



HDPE Flange Adapters Specifications

Product Type: HDPE Flange Adapters – Butt Fusion

Applicable Standards: ASTM D3261, ASTM F2620, AWWA C901/C906, ANSI B16.5, NSF/ANSI 14 & 61

1. Product Description

HDPE flange adapters provide a secure, reliable transition from polyethylene piping systems to flanged metal or plastic piping components. Designed for pressure-rated piping systems, they are manufactured from high-performance PE4710 / PE100 resin and meet ASTM and AWWA standards. Commonly used in municipal water, wastewater, industrial, and mining applications.

2. Product Specifications

Attribute	Specification
Material	High-Density Polyethylene (HDPE), PE4710 / PE100
Manufacturing Method	Precision machined from HDPE pipe stock or molded (varies by size)
Flange Compatibility	ANSI B16.5 Class 150 standard drilling (custom drilling or Class 300 on request)
Fusion Method	Butt fusion to HDPE pipe using ASTM F2620 procedures
Size Range	2" – 36" IPS standard (up to 65" available upon request)
Pressure Rating	Typically SDR11 = 200 psi @ 24°C/73°F (varies by SDR and system design)
Temperature Range	-40°C (-40°F) to 60°C (140°F) continuous service temperature
End Type	One end plain for butt fusion; one end flanged face (stub-end)
Backing Rings	Available in ductile iron (epoxy coated), SS, Galvanized or Poly Encapsulated.

3. Features & Benefits

- Fully pressure-rated when fused to matching HDPE pipe
 - Compatible with ANSI Class 150/300 flanged components
 - Lightweight and corrosion-resistant
 - Smooth inner bore minimizes flow resistance
 - Easy integration with metal or PVC piping systems
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4. Standards Compliance

Standard	Description
ASTM D3261	Standard for butt heat fusion fittings made from PE
ASTM F2620	Butt fusion procedures for joining HDPE pipe and fittings
ANSI B16.5	Steel pipe flanges and flanged fittings—Class 150 bolt pattern compatibility
AWWA C901/C906	HDPE piping systems for water transmission
NSF/ANSI 14 & 61	Potable water system components certification

5. Installation Guidelines

- Use a flat-face flange with full gasket support
 - *Do not use raised face flanges (can lead to leaks)
 - Follow ASTM F2620 fusion procedures for butt fusion joints
 - Torque bolts in a star pattern using recommended values as found in the PPI Handbook
 - Use appropriate gasket (e.g., EPDM/Nitrile, full-face) for application
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6. Quality Assurance

- Manufactured under ISO 9001 quality systems
 - Each adapter traceable by batch/lot code
 - Pressure tested and dimensionally inspected
 - NSF/ANSI 61 certified for potable water contact
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