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A new model

After the success of the R-312 HD Soilmec introduces the new model R-312/200 performing:
- bored piles with dry drilling or bentonite mud
- continuous flight auger piles (CFA)

The main features of the R-312/200 are the following:
- new powerful rotary
- high speed drilling
- easy transport: it can be transported with rotary and kelly bar installed
- compliance with the machine laws for safety standards
- total reduction of rig up time, about 20 minutes from arrival to the job site
- easy to use and handle
- low operating costs
- wide range of accessories (depthmeter, inclinometer, air conditioning, free fall winch)

### Large diameter bored pile

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max pile diameter</td>
<td>1500 mm</td>
</tr>
<tr>
<td>Max pile depth</td>
<td>48 m (with 5x11 kelly bar)</td>
</tr>
<tr>
<td>Max nominal torque</td>
<td>130 kNm</td>
</tr>
<tr>
<td>Max drilling speed</td>
<td>42 rpm</td>
</tr>
<tr>
<td>Spin off speed</td>
<td>153 rpm</td>
</tr>
<tr>
<td>Main winch nominal line pull</td>
<td>133 kN</td>
</tr>
<tr>
<td>Auxiliary winch nominal line pull</td>
<td>56 kN</td>
</tr>
<tr>
<td>Engine</td>
<td>CUMMINS QS85.9</td>
</tr>
<tr>
<td>Power</td>
<td>200 @ 2200 rpm</td>
</tr>
<tr>
<td>Crowd system</td>
<td>123.7 / 101.8</td>
</tr>
<tr>
<td>Operating weight</td>
<td>35 tons</td>
</tr>
<tr>
<td>Transport weight (c/w kelly bar)</td>
<td>34 tons</td>
</tr>
</tbody>
</table>

### Continuous Flight Auger (CFA)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max pile diameter</td>
<td>750 mm</td>
</tr>
<tr>
<td>Max pile depth</td>
<td>13.6 m</td>
</tr>
<tr>
<td>Max nominal extraction force</td>
<td>380 kN</td>
</tr>
<tr>
<td>Transport weight</td>
<td>31 tons</td>
</tr>
</tbody>
</table>

### Friction kelly bar – Ø 355 mm

<table>
<thead>
<tr>
<th>Elements no</th>
<th>Length m</th>
<th>Depth m</th>
<th>Weight ton</th>
<th>Height m</th>
</tr>
</thead>
<tbody>
<tr>
<td>4x</td>
<td>6.0</td>
<td>19.0</td>
<td>2.4</td>
<td>5.0</td>
</tr>
<tr>
<td>4x</td>
<td>7.5</td>
<td>25.0</td>
<td>2.9</td>
<td>5.0</td>
</tr>
<tr>
<td>4x</td>
<td>9.0</td>
<td>32.0</td>
<td>3.3</td>
<td>5.0</td>
</tr>
<tr>
<td>4x</td>
<td>11.0</td>
<td>39.0</td>
<td>3.9</td>
<td>4.6</td>
</tr>
<tr>
<td>5x</td>
<td>9.0</td>
<td>40.0</td>
<td>4.3</td>
<td>5.0</td>
</tr>
<tr>
<td>5x</td>
<td>11.0</td>
<td>48.0</td>
<td>5.1</td>
<td>4.6</td>
</tr>
</tbody>
</table>

### Mechanical locking kelly bar – Ø 355 mm

<table>
<thead>
<tr>
<th>Elements no</th>
<th>Length m</th>
<th>Depth m</th>
<th>Weight ton</th>
<th>Height m</th>
</tr>
</thead>
<tbody>
<tr>
<td>4x</td>
<td>7.5</td>
<td>25.0</td>
<td>2.9</td>
<td>5.0</td>
</tr>
<tr>
<td>4x</td>
<td>9.0</td>
<td>34.0</td>
<td>3.3</td>
<td>5.0</td>
</tr>
<tr>
<td>4x</td>
<td>11.0</td>
<td>38.0</td>
<td>3.9</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Standard dimension of tool connection is 130x130 mm / 14 kelly stub height from ground level.
A new model
R-312/200
CONTINUOUS FLIGHT AUGER

After the success of the R-312 HD Soilmec introduces the new model R-312/200 performing:
- large diameter bored pile
- friction kelly bar – Ø 355 mm
- low overhead version
- 4 x 11 kelly bar
- high speed drilling
- powerful rotary

The main features of the R-312/200 are the following:
- continuous flight auger piles (CFA)
- large diameter bored piles with dry drilling or bentonite mud

After the success of the R-312 HD Soilmec introduces the new model R-312/200 performing:

Low overhead version

- Large diameter bored pile
- Standard version
- Working Condition

- Standard dimension of tool connection is 130x130 mm / H = kelly stub height from ground level
- easy transport: it can be transported with rotary and kelly bar installed
- high speed drilling
- new powerful rotary

- Low overhead version

- Large diameter bored pile
- Standard version
- Transport Condition

- Low overhead version

- Large diameter bored pile
- Standard version
- Transport Condition

- Continuous flight auger
- bored piles with dry drilling or bentonite mud

- Working Condition

- Large diameter bored pile
- Standard version
- Working Condition

- Large diameter bored pile
- Standard version
- Working Condition

- Large diameter bored pile
- Standard version
- Working Condition

- Large diameter bored pile
- Standard version
- Working Condition

- Large diameter bored pile
- Standard version
- Working Condition
HYDRAULIC DRIVING UNIT

After the success of the R-312 HD, Soilmec introduces the new model R-312/200 performing:
- Large diameter bored piles
- High speed drilling
- Easy transport: it can be transported with rotary and kelly bar installed
- Compliance with the machine laws for safety standards
- Reduction of rig up time, about 20 minutes from arrival to the job site

The main features of the R-312/200 are the following:
- Continuous Flight Auger piles (CFA)
- Hydraulically coupled
- Wide range of accessories (depthmeter, inclinometer, air conditioning, free fall winch)
- Low operating costs
- Easy to use and handle

Large diameter bored piles

<table>
<thead>
<tr>
<th>Diameter (mm)</th>
<th>Side elements</th>
<th>Locking type</th>
<th>Height (mm)</th>
<th>Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1150</td>
<td>7</td>
<td>9 - Telescopic kelly bar</td>
<td>6000</td>
<td>1279</td>
</tr>
<tr>
<td>1180</td>
<td>6</td>
<td>8 - Rotary head with guide to 3 drilling speeds and one high spin off speed</td>
<td>6000</td>
<td>1279</td>
</tr>
<tr>
<td>1200</td>
<td>5</td>
<td>6 - Crowd system</td>
<td>6000</td>
<td>1279</td>
</tr>
<tr>
<td>1220</td>
<td>5</td>
<td>7 - Crowd system</td>
<td>6000</td>
<td>1279</td>
</tr>
<tr>
<td>1240</td>
<td>4</td>
<td>5 - Self-erecting mast composed by an intermediate element 11.9 m long and a top element 3.5 m long</td>
<td>6000</td>
<td>1279</td>
</tr>
</tbody>
</table>

The nominal values are referred to 100% total efficiency.

LARGE DIAMETER BORED PILE

<table>
<thead>
<tr>
<th>Diameter (mm)</th>
<th>Main cylinders with guide to 3 drilling speeds and one high spin off speed</th>
<th>Max torque (kN.m)</th>
<th>Angle of inclinometer</th>
<th>Base width (mm)</th>
<th>Extended track width (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1150</td>
<td>10.5, 10, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5</td>
<td>4340</td>
<td>1474</td>
<td>600</td>
<td>3700</td>
</tr>
<tr>
<td>1180</td>
<td>10.5, 10, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5</td>
<td>4340</td>
<td>1474</td>
<td>600</td>
<td>3700</td>
</tr>
<tr>
<td>1200</td>
<td>10.5, 10, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5</td>
<td>4340</td>
<td>1474</td>
<td>600</td>
<td>3700</td>
</tr>
<tr>
<td>1220</td>
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<td>1474</td>
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<td>3700</td>
</tr>
<tr>
<td>1240</td>
<td>10.5, 10, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5</td>
<td>4340</td>
<td>1474</td>
<td>600</td>
<td>3700</td>
</tr>
</tbody>
</table>

Inside cabin view

SHOE WIDTH 600 mm
EXTENDED TRACK WIDTH 3700 mm

CUMMINS QSB5.9

13-6

133

153

130

750

133

42

438

48 (with 5x11 kelly bar)

48,5 (with 4x11 kelly bar)

LARGE DIAMETER BORED PILE

<table>
<thead>
<tr>
<th>Diameter (mm)</th>
<th>Main cylinders with guide to 3 drilling speeds and one high spin off speed</th>
<th>Max torque (kN.m)</th>
<th>Angle of inclinometer</th>
<th>Base width (mm)</th>
<th>Extended track width (mm)</th>
</tr>
</thead>
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<tr>
<td>1150</td>
<td>10.5, 10, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5</td>
<td>4340</td>
<td>1474</td>
<td>600</td>
<td>3700</td>
</tr>
<tr>
<td>1180</td>
<td>10.5, 10, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5</td>
<td>4340</td>
<td>1474</td>
<td>600</td>
<td>3700</td>
</tr>
<tr>
<td>1200</td>
<td>10.5, 10, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5</td>
<td>4340</td>
<td>1474</td>
<td>600</td>
<td>3700</td>
</tr>
<tr>
<td>1220</td>
<td>10.5, 10, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5</td>
<td>4340</td>
<td>1474</td>
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<td>3700</td>
</tr>
<tr>
<td>1240</td>
<td>10.5, 10, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5, 10.5</td>
<td>4340</td>
<td>1474</td>
<td>600</td>
<td>3700</td>
</tr>
</tbody>
</table>
HYDRAULIC ORGANIZATION

A new model

After the success of the R-312 HD, Soilmec introduces the new model R-312/200, performing:

- Large diameter bored pile
- Friction kelly bar – Ø 355 mm

**Large diameter bored piles**

<table>
<thead>
<tr>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max pile diameter</td>
<td>Ø 11.0 – 600 mm</td>
</tr>
<tr>
<td>Max nominal torque</td>
<td>13.5 kN</td>
</tr>
<tr>
<td>Max pile depth</td>
<td>13,0 m</td>
</tr>
<tr>
<td>Max pile length</td>
<td>9,0 m</td>
</tr>
<tr>
<td>Max number of kelly bars</td>
<td>5 x 11.0</td>
</tr>
<tr>
<td>Max pull down stroke</td>
<td>3500 kN</td>
</tr>
<tr>
<td>Weight</td>
<td>33,000 kg</td>
</tr>
<tr>
<td>Height</td>
<td>24,900 mm</td>
</tr>
</tbody>
</table>

**Mechanical locking kelly bar**

<table>
<thead>
<tr>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max pile diameter</td>
<td>Ø 11.0 – 600 mm</td>
</tr>
<tr>
<td>Max nominal torque</td>
<td>13.5 kN</td>
</tr>
<tr>
<td>Max pile depth</td>
<td>13,0 m</td>
</tr>
<tr>
<td>Max pile length</td>
<td>9,0 m</td>
</tr>
<tr>
<td>Max number of kelly bars</td>
<td>4 x 11.0</td>
</tr>
<tr>
<td>Max pull down stroke</td>
<td>3500 kN</td>
</tr>
<tr>
<td>Weight</td>
<td>32,540 kg</td>
</tr>
<tr>
<td>Height</td>
<td>24,500 mm</td>
</tr>
</tbody>
</table>

**Mechanical locking kelly bar – Ø 11.0 mm**

<table>
<thead>
<tr>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max pile diameter</td>
<td>Ø 11.0 – 600 mm</td>
</tr>
<tr>
<td>Max nominal torque</td>
<td>13.5 kN</td>
</tr>
<tr>
<td>Max pile depth</td>
<td>13,0 m</td>
</tr>
<tr>
<td>Max pile length</td>
<td>9,0 m</td>
</tr>
<tr>
<td>Max number of kelly bars</td>
<td>4 x 11.0</td>
</tr>
<tr>
<td>Max pull down stroke</td>
<td>3500 kN</td>
</tr>
<tr>
<td>Weight</td>
<td>32,540 kg</td>
</tr>
<tr>
<td>Height</td>
<td>24,500 mm</td>
</tr>
</tbody>
</table>

**Inside cabin view**

- Low overhead version
- Standard version
- 360° version

**Working Condition**

- Total reduction of rig up time, about 20 minutes from arrival to the job site
- Compliance with the machine laws for safety standards
- Easy to use and handle
- Low operating costs
- Wide range of accessories (depthmeter, inclinometer, air conditioning, free fall winch)
- Large diameter bored piles (CFA - bored piles with dry drilling or bentonite mud)
- High speed drilling
- New powerful rotary continuous flight auger piles (CFA)
- Low overhead version
- Standard version
- 360° version

**Transport Condition**

- 366 m extended tracks
- 150 kN of reverse pulling force
- Self-erecting mast
- 3.5 m mast available with friction or mechanical locking type
- Mast available with friction or mechanical locking type
- 360° slew ring mounted on a 360° slew ring
- Turret
- 4 - Parallelogram system allowing working radius adjustment, maintaining the mast in vertical position
- Crowd system
- Self-swing mast depending on intermediate element 11.9 m long and a cap element 5.6 m long. The line length can be applied all over the mast length
- CFA standard version
- Low overhead version
- Standard version
- 360° version

**CUMMINS 6BTA55.9-C200**

123.7 / 101.8 rpm

1199 (with 4x11 kelly bar)
1300 (with 5x11 kelly bar)
335 (with 4x11 kelly bar)
345 (with 5x11 kelly bar)

1240 (with 4x11 kelly bar)
1350 (with 5x11 kelly bar)
335 (with 4x11 kelly bar)
345 (with 5x11 kelly bar)

1199 (with 4x11 kelly bar)
1300 (with 5x11 kelly bar)
335 (with 4x11 kelly bar)
345 (with 5x11 kelly bar)

952 (with 4x11 kelly bar)
1199 (with 5x11 kelly bar)
335 (with 4x11 kelly bar)
345 (with 5x11 kelly bar)

520 (with 4x11 kelly bar)
560 (with 5x11 kelly bar)
1350 (with 4x11 kelly bar)
1400 (with 5x11 kelly bar)

1199 (with 4x11 kelly bar)
1300 (with 5x11 kelly bar)
335 (with 4x11 kelly bar)
345 (with 5x11 kelly bar)

952 (with 4x11 kelly bar)
1199 (with 5x11 kelly bar)
335 (with 4x11 kelly bar)
345 (with 5x11 kelly bar)

520 (with 4x11 kelly bar)
560 (with 5x11 kelly bar)
1350 (with 4x11 kelly bar)
1400 (with 5x11 kelly bar)

1199 (with 4x11 kelly bar)
1300 (with 5x11 kelly bar)
335 (with 4x11 kelly bar)
345 (with 5x11 kelly bar)

952 (with 4x11 kelly bar)
1199 (with 5x11 kelly bar)
335 (with 4x11 kelly bar)
345 (with 5x11 kelly bar)

520 (with 4x11 kelly bar)
560 (with 5x11 kelly bar)
1350 (with 4x11 kelly bar)
1400 (with 5x11 kelly bar)

24900 (with 4x11 kelly bar)
26600 (with 5x11 kelly bar)
6000 (with 4x11 kelly bar)
6300 (with 5x11 kelly bar)

3426 (with 4x11 kelly bar)
3543 (with 5x11 kelly bar)
10490 (with 4x11 kelly bar)
11040 (with 5x11 kelly bar)
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- **SOILMEC S.P.A. - Beijing Repr. Office** - P.R. China
- **SOILMEC FAR EAST PTE.LTD** - Singapore
- **SOILMEC LIMITED - U.K.**
- **SOILMEC USA** - U.S.A.

**CERTIFIED QUALITY SYSTEM**

In 1999 Soilmec was awarded the certification of its own Quality System to ISO 9001:2000 series standards.
In 1990 Soilmec was awarded the certification of its own Quality System to ISO 9001/UNI 29001 series standards.

CERTIFIED QUALITY SYSTEM

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- **SOILMEC JAPAN CO LTD** - Japan
- **SOILMEC MALAYSIA** - Malaysia
- **SOILMEC LTD** - U.K.
- **SOILMEC S.P.A. Beijing Repr. Office** - P.R. China
- **SOILMEC S P A** - Italian Company
- **SOILMEC Canada** - Canada
- **SOILMEC LTD** - U.K.
- **SOILMEC (H.K.) Limited** - Hong Kong
- **SOILMEC S P A** - Italy
- **SOILMEC EMIRATES** - U.A.E.
- **SOILMEC FAR EAST PTE LTD** - Singapore
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**R-312/200**
HYDRAULIC ROTARY RIG