

CV-F

FIXED LEADER MAST



 **casagrande**
Since 1963

12 VALUABLE REASONS TO CHOOSE CV-F



3-YEAR WARRANTY 4,500 HOURS OF GUARANTEED OPERATION

The peace of mind of owning equipment designed for long-lasting durability, covered by a 36-month warranty and guaranteed to deliver at least 4.500 hours of flawless operation. This is one of the many ways we ensure that those who choose us can always rely on our unwavering support.



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. This ensures a more responsible and sustainable use of energy.

CFM - CASAGRANDE 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 the rig productivity.

CDR - CASAGRANDE DATA RECORDER

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. Like many other Casagrande rigs, the CV-F is also available in full-electric and hybrid versions.



The cabin is designed to enhance operator comfort, reducing fatigue and increasing productivity while ensuring excellent visibility. It is also soundproofed to ensure optimal acoustic comfort and equipped with a new climate control system, which is quieter, more powerful, and specifically directed at the most exposed body areas. Additionally, the rig's intelligent heat exchangers significantly reduce the noise generated by the cooling system.

ERGONOMIC CABIN WITH HIGH VISIBILITY AND ACOUSTIC COMFORT

The hydraulically lifting cover panels provide easy access to components for inspection and maintenance. Additionally, the optional platforms and safety railings further enhance operator safety during these tasks. Optional cameras offer a detailed view of the work area, improving visibility and facilitating maintenance operations.

EASIER AND SAFER MAINTENANCE

The automated drilling functions available on the rig, in addition to simplifying its operation, allow the operator to stay updated in real-time on the drilling process progress through an in-cabin display. The process is continuously monitored through precise data on depth, torque, pressure, and verticality.

AUTOMATED DRILLING WITH REAL-TIME PROGRESS VERIFICATION

The controls, in addition to being characterized by simple and intuitive functionality, are customizable. Thanks to this, each operator can create their preferred control system, avoiding potential operational errors and enhancing the safety of the operations.

SIMPLIFIED AND CUSTOMIZED USABILITY

The automatic greasing system continuously ensures optimal lubrication of all moving mechanical parts, helping them function perfectly and extending their life.

AUTOMATIC GREASING SYSTEM

The remote control, which allows to perfectly manage all rig movements, enhances the operator's safety during loading and unloading operations from transport vehicles and during the setup phases for work.

REMOTE CONTROL

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

OPTIMAL OPERATION IN COLD ENVIRONMENTS

TECHNICAL INFORMATION

The new Casagrande CV-F range, part of the CV Series, is a versatile line of multi-purpose pile drivers designed for deep foundation and ground improvement projects. The fixed sliding mast allows for various configurations, including sheet piling, hydraulic hammer, CFA, soil mixing, Cased CFA drilling VdW, and cutter soil mixing. These machines feature a modular mast built to support heavy loads, along with a pantograph that ensures efficient load positioning and precise verticality control. Their unique articulation allows for front-the-wall operations, making them ideal for work in confined spaces. The CV-F models combine high performance and stability, offering reliable results across a wide range of operating conditions.

INFORMAZIONI TECNICHE

Le nuove Casagrande CV-F sono parte di una innovativa gamma di macchine multifunzionali progettate per la realizzazione di fondazioni profonde e di miglioramento del terreno. La soluzione con mast fisso scorrevole supporta molteplici allestimenti, tra cui infissione di palancole con vibratore e di pali con martello idraulico, CFA, CFA intubato VdW, soil mixing e cutter soil mixing. Le macchine sono dotate un mast modulare progettato per supportare carichi eccezionali, di un pantografo per un posizionamento efficiente del carico e un controllo preciso della verticalità. La peculiare articolazione consente un utilizzo front-the-wall, ideale per operare in spazi ristretti. I modelli della serie CV-F sono attrezzi versatili che garantiscono prestazioni elevate e stabilità, in un'ampia gamma di condizioni operative.

1 VdW ROTARY HEAD

Other attachments are available for multipurpose piling rig

2 ADJUSTABLE JIB (optional)

Equipped with auxiliary winch with line pull of 60 kN

3 UNIVERSAL COUPLING

Rapid equipment mounting system

4 HEAVY DUTY MODULAR MAST

Equipped with sliding hydraulic ram and pull down winch system

5 MAST SUPPORT WITH STURDY STRUCTURE

Complete with +/- 90° front the wall kinematic

6 OPERATOR'S CABIN

Comfortable and ergonomic cabin with 12" and 7" monitors

7 POWERFUL DIESEL ENGINE

Power 563 kW

8 HD UNDERCARRIAGE

800 mm extendable triple grouser track shoes

1 TESTA DI PERFORAZIONE VdW

Disponibili vari allestimenti per palificazione

2 FALCHETTO REGOLABILE (optional)

Dotato di un argano ausiliario con tiro di 60 kN

3 AGGANCIO UNIVERSALE

Sistema di montaggio rapido attrezzature

4 MAST HD MODULARE

Equipaggiato con contromast e sistema di avanzamento con argano pull down

5 ROBUSTO SUPPORTO MAST

Completo di cinematzismo front the wall +/-90°

6 CABINA OPERATORE

Cabina confortevole ed ergonomica con monitor da 12" e 7"

7 POTENTE MOTORE DIESEL

Potenza di 563 kW

8 SOTTOCARRO RINFORZATO

Cingoli estendibili con pattini a tre barre da 800 mm



CV-F

PERFORMANCE - PRESTAZIONI



18 / 22 m

Max. length of sheet piles / Lunghezza max. palancola



90° / 90°

Mast turning angle dx-sx / Angolo rotazione mast dx-sx



204 kNm

Allowable torque / Coppia ammissibile



563 kW

Diesel engine power / Potenza motore



82 / 84 t

Operating weight / Peso attrezzatura

Maximum values vary according to the set-up
I valori massimali variano in funzione dell'allestimento



SPM

SMART POWER MANAGEMENT

PERFORMANCE

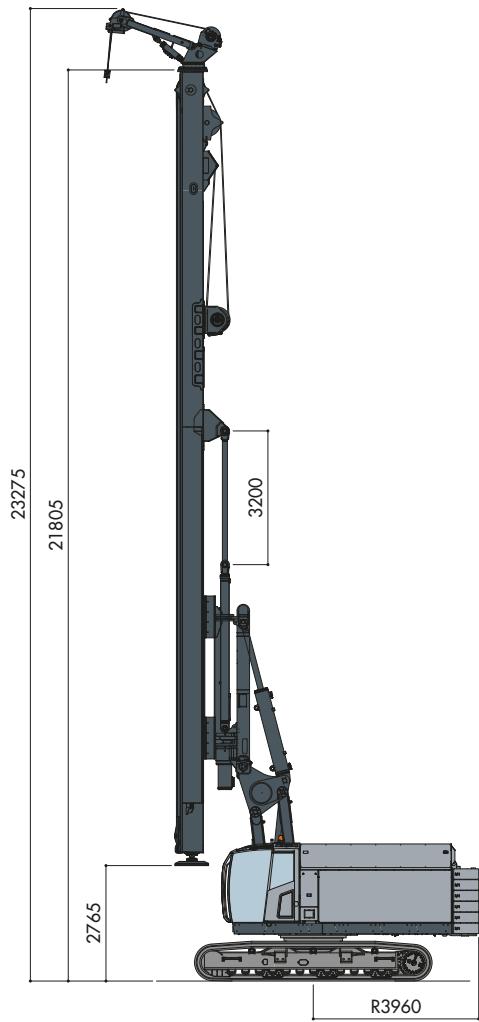
PRESTAZIONI

ATTACHMENTS	ALLESTIMENTO		CV18-F	CV22-F
SHEET PILING	PALANCOLE			
Max. pile length	Lunghezza max. palancola	m	18	22
HYDRAULIC HAMMER	MARTELLO IDRAULICO			
Max. pile length	Lunghezza max. palo	m	15,6	19,4
CASED CFA VdW	CFA INTUBATI VdW			
Max. depth	Profondità max.	m	17,5	21,8
SOILMIXING	SOILMIXING			
Max. depth	Profondità max.	m	17,2	21,4
CUTTER SOIL MIXING	CUTTER SOIL MIXING			
Max. depth	Profondità max.	m	17,9	21,8
BORED PILES	PALI			
Max. depth	Profondità max.	m	41,5	-
Max. diameter uncased	Diametro max.	mm	1400	-
CFA PILES	PALI CFA			
Max. depth	Profondità max.	m	23,2	27,4
DISPLACEMENT PILES	PALI DISPLACEMENT			
Max. depth	Profondità max.	m	23,2	27,4

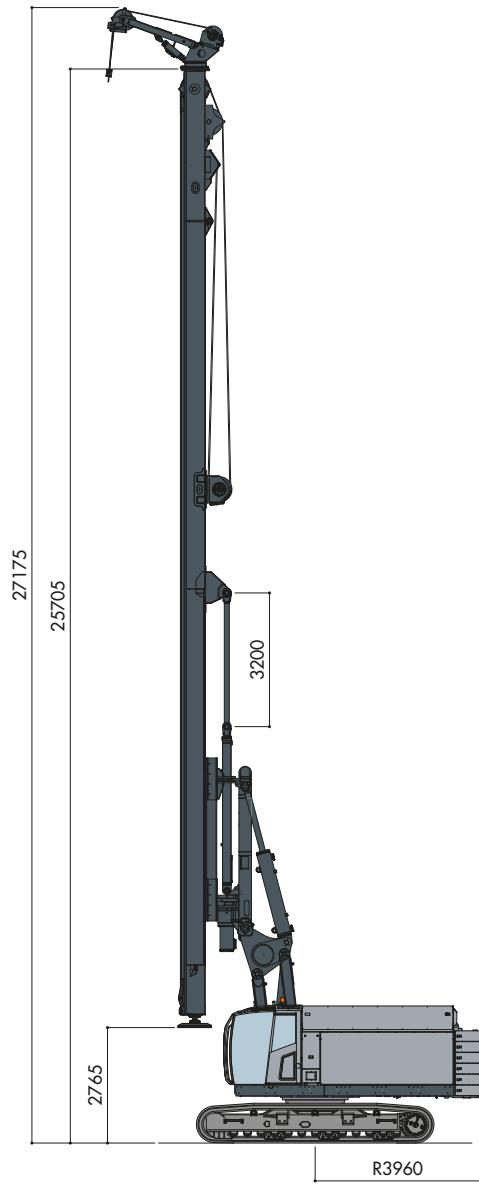


ARRANGEMENTS

ALLESTIMENTI

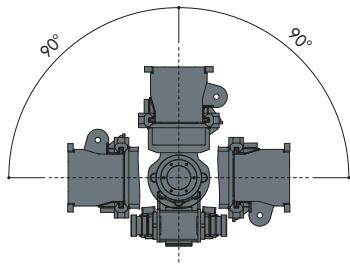


CV18-F

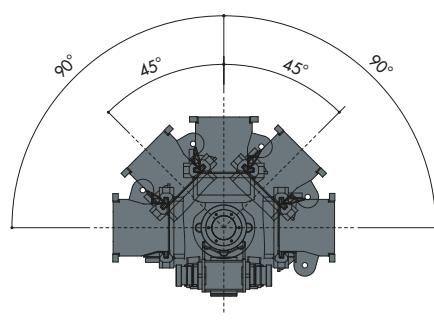


CV22-F

MAST ROTATION ANGLES ANGOLI ROTAZIONE MAST



FREE TURNING ANGLE
ROTAZIONE LIBERA

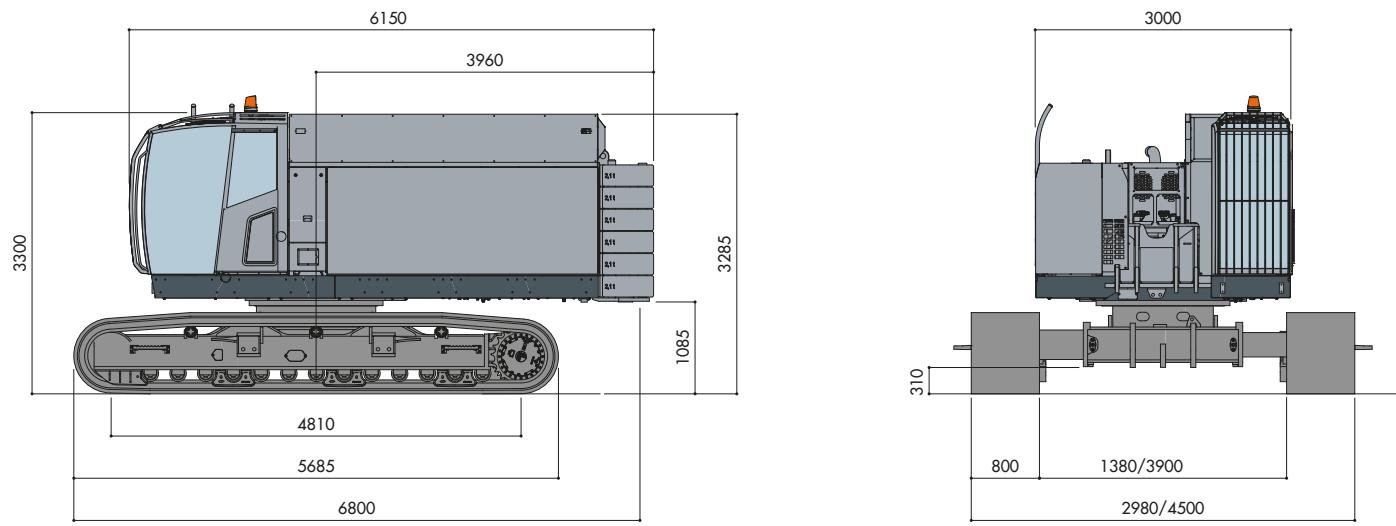


FIXED TURNING ANGLE
ROTAZIONE BLOCCATA



TECHNICAL SPECIFICATIONS

DATI TECNICI



BASE CARRIER	CARRO BASE	
Diesel engine Stage V - Tier 4	Motore diesel Stage V - Tier 4	CAT C18
Power @ 1800 rpm	Potenza @ 1800 rpm	563 kW
Diesel tank capacity	Capacità serbatoio gasolio	825 l
Diesel engine Stage IIIA - Tier 3 equivalent	Motore diesel Stage IIIA - Tier 3 equivalente	optional
HYDRAULIC SYSTEM	IMPIANTO IDRAULICO	
Hydraulic power	Potenza idraulica	500 kW
Hydraulic pressure	Pressione idraulica	350 bar
Main pumps flow rate	Pompe principali portata	2x405 + 2x309 l/min
Hydraulic oil tank capacity	Capacità serbatoio olio idraulico	930 l
UNDERCARRIAGE	SOTTOCARRO	
Class	Classe	D5+
Travel speed	Velocità traslazione	0 ÷ 3 km/h
Traction force - Nominal / Effective	Forza di trazione - Nominale / Effettiva	530 / 420 kN
Weight of basic machine without attachment	Peso macchina base senza attrezzatura	~55700 kg

TECHNICAL SPECIFICATIONS

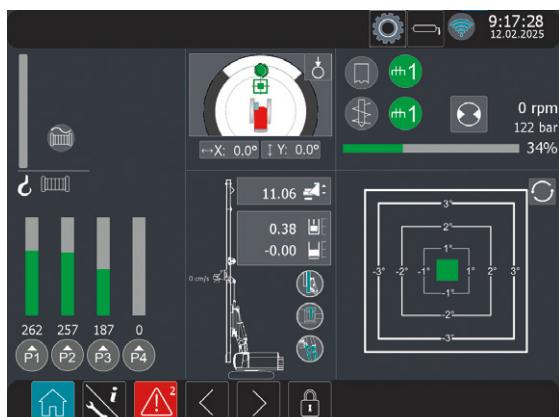
DATI TECNICI

MAIN WINCH	ARGANO PRINCIPALE	
Line pull on 1 st layer nominal / effective	Tiro sul 1° strato nominale / effettivo	165 / 135 kN
Max. line speed	Velocità max.	78 m/min
Rope diameter	Diametro fune	24 mm
AUXILIARY WINCH (optional)	ARGANO AUSILIARIO (optional)	
Line pull on 1 st layer nominal / effective	Tiro sul 1° strato nominale / effettivo	60 / 50 kN
Max. line speed	Velocità max.	53 m/min
Rope diameter	Diametro fune	16 mm
CROWD WINCH	ARGANO PULL-DOWN	
Extraction / Crowd force nominal	Forza di Estrazione / Spinta nominale	420 / 420 kN
Extraction / Crowd force effective	Forza di Estrazione / Spinta effettiva	335 / 335 kN

ELECTRONICS CONTROLLI ELETTRONICI

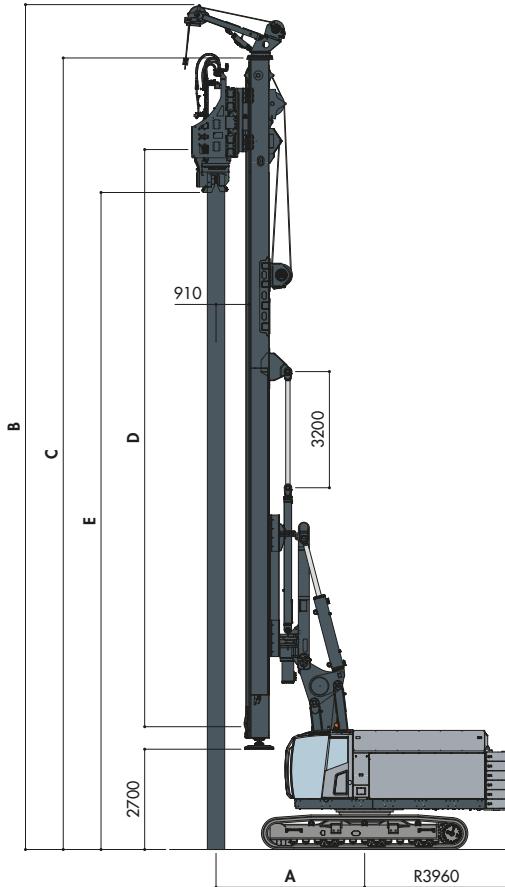
The machine is equipped with a PLC network which controls engine and all the hydraulics. A color touch screen display allows settings and provides information about the machine condition, allows and assists in fault diagnostics. The SPM control system – Smart Power Management - monitors the instantaneous power flows in real time and allocates the full available power to the job duties.

La macchina è dotata di una rete di PLC che governano il motore e tutte le funzioni idrauliche. Un display touch screen consente l'impostazione dei parametri macchina e fornisce le informazioni sulle condizioni di lavoro e assiste la diagnostica dei guasti. Il sistema di gestione SPM – Smart Power Management – sorveglia i flussi di potenza istantanei e destina in tempo reale la piena potenza disponibile alle funzioni di lavoro.



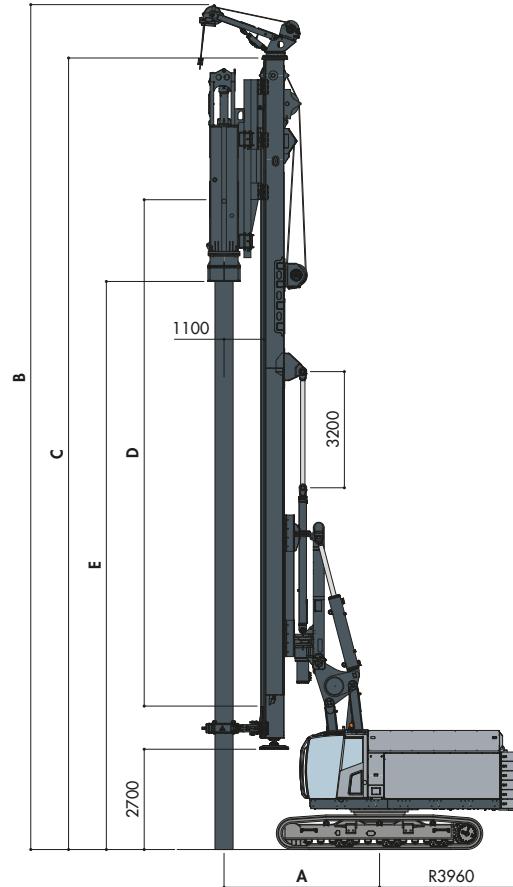
SHEET PILING

ALLESTIMENTO PER PALANCOLE



HYDRAULIC HAMMER

BATTIPALO IDRAULICO



		CV18-F	CV22-F
A	Min. working radius Interasse di lavoro min.	mm	4095 4045
B	Max. height from ground Altezza max. da terra	m	23,3 27,2
C	Max. height from ground without jib Altezza max. da terra senza falchetto	m	21,8 25,7
D	Max. Vibrator stroke Corsa max. vibratore	m	15,9 19,8
E	Max. sheet pile length Lunghezza max. palancola	m	18 22
Max. weight of vibrator Peso max. vibratore	kg	6000 6000	
Operating weight Peso attrezzatura	kg	~79000 ~80200	

		CV18-F	CV22-F
A	Min. working radius Interasse di lavoro min.	mm	4285 4235
B	Max. height from ground Altezza max. da terra	m	23,3 27,2
C	Max. height from ground without jib Altezza max. da terra senza falchetto	m	21,8 25,7
D	Max. Vibrator stroke Corsa max. vibratore	m	13,9 17,6
E	Max. pole length Lunghezza massima palo	m	15,6 19,4
Max. weight of hammer Peso max. martello	kg	11450 11450	
Operating weight Peso attrezzatura	kg	~85800 ~87100	

Hydraulic Vibrator Vibratore idraulico	MS-30 HFMV
Centrifugal force Forza centrifuga	kN 1535
Eccentric moment Momento eccentrico	kgm 0 - 30
Hydraulic power Potenza idraulica	kW 454

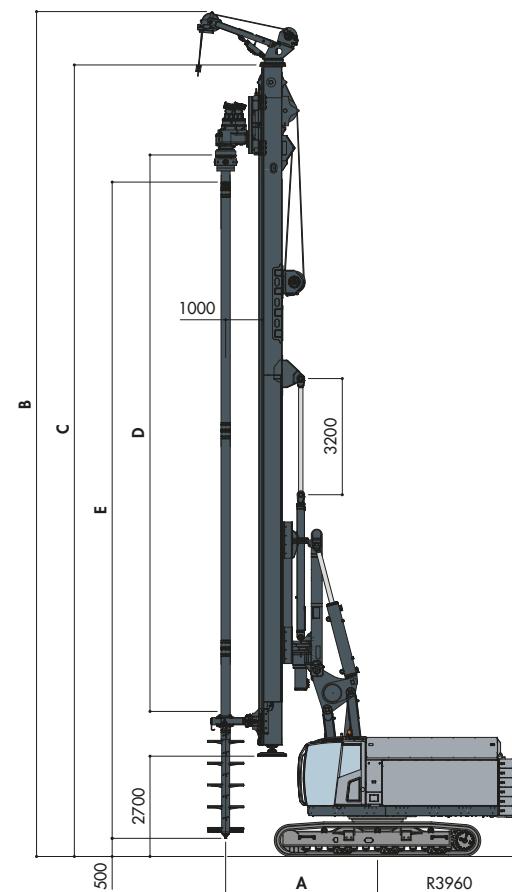
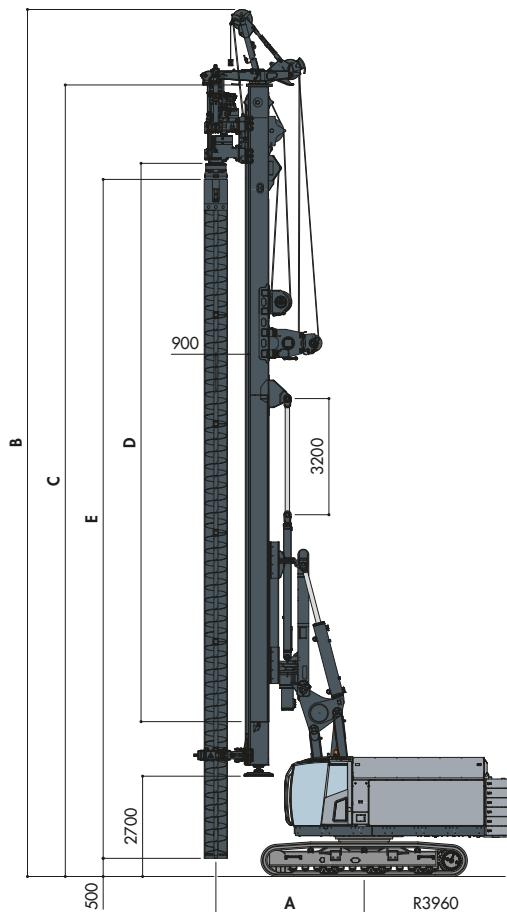
Hydraulic hammer Martello idraulico	CX85
Drop height Altezza di caduta	m 1,2
Energy Energia	kNm 85
Dropweight mass Massa movimentata	kg 7000

CASED CFA VdW

CFA INTUBATI VdW

SOILMIXING

SOILMIXING



		CV18-F	CV22-F
A	Working radius Interasse di perforazione	mm	4058-5450 4035-5400
B	Max. height from ground Altezza max. da terra	m	23,9 27,2
C	Max. height from ground without jib Altezza max da terra senza falchetto	m	21,8 25,7
D	Max. rotary head stroke Corsa max. rotary	m	15,3 19,6
E	Max. tool length Lunghezza massima utensile	m	18,7 22,5
Max. depth Profondità max.		m	17,5 21,8
Extraction force Nominal/Effective Forza di estrazione Nominale/Efettiva	kN	585/470 420/335	
Crowd force Nominal/Effective Forza di spinta Nominale/Efettiva	kN	420/335 420/335	
Operating weight w/o sheet pile Peso attrezzatura senza pallancola	kg	~79200 ~80400	

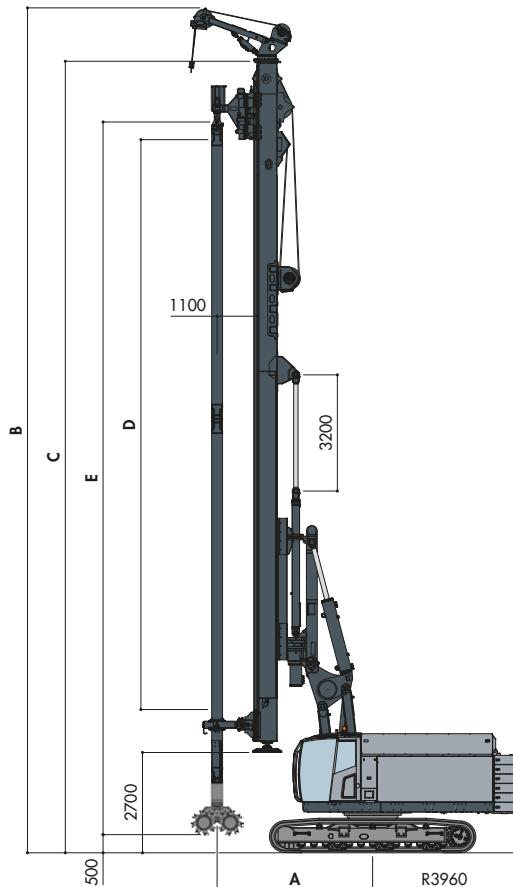
		CV18-F	CV22-F
A	Working radius Interasse di perforazione	mm	4185-5550 4135-5500
B	Max. height from ground Altezza max. da terra	m	27,5 27,2
C	Max. height from ground without jib Altezza max da terra senza falchetto	m	21,8 25,7
D	Max. rotary head stroke Corsa max. rotary	m	15 19,2
E	Max. tool length Lunghezza massima utensile	m	18 22
Max. depth Profondità max.		m	17,2 21,4
Extraction force Nominal/Effective Forza di estrazione Nominale/Efettiva	kN	420/335 420/335	
Crowd force Nominal/Effective Forza di spinta Nominale/Efettiva	kN	420/335 420/335	
Operating weight w/o sheet pile Peso attrezzatura senza pallancola	kg	~76100 ~77300	

Rotary head Testa di rotazione		VDW 2010
Rotary for casing Testa per rivestimento	Max. torque/Coppia max. Max. speed/Velocità max.	kNm 200 rpm 20
Eccentric moment Momento eccentrico	Max. torque/Coppia max. Max. speed/Velocità max.	kNm 100 rpm 42

Rotary head Testa di rotazione		RHP 15
	Max. torque/Coppia max.	kNm 150
	Max. speed/Velocità max.	rpm 69

CUTTER SOIL MIXING

CUTTER SOIL MIXING



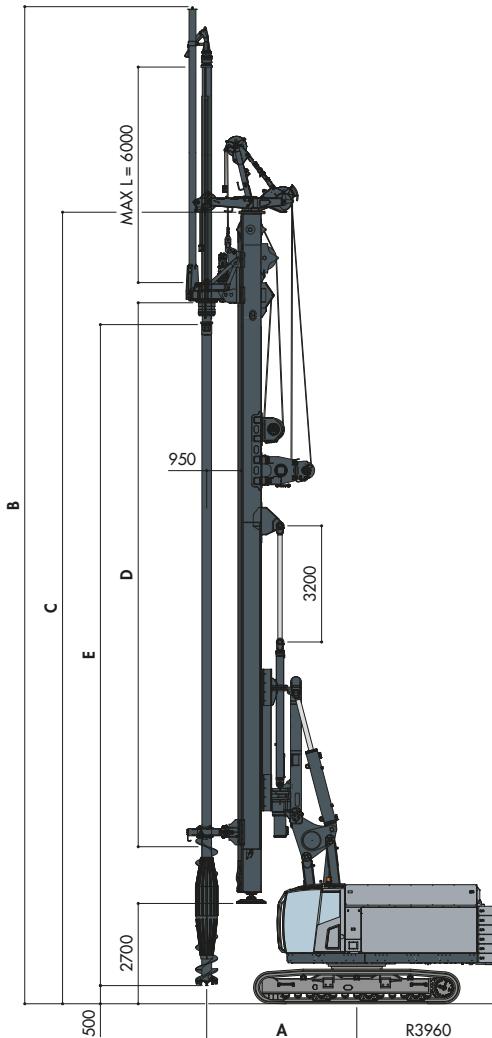
		CV18-F	CV22-F
A	Working radius Interasse di perforazione	mm	4285-5600 4235-5600
B	Max. height from ground Altezza max. da terra	m	23,3 27,2
C	Max. height from ground without jib Altezza max da terra senza falchetto	m	21,8 25,7
D	Max. stroke Corsa max.	m	15,7 19,6
E	Max. tool length Lunghezza massima utensile	m	19,6 23,5
Max. depth Profondità max.		m	17,9 21,8
Extraction force Nominal/Effective Forza di estrazione Nominale/Efettiva	kN	420/335	420/335
Crowd force Nominal/Effective Forza di spinta Nominale/Efettiva	kN	420/335	420/335
Operating weight Peso attrezzatura	kg	~83700	~85000

Cutter soil mixing

Panel length Lunghezza pannello	mm	2400
Panel width Larghezza pannello	mm	500/600/800

DISPLACEMENT PILES

PALI DISPLACEMENT



		CV18-F	CV22-F
A	Working radius Interasse di perforazione	mm	4135-5500 4085-5540
B	Max. height from ground Altezza max. da terra	m	27,5 32
C	Max. height from ground without jib Altezza max da terra senza falchetto	m	21,8 25,7
D	Max. rotary head stroke Corsa max. rotaria	m	15 19,2
E	Max. tool length Lunghezza massima utensile	m	18,2 22,2
Max. depth Profondità max.		m	23,2 27,4
Extraction force Nominal/Effective Forza di estrazione Nominale/Efettiva	kN	585/470	420/335
Crowd force Nominal/Effective Forza di spinta Nominale/Efettiva	kN	420/335	420/335
Operating weight w/o sheet pile Peso attrezzatura senza palloncola	kg	~79850	~80100

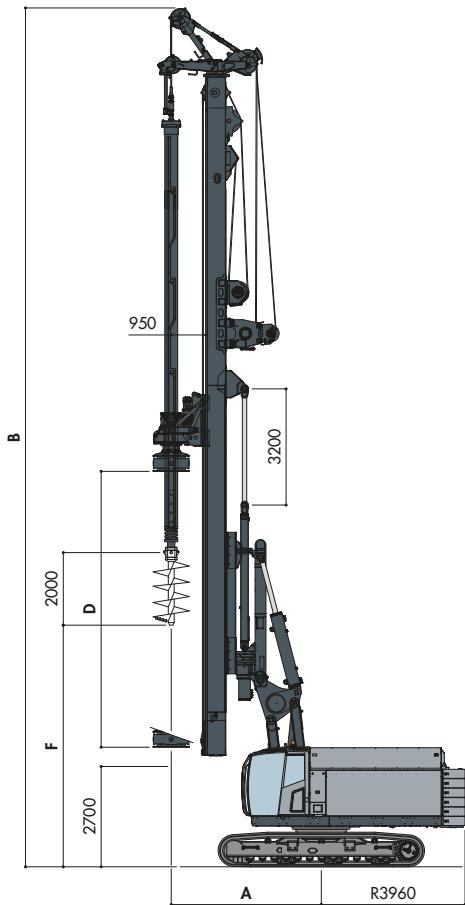
Rotary head Testa di rotazione

R20.355

Max. torque Coppia max.	kNm	204
Max. speed Velocità max.	rpm	42

BORED PILING

ALLESTIMENTO PALI

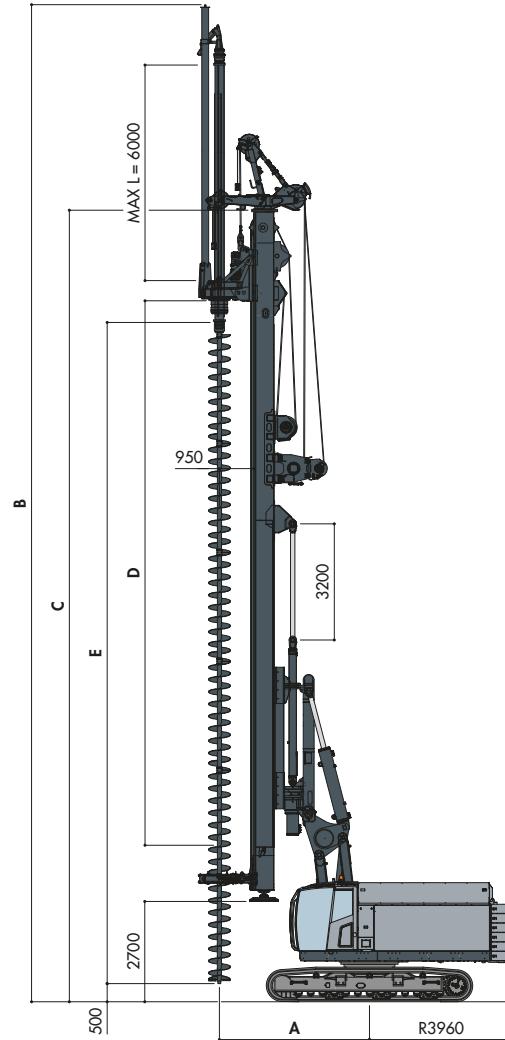


CV18-F

A	Working radius Interasse di perforazione	mm	4135-5500	
B	Max. height from ground Altezza max. da terra	m	23,6	
D	Max. rotary head stroke Corsa max. rotary	m	7,6	
Kelly bar length Lunghezza nominale aste	7500	9500	11000	
F	Max. ground clearance under tool Altezza max. utensile da terra	m	8	8
P	Max. depth - 3 elements kelly bars Profondità max. - aste a 3 elementi	m	21	27
P	Max. depth - 4 elements kelly bars Profondità max. - aste a 4 elementi	m	27,5	35,5
Operating weight Peso attrezzatura	kg	~82850		

CFA BORED PILING

ALLESTIMENTO PALI CFA



CV18-F CV22-F

A	Working radius Interasse di perforazione	mm	4135-5500	4085-5540
B	Max. height from ground Altezza max. da terra	m	27,5	32
D	Max. rotary head stroke Corsa max. rotary	m	15	19,2
E	Max. tool length Lunghezza massima utensile	m	18,2	22,2
Max. depth Profondità max.	m	23,2	27,4	
Extraction force Nominal/Effective Forza di estrazione Nomina/Efettiva	kN	585/470	420/335	
Crowd force Nominal/Effective Forza di spinta Nomina/Efettiva	kN	420/335	420/335	
Operating weight w/o tool Peso attrezzatura senza utensile	kg	~79850	~80100	

Rotary head
Testa di rotazione

R20.355

Max. torque Coppia max.	kNm	204
Max. speed Velocità max.	rpm	42

Rotary head
Testa di rotazione

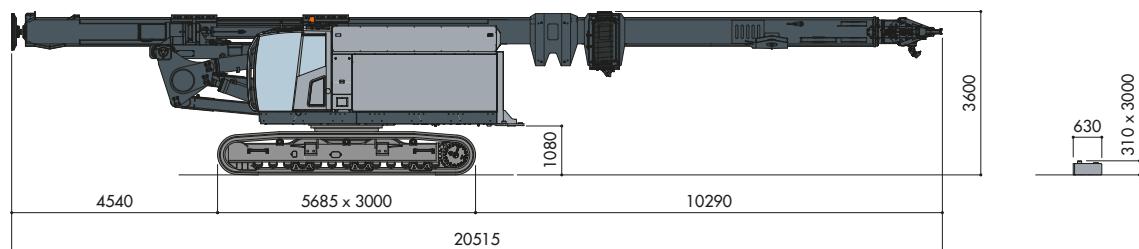
R20.355

Max. torque Coppia max.	kNm	204
Max. speed Velocità max.	rpm	42

TRANSPORT DIMENSIONS

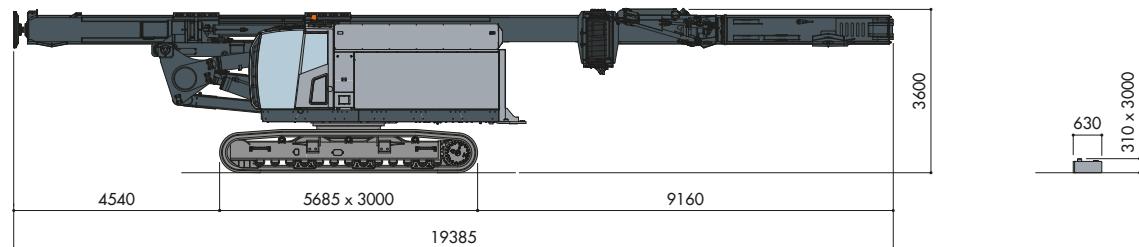
DIMENSIONI DI TRASPORTO

CV18-F



Weight of equipment without attachment / Peso attrezzatura senza allestimento ~ **59300 kg**

CV22-F



Weight of equipment without attachment / Peso attrezzatura senza allestimento ~ **60500 kg**

STANDARD EQUIPMENT

DISPOSITIVI DI SERIE

BASIC MACHINE

SPM control system - Smart Power Management

12" touch screen display for visualization and setting of drilling parameters

7" display for engine management, and video units

Mast lifting and lowering aid

Drilling depth measurement and automatic mast verticality control

Load cells to monitoring extraction and pull forces

Hook on auxiliary line

Protective roof guard (FOPS compliant)

Air condition system

Cab front and side catwalk

Tool box

Electric refueling pump

Automatic idling mode with engine for fuel saving

Start/stop system for fuel saving

MACCHINA BASE

Sistema SPM di controllo e gestione della potenza

Monitor touch-screen da 12" per visualizzazione e settaggio dei parametri di lavoro

Display da 7" per la gestione motore e delle telecamere di sorveglianza

Sistema di sollevamento e abbassamento automatico del mast

Misura profondità perforazione e controllo automatico verticalità mast

Celle di carico per la misura di estrazione e spinta

Gancio sulla fune dell'argano ausiliario

Protezione FOPS su cabina operatore

Aria condizionata in cabina operatore

Pedana anteriore e laterale sulla cabina operatore

Cassetta attrezzi

Pompa elettrica per riempimento gasolio

Auto-idling del motore diesel per risparmio di carburante

Sistema start/stop per risparmio carburante



Devices which reduce the environmental impact of rig / Dispositivi che riducono l'impatto ambientale dell'attrezzatura

OPTIONAL EQUIPMENT

DISPOSITIVI OPTIONAL

BASIC MACHINE

MACCHINA BASE

Lateral catwalks and handrails	Pedane laterali e ringhiere anticaduta
Railings on upperstructure	Ringhiere anticaduta sulla parte superiore del carro
Front cab protective guard	Griglia frontale cabina
Automatic centralized greasing system	Sistema automatico di ingrassaggio centralizzato
Radio remote control for rigging, derigging, tracking and positioning	Radiocomando per montaggio, smontaggio, traslazione e posizionamento
Video unit with two cameras and one 7" monitor to control winches and the rear of the machine	Telecamere di controllo e monitor da 7" in cabina per sorvegliare argani e zona posteriore macchina
Camera for panoramic view of the area around the machine	Telecamera per visualizzazione panoramica area intorno alla macchina
CFM - Casagrande FleetMaster remote rig control and monitoring via internet	CFM - Casagrande FleetMaster monitoraggio e controllo delle macchine via internet
CDR - Casagrande Data Recorder System for monitoring and recording working parameters. Available for every foundation technique	CDR - Casagrande Data Recorder Sistema monitoraggio e registrazione dei parametri di lavoro. Disponibile per ogni tecnica di fondazione
Transport kit according to required transport configuration	Kit di trasporto in funzione della modalità di trasporto

ROTARY PILING EQUIPMENT

ALLESTIMENTO PALI

Cardanic joint for rotary head	Giunto cardanico per testa di perforazione
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CFA EQUIPMENT

ALLESTIMENTO CFA

Measurement and visualization of extraction force	Misurazione e visualizzazione della forza di estrazione
Star CFA cleaner	Pulitore elica a stella
CFA lower guide with hydraulic opening	Centratore elica con apertura idraulica
Hydraulic vibrator for cages	Vibratore idraulico per gabbie
CFA control and adjustment of feed speed	Controllo e regolazione della velocità di avanzamento in CFA
Instrument for measuring, displaying and recording of drilling parameters. Complete with software for processing data on a PC	Strumentazione di misura, visualizzazione e registrazione dei parametri di lavoro. Software per post trattamento dati registrati
Instrument for continuous extraction of CFA	Strumentazione per estrazione CFA continua



casagrande
after - sales service



**WARRANTY
& SERVICING**



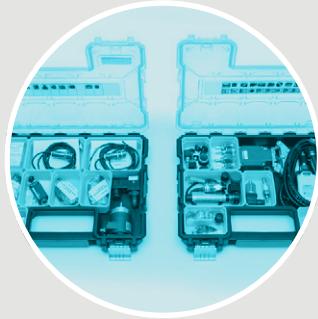
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