

SECTION 40 27 00.08 STAINLESS STEEL PIPE AND FITTINGS—GENERAL SERVICE		
Item	Size	Description
General	All	Physical Characteristics: Stainless steel pipe and fittings. Functional Characteristics: Service Flow Streams on Piping Schedule as shown on the Drawings.
Pipe	2-1/2" & smaller	Performance Characteristics: Schedule 40S: ASTM A312/A312M, Type 316, pickled and passivated.
	3" & larger	Performance Characteristics: Schedule 10S: ASTM A312/A312M, Type 316L, pickled and passivated.
Tubing	All	Performance Characteristics: ASTM A269, Type 316 stainless steel, seamless, fully annealed hydraulic tubing, minimum 0.065-inch wall thickness.
Joints	1-1/2" & smaller	Performance Characteristics: Threaded or flanged at equipment as required or shown.
	2" & larger	Performance Characteristics: Butt-welded or flanged at valves and equipment.
Tubing Joints	All	Performance Characteristics: Flareless compression fitting

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Fittings	1-1/2" & smaller	Performance Characteristics: Threaded: Forged 1,000 CWP minimum, ASTM A182/A182M, Grade F316 or cast Class 150, ASTM A351/A351M, Grade CF8M/316.
	2" & 2-1/2"	Performance Characteristics: Butt Welded: ASTM A403/A403M, Grade WP316L conforming to ASME B16.9 and MSS SP 43, annealed, pickled and passivated; fitting wall thickness to match adjoining pipe; long radius elbows, unless shown otherwise.
	3" & larger	Performance Characteristics: Butt-Welded: ASTM A403/A403M, Type 316L pickled and passivated; fitting wall thickness to match adjoining pipe; long radius elbows, unless shown otherwise. Where noted on the Drawings wrought or re-enforced Tee fittings are to be used.
Tubing Fittings	All	Manufacturers and Products: Parker-Hannifin Ferulok, Flodar BA Series. Or equal. Performance Characteristics: Flareless Compression Type Forged: ASTM A182/A182M, Grade F316.
Branch Connections	1-1/2" & smaller	Performance Characteristics: Tee or reducing tee in conformance with fittings above.
	2" & larger	Performance Characteristics: Butt-welding tee or reducing tee in accordance with fittings above. Where noted on the Drawings wrought or re-enforced Tee fittings are to be used.

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Tubing Branch Connections	All	Performance Characteristics: Compression type tees or reducing tees in accordance with Tubing Fittings above.
Flanges	All	Performance Characteristics: Forged Stainless Steel: ASTM A182/A182M, Grade F316L, ASME B16.5, Class 150 or Class 300, slip-on weld neck or raised face. Weld slip-on flanges inside and outside. Blind Flanges, exposed to the atmosphere and not buried nor immersed in liquid, shall be stainless steel ASTM A240/A240M, Type 316L with gaskets as specified herein.
Unions	2" & smaller	Performance Characteristics: Threaded Forged: ASTM A182/A182M, Grade F316, 2,000-pound or 3,000-pound WOG, integral ground seats, AAR design meeting the requirements of ASME B16.11, bore to match pipe.
Bolting	All	Performance Characteristics: Forged Flanges: Type 316 stainless steel, ASTM A320/A320M, Grade B8M hex head bolts, ASTM A194/A194M, Grade 8M hex head nuts and Type 316 stainless steel washers at nuts and bolt heads. Achieve 40 percent to 60 percent of bolt minimum yield stress. Anywhere mating flange on equipment is cast iron and gasket is flat ring: Carbon steel ASTM A307, Grade B hex head bolts, ASTM A563, Grade A hex head nuts and ASTM F436 hardened steel washers at nuts and bolt heads. Achieve 40 percent to 60 percent of bolt minimum yield stress.

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		Flanged Joints in Sumps, Wet Wells, and Submerged, Wetted Installations: Type 316 stainless steel, ASTM A320/A320M, Grade B8M hex head bolts and ASTM A194/A194M, Grade 8M hex nuts and Type 316 stainless steel washers at nuts and bolt heads. Achieve 40 percent to 60 percent of bolt minimum yield stress.
Gaskets	All Flanges	Performance Characteristics: Flanged, Water, Hot Air, Fuel Gas and Sewage Services: 1/8 inch thick, homogeneous black rubber (EPDM), hardness 60 (Shore A), rated to 250 degrees F. continuous and conforming to ASME B16.21 and ASTM D1330, Steam Grade. Blind Flanges: Gasketed covering entire inside face with gasket cemented to blind flange.
Thread Lubricant	2" & smaller	Manufacturers and Products: AA Thread Seal Tape, Inc. Or equal. Performance Characteristics: General Service: 100 percent virgin polytetrafluoroethylene PTFE tape. Fuel Gas and Fuel Oil Service: Yellow polytetrafluoroethylene PTFE tape designed for fuel gas service, Air Force A-A-58092.

END OF SECTION