

# Gemini™ Cold Cathode Ionisation Vacuum Gauge

The compact solution for vacuum  
measurement in challenging environments

 **INFICON**  
Inspired by visions. Proven by success.

# Wide range - Heavy worker

The INFICON Gemini™ Inverted Magnetron Vacuum Gauge is the workhorse for all vacuum measurement application. Gemini MPG5xx combines two sensor systems into one small device to measure from atmosphere to  $1 \times 10^{-9}$  mbar. The patented ultra-low magnetic stray field design opens up a whole new range of applications. A unique interchangeable dual chamber sensor unit avoids cleaning cycles and reduces maintenance, making Gemini the most robust and economical vacuum gauge of its kind.

## TYPICAL APPLICATIONS

- Long lifetime in harsh environments
- Low magnetic stray field
- Reliable fast ignition
- Fastest maintenance - replaceable insert
- Compact size - easy to integrate
- Corrosion proof feed-through & sensor element
- Selectable measuring current
- 2 relay setpoints ( in conjunction with MxG55x EtherCAT version)
- EtherCAT & RS232/RS485 digital interface

## APPLICATIONS

- Base pressure monitoring and control, from atmosphere to high vacuum in evaporation and sputter coating applications
- General vacuum measurement - industrial furnaces, architectural glass, semiconductor, Refrigeration/air conditioning and production laboratories
- Analytical and R&D applications - mass spectrometry, electron microscopes ophthalmic, optical, medical and high energy physics

Gemini Cold Cathode and combination comes with fully integrated digital electronics, providing ultimate flexibility for system integration.

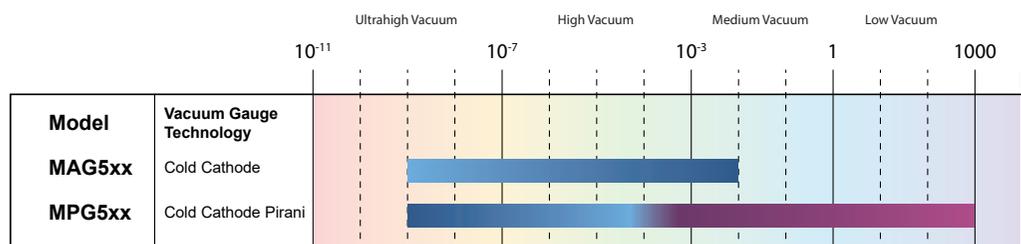
Cold cathode and Pirani combination option provides seamless transition, reliability, practicality and flexibility across wide ranging applications.





## Cold Cathode Ionisation Vacuum Gauge MAG5xx & MPG5xx

### MEASUREMENT RANGE



Atmospheric Pressure (ATM) = 1000 mbar (at sea level)

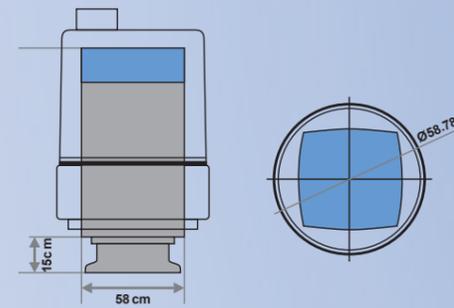
■ Cold Cathode    ■ Pirani

### QUICK & EASY MAINTENANCE

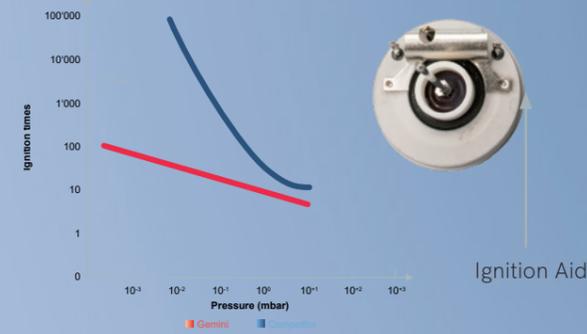


- 1 Electronic unit
- 2 Replacement sensor
- 3 Ionization insert chamber

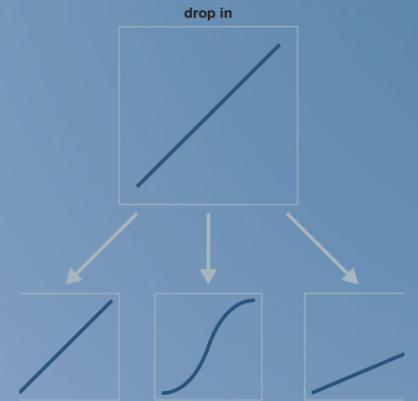
### COMPACT SIZE



### RELIABLE FAST IGNITION



### OUTPUT SIGNAL SHAPING

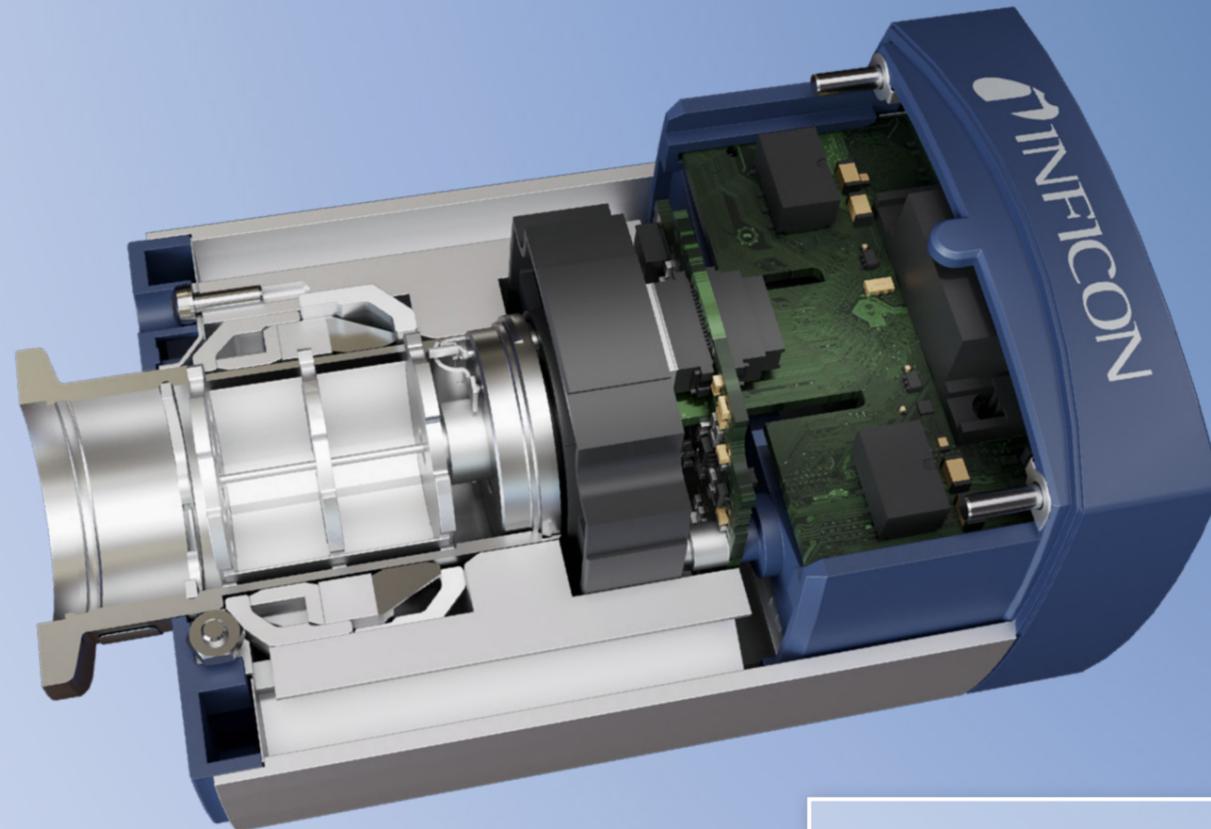


### DUAL CHAMBER FUNCTIONAL PROTECTION



Process side

The dual chamber design acts like an open load lock system, the main dirt gets collected in the first chamber. The special surface is important to cover the self-sputtered films and avoid flittering as long as the self-sputtered films do not break off the chamber walls.



### ELECTRICAL CONNECTIONS

Different plugs



EtherCAT



PROFINET

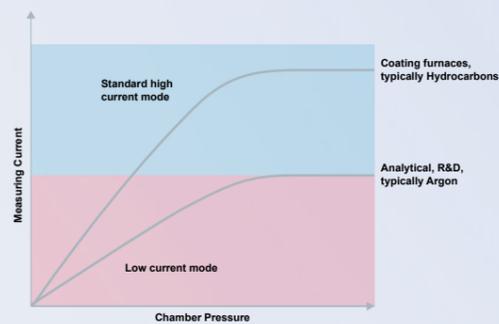


Analog / FCC  
(optional display)



Analog / RS232/485  
(optional display)

### SELECTABLE MEASURING CURRENT



### NO MAGNETIC STRAY FIELD

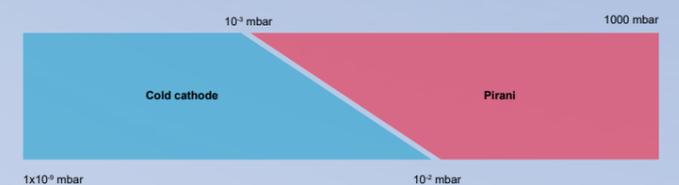
nothing sticks



### CORROSION PROOF FEED THROUGH



### COMBINATION GAUGE



# GEMINI™ MXG5XX ATM TO ULTRA-HIGH VACUUM GAUGE

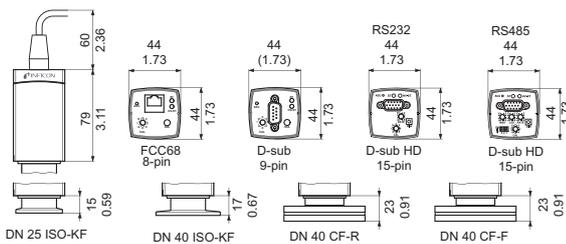
SPECIFICATIONS		MAG5xx	MPG5xx
Measurement system		Cold cathode ionization measurement system (according to the inverted magnetron principle)	Pirani and cold cathode ionization measurement system (according to the inverted magnetron principle)
Measurement range		$1 \times 10^{-9} \dots 1 \times 10^{-2}$ mbar $7.6 \times 10^{-10} \dots 7.6 \times 10^{-3}$ Torr	$1 \times 10^{-9} \dots 1000$ mbar $7.6 \times 10^{-10} \dots 760$ Torr
Accuracy (N2)	$1 \times 10^{-8} \dots 1 \times 10^{-2}$ mbar	30% of reading	
	$1 \times 10^{-2} \dots 100$ mbar $100 \dots 1000$ mbar	30% of reading 50% of reading	
Repeatability (N2)	$1 \times 10^{-8} \dots 1 \times 10^{-2}$ mbar	5%	
	$1 \times 10^{-8} \dots 100$ mbar	5%	
Admissible temperature	Operation (ambient)	+5 ... +55 °C	
	Bakeout at flange	$\leq 150$ °C	
	Storage	-40 ... +70 °C	
Humidity	$1 \times 10^{-7} \dots 1 \times 10^{-2}$ mbar	$\leq 0 \dots 95\%$ relative humidity, non-condensing	
	$1 \times 10^{-8} \dots 1 \times 10^{-2}$ mbar	$\leq 70\%$ (non-condensing)	
Supply voltage	At Gauge	+14.5 ... +30 V (dc)	
	Ripple	$\leq 1$ V (p-p)	
	Power consumption	$\leq 2$ W	
	Fuse to be connected	$\leq 1$ AT	



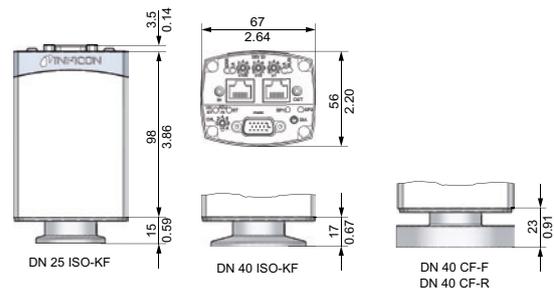
## DIMENSIONS

mm (inch)

### MxG500, MxG504



### MxG550, MxG 554



[www.inficon.com](http://www.inficon.com) [reachus@inficon.com](mailto:reachus@inficon.com)

Due to our continuing program of product improvements, specifications are subject to change without notice.  
©09-2023 INFICON