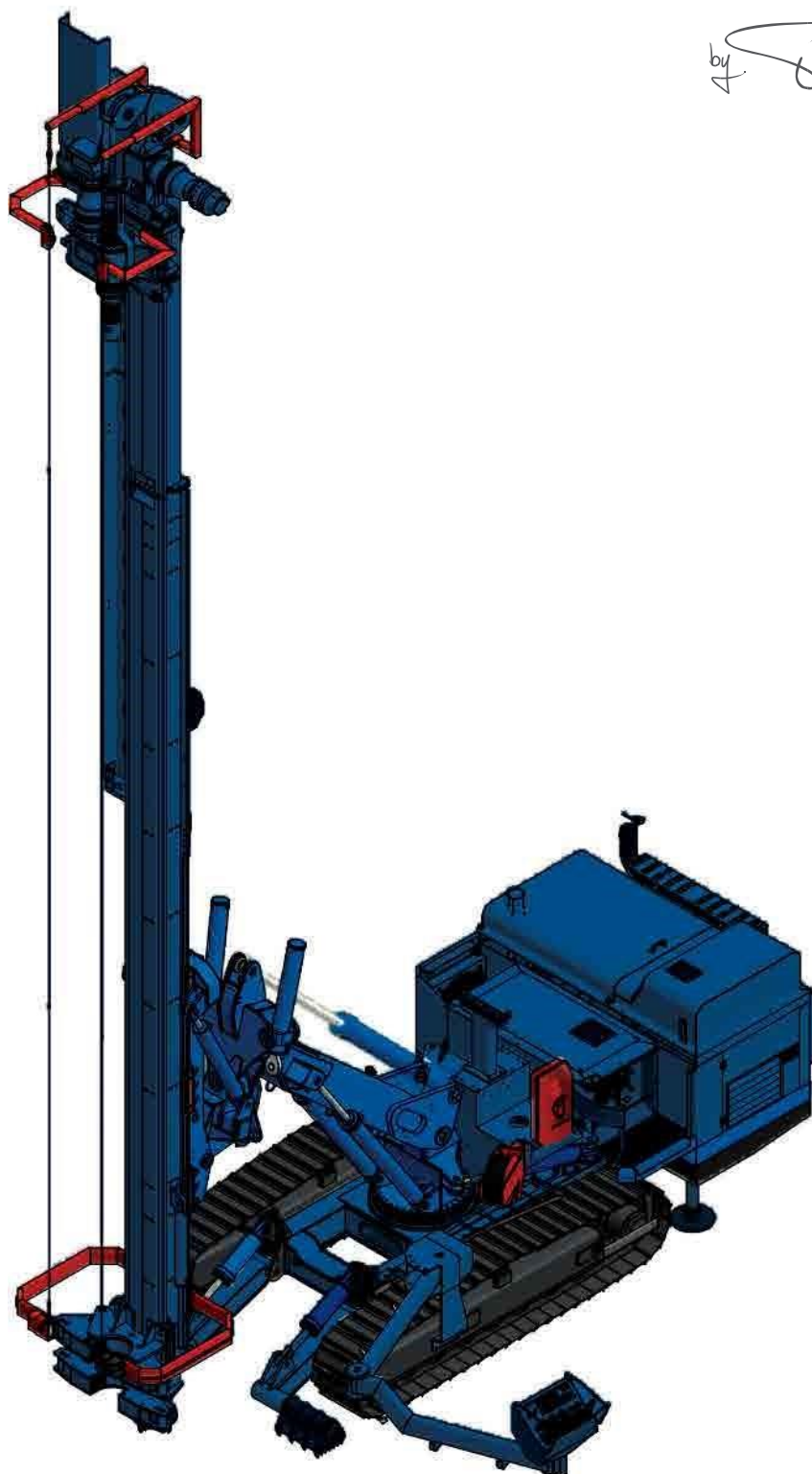


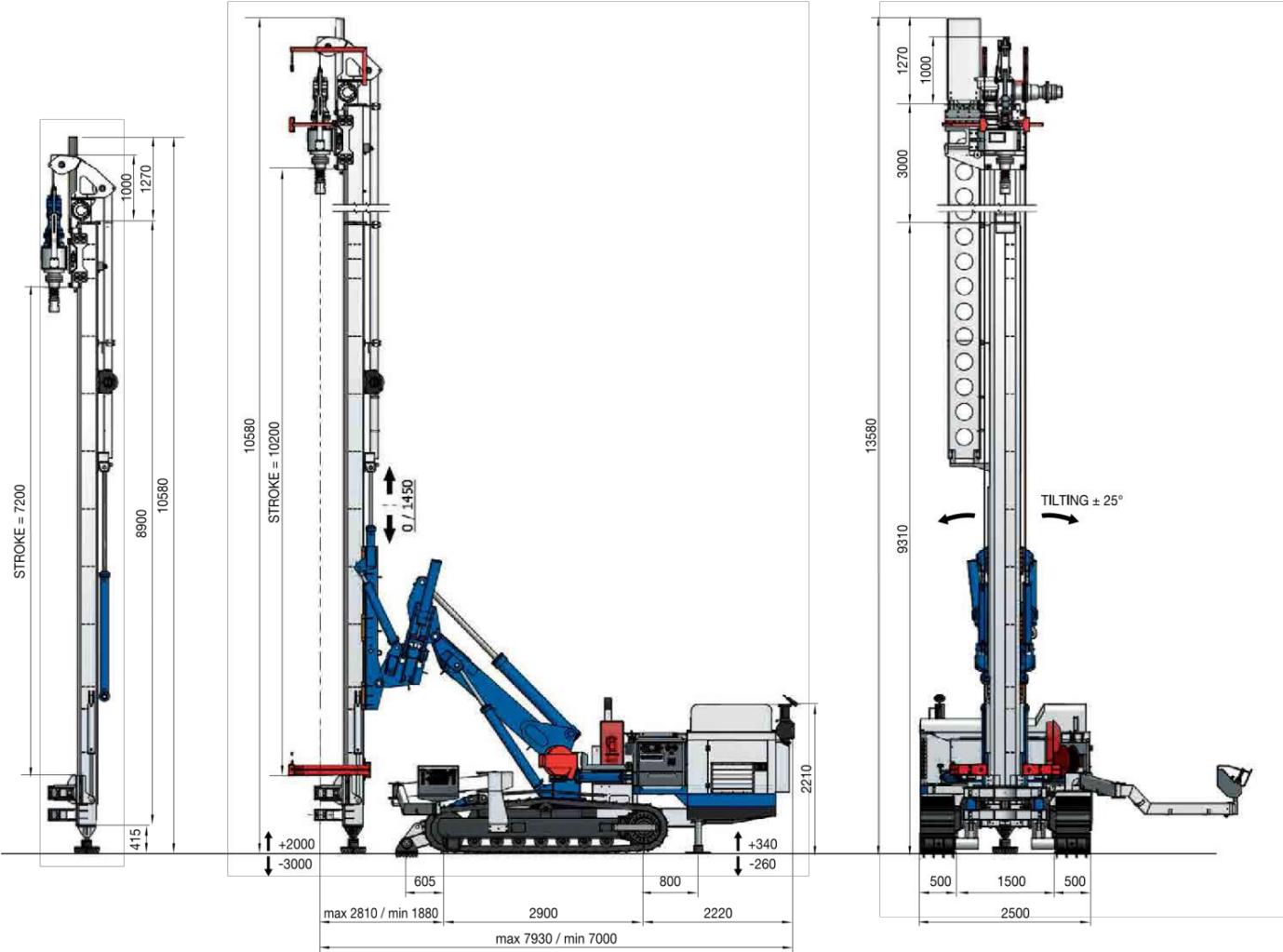
Hydraulic Microdrilling Rig

SM-20

by *soilmec*



SM-20 APPLICATIONS



SM-20 TECHNICAL DATA SHEET

Hoist & Feed system	Motoreducer	Motoreducer	Motoreducer	Motoreducer
- Feed stroke	7200 mm	283.5 in	10200 mm	401.6 in
- Rod lenght type (c/w one rotary head)	6 m	19.7 ft	9 m	29.5 ft
- Maximum hoist pull/feed force	80 kN	17989.7 lbf	80 kN	17984.7 lbf

Rotary head range	HR-17G	HR-17G	HR-21G	HR-21G
- Gear box type	Variable	Variable	Variable	Variable
- Maximum torque	1560 daNm	11505 lb*ft	2000 daNm	14751 lb*ft
- Maximum rotation	280 rpm	280 rpm	245 rpm	345 rpm
- Inner passage	100 mm	3.9 in	130 mm	5.1 in

Operating weight (approx.)	21500 kg	47399 lb
Undercarriage		
- Track shoe width	500 mm	19.7 in
- Wheel base (centre idler to centre sprocket)	2900 mm	114.2 in
- Overall length	3631 mm	143.0 in
- Overall width (not extendable crawler)	2500 mm	98.4 in
- Travelling speed	1,5 km/h	0.93 mph
- Max climbing capacity (gradeability)	66 % (30°)	34 % (19°)
- Average ground pressure	0,074 MPa	10.7 psi
- 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	DEUTZ TCD 2012 L06	DEUTZ TCD 2012 L06
- Emission certification	UE 2004/26/CE Stage IIIA - US EPA nonroad Tier 3	UE 2004/26/CE Stage IIIA - US EPA nonroad Tier 3
- Aspiration	turbocharged and charge liquid cooled	turbocharged and charge liquid cooled
- Power rating	135 kW @ 2000 rpm	181 HP @ 2000 rpm
- Fuel tank capacity	176 l	46.5 US gal
- Sound power level and sound pressure level	LwA 115 - LpA 74 dB(A)	LwA 115 - LpA 74 dB(A)

Hydraulic system		
- Main pumps: variable axial pumps	290 l/min	76.6 US gal/min
- Set pressure main pumps	28 MPa	4061 psi
- Auxiliary pumps: gear pumps	86 + 54 + 32 + 22 l/min	22.7 + 14.3 + 8.5 + 5.8 US gal/min
- Hydraulic oil tank capacity	410 l	108 US gal

Clamp & guide		
- Nominal size	60 - 320 mm	2.4 - 12.6 in
- Maximum clamping force	237 kN	52280 lbf
- Maximum breaking torque	7850 daNm	57899 lb*ft

Service winch		
- Type	controlled descent	controlled descent
- 1st layer line pull	20 kN	4496 lbf
- 1st layer nominal rope speed	46 m/min	151 ft/min
- Rope diameter	10 mm	0.39 in

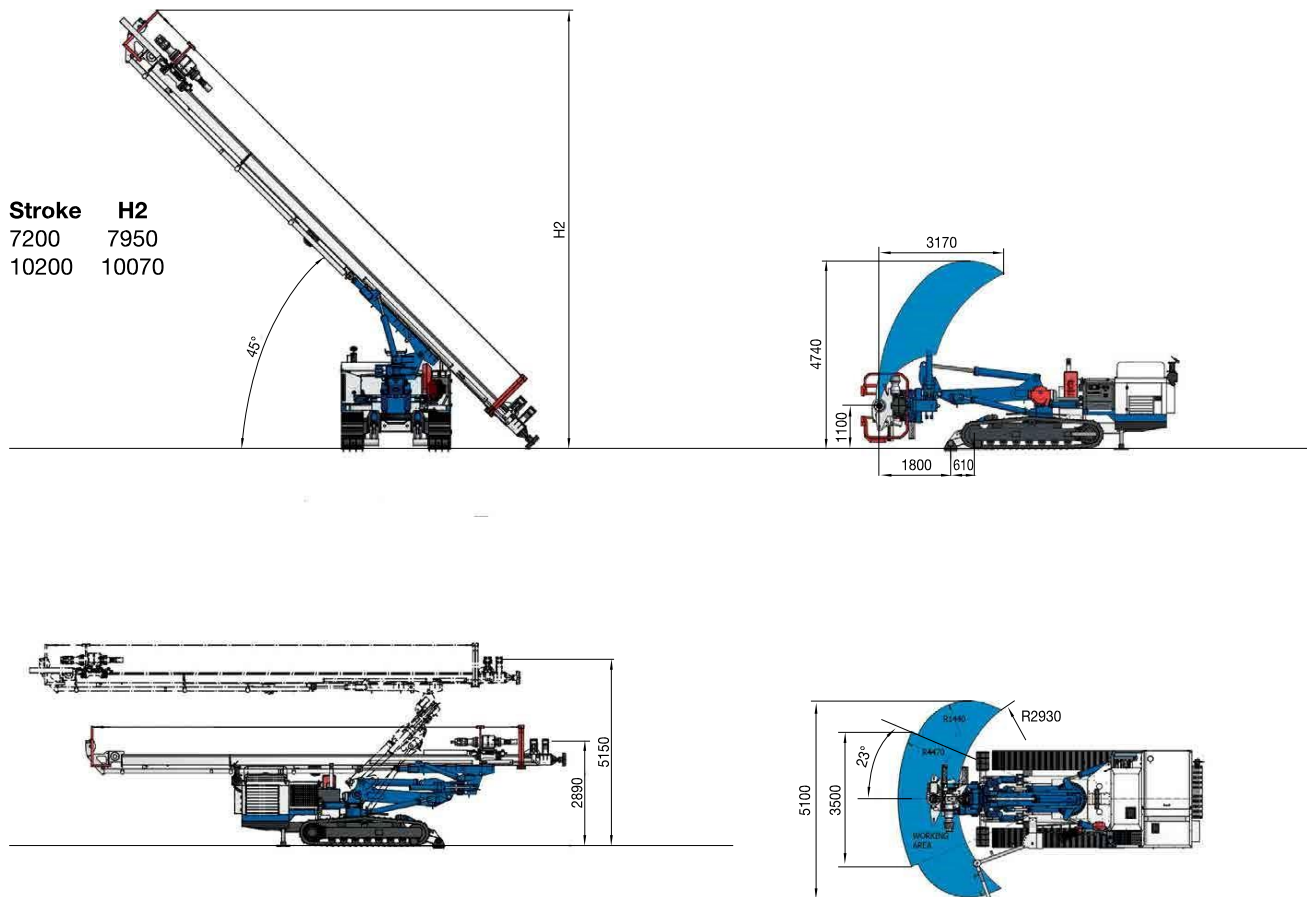
Rod carousel		
- N. of rods	2	2
- Rod diameter	180 mm	7.1 in
- Rod length	7,5 m	295.3 ft

SM-20 MOVIMENTATIONS STANDARD EQUIPMENT

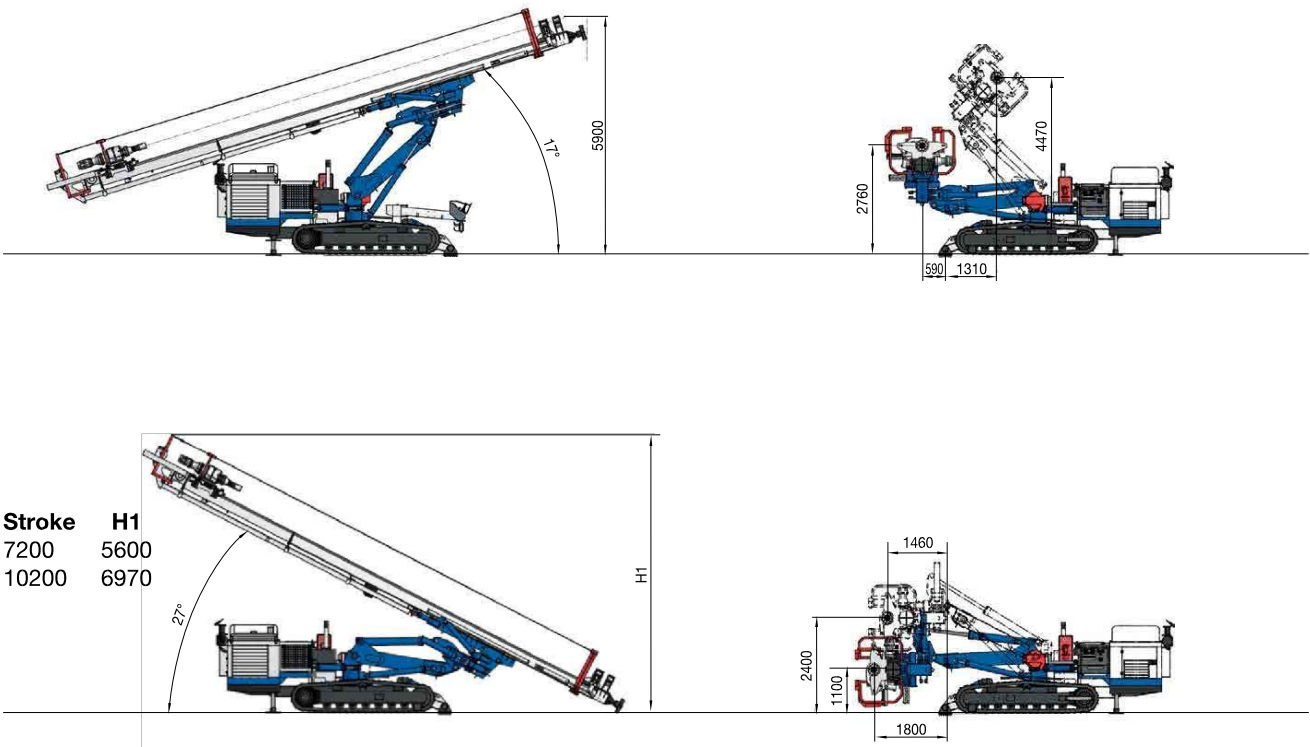
- | | | |
|---|--|---|
| <ul style="list-style-type: none"> • N° 2 hydraulic outriggers • 0-90° mast articulation • Swivelling +/- 23° • Kinematic mechanism <ul style="list-style-type: none"> - Side movements +/- 23° - Articulated 90° join on mast | <ul style="list-style-type: none"> - Telescopic zoom and counter slide • Casing extractor by piston 600 mm stroke • 1200 mm stroke cylinder for mast shoring • Control board on rotating arm for drilling and service functions • Rotary cradle with side shifting stroke: 430 mm | <ul style="list-style-type: none"> • Floating system • Service winch with jib • Integrated foam pump • Air/water system and line lubricator for DTH • Kinematic mechanism are actuated by means of hydraulic panel on base carrier |
|---|--|---|

OPTIONAL EQUIPMENT

- | | | |
|---|---|--|
| <ul style="list-style-type: none"> • Mast kit for 7000 mm stroke • Jet Grouting kit for mono, bi or three fluids treatment and steeples lifting speed (max treatment depth 21 m in T1) • Top hammer configuration: HB-50, hammer | <ul style="list-style-type: none"> feeding 90 l/min @ 200 bar • Rod carousel (2, 6, 8 rods), for mast with stroke 7000 mm and 9500 mm • Synchronized loading system for rods and casings | <ul style="list-style-type: none"> • Lifting crane • Radio remote control for drilling operation • Double rotary kit • Service crane • Clamp and breaker up to 420 mm |
|---|---|--|



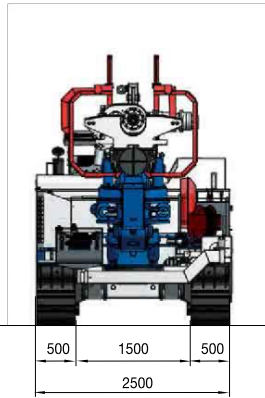
SM-20 JET GROUTING

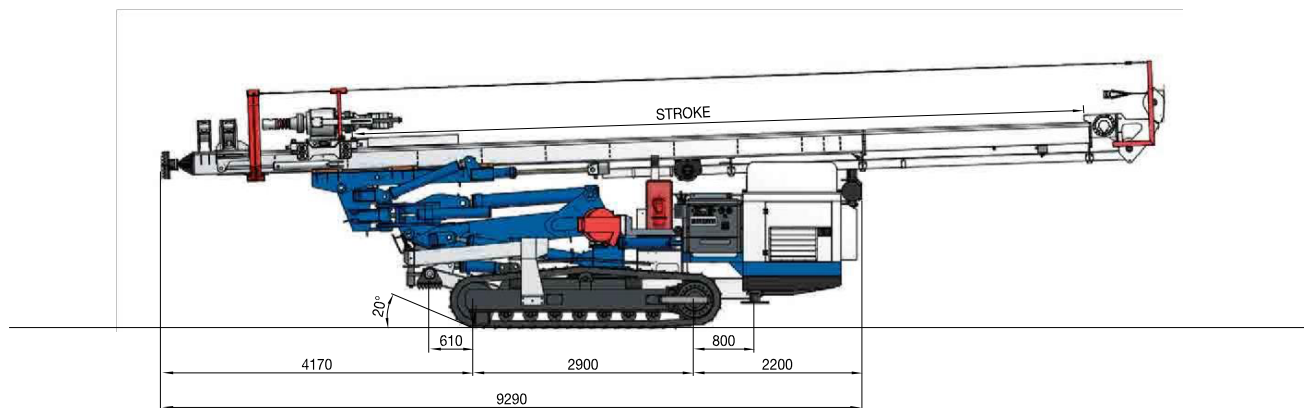




JET GROUTING VERSION

Rod diameter	90 - 127 mm	3.54 - 5 in
Max treatment depth in a single passage	21 m	69 ft
Drillguide extensions	10 + 11 m	193.7 + 433 ft





Technical data sheet SM20-002 04/2015

Transport configuration	Stroke: 7200 mm		Stroke: 10200 mm	
Length	10300 mm	405.5 in	13300 mm	523.6 in
Height	3220 mm	126.8 in	3120 mm	122.8 in
Weight	21150 kg	46627 lb	21500 kg	47399 lb

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Drilling and Foundation Equipment