

A E R O S P A C E   &   S E M I C O N D U C T O R   F L O W



**ASFLOW**



BIO TUBES & FITTINGS  
ACCORDING TO  
ASME BPE STANDARD

[www.asflow.com](http://www.asflow.com)

# The pursuit of the highest & the best quality is our philosophy

Our mission is to optimize our manufacturing process and offer the highest quality products at very competitive price. Our dedicated staffs, with assistance of EP technology leadership, are committed to make our company the most efficient producer of super clean tube & fitting.

## Our products proudly offer:

### Maximum Cleanliness

ASFLOW fittings are cleaned using a multiple step process to assure clean surface, areas inside and out with repeatability every time. Every fitting is passivated according to ASME BPE and ASTM A967 standards.

### Full Traceability

We provide full traceability for each of our products by supplying all necessary production process data. Starting from certifications and incoming inspection of raw materials, through in-process quality control, final inspection, marking and packaging. The process is also completely documented with a unique job number for each BPE process component.

### Every Fitting is Quality Inspected

All around quality and meticulous inspection insures that every fitting will be of the highest quality and in total compliance with all ASME-BPE standards. ASFLOW fittings are 100% visually inspected.



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# Fittings Specifications

## Product:

Stainless Steel fittings comply with ASME BPE standards.

## Sizes:

Stainless Steel fittings are available in sizes .” - 6” O.D. tube size.

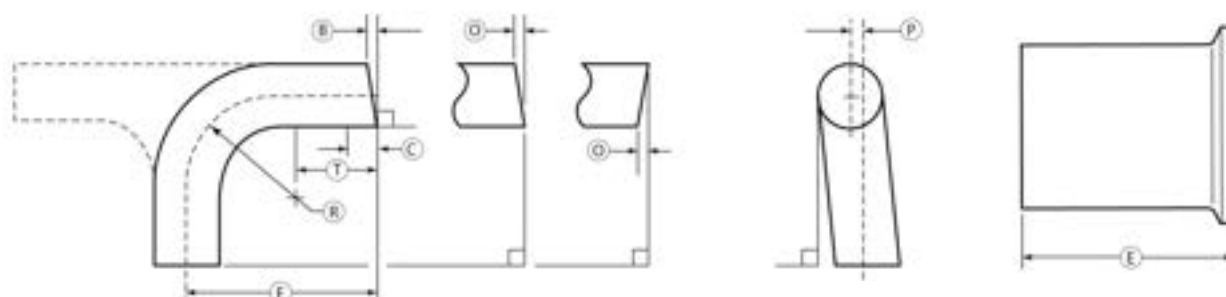
## Material:

Fittings are fabricated in AISI 316L Stainless Steel with sulfur content of 0.005-0.017% achieving superior repeatability for automatic orbital welding process.

## Dimensions & Tolerances:

Dimensions as specified in ASME BPE Part DT-3-1

Nominal Size in.	O.D.		Wall Thickness		Squareness face to tangent, B		Off angle, O		Equivalent Angle (for O) deg	Off Plane, P		Centerline Radius (CLR), R	
	in.	mm	in.	mm	in.	mm	in.	mm		in.	mm	in.	mm
¼” : 4	±0.005	±0.13	+0.003/-0.004	+0.08/-0.10	0.005	0.13	0.009	0.23	2.1	0.030	0.76	0.563	14.30
⅜” : 6	±0.005	±0.13	+0.003/-0.004	+0.08/-0.10	0.005	0.13	0.012	0.30	1.8	0.030	0.76	1.125	28.58
½” : 8	±0.005	±0.13	+0.005/-0.008	+0.13/-0.20	0.005	0.13	0.014	0.36	1.6	0.030	0.76	1.125	28.58
¾” : 12	±0.005	±0.13	+0.005/-0.008	+0.13/-0.20	0.005	0.13	0.018	0.46	1.4	0.030	0.76	1.125	28.58
1” : 16	±0.005	±0.13	+0.005/-0.008	+0.13/-0.20	0.008	0.20	0.025	0.64	1.4	0.030	0.76	1.500	38.10
1½” : 24	±0.008	±0.20	+0.005/-0.008	+0.13/-0.20	0.008	0.20	0.034	0.86	1.3	0.050	1.27	2.250	57.15
2” : 32	±0.008	±0.20	+0.005/-0.008	+0.13/-0.20	0.008	0.20	0.043	1.09	1.2	0.050	1.27	3.000	76.20
2½” : 40	±0.010	±0.25	+0.005/-0.008	+0.13/-0.20	0.010	0.25	0.054	1.37	1.2	0.050	1.27	3.750	95.25
3” : 48	±0.010	±0.25	+0.005/-0.008	+0.13/-0.20	0.016	0.41	0.068	1.73	1.3	0.050	1.27	4.500	114.30
4” : 64	±0.015	±0.38	+0.008/-0.010	+0.20/-0.25	0.016	0.41	0.086	2.18	1.2	0.060	1.52	6.000	152.40
6” : 96	±0.030	±0.76	+0.015/-0.015	+0.38/-0.38	0.030	0.76	0.135	3.43	1.3	0.060	1.52	9.000	228.60



● **Surface Finish:**

Reference: ASME BPE-2014, Part SF, Table SF-2.4-1.

Surface Finish Code	BPE Surface Designation	Inside Surface			Outside Surface
		Ra Maximum		Surface Condition	Surface Condition
		μ-in.	μm		
PL	SF1	20	0.51	Mechanically Polished*	Mechanically Polished
PM	SF4	15	0.38	Mechanically Polished* & Electro-polished	Mechanically Polished

\*: Or any other finishing method that meets the Ra max.

- ASFLOW fittings guarantee the Ra in all internal surfaces, including bent areas where it is difficult to polish and difficult to measure.
- All Ra readings are taken across the lay, wherever possible.
- No single Ra reading shall exceed the Ra max. value in this table.
- Other Ra readings are available if agreed upon between owner/user and supplier, not to exceed values in this table.

● **Cleaning:**

A multi step cleaning cycle is conducted to ensure that fittings are cleaned with a perfect passivation layer. The cleaning process involves degreasing, pickling, electro-polishing (as required) and passivation. During the final stage, the fittings are double-rinsed using D.I. water.

● **Inspection Procedures:**

All fittings produced by ASFLOW production are 100% visually inspected for any surface finish imperfections, as mentioned in Table SF-2.2-1, SF-2.2-2, SF-2.4-1 and SF 2.6-1 in the ASME BPE 2014 specification. All dimensional characteristics are inspected for tolerances listed in parts DT-3-1 to DT-9.3-1 in the ASME BPE 2014 specification.

● **Fitting Marking Information:**

Each fitting and process component is permanently laser Marked to show the following:

- a. Heat number/code traceable to material test report for each product contact surface component
- b. Material type
- c. Manufacturer’s name, logo, & trademark
- d. Product contact surface designation for the appropriate BPE specification
- e. ASME BPE mark

● **Packaging & Labeling:**

Each fitting is capped, bagged and labeled in full compliance with the ASME BPE standard.



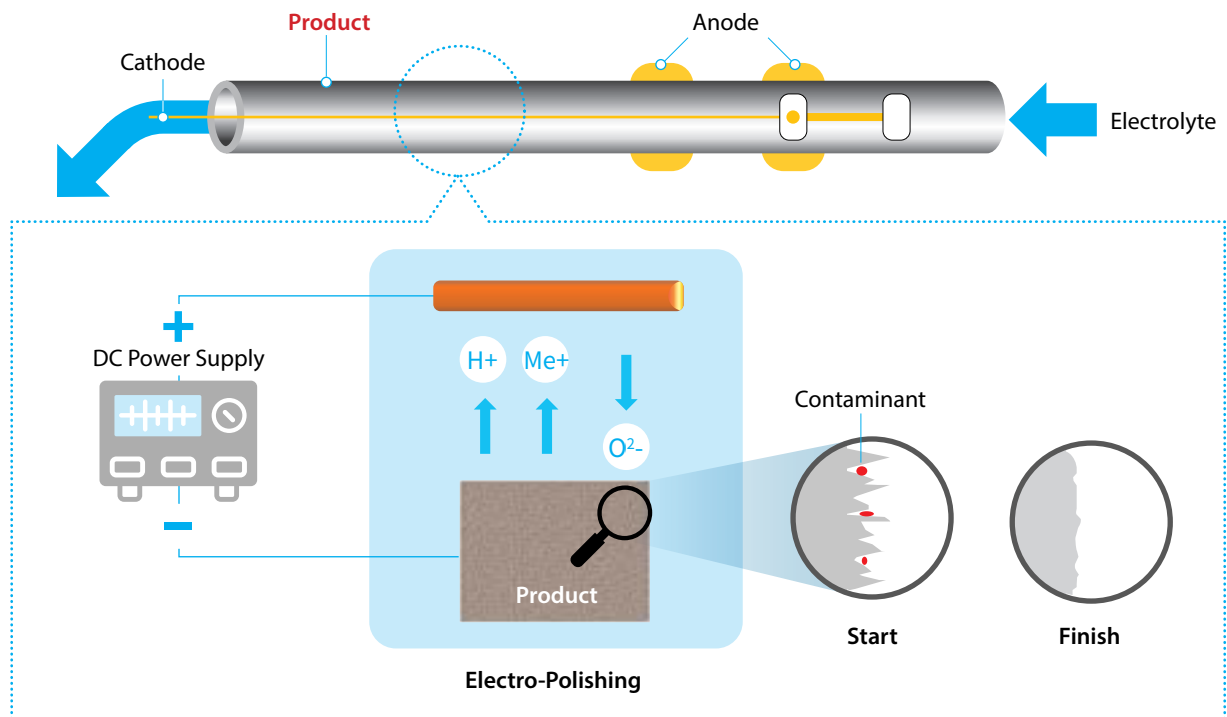
# ASFLOW Electro-Polishing

The uncompromising high quality of ASFLOW EP products is a result of years of experience and accumulated know-how in the electro-polishing process during which ASFLOW has optimized the following four critical elements:

- The temperature of the electrolyte solution.
- The amplitude of the cathodes and their location relevant to the product.
- The level of acidity of the solution.
- The amount of the time that the part is immersed in the solution.

**NOTE:** The ASME BPE guidelines are very clear, for example, that flash electro-polishing, i.e., immersion of the part in the electrolyte solution for a very short period of time, is unacceptable.

## Schematic Set-up of EP System



As a result, **ASFLOW EP** products stand out from competing products in the following ways:

- A thicker EP layer to minimize rouging
- Higher Chrome concentration for better corrosion resistance
- Guaranteed smoothness (Ra) in all internal surfaces to reduce Bio film

### ● **Removal of Contaminants**

**ASFLOW EP** removes the contaminants that were introduced by the various production processes. The unique **EP** process achieves a level of contaminant removal that exceeds the ASME BPE standard.

### ● **Superior Corrosion Resistance**

During the electro-polishing process naturally occurring chrome in the product's base metal is "pulled" to the surface. The thicker the chrome layer that forms on the product surface, the more resistant it will be to corrosion over time. It will also decrease rouging.

The highly optimized **ASFLOW EP** process ensures a particularly thick chrome layer - one of the reasons why **ASFLOW EP** fittings dominate the bio-pharma sector.

### ● **ASFLOW EP Exceeds the ASME BPE Quality Requirements**

The table below shows how **ASFLOW EP** exceeds the ASME BPE quality requirements.

- The thickness of the electro-polish layer, measured in Angstroms.  
The thicker the layer, the more contaminant-free and corrosion-resistant the fitting is.
- Cr/Fe: The ratio of chrome/iron.  
The higher the ratio, the higher the corrosion-resistance.

Attribute	ASME BPE Recommendation	ASFLOW Electro-polishing
EP layer Thickness	15Å <	20Å <
Cr/Fe ratio	1 <	1.5 <

# TUBE Specifications

## Standards:

- ASTM A-269 / A270-S2
- ASME BPE

## Surface Finish:

Surface finish specifications are the same for fittings & tubes. Please refer to table SF-2.4-1



**Table SF-2.4.1-1 Ra Readings for Metallic Process Contact Surfaces**

Surface Designation	Mechanically Polished [Note (1)]	
	Ra Max.	
	µin.	µm
SF0	No finish requirement	No finish requirement
SF1	20	0.51
SF2	25	0.64
SF3	30	0.76
	Electropolished	
	Ra Max.	
	µin.	µm
SF4	15	0.38
SF5	20	0.51
SF6	25	0.64

Surface Finish Code	BPE Surface Designation	Inside Surface			Outside Surface
		Ra Maximum		Surface Condition	Surface Condition
		µ-in.	µm		
PL	SF1	20	0.51	Mechanically Polished*	Mechanically Polished
PM	SF4	15	0.38	Mechanically Polished* & Electro-polished	Mechanically Polished

\*: Or any other finishing method that meets the Ra max.



● **Tubing Dimensional Tolerances:**  
**Tubing specifications, ASTM A-269/A270-S2**

Tubing Diameter		Wall Thickness		OD Tolerance Length (ASTM Spec.)		Length (ASTM Spec.)		Wall Thickness Tolerance
in.	mm	in.	mm	in.	mm	in.	mm	ASTM Spec.
¼" : 4	6.35	0.035	0.89	+/-0.005	+/-0.127	0.125	3.175	+/- 10%
⅜" : 6	9.53	0.035	0.89	+/-0.005	+/-0.127	0.125	3.175	+/- 10%
½" : 8	12.70	0.065	1.65	+/-0.005	+/-0.127	0.125	3.175	+/- 10%
¾" : 12	19.05	0.065	1.65	+/-0.005	+/-0.127	0.125	3.175	+/- 10%
1" : 16	25.40	0.065	1.65	+/-0.005	+/-0.127	0.125	3.175	+/- 10%
1½" : 24	38.10	0.065	1.65	+/-0.008	+/-0.203	0.125	3.175	+/- 10%
2" : 32	50.80	0.065	1.65	+/-0.008	+/-0.203	0.125	3.175	+/- 10%
2½" : 40	63.50	0.065	1.65	+/-0.010	+/-0.254	0.125	3.175	+/- 10%
3" : 48	76.20	0.065	1.65	+/-0.015	+/-0.381	0.125	3.175	+/- 10%
4" : 64	101.60	0.083	2.11	+/-0.015	+/-0.381	0.188	4.763	+/- 10%
6" : 96	152.40	0.109	2.77	+/-0.030	+/-0.762	0.188	4.763	+/- 10%

● **ORDERING INFORMATION**

①	②	③	④	⑤
<b>ABB</b>	<b>TE2S</b>	<b>6L</b>	<b>04</b>	<b>PL</b>
<b>ASFLOW BIO FITTING</b>	<b>DESCRIPTION</b>	<b>MATERIAL</b>	<b>SIZE</b>	<b>SURFACE FINISH Code</b>
		Other materials can be supplied upon request		

①	Brand
ABB	ASFLOW BIO FITTING
ABC	ASFLOW BIO GASKET

②	Part Description
TE2S	90° ELBOW
TE2C	90° ELBOW CLAMP ONE END
TEG2C	90° ELBOW CLAMP TWO END
.	.
.	.

③	Material
6L	SUS316L
S4	SUS304

④	Size
04	1/4"
06	3/8"
08	1/2"
12	3/4"
16	1"
24	1-1/2"
32	2"
40	2-1/2"
48	3"
64	4"
96	6"

⑤	Surface Finish Code
PL	SF1
PM	SF4



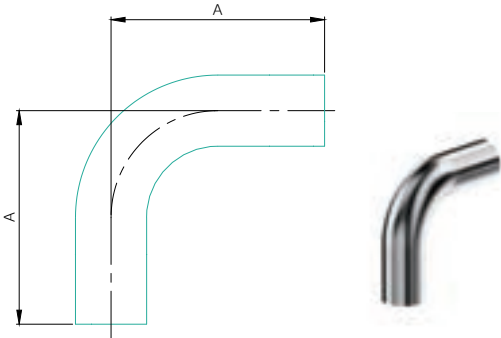
# ELBOWS



# 90° ELBOW

## ABB-TE2S – 90° ELBOW

BPE TABLE # DT-4.1.1-1

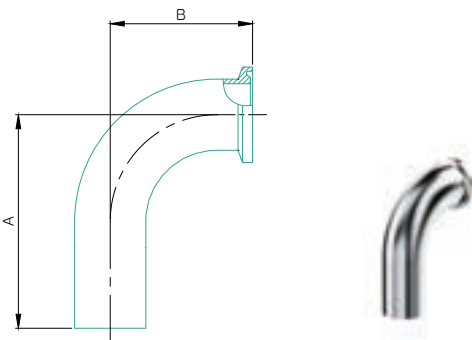


Nominal Size in.	Dimensions		Ordering Code
	A in.	A mm	
1/4"	2.625	66.7	ABB-TE2S6L.25-..
3/8"	2.625	66.7	ABB-TE2S6L.375-..
1/2"	3.000	76.2	ABB-TE2S6L.5-..
3/4"	3.000	76.2	ABB-TE2S6L.75-..
1"	3.000	76.2	ABB-TE2S6L.1.0-..
1-1/2"	3.750	95.3	ABB-TE2S6L.1.5-..
2"	4.750	120.7	ABB-TE2S6L.2.0-..
2-1/2"	5.500	139.7	ABB-TE2S6L.2.5-..
3"	6.250	158.8	ABB-TE2S6L.3.0-..
4"	8.000	203.2	ABB-TE2S6L.4.0-..
6"	11.500	292.1	ABB-TE2S6L.6.0-..

## ABB-TE2C – 90° ELBOW

### CLAMP ONE END

BPE TABLE # DT-4.1.1-2

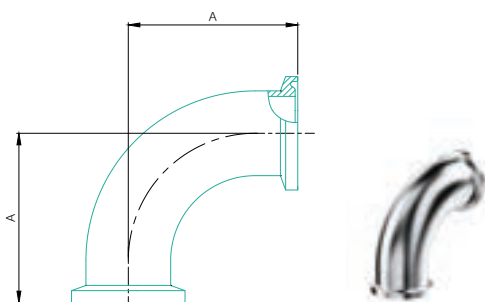


Nominal Size in.	Dimensions				Ordering Code
	A in.	A mm	B in.	B mm	
1/4"	2.625	66.7	1.625	41.3	ABB-TE2C6L.25-..
3/8"	2.625	66.7	1.625	41.3	ABB-TE2C6L.375-..
1/2"	3.000	76.2	1.625	41.3	ABB-TE2C6L.5-..
3/4"	3.000	76.2	1.625	41.3	ABB-TE2C6L.75-..
1"	3.000	76.2	2.000	50.8	ABB-TE2C6L.1.0-..
1-1/2"	3.750	95.3	2.750	69.9	ABB-TE2C6L.1.5-..
2"	4.750	120.7	3.500	88.9	ABB-TE2C6L.2.0-..
2-1/2"	5.500	139.7	4.250	108.0	ABB-TE2C6L.2.5-..
3"	6.250	158.8	5.000	127.0	ABB-TE2C6L.3.0-..
4"	8.000	203.2	6.625	168.3	ABB-TE2C6L.4.0-..
6"	11.500	292.1	10.500	266.7	ABB-TE2C6L.6.0-..

## ABB-TEG2C – 90° ELBOW

### CLAMP TWO END

BPE TABLE # DT-4.1.1-3

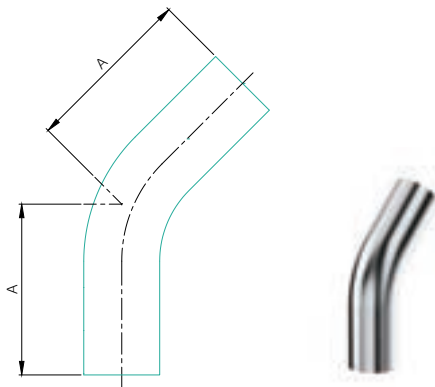


Nominal Size in.	Dimensions		Ordering Code
	A in.	A mm	
1/4"	1.625	41.3	ABB-TEG2C6L.25-..
3/8"	1.625	41.3	ABB-TEG2C6L.375-..
1/2"	1.625	41.3	ABB-TEG2C6L.5-..
3/4"	1.625	41.3	ABB-TEG2C6L.75-..
1"	2.000	50.8	ABB-TEG2C6L.1.0-..
1-1/2"	2.750	69.9	ABB-TEG2C6L.1.5-..
2"	3.500	88.9	ABB-TEG2C6L.2.0-..
2-1/2"	4.250	108.0	ABB-TEG2C6L.2.5-..
3"	5.000	127.0	ABB-TEG2C6L.3.0-..
4"	6.625	168.3	ABB-TEG2C6L.4.0-..
6"	10.500	266.7	ABB-TEG2C6L.6.0-..

# 45° ELBOW

## ABB-TE2KS- 45° ELBOW

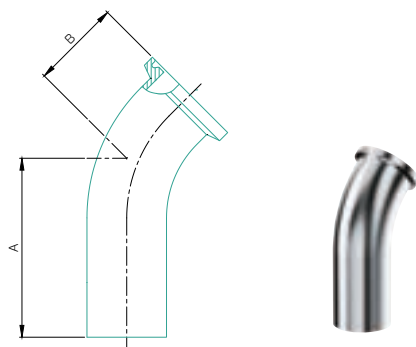
BPE TABLE # DT-4.1.1-4



Nominal Size in.	Dimensions		Ordering Code
	A in.	A mm	
1/4"	2.000	50.8	ABB-TE2KS6L.25-..
3/8"	2.000	50.8	ABB-TE2KS6L.375-..
1/2"	2.250	57.2	ABB-TE2KS6L.5-..
3/4"	2.250	57.2	ABB-TE2KS6L.75-..
1"	2.250	57.2	ABB-TE2KS6L.1.0-..
1-1/2"	2.500	63.5	ABB-TE2KS6L.1.5-..
2"	3.000	76.2	ABB-TE2KS6L.2.0-..
2-1/2"	3.375	85.7	ABB-TE2KS6L.2.5-..
3"	3.625	92.1	ABB-TE2KS6L.3.0-..
4"	4.500	114.3	ABB-TE2KS6L.4.0-..
6"	6.250	158.8	ABB-TE2KS6L.6.0-..

## ABB-TE2KC – 45° ELBOW CLAMP ONE END

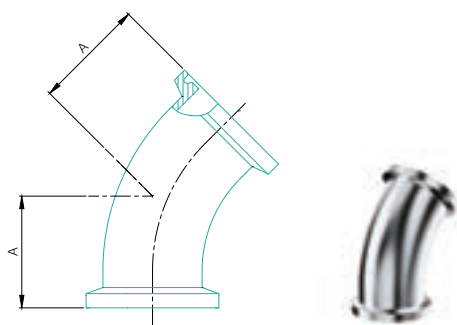
BPE TABLE # DT-4.1.1-5



Nominal Size in.	Dimensions				Ordering Code
	A in.	A mm	B in.	B mm	
1/4"	2.000	50.8	1.000	25.4	ABB-TE2KC6L.25-..
3/8"	2.000	50.8	1.000	25.4	ABB-TE2KC6L.375-..
1/2"	2.250	57.2	1.000	25.4	ABB-TE2KC6L.5-..
3/4"	2.250	57.2	1.000	25.4	ABB-TE2KC6L.75-..
1"	2.250	57.2	1.125	28.6	ABB-TE2KC6L.1.0-..
1-1/2"	2.500	63.5	1.438	36.5	ABB-TE2KC6L.1.5-..
2"	3.000	76.2	1.750	44.5	ABB-TE2KC6L.2.0-..
2-1/2"	3.375	85.7	2.063	52.4	ABB-TE2KC6L.2.5-..
3"	3.625	92.1	2.375	60.3	ABB-TE2KC6L.3.0-..
4"	4.500	114.3	3.125	79.4	ABB-TE2KC6L.4.0-..
6"	6.250	158.8	5.250	133.4	ABB-TE2KC6L.6.0-..

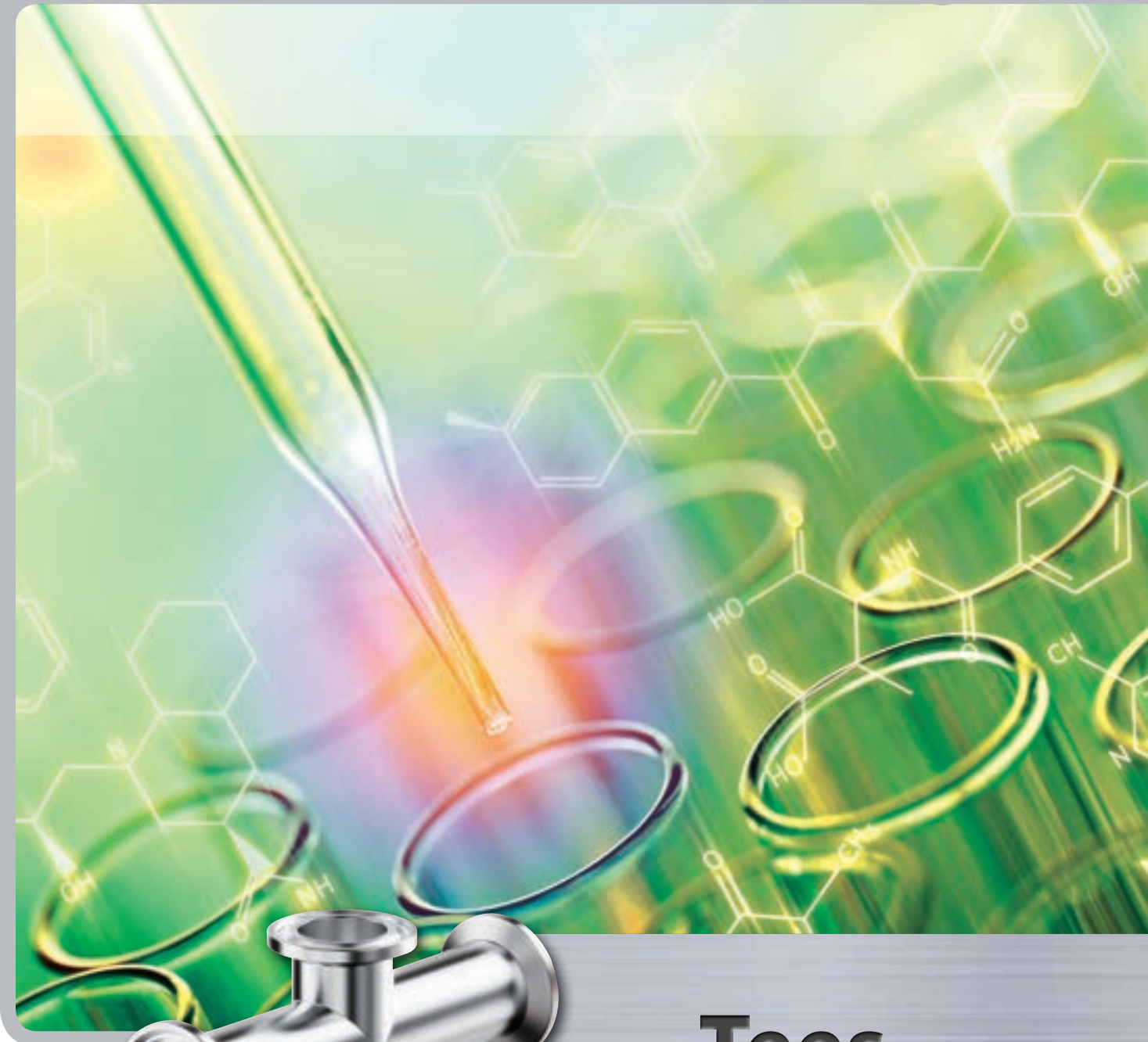
## ABB-TEG2K – 45° ELBOW CLAMP TWO END

BPE TABLE # DT-4.1.1-6



Nominal Size in.	Dimensions		Ordering Code
	A in.	A mm	
1/4"	1.000	25.4	ABB-TEG2K6L.25-..
3/8"	1.000	25.4	ABB-TEG2K6L.375-..
1/2"	1.000	25.4	ABB-TEG2K6L.5-..
3/4"	1.000	25.4	ABB-TEG2K6L.75-..
1"	1.125	28.6	ABB-TEG2K6L.1.0-..
1-1/2"	1.438	36.5	ABB-TEG2K6L.1.5-..
2"	1.750	44.5	ABB-TEG2K6L.2.0-..
2-1/2"	2.063	52.4	ABB-TEG2K6L.2.5-..
3"	2.375	60.3	ABB-TEG2K6L.3.0-..
4"	3.125	79.4	ABB-TEG2K6L.4.0-..
6"	5.250	133.4	ABB-TEG2K6L.6.0-..





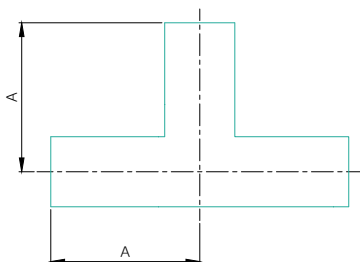
# Tees



# TEE - EQUAL

## ABB-TE7WWW – EQUAL TEE

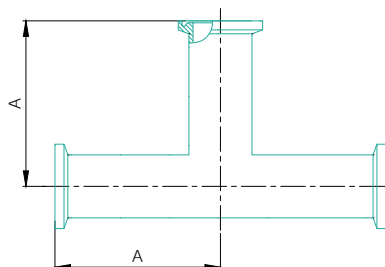
BPE TABLE # DT-4.1.2-1



Nominal Size in.	Dimensions		Ordering Code
	A in.	A mm	
1/4"	1.750	44.5	ABB-TE7WWW6L.25-..
3/8"	1.750	44.5	ABB-TE7WWW6L.375-..
1/2"	1.875	47.6	ABB-TE7WWW6L.5-..
3/4"	2.000	50.8	ABB-TE7WWW6L.75-..
1"	2.125	54.0	ABB-TE7WWW6L1.0-..
1-1/2"	2.375	60.3	ABB-TE7WWW6L1.5-..
2"	2.875	73.0	ABB-TE7WWW6L2.0-..
2-1/2"	3.125	79.4	ABB-TE7WWW6L2.5-..
3"	3.375	85.7	ABB-TE7WWW6L3.0-..
4"	4.125	104.8	ABB-TE7WWW6L4.0-..
6"	5.625	142.9	ABB-TE7WWW6L6.0-..

## ABB-TEG7 – EQUAL TEE CLAMP THREE END

BPE TABLE # DT-4.1.2-4



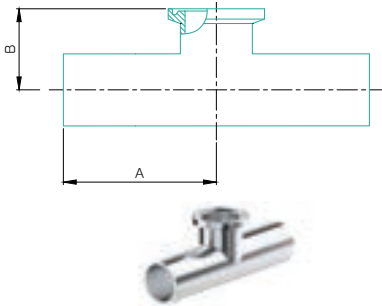
Nominal Size in.	Dimensions		Ordering Code
	A in.	A mm	
1/4"	2.250	57.2	ABB-TEG76L.25-..
3/8"	2.250	57.2	ABB-TEG76L.375-..
1/2"	2.250	57.2	ABB-TEG76L.5-..
3/4"	2.375	60.3	ABB-TEG76L.75-..
1"	2.625	66.7	ABB-TEG76L1.0-..
1-1/2"	2.875	73.0	ABB-TEG76L1.5-..
2"	3.375	85.7	ABB-TEG76L2.0-..
2-1/2"	3.625	92.1	ABB-TEG76L2.5-..
3"	3.875	98.4	ABB-TEG76L3.0-..
4"	4.750	120.7	ABB-TEG76L4.0-..
6"	7.125	181.0	ABB-TEG76L6.0-..



# TEE – SHORT OUTLET

## ABB-TE7WWCS– SHORT OUTLET TEE CLAMP ONE END

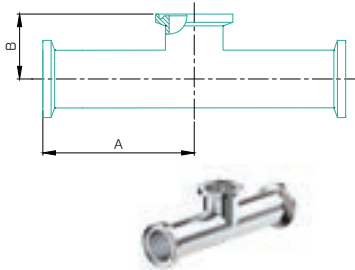
BPE TABLE # DT-4.1.1-2



Nominal Size in.	Dimensions				Ordering Code
	A in.	A mm	B in.	B mm	
1/4"	1.750	44.5	1.000	25.4	ABB-TE7WWCS6L.25-..
3/8"	1.750	44.5	1.000	25.4	ABB-TE7WWCS6L.375-..
1/2"	1.875	47.6	1.000	25.4	ABB-TE7WWCS6L.5-..
3/4"	2.000	50.8	1.125	28.6	ABB-TE7WWCS6L.75-..
1"	2.125	54.0	1.125	28.6	ABB-TE7WWCS6L.1.0-..
1-1/2"	2.375	60.3	1.375	34.9	ABB-TE7WWCS6L.1.5-..
2"	2.875	73.0	1.625	41.3	ABB-TE7WWCS6L.2.0-..
2-1/2"	3.125	79.4	1.875	47.6	ABB-TE7WWCS6L.2.5-..
3"	3.375	85.7	2.125	54.0	ABB-TE7WWCS6L.3.0-..
4"	4.125	104.8	2.750	69.9	ABB-TE7WWCS6L.4.0-..
6"	5.625	142.9	4.625	117.5	ABB-TE7WWCS6L.6.0-..

## ABB-TEG7S– SHORT OUTLET TEE CLAMP THREE END

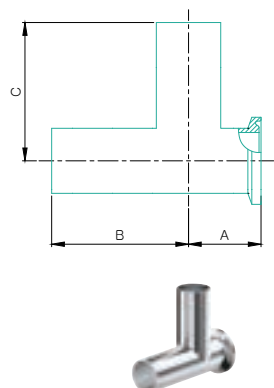
BPE TABLE # DT-4.1.2-5



Nominal Size in.	Dimensions				Ordering Code
	A in.	A mm	B in.	B mm	
1/2"	2.250	57.2	1.000	25.4	ABB-TEG7S6L.5-..
3/4"	2.375	60.3	1.125	28.6	ABB-TEG7S6L.75-..
1"	2.625	66.7	1.125	28.6	ABB-TEG7S6L.1.0-..
1-1/2"	2.875	73.0	1.375	34.9	ABB-TEG7S6L.1.5-..
2"	3.375	85.7	1.625	41.3	ABB-TEG7S6L.2.0-..
2-1/2"	3.625	92.1	1.875	47.6	ABB-TEG7S6L.2.5-..
3"	3.875	98.4	2.125	54.0	ABB-TEG7S6L.3.0-..
4"	4.750	120.7	2.750	69.9	ABB-TEG7S6L.4.0-..
6"	7.125	181.0	4.625	117.5	ABB-TEG7S6L.6.0-..

## ABB-TE7WCSW– SHORT OUTLET RUN TEE CLAMP ONE END

BPE TABLE # DT-4.1.2-3

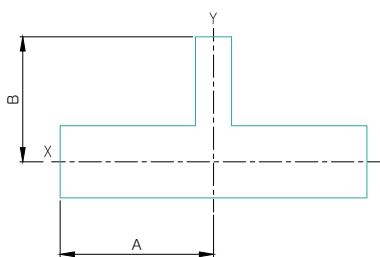


Nominal Size in.	Dimensions						Ordering Code
	A in.	A mm	B in.	B mm	C in.	C mm	
1/4"	0.875	22.2	1.750	44.5	1.750	44.5	ABB-TE7WCSW6L.25-..
3/8"	0.875	22.2	1.750	44.5	1.750	44.5	ABB-TE7WCSW6L.375-..
1/2"	0.875	22.2	1.875	47.6	1.875	47.6	ABB-TE7WCSW6L.5-..
3/4"	1.000	25.4	2.000	50.8	2.000	50.8	ABB-TE7WCSW6L.75-..
1"	1.125	28.6	2.125	54.0	2.125	54.0	ABB-TE7WCSW6L.1.0-..
1-1/2"	1.375	34.9	2.375	60.3	2.375	60.3	ABB-TE7WCSW6L.1.5-..
2"	1.625	41.3	2.875	73.0	2.875	73.0	ABB-TE7WCSW6L.2.0-..
2-1/2"	1.875	47.6	3.125	79.4	3.125	79.4	ABB-TE7WCSW6L.2.5-..
3"	2.125	54.0	3.375	85.7	3.375	85.7	ABB-TE7WCSW6L.3.0-..
4"	2.750	69.9	4.125	104.8	4.125	104.8	ABB-TE7WCSW6L.4.0-..
6"	4.625	117.5	5.625	142.9	5.625	142.9	ABB-TE7WCSW6L.6.0-..

# TEE – REDUCING

## ABB-TE7RWWW - REDUCING TEE

BPE TABLE # DT-4.1.2-6

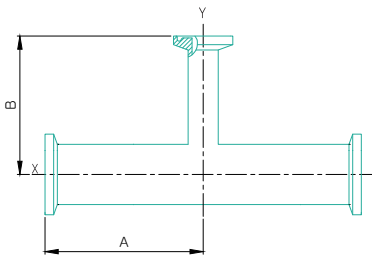


Nominal Size in.	Dimensions				Ordering Code
	A in.	A mm	B in.	B mm	
X x Y					
3/8"x1/4"	1.750	44.5	1.750	44.5	ABB-TE7RWWW6L.375x.25-..
1/2"x1/4"	1.875	47.6	1.875	47.6	ABB-TE7RWWW6L.5x.25-..
1/2"x3/8"	1.875	47.6	1.875	47.6	ABB-TE7RWWW6L.5x.375-..
3/4"x1/4"	2.000	50.8	2.000	50.8	ABB-TE7RWWW6L.75x.25-..
3/4"x3/8"	2.000	50.8	2.000	50.8	ABB-TE7RWWW6L.75x.375-..
3/4"x1/2"	2.000	50.8	2.000	50.8	ABB-TE7RWWW6L.75x.5-..
1"x1/4"	2.125	54.0	2.125	54.0	ABB-TE7RWWW6L1.0x.25-..
1"x3/8"	2.125	54.0	2.125	54.0	ABB-TE7RWWW6L1.0x.375-..
1"x1/2"	2.125	54.0	2.125	54.0	ABB-TE7RWWW6L1.0x.5-..
1"x3/4"	2.125	54.0	2.125	54.0	ABB-TE7RWWW6L1.0x.75-..
1-1/2"x1/2"	2.375	60.3	2.375	60.3	ABB-TE7RWWW6L1.5x.5-..
1-1/2"x3/4"	2.375	60.3	2.375	60.3	ABB- TE7RWWW6L1.5x.75-..
1-1/2"x1"	2.375	60.3	2.375	60.3	ABB-TE7RWWW6L1.5x1.0-..
2"x1/2"	2.875	73.0	2.625	66.7	ABB-TE7RWWW6L2.0x.5-..
2"x3/4"	2.875	73.0	2.625	66.7	ABB-TE7RWWW6L2.0x.75-..
2"x1"	2.875	73.0	2.625	66.7	ABB-TE7RWWW6L2.0x1.0-..
2"x1-1/2"	2.875	73.0	2.625	66.7	ABB-TE7RWWW6L2.0x1.5-..
2-1/2"x1/2"	3.125	79.4	2.875	73.0	ABB-TE7RWWW6L2.5x.5-..
2-1/2"x3/4"	3.125	79.4	2.875	73.0	ABB-TE7RWWW6L2.5x.75-..
2-1/2"x1"	3.125	79.4	2.875	73.0	ABB-TE7RWWW6L2.5x1.0-..
2-1/2"x1-1/2"	3.125	79.4	2.875	73.0	ABB-TE7RWWW6L2.5x1.5-..
2-1/2"x2"	3.125	79.4	2.875	73.0	ABB-TE7RWWW6L2.5x2.0-..
3"x1/2"	3.375	85.7	3.125	79.4	ABB-TE7RWWW6L3.0x.5-..
3"x3/4"	3.375	85.7	3.125	79.4	ABB-TE7RWWW6L3.0x.75-..
3"x1"	3.375	85.7	3.125	79.4	ABB-TE7RWWW6L3.0x1.0-..
3"x1-1/2"	3.375	85.7	3.125	79.4	ABB-TE7RWWW6L3.0x1.5-..
3"x2"	3.375	85.7	3.125	79.4	ABB-TE7RWWW6L3.0x2.0-..
3"x2-1/2"	3.375	85.7	3.125	79.4	ABB-TE7RWWW6L3.0x2.5-..
4"x1/2"	4.125	104.8	3.625	92.1	ABB-TE7RWWW6L4.0x.5-..
4"x3/4"	4.125	104.8	3.625	92.1	ABB-TE7RWWW6L4.0x.75-..
4"x1"	4.125	104.8	3.625	92.1	ABB- TE7RWWW6L4.0x1.0-..
4"x1-1/2"	4.125	104.8	3.625	92.1	ABB-TE7RWWW6L4.0x1.5-..
4"x2"	4.125	104.8	3.875	98.4	ABB-TE7RWWW6L4.0x2.0-..
4"x2-1/2"	4.125	104.8	3.875	98.4	ABB-TE7RWWW6L4.0x2.5-..
4"x3"	4.125	104.8	3.875	98.4	ABB-TE7RWWW6L4.0x3.0-..
6"x3"	5.625	142.9	4.875	123.8	ABB-TE7RWWW6L6.0x3.0-..
6"x4"	5.625	142.9	5.125	130.2	ABB-TE7RWWW6L6.0x4.0-..

# TEE – REDUCING

## ABB-TEG7R - REDUCING TEE CLAMP THREE END

BPE TABLE # DT-4.1.2-6

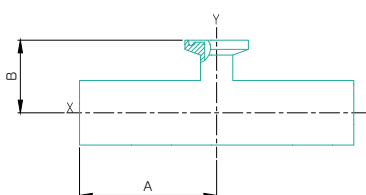


Nominal Size in.	Dimensions				Ordering Code
	A in.	A mm	B in.	B mm	
X x Y					
3/8"x1/4"	2.250	57.2	2.250	57.2	ABB-TEG7R6L.375x.25-..
1/2"x1/4"	2.375	60.3	2.375	60.3	ABB-TEG7R6L.5x.25-..
1/2"x3/8"	2.375	60.3	2.375	60.3	ABB-TEG7R6L.5x.375-..
3/4"x1/4"	2.500	63.5	2.500	63.5	ABB-TEG7R6L.75x.25-..
3/4"x3/8"	2.500	63.5	2.500	63.5	ABB-TEG7R6L.75x.375-..
3/4"x1/2"	2.500	63.5	2.500	63.5	ABB-TEG7R6L.75x.5-..
1"x1/4"	2.625	66.7	2.625	66.7	ABB-TEG7R6L1.0x.25-..
1"x3/8"	2.625	66.7	2.625	66.7	ABB-TEG7R6L1.0x.375-..
1"x1/2"	2.625	66.7	2.625	66.7	ABB-TEG7R6L1.0X.5-..
1"x3/4"	2.625	66.7	2.625	66.7	ABB-TEG7R6L1.0x.75-..
1-1/2"x1/2"	2.875	73.0	2.875	73.0	ABB-TEG7R6L1.5X.5-..
1-1/2"x3/4"	2.875	73.0	2.875	73.0	ABB-TEG7R6L1.5x.75-..
1-1/2"x1"	2.875	73.0	2.875	73.0	ABB-TEG7R6L1.5X1.0-..
2"x1/2"	3.375	85.7	3.125	79.4	ABB-TEG7R6L2.0X.5-..
2"x3/4"	3.375	85.7	3.125	79.4	ABB-TEG7R6L2.0x.75-..
2"x1"	3.375	85.7	3.125	79.4	ABB-TEG7R6L2.0X1.0-..
2"x1-1/2"	3.375	85.7	3.125	79.4	ABB-TEG7R6L2.0X1.5-..
2-1/2"x1/2"	3.625	92.1	3.375	85.7	ABB-TEG7R6L2.5X.5-..
2-1/2"x3/4"	3.625	92.1	3.375	85.7	ABB-TEG7R6L2.5x.75-..
2-1/2"x1"	3.625	92.1	3.375	85.7	ABB-TEG7R6L2.5X1.0-..
2-1/2"x1-1/2"	3.625	92.1	3.375	85.7	ABB-TEG7R6L2.5X1.5-..
2-1/2"x2"	3.625	92.1	3.375	85.7	ABB-TEG7R6L2.5X2.0-..
3"x1/2"	3.875	98.4	3.625	92.1	ABB-TEG7R6L3.0X.5-..
3"x3/4"	3.875	98.4	3.625	92.1	ABB-TEG7R6L3.0x.75-..
3"x1"	3.875	98.4	3.625	92.1	ABB-TEG7R6L3.0X1.0-..
3"x1-1/2"	3.875	98.4	3.625	92.1	ABB-TEG7R6L3.0X1.5-..
3"x2"	3.875	98.4	3.625	92.1	ABB-TEG7R6L3.0X2.0-..
3"x2-1/2"	3.875	98.4	3.625	92.1	ABB-TEG7R6L3.0X2.5-..
4"x1/2"	4.750	120.7	4.125	104.8	ABB-TEG7R6L4.0X.5-..
4"x3/4"	4.750	120.7	4.125	104.8	ABB-TEG7R6L4.0x.75-..
4"x1"	4.750	120.7	4.125	104.8	ABB-TEG7R6L4.0X1.0-..
4"x1-1/2"	4.750	120.7	4.125	104.8	ABB-TEG7R6L4.0X1.5-..
4"x2"	4.750	120.7	4.125	104.8	ABB-TEG7R6L4.0X2.0-..
4"x2-1/2"	4.750	120.7	4.125	104.8	ABB-TEG7R6L4.0X2.5-..
4"x3"	4.750	120.7	4.125	104.8	ABB-TEG7R6L4.0X3.0-..
6"x3"	7.125	181.0	5.375	136.5	ABB-TEG7R6L6.0X3.0-..
6"x4"	7.125	181.0	5.750	146.1	ABB-TEG7R6L6.0X4.0-..

# TEE – REDUCING

## ABB-TE7RWWCS– SHORT OUTLET REDUCING TEE CLAMP ONE END

BPE TABLE # DT-4.1.2-7

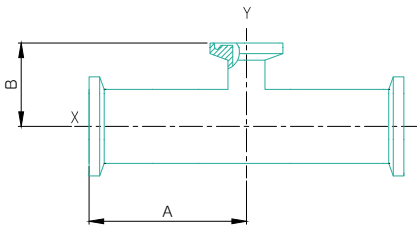


Nominal Size in.	Dimensions				Ordering Code
	A in.	A mm	B in.	B mm	
X x Y					
3/8"x1/4"	1.750	44.5	1.000	25.4	ABB-TE7RWWCS6L.375x.25-..
1/2"x1/4"	1.875	47.6	1.000	25.4	ABB-TE7RWWCS6L.5x.25-..
1/2"x3/8"	1.875	47.6	1.000	25.4	ABB-TE7RWWCS6L.5x.375-..
3/4"x1/4"	2.000	50.8	1.000	25.4	ABB-TE7RWWCS6L.75x.25-..
3/4"x3/8"	2.000	50.8	1.000	25.4	ABB-TE7RWWCS6L.75x.375-..
3/4"x1/2"	2.000	50.8	1.000	25.4	ABB-TE7RWWCS6L.75x.5-..
1"x1/4"	2.125	54.0	1.125	28.6	ABB-TE7RWWCS6L1.0x.25-..
1"x3/8"	2.125	54.0	1.125	28.6	ABB-TE7RWWCS6L1.0x.375-..
1"x1/2"	2.125	54.0	1.125	28.6	ABB-TE7RWWCS6L1.0x.5-..
1"x3/4"	2.125	54.0	1.125	28.6	ABB-TE7RWWCS6L1.0x.75-..
1-1/2"x1/2"	2.375	60.3	1.375	34.9	ABB-TE7RWWCS6L1.5x.5-..
1-1/2"x3/4"	2.375	60.3	1.375	34.9	ABB-TE7RWWCS6L1.5x.75-..
1-1/2"x1"	2.375	60.3	1.375	34.9	ABB-TE7RWWCS6L1.5x1.0-..
2"x1/2"	2.875	73.0	1.625	41.3	ABB-TE7RWWCS6L2.0x.5-..
2"x3/4"	2.875	73.0	1.625	41.3	ABB-TE7RWWCS6L2.0x.75-..
2"x1"	2.875	73.0	1.625	41.3	ABB-TE7RWWCS6L2.0x1.0-..
2"x1-1/2"	2.875	73.0	1.625	41.3	ABB-TE7RWWCS6L2.0x1.5-..
2-1/2"x1/2"	3.125	79.4	1.875	47.6	ABB-TE7RWWCS6L2.5x.5-..
2-1/2"x3/4"	3.125	79.4	1.875	47.6	ABB-TE7RWWCS6L2.5x.75-..
2-1/2"x1"	3.125	79.4	1.875	47.6	ABB-TE7RWWCS6L2.5x1.0-..
2-1/2"x1-1/2"	3.125	79.4	1.875	47.6	ABB-TE7RWWCS6L2.5x1.5-..
2-1/2"x2"	3.125	79.4	1.875	47.6	ABB-TE7RWWCS6L2.5x2.0-..
3"x1/2"	3.375	85.7	2.125	54.0	ABB-TE7RWWCS6L3.0x.5-..
3"x3/4"	3.375	85.7	2.125	54.0	ABB-TE7RWWCS6L3.0x.75-..
3"x1"	3.375	85.7	2.125	54.0	ABB-TE7RWWCS6L3.0x1.0-..
3"x1-1/2"	3.375	85.7	2.125	54.0	ABB-TE7RWWCS6L3.0x1.5-..
3"x2"	3.375	85.7	2.125	54.0	ABB-TE7RWWCS6L3.0x2.0-..
3"x2-1/2"	3.375	85.7	2.125	54.0	ABB-TE7RWWCS6L3.0x2.5-..
4"x1/2"	4.125	104.8	2.625	66.7	ABB-TE7RWWCS6L4.0x.5-..
4"x3/4"	4.125	104.8	2.625	66.7	ABB-TE7RWWCS6L4.0x.75-..
4"x1"	4.125	104.8	2.625	66.7	ABB-TE7RWWCS6L4.0x1.0-..
4"x1-1/2"	4.125	104.8	2.625	66.7	ABB-TE7RWWCS6L4.0x1.5-..
4"x2"	4.125	104.8	2.625	66.7	ABB-TE7RWWCS6L4.0x2.0-..
4"x2-1/2"	4.125	104.8	2.625	66.7	ABB-TE7RWWCS6L4.0x2.5-..
4"x3"	4.125	104.8	2.625	66.7	ABB-TE7RWWCS6L4.0x3.0-..
6"x1/2"	5.625	142.9	3.625	92.1	ABB-TE7RWWCS6L6.0x.5-..
6"x3/4"	5.625	142.9	3.625	92.1	ABB-TE7RWWCS6L6.0x.75-..
6"x1"	5.625	142.9	3.625	92.1	ABB-TE7RWWCS6L6.0x1.0-..
6"x1-1/2"	5.625	142.9	3.625	92.1	ABB-TE7RWWCS6L6.0x1.5-..
6"x2"	5.625	142.9	3.625	92.1	ABB-TE7RWWCS6L6.0x2.0-..
6"x2-1/2"	5.625	142.9	3.625	92.1	ABB-TE7RWWCS6L6.0x2.5-..
6"x3"	5.625	142.9	3.625	92.1	ABB-TE7RWWCS6L6.0x3.0-..
6"x4"	5.625	142.9	3.750	95.3	ABB-TE7RWWCS6L6.0x4.0-..

# TEE – REDUCING

## ABB-TEG7RS – SHORT OUTLET REDUCING TEE CLAMP THREE END

BPE TABLE # DT-4.1.2-9

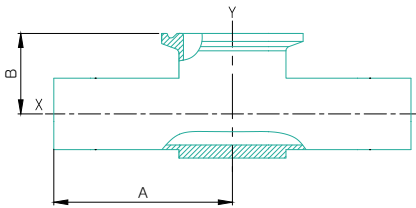


Nominal Size in.	Dimensions				Ordering Code
	A in.	A mm	B in.	B mm	
X x Y					
3/8"x1/4"	2.250	57.2	1.000	25.4	ABB-TEG7RS6L.375x.25-..
1/2"x1/4"	2.375	60.3	1.000	25.4	ABB-TEG7RS6L.5x.25-..
1/2"x3/8"	2.375	60.3	1.000	25.4	ABB-TEG7RS6L.5x.375-..
3/4"x1/4"	2.500	63.5	1.000	25.4	ABB-TEG7RS6L.75x.25-..
3/4"x3/8"	2.500	63.5	1.000	25.4	ABB-TEG7RS6L.75x.375-..
3/4"x1/2"	2.500	63.5	1.000	25.4	ABB-TEG7RS6L.75x.5-..
1"x1/4"	2.625	66.7	1.125	28.6	ABB-TEG7RS6L1.0x.25-..
1"x3/8"	2.625	66.7	1.125	28.6	ABB-TEG7RS6L1.0x.375-..
1"x1/2"	2.625	66.7	1.125	28.6	ABB-TEG7RS6L1.0x.5-..
1"x3/4"	2.625	66.7	1.125	28.6	ABB-TEG7RS6L1.0x.75-..
1-1/2"x1/2"	2.875	73.0	1.375	34.9	ABB-TEG7RS6L1.5x.5-..
1-1/2"x3/4"	2.875	73.0	1.375	34.9	ABB-TEG7RS6L1.5x.75-..
1-1/2"x1"	2.875	73.0	1.375	34.9	ABB-TEG7RS6L1.5x.1.0-..
2"x1/2"	3.375	85.7	1.625	41.3	ABB-TEG7RS6L2.0x.5-..
2"x3/4"	3.375	85.7	1.625	41.3	ABB-TEG7RS6L2.0x.75-..
2"x1"	3.375	85.7	1.625	41.3	ABB-TEG7RS6L2.0x.1.0-..
2"x1-1/2"	3.375	85.7	1.625	41.3	ABB-TEG7RS6L2.0x.1.5-..
2-1/2"x1/2"	3.625	92.1	1.875	47.6	ABB-TEG7RS6L2.5x.5-..
2-1/2"x3/4"	3.625	92.1	1.875	47.6	ABB-TEG7RS6L2.5x.75-..
2-1/2"x1"	3.625	92.1	1.875	47.6	ABB-TEG7RS6L2.5x.1.0-..
2-1/2"x1-1/2"	3.625	92.1	1.875	47.6	ABB-TEG7RS6L2.5x.1.5-..
2-1/2"x2"	3.625	92.1	1.875	47.6	ABB-TEG7RS6L2.5x.2.0-..
3"x1/2"	3.875	98.4	2.125	54.0	ABB-TEG7RS6L3.0x.5-..
3"x3/4"	3.875	98.4	2.125	54.0	ABB-TEG7RS6L3.0x.75-..
3"x1"	3.875	98.4	2.125	54.0	ABB-TEG7RS6L3.0x.1.0-..
3"x1-1/2"	3.875	98.4	2.125	54.0	ABB-TEG7RS6L3.0x.1.5-..
3"x2"	3.875	98.4	2.125	54.0	ABB-TEG7RS6L3.0x.2.0-..
3"x2-1/2"	3.875	98.4	2.125	54.0	ABB-TEG7RS6L3.0x.2.5-..
4"x1/2"	4.750	120.7	2.625	66.7	ABB-TEG7RS6L4.0x.5-..
4"x3/4"	4.750	120.7	2.625	66.7	ABB-TEG7RS6L4.0x.75-..
4"x1"	4.750	120.7	2.625	66.7	ABB-TEG7RS6L4.0x.1.0-..
4"x1-1/2"	4.750	120.7	2.625	66.7	ABB-TEG7RS6L4.0x.1.5-..
4"x2"	4.750	120.7	2.625	66.7	ABB-TEG7RS6L4.0x.2.0-..
4"x2-1/2"	4.750	120.7	2.625	66.7	ABB-TEG7RS6L4.0x.2.5-..
4"x3"	4.750	120.7	2.625	66.7	ABB-TEG7RS6L4.0x.3.0-..
6"x1/2"	7.125	181.0	3.625	92.1	ABB-TEG7RS6L6.0x.5-..
6"x3/4"	7.125	181.0	3.625	92.1	ABB-TEG7RS6L6.0x.75-..
6"x1"	7.125	181.0	3.625	92.1	ABB-TEG7RS6L6.0x.1.0-..
6"x1-1/2"	7.125	181.0	3.625	92.1	ABB-TEG7RS6L6.0x.1.5-..
6"x2"	7.125	181.0	3.625	92.1	ABB-TEG7RS6L6.0x.2.0-..
6"x2-1/2"	7.125	181.0	3.625	92.1	ABB-TEG7RS6L6.0x.2.5-..
6"x3"	7.125	181.0	3.625	92.1	ABB-TEG7RS6L6.0x.3.0-..
6"x4"	7.125	181.0	3.750	95.3	ABB-TEG7RS6L6.0x.4.0-..

# TEE – INSTRUMENT

## ABB-TE7IWWCS – INSTRUMENT TEE CLAMP ONE END

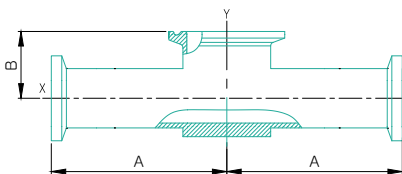
BPE TABLE # DT-4.1.2-10



Nominal Size in.	Dimensions				Ordering Code
	A in.	A mm	B in.	B mm	
X x Y					
1/2"x1-1/2"	2.500	63.5	0.875	22.2	ABB-TE7IWWCS6L.5x1.5-..
3/4"x1-1/2"	2.500	63.5	1.000	25.4	ABB-TE7IWWCS6L.75x1.5-..
1"x1-1/2"	2.500	63.5	1.125	28.6	ABB-TE7IWWCS6L1.0x1.5-..
1/2"x2"	2.750	69.9	1.000	25.4	ABB-TE7IWWCS6L.5x2.0-..
3/4"x2"	2.750	69.9	1.125	28.6	ABB-TE7IWWCS6L.75x2.0-..
1"x2"	2.750	69.9	1.125	31.8	ABB-TE7IWWCS6L1.0x2.0-..
1-1/2"x2"	2.750	69.9	1.500	38.1	ABB-TE7IWWCS6L1.5x2.0-

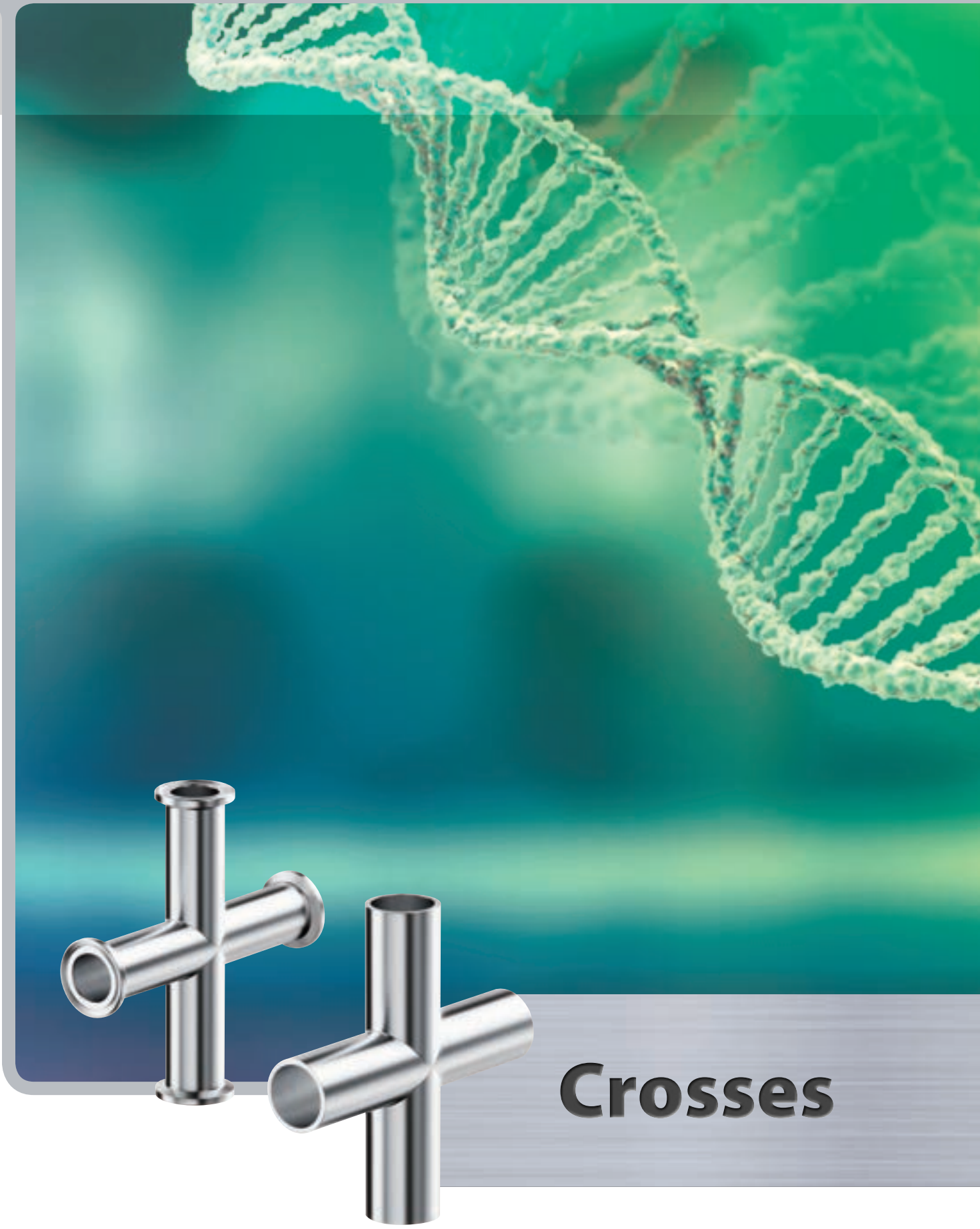
## ABB-TEG7IS - INSTRUMENT TEE CLAMP THREE END

BPE TABLE # DT-4.1.2-11



Nominal Size in.	Dimensions				Ordering Code
	A in.	A mm	B in.	B mm	
X x Y					
1/2"x1-1/2"	3.000	76.2	0.875	22.2	ABB-TEG7IS6L.5x1.5-..
3/4"x1-1/2"	3.000	76.2	1.000	25.4	ABB-TEG7IS6L.75x1.5-..
1"x1-1/2"	3.000	76.2	1.125	28.6	ABB-TEG7IS6L1.0x1.5-..
1/2"x2"	3.250	82.6	1.000	25.4	ABB-TEG7IS6L.5x2.0-..
3/4"x2"	3.250	82.6	1.125	28.6	ABB-TEG7IS6L.75x2.0-..
1"x2"	3.250	82.6	1.250	31.8	ABB-TEG7IS6L1.0x2.0-..
1-1/2"x2"	3.250	82.6	1.500	38.1	ABB-TEG7IS6L1.5x2.0-..



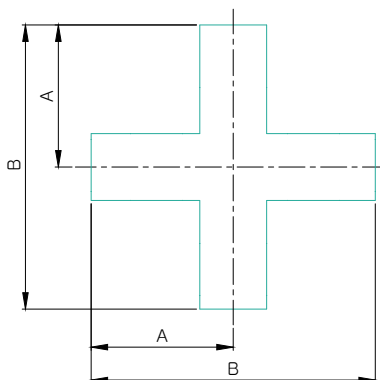


# Crosses

# CROSS

## ABB-TE9WWW- CROSS

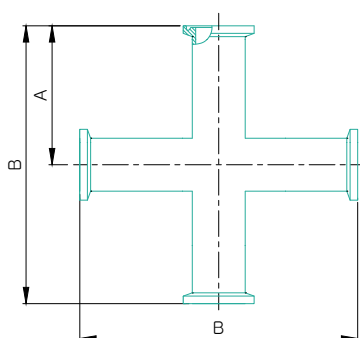
BPE TABLE # DT-4.1.2-1



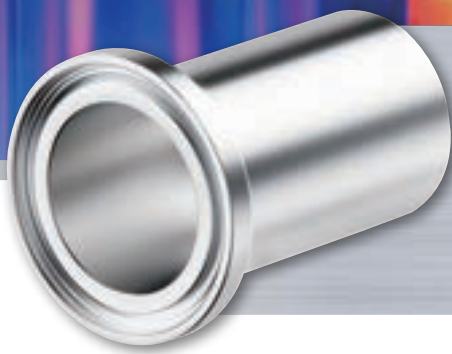
Nominal Size in.	Dimensions				Ordering Code
	A in.	A mm	B in.	B mm	
1/4"	1.750	44.5	3.500	89.0	ABB-TE9WWW6L.25-..
3/8"	1.750	44.5	3.500	89.0	ABB-TE9WWW6L.375-..
1/2"	1.875	47.6	3.750	95.2	ABB-TE9WWW6L.5-..
3/4"	2.000	50.8	4.000	101.6	ABB-TE9WWW6L.75-..
1"	2.125	54.0	4.250	108.0	ABB-TE9WWW6L1.0-..
1-1/2"	2.375	60.3	4.750	120.6	ABB-TE9WWW6L1.5-..
2"	2.875	73.0	5.750	146.0	ABB-TE9WWW6L2.0-..
2-1/2"	3.125	79.4	6.250	158.8	ABB-TE9WWW6L2.5-..
3"	3.375	85.7	6.750	171.4	ABB-TE9WWW6L3.0-..
4"	4.125	104.8	8.250	209.6	ABB-TE9WWW6L4.0-..
6"	5.625	142.9	11.250	285.8	ABB-TE9WWW6L6.0-..

## ABB-TEG9- CROSS CLAMP FOUR END

BPE TABLE # DT-4.1.2-4



Nominal Size in.	Dimensions				Ordering Code
	A in.	A mm	B in.	B mm	
1/4"	2.250	57.2	4.500	114.3	ABB-TEG96L.25-..
3/8"	2.250	57.2	4.500	114.3	ABB-TEG96L.375-..
1/2"	2.250	57.2	4.500	114.3	ABB-TEG96L.5-..
3/4"	2.375	60.3	4.750	120.6	ABB-TEG96L.75-..
1"	2.625	66.7	5.250	133.4	ABB-TEG96L1.0-..
1-1/2"	2.875	73.0	5.750	146.0	ABB-TEG96L1.5-..
2"	3.375	85.7	6.750	171.4	ABB-TEG96L2.0-..
2-1/2"	3.625	92.1	7.250	184.2	ABB-TEG96L2.5-..
3"	3.875	98.4	7.750	196.8	ABB-TEG96L3.0-..
4"	4.750	120.7	9.500	241.4	ABB-TEG96L4.0-..
6"	7.125	181.0	14.250	362.0	ABB-TEG96L6.0-..



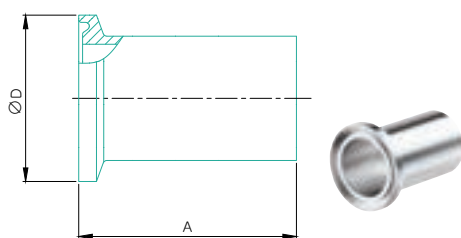
# Ferrules



# Ferrules

## ABB-TEG14AM7 - CLAMP FERRULE LONG

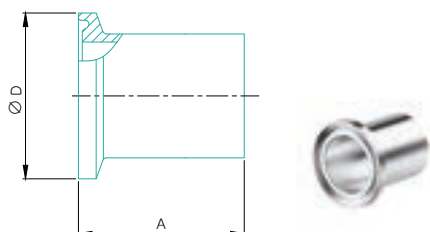
BPE TABLE # DT-4.1.4-1(A)



Nominal Size in.	Dimensions				Ordering Code	
	Type	A in.	A mm	D in.		D mm
1/4"	A	1.750	44.5	0.984	24.9	ABB-TEG14AM76L.25-..
3/8"	A	1.750	44.5	0.984	24.9	ABB-TEG14AM76L.375-..
1/2"	A	1.750	44.5	0.984	24.9	ABB-TEG14AM76L.5-..
3/4"	A	1.750	44.5	0.984	24.9	ABB-TEG14AM76L.75-..
1"	A	1.750	44.5	1.339	34.0	ABB-TEG14AM76L1.0-A..
1"	B	1.750	44.5	1.984	50.3	ABB-TEG14AM76L1.0-..
1-1/2"	B	1.750	44.5	1.984	50.3	ABB-TEG14AM76L1.5-..
2"	B	2.250	57.2	2.516	63.9	ABB-TEG14AM76L2.0-..
2-1/2"	B	2.250	57.2	3.047	77.3	ABB-TEG14AM76L2.5-..
3"	B	2.250	57.2	3.579	90.9	ABB-TEG14AM76L3.0-..
4"	B	2.250	57.2	4.682	118.9	ABB-TEG14AM76L4.0-..
6"	B	3.000	76.2	6.570	166.8	ABB-TEG14AM76L6.0-

## ABB-TEG14BM7- CLAMP FERRULE MEDIUM

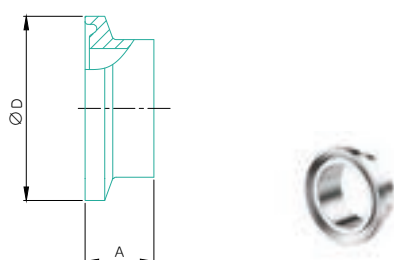
BPE TABLE # DT-4.1.4-1(B)



Nominal Size in.	Dimensions				Ordering Code	
	Type	A in.	A mm	D in.		D mm
1/4"	A	1.130	28.7	0.984	24.9	ABB-TEG14BM76L.25-..
3/8"	A	1.130	28.7	0.984	24.9	ABB-TEG14BM76L.375-..
1/2"	A	1.130	28.7	0.984	24.9	ABB-TEG14BM76L.5-..
3/4"	A	1.130	28.7	0.984	24.9	ABB-TEG14BM76L.75-..
1"	A	1.130	28.7	1.339	34.0	ABB-TEG14BM76L1.0-A..
1"	B	1.130	28.7	1.984	50.3	ABB-TEG14BM76L1.0-..
1-1/2"	B	1.130	28.7	1.984	50.3	ABB-TEG14BM76L1.5-..
2"	B	1.130	28.7	2.516	63.9	ABB-TEG14BM76L2.0-..
2-1/2"	B	1.130	28.7	3.047	77.3	ABB-TEG14BM76L2.5-..
3"	B	1.130	28.7	3.579	90.9	ABB-TEG14BM76L3.0-..
4"	B	1.130	28.7	4.682	118.9	ABB-TEG14BM76L4.0-..
6"	B	1.500	38.1	6.570	166.8	ABB-TEG14BM76L6.0-..

## ABB-TEG2CS- CLAMP FERRULE SHORT

BPE TABLE # DT-4.1.4-1(C)



Nominal Size in.	Dimensions				Ordering Code	
	Type	A in.	A mm	D in.		D mm
1/4"	A	0.500	12.7	0.984	24.9	ABB-TEG2CS6L.25-..
3/8"	A	0.500	12.7	0.984	24.9	ABB-TEG2CS6L.375-..
1/2"	A	0.500	12.7	0.984	24.9	ABB-TEG2CS6L.5-..
3/4"	A	0.500	12.7	0.984	24.9	ABB-TEG2CS6L.75-..
1"	A	0.500	12.7	1.339	34.0	ABB-TEG2CS6L1.0-A..
1"	B	0.500	12.7	1.984	50.3	ABB-TEG2CS6L1.0-..
1-1/2"	B	0.500	12.7	1.984	50.3	ABB-TEG2CS6L1.5-..
2"	B	0.500	12.7	2.516	63.9	ABB-TEG2CS6L2.0-..
2-1/2"	B	0.500	12.7	3.047	77.3	ABB-TEG2CS6L2.5-..
3"	B	0.500	12.7	3.579	90.9	ABB-TEG2CS6L3.0-..
4"	B	0.625	15.9	4.682	118.9	ABB-TEG2CS6L4.0-..
6"	B	0.750	19.1	6.570	166.8	ABB-TEG2CS6L6.0-..

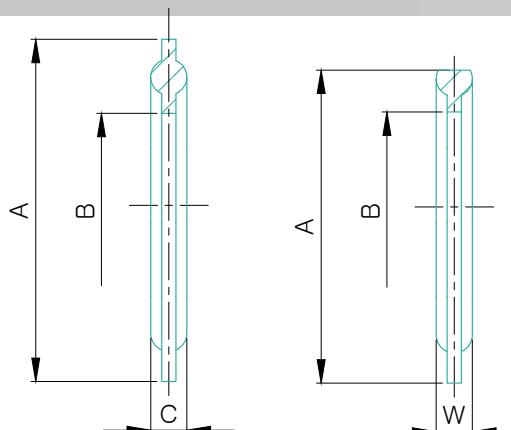




# Gaskets

# Gaskets

## ABC-TEG40 – GASKET



Nominal Size in.	Dimensions								Ordering Code
	A in.	A mm	B in.	B mm	C in.	C mm	W in.	W mm	
1/2"	1.000	25.4	0.370	9.40	-	-	0.22	5.500	ABC-TEG40.5*
3/4"	1.000	25.4	0.618	15.70	-	-	0.22	5.500	ABC-TEG40.75*
1"	1.975	50.16	0.900	22.86	0.2	5.08	-	-	ABC-TEG401.0*
1-1/2"	1.975	50.16	1.400	35.56	0.2	5.08	-	-	ABC-TEG401.5*
2"	2.500	63.50	1.900	48.26	0.2	5.08	-	-	ABC-TEG402.0*
2-1/2"	3.000	76.20	2.400	60.96	0.2	5.08	-	-	ABC-TEG402.5*
3"	3.575	90.80	2.900	73.66	0.2	5.08	-	-	ABC-TEG403.0*
4"	4.690	119.12	3.875	98.42	0.2	5.08	-	-	ABC-TEG404.0*
6"	6.600	167.64	5.840	148.33	0.2	5.08	-	-	ABC-TEG406.0*

\* Please specify the gasket material.

**Note:** Gaskets are type USP Class VI Pharmaceutical Grade.

### GASKET MATERIALS:

PTFE®

VITON®

Envelope type - TEFLON with EPDM Filler

TEFLON with VITON Filler

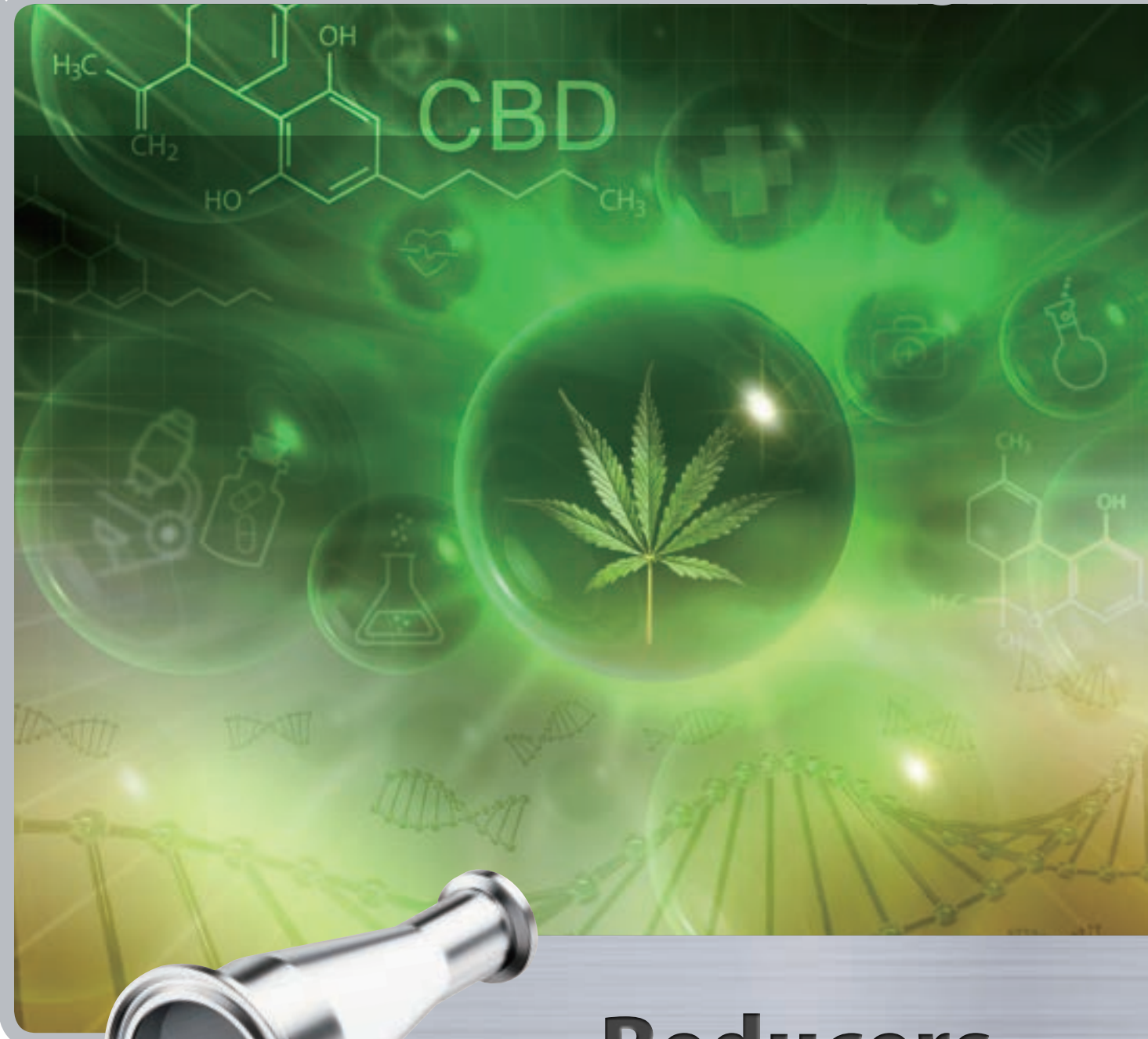
SILICON

BUNA

EPDM and TEF-STEEL®







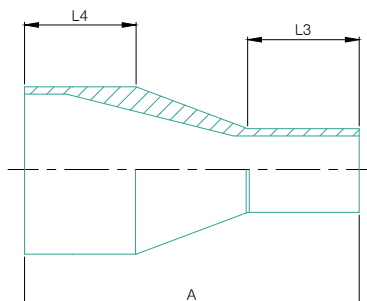
# Reducers



# REDUCER - CONCENTRIC

## ABB-TE31SWW – CONCENTRIC REDUCER

BPE TABLE # DT-4.1.3-1

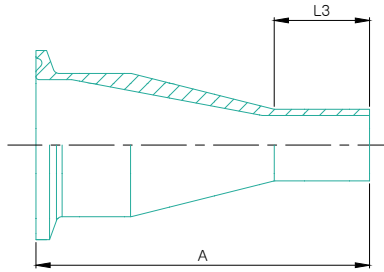


Nominal Size in.	Dimensions						Ordering Code
	Overall Length, A, in	Overall Length, A, mm	Minimum O.D. Tangent, Small End, L3, in. Minimum O.D.	Minimum O.D. Tangent, Small End, L3, mm	Minimum O.D. Tangent, Large End, L4, in	Minimum O.D. Tangent, Large End, L4, mm	
3/8"x1/4"	1.625	41.275	0.750	19.05	0.750	19.05	ABB-TE31SWW6L.375x.25-..
1/2"x1/4"	1.875	47.625	0.750	19.05	1.000	25.40	ABB-TE31SWW6L.5x.25-..
1/2"x3/8"	1.875	47.625	0.750	19.05	1.000	25.40	ABB-TE31SWW6L.5x.375-..
3/4"x3/8"	2.000	50.800	0.750	19.05	1.000	25.40	ABB-TE31SWW6L.75x.375-..
3/4"x1/2"	2.125	53.975	1.000	25.40	1.000	25.40	ABB-TE31SWW6L.75x.5-..
1"x1/2"	2.500	63.500	1.000	25.40	1.000	25.40	ABB-TE31SWW6L1.0x.5-..
1"x3/4"	2.125	53.975	1.000	25.40	1.000	25.40	ABB-TE31SWW6L1.0x.75-..
1-1/2"x3/4"	3.000	76.200	1.000	25.40	1.000	25.40	ABB-TE31SWW6L1.5x.75-..
1-1/2"x1"	2.500	63.500	1.000	25.40	1.000	25.40	ABB-TE31SWW6L1.5x1.0-..
2"x1"	3.375	85.725	1.000	25.40	1.000	25.40	ABB-TE31SWW6L2.0x1.0-..
2"x1-1/2"	2.500	63.500	1.000	25.40	1.000	25.40	ABB-TE31SWW6L2.0x1.5-..
2-1/2"x1-1/2"	3.375	85.725	1.000	25.40	1.000	25.40	ABB-TE31SWW6L2.5x1.5-..
2-1/2"x2"	2.500	63.500	1.000	25.40	1.000	25.40	ABB-TE31SWW6L2.5x2.0-..
3"x1-1/2"	4.250	107.950	1.000	25.40	1.500	38.10	ABB-TE31SWW6L3.0x1.5-..
3"x2"	3.375	85.725	1.000	25.40	1.500	38.10	ABB-TE31SWW6L3.0x2.0-..
3"x2-1/2"	2.625	66.675	1.000	25.40	1.500	38.10	ABB-TE31SWW6L3.0x2.5-..
4"x2"	5.125	130.175	1.000	25.40	1.500	38.10	ABB-TE31SWW6L4.0x2.0-..
4"x2-1/2"	4.250	107.950	1.000	25.40	1.500	38.10	ABB-TE31SWW6L4.0x2.5-..
4"x3"	3.875	98.425	1.500	38.10	1.500	38.10	ABB-TE31SWW6L4.0x3.0-..
6"x3"	7.250	184.150	1.500	38.10	2.000	50.80	ABB-TE31SWW6L6.0x3.0-..
6"x4"	5.625	142.875	1.500	38.10	2.000	50.80	ABB-TE31SWW6L6.0x4.0-..

# REDUCER - CONCENTRIC

## ABB-TE31SCW – CONCENTRIC REDUCER CLAMP ONE END

BPE TABLE # DT-4.1.3-2

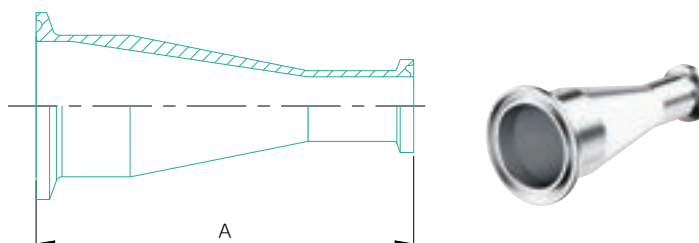


Nominal Size in.	Dimensions				Ordering Code
	Overall Length, A, in	Overall Length, A, mm	Minimum O.D. Tangent, Small End, L3, in.	Minimum O.D. Tangent, Small End, L3, mm	
3/8"x1/4"	2.125	53.975	0.750	19.05	ABB-TE31SCW6L.375x.25-..
1/2"x1/4"	2.375	60.325	0.750	19.05	ABB-TE31SCW6L.5x.25-..
1/2"x3/8"	3.375	60.325	0.750	19.05	ABB-TE31SCW6L.5x.375-..
3/4"x3/8"	2.500	63.500	0.750	19.05	ABB-TE31SCW6L.75x.375-..
3/4"x1/2"	2.625	66.675	1.000	25.40	ABB-TE31SCW6L.75x.5-..
1"x1/2"	3.000	76.200	1.000	25.40	ABB-TE31SCW6L1.0x.5-..
1"x3/4"	2.625	66.675	1.000	25.40	ABB-TE31SCW6L1.0x.75-..
1-1/2"x3/4"	3.500	88.900	1.000	25.40	ABB-TE31SCW6L1.5x.75-..
1-1/2"x1"	3.000	76.200	1.000	25.40	ABB-TE31SCW6L1.5x1.0-..
2"x1"	3.875	98.425	1.000	25.40	ABB-TE31SCW6L2.0x1.0-..
2"x1-1/2"	3.000	76.200	1.000	25.40	ABB-TE31SCW6L2.0x1.5-..
2-1/2"x1-1/2"	3.875	98.425	1.000	25.40	ABB-TE31SCW6L2.5x1.5-..
2-1/2"x2"	3.000	76.200	1.000	25.40	ABB-TE31SCW6L2.5x2.0-..
3"x1-1/2"	4.750	120.650	1.000	25.40	ABB-TE31SCW6L3.0x1.5-..
3"x2"	3.875	98.425	1.000	25.40	ABB-TE31SCW6L3.0x2.0-..
3"x2-1/2"	3.125	79.375	1.000	25.40	ABB-TE31SCW6L3.0x2.5-..
4"x2"	5.750	146.050	1.000	25.40	ABB-TE31SCW6L4.0x2.0-..
4"x2-1/2"	4.875	123.825	1.000	25.40	ABB-TE31SCW6L4.0x2.5-..
4"x3"	4.500	1114.300	1.500	38.10	ABB-TE31SCW6L4.0x3.0-..
6"x3"	8.000	203.200	1.500	38.10	ABB-TE31SCW6L6.0x3.0-..
6"x4"	6.375	161.925	1.500	38.10	ABB-TE31SCW6L6.0x4.0-..

# REDUCER - CONCENTRIC

## ABB-TEG31SCC – CONCENTRIC REDUCER CLAMP TWO END

BPE TABLE # DT-4.1.3-3

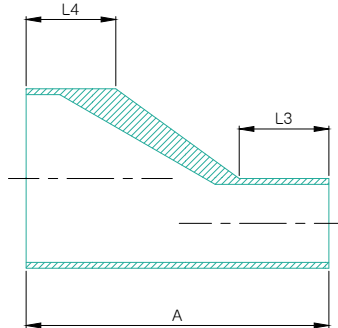


Nominal Size in.	Dimensions		Ordering Code
	Overall Length, A, in	Overall Length, A, mm	
3/8"x1/4"	2.625	66.675	ABB-TEG31SCC6L.375x.25
1/2"x1/4"	2.875	73.025	ABB-TEG31SCC6L.5x.25
1/2"x3/8"	2.875	73.025	ABB-TEG31SCC6L.5x.375
3/4"x3/8"	3.000	76.200	ABB-TEG31SCC6L.75x.375
3/4"x1/2"	3.125	79.375	ABB-TEG31SCC6L.75x.5
1"x1/2"	3.500	88.900	ABB-TEG31SCC6L1.0x.5
1"x3/4"	3.125	79.375	ABB-TEG31SCC6L1.0x.75
1-1/2"x3/4"	4.000	101.600	ABB-TEG31SCC6L1.5x.75
1-1/2"x1"	3.500	88.900	ABB-TEG31SCC6L1.5x1.0
2"x1"	4.375	111.125	ABB-TEG31SCC6L2.0x1.0
2"x1-1/2"	3.500	88.900	ABB-TEG31SCC6L2.0x1.5
2-1/2"x1-1/2"	4.375	111.125	ABB-TEG31SCC6L2.5x1.5
2-1/2"x2"	3.500	88.900	ABB-TEG31SCC6L2.5x2.0
3"x1-1/2"	5.250	133.350	ABB-TEG31SCC6L3.0x1.5
3"x2"	4.375	111.125	ABB-TEG31SCC6L3.0x2.0
3"x2-1/2"	3.625	92.075	ABB-TEG31SCC6L3.0x2.5
4"x2"	6.250	158.750	ABB-TEG31SCC6L4.0x2.0
4"x2-1/2"	5.375	136.525	ABB-TEG31SCC6L4.0x2.5
4"x3"	5.000	127.000	ABB-TEG31SCC6L4.0x3.0
6"x3"	8.500	215.900	ABB-TEG31SCC6L6.0x3.0
6"x4"	7.000	177.800	ABB-TEG31SCC6L6.0x4.0

# REDUCER - ECCENTRIC

## ABB-TE32SWW – ECCENTRIC REDUCER

BPE TABLE # DT-4.1.3-1

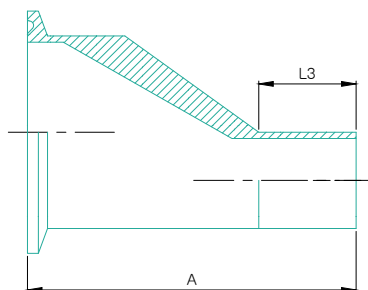


Nominal Size in.	Dimensions						Ordering Code
	Overall Length, A, in	Overall Length, A, mm	Minimum O.D. Tangent, Small End, L3, in.	Minimum O.D. Tangent, Small End, L3, mm	Minimum O.D. Tangent, Large End, L4, in	Minimum O.D. Tangent, Large End, L4, mm	
3/8"x1/4"	1.625	41.275	0.750	19.05	0.750	19.05	ABB-TE32SWW6L.375x.25-..
1/2"x1/4"	1.875	47.625	0.750	19.05	1.000	25.40	ABB-TE32SWW6L.5x.25-..
1/2"x3/8"	1.875	47.625	0.750	19.05	1.000	25.40	ABB-TE32SWW6L.5x.375-..
3/4"x3/8"	2.000	50.800	0.750	19.05	1.000	25.40	ABB-TE32SWW6L.75x.375-..
3/4"x1/2"	2.125	53.975	1.000	25.40	1.000	25.40	ABB-TE32SWW6L.75x.5-..
1"x1/2"	2.500	63.500	1.000	25.40	1.000	25.40	ABB-TE32SWW6L1.0x.5-..
1"x3/4"	2.125	53.975	1.000	25.40	1.000	25.40	ABB-TE32SWW6L1.0x.75-..
1-1/2"x3/4"	3.000	76.200	1.000	25.40	1.000	25.40	ABB-TE32SWW6L1.5x.75-..
1-1/2"x1"	2.500	63.500	1.000	25.40	1.000	25.40	ABB-TE32SWW6L1.5x1.0-..
2"x1"	3.375	85.725	1.000	25.40	1.000	25.40	ABB-TE32SWW6L2.0x1.0-..
2"x1-1/2"	2.500	63.500	1.000	25.40	1.000	25.40	ABB-TE32SWW6L2.0x1.5-..
2-1/2"x1-1/2"	3.375	85.725	1.000	25.40	1.000	25.40	ABB-TE32SWW6L2.5x1.5-..
2-1/2"x2"	2.500	63.500	1.000	25.40	1.000	25.40	ABB-TE32SWW6L2.5x2.0-..
3"x1-1/2"	4.250	107.950	1.000	25.40	1.500	38.10	ABB-TE32SWW6L3.0x1.5-..
3"x2"	3.375	85.725	1.000	25.40	1.500	38.10	ABB-TE32SWW6L3.0x2.0-..
3"x2-1/2"	2.625	66.675	1.000	25.40	1.500	38.10	ABB-TE32SWW6L3.0x2.5-..
4"x2"	5.125	130.175	1.000	25.40	1.500	38.10	ABB-TE32SWW6L4.0x2.0-..
4"x2-1/2"	4.250	107.950	1.000	25.40	1.500	38.10	ABB-TE32SWW6L4.0x2.5-..
4"x3"	3.875	98.425	1.500	38.10	1.500	38.10	ABB-TE32SWW6L4.0x3.0-..
6"x3"	7.250	184.150	1.500	38.10	2.000	50.80	ABB-TE32SWW6L6.0x3.0-..
6"x4"	5.625	142.875	1.500	38.10	2.000	50.80	ABB-TE32SWW6L6.0x4.0-..

# REDUCER - ECCENTRIC

## ABB-TE32SCW – ECCENTRIC REDUCER CLAMP ONE END

BPE TABLE # DT-4.1.3-2



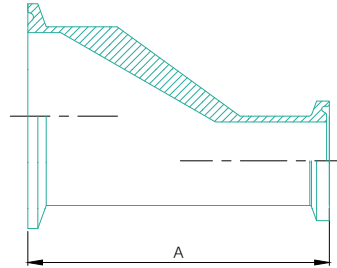
Nominal Size in.	Dimensions				Ordering Code
	Overall Length, A, in	Overall Length, A, mm	Minimum O.D. Tangent, Small End, L3, in.	Minimum O.D. Tangent, Small End, L3, mm	
3/8"x1/4"	2.125	53.975	0.750	19.05	ABB-TE32SCW6L.375x.25-..
1/2"x1/4"	2.375	60.325	0.750	19.05	ABB-TE32SCW6L.5x.25-..
1/2"x3/8"	3.375	60.325	0.750	19.05	ABB-TE32SCW6L.5x.375-..
3/4"x3/8"	2.500	63.500	0.750	19.05	ABB-TE32SCW6L.75x.375-..
3/4"x1/2"	2.625	66.675	1.000	25.40	ABB-TE32SCW6L.75x.5-..
1"x1/2"	3.000	76.200	1.000	25.40	ABB-TE32SCW6L1.0x.5-..
1"x3/4"	2.625	66.675	1.000	25.40	ABB-TE32SCW6L1.0x.75-..
1-1/2"x3/4"	3.500	88.900	1.000	25.40	ABB-TE32SCW6L1.5x.75-..
1-1/2"x1"	3.000	76.200	1.000	25.40	ABB-TE32SCW6L1.5x1.0-..
2"x1"	3.875	98.425	1.000	25.40	ABB-TE32SCW6L2.0x1.0-..
2"x1-1/2"	3.000	76.200	1.000	25.40	ABB-TE32SCW6L2.0x1.5-..
2-1/2"x1-1/2"	3.875	98.425	1.000	25.40	ABB-TE32SCW6L2.5x1.5-..
2-1/2"x2"	3.000	76.200	1.000	25.40	ABB-TE32SCW6L2.5x2.0-..
3"x1-1/2"	4.750	120.650	1.000	25.40	ABB-TE32SCW6L3.0x1.5-..
3"x2"	3.875	98.425	1.000	25.40	ABB-TE32SCW6L3.0x2.0-..
3"x2-1/2"	3.125	79.375	1.000	25.40	ABB-TE32SCW6L3.0x2.5-..
4"x2"	5.750	146.050	1.000	25.40	ABB-TE32SCW6L4.0x2.0-..
4"x2-1/2"	4.875	123.825	1.000	25.40	ABB-TE32SCW6L4.0x2.5-..
4"x3"	4.500	1114.300	1.500	38.10	ABB-TE32SCW6L4.0x3.0-..
6"x3"	8.000	203.200	1.500	38.10	ABB-TE32SCW6L6.0x3.0-..
6"x4"	6.375	161.925	1.500	38.10	ABB-TE32SCW6L6.0x4.0-..



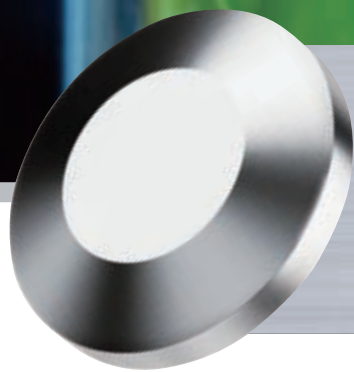
# REDUCER - ECCENTRIC

## ABB-TEG32SCC- ECCENTRIC REDUCER CLAMP TWO END

BPE TABLE # DT-4.1.3-3



Nominal Size in.	Dimensions		Ordering Code
	Overall Length, A, in	Overall Length, A, mm	
3/8"x1/4"	2.625	66.675	ABB-TEG32SCC6L.375x.25-..
1/2"x1/4"	2.875	73.025	ABB-TEG32SCC6L.5x.25-..
1/2"x3/8"	2.875	73.025	ABB-TEG32SCC6L.5x.375-..
3/4"x3/8"	3.000	76.200	ABB-TEG32SCC6L.75x.375-..
3/4"x1/2"	3.125	79.375	ABB-TEG32SCC6L.75x.5-..
1"x1/2"	3.500	88.900	ABB-TEG32SCC6L1.0x.5-..
1"x3/4"	3.125	79.375	ABB-TEG32SCC6L1.0x.75-..
1-1/2"x3/4"	4.000	101.600	ABB-TEG32SCC6L1.5x.75-..
1-1/2"x1"	3.500	88.900	ABB-TEG32SCC6L1.5x1.0-..
2"x1"	4.375	111.125	ABB-TEG32SCC6L2.0x1.0-..
2"x1-1/2"	3.500	88.900	ABB-TEG32SCC6L2.0x1.5-..
2-1/2"x1-1/2"	4.375	111.125	ABB-TEG32SCC6L2.5x1.5-..
2-1/2"x2"	3.500	88.900	ABB-TEG32SCC6L2.5x2.0-..
3"x1-1/2"	5.250	133.350	ABB-TEG32SCC6L3.0x1.5-..
3"x2"	4.375	111.125	ABB-TEG32SCC6L3.0x2.0-..
3"x2-1/2"	3.625	92.0750	ABB-TEG32SCC6L3.0x2.5-..
4"x2"	6.250	158.750	ABB-TEG32SCC6L4.0x2.0-..
4"x2-1/2"	5.375	136.525	ABB-TEG32SCC6L4.0x2.5-..
4"x3"	5.000	127.000	ABB-TEG32SCC6L4.0x3.0-..
6"x3"	8.500	215.900	ABB-TEG32SCC6L6.0x3.0-..
6"x4"	7.000	177.800	ABB-TEG32SCC6L6.0x4.0-..



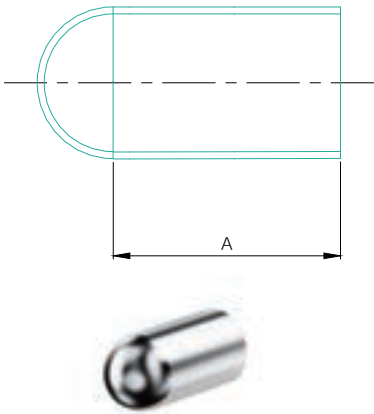
# Caps



# CAP

## ABB-TE16W- WELD CAP

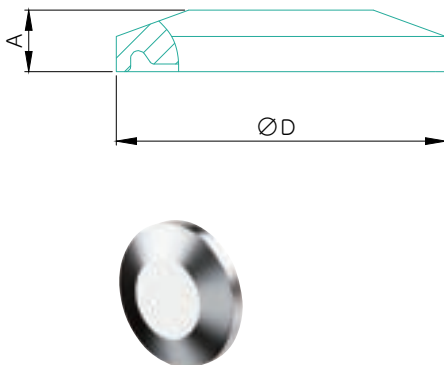
BPE TABLE # DT-4.1.5-1



Nominal Size in.	Dimensions		Ordering Code
	A in.	A mm	
1/2"	1.500	38.1	ABB-TE16W6L.5-..
3/4"	1.500	38.1	ABB-TE16W6L.75-..
1"	1.500	38.1	ABB-TE16W6L1.0-..
1-1/2"	1.500	38.1	ABB-TE16W6L1.5-..
2"	1.500	38.1	ABB-TE16W6L2.0-..
2-1/2"	1.500	38.1	ABB-TE16W6L2.5-..
3"	1.750	44.5	ABB-TE16W6L3.0-..
4"	2.000	50.8	ABB-TE16W6L4.0-..
6"	2.500	63.5	ABB-TE16W6L6.0-..

## ABB-TEG16A - SOLID CAP

BPE TABLE # DT-4.1.5-2



Nominal Size in.	Dimensions				Ordering Code
	A in.	A mm	B in.	B mm	
1/4"	0.187	4.7	0.984	24.9	ABB-TEG16A6L.25-..
3/8"	0.187	4.7	0.984	24.9	ABB-TEG16A6L.375-..
1/2"	0.187	4.7	0.984	24.9	ABB-TEG16A6L.5-..
3/4"	0.187	4.7	0.984	24.9	ABB-TEG16A6L.75-..
1"(Type A)	0.250	6.4	1.339	34.0	ABB-TEG16A6L1.0-A..
1"	0.250	6.4	1.984	50.3	ABB-TEG16A6L1.0-..
1-1/2"	0.250	6.4	1.984	50.3	ABB-TEG16A6L1.5-..
2"	0.250	6.4	2.516	63.9	ABB-TEG16A6L2.0-..
2-1/2"	0.250	6.4	3.047	77.3	ABB-TEG16A6L2.5-..
3"	0.250	6.4	3.579	90.9	ABB-TEG16A6L3.0-..
4"	0.312	7.9	4.682	118.9	ABB-TEG16A6L4.0-..
6"	0.437	11.1	6.570	166.8	ABB-TEG16A6L6.0-..

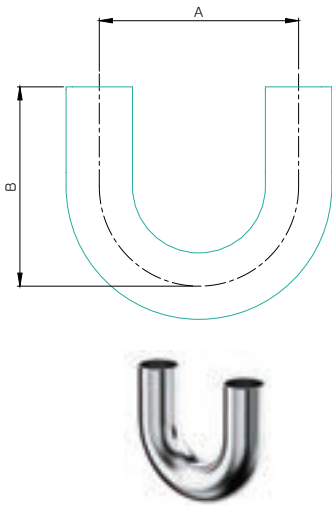


# Bends

# BENDS

## ABB-TE2UBWW- 180° Return Bend

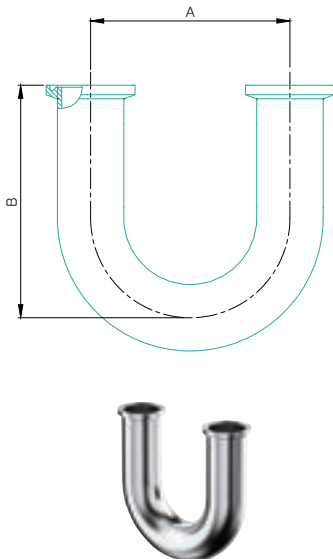
BPE TABLE #DT-4.1.1-7



Nominal Size in.	Dimensions					Ordering Code
	mm	A in.	A mm	B in.	B mm	
1/4"	6.35	4.500	114.30	2.625	66.68	ABB-TE2UBWW6L.25-..
3/8"	9.53	4.500	114.30	2.625	66.68	ABB-TE2UBWW6L.375-..
1/2"	12.70	4.500	114.30	3.000	76.20	ABB-TE2UBWW6L.5-..
3/4"	19.05	4.500	114.30	3.000	76.20	ABB-TE2UBWW6L.75-..
1"	25.40	3.000	76.20	3.000	76.20	ABB-TE2UBWW6L1.0-..
1-1/2"	38.10	4.500	114.30	4.500	114.30	ABB-TE2UBWW6L1.5-..
2"	50.80	6.000	152.40	5.000	127.00	ABB-TE2UBWW6L2.0-..
3"	63.50	7.500	190.50	5.750	146.05	ABB-TE2UBWW6L3.0-..
4"	76.20	9.000	228.60	6.500	165.10	ABB-TE2UBWW6L4.0-
6"	101.60	12.000	304.80	8.500	215.90	ABB-TE2UBWW6L6.0-..

## ABB-TEG2UBWC- 180° Return Bend TWO END

BPE TABLE #DT-4.1.1-8



Nominal Size in.	Dimensions					Ordering Code
	mm	A in.	A mm	B in.	B mm	
1/4"	6.35	4.500	114.30	3.125	79.38	ABB-TEG2UBWC6L.25-..
3/8"	9.53	4.500	114.30	3.125	79.38	ABB-TEG2UBWC6L.375-..
1/2"	12.70	4.500	114.30	3.500	88.90	ABB-TEG2UBWC6L.5-..
3/4"	19.05	4.500	114.30	3.500	88.90	ABB-TEG2UBWC6L.75-..
1"	25.40	3.000	76.20	3.500	88.90	ABB-TEG2UBWC6L1.0-..
1-1/2"	38.10	4.500	114.30	5.000	127.00	ABB-TEG2UBWC6L1.5-..
2"	50.80	6.000	152.40	5.500	139.70	ABB-TEG2UBWC6L2.0-..
3"	63.50	7.500	190.50	6.250	158.75	ABB-TEG2UBWC6L3.0-..
4"	76.20	9.000	228.60	7.000	177.80	ABB-TEG2UBWC6L4.0-..
6"	101.60	12.000	304.80	9.125	231.78	ABB-TEG2UBWC6L6.0-..



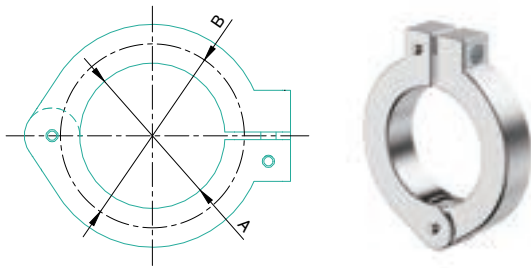


# Clamps



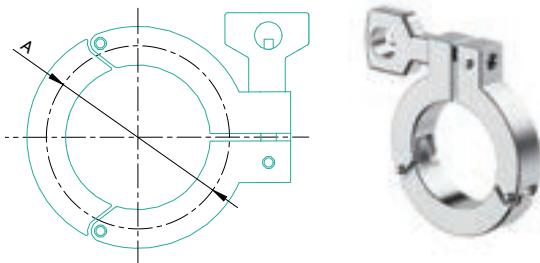
# CLAMP

## ABC-HDCW-SINGLE PIN HEAVY DUTY CLAMP



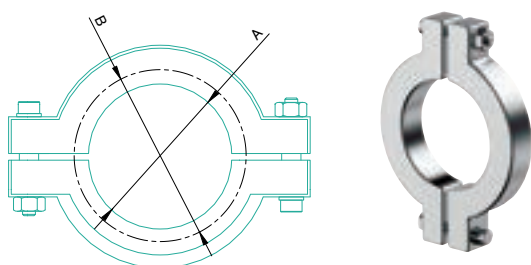
Nominal Size in.	Dimensions		Ordering Code
	A mm	B mm	
1/2"-3/4"	20.00	28.20	ABC-HDCW075-..
1"-1-1/2"	44.40	53.60	ABC-HDCW150-..
2"	57.80	67.00	ABC-HDCW200-..
2-1/2"	71.40	80.60	ABC-HDCW250-..
3"	84.00	94.20	ABC-HDCW300-..
4"	110.00	122.20	ABC-HDCW400-..
6"	155.40	170.40	ABC-HDCW600-..
8"	205.00	220.00	ABC-HDCW800-..
10"	286.00	271.00	ABC-HDCW1000-..
12"	337.00	322.00	ABC-HDCW1200-..

## ABC-THDC-THREE PIECE HEAVY DUTY CLAMP



Nominal Size in.	Dimensions		Ordering Code
	A in.	A mm	
1"-1-1/2"	2.122	54.00	ABC-THDC150-..
2"	2.654	64.50	ABC-THDC200-..
2-1/2"	3.185	80.90	ABC-THDC250-..
3"	3.717	84.40	ABC-THDC300-..
4"	4.820	122.40	ABC-THDC400-..

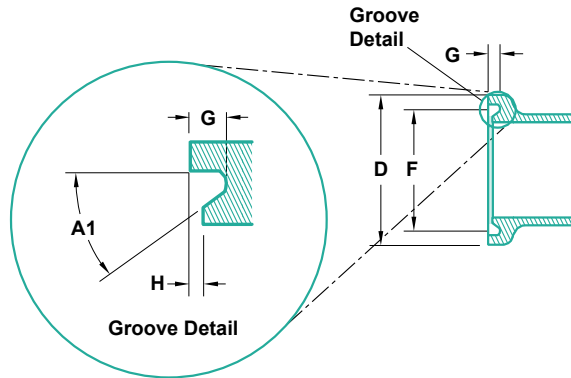
## ABC-HPC-HIGH PRESSURE CLAMP



Nominal Size in.	Dimensions		Ordering Code
	A mm	B mm	
1/2"-3/4"	20.00	28.20	ABC-HPC075-..
1"-1-1/2"	43.32	52.00	ABC-HPC150-..
2"	56.44	65.50	ABC-HPC200-..
2-1/2"	69.54	79.00	ABC-HPC250-..
3"	77.56	92.50	ABC-HPC300-..
4"	108.86	120.50	ABC-HPC400-..
6"	158.00	170.00	ABC-HPC600-..
8"	222.50	237.50	ABC-HPC800-..
10"	258.20	272.80	ABC-HPC1000-..
12"	309.00	327.60	ABC-HPC1200-..

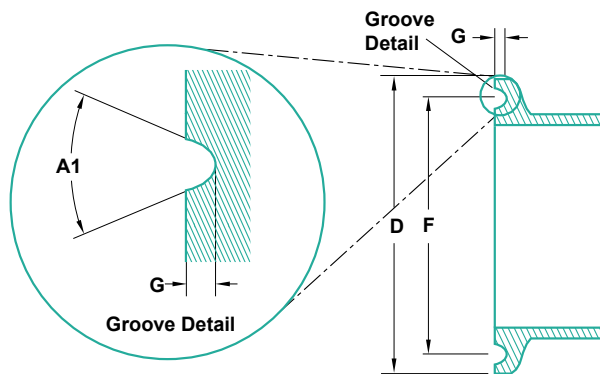
# Technical Information

## Type A



Nominal Size in.		Dimensions								
in.	mm	D in.	D mm	F in.	F mm	G in.	G mm	H in.	H mm	Groove Detail A1
1/4"	6.350	0.98	25	0.80	20.32	0.085	2.16	0.031	0.79	35
3/8"	9.530	0.98	25	0.80	20.32	0.085	2.16	0.031	0.79	35
1/2"	12.700	0.98	25	0.80	20.32	0.085	2.16	0.031	0.79	35
3/4"	19.050	0.98	25	0.80	20.32	0.085	2.16	0.031	0.79	35
1"	25.400	1.34	34	1.16	29.46	0.085	2.16	0.031	0.79	35

## Type B



Nominal Size in.		Dimensions							Groove Detail A1
in.	mm	D in.	D mm	F in.	F mm	G in.	G mm		
1"	25.4	1.984	50.39	1.718	43.64	0.063	1.60	46	
1-1/2"	38.1	1.984	50.39	1.718	43.64	0.063	1.60	46	
2"	50.8	2.516	63.91	2.218	56.34	0.063	1.60	46	
2-1/2"	63.5	3.047	77.39	2.781	70.64	0.063	1.60	46	
3"	76.2	3.579	90.91	3.281	83.34	0.063	1.60	46	
4"	101.6	4.682	118.92	4.344	110.34	0.063	1.60	46	
6"	152.4	6.570	166.88	6.176	156.87	0.063	1.60	46	



BPE

# CERTIFICATE OF AUTHORIZATION

The named company is authorized by the American Society of Mechanical Engineers (ASME) for the scope shown below in accordance with the applicable rules of the ASME BPE Standard on Bioprocessing Equipment. The use of the certification mark and the authority granted by this Certificate of Authorization are subject to the provisions of the agreement set forth in the application. Any component certified under this authorization shall have been produced, assembled, and tested in accordance with the provisions of the aforementioned ASME standard.

The American Society of Mechanical Engineers

COMPANY:

**ASFLOW CO., LTD.**  
797-13, Seobong-ro  
Jeongnam-myeon  
Hwaseong-si, Gyeonggi-do 18522  
Republic of Korea

SCOPE:

**Manufacture of ferrous tubing (excluding circumferential welds) and fittings, at the above location only**

AUTHORIZED: **January 9, 2017**

EXPIRES: **January 9, 2022**

CERTIFICATE NUMBER: **BPE-108**

*Richard Robertson*  
Vice President, Conformity Assessment

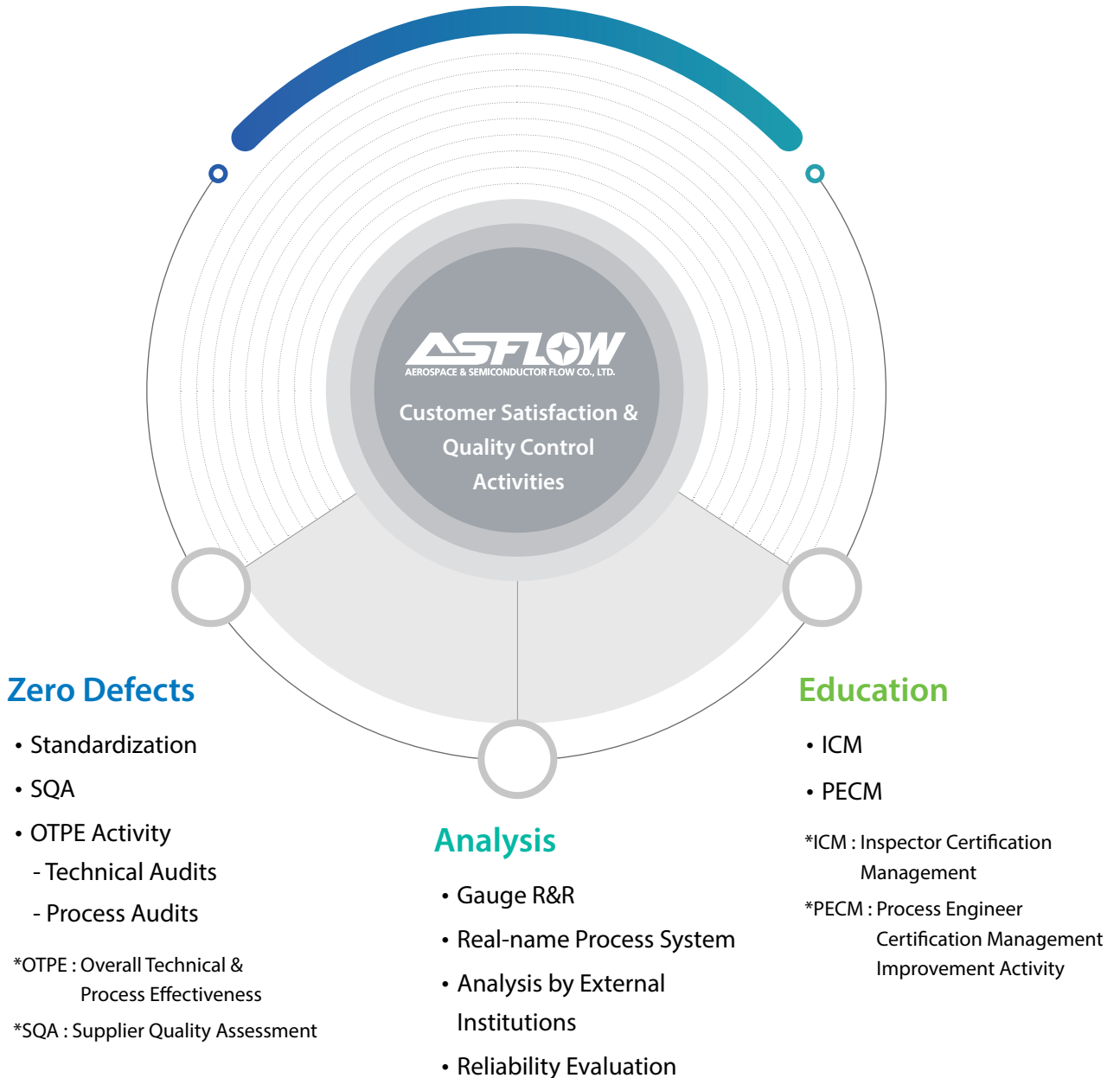
*Joseph ...*  
Director, Conformity Assessment





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ASFLOW, a 100% Korean company, is exerting the utmost effort for “Delivery, Cost and Quality” improvement to achieve customer satisfaction based on its independently developed technologies.





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Tailor-made realizations designed for your process.

- ▶ Sizes 1/2" – 12" Tube OD
- ▶ Finishes Unpolished – 10Ra Max.

ASFLOW Products have extensive capabilities to manufacture unique products with "tailor-made" design and specifications. We have dedicated production cells and people with years of experience to ensure your specifications are met.

In today's complex market we have the versatility and knowledge to manufacture specialty products to use in markets ranging from industrial to high purity.

- 
- Drilling
  - Milling
  - Cutting
  - Bending (standard radius) unique tangents and configurations
  - Welding
  - Polishing - Manual handcrafted or Automatic
  - Electropolishing
  - Passivation
  - Marking
- 

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