

# SR-135 HIGH TECHNOLOGY

**soilmeco**  
Drilling and Foundation Equipment



# SR-135 HiT, designed around you.

A Soilmec rig offers much more than simple power.

Engineered to be multifunctional and technology-adaptable.

Robust and accurate design for the most challenging jobsite conditions.

Top performance combined with the best comfort and noise control that has ever been achieved.

Longer mast allows to drill deeper piles and drive longest casing sections.

Up to 4000 mm (157 in) of drilling diameter.

Depth to 138 m (453 ft).

Self-mounting kelly up to 24,5 m (80 ft) long.

Sound power level: 109 dB(A), and sound pressure level in cabin of only 78 dB(A)

Conversion kit easy to fit minimized downtime for conversion into CFA or Displacement (DP) piles.

More performance. Better performance. Since forever.





# Drive system.

Our challenge:  
uncompromised performance and efficiency  
with low consumption and emission.

To achieve these results, our rig has been equipped with a powerful CAT C18 Acert (470 kW - 630 HP) and a complete package of innovations including the “start & slow” system, a new control of the radiators and its air flows.

All configurations have a continuous fan control system that automatically adjust the speed according to needs, reducing fuel consumption and noise.

The SR-135 whole project aims at reducing noise emissions and easing maintenance by means of: hydraulically driven radiators, new canopy design in the area close to the engine, optimization of the sound-absorbing materials, special care in the air flow controls and specific attention on the parts subject to vibrations.

The combination of all these solutions guarantees the lowest noise in its segment with values LWA and LpA of 109 dB and 78 dB for all available engines.



# Environment starts from safety.

Safety is Soilmec's top priority. We constantly enhance product design and we're doing our best to help you meet your safety goals and create safe working environments. We consider the safety of everyone in, on or around Soilmec equipment when developing new products or enhancing safety features for existing products. Our equipment has several safety features such as but not limited to:

- Cab Lighting
- Visibility Arrangements
- Catwalks, non-slip steps and handrails
- Safety cameras
- Operator Not Present Monitoring System

Every Soilmec equipment is equipped with the CE EN16228 certification package which includes all accessories / devices to ensure the highest level of accessibility and safety in accordance with European standards.

Each machine under goes the most stringent functional and performance tests: all loads are detected and compared with the expected values to guarantee the highest quality in production.



TECHNOLOGY  
FOR  
SAFETY

# Individuality, quality and technology.



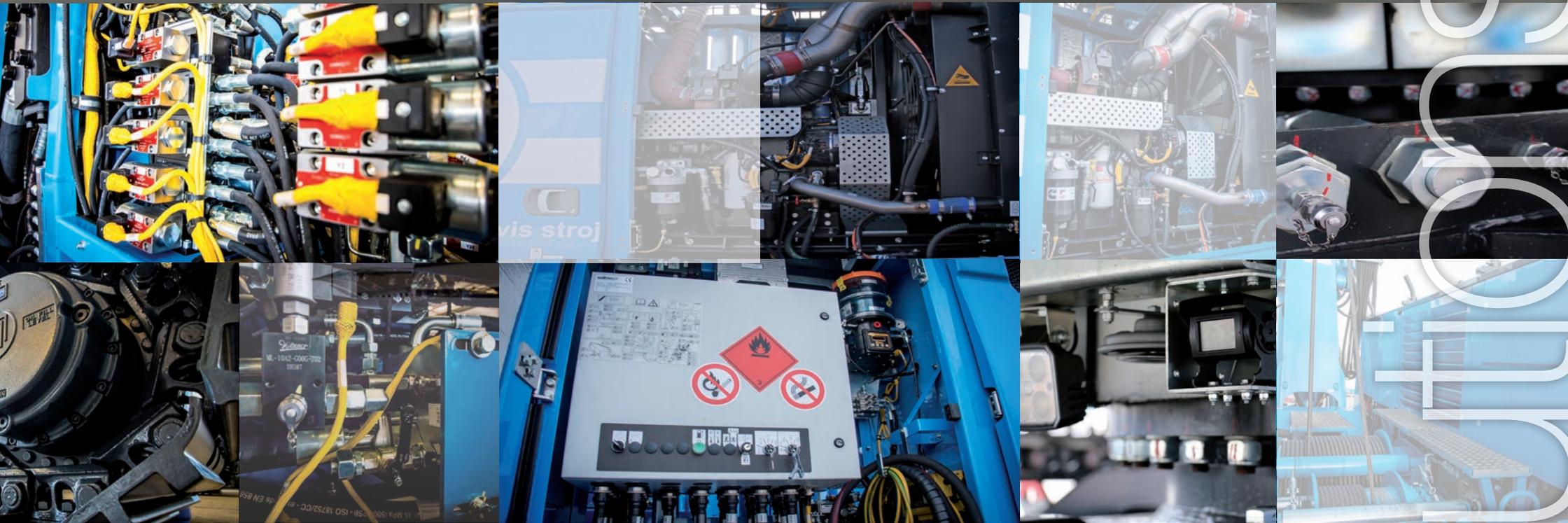
Providing more comfort, added safety, and greater reliability, our ergonomic designed operator's cab will help you produce more. By assessing the specific application and listening properly to the wishes and requirements of the operators, our engineers have designed what we believe to be the most comfortable and productivity-enhancing cabin.

A unique solution in this category (1050 mm /41.6 in wide) in which several accessories facilitate the work of the operator.

- **Improved operator performance** – Reduced cognitive fatigue and enhanced productivity via the intuitive and visually DMS display monitor. Effortless operation and improved control response resulting from new joysticks with designed ergonomic handles. Fully adjustable seat, new air conditioner system and sliding door are some of the accessories you can find inside Soilmec cab to meet your operator needs for comfort and productivity
- **Enhanced safety** – The large windows are designed to improve visibility and brightness improving the general job site safety. Maximum operator feeling of full awareness of all the surrounding environment via external camera system with direct feed to overhead monitors in cab.



# Choose according to you needs.



**Anti-slack rope system (Patent Pending).** The system is managed by the DMS ON BOARD and suggests when to slow down the kelly bar descent to avoid collisions with the bottom of the hole and excessive unwinding of the main rope.

**Automatic return to centre hole.** Designed to speed up the discharging phase.

**Main winch SW470 model.** Main winch in single layer with 470 kN (105660 lbf) line pull.

**Drilling axis at 1800 mm (70 in).** A simple package to change the drilling axis from 1550 to 1800 mm (from 61 into 70 in).

**CFA/DP technology.** Quick and easy package to convert the rig from LDP to CFA/DP, using long rotary stroke version up to 24 m (78.7 ft)

**CSP technological package.** The perfect solution for your cased secant piles.

**CFA autorotary.** The operator can activate this function by a dedicated pedal or joystick.

**CFA autodrilling.** Automated CFA operations by means of electronic device for optimal control of drilling parameters.

**Long service rope.** 32 m (105 ft) longer than standard rope.

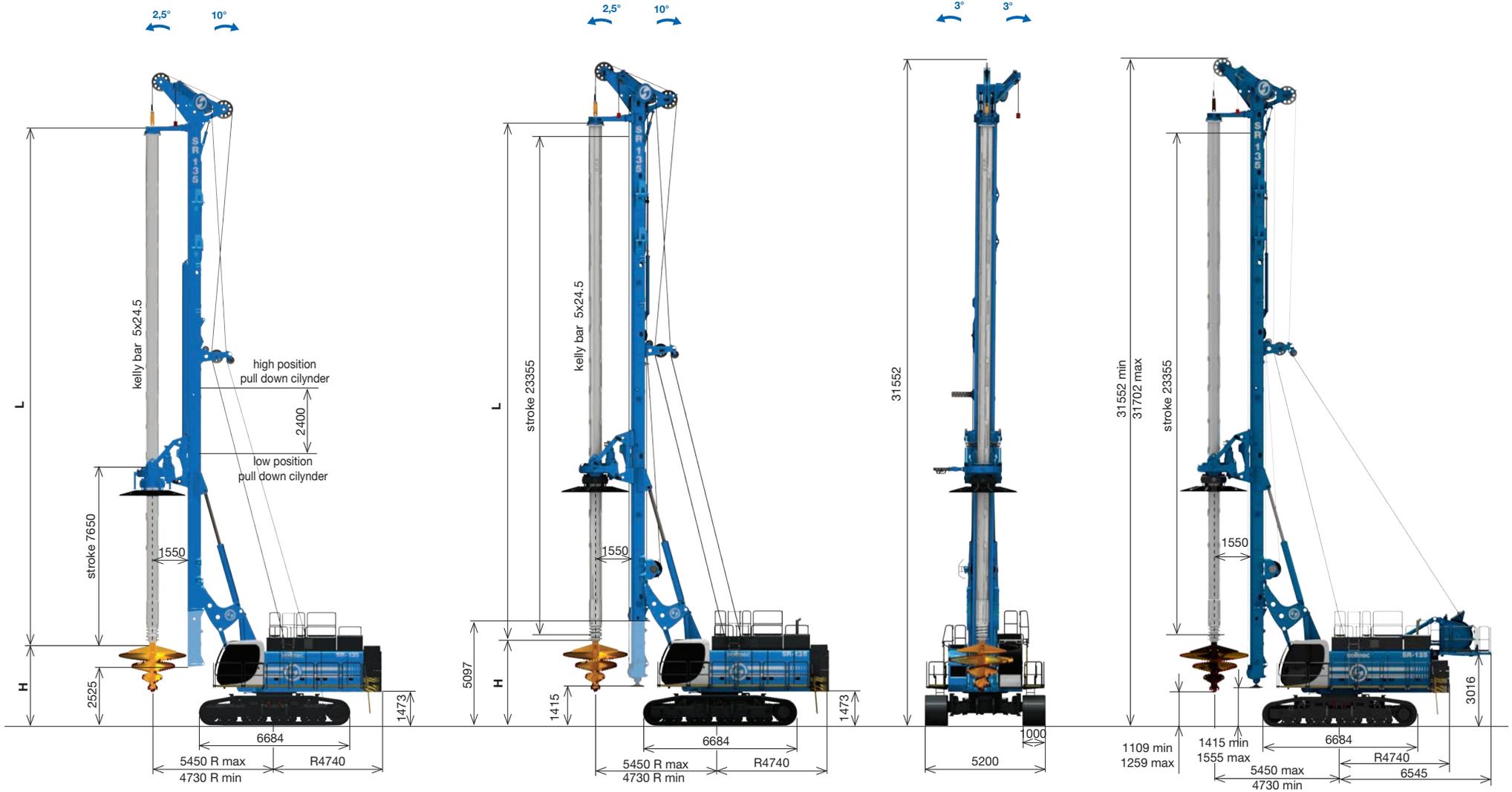
**Automatic Greasing package.** No more worries, self-greasing of most critical parts.

# Large Diameter Piles

Cylinder Crowd System

Winch Crowd System

Upgraded main winch



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

## Kelly bars for LDP

LDP - Large Diameter Piles - CCS version		
Operating weight w/o kelly bar	131100 kg	289026 lb
Max pile diameter (tool along the mast)	3000 mm	118 in
Max pile diameter c/w increased drilling axis <sup>1</sup> (tool along the mast)	3500 mm	138 in
Max pile diameter w/o lower mast section <sup>1-2</sup> (tool below the mast)	3500 mm	138 in
Max pile diameter c/w increased drilling axis <sup>1</sup> & w/o lower mast section <sup>1-2</sup> (tool below the mast)	4000 mm	157 in
Working radius <sup>4</sup>	4730 - 5450 mm	186 - 214 in
Tail swing radius	4740 mm	15.5 ft
Max pile depth-friction kelly <sup>5</sup>	138,2 m	453 ft
Max pile depth-locking kelly	115,1 m	377 ft

LDP - Large Diameter Piles - WCS version		
Operating weight w/o kelly bar	133000 kg	293215 lb
Max pile diameter (tool along the mast)	2800 mm	110 in
Max pile diameter c/w increased drilling axis <sup>1</sup> (tool along the mast)	3300 mm	130 in
Max pile diameter w/o lower mast section <sup>1-3</sup> (tool below the mast)	3500 mm	138 in
Max pile diameter c/w increased drilling axis <sup>1</sup> & w/o lower mast section <sup>1-3</sup> (tool below the mast)	4000 mm	157 in
Working radius <sup>4</sup>	4730 - 5450 mm	186 - 214 in
Tail swing radius	4740 mm	15.5 ft
Max pile depth-friction kelly <sup>5</sup>	138,2 m	453 ft
Max pile depth-locking kelly	115,1 m	377 ft

<sup>1</sup> package on request

<sup>2</sup> cylinder crowd in upper position - depth reduced by 2,4 m (7.8 ft)

<sup>3</sup> rotary stroke reduced - depth reduced by 2,4 m (7.8 ft)

<sup>4</sup> working radius with increased drilling axis: 4980 - 5700 mm (199 - 228 in)

<sup>5</sup> main winch 470 kN (105658 lb) double layers required

	Kelly type	Kelly dimens.	Drilling Depth <sup>1</sup>		Weight	L Length		H						
			m	ft		t	t(US)	m	ft	CCS_low	CCS_high	WCS		
3 pars <sup>2</sup>	BL HD	3 x 11	28,6	93.8	7,8	8.6	12,5	41.0	9,7	31.8	12,1	39.7	16,7	54.8
	BL HD	3 x 12	32,2	105.6	8,4	9.2	13,8	45.3	9,7	31.8	12,1	39.7	15,5	50.9
	BL HD	3 x 13,5	36,1	118.4	9,2	10.1	15,0	49.2	9,7	31.8	12,1	39.7	14,2	46.6
	BL HD	3 x 14,5	39,2	128.6	9,8	10.7	16,1	52.8	9,7	31.8	12,1	39.7	13,2	43.3
	BL HD	3 x 16	43,2	141.7	10,6	11.6	17,5	57.4	9,7	31.8	11,8	38.7	11,8	38.7
	BL HD	3 x 19,5	53,9	176.8	12,5	13.8	21,0	68.9	8,3	27.2	8,3	27.2	8,3	27.2
	BL HD	3 x 21,5	59,9	196.5	13,6	15.0	23,0	75.5	6,3	20.7	6,3	20.7	6,3	20.7
	BL HD	3 x 24,5	68,8	225.7	15,3	16.8	25,9	85.0	3,3	10.8	3,3	10.8	3,3	10.8
	BL HD	4 x 11	38,1	125.0	9,2	10.1	12,5	41.0	9,7	31.8	12,1	39.7	16,7	54.8
	BL HD	4 x 12	43,3	142.1	9,8	10.8	13,8	45.3	9,7	31.8	12,1	39.7	15,5	50.9
4 pars <sup>2</sup>	BL HD	4 x 13,5	48,0	157.5	10,8	11.9	15,0	49.2	9,7	31.8	12,1	39.7	14,2	46.6
	BL HD	4 x 14,5	52,5	172.2	11,5	12.6	16,1	52.8	9,7	31.8	12,1	39.7	13,2	43.3
	BL HD	4 x 16	57,9	190.0	12,4	13.7	17,5	57.4	9,7	31.8	11,8	38.7	11,8	38.7
	BL HD	4 x 17,5	65,0	213.3	13,4	14.7	19,2	63.0	9,7	31.8	10,0	32.8	10,0	32.8
	BL HD	4 x 19,5	72,1	236.5	14,7	16.1	21,0	68.9	8,3	27.2	8,3	27.2	8,3	27.2
	BL HD	4 x 21,5	80,1	262.8	16,0	17.6	23,0	75.5	6,3	20.7	6,3	20.7	6,3	20.7
	BL HD	4 x 24,5	92,0	301.8	17,3	19.7	25,9	85.0	3,3	10.8	3,3	10.8	3,3	10.8
	BL HD	5 x 13,5	60,4	198.2	12,5	13.8	15,0	49.2	9,7	31.8	12,1	39.7	14,2	46.6
	BL HD	5 x 14,5	65,7	215.6	13,3	14.7	16,1	52.8	9,7	31.8	12,1	39.7	13,2	43.3
	BL HD	5 x 16	72,4	237.5	14,5	16.0	17,5	57.4	9,7	31.8	11,8	38.7	11,8	38.7
5 pars <sup>2-3</sup>	BL HD	5 x 17,5	81,4	267.1	15,7	17.3	19,2	63.0	9,7	31.8	10,0	32.8	10,0	32.8
	BL HD	5 x 19,5	90,3	296.3	17,3	19.1	21,0	68.9	8,3	27.2	8,3	27.2	8,3	27.2
	BL HD	5 x 21,5	100,1	328.4	18,9	20.9	23,0	75.5	6,3	20.7	6,3	20.7	6,3	20.7
	BL HD	5 x 24,5	115,1	377.6	21,3	23.5	25,9	85.0	3,3	10.8	3,3	10.8	3,3	10.8
	FR HD	6 x 16	87,6	287.4	15,2	16.7	17,5	57.4	9,7	31.8	11,8	38.7	11,8	38.7
	FR HD	6 x 17,5	97,9	321.2	16,4	18.1	19,2	63.0	9,7	31.8	10,0	32.8	10,0	32.8
	FR HD	6 x 19	105,4	345.8	17,7	19.5	20,5	67.3	8,8	28.9	8,8	28.9	8,8	28.9
	FR HD	6 x 19,5	108,5	356.0	18,1	19.9	21,0	68.9	8,3	27.2	8,3	27.2	8,3	27.2
	FR HD	6 x 21,5	120,5	395.3	19,8	21.8	23,0	75.5	6,3	20.7	6,3	20.7	6,3	20.7
	FR HD	6 x 24,5	138,2	45.0	22,3	24.5	25,9	85.0	3,3	10.8	3,3	10.8	3,3	10.8

deep referred to 1550 mm (61 in) drilling axis. Depth reduced by 300 mm (11.8 in) using 1800 mm (70.9 in) drilling axis

kelly over 19 m (62.3 ft) length becomes not self-mounting w/o lower mast section

<sup>1</sup> drilling depth is reduced by 2,4m (7.8 ft) without lower mast section or cylinder crowd in high position; drilling depth is calculated with kelly bar c/w stub 200x200 and drilling tool 1500 mm (4.9 ft) long

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

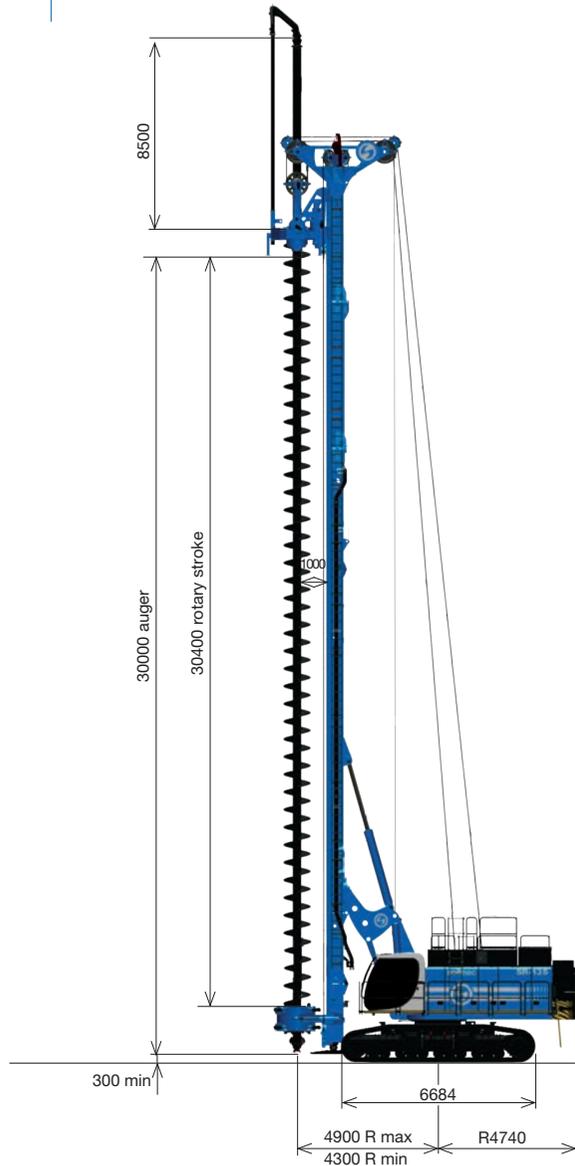
<sup>3</sup> special kelly bars are available in order to increase the residual extraction force (rotary torque derated)

<sup>4</sup> rotary torque derated

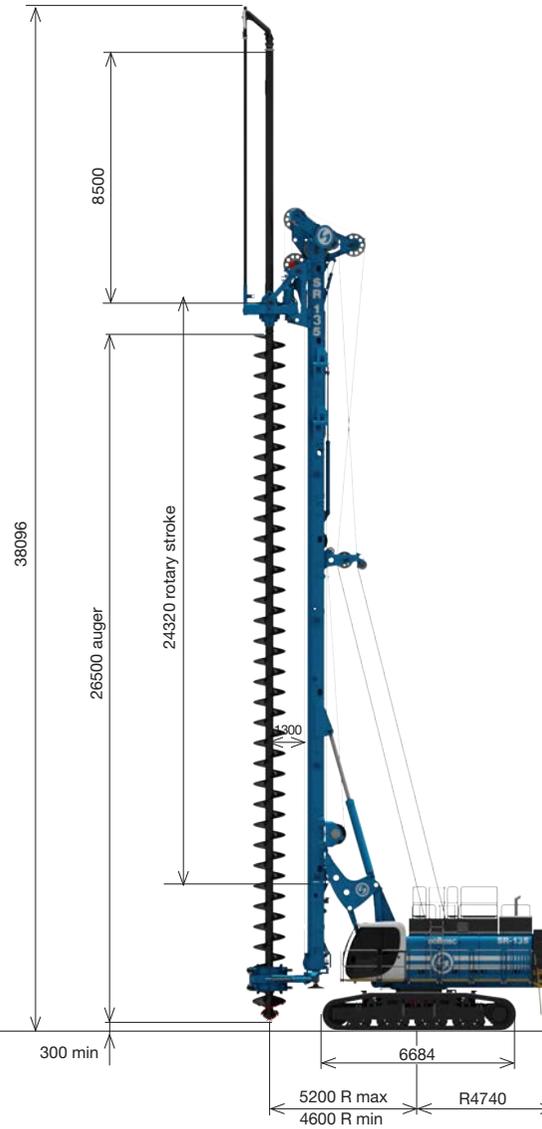
<sup>5</sup> main winch 470 kN (105658 lb) double layers required

# CFA / DP / TJ applications

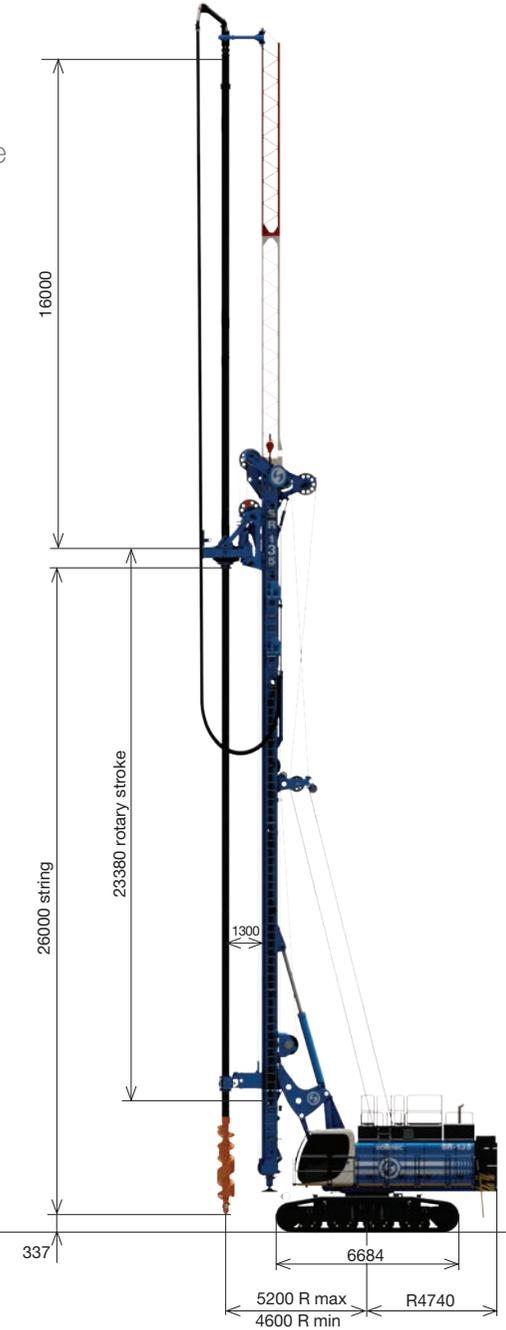
CFA  
4-lines pull



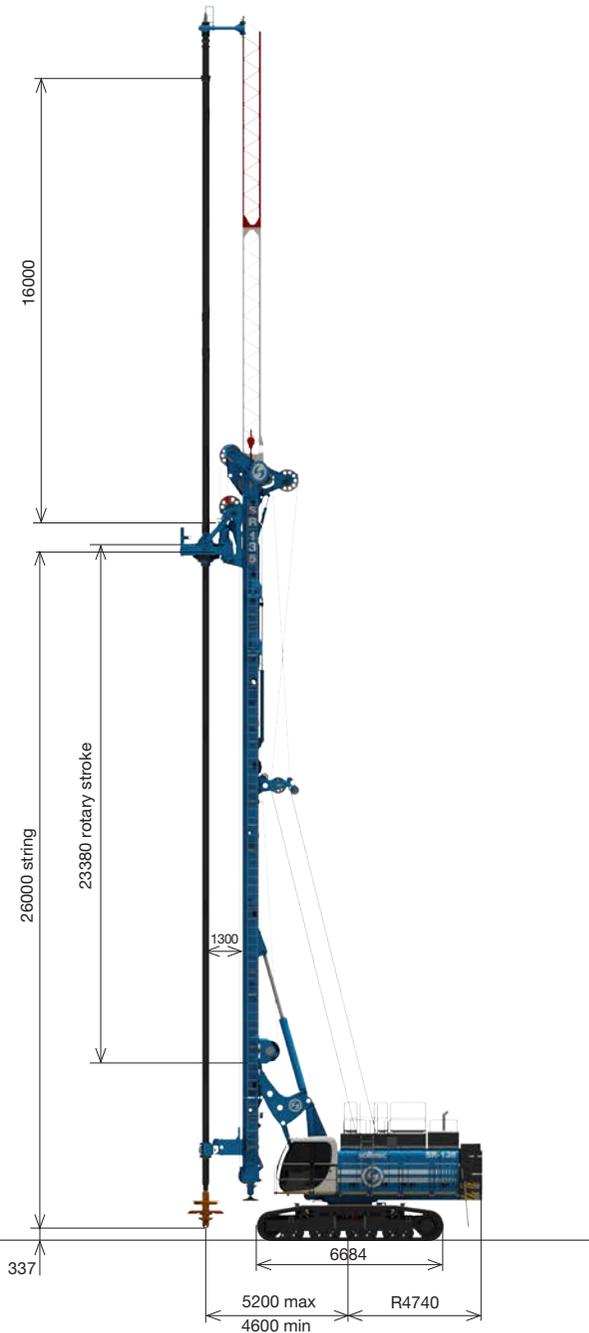
CFA  
Quick Change



DP / TCT  
Quick Change



TJ  
Quick Change



#### CFA - Continuous Flight Auger - 4-lines pull - standard version

Operating weight (c/w 6 m - 19.6 ft sleeve extension, w/o auger)	131800 kg	290566 lb
Max pile diameter	1200 mm	47.24 in
Max length of auger (max length of sleeve extension)	26 m (8,5 m)	85 ft (28 ft)
Max pile depth (c/w 8,5 m - 27.9 ft sleeve extension) <sup>1</sup>	34,5 m	113 ft
Nominal extraction force	1296 kN	291347 lbf
Nominal crowd force on auger <sup>2-3</sup>	540 kN	121395 lbf

#### CFA - Continuous Flight Auger - 4-lines pull - special version

Operating weight (c/w 6 m - 19.6 ft sleeve extension, w/o auger)	133100 kg	293432 lb
Max pile diameter	1200 mm	47.24 in
Max length of auger (max length of sleeve extension)	30 m (8,5 m)	98 ft (28 ft)
Max pile depth (c/w 8,5 m - 27.9 ft sleeve extension) <sup>1</sup>	38,5 m	126 ft
Nominal extraction force	984 kN	221208 lbf
Nominal crowd force on auger <sup>2-3</sup>	540 kN	121395 lbf

#### CFA - Continuous Flight Auger - Quick change

Operating weight (c/w 8,5 m - 27.9 ft sleeve extension, w/o auger)	134550 kg	296632 lb
Max pile diameter	1200 mm	47.24 in
Max length of auger (max length of sleeve extension)	26,5 m (8,5 m)	87 ft (28 ft)
Max pile depth (c/w 8,5 m - 27.9 ft sleeve extension) <sup>1</sup>	32,7 m	107 ft
Nominal extraction force	888 kN	199630 lbf
Nominal crowd force on auger	540 kN	121395 lbf

#### DP - Displacement pile - Quick change <sup>4</sup>

Operating weight (w/o string and tool and extension 16 m - 52.5 ft)	132400 kg	291889 lb
Max recommended DP pile diameter	800 mm	31.50 in
Max recommended TCT pile diameter	1000 mm	39.37 in
Max length of string	26 m	85 ft
Max pile depth w/o lattice boom extension c/w 8,5 m (27.9 ft) string extension	31,5 m	103 ft
Lattice boom extension length	16 m	52 ft
Max pile depth c/w lattice boom extension	39 m	128 ft

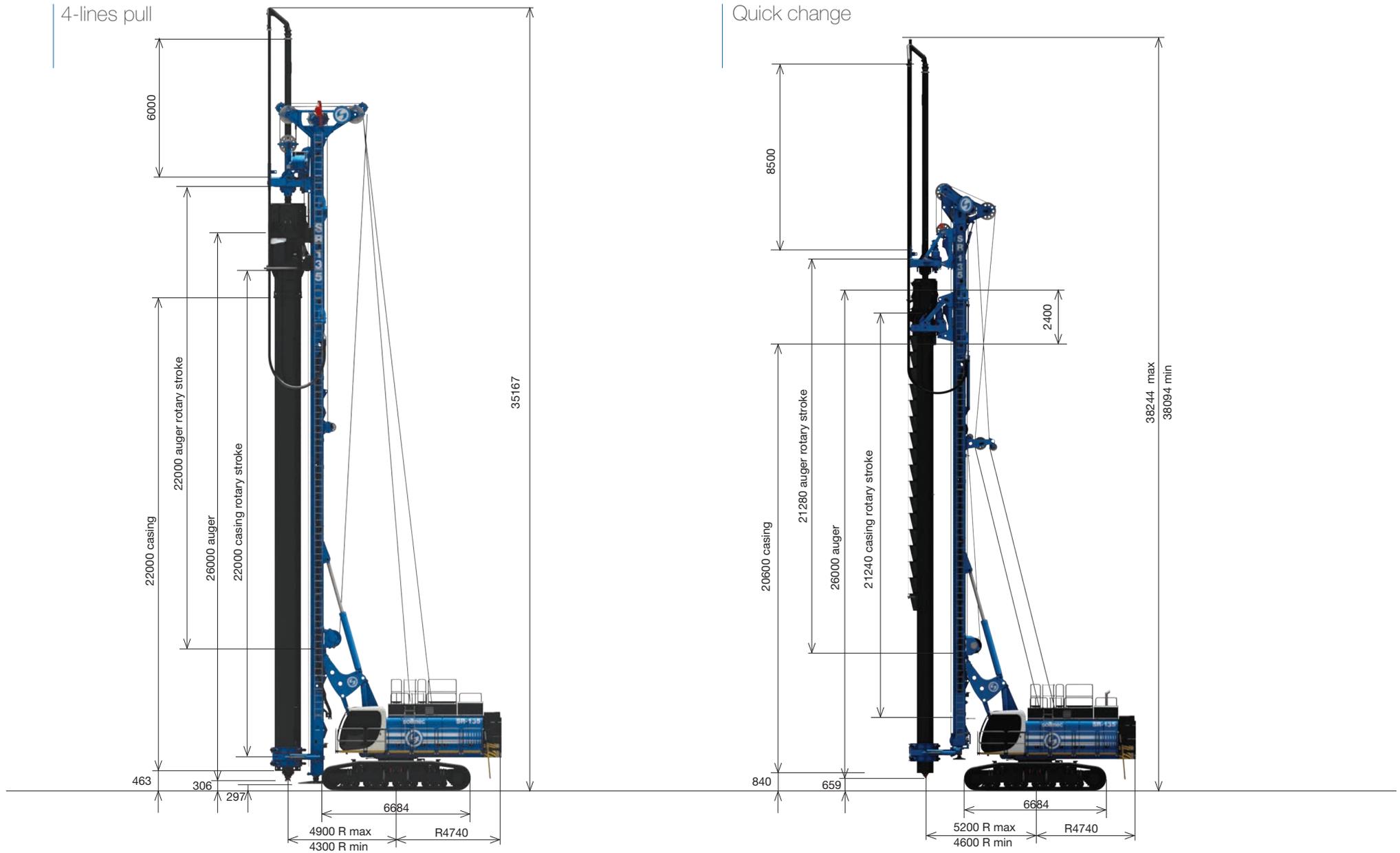
#### TJ - Turbo jet - Quick change <sup>4</sup>

Operating weight (w/o string and tool and extension 16 m - 52.5 ft)	132800 kg	292771 lb
Max recommended TJ pile diameter	1500 mm	59.06 in
Max length of string	26 m	85 ft
Max pile depth w/o lattice boom extension c/w 6 m (19.6 ft) string extension	29 m	95 ft
Lattice boom extension length	16 m	52 ft
Max pile depth c/w lattice boom extension	39 m	128 ft

<sup>1</sup> depth reduced of 1,8 m (5.90 ft) with roller auger cleaner <sup>2</sup> package on request - depth reduced by 1,4 m (4.59 ft)

<sup>3</sup> 100 kN (22480 lbf) also available on request - depth reduced by 250 mm (0.82 ft) <sup>4</sup> DP/TCT and TJ are also available with 4-line pull version

# CSP applications



**CSP - Cased secant piles - 4-lines pull**

<b>Operating weight</b> (c/w 6 m - 19.6 ft sleeve extension, w/o auger and casing)	<b>151800 kg</b>	<b>334658 lb</b>
<b>Max pile diameter</b>	<b>1200 mm</b>	<b>47.24 in</b>
<b>Max augered depth</b> w/o auger cleaner <sup>1</sup>	<b>28,6 m</b>	<b>94 ft</b>
<b>Max cased depth</b> w/o auger cleaner <sup>1</sup>	<b>22,4 m</b>	<b>73 ft</b>
<b>Casing max torque</b>	<b>400 kNm</b>	<b>295020 lbf*ft</b>
<b>Max casing speed rotation</b>	<b>9,6 rpm</b>	<b>9.6 rpm</b>
<b>Auger max torque</b>	<b>411 kNm</b>	<b>303133 lbf*ft</b>
<b>Max auger speed rotation</b>	<b>34,7 rpm</b>	<b>34.7 rpm</b>
<b>Nominal auger pull up/down</b>	<b>1296 / 400 kN</b>	<b>291347 / 89922 lbf</b>
<b>Nominal casing pull up/down</b>	<b>940 / 540 kN</b>	<b>211317 / 121395 lbf</b>

Special version available: Max augered depth w/o cleaner 32,6 m (1070 ft), max cased depth 26,4 m (866 ft), max diameter 900 mm (35.4 in)

**CSP - Cased secant piles - Quick change**

<b>Operating weight</b> (c/w 8,5 m - 27.9 ft sleeve extension, w/o auger and casing)	<b>143500 kg</b>	<b>316363 lb</b>
<b>Max pile diameter</b>	<b>800 mm</b>	<b>31.5 in</b>
<b>Max augered depth</b> w/o auger cleaner <sup>1</sup>	<b>29,7 m</b>	<b>97.4 ft</b>
<b>Max cased depth</b> w/o auger cleaner <sup>1</sup>	<b>21 m</b>	<b>67 ft</b>
<b>Casing max torque</b>	<b>411 kNm</b>	<b>303133 lbf*ft</b>
<b>Max casing speed rotation</b>	<b>9,7 rpm</b>	<b>9.7 rpm</b>
<b>Auger max torque</b>	<b>250 kNm</b>	<b>184387 lbf*ft</b>
<b>Max auger speed rotation</b>	<b>19,6 rpm</b>	<b>19.6 rpm</b>
<b>Nominal auger pull up</b>	<b>520 kN</b>	<b>116900 lbf</b>
<b>Nominal casing pull up/down</b>	<b>360 / 360 kN</b>	<b>14163 / 14163 lbf</b>

<sup>1</sup> depth reduced of 0,6 m (1.9 ft) with cleaner

Soilmec competitive edge in CSP mode is a higher performance which is achieved by having two independent rotaries: during auger lifting to remove the spoil, there is no need to extract the casing.

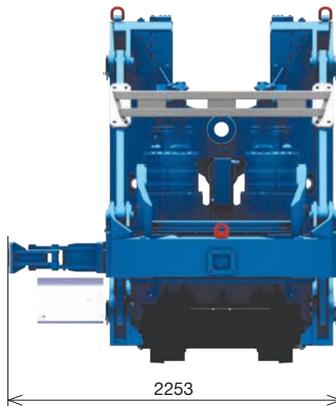
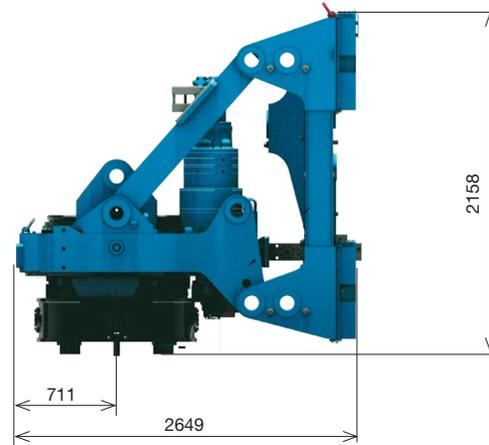
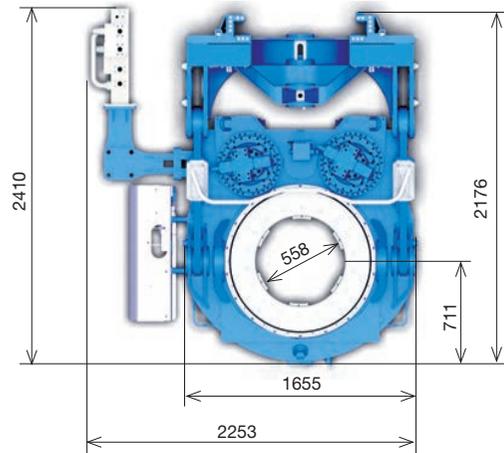
940 kN (211317 lbf) extraction force on casing, the highest extraction force within its class range.

This thanks to the additional winch, which is included in our standard package.

Soilmec innovative solution is a special kit for a rapid conversion of your drilling rig into CSP mode. The existing rotary is used to drive the casing.

The easy conversion allows you to choose the best rig configuration to suit your different needs.

# Rotary



Rotary torque diagram



The new rotary design allows a longer stroke, a higher extraction force and maximum use of available power. Every detail has been accurately designed to increase jobsite production.

The rotary sleeve is composed of 6 symmetrical and interchangeable ribs in order to reduce maintenance time. The inner passage is 617 mm (24.2 in) without ribs.

All our rotary heads are equipped with an automatic control of motor displacements. This optimizing the drilling speed and the productivity in every phase.

Our rotary can be equipped with a new system to variate the drilling axis clearance, from 1550 mm to 1800 mm (from 61 in to 70 in).

Type	Multigear version	Multigear version
Max timed torque overboosted	445 kNm	328515 lbf·ft
Max torque	435 kNm	320834 lbf·ft
1 <sup>st</sup> gear rated torque	411 kNm	303133 lbf·ft
Max drilling speed	35 rpm	35 rpm
Max spin off speed	81 rpm	81 rpm
Weight (w/o cradle and casing flange)	7000 kg	15432 lb

# DMS product suite

Integrated solution embracing smart technology to optimise the use of machinery and increase efficiency on job sites.

Soilmec DMS helps to gain unique insights into ground engineering and DW business by collecting, analysing and managing the most relevant information from the equipment.

The system is intended to support construction companies in daily operations and business processes by improving decision making and leveraging the potential of data analytics.



## DMS ON BOARD

Built-in instrumentation for equipment supervision and performance control.



## DMS PC

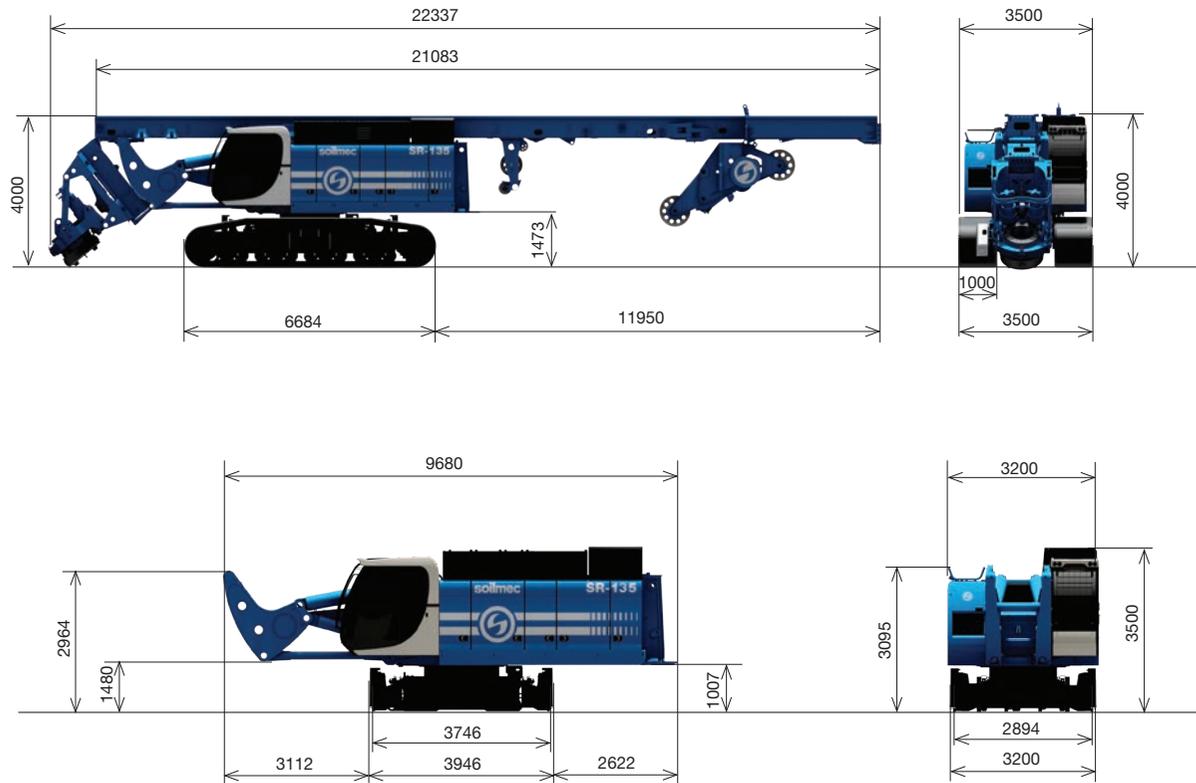
Licensed software for machine and production data processing and reporting.



## DMS MANAGER 4.0

Cloud app for asset, fleet and site management.

# Transport, dimensions & weights



## Streamlined mast disassembly

A new useful system (patent pending) to make mast disassembly easy, fast and safe. This innovative system consists of mechanical lifting accessories (which are fixed on the mast and kinematic mechanism) and a hydraulic device to move the mast cylinders during assembling and disassembling operations. You only need one external service crane to remove the mast from base carrier.

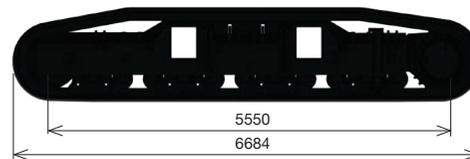
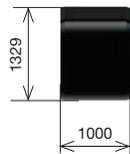
### Transport configuration

Transport width (cw crawler / w/o crawler)	3500 / 3200 mm	138 / 126 in
Transport height (cw crawler / w/o crawler)	4000 / 3500 mm	157 / 138 in
Transport length (w/o rotary, cw mast foot / w/o mast)	21550 / 9680 mm	848 / 381 in
Transport weight CCS (std / min) <sup>1</sup>	93800 / 49400 kg	206791 / 108907 lb
Transport weight WCS (std / min) <sup>1</sup>	100200 / 49400 kg	220901 / 108907 lb

<sup>1</sup> std = cw crawler and lower mast element and w/o rotary; min = w/o rotary, crawler and lower mast element

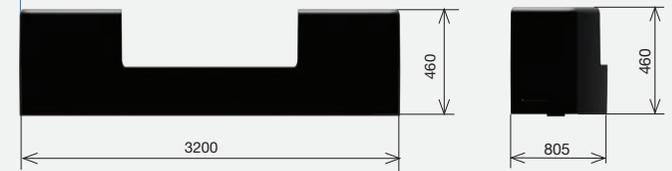


Transport configuration	CCS	CCS	WCS	WCS
Transport weight	19900 kg	43872 lb	24300 kg	53572 lb
Transport length	23423 mm	76.8 ft	24339 mm	79.9 ft
Transport width	2500 mm	8.2 ft	2500 mm	8.2 ft

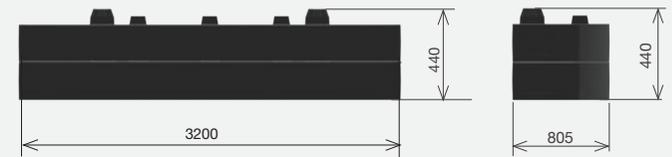


Transport configuration		
Transport weight for each element	13300 kg	29321 lb
Transport length	6684 mm	263.15 in

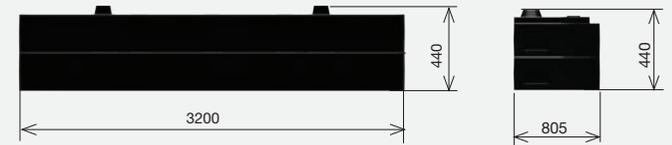
### Stackable counterweight



n.1 x 4 ton (8818 lb)



n.1 x 1,4 ton (3086 lb)



n.4 x 4,4 ton (9700 lb)

*Weights referred to Kelly version. Different configuration of counterweights are available for other versions.*

Transport stackable counterweight		
Transport length	3200 mm	10.5 ft

# Technical data

## Undercarriage



Especially designed for heavy duty applications that require less penetration, better turning capability and less ground disturbance. Maintenance-free crawler track. Hydraulic chain tensioning device.

Undercarriage		
Type	variable gauge, telescoping removable sides	variable gauge, telescoping removable sides
Overall width with retracted crawlers	<b>3500 mm</b>	137.80 in
Overall width with extended crawlers	<b>5200 mm</b>	204.72 in
Overall width with removed crawlers	<b>2980 mm</b>	117.32 in
Width of triple grouser track shoes	<b>1000 mm</b>	39.37 in
Overall length of crawlers	<b>6684 mm</b>	263.15 in
Traction force	<b>813 kN</b>	182766 lbf
Travelling speed	<b>0,8 / 1,59 km/h</b>	0.5 / 1 mph

## Engine



Engine		
Engine	<b>CAT C18 Acert</b>	CA C18 Acert
Rated output ISO 3046-I	<b>470 kW @ 1800 rpm</b>	630 HP @ 1800 rpm
Engine conforms to Exhaust emission Standard	<b>EU stage V - US EPA Tier4f *</b>	EU stage V - US EPA Tier4f *
Fuel tank capacity	<b>1048 l</b>	277 US gal
AD Blue tank capacity	<b>47 l</b>	12 US gal

\* CAT C18 Stage IIIA - US EPA Tier 3 is available on request

## Hydraulic system



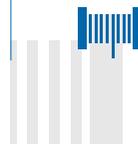
Hydraulic system		
Main pumps flow	<b>2x 444 l/min</b>	2x 117 US gal/min
Third pump flow	<b>140 l/min</b>	37 US gal/min
Hydraulic oil tank capacity	<b>1175 l</b>	310 US gal

## Crowd system



CCS_Cylinder Crowd System		
Stroke	<b>7650 mm</b>	301 in
Crowd force pull (down/up)	<b>345 / 412 kN</b>	77558 / 92620 lbf
Speed up (slow/fast)	<b>5,5 / 20 m/min</b>	18.04 / 65.62 ft/min
Speed down (slow/fast)	<b>5,5 / 20 m/min</b>	18.04 / 65.62 ft/min
WCS_Winch Crowd System		
Stroke	<b>23900 mm</b>	941 in
Crowd force pull (down/up)	<b>540 / 540 kN</b>	121395 / 121395 lbf
Speed up (slow/fast)	<b>8,6 / 33 m/min</b>	28.22 / 108.27 ft/min
Speed down (slow/fast)	<b>8,6 / 33 m/min</b>	28.22 / 108.27 ft/min

## Winches



Main winch - standard		
Type	<b>controlled descent</b>	controlled descent
Rope layers	<b>2</b>	2
Line pull (1st layer)	<b>420 kN</b>	94418 lbf
Rope diameter	<b>36 mm</b>	1.42 in
Line speed (max.)	<b>73 m/min</b>	240 ft/min
Single layer main winch - on request		
Type	<b>controlled descent</b>	controlled descent
Rope layers	<b>1</b>	1
Line pull (1st layer)	<b>470 kN</b>	105658 lbf
Rope diameter	<b>38 mm</b>	1.50 in
Line speed (max.)	<b>65 m/min</b>	213 ft/min
Auxiliary winch		
Type	<b>controlled descent</b>	controlled descent
Rope layers	<b>2</b>	2
Line pull (1st layer)	<b>132 kN</b>	29674 lbf
Rope diameter	<b>22 mm</b>	0.87 in
Line speed (max.)	<b>71 m/min</b>	233 ft/min

## Noise



Noise		
Sound pressure level in cab c/w Tier 4f Engine	<b>78 dB(A)</b>	78 dB(A)
Sound power level c/w Tier 4f Engine	<b>109 dB(A)</b>	109 dB(A)
Vibration transmitted to the hand-arm system of the machine operator	<b>&lt; 2.5 m/s<sup>2</sup></b>	< 8.2 ft/s <sup>2</sup>
Vibration transmitted to the whole body of the machine operator	<b>&lt; 0.5 m/s<sup>2</sup></b>	< 1.64 ft/s <sup>2</sup>

## Cab



By assessing the specific application and listening properly to the wishes and requirements of the operators, Soimec provides the optimal operator cab for comfort. Ergonomic seat with air suspension, fully adjustable, lumbar support, air management, as well as lines of sight, quality and safety are standard aspects considered during the design of the right configuration for the cabin.

Cabin width	<b>1050 mm</b>	3.4 ft
Sliding door		
Courtesy lights		
Air conditioning system and climate control unit		
Radio player with USB aux port		

## Controls



DMS control system, developed and manufactured by Soimec - is designed to give you a total control over performance, production and all your drilling rigs. In real time all the information relating to the operation work cycles and diagnostics of faults are shown on a multi language touch screen display installed in the cab. All drilling operations are actuated by two innovative joysticks. Automatic controls of rotary head and drilling phases are available on request thanks to simple implementation of our DMS system.

# Configurations

## UNDERCARRIAGE

Variable gauge, telescopic removable sides	●
Stabilizers and ejector cylinders	●
Remote control for dismounting tracks	●
Mechanical prearrangement for casing oscillator	●
Hydraulic prearrangement for casing oscillator	○
VRM250KL casing oscillator	○
Radio remote control for tramping operation	●

## UPPER STRUCTURE

Diesel engine CAT C18 ACERT 9 EU Stage IIIA – US EPA Tier 3	○
Diesel engine CAT C18 ACERT 9 EU Stage V – US EPA Tier 4F	○
Start and slow system	●
Harness technology for electrical system	●
Automatic greasing package	●
PTO kit for washing lancer	○
Compressor kit	○
Machine lifting kit (harbor use)	●
Foldable side catwalks for cabin 900 mm (35,4 in)	○
Foldable catwalk with handrails	●
Acoustic & light alarm for tramping	○
Lighting led system package	●
Sound proofed canopies	●
Hydraulic prearrangement for additional technologies	●

## CAB

Front protective grille	●
Falling object protective structure (FOPS)	●
Lower front protective grille	●
Rearview mirrors	●
Comfort package	●
Operator seat (air suspension, lumbar support, fully adjustable positioning, safety belt & operator presence micro-switch)	●
Sliding door	●
Sliding window	○
Lighting system in front of the cab	●

## CONTROL AND MONITORING SYSTEM

DMS ON BOARD with technological package	●
---	---

DMS PC	○
DMS manager 4.0	○
GSM / GPRS / WIFI Modem	●
DMS ON BOARD adjustable monitor 12" touch screen	●
Video control by 5 cameras with display in the cab	●
Inclinometer device with automatic verticality	●

## WINCHES

Main winch SW420 model - double layer	●
Main winch SW470 model - single layer	○
Load cell for main winch	○
Limit switch for rope winding and winches	○
Depthmeter for main winch	●
Anti-slack system for main winch	○
Service winch SW130 model	●
Load cell for service winch	○
Main & service winch pull instant value displayed on DMS on Board	○
Swivel for auxiliary winch	○

## ROTARY UNIT

Rotary unit with gear box; Max torque intermitted: 435 kNm (320.839 lbs*ft)	●
Replaceable drive ribs	●
Quick disassembling rotary kit	●
Automatic control of motor displacement	●
Automatic greasing kit for cradle	●
Oil discharge conveying system	○
Timed torque overboosted kit	○

## MAST

Mast guide cleaner	●
Upper foldable mast element	●
Lower foldable mast element	●
Pressure automatic control of lifting cylinders	●
Automatic greasing package for cathead	●
Dismounting kit for mast assembly in transport condition	○

## KELLY BAR TECHNOLOGY

Rotary sleeve with 6 ribs	●
Cardan joint	●
Flange for casing driving d.1500 mm (59 in)	○

Flange for casing driving d.2000 mm (66.9 in)	○
Flange for casing driving d.2500 mm (98.4 in)	●
Flange for casing driving d.3000 mm (118,1 in)	○
Automatic return to the centre hole	○
Automatic greasing kit for winch crowd	○
Telescopic mast foot	●
Drilling axis 1550 mm (from 61 in)	●
Variable drilling axis from 1550 mm to 1800 mm (from 61 in to 70 in)	○

## CFA TECHNOLOGY

Sleeve 6 m long 25HD-5	○
Sleeve 8,5 m long 25HD-5	○
Package for Quick CFA 26,5 m (89.9 ft) auger length	●
Package for CFA 26 m (85.3 ft) auger length	●
Package for CFA 30 m (98.4 ft) auger length	○
DMS ON BOARD with automatic auger lifting	●
Concrete pipe on turret and mast	○
Autodrilling package	○
Autorotary package	○
Automatic greasing kit for sheeves block	●
Additional pull-down winch	○
Hydraulic universal openable lower guide d.1200mm (47.2 in)	●
Auger cleaner star type	○
Double roller auger cleaner d.1200 mm (47.2 in)	○
Wi-Fi pressure transducer kit for concrete line	○
Two pressure transducers kit	●
Hydraulic prearrangement for VTH-1 vibrator	○
Add. package for CSP technology 22,4 m (73,4 ft) cased depth	○
Add. package for CSP technology 26,4 m (86,6 ft) cased depth	○
Add. package for Quick CSP technology 23,6 m (77 ft) cased depth	○
Lattice mast extension for DP/TCT and TJ technology	○
Add. package for DP/TCT technology: 39 m (128 ft) depth with lattice extension	○
Add. package for TJ technology: 39 m (128 ft) depth with lattice extension	○
Add. package for DP/TCT technology: 31,5 m (103 ft) depth	○
Add. package for TJ technology: 29 m (95 ft) depth	○
Add.package for DP/TCT technology: 39 m (128 ft) depth	○

● 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)

#muddyboots