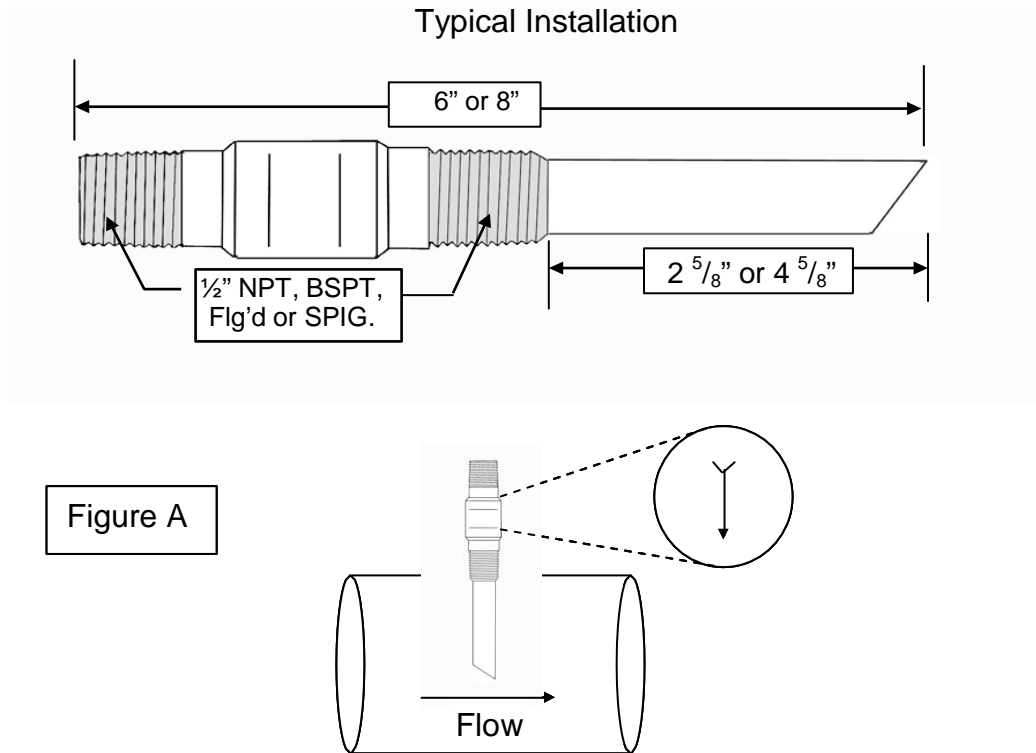




## Metering Pump Injection Quills Instructions

REV.4

1. Install injection quill using the appropriate piping compound and PTFE tape.
2. All injection quills come standard spring assisted. It is recommended, however, if you order a quill without a spring that they be installed in the process line at a 6 o'clock position. This will assist in the check valve seating.
3. 6" length quills are suitable for 4"-6" pipe diameters. Pipe sizes smaller than 4", the quill can be trimmed so that the injection quill is in the centerline of the process pipe. 8" length quills are suitable for 8"-10" pipe diameters.
4. As per the diagram on the previous page, figure (A), install the injection quill in the process so that the stamped arrow in the 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.
5. An isolation valve installed behind the injection quill is recommended for easy maintenance.



### Metering Pump PFS Injection Quills Standard Features

- built in, spring loaded check
- Available in 2 sizes, 6" or 8" length
- 6 materials of construction
- Pressure range to 3000 PSIG
- Simple installation, using 1/2" NPT, BSPT, Flg'd or SPIG. connections

Model	Size (length)	Body Material	Ball Check Material	Check Spring Material	Pressure* Max. PSIG	Temperature Max.
IQ-56-PVC	6"	PVC	CERAMIC	316S/S	150*	140°F (60°C)
IQ-56-CPVC	6"	CPVC	CERAMIC	316S/S	150*	210°F (98°C)
IQ-56-PP	6"	PP	CERAMIC	316S/S	150*	195°F (90°C)
IQ-56-PVDF	6"	PVDF	CERAMIC	316S/S	150*	260°F (125°C)
IQ-56-316S/S	6"	316S/S	316S/S	316S/S	3000*	500°F (260°C)
IQ-56-HASTC	6"	HASTC	HASTC	HASTC	3000*	500°F (260°C)
IQ-58-PVC	8"	PVC	CERAMIC	316S/S	150*	140°F (60°C)
IQ-58-CPVC	8"	CPVC	CERAMIC	316S/S	150*	210°F (98°C)
IQ-58-PP	8"	PP	CERAMIC	316S/S	150*	195°F (90°C)
IQ-58-PVDF	8"	PVDF	CERAMIC	316S/S	150*	260°F (125°C)
IQ-58-316S/S	8"	316S/S	316S/S	316S/S	3000*	500°F (260°C)
IQ-58-HASTC	8"	HASTC	HASTC	HASTC	3000*	500°F (260°C)

\*MAXIMUM PSIG RATING BASED ON 73°F (23°C). SEE PAGE 4 OF INJECTION QUILL PRICE LIST FOR TEMP CORRECTION FACTOR.

**NOTE:** Check spring is made of 316S/S material, the injection quill may be ordered with less spring if not chemically compatible with product being pumped.

Hastelloy C and Titanium Beta C springs are available from stock.

Other spring materials available on special request, please contact the factory for costs.

316S/S, Hastelloy C, Titanium Gr2, PVDF and Teflon balls available from stock.

## Maintenance Instructions:

PFS injection quill checks are supplied with components that are easily accessible for maintenance. To access the quill checks, follow the instructions below:

### Seat Removal

The quill seat is easily removed using a standard ratchet and drive bit.

PVC, CPVC, PP, and PVDF quill seats use a Torx45 drive bit.

316 Stainless Steel and Hastelloy C276 quill seats use a ¼" Hex-head drive bit.

Ensure that the drive bit is properly engaged into the seat, then slowly turn counter clock-wise to remove.

### Re-Assembly of Quill Check Parts

**Spring** – replace spring by installing in quill check, with the small end facing up.

**Ball** – replace ball by installing on top of spring.

**Seat** – prepare check seat by wrapping seat with PTFE tape, approximately 2 turns. Make sure that no PTFE tape strands are impeding the seating surface that will be contacting the check ball.

Use pink PTFE tape for Stainless Steel, Hastelloy, and PVDF seats.

Use white PTFE tape for PVC and CPVC seat materials.

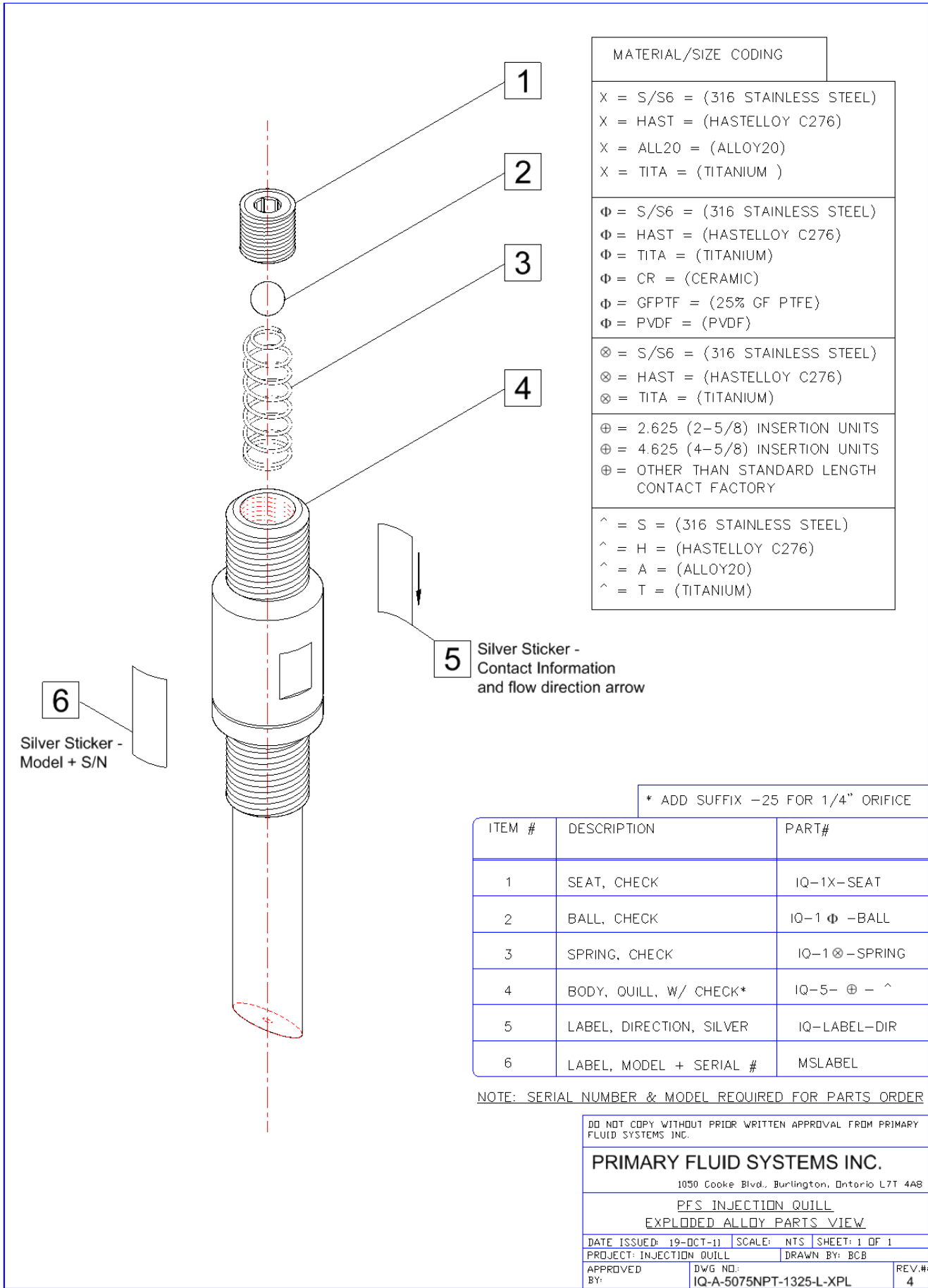
Apply a coating of PTFE pipe sealant on the taped seat, ensuring the entire surface is coated.

### Replace Seat

Put seat on top of ball.

Using the same drive bits from Step 1, ensure that the drive bit is properly engaged into the seat and then slowly thread clockwise into quill body; making sure not to cross-thread when installing seat.

Ensure seat is flush with, or just below, the surface of the quill check.



MATERIAL/SIZE CODING	
X = S/S6 = (316 STAINLESS STEEL)	
X = HAST = (HASTELLOY C276)	
X = ALL20 = (ALLOY20)	
X = TITA = (TITANIUM )	
Φ = S/S6 = (316 STAINLESS STEEL)	
Φ = HAST = (HASTELLOY C276)	
Φ = TITA = (TITANIUM)	
Φ = CR = (CERAMIC)	
Φ = GFPTF = (25% GF PTFE)	
Φ = PVDF = (PVDF)	
⊗ = S/S6 = (316 STAINLESS STEEL)	
⊗ = HAST = (HASTELLOY C276)	
⊗ = TITA = (TITANIUM)	
⊕ = 2.625 (2-5/8) INSERTION UNITS	
⊕ = 4.625 (4-5/8) INSERTION UNITS	
⊕ = OTHER THAN STANDARD LENGTH CONTACT FACTORY	
^ = S = (316 STAINLESS STEEL)	
^ = H = (HASTELLOY C276)	
^ = A = (ALLOY20)	
^ = T = (TITANIUM)	

6  
Silver Sticker -  
Model + S/N

5 Silver Sticker -  
Contact Information  
and flow direction arrow

\* ADD SUFFIX -25 FOR 1/4" ORIFICE

ITEM #	DESCRIPTION	PART#
1	SEAT, CHECK	IQ-1X-SEAT
2	BALL, CHECK	IQ-1 Φ -BALL
3	SPRING, CHECK	IQ-1 ⊗ -SPRING
4	BODY, QUILL, W/ CHECK*	IQ-5- ⊕ - ^
5	LABEL, DIRECTION, SILVER	IQ-LABEL-DIR
6	LABEL, MODEL + SERIAL #	MSLABEL

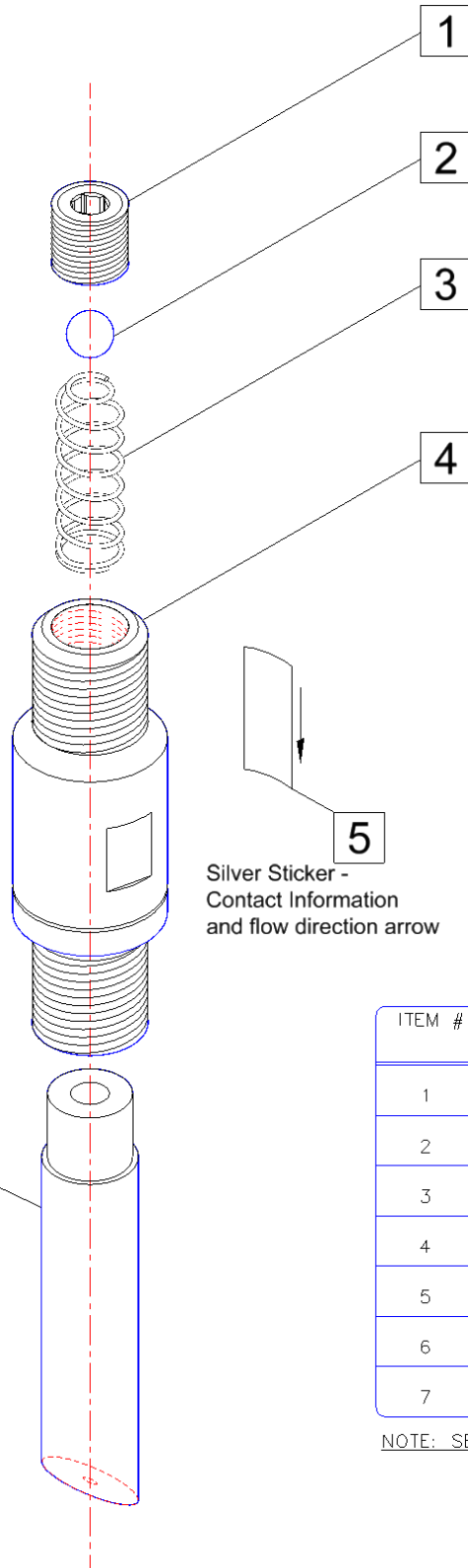
NOTE: SERIAL NUMBER & MODEL REQUIRED FOR PARTS ORDER

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**PRIMARY FLUID SYSTEMS INC.**  
1050 Cooke Blvd., Burlington, Ontario L7T 4A8

PFS INJECTION QUILL  
EXPLODED ALLOY PARTS VIEW

DATE ISSUED: 19-OCT-11	SCALE: NTS	SHEET: 1 OF 1
PROJECT: INJECTION QUILL	DRAWN BY: BCB	
APPROVED BY:	DWG NO: IQ-A-5075NPT-1325-L-XPL	REV.#: 4



6  
Silver Sticker  
- Model + S/N

5  
Silver Sticker -  
Contact Information  
and flow direction arrow

MATERIAL/SIZE CODING	
X = PVC = ( PVC )	
X = CPVC = ( CPVC CORZAN )	
X = PP = ( POLYPROPYLENE )	
X = PVDF = ( PVDF )	
Φ = CR = ( CERAMIC )	
Φ = GFPTF = ( 25% GF PTFE )	
Φ = PVDF = ( PVDF )	
Φ = S/S6 = ( 316 STAINLESS STEEL )	
Φ = HAST = ( HASTELLOY C276 )	
Φ = TITA = ( TITANIUM )	
⊗ = S/S6 = ( 316 STAINLESS STEEL )	
⊗ = HAST = ( HASTELLOY C276 )	
⊗ = TITA = ( TITANIUM )	
# = PVC = ( PVC )	
# = CPVC = ( CPVC CORZAN )	
^ = P = ( PVC )	
^ = C = ( CPVC CORZAN )	
^ = PP = ( POLYPROPYLENE )	
^ = K = ( PVDF )	
⊕ = 2.625 ( 2-5/8 ) INSERTION UNITS	
⊕ = 4.625 ( 4-5/8 ) INSERTION UNITS	
⊕ = OTHER THAN STANDARD LENGTH CONTACT FACTORY	
∅ = 0 ( USED WITH PVC AND CPVC UNITS )	
∅ = 5 ( USED WITH PP AND PVDF UNITS )	

\* ONLY USED WITH PVC AND CPVC UNITS  
\*\* ADD SUFFIX -25 FOR 1/4" ORIFICE

ITEM #	DESCRIPTION	PART#
1	SEAT, CHECK	IQ-1X-SEAT
2	BALL, CHECK	IQ-1 Φ-BALL
3	SPRING, CHECK	IQ-1⊗-SPRING
4	BODY, CHECK*	IQ-BODY-#
5	LABEL, DIRECTION, SILVER	IQ-LABEL-DIR
6	LABEL, MODEL + SERIAL #	MSLABEL
7	QUILL**	IQ-∅-⊕ - ^

NOTE: SERIAL NUMBER & MODEL REQUIRED FOR PARTS ORDER

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PFS INJECTION QUILL  
EXPLODED POLY PARTS VIEW

DATE ISSUED: 19-OCT-11	SCALE: NTS	SHEET: 1 OF 1
PROJECT: INJECTION QUILL	DRAWN BY: BCB	
APPROVED BY:	DWG NO: IQ-P-5075NPT-1325-L-XPL	REV.# 4