



C6^{XP-2}

HYDRAULIC CRAWLER DRILL
FOR GROUND ENGINEERING



C6 XP-2

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The Casagrande C6 XP-2 is a hydraulic drill rig designed for medium to large foundation projects, particularly suited for the execution of anchors, micropiles and jet grouting treatments. Compact yet powerful, it offers the versatility required to operate efficiently in a wide range of ground engineering applications.

Developed using state-of-the-art technology, the C6 XP-2 combines advanced engineering solutions with a robust structure to ensure reliable performance in demanding jobsite conditions. The machine has been engineered with a strong focus on efficiency, reliability and operational economy, allowing contractors to achieve high productivity while maintaining optimized operating costs.

1. "EP" ROTARY HEAD WITH ELECTRO-PROPORTIONAL CONTROL OF DISPLACEMENT

Different settings can be defined according to jobsite requirements or operator preferences.

2. HEAVY DUTY MODULAR MAST

Extraction force 100 kN, stroke of single rotary head 7,3 m

3. FRONT THE WALL JOINT

Continuous movements $\pm 93^\circ$ without stops and without manual operation

4. CLAMP UNIT TYPE M42-M42S

Clamping force 283 kN - diameter 60÷424 mm

5. HD UNDERCARRIAGE WITH FIXED FRAMES

Long and wide tracks for low bearing pressure and high stability

6. POWERFUL DIESEL ENGINE

Power 142 kW at 2000 rpm

7. SPM - SMART POWER MANAGEMENT SYSTEM

Full load-sensing hydraulic



142 kW
Diesel engine power



22,2 kNm
Max. torque



7300 mm
Rotary head stroke

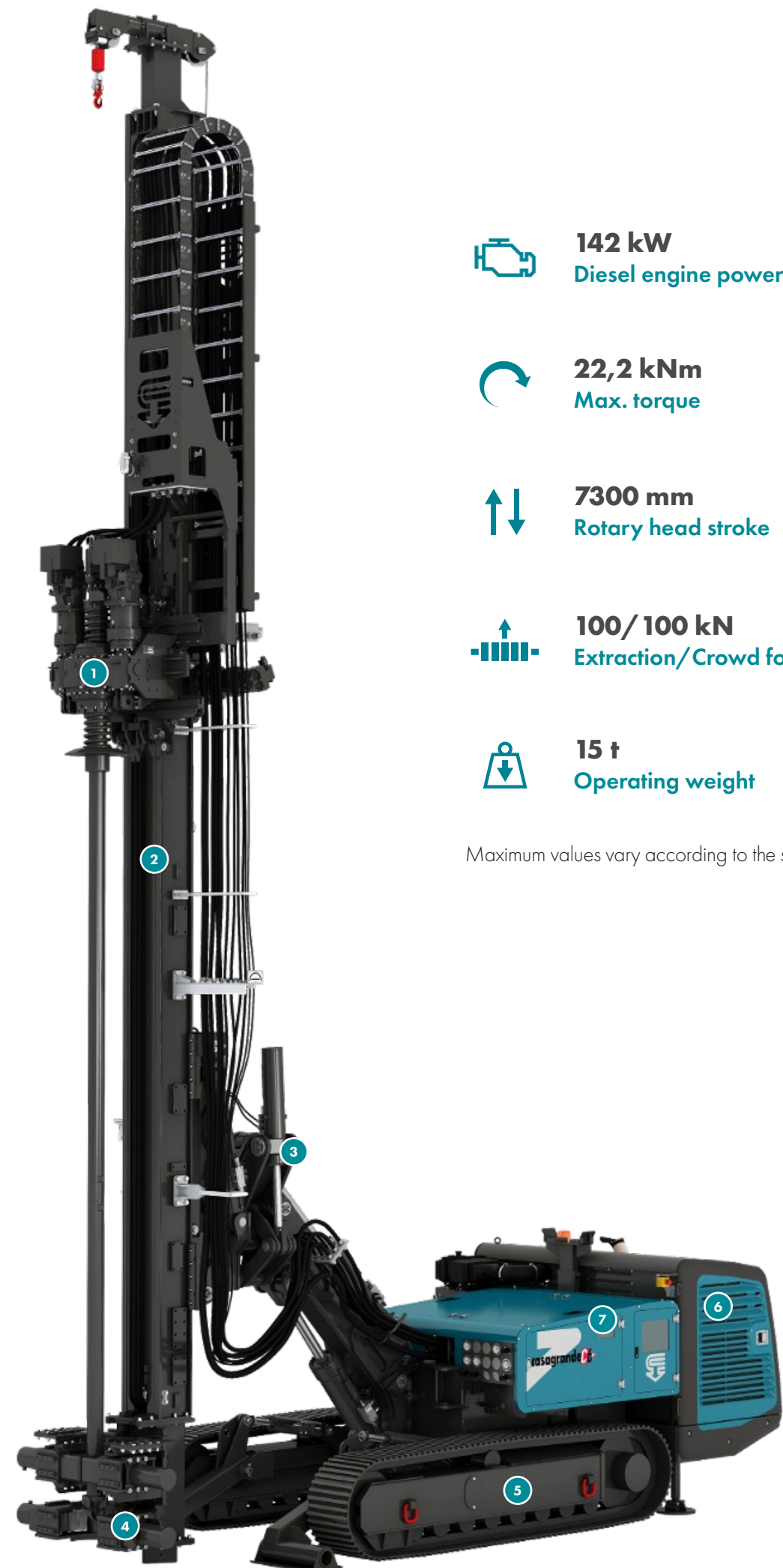


100/100 kN
Extraction/Crowd force



15 t
Operating weight

Maximum values vary according to the set-up.



KEYPOINTS



SPM - SMART POWER MANAGEMENT

The ability to intelligently manage engine power according to each specific function translates into greater efficiency and productivity. A dedicated system continuously detects the required power, increasing it to its maximum level only when necessary.



CFM - FLEET MASTER

The CFM system, developed and refined in collaboration with Vodafone, instantly detects any alarms or malfunctions through an online platform accessible from PCs, tablets, and smartphones. Thanks to the standard integration of Vodafone Business connectivity, real-time monitoring enables immediate intervention in case of failures, significantly reducing downtime and optimizing rig productivity.



CDR - DATA RECORDER (OPTIONAL)

The CDR monitoring system of the drilling process allows for the detection and recording of the working parameters. These data can be analyzed and processed to generate detailed jobsite reports.



ENVIRONMENT AWARENESS

The latest-generation Stage V diesel engines reduce pollutant emissions and allow operation with both low-sulfur fuels and HVO (Hydrotreated Vegetable Oil)—a high-performance, low CO₂ emission fuel taken from waste animal fats and used vegetable oils.



EASIER AND SAFER MAINTENANCE

The machine layout and the wide canopy openings ensure easy and comfortable access for inspection and maintenance operations. Designed in compliance with the latest international standards, the machine guarantees maximum safety for operators during all working phases.



OPTIMAL OPERATION IN EXTREME ENVIRONMENTS (OPTIONAL)

The rig can be equipped with a kit that ensures optimal machine performance and maximum efficiency even in particularly cold environments. This includes a hydraulic oil preheating device, hydraulic oil with stable viscosity and thermal properties.



ENHANCED SAFETY SYSTEMS

The machine is equipped with safety devices in compliance with UNI EN 16228 standards. These systems have been specifically engineered to ensure maximum maneuverability and rapid opening/closing during rod loading and unloading operations. As an alternative to fixed guards, electrosensitive protection systems (radar-based) are available; these prevent access to hazardous working areas unless the dedicated operating mode (R.O.M.) is activated.



TECHNICAL SPECIFICATIONS

BASE CARRIER

ENGINE		STAGE V-TIER 4	UN/ECE R96 *
Diesel engine model		CUMMINS B 4.5	CUMMINS QSB 4.5
Rated output @ 2000 rpm	kW	142	123
Diesel tank capacity	l	320	320
Urea tank capacity	l	56	-

* Exhaust emission equivalent Stage III A/Tier 3.

HYDRAULIC SYSTEM		
Hydraulic power	kW	124
Hydraulic pressure	bar	350
Main pump flow rate	l/min	1x319
Optional main pump flow rate	l/min	1x99
Hydraulic oil tank capacity	l	490

UNDERCARRIAGE		B2
Undercarriage width	mm	2250
Width of triple grouser track shoes	mm	400
Overall tracks length	mm	3300
Travel speed	km/h	0÷2,2
Traction force - nominal	kN	129

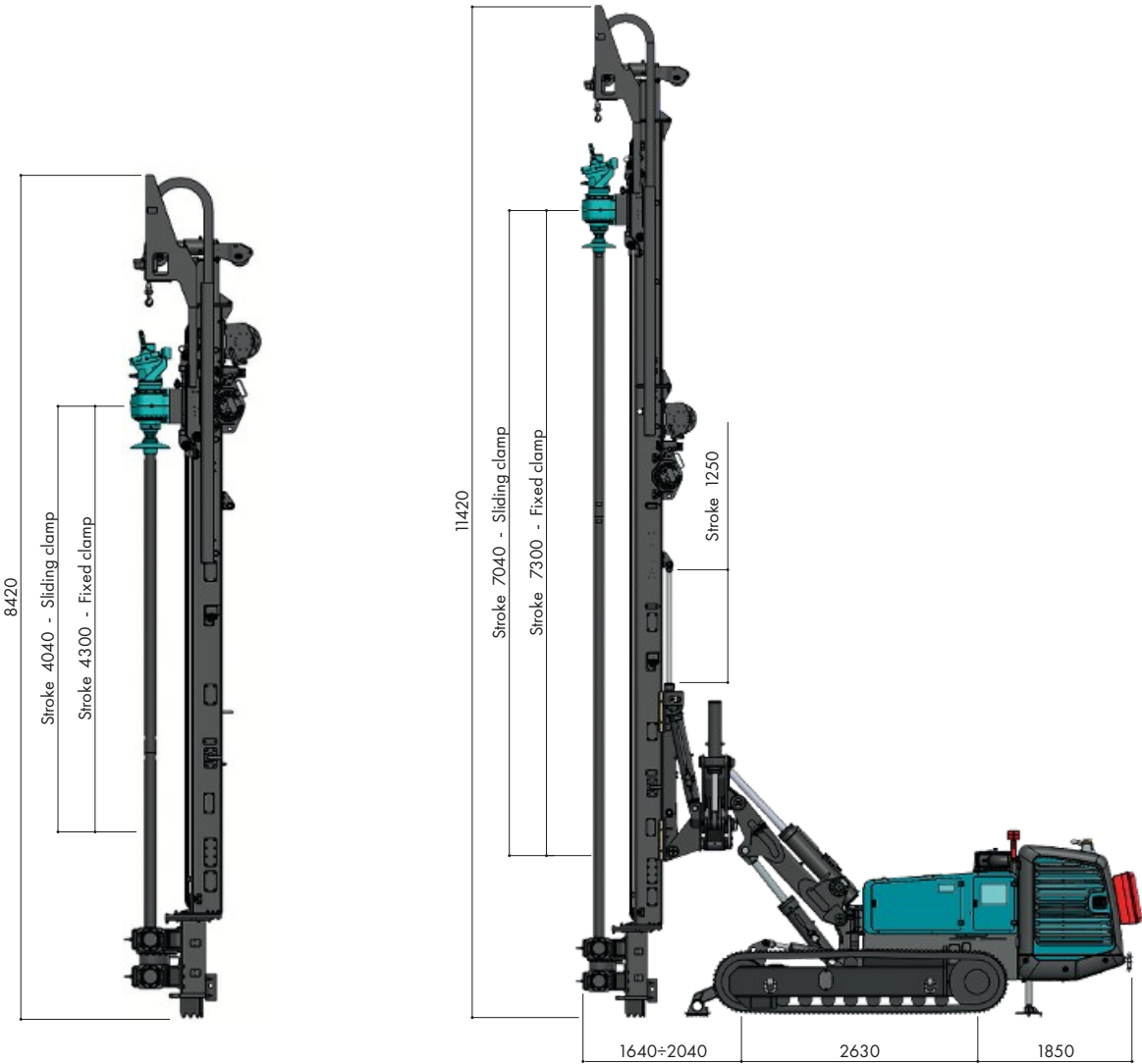
MAST		9100 MR	6100 MR
Mast length	mm	9100	6100
Rotary head stroke	mm	7300	4300
Extraction/Crowd force	kN	87 (100)*	87 (100)*
Extraction/Crowd speed	m/min	53 (77)*	53 (77)*

CLAMPS		M32 M32S	M42 M42S
Diameter	mm	32÷324	60÷424
Clamping force	kN	240	283

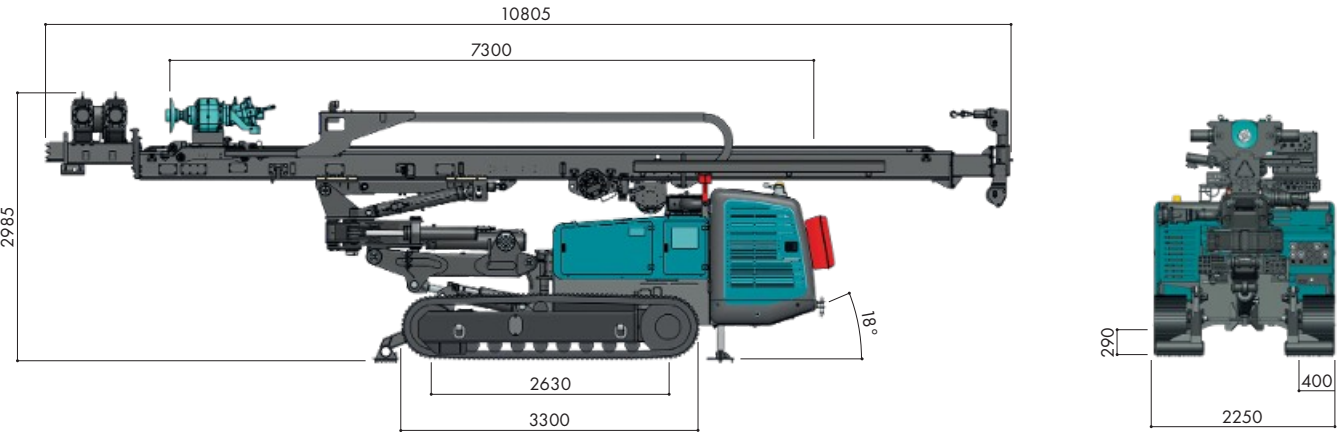
ROTARY HEAD		T14 EP	T20 EP	T2500 EP
Max. torque	kNm	12,2	15,2	22,2
Max. speed	rpm	500	400	226

* Optional

DIMENSIONS



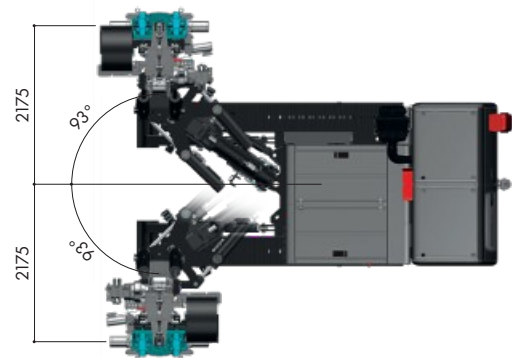
TRANSPORT DATA



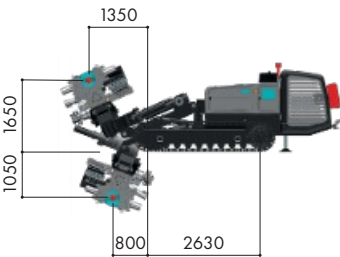
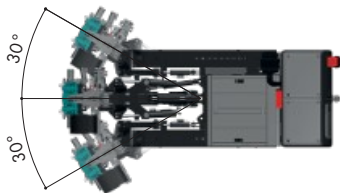
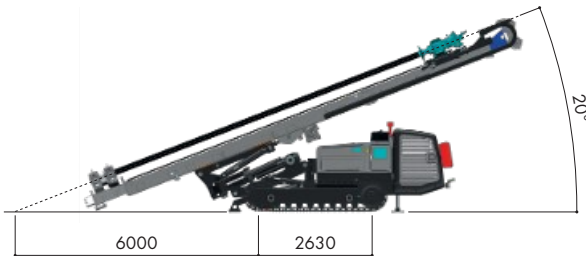
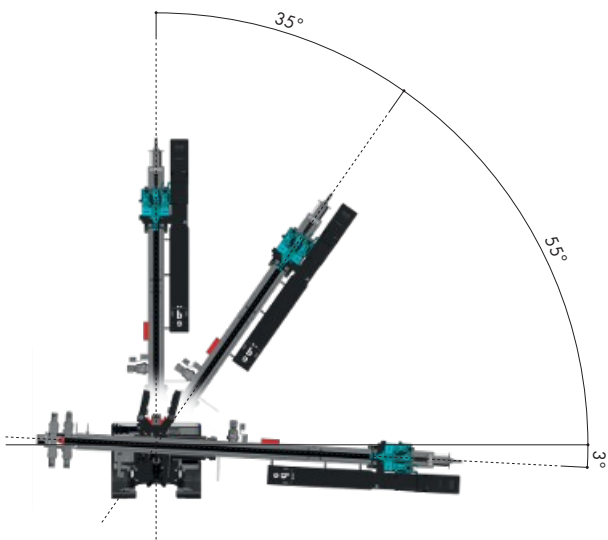
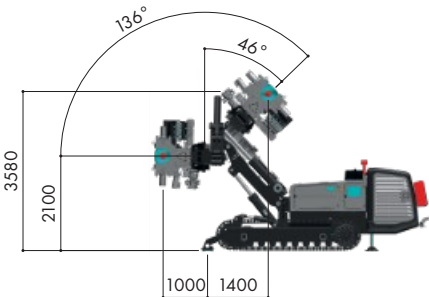
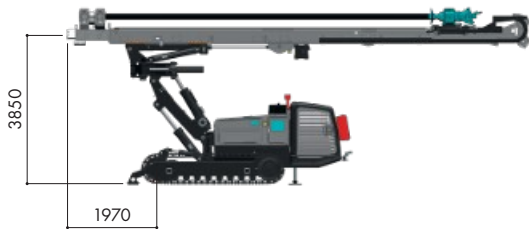
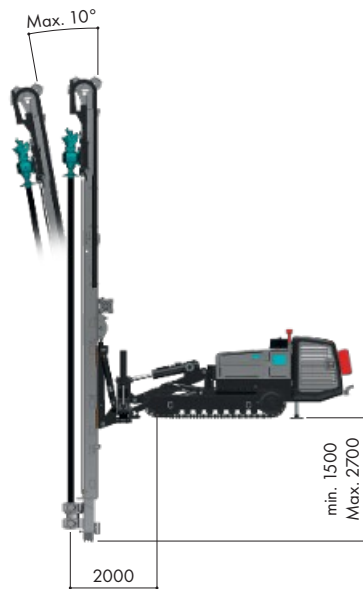
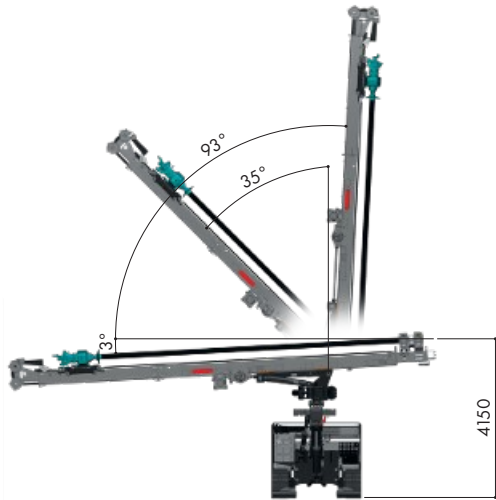
Weight of rig (depending on mounted equipment)
~15000 kg

FRONT THE WALL KINEMATICS

The core of the machine's movement lies in its advanced joint system, engineered to withstand high stresses and perform reliably even in the most demanding conditions. The machine offers a rotation of $\pm 93^\circ$, ensuring precise and efficient positioning. This joint system enables the C6 XP-2 to operate quickly and smoothly, while remaining intuitive and easy to handle. Maximum flexibility defines its performance, allowing the machine to reach even the most challenging and hard-to-access areas with ease.



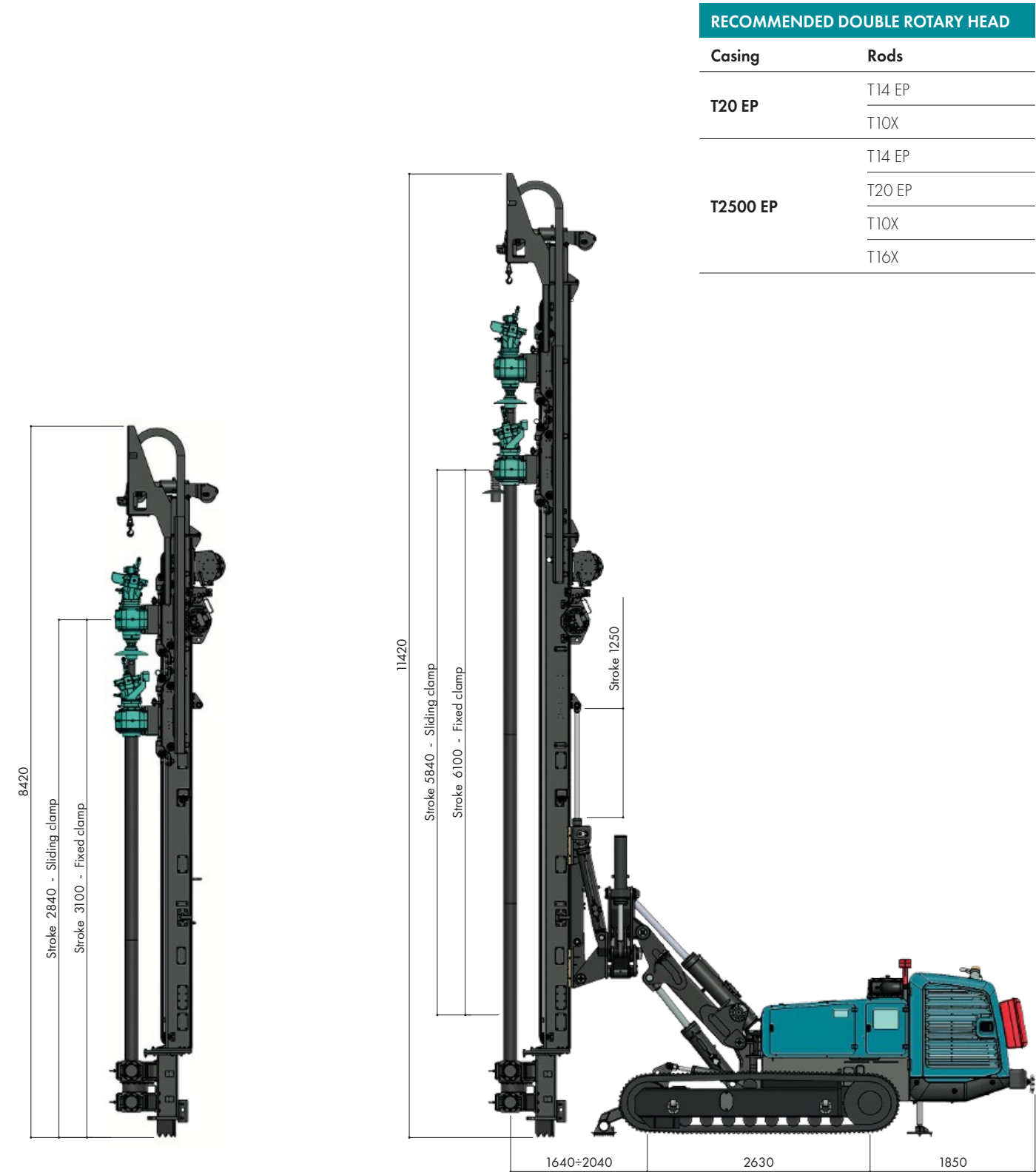
MAST MOVEMENTS



Rig movements are the maximum allowable. Any additional equipment on the rig may limit these movements.

DOUBLE ROTARY HEAD

ARRANGEMENT



JET GROUTING

ARRANGEMENT

LATTICE EXTENSION



OPTIONS

BASIC MACHINE
Electric motor
Other rotary heads available
Drifter type T40 for T14 EP and T20 EP
Rotopercussion unit T10X - T16X
Auxiliary winch with rope - Max. line pull 2000 kg - 3000 kg
Cathead for auxiliary winch
Self-pivot pulley cathead with self-pivoting pulley for auxiliary winch
Telescopic and swinging cathead
Auxiliary crane
Jet grouting system
Super jet grouting arrangement
Hydraulic chuck type P114 - P200 for jet grouting rods
Lubricator for down-the-hole hammer 8,5 l - 20 l
Manual/Automatic centralized greasing system
Wired control or radio remote control for tracking
Safeguards according to EN 16228
CDR - Casagrande Data Recorder
Casagrande Fleet Master remote rig control and monitoring via internet
Flushing pump - Water pump GAMMA 62 (60 l/min Max. - 50 bar Max.) GAMMA 202 (200 l/min Max. - 60 bar Max.)
Pump CC30/20S Foam: (30 l/min Max. - 50 bar Max.) High pressure: (30 l/min Max. - 200 bar Max.)
Mud pump NG530 L (215 l/min - 24 bar) NG600 L (310 l/min - 24 bar) NG800 L (480 l/min - 20 bar) NG1200 L (960 l/min - 14 bar)
Mud and slurry pump: Triplex 90 (90 l/min Max. - 45 bar Max.) Triplex 200 (200 l/min Max. - 45 bar Max.) Triplex 300 (300 l/min Max. - 35 bar Max.)
Water, mud and cement pump STA T60 (600 l/min Max. - 40 bar Max.)



OPTIONS

RC10 - RODS CAROUSEL	RODS WITH BLOCK TEETH		
Max. rod length	mm	3000	3000
Capacity	Rods	10	5
	Ø mm	76÷114	76÷114
Weight of rod loader	kg	1150	1150
Max. weight of rod	kg	1270	1270
Max. depth Mast 5,3 (4,3+1)	m	35,3 (30+5,3)	20,3 (15+5,3)

* With additional counterweight

RC6 - RODS CAROUSEL	MAST 6000 *	
Max. rod length	mm	3000
Capacity 6 rods	Ø mm	76÷168
Weight of rod loader	kg	650
Max. weight of rod	kg	650
Max. depth	m	22,3 (18+4,3)

* With additional counterweight

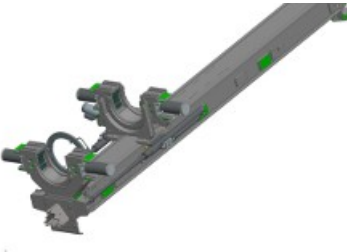
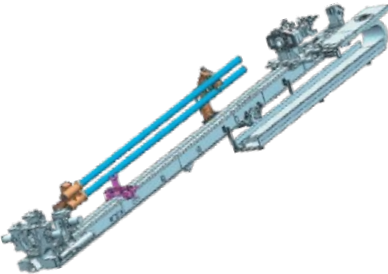
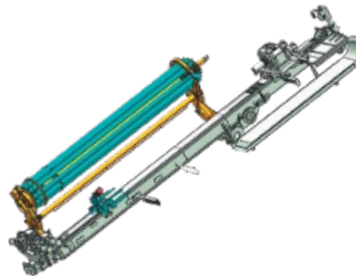
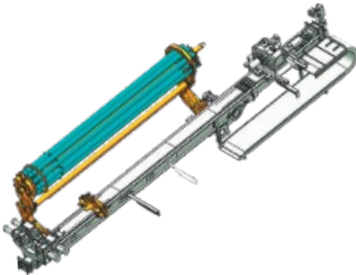
2 RODS LOADER		MAST 6100 *	MAST 9100 *
Max. rod length	mm	3000	6000
Capacity 2 rods	Ø mm	76÷168	76÷168
Capacity 1 rod	Ø mm	168÷219	168÷219
Weight of rod loader	kg	630	630
Max. weight of rod	kg	650	650
Max. depth	m	10,3 (6+4,3)	19,3 (12+7,3)

Option: trolley for anchoring operation

* With additional counterweight

SLIDING CLAMP		M32-M32S/C	M42-M42S/C
Diameter	mm	32÷324	60÷424
Clamping force	kN	240	283
Torque	kNm	30	46
Extraction stroke	mm	600 (1000)*	600 (1000)*
Extraction force	kN	110	200
Weight	kg	870	1350

* Optional



OPTIONAL



SMARTCARE - CASAGRANDE PREMIUM SUPPORT AND WARRANTY PACKAGE

Choosing Casagrande means investing in a machine designed for durability, precision, and maximum performance in special foundation works.

To preserve these values over time, SMARTCARE provides complete support throughout the entire lifecycle of your equipment — ensuring efficiency, reliability, and peace of mind.

SMARTCARE is offered as a separate package; availability and details may vary according to our sales conditions.

- **3-YEAR WARRANTY**
Up to 3 years or 4,500 operating hours of coverage to protect your investment and guarantee long-term reliability. Casagrande stands by your side even after delivery, ensuring lasting performance and operational confidence.
- **TECHNICAL ASSISTANCE & ORIGINAL SPARE PARTS**
Casagrande ensures on-site service with qualified technicians and genuine components specifically designed for your machine.
Each intervention extends equipment life, maintains optimal performance, and ensures operational continuity on every jobsite.
- **SMART SUPPORT**
Through advanced monitoring systems, Casagrande anticipates maintenance needs and recommends spare parts in advance. This proactive approach reduces downtime and keeps your rig operating at maximum efficiency.

OFFICIAL SPARE PARTS — PLANNED IN ADVANCE

Prearranged original spare parts kits are available for each scheduled maintenance phase:

- Ready-to-install solutions ensuring full compatibility
- Simplified logistics and optimized stock management
- Extended component life and minimized downtime

ON-SITE TECHNICIAN EVERY 250 HOURS

Every 250 operating hours, a certified Casagrande technician can perform:

- Preventive inspections and complete check-ups
- Routine maintenance and necessary adjustments
- On-site operator guidance and technical support

DEDICATED TEAM — MONITORING & SUPPORT

The SMARTCARE Team continuously monitors machine hours and performance via Casagrande Fleet Master.

This system enables:

- Scheduled service interventions
- Early identification of spare parts needs
- Optimized maintenance planning and reduced downtime





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**TECHNICAL
ASSISTANCE**



**TRAINING
COURSES**



**REMOTE ASSISTANT
SERVICE**



**SERVICE
BOXES**



**OFFICIAL
SPARE PARTS**

