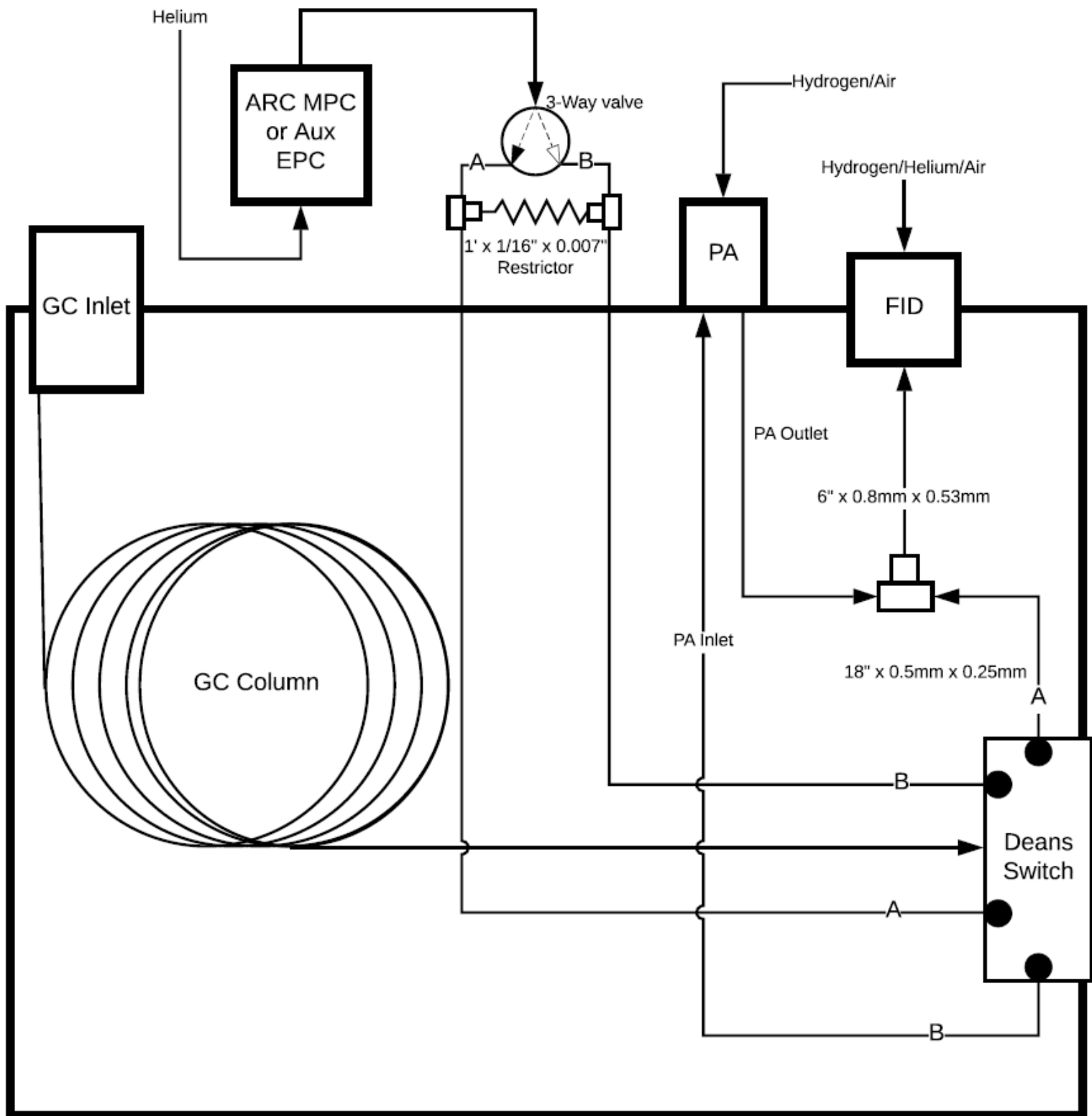




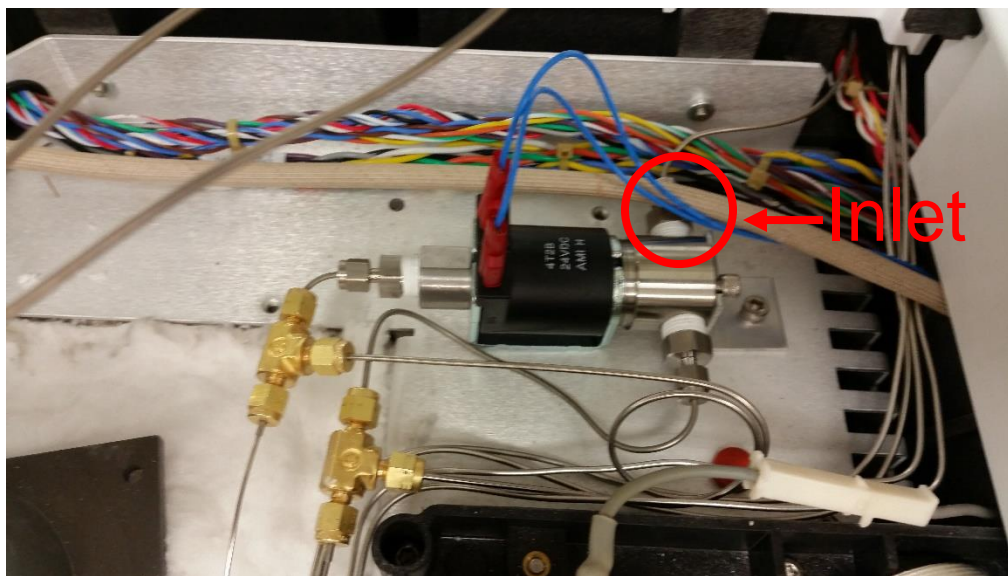
Polyarc Bypass Kit Installation Manual  
Manual ID: PA-MAN-BP1



(Figure 1: Process Flow Diagram)

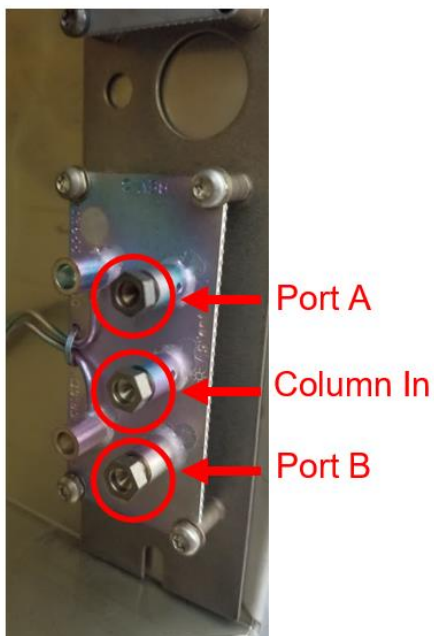
## Installation Instructions

1. Turn off GC oven.
2. Cool Polyarc to room temperature.
3. Turn off FID flame, cool FID module, and turn off all FID flows (air, hydrogen, and makeup).
4. Cool the GC inlet to room temperature.
5. Once the Polyarc is cool, turn off its air and hydrogen flows.
6. Turn off inlet pressure.
7. Either an ARC manual pressure controller (P/N PA-PCR-1GS) or an Agilent Auxiliary EPC channel is required for this installation.
  - a. Please see Agilent's user manual for more information regarding the Auxiliary EPC: [https://www.agilent.com/cs/library/usermanuals/public/G4367-90010\(Rev%202\).pdf](https://www.agilent.com/cs/library/usermanuals/public/G4367-90010(Rev%202).pdf)
  - b. ARC's manual pressure controller requires no mounting or programming.
8. Plumb carrier gas to the Auxiliary EPC channel or ARC manual pressure controller (ARC MPC).
  - a. Inlet to Aux EPC or ARC MPC will be 1/8" Swagelok fittings.
  - b. Depressurize 1/8" lines flowing carrier gas.
  - c. Loosen a fitting on this line to ensure lines are depressurized, tighten fitting again
  - d. Cut tubing and install an 1/8" Swagelok brass tee
  - e. Plumb line from tee directly to Aux EPC or ARC MPC inlet.
  - f. Pressurize line again and leak check all new fittings.
9. Mount 3-way valve onto top of GC behind back detector
10. Plumb 1/16" stainless steel line to inlet port on valve (back side; see Figure 2)



(Figure 2: 3-Way Valve)

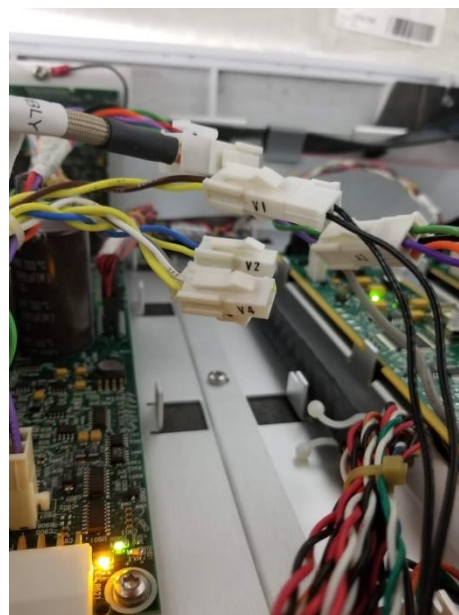
11. Connect pre-made fittings with tees and shunt restrictor to two outlets of valve (top and front; see Figure 2)



(Figure 3: Dean's Switch)

12. Affix Dean's Switch to inside of oven, using the mounting bracket provided.
13. Swage an UltiMetal Ferrule onto the analytical column outlet. See [Agilent's website for instructions on swaging UltiMetal ferrules](#).
14. Connect column outlet to inlet port of Dean's Switch (center port, see Figure 3)
15. Turn on GC inlet pressure
16. Connect Polyarc inlet to port B (bottom port, see Figure 2)
17. Connect 18" section of UltiMetal small tubing provided to port A (top port, see Figure 3).
18. Connect Polyarc outlet and UltiMetal small tubing from Port A to provided tee (Agilent P/N G3184-60065).
19. Connect 7" section of UltiMetal Large to outlet of tee
20. Feed this outlet tubing into the FID, trimming the tubing down to 6" after sliding the FID nut and graphite ferrule onto tube.

21. Connect one side of the electrical cable to the valve and the other to the two-pin valve connector on side panel of GC (Figure 4, labelled V1 or V2, depending on availability).
22. Configure valve on GC panel (Config→Valves→V1). Test configuration by turning on/off valve from front panel and listening for an audible click sound.
23. Pressurize Aux EPC or ARC MPC to 4psi.
24. Leak test all fittings, including those on top of the oven and around valve while switching the valve between both positions (on and off).
25. Test configuration by running a check standard with both configurations (valve on, valve off).



(Figure 4: Valve Connection)