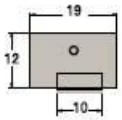
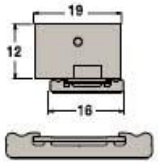
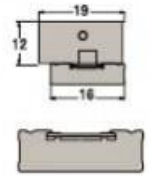
Exposed linear absolute encoders

ABSOLUTES

Series	Section	Measuring lengths	Accuracy	Signals	Pitch Resolution up	Model
Absolute EXA Adhesive		70 mm up to 16.020 mm	± 10 µm/m	SSI	0,01 µm	TAA + L2A
				PANASONIC®	0,01 µm	TAA + L2AP
				MITSUBISHI®	0,01 µm	TAA + L2AM/L2AMH
				BiSS®	0,01 µm	TAA + L2ABC

				FAGOR	0,01 µm	TTA + L2AD
				SIEMENS®(*)	0,01 µm	TTA + L2AD + XC-C8-PA-DQ-M
				YASKAWA®	0,009765625 µm	TAA + L2AK
Absolute EXG Guided		240 mm up to 6.040 mm	± 10 µm/m	SSI	0,01 µm	PG+TGA + L2A
				PANASONIC®	0,01 µm	PG+TGA + L2AP
				MITSUBISHI®	0,01 µm	PG+TGA + L2AM/L2AMH
				FAGOR	0,01 µm	PG + TGA + L2AD
				SIEMENS®(*)	0,01 µm	PG + TGA + L2AD + XC-C8-PA-DQ-M
				BiSS®	0,01 µm	PG+TGA + L2ABC
				YASKAWA®	0,009765625 µm	PG+TGA + L2AK
Absolute EXT Tensioned		140 mm up to 30.040 mm	± 5 µm/m	SSI	0,01 µm	PT + TTA + L2A
				PANASONIC®	0,01 µm	PT + TTA + L2AP

				MITSUBISHI®	0,01 µm	PT + TTA + L2AM/L2AMH
				FAGOR	0,01 µm	PT + TTA + L2AD
				SIEMENS®(*)	0,01 µm	PT + TTA + L2AD + XC-C8-PA-DQ-M
				BiSS®	0,01 µm	PT + TTA + L2ABC
				YASKAWA®	0,009765625 µm	PT + TTA + L2AK

(*) contact Fagor Automation for other lengths.

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- BiSSC® is a registered trademark of IC-Hauss GmbH.
- YASKAWA® is a registered trademark of YASKAWA®Electric Corporation

Installation
Consider the physical length of the installation and the space available for it.
These aspects are crucial to determine the type of linear encoder to use (type of profile).

Mechanical Design:
EXA: adhesive model with the smallest cross section for constraint spaces, it consists of an engraved steel tape glued directly onto the machine surface, recommended if the tape is under thermally stable conditions.

EXG: guided model for long measuring lengths it comprises an aluminium extrusion glued to the surface and an engraved steel tape. The steel tape is guided in the extrusion and secured in the mid point to the machine surface that allows the tape to expand/contract freely at its ends and ensures a defined thermal behaviour.
EXT: tensioned model for very long measuring lengths and high accuracy it comprises an aluminium extrusion glued or screwed to the surface, an engraved steel tape and tensioning system. The steel tape is guided in the extrusion and tensioned between its ends. The tensioned steel tape is fixed on the machine base so it replicates the thermal behaviour of the surface.

Accuracy
Each linear encoder is subjected to quality control showing its accuracy along its measuring length.

Signal
The signal selection considers the communication protocols compatible with the main CNC manufacturers.

Resolution
The resolution of the control of machine depends on the linear encoder.

Cable length
The length of the cable depends on the type of signal.

Compatibility
The signal must be compatible with the control system.

Speed
The speed requirements for the application must be analyzed before choosing the linear encoder.

Shock and Vibration
Fagor linear encoders withstand vibrations of up to 200 m/s2 and shocks of up to 1000 m/s2.