# Site Requirements TurboVap<sup>®</sup>

## Dear Valued Customer

The following document will assist you in the preparation of your laboratory for a successful installation of the TurboVap<sup>®</sup>. Please read and sign where indicated at the end of this document. Your signature validates that you have understood our requirements. We cannot guarantee a complete installation or demonstration if the requirements are not met. If you have any questions please don't hesitate to contact Biotage<sup>®</sup> 1-Point support<sup>®</sup>.

## **Customer Responsibility**

Make sure your site meets these requirements, including the necessary ventilation, space, electric outlets, gases, and tubing required for a successful installation of the system. Users of the system should be present throughout the installation and familiarization services; otherwise, they will miss important operational, maintenance, and safety information. Before the system is installed, the installation site should be prepared as follows:



### Biotage 1-Point Support

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Fume Hood/ Ventilation System	The system must be either connected to a ventilation system using the exhaust outlet at the rear of the system or in a well-ventilated fume hood or an equivalent enclosure to reduce the risk of exposure to harmful solvent vapors. The ventilation system or fume hood must be capable of exhausting 1 m³/min (35.3 ft³/min).		
	Connection: The exhaust hose supplied with the system is 3.8 meters (12.5 feet) and has a 50.8 mm (2") inner diameter.		
Weights and Dimensions	The total weight of the package including the system is 20 kg (44 lbs). Use suitable lifting equipment when moving the package.		
	The fume hood or bench must be able to support the weight of the system. The system weighs 17 kg (37.5 lbs) when the water bath is empty and maximum 29 kg (63.9 lbs) when full with deionized water, rack, and tubes.		
	The dimensions of the system are (W x D x H): 400 x 400 x 390 mm ( $15.7'' \times 15.7'' \times 15.4''$ ) including the hinges at the sides and the exhaust outlet at the rear. Note that the height with the lid open is 590 mm ( $23.2''$ ).		
	Leave a minimum distance of 30 mm (1.2") between the front of the system and any solid objects. The system requires this clearance for proper evacuation of solvent vapors.		
Operating Temperature	18-32 °C		
Humidity	20-90% RH (non-condensing)		
Electrical Supply	100-127 V or 220-240 V at 50/60 Hz, 1000 VA. Connect only to a properly grounded outlet.		
Gas Supply Pressure	The system should operate using inert gas. Compressed air can be used but is not recommended with some solvents due to the possible risk of explosion.		
	<ul> <li>&gt; Minimum supply pressure provides equivalent performance to the TV Classic: 4 bar (0.4 MPa, 58 PSI).</li> <li>&gt; Required supply pressure for full flow capability: 6 bar (0.6 MPa, 87 PSI).</li> <li>&gt; Maximum supply pressure: 9 bar (0.9 MPa, 130 PSI).</li> </ul>		
	Manifold Positions	TV Classic Equivalent Capability (4 Bar Supply Pressure, Liters/min.)	Full Flow Capability (6 Bar Supply Pressure, Liters/min.)
Gas Supply Flow	48 Positions	160	200
	24 Positions	120	160
	6 Positions	35	50
Nozzle Gas Flow Range	The maximum gas flow depends on the gas supply pressure and flow, the number of available nozzles and how many that are open. The maximum possible gas flow for each nozzle:		
	<ul> <li>&gt; 48 positions: 3.5 liters</li> <li>&gt; 24 positions: 5.5 liters</li> <li>&gt; 6 positions: 7 liters/mi</li> </ul>	/min	
External Fire Protection	External fire protection s	hould be installed according to local regulation	s for equipment operating unattended.



### Installation Options

In the case of installation outside of fume hood or safety cabinet it is a customers responsibility to provide a suitable ventilation source capable of exhausting 1 m<sup>3</sup>/min  $(35.3 \text{ ft}^3/\text{min})$ . The exhaust hose supplied with the system is 3.8 meters (12.5 feet) and has a 50.8 mm (2") inner diameter.

Biotage recommends the system should operate using nitrogen gas. Compressed air can be used but is not recommended with some solvents due to the possible risk of explosion.

Only one power outlet is required for installation.

### **Gas Supply Connection**

The gas inlet tubing provided with the system has a 6 mm (0.24") outer and 4 mm (0.16") inner diameter and is 3 m (9.84 ft) in length. it is a customers responsibility to ensure that suitable connections are available to their primary gas supply within the laboratory.

Note that there is no regulator for the gas inlet supplied with the system. This can be purchased separately as an optional accessory

(P/N 352281SP Pressure Regulator and P/N 353480SP Supply Connection Set).

Biotage supplies the system with the following adapters to facilitate connection

1 x 1.4" OD (female) to 6 mm OD (female) converter

1 x 3/8" OD (female) to 6 mm OD (female) converter





Date:

Signature:

#### **Print Name:**

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