



**SF-50**

CFA

Hydraulic CFA  
Rotary Rig

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**SF-50**

**soilmec**   
Drilling and Foundation Equipment

## Rotary

Soilmec rotaries are designed and manufactured to meet the need of performance and high production rate on various applications, with the added benefit of increased component life and reliability.

## Ease of transport and quick assembly

- Transport weight under 33 t.
- Crawlers can be retracted to 2.5 m wide.

## Compact powerful engine

Soilmec installs large displacement engines, providing exceptional performance and reliability.

- High performance, availability and reliability by using tried-and-tested technology with high power-to volume-ratio.
- The modern electronic injection system ensures low fuel consumption and therefore low operating costs.
- Low noise emissions, smooth running characteristics and durability.
- Meets exhaust emission regulations 2004/26/EU, Step III A and US-EPA Tier 3.



## DMS control system

DMS is an innovative system, developed by Soilmec, which controls and monitors the operation of the machine. For ease of operation the system is controlled by a touch screen located in the cab. The system main function, is to enable the machine to perform different functions more efficiently.

A dedicated power module electronic control system ensures the main pumps and diesel engine work at their most effective and productive levels.

## Ergonomic design

The cab is designed to be spacious, quiet and comfortable for the operator, assuring high productivity throughout the working day. Controls are conveniently located for easy operation.

## The Soilmec advantage

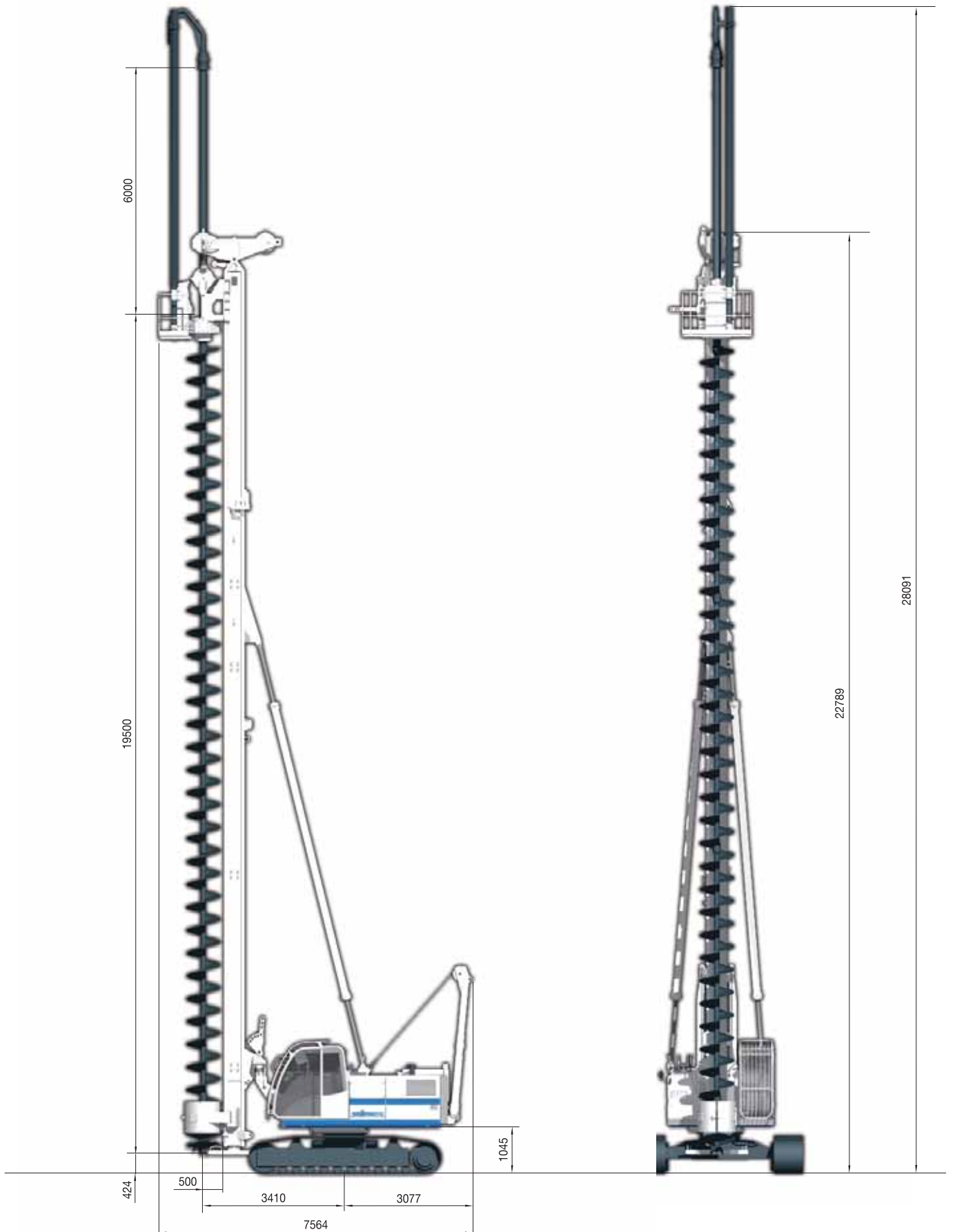
- A real multifunctional machine, designed from scratch to give you the chance of any market opportunity .
- Long life expectancy with a high residual value.
- Best price/performance ratio.
- Built with the customer in mind.









- 1** Turret
- 2** Undercarriage
- 3** Cab
- 4** Openable lower guide
- 5** Continuous flight auger
- 6** Rotary head
- 7** Cathead
- 8** Sleeve extension
- 9** Mast
- 10** Foot element

Cummins QSB6.7		
Power @ 2200 rpm	<b>164 kW</b>	220 HP
Operating weight	<b>39000 kg</b>	85980 lb
Torque	<b>100 kNm</b>	73756 lbfft
Max diameter	<b>900 mm</b>	35 in
Max depth	<b>25 m</b>	82 ft

# CFA - CONTINUOUS FLIGHT AUGER



	<b>Overall height</b>	<b>28091 mm</b>	<i>1106 in</i>
	<b>Operating weight</b> (approx) with kelly 4x13.5	<b>39000 kg</b>	<i>85979 lb</i>
	<b>Rotary Drive</b>		
	- Torque (nominal)	<b>100 kNm</b>	<i>73755 lb<sub>f</sub>ft</i>
	- Speed of rotation (max)	<b>40,9 rpm</b>	<i>40.9 rpm</i>
	<b>Crowd winch system (optional)</b>		
	- Pull down force	<b>37 kN</b>	<i>8318 lbf</i>
	- Stroke	<b>19572 mm</b>	<i>770.55 in</i>
	- Rope diameter	<b>12 mm</b>	<i>0.47 in</i>
	<b>Main winch</b>	<b>controlled descent</b>	<i>controlled descent</i>
	- Line pull (1st layer)	<b>102 kN</b>	<i>22930 lbf</i>
	- Rope diameter	<b>19 mm</b>	<i>0.75 in</i>
	- Rope length	<b>29 m / 65 m / 103 m</b>	<i>95ft / 213ft / 338 ft</i>
	- Line speed (max.)	<b>67 m/min</b>	<i>220 ft/min</i>
	<b>Auxiliary winch</b>	<b>controlled descent</b>	<i>controlled descent</i>
	- Line pull (1st layer)	<b>41 kN</b>	<i>9217 lbf</i>
	- Rope diameter	<b>16 mm</b>	<i>0.63 in</i>
	- Line speed (max.)	<b>66 m/min</b>	<i>217 ft/min</i>
	<b>Continuous flight auger</b>		
	- Max pile diameter	<b>900 mm</b>	<i>35.43 in</i>
	- Max pile depth w/o auger cleaner	<b>25 (19 + 6) m</b>	<i>82 (62 + 20) ft</i>
	- Max pile depth with auger cleaner	<b>23,5 m</b>	<i>77 ft</i>
	- Max extraction force	<b>510 kN</b>	<i>114651 lbf</i>
	- Length of auger string	<b>19,5 m</b>	<i>64 ft</i>
	<b>Mast inclination</b>		
	- Backward/Forward/Lateral	<b>10°/4°/3°</b>	<i>10°/4°/3°</i>

Soilmec integrates high quality level components: Gearmatic, Hydromatic, Lohmann, Rothe erde, Trasmital, Zollern.

### Standard equipment

- Oscillator attachment
- Central lubrication system
- Emergency mode of operation for engine
- Engine diagnostic system
- Diagnostic panel for hydraulic functions
- Transport securing lugs on crawler units
- Access ladder on upper carriage
- On-board lighting set
- On-board tool set
- Electric refuelling pump
- High-comfort operator's cab (*width: 950 mm*)
- Protective roof grate (*FOPS compliant*)
- Air conditioning system
- Radio and CD player

### Optional equipment




#### Base carrier

- Biodegradable oil
- Pressurized air conditioning system

#### Drilling Equipment

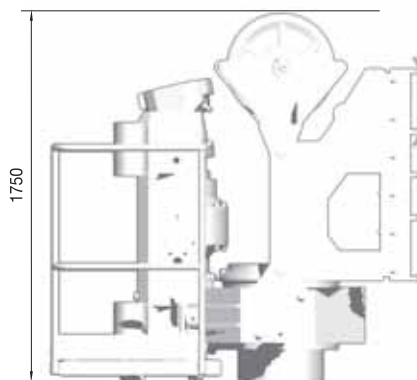
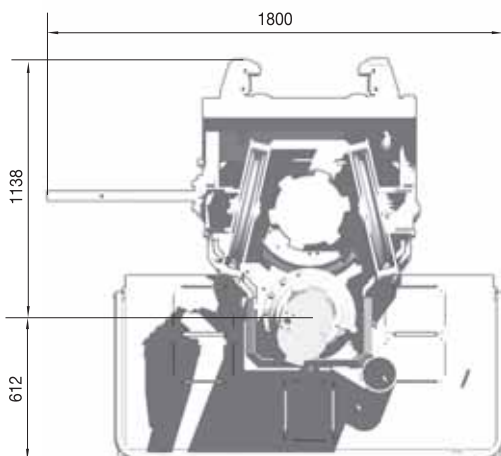
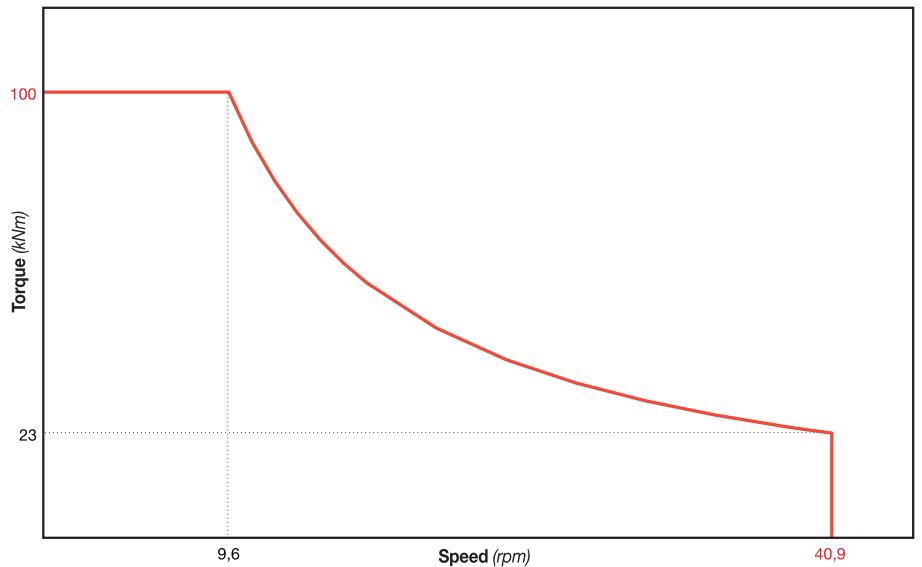
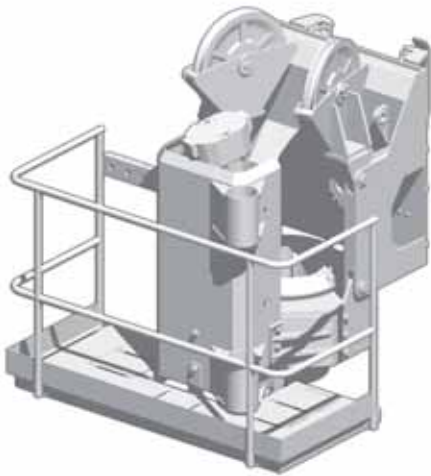
- Swivel for auxiliary rope
- Videocamera attachment
- Track shoes 900 mm wide
- 360° turret rotations

## TECHNICAL DATA - BASE CARRIER

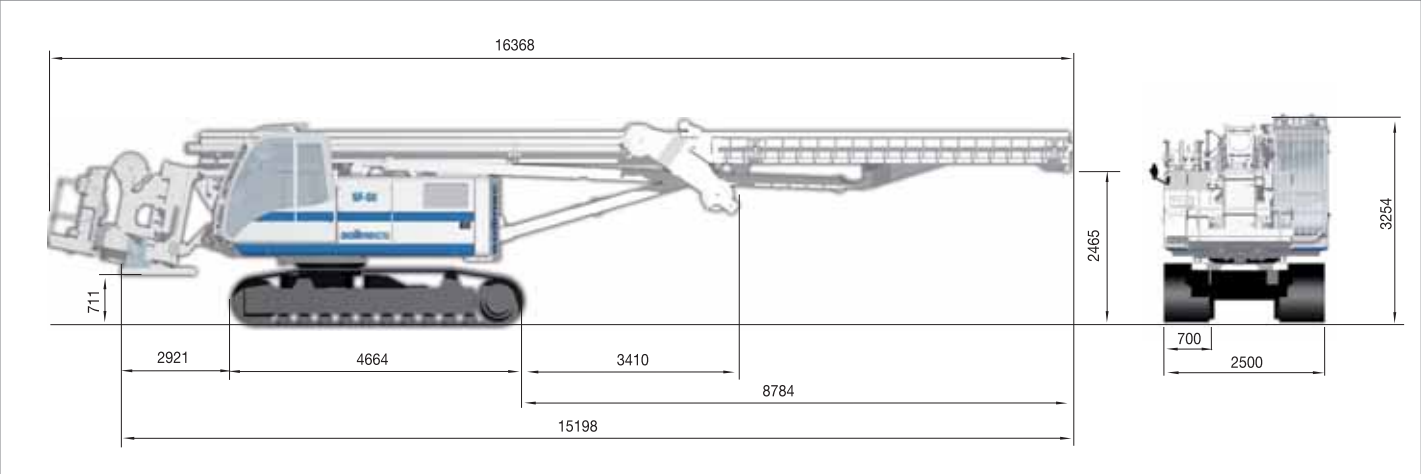
	<b>Engine</b>	<b>Cummins QSB6.7</b>	<i>Cummins QSB6.7</i>
	- Rated output ISO 3046-I	<b>164 kW @ 2200 rpm</b>	<i>220 HP @ 2200 rpm</i>
	- Engine conforms to Exhaust emission Standard	<b>EU stage III A, US EPA Tier 3</b>	<i>EU stage III A, US EPA Tier 3</i>
	- Diesel tank capacity	<b>620 l</b>	<i>164 US gal</i>
	- Sound pressure level in cabin (EN791 Annex A)	<b>75 dB (A)</b>	<i>75 dB (A)</i>
	- Sound power level (2000/14EG u. EN791, Annex A)	<b>106 dB (A)</b>	<i>106 dB (A)</i>
	<b>Hydraulic system</b>		
	- Main pump	<b>320 l/min</b>	<i>85 US gal/min</i>
	- Working pressure	<b>30 MPa</b>	<i>4351 psi</i>
	- Auxiliary pump	<b>24 - 24 - 36 l/min</b>	<i>6 - 6 - 10 US gal/min</i>
	<b>Undercarriage (retractable crawler frames)</b>		
	- Track shoes width	<b>700 / 900 mm</b>	<i>28 / 35 in</i>
	- Overall width of crawlers retracted	<b>2500 / 2900 mm</b>	<i>99 / 114 in</i>
	- Overall width of crawlers extended	<b>4000 / 4200 mm</b>	<i>158 / 165 in</i>
	- Overall length of crawlers	<b>4660 mm</b>	<i>184 in</i>
	- Traction force	<b>280 kN</b>	<i>62945 lbf</i>
	- Travel speed	<b>2,0 km/h</b>	<i>1.2 mph</i>

\* Soilmec integrates high quality level components: Berco, Rexroth, Trasmital.

## Rotary RD-130G



Rotary	Weight	
Multigear type	<b>2250 kg</b>	<b>4960 lbs</b>



Transport w/o rotary Weight **30650 kg** 67572 lb

**FOCUS - DMS**

**DMS**  
DRILLING MATE SYSTEM

Soilmec innovative DMS - Drilling Mate System - has been designed to incorporate:

- CAN OPEN bus system
- colour touch screen suitable for the drilling field

DMS consists of 3 items:

- **DMS**
- **DMS PC**
- **DMS MANAGER**



The **CFA Soilmec rigs** are equipped with the **DRILLING MATE SYSTEM (DMS)** operated through a 12" touch screen to control and monitoring the operating parameters as well as productive data.

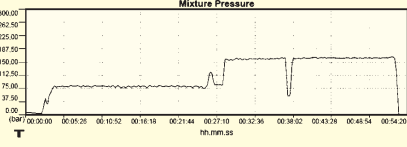
- The **standard DMS equipment** is composed of:
- PLC
  - controller for all electrically actuated functions
  - fault checking and reporting
  - monitor unit designed to display:
    - engine information and diagnostic capability
    - pump pressures
    - mast verticality
    - drilling depth
    - rotary speed and pressure
    - crowd pressure
    - graphics drilling charts

- The following additional optional features are available:
- automatic turret hole centering

- automatic mast verticality
- recording of operating data on memory card



**DMS PC** software package to analyze and print production data and job site daily reports



**DMS MANAGER** for remote control and transmission of process and operating data and tele assistance





SOILMEC distributes machinery and structures all over the world, supported by SOILMEC subsidiary companies and dealers. The complete Soilmec network list is available on the webpage [www.soilmec.it](http://www.soilmec.it)