



B2



soilmec SR-30 Eagle



soilmec

# SR-30 Eagle

**soilmec**  
Drilling and Foundation Equipment

# SR-30 Eagle

## Agile and powerful

The SR-30 Eagle is the smallest model in Soilmec's line-up of drilling rigs. Built with a lightweight design the rig features a high torque rotary head, powerful Diesel engine and the new segmental mast.

The SR-30 Eagle is a modern machine equipped with several accessories, devices and the DMS 4.0 system to ensure the highest level of connectivity, accessibility, and safety.



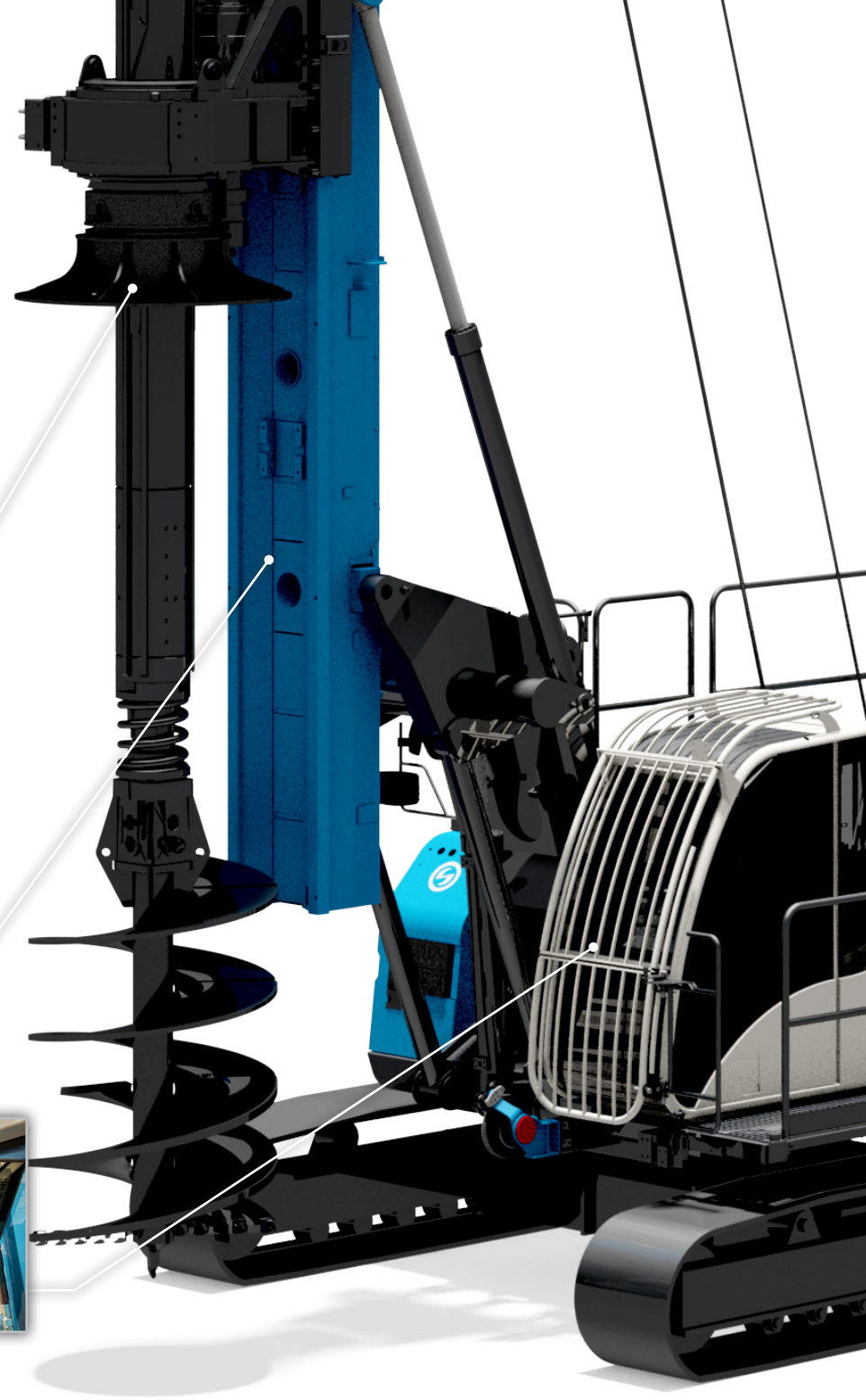
### Higher performance

- Automatic control of rotary motors
- 131 kNm (96619 lbf) Rotary head
- 149 kW (200 HP) Diesel engine



### More efficient

- Optimized lines to the rotary for cutting power loss
- Diesel engine – Auto low idle control for fuel saving
- Electric system 2.0 and over dimensioned hydraulic plant to cut pressure losses





## Safety first

- Cab platform access with handrails
- Radio remote control for safer load/unload and tramping operations
- Automatic white sound alarm during rig travelling and turret rotation
- Warning system for sleeve extension coupling for CFA technology (patent pending)



## Environment-friendly

- Complies with the most stringent emission rules
- Noise reduction



## Proven comfort & visibility

Fully adjustable pneumatic suspension seat, joysticks and keyboards easy to use, powerful HVAC system with recirculating air, USB port

Wide roof and front glass with protection grids, LED lights and CCTV camera system with dedicated 7" display



## Always connected!

DMS On Board 4.0

DMS PC for a complete production analysis

DMS Manager a cloud service for superior fleet supervision

SOILMEC  
CRAWLER  
CRANES

SR-30 Eagle

# One Eagle Two choices

## Standard version

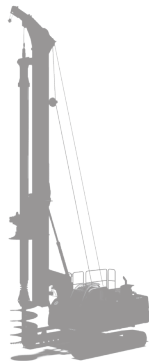
Below 30 t (66,000 lb)

Only Monolithic mast

Kelly

Segmental casing

Standard CFA 4-lines pull



## Upgraded version

Over 30 t (66,000 lb)

Both Monolithic  
or Segmental masts

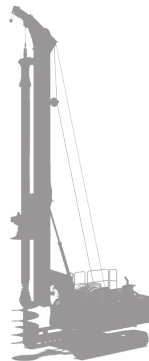
Kelly

Segmental casing

Standard CFA 4-lines pull

Extended CFA 4-lines pull

LHR



SR-30 Eagle

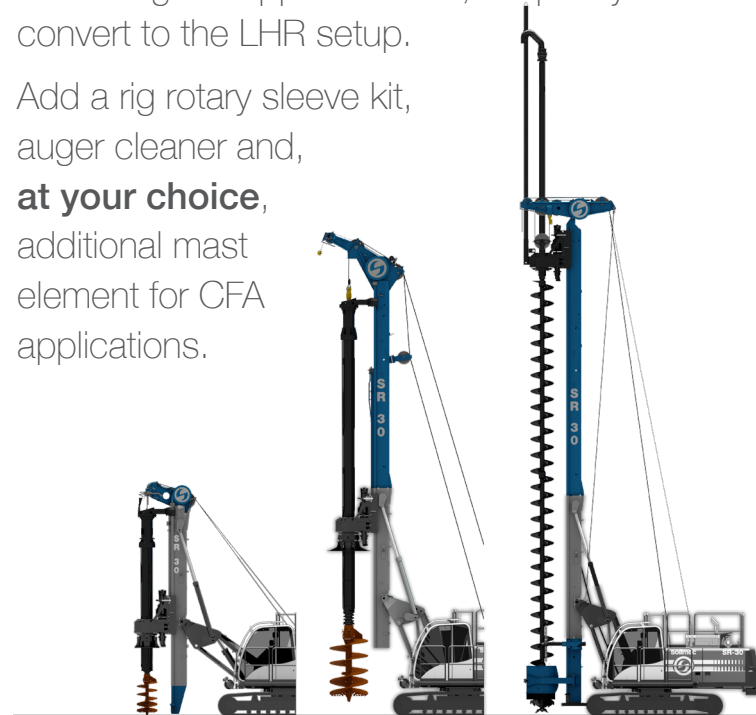
# Latest generation SM segmental mast

The segmental mast allows for quick conversion of the rig for different applications.

Removing the upper element, to quickly convert to the LHR setup.

Add a rig rotary sleeve kit, auger cleaner and,

**at your choice,**  
additional mast  
element for CFA  
applications.





SR-30 Eagle

# The answer to all your job site needs

- **Main winch rope anti-slack (Patent pending).**

Managed by DMS, the system indicates when to slow down the Kelly bar descent in order to avoid collision with the hole bottom and excessive rope unwinding for longer rope operation life

- **Automatic Mast Raising (Patented).** Automatic tensioning of main and service winch ropes during mast raising and boom adjustment to ease the operations during drilling/transport/maintenance phases

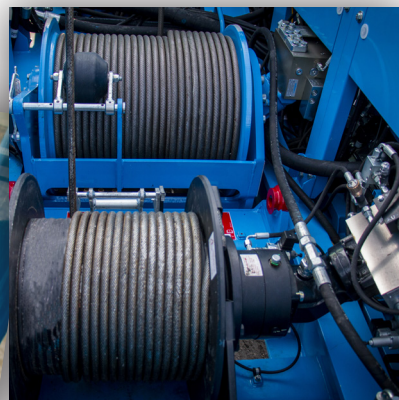
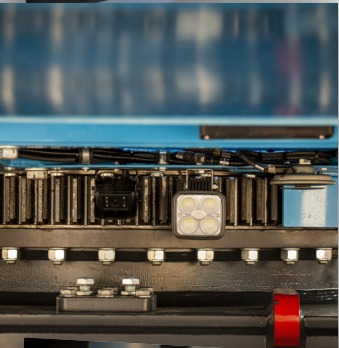
- **Automatic return to centre hole.** Designed to speed up the discharging phase. Very high slewing precision, for a perfect centering of the casing of the Kelly bar. One word: faster cycle

- **Locking Kelly bar visualization system (Patented).** Real time display of locking connection area to simplify the operator job and to protect the rig against wearing and tearing

- **CFA Autodrilling.** An automatic device for CFA mode to control and to optimize the drilling parameters

- **CFA Autorotary (Rotary Revolutions Speed Control).** The operator can activate this function by a dedicated pedal or through joystick

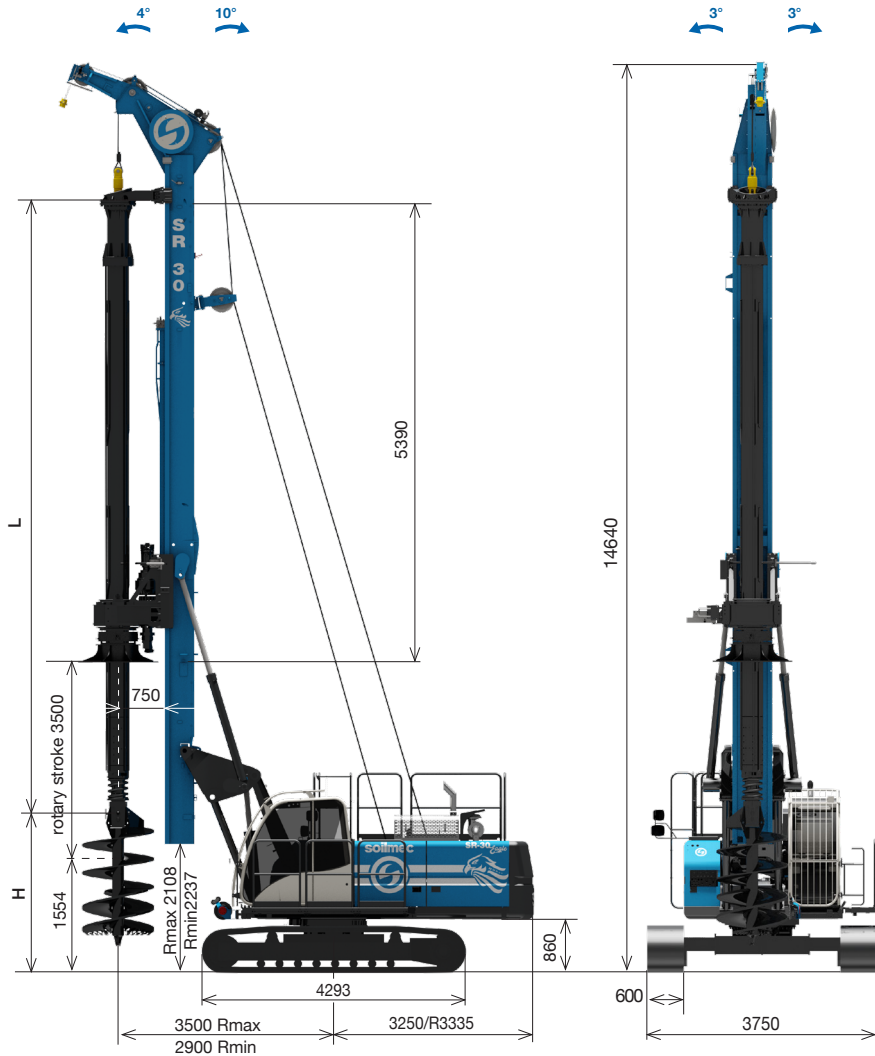
- **Easy maintenance,** automatic lubrication of all the necessary greasing points in Kelly and CFA versions



DRILLING

# Large Diameter Piles

Cylinder Crowd System  
Upgraded version



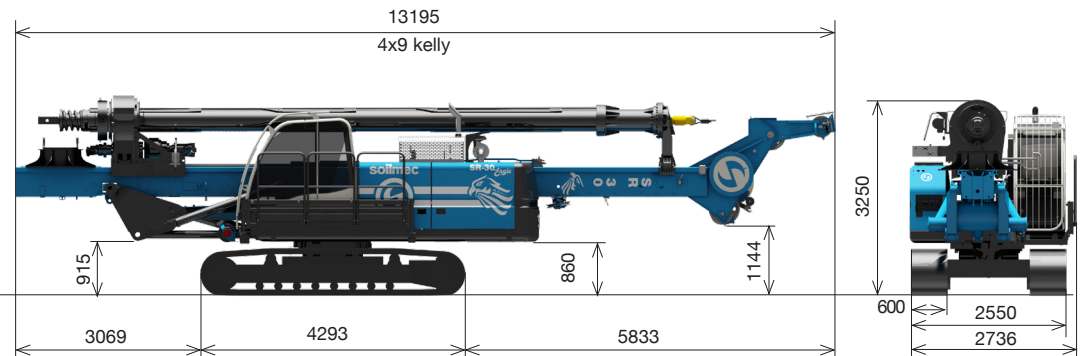
LDP - Large Diameter Piles - CCS version	Upgraded	Upgraded
Operating weight w/o kelly bar <sup>1</sup>	27710 kg	61089 lb
Max pile diameter (tool in front of the mast)	1500 mm	59.1 in
Max pile diameter (tool below the mast)	3000 mm	118.1 in
Working radius	2900 - 3500 mm	114.2 - 137.8 in
Tail swing radius	3335 mm	131.3 in
Max pile depth-friction kelly <sup>5</sup>	40.2 m	131.9 ft
Max pile depth-locking kelly <sup>2</sup>	32.4 m	106.3 ft

Transport configuration - CCS version	Upgraded	Upgraded
Transport weight c/w kelly bar 4x9 <sup>1</sup>	31300 kg	69004 lb
Transport length	13195 mm	43.3 ft
Transport width <sup>3</sup>	2550 mm	8.4 ft
Transport height <sup>4</sup>	3270 mm	10.7 ft

- <sup>1</sup> Stg V version. EU stage II version 300 kg (661 lb) less.
- <sup>2</sup> Also 4x10,5 mechanical locking kelly bar is available. Not self-mounting. Max depth 37,7 m (123.7 ft)
- <sup>3</sup> With foldable catwalk the width is 186 mm (7.3 in) more
- <sup>4</sup> c/w turret handrails. w/o removable handrails height become 3250 mm (10.7 ft)
- <sup>5</sup> Also 5x10.5 friction kelly bar is available. Not self-mounting. Max depth 47.5m (155.8 ft)

All weights are considered in Segmental Mast version. Monolithic mast version weight 350 kg (772 lb) less



## Low Head Room Upgraded version

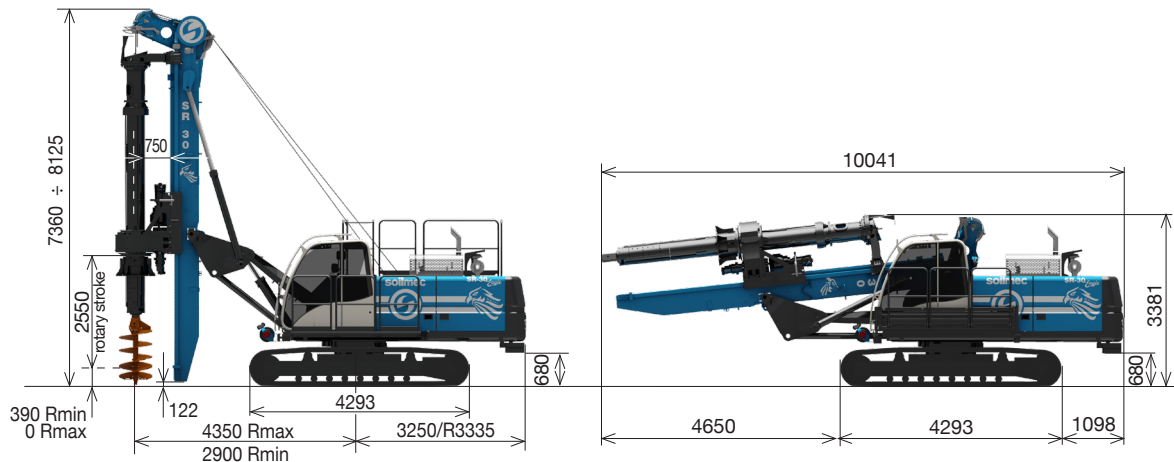
LDP - Large Diameter Piles - LHR version	Upgraded	Upgraded
Operating weight w/o kelly bar <sup>1</sup>	27210 kg	59987 lb
Max pile diameter (tool in front of the mast)	1500 mm	59.1 in
Working radius	2900 - 4350 mm	114.2 - 171.3 in
Tail swing radius	3335 mm	131.3 in
Max pile depth-friction kelly	16.2 m	53.1 ft
Max pile depth-locking kelly	13.2 m	43.3 ft
Operating height Rmax - Rmin	7.4 - 8.2 m	24.3 - 26.9 ft
CCS Stroke	2550 mm	100.4 in
Pull up force	124 kN	27876 lbf
Pull down force	85 kN	19108 lbf
Main winch line pull (1 <sup>st</sup> layer)	102 kN	22930 lbf

Transport configuration - LHR version	Upgraded	Upgraded
Transport weight c/w kelly bar 4x4 <sup>1</sup>	29400 kg	64815 lb
Transport length	10041 mm	32.9 ft
Transport width <sup>2</sup>	2736 mm	9.0 ft
Transport height	3381 mm	11.1 ft

<sup>1</sup> Stg V version. EU stage II version 300 kg (661 lb) less.

<sup>2</sup> With foldable catwalk the width is 186 mm (7.3 in) more



Drawing are not to scale All technical data are purely indicative and subject to change without notice

## Kelly bars for LDP

	Kelly type	Kelly dimens.	Drilling Depth <sup>1</sup>		Weight		L Length		Clearance	
			m	ft	ton	US ton	m	ft	m	ft
3 parts	BL HD	3 x 7,5	19,5	64.0	2,9	3.2	8,5	27.9	4,1	13.5
	BL HD	3 x 9	24,3	79.7	3,4	3.7	10,2	33.5	2,4	7.9
	BL HD <sup>1-5</sup>	3 x 10,5	28,0	93.5	3,8	4.2	11,5	37.7	1,1	3.6
4 parts	BL HD <sup>2</sup>	4 x 7,5	25,7	84.3	2,9	3.2	8,4	27.6	4,3	14.1
	BL HD <sup>2</sup>	4 x 9	32,4	106.3	3,4	3.7	10,0	32.8	2,6	8.5
	BL HD <sup>1-2-5</sup>	4 x 10,5	37,7	123.7	3,9	4.3	11,5	37.7	1,1	3.6
5 parts	FR HD <sup>3-4</sup>	5 x 7,5	32,3	106.0	3,5	3.9	8,4	27.6	4,3	14.1
	FR HD <sup>3-4</sup>	5 x 8,5	38,7	127.0	3,9	4.3	9,6	31.5	3,0	9.8
	FR HD <sup>3-4</sup>	5 x 9	40,2	131.9	4,1	4.5	10,0	32.8	2,6	8.5
	FR HD <sup>3-4-5</sup>	5 x 9,5	42,5	139.4	4,3	4.7	10,4	34.1	2,3	7.5
	FR HD <sup>3-4-5</sup>	5 x 10	45,5	149.3	4,4	4.9	11,0	36.1	1,6	5.2
	FR HD <sup>1-3-4-5</sup>	5 x 10,5	47,5	155.8	4,6	5.1	11,5	37.7	1,2	3.9

## Kelly bar for LHR

Kelly type	Kelly dimens.	Drilling Depth <sup>1</sup>		Weight		L Length		Clearance	
		m	ft	ton	US ton	m	ft	m	ft
BL HD <sup>1</sup>	4 x 4	13,3	43.6	1,9	2.0	4,5	14.9	1,2	3.9
FR HD <sup>1</sup>	5 x 4	16,2	53.1	2,2	2.5	4,5	14.9	1,2	3.9

Note:

Drilling depth is calculated with kelly bar c/w stub 130x130 and drilling tool 1500 mm (4.9 ft) long, all kelly bar have 355 mm (14 in) diameter.

Kelly bars are also available with 324 mm (13 in) diameter (dedicated kit and torque derated needed).

Kelly bars are also available with stub 150x150 and 200x200. Using 200x200 stub; depth +0.2m (0.66ft), L +0.23m (+0.75ft) Clearance -0.2m (-0.66ft)

<sup>1</sup> Drilling depth is calculated with drilling tool 1000 mm (3.3 ft) long

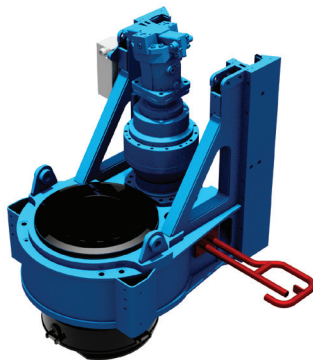
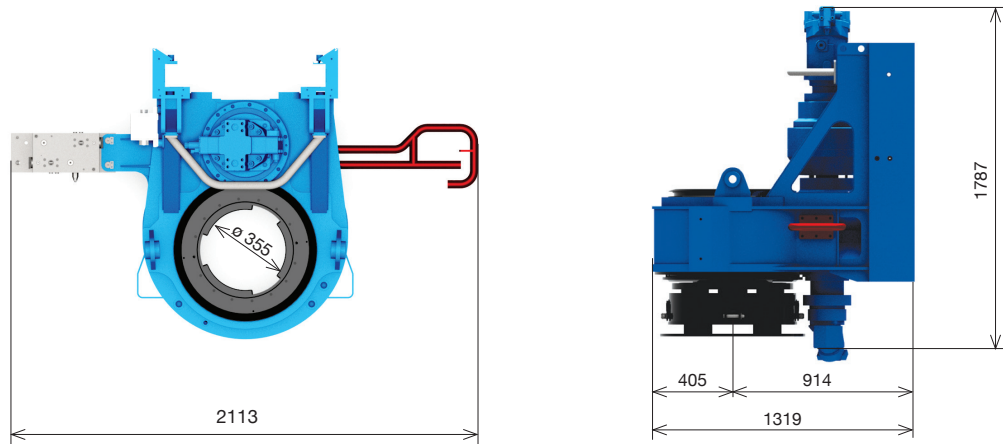
<sup>2</sup> Friction type is also available with the same dimension

<sup>3</sup> Mixed type (3 elements mechanical locking and 2 elements friction) is also available with the same dimension

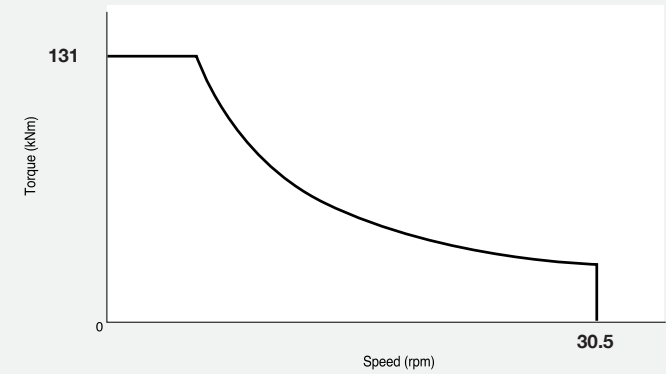
<sup>4</sup> Rotary torque derated

<sup>5</sup> Not self mounting kelly bar

# Rotary



Rotary torque diagram



The rotary implements with a new device that allows the automatic control of the motor displacement. This optimizing the drilling speed and the productivity in every phase.

Kelly bars for rotary OD 355 mm / 14 in.

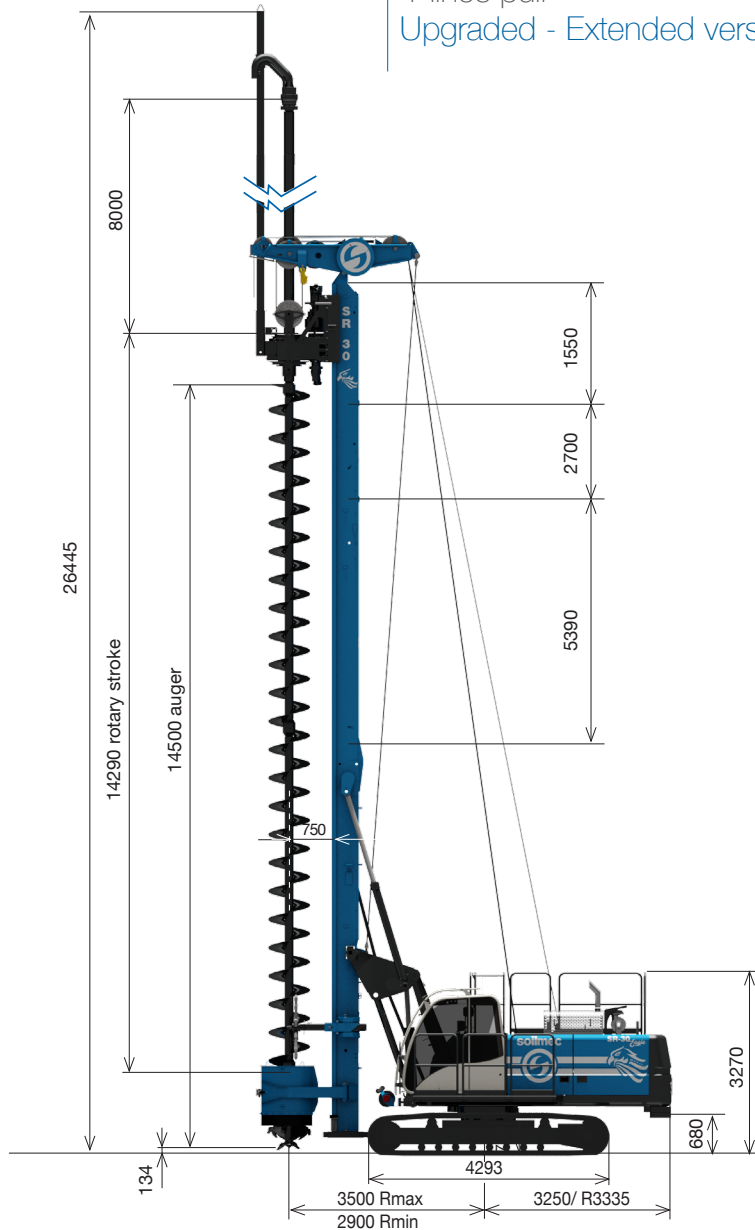
Optional kit for adapting rotary to OD 324mm / 12.8 in is available (torque derating is necessary).

Rotary drive	Spin off type	Spin off type
<b>Max torque</b>	<b>131 kNm</b>	<b>96619 lbf·ft</b>
<b>Rated torque</b>	<b>114 kNm</b>	<b>84228 lbf·ft</b>
<b>Max drilling speed</b>	<b>30,5 rpm</b>	<b>30.5 rpm</b>
<b>Spin-off speed</b>	<b>98 rpm</b>	<b>98 rpm</b>
<b>Rotary Weight (w/o cardan joint &amp; flange)</b>	<b>2345 kg</b>	<b>5170 lb</b>



# CFA

4-lines pull  
Upgraded - Extended version



CFA - Continuous Flight Auger - 4-lines pull	Upgraded - Standard CFA		Upgraded - Extended CFA	
<b>Operating weight</b> (c/w 8 m - 26.2 ft sleeve extension. w/o auger) <sup>1</sup>	<b>32800 kg</b>	72311 lb	<b>33050 kg</b>	72862 lb
<b>Max pile diameter</b>	<b>900 mm</b>	35.4 in	<b>900 mm</b>	35.4 in
<b>Max length of auger</b>	<b>13.5 m</b>	44.2 ft	<b>14.5 m</b>	47.6 ft
<b>Max length of sleeve extension</b>	<b>8 m</b>	26.2 ft	<b>8 m</b>	26.2 ft
<b>Max pile depth</b> (c/w 8 m - 26.2 ft sleeve extension) <sup>2</sup>	<b>21.0 m</b>	68.9 ft	<b>22 m</b>	72.2 ft
<b>Nominal extraction force</b>	<b>300 kN</b>	67442 lbf	<b>300 kN</b>	67442 lbf
<b>Additional crowd force on auger</b> <sup>3</sup>	<b>37 kN</b>	8318 lbf	<b>37 kN</b>	8318 lbf

<sup>1</sup> Necessary 1200 kg (2646 lb) auxiliary counterweight. Stg V version. EU stage II version 300 kg (661 lb) less.

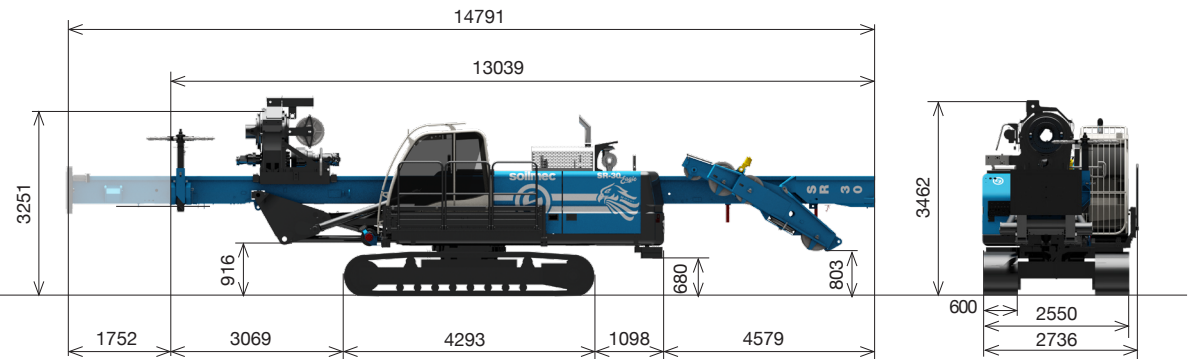
<sup>2</sup> Depth with star auger cleaner. Using rolling cleaner the drilling depth is reduced by 1,2 m (3.9 ft).

<sup>3</sup> Drilling depth is reduced by 0,3 m (1 ft)

Transport CFA - 4-lines pull version	Upgraded - Standard CFA		Upgraded - Extended CFA	
<b>Transport weight</b> <sup>1</sup>	<b>29700 kg</b>	65477 lb	<b>29950 kg</b>	66028 lb
<b>Transport length cw folded cathead</b>	<b>13791 mm</b>	45.2 ft	<b>14791 mm</b>	48.5 in
<b>Transport length w/o mast foot</b>	<b>12039 mm</b>	39.5 ft	<b>13039 mm</b>	42.7 ft
<b>Transport width</b> <sup>2</sup>	<b>2736 mm</b>	9.0 ft	<b>2736 mm</b>	9.0 ft

<sup>1</sup> w/o mast foot 700 kg (1543 lb) and auger cleaner. Stg V version. EU stage II version 300 kg (661 lb) less.

<sup>2</sup> w/o foldable catwalk the width is 2550 mm (8.3 ft)



# Technical data

## Undercarriage



Undercarriage		
Type	variable gauge, telescoping sides frames	variable gauge, telescoping sides frames
Overall width with retracted crawlers	2550 mm	100.4 in
Overall width with extended crawlers	3750 mm	147.6 in
Width of triple grouser track shoes	600 mm	23.6 in
Overall length of crawlers	4293 mm	169 in
Traction force	205 kN	46085 lbf
Travelling speed	1,6 / 2,7 km/h	1 / 1.7 mph

## Winch



Main winch		
Type	controlled descent	controlled descent
Modello	SW100	SW100
Rope layers	2	2
Line pull (1 <sup>st</sup> layer)	102 kN	22930 lbf
Rope diameter	20 mm	0.8 in
Rope speed (1 <sup>st</sup> layer)	72 m/min	236 ft/min

Auxiliary winch		
Type	controlled descent	controlled descent
Rope layers	2	2
Line pull (1 <sup>st</sup> layer)	53 kN	11915 lbf
Rope diameter	16 mm	0.63 in
Rope speed (1 <sup>st</sup> layer)	58 m/min	190 ft/min



Noise emission		
Sound pressure level in cabin - Stage V	80 dB	80 dB
Guaranteed sound power level (2000/14/EC Directive)	109 dB	109 dB

## Engine



Engine		
Engine model <sup>1</sup>	Cummins B 4.5	Cummins B 4.5
Power rating	149 kW @ 2200 rpm	200 HP @ 2200 rpm
Engine conforms to Exhaust emission Standard	EU stage V US EPA Tier 4f	EU stage V US EPA Tier 4f
Fuel tank capacity	350 l	92 US gal
AD Blue tank capacity	56,8 l	15 US gal

<sup>1</sup> Cummins QSB 4.5 - EU stage II 149 kW (200 HP)

## Hydraulic system



Hydraulic system		
Main pumps flow	2x 121 l/min	2x 32 US gal/min
Third pump flow	59 + 37 l/min	16 + 10 US gal/min
Hydraulic oil tank capacity	250 l	66 US gal

## Crowd system



CCS_Cylinder Crowd System		
Stroke	3500 mm	137.8 in
Pull up crowd force	124 kN	27876 lbf
Pull down crowd force	85 kN	19108 lbf
Speed up (slow / fast)	12 m/min	39 ft/min
Speed down (slow / fast)	9,3 m/min	31 ft/min

# Configurations

<b>UNDERCARRIAGE</b>	
Variable gauge, telescopic side frames	●
Machine anchor points for transport	●
Radio remote control for tramming operation	●
<b>UPPER STRUCTURE</b>	
Diesel engine Cummins B 4.5 EU Stage V – US EPA Tier 4F	●
Diesel engine Cummins QSB 4.5 - EU stage II	○
Start and slow system	●
Harness technology for electrical system	●
Automatic Greasing package	○
PTO kit for washing lancer	○
Washing pump kit	○
Prearrangement for air compressor kit	○
Catwalks for centre of turret	●
Rear ladder for torret access	●
Foildable side catwalks for cabin	○
Machine lifting kit (harbor use)	○
Acoustic & light alarm for tramming	●
Lighting led system package	○
Sound proofed canopies	●
<b>CAB</b>	
Front protective grille	●
Falling object protective structure (FOPS)	●
Rearview mirrors	●
Comfort packakge (cup holder, radio, A/C system, USB port and 12 V power socket, roll-up awning, courtesy lights)	●
Operator seat (air suspension, lumbar support, fully adjustable positioning, safety belt & operator presence micro-switch)	●
Front tools support	○
Service rope holder	○
Lighting system in front of the cab	●
Transport kit for disassembled catwalk	○
<b>CONTROL AND MONITORING SYSTEM</b>	
DMS ON BOARD with technological package	●
DMS PC	●

DMS manager 4.0	○
GSM / GPRS / WIFI Modem	●
PLC processor for electrically actuated functions	●
DMS ON BOARD adjustable monitor 12" touch screen	●
Video control by 4 cameras with display in the cab	●
<b>WINCHES</b>	
Main winch SW100 model	●
Load cell for main winch	○
Limit switch for rope winding and winches	●
Depthmeter for main winch	●
Anti-slack system for main winch	○
Service winch SW56 model	●
Load cell for service winch	●
<b>ROTARY UNIT</b>	
RD130 model Max torque intermitted: 131 kNm (96619 lbf)	●
Interchangeable rotary sleeve	●
Quick disassembling rotary kit	○
Automatic greasing kit for cradle	○
Automatic control of motor displacement	●
<b>MAST</b>	
Modular main mast	●
Mast guide cleaner	●
Monolithic mast	○
Kit for assisted rasing mast	○
Lower removable mast element	●
Manual upper mast folding (for CFA)	○
Hydraulic cathead folding kit	○
Cathead greasing kit	○
<b>KELLY BAR TECHNOLOGY</b>	
Rotary sleeve with 3 ribs OD 355 mm (14 in)	●
Rotary sleeve with 3ribs OD 324 mm (12.8 in)	○
Spin off discharging system	●
Cardan joint	●
Flange for casing driving d.1300 (d.51.1 in)	●
Flange for casing driving d.1500 (d.59 in)	○

Automatic return to the centre hole	○
Kelly bar guide	●
<b>CFA TECHNOLOGY</b>	
Hydraulic prearrangement for CFA 4- lines pull	○
HD-4 or HD-5 sleeve 3 m (118 in) long	○
HD-4 or HD-5 sleeve 6 m (236 in) long	●
HD-4 or HD-5 sleeve 8 m (315 in) long	○
DMS ON BOARD with automatic auger lifting	○
Autodrilling package	○
Autorotary package	○
Additional pull-down winch 37 kN (8318 lbf)	○
Openable lower guide d.900 mm (35.4 in)	○
Auger cleaner star type	○
Double roller auger cleaner for d.900 mm (35.4 in) auger	○
Two pressure transducers kit	○
Hydraulic prearrangement for VTH-1 vibrator	○
Automatic greasing package for CFA cathead	○
Package for CFA 4-lines pull 13m (42.7 ft) upper mast extension	●
Package for CFA 4-lines pull 14m (45.9 ft) upper mast extension for extended version	○
Aux counterweight 1200 kg (2646 lb) for CFA	●
Warning system for CFA sleeve extension coupling (patent pending)	●
4 in swivel and bent curve	○
5 in swivel and bent curve	●
WiFi pressure trasducer	○
Drilling energy measurement kit for displacement/CFA	●
Automatic greasing kit for concrete swivel	○

● standard

○ optional



[www.soilmec.it](http://www.soilmec.it)

This brochure has been edited and distributed by SOILMEC Spa. The present document cancels and override any previous ones. This brochure shall not be distributed, reproduced or exhibited without SOILMEC Spa. authorization in accordance with 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](http://www.soilmec.it)