




SC-135 TIGER

soilmec[®]
Drilling and Foundation Equipment





SC-135 Tiger. The hydromill the way it should be.

We've been in and around diaphragm walls for years.

We know that a hydromill should be as productive as the situation demands, unfailingly reliable and capable of minimizing downtime and maintenance costs. We know what it means to turn this business into a profitable one.

ER
D
S

Higher performance

- Hose Chain System for 100 m depth
- Motorized swivel for module rotation system $\pm 90^\circ$
- Independent mobile flaps for accurate verticality
 - 6 upper (3 position) and 6 lower (2 position)
- New Hose Drum and Cathead Layout for perfect suitability at various working radius with all rotation angles of the module (no torsion on the module during excavation)
- High pressure filters on the main lines



Unparalleled ergonomics

- H-cab with outstanding volume (1050 mm wide).
- Air-suspended & fully adjustable seat with lumbar support.
- Sliding door.
- New air conditioner system.
- TouchScreen & Adjustable monitor 12" for DMS.
- Sunshade shield for cabin.





Great reliability

Separate and independent hydraulic system for both Hydromill module and base machine (PATENTED)

- Chance to recover the module and to mobilize the base machine in the site.
- Less refurbishing costs in case of single system contamination.
- Fast problem solving for a dedicated hydraulic system in case of oil contamination.
- Better performances coming from specific oils for each hydraulic system.

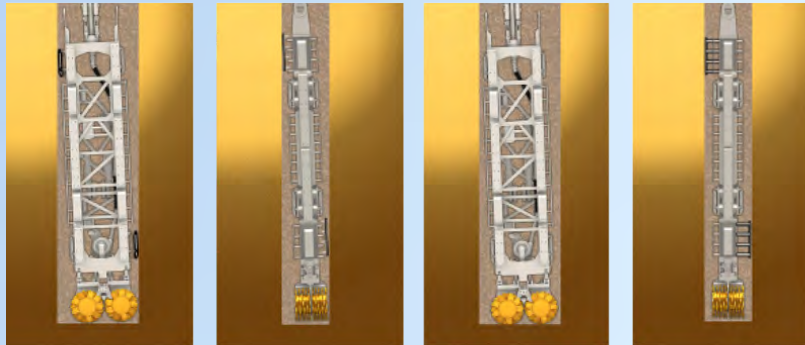
Safety first

Safety equipments in compliance with CE request of EN16228

- 8 video cameras and monitors
- 8 access ladder points for undercarriage
- Quick assembly 900 mm catwalk
- Upper platform catwalks and handrails
- Remote control board for tramming and service/maintenance
- High led lighting system
- Safety Life Line on the boom for service and maintenance



Hydromill Technology: verticality control at the highest levels



Soilmec Hydromill Verticality Control has been developed in order to reach the best requirements in terms of diaphragm precision, allowing verticality error less than 0,2 % tested up to 250 m depth. Verticality control has been ensured by the means of double or triple axis sensors; for very high depth panels Soilmec defines a special triple axis sensor that guarantees an incredible accuracy for long and deep excavations.



Hydromill full package

With Soilmec hydromill package you can get a top quality machine, the complete job site equipments & technology and trustworthy working partner.

Our selected team assist from the moment the machine leaves the factory. Professional technicians and operators carry out complete commissioning and assistance, allow you to get your production targets and provide training on site depending your requirements.

Additionally, our site supervisor assist you with integration, and development of the

Whatever your need for DW with hydromill knowledge and equipment to provide your

Mud treatment system
Operator + Technician

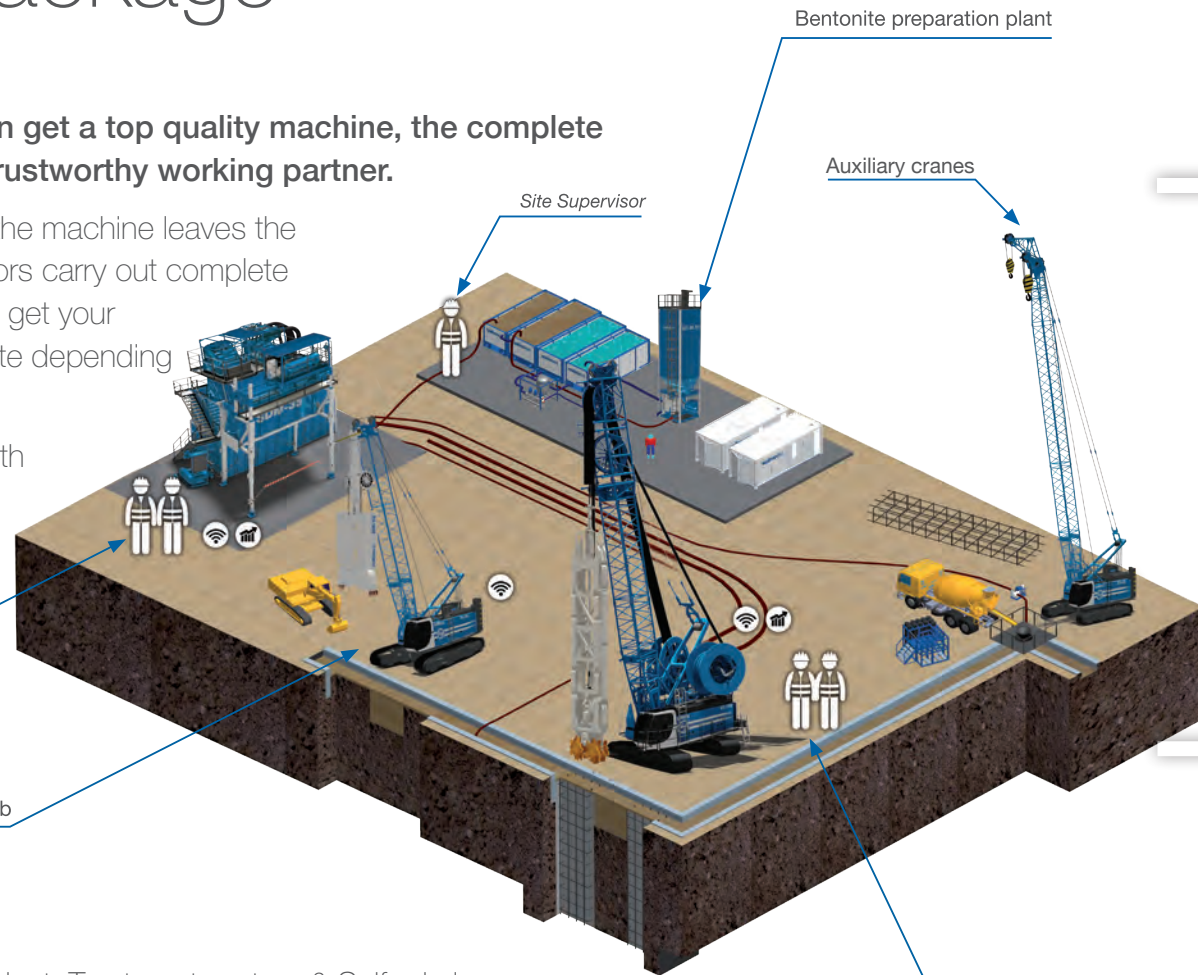
Auxiliary cranes with Grab

Bentonite preparation plant

Auxiliary cranes

Site Supervisor

Operator + Technician



Machinery | Hydromill, Cranes & Grab

Ancillaries Equipment | Mud preparation plant, Treatment system & Self priming pumps

Technologies | DMS on board, DMS PC & DMS Manager

Dedicated team of Experts | Operators, Mechanics & Site supervisor

T-panel innovation.

Milling unit with rotation system conceived for T-panel execution or for other module orientation.

This specific features gives the possibility to facilitate the job site operation, leading to a reduction in terms of cost and time.



Forty-five.

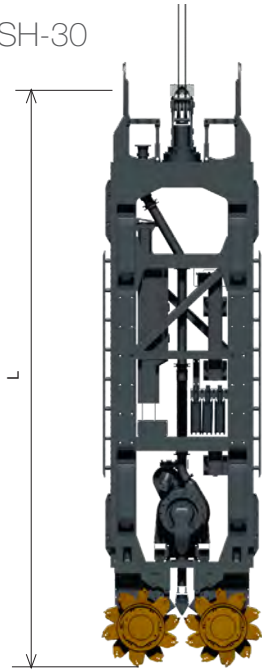
Everything has been designed with a great attention to the current and more modern needs of transport rules.

A giant of more 200 t traveling in 45 t.

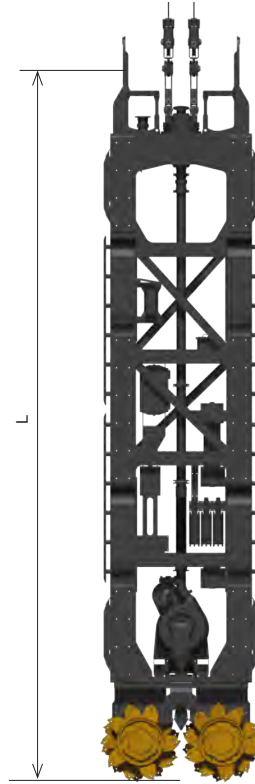


Module data sheet

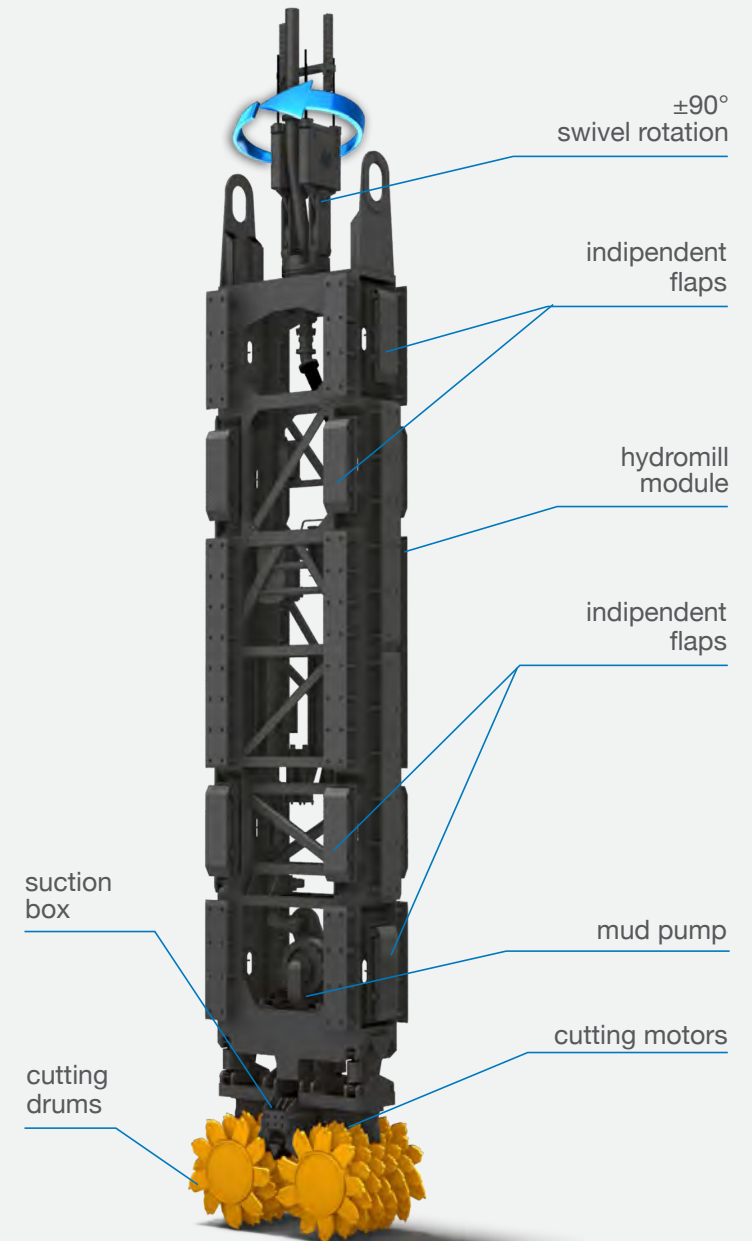
Module SH-30



Module SH-40



ModuleType	SH-30	SH-30	SH-40	SH-40
Hydromill module height (H)	10,5 m	34.5 ft	13 m	42.7 ft
Hydromill module length range (L)	2,6 - 3 m	8.5 - 9.8 ft	2,8 - 3,2 m	9.2 ft - 10.5 ft
Weight range	30 - 40 t	66139 - 88185 lb	40 - 50 t	88185 - 95883 lb
Independent mobile flaps	12	12	12	12
Cutting motors	2	2	2	2
Torque range	90 - 130 kNm	66381 - 95883 lb* <i>ft</i>	90 - 150 kNm	66381 - 110634 lb* <i>ft</i>
Drilling speed range	25 - 16 rpm	25 - 16 rpm	25 - 15 rpm	25 - 15 rpm
Mud pump power	170 kW	228 HP	170 kW	228 HP
Flow rate	450 m3/h	15891 ft3/h	450 m3/h	15891 ft3/h
Delivery pipe	152 mm	6 in	152 mm	6 in
Hydromill module rotation	+/- 90°	+/- 90°	+/- 90°	+/- 90°



Cutting drums

Standard Teeth Drums



Standard Teeth Drums

Coarse and cohesive soil, alluvial soil with small size of soft rocks boulders, medium-soft decompressed rocks (10 MPa UCS)

HD Teeth Drums



HD Teeth Drums

Mixed soils, fractured and medium decompressed rocks (20 MPa UCS)

Standard Pick Drums



Standard Pick Drums

Mixed soils with boulders, fractured and medium-hard decompressed rocks (20-50 MPa UCS)

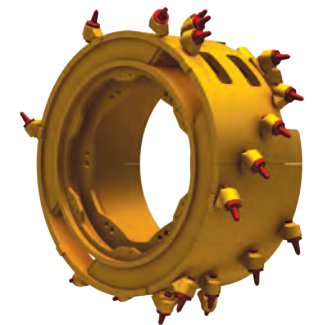
Auger Pick Drums



Auger Pick Drums

Low fractured medium and hard rock formation (30-100 MPa UCS)

HD Pick Drums

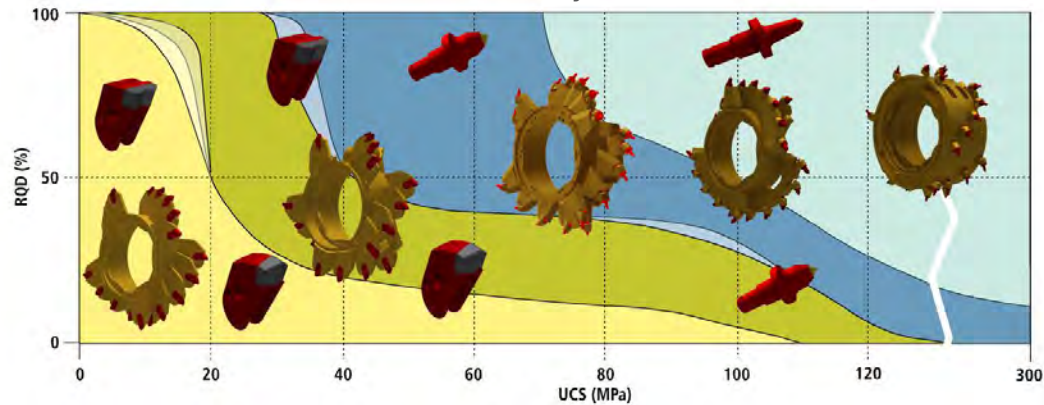


HD Pick Drums

Not fractured hard-extremely hard rock formation (50-300 MPa UCS)

Cutting motors

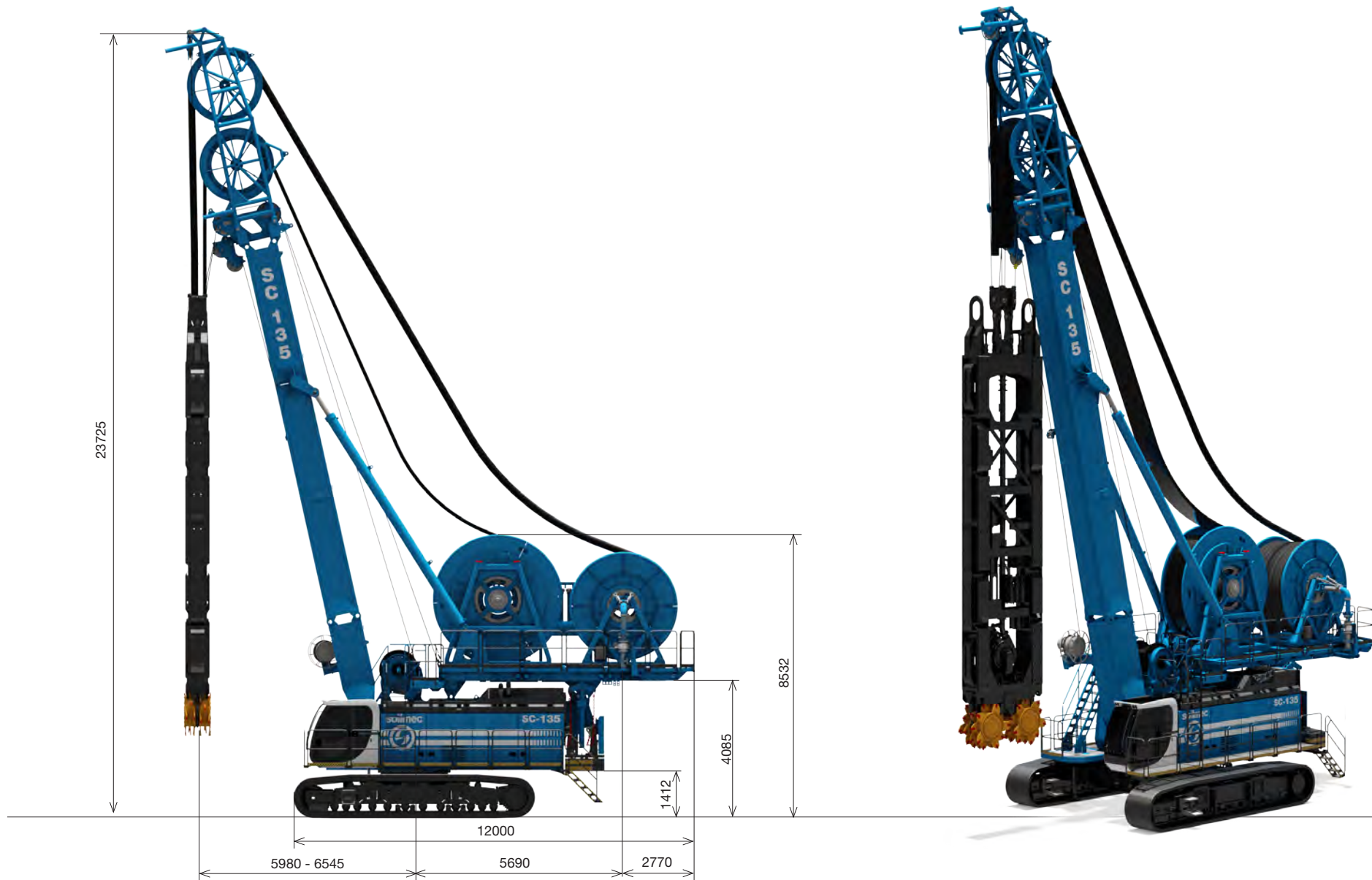
Production rates by soils

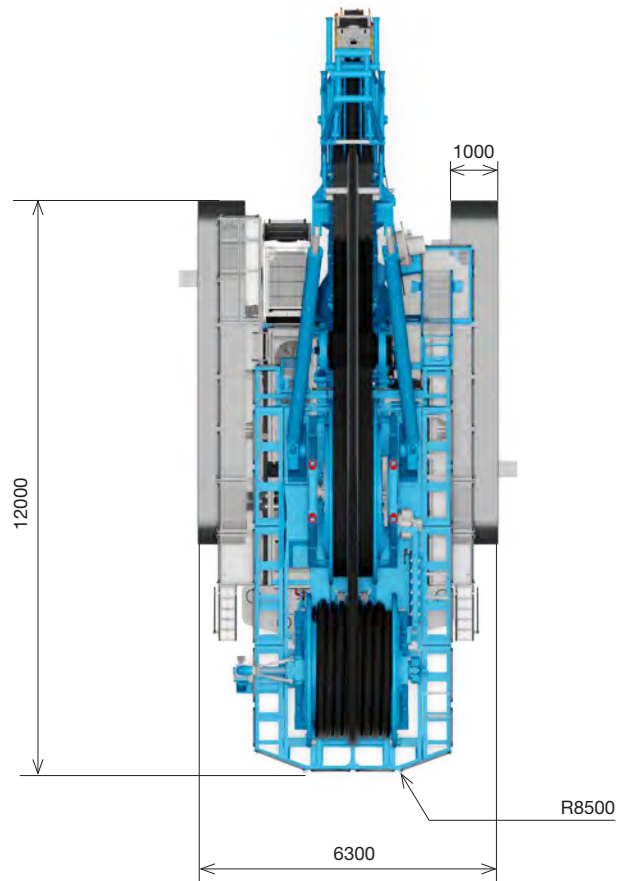


Cutting motors	Rated torque		Drilling speed	
H-9	90 kNm	66381 lbf*ft	25 rpm	25 rpm
HH-11	110 kNm	81132 lbf*ft	20 rpm	20 rpm
HH-13	130 kNm	95883 lbf*ft	16 rpm	16 rpm
HH-15	150 kNm	110634 lbf*ft	15 rpm	15 rpm

Cutting motors	800 mm 31.5 in	1000 mm 39.4 in	1200 mm 47.2 in	1500 mm 59.1 in	1800 mm 70.9 in
O4@	■	■	■	■	
OO488		■	■	■	■
OO48: 6<				■	■

SC-135 Tiger



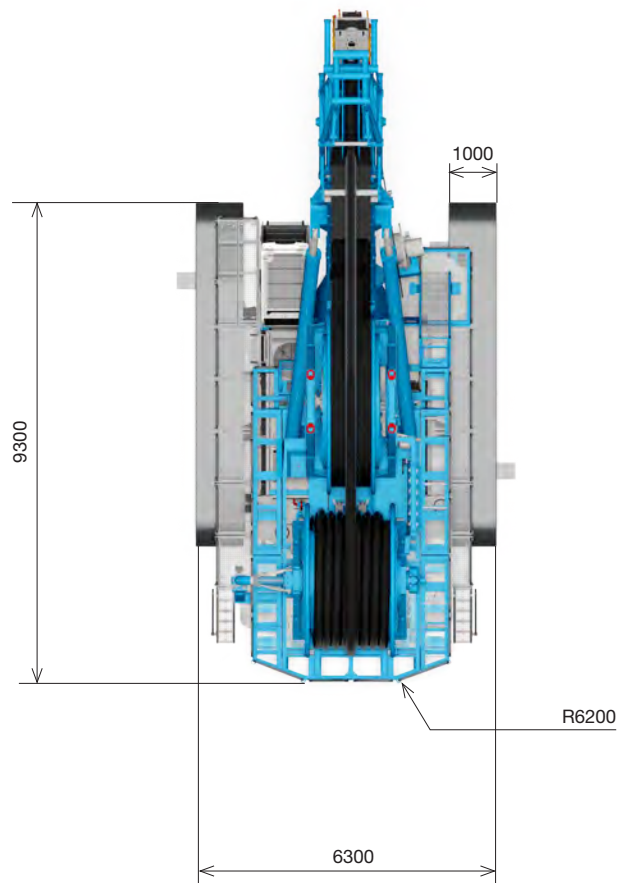


SC-135 Tiger

Operating weight w/o hydromill module	162 ton	357149 lb
Operating height	23,7 m	77.7 ft
Max drilling depth	120 m	394 ft
Hydromill modul model available	SH-30 / SH-40	SH-30 / SH-40
Upperframe		
Width	3500 mm	137.7 in
Swing tail radius	8500 mm	335 in
Counterweight	17 t	37478 lb
Hose reel for cutter hydraulic hoses		
Number of hydraulic lines	7 + 1 (reserve) x 1"1/2	7 + 1 (reserve) x 1"1/2
Max line speed @ 1st layer	30 / 0,1 m/min	98 / 0,33 ft/min
Drum diameter	1400 mm	55 in
Transport weight w/o hoses	13,3 t	29325 lb
Hose reel for mud hose		
Mud hose type	6"	6"
Drum diameter	2200 mm	87 in
Transport weight w/o hoses	5,7 t	12566 lb
Boom for hydromill module		
Boom length	16 + 6 m	52 + 19,9 ft
Kinematic mechanism	Hydraulic cylinders	Hydraulic cylinders
Working radius (min/max)	5980 / 6545 mm	235 / 258 in

SC-135 Tiger Compact





SC-135 Tiger Compact

Operating weight w/o hydromill module	158 ton	348330 lb
Operating height	23,7 m	77.7 ft
Max drilling depth	84 m	276 ft
hydromill modul model available	SH-30 / SH-40	SH-30 / SH-40
Upperframe		
Width	3500 mm	137.7 in
Swing tail radius	6200 mm	244 in
Counterweight	23,2 t	51147 lb
Hose reel for cutter hydraulic hoses		
Number of hydraulic lines	7 + 1 (reserve) x 1"1/2	7 + 1 (reserve) x 1"1/2
Max line speed @ 1st layer	30 / 0,1 m/min	98 / 0,33 ft/min
Drum diameter	1400 mm	55 in
Transport weight w/o hoses	10 t	22046 lb
Hose reel for mud hose		
Mud hose type	6"	6"
Drum diameter	2200 mm	87 in
Transport weight w/o hoses	5,7 t	12566 lb
Boom for hydromill module		
Boom length	16 + 6 m	52 + 19,9 ft
Kinematic mechanism	Hydraulic cylinders	Hydraulic cylinders
Working radius (min/max)	6250 / 6545 mm	246 / 258 in

Transport

Dimensions and Weights

Transport base machine		COMPACT			
Weight w/o counterweight and w/o crawlers	45 t	99208 lb	49,6 t	109350 lb	
Overall length	8600 mm	339 in	8600 mm	339 in	
Overall height	3530 mm	139 in	3530 mm	139 in	
Overall width	3500 mm	138 in	3500 mm	138 in	

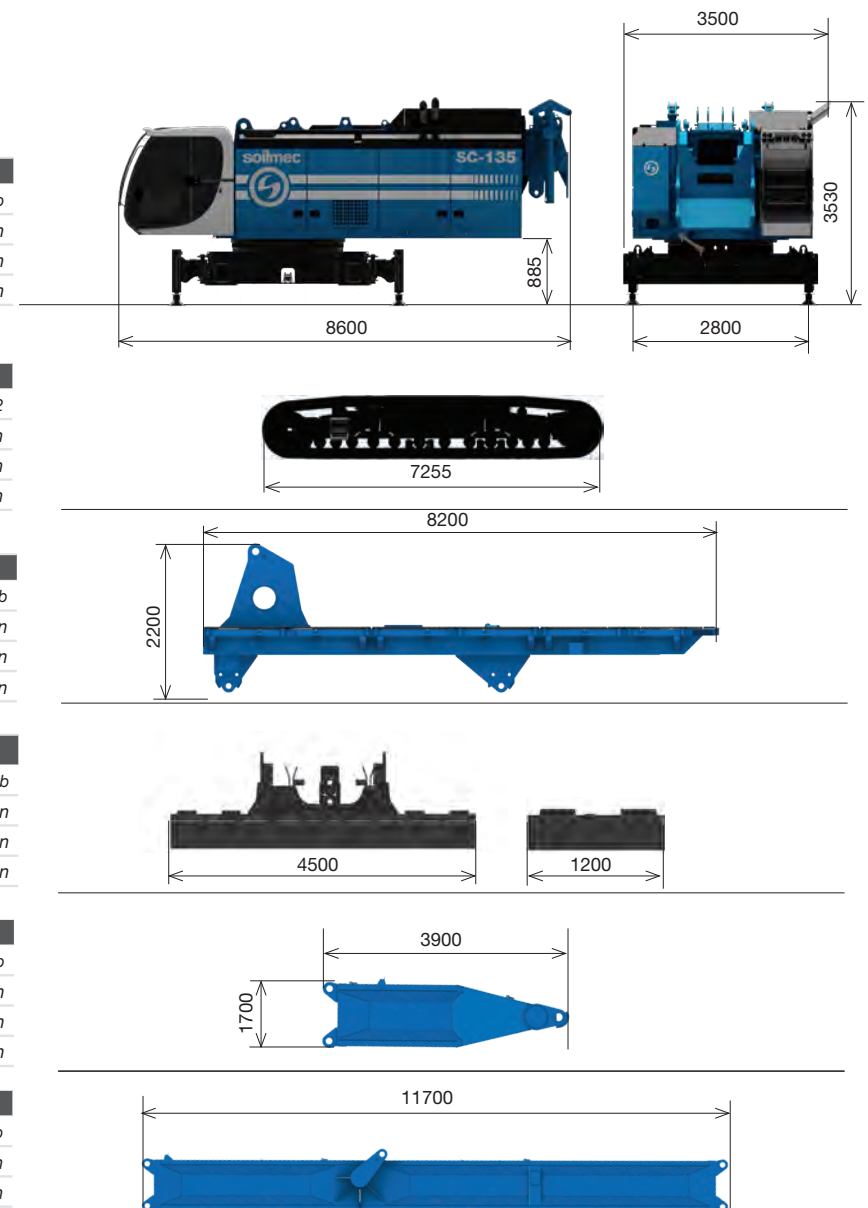
Transport crawler		COMPACT			
Weight	16 t x 2			35274 lb x 2	
Overall length	7255 mm			286 in	
Overall height	1335 mm			53 in	
Overall width	1000 mm			39.4 in	

Transport platform		COMPACT			
Weight	10,5 t	23148 lb	9,5 ton	20943 lb	
Overall length	8200 mm	323 in	6200 mm	244 in	
Overall height	2200 mm	87 in	2200 mm	87 in	
Overall width	3000 mm	118 in	3000 mm	118 in	

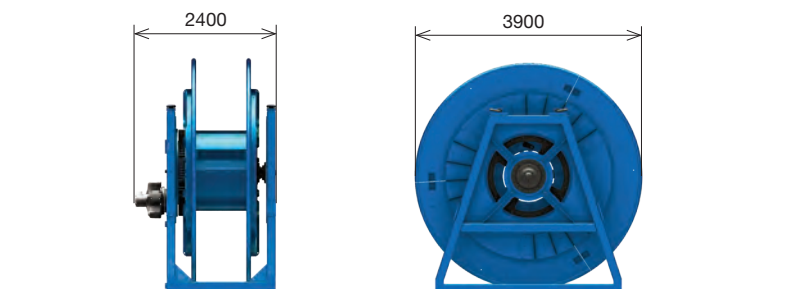
Transport counterweight		COMPACT			
Weight	17 t	37478 lb	23,2 ton	51147 lb	
Overall length	4500 mm	177 in	4500 mm	177 in	
Overall height	1700 mm	67 in	1700 mm	67 in	
Overall width	1200 mm	47 in	1200 mm	47 in	

Transport base boom		COMPACT			
Weight	2,05 t			4520 lb	
Overall length	3900 mm			154 in	
Overall height	1200 mm			47 in	
Overall width	1700 mm			67 in	

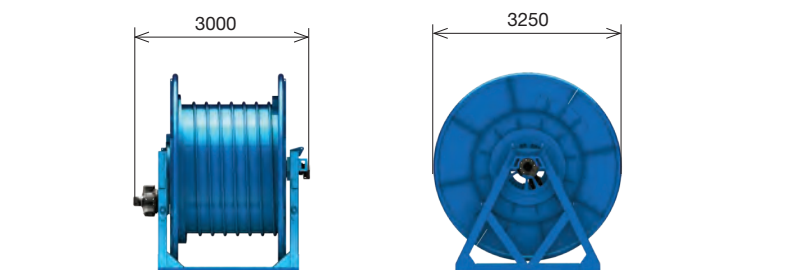
Transport intermediate boom		COMPACT			
Weight	5,3 t			11684 lb	
Overall length	11700 mm			461 in	
Overall height	1300 mm			51 in	
Overall width	1700 mm			67 in	



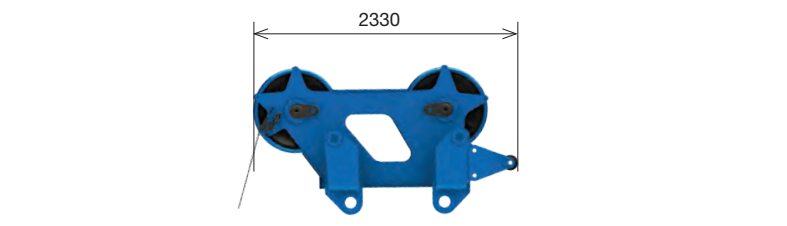
Transport hydraulic hoses drum		COMPACT		
Weight c/w hydraulic hoses	26 ton	57320 lb	20 ton	44092 lb
Overall length	3900 mm	154 in	3500 mm	138 in
Overall height	4000 mm	158 in	4000 mm	158 in
Overall width	2400 mm	95 in	2400 mm	95 in



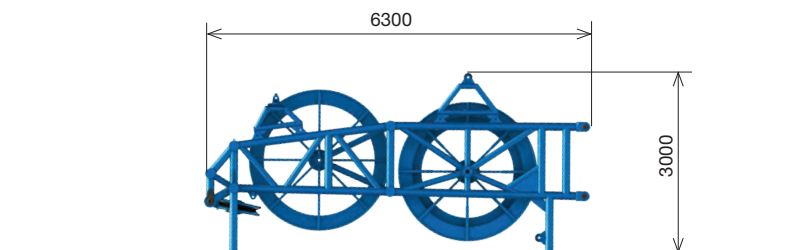
Transport mud hose drum			
Weight c/w mud hose	9,2 t		20282 lb
Overall length	3250 mm		128 in
Overall height	3500 mm		138 in
Overall width	3000 mm		118 in



Transport cathead for rope			
Weight	1,6 t		3527 lb
Overall length	2330 mm		92 in
Overall height	1200 mm		47 in
Overall width	1300 mm		51 in

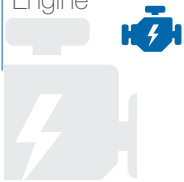


Transport cathead for hoses			
Weight	3,8 t		8377 lb
Overall length	6300 mm		248 in
Overall height	1500 mm		59 in
Overall width	3000 mm		118 in



Technical data

Engine



Engine		
Model	CAT C27	CAT C27
Power rating	708 kW @ 1800 rpm	950 HP @ 1800 rpm
Engine conforms to Exhaust emission Standard	EU Stage V / US EPA Tier 4f	EU Stage V / US EPA Tier 4f
Fuel tank capacity	1200 l	317 US gal

Available:
Engine Tier 2: Power rating 708 kW (950HP) @ 1800 rpm

Noise



Noise		
Sound pressure level in cab c/w Tier 4f Engine	76 dB(A)	76 dB(A)
Sound power level c/w Tier 4f Engine	113 dB(A)	113 dB(A)
Vibration transmitted to the hand-arm system of the machine operator	< 2.5 m/s²	< 2.5 m/s ²
Vibration transmitted to the whole body of the machine operator	< 0.5 m/s²	< 0.5 m/s ²

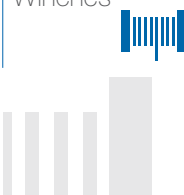
Hydraulic system



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

Separated hydraulic systems		
Main pumps flow - dedicated for hydromill module	3 x 460 l/min	3 x 122 gal/min
Main pumps flow - dedicated for base carrier	2 x 460 l/min	2 x 122 gal/min
Auxiliary pumps flow	3 x 67 l/min	2 x 18 gal/min
Hydraulic oil capacity	1050 + 815 l	277 + 215 US gal

Winches



Main winch		
Type	control descent vario type	control descent vario type
1st layer line pull (nominal)	297 kN	66767 lbf
1st layer rope speed (max)	30 m/min	30 m/min
Rope diameter	26 mm	1.02 in
Rope layers	5	5
Useful rope length with 1/2/3/4/5 full layers	67/143/224/310/400	67/143/224/310/400

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	fixed gauge, removable sides frames	fixed gauge, removable sides frames
Overall width	6300 mm	20.6 ft
Overall length	7255 mm	23.8 ft
Track shoes width	1000 mm	3.28 ft
Track shoes type	flat shoes	flat shoes
Travel speed	0,7 - 1,4 km/h	0.4 - 0.9 mph
Traction force	925 kN	207945 lbf
Average ground pressure	0,167 MPa	24.22 psi

Cab



Soilmec cab. By assessing the specific application and listening properly to the wishes and requirements of the operators, Soilmec 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 cab.

- Cabin width	1050 mm	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 duty cycle crawler cranes. 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.

Configurations

	TIGER	TIGER Compact
UNDERCARRIAGE		
Undercarriage 6000/1000	●	●
4 access points with steps	●	●
Removable sides for low trasport weight (45 t Tiger, 49,6 t Tiger compact)	●	●
Radio remote control for assembly	●	●
Support for tools, air compressor and high pressure water pump	●	●
UPPER STRUCTURE		
Diesel engine Cat C27 708 kW Tier 4 Final/Stage V	●	●
Diesel engine Cat C27 708 kW Tier 3A	○	○
Electro-proportional control system	●	●
360° access with 2 ladders	●	●
Limit switch for rope winding and winches	●	●
Quick assembly catwalk 900 mm width with handrails	●	●
Acoustic & light alarm for tramming	●	●
Hydraulic oil filtering external group complete with oil contamination indicator	○	○
Air compressor and high pressure water pump	○	○
Oil heater kit for low temperature	○	○
Drain oil flow-meter	○	○
CAB		
Falling object protective structure (FOPS)	●	●
Rearview mirrors	●	●
Comfort packakge	●	●
Operator seat (air suspension, lumbar support, fully adjustable positioning, safety belt)	●	●
Sliding door	●	●
Sliding window	○	○
Lighting system in front of the cab	●	●
Sunshade	○	○
CONTROL AND MONITORING SYSTEM		
DMS ON BOARD with control of machine performance and excavation parameters	●	●
DMS PC for production data analysis and report	●	●
DMS PC 3D option for panels overlap control	○	○
DMS manager 4.0	○	○
GSM / GPRS / WIFI Modem	●	●
Adjustable monitor 12" touch screen	●	●
Warning alarm in case of hydraulic oil contamination	●	●

	TIGER	TIGER Compact
SAFETY		
8 video-cameras	●	●
Remote control board for teeth changing	●	●
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	○	○
HYDROMILL TECHNOLOGY		
Double hydraulic circuit for hydromill and base machine	●	●
High pressure filters	●	●
Drain tank with hydro-clean micro filtration and water separation	●	●
Hydraulic hose set for 100 m depth with spare hose	●	●
Hydraulic hose kit for 120 m depth	○	○
Heavy duty mud hose for 100 m depth	●	●
Heavy duty mud hose kit for 120 m depth	○	○
Hydraulic hoses and mud hose layout for module rotation	●	●
Mud flow-meter	●	●

● standard ○ optional n.a. not available

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 road with a blue object, possibly a vehicle, in the distance.

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#muddyboots