Putsch Meniconi Vertical Scale Instructions

Please note this installation kit is designed solely for installation on Putsch Meniconi Vertical Panel Saws, vertical measurement. Accurate Technology manufactures kits for other vertical panel saws in which some or all of the components may be different. For more information about ProKits™ feel free to contact Accurate Technology.

SAFETY WARNING

To avoid injury: Before installing ProScale on a machine, turn off the machine and disconnect it from its power source.

Warranty

Accurate Technology, Inc., warrants **ProKit ™** systems against defective parts and workmanship for one year, commencing from the date of original purchase. Upon notification of a defect, Accurate Technology, Inc. shall have the option to repair or replace any defective part. Such services shall be the customer's sole and exclusive remedy. Expenses incidental to repair, maintenance, or replacement under warranty, including those for labor and material, shall be borne by Accurate Technology, Inc. Freight or transportation charges to Accurate Technology, Inc. shall be paid by the customer.
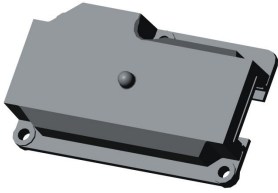
Except as expressly provided in this warranty, Accurate Technology, Inc., does not make any warranties in respect to the product, either expressed or implied, including implied warranties of merchantability or fitness for a particular purpose, except as expressly provided in this agreement.

Accurate Technology, Inc., shall not be liable for any special, incidental, or consequential damages or for loss, damage or expense directly or indirectly arising from the customer's use of or inability to use the equipment either separately or in combination with other equipment, or for personal injury or loss or destruction of other property, or from any other cause.
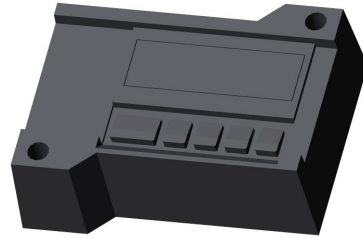
Tools Required

- Drill Motor
- Center Punch
- Tap Handle
- Grinder
- Drill and tap for 10-32 holes
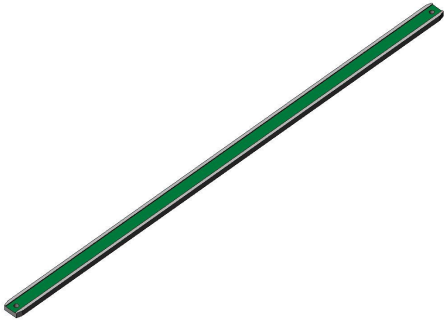- Drill and tap for ¼-20 holes
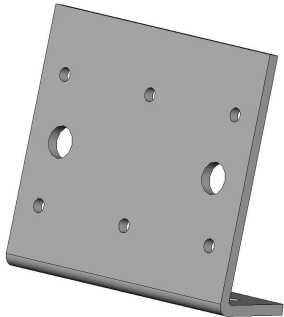
Readhead (cable not shown)	General Purpose DRO

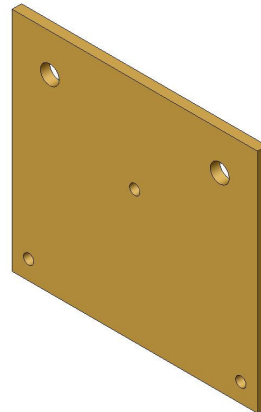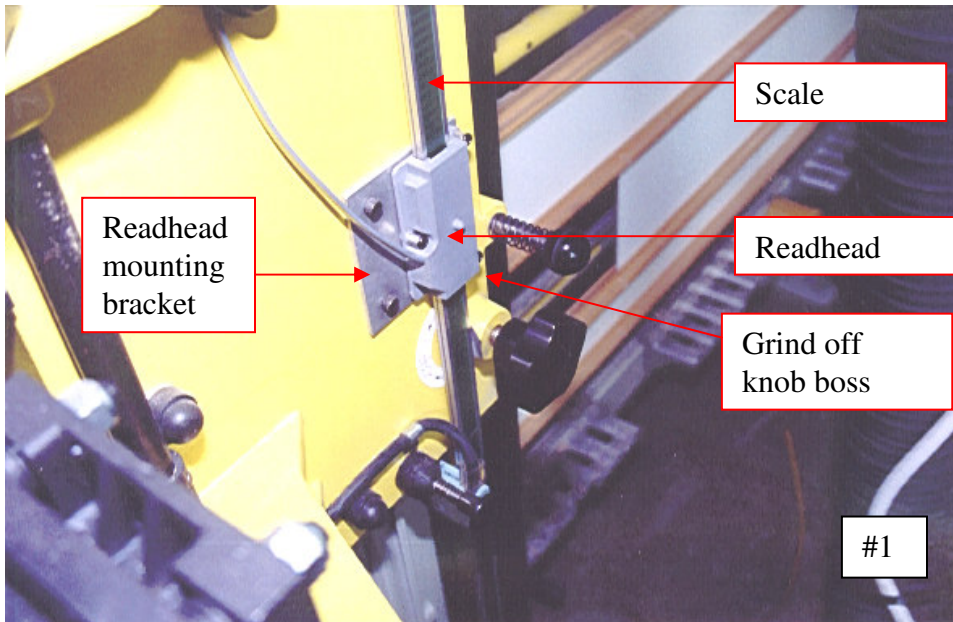| Vertical Digital Scale (93.75" for 133 models) (104" for 145 models)	Connector Link

| DRO Bracket	Readhead Bracket

- **Directions:**

1. Grind away approximately 3/16" (4-5mm) off of the knob boss as shown in Figure 1.

2. Attach readhead to mounting bracket using the three #6-32 x ¼" pan head screws. Slide readhead onto the long scale. Center the scale between the boss (that has been ground) and the relay, as shown in photo 1. Mark the mounting holes for the readhead mounting bracket onto the saw head. Drill and tap two #10-32 holes. Mount the bracket to saw head as shown, using two #10-32 X ½" socket head screws.

3. Enlarge one hole in each connector link with a 1/4" drill. Attach the two connector links (smaller hole side) to the ends of the scale with #10-32 x 1/2" pan head screws. Use the upper connector link's position to mark the very top of the saw beam for a ¼" bolt. Drill and tap ¼-20 threads into the top and bottom of the saw beam as shown in photos 2 and 3. (It is recommended that you drill the bottom hole first; to assure the scale will read as far down as needed.) Mount the scale to the saw beam with ¼-20 bolts and spacers.

Note: If your machine was manufactured prior to 1999, you may need to trim the scale to length. If this is the case, using the pictures on the next page as a guide, measure the maximum scale length that your machine can use, and cut the scale.**

Spacers

Connector Link

Scale

#2

Scale

Spacers

Connector Link

#3
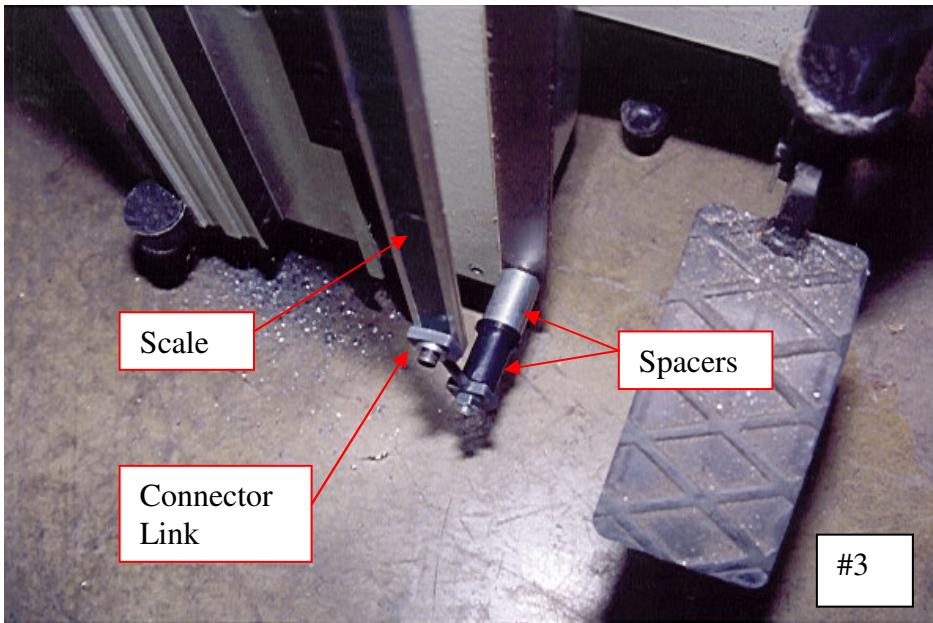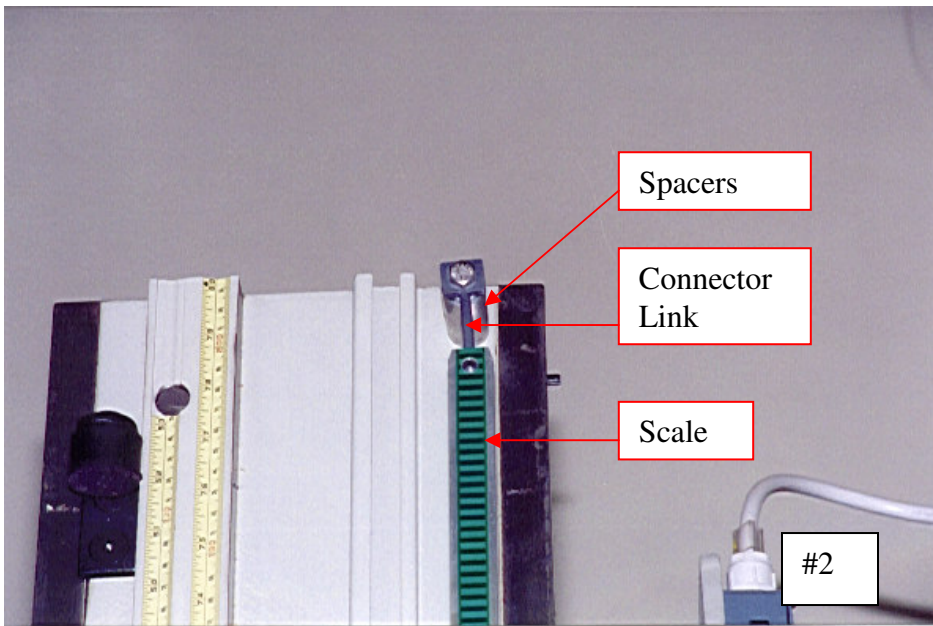
Bottom of Saw Beam (Use the previously drilled hole to left of mounted spacers; DO NOT mount to the bearing surface as shown.)

4. Place the DRO bracket on the top of the saw carriage as shown in photo 4, and mark the mounting holes onto the saw carriage. Drill and tap two #10-32 holes in the carriage. Install the DRO bracket using the #10-32 X ½" socket head screws. Mount the readout to the bracket using foam tape.
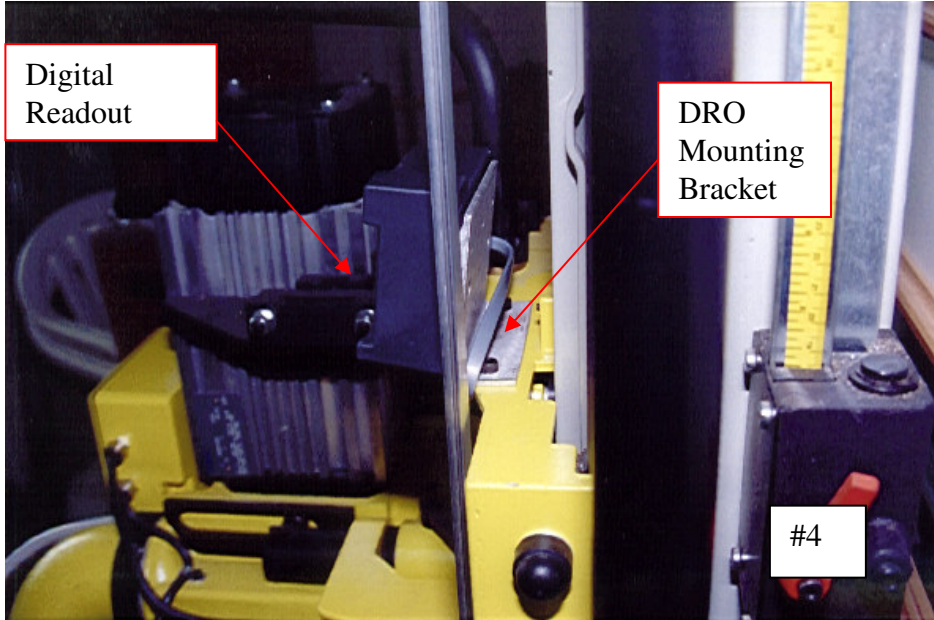
5. Plug the readhead into the readout and turn it on. Move the carriage up and down. Watch the display to see if the numbers increase as the carriage is moved up the beam. If the readings are backwards, a parameter in the readout must be changed. Reference the ProScale Operation Manual for more information.
6. With the carriage **locked in position** near zero, cut a small square board.
7. Measure this board with the most precise measuring tool available and write down the measurement.
8. Press the ZERO key on the readout. (The display should be in ABS mode before pressing zero.)
9. Use the PLUS key to enter the measured value into the readout.
10. Press and hold the ON/OFF button. Tap the MODE button. Release the ON/OFF button. The keyboard is now locked. It can be unlocked by repeating this procedure. Locking prevents the readout from losing its calibration by accidentally pressing the zero key.
11. ProScale should be re-calibrated when the saw blade is changed (kerf allowance) or when the batteries in the readout are changed.

Programming the Digital Readout for different cutting fences:

The digital readout can be programmed to add "station offsets" to the displayed value. This allows the digital readout to track the correct distance to the bottom or mid-fence.
(see next page)

Programming:
1. Change programming parameter **Pr30** to a **1** in the digital readout (refer to the programming section of the *ProScale Operation Manual* for more information).
2. The distance from the bottom to the mid-fence should be programmed into parameter Pr31.

Operation:
*Programming parameters Pr31 was programmed to 24 inches for this **example**.*
1. The operator is making a horizontal cut with the panel supported at the mid-fence. The readout shows a measurement of 10.000 inches.
2. His next cut is larger and needs to use the bottom fence instead. He loads a panel onto the bottom fence, and presses the F1 key on the readout. A #1 lights on the readout, and the reading changes to 34.000 inches (the readout added 10 and 24 to get 34 inches).
3. His next cut is at the mid-fence again. He flips-out the mid-fence, and presses the F1 key again. The #1 disappears, and the reading changes to 10.000 inches.
4. His next cut is at the bottom fence again. He loads a panel onto the bottom fence, and presses the F1 key again. A #1 lights on the readout, and the reading changes to 34.000 inches.
5. For each press of the F1 key, the correct offset is added to go between the mid-fence and bottom fence.

Kerf compensation for repetitive cuts:

The digital readout can also be programmed to automatically compensate for the kerf when making repetitive cuts. This is done by programming the blade kerf into the ABS/INC key. This feature is useful when one or more strips need to be cut to a desired dimension without requiring the operator to account for kerf manually.

Programming:
1. Determine the blade kerf.
2. Lock the carriage in position. The readout should show the ABS indicator in the upper left corner.
3. Press the ABS/INC key (for one second or less). The ABS indicator will turn off, and the INC indicator will turn on.
4. Enter the blade kerf using the PLUS key.
5. Press the ABS/INC key again (for one second or less). The blade kerf is now programmed.
6. Press the ABS/INC key for 3-4 seconds to return to the absolute distance (from fence to blade).

Operation:
1. Load a panel into the machine onto the bottom or mid-fence.
2. Make a clean-up (squaring) cut if necessary.
3. Press the ABS/INC (for one second or less). The readout will display the kerf value.
4. Unlock the carriage and adjust it down to the desired cutoff dimension. Notice that the digital readout first counts off the kerf amount, then counts up to the cutoff dimension. Lock the stop in the desired position, and cut the panel.
5. Repeat steps 3-4 as many times as needed.
6. Press the ABS/INC key for 3-4 seconds to return to the absolute distance (from stop to blade).

Troubleshooting:

The battery clips seem loose when changing the batteries:
- ❑ DO NOT bend these clips. They are specially designed to compress and hold the batteries when the display halves are screwed together. Avoid touching the clips as much as possible.

The display does not change when the carriage is moved:
- ❑ The readhead is not properly engaged by the guide clip and is not moving. Check to be sure the readhead remains properly engaged.
- ❑ The digital readout has been programmed with a very small linear scaling factor. Reset the scaling factor to 1.0000.

The displayed measurement is off by 0.060 inches (1.524mm):
- ❑ There has been a very large static electricity discharge into the measuring system. Ensure the machine and its dust collection tubing is properly grounded. Recalibration is necessary.

The displayed measurement is off by a value other than 0.060 inches (1.524mm):
- ❑ Check that all bolts and fasteners are tight.
- ❑ Check that the saw blade has not been changed. If it has been changed (kerf changed), recalibration may be necessary.
- ❑ The plus, minus, or zero keys have been accidentally pressed. Recalibration is needed.
- ❑ The readhead is not properly engaged by the guide clip and is not moving. Check to be sure the readhead remains properly engaged.
- ❑ The digital readout has been programmed with an obscure linear scaling factor. Reset the scaling factor to 1.0000.
- ❑ There have been several very large static electricity discharges into the measuring system. Ensure the machine and its dust collection tubing is properly grounded. Recalibration is necessary.

ProScale resets itself while saw is running and the carriage is locked:
- ❑ The display has been accidentally reset. Large voltage spikes from nearby motors, inverters, or dust collection systems may cause this. Be sure that all devices are properly grounded.
- ❑ Also, extreme vibration may cause this. Mount the digital readout in a different location.
- ❑ Be sure the "0" key or ABS/INC key have not been pressed. Recalibration is necessary.

ProScale resets itself while the saw is *not* running and the carriage is locked:
- ❑ Be sure the "0" key or ABS/INC key have not been pressed. Recalibration is necessary.

ProScale readout reads "**No Enc**":
- ❑ The readhead has been removed from the scale, or its cable is damaged.
- ❑ The readhead is not connected to the readout.

The display **displays a battery symbol**:
- ❑ The batteries need to be changed. ProScale uses two standard AA **alkaline** cells. Recalibrate the readout after replacing the batteries.