

STM-20
STM-30

LDP

Hydraulic
Rotary Rig



Truck Mounted
Hydraulic Rotary Rig

STM
series

soilmeco
Drilling and Foundation Equipment



Rotary

Soilmec rotaries are designed and manufactured to meet the need for increase production and performance on various applications, with the added benefit of increased component life and reliability.

Ease of transport and quick assembly

- STM-20/STM-30 is a fully hydraulic drilling rig mounted on standard, heavy duty truck.
- Four hydraulic stabilizers mounted on sub frame.

Compact powerful engine

Soilmec installs large displacement engines, providing exceptional performance and reliability.

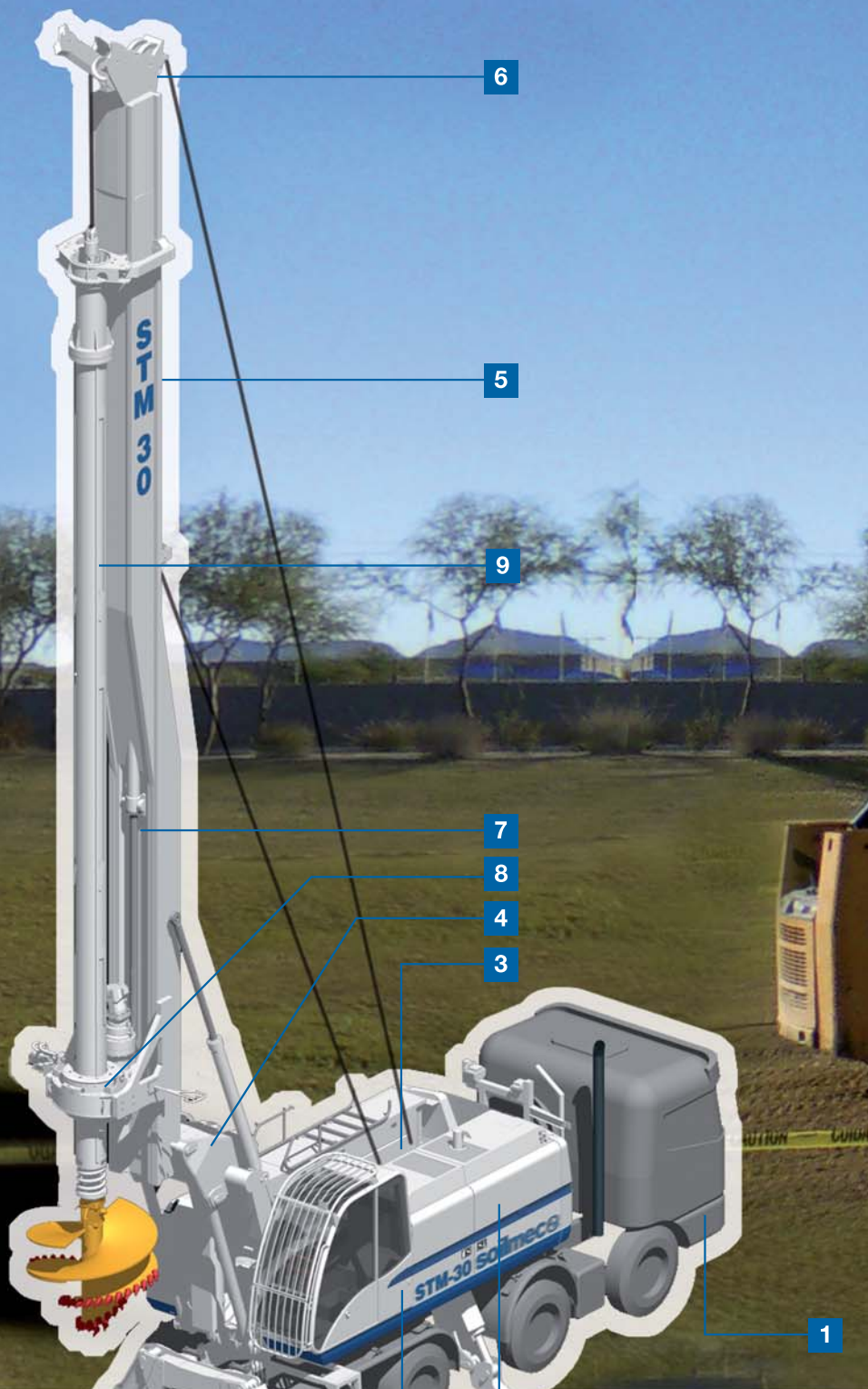
- High performance, availability and reliability by using tried-and-tested technology with high power-to volume-ratio.
- The modern electronic injection system ensures low fuel consumption and therefore low operating costs.
- Low noise emissions, smooth running characteristics and durability.
- Meets exhaust emission regulations 2004/26/EU, Step III A and US-EPA Tier 3

Ergonomic design

The cab is designed to be spacious, quiet and comfortable for the operator, assuring high productivity throughout the working day. Controls are conveniently located for easy operation.

The Soilmec advantage

- A real multifunctional machine, designed from scratch to give you the best drilling solution.
- Long life expectancy with a high residual value.
- Best price/performance ratio.
- Built with the customer in mind.



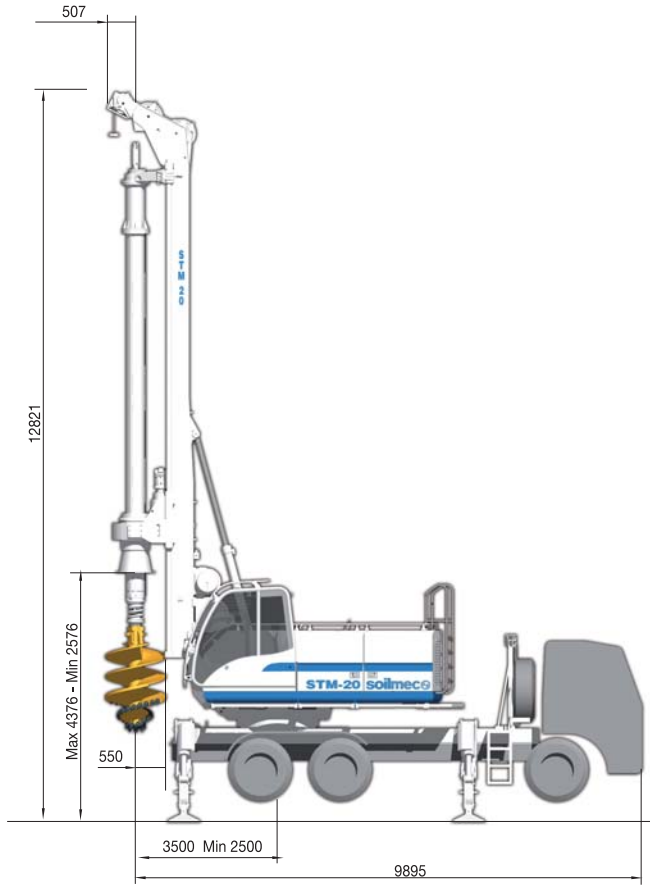
- 1** Base truck
- 2** Turret
- 3** Winches
- 4** Parallelogram system
- 5** Self-erecting mast
- 6** Cathead
- 7** Crowd system
- 8** Rotary head
- 9** Telescopic kelly bar
- 10** Cab

STM-20			
Cummins QSB4.5	Power @ 2200 rpm	119 kW	159 HP
Rig weight (approx) with 3 parts kelly		19300 kg	42549 lb
Torque		100 kNm	73755 lbfft
Max diameter		1800 mm*	71 in*
Max depth		30 m	98.4 ft
STM-30			
Cummins QSB6.7	Power @ 2200 rpm	164 kW	220 HP
Rig weight (approx) with 3 parts kelly bar		29200 kg	64374 lb
Torque		130 kNm	95881 lbfft
Max diameter		2200 mm*	87 in*
Max depth		50 m	164 ft

* Max tool diameter below the mast

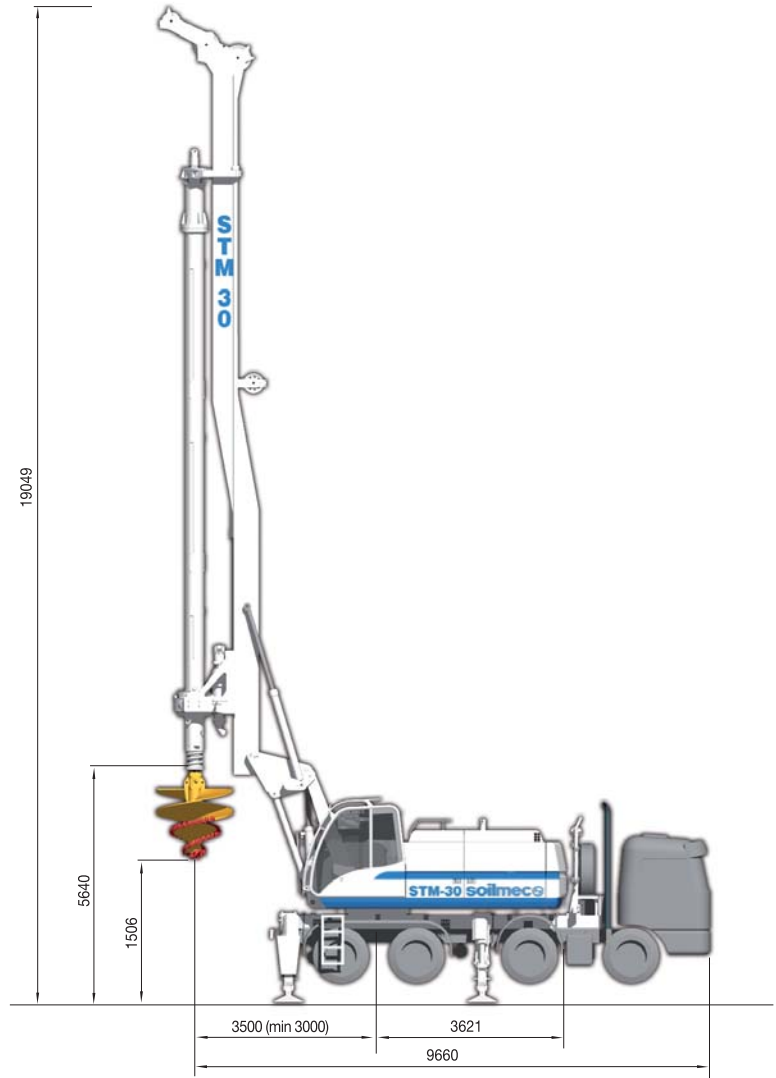
STM-20

Crowd Cylinder Version



STM-30

Crowd Cylinder Version



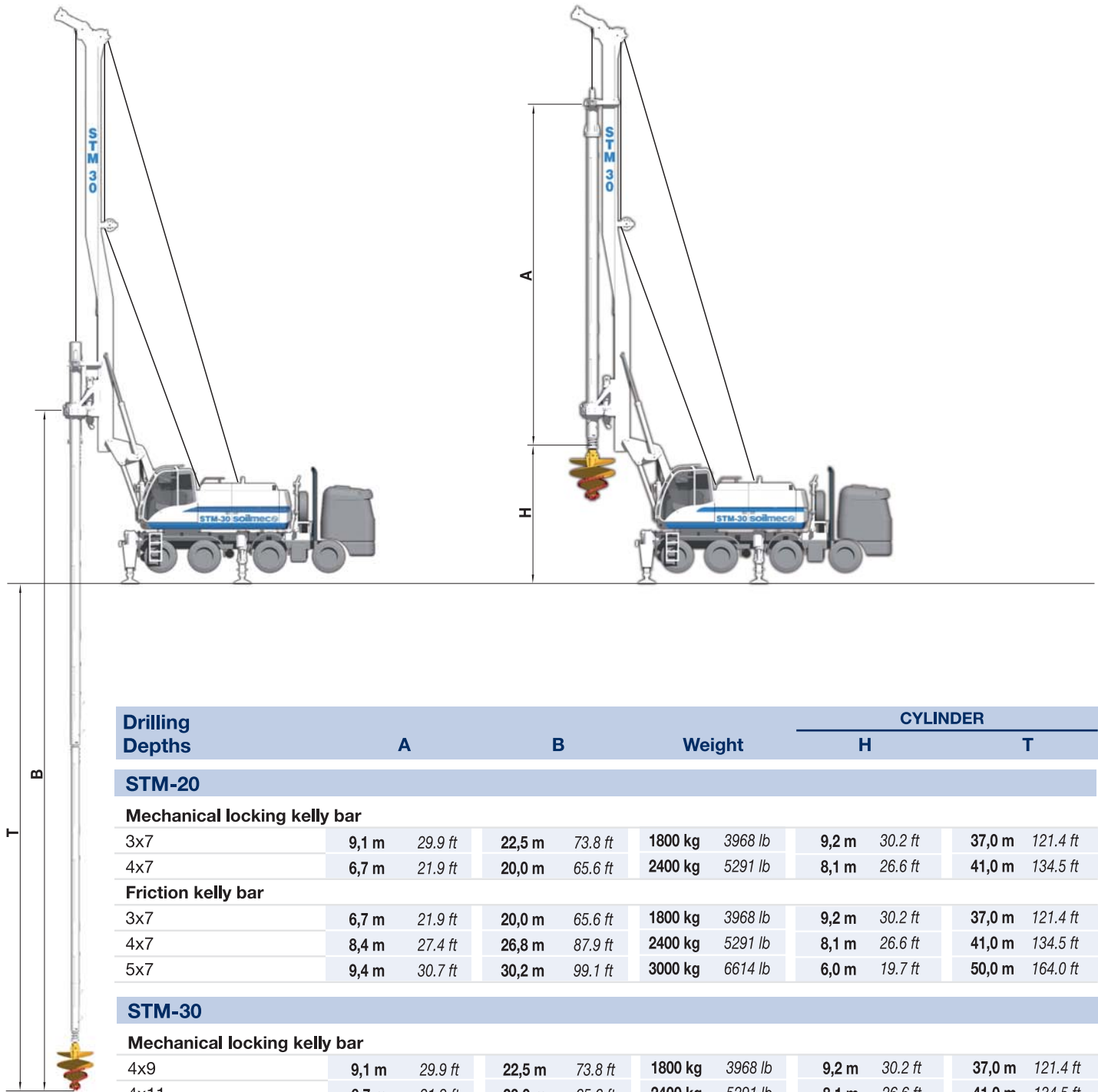
TECHNICAL DATA

STM-20		
Overall height (approx.)	12821 mm	505 in
Rig weight (approx) with 3 parts kelly	19300 kg	42549 lb
Engine	Cummins QSB4.5	Cummins QSB4.5
- Rated output SAE J1995	119 kW @ 2200 rpm	159 HP @ 2200 rpm
- Engine conforms to Exhaust emission Standard	EU stage III A, US EPA Tier 3	EU stage III A, US EPA Tier 3
- Type	Turbocharged and charge air cooled	Turbocharged and charge air cooled
- Sound pressure level in cabin (EN791 Annex A)	74 dB (A)	74 dB (A)
- Sound power level (2000/14EG u. EN791, Annex A)	106 dB (A)	106 dB (A)
Rotary Drive - Spinoff type		
- Torque (nominal)	100 kNm	73755 lbf*ft
- Speed of rotation (max)	43 rpm	43 rpm
- Spinoff speed	178 rpm	178 rpm
Crowd Cylinder system		
- Crowd force pull down / pull up	74 kN / 124 kN	16523 lbf / 27876 lbf
- Stroke	1800 mm	71 in
Main winch	controlled descent	controlled descent
- Line pull (1st layer) nom.	102 kN	22930 lbf
- Rope diameter / Rope length	20 m / 24 m - 54 m	0,79 in / 79 ft - 177 ft
- Line speed (max.)	68 m/min	223 ft/min
Auxiliary winch	controlled descent	controlled descent
- Line pull (1st layer)	48 kN	10701 lbf
- Rope diameter	15 mm	0.59 in
- Line speed (max.)	60 m/min	197 ft/min
Hydraulic system		
- Hydraulic power output	67 kW	90 HP
- Hydraulic pressure	30 MPa	4351 psi
- Flow rates (main circuits)	2 x 115 l/min	2 x 30.4 US gal/min
Truck chassis type	three axles	three axles
Mast inclination		
- Max drilling rake - front / rear / side	10 ° / 10 ° / ± 5 °	10 ° / 10 ° / ± 5 °
- Levelling capability with outrigger	± 3 °	± 3 °
STM-30		
Overall height (approx.)	19049 mm	750 in
Rig weight (approx) with 4x11 kelly	29200 kg	64374 lb
Engine	Cummins QSB6.7	Cummins QSB6.7
- Rated output SAE J1995	164 kW @ 2200 rpm	220 HP @ 2200 rpm
- Engine conforms to Exhaust emission Standard	EU stage III A, US EPA Tier 3	EU stage III A, US EPA Tier 3
- Type	Turbocharged and charge air cooled	Turbocharged and charge air cooled
- Sound pressure level in cabin (EN791 Annex A)	74 dB (A)	74 dB (A)
- Sound power level (2000/14EG u. EN791, Annex A)	106 dB (A)	106 dB (A)
Rotary Drive - Spinoff type		
- Torque (nominal)	130 kNm	95881 lbf*ft
- Speed of rotation (max)	42 rpm	42 rpm
- Spinoff speed	153 rpm	153 rpm
Crowd Cylinder system	102 kN / 124 kN	22930 lbf / 27876 lbf
- Crowd force pull down / pull up	3500 mm	138 in
- Stroke	7 / 5,7 m/min	24 / 18.7 ft/min
Main winch	controlled descent	controlled descent
- Line pull (1st layer) nom.	133 kN	29899 lbf
- Rope diameter / Rope length	23 m / 53 m	75 ft / 174 ft
- Line speed (max.)	79 m/min	259 ft/min
Auxiliary winch	controlled descent	controlled descent
- Line pull (1st layer)	56 kN	12589 lbf
- Rope diameter	16 mm	0.63 in
- Line speed (max.)	83 m/min	272 ft/min
Hydraulic system		
- Hydraulic power output	100 kW	134 HP
- Hydraulic pressure	31 MPa	4496 psi
- Flow rates (main circuits)	2 x 176 l/min	2 x 46 US gal/min
Truck chassis type	three axles 6x6	three axles 6x6
Mast inclination		
- Max drilling rake - front / rear / side	4 ° / 10 ° / ± 3 °	4 ° / 10 ° / ± 3 °
- Levelling capability with outrigger	± 3 °	± 3 °

Soilmec integrates high quality level components: Gearmatic, Hydromatic, Lohmann, Rothe erde, Trasmital, Zollern.

APPLICATIONS

LDP - Kelly Drilling System

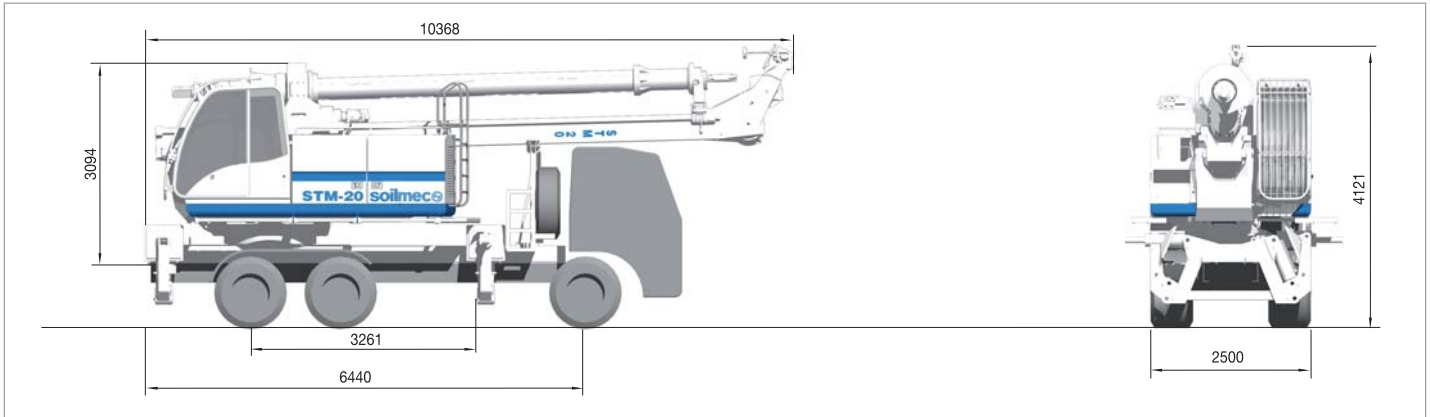


Drilling Depths	A		B		Weight		CYLINDER			
							H		T	
STM-20										
Mechanical locking kelly bar										
3x7	9,1 m	29.9 ft	22,5 m	73.8 ft	1800 kg	3968 lb	9,2 m	30.2 ft	37,0 m	121.4 ft
4x7	6,7 m	21.9 ft	20,0 m	65.6 ft	2400 kg	5291 lb	8,1 m	26.6 ft	41,0 m	134.5 ft
Friction kelly bar										
3x7	6,7 m	21.9 ft	20,0 m	65.6 ft	1800 kg	3968 lb	9,2 m	30.2 ft	37,0 m	121.4 ft
4x7	8,4 m	27.4 ft	26,8 m	87.9 ft	2400 kg	5291 lb	8,1 m	26.6 ft	41,0 m	134.5 ft
5x7	9,4 m	30.7 ft	30,2 m	99.1 ft	3000 kg	6614 lb	6,0 m	19.7 ft	50,0 m	164.0 ft
STM-30										
Mechanical locking kelly bar										
4x9	9,1 m	29.9 ft	22,5 m	73.8 ft	1800 kg	3968 lb	9,2 m	30.2 ft	37,0 m	121.4 ft
4x11	6,7 m	21.9 ft	20,0 m	65.6 ft	2400 kg	5291 lb	8,1 m	26.6 ft	41,0 m	134.5 ft
5x11	6,7 m	21.9 ft	20,0 m	65.6 ft	2400 kg	5291 lb	8,1 m	26.6 ft	41,0 m	134.5 ft
Friction kelly bar										
4x9	6,7 m	21.9 ft	20,0 m	65.6 ft	1800 kg	3968 lb	9,2 m	30.2 ft	37,0 m	121.4 ft
4x11	8,4 m	27.4 ft	26,8 m	87.9 ft	2400 kg	5291 lb	8,1 m	26.6 ft	41,0 m	134.5 ft
5x11	9,4 m	30.7 ft	30,2 m	99.1 ft	3000 kg	6614 lb	6,0 m	19.7 ft	50,0 m	164.0 ft

Drilling Diameters	STM-20		STM-30	
In front of the mast	1100 mm	43 in	1500 mm	59 in
Below the mast	1800 mm	71 in	2200 mm	87 in

() removing the mast bottom section

TRANSPORT DATA

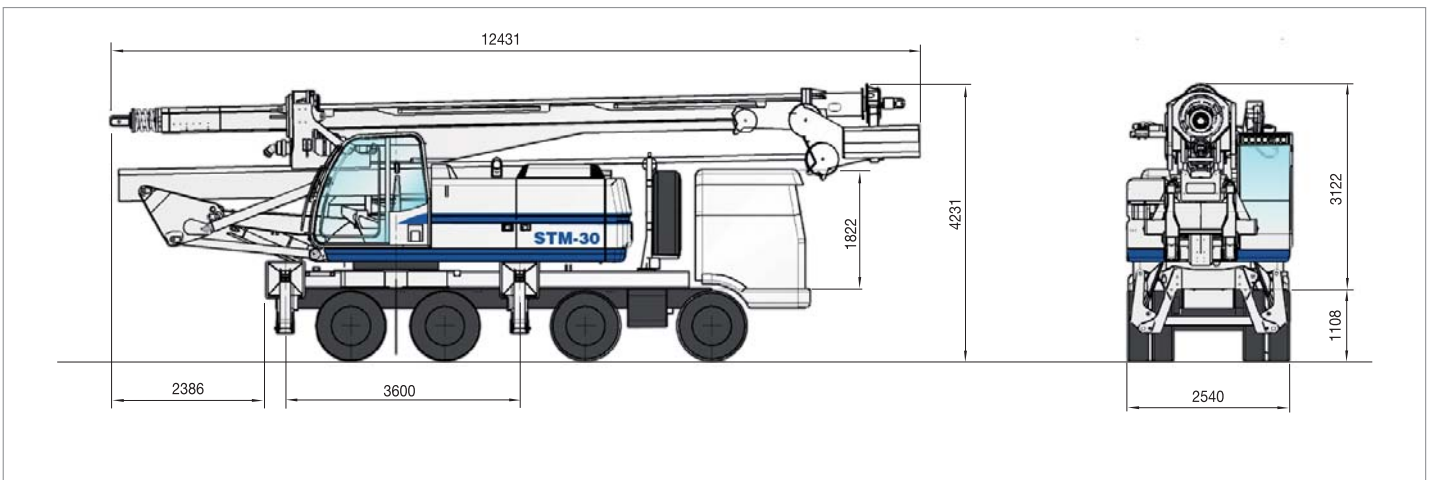


STM-20 - Transport with kelly

Weight

19300 kg

42549 lb



STM-30 - Transport with kelly

Weight

29000 kg

63934 lb





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