



Hydraulic Rotary Rig

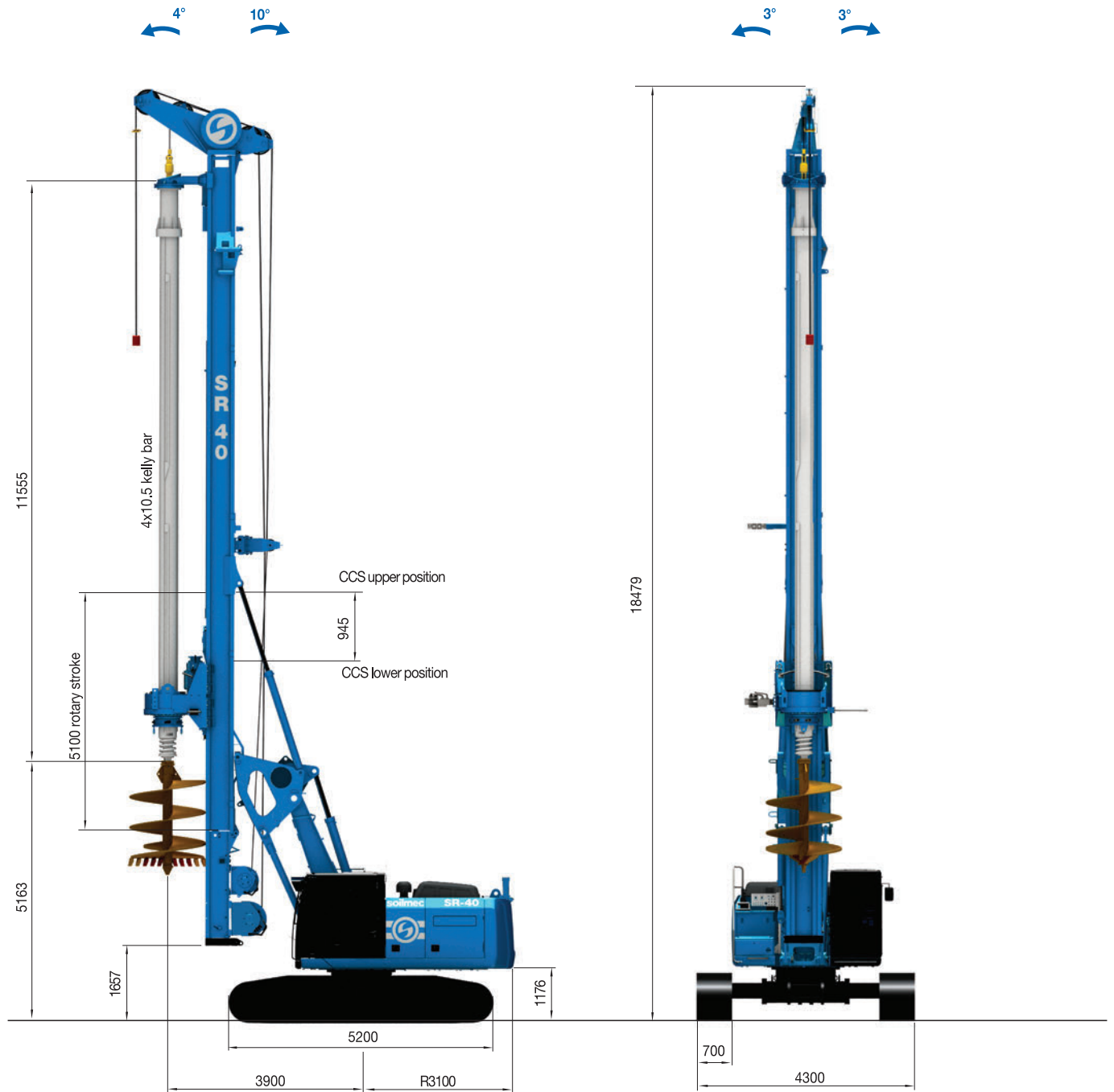
# SR-40 EVO



**soilmec**   
Drilling and Foundation Equipment

# SR-40 EVO Hydraulic Rotary Rig

## LDP APPLICATIONS - Crowd System with Cylinder

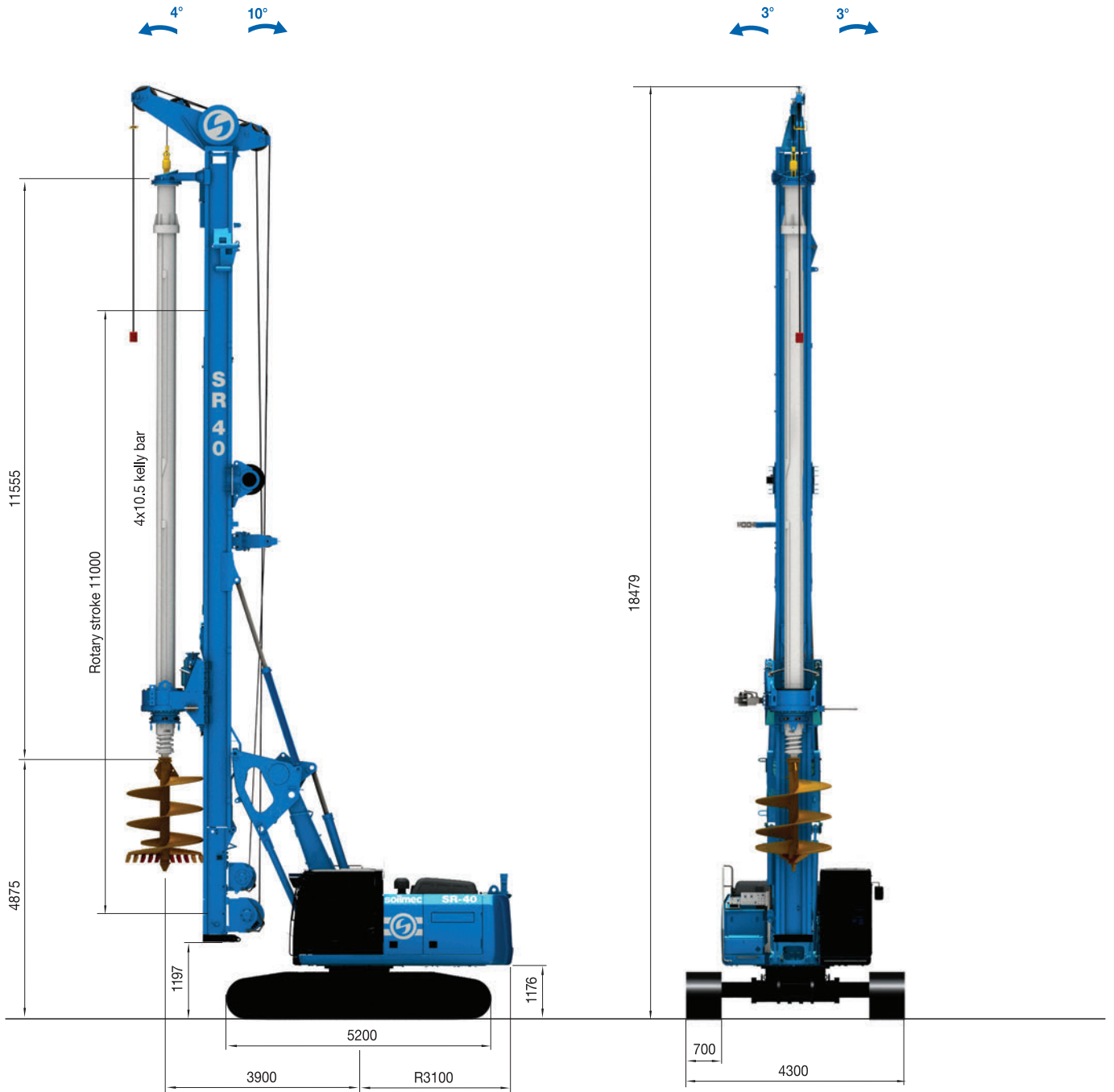


### LDP - Large Diameter Piles - CCS version

|                                     |          |           |
|-------------------------------------|----------|-----------|
| Operating weight w/o kelly          | 46800 kg | 103176 lb |
| Maximum pile diameter               | 1500 mm  | 59 in     |
| Maximum pile depth - friction kelly | 61 m     | 199 ft    |
| Maximum pile depth - locking kelly  | 49 m     | 161 ft    |

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## LDP APPLICATIONS - Crowd System with Winch

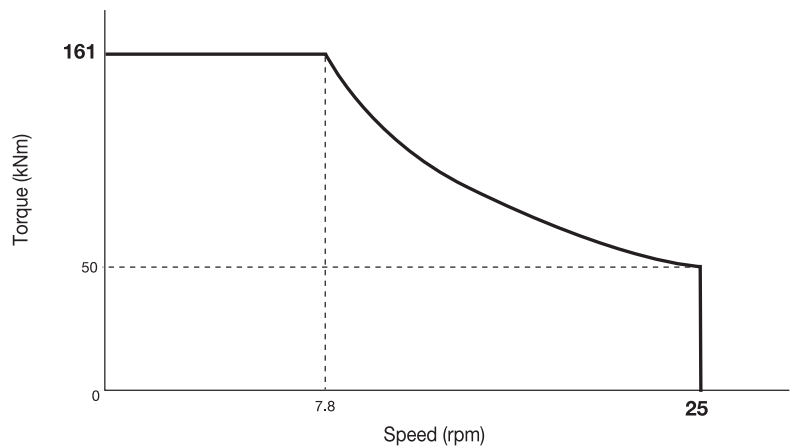
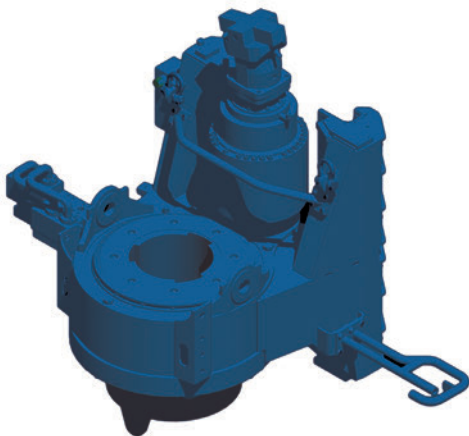
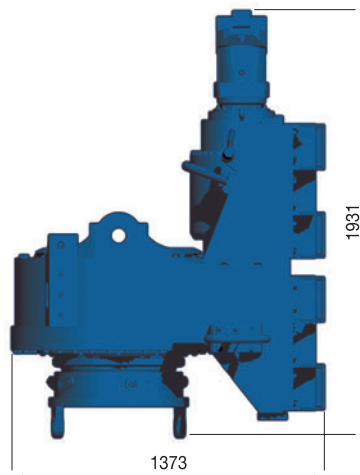
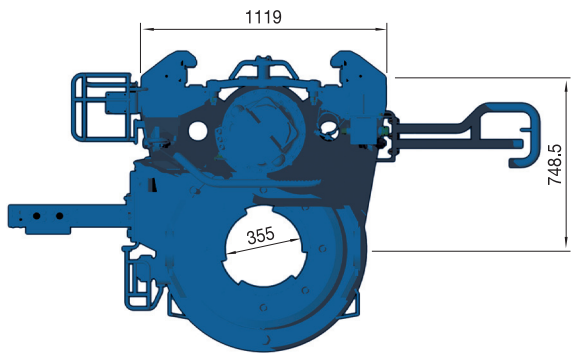


### LDP - Large Diameter Piles - WCS version

|                                     |          |           |
|-------------------------------------|----------|-----------|
| Operating weight w/o kelly          | 48000 kg | 105821 lb |
| Maximum pile diameter               | 1100 mm  | 43 in     |
| Maximum pile depth - friction kelly | 55 m     | 180 ft    |
| Maximum pile depth - locking kelly  | 45 m     | 146 ft    |

# SR-40 EVO Hydraulic Rotary Rig

## ROTARY HEAD



### Rotary Drive - Single gear, Spin on type

|                          |                |                      |
|--------------------------|----------------|----------------------|
| - Max torque*            | <b>161 kNm</b> | <b>119041 lbf*ft</b> |
| - Rated torque           | <b>147 kNm</b> | <b>108422 lbf*ft</b> |
| - Maximum drilling speed | <b>25 rpm</b>  | <b>25 rpm</b>        |
| - Spinoff speed          | <b>160 rpm</b> | <b>160 rpm</b>       |
| - Inner passage w/o ribs | <b>407 mm</b>  | <b>16 in</b>         |

\* Intermittent

# SR-40 EVO Hydraulic Rotary Rig

## TECHNICAL DATA SHEET

|   |  |  |
|---|--|--|
| <b>CCS - Cylinder crowd system</b>                  |  |  |
| - Cylinder stroke                                   | 5100 mm  | 201 in   |
| - Crowd force pull (down/up)                        | 133 / 200 kN                                   | 29899 / 44961 lbf                              |
| - Speed up  | 14,5 m/min                                     | 45.5 ft/min                                    |
| - Slow speed down                                   | 7,5 - 15,7 m/min                               | 24.6 - 51.5 ft/min                             |
| <b>WCS - Winch crowd system</b>                     |  |  |
| - Winch stroke                                      | 11000 mm                                       | 433 in   |
| - Crowd force pull (down/up)                        | 180 / 220 kN                                   | 40465 / 49457 lbf                              |
| - Speed up  | 13,5 m/min                                     | 44 ft/min                                      |
| - Speed down  | 13,2 m/min                                     | 43.3 ft/min                                    |
| <b>Main winch</b>                                   | <b>controlled descent</b>                      | <i>controlled descent</i>                      |
| - Line pull (1st layer)                             | 150 kN   | 33721 lbf                                      |
| - Rope diameter                                     | 22 mm  | 1 in   |
| - Line speed (max.)                                 | 85 m/min                                       | 279 ft/min                                     |
| <b>Auxiliary winch</b>                              | <b>controlled descent</b>                      | <i>controlled descent</i>                      |
| - Line pull (1st layer)                             | 64 kN  | 14388 lbf                                      |
| - Rope diameter                                     | 18 mm  | 0.71 in  |
| - Line speed (max.)                                 | 62 m/min                                       | 203 ft/min                                     |
| <b>Engine type</b>                                  | <b>CAT C7</b>                                  | <i>CAT C7</i>                                  |
| - Rated output                                      | 180 kW @ 1800 rpm                              | 241 HP @ 1800 rpm                              |
| - Engine conforms to Exhaust emission Standard      | <b>EU stage IIIA, US EPA Tier 3</b>            | <i>EU stage IIIA, US EPA Tier 3</i>            |
| - Aspiration  | <b>Turbocharged and charge air cooled</b>      | <i>Turbocharged and charge air cooled</i>      |
| - Diesel tank capacity                              | 520 l  | 137 US gal                                     |
| <b>Hydraulic system rated pressure</b>              | <b>32</b>                                      | <i>4786 psi</i>                                |
| - Flow rates (main circuits)                        | 2x 230 l/min                                   | 2x 61 US gal/min                               |
| - Hydraulic oil tank capacity                       | 260 l  | 69 US gal                                      |
| <b>Undercarriage</b>                                | <b>variable gauge, telescoping side frames</b> | <i>variable gauge, telescoping side frames</i> |
| - Overall width of crawlers retracted/extended      | 2900 / 4300 mm                                 | 114 / 169 in                                   |
| - Width of triple grouser track shoes               | 700 mm   | 28 in  |
| - Overall length of crawlers                        | 5200 mm  | 205 in   |
| - Traction force                                    | 410 kN   | 92170 lbf                                      |
| - Travel speed                                      | 2,3 km/h                                       | 1.4 mph  |
| <b>Mast inclination - Backward/ Forward/Lateral</b> | <b>10° / 4° / 3°</b>                           | <i>10° / 4° / 3°</i>                           |

## STANDARD EQUIPMENT

- Emergency mode of operation for engine
- Main and auxiliary winch controlled descent type
- Hoist limit switch on main and service rope
- Swivel for main rope
- Service rope parking point
- GSM/GPRS/GPS modem kit
- 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
- CAT comfortable Cab
- Protective roof grate (FOPS compliant)
- CAT Engine and Diesel particulate diagnostic panel
- Auto low idle system
- Ergonomic seat
- Heat and Air Conditioning control unit
- Courtesy lights in the cab
- Radio and CD player

## OPTIONAL EQUIPMENT

- Flange for bucket opening
- Hydraulic prearrangement for casing oscillator
- Hydraulic kit for foldable cathead
- Limit switch for rope winding and winches
- Free fall service winch
- Double roller auger cleaner
- Prearrangement for VTH-1
- Mast inclination measurement on X/Y axes (digital/analog display)
- Diagnostic panel for hydraulic function
- Depth measuring device
- Rotary speed measuring device
- Acoustic alarm for rotation and translation
- Video-camera set with 4 cameras included
- Rearview mirrors
- Led lights
- Load cell for service winch

# SR-40 EVO Hydraulic Rotary Rig

## KELLY DRILLING SYSTEM



| Depth    | Drilling Depths | Kelly dimensions | Depth       |          | Weight   |          | CCS SYSTEM |             |         |              | WCS SYSTEM |         |    |
|----------|-----------------|------------------|-------------|----------|----------|----------|------------|-------------|---------|--------------|------------|---------|----|
|          |                 |                  | section x m | m        | ft       | ton      | ton (US)   | H - low pos |         | H - high pos |            | H       |    |
|          |                 |                  |             |          |          |          |            | m           | ft      | m            | ft         | m       | ft |
| 3 parts  | BL HD           | 3 x 8            | 21,7 m      | 71.2 ft  | 3,1 t    | 3.42 ton | 6,4 m      | 21.0 ft     | 7,4 m   | 24.3 ft      | 7,2 m      | 23.6 ft |    |
|          | BL HD           | 3 x 9            | 24,6 m      | 80.7 ft  | 3,4 t    | 3.75 ton | 6,4 m      | 21.0 ft     | 6,6 m   | 21.7 ft      | 6,3 m      | 20.7 ft |    |
|          | BL HD           | 3 x 10,5         | 29,2 m      | 95.8 ft  | 3,8 t    | 4.19 ton | 5,1 m      | 16.7 ft     | 5,1 m   | 16.7 ft      | 4,7 m      | 15.4 ft |    |
|          | BL HD           | 3 x 12           | 33,8 m      | 110.9 ft | 4,3 t    | 4.74 ton | 3,6 m      | 11.8 ft     | 3,6 m   | 11.8 ft      | 3,2 m      | 10.5 ft |    |
| 4 parts  | BL HD           | 4 x 6            | 29,2 m      | 95.8 ft  | 2,5 t    | 2.76 ton | 6,4 m      | 21.0 ft     | 7,4 m   | 24.3 ft      | 9,7 m      | 31.8 ft |    |
|          | BL HD           | 4 x 8            | 29,2 m      | 95.8 ft  | 3,1 t    | 3.42 ton | 6,4 m      | 21.0 ft     | 7,4 m   | 24.3 ft      | 7,2 m      | 23.6 ft |    |
|          | BL HD           | 4 x 9            | 32,3 m      | 106.0 ft | 3,4 t    | 3.75 ton | 6,4 m      | 21.0 ft     | 6,8 m   | 22.3 ft      | 6,4 m      | 21.0 ft |    |
|          | BL HD           | 4 x 10,5         | 38,8 m      | 127.3 ft | 3,9 t    | 4.30 ton | 5,1 m      | 16.7 ft     | 5,1 m   | 16.7 ft      | 4,8 m      | 15.7 ft |    |
|          | BL HD           | 4 x 12           | 45,2 m      | 148.3 ft | 4,3 t    | 4.74 ton | 3,6 m      | 11.8 ft     | 3,6 m   | 11.8 ft      | 3,2 m      | 10.5 ft |    |
|          | BL HD           | 4 x 13           | 48,7 m      | 159.8 ft | 4,6 t    | 5.07 ton | 2,7 m      | 8.9 ft      | n.a.    | n.a.         | n.a.       | n.a.    |    |
|          | FR HD           | 4 x 9            | 32,8 m      | 107.6 ft | 3,4 t    | 3.75 ton | 6,4 m      | 21.0 ft     | 6,7 m   | 22.0 ft      | 6,7 m      | 22.0 ft |    |
| 5 parts* | FR HD           | 4 x 11           | 39,3 m      | 128.9 ft | 4,0 t    | 4.41 ton | 5,1 m      | 16.7 ft     | 5,1 m   | 16.7 ft      | 5,1 m      | 16.7 ft |    |
|          | FR HD           | 4 x 12           | 45,2 m      | 148.3 ft | 4,3 t    | 4.74 ton | 3,8 m      | 12.5 ft     | 3,8 m   | 12.5 ft      | 3,8 m      | 12.5 ft |    |
|          | FR HD           | 4 x 13           | 48,6 m      | 159.4 ft | 4,6 t    | 5.07 ton | 2,8 m      | 9.2 ft      | 2,8 m   | 9.2 ft       | 2,8 m      | 9.2 ft  |    |
|          | FR HD           | 5 x 8,5          | 39,0 m      | 128.0 ft | 3,9 t    | 4.30 ton | 6,4 m      | 21.0 ft     | 7,1 m   | 23.3 ft      | 7,1 m      | 23.3 ft |    |
| FR HD    | 5 x 9           | 40,5 m           | 132.9 ft    | 4,1 t    | 4.52 ton | 6,4 m    | 21.0 ft    | 6,7 m       | 22.0 ft | 6,7 m        | 22.0 ft    |         |    |
| FR HD    | 5 x 9,5         | 42,8 m           | 140.4 ft    | 4,3 t    | 4.74 ton | 6,3 m    | 20.7 ft    | 6,3 m       | 20.7 ft | 6,3 m        | 20.7 ft    |         |    |
| FR HD    | 5 x 10          | 45,8 m           | 150.3 ft    | 4,4 t    | 4.85 ton | 5,7 m    | 18.7 ft    | 5,7 m       | 18.7 ft | 5,7 m        | 18.7 ft    |         |    |
| FR HD    | 5 x 11          | 48,9 m           | 160.4 ft    | 4,8 t    | 5.29 ton | 5,1 m    | 16.7 ft    | 5,1 m       | 16.7 ft | 5,1 m        | 16.7 ft    |         |    |
| FR HD    | 5 x 12          | 55,2 m           | 181.1 ft    | 5,2 t    | 5.73 ton | 3,9 m    | 12.8 ft    | 3,9 m       | 12.8 ft | 3,9 m        | 12.8 ft    |         |    |
| FR HD    | 5 x 13**        | 60,6 m           | 198.8 ft    | 5,5 t    | 6.06 ton | 2,8 m    | 9.2 ft     | n.a.        | n.a.    | n.a.         | n.a.       |         |    |

\* Rotary head derated \*\* Extra rope required

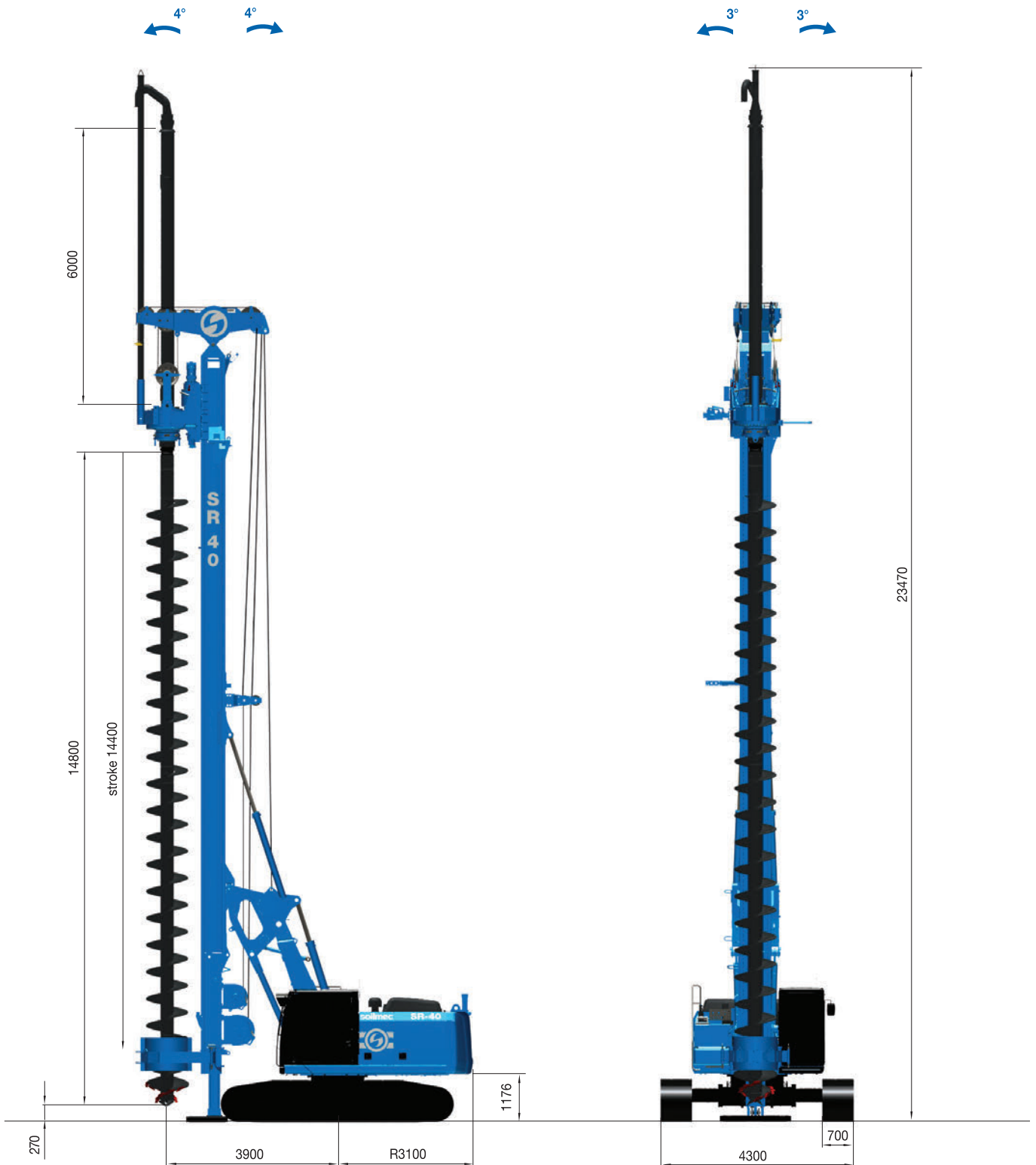
nb: The depth value in CCS high position shall be reduced by 1 m (3.28 ft)

The depth value in WCS shall be reduced by 0,6 m (2 ft)

| Drilling Diameters | CYLINDER |         | WINCH   |         |
|--------------------|----------|---------|---------|---------|
| Uncased            | 1500 mm  | 59.1 in | 1100 mm | 43.3 in |
| Cased              | 1300 mm  | 51.2 in | 1100 mm | 43.3 in |

# SR-40 EVO Hydraulic Rotary Rig

## CFA APPLICATIONS 4° line pull

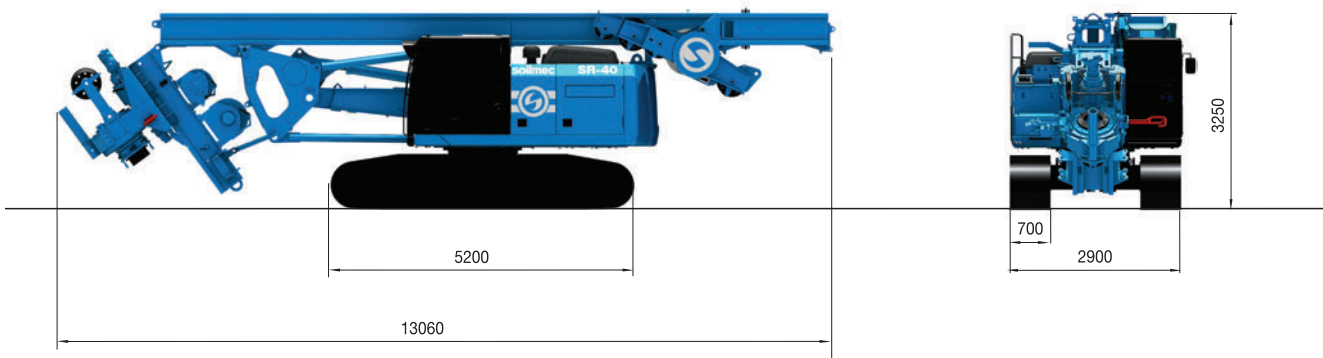
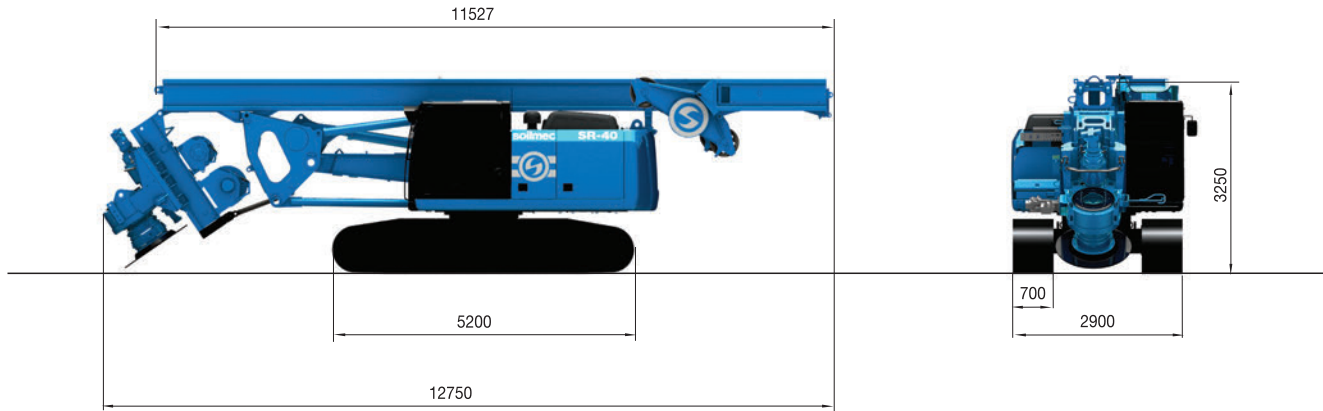


### CFA - Continuous Flight Auger - 4° linepull

|   |               |            |
|---|---------------|------------|
| Operating weight (w/o auger)                                    | 48600 kg      | 107144 lb  |
| Max pile diameter   | 750 / 1000 mm | 30 / 39 in |
| Maximum pile depth (c/w 6 m auger extension; w/o auger cleaner) | 20 m          | 66 ft      |
| Maximum pile depth (c/w 6 m auger extension and auger cleaner)  | 18,5 m        | 61 ft      |
| Extraction force  | 520 kN        | 116899 lbf |
| Crowd force on auger (opt.)                                     | 90 kN         | 20233 lbf  |

# SR-40 EVO Hydraulic Rotary Rig

## TRANSPORT, DIMENSIONS AND WEIGHTS



| Transport configuration                   |                  |                   |
|---|------------------|-------------------|
| Transport width                           | 2900 mm          | 114 in            |
| Transport length - LDP / CFA              | 12750 / 13060 mm | 501.97 / 514 in   |
| Transport height                          | 3250 mm          | 128 in            |
| CCS Version - Transport weight std - min. | 46500 / 35400 kg | 102514 / 78043 lb |
| WCS Version - Transport weight std - min. | 47700 / 36600 kg | 105159 / 80688 lb |

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