

The clearest choice from any point of view

Innova

TrueVision

Innova 40i DRO, with color TFT screen and with the most advanced features

- 3D graphic assistance for programming
- A single DRO for milling, lathe and generic applications that may be defined by parameters
- Friendly and intuitive operations
- Together with FAGOR encoders that ensure maximum system accuracy.



FAGOR 

The best DRO in the world

FROM ANY POINT OF VIEW

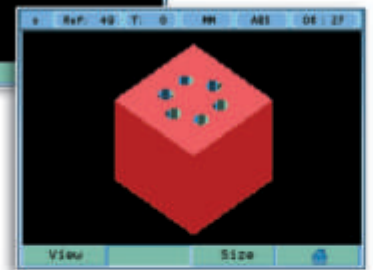
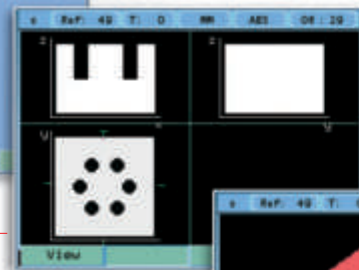
The FAGOR "TrueVision" is the best Digital Readout in the world. It is easy to operate and absolutely reliable; it represents a new technological breakthrough in measuring and control systems for the machine tool. With its exclusive color TFT screen, it is possible to simulate the programmed part in 3D, with an unmatched view from any angle; a considerable advance from the monochrome

LCD screens on the market today. The "TrueVision", with the technology FAGOR uses on their CNC's, may be set by parameter to adapt to milling machines, boring mills, lathes, grinders and general purpose applications to show the help graphics and the features for the selected application.

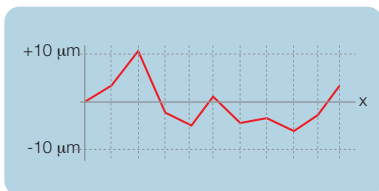


Features common to all versions

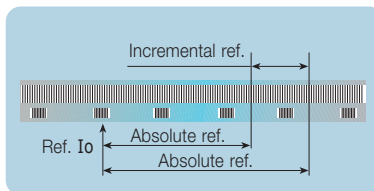
- Calculator
- 100 machine error compensation points
- Easy setup and diagnosis
- Feedback alarms



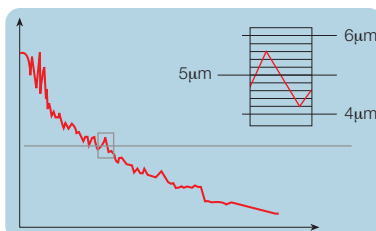
Highest quality and reliability in DRO



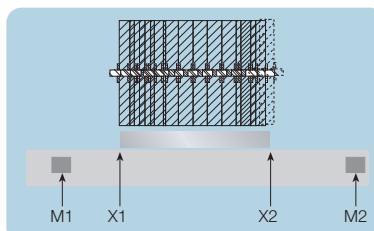
> Multi-point compensation (100 points per axis)



> Absolute / Incremental /Io measurement



> Hysteresis factor



> Software travel limits

FAGOR feedback systems: A combination that sets Innova apart from the rest



- Fagor Automation uses high quality, highly reliable optic technology to manufacture their linear and rotary encoders.
- 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 until obtaining the matchless quality of their encoders today.
- This results in a variety of feedback products that includes the recent absolute linear encoders whose protocols are compatible with the most relevant CNC manufacturers on the market.

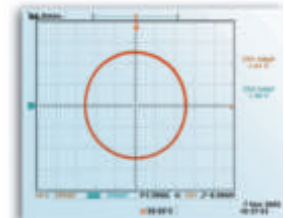


With state-of-the-art technology



Optical design

Fagor uses transmission and reflective optics in its range of encoders as well as patented scanning techniques and components that provide high quality signals.

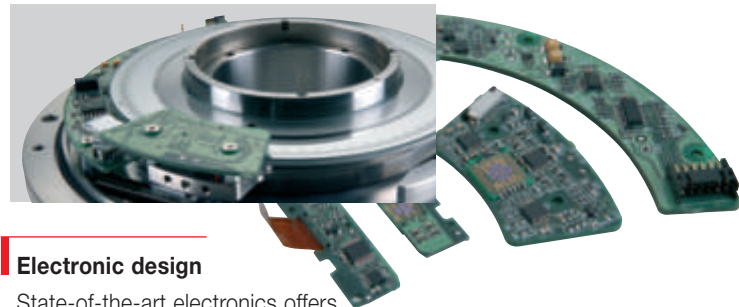


Mechanical design

FAGOR's mechanical developments in the last 30 years 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

State-of-the-art electronics offers a perfect relationship between the reader head and the linear encoder as well as the automatic gain control that assures constant signal characteristics for high resolution.



Standard Feedback systems

Series	Design	Maximum speed	Measuring lengths	Accuracy ratings
M	Small section for installation in limited space	60 m/min	120 mm to 1540 mm	$\pm 10 \mu\text{m}$
			120 mm to 1240 mm	$\pm 5 \mu\text{m}$
C	Wide section	60 m/min	220 mm to 3040 mm	$\pm 10 \mu\text{m}$ $\pm 5 \mu\text{m}$
F	For great lengths	120 m/min	3.2 m to 30 m	$\pm 10 \mu\text{m}$

ACCURACY CERTIFICATE

All FAGOR linear feedback systems are subjected a final accuracy test carried out on a computerized measuring bench equipped with a LASER interferometer inside a climate-controlled chamber at a temperature of 20 °C (68 °F).



Innova 40i DRO



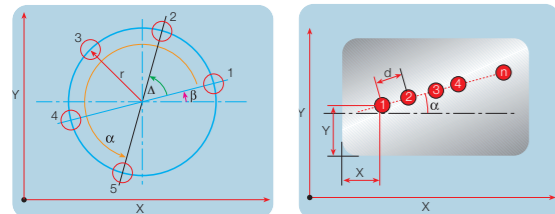
For Milling machines and boring mills with 2, 3 and 4 axes

Thanks to the TFT screen of the Innova 40i, it is possible to select the X Y Z plane for machining, graphically see the steps to follow to calculate bolt-hole, grid and linear drilling, mill pockets, find an angle with respect to the horizontal axis, see in 3D and in color what the programmed workpiece will look like using machining simulation and much more friendly and intuitive assistance that only FAGOR can offer.



Graphic programming assistance

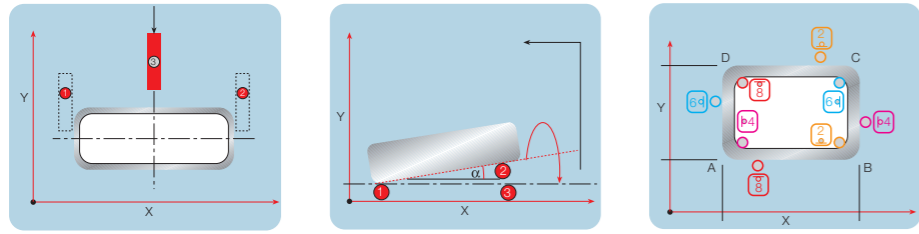
- Bolt-hole drilling
- Linear drilling
- Grid drilling
- Angle calculation in the plane
- 3D machining simulation



> Bolt-hole drilling calculation > Linear drilling calculation

And many more advantages

- Up to 50 part references (datum points).
- Part centering and alignment
- Tool radius compensation
- Machining plane and angle selection
- Re-Set, Pre-Set, direct mm/inch conversion, combining axes, etc.



> Part centering > Part alignment > Tool radius compensation

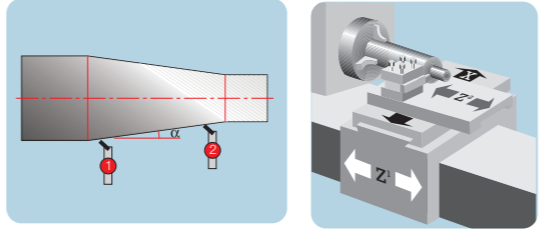
For 2 and 3-axis lathes

The Innova 40i for lathe applications offers the operator graphic assistance that no other DRO can offer such as taper calculation, the combination of the Z1 and Z2 axes or the 16 datum points for as many tool offsets that he can store.



Graphic programming assistance

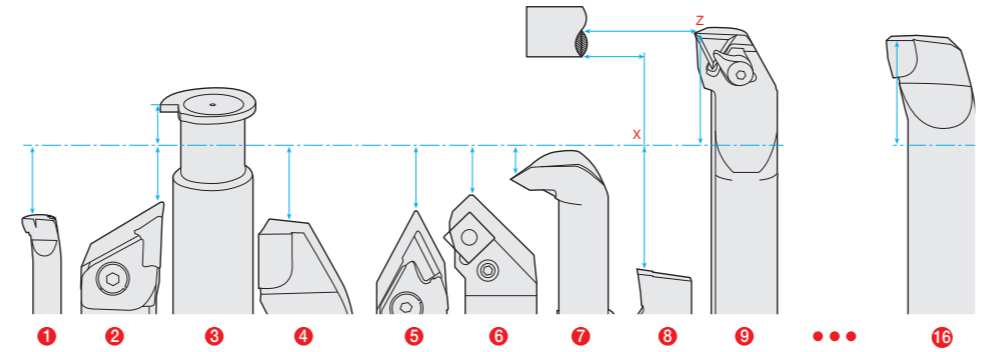
- Part taper calculation
- 3D turning simulation



> Taper calculation > Z axis coupling

And many more advantages

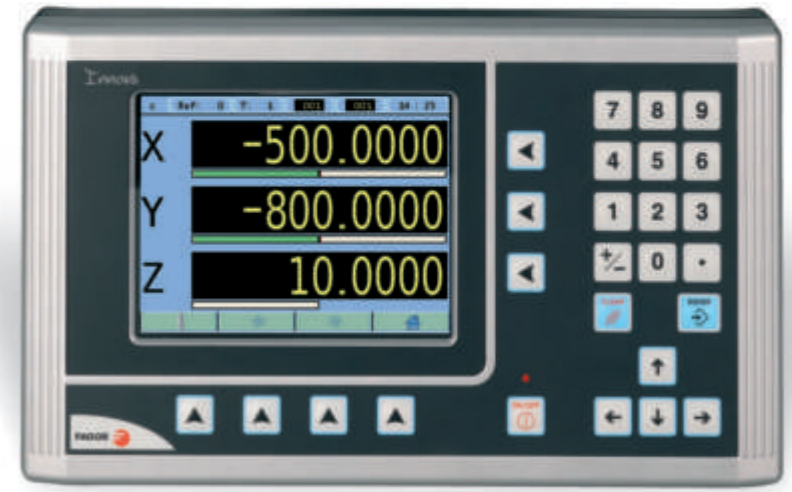
- Up to 16 tool offsets
- Combining the Z1 and Z2 axes
- Preset in HOLD mode
- Re-Set, Pre-Set, direct mm/inch conversion, Combining (coupling) axes, etc.



> Up to 16 tool offsets

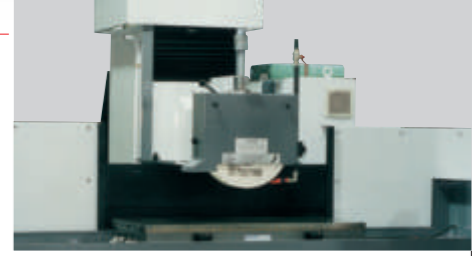
For grinders and general purpose applications

The Innova 40i provides multi-purpose solutions, because it may be adapted to applications as different as grinders, auxiliary axes, metrology, woodworking machines, etc.



Most relevant features

- **Software travel limits**
These limits do not cancel the ones already set by the travel limits of the machine, but offer the operator the chance to add other limits between the main ones.



- **In grinding applications**
Its 100 compensation points provide maximum efficiency and guarantee absolute precision. This point-to-point compensation minimizes possible machine errors.



- **In general purpose applications**
Through the USB connection, it is possible to upload/download data from/to a PC or pen drive and download the parameter data or backup from the DRO; for example, in metrology, it is possible to send the measurement data obtained with a probe out to a PC so it can be used for all kinds of operations such as statistics, error graphs, etc.

ACCESSORIES

Support arm

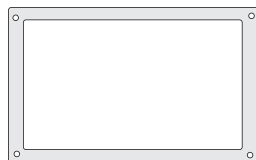


MODEL:

- ARM 300, 300 mm long
- ARM 500, 500 mm long

Frame

(for panel mounting)

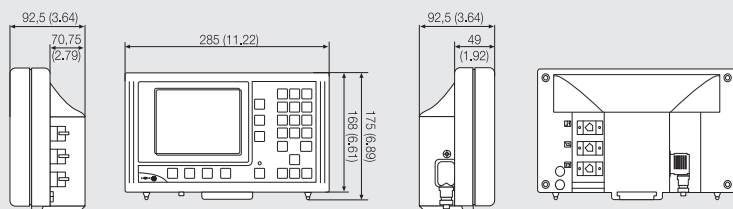


Operating conditions

Power supply protected against AC mains outage	Universal power supply with an input range between 100 V AC and 264 V AC ($\pm 10\%$); Frequency from 45Hz to 400Hz
Operating temperature	From 5 °C to 45 °C (from 41°F to 113 °F)
Storage temperature	From -25 °C to 70 °C (from -13 °F to 158 °F)
Relative humidity	Maximum 95% without condensation at 45 °C (113 °F)
Sealing	Front panel IP54 and rear panel IP4X (DIN 40050)
Product in compliance with safety and electromagnetic compatibility regulations	EN-60204-1, EN-50081-2, EN 55011, EN-55022, EN-50082-2, EN-610004-2, 3, 4, 5, 6, 11, EN-V50140, EN-V50141, ENV 50204 and European Union directives 73/23/ECC, 89/392/CEE, 89/336/ECC and 73/23/EEC
Type of feedback signals	<ul style="list-style-type: none"> • TTL 0-5 VDC $\pm 5\%$ • Differential TTL 0-5 VDC $\pm 5\%$ • Other types of signals using an adapter (consult)
Maximum feedback frequency	250 KHz

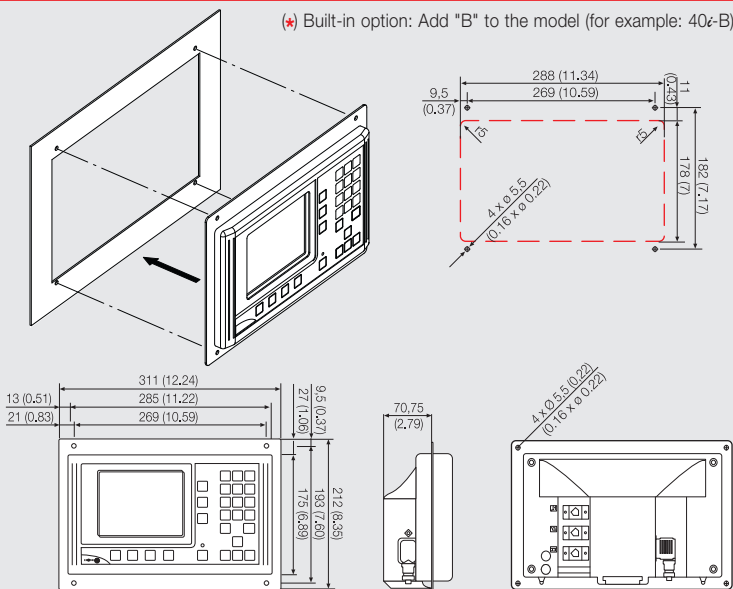
Dimensions in mm and inches

Tabletop models



Built-in models

✳ Built-in option: Add "B" to the model (for example: 406-B)



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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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FAGOR



Worldwide reliability