



Hydraulic Rotary Rig

SR-20

soilmec 
Drilling and Foundation Equipment

SR-20 Hydraulic Rotary Rig

LDP APPLICATIONS



LDP - Large Diameter Piles - CCS version

Operating weight c/w 4x9 kelly bar	27700 kg	61067 lb
Maximum pile diameter	1200 mm	47 in
Maximum pile depth - friction kelly	40 m	131 ft
Maximum pile depth - locking kelly	32 - 37* m	105 - 121.5* ft

* c/w non self-mounting 4x10,5 kelly bar

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TECHNICAL DATA SHEET

Rotary Drive	Single gear, Spin off type	<i>Single gear, Spin off type</i>
- Max torque (theoretical-restricted-intermittent)	114 kNm	<i>84082 lbf*ft</i>
- Rated torque (theoretical)	101 kNm	<i>74494 lbf*ft</i>
- Maximum drilling speed	37 rpm	<i>37 rpm</i>
- Spinoff speed	101 rpm	<i>101 rpm</i>
CCS - Cylinder Crowd system		
- Stroke	3500 mm	<i>138 in</i>
- Max pull up force	124 kN	<i>27876 lbf</i>
- Max pull down force	85 kN	<i>19109 lbf</i>
- Speed up	7 / 12 m/min	<i>23 / 39,4 ft/min</i>
- Speed down	5,5 / 9,5 m/min	<i>18 / 31 ft/min</i>
Main winch		
	controlled descent	<i>controlled descent</i>
- Line pull (1st layer)	104 kN	<i>47210 lbf</i>
- Rope diameter	20 mm	<i>1 in</i>
- Line speed (1st layer)	72 m/min	<i>236 ft/min</i>
Auxiliary winch		
	controlled descent	<i>controlled descent</i>
- Line pull (1st layer)	56 kN	<i>17985 lbf</i>
- Rope diameter	16 mm	<i>0.63 in</i>
- Line speed (max.)	57 m/min	<i>187 ft/min</i>
Engine type		
	Cummins QSB 4.5	<i>Cummins QSB 4.5</i>
- Power rating	119 kW @ 2200 rpm	<i>159 HP @ 2200 rpm</i>
- Engine conforms to Exhaust emission Standard	EU stage IIIB, US EPA Tier 4i	<i>EU stage IIIB, US EPA Tier 4i</i>
- Aspiration	Turbocharged and charge air cooled	<i>Turbocharged and charge air cooled</i>
- Diesel tank capacity	350 l	<i>92 US gal</i>
Hydraulic system		
- Rated pressure	31 MPa	<i>4496 psi</i>
- Flow rates (main circuits)	242 l/min	<i>64 US gal/min</i>
- Flow rates (auxiliary circuits)	59 + 35 l/min	<i>15.6 + 9.2 US gal/min</i>
- Hydraulic oil tank capacity	250 l	<i>66 US gal</i>
Undercarriage		
	variable gauge, telescoping side frames	<i>variable gauge, telescoping side frames</i>
- Width of triple grouser track shoes	600 mm	<i>24 in</i>
- Overall width of crawlers retracted	2500 mm	<i>99 in</i>
- Overall width of crawlers extended	3400 mm	<i>134 in</i>
- Overall length of crawlers	4120 mm	<i>162 in</i>
- Traction force	219 kN	<i>49165 lbf</i>
- Travel speed	2,2 km/h	<i>1.4 mph</i>
Mast inclination - Backward/ Forward/Lateral	10/4/3°	<i>10/4/3°</i>

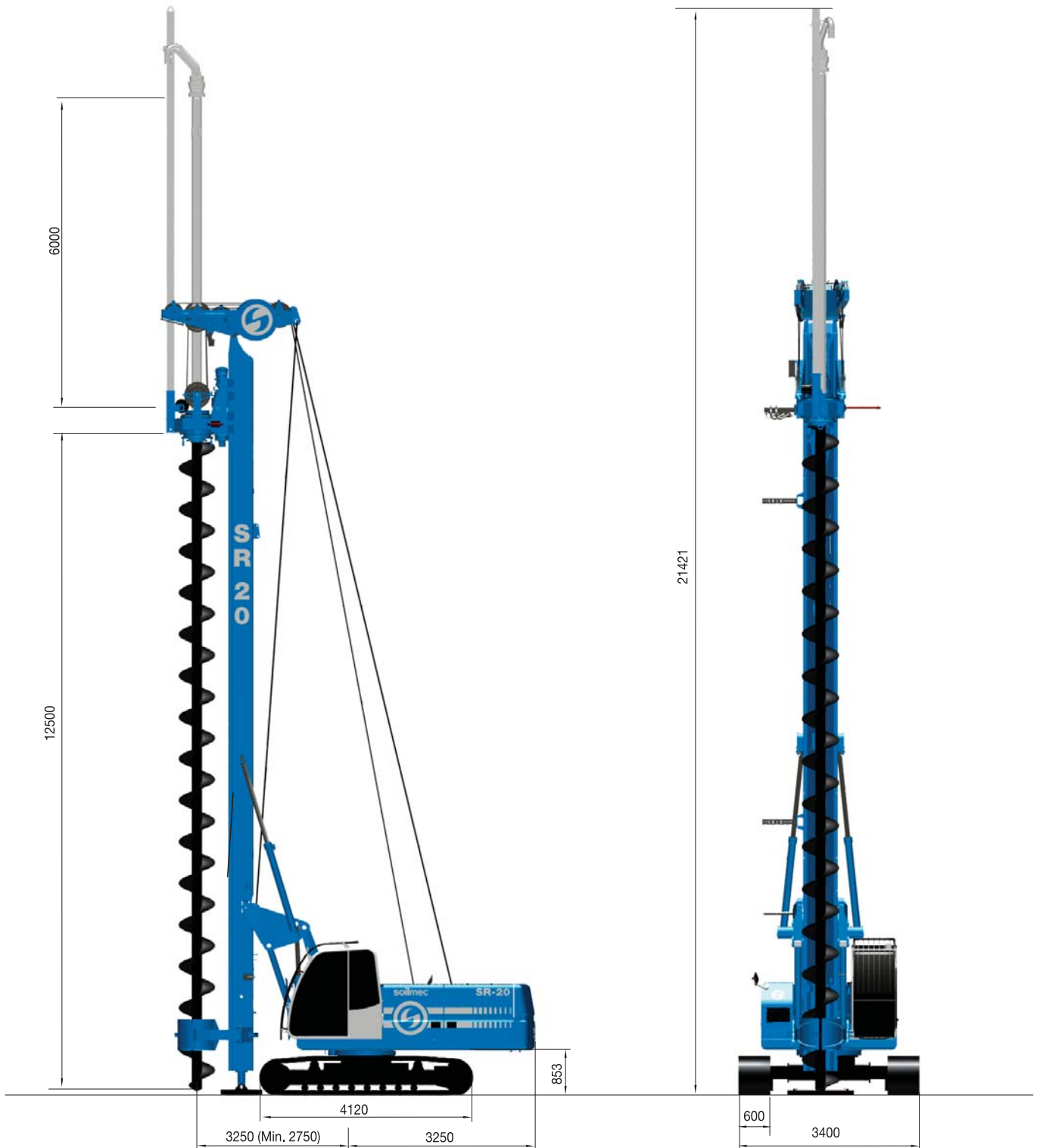
STANDARD EQUIPMENT

- Main and auxiliary winch controlled descent type with special grooving
- Hoist limit switch on main rope
- Service rope parking point
- Mast inclination measurement on X/Y axes (digital/analog display)
- Automatic vertical mast alignment
- Depth measuring device on main winch
- Speed measuring device on rotary
- Crowd pressure setting
- Emergency mode of operation for engine
- Engine diagnostic system
- Diagnostic panel for hydraulic functions
- Removable counterweight (2500 kg)
- Transport securing lugs on crawler units
- Access ladder on upper carriage
- On board lighting set
- On board tool set
- High comfort operator's cab (850 mm width)
- Protective roof grate (FOPS compliant)
- Air conditioning system
- Radio and CD player

OPTIONAL EQUIPMENT

- DMS system electronic monitoring and visualization system - 12" touch screen
- Biodegradable oil
- Pressurized air conditioning system
- Freefall auxiliary winch (56 kN)
- Central lubrication system
- Swivel for auxiliary rope
- Videocamera set
- 800 mm triple grouser
- Truck shoes
- EU stage IIIA, US EPA Tier 3 Diesel Engine

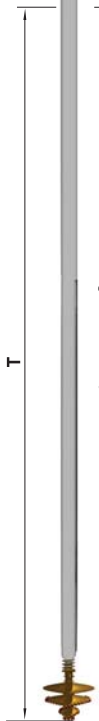
SR-20 Hydraulic Rotary Rig CFA APPLICATIONS 4° line pull



CFA - Continuous Flight Auger - 4° line pull

Maximum pile diameter	750 mm	30 in
Maximum pile depth cw 6 m auger extension	18,3 m	60 ft
Maximum pile depth cw 6 m auger extension	17,1 m	56 ft
Extraction force	280 kN	62945 lbf
Crowd force on auger	37 kN	8318 lbf

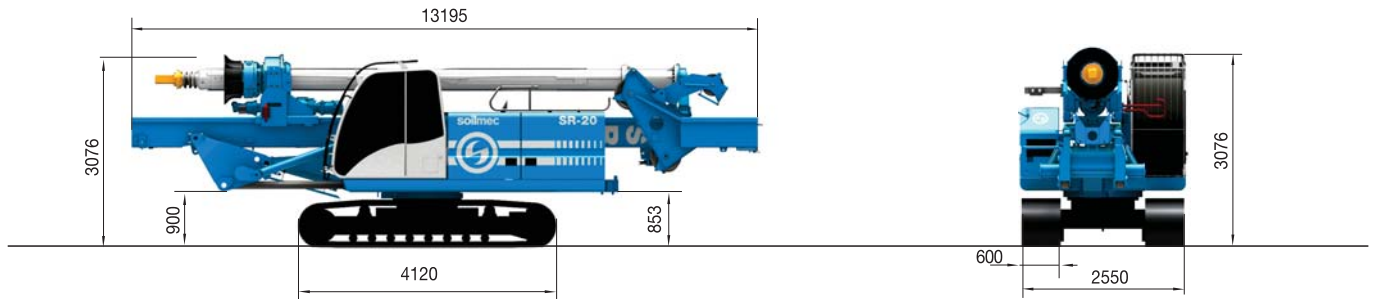
SR-20 Hydraulic Rotary Rig KELLY DRILLING SYSTEM



Drilling Depths	Kelly dimensions	Depth		Weight		CCS SYSTEM				
		m	ft	ton	ton	H		T		
	section x m					m	ft		m	ft
2 parts	BL HD	2 x 6	11,2	36.7	1,3	2866	6,6	21.7	9,7	31.8
	BL HD	2 x 9	17,3	56.8	1,8	3968	3,4	11.2	15,8	51.8
3 parts	BL HD	3 x 7	19,5	64.0	2,2	4850	5,3	17.4	18,0	59.1
	FR HD	3 x 7	19,9	65.3	1,8	3968	5,4	17.7	18,4	60.4
4 parts	BL HD	4 x 6	22,0	72.2	2,2	4850	6,4	21.0	20,5	67.3
	BL HD	4 x 6,5	22,9	75.1	2,3	5071	6,2	20.3	21,4	70.2
	BL HD	4 x 7	26,1	85.6	2,4	5291	5,4	17.7	24,6	80.7
	BL HD	4 x 9	33,6	110.2	3,0	6614	3,6	11.8	32,1	105.3
	BL HD	4 x 10,5	40,0	131.2	3,4	7496	2,1	6.8	38,2	125.3
	FR HD	4 x 7	26,1	85.6	2,4	5291	5,4	17.7	24,6	80.7
	FR HD	4 x 8	30,0	98.4	2,7	5952	4,4	14.4	28,5	93.5
5 parts	FR HD	4 x 9	34,0	111.5	3,0	6614	3,4	11.2	32,5	106.6
	FR HD	5 x 7	32,0	105.6	3,0	6614	5,4	17.7	30,7	100.7
	FR HD	5 x 8	37,1	121.7	3,4	7496	4,4	14.4	35,6	116.8
	FR HD	5 x 9	42,3	138.8	3,7	8157	3,4	11.2	40,8	133.9

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TRANSPORT, DIMENSIONS AND WEIGHTS



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

Technical data sheet SR20-001 04/2014

Transport configuration		
Width	2550 mm	100 in
Length LDP version / CFA version	13200 - 13460 mm	520 - 530 in
Weight - CCS version c/w 4x9 kelly bar	27700 kg	61070 lb
Weight - CCS version w/o rotary, counterweight - Min transport	19800 kg	43652 lb
Weight - CFA version	24500 kg	54013 lb

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