

R-620

HYDRAULIC ROTARY RIG



R-620

HYDRAULIC DRILLING RIG

A new model

The R-620 drilling rig on Caterpillar 3.30 C high power module has been designed to perform the following jobs:

- Bored pile, with dry or bentonite system;
- Bored pile, with casing installed by oscillator or rotary crowd system;
- C.F.A. (Continuous Flight Auger) piles.

The main features of R-620 are the following:

- Machine class: 60 tons;
- New machine Caterpillar type 3.30 C module c/w diesel engine and sound proofed canopy, mounted on 360 degrees slew ring;
- New electronic engine C9 ATAAC with more power (355 BHP) and meeting the most recent emission regulations;
- New powerful rotary: 201 kNm
- Completely self erecting; mast able to withstand the max torque over the whole length;
- Casing installation by rotary crowd system;
- Advanced instrumentation;
- Reliability and safety;
- Stability and easy to handle;
- High productivity;
- Easy to transport;
- Cable crowd system (optional);
- Mechanical and hydraulic pre-arrangement for casing oscillator (available on request).

Large diameter bored pile

| | | |
|---|----------|---------------------------|
| Max pile diameter | mm | 1800 |
| Max cased diameter | mm | 1500 |
| Max pile depth | m | 66 |
| Max nominal torque | kNm | 201 |
| Max drilling speed | rpm | 34 |
| Spin off | rpm | 144 |
| Main winch nominal line pull | kN | 192 |
| Service winch nominal pull | kN | 80 |
| Engine ¹ | type | CATERPILLAR C9 ATAAC-HEUI |
| Max power | kW (BHP) | 261 (355) |
| Crowd system by cylinder <small>with 2 mounting positions</small> | kN | 210 / 150 |
| Pull down stroke | mm | 5600 |
| Cable crowd system (13 m stroke) | kN | 200 / 200 |
| Operating weight | ton | 63 |

The nominal values are referred to 100% total efficiency. / ¹ Meeting the EPA-TIER2 emission regulations.

Continuous Flight Auger (CFA)

| | | |
|------------------------------|-----|------------|
| Max pile diameter | mm | 900 / 1000 |
| Max pile depth | m | 22,5 |
| Max nominal extraction force | kN | 600 |
| Max nominal torque | kNm | 201 |
| Max drilling speed | rpm | 34 |
| Operating weight | ton | 60 - 63 |

Friction kelly bar – Ø 406 mm

| elements n° | length m | depth m | weight ton | H height m |
|----------------|-------------|------------|---------------|---------------|
| 4x | 9,0 | 32,0 | 4,0 | 8,1* |
| 4x | 10,5 | 37,0 | 5,7 | 7,6 |
| 4x | 11,5 | 41,5 | 6,3 | 6,4 |
| 4x | 13,5 | 50,0 | 7,1 | 4,4 |
| 5x | 9,0 | 39,5 | 4,9 | 8,1* |
| 5x | 10,5 | 46,0 | 5,5 | 7,6 |
| 5x | 12,0 | 55,0 | 6,4 | 5,9 |
| 5x | 13,5 | 62,0 | 6,9 | 4,5 |
| 5x | 14,0 | 63,5 | 7,1 | 4,2 |
| 5x | 14,5 | 66,0 | 7,4 | 3,6 |

Mechanical locking kelly bar – Ø 406 mm

| elements n° | length m | depth m | weight ton | H height m |
|----------------|-------------|------------|---------------|---------------|
| 4x | 9,0 | 32,0 | 5,2 | 8,1* |
| 4x | 10,0 | 35,0 | 5,6 | 7,9 |
| 4x | 12,0 | 42,0 | 6,4 | 6,2 |
| 4x | 13,5 | 49,0 | 7,2 | 4,4 |
| 4x | 14,5 | 53,0 | 7,7 | 3,5 |

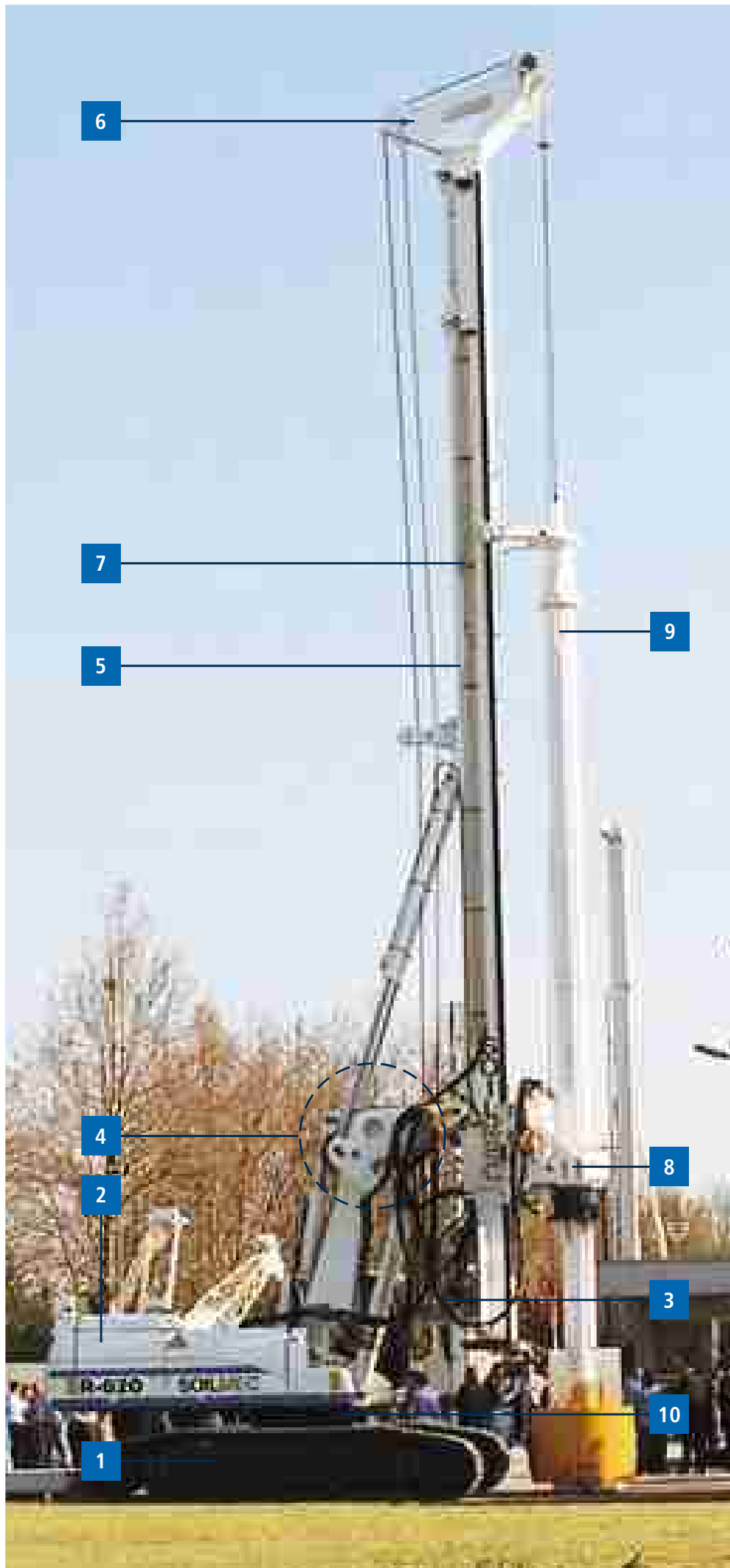
H = Kelly stub height from ground level

* Height limited by rotary position

- 1 **Undercarriage** class D6D CAT with tracks expandable by means of hydraulic cylinder.
- 2 **Base machine** Caterpillar 3.30 C high power module c/w diesel engine C9 ATAAC and sound proofed canopy, mounted on a 360° degree slew ring.
- 3 **Winch assembly.**
- 4 **Parallelogram system** which allows to vary the working radius maintaining the mast always in vertical position.
- 5 **Self-erecting** mast which can withstand the max torque over the whole length. It is composed by 12,75 m intermediate element, 2,1 m bottom element and 2,25 m extension.
- 6 **Sheave cathead.**
- 7 **Crowd system** by 5,6 m. hydraulic cylinder.
- 8 **Rotary head** with 4 drilling speeds and one spin-off high speed. For each drilling speed the max torque is achieved.
- 9 **Telescopic kelly** bar with guide on the mast. Available in friction or mechanical locking version.
- 10 **Mechanical** and hydraulic pre-arrangement for casing oscillator (available on request).



The new R-620 is installed on new "Caterpillar" turret with easy access to any hydraulic and mechanical parts. New designed cabin allows better visibility and easier way of use.

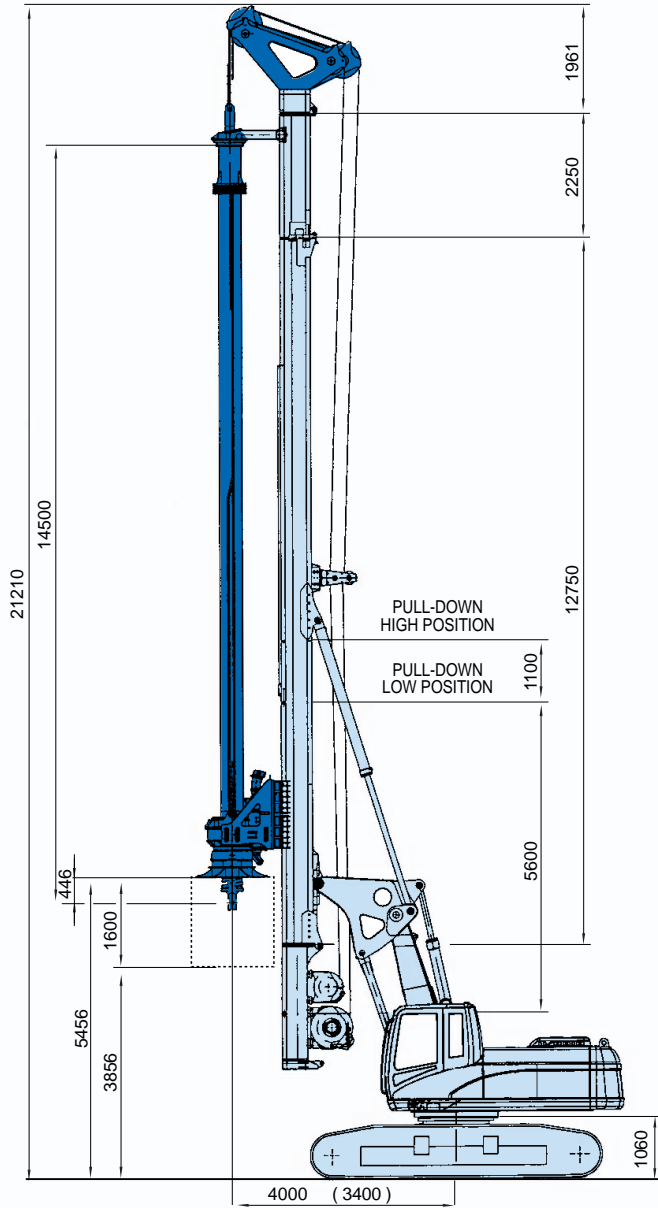


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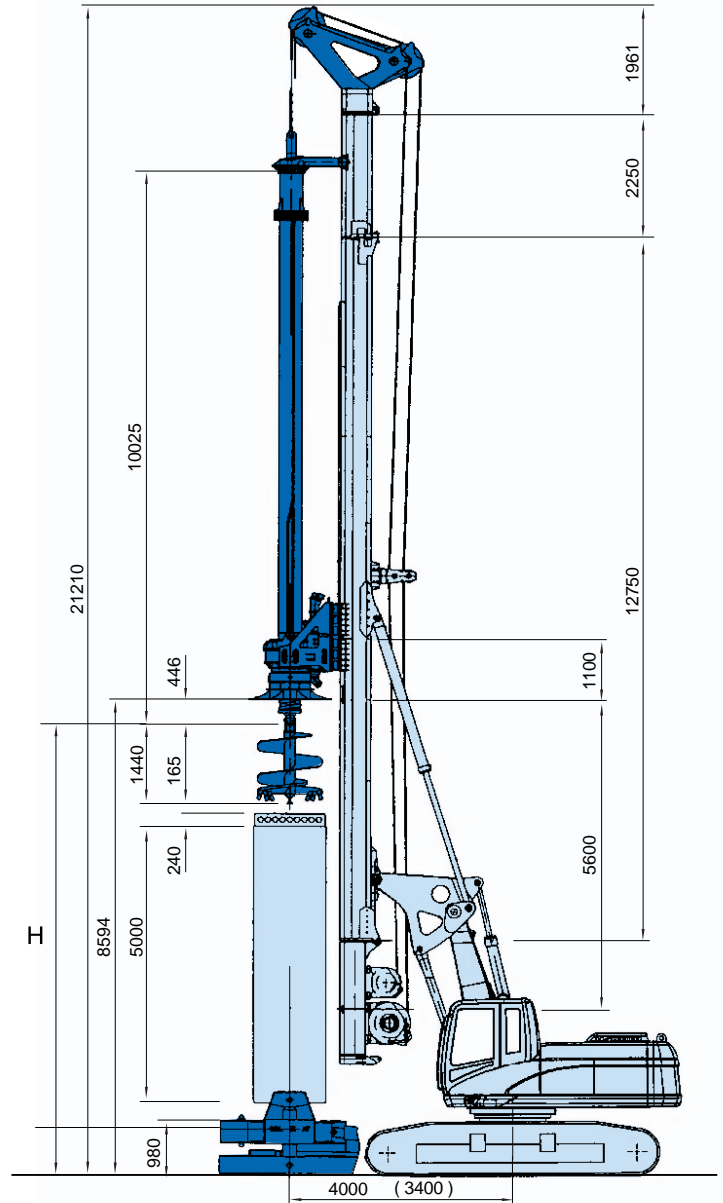
LARGE DIAMETER PILES

Working Condition

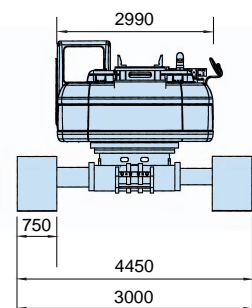
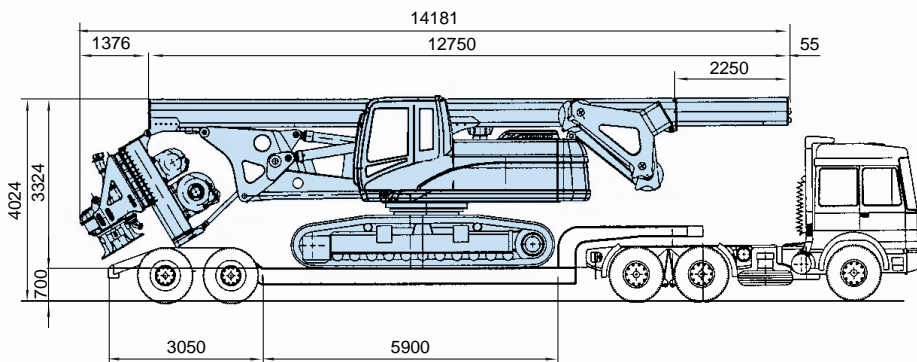
Standard version



Std. with Casing Oscillator



Transport Condition - Standard Version

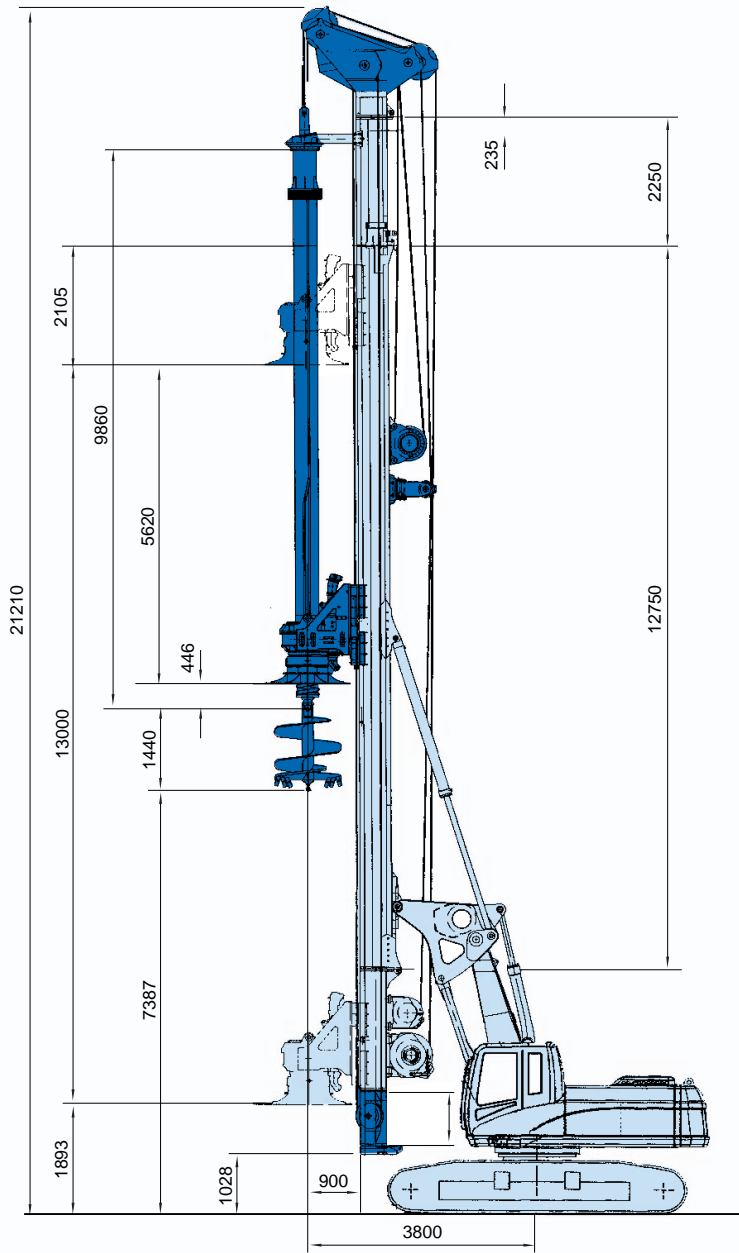


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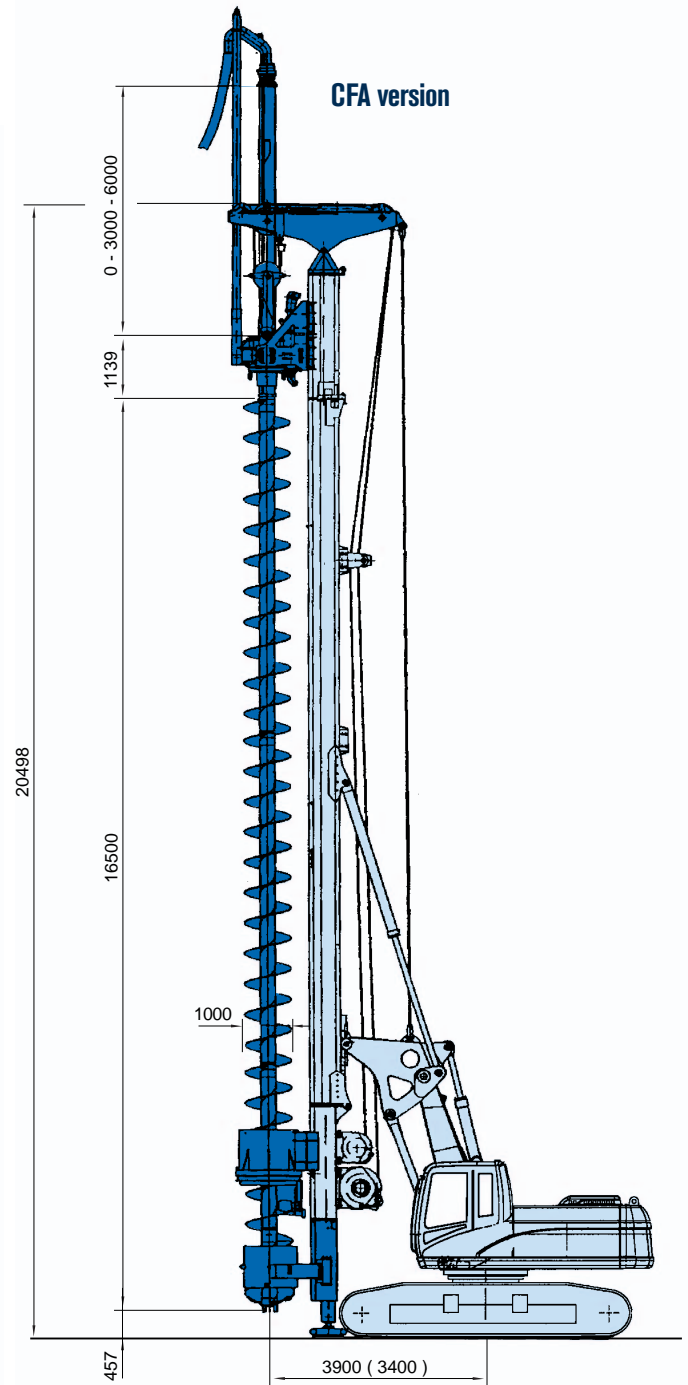
CROWD SYSTEM BY WINCH / CFA

Working Condition

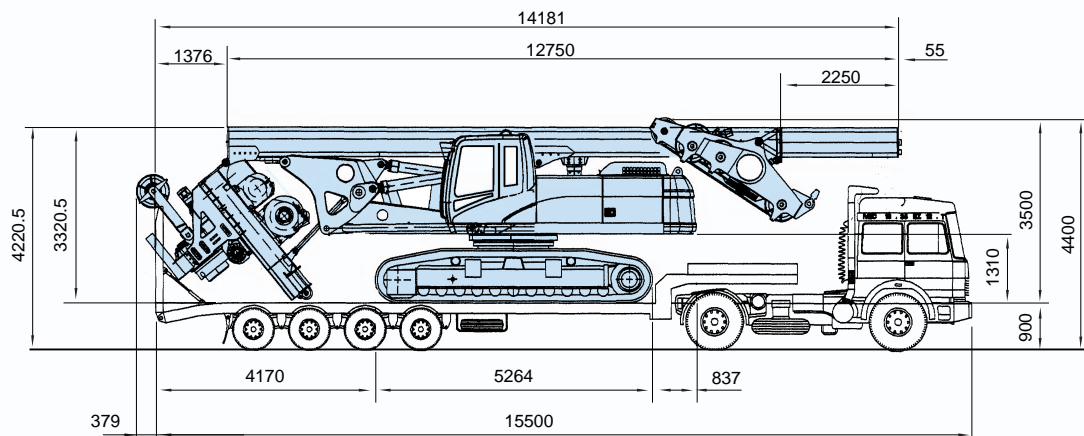
Crowd System by Winch



CFA version



Transport Condition - CFA







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