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Discover more about
Scanner Components



📱 SCAN ME



DANGER - INVISIBLE LASER RADIATION
AVOID SKIN AND EYES EXPOSURE
TO DIRECT OR SCATTERED RADIATION
CLASS 4 LASER PRODUCT

MAX CONTINUOUS POWER:	1700W
MAX PULSED POWER:	6000W
WAVELENGTH:	10.6µm
PULSE DURATION:	From 2µs to 1s
AVOID LASER RADIATION - AVOID DIRECT EYE EXPOSURE	
CLASS 4 LASER PRODUCT	
LASER SOURCE: Spinning disc	
4000W @ 630nm	
PowerMax 4000W 630nm 3000W	

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El.En. lasers are produced under a quality assurance system certified according to ISO 9001.

G-Series Galvanometers

G1222 / G2860 / G3060 / G4080

GZ1920 / GZ2520



Experience Rooted in Passion

G-series is designed, developed, and manufactured at El.En.'s Italian facilities. For over 40 years, El.En. has passionately committed itself to achieving the highest levels of engineering and reliability, creating devices with advanced technological capabilities. In addition to galvanometers, El.En. also develops laser sources and components for a perfect integration. With more than 4000 industrial installations, El.En. has been chosen to achieve exceptional performance in a wide range of industries. Embrace the precision, innovation, and expertise of El.En.'s laser solutions, empowering your industrial applications with cutting-edge technology.

Introducing G-Series Galvanometer

The new G-Series Galvanometer features four different sizes, designed to deliver excellent performance in a wide range of applications. Each galvanometer is equipped with an internally designed optical position sensor, ensuring high dynamic performance, accuracy, precision, reliability, and minimal thermal drift. Whether you're working with mirrors ranging from 3mm to 100mm, you can find the best galvanometer perfectly suited to maximize processing performance. Additionally, for seamless integration and control, we offer the option of including analogical and DSP driver board. The galvanometer series is suitable for both small-scale

projects and large-scale industrial applications. The series is completed with linear motors offered in two different sizes, for high-speed lens movement (up to 1600mm/s) for dynamic focusing of the z-axis. These motors adjust the focus accurately using advanced motion control and they are meticulously designed and built with top-grade components, ensuring outstanding quality and optimal performance.



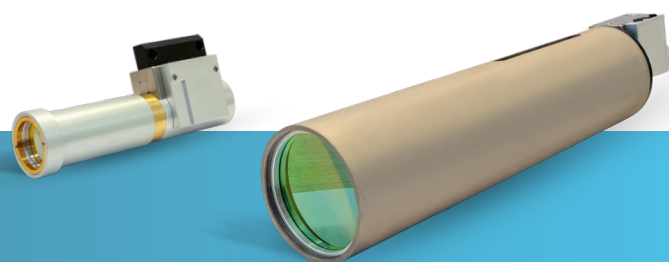
Key features

- Moving Magnet Technology
- High Dynamic Performance
- New Position Detector
- Low Thermal Drift
- Compact Size

Introducing Z Axes Motors Series Galvanometers

Galvo Z Scan series, built by El.En in-house, is a versatile solution for laser processing applications, providing precise control over the laser focus in three dimensions and offering customization options to meet the specific needs of different applications. Dynamic and Precise Positioning to allow 3D Processing Capability and to

replace expensive flat objectives with a wide range of product series offers a variety of sizes and optics designed to cater to different customer applications.



Key features

- High Dynamic Performance
- Precise control
- Dynamic and Precise Positioning
- Customization options
- Compact Size

Seamless integration

The G-Series versatility enables seamless integration into a wide range of systems, providing flexibility to adapt to different mirror size requirements and diverse operational scenarios. An additional advantage of the G-Series is the comprehensive integration of El.En.'s cutting-edge technologies within the same system. This includes laser sources and dedicated software control. By optimizing this technological ecosystem, the series delivers exceptional performance as all components are designed to work together synergistically.

This versatile and harmonized integrability empowers customers or integrators with enhanced efficiency, productivity and performance across various applications and industries.

Moreover, the G-Series ensures compatibility with components other than those from El.En., offering added convenience for integration into existing setups.

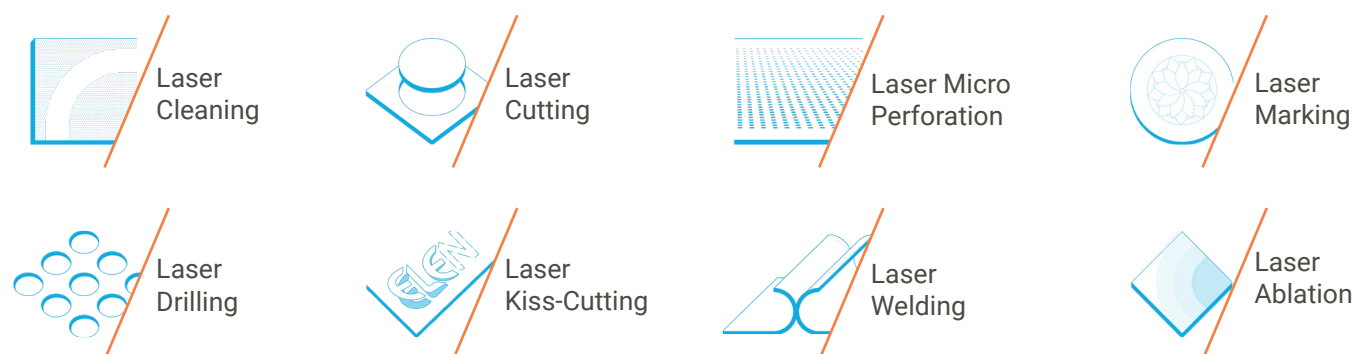
Each model within the G-Series has been meticulously engineered to deliver reliability, exceptional performance and versatility for a wide range of applications.

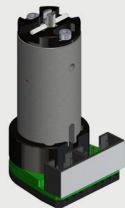


Applications

The G-Series is versatile and can be utilized in various industrial applications, including advanced remote processing, high-speed cutting and engraving of countless materials, digital converting for the packaging industry, label kiss-cutting, laser cleaning for the automotive industry and advanced applications in the aerospace industry, but it can be also integrated in advanced medical equipment for a wide range of primary medical applications from Surgery to Physiotherapy, from Ophthalmology to Aesthetics. With its adaptability and capabilities, the G-series proves to be a reliable choice for a wide range of challenging applications, enhancing performance and reliability.

Processing





G1222



G2860



G3060



G4080

MANCA RENDER

GZ1920

MANCA RENDER

GZ2520

Mechanical & Electrical specifications G Series

Model	G1222	G2860	G3060	G4080	Note
Rated excursion rotor (°mech.)	40	40	40	40	42° mechanically limited
Rotor inertia (g•cm²)	0.015	1.9	9	55	± 10%
Recommended aperture size (mm)	3 ÷ 8	8 ÷ 30	15 ÷ 40	40 ÷ 100	
Torque constant (mN•m/A)	2.2	17.2	48	103	± 10%
Back EMF (mV/(rad/s))	2.2	17.2	48	103	± 10%
Coil resistance (Ohm)	3.6	1.6	2.8	2	± 10%
Coil resistance (Ohm)	100	270	650	1.1	± 10%
Thermal resistance coil to case (°K/W)	4	0.9	0.65	0.3	Max
RMS Coil current (A)	1.6	5	6	10	Max Stator's temp. 60°C
RMS Power (W)	10	50	90	200	Max Stator's temp. 60°C
Peak Coil current (A)	5	20	20	35	10 ms @ 20 Hz
Weight (g)	27	210	330	1400	
Linearity (%)	99.9	99.9	99.95	99.9	Min over +/-15° mecc excursion
	99.8	99.8	99.9	99.8	Min over +/-20° mecc excursion
Scale drift (ppm/K)	+/-50	+/-50	+10/-35	+/-50	Max, over 20 to 60°C case temp.
Zero drift (µrad/°K)	+/-15	+/-15	±8	+/-15	Max, over 20 to 60°C case temp.
Long term drift (% f.s./year)	0.1	0.1	0.05	0.1	
Repeatability (µrad)	15	15	10	15	Short term, no temp. change
Sensor power requirements (V ; mA)	6 ⁽¹⁾	6 ⁽¹⁾	21.5 ⁽¹⁾	6 ⁽¹⁾	
Output signal, common mode (µA)	150	150	280	150	Recommended
Output signal, differential mode (µA/°mech)	4.5-7 ⁽³⁾	4.5-7 ⁽³⁾	20 ⁽⁵⁾	4.5-7 ⁽³⁾	
	15-30 ⁽⁴⁾	15-30 ⁽⁴⁾	25 ⁽⁶⁾	15-30 ⁽⁴⁾	

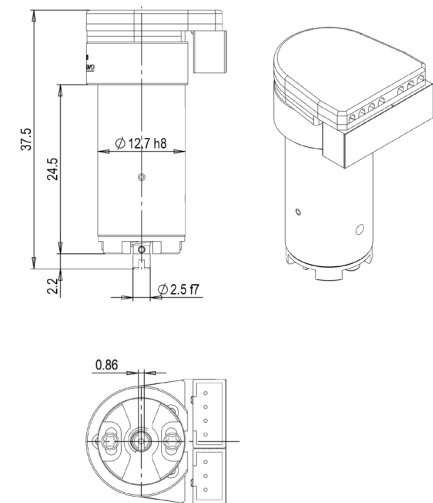
(1) ±5%; Output signal common mode =150 µA
(2) ±5%; Output signal common mode =280 µA
(3) Over 20 to 60°C case temp
(4) Output signal, common mode =150 µA
(5) Typical, Output signal common mode = 280 µA
(6) Max, over 20 to 60°C case temperature

Mechanical & Electrical specifications GZ Series

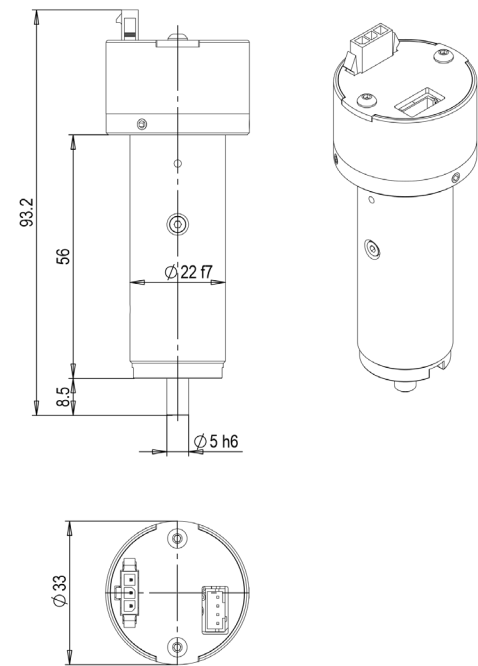
Model	GZ1920	GZ2520
Linearity	99.9% min	99.9% min
	over 20 mm	over 20 mm
Scale drift (ppm/K)	50 max	100 max
zero drift (µm/°K)	10 max	10 max
Long term drift (ppm/year)	200 max	200 max
Repeatability, short term (µm)	5 max	5 max
Moving trolley excursion (mm)	20 Typical/21 max	20 Typical/21 max
Moving lens housing	Ø ¾" *3mm thickness max	Ø 1" *4mm thickness max
Optical aperture (mm)	18	24
Moving trolley speed (mm/s)	1600 max	1400 max
Moving trolley acceleration (G)	35 max	25 max
Setting time (ms)	3.4 @ Dx = 2mm max	3.6 @ Dx = 2mm max
	12 @ Dx = 20mm max	15 @ Dx = 20mm max
Weight (g)	460 ± 10%	

Technical Drawings G-Series*

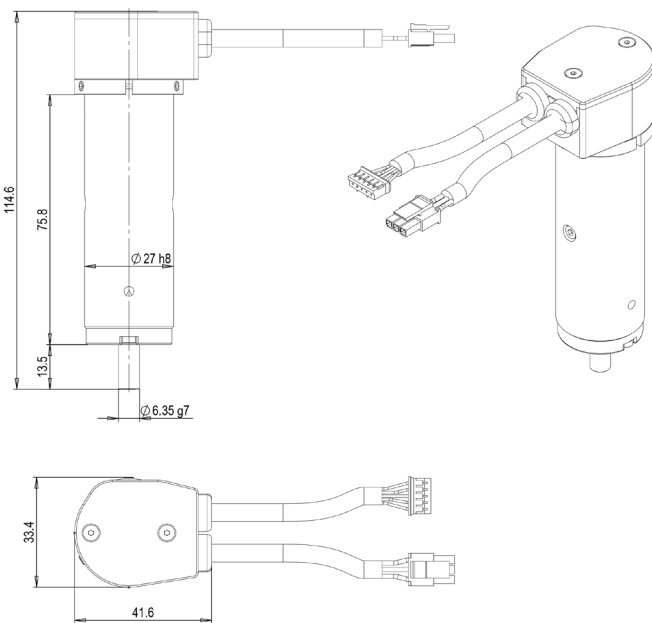
G1222



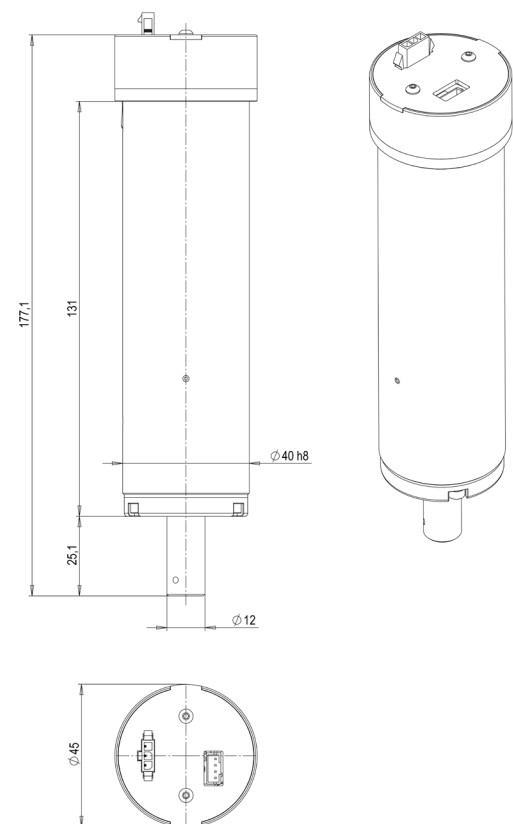
G2860



G3060



G4080

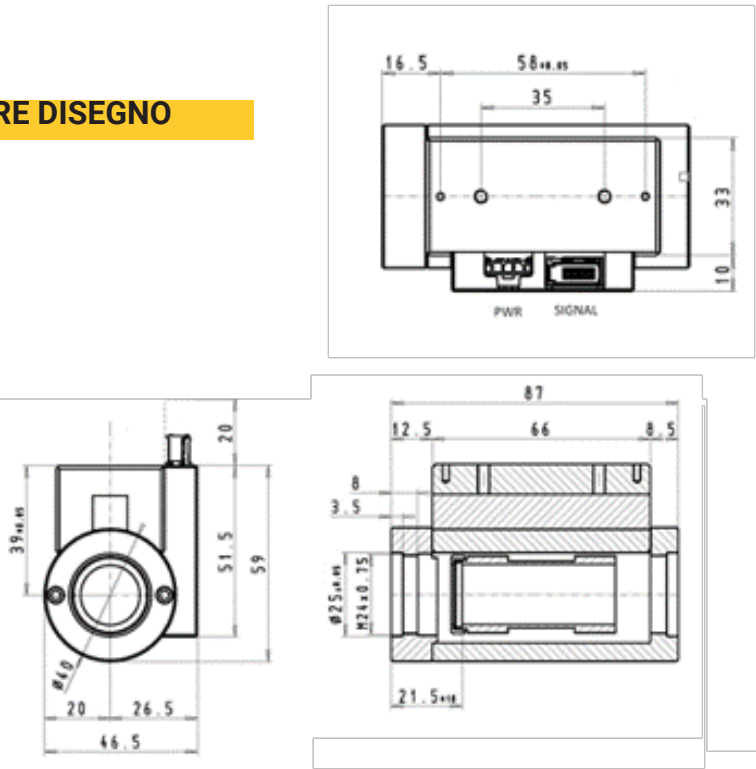


*Drawings not to scale

Technical Drawings GZ-Series*

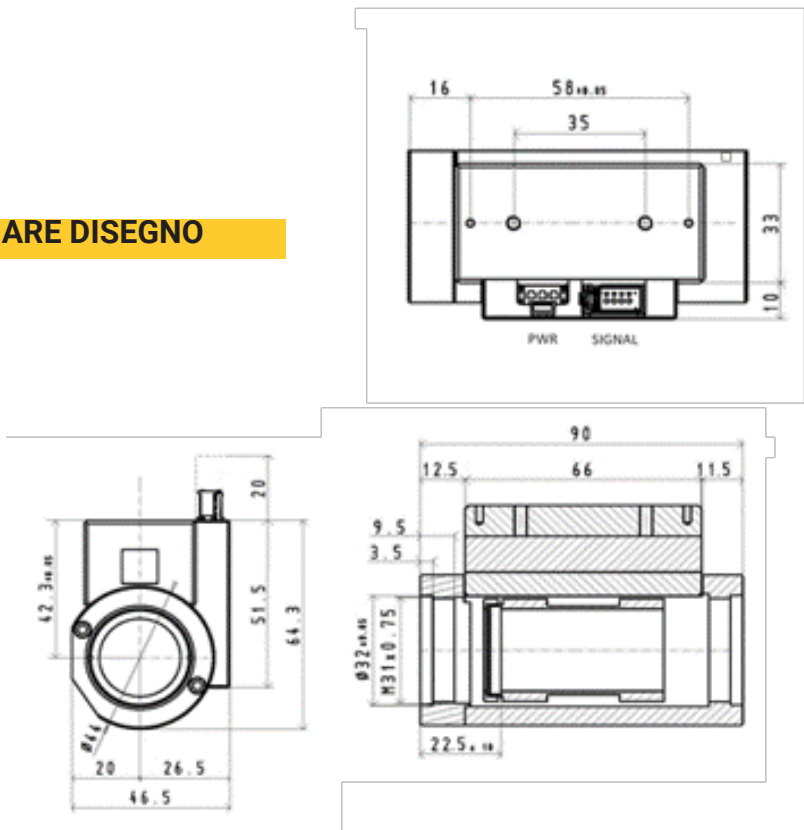
GZ1920

CAMBIARE DISEGNO



GZ2520

CAMBIARE DISEGNO



*Drawings not to scale