

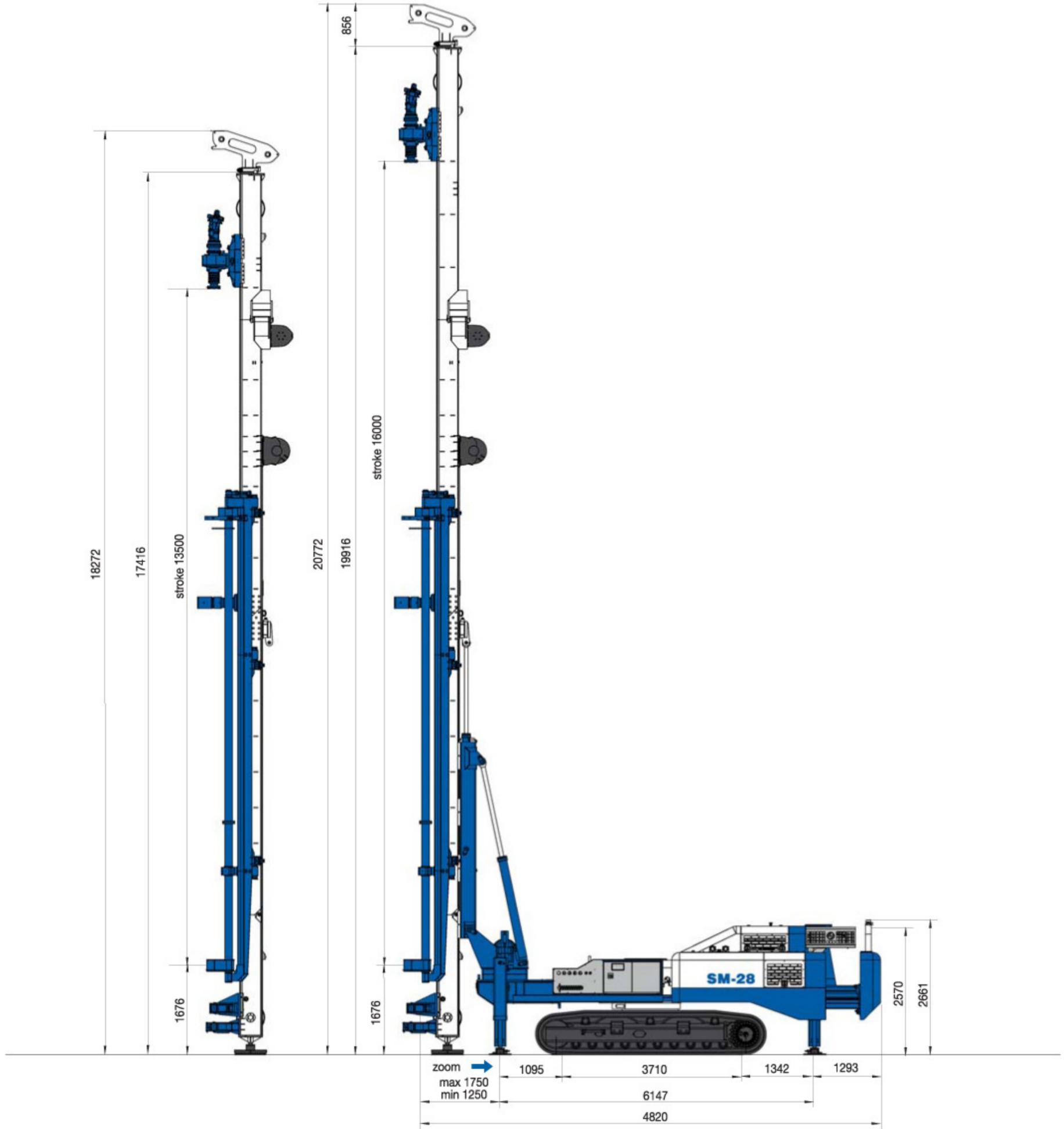
Hydraulic Microdrilling Rig
SM-28

by *Soilmec*



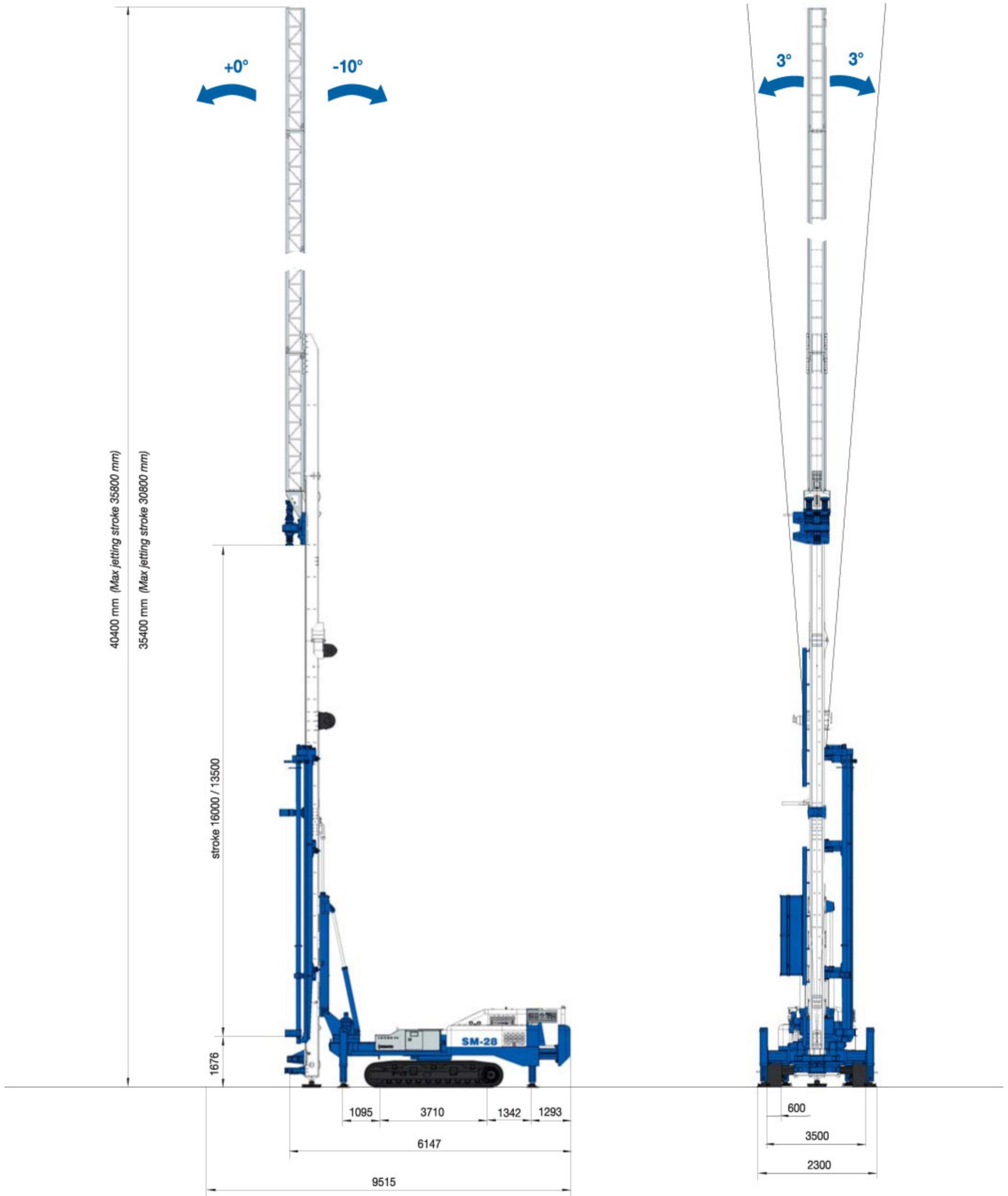
soilmec®
Drilling and Foundation Equipment

SM-28 APPLICATIONS



Hoist & Feed system	winch crowd	winch crowd
- Feed stroke	13500 mm	531.5 in
- Rod length type (c/w one rotary head)	3 + 3 + 6 m	10 + 10 + 20 ft
- Maximum hoist pull (nominal/effective)	170 m	38217 lbf
- Maximum hoist feed force (nominal/effective)	87 kN	19558 lbf
- Maximum speed (fast/low operation)	28 / 12 m/min	92 / 39 ft/min
Rotary head range	Standard	Standard
- Gear box type	variable	variable
- Maximum torque (1st gear)	3300 daNm @ 49 rpm	24339 lbf*ft @ 49 rpm
- Maximum drilling speed	137 rpm	137 rpm
- Maximum tools power (Max Power on rotary)	119 kW	159 HP
- Inner passage	120 mm	4.7 in

SM-28 JET GROUTING



Rod diameter	89 - 114 mm	3.5 - 4.5 in
Max treatment depth in a single passage	34 m	111.5 ft
Drillguide extensions	Telescopic	Telescopic

SM-28 TECHNICAL DATA SHEET

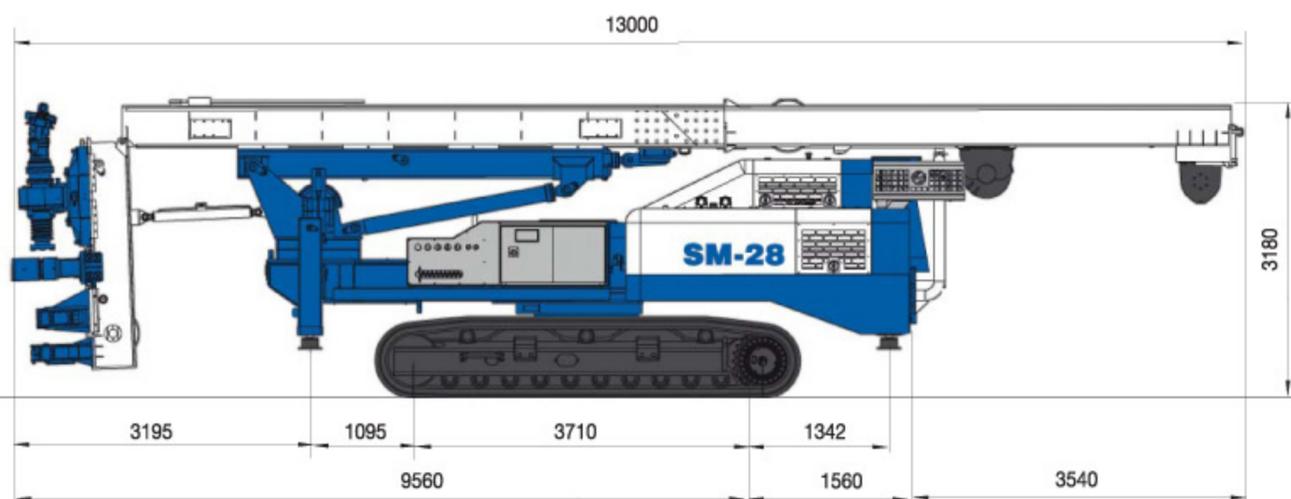
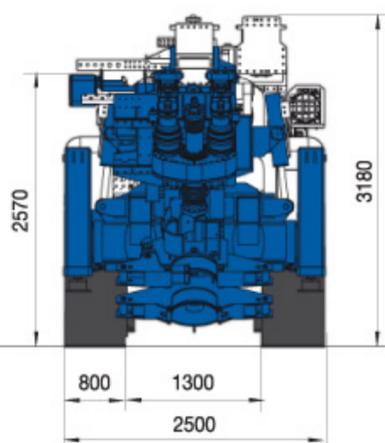
Operating weight (approx.)	33000 / 38000 kg	72752 / 83776 lb
Undercarriage		
- Track shoe width	600 mm	23.6 in
- Wheel base (centre idler to centre sprocket)	3710 mm	146.1 in
- Overall length	4511 mm	177.6 in
- Overall width (ext/retr)	3500 / 2500 mm	137.8 / 98.4 in
- Travelling speed	1,39 km/h	0.86 mph
- Max climbing capacity (gradeability)	34 % (19°)	34 % (19°)
- Average ground pressure	0,085 MPa	12.3 psi
- Tail swing radius	4050 mm	159.4 in
- Ground stabilizers	n° 2 fixed with inclined arm on front + n° 2 fixed on rear	n° 2 fixed with inclined arm on front + n° 2 fixed on rear
Diesel Engine		
- Make and model	CUMMINS QSB 6.7	<i>CUMMINS QSB 6.7</i>
- Emission certification	U.S. EPA Tier 4(i) , CARB Tier 4(i), EU Stage III B	<i>U.S. EPA Tier 4(i) . CARB Tier 4(i). EU Stage III B</i>
- Aspiration	turbocharged and charge air cooled	<i>turbocharged and charge air cooled</i>
- Power rating	194 kW @ 2200 rpm	<i>260 HP @ 2200 rpm</i>
- Fuel tank capacity	380 l	<i>100 US gal</i>
- Sound power level and sound pressure level	LwA 110 - LpA 78 dB(A)	<i>LwA 110 - LpA 78 dB(A)</i>
Hydraulic system		
- Main pumps: variable axial pumps	275 + 2x156 l/min	<i>73 + 2x41 US gal/min</i>
- Set pressure main pumps	28 + 2x31 Mpa	<i>4061 + 2x4496 psi</i>
- Auxiliary pumps: gear pumps	44 + 3x94 l/min	<i>11.6 + 3x24.8 US gal/min</i>
- Hydraulic oil tank capacity	700 l	<i>185 US gal</i>
Clamp & hydraulic joint breaker		
- Nominal size	60 - 430 mm	<i>2.4 - 16.9 in</i>
- Maximum clamping force	280 kN	<i>62945 lbf</i>
- Maximum breaking torque	8800 daNm	<i>64905 lbf*ft</i>
- Pull-up extractor clamp force	260 kN	<i>58450 lbf</i>
- Pull-up extractor clamp stroke	550 mm	<i>21.7 in</i>
Service winch		
- Type	controlled descent	<i>controlled descent</i>
- 1st layer line pull	36 / 35 kN	<i>8093 / 7868 lbf</i>
- 1st layer nominal rope speed	27,5 m/min	<i>90 ft/min</i>
- Rope diameter	14 mm	<i>0.55 in</i>
Rod carousel		
- N. of rods	3	<i>3</i>
- Rod diameter	90 - 114 mm	<i>3.5 - 4.5 in</i>
- Rod length	9 m	<i>29.5 ft</i>

STANDARD EQUIPMENT

- Drill mast 16000 mm stroke
- Clamp and breaker 40 - 320 mm
- Pneumatic inline DTH lubricator
- Kinematic mechanism:
 - Fixed articulation on main frame
 - Mast side tilting +/- 10°
- Rotary cradle side shifting
- Hoist pull in 1st layer complete with jib: 35 kN
- Load Sensing hydraulic system
- Air/water system and line lubricator for DTH
- Fully radio remote control
- Safety controls on board

OPTIONAL EQUIPMENT

- Mast kit extension for 13000 mm stroke
- Rod carousel (3 rods)
- Jet grouting kit for treatment in single depth of 36 m (54 m with automatic loading operations)
- Wide range of rotary heads
- Top hammer kit
- Double rotary kit
- Service crane
- Clamp and breaker up to 510 mm
- Foam pump
- Water and mud pump
- CFA kit with special guide and clamp
- Mast side tilting kit for +/- 18°
- Telescopic zoom on base body



Transport configuration		
Length	13000 mm	511.8 in
Width	2500 mm	98.4 in
Height	3200 mm	126 in
Weight	31000 - 38000 kg	68343 - 83776 lb

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