

PVC

PRESSURE PIPE STANDARDS FOR RECLAIMED WATER

| Standard | Performance Designation | Nominal Diameter Range | Outside Diameter Type | Pressure Class (PC) Pressure Rating (PR) | Safety Factor (SF) | Joining System Type |
|---|-------------------------|------------------------|---|--|--------------------|---|
| AWWA C900: PVC Pressure Pipe & Fabricated Fittings | Pressure Class (PC) | 4" – 60" | Cast Iron Outside Diameter (CIOD) or Iron Pipe Size (IPS) | PC 80 psi – DR51 PC 100 psi – DR41 PC 125 psi – DR32.5 PC 150 psi – DR27.5 PC 160 psi – DR26 PC 165 psi – DR25 PC 200 psi – DR21 PC 235 psi – DR18 PC 250 psi – DR17 PC 305 psi – DR14 | 2.0 | Gasket - Unrestrained Joint Gasket - Restrained Joint Butt Fusion |
| AWWA C905 : REPLACED WITH NEW AWWA C900 STANDARD EFFECTIVE AUGUST 2016 (SEE ABOVE) | | | | | | |
| AWWA C909: PVCO Pressure Pipe | Pressure Class (PC) | 4" - 30" | Ductile Iron Outside Diameter (DIOD) | PC 165 psi PC 235 psi PC 305 psi | 2.0 | Gasket - Unrestrained Joint |
| ASTM D2241: PVC Pressure Pipe | Pressure Rating (PR) | 1/8" – 36" | Copper Tubing Size (CTS) or Plastic Irrigation Pipe (PIP) or Iron Pipe Size (IPS) | PR 50 psi – DR81 PR 63 psi – DR64 PR 80 psi – DR51 PR 100 psi – DR41 PR 118 psi – DR35 PR 125 psi – DR32.5 PR 160 psi – DR26 PR 200 psi – DR21 PR 250 psi – DR17 PR 315 psi – DR13.5 PR 400 psi – DR11 | 2.0 | Gasket - Unrestrained Joint Gasket - Restrained Joint Solvent Cement Butt Fusion |
| ASTM F1483: PVCO Pressure Pipe | Pressure Rating (PR) | 4" – 16" | Cast Iron Outside Diameter (CIOD) or Iron Pipe Size (IPS) | PR 150 PR 160 PR 200 PR 250 | 2.0 | Gasket - Unrestrained Joint Gasket - Restrained Joint |

Note:

1. All PVC pipe pressure capacities are for PVC compound with cell class 12454 and Hydrostatic Design Stress (HDS) = 2,000 psi.
2. All PVCO pipe starting stock is PVC compound with cell class 12454 and Hydrostatic Design Stress (HDS) = 2,000 psi; finished pipe has HDS = 3,550 psi.
3. Safety factor (SF) is the inverse of design factor (DF). All standards use SF = 2.0 or DF = 0.5.
4. Not all pressure classes/ratings are available in all OD types. Check with pipe manufacturer for specific product availability.
5. ASTM D2241 Annex provides PIP outside-diameter regimen.
6. Ductile iron pipe size = cast iron pipe size; abbreviations: DIOD = DIPS = CIOD = CIPS

11.14.2016