



PRIMARY FLUID SYSTEMS INC.

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CS SERIES Metering Pump Corporation Stop Installation Instructions

The 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. CS Corporation Stops are available with an external check valve as an option.

Standard injection length is 4" (102 mm), custom lengths are available. Please contact your sales representative for more information.

Sizing and Material Information

A		C/D	A/E/B				
Standard Quill	Standards	Optional	Quill/Gland/Valve	Temperature	Max. Press*	Optional	Optional
Tube Size	Inlet/Outlet Sizes	Inlet/Outlet Sizes	Available Materials*	Max.	Range/PSIG	Tip Style	Gland/Seal
1/4" = 8mm	1/2" = 15mm	NPT	PVC	140°F (60°C)	0-150 (opt. 0-232)	45° (bevel)	Viton
3/8" = 10mm	3/4" = 20mm	BSPT	CPVC (Corzan)	210°F (98°C)	0-150 (opt. 0-232)	90°(straight)	EPDM
1/2" = 15mm	1" = 25mm	Socket Weld (ASTM)	Polypropylene	195°F (90°C)	0-150	Diffuser	
1" = 25mm	1-1/2" = 40mm	Socket Weld (Metric)	PVDF	260°F (125°C)	0-150 (opt. 0-232)		
1-1/2" = 40mm	2" = 50mm	Flange (ANSI)	316 S/S	350°F (176°C)	0-1000 (opt. 0-6000)		
2" = 50mm	2-1/2" = 65mm	Flange (DIN)	Alloy 20	350°F (176°C)	0-1000 (opt. 0-6000)		
2-1/2" = 65mm	3" = 75mm		Hastelloy C276	350°F (176°C)	0-1000 (opt. 0-6000)		

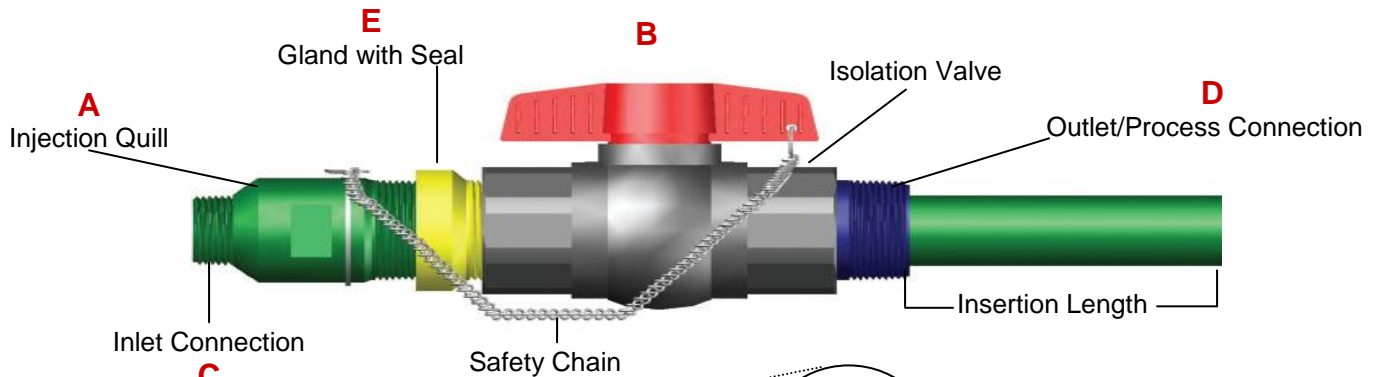


Figure A

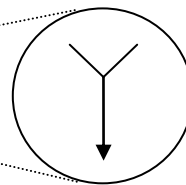
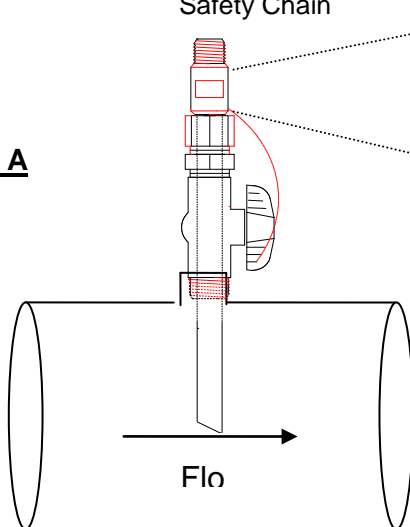


Figure A
Unit shown with
45° bevel quill tip

CAUTION:

When installing or removing Quill from Corporation Valve gland, insure system pressure is at "0" psig.

PRIOR TO INSTALLATION, MAKE SURE ALL FITTINGS AND VALVE UNION NUTS ARE TIGHT.

CORPORATION STOPS VALVE ASSEMBLY INSTALLATION

- 1) Install the Corporation Stop Valve assembly using the appropriate piping compound and PTFE tape.
- 2) Units purchased with the optional HAS hose assembly; install the external check to the Corporation Stop using the appropriate piping compound and PTFE tape. Install the external check to the inlet (B) of the Corporation Stop unit, insuring that the arrow on the check body points in the direction of flow.
- 3) **45 Degree Bevel Quill Tips:** See Fig. A (previous page). Install the valve assembly in the process line so that the stamped arrow in the injection quill body is facing downstream. This positions the angle face of the quill into the process stream, increasing the dispersion of the chemical into the process fluid.
- 4) **90 Degree Bevel Quill Tips:** Units supplied with the 90 degree quill tip are not dependant on directional position.

SAFETY PRECAUTION:

Always ensure system pressure is at "0" psig before unthreading Quill from Corporation Stop gland. Always wear protective clothing and face shield working on chemical metering pumps and accessories.

Removal of injection Quill from Corporation Stop for Service.

1. Slowly unthread the injection quill counter clockwise (B) from the gland (C), (see figure A), making sure not to unthread gland or the union fittings on the valve.

CAUTION:

Loosening the gland fitting or the union nuts on the valve may result in a hazardous situation where pressurized fluids or chemical may be released, which could cause serious injury or damage.

2. Once the quill has been unthreaded, slowly withdraw the injection quill out of the gland (C), using a twisting action to ease the quill out of the gland. Withdraw the quill until the chain is almost taught or the Blue and/or Mark indicator on the quill becomes visible at the gland.
3. Turn the handle to close the ball valve, which will isolate the process line.

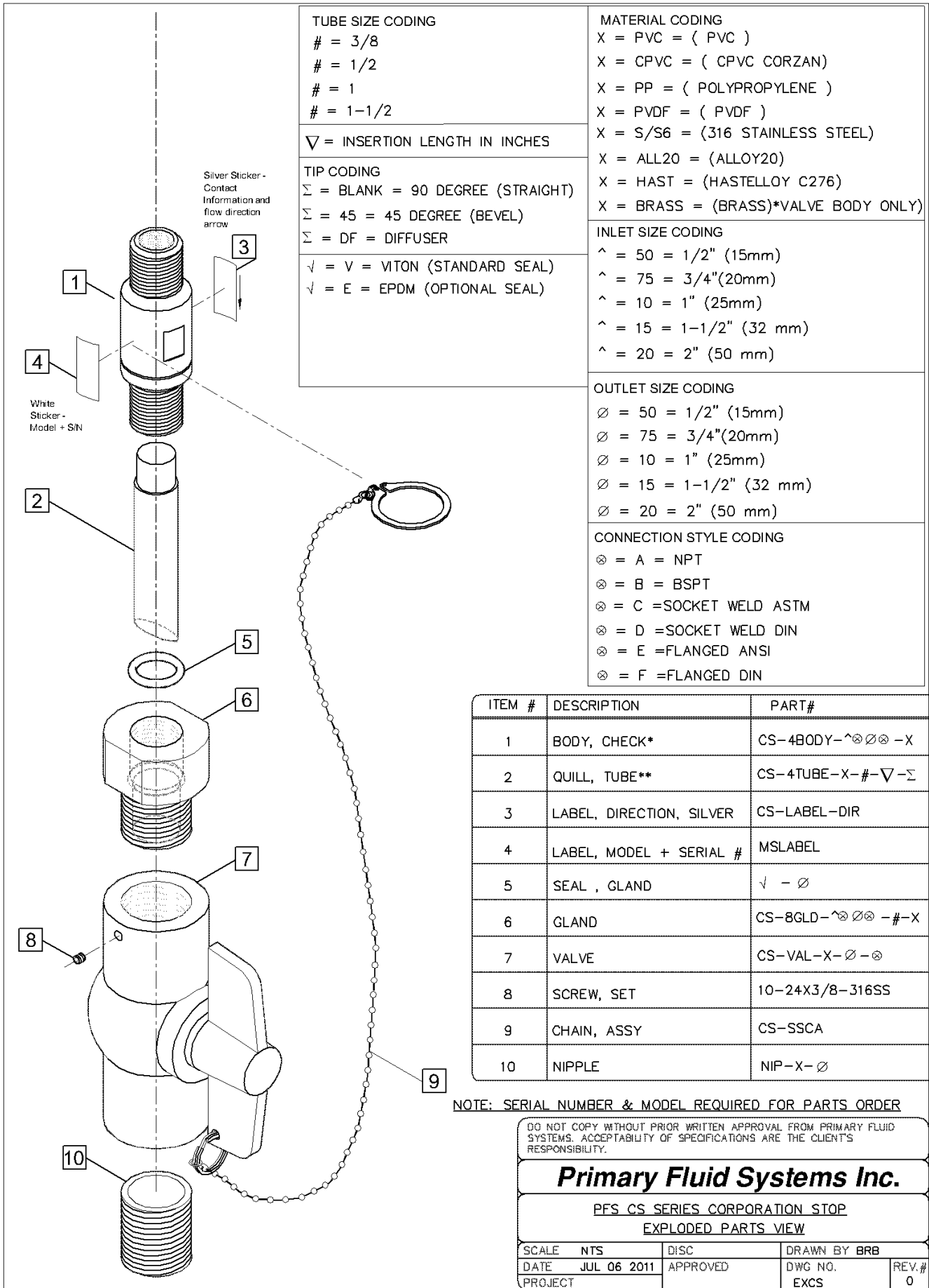
CAUTION:

Completely removing the injection quill without closing the isolation valve will result in a hazardous situation where pressurized fluids or chemical may be released, which could cause serious injury or damage.

4. Continue to remove the injection quill once the valve has been closed.

Re-installation of injection Quill into Corporation Stop for Service.

1. Always ensure the safety chain is properly attached (D). Failure to do so can allow for the quill to be removed without closing the valve and can result in injury or damage.
2. Insert injection quill (B) into the gland (C), using a twisting action to ease the quill into the gland. Continue to insert the quill until it stops and rests up against the ball of the valve.
3. Securely holding the quill, slowly turn the handle to open the ball valve.
4. Continue to insert quill body into the gland. Once the threaded section of the quill reaches the gland, thread the quill body (B) clockwise into the gland (C) by hand until snug. Using a $\frac{7}{8}$ " wrench, tighten down the quill body so that no more than 2 (two) threads show on the quill body. This will insure a good seal for the quill.



TUBE SIZE CODING # = 3/8 # = 1/2 # = 1 # = 1-1/2 ∇ = INSERTION LENGTH IN INCHES	MATERIAL CODING X = PVC = (PVC) X = CPVC = (CPVC CORZAN) X = PP = (POLYPROPYLENE) X = PVDF = (PVDF) X = S/S6 = (316 STAINLESS STEEL) X = ALL20 = (ALLOY20) X = HAST = (HASTELLOY C276) X = BRASS = (BRASS)*VALVE BODY ONLY)
TIP CODING Σ = BLANK = 90 DEGREE (STRAIGHT) Σ = 45 = 45 DEGREE (BEVEL) Σ = DF = DIFFUSER	INLET SIZE CODING ^ = 50 = 1/2" (15mm) ^ = 75 = 3/4"(20mm) ^ = 10 = 1" (25mm) ^ = 15 = 1-1/2" (32 mm) ^ = 20 = 2" (50 mm)
√ = V = VITON (STANDARD SEAL) √ = E = EPDM (OPTIONAL SEAL)	OUTLET SIZE CODING Ø = 50 = 1/2" (15mm) Ø = 75 = 3/4"(20mm) Ø = 10 = 1" (25mm) Ø = 15 = 1-1/2" (32 mm) Ø = 20 = 2" (50 mm)
	CONNECTION STYLE CODING ⊗ = A = NPT ⊗ = B = BSPT ⊗ = C =SOCKET WELD ASTM ⊗ = D =SOCKET WELD DIN ⊗ = E =FLANGED ANSI ⊗ = F =FLANGED DIN

ITEM #	DESCRIPTION	PART#
1	BODY, CHECK*	CS-4BODY-^⊗∅⊗-X
2	QUILL, TUBE**	CS-4TUBE-X-#-∇-Σ
3	LABEL, DIRECTION, SILVER	CS-LABEL-DIR
4	LABEL, MODEL + SERIAL #	MSLABEL
5	SEAL , GLAND	√ - ∅
6	GLAND	CS-8GLD-^⊗⊗⊗-#-X
7	VALVE	CS-VAL-X-∅-⊗
8	SCREW, SET	10-24X3/8-316SS
9	CHAIN, ASSY	CS-SSCA
10	NIPPLE	NIP-X-∅

NOTE: SERIAL NUMBER & MODEL REQUIRED FOR PARTS ORDER

DO NOT COPY WITHOUT PRIOR WRITTEN APPROVAL FROM PRIMARY FLUID SYSTEMS. ACCEPTABILITY OF SPECIFICATIONS ARE THE CLIENT'S RESPONSIBILITY.

Primary Fluid Systems Inc.
 PFS CS SERIES CORPORATION STOP
 EXPLODED PARTS VIEW

SCALE	NTS	DISC	DRAWN BY BRB	
DATE	JUL 06 2011	APPROVED	DWG NO.	REV.#
PROJECT			EXCS	0



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APPLICATION WORKSHEET CORPORATION STOP QUILLS

Injection quill feed

1. **Chemical/Fluid** _____
2. **Pressure** _____ psig kPa other _____
3. **Flow rate** _____ gal/hr liter/hour other _____
4. **Temperature** _____ °F °C other _____
5. **Insertion Length** (Standard Length 4" or 102 mm) Required Length: _____ inches/mm
6. **External Check:** No Yes
7. **Connection Sizes:**
Outlet Connection: 3/4" Choose Inlet Connection of: 1/2" or 3/4"
Outlet Connection: 1" Choose Inlet Connection of: 3/4" or 1"
Outlet Connection: 1-1/2" Choose Inlet Connection of: 1" or 1-1/2"
Outlet Connection: 2" Choose Inlet Connection of: 1-1/2" or 2"
8. **Inlet Connection Style:**
 NPT BSPT Socket Weld ASTM Socket Weld DIN Flanged ANSI Flanged DIN
9. **Outlet Connection Style:**
 NPT BSPT Socket Weld ASTM Socket Weld DIN Flanged ANSI Flanged DIN
10. **Tip Style:** 45 degree (Bevel) 90 degree (Straight) Diffuser
11. **Gland Seal Material:**
 Viton EPDM
12. **Gland Material:**
 PVC CPVC Polypropylene PVDF 316 S/S Alloy20 Hastelloy C 276
13. **Isolation Valve Material:**
 PVC CPVC Polypropylene PVDF
 316 S/S Alloy20 Hastelloy C 276 Brass
14. **Solution Tube Material:**
 PVC CPVC Polypropylene PVDF 316 S/S Alloy20 Hastelloy C 276

Process Line

1. Fluid/Chemical in process pipe _____
2. Fluid Pressure _____ psig kPa other _____
3. Velocity of the fluid in ft/sec _____ (if available)
4. Pipe Size _____ inches mm other _____
5. Flow rate _____ GPM LPM other _____
6. Temperature _____ F C other _____
7. Drawing of installation attached: Yes No