

Atlas Copco Rock Reinforcement

Crowder Supply Co., Inc. • 8495 Roslyn St., Commerce City, CO 80022 • Toll Free: 888-883-5144 • www.CrowderSupply.com

MAI Systems® SDA® R 51L&N

The **Atlas Copco MAI® Self-Drilling Anchor** is a unique anchoring system and is today's answer to the increasing demands of the tunnelling industry and ground engineering for safer and faster production.

The system provides advantages for all areas of its applications, where boreholes would require the time consuming drilling with casing systems in unconsolidated or cohesive soil.

Features and Advantages

- Fits Atlas Copco standard Boomer, ROC and Mustang rigs.
- Particularily suitable for difficult ground conditions.
- A high rate of installation since drilling, placing and grouting can be performed in one single operation.
- Self drilling system eliminates the requirement for a cased borehole.
- Installation with simultaneous drilling and grouting possible.
- Easy installation in all directions, also upwards.
- Suitable for working in limited space, height and in areas of difficult access.
- Simple post grouting system.
- Hot-dipped galvanizing for corrosion protection

Applications

Tunnelling

- Radial bolting
- Forepoling
- Face stabilization
- Portal preparation

Ground engineering

- Slope stabilization
- Micro injection pile
- Temporary support anchor
- nailing



SPECIFICATIONS

| TECHNICAL DATA | R 51L | R 51N | GENERAL DATA |
|--|-----------------------------|-----------------------|--------------------------------|
| Outside diameter..... | 51 mm..... | 51 mm | Type of steel..... EN 10083-1 |
| Internal diameter, average..... | 36 mm..... | 33 mm | Thread type..... R51. ISO 1720 |
| External diameter, effective..... | 47.8 mm..... | 47.8 mm | |
| Effective cross sectional area, average..... | 776 mm ² | 939 mm ² | |
| Ultimate load capacity..... | 550 kN..... | 800 kN | |
| Yield load capacity..... | 450 kN..... | 630 kN | |
| Average tensile strength, Rm..... | 690 N/mm ² | 840 N/mm ² | |
| Average yield strength, Rp0,2..... | 580 N/mm ² | 670 N/mm ² | |
| Weight..... | 7.0 kg/m..... | 8.4 kg/m | |

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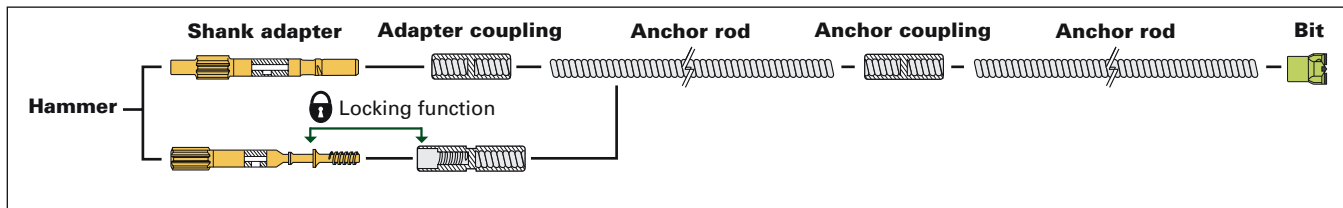
MAI® - SDA® Anker (Self Drilling Hollow Core Anchor)

A Hollow Core Anchor system as self drilling rock bolt for tunnelling in accordance with DIN 21521



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ANCHOR ROD 51

| | Outside diameter | Average internal diameter | Effective external diameter | Aver. eff cross sectional area | Ultimate load capacity | Yield load capacity | Average tensile strength Rm | Average yield strength Rp0,2 | Weight |
|------------------|------------------|---------------------------|-----------------------------|--------------------------------|------------------------|---------------------|-----------------------------|------------------------------|--------|
| | mm | mm | mm | mm ² | kN | kN | N/mm ² | N/mm ² | kg/m |
| R51L | 51 | 36 | 47.8 | 776 | 550 | 450 | 690 | 580 | 7.0 |
| R51N | 51 | 33 | 47.8 | 939 | 800 | 630 | 840 | 670 | 8.4 |
| Part number | | | | | | | | | |
| | 1 meter long | 2 meter long | 3 meter long | 4 meter long | 6 meter long | | | | |
| R51L | 9899150095 | 9899150057 | 9899150052 | 9899150064 | 9899150047 | | | | |
| R51N | 9899150055 | 9899150062 | 9899150061 | 9899150035 | 9899150063 | | | | |
| R51L gal. | 9899700040 | 9899700041 | 9899150988 | 9899700042 | - | | | | |
| R51N gal. | 9899700044 | 9899151312 | 9899150989 | 9899700045 | - | | | | |

ANCHOR COUPLING R51

| | Diam. mm | Length mm | Part number | Kg | Type | |
|------------------|----------|-----------|-------------|------|---------|---|
| R51L | 63 | 140 | 9899700035 | 1.15 | NG Type | Machined steel coupling with patented middle stop |
| R51N | 63 | 220 | 9899700036 | 1.90 | NG Type | Machined steel coupling with patented middle stop |
| R51L gal. | 63 | 120 | 9899150984 | 1.15 | SM Type | Machined steel coupling hot dip galvanized |
| R51N gal. | 63 | 200 | 9899150985 | 1.90 | SM Type | Machined steel coupling hot dip galvanized |

NUT R51

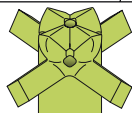
| | Key size mm | Length mm | Part number | Kg | |
|-------------------|-------------|-----------|-------------|------|---------------------------------------|
| R51L&N | 75 | 70 | 9899150023 | 1.55 | Machined steel nut |
| | 75 | | 9899151261 | 1.55 | Machined steel nut hot dip galvanized |

ANCHOR PLATE R51

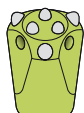
| | Dimension mm | Thickness mm | Part number | Kg | Hole diam. mm |
|------------------|--------------|--------------|-------------|-------|---------------|
| R51L | 200 x 200 | 30 | 9899150096 | 8.80 | 60 |
| R51N | 250 x 250 | 40 | 9899150097 | 18.50 | 60 |
| R51L gal. | 200 x 200 | 30 | 9899700009 | 8.80 | 60 |
| R51N gal. | 250 x 250 | 40 | 9899151164 | 18.50 | 60 |

DRILL BIT R51

| | Description | Kg | Diam. | Part number | Type | |
|------------|----------------|------|-------|-------------|----------|--|
| R51 | R51/Ø110/XX | 1.80 | 110 | 9899150042 | XX Type | Stepped cross bit for sand and gravel. |
| | R51/Ø100/ES-F | 1.80 | 100 | 9899150022 | ES Type | Hardened button bit for unconsolidated soil with boulders. |
| | R51/Ø115/ES-D | 2.00 | 115 | 9899150892 | ES Type | Hardened button bit for unconsolidated soil with boulders. |
| | R51/Ø115/ESS-D | 2.00 | 115 | 9899150059 | ESS Type | Button bit with TC-inserts for medium rock formations. |
| | R51/Ø100/ESS-F | 1.80 | 100 | 9899150753 | ESS Type | Button bit with TC-inserts for medium rock formations. |



XX Type



ES-F Type



ESS-D Type



ESS-F Type