

Innova

DRO_SET

for Milling Machines and Boring Mills

Profitable and intelligent solutions

Thanks to their quality, accuracy, productivity,
reliability and service

FAGOR 

With INNOVA,...Best DRO quality and reliability for milling machines and Boring mills

THE BEST ALTERNATIVE

The technological advances applied to FAGOR measuring and control systems for Milling machines and Boring mills ensure excellent performance in these machine and improve their accuracy, increase their productivity, optimize the quality of each machining operation and minimize the risk of costly human errors.

WITH THE FEATURES THE USER REALLY NEEDS

BASIC

- Zero setting of the axes
- Preset
- Direct mm/inch conversion
- Absolute, Incremental to reference (home) signals
- Resolutions from 0.1 microns on
- Feedrate and movement alarms
- Tool radius compensation
- Linear axis sag compensation
- Linear and angular axis feedback

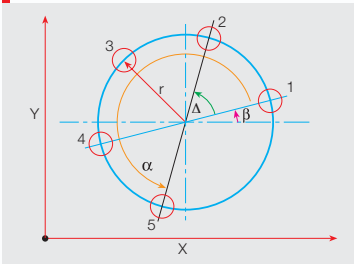
SPECIAL

- Bolt-hole drilling calculation
- Part centering
- Linear drilling calculation
- Calculator function
- Software limits
- Multi-point compensation
- Arc machining
- Part alignment
- Rotation of machining axes
- Axis coupling
- Hysteresis factor
- Scaling factor

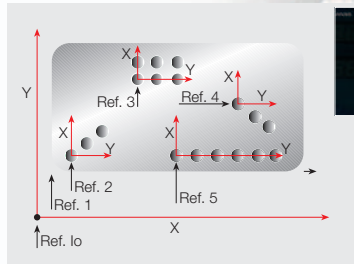
FAGOR EXCLUSIVE

- Up to 20 part references (datum points)
- Feedback signal monitoring
- Easy setup and diagnosis
- Energy saving mode
- PC communication through a USB adapter

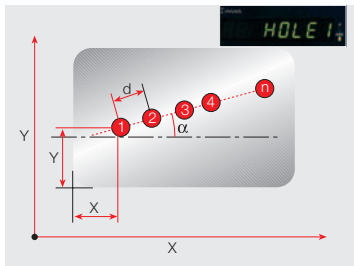
PRACTICAL EXAMPLES



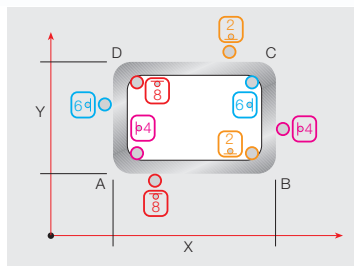
> **Bolt-hole drilling calculation:**
The position of the holes is calculated by entering the values requested by the DRO.



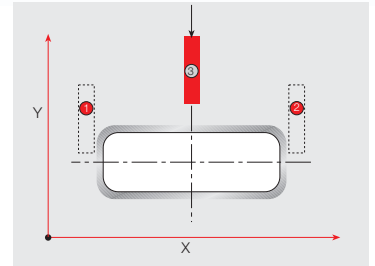
> **Up to 20 part references (datum points) and operations:**
This feature makes the job easier with several datum points and offers the operator greater flexibility with the DRO.



> **Linear drilling calculation:**
Calculates, memorizes the position and guides through the execution of linear drilling operations at any angle.



> **Tool radius compensation (for pockets):**
Once the tool value has been entered, it is stored in the DRO.



> **Part centering:**
Touching two points of the part with the tool or with a probe, the DRO calculates the center of the part.



And... With FAGOR feedback systems that always set them apart



FEEDBACK IS A MUST FOR SYSTEM ACCURACY

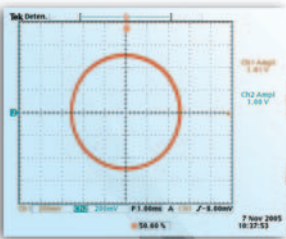
The DRO offers the user features that make his job easier, but what sets it apart in terms of machining accuracy is the feedback installed on the axes of the machine.

That is why, from its birth in 1975, FAGOR has dedicated a great deal of technical and human resources to researching and developing encoders. Thus, its unquestionable quality has been ratified by the exigency tests run by our customers.

STANDARD FEEDBACK SYSTEMS

Series	Design	Maximum federate	Measuring lengths	Accuracy levels
M	Small section for installation in limited space	60 m/min	140 mm to 1540 mm	$\pm 10 \mu\text{m/m}$
			140 mm to 1240 mm	$\pm 5 \mu\text{m/m}$
C	Wide section	60 m/min	220 mm to 3040 mm	$\pm 10 \mu\text{m} / \pm 5 \mu\text{m/m}$
F	Long measuring lengths	120 m/min	3.2 m to 30 m.	$\pm 10 \mu\text{m/m}$

WITH THE MOST RELIABLE TECHNOLOGY IN EVERY SENSE



OPTICAL DESIGN

FAGOR uses optical transmission as well as patented techniques and components. New scanning techniques provide great signal quality.

MECHANICAL DESIGN

FAGOR's mechanical developments have resulted in some of the most innovative and efficient methods for minimizing the effects of especially harsh environments often found in machine-tool applications.

ELECTRONIC DESIGN

The electronic state of the art provides a perfect relationship between the reader head and the linear encoder. All the models meet the industrial standards.

ACCURACY CERTIFICATE

Every single FAGOR linear feedback system is subjected to a final accuracy test carried out on a computerized measuring bench equipped with a LASER interferometer inside a climate-controlled chamber.



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Fagor Automation holds the ISO 9001
Quality System Certificate and the
CE Certificate for all its products

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Worldwide reliability