

E.W. Howell Co., LLC

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REQUEST FOR INFORMATION**No. 00023****TITLE:** Chemical Feed Injection**DATE:** 9/29/2009**PROJECT:** BNL CCWF-II**JOB:**

TO: Attn: Alan Raphael
 Brookhaven National Laboratory
 Brookhaven Sciences Associates, LLC
 Project Modernization Office
 Upton, NY 11973-5000
 Phone: 631-344-5854

STARTED:**COMPLETED:****REQUIRED:** 10/6/2009**WORK****IMPACT:** Unknown**SCHEDULE****IMPACT:** Unknown**COST****IMPACT:** Unknown**QUESTION:**

September 29, 2009
 Chemical Feed Injection

Drawing MP-604 shows the chemical feed injection on the 30" condenser water return while detail 301E on drawing MP-301 shows it on the 42" condenser water supply. In addition I would like to know if the outlet should be a thread-o-let or a weld-o-let as shown on detail 604A on drawing MP-604. Please advise.

CC: File

PROPOSED SOLUTION:**ANSWER:**

Provide a 1" thread-o-let connection on the 30" condenser water return for the corporation stop/injection quill assembly. See the attached catalog cut. The water treatment contractor advised that the concentrated biocide should go to the cooling tower before flowing through the chiller. He has requested a 1" quill. The quill should extend to the center of the 30" condenser water return in order to promote mixing.

Bill Harrison, Giffels/IBI Group

11-15-09

Exact location will be provided on an ECM.

Alan Raphael 11/16/09

Requested By: E.W. Howell Co., LLC**Date:** _____**Signed:** _____

Lauren Bergin

Corporation Stops and Injection Quills

Corporation Stops

Corporation Stops with injection quills are used for injecting chemicals pumped by metering pumps into tanks, mains, cooling towers and process systems. Quill extends into the center of the stream providing more rapid uniform dispersion of injected chemical.

Corporation Stop can be mounted to a "hot tap" which is installed without draining the system. Corporation Stop allows injection quill to be inserted or removed without having to drain or shut down the system.

- Use to 150 psi
- Available in CPVC, Kynar, 316SS and C-20
- Available in 1/2", 3/4" or 1" process connections

R PROVIDE 1" INJECTION QUILL ASSEMBLY

High Pressure Injection Quills

High Pressure Injection Quills are used to inject chemicals pumped by metering pumps into the turbulent flow zone of high pressure water or steam lines.

- Use to 3,000 psi
- Spring loaded check valve
- Available in PVC, Kynar, 316SS and C-20

Neptune
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MODEL CS2-75-PVC



MODEL QC-316-50

Corporation Stops with Quills

Features

- Lever operated stop eliminates the need for a wrench
- Protection chain prevents withdrawal before Corporation Stop is closed
- Operating pressures to 150 psi
- Quill available in Corrosion-resistant CPVC, Kynar, 316 stainless steel and Carpenter 20-Cb3
- Corporation Stop (brass standard, stainless steel optional) available with 1/2", 3/4" or 1" process connections
- Inlet connection 1/2" female all models

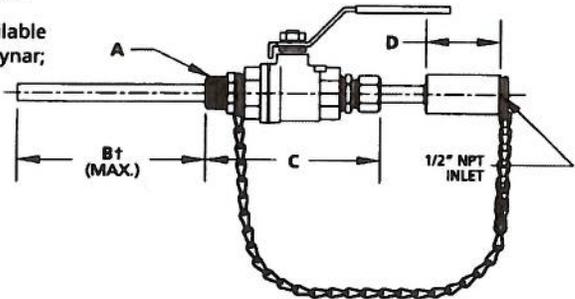
Recommendation

- Install a check valve and isolation valve at the inlet of the quill for ease of maintenance.

MODEL	MATERIAL OF CONSTR.	PRESS. PSI	MAXIMUM TEMP.	DIMENSIONS (INCHES)			
				SIZE (INCHES)	A*	B	C
CS2-50-PVC	CPVC	125 psi	100°F (37°C)	1/2 NPT	7-3/4	5-1/4	2
CS2-75-PVC	CPVC	125 psi	100°F (37°C)	3/4 NPT	7-3/4	5-1/4	2
CS2-100-PVC	CPVC	125 psi	100°F (37°C)	1 NPT	7-1/4	6-1/4	1-1/2
CS2-50-KY	Kynar	150 psi	200°F (93°C)	1/2 NPT	7-3/4	5-1/4	2-3/8
CS2-75-KY	Kynar	150 psi	200°F (93°C)	3/4 NPT	7-3/4	5-1/4	2-3/8
CS2-100-KY	Kynar	150 psi	200°F (93°C)	1 NPT	6-3/4	6-1/4	2
CS2-50-316	316SS	150 psi	250°F (121°C)	1/2 NPT	7-1/2	5-1/4	2-3/8
CS2-75-316	316SS	150 psi	250°F (121°C)	3/4 NPT	7-1/2	5-1/4	2-3/8
CS2-100-316	316SS	150 psi	250°F (121°C)	1 NPT	6-1/2	6-1/4	2-3/8
CS2-50-C20	C-20-Cb3	150 psi	250°F (121°C)	1/2 NPT	7-1/2	5-1/4	2-3/8
CS2-75-C20	C-20-Cb3	150 psi	250°F (121°C)	3/4 NPT	7-1/2	5-1/4	2-3/8
CS2-100-C20	C-20-Cb3	150 psi	250°F (121°C)	1 NPT	6-1/2	6-1/4	2-3/8

*AWWA process connection available.

†Special lengths are available up to 24" for CPVC & Kynar; up to 36" for 316SS & Carpenter 20-Cb3.



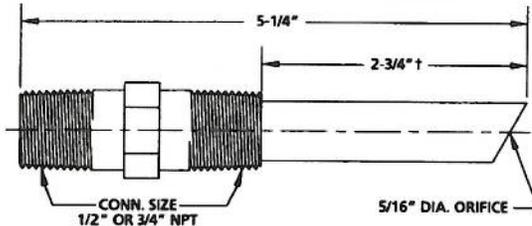
High Pressure Injection Quills with Built-in Check Valves

Features

- Built-in Spring Loaded Check on all models
- High pressure to 3,000 psi
- Available in PVC, Kynar, 316 stainless steel and Carpenter 20-Cb3

MODEL	MATERIAL OF BODY	MATERIAL OF CHECK	MATERIAL OF SPRING	PRESS. (MAX.)	MAXIMUM TEMP.	CONN. SIZE NPT
QC-PVC-50	PVC	Ceramic	HAST C	150 psi	100°F (37°C)	1/2"
QC-PVC-75	PVC	Ceramic	HAST C	150 psi	100°F (37°C)	3/4"
QC-316-50	316SS	316SS	HAST C	3000 psi	750°F (400°C)	1/2"
QC-316-75	316SS	316SS	HAST C	3000 psi	750°F (400°C)	3/4"
QC-316-HPSE*	316SS	316SS	HAST C	3000 psi	750°F (400°C)	1/2"
QC-C20-50	C-20	C-20	HAST C	3000 psi	750°F (400°C)	1/2"
QC-KY-50	Kynar	Ceramic	HAST C	150 psi	200°F (93°C)	1/2"
QC-KY-75	Kynar	Ceramic	HAST C	150 psi	200°F (93°C)	3/4"

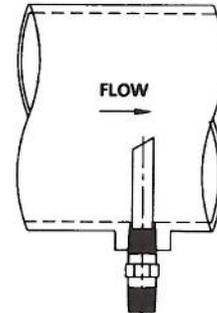
*Has slotted end.



†Special lengths are available up to 24".

Recommendations

- For lines smaller than 4" diameter, trim quill so chemical is released near center of line. Use as is for lines over 4" diameter.
- Install with "Telltale" V-notch facing upstream so flow strikes angled face at end of quill for most rapid dispersal of injected chemical.
- For maintenance ease, installation of an isolation valve, rated above line operating pressure, immediately behind the quill is recommended.



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