

# PRA & WRA RESIDUAL GAS ANALYSERS (RGA)

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**Our new RGA includes two variants: PRA & WRA, both come with simple and effective operation assuring high performance and efficiency.**

Edwards PRA RGAs deliver the perfect balance of high end performance and accessibility. Available in four variants to suit your process needs, whether you just need a basic model or something with more sensitivity/range, the PRA is the perfect starting point for analysing your processes.

The WRA RGAs from Edwards are our top of the line models, with market leading specifications. Available in two variants 1-200 or 1-300 amu, you can measure a wide range of gasses/by-products from your processes. This is paired with increased sensitivity compared to the PRA to allow for greater accuracy from your measurements.

All RGAs have full Ethernet Protocol, which allows you to connect directly to your own PLC and are equipped with dedicated, easy-to-use software which allows you to track your process in real-time from your laptop and do detailed analysis of up to 16 different units.

For those wanting a snapshot view, the units have a unique on-board display which can show you the main gas types as well as the overall pressure of your system without having to connect via laptop.



## Features and benefits

- Total pressure measurement
- Dual filament
- On unit display
- Customer replaceable parts
- Degas function
- Protection of Ion source and EM

## Applications

### PRA

- Residual gas analysis in high vacuum pumping equipment
- Gas analysis in R&D
- Gas analysis in Freeze drying
- Gas analysis in PV/FPD/Semi

### WRA

- Residual gas analysis in UHV pumping equipment
- Analysis of organic materials
- Environmental tracking
- Gas impurity

## TECHNICAL DATA AND ORDERING INFORMATION

|                                            | PRA100              | PRA100S                               | PRA200              | PRA200S                               |
|--------------------------------------------|---------------------|---------------------------------------|---------------------|---------------------------------------|
| Mass range (amu)                           | 1-100               | 1-100                                 | 1-200               | 1-200                                 |
| Mass filter type                           | QMS                 | QMS                                   | QMS                 | QMS                                   |
| Detector type                              | Faraday cup         | EM/Faraday cup                        | Faraday cup         | EM/Faraday cup                        |
| Sensitivity (A/mbar)                       | $1 \times 10^{-5}$  | $400/1 \times 10^{-5}$                | $1 \times 10^{-5}$  | $400/1 \times 10^{-5}$                |
| Minimum detectable partial pressure (mbar) | $1 \times 10^{-10}$ | $1 \times 10^{-14}/1 \times 10^{-10}$ | $1 \times 10^{-10}$ | $1 \times 10^{-14}/1 \times 10^{-10}$ |
| Max operating pressure (mbar)              | $1 \times 10^{-4}$  | $1 \times 10^{-4}$                    | $1 \times 10^{-4}$  | $1 \times 10^{-4}$                    |
| Filament material                          | Ir/Y2O3             | Ir/Y2O3                               | Ir/Y2O3             | Ir/Y2O3                               |
| Operating temp (°C)                        | 40                  | 40                                    | 40                  | 40                                    |
| Max analyser temp (°C)                     | 120                 | 120                                   | 120                 | 120                                   |
| Max bake out temp (elec removed) (°C)      | 250                 | 250                                   | 250                 | 250                                   |
| Connection flange                          | DN40CF              | DN40CF                                | DN40CF              | DN40CF                                |
| Power input                                | DC24V +-10% 50W     | DC24V +-10% 50W                       | DC24V +-10% 50W     | DC24V +-10% 50W                       |
| Weight (kg)                                | 2.6                 | 2.84                                  | 2.6                 | 2.84                                  |
| IP                                         | 30                  | 30                                    | 30                  | 30                                    |
| Serial communication                       | RS485               | RS485                                 | RS485               | RS485                                 |
| Resolution                                 | M/DeltaM=1M(10%PH)  | M/DeltaM=1M(10%PH)                    | M/DeltaM=1M(10%PH)  | M/DeltaM=1M(10%PH)                    |

|                                            | WRA200S                               | WRA300S                               | Product description        | Order number |
|--------------------------------------------|---------------------------------------|---------------------------------------|----------------------------|--------------|
| Mass range (amu)                           | 1-200                                 | 1-300                                 | WRA200S                    | D05002202    |
| Mass filter type                           | QMS                                   | QMS                                   | WRA300S                    | D05002302    |
| Detector type                              | EM/Faraday cup                        | EM/Faraday cup                        | WRA-S analyzer tube        | D05002015    |
| Sensitivity (A/mbar)                       | $400/2.5 \times 10^{-4}$              | $400/2.5 \times 10^{-4}$              | WRA200S/300S filament kit  | D05002014    |
| Minimum detectable partial pressure (mbar) | $1 \times 10^{-15}/1 \times 10^{-11}$ | $1 \times 10^{-15}/1 \times 10^{-11}$ | WRA200S/300S ion source    | D05002013    |
| Max operating pressure (mbar)              | $1 \times 10^{-4}$                    | $1 \times 10^{-4}$                    | WRA200S/300S SEM           | D05002012    |
| Filament material                          | Ir/Y2O3                               | Ir/Y2O3                               | PRA100                     | D05001101    |
| Operating temp (°C)                        | 40                                    | 40                                    | PRA100S                    | D05001102    |
| Max analyser temp (°C)                     | 250                                   | 250                                   | PRA200                     | D05001201    |
| Max bake out temp (elec removed) (°C)      | 300                                   | 300                                   | PRA200S                    | D05001202    |
| Connection flange                          | DN40CF                                | DN40CF                                | PRA100/200 analyzer tube   | D05001016    |
| Power input                                | DC24V +-10% 50W                       | DC24V +-10% 50W                       | PRA100S/200S analyzer tube | D05001015    |
| Weight (kg)                                | 3.21                                  | 3.21                                  | PRA ion source             | D05001013    |
| IP                                         | 30                                    | 30                                    |                            |              |
| Serial communication                       | RS485                                 | RS485                                 |                            |              |
| Resolution                                 | M/DeltaM=1M(10%PH)                    | M/DeltaM=1M(10%PH)                    |                            |              |