

SR-30

Hydraulic
Rotary Rig

LDP
CFA
DW
MP



Hydraulic Rotary Rig **SR-30**

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 transport requirements.
- The rig can be transported complete with the Kelly bar.

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.

DMS control system

DMS is an innovative system, developed by Soilmec, which controls and monitors the operation of the machine. For ease of operation the system is controlled by a touch screen located in the cab. The system main function, is to enable the machine to perform different functions more efficiently.

A dedicated power module electronic control system ensures the main pumps and Diesel engine 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.



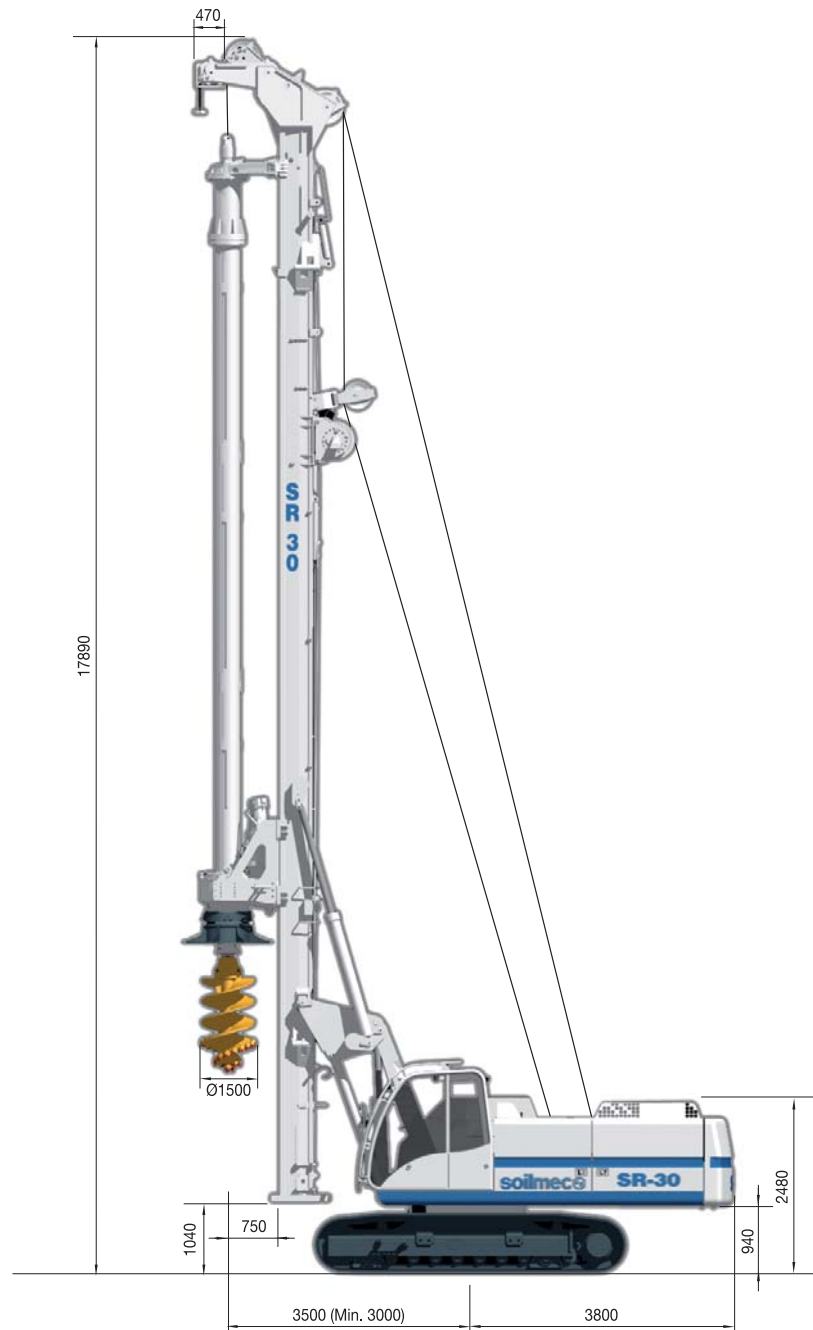


- 1** Undercarriage
- 2** Turret
- 3** Winches
- 4** Parallelogram system
- 5** Self-erecting mast
- 6** Cathead
- 7** Crowd system
- 8** Rotary head
- 9** Telescopic kelly bar
- 10** Counterweight
- 11** Cab

Cummins QSB6.7		
Power @ 2200 rpm	164 kW	220 HP
Operating weight (approx) with kelly 4x9 m	36350 kg	80137 lb
Torque	130 kNm	95881 lb _f ft
Max diameter	1500 mm	59 in
Max depth	49,3 m	161.7 ft

Crowd Winch Version

- **cased bored piles** with casing driven directly through rotary head;
- **deep uncased bored piles** stabilized by drilling fluid or dry hole;
- **CFA (Continuous Flight Auger) piles** by means of long auger string;
- it can be converted into **DW diaphragm wall base machine** to work with a **guided grab (GK-5)**;
- **MP micropiling** kit available.










DMS
DRILLING MATE SYSTEM

LDP - KELLY DRILLING SYSTEM

Crowd Cylinder Version



DATI TECNICI

		CROWD CYLINDER		CROWD WINCH	
Overall height		18050 mm	710.5 in	17890 mm	704.2 in
Operating weight (approx) with kelly 4x9 m		36350 kg	80137 lb	39450 kg	86971 lb
	Rotary Drive - Spin-off type	RD-130		RD-130	
	-Torque (nominal)	130 kNm	95881 lb_fft	130 kNm	95881 lb_fft
	-Speed of rotation (max)	39 rpm	39 rpm	39 rpm	39 rpm
	-Spinoff speed	143 rpm	143 rpm	143 rpm	143 rpm
	Rotary Drive - Shifting gear type	RD-130 G		RD-130 G	
	-Torque (nominal)	130 kNm	95881 lb_fft	130 kNm	95881 lb_fft
	-Speed of rotation (max)	60 rpm	60 rpm	60 rpm	60 rpm
	-Spinoff speed	106 rpm	106 rpm	106 rpm	106 rpm
	Crowd system				
	-Crowd force (pull down/up)	101/124 kN	22705/27876 lb_f	200/200 kN	44961/44961 lb_f
	-Stroke (kelly system)	3500 mm	138 in	11800 mm	464 in
	-Stroke (CFA system)	14000 mm	551 in	13000 mm	512 in
	-Speed (down/up)	5,7/7,4 m/min	18.7/24.2 ft/min	2,8/2,8 m/min	9.1/9.1 ft/min
	-Fast speed (down/up)	n.a.	n.a.	7,5/7,5 m/min	24.6/24.6 ft/min
	Main winch SW-140	controlled descent	controlled descent	controlled descent	controlled descent
	-Line pull (1st layer) effective/nominal	113/135 kN	25403/30349 lb_f	113/135 kN	25403/30349 lb_f
	-Rope diameter/length	22 mm/84 m	0.8 in/276 ft	22 mm/84 m	0.8 in/276 ft
	-Line speed (max.)	78,5 m/min	258 ft/min	78,5 m/min	258 ft/min
	Auxiliary winch SW-70	controlled descent	controlled descent	controlled descent	controlled descent
	-Line pull (1st layer) effective/nominal	54/65 kN	12139/14612 lb_f	54/65 kN	12139/14612 lb_f
	-Rope diameter	18 mm	0.7 in	18 mm	0.7 in
	-Line speed (max.)	58 m/min	190 ft/min	58 m/min	190 ft/min
	Auxiliary winch SF-70 (optional)	free fall	free fall	free fall	free fall
	-Line pull (1st layer) effective/nominal	54/65 kN	12139/14612 lb_f	54/65 kN	12139/14612 lb_f
	-Rope diameter	18 mm	0.7 in	18 mm	0.7 in
	-Line speed (max.)	68 m/min	223 ft/min	68 m/min	223 ft/min
	Mast inclination				
	-Backward/forward/lateral	12/4/3°	12/4/3°	12/4/3°	12/4/3°

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

Standard equipment

- Rotary drive spin-off type
- Main winch controlled descend type
- Main winch with special grooving
- Hoist limit switch on main and auxiliary winches
- Swivel for main rope
- Crowd in fast or slow mode
- Pivoted anchor points for main rope

Measuring and control equipment

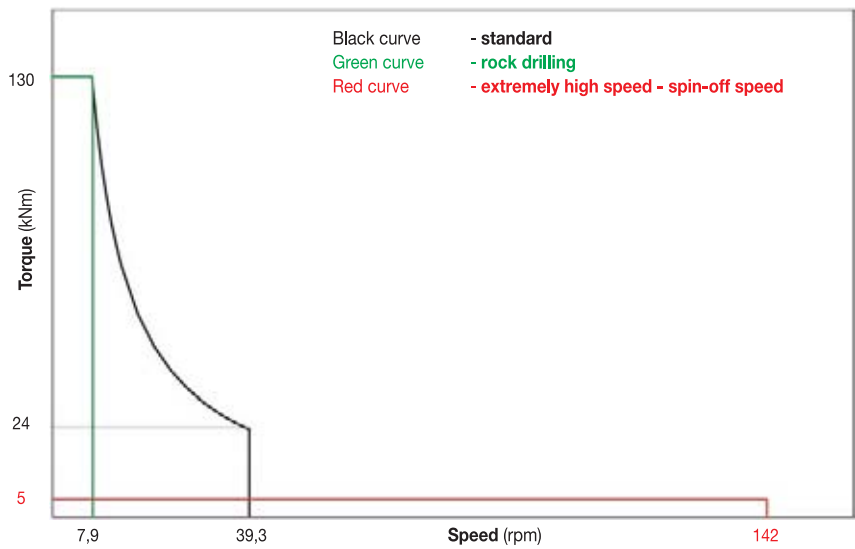
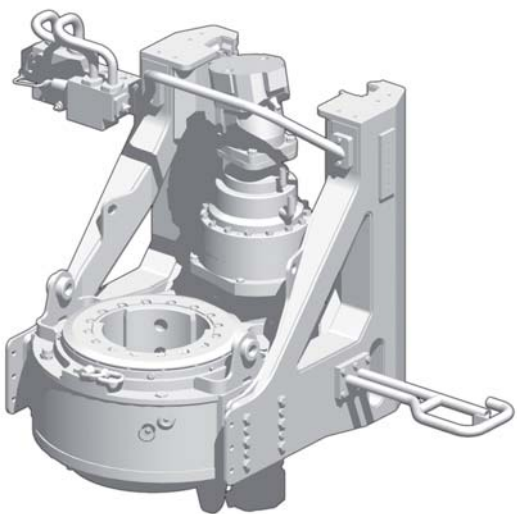
- PLC processor for all electrically actuated functions
- DMS system electronic monitoring and visualization system
- Mast inclination measurement on X/Y axes (*digital/analog display*)
- Automatic vertical alignment of mast
- Depth measuring device on main winch
- Speed measuring device on rotary



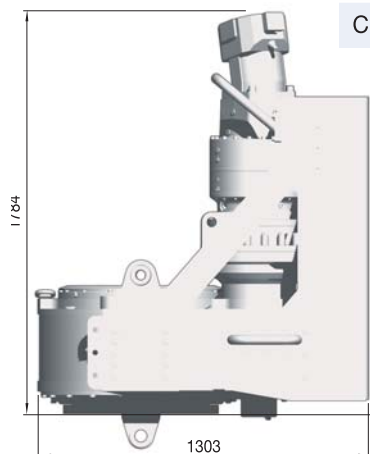
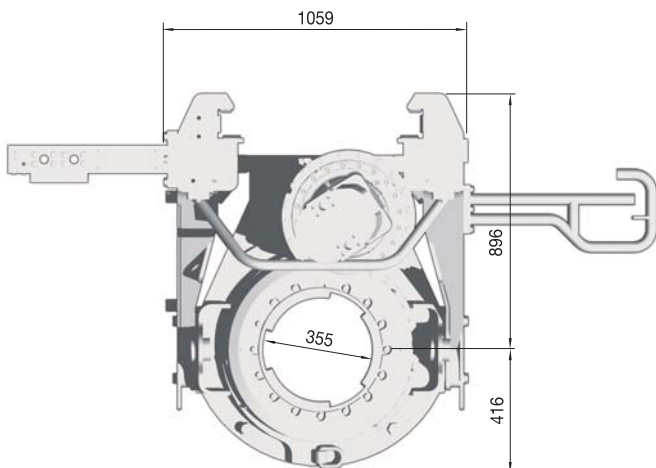
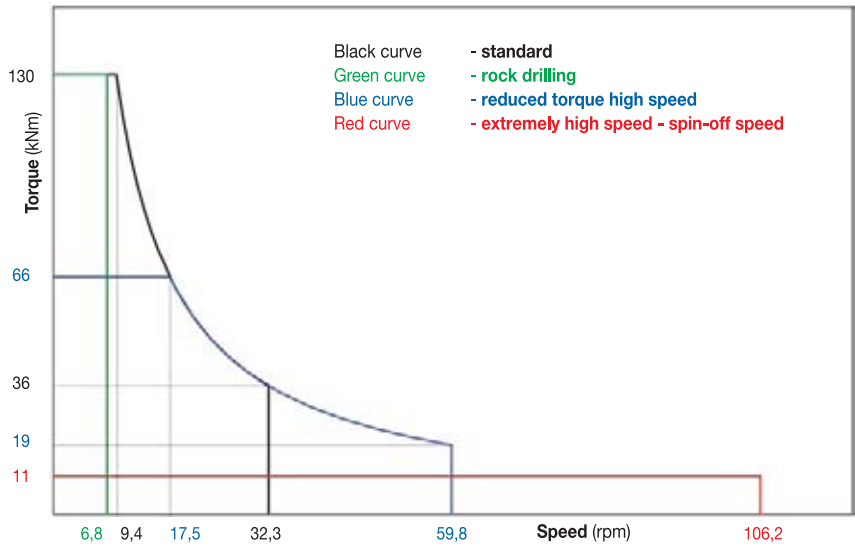
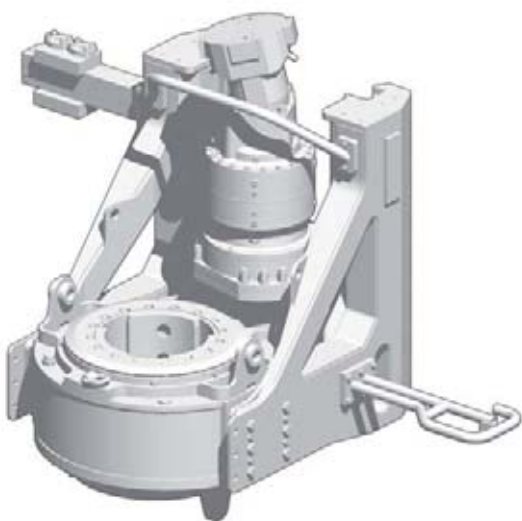
Continuous Flight Auger version

TECHNICAL DATA - ROTARY DRIVE

Rotary RD-130






Rotary RD-130 G



Rotary	Weight	
Crowd cylinder version	3100 kg	6830 lbs
Crowd winch version	3400 kg	7495 lbs

TECHNICAL DATA - BASE CARRIER



	Engine	Cummins QSB6.7	Cummins QSB6.7
	-Rated output ISO 3046-I	164 kW @ 2.200 rpm	220 HP @ 2200 rpm
	-Engine conforms to Exhaust emission Standard	EU stage III, EPA CARB Tier 3	EU stage III, EPA CARB Tier 3
	-Diesel tank capacity	350 l	92.4 US gal
	-Sound pressure level in cabin (EN791 Annex A)	84 dB (A)	84 dB (A)
	-Sound power level (2000/14EG u. EN791, Annex A)	110 dB (A)	110 dB (A)
	Hydraulic system*		
	-Hydraulic power output (measured at inlet to rotary drive)	120 kW	161 HP
	-Hydraulic pressure	300 bar	4786 psi
	-Flow rates (main circuits)	352 l/min	93 US gal/min
	-Hydraulic oil tank capacity	380 l	100 US gal
	Undercarriage* (retractable crawler frames)		
	-Crawler type	D4D	D4D
	-Overall width of crawlers (retracted/extended)	2550/3700 mm	100/146 in
	-Width of triple grouser track shoes	600 mm	24 in
	-Overall length of crawlers	4510 mm	178 in
	-Traction force effective/nominal	244/290 kN	54852/65193 lbf
	-Travel speed	2,2 km/h	1.4 mph

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

Standard equipment

- Emergency mode of operation for engine
- Engine diagnostic system
- Diagnostic panel for hydraulic functions
- Removable counterweight
- Transport securing lugs on crawler units
- Access ladder on uppercarriage
- On-board lighting set
- On-board tool set
- Electric refuelling pump
- High-comfort operator's cab (width: 850 mm)
- Protective roof grate (FOPS compliant)
- Air conditioning system
- Radio and CD player

Optional equipment

Base carrier

- Bio-degradable oil
- Pressurized air conditioning system

Drilling Equipment

- Freefall auxiliary winch
- Swivel for auxiliary rope
- Central lubrication system
- Videocamera attachment

Alternative equipment options

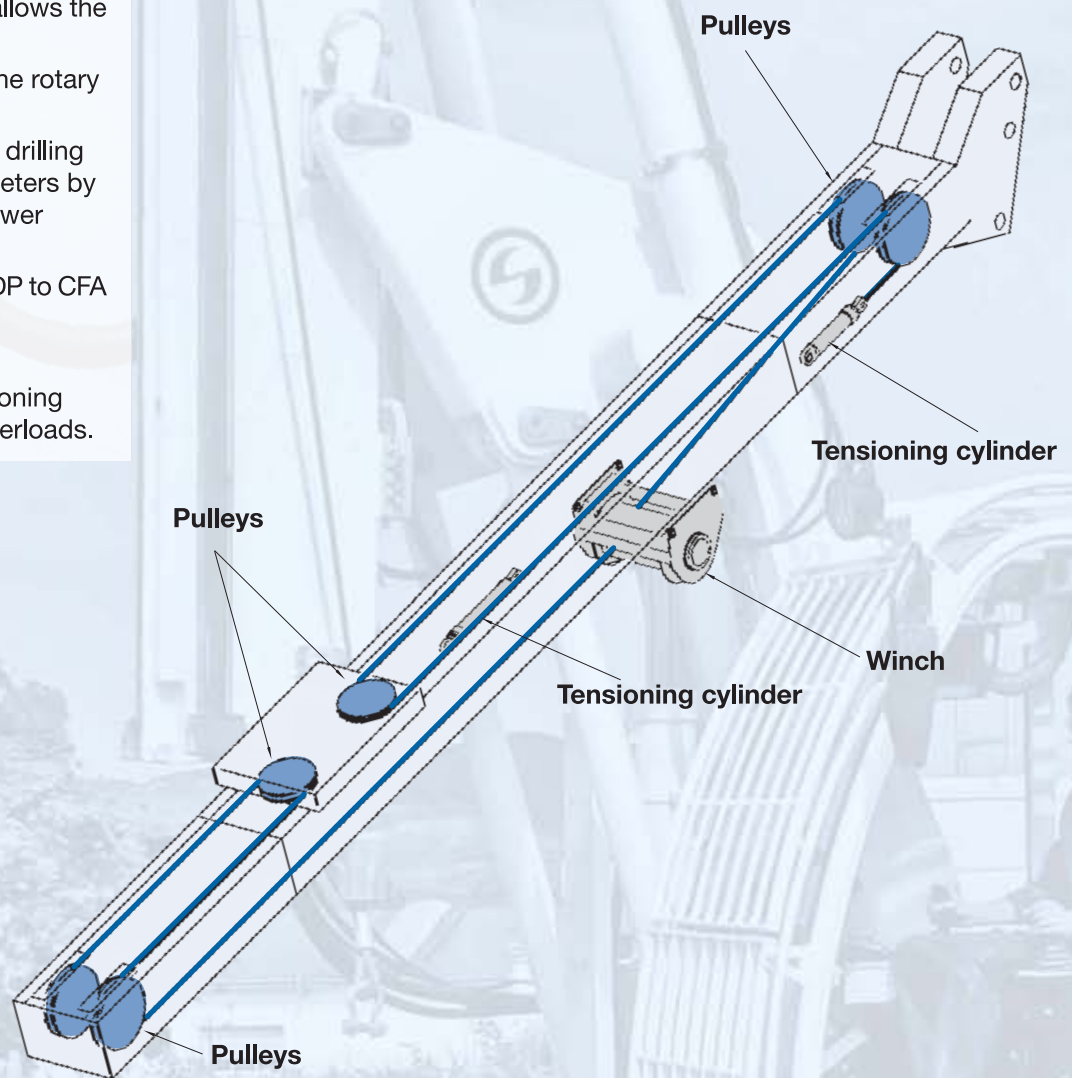
- Wider triple grouser track shoes

FOCUS - CROWD WINCH SYSTEM

The crowd winch system allows the best versatility of use:

- Large clearance under the rotary for casing driving.
- Possibility to extend the drilling range to very large diameters by dismounting the mast lower section.
- Quick conversion from LDP to CFA version.

The double dynamic tensioning avoids rope dangerous overloads.

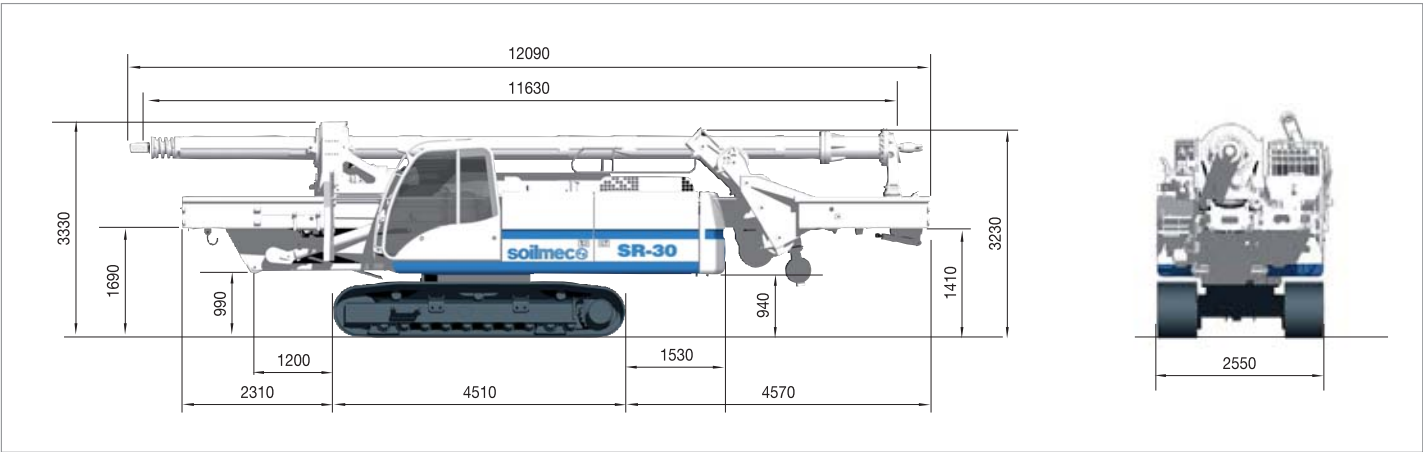


Crowd winch version

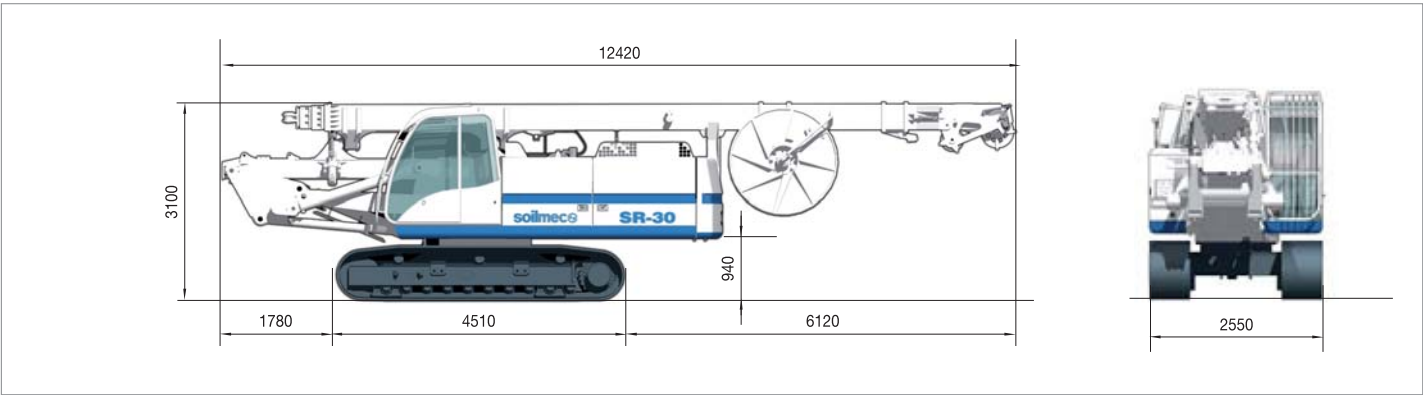


Crowd winch version

TRANSPORT DATA



Transport c/w rotary head and 4x11 kelly bar Weight **36900 kg** 81350 lb



Transport w/o grab Weight **34400 kg** 75838 lb



DMS

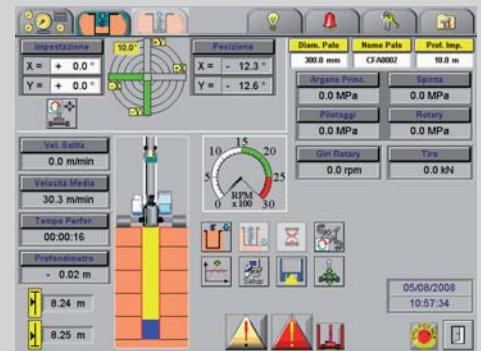
DRILLING MATE SYSTEM

Soilmec innovative DMS - Drilling Mate System - has been designed to incorporate:

- CAN OPEN bus system
- colour touch screen suitable for the drilling field

DMS consists of 3 items:

- **DMS**
- **DMS PC**
- **DMS MANAGER**



DMS

DMS is a standard device on all Soilmec machines. Its main characteristics are:

- interface with Diesel engine
- programmed rig maintenance schedule
- troubleshooting - helping the operator to locate the fault
- production and operation data storage on CF card or USB flash drive for their processing on DMS PC
- connection to modem (GPRS, EDGE or SATELLITE) to send out alarms/data to customer/ Soilmec Control Center (DMS Manager) or to an e-mail address.

Technologies currently available on DMS:

- **LDP / CFA / DP / RCDS**
- **CAP / CSP**
- **GRAB**
- **HYDROMILL**
- **JET / DRILLING / ANCHORS**
- **TTM1-TTM2 / SOILMIXING**

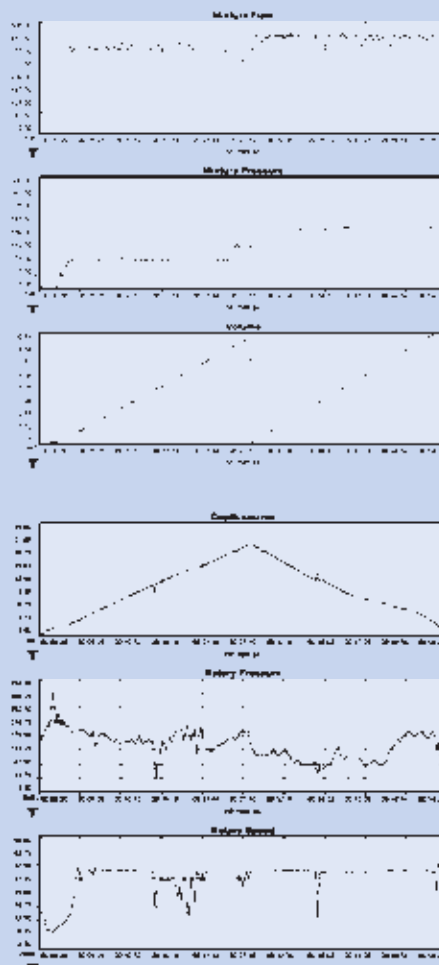
According to technology, DMS can also be complemented with:

- DPS (Drilling Positioning System) to measure drilling tool vertical deviation
- APS (Automatic Positioning System) for rig pile spotting

DMS PC

DMS software enables "visualization and processing" of data either stored on CF/USB flash drive or received remotely via radio/GPRS/wifi/satellite.

With the use of DMS PC daily and production reports are easily available.



DMS MANAGER

Enables full remote control of the machine operations and processing of drilling data sent by modem (wifi/satellite/GPRS).

DMS MANAGER allows to fully use the DMS potential for a truly comprehensive service to customer/jobsite.



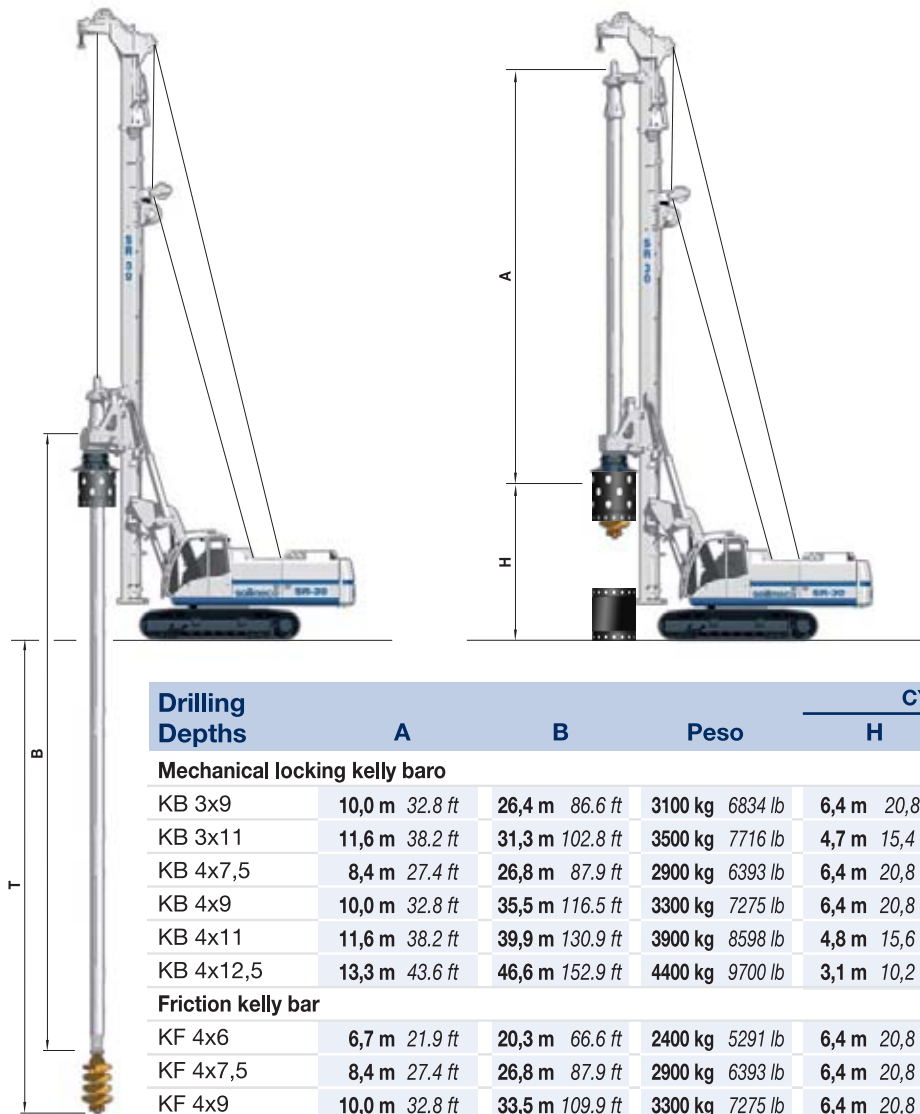
SPARE PART ONLINE CENTER (SPOC)

The innovative technical web site of Soilmec S.p.A. has been published with the aim to give Soilmec Dealer Network **continuous updated information** regarding products and equipments, for a better interaction with the Customers. Infact, SPOC offers the following online features:

- consultation and downloading of rig documentation, e.g. user and maintenance manuals electrical / hydraulic drawings, DMS manuals, technical documentation, etc
- placement and management of purchase orders for spare parts
- real time availability of components of spare parts.

APPLICATIONS

LDP - Kelly Drilling System

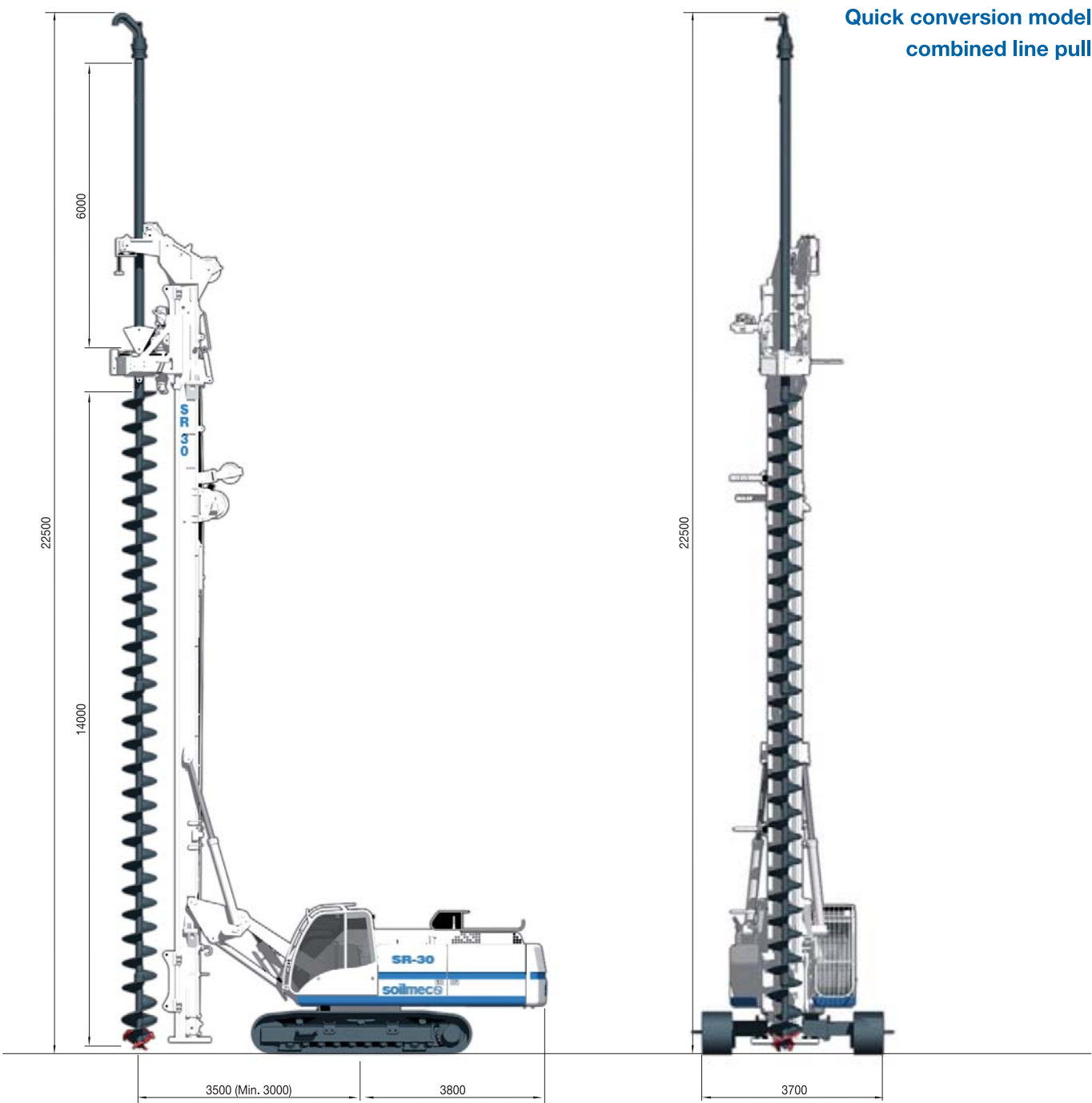


Drilling Depths	A		B		Peso		CYLINDER				WINCH			
							H		T		H		T	
Mechanical locking kelly baro														
KB 3x9	10,0 m	32.8 ft	26,4 m	86.6 ft	3100 kg	6834 lb	6,4 m	20,8 ft	24,1 m	79.1 ft	6,4 m	20,8 ft	26,0 m	85.3 ft
KB 3x11	11,6 m	38.2 ft	31,3 m	102.8 ft	3500 kg	7716 lb	4,7 m	15,4 ft	29,1 m	95.5 ft	4,7 m	15,4 ft	30,9 m	101.4 ft
KB 4x7,5	8,4 m	27.4 ft	26,8 m	87.9 ft	2900 kg	6393 lb	6,4 m	20,8 ft	24,6 m	80.7 ft	8,0 m	26,2 ft	26,4 m	86.6 ft
KB 4x9	10,0 m	32.8 ft	35,5 m	116.5 ft	3300 kg	7275 lb	6,4 m	20,8 ft	33,3 m	109.3 ft	6,4 m	20,8 ft	35,1 m	115.2 ft
KB 4x11	11,6 m	38.2 ft	39,9 m	130.9 ft	3900 kg	8598 lb	4,8 m	15,6 ft	37,7 m	123.7 ft	4,8 m	15,6 ft	39,5 m	129.6 ft
KB 4x12,5	13,3 m	43.6 ft	46,6 m	152.9 ft	4400 kg	9700 lb	3,1 m	10,2 ft	44,4 m	145.7 ft	3,1 m	10,2 ft	46,2 m	151.6 ft
Friction kelly bar														
KF 4x6	6,7 m	21.9 ft	20,3 m	66.6 ft	2400 kg	5291 lb	6,4 m	20,8 ft	18,1 m	59.4 ft	9,7 m	31,8 ft	19,9 m	65.3 ft
KF 4x7,5	8,4 m	27.4 ft	26,8 m	87.9 ft	2900 kg	6393 lb	6,4 m	20,8 ft	24,6 m	80.7 ft	8,0 m	26,2 ft	26,4 m	86.6 ft
KF 4x9	10,0 m	32.8 ft	33,5 m	109.9 ft	3300 kg	7275 lb	6,4 m	20,8 ft	31,3 m	102.7 ft	6,4 m	20,8 ft	33,1 m	108.6 ft
KF 4x11	11,6 m	38.2 ft	40,1 m	131.6 ft	3900 kg	8598 lb	4,8 m	15,6 ft	37,9 m	124.3 ft	4,8 m	15,6 ft	39,7 m	130.2 ft
KF 4x12	12,9 m	42.2 ft	46,0 m	150.9 ft	4300 kg	9480 lb	3,5 m	11,5 ft	43,8 m	143.7 ft	3,5 m	11,5 ft	45,6 m	149.6 ft
KF 5x8,5	9,6 m	31.6 ft	39,8 m	130.6 ft	3900 kg	8598 lb	6,4 m	20,8 ft	37,6 m	123.4 ft	6,8 m	22,1 ft	39,4 m	129.3 ft
KF 5x9	10,0 m	32.8 ft	41,3 m	135.5 ft	4100 kg	9039 lb	6,4 m	20,8 ft	39,1 m	128.3 ft	6,4 m	20,8 ft	40,9 m	134.2 ft
KF 5x10	11,0 m	36.1 ft	46,6 m	152.9 ft	4400 kg	9700 lb	5,4 m	17,6 ft	44,4 m	145.7 ft	5,4 m	17,6 ft	46,2 m	151.6 ft
KF 5x11	11,6 m	38.2 ft	49,7 m	163.1 ft	4800 kg	10582 lb	4,8 m	15,6 ft	47,5 m	155.8 ft	4,8 m	15,6 ft	49,3 m	161.7 ft

Drilling Diameters	CYLINDER		WINCH	
Uncased	1500 mm	59 in	1500 mm	59 in
Cased	1200 mm	47 in	1200 mm	47 in

APPLICATIONS

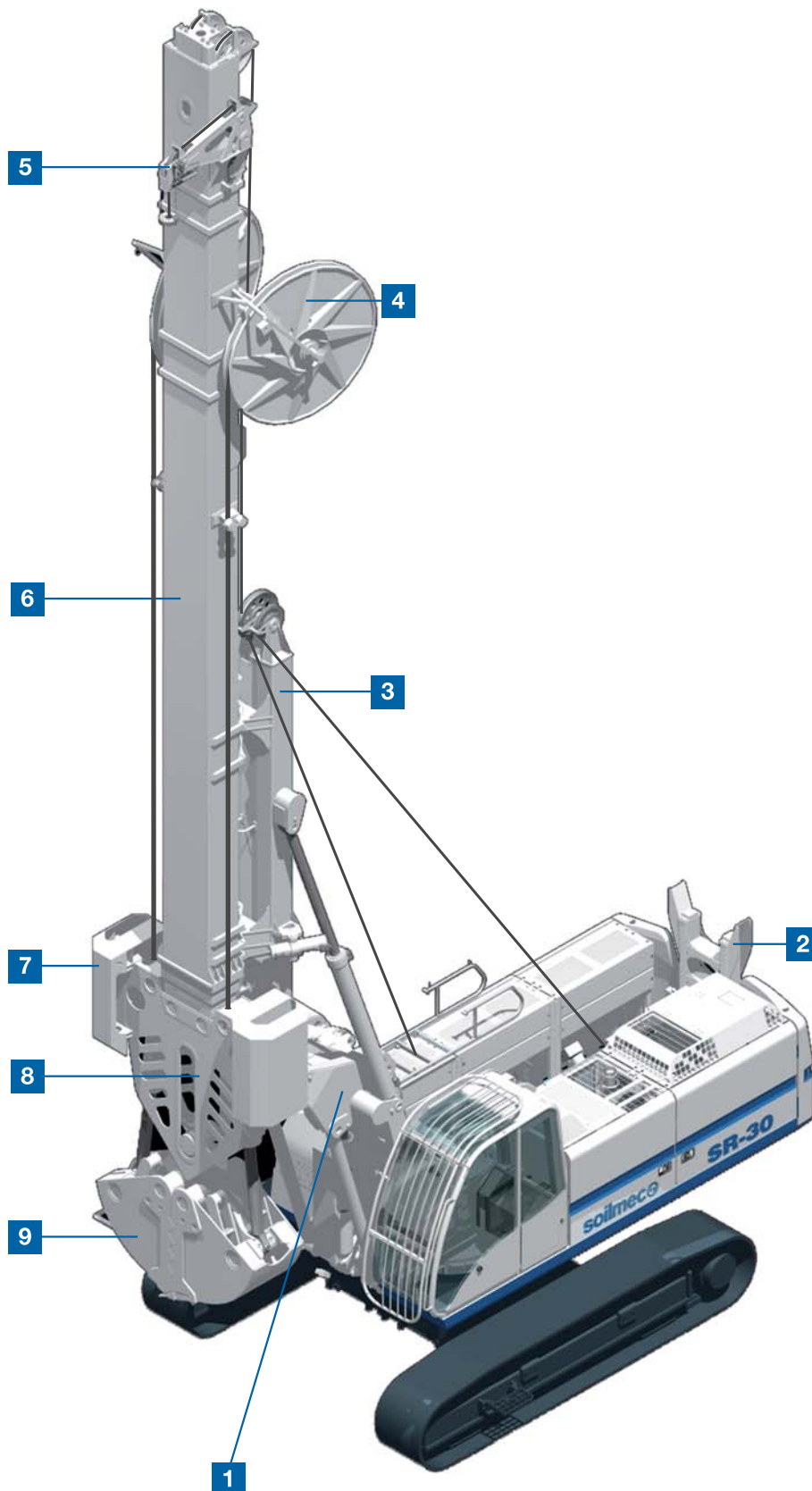
CFA - Continuous Flight Auger



	combined line pull		4-part line pull	
Kelly extension	6 m	19.6 ft	6 m	19.6 ft
Drilling depth with auger cleaner	17,5 m (11,5+6)	57.4 ft (37.8+19.6)	18,3 m (12,3+6)	60 ft (40.4+19.6)
Drilling depth without auger cleaner	18,7 m (12,7+6)	61.3 ft (41.7+19.6)	19,5 m (13,5+6)	63.9 ft (44.3+19.6)
Max drilling diameter	750 mm	29.5 in	750 mm	29.5 in
Max extraction force	330 kN	74186 lbf	380 kN	85426 lbf
Max crowd force	100 kN	22480 lbf	37 kN	8318 lbf
Continuous flight auger length including starter auger	14000 mm	551 in	14000 mm	551 in
Operating weight (approx. w/o augers)	36500 kg	80500 lb	34500 kg	76060 lb

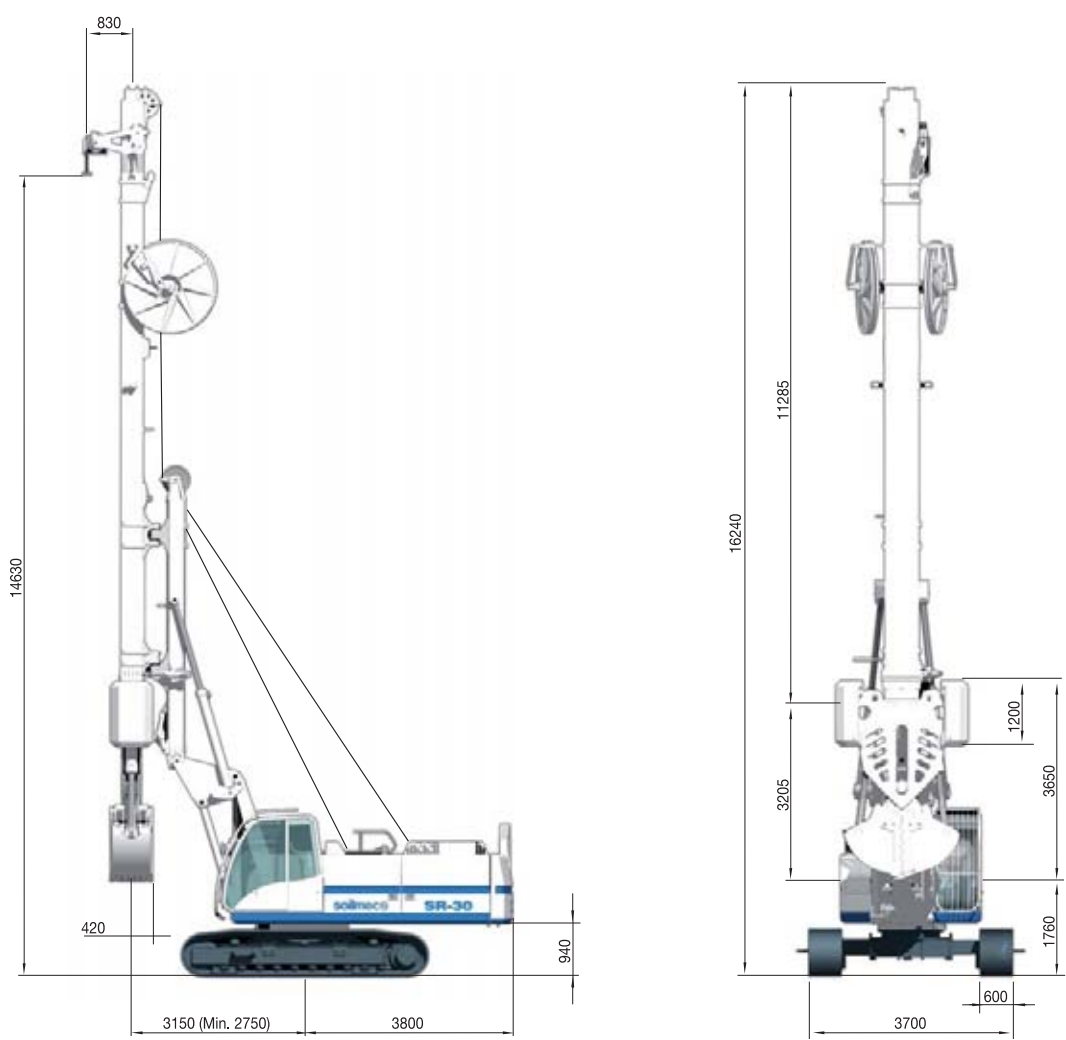
APPLICATIONS

Guided grab GK-5 for diaphragm walls



- Easy and quick change from kelly to grab version
- Hydraulic retractable jib allowing to work close to other pre-existing buildings
- Hydraulic safety device for transport
- Grab frame with reduced thickness thanks to two mechanically synchronized jacks for the jaws' opening/closing
- Kelly bars made of four elements (*one is fixed while the other three are telescopic*).
- Mast rotation $\pm 45^\circ$
- Transported complete with the mast folded on the rig and the grab frame already assembled
- To carry out diaphragm walls with a thickness variable from 400 to 800 mm and width from 2000 to 2500 mm in standard version with the same grab body
- Optional kit for thicknesses of 300- 600 mm available
- Max performing depth: 31 m (*with a 5 m extension*)

- 1** Standard parallelogram system
- 2** Kelly rest
- 3** Mast
- 4** Hose winders
- 5** Service jib
- 6** Telescopic kelly
- 7** Stabilizers
- 8** Grab body
- 9** Jaws



Panel thickness	400-800 mm	15.7-31.5 in
Panel width	2000-2500 mm	78.7-98.4 in
Max diaphragm depth	31 m	94.5 ft
Rated Power	164 kW	220 HP
Main winch, nominal	135 kN	30348 lb _f
DIAPHRAGM WALL		
Grab weight (c/w kelly)	14000 kg	30860 lbs
Grab total length (c/w kelly)	14 m	42.7 ft
Approx weight (crane+grab)	40000 kg	88180 lbs



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