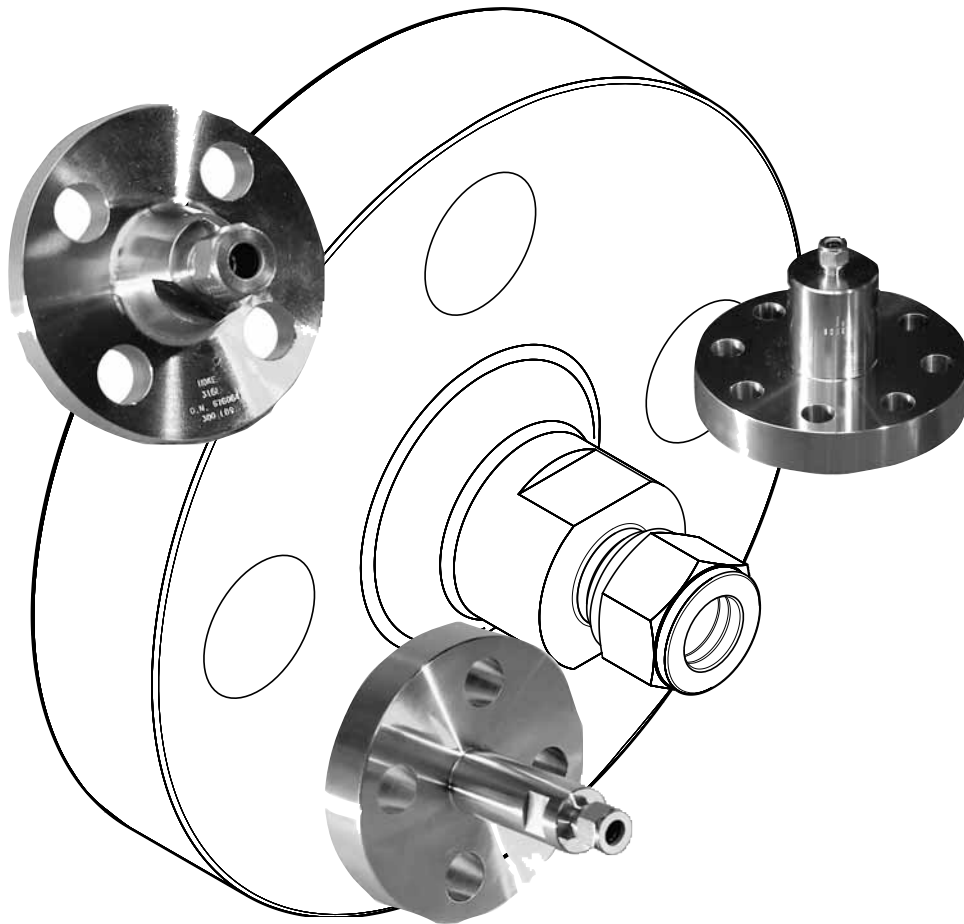




## Gyrolok® Flanges

Gyrolok® flanges provide a simple, safe interface between pipe flanges and instrument fittings, eliminating the need for pipe threading or welding. This design incorporates a HOKE Gyrolok® Tube Fitting with a standard flange assembly. The flange end is dimensioned to meet ANSI B16.5 Pressure Classes 150, 300, 600, and 1500. Available in 316 stainless steel, Duplex UNS S31803, Hastelloy® C-276, Inconel®, Monel®, and other superior alloys.



pipe flanges

### Technical Data

|                    |  |
|--------------------|--|
| STANDARD MATERIAL* | 316 stainless steel, Duplex UNS S31083, Inconel®, Hastelloy® C-276, Monel® |
| FINISH             | 125 to 250 µinch   |
| FLANGE SIZES NPS** | 1/2", 3/4", 1", 2"   |
| GYROLOK® FITTINGS  | 1/4", 3/8", 1/2"   |

\* Consult factory for other materials  
\*\* Consult factory for other sizes

### Features

- Meets ANSI B16.5 Pressure Class 150, 300, 600, and 1500 requirements for pipe flanges and flange fittings.†
- Includes Gyrolok® fittings – 1/4", 3/8", 1/2", 3/4", 1".
- One-piece integral body.
- Use for transitions from process lines to instrumentation lines.
- See page 7 for options.
- Special High Tolerance NPT Thread

† Consult factory for other classes

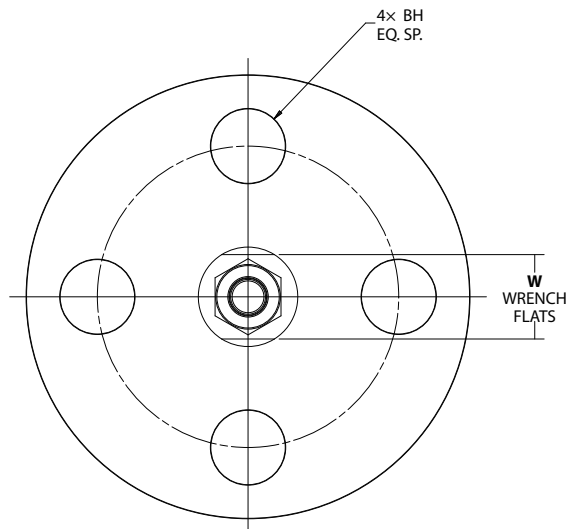
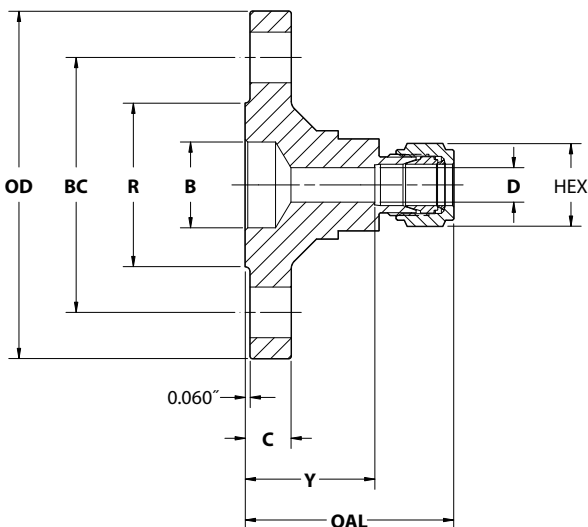
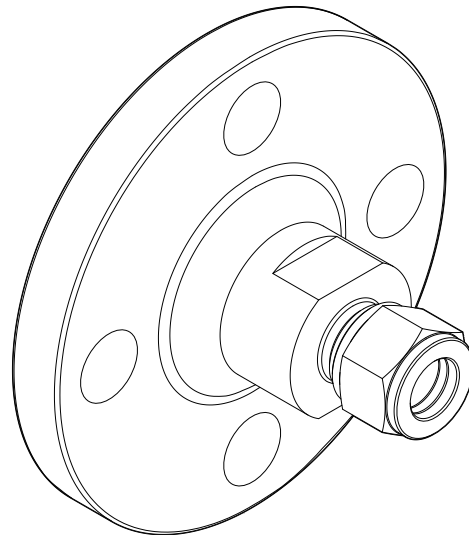
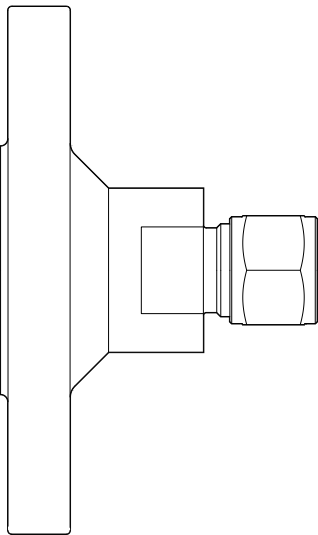
### HOKE Inc.

405 Centura Court • PO Box 4866 (29305) • Spartanburg, SC 29303  
Phone (864) 574-7966 Fax (864) 587-5608  
www.hoke.com • sales@hoke.com

# ANSI B16.5 - Type Flanges

| Class 150 |      |      |      |      |       |       |                  |       |     |      |      |       |
|-----------|------|------|------|------|-------|-------|------------------|-------|-----|------|------|-------|
| NPS       | OD   | R    | B    | C    | BC    | BH    | GYROLOK® FITTING | D     | HEX | Y    | OAL  | W     |
| ½"        | 3.50 | 1.38 | 0.62 | 0.45 | 2.375 | 0.625 | ¼"               | 0.187 | ⅞"  | 1.46 | 2.10 | 20mm  |
|           |      |      |      |      |       |       | ⅜"               | 0.282 | 1⅛" | 2.11 |      |       |
|           |      |      |      |      |       |       | ½"               | 0.422 | ⅞"  | 2.24 |      |       |
| ¾"        | 3.88 | 1.69 | 0.82 | 0.51 | 2.750 | 0.625 | ¼"               | 0.187 | ⅞"  | 1.64 | 2.28 | 0.875 |
|           |      |      |      |      |       |       | ⅜"               | 0.282 | 1⅛" | 2.29 |      |       |
|           |      |      |      |      |       |       | ½"               | 0.422 | ⅞"  | 2.42 |      |       |
| 1"        | 4.25 | 2.00 | 1.05 | 0.56 | 3.125 | 0.625 | ¼"               | 0.187 | ⅞"  | 1.77 | 2.41 | 1.125 |
|           |      |      |      |      |       |       | ⅜"               | 0.282 | 1⅛" | 2.42 |      |       |
|           |      |      |      |      |       |       | ½"               | 0.422 | ⅞"  | 2.55 |      |       |
|           |      |      |      |      |       |       | ¾"               | 0.656 | 1⅛" | 2.52 |      |       |
| 2"        | 6.00 | 3.62 | 2.07 | 0.76 | 4.750 | 0.750 | ¼"               | 0.187 | ⅞"  | 2.08 | 2.72 | 2.00  |
|           |      |      |      |      |       |       | ⅜"               | 0.282 | 1⅛" | 2.73 |      |       |
|           |      |      |      |      |       |       | ½"               | 0.422 | ⅞"  | 2.86 |      |       |
|           |      |      |      |      |       |       | ¾"               | 0.656 | 1⅛" | 2.83 |      |       |
|           |      |      |      |      |       |       | 1"               | 0.875 | 1½" | 2.92 |      |       |

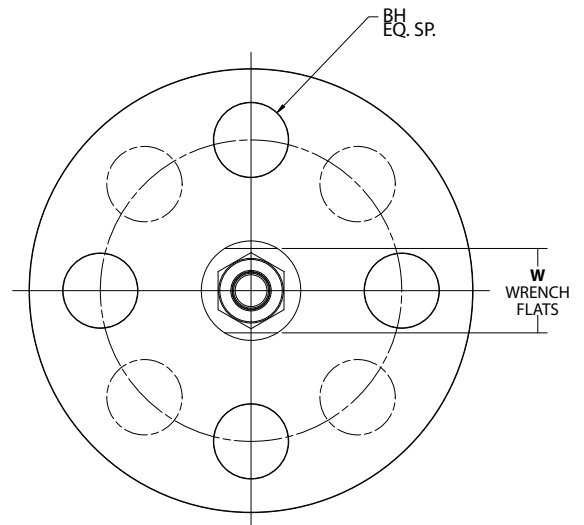
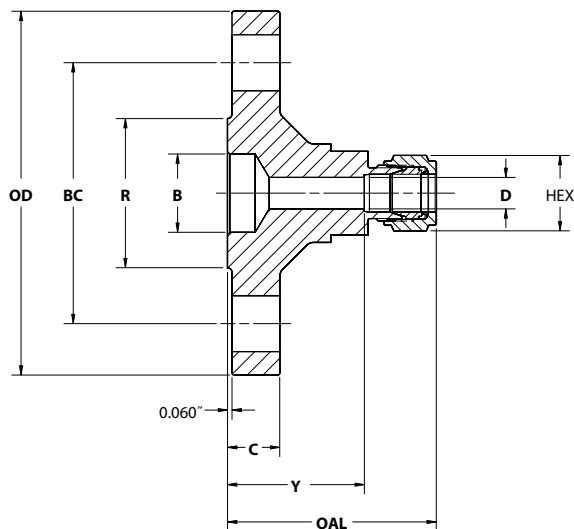
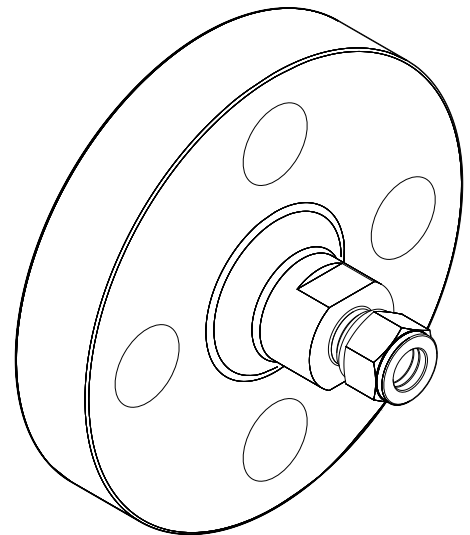
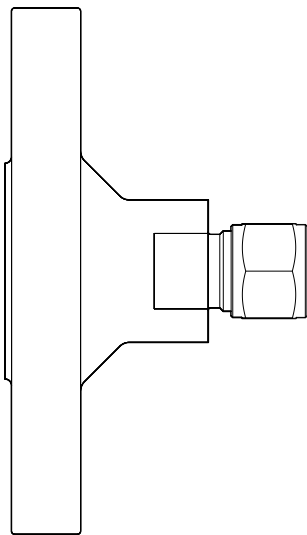
Dimensions are in inches unless otherwise noted  
 Dimensions are for reference only and subject to change



# ANSI B16.5 - Type Flanges

| Class 300 |      |      |      |      |       |                  |                  |       |        |      |      |       |
|-----------|------|------|------|------|-------|------------------|------------------|-------|--------|------|------|-------|
| NPS       | OD   | R    | B    | C    | BC    | BH               | GYROLOK® FITTING | D     | HEX    | Y    | OAL  | W     |
| 1/2"      | 3.75 | 1.38 | 0.62 | 0.57 | 2.625 | 0.625<br>4 holes | 1/4"             | 0.187 | 9/16"  | 1.64 | 2.28 | 20mm  |
|           |      |      |      |      |       |                  | 3/8"             | 0.282 | 11/16" | 1.58 | 2.29 |       |
|           |      |      |      |      |       |                  | 1/2"             | 0.422 | 7/8"   | 1.46 | 2.42 |       |
| 3/4"      | 4.62 | 1.69 | 0.82 | 0.63 | 3.250 | 0.750<br>4 holes | 1/4"             | 0.187 | 9/16"  | 1.83 | 2.47 | 0.875 |
|           |      |      |      |      |       |                  | 3/8"             | 0.282 | 11/16" | 1.77 | 2.48 |       |
|           |      |      |      |      |       |                  | 1/2"             | 0.422 | 7/8"   | 1.65 | 2.61 |       |
| 1"        | 4.88 | 2.00 | 1.05 | 0.70 | 3.500 | 0.750<br>4 holes | 1/4"             | 0.187 | 9/16"  | 2.02 | 2.66 | 1.125 |
|           |      |      |      |      |       |                  | 3/8"             | 0.282 | 11/16" | 1.96 | 2.67 |       |
|           |      |      |      |      |       |                  | 1/2"             | 0.422 | 7/8"   | 1.84 | 2.80 |       |
|           |      |      |      |      |       |                  | 3/4"             | 0.656 | 1 1/8" | 1.78 | 2.77 |       |
| 2"        | 6.50 | 3.62 | 2.07 | 0.89 | 5.000 | 0.750<br>8 holes | 1/4"             | 0.187 | 9/16"  | 2.33 | 2.97 | 2.00  |
|           |      |      |      |      |       |                  | 3/8"             | 0.282 | 11/16" | 2.27 | 2.98 |       |
|           |      |      |      |      |       |                  | 1/2"             | 0.422 | 7/8"   | 2.15 | 3.11 |       |
|           |      |      |      |      |       |                  | 3/4"             | 0.656 | 1 1/8" | 2.09 | 3.08 |       |
|           |      |      |      |      |       |                  | 1"               | 0.875 | 1 1/2" | 1.91 | 3.17 |       |

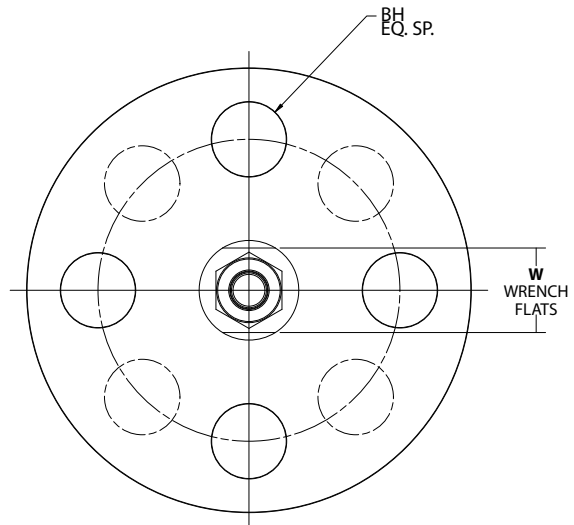
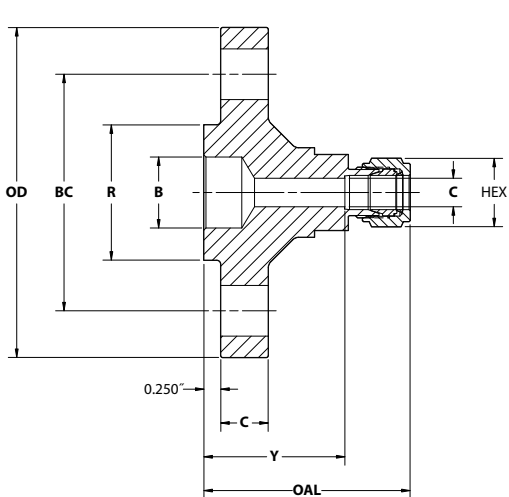
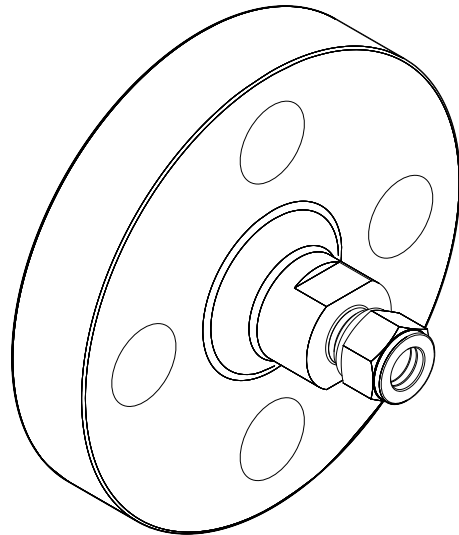
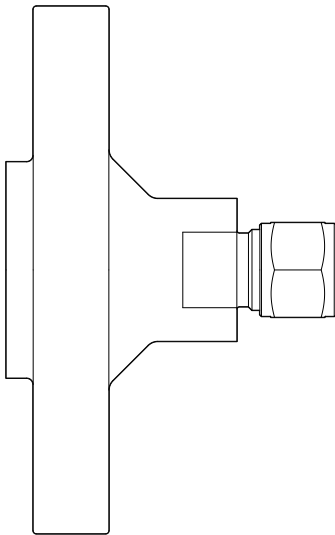
Dimensions are in inches unless otherwise noted  
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# ANSI B16.5 - Type Flanges

| Class 600 |      |      |      |      |       |                  |                  |       |     |      |      |       |
|-----------|------|------|------|------|-------|------------------|------------------|-------|-----|------|------|-------|
| NPS       | OD   | R    | B    | C    | BC    | BH               | GYROLOK® FITTING | D     | HEX | Y    | OAL  | W     |
| ½"        | 3.75 | 1.38 | 0.62 | 0.57 | 2.625 | 0.625<br>4 holes | ¼"               | 0.187 | ⅞"  | 1.89 | 2.53 | 20mm  |
|           |      |      |      |      |       |                  | ⅜"               | 0.282 | 1⅛" | 1.83 | 2.54 |       |
|           |      |      |      |      |       |                  | ½"               | 0.422 | ⅞"  | 1.71 | 2.67 |       |
| ¾"        | 4.62 | 1.69 | 0.82 | 0.63 | 3.250 | 0.750<br>4 holes | ¼"               | 0.187 | ⅞"  | 2.08 | 2.72 | 0.875 |
|           |      |      |      |      |       |                  | ⅜"               | 0.282 | 1⅛" | 2.02 | 2.73 |       |
|           |      |      |      |      |       |                  | ½"               | 0.422 | ⅞"  | 1.90 | 2.86 |       |
| 1"        | 4.88 | 2.00 | 1.05 | 0.70 | 3.500 | 0.750<br>4 holes | ¼"               | 0.187 | ⅞"  | 2.27 | 2.91 | 1.125 |
|           |      |      |      |      |       |                  | ⅜"               | 0.282 | 1⅛" | 2.21 | 2.92 |       |
|           |      |      |      |      |       |                  | ½"               | 0.422 | ⅞"  | 2.09 | 3.05 |       |
|           |      |      |      |      |       |                  | ¾"               | 0.656 | 1⅛" | 2.03 | 3.02 |       |
| 2"        | 6.50 | 3.62 | 2.07 | 1.01 | 5.000 | 0.750<br>8 holes | ¼"               | 0.187 | ⅞"  | 2.71 | 3.35 | 2.00  |
|           |      |      |      |      |       |                  | ⅜"               | 0.282 | 1⅛" | 2.65 | 3.36 |       |
|           |      |      |      |      |       |                  | ½"               | 0.422 | ⅞"  | 2.53 | 3.49 |       |
|           |      |      |      |      |       |                  | ¾"               | 0.656 | 1⅛" | 2.47 | 3.46 |       |
|           |      |      |      |      |       |                  | 1"               | 0.875 | 1½" | 2.29 | 3.55 |       |

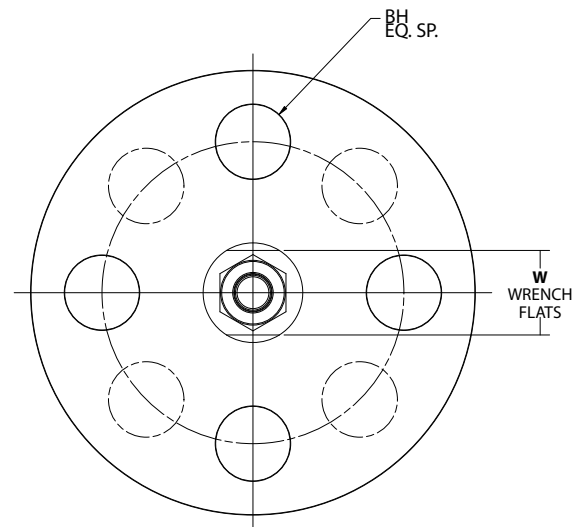
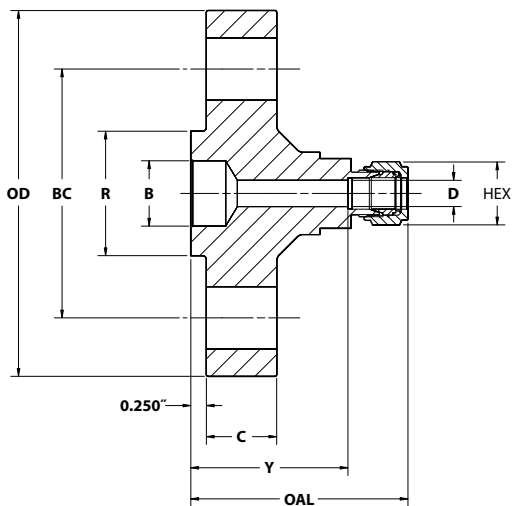
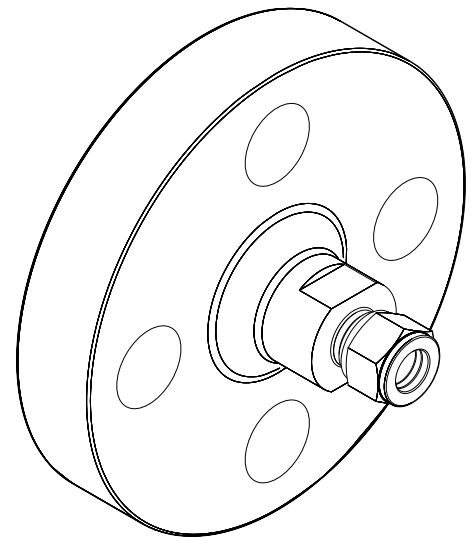
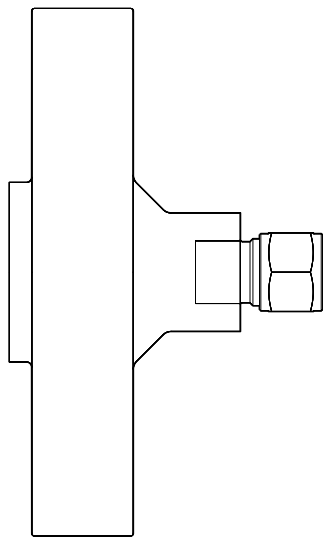
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# ANSI B16.5 - Type Flanges

| Class 1500 |      |      |      |      |       |                  |                  |       |        |      |      |       |
|------------|------|------|------|------|-------|------------------|------------------|-------|--------|------|------|-------|
| NPS        | OD   | R    | B    | C    | BC    | BH               | GYROLOK® FITTING | D     | HEX    | Y    | OAL  | W     |
| 1/2"       | 4.75 | 1.38 | 0.62 | 0.89 | 3.250 | 0.875<br>4 holes | 1/4"             | 0.187 | 9/16"  | 2.21 | 2.85 | 20mm  |
|            |      |      |      |      |       |                  | 3/8"             | 0.282 | 11/16" | 2.15 | 2.86 |       |
|            |      |      |      |      |       |                  | 1/2"             | 0.422 | 7/8"   | 2.03 | 2.99 |       |
| 3/4"       | 5.12 | 1.69 | 0.82 | 1.01 | 3.500 | 0.875<br>4 holes | 1/4"             | 0.187 | 9/16"  | 2.58 | 3.22 | 0.875 |
|            |      |      |      |      |       |                  | 3/8"             | 0.282 | 11/16" | 2.52 | 3.23 |       |
|            |      |      |      |      |       |                  | 1/2"             | 0.422 | 7/8"   | 2.40 | 3.36 |       |
| 1"         | 5.88 | 2.00 | 1.05 | 1.13 | 4.000 | 1.000<br>4 holes | 1/4"             | 0.187 | 9/16"  | 2.71 | 3.35 | 1.125 |
|            |      |      |      |      |       |                  | 3/8"             | 0.282 | 11/16" | 2.65 | 3.36 |       |
|            |      |      |      |      |       |                  | 1/2"             | 0.422 | 7/8"   | 2.53 | 3.49 |       |
|            |      |      |      |      |       |                  | 3/4"             | 0.656 | 1 1/8" | 2.47 | 3.46 |       |
| 2"         | 8.50 | 3.62 | 2.07 | 1.51 | 6.500 | 1.000<br>8 holes | 1/4"             | 0.187 | 9/16"  | 3.83 | 4.47 | 2.00  |
|            |      |      |      |      |       |                  | 3/8"             | 0.282 | 11/16" | 3.77 | 4.48 |       |
|            |      |      |      |      |       |                  | 1/2"             | 0.422 | 7/8"   | 3.65 | 4.61 |       |
|            |      |      |      |      |       |                  | 3/4"             | 0.656 | 1 1/8" | 3.59 | 4.58 |       |
|            |      |      |      |      |       |                  | 1"               | 0.875 | 1 1/2" | 3.41 | 4.67 |       |

Dimensions are in inches unless otherwise noted  
 Dimensions are for reference only and subject to change



# ANSI B16.5 - Type Flanges

## Pressure-Temperature Ratings

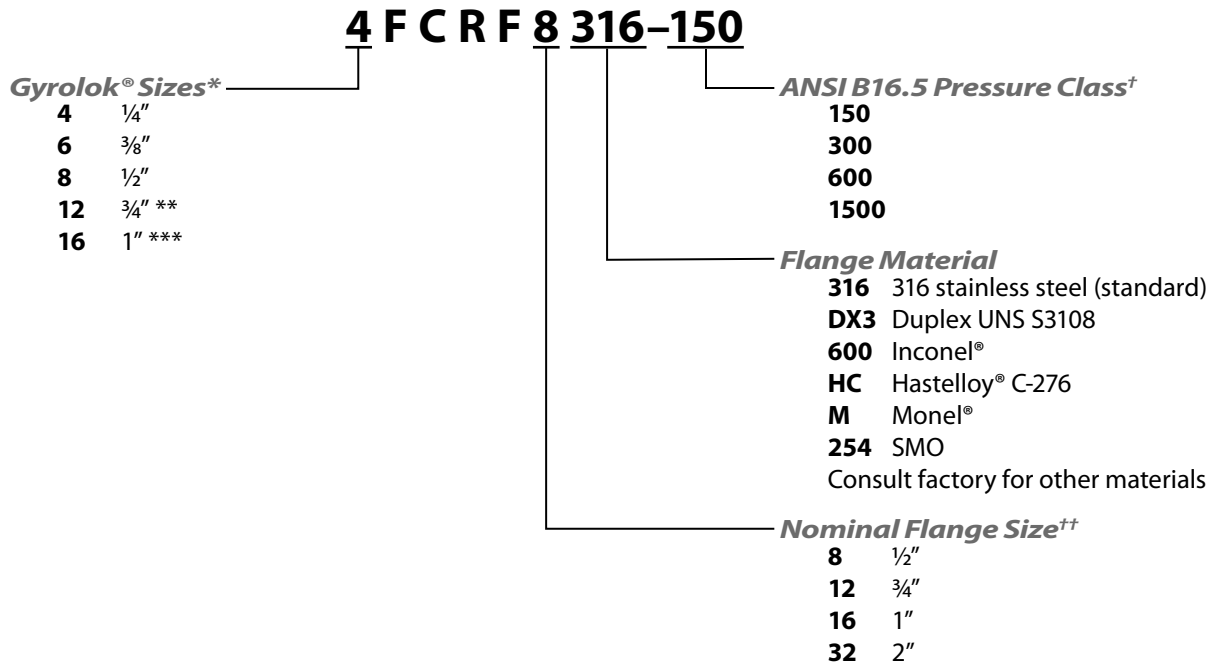
To determine pressure ratings for fittings with a flange end connection and a second end connection, use the lower of the two pressure ratings.

| Working Pressure by Class, psig* |            |     |      |      |
|----------------------------------|------------|-----|------|------|
| TEMPERATURE<br>°F                | ASME CLASS |     |      |      |
|                                  | 150        | 300 | 600  | 1500 |
| -20 to 100                       | 275        | 720 | 1440 | 3600 |
| 200                              | 235        | 620 | 1240 | 3095 |
| 300                              | 215        | 560 | 1120 | 2795 |
| 400                              | 195        | 515 | 1025 | 2570 |
| 500                              | 170        | 480 | 955  | 2390 |
| 600                              | 140        | 450 | 900  | 2255 |
| 650                              | 125        | 440 | 885  | 2210 |
| 700                              | 110        | 435 | 870  | 2170 |
| 750                              | 95         | 425 | 855  | 2135 |
| 800                              | 80         | 420 | 845  | 2110 |
| 850                              | 65         | 420 | 835  | 2090 |
| 900                              | 50         | 415 | 830  | 2075 |
| 950                              | 35         | 385 | 775  | 1930 |
| 1000                             | 20         | 365 | 725  | 1820 |

| Working Pressure by Class, bar* |            |      |      |       |
|---------------------------------|------------|------|------|-------|
| TEMPERATURE<br>°F               | ASME CLASS |      |      |       |
|                                 | 150        | 300  | 600  | 1500  |
| -29 to 38                       | 19.0       | 49.6 | 99.3 | 248.2 |
| 50                              | 18.4       | 48.1 | 96.2 | 240.6 |
| 100                             | 16.2       | 42.2 | 84.4 | 211.0 |
| 150                             | 14.8       | 38.5 | 77.0 | 192.5 |
| 200                             | 13.7       | 35.7 | 71.3 | 178.3 |
| 250                             | 12.1       | 33.4 | 66.8 | 166.9 |
| 300                             | 10.2       | 31.6 | 63.2 | 158.1 |
| 325                             | 9.3        | 30.9 | 61.8 | 154.4 |
| 350                             | 8.4        | 30.3 | 60.7 | 151.6 |
| 375                             | 7.4        | 29.9 | 59.8 | 149.4 |
| 400                             | 6.5        | 29.4 | 58.9 | 147.2 |
| 425                             | 5.5        | 29.1 | 58.3 | 145.7 |
| 450                             | 4.6        | 28.8 | 57.7 | 144.2 |
| 475                             | 3.7        | 28.7 | 57.3 | 143.4 |
| 500                             | 2.8        | 28.2 | 56.5 | 140.9 |
| 538                             | 1.4        | 25.2 | 50.0 | 125.5 |

\* Pressure ratings are according to ASME B16.5-2003, Tables 2-2.2 and F2-2.2.

## How to Order



\* Refer to the Hoke Gyrolok® catalog #79002 for our full range of fitting products. See the Hoke Tubing Data Charts #79308 for more information on tubing data.

\*\* Only available for 1" and 2" NPS

\*\*\* Only available for 2" NPS

† Consult factory for other classes

†† Consult factory for other sizes

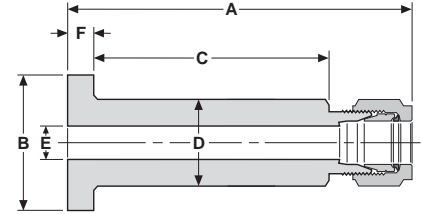
# Options

## Lapped Flange Connectors

The Lapped Flange Connector is used to allow safe and simple connections between process lines and instruments. The basic, one-piece unit consists of a HOKE Gyrolok tube connection end and a 1/2" lap joint pipe flange. The flange end is dimensioned to meet ANSI 2500 flange specifications. Available in "Smooth" or "Serrated/Concentric" seal faces, and in 316 stainless steel, Hastelloy® C-276, or Monel®.



| Lapped Flange Connector CLF (fractional) |             |                          |             |                   |      |      |      |       |      |
|--|-------------|--------------------------|-------------|-------------------|------|------|------|-------|------|
| PART NUMBER*                             | FLANGE SEAL | FINISH                   | T TUBE O.D. | DIMENSIONS (inch) |      |      |      |       |      |
|  |             |                          |             | A                 | B    | C    | D    | E MIN | F    |
| 4CLFA[ ]                                 | A           | 3.2–6.3 micrometer (Ra)  | ¼           | 3.33              | 1.38 | 2.28 | 0.88 | 0.19  | 0.25 |
| 4CLFB[ ]                                 | B           | 6.3–12.5 micrometer (Ra) |             |                   |      |      |      |       |      |
| 6CLFA[ ]                                 | A           | 3.2–6.3 micrometer (Ra)  | ⅜           | 3.34              | 1.38 | 2.28 | 0.88 | 0.30  | 0.25 |
| 6CLFB[ ]                                 | B           | 6.3–12.5 micrometer (Ra) |             |                   |      |      |      |       |      |
| 8CLFA[ ]                                 | A           | 3.2–6.3 micrometer (Ra)  | ½           | 3.47              | 1.38 | 2.28 | 0.88 | 0.42  | 0.25 |
| 8CLFB[ ]                                 | B           | 6.3–12.5 micrometer (Ra) |             |                   |      |      |      |       |      |



| Lapped Flange Connector CLF/MM (metric) |             |                          |             |                 |      |      |      |       |     |
|---|-------------|--------------------------|-------------|-----------------|------|------|------|-------|-----|
| PART NUMBER*                            | FLANGE SEAL | FINISH                   | T TUBE O.D. | DIMENSIONS (mm) |      |      |      |       |     |
|   |             |                          |             | A               | B    | C    | D    | E MIN | F   |
| 10CLFA[ ]MM                             | A           | 3.2–6.3 micrometer (Ra)  | 10          | 84.1            | 34.9 | 57.9 | 22.2 | 7.1   | 6.4 |
| 10CLFB[ ]MM                             | B           | 6.3–12.5 micrometer (Ra) |             |                 |      |      |      |       |     |

\* To specify material, insert BR=brass, 316=stainless steel, M=Monel®, or HC=Hastelloy® C-276 in place of the brackets. Example: 4CLFA316.

Flange Seal "A"



Smooth

Flange Seal "B"



Serrated / Concentric

## Gyrolok Tube Fittings

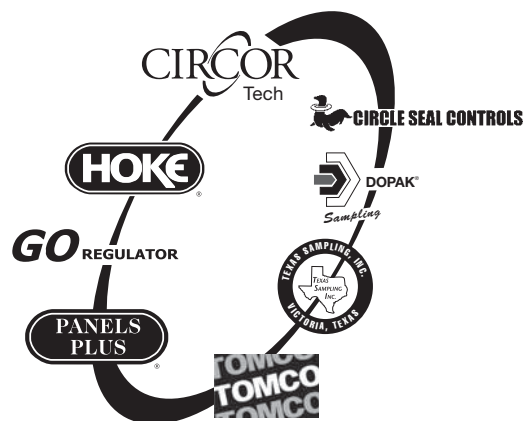
See the Gyrolok Tube Fittings catalog #79002 for product information, assembly instructions, and guarantee of interchangeability with certain other manufacturers.

Gyrolok® components are guaranteed to be interchangeable with certain other suppliers. For more information, visit [www.hoke.com](http://www.hoke.com) or contact your local Hoke distributor.



## For Your Safety

It is solely the responsibility of the system designer and user to select products suitable for their application requirements and to ensure proper installation, operation, and maintenance of these products. Material compatibility, product ratings and application details should be considered in the selection. Improper selection or use of products described herein can cause personal injury or property damage.



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Fax (909) 923-2550

[www.circor-panelsplus.com](http://www.circor-panelsplus.com)

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Houston, Texas 77080

Tel (713) 460-8311

Fax (713) 460-8578

[www.dopak.com](http://www.dopak.com)

### Texas Sampling, Inc

3706 Rio Grande

Victoria, Texas 77901

Tel (361) 575-8087

Fax (361) 575-8157

[www.texassampling.com](http://www.texassampling.com)

### Circle Seal Controls

2301 Wardlow Circle

Corona, CA 92880

Tel (951) 270-6200

Fax (951) 270-6201

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## CIRCOR Instrumentation Technologies

CIRCOR Instrumentation Technologies (CIT) is a product group of CIRCOR International (NYSE: CIR), specializing in fluid process control solutions with orifice sizes typically up to 1". Our main product lines include ball, needle, packless, diaphragm, solenoid, and metering valves, pressure regulators, quick couplers, Gyrolok® compression tube fittings, and fully integrated sampling systems.

CIT markets primarily to the petrochemical, refining, power generation, food and beverage, semiconductor, and pharmaceutical industries, and to OEM's. CIT separates itself from the competition by offering highly engineered components manufactured to exacting standards and a variety of custom options.