



SC-20

Hydraulic
Crawler Crane

LIFTING
CASING
OSCILLATOR
VIBRO
CLAMSHELL
TREMIE PIPES

Hydraulic Crawler Crane **SC-20**



Power, precision and flexibility of the engine

119 kW engine power combined with high reliability.
The high pressure Common Rail Fuel System delivers high injection pressure for improved performance and fuel efficiency at every rpm. Low noise emissions thanks to the rear gear train.
Engine designed to require minimum maintenance intervals.

Winches with high line pull

Free fall winches with high performances even in most demanding conditions.
Nominal line pull at 1st layer = 100 kN.
High reliability (M6 L3 T5 classification).

Working configurations

SC-20 is an heavy-duty crane, with robust construction, suitable for different working configurations: with hooks (for lifting or concrete tremie piles), vibratory drivers, clamshell grab.

Safe design

SC-20 is equipped with several safety devices: the Load Limiter System that, meeting all international safety standards, prevents hoist rope overloads and overhoists (on boom or hook); limit micro-switches to protect on rope unwinding; lever micro-

switches to limit the max boom angle; protection for undue activation of cab controls; dead-man button; emergency stop button.
Winch controls are designed to be compliant with safety standards and, in the meantime, reduce the operator fatigue.

Enhanced hydraulic and electric systems

Hydraulic and electric systems have been designed to be flexible, good for different potential uses required by Customers. The diesel engine provides additional Power-Take Offs allowing, through the installation of one or more hydraulic pumps, the oil flow supply for additional working tools.

Quick assembly and efficient transport

Crawlers can be retracted to 2.55 meters wide in transport. Transport weight less than 26 ton. The removable counterweight allows to reduce transport weight under 21 ton.

The Soilmec advantage

- A real multifunctional machine, designed from scratch to give you the best excavation solution.
- Long life expectancy with a high residual value.
- Best price/performance ratio.
- Built with the customer in mind.

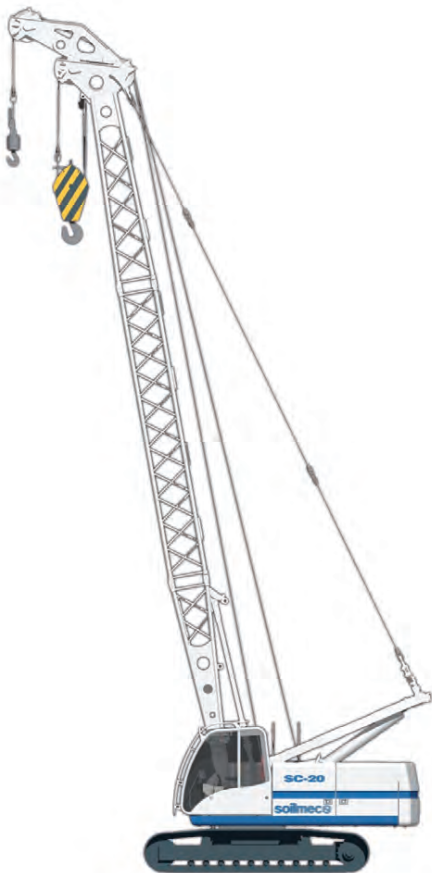


- 1 Undercarriage
- 2 Turret
- 3 Winch
- 4 Boom hoist
- 5 Lattice boom
- 6 Cathead
- 7 Jib
- 8 Hook
- 9 Swivel
- 10 Self erecting counterweight
- 11 Cab

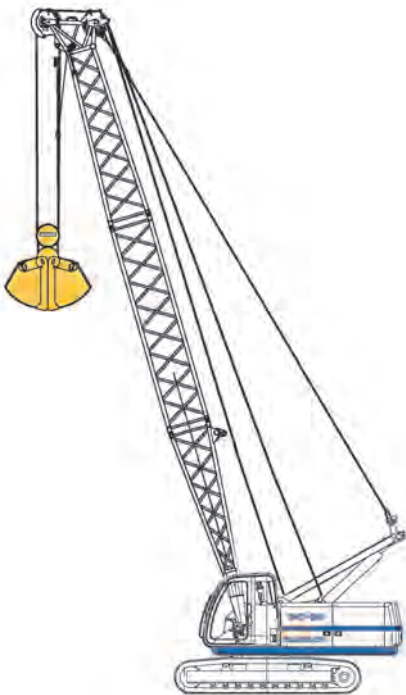
Cummins QSB 4.5 Engine		
Power @ 2200 rpm	119 kW	160 HP
Operating weight (approx.)	26500 kg	58422 lb
Max lifting capacity	21,5 ton @ 2,7 m	47289 lb @ 8.8 ft
Max boom lenght	21 m	69 ft
Max line pull	100 kN	22481 lb _f



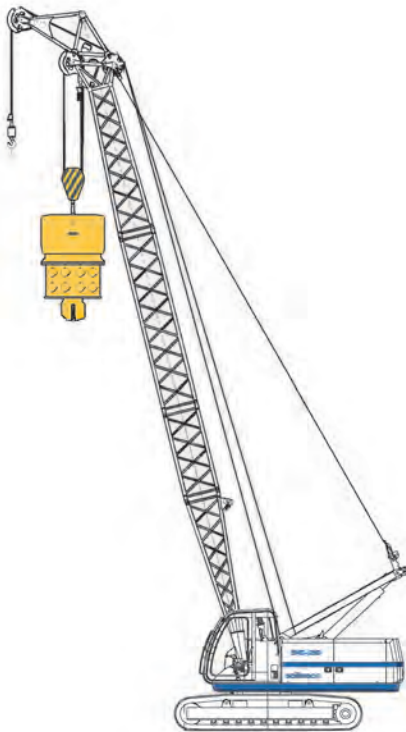
WORKING CONFIGURATIONS



SC-20 for lifting
with crane equipment



SC-20 for digging
and material handling
with clamshell



SC-20 for driving profiles
with vibratory drivers



TECHNICAL SPECIFICATIONS

DIESEL ENGINE

	Model	CUMMINS QSB 4.5	
	Max rated power @ 2200 rpm	119 kW	159 HP
	Displacement	4,5 liters	1.2 US gal
	Number of cylinders and Arrangement	4 in line	
	Aspiration	turbocharged, air to air intercooled	
	Cooling	water cooled	
	Electric system	24 V	
	Emissions	QSB 4.5 meets EU 97/68 EC Stage IIIA and EPA/CARB Tier 3	

HYDRAULIC SYSTEM

	Max working pressure	30 MPa	4351 psi
	Max oil flow	Main pump: 290 l/min	77 US gal/min
	Cooling	oil-to-air heat exchanger	

MAIN WINCHES

	Winch type	LFF-84		LW-84		LW-40	
	Type	free fall		control descent		control descent	
	Drum groove type	Lebus		Lebus		Lebus	
	Line pull (nominal load)	100 kN	22481 lb _f	100 kN	22481 lb _f	47,6 kN	10701 lb _f
	Rope diameter	22 mm	0.87 in	22 mm	0.87 in	15 mm	0.87 in
	Rope speed	52 m/min	171 ft/min	52 m/min	171 ft/min	60 m/min	197 ft/min
	Rope capacity 1st layer	21 m	69 ft	21 m	69 ft	32 m	105 ft

SWING

	Swing bearing	Double-row ball type with external teeth	
	Swing drives	Type: planetary 2 stages	
		Hydraulic motor: fixed displacement piston	
		Swing brake type: multiple disc	
	Max swing speed	3.1 rpm	

UNDERCARRIAGE

	Type	Variable gauge, class D4d	
	Track shoes type	triple grouser	
	Overall widht (retr./ext.)	2500 / 3700 mm	99 / 146 in
	Overall lenght	4510 mm	178 in
	Track shoe width	600 mm	24 in
	Travel speed	1,1 - 2,2 km/h	0.7 - 1.4 mph

SERVICE REFILL CAPACITIES

	Fuel tank	307 l	81.1 US gal
	Hydraulic oil tank	329 l	86.9 US gal

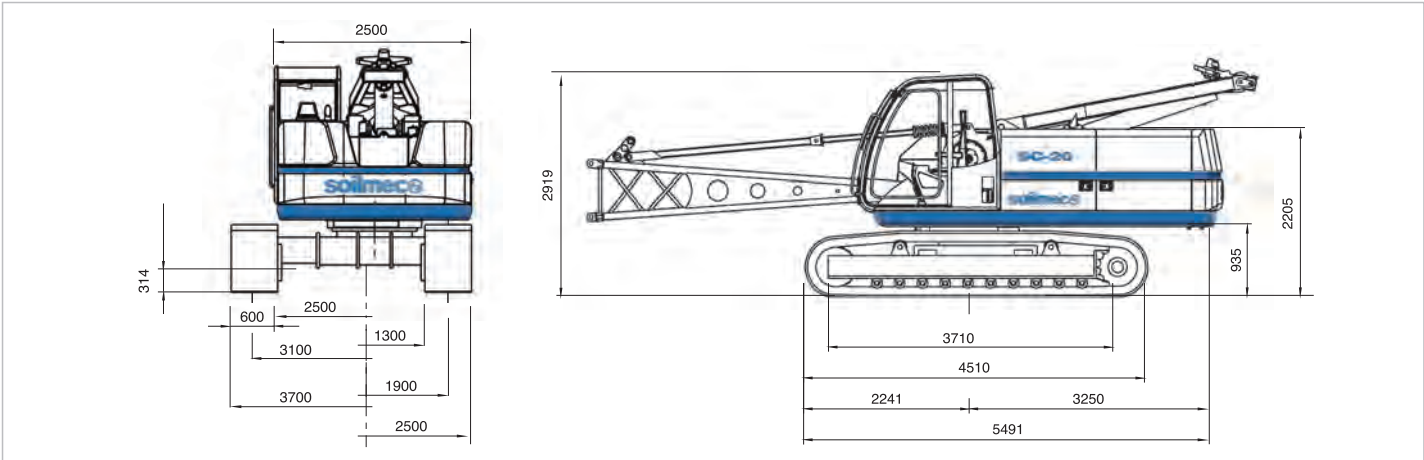
NOISE EMISSION



Noise emissions correspond with 2000/14/EC directive on noise emission by equipment used outdoors.



TRANSPORT DIMENSIONS AND WEIGHTS

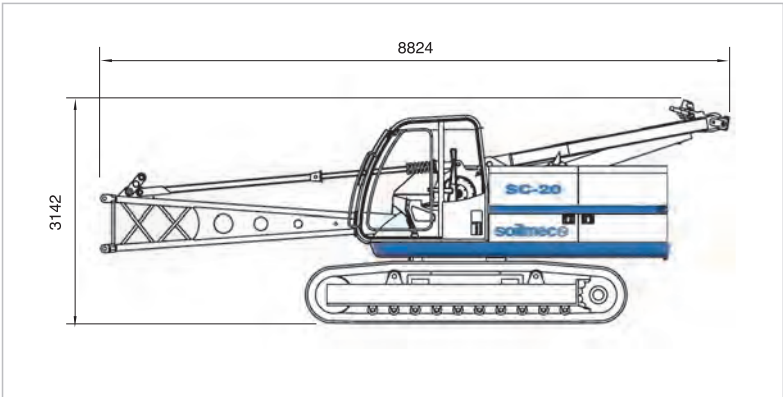


Base machine

with counterweight

Weight

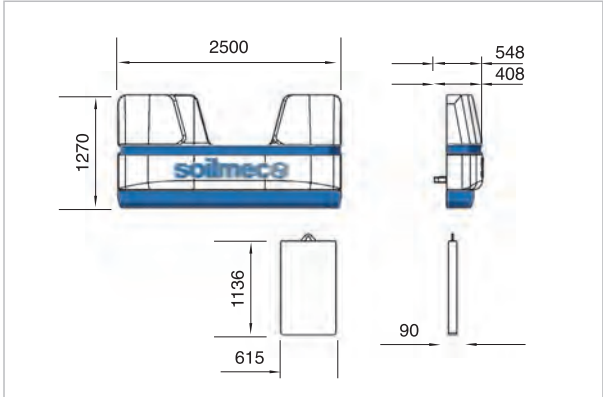
26000 kg 57320 lb



Transport configuration

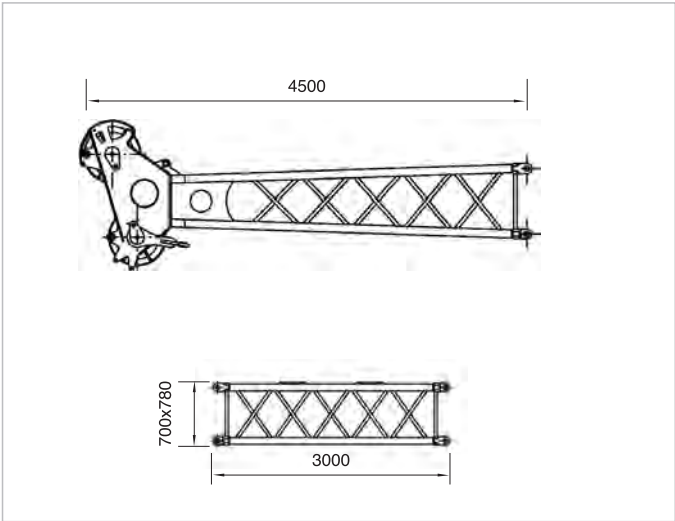
without counterweight

Width 2550 mm 100 in
Weight 21000 kg 46296 lb



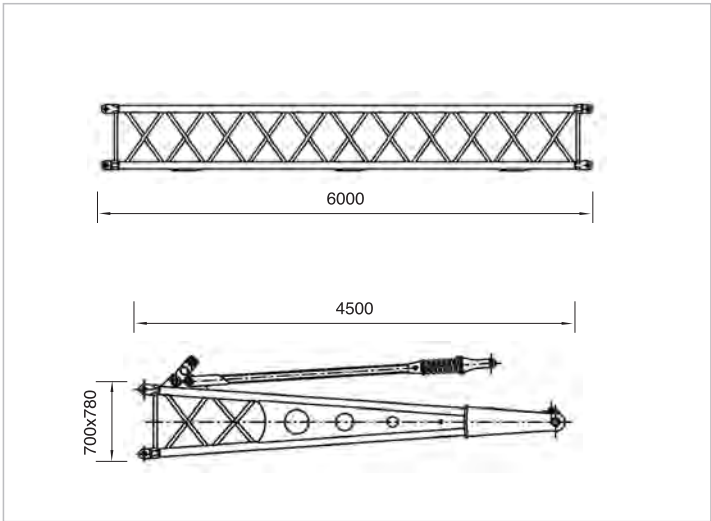
Counterweight

Width 2500 mm 98 in
Weight 5000 kg 11023 lb



Boom head

Lenght 4500 mm 177 in
Weight 1005 kg 2216 lb



Boom insert (6m)

Width 780 mm 31 in
Weight 525 kg 1157 lb

Boom insert (3m)

Width 780 mm 31 in
Weight 318 kg 701 lb

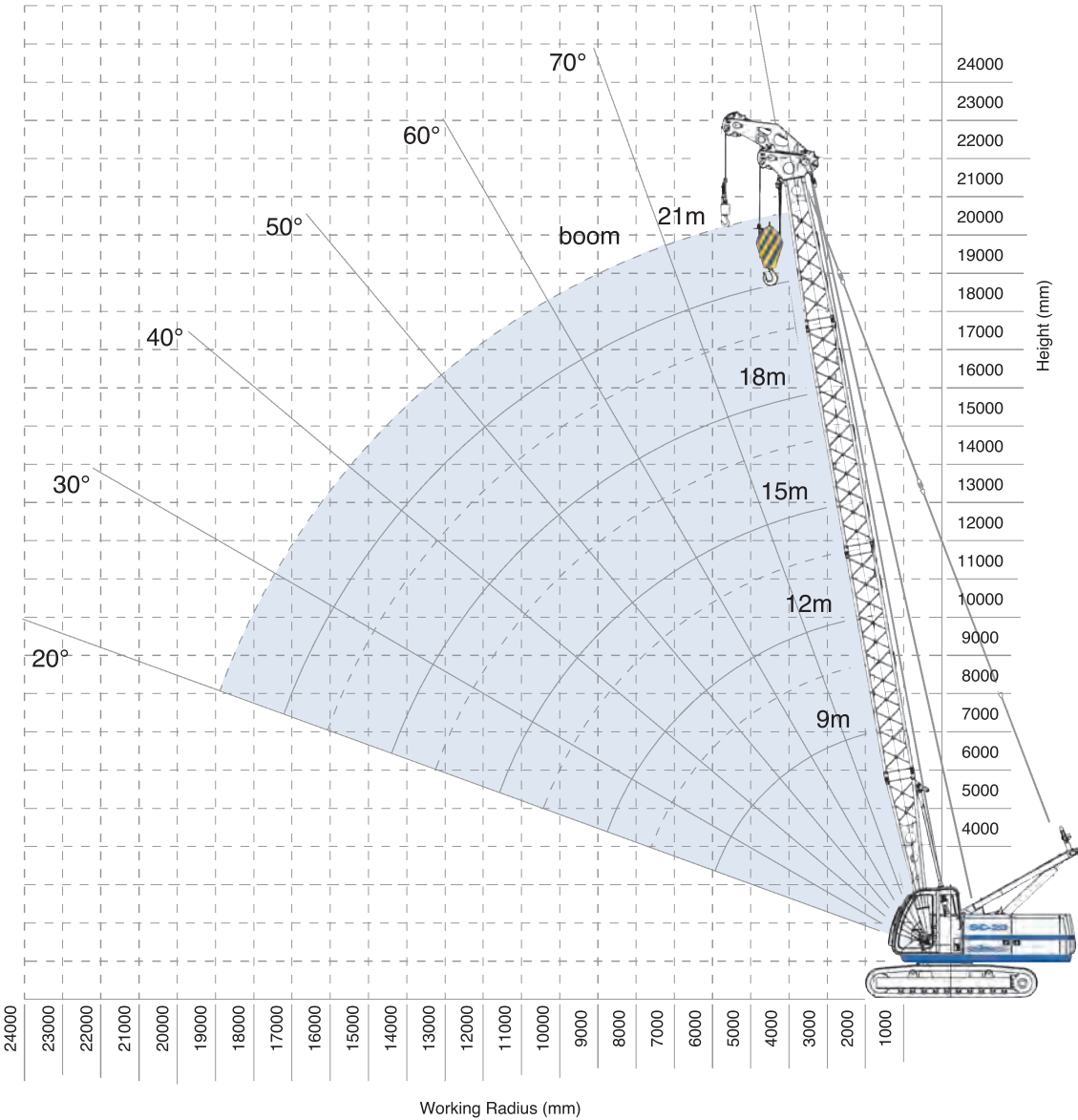


MAIN BOOM EQUIPMENT





MAIN BOOM



AUXILIARY JIB

Max capacity
8,5 t (18739 lb)

Load chart programmed
in Load moment indicator

Notes

- Rated loads are in metric tons valid for 360 degrees working area.
- Lifting capacities are in compliance with DIN 15019/part2/chart 1 and ISO 4305 and do not exceed 75% of tipping load.
- Working radius is measured from the swing center of the machine.
- 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.
- This load chart is valid if crawler frames are extended.
- Lifting capacities are based on freely suspended loads. Operator must reduce lifted loads and operating speeds in case of adverse conditions (e.g.: wind, soft ground, out-of-level, pendulum action, sudden load stopping, operating speeds, etc.)
- This load chart is 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.
- Operations are not approved for working radius and boom lengths that have no ratings associated on load chart.



LOAD CHART

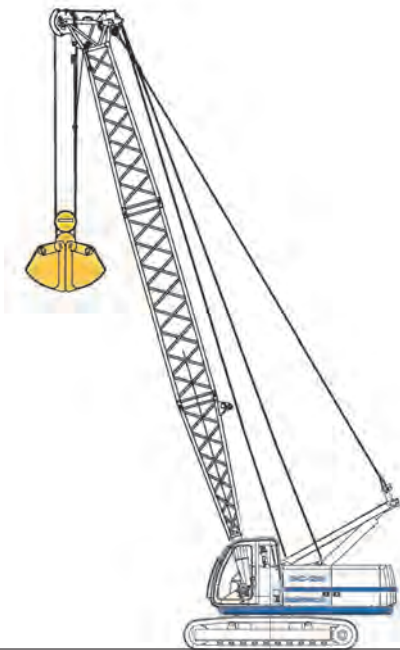
Capacity (t)						
Boom Length (m)						
Radius (m)	9 m	12 m	15 m	18 m	21 m	Radius (m)
2,7	21,5					2,7
3,0	21,5					3,0
3,5	18,4	18,4				3,5
4,0	15,6	15,6	15,5			4,0
4,5	13,2	13,2	13,2	13,1		4,5
5,0	11,4	11,4	11,4	11,2	11,1	5,0
5,5	10,1	10,1	9,9	9,8	9,7	5,5
6,0	8,9	8,9	8,8	8,7	8,6	6,0
6,5	7,9	7,9	7,9	7,7	7,6	6,5
7,0	7,1	7,1	7,0	6,9	6,8	7,0
7,5	6,3	6,3	6,3	6,2	6,1	7,5
8,0	5,7	5,7	5,7	5,6	5,4	8,0
8,5	5,2	5,2	5,2	5,1	5,0	8,5
9,0	4,7	4,7	4,7	4,6	4,6	9,0
9,5	4,3	4,3	4,3	4,2	9,5	
10,0		4,0	4,0	3,9	3,8	10,0
11,0		3,4	3,4	3,3	3,2	11,0
12,0			2,9	2,8	2,7	12,0
13,0			2,5	2,4	2,3	13,0
14,0			2,1	2,1	2,0	14,0
15,0			1,9	2,0	1,7	15,0
16,0				1,5	1,4	16,0
17,0				1,3	1,2	17,0
18,0					1,0	18,0
19,0					0,9	19,0
20,0					0,7	20,0
Part line	4	4	2	2	2	Part line

Boom configuration

Type	Lenght		N° of boom extensions				
Boom foot	4,5 m	14.7 ft	1	1	1	1	1
Boom insert	3 m	9.8 ft	–	1	–	1	–
Boom insert	6 m	19.7 ft	–	–	1	1	2
Boom head	4,5 m	14.7 ft	1	1	1	1	1
Boom lenght (m)			9	12	15	18	21
Boom lenght (ft)			29.5	39.3	49.2	59	69

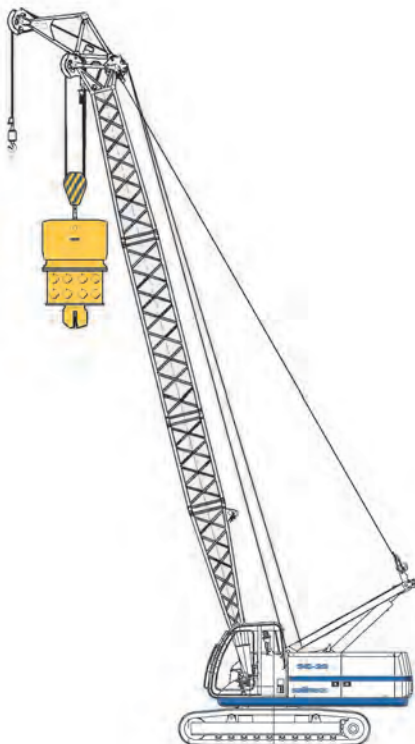


DIAPHRAGM WALL GRAB & CLAMSHELL EQUIPMENT



Clamshell

Winches	8,4 t	18519 lb
Clamshell with one rope	9 t	19841 lb
Clamshell with two ropes	12 t	26455 lb



Vibratory drivers

Winches	8,4 t	18519 lb
Max vibrator weight	3 t	6614 lb



WORKING TOOLS



CLAMSHELL



VIBRATORY DRIVERS



LIFTING FLOATING PONTOON



TREMIE PIPES



LIFTING



VIBRATORY DRIVERS



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All technical data are purely indicative and subject to change without notice



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