Product Data Sheet
RXPS-002276, Rev A
December 2019

Roxar™ Injection Quill

Chemical injection systems are essential to corrosion control and process optimization programs. They are commonly used in the petroleum, chemical, and water treatment industries. The Roxar Injection Quill is an open-ended tube cut at a 45 ° (60° for certain applications) with a slot. The Roxar Injection Quill is used in systems that inject a wide range of chemicals into processes such as biocides, demulsifiers, corrosion inhibitors, and oxygen scavengers.

The Roxar Injection Quill system takes samples of the process fluid for further evaluation in a laboratory for inhibitor concentration levels, oxygen levels, scale forming compounds, and a wide range of process parameters. The Roxar Injection Quill is also available in nozzle spray and open type injection tubes.

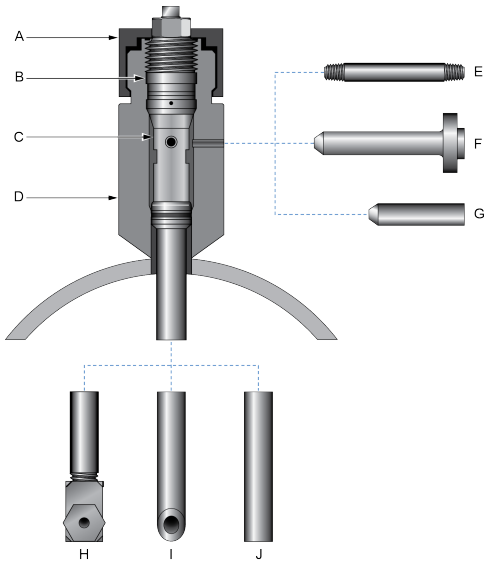
The Roxar Injection Quill has the following features:

- Enables highly effective dispersion of the chemical to be injected in the pipe
- Utilizes the turbulence created by its design to provide an efficient distribution of the injected chemical into the product flow
- Allows for use with both mechanical access fittings and hydraulic access fittings, which enables cost reductions
- Provides for safe retrieval even during the pipeline operation allowing the operator to inspect, easily clean, and carry out the maintenance work in safe conditions without stopping production

Operating principle

The Roxar Injection Quill is designed to be installed in the most effective position, usually at the center of the pipe, to ensure even distribution of the injected chemical to the flow. By adopting the Roxar Access Fittings that are used for corrosion monitoring, the user has the option of maintaining, cleaning, or replacing an injection tube without site or plant shutdowns.

Figure 1: Components of the complete Chemical Injection and Sampling Assembly

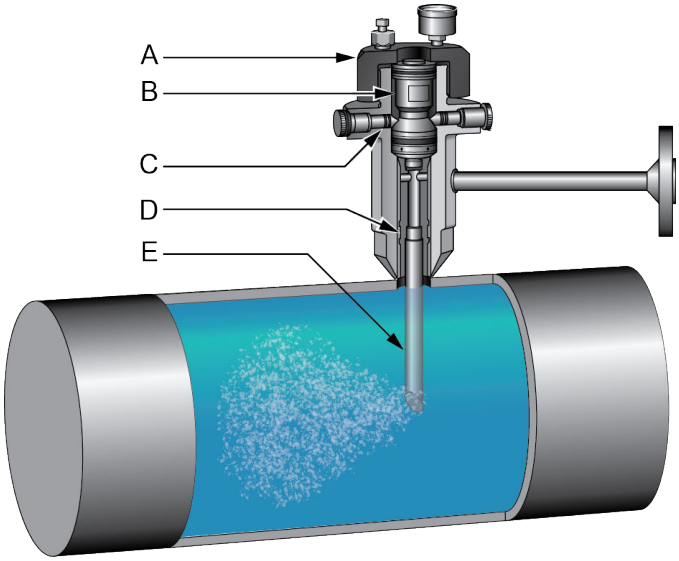


A. Protective cover
B. Solid plug
C. Injection nut
D. Access fitting
E. NPT option
F. Nipple flange option
G. Nipoled option
H. Spray nozzle option
I. Open (Sampling) option
J. Quill option

Figure 2: Complete Roxar injection system comprising of hydraulic access fitting tee-type, quill, plug and cover

Main components of a Chemical Injection System

Figure 3: Roxar Hydraulic Access Fitting with side connection, solid plug and injection tube and nut



A. Pressure-proof cover
B. Solid plug
C. Hydraulic access fitting tee-type
D. Injection nut
E. Injection tube

Model code numbering system

Product description

Model	Product description
IQUILL	Injection and sampling quill

Tube/nut interface

Code	Tube/nut interface
20	¼ in NPT
21	½ in NPT
22	¼ in WEL
23	½ in WEL
24	¾ in WEL
30(1)(2)(3)	Integral

(1) *Not available with material but option 0N0N.*
(2) *Only available with nut mounting option LN.*
(3) *Only available with schedule tube N0.*

Nut mounting

Code	Nut mounting
LN(1)(2)(3)(4)	Not applicable
L1	For access fitting Flareweld and Flanged ≤ 400/600# 95 mm
L2(5)(6)	For access fitting Flanged ≥900/1500# 140 mm

(1) *Not available with tube/nut interface options 22, 23, 24, 30.*
(2) *Not available with injection tube type option NTN for tube nut interface options 20, 21, 99.*
(3) *Only available with material nut option 0N0N.*
(4) *Only available with operating mode and conditions option 00.*
(5) *Not available with material nut option 0N0N.*
(6) *Only available with table/nut interface option 30.*

Injection tube type

Code	Injection tube type
NTN(1)(2)(3)	Not applicable
OT0	Open tube without non-return valve
NT0	Spray nozzle without non-return valve material stainless steel A479.Gr.316L, bar, EN 10204 3.1 NACE MR0175
NT1	Spray nozzle without non-return valve material duplex A479 UNS S31803, bar, EN 10204 3.1 NACE MR0175
QT0	Quill 45 ° without non-return valve
QT2	Quill 60 ° without non-return valve

(1) *Not available with tube/nut interface options 22, 23, 24, 30.*
(2) *Only available with schedule tube option N0 and quill length L000.*
(3) *Only available with material tube option 0N0N.*

Material nut

Code	Material nut
0N0N(1)(2)	Not applicable
26CA(3)	Stainless steel A479 Gr. 316L, bar EN 10204 3.1 NACE MR0175
2D6A(4)	Duplex A479 UNS S31803, bar EN 10204 3.1 NACE MR0175
2E6A(5)	Super duplex A479 S32760, bar EN 10204 3.1 NACE MR0175
3A6A(6)	Nickel alloy B446 N06625, bar EN 10204 3.1 NACE MR0175
3C6A(7)	Incolloy B425 N08825, bar EN 10204 3.1 NACE MR0175

(1) *Not available with table/nut interface options 22, 23, 24.*
(2) *Only available with operating mode and conditions option 00.*
(3) *Only available with material tube option 0N0N, 2C7A, 9X9X.*
(4) *Only available with material tube option 0N0N, 2D7A, 9X9X.*
(5) *Only available with material tube option 0N0N, 2E7A, 9X9X.*
(6) *Only available with material tube option 0N0N, 3A7A, 9X9X.*
(7) *Only available with material tube option 0N0N, 3C7A, 9X9X.*

Operating mode and conditions

Code	Operating mode and conditions
00(1)	Not applicable
01	Standard Viton® O-ring, PTFE backup rings
02	Rapid gas decompression FR 25/90 O-ring, PTFE backup rings
03	Rapid gas decompression and/or 100% Methanol Elast-O-Lion® 101 O-ring, PTFE backup rings
04	Standard generic FKM 75 O-ring, PTFE backup rings
05	Rapid gas decompression Generic FKM 90 O-ring, PTFE backup rings

Code	Operating mode and conditions
06	Rapid gas decompression and/or 100% methanol generic HNBR 90 O-ring, PTFE backup rings

(1) *Only available with nut mounting option LN.*

Material tube

Code	Material tube
0N0N[1][2][3]	Not applicable
2C7A[4]	Stainless steel A312 Gr. 316L, tube EN 10204 3.1 NACE MR0175
2D7A[4]	Duplex A790 UNS S31803, tube EN 10204 3.1 NACE MR0175
2E7A[4]	Super duplex A790 S32760, tube EN 10204 3.1 NACE MR0175
3A7A[4]	Nickel alloy B444 N06625, tube EN 10204 3.1 NACE MR0175
3C7A[4]	Nickel alloy B423 N08825, tube EN 10204 3.1 NACE MR0175

(1) *Only available with tube/nut interface option 20. 21, 30.*
(2) *Not available with tube/nut interface option.*
(3) *Only available with injection tube type option NTN.*
(4) *Not available with tube/nut interface option 30.*

Schedule tube

Code	Schedule tube
N0[1]	Not applicable
S1[2]	XS
S2[3]	XXS
S3[4]	160

(1) *Not available with injection tube type options OT0, NT0, NT1, QT0, QT2, XX9.*
(2) *Not available with tube/nut interface options 21, 23, 24, 30.*
(3) *Not available with tube/nut interface options 20, 21, 22, 23, 30.*
(4) *Not available with tube/nut interface options 20, 22, 24, 30.*

Quill length

Code	Quill length
L000[1]	Calculated length for injection quill
L100-L900	Quill length (mm)

(1) *Not available with injection tube type options OT0, NT0, NT1, QT0, QT2, XX9.*

Factory options

Code	Factory options
Z	Standard product

Certificates, tests, calibrations and services

Code	Certificates, tests, calibrations and services (optional)
D1	Dye penetrant test
D2(1)	Dye penetrant test for welds
PM	Positive material identification

(1) *Not available with tube/nut interface options 20, 21, 30.*

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