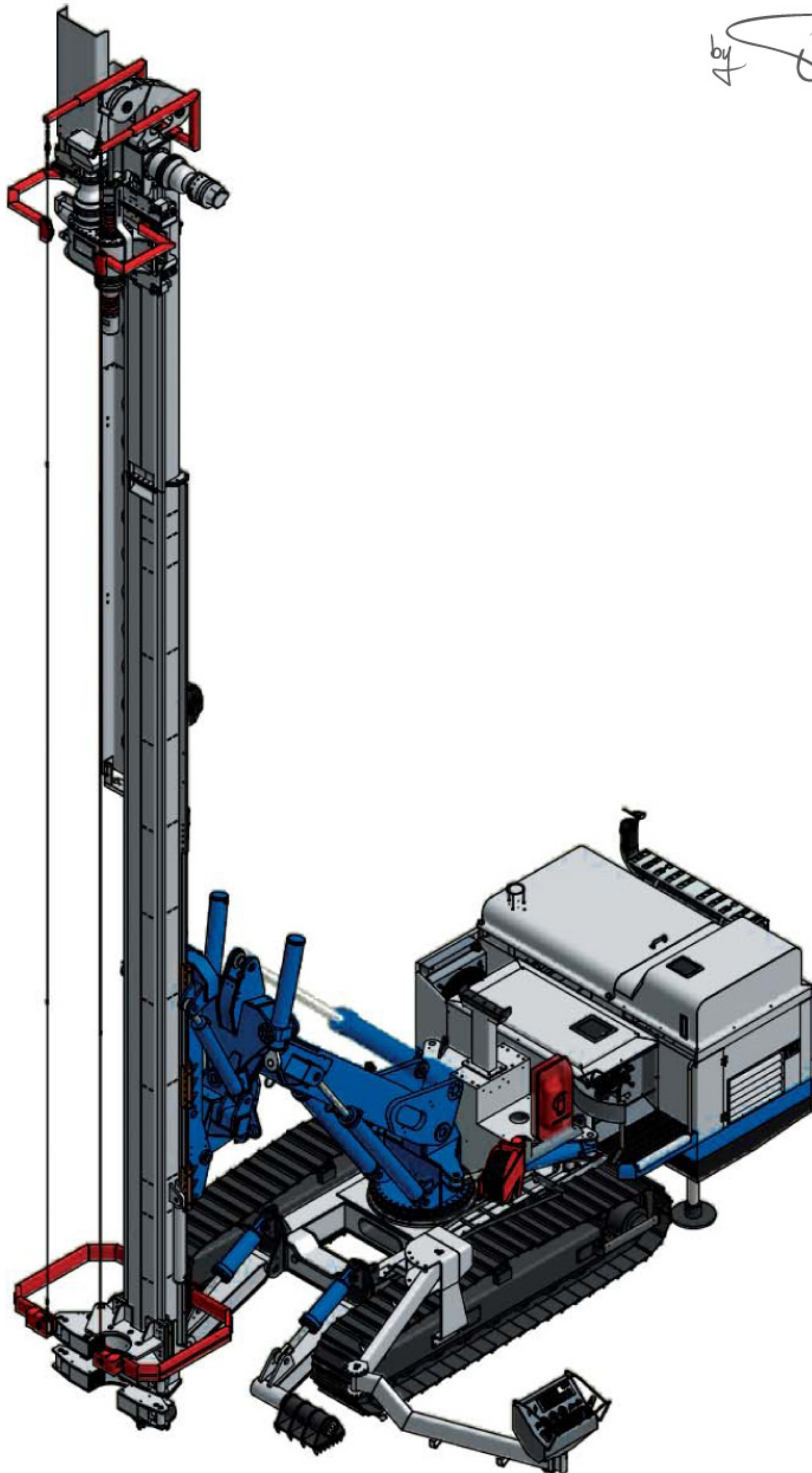


Hydraulic Microdrilling Rig

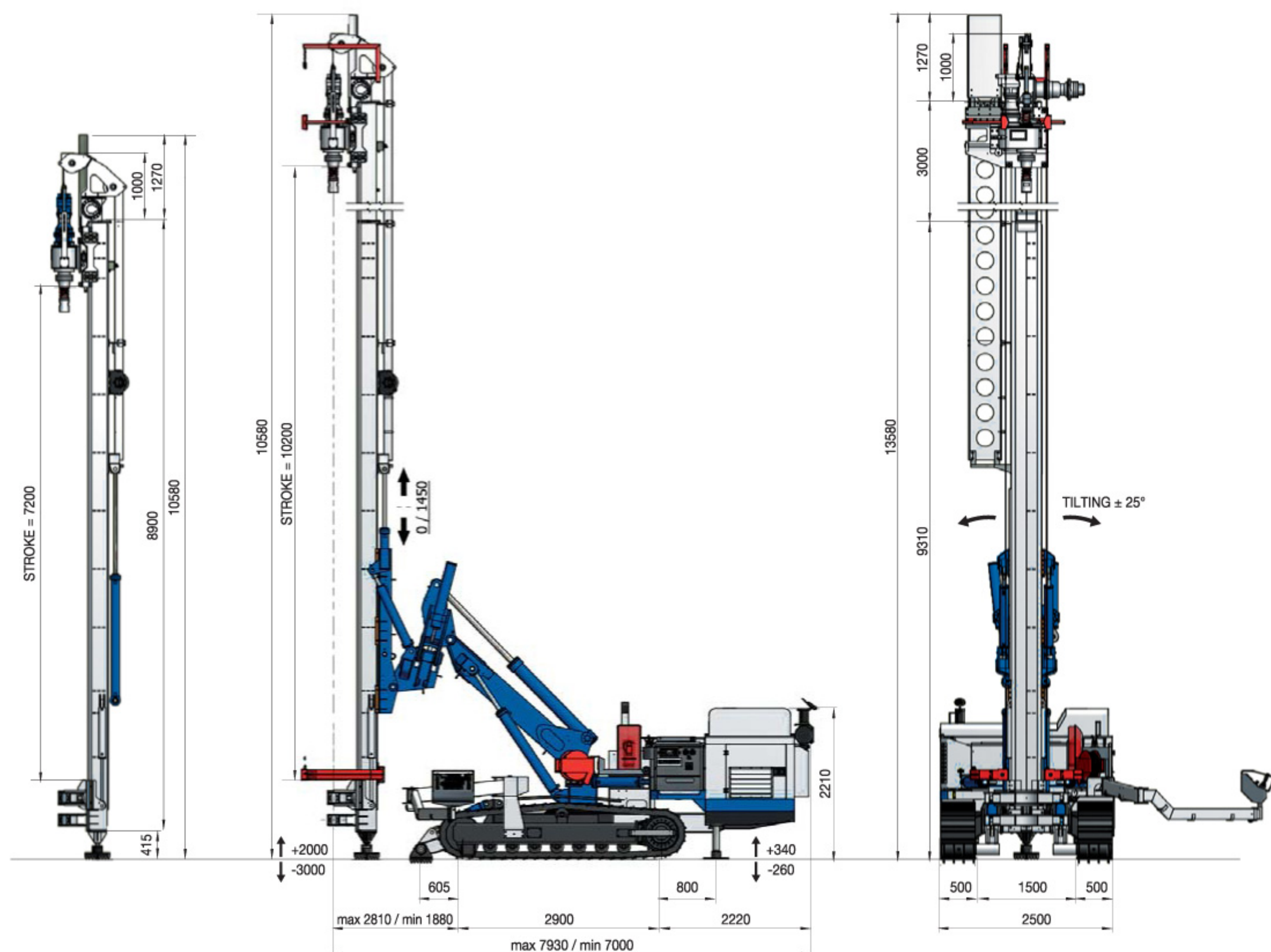
SM-20

by *soilmec*



soilmec®
Drilling and Foundation Equipment

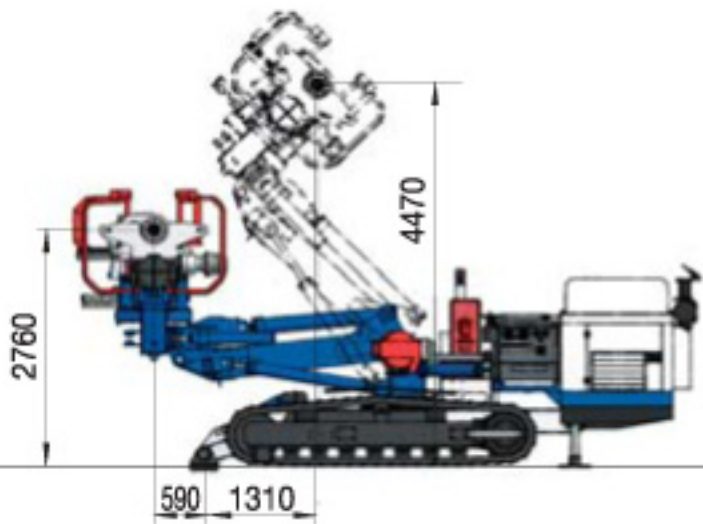
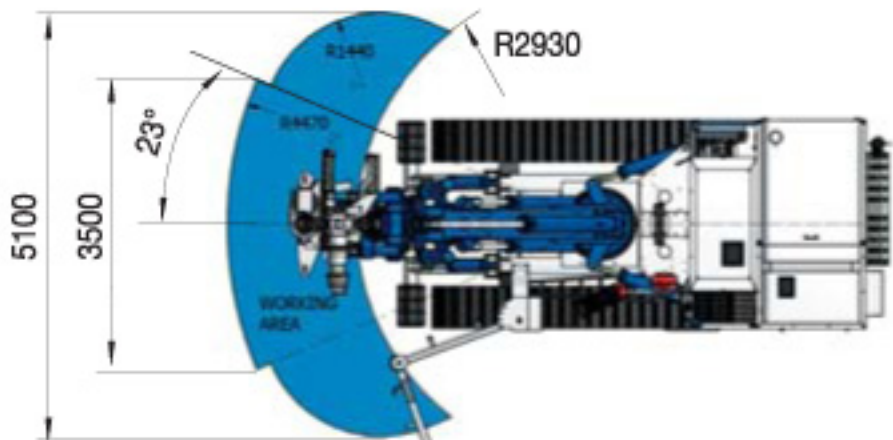
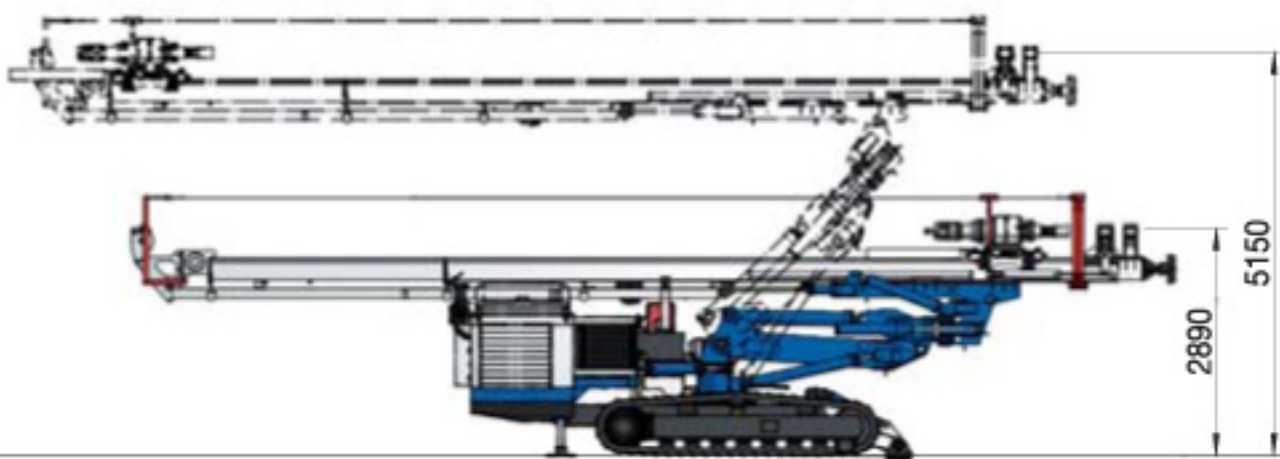
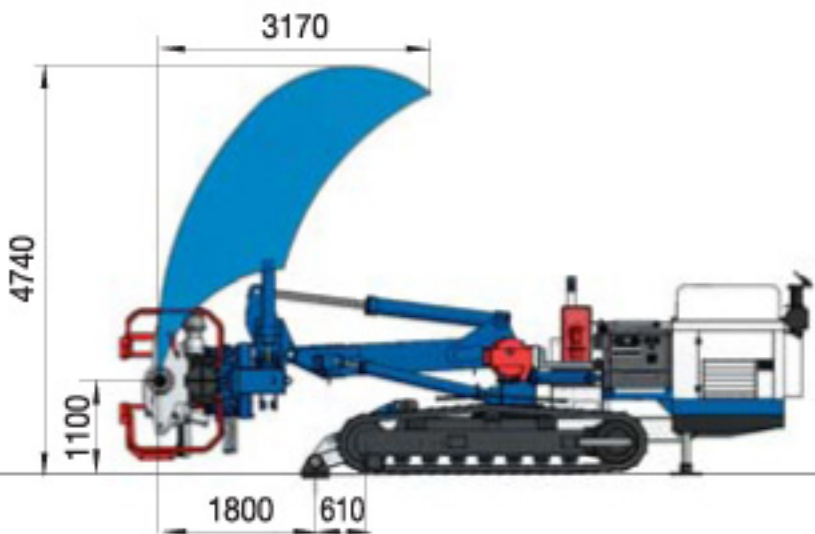
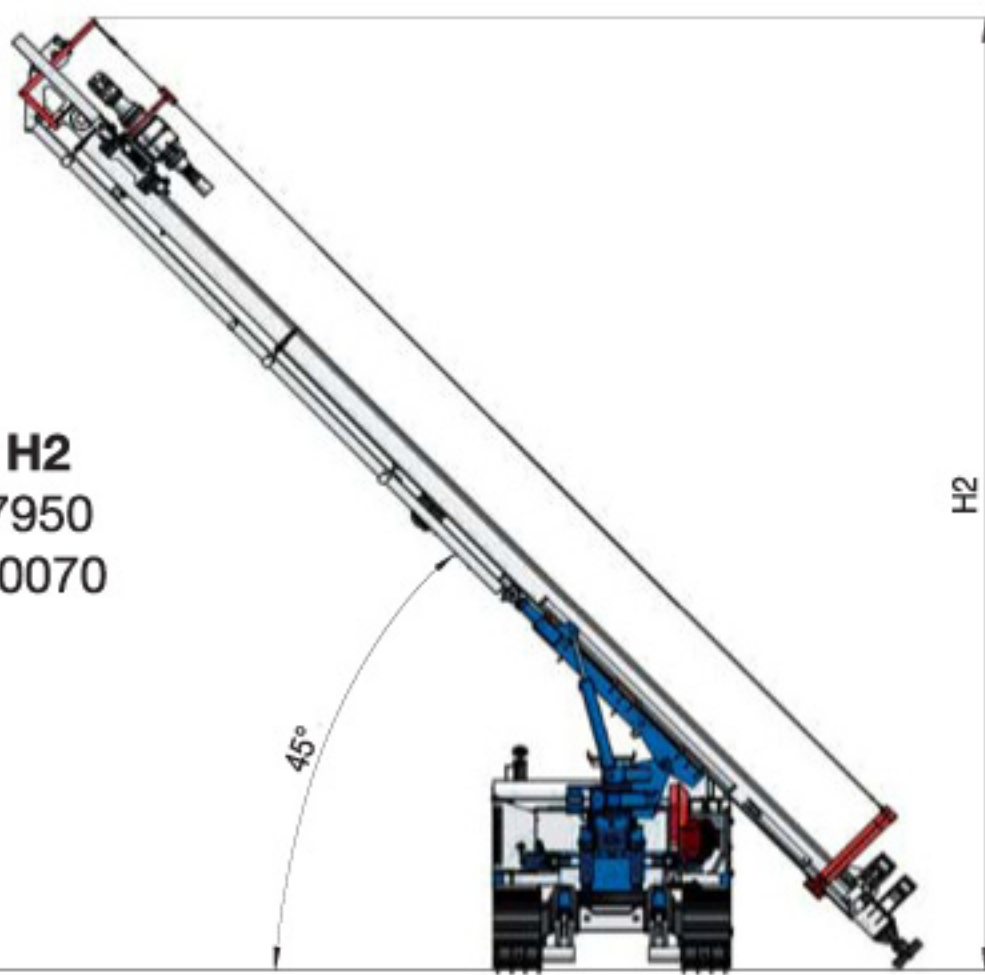
SM-20 APPLICATIONS



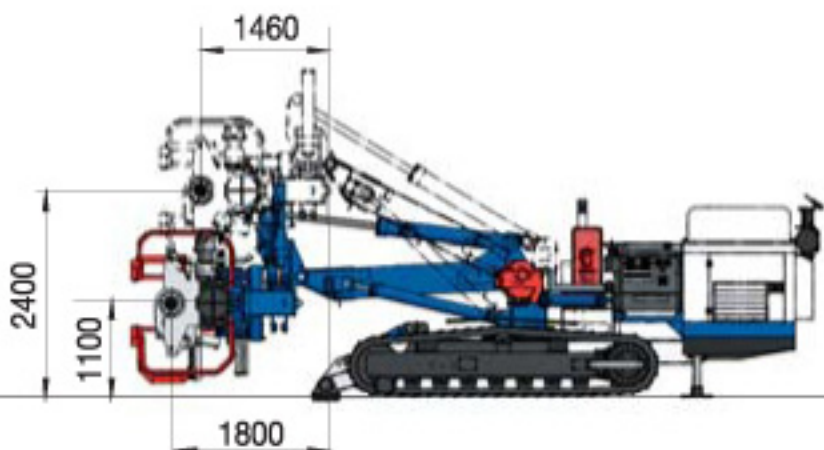
Hoist & Feed system	Motoreducer	Motoreducer	Motoreducer	Motoreducer
- Feed stroke	7200 mm	283.5 in	10200 mm	401.6 in
- Rod lenght type (c/w one rotary head)	6 m	19.7 ft	9 m	29.5 ft
- Maximum hoist pull/feed force	83 kN	18659 lbf	83 kN	18659 lbf

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

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

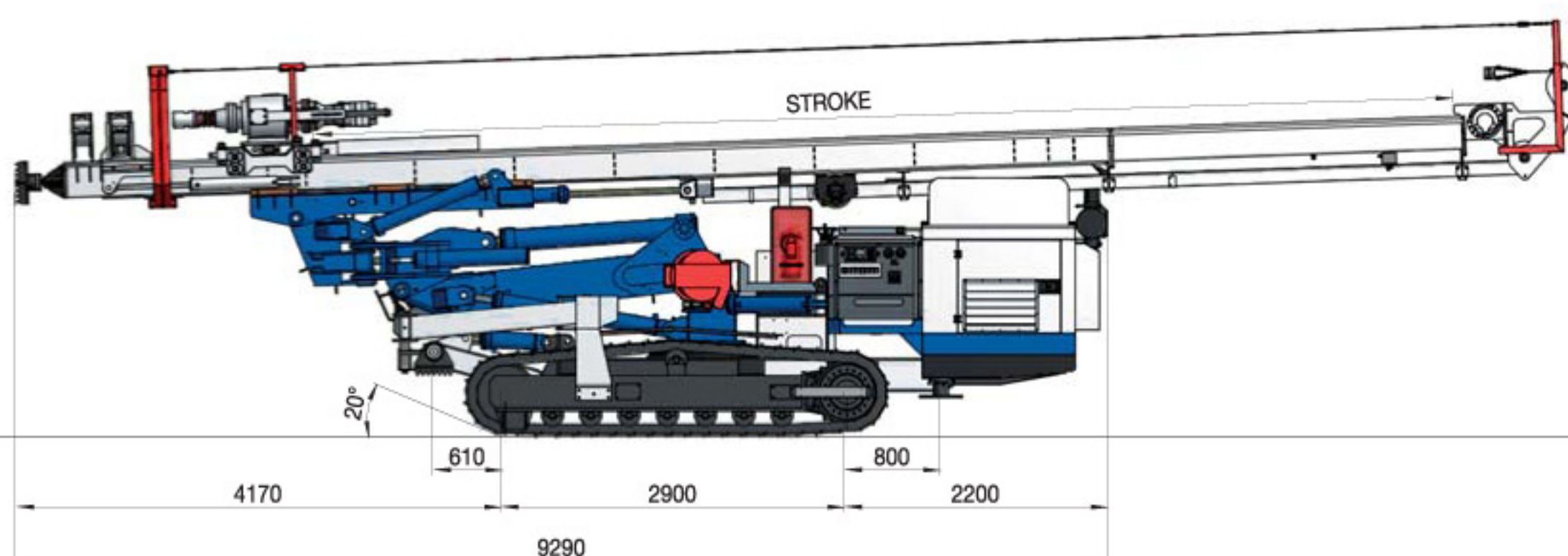
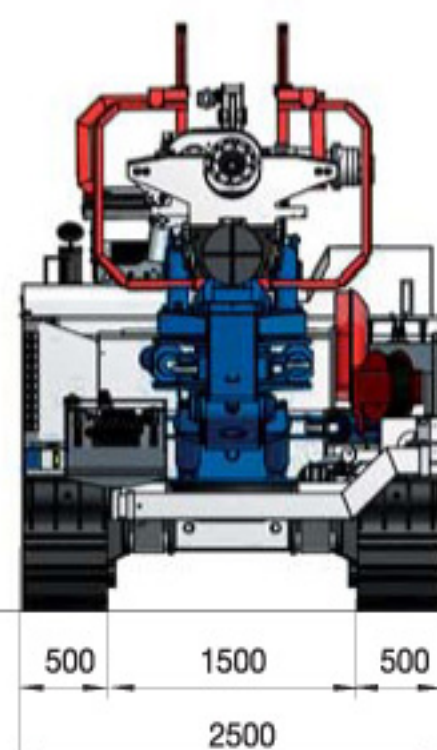
Operating weight (approx.)		
	21000 kg	46297 lb
Undercarriage		
- Track shoe width	500 mm	19.7 in
- Wheel base (centre idler to centre sprocket)	1705 mm	67.1 in
- Overall length	3631 mm	143.0 in
- Overall width (not extendable crawler)	2500 mm	98.4 in
- Travelling speed	2,00 km/h	1.24 mph
- Max climbing 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

- | | | |
|--|--|---|
| <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 |
|---|---|--|



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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