



# Chemical Injection Quills

## Chemical Injection Quills & Corporation Stops

Injection quills are designed to ensure a uniform and rapid dispersal of injection chemicals into the center stream of a process pipeline. This prevents corrosive liquids from clinging to the side of the pipe.

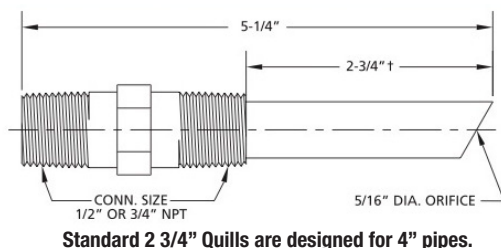
Injection quills are available in a variety of materials and pressure ranges as shown in the chart below. Pressure and temperature are dependent on the material of construction and vary from 150 to 3000 psi and 100 °F (37 °C) and 500 °F (260 °C).

### Chemical Injection Quills - with Built-in High Pressure Check Valve (QC)

| Model             | Material of Body | Material Of Check | Material of Spring | Pressure Max. | Maximum Temperature | Connection Size Male NPT | Standard Quill Length | Max. Quill Length (SP) | Inlet Size |
|-------------------|------------------|-------------------|--------------------|---------------|---------------------|--------------------------|-----------------------|------------------------|------------|
| QC-PVC-50         | PVC              | Ceramic           | Hastelloy C        | 150 psi       | 100F (37C)          | 1/2" MNPT                | 2 3/4"                | 24"                    | 1/2" MNPT  |
| QC-PVC-75         | PVC              | Ceramic           | Hastelloy C        | 150 psi       | 100F (37C)          | 3/4" MNPT                | 2 3/4"                | 24"                    | 3/4" MNPT  |
| QC-PVC-100        | PVC              | Ceramic           | Hastelloy C        | 150 psi       | 100F (37C)          | 1" MNPT                  | 2 3/4"                | 24"                    | 1" MNPT    |
| QC-PVC-100-50FNPT | PVC              | Ceramic           | Hastelloy C        | 150 psi       | 100F (37C)          | 1" MNPT                  | 2 3/4"                | 24"                    | 1" FNPT    |
| QC-316-50         | 316 SSTL         | 316 SSTL          | Hastelloy C        | 1000 psi      | 500F (260C)         | 1/2" MNPT                | 2 3/4"                | 24"                    | 1/2" MNPT  |
| QC-316-75         | 316 SSTL         | 316 SSTL          | Hastelloy C        | 3000 psi      | 500F (260C)         | 3/4" MNPT                | 2 3/4"                | 36"                    | 3/4" MNPT  |
| QC-316-100        | 316 SSTL         | 316 SSTL          | Hastelloy C        | 3000 psi      | 500F (260C)         | 1" MNPT                  | 2 3/4"                | 24"                    | 1" MNPT    |
| QC-316-100-50FNPT | 316 SSTL         | 316 SSTL          | Hastelloy C        | 3000 psi      | 500F (260C)         | 1" MNPT                  | 2 3/4"                | 24"                    | 1" FNPT    |
| QC-C20-50         | C-20             | C-20              | Hastelloy C        | 3000 psi      | 750F (400C)         | 1/2" MNPT                | 2 3/4"                | 24"                    | 1/2" MNPT  |
| QC-KY-50          | Kynar            | Ceramic           | Hastelloy C        | 150 psi       | 200F (93C)          | 1/2" MNPT                | 2 3/4"                | 24"                    | 1/2" MNPT  |
| QC-KY-75          | Kynar            | Ceramic           | Hastelloy C        | 150 psi       | 200F (93C)          | 3/4" MNPT                | 2 3/4"                | 24"                    | 3/4" MNPT  |
| QC-KY-100         | Kynar            | Ceramic           | Hastelloy C        | 150 psi       | 200F (93C)          | 1" MNPT                  | 2 3/4"                | 24"                    | 1" MNPT    |
| QC-KY-100-50FNPT  | Kynar            | Ceramic           | Hastelloy C        | 150 psi       | 200F (93C)          | 1" MNPT                  | 2 3/4"                | 24"                    | 1" FNPT    |

### Chemical Injection Quills - No Check Valves (QB)

| Model             | Material of Body | Maximum Temperature | Connection Size MALE NPT | Standard Quill Length | Max. Quill Length (SP) | Inlet Size |
|-------------------|------------------|---------------------|--------------------------|-----------------------|------------------------|------------|
| QB-PVC-50         | PVC              | 100 F (37C)         | 1/2" FNPT                | 2 3/4"                | 24"                    | 1/2" MNPT  |
| QB-PVC-75         | PVC              | 100 F (37C)         | 3/4" FNPT                | 2 3/4"                | 24"                    | 3/4" MNPT  |
| QB-PVC-100        | PVC              | 100 F (37C)         | 1" FNPT                  | 2 3/4"                | 24"                    | 1" MNPT    |
| QB-PVC-100-50FNPT | PVC              | 100 F (37C)         | 1" FNPT                  | 2 3/4"                | 24"                    | 1" FNPT    |
| QB-316-50         | 316 SSTL         | 500F (260C)         | 1/2" FNPT                | 2 3/4"                | 24"                    | 1/2" MNPT  |
| QB-316-75         | 316 SSTL         | 500F (260C)         | 3/4" FNPT                | 2 3/4"                | 36"                    | 3/4" MNPT  |
| QB-316-100-50FNPT | 316 SSTL         | 500F (260C)         | 1" FNPT                  | 2 3/4"                | 24"                    | 1" FNPT    |
| QB-316-100        | 316 SSTL         | 500F (260C)         | 1" FNPT                  | 2 3/4"                | 24"                    | 1" MNPT    |
| QB-C20-50         | C-20             | 750 F (400C)        | 1/2" FNPT                | 2 3/4"                | 24"                    | 1/2" MNPT  |
| QB-KY-50          | Kynar            | 200F (93C)          | 1/2" FNPT                | 2 3/4"                | 24"                    | 1/2" MNPT  |
| QB-KY-75          | Kynar            | 200F (93C)          | 3/4" FNPT                | 2 3/4"                | 24"                    | 3/4" FNPT  |
| QB-KY-100FNPT     | Kynar            | 200F (93C)          | 1" FNPT                  | 2 3/4"                | 24"                    | 1" MNPT    |
| QB-KY-100-50      | Kynar            | 200F (93C)          | 1" FNPT                  | 2 3/4"                | 24"                    | 1" FNPT    |

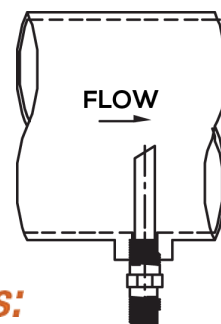


## Options:

- With or without check valves.
- Standard lengths of 2 3/4" for 4" pipes.
- Custom lengths to 36" (SP).
- Materials: PVC, Stainless Steel, C-20, Kynar.



Installation Position



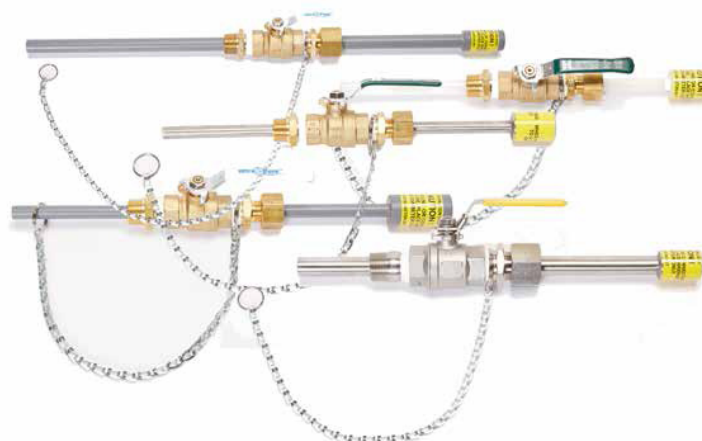
## Recommendations:

- For lines smaller than 4" diameter, trim quill so chemical is released near center of line. Use as is for lines over 4" diameter or order special length that will disperse the chemical near the center of the pipe.
- 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.



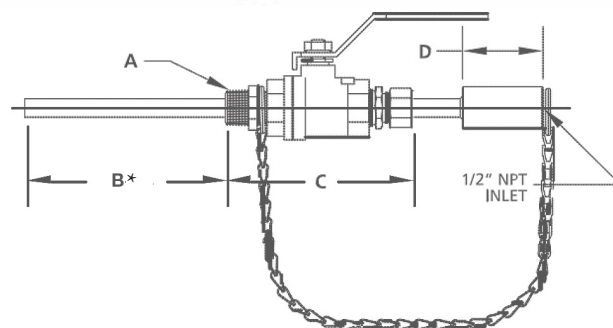
## Features:

- 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 on all models.



## Recommendations:

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



## Retractable Corporation Stop Chemical Injection Quill

| Model              | Material of Constuction | Operating Pressure | Maximum Temperature | A        | C      | D      | Inlet NPT | B* (Max Length) Std Quill | B* (SP)   |
|--------------------|-------------------------|--------------------|---------------------|----------|--------|--------|-----------|---------------------------|-----------|
| <b>CS2-50-PVC</b>  | CPVC                    | 125 psi            | 100F (37C)          | 1/2" NPT | 5 1/4" | 2"     | 1/2"      | 7 3/4"                    | Up to 24" |
| <b>CS2-75-PVC</b>  | CPVC                    | 125 psi            | 100F (37C)          | 3/4" NPT | 5 1/4" | 2"     | 1/2"      | 7 3/4"                    | Up to 24" |
| <b>CS2-100-PVC</b> | CPVC                    | 125 psi            | 100F (37C)          | 1" NPT   | 6 1/4" | 1 1/2" | 1/2"      | 7 1/4"                    | Up to 24" |
| <b>CS2-50-KY</b>   | Kynar                   | 150 psi            | 200F (93C)          | 1/2" NPT | 5 1/4" | 2 3/8" | 1/2"      | 7 3/4"                    | Up to 24" |
| <b>CS2-75-KY</b>   | Kynar                   | 150 psi            | 200F (93C)          | 3/4" NPT | 5 1/4" | 2 3/8" | 1/2"      | 7 3/4"                    | Up to 24" |
| <b>CS2-100-KY</b>  | Kynar                   | 150 psi            | 200F (93C)          | 1" NPT   | 6 1/4" | 2"     | 1/2"      | 6 3/4"                    | Up to 24" |
| <b>CS2-50-316</b>  | 316 SSTL                | 150 psi            | 250F (121C)         | 1/2" NPT | 5 1/4" | 2 3/8" | 1/2"      | 7 1/2"                    | Up to 24" |
| <b>CS2-75-316</b>  | 316 SSTL                | 150 psi            | 250F (121C)         | 3/4" NPT | 5 1/4" | 2 3/8" | 1/2"      | 7 1/2"                    | Up to 36" |
| <b>CS2-100-316</b> | 316 SSTL                | 150 psi            | 250F (121C)         | 1" NPT   | 6 1/4" | 2 3/8" | 1/2"      | 6 1/2"                    | Up to 36" |
| <b>CS2-50-C20</b>  | C-20                    | 150 psi            | 250F (121C)         | 1/2" NPT | 5 1/4" | 2 3/8" | 1/2"      | 7 1/2"                    | Up to 36" |
| <b>CS2-75-C20</b>  | C-20                    | 150 psi            | 250F (121C)         | 3/4" NPT | 5 1/4" | 2 3/8" | 1/2"      | 7 1/2"                    | Up to 36" |
| <b>CS2-100-C20</b> | C-20                    | 150 psi            | 250F (121C)         | 1" NPT   | 6 1/4" | 2 3/8" | 1/2"      | 6 1/2"                    | Up to 36" |

\* "B" is the standard quill length. Custom lengths (SP) may be order up to 24" or 36".



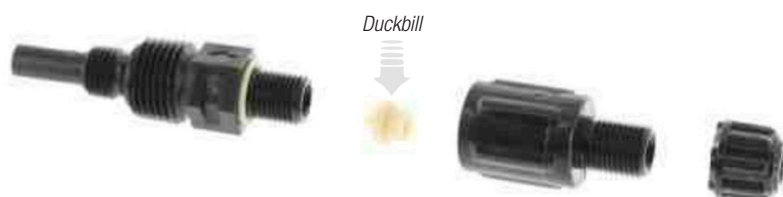


## Polypropylene Chemical Injection Quill

This injection quill is designed to work with 1/4" or 3/8" diameter hosing. Rated up to 100 psi, these chemical injection quills come with a Santoprene or Pellathane material internal duckbill. Product UCAK300 is designed with no check valve.

Check the chemical resistant guide (*Product Bulletin: Chemical PB*) for the correct duckbill selection within your check valve.

| Model                        | Material of Construction   | Operating Pressure | Injection Port NPT | Inlet NPT | Quill Length | Max Temp |
|------------------------------|----------------------------|--------------------|--------------------|-----------|--------------|----------|
| <b>UCAK300 &amp; MCAK300</b> | Polypropylene              | None               | 1/2"               | 1/4"      | 1 1/4"       | 125F     |
| <b>MCDBINJ</b>               | Polypropylene / Santoprene | 100 psi            | 1/2"               | 1/4"      | 1 1/4"       | 125F     |
| <b>MCTYINJ</b>               | Polypropylene / Pellathane | 100 psi            | 1/2"               | 1/4"      | 1 1/4"       | 125F     |
| <b>MCBINJ &amp; UCINJ38</b>  | Polypropylene / Santoprene | 100 psi            | 1/2"               | 3/8"      | 1 1/4"       | 125F     |
| <b>MCTYIJ38</b>              | Polypropylene / Pellathane | 100 psi            | 1/2"               | 3/8"      | 1 1/4"       | 125F     |

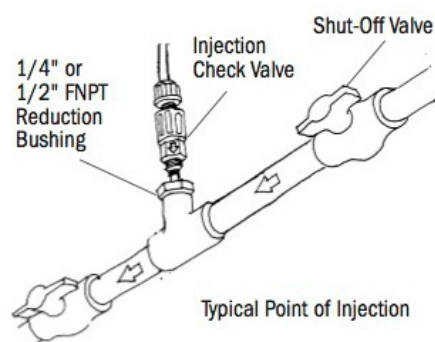


P/N MCDBINJ  
1/4" Stenner Chemical Injection Quills (100 psi)

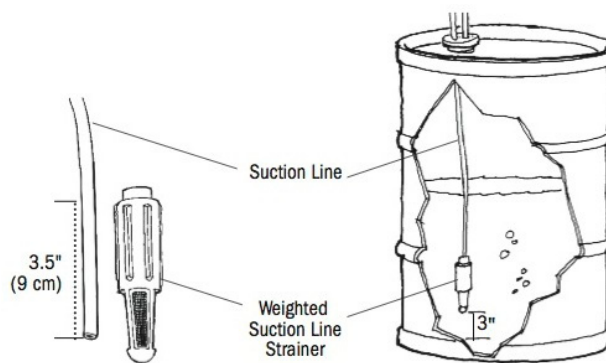
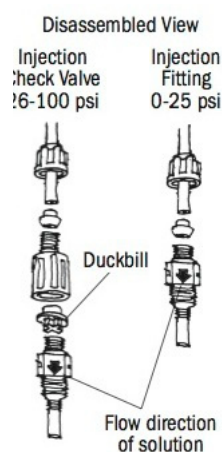


P/N MCDBINJ  
Completed Assembly

### Quill Installation



### Quill Assembly



Optional Foot Valve (P/N ST114 or ST138)

Distributed by:

# Multi-Port Chemical Injection Quills

## Dual Port Injection Quill

These dual port chemical injection quills are specially designed to ensure a more uniform and rapid dispersal of TWO chemical injects into one port. This allows the chemicals to be injected near the center of the process stream pipe and minimizes any chance of chemicals clinging/damaging of the pipe inner surface.

The dual injection quills are primarily made of Type 316 SSTL they are designed to allow two chemicals to be injected into one port simultaneously.

### Standard P/N design options:

- Process Connection Size: 1/2", 3/4", or 1" mnpt (-050, -075, & -100, respectively).
- High Pressure Check Valve Kits: (-CVK)
- Shutoff Ball Valves: (-BV)

### Features:

- Check valve kits are option on the pump side connection for easy installation and come assembled ready for use.
- Insertion length of the inner tube is adjustable, based on where the compression fitting is secured.
- Hex shaped body allows a wrench to be used during installation
- This product includes two 1/4" or 1/2" pump connectors for quick connection of you 1/4" or 1/2" chemical tubes.

### Special Options:

Specific quill lengths and materials of Alloy 20 and Hastelloy are available upon special request. Please email your requirements to [quotes@chemworld.com](mailto:quotes@chemworld.com).

### Quick Ordering Breakdown:

- QD316-050: 1/2" mnpt Process Connection
- QD316-075: 3/4" mnpt Process Connection
- QD316-100: 1" mnpt Process Connection
- QD316-050CVK: 1/2" mnpt Process Connection includes 2 Check Valve Kits
- QD316-075CVK: 3/4" mnpt Process Connection includes 2 Check Valve Kits
- QD316-100CVK: 1" mnpt Process Connection includes 2 Check Valve Kits
- QD316-050BV-CVK: 1/2" mnpt Process Connection w/ 2 Ball Valves & 2 Check Valve Kits
- QD316-075BV-CVK: 3/4" mnpt Process Connection w/ 2 Ball Valves & 2 Check Valve Kits
- QD316-100BV-CVK: 1" mnpt Process Connection w/ 2 Ball Valves & 2 Check Valve Kits

## Standard Types:

| Part Number     | Process Connection | Pump Connection | Inner Quill Size (Tubing) | Outer Quill Size (Pipe) | Inner Quill Length | Outer Quill Length | Pressure (Max) | Temperature (Max) |
|-----------------|--------------------|-----------------|---------------------------|-------------------------|--------------------|--------------------|----------------|-------------------|
| QD316-050       | 1/2" MNPT          | 1/4" FNPT       | 1/4"                      | 1/4"                    | 2 3/4"             | Up to 7"           | 0 psi          | 500F (260C)       |
| QD316-050-CVK   | 1/2" MNPT          | 1/4" FNPT       | 1/4"                      | 1/4"                    | 2 3/4"             | Up to 7"           | 1000 psi       | 375F (190C)*      |
| QD316-050BV-CVK | 1/2" MNPT          | 1/4" FNPT       | 1/4"                      | 1/4"                    | 2 3/4"             | Up to 7"           | 1000 psi       | 375F (190C)*      |
| QD316-75        | 3/4" MNPT          | 1/2" FNPT       | 3/8"                      | 3/8"                    | 2 3/4"             | Up to 7"           | 0 psi          | 500F (260C)       |
| QD316-075-CVK   | 3/4" MNPT          | 1/2" FNPT       | 3/8"                      | 3/8"                    | 2 3/4"             | Up to 7"           | 1000 psi       | 375F (190C)*      |
| QD316-75BV-CVK  | 3/4" MNPT          | 1/2" FNPT       | 3/8"                      | 3/8"                    | 2 3/4"             | Up to 7"           | 1000 psi       | 375F (190C)*      |
| QD316-100       | 1" MNPT            | 1/2" FNPT       | 3/8"                      | 3/8"                    | 2 3/4"             | Up to 7"           | 0 psi          | 500F (260C)       |
| QD316-100-CVK   | 1" MNPT            | 1/2" FNPT       | 3/8"                      | 3/8"                    | 2 3/4"             | Up to 7"           | 1000 psi       | 375F (190C)*      |
| QD316-100BV-CVK | 1" MNPT            | 1/2" FNPT       | 3/8"                      | 3/8"                    | 2 3/4"             | Up to 7"           | 1000 psi       | 375F (190C)*      |

\* Max temperature rating is based on units provided with check valves.



QD316-075BV-CVK

Order Directly online at [www.ChemWorld.com](http://www.ChemWorld.com)



Distributed by:

## Multi-Port Chemical Injection Quills

### 3 & 4 Ports Injection Quill

These 3 and 4 port chemical injection quills are specially designed to ensure a more uniform and rapid dispersal of three or four chemicals into one port. This allows the chemicals to be injected near the center of the process stream tank or deaerator.

This standard product is made of 316 SST. Alloy 20 and Hastelloy materials are also available upon request, please email us at [quotes@chemworld.com](mailto:quotes@chemworld.com).

#### Features:

- Manufactured with 1", 1 1/2", and 2" mnpt process connect threads.
- Hex body shape allows for a wrench to be used during installation.
- Made in the USA.
- Each quill is welded to two rings to prevent quills from unscrewing.
- The product may be ordered with 3 or 4 inject ports.
- Optional shut off ball valves and check valve kits (-cvk) may be added to your order. (as seen in photo).

#### Part Number Breakdown:

- QT-316-100: 1" SSTL process connection 3 port chemical injection quill
- QT-316-150: 1 1/2" SSTL process connection 3 port chemical injection quill
- QT-316-200: 2" SSTL process connection 3 port chemical injection quill
- QT-316-100-CVK: 1" SSTL process connection 3 port injection quill, includes 3 ball valves & check valve kits.
- QT-316-150-CVK: 1 1/2" SSTL process connection 3 port injection quill, includes 3 ball & check valve kits.
- QT-316-200-CVK: 2" SSTL process connection 3 port injection quill, includes 3 ball & check valve kits.
- Q4-316-200-CVK: 2" SSTL process connection 4 port chemical injection quill.
- Q4-316-200-CVK: 2" SSTL process connection 4 port injection quill, includes 3 ball & check valve kits.

### Standard Types:

| Part Number    | Number of Ports | Process Connection | Chemical Inlet | Quill Size | Quill Length | Pressure (max) | Temperature (max) |
|----------------|-----------------|--------------------|----------------|------------|--------------|----------------|-------------------|
| QT-316-100     | 3               | 1" MNPT            | 1/4" FNPT      | 1/4"       | 18"          | 0 psi          | 500F (260C)       |
| QT-316-100-CVK | 3               | 1" MNPT            | 1/4" FNPT      | 1/4"       | 18"          | 1000 psi       | 375F (190C)*      |
| QT-316-150     | 3               | 1 1/2" MNPT        | 1/4" FNPT      | 1/4"       | 18"          | 0 psi          | 500F (260C)       |
| QT-316-150-CVK | 3               | 1 1/2" MNPT        | 1/4" FNPT      | 1/4"       | 18"          | 1000 psi       | 375F (190C)*      |
| QT-316-200     | 3               | 2" MNPT            | 1/4" FNPT      | 1/4"       | 18"          | 0 psi          | 500F (260C)       |
| QT-316-200-CVK | 3               | 2" MNPT            | 1/4" FNPT      | 1/4"       | 18"          | 1000 psi       | 375F (190C)*      |
| Q4-316-200     | 4               | 2" MNPT            | 1/4" FNPT      | 1/4"       | 18"          | 0 psi          | 500F (260C)       |
| Q4-316-200-CVK | 4               | 2" MNPT            | 1/4" FNPT      | 1/4"       | 18"          | 1000 psi       | 375F (190C)*      |

\* Max temperature rating is based on units provided with check valves.



QT-316-100-CVK

Order Directly online at [www.ChemWorld.com](http://www.ChemWorld.com)

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## Multi-Port Chemical Injection Quills

### Retractable 3 Port Quill

#### Application includes:

- Injection Quills are designed to ensure a more uniform and rapid dispersal of injection chemicals into the center of the process pipe of tank.
- Deaerator and boiler feed water tank applications are suited well for this product.
- This product is primarily made of type 316 stainless steel.

#### Features:

- Three shut off ball valves are included with this product.
- Alloy 20 and Hastelloy materials are also available.
- Special quill lengths may also be order upon request. Please email us at [quotes@chemworld.com](mailto:quotes@chemworld.com).
- Hex body shape allows for a wrench to be used during installation.
- Made in the USA.
- Each quill is welded to two rings to prevent quills from unscrewing.
- Optional: Check valves (-CV) are optional with this unit. If ordered they come installed. (As seen in the photo).



QR3-250-316SS-Q12S-CV

### Standard Types:

| Part Number           | Process Connection (standard) | Chemical Inlet Connection (3 ports) | Quill Size | Quill Length (Standard) | Pressure (max) | Temperature (max) |
|-----------------------|-------------------------------|-------------------------------------|------------|-------------------------|----------------|-------------------|
| QR3-250-316SS-Q12S    | 2 1/2" MNPT                   | 1/2" FNPT                           | 1/2"       | 12"                     | 150 psi        | 250F (121C)       |
| QR3-250-316SS-Q12S-CV | 2 1/2" MNPT                   | 1/2" FNPT                           | 1/2"       | 12"                     | 150 psi        | 250F (121C)       |
| QR3-300-316SS-Q12S    | 3" MNPT                       | 1/2" FNPT                           | 1/2"       | 12"                     | 150 psi        | 250F (121C)       |
| QR3-300-316SS-Q12S-CV | 3" MNPT                       | 1/2" FNPT                           | 1/2"       | 12"                     | 150 psi        | 250F (121C)       |

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## Retractable Injection Quill

This retractable chemical injection quill allows for proper injection into liquid, gas or mixed phase system.

- Nozzles can be removed for inspection without system shutdown.
- Adjustable quill permits precise positioning of quill in fluid flow.
- Restrains stinger during insertion/removal.
- Standard size includes: 1/2", 3/4", & 1" MNPT (standard).
- Other available in larger sizes, up to 3" MNPT connection. (please email [quotes@chemworld.com](mailto:quotes@chemworld.com) for a quote).
- Welded safety collar.
- Other available CPVC, Alloy 20 Hastelloy (please email us for a quote).
- Made in the USA.
- Quill internal diameter is 1/4".
- Pressure rating: 300 psi.
- Wetted Parts: 316 stainless steel.
- Packing: Graphite (maximum temperature 700 F).
- Rated to 500 F.
- Includes one 316 SSTL shut off ball valve.

ChemWorld also stocks PVC, Kynar, and C-20 injection quills. For chemical applications that never shut down, consider using a stainless steel corporation stop valves.



QR-050-SS



Order Directly online at [www.ChemWorld.com](http://www.ChemWorld.com)