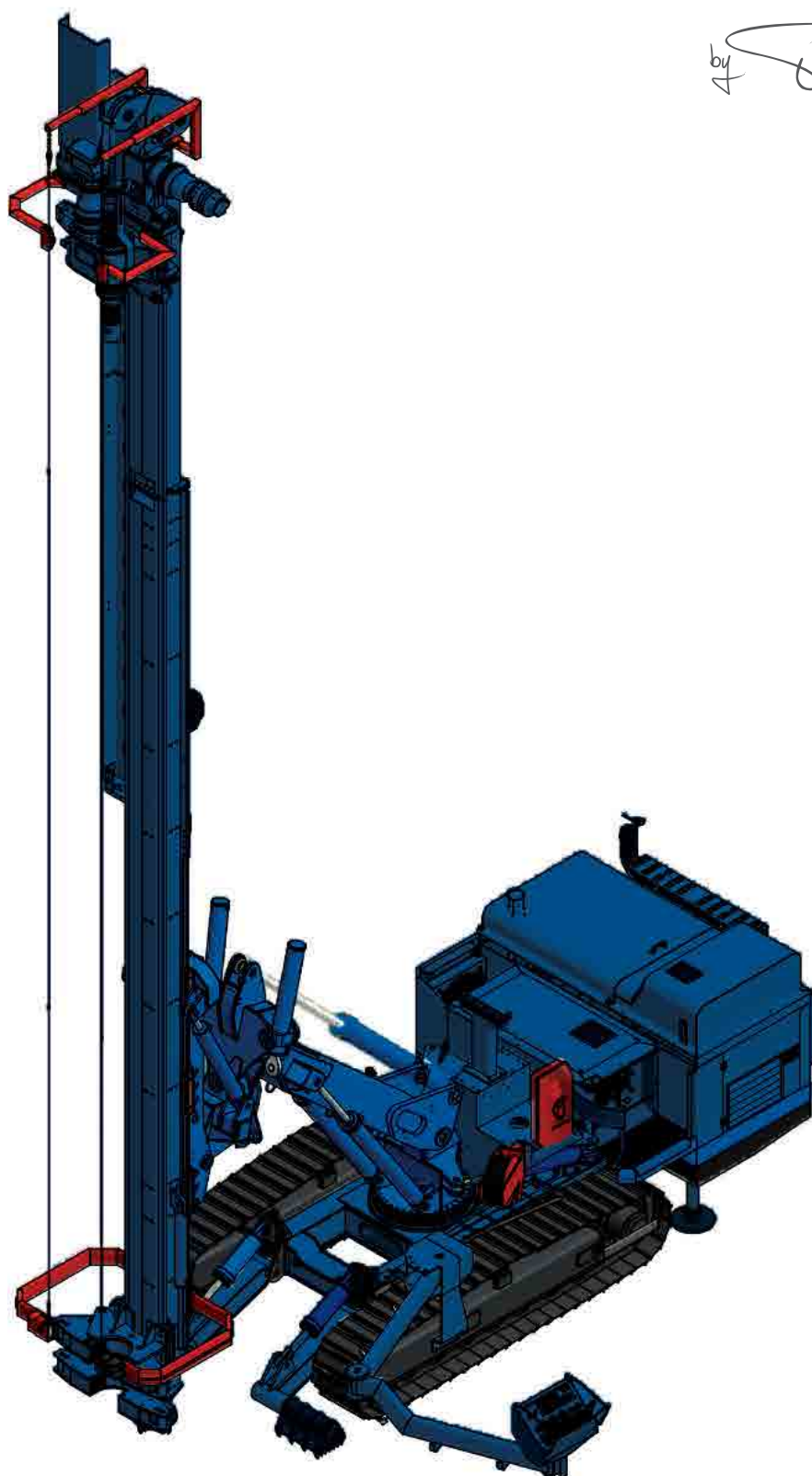


Hydraulic Microdrilling Rig

SM-20

by *S. Mitef*



Technical drawings of the CR 10000 crane showing side, front, and rear views with dimensions.

Side View Dimensions:

- STROKE = 7200
- 10580
- 8900
- 1000
- 1270
- 415

Front View Dimensions:

- 10580
- STROKE = 10200
- 0 / 1450
- +2000
- 3000
- 605
- 2900
- 800
- 2220
- 2210
- +340
- 260
- max 2810 / min 1880
- max 7930 / min 7000

Rear View Dimensions:

- 13580
- 9310
- 3000
- 1270
- 1000
- TILTING $\pm 25^\circ$
- 500
- 1500
- 500
- 2500

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	179894.7 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

SM-20 TECHNICAL DATA SHEET

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 lbf*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

STANDARD EQUIPMENT

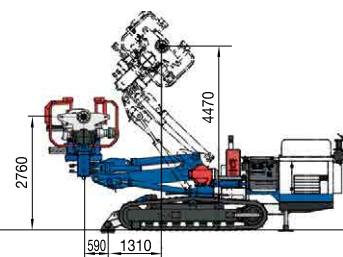
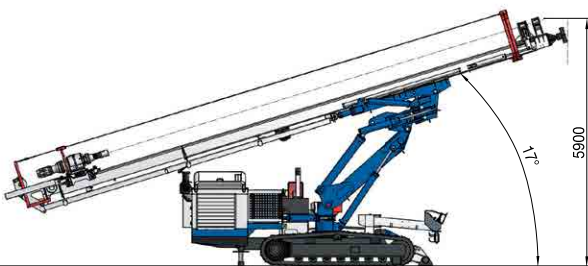
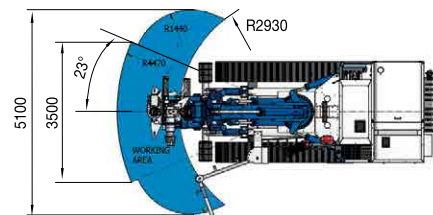
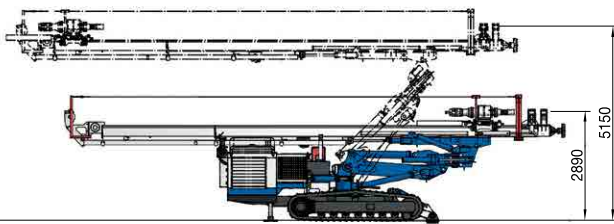
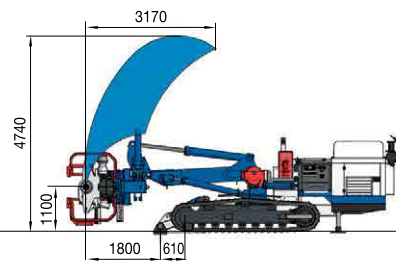
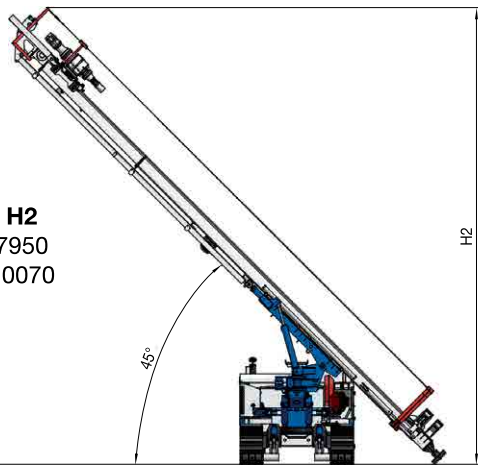
- | | | |
|--|--|---|
| <ul style="list-style-type: none"> • N° 2 hydraulic outriggers • 0-90° mast articulation • Swivelling +/-23° • Kinematic mechanism <ul style="list-style-type: none"> - Side movements +/- 23° - Articulated 90° join on mast | <ul style="list-style-type: none"> - Telescopic zoom 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

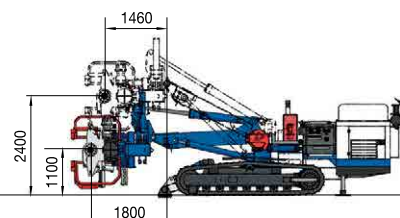
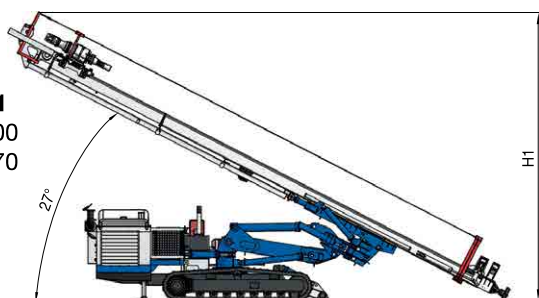
- | | | |
|---|---|--|
| <ul style="list-style-type: none"> • Mast kit for 7000 mm stroke • Jet Grouting kit for mono, bi or three fluids treatment and steeples lifting speed (max treatment depth 21 m in T1) • Top hammer configuration: HB-50, hammer | <ul style="list-style-type: none"> feeding 90 l/min @ 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 MOVIMENTATIONS

Stroke H2
7200 7950
10200 10070



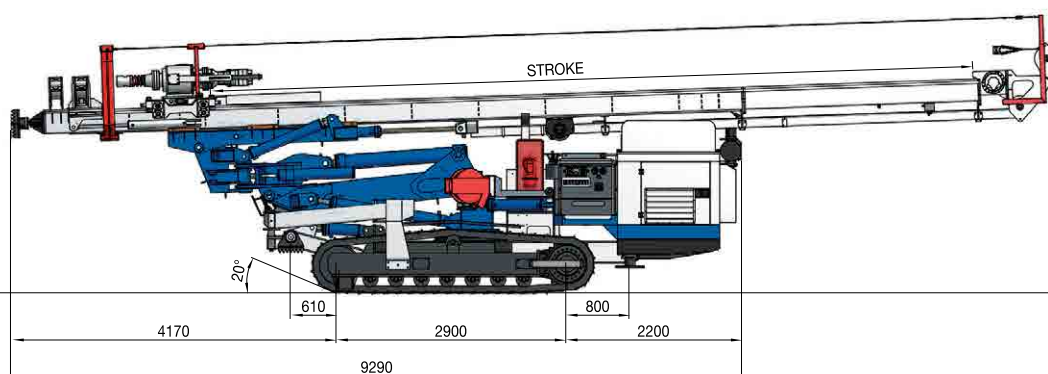
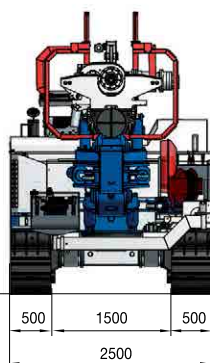
Stroke H1
7200 5600
10200 6970



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



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

This brochure has been edited and distributed by SOILMEC Spa. The present document cancels and override any previous ones. This brochure shall not be distributed, reproduced or exhibited without SOILMEC Spa. authorization in accordance with to SOILMEC web site disclaimer condition.

SOILMEC Spa distributes machinery and structures all over the world, supported by SOILMEC Spa subsidiary companies and dealers. The complete Soilmec network list is available on the web site www.soilmec.it