



Introduction to Stainless Steel Fitting Line

The Dwyer Series A-1000 quality tube fittings have been designed and manufactured to provide reliable leak-free connections in a wide variety of applications. A reliable leak-free tubing system will be achieved by combining the proper selection and handling of tubing with the proper tube fitting selection and installation. The following information is provided to assist in the tube selection process.

Material

The tubing material chosen must be compatible with the system's contained media, pressure and temperature, as well as with the environment in which it will be installed. Also, the tubing and fittings materials should be similar for optimum sealing action to occur (stainless fittings for stainless tube, brass fittings for copper tube, carbon steel fittings for carbon steel tube, etc.). The mixing and contact of dissimilar materials may leave the system susceptible to galvanic corrosion and/or not allow proper tube fitting makeup to be achieved.

Pressure and Flow

The size of the tube's outside diameter (O.D.) and the necessary wall thickness are determined by the system's pressure and flow requirements. Table A details the suggested tubing sizes and wall thickness for use with instrumentation tube fittings. If no pressure is shown on the table for a particular size, the tube is not recommended for use with instrumentation tube fittings. The tubing system should not be utilized above the tube's maximum allowable working pressure.

Temperature

The system's operating temperature may affect the initial choice of tubing material and may also affect the maximum allowable working temperature for the given tube size (see Table B for temperature stress factors).

Light Gas Service

To provide a successful connection for light gas service, the tubing must have a thick enough wall to provide resistance for the setup action of the ferrules to further compensate for the tube's potential surface condition.

Handling and Installation

Surface scratches and gouges on tubing are a source of potential leaks. Some precaution when handling the tubing can help reduce surface

scratches and maintain the surface finish as originally intended by the manufacturer. Tubing should never be dragged across rocks, blacktop, pavement, or tubing storage racks as scratches and gouges can occur. Sharp blades should always be used in the tube cutters or hacksaws used to cut the tubing so as to provide a clean, square cut. Dull cutting blades can cause internal and external hanging burrs, and cause the tubing to become oval and affect proper insertion within the fitting. As a good handling practice, tubing should always be deburred prior to tube fitting installation to help assure easy and complete tube insertion. Additionally, for bent tube assemblies, it is important to bend tubing prior to installing tube fittings, and to provide a sufficient straight length of tubing after the bend to allow the tube to be fully inserted into the fitting. Also, to eliminate weight stress from the tubing upon the fitting and to provide additional system support for vibration and thermal shock resistance, the tubing should always be supported by tube hangers, clamps or trays.

Temperature		Stainless Steel 316
°F	°C	
100	38	1.00
200	93	1.00
300	149	1.00
400	200	.97
500	260	.90
600	316	.85
700	371	.82
800	427	.80*
900	482	.78*
1000	538	.73*
1200	649	.37*

*The precipitation of chromium carbides potentially resulting in intergranular corrosion may occur when exposed to operating temperatures.

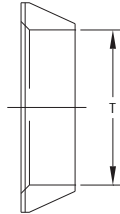
Tube O.D. [Size (in)]	Wall Thickness of Tube (Inches)															
	.010	.012	.014	.016	.020	.028	.035	.049	.065	.083	.095	.109	.120	.134	.156	.188
1/16	5600	6850	8150	9500	12100											
1/8						8550	11000									
3/16						5450	7000	10300								
1/4						4000	5100	7500	10300							
5/16							4050	5850	8050							
3/8							3300	4800	6550							
1/2							2450	3500	4750	6250						
5/8								2950	4000	5200	6050					
3/4								2400	3300	4250	4950	5800				
7/8								2050	2800	3600	4200	4850				
1									2400	3150	3650	4200	4700			
1-1/4										2450	2850	3300	3650	4150	4900	
1-1/2											2350	2700	3000	3400	4000	4900
2												2000	2200	2500	2900	3600



Series
A-1000

Stainless Steel Fitting Line

Series A-1006 Front Ferrule Fitting Line



SPECIFICATIONS

Service: Liquid, steam and compatible gases.

Wetted Materials: 316 SS.

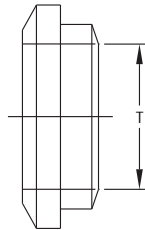
Temperature Ranges: See reference Table B.

Pressure Ranges: See reference Table A.

Connections: 1/16" to 2".

Model	T=Tube O.D.	Model	T=Tube O.D.
A-1006-1	1/16"	A-1006-8	5/8"
A-1006-2	1/8"	A-1006-9	3/4"
A-1006-3	3/16"	A-1006-10	7/8"
A-1006-4	1/4"	A-1006-11	1"
A-1006-5	5/16"	A-1006-12	1-1/4"
A-1006-6	3/8"	A-1006-13	1-1/2"
A-1006-7	1/2"	A-1006-14	2"

Series A-1007 Back Ferrule Fitting Line



SPECIFICATIONS

Service: Liquid, steam and compatible gases.

Wetted Materials: 316 SS.

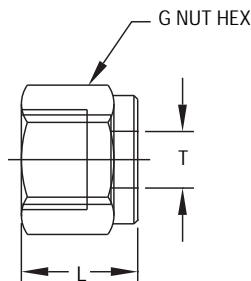
Temperature Ranges: See reference Table B.

Pressure Ranges: See reference Table A.

Connections: 1/16" to 2".

Model	T=Tube O.D.	Model	T=Tube O.D.
A-1007-1	1/16"	A-1007-8	5/8"
A-1007-2	1/8"	A-1007-9	3/4"
A-1007-3	3/16"	A-1007-10	7/8"
A-1007-4	1/4"	A-1007-11	1"
A-1007-5	5/16"	A-1007-12	1-1/4"
A-1007-6	3/8"	A-1007-13	1-1/2"
A-1007-7	1/2"	A-1007-14	2"

Series A-1008 Nut Fitting Line



SPECIFICATIONS

Service: Liquid, steam and compatible gases.

Wetted Materials: 316 SS.

Temperature Ranges: See reference Table B.

Pressure Ranges: See reference Table A.

Connections: 1/16" to 2".

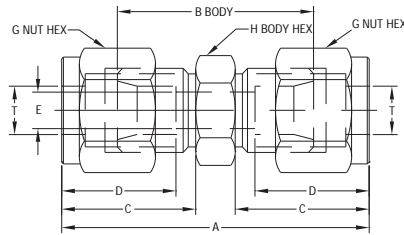
Dimensions: Consult website, or contact factory.

Model	T=Tube O.D.	Model	T=Tube O.D.
A-1008-1	1/16"	A-1008-8	5/8"
A-1008-2	1/8"	A-1008-9	3/4"
A-1008-3	3/16"	A-1008-10	7/8"
A-1008-4	1/4"	A-1008-11	1"
A-1008-5	5/16"	A-1008-12	1-1/4"
A-1008-6	3/8"	A-1008-13	1-1/2"
A-1008-7	1/2"	A-1008-14	2"



Series A-1000 Stainless Steel Fitting Line

Series A-1003 Union Fitting Line

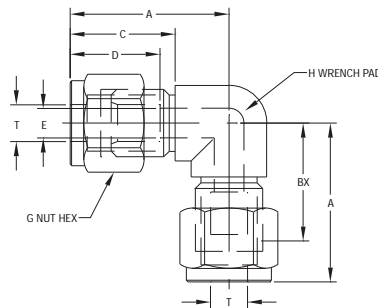


SPECIFICATIONS

Service: Liquid, steam and compatible gases.
Wetted Materials: 316 SS.
Temperature Ranges: See reference Table B.
Pressure Ranges: See reference Table A.
Connections: 1/16" to 2".
Dimensions: Consult website, or contact factory.

Model	T=Tube O.D.	Model	T=Tube O.D.	Model	T=Tube O.D.
A-1003-1	1/16"	A-1003-6	3/8"	A-1003-11	1"
A-1003-2	1/8"	A-1003-7	1/2"	A-1003-12	1-1/4"
A-1003-3	3/16"	A-1003-8	5/8"	A-1003-13	1-1/2"
A-1003-4	1/4"	A-1003-9	3/4"	A-1003-14	2"
A-1003-5	5/16"	A-1003-10	7/8"		

Series A-1004 Union Elbow Fitting Line

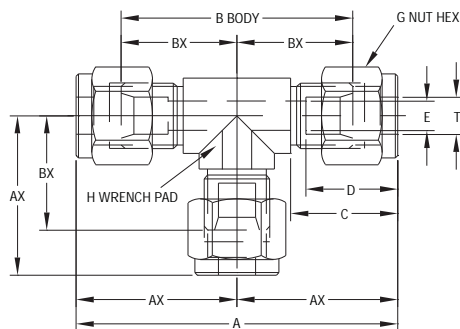


SPECIFICATIONS

Service: Liquid, steam and compatible gases.
Wetted Materials: 316 SS.
Temperature Ranges: See reference Table B.
Pressure Ranges: See reference Table A.
Connections: 1/16" to 2".
Dimensions: Consult website, or contact factory.

Model	T=Tube O.D.	Model	T=Tube O.D.	Model	T=Tube O.D.
A-1004-1	1/16"	A-1004-6	3/8"	A-1004-11	1"
A-1004-2	1/8"	A-1004-7	1/2"	A-1004-12	1-1/4"
A-1004-3	3/16"	A-1004-8	5/8"	A-1004-13	1-1/2"
A-1004-4	1/4"	A-1004-9	3/4"	A-1004-14	2"
A-1004-5	5/16"	A-1004-10	7/8"		

Series A-1005 Union Tee Fitting Line



SPECIFICATIONS

Service: Liquid, steam and compatible gases.
Wetted Materials: 316 SS.
Temperature Ranges: See reference Table B.
Pressure Ranges: See reference Table A.
Connections: 1/16" to 2".
Dimensions: Consult website, or contact factory.

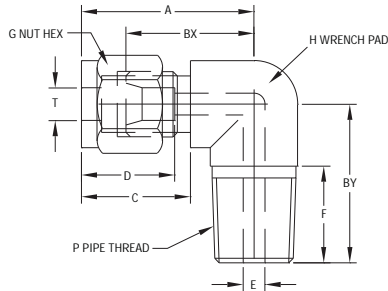
Model	T=Tube O.D.	Model	T=Tube O.D.	Model	T=Tube O.D.
A-1005-1	1/16"	A-1005-6	3/8"	A-1005-12	1-1/4"
A-1005-2	1/8"	A-1005-7	1/2"	A-1005-13	1-1/2"
A-1005-3	3/16"	A-1005-8	5/8"	A-1005-14	2"
A-1005-4	1/4"	A-1005-9	3/4"		
A-1005-5	5/16"	A-1005-11	1"		



Series
A-1000

Stainless Steel Fitting Line

Series A-1001 Male Elbow Fitting Line

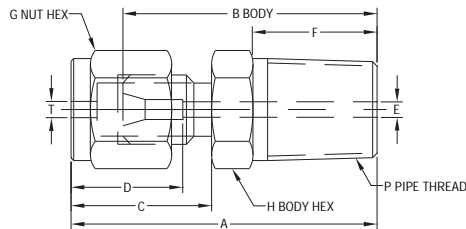


SPECIFICATIONS

Service: Liquid, steam and compatible gases.
Wetted Materials: 316 SS.
Temperature Ranges: See reference Table B.
Pressure Ranges: See reference Table A.
Connections: 1/16" to 1-1/2".
Dimensions: Consult website, or contact factory.

Model	T=Tube O.D.	P=Pipe Thread Male	Model	T=Tube O.D.	P=Pipe Thread Male	Model	T=Tube O.D.	P=Pipe Thread Male
A-1001-1	1/16"	1/16"	A-1001-12	5/16"	1/8"	A-1001-24	5/8"	3/8"
A-1001-2	1/16"	1/8"	A-1001-13	5/16"	1/4"	A-1001-25	5/8"	1/2"
A-1001-3	1/8"	1/16"	A-1001-15	3/8"	1/8"	A-1001-26	5/8"	3/4"
A-1001-4	1/8"	1/8"	A-1001-16	3/8"	1/4"	A-1001-27	3/4"	1/2"
A-1001-5	1/8"	1/4"	A-1001-17	3/8"	3/8"	A-1001-28	3/4"	3/4"
A-1001-6	3/16"	1/8"	A-1001-18	3/8"	1/2"	A-1001-29	7/8"	3/4"
A-1001-7	3/16"	1/4"	A-1001-19	3/8"	3/4"	A-1001-30	1"	3/4"
A-1001-8	1/4"	1/8"	A-1001-20	1/2"	1/4"	A-1001-31	1"	1"
A-1001-9	1/4"	1/4"	A-1001-21	1/2"	3/8"	A-1001-32	1-1/4"	1-1/4"
A-1001-10	1/4"	3/8"	A-1001-22	1/2"	1/2"	A-1001-33	1-1/2"	1-1/2"
A-1001-11	1/4"	1/2"	A-1001-23	1/2"	3/4"			

Series A-1002 Male Connector Fitting Line



SPECIFICATIONS

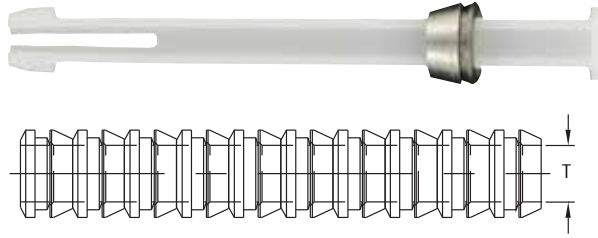
Service: Liquid, steam and compatible gases.
Wetted Materials: 316 SS.
Temperature Ranges: See reference Table B.
Pressure Ranges: See reference Table A.
Connections: 1/16" to 2".
Dimensions: Consult website, or contact factory.

Model	T=Tube O.D.	P=Pipe Thread Male	Model	T=Tube O.D.	P=Pipe Thread Male	Model	T=Tube O.D.	P=Pipe Thread Male
A-1002-1	1/16"	1/16"	A-1002-17	5/16"	1/8"	A-1002-32	5/8"	1/2"
A-1002-2	1/16"	1/8"	A-1002-18	5/16"	1/4"	A-1002-33	5/8"	3/4"
A-1002-3	1/16"	1/4"	A-1002-19	5/16"	3/8"	A-1002-34	3/4"	1/2"
A-1002-4	1/8"	1/16"	A-1002-20	3/8"	1/8"	A-1002-35	3/4"	3/4"
A-1002-5	1/8"	1/8"	A-1002-21	3/8"	1/4"	A-1002-36	3/4"	1"
A-1002-6	1/8"	1/4"	A-1002-22	3/8"	3/8"	A-1002-37	7/8"	3/4"
A-1002-7	1/8"	3/8"	A-1002-23	3/8"	1/2"	A-1002-39	1"	1/2"
A-1002-8	1/8"	1/2"	A-1002-24	3/8"	3/4"	A-1002-40	1"	3/4"
A-1002-9	3/16"	1/8"	A-1002-25	1/2"	1/8"	A-1002-41	1"	1"
A-1002-10	3/16"	1/4"	A-1002-26	1/2"	1/4"	A-1002-42	1-1/4"	1"
A-1002-11	1/4"	1/16"	A-1002-27	1/2"	3/8"	A-1002-43	1-1/4"	1-1/4"
A-1002-12	1/4"	1/8"	A-1002-28	1/2"	1/2"	A-1002-44	1-1/2"	1-1/2"
A-1002-13	1/4"	1/4"	A-1002-29	1/2"	3/4"	A-1002-45	2"	2"
A-1002-15	1/4"	1/2"	A-1002-30	5/8"	3/8"			
A-1002-16	1/4"	3/4"	A-1002-31	5/8"	1/2"			



Series A-1000 Stainless Steel Fitting Line

Series A-1009 Ferrule Set Fitting Line

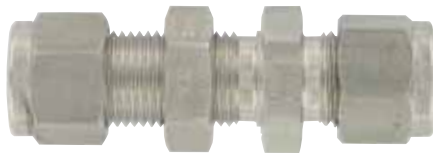


SPECIFICATIONS

Service: Liquid, steam and compatible gases.
Wetted Materials: 316 SS.
Temperature Ranges: See reference Table B.
Pressure Ranges: See reference Table A.
Connections: 1/16" to 2".

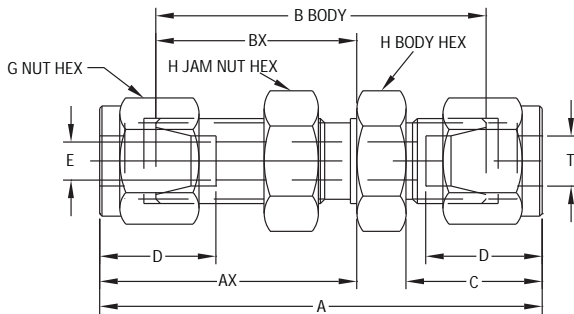
Model	T=Tube O.D.	Model	T=Tube O.D.	Model	T=Tube O.D.
A-1009-1	1/16"	A-1009-4	1/4"	A-1009-6	3/8"
A-1009-2	1/8"	A-1009-5	5/16"	A-1009-7	1/2"
A-1009-3	3/16"				

Series A-1010 Bulkhead Union Fitting Line



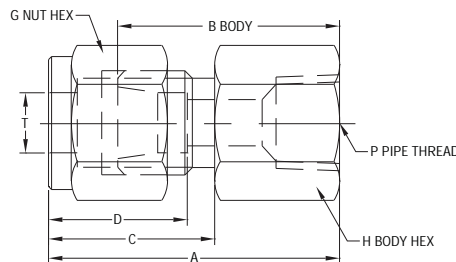
SPECIFICATIONS

Service: Liquid, steam and compatible gases.
Wetted Materials: 316 SS.
Temperature Ranges: See reference Table B.
Pressure Ranges: See reference Table A.
Connections: 1/16" to 1".
Dimensions: Consult website, or contact factory.



Model	T=Tube O.D.
A-1010-1	1/16"
A-1010-2	1/8"
A-1010-3	3/16"
A-1010-4	1/4"
A-1010-5	5/16"
A-1010-6	3/8"
A-1010-7	1/2"
A-1010-8	5/8"
A-1010-9	3/4"
A-1010-10	1"

Series A-1011 Female Connector Fitting Line



SPECIFICATIONS

Service: Liquid, steam and compatible gases.
Wetted Materials: 316 SS.
Temperature Ranges: See reference Table B.
Pressure Ranges: See reference Table A.
Connections: 1/16" to 1-1/2".
Dimensions: Consult website, or contact factory.

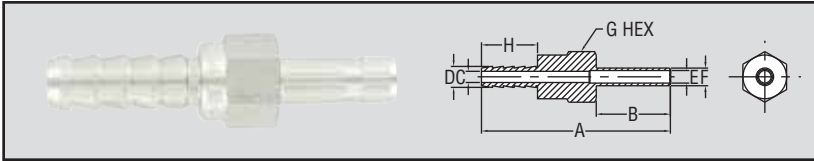
Model	T=Tube O.D.	P=Pipe Thread Male	Model	T=Tube O.D.	P=Pipe Thread Male	Model	T=Tube O.D.	P=Pipe Thread Male
A-1011-1	1/16"	1/16"	A-1011-12	3/8"	1/4"	A-1011-22		1/2"
A-1011-2	1/16"	1/8"	A-1011-13	3/8"	1/8"	A-1011-23	3/4"	1/2"
A-1011-3	1/8"	1/8"	A-1011-14	3/8"	1/4"	A-1011-24	3/4"	3/4"
A-1011-4	1/8"	1/4"	A-1011-15	3/8"	3/8"	A-1011-25	7/8"	3/4"
A-1011-5	3/16"	1/8"	A-1011-16	3/8"	1/2"	A-1011-26	1"	3/4"
A-1011-6	1/4"	1/8"	A-1011-17	1/2"	3/4"	A-1011-27	1"	1"
A-1011-7	1/4"	1/4"	A-1011-18	1/2"	1/4"	A-1011-28	1-1/4"	1-1/4"
A-1011-8	1/4"	3/8"	A-1011-19	1/2"	3/8"	A-1011-29	1-1/2"	1-1/2"
A-1011-9	1/4"	1/2"	A-1011-20	1/2"	1/2"			
A-1011-11	5/16"	1/4"	A-1011-21	5/8"	3/4"			



Series
A-1000

Stainless Steel Fitting Line

Series A-1012 Hose Barb to Tube Connector



SPECIFICATIONS

Service: Liquid, steam and compatible gases.

Wetted Materials: 316 SS.

Temperature Ranges: See reference Table B.

Pressure Ranges: See reference Table A.

Connections: 1/8"-1/2".

Dimensions: Consult website, or contact factory.

Model	Hose Barb	T=Tube O.D.
A-1012-1	1/8"	1/8"
A-1012-2	1/8"	1/4"
A-1012-3	1/4"	1/4"
A-1012-4	1/4"	3/8"
A-1012-6	3/8"	3/8"
A-1012-9	1/2"	1/2"