

STC Composite Push-In Fittings

Bulkhead Connector BC Specifications

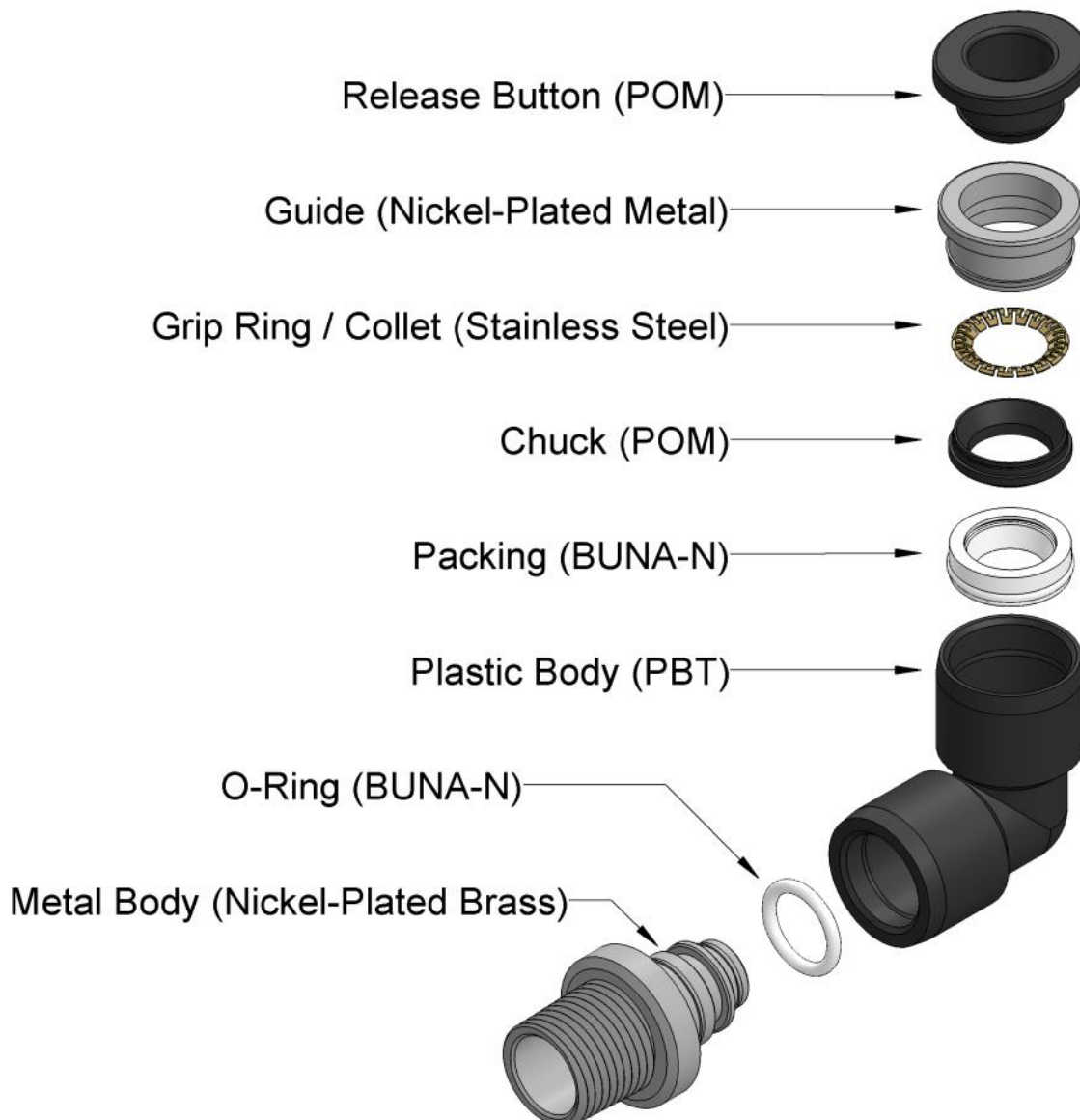


Bulkhead Connector BC Specifications

| Specifications | |
|-----------------------------|--|
| Operating Pressure Range | 0 - 180 PSI (0 - 1200 kpa) |
| Vacuum | 0 - 29.5" Hg (750 mm Hg) |
| Operating Temperature | 32 - 140°F (0 - 60°C) |
| Recommended Tubing Material | Polyurethane, Nylon, Polyethylene, Polypropylene |
| Metal Body | Brass, Nickel Plated |
| Plastic Body | PBT (Polybutylene Terephthalate) |
| Release Button | POM (Polyoxymethylene copolymer) |
| Grip Ring or Collet | 300 Series Stainless Steel |
| O-Ring | NBR (Buna-N) |
| Thread Sealant | Teflon |
| Service | FOR AIR |

Composite Push-In Fitting Components

Composite Push-In Fitting Materials of Construction



Material Test Reports

This document certifies that STC products have been subjected to quality assurance procedures and meet the material and performance specifications published by Sizto Tech Corporation (STC). The products have been manufactured, processed, inspected, and tested according to STC internal requirements and ISO 9001 standards.

ISO 9001:2015 Certificate Number: **Qnb17180318**
Date of Issue: **01, March, 2018**
Valid Until: **28, February, 2021**

Individual materials and components used in this product have been tested and conform to applicable published standards according to chart below. Please be advised that STC does not conduct its own material analysis of all raw materials, rather, STC relies on the statements of its material suppliers & reserves the rights to independently test raw materials if necessary. Material Test Reports may be available for specific products upon request.

| Material | Use Location | Material Standard |
|----------------------------------|---------------------------------------|---------------------|
| 316 Stainless Steel | Metal Fittings, Valves, Air Cylinders | ASTM A240/A2666 |
| 304 Stainless Steel | Valves, Air Cylinders | ASTM A240/A666 |
| CF8M Stainless Steel | Valves | ASTM A351/A743 |
| Brass | Valves | ASTM B36/B62 |
| Nickel-Plated Brass | Composite Fittings | ASTM B456/B927 |
| Acetal Homopolymer (Delrin) | Valves | ASTM D4181/D6778—14 |
| Acetal Copolymer (POM) | Composite Fittings | ASTM D4181/D6778—14 |
| FKM (Viton) | Seals | ASTM D1418 |
| PTFE (Teflon) | Valves, Seals | ASTM D3294—15 |
| NBR (Buna N) | Seals | ASTM D1387—06 |
| EPDM | Seals | ASTM D3568—03 |
| Polybutylene Terephthalate (PBT) | Composite Fittings | ASTM D4000 |

Composite Push-In Fitting Installation Procedure

A. Installation of Pipe Fittings

1. Tighten fitting by hand, then turn it 2-3 turns with a wrench until it reaches the desired torque listed. If the fittings are not pre-coated with sealant, or is used and the sealant is not in good condition, apply Teflon sealant tape to the threads.

| Recommendation of Torque for Tightening Fittings | | |
|--|---------------|----------------|
| Fitting Thread Size | Torque, lb-ft | Torque, kgf/cm |
| 10-32, M5 - M6 | 1.0 - 1.5 | 14 - 21 |
| NPT 1/8, R1/8 | 5 - 6.5 | 70 - 90 |
| NPT 1/4, R1/4 | 8.5 - 10 | 120 - 140 |
| NPT 3/8, R 3/8 | 16 - 17.5 | 220 - 240 |
| NPT 1/2, R 1/2 | 20 - 21.5 | 280 - 300 |

B. Installation of Tubing into Fitting:

1. Slowly push a clean and perpendicularly cut tube into the fitting until it comes to a dead stop.
2. Gently pull the tubing back until the Grip Ring or Collet of the fitting grips onto the tubing and has a good seal.
3. Use Polyethylene, Polypropylene, Polyurethane, or Nylon tubing designed for instant fittings.

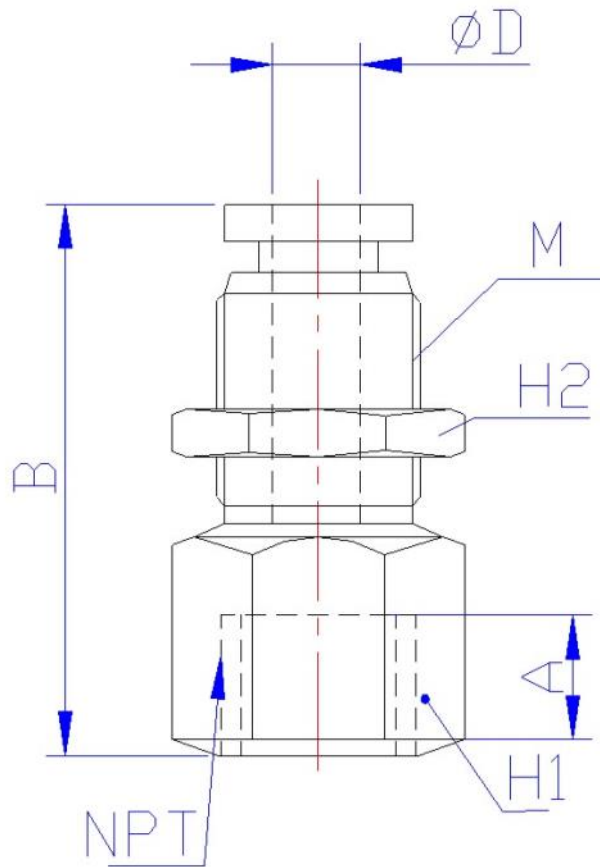
C. Removal of Tubing from Fitting:

1. Push in evenly on the two long, oval sides of the Release Button.
2. Pull out the tube while depressing the Release Button.
3. To reuse the tubing, cut off the lodged portion of the previously used tubing in an even and perpendicular fashion.

D. Recommended Tubing Material, Size, and Hardness Requirements:

| Tubing Material | Specified Size | Hardness (Durometer) |
|--------------------------|-------------------------|----------------------|
| Polyurethane | +/- 0.006" (+/-0.15 mm) | Shore A 85 or higher |
| Polyethylene | +/- 0.004" (+/-0.1 mm) | Shore D 44 - D75 |
| Polypropylene | +/- 0.004" (+/-0.1 mm) | Shore D 44 - D75 |
| Nylon | +/- 0.004" (+/-0.1 mm) | Shore D 44 - D75 |
| Pre-grooved Metal Tubing | +/- 0.004" (+/-0.1 mm) | |

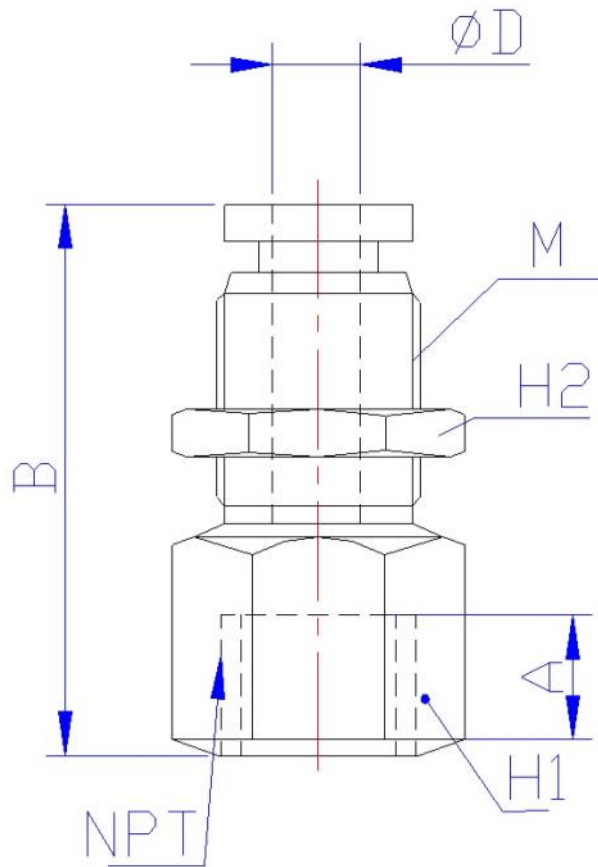
Composite Push-In Fitting Dimensions



| Bulkhead Connector BC Dimensions | | | | | | | |
|----------------------------------|------|-------------|-----|------|------|------|------|
| Model | ΦD | Thread Size | M | A | H1 | H2 | B |
| BC 1/8 N1/8 | 1/8 | NPT1/8 | M12 | 7.5 | 14.3 | 14.3 | 23.8 |
| BC 5/32 N1/8 | 5/32 | NPT1/8 | M12 | 7.5 | 14.3 | 14.3 | 23.8 |
| BC 3/16 N1/8 | 3/16 | NPT1/8 | M14 | 7.5 | 14.3 | 17.4 | 24.7 |
| BC 3/16 N1/4 | 3/16 | NPT1/4 | M14 | 10.5 | 14.3 | 17.4 | 30.4 |
| BC 1/4 N1/8 | 1/4 | NPT1/8 | M14 | 7.5 | 17.4 | 17.4 | 24.7 |
| BC 1/4 N1/4 | 1/4 | NPT1/4 | M14 | 10.5 | 17.4 | 17.4 | 30.4 |
| BC 5/16 N1/8 | 5/16 | NPT1/8 | M16 | 7.5 | 17.4 | 19 | 27.9 |
| BC 5/16 N1/4 | 5/16 | NPT1/4 | M16 | 10.5 | 19 | 19 | 35.9 |
| BC 5/16 N3/8 | 5/16 | NPT3/8 | M16 | 11 | 19 | 19 | 35.4 |
| BC 3/8 N1/4 | 3/8 | NPT1/4 | M20 | 10.5 | 22.2 | 22.2 | 31.9 |
| BC 3/8 N3/8 | 3/8 | NPT3/8 | M20 | 11 | 22.2 | 22.2 | 34.7 |
| BC 1/2 N3/8 | 1/2 | NPT3/8 | M22 | 11 | 25.4 | 25.4 | 35.4 |
| BC 1/2 N1/2 | 1/2 | NPT1/2 | M22 | 14 | 25.4 | 25.4 | 41.4 |

Note: Dimensions are for reference only. Field verify dimensions prior to installation for critical dimensions.

Composite Push-In Fitting Dimensions



| Bulkhead Connector BC Dimensions | | | | | | | |
|----------------------------------|----|-------------|-----|----|----|----|------|
| Model | ΦD | Thread Size | M | A | H1 | H2 | B |
| BC 4 R1/8 | 4 | R1/8 | M12 | 7 | 14 | 14 | 23.3 |
| BC 4 R1/4 | 4 | R1/4 | M12 | 9 | 17 | 14 | 25.4 |
| BC 6 R1/8 | 6 | R1/8 | M14 | 7 | 17 | 17 | 24.2 |
| BC 6 R1/4 | 6 | R1/4 | M14 | 9 | 17 | 17 | 29.2 |
| BC 6 R3/8 | 6 | R3/8 | M14 | 10 | 19 | 17 | 30.2 |
| BC 8 R1/8 | 8 | R1/8 | M16 | 7 | 19 | 19 | 27.4 |
| BC 8 R1/4 | 8 | R1/4 | M16 | 9 | 19 | 19 | 34.4 |
| BC 8 R3/8 | 8 | R3/8 | M16 | 10 | 19 | 19 | 34.4 |
| BC 8 R1/2 | 8 | R1/2 | M16 | 12 | 24 | 19 | 36.4 |
| BC 10 R1/8 | 10 | R1/8 | M20 | 7 | 21 | 24 | 28.4 |
| BC 10 R1/4 | 10 | R1/4 | M20 | 9 | 21 | 24 | 30.4 |
| BC 10 R3/8 | 10 | R3/8 | M20 | 10 | 21 | 24 | 33.7 |
| BC 10 R1/2 | 10 | R1/2 | M20 | 12 | 24 | 24 | 35.7 |
| BC 12 R1/4 | 12 | R1/4 | M22 | 9 | 24 | 27 | 33.5 |
| BC 12 R3/8 | 12 | R3/8 | M22 | 10 | 24 | 27 | 34.4 |
| BC 12 R1/2 | 12 | R1/2 | M22 | 12 | 24 | 27 | 39.4 |

Note: Dimensions are for reference only. Field verify dimensions prior to installation for critical dimensions.

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