

Sentry® QCIII Quick Connect Systems

The cleanest, safest, most user-friendly connection system available for high-purity bulk chemical dispense

Entegris introduced our first patented Quick Connect System over 25 years ago and our system remains the industry standard for high-purity chemical dispense. Expanding on the proven performance and functionality of this quick connect system, the Sentry® QCIII quick connect system is today's safest and easiest method of connecting chemical containers with typical bulk chemical delivery systems. This patented connection system comprises a key coded dispense head (DH3) and drum insert (DI3) that self align. Simply rotating the retaining ring pulls the DH3 and DI3 together so no visual line of site is required to make the connection – simplifying the assembly process significantly.

The Sentry QCIII quick connect system is designed for use with FluoroPure® chemical containers including HDPE transport drums, PFA composite drums, pressure vessels, and intermediate bulk containers.

APPLICATIONS

- High-purity, corrosive chemical handling
- Ideal for high flow chemical distribution applications
- Bulk chemical delivery in pharmaceutical and biopharmaceutical applications



Sentry® QCIII Quick Connect Systems

FEATURES & BENEFITS

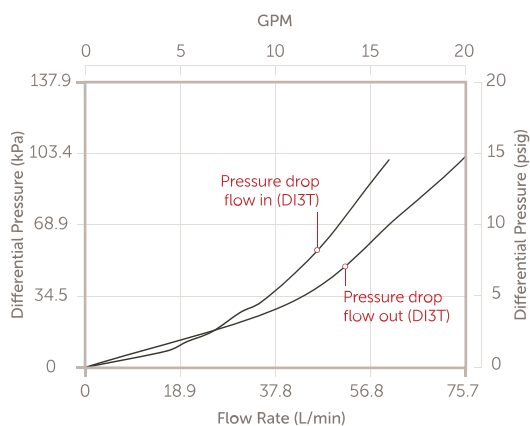
The main chemical dispense line utilizes Flaretek® sealing technology	Provides a leak-free, secure connection without O-rings
Key coded system	Eliminates the need for O-ring replacement and maintenance, minimizing downtime
Four ports are designed into the system	Ensures against unsafe chemical mixing while guaranteeing dedicated clean service
Optimized dispense head flow path	Enables recirculation and dispense operations in one connection, eliminating the need for an independent recirculation dispense head and drum insert
Laser marked dispense head and drum insert	Assembles faster, requires less labor, reduces maintenance, and lowers costs
	Allows chemical dispense at 1.5x the flow rate of standard quick connection systems, reducing recirculation time and increasing process efficiency
	Allows quick visual identification and 100% traceability to a production date and production inspection record

SPECIFICATIONS

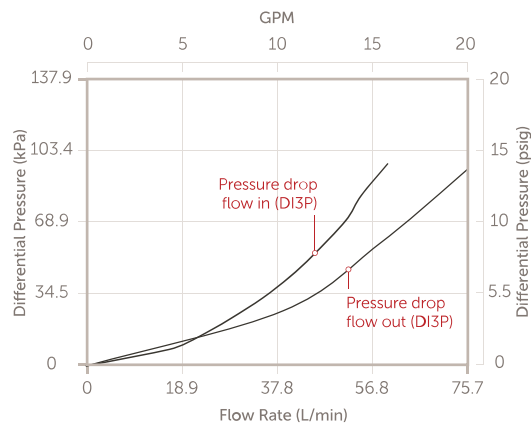
Materials of construction	Dispense head:	Wetted parts include PFA, FEP, and Kalrez® 4001 materials. Wetted parts are Kalrez 6221 for Life Science applications.
		Nonwetted parts are PFA and polyethylene.
		Nut materials are PFA, PVDF or CPFA.
	Drum insert:	Wetted parts are PFA and/or polyethylene with FEP encapsulated o-rings. Nonwetted parts are polyethylene.
Operating parameters	Maximum pressure:	30 psig (207 kPa) @ 77°F (25°C)
	Maximum pressure on recirculation port:	5 psig (34.5 kPa)
	Regulatory:	All internal wetted surfaces are made from resins that comply with FDA regulation 21 CFR 177.1550 or 21 CFR 177.2600 for use as articles or components of articles intended to contact food. Representative samples of these resins have been tested for biocompatibility in accordance with USP protocol and all meet the requirements of a USP Class VI (121 C) plastic. These resins also do not use any animal derived materials as intentional components.

PERFORMANCE DATA

Dispense Port Water Flow vs. Pressure Drop

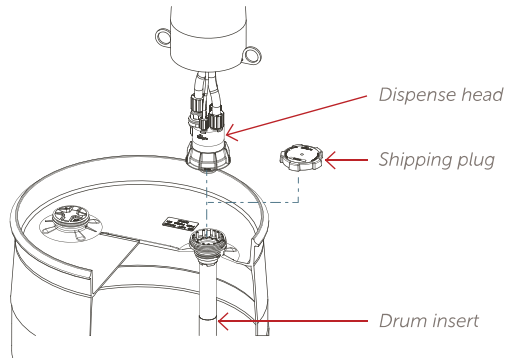


Dispense Port Water Flow vs. Pressure Drop

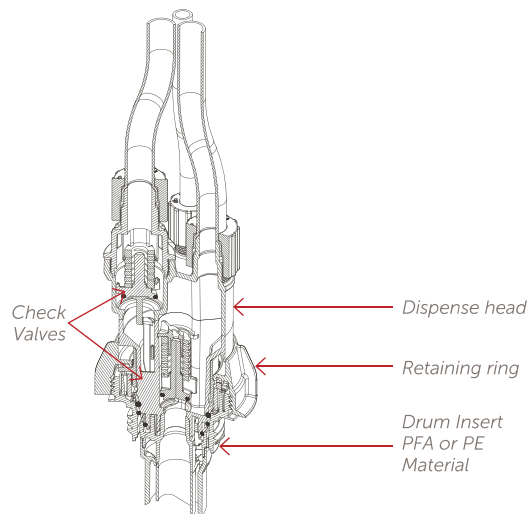


DRAWINGS

Attaching DH3 to DI3

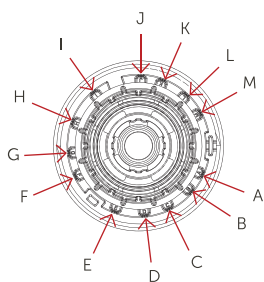


DH3/DI3 Assembly Cross Sectional

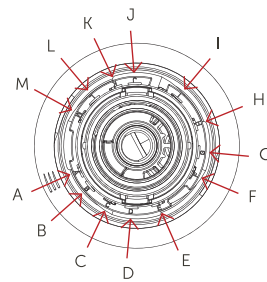


Note: The 1/4" Flaretek verification port is not shown due to cutaway view.

Drum Insert Key Code Tabs



Dispense Head Rotating Key Code Ring Notches



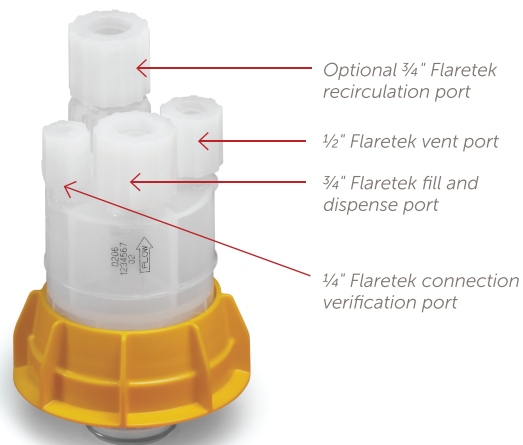
Key Codes

Our patented quick connect system is key coded to ensure against unsafe chemical mixing while guaranteeing dedicated clean service. One connection provides dispensing, venting, and level detection/connection verification.

Due to the large quantity of key coded options, drum inserts are key coded per customer order.

A series of seven tabs/slots are used to make up each chemical code.

Port Options



ORDERING INFORMATION

Sentry QCIII Drum Inserts: part number

DI3

- - - -

Special instructions

00 = Standard angle cut
on downtube

01 = No angle cut on
downtube

DI tracking tag

0 = Standard serial number tag

1 = No tag

O-ring material (shipping cap)

0 = FEP encapsulated silicone

1 = FEP encapsulated FKM

2 = FEP encapsulated EPDM

Shipping cap

0 = Standard

3 = Manual relief

6 = Vented (H₂O₂)

Chemical key code

Contact the factory for chemical
codes assignments.

Drum insert length

01 = 200 liter FluoroPure PFA composite drum

02 = 100 liter FluoroPure PFA composite drum

03 = 50 liter FluoroPure PFA composite drum

07 = 100 liter FluoroPure pressure vessel

08 = 20 liter FluoroPure pressure vessel

25 = 200 liter FluoroPure PGI Trilayer HDPE drum

28 = 20 liter FluoroPure PFA lined pail

29 = 55 gallon FluoroPure HDPE drum

1M = 200 liter FluoroPure Asia/Pacific HDPE drum

49 = 500 liter FluoroPure PE or PFA IBC

50 = 800 liter FluoroPure PE or PFA IBC

51 = 1200 liter FluoroPure PE or PFA IBC

53 = 175 liter FluoroPure PE/PE or PE/PFA
composite drum

XX = Contact the factory for additional assignments

Number of ports

3 = Standard

4 = Includes recirculation diffuser

Material of construction

P = Polyethylene

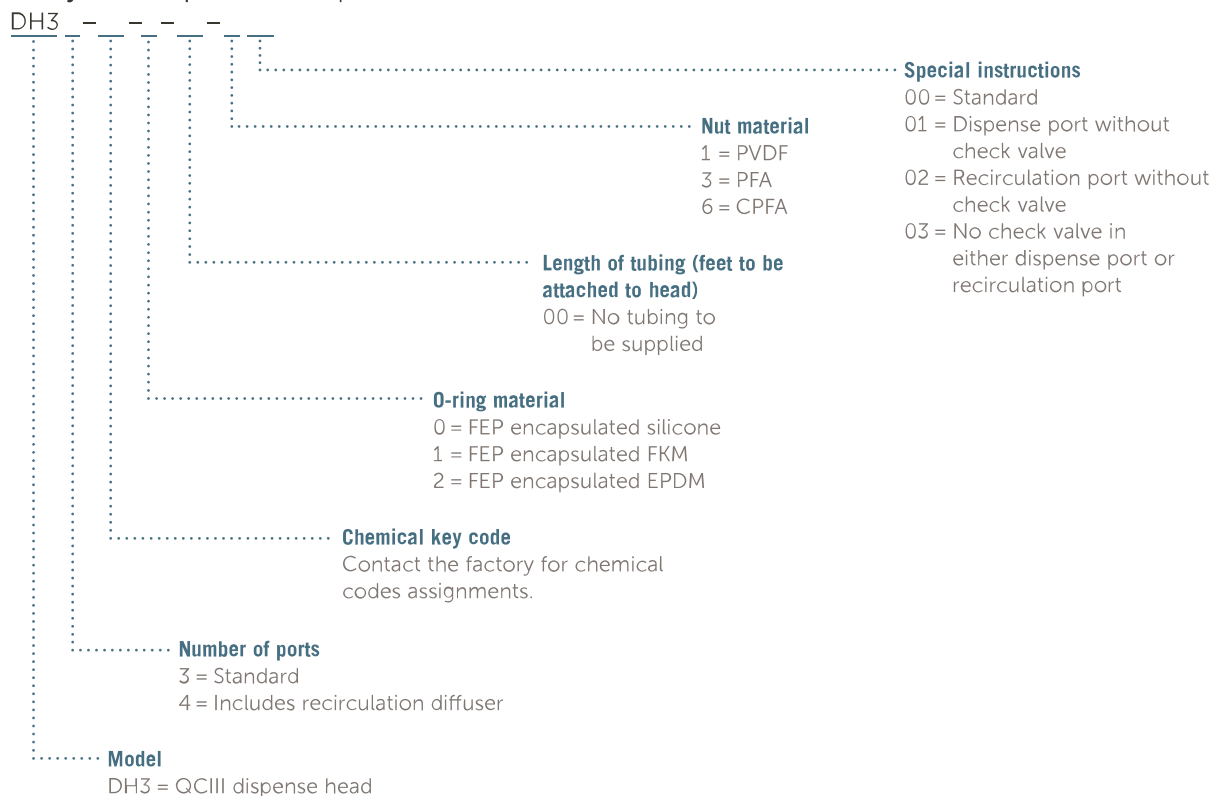
T = PFA

Model

DI3 = QCIII drum insert

ORDERING INFORMATION

Sentry QCIII Dispense Heads: part number



FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit entegris.com and select the [Contact Us](#) link to find the customer service center nearest you.

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