Biotage[®] Flash 400 Quick Guide

Control Panel

Item	Description
PG-01	Pump pressure gauge. Monitors the solvent pump outlet pressure.
PG-02	Cartridge compression pressure gauge. Monitors the pressure inside the radial compression module.
MV-01	Solvent select valve. Selects which of the two solvent inlets $(\mathbf{A} \text{ or } \mathbf{B})$ that will be used.
MV-06	Fraction select valve. Selects which of the two outlets (1 or 2) the elution stream will exit through.
MV-07	Cartridge compression valve.
	Opens the line between the radial compression chamber and the radial compression fluid reservoir, which compresses the cartridge if the fluid reservoir is pressurized. PG-02 and PG-03 readings will equalize.
	Closes the valve.
MV-08	Solvent pump valve. Turns the solvent pump on or off (O or I) by opening or closing the line between the air supply and the pump.
MV-09	Reservoir pressure valve.
	Pressurizes the radial compression fluid reservoir by connecting it to the nitrogen supply.
	Used when checking that the pressure in the radial compression fluid reservoir can be maintained.
	 Vents the radial compression fluid reservoir by opening it to the atmosphere. The exhaust port is located on the side connection panel.
MV-11	Pump flow rate control. Regulates the compressed

MV-11 Pump flow rate control. Regulates the compressed air pressure to the solvent pump. Turn the knob counterclockwise to increase the solvent flow rate and clockwise to decrease it.

Safety Positions

Before introducing compressed air or nitrogen into the system, ensure that the following valves are in their safety position.

Valve	Safety Position
MV-11	Clockwise until stopped
MV-08	O (closed)
MV-09	vent)
MV-07	in (open/compress)

Radial Compression Fluid Reservoir

Item	Function
PG-03	Reservoir pressure gauge. Monitors the radial compression fluid reservoir pressure.

Side Connection Panel

Item	Description
	Solvent inlets A and B .
	Fraction outlets 1 and 2.
MV-10	Radial compression drain valve.
	Closes the valve.
	Drains the fluid from the radial compression chamber. Used before removing the cartridge.
MV-05	Vacuum break valve, bottom.
	Closes the valve.
	Breaks any vacuum that develops when the cartridge is in use. Used when preparing to remove a cartridge or when testing if the cartridge seal adapter's O-ring has sealed properly.
* 	Compressed air inlet for the solvent pump.
N ₂	Nitrogen inlet. Used to pressurize the radial compression fluid reservoir and the radial compression module.
A	Exhaust port for when venting the radial compression fluid reservoir using the MV-09 valve.
	Safety relief port for the radial compression module. The module is rated at 170 psig (11.7 bar) maximum pressure.

Top Head Assembly

Item	Description
MV-02	Three-way injection valve. Selects the solvent or sample inlet. During cartridge removal, compressed gas may be blown through this valve and through the cartridge to remove solvent.
MV-03	Cartridge compression vent valve. Open the valve to purge air from the radial compression chamber when compressing the cartridge.
MV-04	Vacuum break valve, top. Open the valve to break any vacuum that develops when the cartridge is in use. Used when preparing to remove a cartridge or testing if the cartridge seal adapter's O-ring has sealed properly.





Figure 1. The cartridge compression vent valve (MV-03) and the top vacuum break valve (MV-04) closed (left image) and opened (right image).





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