PRIMARY FLUID SYSTEMS INC.

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Metering Pump Corporation Stop Installation Instructions

Primary Fluid Systems Inc. introduces Pressure Corporation Stops, the newest addition to their line of Metering Pump Accessories.
The Pressure Corporation Stop is ideal for the injection of chemicals into the center stream of a process pipeline. This provides for a more homogeneous mix to take place in the pipeline. Each Corporation Stop has a separate quill, which can be removed from service via an isolation valve assembly while the system process is still under pressure (Maximum system working pressure is 150 psig). Each quill has a built in spring-loaded check, to help prevent back siphoning.
The injection quill is available in two sizes, 2⅝" insertion length suitable for 4"-6" pipe diameters and 4⅝" insertion length suitable for 8"-10" pipe diameters. The connection for both sizes is ½" NPT or BSP.

Six (6) materials of construction are available that provide compatibility for most chemicals injected. Each quill comes standard with a stainless steel spring, as an option a Hastelloy C spring is available at an extra charge (consult factory). Hastelloy C units come standard with a HastC spring. The quill may also be ordered without a spring.
Pressure and temperature are dependent on the material of construction and vary from 150 PSIG and 60º C (140ºF) to 2000 PSIG and 176º C (350ºF). (Maximum system pressure at time of quill removal should not exceed 150 psig)

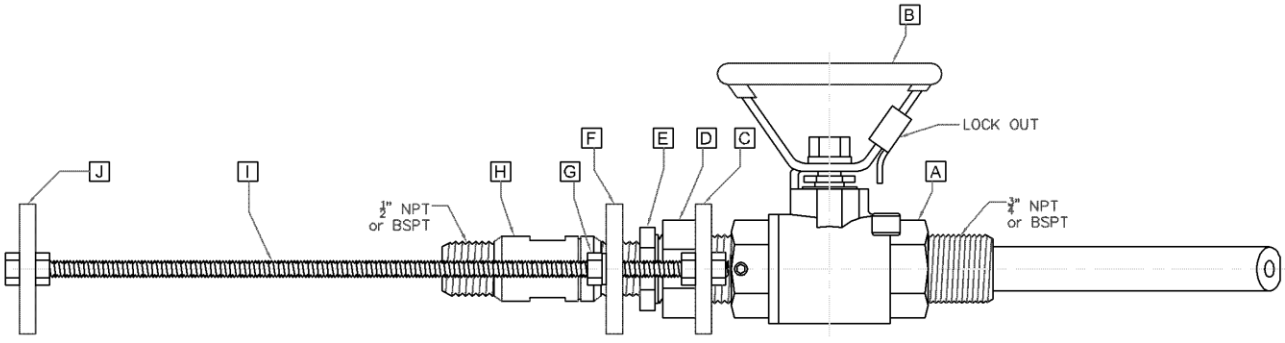
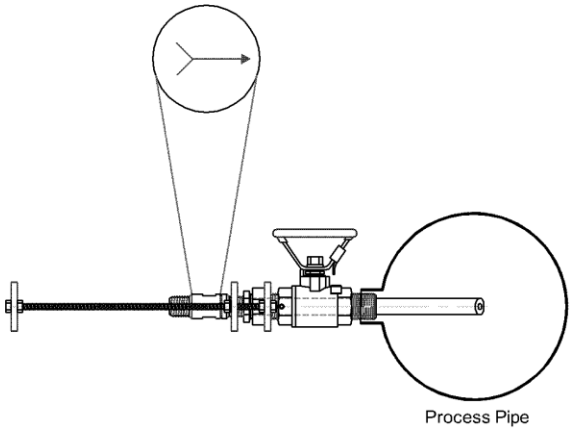


Figure A



CAUTION:
When installing or removing Quill from Corporation Valve gland, insure system pressure is **no** greater than 150 psig.

CORPORATION STOPS VALVE ASSEMBLY INSTALLATION

NOTE:
If these instructions are not followed serious injury could occur.

Caution:
On new installations make sure your system process pipe line is at atmospheric pressure ("0" PSIG)

Caution:
Standard Safety Precautions should always be followed when dealing with chemicals and pressurized equipment. Safety glasses, gloves and any equipment required to proceed with safety in mind should be followed.

New Installations for Corporation Stops:
All letters correspond with Figure A on page 1

1) A 3/4" FNPT connection must be available for connecting the threaded connection into the process pipe.
2) Corporation Stop comes already assembled with gland (**E**) tightened to create a seal and quill is at full extension.
3) Install Corporation Stop into the process pipe line at the ¾" FNPT connection with Teflon tape and pipe dope
4) Ensure that the valve handle (**B**) is in an upright, vertical position.
5) Once the process line is filled and charged, the corporation stop gland should be checked for leaks.
6) If leaking exists, then tighten gland nut (**E**) by turning in a clockwise motion, using a 1 1/8" open ended wrench or an adjustable wrench (**Do Not over Tighten**).

Caution:
Never remove quill from Gland (E) until you are sure the Valve (A) is closed.

Valve handle (B) should be in a cross (90°) to the valve body (A) when closed

Removal of Quill from Corporation Stop for Inspection or Repair
All letters correspond with Figure A on page 1

1) Shut down pump feed to injection quill and isolate feed line to quill.
2) Disconnect feed line to quill at the ½" NPT connection on quill (**H**).
3) Using a 1 1/8" wrench or adjustable wrench back off (counter clockwise) the gland nut (**E**) by one complete turn or 1 ½ threads.

Continued on next page

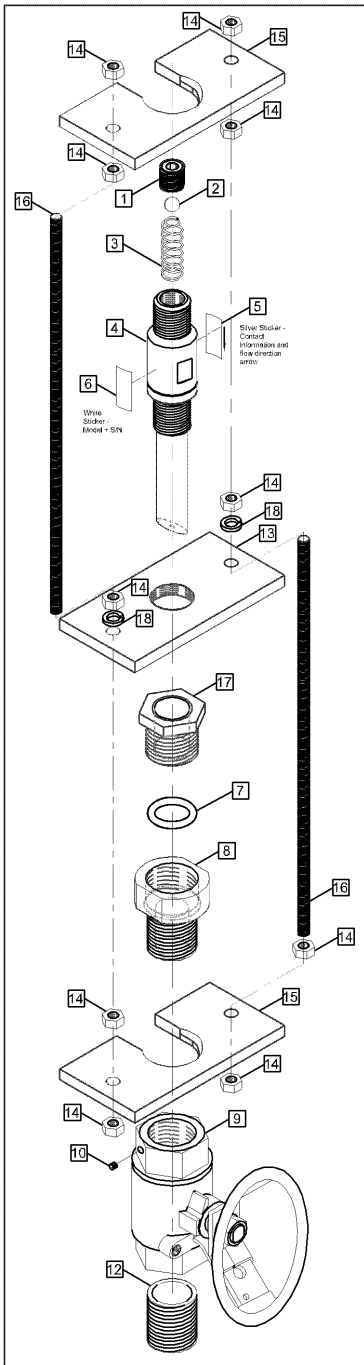
4) Back off (2) ¼" threaded nuts (**G**) located behind Retaining Plate (**F**) evenly using a 7/16" wrench (If gland nut (**E**)is backed off the right amount as noted in #3 then the quill (**H**) will follow the loosening nuts, thus constantly maintaining a pressure on the retraction of the quill from the process).
5) Once the nuts are backed off all the way to the back plate (**J**) and the quill has retracted the same distance you should be able to close the isolation valve (**A**) using the oval handle (**B**) raise the lock out to enable you to turn the handle clockwise 90 degrees.
6) Once the valve is closed you can now push forward on the quill (**H**) approximately ¼" allowing for the front retaining plate (**C**) to move forward and be pulled up from behind the gland housing (**D**).
7) This will allow you to pull the quill free of the gland complete with retaining pressure bracket to inspect or repair.

Note
The lock out located on the valve handle is recommended to be used in conjunction with a lock if the quill is going to be removed for more than just inspection and cleaning or any extended period of time as a safety precaution.

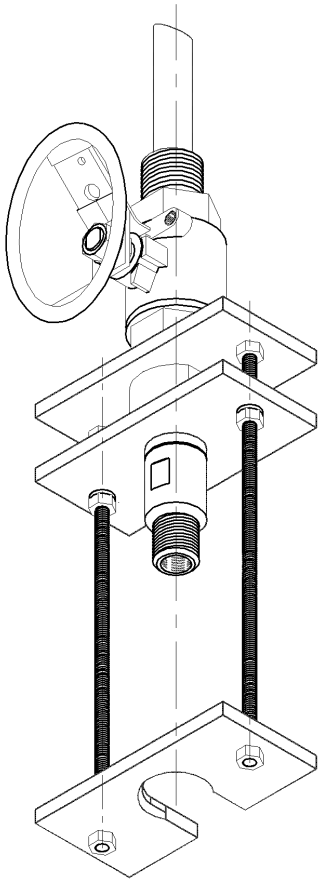
Reinstalling Inspected or Repaired Quill

All letters correspond with Figure A on page 1

1) Ensure that bracket (**C**) is in full forward position (This will allow the installation of bracket (**C**) when inserting quill tip into gland (**E**) and gently guide quill forward until quill tip meets with closed valve (**A**) while lifting bracket (**C**) over gland housing (**D**) and gland (**E**).
2) Slide retaining bracket (**C**) over gland housing (**D**) threaded section and draw back quill (**H**) to snug up connection.
3) Ensure that all components are secure and quill is lined up inside the gland (**E**).
4) Proceed to open (counterclockwise) the valve handle (**B**) to allow access to the process line (only a small amount of weeping from the gland should be experienced) if excessive amount of fluid is discharged from the gland then tighten the gland (**E**) down by ½ to1 complete turn (clockwise). If excessive fluid is still discharging then reverse the above installation and inspect the gland "O" ring and replace.
5) Evenly tighten down the ¼" s/s nuts (**G**) located behind the retaining plate (**F**) which will draw the quill back into the process.
6) For full insertion tighten s/s nuts (**G**) until threaded portion of up stream quill (**H**) is starting into the gland nut (**E**).
7) Tighten the gland nut (**E**) clockwise using a 1 1/8" open end wrench or an adjustable wrench by one complete turn or snug and no leaking is occurring.
8) Re-attach chemical feed line to ½" NPT of quill (**H**).



EXPLODED VIEW



ASSEMBLED VIEW

* RECOMEND SPARE PARTS

ITEM #	DESCRIPTION	PART#	MATERIAL
1	SEAT, CHECK	IQ-1S/S6-SEAT	316 S/S
2	BALL, CHECK	IQ-1S/S6-BALL	316 S/S
3	SPRING, CHECK	IQ-1S/S6-SPRING	316S/S
4	BODY, QUILL, W/ CHECK	CALL FACTORY	316S/S
5	LABEL, DIRECTION, SILVER	IQ-LABEL-DIR	MYLAR
6	LABEL, MODEL + SERIAL #	MSLABEL	MYLAR
7	SEAL , GLAND	V313	VITON
8	GLAND	CCS-S/S-GLD	316 S/S
9	VALVE	CCS-VAL-S/S6	316 S/S
10	SCREW, SET	10-24X3/8-316SS	304 S/S
12	NIPPLE	NIP-S/S6	316 S/S
13	PLATE, QUILL	PQ-13S/S6-PLATE	304 S/S
14	NUT, PLATE	PQ-14S/S6-NUT	18-8 S/S
15	PLATE, GLAND	PQ-15S/S6-PLATE	304 S/S
16	ROD, PLATE	CALL FACTORY	304 S/S
17	BUSH, GLAND	PQ-17S/S6-BUSH	316 S/S
18	WASHER, PLATE	PQ-18S/S6-WASHER	18-8 S/S

Primary Fluid Systems Inc.

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PRESSURE CORPORATION STOP
EXPLODED PARTS VIEW AND DIMENSIONS

SCALE NTS	DIMENSIONAL TOLERANCE +/- .25"		
DATE 18-JUL-07	APPROVED	DWG NO. CCSP	REV.# 4
DRAWN BY BRB			