

SR-125 HIGH TECHNOLOGY



soilmec®
Drilling and Foundation Equipment

Experiencing the Soilmec solution

The vital spark of life, the passion of the soul, the wind of new ideas, the energy of the earth in motion, when all these forces unite, machines emerge as power in its purest state. The power of the mind that imagines and designs things ever dreamed of before.

The power of human hands forges these amazingly complex metal giants, that are nonetheless docile and obedient.

The power of the tools that dig, drill and lift to extract resources from the bowels of the earth, to lay solid and safe foundations, to bring energy, wellbeing and security to everyone, everywhere.



soilmeco



soilmec®
Experiencing the Soilmec Solution

Soilmec,
Solution Provider

Experience

SR-125 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.

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

Depth to 120 m (394 ft).

Self-mounting kelly up to 21,5 m (70.5 ft) long.

Sound power level: 109 dB(A).

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

More performance. Better performance. Since forever.





soilmec



HIT

HIGH TECHNOLOGY

Multifunctionality:

it can perform different technologies.

Designed for bored piles with Kelly bar and CFA, it can be easily converted to perform all piling and soil consolidation techniques.

Customized
to your needs.



CSP technology.

Three different packages
for three different solutions.

Maximum depth:

32 m (105 ft) of auger depth – 25,8 m (84.6 ft) cased depth – 900 mm (36 in) diameter

Maximum diameter:

1200 mm (47 in) – 28 m (91.9 ft) of auger depth – 21,8 (71.5 ft) cased depth.

Quicker conversion:

26,1 m (85.6 ft) of auger depth – 17,4 m (57 ft) cased depth – 800 mm (31.5 in) diameter

Caseable

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-125 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 can be purchased with the EC 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.



soilmec

DMS

Everything under control wherever you are.

Total control through the most advanced monitoring system in foundation field.

DMS, Drilling Mate System, is the control center of your job site and Soilmec drilling rigs.

In 2004, Soilmec was the first manufacturer in the world to develop a system for the global control of the drilling rig and of the production processes.

DMS is available in each Soilmec rig and you can have 3 different packages that allow you to have the best possible control of your activities.

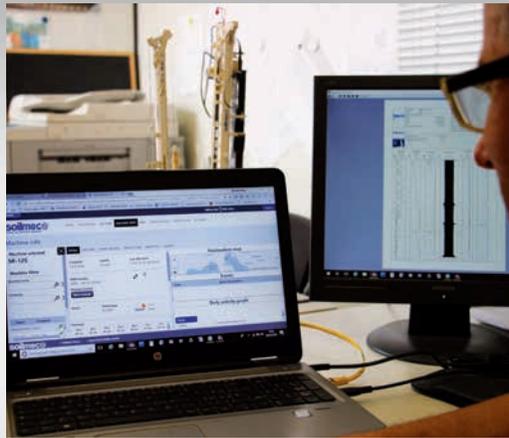


126.111.30.21
20/03/2017
13:24:31
Argano princ.
5 bar
Giri rotary
0 rpm
Pilotaggi
38 bar
Rotary
8 bar
ompa 3
5 bar



DMS ON BOARD

It is the heart of the rig able to monitor all the drilling phases directly from the operator's cab. The system consists of a multilingual touch screen display fitted on an adjustable arm. It is designed to display in real time all the information related to the drilling phases.



DMS PC

Licensed software that displays and processes the data acquired by "DMS On Board".



DMS MANAGER 4.0

Soilmec cloud-running application for remote, centralized supervision of the rig fleet and productivity in real time thanks to IoT technology.

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.



Ready to support you at any stage
of your choice. Always.



Technical
support

Original
spares

Training

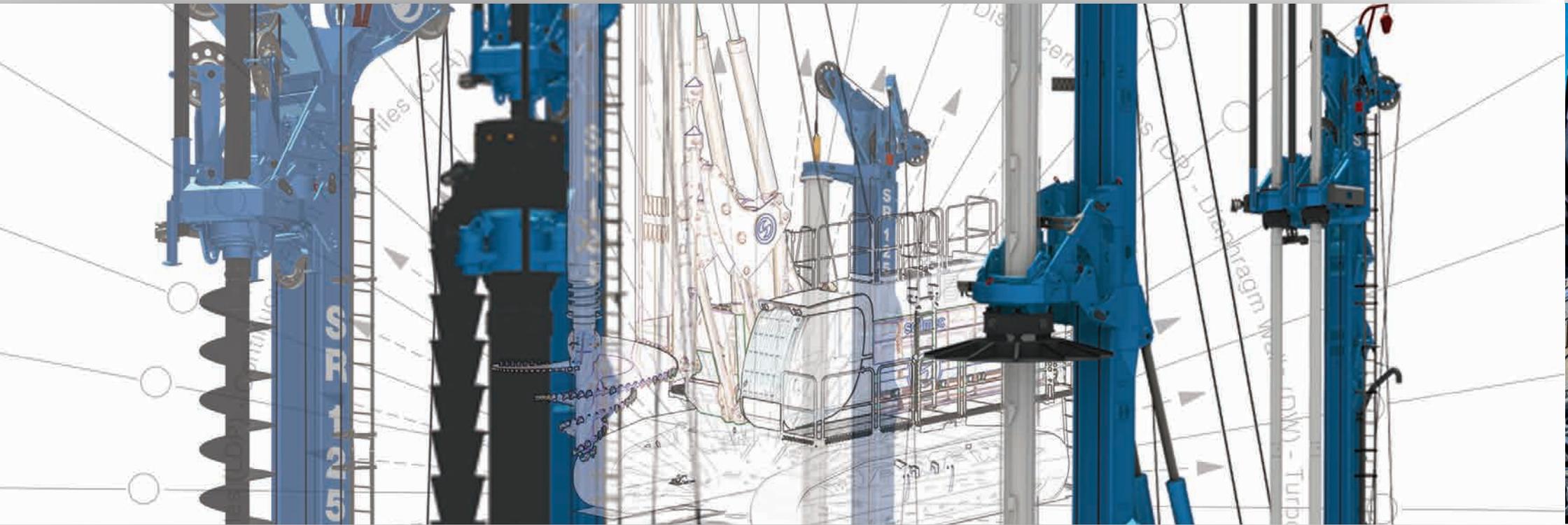
Auditing

Maintenance
service contracts

DMS
control
center

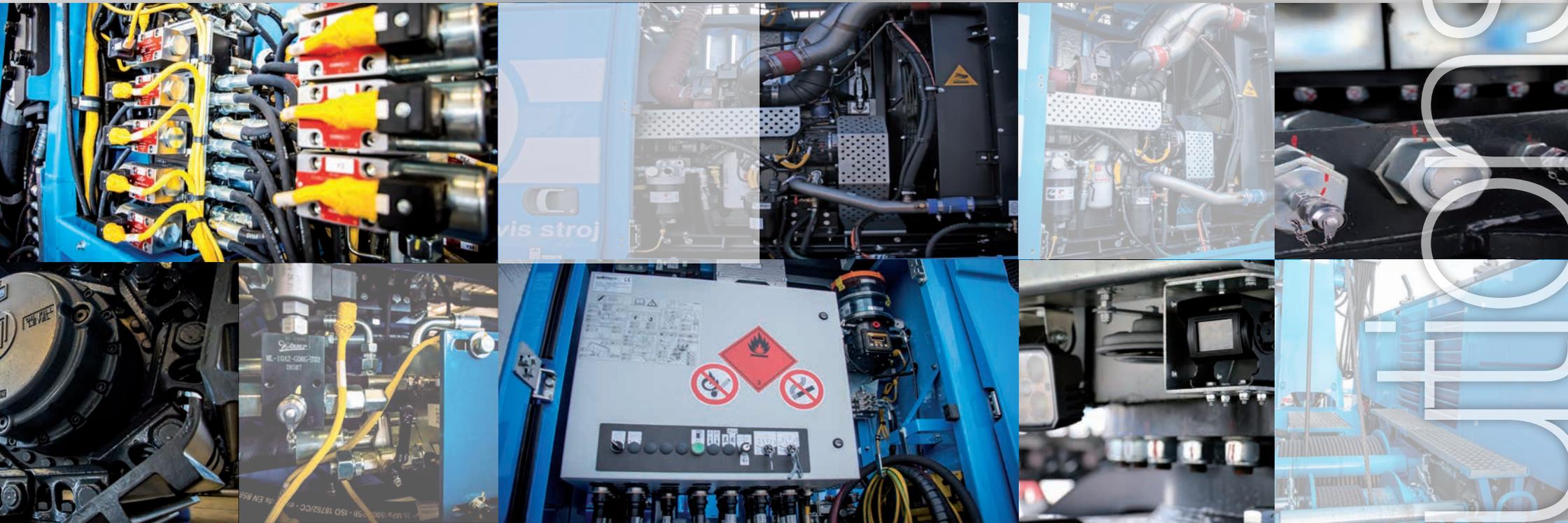
Service & Comfort

Our expertise and solution
for the foundation industry...



... to operate flawlessly.

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.

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.

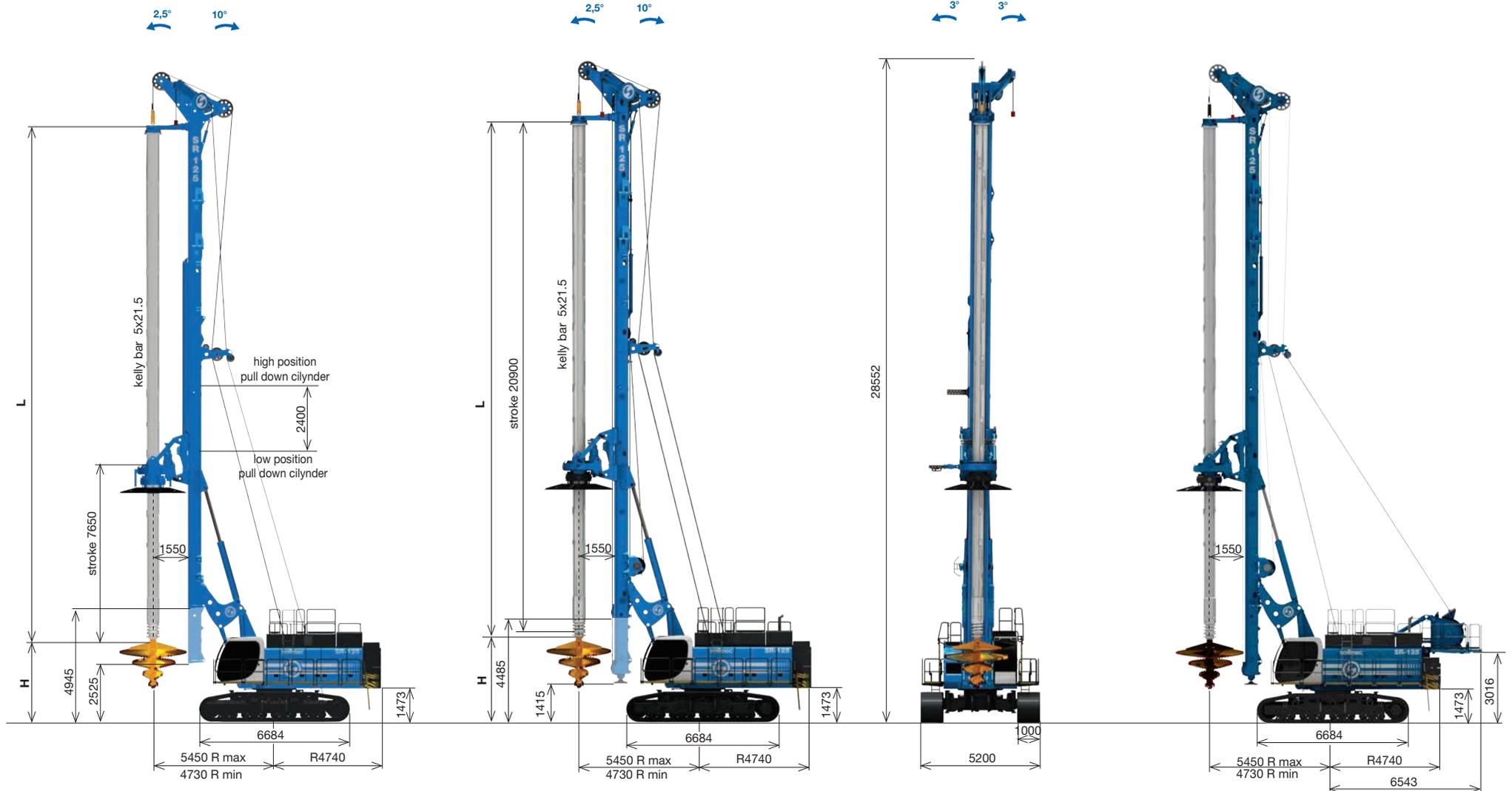
Automatic Greasing package. No more worries, self-greasing of most critical parts.

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.

LDP - Large Diameter Piles - CCS version

Operating weight w/o kelly bar	126700 kg	279323 lb
Max pile diameter (tool along the mast)	3000 mm	118 in
Max pile diameter c/w increased drilling axis ¹ (tool along the mast)	3500 mm	138 in
Max pile diameter w/o lower mast section ¹⁻² (tool below the mast)	3500 mm	138 in
Max pile diameter c/w increased drilling axis ¹ & w/o lower mast section ¹⁻² (tool below the mast)	4000 mm	157 in
Working radius ⁴	4730 - 5450 mm	186 - 214 in
Tail swing radius	4750 mm	15.5 ft
Max pile depth-friction kelly	120 m	394 ft
Max pile depth-locking kelly	100 m	328 ft

LDP - Large Diameter Piles - WCS version

Operating weight w/o kelly bar	128700 kg	283732 lb
Max pile diameter (tool along the mast)	2800 mm	110 in
Max pile diameter c/w increased drilling axis ¹ (tool along the mast)	3300 mm	130 in
Max pile diameter w/o lower mast section ¹⁻³ (tool below the mast)	3500 mm	138 in
Max pile diameter c/w increased drilling axis ¹ & w/o lower mast section ¹⁻³ (tool below the mast)	4000 mm	157 in
Working radius ⁴	4730 - 5450 mm	186 - 214 in
Tail swing radius	4750 mm	15.5 ft
Max pile depth-friction kelly	120 m	394 ft
Max pile depth-locking kelly	100 m	328 ft

LDP - Special arrangement with upgraded main winch

Operating weight w/o kelly bar CCS version	127800 kg	281748 lb
Operating weight w/o kelly bar WCS version	130100 kg	286818 lb
Tail swing radius	6543 mm	22.1 ft
Max pile depth using single layer	119 m	390 ft

¹ package on request

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

³ rotary stroke reduced - depth reduced by 2,4 m (7.8 ft)

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

Kelly bars for LDP

	Kelly type	Kelly dimens.	Drilling Depth ¹		Weight	L Length		H						
			m	ft		t (US)	m	ft	CCS low	CCS high	WCS			
			m	ft	t (US)	m	ft	m	ft	m	ft			
3 pars ²	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	13,7	44.9
	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	12,5	41.0
	BL HD	3 x 13,5	36,1	118.4	9,2	10.1	15,0	49.2	9,7	31.8	11,2	36.7	11,2	36.7
	BL HD	3 x 14,5	39,2	128.6	9,8	10.7	16,1	52.8	9,7	31.8	10,2	33.5	10,2	33.5
	BL HD	3 x 16	43,2	141.7	10,6	11.6	17,5	57.4	8,8	28.9	8,8	28.9	8,8	28.9
	BL HD	3 x 19,5	53,9	176.8	12,5	13.8	21,0	68.9	5,3	17.4	5,3	17.4	5,3	17.4
	BL HD	3 x 21,5	59,9	196.5	13,6	15.0	23,0	75.5	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	13,7	44.9
4 pars ²	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	12,5	41.0
	BL HD	4 x 13,5	48,0	157.5	10,8	11.9	15,0	49.2	9,7	31.8	11,2	36.7	11,2	36.7
	BL HD	4 x 14,5	52,5	172.2	11,5	12.6	16,1	52.8	9,7	31.8	10,2	33.5	10,2	33.5
	BL HD	4 x 16	57,9	190.0	12,4	13.7	17,5	57.4	8,8	28.9	8,8	28.9	8,8	28.9
	BL HD	4 x 17,5	65,0	213.3	13,4	14.7	19,2	63.0	7,0	23.0	7,0	23.0	7,0	23.0
	BL HD	4 x 19,5	72,1	236.5	14,7	16.1	21,0	68.9	5,3	17.4	5,3	17.4	5,3	17.4
	BL HD	4 x 21,5	80,1	262.8	16,0	17.6	23,0	75.5	3,3	10.8	3,3	10.8	3,3	10.8
	BL HD	5 x 13,5	60,4	198.2	11,8	13	15,0	49.2	9,7	31.8	11,2	36.7	11,2	36.7
5 pars ²⁻³	BL HD	5 x 14,5	65,7	215.6	12,5	13.8	16,1	52.8	9,7	31.8	10,2	33.5	10,2	33.5
	BL HD	5 x 16	72,4	237.5	13,7	15	17,5	57.4	8,8	28.9	8,8	28.9	8,8	28.9
	BL HD	5 x 17,5	81,4	267.1	14,8	16	19,2	63.0	7,0	23.0	7,0	23.0	7,0	23.0
	BL HD	5 x 19,5	90,3	296.3	16,3	18	21,0	68.9	5,3	17.4	5,3	17.4	5,3	17.4
	BL HD	5 x 21,5	100,1	328.4	17,8	19.6	23,0	75.5	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	8,8	28.9	8,8	28.9	8,8	28.9
	FR HD	6 x 17,5	97,9	321.2	16,4	18.1	19,2	63.0	7,0	23.0	7,0	23.0	7,0	23.0
	FR HD	6 x 19	105,4	345.8	17,7	19.5	20,5	67.3	5,8	19.0	5,8	19.0	5,8	19.0
6 pars ⁴	FR HD	6 x 19,5	108,5	356.0	18,1	19.9	21,0	68.9	5,3	17.4	5,3	17.4	5,3	17.4
	FR HD	6 x 21,5	120,5	395.3	19,8	21.8	23,0	75.5	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

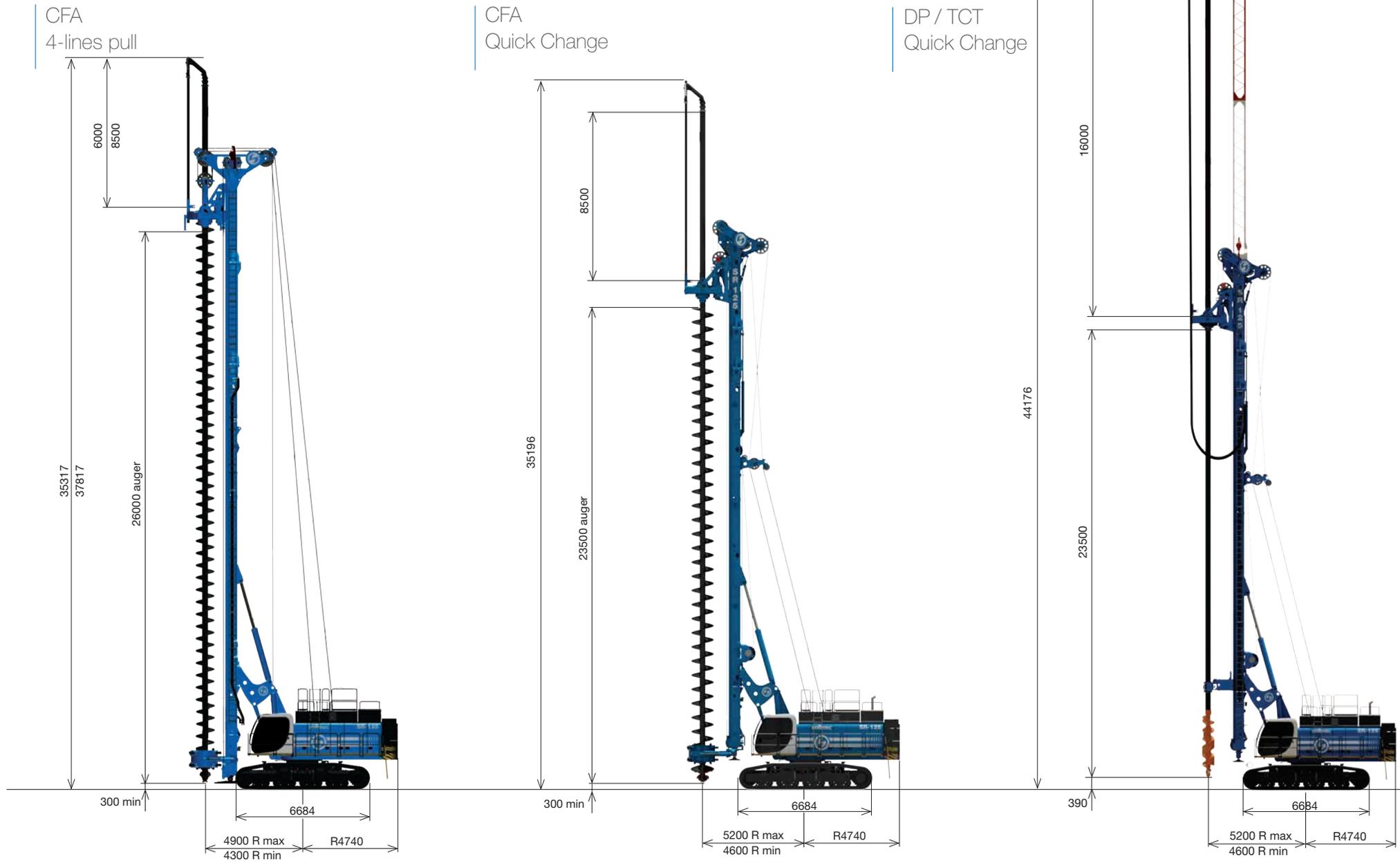
¹ drilling depth is reduced by 2,4m (7.8 ft) without lower mast section or cylinder crowd in high position; drilling depth is calculated with kelly bar c/w stub 200x200 and drilling tool 1500 mm (4.9 ft) long

² friction type is also available with the same dimension

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

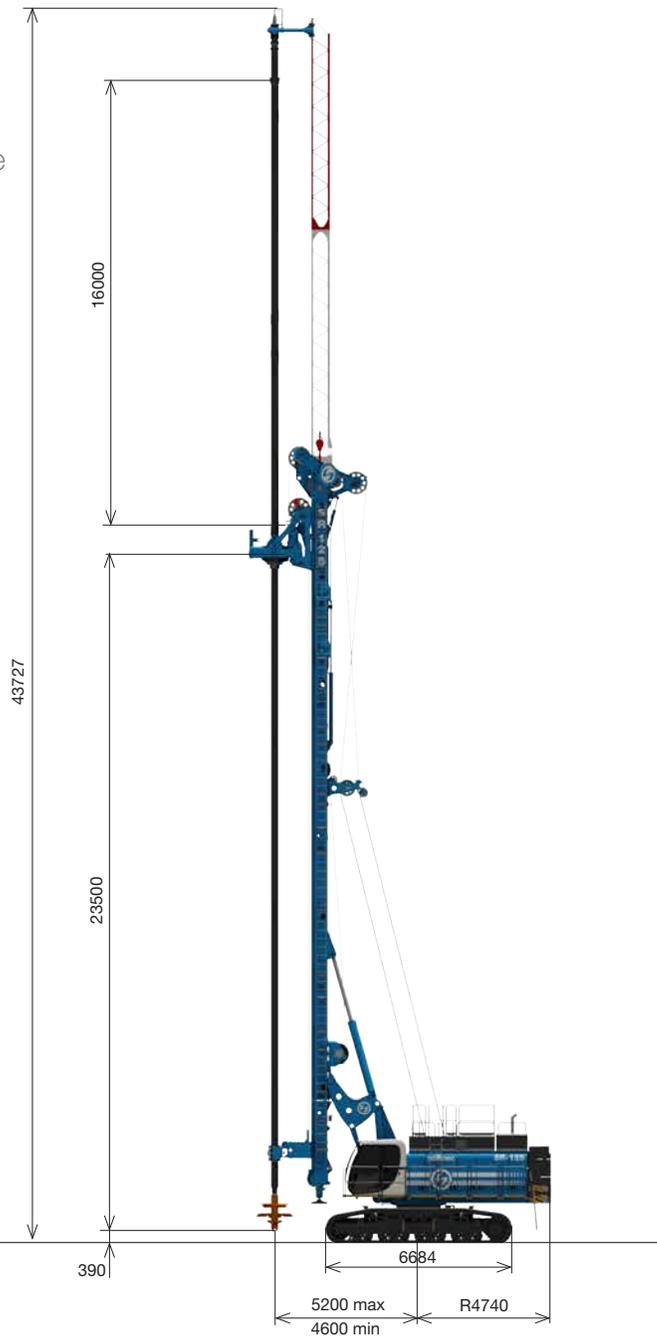
⁴ rotary torque derated

CFA / DP / TJ applications



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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) ¹	34,5 m	113 ft
Nominal extraction force	1296 kN	291347 lbf
Nominal crowd force on auger ²⁻³	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) ¹	38,5 m	126 ft
Nominal extraction force	984 kN	221208 lbf
Nominal crowd force on auger ²⁻³	540 kN	121395 lbf

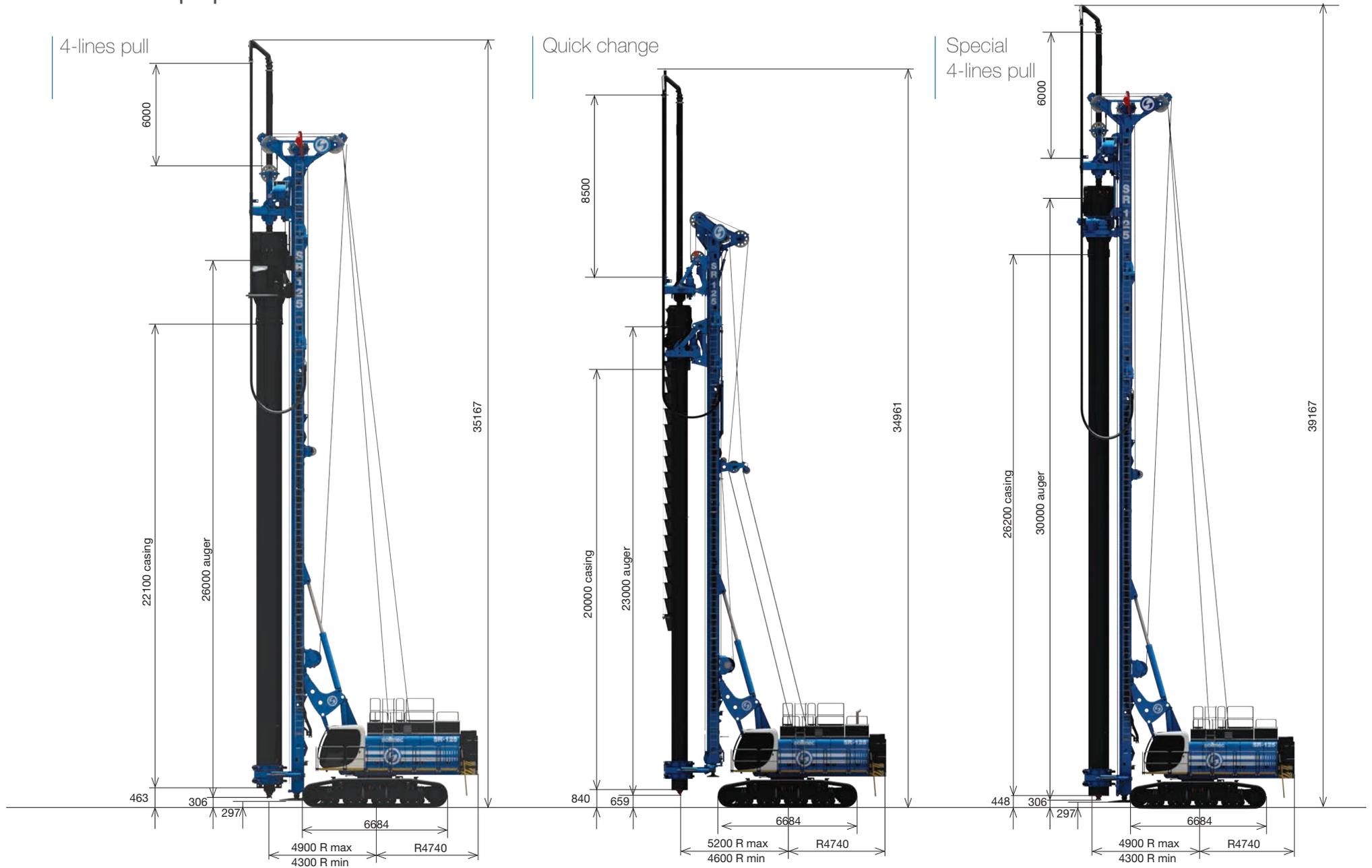
CFA - Continuous Flight Auger - Quick change		
Operating weight (c/w 8,5 m - 27.9 ft sleeve extension, w/o auger)	130400 kg	287480 lb
Max pile diameter	1200 mm	47.24 in
Max length of auger (max length of sleeve extension)	23,5 m (8,5 m)	77 ft (28 ft)
Max pile depth (c/w 8,5 m - 27.9 ft sleeve extension) ¹	29,7 m	97 ft
Nominal extraction force	1200 kN	269766 lbf
Nominal crowd force on auger	540 kN	121395 lbf

DP - Displacement pile - Quick change ⁴		
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	23,5 m	77 ft
Max pile depth w/o lattice boom extension c/w 8,5 m (27.9 ft) string extension	28,5 m	94 ft
Lattice boom extension length	16 m	52 ft
Max pile depth c/w lattice boom extension	36 m	118 ft

TJ - Turbo jet - Quick change ⁴		
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	23.5 m	77.1 ft
Max pile depth w/o lattice boom extension c/w 8,5 m (27.9 ft) string extension	26 m	85 ft
Lattice boom extension length	16 m	52 ft
Max pile depth c/w lattice boom extension	36 m	118 ft

¹ depth reduced of 1,8 m (5.90 ft) with roller auger cleaner ² package on request - depth reduced by 1,4 m (4.59 ft)
³ 100 kN (22480 lbf) also available on request - depth reduced by 250 mm (0.82 ft) ⁴ DP/TCT and TJ are also available with 4-line pull version

CSP applications



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CSP - Cased secant piles - 4-lines pull

Operating weight (c/w 6 m - 19.6 ft sleeve extension, w/o auger and casing)	151800 kg	334658 lb
Max pile diameter	1200 mm	47.24 in
Max augered depth w/o auger cleaner ¹	28,6 m (22,6 + 6)	94 ft (74.15 + 19.6)
Max cased depth w/o auger cleaner ¹	22,4 m	73 ft
Casing max torque	400 kNm	295020 lbf*ft
Max casing speed rotation	9,6 rpm	9.6 rpm
Auger max torque	411 kNm	303133 lbf*ft
Max auger speed rotation	34,7 rpm	34.7 rpm
Nominal auger pull up/down	1296 / 400 kN	291347 / 89922 ft
Nominal casing pull up/down	940 / 540 kN	211317 / 121395 ft

CSP - Cased secant piles - Quick change

Operating weight (c/w 8,5 m - 27.9 ft sleeve extension, w/o auger and casing)	141500 kg	311951 lb
Max pile diameter	800 mm	31.5 in
Max augered depth w/o auger cleaner ¹	26,7 m (18,2 + 8,5)	87.6 ft (59.7 + 27.9)
Max cased depth w/o auger cleaner ¹	18 m	59.06 ft
Casing max torque	411 kNm	303133 lbf*ft
Max casing speed rotation	9,7 rpm	9.7 rpm
Auger max torque	250 kNm	184387 lbf*ft
Max auger speed rotation	19,6 rpm	19.6 rpm
Nominal auger pull up	720 kN	161860 lbf*ft
Nominal casing pull up/down	490 / 490 kN	110154 / 110154 lbf

CSP - Cased secant piles - 4-lines pull - special version

Operating weight (c/w 6 m - 19.6 ft sleeve extension, w/o auger and casing)	153300 kg	337965 lb
Max pile diameter	900 mm	35.43 in
Max augered depth w/o auger cleaner ¹	32,6 m (26,6 + 6)	107 ft (87.2 + 19.6)
Max cased depth w/o auger cleaner ¹	26,4 m	87 ft
Casing max torque	400 kNm	295020 lbf*ft
Max casing speed rotation	9,6 rpm	9.6 rpm
Auger max torque	411 kNm	303133 lbf*ft
Max auger speed rotation	34,7 rpm	34.7 rpm
Nominal auger pull up/down	984 / 315 kN	221208 / 70814 ft
Nominal casing pull up/down	740 / 540 kN	166356 / 121395 ft

¹ 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.

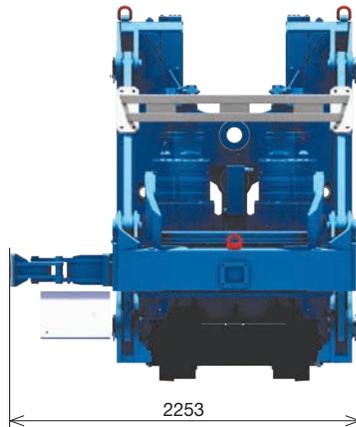
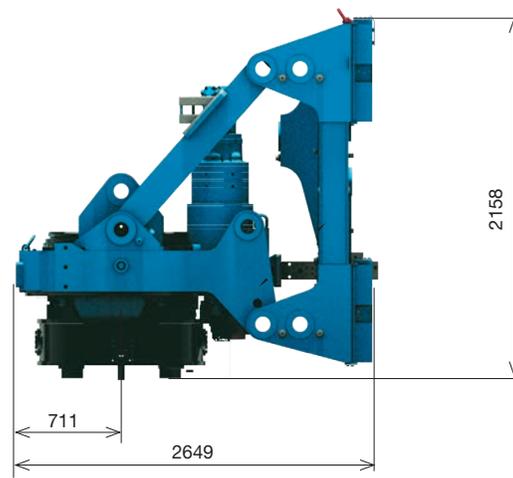
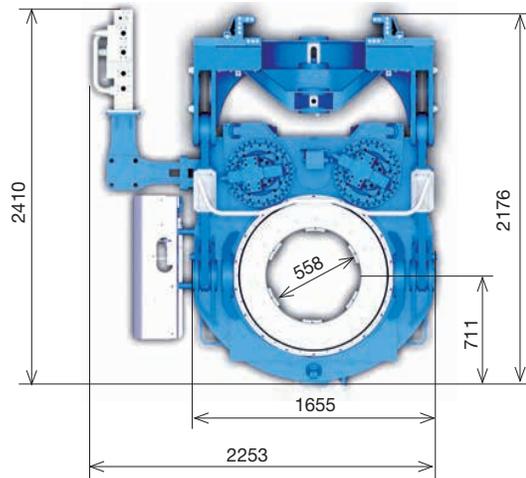
940 kN extraction force on casing, the highest extraction force within its class range.

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

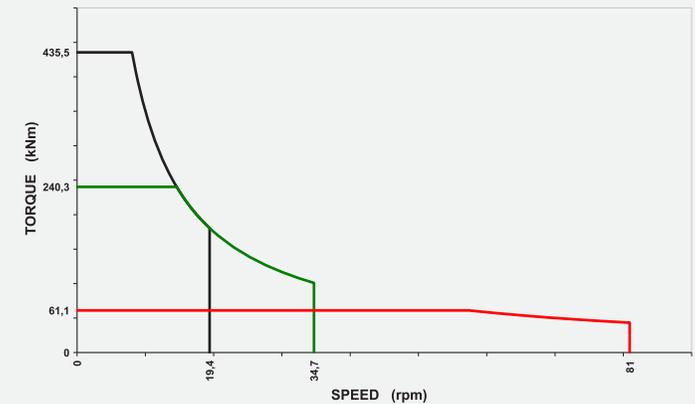
Soilmec innovative solution is a special kit for a rapid conversion of your drilling rig into CSP mode. The existing rotary is used to drive the casing.

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.

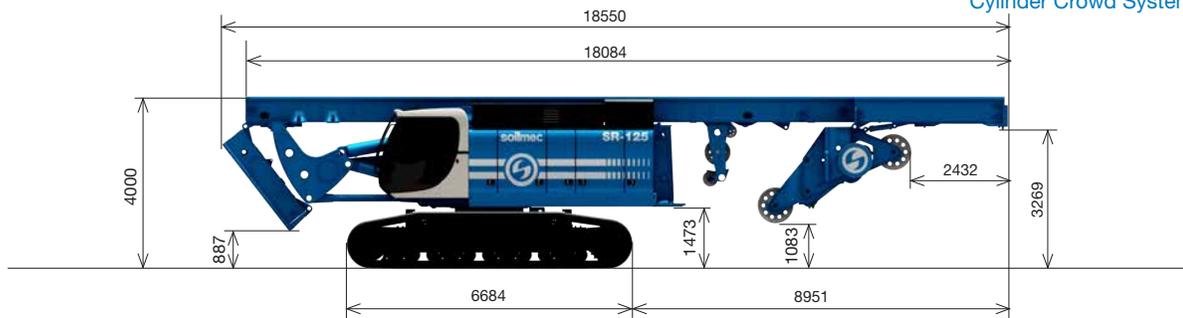
All our rotary heads are equipped with an automatic control of motor displacements. This optimizing the drilling speed and the productivity in every phase.

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 torque	435 kNm	320834 lbf*ft
1 st 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

Transport, dimensions & weights

Cylinder Crowd System



Transport configuration	CCS	CCS	WCS	WCS
Transport weight	90340 kg	199165 lb ¹	96600 kg	212966 lb ²
Transport length ³	18550 mm	60.8 ft	18939 mm	62.1 ft

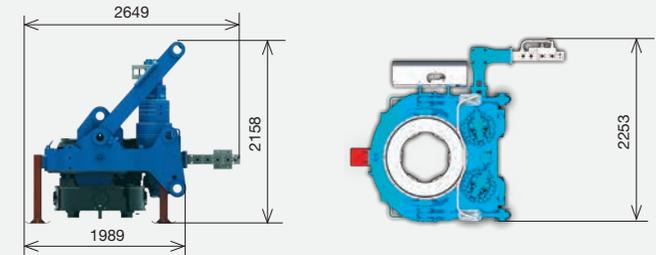
¹ includes the base carrier c/w undercarriage, mast; w/o counterweight, rotary, rotary cradle and cylinder crowd

² includes the base carrier c/w undercarriage, mast, rotary cradle, winch crowd; w/o counterweight and rotary

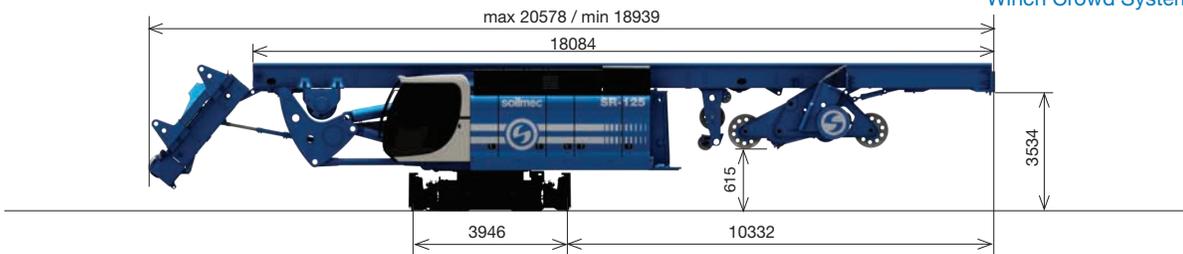
³ by truck shipment the maximum length will be 20578 mm (67.5 ft)

Note: with full optional undercarriage weight increase by 1600 kg (3527 lb)

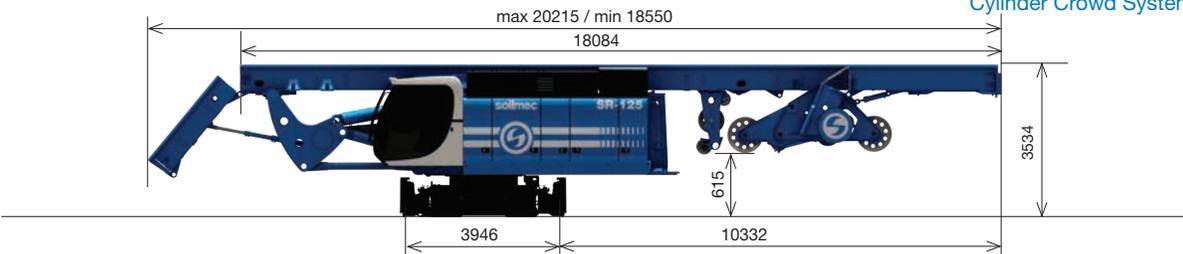
Rotary



Winch Crowd System



Cylinder Crowd System

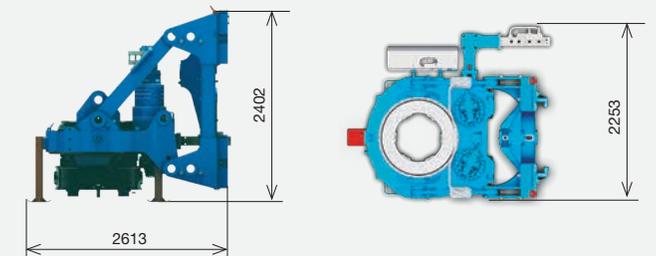


Transport configuration	CCS	CCS	WCS	WCS
Transport weight	64200 kg	141536 lb ¹	70300 kg	154985 lb ²
Transport length	20215 mm	67.5 ft	20578 mm	67.5 ft

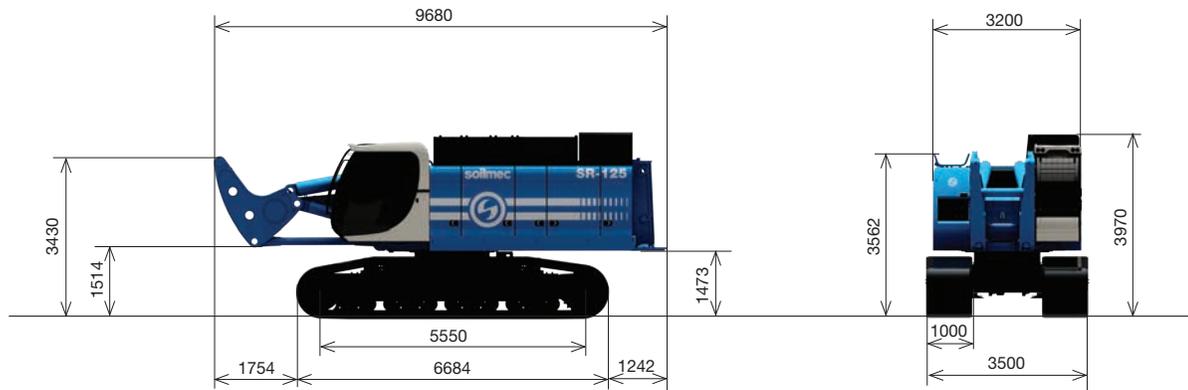
¹ includes the base carrier c/w mast; w/o undercarriage, counterweight, rotary, rotary cradle and cylinder crowd

² includes the base carrier c/w mast, rotary cradle, winch crowd; w/o undercarriage, counterweight and rotary

Note: with full optional undercarriage weight increase by 1500 kg (3306 lb)



Transport, dimensions & weights

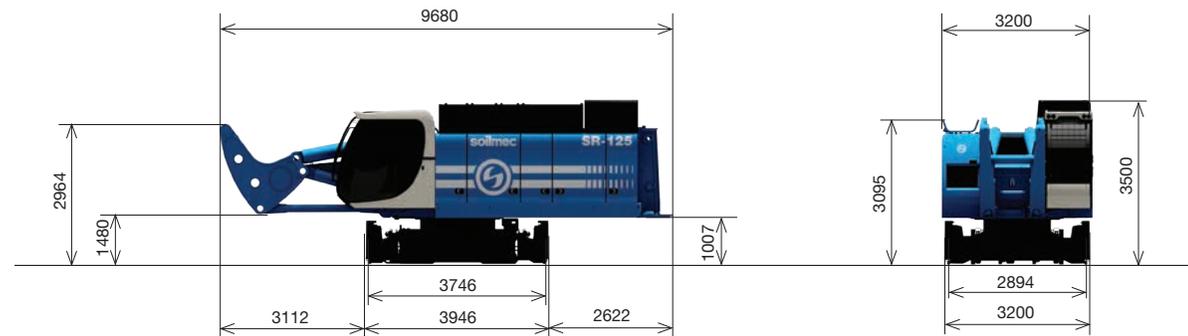


Transport configuration

Transport weight	74700 kg	164685 lb
Transport length	9680 mm	31.8 ft

Includes the base carrier and undercarriage; w/o mast and counterweight

Note: with full optional undercarriage weight increase by 1600 kg (3527 lb)



Transport configuration

Transport weight	47800 kg	105380 lb
Transport length	9680 mm	31.8 ft

Includes the only base carrier

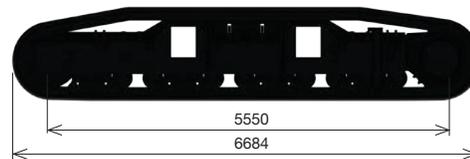
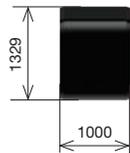
Note: with full optional undercarriage weight increase by 1500 kg (3306 lb)

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	CCS	CCS	WCS	WCS
Transport weight	18800 kg	41446 lb*	23300 kg	51367 lb
Transport length	20423 mm	67 ft	21339 mm	70 ft
Transport width	2500 mm	8.2 ft	2500 mm	8.2 ft

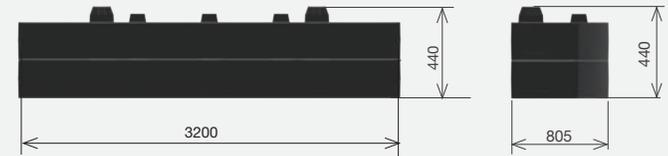


Transport configuration		
Transport weight for each element	13300 kg	29321 lb
Transport length	6684 mm	263.15 in

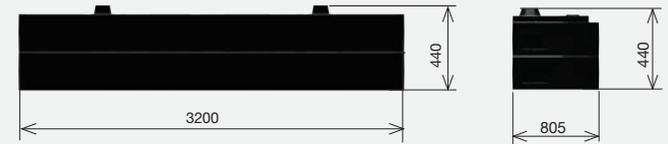
Stackable counterweight



n.1 x 4 ton (8818 lb)



n.2 x 1,4 ton (3086 lb)



n.3 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

Crowd system



CCS_Cylinder Crowd System		
Stroke	7650 mm	301 in
Crowd force pull (down/up)	345 / 412 kN	77558 / 92620 lbf
Speed up (slow/fast)	5,5 / 20 m/min	18.04 / 65.62 ft/min
Speed down (slow/fast)	5,5 / 20 m/min	18.04 / 65.62 ft/min
WCS_Winch Crowd System		
Stroke	21300 mm	740 in
Crowd force pull (down/up)	540 / 540 kN	121395 / 121395 lbf
Speed up (slow/fast)	8,6 / 33 m/min	28.22 / 108.27 ft/min
Speed down (slow/fast)	8,6 / 33 m/min	28.22 / 108.27 ft/min

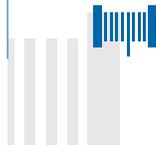
Engine



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

* CAT C18 Stage IIIA is available on request

Winches



Main winch - standard		
Type	controlled descent	controlled descent
Model	SW420	SW420
Rope layers	2	2
Line pull (1st layer)	420 kN	94418 lbf
Rope diameter	36 mm	1.42 in
Line speed (max.)	73 m/min	240 ft/min

Single layer main winch - on request		
Type	controlled descent	controlled descent
Model	SW470SL	SW470SL
Rope layers	1	1
Line pull (1st layer)	470 kN	105658 lbf
Rope diameter	38 mm	1.50 in
Line speed (max.)	65 m/min	213 ft/min

Auxiliary winch		
Type	controlled descent	controlled descent
Rope layers	2	2
Line pull (1st layer)	132 kN	29674 lbf
Rope diameter	22 mm	0.87 in
Line speed (max.)	71 m/min	233 ft/min

Hydraulic system



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

Noise



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

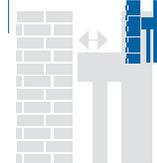
Undercarriage



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	3500 mm	137.80 in
Overall width with extended crawlers	5200 mm	204.72 in
Overall width with removed crawlers	2980 mm	117.32 in
Width of triple grouser track shoes	1000 mm	39.37 in
Overall length of crawlers	6684 mm	263.15 in
Traction force	813 kN	182766 lbf
Travelling speed	0,8 / 1,59 km/h	0.5 / 1 mph

FoW clearance



Front of wall clearance			
LDP - Large Diameter Pile - CCS version	due to rotary ¹	711 mm	27.99 in
LDP - Large Diameter Pile - WCS version	due to rotary ¹	711 mm	27.99 in
CFA - Continuous Flight Auger - 4 line pull - standard version	due to swan neck	946 mm	37.24 in
CFA - Continuous Flight Auger - 4 line pull - special version	due to swan neck	946 mm	37.24 in
CFA - Continuous Flight Auger - Quick change	due to swan neck	946 mm	37.24 in
DP - Displacement Pile - Quick change	due to swan neck	946 mm	37,24 in
TJ - Turbo Jet - Quick change	due to sleeve guide ²	711 mm	27.99 in
CSP - Cased Secant Pile - 4 line pull - standard version	due to casing driver	1083 mm	42.64 in
CSP - Cased Secant Pile - Quick change	due to swan neck	946 mm	37.24 in
CSP - Cased Secant Pile - 4 line pull - special version	due to casing driver	1083 mm	42.64 in

¹ w/o casing flange and drilling tool

² c/w lattice boom and w/o automatic greasing for swivel head

Configurations

	LDP Large Diameter Pile with Kelly bar		CFA Continuous Flight Auger Piles		LDP Large Diameter Pile with Kelly bar		CFA Continuous Flight Auger Piles	
	(WCS)	(CCS)	(4-line pull)	(Quick Change)	(WCS)	(CCS)	(4-line pull)	(Quick Change)
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	○	○	○	○	○	○	○	○
VFM250KL casing oscillator	○	○	○	○	○	○	○	○
Radio remote control for trammimg operation	●	●	●	●	●	●	●	●
UPPER STRUCTURE								
Diesel engine CAT C18 ACERT 9 EU Stage IV – US EPA Tier 4F	●	●	●	●	●	●	●	●
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 trammimg	○	○	○	○	○	○	○	○
Lighting led system package	●	●	●	●	●	●	●	●
Sound proofed canopies	●	●	●	●	●	●	●	●
Hydraulic prearrangement for additional technologies	●	●	●	●	●	●	●	●
H-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	○	○	n.a.	n.a.	○	○	○	○
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	○	○	○	○	○	○	○	○
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	●	●	n.a.	n.a.	●	●	n.a.	n.a.
Cardan joint	●	●	n.a.	n.a.	●	●	n.a.	n.a.
Flange for casing driving d.1500 mm (59 in)	○	○	n.a.	n.a.	○	○	n.a.	n.a.
Flange for casing driving d.2000 mm (66.9 in)	○	○	n.a.	n.a.	○	○	n.a.	n.a.
Flange for casing driving d.2500 mm (98.4 in)	●	●	n.a.	n.a.	●	●	n.a.	n.a.
Flange for casing driving d.3000 mm (118.1 in)	○	○	n.a.	n.a.	○	○	n.a.	n.a.
Automatic return to the centre hole	○	○	n.a.	n.a.	○	○	n.a.	n.a.
Automatic greasing kit for winch crowd	○	n.a.	n.a.	n.a.	○	n.a.	n.a.	n.a.
Telescopic mast foot	●	n.a.	n.a.	n.a.	●	n.a.	n.a.	n.a.
Drilling axis 1550 mm (from 61 in)	●	●	n.a.	n.a.	●	●	n.a.	n.a.
Variable drilling axis from 1550 mm to 1800 mm (from 61 in to 70 in)	○	○	n.a.	n.a.	○	○	n.a.	n.a.
CFA TECHNOLOGY								
Sleeve 6 m long 25HD-5	n.a.	n.a.	○	n.a.	n.a.	n.a.	○	n.a.
Sleeve 8,5 m long 25HD-5	n.a.	n.a.	○	n.a.	n.a.	n.a.	○	n.a.
Package for CFA 23,5 m (77 ft) auger length	n.a.	n.a.	n.a.	●	n.a.	n.a.	n.a.	●
Package for CFA 26 m (85.3 ft) auger length	n.a.	n.a.	●	n.a.	n.a.	n.a.	●	n.a.
Package for CFA 30 m (98.4 ft) auger length	n.a.	n.a.	○	n.a.	n.a.	n.a.	○	n.a.
DMS ON BOARD with automatic auger lifting	n.a.	n.a.	●	●	n.a.	n.a.	●	●
Concrete pipe on lurret and mast	n.a.	n.a.	○	○	n.a.	n.a.	○	○
Autodrilling package	n.a.	n.a.	○	○	n.a.	n.a.	○	○
Autorotary package	n.a.	n.a.	○	○	n.a.	n.a.	○	○
Automatic greasing kit for sheeves block	n.a.	n.a.	●	●	n.a.	n.a.	●	●
Additional pull-down winch	n.a.	n.a.	○	○	n.a.	n.a.	○	○
Hydraulic universal openable lower guide d.1200mm (47.2 in)	n.a.	n.a.	●	●	n.a.	n.a.	●	●
Auger cleaner star type	n.a.	n.a.	○	○	n.a.	n.a.	○	○
Double roller auger cleaner d.1200 mm (47.2 in)	n.a.	n.a.	○	○	n.a.	n.a.	○	○
Wi-Fi pressure transducer kit for concrete line	n.a.	n.a.	○	○	n.a.	n.a.	○	○
Two pressure transducers kit	n.a.	n.a.	●	●	n.a.	n.a.	●	●
Hydraulic prearrangement for VTH-1 vibrator	n.a.	n.a.	○	○	n.a.	n.a.	○	○
Additional package for CSP technology 22,4 m (73.4 ft) cased depth	n.a.	n.a.	○	n.a.	n.a.	n.a.	○	n.a.
Additional package for CSP technology 26,4 m (86.6 ft) cased depth	n.a.	n.a.	○	n.a.	n.a.	n.a.	○	n.a.
Additional package for CSP technology 18 m (59 ft) cased depth	n.a.	n.a.	n.a.	○	n.a.	n.a.	n.a.	○
Lattice mast extension for DP/TCT and TJ technology	n.a.	n.a.	n.a.	○	n.a.	n.a.	n.a.	○
Additional package for DP/TCT technology; 36 m (118.1 ft) depth with lattice extension	n.a.	n.a.	n.a.	○	n.a.	n.a.	n.a.	○
Additional package for TJ technology; 36 m (118.1 ft) depth with lattice extension	n.a.	n.a.	n.a.	○	n.a.	n.a.	n.a.	○
Additional package for DP/TCT technology; 32,5 m (106.6 ft) depth	n.a.	n.a.	○	n.a.	n.a.	n.a.	○	n.a.
Additional package for TJ technology; 30 m (98.4 ft) depth	n.a.	n.a.	○	n.a.	n.a.	n.a.	○	n.a.
Additional package for DP/TCT technology; 36,5 m (119.7 ft) depth	n.a.	n.a.	○	n.a.	n.a.	n.a.	○	n.a.
Additional package for TJ technology; 34 m (111.5 ft) depth	n.a.	n.a.	○	n.a.	n.a.	n.a.	○	n.a.

● standard ○ optional n.a. not available



standard equipment for CE certification

A close-up photograph of a muddy tire tread on a dirt surface. The tire is in the foreground, showing deep grooves filled with dark brown mud. The background is a blurred dirt surface with some green grass visible in the distance.

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