



# SC-130HD

Heavy Duty  
Crawler Crane

**soilmec**   
Drilling and Foundation Equipment

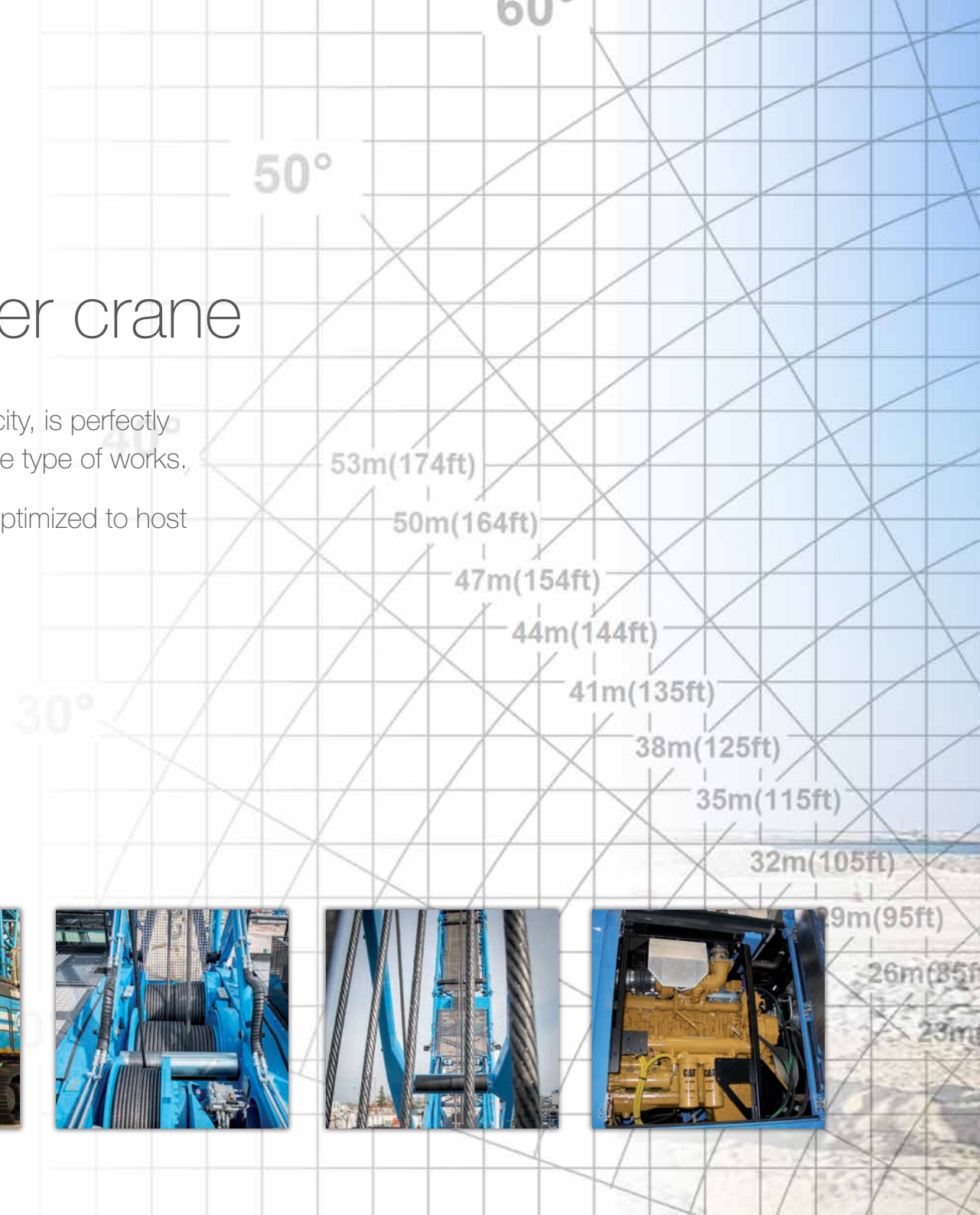
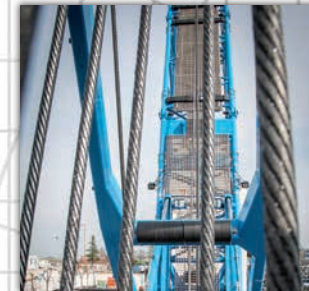


# The SC-130HD duty cycle crawler crane

by means of its 130 tons load max. capacity, is perfectly suited for the deep foundation most severe type of works.

The SC-130HD crawler crane has been optimized to host a variety of applications, among other:

- Clamshell
- Diaphragm Wall Grab
- Hydraulic Rotary
- Casing Oscillator and Hammer Grab
- Dynamic Compaction
- Hydraulic Vibrator
- Lifting Operations

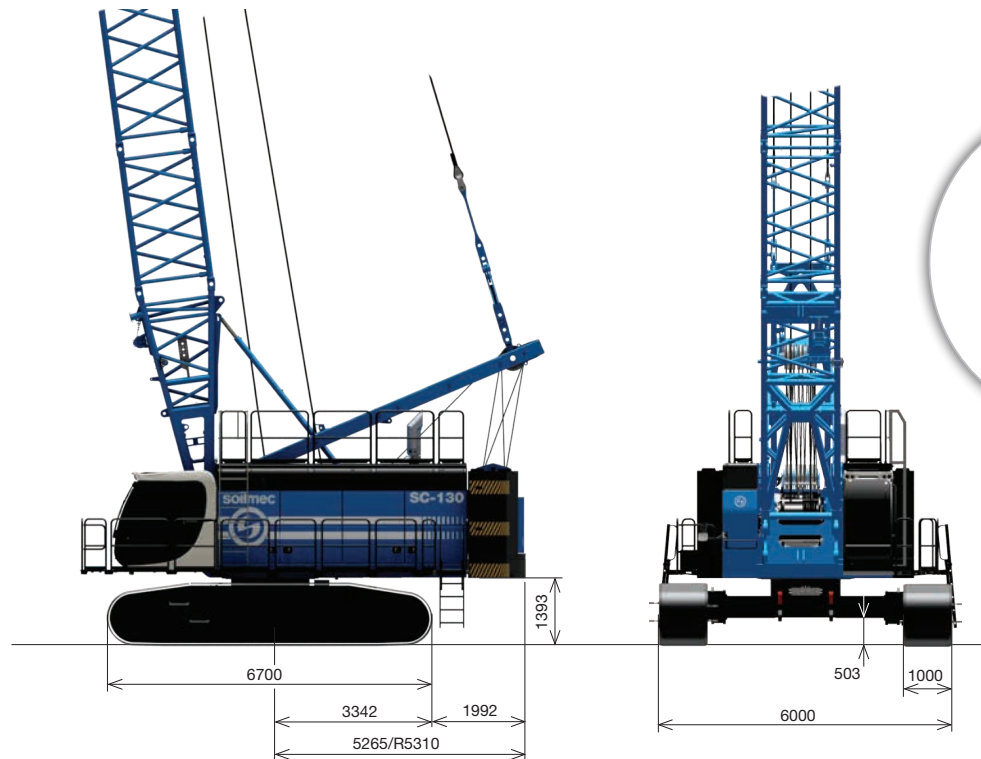




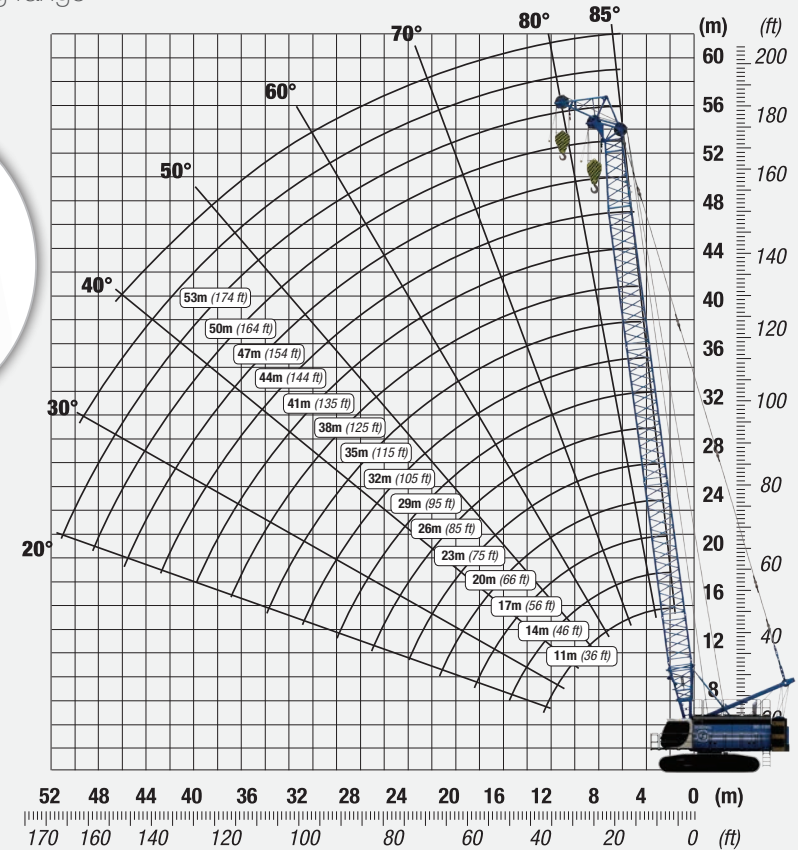
- The SC-130HD achieves **low noise emissions** (LWA) and low Diesel consumption thanks to an alternatives of sound-absorbing solutions on one side and a very effective air-flow-controls on the other.
- By means of the systems' design **optimization for each specific work configuration**, the crawler crane results to be very reliable and very simple as far as maintenance is concerned.
- The winches and turret rotation superior control, **significantly reduces the operating costs** and increases the production cycle.
- Thanks to its 130 tons lifting capacity and its 35 tons free-fall winches, **this innovative crane sets new standards for material handling allowing to use very heavy grabs** (30 tons and above).



# SC-130 HD



## Working range



### SC-130 HD

<b>Operating weight</b>	<b>120000 kg</b>	<b>264554 lb</b>
<b>Max capacity in lifting operation</b>	<b>130000 kg</b>	<b>286600 lb</b>

### Boom configuration - Number of boom extension

	Length (m)	11	14	17	21	24	26	29	32	35	38	41	44	47	50	53	56
<b>Boom foot</b>	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>Boom insert</b>	3		1								1	1			1	1	
<b>Boom insert</b>	6			1		2	1		2	1	1	2	2	3	2	2	3
<b>Boom insert</b>	9				1		1	2	1	2	2	2	2	2	3	3	3
<b>Boom head</b>	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

	Length (ft)	36	46	56	69	79	85	95	105	115	125	135	144	154	164	174	184
<b>Boom foot</b>	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>Boom insert</b>	10		1								1	1			1	1	
<b>Boom insert</b>	20			1		2	1		2	1	1	2	2	3	2	2	3
<b>Boom insert</b>	30				1		1	2	1	2	2	2	2	2	3	3	3
<b>Boom head</b>	20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

### Auxiliary jib

<b>Max capacity</b>	<b>30 t</b>	<b>33 US ton</b>	<i>Load chart programmed in Load moment indicator</i>
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### Boom configuration

- Rated loads are in metric tons valid for 360 degrees working area.
- Lifting capacities are in compliance with ISO 4305 (Table 1+2) + tipping angle 4° for dynamic effect
- Working radius are measured from the swing center of the machine and under load.
- Rated loads are calculated with the machine on firm and level ground, without travelling
- Weights of lifting attachments (e.g.: hook, ropes, bucket, etc.) are included in the rated load: therefore their weights must be subtracted from rated load to obtain net lifting value.
- Load charts are valid with maximum undercarriage track.
- Optional equipment on boom (e.f. boom catwalks; jb; etc.) must be deducted from rated load to get net lifting value.
- Lifting capacities are based on freely suspended loads. Rated loads and operating speeds must be reduced in case of adverse conditions (e.g.: wind, soft ground, out-of-level, pendulum action, sudden load stopping, operating speeds, etc.)
- Load chart above are only for reference. For actual lifting capacities please refer to load chart in operator's manual.
- Instruction in the "Operator's Manual" must be strictly observed during machine operations.





# Configurations

Mechanical Grab



## DW Mechanical grab

Max grab weight	35000 kg	77162 lb
GC-16 weight	16000 - 22000 kg	35274 - 48502 lb
GC-16 excav. dimension	800/1200 x 2800/3500 mm	31.5/47 x 110/138 in

Please refer to load chart for duty cycle operation

Hydraulic Grab



## DW Hydraulic grab

Max grab weight - 1 rope	35000 kg	77162 lb
Max grab weight - 2 rope	53000 kg	116845 lb
GH-15 weight	15200 kg	33510 lb
GH-15 excav. dimension	600/1500 x 2500/4200 mm	23.6/59 x 98.4/165.4 in

Please refer to load chart for duty cycle operation

Casing & Hammer Grab



## Casing oscillator and hammer grab

Max drilling diameter	3000 mm	118 in
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Please refer to load chart for duty cycle operation

Clamshell



**Clamshell**

Max grab weight      **53000 kg**      **116845 lb**

Radius (m)	SC130HD Load chart (t) - for duty cycle operation c/w 35800 kg counterweight										Radius (m)
	Boom length (m)										
	11	14	17	20	23	26	29	32	35		
5,0	52,1	52,1	52,1								5,0
6,0	52,1	52,1	52,1	44,0	37,8	32,5					6,0
7,0	52,1	52,1	51,5	43,7	37,5	32,3	28,2	24,9	22,1		7,0
8,0	50,2	50,4	50,4	43,3	37,2	32,3	28,2	24,9	22,1		8,0
9,0	42,0	42,2	42,2	42,2	37,2	32,3	28,2	24,9	22,1		9,0
10,0	36,0	36,1	36,2	36,2	36,1	32,3	28,2	24,9	22,1		10,0
11,0	31,3	31,5	31,6	31,5	31,5	31,4	28,2	24,9	22,1		11,0
12,0		27,9	27,9	27,9	27,8	27,7	27,6	24,9	22,1		12,0
13,0		24,9	25,0	24,9	24,9	24,8	24,7	24,5	22,1		13,0
14,0		22,4	22,5	22,5	22,4	22,3	22,2	22,1	21,8		14,0
16,0			18,7	18,7	18,6	18,5	18,4	18,2	18,1		16,0
18,0				15,8	15,8	15,7	15,5	15,4	15,3		18,0
20,0				13,6	13,6	13,5	13,4	13,2	13,1		20,0
22,0					11,6	11,5	11,4	11,2	11,1		22,0
24,0						10,0	9,9	9,7	9,6		24,0
26,0							8,7	8,6	8,5		26,0
28,0								7,6	7,4		28,0
30,0									6,6		30,0
32,0									5,9		32,0
34,0										5,2	34,0

Radius (ft)	SC130HD Load chart (t) - for duty cycle operation c/w 78925.5 lb counterweight										Radius (ft)
	Boom length (ft)										
	36	46	56	66	75	85	95	105	115		
16	57,5	57,5	57,5								16
20	57,5	57,5	57,5	48,6	41,7	35,9					20
23	57,5	57,5	56,8	48,2	41,4	35,6	31,1	27,4	24,4		23
26	55,4	55,6	55,6	47,8	41,0	35,6	31,1	27,4	24,4		26
30	46,3	46,5	46,6	46,5	41,0	35,6	31,1	27,4	24,4		30
33	39,7	39,9	39,9	39,9	39,8	35,6	31,1	27,4	24,4		33
36	34,6	34,8	34,8	34,8	34,7	34,6	31,1	27,4	24,4		36
39		30,7	30,8	30,8	30,7	30,6	30,5	27,4	24,4		39
43		27,4	27,5	27,5	27,4	27,3	27,2	27,0	24,4		43
46		24,7	24,8	24,8	24,7	24,6	24,5	24,3	24,0		46
52			20,6	20,6	20,5	20,4	20,3	20,1	20,0		52
59				17,4	17,4	17,3	17,1	17,0	16,8		59
66				15,0	15,0	14,8	14,7	14,6	14,4		66
72					12,8	12,6	12,5	12,4	12,2		72
79						11,0	10,9	10,7	10,6		79
85							9,6	9,5	9,4		85
92								8,3	8,2		92
98									7,3		98
105									6,5		105
112										5,7	112

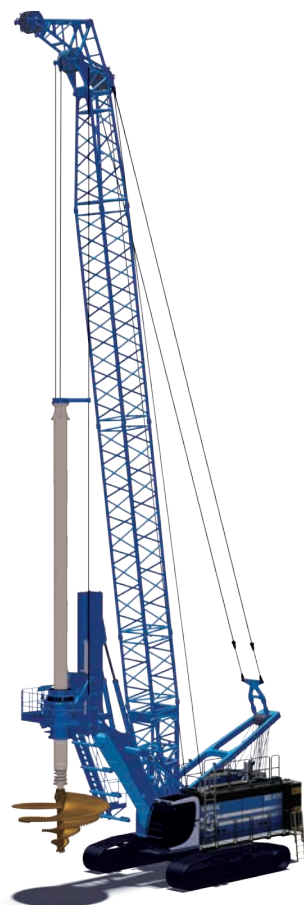
Radius (m)	SC130HD Load chart (t) - for duty cycle operation c/w 42000 kg counterweight										Radius (m)
	Boom length (m)										
	11	14	17	20	23	26	29	32	35		
6,0											6,0
7,0			53,0	53,0	44,6	38,6	33,6	29,6	26,0	23,2	7,0
8,0	52,1	53,0	51,5	44,0	38,3	33,3	29,1	26,0	22,9	8,0	
9,0	46,0	46,2	46,3	43,7	38,0	33,3	29,1	26,0	22,9	9,0	
10,0	39,5	39,6	39,7	39,7	37,7	33,3	29,1	26,0	22,9	10,0	
11,0	34,4	34,6	34,7	34,6	34,6	33,1	29,1	26,0	22,9	11,0	
12,0		30,6	30,7	30,6	30,6	30,2	28,6	26,0	22,9	12,0	
13,0		27,4	27,5	27,4	27,4	27,3	26,2	24,8	22,9	13,0	
14,0		24,7	24,8	24,8	24,7	24,6	23,9	22,8	21,8	14,0	
16,0			20,6	20,6	20,6	20,4	20,3	19,4	18,6	16,0	
18,0				17,5	17,5	17,3	17,2	17,1	16,0	18,0	
20,0				15,1	15,1	15,0	14,9	14,7	14,6	20,0	
22,0					12,9	12,8	12,7	12,5	12,4	22,0	
24,0						11,1	11,1	10,9	10,8	24,0	
26,0							9,8	9,7	9,6	26,0	
28,0								8,5	8,4	28,0	
30,0									7,5	30,0	
32,0									6,7	32,0	
34,0										6,0	34,0
34,0										5,2	34,0

Radius (ft)	SC130HD Load chart (t) - for duty cycle operation c/w 92594 lb counterweight										Radius (ft)
	Boom length (ft)										
	36	46	56	66	75	85	95	105	115		
20											20
23			58,5	58,5	49,2	42,5	37,0	32,6	28,7	25,6	23
26	57,5	58,5	56,8	48,6	42,2	36,7	32,1	28,7	25,2	26	
30	50,8	51,0	51,0	48,2	41,9	36,7	32,1	28,7	25,2	30	
33	43,5	43,7	43,8	43,7	41,6	36,7	32,1	28,7	25,2	33	
36	38,0	38,2	38,2	38,2	38,1	36,5	32,1	28,7	25,2	36	
39		33,8	33,9	33,8	33,7	33,3	31,6	28,7	25,2	39	
43		30,2	30,3	30,2	30,2	30,1	28,9	27,3	25,2	43	
46		27,2	27,4	27,3	27,2	27,1	26,4	25,2	24,1	46	
52				22,8	22,7	22,5	22,4	21,4	20,5	52	
59				19,3	19,3	19,1	19,0	18,9	17,6	59	
66				16,6	16,6	16,5	16,4	16,2	16,1	66	
72					14,2	14,1	14,0	13,8	13,7	72	
79						12,3	12,2	12,0	11,9	79	
85							10,8	10,7	10,5	85	
92								9,4	9,3	92	
98									8,3	98	
105									7,4	105	
112										6,6	112
112										5,7	112

Please refer to load chart for duty cycle operation

# Configurations

Hydraulic rotary



Dynamic Compaction



Hydraulic rotary attachment (SA-40)		
Max diameter	4000 mm	157.5 in
Max depth	94 (106) m	308.4 (348) ft
Max torque	413 kNm	304608 lb*ft
Rated torque	387 kNm	285432 lb*ft
Max drilling speed	30,4 rpm	30,4 rpm
Cylinder crowd system stroke	2840 mm	111.8 ft
Cylinder crowd system force	180 kN	40465 lbf

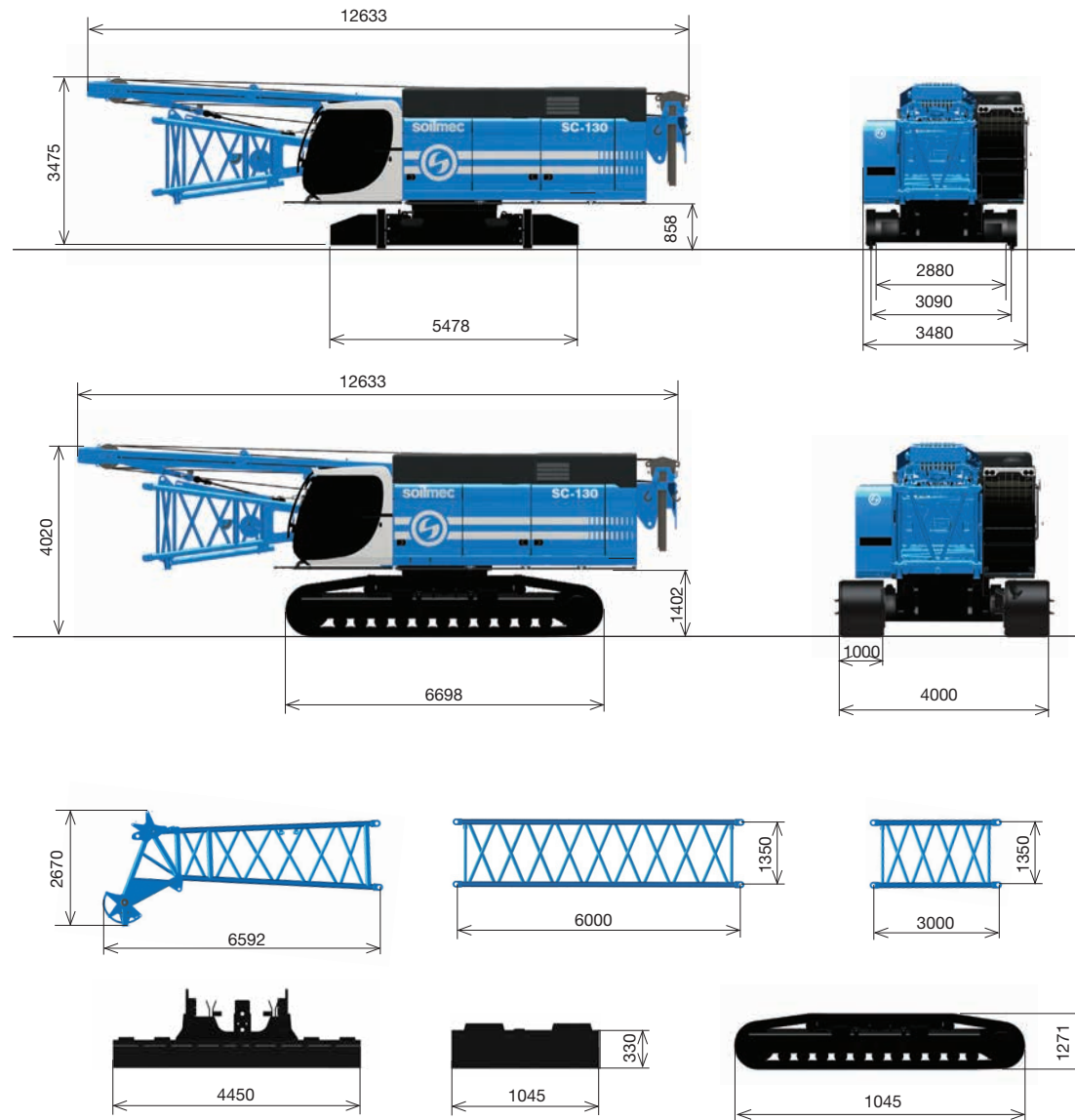
working radius	Boom length				
	20 m	23 m	26 m	29 m	32 m
8 m	30 t	30 t	30 t	28,4 t	24,8 t
9 m	30 t	30 t	27,5 t	25,8 t	23,7 t
10 m	29,6 t	26,8 t	25,1 t	23,4 t	21,8 t

working radius	Boom length				
	66 ft	75 ft	85 ft	95 ft	105 ft
26 ft	66139 lb	66139 lb	66139 lb	62611 lb	54675 lb
30 ft	66139 lb	66139 lb	60627 lb	56879 lb	52249 lb
33 ft	65257 lb	59084 lb	55336 lb	51588 lb	48061 lb



# Transport

## Dimensions and Weights



### Base machine (SC-39 VW undercarriage) c/w crawlers

Weight	80000 kg	176370 lb
Width	4000 mm	157 in
Height	4020 mm	158 in
Length	12633 mm	497 in

### Base machine (SC-39 VW undercarriage) w/o crawlers

Weight	57000 kg	125663 lb
Width	3500 mm	138 in
Height	3475 mm	137 in
Length	12633 mm	497 in

### Base machine (SC-37 FW undercarriage) w/o crawlers

Weight	49500 kg	109129 lb
Width	3500 mm	138 in
Height	3545 mm	140 in
Length	12633 mm	497 in

### Boom transport

Width	1500 mm	59 in
Weight - 3 m (10 ft)	930 kg	2050 lb
Weight - 6 m (20 ft)	1950 kg	4299 lb
Weight - 9 m (30 ft)	3020 kg	6658 lb
Weight - Cathead	3397 kg	7489 lb

### Counterweight transport

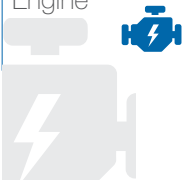
Base width	1125 mm	44 in
Base weight	10000 kg	22046 lb
Block width	996 mm	39 in
Block weight	1400 kg	3086 lb

### Sideframes transport

Weight (SC-37 FW)	13000 kg	28660 lb
Weight (SC-39 VW)	12500 kg	27558 lb
Width	1000 mm	39 in

# Technical data

## Engine



Engine		
Model	<b>CAT C18</b>	CAT C18
Power rating	<b>563 kW @ 1800 rpm</b>	755 HP @ 1800 rpm
Engine conforms to Exhaust emission Standard	<b>EU Stage V / US EPA Tier 4f</b>	EU Stage V / US EPA Tier 4f
Fuel tank capacity	<b>1100 l</b>	291 US gal

Available:

Engine Tier 2: Power rating 570 kW (764HP) @ 1800 rpm

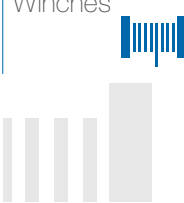
## Hydraulic system



The cleaning of hydraulic oils is electronically monitored and any clogging is show to operator on DMS control system in the cab.

Hydraulic systems		
Main pumps flow - dedicated for hydromill module	<b>2 x 420 l/min</b>	2 x 111 US gal
Main pumps flow - dedicated for base carrier	<b>2 x 384 l/min</b>	2 x 101 US gal
Hydraulic oil capacity	<b>1250 l</b>	330 US gal

## Winches



Main winch		Option 1
Type	<b>Free fall</b>	Free fall
1st layer line pull (nominal)	<b>300 kN</b>	67442 lbf
1 st layer rope speed (max)	<b>81 m/min</b>	266 ft/min
Rope diameter	<b>36 mm</b>	1,4 in
Rope layers	<b>3</b>	3
Useful rope length with 1 / 2 / 3 full layers	<b>38 / 87 / 140 m</b>	125 / 285 / 459 ft

Main winch		Option 2
Type	<b>Free fall</b>	Free fall
1st layer line pull (nominal)	<b>350 kN</b>	78682 lbf
1 st layer rope speed (max)	<b>73 m/min</b>	240 ft/min
Rope diameter	<b>36 mm</b>	1,4 in
Rope layers	<b>3</b>	3
Useful rope length with 1 / 2 / 3 full layers	<b>39 / 90 / 144 m</b>	128 / 295 / 472ft

## Upper structure



Upper structure		
Turret width	<b>3500 mm</b>	138 in
Slewing speed	<b>3,5 rpm</b>	3,5 rpm
Swing tail radius	<b>5310 mm</b>	209 in

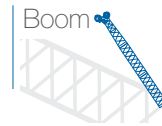
## Undercarriage



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	Variable gauge
Overall width	<b>6000 mm</b>	236,2 in
Overall length	<b>6700 mm</b>	263,8 in
Track shoes width	<b>1000 mm</b>	39,4 in
Track shoes type	<b>Triple grouser</b>	Triple grouser
Travel speed	<b>0,8 - 1,6 km/h</b>	0,5 - 1,0 mph
Traction force	<b>722 kN</b>	162309 lbf
Average ground pressure	<b>0,2 MPa</b>	29 psi

## Boom



Boom		
Boom length min - max	<b>11 - 56 m</b>	36 - 184 ft
Boom extension length	<b>3 - 6 - 9 m</b>	10 - 20 -30 ft
Jib	<b>30 t</b>	33 US ton



Noise		
Sound pressure level in cab c/w Tier 4f Engine	<b>77 dB(A)</b>	76 dB(A)
Sound power level c/w Tier 4f Engine	<b>107 dB(A)</b>	113 dB(A)

## H-cab



Soilmec H-cab. By assessing the specific application and listening properly to the wishes and requirements of the operators, Soilmec provides the optimal operator cabin 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 Soilmec - 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.



# Equipments

## UNDERCARRIAGE

Triple grouser track shoes	●
Flat track shoes	○
Variable gauge undercarriage	●
Self-lifting kit for variable gauge undercarriage	○
Fixed gauge undercarriage	○
Extension kit for undercarriage fixed Gauge	○
4 access points with steps	●
Removable sides for low transport weight	○
Extension plates groups for undercarriage stabilizers	○
Hydraulic prearrangement for Casing Oscillator	○
Tracks with chain tensioning device	●
Grease lubricated tracks	●
Track triple grouser: 900 mm	○

## UPPER STRUCTURE

Diesel engine Cat C18 Tier 4F / Stage V	●
Diesel engine Cat C18 Tier 2	○
360° access with 2 ladders for upper structure	●
Slew bearing with 3 roller bearing	●
Additional counterweight 6,2 t (6.8 US ton)	○
Free fall winches 30 t (33 US ton)	●
Free fall winches 35 t (39 US ton)	○
Limit switch for rope winding and winches	●
Quick assembly catwalk 900 mm width with handrails	●
Acoustic & light alarm for tramming	●
Automatic greasing kit	○
2° (Additional) Motoreducer for turret swing	○
Service winch for assembling operation	○
Support for tools, air compressor and high pressure water pump	○
PLC system for electro-proportional controls	●
Counterweight self-removal	●
Hydro-clean micro filtration with water separation	●
Automatic swing parking brake and automatic travel parking brake	●
Electric refueling pumps for Diesel and hydraulic oil with automatic stop system	●
Bio lubrication engine oil	○
*CAT BIO HYD ADVANCED* hydraulic bio-oil (compliant with European directive 2005/360/EC)	○
Swing limitation system	○

## H-CAB

Falling object protective structure (FOPS)	●
Rearview mirrors	●
Operator seat (air suspension, lumbar support, fully adjustable positioning, safety belt)	●
Sliding door	●
Sliding window	●
Lighting system in front of the cab	●
Sunshade shield for cabin	●
Comfort pack (Air conditioner, Beverage/Cup holder, Courtesy lights, etc.)	●
Stationary skylight	●
Travel control pedals with removable hand levers	●
Signal/warning horn	●
Hydraulic oil contamination warning inside the cab	●

## CONTROL AND MONITORING SYSTEM

DMS ON BOARD with control of machine performance and excavation parameters	●
DMS PC for production data analysis and report	●
DMS manager 4.0	●
GSM / GPRS / WIFI Modem	●
Adjustable monitor 12" touch screen	●

## SAFETY DEVICE

4 video-cameras	●
Assembly mode for rigging/de-rigging	●
Control board for rope changing	●
High led lighting system	●
Safety life line on the boom and base boom ladder	●
Load Moment Limiter (with boom lowering slow stop function)	●
Fire extinguisher	●
State-of-the-art safety load indicator with graphic display and 3 color percentage indicator traffic light	●
Cab top guard	●
Safety 3 rope turns unwinding limited switch on winches	●

## BOOM

Boom extension 3 - 6 - 9 m (10 - 20 -30 ft)	●
Boom angle available on display	●
Working radius available on display	●
Max handling load available on display	●
Current handling load available on display	●

Boom walk ways	●
Personal fall arrest system for boom walk ways	○

## TECHNOLOGY PACKAGE \*

### LIFTING

Not Rotating Ropes Group for front and rear winches L = 140 m (459.3 ft)	●
Hook Block (No.4 sheeves) for 120 tons	○
Hook Block (No.3 sheeves) for 100 tons	●
Hook Block (No.2 sheeves) for 72,4 tons	○
Hook Block (No.1 sheeves) for 37,7 tons	○
Jib 30 t (33 US ton)	○
Lifting beam for jib in 2nd line pull	○
Swivel hook for jib (No.1 sheeves) for 20 tons	○

### DIAPHRAGM WALL

Hydraulic grab GH-15	○
Inclinometer c/w watertight box	●
Grab body extendable with additional side guides	●
Interchangeable jaws and teeth	●
Depthmeter	●
Greasing kit	●
Rotating Ropes Group for front and rear winches L=120m	●
Rotating Ropes Group for front and rear winches L=150m	○
Mechanical grab GC-11	○
Mechanical grab GC-16	○
Winch synchronization (both winches work at the same speed) for 2 rope grab operations	○

### CASING OSCILLATOR

Not Rotating Ropes Group for front and rear winches L=140m (Spherical/Hammer Grab)	○
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### DYNAMIC COMPACTION

Heavy Duty sheaves for ropes	●
Protection grids and heavy duty shield for cabin	●
Ropes restrained and protection arcs for stroke absorption	●

### HYDRAULIC ROTARY

Hydraulic rotary attachment SA-40	●
Hydraulic and Electric prearrangement for rotary attachment	●
Hydraulic rotary table up to 413 kNm nominal torque	●
Hydraulic crowd cylinder nominal force up to 250 kN	●

● standard ○ optional n.a. not available

\* The technology package is only referred to the machine set up in this specific version



A close-up photograph of a muddy tire tread on a dirt surface. The tire is on the left side of the frame, and the mud is dark brown and textured. The background is a blurred dirt surface.

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#muddyboots