eosAC/eosMX and Picarro analyzer quick setup
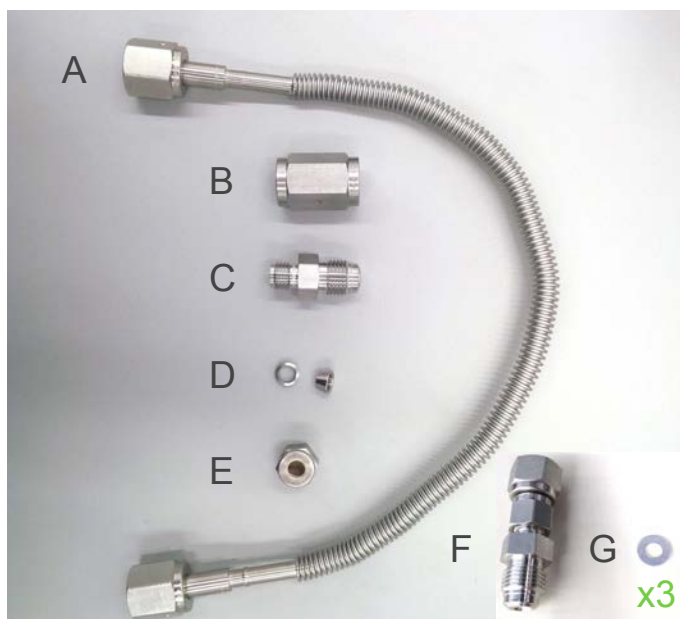
Introduction

This guide provides simplified setup instructions for interfacing the eosMX multiplexer and eosAC autochambers with Picarro analyzers, using the G2508 as the example in the photos.

> **IMPORTANT**
> This quick start guide is not a replacement for the Picarro, eosAC, or eosMX user manuals. We recommend reading them before proceeding.

Required Components

- Picarro Analyzer (not pictured)
- Picarro Recirculation Pump (not pictured)
- eosMX (not pictured)
- eosAC(s) (not pictured)
- Tubing 2 x 30 m per eosAC (not pictured)
- Power/data cable 1 x 30m per eosAC (not pictured)
- USB cable x2 (not pictured)
- (A) Convoluted Metal Hose (w/ VCR termination)
- (B) VCR Coupling (SS-4-VCR-CG)
- (C) VCR to Swagelok Fitting (SS-4-VCR-6-400)
- (D) ¼" Ferrule (SS-403-1, SS-404-1)*
- (E) ¼" Swage Nut (SS-402-1)*
- (F) Vacuum VCR Connection
- (G) VCR Metal Gasket x3 (SS-4-VCR-2)

*Components D and E are only required if you re-swage a tube. Please contact Eosense Support for supplies.
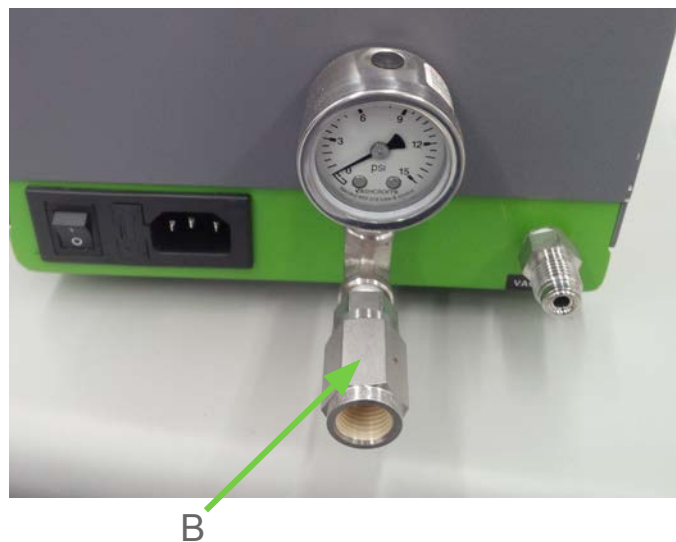
> **TIP: Swagelok Fittings**
> All Eosense tubing is supplied pre-swaged (ferrules have been added and tightened). If you need to apply a new ferrule (D) and nut (E) after cutting a tube, apply 1¼ turns to properly compress it.*
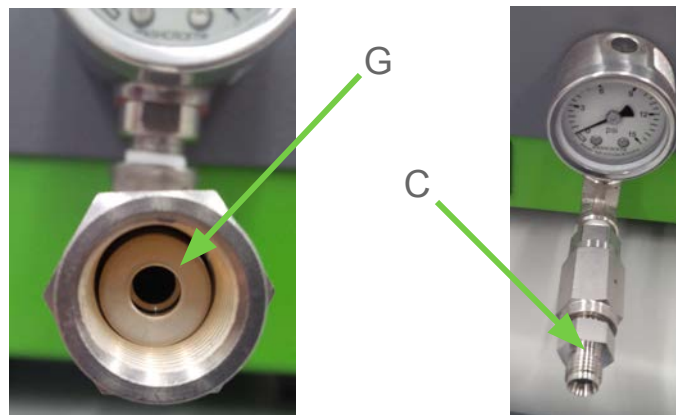
Prepare the Pump

The recirculating pump has two ports located on the rear of the unit. One port provides vacuum to the analyzer, which is necessary for its operation, while the other port provides the gas exhaust for the system.
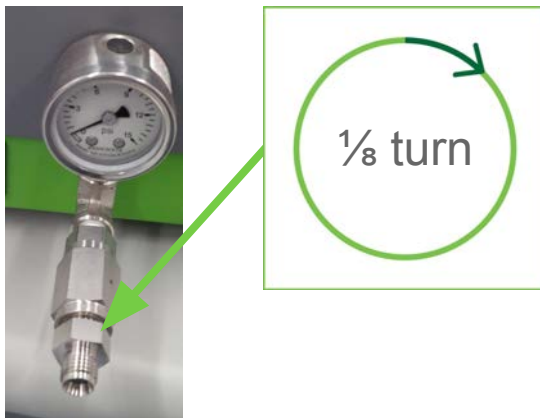
STEP 1 Attach VCR coupling (B) to outlet port of pump.

STEP 2 Insert VCR Metal Gasket (G) into coupling and attach VCR to Swagelok fitting (C).

STEP 3 Once the VCR to Swagelok fitting (C) is finger tight, use two wrenches to apply an additional ⅛ turn to compress the gasket.

Prepare the Analyzer

STEP 4 Attach the Vacuum VCR Connection (F) to the VACUUM port of the analyzer.

F

Connect Pump to Analyzer

STEP 5 Connect the pump and analyzer VACUUM ports using the convoluted metal hose (A). Ensure that each connection receives a VCR Metal Gasket (G) and is tightened ⅛ turn past finger tight with a wrench.
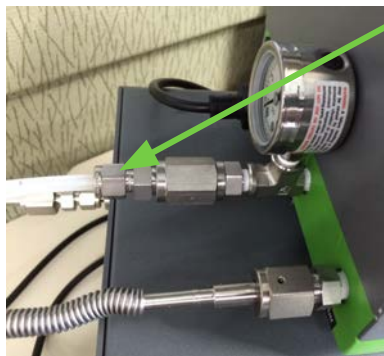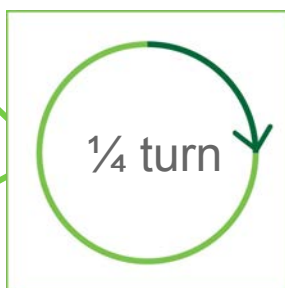

Connect eosMX to Analyzer

STEP 6 The two supplied analyzer-multiplexer tubes are cut to the appropriate length (60 cm) for the eosMX when it is placed on top of the analyzer, and are pre-swaged.

> **IMPORTANT**
> Ensure that the eosMX is on before connecting tubing between it and the analyzer, so the relief valves are active.

STEP 7 To install the two 60 cm tubes, first hand-tighten, then use a wrench to apply an extra ¼ turn to seal the swage connections on analyzer, pump and eosMX, matching INLET to Picarro INLET, and OUTLET to pump outlet.

STEP 8 Connect the CONTROL and DATA ports on the back of the eosMX to the analyzer using the provided USB cables. Use the cable end with the integrated dust cap to connect to the eosMX, **ensuring that the USB-B connector is oriented so the white triangle on the connector faces upward**. Carefully screw down the cap as the cable end is inserted. The other cable ends plug into any available USB port on the analyzer.

Connect eosMX to eosAC Chambers

The supplied 30 m tube pairs that connect each eosAC to the eosMX are pre-swaged for the end that connects to the eosMX. The eosAC INLET and OUTLET ports are quick connectors into which you push the plain end of the tube.

STEP 9 Connect the pre-swaged tubes to an INLET port on the front of the eosMX, and the other end to the INLET port on the rear of an eosAC, pushing until the quick connect port holds the tubing securely.

Next, making sure to use an OUTLET number that matches the INLET number on the front of the eosMX, repeat this process with the second piece of tubing for the OUTLET ports.

eosAC (rear): INLET, OUTLET, and COMM.

STEP 10 Attach one end of the power/data cable to the COMM port on the back of the eosAC and other end to the eosMX COMM port that matches the INLET/OUTLET number used in Step 9.

STEP 11 Repeat Steps 9 and 10 for each of your eosAC chambers.

The system is now ready for use.

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