

# Semiconductor Flow Equipment

Ultra High Purity Tubes & Fittings



**NEUMO | HPT | EGMO**

NEUMO Ehrenberg Group

# SciMax® - Ultra Purity With Guaranteed Ra

SciMax Semiconductor Flow Equipment is specially designed and manufactured following Egmo's SMT1 unique specifications meeting the stringent standards of the semiconductor industry and delivering maximum results. Egmo's SMT1 specs. provides a Superior Weldability to achieve outstanding orbital welding results.

### Maximum Guaranteed Ra

Using unique polishing technology, EGMO guarantees the Ra in all internal surfaces, including bent areas where it is difficult to polish and measure.

### Maximum Cleanability

The multi-step cleaning cycle degreasing, passivation, and electro-polishing is conducted to ensure that products are cleaned with a perfect passive 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 enable EGMO to supply semiconductor flow equipment of the highest quality standards to meet the customer's demands.



## About EGMO

EGMO, a member of NEUMO Ehrenberg Group, is a worldwide leader in the manufacturing of high purity, stainless steel products for the Semiconductor, Biopharmaceutical and Food industries. Founded in 1965, EGMO offers its customers decades of experience in innovative development and production of an extensive range of tubes, fittings, valves, vessels and other special components. EGMO is ISO 9001:2015, CE, ASME & CRN certified and its products also meet the following standards: TUV, 3A, DIN, ISO, CE, SMS, BS (RJT).

## About HPT

High Purity Technology (HPT), located in the Hudson River Valley of New York, has supplied Semiconductor OEMs and End users with tubing and fittings cleaned for ultra-high purity systems and related applications since 1983. HPT has built its reputation as the leader in ultra-high purity products and services through experience, commitment to quality, and a strong dedication to customer service and support.

As a member of the Neumo Ehrenberg Group, HPT is the primary distributor of the SciMax® brand of UHP tubing and fittings throughout the Americas. HPT's extensive distribution network and stocking programs provide the ability to meet your delivery requirements - keeping your projects on schedule.

## NEUMO Ehrenberg Group

The NEUMO Ehrenberg Group, a diversified multinational organization headquartered in Germany, was founded by Senator Henry Ehrenberg in 1947. The know-how, experience, and impressive track record of its companies, NEUMO, HPT and EGMO, have been earned 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.



| www.egmo.co.il |

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## Industry Terms Glossary

Term	Acronym	Definition
<b>A</b> Alloy		A material composed of two or more metals that are mixed and united - usually when they are in a molten state.
AES Test	<b>AES</b>	Atomic Emission Spectroscopy (AES), also known as AES Analysis and often referred to as OES, is one of the most useful analytical chemistry techniques for direct element analysis of solid metal and alloy samples.
American Society of Mechanical Engineers	<b>ASME</b>	Creates consensus standards for Mechanical Engineering.
American Society for the Testing & Materials	<b>ASTM</b>	Creates consensus standards for material quality and material quality testing methods.
ASME- B46.1	<b>B46.1</b>	B46.1 is the standard that defines surface texture and its constituents: roughness, waviness, and lay. It also defines parameters for specifying surface texture.
ASME - B31.3	<b>B31.3</b>	American National Standard that covers piping typically found in pharmaceutical, semiconductor, cryogenic plants, and related processing plants and terminals. B31.3 applies mostly to inspection, examination, and testing of systems.
ASTM A-213	<b>A-213</b>	Refers to the ASTM standard for seamless ferritic and austenitic steel tubes
ASME SA-213	<b>SA-213</b>	Standard Specification for Seamless Ferritic and Austenitic Alloy-Steel Boiler, Superheater, and Heat-Exchanger Tubes.
ASTM-A 269	<b>A 269</b>	Specification titled "Seamless and Welded Austenitic Stainless-Steel Tubing for General Service". It covers a variety of grades of austenitic stainless-steel tubing.
ASTM-A 270	<b>A 270</b>	A270 is a specification that defines the standard for the welded seamless, and heavily cold-worked welded austenitic and ferritic stainless steel sanitary tubing. It includes the stainless-steel tube types in seamless and welded.
ASTM-A 632	<b>A 632</b>	Standard Specification for Seamless and Welded Austenitic Stainless-Steel Tubing (Small-Diameter) for General Service.
<b>B</b> Bright Annealed	<b>BA</b>	BA is a heat treatment process which takes place in a vacuum that is used to alter metals' mechanical and physical properties to reduce hardness, increase ductility (flexibility), eliminate internal stresses, and improve corrosion resistance.
Butt-Weld	<b>BW</b>	Is one of the simplest and most versatile types of weld joint designs. The joint is formed by placing two pieces of metal end-to-end and then welding along the joint.
<b>C</b> CFOS	<b>CFOS</b>	Clean for Oxygen Service.
CGA G-4.1	<b>CGA G-4.1</b>	Compressed Gas Association (CGA) G4.1 describes the cleaning methods and requirements for equipment used in the production, storage, distribution, and use of liquid and gaseous oxygen to reduce the risk of fire, explosion, or promotion of combustion.
COAX	<b>COAX</b>	Coax or Containment fittings and tubes are designed to provide a safe distribution of toxic gases or fluids. In the event of a leak in the process tube, the hazardous media is contained by the outer tube and evacuated safely.
<b>D</b> DI Water	<b>DI</b>	Means Deionized water. DI water, or demineralized water is water that has had ions removed. Ions are molecules with a positive or negative electrical charge. In water, they appear as dissolved mineral salts.
Dead Leg		A section of a tube/pipe in a closed recirculation loop that does not have a continuous flow through it.
<b>E</b> Eddy Current Testing		In the eddy-current testing of tubes, an inspector will run a probe through the length of a tube to identify tiny defects. It can also help to identify defects on the surface of materials, with the use of pulsed eddy current testing equipment.
Electro-Polish	<b>EP</b>	Polishing process for metal components where the part is placed in an acid bath (typically sulfuric and phosphoric) containing a cathode. As current passes through the cathode, metal ions are removed from the surface of the metal.
EN 10204 3.1	<b>EN 10204 3.1</b>	The EN 10204 Type 3.1 Inspection Certificate are actual test results from the material in the lot from which the steel products have been supplied.
<b>F</b> Face Seal	<b>FS</b>	Face seal is a seal in which the sealing surfaces are normal to the axis of the seal and is typically used in static applications to prevent leakage in the radial direction with respect to the axis of the seal.
<b>H</b> High Purity	<b>HP</b>	High purity industrial gases are routinely delivered in large quantities having purities exceeding 99.999%.
<b>M</b> Manifold		A manifold is a fluid or gas distribution system or device that serves to bring many valves into one place or a single channel into an area where many points meet. Manifold systems can range from simple supply chambers with several outlets, to multi-chambered flow control units.

Term	Acronym	Definition
Mechanical Polish	<b>MP</b>	Is performed in steps with progressively finer abrasives until the desired smoothness is achieved.
<b>O</b> Orbital Welding		An automated TIG welding process that is designed to produce repeatable fusion welds for tubular components.
<b>P</b> Passivation		The process of rinsing stainless steel with acid citric or nitric to form a corrosion-resistant chromium-oxide layer on the surface.
PE	<b>PE</b>	Polyethylene or polythene (abbreviated PE; IUPAC name polyethene or poly(methylene) is the most commonly produced plastic.
PCW	<b>PCW</b>	Process Cooling Water.
PMI	<b>PMI</b>	Positive Material Identification is a fast and non-destructive testing (NDT) method for verifying the chemical composition of metals and alloys.
Points of Connection (ref. to Manifolds)	<b>POC</b>	Point of connection is the area in a manifold where the inlet or outlet tube and valves are connected.
<b>R</b> Roughness Average	<b>Ra</b>	An expression of measured surface roughness or texture, typically, of a polished or machined metal surface. The arithmetic average value of the departure (peaks and valleys) of a surface profile from the center line throughout the sampling length, is generally expressed in microinch ( $\mu$ in) or micro-meter ( $\mu$ m) units and measured with profilometers.
<b>S</b> Seamless Tube	<b>SL</b>	Seamless tubes do not have a welded seam. The tubing is manufactured through an extrusion process where the tube is drawn from a solid stainless steel material and extruded into hollow form.
SEM test Scanning Electron Microscopy	<b>SEM</b>	Is a test process that scans a sample with an electron beam to produce a magnified image for analysis. The method is also known as SEM analysis and SEM microscopy and is used very effectively in microanalysis and failure analysis of solid inorganic materials.
SEMATECH	<b>SEMATECH</b>	Comes from Semiconductor Manufacturing Technology, is a not-for-profit consortium that performs research and development to advance chip manufacturing.
SEMATECH 90120401B		A test method for SEM analysis of metallic surface condition for gas distribution system components.
SEMATECH 90120403B		A test method for XPS analysis of surface composition and chemistry of electropolished stainless steel tubing for gas distribution system components.
SEMATECH 91060573B		A test method for Auger electron spectroscopy (AES) Analysis of surface and oxide composition of electropolished stainless steel tubing for gas distribution system components.
Surface Finish		Are all surface finishes accessible and inaccessible, that directly or indirectly are in contact with the fluid (gases/liquids).
<b>T</b> Tubing Dimensions		O.D. - outside diameter I.D. - inside diameter Tube dimensions are specific; Specific means actual measurements. Pipe dimensions are nominal. Nominal means the theoretical or stated value of a dimension.
<b>U</b> Ultra-High Purity	<b>UHP</b>	Ultra-high purity refers to gases with specific impurities held to levels less than 0.1 parts per million (ppm).
Ultrapure water	<b>UPW</b>	Ultrapure water is water that has been made as close as possible to pure H <sub>2</sub> O. The electric resistivity ratio of theoretically pure water is 18.24 M $\Omega$ cm.
<b>V</b> Vacuum Coupling Radiation	<b>VCR</b>	VCR means vacuum coupling radiation, providing leak-tight service from vacuum to positive pressure.
<b>W</b> Welded Tube	<b>WT</b>	Welded stainless steel tube is produced through roll-forming strips or sheets of stainless steel into a tube shape and then welding the seam longitudinally.
Water for Injection	<b>WFI</b>	The assembly consisting of a storage tank and a distribution loop is called a purified water (PW) loop or a water for injection (WFI) loop. The difference between the purified water (PW) and water for injection (WFI) is mainly based on their physical, chemical and microbiological properties.
<b>X</b> XPS test	<b>X-ray Photoelectron Spectroscopy (XPS)</b>	Also known as electron spectroscopy for chemical analysis (ESCA), is a technique for analyzing a material's surface chemistry. XPS can measure elemental composition as well as the chemical and electronic state of the atoms within a material.
3 Dimension (Ref. to Welding)	<b>3D</b>	The 3D laser welding process uses concentrated energy, to fuse metal parts into a very precise joint, that is strong and highly aesthetic.

## Product Specification

	SCiMax10	SCiMax20
Application	Ultra High Purity	High Purity
Material	316L	316L
ID Ra max ( $\mu\text{Inch}/\mu\text{meter}$ )	10 /0.25 *	20 /0.5
Surface Treatment	EP	BA
Final Cleaning	UPW 18M $\Omega$	DI-WATER
Packing Environment Area	ISO 4 Class 10	ISO 6 Class 1,000
Packing & Capping	UHP N2 purge Mylar + PE cap + Double PE bag	N2 purge Mylar + PE cap + PE bag
Marking	• Brand name • Job number • Material grade • Dimensions • Heat number	

\* >1": Ra 10/0.25 ( $\mu\text{Inch}/\mu\text{meter}$ )

**All products SCiMax10 and SCiMax20 are CFOS**

## Inspection Tests and Documentation

Summary table of testing, inspection and certification that can be given per our process.

Description	Standard / Value		
		SCiMax10	SCiMax20
Material Composition	ASTM A269, A270, A632, A-213, SA-213	✓	✓
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 0.1 $\mu$ ft <sup>3</sup> )	✓	
Moisture Test for Tube: Additional Moisture on UHP N2 Purged Gas	$\Delta$ 0.5 ppm	✓	
Ultra Pure Water Resistivity	18 M $\Omega$	✓	
SEM TEST - Scanning Electron Microscopy for Defects	SEMATECH 90120401B 50 defects (magnification*3600)	✓	
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 Cr ox/ Fe ox	SEMATECH 90120403B > 2/1	✓	
AES TEST - Auger Electron Spectroscopy for Measuring of Oxide Thickness	SEMATECH 91060573B > 20A	✓	

## Technical Information

### Tube Tolerances

Tubing 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"	+0.004"/-.000"	-0+1/8"	+/-10%
3/8"	.035"	+0.004"/-.000"	-0+1/8"	+/-10%
1/2"	.049"	+0.005"/-.005"	-0+1/8"	+/-10%
3/4"	.065"	+0.005"/-.005"	-0+1/8"	+/-10%
1"	.065"	+0.005"/-.005"	-0+1/8"	+/-10%
1 1/2"	.065"	+0.010"/-.010"	-0+1/8"	+/-10%
2"	.065"	+0.010"/-.010"	-0+1/8"	+/-10%
2 1/2"	.065"	+0.010"/-.010"	-0+1/8"	+/-10%
3"	.065"	+0.010"/-.010"	-0+1/8"	+/-10%
4"	.083"	+0.015"/-.015"	-0+1/8"	+/-10%
6"	.109"	+0.030"/-.030"	-0+1/8"	+/-10%

\* The tubing's nominal length is 20 ft (6.1 meters) other upon request.

### Material and Properties

Chemical Composition (%) for Various Stainless Steels

Material	Carbon	Manganese	Silicone	Chromium	Nickel	Molybdenum	Phosphorus	Sulfur
316	≤0.08	≤2.00	≤1.00	16.0-18.0	10.0-14.0	2.0-3.0	≤0.045	≤0.03
316L*	≤0.03	≤2.00	≤1.00	16.0-18.0	10.0-14.0	2.0-3.0	≤0.045	**

\* Seamless tubes and fittings are manufactured by SMT1 spec., having a unique chemical composition providing Superior Weldability.

\*\* Sulfur content:

Seamless material - 0.005 to 0.010%

Welded and bar stock material - 0.005 to 0.017%

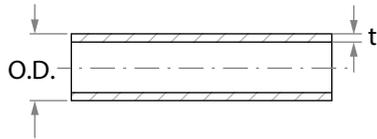
Coax sleeves - up to 0.03%

### Operating Pressures of Stainless Steel Tubing

Size OD Tube	Nominal Wall Thickness	AISI 316L (1.4404)		
		Working Pressure (psi/bar)*	Yield Pressure (psi/bar)	Burst Pressure (psi/bar)
1/4"	.035	5941/410	8436/582	20400/1407
3/8"	.035	3835/265	5445/375	13200/910
1/2"	.049	4550/314	6500/448	18200/1255
3/4"	.065	3030/209	4300/296	12100/834
1"	.065	2280/157	3300/227	9100/627
1 1/2"	.065	1520/105	2200/152	6100/421
2"	.065	1140/79	1600/110	4600/317
2 1/2"	.065	910/63	1300/90	3600/248
3"	.065	760/52	1100/76	3000/207
4"	.083	730/50	1000/69	2900/200
6"	.109	640/44	900/62	2500/172

\* Allowable working pressures are calculated from an S value of 20 000 psi (137.8 MPa) for ASTM A269 tubing at -20 to 100°F (-28 to 37°C), as listed in ASME B31.3 and ASME B31.1.

## Tubes Specifications



### SCiMax 10 - Tube Dimensions

O.D. Size Inch	Tube type	Wall Thickness		Name	Catalog #
		t inch	t mm		
				SCiMax 10	SCiMax 10
¼"	Seamless	0.035	0.89	SM10316LEPSL-.25X.035SMT1	581-00236
⅜"	Seamless	0.035	0.89	SM10316LEPSL-.375X.035SMT1	581-00237
½"	Seamless	0.049	1.24	SM10316LEPSL-.5X.049SMT1	581-00238
¾"	Seamless	0.065	1.65	SM10316LEPSL-.75X.065SMT1	581-00239
1"	Seamless	0.065	1.65	SM10316LEPSL-1.0X.065SMT1	581-00240
1"	Welded	0.065	1.65	SM10316LEPWE-1.0X.065	581-00019
1½"	Welded	0.065	1.65	SM10316LEPWE-1.5X.065	581-00026
2"	Welded	0.065	1.65	SM10316LEPWE-2.0X.065	581-00028
2½"	Welded	0.065	1.65	SM10316LEPWE-2.5X.065	581-00029
3"	Welded	0.065	1.65	SM10316LEPWE-3.0X.065	581-00030
4"	Welded	0.083	2.11	SM10316LEPWE-4.0X.083	581-00031
6"	Welded	0.109	2.77	SM10316LEPWE-6.0X.109	581-00032

How to order - see page 10

### SCiMax 20 - Tube Dimensions

O.D. Size Inch	Tube type	Wall Thickness		Name	Catalog #
		t inch	t mm		
				SCiMax 20	SCiMax 20
¼"	Seamless	0.035	0.89	SM20316LBASL-0.25X0.035SMT1	581-00241
⅜"	Seamless	0.035	0.89	SM20316LBASL-0.375X0.035SMT1	581-00242
½"	Seamless	0.049	1.24	SM20316LBASL-.5X.049SMT1	581-00243
¾"	Seamless	0.065	1.65	SM20316LBASL-.75X.065SMT1	581-00244
1"	Seamless	0.065	1.65	SM20316LBASL1.0X.065SMT1	581-00245
1"	Welded	0.065	1.65	SM20316LMPWE-1.0X.065	581-00005
1½"	Welded	0.065	1.65	SM20316LMPWE-1.5X.065	581-00006
2"	Welded	0.065	1.65	SM20316LMPWE-2.0X.065	581-00027
2½"	Welded	0.065	1.65	SM20316LMPWE-2.5X.065	581-00008
3"	Welded	0.065	1.65	SM20316LMPWE-3.0X.065	581-00009
4"	Welded	0.083	2.11	SM20316LMPWE-4.0X.083	581-00010
6"	Welded	0.109	2.77	SM20316LMPWE-6.0X.109	581-00011

How to order - see page 10

SMT1 - Egmo's seamless tubes spec.

SM10 - SCiMax10

SM20 - SCiMax20

SL - Seamless

WE - Welded

EP - Electropolished

BA - Bright Annealed

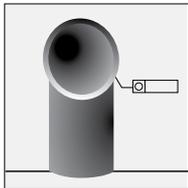
MP - Mechanical Polished

## Fitting Tolerances

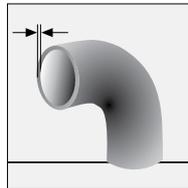
Nominal OD Size	¼"	⅜"	½"	¾"	1"	1½"	2"	2½"	3"	4"	6"
O.D. Tolerance	±.005	±.005	±.005	±.005	±.005	±.008	±.008	±.010	±.010	±.015	±.030
Nominal Wall Thickness	.035	.035	.049	.065	.065	.065	.065	.065	.065	.083	.109
Wall Thickness Tolerance before EP	+003/- .004	+003/- .004	+005/- .008	+005/- .008	+005/- .008	+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 (C)	.750	.750	.750	.750	.750	.750	.750	.750	.750	.750	.750
Tangent Length (T)	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)	.005	.005	.005	.005	.008	.008	.008	.010	.016	.016	.030
Off Angle (O)	.009	.012	.014	.018	.025	.034	.043	.054	.068	.086	.135
Off Plane (P)	±.030	±.030	±.030	±.030	±.030	±.050	±.050	±.050	±.050	±.060	±.060

\* All dimensions are in Inches  
 Tubing specifications, ASTM A269/ A270/ A632

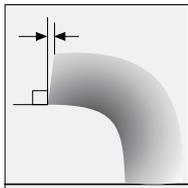
• Roundness



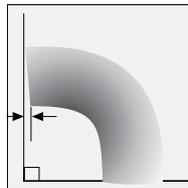
• Wall Thickness



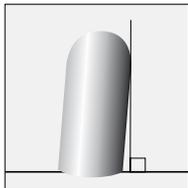
• Squareness Face to Tangent



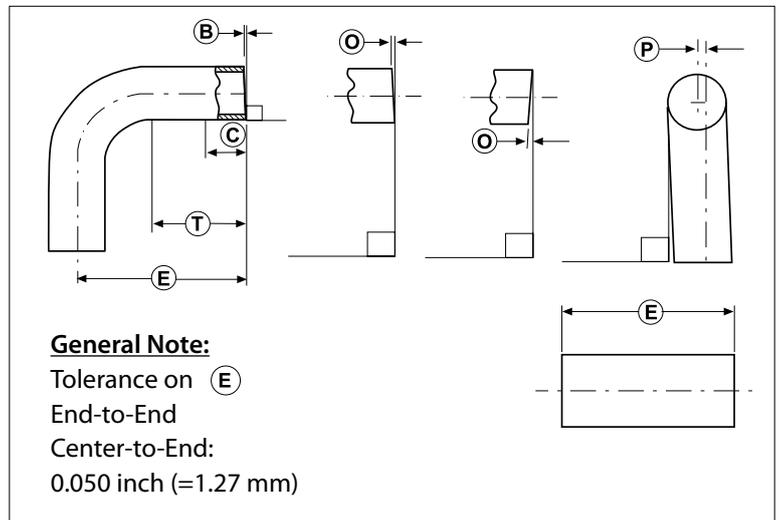
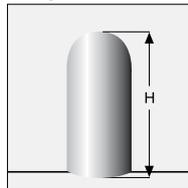
• Off Angle



• Off Plane



• Height



## How to order

To specify the part, choose a product line, material, surface finishing that can be **EP only for SM10** and **BA or MP only for SM20**. Then select the type and O.D. size of the requested part as shown below.

**SL** (Seamless): 1/4" up to 1".

**WE** (Welded): 1" up to 6".

Please Note: Only O.D. 1" can be ordered SL or WE.

Seamless tubes and fittings are manufactured by SMT1 spec., having a unique chemical composition providing Superior Weldability.

### Tubes:

S	M	1	0	3	1	6	L	E	P	S	L	-	.	2	5	X	.	0	3	5	S*	M	T	1
Product Line				Material			Surface Finishing		Type	O.D. Size			Wall Thickness Inch											

Product Line	Material	Surface Finishing	Type	O.D. Size	Wall Thickness Inch
SM10 - SCiMax 10	316L	EP - Electro Polish (for SM10 only)	SL - Seamless (1/4"-1")	1/4" - .25	.035
SM20 - SCiMax 20		BA - Bright Annealed (for SM20 only)	WE - Welded (1"-6")	3/8" - .375	.035
		MP - Mechanical Polished (for SM20 only)**		1/2" - .5	.049
				3/4" - .75	.065
				1" - 1.0	.065
				1 1/2" - 1.5	.065
				2" - 2.0	.065
				2 1/2" - 2.5	.065
				3" - 3.0	.065
				4" - 4.0	.083
				6" - 6.0	.109

For Example: SM10316LEPSL-.25x.035SMT1

\* SMT1 - for SM10 and SM20 Seamless only.

\*\* MP for welded only.

### Fittings:

S	M	1	0	3	1	6	L	E	P	E	L	9	0	-	.	2	5
Product Line				Material			Surface Finishing		Type	O.D. Size							

Product Line	Material	Surface Finishing	Type	O.D. Size*
SM10 - SCiMax 10	316L	EP - Electro Polish (for SM10 only)	EL90 - Elbow 90	1/4" - .25
SM20 - SCiMax 20		BA - Bright Annealed (for SM20 only)	EL45 - Elbow 45	3/8" - .375
		MP - Mechanical Polished (for SM20 only)**	ETEE - Equal Tee	1/2" - .5
			ECAP - End Cap	3/4" - .75
				1" - 1.0
				1 1/2" - 1.5
				2" - 2.0
				2 1/2" - 2.5
				3" - 3.0
				4" - 4.0
				6" - 6.0

For Example: SM10316LEPEL45-.5

\* Fittings can be SL from 1/4" up to 1" (included) or WE from 1" up to 6"

\*\* MP for welded only.

## How to order

### Reducing Components:

<b>S</b>	<b>M</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>6</b>	<b>L</b>	<b>E</b>	<b>P</b>	<b>R</b>	<b>T</b>	<b>E</b>	<b>E</b>	<b>-</b>	<b>.</b>	<b>3</b>	<b>7</b>	<b>5</b>	<b>X</b>	<b>.</b>	<b>2</b>	<b>5</b>
Product Line				Material			Surface Finishing			Type		O.D. Size Large			O.D. Size Small							

Product Line	Material	Surface Finishing	Type	Size Large	Size Small
SM10 - SciMax 10	316L	EP - Electro Polish (for SM10 only)	RTEE - Reducing Tee	3/8" - .375	1/4" - .25
SM20 - SciMax 20		BA - Bright Annealed (for SM20 only)	CORD - Concentric Reducer	1/2" - .5	3/8" - .375
		MP - Mechanical Polished (for SM20 only)*		3/4" - .75	1/2" - .5
		1" - 1.0		3/4" - .75	
		1 1/2" - 1.5		1" - 1.0	
		2" - 2.0		1 1/2" - 1.5	
		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: SM20316LBARTEE-2.0x.375

\* MP for welded only.

### Coax - Tubes:

Product Line	Material	Surface Finishing	Type	O.D. Size	
				Inner Tube	Outer Tube
SM10COAX - SciMax 10 COAX	316L	EP - Electro Polish (for SM10 only)	SL - Seamless (1/4"-1")	1/4" - .25	x 1/2" - .50
SM20COAX - SciMax 20 COAX		BA - Bright Annealed (for SM20 only)	WE - Welded (1"-6")	3/8" - .375	x 5/8" - .625
		MP - Mechanical Polished (for SM20 only)*		1/2" - .5	x 3/4" - .75
				3/4" - .75	x 1" - 1.0
				1" - 1.0	x 1 1/4" - 1.25
			1" - 1.0	x 1 1/2" - 1.5	

**To order a Coax - Tube: Chose the Name and the catalogue number of the requested product per table in page 20.**

**For Example: SM10COAX316LEPSL-.25x.035**

\* MP for welded only.

## Coax Fittings:

Product Line	Material	Surface Finishing	Type
SM10COAX - SCiMax 10 COAX	316L	EP - Electro Polish (for SM10 only)	EL90 - Elbow 90
SM20COAX - SCiMax 20 COAX		BA - Bright Annealed (for SM20 only)	EL45 - Elbow 45
		MP - Mechanical Polished (for SM20 only)**	ETEE - Equal Tee
			PTEE - Purge Tee *
			SLVE - Sleeve *
			TERM - Terminator *

**To order a Coax Fittings: Chose the Name and the cataloge number of the requested product per table in page 19-22.**

**For Example: SM10COAX316LEPEL45-.5**

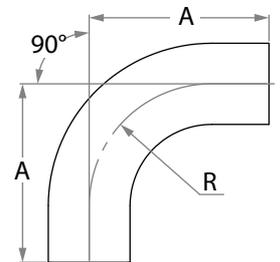
\* Size refers to outer tube

\*\* MP for welded only.

# Elbows

## EL90 - Elbow 90°

O.D. Size Inch	Dimensions				SCiMax 10		SCiMax 20	
	A inch	A mm	R inch	R mm	Name	Catalog# EP	Name	Catalog# BA
¼"	2.625	66.7	0.62	15.90	SM10316LEPEL90-.25	580-00027	SM20316LBAEL90-.25	580-00049
⅜"	2.625	66.7	1.00	25.40	SM10316LEPEL90-.375	580-00028	SM20316LBAEL90-.375	580-00050
½"	3.000	76.2	1.13	28.60	SM10316LEPEL90-.5	580-00029	SM20316LBAEL90-.5	580-00006
¾"	3.000	76.2	1.13	28.60	SM10316LEPEL90-.75	580-00030	SM20316LBAEL90-.75	580-00014
1"	3.000	76.2	1.50	38.10	SM10316LEPEL90-1.0-SL	580-00192	*	*
1"	3.000	76.2	1.50	38.10	SM10316LEPEL90-1.0	580-00031	SM20316LBAEL90-1.0	580-00002
1½"	3.750	95.3	2.25	57.20	SM10316LEPEL90-1.5	580-00032	SM20316LBAEL90-1.5	580-00004
2"	4.750	120.7	3.00	76.20	SM10316LEPEL90-2.0	580-00033	SM20316LBAEL90-2.0	580-00008
2½"	5.500	139.7	3.75	95.25	SM10316LEPEL90-2.5	580-00034	SM20316LBAEL90-2.5	580-00010
3"	6.250	158.8	4.50	114.30	SM10316LEPEL90-3.0	580-00035	SM20316LBAEL90-3.0	580-00012
4"	8.000	203.2	6.00	152.40	SM10316LEPEL90-4.0	580-00036	SM20316LBAEL90-4.0	580-00016
6"	11.500	292.1	9.00	228.60	SM10316LEPEL90-6.0	580-00037	SM20316LBAEL90-6.0	580-00109



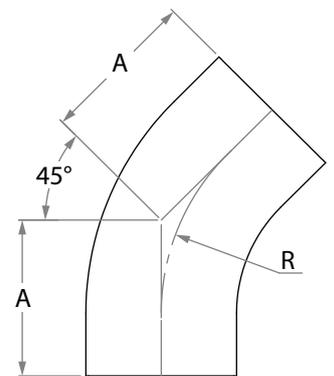
How to order - see page 10

For Wall thickness please refer to page 8

\* 1" Seamless SCiMax 20 - upon request

## EL45 - Elbow 45°

O.D. Size Inch	Dimensions				SCiMax 10		SCiMax 20	
	A inch	A mm	R inch	R mm	Name	Catalog# EP	Name	Catalog# BA
¼"	2.000	50.80	0.62	15.75	SM10316LEPEL45-.25	580-00038	SM20316LBAEL45-.25	580-00152
⅜"	2.000	50.80	1.00	25.40	SM10316LEPEL45-.375	580-00039	SM20316LBAEL45-.375	580-00153
½"	2.250	57.20	1.13	28.60	SM10316LEPEL45-.5	580-00040	SM20316LBAEL45-.5	580-00005
¾"	2.250	57.20	1.13	28.60	SM10316LEPEL45-.75	580-00041	SM20316LBAEL45-.75	580-00013
1"	2.250	57.20	1.50	38.10	SM10316LEPEL45-1.0-SL	580-00191	*	*
1"	2.250	57.20	1.50	38.10	SM10316LEPEL45-1.0	580-00026	SM20316LBAEL45-1.0	580-00001
1½"	2.500	63.50	2.25	57.20	SM10316LEPEL45-1.5	580-00043	SM20316LBAEL45-1.5	580-00003
2"	3.000	76.20	3.00	76.20	SM10316LEPEL45-2.0	580-00044	SM20316LBAEL45-2.0	580-00007
2½"	3.375	85.70	3.75	95.25	SM10316LEPEL45-2.5	580-00045	SM20316LBAEL45-2.5	580-00009
3"	3.625	92.10	4.50	114.30	SM10316LEPEL45-3.0	580-00046	SM20316LBAEL45-3.0	580-00011
4"	4.500	114.30	6.00	152.40	SM10316LEPEL45-4.0	580-00048	SM20316LBAEL45-4.0	580-00015
6"	6.250	158.80	9.00	228.60	SM10316LEPEL45-6.0	580-00047	SM20316LBAEL45-6.0	580-00154

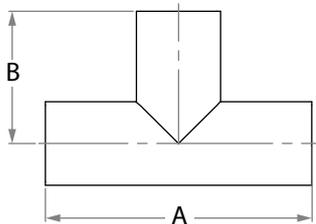


How to order - see page 10

For Wall thickness please refer to page 8

\* 1" Seamless SCiMax 20 - upon request

## Tees



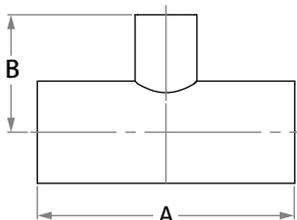
### ETEE - Equal Tee

O.D. Size Inch	Dimensions				SCiMax 10		SCiMax 20	
	A inch	A mm	B inch	B mm	Name	Catalog# EP	Name	Catalog# BA
¼"	3.50	88.90	1.750	44.50	SM10316LEPETEE-.25	579-00059	SM20316LBAETEE-.25	579-00049
⅜"	3.50	88.90	1.750	44.50	SM10316LEPETEE-.375	579-00060	SM20316LBAETEE-.375	579-00179
½"	3.75	95.25	1.875	47.60	SM10316LEPETEE-.5	579-00062	SM20316LBAETEE-.5	579-00038
¾"	4.00	101.60	2.000	50.80	SM10316LEPETEE-.75	579-00065	SM20316LBAETEE-.75	579-00041
1"	4.25	108.00	2.125	54.00	SM10316LEPETEE-1.0-SL	579-00554	*	*
1"	4.25	108.00	2.125	54.00	SM10316LEPETEE-1.0	579-00069	SM20316LBAETEE-1.0	579-00035
1½"	4.75	120.60	2.375	60.30	SM10316LEPETEE-1.5	579-00074	SM20316LBAETEE-1.5	579-00036
2"	5.75	146.00	2.875	73.00	SM10316LEPETEE-2.0	579-00080	SM20316LBAETEE-2.0	579-00039
2½"	6.25	158.75	3.125	79.40	SM10316LEPETEE-2.5	579-00087	SM20316LBAETEE-2.5	579-00449
3"	6.75	171.40	3.375	85.70	SM10316LEPETEE-3.0	579-00095	SM20316LBAETEE-3.0	579-00040
4"	8.25	209.60	4.125	104.80	SM10316LEPETEE-4.0	579-00102	SM20316LBAETEE-4.0	579-00042
6"	11.25	285.80	5.625	142.90	SM10316LEPETEE-6.0	579-00110	SM20316LBAETEE-6.0	579-00450

How to order - see page 10

For Wall thickness please refer to page 8

1" Seamless SCiMax 20 - upon request



### RTEE - Reducing Tee

O.D. Size Inch	Dimensions				SCiMax 10		SCiMax 20	
	A inch	A mm	B inch	B mm	Name	Catalog# EP	Name	Catalog# BA
⅜" x ¼"	3.50	88.9	1.750	44.45	SM10316LEPRTEE-.375X.25	579-00061	SM20316LBARTEE-.375X.25	579-00451
½" x ¼"	3.75	95.3	1.875	47.65	SM10316LEPRTEE-.5X.25	579-00063	SM20316LBARTEE-.5X.25	579-00044
½" x ⅜"	3.75	95.3	1.875	47.65	SM10316LEPRTEE-.5X.375	579-00064	SM20316LBARTEE-.5X.375	579-00183
¾" x ¼"	4.00	101.6	2.000	50.80	SM10316LEPRTEE-.75X.25	579-00066	SM20316LBARTEE-.75X.25	579-00453
¾" x ⅜"	4.00	101.6	2.000	50.80	SM10316LEPRTEE-.75X.375	579-00067	SM20316LBARTEE-.75X.375	579-00454
¾" x ½"	4.00	101.6	2.000	50.80	SM10316LEPRTEE-.75X.5	579-00068	SM20316LBARTEE-.75X.5	579-00023
1" x ¼"	4.25	108.0	2.125	54.00	SM10316LEPRTEE-1.0X.25-SL	579-00555	*	*
1" x ¼"	4.25	108.0	2.125	54.00	SM10316LEPRTEE-1.0X.25	579-00070	SM20316LBARTEE-1.0X.25	579-00455
1" x ⅜"	4.25	108.0	2.125	54.00	SM10316LEPRTEE-1.0X.375-SL	579-00556	*	*
1" x ⅜"	4.25	108.0	2.125	54.00	SM10316LEPRTEE-1.0X.375	579-00071	SM20316LBARTEE-1.0X.375	579-00456
1" x ½"	4.25	108.0	2.125	54.00	SM10316LEPRTEE-1.0X.5-SL	579-00557	*	*
1" x ½"	4.25	108.0	2.125	54.00	SM10316LEPRTEE-1.0X.5	579-00072	SM20316LBARTEE-1.0X.5	579-00002
1" x ¾"	4.25	108.0	2.125	54.00	SM10316LEPRTEE-1.0X.75-SL	579-00558	*	*
1" x ¾"	4.25	108.0	2.125	54.00	SM10316LEPRTEE-1.0X.75	579-00073	SM20316LBARTEE-1.0X.75	579-00003
1½" x ¼"	4.75	120.7	2.375	60.30	SM10316LEPRTEE-1.5X.25	579-00075	SM20316LBARTEE-1.5X.25	579-00425
1½" x ⅜"	4.75	120.7	2.375	60.30	SM10316LEPRTEE-1.5X.375	579-00076	SM20316LBARTEE-1.5X.375	579-00457
1½" x ½"	4.75	120.7	2.375	60.30	SM10316LEPRTEE-1.5X.5	579-00077	SM20316LBARTEE-1.5X.5	579-00006
1½" x ¾"	4.75	120.7	2.375	60.30	SM10316LEPRTEE-1.5X.75	579-00078	SM20316LBARTEE-1.5X.75	579-00007
1½" x 1"	4.75	120.7	2.375	60.30	SM10316LEPRTEE-1.5X1.0-SL	579-00559	*	*
1½" x 1"	4.75	120.7	2.375	60.30	SM10316LEPRTEE-1.5X1.0	579-00079	SM20316LBARTEE-1.5X1.0	579-00004

How to order - see page 11

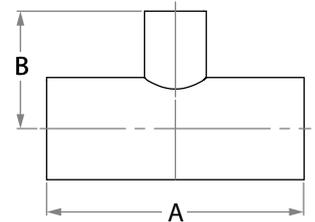
For Wall thickness please refer to page 8

1" Seamless SCiMax 20 - upon request

# Reducing Components - RTEE

## RTEE - Reducing Tee

O.D. Size Inch	Dimensions				SCiMax 10		SCiMax 20	
	A inch	A mm	B inch	B mm	Name	Catalog# EP	Name	Catalog# BA
2" x 1/4"	5.75	146.0	2.625	66.7	SM10316LEPRTEE-2.0X.25	579-00081	SM20316LBARTEE-2.0X.25	579-00458
2" x 3/8"	5.75	146.0	2.625	66.7	SM10316LEPRTEE-2.0X.375	579-00082	SM20316LBARTEE-2.0X.375	579-00459
2" x 1/2"	5.75	146.0	2.625	66.7	SM10316LEPRTEE-2.0X.5	579-00083	SM20316LBARTEE-2.0X.5	579-00010
2" x 3/4"	5.75	146.0	2.625	66.7	SM10316LEPRTEE-2.0X.75	579-00084	SM20316LBARTEE-2.0X.75	579-00011
2" x 1"	5.75	146.0	2.625	66.7	SM10316LEPRTEE-2.0X1.0-SL	579-00560	*	*
2" x 1"	5.75	146.0	2.625	66.7	SM10316LEPRTEE-2.0X1.0	579-00085	SM20316LBARTEE-2.0X1.0	579-00008
2" x 1 1/2"	5.75	146.0	2.625	66.7	SM10316LEPRTEE-2.0X1.5	579-00086	SM20316LBARTEE-2.0X1.5	579-00009
2 1/2" x 1/4"	6.25	158.8	2.875	73.0	SM10316LEPRTEE-2.5X.25	579-00088	SM20316LBARTEE-2.5X.25	579-00460
2 1/2" x 3/8"	6.25	158.8	2.875	73.0	SM10316LEPRTEE-2.5X.375	579-00089	SM20316LBARTEE-2.5X.375	579-00461
2 1/2" x 1/2"	6.25	158.8	2.875	73.0	SM10316LEPRTEE-2.5X.5	579-00090	SM20316LBARTEE-2.5X.5	579-00014
2 1/2" x 3/4"	6.25	158.8	2.875	73.0	SM10316LEPRTEE-2.5X.75	579-00091	SM20316LBARTEE-2.5X.75	579-00016
2 1/2" x 1"	6.25	158.8	2.875	73.0	SM10316LEPRTEE-2.5X1.0-SL	579-00561	*	*
2 1/2" x 1"	6.25	158.8	2.875	73.0	SM10316LEPRTEE-2.5X1.0	579-00092	SM20316LBARTEE-2.5X1.0	579-00012
2 1/2" x 1 1/2"	6.25	158.8	2.875	73.0	SM10316LEPRTEE-2.5X1.5	579-00093	SM20316LBARTEE-2.5X1.5	579-00013
2 1/2" x 2"	6.25	158.8	2.875	73.0	SM10316LEPRTEE-2.5X2.0	579-00094	SM20316LBARTEE-2.5X2.0	579-00015
3" x 1/4"	6.75	171.5	3.125	79.4	SM10316LEPRTEE-3.0X1/4	579-00437	SM20316LBARTEE-3.0X.25	579-00462
3" x 3/8"	6.75	171.5	3.125	79.4	SM10316LEPRTEE-3.0X3/8	579-00438	SM20316LBARTEE-3.0X.375	579-00548
3" x 1/2"	6.75	171.5	3.125	79.4	SM10316LEPRTEE-3.0X.5	579-00096	SM20316LBARTEE-3.0X.5	579-00019
3" x 3/4"	6.75	171.5	3.125	79.4	SM10316LEPRTEE-3.0X.75	579-00097	SM20316LBARTEE-3.0X.75	579-00022
3" x 1"	6.75	171.5	3.125	79.4	SM10316LEPRTEE-3.0X1.0-SL	579-00562	*	*
3" x 1"	6.75	171.5	3.125	79.4	SM10316LEPRTEE-3.0X1.0	579-00098	SM20316LBARTEE-3.0X1.0	579-00017
3" x 1 1/2"	6.75	171.5	3.125	79.4	SM10316LEPRTEE-3.0X1.5	579-00099	SM20316LBARTEE-3.0X1.5	579-00018
3" x 2"	6.75	171.5	3.125	79.4	SM10316LEPRTEE-3.0X2.0	579-00100	SM20316LBARTEE-3.0X2.0	579-00020
3" x 2 1/2"	6.75	171.5	3.125	79.4	SM10316LEPRTEE-3.0X2.5	579-00101	SM20316LBARTEE-3.0X2.5	579-00021
4" x 1/4"	8.25	209.6	3.625	92.1	SM10316LEPRTEE-4.0X1/4	579-00439	SM20316LBARTEE-4.0X.25	579-00549
4" x 3/8"	8.25	209.6	3.625	92.1	SM10316LEPRTEE-4.0X3/8	579-00440	SM20316LBARTEE-4.0X3/8	579-00550
4" x 1/2"	8.25	209.6	3.625	92.1	SM10316LEPRTEE-4.0X.5	579-00103	SM20316LBARTEE-4.0X.5	579-00027
4" x 3/4"	8.25	209.6	3.625	92.1	SM10316LEPRTEE-4.0X.75	579-00104	SM20316LBARTEE-4.0X.75	579-00024
4" x 1"	8.25	209.6	3.625	92.1	SM10316LEPRTEE-4.0X1.0-SL	579-00563	*	*
4" x 1"	8.25	209.6	3.625	92.1	SM10316LEPRTEE-4.0X1.0	579-00105	SM20316LBARTEE-4.0X1.0	579-00025
4" x 1 1/2"	8.25	209.6	3.625	92.1	SM10316LEPRTEE-4.0X1.5	579-00106	SM20316LBARTEE-4.0X1.5	579-00026
4" x 2"	8.25	209.6	3.875	98.4	SM10316LEPRTEE-4.0X2.0	579-00107	SM20316LBARTEE-4.0X2.0	579-00028
4" x 2 1/2"	8.25	209.6	3.875	98.4	SM10316LEPRTEE-4.0X2.5	579-00108	SM20316LBARTEE-4.0X2.5	579-00029
4" x 3"	8.25	209.6	3.875	98.4	SM10316LEPRTEE-4.0X3.0	579-00109	SM20316LBARTEE-4.0X3.0	579-00030
6" x 1/4"	11.25	285.8	4.625	117.5	SM10316LEPRTEE-6.0X1/4	579-00441	SM20316LBARTEE-6.0X1/4	579-00551
6" x 1/2"	11.25	285.8	4.625	117.5	SM10316LEPRTEE-6.0X.5	579-00111	SM20316LBARTEE-6.0X.5	579-00463
6" x 3/4"	11.25	285.8	4.625	117.5	SM10316LEPRTEE-6.0X.75	579-00112	SM20316LBARTEE-6.0X.75	579-00464
6" x 1"	11.25	285.8	4.625	117.5	SM10316LEPRTEE-6.0X1.0-SL	579-00564	*	*
6" x 1"	11.25	285.8	4.625	117.5	SM10316LEPRTEE-6.0X1.0	579-00113	SM20316LBARTEE-6.0X1.0	579-00465
6" x 1 1/2"	11.25	285.8	4.625	117.5	SM10316LEPRTEE-6.0X1.5	579-00114	SM20316LBARTEE-6.0X1.5	579-00466
6" x 2"	11.25	285.8	4.875	123.8	SM10316LEPRTEE-6.0X2.0	579-00115	SM20316LBARTEE-6.0X2.0	579-00467
6" x 2 1/2"	11.25	285.8	4.875	123.8	SM10316LEPRTEE-6.0X2.5	579-00116	SM20316LBARTEE-6.0X2.5	579-00567
6" x 3"	11.25	285.8	4.875	123.8	SM10316LEPRTEE-6.0X3.0	579-00117	SM20316LBARTEE-6.0X3.0	579-00468
6" x 4"	11.25	285.8	5.125	130.2	SM10316LEPRTEE-6.0X4.0	579-00118	SM20316LBARTEE-6.0X4.0	579-00469



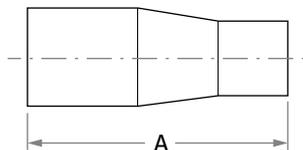
How to order - see page 11

For Wall thickness please refer to page 8

\* 1" Seamless SCiMax 20 - upon request

## Reducing Components - CORD

### CORD - Concentric Reducer



O.D. Size Inch	Dimensions		SCiMax 10		SCiMax 20	
	A inch	A mm	Name	Catalog# EP	Name	Catalog# BA
3/8" x 1/4"	1.625	41.28	SM10316LEPCORD-.375X.25	578-00032	SM20316LBACORD-.375X.25	578-00269
1/2" x 1/4"	1.875	47.63	SM10316LEPCORD-.5X.25	578-00033	SM20316LBACORD-.5X.25	578-00025
1/2" x 3/8"	1.875	47.63	SM10316LEPCORD-.5X.375	578-00034	SM20316LBACORD-.5X.375	578-00270
3/4" x 1/4"	1.875	47.63	SM10316LEPCORD-.75X.25	578-00035	SM20316LBACORD-.75X.25	578-00271
3/4" x 3/8"	1.875	47.63	SM10316LEPCORD-.75X.375	578-00036	SM20316LBACORD-.75X.375	578-00272
3/4" x 1/2"	1.875	47.63	SM10316LEPCORD-.75X.5	578-00037	SM20316LBACORD-.75X.5	578-00024
1" x 1/4"	2.125	53.97	SM10316LEPCORD-1.0X.25	578-00038	SM20316LBACORD-1.0X.25	578-00084
1" x 3/8"	2.125	53.97	SM10316LEPCORD-1.0X.375	578-00039	SM20316LBACORD-1.0X.375	578-00085
1" x 1/2"	2.125	53.97	SM10316LEPCORD-1.0X.5	578-00040	SM20316LBACORD-1.0X.5	578-00009
1" x 3/4"	2.125	53.97	SM10316LEPCORD-1.0X.75	578-00041	SM20316LBACORD-1.0X.75	578-00019
1 1/2" x 1/4"	2.250	57.15	SM10316LEPCORD-1.5X.25	578-00042	SM20316LBACORD-1.5X.25	578-00339
1 1/2" x 3/8"	2.250	57.15	SM10316LEPCORD-1.5X.375	578-00043	SM20316LBACORD-1.5X.375	578-00087
1 1/2" x 1/2"	2.250	57.15	SM10316LEPCORD-1.5X.5	578-00044	SM20316LBACORD-1.5X.5	578-00023
1 1/2" x 3/4"	2.250	57.15	SM10316LEPCORD-1.5X.75	578-00045	SM20316LBACORD-1.5X.75	578-00026
1 1/2" x 1"	2.250	57.15	SM10316LEPCORD-1.5X1.0	578-00046	SM20316LBACORD-1.5X1.0	578-00022
2" x 1/4"	2.750	69.85	SM10316LEPCORD-2.0X.25	578-00047	SM20316LBACORD-2.0X.25	578-00340
2" x 3/8"	2.750	69.85	SM10316LEPCORD-2.0X.375	578-00048	SM20316LBACORD-2.0X.375	578-00273
2" x 1/2"	2.750	69.85	SM10316LEPCORD-2.0X.5	578-00049	SM20316LBACORD-2.0X.5	578-00010
2" x 3/4"	2.750	69.85	SM10316LEPCORD-2.0X.75	578-00050	SM20316LBACORD-2.0X.75	578-00020
2" x 1"	2.750	69.85	SM10316LEPCORD-2.0X1.0	578-00051	SM20316LBACORD-2.0X1.0	578-00076
2" x 1 1/2"	2.750	69.85	SM10316LEPCORD-2.0X1.5	578-00052	SM20316LBACORD-2.0X1.5	578-00005
2 1/2" x 1/2"	3.500	88.90	SM10316LEPCORD-2.5X.5	578-00053	SM20316LBACORD-2.5X.5	578-00011
2 1/2" x 3/4"	3.500	88.90	SM10316LEPCORD-2.5X.75	578-00054	SM20316LBACORD-2.5X.75	578-00027
2 1/2" x 1"	3.500	88.90	SM10316LEPCORD-2.5X1.0	578-00055	SM20316LBACORD-2.5X1.0	578-00002
2 1/2" x 1 1/2"	3.500	88.90	SM10316LEPCORD-2.5X1.5	578-00056	SM20316LBACORD-2.5X1.5	578-00006
2 1/2" x 2"	3.500	88.90	SM10316LEPCORD-2.5X2.0	578-00057	SM20316LBACORD-2.5X2.0	578-00013
3" x 1/2"	4.250	108.00	SM10316LEPCORD-3.0X.5	578-00058	SM20316LBACORD-3.0X.5	578-00012
3" x 3/4"	4.250	108.00	SM10316LEPCORD-3.0X.75	578-00059	SM20316LBACORD-3.0X.75	578-00021
3" x 1"	4.250	108.00	SM10316LEPCORD-3.0X1.0	578-00060	SM20316LBACORD-3.0X1.0	578-00003
3" x 1 1/2"	4.250	108.00	SM10316LEPCORD-3.0X1.5	578-00061	SM20316LBACORD-3.0X1.5	578-00007
3" x 2"	4.250	108.00	SM10316LEPCORD-3.0X2.0	578-00062	SM20316LBACORD-3.0X2.0	578-00014
3" x 2 1/2"	4.250	108.00	SM10316LEPCORD-3.0X2.5	578-00063	SM20316LBACORD-3.0X2.5	578-00016
4" x 3/4"	5.000	127.00	SM10316LEPCORD-4.0X.75	578-00064	SM20316LBACORD-4.0X.75	578-00274
4" x 1"	5.000	127.00	SM10316LEPCORD-4.0X1.0	578-00065	SM20316LBACORD-4.0X1.0	578-00004
4" x 1 1/2"	5.000	127.00	SM10316LEPCORD-4.0X1.5	578-00066	SM20316LBACORD-4.0X1.5	578-00008
4" x 2"	5.000	127.00	SM10316LEPCORD-4.0X2.0	578-00067	SM20316LBACORD-4.0X2.0	578-00089
4" x 2 1/2"	5.000	127.00	SM10316LEPCORD-4.0X2.5	578-00068	SM20316LBACORD-4.0X2.5	578-00017
4" x 3"	5.000	127.00	SM10316LEPCORD-4.0X3.0	578-00069	SM20316LBACORD-4.0X3.0	578-00018
6" x 1"	6.000	152.40	SM10316LEPCORD-6.0X1.0	578-00070	SM20316LBACORD-6.0X1.0	578-00275
6" x 1 1/2"	6.000	152.40	SM10316LEPCORD-6.0X1.5	578-00071	SM20316LBACORD-6.0X1.5	578-00276
6" x 2"	6.000	152.40	SM10316LEPCORD-6.0X2.0	578-00072	SM20316LBACORD-6.0X2.0	578-00277
6" x 2 1/2"	6.000	152.40	SM10316LEPCORD-6.0X2.5	578-00073	SM20316LBACORD-6.0X2.5	578-00278
6" x 3"	6.000	152.40	SM10316LEPCORD-6.0X3.0	578-00074	SM20316LBACORD-6.0X3.0	578-00279
6" x 4"	6.000	152.40	SM10316LEPCORD-6.0X4.0	578-00075	SM20316LBACORD-6.0X4.0	578-00280

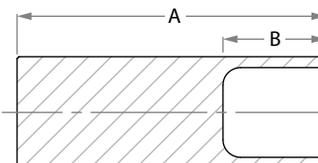
How to order - see page 11

For wall thickness please refer to page 8

## End Caps

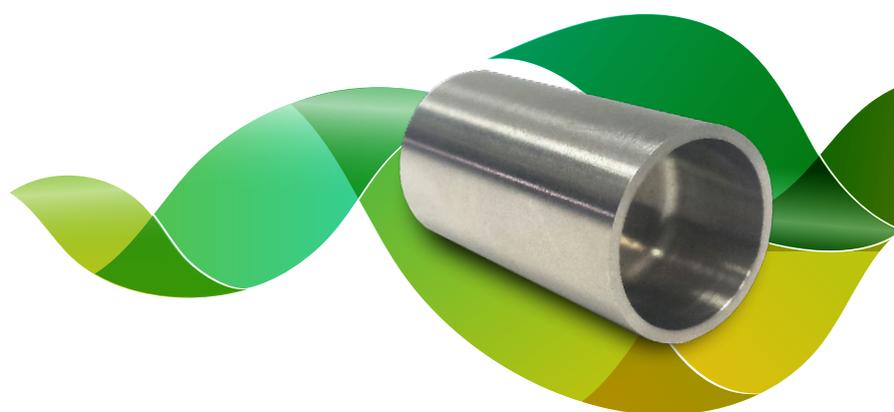
### ECAP - End Cap

O.D. Size Inch	Dimensions				SciMax 10		SciMax 20	
	A inch	A mm	B inch	B mm	Name	Catalog# EP	Name	Catalog# BA
¼"	1.70	34.75	0.46	11.58	SM10316LEPECAP-.25	576-00001	SM20316LBAECAP-.25	576-00012
⅜"	1.75	44.45	0.58	14.82	SM10316LEPECAP-.375	576-00002	SM20316LBAECAP-.375	576-00013
½"	1.75	44.45	0.58	14.82	SM10316LEPECAP-.5	576-00003	SM20316LBAECAP-.5	576-00014
¾"	1.75	44.45	0.58	14.82	SM10316LEPECAP-.75	576-00004	SM20316LBAECAP-.75	576-00015
1"	1.75	44.45	0.58	14.82	SM10316LEPECAP-1.0	576-00005	SM20316LBAECAP-1.0	576-00016
1½"	2.00	50.80	0.67	16.93	SM10316LEPECAP-1.5	576-00006	SM20316LBAECAP-1.5	576-00017
2"	2.00	50.80	0.67	16.93	SM10316LEPECAP-2.0	576-00007	SM20316LBAECAP-2.0	576-00018
2½"	2.00	50.80	0.67	16.93	SM10316LEPECAP-2.5	576-00008	SM20316LBAECAP-2.5	576-00019
3"	2.00	50.80	0.67	16.93	SM10316LEPECAP-3.0	576-00009	SM20316LBAECAP-3.0	576-00020
4"	2.50	63.50	0.83	21.17	SM10316LEPECAP-4.0	576-00010	SM20316LBAECAP-4.0	576-00021
6"	3.15	80.00	2.63	66.67	SM10316LEPECAP-6.0	576-00011	SM20316LBAECAP-6.0	576-00022



How to order - see page 9

For wall thickness please refer to page 8



## Coax - Tubes

### Tubes

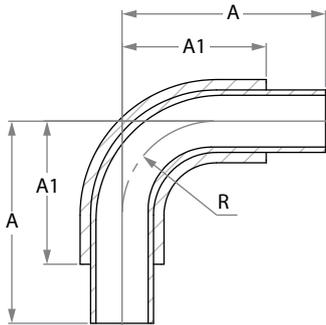


O.D. Size Inch		Dimensions				SCiMax 10	
Inner Tube	X Outer Tube*	Wall Thickness Inner Tube		Wall Thickness Outer Tube		Name	Catalog# EP
		t1 inch	t1 mm	t2 inch	t2 mm		
¼"	x ½"	0.035	0.89	0.049	1.24	SM10COAX316LEPSL-.25X.035	581-00081
⅜"	x ⅝"	0.035	0.89	0.049	1.24	SM10COAX316LEPSL-.375X.035	581-00131
½"	x ¾"	0.049	1.24	0.065	1.65	SM10COAX316LEPSL-.5X.049	581-00088
¾"	x 1"	0.065	1.65	0.065	1.65	SM10COAX316LEPSL-.75X.065	581-00129
1"	x 1¼"	0.065	1.65	0.065	1.65	SM10COAX316LEPSL-1.0X.065	581-00250
1"	x 1½"	0.065	1.65	0.065	1.65	SM10316LCOAX1.5-EP1.0X0.065	581-00268

How to order - see page 11

\* SM 20 all sizes, welded tube for OD ≥ 1"

## Coax - Elbows



### EL90 - Elbow 90°

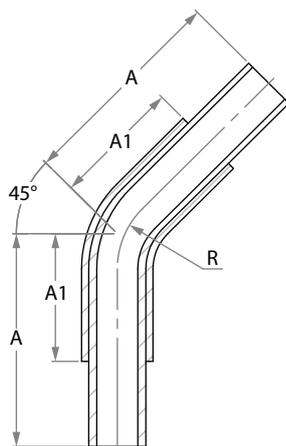
O.D. Size Inch		Dimensions						SCiMax 10	
Inner Tube	X Outer Tube*	A inch	A mm	A1 inch	A1 mm	R inch	R mm	Name	Catalog# EP
		¼"	x ½"	4.0	101.6	3.0	76.2		
⅜"	x ⅝"	4.0	101.6	3.0	76.2	1.125	28.6	SM10COAX316LEPEL90-.375	585-00002
½"	x ¾"	4.0	101.6	3.0	76.2	1.125	28.6	SM10COAX316LEPEL90-.50	585-00011
¾"	x 1"***	3.2	81.4	2.2	56.1	1.125	28.6	SM10COAX316LEPEL90-.75	585-00013
1"	x 1¼"***	4.0	102.2	2.5	64.2	1.500	38.1	SM10COAX316LEPEL90-1.0-SL	585-00044
1"	x 1½"***	4.25	108	3.25	82.6	1.500	38.1	SM10COAX 1.5-316LSLEP EL90 1.0	585-00046

How to order - see page 12 | For wall thickness please refer to page 8 |

Inner Tubes (all sizes) and Outer tubes (up to ¾") are made from **Seamless** tubes

\* SM 20 all sizes, welded tube for OD ≥ 1" | \*\* External elbow welded from segments

### EL45 - Elbow 45°



O.D. Size Inch		Dimensions						SCiMax 10	
Inner Tube	X Outer Tube*	A inch	A mm	A1 inch	A1 mm	R inch	R mm	Name	Catalog# EP
		¼"	x ½"	3.25	82.6	2.25	57.2		
⅜"	x ⅝"	3.25	82.6	2.25	57.2	1.125	28.6	SM10COAX316LEPEL45-.375	585-00024
½"	x ¾"	3.25	82.6	2.25	57.2	1.125	28.6	SM10COAX316LEPEL45-.50	585-00025
¾"	x 1"***	3.25	82.6	2.25	57.2	1.125	28.6	SM10COAX316LEPEL45-.75	585-00021
1"	x 1¼"***	3.75	95.3	2.25	57.2	1.500	38.1	SM10COAX316LEPEL45-1.0-SL	585-00045
1"	x 1½"***	3.5	88.9	2.5	63.5	1.5	38.1	SM10COAX 1.5-316LSLEP EL45 1.0	585-00047

How to order - see page 12 | For wall thickness please refer to page 8 |

Inner Tubes (all sizes) and Outer tubes (up to ¾") are made from **Seamless** tubes

\* SM 20 all sizes, welded tube for OD ≥ 1" | \*\* External elbow welded from segments

## Coax - Tees

### ETEE - Equal Tee

O.D. Size Inch		Dimensions								SciMax 10	
Inner Tube	X Outer Tube*	A inch	A mm	A1 inch	A1 mm	B inch	B mm	B1 inch	B1 mm	Name	Catalog# EP
¼"	x ½"	5.75	146.05	3.75	95.25	2.87	73.00	1.875	47.60	SM10COAX316LEPETEE-.25	584-00001
⅜"	x ⅝"	5.75	146.05	3.75	95.25	2.87	73.00	1.875	47.60	SM10COAX316LEPETEE-.375	584-00002
½"	x ¾"	6.00	152.40	4.00	101.60	3.00	76.20	2.000	50.80	SM10COAX316LEPETEE-.50	584-00009
¾"	x 1"	6.25	158.80	4.25	108.00	3.13	79.40	2.125	54.00	SM10COAX316LEPETEE-.75	584-00008
1"	x 1¼"	7.25	184.20	4.25	108.00	3.13	79.40	2.125	54.00	SM10COAX316LEPETEE-1.0-SL	584-00034

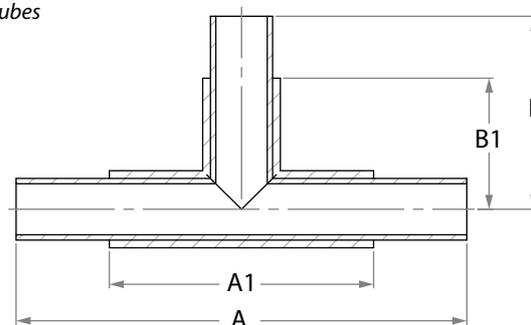
How to order - see page 12 | For wall thickness please refer to page 8

1"x1½" - Available upon Request

Inner Tubes (all sizes) and Outer tubes (up to ¾") are made from **Seamless** tubes

All Coax Tees are made by welding the segments

\* SM 20 all sizes, welded tube for OD ≥ 1"



## Coax - Tees

### RTEE - Reducing Tee

O.D. Size Inch		Reducing O.D. Size Inch		Dimensions								SciMax 10	
Inner Tube	X Outer Tube*	Inner Tube	X Outer Tube*	A inch	A mm	A1 inch	A1 mm	B inch	B mm	B1 inch	B1 mm	Name	Catalog# EP
⅜"	x ⅝"	¼"	x ½"	5.75	146.10	3.75	95.3	2.875	73.0	1.875	47.6	SM10COAX316LEPRTEE-.375X.25	584-00016
½"	x ¾"	¼"	x ½"	6.00	152.40	4.00	101.6	3.000	76.2	2.000	50.8	SM10COAX316LEPRTEE-.50X.25	584-00017
½"	x ¾"	⅜"	x ⅝"	6.00	152.40	4.00	101.6	3.000	76.2	2.000	50.8	SM10COAX316LEPRTEE-.50X.375	584-00018
¾"	x 1"	¼"	x ½"	6.25	158.80	4.25	108.0	3.125	79.4	2.125	54.0	SM10COAX316LEPRTEE-.75X.25	584-00019
¾"	x 1"	⅜"	x ⅝"	6.25	158.80	4.25	108.0	3.125	79.4	2.125	54.0	SM10COAX316LEPRTEE-.75X.375	584-00020
¾"	x 1"	½"	x ¾"	6.25	158.80	4.25	108.8	3.125	79.4	2.125	54.0	SM10COAX316LEPRTEE-.75X.50	584-00005
1"	x 1¼"	¼"	x ½"	7.25	184.20	4.25	108.0	3.125	79.4	2.125	54.0	SM10COAX316LEPRTEE-1.0X.25	**
1"	x 1¼"	⅜"	x ⅝"	7.25	184.20	4.25	108.0	3.125	79.4	2.125	54.0	SM10COAX316LEPRTEE-1.0X.375	**
1"	x 1¼"	½"	x ¾"	7.25	184.20	4.25	108.0	3.125	79.4	2.125	54.0	SM10COAX316LEPRTEE-1.0X.50-SL	584-00033
1"	x 1¼"	½"	x ¾"	7.25	184.20	4.25	108.0	3.125	79.4	2.125	54.0	SM10COAX316LEPRTEE-1.0X.50	584-00007
1"	x 1¼"	¾"	x 1"	7.25	184.20	4.25	108.0	3.125	79.4	2.125	54.0	SM10COAX316LEPRTEE-1.0X.75	584-00035
1"	x 1½"	¼"	x ½"	6.25	158.75	4.25	108.0	3.125	79.4	2.125	54.0	SM10COAX1.5-316LSLEPRTEE-1.0X.25	584-00037

How to order - see page 12 | For wall thickness please refer to page 11

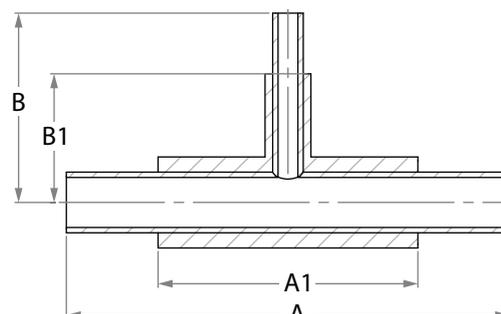
Inner Tubes and Outer tubes up to ¾" are made from **Seamless** tubes.

SL letters combination in the name of 1" Inner tube means Seamless tube as well.

All Coax Tees are made by welding the segments

\* SM 20 all sizes, welded tube for OD ≥ 1"

\*\* Sizes of Inner Tube: 1" X ½", 1" X ⅜", 1" X ¾" and others are available upon request

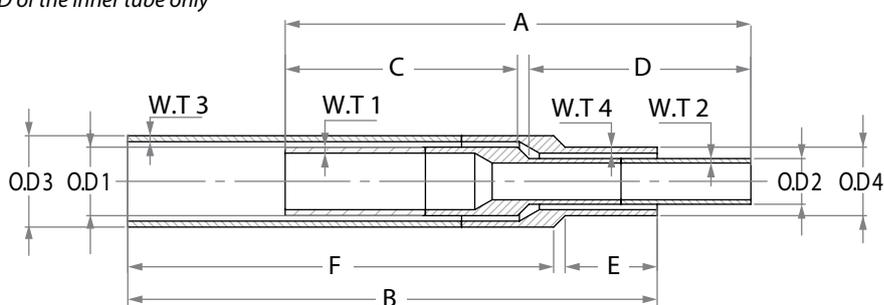


## Coax Accessories

### Coax Reducer

O.D. Size Inch*	Inner Tube				Outer Tube				General Lengths						SCiMax 10	
Inner Tube	OD1	WT1	OD2	WT2	OD3	WT3	OD4	WT4	A	B	C	F	D	E	Name	Catalog# EP
3/8" x 1/4"	0.375	0.035	0.25	0.035	0.625	0.049	0.50	0.049	4.0	4.00	1.34	2.34	2.60	1.47	SM10COAX316LEPCORD-.25X.375	524-00001
1/2" x 1/4"	0.500	0.049	0.25	0.035	0.750	0.065	0.50	0.049	4.0	4.00	1.31	2.31	2.56	1.56	SM10COAX316LEPCORD-.25X.5	524-00002
3/4" x 1/4"	0.750	0.065	0.25	0.035	1.000	0.065	0.50	0.049	5.0	5.75	2.00	3.88	2.75	1.63	SM10COAX316LEPCORD-.25X.75	524-00003
3/4" x 1/2"	0.750	0.065	0.50	0.049	1.000	0.065	0.75	0.065	5.0	5.75	2.06	3.94	2.81	1.69	SM10COAX316LEPCORD-.5X.75	524-00007
1" x 1/2"	1.000	0.065	0.50	0.049	1.250	0.065	0.75	0.065	5.0	5.75	2.13	3.88	2.63	1.63	M10COAX316LEPCORD-.5X1.0	524-00006
1" x 3/4"	1.000	0.065	0.75	0.065	1.250	0.065	1.00	0.065	6.5	6.50	2.19	3.94	4.19	2.44	SM10COAX316LEPCORD-.75X1.0	524-00008

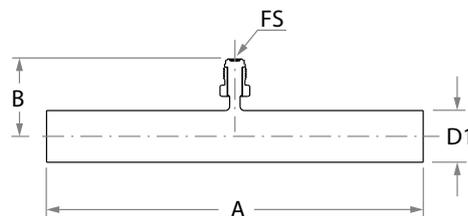
How to order - see page 11 | For wall thickness please refer to page 10  
 Inner and Outer Tubes are welded from segments | Outer Tubes are Scimax 20  
 \* Other sizes upon request, Sizes are based on the OD of the inner tube only  
 All dimensions are in Inches



### PTEE - Purge Tee Male

O.D. Size Inch	Dimensions							SCiMax 20	
Tube	D1 inch	D1 mm	A inch	A mm	B inch	B mm	FS*	Name	Catalog # BA
1/2"	0.50	12.7	3.75	95.25	1.875	47.65	0.25	SM20COAX316LBAPTEEM-.50	584-00023
5/8"	0.62	15.75	3.75	95.25	1.950	49.53	0.25	SM20COAX316LBAPTEEM-.63	584-00024
3/4"	0.75	19.05	4.00	101.60	2.000	50.80	0.25	SM20COAX316LBAPTEEM-.75	584-00012
1"	1.00	25.4	4.25	108.00	2.125	54.00	0.25	SM20COAX316LBAPTEEM-1.0	584-00029
1 1/4"	1.25	31.75	4.25	108.00	2.260	57.40	0.25	SM20COAX316LBAPTEEM-1.25	584-00030

How to order - see page 12  
 Always choose PTEE one size larger than the coax fitting  
 For wall thickness please refer to page 11  
 \* FS - Face Seal



## Coax Accesories

### SLVE - Sleeve

O.D. Size Inch	Dimensions						SCiMax 20**		
Tube	D1 inch	D1 mm	D2 inch	D2 mm	A inch*	A mm*	Name 20	Catalog # BA	
½"	0.63	15.87	0.53	12.9	2.5	63.5	SM20COAX316LBASLEEVE-.50	528-00004	
½"	0.63	15.87	0.53	12.9	4.0	101.6	SM20COAX316LBASLEEVE-.50Long	528-00010*	
⅝"	0.75	19.0	0.63	16.1	2.5	63.5	SM20COAX316LBASLEEVE-.63	528-00002	
⅝"	0.75	19.0	0.63	16.1	4.0	101.6	SM20COAX316LBASLEEVE-.63Long	528-00011*	
¾"	0.87	22.0	0.76	19.25	2.5	63.5	SM20COAX316LBASLEEVE-.75	528-00003	
¾"	0.87	22.0	0.76	19.25	4.0	101.6	SM20COAX316LBASLEEVE-.75Long	528-00012*	
1"	1.14	29.0	1.02	25.6	3.5	88.9	SM20COAX316LBASLEEVE-1.0	528-00001	
1"	1.14	29.0	1.02	25.6	4.0	101.6	SM20COAX316LBASLEEVE-1.0Long	528-00008*	
1¼"	1.38	35.0	1.26	32.0	3.5	88.9	SM20COAX316LBASLEEVE-1.25	528-00005	
1¼"	1.38	35.0	1.26	32.0	4.0	101.6	SM20COAX316LBASLEEVE-1.25Long	528-00009*	
1½"	1.61	41.0	1.51	38.35	4.0	101.6	SM20COAX316LBASLEEVE-1.5	528-00007	
2"	2.12	54.0	2.01	51.1	5.56	141.3	SM20COAX316LBASLEEVE-2	528-00006	



How to order - see page 12

Sleeves are SCiMax 20

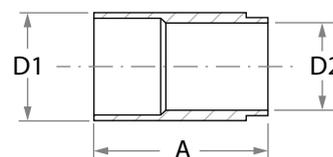
For wall thickness please refer to page 11

\* Long Sleeve - Upon request Only.

\*\* Coax sleeves are fillet welded and the sulfur content may be up to 0.03%

### TERM - Terminator

O.D. Size Inch		Dimensions						SCiMax 20		
Inner Tube	Outer Tube	D1 inch	D1 mm	D2 inch	D2 mm	A inch	A mm	Name 20	Catalog # BA	
¼"	x ½"	0.50	12.7	0.26	6.6	1.25	31.75	SM20COAX316LBATERM-.25	590-00001	
⅜"	x ⅝"	0.63	15.9	0.38	9.7	1.25	31.75	SM20COAX316LBATERM-.375	590-00005	
½"	x ¾"	0.75	19.1	0.51	12.9	1.25	31.75	SM20COAX316LBATERM-.5	590-00010	
¾"	x 1"	1.00	25.4	0.76	19.3	2.00	50.80	SM20COAX316LBATERM-.75	590-00002	
1"	x 1¼"	1.25	31.8	1.00	25.4	2.13	54.00	SM20COAX316LBATERM-1.0	590-00011	
1"	x 1½"	1.50	38.1	1.00	25.4	2.13	54.00	SM20COAX1.5-316LBATERM-1.0	590-00021	



How to order - see page 12

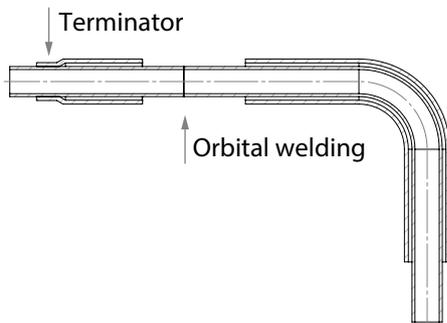
Terminators are SCiMax 20

For wall thickness please refer to page 11

## Coax Assembly Instructions

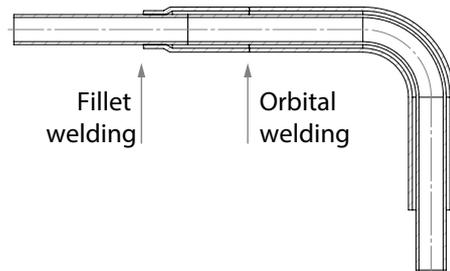
### Terminator Assembly

#### A - Prepare the parts and weld the inner tubes



1. Assemble the terminator over the inner tube.
2. Align the inner tubes and weld them.
3. Inspection and Helium leak test.
4. If Ok proceed with B.

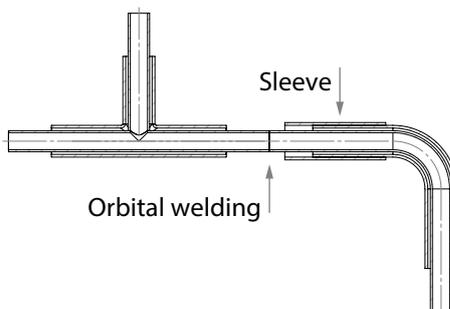
#### B - Orbital and fillet welding



1. Slide the terminator over the inner tube to mate with the outer jacket of the fitting.
2. Fillet weld as seen above.
3. Inspection and Helium leak test.

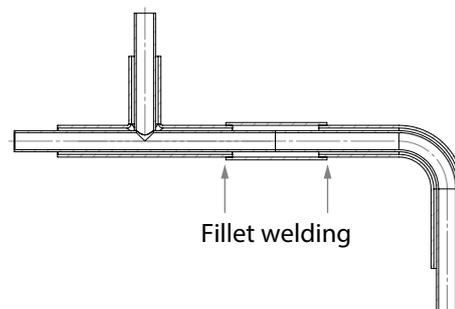
### Sleeve Assembly

#### A - Prepare the parts and weld the inner tubes



1. Assemble the sleeve over the inner tube.
2. Align the inner tubes and weld them.
3. Inspection and Helium leak test.
4. If OK proceed with B.

#### B - Fillet welding

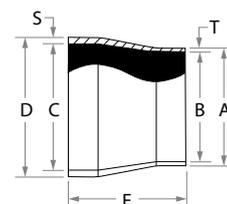


1. Slide the sleeve over the inner tube to close the gap between the outer jackets.
2. Fillet weld.
3. Inspection and Helium leak test.

## Accessories

### TUBE X PIPE ADAPTER

O.D. Size Inch	Dimensions							SM10*		SM20	
Tube	A inch	B inch	C inch	D inch	E inch	T inch	S inch	Catalog #	Name	Catalog #	Name
½"	0.500	0.370	0.674	0.840	1.000	0.065	0.083	513-00019	SM10316LEPPTA-.5	513-00010	SM20316LBAPTA-.5
¾"	0.750	0.620	0.884	1.050	1.000	0.065	0.083	513-00020	SM10316LEPPTA-.75	513-00011	SM20316LBAPTA-.75
1"	1.000	0.870	1.097	1.315	1.000	0.065	0.109	513-00021	SM10316LEPPTA-1.0	513-00012	SM20316LBAPTA-1.0
1½"	1.500	1.370	1.682	1.900	1.500	0.065	0.109	513-00022	SM10316LEPPTA-1.5	513-00013	SM20316LBAPTA-1.5
2"	2.000	1.870	2.157	2.375	1.500	0.065	0.109	513-00023	SM10316LEPPTA-2.0	513-00014	SM20316LBAPTA-2.0
2½"	2.500	2.370	2.635	2.875	1.500	0.065	0.120	513-00024	SM10316LEPPTA-2.5	513-00015	SM20316LBAPTA-2.5
3"	3.000	2.870	3.260	3.500	2.000	0.065	0.120	513-00025	SM10316LEPPTA-3.0	513-00016	SM20316LBAPTA-3.0
4"	4.000	3.834	4.260	4.500	2.000	0.083	0.120	513-00026	SM10316LEPPTA-4.0	513-00017	SM20316LBAPTA-4.0
6"	6.000	5.782	6.357	6.625	3.000	0.109	0.134	513-00027	SM10316LEPPTA-6.0	513-00018	SM20316LBAPTA-6.0

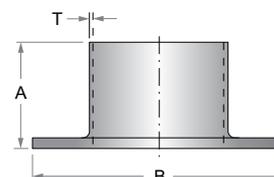


All the above are SCH10 & 316 L

\* SM10 by special request

### TYPE A STUB END WITH GROOVES

Nominal Size in.	Dimensions						SM10*		SM20	
	A in.	A mm	B in.	B mm	T in.	T mm	Catalog #	Name	Catalog #	Name
½"	2.000	50.80	1.625	41.3	0.049	1.24	574-00012	SM10316LEPSE-.5	574-00003	SM20316LBASE-.5
¾"	2.000	50.80	1.687	42.9	0.065	1.65	574-00013	SM10316LEPSE-.75	574-00004	SM20316LBASE-.75
1"	2.000	50.80	2.000	50.8	0.065	1.65	574-00014	SM10316LEPSE-1.0	574-00005	SM20316LBASE-1.0
1½"	2.000	50.80	2.875	73.0	0.065	1.65	574-00015	SM10316LEPSE-1.5	574-00006	SM20316LBASE-1.5
2"	2.500	63.50	3.265	92.1	0.065	1.65	574-00016	SM10316LEPSE-2.0	574-00007	SM20316LBASE-2.0
2½"	2.500	63.50	4.125	104.8	0.065	1.65	574-00017	SM10316LEPSE-2.5	574-00008	SM20316LBASE-2.5
3"	2.500	63.50	5.000	127.0	0.065	1.65	574-00018	SM10316LEPSE-3.0	574-00009	SM20316LBASE-3.0
4"	2.500	63.50	6.187	157.2	0.083	2.11	574-00019	SM10316LEPSE-4.0	574-00010	SM20316LBASE-4.0
6"	3.000	76.20	8.500	215.9	0.109	2.77	574-00020	SM10316LEPSE-6.0	574-00011	SM20316LBASE-6.0



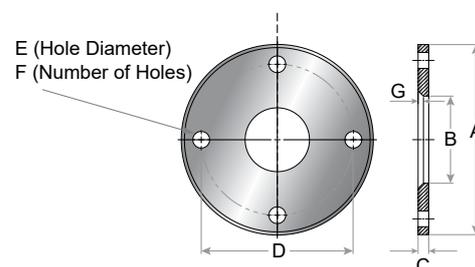
All the above are 316 L

\* SM10 by special request

### SLIP ON FLANGE

Nominal Size in.	Dimensions												Holes Diameter	Num. of Holes	SM20	
	A in.	A mm	B in.	B mm	C in.	C mm	D in.	D mm	G inch	G mm	E inch	E mm	F	Catalog #	Name	
½"	3-½"	88.9	0.56	14.2	⅜"	9.5	2-⅜"	60.3	⅜"	4.8	⅝"	15.9	4	683-00009	SM20316LBASOF-.5	
¾"	3-⅞"	98.4	0.81	20.6	⅜"	9.5	2-¾"	69.8	⅜"	4.8	⅝"	15.9	4	683-00010	SM20316LBASOF-.75	
1"	4-¼"	108.0	1.06	26.9	⅜"	9.5	3-⅛"	79.4	⅜"	4.8	⅝"	15.9	4	683-00011	SM20316LBASOF-1.0	
1½"	5"	127.0	1.56	39.6	⅜"	9.5	3-⅞"	98.4	⅜"	4.8	⅝"	15.9	4	683-00012	SM20316LBASOF-1.5	
2"	6"	152.4	2.06	52.3	⅞"	11.1	4-¾"	120.6	⅞"	5.6	¾"	19.1	4	683-00013	SM20316LBASOF-2.0	
2½"	7"	177.8	2.56	65.0	⅞"	11.1	5-½"	139.7	⅞"	5.6	¾"	19.1	4	683-00017	SM20316LBASOF-2.5	
3"	7-½"	190.5	3.06	77.7	½"	12.7	6"	152.4	¼"	6.4	¾"	19.1	4	683-00014	SM20316LBASOF-3.0	
4"	9"	228.6	4.06	103.1	½"	12.7	7-½"	190.5	¼"	6.4	¾"	19.1	8	683-00015	SM20316LBASOF-4.0	
6"	11"	297.4	6.06	153.9	⅜"	20.7	9-½"	241.3	¼"	6.4	⅞"	22.2	8	683-00016	SM20316LBASOF-6.0	

All the above are 316 L



## Laterals and Manifolds

EGMO offers top quality PCW, CFOS & UHP pre-fabricated laterals & manifolds for the semiconductor industry.

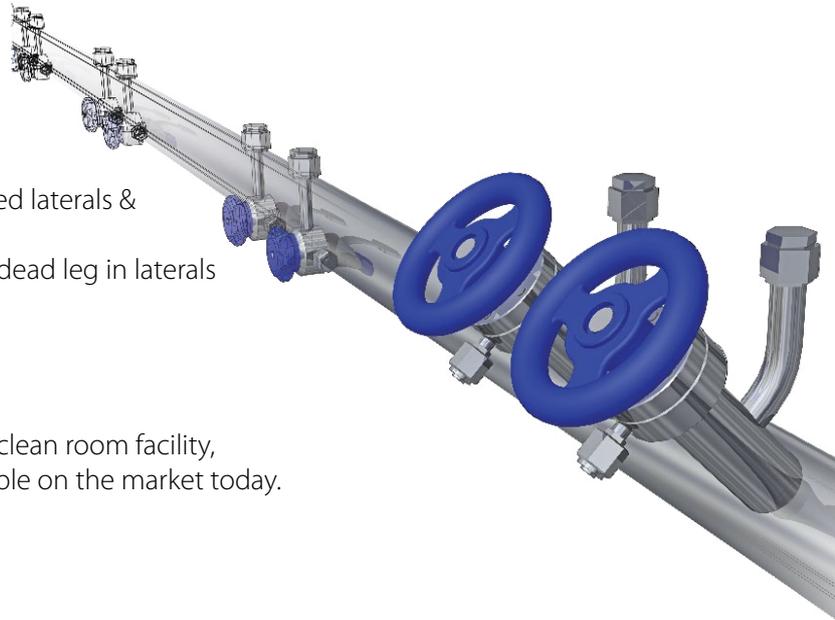
Using EGMO's unique 3D internal welding technology, dead leg in laterals and manifold POC's are reduced to minimum:

- Reduce purge time
- Reduce number of welding on-site
- Reduce cost per line

With our new state of the art pre-fabrication plant and clean room facility, EGMO offers the best quality laterals & manifolds available on the market today.

### Advantages

- Reducing field installation time
- All MP & EP manifolds are passivated
- Custom designed, manufactured, and 100% tested from a single source
- Reduced assembly & installation costs
- Warranted as a single part number
- Advanced and unique internal welding technology
- Reduced dead leg in branch
- Minimum weld per manifold



## EGMO Laterals Application

- PCW & WFI water loops
- Bulk gases distribution systems
- Specialty gases distribution systems
- Mini Lateral for hook up

### PCW Laterals

304L SCH10  
 Diameters: 3" - 10"  
 Material: 304L  
 Pipes Standard

### CFOS Laterals

316L  
 Diameters: ½" - 6"  
 Material: 316L  
 Tubes Standard

### UHP Laterals

316L EP  
 Diameters: 1" - 6"  
 For UHP gases

### Lateral Outlets

Weld connection  
 Gland connection  
 Clamp ferrule  
 Ball valve  
 Diaphragm valve  
 Compression fittings

### Applications

Ultra high purity gases  
 Utility gas line laterals  
 Process Cooling Water  
 Short manifolds for gas cabinets



## EGMO Manifold New Concept **Cut&Weld**

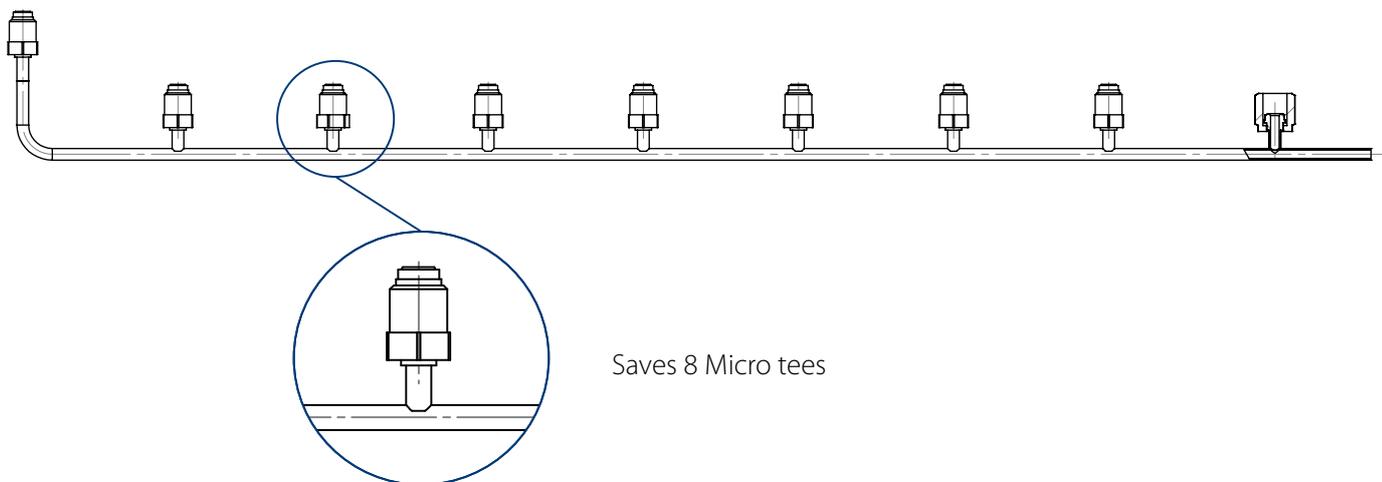
**Background:** A Standard Manifold is based on a combination of a UHP tube welded to a mini butt-weld Tee fitting and a gland fitting, creating 3 welds per connection.

**EGMO Manifold New Concept **Cut&Weld**:** With this new concept, EGMO provides an advanced UHP manifold based on direct internal welding of the UHP Gland to the tube, saving the use of the mini butt-weld tee and two welding per connection.

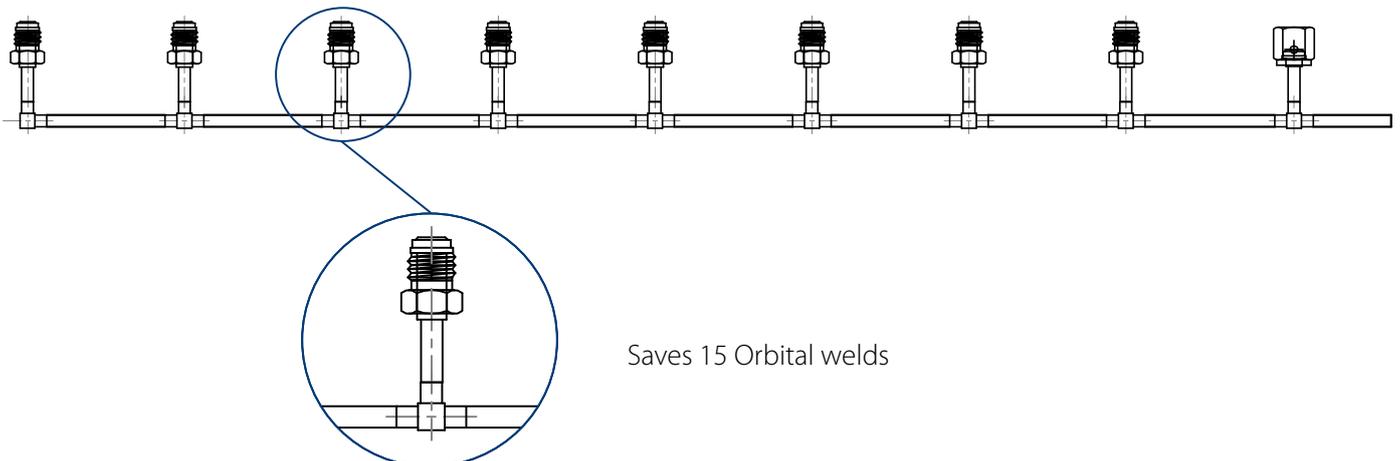
### EGMO Manifold New Concept **Cut&Weld** advantages and specifications:

- Tailor-made design per the customer's needs.
- Improve safety.
- Improve quality.
- Reduce costs.
- Sizes - 1/4" - 1"
- Branches - 1/4" - 3/4"
- Outlets - VCR Glands + Butt Weld

### Implementation of Internal Welding Technology



### Standard Manifold

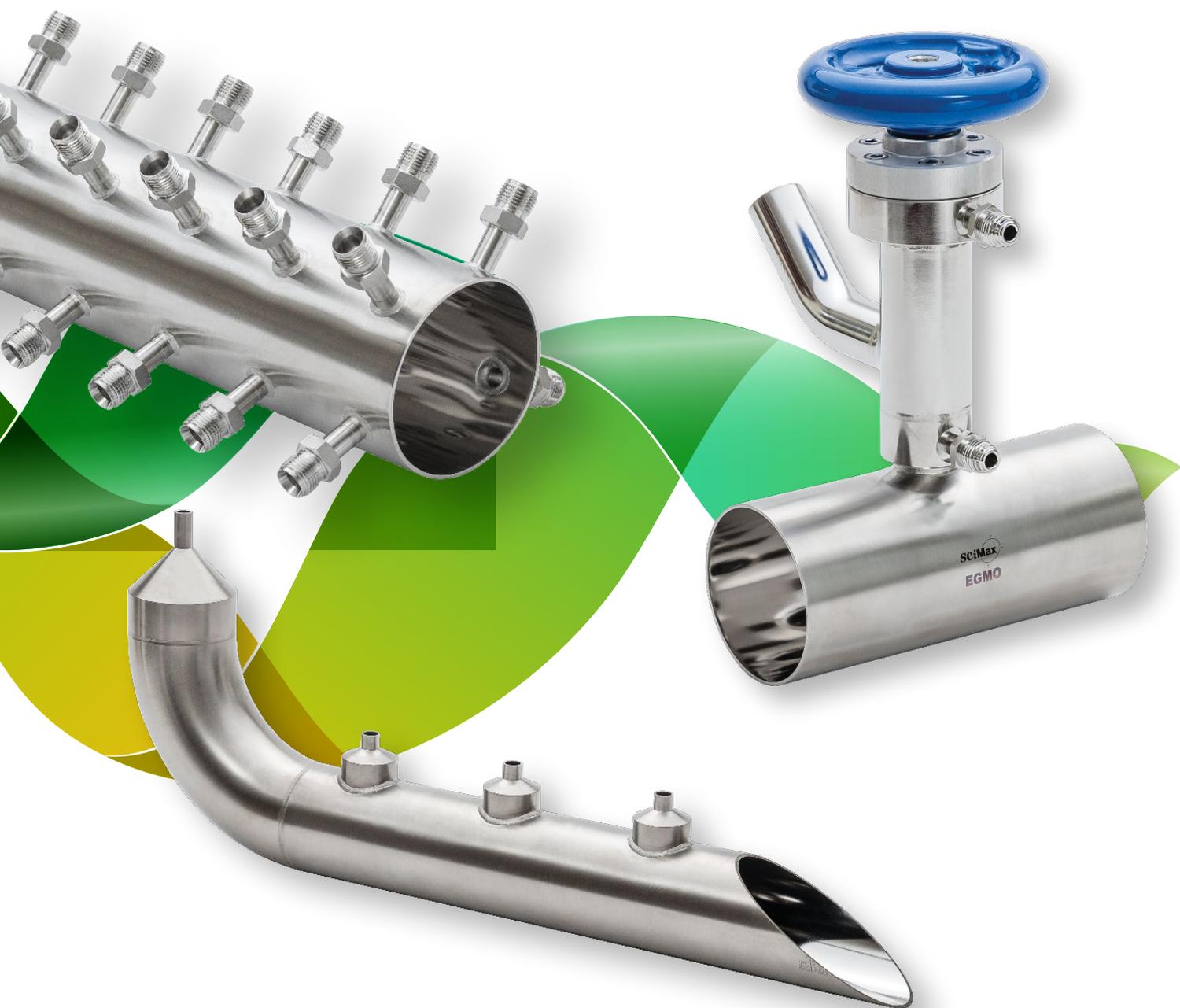


## Customized Components

EGMO, HPT, and NEUMO are distinguished by their unique ability to provide the highest quality stainless steel products - ranging from special fittings, connectors, electro polished vessels and tanks with the most advanced technology, and other special accessories - for a cross-industry clientele.

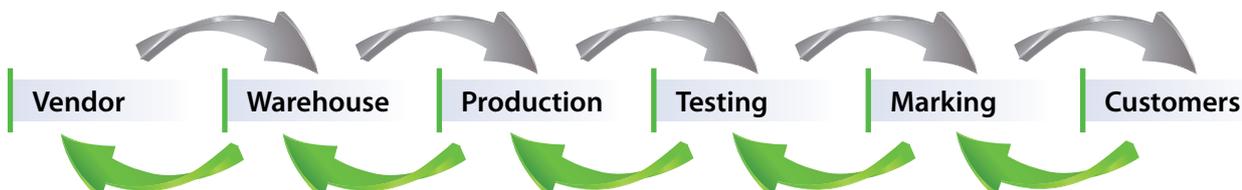
Our abilities have developed and progressed over the years, allowing us to offer a one-of-a-kind business opportunity: custom stainless steel products and systems, manufactured according to client specifications and needs.

Our Vessels & Custom Products can be designed to meet any requirement, including vessels, abnormal sizes, special angles, sprinklers, subsystems and many more - all in compliance with industrial regulations.



## 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 [www.egmo.co.il](http://www.egmo.co.il) 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.

### ON-LINE MTR

Please, enter job/certificate number:




The MTR is also available for download with QR CODE

### The MTR format provides the following information:

- Part number, part description and job number
- Material type
- Heat Number per each component describing the fitting and its associated properties:
  - Tube dimensions and standards
  - Chemical composition
  - Mechanical properties
  - Visual, dimensional, corrosion, EDDY current testing, flaring and flattening, PMI Test
- Certificate of Compliance (please refer to table page 19)

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Semiconductor



Bio-Pharm



Hygienic