



LX-SERIES

6 / 5 AXIS CNC BRIDGE CUTTER

"CRAFTING INNOVATION, CARVED IN STONE"

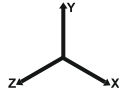


MAIN CHARACTERISTICS

KEY FEATURES AND ADVANTAGES OF THE BHAGWATI'S LX SERIES:

INTERPOLATED AXES:

The machine features 4/5 Optional interpolated axes, providing enhanced flexibility for a wide range of work processes.



MATERIAL COMPATIBILITY

The machine is capable of working with various materials, including marble, granite, artificial stone, and ceramic.



USER-FRIENDLY:

The design and features of the machine are intended to make it user-friendly, allowing operators to easily carry out various tasks.



COMPACT AND SIMPLE DESIGN:

The machine is designed to be simple and compact, allowing for easy transport, installation, and operation. Its monoblock - frame structure contributes to its simplicity and facilitates fast installation.



QUALITY AND RELIABILITY:

BHAGWATI'S Lx Series is designed with a focus on maximum quality and reliability over time, ensuring consistent performance.



VERSATILITY:

It offers users the flexibility to carry out a diverse range of work processes, making it suitable for different applications within the stone and building industry.



AUTOMATION CAPABILITY :

The machine is equipped with accessories and optional that enable fully-automated processes. This can help reduce processing times and increase overall productivity.



INCREASED PRODUCTIVITY:

Through its automated features and versatile capabilities, the CNC machine aims to enhance productivity in the production of countertops, shower trays, and claddings.

UTILITIES



SPECIALIZED MACHINING OPERATION

The **Lx SERIES** can be used for a wide range of operations, for example:



Longitudinal Cuts



Oblique Cuts



Elliptical Milling



Sphere Milling



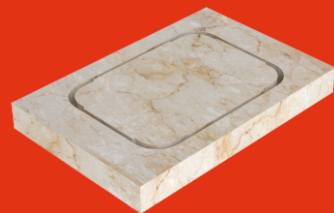
Slab Molding



Core Cutting



Edge Molding



Cut to Size

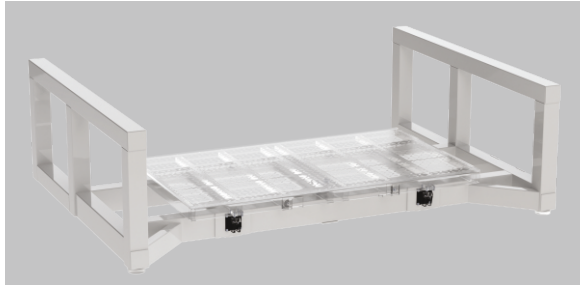


Complex Shape Milling



Slot Milling

MAIN COMPONENTS

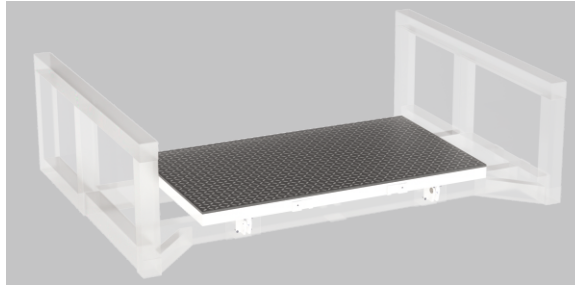


MONOBLOC STRUCTURE

Innovative Monobloc structure, a revolutionary design that features a single structure to be positioned directly on the site.

This groundbreaking system incorporates a cutting-edge ground positioning mechanism utilizing leveling feet, eliminating the necessity for drilling holes in the floor.

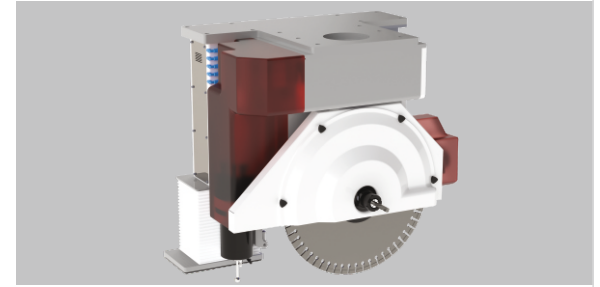
This not only streamlines the installation process but also enhances the overall adaptability and convenience of the structure.



TILTING TABLE

Table Tilting at 0 – 85° for loading and unloading designed to enhance your workspace with precision and efficiency.

The tilting table is available with a wooden or rubber surface (depending on the preference of the user)



ELECTRO SPINDLE

Max. Diameter Of Saw Blade 600 mm

Motor power 18.5 Kw with adjustable speeds ranging from 0 to 4500 RPM controlled by VFD

"C" Axis designed to Rotate -5° - 365° (Motorized)

"A" Axis tilting cutting head with 0° - 90° (Motorized)

MAIN COMPONENTS



LASER MARKING

Machine is equipped with a laser marker for marking the precise cutting path for the cutter



CONTROL PANEL (WITH 21" INDUSTRIAL PC)

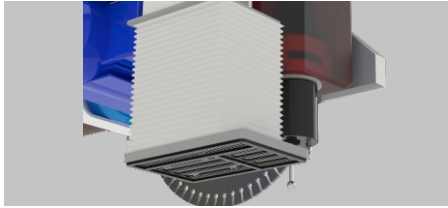
Operator Interface with PC and 21" Touch Screen Monitor. USB port for transferring files.



AUTO LUBRICATION

Auto lubrication system in order to prevent friction and deterioration of the parts

OPTIONAL FEATURES

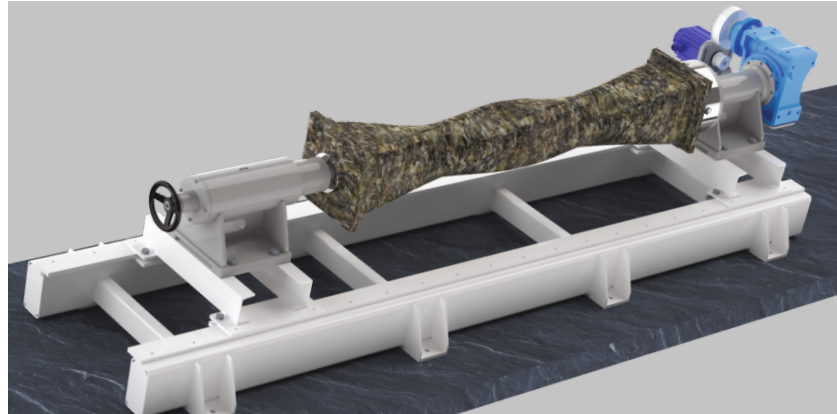


VACUUM SUCTION CUP

Vacuum suction cup with a new design, with 6 gripping zones to lift even small pieces and with a load Capacity of up to 300 kg.

Makes the most of the surface of the slab, reducing processing waste.

Increase productivity and reduces downtime
Allows moving pieces without operator intervention.



ROTATORY AXIS

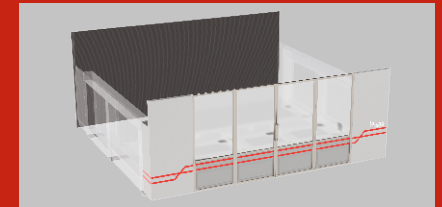
The machine we offer is a versatile and indispensable tool designed specifically for crafting various solid rotary marble and granite stones.

Its precision and adaptability make it ideal for producing an array of intricate architectural elements. Whether you're working on balusters, columns, guide bars, cycloidal balusters, pellets, stylobates, caps, or other stone components.

PHOTO CAMERA

Photo camera provides high-quality imaging to accurately identify and measure the dimensions of slabs being processed. This eliminates the need for manual measurements, ensuring efficiency and precision.

Photo Camera allow you to automatically detect the surface of the Slabs present on the workbench using as camera positioned above the machine.



FRONT & BACK ENCLOSURES

The "Front & Back enclosure" system ensures comprehensive protection and safety for all machining operations. By incorporating front doors with aluminum profile and polycarbonate panels, the system effectively shields operators during machining tasks. This design not only maximizes safety but also ensures optimal visibility of the working area, creating a secure environment for operators engaged in machining operations.

OPTIONAL FEATURES



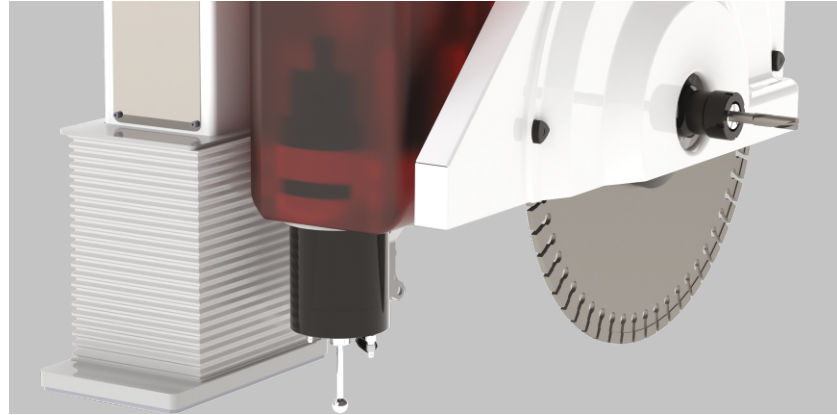
WATER JET

Combining saw blade cutting technology with waterjet cutting technology requires precise coordination and control. The goal is to minimize working time by activating water jet cutting only when necessary and ensuring that both the disc cut and waterjet cut align seamlessly without the need to move the slab.



AUTOMATIC TOOL CHANGER (ATC)

CNC Bridge cutter machine is equipped with automatic tool changer with tool capacity of 6, 8, 10 tools according to the different production process requirements of customers.

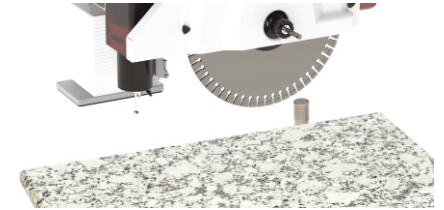
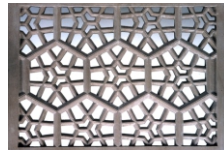


ROUTER

Vertical Router managed by VFD with revolutions 0 – 18,000.

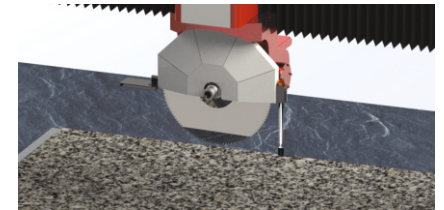
Router Allow the operator to use small diameter diamond Tool for incremental cutting / blind or through drilling.

This capability allows for efficient and versatile machining processes, reducing the need for tool changes and enhancing overall productivity.



BLADE THICKNESS SENSOR

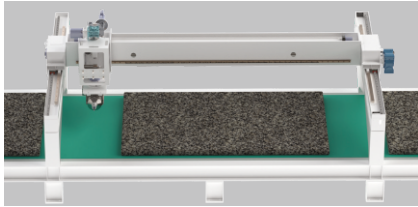
The blade thickness sensor measures the diameter of the disk or the thickness of a segment mounted on the main spindle or router.



SLAB THICKNESS SENSOR

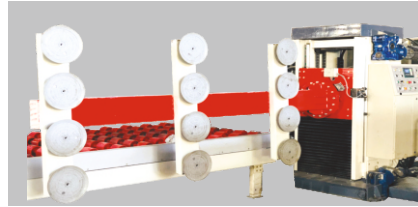
An automatic slab thickness sensor measures the thickness of a slab in real time.

OPTIONAL STRUCTURE



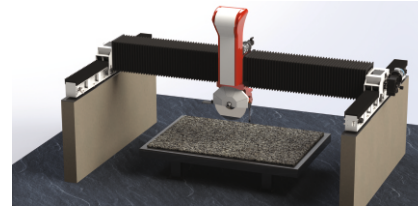
CONVEYOR TYPE TABLE

A Conveyor belt system can simplify operation of the slab handling system. Once the cutting process is complete, the slab is transported along the conveyor belt to the unloading area. This could involve removing the finished pieces or preparing the slab for the next stage of processing.



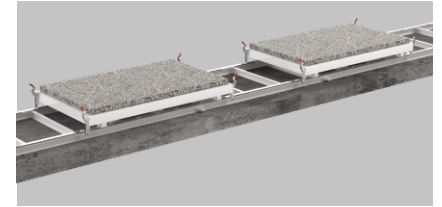
AUTOMATIC LOADING OF SLAB

The ROBOT system has been equipped with intelligent reader. It can be configured with automatic loading/unloading system for a fully automated process. This automatic ROBOT will be useful to take slabs from the end of the line and will place them at their desired stations.



BRIDGE TYPE

Civil foundations are optional with Lx 1000 & Lx 1200 series due to their super heavy structure and bigger blade diameter.

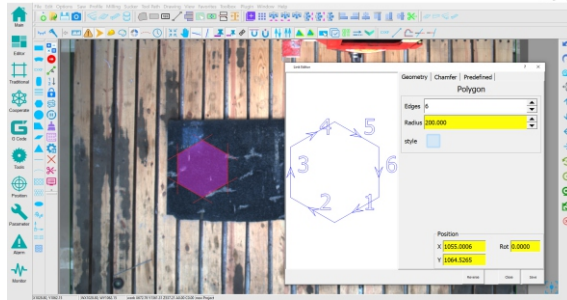


DOUBLE TABLE

This innovative solution incorporates a Double Table, introducing unparalleled versatility to accommodate a wide range of work pieces. The automatic exchange between Table 1 and Table 2 occurs seamlessly in both the cutting and unloading areas, optimizing workflow efficiency. The entire exchange process is intelligently managed by advanced machine software. The tilting table is available with a choice of surfaces. Users can opt for a wooden or rubber surface based on their specific requirements.

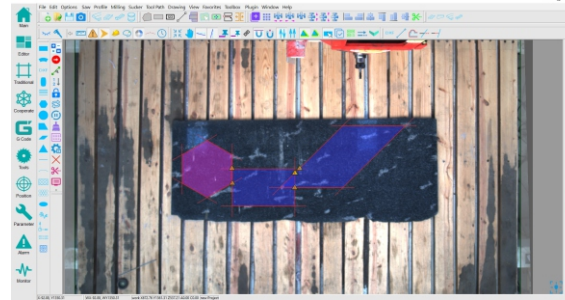
SOFTWARE FEATURES

Bhagwati Machines has developed a simple and user-friendly software aimed at optimizing the cutting of variously shaped pieces from slabs. This innovative software is designed to streamline the cutting processes using a blade, accommodating both rectilinear and curvilinear shapes, such as steps, kitchen worktops, rectangles, and covers. Users can input shapes either through predefined templates within the program or by importing shapes from DXF files.



GRAPHICS PROGRAMMING

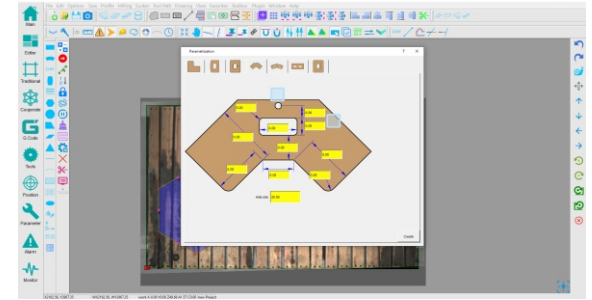
Graphics programming is the most important part of the whole software. Click on the graphic, the software will generate a geometric interface with Default parameters, and then click on the appropriate position on the screen With the mouse Click to finish placing the graphics. Then double-click The graph just drawn to edit the parameters of the graphics.



NESTING FUNCTIONS

Allows users to set the position of pieces and sequence of cuts
Offers both manual and automatic piece nesting options
Takes surface availability into account for efficient cutting

- Automatic nesting for time and material optimization.
- Optimizes cutting to reduce material waste.
- Manual nesting for user customization.



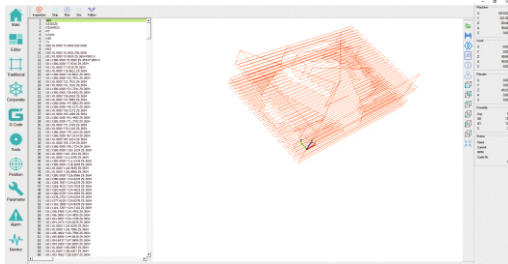
SHAPE INPUT

Supports both rectilinear and curvilinear shapes.
Pre-defined shapes available in the program.
Shapes can be imported from DXF files.
Software can perform below graphical functions

Rectangular cut
Sector cutting
DXF map
Cutting of worktops
Straight line group
Regular polygons
Full circle cutting
Separate straight cut
Individual arc cutting

Grid
Circular array
Ellipse
Arc profiling
Straight line profiling
Wavy lines
Trapezoidal lines
Rotate profiling
Suction cup function

SOFTWARE FEATURES



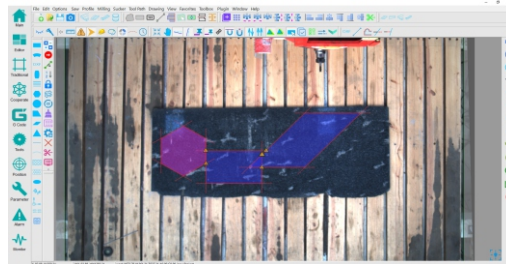
CODE EXECUTION MONITORING

Here you can view the code automatically generated by the software, or import the code generated by third-party software.

Block number	Machine position	Work position	WEK1	WEK2	X	Y	Z	A	C
G04		293.4100	110.0640	-503.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G05		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G06		1810.5260	563.1760	-552.2050	0.0000	0.0000	0.0000	0.0000	0.0000
G07		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G08		290.3470	197.1290	-496.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G09		257.1670	204.0770	-500.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E154C1		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E154C2		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

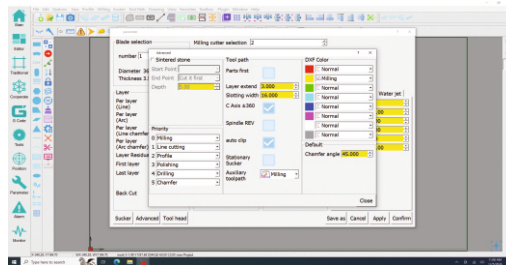
TOOL SETTING

Up to 130 tools can be set in the tool page. you can view the parameters of each tool.



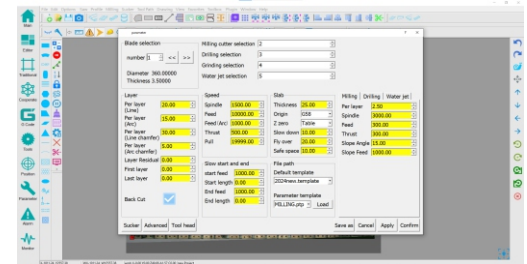
COLLISION PREVENTION

Includes a function to prevent collisions between pieces during the cutting process.



COMPREHENSIVE PROCESSING

Comprehensive processing is mainly for the places that cannot be processed by saw blades, which need to use milling cutters, drilling, and water jets. Before use, we need to choose the corresponding cutting tool.



SPINDLE SETTING

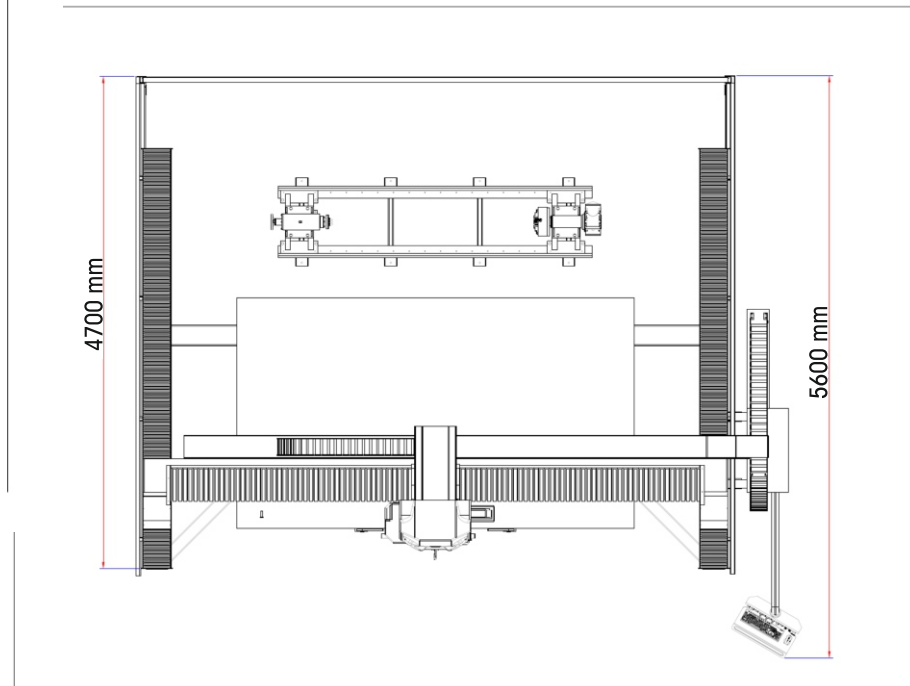
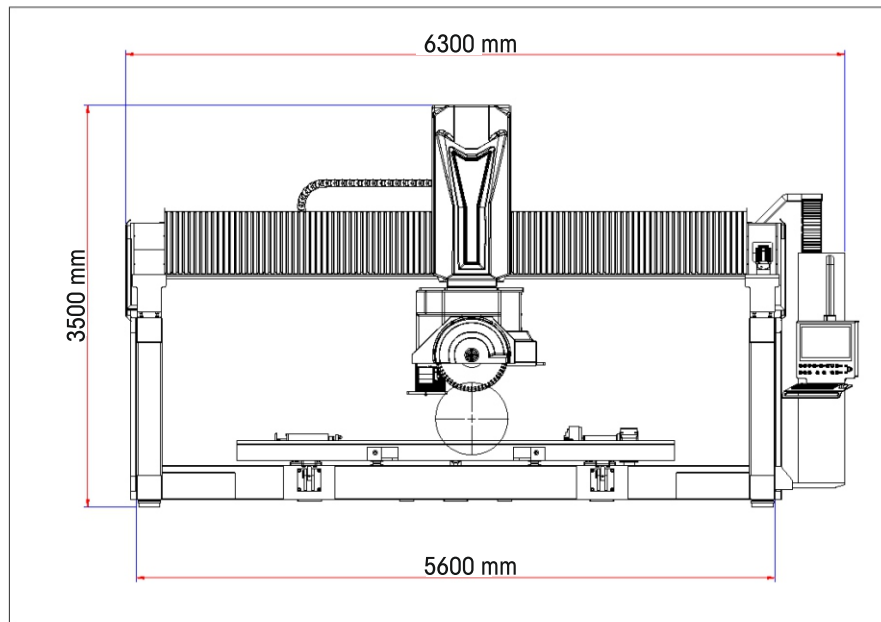
When the spindle motor exceeds the set current, the program operation can be suspended to prevent the saw blade from being stuck.

Block number	Machine position	Work position	WEK1	WEK2	X	Y	Z	A	C
G04		293.4100	110.0640	-503.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G05		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G06		1810.5260	563.1760	-552.2050	0.0000	0.0000	0.0000	0.0000	0.0000
G07		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G08		290.3470	197.1290	-496.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G09		257.1670	204.0770	-500.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E154C1		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E154C2		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

POSITION SETTING

There are three types of positions in the position setting page: user position (user-defined position), mechanical position (system fixed function position), work position piece coordinates.

MACHINE DIMENSIONS mm



TECHNICAL DATA

		Lx 600	Lx 800	Lx 1000	Lx 1200
Number of interpolated axes	N°	5	5	5	5
Carriage stroke X axis	mm	3900	3900	4000	4000
Maximum carriage speed (X axis)	m / min	0-40	0-40	0-40	0-40
Positioning repeatability axis X	mm	0±5	±0.15	±0.15	±0.15
Bridge stroke Y axis	mm	2900	2900	2950	2950
Maximum bridge speed (Y axis)	m / min	0-40	0-40	0-40	0-40
Positioning repeatability axis Y	mm	0±5	±0.15	±0.15	±0.15
Vertical stroke Z axis	mm	550	650	750	900
Maximum head speed (Z axis)	m/min	0-10	0-10	0-10	0-10
Positioning repeatability axis Z	mm	0±5	±0.15	±0.15	±0.15
Blade-carrying head rotation © axis)	Deg.	-5°/365°	-5°/365°	-5°/365°	-5°/365°
Disc head tilting movement (axis A)	Deg.	0/90°	0/90°	0/90°	0/90°
Working table dimensions	mm	3800 x 2200	3800 x 2200	3800 x 2200	3800 x 2200
Maximum Load over single bench	1500	1500	1500	1500	1500

TECHNICAL DATA

		Lx 600	Lx 800	Lx 1000	Lx 1200	
Minimum disc diameter	mm	350	350	450	450	
Maximum disc diameter	mm	600	800	1000	1200	
Maximum cutting depth	mm	200	280	365	450	
Spindle motor power	Kw/Hp	18/24	18/24	23.5/31.5	28/37.5	
Spindle motor nominal torque	Nm	59	59	72	92	
Spindle motor speed range	Rpm	0-4500	0-4500	0-3800	0-3800	
Spindle shaft diameter	mm	50	50	60	60	
Suction cups stroke	mm	250	330	400	480	
Max. disc dimensions with suction cups	mm	600	800	1000	1200	
Max. weight lift with suction cups	Kg	300	400	500	600	
Water consumption	l/min	35	50	50	60	
Air consumption	l/min	20	20	20	20	
Standard electric voltage	V/Hz	400+10% / 50	400+10% / 50	400+10% / 50	400+10% / 50	
Total installed power	Kw/Hp	26/35	26/35	31.5/42	36/48	
Approx. total weight of the machine	Kg	9900	10050	10350	10950	



ADDRESS

HEAD OFFICE (AJMER)

178, 179, 179-A, RIICO Industrial Area Extn,
Parbatpura-Makhupura, AJMER (Raj)

DELHI OFFICE

YC CO-WORKING SPACE 4TH FLOOR, PLOT NO-94 SEC-13,
NEAR RADISSON BL NEW DELHI-110078

PUNE (MAHARASHTRA)

Shop No.- 104, Westwood Estate, 235/2A,
Chhatrapati Chowk, Kaspte Vasfi, Wakad, Pune-57

BENGALURU (KARNATAKA)

1F, Maa Tara Apartments, 4th Floor Srirampura,
Bommasandra, Jigni Road Bengaluru (Karnataka)

PALANPUR (GUJRAT)

District Banaskantha,
Palanpur (Gujarat)

KARIMNAGAR (TELANGANA)

Shree Niwasa Complex, Kazipur Road,
Bahupet, Karimnagar (Telangana)

SRIKAKULAM (ANDHRA PRADESH)

H. No 4-12, Sai Nagar, Narasannapeta,
Srikakulam (Andhra Pradesh)

KISHANGARH (RAJASTHAN)

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