



Hydraulic Rotary Rig

# SR-145

## HIT



**soilmec**   
Drilling and Foundation Equipment

# SR-145 HIT Hydraulic Rotary Rig

## LDP APPLICATIONS - Crowd system with cylinder

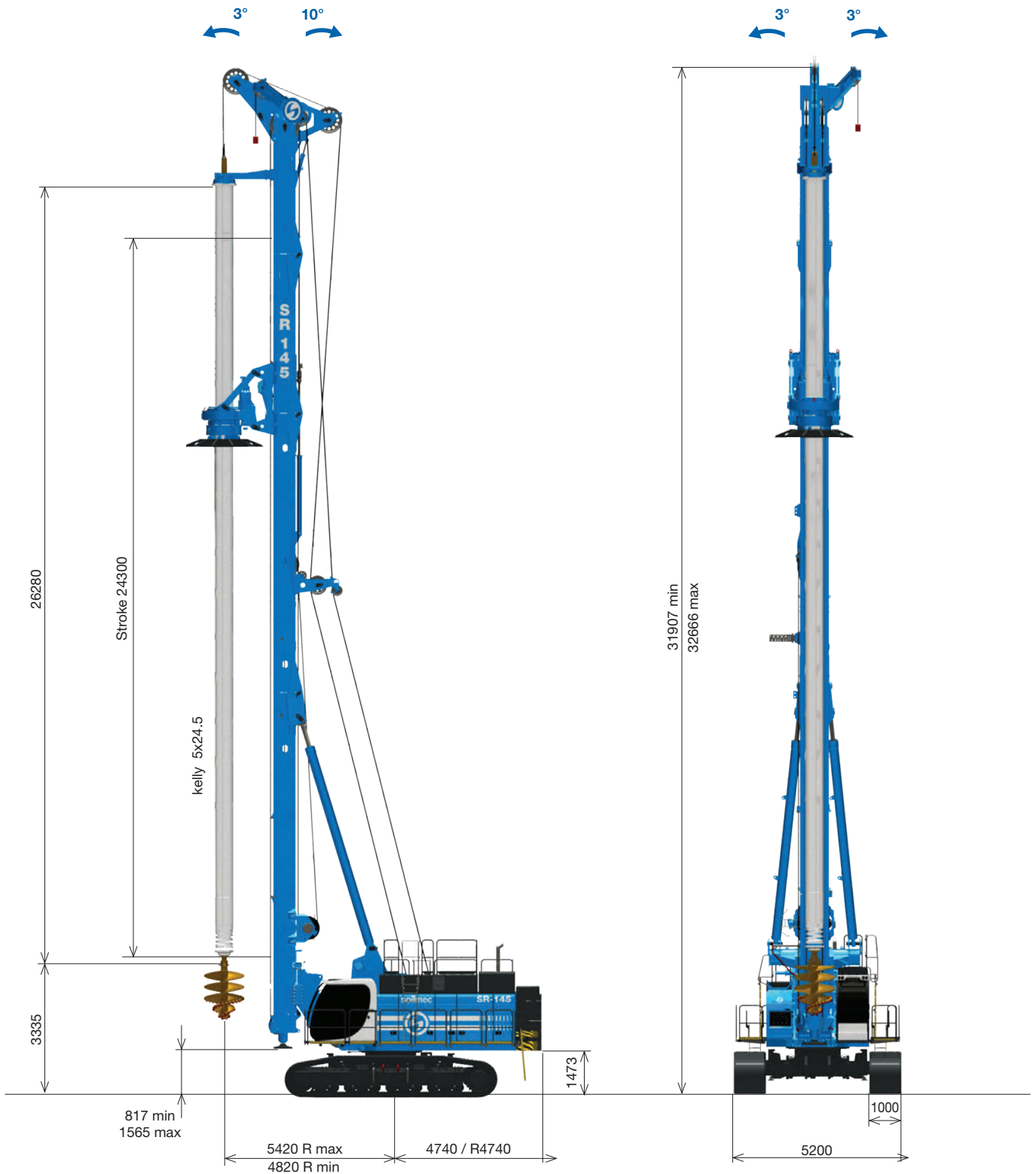


### LDP\_Large Diameter Piles - CCS version

<b>Operating weight</b> w/o kelly bar	144750 kg	319116 lb
<b>Max pile diameter</b> along mast	3000 mm	118 in
<b>Max pile diameter</b> with special kit (opt.)	3500 mm	138 in
<b>Max pile depth</b> - friction kelly	121 m	397 ft
<b>Max pile depth</b> - locking kelly	114 m	374 ft

# SR-145 HIT Hydraulic Rotary Rig

## LDP APPLICATIONS - Crowd system with winch

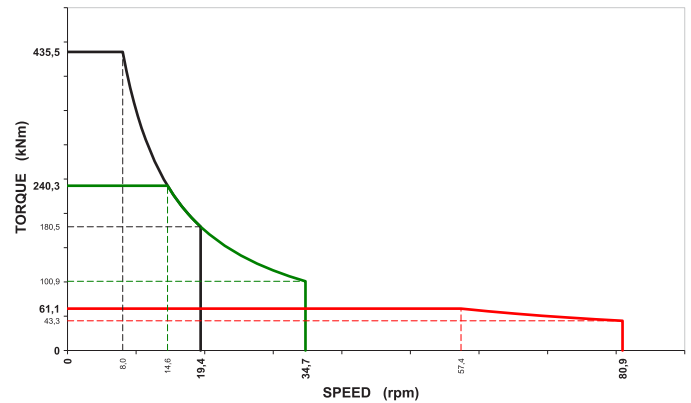
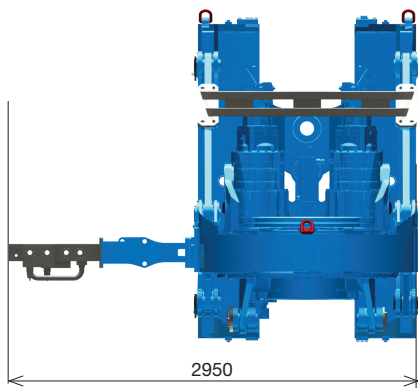
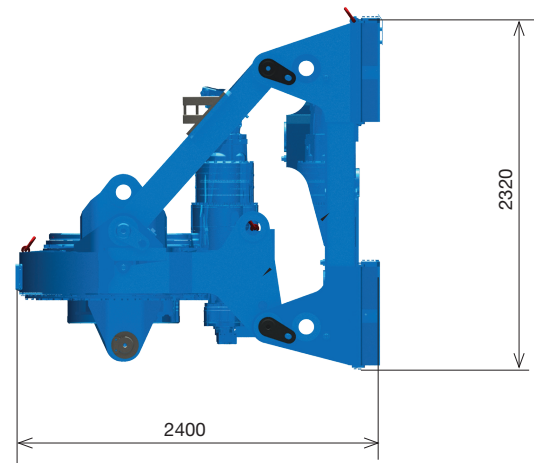
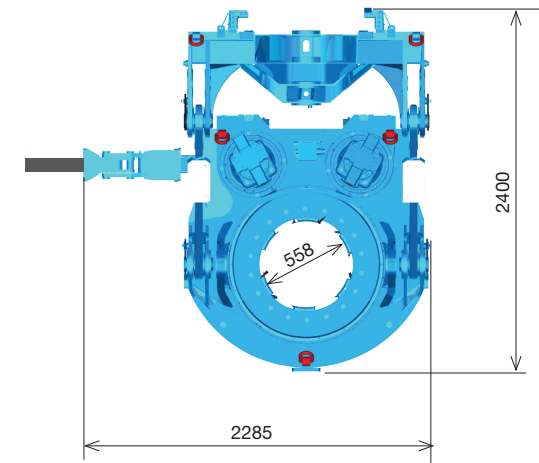


### LDP Large Diameter Piles - WCS version

<b>Operating weight w/o kelly bar</b>	146200 kg	322313 lb
<b>Max pile diameter along mast</b>	2800 mm	110 in
<b>Max pile diameter with special kit (opt.)</b>	3300 mm	130 in
<b>Max pile depth - friction kelly</b>	121 m	398 ft
<b>Max pile depth - locking kelly</b>	114 m	374 ft

# SR-145 HIT Hydraulic Rotary Rig

## ROTARY TABLE



### Rotary drive

- Max torque (intermittent)
- Rated torque
- Speed of rotation (1<sup>st</sup> gear)
- Speed of rotation (3<sup>rd</sup> gear)

### Multigear version

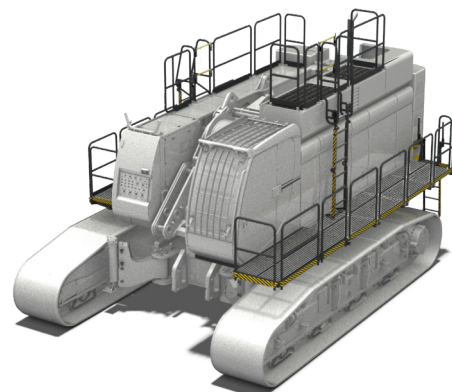
- 435 kNm** *320834 lbf·ft*
- 411 kNm** *303133 lbf·ft*
- 19,4 rpm** *19.4 rpm*
- 81 rpm** *81 rpm*

# SR-145 HIT Hydraulic Rotary Rig

Safety equipment compulsory for EC marking

On request whenever EC marking is not needed

- Catwalks 900 mm (3 ft) wide
- Ladder and handrails for both access levels
- Acoustic alarm for rotation and translation
- Radio remote control for tramming on ramp
- Video-camera set with 5 cameras included
- Rearview mirrors
- Led lights
- Oil discharge conveying system
- Load cell for service winch



# SR-145 HIT Hydraulic Rotary Rig

## TECHNICAL DATA SHEET

<b>CCS_Crowd Cylinder System</b>		
- Stroke	7650 mm	301 in
- Crowd force pull (down/up)	345 / 412 kN	77558 / 92620 lbf
- Fast speed up/down	20 m/min	66 ft/min
- Slow speed up/down	5,5 m/min	18 ft/min
<b>WCS_Crowd Winch System</b>		
- Stroke	21300 mm	740 in
- Crowd force pull (down/up)	540 / 540 kN	121395 / 121395 lbf
- Fast speed up/down	33 m/min	108 ft/min
- Slow speed up/down	8,6 m/min	28 ft/min
<b>Engine</b>		
	CAT C18 Acert	CAT C Acert
- Rated output	470 kW @ 1800 rpm	630 HP @ 1800 rpm
- Engine conforms to Exhaust emission Standard	EU stage IV-US EPA Tier4f	EU stage IV-US EPA Tier4f
- Diesel tank capacity	1048 l	277 US gal
<b>Main winch</b>		
	controlled descent	controlled descent
- Line pull (1st layer)	420 kN	94418 lbf
- Rope diameter	36 mm	740 in
- Line speed (max.)	73 m/min	240 ft/min
<b>Auxiliary winch</b>		
	controlled descent	controlled descent
- Line pull (1st layer)	132 kN	29674 lbf
- Rope diameter	22 mm	740 in
- Line speed (max.)	71 m/min	233 ft/min
<b>Hydraulic system</b>		
- Flow rates (main circuits)	2x 444 l/min	2x 117 US gal/min
- Third pump flow	140 l/min	37 US gal/min
- Hydraulic oil tank capacity	1175 l	310 US gal
<b>Undercarriage</b>		
	variable gauge, telescoping removable sides	variable gauge, telescoping removable sides
- Overall width with retracted crawlers	3500 mm	138 in
- Overall width with extended crawlers	5200 mm	205 in
- Width of triple grouser track shoes	1000 mm	39 in
- Overall length of crawlers	6684 mm	263 in
- Traction force effective/nominal	813 kN	182766 lbf
- Travel speed	1,6 km/h	1.0 mph
<b>Mast inclination (Backward/ Forward/Lateral)</b>		
	10°/3°/3°	10°/3°/3°

## STANDARD EQUIPMENT

- Rotary table replaceable drive ribs
- Emergency mode of operation for engine
- Main and auxiliary winch controlled descent type with special grooving
- Hoist limit switch on main and service rope
- Swivel for main rope
- Service rope parking point
- GSM/GPRS/GPS modem kit
- DMS system electronic monitoring and visualization system
- Mast inclination measurement on X/Y axes (digital/ analog display)
- Automatic vertical mast alignment
- Depth measuring device
- Rotary speed measuring device
- Rotary power control
- Variably stackable counterweight
- Removable undercarriage
- Variable gauge undercarriage
- Wider triple grouser track shoes
- Transport securing lugs on crawler units
- Oscillator attachment brackets
- Lower foldable mast element
- Cardan joint
- Flange for casing driving
- Kelly swivel
- Kelly guide
- On board lighting set
- On board tool set
- Electric refuelling pump
- High comfortable H-Cab 1050 mm (3,4 ft) wide
- Protective roof grate (FOPS compliant)
- Sliding door
- Adjustable console with sliding support for DMS 12" touch screen
- Engine and Diesel particulate diagnostic panel
- Auto low idle system
- 3 color warning light
- Ergonomic seat with air suspension, fully-adjustable positioning and lumbar support
- Heat and Air Conditioning control unit
- Courtesy lights in the cab
- Radio and CD player

## OPTIONAL EQUIPMENT

- Optional Diesel Engine with EU Stage III A - US EPA Tier 3 motorization
- Kit for disassembling undercarriage
- Fiberglass canopies
- Automatic greasing kit
- Lubricator pump kit for rotary pads cradle
- Central lubrication system
- Flange for bucket opening
- Hydraulic prearrangement for casing oscillator
- Mast extension for special configuration
- Mast ladder kit
- Parachute safety kit
- Automatic hydraulic kit for upper mast folding
- Limit switch for rope winding and winches
- Free fall service winch
- Double roller auger cleaner
- Prearrangement for VTH-1

# SR-145 HIT Hydraulic Rotary Rig

## KELLY DRILLING SYSTEM

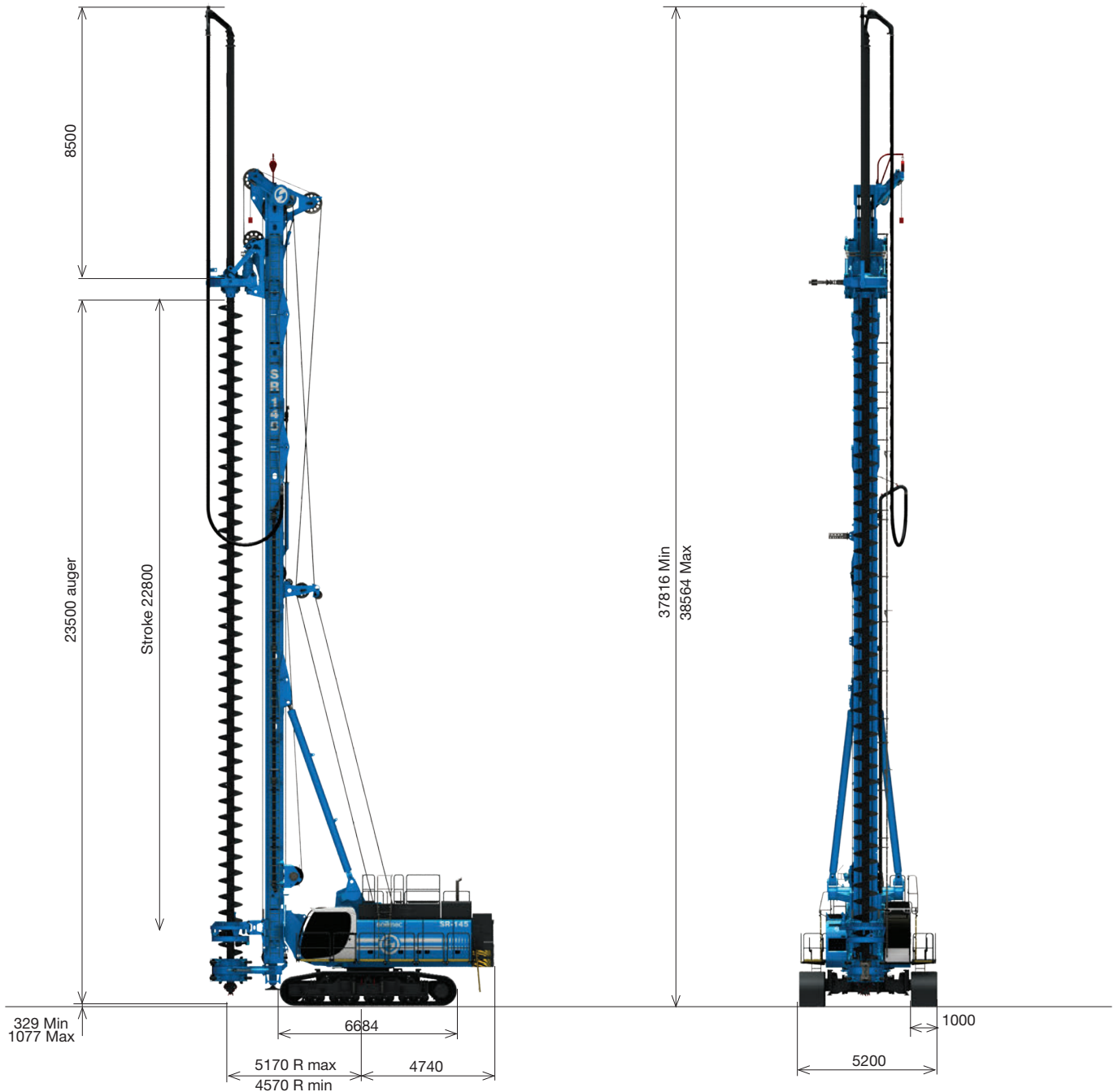


Drilling Depths	Kelly Dimensions	Depth		Weight		CCS SYSTEM		WCS SYSTEM		
		section x m	m	ft	kg	lb	H		H	
							m	ft	m <sup>(1)</sup>	ft
3 parts	BL HD	3 x 11	29,8	97,8	7,8	8,62	9,6	31,5	17,6	57,7
	BL HD	3 x 12	33,3	109,3	8,4	9,23	9,6	31,5	15,4	50,5
	BL HD	3 x 13,5	37,3	122,4	9,2	10,14	9,6	31,5	14,2	46,6
	BL HD	3 x 14,5	40,3	132,2	9,8	10,75	9,6	31,5	13,3	43,6
	BL HD	3 x 16	44,3	145,3	10,6	11,66	9,6	31,5	11,9	39,0
	BL HD	3 x 17,5	49,8	163,4	11,4	12,58	8,5	27,9	10,2	33,5
	BL HD	3 x 19,5	55,4	181,8	12,5	13,79	6,6	21,7	8,5	27,9
	BL HD	3 x 21,5	61,1	200,5	13,6	15,01	3,2	10,5	6,6	21,7
4 parts	FR/BL HD	4 x 11	39,2	128,6	9,2	10,14	9,6	31,5	17,6	57,7
	FR/BL HD	4 x 12	44,5	146,0	9,8	10,85	9,6	31,5	15,4	50,5
	FR/BL HD	4 x 13,5	49,1	161,1	10,8	11,91	9,6	31,5	14,2	46,6
	FR/BL HD	4 x 14,5	53,7	176,2	11,5	12,62	9,6	31,5	13,3	43,6
	FR/BL HD	4 x 16	59,0	193,6	12,4	13,69	9,6	31,5	11,9	39,0
	FR/BL HD	4 x 17,5	66,2	217,2	13,4	14,76	9,6	31,5	10,2	33,5
	FR/BL HD	4 x 19,5	73,5	241,1	14,7	16,18	8,5	27,9	8,5	27,9
	FR/BL HD	4 x 21,5	81,3	266,7	16,0	17,60	6,6	21,7	6,6	21,7
5 parts*	FR/BL HD	5 x 16	73,5	241,1	14,5	16,00	9,6	31,5	11,9	39,0
	FR/BL HD	5 x 17,5	82,6	271,0	15,7	17,33	9,6	31,5	10,2	33,5
	FR/BL HD	5 x 19,5	91,8	301,2	17,3	19,09	8,5	27,9	8,5	27,9
	FR/BL HD	5 x 21,5	101,3	332,3	18,9	20,86	6,6	21,7	6,6	21,7
	FR/BL HD	5 x 24,5	117,8	386,5	21,3	23,51	3,2	10,5	3,2	10,5
6 parts*	FR/BL	6 x 17,5	99,0	324,8	18,7	20,61	9,6	31,5	10,2	33,5
	FR HD	6 x 19,5	109,7	359,9	19,4	21,38	8,5	27,9	8,5	27,9
	FR HD	6 x 21,5	121,0	397,0	22,0	24,25	6,6	21,7	6,6	21,7

\* Rotary head derated

# SR-145 HIT Hydraulic Rotary Rig

## CFA APPLICATIONS Quick conversion kit

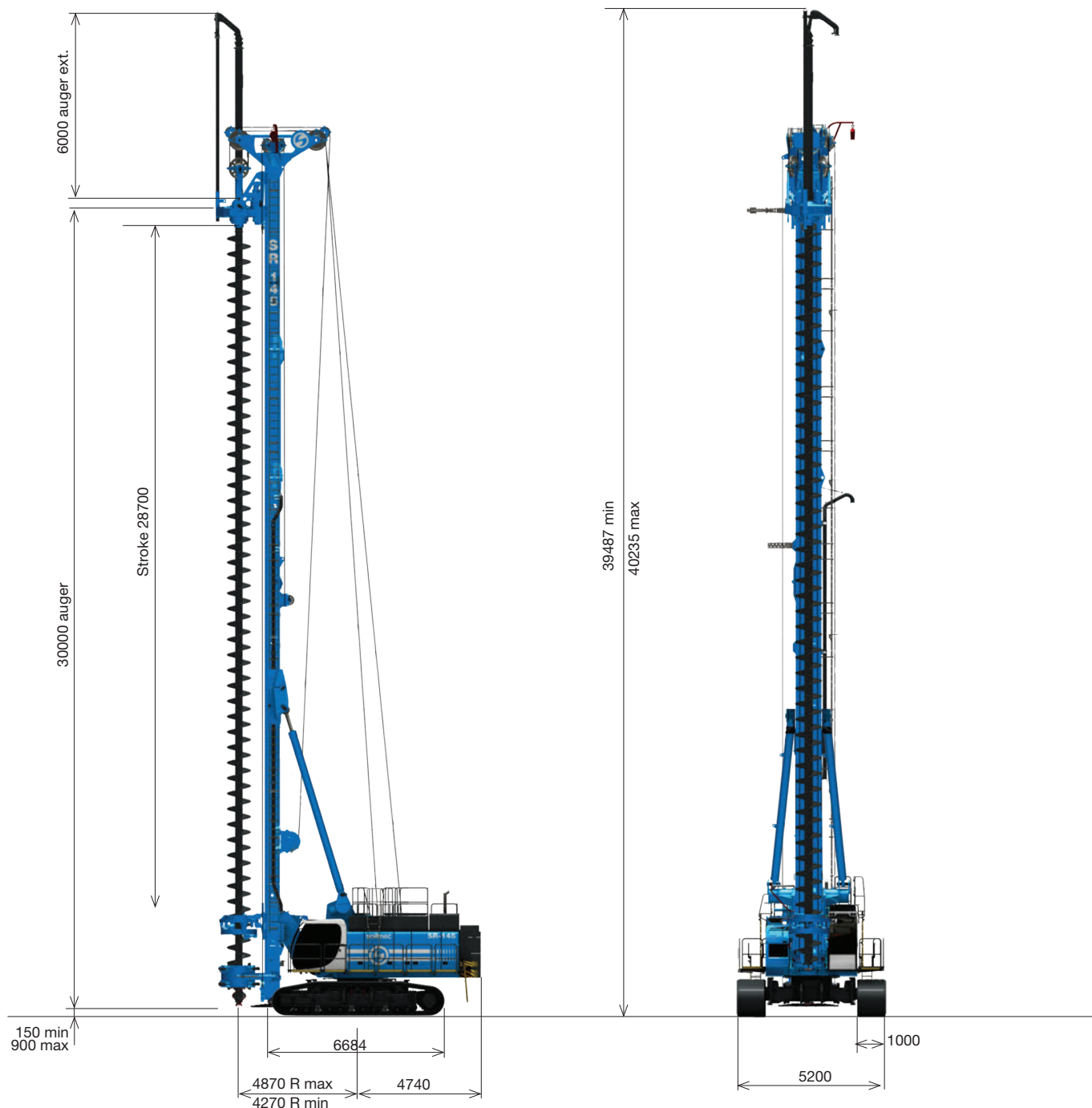


### CFA Continuous Flight Auger - Quick conversion kit

- Operating weight c/w auger ext, w/o auger	146400 kg	322756 lb
- Max pile diameter	1200 mm	47.24 in
- Max pile depth with star auger cleaner 8,5 m auger ext.	32,5 m	107 ft
- Max pile depth with double roller auger cleaner 8,5 m auger ext.	31 m	102 ft
- Extraction force	1200 kN	269766 lbf
- Crowd force on auger	540 kN	121395 lbf

# SR-145 HIT Hydraulic Rotary Rig

## CFA APPLICATIONS 4° line pull



### CFA Continuous Flight Auger - 4° Line pull

- Operating weight c/w auger ext, w/o auger	143500 kg	316363 lb
- Max pile diameter	1200 mm	47.24 in
- Max pile depth with star auger cleaner 6 m auger ext.	32 m	105 ft
- Max pile depth with double roller auger cleaner, with 6 m auger ext.	30,5 m	100 ft
- Extraction force	1362 kN	306184 lbf
- Crowd force on auger optional	540 kN	121395 lbf

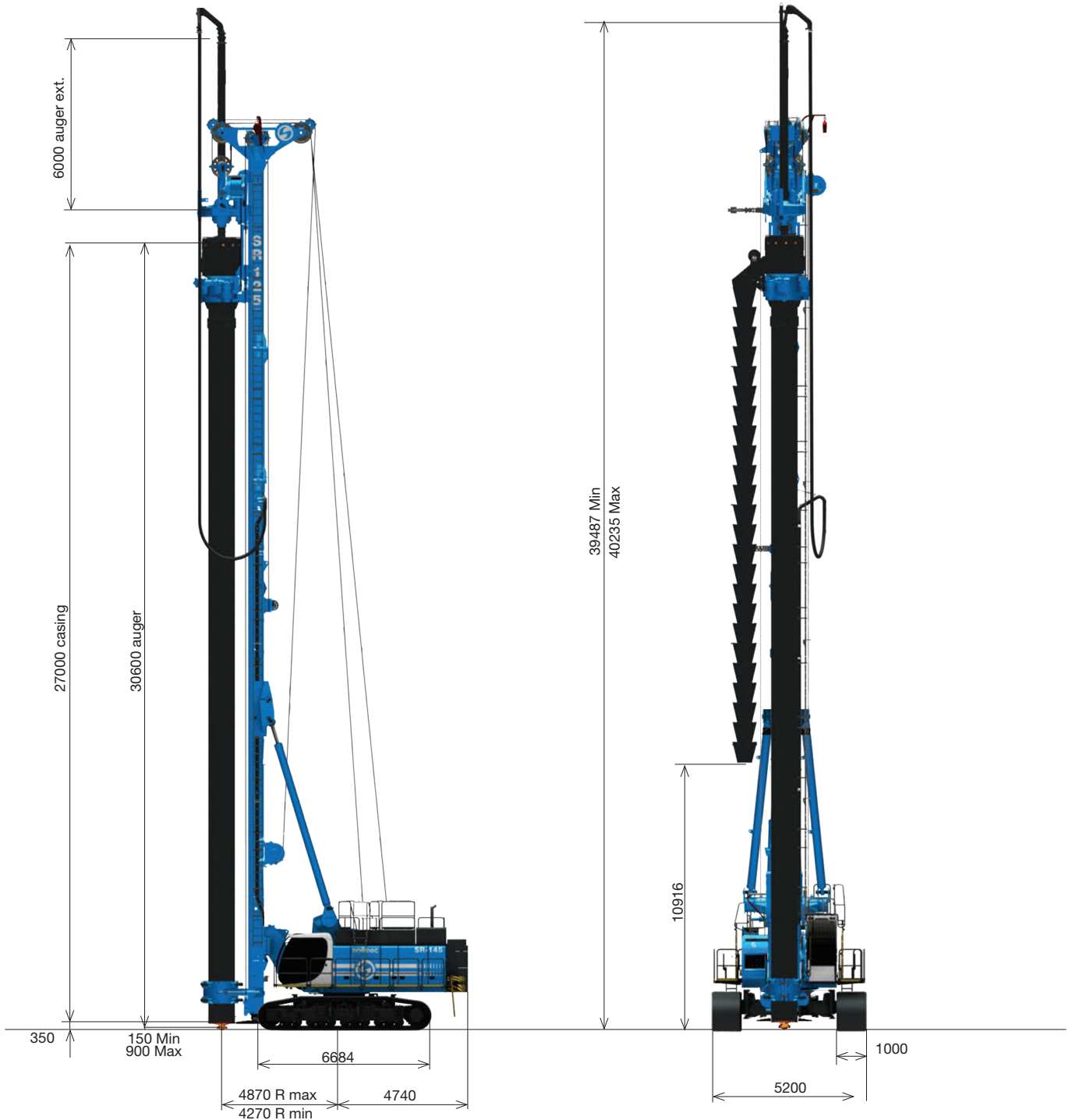
### CFA Continuous Flight Auger - 4° Line pull - Special version

- Operating weight c/w auger ext, w/o auger	145200 kg	320108 lb
- Max pile diameter	1200 mm	47.24 in
- Max pile depth with star auger cleaner 6 m auger ext.	36 m	118 ft
- Max pile depth with double roller auger cleaner, with 6 m auger ext.	34,5 m	113 ft
- Extraction force	962 kN	216262 lbf
- Crowd force on auger optional	540 kN	121395 lbf



# SR-145 HIT Hydraulic Rotary Rig

## CAP/CSP APPLICATION 4° Line pull

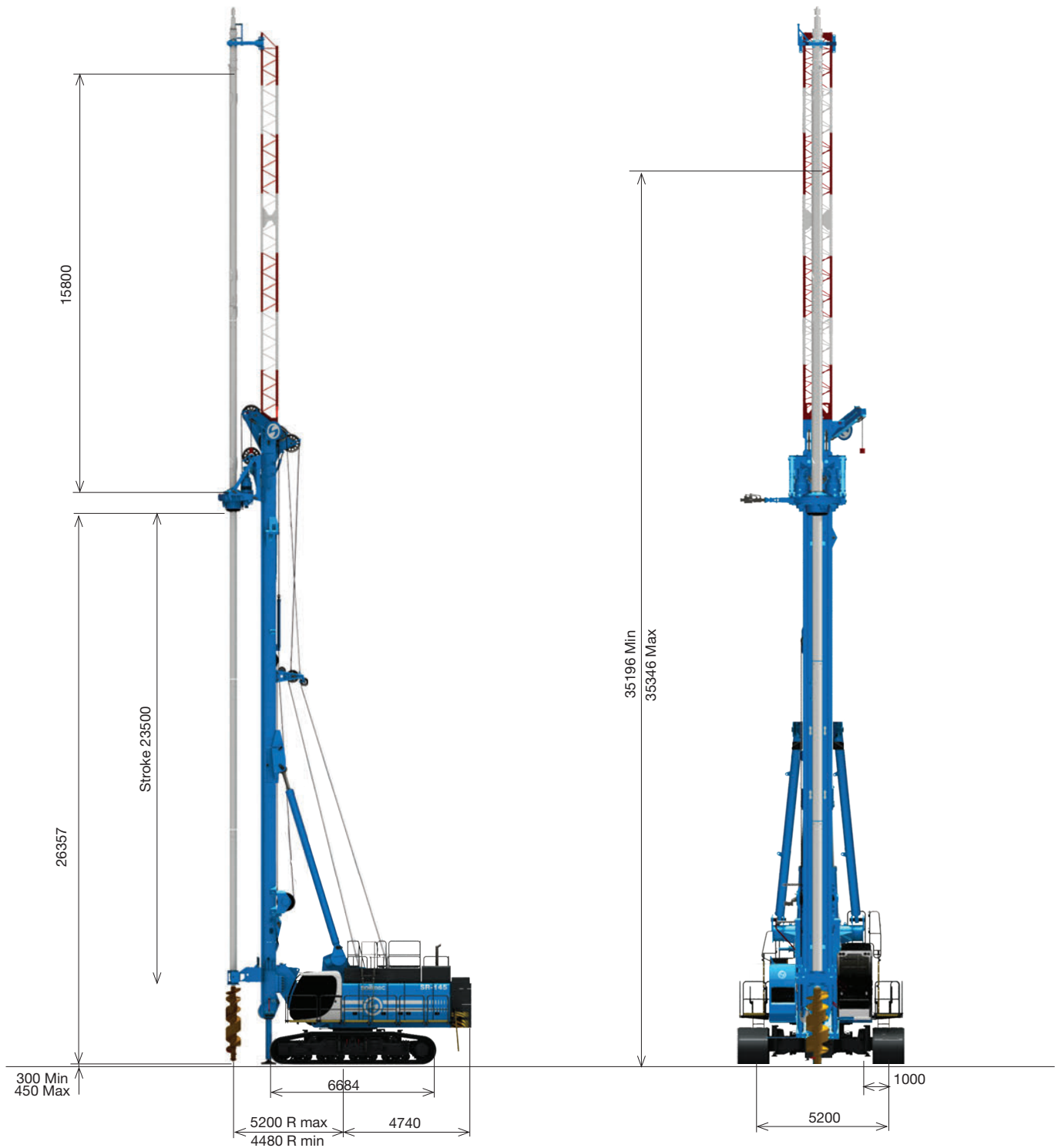


### CAP/CSP\_Cased Augered & Secant Piles - 4°Line pull

- Operating weight c/w auger ext, w/o auger	158900 kg	350311 lb
- Max pile diameter	1200 mm	47.24 in
- Max pile depth with 6 m auger extension	29,3 m	96 ft
- Max pile depth with auger cleaner, with 6 m auger ext.	28,5 m	94 ft
- Max cased depth c/w - w/o auger cleaner	22/22,8 m	72/75 ft
- Casing max torque - intermittent	508 kNm	385001 lb*ft
- Casing rated torque	480 kNm	362874 lb*ft
- Casing speed of rotation (max)	11,6 rpm	8.9 rpm
- Casing pull up/down	540 kN	121395 lbf
- Auger max torque - intermittent	230 (up to 411) kNm	195451 lb*ft
- Auger rated torque	411 kNm	184387 lb*ft
- Auger speed of rotation (max)	29,9 rpm	17.4 rpm
- Auger pull up/down	962 / 400 kN	216262 / 89922 ft

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## DP/TCT APPLICATIONS Quick Conversion Kit

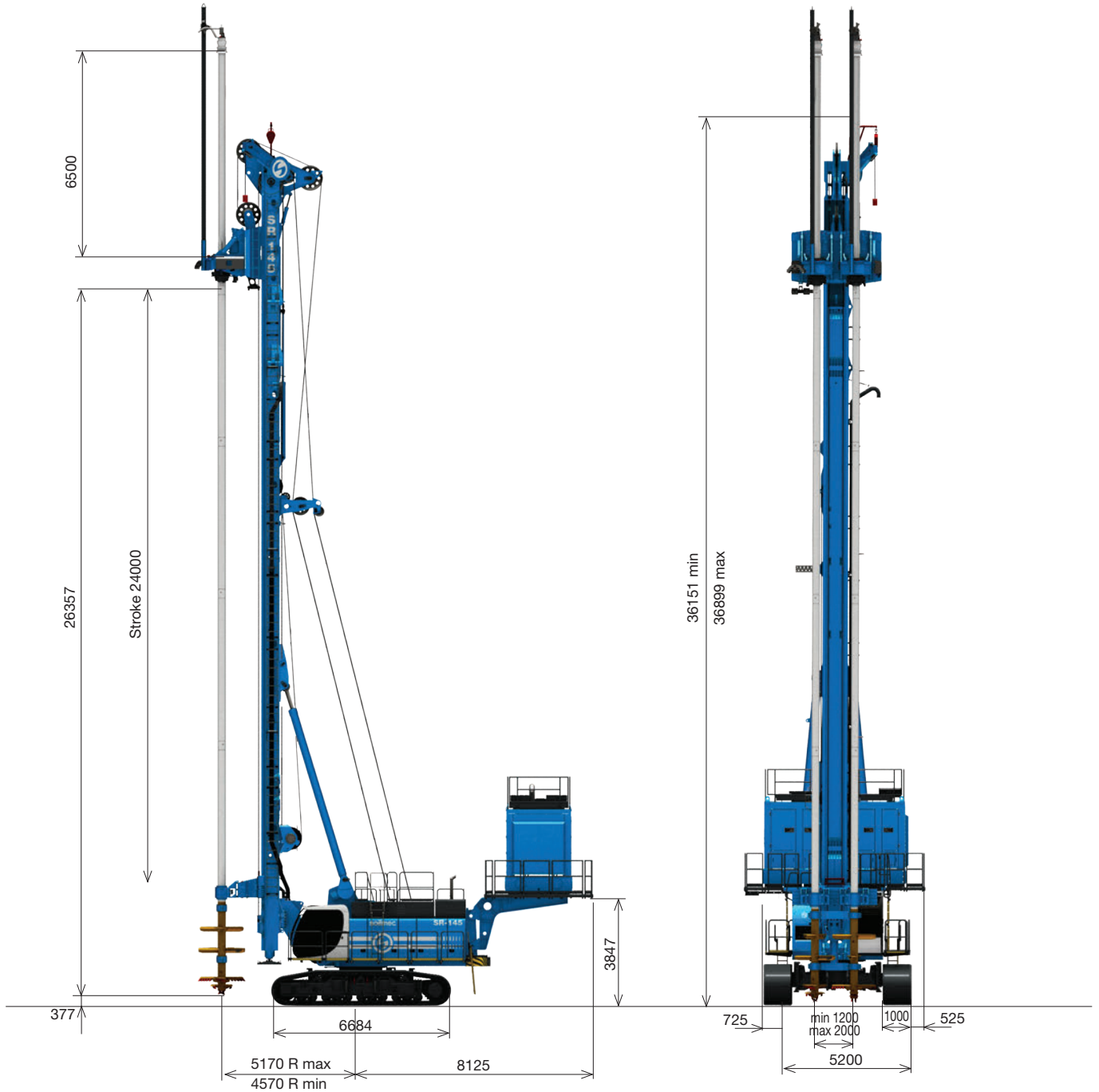


### DP Displacement Piles - Quick conversion kit

- Max DP pile diameter	800 mm	31.50 in
- Max TCT pile diameter	1000 mm	39.37 in
- Max pile depth with 8,5 m string extension	31,5 m	103 ft
- Lattice mast extension	15,8 m	51.84 ft
- Max depth c/w lattice boom mast extension	39 m	127.95 ft

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## TJ/SOIL MIXING APPLICATIONS Quick Conversion Kit



### TJ\_Turbojet® - Quick conversion kit

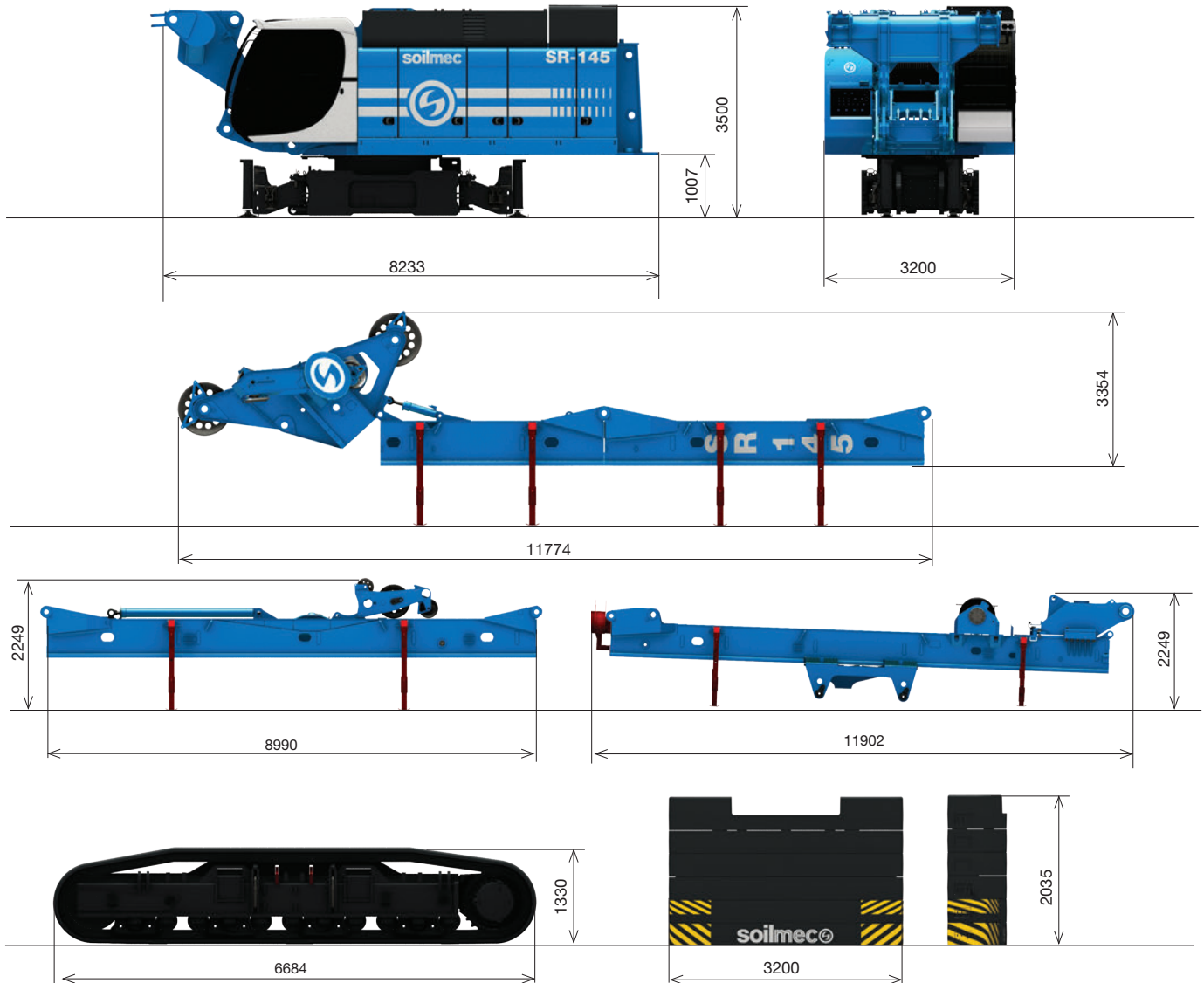
- Max treatment diameter	1500 mm	59.06 in
- Max pile depth with 8,5 m string extension	31,5 m	103 ft
- Lattice mast extension	15,8 m	51.84 ft
- Max depth c/w lattice boom mast extension	39 m	127.95 ft

### TTJ\_Twin Turbojet®

- Max treatment section	3500 x 1500 mm	138 x 59 in
- Max pile depth with 6,5 m string extension	30 m	98 ft
- Lattice mast extension	15,8 m	51.84 ft
- Max depth c/w lattice boom mast extension	36 m	118.11 ft

# SR-145 HIT Hydraulic Rotary Rig

## TRANSPORT, DIMENSIONS & WEIGHTS



### Transport configuration

- Transport width with/without crawlers	3500 / 3200 mm	137.80 / 126 in
- Transport length with/without base mast	18100 / 8233 mm	713 / 321 in
- Transport height	3966 mm	156.14 in
- CCS Version - Transport weight std - min	92900 / 48200 kg	204807 / 106262 lb
- WCS Version - Transport weight std - min	95900 / 48200 kg	211421 / 106262 lb
- Mast base weight	15800 kg	34835 lb
- Mast intermediate part weight	5600 kg	12346 lb
- Mast upper part and cat head weight	7400 kg	16314 lb
- Side frames weight	26600 kg	58643 lb
- Counterweight (single elements 4/4,4)	26000 kg	57320 lb

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