

Heavy Duty Crawler Crane

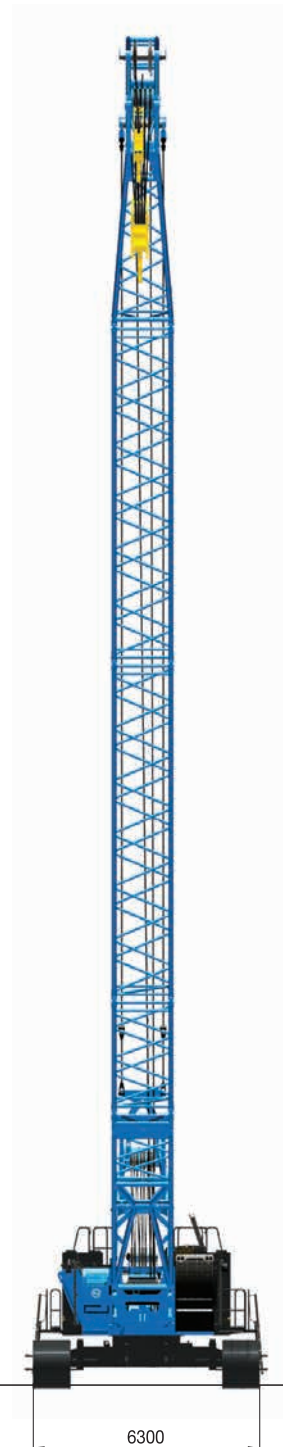
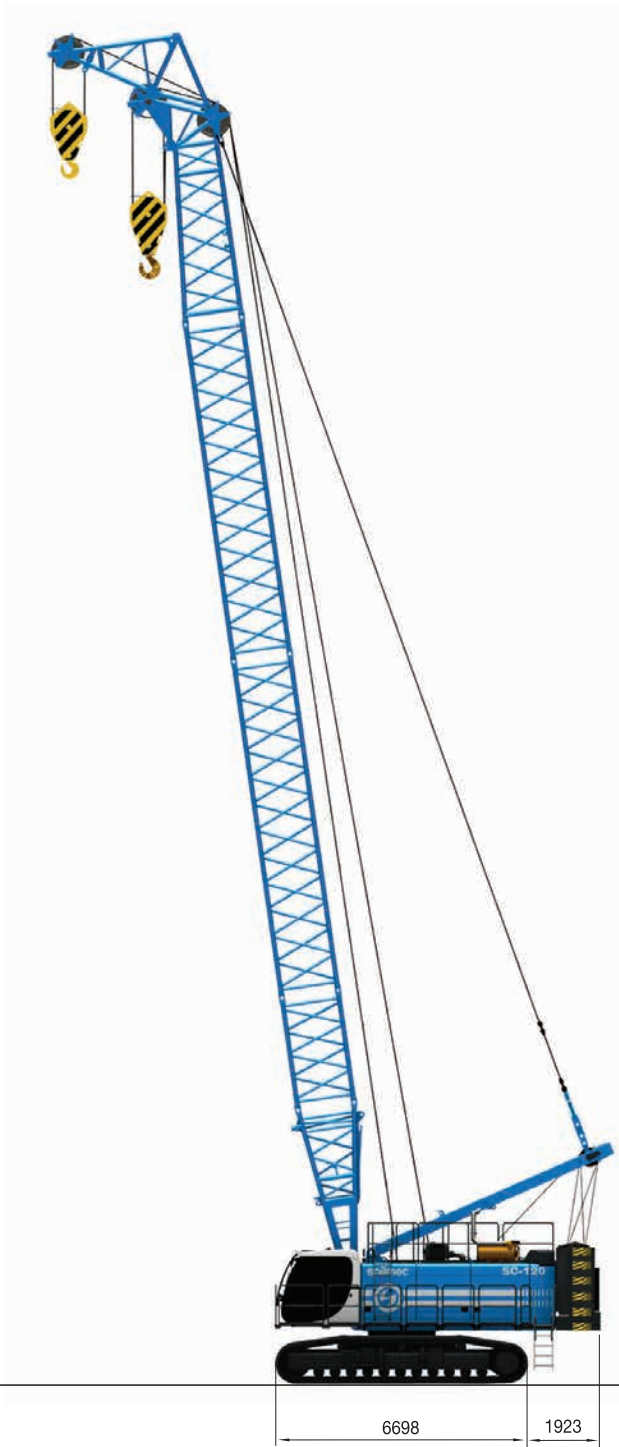
SC-120 HD



soilmec 
Drilling and Foundation Equipment

SC-120 HD Hydraulic Crawler Crane

LIFTING APPLICATION



Operating weight

115000 kg

253532 lb

SC-120 HD Hydraulic Crawler Crane

TECHNICAL DATA SHEET

| | | |
|---|--|--|
| Diesel engine | CAT C18 ACERT™ | CAT C18 ACERT™ |
| - Max Rated Power | 563 / 570 kW @ 1800 rpm | 755 / 764 HP @ 1800 rpm |
| - Engine conforms to exhaust emissions standard | EU Stage IV-EPA Tier 4f or EU Stage IIIA-EPA Tier 3 | EU Stage IV-EPA Tier 4f or EU Stage IIIA-EPA Tier 3 |
| - Displacement | 18,1 l | 4,8 US gal |
| - Aspiration | Turbocharged | Turbocharged |
| Hydraulic system | | |
| - Main pumps max oil flow | 3x 360 + 2x 325 l/min | 3x 95.1 2x 235 US gal |
| Service refill capacity | | |
| - Fuel Tank | 800 l | 211 US gal |
| - Hydraulic Tank | 840 l | 222 US gal |
| Main winches | Free Fall | Free Fall |
| - 1st layer line pull (effective) | 350 kN | 78683 lbf |
| - Rope diameter | 36 mm | 1.11 in |
| - Rope speed | 61 m/min | 200 ft/min |
| - Rope capacity 1st layer | 36 m | 118 ft |
| Swing system | | |
| - Nr° of swing drives | 1 or 2 | 1 or 2 |
| - Max swing speed | 4,3 rpm | 4.3 rpm |
| - Tail swing radius | 5310 mm | 209 in |
| Boom | | |
| - Length min-max | 11 - 56 m | 36.1 - 183.7 ft |
| - Tubular (horizontal x vertical) | 1500 x 1500 mm | 59.1 x 59.1 in |
| - Boom extension length | 3 - 6 m | 9.8 - 19.7 ft |
| Undercarriage | Variable gauge - Removable sides | Variable gauge - Removable sides |
| - Overall width | 6000 mm | 236.22 in |
| - Overall length of crawlers | 6698 mm | 263.70 in |
| - Track shoe width - Triple grouser | 1000 mm | 39.37 in |
| - Travel speed | 0,8 - 1,6 km/h | 0.5 - 1.0 mph |

STANDARD EQUIPMENT

BASE MACHINE

- Two front working lights
- PLC system for electric-hydraulic controls
- Rear view mirror
- Steps for crawlers
- Counterweight self-removal
- Tracks with chain tensioning device
- Swivel for main rope
- Grease lubricated tracks
- Hydro-clean micro filtration with water separation
- Automatic swing parking brake and automatic travel parking brake
- Electric refuelling pumps for diesel and hydraulic oil with automatic stop system.

CAB/CONTROL

- Air conditioner, heater and defroster with automatic climate control
- Beverage/Cup holder
- Stationary skylight
- Radio and CD player
- Sunshade for windshield
- High brightness led internal to the cab
- Travel control pedals with removable hand levers
- Courtesy lights in the cab
- Parallelogram wiper including a washer nozzle mounted below the cab windshield
- Signal/warning horn
- Hydraulic oil contamination warning inside the cab
- H-Cab with sliding doors

- Retracted seat belt
- 12" DMS touch or 10" non touch
- Tempered safety glass panel
- Armrests

SAFETY DEVICE

- 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
- Catwalk (on side and in front of operator's cab)
- Hoist limit switch on both winches
- Safety 3 rope turns unwinding limited switch on whinches
- Handrails

OPTIONAL EQUIPMENT

- Track triple grouser: 900 mm
- Electric hand throttle
- Flat track shoes
- Tagline winch
- Reversible cooling fan including protective screen
- Automatic lubrication system
- Bio lubrication engine oil
- Boom walk ways with personal fall arrest system

- Winch synchronisation (both winches work at the same speed) for 2 rope grab operations
- "CAT BIO HYD ADVANCED" hydraulic bio-oil (compliant with European directive 2005/360/EC).
- GSM modem
- Hydraulic arrangement for Casing oscillator attachment
- Swing and travel alarm

- Negative free fall controls
- Lights for overall dimensions
- Satellite system for remote transmission of operating data
- LCD cameras monitor multi-display
- Removable tracks
- Swing limitation system
- Depthmeter on both winches
- 300 kN free fall winches

SC-120 Hydraulic Crawler Crane

LOAD CHART

SC-120 HD Load chart (t) for lifting operation

Boom Length (m)

| Radius (m) | 11 m | 14 m | 17 m | 20 m | 23 m | 26 m | 29 m | 32 m | 35 m | 38 m | 41 m | 44 m | 47 m | 50 m | 53 m |
|------------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 3,8 | 120,0 | | | | | | | | | | | | | | |
| 4,0 | 113,0 | 113,0 | | | | | | | | | | | | | |
| 5,0 | 91,9 | 90,9 | 91,0 | 91,0 | | | | | | | | | | | |
| 6,0 | 76,8 | 76,9 | 76,8 | 76,0 | 76,3 | 70,1 | 59,0 | | | | | | | | |
| 7,0 | 66,2 | 66,1 | 65,4 | 65,6 | 65,5 | 64,0 | 59,0 | 51,9 | 44,6 | 39,0 | | | | | |
| 8,0 | 57,4 | 57,3 | 57,5 | 57,5 | 56,8 | 56,2 | 54,0 | 51,9 | 44,6 | 39,0 | 35,4 | 31,5 | | | |
| 9,0 | 51,1 | 51,1 | 50,8 | 50,7 | 50,6 | 48,3 | 47,4 | 45,8 | 43,9 | 39,0 | 35,4 | 31,5 | 28,5 | 26,0 | 23,0 |
| 10,0 | 44,9 | 45,1 | 45,2 | 45,2 | 44,7 | 43,0 | 41,9 | 40,5 | 39,1 | 38,1 | 35,4 | 31,5 | 28,5 | 26,0 | 23,0 |
| 11,0 | 38,6 | 38,7 | 38,9 | 38,8 | 39,3 | 38,3 | 37,3 | 36,0 | 34,8 | 34,0 | 33,2 | 31,5 | 28,5 | 26,0 | 23,0 |
| 12,0 | | 34,5 | 34,6 | 34,6 | 34,7 | 34,1 | 33,9 | 32,8 | 31,8 | 30,9 | 29,6 | 29,0 | 27,6 | 26,0 | 23,0 |
| 13,0 | | 30,7 | 30,8 | 30,8 | 30,9 | 30,4 | 30,2 | 29,8 | 28,9 | 28,0 | 26,8 | 26,3 | 25,0 | 24,7 | 23,0 |
| 14,0 | | 27,4 | 27,9 | 27,9 | 27,5 | 27,5 | 27,3 | 27,0 | 26,2 | 25,4 | 24,3 | 23,8 | 23,5 | 22,4 | 21,9 |
| 16,0 | | | 22,9 | 22,9 | 22,8 | 22,8 | 22,6 | 22,4 | 22,1 | 21,4 | 20,5 | 20,1 | 19,9 | 18,9 | 18,5 |
| 18,0 | | | | 19,3 | 19,2 | 19,2 | 18,7 | 18,6 | 18,3 | 18,1 | 18,1 | 17,6 | 16,8 | 16,0 | 15,6 |
| 20,0 | | | | 16,3 | 16,2 | 16,2 | 15,8 | 15,7 | 15,5 | 15,2 | 15,3 | 14,8 | 14,7 | 14,1 | 13,7 |
| 22,0 | | | | | 14,3 | 14,2 | 14,0 | 13,8 | 13,6 | 13,4 | 12,4 | 12,1 | 11,9 | 11,4 | 11,1 |
| 24,0 | | | | | | 11,5 | 12,2 | 11,2 | 11,0 | 10,9 | 11,2 | 10,9 | 10,6 | 10,4 | 10,1 |
| 26,0 | | | | | | 10,8 | 10,7 | 10,5 | 10,0 | 9,8 | 9,8 | 9,6 | 9,3 | 8,4 | 8,2 |
| 28,0 | | | | | | | 9,4 | 9,3 | 9,1 | 8,8 | 8,0 | 7,8 | 7,6 | 7,6 | 7,4 |
| 30,0 | | | | | | | | | 8,1 | 8,0 | 7,7 | 7,5 | 6,8 | 6,7 | 6,0 |
| 32,0 | | | | | | | | | 7,0 | 6,8 | 6,5 | 6,4 | 5,8 | 5,4 | 5,3 |
| 34,0 | | | | | | | | | | 5,9 | 5,7 | 5,6 | 5,1 | 4,8 | 4,6 |
| 36,0 | | | | | | | | | | | 5,0 | 4,9 | 4,4 | 4,2 | 3,7 |
| 38,0 | | | | | | | | | | | 4,4 | 4,0 | 3,9 | 3,4 | 2,8 |
| 40,0 | | | | | | | | | | | | 3,5 | 3,4 | 2,8 | 2,1 |
| 42,0 | | | | | | | | | | | | | 2,5 | 2,1 | 2,1 |
| 44,0 | | | | | | | | | | | | | 1,9 | 2,1 | 1,9 |
| 46,0 | | | | | | | | | | | | | | 1,6 | |

SC-120 HD Load chart (t) for duty cycle operation

Boom Length (m)

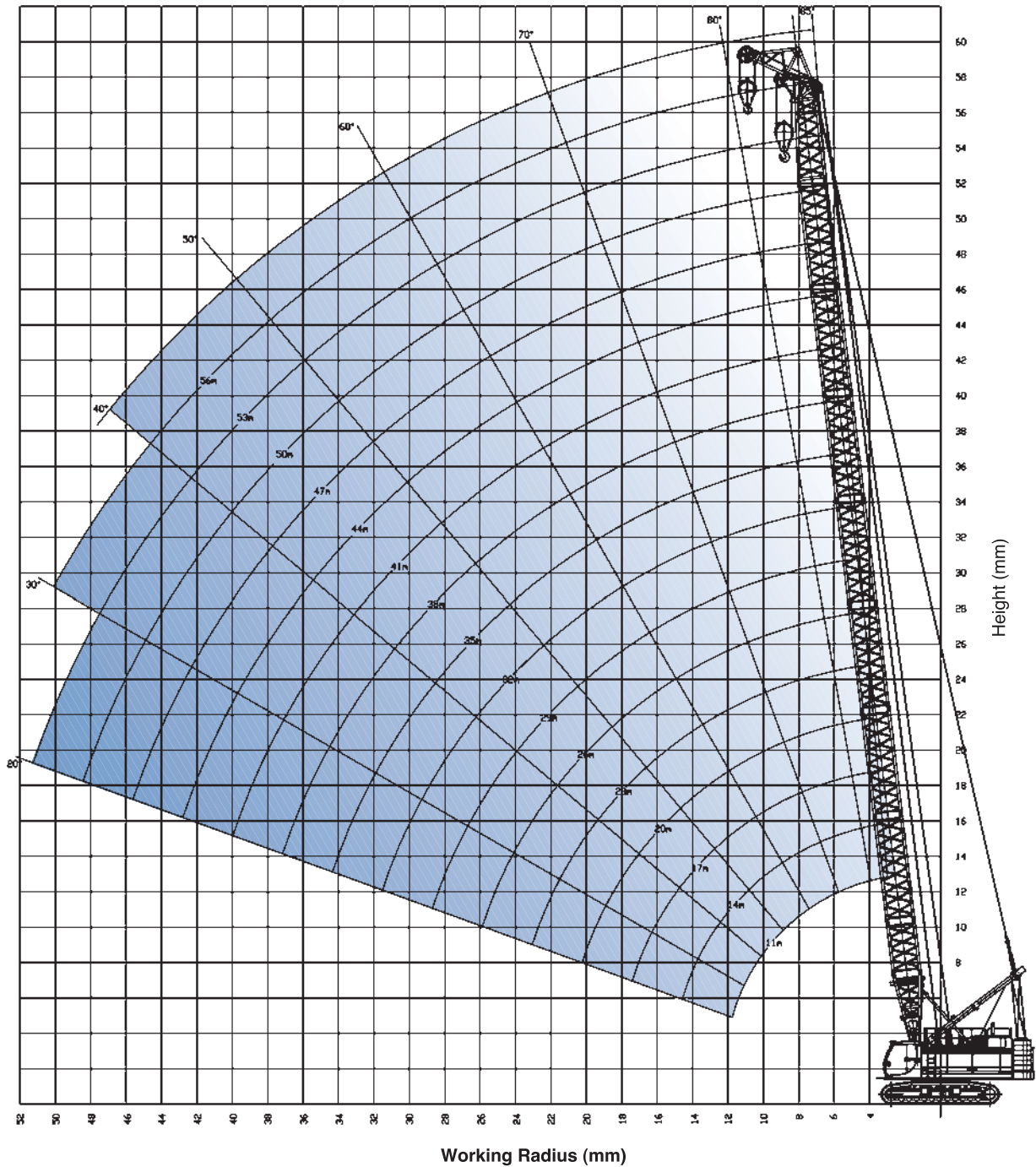
| Radius (m) | 11 m | 14 m | 17 m | 20 m | 23 m | 26 m | 29 m | 32 m | 35 m |
|------------|------|------|------|------|------|------|------|------|------|
| 5,0 | 52,1 | 52,1 | 52,1 | | | | | | |
| 6,0 | 52,1 | 52,1 | 52,1 | 44,0 | 37,8 | 32,5 | | | |
| 7,0 | 52,1 | 52,1 | 51,5 | 43,7 | 37,5 | 32,3 | 28,2 | 24,9 | 22,1 |
| 8,0 | 50,2 | 50,4 | 50,4 | 43,3 | 37,2 | 32,3 | 28,2 | 24,9 | 22,1 |
| 9,0 | 42,0 | 42,2 | 42,2 | 42,2 | 37,2 | 32,3 | 28,2 | 24,9 | 22,1 |
| 10,0 | 36,0 | 36,1 | 36,2 | 36,2 | 36,1 | 32,3 | 28,2 | 24,9 | 22,1 |
| 11,0 | 31,3 | 31,5 | 31,6 | 31,5 | 31,5 | 31,4 | 28,2 | 24,9 | 22,1 |
| 12,0 | | 27,9 | 27,9 | 27,9 | 27,8 | 27,7 | 27,6 | 24,9 | 22,1 |
| 13,0 | | 24,9 | 25,0 | 24,9 | 24,9 | 24,8 | 24,7 | 24,5 | 22,1 |
| 14,0 | | 22,4 | 22,5 | 22,5 | 22,4 | 22,3 | 22,2 | 22,1 | 21,8 |
| 16,0 | | | 18,7 | 18,7 | 18,6 | 18,5 | 18,4 | 18,2 | 18,1 |
| 18,0 | | | | 15,8 | 15,8 | 15,7 | 15,5 | 15,4 | 15,3 |
| 20,0 | | | | 13,6 | 13,6 | 13,5 | 13,4 | 13,2 | 13,1 |
| 22,0 | | | | | 11,6 | 11,5 | 11,4 | 11,2 | 11,1 |
| 24,0 | | | | | | 10,0 | 9,9 | 9,7 | 9,6 |
| 26,0 | | | | | | 8,7 | 8,6 | 8,5 | 8,4 |
| 28,0 | | | | | | | 7,6 | 7,4 | 7,3 |
| 30,0 | | | | | | | | 6,6 | 6,5 |
| 32,0 | | | | | | | | 5,9 | 5,8 |
| 34,0 | | | | | | | | | 5,2 |

Boom Configuration

| Boom Length | | Boom foot | Boom insert | Boom insert | Boom insert | Boom head |
|-------------|-------------------|-----------|-------------|-------------|-------------|-----------|
| m | length | 5 m | 3 m | 6 m | 9 m | 6 m |
| 11 | n. boom extension | 1 | - | - | - | 1 |
| 14 | | 1 | 1 | - | - | 1 |
| 17 | | 1 | - | 1 | - | 1 |
| 21 | | 1 | - | - | 1 | 1 |
| 24 | | 1 | - | 2 | - | 1 |
| 26 | | 1 | - | 1 | 1 | 1 |
| 29 | | 1 | - | - | 2 | 1 |
| 32 | | 1 | - | 2 | 1 | 1 |
| 35 | | 1 | - | 1 | 2 | 1 |
| 38 | | 1 | 1 | 1 | 2 | 1 |
| 41 | | 1 | - | 2 | 2 | 1 |
| 44 | | 1 | 1 | 2 | 2 | 1 |
| 47 | | 1 | - | 3 | 2 | 1 |
| 50 | | 1 | - | 2 | 3 | 1 |
| 53 | | 1 | 1 | 2 | 3 | 1 |
| 56 | | 1 | 1 | 3 | 3 | 1 |

SC-120 HD Heavy Duty Crawler Crane

LIFTING APPLICATION MAIN BOOM



Auxiliary Jib standard

Max capacity 30 t 66138.7 lb

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; jib; 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.

SC-120 HD Heavy Duty Crawler Crane

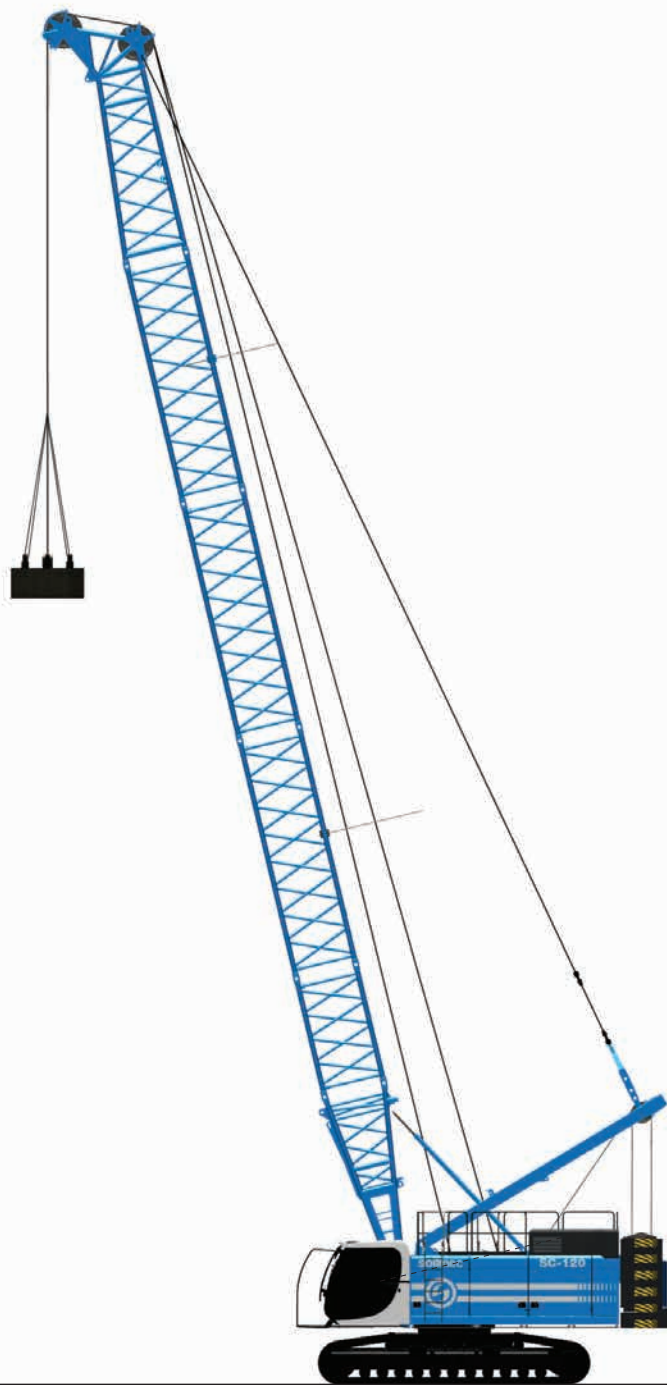
SA-40 CRANE ATTACHMENT APPLICATION



Crane attachment SA-40

| | | |
|--------------|------------|----------------|
| Max Diameter | 4000 mm | 157.5 in |
| Max Depth | 94 (106) m | 308.4 (348) ft |

SC-120 HD Heavy Duty Crawler Crane
DYNAMIC COMPACTION APPLICATION

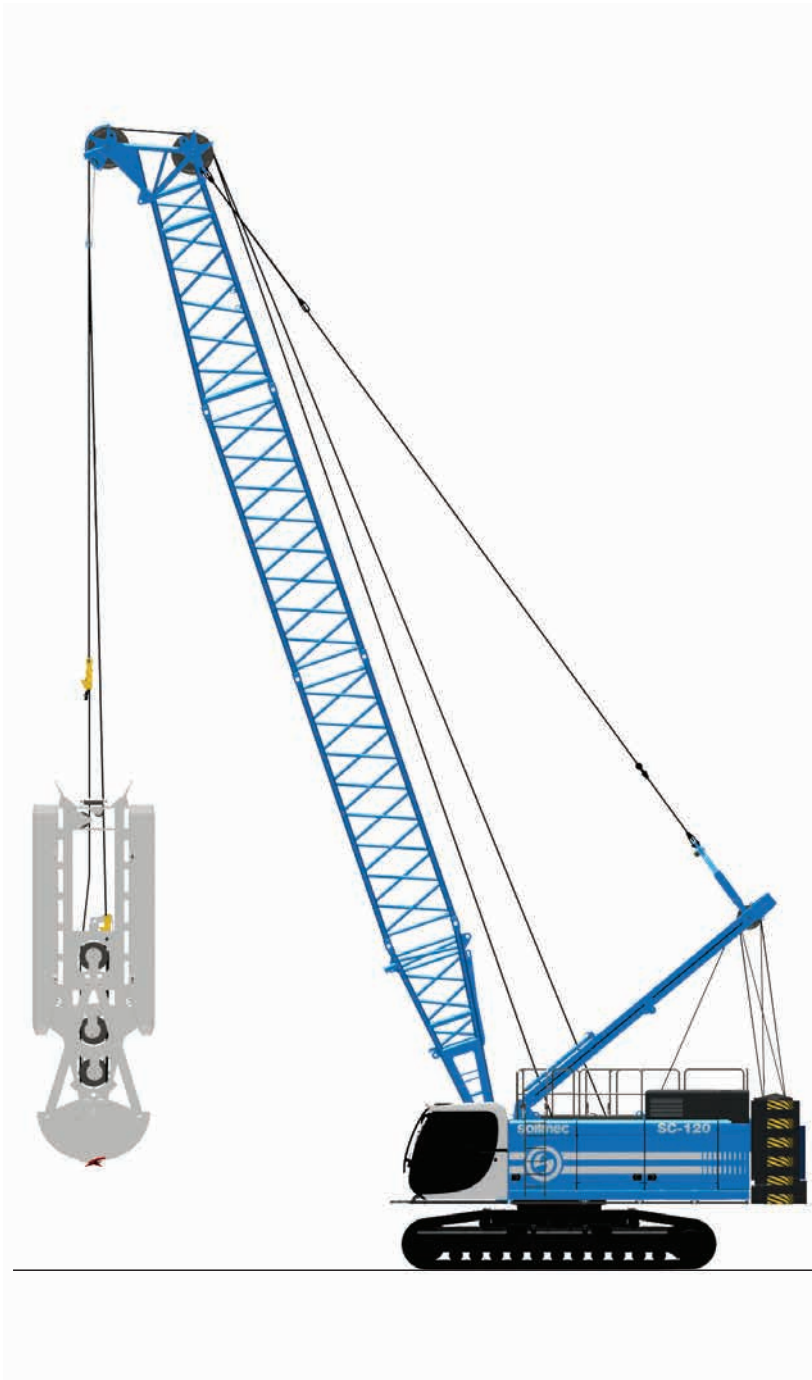


Capacity Table Dynamic Compaction

| | | Boom length | | | | | | | | | | |
|----------------|------|-------------|-------|----------|-------|----------|-------|----------|-------|----------|--------|----------|
| | | 20 m | 66 ft | 23 m | 75 ft | 26 m | 85 ft | 29 m | 95 ft | 32 m | 105 ft | |
| Working Radius | 8 m | 26 ft | 36 t | 79366 lb | 33 t | 72752 lb | 31 t | 68343 lb | 28 t | 61729 lb | 25 t | 55115 lb |
| | 9 m | 30 ft | 32 t | 70547 lb | 30 t | 66138 lb | 28 t | 61729 lb | 26 t | 57320 lb | 24 t | 52910 lb |
| | 10 m | 33 ft | 29 t | 63933 lb | 27 t | 59524 lb | 25 t | 55115 lb | 23 t | 50706 lb | 22 t | 48501 lb |

SC-120 HD Heavy Duty Crawler Crane

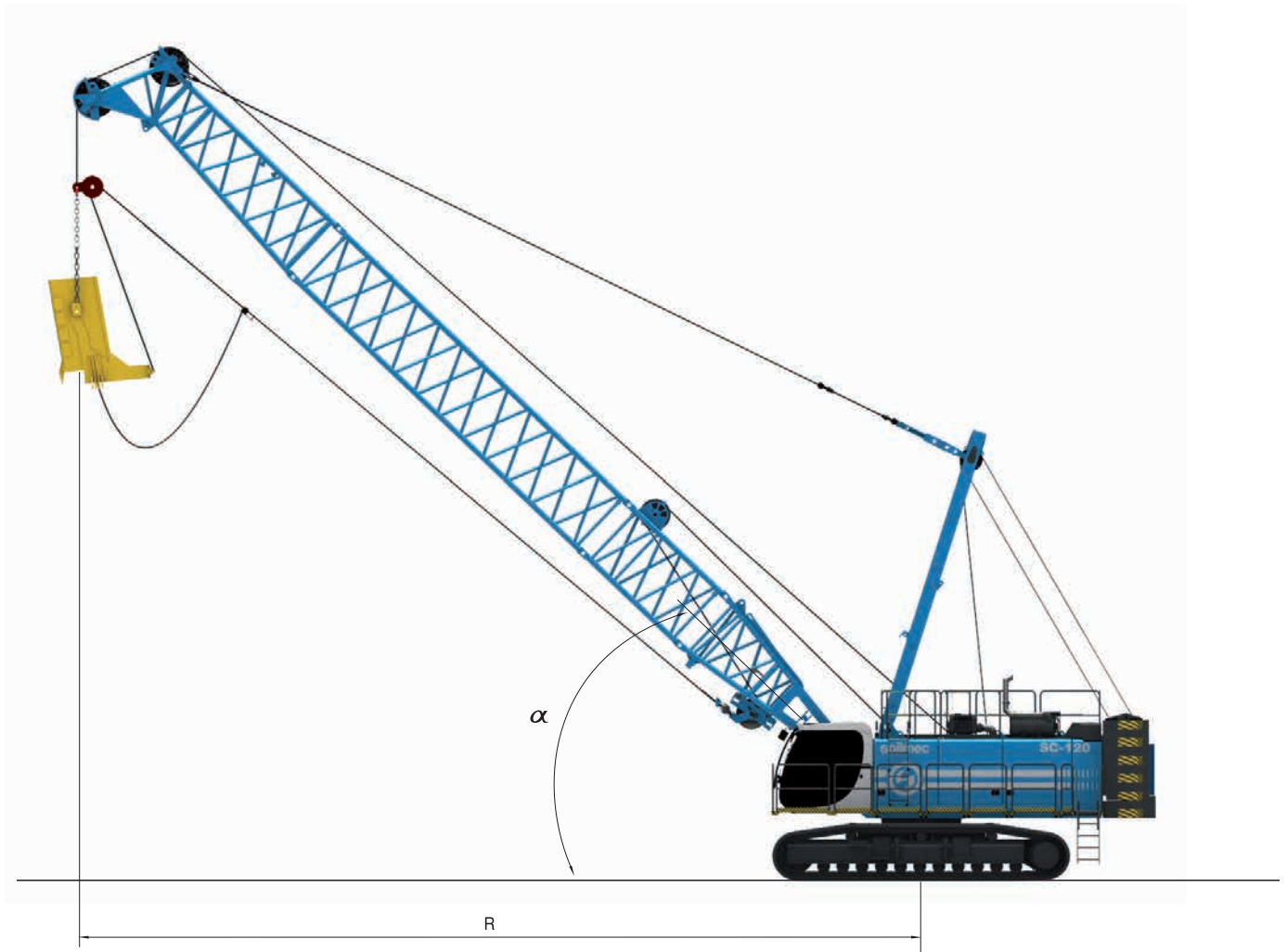
MECHANICAL DW GRAB APPLICATION



| Diaphragm Wall Grab | | |
|---------------------|------------|------------|
| Max grab weight | 25 t | 27,5 lb |
| Winches | 2 x 300 kN | 67443 lbf |
| Max rope speed | 91 m/min | 299 ft/min |

Please refer to load chart for duty cycle operation

SC-120 HD Heavy Duty Crawler Crane DRAGLINE APPLICATION



Dragline Capacity Table

Boom length (m)

| Boom angle (deg) | 17 | | | 20 | | | 23 | | | 26 | | | 29 | | | 32 | | |
|------------------|-------|-------|---------------|-------|-------|---------------|-------|-------|---------------|-------|-------|---------------|-------|-------|---------------|-------|-------|---------------|
| | R (m) | H (m) | Capacity (t.) | R (m) | H (m) | Capacity (t.) | R (m) | H (m) | Capacity (t.) | R (m) | H (m) | Capacity (t.) | R (m) | H (m) | Capacity (t.) | R (m) | H (m) | Capacity (t.) |
| 50 | 13,3 | 14,9 | 18,9 | 15,3 | 17,1 | 18,9 | 17,2 | 19,4 | 18,9 | 19,1 | 21,7 | 18,3 | 21 | 24 | 15,6 | 23 | 26,3 | 13,3 |
| 45 | 14,4 | 13,8 | 18,9 | 16,5 | 15,9 | 18,9 | 18,6 | 18 | 18,9 | 20,7 | 20,2 | 16,5 | 22,9 | 22,3 | 13,9 | 25 | 24,4 | 11,9 |
| 40 | 15,3 | 12,6 | 18,9 | 17,6 | 14,6 | 18,9 | 19,9 | 16,5 | 17,6 | 22,2 | 18,4 | 14,9 | 24,5 | 20,4 | 12,6 | 26,8 | 22,3 | 10,8 |
| 35 | 16,2 | 11,4 | 18,9 | 18,6 | 13,1 | 18,9 | 21,1 | 14,9 | 16,2 | 23,5 | 16,6 | 13,9 | 26 | 18,3 | 11,4 | 28,4 | 20 | 9,7 |
| 30 | 16,9 | 10,1 | 18,3 | 19,5 | 11,6 | 16,5 | 22,1 | 13,1 | 14,6 | 24,7 | 14,6 | 12,7 | 27,3 | 16,1 | 10,7 | 29,9 | 17,6 | 8,8 |
| 25 | 17,5 | 8,8 | 16,1 | 20,2 | 10 | 14 | 22,9 | 11,3 | 11,9 | 25,7 | 12,6 | 10,4 | 28,4 | 13,8 | 9,7 | 31,1 | 15,1 | 8,3 |

SC-120 HD Heavy Duty Crawler Crane

HAMMER GRAB AND CASING OSCILLATOR APPLICATION



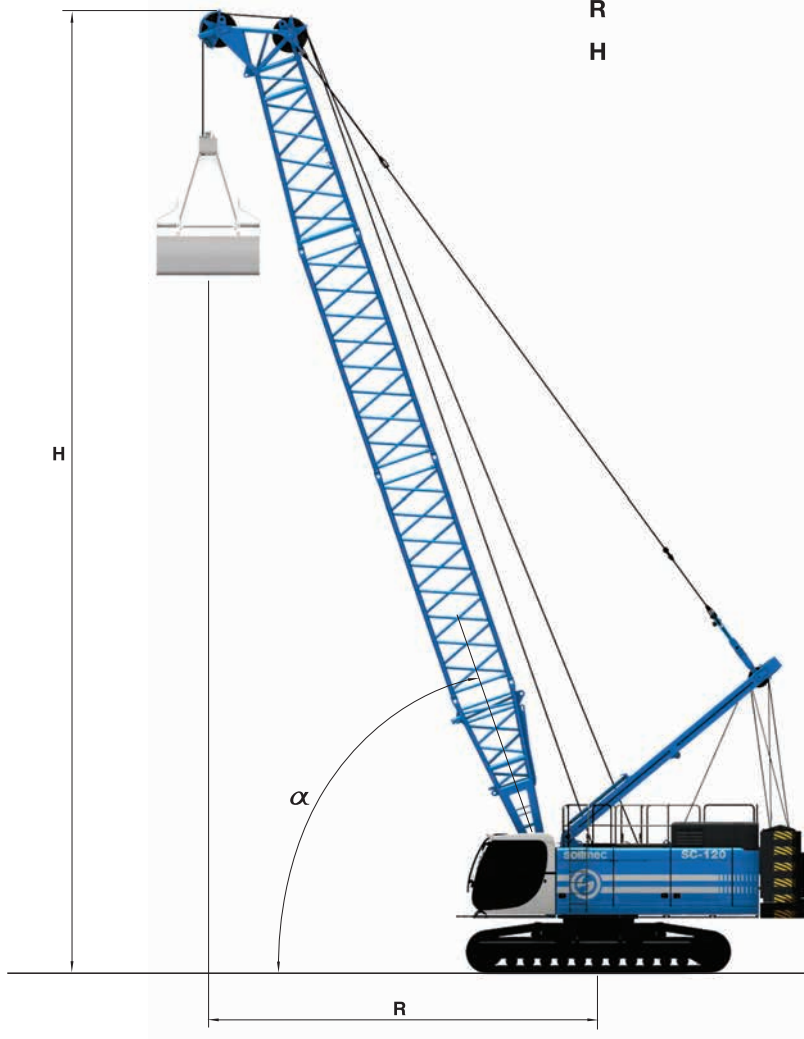
Hammer grab and casing oscillator

| | | |
|-----------------------|------------|------------|
| Max drilling diameter | 3300 mm | 130 in |
| Rope speed | 91 m/min | 299 ft/min |
| Winches | 2 x 300 kN | 67443 lbf |

Please refer to load chart for duty cycle operation

SC-120 HD Heavy Duty Crawler Crane CLAMSHELL APPLICATION

Working diagram



Clamshell equipment

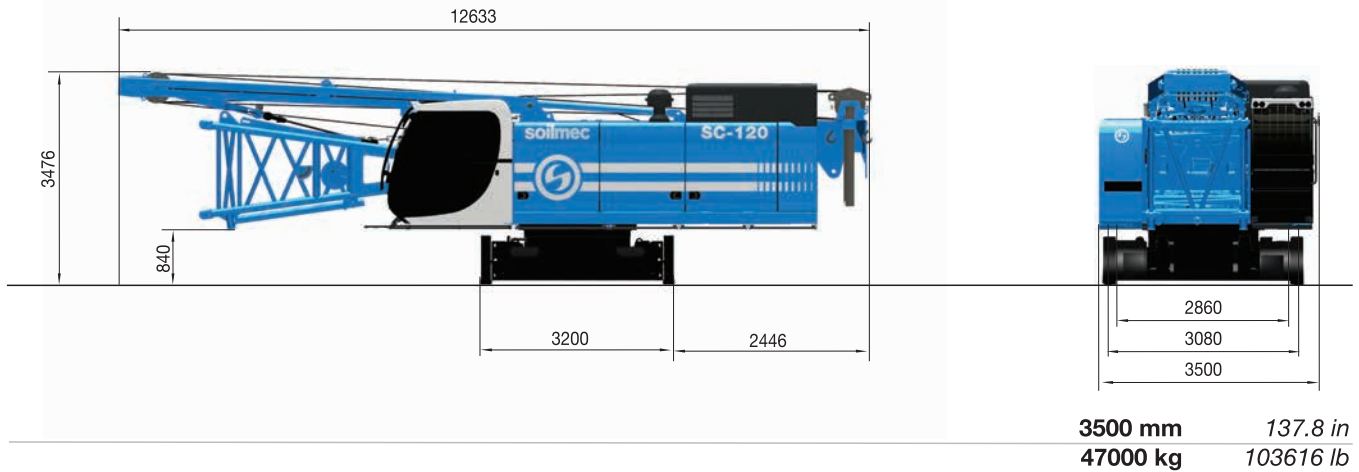
Boom length (m)

| Radius | 17 | 20 | 23 | 26 | 29 | 32 |
|--------|------|------|------|------|------|------|
| 10 | 33,8 | 33,7 | 33,7 | 33,6 | 33,6 | 33,3 |
| 11 | 29,3 | 29,3 | 29,3 | 29,2 | 29,1 | 29 |
| 12 | 25,8 | 25,8 | 25,8 | 25,7 | 25,6 | 25,5 |
| 13 | 23 | 23 | 22,9 | 22,8 | 22,7 | 22,6 |
| 14 | 20,6 | 20,6 | 20,6 | 20,5 | 20,4 | 20,3 |
| 16 | 16,9 | 16,9 | 16,9 | 16,8 | 16,7 | 16,6 |
| 18 | | 14,2 | 14,2 | 14,1 | 14 | 13,9 |
| 20 | | 10,1 | 12,1 | 12 | 11,9 | 11,8 |
| 22 | | | 10,4 | 10,3 | 10,2 | 10,1 |
| 24 | | | | 8,9 | 8,8 | 8,7 |
| 26 | | | | 6,2 | 7,7 | 7,6 |
| 28 | | | | | 6,7 | 6,6 |
| 30 | | | | | | 5,8 |
| 32 | | | | | | 3,5 |

SC-120 HD Heavy Duty Crawler Crane

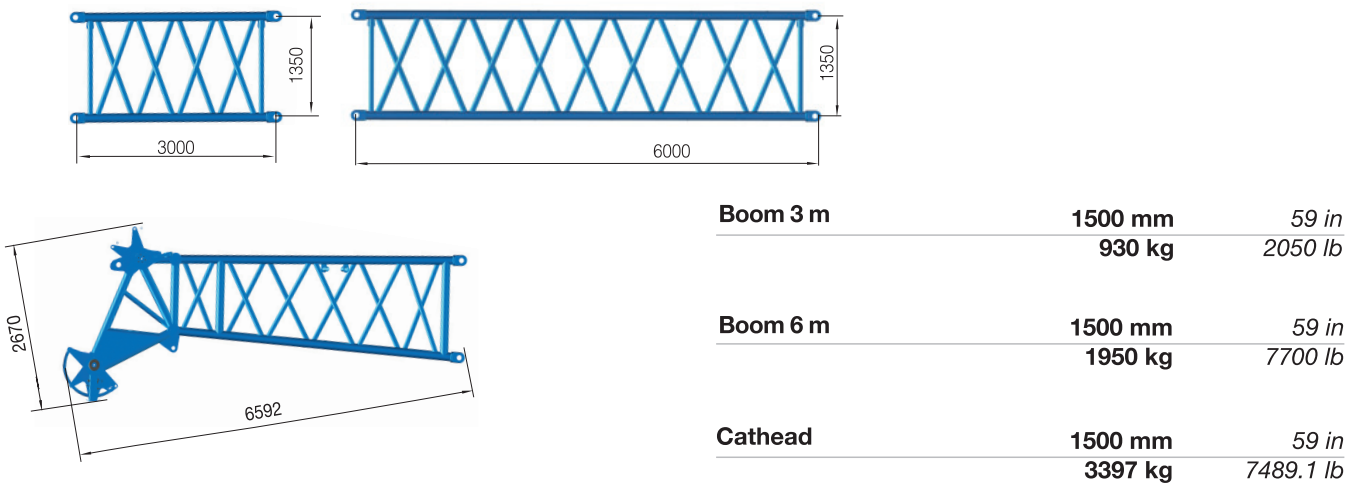
TRANSPORT DIMENSIONS AND WEIGHTS

Main machine



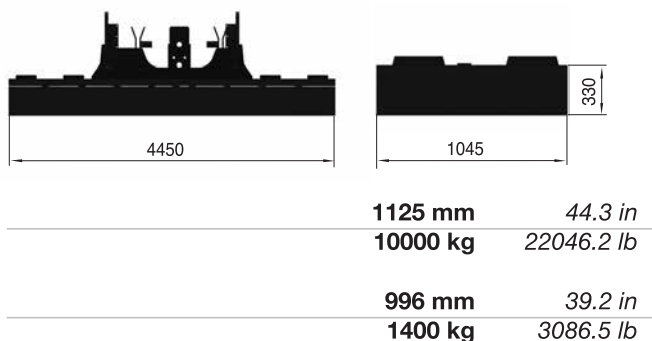
All technical data are purely indicative and subject to change without notice

Boom

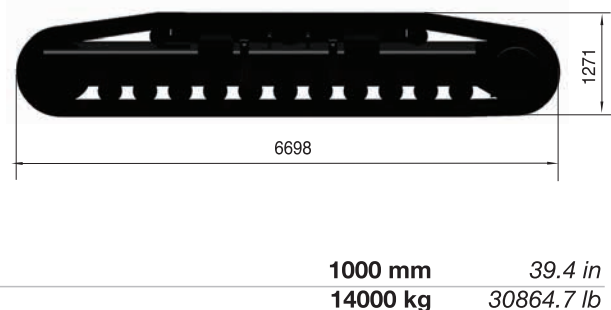


Technical data sheet SC120HD-005 02/2018

Counterweight (36 t / 79366 lb)



Sideframes



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