

# ACTIVE ION GAUGE CONTROLLER

RANGE  $5 \times 10^{-3}$  TO  $2 \times 10^{-11}$  mbar

The Edwards Active Ion Gauge Controller (IGC) provides all the power, control and signal conditioning required to run one or two ion gauge heads



When connected to a Edwards TIC Instrument Controller the user has full control of the ion gauge functions from the TIC front panel. This includes features such as automatic emission current selection and interlock with other gauge types.

Alternatively, the IGC can be linked directly to a control system such as a PLC to give the OEM or system builder direct access to control inputs and signal outputs.

## Features and Benefits

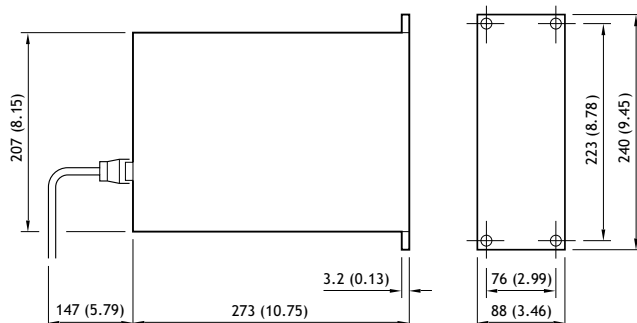
- **Wide measurement range**
  - Electron beam degas versions:  
 $5 \times 10^{-3}$  to  $2 \times 10^{-11}$  mbar
- **Selection of head available**
  - Choice of electron beam degas, nude or glass encapsulated, tungsten or thoriated iridium filaments
- **Flexible cabling system**
  - Ion gauge cables are available in 2 and 3m lengths including bakeable versions. Active gauge cables to link IGC and AGC are available in lengths up to 100m.
- **Vacuum interlock through an auxiliary low vacuum Active gauge**
  - To protect the ion gauge from accidental operation at high pressure it can be interlocked through an Active Pirani or thermocouple gauge connected to the IGC or AGC
- **Ratiomatic measurement system**
  - Improved measurement accuracy
  - Allows soft start on filament power-up giving an added degree of filament protection
- **Choice of Edwards interface (EHVI) or parallel command and status port (PCSP)**
  - EHVI: allows connection to Edwards TIC Instrument Controller
  - PCSP: 15 way D-type connector giving access to all control input and signal outputs

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## Technical Data

<b>Power supply</b>		<b>Degas power</b>	
Input voltage range	90 to 265 V ac	Electron beam (EBEAM)	60 W max (adjustable)
Input frequency range	45 to 70 Hz		Active low (less than 3 V) with internal pull up resistors (150 k $\Omega$ ) to 28 V
Main supply socket	IEC 320	<b>PCSP interface</b>	
<b>Temperature range</b>		Connections	
Operating	10 to 50 °C	PCSP interface socket or	15 way female D-type
Storage	-20 to +70 °C	EHVI (AGC) interface socket plus	8 way FCC68/RJ45 socket
Relative humidity (non condensing)	10 to 90%	Auxilliary gauge socket	8 way FCC68/RJ45 socket
Enclosure rating	IP20	Ion gauge socket	7 way circular multipole
<b>Pressure range</b>		<b>Dimensions</b>	
Electron beam degas (EBEAM)	$5 \times 10^{-3}$ to $2 \times 10^{-11}$ mbar	Without rack mounting kit	203 x 87 x 273 mm
Emission current	0.1, 1.0 to 10 mA (selectable)	With rack mounting kit	Half 19" rack, 2U
<b>Filament power supply</b>		<b>Weight</b>	1.8 kg
Voltage	8 V dc max	<b>Standards</b>	
Current	5 A max	Electronic design	EN61010-1
Power	40 W max	Electromagnetic compatibility	EN61326 (Class B Emissions)
Note: 2 head versions of the IGC will only drive one head at a time			

## Dimensions



## Ordering information

Product Description	Order No.	Product Description	Order No.
Controllers		1" Port, Kovar thoriated iridium filament	D029-98-110
IGC EBEAM, 2 HEAD, PCSP	D048-46-000	2 3/4" ConFlat®, Kovar 3/4" port, dual tungsten filaments	D029-98-140
IGC EBEAM, 2 HEAD, EHVI	D048-47-000	2 3/4" ConFlat®, Kovar 3/4" port, thoriated iridium filament	D029-98-170
Controller/gauge combinations may be supplied with a calibration certificate	Call for details	Cables for the above tubes	
Accessories for the above controllers		I <sup>2</sup> R 1.8m cable	D048-31-060
IGC 19" rack mounting kit	D048-30-300	I <sup>2</sup> R 3m cable	D048-31-100
Half 19" blanking kit	D048-30-301	Nude, resistive degas (I <sup>2</sup> R) ion gauge tubes (X-Ray limit 4 x 10 <sup>-10</sup> mbar)	
Half 19" rack joining kit	D048-30-302	Note, I <sup>2</sup> R tubes can be used with EBEAM controllers	
Electron beam (EBEAM) degas ion gauge tubes (X-Ray limit 2 x 10 <sup>-11</sup> mbar)		2 3/4" ConFlat®, dual tungsten filaments	D029-98-380
2 3/4" Conflat®, nude, dual tungsten filaments	D029-99-380	2 3/4" ConFlat®, thoriated iridium filament	D029-98-390
Spare filaments for the above	D029-99-360	Cables for the above tubes	
2 3/4" Conflat®, nude, dual thoriated iridium filaments	D029-99-390	I <sup>2</sup> R 1.8m cable	D048-46-060
Spare filaments for the above	D029-99-370	I <sup>2</sup> R 3m cable	D048-46-100
Cables for the above tubes (bakeable to 250 °C)		Other tube/cable combinations available	Call for details
EBEAM (nude) 2 m cable	D048-47-060	IGC to TIC and auxiliary gauge connection cables	
EBEAM (nude) 3 m cable	D048-47-100	Use the range of FCC68 active gauge cables listed on the TIC and active gauge data sheets	
Glass encapsulated, resistive degas (I <sup>2</sup> R) ion gauge tubes (X-Ray limit 3 x 10 <sup>-10</sup> mbar)		Mains cables	
Note: (I <sup>2</sup> R) tubes can be used with EBEAM controllers		2m UK plug	D400-13-025
3/4" port, Kovar dual tungsten filaments	D029-98-010	2m USA plug	D400-13-120
3/4" port, Kovar thoriated iridium filament	D029-98-040	2m Northern European plug	D400-13-030
1" port, Kovar dual tungsten filaments	D029-98-070	Conflat® is a trademark of Varian	

## Global Contacts

### EUROPE

UK Crawley +44 1293 528844  
 UK Local Rate (UK only) 08459 212223  
 Belgium Brussels +32 2 300 0730  
 France Paris +33 1 4121 1256  
 Germany Munich 0800 000 1456  
 Italy Milan +39 02 48 4471

### USA

Tewksbury, MA +1 978 658 5410  
 Toll free (USA only) +1 800 848 9800

### ASIA PACIFIC

Taiwan R.O.C. Toufen Town +886 37 611 422  
 Singapore +65 6546 8408

### BRAZIL

Sao Paulo +55 11 3952 5000

### CHINA

Shanghai +86 21 5866 9618

### INDIA

Pune +91 20 4075 2222

### ISRAEL

Qiryat-Gat +972 8 681 0633

### KOREA

Bundang +82 31 716 7070

### JAPAN

Yachiyo +81 47 458 8831



WWW.EDWARDSVACUUM.COM

info@edwardsvacuum.com

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