threaded to be used with threaded stud or bolt
- Easy to install by hammer action
- Slotted sleeve and internal wedge component together facilitate easy setting and expansion

### Applications

- Pipelines systems
- Ventilation systems
- Sprinkler systems
- Cable conduits and wires
- Gratings

### Base materials

#### Approved for use in:

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

#### Also suitable for use in:

- Natural Stone

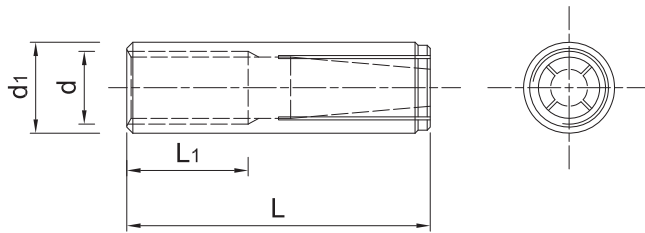
## Installation guide



1. Drill a hole of required diameter and depth
2. Clear the hole of drilling dust and debris (using blowpump or equivalent method)
3. Insert wedge anchor, slotted end first
4. Use the setting tool to drive the internal wedge into the anchor
5. Insert bolt or stud through fixture and tighten to the recommended torque

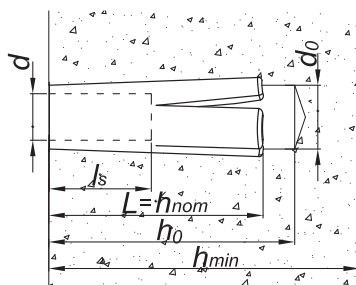
## Product information

R-DCA/R-DCL



Size	Product Code	Anchor				Fixture
		Thread size	External diameter	Length	Thread length	Hole diameter
		d	d <sub>1</sub>	L	L <sub>1</sub>	d <sub>f</sub>
		[mm]	[mm]	[mm]	[mm]	[mm]
M6	R-DCA-06-25/ R-DCL-06	6	8	25	11	7
M8	R-DCA-08-30/ R-DCL-08	8	10	30	13	9
M10	R-DCA-10-40/ R-DCL-10	10	12	40	15	12
M12	R-DCA-12-50/ R-DCL-12	12	15	50	20	14
M16	R-DCA-16-65/ R-DCL-16	16	20	65	25	18
M20	R-DCA-20-80	20	25	80	30	22

## Installation data



Size			M6	M8	M10	M12	M16	M20
Thread diameter	d	[mm]	6	8	10	12	16	20
Hole diameter in substrate	d <sub>0</sub>	[mm]	8	10	12	15	20	25
Installation torque	T <sub>inst</sub>	[Nm]	4.5	11	22	38	98	130
Min. hole depth in substrate	h <sub>0</sub>	[mm]	30	32	42	53	70	85
Installation depth	h <sub>nom</sub>	[mm]	25	30	40	50	65	80
Min. substrate thickness	h <sub>min</sub>	[mm]	80			100	130	160
Min. spacing	s <sub>min</sub>	[mm]	200				260	320
Min. edge distance	c <sub>min</sub>	[mm]	150			195	240	

## Mechanical properties

Size			M6	M8	M10	M12	M16	M20
Nominal ultimate tensile strength - tension	f <sub>uk</sub>	[N/mm <sup>2</sup> ]	450	450	450	450	450	450
Nominal yield strength - tension	f <sub>yk</sub>	[N/mm <sup>2</sup> ]	360	360	360	360	360	360
Cross sectional area - tension	A <sub>s</sub>	[mm <sup>2</sup> ]	20.1	36.6	58.0	84.3	157.0	245.0
Elastic section modulus	W <sub>el</sub>	[mm <sup>3</sup> ]	21.2	50.3	98.2	169.7	402.1	785.4
Characteristic bending resistance	M <sup>0</sup> <sub>Rk,s</sub>	[Nm]	13.0	31.0	61.0	106.0	251.0	490.0
Design bending resistance	M	[Nm]	11.0	25.0	49.0	85.0	201.0	392.0

## Basic performance data

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

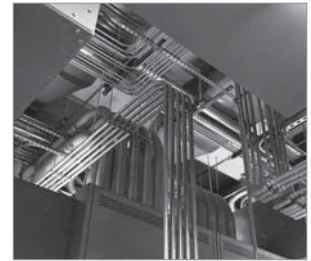
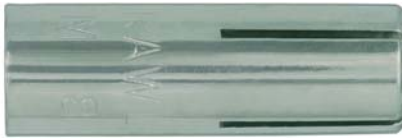
Size		M6	M8	M10	M12	M16	M20
Embedment depth $h_{ef}$	[mm]	25	30	40	50	65	80
<b>CHARACTERISTIC LOAD</b>							
TENSION LOAD $N_{Rk}$	[kN]	1.50	3.00	4.57	6.40	13.3	17.4
SHEAR LOAD $V_{Rk}$	[kN]	1.50	3.00	4.57	6.40	13.3	17.4
<b>DESIGN LOAD</b>							
TENSION LOAD $N_{Rd}$	[kN]	0.72	1.43	2.18	3.06	6.30	8.30
SHEAR LOAD $V_{Rd}$	[kN]	0.72	1.43	2.18	3.06	6.30	8.30
<b>RECOMMENDED LOAD</b>							
TENSION LOAD $N_{rec}$	[kN]	0.50	1.02	1.55	2.19	4.50	5.90
SHEAR LOAD $V_{rec}$	[kN]	0.50	1.02	1.55	2.19	4.50	5.90

## Product commercial data

Size	Product Code	Anchor		Quantity [pcs]			Weight [kg]			Bar Code
		Thread size [mm]	Length [mm]	Box	Outer	Pallet	Box	Outer	Pallet	
<b>R-DCA Wedge Anchor</b>										
M6	R-DCA-06-25	6	25	100	1000	36000	0.70	7.0	282.0	5010445771088
M8	R-DCA-08-30	8	30	100	1000	60000	1.20	12.0	750.0	5010445771200
M10	R-DCA-10-40	10	40	50	50	25000	1.20	1.20	630.0	5906675151687
M12	R-DCA-12-50	12	50	50	50	18000	2.4	2.4	876.0	5906675152004
M16	R-DCA-16-65	16	65	25	100	6000	2.7	10.9	684.0	5010445771507
M20	R-DCA-20-80	20	80	15	90	3240	3.0	17.9	674.8	5010445771620
<b>R-DCL Lipped Wedge Anchor</b>										
M6	R-DCL-06	6	25	100	100	56000	1.60	1.60	926.0	5010445779084
M8	R-DCL-08	8	30	100	100	57600	1.60	1.60	951.6	5010445779206
M10	R-DCL-10	10	40	50	50	36000	1.60	1.60	1182.0	5010445779329
M12	R-DCL-12	12	50	50	50	6000	1.60	1.60	222.0	5010445779411
M16	R-DCL-16	16	65	25	25	6000	1.60	1.60	414.0	5010445779503

# R-DCA-A4 Stainless Steel Wedge Anchor

Internally threaded stainless steel wedge anchor for simple hammer-set installation



## Approvals and Reports

- ETA-13/0584; ETAG 001, Part 6



## Product overview

### Features and benefits

- Stainless steel material for high resistance to corrosion
- Easy to install by hammer action
- Slotted sleeve and internal wedge component together facilitate easy setting and expansion

### Applications

- Pipelines systems
- Ventilation systems
- Sprinkler systems
- Cable conduits and wires
- Gratings

### Base materials

#### Approved for use in:

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

#### Also suitable for use in:

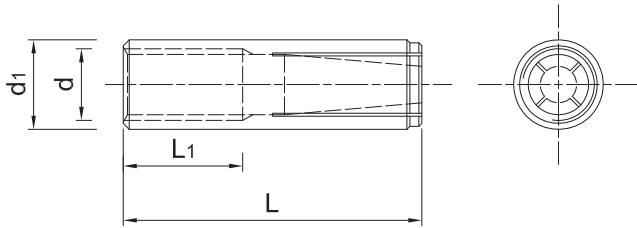
- Natural Stone

## Installation guide



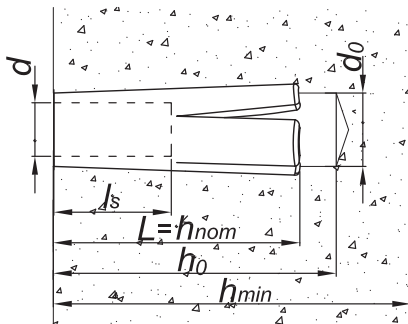
1. Drill a hole of required diameter and depth
2. Clear the hole of drilling dust and debris (using blowpump or equivalent method)
3. Insert wedge anchor, slotted end first
4. Use the setting tool to drive the internal wedge into the anchor
5. Insert bolt or stud through fixture and tighten to the recommended torque

## Product information



Size	Product Code	Anchor				Fixture
		Thread size	External diameter	Length	Thread length	Hole diameter
		d	d <sub>1</sub>	L	L <sub>1</sub>	d <sub>f</sub>
		[mm]	[mm]	[mm]	[mm]	[mm]
M6	R-DCA-06-25-A4	6	8	25	11	7
M8	R-DCA-08-30-A4	8	10	30	13	9
M10	R-DCA-10-40-A4	10	12	40	15	12
M12	R-DCA-12-50-A4	12	15	50	20	14
M16	R-DCA-16-65-A4	16	20	65	25	18

## Installation data



Size			M6	M8	M10	M12	M16	
Thread diameter	d	[mm]	6	8	10	12	16	
Hole diameter in substrate	d <sub>0</sub>	[mm]	8	10	12	15	20	
Installation torque	T <sub>inst</sub>	[Nm]	4.5	11	22	38	98	
Min. hole depth in substrate	h <sub>0</sub>	[mm]	30	32	42	53	70	
Installation depth	h <sub>nom</sub>	[mm]	25	30	40	50	65	
Min. substrate thickness	h <sub>min</sub>	[mm]	80		100		130	
Min. spacing	s <sub>min</sub>	[mm]	200				260	
Min. edge distance	c <sub>min</sub>	[mm]	150				195	

## Mechanical properties

Size			M6	M8	M10	M12	M16
Nominal ultimate tensile strength - tension	F <sub>uk</sub>	[N/mm <sup>2</sup> ]	700	700	700	700	700
Nominal yield strength - tension	F <sub>yk</sub>	[N/mm <sup>2</sup> ]	525	525	525	525	525
Cross sectional area - tension	A <sub>s</sub>	[mm <sup>2</sup> ]	20.1	36.6	58.0	84.3	157.0
Elastic section modulus	W <sub>el</sub>	[mm <sup>3</sup> ]	21.2	50.3	98.2	169.7	402.1
Characteristic bending resistance	M <sup>0</sup> <sub>Rk,s</sub>	[Nm]	11.0	26.0	52.0	92.0	233.0
Design bending resistance	M	[Nm]	8.80	20.8	41.6	73.6	186.4

## Basic performance data

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

Size		M6	M8	M10	M12	M16
Embedment depth $h_{ef}$	[mm]	25	30	40	50	65
<b>CHARACTERISTIC LOAD</b>						
TENSION LOAD $N_{Rk}$	[kN]	1.00	2.01	3.20	4.59	8.27
SHEAR LOAD $V_{Rk}$	[kN]	1.00	2.01	3.20	4.59	8.27
<b>DESIGN LOAD</b>						
TENSION LOAD $N_{Rd}$	[kN]	0.48	0.96	1.50	2.19	3.90
SHEAR LOAD $V_{Rd}$	[kN]	0.48	0.96	1.50	2.19	3.90
<b>RECOMMENDED LOAD</b>						
TENSION LOAD $N_{rec}$	[kN]	0.30	0.68	1.09	1.56	2.80
SHEAR LOAD $V_{rec}$	[kN]	0.30	0.68	1.09	1.56	2.80

## Product commercial data

Size	Product Code	Anchor		Quantity [pcs]			Weight [kg]			Bar Code
		Thread size [mm]	Length [mm]	Box	Outer	Pallet	Box	Outer	Pallet	
M6	R-DCA-06-25-A4	6	25	100	1000	100000	0.70	7.0	730.0	5010445776083
M8	R-DCA-08-30-A4	8	30	100	1000	64000	1.30	13.0	862.0	5010445776205
M10	R-DCA-10-40-A4	10	40	50	500	32000	1.15	11.5	766.0	5010445776328
M12	R-DCA-12-50-A4	12	50	50	400	16000	2.3	18.4	766.0	5010445776410
M16	R-DCA-16-65-A4	16	65	25	100	6000	2.7	10.9	684.0	5010445776502

## R-DCA-ST-Plus/R-DCA-ST Wedge Anchor Setting Tools

### Manual setting tool



R-DCA-ST-PLUS



R-DCA-ST

## Product commercial data

Size	Product Code	Diameter			Quantity	Weight
		$d_4$	$d_5$	$l_2$	[pcs]	[kg]
		[mm]	[mm]	[mm]	Box	Box
M6	R-DCA-ST-06-PLUS/R-DCA-ST-06	5.0	7.5	14.8	1	0.08
M8	R-DCA-ST-08-PLUS/R-DCA-ST-08	6.6	9.5	18.0	1	0.09
M10	R-DCA-ST-10-PLUS/R-DCA-ST-10	8.3	11.5	23.0	1	0.13
M12	R-DCA-ST-12-PLUS/R-DCA-ST-12	10.2	14.5	28.0	1	0.36
M16	R-DCA-ST-16-PLUS/R-DCA-ST-16	13.5	19.5	33.0	1	0.39
M20	R-DCA-ST-20-PLUS/R-DCA-ST-20	16.8	24.5	47.0	1	0.39