ROPER WHITNEY
CHANGING THE SHAPE OF METAL

# AUTOBRAKE®

## INSTALLATION CHECKLIST

Model AB1014, Model AB1016 and Model AB1214

2833 Huffman Blvd., Rockford, Illinois 61103
815-962-3011 / Fax 815-962-2227
**www.roperwhitney.com**

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# CONGRATULATIONS

We're excited about your AUTOBRAKE. purchase, the most popular and reliable powered folder on the market today. We are certain it will be an asset to your shop and your sheet metal fabrication processes.

**IMPORTANT**

We want the installation of your Autobrake to go as smooth as possible. So this document outlines all of the things you need to know, and take care of, before the date of installation.

Please read this pre-installation packet thoroughly and **send back the signed and completed checklist** (page 17) when you're done. We are available to answer any questions that arise. You can reach us at (815) 962-3011.

# INSTALLATION INSTRUCTIONS

**ELECTRICAL REQUIREMENTS:**

It is the responsibility of the customer to insure that the proper electrical power is available for the machine. The Autobrakes require 230 Volts A/C, 3 phase power with a ground. If the incoming voltage is dirty (arc welders) install a 5/8 inch copper grounding rod adjacent to the right rear leg. The rod should be 8 feet long and only 8 inches should be extending above the floor level. Run a ground wire from grounding rod to an approved grounding terminal inside the electrical cabinet.

Current requirements:

| Unit | Service Required | Minimum Wire Size |
|---|---|---|
| AB1016 series | 15 amp | 14 Ga. |
| AB1014 series | 20 amp | 12 Ga. |
| AB1214 series | 30 amp | 12 Ga. |

An electrical disconnect needs to be installed within 10 ft of the machine for maintenance and OSHA requirements. The electrical power is fed through the main electrical cabinet in the rear. This connection must be flexible to allow opening and closing of the electrical control panel. See Figure 1.

During installation there are a couple of conditions that can affect the control system. In some parts of the United States the incoming voltage is only 208 VAC. The incoming voltage must be between 220 and 250 VAC, (230 VAC, -5%+10%). If the incoming voltage is below or above these limits then a set of Buck/Boost transformers must be installed. **Note: if these transformers must be installed, they are the responsibility of the customer.** Buck/Boost transformers automatically increase or decrease the voltage potential by 10%. These voltage limitations are critical due to internal step down transformers. Additionally, low incoming voltage can have an adverse effect on the power output of the main motors.

There are several different manufacturers of these transformers and they are readily available across the country.

| | |
|---|---|
| Hevi-duty Electric<br>Model HS19F500A | 2 required |
| Acme Electric Corporation<br>Model T-1-81051 | 2 required |
| Square “D” model 500/V46F<br>200 to 230 VAC<br>6.5 KVA, 15% tolerance | 2 required |

Flexible electrical connection goes into the rear of the main electrical cabin.


Figure 1

Note: The main electrical cabin door swings open for maintenance access. The electrical power going into the cabinets must be flexible.

The second condition is single phase 220 VAC systems. In this case an external phase converter must be installed.

A phase converter creates an artificial third leg that is synchronized with the other two incoming phases. **Note: when working with inductive motors, only a rotary inverter should be used.** It is recommended that a voltage stabilizer be installed along with the phase converter.

| Unit | Minimum | Recommended |
|---|---|---|
| AB1016 series | CNC PAC-5 | CNC PAC-7 |
| AB1014 series | CNC PAC-5 | CNC PAC-7 |
| AB1214 series | CNC PAC-7 | CNC PAC-10 |

We recommend:

Phase-A-Matic
39917 18th Street West
Palmdale, CA 93551
(800) 962-6976

or

ARCO Electric Products
2325 E. Michigan Rd.
Shelbyville, IN 46176-2655
(800) 428-4370

When installing a phase converter attention must be paid to wire size and length of cable run. Due to the varying rules and regulation across the country, it is the customers responsibility to insure that all local codes are complied with. We recommend the use of a certified electrician who is familiar with your area.

Prior to our service personnel arrival, electrical power must be stubbed into the main control panel with 3 extra feet for routing. Our people will do the actual electrical hook up inside the machine.

# AIR REQUIREMENTS

The operation of pop-up fingers is controlled by integral air circuit. Air supplied to the backgauge fingers must be clean and filtered with an operating pressure of 80-100 psi.

The Autobrake is sent on a single skid. Upon arrival inspect the unit for any visible signs of damage. If any is noted, please contact the trucking company immediately and take pictures of the damage.

If the machine arrives on a flat bed and there is no loading dock, the unit can be picked up by the upper clamping jaw. This includes the skid, backgauge assembly and base unit. Contact the factory with any questions prior to removing the machine from the truck. Use a licensed rigger when off-loading the equipment.

After the skidded machine is removed from the truck and set down, the machine should be prepared for placement. Start by removing the shipping frame, then the storage box and finally the backgauge assembly. The backgauge assembly is mounted vertically for shipment. So, use care that it does not fall away from the machine. The backgauge table should only be picked up by the lower frame assembly. Once removed, set it aside. It will be installed later by the service person.

**WARNING - Potential for Injury or Death**

Use proper handling equipment and tools when moving this machine and its components. Do not exceed the rated capacities of fork trucks or cranes. Be aware of all potential hazards, and make certain that the machine, crating, skidding, and separate machine elements are properly braced and supported before attempting to move them.

Pick up the lower frame only using slings.

Figure 2

See page 12 for minimum forklift capacities. Position the forks as far apart as possible and between the jaws. Place plywood on top of the forks to prevent marring the jaw. Place a 4 x 4 or two 2 x 4 on top of the forks 12 inches back from the front. This helps keep the machine level when picking it up. Adjust the tilt as required to pick the machine straight up and off of the lag bolts holding it to the skid. Position the machine as required. Note: align the fork lift up with the center of the machine and insert the forks as far as possible for better control when lifting.

Figure 3


Figure 4

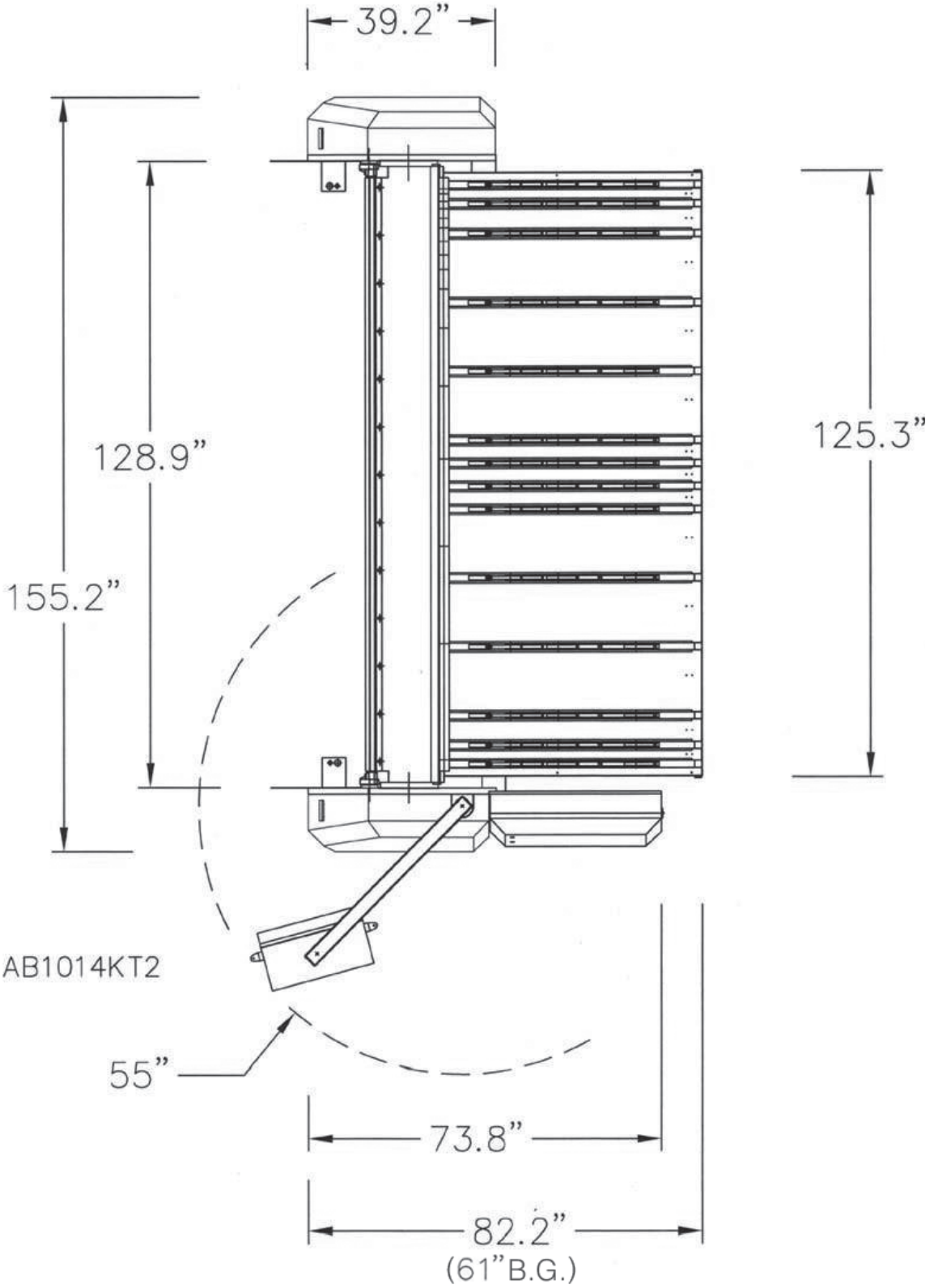
Position a 4 x 4 or equivalent between the forks and the upper beam to lift the machine up straight.

The Autobrake must be in place and bolted to the floor prior to the arrival of service personnel. The Autobrakes are very heavy and difficult to move. For example, when fully skidded the AB1014K, with a 61 inch backgauge, weighs 9,600 lbs. Therefore, we recommend that a qualified rigging crew position the base machine, mark the floor, install anchor bolts and bolt the machine to the floor.

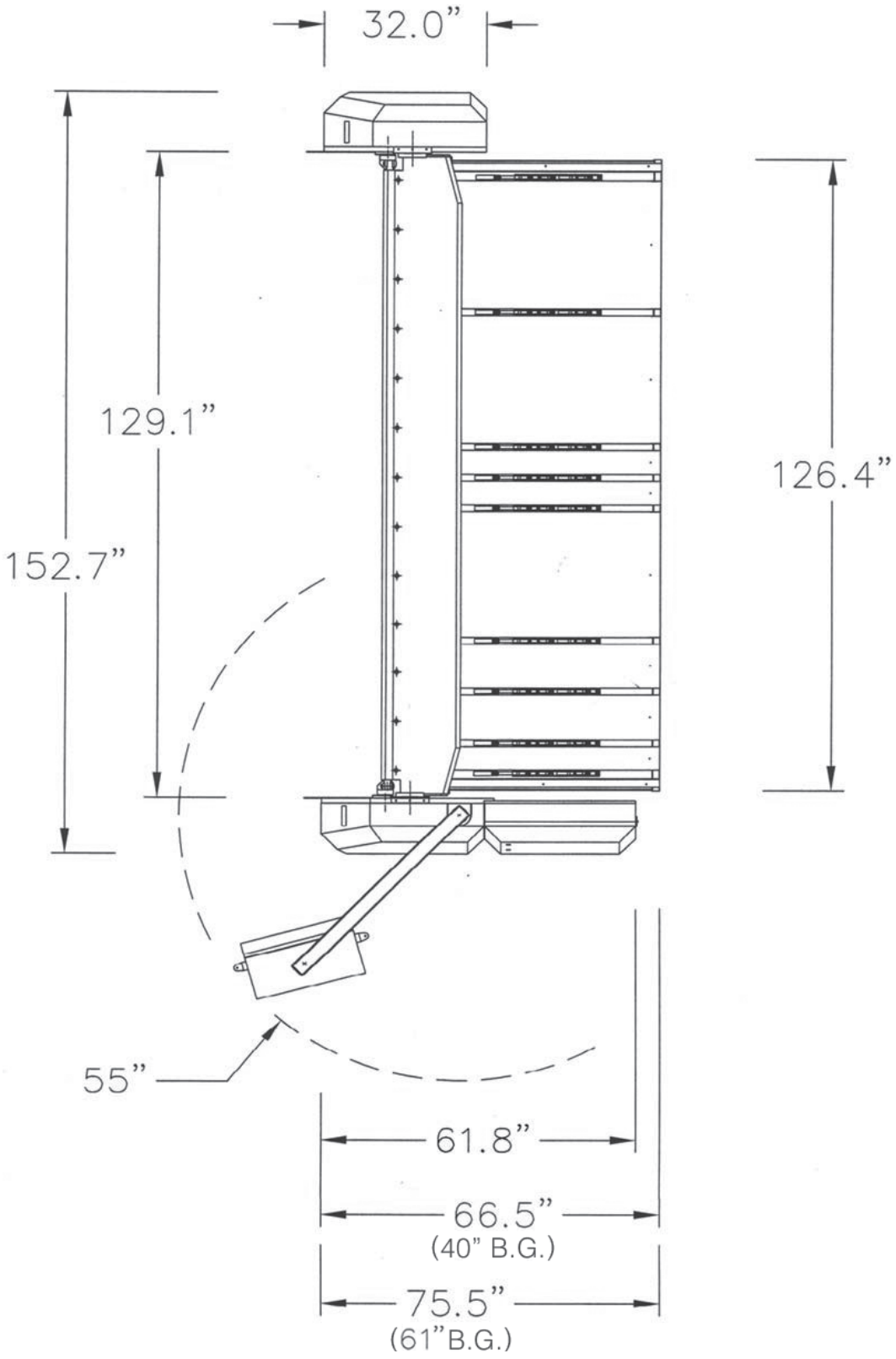
The machine should be bolted to the floor using 3/4-7 inch expanding anchor bolts. The minimum floor thickness is 4 inches. Studs should be at least 6 inches long with 3 inches extended above the floor.

Figure 5

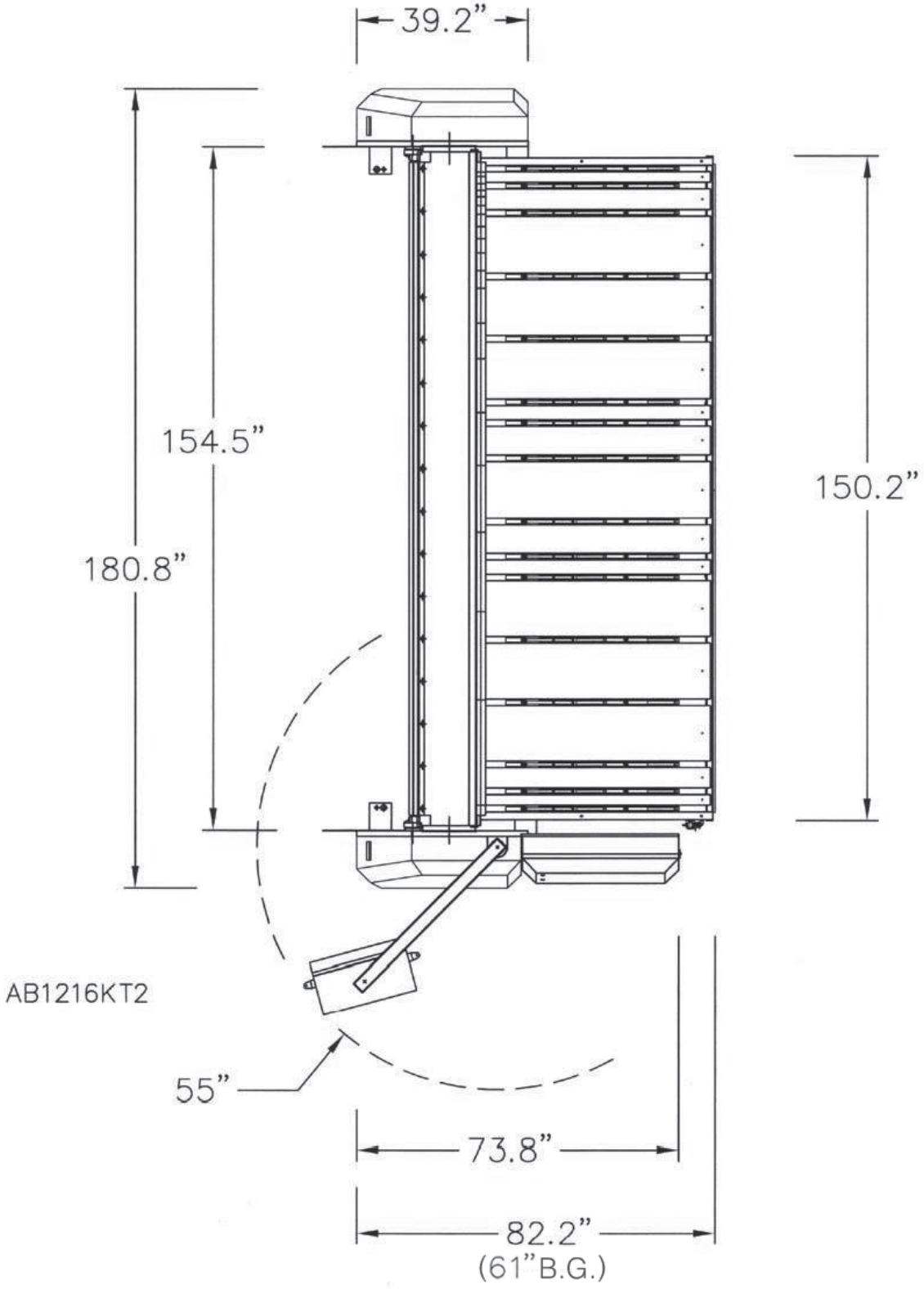
The machine must be located such that there are 18 inches of clearance on the left side, 18 inches of clearance for the backgauge, when installed, and 18 inches of clearance on the right side with the electrical control panel fully open.




**FLOOR DIMENSIONS**
**AB1014K WITH 61” B.G.**




**FLOOR DIMENSIONS**
**AB1016 WITH 40” B.G.**




**FLOOR DIMENSIONS**
**AB1214 61” B.G.**
**AB1214K 61” B.G.**

# FOUNDATION REQUIREMENTS

| Model | Machine Weight | Shipping Weight |
|---|---|---|
| AB1014 | 8,542 lbs | 9,022 lbs |
| AB1014K | 9,132 lbs | 9,612 lbs |
| AB1214 | 10,817 lbs | 11,060 lbs |
| AB1214K | 11,530 lbs | 12,060 lbs |
| AB1016 | 6,070 lbs | 6,600 lbs |
| AB1016K | 6,670 lbs | 7,200 lbs |

Autobrakes can safely be placed on existing reinforced concrete floors 4 inches thick.

Note: the guide lines are minimum recommendations only. Always check and insure that all local codes are being complied with.

| | Weights | | | | |
|---|---|---|---|---|---|
| Machine Type | Core Machine | Backgauge | Complete Machine | Skid & Packaging | Total Shipping Weight |
| AB1014 w/61" BG | 8,042 lb. | 500 lb | 8,542 lb. | 480 lb. | 9,022 lb. |
| AB1014K w/61" BG | 8,632 lb. | 500 lb. | 9,132 lb. | 480 lb. | 9,612 lb. |
| AB1214 w/61" BG | 10,267 lb. | 550 lb. | 10,817 lb. | 530 lb. | 11,060 lb. |
| AB1214K w/61" BG | 10,980 lb. | 550 lb. | 11,530 lb. | 530 lb. | 12,060 lb. |
| AB1016 w/61" BG | 5,520 lb. | 550 lb. | 6,070 lb. | 530 lb. | 6,600 lb. |
| AB1016K w/61" BG | 6,120 lb. | 550 lb. | 6,670 lb. | 530 lb. | 7,200 lb. |

The chart has been broken down to show the weights at various points in the handling process. In some cases, the machines listed may be handled in the segments shown to reduce the lift requirements of cranes and forklifts.

Always verify the lift capacity of the crane or forklift equipment you are using prior to moving the Autobrake or any of its components. Serious injury and/or damage to the machine may result if the lift equipment is used beyond its capacity.

# SURGE SUPPRESSION

Some customers may desire to install a 3 phase surge suppressor inside their electrical control panel because of problems associated with the local power grid.

We recommend:

Sola/Hevi-Duty
Model - STV100K-24D 800-377-4384
240 VAC
3 phase delta + ground Frequency 47-63 Hz
Nema 4 enclosure
8 pounds

or

Square D SDSA3650
240 VAC
47-63 Hz

Both units meet NEC Article 280.

# AIR

As of January 2001, all backgauge assemblies have air operated fingers. The backgauge assembly requires 80 to 100 psi at 1 cubic feet per hour.

Note: the air fitting may have to be changed due to the wide variety available. The customer is responsible for shop air.

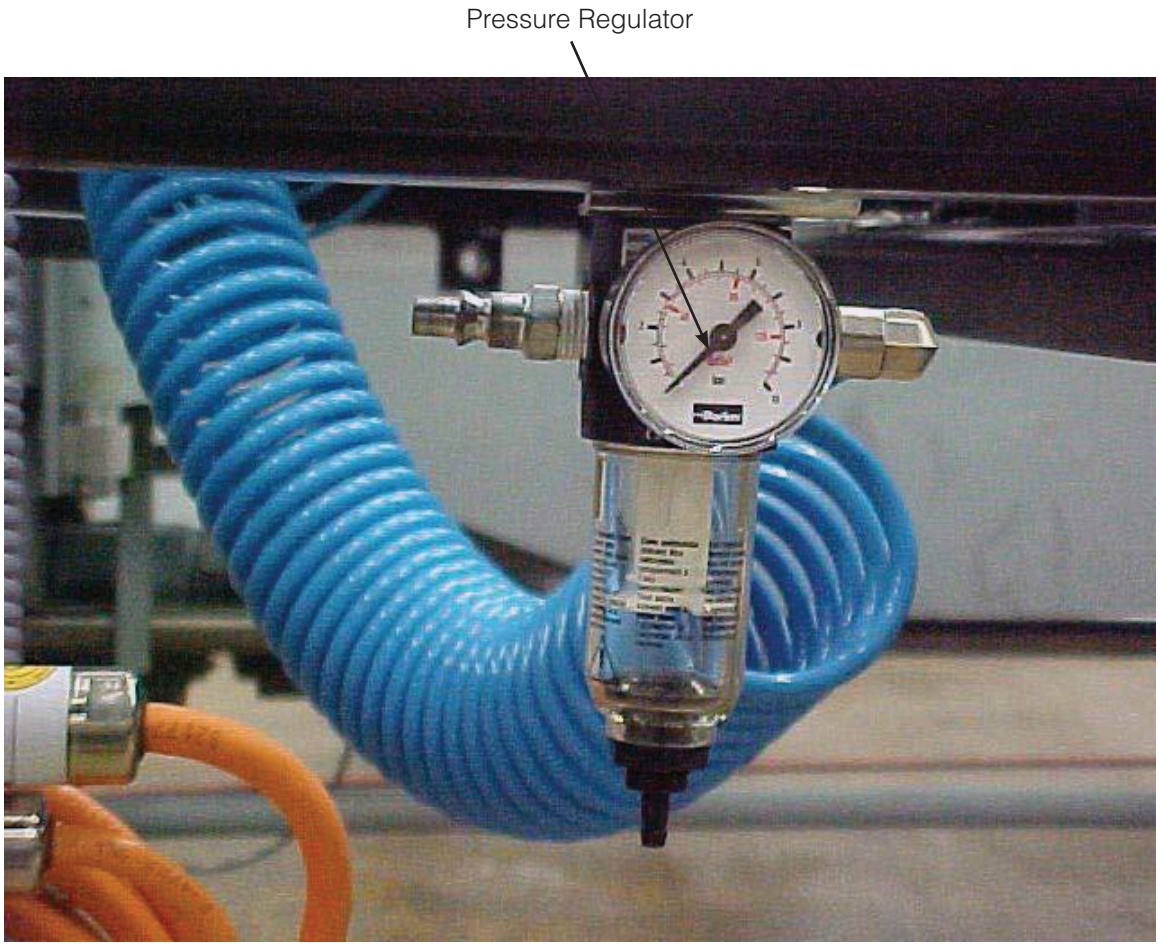



Figure 6

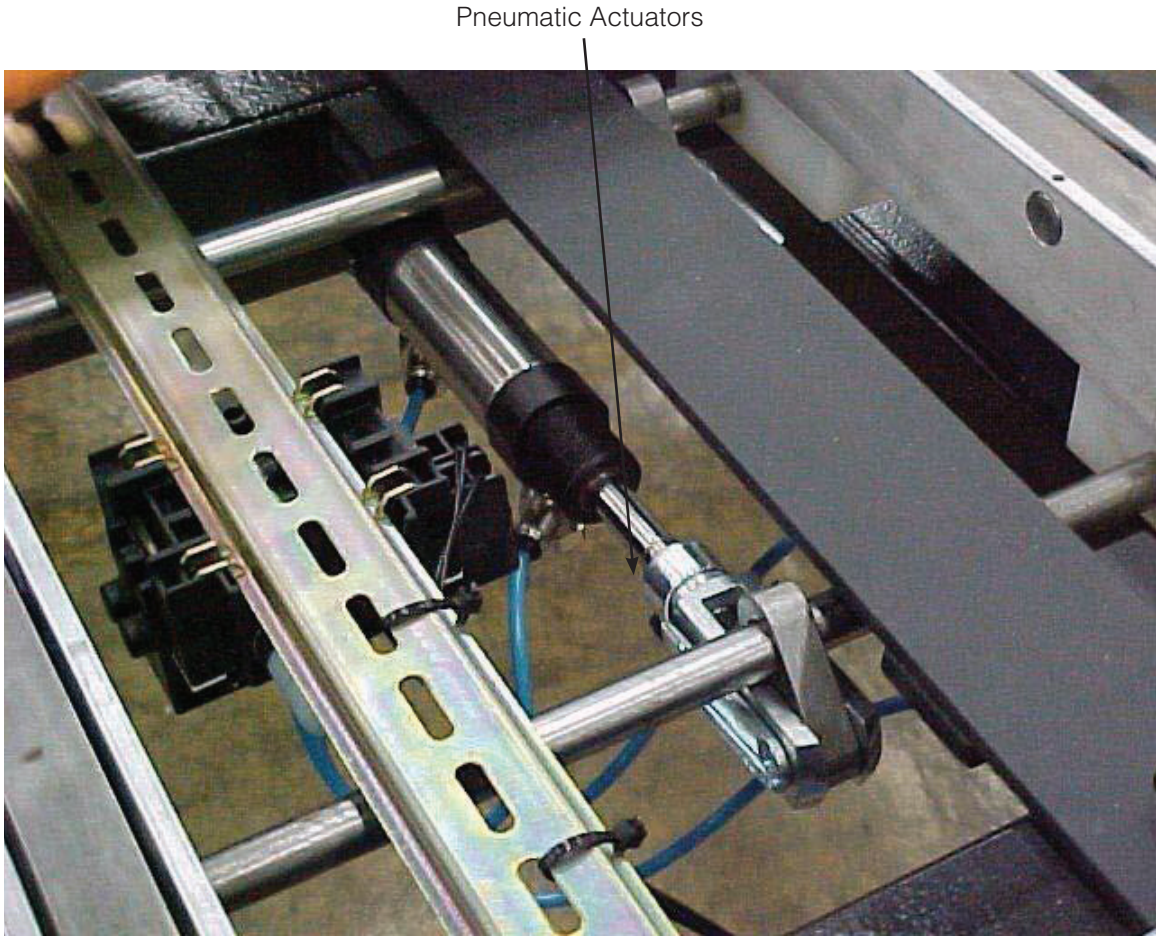



Figure 7

Bottom view looking up at the actuators and solenoid valves.

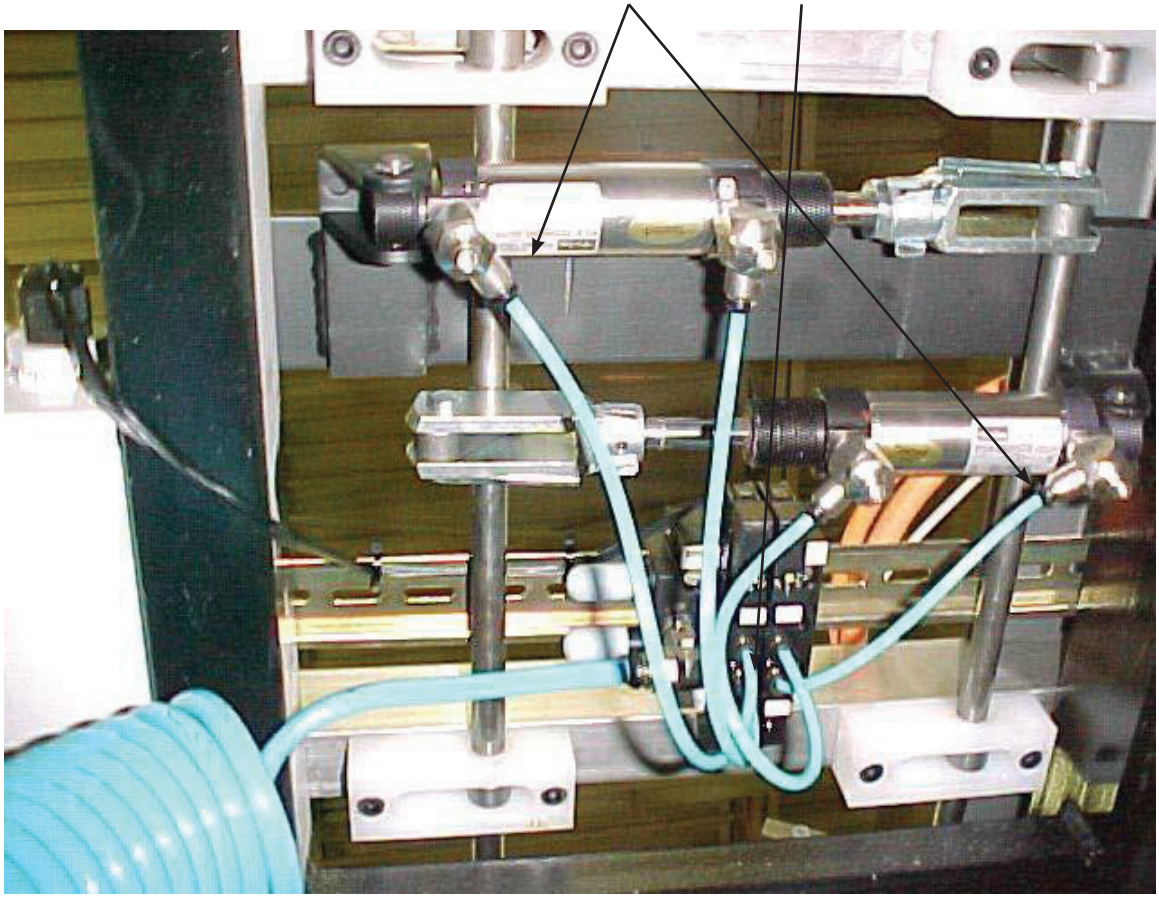
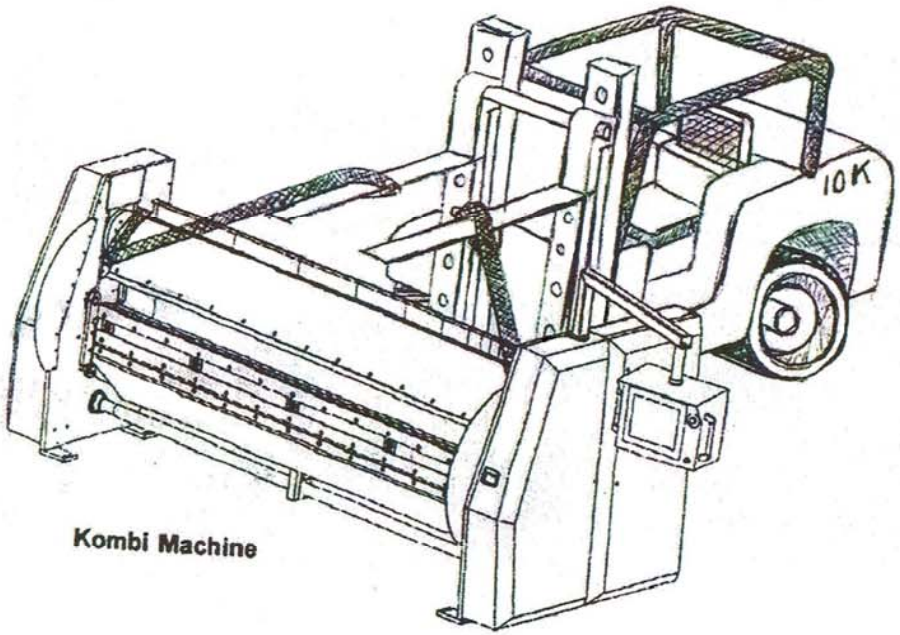
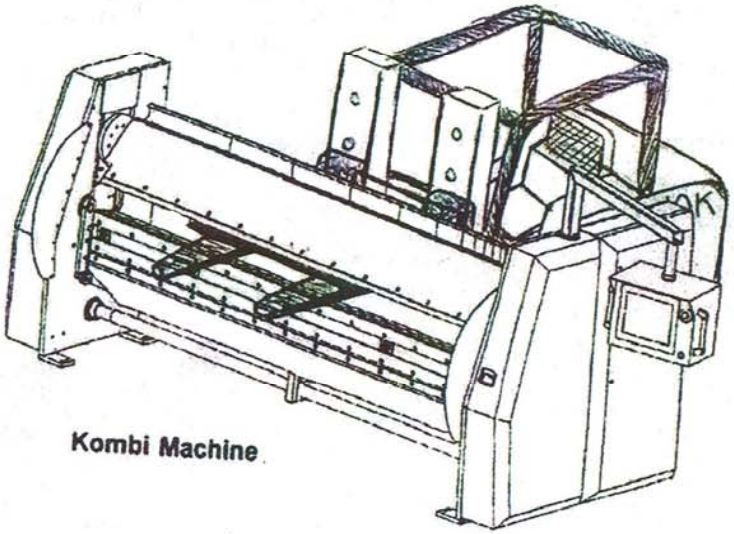


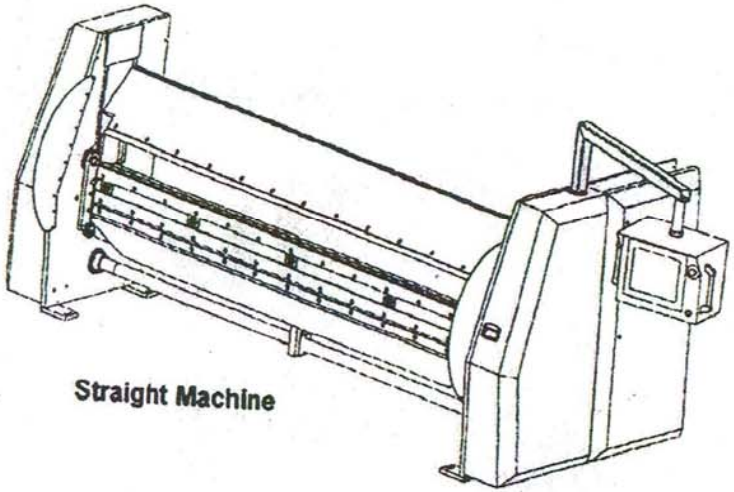
Figure 8



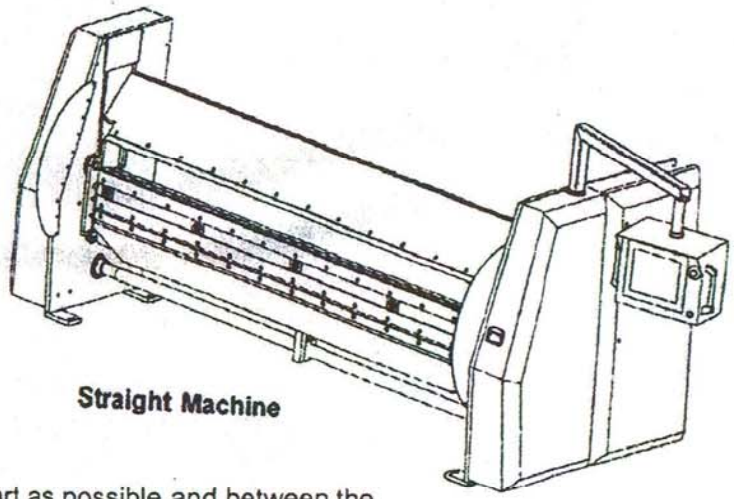

Kombi Machine



Kombi Machine



Straight Machine



Straight Machine

See page 12 for minimum forklift capacities. Position the forks as far apart as possible and between the jaws.

Place plywood on top of the forks to prevent marring the jaw. Place a 4 x 4 or two 2 x 4 on top of the forks 12 inches back from the front. This helps keep the machine level when picking it up. Adjust the tilt as required to pick the machine straight up and off of the lag bolts holding it to the skid. Position the machine as required.

Note: align the fork lift up with the center of the machine and insert the forks as far as possible for better control when lifting.

# AUTOBRAKE INSTALLATION CHECK LIST

Prior to delivery and set up of the Autobrake, the customer must insure they have the correct electrical requirements, foundation requirements, and that the unit is set in place.

1. _____ Electrical Power:

| | | | |
|---|---|---|---|
| Phase | 'a' to 'b' | Phase 'a' to ground | _____ |
| Phase | 'b' to 'c' | Phase 'b' to ground | _____ |
| Phase | 'a' to 'c' | Phase 'c' to ground | _____ |

Note: these readings must be taken with an A/C volt meter. Using a voltage checker only indicates power. It does not give you a voltage reading. If you don't have a calibrated volt meter, you will need to have someone, who is capable of doing this, take the voltage readings.

If you have 208 volts A/C then you need to install a set of buck/boost transformers. See Electrical Requirements, page 3. If you have single phase 220 volts A/C then a phase converter must be installed. See Electrical Requirements, page 3.

2. _____ Remove backgauge from shipping crate and set aside for installation by the factory representative.

3. _____ Remove base unit from the shipping skid, and position on the shop floor. Note: there needs to be a minimum clearance of 3-feet on each side of the machine for maintenance and access to the electrical cabinet. There should be a minimum of 2-feet at the rear of the backgauge after installation.

4. _____ Each leg of the Autobrake has a pair of feet attached with which the Autobrake is secured to the shop floor. After setting the machine in place, use the non-threaded holes in the feet to determine the location of the floor anchors. There is sufficient clearance in these holes to place the floor anchors without moving the machine. Install 3/4" lag bolts (anchors) in the floor. See page 8 for details.

5. _____ Seat the lag bolts, and install related hardware. Do not level the machine at this time. Service personnel will level the machine during the installation process.

The above readings and activities are required to be completed by the purchaser of the machine. Please sign and return this page as acknowledgment of your acceptance of these conditions.

Additional service charges may be applied if the above items are not completed prior to the start of the installation process.

Roper Whitney of Rockford will only be able to schedule your machine for installation after this form is signed and returned. Send the form by fax to Roper Whitney at (815) 962-2227: attention Service Department. Please contact us with any questions at (815) 962-3011.

Signed _____ Dated: _____