WinTech

PURE PIPING SOLUTIONS

GAS DELIVERY SYSTEMS

TUBES
FITTINGS
PIPES

Winter Technologies LLC 1464 Hoelzer Ct Pacific, MO 63069

Chemical Composition (%)

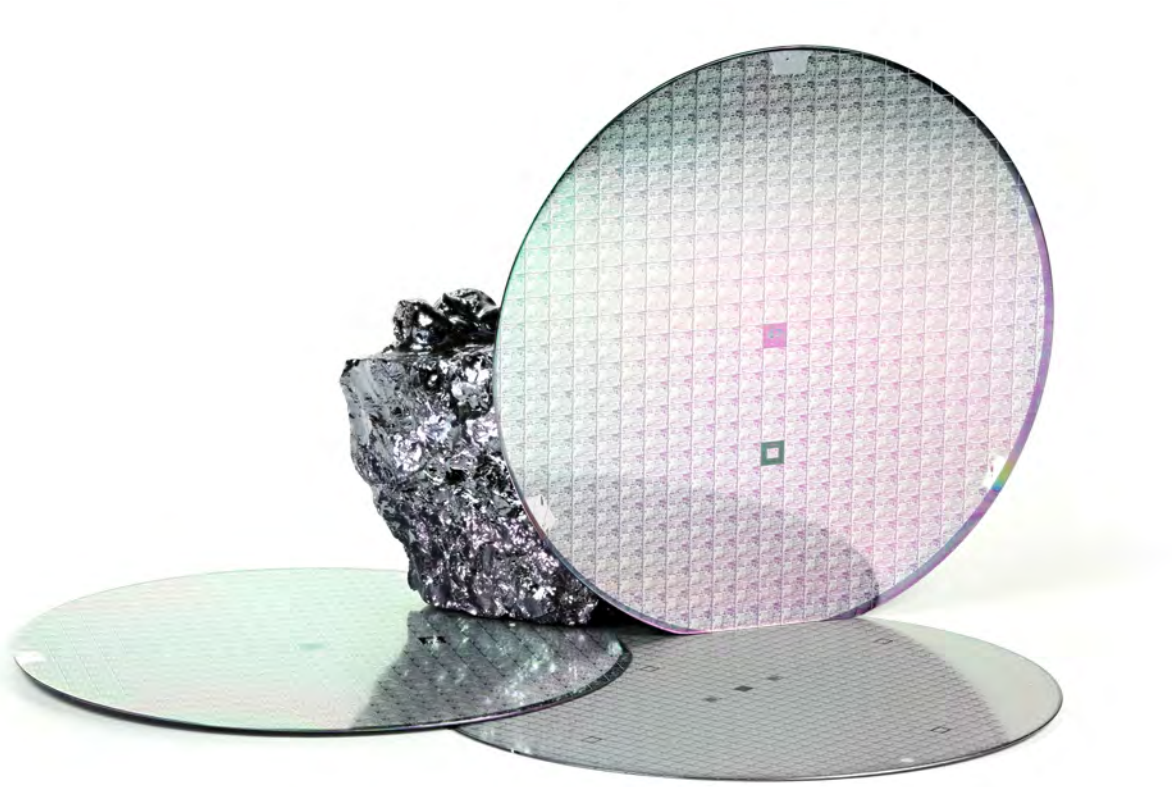
ASTM Standard	C	Si	Mn	P	S	Ni	Cr	Mo
304	≦ 0.080	≦ 1.00	≦ 2.00	≦ 0.045	≦ 0.030	8.00 – 11.00	18.00 – 20.00	-
304L	≦ 0.035	≦ 1.00	≦ 2.00	≦ 0.045	≦ 0.030	8.00 – 12.00	18.00 – 20.00	-
316	≦ 0.080	≦ 1.00	≦ 2.00	≦ 0.045	≦ 0.030	10.00 – 14.00	16.00 – 18.00	2.00 – 3.00
316L	≦ 0.035	≦ 1.00	≦ 2.00	≦ 0.045	0.005 – 0.012	12.00 – 16.00	16.00 – 18.00	2.00 – 3.00
316L VAR	0.015 – 0.030	≦ 1.00	1.00 – 1.50	≦ 0.045	0.005 – 0.012	12.00 – 16.00	16.00 – 18.00	2.00 – 3.00
316L VIM/VAR	0.015 – 0.030	≦ 1.00	0.15 – 0.40	≦ 0.045	0.005 – 0.010	12.00 – 16.00	16.00 – 18.00	2.00 – 3.00

Characteristics

ASTM	Mechanical			Specific Gravity	Thermal Expansion X 10-6 0 - 100°C	Specific Electric Resistance Room Temp. (10-8Ωm)	Specific Heat 0 - 100°C kj / (kg. °C)	Anti – Oxidation Critical Temperature	
	Tensile Strength (N/mm^2)	Yield Strength (N/mm^2)	Elongation (%)					Continuous Use (°C)	Intermittent Use (°C)
304	≧ 520	≧ 205	≧ 30	7.93	17.3	72	0.5	900	810
304L	≧ 480	≧ 175	≧ 30	7.93	17.3	72	0.5	900	810
316	≧ 520	≧ 205	≧ 30	7.98	16.0	74	0.5	900	810
316L	≧ 480	≧ 175	≧ 30	7.98	16.0	74	0.5	900	810

Cleaned Quality Assurance Values

Inspection Item	Assurance Values					
	AP	Grade	BA Grade	MP + EP Grade	EP	Grade
Oil content measurement	≦ 0.1mg/ft^2		≦ 0.01mg/ft^2			
Particle count	≦ No. of particle 0.3μm is 5/cf		≦ No. of particle 0.1μm is 5/cf		≦ No. of particle 0.1μm is 1/cf	
Liquid registivity measurement	-		≧ 0.5MΩ-cm			
Ion chromatography analysis	-		≦ 10ng/cm^2		≦ 5ng/cm^2	
Dew point measurement	-		≦ -75°C			



Raw material:

Stainless steel is the best material for Ultra High Purity, anti-corrosion, resistance of high temperature and for safety. 316L is a low carbon steel alloy, attractive because of its good weld-ability and inherent corrosion resistance. The commercial grade of 316L may contain impurities in the form of trapped gases and non-metallic inclusions. To prevent this from becoming a problem for our customer, **WinTech** only purchases materials to our own specifications.

Electropolishing

Electropolishing creates a smooth clean surface that enhances corrosion resistance and reduces particle entrapment in microscopic crevices. Our innovative and proprietary process greatly increases the ability to deliver quality electropolished components for dependable performance in any system.

Quality

WinTech's unyielding commitment to quality is evident in every step of our manufacturing process. From the start of procurement we specify stringent material standards. When raw materials arrive at our loading dock they are quarantined until wall thickness, ovality, smoothness, surface morphology, and chemical composition have been verified to make sure it will meet our rigorous procedures each and every time.
Before packaging tubing and fittings are cleaned with DI water produced through a reverse osmosis deionized process, surpassing SEMI guidelines for pure water. Components are then purged with high purity nitrogen. Finally, caps are placed over nylon film and the finished product is sealed in single or double poly bags.

Fittings and tubing are 100% inspected visually.

With **WinTech** tubing and fittings, you can be sure that you are installing cleaner components.

Cleaning and Bagging

WinTech offers a wide range of cleaning services including cleaning for oxygen service and specialized cleaning to customer specifications requiring solvent and heated deionized water processing. In addition to providing cleaning services we also provide packaging services such as capping, bagging, double bagging and sealing in an ISO Class 4 clean room environment.

The following quality assurance options are available:

Scanning Electron Microscope (SEM) photographs
Auger Electron Spectroscopy (AES) tests
Electron Spectroscopy Chemical Analysis (ESCA) tests Testing for presence of moisture
Testing for presence of particles down to 0.1 micron
Certification for oxygen and medical gas service
Image processing (video probe and/or boroscope capabilities)

WT10 / WT15 Specification

Applications

Ultra High Purity Systems, Electropolished

Materials

316L Stainless steel, single-melt or double-melt (seamless or welded)

other alloys avalible upon request

Sizes

Tube & Fittings: 1/8" to 4" (Contact WinTech for larger sizes)

Tolerances

In accordance with ASTM: A213/A269 & or A632

I.D. Surface Finish

WT10: 10 µin Ra

WT15: 15 µin Ra

UPON REQUEST :

5µin Ra, 7µin Ra

Testing & Inspection

Visual inspection

Surface roughness measurement

UPON REQUEST :

Helium-leak testing
Scanning Electron Microscopy (SEM)
Auger Electron Microscopy (AES)
Election Spectroscopy for Chemical Analysis (ESCA or XPS)
Particle testing
Moisture testing

Documentation

A quality inspection certificate is furnished with each shipment.

The report contains the following information:

Material composition & applicable specification designation
Nominal outside diameter size
Chemical composition
Statement of quality assurance testing
Lot & heat identification for traceability

Cleaned

Cleaned with 60° C DI water, purged with heated and filtered nitrogen,

capped, individually double bagged and then bulk bagged in an Class

100 clean room. WT15 is single bagged then Bulk Bagged

Packaging

All components are purged with UHP nitrogen, capped, double-bagged

and packaged for shipment in such

a manner, which prevents damage to product and primary product packaging.

WT20 Specification

Applications

High-Purity Systems

Materials

316L or 304L Stainless steel, single-melt (seamless or welded)

other alloys avalible upon request

Sizes

Tube & Fittings: 1/8" to 4" (Contact WinTech for larger sizes)

I.D. Surface Finish Options

WT20: 20 µin Ra

Tolerances

In accordance with ASTM: A213/A269 & or A632

Cleaned

Cleaned Thermocouple Clean Cap ASTM A632-S3

Clean for O2 Service (CFOS) ASTM G93, CGA G4.1 or customer requested

Passivation per ASTM A380, ASTM A967, SAE AMS2700 and QQ-P-35

Documentation

A quality inspection certificate is furnished with each shipment. The

report contains the following information:

Material composition & applicable specification designation

Nominal outside diameter size

Chemical composition

Statement of quality assurance testing

Lot & heat identification for traceability

Packaging

All components are capped, bagged and packaged for shipment in such a

manner, which prevents damage to product and primary product packaging.

WTBA Specification

Applications

High Purity Systems

Materials

316L or 304L Stainless steel, single-melt (seamless or welded)

other alloys avalible upon request

Sizes

Tube & Fittings: 1/8" to 4" (contact WinTech for larger sizes)

I.D. Surface Finish Options :

Bright Annealed Mill Finish

Tolerances

In accordance with ASTM A213/A269 & or A632

Testing & Inspection

Visual inspection

Dimensional inspection

Cleaned

Cleaned Thermocouple Clean Cap ASTM A632-S3

UPON REQUEST :

Clean for O2 Service (CFOS) ASTM G93, CGA G4.1

Passivation per ASTM A380, ASTM A967, SAE AMS2700 and QQ-P-35

Documentation

A quality inspection certificate is furnished with each shipment. The

report contains the following information:

Material composition & applicable specification designation

Nominal outside diameter size

Chemical composition

Statement of quality assurance testing

Lot & heat identification for traceability

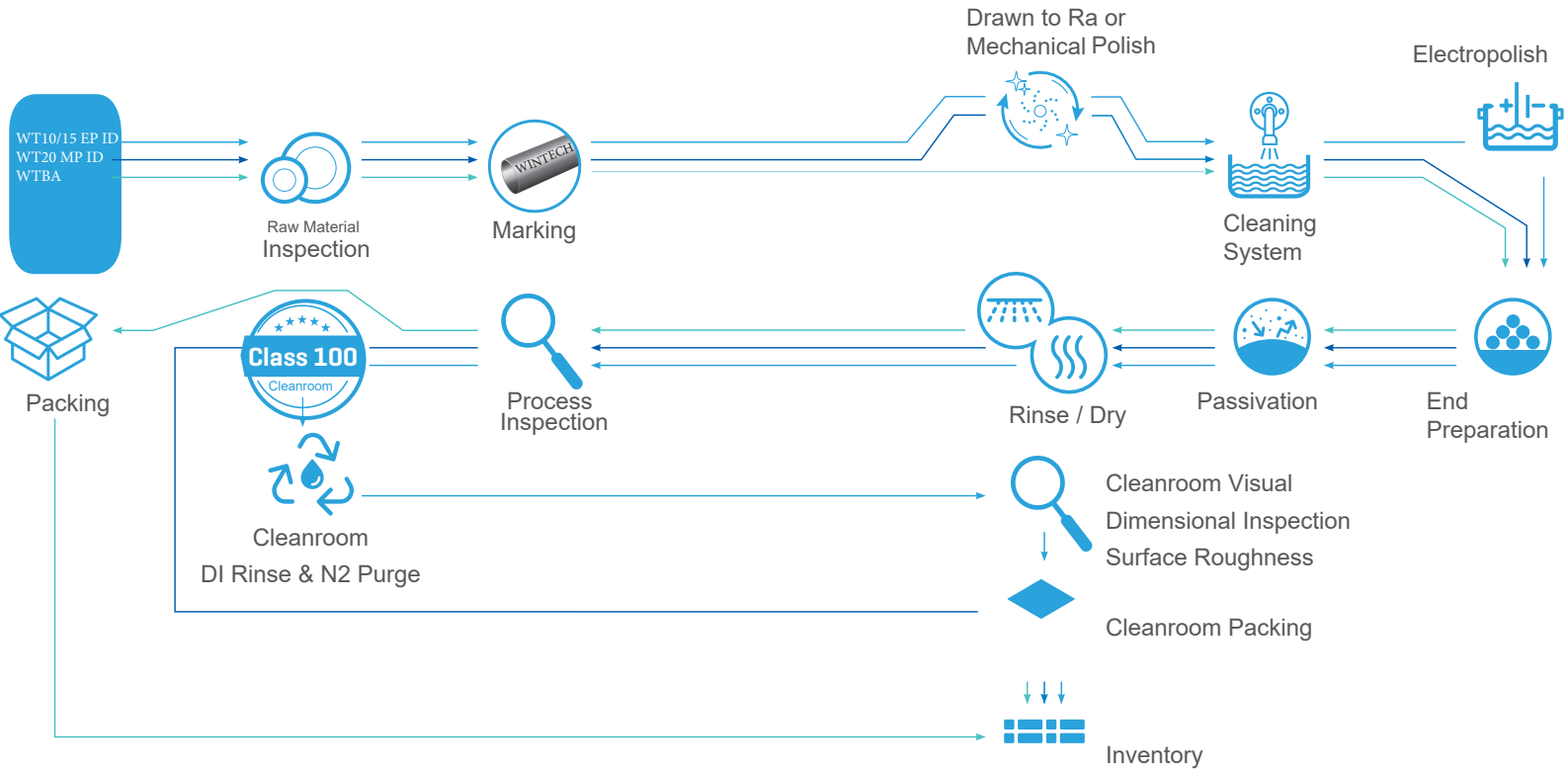
Packaging

Customer specified, caps and bags available. Packaged for shipment

in such a manner, which prevents damage to product and primary

product packaging.

Tube & Pipe Process



Tube Part Number Builder

A	B	C	D	E	F
Process	Seamless or Welded	O.D. Size	Wall Thickness	Material	Service/Special Request
• WT10 • WT15 • WT20 • WTBA	• S (SMLS) • W(WLD)	• 1/8" - ***02*** • 1/4" - ***04*** • 3/8" - ***06*** • 1/2" - ***08*** • 3/4" - ***12*** • 1" - ***16*** • 1 1/4" - ***20*** • 1 1/2" - ***24*** • 2" - ***32*** • 2 1/2" - ***40*** • 3" - ***48*** • 4" - ***64***	• 0.020" - ***020*** • 0.028" - ***028*** • 0.035 - ***035*** • 0.049 - ***049*** • 0.065 - ***065*** • 0.083 - ***083*** • 0.095 - ***095*** • 0.109 - ***109*** • 0.120 - ***120***	• 304/L - ***304L*** • 316/L - ***316L*** • VIM/VAR - ***VIMVAR*** • Monel - ***400*** • Hastelloy C22 - ***C22*** • Hastelloy C276 - ***C276***	• Cleaned for Oxygen Service - ***CFOS*** • Thermocouple Clean - ***TCC*** • Passivation - ***PASS*** • DFAR Compliant - ***DFAR***

Example: WT20S06049316LTCC

WT20 - Process
S - Seamless
06 - 3/8" OD
049 - 0.049" Wall Thickness
316L - 316/L Grade
TCC - Thermocouple Cleaned

****In our Wintech BA part numbers, the Seamless/Welded designator comes after the sizing.****

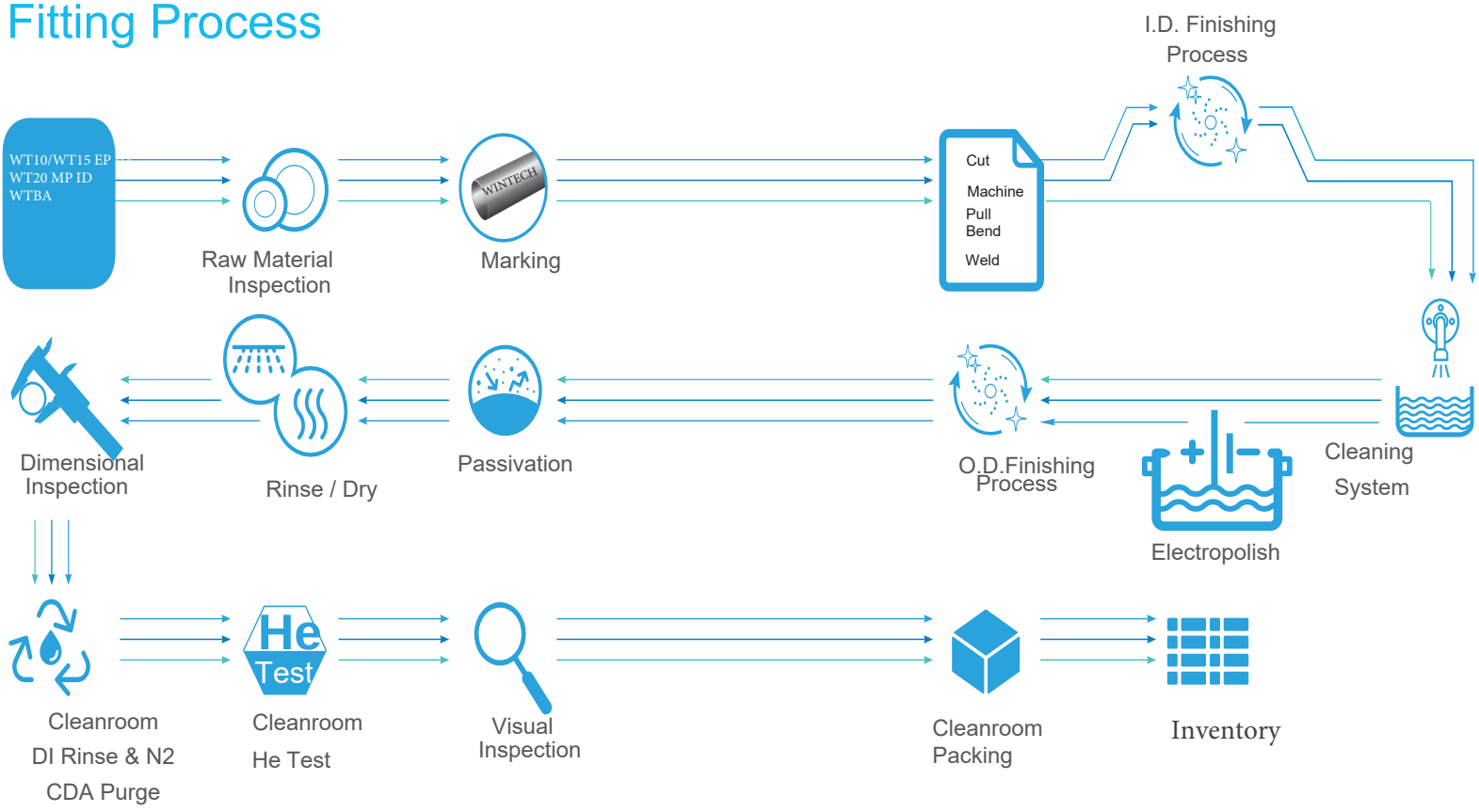
Example:

WTBA04035S316LCFOS

WTBA - Process
04 - 1/4" OD
035 - 0.035" Wall Thickness
S - Seamless
304L - 304/L Grade
CFOS - Cleaned for Oxygen Service

Contact WinTech UHP for other materials, sizes, or wall thickness.

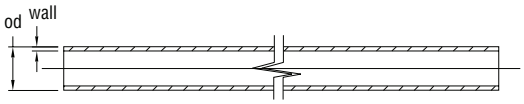
Fitting Process



Fitting Part Number Builder

A	B	C	D
Configuration	O.D. Size	Process	Service/Special Request
• 90° Elbow - ***2WW*** • 45° Elbow- ***3WW*** • Red Tee - ***7RWWW*** • Conc Red - ***31WW*** • Equal Tee - ***7WWW*** • End Cap - ***16W*** *contact WinTech for COAX	• 1/8" - ***02*** • 1/4" - ***04*** • 3/8" - ***06*** • 1/2" - ***08*** • 3/4" - ***12*** • 1" - ***16*** • 1 1/4" - ***20*** • 1 1/2" - ***24*** • 2" - ***32*** • 2 1/2" - ***40*** • 3" - ***48*** • 4" - ***64***	• WT10 • WT15 • WT20 • WTBA *part numbers for fittings based off of 316/L, for other alloys contact WinTech	• Cleaned for Oxygen Service - ***CFOS*** • Thermocouple Clean - ***TCC*** • Passivation - ***PASS*** • DFAR Compliant - ***DFAR***

Tubing Specifications

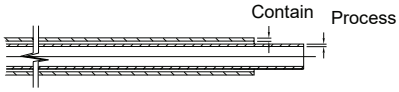


To complete part number add product specification.
Example: WT10S04035316L

**Available in straight lengths and coils.*
(Coils available in seamless up to 1" OD)

		Dimensions			Product Spec		
Part no.	Material	OD	Wall	lb/ft	10/15	20	BA
S02020	316L SS SMLS	.125	.020	.080	●	●	●
S02028	316L SS SMLS	.125	.028	.080	●	●	●
S04035	316L SS SMLS	.250	.035	.080	●	●	●
S06035	316L SS SMLS	.375	.035	.130	●	●	●
S08049	316L SS SMLS	.500	.049	.240	●	●	●
S12065	316L SS SMLS	.750	.065	.480	●	●	●
W16065	316L SS WLD	1.00	.065	.650	●	●	●
S16065	316L SS SMLS	1.00	.065	.650	●	●	●
W24065	316L SS WLD	1.50	.065	1.00	●	●	●
S24065	316L SS SMLS	1.50	.065	1.00	●	●	●
W32065	316L SS WLD	2.00	.065	1.34	●	●	●
S32065	316L SS SMLS	2.00	.065	1.34	●	●	●
W48065	316L SS WLD	3.00	.065	2.03	●	●	●
W64083	316L SS WLD	4.00	.083	3.47	●	●	●

Coaxial Tubing Specifications



To complete part number add product specification.
Example: CX04S08SWT10

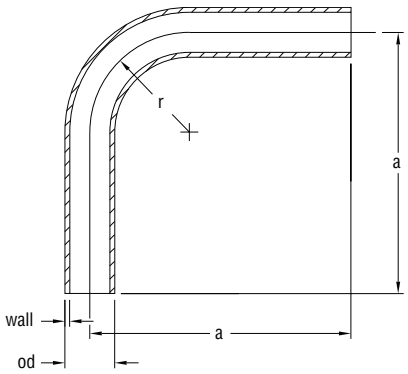
*please indicate SMLS or WLD and alloy for Outer Tube

		Dimensions					Product Spec		
Part no.	Process Tube	Process OD	Process Wall	Contain OD	Contain Wall	lb/ft	10/15	20	BA
CX04S08S	316L SS SMLS	.250	.035	.500	.049	.320	●	●	●
CX06S10S	316L SS SMLS	.375	.035	.625	.049	.490	●	●	●
CX08S12S	316L SS SMLS	.500	.049	.750	.065	.720	●	●	●
CX12S16S	316L SS SMLS	.750	.065	1.00	.065	1.13	●	●	●
CX16S20S	316L SS SMLS	1.00	.065	1.25	.065	1.52	●	●	●

Contact WinTech for other materials, sizes, or wall thickness.

90° Elbow

2WW



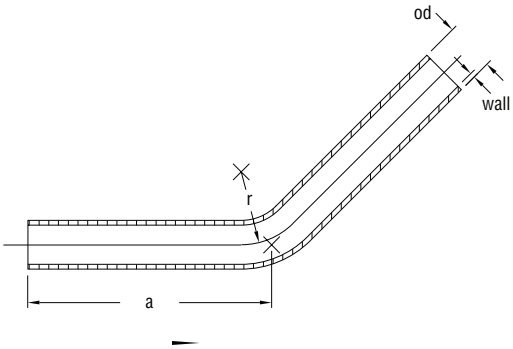
To complete part number add product specification.
Example: 2WW04WT10

*please indicate seamless or welded

		Dimensions						Product Spec		
Part no.	Material	OD	Wall	a	r	a mm	r mm	10/15	20	BA
2WW04	316L SS SMLS	.250	.035	2.06	.560	52	14	●	●	●
2WW06	316L SS SMLS	.375	.035	2.62	.560	67	14	●	●	●
2WW08	316L SS SMLS	.500	.049	2.62	.750	67	19	●	●	●
2WW12	316L SS SMLS	.750	.065	2.62	1.12	67	28	●	●	●
2WW16	316L SS WLD	1.00	.065	4.00	1.50	102	38	●	●	●
2WW16	316L SS SMLS	1.00	.065	4.00	1.50	102	38	●	●	●
2WW24	316L SS WLD	1.50	.065	3.75	2.25	95	57	●	●	●
2WW24	316L SS SMLS	1.50	.065	3.75	2.25	95	57	●	●	●
2WW32	316L SS WLD	2.00	.065	4.75	3.00	121	76	●	●	●
2WW32	316L SS SMLS	2.00	.065	4.75	3.00	121	76	●	●	●
2WW48	316L SS WLD	3.00	.065	6.25	4.50	159	114	●	●	●
2WW64	316L SS WLD	4.00	.083	8.00	6.00	203	152	●	●	●

45° Elbow

3WW



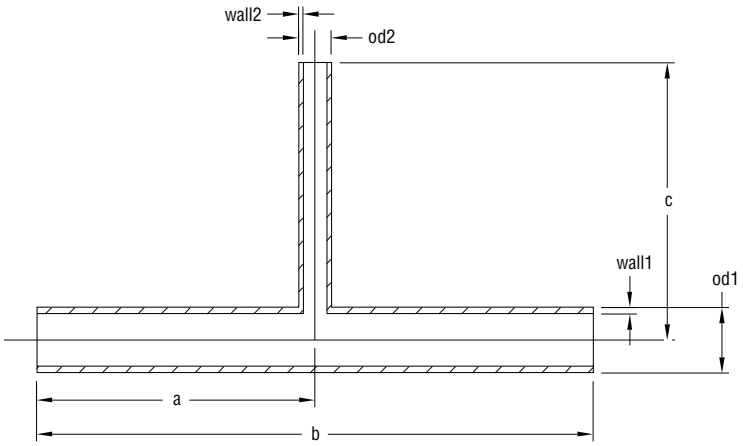
To complete part number add product specification.
Example: 3WW04WT10

*please indicate seamless or welded

		Dimensions						Product Spec		
Part no.	Material	OD	Wall	a	r	a mm	r mm	10/15	20	BA
3WW04	316L SS SMLS	.250	.035	1.10	.560	28	14	●	●	●
3WW06	316L SS SMLS	.375	.035	2.00	.560	51	14	●	●	●
3WW08	316L SS SMLS	.500	.049	2.50	.750	64	19	●	●	●
3WW12	316L SS SMLS	.750	.065	2.50	1.12	64	28	●	●	●
3WW16	316L SS WLD	1.00	.065	3.12	1.50	79	38	●	●	●
3WW16	316L SS SMLS	1.00	.065	3.12	1.50	79	38	●	●	●
3WW24	316L SS WLD	1.50	.065	2.50	2.25	64	57	●	●	●
3WW24	316L SS SMLS	1.50	.065	2.50	2.25	64	57	●	●	●
3WW32	316L SS WLD	2.00	.065	3.00	3.00	76	76	●	●	●
3WW32	316L SS SMLS	2.00	.065	3.00	3.00	76	76	●	●	●
3WW48	316L SS WLD	3.00	.065	3.625	4.50	92	114	●	●	●
3WW64	316L SS WLD	4.00	.083	4.50	6.00	114	152	●	●	●

Contact WinTech UHP for other materials, sizes, or wall thickness.

Reducing Tee
7RWWW



To complete part number add product specification.
Example: 7RWWW0604WT10
*please indicate seamless or welded

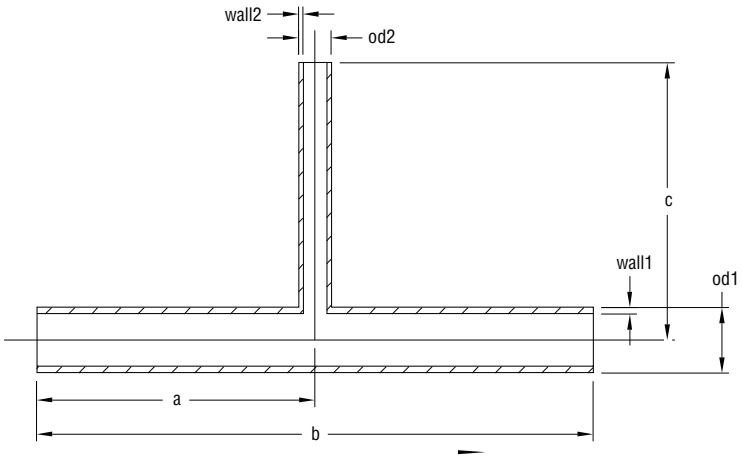
		Dimensions										Product Spec		
Part no.	Material	OD1	OD2	Wall1	Wall2	a	b	c	a mm	b mm	c mm	10/15	20	BA
7RWWW0604	316L SS SMLS	.375	.250	.035	.035	1.75	3.50	1.75	45	89	45	●	●	●
7RWWW0804	316L SS SMLS	.500	.250	.049	.035	2.12	4.25	2.12	54	108	54	●	●	●
7RWWW0806	316L SS SMLS	.500	.375	.049	.035	2.12	4.25	2.12	54	108	54	●	●	●
7RWWW1204	316L SS SMLS	.750	.250	.065	.035	2.12	4.25	2.12	54	108	54	●	●	●
7RWWW1206	316L SS SMLS	.750	.375	.065	.035	2.12	4.25	2.12	54	108	54	●	●	●
7RWWW1208	316L SS SMLS	.750	.500	.065	.049	2.12	4.25	2.12	54	108	54	●	●	●
7RWWW1604	316L SS SMLS	1.00	.250	.065	.035	2.50	5.00	2.50	64	127	64	●	●	●
7RWWW1606	316L SS SMLS	1.00	.375	.065	.035	2.50	5.00	2.50	64	127	64	●	●	●
7RWWW1608	316L SS SMLS	1.00	.500	.065	.049	2.50	5.00	2.50	64	127	64	●	●	●
7RWWW1612	316L SS SMLS	1.00	.750	.065	.065	2.50	5.00	2.50	64	127	64	●	●	●
7RWWW2404	316L SS SMLS	1.50	.250	.065	.035	2.375	4.75	2.375	60	121	60	●	●	●
7RWWW2404	316L SS WLD	1.50	.250	.065	.035	2.375	4.75	2.375	60	121	60	●	●	●
7RWWW2406	316L SS WLD	1.50	.375	.065	.035	2.375	4.75	2.375	60	121	60	●	●	●
7RWWW2406	316L SS SMLS	1.50	.375	.065	.035	2.375	4.75	2.375	60	121	60	●	●	●
7RWWW2408	316L SS WLD	1.50	.500	.065	.049	2.375	4.75	2.375	60	121	60	●	●	●
7RWWW2408	316L SS SMLS	1.50	.500	.065	.049	2.375	4.75	2.375	60	121	60	●	●	●
7RWWW2412	316L SS WLD	1.50	.750	.065	.065	2.375	4.75	2.375	60	121	60	●	●	●
7RWWW2412	316L SS SMLS	1.50	.750	.065	.065	2.375	4.75	2.375	60	121	60	●	●	●
7RWWW2416	316L SS WLD	1.50	1.00	.065	.065	2.375	4.75	2.375	60	121	60	●	●	●
7RWWW2416	316L SS SMLS	1.50	1.00	.065	.065	2.375	4.75	2.375	60	121	60	●	●	●
7RWWW3204	316L SS WLD	2.00	.250	.065	.035	2.875	5.75	2.875	83	165	83	●	●	●
7RWWW3204	316L SS SMLS	2.00	.250	.065	.035	2.875	5.75	2.875	83	165	83	●	●	●

Contact WinTech for other materials, sizes, or wall thickness.

continued next page

Reducing Tee

7RWWW



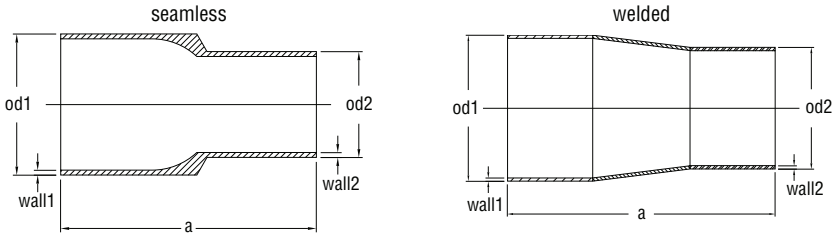
To complete part number add product specification.
Example: 7RWWW3206WT10
*please indicate seamless or welded

		Dimensions										Product Spec		
Part no.	Material	OD1	OD2	Wall1	Wall2	a	b	c	a mm	b mm	c mm	10/15	20	BA
7RWWW3206	316L SS WLD	2.00	.375	.065	.035	2.875	5.75	2.875	83	165	83	●	●	●
7RWWW3206	316L SS SMLS	2.00	.375	.065	.035	2.875	5.75	2.875	83	165	83	●	●	●
7RWWW3208	316L SS WLD	2.00	.500	.065	.049	2.875	5.75	2.625	73	146	67	●	●	●
7RWWW3208	316L SS SMLS	2.00	.500	.065	.049	2.875	5.75	2.625	73	146	67	●	●	●
7RWWW3212	316L SS WLD	2.00	.750	.065	.065	2.875	5.75	2.625	73	146	67	●	●	●
7RWWW3212	316L SS SMLS	2.00	.750	.065	.065	2.875	5.75	2.625	73	146	67	●	●	●
7RWWW3216	316L SS WLD	2.00	1.00	.065	.065	2.875	5.75	2.625	73	146	67	●	●	●
7RWWW3216	316L SS SMLS	2.00	1.00	.065	.065	2.875	5.75	2.625	73	146	67	●	●	●
7RWWW3224	316L SS WLD	2.00	1.50	.065	.065	2.875	5.75	2.625	73	146	67	●	●	●
7RWWW3224	316L SS SMLS	2.00	1.50	.065	.065	2.875	5.75	2.625	73	146	67	●	●	●
7RWWW4804	316L SS WLD	3.00	.250	.065	.035	3.375	6.75	3.125	86	172	79	●	●	●
7RWWW4806	316L SS WLD	3.00	.375	.065	.035	3.375	6.75	3.125	86	172	79	●	●	●
7RWWW4808	316L SS WLD	3.00	.500	.065	.049	3.375	6.75	3.125	86	172	79	●	●	●
7RWWW4812	316L SS WLD	3.00	.750	.065	.065	3.375	6.75	3.125	86	172	79	●	●	●
7RWWW4816	316L SS WLD	3.00	1.00	.065	.065	3.375	6.75	3.125	86	172	79	●	●	●
7RWWW4824	316L SS WLD	3.00	1.50	.065	.065	3.375	6.75	3.125	86	172	79	●	●	●
7RWWW4832	316L SS WLD	3.00	2.00	.065	.065	3.375	6.75	3.125	86	172	79	●	●	●
тw ² ² ² сплп	омс[{{ ² [5	п◊лл	◊нрл	◊луо	◊лор	п◊мнр	у◊нр	о◊снр	млр	нмл	фн	●	●	●
тw ² ² ² сплс	омс[{{ ² [5	п◊лл	◊отр	◊луо	◊лор	п◊мнр	у◊нр	о◊снр	млр	нмл	фн	●	●	●
тw ² ² ² сплу	омс[{{ ² [5	п◊лл	◊рлл	◊луо	◊лпф	п◊мнр	у◊нр	о◊снр	млр	нмл	фн	●	●	●
тw ² ² ² спмн	омс[{{ ² [5	п◊лл	◊трл	◊луо	◊лср	п◊мнр	у◊нр	о◊снр	млр	нмл	фн	●	●	●
тw ² ² ² спмс	омс[{{ ² [5	п◊лл	м◊лл	◊луо	◊лср	п◊мнр	у◊нр	о◊снр	млр	нмл	фн	●	●	●
тw ² ² ² спнп	омс[{{ ² [5	п◊лл	м◊рл	◊луо	◊лср	п◊мнр	у◊нр	о◊снр	млр	нмл	фн	●	●	●
тw ² ² ² спон	омс[{{ ² [5	п◊лл	н◊лл	◊луо	◊лср	п◊мнр	у◊нр	о◊утр	млр	нмл	фу	●	●	●
тw ² ² ² сппу	омс[{{ ² [5	п◊лл	о◊лл	◊луо	◊лср	п◊мнр	у◊нр	о◊утр	млр	нмл	фу	●	●	●

Contact WinTech for other materials, sizes, or wall thickness.

Concentric Reducer

31WW

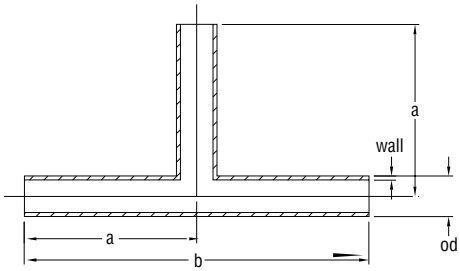


To complete part number add product specification.
Example: 31WW0804WT10

		Dimensions						Product Spec		
Part no.	Material	OD1	OD2	Wall1	Wall2	a	a mm	10/15	20	BA
31WW0604	316L SS SMLS	.375	.250	.035	.035	2.75	70	●	●	●
31WW0804	316L SS SMLS	.500	.250	.049	.035	2.75	70	●	●	●
31WW0806	316L SS SMLS	.500	.375	.049	.035	2.75	70	●	●	●
31WW1204	316L SS SMLS	.750	.250	.065	.035	2.75	70	●	●	●
31WW1206	316L SS SMLS	.750	.375	.065	.035	2.75	70	●	●	●
31WW1208	316L SS SMLS	.750	.500	.065	.049	2.75	70	●	●	●
31WW1604	316L SS SMLS	1.00	.250	.065	.035	3.00	76	●	●	●
31WW1606	316L SS SMLS	1.00	.375	.065	.035	3.00	76	●	●	●
31WW1608	316L SS SMLS	1.00	.500	.065	.049	3.00	76	●	●	●
31WW1612	316L SS SMLS	1.00	.750	.065	.065	3.00	76	●	●	●
31WW2404	316L SS SMLS	1.50	.250	.065	.035	5.50	140	●	●	●
31WW2406	316L SS SMLS	1.50	.375	.065	.035	5.50	140	●	●	●
31WW2408	316L SS SMLS	1.50	.500	.065	.049	5.50	140	●	●	●
31WW2412	316L SS SMLS	1.50	.750	.065	.065	5.00	127	●	●	●
31WW2412	316L SS WLD	1.50	.750	.065	.065	5.00	127	●	●	●
31WW2416	316L SS SMLS	1.50	1.00	.065	.065	5.00	127	●	●	●
31WW2416	316L SS WLD	1.50	1.00	.065	.065	5.00	127	●	●	●
31WW3204	316L SS SMLS	2.00	.250	.065	.035	7.75	197	●	●	●
31WW3206	316L SS SMLS	2.00	.375	.065	.035	7.75	197	●	●	●
31WW3208	316L SS SMLS	2.00	.500	.065	.049	7.75	197	●	●	●
31WW3212	316L SS SMLS	2.00	.750	.065	.065	7.25	184	●	●	●
31WW3212	316L SS WLD	2.00	.750	.065	.065	7.25	184	●	●	●
31WW3216	316L SS SMLS	2.00	1.00	.065	.065	7.25	184	●	●	●
31WW3216	316L SS WLD	2.00	1.00	.065	.065	7.25	184	●	●	●
31WW3224	316L SS SMLS	2.00	1.50	.065	.065	5.25	133	●	●	●
31WW3224	316L SS WLD	2.00	1.50	.065	.065	5.25	133	●	●	●
31WW4816	316L SS WLD	3.00	1.00	.065	.065	11.25	286	●	●	●
31WW4824	316L SS WLD	3.00	1.50	.065	.065	9.25	235	●	●	●
31WW4832	316L SS WLD	3.00	2.00	.065	.065	7.50	191	●	●	●
31WW4840	316L SS WLD	3.00	2.50	.065	.065	5.50	140	●	●	●
31WW6416	316L SS WLD	4.00	1.00	.083	.065	15.50	394	●	●	●
31WW6424	316L SS WLD	4.00	1.50	.083	.065	13.50	343	●	●	●
31WW6432	316L SS WLD	4.00	2.00	.083	.065	11.75	299	●	●	●
31WW6440	316L SS WLD	4.00	2.50	.065	.065	9.75	248	●	●	●
31WW6448	316L SS WLD	4.00	3.00	.083	.065	7.75	197	●	●	●

Contact WinTech for other materials, sizes, or wall thickness.

Equal Tee
7WWW



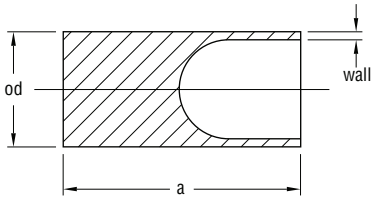
To complete part number add product specification.
Example: 7WWW04WT10

*please indicate seamless or welded

		Dimensions						Product Spec		
Part no.	Material	OD	Wall	a	b	a mm	b mm	10/15	20	BA
7WWW04	316L SS SMLS	.250	.035	1.75	3.50	45	89	●	●	●
7WWW06	316L SS SMLS	.375	.035	1.75	3.50	45	89	●	●	●
7WWW08	316L SS SMLS	.500	.049	2.12	4.25	54	108	●	●	●
7WWW12	316L SS SMLS	.750	.065	2.12	4.25	54	108	●	●	●
7WWW16	316L SS WLD	1.00	.065	2.50	5.00	64	127	●	●	●
7WWW16	316L SS SMLS	1.00	.065	2.50	5.00	64	127	●	●	●
7WWW24	316L SS WLD	1.50	.065	2.375	4.75	60	121	●	●	●
7WWW24	316L SS SMLS	1.50	.065	2.375	4.75	60	121	●	●	●
7WWW32	316L SS WLD	2.00	.065	2.875	5.75	73	146	●	●	●
7WWW32	316L SS SMLS	2.00	.065	2.875	5.75	73	146	●	●	●
7WWW48	316L SS WLD	3.00	.065	3.375	6.75	86	172	●	●	●
7WWW64	316L SS WLD	4.00	.083	4.125	8.25	105	210	●	●	●

Contact WinTech for other materials, sizes, or wall thickness.

End Cap
16W



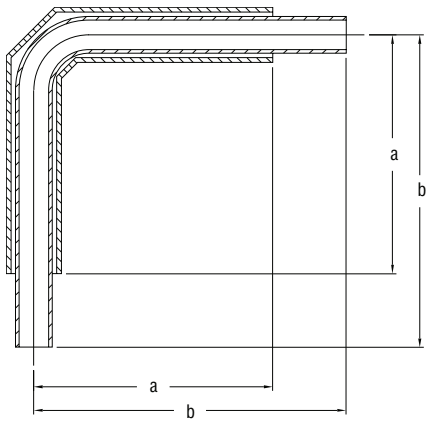
To complete part number add product specification.
Example: 16W04WT10

		Dimensions				Product Spec		
Part no.	Material	OD	Wall	a	a mm	10/15	20	BA
16W04	316L SS SMLS	.250	.035	1.125	29	●	●	●
16W06	316L SS SMLS	.375	.035	1.125	29	●	●	●
16W08	316L SS SMLS	.500	.049	1.375	35	●	●	●
16W12	316L SS SMLS	.750	.065	1.75	44	●	●	●
16W16	316L SS SMLS	1.00	.065	1.75	44	●	●	●
16W24	316L SS SMLS	1.50	.065	2.00	51	●	●	●
16W32	316L SS SMLS	2.00	.065	2.00	51	●	●	●
16W48	316L SS WLD	3.00	.065	2.00	51	●	●	●
16W64	316L SS WLD	4.00	.083	2.50	51	●	●	●

Contact WinTech for other materials, sizes, or wall thickness.

Coaxial 90° Elbow

X2WW



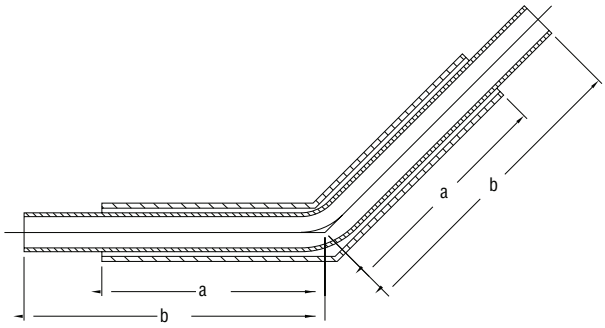
To complete part number add product specification.
Example: X2WW0408WT10
*please indicate SMLS or WLD and alloy for Outer Tube

Part no.	Process Tube	Process OD	Process Wall	Contain OD	Contain Wall	Dimensions a	b	r	a mm	b mm	r mm	Product Spec 10/15	20	BA
X2WW0408	316L SS SMLS	.250	.035	.500	.049	3.37	4.37	.560	86	111	14	●	●	●
X2WW0610	316L SS SMLS	.375	.035	.625	.049	3.12	4.12	.560	79	105	14	●	●	●
X2WW0812	316L SS SMLS	.500	.049	.750	.065	3.25	4.25	.750	83	108	19	●	●	●
X2WW1216	316L SS SMLS	.750	.065	1.00	.065	5.00	6.75	1.12	127	172	28	●	●	●
X2WW1620	316L SS SMLS	1.00	.065	1.25	.065	5.37	7.12	1.50	136	181	38	●	●	●

Contact WinTech for other materials, sizes, or wall thickness.

Coaxial 45° Elbow

X3WW

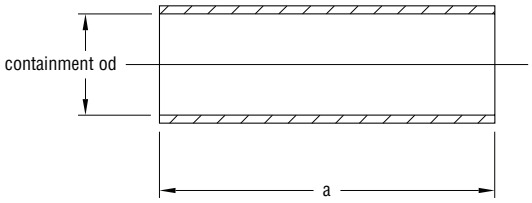


To complete part number add product specification.
Example: X2WW0408WT10
*please indicate SMLS or WLD and alloy for Outer Tube

Part no.	Process Tube	Process OD	Process Wall	Contain OD	Contain Wall	Dimensions a	b	r	a mm	b mm	r mm	Product Spec 10/15	20	BA
X3WW0408	316L SS SMLS	.250	.035	.500	.049	3.00	4.00	.560	76	102	14	●	●	●
X3WW0610	316L SS SMLS	.375	.035	.625	.049	2.87	3.87	.560	73	98	14	●	●	●
X3WW0812	316L SS SMLS	.500	.049	.750	.065	2.87	3.87	.750	73	98	19	●	●	●
X3WW1216	316L SS SMLS	.750	.065	1.00	.065	4.37	6.12	1.12	111	155	28	●	●	●
X3WW1620	316L SS SMLS	1.00	.065	1.25	.065	4.50	6.25	1.50	114	159	38	●	●	●

Contact WinTech for other materials, sizes, or wall thickness.

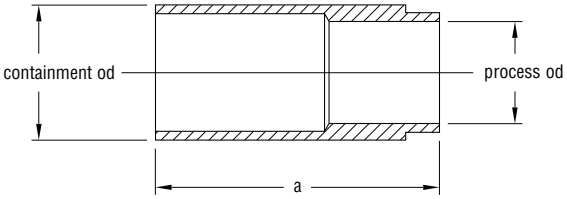
Coaxial Sleeve Coupling
XSC



Part no.	Process Tube	Dimensions OD	Dimensions a	Dimensions a mm
XSC0408	316L SS SMLS	.500	4.00	102
XSC0610	316L SS SMLS	.625	4.00	102
XSC0812	316L SS SMLS	.750	4.00	102
XSC1216	316L SS SMLS.	1.00	4.00	102
XSC1620	316L SS SMLS	1.25	4.00	102

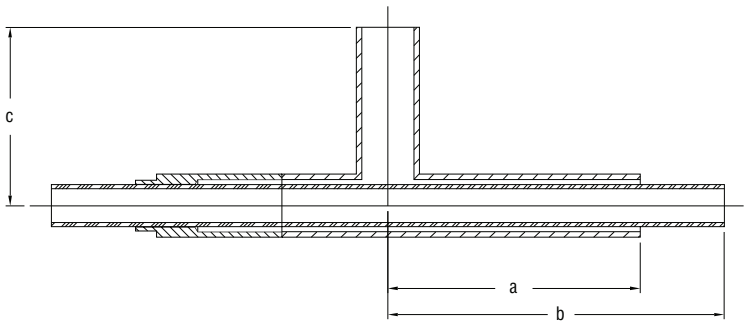
Contact WinTech UHP for other materials, sizes, or wall thickness.

Coaxial Termination
XTM



Part no.	Process Tube	Dimensions Process OD	Dimensions Contain OD	Dimensions a	Dimensions a mm
XTM0408	316L SS SMLS	.250	.500	1.25	32
XTM0610	316L SS SMLS	.375	.625	1.25	32
XTM0812	316L SS SMLS	.500	.750	1.25	32
XTM1216	316L SS SMLS	.750	1.00	2.00	51
XTM1620	316L SS SMLS	1.00	1.25	2.00	51

Coaxial Starter Piece
XSP



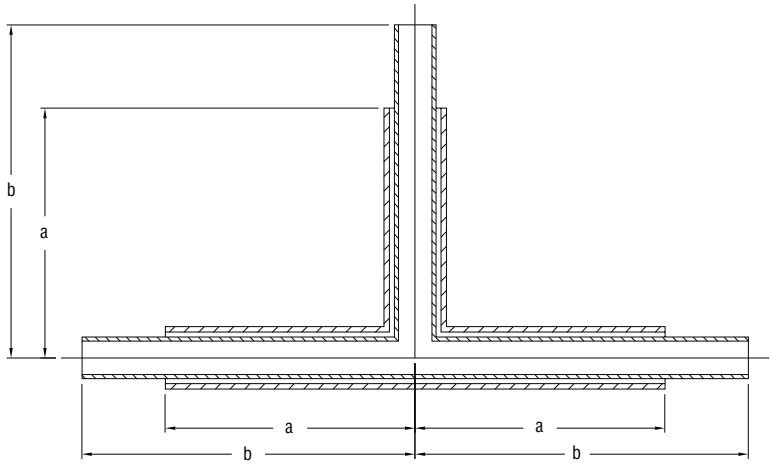
To complete part number add product specification.
Example: XSP0408WT10

Part no.	Process Tube	Process OD	Process Wall	Contain OD	Contain Wall	Dimensions a	Dimensions b	Dimensions c	a mm	b mm	c mm	Product Spec 10/15	Product Spec 20	Product Spec BA
XSP0408	316L SS SMLS	.250	.035	.500	.049	2.87	3.87	2.12	73	98	54	●	●	●
XSP0610	316L SS SMLS	.375	.035	.625	.049	3.00	4.00	2.12	76	102	54	●	●	●
XSP0812	316L SS SMLS	.500	.049	.750	.065	3.00	4.00	2.12	76	102	54	●	●	●
XSP1216	316L SS SMLS	.750	.065	1.00	.065	4.62	5.62	2.12	117	143	54	●	●	●
XSP1620	316L SS SMLS	1.00	.065	1.25	.065	4.75	5.75	2.50	121	146	64	●	●	●

Contact WinTech UHP for other materials, sizes, or wall thickness.

Coaxial Equal Tee

X7WWW



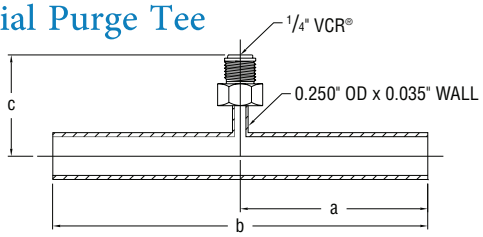
To complete part number add product specification.
Example: X7WWW0408WT10
*please indicate SMLS or WLD and alloy for Outer Tube

Part no.	Process Tube	Process OD	Process Wall	Contain OD	Contain Wall	Dimensions a	Dimensions b	Dimensions a mm	Dimensions b mm	Product Spec 10/15	Product Spec 20	Product Spec BA
X7WWW0408	316L SS SMLS	.250	.035	.500	.049	2.87	3.87	73	98	●	●	●
X7WWW0610	316L SS SMLS	.375	.035	.625	.049	3.00	4.00	76	102	●	●	●
X7WWW0812	316L SS SMLS	.500	.049	.750	.065	3.00	4.00	76	102	●	●	●
X7WWW1216	316L SS SMLS	.750	.065	1.00	.065	4.62	6.37	117	162	●	●	●
X7WWW1620	316L SS SMLS	1.00	.065	1.25	.065	4.75	6.50	121	165	●	●	●

Contact WinTech for other materials, sizes, or wall thickness.

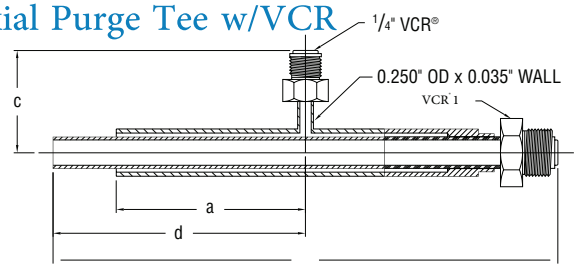
Coaxial Purge Tee

XPT



Coaxial Purge Tee w/VCR

XPTV

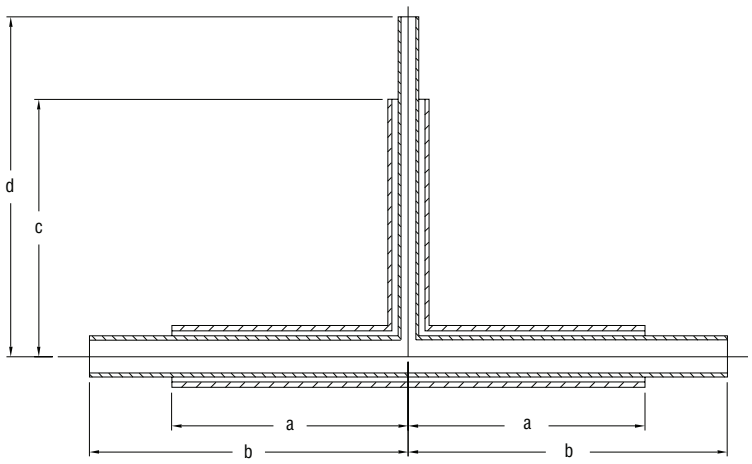


Part no.	Process Tube	Process OD	Contain OD	Contain Wall	Dimensions a	Dimensions b	Dimensions c	Dimensions d	Dimensions a mm	Dimensions b mm	Dimensions c mm	Dimensions d mm	VCR*	Product Spec 10/15	Product Spec 20	Product Spec BA
XPT0408	316L SS SMLS	.250	.500	.049	2.87	5.75	1.51	—	73	146	38	—	—	●	●	●
XPT0610	316L SS SMLS	.375	.625	.049	3.00	6.00	1.57	—	76	152	40	—	—	●	●	●
XPT0812	316L SS SMLS	.500	.750	.065	3.00	6.00	1.62	—	76	152	41	—	—	●	●	●
XPT1216	316L SS SMLS	.750	1.00	.065	4.62	9.25	1.74	—	117	235	44	—	—	●	●	●
XPT1620	316L SS SMLS	1.00	1.25	.065	4.75	9.50	1.87	—	121	241	48	—	—	●	●	●
XPTV0408	316L SS SMLS	.250	.500	.049	2.87	7.75	1.51	3.87	73	197	38	98	.250	●	●	●
XPTV0610	316L SS SMLS	.375	.625	.049	3.00	8.00	1.57	4.00	76	203	40	102	.370	●	●	●
XPTV0812	316L SS SMLS	.500	.750	.065	3.00	8.00	1.62	4.00	76	203	41	102	.500	●	●	●
XPTV1216	316L SS SMLS	.750	1.00	.065	4.62	12.75	1.74	6.37	117	324	44	162	.750	●	●	●
XPTV1620	316L SS SMLS	1.00	1.25	.065	4.75	13.00	1.87	6.50	121	330	48	165	1.00	●	●	●

Contact WinTech for other materials, sizes, or wall thickness.

Coaxial Reducing Tee

X7RWWW



To complete part number add product specification.
Example: XR7WWW0408WT10

*please indicate SMLS or WLD and alloy for Outer Tube

Part no.	Process Tube	Run		Rise		Dimensions								Product Spec		
		Process OD	Contain OD	Process OD	Contain OD	a	b	c	d	a mm	b mm	c mm	d mm	10/15	20	BA
X7RWWW0604	316L SS SMLS	.375	.625	.250	.500	2.87	3.87	3.12	4.12	73	98	79	105	●	●	●
X7RWWW0804	316L SS SMLS	.500	.750	.250	.500	2.87	3.87	3.12	4.12	73	98	79	105	●	●	●
X7RWWW0806	316L SS SMLS	.500	.750	.375	.625	3.00	4.00	3.12	4.12	73	102	79	105	●	●	●
X7RWWW1204	316L SS SMLS	.750	1.00	.250	.500	4.37	6.12	3.25	4.25	111	155	83	108	●	●	●
X7RWWW1206	316L SS SMLS	.750	1.00	.375	.625	4.50	6.25	3.25	4.25	114	159	83	108	●	●	●
X7RWWW1208	316L SS SMLS	.750	1.00	.500	.750	4.50	6.25	3.25	4.25	114	159	83	108	●	●	●
X7RWWW1604	316L SS SMLS	1.00	1.25	.250	.500	4.37	6.12	3.37	4.37	111	155	86	111	●	●	●
X7RWWW1606	316L SS SMLS	1.00	1.25	.375	.625	4.50	6.25	3.37	4.37	114	159	86	111	●	●	●
X7RWWW1608	316L SS SMLS	1.00	1.25	.500	.750	4.50	6.25	3.37	4.37	114	159	86	111	●	●	●
X7RWWW1612	316L SS SMLS	1.00	1.25	.750	1.00	4.62	6.37	4.87	6.62	117	162	124	168	●	●	●

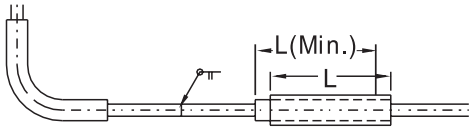
Contact WinTech for other materials, sizes, or wall thickness.

HOW TO USE A COAX SLEEVE
(JOINT PROCESS)

Step 1: slide a sleeve over the contain tube and weld the inner tube.

Step 2: cover inner tube weld with sleeve and auto weld both ends of the sleeve to the contain tube.

N.B. The right side of the tube must have a straight length L (Min.) to allow for sleeve.



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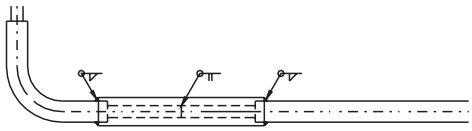

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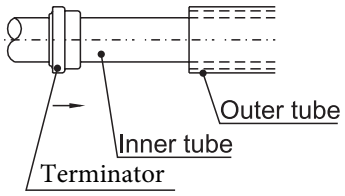
HOW TO USE A TERMINATOR
(JOINT PROCESS)

Step 1: Slide a terminator over the inner tube.

Step 2: Weld the terminator to the inner tube and contain tube.



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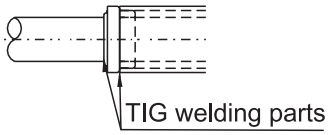

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