

RECEIVING & INSTALLATION INSTRUCTIONS

10 & 14" Z AXIS CHECKMASTER MANUAL CMMS

MODELS 112-102, 216-142



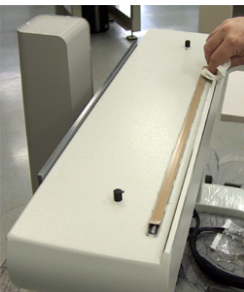
Cut and Remove the two metal straps from around the shipping container and base pallet. Remove the wooden boards at the bottom of the carton that hold it to the pallet and lift the carton off the pallet.



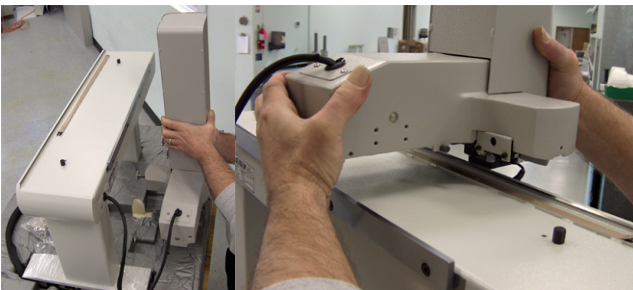
Remove the top foam insert. You will find the bridge assembly, the Z axis & carriage assembly, and an accessory box located in a bottom foam insert. At the bottom on the pallet is the granite machine base.



Remove the accessory box from the bottom foam insert and open to find the ProCounter Interface, power adapter, Reference Sphere, Touch Probe Kit, GeoWidget training part, User Manual, lifting handles, and miscellaneous hardware.



With denatured alcohol and lint free cloth/tissue clean the bridge rails front and back of rust preventative and dirt while the bridge is still in the foam insert.

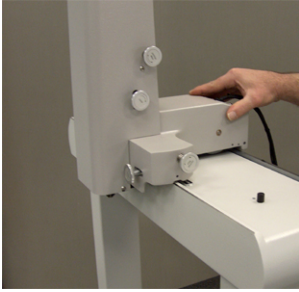


Lift the carriage assembly from the foam insert and check front and rear bearings for any dirt or loose packing material. Rotate carriage 180° counterclockwise to align carriage and bridge assemblies. Gently lower the carriage assembly onto the bridge rails with caution for the X axis scale head, and lock in place. **CAUTION – keep a hand on the carriage until completing the next step.**

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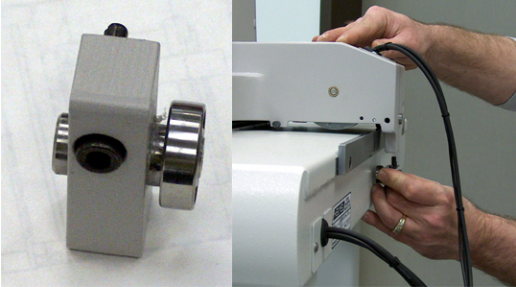
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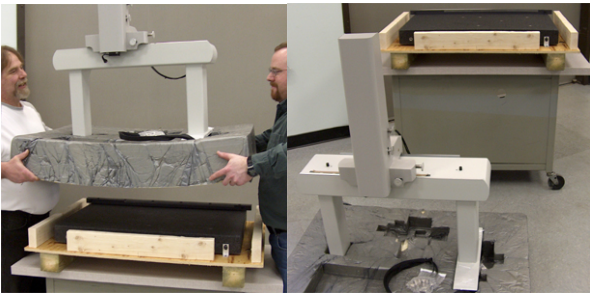


!!!CAUTION!!!

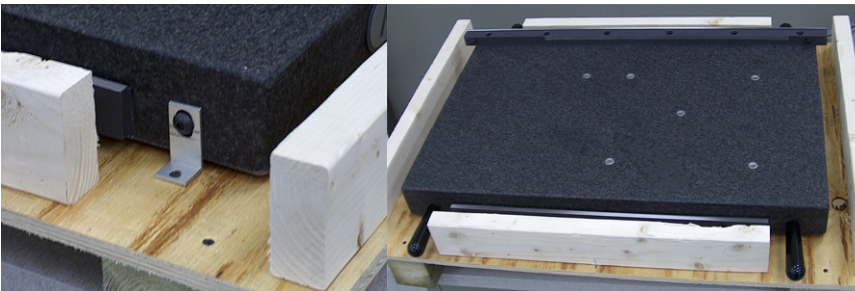
Keep a hand on the carriage as shown until you complete the next step.



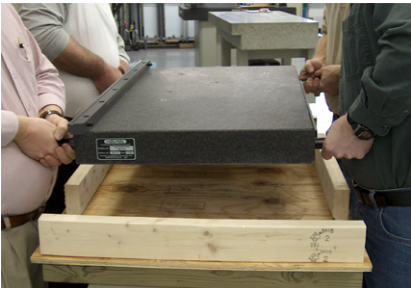
Find the rear bearing bracket among the components from the accessories box. Screw the rear bearing bracket onto the bottom rear of the carriage with a 3/16 hex wrench. It mounts only one way and will secure the Z assembly and carriage to the bridge so you may let go of it.



With two people lift entire bottom foam insert from base pallet and place to the side. This reveals the granite machine base which is secured to the pallet with two angle brackets.



Remove the two angle brackets holding the granite base to the pallet, and install the four lifting handles from the accessories box, two on each side.



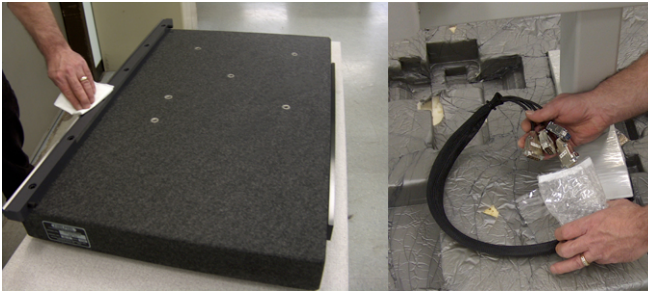
With four people, lift the granite machine base from the pallet and place it on the customer mounting surface which must have leveling capability. The base has three rubber feet bonded to the bottom.



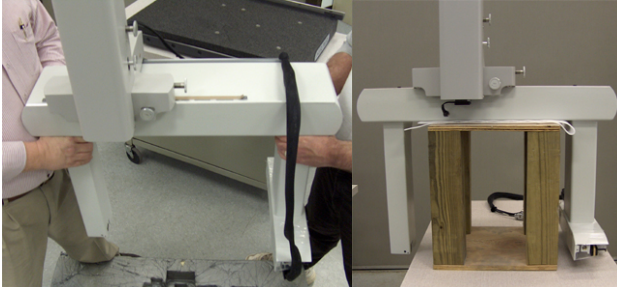
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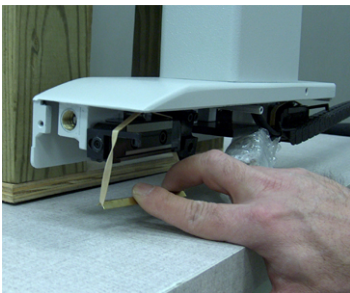
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With denatured alcohol and lint free cloth/tissue clean the machine base guide and leg rail, of rust preventative. Prior to mounting the bridge to the plate, un-bag the connectors and free the cable bundle.

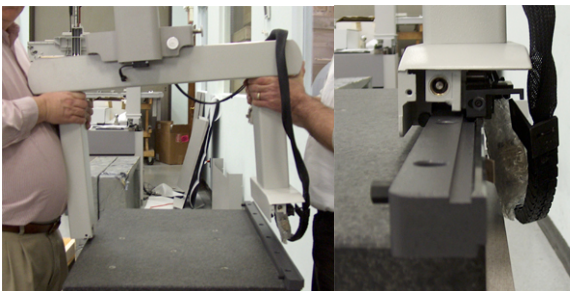


With two people, lift the bridge out of the foam packing and place it on a narrow bench, riser, or the forks of a lift truck to allow access to the bearings at the bottom of the legs.



The recirculating bearings under the main support are protected with cellophane wrap. This must be removed. Then carefully remove the protective brass strips over the bearings and the rubber bands holding them in place. Clean the outer leg bearing of any dirt or packing.

!!!CAUTION!!! – *Any bump or shock might dislodge the bearing balls until the bridge is placed on the base. Handle carefully!*



With two people, lift the bridge assembly and place it gently onto the granite machine base. Carefully align recirculating bearings with the “V” guide rail. The outer leg bearing will locate itself on the leg rail.



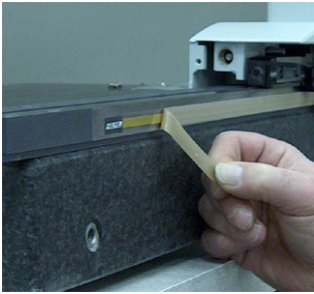
On the front recirculating bearing, assemble a Y-Axis anti-liftoff Hook to the Bearing Clamp Block with two #8-32 cap screws and washers. Use a 9/64 hex wrench to loosely tighten the screws. The hook can be adjusted up or down to achieve the needed clearance under the guide rail. They must not contact the rail. (Do not tighten the screws going into the Bearing Cartridge).



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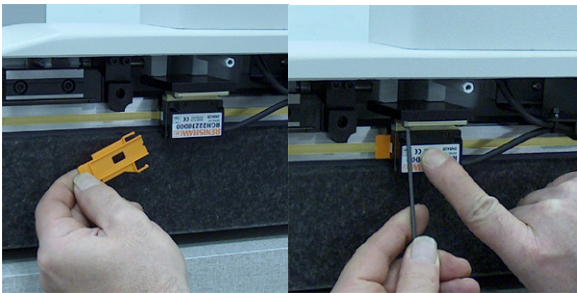
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Peel the protective tape off of the Y axis scale.



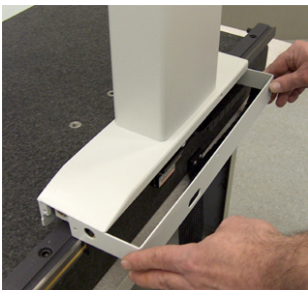
Remove the packing from the Y axis scale reading head attached by cable to the main support base. Mount the head **loosely** with two 8-32 Button Head Socket Screws using a 3/32 hex wrench, but do not press it against the gold scale.



Locate the orange plastic Gap Tool in the accessories, and slide it as shown between the reading head and the scale. Gently press the reading head against the scale with one finger while tightening the mounting screws. Remove the Gap Tool.



Attach the main cable bundle to the granite machine base with two 8-32 Button Head Socket Screws using a 3/32 hex wrench. The cable track should form a return loop as shown.



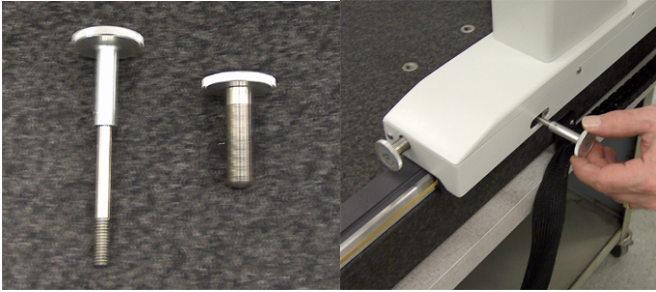
Locate the main support base cover in the accessories, and install as shown on the main support with three 8-32 Button Head Socket Screws using a 3/32 hex wrench.



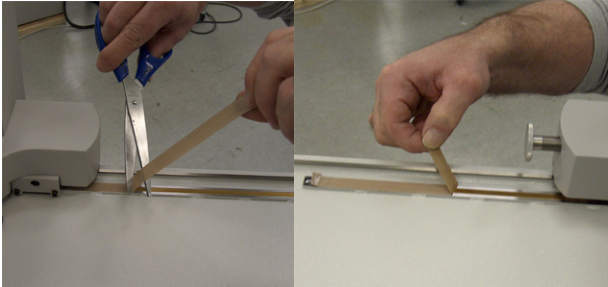
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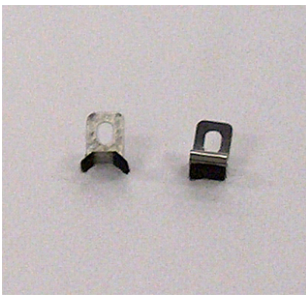
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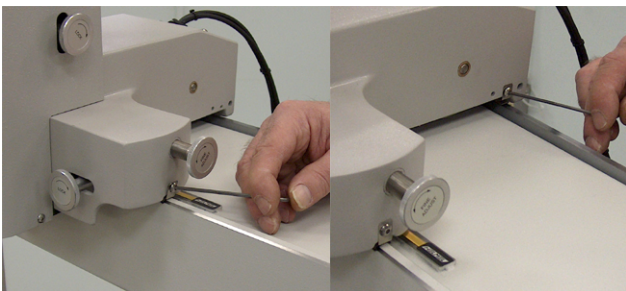
Locate the Y axis Lock (left) and Fine Adjust (right) knobs in the accessories. Install the Fine Adjust knob first in the front end of the main support, turning it in until you see the thread hole for the Lock knob centered in the side slot, then install the Lock knob through the side slot.



To remove the protective tape from the X axis scale on top of the bridge, move the carriage to one side, peel the tape partially from the scale, then cut it. Move the carriage to the opposite side and remove the remaining tape.



Locate the way wipers in the accessories. These are small clips with felt pads that clean the ways and protect the bearing motion. Find two V wipers for the X axis "V" way (type at left), and four flat wipers for the X axis rear way and Y axis leg rail (type at right).



Install two "V" rail wipers with 8-32 button head screws (3/32 hex wrench) on the front right and front left of the X axis carriage on the bridge. Install two flat wipers on the right and left sides of the X axis carriage at the top rear of the bridge.



Install two flat wipers with 8-32 button head screws (3/32 hex wrench) on the front and back sides of the Y axis outboard leg for the leg rail. Adjust all wipers to contact the ways lightly with the felt pads.



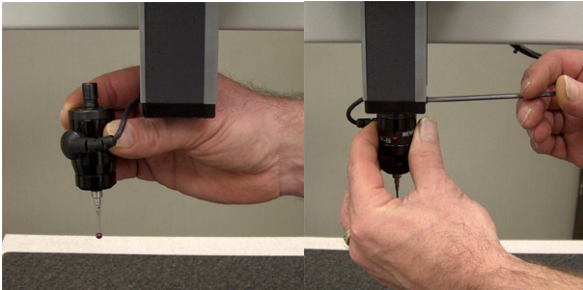
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Locate the ProCounter Interface box in the accessories, and make connections as follows (left-to-right – machine connectors are labeled): Z axis scale, Y axis scale, X axis scale, Touch Probe, USB (to PC), and Power Supply.



Locate the Touch Probe from the accessories, insert the Probe connector at the bottom of the Z axis probe bar into the Probe, and mount into the 3/8" mounting hole in the Z axis end cap. Tighten with a 1/8 hex wrench.



CHECKMASTER fully assembled

Should you have any questions regarding these instructions, please contact Russell Sicard at HELMEL ENGINEERING, (716-297-8644) or e-mail at Russell@Helmel.com



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