

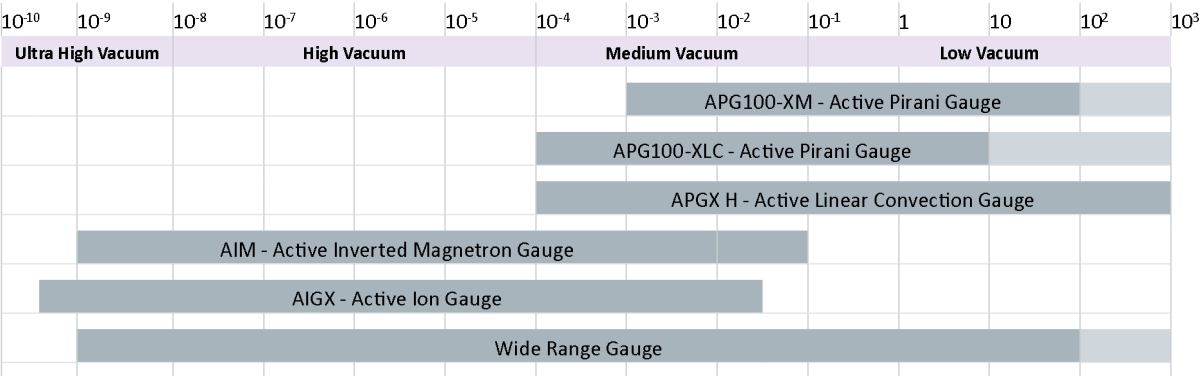
VACUUM MEASUREMENT

Steps to choosing the right vacuum gauge



1

Determine the range of pressures using the chart below to guide you.



The dark grey shading indicates the primary accuracy range for the specified gauge.
The light grey 'operating range' indicates the pressure range where the gauge can be used but will not provide accurate readings.

2

Choose your gauge

APG100 - Active Pirani Gauge



APG100 series Active Pirani vacuum gauges are available in 2 models. The APG100-XM is the standard model and measures to 10⁻³ mbar, the APG100-XLC is a corrosion resistant version with measurement to 10⁻⁴ mbar. Both gauges feature compact size for easy installation, a linear output and a replaceable sensor tube. These gauges are compatible with all Edwards TIC instrument controllers and other Active gauge controllers and displays.



Technical data	
Pressure range	APG100-XM = 10 ⁻³ to 10 ⁻³ mbar APG100-XLC = 10 ⁻³ to 10 ⁻⁴ mbar
Accuracy	APG100-XM = <100 mbar APG100-XLC = <10 mbar typically +/- 15%
Max overpressure	10 bar absolute (145 psi)
Temperature range	
Operating	+5 to +60 °C
Storage	-30 to +70 °C

Active Pirani gauges	Order no.
APG100-XM Atmosphere to 10 ⁻³ mbar NW16 flange	D02601000
APG100-XM Atmosphere to 10 ⁻³ mbar NW25 flange	D02602000
APG100-XLC Atmosphere to 10 ⁻⁴ mbar corrosion resistant NW16 flange	D02603000
APG100-XLC Atmosphere to 10 ⁻⁴ mbar corrosion resistant NW25 flange	D02604000

APGX H - Active Linear Convection Gauge

10 ⁻¹⁰	10 ⁻⁹	10 ⁻⁸	10 ⁻⁷	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³	10 ⁻²	10 ⁻¹	1	10	10 ²	10 ³
Ultra High Vacuum		High Vacuum				Medium Vacuum			Low Vacuum				

The Active Linear Convection Vacuum Gauge has a wide measuring range from 1333 to 3 x 10⁻⁴ mbar. The use of convection technology ensures accuracy and sensitivity are maintained to the top of the pressure range compared to conventional Pirani gauges, which lose accuracy above 100 mbar. The gauge is compact and may be mounted in any orientation, simplifying installation where space is limited.



Technical data	
Pressure range	1333 to 3 x 10 ⁻⁴ mbar
Accuracy	Typically +/- 15%
Max overpressure	10 bar absolute (145 psi)
Temperature range	
Operating	+5 to +60 °C
Storage	-30 to +70 °C

APGX H - Active Linear Convection Gauges	Order no.
APGX-H NW16 Aluminium	D02391000
APGX-H NW16 Stainless Steel	D02395000
APGX-H NW25 Stainless Steel	D02392000
APGX-H 1/8" NPT Stainless Steel	D02396000

AIM - Active Inverted Magnetron Gauge

10 ⁻¹⁰	10 ⁻⁹	10 ⁻⁸	10 ⁻⁷	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³	10 ⁻²	10 ⁻¹	1	10	10 ²	10 ³
Ultra High Vacuum		High Vacuum				Medium Vacuum			Low Vacuum				

Edwards Active Inverted Magnetron (AIM) Gauges provide accurate measurement over the vacuum range of 1 x 10⁻² to 1 x 10⁻⁹ mbar. These gauges have proved to be rugged and reliable in a wide range of applications, ranging from scientific instruments to industrial processes.

The AIM-X Gauge is an inverted magnetron gauge head and gauge controller combined into a single compact unit, and features a linear output for easy integration with a computer or PLC.

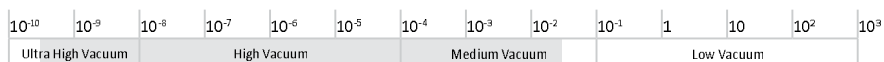
The XL variants have a very low external magnetic field, these are ideally suitable for use with sensitive analytical instruments or in applications where the gauge needs to be mounted in close proximity to a turbomolecular pump.



Technical data	
Pressure range	10 ⁻² to 10 ⁻⁹ mbar
Accuracy	Typically +/- 30%
Max overpressure	10 bar absolute (145 psi)
Temperature range	
Operating	+5 to +60 °C
Storage	0 to +70 °C

Active Inverted Magnetron gauges	Order no.
AIM-X-NW25	D14642000
AIM-XL-NW25	D14645000
AIM-X-DN40CF	D14662000
AIM-XL-DN40CF	D14665000

AIGX - Active Ion Gauge



The Active Ion Gauge (AIGX) is a compact active ion gauge with dual yttria coated iridium filaments, a wide measuring range from 6.6×10^{-2} to 6.6×10^{-10} mbar and a 1 Volt/decade linear output. The AIGX incorporates all benefits of the industry standard active gauging concept, with integral electronics and replaceable tube. The gauge has a degas facility and includes features to protect and extend the life of the filaments. The AIGX benefits from extremely low emissions of charged particles, which makes it an excellent choice for processes where background noise is undesirable.



Technical data	
Pressure range	6.6×10^{-2} to 6.6×10^{-10} mbar
Accuracy	Typically +/- 15%
Max overpressure	10 bar absolute (145 psi)
Temperature range	
Operating	0 to +40 °C
Storage	-30 to +70 °C

AIGX - Active Ion Gauge	Order no.
AIGX-S NW25	D04850000
AIGX-S DN16CF	D04851000
AIGX-S DN40CF	D04852000

WRG - Wide Range Gauge



The Wide Range Gauge (WRG) family offers the capability of single port pressure measurement in the range atmosphere to 10^{-9} mbar, with a linear output. It's a compact solution, halving the space and connectivity hardware requirement, which can be all important in many applications. The WRG has many novel features, including a patented striker, push-button calibration and set point controls and comprehensive diagnostics. The WRG is a cost-effective vacuum management solution when used either with a Edwards controller or directly integrated into the vacuum system controls.



Technical data	
Pressure range	10^3 to 10^{-9} mbar
Accuracy	Typically +/- 15% at <100 mbar +/- 30% at $<10^{-3}$ mbar
Max overpressure	10 bar absolute (145 psi)
Temperature range	
Operating	+5 to +60 °C
Storage	0 to +70 °C

Wide range gauges	Order no.
WRG NW25 Stainless Steel	D14701000
WRG DN40CF Stainless Steel	D14703000
WRG-SL NW25	D14711000



Choose the cable length required

Cables include FCC68/RJ45 compatible connections at both ends.

Connection cable options	Order no.
0.5 m	D40001005
1 m	D40001010
3 m	D40001030
5 m	D40001050
10 m	D40001100

4

Choose display option

Active Digital Controller

The Active Digital Controller (ADC) is a compact single gauge controller and display. It features a bright LED display and simple push button controls. The ADC automatically recognises compatible Edwards gauges, loads the appropriate look-up table and displays the pressure in commonly used vacuum units.



- Plug and measure operation
- Bright LED display for clear visibility
- Choice of display units - mbar, Torr, Pascal
- Supports APG100, APGXH and WRG gauges

Enhanced Active Digital Controller

The Enhanced Active Digital Controller (ADC) is a compact dual gauge controller and display. It features a bright LED display and simple push button controls for two compatible Edwards gauges. The Enhanced ADC automatically loads the appropriate look-up table and displays the pressure in commonly used vacuum units.



- Controls two active gauges of the same type
- 2 set-point relays
- Simple push button control
- RS232 interface and analog output
- Supports APG100, APGXH, WRG and AIM gauges

TIC Controller

The TIC instrument controller offers comprehensive control and display of up to 6 compatible Edwards gauges. Intuitive user interface, 6 set points and full Windows Software for control and data logging functionality.



- Universal controller for up to 6 active gauges
- Compact design
- Clear, easy-to-use graphical user interface
- Serial communication Windows™ PC program including data logger, plus analogue outputs
- RS232 interface and analog output
- Supports APG100, APGXH, WRG, AIM and AIGX gauges

Controller	Order number	Max no. of gauges	No. of setpoints	Windows software	Data logging
TIC controller (3 gauge)	D39700000	3	3	Yes	Yes
TIC controller (6 gauge)	D39701000	6	6	Yes	Yes
Active Digital Controller (ADC)	D39590000	1	0	No	No
Enhanced Digital Controller (eADC)	D39591500	2	2	No	No