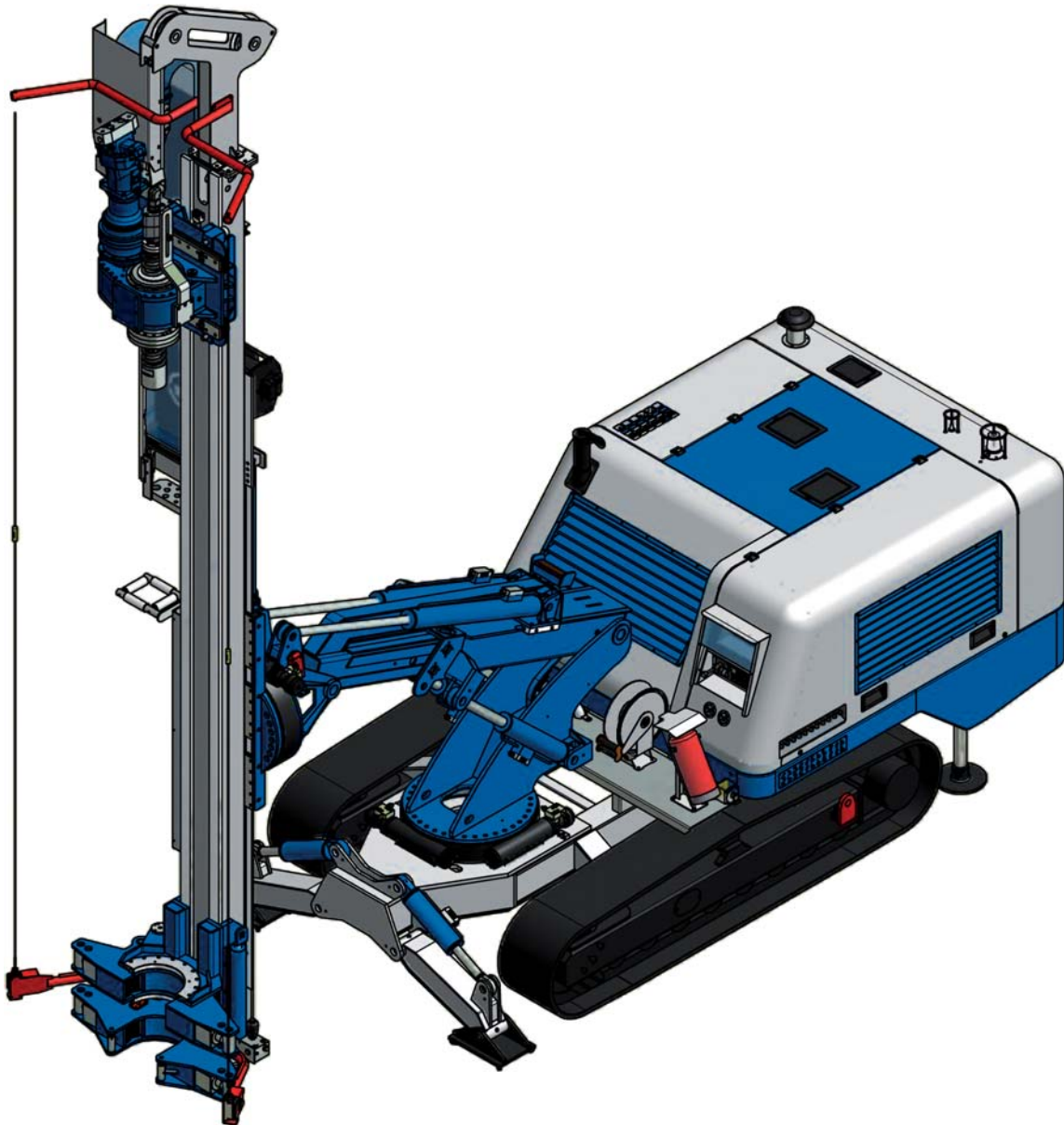
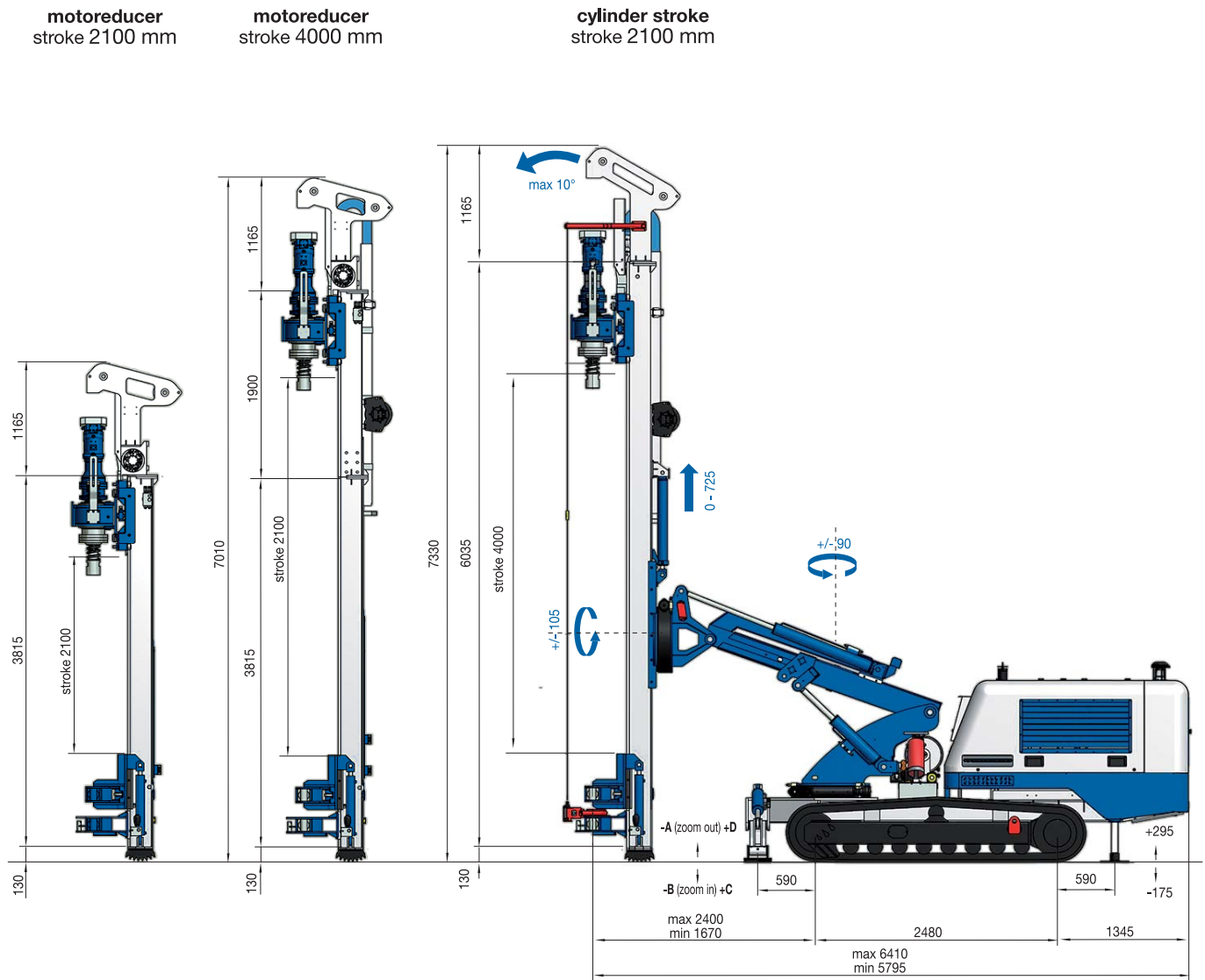


Hydraulic Microdrilling Rig
SM-10

by *S. Suter*



SM-10 APPLICATIONS



Hoist & Feed system	Motoreducer		Motoreducer		Cylinder	
- Feed stroke	2100 mm	82.7 in	4000 mm	157.5 in	4000 mm	157.5 in
- Rod length type (c/w one rotary head)	1,5 m	4.9 ft	3 m	9.8 ft	3 m	9.8 ft
- Max hoist pull/feed force	70 / 70 kN	15736 / 15736 lbf	70 / 70 kN	15736 / 15736 lbf	80 / 52 kN	17984 / 11690 lbf
- A (Zoom Out) +D	-1910 / +630 mm	-75 / +25 in	-1910 / +630 mm	-75 / +25 in	-1370 / +725 mm	-54 / +29 in
- B (Zoom In) +C	-1750 / +415 mm	-69 / +16 in	-1750 / +415 mm	-69 / +16 in	-1215 / +510 mm	-48 / +20 in

Rotary head range	HR13	HR13
- Gear box type	Variable	Variable
- Max torque	1300 daNm	9588 lbf*ft
- Max drilling speed	130 rpm	130 rpm
- Inner passage	114 mm	4.5 in

SM-10 TECHNICAL DATA SHEET

Operating weight (approx.)	10500 / 12500 kg	23148 / 27558 lb
Undercarriage		
- Track shoe width	400 mm	15.7 in
- Wheel base (centre idler to centre sprocket)	2480 mm	97.6 in
- Overall length	3062 mm	120.6 in
- Overall width (not extendable crawler)	2200 mm	87 in
- Travelling speed	1,50 km/h	0.93 mph
- Max climbing capacity (gradeability)	66% (30°)	66% (30°)
- Average ground pressure	0,058 MPa	8.4 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
Power pack		
- Diesel Engine make and model	DEUTZ TCD 2013 L04W	DEUTZ TCD 2013 L04W
- Emission certification	UE 2004/26ce Stage III - EPA nonroad Tier 3	UE 2004/26ce Stage III - EPA nonroad Tier 3
- Diesel Engine power rating	116 kW @ 2300 rpm	155 HP @ 2300 rpm
- Fuel tank capacity	180 l	48 US gal
- Sound power level and sound pressure level	LwA 110 - LpA 78 dB(A)	LwA 110 - LpA 78 dB(A)
Hydraulic system		
- Main pumps: variable axial pumps	170 + 170 l/min	45 + 45 US gal/min
- Set pressure main pumps	28 MPa	4061 psi
- Auxiliary pumps: gear pumps	80 + 103 + 48 + 48 l/min	21 + 27 + 13 + 13 US gal/min
- Hydraulic oil tank capacity	600 l	159 US gal
Clamp & hydraulic joint breaker		
- Nominal size	60 - 320 mm	2 - 13 in
- Maximum clamping force	200 kN	44961 lbf
- Maximum breaking torque	5000 daNm	36878 lbf*ft
Extractor device		
- Pull up extractor clamp force	150 kN	33721 lbf
- Pull up extractor clamp stroke	400 mm	15.7 in
Service winch		
- Type	controlled descent	controlled descent
- 1st layer line pull	20 kN	4496 lbf
- 1st layer nominal rope speed	60 m/min	197 ft/min
- Rope diameter	6 mm	0.24 in
Rod carousel		
- N. of rods	3	3
- Rod diameter	114 mm	4.5 in
- Rod length	3000 mm	118.1 in

STANDARD EQUIPMENT

- Steel undercarriage: width 2200 mm and shoes 400 mm
- Diesel engine Deutz TCD 2013 L04 2V. Rated output: 116 kW
- Load Sensing Rexroth hydraulic system. Twin main pumps: variable axial pumps LS: 171 lt/min
- Kinematic mechanism:
 - Swiveling boom articulation by slew ring on the base machine enables parallel drilling to the tracks up to +/- 90°;
 - Counter slide: slew ring on mast for +/- 180° rotation
 - Sliding mast by cylinder 900 mm stroke
 - Telescopic boom of 650mm on base carrier;
- Heavy duty No modular mast with 4000 mm e crowd system by cylinder. Hoist force: 80 kN
- Rotary cradle with side shifting
- Single rotary head: max torque: 1300 daNm; max rpm: 130 rpm
- Clamp and breaker assembly with range 60-310 mm
- Aux winch: hoist pull in first layer: 20 kN. Complete with jib for 6m rod lifting
- Full radio remote control for all operations
- Integrated foam pump

OPTIONAL EQUIPMENT

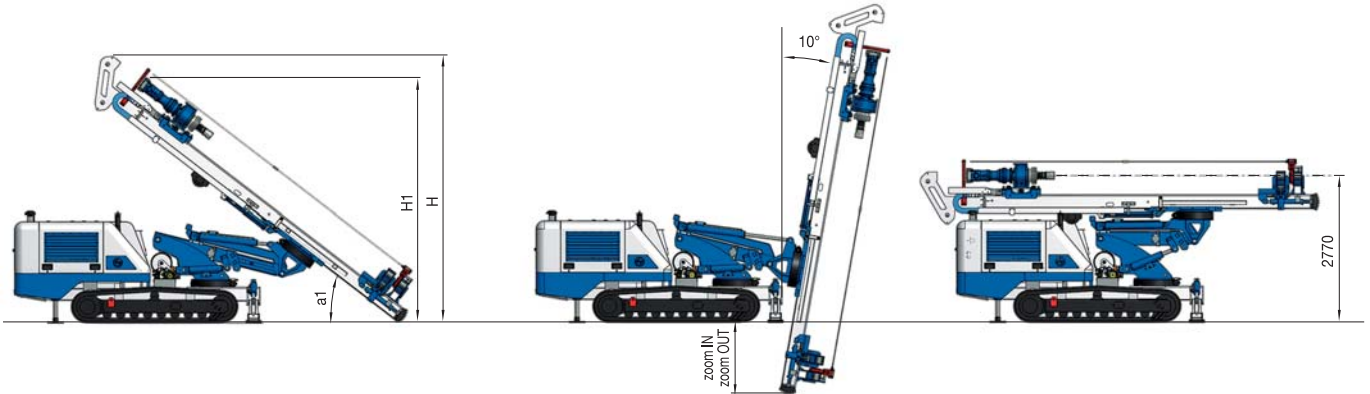
- Modular mast
- Counter slide c/w articulation 90° joint
- Wide range of rotary heads
- Jet grouting kit
- Top hammer kit
- Rod loader

SM-10 JET GROUTING

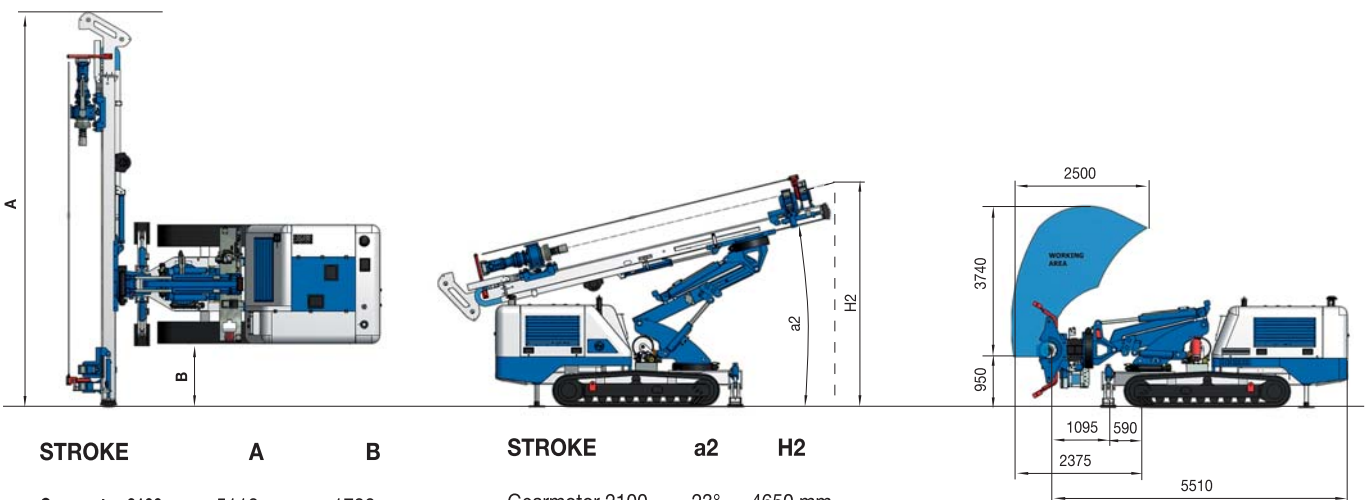
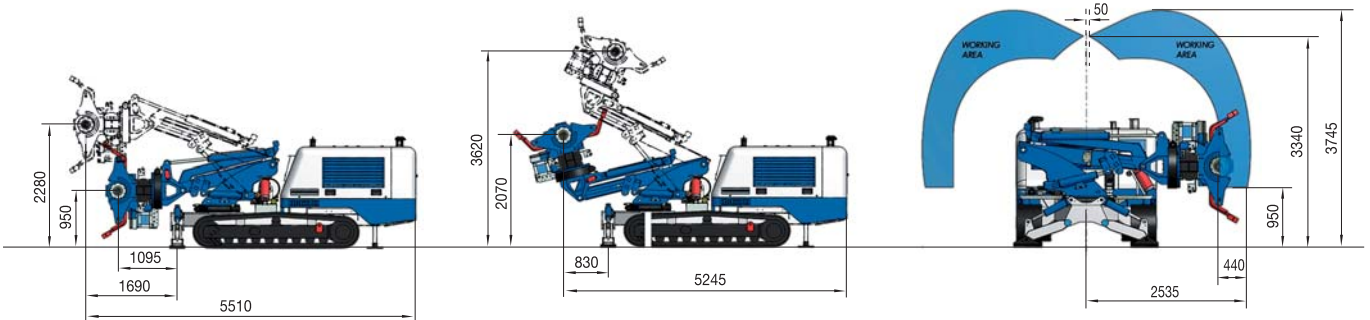


JET GROUTING VERSION		
Rod diameter	90 mm	3.54 in
Max treatment depth in a single passage	12 m	39 ft

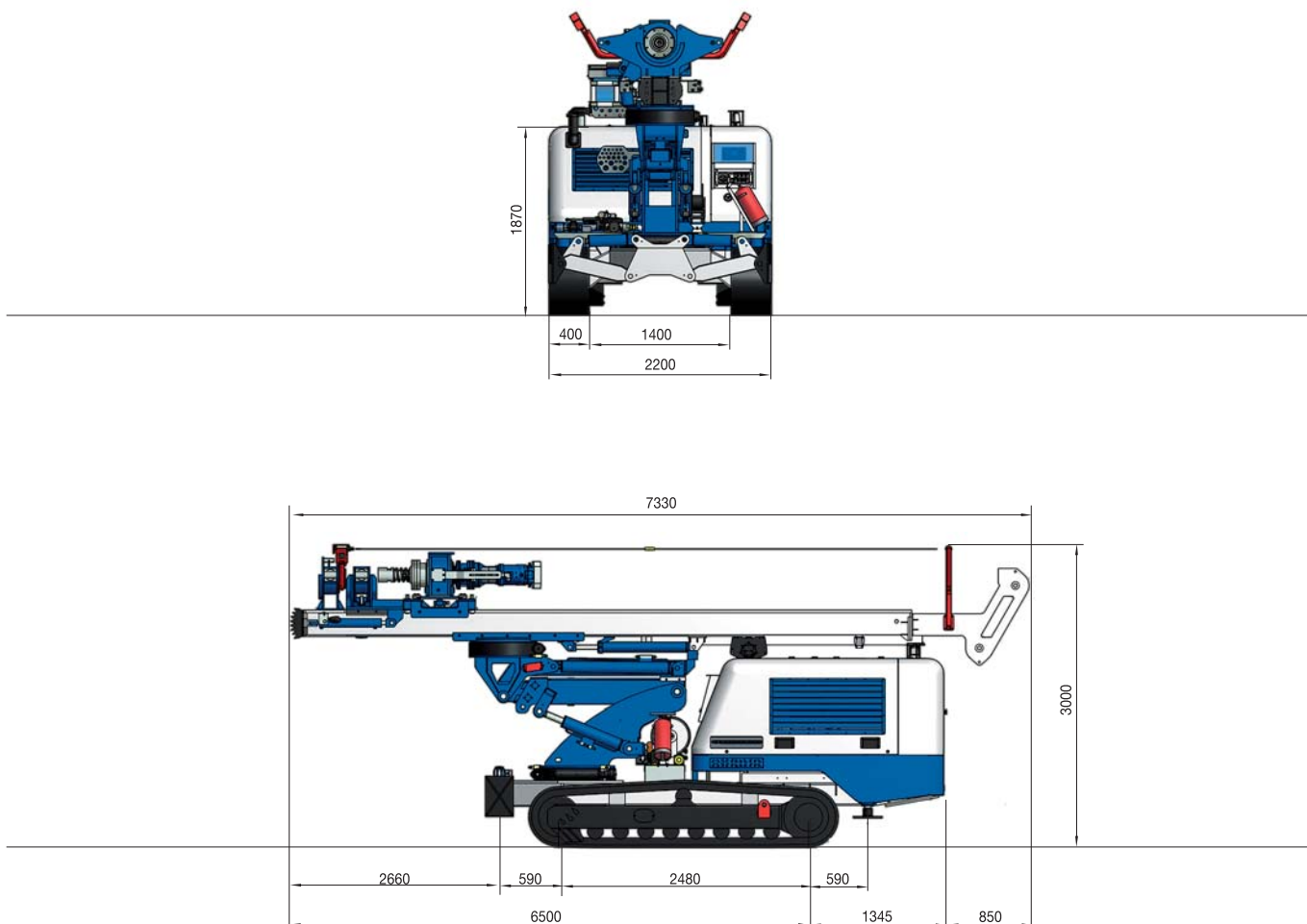
SM-10 MOVIMENTATIONS



ZOOM	a1	H1	H2	STROKE	Zoom IN	Zoom OUT
Gearmotor 2100 - ZOOM IN	35°	3160 mm	3350 mm	Gearmotor 2100/4000 Cylinder 4000	1845 mm 1310 mm	2005 mm 1470 mm
Gearmotor 2100 - ZOOM OUT	30°	2950 mm	3120 mm			
Gearmotor 4000 - ZOOM IN	35°	4195 mm	4385 mm			
Gearmotor 4000 - ZOOM OUT	30°	3890 mm	4060 mm			
Cylinder 4000 - ZOOM IN	40°	4870 mm	5300 mm			
Cylinder 4000 - ZOOM OUT	37°	4530 mm	4910 mm			



STROKE	A	B	STROKE	a2	H2
Gearmotor 2100	5110 mm	1730 mm	Gearmotor 2100	23°	4650 mm
Gearmotor 4000	7330 mm	1730 mm	Gearmotor 4000	14°	4400 mm
Cylinder 4000	7330 mm	1190 mm	Cylinder 4000	12°	4200 mm



Transport configuration	Length		Weight	
Stroke version 2100 mm	5110 mm	201.2 in	12400 kg	27337 lb
Stroke version 4000 mm	7330 mm	288.6 in	12600 kg	27778 lb

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