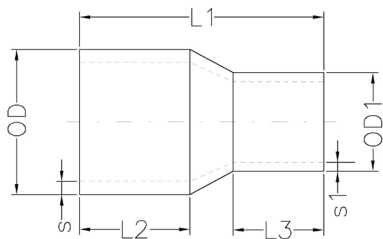


Butt Fusion IPS Reducers

FM APPROVED



- Molded from black PE 100 / 4710 resin & NSF-61 certified
- Complies with the following product standards: ASTM D2513, D3261, D3350, and AWWA C906
- Made in the USA
- FM Approval Class 1613



SDR 7 (STANDARD DIMENSION RATIO) 335 PSI (WORKING PRESSURE AS 73.4° F)

| Product Code | Nominal Diameter (inch) | L1 (inch) | L2 (inch) | L3 (inch) | s (inch) Min Wall | OD (inch) | s1 (inch) Min Wall | OD 1 (inch) | Pressure Rating (psi.) |
|-------------------|-------------------------|-----------|-----------|-----------|-------------------|-----------|--------------------|-------------|------------------------|
| FF-51.317.0302.07 | 3 x 2" IPS | 7.91 | 3.46 | 3.310 | 0.500 | 3.500 | 0.339 | 2.380 | 335 |
| FF-51.317.0402.07 | 4 x 2" IPS | 8.82 | 3.58 | 3.310 | 0.643 | 4.500 | 0.339 | 2.380 | 335 |
| FF-51.317.0403.07 | 4 x 3" IPS | 7.99 | 3.58 | 3.460 | 0.643 | 4.500 | 0.500 | 3.500 | 335 |
| FF-51.317.0604.07 | 6 x 4" IPS | 9.88 | 4.21 | 3.580 | 0.946 | 6.630 | 0.643 | 4.500 | 335 |
| FF-51.317.0806.07 | 8 x 6" IPS | 11.18 | 5.08 | 4.210 | 1.232 | 8.630 | 0.946 | 6.630 | 335 |

SDR 9 (STANDARD DIMENSION RATIO) 250 PSI (WORKING PRESSURE AS 73.4° F)

| Product Code | Nominal Diameter (inch) | L1 (inch) | L2 (inch) | L3 (inch) | s (inch) Min Wall | OD (inch) | s1 (inch) Min Wall | OD 1 (inch) | Pressure Rating (psi.) |
|-------------------|-------------------------|-----------|-----------|-----------|-------------------|-----------|--------------------|-------------|------------------------|
| FF-51.317.0302.09 | 3 x 2" IPS | 7.91 | 3.46 | 3.310 | 0.389 | 3.500 | 0.264 | 2.380 | 250 |
| FF-51.317.0402.09 | 4 x 2" IPS | 8.82 | 3.58 | 3.310 | 0.500 | 4.500 | 0.264 | 2.380 | 250 |
| FF-51.317.0403.09 | 4 x 3" IPS | 7.99 | 3.58 | 3.460 | 0.500 | 4.500 | 0.389 | 3.500 | 250 |
| FF-51.317.0604.09 | 6 x 4" IPS | 9.88 | 4.21 | 3.580 | 0.736 | 6.630 | 0.500 | 4.500 | 250 |
| FF-51.317.0806.09 | 8 x 6" IPS | 11.18 | 5.08 | 4.210 | 0.958 | 8.630 | 0.736 | 6.630 | 250 |

SDR 11 (STANDARD DIMENSION RATIO) 200 PSI (WORKING PRESSURE AT 73.4° F)

| Product Code | Nominal Diameter (inch) | L1 (inch) | L2 (inch) | L3 (inch) | s (inch) Min Wall | OD (inch) | s1 (inch) Min Wall | OD 1 (inch) | Pressure Rating (psi.) |
|-------------------|-------------------------|-----------|-----------|-----------|-------------------|-----------|--------------------|-------------|------------------------|
| FF-51.118.0302.11 | 3 x 2" IPS | 7.72 | 3.74 | 2.83 | 0.318 | 3.50 | 0.216 | 2.38 | 200 |
| FF-51.118.0402.11 | 4 x 2" IPS | 8.82 | 4.09 | 2.76 | 0.409 | 4.50 | 0.216 | 2.38 | 200 |
| FF-51.118.0403.11 | 4 x 3" IPS | 8.78 | 4.13 | 3.70 | 0.409 | 4.50 | 0.318 | 3.50 | 200 |
| FF-51.118.0603.11 | 6 x 3" IPS | 11.18 | 5.06 | 3.78 | 0.603 | 6.63 | 0.318 | 3.50 | 200 |
| FF-51.118.0604.11 | 6 x 4" IPS | 10.94 | 4.84 | 3.90 | 0.603 | 6.63 | 0.409 | 4.50 | 200 |
| FF-51.118.0806.11 | 8 x 6" IPS | 12.36 | 5.51 | 4.96 | 0.785 | 8.63 | 0.603 | 6.63 | 200 |
| FF-51.118.1008.11 | 10 x 8" IPS | 14.21 | 6.22 | 5.94 | 0.978 | 10.75 | 0.785 | 8.63 | 200 |
| FF-51.118.1208.11 | 12 x 8" IPS | 16.34 | 6.54 | 5.91 | 1.16 | 12.75 | 0.785 | 8.63 | 200 |
| FF-51.118.1210.11 | 12 x 10" IPS | 16.14 | 6.61 | 6.46 | 1.16 | 12.75 | 0.978 | 10.75 | 200 |

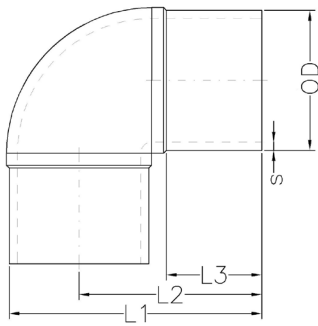
Notes:

1. All dimensions shown are nominal and subject to manufacturing tolerance. OD and minimum wall are determined in accordance with ASTM standards. Drawing shown is an approximation only.
2. Please refer to DOT pressure requirements for natural gas applications.
3. Fittings are marked to meet standards to which the product is produced and labeled.



Butt Fusion IPS 90° Elbows

FM APPROVED



- Molded from black PE 100 / 4710 resin & NSF-61 certified
- Complies with the following product standards: ASTM D2513, D3261, D3350, and AWWA C906
- Made in the USA
- FM Approval Class 1613



SDR 7 (STANDARD DIMENSION RATIO) 335 PSI (WORKING PRESSURE AS 73.4° F)

| Product Code | Nominal Diameter (inch) | L1 (inch) | L2 (inch) | L3 (inch) | s (inch) Min Wall | OD (inch) | Pressure Rating (psi.) |
|-------------------|-------------------------|-----------|-----------|-----------|-------------------|-----------|------------------------|
| FF-51.113.0002.07 | 2" IPS | 5.75 | 4.25 | 2.45 | 0.339 | 2.38 | 335 |
| FF-51.113.0003.07 | 3" IPS | 7.53 | 5.65 | 3.05 | 0.500 | 3.50 | 335 |
| FF-51.113.0004.07 | 4" IPS | 8.68 | 6.13 | 3.25 | 0.643 | 4.50 | 335 |
| FF-51.113.0006.07 | 6" IPS | 12.80 | 9.28 | 4.05 | 0.946 | 6.63 | 335 |

SDR 9 (STANDARD DIMENSION RATIO) 250 PSI (WORKING PRESSURE AS 73.4° F)

| Product Code | Nominal Diameter (inch) | L1 (inch) | L2 (inch) | L3 (inch) | s (inch) Min Wall | OD (inch) | Pressure Rating (psi.) |
|-------------------|-------------------------|-----------|-----------|-----------|-------------------|-----------|------------------------|
| FF-51.113.0002.09 | 2" IPS | 5.75 | 4.25 | 2.45 | 0.264 | 2.38 | 250 |
| FF-51.113.0003.09 | 3" IPS | 7.53 | 5.65 | 3.05 | 0.389 | 3.50 | 250 |
| FF-51.113.0004.09 | 4" IPS | 8.68 | 6.13 | 3.25 | 0.500 | 4.50 | 250 |
| FF-51.113.0006.09 | 6" IPS | 12.8 | 9.28 | 4.05 | 0.736 | 6.63 | 250 |

SDR 11 (STANDARD DIMENSION RATIO) 200 PSI (WORKING PRESSURE AS 73.4° F)

| Product Code | Nominal Diameter (inch) | L1 (inch) | L2 (inch) | L3 (inch) | s (inch) Min Wall | OD (inch) | Pressure Rating (psi.) |
|-------------------|-------------------------|-----------|-----------|-----------|-------------------|-----------|------------------------|
| FF-51.113.0002.11 | 2" IPS | 5.71 | 4.41 | 2.44 | 0.22 | 2.38 | 200 |
| FF-51.113.0003.11 | 3" IPS | 7.48 | 5.67 | 3.23 | 0.32 | 3.50 | 200 |
| FF-51.113.0004.11 | 4" IPS | 8.9 | 6.54 | 3.66 | 0.41 | 4.50 | 200 |
| FF-51.113.0006.11 | 6" IPS | 12.13 | 8.74 | 4.49 | 0.60 | 6.63 | 200 |
| FF-51.113.0008.11 | 8" IPS | 15.75 | 11.42 | 5.63 | 0.79 | 8.63 | 200 |
| FF-51.113.0010.11 | 10" IPS | 18.82 | 13.35 | 6.14 | 0.98 | 10.75 | 200 |
| FF-51.113.0012.11 | 12" IPS | 20.83 | 14.17 | 6.30 | 1.16 | 12.75 | 200 |

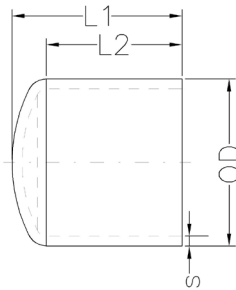
Notes:

1. All dimensions shown are nominal and subject to manufacturing tolerance. OD and minimum wall are determined in accordance with ASTM standards. Drawing shown is an approximation only.
2. Please refer to DOT pressure requirements for natural gas applications.
3. Fittings are marked to meet standards to which the product is produced and labeled.



Butt Fusion IPS End Caps

FM APPROVED



- Molded from black PE 100 / 4710 resin & NSF-61 certified
- Complies with the following product standards: ASTM D2513, D3261, D3350, and AWWA C906
- Made in the USA
- FM Approval Class 1613



SDR 7 (STANDARD DIMENSION RATIO) 335 PSI (WORKING PRESSURE AS 73.4° F)

| Product Code | Nominal Diameter (inch) | L1 (inch) | L2 (inch) | s (inch) Min Wall | OD (inch) | Pressure Rating (psi.) |
|-------------------|-------------------------|-----------|-----------|-------------------|-----------|------------------------|
| FF-51.314.0002.07 | 2" IPS | 3.86 | 3.15 | 0.339 | 2.38 | 335 |
| FF-51.314.0003.07 | 3" IPS | 4.61 | 3.58 | 0.500 | 3.50 | 335 |
| FF-51.314.0004.07 | 4" IPS | 5.24 | 3.89 | 0.643 | 4.50 | 335 |
| FF-51.314.0006.07 | 6" IPS | 6.77 | 4.72 | 0.946 | 6.63 | 335 |
| FF-51.314.0008.07 | 8" IPS | 8.43 | 5.57 | 1.232 | 6.63 | 335 |
| FF-51.314.0010.07 | 10" IPS | 9.69 | 6.12 | 1.536 | 10.75 | 335 |
| FF-51.314.0012.07 | 12" IPS | 11.50 | 7.25 | 1.821 | 12.75 | 335 |

SDR 9 (STANDARD DIMENSION RATIO) 250 PSI (WORKING PRESSURE AS 73.4° F)

| Product Code | Nominal Diameter (inch) | L1 (inch) | L2 (inch) | s (inch) Min Wall | OD (inch) | Pressure Rating (psi.) |
|-------------------|-------------------------|-----------|-----------|-------------------|-----------|------------------------|
| FF-51.314.0002.09 | 2" IPS | 3.86 | 3.15 | 0.264 | 2.38 | 250 |
| FF-51.314.0003.09 | 3" IPS | 4.61 | 3.58 | 0.389 | 3.50 | 250 |
| FF-51.314.0004.09 | 4" IPS | 5.24 | 3.89 | 0.500 | 4.50 | 250 |
| FF-51.314.0006.09 | 6" IPS | 6.77 | 4.72 | 0.736 | 6.63 | 250 |
| FF-51.314.0008.09 | 8" IPS | 8.43 | 5.57 | 0.958 | 8.63 | 250 |
| FF-51.314.0010.09 | 10" IPS | 9.69 | 6.12 | 1.194 | 10.75 | 250 |
| FF-51.314.0012.09 | 12" IPS | 11.50 | 7.25 | 1.417 | 12.75 | 250 |

SDR 11 (STANDARD DIMENSION RATIO) 200 PSI (WORKING PRESSURE AS 73.4° F)

| Product Code | Nominal Diameter (inch) | L1 (inch) | L2 (inch) | s (inch) Min Wall | OD (inch) | Pressure Rating (psi.) |
|-------------------|-------------------------|-----------|-----------|-------------------|-----------|------------------------|
| FF-51.114.0002.11 | 2" IPS | 3.15 | 2.48 | 0.22 | 2.38 | 200 |
| FF-51.114.0003.11 | 3" IPS | 4.57 | 3.62 | 0.32 | 3.50 | 200 |
| FF-51.114.0004.11 | 4" IPS | 5.16 | 3.90 | 0.41 | 4.50 | 200 |
| FF-51.114.0006.11 | 6" IPS | 6.69 | 4.72 | 0.60 | 6.63 | 200 |
| FF-51.114.0008.11 | 8" IPS | 8.43 | 5.83 | 0.79 | 8.63 | 200 |
| FF-51.114.0010.11 | 10" IPS | 9.57 | 6.30 | 0.98 | 10.75 | 200 |
| FF-51.114.0012.11 | 12" IPS | 11.46 | 7.48 | 1.16 | 12.75 | 200 |

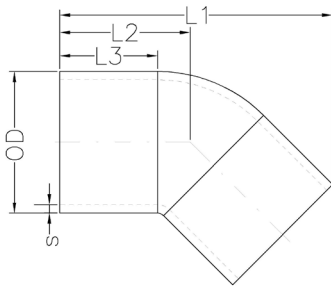
Notes:

1. All dimensions shown are nominal and subject to manufacturing tolerance. OD and minimum wall are determined in accordance with ASTM standards. Drawing shown is an approximation only.
2. Please refer to DOT pressure requirements for natural gas applications.
3. Fittings are marked to meet standards to which the product is produced and labeled.



Butt Fusion IPS 45° Elbows

FM APPROVED



- Molded from black PE 100 / 4710 resin & NSF-61 certified
- Complies with the following product standards: ASTM D2513, D3261, D3350, and AWWA C906
- Made in the USA
- FM Approval Class 1613



SDR 7 (STANDARD DIMENSION RATIO) 335 PSI (WORKING PRESSURE AS 73.4° F)

| Product Code | Nominal Diameter (inch) | L1 (inch) | L2 (inch) | L3 (inch) | s (inch) Min Wall | OD (inch) | Pressure Rating (psi.) |
|-------------------|-------------------------|-----------|-----------|-----------|-------------------|-----------|------------------------|
| FF-51.110.0002.07 | 2" IPS | 8.28 | 4.2 | 2.40 | 0.339 | 2.38 | 335 |
| FF-51.110.0003.07 | 3" IPS | 10.15 | 5.00 | 2.50 | 0.500 | 3.50 | 335 |
| FF-51.110.0004.07 | 4" IPS | 10.70 | 5.07 | 2.80 | 0.643 | 4.50 | 335 |
| FF-51.110.0006.07 | 6" IPS | 16.27 | 8.13 | 4.00 | 0.946 | 6.63 | 335 |

SDR 9 (STANDARD DIMENSION RATIO) 250 PSI (WORKING PRESSURE AS 73.4° F)

| Product Code | Nominal Diameter (inch) | L1 (inch) | L2 (inch) | L3 (inch) | s (inch) Min Wall | OD (inch) | Pressure Rating (psi.) |
|-------------------|-------------------------|-----------|-----------|-----------|-------------------|-----------|------------------------|
| FF-51.110.0002.09 | 2" IPS | 8.28 | 4.20 | 2.40 | 0.264 | 2.38 | 250 |
| FF-51.110.0003.09 | 3" IPS | 10.15 | 5.00 | 2.50 | 0.389 | 3.50 | 250 |
| FF-51.110.0004.09 | 4" IPS | 10.70 | 5.07 | 2.80 | 0.500 | 4.50 | 250 |
| FF-51.110.0006.09 | 6" IPS | 16.27 | 8.13 | 4.00 | 0.736 | 6.63 | 250 |

SDR 11 (STANDARD DIMENSION RATIO) 200 PSI (WORKING PRESSURE AS 73.4° F)

| Product Code | Nominal Diameter (inch) | L1 (inch) | L2 (inch) | L3 (inch) | s (inch) Min Wall | OD (inch) | Pressure Rating (psi.) |
|-------------------|-------------------------|-----------|-----------|-----------|-------------------|-----------|------------------------|
| FF-51.110.0002.11 | 2" IPS | 6.38 | 3.23 | 2.52 | 0.22 | 2.38 | 200 |
| FF-51.110.0003.11 | 3" IPS | 9.09 | 4.57 | 3.39 | 0.32 | 3.50 | 200 |
| FF-51.110.0004.11 | 4" IPS | 10.24 | 5.04 | 3.58 | 0.41 | 4.50 | 200 |
| FF-51.110.0006.11 | 6" IPS | 13.82 | 6.61 | 4.53 | 0.60 | 6.63 | 200 |
| FF-51.110.0008.11 | 8" IPS | 16.97 | 8.15 | 5.63 | 0.79 | 8.63 | 200 |
| FF-51.110.0010.11 | 10" IPS | 20.28 | 9.61 | 6.18 | 0.98 | 10.75 | 200 |
| FF-51.110.0012.11 | 12" IPS | 21.93 | 10.04 | 6.50 | 1.16 | 12.75 | 200 |

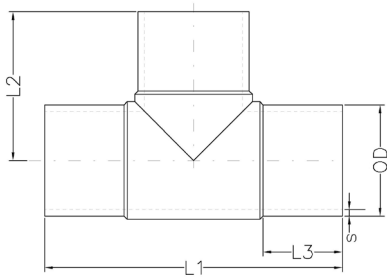
Notes:

1. All dimensions shown are nominal and subject to manufacturing tolerance. OD and minimum wall are determined in accordance with ASTM standards. Drawing shown is an approximation only.
2. Please refer to DOT pressure requirements for natural gas applications.
3. Fittings are marked to meet standards to which the product is produced and labeled.



Butt Fusion IPS Tees

FM APPROVED



- Molded from black PE 100 / 4710 resin & NSF-61 certified
- Complies with the following product standards: ASTM D2513, D3261, D3350, and AWWA C906
- Made in the USA
- FM Approval Class 1613



SDR 7 (STANDARD DIMENSION RATIO) 335 PSI (WORKING PRESSURE AS 73.4° F)

| Product Code | Nominal Diameter (inch) | L1 (inch) | L2 (inch) | L3 (inch) | s (inch) Min Wall | OD (inch) | Pressure Rating (psi.) |
|-------------------|-------------------------|-----------|-----------|-----------|-------------------|-----------|------------------------|
| FF-51.115.0002.07 | 2" IPS | 9.69 | 4.88 | 2.87 | 0.339 | 2.375 | 335 |
| FF-51.115.0003.07 | 3" IPS | 11.61 | 5.79 | 3.54 | 0.500 | 3.500 | 335 |
| FF-51.115.0004.07 | 4" IPS | 13.78 | 6.89 | 3.94 | 0.643 | 4.500 | 335 |
| FF-51.115.0006.07 | 6" IPS | 17.68 | 8.82 | 4.72 | 0.946 | 6.625 | 335 |
| FF-51.115.0008.07 | 8" IPS | 23.03 | 11.46 | 5.67 | 1.232 | 8.625 | 335 |
| FF-51.115.0010.07 | 10" IPS | 27.17 | 13.54 | 6.22 | 1.536 | 10.750 | 335 |
| FF-51.115.0012.07 | 12" IPS | 29.72 | 14.84 | 6.77 | 1.821 | 12.750 | 335 |

SDR 9 (STANDARD DIMENSION RATIO) 250 PSI (WORKING PRESSURE AS 73.4° F)

| Product Code | Nominal Diameter (inch) | L1 (inch) | L2 (inch) | L3 (inch) | s (inch) Min Wall | OD (inch) | Pressure Rating (psi.) |
|-------------------|-------------------------|-----------|-----------|-----------|-------------------|-----------|------------------------|
| FF-51.115.0002.09 | 2" IPS | 9.69 | 4.88 | 2.87 | 0.264 | 2.375 | 250 |
| FF-51.115.0003.09 | 3" IPS | 11.61 | 5.79 | 3.54 | 0.389 | 3.500 | 250 |
| FF-51.115.0004.09 | 4" IPS | 13.78 | 6.89 | 3.94 | 0.500 | 4.500 | 250 |
| FF-51.115.0006.09 | 6" IPS | 17.68 | 8.82 | 4.72 | 0.736 | 6.625 | 250 |
| FF-51.115.0008.09 | 8" IPS | 23.03 | 11.46 | 5.67 | 0.958 | 8.625 | 250 |
| FF-51.115.0010.09 | 10" IPS | 27.17 | 13.54 | 6.22 | 1.194 | 10.750 | 250 |
| FF-51.115.0012.09 | 12" IPS | 29.72 | 14.84 | 6.77 | 1.417 | 12.750 | 250 |

SDR 11 (STANDARD DIMENSION RATIO) 200 PSI (WORKING PRESSURE AS 73.4° F)

| Product Code | Nominal Diameter (inch) | L1 (inch) | L2 (inch) | L3 (inch) | s (inch) Min Wall | OD (inch) | Pressure Rating (psi.) |
|-------------------|-------------------------|-----------|-----------|-----------|-------------------|-----------|------------------------|
| FF-51.115.0002.11 | 2" IPS | 9.69 | 4.88 | 2.87 | 0.216 | 2.375 | 200 |
| FF-51.115.0003.11 | 3" IPS | 11.61 | 5.79 | 3.54 | 0.318 | 3.500 | 200 |
| FF-51.115.0004.11 | 4" IPS | 13.78 | 6.89 | 3.94 | 0.409 | 4.500 | 200 |
| FF-51.115.0006.11 | 6" IPS | 17.68 | 8.82 | 4.72 | 0.603 | 6.625 | 200 |
| FF-51.115.0008.11 | 8" IPS | 23.03 | 11.46 | 5.67 | 0.785 | 8.625 | 200 |
| FF-51.115.0010.11 | 10" IPS | 27.17 | 13.54 | 6.22 | 0.978 | 10.750 | 200 |
| FF-51.115.0012.11 | 12" IPS | 29.72 | 14.84 | 6.77 | 1.160 | 12.750 | 200 |

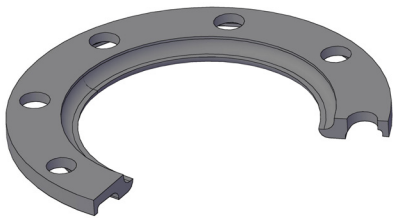
Notes:

1. All dimensions shown are nominal and subject to manufacturing tolerance. OD and minimum wall are determined in accordance with ASTM standards. Drawing shown is an approximation only.
2. Please refer to DOT pressure requirements for natural gas applications.
3. Fittings are marked to meet standards to which the product is produced and labeled.

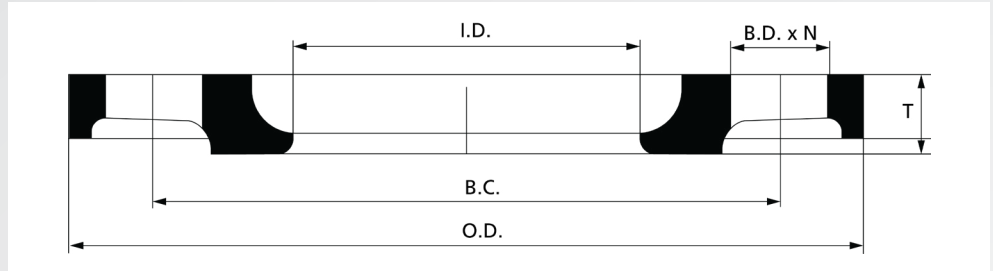


Ductile Iron Backup Rings

FM APPROVED



- Material: ASTM A536, G65-45-12
- Description: Convolute, Fusion Bonded Epoxy for use with HDPE Flange Adapters
- Meets Requirements: Class 150, Mates with ANSI B16.5 and AWWA C207
- FM Approval Class 1613



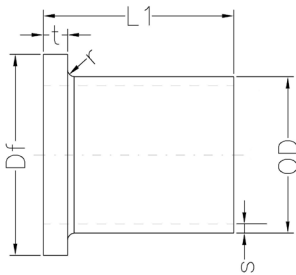
DR 11 (200 PSI)

| IPS Pipe Dia. | Product Code | Outside Dia. (inch) | Inside Dia. (inch) | Flange Thick. (inch) | Bolt Hole No. | Bolt Hole Dia. (inch) | Bolt Hole Circle (inch) | Unit Weight (lbs.) | Pressure Rating (psi.) |
|---------------|------------------------|---------------------|--------------------|----------------------|---------------|-----------------------|-------------------------|--------------------|------------------------|
| 2" | RO-BRINGS-DI-R11-02.00 | 6.00 | 2.60 | 0.52 | 4 | 0.75 | 4.75 | 2.80 | 200 |
| 3" | RO-BRINGS-DI-R11-03.00 | 7.50 | 3.75 | 0.55 | 4 | 0.75 | 6.00 | 4.00 | 200 |
| 4" | RO-BRINGS-DI-R11-04.00 | 9.00 | 4.75 | 0.60 | 8 | 0.75 | 7.50 | 5.60 | 200 |
| 6" | RO-BRINGS-DI-R11-06.00 | 11.00 | 6.88 | 0.67 | 8 | 0.88 | 9.50 | 8.00 | 200 |
| 8" | RO-BRINGS-DI-R11-08.00 | 13.50 | 8.88 | 0.90 | 8 | 0.88 | 11.75 | 12.5 | 200 |
| 10" | RO-BRINGS-DI-R11-10.00 | 16.00 | 11.00 | 1.05 | 12 | 1.00 | 14.25 | 16.8 | 200 |
| 12" | RO-BRINGS-DI-R11-12.00 | 19.00 | 13.15 | 1.35 | 12 | 1.00 | 17.00 | 26.8 | 200 |



Butt Fusion
IPS
Flange Adapters

FM APPROVED



- Molded from black PE 100 / 4710 resin & NSF-61 certified
- Complies with the following product standards: ASTM D2513, D3261, D3350, F2880, and AWWA C906
- Made in the USA
- FM Approval Class 1613



SDR 11 (STANDARD DIMENSION RATIO) 200 PSI (WORKING PRESSURE AT 73.4° F)

| Product Code | Nominal Diameter (inch) | L1 (inch) | s (inch) Wall | OD (inch) | Df (inch) | t (inch) Wall | r (inch) | Pressure Rating (psi.) |
|-------------------|-------------------------|-----------|---------------|-----------|-----------|---------------|----------|------------------------|
| FF-51.112.0002.11 | 2" IPS | 6.10 | 0.22 | 2.38 | 3.94 | 0.55 | 0.20 | 200 |
| FF-51.112.0003.11 | 3" IPS | 6.10 | 0.32 | 3.50 | 5.00 | 0.67 | 0.28 | 200 |
| FF-51.112.0004.11 | 4" IPS | 6.10 | 0.41 | 4.50 | 6.61 | 0.79 | 0.28 | 200 |
| FF-51.112.0006.11 | 6" IPS | 7.87 | 0.60 | 6.63 | 8.50 | 1.02 | 0.28 | 200 |
| FF-51.112.0008.11 | 8" IPS | 10.63 | 0.79 | 8.63 | 10.63 | 1.26 | 0.35 | 200 |
| FF-51.112.0010.11 | 10" IPS | 12.99 | 0.98 | 10.75 | 12.99 | 1.38 | 0.35 | 200 |
| FF-51.112.0012.11 | 12" IPS | 15.75 | 1.16 | 12.75 | 15.75 | 1.5 | 0.35 | 200 |

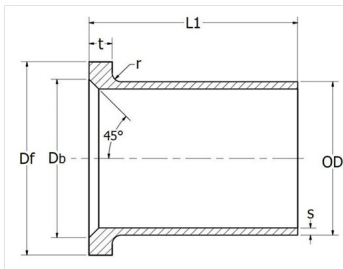
Notes:

1. All dimensions shown are nominal and subject to manufacturing tolerance. OD and minimum wall are determined in accordance with ASTM standards. Drawing shown is an approximation only.
2. Please refer to DOT pressure requirements for natural gas applications.
3. Fittings are marked to meet standards to which the product is produced and labeled.



Butt Fusion
IPS Beveled
Flange Adapters

FM APPROVED



- Molded from black PE 100 / 4710 resin & NSF-61 certified
- Complies with the following product standards: ASTM D2513, D3261, D3350, and AWWA C906
- Made in the USA
- FM Approval Class 1613



SDR 11 (STANDARD DIMENSION RATIO) 200 PSI (WORKING PRESSURE AT 73.4° F)

| Product Code | Nominal Diameter (inch) | L1 (inch) | s (inch) Wall | OD (inch) | Df (inch) | Db (inch) | t (inch) Wall | r (inch) | Pressure Rating (psi.) |
|----------------------|-------------------------|-----------|---------------|-----------|-----------|-----------|---------------|----------|------------------------|
| FF-51.112B45.0002.11 | 2" IPS | 6.10 | 0.22 | 2.38 | 3.94 | 2.8 | 0.55 | 0.20 | 200 |
| FF-51.112B45.0003.11 | 3" IPS | 6.10 | 0.32 | 3.50 | 5.00 | 3.8 | 0.67 | 0.28 | 200 |
| FF-51.112B45.0004.11 | 4" IPS | 6.10 | 0.41 | 4.50 | 6.61 | 4.8 | 0.79 | 0.28 | 200 |
| FF-51.112B45.0006.11 | 6" IPS | 7.87 | 0.60 | 6.63 | 8.50 | 6.6 | 1.02 | 0.28 | 200 |
| FF-51.112B45.0008.11 | 8" IPS | 10.63 | 0.79 | 8.63 | 10.83 | 8.6 | 1.26 | 0.35 | 200 |
| FF-51.112B45.0010.11 | 10" IPS | 12.99 | 0.98 | 10.75 | 12.99 | 10.75 | 1.38 | 0.35 | 200 |
| FF-51.112B45.0012.11 | 12" IPS | 15.75 | 1.16 | 12.75 | 15.75 | 12.75 | 1.50 | 0.35 | 200 |

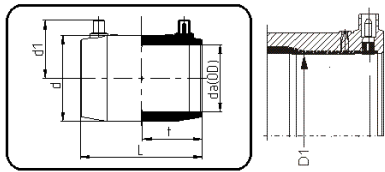
Notes:

1. All dimensions shown are nominal and subject to manufacturing tolerance. OD and minimum wall are determined in accordance with ASTM standards. Drawing shown is an approximation only.
2. Please refer to DOT pressure requirements for natural gas applications.
3. Fittings are marked to meet standards to which the product is produced and labeled.



IPS Electrofusion Couplings

MONOFILAR



- Molded from black PE 100-RC / 4710 & NSF-61 approved resin
- Complies with the following product standards: ASTM D2513, D3261, D3350, F1055, and AWWA C906
- FM Approval Class 1613



SDR 11 (WATER 200 PSI, GAS*)

| Product Code | Nominal Diameter da OD (inch) | D1 (ID) | L (inch) | d1 (inch) | d (inch) | t (inch) | Weight (lbs.) | Pressure Rating (psi.) |
|-------------------|-------------------------------|---------|----------|-----------|----------|----------|---------------|------------------------|
| RI-51.173.0002.11 | 2" IPS | 2.378 | 5.031 | 3.130 | 2.224 | 2.516 | 0.5 | 200 |
| RI-51.173.0003.11 | 3" IPS | 3.524 | 5.551 | 4.331 | 2.835 | 2.736 | 0.8 | 200 |
| RI-51.173.0004.11 | 4" IPS | 4.528 | 5.984 | 5.591 | 3.346 | 2.953 | 1.3 | 200 |
| RI-51.173.0006.11 | 6" IPS | 6.634 | 7.126 | 8.110 | 4.390 | 3.524 | 3.3 | 200 |
| RI-51.173.0008.11 | 8" IPS | 8.646 | 9.094 | 10.551 | 5.433 | 4.469 | 6.8 | 200 |
| RI-51.173.0010.11 | 10" IPS | 10.787 | 9.843 | 13.228 | 6.496 | 4.843 | 13.3 | 200 |
| RI-51.173.0012.11 | 12" IPS | 12.795 | 10.236 | 15.709 | 7.480 | 5.039 | 18.3 | 200 |

All dimensions shown are nominal and subject to manufacturing tolerance. OD and minimum wall are determined in accordance with ASTM standards Drawing shown is an approximation only. Pressures listed are sustainable maximum operating pressure at 73°F.

Approved processing temperatures between -10°C (14°F) and 45°C (113°F).

* The maximum pressure for gas applications should be calculated based on the applicable local and federal regulations.

