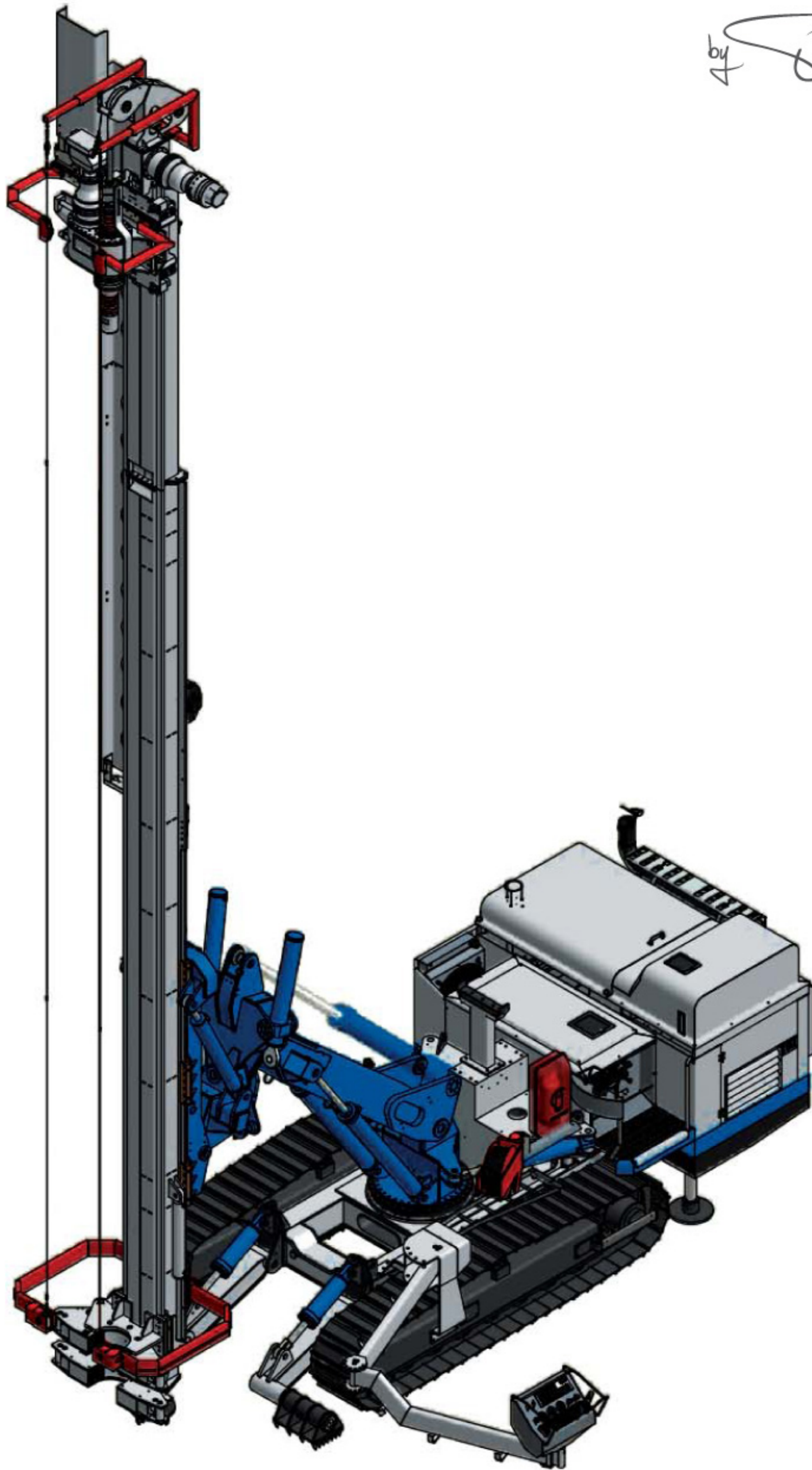
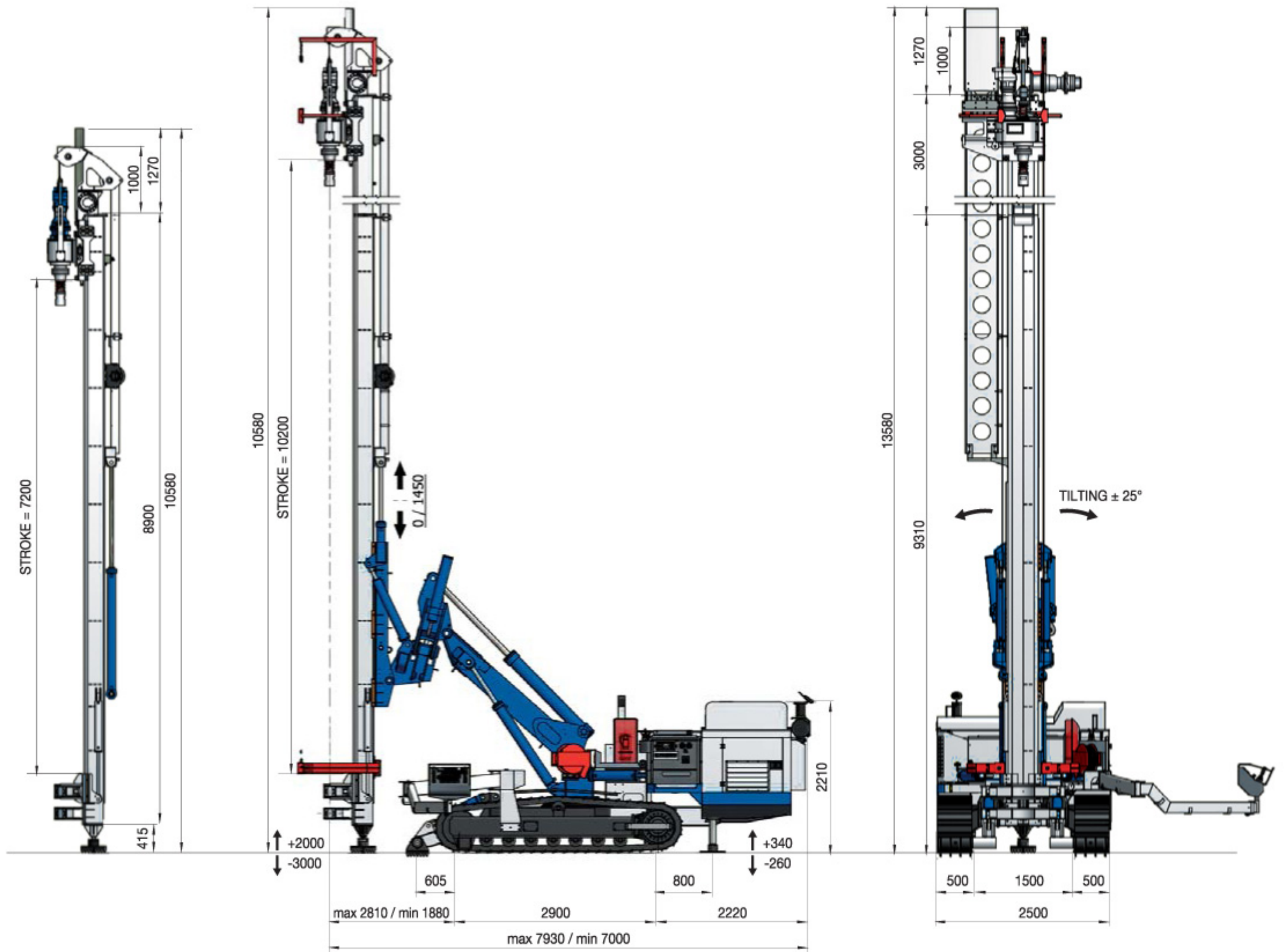


Hydraulic Microdrilling Rig
SM-20

by *Soilmec*



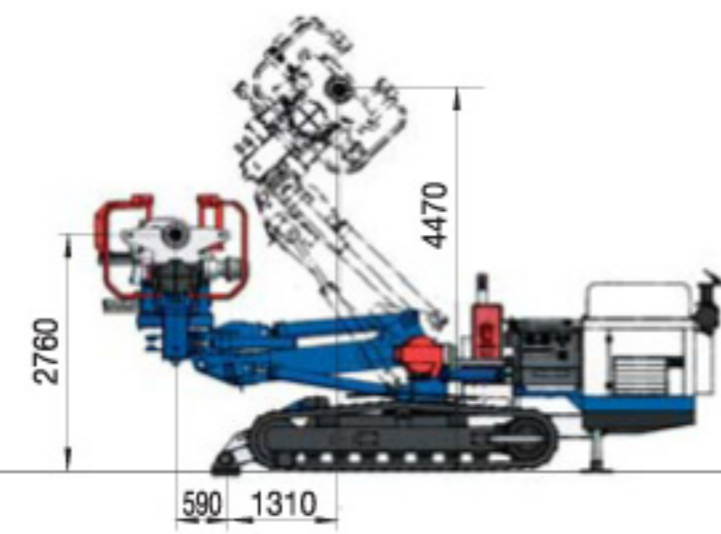
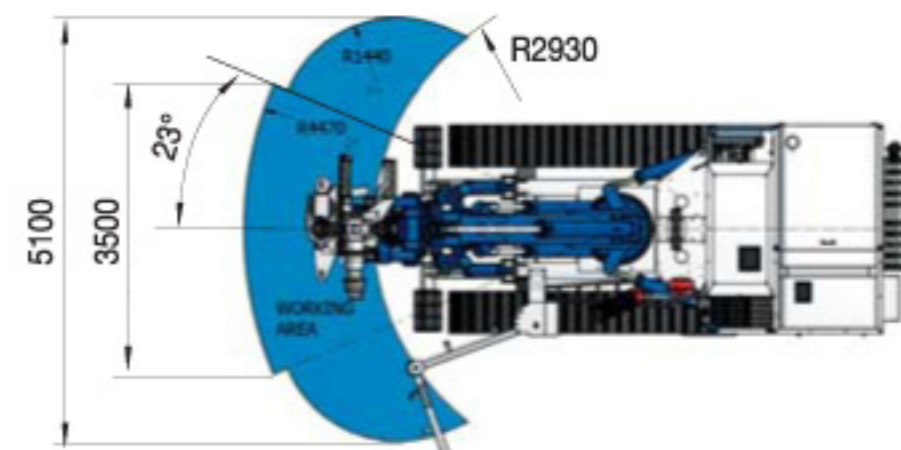
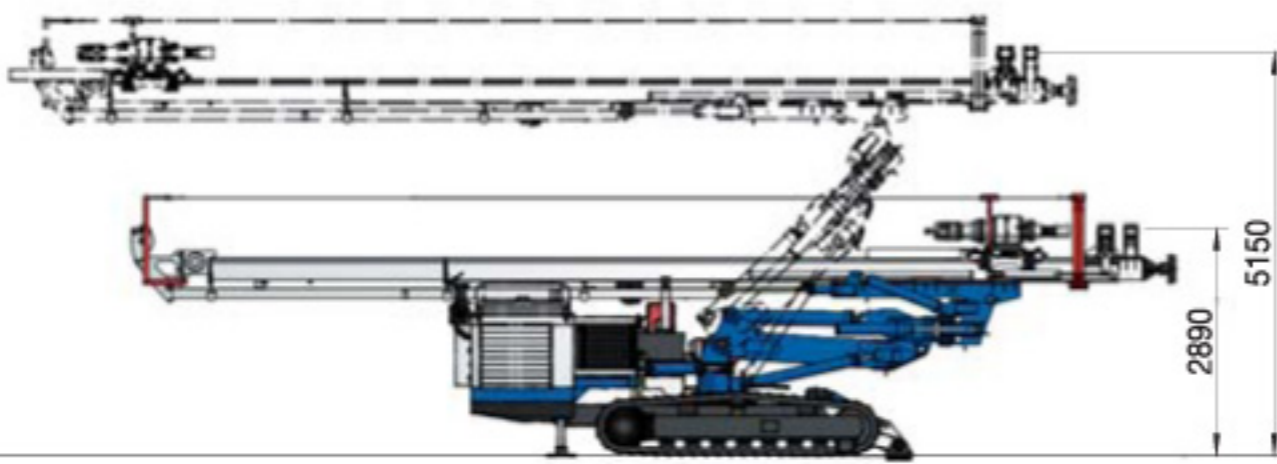
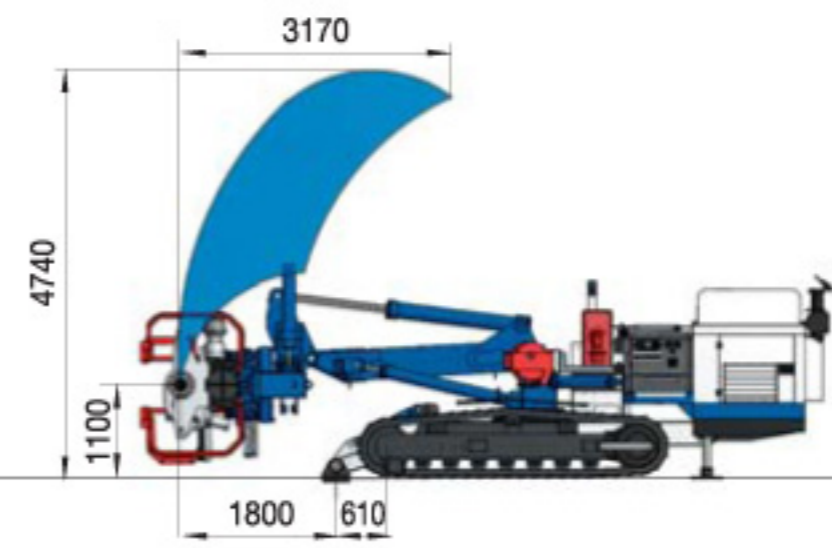
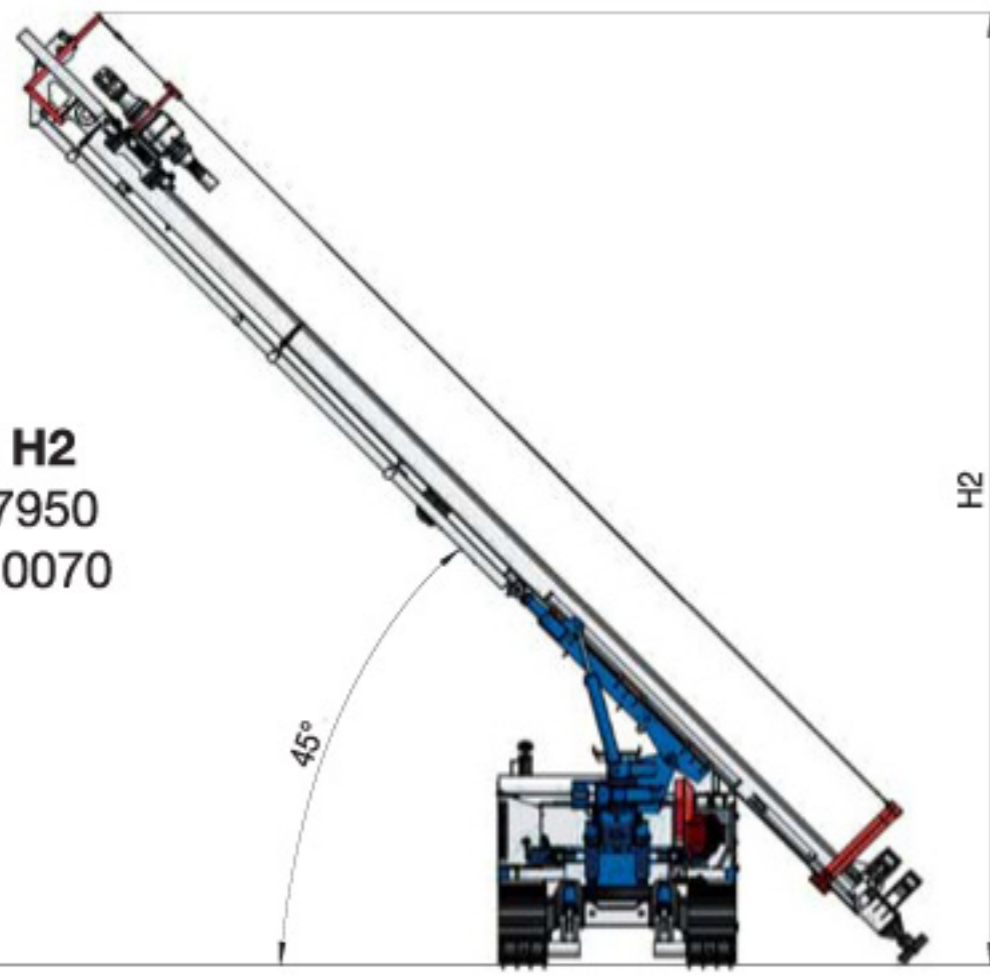
SM-20 APPLICATIONS



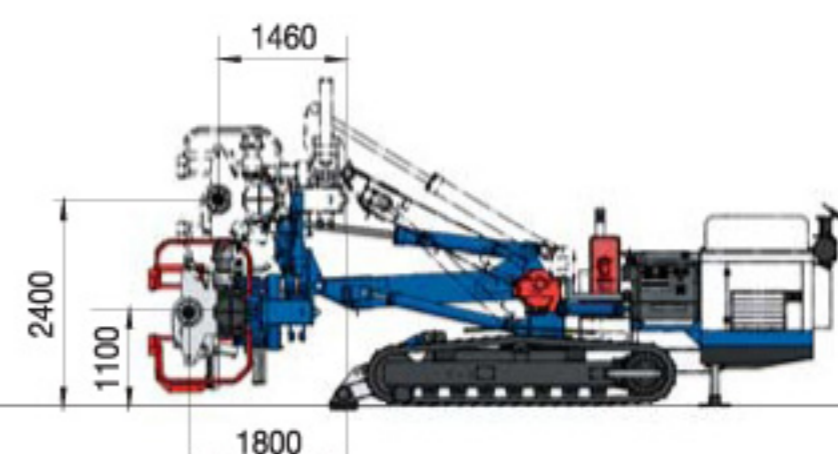
Hoist & Feed system	Motoreducer	Motoreducer	Motoreducer	Motoreducer
- Feed stroke	7200 mm	283.5 in	10200 mm	401.6 in
- Rod length type (c/w one rotary head)	6 m	19.7 ft	9 m	29.5 ft
- Maximum hoist pull/feed force	83 kN	18659 lbf	83 kN	18659 lbf
Rotary head range	HR-17G	HR-17G	HR-21G	HR-21G
- Gear box type	Variable	Variable	Variable	Variable
- Maximum torque	1474 daNm	10872 lb*ft	2154 daNm	15887 lb*ft
- Maximum rotation	295 rpm	295 rpm	315 rpm	315 rpm
- Inner passage	90 mm	3.5 in	127 mm	5.0 in

SM-20 MOVIMENTATIONS

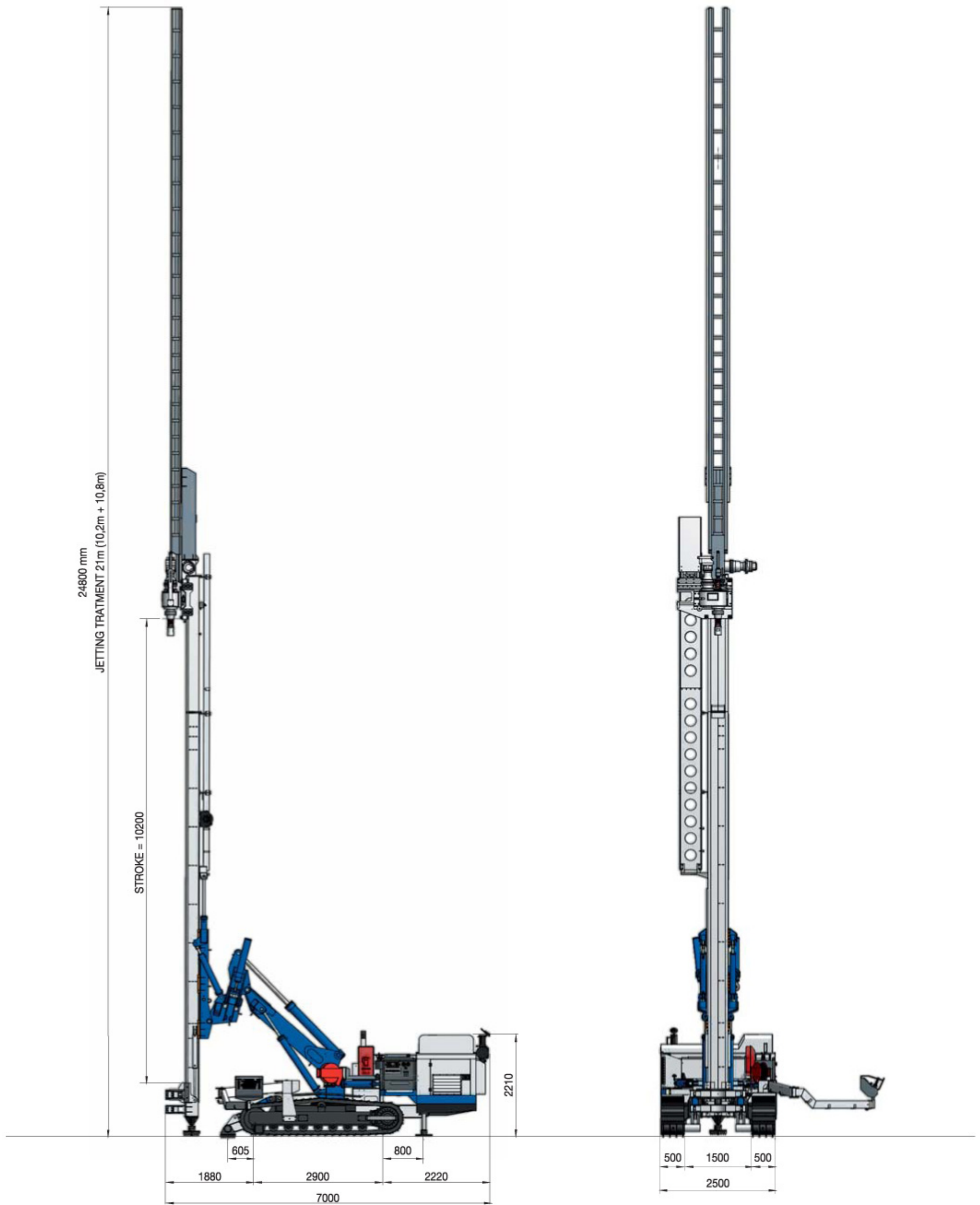
Stroke	H2
7200	7950
10200	10070



Stroke	H1
7200	5600
10200	6970



SM-20 JET GROUTING



JET GROUTING VERSION		
Rod diameter	114 mm	4.49 in
Max treatment depth in a single passage	21 m	69 ft
Drillguide extensions	10,8 m	35.4 ft

SM-20 TECHNICAL DATA SHEET

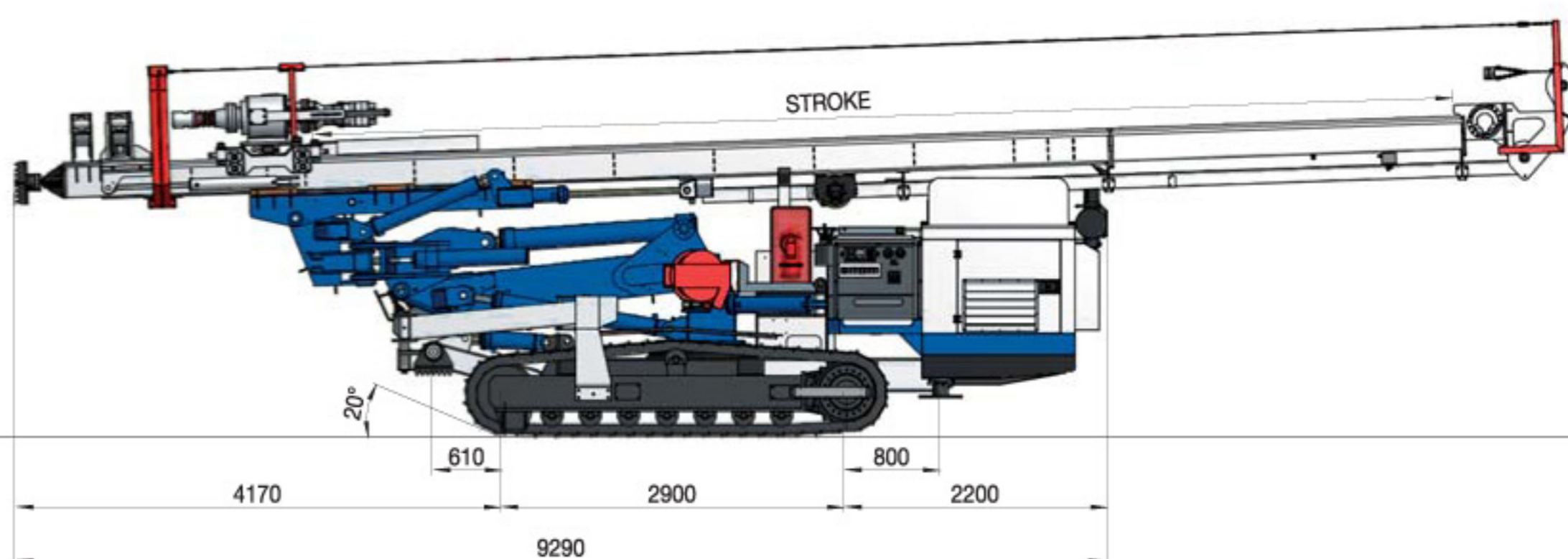
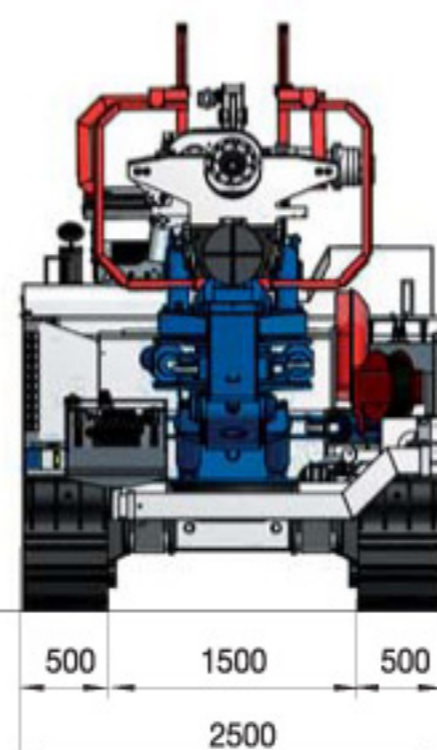
Operating weight (approx.)	21000 kg	46297 lb
Undercarriage		
- Track shoe width	500 mm	19.7 in
- Wheel base (centre idler to centre sprocket)	1705 mm	67.1 in
- Overall length	3631 mm	143.0 in
- Overall width (not extendable crawler)	2500 mm	98.4 in
- Travelling speed	2,00 km/h	1.24 mph
- Max climbing capacity (gradeability)	34 % (19°)	34 % (19°)
- Average ground pressure	0,070 MPa	10.2 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	129 kW @ 2000 rpm	173 HP @ 2000 rpm
- Fuel tank capacity	180 l	48 US gal
- Sound power level and sound pressure level	LwA 110 - LpA 90 dB(A)	LwA 110 - LpA 90 dB(A)
Electric motor		
- Make and model	ABB 4 poles 50Hz 380 / 660v	ABB 4 poles 50Hz 380 / 660v
- Power rating	75 kW @ 1485 rpm	101 HP @ 1485 rpm
Hydraulic system		
- Main pumps: variable axial pumps	290 l/min	76.6 US gal/min
- Set pressure main pumps	30 MPa	4351 psi
- Auxiliary pumps: gear pumps	65 + 72 + 17 + 108 l/min	17.2 + 19.0 + 4.5 + 28.5 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	188 kN	42263 lbf
- Maximum breaking torque	6000 daNm	44254 lbf*ft
Service winch		
- Type	controlled descent	controlled descent
- 1st layer line pull	20 kN	4496 lbf
- 1st layer nominal rope speed	57 m/min	187 ft/min
- Rope diameter	10 mm	0.39 in
Rod carousel		
- N. of rods	up to 8 (optional)	up to 8 (optional)
- Rod diameter	180 mm	7.1 in
- Rod length	6 m	19.7 ft

STANDARD EQUIPMENT

- N° 2 hydraulic outriggers
- 0-90° mast articulation
- Swivelling +/-23°
- Kinematic mechanism
 - Side movements +/- 23°
 - Articulated 90° join on mast
- 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
- 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

- 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
- 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
- Lifting crane
- Radio remote control for drilling operation
- Double rotary kit
- Service crane
- Clamp and breaker up to 420 mm



Transport configuration	Stroke: 7200 mm		Stroke: 10200 mm	
Length	13300 mm	523.6 in	10300 mm	405.5 in
Height	3220 mm	126.8 in	3120 mm	122.8 in
Weight	21400 kg	47178 lb	22000 kg	48501 lb

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