

Hydraulic Rotary Rig

SR-90



soilmec 
Drilling and Foundation Equipment

SR-90 Hydraulic Rotary Rig

LDP APPLICATIONS



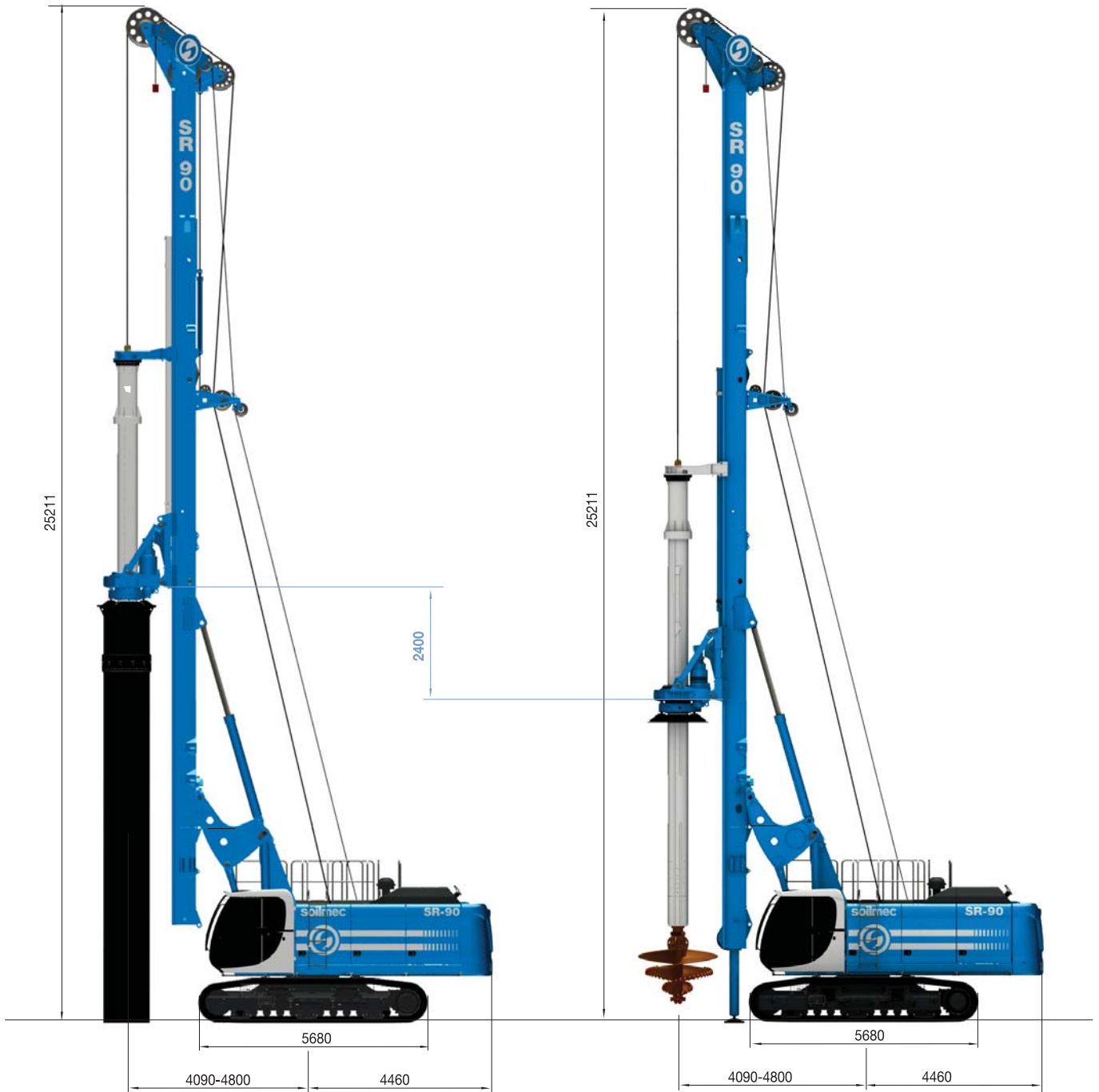
LDP - Large Diameter Piles - WCS version

Operating weight c/w 4x10,5 kelly bar	97000 kg	213848 lb
Max pile diameter	1900 mm	74.80 in
Max pile diameter - special configuration*	3000 mm	118 in
Max pile depth - friction kelly	89 - 106,5 m	292 - 349,4 ft
Max pile depth - locking kelly	70 m	229.66 ft

* lower mast section removed, tool below mast

SR-90 Hydraulic Rotary Rig

LDP APPLICATIONS Crowd cylinder double positioning



LDP - Large Diameter Piles - CCS version

Operating weight c/w 4x10,5 kelly bar	95000 kg	209437 lb
Max pile diameter	2100 mm	82.68 in
Max pile diameter - special configuration*	3000 mm	118 in
Max pile depth - friction kelly	89 - 106.5 m	292 - 349.4 ft
Max pile depth - locking kelly	70 m	229.66 ft

* lower mast section removed, tool below mast

SR-90 Hydraulic Rotary Rig

TECHNICAL DATA SHEET

CCS - Cylinder crowd system		
- Crowd force pull (down/up)	280/365 kN	62945/82054 lbf
- Stroke	6500 mm	256 in
- Speed (down/up)	10,8 m/min	35.4 ft/min
- Fast speed (down/up)	3,5/11 m/min	11.5/36 ft/min
WCS - Winch crowd system		
- Crowd force pull (down/up)	484/484 kN	108800 / 108800 lbf
- Stroke	18800 mm	740 in
- Speed (down/up)	20 m/min	65.6 ft/min
- Fast speed (down/up)	6/20 m/min	19.7/65.6 ft/min
Main winch SW320		
	controlled descent	<i>controlled descent</i>
- Line pull (1st layer)	320 kN	71939 lbf
- Rope diameter/lenght	32 mm	1.26 in
- Line speed (max.)	80 m/min	263 ft/min
Auxiliary winch SW130		
	controlled descent	<i>controlled descent</i>
- Line pull (1st layer)	132 kN	29675 lbf
- Rope diameter	22 mm	0.87 in
- Line speed (max.)	70 m/min	230 ft/min
Engine		
	CAT C15 Acert	<i>CAT C15 Acert</i>
- Rated output ISO 3046-I	403 kW @ 1800 rpm	540 HP @ 1800 rpm
- Engine conforms to Exhaust emission Standard	EU stage III B, US EPA Tier 4i	<i>EU stage III B, US EPA Tier 4i</i>
- Diesel tank capacity	830 l	220 US gal
Hydraulic system		
- Hydraulic pressure rated	31 Mpa	4496 psi
- Flow rates (main circuits)	2x 444 l/min	2x 117.3 US gal/min
- Hydraulic oil tank capacity	1050 l	277 US gal
Undercarriage		
	variable gauge, telescoping removable sides	<i>variable gauge, telescoping removable sides</i>
- Overall width of crawlers retracted/extended	3200/4700 mm	126/185 in
- Width of triple grouser track shoes	900 mm	35 in
- Overall length of crawlers	5680 mm	224 in
- Traction force effective/nominal	668 kN	150172.4 lbf
- Travel speed	1,9 km/h	1.2 mph
Mast inclination (Backward/ Forward/Lateral)	5/4/3°	<i>5/4/3°</i>

STANDARD EQUIPMENT

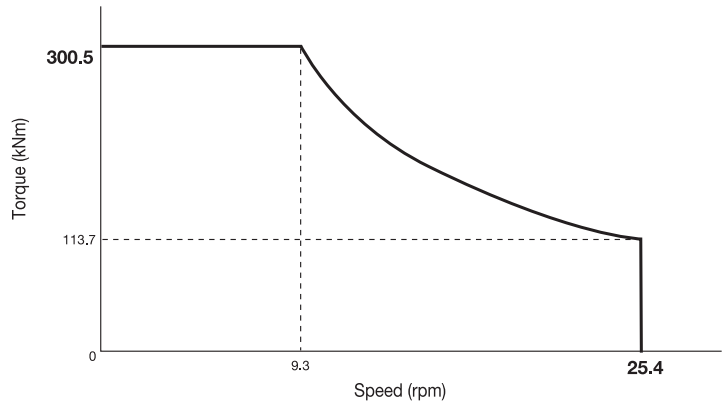
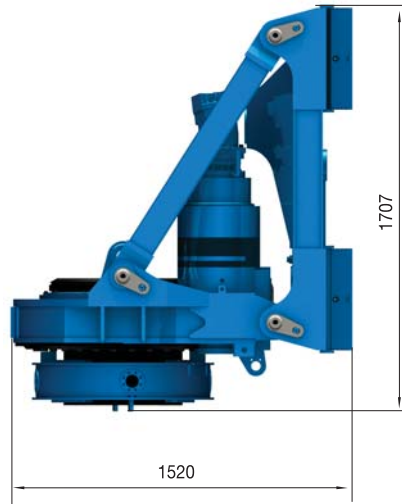
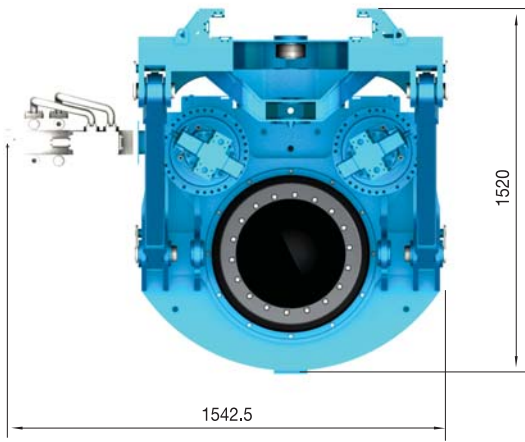
- Independent rotaries shifting gear type
- Rotary table replaceable drive ribs
- Main and auxiliary winch controlled descent type with special grooving
- Hoist limit switch on main rope
- Swivel for main rope
- Service rope parking point
- DMS system electronic monitoring and visualization system
- 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
- Oscillator attachment brackets
- Central lubrication system
- Emergency mode of operation for engine
- Engine diagnostic system
- Diagnostic panel for hydraulic functions
- Removable counterweight
- Counterweight self-mounting capability
- Removable crawler side frames
- Variable gauge undercarriage
- 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
- Protective roof grate (FOPS compliant)
- Air conditioning system
- Radio and CD player
- Videocamera set

OPTIONAL EQUIPMENT

- Diesel Engine CAT C15 EU Stage III A - US EPA Tier3 available
- Biodegradable oil
- Pressurized air conditioning system
- Freefall main winch
- Freefall auxiliary winch
- Swivel for auxiliary rope
- Wider triple grouser track shoes
- 4th Winch (400kN)
- Double roller auger cleaner
- VTH-1 vibrator
- Main winch load cell

SR-90 Hydraulic Rotary Rig

ROTARY TABLE RD-300



Rotary drive

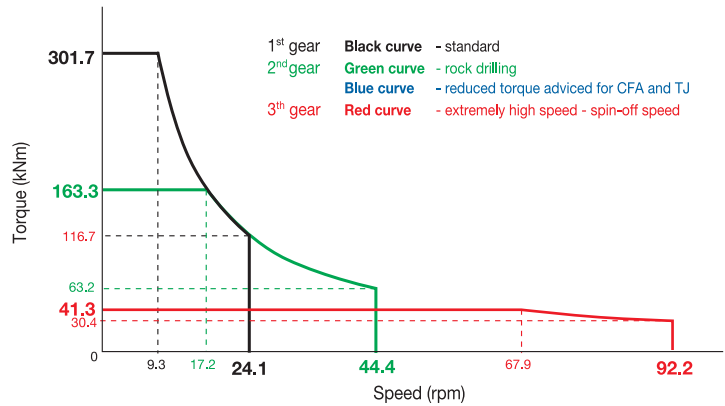
- Max torque (theoretical-restricted-intermittent)
- Rated torque (theoretical)
- Speed of rotation (max)
- Spin-off speed

Single gear version

- 351 kNm**
- 300,5 kNm**
- 25,4 rpm**
- 120 rpm**

Single gear version

- 258880 lbf*ft**
- 221634 lbf*ft**
- 25.4 rpm**
- 120 rpm**



Rotary drive

- Max torque (theoretical-restricted-intermittent)
- Rated torque (theoretical)
- Speed of rotation (max)
- Spin-off speed

Multigear version

- 352 kNm**
- 302 kNm**
- 24,1 rpm**
- 92 rpm**

Multigear version

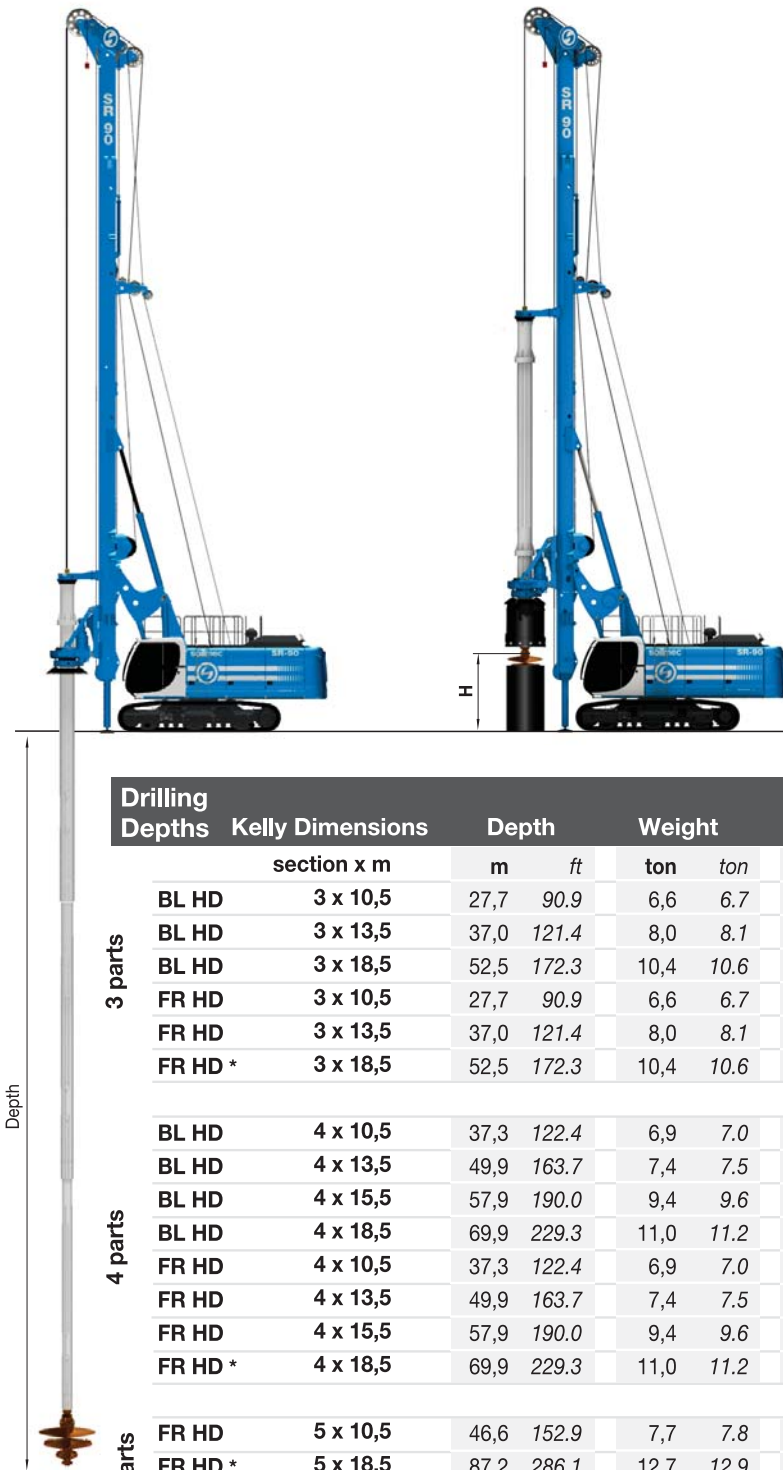
- 259617 lbf*ft**
- 222519 lbf*ft**
- 24.1 rpm**
- 92 rpm**

SR-90 Hydraulic Rotary Rig

KELLY DRILLING SYSTEM

Optional equipment:

- Hydraulic oscillator
VRM 200 KL



Drilling Depths	Kelly Dimensions section x m	Depth		Weight		CCS SYSTEM				WCS SYSTEM	
						H - High pos.		H - Low pos.		H	
						m	ft	m	ft	m ⁽¹⁾	ft
3 parts	BL HD 3 x 10,5	27,7	90.9	6,6	6.7	8,59	28.2	10,0	32.8	10,0	32.8
	BL HD 3 x 13,5	37,0	121.4	8,0	8.1	7,87	25.8	7,87	25.8	7,87	25.8
	BL HD 3 x 18,5	52,5	172.3	10,4	10.6	2,77	9.1	2,77	9.1	2,77	9.1
	FR HD 3 x 10,5	27,7	90.9	6,6	6.7	8,59	28.2	10,0	32.8	10,0	32.8
	FR HD 3 x 13,5	37,0	121.4	8,0	8.1	7,87	25.8	7,87	25.8	7,87	25.8
	FR HD * 3 x 18,5	52,5	172.3	10,4	10.6	2,77	9.1	2,77	9.1	2,77	9.1
4 parts	BL HD 4 x 10,5	37,3	122.4	6,9	7.0	8,59	28.2	10,0	32.8	10,0	32.8
	BL HD 4 x 13,5	49,9	163.7	7,4	7.5	7,87	25.8	7,87	25.8	7,87	25.8
	BL HD 4 x 15,5	57,9	190.0	9,4	9.6	5,88	19.3	5,88	19.3	5,88	19.3
	BL HD 4 x 18,5	69,9	229.3	11,0	11.2	2,77	9.1	2,77	9.1	2,77	9.1
	FR HD 4 x 10,5	37,3	122.4	6,9	7.0	8,59	28.2	10,0	32.8	10,0	32.8
	FR HD 4 x 13,5	49,9	163.7	7,4	7.5	7,87	25.8	7,87	25.8	7,87	25.8
	FR HD 4 x 15,5	57,9	190.0	9,4	9.6	5,88	19.3	5,88	19.3	5,88	19.3
	FR HD * 4 x 18,5	69,9	229.3	11,0	11.2	2,77	9.1	2,77	9.1	2,77	9.1
5 parts	FR HD 5 x 10,5	46,6	152.9	7,7	7.8	8,59	28.2	10,0	32.8	10,0	32.8
	FR HD * 5 x 18,5	87,2	286.1	12,7	12.9	2,77	9.1	2,77	9.1	2,77	9.1
	FR HD * 5 x 19	89,2	292.7	13,0	13.2	2,37	7.8	2,37	7.8	2,37	7.8
6 parts	FR HD 6 x 10,5	55,9	183.4	7,8	7.9	8,59	28.2	10,0	32.8	10,0	32.8
	FR HD * 6 x 19,0	107,0	351.1	13,3	13.5	2,37	7.8	2,37	7.8	2,37	7.8

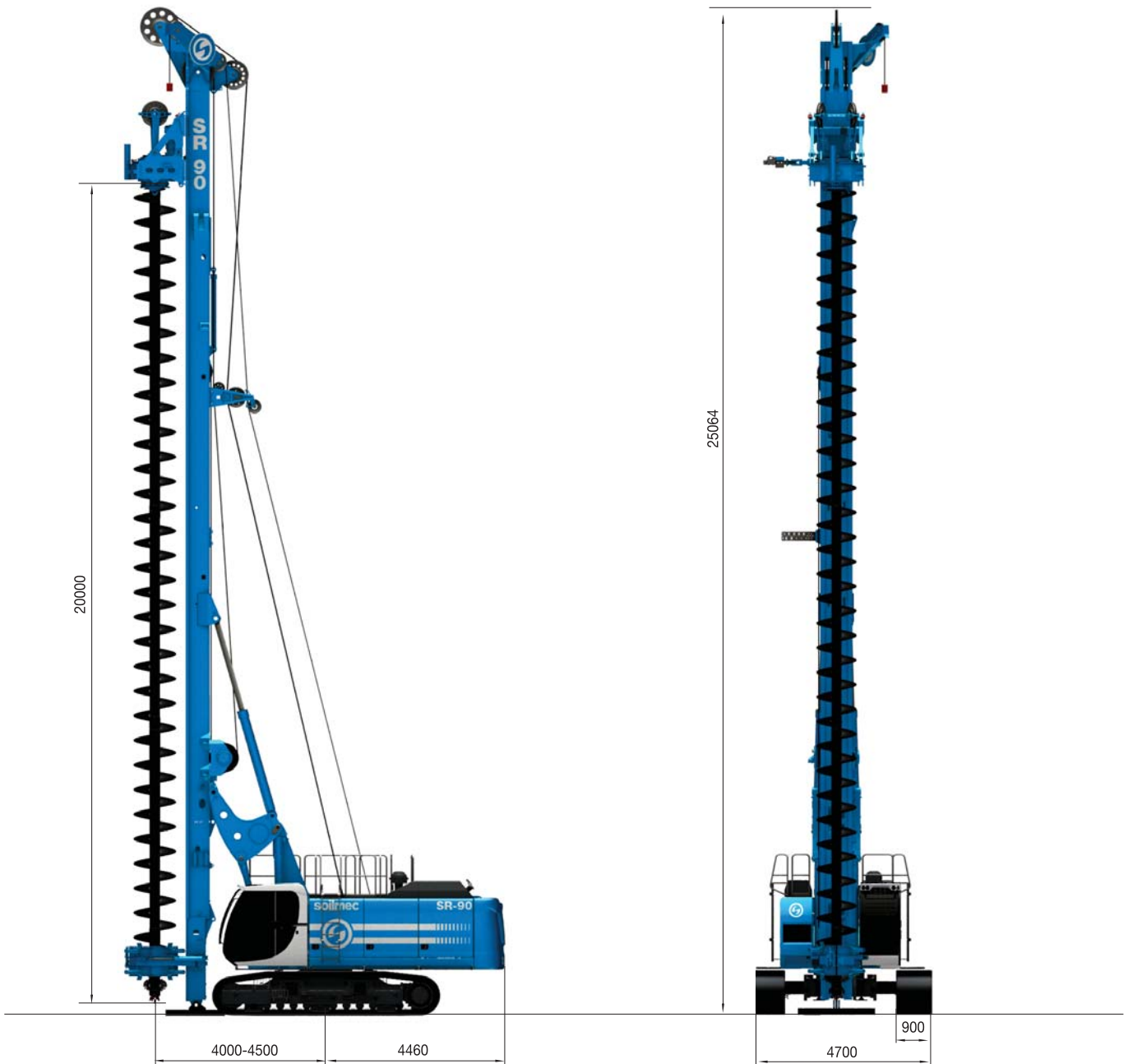
* non self-mounting kelly bar w/o mast foot

(1) 2,4 m depth reduction

(2) 2,4 m depth reduction w/o mast foot

SR-90 Hydraulic Rotary Rig

CFA APPLICATIONS Quick conversion kit

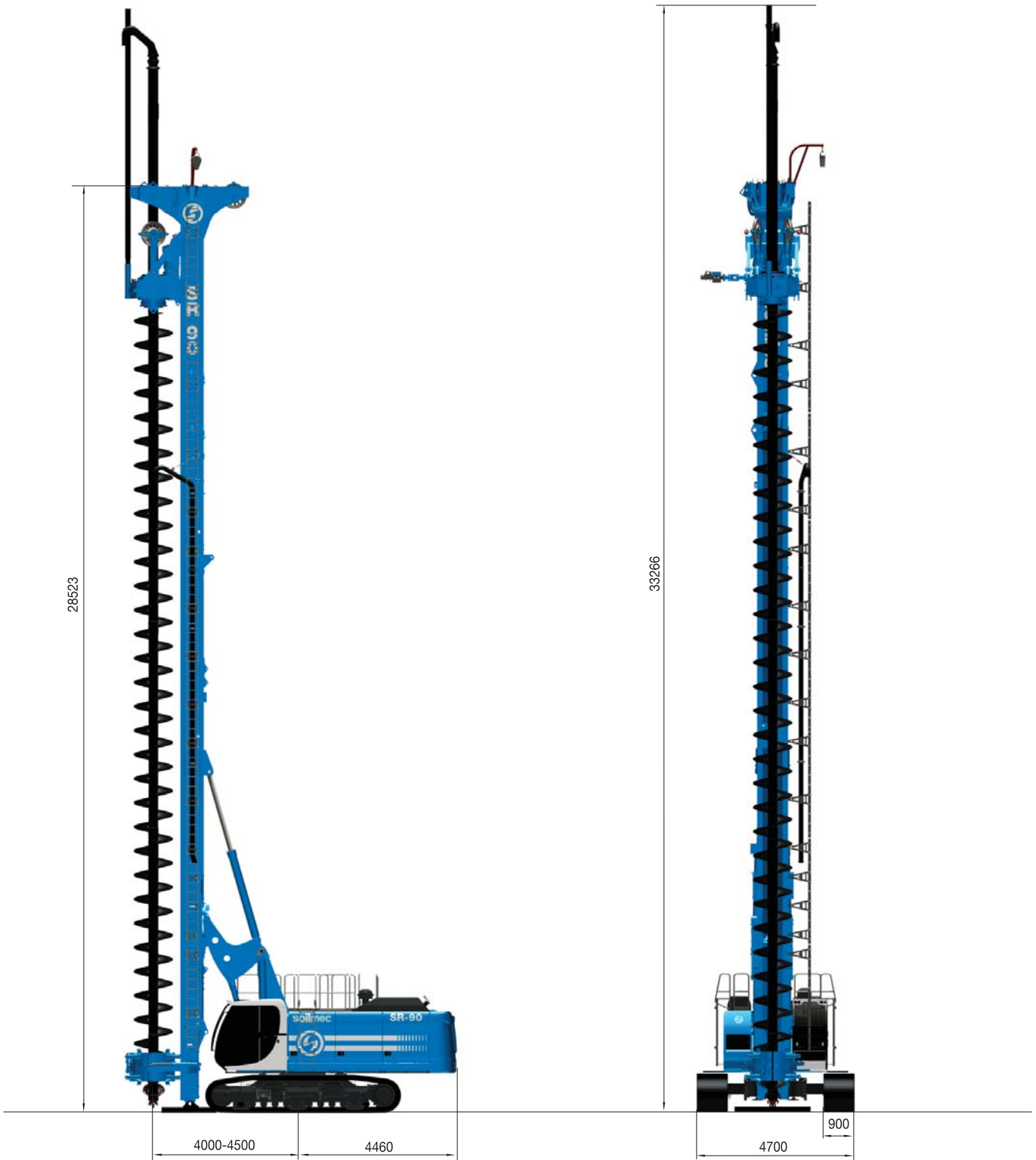


CFA - Continuous Flight Auger - Quick conversion kit

Max pile diameter	1200 mm	203926 lb
Max pile depth c/w 8,5 m auger extension	26,5 m	86.94 ft
Max pile depth with auger cleaner c/w 8,5 m auger extension	25 m	81.94 ft
Extraction force	1000 kN	224808.9 lbf
Crowd force on auger (optional)	484 kN	108807.5 lbf

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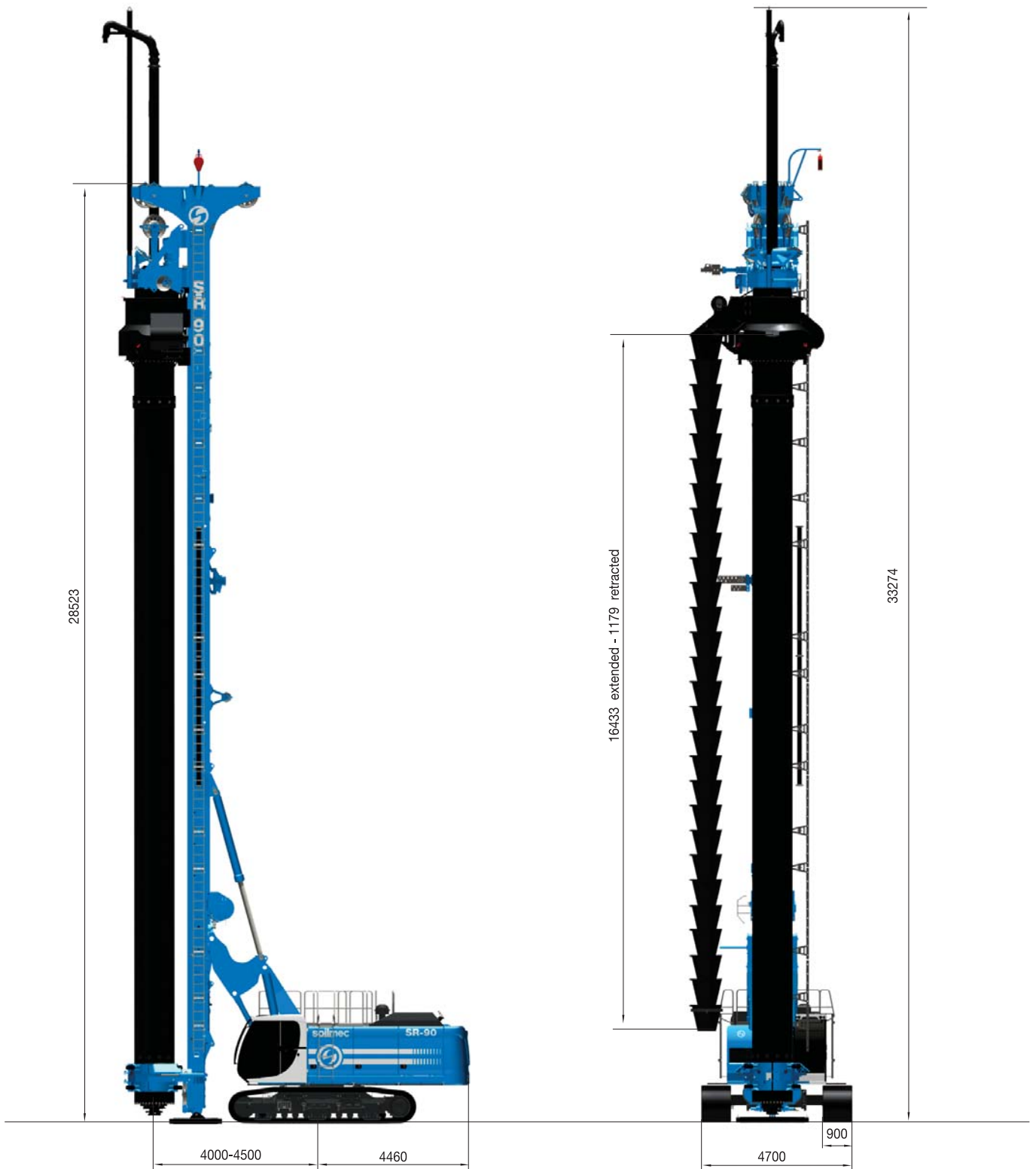
CFA APPLICATIONS 4° line pull



CFA - Continuous Flight Auger - 4° linepull		
Operating weight c/w auger ext, w/o auger	92500 kg	203926 lb
Max pile diameter	1200 mm	47.24 in
Max pile depth c/w 6 m auger extension	30 m	98.42 ft
Max pile depth with auger cleaner c/w 6 m auger extension	28,5 m	93.50 ft
Extraction force	1280 kN	287755.4 lbf
Crowd force on auger (optional)	100 kN	22480.89 lbf

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CAP/CSP APPLICATIONS 4° line pull

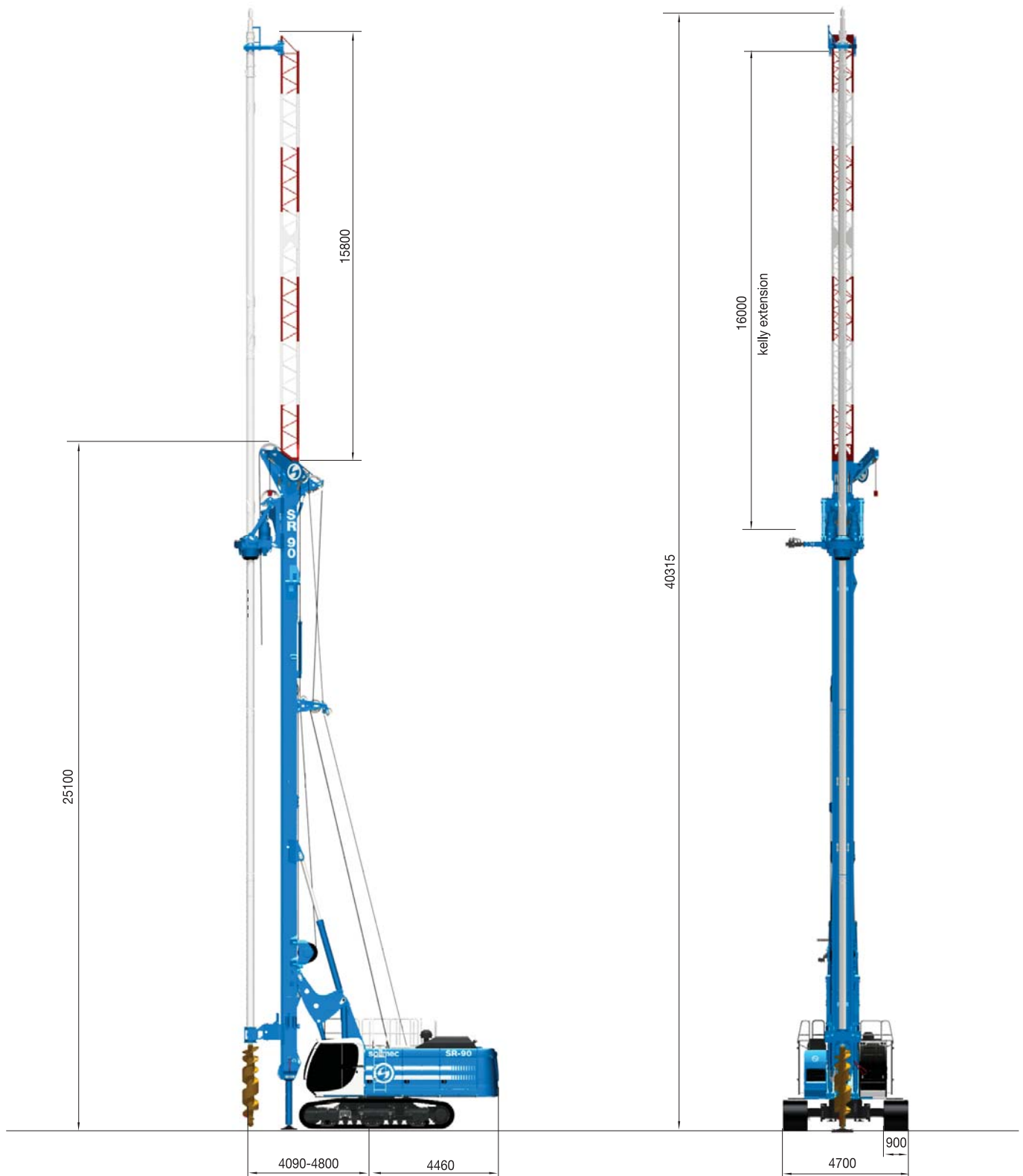


CAP/CSP - Cased Augered & Secant Piles - 4° linepull

Max pile diameter	1000 mm	39.37 in
Max pile depth c/w 6 m auger extension	27,3 m	90.88 ft
Max pile depth with auger cleaner c/w 6 m auger extension	26,5 m	86.94 ft
Max cased depth (w/ w/o auger cleaner)	20 / 20,8 m	65.6 / 68.2 ft
Casing max torque (theoretical - restricted - intermittent)	342 kNm	252246 lb*ft
Casing theoretical rated torque	303 kNm	223478 lb*ft
Casing pull up/down	484 kN	108807.5 lbf
Max cased speed	12,7 rpm	12.7 rpm

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DP APPLICATIONS Quick conversion kit



DP - Displacement Piles - Quick conversion kit

Max DP pile diameter	800 mm	<i>31.50 in</i>
Max TCT pile diameter	800 mm	<i>31.50 in</i>
Max pile depth c/w 8,5 m auger extension	25,5 m	<i>83.66 ft</i>
Mast lattice boom extension length	15,8 m	<i>51.84 ft</i>
Max depth c/w lattice boom mast extension	33 m	<i>108.27 ft</i>

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TJ APPLICATIONS Quick conversion kit

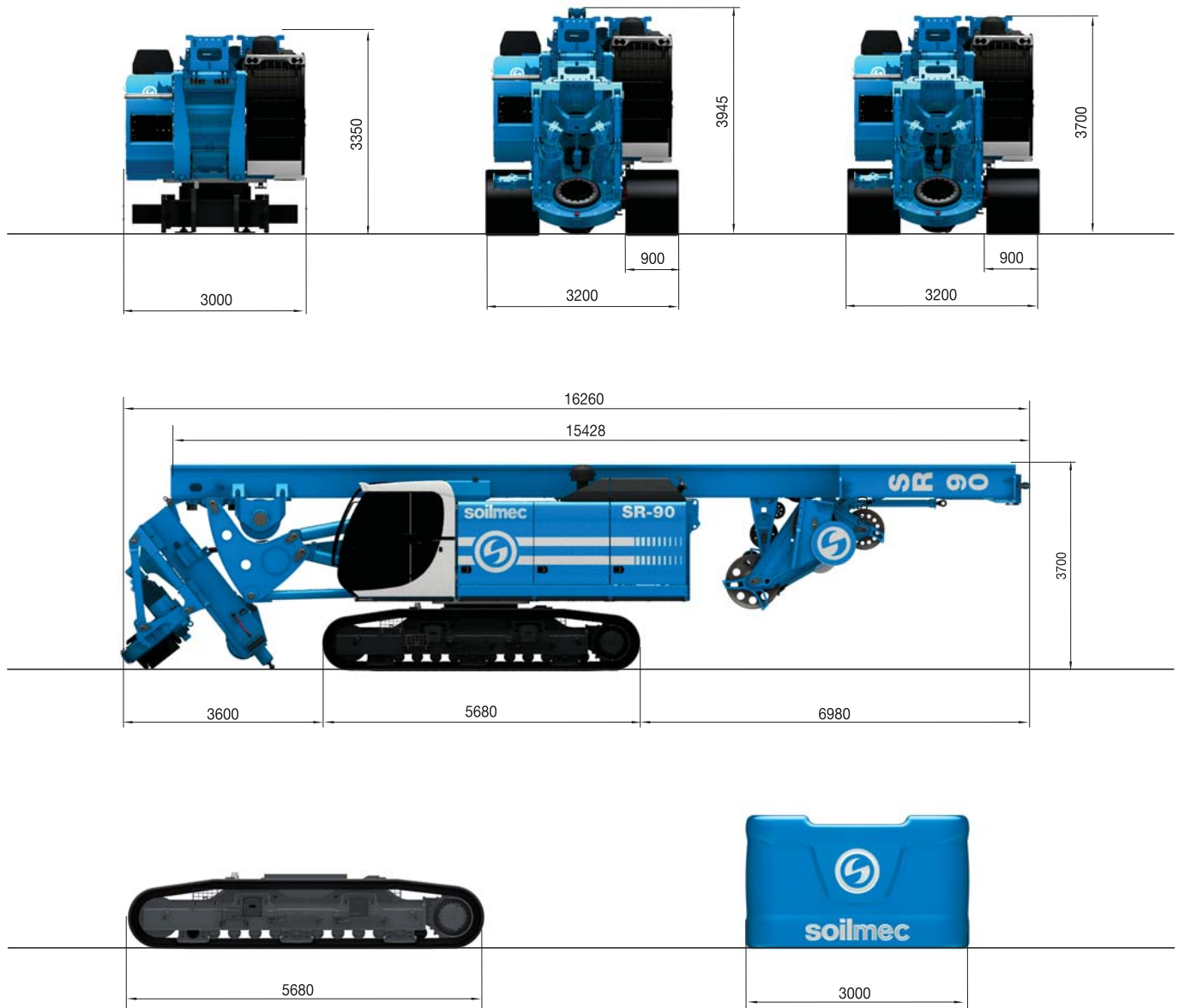


TJ - Turbojet® - Quick conversion kit

Max treatment diameter	1500 mm	31.50 in
Max pile depth c/w 8,5 m auger extension	25,5 m	83.66 ft
Mast lattice boom extension length	15,8 m	51.84 ft
Max depth c/w lattice boom mast extension	33 m	108.27 ft

SR-90 Hydraulic Rotary Rig

TRANSPORT, DIMENSIONS AND WEIGHTS



Weight 15200 (7600 + 7600) kg 33510 (16755 + 16755) lb
Thickness 900 mm 35 in

Weight 15000 (11500 + 3500) kg 33069 (25353 + 7716) lb
Thickness 765 mm 30 in

Transport configuration		
Width c/w - w/o crawlers	3200 - 3000 mm	126 - 118 in
Length c/w - w/o rotary and lower mast element	15428 - 16260 mm	608 - 640 in
Weight CCS version c/w rotary, w/o counterweight - w/o rotary, counterweight, crawlers	64400 - 45400 kg	141976 - 100090 lb
Weight WSC version c/w rotary, w/o counterweight - w/o rotary, counterweight, crawlers	69200 - 53250 kg	152560 - 117396 lb

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