

Ultra Purity with Guaranteed Ra



# Semiconductor Flow Equipment



NEUMO Ehrenberg Group



## SCiMax - Ultra Purity with Guaranteed Ra

SCiMax Semiconductor Flow Equipment is specially designed to meet the stringent standards of the semiconductor industry, delivering maximum results.

- **Maximum Guaranteed Ra**

EGMO guarantees the Ra in all internal surfaces, including bent areas.

- **Maximum Cleanability**

The multi-step cleaning cycle (degreasing, pickling, and electro-polishing) is conducted to ensure that products are cleaned with a perfect passivation layer. Final cleaning with ultra pure water is undertaken in a clean room.

- **Maximum Availability**

State-of-the-art manufacturing facilities and full marketing, distribution, and support in Europe, the USA, and Asia enables EGMO to supply semiconductor flow equipment of the highest quality standards to meet the customer's demands.

- **Full Traceability**

Each step of our production process is documented and recorded starting from raw materials through finished goods.



### Proven Expertise and Experience: The NEUMO Ehrenberg group



The NEUMO Ehrenberg Group, a diversified multi-national organization headquartered in Germany, was founded by Senator Henry Ehrenberg in 1947

The know-how, experience, and impressive track record of its companies, NEUMO, VNE and EGMO, have been garnered over four decades. Today, the Group is a leading manufacturer of worldwide stainless steel process fittings and components. The group's worldwide distribution network supports major multinational accounts.

Guaranteed Quality \* Reliable Delivery \* Competitive Pricing



NEUMO Ehrenberg Group



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## Quick Selection Guide

Product	Application	Material	ID Ra ( $\mu$ inch/ $\mu$ meter)	
<b>SciMax 40</b>	Main CDA Line, HI-VACUUM, Exhausts Lines	304L/316L	40 / 1	
<b>SciMax 30</b>	CDA, Main GN2 Lines	304L/316L	30 / 0.75	
<b>SciMax 25</b>	CDA, GN2, Instrument Air	316L	25 / 0.625	
<b>SciMax 20</b>	CDA, GN2, Breathing Air Systems	316L	20 / 0.5	
<b>SciMax 15</b>	High Purity Systems	316L	15 / 0.375	
<b>SciMax 10</b>	Ultra High Purity Systems	316L	10 / 0.25	
<b>SciMax 5</b>	Ultra High Purity Systems	316L	5 / 0.125	

\*MP - Seamless tubes are bright annealed only.



	O.D. ( $\mu$ inch)	Surface Treatment	Final Cleaning	Packing Environment Area	Packing & Capping	Marking
	Bright Finish	MP*	DI-WATER	Control Environment	PE cap + PE bag	<ul style="list-style-type: none"> <li>○ Heat number</li> <li>○ Job number</li> <li>○ Material grade</li> <li>○ Dimensions</li> <li>○ Brand name</li> </ul>
	Bright Finish	MP*/EP	DI-WATER	Class 100,000	N2 purge + PE cap + PE bag	<ul style="list-style-type: none"> <li>○ Heat number</li> <li>○ Job number</li> <li>○ Material grade</li> <li>○ Dimensions</li> <li>○ Brand name</li> </ul>
	Bright Finish	MP*/EP	DI-WATER	Class 100,000	N2 purge + PE cap + PE bag	<ul style="list-style-type: none"> <li>○ Heat number</li> <li>○ Job number</li> <li>○ Material grade</li> <li>○ Dimensions</li> <li>○ Brand name</li> </ul>
	32	MP*/EP	DI-WATER	Class 1,000	N2 purge +PE cap + PE bag	<ul style="list-style-type: none"> <li>○ Heat number</li> <li>○ Job number</li> <li>○ Material grade</li> <li>○ Dimensions</li> <li>○ Brand name</li> </ul>
	32	MP*/EP	DI-WATER	Class 1,000	N2 purge +PE cap + PE bag	<ul style="list-style-type: none"> <li>○ Heat number</li> <li>○ Job number</li> <li>○ Material grade</li> <li>○ Dimensions</li> <li>○ Brand name</li> </ul>
	32	EP	UPW 18M $\Omega$	Class 10	UHP N2 purge + PE cap + Double PE bag	<ul style="list-style-type: none"> <li>○ Heat number</li> <li>○ Job number</li> <li>○ Material grade</li> <li>○ Dimensions</li> <li>○ Brand name</li> </ul>
	32	EP	UPW 18M $\Omega$	Class 10	UHP N2 purge + PE cap + Double PE bag	<ul style="list-style-type: none"> <li>○ Heat number</li> <li>○ Job number</li> <li>○ Material grade</li> <li>○ Dimensions</li> <li>○ Brand name</li> </ul>

## Quick Selection Guide

Product	Application	Material	ID Ra ( $\mu$ inch/ $\mu$ meter)	
<b>SciMax 40</b>	Main CDA Line, HI-VACUUM, Exhausts Lines	304L/316L	40 / 1	
<b>SciMax 30</b>	CDA, Main GN2 Lines	304L/316L	30 / 0.75	
<b>SciMax 25</b>	CDA, GN2, Instrument Air	316L	25 / 0.625	
<b>SciMax 20</b>	CDA, GN2, Breathing Air Systems	316L	20 / 0.5	
<b>SciMax 15</b>	High Purity Systems	316L	15 / 0.375	
<b>SciMax 10</b>	Ultra High Purity Systems	316L	10 / 0.25	
<b>SciMax 5</b>	Ultra High Purity Systems	316L	5 / 0.125	

\*MP - Seamless tubes are bright annealed only.



	O.D. ( $\mu$ inch)	Surface Treatment	Final Cleaning	Packing Environment Area	Packing & Capping	Marking
	Bright Finish	MP*	DI-WATER	Control Environment	PE cap + PE bag	<ul style="list-style-type: none"> <li>○ Heat number</li> <li>○ Job number</li> <li>○ Material grade</li> <li>○ Dimensions</li> <li>○ Brand name</li> </ul>
	Bright Finish	MP*/EP	DI-WATER	Class 100,000	N2 purge + PE cap + PE bag	<ul style="list-style-type: none"> <li>○ Heat number</li> <li>○ Job number</li> <li>○ Material grade</li> <li>○ Dimensions</li> <li>○ Brand name</li> </ul>
	Bright Finish	MP*/EP	DI-WATER	Class 100,000	N2 purge + PE cap + PE bag	<ul style="list-style-type: none"> <li>○ Heat number</li> <li>○ Job number</li> <li>○ Material grade</li> <li>○ Dimensions</li> <li>○ Brand name</li> </ul>
	32	MP*/EP	DI-WATER	Class 1,000	N2 purge + PE cap + PE bag	<ul style="list-style-type: none"> <li>○ Heat number</li> <li>○ Job number</li> <li>○ Material grade</li> <li>○ Dimensions</li> <li>○ Brand name</li> </ul>
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	32	EP	UPW 18M $\Omega$	Class 10	UHP N2 purge + PE cap + Double PE bag	<ul style="list-style-type: none"> <li>○ Heat number</li> <li>○ Job number</li> <li>○ Material grade</li> <li>○ Dimensions</li> <li>○ Brand name</li> </ul>
	32	EP	UPW 18M $\Omega$	Class 10	UHP N2 purge + PE cap + Double PE bag	<ul style="list-style-type: none"> <li>○ Heat number</li> <li>○ Job number</li> <li>○ Material grade</li> <li>○ Dimensions</li> <li>○ Brand name</li> </ul>

## How to Order

To specify the part, choose a product line, type of material and then select the code number describing the requested part as shown below:

### Fitting:

**S M 4 0 6 L E P E L 9 0 - 0 . 2 5**

Product Line      Material      Surface Treatment      Shape      O.D. Size

Product Line	Material	Surface Treatment	Shape	O.D. Size
<b>SM40</b> - SCiMax 40	<b>6L</b> - 316L	<b>EP</b> - Electro Polish	<b>EL90</b> - Elbow 90	1/4" - 0.25
<b>SM30</b> - SCiMax 30	<b>4L</b> - 304L	<b>MP</b> - Mechanical Polish	<b>EL45</b> - Elbow 45	3/8" - 0.375
<b>SM25</b> - SCiMax 25			<b>ETEE</b> - Equal Tee	1/2" - 0.5
<b>SM20</b> - SCiMax 20			<b>ECRS</b> - Equal Cross	3/4" - 0.75
<b>SM15</b> - SCiMax 15			<b>ECAP</b> - End Cap	1" - 1.0
<b>SM10</b> - SCiMax 10				1 1/2" - 1.5
<b>SM5</b> - SCiMax 5				2" - 2.0
				2 1/2" - 2.5
				3" - 3.0
				4" - 4.0
				6" - 6.0

For Example: **SM306LEPEL45-0.5**

### Reducing Components:

**S M 4 0 4 L M P R T E E - 1 . 5 x 0 . 7 5**

Product Line      Material      Surface Treatment      Shape      O.D. Size Large      O.D. Size Small

Product Line	Material	Surface Treatment	Shape	Size Large	Size Small
<b>SM40</b> - SCiMax 40	<b>6L</b> - 316L	<b>EP</b> - Electro Polish	<b>RTEE</b> - Reducing Tee	3/8" - 0.375	1/4" - 0.25
<b>SM30</b> - SCiMax 30	<b>4L</b> - 304L	<b>MP</b> - Mechanical Polish	<b>CORD</b> - Concentric Reducer	1/2" - 0.5	3/8" - 0.375
<b>SM25</b> - SCiMax 25			<b>RCRS</b> - Reducing Cross	3/4" - 0.75	1/2" - 0.5
<b>SM20</b> - SCiMax 20				1" - 1.0	3/4" - 0.75
<b>SM15</b> - SCiMax 15				1 1/2" - 1.5	1" - 1.0
<b>SM10</b> - SCiMax 10				2" - 2.0	1 1/2" - 1.5
<b>SM5</b> - SCiMax 5				2 1/2" - 2.5	2" - 2.0
				3" - 3.0	2 1/2" - 2.5
				4" - 4.0	3" - 3.0
				6" - 6.0	4" - 4.0

For Example: **SM254LMPRTEE-2.0x0.375**



## How to Order

### COAX Fitting:

S	M	4	0	C	O	A	X	6	L	E	P	E	L	9	0	-	0	.	2	5
Product Line				Material	Surface Treatment	Shape			O.D. Size											

Product Line	Inner Tube Parameters			
	Material	Surface Treatment	Shape	O.D. Size
SM40COAX - SciMax 40 COAX	6L - 316L	EP - Electro Polish	EL90 - Elbow 90	1/4" - 0.25
SM30COAX - SciMax 30 COAX	4L - 304L	MP - Mechanical Polish	EL45 - Elbow 45	3/8" - 0.375
SM25COAX - SciMax 25 COAX			ETEE - Equal Tee	1/2" - 0.5
SM20COAX - SciMax 20 COAX			PTEE - Purge Tee	3/4" - 0.75
SM15COAX - SciMax 15 COAX			SLVE - Sleeve	1" - 1.0
SM10COAX - SciMax 10 COAX			TERM - Terminator	
SM5COAX - SciMax 5 COAX				

For Example: **SM30COAX6LEPEL45-0.5**



### COAX Reducing Components:

S	M	4	0	C	O	A	X	4	L	M	P	R	T	E	E	-	1	.	5	x	0	.	7	5
Product Line				Material	Surface Treatment	Shape			O.D. Size Large			O.D. Size Small												

Product Line	Inner Tube Parameters				
	Material	Surface Treatment	Shape	Size Large	Size Small
SM40COAX - SciMax 40 COAX	6L - 316L	EP - Electro Polish	RTEE - Reducing Tee	3/8" - 0.375	1/4" - 0.25
SM30COAX - SciMax 30 COAX	4L - 304L	MP - Mechanical Polish		1/2" - 0.5	3/8" - 0.375
SM25COAX - SciMax 25 COAX				3/4" - 0.75	1/2" - 0.5
SM20COAX - SciMax 20 COAX				1" - 1.0	3/4" - 0.75
SM15COAX - SciMax 15 COAX					
SM10COAX - SciMax 10 COAX					
SM5COAX - SciMax 5 COAX					

For Example: **SM25COAX6LMPRTEE-2.0x0.375**

## How to Order

### Tubing:

<b>S</b>	<b>M</b>	<b>4</b>	<b>0</b>	<b>6</b>	<b>L</b>	<b>E</b>	<b>P</b>	<b>W</b>	<b>E</b>	-	<b>0</b>	<b>.</b>	<b>2</b>	<b>5</b>	<b>x</b>	<b>0</b>	<b>.</b>	<b>0</b>	<b>3</b>	<b>5</b>
Product Line				Material	Surface Treatment	Type	O.D. Size				Wall Thickness Inch									

Product Line	Material	Surface Treatment	Type	O.D. Size	Wall Thickness Inch
<b>SM40</b> - SCiMax 40	<b>6L</b> - 316L	<b>EP</b> - Electro Polish	<b>WE</b> - Welded	1/4" - 0.25	0.035
<b>SM30</b> - SCiMax 30	<b>4L</b> - 304L	<b>MP*</b> - Mechanical Polish	<b>SL</b> - Seamless	3/8" - 0.375	0.035
<b>SM25</b> - SCiMax 25				1/2" - 0.5	0.049
<b>SM20</b> - SCiMax 20				1/2" - 0.5	0.065
<b>SM15</b> - SCiMax 15				3/4" - 0.75	0.065
<b>SM10</b> - SCiMax 10				1" - 1.0	0.065
<b>SM5</b> - SCiMax 5				1 1/2" - 1.5	0.065
				2" - 2.0	0.065
				2 1/2" - 2.5	0.065
				3" - 3.0	0.065
				4" - 4.0	0.083
				6" - 6.0	0.109

\*MP - Seamless tubes are bright annealed only.

For Example: **SM406LMPSL-0.25x0.035**

### COAX Tubing:

<b>S</b>	<b>M</b>	<b>4</b>	<b>0</b>	<b>C</b>	<b>O</b>	<b>A</b>	<b>X</b>	<b>6</b>	<b>L</b>	<b>E</b>	<b>P</b>	<b>W</b>	<b>E</b>	-	<b>0</b>	<b>.</b>	<b>2</b>	<b>5</b>	<b>x</b>	<b>0</b>	<b>.</b>	<b>0</b>	<b>3</b>	<b>5</b>
Product Line				Material	Surface Treatment	Type	O.D. Size				Wall Thickness Inch													

Product Line	Inner Tube Parameters					Wall Thickness Inch	
	Material	Surface Treatment	Type	O.D. Size			
<b>SM40COAX</b> - SCiMax 40 COAX	<b>6L</b> - 316L	<b>EP</b> - Electro Polish	<b>WE</b> - Welded	1/4" - 0.25	0.035		
<b>SM30COAX</b> - SCiMax 30 COAX	<b>4L</b> - 304L	<b>MP*</b> - Mechanical Polish	<b>SL</b> - Seamless	3/8" - 0.375	0.035		
<b>SM25COAX</b> - SCiMax 25 COAX				1/2" - 0.5	0.049		
<b>SM20COAX</b> - SCiMax 20 COAX				1/2" - 0.5	0.065		
<b>SM15COAX</b> - SCiMax 15 COAX				3/4" - 0.75	0.065		
<b>SM10COAX</b> - SCiMax 10 COAX				1" - 1.0	0.065		
<b>SM5COAX</b> - SCiMax 5 COAX							

\*MP - Seamless tubes are bright annealed only.

For Example: **SM40COAX6LMPSL-0.25x0.035**



## How to Order

### Sci - Connect S®

<b>S</b>	<b>M</b>	<b>4</b>	<b>0</b>	<b>C</b>	<b>S</b>	<b>6</b>	<b>L</b>	<b>E</b>	<b>P</b>	-	<b>0</b>	<b>.</b>	<b>2</b>	<b>5</b>	<b>x</b>	<b>0</b>	<b>.</b>	<b>0</b>	<b>3</b>	<b>5</b>
Product Line					Material		Surface Treatment			O.D. Size			Wall Thickness Inch							

Product Line	Material	Surface Treatment	O.D. Size	Wall Thickness Inch
<b>SM40CS</b> - SCiMax 40 Connect S	<b>6L</b> - 316L	<b>EP</b> - Electro Polish	1/4" - 0.25	0.035
<b>SM30CS</b> - SCiMax 30 Connect S	<b>4L</b> - 304L	<b>MP</b> - Mechanical Polish	3/8" - 0.375	0.035
<b>SM25CS</b> - SCiMax 25 Connect S			1/2" - 0.5	0.049
<b>SM20CS</b> - SCiMax 20 Connect S			1/2" - 0.5	0.065
<b>SM15CS</b> - SCiMax 15 Connect S			3/4" - 0.75	0.065
			1" - 1.0	0.065
			1 1/2" - 1.5	0.065
			2" - 2.0	0.065
			2 1/2" - 2.5	0.065
			3" - 3.0	0.065
			4" - 4.0	0.083

For Example: **SM40CS6LMP-0.25x0.035**



# Tubes

## TUBE Dimensions

O.D. Size Inch	Wall Thickness		Size x Wall Thickness Inch*
	t inch	t mm	
1/4"	0.035	0.89	0.25x0.035
3/8"	0.035	0.89	0.375x0.035
1/2"	0.049	1.24	0.5x0.049
1/2"	0.065	1.65	0.5x0.065
5/8"	0.049	1.24	0.625x0.049
3/4"	0.065	1.65	0.75x0.065
1"	0.065	1.65	1.0x0.065
1 1/4"	0.065	1.65	1.25x0.065
1 1/2"	0.065	1.65	1.5x0.065
2"	0.065	1.65	2.0x0.065
2 1/2"	0.065	1.65	2.5x0.065
3"	0.065	1.65	3.0x0.065
4"	0.083	2.11	4.0x0.083
6"	0.109	2.77	6.0x0.109



\* How to order - see page 6





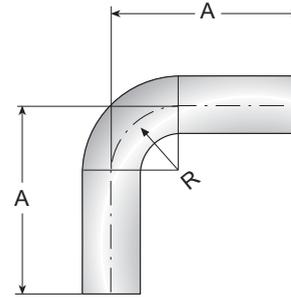
## Elbows

### EL90 - ELBOW 90°

O.D. Size Inch	Dimensions				Shape - Size*
	A inch	A mm	R inch	R mm	
1/4"	2.63	66.7	0.62	15.90	EL90-0.25
3/8"	2.63	66.7	1.00	25.40	EL90-0.375
1/2"	3.00	76.2	1.13	28.60	EL90-0.5
3/4"	3.00	76.2	1.13	28.60	EL90-0.75
1"	3.00	76.2	1.50	38.10	EL90-1.0
1 1/2"	3.75	95.3	2.25	57.20	EL90-1.5
2"	4.75	120.7	3.00	76.20	EL90-2.0
2 1/2"	5.50	139.7	3.75	95.25	EL90-2.5
3"	6.25	158.8	4.50	114.30	EL90-3.0
4"	8.00	203.2	6.00	152.40	EL90-4.0
6"	11.50	292.1	9.00	228.60	EL90-6.0

\* How to order - see page 4

\*\* For wall thickness please refer to page 8

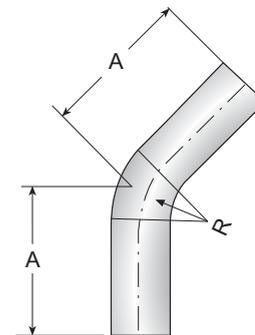


### EL45 - ELBOW 45°

O.D. Size Inch	Dimensions				Shape - Size*
	A inch	A mm	R inch	R mm	
1/4"	2.000	50.8	0.62	15.90	EL45-0.25
3/8"	2.000	50.8	1.00	25.40	EL45-0.375
1/2"	2.250	57.2	1.13	28.60	EL45-0.5
3/4"	2.250	57.2	1.13	28.60	EL45-0.75
1"	2.250	57.2	1.50	38.10	EL45-1.0
1 1/2"	2.500	63.5	2.25	57.20	EL45-1.5
2"	3.000	76.2	3.00	76.20	EL45-2.0
2 1/2"	3.375	85.7	3.75	95.25	EL45-2.5
3"	3.625	92.1	4.50	114.30	EL45-3.0
4"	4.500	114.3	6.00	152.40	EL45-4.0
6"	6.250	158.8	9.00	228.60	EL45-6.0

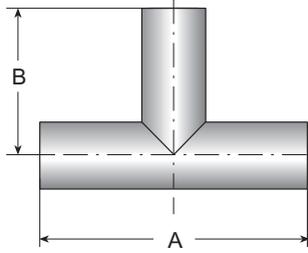
\* How to order - see page 4

\*\* For wall thickness please refer to page 8





## Tees



### ETEE - EQUAL TEE

O.D. Size Inch	Dimensions				Shape - Size*
	A in	A mm	B inch	B mm	
1/4"	3.500	88.90	1.750	44.50	ETEE-0.25
3/8"	3.500	88.90	1.750	44.50	ETEE-0.375
1/2"	3.750	95.25	1.875	47.60	ETEE-0.5
3/4"	4.000	101.60	2.000	50.80	ETEE-0.75
1"	4.250	108.00	2.125	54.00	ETEE-1.0
1 1/2"	4.750	120.60	2.375	60.30	ETEE-1.5
2"	5.750	146.00	2.875	73.00	ETEE-2.0
2 1/2"	6.250	158.75	3.125	79.40	ETEE-2.5
3"	6.750	171.40	3.375	85.70	ETEE-3.0
4"	8.250	209.60	4.125	104.80	ETEE-4.0
6"	11.25	285.80	5.625	142.90	ETEE-6.0

\* How to order - see page 4

\*\* For wall thickness please refer to page 8



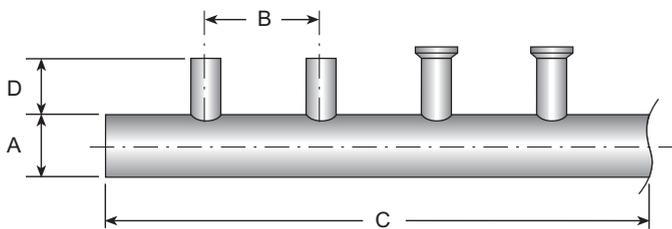
## Manifolds (Multi Tee)

EGMO develops, designs and manufactures a wide range of stainless steel manifolds by using advanced welding and tube forming technologies.

All around quality and meticulous inspection ensures that every manifold will be of the highest quality and in total compliance with SEMI standards.

### Advantages

- o Minimum welds per manifold
- o Advanced welding technology - improved seam surface
- o Electropolish and passivation after welding
- o Short installation time - Cost reduction
- o Various outlets: weld, clamp, diaphragm valve



### MANIFOLD

A	B	C	D	
O.D.	Min. Pitch	Total Length	Branch Height	Branch O.D.
1/2	70	According to Request (Max. 6m)	33	1/2
3/4			35	≤ 3/4
1			38	≤ 1
1 1/2			41	≤ 1 1/2
2	45		≤ 2	
2 1/2	48		≤ 2 1/2	
3	110	52	≤ 3	
4	140	55	≤ 4	

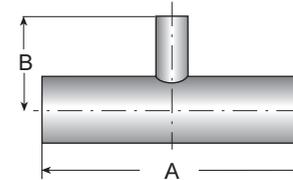
**Note:** In case of reducing branch or other outlets, B and D may change.



## Tees

### RTEE - REDUCING TEE

O.D. Size Inch	Dimensions				Shape - Size*
	A inch	A mm	B inch	B mm	
3/8" x 1/4"	3.500	88.90	1.750	44.45	RTEE-0.375x0.25
1/2" x 1/4"	3.750	95.30	1.875	47.65	RTEE-0.5x0.25
1/2" x 3/8"	3.750	95.30	1.875	47.65	RTEE-0.5x0.375
3/4" x 1/4"	4.000	101.60	2.000	50.80	RTEE-0.75x0.25
3/4" x 3/8"	4.000	101.60	2.000	50.80	RTEE-0.75x0.375
3/4" x 1/2"	4.000	101.60	2.000	50.80	RTEE-0.75x0.5
1" x 1/4"	4.250	108.00	2.125	54.00	RTEE-1.0x0.25
1" x 3/8"	4.250	108.00	2.125	54.00	RTEE-1.0x0.375
1" x 1/2"	4.250	108.00	2.125	54.00	RTEE-1.0x0.5
1" x 3/4"	4.250	108.00	2.125	54.00	RTEE-1.0x0.75
1 1/2" x 1/4"	4.750	120.70	2.375	60.35	RTEE-1.5x0.25
1 1/2" x 3/8"	4.750	120.70	2.375	60.35	RTEE-1.5x0.375
1 1/2" x 1/2"	4.750	120.70	2.375	60.35	RTEE-1.5x0.5
1 1/2" x 3/4"	4.750	120.70	2.375	60.35	RTEE-1.5x0.75
1 1/2" x 1"	4.750	120.70	2.375	60.35	RTEE-1.5x1.0
2" x 1/4"	5.750	146.00	2.625	66.70	RTEE-2.0x0.25
2" x 3/8"	5.750	146.00	2.625	66.70	RTEE-2.0x0.375
2" x 1/2"	5.750	146.00	2.625	66.70	RTEE-2.0x0.5
2" x 3/4"	5.750	146.00	2.625	66.70	RTEE-2.0x0.75
2" x 1"	5.750	146.00	2.625	66.70	RTEE-2.0x1.0
2" x 1 1/2"	5.750	146.00	2.625	66.70	RTEE-2.0x1.5
2 1/2" x 1/4"	6.250	158.80	2.875	73.00	RTEE-2.5x0.25
2 1/2" x 3/8"	6.250	158.80	2.875	73.00	RTEE-2.5x0.375
2 1/2" x 1/2"	6.250	158.80	2.875	73.00	RTEE-2.5x0.5
2 1/2" x 3/4"	6.250	158.80	2.875	73.00	RTEE-2.5x0.75
2 1/2" x 1"	6.250	158.80	2.875	73.00	RTEE-2.5x1.0
2 1/2" x 1 1/2"	6.250	158.80	2.875	73.00	RTEE-2.5x1.5
2 1/2" x 2"	6.250	158.80	2.875	73.00	RTEE-2.5x2.0
3" x 1/4"	6.750	171.50	3.125	79.40	RTEE-3.0x0.25
3" x 3/8"	6.750	171.50	3.125	79.40	RTEE-3.0x0.375
3" x 1/2"	6.750	171.50	3.125	79.40	RTEE-3.0x0.5
3" x 3/4"	6.750	171.50	3.125	79.40	RTEE-3.0x0.75
3" x 1"	6.750	171.50	3.125	79.40	RTEE-3.0x1.0
3" x 1 1/2"	6.750	171.50	3.125	79.40	RTEE-3.0x1.5
3" x 2"	6.750	171.50	3.125	79.40	RTEE-3.0x2.0
3" x 2 1/2"	6.750	171.50	3.125	79.40	RTEE-3.0x2.5
4" x 1/4"	8.250	209.60	3.625	92.10	RTEE-4.0x0.25
4" x 3/8"	8.250	209.60	3.625	92.10	RTEE-4.0x0.375
4" x 1/2"	8.250	209.60	3.625	92.10	RTEE-4.0x0.5
4" x 3/4"	8.250	209.60	3.625	92.10	RTEE-4.0x0.75
4" x 1"	8.250	209.60	3.625	92.10	RTEE-4.0x1.0
4" x 1 1/2"	8.250	209.60	3.625	92.10	RTEE-4.0x1.5
4" x 2"	8.250	209.60	3.875	98.40	RTEE-4.0x2.0
4" x 2 1/2"	8.250	209.60	3.875	98.40	RTEE-4.0x2.5
4" x 3"	8.250	209.60	3.875	98.40	RTEE-4.0x3.0
6" x 1/4"	11.250	285.80	4.785	123.80	RTEE-6.0x0.25
6" x 3/8"	11.250	285.80	4.785	123.80	RTEE-6.0x0.375
6" x 1/2"	11.250	285.80	4.785	123.80	RTEE-6.0x0.5
6" x 3/4"	11.250	285.80	4.785	123.80	RTEE-6.0x0.75
6" x 1"	11.250	285.80	4.785	123.80	RTEE-6.0x1.0
6" x 1 1/2"	11.250	285.80	4.785	123.80	RTEE-6.0x1.5
6" x 2"	11.250	285.80	4.785	123.80	RTEE-6.0x2.0
6" x 2 1/2"	11.250	285.80	4.785	123.80	RTEE-6.0x2.5
6" x 3"	11.250	285.80	4.785	123.80	RTEE-6.0x3.0
6" x 4"	11.250	285.80	5.625	130.20	RTEE-6.0x4.0

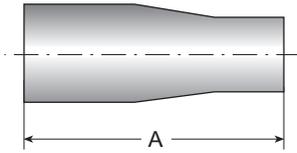


\* How to order - see page 4

\*\* For wall thickness please refer to page 8



## Reducers



### CORD - CONCENTRIC REDUCER

O.D. Size Inch	Dimensions		Shape - Size*
	A inch	A mm	
3/8" x 1/4"	1.625	41.28	CORD-0.375x0.25
1/2" x 1/4"	1.875	47.63	CORD-0.5x0.25
1/2" x 3/8"	1.875	47.63	CORD-0.5x0.375
3/4" x 1/4"	1.875	47.63	CORD-0.75x0.25
3/4" x 3/8"	1.875	47.63	CORD-0.75x0.375
3/4" x 1/2"	2.125	53.97	CORD-0.75x0.5
1" x 1/4"	2.125	53.97	CORD-1.0x0.25
1" x 3/8"	2.125	53.97	CORD-1.0x0.375
1" x 1/2"	2.250	57.15	CORD-1.0x0.5
1" x 3/4"	2.125	53.97	CORD-1.0x0.75
1 1/2" x 1/4"	2.250	57.15	CORD-1.5x0.25
1 1/2" x 3/8"	2.250	57.15	CORD-1.5x0.375
1 1/2" x 1/2"	2.250	57.15	CORD-1.5x0.5
1 1/2" x 3/4"	2.250	57.15	CORD-1.5x0.75
1 1/2" x 1"	2.250	57.15	CORD-1.5x1.0
2" x 1/4"	2.750	69.85	CORD-2.0x0.25
2" x 3/8"	2.750	69.85	CORD-2.0x0.375
2" x 1/2"	2.750	69.85	CORD-2.0x0.5
2" x 3/4"	2.750	69.85	CORD-2.0x0.75
2" x 1"	2.500	63.50	CORD-2.0x1.0
2" x 1 1/2"	2.250	57.15	CORD-2.0x1.5
2 1/2" x 1/2"	3.750	95.25	CORD-2.5x0.5
2 1/2" x 3/4"	3.500	88.90	CORD-2.5x0.75
2 1/2" x 1"	3.250	82.55	CORD-2.5x1.0
2 1/2" x 1 1/2"	7.250	184.20	CORD-2.5x1.5
2 1/2" x 2"	5.500	139.70	CORD-2.5x2.0
3" x 1/2"	6.625	117.48	CORD-3.0x0.5
3" x 3/4"	4.500	114.30	CORD-3.0x0.75
3" x 1"	4.250	108.00	CORD-3.0x1.0
3" x 1 1/2"	9.250	235.00	CORD-3.0x1.5
3" x 2"	7.500	190.50	CORD-3.0x2.0
3" x 2 1/2"	5.500	139.70	CORD-3.0x2.5
4" x 1/2"	5.500	139.70	CORD-4.0x0.5
4" x 3/4"	5.250	133.25	CORD-4.0x0.75
4" x 1"	5.000	127.00	CORD-4.0x1.0
4" x 1 1/2"	4.625	117.48	CORD-4.0x1.5
4" x 2"	11.750	298.45	CORD-4.0x2.0
4" x 2 1/2"	9.750	247.65	CORD-4.0x2.5
4" x 3"	7.750	196.85	CORD-4.0x3.0
6" x 1"	7.250	184.15	CORD-6.0x1.0
6" x 1 1/2"	7.000	177.80	CORD-6.0x1.5
6" x 2"	6.500	165.10	CORD-6.0x2.0
6" x 2 1/2"	6.000	152.40	CORD-6.0x2.5
6" x 3"	10.000	254.00	CORD-6.0x3.0
6" x 4"	10.000	254.00	CORD-6.0x4.0

\* How to order - see page 4

\*\* For wall thickness please refer to page 8



## End Caps

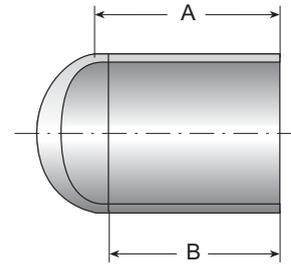
### ECAP - End Cap

O.D. Size Inch	Dimensions		Shape - Size*
	A inch	A mm	
1/4"	1.000	25.40	ECAP-0.25
3/8"	1.000	25.40	ECAP-0.375
1/2"	1.500	38.10	ECAP-0.5
3/4"	1.500	38.10	ECAP-0.75
1"	1.500	38.10	ECAP-1.0
1 1/2"	1.500	38.10	ECAP-1.5
2"	1.500	38.10	ECAP-2.0
2 1/2"	1.500	38.10	ECAP-2.5
3"	1.750	44.50	ECAP-3.0
4"	2.000	50.80	ECAP-4.0
6"	2.500	63.50	ECAP-6.0

**Note:** Minimum I.D. control portion length, *B*, is 0.375 in. (9.53 mm) for all sizes.

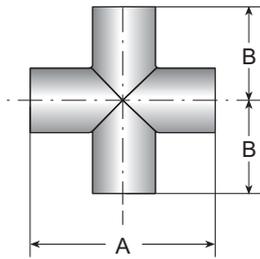
\* **How to order** - see page 4

\*\* For wall thickness please refer to page 8





## Crosses



### ECRS - EQUAL CROSS

O.D. Size Inch	Dimensions				Shape - Size*
	A inch	A mm	B inch	B mm	
1/4"	3.500	88.90	1.750	44.50	ECRS-0.25
3/8"	3.500	88.90	1.750	44.50	ECRS-0.375
1/2"	3.750	95.25	1.875	47.60	ECRS-0.5
3/4"	4.000	101.60	2.000	50.80	ECRS-0.75
1"	4.250	108.00	2.125	54.00	ECRS-1.0
1 1/2"	4.750	120.60	2.375	60.30	ECRS-1.5
2"	5.750	146.00	2.875	73.00	ECRS-2.0
2 1/2"	6.250	158.80	3.125	79.40	ECRS-2.5
3"	6.750	171.40	3.375	85.70	ECRS-3.0
4"	8.250	209.60	4.125	104.80	ECRS-4.0
6"	11.25	285.80	5.625	142.90	ECRS-6.0

\* **How to order** - see page 4

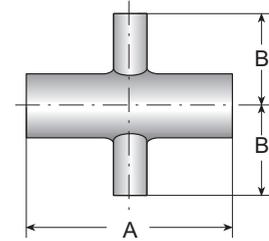
\*\* For wall thickness please refer to page 8



## Crosses

### RCRS - REDUCING CROSS

O.D. Size Inch	Dimensions				Shape - Size*
	A inch	A mm	B inch	B mm	
3/8" x 1/4"	3.500	88.90	1.750	44.45	RCRS-0.375x0.25
1/2" x 1/4"	3.750	95.30	1.875	47.65	RCRS-0.5x0.25
1/2" x 3/8"	3.750	95.30	1.875	47.65	RCRS-0.5x0.375
3/4" x 1/4"	4.000	101.60	2.000	50.80	RCRS-0.75x0.25
3/4" x 3/8"	4.000	101.60	2.000	50.80	RCRS-0.75x0.375
3/4" x 1/2"	4.000	101.60	2.000	50.80	RCRS-0.75x0.5
1" x 1/4"	4.250	108.00	2.125	54.00	RCRS-1.0x0.25
1" x 3/8"	4.250	108.00	2.125	54.00	RCRS-1.0x0.375
1" x 1/2"	4.250	108.00	2.125	54.00	RCRS-1.0x0.5
1" x 3/4"	4.250	108.00	2.125	54.00	RCRS-1.0x0.75
1 1/2" x 1/4"	4.750	120.70	2.375	60.35	RCRS-1.5x0.25
1 1/2" x 3/8"	4.750	120.70	2.375	60.35	RCRS-1.5x0.375
1 1/2" x 1/2"	4.750	120.70	2.375	60.35	RCRS-1.5x0.5
1 1/2" x 3/4"	4.750	120.70	2.375	60.35	RCRS-1.5x0.75
1 1/2" x 1"	4.750	120.70	2.375	60.35	RCRS-1.5x1.0
2" x 1/4"	5.750	146.00	2.625	66.70	RCRS-2.0x0.25
2" x 3/8"	5.750	146.00	2.625	66.70	RCRS-2.0x0.375
2" x 1/2"	5.750	146.00	2.625	66.70	RCRS-2.0x0.5
2" x 3/4"	5.750	146.00	2.625	66.70	RCRS-2.0x0.75
2" x 1"	5.750	146.00	2.625	66.70	RCRS-2.0x1.0
2" x 1 1/2"	5.750	146.00	2.625	66.70	RCRS-2.0x1.5
2 1/2" x 1/4"	6.250	158.80	2.875	73.00	RCRS-2.5x0.25
2 1/2" x 3/8"	6.250	158.80	2.875	73.00	RCRS-2.5x0.375
2 1/2" x 1/2"	6.250	158.80	2.875	73.00	RCRS-2.5x0.5
2 1/2" x 3/4"	6.250	158.80	2.875	73.00	RCRS-2.5x0.75
2 1/2" x 1"	6.250	158.80	2.875	73.00	RCRS-2.5x1.0
2 1/2" x 1 1/2"	6.250	158.80	2.875	73.00	RCRS-2.5x1.5
2 1/2" x 2"	6.250	158.80	2.875	73.00	RCRS-2.5x2.0
3" x 1/4"	6.750	171.50	3.125	79.40	RCRS-3.0x0.25
3" x 3/8"	6.750	171.50	3.125	79.40	RCRS-3.0x0.375
3" x 1/2"	6.750	171.50	3.125	79.40	RCRS-3.0x0.5
3" x 3/4"	6.750	171.50	3.125	79.40	RCRS-3.0x0.75
3" x 1"	6.750	171.50	3.125	79.40	RCRS-3.0x1.0
3" x 1 1/2"	6.750	171.50	3.125	79.40	RCRS-3.0x1.5
3" x 2"	6.750	171.50	3.125	79.40	RCRS-3.0x2.0
3" x 2 1/2"	6.750	171.50	3.125	79.40	RCRS-3.0x2.5
4" x 1/4"	8.250	209.60	3.625	92.10	RCRS-4.0x0.25
4" x 3/8"	8.250	209.60	3.625	92.10	RCRS-4.0x0.375
4" x 1/2"	8.250	209.60	3.625	92.10	RCRS-4.0x0.5
4" x 3/4"	8.250	209.60	3.625	92.10	RCRS-4.0x0.75
4" x 1"	8.250	209.60	3.625	92.10	RCRS-4.0x1.0
4" x 1 1/2"	8.250	209.60	3.625	92.10	RCRS-4.0x1.5
4" x 2"	8.250	209.60	3.875	98.40	RCRS-4.0x2.0
4" x 2 1/2"	8.250	209.60	3.875	98.40	RCRS-4.0x2.5
4" x 3"	8.250	209.60	3.875	98.40	RCRS-4.0x3.0
6" x 1/4"	11.250	285.80	4.785	123.80	RCRS-6.0x0.25
6" x 3/8"	11.250	285.80	4.785	123.80	RCRS-6.0x0.375
6" x 1/2"	11.250	285.80	4.785	123.80	RCRS-6.0x0.5
6" x 3/4"	11.250	285.80	4.785	123.80	RCRS-6.0x0.75
6" x 1"	11.250	285.80	4.785	123.80	RCRS-6.0x1.0
6" x 1 1/2"	11.250	285.80	4.785	123.80	RCRS-6.0x1.5
6" x 2"	11.250	285.80	4.785	123.80	RCRS-6.0x2.0
6" x 2 1/2"	11.250	285.80	4.785	123.80	RCRS-6.0x2.5
6" x 3"	11.250	285.80	4.785	123.80	RCRS-6.0x3.0
6" x 4"	11.250	285.80	5.625	130.20	RCRS-6.0x4.0



\* How to order - see page 4

\*\* For wall thickness please refer to page 8

## COAX - Tubes



### TUBES

O.D. Size Inch		Dimensions				Size x Wall Thickness Inch*
Inner Tube	Outer Tube	Wall Thickness Inner Tube		Wall Thickness Outer Tube		Inner Tube
		t1 inch	t1 mm	t2 inch	t2 mm	
1/4" x 1/2"		0.035	0.89	0.049	1.24	0.25x0.035
3/8" x 5/8"		0.035	0.89	0.049	1.24	0.375x0.035
1/2" x 3/4"		0.049	1.24	0.065	1.65	0.5x0.049
3/4" x 1"		0.065	1.65	0.065	1.65	0.75x0.065
1" x 1 1/4"		0.065	1.65	0.065	1.65	1.0x0.065

\* How to order - see page 6



## COAX - Elbows

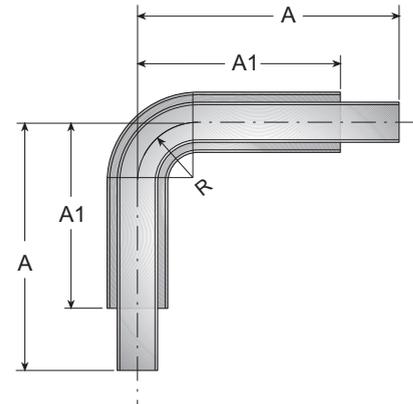
### EL90 - ELBOW 90°

O.D. Size Inch		Dimensions						Shape - Size*
Inner Tube	Outer Tube	A inch	A mm	A1 inch	A1 mm	R inch	R mm	Inner Tube
1/4"	x 1/2"	4.0	101.6	3.0	76.2	1.12	28.6	EL90-0.25
3/8"	x 5/8"	4.0	101.6	3.0	76.2	1.12	28.6	EL90-0.375
1/2"	x 3/4"	4.0	101.6	3.0	76.2	1.12	28.6	EL90-0.5
*** 3/4"	x 1"	4.0	81.4	2.3	59.4	1.12	28.6	EL90-0.75
*** 1"	x 1 1/4"	4.5	102.2	2.6	66.2	1.5	38.1	EL90-1.0
*** 1 1/2"	x 2"	4.8	123.3	3.4	87.3	2.2	57.2	EL90-1.5

\* How to order - see page 5

\*\* For wall thickness please refer to page 16

\*\*\* External elbow welded from segments

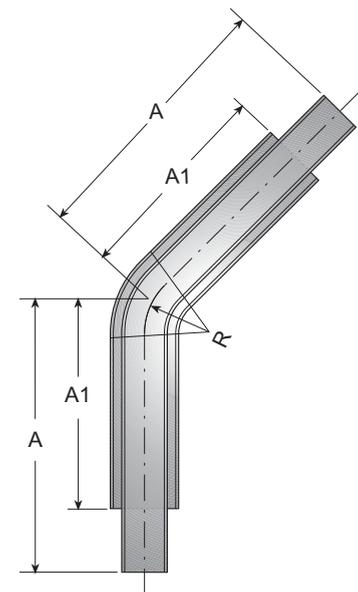


### EL45 - ELBOW 45°

O.D. Size Inch		Dimensions						Shape - Size*
Inner Tube	Outer Tube	A inch	A mm	A1 inch	A1 mm	R inch	R mm	Inner Tube
1/4"	x 1/2"	3.25	82.6	2.25	57.2	1.12	28.6	EL45-0.25
3/8"	x 5/8"	3.25	82.6	2.25	57.2	1.12	28.6	EL45-0.375
1/2"	x 3/4"	3.25	82.6	2.25	57.2	1.12	28.6	EL45-0.5
3/4"	x 1"	3.25	82.6	2.25	57.2	1.12	28.6	EL45-0.75
1"	x 1 1/4"	3.75	95.3	2.25	57.2	1.5	38.1	EL45-1.0

\* How to order - see page 5

\*\* For wall thickness please refer to page 16

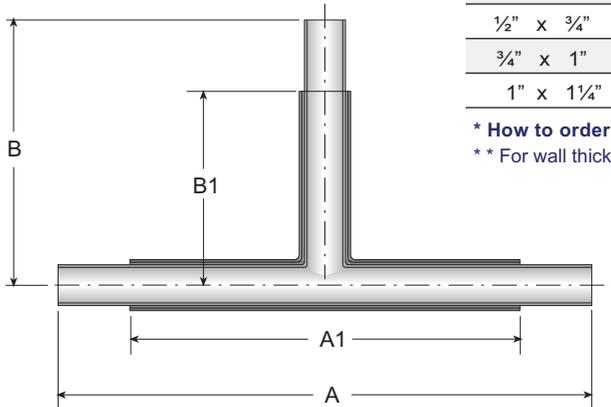




## COAX - Tees

### ETEE - EQUAL TEE

O.D. Size Inch		Dimensions								Shape - Size*
Inner Tube	Outer Tube	A inch	A mm	A1 inch	A1 mm	B inch	B mm	B1 inch	B1 mm	Inner Tube
1/4"	1/2"	5.75	146.05	3.75	95.25	2.87	73.00	1.87	47.60	ETEE-0.25
3/8"	5/8"	5.75	146.05	3.75	95.25	2.87	73.00	1.87	47.60	ETEE-0.375
1/2"	3/4"	6.00	152.40	4.00	101.60	3.00	76.20	2.00	50.80	ETEE-0.5
3/4"	1"	6.25	158.80	4.25	108.00	3.13	79.50	2.12	54.00	ETEE-0.75
1"	1 1/4"	7.25	184.20	4.25	108.00	3.13	79.50	2.12	54.00	ETEE-1.0

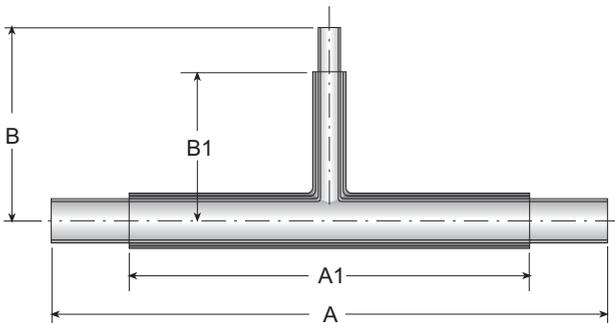


\* **How to order** - see page 5  
 \*\* For wall thickness please refer to page 16

### RTEE - REDUCING TEE

O.D. Size Inch		Reducing O.D. Size Inch		Dimensions								Shape - Size*
Inner Tube	Outer Tube	Inner Tube	Outer Tube	A inch	A mm	A1 inch	A1 mm	B inch	B mm	B1 inch	B1 mm	Inner Tube
3/8"	5/8"	1/4"	1/2"	5.75	146.1	3.75	95.3	2.87	73.2	1.87	47.6	RTEE-0.375x0.625
1/2"	3/4"	1/4"	1/2"	6.00	152.4	4.00	101.6	3.00	76.2	2.00	50.8	RTEE-0.5x0.375
1/2"	3/4"	3/8"	5/8"	6.00	152.4	4.00	101.6	3.00	76.2	2.00	50.8	RTEE-0.5x0.375
3/4"	1"	1/4"	1/2"	6.25	158.8	4.25	108.0	3.12	79.4	2.12	54.0	RTEE-0.375x1.0
3/4"	1"	3/8"	5/8"	6.25	158.8	4.25	108.0	3.12	79.4	2.12	54.0	RTEE-0.375x1.0
1"	1 1/4"	1/2"	3/4"	7.25	184.2	4.25	108.0	3.12	79.4	2.12	54.0	RTEE-1.0x1.25
1"	1 1/4"	1/4"	1/2"	7.25	184.2	4.25	108.0	3.12	79.4	2.12	54.0	RTEE-1.0x1.25
1"	1 1/4"	3/8"	5/8"	7.25	184.2	4.25	108.0	3.12	79.4	2.12	54.0	RTEE-1.0x1.25
1"	1 1/4"	1/2"	3/4"	7.25	184.2	4.25	108.0	3.12	79.4	2.12	54.0	RTEE-1.0x1.25
1"	1 1/4"	3/4"	1"	7.25	184.2	4.25	108.0	3.12	79.4	2.12	54.0	RTEE-1.0x1.25

\* **How to order** - see page 5  
 \*\* For wall thickness please refer to page 16





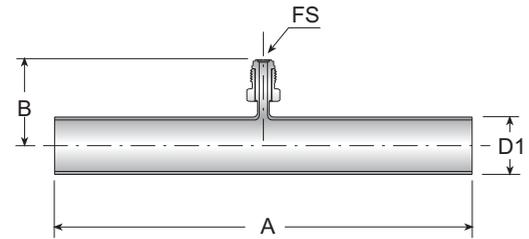
# COAX

## PTEE - PURGE TEE

O.D. Size Inch		Dimensions							Shape - Size*
Inner Tube	Outer Tube	D1 inch	D1 mm	A inch	A mm	B inch	B mm	FS	
1/4"	x 1/2"	1/2"	0.25	3.75	95.25	1.87	47.65	0.25	PTEE-0.25
3/8"	x 5/8"	5/8"	0.62	3.75	95.25	6.00	152.4	0.25	PTEE-0.375
1/2"	x 3/4"	3/4"	0.75	4.00	101.60	2.00	50.80	0.25	PTEE-0.5
3/4"	x 1"	1"	1.00	4.25	108.00	2.12	54.00	0.25	PTEE-0.75
1"	x 1 1/4"	1 1/4"	1.25	4.25	108.00	9.25	241.3	0.25	PTEE-1.0

\* How to order - see page 5

\*\* For wall thickness please refer to page 16

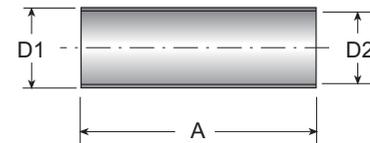


## SLVE - SLEEVE

O.D. Size Inch		Dimensions						Shape - Size*
Outer Tube	D1 inch	D1 mm	D2 inch	D2 mm	A inch	A mm		
1/2"	0.63	15.87	0.53	13.40	2.50	63.50		SLVE-0.5
5/8"	0.75	19.00	0.63	16.10	2.50	63.50		SLVE-0.625
3/4"	0.87	22.00	0.76	19.18	2.50	63.50		SLVE-0.75
1"	1.14	29.00	1.02	26.00	3.50	88.90		SLVE -1.0
1 1/4"	1.38	35.00	1.26	32.00	3.50	88.90		SLVE-1.25

\* How to order - see page 5

\*\* For wall thickness please refer to page 16

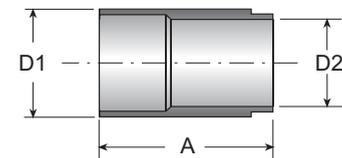


## TERM - TERMINATOR

O.D. Size Inch		Dimensions						Shape - Size*
Inner Tube	Outer Tube	D1 inch	D1 mm	D2 inch	D2 mm	A inch	A mm	
1/4"	x 1/2"	0.50	12.7	0.26	6.60	1.87	47.60	TERM-0.25
3/8"	x 5/8"	0.63	15.9	0.38	9.70	2.13	54.00	TERM-0.375
1/2"	x 3/4"	0.75	19.1	0.51	12.90	2.13	54.00	TERM-0.5
3/4"	x 1"	1.00	25.4	0.76	19.30	2.13	54.00	TERM-0.75
1"	x 1 1/4"	1.25	31.8	1.00	25.60	2.13	54.00	TERM-1.0

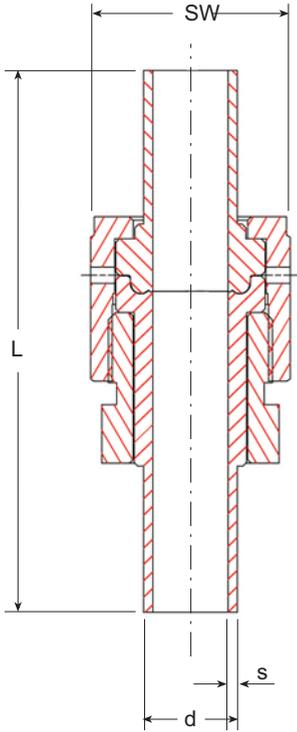
\* How to order - see page 5

\*\* For wall thickness please refer to page 16





## SCi - Connect S®

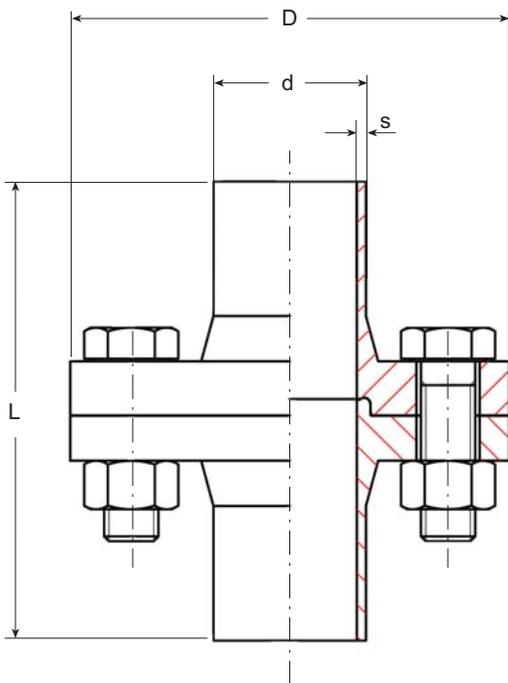


Seals Without Gasket

### SCi - Connect S®

O.D. Size Inch	Dimensions				Size*
	d mm	s mm	L mm	SW mm	
1/4"	6.35	0.89	71.00	19.00	0.25
1/2"	12.70	1.24	74.00	27.00	0.5
3/4"	19.05	1.65	91.00	38.00	0.75
1"	25.40	1.65	99.00	44.50	1.0

\* How to order - see page 7



Seals Without Gasket

### SCi - Connect S®

O.D. Size Inch	Dimensions				Size*
	d mm	s mm	L mm	D mm	
1 1/2"	38.10	1.65	102.00	105.00	1.5
2"	50.80	1.65	106.00	125.00	2.0
2 1/2"	63.50	1.65	106.00	135.00	2.5
3"	76.20	1.65	130.00	145.00	3.0
4"	101.60	2.11	134.00	180.00	4.0

\* How to order - see page 7



## Technical Information

### Tube Tolerances

Tube specifications, ASTM A269/ A270/ A632

Tubing Diameter	Wall Thickness	OD Dimensional Specifications	Length	Wall Thickness Tolerance
		ASTM Spec.	ASTM Spec.	ASTM Spec.
1/4"	.035"	+ .004"/- .000"	-0+1/8"	+/-10%
3/8"	.035"	+ .004"/- .000"	-0+1/8"	+/-10%
1/2"	.049"	+ .005"/- .005"	-0+1/8"	+/-10%
3/4"	.065"	+ .005"/- .005"	-0+1/8"	+/-10%
1"	.065"	+ .005"/- .005"	-0+1/8"	+/-10%
1 1/2"	.065"	+ .010"/- .010"	-0+1/8"	+/-10%
2"	.065"	+ .010"/- .010"	-0+1/8"	+/-10%
2 1/2"	.065"	+ .010"/- .010"	-0+1/8"	+/-10%
3"	.065"	+ .010"/- .010"	-0+1/8"	+/-10%
4"	.083"	+ .015"/- .015"	-0+1/8"	+/-10%
6"	.109"	+ .030"/- .030"	-0+1/8"	+/-10%

### Material and Properties

#### Chemical Composition for Various Stainless Steels

Material	Carbon	Manganese	Silicone	Chromium	Nickel	Molybdenum	Phosphorus	Sulfur
<b>304</b>	≤0.08	≤2.00	≤1.00	18.0-20.0	8.0-10.5	-	≤0.045	≤0.03
<b>304L</b>	≤0.03	≤2.00	≤1.00	18.0-20.0	8.0-12.0	-	≤0.045	≤0.03
<b>316</b>	≤0.08	≤2.00	≤1.00	16.0-18.0	10.0-14.0	2.0-3.0	≤0.045	≤0.03
<b>316L</b>	≤0.03	≤2.00	≤1.00	16.0-18.0	10.0-14.0	2.0-3.0	≤0.045	≤0.03

#### Operating Pressures of Stainless Steel Tubing

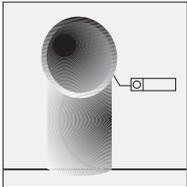
Size OD Tube	Nom. Wall	AISI 316L (1.4404)			AISI 304L (1.4306)		
		Working Pressure (psi/bar)	Yield Pressure (psi/bar)	Burst Pressure (psi/bar)	Working Pressure (psi/bar)	Yield Pressure (psi/bar)	Burst Pressure (psi/bar)
1/4"	.035	5.941/410	8.436/582	20.400/1.407	6.250/430	9.200/665	21.200/1.500
3/8"	.035	3.835/265	5.445/375	13.200/910	4.150/285	6.750/465	14.500/1.000
1/2"	.049	4.550/314	6.500/448	18.200/1.255	4.880/336	7.800/538	19.500/1.344
3/4"	.065	3.030/209	4.300/296	12.100/834	3.250/224	5.200/358	13.000/896
1"	.065	2.280/157	3.300/227	9.100/627	2.440/168	3.900/269	9.800/896
1 1/2"	.065	1.520/105	2.200/152	6.100/421	1.630/112	2.600/179	6.500/448
2"	.065	1.140/79	1.600/110	4.600/317	1.220/84	2.000/138	4.900/338
2 1/2"	.065	910/63	1.300/90	3.600/248	980/68	1.600/110	3.900/269
3"	.065	760/52	1.100/76	3.000/207	810/56	1.300/90	3.300/228
4"	.083	730/50	1.000/69	2.900/200	780/54	1.200/83	3.100/214
6"	.109	640/44	900/62	2.500/172	680/47	1.100/76	2.700/186

## Fitting Tolerances

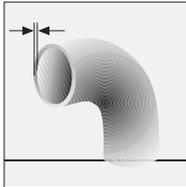
Nominal OD Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"
O.D. Tolerance	±.005	±.005	±.005	±.005	±.005	±.008	±.008	±.010	±.010	±.015	±.030
Nominal Wall Thickness	.035	.035	.049	.065	.065	.065	.065	.065	.065	.083	.109
Wall Thickness Tolerance before EP	+ .003 / - .004	+ .003 / - .004	+ .005 / - .008	+ .005 / - .008	+ .005 / - .008	+ .005 / - .008	+ .005 / - .008	+ .005 / - .008	+ .005 / - .008	+ .008 / - .010	+ .015 / - .015
Wall Thickness Tolerance after EP	+ .005 / - .010	+ .005 / - .010	+ .005 / - .010	+ .005 / - .010	+ .005 / - .010	+ .005 / - .010	+ .005 / - .010	+ .005 / - .010	+ .005 / - .010	+ .008 / - .012	+ .015 / - .017
Control Length <b>(C)</b>	.750	.750	.750	.750	.750	.750	.750	.750	.750	.750	.750
Tangent Length <b>(T)</b>	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.750	2.000	2.500
Squareness Face to Tangent <b>(B)</b>	.005	.005	.005	.005	.008	.008	.008	.010	.016	.016	.030
Off Angle <b>(O)</b>	.009	.012	.014	.018	.025	.034	.043	.054	.068	.086	.135
Off Plane <b>(P)</b>	±.030	±.030	±.030	±.030	±.030	±.050	±.050	±.050	±.050	±.060	±.060

\* All dimensions are in Inches

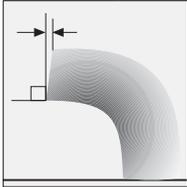
• Roundness



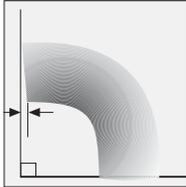
• Wall Thickness



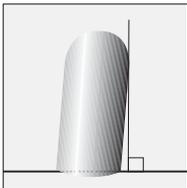
• Squareness Face to Tangent



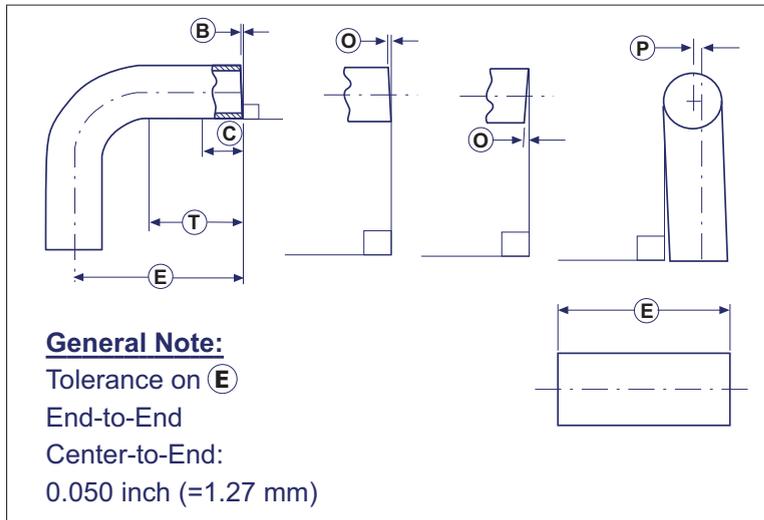
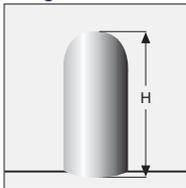
• Off Angle



• Off Plane



• Height





## Inspection Tests and Documentation

Summary table of testing, inspection and certification that can be given per product line.

Description	Standard / Value							
		<i>SciMax 40</i>	<i>SciMax 30</i>	<i>SciMax 25</i>	<i>SciMax 20</i>	<i>SciMax 15</i>	<i>SciMax 10</i>	<i>SciMax 5</i>
Material Composition	ASTM A269, A632, A270	✓	✓	✓	✓	✓	✓	✓
Mechanical Tests	ASTM A269, A632	✓	✓	✓	✓	✓	✓	✓
Visual Inspection 100%	Internal procedure	✓	✓	✓	✓	✓	✓	✓
Dimensional Measurements	ANSI B31.3	✓	✓	✓	✓	✓	✓	✓
Hydrocarbon Cleaning Inspection	CGA G-4.1	✓	✓	✓	✓	✓	✓	✓
Helium Leak Test for Welded Fittings	1*10 <sup>-9</sup> scc/sec	✓	✓	✓	✓	✓	✓	✓
Inspection Certification	EN 10204 3.1	✓	✓	✓	✓	✓	✓	✓
Ra Measurements	ASME B46.1		✓	✓	✓	✓	✓	✓
Particles Test	<10 particles (greater than 0.1µ ft <sup>3</sup> )						✓	✓
Moisture Test for Tube: Additional Moisture on UHP N2 Purged Gas	Δ0.5 ppm						✓	✓
Ultra Pure Water Resistivity	18 MΩ						✓	✓
SEM TEST - Scanning Electron Microscopy for Defects	SEMATECH 90120401B 40 defects (magnification*3500)						✓	✓
XPS TEST - X Ray Photoelectron Spectroscopy for Analysis of Cr/Fe	SEMATECH 90120403B 1.5/1<						✓	✓
XPS TEST - X Ray Photoelectron Spectroscopy for Analysis of CrO/FeO	SEMATECH 90120403B 3/1 <						✓	✓
AES TEST - Auger Electron Spectroscopy for Measuring of Oxide Thickness	SEMATECH 91060573B / 20 A<						✓	✓

## Vessels & Customized Components

EGMO, with over 40 years of experience in stainless steel flow equipment, has the capability to transfer the customer concept design to product.

Our custom-made components include:

- Flow Components: manifolds, pneumatic valves, filter housing, special fittings.
- Vessels: vacuum chambers, expansion tanks, reactors, skids.

Our capabilities:

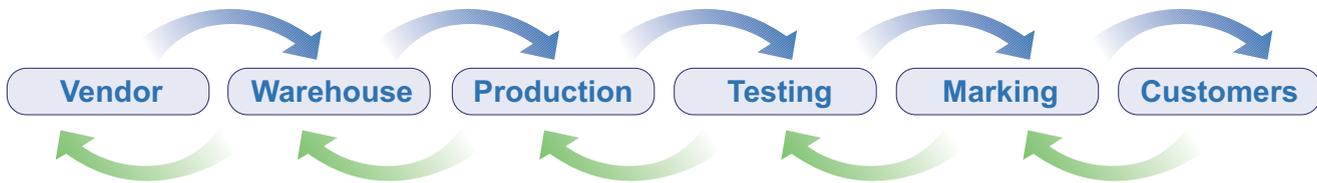
- Transfer concept design to production drawings
- Precision plastic forming
- Surface treatment including mechanical polish and in-house electro-polish services
- Q.A. system according to international standards: ISO, CE, TÜV





## MTR - Material Test Report

The MTR is the reference document for the entire history of the production processes and the raw materials used to make the SciMax component.



The MTR document is easily generated on-line via [Sci-Max.net](http://Sci-Max.net) using only the job number as input. The job number is the product identification number which represents all processes and raw materials related to the specific item.

### Online MTR

Please, enter job/certificate number:

Create Certificate 



The MTR format provides the following information:

1. Part number, part description and job number
2. Material type
3. Heat Number per each component describing the fitting and its associated properties:
  - a. Tube dimensions and standards
  - b. Chemical composition
  - c. Mechanical properties
  - d. Visual, dimensional, corrosion, EDDY current testing, flaring and flattening, PMI Test
4. Certificate of Compliance (please refer to table page 23)





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