A new model

Soilmec SM-14 is a multipurpose drilling rig. Its modular design is engineered for the execution of: Micropiles, Tie-backs, Jet-Grouting, Coring, Drain, Water wells. The rig is fitted with proportional, hydraulic servo-assisted controls that make the operations smooth and trouble free even in the hardest weather conditions. Featured with Load Sensing System, it has lower running costs and a reduced wear and tear on components.

Soilmec SM-14 versatility unit that can be tailored to any customer need or geological conditions:
- Variable speed or 3-speeds gear box;
- Hydraulic drifter;
- Vibrorotary;
- Rotop;
- Double Head.

Soilmec SM-14 may be further tailored with a wide range of optional items such as:
- Jet-Grouting kit for mono, bi or three fluids treatment and steeples lifting speed for ø 127 mm rods;
- 90° mast articulation for tie-back drilling;
- Mast rotation by motoreducer for ± 180°;
- Mast for 1.5, 1.8, 2.1, 3, 4 and 7 m stroke;
- Service crane for handling of drilling rods and for rods & casing;
- Foam Pump;
- Dust collector;
- Radio operated remote control.

### BASE MACHINE

| **Undercarriage with oscillating tracks** | mm | 400 |
| Track shoe width | mm | 3062 |
| Overall length | mm | 2300 |
| Overall width | mm | 27 |
| Travelling speed | km/h | 138 |
| Average ground pressure | MPa | 0.07 |

**Diesel engine**

- Make and model: CUMMINS QSB 4.5 - Tier III
- Max Diesel Engine power (SAE J1995) kW (BHp) 123 (165) @ 2000 rpm
- Fuel tank capacity liter 200

**Electric motor (on request)**

- Make and model: SIEMENS 4 POLS 50 Hz
- Rated power kW (BHp) 90 (121) @ 1485 rpm

**Hydraulic system**

- Oil tank capacity liter 400

**Mast hoist & feed system**

**Feed Type** | Jack | Gear motor |
| Feed stroke | mm | 4000 | 7000 |
| Maximum hoist pull | kN | 89 | 87* |
| Maximum feed force | kN | 45 | 87* |
| Maximum speed (fast operation) | rpm | 28 | 28* |

**Clamp & hydraulic joint breaker**

- Nominal size mm 50 - 315 50 - 360 60 - 415
- Maximum clamping force (28 MPa) kN 266
- Maximum breaking torque daNm 5060

**Winch and jib**

- Maximum line pull (1st layer) kN 20
- Maximum rope speed (4th or 5th layer) m/min 60
- Rope diameter mm 10
- Rope capacity / Rope fitted m 46 / 40

### JET GROUTING VERSION

**Rod diameters** | mm | 90 - 114 - 127** |
**Max treatment depth (T1/T1S-T2)** | mm | 15400 / 16000 |

**Std. Weight (w/o options)** | kg | 13400 |

**Noise level** LwA - LpA 105 - 81

* Nominal **Special kit

Courtesy of Crane.Market
1 - Crawler undercarriage with +/- 10° oscillating tracks.

2 - Machine body including prime mover, hydraulic plant with load SENSING control and soundproof canopy.

3 - N° 2 hydraulic outriggers.

4 - Control levers for rig positioning.

5 - Articulated boom for mast positioning.

6 - 4 x 90° turntable for mast rotation.

7 - 1000 mm stroke cylinder for mast shoring.

8 - Rotary cradle with adjusting rollers and 450 mm side-shifting device.

9 - Variable speed rotary head with 1400 daNm max torque, 221 rpm max rotation.

10 - Floating system.

11 - Clamp max. diam. 415 mm.

12 - Breaker max. diam. 415 mm.

13 - Control board on rotating and pivoting arm for drilling and service functions.

14 - Service winch with jib.

15 - Chain for hydraulic hoses.
**Vibrorotary.** Is made up by combining one conventional rotary to a Vibro Hammer unit. Advantages:
- Single or double drilling string for up to 219 mm o.d.;
- Lower skin friction of casing/rod (therefore less torque is needed);
- Higher efficiency compared to TH technology;
- Lower noise emission compared to DTH and TH technologies.

**Variable speed rotary head.** Any combination of torque and speed can be set from operator’s console to get the most suited ratio for your drilling technology. Standard rotary may be easily modified on site, by fitting purposely-designed kits, to get either higher torque or higher speed versions.

**Rotary head with Rollstar gear box.** It provides a maximum torque of 1300 daNm and a maximum speed of 429 rpm.

**Rotop.** It combines Soilmec main reduction gear with one commercial brand hammering device.

**Hydraulic Top Hammer.** The rig design allows the assembling of any available top hammer brand with a maximum frequency of 2400 blow/minute and a maximum energy of 840 Nm.

**Double head.** Hydraulic system is sized to feed any options such as Rotary/Rotary, Rotary/Rotop and Rotary/Top Hammer without compromising in power.

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<table>
<thead>
<tr>
<th>ROTORY HEAD RH-120V</th>
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<tr>
<td>Gear box type</td>
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<td>Max. nominal torque</td>
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<td>Maximum drilling speed</td>
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<td>Passage</td>
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<td>Maximum drilling speed</td>
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<td>Maximum drilling speed</td>
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<td>Vibration frequency</td>
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<td>Vibrating force</td>
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<td>Single blow energy</td>
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<tr>
<td>Weight up to</td>
<td>kg 700</td>
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<tr>
<td>Blow frequency and impact energy</td>
<td>2400 / 840 shank up to C112</td>
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<tr>
<td>Max. Nominal torque</td>
<td>daNm 1800</td>
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**MAST MOVEMENTS**

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*Courtesy of Crane.Market*
JET GROUTING VERSION

SM-14

Courtesy of Crane.Market
SOILMEC distributes machinery and structures all over the world, supported by SOILMEC subsidiary companies and representative offices as:

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**CERTIFIED QUALITY SYSTEM**

In 1990 Soilmec was awarded with the certification of its Quality System complying with ISO 9001:2000 and ISO 14001:2004 standards.

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All technical data are purely indicative and subject to change without notice.