



PG INSPECTION
TECHNOLOGIES

PGI000-400-1.0X

Made in USA



TYPES OF CUTTING TOOLS

- Micro tools
- Step drills
- Drills
- Reamers
- End mills
- Inserts
- Taps
- Custom tooling
- Screws/bolts

TYPES OF MEASUREMENTS

- 50+ Preset Calculations/Measurements
 - Distances
 - Radii
 - Angles
 - Diameter
 - Comparisons

APPLICATIONS

- Quick checks on the shop floor – next to CNC grinding machines
- Advanced geometry and visual inspections in the metrology laboratory
- Creating reports for incoming/outgoing quality control
- Scenes and Inspections software feature for testing large quantity tool runs
 - Create inspection macro to control testing process ensuring accurate & repeatable tests

Optical Cutting Tool Inspection System with REACTION Software

For small tools \varnothing 0.025 - 0.40" (0.635 - 10mm)

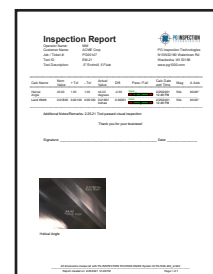
The PGI000-400-1.0X is a tool geometry inspection system durable enough for everyday shop floor use and precise enough for a metrology laboratories incoming and outgoing quality inspections. The 5MP camera reproduces and displays high resolution cutting tool images magnified up to 290x on a 4K monitor.

All PGI000-400 systems collect and display data from the horizontal (X), vertical (Y), base block/tool holder rotational position (A), crosshair rotation (Z), focus (F) and microscope magnification (M) axis's as well as allow for optional lighting control through the software.

The PGI000-400 REACTION software allows the user to measure tool geometries in multiple ways.

- **Screen:** take measurements by picking points on the monitors screen
- **Scales:** use the X & Y axis handwheels to mark points and take measurements via the scales
- **Edge Detection:** this popular feature allows the software to detect the tools edges when taking measurements which helps to automate the process and virtually eliminates human error
- **Comparisons:** the software can create comparison geometries for quick referencing (Go/No-Go)
- **DXF/DWG file:** import overlay for tool size comparisons
- **CTM file:** Create and save tool image to use as an overlay for tool alignment and inspections

The PG REACTION software is very user friendly and incorporates on screen prompts, instructions and video demos for each tool calculation. Calculations can be repeated efficiently by recalling previous saved inspection scenes. Annotations/notes can be added alongside measurements.



With the click of an icon the software can export data to an Excel/CSV file or create a customized PDF report with results and user entered tolerances, images, customer details as well as an optional PASS/FAIL notification.

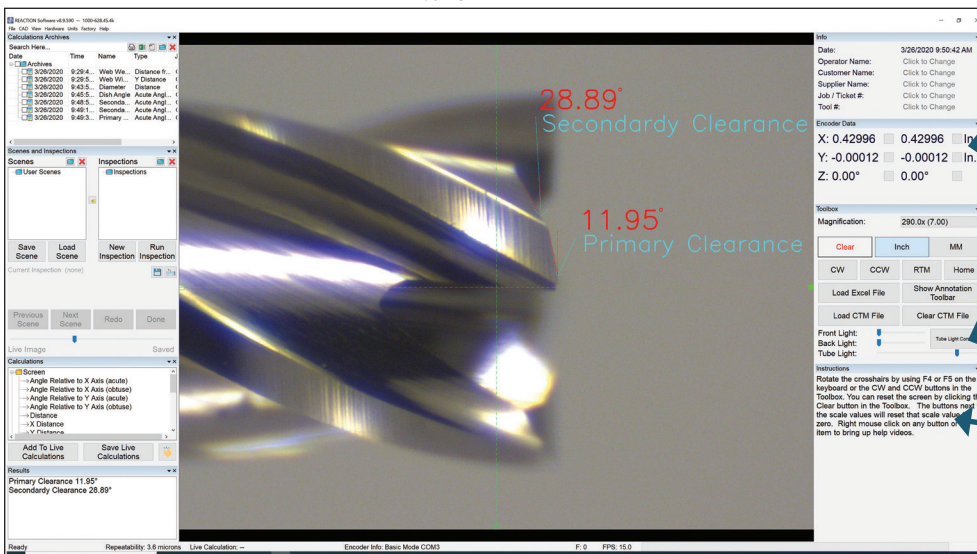
For more information visit: www.pg1000.com

PGI 000-400-1.0X

Features:

- Quick - measurements taken in less than 30 seconds
- Extremely accurate and repeatable
- User friendly software interface
- Flexibility during inspection – inspections done your way
- Live image calculations
- Snap to edges (auto edge detection)
- Edge detection (rotational w/concentricity fixture)
- 50+ calculations/measurements available in software
- Perform multiple calculations over a single image
- Create inspection macro templates
- DXF/DWG overlay software lockable to scale movement
- DXF/DWG data collection
- Tool comparisons
- Customizable PDF inspection reports
- Export results and data as Excel or CSV file
- Magnifications automatically synchronized to PC
- Center of tool focus indication
- Tool position in degrees displayed in software
- Certified granite base
- High precision linear bearings for all axis
- 270° pivoting base block for tool holding fixtures
- Free software upgrades (as hardware permits)
- All units delivered fully calibrated and ready for use
- 1 year warranty
- MADE IN USA

.025" End Mill



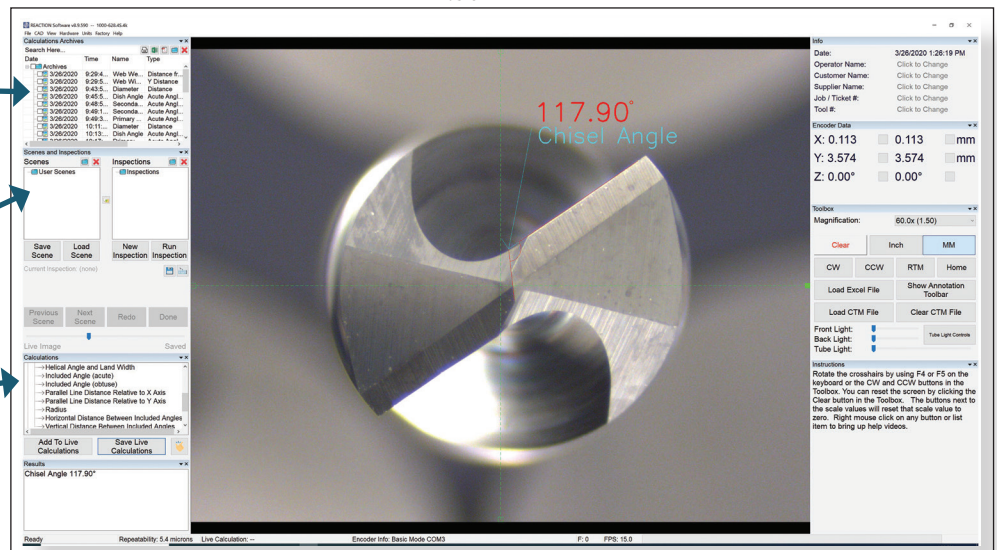
Data from all encoders/axis displayed

Light controls

On screen instructions

Primary and Secondary Clearance Angle at 290X zoom

.301" Drill



Inspection archives:
For report generation

Scenes & Inspections:
For saving inspection parameters

50+ Calculations/
Measurements to choose from

Chisel Angle at 25x zoom

Specifications:

Scope Magnification:				Recommended Tool Size:	Camera:	Computer:	Monitor:	Operating System:
25x	100x	180x	260x	0.025 - 0.40" (0.635 - 10mm) flute up to 7.5"L	5MP color camera	High performance w/ REACTION software reinstalled	27" 4K Ultra HD	Windows 10 64 bit
40x	120x	220x	290x					
50x	140x	240x						
80x	160x	250x						
Scales:	Power:	Language:		Accuracy/ Repeatability:		Measuring Range:		Dimensions: Weight:
Fagor 1μ	110Vac 60Hz (220Vac optional)	English	German	+/-0.0002" (5μ) at maximum magnification	Vertical: 3.35" (85mm) Horizontal: 7.87" (200mm)		24"x19"x18" 140lbs	
		Spanish	Japanese					
		Chinese						

PG1000-400-1.0X System Includes:

- 1 PG1000-400-1.0X gage
- 2 Pivoting base block for tool holding fixtures
- 3 V block, 5" (127mm)
- 4 V block insert with notch, 3.15" (80mm)
- 5 Carbide tipped backstop assembly
- 6 Top/tool clamp
- 7 Flexible LED light w/diffuser cap
- 8 Curved magnetic diffuser plate
- 9 High performance PC
- 10 REACTION software
- 11 27" 4K Ultra HD monitor

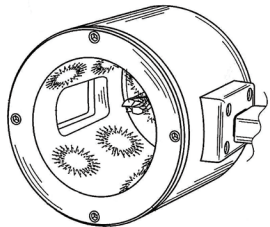


PGI000-400-1.0X Common Accessories:

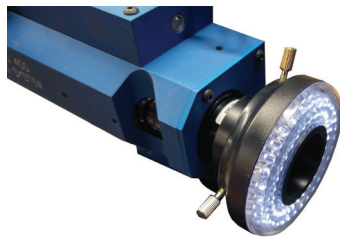


Lighting:

- I000-648** Eight quadrant LED illumination tube controlled by PC/software
- I000-661-1** LED ring light controlled by PC/software
- I000-662** LED back light controlled by PC/software



p/n I000-648



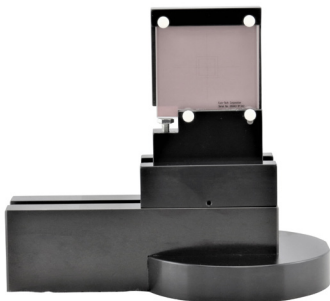
p/n I000-661-1



p/n I000-662

Calibration:

- I000-443** Standard calibration reticle. For screen calibration and 50mm x 50mm area of scale calibration.
- I000-645-1** Linear segmented calibration reticle. For screen calibration and the full working area of the microscope: 85mm x 200mm.



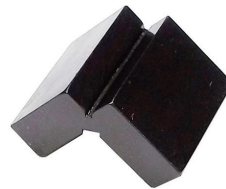
p/n I000-443



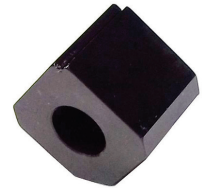
p/n I000-645-1

Hardware:

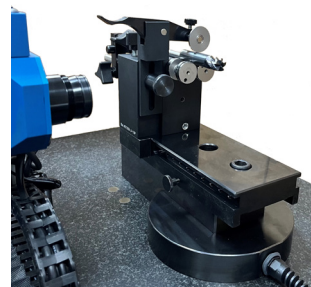
- 00030-3MA** Short V block insert for small tools, 1.5" (38mm) L
- 00257-1MB** Mini V block insert for micro tools (1 - 3mm shank)
- I000-571** Concentricity fixture with quarter 'zero-style' plain precision rollers, top roller and backstop for small/micro tools. Shank/tool size range: 0.010" - 1.000"



p/n 00030-3MA



p/n 00257-1MB



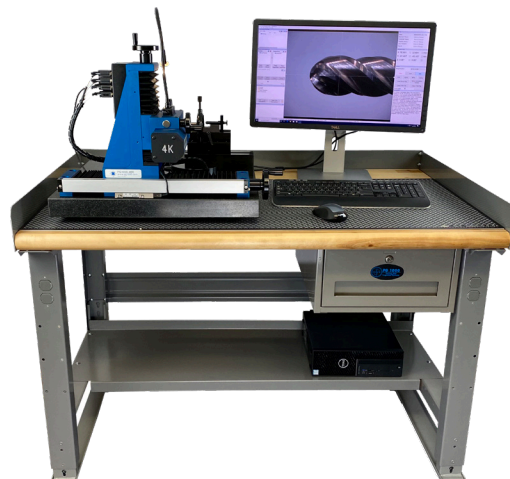
p/n I000-571



I000-571 rollers

Other Options:

- 00087-3P** 35Watt UPS/Surge protection device
- 03048-01** Custom 48"L x 30"D PGI000 workbench



pg@pgi000.com • 262-946-5420 • N15W22180 Watertown Rd Unit #11 • Waukesha, WI 53186

PG Inspection Technologies reserves the right to change specifications and designs without notice. Illustrations, data, dimensions and weights given in this brochure and on our website are for guidance only and cannot be held binding on the company.

Revision 3.3.23