




















EM TECHNIK Series 1D Flare Fittings



		PG.			PG.
Knurled Nut		1	Panel Mount Elbow		8
Hex Nut		1	Union Tee		8
Union Flare x Flare		2	Tee with Thread		9
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Quick Specification
 All components are produced in a clean room environment and DI rinsed prior to packaging. All components are molded without seams in the thread for high temperature and pressure ratings.

Body Material: PFA
 PVDF (Solef 1008/0001 HP)
 Natural Polypropylene

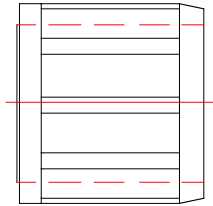
Nut material: PVDF (Solef 1008/0001 HP)
 PFA on request

Connection Method: Flare

Other configurations are available on request.

KNURLED NUT FOR FLARE FITTINGS

Part Number: 1D0002.00

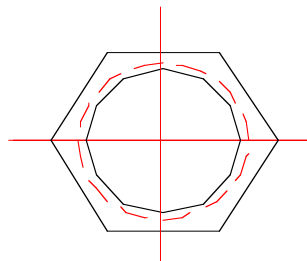
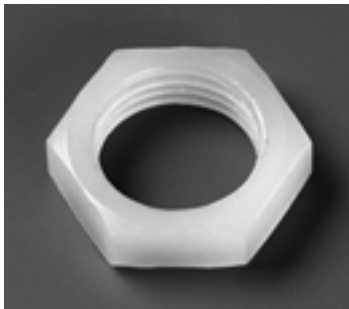


Size
1/4"
3/8"
1/2"
3/4"
1"

Material: PFA, PVDF, Natural PP

HEX NUT FOR PANEL MOUNT

Part Number: 1D0007.00

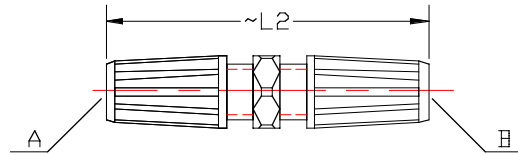


Size
1/4"
3/8"
1/2"
3/4"
1"

Material: PFA, PVDF, Natural PP

STRAIGHT UNION FLARE X FLARE

Part Number: 1D0100.10

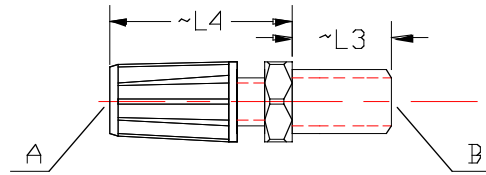


Size A	Size B	L2mm	L2 inches
1/4"	1/4"	66	2.60
3/8"	3/8"	74	2.91
1/2"	1/2"	76	2.99
3/4"	3/4"	88	3.46
1"	1"	104	4.09

Material: PFA, PVDF, Natural PP

STRAIGHT MALE FLARE X MALE NPT THREAD

Part Number: 1D0100.32

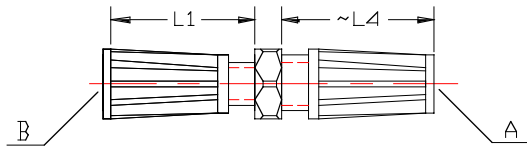


Size A	Size B	L4 mm	L4 inches	L3 mm	L3 inches
1/4"	1/8"	36	1.42	10	.394
3/8"	1/4"	41	1.61	15	.590
3/8"	3/8"	41	1.61	15.3	.602
3/8"	1/2"	41	1.61	20	.790
1/2"	1/4"	43	1.69	15	.590
1/2"	3/8"	43	1.69	15.3	.602
1/2"	1/2"	43	1.69	20	.790
1/2"	3/4"	47	1.85	20	.790
3/4"	1/2"	52	2.05	20	.790
3/4"	3/4"	52	2.05	20	.790
1"	3/4"	60	2.36	20	0.79
1"	1"	60	2.36	25	0.98

Material: PFA, PVDF, Natural PP

STRAIGHT UNION MALE FLARE X FEMALE FLARE

Part Number: 1D0100.40

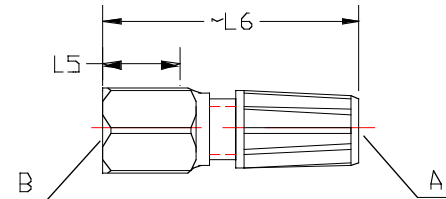


Size A	Size B	L4 MM	L4 inches	L1 mm	L1 inch
$\frac{3}{8}$ "	$\frac{3}{8}$ "	41	1.61	24	.945
$\frac{1}{2}$ "	$\frac{1}{2}$ "	43	1.69	27	1.06

Material: PFA, PVDF, Natural PP

STRAIGHT MALE FLARE X FEMALE NPT THREAD

Part Number: 1D0100.42

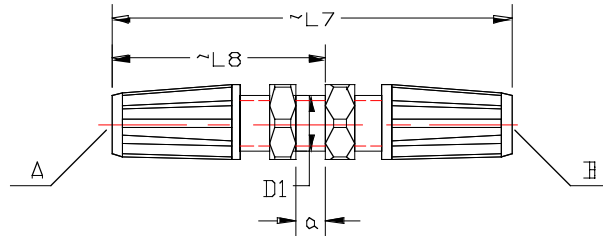


Size A	Size B	L6 mm	L6 inches	L5 mm	L5 inches
$\frac{1}{4}$ "	$\frac{1}{8}$ "	46	1.81	11.6	.457
$\frac{3}{8}$ "	$\frac{1}{4}$ "	55	2.16	16.4	.646
$\frac{3}{8}$ "	$\frac{3}{8}$ "	56	2.20	17.4	.685
$\frac{3}{8}$ "	$\frac{1}{2}$ "	62	2.44	22.6	.890
$\frac{1}{2}$ "	$\frac{1}{4}$ "	56	2.20	16.4	.646
$\frac{1}{2}$ "	$\frac{3}{8}$ "	57	2.24	17.4	.685
$\frac{1}{2}$ "	$\frac{1}{2}$ "	63	2.48	22.6	.890
$\frac{3}{4}$ "	$\frac{1}{2}$ "	64	2.52	22.6	.890
1"	$\frac{3}{4}$ "	77	3.03	23.1	0.91
1"	1"	82	3.22	27.8	1.09

Material: PFA, PVDF, Natural PP

STRAIGHT PANEL MOUNT UNION

Part Number: 1D0101.10

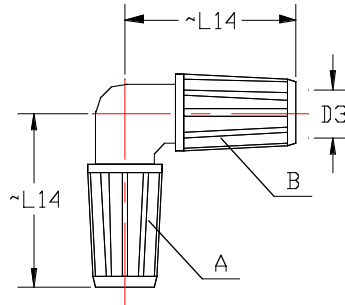


Size A	Size B	L7mm	L7 in.	L8mm	L8 in.	D1mm	D1 in.	a(mm)	a(in)
$\frac{1}{4}$ "	$\frac{1}{4}$ "	77	3.03	42	1.65	13	.512	6.5	0.256
$\frac{3}{8}$ "	$\frac{3}{8}$ "	85	3.45	46	1.81	16	.630	6.5	0.256
$\frac{1}{2}$ "	$\frac{1}{2}$ "	87	3.42	48	1.89	20	.790	6.5	0.256
$\frac{3}{4}$ "	$\frac{3}{4}$ "	100	3.94	56	2.20	26	1.02	6.5	0.256
1"	1"	118	4.65	58	2.28	-	-	6.5	0.256

Material: PFA, PVDF, Natural PP

ELBOW UNION FLARE X FLARE

Part Number: 1D0200.10

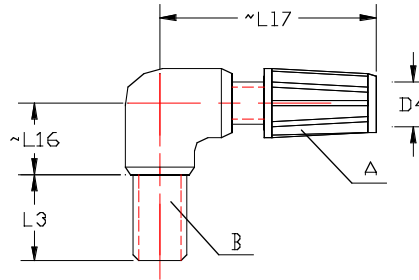


Size A	Size B	L14 mm	L14 inches	D3 mm	D3 inches
1/4"	1/4"	40	1.57	15	.590
3/8"	3/8"	46	1.81	20	.790
1/2"	1/2"	50	1.97	25	.98
3/4"	3/4"	59	2.32	30	1.18
1"	1"	69	2.71	40	1.57

Material: PFA, PVDF, Natural PP

90 ELBOW FLARE X MALE NPT THREAD

Part Number: 1D0200.32

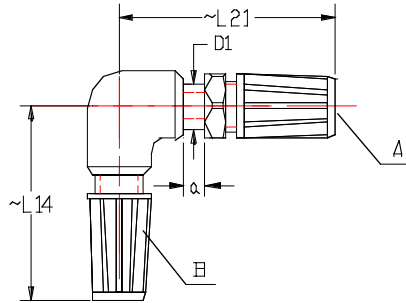


Size A	Size B	L17mm	L17 in.	L16mm	L16 in.	L3mm	L3 in.	D4 mm	D4 in.
1/4"	1/8"	40	1.57	16	.630	10	.394	15	.59
3/8"	1/4"	46	1.81	20	.790	15	.59	20	.79
3/8"	3/8"	46	1.81	20	.790	15.3	.602	20	.79
3/8"	1/2"	49	1.93	20	.790	20	.790	20	.79
1/2"	1/4"	50	1.57	24	.945	15	.59	25	.98
1/2"	3/8"	50	1.57	24	.945	15.3	.602	25	.98
1/2"	1/2"	50	1.57	24	.945	20	.79	25	.98
1/2"	3/4"	54	2.13	26	1.02	20	.79	30	1.18
3/4"	1/2"	59	2.32	32	1.26	20	.79	30	1.18
3/4"	3/4"	64	2.52	32	1.26	20	.79	30	1.18
1"	3/4"	68	2.68	30	1.18	20	0.79	40	1.57
1"	1"	68	2.68	30	1.18	25	0.98	40	1.57

Material: PFA, PVDF, Natural PP

90 FLARE X FLARE PANEL MOUNT

Part Number: 1D0201.10

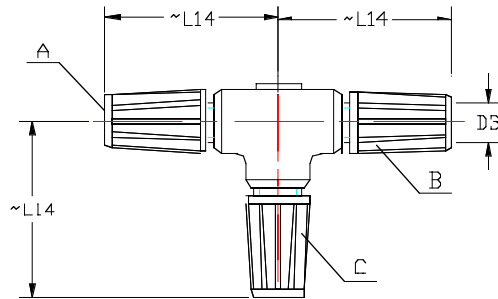


Size A	Size B	L21mm	L21 in.	L14mm	L14 in.	D1mm	D1 in.	a(mm)	a(in)
1/4"	1/4"	60	2.36	40	1.57	13	.512	6.5	.256
3/8"	3/8"	69	2.71	46	1.81	16	.63	6.5	.256
1/2"	1/2"	75	2.95	50	1.97	20	.79	6.5	.256
3/4"	3/4"	88	3.46	59	2.32	26	1.02	6.5	.256

Material: PFA, PVDF, Natural PP

TEE UNION FLARE

Part Number: 1D0300.10

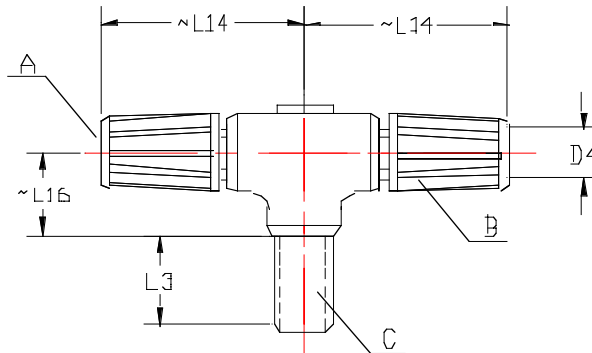


Size A	Size B	Size C	L14 mm	L14 in.	D3 mm	D3 in.
1/4"	1/4"	1/4"	40	1.57	15	.590
3/8"	3/8"	3/8"	46	1.81	20	.790
1/2"	1/2"	1/2"	50	1.97	25	.980
3/4"	3/4"	3/4"	59	2.32	30	1.18
1"	1"	1"	69	2.72	40	1.57

Material: PFA, PVDF, Natural PP

TEE FLARE X FLARE X MALE NPT THREAD

Part Number: 1D0300.32

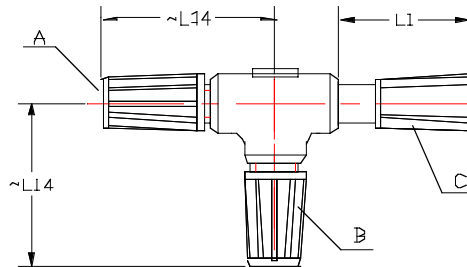


Size A	Size B	Size C	L14mm	L14 in.	L16mm	L16 in.	L3mm	L3 in.	D4 mm	D4 in.
1/4"	1/4"	1/8"	40	1.57	16	.630	10	.394	15	.59
3/8"	3/8"	1/4"	46	1.81	20	.79	15	.59	20	.79
3/8"	3/8"	3/8"	46	1.81	20	.79	15.3	.602	20	.79
3/8"	3/8"	1/2"	46	1.81	20	.79	20	.79	20	.79
1/2"	1/2"	1/4"	50	1.97	24	.945	15	.59	25	.98
1/2"	1/2"	3/8"	50	1.97	24	.945	15.3	.602	25	.98
1/2"	1/2"	1/2"	50	1.97	24	.945	20	.79	25	.98
1/2"	1/2"	3/4"	50	1.97	26	1.02	20	.79	25	.98
3/4"	3/4"	1/2"	59	2.32	32	1.26	20	.79	30	1.18
3/4"	3/4"	3/4"	59	2.52	32	1.26	20	.79	30	1.18
1"	1"	3/4"	68	2.68	30	1.18	20	.79	40	1.57
1"	1"	1"	68	2.68	30	1.18	25	.98	40	1.57

Material: PFA, PVDF, Natural PP

TEE MALE FLARE X MALE FLARE X FEMALE FLARE

Part Number: 1D0310.40



Size A	Size B	Size C	L14 mm	L14 inches	L1 mm	L1 inch
$\frac{3}{8}$ "	$\frac{3}{8}$ "	$\frac{3}{8}$ "	46	1.81	24	.945
$\frac{1}{2}$ "	$\frac{1}{2}$ "	$\frac{1}{2}$ "	50	1.97	27	1.06
$\frac{3}{4}$ "	$\frac{3}{4}$ "	$\frac{3}{4}$ "	59	2.32	27	1.06
Reducer						
$\frac{3}{8}$ "	$\frac{3}{8}$ "	$\frac{1}{2}$ "	46	1.81	24	.945

Material: PFA, PVDF, Natural PP



PRESSURE RATING

Material	Polypro	PVDF	PFA
Nominal Pressure rating	PN 10 150 psi	PN 10 150 psi	PN 10 150 psi
20 C	100%	100%	100%
30 C	80%	80%	90%
40 C	70%	70%	85%
50 C	55%	60%	80%
60 C	45%	50%	70%
70 C	35%	45%	60%
80 C	25%	40%	50%
90 C	20%	35%	45%
100 C		35%	40%
110 C		30%	35%
120 C		25%	30%
130 C		25%	30%
140 C		25%	25%
150 C			20%
160 C			15%
170 C			10%
180 C			10%
190 C			10%
200 C			10%

Multiply the % rating by the nominal rating.

The above ratings are for the fittings. Ratings may vary depending on the tubing. Ratings are based on 3/4" and smaller fittings. Consult factory for ratings for 1" components.

HEATING TIME TABLE

Tubing and Fitting Size	1/4"	3/8"	1/2"	3/4"	1"
Infrared Ring (sec)	40	50	50	50	60
Air Gun (sec)	15	25	25	25	25
Hold in mandrel (sec)	20	20	20	20	20
Cooling Time (min)	2	2	3	3	3

HOW TO ORDER

Part number creation

Part Description - Tube Size, Thread size, Reduction, Material

Tube Size OD	Code
1/4"	03
3/8"	11
1/2"	15
3/4"	20

Thread Size	Code
no thd	00
1/8"	10
1/4"	12
3/8"	14
1/2"	16
3/4"	20

Reduction for line size change only
No Reduction: 00

Material	Code
PVDF	F1
PFA	H9
PPn	B2

Example 1

1/4" PFA Union Flare x Flare

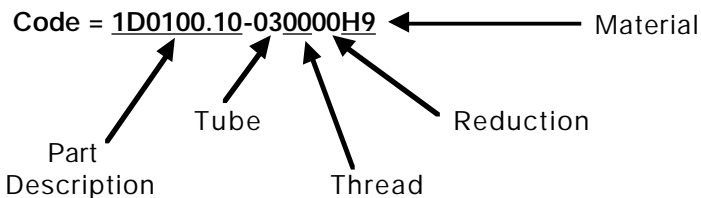
Description: 1D0100.10
 Tube Size: 1/4" = 03
 Thread Size: No thread = 00
 Reduction: No reduction = 00
 Material: PFA = H9

Code = 1D0100.10-030000H9

← Material

Part Tube Thread Reduction

Description



Example 2

1/2" PVDF Flare connection x 1/4" NPT thread

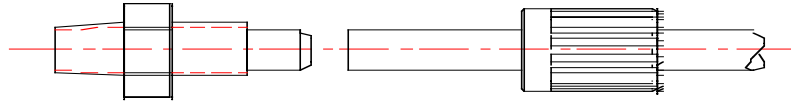
Description: 1D0100.32
 Tube Size: 1/2" = 15
 Thread Size: 1/4" = 12
 Reduction: no reduction = 00
 Material: PVDF = F1

Code = 1D0100.32-151200F1

FLARE FITTING ASSEMBLY PROCEDURE

Step 1. Remove components from the cleanroom packaging

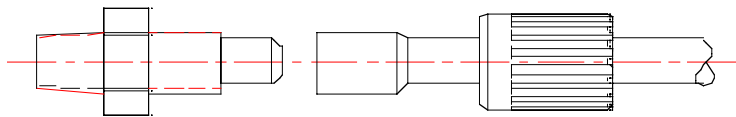
Step 2. Cut off the tubing at a right angle. Insert nut over the tube prior to flaring the tube.



Step 3. Using an approved hot air gun, hold the tubing 0.5" to 0.75" above the heater. Rotate the tube 360 degrees to heat the tube evenly. Heat the tube per the specified amount of time per the heating time table.

Step 3. Using an approved infrared heating tool, hold the tubing in the center of the rings. Heat a length of 0.5" to 0.75" from the end of the tube. Heat the tube per the specified amount of time per the heating time table.

Step 4. At the completion of the heat time push the tube over the PTFE flare mandrel to create the flare. Hold the tube over the mandrel for the specified amount of time per the time table.



Step 5. The flare is now ready for usage. The flare can now be inserted over the male flare fitting and locked into place with the knurled nut.

