



SR-80C

LDP
CFA

Hydraulic
Rotary Rig

Hydraulic Rotary Rig **SR-80C**

soilmec 
Drilling and Foundation Equipment



Rotary

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

Ease of transport and quick assembly

- Crawlers can be retracted to respect wide transport requirements.

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.

CAT monitoring system

The CAT monitoring system ensure the hydraulic system and Diesel engine to work at their most effective and productive levels.

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

CATERPILLAR C13 Acert		
Power @ 1800 rpm	328 kW	440 HP
Operating weight (approx) with kelly 4x13,5 m	85400 kg	188273 lb
Torque	292 kNm	215365 lbfft
Max diameter (crowd Cylinder)	2000 mm	79 in
Max diameter (crowd Winch)	1600 mm	63 in
Max depth	77 m	252.6 ft

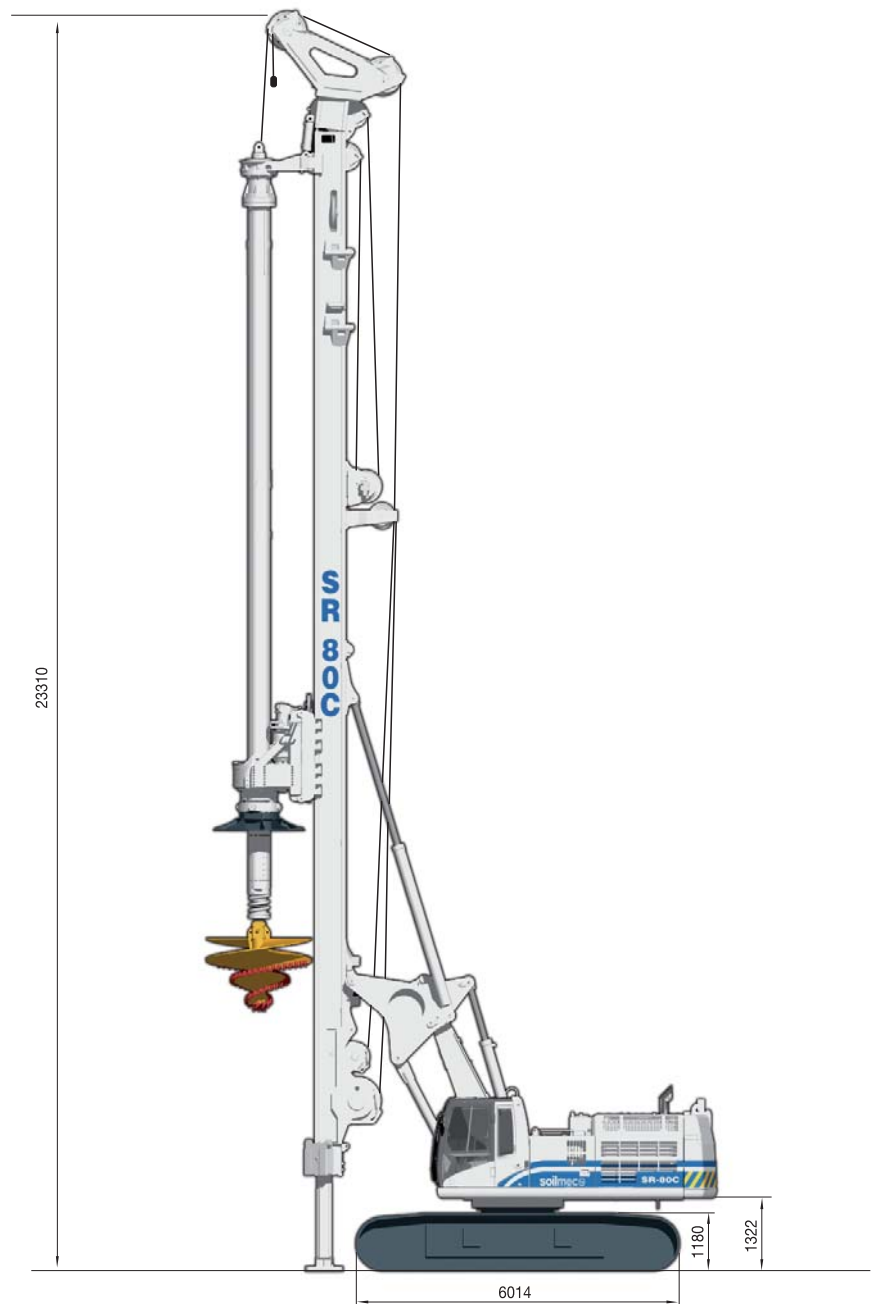
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LDP - KELLY DRILLING SYSTEM

Crowd Winch Version

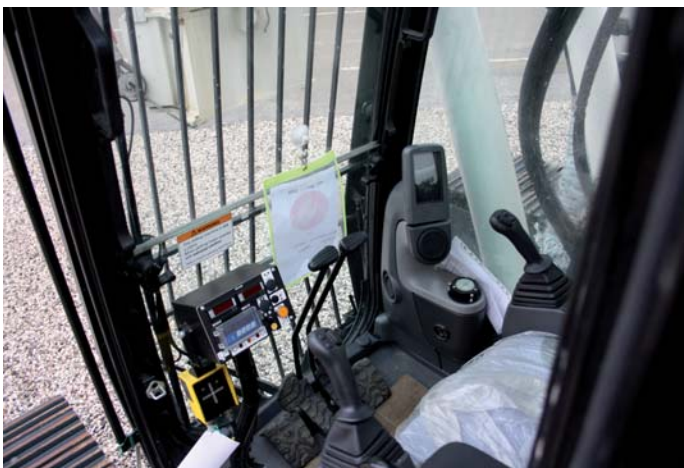
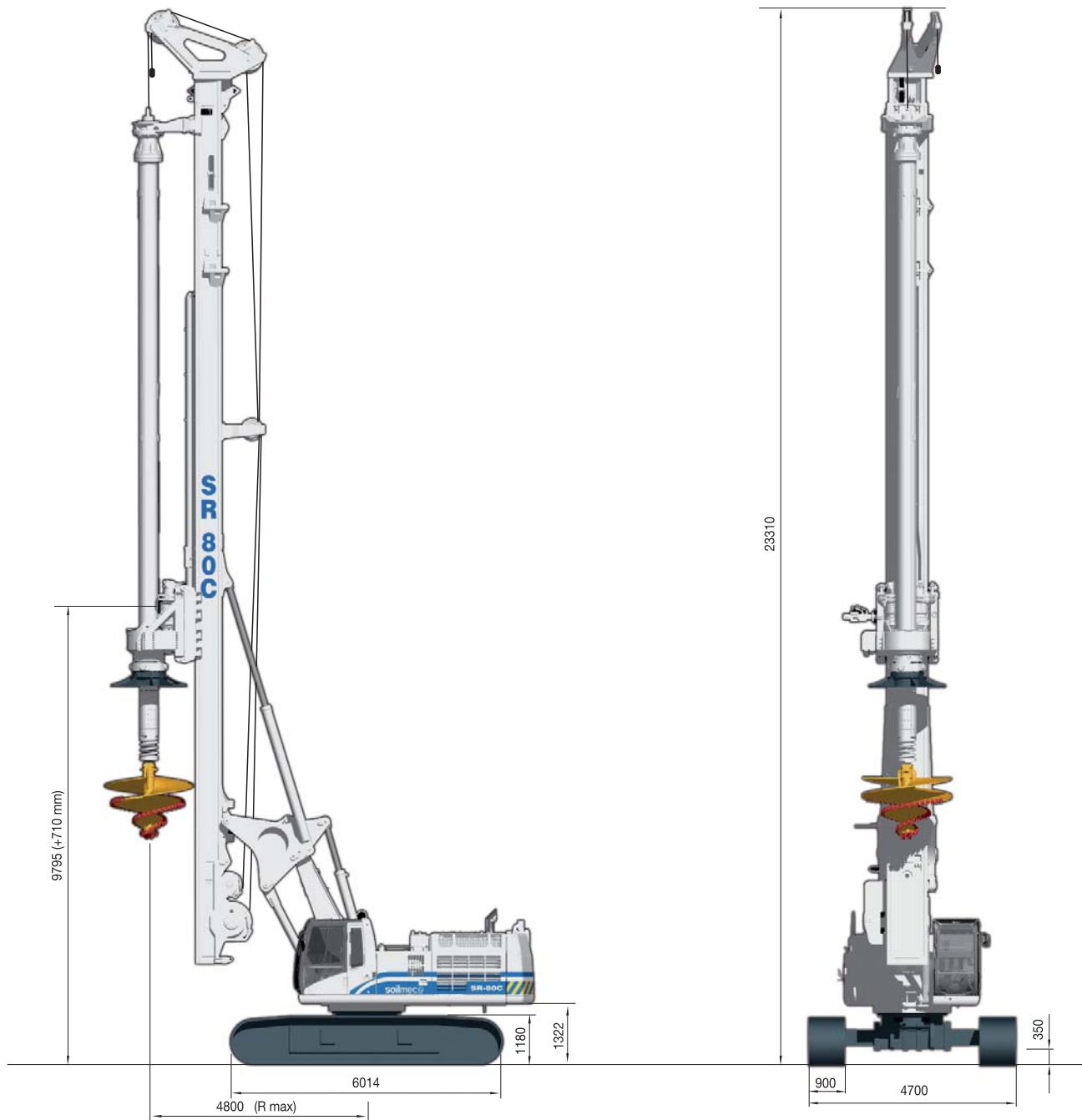
The hydraulic drilling rig SR-80C has been specially designed to suit the following applications:

- **cased bored piles** with casing driven directly by rotary head or optionally by casing oscillator powered by the base carrier itself;
- **deep uncased bored piles** stabilized by drilling fluid or dry hole;
- **CFA (Continuous Flight Auger) piles** by means of long auger string.










LDP - KELLY DRILLING SYSTEM

Crowd Cylinder Version



TECHNICAL DATA

	Rotary Drive - RD-260 single gear version		Rotary Drive - RD-260G multi gear version		
Overall height (Kelly system)	23310 mm	918 in	23310 mm	918 in	
Operating weight (approx) with kelly 4x13,5 m	85400 kg	188273 lb	86000 kg	189597 lb	
	Rotary Drive				
	-Torque (nominal)	292 kNm	215365 lbf*ft	292 kNm	215365 lbf*ft
	-Rotation speed (max)	25 rpm	25 rpm	50 rpm	50 rpm
	-Spinoff speed	117 rpm	117 rpm	107 rpm	107 rpm
	Crowd Cylinder system				
	-Crowd force pull down (fast speed)	220 kN	49457 lbf	220 kN	49457 lbf
	-Low Crowd force pull down (slow speed)	104 kN	23380 lbf	104 kN	23380 lbf
	-Crowd force pull up	300 kN	67442 lbf	300 kN	67442 lbf
	-Speed down	5,3 m/min	17,4 ft/min	5,3 m/min	17,4 ft/min
	-Fast speed down	10 m/min	32,8 ft/min	10,0 m/min	32,8 ft/min
	-Speed up	10,2 m/min	33,5 ft/min	10,2 m/min	33,5 ft/min
	-Stroke (kelly system)	6500 mm	256 in	6500 mm	256 in
	Crowd Winch system				
	-Crowd force (pull down) nominal	220 kN	49457 lbf	220 kN	49457 lbf
	-Crowd force (pull up) nominal	280 kN	62945 lbf	280 kN	62945 lbf
	-Speed	10 m/min - 18 m/min	32,8 ft/min - 29,1 ft/min	10 m/min - 18 m/min	32,8 ft/min - 29,1 ft/min
	Main winch SW-270				
		controlled descent	controlled descent	controlled descent	controlled descent
	-Line pull (1st layer) effective	219 kN	49232 lbf	219 kN	49232 lbf
	-Line pull (1st layer) nominal	260 kN	58449 lbf	260 kN	58449 lbf
	-Rope diameter	30 mm	1,19 in	30 mm	1,19 in
	-Rope length	31 m / 73 m / 118 m	102ft/239ft/387ft	31 m / 73 m / 118 m	102ft/239ft/387ft
	Auxiliary winch SW-90.3				
		controlled descent	controlled descent	controlled descent	controlled descent
	-Line pull (1st layer) effective	84 kN	18884 lbf	84 kN	18884 lbf
	-Line pull (1st layer) nominal	100 kN	22481 lbf	100 kN	22481 lbf
	-Rope diameter	19 mm	0,75 in	19 mm	0,75 in
	Auxiliary winch PD-15				
		free fall	free fall	free fall	free fall
	-Line pull (1st layer) effective	54 kN	12068 lbf	54 kN	12068 lbf
	-Line pull (1st layer) nominal	61 kN	13713 lbf	61 kN	13713 lbf
	-Rope diameter	18 mm	0,71 in	18 mm	0,71 in
	Mast inclination (Kelly)				
	-Backward/Forward/Lateral	10 / 4 / 3 °	10 / 4 / 3 °	10 / 4 / 3 °	10 / 4 / 3 °

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

Standard equipment

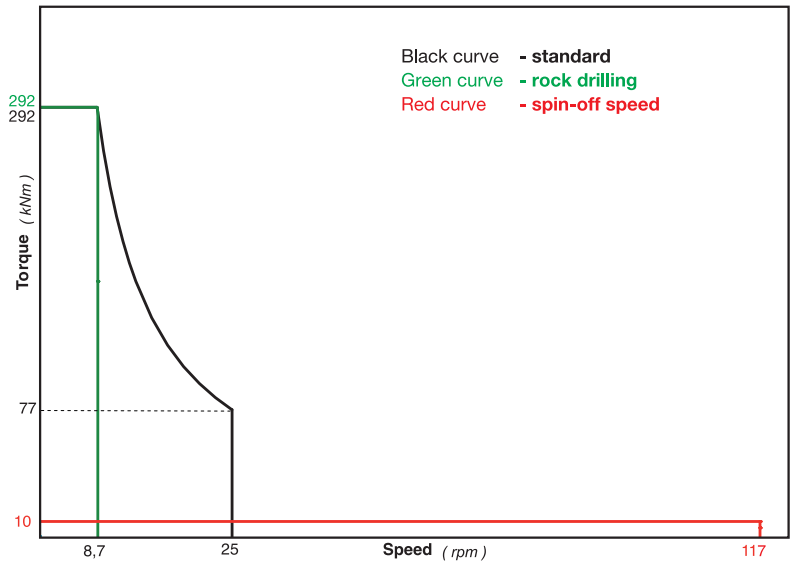
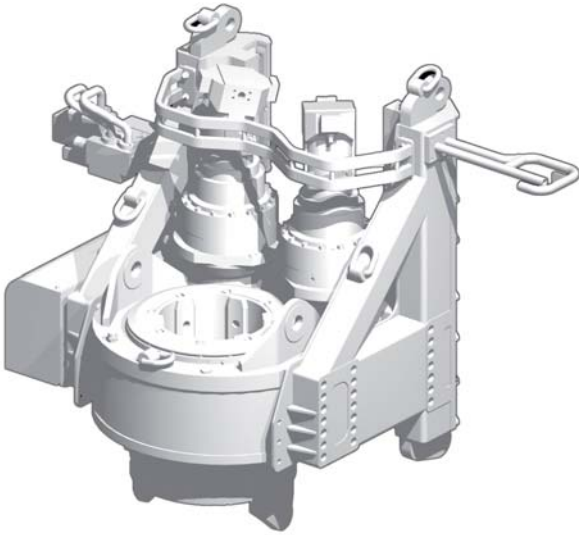
- Rotary drive single gear version
- Main winch controlled descend type
- Main and auxiliary winches fitted with grooved drums
- Hoist limit switch on main and auxiliary winches
- Swivel for main rope
- Crowd in fast or slow mode
- Parking point for main rope



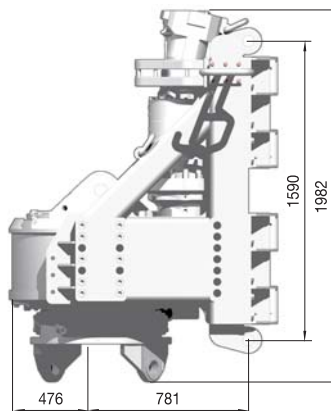
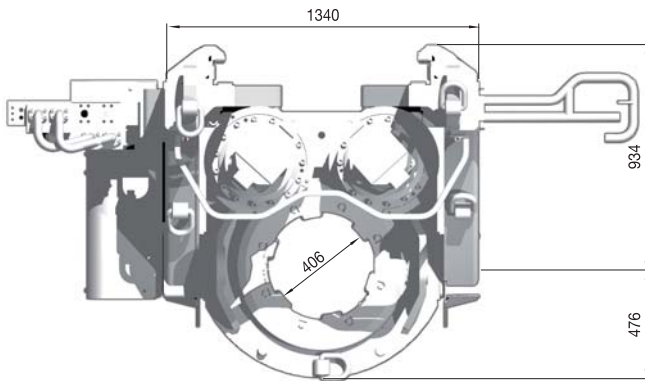
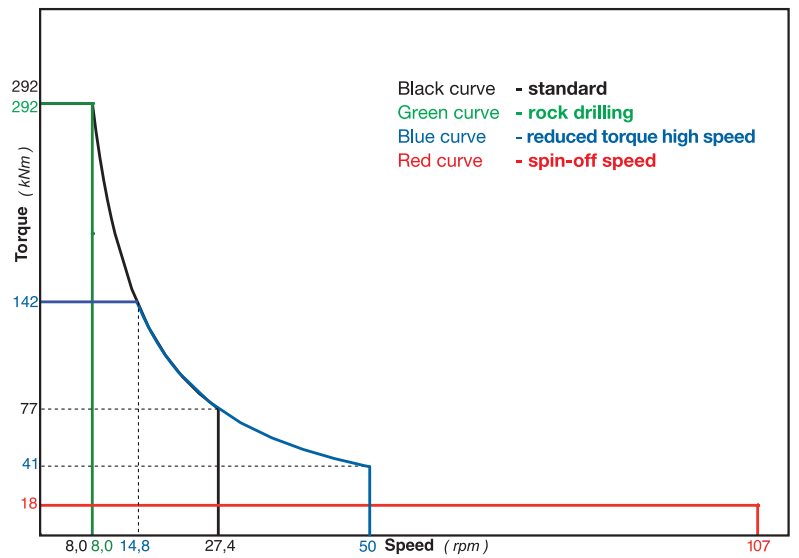
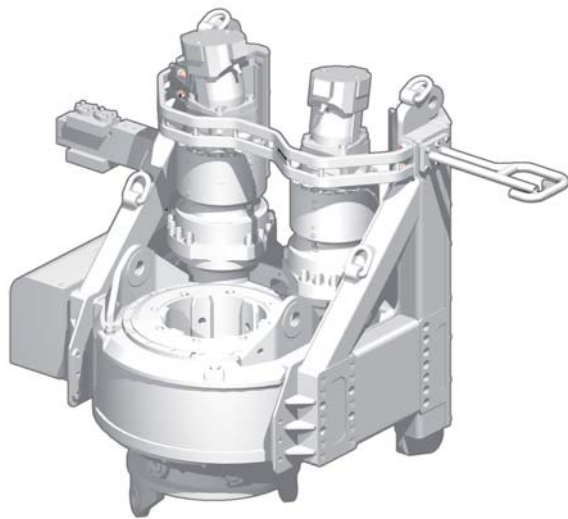
Crowd winch version

TECHNICAL DATA - ROTARY DRIVE

Rotary RD-260






Rotary RD-260 G



Rotary	Weight	
Single gear version	4500 kg	9921 lbs
Multi gear version	4900 kg	10802 lbs

TECHNICAL DATA - BASE CARRIER



	Engine	CATERPILLAR C13 Acert	CATERPILLAR C13 Acert
	-Rated output ISO 3046-I	330 kW @ 1800 rpm	442 HP @ 1800 rpm
	-Engine conforms to Exhaust emission Standard	EU stage III A, US EPA Tier 3	EU stage III A, US EPA Tier 3
	-Diesel tank capacity	720 l	190 US gal
	-Sound pressure level in cabin (EN791 Annex A)	77 dB (A)	77 dB (A)
	-Sound power level (2000/14EG u. EN791, Annex A)	109 dB (A)	109 dB (A)
	Hydraulic system		
	-Hydraulic power output (measured at inlet to rotary drive)	230 kW	308 HP
	-Hydraulic pressure	33 MPa	4786 psi
	-Flow rates (main circuits)	2x 360 l/min	2x 95 US gal/min
	-Hydraulic oil tank capacity	550 l	145 US gal
	Undercarriage (retractable crawler frames)		
	-Crawler type	D7D	D7D
	-Overall width of crawlers retracted	2980 mm	118 in
	-Overall width of crawlers extended	4560 mm	179 in
	-Width of triple grouser track shoes	800 mm	31 in
	-Overall length of crawlers	6000 mm	236 in
	-Traction force	669 kN	150397 lbf
	-Travel speed	2 km/h	1,2 mph

* Soilmec integrates high quality level components: Berco, Rexroth, Trasmital.

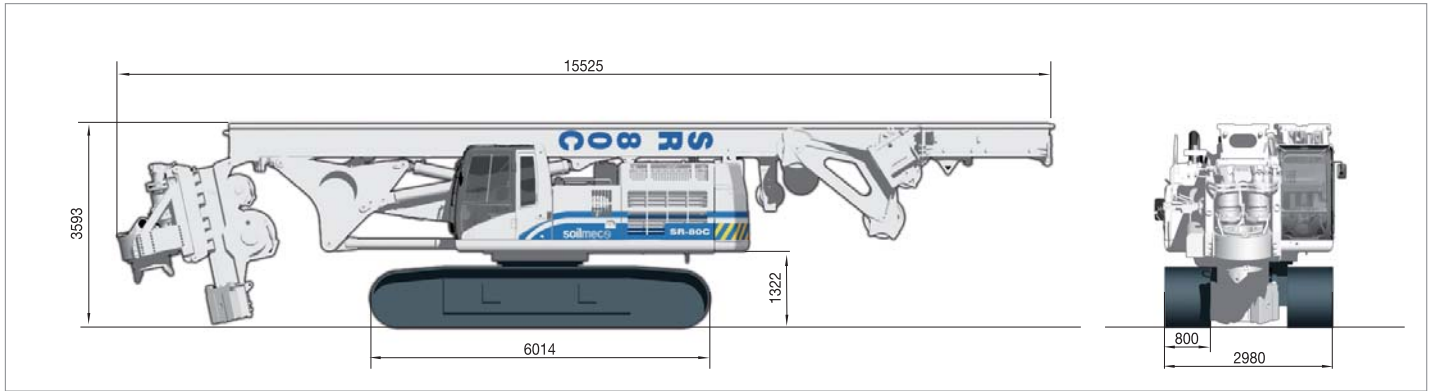
Standard equipment

- Oscillator attachment
- Engine emergency operation mode
- Engine diagnostic system
- Hydraulic functions diagnostic panel
- Transport securing rods on crawler units
- Access ladder on upper carriage
- On-board lighting set
- On-board tool set
- Electric refuelling pump
- High-comfort operator's cab
- Protective roof grate (*FOPS compliant*)
- Air conditioning system
- Radio and CD player

Optional equipment

- Base carrier**
 - Biodegradable oil
 - Pressurized air conditioning system
- Drilling Equipment**
 - Free fall auxiliary winch
 - Swivel for auxiliary rope
 - Central lubrication system
 - Videocamera set

TRANSPORT DATA

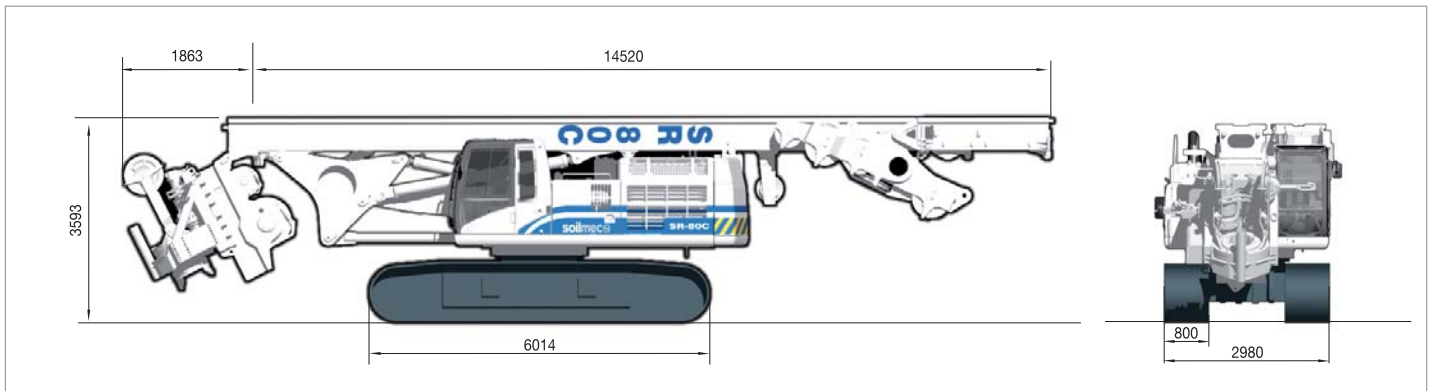


Transport PDF version

Weight

77800 kg

171518 lb



Transport CFA version

Weight

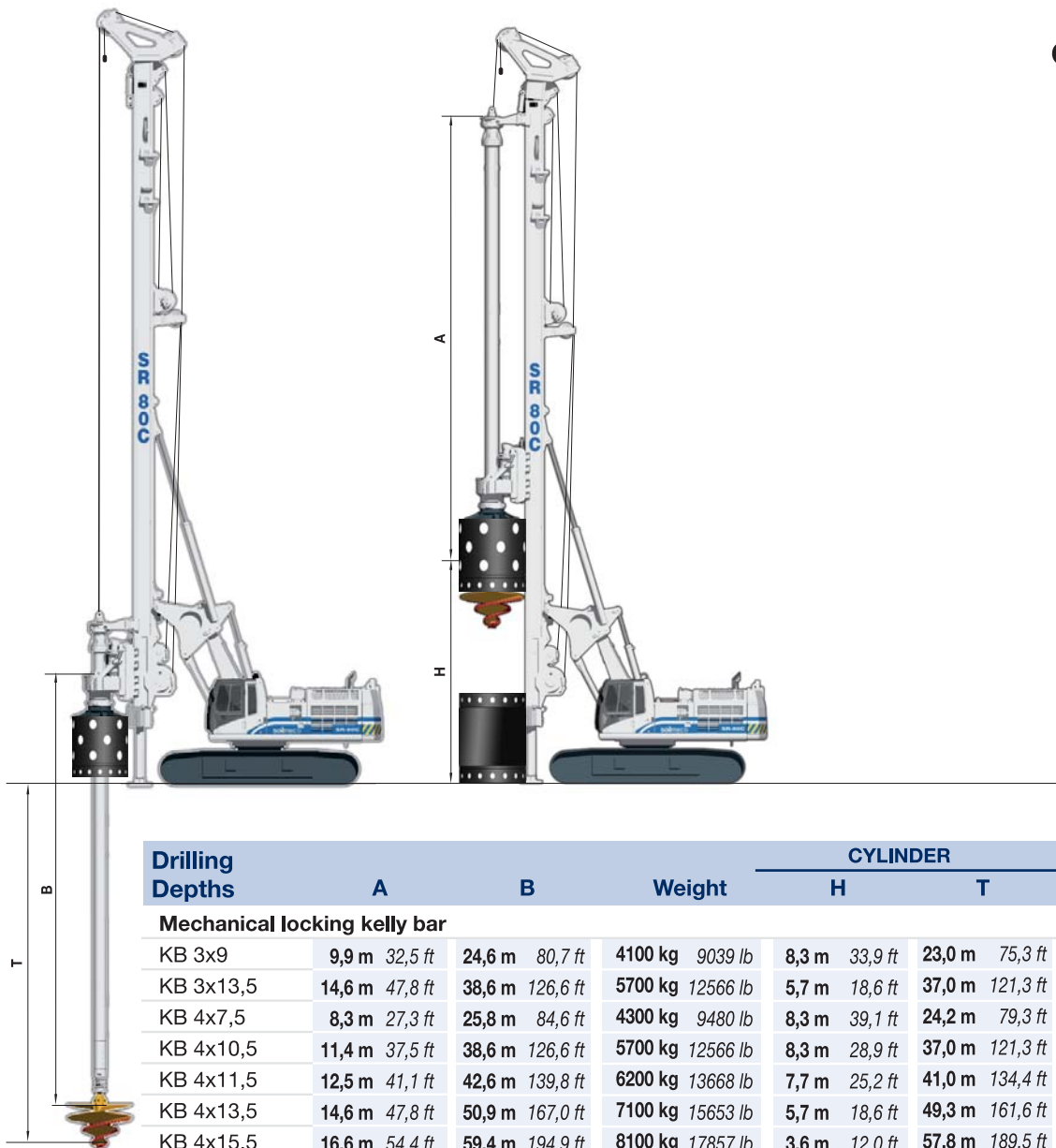
76000 kg

167550 lb



APPLICATIONS

LDP - Kelly Drilling System



Optional equipment:

- Hydraulic oscillator
VRM 200 KL
on demand

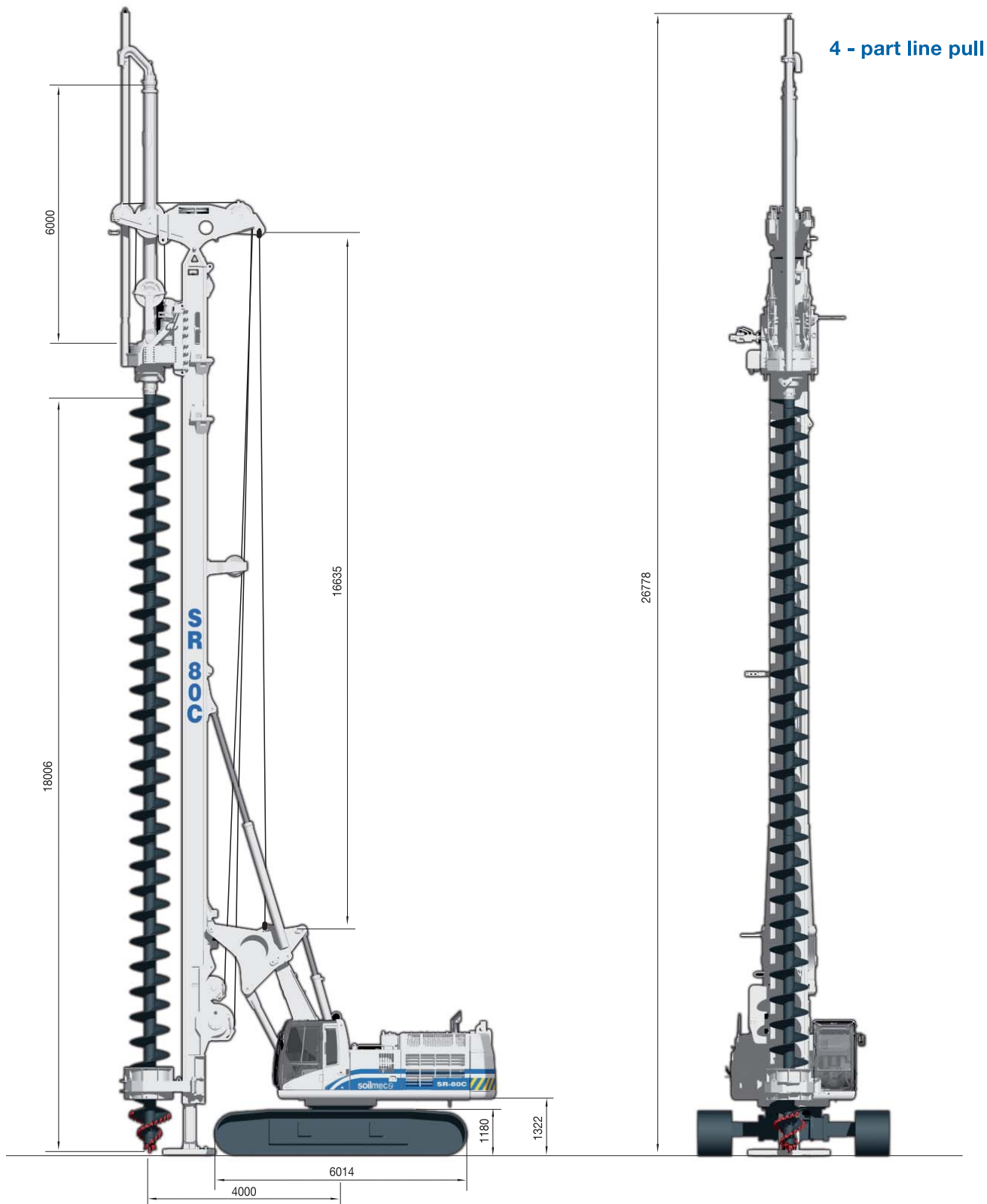
Drilling Depths	A		B		Weight	CYLINDER				WINCH				
						H	T	H	T	H	T	H	T	
Mechanical locking kelly bar														
KB 3x9	9,9 m	32,5 ft	24,6 m	80,7 ft	4100 kg	9039 lb	8,3 m	33,9 ft	23,0 m	75,3 ft	10,3 m	33,9 ft	22,9 m	75,0 ft
KB 3x13,5	14,6 m	47,8 ft	38,6 m	126,6 ft	5700 kg	12566 lb	5,7 m	18,6 ft	37,0 m	121,3 ft	5,7 m	18,6 ft	36,9 m	120,9 ft
KB 4x7,5	8,3 m	27,3 ft	25,8 m	84,6 ft	4300 kg	9480 lb	8,3 m	39,1 ft	24,2 m	79,3 ft	11,9 m	39,1 ft	24,1 m	78,9 ft
KB 4x10,5	11,4 m	37,5 ft	38,6 m	126,6 ft	5700 kg	12566 lb	8,3 m	28,9 ft	37,0 m	121,3 ft	8,8 m	28,9 ft	36,9 m	120,9 ft
KB 4x11,5	12,5 m	41,1 ft	42,6 m	139,8 ft	6200 kg	13668 lb	7,7 m	25,2 ft	41,0 m	134,4 ft	7,7 m	25,2 ft	40,9 m	134,0 ft
KB 4x13,5	14,6 m	47,8 ft	50,9 m	167,0 ft	7100 kg	15653 lb	5,7 m	18,6 ft	49,3 m	161,6 ft	5,7 m	18,6 ft	49,2 m	161,3 ft
KB 4x15,5	16,6 m	54,4 ft	59,4 m	194,9 ft	8100 kg	17857 lb	3,6 m	12,0 ft	57,8 m	189,5 ft	3,6 m	12,0 ft	57,7 m	189,1 ft
KB 4x16,5	17,7 m	58,1 ft	63,6 m	208,7 ft	8500 kg	18739 lb	2,5 m	8,3 ft	62,0 m	203,3 ft	2,5 m	8,3 ft	61,9 m	202,9 ft
Friction kelly bar														
KR 4x10,5*	11,4 m	37,5 ft	38,6 m	126,6 ft	5700 kg	12566 lb	8,3 m	28,9 ft	37,0 m	121,3 ft	8,8 m	28,9 ft	36,9 m	120,9 ft
KR 4x11,5*	12,5 m	41,1 ft	42,6 m	139,8 ft	6200 kg	13668 lb	7,7 m	25,2 ft	41,0 m	134,4 ft	7,7 m	25,2 ft	40,9 m	134,0 ft
KR 4x13,5*	14,6 m	47,8 ft	50,9 m	167,0 ft	7100 kg	15653 lb	5,7 m	18,6 ft	49,3 m	161,6 ft	5,7 m	18,6 ft	49,2 m	161,3 ft
KR 4x15,5*	16,6 m	54,4 ft	59,4 m	194,9 ft	8100 kg	17857 lb	3,6 m	12,0 ft	57,8 m	189,5 ft	3,6 m	12,0 ft	57,7 m	189,1 ft
KR 4x16,5*	17,7 m	58,1 ft	63,6 m	208,7 ft	8500 kg	18739 lb	2,5 m	8,3 ft	62,0 m	203,3 ft	2,5 m	8,3 ft	61,9 m	202,9 ft
KR 5x10,5*	11,3 m	37,1 ft	47,7 m	156,5 ft	6100 kg	13448 lb	8,3 m	29,3 ft	46,1 m	151,1 ft	8,9 m	29,3 ft	46,0 m	150,8 ft
KR 5x11,5*	12,4 m	40,8 ft	53,1 m	174,2 ft	6600 kg	14550 lb	7,8 m	25,6 ft	51,5 m	168,8 ft	7,8 m	25,6 ft	51,4 m	168,5 ft
KR 5x13,5*	14,4 m	47,4 ft	63,5 m	208,3 ft	7600 kg	16755 lb	5,8 m	19,0 ft	61,9 m	203,0 ft	5,8 m	19,0 ft	61,8 m	202,6 ft
KR 5x15,5*	16,7 m	54,6 ft	74,4 m	244,1 ft	8500 kg	18739 lb	3,6 m	11,7 ft	72,8 m	238,7 ft	3,6 m	11,7 ft	72,7 m	238,4 ft
KR 5x16,5*	17,6 m	57,7 ft	79,0 m	259,2 ft	9000 kg	19841 lb	2,7 m	8,7 ft	77,4 m	253,8 ft	2,7 m	8,7 ft	77,3 m	253,4 ft

* the rotary head to be reset

Drilling Diameters	CYLINDER		WINCH	
Uncased	2000 mm	78.8 in	1600 mm	63,0 in
Cased	1800 mm	70.9 in	1600 mm	63,0 in

APPLICATIONS

CFA - Continuous Flight Auger



Auger extension	6 m	19,7 ft
Drilling depth with auger cleaner	22,2 m (16,2+6)	72,8 ft (53,1+19,7)
Drilling depth without auger cleaner	23,7 m (17,7+6)	77,8 ft (58,1+19,7)
Stroke	18000 mm	709 in
Max drilling diameter	1200 mm	47,3 in
Max extraction force	800 kN	179844 lbf
Continuous flight auger length including starter auger	18500 mm	728,9 in
Operating weight (approx. w/o augers)	78000 kg	171959 lb



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