

Vacuum Control for TGA Analysers

Slow Vacuum Apply and Release
Vacuum Down to -760mm Hg

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When working under vacuum with Thermogravimetric Analysers (TGA), it is important that the vacuum is both applied and released slowly, otherwise the sample or sample pans can be blown around inside the TGA and cause contamination which requires cleaning out. Ruston Services has designed a suitable manual control panel such that the vacuum can be applied and released using needle valves, with a vacuum gauge which gives a clear indication of the line pressure to the TGA at all times.

The design of the gas system is such that the TGA can be let up to ambient pressure from a nitrogen supply to ensure that the sample is not exposed to oxygen, or the system can be let up to air.

Key features are

- Vacuum gauge always shows the pressure in the TGA Line.
- Needle valve to control evacuation rate to avoid disturbing the sample or the TGA balance
- On/off toggle valve to immediately isolate the vacuum pump from the Vacuum Control unit.
- Needle valve to control gas inlet speed to return the TGA system to ambient pressure
- TGA can be returned to ambient pressure using a nitrogen purge inlet

A suitable vacuum pump can be supplied at extra cost. Please state voltage required.

A Vacuum Regulator accessory is also available from RSL to control and maintain the level of vacuum inside the TGA

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Specifications

Panel Size (H x W x D)	360mm x 196mm x 120mm (includes mounting feet)
Vacuum Gauge	100mm diameter Display Vacuum from -1 bar to 0 bar (0 to -760mm Hg)
Time to Fully Evacuate TGA	Typically less than 1 minute, based on a TGA Balance volume of 1.5L with the recommended vacuum pump.
Connection sizes	Vacuum pump connection – brass 6.3mm OD connector. TGA Analyser connection – brass 6.3mm OD connector. Vacuum Release connector may be connected to an N ₂ supply to refill the TGA with nitrogen and is ISO 7/1 thread 1/4-19. Adaptor from 1/4-19 to 1/8" Swagelok tube fitting included. (adaptor to metric tubing sizes can be supplied on request)
Vacuum Hose Supplied	4m of Silicone vacuum hose (11mm OD x 6mm ID) is supplied with the vacuum control.
Instructions	A set of installation and operation instructions are included with each vacuum control unit.
Optional Vacuum Pump	A vacuum pump with the following specifications is available and can be supplied at additional cost. <ul style="list-style-type: none">• Free air Capacity 24L/min (0.85cfm)• Maximum vacuum >-700mm Hg (28 in Hg, -915 mbar)• Noise level 68dB• Duty Cycle - continuous• Max ambient Temperature 38°C (100°F)
Optional Vacuum Regulator	The Vacuum Regulator Accessory will control the level of vacuum to within approximately 10mmHg (1.3kPa, 13 mbar) whether there is a flowing purge in the TGA, or a static vacuum in the TGA.

Ordering Information

Quotation Requests	Please email your requirements to info@lab-ware.co.uk , stating whether you need the TGA Vacuum Control only, or supplied with the Vacuum Pump, and/or the Vacuum Regulator accessory. Quotations are normally valid for 60 days.
Ordering	Please send your official order number to the address below or by email to sales@rustons.org.uk If your organisation is VAT registered, please ensure that your VAT number is clearly visible on your order.
Delivery	Delivery is normally 4 - 6 weeks from receipt of order. We may be able to provide faster delivery in some circumstances.

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Recommended Accessory

Vacuum Regulator Accessory

Control of Vacuum Level to 10 mm Hg (1.3kPa)

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The Optional RSL Vacuum Regulator Accessory

Although a degree of control of the level of vacuum at the TGA can be obtained directly using the needle valve controlling the vacuum pull of the vacuum pump, long experiments involving a constant level of vacuum can be achieved by adding the Vacuum Regulator accessory. This unit sits between the TGA Vacuum Control and the vacuum pump and allows a specific vacuum level to be set and maintained within the TGA with either a static vacuum, or a flowing gas through the vacuum, and will maintain the level of vacuum within approximately 10mm Hg (1.3 kPa, 13 mBar). Although the vacuum regulator is fitted with a small vacuum gauge, it is recommended that the vacuum gauge of the RSL TGA Vacuum Control unit is used for greater readability of the vacuum level.

The RSL Vacuum Regulator accessory is an optional extra for the TGA Vacuum Control and is intended for wall mounting.

Dimensions

Width	165mm (excludes connection tubes)
Height	90mm
Depth	92mm
Connection size	6.35mm