VE Fixed Probe Instrument Double Block & Bleed

Technical Data Sheet

VE Instrument Double Block and Bleed

The new VE instrument double block and bleed (DBB) is an integrated valve arrangement that delivers full double block and bleed functionality, whilst ensuring optimum sample integrity and response.

Specifically aimed at ultra fast or trace component applications; the instrument DBB valve provides the full functionality of a conventional DBB for downstream operation and maintenance, whilst eliminating the additional cost and weight of a full firesafe approved process DBB (please see TDS 004 Annex 2).

VE technology ensures a constant 2mm ID, low volume, electro-polished sample pathway, without dead legs and threaded connections from probe tip to analyser inlet. By eliminating these poor design features associated with conventional systems, we ensure that there is nowhere for the flow to stagnate or recirculate, no preferential sorption on dissimilar materials and no rough surfaces to promote physical entrapment.

The instrument double block and bleed valve is integrated into one compact block. This new design means that the valve is now smaller and lighter in weight than ever before, significantly reducing sample transit distance. By integrating high performance instrument valves, this robust double block and bleed valve arrangement can be easily mounted on to the head of a VE Technology fixed or retractable sample probe (please see TDS 004 & TDS 006).

An integrated back flush port can be utilised for cleaning out your sample probe in-situ and at full line pressure.

A port is also incorporated to allow a certified validation gas to be introduced into your sample system immediately at the head of the probe. This allows the operator to validate that the sample system has not become contaminated.*

Benefits

- **Accuracy –** Improve sampling performance over conventional methods, without compromising safety by using a purpose-designed-and-built DBB valve.
- **Representative –** Low volume, constant cross sectional area, no dead legs or threaded connections and electropolished internals throughout, minimising the detrimental effects associated with sorption and physical entrapment (SilcoNert® coating avaialble).
- **Response time –** Reduced transit distance and minimal internal volume for increased sampling accuracy and minimised sample response time.
- **Backflush Facility –** Providing the ability to clean the sample probe's internal surfaces, in-situ (and at full line pressure). This is only possible due to the low volume, constant cross sectional area and high quality surface finishes of the entire sample probe and DBB design.*
- **Validation Port –** Sampling integrity with the integrated validation port. Providing the ability to introduce a validation gas with a known composition, in order to verify that the sample system is not altering sample identity or state during sample transit, filtering or pressure reduction.

*Back flush and validation kits available. Please contact Orbital or your local representative for more information.

Material of Construction	Constant 2mm, electro-polished SS316L sample pathway (option for SilcoNert® coating) SS316L valve body Alternative materials and NACE available by request
Operating Pressure	172 barg as standard, extended ranges available
Operating Temperature	Permissible ambient temperature -50°C to 148°C (-58°F to 298°F) at fully rated conditions, extended ranges available
Security	Valve key required (supplied – see image below)
Connections	Inlet and outlet connections 1/8" compression as standard
Mounting	Suitable for mounting directly on to the head of a VE sample probe, purpose-built-bracketry or an enclosure
Part Numbers	Standard (electropolished): **ED03 113** NACE electropolished: **ED03 1529** SilcoNert® coated, NACE and electropolished: **ED03 1530**

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