

SM-14 SOIL INVESTIGATION

soilmec®
Drilling and Foundation Equipment



SM-14, your next soil investigation rig!

This compact rig is able to perform a wide range of technologies such as micropiles, anchors, soil investigation and consolidations with jet grouting.





Flexible and powerful at your service

- Swiveling boom articulation by cylinder on the base machine enables $\pm 35^\circ$, slide rotation for 4 sectors at 90° , along with the sliding mast operated by cylinder makes the machine able to perform a wide variety of angles and positions.
- Powered by Tier III Cummins Diesel engines
- Range of rotary heads with different torques and speeds to suit the various drilling needs.



Safety First, No Compromise

Complies with the latest international Safety standards.

- Hydraulic openable cages
- Additional trip wires devices
- Emergency stop buttons
- ROM and SPM operation modes

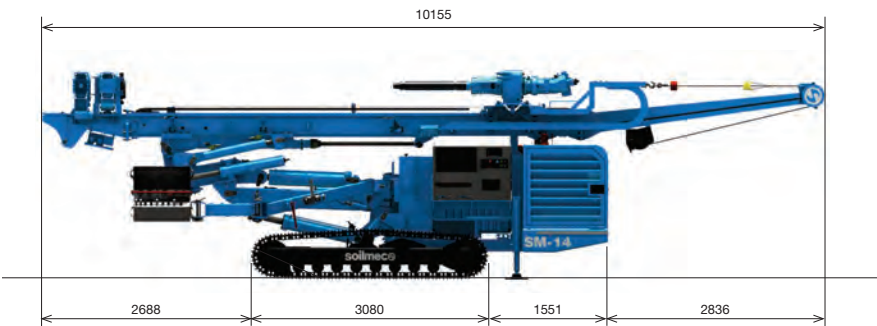
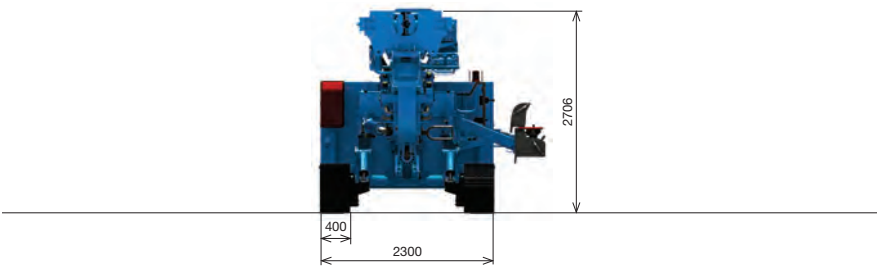
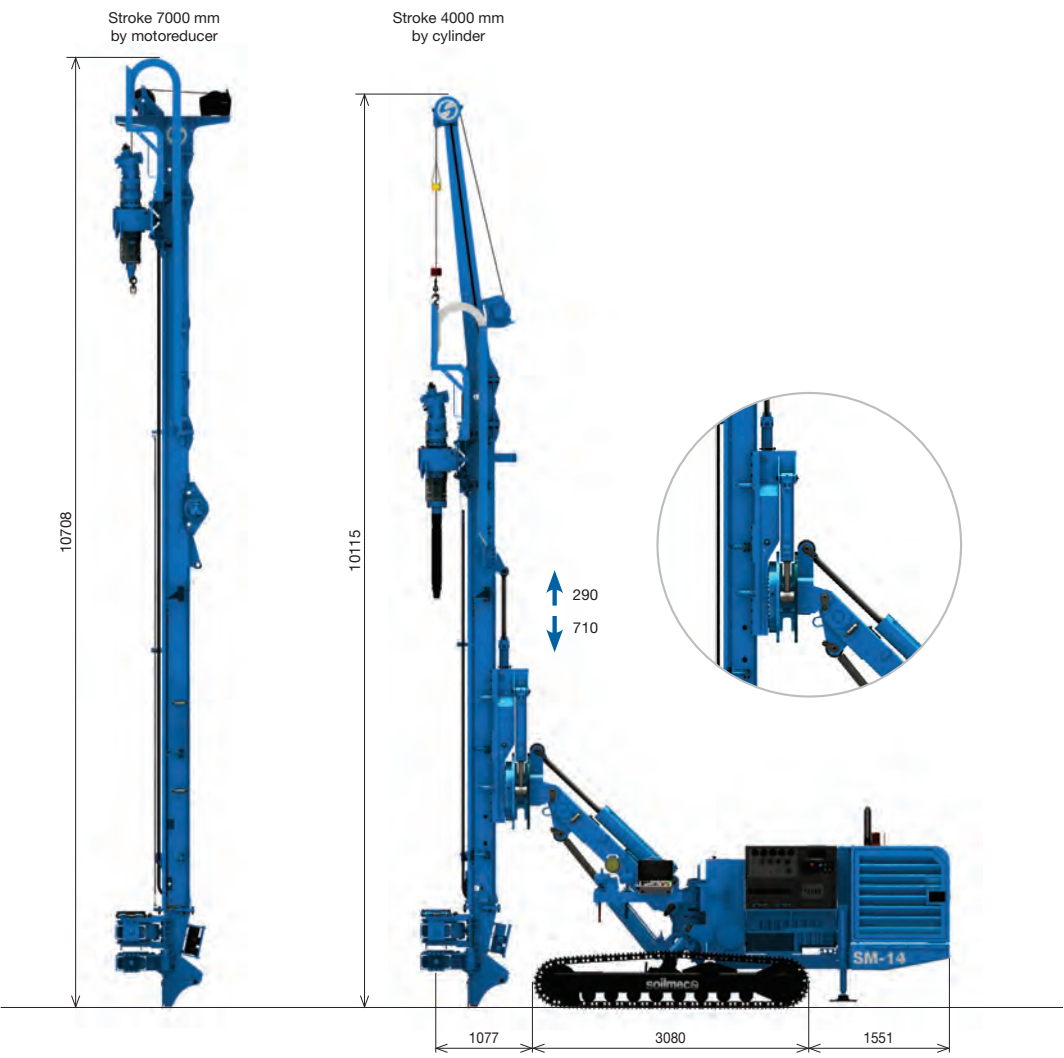


Excellent versatility and increased manoeuvrability

- Modular mast with motoreducer crowd system.
- Hydraulic/proportional panel mounted on pivotal support arm for drilling operations and wired remote control for tramming.
- The rig is fitted with proportional, hydraulic servo-assisted controls that make operations smooth.
- Featured with Load Sensing System, it has lower running costs and a reduced wear and tear on components.

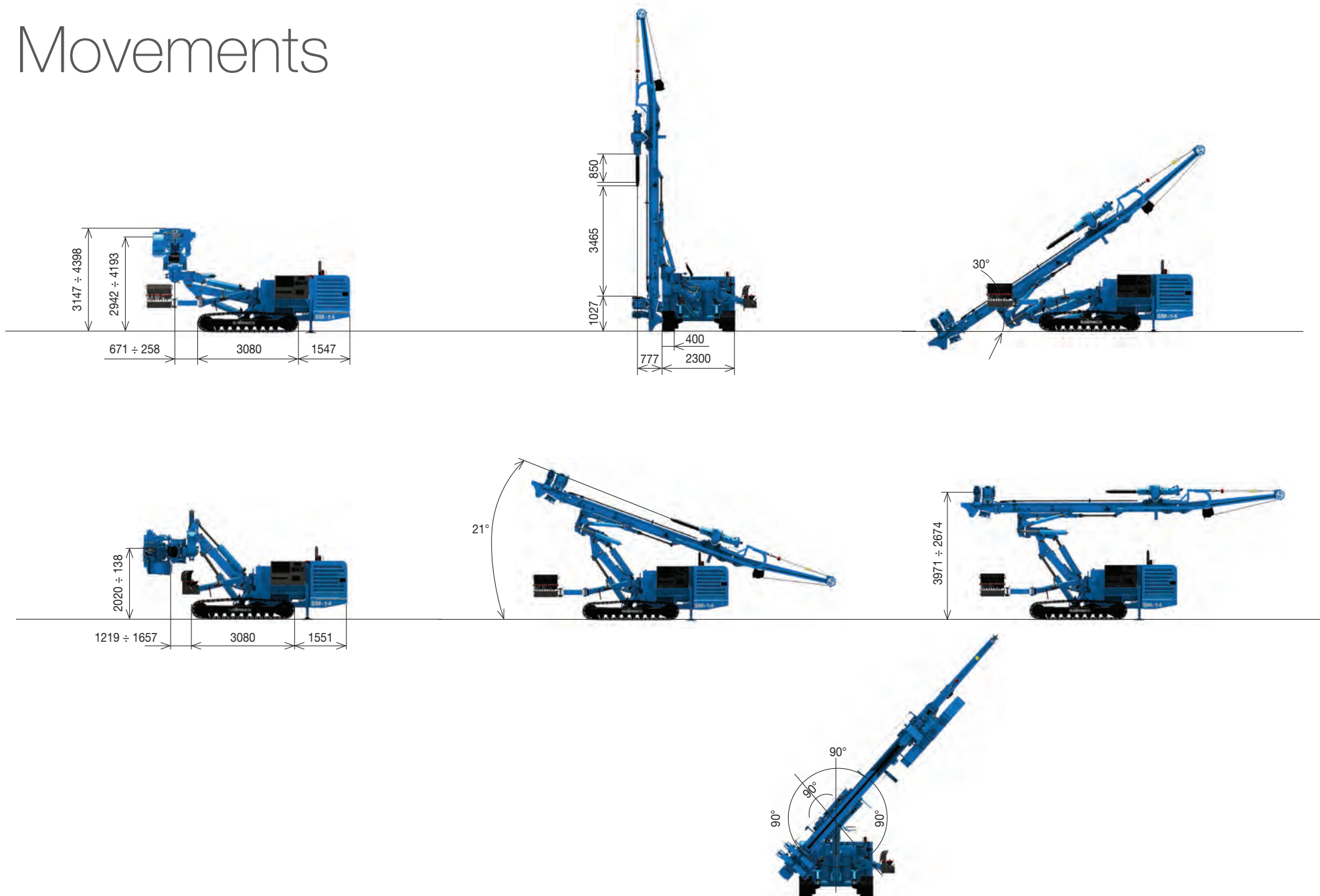


Working Configuration



Transport configuration		
Width	2300 mm	91 in
Height	2750 mm	108.3 in
Length (stroke 4000/7000)	10155 / 10424 mm	400 / 410 in
Weight (stroke 4000/7000)	14300 / 15000 mm	31526 / 33069 lb

Movements



Technical data

Undercarriage



Undercarriage		
Type	pivoting +/- 10°	<i>pivoting +/- 10°</i>
Triple grouse track shoe width	400 mm	<i>15.7 in</i>
Overall length	3080 mm	<i>121.2 in</i>
Overall width (not extendable crawler)	2300 mm	<i>90.6 in</i>
Travelling speed	2,7 km/h	<i>1.68 mph</i>
Average ground pressure	0,070 MPa	<i>10.2 psi</i>
Ground stabilizers	N°2 fixed on rear	<i>N°2 fixed on rear</i>

Diesel engine



Diesel Engine		
Make and model	Cummins QSB 4.5	<i>Cummins QSB 4.5</i>
Emission certification	EU stage III US EPA Tier 3	<i>EU stage III US EPA Tier 3</i>
Diesel engine power rating	119 kW @ 2200 rpm	<i>160 HP @ 2200 rpm</i>
Fuel tank capacity	200 l	<i>53 US gal</i>

Hydraulic system



Hydraulic System		
Main pumps: <i>variable axial pumps</i>	156 + 156 l/min	<i>41.2 + 41.2 US gal/min</i>
Auxiliary pumps: <i>gear pumps</i>	20 l/min	<i>5.3 US gal/min</i>
Hydraulic oil tank capacity	400 l	<i>106 US gal</i>

Rotary head



Rotary	HD 1200V	HD 1200 V	HT1400	HT1400
Gear box type	Variable	<i>Variable</i>	Variable	<i>Variable</i>
Maximum torque	1210 daNm	<i>8924 lbf*ft</i>	1360 daNm	<i>10031 lbf*ft</i>
Maximum rotation	277 rpm	<i>277 rpm</i>	229 rpm	<i>229 rpm</i>
Inner passage	124 mm	<i>4.9 in</i>	124 mm	<i>4.9 in</i>
	HTD 2500G	HTD 2500G	HD 2000	HD 2000
Gear box type	3 speed	<i>3 speed</i>	Variable	<i>Variable</i>
Maximum torque	2550 daNm	<i>18807 lbf*ft</i>	2023 daNm	<i>14921 lbf*ft</i>
Maximum rotation	52 rpm	<i>52 rpm</i>	130 rpm	<i>130 rpm</i>
Inner passage	101,5 mm	<i>4 in</i>	144 mm	<i>6 in</i>

Clamp & hydraulic joint breaker



Clamp & Hydraulic joint breaker		
Nominal size	50 - 315 / 60 - 415 mm	<i>1.96 - 12.4 / 2.4 - 16.3 in</i>
Maximum clamping force	268 kN	<i>58798 lbf</i>
Maximum breaking torque	5060 daNm	<i>37321 lbf*ft</i>
Pull-up extractor clamp force/stroke	100 kN / 400 mm	<i>22481 lbf / 3.9 in</i>

Service winch



Service winch		
Type	Controlled descent	<i>Controlled descent</i>
1°layer line pull	24 kN	<i>5395 lbf</i>
Rope diameter	10 mm	<i>0.39 in</i>
Rope speed	46 m/min	<i>151 ft/min</i>

Hoist & Feed System



Hoist & Feed System				
Type	cylinder	<i>cylinder</i>	motoreducer	<i>motoreducer</i>
Feed Stroke	4000 mm	<i>157.5 in</i>	4300-7000 mm	<i>171.3-275.6 in</i>
Max Hoist pull	89 kN	<i>20008 lbf</i>	99 kN	<i>2256 lbf</i>
Max Feed force	45 kN	<i>10116 lbf</i>	99 kN	<i>2256 lbf</i>
Max speed fast/low	28/6 m/min	<i>92/20 ft/min</i>	28/5 m/min	<i>95/16 ft/min</i>

Jet Grouting

JG system

Max treatment depth in a single passage (c/w mast extensions)	18 m	<i>59 ft</i>
Hydraulic chuck max handling diameter	114 mm	<i>4.5 in in</i>

Configurations

Pivoting undercarriage	●	Fire extinguisher	●
Upper frame complete with slew ring for 360° rotation	●	Double rotary kit	○
Wired remote control for tramming only	●	Jet grouting kit, single fluid	○
7" LCD monitor for alarms & diesel engine control and DMS connectivity	●	Jet grouting kit, double fluid	○
Hydraulic and proportional controls for all operations	●	Hydraulic chuck complete with gauge pressure and safety device	○
Mast extension kits	○	Extension for jet grouting	○
Auxiliary winch, 5 kN (1124 lbf)	●	Fully hydraulic version prearrangement for Jet Grouting	●
Extractor device for clamps	○	Hydraulic pump for foam 30 l/min @ 150 bar (7.9 gallon @ 2176 psi)	○
Clamp & breaker 50-315 mm (1.96 - 12.4 in)	●	Triplex pump for water flushing 200 l/min @ 80 bar (52.8 gallon @ 1160 psi)	○
Clamp & breaker 60-415 mm (2.4 - 16.3 in)	○	RH24x Top Hammer Kit and prearrangement	○
Fixed boom	○	RH32x Top Hammer Kit and prearrangement	○
Telescopic boom	●		
Kinematic mechanism - 4 sectort	●		
Kinematic mechanism - 90° joint	○		
Kinematic mechanism - ± 180° motoreducer	○		
Diesel engine EU S tage III - US EPA Tier 3	○		
Load sensing hydraulic system	●		
Hydraulic prearrangement for auxiliary pumps	●		
Rotary cradle complete with pads and side shifting movements	●		
Floating system for rotary head	●		
Air/water system and line lubricator for DTH	●		
Foam pump c/w gauge pressure and safety valve	○		
Water & mud pumps	○		
Centering device	●		
Slow rotation kit and special protective mode	●		
Hydraulic safety cage kit driven by cylinder	●		
Lighting system on mast	○		
Washing kit including with hose rewinder & washing lance	○		

● standard

○ optional



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