

# FluoroLine® Plus Dual Containment Tubing

*Enabling uninterrupted process lines  
and increased chemical resistance at  
lower cost per installed foot of tubing*

## Clean, Continuous Lengths

Entegris offers ultraclean FluoroLine® Plus dual containment tubing for use in high-purity sub-fab applications. This innovative product allows long, continuous double-contained tubing lengths without the introduction of contaminants common when pulling tubing through traditional PVC secondary containment. For extreme purity needs, this ultraclean tubing has the lowest total metal extractables and least amount of surface contamination.

## PFA Primary Containment

Entegris offers three grades of ultrapure FluoroLine PFA tubing for primary containment: high-purity HP PFA plus, high-purity high molecular weight (HMW) PFA, and high-purity PFA. Each is made from 100% virgin PFA material and is ideal for use in high-purity, highly corrosive applications. PFA primary containment tubing is available in  $\frac{1}{4}$ ",  $\frac{3}{8}$ ",  $\frac{1}{2}$ ",  $\frac{3}{4}$ ", 1", and  $1\frac{1}{4}$ " sizes.

## Special Blend PFA Secondary Containment

FluoroLine Plus PFA tubing comprises the secondary containment in Entegris' dual containment tubing. This special blend PFA material offers improved chemical resistance at a lower cost, and provides clarity for easy visual inspection of primary tubing. Unlike rigid PVC pipe, which is commonly used for secondary containment, FluoroLine Plus PFA tubing is flexible and bends easily. No heat bending containment pipe or tensile pulling primary tubing is required during installation. FluoroLine Plus PFA secondary containment is available in  $\frac{1}{2}$ ",  $\frac{3}{4}$ ", 1",  $1\frac{3}{8}$ ", and 40 mm sizes.

## Fast and Easy Installation

FluoroLine Plus dual containment tubing can be installed or retrofitted in mere hours instead of days. This enables time-saving installation into areas highly populated with other facility



*Extrusion process reduces contamination potential and enables long, continuous lengths.*

plumbing or facility infrastructure where it is difficult to route rigid PVC containment pipe. Because Entegris' dual containment tubing is available in long, continuous lengths, you no longer have to weld PVC pipe sections together to create the secondary containment system. In addition, the primary tubing does not need to be pulled through PVC pipe on-site, dramatically reducing installation and labor cost.

## APPLICATIONS

- Tool hookup and primary distribution lines in bulk chemical delivery sub-fab applications
- Specialty chemical manufacturing in corrosive chemical environments
- TFT/LCD processes requiring corrosive chemical handling

## FEATURES & BENEFITS

---

|   |   |
|---|---|
| <b>PFA primary containment</b>                                    | Broad chemical compatibility  |
| <b>Special blend of FluoroLine Plus PFA secondary containment</b> | More chemically compatible than competitive secondary containment tubing materials<br>Low cost  |
| <b>Tube-in-tube design</b>  | Long, continuous lengths are possible without connections or welding<br>Faster, less labor-intensive installation<br>Considerable total cost reduction per foot of installed tubing<br>Additional tool hookup lines can be added in hours, not days |
| <b>Flexible tubing</b>  | No tensile pulls are introduced on tubing<br>Does not kink as result of pulling through PVC secondary containment<br>No special and expensive welding or heat bending processes are required  |
| <b>Laser marking on both inner and outer tubing</b>               | Enables traceability to the work order and inspection record  |

## TUBING ORDERING INFORMATION

---

FluoroLine Plus primary tubing has the same pressure and temperature specifications as FluoroLine ultrapure, single line tubing. For pressure and temperature ratings of FluoroLine tubing, visit Entegris' Web site at

[www.entegris.com/products/fluidmanagement](http://www.entegris.com/products/fluidmanagement).  
Minimum order quantities may apply. Contact Entegris, Inc. for additional information.

| Part number*  | Tubing material                         | Process line    | Maximum reel length |
|---|---|-----------------|---------------------|
| DCT500F-250KC<br>Process line<br>Secondary containment line   | FluoroLine XKTUC<br>FluoroLine Plus PFA | 1/4"<br>1/2"    | 1219 m (4000')      |
| DCT750F-375KC<br>Process line<br>Secondary containment line   | FluoroLine XKTUC<br>FluoroLine Plus PFA | 3/8"<br>3/4"    | 457 m (1500')       |
| DCT750F-500KC<br>Process line<br>Secondary containment line   | FluoroLine XKTUC<br>FluoroLine Plus PFA | 1/2"<br>3/4"    | 457 m (1500')       |
| DCT1000F-500KC<br>Process line<br>Secondary containment line  | FluoroLine XKTUC<br>FluoroLine Plus PFA | 1/2"<br>1"      | 229 m (750')        |
| DCT1000F-750KC<br>Process line<br>Secondary containment line  | FluoroLine XKTUC<br>FluoroLine Plus PFA | 3/4"<br>1"      | 229 m (750')        |
| DCT1375F-1000KC<br>Process line<br>Secondary containment line | FluoroLine XKTUC<br>FluoroLine Plus PFA | 1"<br>1 1/8"    | 183 m (600')        |
| DCT1570F-1250KC<br>Process line<br>Secondary containment line | FluoroLine XKTUC<br>FluoroLine Plus PFA | 1 1/4"<br>40 mm | 152 m (500')        |

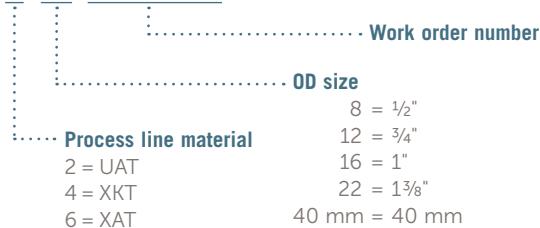
\*Primary containment is also available in other PFA material grades as a special order. To order, contact Entegris.

| Part number*  | OD                                     | OD tolerance                               | ID                                     | Wall thickness                       | Wall thickness tolerance                   | Minimum bend radius              |
|---|--|--|--|--------------------------------------|--|----------------------------------|
| DCT500F-250KC<br>Process line<br>Secondary containment line   | 6.35 mm (0.250")<br>12.70 mm (0.500")  | ±0.102 mm (±0.004")<br>±0.127 mm (±0.005") | 3.96 mm (0.156")<br>9.55 mm (0.376")   | 1.19 mm (0.047")<br>1.57 mm (0.062") | ±0.102 mm (±0.004")<br>±0.127 mm (±0.005") | 38 mm (1.5")<br>70 mm (2.8")     |
| DCT750F-375KC<br>Process line<br>Secondary containment line   | 9.52 mm (0.375")<br>19.05 mm (0.750")  | ±0.102 mm (±0.004")<br>±0.127 mm (±0.005") | 6.38 mm (0.251")<br>15.90 mm (0.626")  | 1.57 mm (0.062")<br>1.57 mm (0.062") | ±0.127 mm (±0.005")<br>±0.127 mm (±0.005") | 51 mm (2.0")<br>229 mm (9.0")    |
| DCT750F-500KC<br>Process line<br>Secondary containment line   | 12.70 mm (0.500")<br>19.05 mm (0.750") | ±0.127 mm (±0.005")<br>±0.127 mm (±0.005") | 9.55 mm (0.376")<br>15.90 mm (0.626")  | 1.57 mm (0.062")<br>1.57 mm (0.062") | ±0.127 mm (±0.005")<br>±0.127 mm (±0.005") | 58 mm (2.3")<br>229 mm (9.0")    |
| DCT1000F-500KC<br>Process line<br>Secondary containment line  | 12.70 mm (0.500")<br>25.40 mm (1.000") | ±0.127 mm (±0.005")<br>±0.127 mm (±0.005") | 9.55 mm (0.376")<br>22.25 mm (0.876")  | 1.57 mm (0.062")<br>1.57 mm (0.062") | ±0.127 mm (±0.005")<br>±0.127 mm (±0.005") | 58 mm (2.3")<br>79 mm (11.0")    |
| DCT1000F-750KC<br>Process line<br>Secondary containment line  | 19.05 mm (0.750")<br>25.40 mm (1.000") | ±0.127 mm (±0.005")<br>±0.127 mm (±0.005") | 15.90 mm (0.626")<br>22.25 mm (0.876") | 1.57 mm (0.062")<br>1.57 mm (0.062") | ±0.127 mm (±0.005")<br>±0.127 mm (±0.005") | 229 mm (9.0")<br>279 mm (11.0")  |
| DCT1375F-1000KC<br>Process line<br>Secondary containment line | 25.40 mm (1.000")<br>34.93 mm (1.375") | ±0.127 mm (±0.005")<br>±0.178 mm (±0.007") | 22.25 mm (0.876")<br>31.12 mm (1.225") | 1.57 mm (0.062")<br>1.57 mm (0.062") | ±0.127 mm (±0.005")<br>±0.178 mm (±0.007") | 279 mm (11.0")<br>457 mm (18.0") |
| DCT1570F-1250KC<br>Process line<br>Secondary containment line | 31.75 mm (1.25")<br>40 mm (1.57")      | ±0.18 mm (±0.007")<br>±0.18 mm (±0.007")   | 27.94 mm (1.100")<br>36.73 mm (1.446") | 1.91 mm (0.075")<br>1.57 mm (0.062") | ±0.18 mm (±0.007")<br>±0.20 mm (±0.008")   | 318 mm (12.5")<br>572 mm (22.5") |

\*Primary containment is also available in other PFA material grades as a special order. To order, contact Entegris.

## Laser Marking Codes

ENTEGRIS



## Dual Containment Tubing Cutter

Entegris has designed a special tube cutter that cuts the secondary containment without damaging the primary tubing, reducing potential rework.

| Part number | Secondary containment tubing |
|-------------|------------------------------|
| 213-203-N   | 1/2" OD                      |
| 213-204-N   | 3/4" OD                      |
| 213-205-N   | 1" OD                        |
| 213-221-N   | 1 3/8" OD                    |
| 213-218-N   | 40 mm OD                     |



Entegris' tube cutter delicately scores the secondary containment tubing without penetrating the primary tubing. Once scored, simply snap it off.

## PASS-THROUGH PFA DUAL CONTAINMENT FITTINGS

---

### Fewer Connections, Fewer Leak Points

Entegris offers molded PFA dual containment fittings that enable a process line to pass through walls uninterrupted. The pass-through dual containment fitting was designed around Entegris' industry leading Flaretok® and Quikgrip® fittings. These high-performing extensions of Entegris' proven fitting technologies offer fewer connections, easier assembly, and fewer leak points.

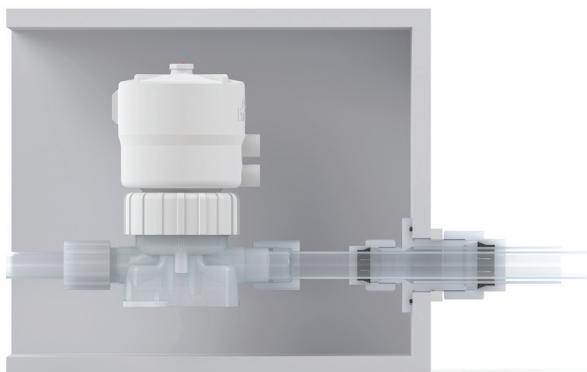
### Uninterrupted Tubing Runs

This fitting is the only fitting on the market to offer true dual containment from one box to the next. The advanced fitting enables a process line to pass through a wall to the next component uninterrupted. Special corrugated tubing is not required

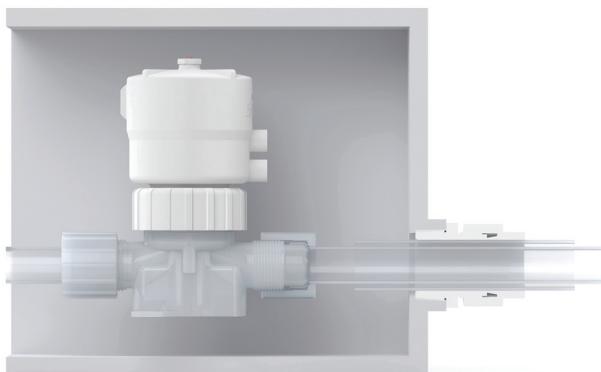
for secondary containment, thus enabling the use of standard, straight-wall tubing, and providing a great cost advantage. In addition, the dual containment fitting has an O-ring that seals off the fitting at the cabinet wall. This seal prevents fluid from escaping through the panel mount hole, maintaining cabinet integrity in the event of a leak, and increasing safety to a level unmatched by competitive fittings.

### Reduce Contamination, Increase Safety

Flaretok and Quikgrip dual containment fittings support  $\frac{1}{4}$ " to  $\frac{3}{4}$ " process lines, with secondary lines from  $\frac{1}{2}$ " to 1". Integral ferrule dual containment fittings support 1" process lines with  $1\frac{3}{8}$ " secondary lines. The fitting assemblies adapt to panels that are up to  $\frac{1}{2}$ " thick.

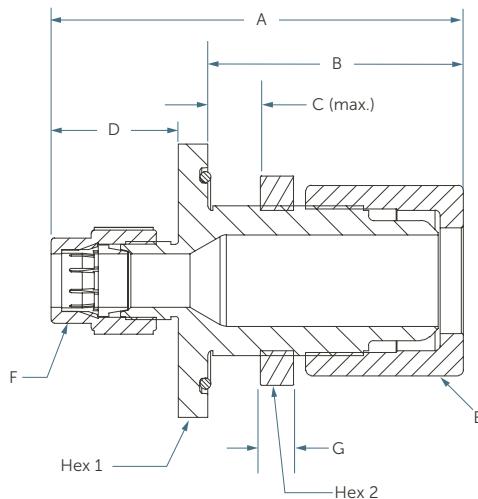


*Dual containment fittings enable uninterrupted tubing runs.*



## FITTING ORDERING INFORMATION

### Dual Containment Flaretek x Quikgrip



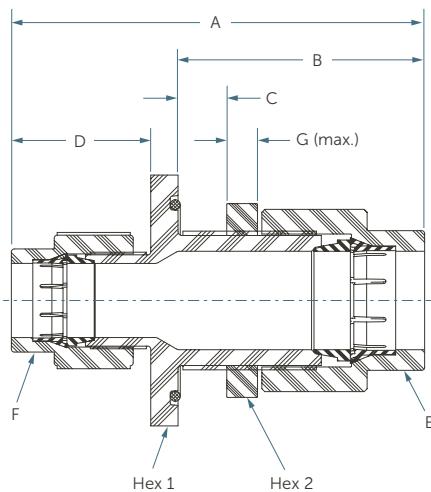
### Flaretek x Quikgrip

| Part number  | Process line (F) | Secondary containment line (E) | DIMENSIONS       |                 |                 |                 |                |        | Panel mount hole diameter |                 |
|--------------|------------------|--------------------------------|------------------|-----------------|-----------------|-----------------|----------------|--------|---------------------------|-----------------|
|              |                  |                                | A                | B               | C               | D               | G              | Hex 1  | Hex 2                     |                 |
| DCC8F-4GN*   | 1/4" Quikgrip    | 1/2" Flaretek                  | 85.6 mm (3.37")  | 52.3 mm (2.06") | 12.7 mm (0.50") | 26.2 mm (1.03") | 8.1 mm (0.32") | 1 3/8" | 1 1/16"                   | 19.0 mm (0.75") |
| DCC12F-6GN*  | 3/8" Quikgrip    | 3/4" Flaretek                  | 95.8 mm (3.77")  | 59.9 mm (2.36") | 12.7 mm (0.50") | 28.7 mm (1.13") | 9.7 mm (0.38") | 1 5/8" | 1 1/16"                   | 25.4 mm (1.00") |
| DCC12F-8GN*  | 1/2" Quikgrip    | 3/4" Flaretek                  | 97.8 mm (3.85")  | 59.9 mm (2.36") | 12.7 mm (0.50") | 30.7 mm (1.21") | 9.7 mm (0.38") | 1 5/8" | 1 1/16"                   | 25.4 mm (1.00") |
| DCC16F-8GN*  | 1/2" Quikgrip    | 1" Flaretek                    | 99.6 mm (3.92")  | 61.7 mm (2.43") | 12.7 mm (0.50") | 30.7 mm (1.21") | 8.1 mm (0.32") | 2 1/4" | 1 3/4"                    | 38.1 mm (1.50") |
| DCC16F-12GN* | 3/4" Quikgrip    | 1" Flaretek                    | 104.9 mm (4.13") | 61.7 mm (2.43") | 12.7 mm (0.50") | 36.1 mm (1.42") | 8.1 mm (0.32") | 2 1/4" | 1 3/4"                    | 38.1 mm (1.50") |

\* = PFA body with -1 (PVDF), -3 (PFA), or -6 (CPFA) nuts.

## FITTING ORDERING INFORMATION (CONTINUED)

### Dual Containment Quikgrip x Quikgrip

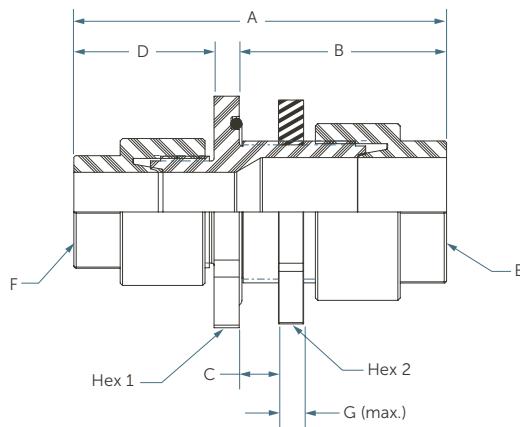


### Quikgrip x Quikgrip

| Part number    | Process line (F) | Secondary containment line (E) | DIMENSIONS       |                 |                 |                 |                |        | Panel mount hole diameter |                 |
|----------------|------------------|--------------------------------|------------------|-----------------|-----------------|-----------------|----------------|--------|---------------------------|-----------------|
|                |                  |                                | A                | B               | C               | D               | G              | Hex 1  | Hex 2                     |                 |
| DCC8G-4GN-1M   | 1/4" Quikgrip    | 1/2" Quikgrip                  | 82.6 mm (3.25")  | 49.5 mm (1.95") | 12.7 mm (0.50") | 26.2 mm (1.03") | 8.1 mm (0.32") | 1 3/8" | 1 1/16"                   | 19.0 mm (0.75") |
| DCC12G-8GN-1M  | 1/2" Quikgrip    | 3/4" Quikgrip                  | 94.7 mm (3.73")  | 57.7 mm (2.27") | 12.7 mm (0.50") | 30.7 mm (1.21") | 9.7 mm (0.38") | 1 5/8" | 1 5/16"                   | 25.4 mm (1.00") |
| DCC16G-12GN-1M | 3/4" Quikgrip    | 1" Quikgrip                    | 108.2 mm (4.26") | 64.3 mm (2.53") | 12.7 mm (0.50") | 36.1 mm (1.42") | 8.1 mm (0.32") | 2 1/4" | 1 3/4"                    | 38.1 mm (1.50") |

## FITTING ORDERING INFORMATION (CONTINUED)

### Dual Containment Integral Ferrule x Integral Ferrule



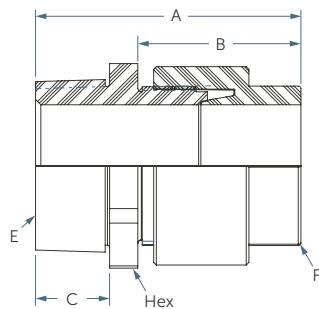
### Integral Ferrule x Integral Ferrule

| Part number | Process line (F)    | Secondary containment line (E) | DIMENSIONS       |                 |                 |                 |                | Hex 1  | Hex 2  | Panel mount hole diameter |
|-------------|---------------------|--------------------------------|------------------|-----------------|-----------------|-----------------|----------------|--------|--------|---------------------------|
|             |                     |                                | A                | B               | C               | D               | G              |        |        |                           |
| DCC22N-16N* | 1" Integral Ferrule | 1 3/8" Integral Ferrule        | 121.4 mm (4.78") | 67.8 mm (2.67") | 12.7 mm (0.50") | 45.5 mm (1.79") | 8.1 mm (0.32") | 2 5/8" | 2 1/2" | 47.8 mm (1.88")           |

\*Fitting body and integral ferrule nut are polyethylene (PE) material.

## FITTING ORDERING INFORMATION (CONTINUED)

### Dual Containment Integral Ferrule x MNPT



### Integral Ferrule x MNPT

| Part number   | Process line (E) | Secondary containment line (F) | DIMENSIONS      |                 |                 |                 |
|---------------|------------------|--------------------------------|-----------------|-----------------|-----------------|-----------------|
|               |                  |                                | A               | B               | C               | Hex             |
| DCC22N-24MNPT | 1½" MNPT         | 1⅜" Integral ferrule           | 76.5 mm (3.01") | 47.0 mm (1.85") | 21.3 mm (0.84") | 50.8 mm (2.00") |

### FOR MORE INFORMATION

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

### TERMS AND CONDITIONS OF SALE

All purchases are subject to Entegris' Terms and Conditions of Sale. To view and print this information, visit [entegris.com](http://entegris.com) and select the [Terms & Conditions](#) link in the footer.



### Corporate Headquarters

129 Concord Road  
Billerica, MA 01821  
USA

### Customer Service

Tel +1 952 556 4181  
Fax +1 952 556 8022  
Toll Free 800 394 4083

Entegris®, the Entegris Rings Design®, and other product names are trademarks of Entegris, Inc. as listed on [entegris.com/trademarks](http://entegris.com/trademarks). All third-party product names, logos, and company names are trademarks or registered trademarks of their respective owners. Use of them does not imply any affiliation, sponsorship, or endorsement by the trademark owner.

©2002-2019 Entegris, Inc. | All rights reserved. | Printed in the USA | 3130-10005ENT-0119