

Date: Thursday, February 4, 2021
Quote #: SPBQ2517/QT-067371



Chris Deal
1810 W. 5000 S.
Salt Lake City, UT 84129
Phone: 801-550-9732
www.pillarmachine.com

Note: All Pricing is in US Dollars
Pricing valid for 30 days from date of quote.



H-49 CNC Horizontal Bore and Dowel Insertion Machine

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Machine to Include:

USER INTERFACE

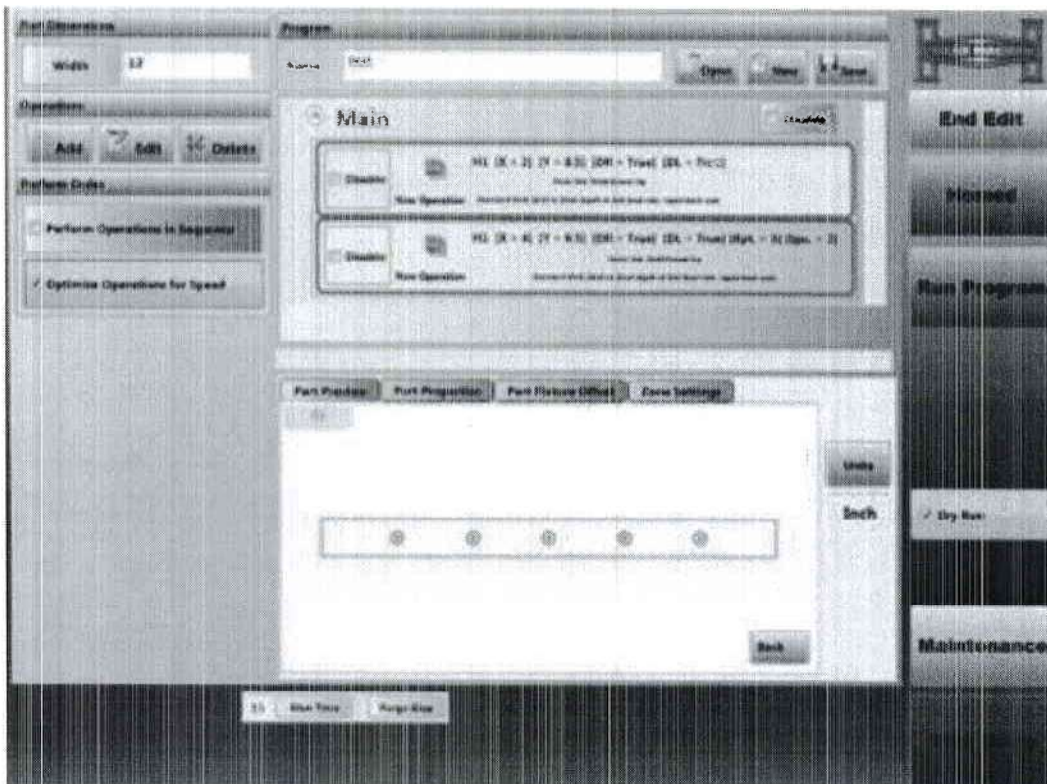
A 15" Industrial Color Touchscreen is used to write and store programs.

The on-screen graphics of the operator interface have been designed to allow for quick programming at the machine. Typically, programs can be written and recalled in less than one minute.

The Interface is open architecture allowing it to integrate with design software that can give hole locations in the form of a .xml file or a bar code (with bar code reader purchase found in options below).

Standard Features in the software include:

1. Graphic interface to show where holes are to be drilled and if a dowel is to be inserted.
2. Parametric Programming.
3. Pattern Drilling/Inserting.
4. Password protection of certain features/functions.
5. Online diagnostic capability (if machine is connected to an internet connection).
6. Toggle between Metric or Imperial programing parameters.



Note: Image may not necessarily depict final Operator Interface and is only used as an example of an Operator Interface Screen.

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H-49 MAINTENANCE SCREEN

The H-49 Maintenance Screen gives you the ability to manage inputs, outputs and machine offsets.

From this screen you can manually trigger all outputs as well as visually see if the machine is seeing the inputs correctly. You also set the machine parameters that are not as communally used such as fence and spindle offsets from this screen.

Because this screen is password protected you can be selective with who you grant access to it.



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H-49 STANDARD SPECIFICATIONS

STANDARD MATERIAL SPECIFICATIONS: (unless stated otherwise in quote)

49" maximum length capability
Unlimited Width Capability
1/2" minimum to 1" maximum thickness capability

DRIVES:

X Axis - Rack and Pinion
Y & Z Axis - Manual by use of hand digital readout

GUIDES:

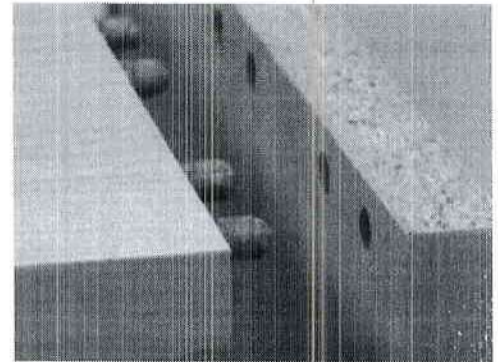
X - Axis Guides: High precision square rail guides & bearings for all linear motions.
Y - Axis Guides: High precision square rail guides & bearings for all linear motions.
Z - Axis Guides: High Precision square rail guides & bearings for all linear motions.

UTILITIES:

Electrical - 3 phase, 208 - 230 volt, 60 cycles, 20 amps
Compressed Air - 90 psi at 10 CFM
Dust collection port - 1 each 2.5" port at 220 CFM

MACHINE DIMENSIONS:

Width - 75"
Depth - 48"
Height - 75"
Dowel Bowl Height - 75"
Weight 1160 lbs.



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INDUSTRIAL COMPUTER (WINDOWS 10)

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SPECIFICATIONS:

Video: on board
Ethernet 1 x PCIE Broadcom GbE (or similar)
USB: 2 x USB 2.0 (or similar)
Serial Port: 1 x RS-232 (or similar)
100-240 VAC External Power adapter (or similar)
Windows 10 operating system



Note: photo may not represent the exact computer to be used in the machine.

TUBULAR FRAME CONSTRUCTION

The H49 frame is constructed of an all welded tubular steel frame for rigidity and accuracy.

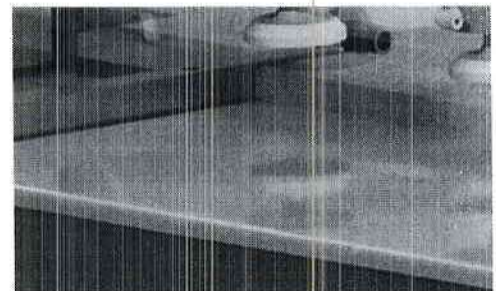
This heavy-duty frame will minimize the chance for vibration providing a cleaner and more accurate cut.

This Fabricated frame is 100% made in our Utah facility.



WORK SURFACE TABLE

The table top is comprised of 1/2" thick machined aluminum to ensure a rigid and reliable reference point.



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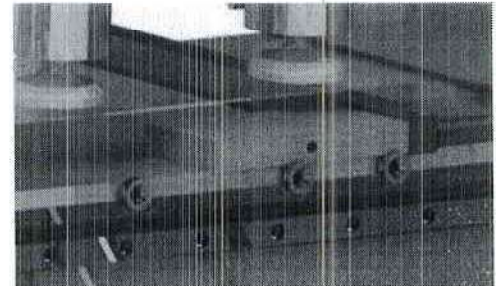


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BACK FENCE SYSTEM

The button fence system is designed to accommodate thin work pieces down to 1/2" material thickness.

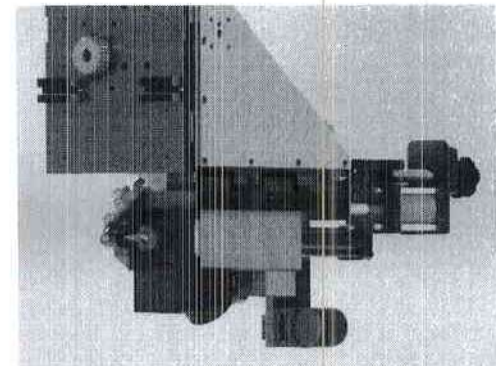


H-49 MACHINING CARRIAGE MOUNTING

The H-49 machines are designed so that the drill motor, inserter, etc. are mounted above the machining surface. By mounting this above the machining surface the entire carriage will stay clear of dirt and debris.

All wiring and pneumatics to the carriage is carried in an enclosed E Track to prevent damage to critical components.

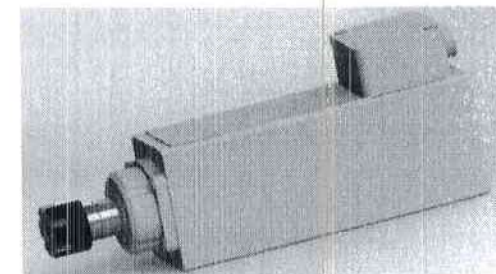
Note: if machine extension (96" or 120" versions) are required the carriage and rail are mounted below the table.



HIGH FREQUENCY SPINDLE

The H49 is equipped with a 1 HP High Frequency 18,000 RPM Direct Drive Spindle mounted onto a 1/2" machined aluminum tool plate.

The 18,000 RPM spindle speed guarantees the boring bit concentricity, ensuring an accurate hole size for maximum glue contact. The high RPM also allows for rapid plunge boring to be accomplished without losing the integrity of the boring surface. Glued or pre-glued dowels can be used due to the accuracy and integrity of the hole.



VIBRATORY DOWEL BOWL

12" Vibratory dowel bowl mounted above machine.

The cascade design with outward spiraling track will orientate the dowels into the feeding mechanism. This bowl can hold up to 800 8mm dowels at a time.

Note: an 18" dowel bowl capable of holding 3000 dowels is available, see the option section of this quote.



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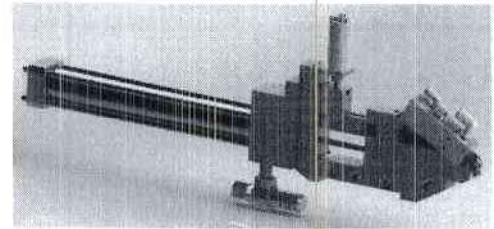
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H-49 DOWEL INSERTER MECHANISM

Our patented dowel insertion system is a straight forward design. The design has proven to reliably insert dowels without the need for adjustment or realignment.

Dowel protrusion on the H-49 is set using corrugated steps for incremental adjustment. Protrusion adjustment can be set between 10-14 mm.

The standard dowel diameter supplied with machine is 8 mm by 30-35 mm length. Other diameters and lengths available upon request.



GLUE/WATER INJECTION SYSTEM

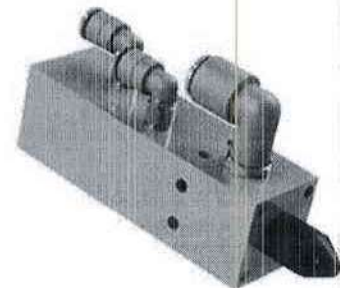
The Glue Insertion System is designed and built to accurately dispense water or glue into a pre-drilled hole. The amount of glue/water to be administered is defined and metered through an on screen adjustable electronic control.

The injection system is an enclosed system using a needle and seat at valve, diaphragm pump with a maximum air pressure of 100 psi, with infinite adjustment to all valves.

The injector nozzle is constructed with Delrin, a self-sealing, nonstick material. The Delrin nozzle is leak resistant over a wide viscosity range making it an ideal material for a low viscosity substance such as water as well as higher viscosity glues. Unlike steel, Delrin is a non-stick material. This means that glue is unable to bond with the Delrin and then to the needle, thus vastly reducing the likelihood of blockage.

Pillar Machine also uses a 4-seal system to prevent glue/water from seeping back thru the system and into the electro valve.

Note: This system will inject glue or water with equal effectiveness. When using glue Pillar recommends using: "Franklin Assembly 161" Glue (or similar but not to exceed 160 centipoise of viscosity); when using water Pillar recommends using "Distilled Water". Franklin Assembly 161 can be purchased from Pillar Service.



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PARAMETRIC PROGRAMMING

One of the many ways you can program this machine is with parametric programming which is included. Parametric programming is a type of mathematical optimization, where the optimization solution is solved as a function of or multiple parameters. The input parameters for this option are:

1. Location of first and second dowel to be installed closest to the datum edge of the part.
2. Spacing for dowels in the center of the part.
3. Minimum spacing for dowels in the center of the part.
4. Location of last and second to last dowel to be installed on the far edge of the part.

Once these parameters are set, all the operator needs to do is tell the machine the part length and the program determines the appropriate dowel count and placement.

Note: this parametric programming conforms to Architectural Woodwork Institute (AWI) specifications and is what is widely used in most 3rd party design software's such as "Cabinet Vision" and "Microvellum".

FREIGHT INCLUDED

Freight from our Salt Lake factory to your facility is included in this price.

Machine F.O.B. Destination

