

Hydraulic Microdrilling Rig

SM-5

by *Soilmec*



soilmec®
Drilling and Foundation Equipment

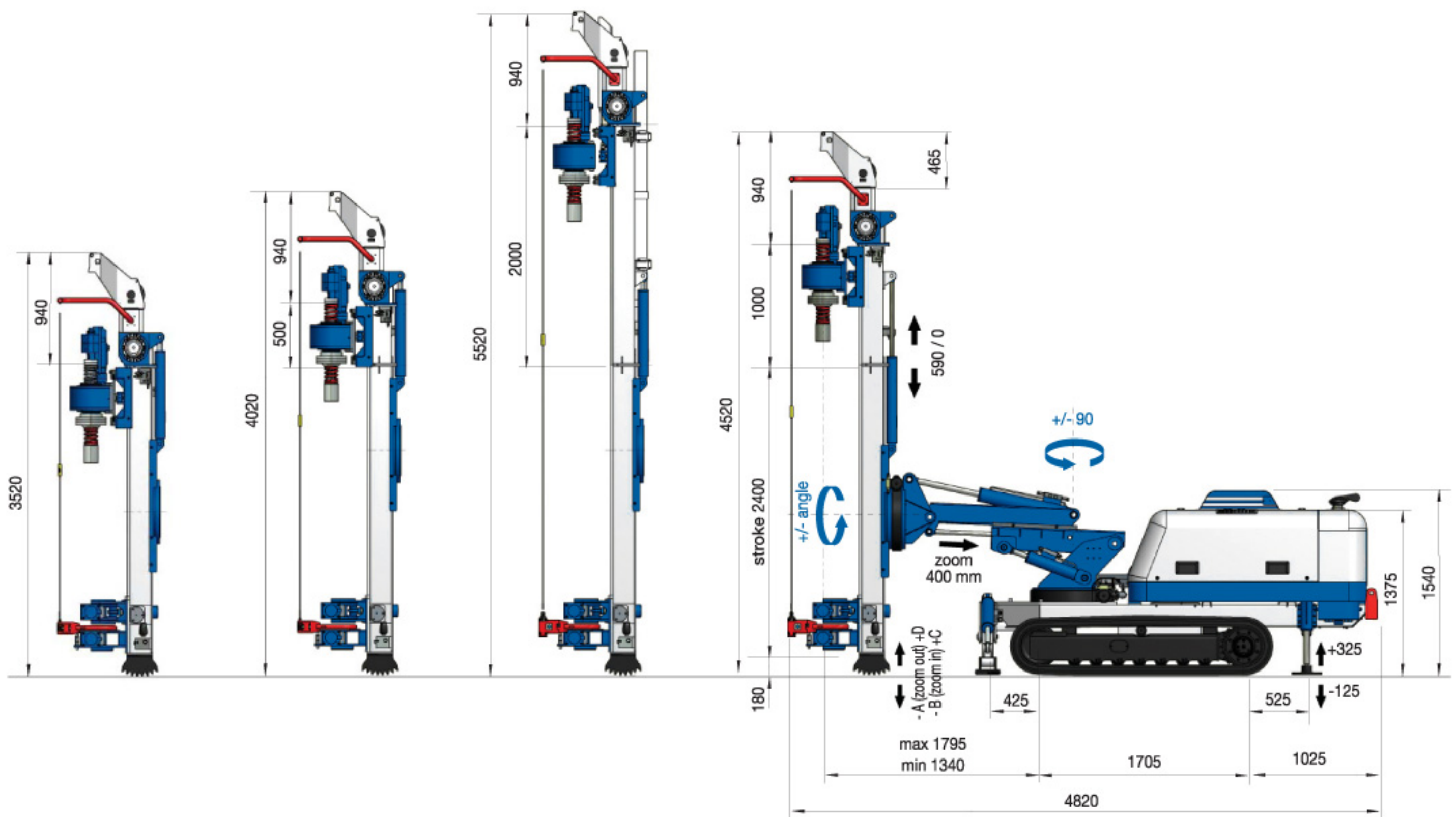
SM-5 APPLICATIONS

stroke 1400 mm

stroke 1900 mm

stroke 3400 mm

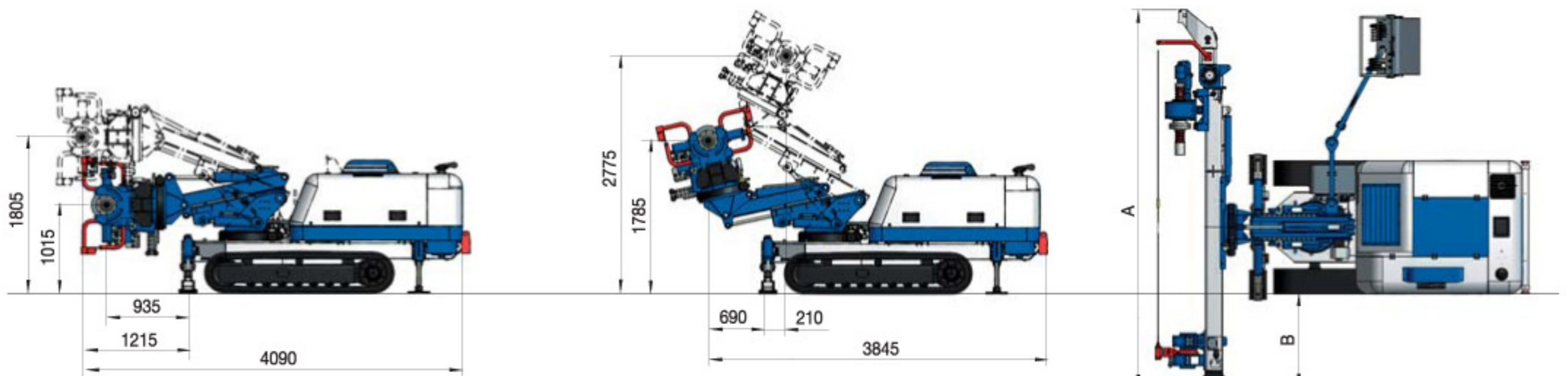
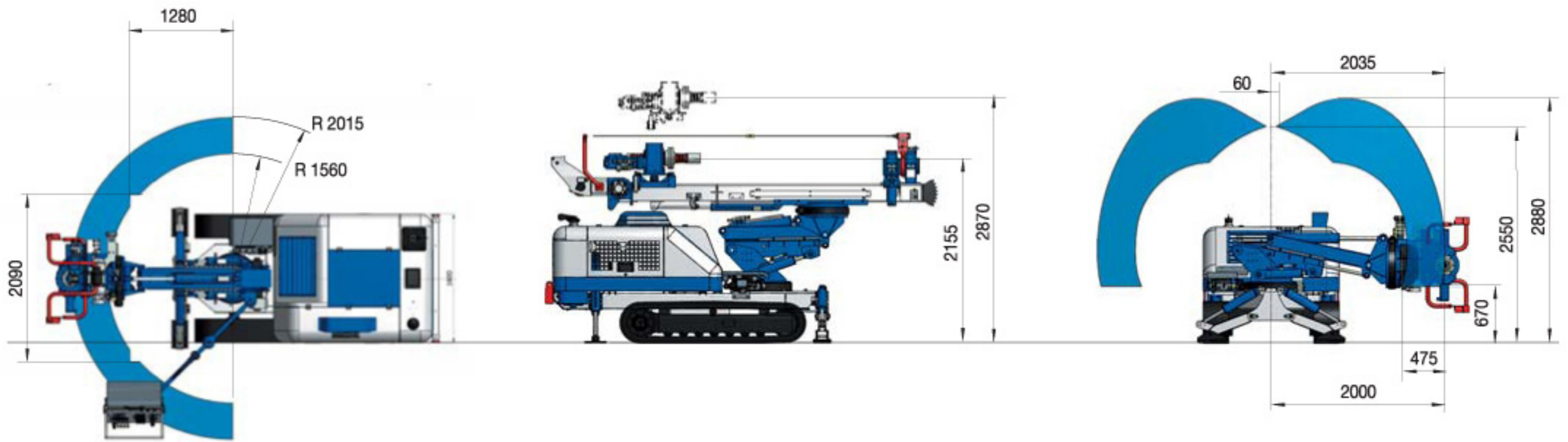
stroke 2400 mm



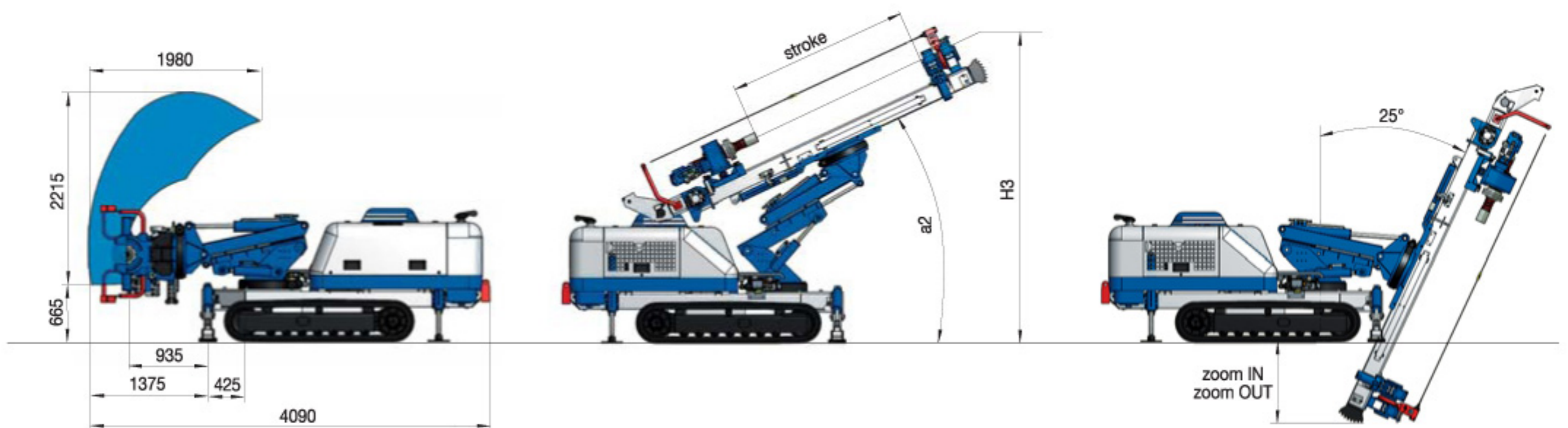
Hoist & Feed system		Type two gear motors							
- Feed stroke	1400 mm	55.1 in	1900 mm	74.8 in	2400 mm	94.5 in	3400 mm	133.9 in	
- Rod length type (c/w one rotary head)	1 m	3.3 ft	1,5 m	4.9 ft	2 m	6.6 ft	3 m	9.8 ft	
- Max hoist pull/feed force	40 / 40 kN	8992 / 8992 lbf	40 / 40 kN	8992 / 8992 lbf	40 / 40 kN	8992 / 8992 lbf	40 / 40 kN	8992 / 8992 lbf	
- Tilting Angle from verticality	+/-180°	+/-180°	+/-180°	+/-180°	+/-145°	+/-145°	+/-20°	+/-20°	
- A (Zoom Out) +D	-485 / +990 mm	-19 / +39 in	-985 / +490 mm	-39 / +19 in	-985 / +490 mm	-39 / +19 in	-985 / +490 mm	-39 / +19 in	
- B (Zoom In) +C	-390 / +825 mm	-15 / +32 in	-890 / +325 mm	-35 / +13 in	-890 / +325 mm	-35 / +13 in	-890 / +325 mm	-35 / +13 in	

Rotary head range	HR6G		HR6F		HR7G		HR8G		HR9F	
- Gear box type	4 Gear box	4 Gear box	2 Gear box	2 Gear box	6 Gear box	6 Gear box	4 Gear box	4 Gear box	2 Gear box	2 Gear box
- Max torque	600 daNm	4425 lbf*ft	690 daNm	5089 lbf*ft	700 daNm	5163 lbf*ft	820 daNm	6048 lbf*ft	970 daNm	7154 lbf*ft
- Max drilling speed	311 rpm	311 rpm	138 rpm	138 rpm	860 rpm	860 rpm	220 rpm	220 rpm	98 rpm	98 rpm
- Inner passage	66 mm	2.6 in	114 mm	4.5 in	66 mm	2.6 in	66 mm	2.6 in	114 mm	4.5 in

SM-5 MOVIMENTATIONS

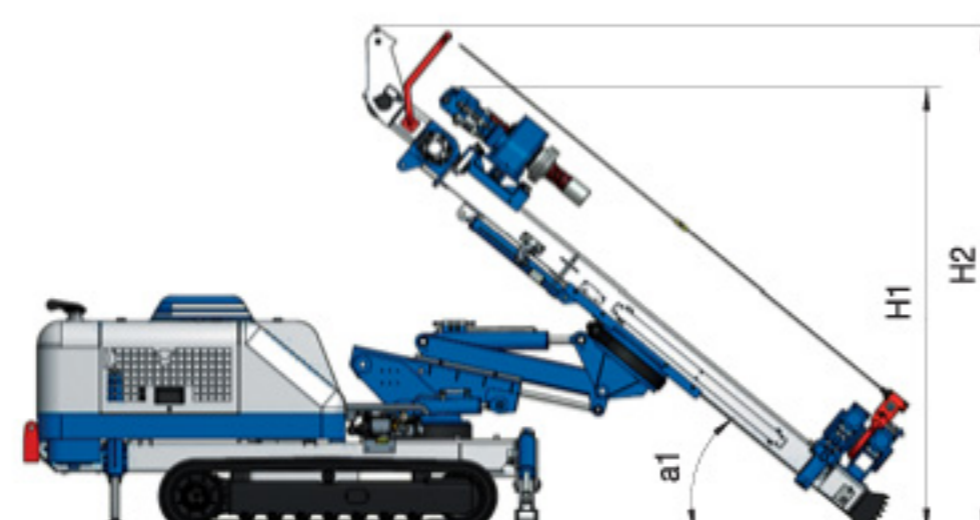


STROKE	A	B (min)	B (min)
1400	3520	15	610
1900	4020	515	1010
2400	4520	515	1010
3400	-	-	-



STROKE	a2	H3
1400	490	580
1900	940	1030
2400	940	1030
3400	-	-

STROKE	Zoom In	Zoom Out
1400	490	580
1900	940	1030
2400	940	1030
3400	-	-



ZOOM	a1	H1	H2
Stroke 1400-Zoom In	60°	2770	3300
Stroke 1400-Zoom Out	55°	2670	3160
Stroke 1900-Zoom In	42,5°	2670	3110
Stroke 1900-Zoom Out	40°	2570	2950
Stroke 2400-Zoom In	42,5°	3035	3440
Stroke 2400-Zoom Out	40°	2885	3270
Stroke 3400-Zoom In	42,5°	3710	4120
Stroke 3400-Zoom Out	40°	3520	3900

SM-5 JET GROUTING



JET GROUTING VERSION		
Rod diameter	90 mm	3.54 in
Max treatment depth in a single passage	8 m	26 ft

SM-5 TECHNICAL DATA SHEET

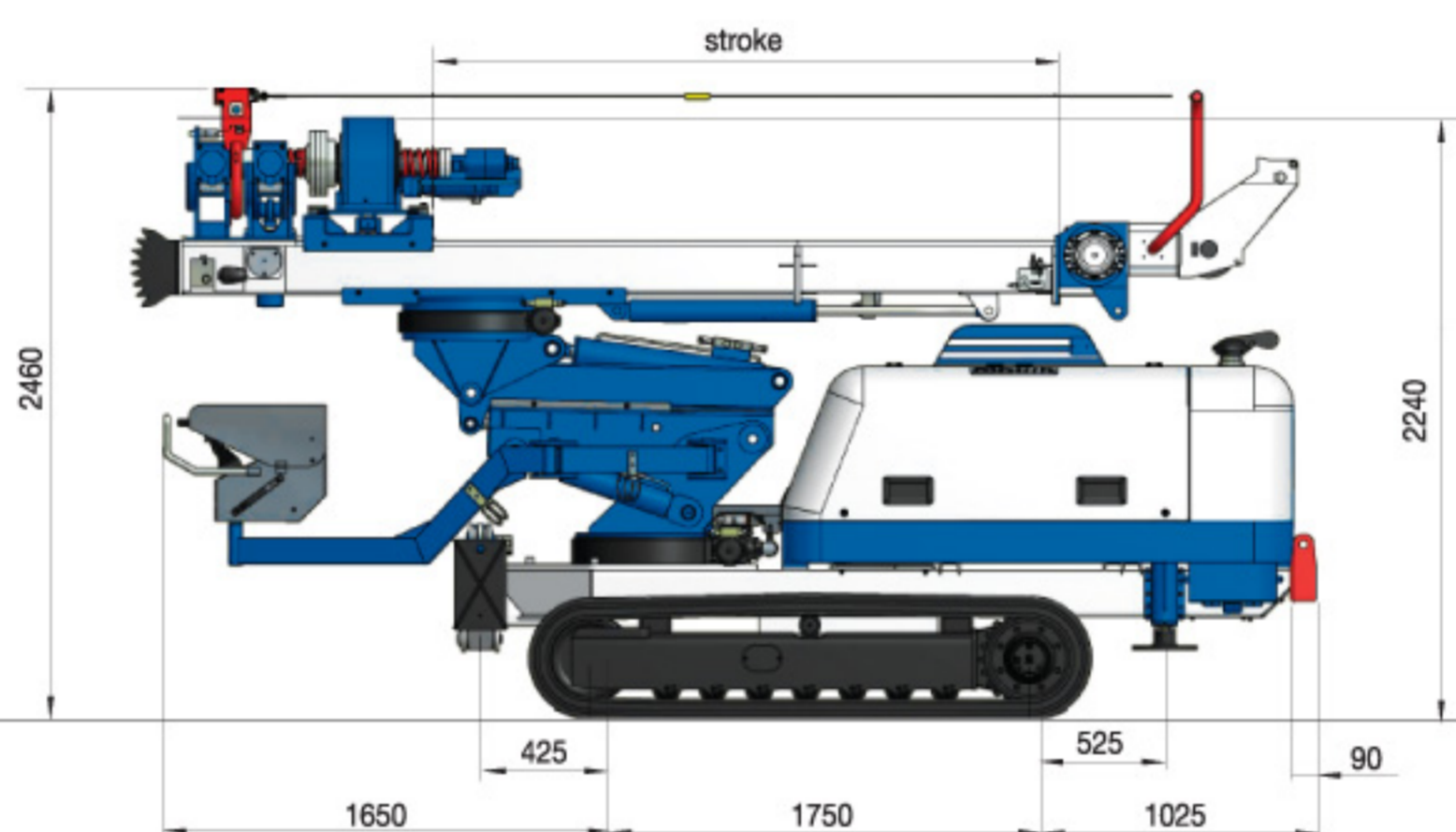
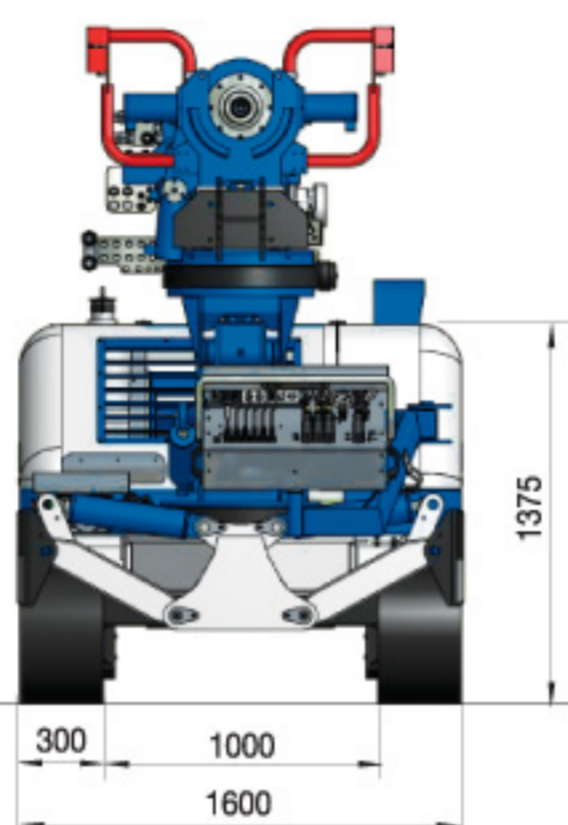
Operating weight (approx.)	5500 / 5840 kg	12125 / 12875 lb
Undercarriage		
- Track shoe width	300 mm	11.8 in
- Wheel base (centre idler to centre sprocket)	1705 mm	67.1 in
- Overall length	2200 mm	86.6 in
- Overall width (not extendable crawler)	1600 mm	63 in
- Travelling speed	1,79 km/h	1.11 mph
- Max climbing capacity (gradeability)	34% (19°)	34% (19°)
- Average ground pressure	0,054 MPa	7.8 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 2011 L04W tier III	DEUTZ TCD 2011 L04W tier III
- Emission certification	EU 97/68 - 2004/06 Step IIIA	EU 97/68 - 2004/06 Step IIIA
- Diesel Engine power rating	71,2 kW @ 2300 rpm	95 HP @ 2300 rpm
- Fuel tank capacity	75 l	20 US gal
- Sound power level and sound pressure level	LwA 105 - LpA 74 dB(A)	LwA 105 - LpA 74 dB(A)
Electrical motor (optional)		
- Make and model	ABB 4 poles 50Hz 380 / 660v	ABB 4 poles 50Hz 380 / 660v
- Rated power	75,0 kW @ 1485 rpm	101 HP @ 1485 rpm
Hydraulic system		
- Main pumps: variable axial pumps	145 l/min	38 US gal/min
- Set pressure main pumps	26 MPa	3771 psi
- Auxiliary pumps: gear pumps	78 + 37 + 32 l/min	20.6 + 9.8 + 8.5 US gal/min
- Hydraulic oil tank capacity	230 l	61 US gal
Clamp & hydraulic joint breaker		
- Nominal size	50 - 220 mm	2 - 9 in
- Maximum clamping force	140 kN	31473 lbf
- Maximum breaking torque	3000 daNm	22127 lbf*ft
Service winch		
- Type	controlled descent	controlled descent
- 1st layer line pull	5 kN	1124 lbf
- 1st layer nominal rope speed	42 m/min	138 ft/min
- Rope diameter	6 mm	0.24 in

STANDARD EQUIPMENT

- Steel undercarriage: width 1600 mm and shoes 300 mm
- Diesel engine Deutz TCD 2011 L04. Rated output: 71,2 kW @ 2300 rpm
- Load Sensing hydraulic system. Main pump: variable axial pumps LS: 145 l/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
- Telescopic boom of 400mm on base carrier;
- Modular mast for 2400 mm stroke and hoist system by motoreducer: 40 kN
- Rotary cradle with side shifting
- Single rotary head; max torque: 972 daNm, max rpm: 98 rpm
- Clamp and breaker assembly with range 50-220 mm

OPTIONAL EQUIPMENT

- Undercarriage with rubber crawler
- Electrical engine
- Wide range of feed stroke by mast kit: 1400 - 1900 - 3400 mm
- Wide range of rotary heads
- Jet grouting kit
- Top hammer kit
- Full radio remote control
- Triplex pump for water flushing on board



Transport configuration	Length		Weight	
Stroke version 1400 mm	4095 mm	161.2 in	5500 kg	12125 lb
Stroke version 1900 mm	4595 mm	180.9 in	5600 kg	12346 lb
Stroke version 2400 mm	4595 mm	180.9 in	5640 kg	12434 lb
Stroke version 3400 mm	5520 mm	217.3 in	5840 kg	12875 lb

This brochure has been edited and distributed by SOILMEC Spa. The present document cancels and override any previous ones. This brochure may not be distributed, reproduced or exhibited without SOILMEC Spa. authorization in according 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