

1. About the Optional Purge Controller

The Purge Controller (P/N 14160068) is an optional accessory that can be purchased for use with ParticleTrack™ G400 and ParticleView™ V19 products. Purging is required where the process temperature is below that of the dew point of the operating environment. The purpose of the purge is to maintain data integrity through removal of any moisture that would result in condensation or formation of ice crystals on the probe window as the process temperature is reducing.

This quick reference guide contains instructions for setting up and using the purge controller (Sections 2 and 3). Section 4 specifically addresses how to upgrade an earlier purge controller via the upgrade kit (P/N 14474831).

Instrument-Quality Air

All Particle System Characterization (PSC) probes require clean, dry, pressure-regulated instrument-quality air or inert gas. Quality of the air must meet the specifications of the American National Standards Institute/Instrument Society of America (ANSI/ISA) S7.0.01-1966 Quality Standard for Instrument Air.

- Have a dew point of at least 10 °C [18 °F] lower than the minimum temperature to which any part of the system will be exposed
- Contain less than 1 ppm total oil or hydrocarbons
- Contain less than 1 ppm particulates at a maximum size of 3 microns
- Be free of any corrosive contaminants and flammable or toxic hazardous gases

2. Setting Up Purge Controller

The purge controller (**Figure 2**) requires the following for set up and use:

- A**—Supply Inlet, quick-connect tubing (customer supplied, 6.35 mm [1/4 inch])
- B**—Outlet to instrument, quick-connect tubing (not shown, 6 mm [0.24 inch])
- C**—Pressure regulator with gauge
- D**—Flow regulator with rotameter

1. Clean (purge) all air lines and tubing before connecting to instrument.
 - a. Apply air to unconnected inlet line to clear out any moisture or particulate matter.
 - b. Holding inlet line, direct it to a clean, dry paper towel.
 - c. Verify that no moisture or particles appear on the paper.
2. Connect air supply to the quick-connect air inlet (**A** in **Figure 2**).
3. Connect supplied tubing between the outlet to probe (**B**) and the instrument, as follows:

For ParticleTrack G400:

Connect 6 mm purge tubing, supplied with the purge controller, to the quick-connect outlet (**B**) and the purge fitting on the rear of the G400 base unit.

For ParticleView V19:

Connect the 3.18 mm [1/8 in] tubing and adapter for 6 mm connection (supplied with the instrument) to the purge controller outlet (**B** in **Figure 2**). Then, connect the tubing to the purge fitting on the ParticleView V19 interface unit (**Figure 1**).



Figure 1

4. Always check all air connections before applying pressure.

3. Using Purge Controller

Supply and regulate air according to the instrument requirements.

ParticleTrack G400

Operating Pressure, Normal	1.0 barg [15 psig]
Pre-purge for one (1) hour	1.2 SLPM [0.042 SCFM]
Operating Flow Rate	0.15 SLPM [0.005 SCFM]

ParticleView V19

Operating Pressure, Normal	2.0 barg [30 psig]
Pre-purge for one (1) hour	0.5 SLPM [0.02 SCFM]
Operating Flow Rate	0.5 SLPM [0.02 SCFM]



Figure 2

4. Installing Purge Controller Upgrade Kit

If you have the earlier purge controller, this section lists the steps to upgrade it to the new model via the upgrade kit.

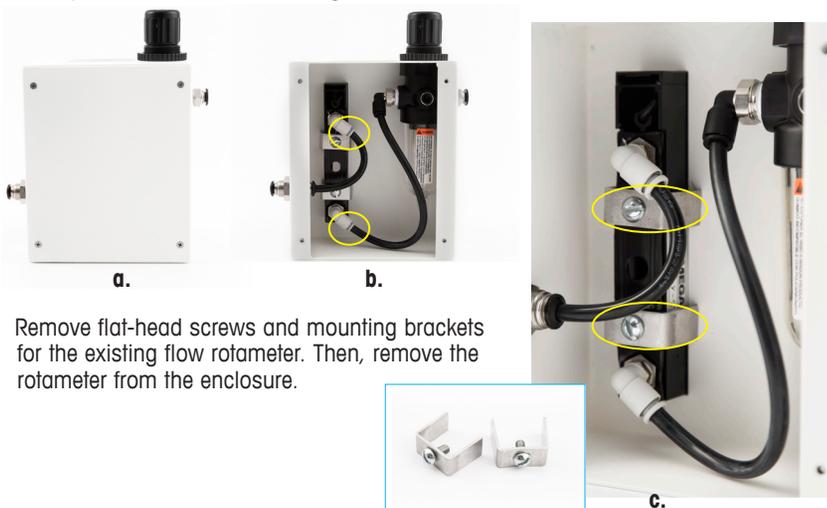
Upgrade Kit Contents:

- 1 each 14203020 label
- 1 each 14202598 purge rotameter (0–1.2 LPM)
- 2 each 14202493 1/8 inch NPT quick-connect elbow for 6 mm tubing
- 1 each 14202091 6 mm tubing
- 1 each Tool set:
 - 14285683 Phillips #0 screwdriver,
 - 14285682 6" Crescent wrench,
 - 14285684 Flat head 1/4" screwdriver
- 1 each 14696471 Quick Reference Guide (MK-PB-0120-AC, this document)



Upgrade Steps:

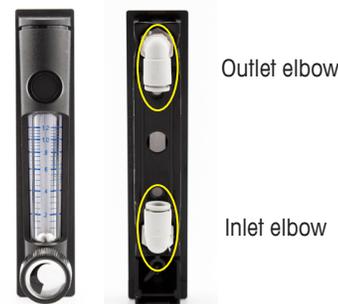
1. Remove the existing label on the front of the purge controller unit and install the new label detailing the operating requirements.
2. Replace the purge rotameter.
 - a. Open the back of the unit by removing the four screws.
 - b. Disconnect the 6 mm black tubing from the quick-connect elbow fittings at the top and bottom of the existing rotameter.



- c. Remove flat-head screws and mounting brackets for the existing flow rotameter. Then, remove the rotameter from the enclosure.



- d. Install the new quick-connect 1/8-inch elbows on the inlet and outlet for the new flow rotameter. Use crescent wrench to secure elbows. Ensure fittings are rotated vertically for installation into the purge controller enclosure.



- e. Insert the new flow rotameter in the enclosure, re-attach the mounting brackets and secure the screws.
- f. Connect the 6 mm tubing from the purge regulator to the new flow rotameter inlet elbow.
- g. Connect the 6 mm tubing from the air outlet to the flow rotameter outlet elbow.

NOTE: Ensure connections are secure by gently pulling on tubing.

- h. Replace the back cover.
3. Turn on air to purge the new fittings and ensure there is no debris in the system.
4. Follow the purge requirements for operating the purge with your system (detailed in Section 3 on side 1).

5. Further Information

More information on the purge controller can be found in the hardware manual accompanying your ParticleTrack or ParticleView instrument.

Please send an email to AutoChemCustomerCare@mt.com with any questions.

www.mt.com/particle

Visit for more information