



CV-T

TELESCOPIC LEADER MAST



12 VALUABLE REASONS TO CHOOSE CV-T



**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-T 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-T range, part of the CV Series, is a versatile line of multi-purpose pile drivers designed for deep foundation and ground improvement projects. The telescopic 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 telescopic 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-T models combine high performance and stability, offering reliable results across a wide range of operating conditions.

INFORMAZIONI TECNICHE

Le nuove Casagrande CV-T 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 telescopico 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 di un mast telescopico modulare progettato per supportare carichi rilevanti, 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-T sono attrezzature versatili che garantiscono prestazioni elevate e stabilità, in un'ampia gamma di condizioni operative.

1 HYDRAULIC VIBRATOR

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 TELESCOPIC MAST

with hydraulic ram and reeving system for high crowd and extraction force

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

Extendable triple grouser track shoes

1 VIBRATORE IDRAULICO

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 TELESCOPICO

Con sfilo idraulico e sistema di rinvio con elevata forza di estrazione e spinta

5 ROBUSTO SUPPORTO MAST

Completo di cinematismo 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



CV-T

PERFORMANCE - PRESTAZIONI



16 / 19 / 21 m

Max. sheet pile length / Lunghezza max. palancola



90° / 90°

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



100 kNm (CV16-T / CV19-T)

150 kNm (CV21-T)

Allowable torque / Coppia ammissibile



563 kW

Diesel engine power / Potenza motore



70 / 76 / 80 t

Operating weight / Peso attrezzatura

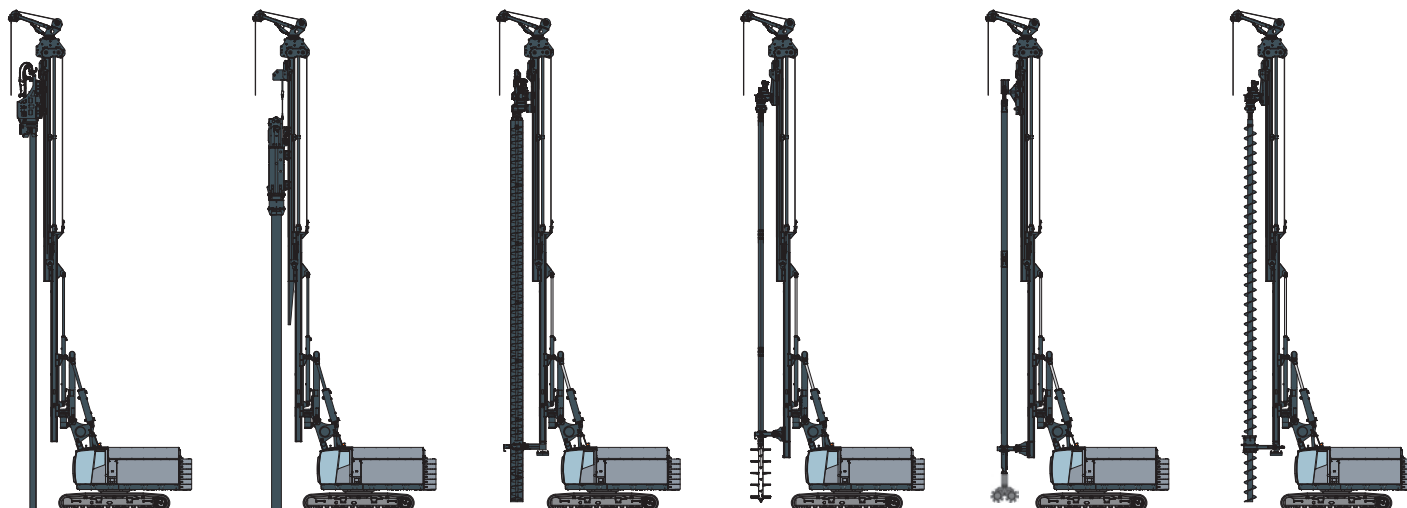
Maximum values vary according to the set-up
I valori massimali variano in funzione dell'allestimento



PERFORMANCE

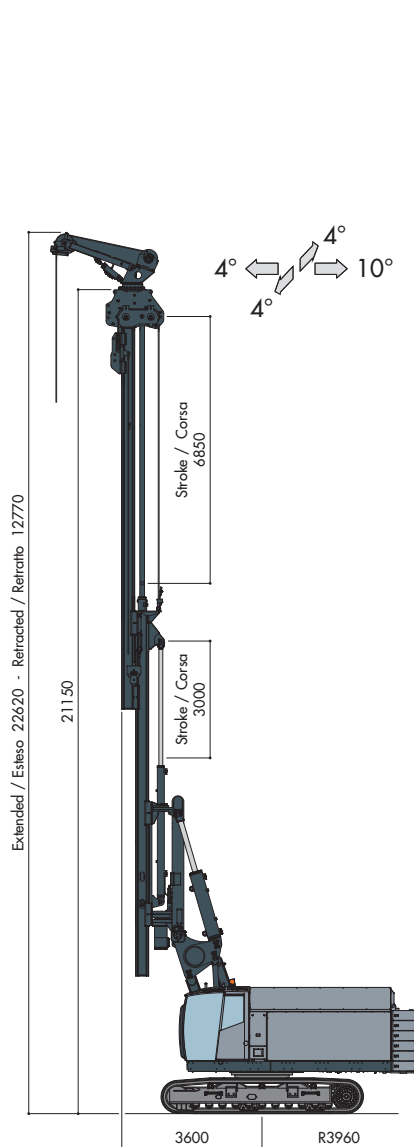
PRESTAZIONI

ATTACHMENTS	ALLESTIMENTO		CV16-T	CV19-T	CV21-T
SHEET PILING	PALANCOLE				
Max. pile length	Lunghezza max. palanca	m	16	19	21
HYDRAULIC HAMMER	MARTELLLO IDRAULICO				
Max. pile length	Lunghezza max. palo	m	12	15	17
CASED CFA VdW	CFA INTUBATI VdW				
Max. depth	Profondità max.	m	16	18,7	20,7
SOILMIXING	SOILMIXING				
Max. depth	Profondità max.	m	15,9	18,6	20,6
CUTTER SOIL MIXING	CUTTER SOIL MIXING				
Max. depth	Profondità max.	m	15,9	18,6	20,6
CFA PILES	PALI CFA				
Max. depth	Profondità max.	m	16	18,7	20,7

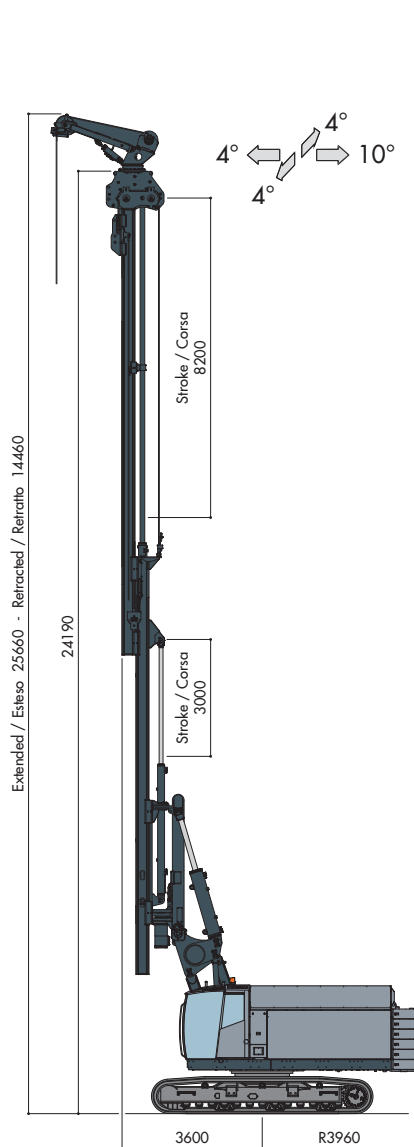


ARRANGEMENTS

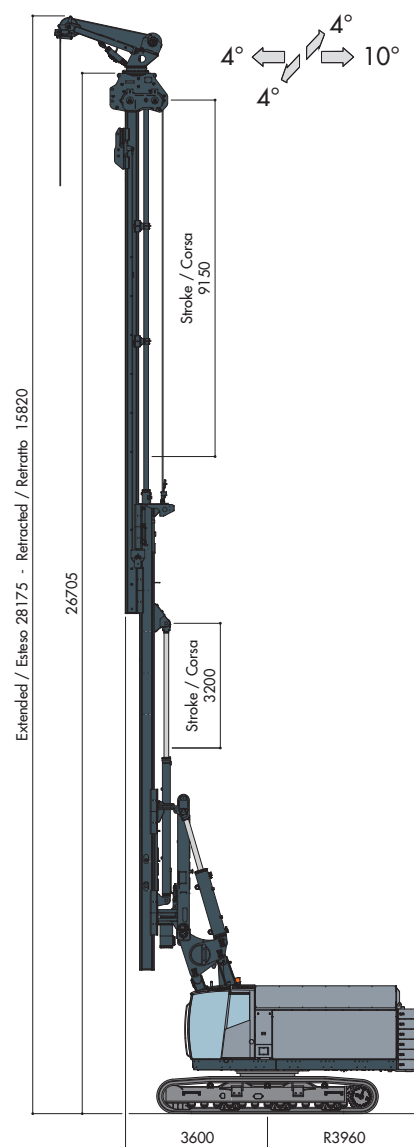
ALLESTIMENTI



CV16-T



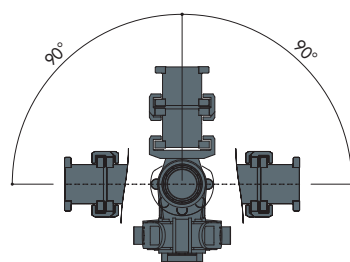
CV19-T



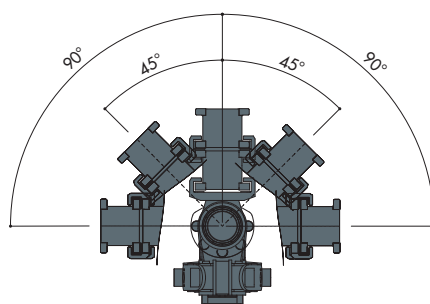
CV21-T

MAST ROTATION ANGLES

ANGOLI ROTAZIONE MAST



FREE TURNING ANGLE
ROTAZIONE LIBERA



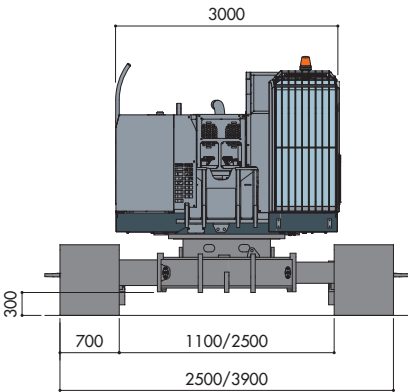
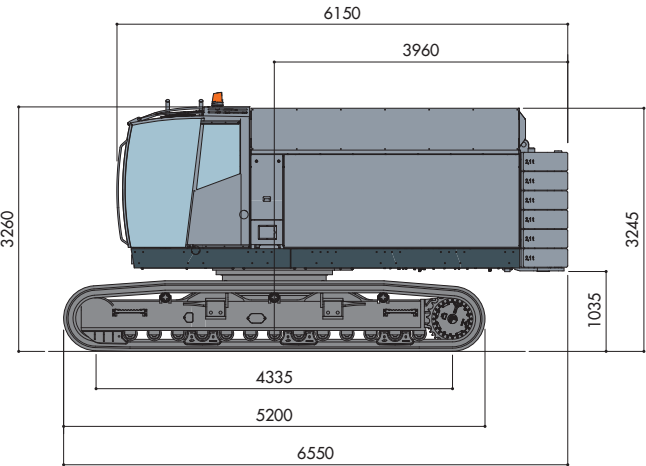
FIXED TURNING ANGLE
ROTAZIONE BLOCCATA



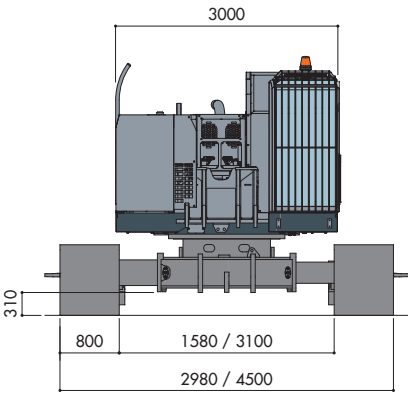
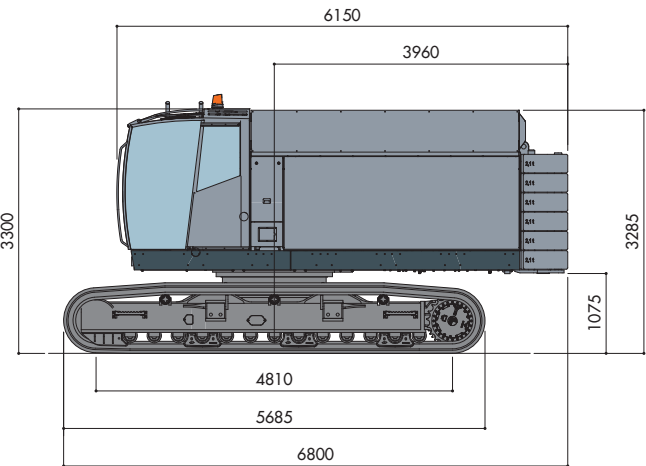
CRAWLER DIMENSIONS

DIMENSIONI CARRO

CV16-T BASE CARRIER
CV16-T CARRO BASE



CV19-T / CV21-T BASE CARRIER
CV19-T / CV21-T CARRO BASE



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	CV16-T	CV19/21-T
Class		Classe	D5	D5+
Travel speed		Velocità traslazione	0 ÷ 1,6 km/h	0 ÷ 3 km/h
Traction force - Nominal / Effective		Forza di trazione - Nominale / Effettiva	515 / 410 kN	530 / 420 kN
Weight of basic machine without attachment		Peso macchina base senza attrezzatura	~47700 kg	~51900/54300 kg
AUXILIARY WINCH (optional)		ARGANO AUSILIARIO (optional)		
Line pull on 1st 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	

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.



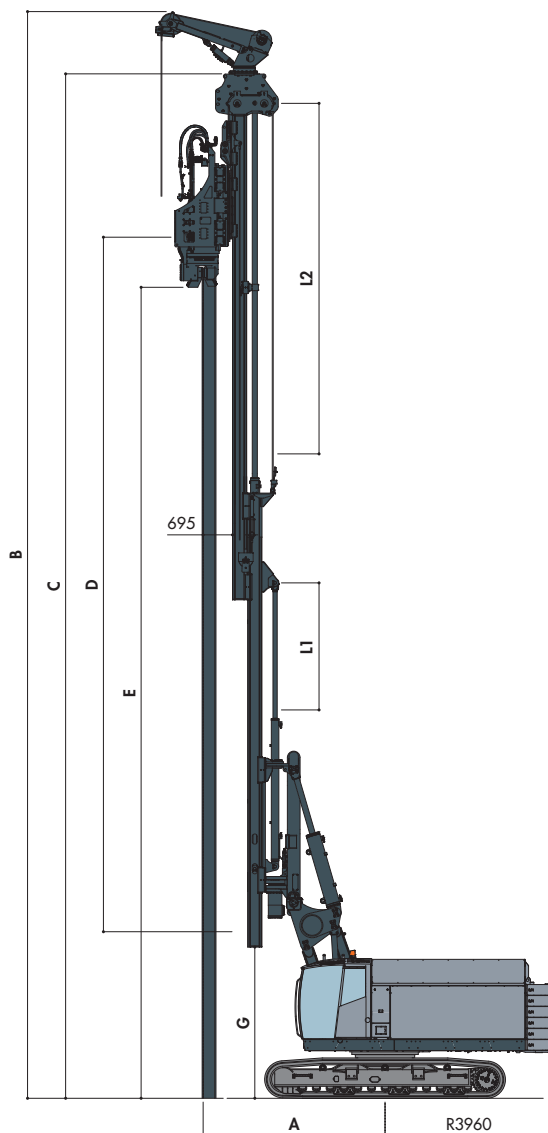
SHEET PILING

ALLESTIMENTO PER PALANCOLE

Hydraulic 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

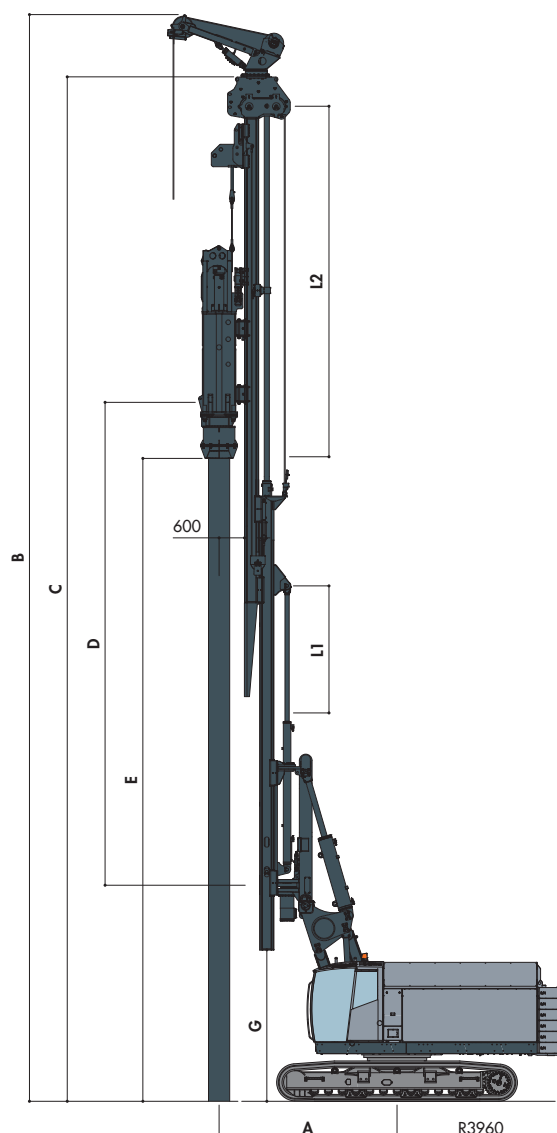


			CV16-T	CV19-T	CV21-T
A	Working radius Interasse di lavoro	mm	4300-5300	4300-5300	4350-5350
B	Max. height from ground Altezza max. da terra	m	22,6	25,7	28,2
C	Max. height from ground without jib Altezza max da terra senza falchetto	m	21,2	24,2	26,7
D	Max. vibrator stroke Corsa max. vibratore	m	13,7	16,4	18,3
E	Max. sheet pile length Lunghezza max. palanca	m	16,1	19,1	21,6
G	Max. distance off ground Distanza max. da terra	m	3,5	3,5	3,6
L1	Max cylinder stroke Corsa max. martinetto	m	3	3	3,2
L2	Max cylinder stroke Corsa max. martinetto	m	6,85	8,2	9,15
	Extraction force at sledge Forza di estrazione alla slitta	kN	200	200	260
	Crowd force at sledge Forza di spinta alla slitta	kN	140	140	140
	Max. weight of vibrator Peso max. vibratore	kg	6000	6000	6000
	Operating weight Peso attrezzatura	kg	~67900	~73500	~77500

HYDRAULIC HAMMER

BATTIPALO IDRAULICO

Hydraulic hammer Martello idraulico		CX50
Drop height Altezza di caduta	mm	1200
Energy Energia	kNm	50
Dropweight mass Massa movimentata	kg	4000



			CV16-T	CV19-T	CV21-T
A	Working radius Interasse di lavoro	mm	4200-5200	4200-5200	4250-5250
B	Max. height from ground Altezza max. da terra	m	22,6	25,7	28,2
C	Max. height from ground without jib Altezza max da terra senza falchetto	m	21,2	24,2	26,7
D	Max. hammer stroke Corsa max. martello	m	9,4	12,4	14,4
E	Max. pole length Lunghezza max. palo	m	12,1	15,1	17,3
G	Max. distance off ground Distanza max. da terra	m	3,5	3,5	3,6
L1	Max cylinder stroke Corsa max. martinetto	m	3	3	3,2
L2	Max cylinder stroke Corsa max. martinetto	m	6,85	8,2	9,15
	Extraction force at sledge Forza di estrazione alla slitta	kN	200	200	260
	Crowd force at sledge Forza di spinta alla slitta	kN	140	140	140
	Max. weight of hammer Peso max. martello	kg	8000	8000	8000
	Operating weight Peso attrezzatura	kg	~70000	~75200	~79100

CASED CFA VdW

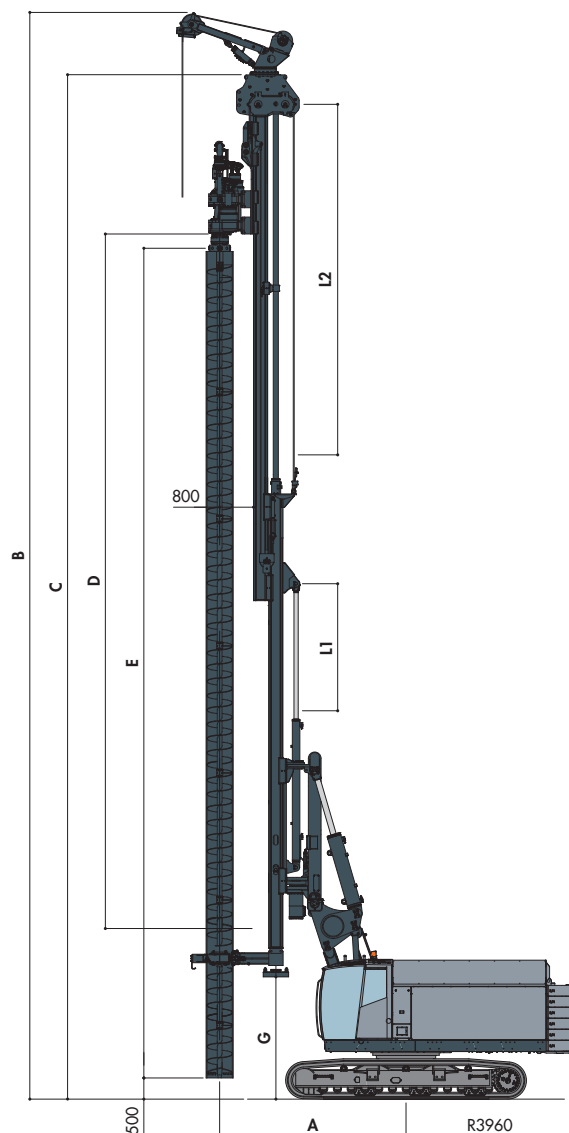
CFA INTUBATI VdW

Rotary head

Testa di rotazione

VDW 1005

Casing Tubo	Max. torque / Coppia max.	kNm	100
	Max. speed / Velocità max.	rpm	41
Auger Elica	Max. torque / Coppia max.	kNm	50
	Max. speed / Velocità max.	rpm	69



			CV16-T	CV19-T	CV21-T
A	Working radius Interasse di lavoro	mm	4400-5400	4400-5400	4450-5450
B	Max. height from ground Altezza max. da terra	m	22,6	25,7	28,2
C	Max. height from ground without jib Altezza max da terra senza falchetto	m	21,2	24,2	26,7
D	Max. rotary head stroke Corsa max. rotary	m	13,7	16,4	18,3
E	Max. tool length Lunghezza max. utensile	m	16,5	19,6	21,8
G	Max. distance off ground Distanza max. da terra	m	2,8	2,8	2,9
L1	Max cylinder stroke Corsa max. martinetto	m	3	3	3,2
L2	Max cylinder stroke Corsa max. martinetto	m	6,85	8,2	9,15
	Max. drilling depth Profondità max. di perforazione	m	16	18,7	20,7
	Max. drilling diameter Diametro max. di perforazione	mm	600	600	600
	Extraction force at sledge Forza di estrazione alla slitta	kN	200	200	260
	Crowd force at sledge Forza di spinta alla slitta	kN	140	140	140
	Operating weight w/o auger and casing Peso attrezzatura senza elica e rivestimento	kg	~66500	~71800	~75600

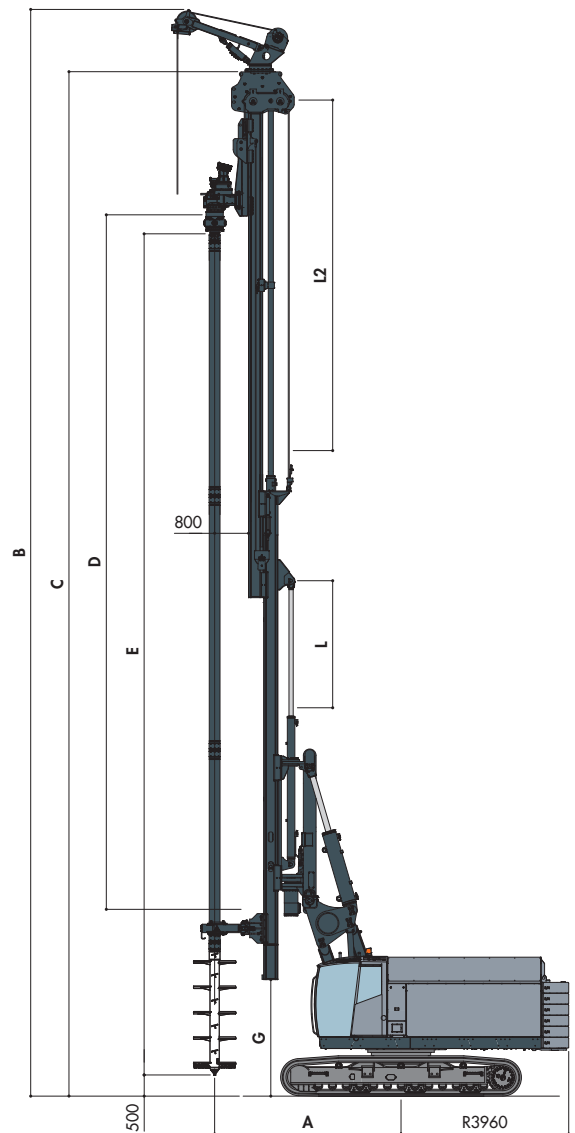
SOILMIXING

SOILMIXING

Rotary head Testa di perforazione

RHP 10

Max. torque Coppia max	kNm	100
Max. speed Velocità max.	rpm	69

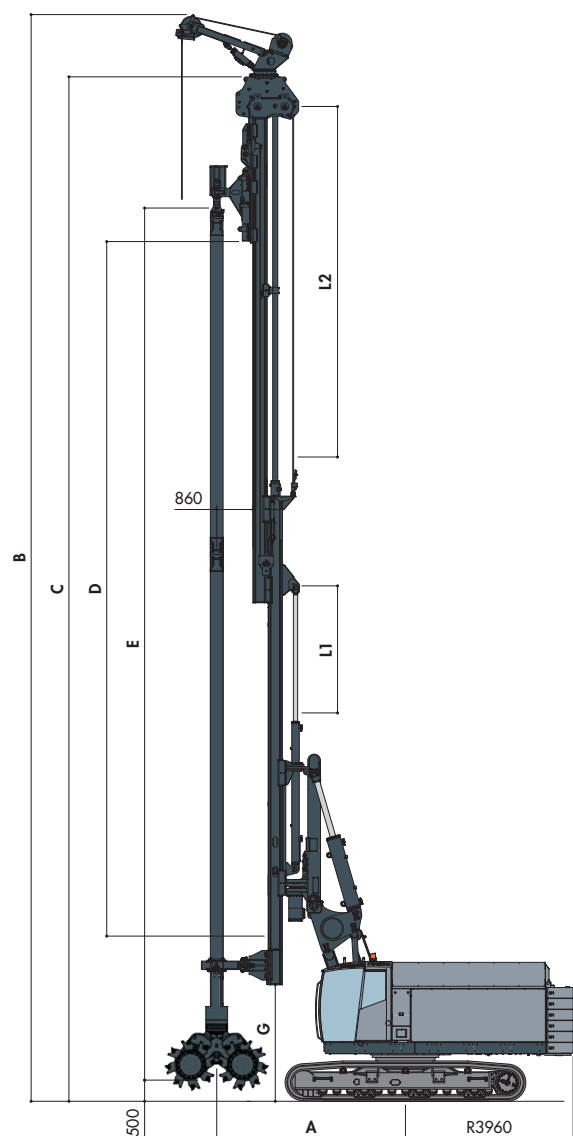


			CV16-T	CV19-T	CV21-T
A	Working radius Interasse di lavoro	mm	4400-5400	4400-5400	4450-5450
B	Max. height from ground Altezza max. da terra	m	22,6	25,7	28,2
C	Max. height from ground without jib Altezza max da terra senza falchetto	m	21,2	24,2	26,7
D	Max. rotary head stroke Corsa max. rotary	m	13,7	16,4	18,3
E	Max. tool length Lunghezza max. utensile	m	16,8	19,8	22
G	Max. distance off ground Distanza max. da terra	m	2,7	2,7	2,8
L1	Max cylinder stroke Corsa max. martinetto	m	3	3	3,2
L2	Max cylinder stroke Corsa max. martinetto	m	6,85	8,2	9,15
	Max. depth Profondità max.	m	15,9	18,6	20,6
	Max. mixing diameter Diametro max. di trattamento	mm	1000	1000	1000
	Extraction force at sledge Forza di estrazione alla slitta	kN	200	200	260
	Crowd force at sledge Forza di spinta alla slitta	kN	140	140	140
	Operating weight w/o tools Peso attrezzatura senza utensili	kg	~65000	~70150	~74000

CUTTER SOIL MIXING

CUTTER SOIL MIXING

Cutter Soil Mixing Cutter Soil Mixing		HT5000	HT7500
Panel length Lunghezza pannello	mm	2400/2800	2400/2800
Panel width Larghezza pannello	mm	450 - 800	500 - 1200
Max. Nominal torque Coppia nominale max.	kNm	2x50	2x75
Max. Wheel speed Velocità ruote max.	rpm	45	30

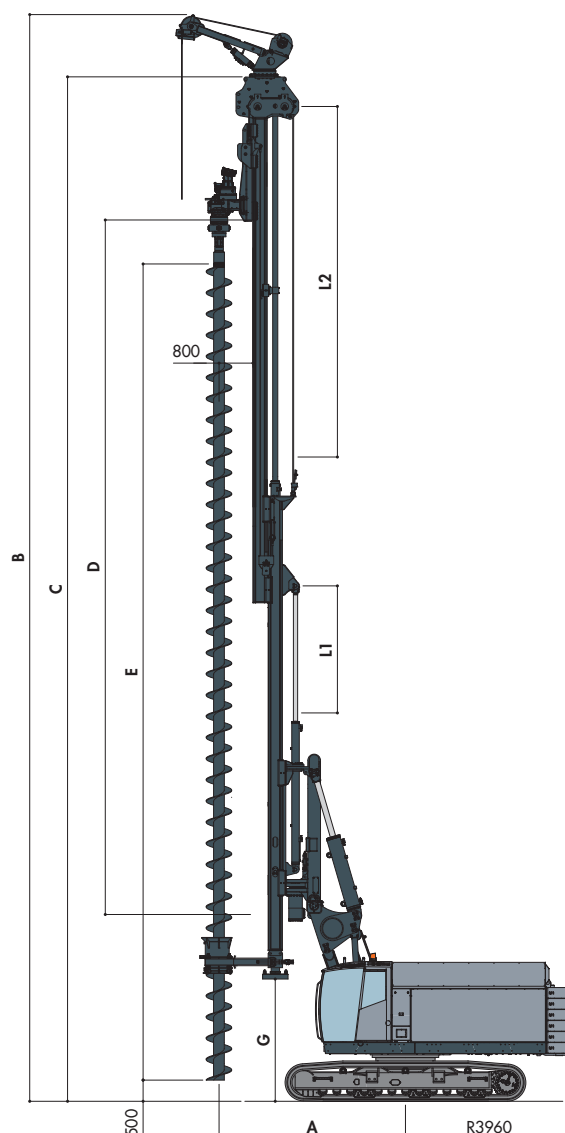


			CV16-T	CV19-T	CV21-T
A	Working radius Interasse di lavoro	mm	4460-5460	4460-5460	4510-5510
B	Max. height from ground Altezza max. da terra	m	22,6	25,7	28,2
C	Max. height from ground without jib Altezza max da terra senza falchetto	m	21,2	24,2	26,7
D	Max. vibrator stroke Corsa max. vibratore	m	13,7	16,4	18,3
E	Max. tool length Lunghezza max. utensile	m	16,5	20,5	22,8
G	Max. distance off ground Distanza max. da terra	m	2,7	2,7	2,8
L1	Max cylinder stroke Corsa max. martinetto	m	3	3	3,2
L2	Max cylinder stroke Corsa max. martinetto	m	6,85	8,2	9,15
Max. depth Profondità max.		m	15,9	18,6	20,6
Extraction force at sledge Forza di estrazione alla slitta		kN	200	200	260
Crowd force at sledge Forza di spinta alla slitta		kN	140	140	140
Operating weight Peso attrezzatura		kg	~72500	~78300	~82200

CFA BORED PILING

ALLESTIMENTO PALI CFA

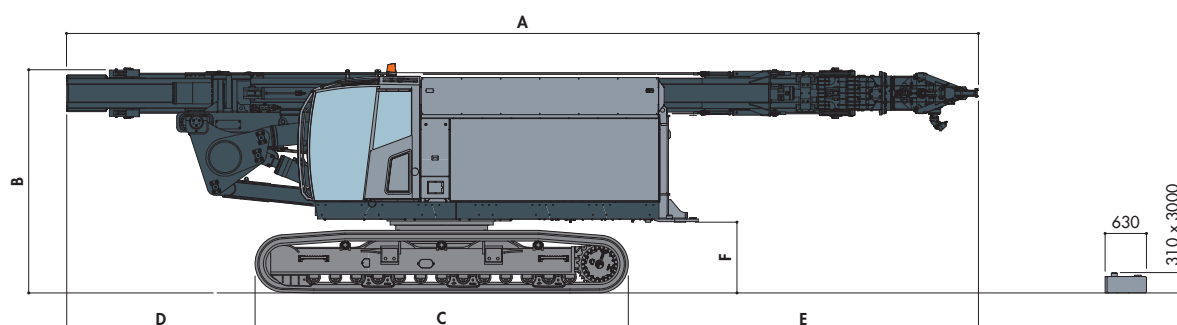
Rotary head Testa di perforazione		RHP 10 CV16/19	RHP 15 CV21
Max. torque Coppia max	kNm	100	150
Max. speed Velocità max.	rpm	69	69



			CV16-T	CV19-T	CV21-T
A	Working radius Interasse di lavoro	mm	4400-5400	4400-5400	4450-5550
B	Max. height from ground Altezza max. da terra	m	22,6	25,7	28,2
C	Max. height from ground without jib Altezza max da terra senza falchetto	m	21,2	24,2	26,7
D	Max. rotary head stroke Corsa max. rotary	m	13,7	16,4	18,3
E	Max. tool length Lunghezza max. utensile	m	16,2	19,2	21,5
G	Max. distance off ground Distanza max. da terra	m	2,8	2,8	2,9
L1	Max cylinder stroke Corsa max. martinetto	m	3	3	3,2
L2	Max cylinder stroke Corsa max. martinetto	m	6,85	8,2	9,15
	Max. drilling depth Profondità di perforazione max.	kN	16	18,7	20,7
	Max. drilling diameter Diametro di perforazione max.	mm	600	600	750
	Extraction force at sledge Forza di estrazione alla slitta	kN	200	200	260
	Crowd force at sledge Forza di spinta alla slitta	kg	140	140	140
	Operating weight w/o auger Peso attrezzatura senza elica	kg	~65000	~70150	~75100

TRANSPORT DATA

DATI DI TRASPORTO



			CV16-T	CV19-T	CV21-T
A	Transport length Transport length	mm	12240	13895	15345
B	Transport height Altezza di trasporto	mm	3360	3400	3400
C	Overall length / width of crawlers Lunghezza / Larghezza cingoli	mm	5197 / 2500	5685 / 2980	5685 / 2980
D	Front overhang Sbalzo anteriore	mm	2010	2875	3100
E	Rear overhang Sbalzo posteriore	mm	5035	5335	6555
F	Clearance under counterweight Altezza sotto contrappeso	mm	1035	1075	1075
Mass of equipment in transport (without auxiliary winch/jib, without counterweight and without attachment) Massa attrezzatura in trasporto (senza falchetto, senza zavorre e allestimento)		kg	51500	55000	57000
Standard counterweight Zavorra standard		kg	8500 (5x1700)	10200 (6x1700)	12600 (6x2100)
Auxiliary winch/jib (optional) Falchetto / Argano ausiliario (optional)		kg	1120	1120	1120



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 

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

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 



OPTIONAL EQUIPMENT

DISPOSITIVI OPZIONALI

BASIC MACHINE

Lateral catwalks and handrails

Railings on upperstructure

Front cab protective guard

Automatic centralized greasing system

Radio remote control for rigging, derigging, tracking and positioning

Video unit with two cameras and one 7" monitor to control winches and the rear of the machine

Camera for panoramic view of the area around the machine

Load cells on auxiliary winch to monitoring the lifted load

CFM - Casagrande FleetMaster remote rig control and monitoring via internet

CDR - Casagrande Data Recorder
System for monitoring and recording working parameters. Available for every foundation technique

Transport kit according to required transport configuration

MACCHINA BASE

Pedane laterali e ringhiere anticaduta

Ringhiere anticaduta sulla parte superiore del carro

Griglia frontale cabina

Sistema automatico di ingrassaggio centralizzato

Radiocomando per montaggio, smontaggio, traslazione e posizionamento

Telecamere di controllo e monitor da 7" in cabina per sorvegliare argani e zona posteriore macchina

Telecamera per visualizzazione panoramica area intorno alla macchina

Celle di carico sull'argano ausiliario per il controllo del carico di sollevamento

CFM - Casagrande FleetMaster monitoraggio e controllo delle macchine via internet

CDR - Casagrande Data Recorder
Sistema monitoraggio e registrazione dei parametri di lavoro. Disponibile per ogni tecnica di fondazione

Kit di trasporto in funzione della modalità di trasporto

CFA EQUIPMENT

Measurement and visualization of extraction force

Star CFA cleaner

CFA lower guide with hydraulic opening

Hydraulic vibrator for cages

CFA control and adjustment of feed speed

Instrument for measuring, displaying and recording of drilling parameters. Complete with software for processing data on a PC

Instrument for continuous extraction of CFA

ALLESTIMENTO CFA

Misurazione e visualizzazione della forza di estrazione

Pulitore elica a stella

Centratore elica con apertura idraulica

Vibratore idraulico per gabbie

Controllo e regolazione della velocità di avanzamento in CFA

Strumentazione di misura, visualizzazione e registrazione dei parametri di lavoro. Software per post trattamento dati registrati

Strumentazione per estrazione CFA continua



casagrande

after - sales service



**WARRANTY
& SERVICING**



**TECHNICAL
ASSISTANCE**



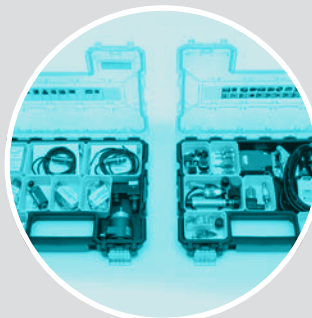
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