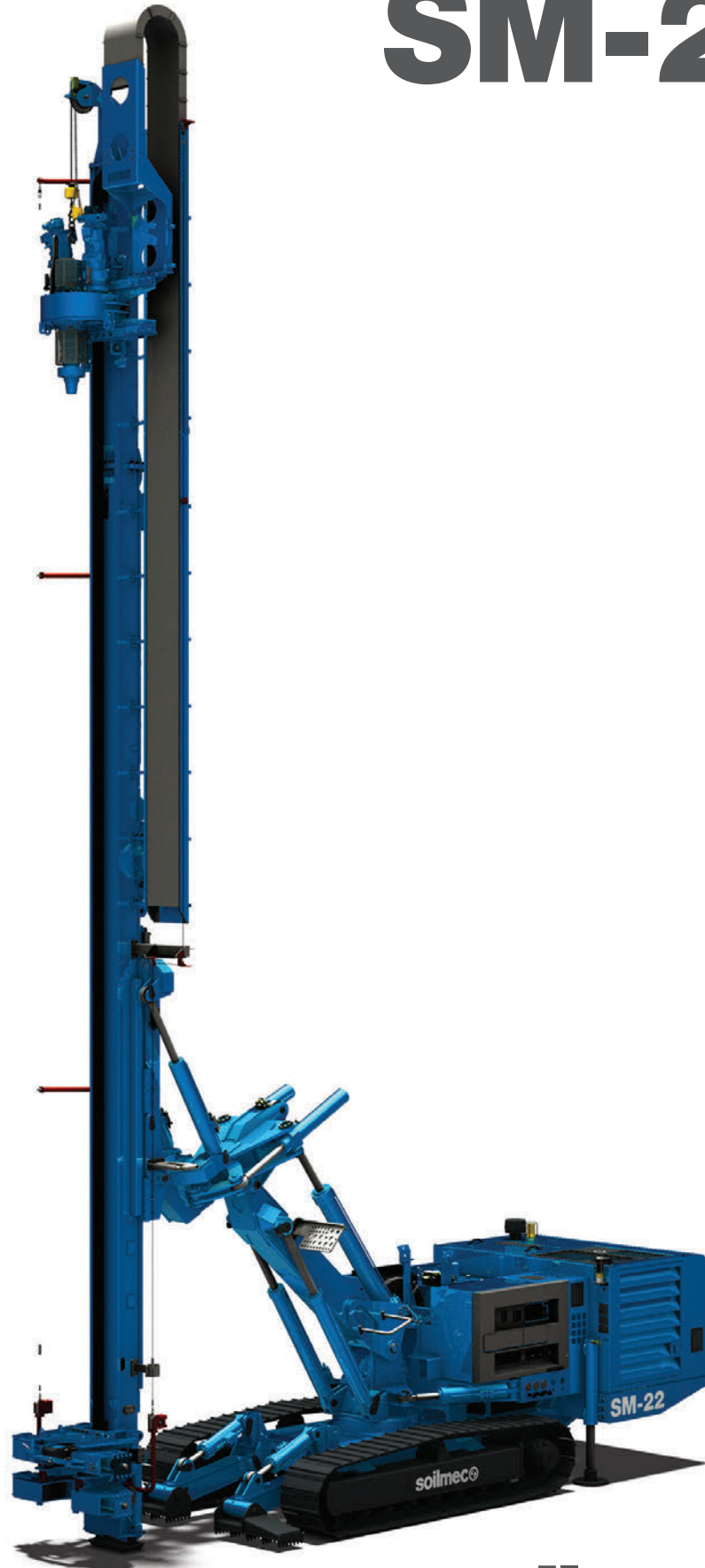


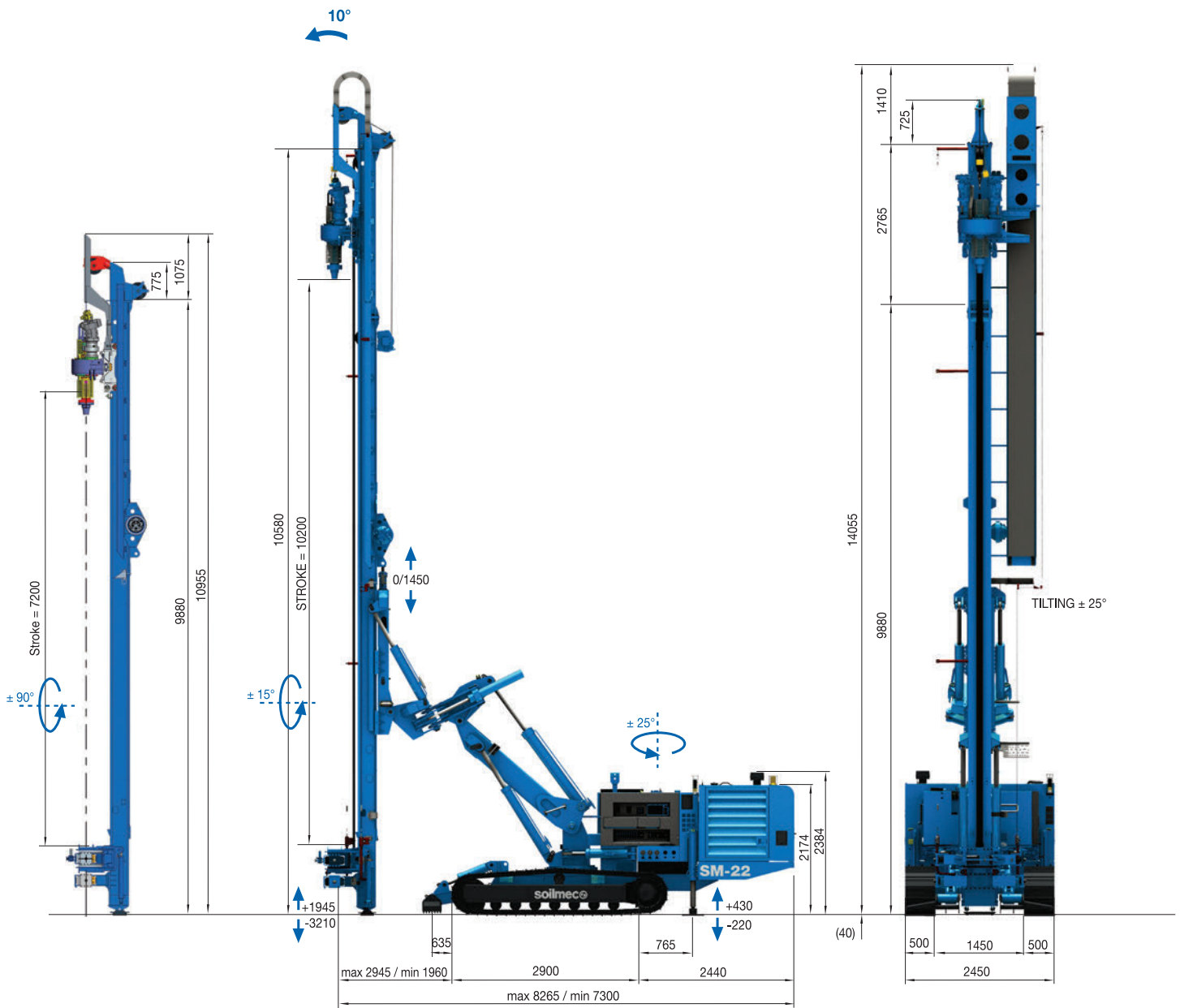
Hydraulic Microdrilling Rig

SM-22



soilmec 
Drilling and Foundation Equipment

SM-22 APPLICATIONS



Hoist & Feed system	Cylinder	Cylinder	Motoreducer	Motoreducer	Motoreducer	Motoreducer
Feed Stroke	4800 mm	188.98 in	7200 mm	283.46 in	10200 mm	401.57 in
Rope Length type (c/w one rotary head)	3 m	9.8 ft	6 m	19.7 ft	9 m	29.5 ft
Max. hoist pul / feed force (nom./feff.)	141 / 79 kN	31698 / 17760 lbf	110 / 88 kN	24729 / 19783 lbf	110 / 88 kN	24729 / 19783 lbf
Optional max. hoist pull / feed force (nom./eff.)	-	-	140 / 112 kN	31473 / 25178 lbf	140 / 112 kN	31473 / 25178 lbf
Rotary head	HR-17	HR-17	HR21	HR21		
Gear box type	2 Mech.Gearbox + var. displ. hydr. motors		2 Mech.Gearbox + var. displ. hydr. motors			
Maximum torque	1560 daNm	11506 lbf*ft	2000 daNm	14751 lbf*ft		
Maximum rotation	280 rpm	280 rpm	245 rpm	245 rpm		
Inner passage	100 mm	3.94 in	130 mm	5.12 in		
Rotary head	HT1400V	HT1400V	HT3700	HT3700	HT4500	HT4500
Gear box type	Variable displacement hydraulic motors		Variable displacement hydraulic motors		Variable displacement hydraulic motors	
Maximum torque	1390 daNm	10252 lbf*ft	3659 daNm	26987 lbf*ft	4500 daNm	33190 lbf*ft
Maximum rotation	330 rpm	330 rpm	124 rpm	124 rpm	94 rpm	94 rpm
Inner passage	124 mm	4.88 in	144 mm	5.67 in	130 mm	5.12 in

SM-22 TECHNICAL DATA SHEET

Operating weight (basic configuration)		22000 kg	48501 lb
Undercarriage			
- Track shoe width		500 mm	19.7 in
- Wheel base (centre idler to centre sprocket)		2900 mm	114.2 in
- Overall length		3630 mm	143.0 in
- Overall width (not extendable crawler)		2450 mm	1.18 in
- Travelling speed		1,9 km/h	0.93 mph
- Max climbing capacity (gradeability)		66 % (30°)	66 % (30°)
- Average ground pressure		0,075 ÷ 0,085 MPa	10.9 ÷ 12.3 psi
- Ground stabilizers	n° 2 pivoting on front + n° 2 fixed on rear		n° 2 pivoting on front + n° 2 fixed on rear
Diesel Engine			
- Make and model	CUMMINS QSB6.7 Tier 4f	CUMMINS QSB6.7 Tier 4f	
- Emission certification	CARB Tier 4f, EU Stage IV, US EPA Tier 4f	CARB Tier 4f, EU Stage IV, US EPA Tier 4f	
- Aspiration	turbocharged liquid cooled	turbocharged liquid cooled	
- Power rating	194 kW @ 2000 rpm	260 HP @ 2000 rpm	
- Fuel tank capacity	350 l	92 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: 2 variable axial piston pumps		214 + 214 l/min	57 + 57 US gal/min
- Set pressure main pumps		32 MPa	4641 psi
- Auxiliary pumps: gear pumps		40 + 22 l/min	11 + 5.8 US gal/min
- Hydraulic oil tank capacity		500 l	132 US gal
Clamp & breaker			
- Nominal size	50 - 315 mm (60-415 opz. / 60-515 opz.)	2 - 12.6 in (2.4-16.4 opz. / 2.4-20.3 opz.)	
- Maximum clamping force		266 kN	52280 lbf
- Maximum breaking torque		5060 daNm	57899 lbf*ft
Service winch			
- Type	controlled descent	controlled descent (opz.)	controlled descent controlled descent (opz.)
- 1st layer line pull	20 kN	36 kN	4496 lbf 8093 lbf
- 1st layer nominal rope speed	46 m/min	28 m/min	151 m/min 92 ft/min
- Rope diameter	10 mm	14 mm	0.39 in 0.55 in
Extractor Device			
- Type		2 Telescopic Cylinder	2 Telescopic Cylinder
- Stroke		1000 (1500 opt) mm	39 (59 opt) in
- Extraction Force		188 kN	42263 lbf
Rod loader			
- Type	Hydraulic arm	Hydraulic arm	Hydraulic arm Hydraulic arm Hydraulic carousel Hydraulic carousel Hydraulic carousel Hydraulic carousel
- Nr. of rods	2	2	3 3 10 10 5 5
- Max Rod diameter	180 mm	7.09 in	140 mm 5.51 in 114 mm 4.49 in 140 mm 5.51 in
- Max Rod length	9 m	29.5 ft	6 m 19.7 ft 4.5 m 14.8 ft 4.5 m 14.8 ft

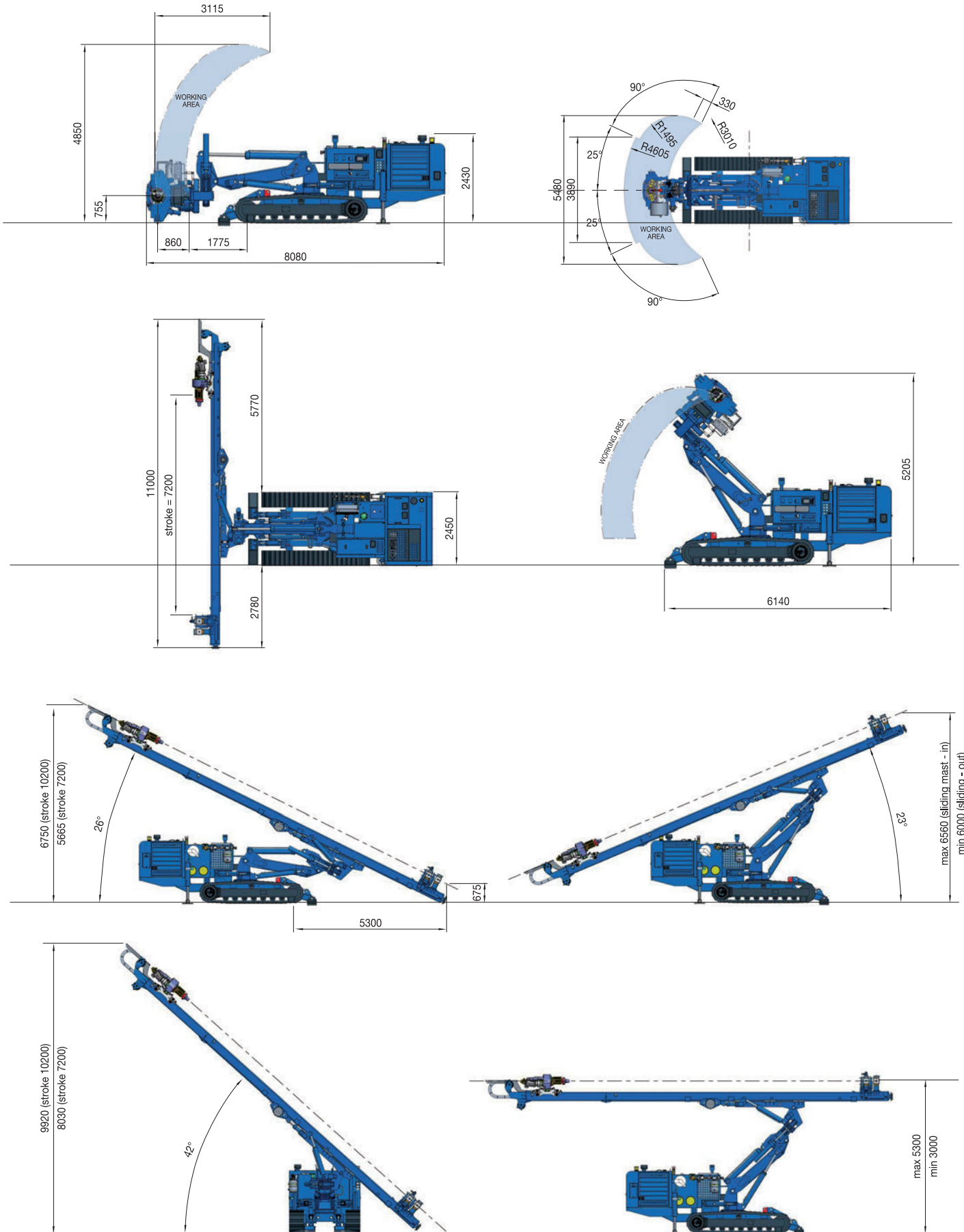
STANDARD EQUIPMENT

- Articulated boom for mast positioning
- Kinematic mechanism
 - Boom rotation on base machine +/- 25°
 - Articulated 90° join without jpin removing
 - Counter slide
- 1450 mm stroke cylinder for sliding mast
- Control board on pivoting arm for drilling
- Rotary cradle with side shifting
- Floating system
- Service winch with jib
- Guiding and lay-out device for hydr. hoses
- Load sensing hydraulic system
- Air/water system and line lubricator for DTH
- Control board on base frame for positioning
- Wired remote control for tramping

OPTIONAL EQUIPMENT

- Jet Grouting kit for mono, bi or three fluids treatment (max treatment depth 24 m in T1)
- Top hammer kit
- Full radio remote control
- Double rotary kit
- Service crane
- Flushing pumps and washing kit
- Mud pumps
- High pressure water pumps
- Coring heads

SM-22 MOVIMENTATIONS

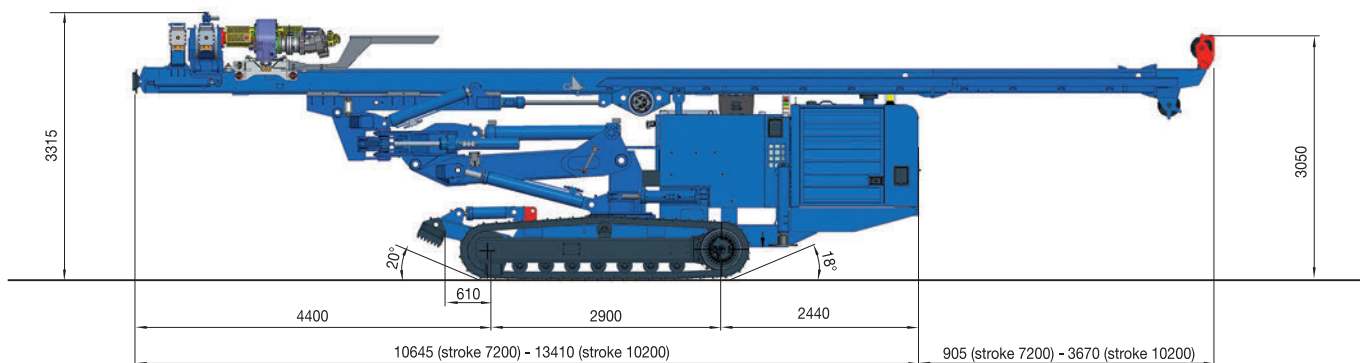
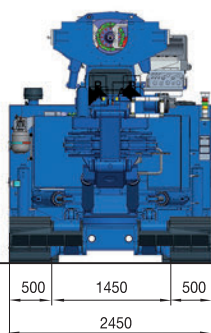


SM-22 JET GROUTING



JET GROUTING VERSION

Rod diameter	90 - 127 mm	3.54 - 5 in
Max treatment depth in a single passage (mast 7.2 m + flanged boom)	21 m	69 ft
Drillguide extensions	4 + 10 m	13 + 33 ft
Max treatment depth a single passage (mast 7.2 m + telescopic boom)	24 m	79 ft
Drillguide extensions	4 + 10 m	13 + 33 ft



Transport configuration		
Min height	3250 mm	128 in
Min width	2500 mm	984 in
Length	10650 mm	419.3 in
Basic weight	22000 kg	48501 lb

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