PG INSPECTION
TECHNOLOGIES

PG1000 Setup Guide

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Disclaimer and Warning

Congratulations on purchasing your new PG1000 cutting tool inspection system. The information in this document affects your safety and your legal rights and responsibilities. Read this document carefully to ensure your safety and the proper configuration before use. Failure to read and follow instructions and warnings in this document may result in serious injury to yourself or others, damage to your PG1000 system, or damage to other objects in the vicinity. This document and all other collateral documents are subject to change at the sole discretion of PG Inspection Technologies. For up-to-date documentation, visit www.pg1000.com and click on the Resources tab.
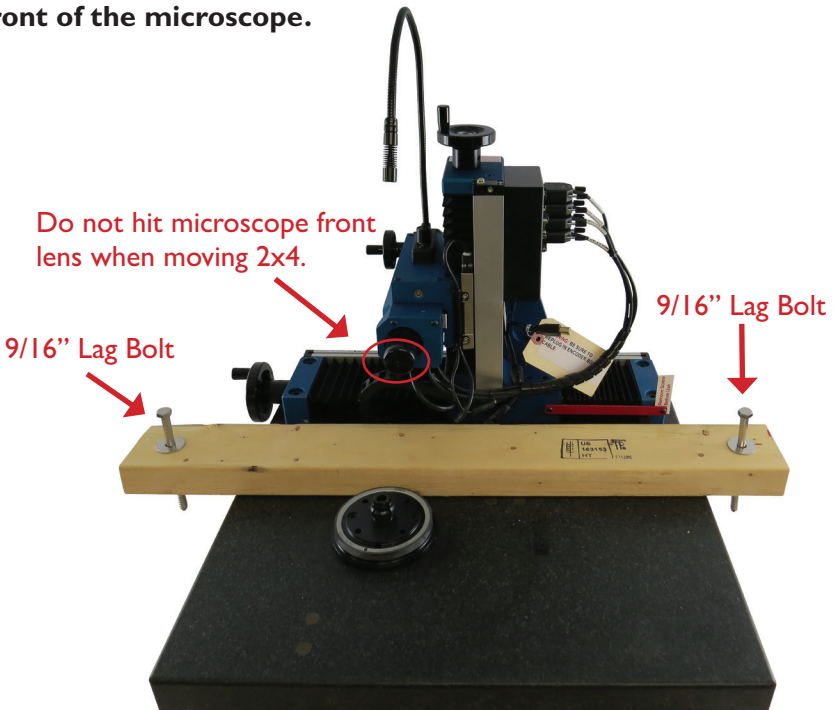
By using this product, you hereby signify that you have read this disclaimer and warning carefully and that you understand and agree that you are solely responsible for your own conduct while setting up and using the PG1000 system, and for any consequences thereof. PG Inspection Technologies accepts no liability for damage, injury or any legal responsibility incurred directly or indirectly from the setup or use of the PG1000 system. The user shall observe safe and lawful practices including, but not limited to, those set forth in this document.
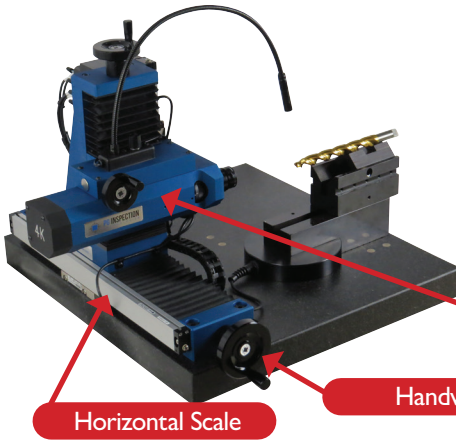
Removal of PG1000 from Crate

Remove all hardware boxes from crate. It will be necessary to unscrew and remove any 2x4 bracing. Bracing screwheads are on the outside of the crate. **Be very careful not to let the 2x4 braces fall onto the PG1000 unit when removing screws.**

Remove lag bolts with 9/16'' socket driver. When lifting/removing the 2x4 securing the PG1000 unit to the crate, **be very careful not to hit the front of the microscope.**

Do not hit microscope front lens when moving 2x4.

9/16'' Lag Bolt

9/16'' Lag Bolt

Never lift PG1000 unit via the horizontal scale, microscope assembly or the handwheel. Doing so will cause misalignment, damage to the system and is not covered under warranty.

Microscope Assembly
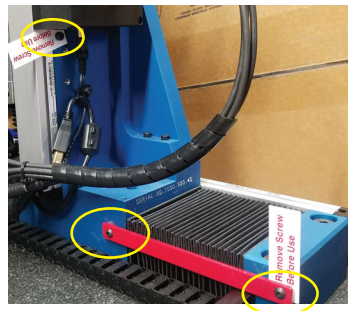
Handwheel

Horizontal Scale

PG1000 units weigh 135-150 lbs. Lift PG1000 unit from crate with supplied lifting straps and a hoist. Make sure the weight on each strap is balanced and lift slowly.

After the PG1000 is removed from the crate the unit can be lifted via the supplied lifting straps or two people can lift by the granite base. **If manually lifting by the granite base be careful not to pinch fingers under the base when lifting and setting the unit in place.**
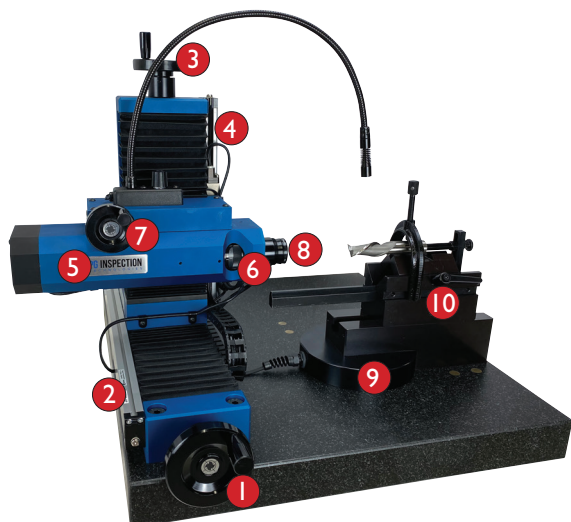
Do not turn the handwheels until the (3) locking bolts and (1) locking bar are removed or damage will occur.

WARNING - TO PREVENT DAMAGE: Remove "3" Locking Screws & Locking Bar before moving "X" and "Y" Axis

Overview of PG1000-400 System

1. X Axis Handwheel
2. X Axis Scale
3. Y Axis Handwheel
4. Y Axis Scale
5. Camera/Microscope Assembly
6. Magnification Thumbwheel
   (M Axis encoder)
7. Focus Adjustment Handwheel
   (F Axis encoder)
8. Microscope Front Lens
9. Base Block/Tool Rotation
   (A Axis encoder)
10. V Block Assembly

Overview of PG1000-200 System

1. X Axis Handwheel
2. X Axis Scale
3. Y Axis Handwheel
4. Y Axis Scale
5. Camera/Microscope Assembly
6. Magnification Thumbwheel
   (no encoder)
7. Focus Adjustment
   (no encoder)
8. Microscope Front Lens
9. Base Block/Tool Rotation
   *(no encoder)*
10. V Block Assembly
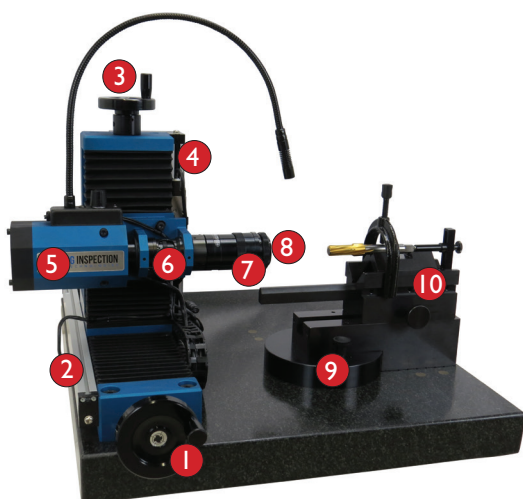
Base Block and V Block Assembly Installation:

After unpacking the base block assembly, set in place over round pivot plate. Tighten expansion bolt with supplied T wrench to fix the base block assembly to the granite base. **Do not overtighten!**

Note: PG1000-400 models have a base block encoder which includes a cable that plugs into the Encoder Interface Box.

Visit www.pg1000.com or contact pg@pg1000.com for detailed base block installation instructions.
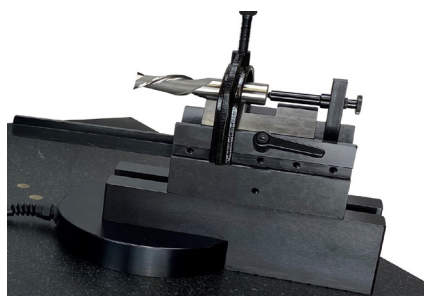
V Block assembly or optional accessories can be installed on the base block assembly after it is installed.

Power Supply Installation:

Connect 24vdc power supply cable to end of cable assembly. Connect power supply to power source. A green indicating light on the encoder interface box confirms power. Red intermittent light indicates power and activity.


Visit www.pg1000.com or contact pg@pg1000.com for PG1000 wiring diagram.

PG1000 Initial Setup

Encoder Interface Box *(front):*

(X) X Axis Scale

(Y) Y Axis Scale

(3) M Axis Magnification Encoder
(PG1000-400 models only)

(4) F Axis Focus Encoder
(PG1000-400 models only)

(L) Illumination Tube - *optional accessory*

(5) A Axis Base Block Encoder - *not factory installed*
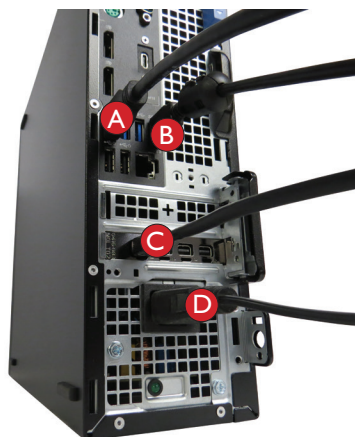*(PG1000-400 models only)*

(6) Extra port - *unused*
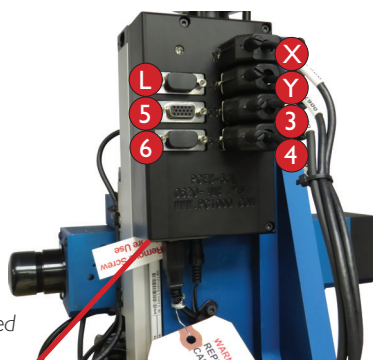
Encoder Interface Box *(bottom):*

(USB) USB Data Cable - *not factory installed*

(power) 24 Volt Power - *included power supply plugs
into end of cable assembly not into the box*

(BL) Back Light - *optional accessory*

(RL) Ring Light - *optional accessory*

Computer/PC

(A) Camera USB 3.0/3.1
(Must plug into USB 3.0/3.1 port!)

(B) Encoder Box USB
(Plug into USB 2.0 or 3.0/3.1 port)

(C) Monitor Cable - DP to miniDP
*(**Plug** miniDP cable into graphics card port)*

(D) PC Power Cable

(E) Mouse - *not shown*
(Plug into USB 2.0 or 3.0/3.1 port)

(F) Keyboard - *not shown*
(Plug into USB 2.0 or 3.0/3.1 port)

Trouble Shooting

Problem	Solution
No camera image. 'REACTION Software Demo Mode' displayed.	• Make sure encoder interface box green LED power indicating light is on. Power supply must be installed. • Make sure camera is plugged into USB 3.0/3.1 port. • Unplug and re-plug all USB cables to reestablish connection. • Exit program and restart program.
'Outside Working Area' displayed.	• Move X and/or Y scale handwheels until camera is positioned within working area. • Calibrate scales *(under Calibration Menu)* - Systems PW: PG2019 • Exit program and restart program.
M Axis (magnification) failure / 'Microscope Mag Wheel Seated Improperly' displayed.	• Make sure thumbwheel is seated properly in detent. • Click 'Mag Reset' button for quick reset. • Calibrate Microscope *(under Calibration Menu)* - Admin PW: PG2019 • Exit program and restart program.
System will not pass encoder checks.	• Ensure all cables and connections are securely in place. • Exit program, reboot computer and restart program.
No video feed / frozen image.	• Unplug and re-plug all USB cables to reestablish connection. • Exit program and restart program.
Encoder Box not located by software.	• Unplug and re-plug all USB cables to reestablish connection. • Check device manager for connection on COM Port 3. • Make sure encoder interface box green LED power indicating light is on. Power supply must be installed. • Exit program and restart program.

Contact PG Inspection Technologies Service Department for additional assistance:
support@pg1000.com • 262-946-5420