PRIMARY FLUID SYSTEMS INC.

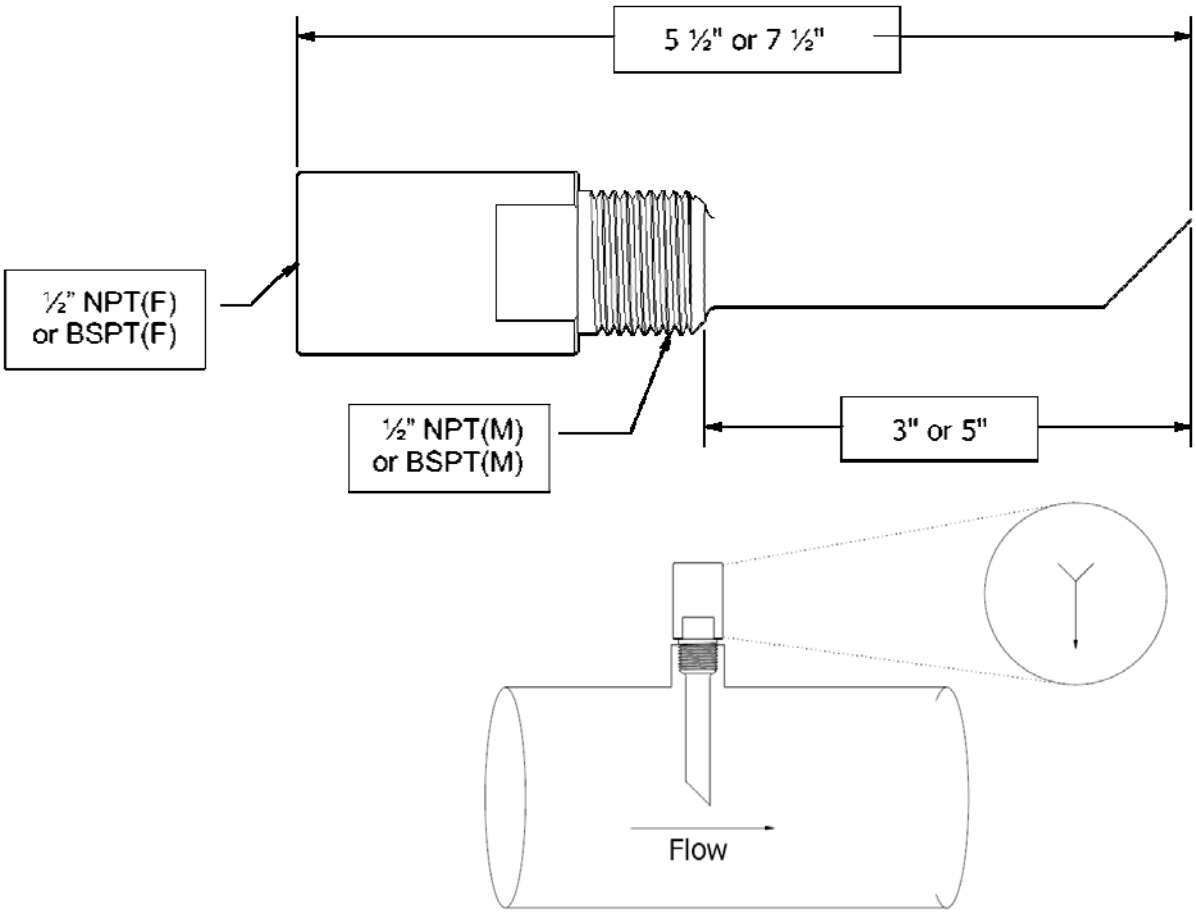
1050 COOKE BLVD., BURLINGTON, ON. CANADA L7T 4A8
TEL:(905)333-8743 FAX:(905)333-8746
1-800-776-6580
www.primaryfluid.com
primary@primaryfluid.com

10/12
Rev. 3

Metering Pump Injection Quills Instructions

Primary Fluid Systems Inc. introduces the Injection Quill, the newest addition to their line of Metering Pump Accessories.
The injection quill 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 quill has a built in stainless steel spring-loaded check, to help prevent back siphoning.
The injection quill is available in two sizes, 3” injection length suitable for 4”-6” pipe diameters and 5” injection length suitable for 8”-10” pipe diameters. The connection for both sizes is ½” NPT or BSPT Male X Female. Optional flanged connection is also available (consult factory).
Six (6) materials of construction are available that provide compatibility for most chemicals injected. Each quill comes standard with a Hastelloy C spring. Optional spring and ball materials are available at an extra charge (consult factory) or the quill may be ordered without a spring or ball.
Pressure and temperature are dependent on the material of construction and vary from 150 and 3000 PSIG and 60ºC (140ºF) and 260ºC (500ºF). (See list on next page)

Typical Installation



Injection Quill Instructions continued …

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. 3" injection 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. 5" injection 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.

Model	OAL Length	Insertion Length	Body Material	Ball Check Material	Check Spring Material	Pressure Max. PSIG	Temperature Max.
IQF-53-PVC	5 ½"	3"	PVC	CERAMIC	HASTC	150	140°F (60°C)
IQF-53-CPVC	5 ½"	3"	CPVC	CERAMIC	HASTC	150	210°F (98°C)
IQF-53-PP	5 ½"	3"	PP	CERAMIC	HASTC	150	195°F (90°C)
IQF-53-PVDF	5 ½"	3"	PVDF	CERAMIC	HASTC	150	260°F (125°C)
IQF-53-316S/S	5 ½"	3"	316S/S	CERAMIC	HASTC	3000	500°F (260°C)
IQF-53-HASTC**	5 ½"	3"	HASTC	CERAMIC	HASTC	3000	500°F (260°C)
IQF-55-PVC	7 ½"	5"	PVC	CERAMIC	HASTC	150	140°F (60°C)
IQF-55-CPVC	7 ½"	5"	CPVC	CERAMIC	HASTC	150	210°F (98°C)
IQF-55-PP	7 ½"	5"	PP	CERAMIC	HASTC	150	195°F (90°C)
IQF-55-PVDF	7 ½"	5"	PVDF	CERAMIC	HASTC	150	260°F (125°C)
IQF-55-316S/S	7 ½"	5"	316S/S	CERAMIC	HASTC	3000	500°F (260°C)
IQF-55-HASTC**	7 ½"	5"	HASTC	CERAMIC	HASTC	3000	500°F (260°C)

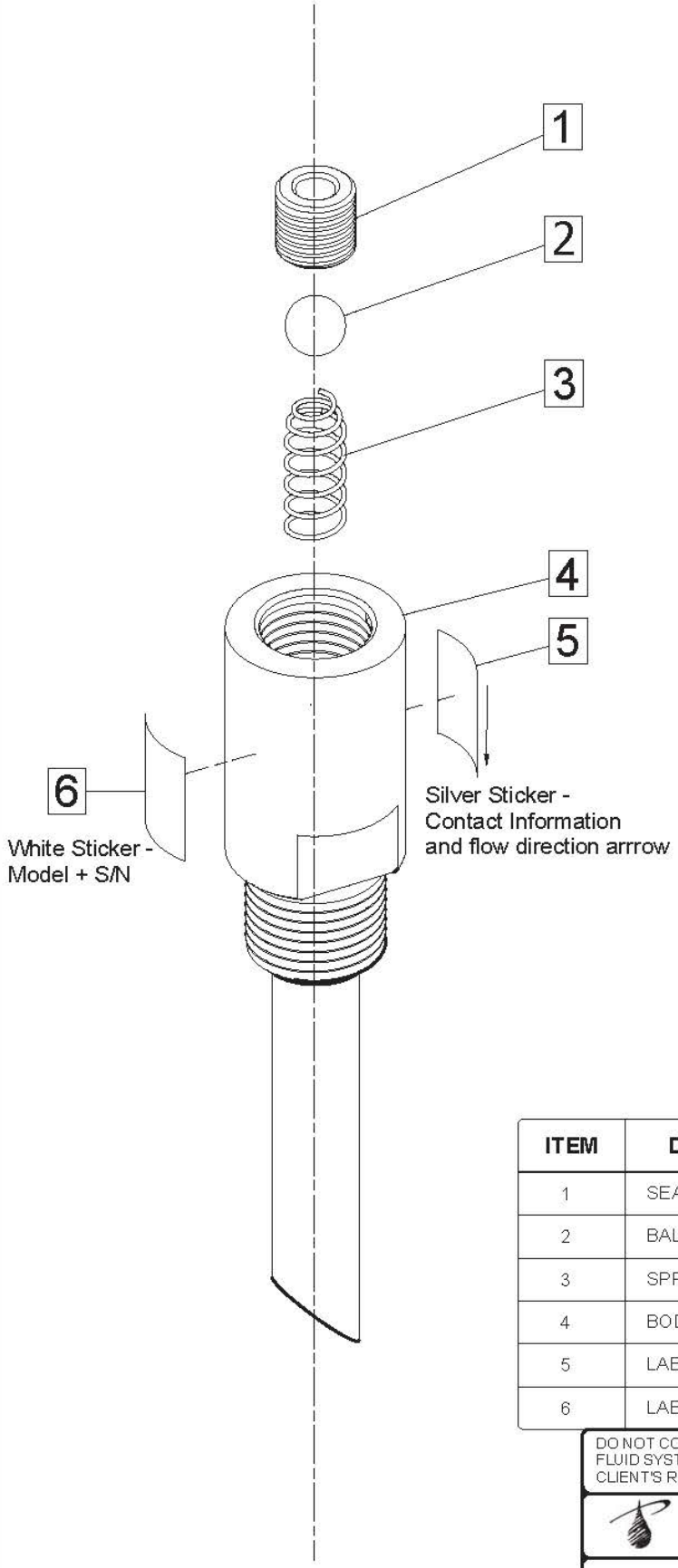
**MAXIMUM PSIG RATING BASED ON 73°F (23°C). SEE PAGE 4 OF INJETION QUILL PRICE LIST FOR TEMP CORRECTION FACTOR*

NOTE: Check spring is made of Hastelloy "C" material, the injection quill may be ordered with less spring if not chemically compatible with product being pumped.
Stainless Steel 316 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.

Metering Pump PFS Injection Quills Standard Features

- built in, spring loaded check
- 6 materials of construction
- Simple installation, using ½" NPT or BSPT Male X Female connections
- Available in 2 sizes, 3" or 5" injection length
- Pressure range to 3000 PSIG

NOTE: SERIAL NUMBER & MODEL REQUIRED FOR PARTS ORDER



MATERIAL/SIZE CODING
W = S/S6 = (316 STAINLESS STEEL)
W = HAST = (HASTELLOY C276)
W = ALL20 = (ALLOY20)
W = TITA = (TITANIUM GR.2)
X = S/S6 = (316 STAINLESS STEEL)
X = HAST = (HASTELLOY C276)
X = TITA = (TITANIUM Gr.2)
X = CR = (CERAMIC)
X = GFTFE = (25% GF PTFE)
X = PVDF = (PVDF)
Y = S/S6 = (316 STAINLESS STEEL)
Y = HAST = (HASTELLOY C276)
Y = TITA = (TITANIUM BETA C)
Z = 3" INSERTION UNITS
Z = 5" INSERTION UNITS
Z = OTHER THAN STANDARD LENGTH CONTACT FACTORY
^ = S = (316 STAINLESS STEEL)
^ = H = (HASTELLOY C276)
^ = A = (ALLOY20)
^ = T = (TITANIUM GR. 2)

ITEM	DESCRIPTOIN	PART NUMBER
1	SEAT, CHECK	IQF - 1W - SEAT
2	BALL, CHECK	IQF - 1X - BALL
3	SPRING, CHECK	IQF - 1Y - SPRING
4	BODY, QUILL	IQF - 5Z - ^
5	LABEL, DIRECTION, SILVER	IQF - LABEL - DIR
6	LABEL, MODEL + SERIAL #	MSLABEL

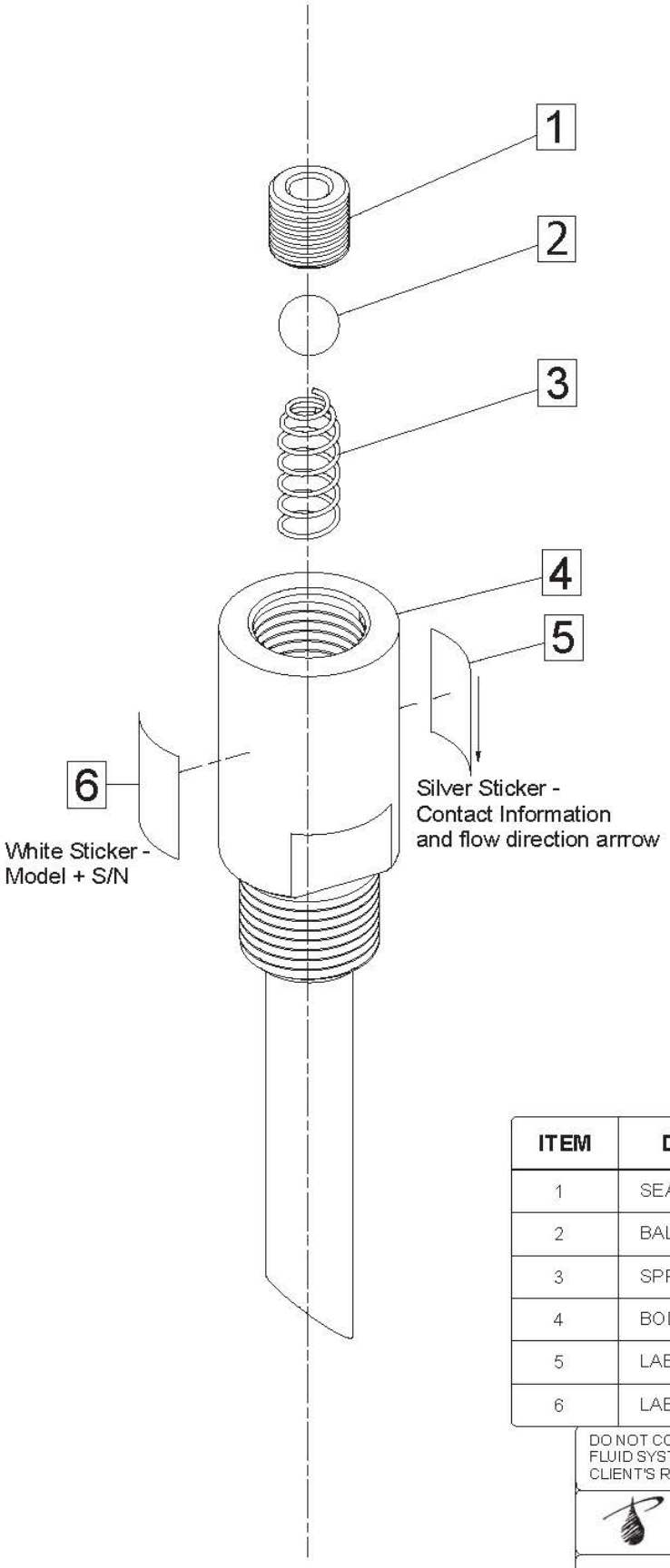
DO NOT COPY WITHOUT PRIOR WRITTEN APPROVAL FROM PRIMARY FLUID SYSTEMS. ACCEPTABILITY OF SPECIFICATIONS ARE THE CLIENT'S RESPONSIBILITY.

Primary Fluid Systems Inc.

PFS INJECTION QUILL - ALLOY
EXPLODED VIEW

SCALE	DISC	DRAWN BY	
DATE	APPROVED	DWG NO.	REV. #
PROJECT			

NOTE: SERIAL NUMBER & MODEL REQUIRED FOR PARTS ORDER



MATERIAL/SIZE CODING
W = PVC = (PVC)
W = CPVC = (CPVC CORZAN)
W = PP = (POLYPROPYLENE)
W = PVDF = (PVDF)
X = CR = (CERAMIC)
X = GFTFE = (25% OF GF PTFE)
X = PVDF = (PVDF)
X = S/S6 = (316 STAINLESS STEEL)
X = HAST = (HASTELLOY C276)
X = TITA = (TITANIUM GR.2)
Y = S/S6 = (316 STAINLESS STEEL)
Y = HAST = (HASTELLOY C276)
Y = TITA = (TITANIUM BETA C)
Z = 3" INSERTION UNITS
Z = 5" INSERTION UNITS
Z = OTHER THAN STANDARD LENGTH CONTACT FACTORY
^ = P = (PVC)
^ = C = (CPVC CORZAN)
^ = PP = (POLYPROPYLENE)
^ = K = (PVDF)

ITEM	DESCRIPTOIN	PART NUMBER
1	SEAT, CHECK	IQF - 1W - SEAT
2	BALL, CHECK	IQF - 1X - BALL
3	SPRING, CHECK	IQF - 1Y - SPRING
4	BODY, QUILL	IQF - 5Z - ^
5	LABEL, DIRECTION, SILVER	IQF - LABEL - DIR
6	LABEL, MODEL + SERIAL #	MSLABEL

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PFS INJECTION QUILL - PLASTIC
EXPLODED VIEW

SCALE	DISC	DRAWN BY	
DATE	APPROVED	DWG NO.	REV. #
PROJECT			