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## *Design, Manufacture and Supply of Earth Boring Machines and Equipment Ontwerp en Vervaardiging van Grond-boormasjiene en Toerusting*

### **TECHNICAL SHEET: SR1000 DRILL RIG**

The **SR1000** water-well/ reverse circulation drill rig is a robust, simple reliable and capable machine. This drill rig has no electronic systems that control any functions, thus eliminating untimely and unforeseen standing time due to dust ingression, thereby increasing machine availability, reliability and then of course production.

The derrick is fabricated from hollow drawn steel tube and hot-rolled sections. The feed cylinder has a 6.5 meter stroke and is coupled to an inner derrick, which carries the rotary head.

The rotary head is our SRD Gearbox type which was designed by Super Rock Drills and is manufactured in-house. Extra heavy-duty bearings, take all forces produced during drilling operations. The bull shaft on the air swivel has a 4.5" remet / 102 ARD or a 3.5" API thread to which the drill string is attached. A built-in shock absorber on the head minimizes vibration and shock loads to the machine and drill string. A hydraulic two-speed system is fitted as a standard to all machines. The rotary head is fitted to an inner derrick, which runs inside the outer derrick on six heavy-duty sliding blocks which almost eliminates all wear. Apart from reverse circulation drilling the rotary head can do open hole DTH hammer, mud rotary, air rotary, auger, tricone and RAB drilling.

Four hydraulic outriggers are fitted to the outer corners of the rig for easy and accurate levelling of the rig.

Twin hydraulic cylinders are used to raise and lower the derrick. All hydraulic controls are fitted into a single panel in front of the operator, making the operation of the machine very easy and simple even for unskilled operators. A fingertip down feed valve is fitted to ensure even pressures during drilling operations.

The working table consists of removable half-moons combined with replaceable guide collars, which when removed, easily allows 305mm diameter tools to pass through. Guide bushes are supplied to suit the drill string.

The drill rig's power pack consists of a six-cylinder Kirloskar engine close coupled to our tried and tested hydraulic system. All necessary air, fuel and oil filters are included.



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Export Customs Code: 00653225

Members: GGM JOOSTE (MANAGING), EVA KIRSTEIN



A optional hydraulic rod breaker facilitates handsfree rod breaking.

A 10-litre inline oil lubrication for DTH hammer drilling is fitted as a standard.

The **SR1000** is a very simple and easy machine to operate and maintain. Being locally designed and manufactured with over four hundred machines running in the mining, exploration, water well and piling industries proves that the **SR1000** range is a very popular and robust choice amongst drilling contractors.



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<b>MAST</b>	<b>ROTARY HEAD</b>
<p>Fabricated from hollow drawn steel tube and hot-rolled sections. Telescopic design, direct cylinder couples the inner derrick to the outer derrick. No cables or chains are required.</p> <p>Mast length: Standard</p> <ul style="list-style-type: none"> <li>- 9m Outer Mast. 12850mm With inner mast fully extended.</li> </ul> <p>Mast Raising Cylinders</p> <ul style="list-style-type: none"> <li>- 2</li> </ul> <p>Mast Locking Options</p> <ul style="list-style-type: none"> <li>- For vertical drilling.</li> <li>- Dump mast for angle drilling (Stroke:1900mm) Allowing for drill angles from 90 degree (vertical) to 45 degree dependant on carrier truck height.</li> </ul> <p>Rod Loader Options</p> <ul style="list-style-type: none"> <li>- Single: Manually swung 6-rod carousel.</li> <li>- Double: Manually swung 6-rod carousel.</li> </ul>	<p>Options</p> <ul style="list-style-type: none"> <li>- SRD Gearbox (Reduction type) 0-100 RPM Spindle hole 80mm Max torque options 4000-12000nm Spindle thread options: 1. 102 ARD 2. 4 ½" Remet 3. 3 ½" Regular API OR</li> <li>- B100 Staffa Motor coupled to SRD Air-Box.</li> </ul>
<b>DRILLING PARAMETERS</b>	<b>FEED SYSTEM</b>
<p>Hole Diameter</p> <ul style="list-style-type: none"> <li>- 3" - 18"</li> </ul> <p>Depth Calculation(1)</p> <ul style="list-style-type: none"> <li>- Maximum depth using 25kg/m drill string will be 536m @ 20% safety margin.</li> </ul> <p>Depth Calculation(2)</p> <ul style="list-style-type: none"> <li>- Maximum depth using 25kg/m drill string will be 450m @ 43% safety margin.</li> </ul>	<p>Type</p> <ul style="list-style-type: none"> <li>- Telescopic direct cylinder.</li> </ul> <p>Pull Back</p> <ul style="list-style-type: none"> <li>- 16 Ton @ 200 Bar</li> </ul> <p>Down Force</p> <ul style="list-style-type: none"> <li>- 5.7 Ton @ 200 bar</li> </ul> <p>Stroke</p> <ul style="list-style-type: none"> <li>- 6500mm / 6.5m</li> </ul>
<b>RECOMMENDED COMPRESSOR CAPACITY</b>	<b>DECK ENGINE</b>
<p>Flow Rate</p> <ul style="list-style-type: none"> <li>- 1200 CFM</li> </ul> <p>Pressure</p> <ul style="list-style-type: none"> <li>- 23 Bar</li> </ul> <p>Different options are available to suite requirement.</p>	<p>Make</p> <ul style="list-style-type: none"> <li>- Kirloskar</li> </ul> <p>Engine Type</p> <ul style="list-style-type: none"> <li>- HA694</li> </ul> <p>Rating kW/HP</p> <ul style="list-style-type: none"> <li>- 70/95</li> </ul> <p>RPM</p> <ul style="list-style-type: none"> <li>- 1800</li> </ul>
<b>HYDRAULIC SYSTEM</b>	<b>DUST SUPPRESSION</b>
<p>Oil Type</p> <ul style="list-style-type: none"> <li>- Hydraulic 68</li> </ul> <p>Rig Pumps</p> <ul style="list-style-type: none"> <li>- Gear Pumps @ 200 Bar</li> </ul> <p>Circuit type</p> <ul style="list-style-type: none"> <li>- Open Loop</li> </ul>	<p>Piston pump</p> <ul style="list-style-type: none"> <li>- 21l/min @ 200 Bar</li> </ul>
<b>HAMMER LUBRICATION</b>	<b>GENERAL SPECIFICATIONS</b>
<p>Type</p> <ul style="list-style-type: none"> <li>- Venturi system</li> <li>- 10 Litres</li> </ul>	<p>Lighting</p> <ul style="list-style-type: none"> <li>- LED Lights</li> </ul> <p>Emergency Stops</p> <p>Protection guards on all hot surfaces</p> <p>Lock-out protection</p>

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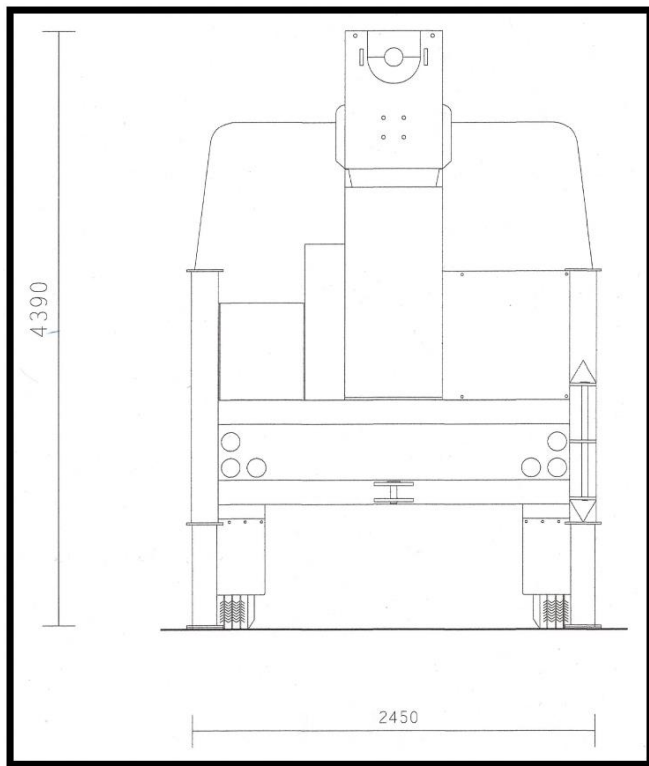
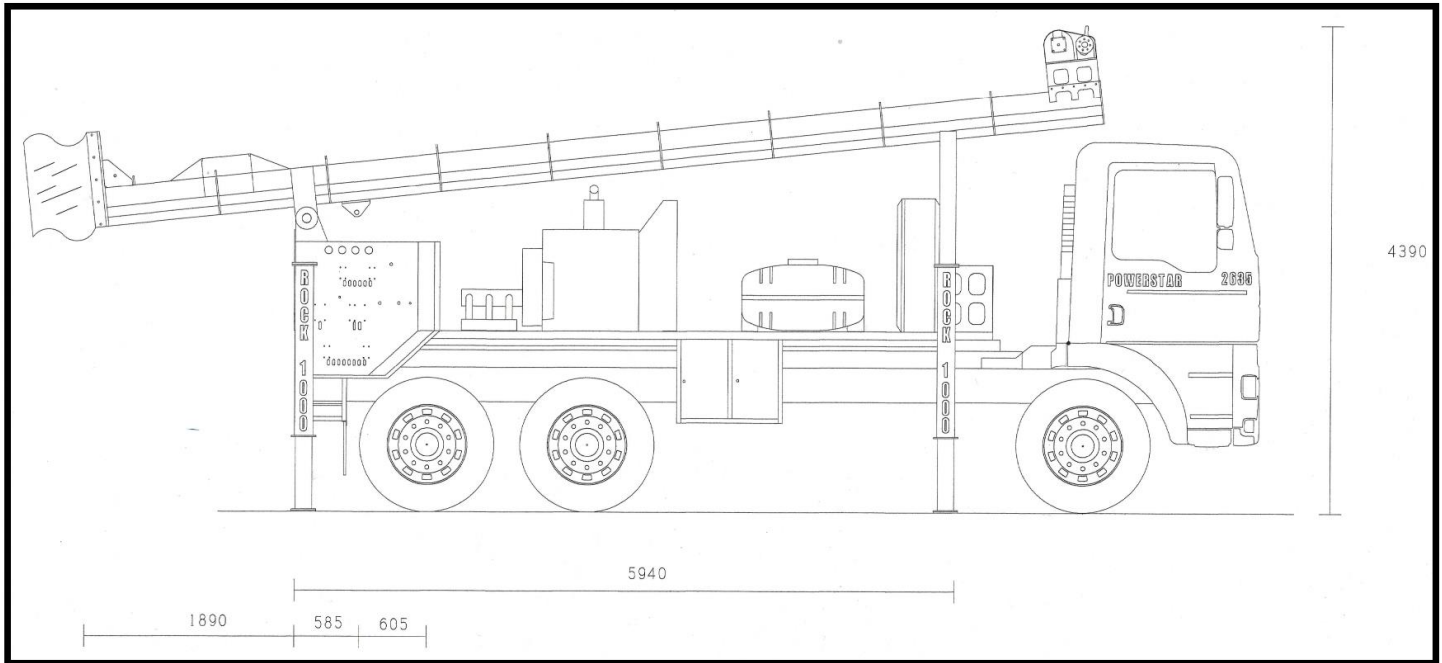


<b>SRD GEARBOX CAPABILITIES</b>	<b>COOLING - HYDRAULICS</b>
Types <ul style="list-style-type: none"> <li>- Reverse Circulation (RC)</li> <li>- Open Hole DTH - Waterwells</li> <li>- Mud Rotary</li> <li>- Air Rotary</li> <li>- Auger</li> <li>- RAB Drilling</li> <li>- Air Core</li> </ul>	Oil cooler fitted <ul style="list-style-type: none"> <li>- 12v Electrical driven fan</li> </ul>
<b>RIG STABILIZATION</b>	<b>ROD BREAKING SYSTEM</b>
4 X Hydraulic outriggers <ul style="list-style-type: none"> <li>- Bored</li> <li>- 100mm</li> <li>- Stroke - 1300mm</li> </ul>	Options <ul style="list-style-type: none"> <li>- Manual keeper key</li> <li>- Hydraulic keeper key</li> <li>- Break-out cylinder &amp; spanner</li> <li>- Hydraulic rod breaker</li> </ul>
<b>WINCH</b>	<b>MUD PUMP (OPTIONAL)</b>
Standard <ul style="list-style-type: none"> <li>- Fixed winch</li> <li>- Hydraulic swing Jib - Optional.</li> </ul>	Standard <ul style="list-style-type: none"> <li>- 4x3x13 Centrifugal *Hydraulic Drive.</li> </ul> Optional <ul style="list-style-type: none"> <li>- Duplex, Triplex, Orbit.</li> </ul>
<b>AIR LINE SYSTEM</b>	
All 2" steel & 2" rubber hoses rated @ 80 Bar pressure.	

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Rear View

Dimensions may vary slightly according to carrier truck specifications

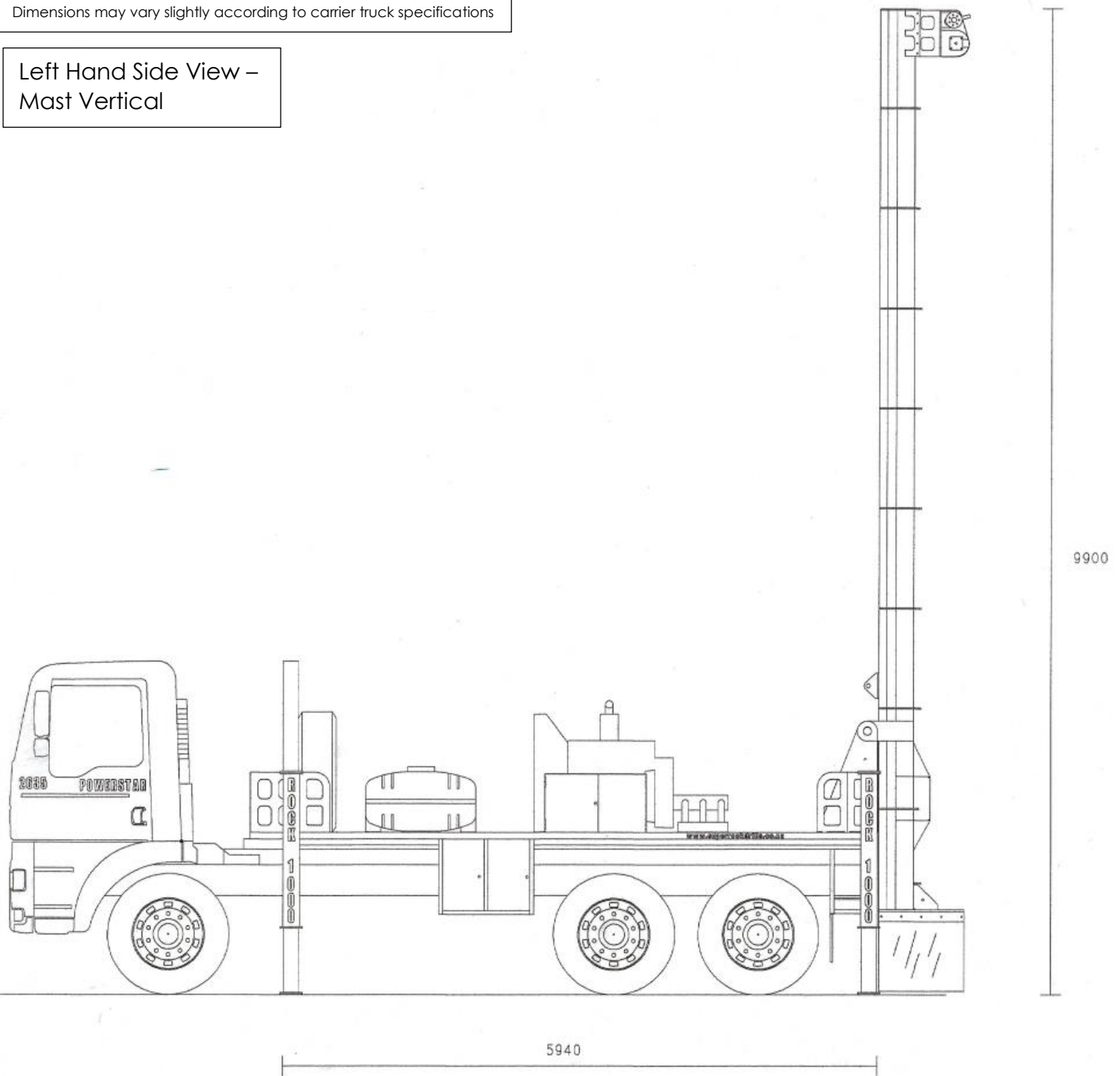
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Dimensions may vary slightly according to carrier truck specifications

Left Hand Side View –  
Mast Vertical



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