

# Installers Pocket Guide











## SSP



At SSP, we are proud to be an American manufacturing success story.

100% of our products are made in America. All of our manufacturing is performed in our 165,000 sq. ft. facility located near Cleveland, Ohio. Our facility is the largest vertically integrated, single-site operation in the industry. In addition to manufacturing and assembly, we have closed die forging, tool & die design, product engineering and testing operations under the same roof with customer service and management.

Made in America is good business. Not only do we make everything in America, we use American suppliers too. Buying American allows us to have better quality control and a more reliable supply chain. We can work more closely within our walls and with our suppliers to improve quality, reduce costs, and shorten lead times, which means faster service and better products for you.

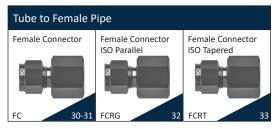
Support where it counts. SSP products and services are supported by more than 4000 people and 350 distributor locations around the globe. For a distributor near you, contact SSP Customer Service or visit www.mySSP.com/distributors.



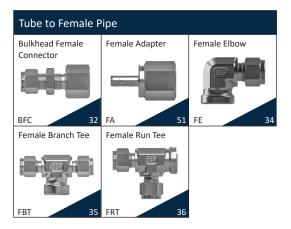
## Table of Contents

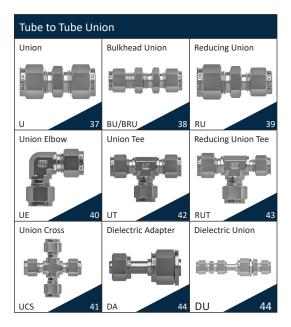
Table of Contents
Visual Index 2
Installation Instructions
Initial Installation7
Reassembly Instructions9
Pre-Setting Instructions 10
SSP Gap Gage Instructions 12
Technical Data 13
SSP Duolok <sup>®</sup> Fittings
Tube to Male Pipe 16
Tube to Female Pipe 30
Tube to Tube Union
Tube to Welded Systems 45
Tube Stub Connectors / Adapters 47
Duolok <sup>®</sup> 37° Flare (AN) 54
Tube to O-Ring Seal55
Tube to SAE / MS56
Cap and Plug 59
Components
SSP Tubing
Safety Information67
Limited Lifetime Warranty

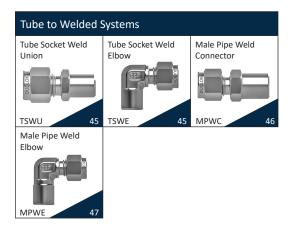
Tube to Male Pip	е	
Male Connector	Male Connector ISO Parallel	Male Connector ISO Tapered
MC 16-17	MCRS 18-19	MCRT 20-21
Male Connector Bored Through	Bulkhead Male Connector	Male Adapter
MCBT 22	BMC 23	MA 50
Male Elbow	Male Elbow –	Male Elbow –
	ISO Parallel	ISO Tapered
ME 24-25	MERS 26	MERT 26-27
45° Male Elbow	Male Branch Tee	Male Run Tee
M45E 23	MBT 28	MRT 29

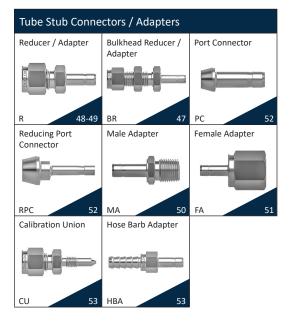


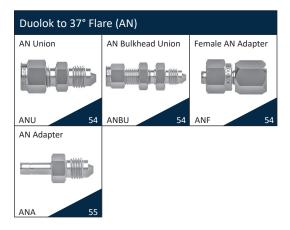
Continued on the next page

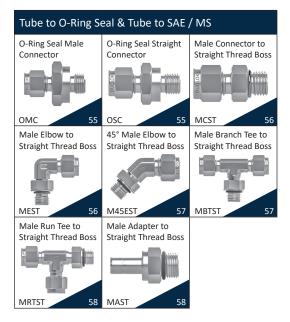


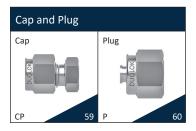


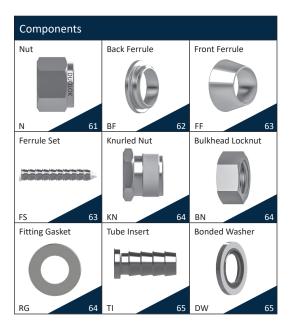












#### Initial Installation

 SSP tube fittings come individually bagged and completely assembled for immediate use. There is no need for disassembly prior to use. Simply remove the tube fitting from its bag, insert the tube\* until it bottoms in the SSP tube fitting body and then hand tighten the SSP nut. (See Figure 02.)

\*Tubing ends should be cut as straight as possible with all O.D. and I.D. burrs removed. Use of a tubing cutter or guide blocks with a hack- saw is recommended.

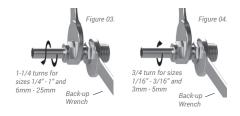
Figure 02.



NOTE: For extreme system applications using high pressures or requiring an extra factor of safety, it may be desirable to use a "common make up starting point" to alleviate the inherent variations in tubing diameters. Installation should begin from a snug position, which is achieved by wrench tightening the Duolok nut until the inserted tubing will not move by hand (approximately 1/8 turn). From this new "snug" starting point, continue with the recommended installation instructions.

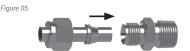
While holding the fitting body stable with a back-up wrench, scribe the nut for a reference point and wrench tighten the nut 1-1/4 turns for sizes 1/4"-1" or 6mm-25mm and 3/4 turn for sizes 1/16"-3/16" or 3mm-5mm. (See Figures 03 and 04).

NOTE: For all sizes, tighten plugs (P), machined ferrule end of port connector (PC) and the SSP tube fitting end of the Female AN adapter (ANF) only 1/4 of a turn. Tube fittings in sizes over 25mm and 1in. require the use of the SSP Hydraulic Swaging Tool for installation. Contact your local SSP Distributor for more information.



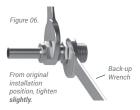
#### **Reassembly Instructions**

To reassemble a SSP tube fitting connection, simply insert the tubing with the previously coined ferrules and SSP nut into the fitting body until the front ferrule seats within the fitting body, and then tighten the nut by hand. (See Figure 05.)



NOTE: By following proper reassembly procedures, SSP tube fitting connections may be disconnected and reconnected repeatedly.

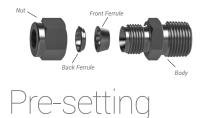
While holding the fitting body stable with a back up wrench, use a wrench to rotate the SSP nut to the fitting's original installation position (approximately 1/4 turn from the hand-tight, snug position) then continue to tighten the SSP nut slightly. (See Figure 06.)



#### Component Assembly

Should individual component assembly of an SSP tube fitting ever be required, careful attention must be given to the proper sequence and direction of the SSP tube fitting components. (See Figure 07.)

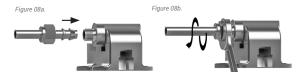
Figure 07.



The SSP tube fitting pre-setting tool is used to preset the ferrules on the tubing for subsequent installation in a fitting body. The pre-setting tool can be especially helpful when an installation must be made in a tight space or hard-to-work area. The pre-setting tool allows the major portion of the installation work to occur in a more favorable work setting with only the completion of the installation in the hard-to-work area.

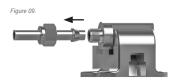
#### Pre-setting Instructions

- Secure the pre-setting tool in a vise.
- Remove the protective nut and assemble the SSP nut and ferrules loosely to the pre-setting tool. Insert the tubing through the nut and ferrules until it bottoms in the pre-setting tool, and then follow the standard SSP tube fitting installation instructions from page 7. (See Figures 08a and 08b.)

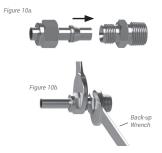




(3) Loosen the nut and remove the tubing with the pre-set SSP tube fitting ferrules and nut from the pre-setting tool. (See Figure 09.)



(4) Installation of the tubing, with the pre-set SSP tube fitting ferrules and nut in the appropriate fitting body, can now be made by following the standard reassembly instructions. (See Figures 10a and 10b.)



(5) Return the protective nut to the presetting tool.

NOTE: To extend the life of a pre-setting tool, lubricate the tool with a lubricant compatible with the system's tubing material, environment and media. Also, at times an over- sized or very soft tubing may tend to stick in the presetting tool after make up. To remove the tubing, gently rock the tubing back and forth. Never turn the tube with pliers or another tool as such action may damage the sealing surfaces.

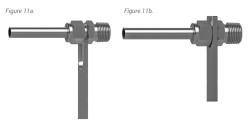
## Gageability

Each SSP tube fitting component is manufactured with utmost precision to provide the optimum performance interaction of the components during assembly. By maintaining such stringent manufacturing tolerances, SSP tube fittings are considered gageable for sufficient pull-up during initial installation. The SSP tube fitting "Gap Gages" are designed to identify for the installer or inspector, prior to pressurizing a system, that sufficient tightening of the tube fitting has occurred. Gageability provides additional reliability for proper installation and ultimate tube fitting safety and performance.

#### Gap Gage Instructions

- Follow proper installation instructions

   (as supplied with the fittings, or published in the SSP tube fittings catalog).
- 2 After completion of the installation instructions and prior to pressuring the system, choose the proper size Gap Gage and try to insert it between the fitting's nut and body hex. (See Figure 11a and 11b.)



No additional tightening required.

(3) If the Gap Gage will not enter between the fitting's nut and body hex, no additional tightening is required.

(4) If the Gap Gage will enter between the fitting's nut and body hex, additional tightening is required.

	STAINLESS STEEL TUBING – Wall Thickness .010" to .049" Maximum Allowable Working Pressure (PSIG)							
Tube O.D.		Wall Thickness of Tube (In.)						
Size (In.)	.010	.012	.014	.016	.020	.028	.035	.049
1/16	5600	6850	8150	9500	12100			
1/8						8550	11000	
3/16						5450	7000	10300
1/4						4000	5100	7500
5/16							4050	5850
3/8							3300	4800
1/2							2450	3500
5/8								2950
3/4								2400
7/8								2050
1		Note	For light	gas servi				
1-1/4			Note: For light gas service, use tubing with wall thickness outside of shaded area.					
1-1/2			or shad	eu area.				
2								

(Wall Thicknesses .065" through .188" are on the following page.)

**Calculation Basis:** Annealed, seamless 304 or 316 stainless steel tubing ASTM A-269 or equivalent. System temperatures between -20°F and 100°F with allowable stress of 20,000 psi. Ultimate tensile strength of 75,000 psi. Safety factor of 4.

**Reference:** ANSI B31.3 Code. (For more specific working pressure information regarding a particular tubing, consult with the actual manufacturer of the tubing.)

Note: For welded and drawn tubing, a derating factor must be utilized. For double welded tube, multiply the above pressure rating by .85; and for single welded tube by .80 (ANSI B 31, Table A-1B). Suggested Tube Ordering Information: Specify the outside diameter and wall thickness of annealed, seamless or welded and drawn 316 or 304 stainless steel tubing of ASTM A-269, A-249, A-213 or equivalent. Also specify high quality tubing to be free of scratches and suited for bending with material hardness not to exceed Rb 90.

## Technical Data

	STAINLESS STEEL TUBING – Wall Thickness .065" to .188" Maximum Allowable Working Pressure (PSIG)							
Tube O.D.	Wall Thickness of Tube (In.)							
Size (In.)	.065	.083	.095	.109	.120	.134	.156	.188
1/16								
1/8					Not	e: For ligh	t ass sor	vice
3/16					use tu	ibing with	n wall thio	kness
1/4	10300				outside of shaded area.			ea.
5/16	8050							
3/8	6550							
1/2	4750	6250						
5/8	4000	5200	6050					
3/4	3300	4250	4950	5800				
7/8	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

(Wall Thicknesses .010" through .049" are on the previous page.)

Calculation Basis: Annealed, seamless 304 or 316 stainless steel tubing ASTM A-269 or equivalent. System temperatures between -20°F and 100°F with allowable stress of 20,000 psi. Ultimate tensile strength of 75,000 psi. Safety factor of 4.

**Reference:** ANSI B31.3 Code. (For more specific working pressure information regarding a particular tubing, consult with the actual manufacturer of the tubing.) Multiply stainless steel rating by 0.94 for working pressure in accordance with ASME B31.1.

Note: For welded and drawn tubing, a derating factor must be utilized. For double welded tube, multiply the above pressure rating by .85; and for single welded tube by .80 (ANSI B 31, Table A-1B). Suggested Tube Ordering Information: Specify the outside diameter and wall thickness of annealed, seamless or welded and drawn 316 or 304 stainless steel tubing of ASTM A-269, A-249, A-213 or equivalent. Also specify high quality tubing to be free of scratches, and suited for bending with material hardness not to exceed Rb 90.

#### **Technical Data**

	STAINLESS STEEL TUBING Maximum Allowable Working Pressure (bar)										
Tube O.D.		Wall Thickness of Tube (mm)									
Size (mm)	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5 2.8 3.0 3.		3.5	
3	670										
6	310	420	540	710							
8		310	390	520				Note: For light gas service, use tubing with			
10		240	300	400	510	580		wall thickness outside of shaded area.			
12		200	250	330	410	470					
14		160	200	270	340	380	430				
15		150	190	250	310	360	400				
16			170	230	290	330	370	400			
18			150	200	260	290	320	370			
20			140	180	230	260	290	330	380		
22			140	160	200	230	260	300	340		
25					180	200	230	260	290	320	

Calculation Basis: Annealed, seamless 304 or 316 stainless steel tubing EN ISO 1127 or equivalent (from ASME B31.3). System temperatures between -20°F and 100°F with allowable stress of 137 MPA. Ultimate tensile strength of 517 MPA. Safety factor of 4. **Reference:** ANSI B31.3 Code. (For more specific working pressure information regarding a particular tubing, consult with the actual manufacturer of the tubing.) Multiply stainless steel rating by 0.94 for working pressure in accordance with ASME B31.1.

Note: For welded and drawn tubing, a derating factor must be utilized. For double welded tube, multiply the above pressure rating by .85; and for single welded tube .80 (ANSI B 31, Table A-1B). Suggested Tube Ordering Information: Specify the outside diameter and wall thickness of annealed, seamless or welded and drawn 316 or 304 stainless steel tubing of EN ISO 1127 or equivalent. Also specify high quality tubing to be free of scratches, and suited for bending with material hardness not to exceed Rb 90 (200 HV).

**MC** Male Connector - NPT For Fractional Tube



Duolok Part #	Tube O.D. (in.)	NPT Male Pipe (in.)
D3MC2	3/16	1/8
D3MC4	3/16	1/4
D4MC2	1/4	1/8
D4MC4	1/4	1/4
D6MC2	3/8	1/8
D6MC4	3/8	1/4
D6MC6	3/8	3/8
D6MC8	3/8	1/2
D8MC2	1/2	1/8
D8MC4	1/2	1/4
D8MC6	1/2	3/8
D8MC8	1/2	1/2
D10MC2	5/8	1/8
D10MC4	5/8	1/4
D10MC6	5/8	3/8
D10MC8	5/8	1/2
D10MC12	5/8	3/4
D12MC2	3/4	1/8
D12MC4	3/4	1/4
D12MC6	3/4	3/8
D12MC8	3/4	1/2
D12MC12	3/4	3/4
D14MC4	7/8	1/4
D14MC6	7/8	3/8
D14MC8	7/8	1/2
D16MC6	1	3/8
D16MC8	1	1/2
D16MC12	1	3/4
D16MC16	1	1
D20MC16	1-1/4	1
D20MC20	1-1/4	1-1/4
D24MC24	1-1/2	1-1/2
D32MC32	2	2

МС

Male Connector - NPT For Metric Tube



Duolok Part #	Tube O.D. (mm)	NPT Male Pipe (in.)
DM3MC2	3	1/8
DM3MC4	3	1/4
DM4MC2	4	1/8
DM4MC4	4	1/4
DM6MC2	6	1/8
DM6MC4	6	1/4
DM6MC6	6	3/8
DM6MC8	6	1/2
DM8MC2	8	1/8
DM8MC4	8	1/4
DM8MC6	8	3/8
DM8MC8	8	1/2
DM10MC2	10	1/8
DM10MC4	10	1/4
DM10MC6	10	3/8
DM10MC8	10	1/2
DM10MC12	10	3/4
DM12MC2	12	1/8
DM12MC4	12	1/4
DM12MC6	12	3/8
DM12MC8	12	1/2
DM12MC12	12	3/4
DM14MC4	14	1/4
DM14MC6	14	3/8
DM14MC8	14	1/2
DM15MC8	15	1/2
DM16MC6	16	3/8
DM16MC8	16	1/2
DM16MC12	16	3/4
DM18MC8	18	1/2
DM18MC12	18	3/4
DM20MC8	20	1/2
DM20MC12	20	3/4
DM22MC12	22	3/4
DM22MC16	22	1
DM25MC8	25	1/2
DM25MC12	25	3/4
DM25MC16	25	1

MCRS Male Connector -ISO Parallel For Fractional Tube



Duolok Part #	Tube O.D. (in.)	ISO Male Pipe (in.)
D2MCRS2	1/8	1/8
D2MCRS4	1/8	1/4
D2MCRS6	1/8	3/8
D4MCRS2	1/4	1/8
D4MCRS4	1/4	1/4
D4MCRS6	1/4	3/8
D4MCRS8	1/4	1/2
D6MCRS4	3/8	1/4
D6MCRS6	3/8	3/8
D6MCRS8	3/8	1/2
D8MCRS4	1/2	1/4
D8MCRS6	1/2	3/8
D8MCRS8	1/2	1/2
D12MCRS8	3/4	1/2
D12MCRS12	3/4	3/4
D16MCRS8	1	1/2
D16MCRS16	1	1

**NOTE:** RS threaded fittings conform to ISO standards 228-1. The standard gasket for RS fittings is a 300 series stainless steel outer ring with a Viton® inner ring bonded to it.

#### MCRS Male Connector -ISO Parallel For Metric Tube



Duolok Part #	Tube O.D. (mm)	ISO Male Pipe (in.)
DM3MCRS2	3	1/8
DM3MCRS4	3	1/4
DM4MCRS2	4	1/8
DM6MCRS2	6	1/8
DM6MCRS4	6	1/4
DM6MCRS6	6	3/8
DM6MCRS8	6	1/2
DM8MCRS2	8	1/8
DM8MCRS4	8	1/4
DM8MCRS6	8	3/8
DM8MCRS8	8	1/2
DM10MCRS4	10	1/4
DM10MCRS6	10	3/8
DM10MCRS8	10	1/2
DM12MCRS4	12	1/4
DM12MCRS6	12	3/8
DM12MCRS8	12	1/2
DM12MCRS12	12	3/4
DM16MCRS6	16	3/8
DM16MCRS8	16	1/2
DM18MCRS8	18	1/2
DM18MCRS12	18	3/4
DM20MCRS8	20	1/2
DM20MCRS12	20	3/4
DM22MCRS12	22	3/4
DM22MCRS16	22	1
DM25MCRS12	25	3/4
DM25MCRS16	25	1

**NOTE:** RS threaded fittings conform to ISO standards 228-1. The standard gasket for RS fittings is a 300 series stainless steel outer ring with a Viton® inner ring bonded to it.

MCRT Male Connector -ISO Tapered For Fractional Tube



Duolok Part #	Tube O.D. (in.)	ISO Male Pipe (in.)
D2MCRT2	1/8	1/8
D2MCRT4	1/8	1/4
D4MCRT2	1/4	1/8
D4MCRT4	1/4	1/4
D4MCRT6	1/4	3/8
D4MCRT8	1/4	1/2
D5MCRT2	5/16	1/8
D5MCRT4	5/16	1/4
D6MCRT2	3/8	1/8
D6MCRT4	3/8	1/4
D6MCRT6	3/8	3/8
D6MCRT8	3/8	1/2
D8MCRT4	1/2	1/4
D8MCRT6	1/2	3/8
D8MCRT8	1/2	1/2
D8MCRT12	1/2	3/4
D12MCRT12	3/4	3/4
D16MCRT16	1	1

**NOTE:** RT threaded fittings conform to ISO standards 7-1.

MCRT Male Connector -ISO Tapered For *Metric* Tube



Duolok Part #	Tube O.D. (mm)	ISO Male Pipe (in.)
DM4MCRT2	4	1/8
DM4MCRT4	4	1/4
DM6MCRT2	6	1/8
DM6MCRT4	6	1/4
DM6MCRT6	6	3/8
DM6MCRT8	6	1/2
DM8MCRT2	8	1/8
DM8MCRT4	8	1/4
DM8MCRT6	8	3/8
DM8MCRT8	8	1/2
DM10MCRT2	10	1/8
DM10MCRT4	10	1/4
DM10MCRT6	10	3/8
DM10MCRT8	10	1/2
DM12MCRT4	12	1/4
DM12MCRT6	12	3/8
DM12MCRT8	12	1/2
DM12MCRT12	12	3/4
DM15MCRT8	15	1/2
DM16MCRT4	16	1/4
DM16MCRT6	16	3/8
DM16MCRT8	16	1/2
DM16MCRT12	16	3/4
DM18MCRT8	18	1/2
DM18MCRT12	18	3/4
DM20MCRT8	20	1/2
DM20MCRT12	20	3/4
DM22MCRT8	22	1/2
DM22MCRT12	22	3/4
DM25MCRT8	25	1/2
DM25MCRT12	25	3/4

**NOTE:** RT threaded fittings conform to ISO standards 7-1.

	T
MCB	

Male Connector Bored Through - NPT

#### For Fractional Tube



Duolok Part #	Tube O.D. (in.)	NPT Male Pipe (in.)
D1MCBT1	1/16	1/16
D1MCBT2	1/16	1/8
D2MCBT1	1/8	1/16
D2MCBT2	1/8	1/8
D2MCBT4	1/8	1/4
D3MCBT2	3/16	1/8
D3MCBT4	3/16	1/4
D4MCBT2	1/4	1/8
D4MCBT4	1/4	1/4
D4MCBT6	1/4	3/8
D4MCBT8	1/4	1/2
D5MCBT4	5/16	1/4
D6MCBT4	3/8	1/4
D6MCBT6	3/8	3/8
D6MCBT8	3/8	1/2
D8MCBT8	1/2	1/2
D10MCBT12	5/8	3/4
D12MCBT12	3/4	3/4
D16MCBT16	1	1
D20MCBT20	1-1/4	1-1/4

**BMC** Bulkhead Male Connector - NPT For Fractional Tube



Duolok Part #	Tube O.D. (in.)	NPT Male Pipe (in.)
D2BMC2	1/8	1/8
D4BMC2	1/4	1/8
D4BMC4	1/4	1/4
D6BMC4	3/8	1/4
D8BMC6	1/2	3/8
D8BMC8	1/2	1/2

**M45E** 45° Male Elbow - NPT For Fractional Tube



Duolok Part #	Tube O.D. (in.)	NPT Male Pipe (in.)
D4M45E2	1/4	1/8
D4M45E4	1/4	1/4
D6M45E2	3/8	1/8
D6M45E4	3/8	1/4
D6M45E6	3/8	3/8
D8M45E6	1/2	3/8

**ME** Male Elbow - NPT For Fractional Tube



Duolok	Tube	NPT
Part #	O.D.	Male Pipe
	(in.)	(in.)
D1ME1	1/16	1/16
D1ME2	1/16	1/8
D2ME1	1/8	1/16
D2ME2	1/8	1/8
D2ME4	1/8	1/4
D3ME2	3/16	1/8
D3ME4	3/16	1/4
D4ME2	1/4	1/8
D4ME4	1/4	1/4
D4ME6	1/4	3/8
D4ME8	1/4	1/2
D5ME2	5/16	1/8
D5ME4	5/16	1/4
D5ME6	5/16	3/8
D6ME2	3/8	1/8
D6ME4	3/8	1/4
D6ME6	3/8	3/8
D6ME8	3/8	1/2
D6ME12	3/8	3/4
D8ME4	1/2	1/4
D8ME6	1/2	3/8
D8ME8	1/2	1/2
D8ME12	1/2	3/4
D10ME6	5/8	3/8
D10ME8	5/8	1/2
D10ME12	5/8	3/4
D12ME8	3/4	1/2
D12ME12	3/4	3/4
D14ME12	7/8	3/4
D16ME12	1	3/4
D16ME16	1	1
D20ME20	1-1/4	1-1/4
D24ME24	1-1/2	1-1/2
D32ME32	2	2

**ME** Male Elbow - NPT For *Metric* Tube



Duolok Part #	Tube O.D. (mm)	NPT Male Pipe (in.)
DM3ME2	3	1/8
DM3ME4	3	1/4
DM4ME2	4	1/8
DM4ME4	4	1/4
DM6ME2	6	1/8
DM6ME4	6	1/4
DM6ME6	6	3/8
DM6ME8	6	1/2
DM8ME2	8	1/8
DM8ME4	8	1/4
DM8ME6	8	3/8
DM8ME8	8	1/2
DM10ME2	10	1/8
DM10ME4	10	1/4
DM10ME6	10	3/8
DM10ME8	10	1/2
DM12ME4	12	1/4
DM12ME6	12	3/8
DM12ME8	12	1/2
DM12ME12	12	3/4
DM15ME8	15	1/2
DM16ME6	16	3/8
DM16ME8	16	1/2
DM16ME12	16	3/4
DM18ME8	18	1/2
DM18ME12	18	3/4
DM20ME8	20	1/2
DM20ME12	20	3/4
DM22ME12	22	3/4
DM22ME16	22	1
DM25ME12	25	3/4
DM25ME16	25	1

**MERS** Male Elbow -ISO Parallel For Fractional Tube



Duolok Part #	Tube O.D. (mm)	ISO Male Pipe (in.)
D4MERS2	1/4	1/8
D4MERS4	1/4	1/4
D6MERS4	3/8	1/4
D6MERS6	3/8	3/8
D8MERS4	1/2	1/4
D8MERS6	1/2	3/8
D8MERS8	1/2	1/2

NOTE: RS threaded fittings conform to ISO standards 228/1. The standard gasket for RS fittings is a 300 series stainless steel outer ring with a Viton® inner ring bonded to it.

**MERT** Male Elbow -ISO Tapered

For Fractional Tube



**MERS** Male Elbow -ISO Parallel



For Metric Tube

Duolok Part #	Tube O.D. (mm)	ISO Male Pipe (in.)
DM6MERS2	6	1/8
DM6MERS4	6	1/4
DM8MERS2	8	1/8
DM8MERS4	8	1/4
DM10MERS4	10	1/4
DM10MERS6	10	3/8
DM12MERS4	12	1/4
DM12MERS6	12	3/8
DM12MERS8	12	1/2
DM12MERS12	12	3/4

Duolok Part #	Tube O.D. (in.)	ISO Male Pipe (in.)
D2MERT2	1/8	1/8
D4MERT2	1/4	1/8
D4MERT4	1/4	1/4
D4MERT6	1/4	3/8
D4MERT8	1/4	1/2
D5MERT4	5/16	1/4
D6MERT2	3/8	1/8
D6MERT4	3/8	1/4
D6MERT6	3/8	3/8
D6MERT8	3/8	1/2
D8MERT4	1/2	1/4
D8MERT6	1/2	3/8
D8MERT8	1/2	1/2

**NOTE:** RT threaded fittings conform to ISO standards 7-1.

#### MERT Male Elbow -ISO Tapered For Metric Tube



Duolok Part #	Tube O.D. (mm)	ISO Male Pipe (in.)
DM3MERT2	3	1/8
DM3MERT4	3	1/4
DM4MERT2	4	1/8
DM4MERT4	4	1/4
DM6MERT2	6	1/8
DM6MERT4	6	1/4
DM6MERT6	6	3/8
DM6MERT8	6	1/2
DM8MERT2	8	1/8
DM8MERT4	8	1/4
DM8MERT6	8	3/8
DM8MERT8	8	1/2
DM10MERT4	10	1/4
DM10MERT6	10	3/8
DM10MERT8	10	1/2
DM12MERT2	12	1/8
DM12MERT4	12	1/4
DM12MERT6	12	3/8
DM12MERT8	12	1/2
DM12MERT12	12	3/4
DM16MERT6	16	3/8
DM16MERT8	16	1/2
DM18MERT8	18	1/2
DM18MERT12	18	3/4
DM20MERT8	20	1/2
DM20MERT12	20	3/4
DM22MERT12	22	3/4
DM22MERT16	22	1
DM25MERT12	25	3/4
DM25MERT16	25	1

**NOTE:** RT threaded fittings conform to ISO standards 7-1.

**MBT** Male Branch Tee - NPT For Fractional Tube



Duolok Part #	Tube O.D. (in.)	NPT Male Pipe (in.)
D2MBT2	1/8	1/8
D2MBT4	1/8	1/4
D3MBT2	3/16	1/8
D4MBT2	1/4	1/8
D4MBT4	1/4	1/4
D5MBT2	5/16	1/8
D6MBT4	3/8	1/4
D6MBT6	3/8	3/8
D8MBT6	1/2	3/8
D8MBT8	1/2	1/2
D10MBT8	5/8	1/2
D12MBT12	3/4	3/4

#### **MBT** Male Branch Tee - NPT For *Metric* Tube



Duolok Part #	Tube O.D. (mm)	NPT Male Pipe (in.)
DM6MBT2	6	1/8
DM6MBT4	6	1/4
DM8MBT2	8	1/8
DM8MBT4	8	1/4
DM10MBT4	10	1/4
DM12MBT4	12	1/4
DM12MBT6	12	3/8
DM12MBT8	12	1/2
DM16MBT8	16	1/2

**MRT** Male Run Tee - NPT For Fractional Tube



Duolok Part #	Tube O.D. (in.)	NPT Male Pipe (in.)
D2MRT2	1/8	1/8
D2MRT4	1/8	1/4
D3MRT2	3/16	1/8
D4MRT2	1/4	1/8
D4MRT4	1/4	1/4
D5MRT2	5/16	1/8
D6MRT4	3/8	1/4
D6MRT6	3/8	3/8
D8MRT6	1/2	3/8
D8MRT8	1/2	1/2
D10MRT8	5/8	1/2
D12MRT12	3/4	3/4

#### **MRT** Male Run Tee - NPT For *Metric* Tube



Duolok Part #	Tube O.D. (mm)	NPT Male Pipe (in.)
DM6MRT2	6	1/8
DM6MRT4	6	1/4
DM8MRT4	8	1/4
DM12MBT4	12	1/4
DM12MBT8	12	1/2
DM16MBT8	16	1/2

FC Female Connector - FNPT For Fractional Tube



Duolok Part #	Tube O.D. (in.)	NPT Female Pipe (in.)
D1FC1	1/16	1/16
D1FC2	1/16	1/8
D2FC2	1/8	1/8
D2FC4	1/8	1/4
D3FC2	3/16	1/8
D4FC2	1/4	1/8
D4FC4	1/4	1/4
D4FC6	1/4	3/8
D4FC8	1/4	1/2
D5FC2	5/16	1/8
D5FC4	5/16	1/4
D6FC2	3/8	1/8
D6FC4	3/8	1/4
D6FC6	3/8	3/8
D6FC8	3/8	1/2
D6FC12	3/8	3/4
D8FC4	1/2	1/4
D8FC6	1/2	3/8
D8FC8	1/2	1/2
D8FC12	1/2	3/4
D10FC6	5/8	3/8
D10FC8	5/8	1/2
D12FC8	3/4	1/2
D12FC12	3/4	3/4
D14FC12	7/8	3/4
D16FC12	1	3/4
D16FC16	1	1
D20FC20	1-1/4	1-1/4
D24FC24	1-1/2	1-1/2
D32FC32	2	2

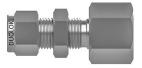
FC Female Connector - FNPT For *Metric* Tube



Duolok Part #	Tube O.D. (mm)	NPT Female Pipe (in.)
DM3FC2	3	1/8
DM3FC4	3	1/4
DM4FC2	4	1/8
DM6FC2	6	1/8
DM6FC4	6	1/4
DM6FC6	6	3/8
DM6FC8	6	1/2
DM8FC2	8	1/8
DM8FC4	8	1/4
DM8FC6	8	3/8
DM8FC8	8	1/2
DM10FC4	10	1/4
DM10FC6	10	3/8
DM10FC8	10	1/2
DM12FC4	12	1/4
DM12FC6	12	3/8
DM12FC8	12	1/2
DM15FC8	15	1/2
DM16FC8	16	1/2
DM20FC8	20	1/2
DM20FC12	20	3/4
DM22FC12	22	3/4
DM22FC16	22	1
DM25FC12	25	3/4
DM25FC16	25	1

**BFC** Bulkhead Female Connector - FNPT

For Fractional Tube



Duolok Part #	Tube O.D. (in.)	NPT Female Pipe (in.)
D2BFC2	1/8	1/8
D4BFC2	1/4	1/8
D4BFC4	1/4	1/4
D6BFC4	3/8	1/4
D8BFC6	1/2	3/8
D8BFC8	1/2	1/2

**FCRG** Female Connector -ISO parallel

For *Metric* Tube



Duolok Part #	Tube O.D. (mm)	ISO Female Pipe (in.)
DM3FCRG4	3	1/4
DM6FCRG4	6	1/4
DM6FCRG6	6	3/8
DM6FCRG8	6	1/2
DM8FCRG4	8	1/4
DM8FCRG6	8	3/8
DM8FCRG8	8	1/2
DM10FCRG4	10	1/4
DM10FCRG6	10	3/8
DM10FCRG8	10	1/2
DM12FCRG4	12	1/4
DM12FCRG6	12	3/8
DM12FCRG8	12	1/2
DM20FCRG8	20	1/2
DM22FCRG8	22	1/2

**NOTE:** No seal is made with the mating male thread. Instead, an RG gasket is placed in the flat bottom of the female end and the end of the mating male thread compresses against the RG gasket to seal. See page 64 for gasket seal numbers.

FCRT Female Connector -ISO Tapered For Metric Tube



Duolok Part #	Tube O.D. (mm)	ISO Female Pipe (in.)
DM3FCRT2	3	1/8
DM6FCRT2	6	1/8
DM6FCRT4	6	1/4
DM6FCRT6	6	3/8
DM6FCRT8	6	1/2
DM8FCRT2	8	1/8
DM8FCRT4	8	1/4
DM8FCRT6	8	3/8
DM8FCRT8	8	1/2
DM10FCRT2	10	1/8
DM10FCRT4	10	1/4
DM10FCRT6	10	3/8
DM10FCRT8	10	1/2
DM12FCRT2	12	1/8
DM12FCRT4	12	1/4
DM12FCRT6	12	3/8
DM12FCRT8	12	1/2
DM12FCRT12	12	3/4
DM15FCRT6	15	3/8
DM15FCRT8	15	1/2
DM20FCRT8	20	1/2
DM20FCRT12	20	3/4
DM22FCRT12	22	3/4
DM22FCRT16	22	1
DM25FCRT12	25	3/4
DM25FCRT16	25	1

**NOTE:** RT threaded fittings conform to ISO standard 7-1.

**FE** Female Elbow - FNPT For Fractional Tube



Duolok Part #	Tube O.D. (in.)	NPT Female Pipe (in.)
D2FE2	1/8	1/8
D2FE4	1/8	1/4
D3FE2	3/16	1/8
D4FE2	1/4	1/8
D4FE4	1/4	1/4
D4FE6	1/4	3/8
D4FE8	1/4	1/2
D5FE2	5/16	1/8
D5FE4	5/16	1/4
D6FE2	3/8	1/8
D6FE4	3/8	1/4
D6FE6	3/8	3/8
D6FE8	3/8	1/2
D8FE4	1/2	1/4
D8FE6	1/2	3/8
D8FE8	1/2	1/2
D10FE6	5/8	3/8
D10FE8	5/8	1/2
D12FE8	3/4	1/2
D12FE12	3/4	3/4
D14FE12	7/8	3/4
D16FE12	1	3/4
D16FE16	1	1

**FE** Female Elbow - FNPT For *Metric* Tube



Duolok Part #	Tube O.D. (mm)	NPT Female Pipe (in.)
DM6FE2	6	1/8
DM6FE4	6	1/4
DM6FE8	6	1/2
DM8FE4	8	1/4
DM10FE2	10	1/8
DM10FE4	10	1/4
DM12FE4	12	1/4
DM12FE8	12	1/2
DM16FE8	16	1/2

### Tube to Female Pipe

**FBT** Female Branch Tee - FNPT For Fractional Tube



Duolok Part #	Tube O.D. (in.)	NPT Female Pipe (in.)
D2FBT2	1/8	1/8
D4FBT2	1/4	1/8
D4FBT4	1/4	1/4
D6FBT4	3/8	1/4
D8FBT4	1/2	1/4
D8FBT6	1/2	3/8
D8FBT8	1/2	1/2
D10FBT8	5/8	1/2
D12FBT12	3/4	3/4
D16FBT12	1	3/4
D16FBT16	1	1

### **FBT** Female Branch Tee - FNPT

For Metric Tube



Duolok Part #	Tube O.D. (mm)	NPT Female Pipe (in.)
DM6FBT4	6	1/4
DM8FBT2	8	1/8
DM8FBT4	8	1/4
DM10FBT4	10	1/4
DM12FBT4	12	1/4
DM12FBT6	12	3/8
DM16FBT8	16	1/2

## Tube to Female Pipe

**FRT** Female Run Tee - FNPT For Fractional Tube



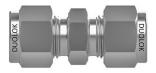
Duolok Part #	Tube O.D. (in.)	NPT Female Pipe (in.)
D2FRT2	1/8	1/8
D4FRT2	1/4	1/8
D4FRT4	1/4	1/4
D6FRT4	3/8	1/4
D8FRT6	1/2	3/8
D8FRT8	1/2	1/2
D12FRT12	3/4	3/4

**FRT** Female Run Tee - FNPT For *Metric* Tube



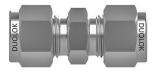
Duolok Part #	Tube O.D. (mm)	NPT Female Pipe (in.)
DM6FRT2	6	1/8
DM6FRT4	6	1/4
DM8FRT2	8	1/8
DM8FRT4	8	1/4
DM10FRT4	10	1/4
DM12FRT4	12	1/4
DM12FRT6	12	3/8
DM16FRT8	16	1/2

**U** Union For Fractional Tube



Duolok Part #	Tube O.D. (in.)
D1U	1/16
D2U	1/8
D3U	3/16
D4U	1/4
D5U	5/16
D6U	3/8
D8U	1/2
D10U	5/8
D12U	3/4
D14U	7/8
D16U	1
D20U	1-1/4
D24U	1-1/2
D32U	2

**U** Union For *Metric* Tube



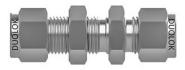
Duolok Part #	Tube O.D. (mm)
DM3U	3
DM4U	4
DM6U	6
DM8U	8
DM10U	10
DM12U	12
DM14U	14
DM15U	15
DM16U	16
DM18U	18
DM20U	20
DM22U	22
DM25U	25

**BU** Bulkhead Union For Fractional Tube



Duolok Part #	Tube O.D. (in.)
D1BU	1/16
D2BU	1/8
D3BU	3/16
D4BU	1/4
D5BU	5/16
D6BU	3/8
D8BU	1/2
D10BU	5/8
D12BU	3/4
D16BU	1

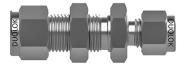
**BU** Bulkhead Union For *Metric* Tube



Duolok Part #	Tube O.D. (mm)
DM3BU	3
DM4BU	4
DM6BU	6
DM8BU	8
DM10BU	10
DM12BU	12
DM14BU	14
DM15BU	15
DM16BU	16
DM18BU	18
DM20BU	20

**BRU** Bulkhead Reducing Union For Fractional Tube

Duolok Part #	Tube 1 O.D. (in.)	Tube 2 O.D. (in.)
D4BRU2	1/4	1/8
D6BRU4	3/8	1/4
D8BRU4	1/2	1/4
D8BRU6	1/2	3/8



**RU** Reducing Union For Fractional Tube



Duolok Part #	Tube 1 O.D. (in.)	Tube 2 O.D. (in.)
D2RU1	1/8	1/16
D3RU1	3/16	1/16
D3RU2	3/16	1/8
D4RU1	1/4	1/16
D4RU2	1/4	1/8
D4RU3	1/4	3/16
D5RU2	5/16	1/8
D5RU4	5/16	1/4
D6RU1	3/8	1/16
D6RU2	3/8	1/8
D6RU4	3/8	1/4
D6RU5	3/8	5/16
D8RU2	1/2	1/8
D8RU4	1/2	1/4
D8RU6	1/2	3/8
D10RU6	5/8	3/8
D10RU8	5/8	1/2
D12RU4	3/4	1/4
D12RU6	3/4	3/8
D12RU8	3/4	1/2
D12RU10	3/4	5/8
D16RU8	1	1/2
D16RU12	1	3/4

#### **RU** Reducing Union For *Metric* Tube



Duolok Part #	Tube 1 O.D. (mm)	Tube 2 O.D. (mm)
DM6RUM3	6	3
DM6RUM4	6	4
DM8RUM6	8	6
DM10RUM6	10	6
DM10RUM8	10	8
DM12RUM6	12	6
DM12RUM8	12	8
DM12RUM10	12	10
DM16RUM10	16	10
DM16RUM12	16	12
DM18RUM12	18	12
DM25RUM18	25	18
DM25RUM20	25	20

UE

Union Elbow For Fractional Tube



Duolok Part #	Tube O.D. (in.)
D1UE	1/16
D2UE	1/8
D3UE	3/16
D4UE	1/4
D5UE	5/16
D6UE	3/8
D8UE	1/2
D10UE	5/8
D12UE	3/4
D14UE	7/8
D16UE	1
D20UE	1-1/4
D24UE	1-1/2
D32UE	2

#### **UE** Union Elbow For *Metric* Tube



Duolok Part #	Tube O.D. (mm)
DM3UE	3
DM4UE	4
DM6UE	6
DM8UE	8
DM10UE	10
DM12UE	12
DM14UE	14
DM15UE	15
DM16UE	16
DM18UE	18
DM20UE	20
DM22UE	22
DM25UE	25

#### UCS Union Cross For Fractional Tube



Duolok Part #	Tube O.D. (in.)
D2UCS	1/8
D4UCS	1/4
D5UCS	5/16
D6UCS	3/8
D8UCS	1/2
D12UCS	3/4
D16UCS	1

UCS Union Cross For Metric Tube



Duolok Part #	Tube O.D. (mm)
DM3UCS	3
DM6UCS	6
DM8UCS	8
DM10UCS	10
DM12UCS	12
DM16UCS	16
DM18UCS	18
DM20UCS	20
DM25UCS	25

**UT** Union Tee For Fractional Tube



#### **UT** Union Tee For *Metric* Tube



Duolok Part #	Tube O.D. (in.)
D1UT	1/16
D2UT	1/8
D3UT	3/16
D4UT	1/4
D5UT	5/16
D6UT	3/8
D8UT	1/2
D10UT	5/8
D12UT	3/4
D14UT	7/8
D16UT	1
D20UT	1-1/4
D24UT	1-1/2
D32UT	2

Duolok Part #	Tube O.D. (mm)
DM3UT	3
DM4UT	4
DM6UT	6
DM8UT	8
DM10UT	10
DM12UT	12
DM14UT	14
DM15UT	15
DM16UT	16
DM18UT	18
DM20UT	20
DM22UT	22
DM25UT	25

**RUT** Reducing Union Tee -Configuration A For Fractional Tube



Duolok Part #	Tube 1 O.D. (in.)	Tube 2 O.D. (in.)
D6RUT64	3/8	1/4
D8RUT84	1/2	1/4
D8RUT86	1/2	3/8
D10RUT106	5/8	3/8
D12RUT126	3/4	3/8
D12RUT128	3/4	1/2
D16RUT166	1	3/8
D16RUT168	1	1/2
D16RUT1612	1	3/4

**RUT** Reducing Union Tee -Configuration B For Fractional Tube

Duolok Part #	Tube 1 O.D. (in.)	Tube 2 O.D. (in.)
D6RUT46	3/8	1/4

**RUT** Reducing Union Tee -Configuration C For Fractional Tube

Duolok Part #	Tube 1 O.D. (in.)	Tube 2 O.D. (in.)
D8RUT66	1/2	3/8
D10RUT66	5/8	3/8
D12RUT66	3/4	3/8

**RUT** Reducing Union Tee -Configuration D For Fractional Tube

Duolok Part #	Tube 1 O.D. (in.)	Tube 2 O.D. (in.)	Tube 3 O.D. (in.)
D10RUT86	5/8	1/2	3/8
D12RUT86	3/4	1/2	3/8
D16RUT126	1	3/4	3/8

**DA** Dielectric Adapter For Fractional Tube

Duolok Part #	Tube End 1 (in.)	Tube End 2 (in.)
D8DA6	3/8	1/2



The SSP Instrumentation Dielectric Adapter is supplied with pre-swaged 3/8" nut and ferrules. The dielectric connection has a captive 1/2" nut. Dielectric Stop Collar and assembly instructions are also supplied with the adapter. By using 3/8" and 1/2" tube-ended SSP Instrumentation tube fittings with the adapter, a wide range of dielectric fitting configurations can be built.

DU	Duolok Part #	Length (in.)
Dielectric Union	D4DU	4.08
For Fractional Tube	D6DU	4.20
	D8DU	4.48
	D6DMC4	4.04

Dielectric fittings are designed to isolate monitoring and control instruments and equipment from electrical current and voltages. Manufactured in 316 stainless steel with thermoplastic insulators, SSP Instrumentation's dielectric fittings provide high dielectric strength in applications up to 5,000 PSIG. Typical applications for dielectric fittings are on impulse lines in natural gas pipeline monitoring stations. For additional factory assembled configurations, contact your local distributor.

#### Materials and Technical Data

Body: 316 Stainless Steel Insulator: Polyetherimide Pressure Rating: 5,000 PSIG Temperature Rating: From -40°F to +200°F Electrical Resistance: 1.0 x 10E7 Ohm at 70°F (20°C) at 10 VDC @ 50% relative humidity; voltage breakdown resistance of 3,000 VDC.

### Tube to Welded Systems

**TSWU** 

Tube Socket Weld Connector

For Fractional Tube



Duolok Part #	Tube Size (in.)
D2TSWU2	1/8
D4TSWU4	1/4
D6TSWU6	3/8
D8TSWU8	1/2
D12TSWU12	3/4
D16TSWU16	1

**TSWE** Tube Socket Weld Elbow

For Fractional Tube



Duolok Part #	Tube Size (in.)
D4TSWE4	1/4
D6TSWE6	3/8
D8TSWE8	1/2

## Tube to Welded Systems

**MPWC** Male Pipe Weld Connector

For Fractional Tube



Duolok Part #	Tube O.D. (in.)	Male Pipe Weld Size (in.)
D2MPWC2	1/8	1/8
D3MPWC2	3/16	1/8
D4MPWC2	1/4	1/8
D4MPWC4	1/4	1/4
D5MPWC2	5/16	1/8
D5MPWC4	5/16	1/4
D6MPWC4	3/8	1/4
D6MPWC6	3/8	3/8
D6MPWC8	3/8	1/2
D8MPWC6	1/2	3/8
D8MPWC8	1/2	1/2
D8MPWC12	1/2	3/4
D10MPWC8	5/8	1/2
D12MPWC12	3/4	3/4
D16MPWC16	1	1
D20MPWC20	1-1/4	1-1/4
D24MPWC24	1-1/2	1-1/2

### **MPWC** Male Pipe Weld Connector For *Metric* Tube



Duolok Part #	Tube O.D. (mm)	Male Pipe Weld Size (in.)
DM3MPWC2	3	1/8
DM4MPWC2	4	1/8
DM6MPWC2	6	1/8
DM6MPWC4	6	1/4
DM8MPWC2	8	1/8
DM8MPWC4	8	1/4
DM8MPWC8	8	1/2
DM10MPWC4	10	1/4
DM10MPWC6	10	3/8
DM10MPWC8	10	1/2
DM12MPWC4	12	1/4
DM12MPWC6	12	3/8
DM12MPWC8	12	1/2
DM14MPWC6	14	3/8
DM15MPWC8	15	1/2
DM16MPWC8	16	1/2
DM18MPWC8	18	1/2

## Tube to Welded Systems

**MPWE** Male Pipe Weld Elbow For Fractional Tube

Duolok Part #	Tube O.D. (in.)	Male Pipe Weld Size (in.)
D4MPWE2	1/4	1/8
D4MPWE4	1/4	1/4
D6MPWE4	3/8	1/4
D8MPWE8	1/2	1/2
D12MPWE12	3/4	3/4



### Tube Stub Connectors / Adapters

#### BR

Bulkhead Reducer / Adapter

For Fractional Tube



Duolok Part #	Tube O.D. (in.)
D2BR2	1/8
D4BR4	1/4
D6BR6	3/8
D8BR8	1/2

#### R

Reducer / Adapter For Fractional Tube



Duolok Part #	Tube 1 O.D. (in.)	Tube 2 O.D. (in.)
D1R2	1/16	1/8
D1R4	1/16	1/4
D2R1	1/8	1/16
D2R2	1/8	1/8
D2R3	1/8	3/16
D2R4	1/8	1/4
D2R6	1/8	3/8
D2R8	1/8	1/2
D3R2	3/16	1/8
D3R4	3/16	1/4
D4R2	1/4	1/8
D4R3	1/4	3/16
D4R4	1/4	1/4
D4R5	1/4	5/16
D4R6	1/4	3/8
D4R8	1/4	1/2
D4R10	1/4	5/8
D4R12	1/4	3/4
D5R6	5/16	3/8
D5R8	5/16	1/2
D6R4	3/8	1/4
D6R6	3/8	3/8
D6R8	3/8	1/2
D6R10	3/8	5/8
D6R12	3/8	3/4
D8R4	1/2	1/4
D8R6	1/2	3/8
D8R8	1/2	1/2
D8R10	1/2	5/8
D8R12	1/2	3/4
D8R16	1/2	1
D10R12	5/8	3/4
D10R14	5/8	7/8
D10R16	5/8	1
D12R8	3/4	1/2
D12R16	3/4	1
D20R24	1-1/4	1-1/2

**NOTE:** For Heat Exchanger Tee applications, certain Reducer / Adapter fittings can be "bored through" to accommodate a process tube's insertion. Consult with the local distributor for further information on "bored through" Reducer / Adapter (RBT) fittings.

#### R

Reducer / Adapter For *Metric* Tube



Duolok Part #	Tube 1 O.D. (mm)	Tube 2 O.D. (mm)
DM3RM4	3	4
DM3RM6	3	6
DM3RM10	3	10
DM4RM6	4	6
DM6RM3	6	3
DM6RM8	6	8
DM6RM10	6	10
DM6RM12	6	12
DM6RM18	6	18
DM8RM6	8	6
DM8RM10	8	10
DM8RM12	8	12
DM10RM6	10	6
DM10RM8	10	8
DM10RM12	10	12
DM10RM15	10	15
DM10RM18	10	18
DM12RM6	12	6
DM12RM8	12	8
DM12RM10	12	10
DM12RM16	12	16
DM12RM18	12	18
DM12RM20	12	20
DM12RM22	12	22
DM12RM25	12	25
DM16RM12	16	12
DM18RM12	18	12
DM18RM16	18	16
DM18RM20	18	20
DM18RM22	18	22
DM18RM25	18	25
DM20RM16	20	16
DM20RM18	20	18
DM20RM22	20	22
DM20RM25	20	25
DM22RM18	22	18
DM22RM20	22	20
DM22RM25	22	25
DM25RM18	25	18
DM25RM20	25	20

**MA** Male Adapter - NPT For Fractional Tube



Duolok Part #	Tube O.D. (in.)	NPT Male Pipe (in.)
D2MA2	1/8	1/8
D2MA4	1/8	1/4
D3MA2	3/16	1/8
D3MA4	3/16	1/4
D4MA2	1/4	1/8
D4MA4	1/4	1/4
D4MA6	1/4	3/8
D4MA8	1/4	1/2
D5MA2	5/16	1/8
D5MA4	5/16	1/4
D6MA2	3/8	1/8
D6MA4	3/8	1/4
D6MA6	3/8	3/8
D6MA8	3/8	1/2
D8MA4	1/2	1/4
D8MA6	1/2	3/8
D8MA8	1/2	1/2
D10MA8	5/8	1/2
D12MA8	3/4	1/2
D12MA12	3/4	3/4
D16MA12	1	3/4
D16MA16	1	1

**MA** Male Adapter - NPT

For *Metric* Tube



Duolok Part #	Tube O.D. (mm)	NPT Male Pipe (in.)
DM6MA2	6	1/8
DM6MA4	6	1/4
DM8MA4	8	1/4
DM10MA4	10	1/4
DM10MA6	10	3/8
DM10MA8	10	1/2
DM12MA4	12	1/4
DM12MA8	12	1/2

FA

Female Adapter - FNPT For Fractional Tube



Duolok Part #	Tube O.D. (in.)	NPT Female Pipe (in.)
D2FA2	1/8	1/8
D2FA4	1/8	1/4
D3FA4	3/16	1/4
D4FA2	1/4	1/8
D4FA4	1/4	1/4
D4FA6	1/4	3/8
D4FA8	1/4	1/2
D5FA4	5/16	1/4
D6FA2	3/8	1/8
D6FA4	3/8	1/4
D6FA6	3/8	3/8
D6FA8	3/8	1/2
D8FA4	1/2	1/4
D8FA6	1/2	3/8
D8FA8	1/2	1/2
D10FA8	5/8	1/2
D12FA8	3/4	1/2
D12FA12	3/4	3/4
D12FA16	3/4	1
D16FA12	1	3/4
D16FA16	1	1

**FA** Female Adapter - FNPT

For Metric Tube



Duolok Part #	Tube O.D. (mm)	NPT Female Pipe (in.)
DM6FA2	6	1/8
DM6FA4	6	1/4
DM8FA4	8	1/4
DM10FA4	10	1/4
DM10FA6	10	3/8
DM10FA8	10	1/2
DM12FA4	12	1/4
DM12FA8	12	1/2

#### PC Port Connector Port Connector For Fractional Tube



Duolok Part #	Tube O.D. (in.)
D1PC	1/16
D2PC	1/8
D4PC	1/4
D5PC	5/16
D6PC	3/8
D8PC	1/2
D12PC	3/4
D16PC	1

## PC For Metric Tube



Duolok Part #	Tube O.D. (mm)
DM3PC	3
DM6PC	6
DM8PC	8
DM10PC	10
DM12PC	12
DM15PC	15
DM16PC	16
DM18PC	18
DM20PC	20
DM25PC	25

#### **RPC** Reducing Port Connector For Fractional Tube

#### **RPC** Reducing Port Connector For *Metric* Tube



Duolok Part #	Tube 1 O.D. (in.)	Tube 2 O.D. (in.)
D2RPC1	1/8	1/16
D4RPC1	1/4	1/16
D4RPC2	1/4	1/8
D6RPC2	3/8	1/8
D6RPC4	3/8	1/4
D8RPC4	1/2	1/4
D8RPC6	1/2	3/8
D12RPC8	3/4	1/2



Duolok Part #	Tube 1 O.D. (mm)	Tube 2 O.D. (mm)
DM6RPCM3	6	3
DM8RPCM6	8	6
DM10RPCM6	10	6
DM10RPCM8	10	8
DM12RPCM6	12	6
DM12RPCM8	12	8
DM12RPCM10	12	10
DM16RPCM12	16	12

# HBA

Hose Barb Adapter For Fractional Tube



Duolok Part #	Hose I.D. (in.)	Tube Size (in.)
D2HBA2	1/8	1/8
D2HBA4	1/8	1/4
D4HBA4	1/4	1/4
D4HBA6	1/4	3/8
D5HBA4	5/16	1/4
D6HBA6	3/8	3/8
D6HBA8	3/8	1/2
D8HBA6	1/2	3/8
D8HBA8	1/2	1/2
D12HBA12	3/4	3/4







CU2	
Calibration For Fractional Tube	

Duolok Part #	Tube O.D. (in.)
D4CU2	1/4



## Duolok to 37 $^{\circ}$ Flare

**ANU** AN Union For Fractional Tube



Duolok Part #	Tube O.D. (in.)	AN Tube Flare Size (in.)
D1ANU2	1/16	1/8
D2ANU2	1/8	1/8
D2ANU4	1/8	1/4
D4ANU4	1/4	1/4
D5ANU5	5/16	5/16
D6ANU4	3/8	1/4
D6ANU6	3/8	3/8
D8ANU8	1/2	1/2
D12ANU12	3/4	3/4
D16ANU16	1	1

**ANBU** AN Bulkhead Union For Fractional Tube



Duolok Part #	Tube O.D. (in.)	AN Tube Flare Size (in.)
D4ANBU4	1/4	1/4
D6ANBU6	3/8	3/8
D8ANBU8	1/2	1/2
D12ANBU12	3/4	3/4
D16ANBU16	1	1

**ANF** Female AN Adapter For Fractional Tube



Duolok Part #	Tube O.D. (in.)	AN Flare Size (in.)
D2ANF2	1/8	1/8
D2ANF4	1/8	1/4
D4ANF4	1/4	1/4
D6ANF6	3/8	3/8
D8ANF8	1/2	1/2

# Duolok to 37 $^{\circ}$ Flare





Duolok Part #	Tube O.D. (in.)	AN Tube Flare Size (in.)
D4ANA4	1/4	1/4
D6ANA4	3/8	1/4
D6ANA6	3/8	3/8
D8ANA8	1/2	1/2
D12ANA12	3/4	3/4
D16ANA16	1	1

### Tube to O-Ring Seal

**OMC** O-Ring Seal Male Connector\* For Fractional Tube



Duolok Part #	Tube O.D. (in.)	NPT* Male Pipe (in.)
D2OMC2	1/8	1/8
D40MC2	1/4	1/8
D40MC4	1/4	1/4
D6OMC4	3/8	1/4
D6OMC6	3/8	3/8
D6OMC8	3/8	1/2
D80MC8	1/2	1/2

\*Connects to Female Short NPT Thread

**OSC** O-Ring Seal Male Straight Thread Connector\* For Fractional Tube



Duolok Part #	Tube O.D. (in.)	Thread Size
D1OSC2	1/16	5/16 - 24
D2OSC2	1/8	5/16 - 24
D3OSC3	3/16	3/8 - 24
D4OSC4	1/4	7/16 - 20
D5OSC5	5/16	1/2 - 20
D6OSC6	3/8	9/16 - 18
D8OSC8	1/2	3/4 - 16
D12OSC12	3/4	1-1/16 - 12
D16OSC16	1	1-5/16 - 12

\*Connects to Female Straight Thread - SAE J1926

# Tube to SAE / MS

**MCST** 

Male Connector -Straight Thread Boss

For Fractional Tube



Duolok Part #	Tube O.D. (in.)	Thread Size
D2MCST2	1/8	5/16 - 24
D4MCST4	1/4	7/16 - 20
D4MCST6	1/4	9/16 - 18
D4MCST8	1/4	3/4 - 16
D4MCST10	1/4	7/8 - 14
D5MCST5	5/16	1/2 - 20
D6MCST4	3/8	7/16 - 20
D6MCST6	3/8	9/16 - 18
D6MCST8	3/8	3/4 - 16
D6MCST10	3/8	7/8 - 14
D8MCST6	1/2	9/16 - 18
D8MCST8	1/2	3/4 - 16
D8MCST10	1/2	7/8 - 14
D8MCST12	1/2	1-1/16 - 12
D10MCST8	5/8	3/4 - 16
D10MCST10	5/8	7/8 - 14
D12MCST8	3/4	3/4 - 16
D12MCST12	3/4	1-1/16 - 12
D14MCST14	7/8	1-3/16 - 12
D16MCST12	1	1-1/16 - 12
D16MCST16	1	1-5/16 - 12
D20MCST20	1-1/4	1-5/8 - 12
D24MCST24	1-1/2	1-7/8 - 12

90 Durometer Viton<sup>®</sup> O-Ring is standard. Other O-Ring compounds are available.

**MEST** Male Elbow -Straight Thread Boss For Fractional Tube



Duolok Part #	Tube O.D. (in.)	SAE / MS Thread Size
D4MEST4	1/4	7/16 - 20
D4MEST6	1/4	9/16 - 18
D5MEST5	5/16	1/2 - 20
D6MEST4	3/8	7/16 - 20
D6MEST6	3/8	9/16 - 18
D6MEST8	3/8	3/4 - 16
D8MEST6	1/2	9/16 - 18
D8MEST8	1/2	3/4 - 16
D10MEST10	5/8	7/8 - 14
D12MEST12	3/4	1-1/16 - 12
D16MEST16	1	1-5/16 - 12
D20MEST20	1-1/4	1-5/8 - 12

90 Durometer Viton<sup>®</sup> O-Ring is standard. Other O-Ring compounds are available.

# Tube to SAE / MS

**M45EST** 45° Male Elbow -Straight Thread Boss For Fractional Tube



Duolok Part #	Tube O.D. (in.)	SAE / MS Thread Size
D4M45EST4	1/4	7/16 - 20
D6M45EST6	3/8	9/16 - 18
D8M45EST8	1/2	3/4 - 16
D12M45EST12	3/4	1-1/16 - 12
D16M45EST16	1	1-5/16 - 12

90 Durometer Viton<sup>®</sup> O-Ring is standard. Other O-Ring compounds are available.

**MBTST** Male Branch Tee - Straight Thread Boss For Fractional Tube



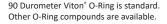
Duolok Part #	Tube O.D. (in.)	SAE / MS Thread Size
D4MBTST4	1/4	7/16 - 20
D6MBTST6	3/8	9/16 - 18
D8MBTST8	1/2	3/4 - 16
D12MBTST12	3/4	1-1/16 - 12
D16MBTST16	1	1-5/16 - 12

90 Durometer Viton<sup>®</sup> O-Ring is standard. Other O-Ring compounds are available.

## Tube to SAE / MS

**MRTST** Male Run Tee -Straight Thread Boss For Fractional Tube

Duolok Part #	Tube O.D. (in.)	SAE / MS Thread Size
D4MRTST4	1/4	7/16 - 20
D6MRTST6	3/8	9/16 - 18
D8MRTST8	1/2	3/4 - 16
D12MRTST12	3/4	1-1/16 - 12
D16MRTST16	1	1-5/16 - 12







Duolok Part #	Tube O.D. (in.)	SAE / MS Thread Size
D2MAST2	1/8	5/16 - 24
D4MAST4	1/4	7/16 - 20
D6MAST4	3/8	7/16 - 20
D6MAST6	3/8	9/16 - 18
D6MAST8	3/8	3/4 - 16
D8MAST6	1/2	9/16 - 18
D8MAST8	1/2	3/4 - 16
D12MAST12	3/4	1-1/16 - 12
D16MAST16	1	1-5/16 - 12

90 Durometer Viton<sup>®</sup> O-Ring is standard. Other O-Ring compounds are available.

## Cap and Plug

**СР** Сар For *Fractional* Tube



Duolok	Tube
Part #	O.D.
i are ii	(in.)
D1CP	1/16
D2CP	1/8
D3CP	3/16
D4CP	1/4
D5CP	5/16
D6CP	3/8
D8CP	1/2
D10CP	5/8
D12CP	3/4
D14CP	7/8
D16CP	1
D20CP	1-1/4
D24CP	1-1/2

**CP** Cap For *Metric* Tube



Duolok Part #	Tube O.D. (mm)
DM3CP	3
DM4CP	4
DM6CP	6
DM8CP	8
DM10CP	10
DM12CP	12
DM14CP	14
DM15CP	15
DM16CP	16
DM18CP	18
DM20CP	20
DM22CP	22
DM25CP	25

## Cap and Plug

#### Ρ

Plug For *Fractional* Tube



Duolok Part #	Tube O.D. (in.)
D1P	1/16
D2P	1/8
D3P	3/16
D4P	1/4
D5P	5/16
D6P	3/8
D8P	1/2
D10P	5/8
D12P	3/4
D16P	1
D20P	1-1/4
D24P	1-1/2

### Ρ

Plug For *Metric* Tube



Duolok Part #	Tube O.D. (mm)
DM3P	3
DM4P	4
DM6P	6
DM8P	8
DM10P	10
DM12P	12
DM15P	15
DM16P	16
DM18P	18
DM20P	20
DM22P	22
DM25P	25

#### **N** NUT For *Fractional* Tube



Duolok Part #	Tube O.D. (in.)
D1N	1/16
D2N	1/8
D3N	3/16
D4N	1/4
D5N	5/16
D6N	3/8
D8N	1/2
D10N	5/8
D12N	3/4
D14N	7/8
D16N	1
D20N	1-1/4
D24N	1-1/2
D32N	2

### **N** NUT For *Metric* Tube



Duolok Part #	Tube O.D. (mm)
DM3N	3
DM4N	4
DM6N	6
DM8N	8
DM10N	10
DM12N	12
DM14N	14
DM15N	15
DM16N	16
DM18N	18
DM20N	20
DM22N	22
DM25N	25

**BF** Back Ferrule For Fractional Tube



Duolok Part #	Tube O.D. (in.)
D1BF	1/16
D2BF	1/8
D3BF	3/16
D4BF	1/4
D5BF	5/16
D6BF	3/8
D8BF	1/2
D10BF	5/8
D12BF	3/4
D14BF	7/8
D16BF	1
D20BF	1-1/4
D24BF	1-1/2
D32BF	2

**BF** Back Ferrule For *Metric* Tube



Duolok Part #	Tube O.D. (mm)
DM3BF	3
DM4BF	4
DM6BF	6
DM8BF	8
DM10BF	10
DM12BF	12
DM14BF	14
DM15BF	15
DM16BF	16
DM18BF	18
DM20BF	20
DM22BF	22
DM25BF	25

#### **FF** Front Ferrule For Fractional Tube



Duolok Part #	Tube O.D. (in.)
D1FF	1/16
D2FF	1/8
D3FF	3/16
D4FF	1/4
D5FF	5/16
D6FF	3/8
D8FF	1/2
D10FF	5/8
D12FF	3/4
D14FF	7/8
D16FF	1
D20FF	1-1/4
D24FF	1-1/2
D32FF	2

#### **FS** Ferrule Set For Fractional Tube



Duolok Part #	Tube O.D. (in.)
D1FS	1/16
D2FS	1/8
D3FS	3/16
D4FS	1/4
D5FS	5/16
D6FS	3/8
D8FS	1/2

#### FF

Front Ferrule For *Metric* Tube



Duolok Part #	Tube O.D. (mm)
DM3FF	3
DM4FF	4
DM6FF	6
DM8FF	8
DM10FF	10
DM12FF	12
DM14FF	14
DM15FF	15
DM16FF	16
DM18FF	18
DM20FF	20
DM22FF	22
DM25FF	25

**FS** Ferrule Set For *Metric* Tube



Duolok Part #	Tube O.D. (mm)
DM6FS	6
DM8FS	8
DM10FS	10
DM12FS	12

A Ferrule Set consists of one front ferrule and one back ferrule and is conveniently packaged and sold in multiples of ten sets per "holding tube" housing.

**KN** Knurled Nut For Fractional Tube



Duolok Part #	Tube O.D. (in.)
D1KN	1/16
D2KN	1/8
D3KN	3/16
D4KN	1/4
D5KN	5/16
D6KN	3/8
D8KN	1/2
D10KN	5/8
D12KN	3/4
D14KN	7/8
D16KN	1

### **BN** Bulkhead Locknut For Fractional Tube



Duolok Part #	Tube O.D. (in.)
D1BN	1/16
D2BN	1/8
D3BN	3/16
D4BN	1/4
D5BN	5/16
D6BN	3/8
D8BN	1/2
D10BN	5/8
D12BN	3/4
D14BN	7/8
D16BN	1

### **RG** RG Fitting Gasket For *Metric* Tube



Duolok Part #	O.D. (mm)	I.D. (mm)
4RG-CU	10.7	7.6
6RG-CU	14.2	8.6
8RG-CU	17.8	9.1

#### **TI** Tube Insert For Fractional Tube



Duolok Part #	Tube O.D. (in.)	Tube I.D. (in.)
D3TI2	3/16	1/8
D4TI2	1/4	1/8
D4TI170	1/4	0.170
D4TI3	1/4	3/16
D5TI2	5/16	1/8
D5TI3	5/16	3/16
D5TI4	5/16	1/4
D6TI3	3/8	3/16
D6TI4	3/8	1/4
D8TI4	1/2	1/4
D8TI6	1/2	3/8
D10TI6	5/8	3/8
D10TI8	5/8	1/2
D12TI8	3/4	1/2
D12TI10	3/4	5/8
D16TI12	1	3/4

#### **TI** Tube Insert For *Metric* Tube



Duolok Part #	Tube O.D. (mm)	Tube I.D. (mm)
DM6TI4	6	4
DM8TI6	8	6
DM10TI8	10	8
DM12TI8	12	8
DM12TI10	12	10

**DW** Bonded Washer For Fractional Tube



Duolok Part #	ISO Pipe Size (in.)
2DW-BSPP-SS-V	1/8
4DW-BSPP-SS-V	1/4
6DW-BSPP-SS-V	3/8
8DW-BSPP-SS-V	1/2
12DW-BSPP-SS-V	3/4
16DW-BSPP-SS-V	1

Comes standard as a 300 series stainless steel outer ring with a Viton® inner ring bonded to it. Also available with Buna-N. Replace -V with -B if Buna-N is Required.

# SSP Tubing

### SSP Tubing

For Fractional Tube

SSP Part Number	Tube O.D. (in.)	Wall Thickness
RTT3160125X028	1/8	0.028
RTT3160250X035	1/4	0.035
RTT3160250X049		0.049
RTT3160250X065		0.065
RTT3160375X035	3/8	0.035
RTT3160375X049		0.049
RTT3160375X065		0.065
RTT3160500X035	1/2	0.035
RTT3160500X049		0.049
RTT3160500X065		0.065
RTT3160625X065	5/8	0.065
RTT3160750X065	3/4	0.065
RTT3160750X095		0.095
RTT3161000X083	1	0.083
RTT3161000X109		0.109

### SSP Tubing

For Metric Tube

SSP Part Number	Tube O.D. (mm)	Wall Thickness
RTT316M06XM1.0	6	1.0
RTT316M06XM1.5		1.5
RTT316M08XM1.0	8	1.0
RTT316M08XM1.5		1.5
RTT316M10XM1.0	10	1.0
RTT316M10XM1.5		1.5
RTT316M12XM1.0	12	1.0
RTT316M12XM1.5		1.5
RTT316M12xM2.0		2.0
RTT316M16XM1.5	16	1.5
RTT316M16XM2.0		2.0
RTT316M18XM1.5	18	1.5
RTT316M18XM2.0		2.0
RTT316M20XM2.0	20	2.0
RTT316M25XM1.5	25	1.5
RTT316M26XM2.0		2.0

#### Safety

To help ensure the safe and reliable performance of tube fitting products, complete system design must be considered prior to the installation of the tubing and tube fittings. Determining the design compatibility of materials, media, flows, temperatures and pressures; as well as implementing proper installation, operation and maintenance of the system are the responsibility of the systems' owners, designers and users.

#### SSP Safety Reminders

All SSP products are designed and manufactured with safety in mind. The following is a limited list of general safety practices:

Do not install, tighten or loosen a tube fitting while the system is under pressure.

Do not loosen a tube fitting, nut or plug to relieve or bleed system pressure.

Always use a back-up wrench to hold the tube fitting body steady when tightening or loosening tube fitting nuts.

There is no need to disassemble a new tube fitting prior to use.

Use proper thread lubricants and sealants on tapered pipe threads.

Very soft, pliable plastic tubing requires a tube insert.

Tube fitting and tubing material should be similar (stainless steel fittings on stainless steel tubing, brass fittings on copper tubing, etc.) with the tubing material being fully annealed. For more specific information, refer to the Selection Guide for Instrumentation Tubing in the Duolok<sup>®</sup> catalog.

Do not weld tube fittings that are assembled. Prior to welding, remove the nut and ferrules and protect the seat and thread area of the tube fitting by covering with a plug or another nut.

#### Duolok<sup>®</sup> Tube Fittings LIFETIME LIMITED WARRANTY

SSP guarantees all Duolok tube fittings and Duolok tube fitting components to be free from defects in materials and workmanship. Additionally, SSP guarantees Duolok product performance to the published catalog specifications when properly installed according to the catalog selection and installation instructions. To initiate a warranty claim, suspected defective product must be returned to SSP with the nature of potential defect documented for factory evaluation. Any product with a determined defect in material or workmanship will be replaced with an equivalent product at no charge.

This warranty comprises the sole and entire warranty pertaining to items provided hereunder. There is no other warranty, guarantee, express or implied representation of any kind whatsoever. All other warrantis including, but not limited to, merchantability and fitness for purpose, whether express, implied, or arising by operation of law. Course of dealing, or trade usage are hereby disclaimed. There are no warrantics which extend beyond the description on the face hereof; and this warranty does not apply in the case of abuse, mishandling, or normal use depreciation. In no event, whether alleged to arise from breach of contract, express or implied warranty, by operation of law, negligence or otherwise, will SSP be liable for any incidental, consequential, lost property, or other special damages of any kind whatsoever. The exclusive only remedy under this warranty is the replacement of determined defective parts as set forth above. Duolok<sup>®</sup>, Unilok<sup>®</sup>, Griplok<sup>®</sup>, TruFit<sup>®</sup> & FloLok<sup>®</sup> are registered trademarks of SSP Fittings Corp.

Swagelok<sup>®</sup> and Cajon<sup>®</sup> are registered trademarks of Swagelok Co. Parker CPI<sup>®</sup> and ParkerTM are registered trademarks of Parker Hannifin.

Hoke Gyrolok<sup>®</sup> and Hoke<sup>®</sup> are registered trademarks of Hoke Inc. Viton<sup>®</sup> and Teflon<sup>®</sup> are registered trademarks of E.I. duPont Nemours and Co.

Monel® is a registered trademark of Inco Alloys International

**NOTICE:** This publication is an uncontrolled copy of a controlled document. SSP has made every reasonable effort to insure the accuracy of the information contained in this publication, and is not to be held liable in any manner for any mistakes, omissions, typographical and/or printing errors.



IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE PERSONAL INJURY AND PROPERTY DAMAGE.

It is the sole responsibility of the system designers and users to properly select and use products for their specific applications. This document has been printed for users with technical expertise as a reference for further investigation to determine specific product needs relative to design requirements.

Founded 1926 Privately owned, third generation business Modern single-site vertically integrated manufacturing facility DFARS-compliant raw material ISO 9001 quality management system Limited Lifetime Warranty





The Only 100% American Made Instrument Valves & Fittings

8250 Boyle Parkway • Twinsburg, OH 44087
 330-425-4250 • www.mySSP.com
 ©2020 SSP Fittings Corp. All rights reserved.

SSPDIPG-20A