



D-CKWEILER
connecting flow to purity

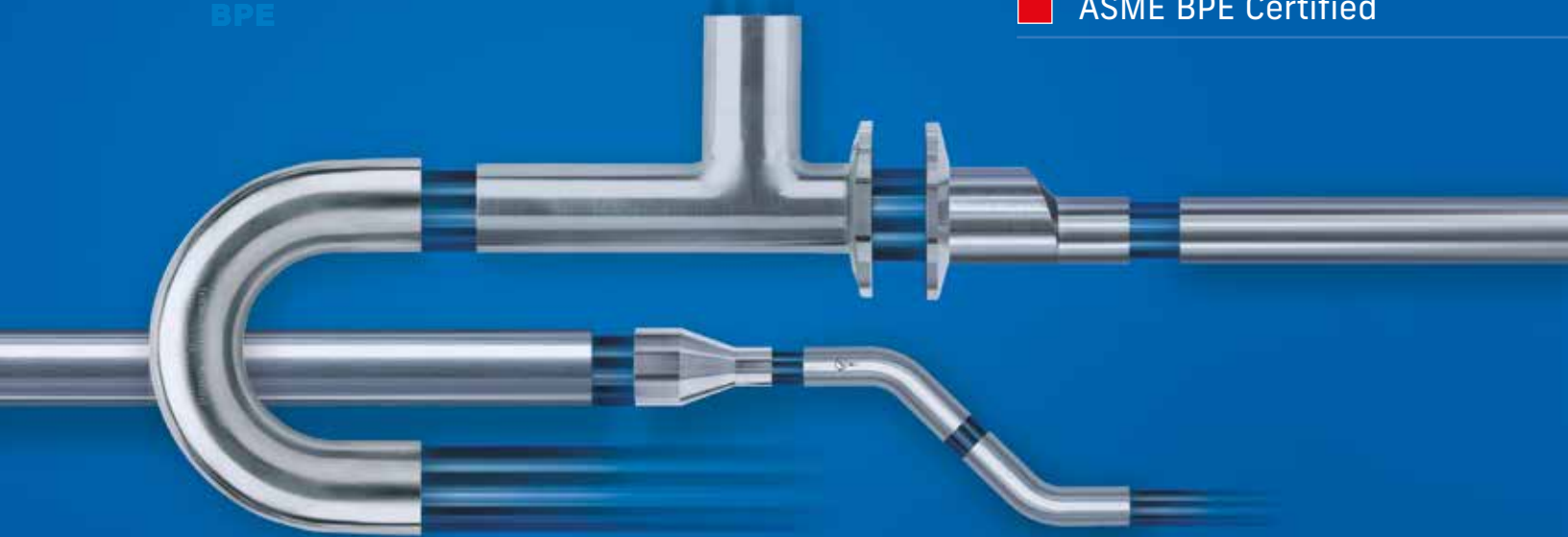
LIFE SCIENCE

TUBES, FITTINGS AND CONNECTIONS



FOR PHARMA, BIOTECH AND
OTHER LIFE SCIENCE INDUSTRIES

 ASME BPE Certified



NORTH AMERICA

ASME BPE Certified
Tubes and Fittings.
Highest purity up to Ra 15 µin.



Dockweiler quality
from raw material to delivery.
All certificates are available on:
www.dockweiler.com

Consistent 3.1 certificates
with all important information.
End-to-end documentation
and traceability.



Engineered components
for engineered efficiency.
Weld seams in perfection and
ultimate quality.

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For Pharma, Biotech and other Life Science Industries


ASME BPE


 ASME BPE SF1 / Mechanically polished

 ASME BPE SF4 / Electropolished




1. SURFACES QUALITIES

| Tubes and fittings: | Inner surface (mp)* |
|---|---|
| ASME BPE SF0 - on request | No finish requirements |
|  ASME BPE SF1 | Ra_{max.} ≤ 20 µin (0.51 µm) Dockweiler Standard |
| ASME BPE SF2 - on request | Ra _{max.} ≤ 25 µin (0.64 µm) |
| ASME BPE SF3 - on request | Ra _{max.} ≤ 30 µin (0.76 µm) |

| Tubes and fittings: | Inner surface (ep) |
|---|---|
|  ASME BPE SF4 | Ra_{max.} ≤ 15 µin (0.38 µm) Dockweiler Standard |
| ASME BPE SF5 - on request | Ra _{max.} ≤ 20 µin (0.51 µm) |
| ASME BPE SF6 - on request | Ra _{max.} ≤ 25 µin (0.64 µm) |

| | |
|--------------------|--|
| Surface treatment: | <ul style="list-style-type: none"> - Mechanically polished (or any other finishing method that meets the Ra max.): Cleaning and test procedure ASTM A 632, S3 - Electropolished: Procedure acc. to Spec. Doc. 8.4-40/3.2/3.3.2 |
| | Free of oil and grease acc. to CGA G-4.1-2018 and ASTM G93 |

2. MATERIALS






| | | |
|---|---|--|
|  ASME BPE | UNS S31603 (316L)* UNS S31603 (316L) / 1.4404* UNS S31603 (316L) / 1.4435* * defined sulphur of 0.005 - 0.017% | UNS N08904 (904L) / 1.4539 UNS N06022 (C22) / 2.4602 UNS N08367 (AL-6XN) |
|---|---|--|

| | |
|-------------------------|--|
| Hardness equivalent to: | <ul style="list-style-type: none"> - max. 180 HV* according to DIN EN ISO 6507-1 - max. 90 HRB* according to DIN EN ISO 6508-1 |
| | * comparable to ASTM E-384 (HV) and ASTM E 18-22 (HRB) |

3. DIMENSIONS

| Imperial | acc. to ASME BPE, Part DT | |
|------------------------|---|-------------------------------------|
| OD x WT: | 1/4" to 6" (0.250 x 0.035 inch to 6.000 x 0.109 inch) | 6.35 x 0.89 mm to 152.40 x 2.77 mm |
| Length of tubes: | min. 19.36 ft to max. 19.98 ft (6000 mm -100/+90) | |
| Manufacturing process: | Seamless tubes ≤ 1" OD (25.40 mm) | Welded tubes ≥ 1 1/2" OD (38.10 mm) |

4. QUALITY AND TEST PROCEDURES

| | | |
|--|--|--|
|  Verification of basic test certificate |  Visual inspection |  Endoscopic inspection of bright finished tubes |
|  Verification of dimensions |  Roughness measurements | |

5. TECHNICAL TERMS OF DELIVERY

Tubes and fittings are prepared for orbital welding according to the following standards:

Tubes

acc. to ASTM A 269 / A 632 / A 312 (Pipe), DIN EN 10217-7 / 10216-5 with a length of 19.35 ft - 19.98 ft (5900 - 6090 mm), max. 10% short lengths of min. 9.84 ft (3000 mm)

Tube fitting components

Prematerial acc. to ASTM A 269 / A 632 / A 312 / A 403 (Pipe), DIN EN 10217-7 / 10216-5

Machined components

Prematerial acc. to ASTM A 479, DIN EN 10088-3, DIN 17440, ASTM A 182 (Pipe)

Marking always with

DOCKWEILER / DW-Number / Dimension / Material / Heat number

Tube, pipe and fittings shall be permanently marked as per Dockweiler guideline AA 7.5.3-80. The marking must provide all necessary information to trace back the heat number and the material grade.

6. DOCUMENTATION, PACKAGING AND SHIPPING

The documentation result by the Dockweiler Inspection Certificate 3.1 according to DIN EN 10204.

Mechanically polished tubes and fittings are capped with transparent PE caps and are individually sealed in PE foil.

Electropolished tubes and fittings are capped with yellow PE caps and are individually sealed in PE foil.

Delivery in tubular container or wooden crate, fittings in strong cardboard box with shock absorbing filler.

The batch label on the foil contains the information ASME BPE SF1 or ASME BPE SF4.

Dockweiler Order Code System: Easy to select and combine

The Dockweiler Order Code is built up of three elements:

1. **Quality** (Inner Surface SF1 or SF4)
2. **Product Code**
3. **Diameter**
4. **BPE Reference** (last two digits)

Selection for Tubes = Surface Quality + Outer Diameter (1 + 3)

Order Code Sample for ■ ASME BPE, SF-1, Tube 1/4 Inch: 1 - 2
SF1 - 04

1. QUALITY

| Code Quality | Specification |
|--------------|---------------|
| SF1 | ASME BPE 2024 |
| SF4 | ASME BPE 2024 |

2. BASIC CODE FITTING TYPE

| Code Product | Description |
|--------------|-----------------------------|
| E4 | 45° Elbow |
| E8 | 88° Elbow |
| E2 | 92° Elbow |
| E9 | 90° Elbow |
| EU | 180° Return Bend |
| TE | Tee Equal |
| TR | Reducing Tee |
| CE | Straight Cross |
| RC | Concentric Reducer |
| RE | Eccentric Reducer |
| FA, FB, FC | Ferrule |
| WC | Weld Cap |
| FTC | Solid End Cap |
| CL-SP-WN | Clamp (Single Pin Wing Nut) |
| TC-GK | Triclamp Gasket |

3. BASIC CODE OUTER DIAMETER

| Code Diameter | Size (Inch) |
|---------------|-------------|
| 02 | 1/8 |
| 04 | 1/4 |
| 06 | 3/8 |
| 08 | 1/2 |
| 10 | 5/8 |
| 12 | 3/4 |
| 16 | 1 |
| 24 | 1 1/2 |
| 32 | 2 |
| 40 | 2 1/2 |
| 48 | 3 |
| 64 | 4 |
| 96 | 6 |

4. REFERENCE ACC. TO ASME-BPE

| Code Elbows | Code T-Pieces | Code Reducers | Code Ferrules | Code Caps |
|-------------|---------------|---------------|---------------|-----------|
| 1-1 | 2-1 | 3-1 | 4-1 | 5-1 |
| 1-2 | 2-2 | 3-2 | | 5-2 |
| 1-3 | 2-3 | 3-3 | | |
| 1-4 | 2-4 | | | |
| 1-5 | 2-5 | | | |
| 1-6 | 2-6 | | | |
| 1-7 | 2-7 | | | |
| 1-8 | 2-8 | | | |
| 1-9 | 2-9 | | | |
| 1-10 | 2-10 | | | |
| | 2-11 | | | |



| Nominal Size (d) | | Wall Thickness (s) | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Diameter ³ | |
|------------------|--------|--------------------|------|--|--|-----------------------|----|
| Inch | mm | Inch | mm | 316L | | | |
| 1/4 | 6.35 | 0.035 | 0.89 | SF1 | SF4 | - | 04 |
| 3/8 | 9.53 | 0.035 | 0.89 | SF1 | SF4 | - | 06 |
| 1/2 | 12.70 | 0.065 | 1.65 | SF1 | SF4 | - | 08 |
| 3/4 | 19.05 | 0.065 | 1.65 | SF1 | SF4 | - | 12 |
| 1 | 25.40 | 0.065 | 1.65 | SF1 | SF4 | - | 16 |
| 1 1/2 | 38.10 | 0.065 | 1.65 | SF1 | SF4 | - | 24 |
| 2 | 50.80 | 0.065 | 1.65 | SF1 | SF4 | - | 32 |
| 2 1/2 | 63.50 | 0.065 | 1.65 | SF1 | SF4 | - | 40 |
| 3 | 76.20 | 0.065 | 1.65 | SF1 | SF4 | - | 48 |
| 4 | 101.60 | 0.083 | 2.11 | SF1 | SF4 | - | 64 |
| 6 | 152.40 | 0.109 | 2.77 | SF1 | SF4 | - | 96 |

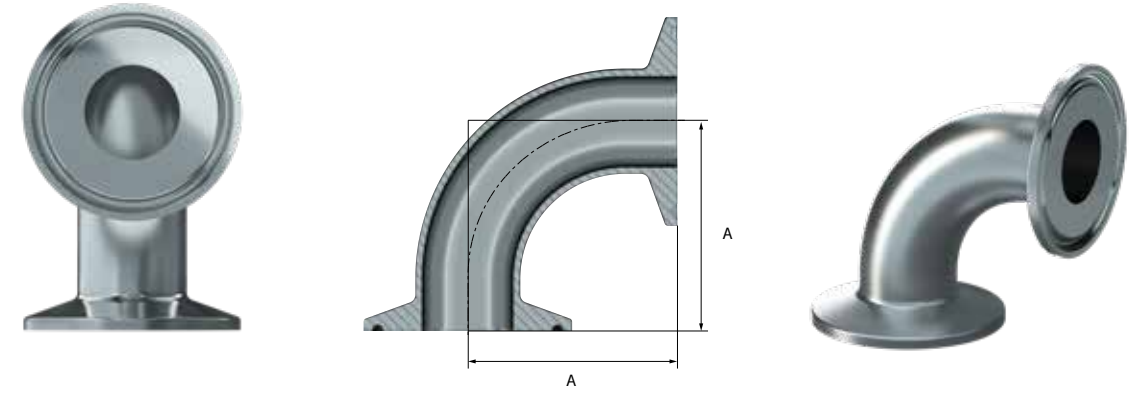
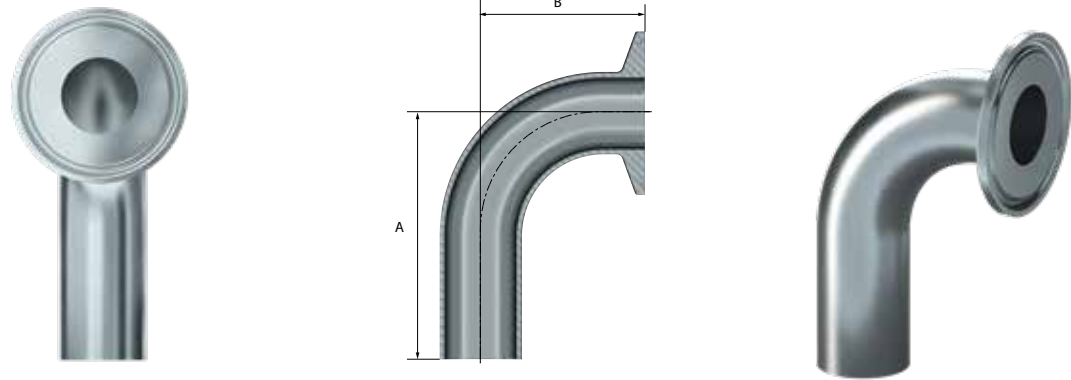
Further dimensions on request.

For Order Code please combine:
Quality¹ + Diameter³

| Nominal Size (d) | | A | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | | BPE Ref. ⁴ |
|------------------|--------|--------|--------|--|--|--|-------|-----------------------|
| Inch | mm | Inch | mm | 316L | | | | WW |
| 1/4 | 6.35 | 2.625 | 66.70 | SF1 | SF4 | - | E9-04 | - 1-1 |
| 3/8 | 9.53 | 2.625 | 66.70 | SF1 | SF4 | - | E9-06 | - 1-1 |
| 1/2 | 12.70 | 3.000 | 76.20 | SF1 | SF4 | - | E9-08 | - 1-1 |
| 3/4 | 19.05 | 3.000 | 76.20 | SF1 | SF4 | - | E9-12 | - 1-1 |
| 1 | 25.40 | 3.000 | 76.20 | SF1 | SF4 | - | E9-16 | - 1-1 |
| 1 1/2 | 38.10 | 3.750 | 95.30 | SF1 | SF4 | - | E9-24 | - 1-1 |
| 2 | 50.80 | 4.750 | 120.70 | SF1 | SF4 | - | E9-32 | - 1-1 |
| 2 1/2 | 63.50 | 5.500 | 139.70 | SF1 | SF4 | - | E9-40 | - 1-1 |
| 3 | 76.20 | 6.250 | 158.80 | SF1 | SF4 | - | E9-48 | - 1-1 |
| 4 | 101.60 | 8.000 | 203.20 | SF1 | SF4 | - | E9-64 | - 1-1 |
| 6 | 152.40 | 11.500 | 292.10 | SF1 | SF4 | - | E9-96 | - 1-1 |

Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴



| Nominal Size (d) | | Weld End (A) | | Clamp End (B) | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|--------|--------------|--------|---------------|--------|--|--|---|--------------------------|
| Inch | mm | Inch | mm | Inch | mm | | | | |
| | | | | | | 316L | | CW | |
| 1/4 | 6.35 | 2.625 | 66,70 | 1.625 | 41,30 | SF1 | SF4 | - E9-04 | - 1-2 |
| 3/8 | 9.53 | 2.625 | 66,70 | 1.625 | 41,30 | SF1 | SF4 | - E9-06 | - 1-2 |
| 1/2 | 12.70 | 3.000 | 76,20 | 1.625 | 41,30 | SF1 | SF4 | - E9-08 | - 1-2 |
| 3/4 | 19.05 | 3.000 | 76,20 | 1.625 | 41,30 | SF1 | SF4 | - E9-12 | - 1-2 |
| 1 | 25.40 | 3.000 | 76,20 | 2.000 | 50,80 | SF1 | SF4 | - E9-16 | - 1-2 |
| 1 1/2 | 38.10 | 3.750 | 95,30 | 2.750 | 69,90 | SF1 | SF4 | - E9-24 | - 1-2 |
| 2 | 50.80 | 4.750 | 120,70 | 3.500 | 88,90 | SF1 | SF4 | - E9-32 | - 1-2 |
| 2 1/2 | 63.50 | 5.500 | 139,70 | 4.250 | 108,00 | SF1 | SF4 | - E9-40 | - 1-2 |
| 3 | 76.20 | 6.250 | 158,80 | 5.000 | 127,00 | SF1 | SF4 | - E9-48 | - 1-2 |
| 4 | 101.60 | 8.000 | 203,20 | 6.625 | 168,20 | SF1 | SF4 | - E9-64 | - 1-2 |
| 6 | 152.40 | 11.500 | 292,10 | 10.500 | 266,70 | SF1 | SF4 | - E9-96 | - 1-2 |

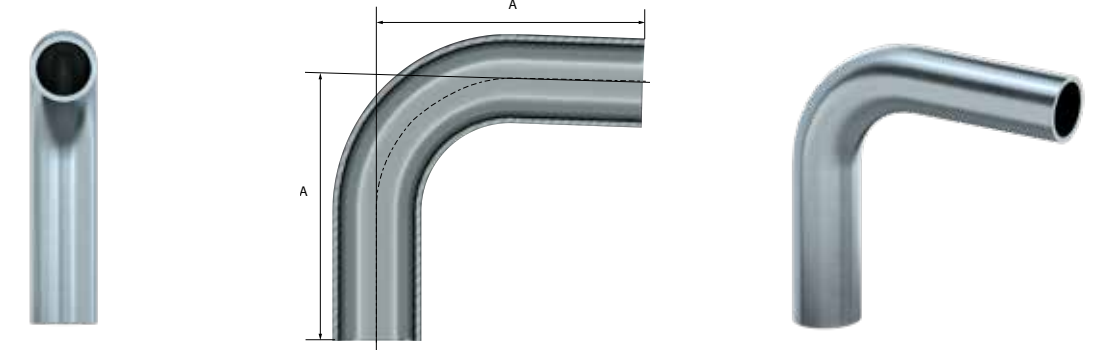
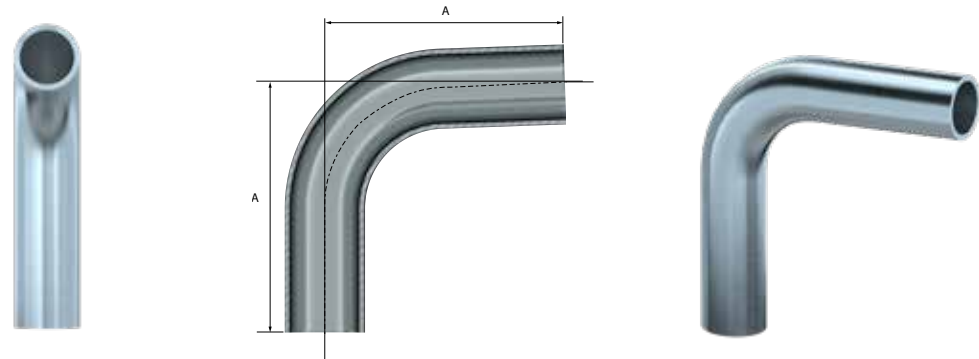
Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

| Nominal Size (d) | | Clamp End (A) | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|--------|---------------|--------|--|--|---|--------------------------|
| Inch | mm | Inch | mm | | | | |
| | | | | 316L | | CC | |
| 1/4 | 6.35 | 1.625 | 41.30 | SF1 | SF4 | - E9-04 | - 1-3 |
| 3/8 | 9.53 | 1.625 | 41.30 | SF1 | SF4 | - E9-06 | - 1-3 |
| 1/2 | 12.70 | 1.625 | 41.30 | SF1 | SF4 | - E9-08 | - 1-3 |
| 3/4 | 19.05 | 1.625 | 41.30 | SF1 | SF4 | - E9-12 | - 1-3 |
| 1 | 25.40 | 2.000 | 50.80 | SF1 | SF4 | - E9-16 | - 1-3 |
| 1 1/2 | 38.10 | 2.750 | 69.90 | SF1 | SF4 | - E9-24 | - 1-3 |
| 2 | 50.80 | 3.500 | 88.90 | SF1 | SF4 | - E9-32 | - 1-3 |
| 2 1/2 | 63.50 | 4.250 | 108.00 | SF1 | SF4 | - E9-40 | - 1-3 |
| 3 | 76.20 | 5.000 | 127.00 | SF1 | SF4 | - E9-48 | - 1-3 |
| 4 | 101.60 | 6.625 | 168.30 | SF1 | SF4 | - E9-64 | - 1-3 |
| 6 | 152.40 | 10.500 | 266.70 | SF1 | SF4 | - E9-96 | - 1-3 |

Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴



| Nominal Size (d) | | A | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|--------|--------|--------|--|--|---|--------------------------|
| Inch | mm | Inch | mm | 316L | | | WW |
| 1/4 | 6.35 | 2.700 | 68.58 | SF1 | SF4 | - E8-04 | - 1-9 |
| 3/8 | 9.53 | 2.700 | 68.58 | SF1 | SF4 | - E8-06 | - 1-9 |
| 1/2 | 12.70 | 3.065 | 77.85 | SF1 | SF4 | - E8-08 | - 1-9 |
| 3/4 | 19.05 | 3.065 | 77.85 | SF1 | SF4 | - E8-12 | - 1-9 |
| 1 | 25.40 | 3.050 | 77.47 | SF1 | SF4 | - E8-16 | - 1-9 |
| 1 1/2 | 38.10 | 3.800 | 96.52 | SF1 | SF4 | - E8-24 | - 1-9 |
| 2 | 50.80 | 4.810 | 122.17 | SF1 | SF4 | - E8-32 | - 1-9 |
| 2 1/2 | 63.50 | 5.560 | 141.22 | SF1 | SF4 | - E8-40 | - 1-9 |
| 3 | 76.20 | 6.310 | 160.27 | SF1 | SF4 | - E8-48 | - 1-9 |
| 4 | 101.60 | 8.065 | 204.85 | SF1 | SF4 | - E8-64 | - 1-9 |
| 6 | 152.40 | 11.580 | 294.13 | SF1 | SF4 | - E8-96 | - 1-9 |

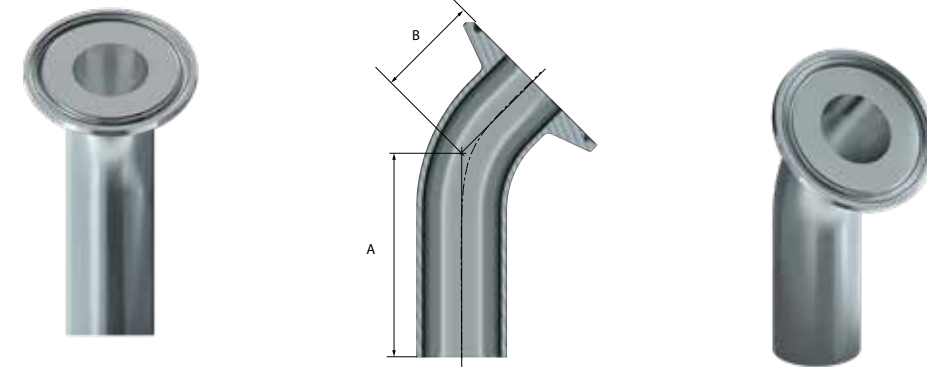
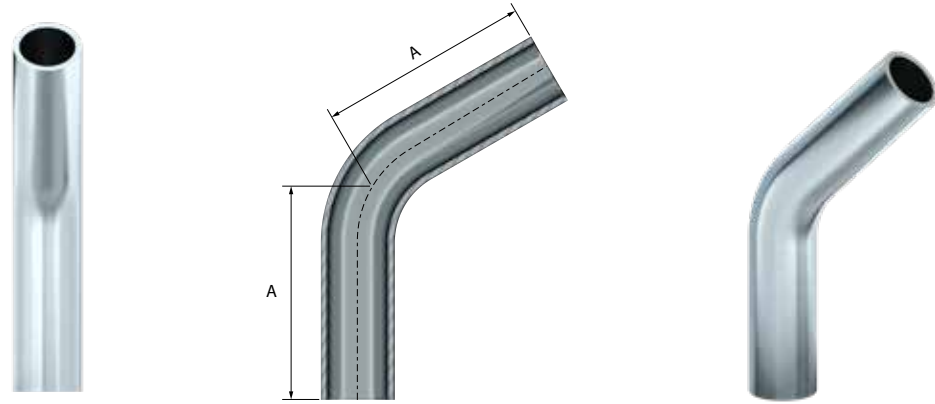
For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

Further dimensions on request.

| Nominal Size (d) | | A | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|--------|--------|--------|--|--|---|--------------------------|
| Inch | mm | Inch | mm | 316L | | | WW |
| 1/4 | 6.35 | 2.700 | 68.58 | SF1 | SF4 | - E2-04 | - 1-10 |
| 3/8 | 9.53 | 2.700 | 68.58 | SF1 | SF4 | - E2-06 | - 1-10 |
| 1/2 | 12.70 | 3.065 | 77.85 | SF1 | SF4 | - E2-08 | - 1-10 |
| 3/4 | 19.05 | 3.065 | 77.85 | SF1 | SF4 | - E2-12 | - 1-10 |
| 1 | 25.40 | 3.050 | 77.47 | SF1 | SF4 | - E2-16 | - 1-10 |
| 1 1/2 | 38.10 | 3.800 | 96.52 | SF1 | SF4 | - E2-24 | - 1-10 |
| 2 | 50.80 | 4.810 | 122.17 | SF1 | SF4 | - E2-32 | - 1-10 |
| 2 1/2 | 63.50 | 5.560 | 141.22 | SF1 | SF4 | - E2-40 | - 1-10 |
| 3 | 76.20 | 6.310 | 160.27 | SF1 | SF4 | - E2-48 | - 1-10 |
| 4 | 101.60 | 8.065 | 204.85 | SF1 | SF4 | - E2-64 | - 1-10 |
| 6 | 152.40 | 11.580 | 294.13 | SF1 | SF4 | - E2-96 | - 1-10 |

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

Further dimensions on request.



ASME BPE / SF1
Mechanically polished¹

ASME BPE / SF4
Electropolished¹

Product Code²
+
Diameter³

BPE
Ref.⁴

| Nominal Size (d) | | A | | 316L | | Product Code ² + Diameter ³ | | BPE Ref. ⁴ |
|------------------|--------|-------|--------|------|-----|---|-------|-----------------------|
| Inch | mm | Inch | mm | SF1 | SF4 | - | | WW |
| 1/4 | 6.35 | 2.000 | 50.80 | SF1 | SF4 | - | E4-04 | - 1-4 |
| 3/8 | 9.53 | 2.000 | 50.80 | SF1 | SF4 | - | E4-06 | - 1-4 |
| 1/2 | 12.70 | 2.250 | 57.20 | SF1 | SF4 | - | E4-08 | - 1-4 |
| 3/4 | 19.05 | 2.250 | 57.20 | SF1 | SF4 | - | E4-12 | - 1-4 |
| 1 | 25.40 | 2.250 | 57.20 | SF1 | SF4 | - | E4-16 | - 1-4 |
| 1 1/2 | 38.10 | 2.500 | 63.50 | SF1 | SF4 | - | E4-24 | - 1-4 |
| 2 | 50.80 | 3.000 | 76.20 | SF1 | SF4 | - | E4-32 | - 1-4 |
| 2 1/2 | 63.50 | 3.375 | 85.70 | SF1 | SF4 | - | E4-40 | - 1-4 |
| 3 | 76.20 | 3.625 | 92.10 | SF1 | SF4 | - | E4-48 | - 1-4 |
| 4 | 101.60 | 4.500 | 114.30 | SF1 | SF4 | - | E4-64 | - 1-4 |
| 6 | 152.40 | 6.250 | 158.80 | SF1 | SF4 | - | E4-96 | - 1-4 |

Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

ASME BPE / SF1
Mechanically polished¹

ASME BPE / SF4
Electropolished¹

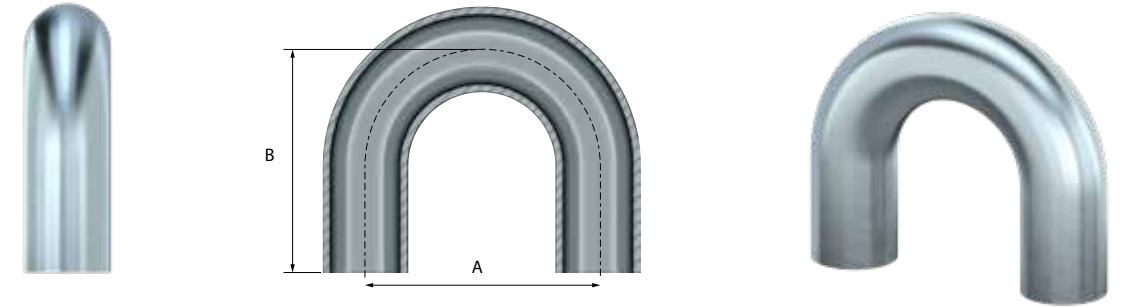
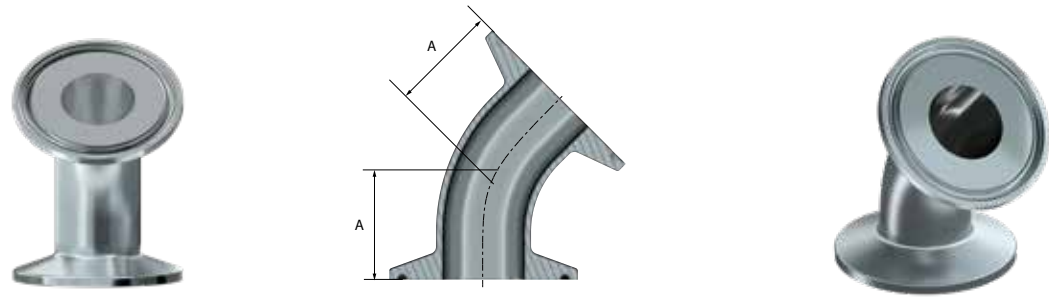
Product Code²
+
Diameter³

BPE
Ref.⁴

| Nominal Size (d) | | Weld End (A) | | Clamp End (B) | | 316L | | Product Code ² + Diameter ³ | | BPE Ref. ⁴ |
|------------------|--------|--------------|--------|---------------|--------|------|-----|---|-------|-----------------------|
| Inch | mm | Inch | mm | Inch | mm | SF1 | SF4 | - | | CW |
| 1/4 | 6.35 | 2.000 | 50.80 | 1.000 | 25.40 | SF1 | SF4 | - | E4-04 | - 1-5 |
| 3/8 | 9.53 | 2.000 | 50.80 | 1.000 | 25.40 | SF1 | SF4 | - | E4-06 | - 1-5 |
| 1/2 | 12.70 | 2.250 | 57.20 | 1.000 | 25.40 | SF1 | SF4 | - | E4-08 | - 1-5 |
| 3/4 | 19.05 | 2.250 | 57.20 | 1.000 | 25.40 | SF1 | SF4 | - | E4-12 | - 1-5 |
| 1 | 25.40 | 2.250 | 57.20 | 1.125 | 28.60 | SF1 | SF4 | - | E4-16 | - 1-5 |
| 1 1/2 | 38.10 | 2.500 | 63.50 | 1.438 | 36.50 | SF1 | SF4 | - | E4-24 | - 1-5 |
| 2 | 50.80 | 3.000 | 76.20 | 1.750 | 44.50 | SF1 | SF4 | - | E4-32 | - 1-5 |
| 2 1/2 | 63.50 | 3.375 | 85.70 | 2.063 | 52.40 | SF1 | SF4 | - | E4-40 | - 1-5 |
| 3 | 76.20 | 3.625 | 92.10 | 2.375 | 60.30 | SF1 | SF4 | - | E4-48 | - 1-5 |
| 4 | 101.60 | 4.500 | 114.30 | 3.125 | 79.40 | SF1 | SF4 | - | E4-64 | - 1-5 |
| 6 | 152.40 | 6.250 | 158.80 | 5.250 | 133.40 | SF1 | SF4 | - | E4-96 | - 1-5 |

Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴



| Nominal Size (d) | | Clamp End (A) | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|--------|---------------|--------|--|--|---|--------------------------|
| Inch | mm | Inch | mm | ■ | ■ | | CC |
| 1/4 | 6.35 | 1.000 | 25.40 | SF1 | SF4 | - E4-04 | - 1-6 |
| 3/8 | 9.53 | 1.000 | 25.40 | SF1 | SF4 | - E4-06 | - 1-6 |
| 1/2 | 12.70 | 1.000 | 25.40 | SF1 | SF4 | - E4-08 | - 1-6 |
| 3/4 | 19.05 | 1.000 | 25.40 | SF1 | SF4 | - E4-12 | - 1-6 |
| 1 | 25.40 | 1.125 | 28.60 | SF1 | SF4 | - E4-16 | - 1-6 |
| 1 1/2 | 38.10 | 1.438 | 36.50 | SF1 | SF4 | - E4-24 | - 1-6 |
| 2 | 50.80 | 1.750 | 44.50 | SF1 | SF4 | - E4-32 | - 1-6 |
| 2 1/2 | 63.50 | 2.063 | 52.40 | SF1 | SF4 | - E4-40 | - 1-6 |
| 3 | 76.20 | 2.375 | 60.30 | SF1 | SF4 | - E4-48 | - 1-6 |
| 4 | 101.60 | 3.125 | 79.40 | SF1 | SF4 | - E4-64 | - 1-6 |
| 6 | 152.40 | 5.250 | 133.40 | SF1 | SF4 | - E4-96 | - 1-6 |

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

Further dimensions on request.

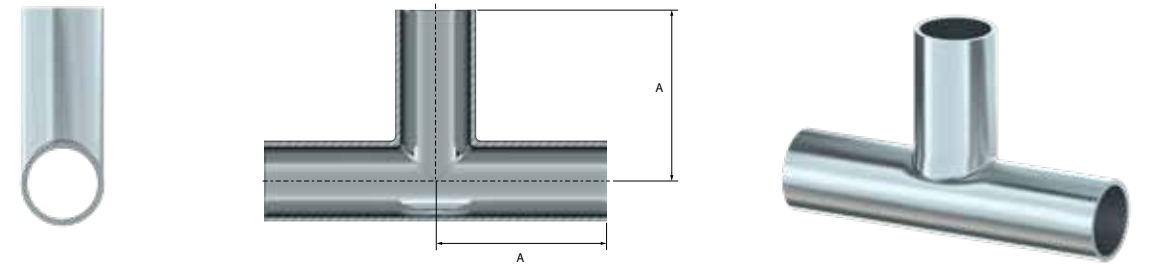
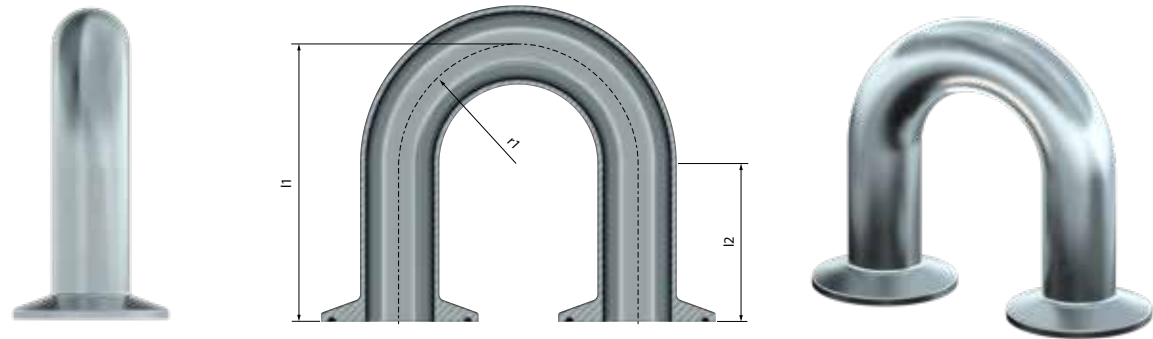
| Nominal Size (d) | | A | | B | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|--------|--------|--------|--------|--------|--|--|---|--------------------------|
| Inch | mm | Inch | mm | Inch | mm | ■ | ■ | | WW |
| 1/4 | 6.35 | 4.500 | 114.30 | 2.625 | 66.70 | SF1 | SF4 | - EU-04 | - 1-7 |
| 3/8 | 9.53 | 4.500 | 114.30 | 2.625 | 66.70 | SF1 | SF4 | - EU-06 | - 1-7 |
| 1/2 | 12.70 | 4.500 | 114.30 | 3.000 | 76.20 | SF1 | SF4 | - EU-08 | - 1-7 |
| 3/4 | 19.05 | 4.500 | 114.30 | 3.000 | 76.20 | SF1 | SF4 | - EU-12 | - 1-7 |
| 1 | 25.40 | 3.000 | 76.20 | 3.000 | 76.20 | SF1 | SF4 | - EU-16 | - 1-7 |
| 1 1/2 | 38.10 | 4.500 | 114.30 | 4.500 | 114.30 | SF1 | SF4 | - EU-24 | - 1-7 |
| 2 | 50.80 | 6.000 | 152.40 | 5.000 | 127.00 | SF1 | SF4 | - EU-32 | - 1-7 |
| 2 1/2 | 63.50 | 7.500 | 190.50 | 5.750 | 146.10 | SF1 | SF4 | - EU-40 | - 1-7 |
| 3 | 76.20 | 9.000 | 228.60 | 6.500 | 165.10 | SF1 | SF4 | - EU-48 | - 1-7 |
| 4 | 101.60 | 12.000 | 304.80 | 8.500 | 215.90 | SF1 | SF4 | - EU-64 | - 1-7 |
| 6 | 152.40 | 18.000 | 457.20 | 11.500 | 292.10 | SF1 | SF4 | - EU-96 | - 1-7 |

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

Further dimensions on request.

DT-4.1.1-8
HYGIENIC CLAMP JOINT: 180° RETURN BEND

DT-4.1.2-1
AUTOMATIC TUBE WELD: STRAIGHT TEE



■ ASME BPE / SF1
Mechanically polished¹

■ ASME BPE / SF4
Electropolished¹

Product Code²
+
Diameter³

BPE
Ref.⁴

| Nominal Size (d) | | A | | B | | 316L | | Product Code ² + Diameter ³ | | BPE Ref. ⁴ |
|------------------|--------|--------|--------|--------|--------|------|-----|---|-------|-----------------------|
| Inch | mm | Inch | mm | Inch | mm | SF1 | SF4 | - | CC | |
| 1/4 | 6.35 | 4.500 | 114.30 | 3.125 | 79.40 | SF1 | SF4 | - | EU-04 | - 1-8 |
| 3/8 | 9.53 | 4.500 | 114.30 | 3.125 | 79.40 | SF1 | SF4 | - | EU-06 | - 1-8 |
| 1/2 | 12.70 | 4.500 | 114.30 | 3.500 | 88.90 | SF1 | SF4 | - | EU-08 | - 1-8 |
| 3/4 | 19.05 | 4.500 | 114.30 | 3.500 | 88.90 | SF1 | SF4 | - | EU-12 | - 1-8 |
| 1 | 25.40 | 3.000 | 76.20 | 3.500 | 88.90 | SF1 | SF4 | - | EU-16 | - 1-8 |
| 1 1/2 | 38.10 | 4.500 | 114.30 | 5.000 | 127.00 | SF1 | SF4 | - | EU-24 | - 1-8 |
| 2 | 50.80 | 6.000 | 152.40 | 5.500 | 139.70 | SF1 | SF4 | - | EU-32 | - 1-8 |
| 2 1/2 | 63.50 | 7.500 | 190.50 | 6.250 | 158.80 | SF1 | SF4 | - | EU-40 | - 1-8 |
| 3 | 76.20 | 9.000 | 228.60 | 7.000 | 177.80 | SF1 | SF4 | - | EU-48 | - 1-8 |
| 4 | 101.60 | 12.000 | 304.80 | 9.125 | 231.80 | SF1 | SF4 | - | EU-64 | - 1-8 |
| 6 | 152.40 | 18.000 | 457.20 | 13.000 | 330.20 | SF1 | SF4 | - | EU-96 | - 1-8 |

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

Further dimensions on request.

■ ASME BPE / SF1
Mechanically polished¹

■ ASME BPE / SF4
Electropolished¹

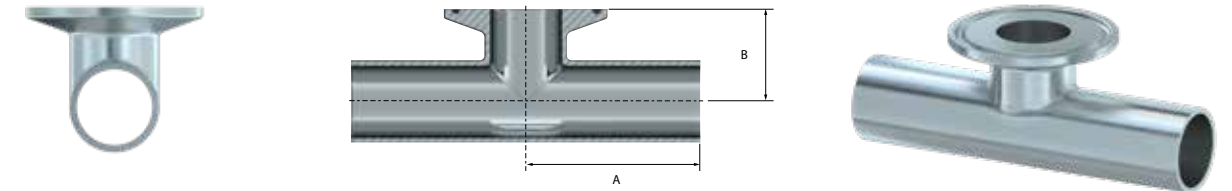
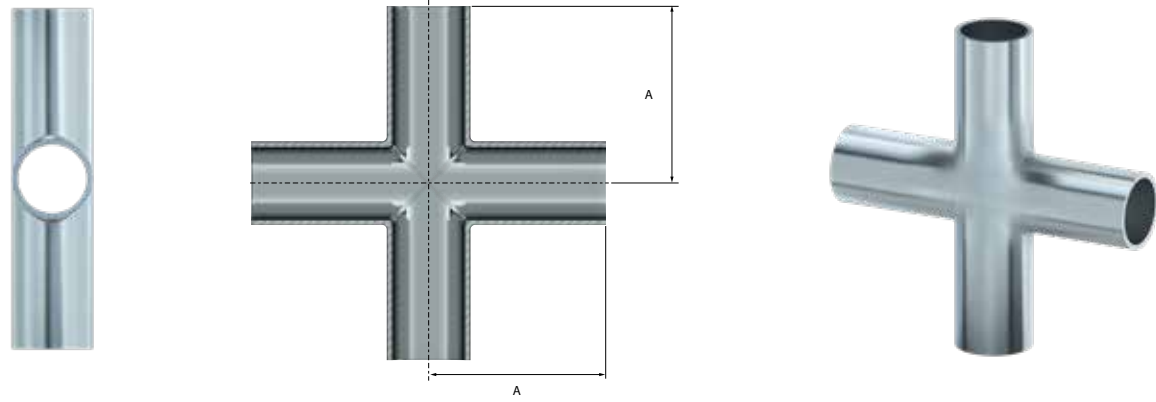
Product Code²
+
Diameter³

BPE
Ref.⁴

| Nominal Size (d) | | A | | 316L | | Product Code ² + Diameter ³ | | BPE Ref. ⁴ |
|------------------|--------|-------|--------|------|-----|---|-------|-----------------------|
| Inch | mm | Inch | mm | SF1 | SF4 | - | WW | |
| 1/4 | 6.35 | 1.750 | 44.50 | SF1 | SF4 | - | TE-04 | - 2-1 |
| 3/8 | 9.53 | 1.750 | 44.50 | SF1 | SF4 | - | TE-06 | - 2-1 |
| 1/2 | 12.70 | 1.875 | 47.60 | SF1 | SF4 | - | TE-08 | - 2-1 |
| 3/4 | 19.05 | 2.000 | 50.80 | SF1 | SF4 | - | TE-12 | - 2-1 |
| 1 | 25.40 | 2.125 | 54.00 | SF1 | SF4 | - | TE-16 | - 2-1 |
| 1 1/2 | 38.10 | 2.375 | 60.30 | SF1 | SF4 | - | TE-24 | - 2-1 |
| 2 | 50.80 | 2.875 | 73.00 | SF1 | SF4 | - | TE-32 | - 2-1 |
| 2 1/2 | 63.50 | 3.125 | 79.40 | SF1 | SF4 | - | TE-40 | - 2-1 |
| 3 | 76.20 | 3.375 | 85.70 | SF1 | SF4 | - | TE-48 | - 2-1 |
| 4 | 101.60 | 4.125 | 104.80 | SF1 | SF4 | - | TE-64 | - 2-1 |
| 6 | 152.40 | 5.625 | 142.90 | SF1 | SF4 | - | TE-96 | - 2-1 |

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

Further dimensions on request.



| Nominal Size (d) | | A | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|--------|-------|--------|--|--|---|--------------------------|
| Inch | mm | Inch | mm | ■ | ■ | 316L | WWW |
| 1/4 | 6.35 | 1.750 | 44.50 | SF1 | SF4 | - CE-04 | - 2-1 |
| 3/8 | 9.53 | 1.750 | 44.50 | SF1 | SF4 | - CE-06 | - 2-1 |
| 1/2 | 12.70 | 1.875 | 47.60 | SF1 | SF4 | - CE-08 | - 2-1 |
| 3/4 | 19.05 | 2.000 | 50.80 | SF1 | SF4 | - CE-12 | - 2-1 |
| 1 | 25.40 | 2.125 | 54.00 | SF1 | SF4 | - CE-16 | - 2-1 |
| 1 1/2 | 38.10 | 2.375 | 60.30 | SF1 | SF4 | - CE-24 | - 2-1 |
| 2 | 50.80 | 2.875 | 73.00 | SF1 | SF4 | - CE-32 | - 2-1 |
| 2 1/2 | 63.50 | 3.125 | 79.40 | SF1 | SF4 | - CE-40 | - 2-1 |
| 3 | 76.20 | 3.375 | 85.70 | SF1 | SF4 | - CE-48 | - 2-1 |
| 4 | 101.60 | 4.125 | 104.80 | SF1 | SF4 | - CE-64 | - 2-1 |
| 6 | 152.40 | 5.625 | 142.90 | SF1 | SF4 | - CE-96 | - 2-1 |

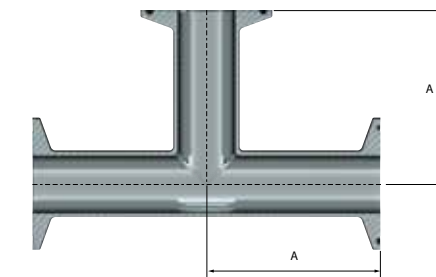
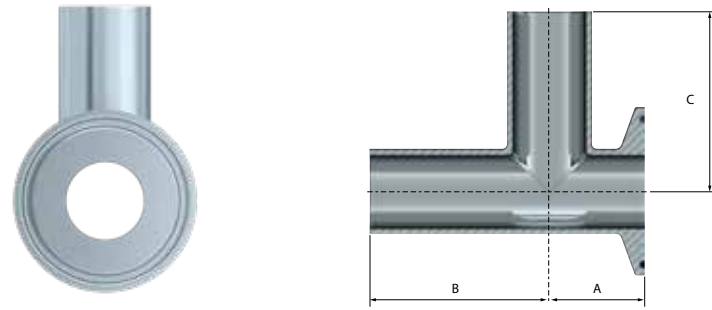
For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

Further dimensions on request.

| Nominal Size (d) | | A | | B | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|--------|-------|--------|-------|--------|--|--|---|--------------------------|
| Inch | mm | Inch | mm | Inch | mm | ■ | ■ | 316L | WCW |
| 1/4 | 6.35 | 1.750 | 44.50 | 1.000 | 25.40 | SF1 | SF4 | - TE-04 | - 2-2 |
| 3/8 | 9.53 | 1.750 | 44.50 | 1.000 | 25.40 | SF1 | SF4 | - TE-06 | - 2-2 |
| 1/2 | 12.70 | 1.875 | 47.60 | 1.000 | 25.40 | SF1 | SF4 | - TE-08 | - 2-2 |
| 3/4 | 19.05 | 2.000 | 50.80 | 1.125 | 28.60 | SF1 | SF4 | - TE-12 | - 2-2 |
| 1 | 25.40 | 2.125 | 54.00 | 1.125 | 28.60 | SF1 | SF4 | - TE-16 | - 2-2 |
| 1 1/2 | 38.10 | 2.375 | 60.30 | 1.375 | 34.90 | SF1 | SF4 | - TE-24 | - 2-2 |
| 2 | 50.80 | 2.875 | 73.00 | 1.625 | 41.30 | SF1 | SF4 | - TE-32 | - 2-2 |
| 2 1/2 | 63.50 | 3.125 | 79.40 | 1.875 | 47.60 | SF1 | SF4 | - TE-40 | - 2-2 |
| 3 | 76.20 | 3.375 | 85.70 | 2.125 | 54.00 | SF1 | SF4 | - TE-48 | - 2-2 |
| 4 | 101.60 | 4.125 | 104.80 | 2.750 | 69.00 | SF1 | SF4 | - TE-64 | - 2-2 |
| 6 | 152.40 | 5.625 | 142.90 | 4.625 | 117.50 | SF1 | SF4 | - TE-96 | - 2-2 |

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

Further dimensions on request.



| Nominal Size (d) | | A | | B | | C | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|--------|-------|--------|-------|--------|-------|--------|--|--|---|--------------------------|
| Inch | mm | Inch | mm | Inch | mm | Inch | mm | 316L | | | WWC |
| 1/4 | 6.35 | 0.875 | 22.20 | 1.750 | 44.50 | 1.750 | 44.50 | SF1 | SF4 | - TE-04 | - 2-3 |
| 3/8 | 9.53 | 0.875 | 22.20 | 1.750 | 44.50 | 1.750 | 44.50 | SF1 | SF4 | - TE-06 | - 2-3 |
| 1/2 | 12.70 | 0.875 | 22.20 | 1.875 | 47.60 | 1.875 | 47.60 | SF1 | SF4 | - TE-08 | - 2-3 |
| 3/4 | 19.05 | 1.000 | 25.40 | 2.000 | 50.80 | 2.000 | 50.80 | SF1 | SF4 | - TE-12 | - 2-3 |
| 1 | 25.40 | 1.125 | 28.60 | 2.125 | 54.00 | 2.125 | 54.00 | SF1 | SF4 | - TE-16 | - 2-3 |
| 1 1/2 | 38.10 | 1.375 | 34.90 | 2.375 | 60.30 | 2.375 | 60.30 | SF1 | SF4 | - TE-24 | - 2-3 |
| 2 | 50.80 | 1.625 | 41.30 | 2.875 | 73.00 | 2.875 | 73.00 | SF1 | SF4 | - TE-32 | - 2-3 |
| 2 1/2 | 63.50 | 1.875 | 47.60 | 3.125 | 79.40 | 3.125 | 79.40 | SF1 | SF4 | - TE-40 | - 2-3 |
| 3 | 76.20 | 2.125 | 54.00 | 3.375 | 85.70 | 3.375 | 85.70 | SF1 | SF4 | - TE-48 | - 2-3 |
| 4 | 101.60 | 2.750 | 69.90 | 4.125 | 104.80 | 4.125 | 104.80 | SF1 | SF4 | - TE-64 | - 2-3 |
| 6 | 152.40 | 4.625 | 117.50 | 5.625 | 142.90 | 5.625 | 142.90 | SF1 | SF4 | - TE-96 | - 2-3 |

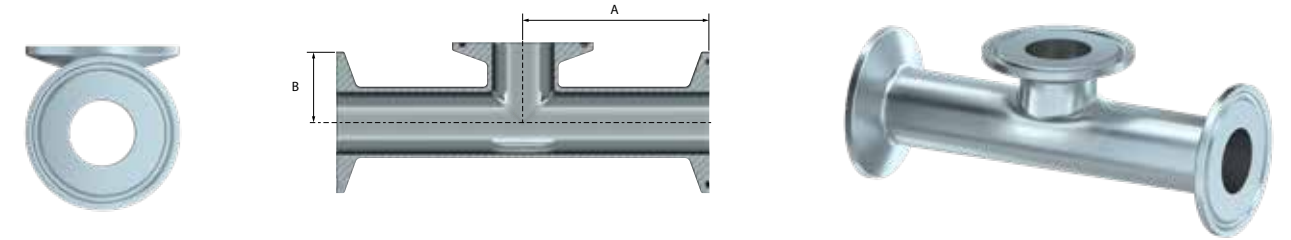
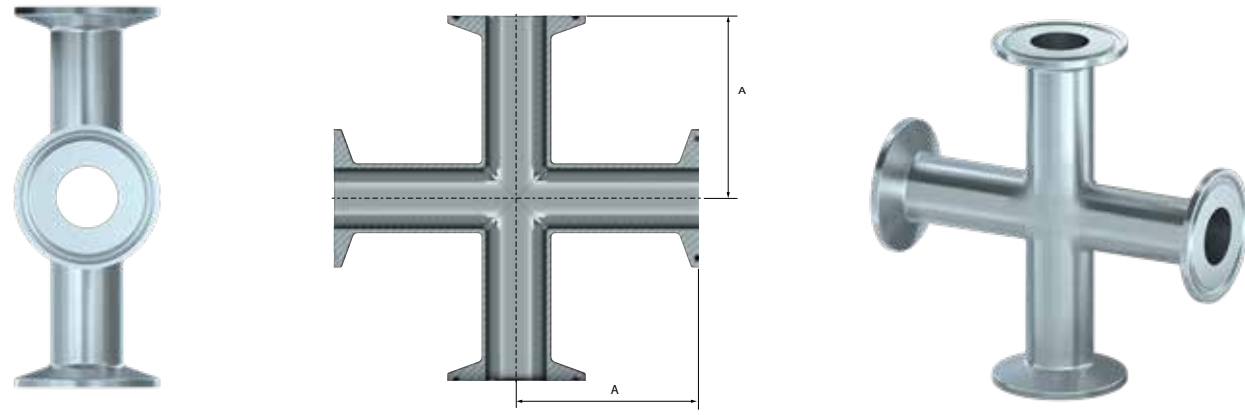
Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

| Nominal Size (d) | | A (L1) | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|--------|--------|--------|--|--|---|--------------------------|
| Inch | mm | Inch | mm | 316L | | | CCC |
| 1/4 | 6.35 | 2.250 | 57.20 | SF1 | SF4 | - TE-04 | - 2-4 |
| 3/8 | 9.53 | 2.250 | 57.20 | SF1 | SF4 | - TE-06 | - 2-4 |
| 1/2 | 12.70 | 2.250 | 57.20 | SF1 | SF4 | - TE-08 | - 2-4 |
| 3/4 | 19.05 | 2.375 | 60.30 | SF1 | SF4 | - TE-12 | - 2-4 |
| 1 | 25.40 | 2.625 | 66.70 | SF1 | SF4 | - TE-16 | - 2-4 |
| 1 1/2 | 38.10 | 2.875 | 73.00 | SF1 | SF4 | - TE-24 | - 2-4 |
| 2 | 50.80 | 3.375 | 85.70 | SF1 | SF4 | - TE-32 | - 2-4 |
| 2 1/2 | 63.50 | 3.625 | 92.10 | SF1 | SF4 | - TE-40 | - 2-4 |
| 3 | 76.20 | 3.875 | 98.40 | SF1 | SF4 | - TE-48 | - 2-4 |
| 4 | 101.60 | 4.750 | 120.70 | SF1 | SF4 | - TE-64 | - 2-4 |
| 6 | 152.40 | 7.125 | 181.00 | SF1 | SF4 | - TE-96 | - 2-4 |

Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴



| Nominal Size (d) | | | | A | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|--------|-------|--------|------|--|--|--|-----------------------|
| Inch | mm | Inch | mm | 316L | | | CCCC | |
| 1/4 | 6.35 | 2.250 | 57.20 | SF1 | SF4 | - | CE-04 | - 2-4 |
| 3/8 | 9.53 | 2.250 | 57.20 | SF1 | SF4 | - | CE-06 | - 2-4 |
| 1/2 | 12.70 | 2.250 | 57.20 | SF1 | SF4 | - | CE-08 | - 2-4 |
| 3/4 | 19.05 | 2.375 | 60.30 | SF1 | SF4 | - | CE-12 | - 2-4 |
| 1 | 25.40 | 2.625 | 66.70 | SF1 | SF4 | - | CE-16 | - 2-4 |
| 1 1/2 | 38.10 | 2.875 | 73.00 | SF1 | SF4 | - | CE-24 | - 2-4 |
| 2 | 50.80 | 3.375 | 85.70 | SF1 | SF4 | - | CE-32 | - 2-4 |
| 2 1/2 | 63.50 | 3.625 | 92.10 | SF1 | SF4 | - | CE-40 | - 2-4 |
| 3 | 76.20 | 3.875 | 98.40 | SF1 | SF4 | - | CE-48 | - 2-4 |
| 4 | 101.60 | 4.750 | 120.70 | SF1 | SF4 | - | CE-64 | - 2-4 |
| 6 | 152.40 | 7.125 | 181.00 | SF1 | SF4 | - | CE-96 | - 2-4 |

Further dimensions on request.

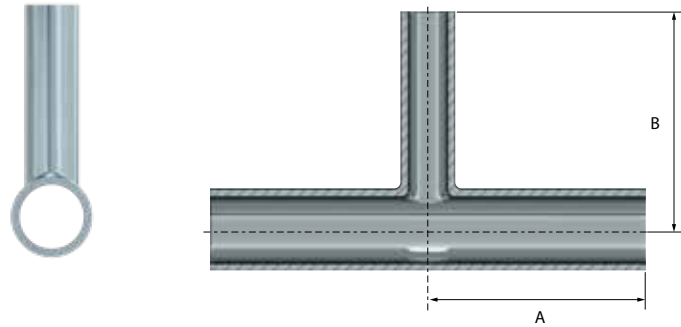
For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

| Nominal Size (d) | | | | | | A | B | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|--------|-------|--------|-------|--------|------|-----|--|--|--|-----------------------|
| Inch | mm | Inch | mm | Inch | mm | 316L | | | CCC | | |
| 1/2 | 12.70 | 2.625 | 66.70 | 1.125 | 28.60 | SF1 | SF4 | - | TE-08 | - 2-5 | |
| 3/4 | 19.05 | 2.875 | 73.00 | 1.375 | 34.90 | SF1 | SF4 | - | TE-12 | - 2-5 | |
| 1 | 25.40 | 3.375 | 85.70 | 1.625 | 41.30 | SF1 | SF4 | - | TE-16 | - 2-5 | |
| 1 1/2 | 38.10 | 3.625 | 92.10 | 1.875 | 47.60 | SF1 | SF4 | - | TE-24 | - 2-5 | |
| 2 | 50.80 | 3.875 | 98.40 | 2.125 | 54.00 | SF1 | SF4 | - | TE-32 | - 2-5 | |
| 2 1/2 | 63.50 | 4.750 | 120.70 | 2.750 | 69.90 | SF1 | SF4 | - | TE-40 | - 2-5 | |
| 3 | 76.20 | 7.125 | 181.00 | 4.625 | 117.50 | SF1 | SF4 | - | TE-48 | - 2-5 | |
| 4 | 101.60 | 4.125 | 104.80 | 2.750 | 69.00 | SF1 | SF4 | - | TE-64 | - 2-5 | |
| 6 | 152.40 | 5.625 | 142.90 | 4.625 | 117.50 | SF1 | SF4 | - | TE-96 | - 2-5 | |

Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

DT-4.1.2-6
AUTOMATIC TUBE WELD: REDUCING TEE



ASME BPE / SF1
Mechanically polished¹

ASME BPE / SF4
Electropolished¹

Product Code²
+
Diameter³

BPE
Ref.⁴

| Nominal Size (d) | | A | | B | | 316L | | Product Code ² + Diameter ³ | | BPE Ref. ⁴ | |
|------------------|---------------|-------|-------|-------|-------|------|-----|---|------------|-----------------------|-----|
| Inch | mm | Inch | mm | Inch | mm | SF1 | SF4 | - | TR-XXXX-XX | - | 2-6 |
| 3/8 x 1/4 | 9.53 x 6.35 | 1.750 | 44.50 | 1.750 | 44.50 | SF1 | SF4 | - | TR-06-04 | - | 2-6 |
| 1/2 x 1/4 | 12.70 x 6.35 | 1.875 | 47.60 | 1.875 | 47.60 | SF1 | SF4 | - | TR-08-04 | - | 2-6 |
| 1/2 x 3/8 | 12.70 x 9.53 | 1.875 | 47.60 | 1.875 | 47.60 | SF1 | SF4 | - | TR-08-06 | - | 2-6 |
| 3/4 x 1/4 | 19.05 x 6.35 | 2.000 | 50.80 | 2.000 | 50.80 | SF1 | SF4 | - | TR-12-04 | - | 2-6 |
| 3/4 x 3/8 | 19.05 x 9.53 | 2.000 | 50.80 | 2.000 | 50.80 | SF1 | SF4 | - | TR-12-06 | - | 2-6 |
| 3/4 x 1/2 | 19.05 x 12.70 | 2.000 | 50.80 | 2.000 | 50.80 | SF1 | SF4 | - | TR-12-08 | - | 2-6 |
| 1 x 1/4 | 25.40 x 6.35 | 2.125 | 54.00 | 2.125 | 54.00 | SF1 | SF4 | - | TR-16-04 | - | 2-6 |
| 1 x 3/8 | 25.40 x 9.53 | 2.125 | 54.00 | 2.125 | 54.00 | SF1 | SF4 | - | TR-16-06 | - | 2-6 |
| 1 x 1/2 | 25.40 x 12.70 | 2.125 | 54.00 | 2.125 | 54.00 | SF1 | SF4 | - | TR-16-08 | - | 2-6 |
| 1 x 3/4 | 25.40 x 19.05 | 2.125 | 54.00 | 2.125 | 54.00 | SF1 | SF4 | - | TR-16-12 | - | 2-6 |
| 1 1/2 x 1/2 | 38.10 x 12.70 | 2.375 | 60.30 | 2.375 | 60.30 | SF1 | SF4 | - | TR-24-08 | - | 2-6 |
| 1 1/2 x 3/4 | 38.10 x 19.05 | 2.375 | 60.30 | 2.375 | 60.30 | SF1 | SF4 | - | TR-24-12 | - | 2-6 |
| 1 1/2 x 1 | 38.10 x 25.40 | 2.375 | 60.30 | 2.375 | 60.30 | SF1 | SF4 | - | TR-24-16 | - | 2-6 |
| 2 x 1/2 | 50.80 x 12.70 | 2.875 | 73.00 | 2.625 | 66.70 | SF1 | SF4 | - | TR-32-08 | - | 2-6 |
| 2 x 3/4 | 50.80 x 19.05 | 2.875 | 73.00 | 2.625 | 66.70 | SF1 | SF4 | - | TR-32-12 | - | 2-6 |
| 2 x 1 | 50.80 x 25.40 | 2.875 | 73.00 | 2.625 | 66.70 | SF1 | SF4 | - | TR-32-16 | - | 2-6 |
| 2 x 1 1/2 | 50.80 x 38.10 | 2.875 | 73.00 | 2.625 | 66.70 | SF1 | SF4 | - | TR-32-24 | - | 2-6 |

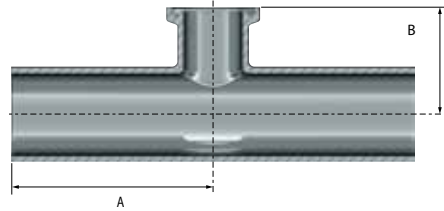
Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

| Nominal Size (d) | | A | | B | | 316L | | Product Code ² + Diameter ³ | | BPE Ref. ⁴ | |
|------------------|-----------------|-------|--------|-------|--------|------|-----|---|------------|-----------------------|-----|
| Inch | mm | Inch | mm | Inch | mm | SF1 | SF4 | - | TR-XXXX-XX | - | 2-6 |
| 2 1/2 x 1/2 | 63.50 x 12.70 | 3.125 | 79.40 | 2.875 | 73.00 | SF1 | SF4 | - | TR-40-08 | - | 2-6 |
| 2 1/2 x 3/4 | 63.50 x 19.05 | 3.125 | 79.40 | 2.875 | 73.00 | SF1 | SF4 | - | TR-40-12 | - | 2-6 |
| 2 1/2 x 1 | 63.50 x 25.40 | 3.125 | 79.40 | 2.875 | 73.00 | SF1 | SF4 | - | TR-40-16 | - | 2-6 |
| 2 1/2 x 1 1/2 | 63.50 x 38.10 | 3.125 | 79.40 | 2.875 | 73.00 | SF1 | SF4 | - | TR-40-24 | - | 2-6 |
| 2 1/2 x 2 | 63.50 x 50.80 | 3.125 | 79.40 | 2.875 | 73.00 | SF1 | SF4 | - | TR-40-32 | - | 2-6 |
| 3 x 1/2 | 76.20 x 12.70 | 3.375 | 85.70 | 3.125 | 79.40 | SF1 | SF4 | - | TR-48-08 | - | 2-6 |
| 3 x 3/4 | 76.20 x 19.05 | 3.375 | 85.70 | 3.125 | 79.40 | SF1 | SF4 | - | TR-48-12 | - | 2-6 |
| 3 x 1 | 76.20 x 25.40 | 3.375 | 85.70 | 3.125 | 79.40 | SF1 | SF4 | - | TR-48-16 | - | 2-6 |
| 3 x 1 1/2 | 76.20 x 38.10 | 3.375 | 85.70 | 3.125 | 79.40 | SF1 | SF4 | - | TR-48-24 | - | 2-6 |
| 3 x 2 | 76.20 x 50.80 | 3.375 | 85.70 | 3.125 | 79.40 | SF1 | SF4 | - | TR-48-32 | - | 2-6 |
| 3 x 2 1/2 | 76.20 x 63.50 | 3.375 | 85.70 | 3.125 | 79.40 | SF1 | SF4 | - | TR-48-40 | - | 2-6 |
| 4 x 1/2 | 101.60 x 12.70 | 4.125 | 104.80 | 3.625 | 92.10 | SF1 | SF4 | - | TR-64-08 | - | 2-6 |
| 4 x 3/4 | 101.60 x 19.05 | 4.125 | 104.80 | 3.625 | 92.10 | SF1 | SF4 | - | TR-64-12 | - | 2-6 |
| 4 x 1 | 101.60 x 25.40 | 4.125 | 104.80 | 3.625 | 92.10 | SF1 | SF4 | - | TR-64-16 | - | 2-6 |
| 4 x 1 1/2 | 101.60 x 38.10 | 4.125 | 104.80 | 3.625 | 92.10 | SF1 | SF4 | - | TR-64-24 | - | 2-6 |
| 4 x 2 | 101.60 x 50.80 | 4.125 | 104.80 | 3.875 | 98.40 | SF1 | SF4 | - | TR-64-32 | - | 2-6 |
| 4 x 2 1/2 | 101.60 x 63.50 | 4.125 | 104.80 | 3.875 | 98.40 | SF1 | SF4 | - | TR-64-40 | - | 2-6 |
| 4 x 3 | 101.60 x 76.20 | 4.125 | 104.80 | 3.875 | 98.40 | SF1 | SF4 | - | TR-64-48 | - | 2-6 |
| 6 x 1/2 | 152.40 x 12.70 | 5.625 | 142.90 | 4.625 | 117.48 | SF1 | SF4 | - | TR-96-08 | - | 2-6 |
| 6 x 3/4 | 152.40 x 19.05 | 5.625 | 142.90 | 4.625 | 117.48 | SF1 | SF4 | - | TR-96-12 | - | 2-6 |
| 6 x 1 | 152.40 x 25.40 | 5.625 | 142.90 | 4.625 | 117.48 | SF1 | SF4 | - | TR-96-16 | - | 2-6 |
| 6 x 1 1/2 | 152.40 x 38.10 | 5.625 | 142.90 | 4.625 | 117.48 | SF1 | SF4 | - | TR-96-24 | - | 2-6 |
| 6 x 2 | 152.40 x 50.80 | 5.625 | 142.90 | 4.625 | 117.48 | SF1 | SF4 | - | TR-96-32 | - | 2-6 |
| 6 x 2 1/2 | 152.40 x 63.50 | 5.625 | 142.90 | 4.625 | 117.48 | SF1 | SF4 | - | TR-96-40 | - | 2-6 |
| 6 x 3 | 152.40 x 76.20 | 5.625 | 142.90 | 4.875 | 123.80 | SF1 | SF4 | - | TR-96-48 | - | 2-6 |
| 6 x 4 | 152.40 x 101.60 | 5.625 | 142.90 | 5.125 | 130.20 | SF1 | SF4 | - | TR-96-64 | - | 2-6 |

Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴



| Nominal Size (d) | | A | | B | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|---------------|-------|-------|-------|-------|--|--|---|--------------------------|
| Inch | mm | Inch | mm | Inch | mm | | | | |
| | | | | | | 316L | | WCW | |
| 3/8 x 1/4 | 9.53 x 6.35 | 1.750 | 44.50 | 1.000 | 25.40 | SF1 | SF4 | - TR-06-04 | - 2-7 |
| 1/2 x 1/4 | 12.70 x 6.35 | 1.875 | 47.60 | 1.000 | 25.40 | SF1 | SF4 | - TR-08-04 | - 2-7 |
| 1/2 x 3/8 | 12.70 x 9.53 | 1.875 | 47.60 | 1.000 | 25.40 | SF1 | SF4 | - TR-08-06 | - 2-7 |
| 3/4 x 1/4 | 19.05 x 6.35 | 2.000 | 50.80 | 1.000 | 25.40 | SF1 | SF4 | - TR-12-04 | - 2-7 |
| 3/4 x 3/8 | 19.05 x 9.53 | 2.000 | 50.80 | 1.000 | 25.40 | SF1 | SF4 | - TR-12-06 | - 2-7 |
| 3/4 x 1/2 | 19.05 x 12.70 | 2.000 | 50.80 | 1.000 | 25.40 | SF1 | SF4 | - TR-12-08 | - 2-7 |
| 1 x 1/4 | 25.40 x 6.35 | 2.125 | 54.00 | 1.125 | 28.60 | SF1 | SF4 | - TR-16-04 | - 2-7 |
| 1 x 3/8 | 25.40 x 9.53 | 2.125 | 54.00 | 1.125 | 28.60 | SF1 | SF4 | - TR-16-06 | - 2-7 |
| 1 x 1/2 | 25.40 x 12.70 | 2.125 | 54.00 | 1.125 | 28.60 | SF1 | SF4 | - TR-16-08 | - 2-7 |
| 1 x 3/4 | 25.40 x 19.05 | 2.125 | 54.00 | 1.125 | 28.60 | SF1 | SF4 | - TR-16-12 | - 2-7 |
| 1 1/2 x 1/2 | 38.10 x 12.70 | 2.375 | 60.30 | 1.375 | 34.90 | SF1 | SF4 | - TR-24-08 | - 2-7 |
| 1 1/2 x 3/4 | 38.10 x 19.05 | 2.375 | 60.30 | 1.375 | 34.90 | SF1 | SF4 | - TR-24-12 | - 2-7 |
| 1 1/2 x 1 | 38.10 x 25.40 | 2.375 | 60.30 | 1.375 | 34.90 | SF1 | SF4 | - TR-24-16 | - 2-7 |
| 2 x 1/2 | 50.80 x 12.70 | 2.875 | 73.00 | 1.625 | 41.30 | SF1 | SF4 | - TR-32-08 | - 2-7 |
| 2 x 3/4 | 50.80 x 19.05 | 2.875 | 73.00 | 1.625 | 41.30 | SF1 | SF4 | - TR-32-12 | - 2-7 |
| 2 x 1 | 50.80 x 25.40 | 2.875 | 73.00 | 1.625 | 41.30 | SF1 | SF4 | - TR-32-16 | - 2-7 |
| 2 x 1 1/2 | 50.80 x 38.10 | 2.875 | 73.00 | 1.625 | 41.30 | SF1 | SF4 | - TR-32-24 | - 2-7 |

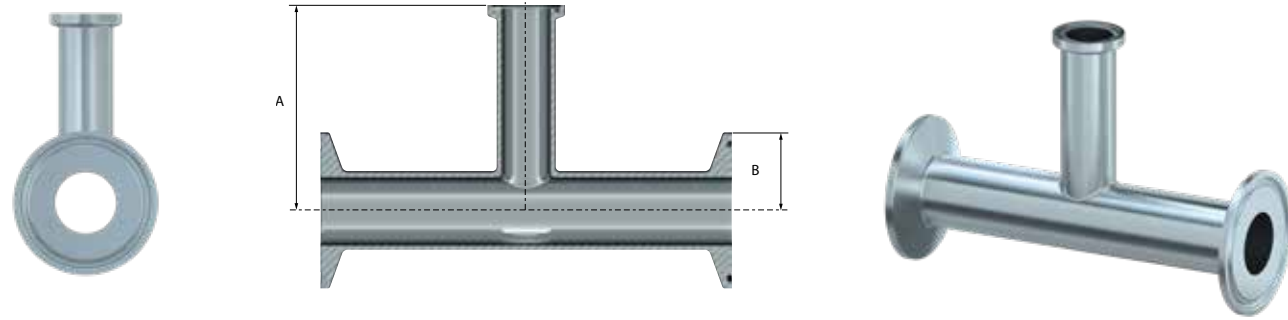
Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

| Nominal Size (d) | | A | | B | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|-----------------|-------|--------|-------|-------|--|--|---|--------------------------|
| Inch | mm | Inch | mm | Inch | mm | | | | |
| | | | | | | 316L | | WCW | |
| 2 1/2 x 1/2 | 63.50 x 12.70 | 3.125 | 79.40 | 1.875 | 47.60 | SF1 | SF4 | - TR-40-08 | - 2-7 |
| 2 1/2 x 3/4 | 63.50 x 19.05 | 3.125 | 79.40 | 1.875 | 47.60 | SF1 | SF4 | - TR-40-12 | - 2-7 |
| 2 1/2 x 1 | 63.50 x 25.40 | 3.125 | 79.40 | 1.875 | 47.60 | SF1 | SF4 | - TR-40-16 | - 2-7 |
| 2 1/2 x 1 1/2 | 63.50 x 38.10 | 3.125 | 79.40 | 1.875 | 47.60 | SF1 | SF4 | - TR-40-24 | - 2-7 |
| 2 1/2 x 2 | 63.50 x 50.80 | 3.125 | 79.40 | 1.875 | 47.60 | SF1 | SF4 | - TR-40-32 | - 2-7 |
| 3 x 1/2 | 76.20 x 12.70 | 3.375 | 85.70 | 2.125 | 54.00 | SF1 | SF4 | - TR-48-08 | - 2-7 |
| 3 x 3/4 | 76.20 x 19.05 | 3.375 | 85.70 | 2.125 | 54.00 | SF1 | SF4 | - TR-48-12 | - 2-7 |
| 3 x 1 | 76.20 x 25.40 | 3.375 | 85.70 | 2.125 | 54.00 | SF1 | SF4 | - TR-48-16 | - 2-7 |
| 3 x 1 1/2 | 76.20 x 38.10 | 3.375 | 85.70 | 2.125 | 54.00 | SF1 | SF4 | - TR-48-24 | - 2-7 |
| 3 x 2 | 76.20 x 50.80 | 3.375 | 85.70 | 2.125 | 54.00 | SF1 | SF4 | - TR-48-32 | - 2-7 |
| 3 x 2 1/2 | 76.20 x 63.50 | 3.375 | 85.70 | 2.125 | 54.00 | SF1 | SF4 | - TR-48-40 | - 2-7 |
| 4 x 1/2 | 101.60 x 12.70 | 4.125 | 104.80 | 2.625 | 66.70 | SF1 | SF4 | - TR-64-08 | - 2-7 |
| 4 x 3/4 | 101.60 x 19.05 | 4.125 | 104.80 | 2.625 | 66.70 | SF1 | SF4 | - TR-64-12 | - 2-7 |
| 4 x 1 | 101.60 x 25.40 | 4.125 | 104.80 | 2.625 | 66.70 | SF1 | SF4 | - TR-64-16 | - 2-7 |
| 4 x 1 1/2 | 101.60 x 38.10 | 4.125 | 104.80 | 2.625 | 66.70 | SF1 | SF4 | - TR-64-24 | - 2-7 |
| 4 x 2 | 101.60 x 50.80 | 4.125 | 104.80 | 2.625 | 66.70 | SF1 | SF4 | - TR-64-32 | - 2-7 |
| 4 x 2 1/2 | 101.60 x 63.50 | 4.125 | 104.80 | 2.625 | 66.70 | SF1 | SF4 | - TR-64-40 | - 2-7 |
| 4 x 3 | 101.60 x 76.20 | 4.125 | 104.80 | 2.625 | 66.70 | SF1 | SF4 | - TR-64-48 | - 2-7 |
| 6 x 1/2 | 152.40 x 12.70 | 5.625 | 142.90 | 3.625 | 92.10 | SF1 | SF4 | - TR-96-48 | - 2-7 |
| 6 x 3/4 | 152.40 x 19.05 | 5.625 | 142.90 | 3.625 | 92.10 | SF1 | SF4 | - TR-96-08 | - 2-7 |
| 6 x 1 | 152.40 x 25.40 | 5.625 | 142.90 | 3.625 | 92.10 | SF1 | SF4 | - TR-96-16 | - 2-7 |
| 6 x 1 1/2 | 152.40 x 38.10 | 5.625 | 142.90 | 3.625 | 92.10 | SF1 | SF4 | - TR-96-24 | - 2-7 |
| 6 x 2 | 152.40 x 50.80 | 5.625 | 142.90 | 3.625 | 92.10 | SF1 | SF4 | - TR-96-32 | - 2-7 |
| 6 x 2 1/2 | 152.40 x 63.50 | 5.625 | 142.90 | 3.625 | 92.10 | SF1 | SF4 | - TR-96-40 | - 2-7 |
| 6 x 3 | 152.40 x 76.20 | 5.625 | 142.90 | 3.625 | 92.10 | SF1 | SF4 | - TR-96-48 | - 2-7 |
| 6 x 4 | 152.40 x 101.60 | 5.625 | 142.90 | 3.750 | 95.30 | SF1 | SF4 | - TR-96-64 | - 2-7 |

Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴



| Nominal Size (d) | | A | | B | | ASME BPE / SF1 Mechanically polished ¹ | | ASME BPE / SF4 Electropolished ¹ | | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|---------------|-------|-------|-------|-------|--|-----|--|----------|--|-----------------------|
| Inch | mm | Inch | mm | Inch | mm | 316L | | | | CCC | |
| 3/8 x 1/4 | 9.53 x 6.35 | 2.250 | 57.20 | 2.250 | 57.20 | SF1 | SF4 | - | TR-06-04 | - | 2-8 |
| 1/2 x 1/4 | 12.70 x 6.35 | 2.375 | 60.30 | 2.375 | 60.30 | SF1 | SF4 | - | TR-08-04 | - | 2-8 |
| 1/2 x 3/8 | 12.70 x 9.53 | 2.375 | 60.30 | 2.375 | 60.30 | SF1 | SF4 | - | TR-08-06 | - | 2-8 |
| 3/4 x 1/4 | 19.05 x 6.35 | 2.500 | 63.50 | 2.500 | 63.50 | SF1 | SF4 | - | TR-12-04 | - | 2-8 |
| 3/4 x 3/8 | 19.05 x 9.53 | 2.500 | 63.50 | 2.500 | 63.50 | SF1 | SF4 | - | TR-12-06 | - | 2-8 |
| 3/4 x 1/2 | 19.05 x 12.70 | 2.500 | 63.50 | 2.500 | 63.50 | SF1 | SF4 | - | TR-12-08 | - | 2-8 |
| 1 x 1/4 | 25.40 x 6.35 | 2.625 | 66.70 | 2.625 | 66.70 | SF1 | SF4 | - | TR-16-04 | - | 2-8 |
| 1 x 3/8 | 25.40 x 9.53 | 2.625 | 66.70 | 2.625 | 66.70 | SF1 | SF4 | - | TR-16-06 | - | 2-8 |
| 1 x 1/2 | 25.40 x 12.70 | 2.625 | 66.70 | 2.625 | 66.70 | SF1 | SF4 | - | TR-16-08 | - | 2-8 |
| 1 x 3/4 | 25.40 x 19.05 | 2.625 | 66.70 | 2.625 | 66.70 | SF1 | SF4 | - | TR-16-12 | - | 2-8 |
| 1 1/2 x 1/2 | 38.10 x 12.70 | 2.875 | 73.00 | 2.875 | 73.00 | SF1 | SF4 | - | TR-24-08 | - | 2-8 |
| 1 1/2 x 3/4 | 38.10 x 19.05 | 2.875 | 73.00 | 2.875 | 73.00 | SF1 | SF4 | - | TR-24-12 | - | 2-8 |
| 1 1/2 x 1 | 38.10 x 25.40 | 2.875 | 73.00 | 2.875 | 73.00 | SF1 | SF4 | - | TR-24-16 | - | 2-8 |
| 2 x 1/2 | 50.80 x 12.70 | 3.375 | 85.70 | 3.125 | 79.40 | SF1 | SF4 | - | TR-32-08 | - | 2-8 |
| 2 x 3/4 | 50.80 x 19.05 | 3.375 | 85.70 | 3.125 | 79.40 | SF1 | SF4 | - | TR-32-12 | - | 2-8 |
| 2 x 1 | 50.80 x 25.40 | 3.375 | 85.70 | 3.125 | 79.40 | SF1 | SF4 | - | TR-32-16 | - | 2-8 |
| 2 x 1 1/2 | 50.80 x 38.10 | 3.375 | 85.70 | 3.125 | 79.40 | SF1 | SF4 | - | TR-32-24 | - | 2-8 |

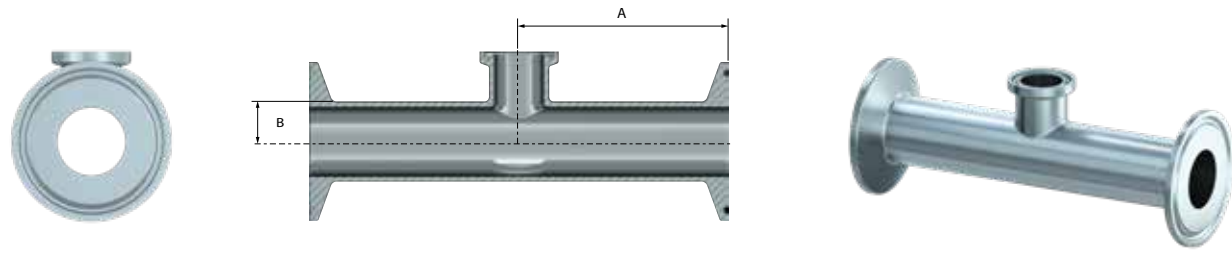
Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

| Nominal Size (d) | | A | | B | | ASME BPE / SF1 Mechanically polished ¹ | | ASME BPE / SF4 Electropolished ¹ | | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|-----------------|-------|--------|-------|--------|--|-----|--|----------|--|-----------------------|
| Inch | mm | Inch | mm | Inch | mm | 316L | | | | CCC | |
| 2 1/2 x 1/2 | 63.50 x 12.70 | 3.625 | 92.10 | 3.375 | 85.70 | SF1 | SF4 | - | TR-40-08 | - | 2-8 |
| 2 1/2 x 3/4 | 63.50 x 19.05 | 3.625 | 92.10 | 3.375 | 85.70 | SF1 | SF4 | - | TR-40-12 | - | 2-8 |
| 2 1/2 x 1 | 63.50 x 25.40 | 3.625 | 92.10 | 3.375 | 85.70 | SF1 | SF4 | - | TR-40-16 | - | 2-8 |
| 2 1/2 x 1 1/2 | 63.50 x 38.10 | 3.625 | 92.10 | 3.375 | 85.70 | SF1 | SF4 | - | TR-40-24 | - | 2-8 |
| 2 1/2 x 2 | 63.50 x 50.80 | 3.625 | 92.10 | 3.375 | 85.70 | SF1 | SF4 | - | TR-40-32 | - | 2-8 |
| 3 x 1/2 | 76.20 x 12.70 | 3.875 | 98.40 | 3.625 | 92.10 | SF1 | SF4 | - | TR-48-08 | - | 2-8 |
| 3 x 3/4 | 76.20 x 19.05 | 3.875 | 98.40 | 3.625 | 92.10 | SF1 | SF4 | - | TR-48-12 | - | 2-8 |
| 3 x 1 | 76.20 x 25.40 | 3.875 | 98.40 | 3.625 | 92.10 | SF1 | SF4 | - | TR-48-16 | - | 2-8 |
| 3 x 1 1/2 | 76.20 x 38.10 | 3.875 | 98.40 | 3.625 | 92.10 | SF1 | SF4 | - | TR-48-24 | - | 2-8 |
| 3 x 2 | 76.20 x 50.80 | 3.875 | 98.40 | 3.625 | 92.10 | SF1 | SF4 | - | TR-48-32 | - | 2-8 |
| 3 x 2 1/2 | 76.20 x 63.50 | 3.875 | 98.40 | 3.625 | 92.10 | SF1 | SF4 | - | TR-48-40 | - | 2-8 |
| 4 x 1/2 | 101.60 x 12.70 | 4.750 | 120.70 | 4.125 | 104.80 | SF1 | SF4 | - | TR-64-08 | - | 2-8 |
| 4 x 3/4 | 101.60 x 19.05 | 4.750 | 120.70 | 4.125 | 104.80 | SF1 | SF4 | - | TR-64-12 | - | 2-8 |
| 4 x 1 | 101.60 x 25.40 | 4.750 | 120.70 | 4.125 | 104.80 | SF1 | SF4 | - | TR-64-16 | - | 2-8 |
| 4 x 1 1/2 | 101.60 x 38.10 | 4.750 | 120.70 | 4.125 | 104.80 | SF1 | SF4 | - | TR-64-24 | - | 2-8 |
| 4 x 2 | 101.60 x 50.80 | 4.750 | 120.70 | 4.375 | 111.10 | SF1 | SF4 | - | TR-64-32 | - | 2-8 |
| 4 x 2 1/2 | 101.60 x 63.50 | 4.750 | 120.70 | 4.375 | 111.10 | SF1 | SF4 | - | TR-64-40 | - | 2-8 |
| 4 x 3 | 101.60 x 76.20 | 4.750 | 120.70 | 4.375 | 111.10 | SF1 | SF4 | - | TR-64-48 | - | 2-8 |
| 6 x 1/2 | 152.40 x 12.70 | 7.125 | 180.98 | 5.125 | 130.18 | SF1 | SF4 | - | TR-96-08 | - | 2-8 |
| 6 x 3/4 | 152.40 x 19.05 | 7.125 | 180.98 | 5.125 | 130.18 | SF1 | SF4 | - | TR-96-12 | - | 2-8 |
| 6 x 1 | 152.40 x 25.40 | 7.125 | 180.98 | 5.125 | 130.18 | SF1 | SF4 | - | TR-96-16 | - | 2-8 |
| 6 x 1 1/2 | 152.40 x 38.10 | 7.125 | 180.98 | 5.125 | 130.18 | SF1 | SF4 | - | TR-96-24 | - | 2-8 |
| 6 x 2 | 152.40 x 50.80 | 7.125 | 180.98 | 5.125 | 130.18 | SF1 | SF4 | - | TR-96-32 | - | 2-8 |
| 6 x 2 1/2 | 152.40 x 63.50 | 7.125 | 180.98 | 5.125 | 130.18 | SF1 | SF4 | - | TR-96-40 | - | 2-8 |
| 6 x 3 | 152.40 x 76.20 | 7.125 | 181.00 | 5.375 | 136.50 | SF1 | SF4 | - | TR-96-48 | - | 2-8 |
| 6 x 4 | 152.40 x 101.60 | 7.125 | 181.00 | 5.750 | 146.10 | SF1 | SF4 | - | TR-96-64 | - | 2-8 |

Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴



| Nominal Size (d) | | A | | B | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|---------------|-------|-------|-------|-------|--|--|--|-----------------------|
| Inch | mm | Inch | mm | Inch | mm | | | | |
| | | | | | | 316L | | CCC | |
| 3/8 x 1/4 | 9.53 x 6.35 | 2.250 | 57.20 | 1.000 | 25.40 | SF1 | SF4 | - TR-06-04 | - 2-9 |
| 1/2 x 1/4 | 12.70 x 6.35 | 2.375 | 60.30 | 1.000 | 25.40 | SF1 | SF4 | - TR-08-04 | - 2-9 |
| 1/2 x 3/8 | 12.70 x 9.53 | 2.375 | 60.30 | 1.000 | 25.40 | SF1 | SF4 | - TR-08-06 | - 2-9 |
| 3/4 x 1/4 | 19.05 x 6.35 | 2.500 | 63.50 | 1.000 | 25.40 | SF1 | SF4 | - TR-12-04 | - 2-9 |
| 3/4 x 3/8 | 19.05 x 9.53 | 2.500 | 63.50 | 1.000 | 25.40 | SF1 | SF4 | - TR-12-06 | - 2-9 |
| 3/4 x 1/2 | 19.05 x 12.70 | 2.500 | 63.50 | 1.000 | 25.40 | SF1 | SF4 | - TR-12-08 | - 2-9 |
| 1 x 1/4 | 25.40 x 6.35 | 2.625 | 66.70 | 1.125 | 28.60 | SF1 | SF4 | - TR-16-04 | - 2-9 |
| 1 x 3/8 | 25.40 x 9.53 | 2.625 | 66.70 | 1.125 | 28.60 | SF1 | SF4 | - TR-16-06 | - 2-9 |
| 1 x 1/2 | 25.40 x 12.70 | 2.625 | 66.70 | 1.125 | 28.60 | SF1 | SF4 | - TR-16-08 | - 2-9 |
| 1 x 3/4 | 25.40 x 19.05 | 2.625 | 66.70 | 1.125 | 28.60 | SF1 | SF4 | - TR-16-12 | - 2-9 |
| 1 1/2 x 1/2 | 38.10 x 12.70 | 2.875 | 73.00 | 1.375 | 34.90 | SF1 | SF4 | - TR-24-08 | - 2-9 |
| 1 1/2 x 3/4 | 38.10 x 19.05 | 2.875 | 73.00 | 1.375 | 34.90 | SF1 | SF4 | - TR-24-12 | - 2-9 |
| 1 1/2 x 1 | 38.10 x 25.40 | 2.875 | 73.00 | 1.375 | 34.90 | SF1 | SF4 | - TR-24-16 | - 2-9 |
| 2 x 1/2 | 50.80 x 12.70 | 3.375 | 85.70 | 1.625 | 41.30 | SF1 | SF4 | - TR-32-08 | - 2-9 |
| 2 x 3/4 | 50.80 x 19.05 | 3.375 | 85.70 | 1.625 | 41.30 | SF1 | SF4 | - TR-32-12 | - 2-9 |
| 2 x 1 | 50.80 x 25.40 | 3.375 | 85.70 | 1.625 | 41.30 | SF1 | SF4 | - TR-32-16 | - 2-9 |
| 2 x 1 1/2 | 50.80 x 38.10 | 3.375 | 85.70 | 1.625 | 41.30 | SF1 | SF4 | - TR-32-24 | - 2-9 |

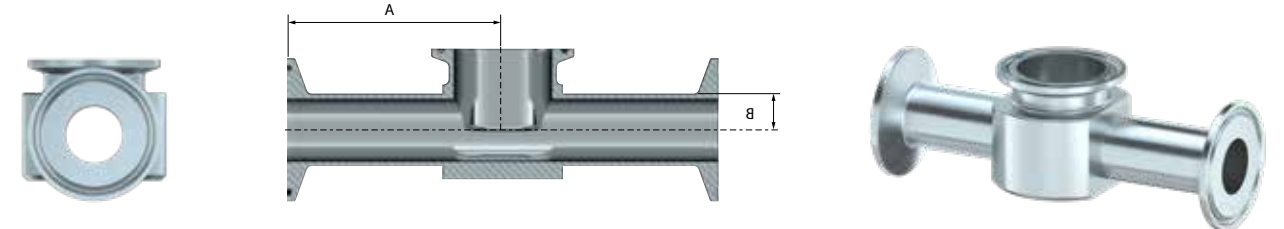
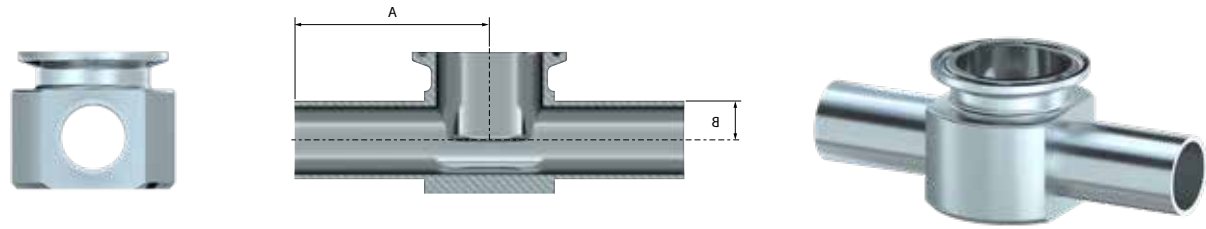
Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

| Nominal Size (d) | | A | | B | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|-----------------|-------|--------|-------|-------|--|--|--|-----------------------|
| Inch | mm | Inch | mm | Inch | mm | | | | |
| | | | | | | 316L | | CCC | |
| 2 1/2 x 1/2 | 63.50 x 12.70 | 3.625 | 92.10 | 1.875 | 47.60 | SF1 | SF4 | - TR-40-08 | - 2-9 |
| 2 1/2 x 3/4 | 63.50 x 19.05 | 3.625 | 92.10 | 1.875 | 47.60 | SF1 | SF4 | - TR-40-12 | - 2-9 |
| 2 1/2 x 1 | 63.50 x 25.40 | 3.625 | 92.10 | 1.875 | 47.60 | SF1 | SF4 | - TR-40-16 | - 2-9 |
| 2 1/2 x 1 1/2 | 63.50 x 38.10 | 3.625 | 92.10 | 1.875 | 47.60 | SF1 | SF4 | - TR-40-24 | - 2-9 |
| 2 1/2 x 2 | 63.50 x 50.80 | 3.625 | 92.10 | 1.875 | 47.60 | SF1 | SF4 | - TR-40-32 | - 2-9 |
| 3 x 1/2 | 76.20 x 12.70 | 3.875 | 98.40 | 2.125 | 54.00 | SF1 | SF4 | - TR-48-08 | - 2-9 |
| 3 x 3/4 | 76.20 x 19.05 | 3.875 | 98.40 | 2.125 | 54.00 | SF1 | SF4 | - TR-48-12 | - 2-9 |
| 3 x 1 | 76.20 x 25.40 | 3.875 | 98.40 | 2.125 | 54.00 | SF1 | SF4 | - TR-48-16 | - 2-9 |
| 3 x 1 1/2 | 76.20 x 38.10 | 3.875 | 98.40 | 2.125 | 54.00 | SF1 | SF4 | - TR-48-24 | - 2-9 |
| 3 x 2 | 76.20 x 50.80 | 3.875 | 98.40 | 2.125 | 54.00 | SF1 | SF4 | - TR-48-32 | - 2-9 |
| 3 x 2 1/2 | 76.20 x 63.50 | 3.875 | 98.40 | 2.125 | 54.00 | SF1 | SF4 | - TR-48-40 | - 2-9 |
| 4 x 1/2 | 101.60 x 12.70 | 4.750 | 120.70 | 2.625 | 66.70 | SF1 | SF4 | - TR-64-08 | - 2-9 |
| 4 x 3/4 | 101.60 x 19.05 | 4.750 | 120.70 | 2.625 | 66.70 | SF1 | SF4 | - TR-64-12 | - 2-9 |
| 4 x 1 | 101.60 x 25.40 | 4.750 | 120.70 | 2.625 | 66.70 | SF1 | SF4 | - TR-64-16 | - 2-9 |
| 4 x 1 1/2 | 101.60 x 38.10 | 4.750 | 120.70 | 2.625 | 66.70 | SF1 | SF4 | - TR-64-24 | - 2-9 |
| 4 x 2 | 101.60 x 50.80 | 4.750 | 120.70 | 2.625 | 66.70 | SF1 | SF4 | - TR-64-32 | - 2-9 |
| 4 x 2 1/2 | 101.60 x 63.50 | 4.750 | 120.70 | 2.625 | 66.70 | SF1 | SF4 | - TR-64-40 | - 2-9 |
| 4 x 3 | 101.60 x 76.20 | 4.750 | 120.70 | 2.625 | 66.70 | SF1 | SF4 | - TR-64-48 | - 2-9 |
| 6 x 1/2 | 152.40 x 12.70 | 7.125 | 181.00 | 3.625 | 92.10 | SF1 | SF4 | - TR-96-08 | - 2-9 |
| 6 x 3/4 | 152.40 x 19.05 | 7.125 | 181.00 | 3.625 | 92.10 | SF1 | SF4 | - TR-96-12 | - 2-9 |
| 6 x 1 | 152.40 x 25.40 | 7.125 | 181.00 | 3.625 | 92.10 | SF1 | SF4 | - TR-96-16 | - 2-9 |
| 6 x 1 1/2 | 152.40 x 38.10 | 7.125 | 181.00 | 3.625 | 92.10 | SF1 | SF4 | - TR-96-24 | - 2-9 |
| 6 x 2 | 152.40 x 50.80 | 7.125 | 181.00 | 3.625 | 92.10 | SF1 | SF4 | - TR-96-32 | - 2-9 |
| 6 x 2 1/2 | 152.40 x 63.50 | 7.125 | 181.00 | 3.625 | 92.10 | SF1 | SF4 | - TR-96-40 | - 2-9 |
| 6 x 3 | 152.40 x 76.20 | 7.125 | 181.00 | 3.625 | 92.10 | SF1 | SF4 | - TR-96-48 | - 2-9 |
| 6 x 4 | 152.40 x 101.60 | 7.125 | 181.00 | 3.750 | 95.30 | SF1 | SF4 | - TR-96-64 | - 2-9 |

Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴



| Nominal Size (d) | | A | | B | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|---------------|-------|-------|-------|-------|--|--|---|--------------------------|
| Inch | mm | Inch | mm | Inch | mm | ■ | ■ | | |
| | | | | | | 316L | | | |
| 1/2 x 1 1/2 | 12.70 x 38.10 | 2.500 | 63.50 | 0.875 | 22.20 | SF1 | SF4 | - TR-08-24 | - 2-10 |
| 3/4 x 1 1/2 | 19.05 x 38.10 | 2.500 | 63.50 | 1.000 | 25.40 | SF1 | SF4 | - TR-12-24 | - 2-10 |
| 1 x 1 1/2 | 25.40 x 38.10 | 2.500 | 63.50 | 1.125 | 28.60 | SF1 | SF4 | - TR-16-24 | - 2-10 |
| 1/2 x 2 | 12.70 x 50.80 | 2.750 | 69.90 | 1.000 | 25.40 | SF1 | SF4 | - TR-08-32 | - 2-10 |
| 3/4 x 2 | 19.05 x 50.80 | 2.750 | 69.90 | 1.125 | 28.60 | SF1 | SF4 | - TR-12-32 | - 2-10 |
| 1 x 2 | 25.40 x 50.80 | 2.750 | 69.90 | 1.250 | 31.80 | SF1 | SF4 | - TR-16-32 | - 2-10 |
| 1 1/2 x 2 | 38.10 x 50.80 | 2.750 | 69.90 | 1.500 | 38.10 | SF1 | SF4 | - TR-24-32 | - 2-10 |

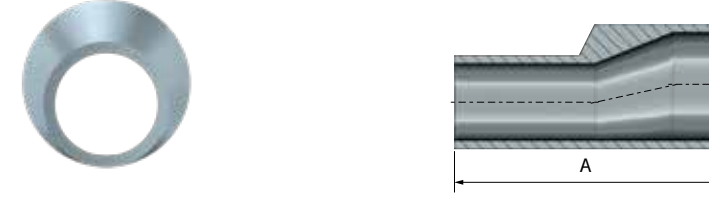
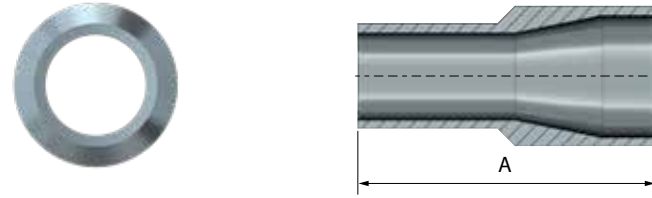
Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

| Nominal Size (d) | | A | | B | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | BPE Ref. ⁴ |
|------------------|---------------|-------|-------|-------|-------|--|--|---|--------------------------|
| Inch | mm | Inch | mm | Inch | mm | ■ | ■ | | |
| | | | | | | 316L | | | |
| 1/2 x 1 1/2 | 12.70 x 38.10 | 2.500 | 63.50 | 0.875 | 22.20 | SF1 | SF4 | - TR-08-24 | - 2-11 |
| 3/4 x 1 1/2 | 19.05 x 38.10 | 2.500 | 63.50 | 1.000 | 25.40 | SF1 | SF4 | - TR-12-24 | - 2-11 |
| 1 x 1 1/2 | 25.40 x 38.10 | 2.500 | 63.50 | 1.125 | 28.60 | SF1 | SF4 | - TR-16-24 | - 2-11 |
| 1/2 x 2 | 12.70 x 50.80 | 2.750 | 69.90 | 1.000 | 25.40 | SF1 | SF4 | - TR-08-32 | - 2-11 |
| 3/4 x 2 | 19.05 x 50.80 | 2.750 | 69.90 | 1.125 | 28.60 | SF1 | SF4 | - TR-12-32 | - 2-11 |
| 1 x 2 | 25.40 x 50.80 | 2.750 | 69.90 | 1.250 | 31.80 | SF1 | SF4 | - TR-16-32 | - 2-11 |
| 1 1/2 x 2 | 38.10 x 50.80 | 2.750 | 69.90 | 1.500 | 38.10 | SF1 | SF4 | - TR-24-32 | - 2-11 |

Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴



ASME BPE / SF1
Mechanically polished¹

ASME BPE / SF4
Electropolished¹

Product Code²
+
Diameter³

BPE
Ref.⁴

| Nominal Size (d) | | A | | 316L | | Product Code ² + Diameter ³ | | BPE Ref. ⁴ |
|------------------|-----------------|-------|--------|------|-----|---|----------|-----------------------|
| Inch | mm | Inch | mm | SF1 | SF4 | - | | WW |
| 3/8 x 1/4 | 9.53 x 6.35 | 1.625 | 41.30 | SF1 | SF4 | - | RC-06-04 | 3-1 |
| 1/2 x 1/4 | 12.70 x 6.35 | 1.875 | 47.60 | SF1 | SF4 | - | RC-08-04 | 3-1 |
| 1/2 x 3/8 | 12.70 x 9.53 | 1.875 | 47.60 | SF1 | SF4 | - | RC-08-06 | 3-1 |
| 3/4 x 3/8 | 19.05 x 9.53 | 2.000 | 50.80 | SF1 | SF4 | - | RC-12-06 | 3-1 |
| 3/4 x 1/2 | 19.05 x 12.70 | 2.125 | 54.00 | SF1 | SF4 | - | RC-12-08 | 3-1 |
| 1 x 1/2 | 25.40 x 12.70 | 2.500 | 63.50 | SF1 | SF4 | - | RC-16-08 | 3-1 |
| 1 x 3/4 | 25.40 x 19.05 | 2.125 | 54.00 | SF1 | SF4 | - | RC-16-12 | 3-1 |
| 1 1/2 x 3/4 | 38.10 x 19.05 | 3.000 | 76.20 | SF1 | SF4 | - | RC-24-12 | 3-1 |
| 1 1/2 x 1 | 38.10 x 25.40 | 2.500 | 63.50 | SF1 | SF4 | - | RC-24-16 | 3-1 |
| 2 x 1 | 50.80 x 25.40 | 3.375 | 85.70 | SF1 | SF4 | - | RC-32-16 | 3-1 |
| 2 x 1 1/2 | 50.80 x 38.10 | 2.500 | 63.50 | SF1 | SF4 | - | RC-32-24 | 3-1 |
| 2 1/2 x 1 1/2 | 63.50 x 38.10 | 3.375 | 85.70 | SF1 | SF4 | - | RC-40-24 | 3-1 |
| 2 1/2 x 2 | 63.50 x 50.80 | 2.500 | 63.50 | SF1 | SF4 | - | RC-40-32 | 3-1 |
| 3 x 1 1/2 | 76.20 x 38.10 | 4.250 | 108.00 | SF1 | SF4 | - | RC-48-24 | 3-1 |
| 3 x 2 | 76.20 x 50.80 | 3.375 | 85.70 | SF1 | SF4 | - | RC-48-32 | 3-1 |
| 3 x 2 1/2 | 76.20 x 63.50 | 2.625 | 66.70 | SF1 | SF4 | - | RC-48-40 | 3-1 |
| 4 x 2 | 101.60 x 50.80 | 5.125 | 130.20 | SF1 | SF4 | - | RC-64-32 | 3-1 |
| 4 x 2 1/2 | 101.60 x 63.50 | 4.250 | 108.00 | SF1 | SF4 | - | RC-64-40 | 3-1 |
| 4 x 3 | 101.60 x 76.20 | 3.875 | 98.40 | SF1 | SF4 | - | RC-64-48 | 3-1 |
| 6 x 3 | 152.40 x 76.20 | 7.250 | 184.20 | SF1 | SF4 | - | RC-96-48 | 3-1 |
| 6 x 4 | 152.40 x 101.60 | 5.625 | 142.90 | SF1 | SF4 | - | RC-96-64 | 3-1 |

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

Further dimensions on request.

ASME BPE / SF1
Mechanically polished¹

ASME BPE / SF4
Electropolished¹

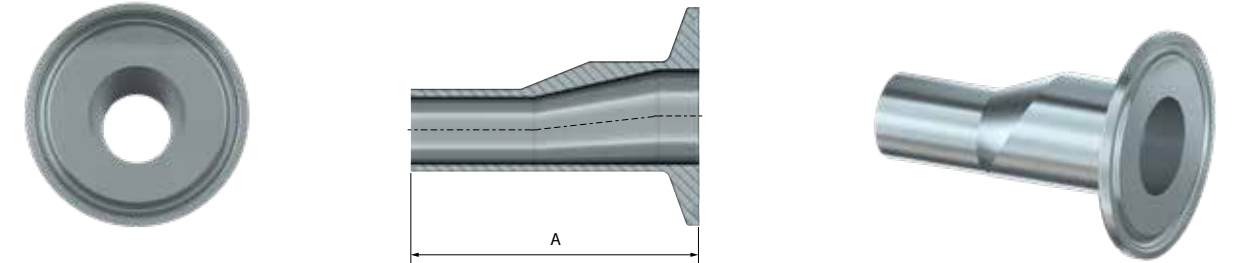
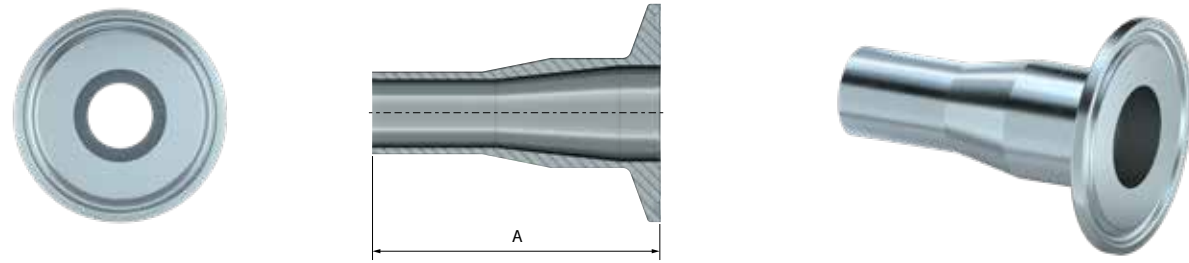
Product Code²
+
Diameter³

BPE
Ref.⁴

| Nominal Size (d) | | A | | 316L | | Product Code ² + Diameter ³ | | BPE Ref. ⁴ |
|------------------|-----------------|-------|--------|------|-----|---|----------|-----------------------|
| Inch | mm | Inch | mm | SF1 | SF4 | - | | WW |
| 3/8 x 1/4 | 9.53 x 6.35 | 1.625 | 41.30 | SF1 | SF4 | - | RE-06-04 | 3-1 |
| 1/2 x 1/4 | 12.70 x 6.35 | 1.875 | 47.60 | SF1 | SF4 | - | RE-08-04 | 3-1 |
| 1/2 x 3/8 | 12.70 x 9.53 | 1.875 | 47.60 | SF1 | SF4 | - | RE-08-06 | 3-1 |
| 3/4 x 3/8 | 19.05 x 9.53 | 2.000 | 50.80 | SF1 | SF4 | - | RE-12-06 | 3-1 |
| 3/4 x 1/2 | 19.05 x 12.70 | 2.125 | 54.00 | SF1 | SF4 | - | RE-12-08 | 3-1 |
| 1 x 1/2 | 25.40 x 12.70 | 2.500 | 63.50 | SF1 | SF4 | - | RE-16-08 | 3-1 |
| 1 x 3/4 | 25.40 x 19.05 | 2.125 | 54.00 | SF1 | SF4 | - | RE-16-12 | 3-1 |
| 1 1/2 x 3/4 | 38.10 x 19.05 | 3.000 | 76.20 | SF1 | SF4 | - | RE-24-12 | 3-1 |
| 1 1/2 x 1 | 38.10 x 25.40 | 2.500 | 63.50 | SF1 | SF4 | - | RE-24-16 | 3-1 |
| 2 x 1 | 50.80 x 25.40 | 3.375 | 85.70 | SF1 | SF4 | - | RE-32-16 | 3-1 |
| 2 x 1 1/2 | 50.80 x 38.10 | 2.500 | 63.50 | SF1 | SF4 | - | RE-32-24 | 3-1 |
| 2 1/2 x 1 1/2 | 63.50 x 38.10 | 3.375 | 85.70 | SF1 | SF4 | - | RE-40-24 | 3-1 |
| 2 1/2 x 2 | 63.50 x 50.80 | 2.500 | 63.50 | SF1 | SF4 | - | RE-40-32 | 3-1 |
| 3 x 1 1/2 | 76.20 x 38.10 | 4.250 | 108.00 | SF1 | SF4 | - | RE-48-24 | 3-1 |
| 3 x 2 | 76.20 x 50.80 | 3.375 | 85.70 | SF1 | SF4 | - | RE-48-32 | 3-1 |
| 3 x 2 1/2 | 76.20 x 63.50 | 2.625 | 66.70 | SF1 | SF4 | - | RE-48-40 | 3-1 |
| 4 x 2 | 101.60 x 50.80 | 5.125 | 130.20 | SF1 | SF4 | - | RE-64-32 | 3-1 |
| 4 x 2 1/2 | 101.60 x 63.50 | 4.250 | 108.00 | SF1 | SF4 | - | RE-64-40 | 3-1 |
| 4 x 3 | 101.60 x 76.20 | 3.875 | 98.40 | SF1 | SF4 | - | RE-64-48 | 3-1 |
| 6 x 3 | 152.40 x 76.20 | 7.250 | 184.20 | SF1 | SF4 | - | RE-96-48 | 3-1 |
| 6 x 4 | 152.40 x 101.60 | 5.625 | 142.90 | SF1 | SF4 | - | RE-96-64 | 3-1 |

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

Further dimensions on request.



ASME BPE / SF1
Mechanically polished¹

ASME BPE / SF4
Electropolished¹

Product Code²
+
Diameter³

BPE
Ref.⁴

ASME BPE / SF1
Mechanically polished¹

ASME BPE / SF4
Electropolished¹

Product Code²
+
Diameter³

BPE
Ref.⁴

| Nominal Size (d) | | A | | 316L | | Product Code ² + Diameter ³ | | BPE Ref. ⁴ |
|------------------|-----------------|-------|--------|------|-----|---|----------|-----------------------|
| Inch | mm | Inch | mm | SF1 | SF4 | - | | |
| 3/8 x 1/4 | 9.53 x 6.35 | 2.125 | 54.00 | SF1 | SF4 | - | RC-06-04 | 3-2 |
| 1/2 x 1/4 | 12.70 x 6.35 | 2.375 | 60.30 | SF1 | SF4 | - | RC-08-04 | 3-2 |
| 1/2 x 3/8 | 12.70 x 9.53 | 2.375 | 60.30 | SF1 | SF4 | - | RC-08-06 | 3-2 |
| 3/4 x 3/8 | 19.05 x 9.53 | 2.500 | 63.50 | SF1 | SF4 | - | RC-12-06 | 3-2 |
| 3/4 x 1/2 | 19.05 x 12.70 | 2.625 | 66.70 | SF1 | SF4 | - | RC-12-08 | 3-2 |
| 1 x 1/2 | 25.40 x 12.70 | 3.000 | 76.20 | SF1 | SF4 | - | RC-16-08 | 3-2 |
| 1 x 3/4 | 25.40 x 19.05 | 2.625 | 66.70 | SF1 | SF4 | - | RC-16-12 | 3-2 |
| 1 1/2 x 3/4 | 38.10 x 19.05 | 3.500 | 88.90 | SF1 | SF4 | - | RC-24-12 | 3-2 |
| 1 1/2 x 1 | 38.10 x 25.40 | 3.000 | 76.20 | SF1 | SF4 | - | RC-24-16 | 3-2 |
| 2 x 1 | 50.80 x 25.40 | 3.875 | 98.40 | SF1 | SF4 | - | RC-32-16 | 3-2 |
| 2 x 1 1/2 | 50.80 x 38.10 | 3.000 | 76.20 | SF1 | SF4 | - | RC-32-24 | 3-2 |
| 2 1/2 x 1 1/2 | 63.50 x 38.10 | 3.875 | 98.40 | SF1 | SF4 | - | RC-40-24 | 3-2 |
| 2 1/2 x 2 | 63.50 x 50.80 | 3.000 | 76.20 | SF1 | SF4 | - | RC-40-32 | 3-2 |
| 3 x 1 1/2 | 76.20 x 38.10 | 4.750 | 120.70 | SF1 | SF4 | - | RC-48-24 | 3-2 |
| 3 x 2 | 76.20 x 50.80 | 3.875 | 98.40 | SF1 | SF4 | - | RC-48-32 | 3-2 |
| 3 x 2 1/2 | 76.20 x 63.50 | 3.125 | 79.40 | SF1 | SF4 | - | RC-48-40 | 3-2 |
| 4 x 2 | 101.60 x 50.80 | 5.750 | 146.00 | SF1 | SF4 | - | RC-64-32 | 3-2 |
| 4 x 2 1/2 | 101.60 x 63.50 | 4.875 | 123.80 | SF1 | SF4 | - | RC-64-40 | 3-2 |
| 4 x 3 | 101.60 x 76.20 | 4.500 | 114.30 | SF1 | SF4 | - | RC-64-48 | 3-2 |
| 6 x 3 | 152.40 x 76.20 | 8.000 | 203.20 | SF1 | SF4 | - | RC-96-48 | 3-2 |
| 6 x 4 | 152.40 x 101.60 | 6.375 | 161.90 | SF1 | SF4 | - | RC-96-64 | 3-2 |

Further dimensions on request.

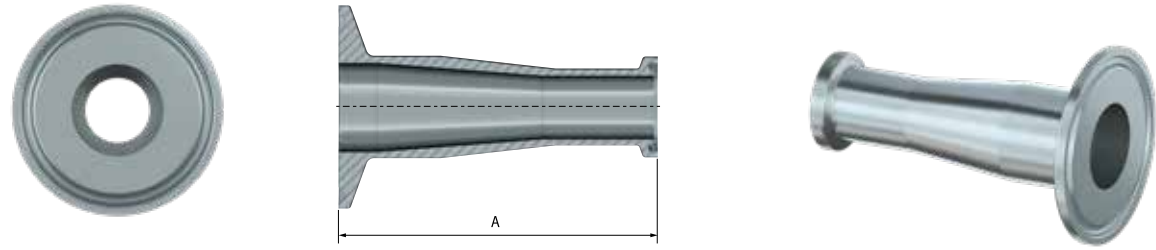
For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

| Nominal Size (d) | | A | | 316L | | Product Code ² + Diameter ³ | | BPE Ref. ⁴ |
|------------------|-----------------|-------|--------|------|-----|---|----------|-----------------------|
| Inch | mm | Inch | mm | SF1 | SF4 | - | | |
| 3/8 x 1/4 | 9.53 x 6.35 | 2.125 | 54.00 | SF1 | SF4 | - | RE-06-04 | 3-2 |
| 1/2 x 1/4 | 12.70 x 6.35 | 2.375 | 60.30 | SF1 | SF4 | - | RE-08-04 | 3-2 |
| 1/2 x 3/8 | 12.70 x 9.53 | 2.375 | 60.30 | SF1 | SF4 | - | RE-08-06 | 3-2 |
| 3/4 x 3/8 | 19.05 x 9.53 | 2.500 | 63.50 | SF1 | SF4 | - | RE-12-06 | 3-2 |
| 3/4 x 1/2 | 19.05 x 12.70 | 2.625 | 66.70 | SF1 | SF4 | - | RE-12-08 | 3-2 |
| 1 x 1/2 | 25.40 x 12.70 | 3.000 | 76.20 | SF1 | SF4 | - | RE-16-08 | 3-2 |
| 1 x 3/4 | 25.40 x 19.05 | 2.625 | 66.70 | SF1 | SF4 | - | RE-16-12 | 3-2 |
| 1 1/2 x 3/4 | 38.10 x 19.05 | 3.500 | 88.90 | SF1 | SF4 | - | RE-24-12 | 3-2 |
| 1 1/2 x 1 | 38.10 x 25.40 | 3.000 | 76.20 | SF1 | SF4 | - | RE-24-16 | 3-2 |
| 2 x 1 | 50.80 x 25.40 | 3.875 | 98.40 | SF1 | SF4 | - | RE-32-16 | 3-2 |
| 2 x 1 1/2 | 50.80 x 38.10 | 3.000 | 76.20 | SF1 | SF4 | - | RE-32-24 | 3-2 |
| 2 1/2 x 1 1/2 | 63.50 x 38.10 | 3.875 | 98.40 | SF1 | SF4 | - | RE-40-24 | 3-2 |
| 2 1/2 x 2 | 63.50 x 50.80 | 3.000 | 76.20 | SF1 | SF4 | - | RE-40-32 | 3-2 |
| 3 x 1 1/2 | 76.20 x 38.10 | 4.750 | 120.70 | SF1 | SF4 | - | RE-48-24 | 3-2 |
| 3 x 2 | 76.20 x 50.80 | 3.875 | 98.40 | SF1 | SF4 | - | RE-48-32 | 3-2 |
| 3 x 2 1/2 | 76.20 x 63.50 | 3.125 | 79.40 | SF1 | SF4 | - | RE-48-40 | 3-2 |
| 4 x 2 | 101.60 x 50.80 | 5.750 | 146.00 | SF1 | SF4 | - | RE-64-32 | 3-2 |
| 4 x 2 1/2 | 101.60 x 63.50 | 4.875 | 123.80 | SF1 | SF4 | - | RE-64-40 | 3-2 |
| 4 x 3 | 101.60 x 76.20 | 4.500 | 114.30 | SF1 | SF4 | - | RE-64-48 | 3-2 |
| 6 x 3 | 152.40 x 76.20 | 8.000 | 203.20 | SF1 | SF4 | - | RE-96-48 | 3-2 |
| 6 x 4 | 152.40 x 101.60 | 6.375 | 161.90 | SF1 | SF4 | - | RE-96-64 | 3-2 |

Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

DT-4.1.3-3
HYGIENIC CLAMP JOINT: CONCENTRIC REDUCER



ASME BPE / SF1
Mechanically polished¹

ASME BPE / SF4
Electropolished¹

Product Code²
+
Diameter³

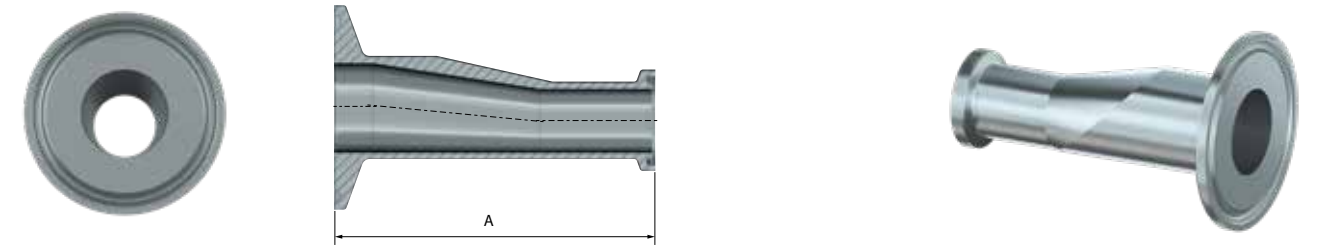
BPE
Ref.⁴

| Nominal Size (d) | | A | | 316L | | Product Code ² + Diameter ³ | | BPE Ref. ⁴ |
|------------------|-----------------|-------|--------|------|-----|---|----------|-----------------------|
| Inch | mm | Inch | mm | SF1 | SF4 | - | | CC |
| 3/8 x 1/4 | 9.53 x 6.35 | 2.625 | 66.70 | SF1 | SF4 | - | RC-06-04 | - 3-3 |
| 1/2 x 1/4 | 12.70 x 6.35 | 2.875 | 73.00 | SF1 | SF4 | - | RC-08-04 | - 3-3 |
| 1/2 x 3/8 | 12.70 x 9.53 | 2.875 | 73.00 | SF1 | SF4 | - | RC-08-06 | - 3-3 |
| 3/4 x 3/8 | 19.05 x 9.53 | 3.000 | 76.20 | SF1 | SF4 | - | RC-12-06 | - 3-3 |
| 3/4 x 1/2 | 19.05 x 12.70 | 3.125 | 79.40 | SF1 | SF4 | - | RC-12-08 | - 3-3 |
| 1 x 1/2 | 25.40 x 12.70 | 3.500 | 88.90 | SF1 | SF4 | - | RC-16-08 | - 3-3 |
| 1 x 3/4 | 25.40 x 19.05 | 3.125 | 79.40 | SF1 | SF4 | - | RC-16-12 | - 3-3 |
| 1 1/2 x 3/4 | 38.10 x 19.05 | 4.000 | 101.60 | SF1 | SF4 | - | RC-24-12 | - 3-3 |
| 1 1/2 x 1 | 38.10 x 25.40 | 3.500 | 88.90 | SF1 | SF4 | - | RC-24-16 | - 3-3 |
| 2 x 1 | 50.80 x 25.40 | 4.375 | 111.10 | SF1 | SF4 | - | RC-32-16 | - 3-3 |
| 2 x 1 1/2 | 50.80 x 38.10 | 3.500 | 88.90 | SF1 | SF4 | - | RC-32-24 | - 3-3 |
| 2 1/2 x 1 1/2 | 63.50 x 38.10 | 4.375 | 111.10 | SF1 | SF4 | - | RC-40-24 | - 3-3 |
| 2 1/2 x 2 | 63.50 x 50.80 | 3.500 | 88.90 | SF1 | SF4 | - | RC-40-32 | - 3-3 |
| 3 x 1 1/2 | 76.20 x 38.10 | 5.250 | 133.40 | SF1 | SF4 | - | RC-48-24 | - 3-3 |
| 3 x 2 | 76.20 x 50.80 | 4.375 | 111.10 | SF1 | SF4 | - | RC-48-32 | - 3-3 |
| 3 x 2 1/2 | 76.20 x 63.50 | 3.625 | 92.10 | SF1 | SF4 | - | RC-48-40 | - 3-3 |
| 4 x 2 | 101.60 x 50.80 | 6.250 | 158.80 | SF1 | SF4 | - | RC-64-32 | - 3-3 |
| 4 x 2 1/2 | 101.60 x 63.50 | 5.375 | 136.50 | SF1 | SF4 | - | RC-64-40 | - 3-3 |
| 4 x 3 | 101.60 x 76.20 | 5.000 | 127.00 | SF1 | SF4 | - | RC-64-48 | - 3-3 |
| 6 x 3 | 152.40 x 76.20 | 8.500 | 215.90 | SF1 | SF4 | - | RC-96-48 | - 3-3 |
| 6 x 4 | 152.40 x 101.60 | 7.000 | 177.80 | SF1 | SF4 | - | RC-96-64 | - 3-3 |

Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

DT-4.1.3-3
HYGIENIC CLAMP JOINT: ECCENTRIC REDUCER



ASME BPE / SF1
Mechanically polished¹

ASME BPE / SF4
Electropolished¹

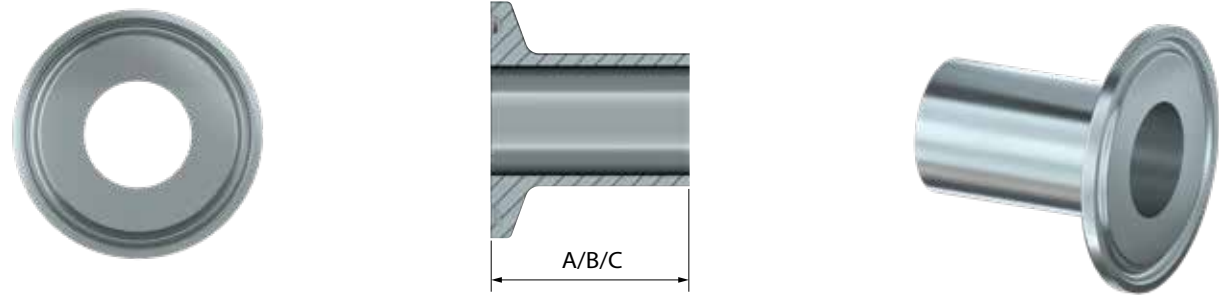
Product Code²
+
Diameter³

BPE
Ref.⁴

| Nominal Size (d) | | A | | 316L | | Product Code ² + Diameter ³ | | BPE Ref. ⁴ |
|------------------|-----------------|-------|--------|------|-----|---|----------|-----------------------|
| Inch | mm | Inch | mm | SF1 | SF4 | - | | CC |
| 3/8 x 1/4 | 9.53 x 6.35 | 2.625 | 66.70 | SF1 | SF4 | - | RE-06-04 | - 3-3 |
| 1/2 x 1/4 | 12.70 x 6.35 | 2.875 | 73.00 | SF1 | SF4 | - | RE-08-04 | - 3-3 |
| 1/2 x 3/8 | 12.70 x 9.53 | 2.875 | 73.00 | SF1 | SF4 | - | RE-08-06 | - 3-3 |
| 3/4 x 3/8 | 19.05 x 9.53 | 3.000 | 76.20 | SF1 | SF4 | - | RE-12-06 | - 3-3 |
| 3/4 x 1/2 | 19.05 x 12.70 | 3.125 | 79.40 | SF1 | SF4 | - | RE-12-08 | - 3-3 |
| 1 x 1/2 | 25.40 x 12.70 | 3.500 | 88.90 | SF1 | SF4 | - | RE-16-08 | - 3-3 |
| 1 x 3/4 | 25.40 x 19.05 | 3.125 | 79.40 | SF1 | SF4 | - | RE-16-12 | - 3-3 |
| 1 1/2 x 3/4 | 38.10 x 19.05 | 4.000 | 101.60 | SF1 | SF4 | - | RE-24-12 | - 3-3 |
| 1 1/2 x 1 | 38.10 x 25.40 | 3.500 | 88.90 | SF1 | SF4 | - | RE-24-16 | - 3-3 |
| 2 x 1 | 50.80 x 25.40 | 4.375 | 111.10 | SF1 | SF4 | - | RE-32-16 | - 3-3 |
| 2 x 1 1/2 | 50.80 x 38.10 | 3.500 | 88.90 | SF1 | SF4 | - | RE-32-24 | - 3-3 |
| 2 1/2 x 1 1/2 | 63.50 x 38.10 | 4.375 | 111.10 | SF1 | SF4 | - | RE-40-24 | - 3-3 |
| 2 1/2 x 2 | 63.50 x 50.80 | 3.500 | 88.90 | SF1 | SF4 | - | RE-40-32 | - 3-3 |
| 3 x 1 1/2 | 76.20 x 38.10 | 5.250 | 133.40 | SF1 | SF4 | - | RE-48-24 | - 3-3 |
| 3 x 2 | 76.20 x 50.80 | 4.375 | 111.10 | SF1 | SF4 | - | RE-48-32 | - 3-3 |
| 3 x 2 1/2 | 76.20 x 63.50 | 3.625 | 92.10 | SF1 | SF4 | - | RE-48-40 | - 3-3 |
| 4 x 2 | 101.60 x 50.80 | 6.250 | 158.80 | SF1 | SF4 | - | RE-64-32 | - 3-3 |
| 4 x 2 1/2 | 101.60 x 63.50 | 5.375 | 136.50 | SF1 | SF4 | - | RE-64-40 | - 3-3 |
| 4 x 3 | 101.60 x 76.20 | 5.000 | 127.00 | SF1 | SF4 | - | RE-64-48 | - 3-3 |
| 6 x 3 | 152.40 x 76.20 | 8.500 | 215.90 | SF1 | SF4 | - | RE-96-48 | - 3-3 |
| 6 x 4 | 152.40 x 101.60 | 7.000 | 177.80 | SF1 | SF4 | - | RE-96-64 | - 3-3 |

Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴



| Nominal Size (d) | | A | | Clamp Dimensions | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | | BPE Ref. ⁴ |
|------------------|--------|-------|-------|------------------|--------|--|--|--|----|-----------------------|
| Inch | mm | Inch | mm | Inch | mm | ■ | ■ | 316L | CW | |
| 1/4 | 6.35 | 1.750 | 44.50 | 0.984 | 25.00 | SF1 | SF4 | - FA-04 | - | 4-1 |
| 3/8 | 9.53 | 1.750 | 44.50 | 0.984 | 25.00 | SF1 | SF4 | - FA-06 | - | 4-1 |
| 1/2 | 12.70 | 1.750 | 44.50 | 0.984 | 25.00 | SF1 | SF4 | - FA-08 | - | 4-1 |
| 3/4 | 19.05 | 1.750 | 44.50 | 0.984 | 25.00 | SF1 | SF4 | - FA-12 | - | 4-1 |
| 1 | 25.40 | 1.750 | 44.50 | 1.984 | 50.50 | SF1 | SF4 | - FA-16 | - | 4-1 |
| 1 1/2 | 38.10 | 1.750 | 44.50 | 1.984 | 50.50 | SF1 | SF4 | - FA-24 | - | 4-1 |
| 2 | 50.80 | 2.250 | 57.20 | 2.516 | 64.00 | SF1 | SF4 | - FA-32 | - | 4-1 |
| 2 1/2 | 63.50 | 2.250 | 57.20 | 3.047 | 77.50 | SF1 | SF4 | - FA-40 | - | 4-1 |
| 3 | 76.20 | 2.250 | 57.20 | 3.579 | 91.00 | SF1 | SF4 | - FA-48 | - | 4-1 |
| 4 | 101.60 | 2.250 | 57.20 | 4.682 | 119.00 | SF1 | SF4 | - FA-64 | - | 4-1 |
| 6 | 152.40 | 3.000 | 76.20 | 6.570 | 167.00 | SF1 | SF4 | - FA-96 | - | 4-1 |

Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

| Nominal Size (d) | | B | | Clamp Dimensions | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | | BPE Ref. ⁴ |
|------------------|--------|-------|-------|------------------|-------|--|--|--|----|-----------------------|
| Inch | mm | Inch | mm | Inch | mm | ■ | ■ | 316L | CW | |
| 1/4 | 6.35 | 1.130 | 28.58 | 0.984 | 25.0 | SF1 | SF4 | - FB-04 | - | 4-1 |
| 3/8 | 9.53 | 1.130 | 28.58 | 0.984 | 25.0 | SF1 | SF4 | - FB-06 | - | 4-1 |
| 1/2 | 12.70 | 1.130 | 28.58 | 0.984 | 25.0 | SF1 | SF4 | - FB-08 | - | 4-1 |
| 3/4 | 19.05 | 1.130 | 28.58 | 0.984 | 25.0 | SF1 | SF4 | - FB-12 | - | 4-1 |
| 1 | 25.40 | 1.130 | 28.58 | 1.984 | 50.5 | SF1 | SF4 | - FB-16 | - | 4-1 |
| 1 1/2 | 38.10 | 1.130 | 28.58 | 1.984 | 50.5 | SF1 | SF4 | - FB-24 | - | 4-1 |
| 2 | 50.80 | 1.130 | 28.58 | 2.516 | 64.0 | SF1 | SF4 | - FB-32 | - | 4-1 |
| 2 1/2 | 63.50 | 1.130 | 28.58 | 3.047 | 77.5 | SF1 | SF4 | - FB-40 | - | 4-1 |
| 3 | 76.20 | 1.130 | 28.58 | 3.579 | 91.0 | SF1 | SF4 | - FB-48 | - | 4-1 |
| 4 | 101.60 | 1.130 | 28.58 | 4.682 | 119.0 | SF1 | SF4 | - FB-64 | - | 4-1 |
| 6 | 152.40 | 1.500 | 38.1 | 6.570 | 167.0 | SF1 | SF4 | - FB-96 | - | 4-1 |

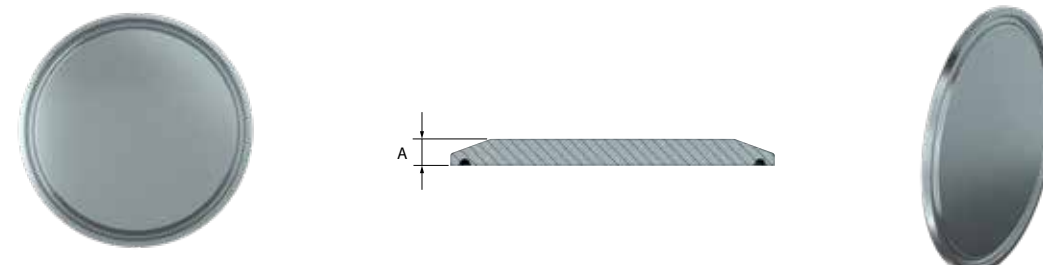
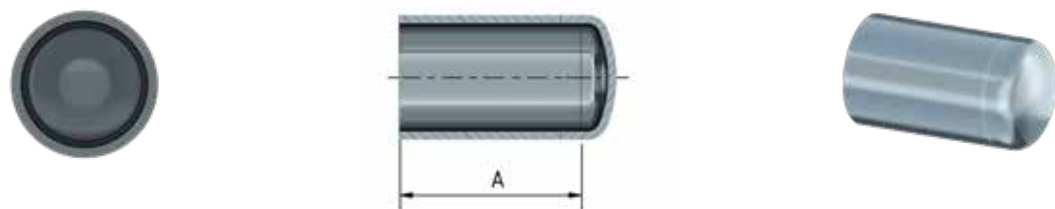
Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

| Nominal Size (d) | | C | | Clamp Dimensions | | ASME BPE / SF1 Mechanically polished ¹ | ASME BPE / SF4 Electropolished ¹ | Product Code ² + Diameter ³ | | BPE Ref. ³ |
|------------------|--------|-------|-------|------------------|--------|--|--|--|----|-----------------------|
| Inch | mm | Inch | mm | Inch | mm | ■ | ■ | 316L | CW | |
| 1/4 | 6.35 | 0.500 | 12.70 | 0.984 | 25.00 | SF1 | SF4 | - FC-04 | - | 4-1 |
| 3/8 | 9.53 | 0.500 | 12.70 | 0.984 | 25.00 | SF1 | SF4 | - FC-06 | - | 4-1 |
| 1/2 | 12.70 | 0.500 | 12.70 | 0.984 | 25.00 | SF1 | SF4 | - FC-08 | - | 4-1 |
| 3/4 | 19.05 | 0.500 | 12.70 | 0.984 | 25.00 | SF1 | SF4 | - FC-12 | - | 4-1 |
| 1 | 25.40 | 0.500 | 12.70 | 1.984 | 50.50 | SF1 | SF4 | - FC-16 | - | 4-1 |
| 1 1/2 | 38.10 | 0.500 | 12.70 | 1.984 | 50.50 | SF1 | SF4 | - FC-24 | - | 4-1 |
| 2 | 50.80 | 0.500 | 12.70 | 2.516 | 64.00 | SF1 | SF4 | - FC-32 | - | 4-1 |
| 2 1/2 | 63.50 | 0.500 | 12.70 | 3.047 | 77.50 | SF1 | SF4 | - FC-40 | - | 4-1 |
| 3 | 76.20 | 0.500 | 12.70 | 3.579 | 91.00 | SF1 | SF4 | - FC-48 | - | 4-1 |
| 4 | 101.60 | 0.625 | 15.90 | 4.682 | 119.00 | SF1 | SF4 | - FC-64 | - | 4-1 |
| 6 | 152.40 | 0.750 | 19.05 | 6.570 | 167.00 | SF1 | SF4 | - FC-96 | - | 4-1 |

Further dimensions on request.

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴



ASME BPE / SF1
Mechanically polished¹

ASME BPE / SF4
Electropolished¹

Product Code²
+ Diameter³

BPE Ref.⁴

| Nominal Size (d) | | A | | 316L | | W | |
|------------------|--------|-------|-------|------|-----|---|-------------|
| Inch | mm | Inch | mm | SF1 | SF4 | - | |
| 1/2 | 12.70 | 1.555 | 39.50 | SF1 | SF4 | - | WC-08 - 5-1 |
| 3/4 | 19.05 | 1.555 | 39.50 | SF1 | SF4 | - | WC-12 - 5-1 |
| 1 | 25.40 | 1.555 | 39.50 | SF1 | SF4 | - | WC-16 - 5-1 |
| 1 1/2 | 38.10 | 1.555 | 39.50 | SF1 | SF4 | - | WC-24 - 5-1 |
| 2 | 50.80 | 1.555 | 39.50 | SF1 | SF4 | - | WC-32 - 5-1 |
| 2 1/2 | 63.50 | 1.555 | 39.50 | SF1 | SF4 | - | WC-40 - 5-1 |
| 3 | 76.20 | 1.811 | 46.00 | SF1 | SF4 | - | WC-48 - 5-1 |
| 4 | 101.60 | 2.067 | 52.50 | SF1 | SF4 | - | WC-64 - 5-1 |
| 6 | 152.40 | 2.559 | 65.00 | SF1 | SF4 | - | WC-96 - 5-1 |

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

Further dimensions on request.

| Nominal Size (d) | | A | | Clamp Dimensions | | 316L | | C | |
|------------------|--------|-------|-------|------------------|--------|------|-----|---|--------------|
| Inch | mm | Inch | mm | Inch | mm | SF1 | SF4 | - | |
| 1/4 | 6.35 | 0.187 | 4.70 | 0.984 | 25.00 | SF1 | SF4 | - | FTC-04 - 5-2 |
| 3/8 | 9.53 | 0.187 | 4.70 | 0.984 | 25.00 | SF1 | SF4 | - | FTC-06 - 5-2 |
| 1/2 | 12.70 | 0.187 | 4.70 | 0.984 | 25.00 | SF1 | SF4 | - | FTC-08 - 5-2 |
| 3/4 | 19.05 | 0.187 | 4.70 | 0.984 | 25.00 | SF1 | SF4 | - | FTC-12 - 5-2 |
| 1 | 25.40 | 0.250 | 6.40 | 1.984 | 50.50 | SF1 | SF4 | - | FTC-16 - 5-2 |
| 1 1/2 | 38.10 | 0.250 | 6.40 | 1.984 | 50.50 | SF1 | SF4 | - | FTC-24 - 5-2 |
| 2 | 50.80 | 0.250 | 6.40 | 2.516 | 64.00 | SF1 | SF4 | - | FTC-32 - 5-2 |
| 2 1/2 | 63.50 | 0.250 | 6.40 | 3.047 | 77.50 | SF1 | SF4 | - | FTC-40 - 5-2 |
| 3 | 76.20 | 0.250 | 6.40 | 3.579 | 91.00 | SF1 | SF4 | - | FTC-48 - 5-2 |
| 4 | 101.60 | 0.312 | 7.90 | 4.682 | 119.00 | SF1 | SF4 | - | FTC-64 - 5-2 |
| 6 | 152.40 | 0.437 | 11.10 | 6.570 | 167.00 | SF1 | SF4 | - | FTC-96 - 5-2 |

For Order Code please combine:
Quality¹ + Product Code² - Diameter³ + BPE Ref.⁴

Further dimensions on request.



| Nominal Size | Flange Dimensions | Order Code |
|--------------|-------------------|-------------|
| Inch | Inch | |
| 1/4 | 0.984 | CL-SP-WN-04 |
| 3/8 | 0.984 | CL-SP-WN-06 |
| 1/2 | 0.984 | CL-SP-WN-08 |
| 3/4 | 0.984 | CL-SP-WN-12 |
| 1 | 1.984 | CL-SP-WN-16 |
| 1 1/2 | 1.984 | CL-SP-WN-24 |
| 2 | 2.516 | CL-SP-WN-32 |
| 2 1/2 | 3.047 | CL-SP-WN-40 |
| 3 | 3.579 | CL-SP-WN-48 |
| 4 | 4.682 | CL-SP-WN-64 |
| 6 | 6.570 | CL-SP-WN-96 |

Special Clamps / optional



| Nominal Size | Flange | Product Code ² + Diameter ³ | PTFE | FKM | PTFE/FKM | EPDM | VMQ | PTFE/316L | PTFE/EPDM |
|--------------|--------|---|------|-----|----------|------|-----|-----------|-----------|
| Inch | Inch | | | | | | | | |
| 1/4 | 0.984 | TC-GK-04 | - P | F | FP | E | V | P3 | PE |
| 3/8 | 0.984 | TC-GK-06 | - P | F | FP | E | V | P3 | PE |
| 1/2 | 0.984 | TC-GK-08 | - P | F | FP | E | V | P3 | PE |
| 3/4 | 0.984 | TC-GK-12 | - P | F | FP | E | V | P3 | PE |
| 1 | 1.984 | TC-GK-16 | - P | F | FP | E | V | P3 | PE |
| 1 1/2 | 1.984 | TC-GK-24 | - P | F | FP | E | V | P3 | PE |
| 2 | 2.516 | TC-GK-32 | - P | F | FP | E | V | P3 | PE |
| 2 1/2 | 3.047 | TC-GK-40 | - P | F | FP | E | V | P3 | PE |
| 3 | 3.579 | TC-GK-48 | - P | F | FP | E | V | P3 | PE |
| 4 | 4.682 | TC-GK-64 | - P | F | FP | E | V | P3 | PE |
| 6 | 6.570 | TC-GK-96 | - P | F | FP | E | V | P3 | PE |

For Order Code please combine: **Product Code² + Diameter³ + Gasket Material**

Special Gaskets / optional



Screen Gaskets provide prefiltration for critical membrane filters, coalescence of water vapour from process exhaust lines, particulate removal before fill and finish and more.



The **Smart Gasket** values are proven when validating sterility in high purity pharmaceutical systems.



The **Controlled Compression** Gaskets cannot be overtightened but controls clamp compression to exactly the correct amount, allowing the properly positioned gasket to make a perfect surface I.D. seal with ferrules.



Orifice Plates advance your system's performance, adjust flow rates, balance backflow and equalize back pressure during SIP procedures.

All standard sanitary gaskets are moulded from FDA compliant compounds and fulfil USP class VI.

Total traceability for the complete system

Dockweiler gaskets are cleaned, dried and permanently marked. Mix-ups after removal from the packaging are eliminated.

Lasermarking information: DOCKWEILER / DW-No.

| Material | PTFE | FKM | PTFE / FKM | EPDM | VMQ | PTFE / 316L | PTFE / EPDM |
|---|--|------------------------------|----------------------------|--|---------------------------------------|---|-----------------------------|
| Material acc. to ISO 1629 / ASTM D1418 | Polytetrafluoroethylene | Perfluorinated rubber | PTFE enveloped FKM | Ethylene propylene diene rubber | Platinum cured silicone rubber | Composite of stainless steel 316L and PTFE | PTFE enveloped EPDM |
| Trade name | Teflon® Dyneon® | Viton® Fluorel® | | Buna® Nordel® | Silopren® Silastic® | | |
| Diameter* | Flange size ≤ 1" Gasket without Lip, Flange size ≥ 1 1/2": Gasket with Lip | | | Flange size ≤ 1" Gasket without Lip, Flange size ≥ 1 1/2": Gasket with Lip | | | |
| <small>*Not all diameters are available in all materials.</small> | Imperial 1/4" – 6" | | | Imperial 1/4" – 6" | | | |
| Temperature variations | - | + | 0 | + | + | + | + |
| Continuous steam | + | + | + | + | + | + | + |
| Non-polar solvents | + | + | + | - | - | + | + |
| Polar solvents | + | - | + | - | - | + | + |
| Acid and active oxygen | + | + | + | + | + | + | + |
| Acid | + | + | + | + | + | + | + |
| Alkaline | + | + | + | + | - | + | + |
| Hardness | 68 Shore A | 82 Shore A | 45 Shore A | 45 Shore A | 65 – 75 Shore A | 80 Shore A | 70 +/- 5 Shore A |
| Density | 215.3765 lb/ft ³ | 79.90779 lb/ft ³ | 118.613 lb/ft ³ | 131.099 lb /ft ³ | 74.9136 lb/ft ³ | 115.4917 lb/ft ³ | 78.03495 lb/ft ³ |
| Compression set | 18,5 % 70 Hour 392 °F | 13 % 24 Hour 347 °F | 15 % 24 Hour 347 °F | 10 % 24 Hour 302 °F | 20 % 24 Hour 347 °F | 7 % 24 Hour 302 °F | 5 % 24 Hour 347 °F |
| | 5 to 446 °F | -4 to 410 °F | -76 to 356 °F | -40 to 284 °F | -76 to 392 °F | -94 to 500 °F | -94 to 356 °F |
| | + = highly suitable | 0 = suitable | - = not suitable | | + = highly suitable | 0 = suitable | - = not suitable |

Optimized designs, the purest surfaces, perfected welds

When it comes to implementing complex components and systems Dockweiler is your manufacturing specialist. Maximizing productivity is the primary goal. This requires a highly reliable and efficient solution. The focus here is on low dead space and surface optimization.



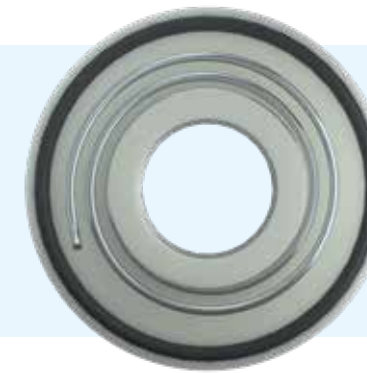
Customized Fittings

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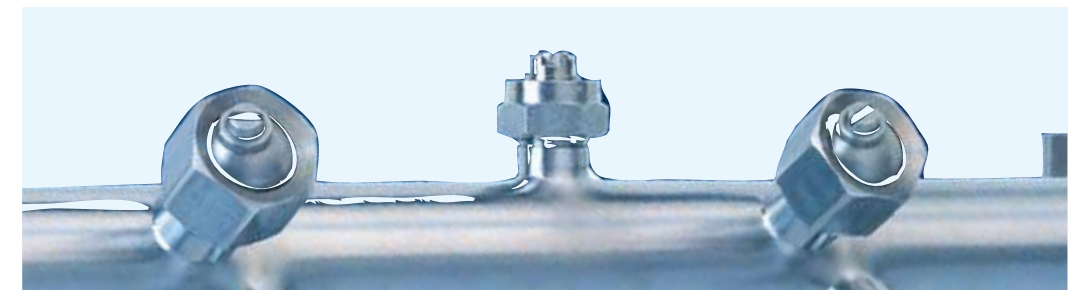
Cleanshut Wall and Ceiling Feedthroughs

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Prefabricated Components

Page 54



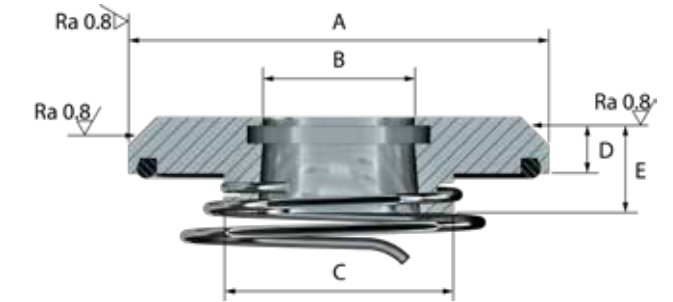
Customized Fittings

Customized fittings manufactured to your specifications are the tailor-made solution when standard fittings do not meet customer requirements. Our service starts with drafting and extends to 3.1 documentation.

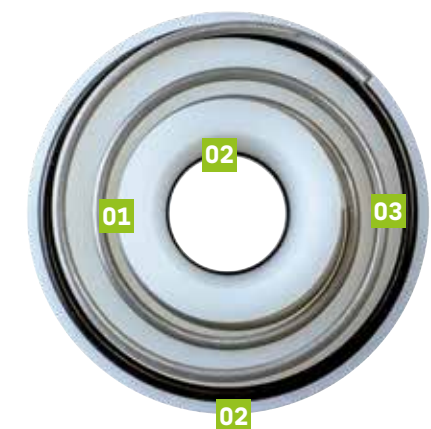


A perfect finish for wall and ceiling feedthroughs in clean rooms

Assembly without screws – minimizes the risk of damage to the cleanroom wall.
Simple installation within seconds.



| Imperial Tube Dimensions | Dimensions | | | | | Order Code |
|-----------------------------|------------|-------|-------|-------|-------|---------------|
| | Ø A | Ø B | Ø C | D | E | |
| Inch | Inch | | | | | |
| 1/2 | 2.520 | 0.508 | 1.339 | 0.394 | 0.709 | WFT - 08 - PV |
| 3/4 | 2.953 | 0.758 | 1.772 | 0.394 | 0.709 | WFT - 12 - PV |
| 1 | 2.953 | 1.008 | 1.772 | 0.394 | 0.709 | WFT - 16 - PV |
| 1 1/2 | 4.134 | 1.508 | 2.953 | 0.394 | 0.787 | WFT - 24 - PV |
| 2 | 4.134 | 2.008 | 2.953 | 0.394 | 0.787 | WFT - 32 - PV |
| 2 1/2 | 5.433 | 2.508 | 4.252 | 0.394 | 0.866 | WFT - 40 - PV |
| 3 | 5.433 | 3.008 | 4.252 | 0.394 | 0.866 | WFT - 48 - PV |
| 4 | 5.866 | 4.008 | 5.000 | 0.394 | 0.866 | WFT - 64 - PV |



| Components | Materials |
|---------------|-----------|
| 01 Basic Body | PVDF |
| 02 O-rings | EPDM |
| 03 Spring | 1.4310 |

Prefabricated components for simple and smooth installations

Experience in piping systems for transporting high-purity media is the Dockweiler “plus”: The safety and purity of production processes is the primary objective. In addition, improvements in design can increase productivity and simplify installation – synergies that our customers appreciate.



Highest Purity



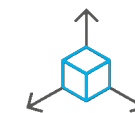
The highest standards of hygiene and cleanliness are essential for numerous manufacturing processes in the pharmaceutical, chemical and semiconductor industries. This is particularly true for the inner surfaces of piping systems that are in contact with sensitive media.

Hygienic Design



For pharmaceutical products and other highly sensitive substances, protection against contamination is an essential aspect. The question is how quickly and easily a production facility can be cleaned. Hygienic design includes production features that ensure this and guarantee continuous product quality.

Space Management



Nowadays, capital-intensive production, rising prices (e.g. energy) or shortages of raw materials are forcing companies more and more to put their processes to the test. Space management refers to customer-specific solutions that enable the expansion or optimization of plants in a very limited space.

Enhancing Efficiency



For many manufacturing companies, increasing efficiency is a particular challenge: Given the high complexity of production systems, companies might come up against personnel or technological limits.



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