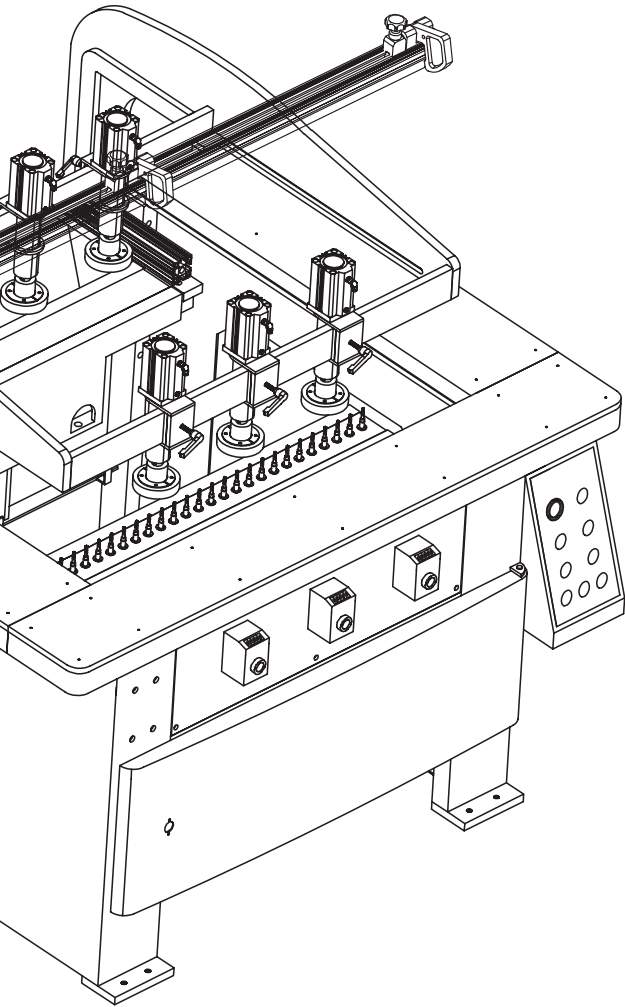


Ironwood DBR50

User Manual




general information. features.
technical specifications. safety considerations.
delivery and installation. inspection.
pre-operation cleaning. **assembly.**
extension fence and stops. drill bits.
connect to power and air.
power connection. air supply connection.
operation and adjustments.
machine operation. **maintenance.**

IRONWOOD

stiles

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 **PLEASE REVIEW AND OBSERVE ALL SAFETY INFORMATION / DIRECTIVES BEFORE INSTALLING, OPERATING, OR PERFORMING MAINTENANCE ON THIS MACHINERY.**

1.0 General Information

1.1 Thank You!

Thank you for your purchase of the Ironwood DBR50 double-line boring machine. At Stiles Machinery, our goal is to ensure that you are fully satisfied with your purchase. This manual is provided so that you may properly assemble, operate, and maintain your DBR50. Should you need help, our team of dedicated service personnel are available to answer your questions and provide any resource recommendations you may need.

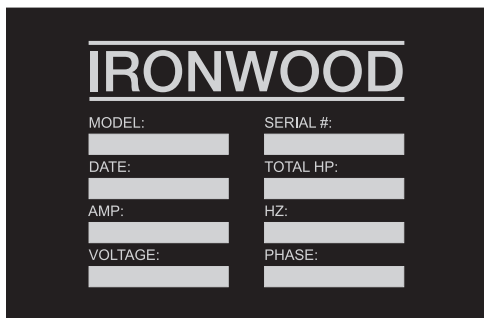
Warranty and Support

All Ironwood machines are designed to meet the exacting standards demanded by craftsmen like you. Ironwood machines include a one (1) year parts warranty and two (2) years of free 24/7 technical support beginning at date of shipment. Standard technical support remains in effect for free for the lifetime of the machine thereafter. Warranty service work is not covered by manufacturer's warranty. Stiles' service team is available for an additional charge.

1.2 Before Contacting Stiles

Please have your machine model and serial number available when contacting Stiles Machinery with questions. The machine's model and serial number are listed on the metallic plate located on the machine's frame.

Information regarding the electrical system and pneumatic supply are also listed on the metallic plate.



Machine information plate

Stiles Technical Support
616.698.6615

Stiles Parts
800.PARTS.80 (800.727.8780)

Website
www.stilesmachinery.com/ironwood/dbr-series

Machine Model _____

Machine Serial Number _____

1.3 Features

- 2 independently operated drill blocks have 25 spindles on each head
- QuickSet rear-fence function allows parallel adjustment of rear fence to drill block
- 6 Quick-Release pressure-controlled pneumatic clamps firmly secure workpieces and prevent injury
- Rubber-coated clamping heads prevent workpiece damage
- Convenient pivoting control box
- Adjustable feed and braking speeds for chip-free, through-hole operation
- Digital readouts for accuracy
- Analog scale (metric and U.S.) allows quick and easy calibration and are angled for easy viewing
- Second measurement scale is integrated in the rear fence for precise indexing
- Work table has a large work area
- Compact finish ensures smooth workpiece movement
- Reinforced drill blocks provide additional support for drilling small workpieces
- Convenient built-in storage for up to 50 additional bits
- Manual-release stops enable quick set ups for 37mm and 44mm settings

1.4 Intended Use

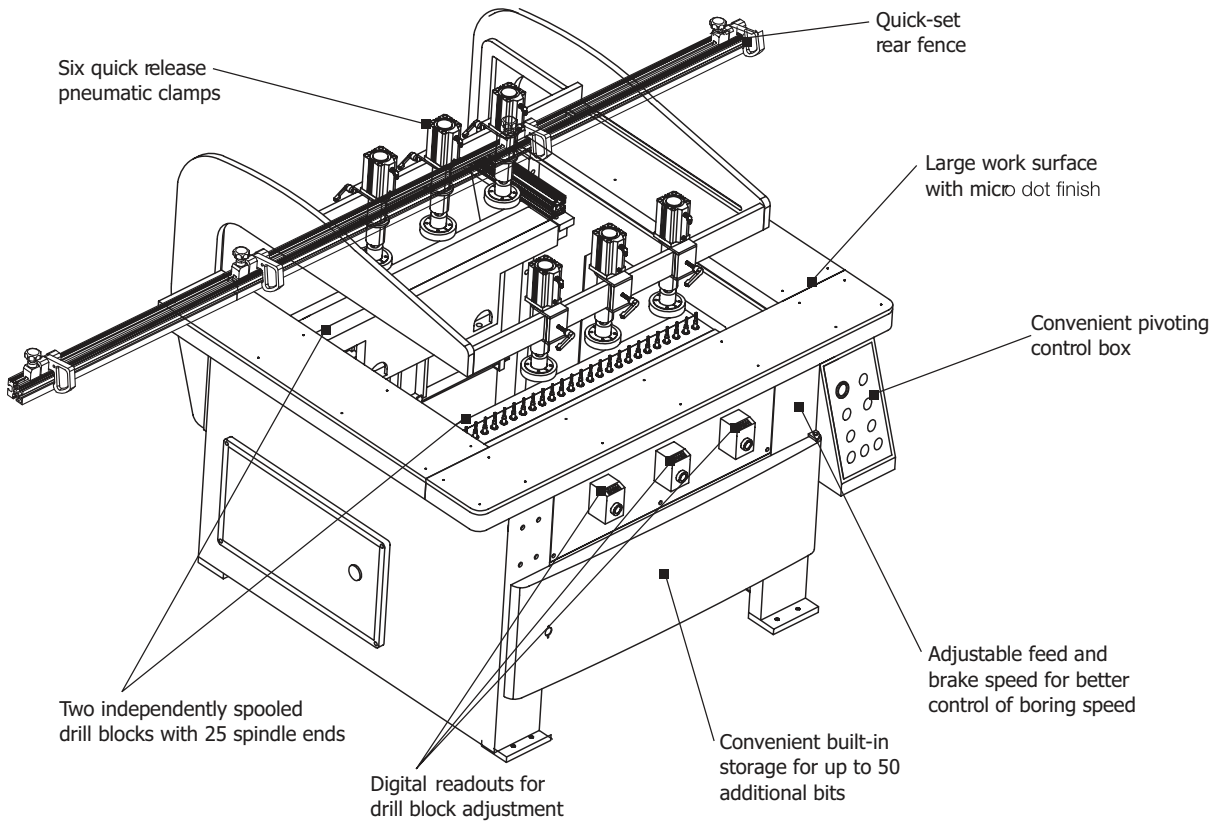
The Ironwood DBR50 is designed for closet, casegood, and cabinet making. The machine allows easy boring of single or double rows. You can bore up to 25 holes in each row with just one stroke.

The machine features two independently operated drill blocks for vertical drilling. Drill bits rise from beneath the workpiece for faster, cleaner, and safer boring.

The DBR50 allows System 32 line boring, with hole spacing of 32mm to facilitate the easy installation of dowels, brackets, hinges, cam fittings, shelf support, connecting screws, etc.

Operators can choose auto or manual mode for repetitive drilling.

This robust, ergonomically designed boring machine allows quick set-up times, digital read-outs for improved accuracy, and a conveniently large working surface for various applications.



1.5 Technical Specifications

Description	Ironwood DBR50
Number of Boring Units	2
Pneumatic Clamps	6
Spindles per Boring Head	25
Center Distance Between Spindles	32mm
Work Table Dimensions (d x w)	32¼" x 45¼" / 820mm x 1150mm
Boring Depth	0-2¾" / 0-70mm
Max Workpiece Thickness	4" / 100mm
Quick Chuck	50
Motor Power	3 hp per motor
Working Table Height	33¾" / 845mm
Spindle Speed	3450 rpm
Air Requirement	90-100 PSI
Air Consumption	2 cfm / cycle
Machine Dimensions (d x w x h, w/o fence)	55½" x 55" x 50¼" / 1410mm x 1400mm x 1280mm
Shipping Dimensions (d x w x h)	59" x 57" x 56¾" / 1500mm x 1450mm x 1440mm
Net Weight	1610lb / 730kg
Shipping Weight	1870lb / 850kg
Electrical Connection	230v 3 phase / 460v 3 phase
Amperage	17.4 amps @ 230v / 8.7 amps @ 460v

1.6 Safety Considerations

For your safety, read these instructions thoroughly before you install and operate this machine. Always have these instructions available at the machine for reference.

Observe all codes and regulations that apply to the installation and operation of this machine.

Keep visitors at a safe distance from the work space.

Keep children away from this and all machines. Childproof your work area!

Familiarize yourself with the safety notices used in this manual.

CAUTION

If cautions are ignored, personal injury and/or machine damage may result.

WARNING

If warnings are ignored, serious injury or death may result.

Warning Label

This machine has a warning label attached to ensure safe operation. It is very important and should be kept clean and never removed. If the warning label becomes damaged or lost, contact Stiles Machinery immediately for replacements.



Risk of electrical shock

WARNING

Never use the DBR50 for purposes other than its intended use. Do not modify or remove any guards or other safety features. Improper use or modifications may affect your warranty or result in serious injury or death.

Training

This machine is intended for use by authorized, well-trained operators only.

Do not operate until you have a complete working knowledge of the machine and have been properly trained for its safe operation, correct adjustment, and use. All operators should thoroughly read and understand this manual and the workings of this machine prior to operation.

It is essential that all operators be aware of the following:

- The dangers associated with the operation of this machine.
- The use of personal protective equipment for ear and eye protection.
- The proper positioning of the operator and operator's hands relative to the drill bits and pneumatic clamps.
- The principles of machine operation, and proper use and adjustment of the fence and safety features.
- The correct selection of tooling for each operation.
- The safe handling of the workpiece when boring.
- The safe stacking of the workpiece before and after boring.

2.0 Facility Preparation

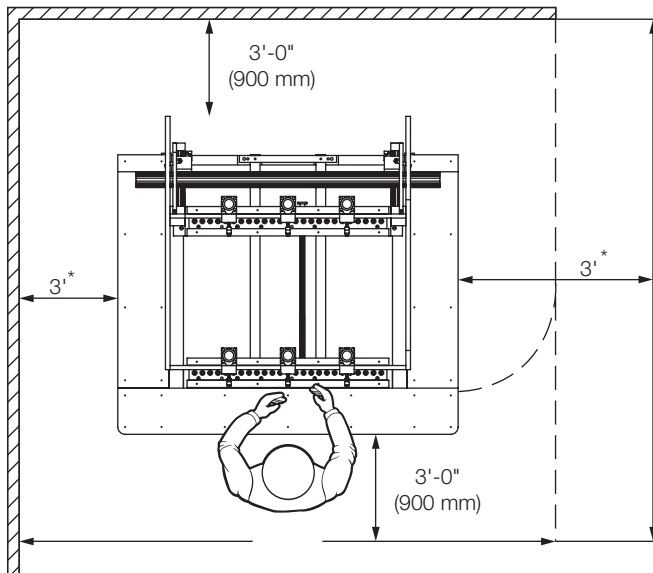
Prior to uncrating your machine confirm that your location can accommodate the Ironwood DBR50. Follow these guidelines:

2.1 Floor

- The floor must be flat and level.
- Although no special foundations are required, a concrete floor is recommended.
- All floors must have a load-bearing strength suitable for the machine weight of approximately 1,600 pounds (730 kg).
- If anchoring the machine to the floor, purchase high quality anchor bolts appropriate to the floor construction and material.

2.2 Work Space

- Provide adequate workspace surrounding the machine.
- Provide proper non-glare, overhead lighting.
- Avoid exposing to any environment where vibration is present.



Machine clearance requirements*

*Actual clearance requirements on the sides depend upon the length of the workpiece to the machine.

2.3 Power

⚠ WARNING

A licensed electrician must connect the DBR50 to the building power source.

- Do not use extension cords.
- Be sure that the electrical current of the power source is of the same characteristics as the 230-volt, or 460-volt, 3-phase electrical system supplied with your machine. If other machine voltage capabilities are required, contact Stiles Machinery.

	DBR50
Motor	3 hp x 2
Motor Power	230v (3-phase) / 460v (3 phase)
Amperage	17.4 amps @ 230v / 8.7 amps @ 460v

- Ensure the machine is protected with an external over-current protective device per your local electrical codes.
- Electrical equipment operating conditions:
Air temperatures between +41°F (+5°C) and +113°F (+45°C).
Relative humidity not to exceed 50% at a maximum temperature of +113°F (+45°C).
- Electrical equipment is designed and protected to withstand the effects of transportation and storage temperatures within a range of -13°F (-25°C) to +131°F (+55°C), and for short periods of time not exceeding 24 hours at up to +158°F (+70°C).
- Ensure connection to factory ground system is wired correctly (IAW local electrical codes and NEC) and not connected to any electro magnetic interference source such as welders.

2.4 Compressed Air

This machine requires compressed air between 90-100 psi to operate.

3.0 Delivery and Installation

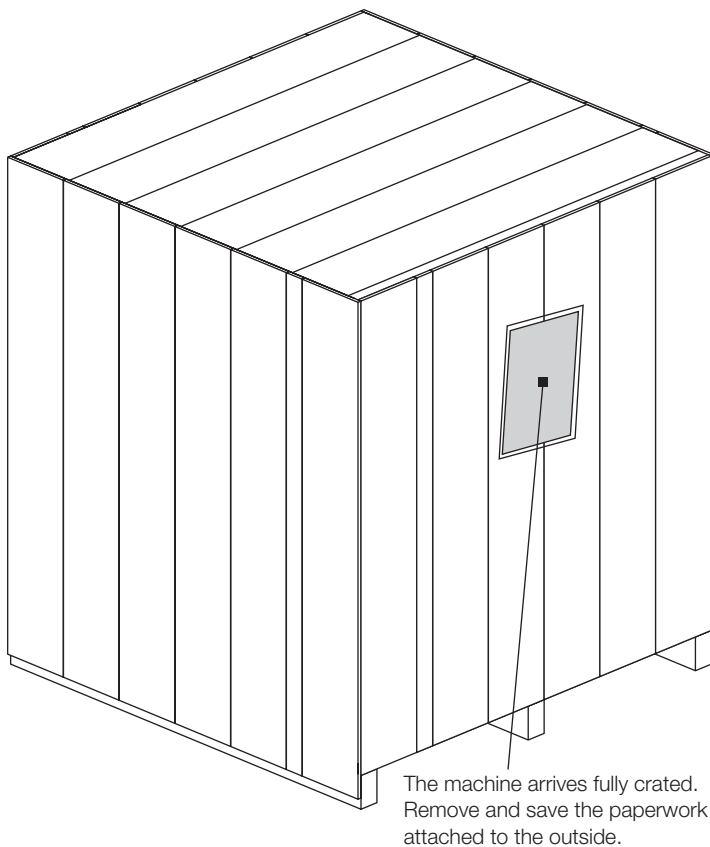
3.1 Receiving Your Machine

You will be contacted to arrange delivery. Your machine will be delivered by truck to your location. If there is no loading dock, be sure that you have informed the carrier in advance so that they deliver using a truck with a lift gate to lower the machine to ground level.

Before accepting the machine and signing the bill of lading from the carrier, please inspect crating and machine condition, note potential damage on the bill of lading, take pictures of potential damage, and contact Stiles Machinery immediately at 616.698.7500 and ask to speak with the traffic department.

The machine will arrive fully crated and secured to a pallet. Use a hand truck or fork lift to move the machine on its pallet as close to its final position as possible.

If you do not intend to install the machine immediately after delivery, store it in a protected, cool, and dry location.



3.2 Unpack the Machine

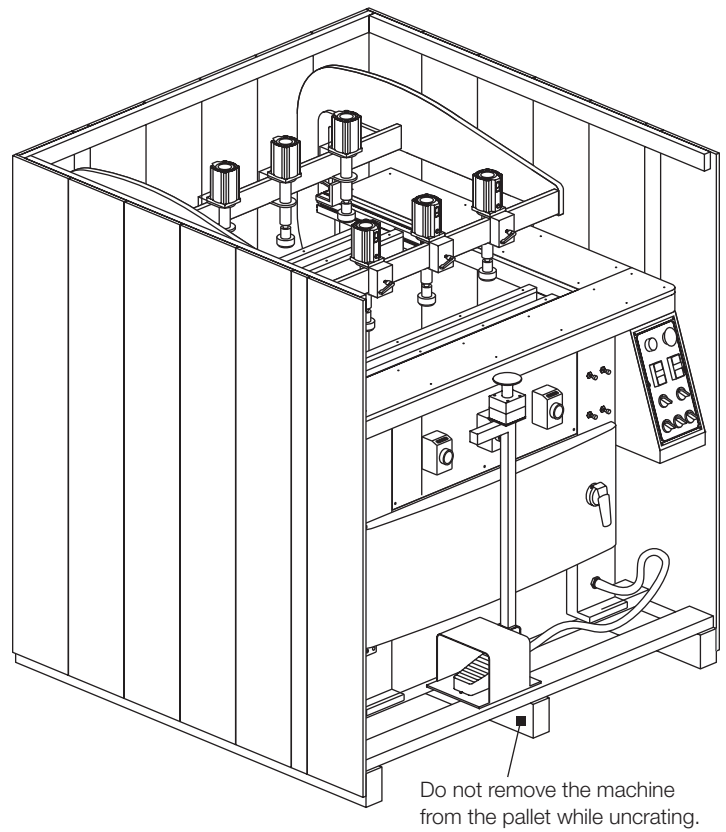
TOOLS REQUIRED:

- Hammer
- Crowbar

Unpack as follows:

Do not remove the machine from the pallet.

1. Remove and save all paperwork attached to the outside of the crate.
2. Remove the crating, starting with the top, then remove the four sides. Use caution to avoid personal injury and prevent damage to the machine's finish.
3. Remove the protective plastic from the machine, starting at the bottom.



4. Remove hardware, accessories, and tool kit that may be shipped inside the machine. If additional accessories are ordered, they may be delivered separately.

3.3 Inspection

Save all containers and packing materials until you are satisfied that your machine has arrived in good condition. If you discover the machine is damaged after you've signed for delivery, immediately call Stiles Customer Service at 616.698.7500.

When you are completely satisfied with the condition of your equipment, you should inventory its parts.

Open and check the contents of all containers to ensure all tools, hardware, and accessories are included. The tool kit should contain the following items:

1. Allen wrench set (7 pieces)
2. Open-end wrench set (6-pieces: 8x10/10x12/12x14/14x17/17x19/22x24)
3. Grease gun
4. 3m ruler
5. Cranking handle
6. Paint (3-color set)
7. User manual

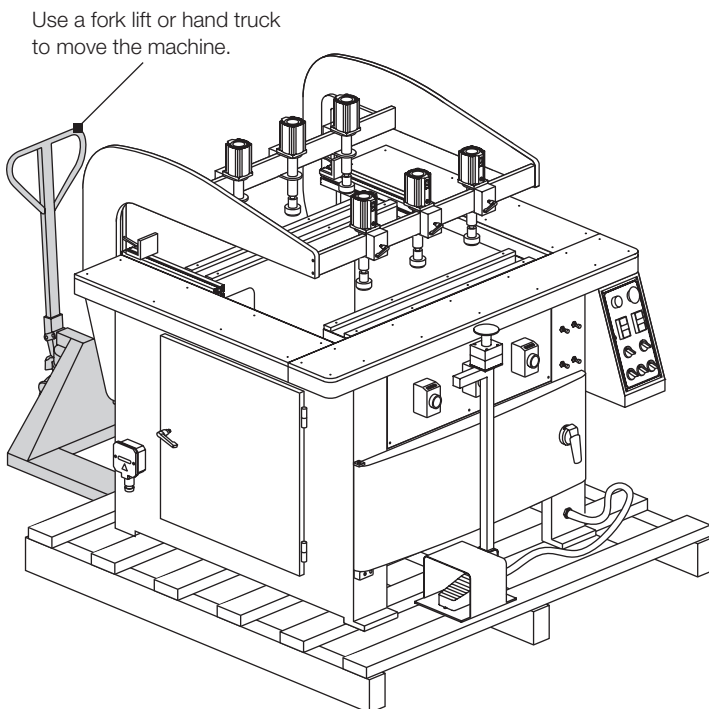
3.4 Move Machine to Final Position

Be sure the site is properly prepared. Refer to section 2.0 for details

TOOLS REQUIRED:

- Hand truck or fork lift

Use a hand truck or fork lift to move the machine on its pallet to its final location. If using a fork lift, insert the forks as close as possible to the supports. Make sure fork travel is clear of any obstacles or wiring.



3.5 Remove Machine from Pallet

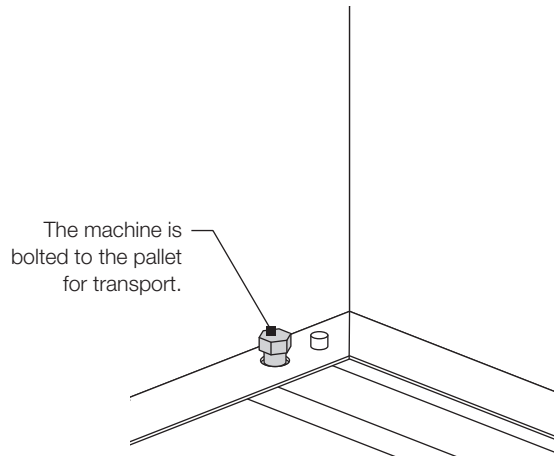
CAUTION

The DBR50 weighs approximately 1,600 pounds (730kg). For this procedure, we recommend using a fork lift.

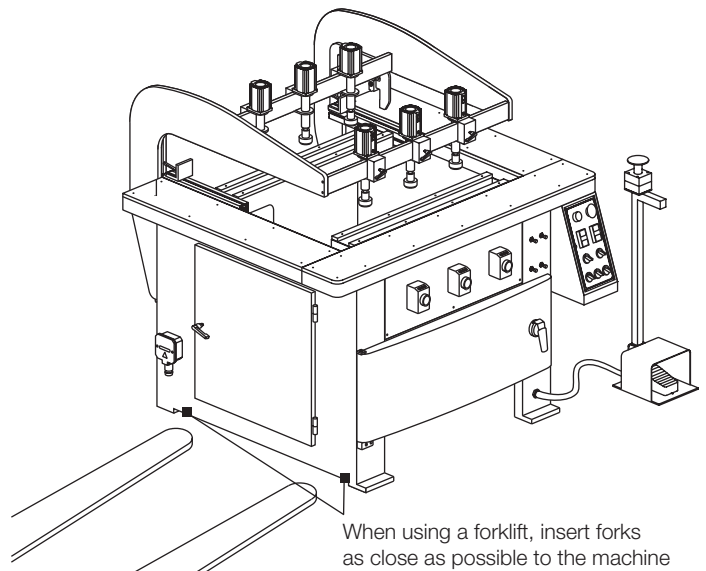
TOOLS REQUIRED:

- Adjustable wrench

When the machine has been placed at its final location, carefully remove the machine from the pallet.



1. From inside the cabinet, remove the bolts that secure the machine to the pallet at the interior corners.
2. Lift the machine from the pallet by pickup with a forklift.
3. Carefully place the machine into final position.



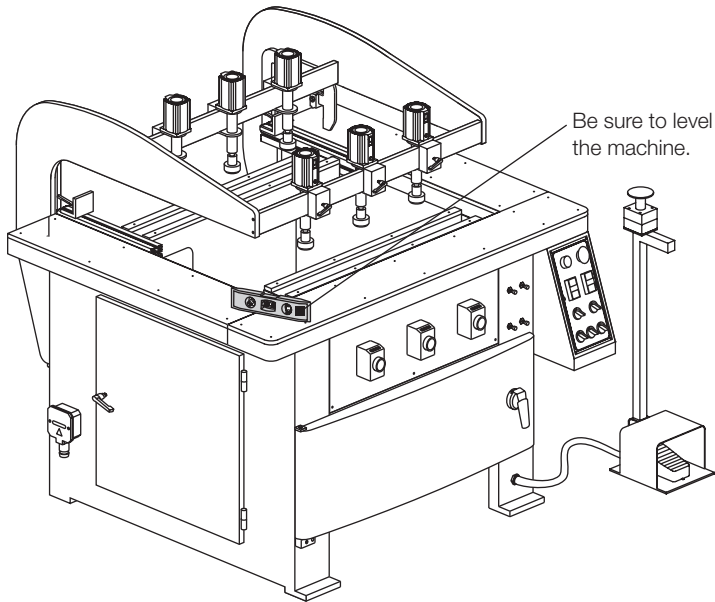
NOTE: The boring heads can be damaged if care is not taken when moving machine.

3.6 Level

TOOLS REQUIRED:

- Bubble Level
- Adjustable wrench

Use a bubble level along the length and width of the tabletop surface to check for level. Use an adjustable wrench to adjust leveling bolts to level the machine.



3.7 Pre-Operation Cleaning

⚠ WARNING

Use proper cleaning agents and methods described below. Do not use gasoline or other petroleum-based solvents. There is a risk of explosion and burning if these products are used. Serious personal injury may occur.

Machine Surfaces

After the machine is unpacked, remove the rust preventative oil that coats the machine. Use a soft cloth and nonflammable degreasing agent, such as Simple Green or other orange/citrus-based cleaner. Do not use abrasive pads.

Boring Block Quick Chucks

Special care should be taken when cleaning boring block quick chucks. Completely remove all the grease and dust using a degreasing agent as mentioned above.

4.0 Assembly

To be assembled:

- Rear extension fence and stops
- Drill bits

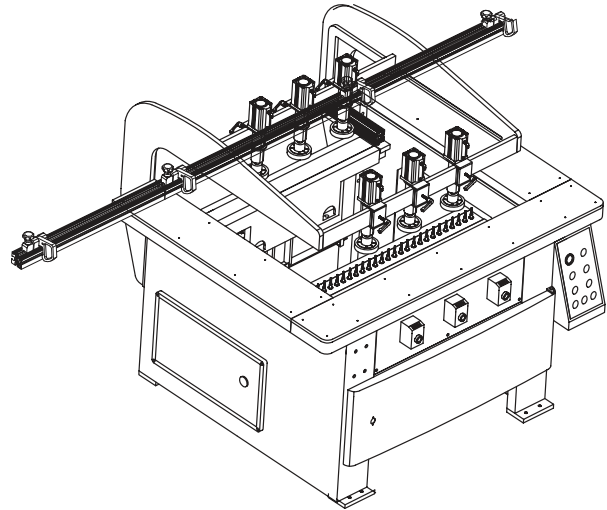
4.1 Extension Fence and Stops

PARTS REQUIRED:

- 3 fence sections
- 2 connection rods
- 4 connection bars
- 4 flip stops
- 1 measurement tape



The rear aluminum fence is assembled using three sections: one 49 1/4" (1250mm) section between two 34 1/2" (875mm) fence extensions attached to the left and right of the center section. The aluminum fence has one beveled corner. The beveled corner is the mounting slot for the ruler and should be positioned forward for easy viewing.



To assemble:

1. Insert a connection rod halfway into the center hole at each end of the center back fence.
2. Insert a connection bar into the T-slot at each end of the center back fence; leave approximately half the connection bar exposed.
3. Tighten two set screws through the center back fence onto each connection bar.
4. Attach the two side fences to the connection rod at each end of the center back fence.
5. Tighten the connection bar set screws.
6. Loosen the locking handle on the flip stops.
7. Insert flip stops into the t-slot on the aluminum profile of the back fence.
8. Slide the flip stops to the desired positions on the fence.
9. Tighten the locking handles.

NOTE: A 3-meter measurement tape is included in the tool kit. The measurement tape can be mounted on the assembled back fence to provide accurate flip stop measurements over the entire length of the back fence.

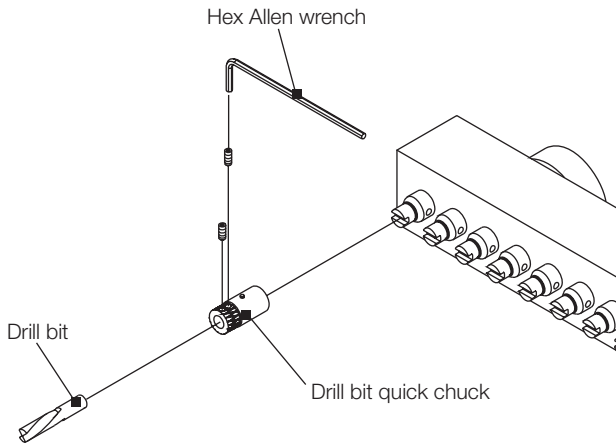
4.2 Drill Bits

PARTS REQUIRED:

- Drill bit adapters (supplied)
- Drill bits (not supplied)

TOOLS REQUIRED:

- Hex Allen wrench



1. Determine which drill bit locations will be used to accommodate the application.

NOTE: Each spindle is colored red or black based on rotation direction (left or right). Please observe the rotation direction when selecting tooling for each spindle.

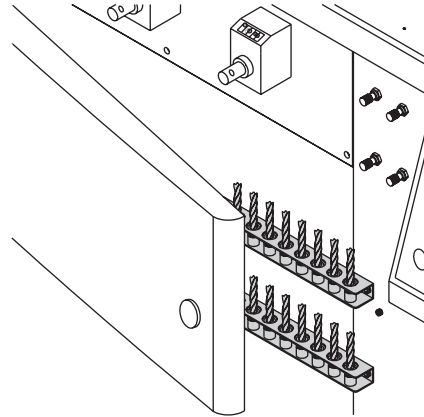
2. Carefully insert a drill bit quick chuck into the spindle in the desired positions. Make sure the pin inside the quick chuck is engaged with the notch on the spindle.
3. Install drill bits into the other quick chucks in the same manner.
4. Tighten the two set screws with an Allen wrench.
5. Make sure the bits are aligned and all at the same height. Remove and reinstall any out-of-alignment drill bits so that all are aligned.

Remove Drill Bits

To remove a drill bit quick chuck (with drill bit) from the spindle, slightly turn the quick chuck to the left and pull up.

Drill Bit Storage Compartment

You can store up to 50 drill bits in the storage compartment behind the access door at the front of the machine.



5.0 Connect to Power and Air

5.1 Power connection

- Voltage – Steady state voltage +/- 10% of nominal voltage.
- Machine needs steady voltage at all times.

WARNING

Before connecting power to the machine, make sure all screws and fasteners are tightened and all mechanical functions work freely.

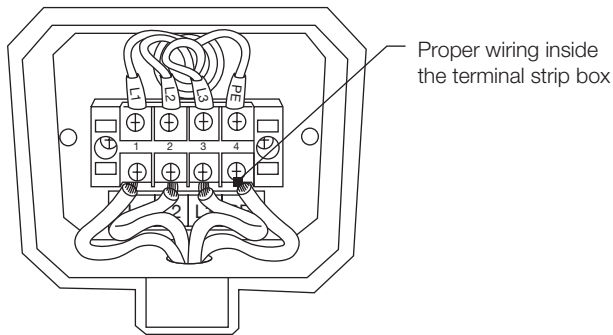
WARNING

A licensed electrician must complete all connections to electrical power.

Before connecting to a power source, confirm that the electrical current of the power source is the same as the electrical system supplied with your machine. Ensure the machine is protected with an external over current protective device per your local regulating authorities.

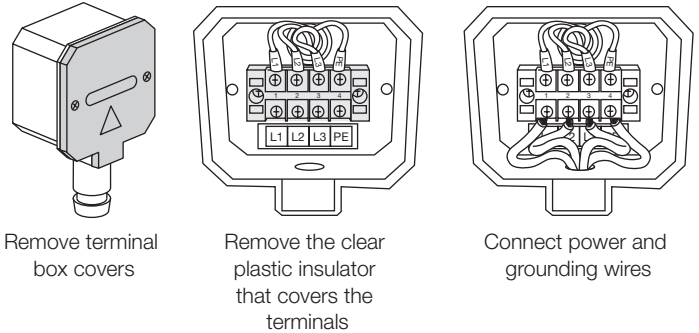
Machine must be properly grounded to prevent electric shock. Never connect the yellow/green wire to a live terminal.

Once connected to power source, terminals are electrified even while the power switch is off.



To connect power source to the machine:

1. Remove two screws (A) and remove terminal box cover (B).
2. Remove clear plastic insulator that covers the terminals (C).
3. Insert source power cables through opening of terminal box (D).
4. Connect the two power cables to terminals L1 and L2, (E) and the yellow/green ground wire to ground terminal (F).
5. Replace the clear plastic insulator (C) and the power box cover (B).



WARNING

Always shut off power at source before removing terminal box cover. Failure to comply with this action may result in electric shock.

WARNING

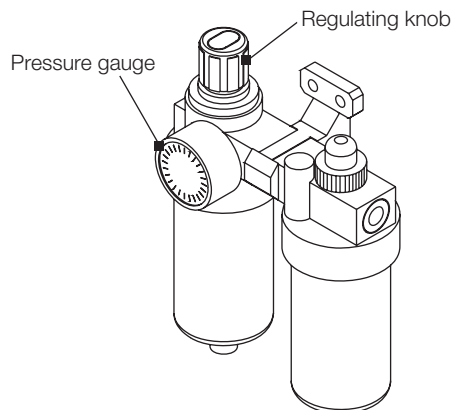
We have covered some basic electrical requirements for the safe installation of your machine. These requirements may not cover all installation requirements. You must confirm that your particular electrical configuration complies with all local codes. Ensure compliance by checking with your local municipality and a licensed electrician.

5.2 Air Supply Connection

Boring carriage adjustment and Quick-Release clamp operation are pneumatically controlled using the foot pedal.

A 1/4" N.P.T. inlet is supplied with the machine's air fitter/regulator to connect the machine to the air supply.

The air pressure regulator should be set to 90-100 psi.



To adjust the pressure:

1. Pull up on the outer ring of the regulating knob.
2. Turn the regulating knob counterclockwise to let air exhaust to a pressure level below the desired setting.
3. Turn the knob clockwise to slowly increase the pressure to the desired setting.

6.0 Safety

WARNING

Like all power equipment, there is danger associated with the Ironwood DBR50. Use caution and follow all safety instructions. Take every precaution to protect yourself, others around you, and the machine itself from improper use. Safety is a combination of common sense, training, and being alert at all times while operating your machine. If instructions, warnings, and cautions are not followed, serious personal injury or death may occur.

EYE PROTECTION: Always wear approved safety glasses or a face shield when operating this machine. Only use eye protection that meets or exceeds the standards of the American National Standards Institute (ANSI).

EAR PROTECTION: Always wear ear protection during machine operation.

DRESS CODE: Do not wear loose clothing, neckties, jewelry, or gloves that can get caught in moving parts. Confine long hair and keep sleeves above the elbow.

ELECTRICAL GROUNDING: Your machine must be electrically grounded. If a cord and plug are used, make certain the machine is properly grounded. Follow the grounding procedure indicated by the National Electric Code and local regulating authorities.

GUARDS: Make certain that machine guards are in place and in good working order. The machine should never be operated without the safety guards in place.

TOOLING AND ACCESSORIES: Use only recommended tooling and accessories. Improper tooling and accessories may cause personal injury or damage to your machine. Regularly maintain your tools and accessories. Follow instructions for lubricating and changing tooling and accessories.

POWER: Make sure the starter is in the OFF position before connecting power to the machine.

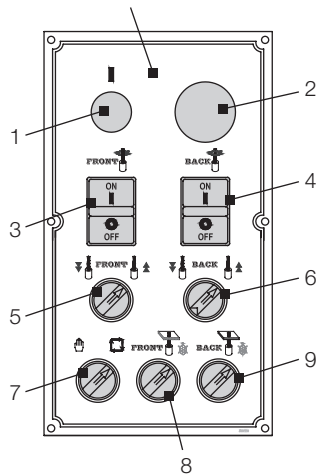
Make certain the machine is either unplugged or electrically disconnected and locked out when performing all maintenance, cleaning, or machine adjustments. Never leave the machine running unattended. Always turn the power off and stay by the machine until the drill spindles completely stop rotating.

HOUSEKEEPING: Before turning the machine on, remove all extra items on or around the machine. Keep the work area clean and free of scrap material, sawdust, and other debris to minimize the danger of slipping. Use compressed air or a brush to remove chips or debris. NEVER use your hands.

7.0 Operation and Adjustments

7.1 Machine Controls

The control unit on the front-right of the machine pivots for convenient use and controls the following functions:



1. Power On: Press to turn on control power to the machine.
2. Emergency Stop/Power Off: Press in case of emergency to stop drill rotation or to turn off machine control power.
3. Rear Drill Block On/Off: Press green button to turn drill block on; press red button to turn off drill block.
4. Front Drill Block On/Off: Press green button to turn drill block on; press red button to turn off drill block.
5. Rear Drill Block Activation Switch:
 - a. Manual Mode: Allows manual rise and fall of rear drill block
 - b. Automatic Mode: Allows automatic rise and fall of rear drill block
6. Front Drill Block Activation Switch:
 - a. Manual Mode: Allows manual rise and fall of front drill block
 - b. Automatic Mode: Allows automatic rise and fall of front drill block

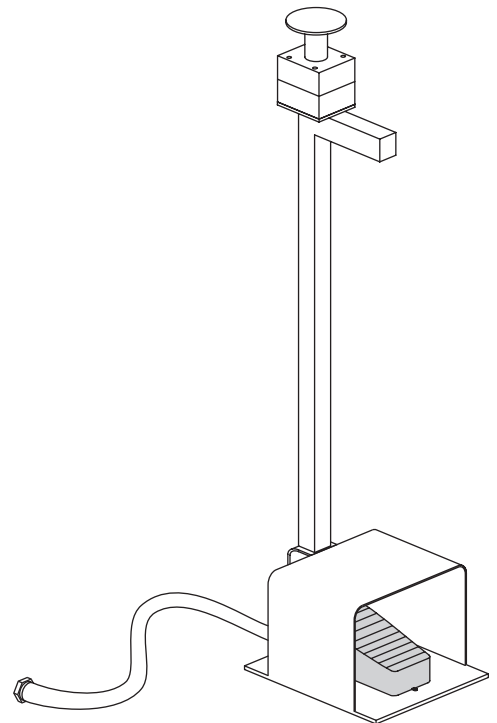
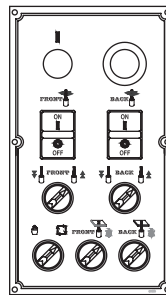
7. Mode Selector switch

- Position 1 (hand symbol): Manual mode. The boring head carriage will move pneumatically into the desired position without spindle rotation. This position can be used to raise and lower boring head to easily change tooling.
- Position 2 (circular arrows): Automatic mode. The foot pedal activates the pneumatic movement of both the boring head carriage and the workpiece hold-down clamp; the drill spindles will run automatically when the boring head carriage moves up/forward and stop when it is in a lowered/back position.

8. Back Through-hole Boring Brake On/Off: Turn the knob to the right for through-hole applications; turn to the left to turn off. The switch causes the drill bank to slow down before punching through top of panel to prevent chipout.
9. Front Through-hole Boring Brake On/Off: Turn the knob to the right for through-hole applications; turn to the left to turn off. The switch causes drill bank to slow down before punching through top of panel to prevent chipout.

Foot Pedal

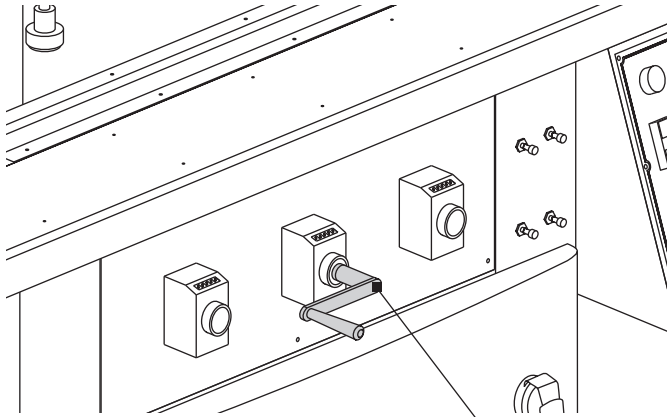
The foot pedal activates the pneumatic movement of both the workpiece hold-down clamps and the boring head carriages.



Boring Depth and Back Carriage Position

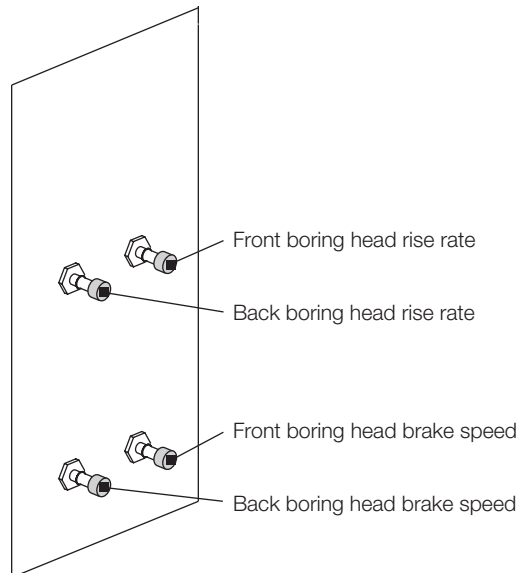
The control panel on the front of the machine body lets you precisely adjust the boring depth and rear boring head carriage position.

- Left knob: Controls boring depth of rear carriage.
- Center knob: Controls position of rear carriage.
- Right knob: Controls boring depth of front carriage



Use crank handle to adjust bore depth and back carriage position

A crank handle is provided to operate these controls. Digital readout is provided at each control for accurate setup of each function.



Speed Control

1. **Back Boring Head Rise Rate:** Turn the knob counterclockwise to increase the speed at which the back drill block travels up during the boring cycle. Turn knob clockwise to decrease rise speed.
2. **Front Boring Head Rise Rate:** Turn the knob counterclockwise to increase the speed at which the front drill block travels up during the boring cycle. Turn the knob clockwise to decrease speed.
3. **Back Boring Head Brake Speed:** Controls the rate at which the back boring head brakes for through-hole drilling applications. Turn the knob counterclockwise to increase speed. Turn the knob clockwise to decrease speed.
4. **Front Boring Head Brake Speed:** Controls the rate at which the front boring head brakes for through-hole drilling applications. Turn the knob counterclockwise to increase speed. Turn the knob clockwise to decrease speed.

7.2 Machine Operation

Step 1: Activate air supply to machine

WARNING

When air pressure is first applied to the machine, the boring head carriage may move. Do not stand behind the machine.

NOTE: The air supply must be on to make certain adjustments and enable movement of the workpiece hold-down clamps and boring carriage.

Step 2: Turn on power to machine

Step 3: Ensure air pressure is correct

Step 4: Select operation mode

There are two operation modes available on the DBR50 machine.

Manual Mode (hand symbol): Use for manual setup of the machine.

Turn the knob to the left for manual control. The boring head carriage will move pneumatically into the desired position without spindle rotation, unless spindle rotation is manually turned on.

Automatic Mode (circular arrows): Use for normal machine operation.

Turn the knob to the right for automatic up/down movement of the boring head carriages. The foot pedal activates the pneumatic movement of both the boring head carriages and the work hold-down clamp. The drill spindles will run automatically when the boring head carriages move up and stop when they are in a lowered position.

Step 5: Set boring depth

Attach the crank handle to the left or right digital readout to set the boring depth for the back and front carriages. The depths are displayed in millimeters (mm) on the integral digital readouts for both controls.

To adjust:

1. Turn the crank handle to change position of boring depth, observing position on digital readout.

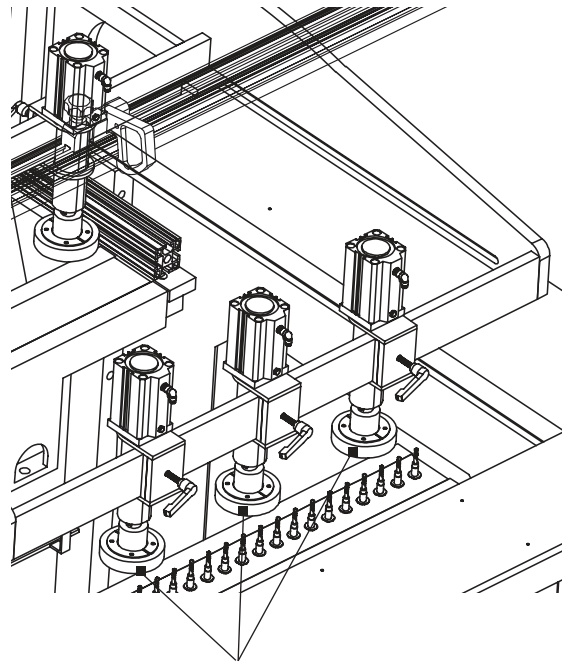
Step 6: Position rear boring head

The rear boring head can be adjusted to change the spacing between the front and rear boring heads by using the center digital readout.

To adjust:

1. Turn the crank handle to change position of the rear boring head, observing position on the digital readout.

Step 7: Position the workpiece hold-down clamps



Position the hold-down clamps according to the dimensions of your workpiece to securely hold it in place while boring.

To accommodate workpiece thickness:

1. Place the workpiece on the table under the hold-down clamps.
2. Lower the hold-down clamps to within an inch of the surface of the workpiece.
3. Lock the hold-down clamps in place.

To accommodate workpiece width:

1. Loosen the lock lever for each hold-down to be adjusted.
2. Move the hold-down(s) right or left to the optimal position to secure your workpiece.
3. Tighten the lock levers.

NOTE: A minimum of two workpiece hold-down clamps should always be used when possible.

To reposition the hold-down assembly:

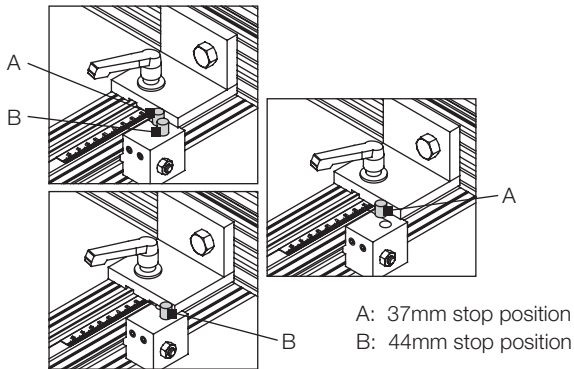
1. Loosen the lock levers at each end of the assembly.
2. Move the assembly forward or back as needed.
3. Tighten the lock levers.

Step 8: Position flip stops

Position the four flip stops on the fence according to the dimensions of your workpiece and the desired boring points. The stops can be moved to any point along the fence. The fence has an integral measuring guide with magnifying lens for precision set-up.

1. Loosen the flip stop locking levers.
2. Slide the flip stops to the desired positions on the fence.
3. Tighten the locking levers.

Step 9: Position QuickSet rear fence



Position the rear fence in proper relation to the drill block for your application.

1. Loosen the locking handles on the rear fence.
2. Move the fence forward or back as needed.
3. Tighten the locking handles.

Two stop-block positions enable quick and easy 37mm or 44mm setting:

1. Depress the button on the manual release stop and move to the desired setting.
2. Release the button.
3. Repeat for the other stop.

Step 10: Set feed rates

Feed rates are determined by the type of wood and drilling operation. In general, hard woods require a lower feed rate; soft woods require a faster rate. Through-holes require a slower rise rate.

To reduce the feed or brake rates for the boring head carriage, turn the rise rate and brake rate adjustment knobs clockwise for the front and rear boring head. Turn counterclockwise to increase the feed or brake rates.

NOTE: If there is burning on a drill hole or chipout on a through-hole, feed rate is too fast or too slow. Adjust as needed based on the material being machined.

Step 11: Boring the workpiece

WARNING

Do not attempt to operate machine if you are not completely familiar with its operation. Obtain immediate advice from a supervisor, instructor, or other qualified personnel.

Use of this machine requires that you give your work your undivided attention, and careless acts or not paying close attention to work being performed may result in serious injury to yourself and/or others. Never operate this or any machine under the influence of drugs, alcohol, or any medication that may impair judgment.

Do not bore warped wood. The workpiece must sit flat on the table without rocking.

Dust created by manufacturing activities may be harmful to your health. Your risks from exposure may vary. Always work in a well-ventilated area and wear safety approved, protective dust masks specifically designed to filter out microscopic particles.

Once fences, depths, and rear boring head are properly set for operation:

1. Turn on air supply and power supply to machine.
2. Press control power on button.
3. Place the workpiece in the desired reference position against the fences and/or flip stops.
4. Bore your workpiece:
 - a. If in manual mode, you should not bore the workpiece. Switch to automatic mode.
 - b. If in automatic mode, press the foot pedal; the drill spindles will run automatically when the boring head carriage moves up/forward and stop when it returns to the lowered/back position.
5. Remove the workpiece.

WARNING

Never remove the bored piece until the boring cycle is complete.

8.0 Maintenance

⚠ WARNING

Before performing any type of maintenance or adjustments, make certain that the machine is disconnected from its power and air source and completely shut off.

⚠ WARNING

Never operate the machine until it has been properly lubricated and all necessary maintenance work has been completed.

NOTE: After changing a setting, making an adjustment, performing repair/maintenance work, or troubleshooting, please check that all applicable safety functions are working properly before performing another operation.

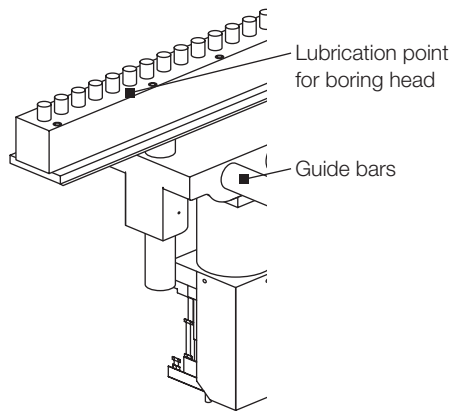
Clean all machine parts and surrounding areas daily.

Keep a maintenance record and perform recommended maintenance checks.

8.1 Lubrication

Weekly, clean and lightly oil the drill head guide bars and the positioning screw of the rear boring head carriage using an ISO VG32 oil.

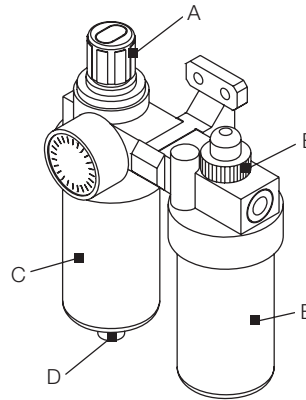
Every 1,000 hours of machine operation, lubricate the boring head using a grease gun and a non-melting moly grease. Apply no more than 6 grease-gun strokes.



Spindle bearings are permanently lubricated and require no further lubrication.

Spindle bearings may purge grease during the first 20 hours of operation. Wipe away any excess grease before starting the machine.

Pneumatic System



Periodically fill the oil reservoir (B) with pneumatic oil. Use high-quality pneumatic oil such as VG32 or other approved lubricant.

Drain and refill oil if there is condensation inside the reservoir (C). To drain, press the knob (D).

NOTE: Reduced air flow can cause lack of lubrication. Be sure air flow is properly adjusted to avoid mechanical damage from lack of lubrication.

8.2 Cleaning

Blow dust from the machine frequently to avoid buildup of waste material, dust and other debris.

8.3 Inspection

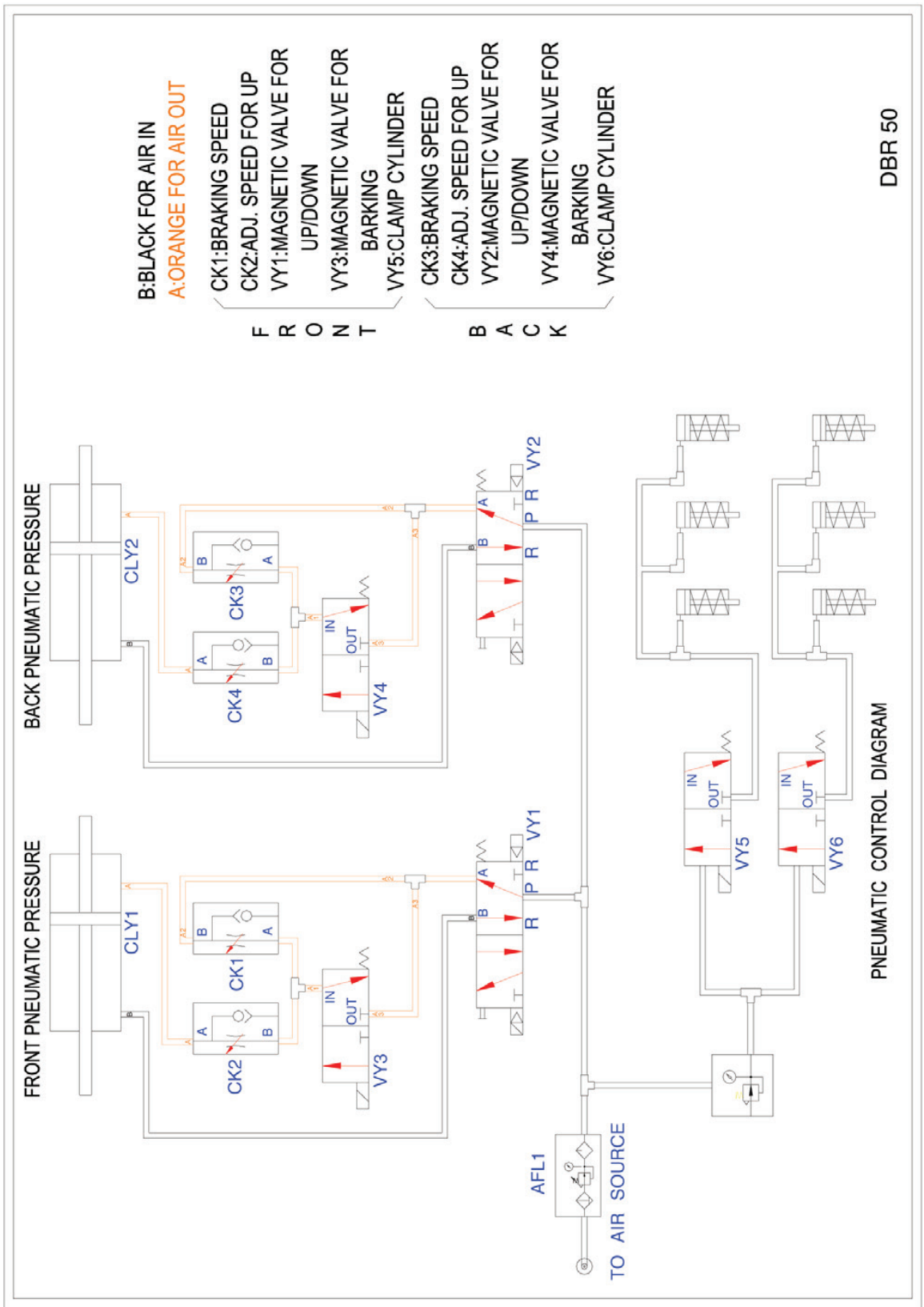
Feature	Interval/Situation
Boring head and bits	Every use
Emergency stop	Everyday – by functional test
Pneumatic system	Every day
Electrical cabinet/system	Monthly: wiring terminals loose, insulation deterioration, vacuum dust

9.0 Troubleshooting

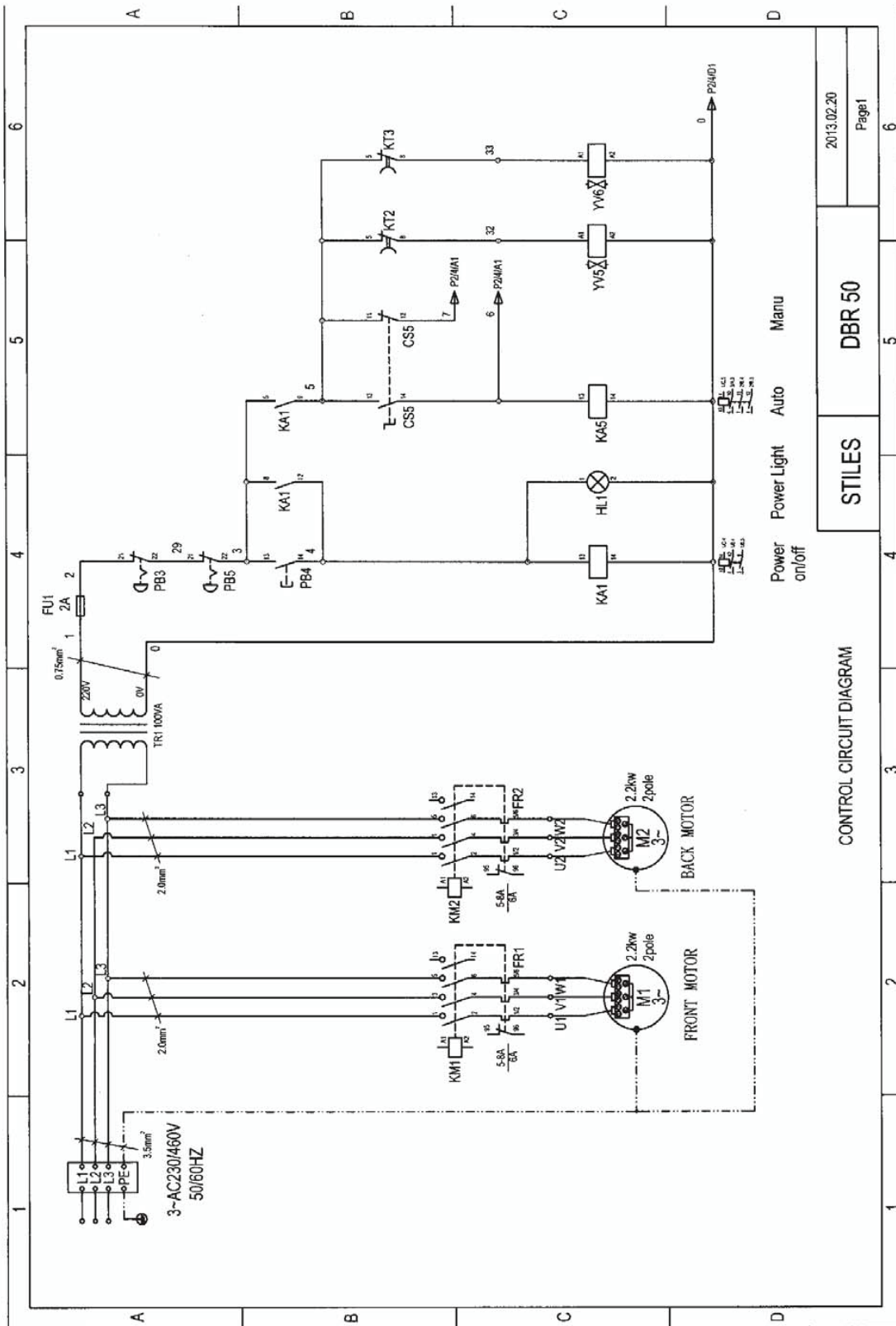
Trouble	Possible Cause	Solution
Motor won't start	Overload is tripped Improper voltage Failed motor	Reset overload Check voltage to motor Rotate motor by hand and Ohm out motor
Drills are burning wood	Drill feed speed too fast Drill feed speed too low Dull tooling Improper tooling	Slow down feed speed Speed up feed speed Sharpen or replace tooling Ensure correct tooling for application (including rotation direction of tools and spindle)
Drills are chipping material on through hole boring	Brake not switched on Brake speed too fast Brake worn Brake not adjusted in correct position	Turn brake switch on Slow down speed of brake Replace brake Adjust brake to proper adjustment point
Motor not starting when foot pedal is pressed	Machine in manual mode Bad electrical switch	Switch to automatic mode Call Stiles Technical Support
Drill block making abnormal noise	Bad bearings or broken gears	Call Stiles Technical Support

If you cannot resolve your issue, contact Stiles Technical Support at 616.698.6615.

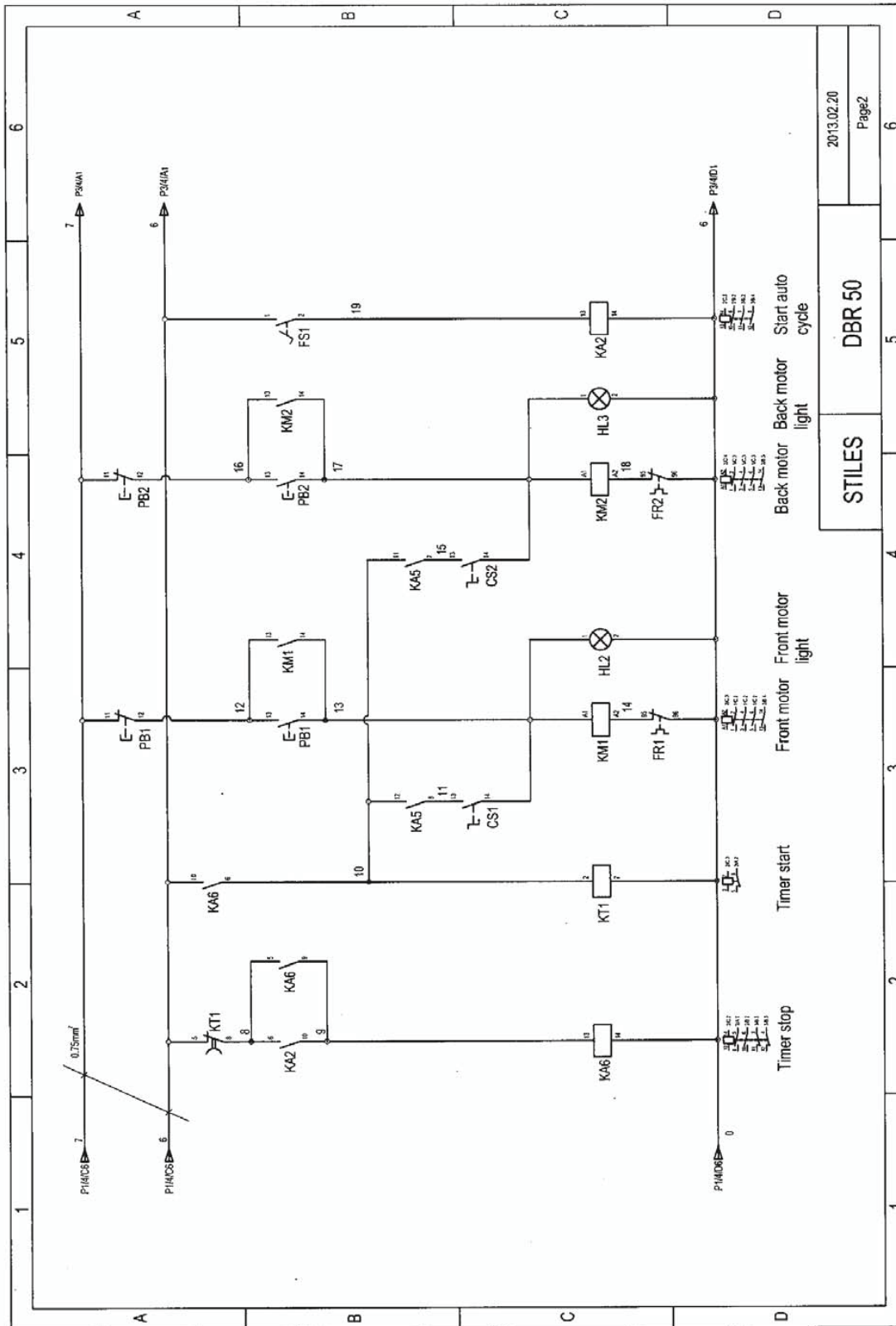
9.1 Air Circuit Diagram



9.2 Electrical Diagram

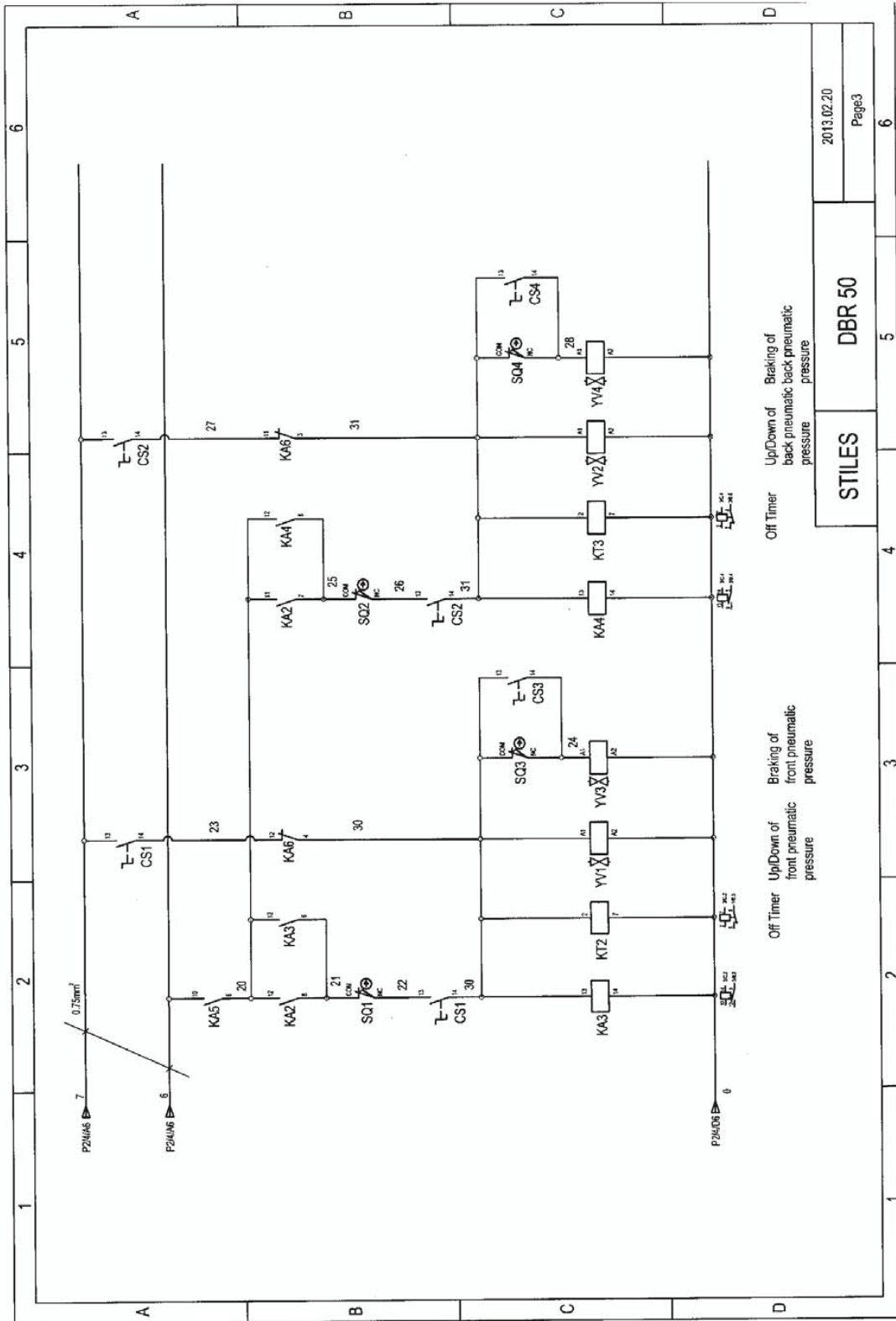


9.2 Electrical Diagram (Continued)

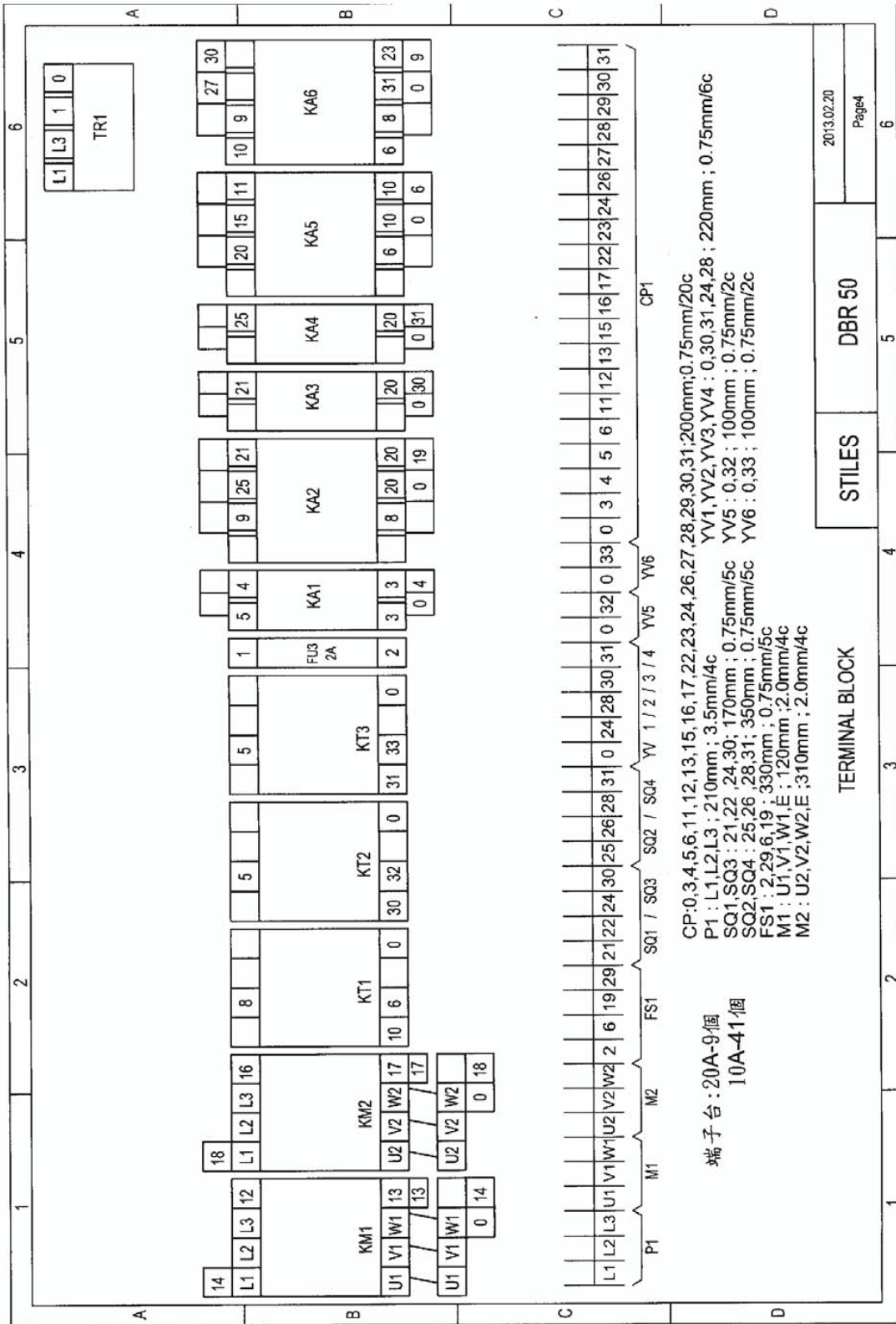


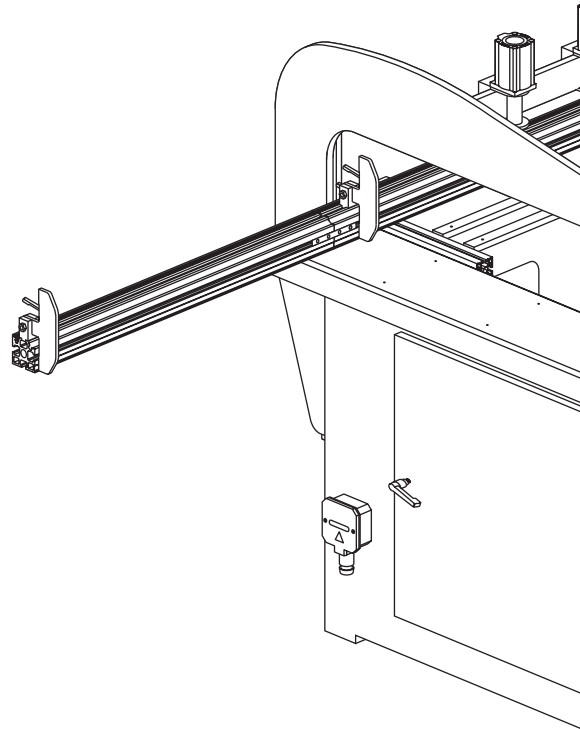
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STILES	DBR 50

9.2 Electrical Diagram (Continued)



9.2 Electrical Diagram (Continued)





IRONWOOD

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stiles

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