

Flow-through Cell Option

Manning samplers are designed for use with non-pressurized fluid sources. In some instances, it is necessary to sample from a pressurized pipe or other source. The Flow-through Cell (FTC) allows sampling from pressurized sources by relieving the pressure. The FTC operates by opening the stream to the atmosphere, thereby reducing the effective pressure to zero.

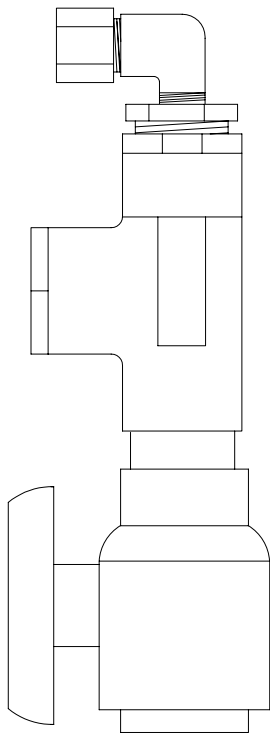


Figure 1. Flow-Through Cell

Operation

The pressurized source is connected to the ball valve on the inlet of the FTC (refer to Figure 3). The ball valve is used to adjust the flow to no more than 50 GPM at 50-PSI maximum. It also allows

fluid to the FTC to be shut off for cleaning and maintenance.

Fluid then enters the clear PVC tee and flows out of the FTC to an open-air drain. The third opening on the clear PVC tee is attached to the sampler intake hose using a bushing and fittings. An intake tube attached to the bushing allows the sampler to draw fluid from and purge fluid back to the FTC. The bushing can be easily removed for cleaning.

General Installation

Appropriate piping to the FTC is required so the pressurized source and open-air drain are available. The sampler must be located higher than the FTC, and the intake line to the sampler must be routed so there are no dips where fluid could collect.

It is important that the pipe from the FTC outlet to the drain does not have any reductions in it. Any reductions or excessive elbows will increase the pressure at the intake point for the sampler. The FTC is designed to operate with a flow of not more than 50 GPM at 50-PSI. In instances where the flow cannot be reduced sufficiently with the manual ball valve, an additional pressure reduction valve must be installed before the FTC.

Normally, flow through the FTC is continuous. In some applications, it is desirable to only have flow through the FTC during a sample cycle. To accomplish this, an electrically actuated ball valve may be installed close to the pressurized source. The valve is opened only during the sample cycle. See Figure 4.

Most electrically actuated ball valves require a relay to control them. This relay and the sampler can be controlled by a PLC or other control circuitry. If the Alarm Option is installed on the sampler, the SAMPLE CYCLE relay can be used to control the ball valve relay.

The FTC may be mounted close to the pressurized source with an intake hose connecting it to the sampler. Depending upon the application, the FTC may require additional mounting support (customer-supplied).

Manning flow-through cells are available for either 3/8-inch ID or 5/8-inch ID intake hose in non-toxic applications only:

Part Number	Description
MS889630	Flow-through Cell, 3/8-inch Intake
MS889631	Flow-through Cell, 5/8-inch Intake



Figure 2. Flow-through Cell

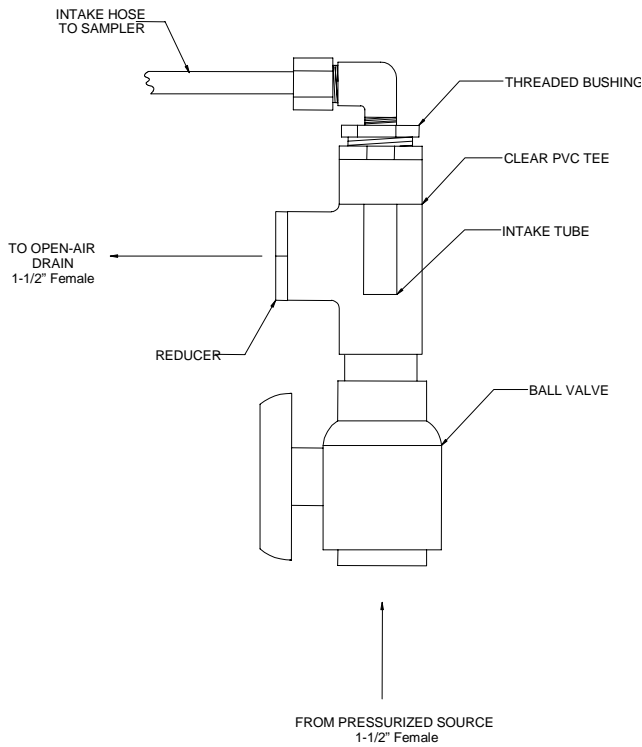
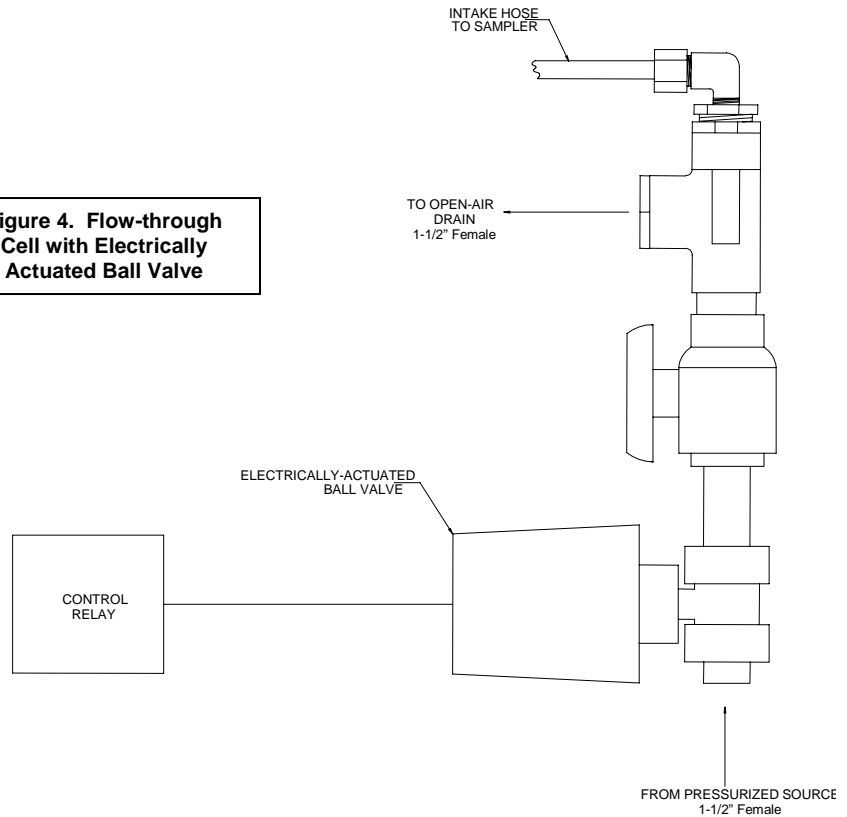


Figure 3. Flow-through Cell Operation

Figure 4. Flow-through Cell with Electrically Actuated Ball Valve



Headquarters and Sales:

Manning Environmental, Inc.
 1968 South Austin Avenue
 Suite 101
 Georgetown, Texas 78626

Phone: (800) 863-9337
 Fax: (512) 863-4472
 Email: sales@manning-enviro.com
 Web: www.manning-enviro.com

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