

Quick Sampling Valve

INSTALLATIONS, OPERATING, & MAINTENANCE INSTRUCTIONS

QUIK[®] Sampling Valve

- ✓ Automated quarter-turn actuator can be easily mounted to the valve pad using ISO 5211 F5
- ✓ ANSI Class 600 Body Rating

OVERVIEW:

Strahman's **QUIK[®] Sampling Valve** (QSV) was designed specifically for precise sampling control and operator safety.

The QSV combines a Linear Rising Valve Stem with Quarter turn actuation never before seen in a Sampling Valve.

The QSV has a soft-seat TFE seal designed to ANSI Class VI leakage ratings. It features a spring-loaded fail-closed safety design and has a self-contained manual hand actuator with an ergonomic handle that features multiple positions for exceptional control. The temperature operating range is:

-328 degF(-200 degC) Minimum temperature
450 degF(232 degC) Maximum temperature

The QSV-700 can also be used for injection service (reverse flow) of process chemicals, cleaning agents and other applications. It is suitable for handling fluids that do not have suspended solids that can lodge under the seat.

- ✓ ANSI Seat Leakage Class VI with a bubble tight shut off and soft seat design
- ✓ Spring-to-close Fail Safe Design
- ✓ Live Loaded Packing for reliable, leak-free service
- ✓ Low Profile, minimal height requirements
- ✓ 45-degree outlet for large flow capacity
- ✓ Standard and Custom Body Extensions available up to 6" for true samples inside vessels or process lines

INSTALLATION INSTRUCTIONS FOR QUIK[®] Sampling Valve

MOUNTING POSITION:

Strahman **QUIK[®] Sampling Valve** can be installed with the operator in four different positions. The valve outlet can be rotated in increments of 90 degrees, independently of the handle position.

HANDLE POSITION: If the manner of operating the handle becomes awkward, the position of the handle can be changed. Strahman **QUIK[®] Sampling Valves** can be installed with the operator handle in sixteen different positions.

INSTALLATION:

Strahman **QUIK[®] Sampling Valves** are offered with National Pipe Thread Standard per ASME B16.34.

Precautions should be taken to avoid access to the valve while under pressure or vacuum.

Bolting and gaskets as permitted under standard ASME 16.5 are to be used.

When and where applicable, particular care should be exercised in the following areas: Earthquake, external piping loads, wear and erosion, unstable fluids, surface temperature and over/under pressure and temperature during operation.

While installing, the valve should be in the closed position to protect the shaft and seals. Before installing the unit, inspect the threads, male and female for cleanliness and clearance. Once this is done, then apply thread sealant and install.

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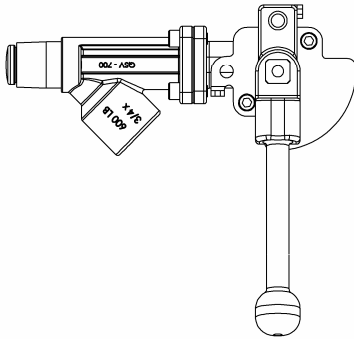


Figure 1 Hand Operated QSV-700.

NOTE: Discharge of the Strahman **QUIK[®] Sampling Valve** must be to a secured area where no damage can be had to personnel or equipment. Care must be given to any spills upon flooring. The Strahman **QUIK[®] Sampling Valve** takes a live sample. No process fluid is stored within the valve body.

OPERATING INSTRUCTIONS FOR **QUIK[®] Sampling Valve**

SAFETY:

When and where applicable, particular care should be exercised in the following areas: Earthquake, external piping loads, wear and erosion, unstable fluids, surface temperature and over/under pressure and temperature during operation.

OPERATION:

The Strahman **QUIK[®] Sampling Valve** is simply operated by grabbing the handle and pulling the trigger for a quarter turn. Upon reaching the fully open position the operator will feel a stop. The operator must keep force upon the lever as the Strahman **QUIK[®] Sampling Valve** is designed to immediately close.

The Strahman **QUIK[®] Sampling Valve** is designed to allow the operator to keep the valve open for an extended period of time. When the

valve is open, place a metal dowel in the hole that appears between the handle and handle plate to lock in place.

MAINTENANCE INSTRUCTIONS FOR **QUIK[®] Sampling Valve**

CHANGING THE ACTUATOR POSITION:

Removing three (3) socket hex head machine screws (See Figure 2) can change the mounting position of the handle.

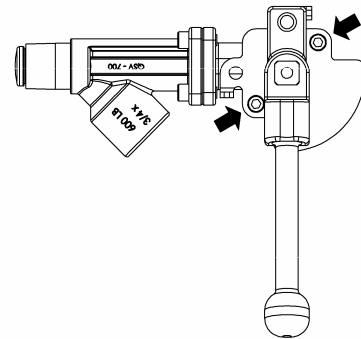


Figure 2 Changing Actuator Position.

With the bolts removed, the handle plate and the handle can be moved in 90-degree increments for ease of operator use. To change the mounting position further, please refer to the section below describing the method to change the valve outlet position.

CHANGING THE MOUNTING POSITION:

To change the valve outlet position requires the removal of four (4) socket head machine screws and rotating the Actuator Housing Cover in 90-degree increments for the best-preferred position (See Figure 3). In this manner the valve discharge can be placed in three (3) positions and the operator handle in twelve (12) positions.

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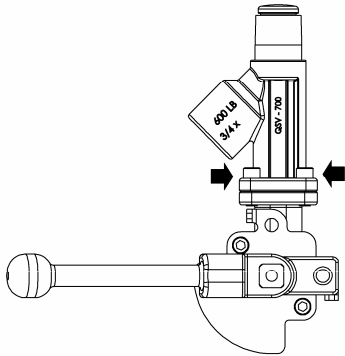


Figure 3 Changing Mounting Position.

BEARING REPLACEMENT:

The QSV has two (2) bearings (See Figure 4). First remove the three socket head machine screws holding the operator handle and handle plate. Then to remove the outer

Actuator Shaft Bearing, apply a 1-1/4 inch wrench to the Actuator Housing Cover. The Actuator Shaft Bearing will be found inside of the Actuator Housing Cover. Remove the bearing by holding cover securely in a vise. Use a hammer and chisel or (flat screw driver) and cut the side of bearing. Use caution not to cause excess damage to cover. Replace bearing with original Strahman Parts by pressing bearing into cover with tapered side into the cover.

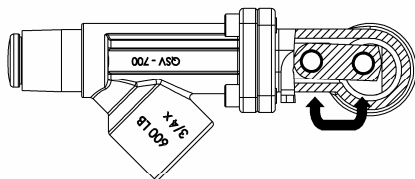


Figure 4 Bearing Replacements.

To remove the inner Actuator Shaft Bearing, apply a 1/8" hex wrench to the exposed Button Head Socket Cap Screw (see Figure 3) and remove screw.

Thread screw halfway into Link Shaft Pin and remove pin using leverage. Remove the four screws holding the body assembly to the actuator housing. Now slide body assembly out of housing and slide actuator shaft out of housing. The housing bearing is now exposed. Place housing securely in a vise with operator handle side facing up. Use a hammer and punch or (flat screw driver) to tap out the inner Actuator Shaft Bearing. Replace bearing with original Strahman Parts by pressing bearing into housing with tapered side into housing.

Place clevis securely in a vise to avoid damaging the stem guide and seals and use a punch, remove the Clevis Pin. With the Clevis Pin removed the Link is free to be taken and the Link Bearings are free to be removed using a punch. Replace bearings with original Strahman Parts by pressing bearings into link with tapered side into link.

REMOVAL OF CLEVIS AND JAM NUT:

Using two (2) 9/16" wrenches loosen the Clevis and then the Jamb Nut from the Stem.

REMOVAL OF STEM, SPRING, PACKING, PACKING FOLLOWER, STEM GUIDE BUSHING, MAIN SEAL, STEM END

With the removal of the Clevis and Jam Nut, the Stem, Stem End, Packing, Packing Follower, Spring, Stem Guide Bushing and Main Seal is designed to be readily removed. Each part can be replaced separately, except for the Stem, Stem End and Main Seal. This must be replaced as an assembly. When replacing the three-piece packing make sure the packing is placed with the curved sides facing up toward you.

REASSEMBLY:

The reassembly of the QSV is to repeat the above directions in a reverse sequence.

IMPORTANT NOTE: The Clevis is to be threaded six (6) rotations upon the stem. This will allow the Handle to have an open and closed position 90 degrees apart.

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INSTALLATION INSTRUCTIONS

FOR QUIK[®] Sampling Valve WITH HALF COUPLING

NOTE: When installing a QUIK[®] Sampling Valve, use only a Strahman Half Coupling; use of any other coupling may affect performance.

Strahman couplings slide into a hole drilled in a pipeline. A socket weld type weld is used to attach it to the pipe (See Figure 5).

Contoured couplings are normally used for smaller pipe sizes up to 6". Contouring of the coupling allows it to match the inside diameter of the pipe and not obstruct the flow. Non-Contoured couplings can be supplied for 8" pipe sizes and above. Normally the non-contoured couplings are used because there is little obstruction of flow.

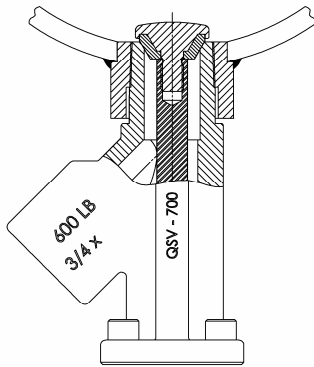


Figure 5 QSV and Coupling Welded to pipeline.

upper face of the half coupling. To ensure proper installation and sealing of threaded connection, retapping of the half coupling may be necessary to correct distortion caused by welding.

NOTES:

1. Strahman's threaded half couplings are not designed for welding.
2. Welding connections require Strahman's ANSI socket weld coupling, or an equivalent, and a quick sampling valve with socket weld inlet [when welding a sampling valve into a coupling, draw an even bead around the coupling].

When QUIK[®] Sampling Valve is threaded onto a Strahman half coupling, stem end will extend 1/4" approximately off the pipeline inside diameter on the closed position (See Figure 6). When fully open, stem end will extend 1/2" (See Figure 7).

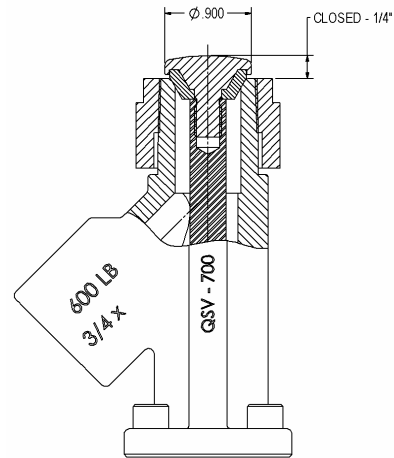


Figure 6 QUIK[®] Sampling Valve Closed.

HALF COUPLING INSTALLATION INSTRUCTIONS

The QUIK[®] Sampling Valve inlet connection should be flush with either the contour or

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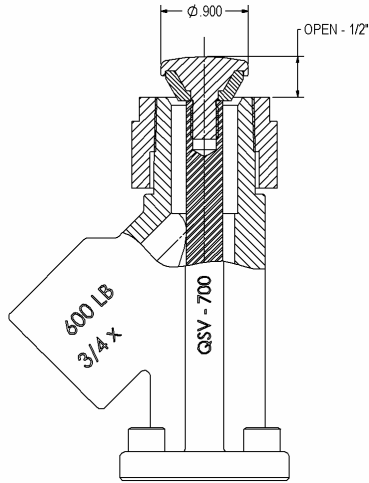


Figure 7 **QUIK® Sampling Valve** Open.

QUICK SAMPLING VALVE WITH BODY EXTENSION

Strahman **QUIK® Sampling Valve** is available with body extensions up to 6 inches (See Figure 8).

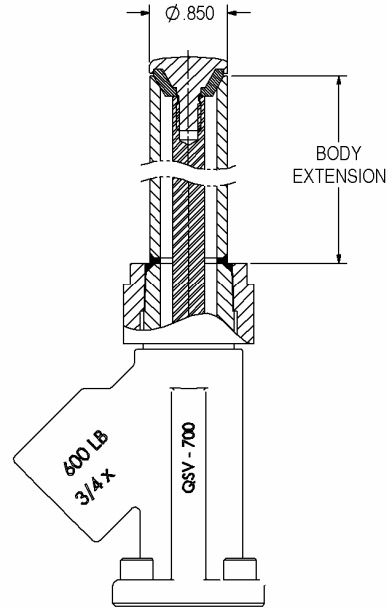


Figure 8 **QUIK® Sampling Valve** with Body Extension.

Available extensions are as follows:

BODY EXTENSION
2"
4"
6"

For more information, please contact your Strahman Distributor.