



TCM 888^{plus}

MACCHINA A CATENA DA GALLERIA
CHAIN SAW FOR MARBLE UNDERGROUND MINING



Benetti Macchine
the evolution of a tradition

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LA TAGLIATRICE A CATENA DA GALLERIA MODELLO TCM 888 È MONTATA SU CARRO CINGOLATO E RAPPRESENTA LA MACCHINA PIÙ AVANZATA PER L'APERTURA E LO SVILUPPO DI CAVE IN GALLERIA.

THE CHAIN SAW MACHINE MODEL TCM 888 IS MOUNTED ON CRAWLER AND IS THE MOST ADVANCED MACHINE FOR THE OPENING, DEVELOPMENT AND EXTENTION OF UNDERGROUND MARBLE MINES.



Caratteristiche principali:

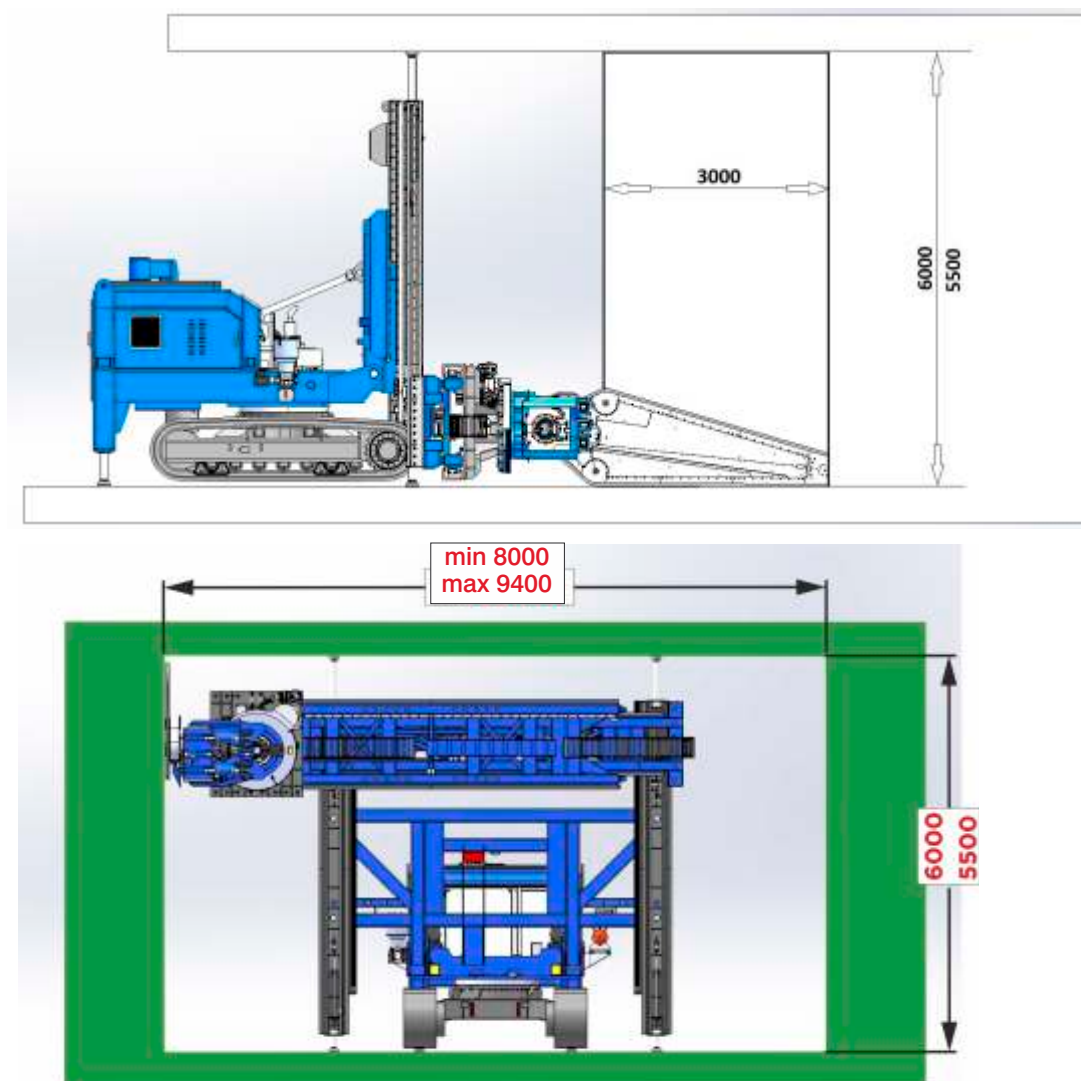
La TCM 888 è una tagliatrice a catena progettata per l'apertura e la realizzazione di gallerie in cave di marmo e materiali simili.

La coltivazione delle cave è sempre più orientata alla realizzazione di cave in galleria che consentono l'ottimizzazione dei cicli produttivi e un maggior rispetto per le problematiche ambientali e di sicurezza.

Main features:

The TCM 888 is a chain saw designed to open and develop underground mines of marble and of similar stone materials.

Underground mining development is becoming a more and more common practice in many marble quarry operations. This method is often considered preferable to the open pit quarrying in terms of production optimization, efficiency, safety and environment preservation.



DATI TECNICI / TECHNICAL DATA

Potenza elettrica installata / Total installed power	70 kW
Peso / Weight	52000 kg
Velocità avanzamento carro / Crawler speed	0 - 1.2 km/hr
Massima pendenza / Max slope allowed	25%
Potenza power pack / Power pack capacity	75 kW
Consumo gasolio / Diesel fuel consumption	15-20 l/hr
Capacità serbatoio / Fuel tank capacity	70 l
Velocità rotazione catena / Chain rotation speed	0-1.2 m/sec
Velocità traslazione lavoro / Work travel speed	0-15 cm/min.
Rotazione testa operatrice / Head rotation	360°
Rotazione braccio / Arm rotation	360°
Capacità serbatoio olio idraulico / Hydraulic oil tank capacity	290 l
Capacità serbatoio grasso / Grease tank capacity	30 kg
Compressore a bordo / On-board air compressor	50 l - 1.5 kW
Aspiratore / Vacuum system	Optional
Sezione della galleria / Tunnel section	L = min 8 m - max 9.40 m H= 6.00 m or 5.50 m
Profondità di taglio / Cut depth	3 m

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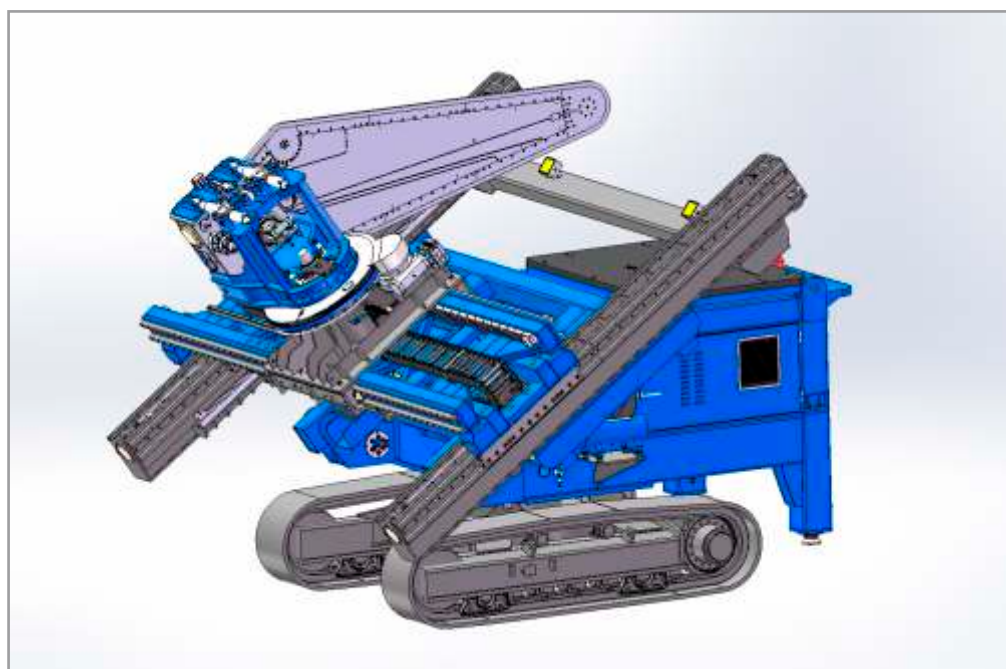
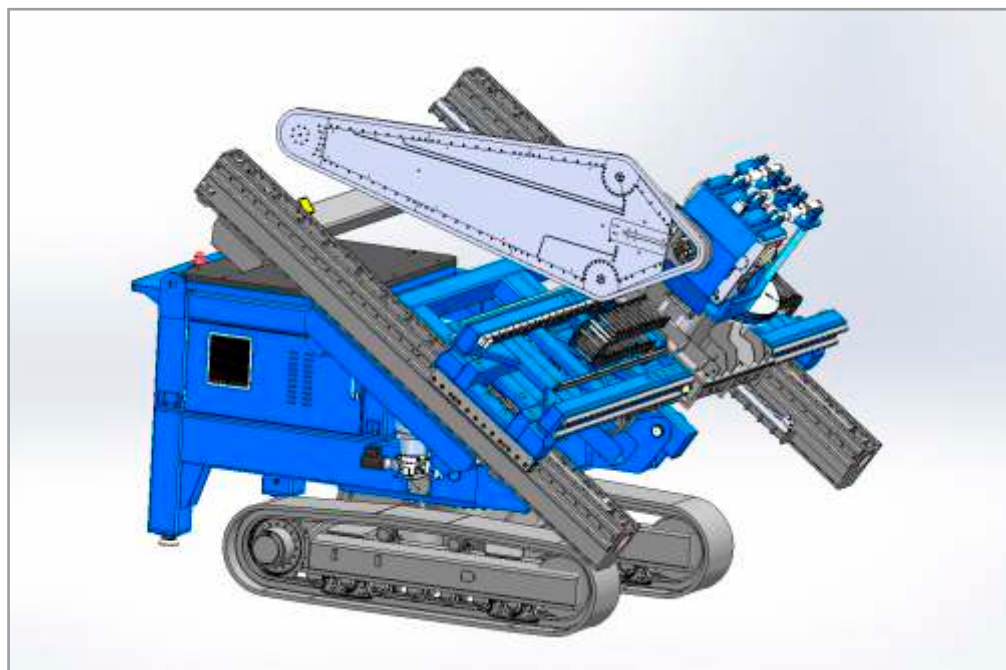
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La macchina è montata su un carro cingolato e può muoversi in modo agevole ed autonomo sia all'interno della galleria che nel piazzale di cava.

Durante lo spostamento la macchina viene configurata come nelle figure a fianco per diminuirne l'ingombro e permettere di superare pendenze fino al 25%.

The machine is mounted on a crawler and it can move easily and autonomously inside the tunnel.

The machine is configured as shown in the next figures to reduce the overall dimensions and to move over slopes up to 25%.



Macchina configurata per lo spostamento. / Machine configured for the movement.

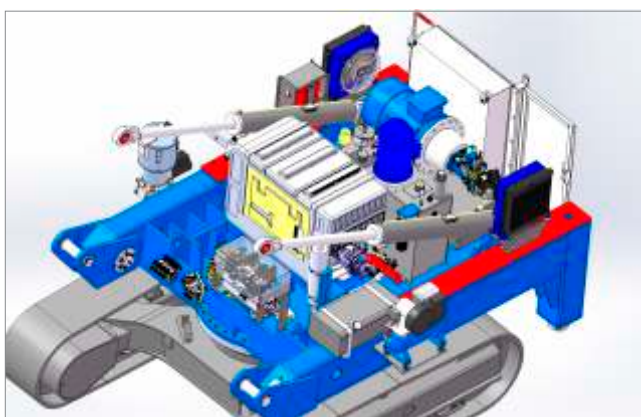


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Tutte le movimentazioni del carro cingolato e i posizionamenti della macchine sono resi possibili da una unità di potenza con motore endotermico montato sul carro stesso.

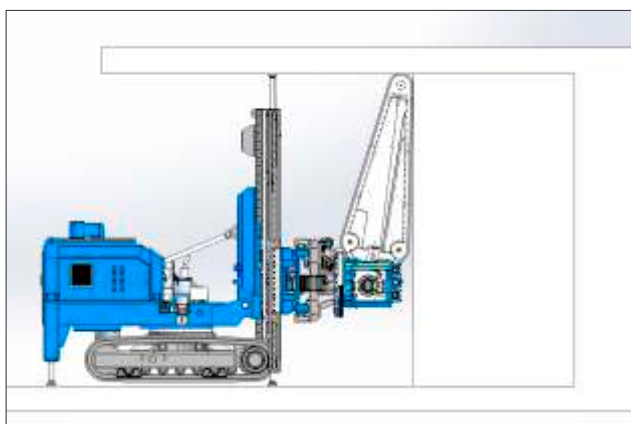
All the movements of the crawler and the positioning devices of the machine are made possible by an on-board "power pack" unit equipped with a diesel engine.



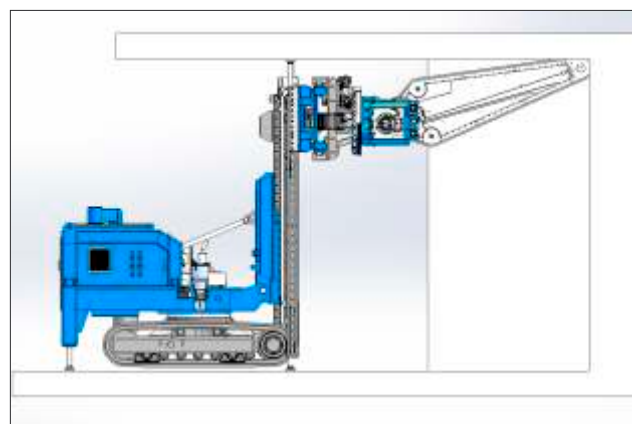
Power Pack montato a bordo macchina
Power Pack mounted on board



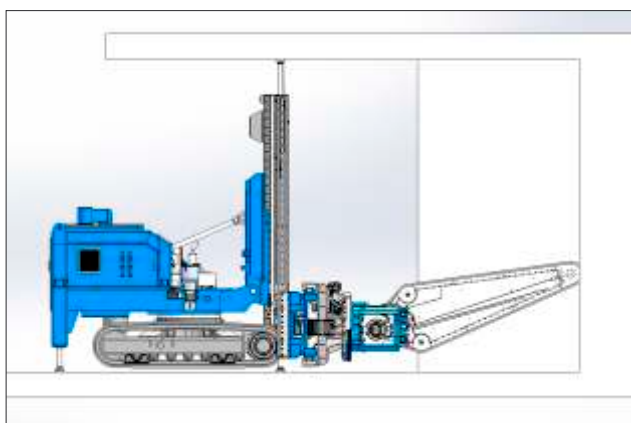
Power Pack



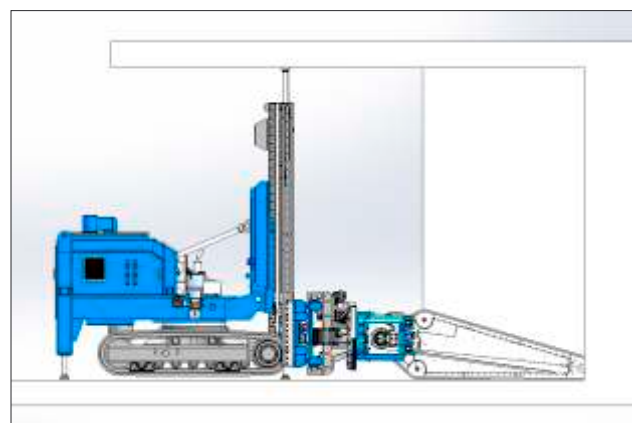
Inizio taglio verticale / Start of a vertical cut
Braccio disegnato per ottimizzare le operazioni di taglio
Arm designed to optimize the cutting operations



Entrata lama con rotazione e traslazione verticale in risalita
Arm entry with rotation and vertical upward travel movement.



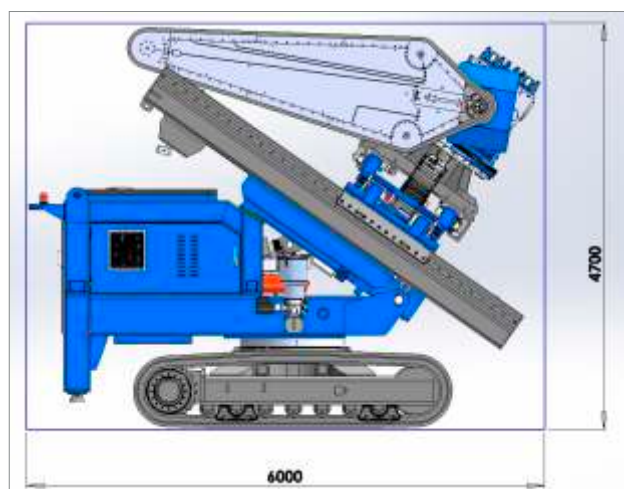
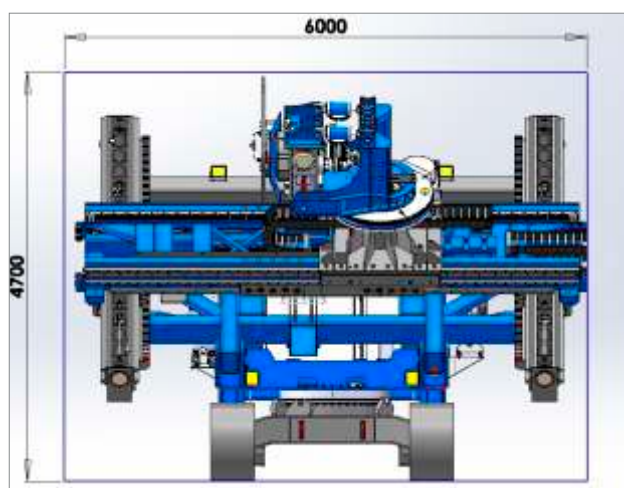
Fine della fase di sola traslazione senza rotazione della lama
End of the cut without arm rotation



Fine del taglio solo con la rotazione della lama
End of the cut after final arm rotation

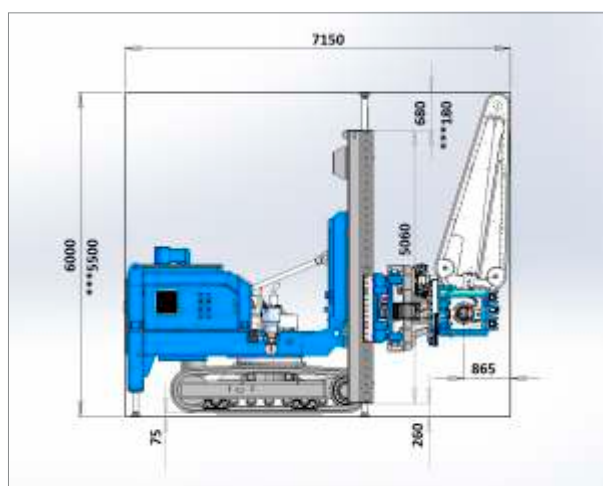
Dimensioni principali della macchina configurata per la movimentazione

Setup and sizes during the movement of the machine



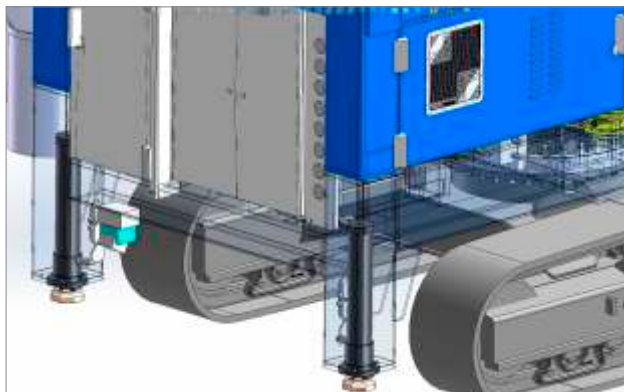
Dimensioni principali della macchina posizionata per un taglio verticale all'interno della galleria

Setup and sizes and of the machine before a vertical cut

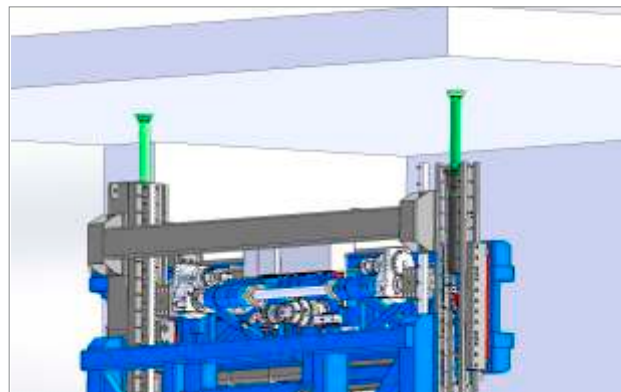


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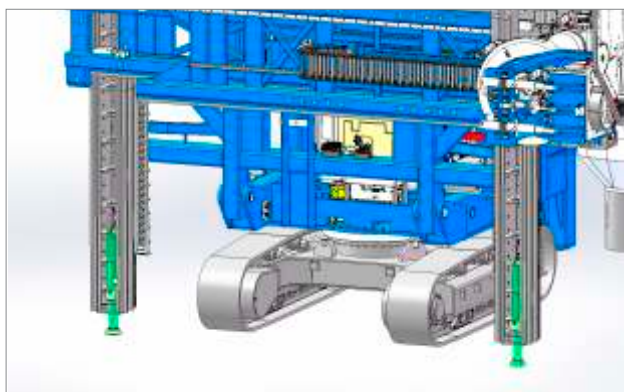
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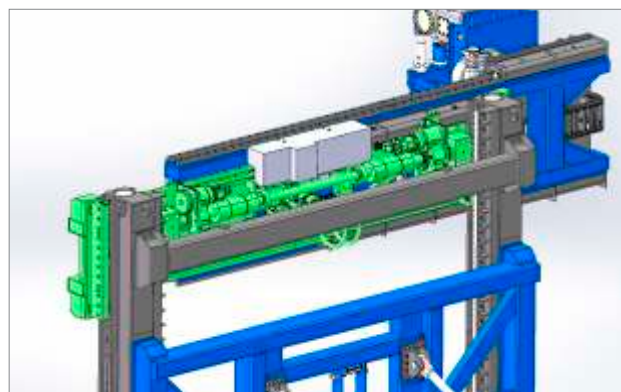
Stabilizzatori posteriori sul telaio portante solidale al carro
Back positioning hydraulic jacks mounted on the crawler frame



Stabilizzatori superiori sulle colonne del telaio portante
Upper positioning hydraulic jacks on two columns of the portal



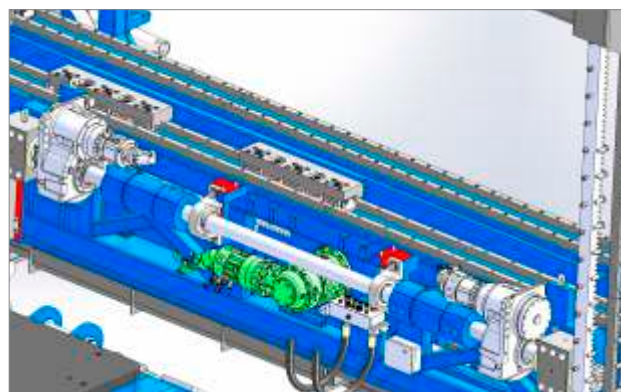
Stabilizzatori inferiori sulle colonne del telaio portante
Lower positioning hydraulic jacks on the two columns of the portal



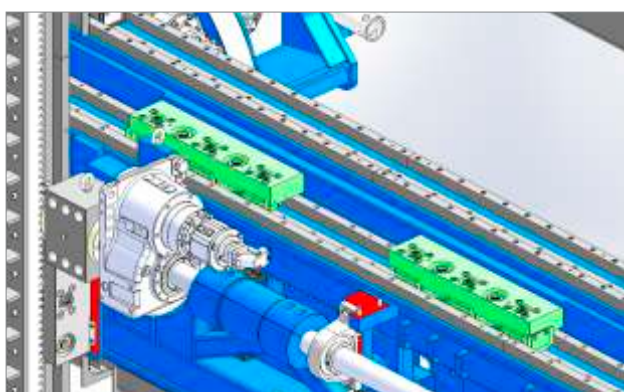
Trave movimento verticale - asse Z
Vertical movement beam - Z axis



Trave movimento orizzontale - asse X1
Horizontal movement beam - X1 axis



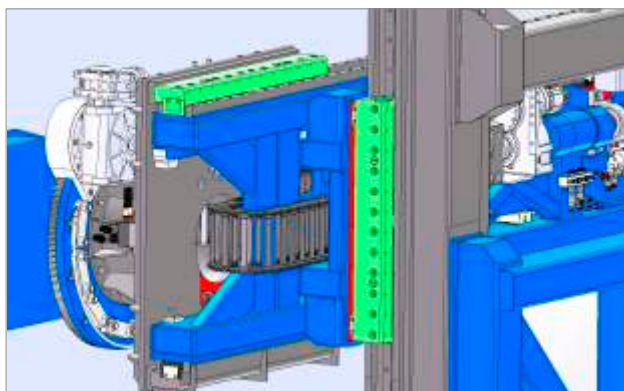
Motorizzazione - asse X1
Driving unit - X1 axis



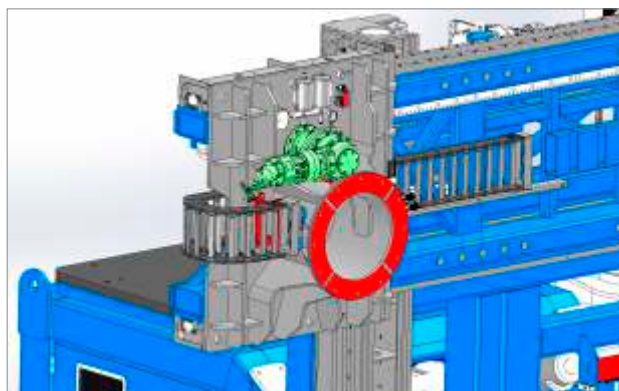
Pattini di guida - asse X1
Guiding shoes - X1 axis



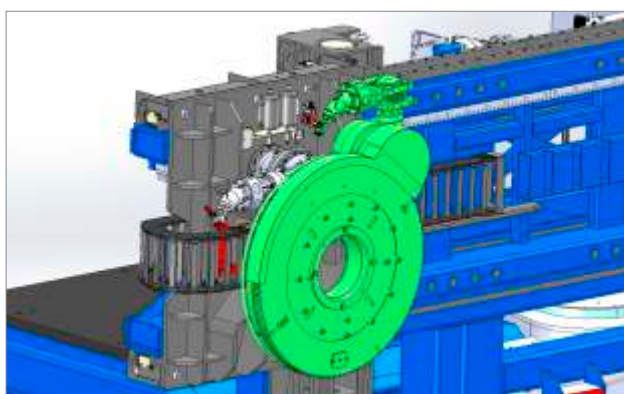
Carro porta testa - asse X2
Head carrying trolley - X2 axis



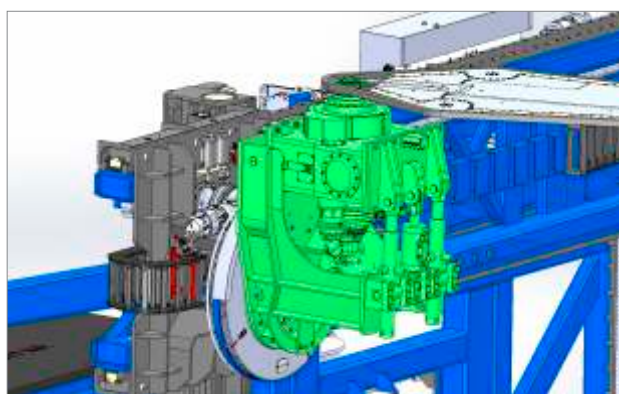
Pattini di guida - asse Z e asse X2
Guiding shoes - Z axis and X2 axis



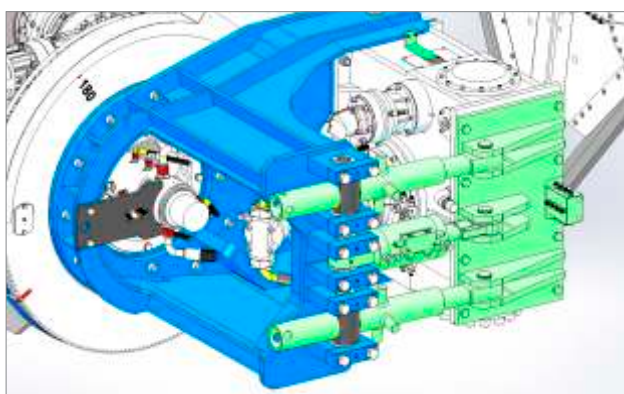
Motoriduttore traslazione carro portatesta - asse X2
Head carrying trolley travel gearbox - X2 axis



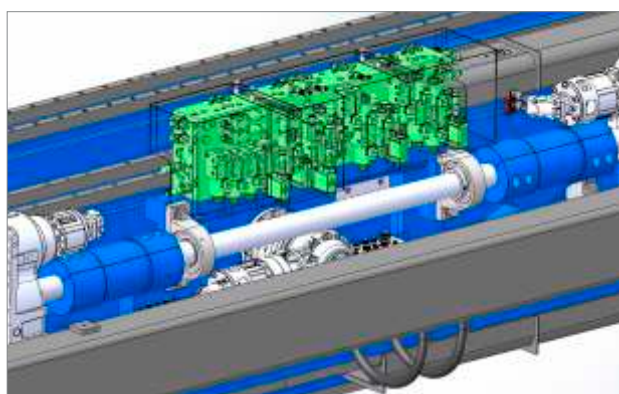
Ralla 360° portatesta con frenatura idraulica automatica
Center plate designed to rotate the head of 360° with automatic hydraulic break



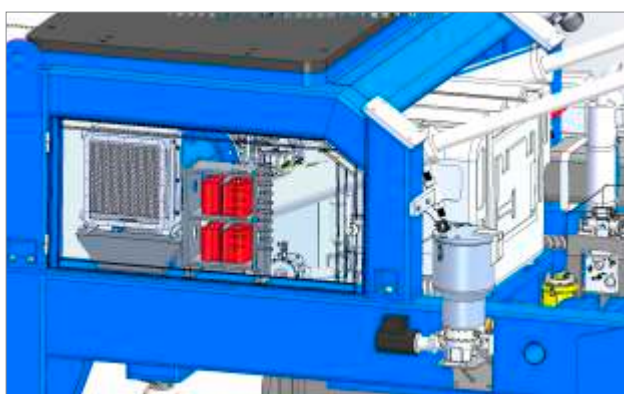
Testa operatrice
Operating Head



Sistema inclinazione piano di taglio
Adjustment system for cut direction



Gruppo valvole proporzionali
Group of proportional valves



Struttura portante con sportelli di ispezione
Main frame with inspection doors



Quadro elettrico con pannello interfaccia operatore touchscreen
Electric control panel with touch-screen

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Per rendere operativa la macchina in fase di taglio è sufficiente collegarla ad una linea elettrica 400V/50Hz per mezzo della spina a bordo macchina.

During the cutting operation, the machine should be simply connected to the 400V/50Hz power line through cable and on-board plug.



Le funzioni della macchina sono gestite per mezzo di un radiocomando e di un pannello operatore "touch screen".

All the functions are controlled by means of a remote control board without cable and of a touch-screen panel.







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