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# ARDEX CE 425

## GRP Multi-Strand Ground Anchor

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Cuttable anchors

Temporary anchors

Corrosive soils resistant

Light weight with high tensile strength

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**ARDEX Australia Pty Ltd**

2 Buda Way,  
Kemps Creek, NSW 2178  
Phone: 1300 788 780  
Email: [technicalservices@ardexaustralia.com](mailto:technicalservices@ardexaustralia.com)  
[www.ardexaustralia.com](http://www.ardexaustralia.com)

**ARDEX New Zealand Ltd**

15 Alfred Street, Onehunga Auckland,  
New Zealand 1061  
Phone: 0800 227 339  
Email: [info@ardexnz.com](mailto:info@ardexnz.com)  
[www.ardex.co.nz](http://www.ardex.co.nz)

# ARDEX CE 425

## GRP Multi-Strand Ground Anchor

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### DESCRIPTION

ARDEX CE 425 is a GRP high strength, light weight, flexible multi-strand ground anchor made up of 7 x 7mm GRP bars per 21mm strand, that offers a complete solution where anchors are required to be removed once they become redundant and an alternative to traditional steel removable anchors.

ARDEX CE 425 can be assembled easily in the factory or directly on the project site.

### RECOMMENDED USES

- Face stabilization
- Long bolting in tunnels
- Tie Back/Retaining anchors
- Alternative to removable anchors

### ADVANTAGES

- High tensile strength
- Flexible and light weight
- Resistant in corrosive soils
- No removal required – Cuttable anchors

### INSTALLATION

#### 1. Handling.

Gloves, safety glasses, and dust mask must be worn as a minimum when cutting GRP anchors.

#### 2. Installation of GRP strands into bore holes.

- The anchors must be inspected prior to the installation to ensure there is no damage to the anchor assembly.
- If the bar or sheathing is damaged, these must be replaced prior to installation.
- Care should be taken not to twist the anchor during installation.
- Caution should be taken to prevent collapsing of the borehole as grout voids in borehole will result in reduced anchor capacity.
- Grout the anchor the full length using ARDEX CE 901 or ARDEX CE 902 specialty grouts.

#### 3. Stressing of GRP Strands.

- While applying jacking force, accurately check load and immediately stop operation if excessive displacement / strand elongation is noted.

- The testing frame must be set up to ensure that everything is square, and the anchor is being pulled in direct tension. The anchor must not bend or twist in any direction.
- Ensure the testing equipment has been calibrated.
- Do not test to loads above 80% of the rated load for the anchor used for testing. The rated loads are outlined on the Technical Data Sheet.

### PACKAGING

ARDEX CE 425 – GRP multi-strand ground anchors can be manufactured with multiple combinations of number of strands and with any free length and bond lengths to meet the project design specifications. See design load table.

### STORAGE

The product must be stored where it will be safe from damage and or contamination.

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### TECHNICAL DATA

CHARACTERISTIC	NOMINAL VALUES
Tensile strength of single bundle	250kN
Tensile E-Modulus	>60 GPa
Strain at Failure	2.1%
Shear (90%)	480 MPa
Weight (single bundle)	570 +40/-0 g/m
Diameter of bundle	21mm

### ARDEX CE 425 - GRP MULTI-STRAND GROUND ANCHOR

No. of GRP Strands (21mm dia)	UTS (kN)	Allowable Design Load (kN)	Min Hole Dia (mm)	Notes
3	750	400	110	<p><b>According to EC7</b> Guaranteed Tensile Strength: 254.4 kN  Reduction on Anchor Capacity: <math>1.1 \rightarrow 254.4 / 1.1 = 231.3\text{kN}</math>  Material Safety Factor: <math>1.15 \rightarrow 231.3 / 1.15 = 201.1\text{kN}</math>  Capacity per Bundle <math>\rightarrow 200\text{kN}</math>  <b>Working Anchors</b> Load Safety Factor: 1.50</p>
4	1000	534	130	
5	1250	667	150	
6	1500	800	180	
7	1750	934	180	
8	2000	1067	200	
9	2250	1200	210	
10	2500	1334	230	
11	2750	1467	250	
12	3000	1601	250	

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### **GUARANTEE**

ARDEX Australia Pty Ltd ("we" or "us") guarantees this product ("our goods") is free from manufacturing defects and will perform to any applicable specification published by us. Our liability under this guarantee is limited at our option to replacement of the product, repair of any damage to the immediate surface or area of application of the product, or compensation, in each case if we are satisfied loss or damage was due to a breach of this guarantee. This guarantee does not apply if damage or loss is due to failure to follow published instructions or any act or circumstance beyond our control, including shade variations and efflorescence. If you wish to make a claim under this guarantee you must notify us (ARDEX Australia Pty Ltd, 2 Buda Way, Kemps Creek, NSW 2178; Toll Free: 1800 224 070; Email: [technicalservices@ardexaustralia.com](mailto:technicalservices@ardexaustralia.com)) and provide evidence of your purchase of the product within 30 days of any alleged loss or damage occurring. We reserve the right to ask you for satisfactory evidence of any alleged loss or damage. Any claim under this guarantee is at your cost. This guarantee is in addition to any rights or remedies you may have as a "consumer" under the Australian Consumer Law and to that extent you need to be aware that: "Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure".

### **DISCLAIMER**

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