

DC1S

Vacuum Controller / Distillation Controller Absolute Pressure 1400 to 1 mbar

The DC1S controls vacuum processes by means of internal, continuous valves for vacuum and venting.

It offers high control accuracy and operates independently of type and pump speed of the applied vacuum source.

Fuzzy logic technology allows the controller to adjust to varying process conditions.



Worldwide Patented

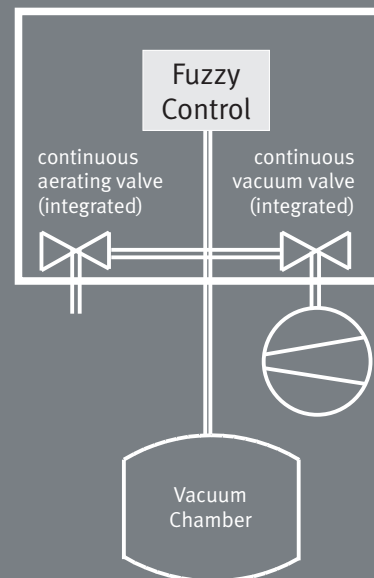
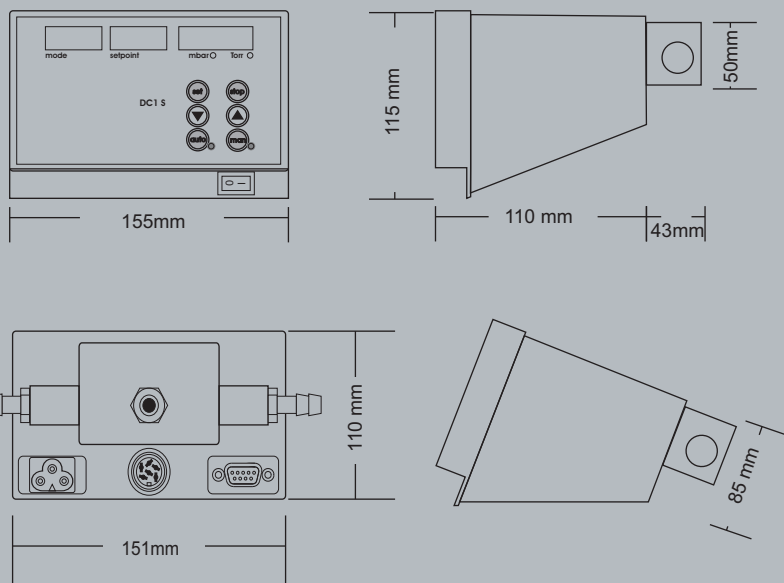
Typical Applications

- Vacuum distillation, rotary evaporators
- Chemical process engineering
- Analysis instruments
- Workplaces with centralized vacuum supply
- Automatic filtration
- Regulation of complex pressure profiles
- Laboratory workplaces
- Process automation
- Casting

Benefits

- Continuously regulated proportional valves for evacuation and venting mean superior vacuum control
- Automatic adjustment to variable process conditions using self optimizing fuzzy logic based control
- Internal valves and an integrated sensor minimize the effort for installation
- Patented automatic mode to approach and find boiling points in vacuum evaporators
- Programmable pressure ramp down for optimal evaporation rates
- Reduction of solvent foaming and delay in boiling
- The controller is suitable for any kind of vacuum source and can be easily integrated into existing appliances
- Suitable for small volumes
- Silent valve operation
- Chemically resistant ceramic sensor with Kalrez® sealing
- Valves made of robust polypropylene
- Pressure units mbar, Torr
- Clear data display information shows operation mode, actual pressure and set point
- Easy to use
- Manual operation mode allows intervention in pressure control quickly and at anytime
- Available as desktop unit or for panel mounting; rod for stand support available
- Universal switched mode power supply 95 - 265 VAC
- Serial interface for process data collection and programming set points
- VacuGraph software for saving and plotting measurements on a PC





Technical Data

Display	3 displays with 7-segment LEDs for display mode / set point / actual pressure (3 / 3 / 4 digits)
Display Refresh Rate	2 Hz (500 ms)
Sampling Rate	50 Hz (20 ms)
Measuring Principle	Piezo resistive, independent of gas type
Materials In Contact With Vacuum	Al ₂ O ₃ -ceramic, PP, Kalrez®
Measurement Range	1400 - 1 mbar (1050 - 1 Torr), admitted overpressure 2 bar absolute
Accuracy	Max. ±0.5% full scale (linearity / hysteresis / repeatability)
Resolution	1 mbar (Torr)
Measuring Rate	20 ms
Power Supply	95 - 265 VAC 50 / 60 Hz
Electrical Connections	6-pole, round jack, female for cooling water valve (24 V, 5 VA) RS232; SubD 9-pole, female
Power Consumption	Approx. 13 W
Fuse	Thermal fuse
Operating Temperature	0...+40°C
Storage Temperature	-10...+60°C
Vacuum Connection	G 1/4, hose nozzle 8 mm (optionally DN 16 ISO-KF)
Recorder Output	0-10 VDC, resolution 4 mbar
Protection Class	IP40
Weight	Approx. 1110 g

Product Code

• **DC1S**
Vacuum controller DC1S, 1400 - 1 mbar, with integrated ceramic sensor and continuous valves for vacuum and venting, 95 - 265 VAC

• **DC1S/S**
As above, for panel mounting

Accessories:

• **DC1SH2**
Stand holder

• **VGR**
VacuGraph Windows software

• **Wo80002**
PC cable RS232, 2 m