

Vertical Broaching Machines

- Vertical broaching machine - Hydraulic operated Pull type.
- Table-up Vertical Broaching Machine (Hydraulic)
- CNC Vertical Broaching Machine



A vertical broaching machine uses a precision tool to create custom cuts in work pieces at high speeds. Once tooled up properly, PRECI-CUT vertical broaching machine is capable of mass-producing parts to your exact specifications.

Vertical broaching can be used in the following broaching types:

- Pull-down broaching
- Pull-up broaching
- Push broaching
- Surface broaching

Use PRECI-CUT vertical Broaching machine to remove material from steel, stainless steel, aluminium, brass, bronze or other Ferrous & Non-Ferrous materials. Depending on the material to broach one may need to adjust the tooling or increase the frequency of tool sharpening.

Broaching Tools are needs to be monitored for tool life to prevent machine & tool damage and keep job at highest accuracy level. Vertical Broaching machine required least maintenance compared to other type broaching machines.

Advantages of Vertical Broaching Machines.

- Vertical Broaching machine required small floor space.
- Can able to take longer stroke on same floor space.

Vertical Broaching Machines are further classified as per their application as below.

- 1) Vertical Broaching machine Hydraulic operated Broach Moving.
- 2) Vertical broaching machine Table up (Job Moving).
- 3) CNC Vertical Broaching Machine.

Vertical broaching machine - Hydraulic operated Pull type.

Our vertical hydraulic pull down broaching machine is designed to save floor space and achieve accurate results.

The cylinder, broach holder, broach and component; everything is in a single axis which increases the accuracy and reliability of the broaching process.

The machines are suited perfectly for mass production. The machines are provided with ergonomically designed operator platform.



Preci-Cut Tools Vertical Broaching Machine Models -

Description	Unit	VB 3	VB 6	VB 10	VB 16
Pulling Force	KN	30	60	100	160
Max. Stroke	Mm	500/1000/1200	1000/1200	1000/1600	1600/2000
Cut. Speed	m/min.	1-6	1-6	1-6	1-6
Return speed	m/min.	07	07	07	07

Advantages of Hydraulic operated Vertical Broaching machine

- Vertical broaching machine can be installed in pit as well as on floor level with operator platform.
- Easy Relocation of machine.
- Flexibility for various components.
- Frequent setup changes possible.
- Suitable & Economic for Mass Production.
- Ergonomic Operator Platform.
- High precision finish broaching of material
- Poka yoke system can be implemented with Visual inspection.

Table-up Vertical Broaching Machine (Hydraulic)

Our Table-up broaching machines are designed to save floor space, eliminate need of pit as well as elevated operator platform.

The machines are suited perfectly for cellular concept manufacturing and for mass production.

The component loading / unloading is at industry standard level of ~1000 mm from ground level, enabling loading of bigger and heavier components with ease.

The machine can easily be integrated with automation for loading / unloading of components. Due to zero relative speeds of puller and lifter, the levels of accuracies that can be achieved are higher compared to conventional broaching machine.

The operator intervention is only once in the total cycle compared to twice in conventional broaching machine concepts, resulting into faster cycle times and more efficiency.



Preci-Cut Tools Vertical Broaching Machine Models -

Description	Unit	TVB-3	TVB-6	TVB-10	TVB-16
Pulling Force	KN	30	60	100	160
Max. Broaching Stroke	Mm	500/1000/1200	1000/1200	1000/1600	1600/2000
Retriever Stroke	mm	300/700	700	900	1200
Cut. Speed	m/min.	1-6	1-6	1-6	1-6
Return speed	m/min.	07	07	07	07
Loading Height	mm	900-1000	900-1000	900-1000	900-1000

Advantages of Table - up Broaching machine -

- Table-up broaching machine eliminates the need for Pits.
- Eliminates the need of Elevated Operator Platform.
- Easy Relocation of machine.
- Extremely Suitable & Economic for Mass Production.
- Great Productivity due to Fast Cycle Time.
- Industry Standard work piece loading/unloading height of 1000mm.
- High precision finish broaching of material.
- Operator friendly.
- High axial accuracy due to stationary puller & retriever.
- Ease of Automation.

CNC Vertical Broaching Machine

CNC Vertical Broaching machine can be done on both Table UP (Job moving) type & Elevated operator platform type pit less machine.

Our CNC Table-up broaching machines are designed to save floor space, eliminate need of pit as well as elevated operator platform, Decreases total machine height, Removes hydraulic power pack unit.

The machines are suited perfectly for cellular concept manufacturing & for mass production.

The component loading / unloading is at industry standard level of ~1000 mm from ground level, enabling loading of bigger and heavier components with ease.

The machines can easily be integrated with automation for loading / unloading of components.

Due to zero relative speeds of puller and lifter, the level of accuracies that can be achieved are higher. The operator intervention is only once in the total cycle compared to twice in conventional broaching machine concepts.



Preci-Cut Tools Vertical Broaching Machine Models -

Description	Unit	CTVB-3	CTVB-6	CTVB-10	CTVB-16
Pulling Force	KN	30	60	100	160
Max. Stroke	Mm	500/1000/1200	1000/1200	1000/1600	1000/2000
Cut. Speed	m/min.	1-8	1-8	1-8	1-8
Return speed	m/min.	12	12	12	12

Advantages of CNC Vertical Broaching machine -

- Broaching Feed can be controlled precisely in micron due to servo drive through HMI.
- Job can be positioned at home via Rapid return speed which reduces cycle time.
- As the machine drive is electro-mechanical, the need of complex hydraulic systems is eliminated.
- Eliminates the requirement of oil chillers.
- Power consumption of the machines is also reduced substantially due to running of Servo motors only when desired.
- The elimination of hydraulic power unit and oil chillers, Reduces machine floor space.
- Machine surrounding area remains clean due to removal of Hydraulic Power pack unit.
- Due to Eliminations of Hydraulic Cylinders machine total height is substantially reduced.

Standard & Optional Machine Features

Some of the Standard Machine Features are as follows -

- Automatic Broach Retriever system
- Programmable Coolant function
- Two Hand Push button for operator safety
- Hydraulic Heat exchanger.

Optional machine Features are as below -

- Touch screen Human Machine Interface Operator Panel
- Tool Load monitoring system.
- Automation for component loading/unloading
- Automatic Broach Cleaning system
- Broach overload protection system
- Magnetic chip conveyor.
- Camera Visual Inspection
- Component auto cleaning system.



Manufactured by :

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