

# Atlas Copco Rock Reinforcement

## 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

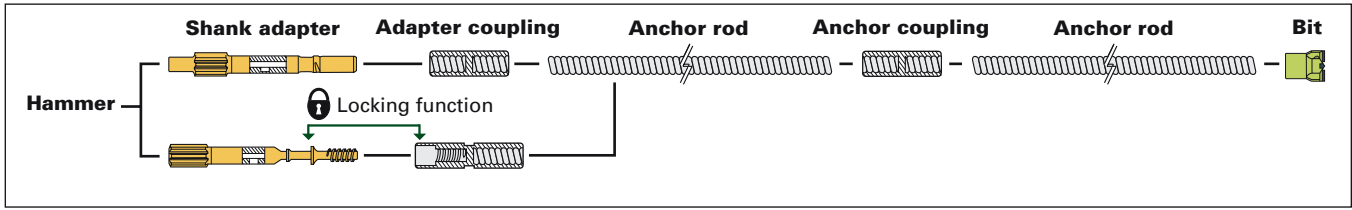
TECHNICAL DATA	R 51L	R 51N	GENERAL DATA
Outside diameter.....	51 mm.....	51 mm	Type of steel..... EN 10083-1
Internal diameter, average.....	36 mm.....	33 mm	Thread type..... R51. ISO 1720
External diameter, effective.....	47.8 mm.....	47.8 mm	
Effective cross sectional area, average.....	776 mm <sup>2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

## Atlas Copco MAI Systems® SDA®

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

# MAI Systems<sup>®</sup> SDA<sup>®</sup> R 51L&N



## 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 <sup>2</sup>	kN	kN	N/mm <sup>2</sup>	N/mm <sup>2</sup>	kg/m
<b>R51L</b>	51	36	47.8	776	550	450	690	580	7.0
<b>R51N</b>	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				
<b>R51L</b>	9899150095	9899150057	9899150052	9899150064	9899150047				
<b>R51N</b>	9899150055	9899150062	9899150061	9899150035	9899150063				
<b>R51L gal.</b>	9899700040	9899700041	9899150988	9899700042	-				
<b>R51N gal.</b>	9899700044	9899151312	9899150989	9899700045	-				

## ANCHOR COUPLING R51

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

## NUT R51

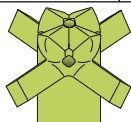
	Key size mm	Length mm	Part number	Kg	
<b>R51L&amp;N</b>	75	70	9899150023	1.55	Machined steel nut
	75		9899151261	1.55	Machined steel nut hot dip galvanized

## ANCHOR PLATE R51

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

## DRILL BIT R51

	Description	Kg	Diam.	Part number	Type	
<b>R51</b>	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