



# BioPharmaceutical Fittings (BPE) Catalogue

*Uncommon Excellence*

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## BioPharmaceutical Fittings (BPE)

### Applications

- BioPharmaceutical fittings are used for the transport of liquid media in the biotechnology, cosmetic and pharmaceutical industries.

### PL Finish - SF1

- OD = .812 - mechanically polished
- ID = .508 - mechanically polished

### PM Finish - SF4

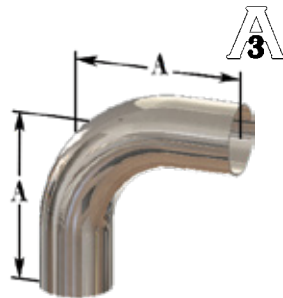
- OD = .812 - mechanically polished
- ID = .381 - mechanically & electropolished

### Mechanically Polished

- This is the process of smoothing a surface using mechanical tools and abrasives, performed in steps with progressively finer abrasives until the designed smoothness is achieved.

### Electropolished

- This is the electrochemical process that removes material from the metal, lowering the difference between the peaks, and valleys, and creating an extremely smooth, mirror-like surface. The part is immersed in an acid-based bath and subjected to a direct electrical current.

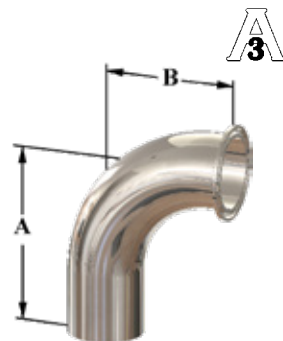


DT-4.1.1-1 (#DT-7)  
ASME BPE 2019

Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF1	PM Finish - SF4	mm
12.7	½	T2S-050PL	T2S-050PM	76.2
19.05	¾	T2S-075PL	T2S-075PM	76.2
25.4	1	T2S-100PL	T2S-100PM	76.2
38.1	1½	T2S-150PL	T2S-150PM	95.3
50.8	2	T2S-200PL	T2S-200PM	120.7
63.5	2½	T2S-250PL	T2S-250PM	139.7
76.2	3	T2S-300PL	T2S-300PM	158.8
101.6	4	T2S-400PL	T2S-400PM	203.2
152.4	6	T2S-600PL	T2S-600PM	292.1

Product Group: AV14

## 90° Clamp x Weld Elbows



DT-4.1.1-2 (#DT-12)  
ASME BPE 2019

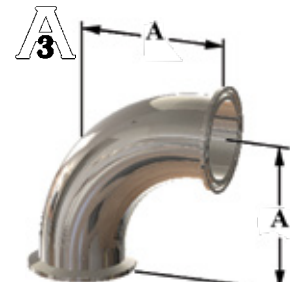
Tube OD Size		Part Numbers		Dimensions	
mm	inch	PL Finish - SF1	PM Finish - SF4	A (mm)	B (mm)
12.7	½	T2CM-050PL	T2CM-050PM	76.2	41.3
19.05	¾	T2CM-075PL	T2CM-075PM	76.2	41.3
25.4	1	T2CM-100PL	T2CM-100PM	76.2	50.8
38.1	1½	T2CM-150PL	T2CM-150PM	95.3	69.9
50.8	2	T2CM-200PL	T2CM-200PM	120.7	88.9
63.5	2½	T2CM-250PL	T2CM-250PM	139.7	108.0
76.2	3	T2CM-300PL	T2CM-300PM	158.8	127.0
101.6	4	T2CM-400PL	T2CM-400PM	203.2	168.3
152.4	6	T2CM-600PL	T2CM-600PM	292.1	266.7

Product Group: AV14

## 90° Clamp x Clamp Elbows

Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF1	PM Finish - SF4	mm
12.7	½	T2CMP-050PL	T2CMP-050PM	41.3
19.05	¾	T2CMP-075PL	T2CMP-075PM	41.3
25.4	1	T2CMP-100PL	T2CMP-100PM	50.8
38.1	1½	T2CMP-150PL	T2CMP-150PM	69.9
50.8	2	T2CMP-200PL	T2CMP-200PM	88.9
63.5	2½	T2CMP-250PL	T2CMP-250PM	108.0
76.2	3	T2CMP-300PL	T2CMP-300PM	127.0
101.6	4	T2CMP-400PL	T2CMP-400PM	168.3
152.4	6	T2CMP-600PL	T2CMP-600PM	266.7

Product Group: AV14

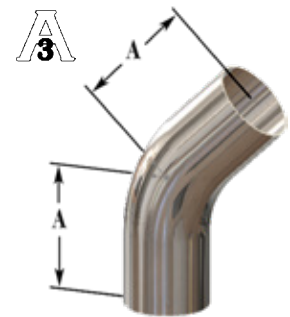


DT-4.1.1-3 (#DT-16)  
ASME BPE 2019

## 45° Weld Elbows

Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF1	PM Finish - SF4	mm
12.7	½	T2KS-050PL	T2KS-050PM	57.2
19.05	¾	T2KS-075PL	T2KS-075PM	57.2
25.4	1	T2KS-100PL	T2KS-100PM	57.2
38.1	1½	T2KS-150PL	T2KS-150PM	63.5
50.8	2	T2KS-200PL	T2KS-200PM	76.2
63.5	2½	T2KS-250PL	T2KS-250PM	85.7
76.2	3	T2KS-300PL	T2KS-300PM	92.1
101.6	4	T2KS-400PL	T2KS-400PM	114.3
152.4	6	T2KS-600PL	T2KS-600PM	158.8

Product Group: AV14

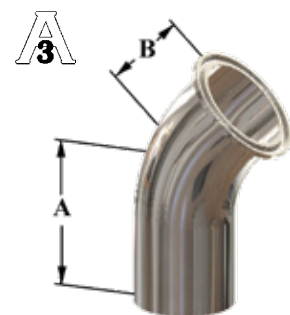


DT-4.1.1-4 (#DT-8)  
ASME BPE 2019

## 45° Clamp x Weld Elbows

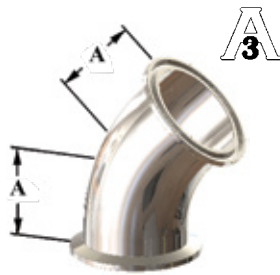
Tube OD Size		Part Numbers		Dimensions	
mm	inch	PL Finish - SF1	PM Finish - SF4	A (mm)	B (mm)
12.7	½	T2KM-050PL	T2KM-050PM	57.2	25.4
19.05	¾	T2KM-075PL	T2KM-075PM	57.2	25.4
25.4	1	T2KM-100PL	T2KM-100PM	57.2	28.6
38.1	1½	T2KM-150PL	T2KM-150PM	63.5	36.5
50.8	2	T2KM-200PL	T2KM-200PM	76.2	44.5
63.5	2½	T2KM-250PL	T2KM-250PM	85.7	52.4
76.2	3	T2KM-300PL	T2KM-300PM	92.1	60.3
101.6	4	T2KM-400PL	T2KM-400PM	114.3	79.4
152.4	6	T2KM-600PL	T2KM-600PM	158.8	133.4

Product Group: AV14



DT-4.1.1-5 (#DT-13)  
ASME BPE 2019

## 45° Clamp x Clamp Elbows

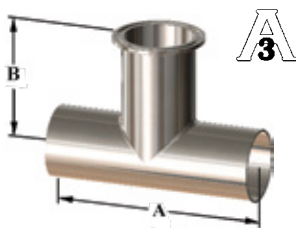


DT-4.1.1-6 (#DT-17)  
ASME BPE 2019

Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF1	PM Finish - SF4	mm
12.7	½	T2KMP-050PL	T2KMP-050PM	25.4
19.05	¾	T2KMP-075PL	T2KMP-075PM	25.4
25.4	1	T2KMP-100PL	T2KMP-100PM	28.6
38.1	1½	T2KMP-150PL	T2KMP-150PM	36.5
50.8	2	T2KMP-200PL	T2KMP-200PM	44.5
63.5	2½	T2KMP-250PL	T2KMP-250PM	52.4
76.2	3	T2KMP-300PL	T2KMP-300PM	60.3
101.6	4	T2KMP-400PL	T2KMP-400PM	79.4
152.4	6	T2KMP-600PL	T2KMP-600PM	133.4

Product Group: AV14

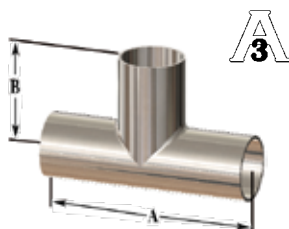
## Weld x Weld x Clamp Tees



Tube OD Size		Part Numbers		Dimensions	
mm	inch	PL Finish - SF1	PM Finish - SF4	A (mm)	B (mm)
12.7	½	T7WWM-050PL	T7WWM-050PM	95.20	57.2
19.05	¾	T7WWM-075PL	T7WWM-075PM	101.6	60.325
25.4	1	T7WWM-100PL	T7WWM-100PM	108.0	66.675
38.1	1½	T7WWM-150PL	T7WWM-150PM	120.6	73.025
50.8	2	T7WWM-200PL	T7WWM-200PM	146.0	85.725
63.5	2½	T7WWM-250PL	T7WWM-250PM	158.8	92.075
76.2	3	T7WWM-300PL	T7WWM-300PM	171.4	98.42
101.6	4	T7WWM-400PL	T7WWM-400PM	209.6	120.65
152.4	6	T7WWM-600PL	T7WWM-600PM	285.8	180.975

Product Group: AV14

## Weld x Weld x Weld Tees



DT-4.1.2-1 (#DT-9)  
ASME BPE 2019

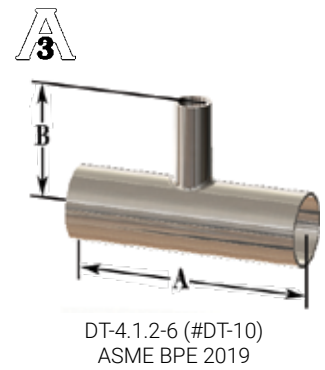
Tube OD Size		Part Numbers		Dimensions	
mm	inch	PL Finish - SF1	PM Finish - SF4	A (mm)	B (mm)
12.7	½	T7WWW-050PL	T7WWW-050PM	95.2	47.6
19.05	¾	T7WWW-075PL	T7WWW-075PM	101.6	50.8
25.4	1	T7WWW-100PL	T7WWW-100PM	108.0	54.0
38.1	1½	T7WWW-150PL	T7WWW-150PM	120.6	60.3
50.8	2	T7WWW-200PL	T7WWW-200PM	146.0	73.0
63.5	2½	T7WWW-250PL	T7WWW-250PM	158.8	79.4
76.2	3	T7WWW-300PL	T7WWW-300PM	171.4	85.7
101.6	4	T7WWW-400PL	T7WWW-400PM	209.6	104.8
152.4	6	T7WWW-600PL	T7WWW-600PM	285.8	142.9

Product Group: AV14

Weld x Weld x Weld Reducing Tees

Tube OD Size		Part Numbers		Dimensions	
mm	inch	PL Finish - SF1	PM Finish - SF4	A (mm)	B (mm)
19.05 x 12.7	¾ x ½	T7RWWW-075050PL	T7RWWW-075050PM	101.6	50.8
25.4 x 12.7	1 x ½	T7RWWW-100050PL	T7RWWW-100050PM	108.0	54
25.4 x 19.05	1 x ¾	T7RWWW-100075PL	T7RWWW-100075PM	108.0	54
38.1 x 12.7	1½ x ½	T7RWWW-150050PL	T7RWWW-150050PM	120.6	60.3
38.1 x 19.05	1½ x ¾	T7RWWW-150075PL	T7RWWW-150075PM	120.6	60.3
38.1 x 25.4	1½ x 1	T7RWWW-150100PL	T7RWWW-150100PM	120.6	60.3
50.8 x 12.7	2 x ½	T7RWWW-200050PL	T7RWWW-200050PM	146.0	66.7
50.8 x 19.05	2 x ¾	T7RWWW-200075PL	T7RWWW-200075PM	146.0	66.7
50.8 x 25.4	2 x 1	T7RWWW-200100PL	T7RWWW-200100PM	146.0	66.7
50.8 x 38.1	2 x 1½	T7RWWW-200150PL	T7RWWW-200150PM	146.0	66.7
63.5 x 19.05	2½ x ¾	T7RWWW-250075PL	T7RWWW-250075PM	158.8	73.0
63.5 x 25.4	2½ x 1	T7RWWW-250100PL	T7RWWW-250100PM	158.8	73.0
63.5 x 38.1	2½ x 1½	T7RWWW-250150PL	T7RWWW-250150PM	158.8	73.0
63.5 x 50.8	2½ x 2	T7RWWW-250200PL	T7RWWW-250200PM	158.8	73.0
76.2 x 12.7	3 x ½	T7RWWW-300075PL	T7RWWW-300075PM	171.4	79.4
76.2 x 19.05	3 x ¾	T7RWWW-300075PL	T7RWWW-300075PM	171.4	79.4
76.2 x 25.4	3 x 1	T7RWWW-300100PL	T7RWWW-300100PM	171.4	79.4
76.2 x 38.1	3 x 1½	T7RWWW-300150PL	T7RWWW-300150PM	171.4	79.4
76.2 x 50.8	3 x 2	T7RWWW-300500PL	T7RWWW-300500PM	171.4	79.4
76.2 x 63.5	3 x 2½	T7RWWW-300250PL	T7RWWW-300250PM	171.4	79.4
101.6 x 12.7	4 x ½	T7RWWW-400050PL	T7RWWW-400050PM	209.6	92.1
101.6 x 19.05	4 x ¾	T7RWWW-400075PL	T7RWWW-400075PM	209.6	92.1
101.6 x 25.4	4 x 1	T7RWWW-400100PL	T7RWWW-400100PM	209.6	92.1
101.6 x 38.1	4 x 1½	T7RWWW-400150PL	T7RWWW-400150PM	209.6	92.1
101.6 x 50.8	4 x 2	T7RWWW-400200PL	T7RWWW-400200PM	209.6	98.4
101.6 x 63.5	4 x 2½	T7RWWW-400250PL	T7RWWW-400250PM	209.6	98.4
101.6 x 76.2	4 x 3	T7RWWW-400300PL	T7RWWW-400300PM	209.6	98.4
152.4 x 76.2	6 x 3	T7RWWW-600300PL	T7RWWW-600300PM	285.8	123.8
152.4 x 101.6	6 x 4	T7RWWW-600400PL	T7RWWW-600400PM	285.8	130.2

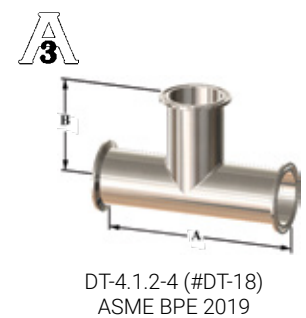
Product Group: AV14



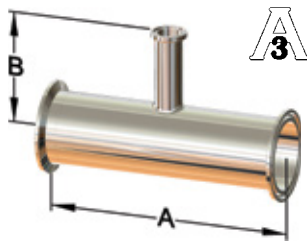
Clamp x Clamp x Clamp Tees

Tube OD Size		Part Numbers		Dimensions	
mm	inch	PL Finish - SF1	PM Finish - SF4	A (mm)	B (mm)
12.7	½	T7MP-050PL	T7MP-050PM	120.6	60.3
19.05	¾	T7MP-075PL	T7MP-075PM	127.0	63.5
25.4	1	T7MP-100PL	T7MP-100PM	133.4	66.7
38.1	1½	T7MP-150PL	T7MP-150PM	146.0	73.0
50.8	2	T7MP-200PL	T7MP-200PM	171.4	85.7
63.5	2½	T7MP-250PL	T7MP-250PM	184.2	92.1
76.2	3	T7MP-300PL	T7MP-300PM	196.8	98.4
101.6	4	T7MP-400PL	T7MP-400PM	241.4	120.7
152.4	6	T7MP-600PL	T7MP-600PM	362.0	181.0

Product Group: AV14



## Clamp x Clamp x Clamp Reducing Tees

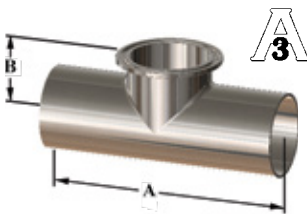


DT-4.1.2-8 (#DT-19)  
ASME BPE 2019

Tube OD Size		Part Numbers		Dimensions	
mm	inch	PL Finish - SF1	PM Finish - SF4	A (mm)	B (mm)
19.05 x 12.7	¾ x ½	T7RMP-075050PL	T7RMP-075050PM	127.0	63.5
25.4 x 12.7	1 x ½	T7RMP-100050PL	T7RMP-100050PM	133.4	66.7
25.4 x 19.05	1 x ¾	T7RMP-100075PL	T7RMP-100075PM	133.4	66.7
38.1 x 12.7	1½ x ½	T7RMP-150050PL	T7RMP-150050PM	146.0	73.0
38.1 x 19.05	1½ x ¾	T7RMP-150075PL	T7RMP-150075PM	146.0	73.0
38.1 x 25.4	1½ x 1	T7RMP-150100PL	T7RMP-150100PM	146.0	73.0
50.8 x 12.7	2 x ½	T7RMP-200050PL	T7RMP-200050PM	171.4	79.4
50.8 x 19.05	2 x ¾	T7RMP-200075PL	T7RMP-200075PM	171.4	79.4
50.8 x 25.4	2 x 1	T7RMP-200100PL	T7RMP-200100PM	171.4	79.4
50.8 x 38.1	2 x 1½	T7RMP-200150PL	T7RMP-200150PM	171.4	79.4
63.5 x 19.05	2½ x ¾	T7RMP-250075PL	T7RMP-250075PM	184.2	85.7
63.5 x 25.4	2½ x 1	T7RMP-250100PL	T7RMP-250100PM	184.2	85.7
63.5 x 38.1	2½ x 1½	T7RMP-250150PL	T7RMP-250150PM	184.2	85.7
63.5 x 50.8	2½ x 2	T7RMP-250200PL	T7RMP-250200PM	184.2	85.7
76.2 x 12.7	3 x ½	T7RMP-300075PL	T7RMP-300050PM	196.8	92.1
76.2 x 19.05	3 x ¾	T7RMP-300075PL	T7RMP-300075PM	196.8	92.1
76.2 x 25.4	3 x 1	T7RMP-300100PL	T7RMP-300100PM	196.8	92.1
76.2 x 38.1	3 x 1½	T7RMP-300150PL	T7RMP-300150PM	196.8	92.1
76.2 x 50.8	3 x 2	T7RMP-300500PL	T7RMP-300500PM	196.8	92.1
76.2 x 63.5	3 x 2½	T7RMP-300250PL	T7RMP-300250PM	196.8	92.1
101.6 x 12.7	4 x ½	T7RMP-400050PL	T7RMP-400050PM	241.4	104.8
101.6 x 19.05	4 x ¾	T7RMP-400075PL	T7RMP-400075PM	241.4	104.8
101.6 x 25.4	4 x 1	T7RMP-400100PL	T7RMP-400100PM	241.4	104.8
101.6 x 38.1	4 x 1½	T7RMP-400150PL	T7RMP-400150PM	241.4	104.8
101.6 x 50.8	4 x 2	T7RMP-400200PL	T7RMP-400200PM	241.4	111.1
101.6 x 63.5	4 x 2½	T7RMP-400250PL	T7RMP-400250PM	241.4	111.1
101.6 x 76.2	4 x 3	T7RMP-400300PL	T7RMP-400300PM	241.4	111.1
152.4 x 76.2	6 x 3	T7RMP-600300PL	T7RMP-600300PM	362.0	136.5
152.4 x 101.6	6 x 4	T7RMP-600400PL	T7RMP-600400PM	362.0	146.1

Product Group: AV14

## Weld x Weld x Clamp Short Outlet Tees



DT-4.1.2-2 (#DT-15)  
ASME BPE 2019

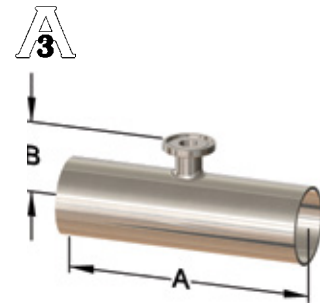
Tube OD Size		Part Numbers		Dimensions	
mm	inch	PL Finish - SF1	PM Finish - SF4	A (mm)	B (mm)
12.7	½	T7WWMS-050PL	T7WWMS-050PM	95.2	25.4
19.05	¾	T7WWMS-075PL	T7WWMS-075PM	101.6	28.6
25.4	1	T7WWMS-100PL	T7WWMS-100PM	108.0	28.6
38.1	1½	T7WWMS-150PL	T7WWMS-150PM	120.6	34.9
50.8	2	T7WWMS-200PL	T7WWMS-200PM	146.0	41.3
63.5	2½	T7WWMS-250PL	T7WWMS-250PM	158.8	47.6
76.2	3	T7WWMS-300PL	T7WWMS-300PM	171.4	54.0
101.6	4	T7WWMS-400PL	T7WWMS-400PM	209.6	69.9
152.4	6	T7WWMS-600PL	T7WWMS-600PM	285.8	117.5

Product Group: AV14

Weld x Weld x Clamp Short Outlet Reducing Tees

Tube OD Size		Part Numbers		Dimensions	
mm	inch	PL Finish - SF1	PM Finish - SF4	A (mm)	B (mm)
19.05 x 12.7	¾ x ½	T7RWWMS-075050PL	T7RWWMS-075050PM	101.6	25.4
25.4 x 12.7	1 x ½	T7RWWMS-100050PL	T7RWWMS-100050PM	108.0	28.6
25.4 x 19.05	1 x ¾	T7RWWMS-100075PL	T7RWWMS-100075PM	108.0	28.6
38.1 x 12.7	1½ x ½	T7RWWMS-150050PL	T7RWWMS-150050PM	120.6	34.9
38.1 x 19.05	1½ x ¾	T7RWWMS-150075PL	T7RWWMS-150075PM	120.6	34.9
38.1 x 25.4	1½ x 1	T7RWWMS-150100PL	T7RWWMS-150100PM	120.6	34.9
50.8 x 12.7	2 x ½	T7RWWMS-200050PL	T7RWWMS-200050PM	146.0	41.3
50.8 x 19.05	2 x ¾	T7RWWMS-200075PL	T7RWWMS-200075PM	146.0	41.3
50.8 x 25.4	2 x 1	T7RWWMS-200100PL	T7RWWMS-200100PM	146.0	41.3
50.8 x 38.1	2 x 1½	T7RWWMS-200150PL	T7RWWMS-200150PM	146.0	41.3
63.5 x 19.05	2½ x ¾	T7RWWMS-250075PL	T7RWWMS-250075PM	158.8	47.6
63.5 x 25.4	2½ x 1	T7RWWMS-250100PL	T7RWWMS-250100PM	158.8	47.6
63.5 x 38.1	2½ x 1½	T7RWWMS-250150PL	T7RWWMS-250150PM	158.8	47.6
63.5 x 50.8	2½ x 2	T7RWWMS-250200PL	T7RWWMS-250200PM	158.8	47.6
76.2 x 12.7	3 x ½	T7RWWMS-300050PL	T7RWWMS-300050PM	171.4	54.0
76.2 x 19.05	3 x ¾	T7RWWMS-300075PL	T7RWWMS-300075PM	171.4	54.0
76.2 x 25.4	3 x 1	T7RWWMS-300100PL	T7RWWMS-300100PM	171.4	54.0
76.2 x 38.1	3 x 1½	T7RWWMS-300150PL	T7RWWMS-300150PM	171.4	54.0
76.2 x 50.8	3 x 2	T7RWWMS-300200PL	T7RWWMS-300200PM	171.4	54.0
76.2 x 63.5	3 x 2½	T7RWWMS-300250PL	T7RWWMS-300250PM	171.4	54.0
101.6 x 12.7	4 x ½	T7RWWMS-400050PL	T7RWWMS-400050PM	209.6	66.7
101.6 x 19.05	4 x ¾	T7RWWMS-400075PL	T7RWWMS-400075PM	209.6	66.7
101.6 x 25.4	4 x 1	T7RWWMS-400100PL	T7RWWMS-400100PM	209.6	66.7
101.6 x 38.1	4 x 1½	T7RWWMS-400150PL	T7RWWMS-400150PM	209.6	66.7
101.6 x 50.8	4 x 2	T7RWWMS-400200PL	T7RWWMS-400200PM	209.6	66.7
101.6 x 63.5	4 x 2½	T7RWWMS-400250PL	T7RWWMS-400250PM	209.6	66.7
101.6 x 76.2	4 x 3	T7RWWMS-400300PL	T7RWWMS-400300PM	209.6	66.7
152.4 x 76.2	6 x 3	T7RWWMS-600300PL	T7RWWMS-600300PM	285.8	92.1
152.4 x 101.6	6 x 4	T7RWWMS-600400PL	T7RWWMS-600400PM	285.8	95.3

Product Group: AV14

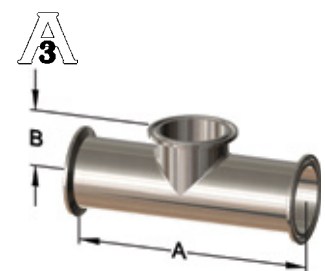


DT-4.1.2-7 (#DT-14)  
ASME BPE 2019

Clamp x Clamp x Clamp Short Outlet Tees

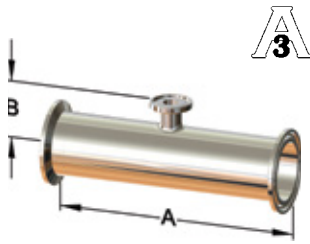
Tube OD Size		Part Numbers		Dimensions	
mm	inch	PL Finish - SF1	PM Finish - SF4	A (mm)	B (mm)
12.7	½	T7MPS-050PL	T7MPS-050PM	120.6	25.4
19.05	¾	T7MPS-075PL	T7MPS-075PM	127.0	28.6
25.4	1	T7MPS-100PL	T7MPS-100PM	133.4	28.6
38.1	1½	T7MPS-150PL	T7MPS-150PM	146.0	34.9
50.8	2	T7MPS-200PL	T7MPS-200PM	171.4	41.3
63.5	2½	T7MPS-250PL	T7MPS-250PM	184.2	47.6
76.2	3	T7MPS-300PL	T7MPS-300PM	196.8	54.0
101.6	4	T7MPS-400PL	T7MPS-400PM	241.4	69.9
152.4	6	T7MPS-600PL	T7MPS-600PM	362.0	117.5

Product Group: AV14



DT-4.1.2-5 (#DT-27)  
ASME BPE 2019

## Clamp x Clamp x Clamp Short Outlet Reducing Tees

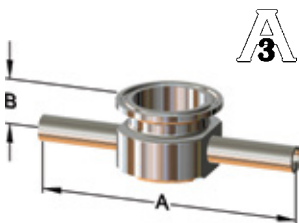


DT-4.1.2-9 (#DT-20)  
ASME BPE 2019

Tube OD Size		Part Numbers		Dimensions	
				A (mm)	B (mm)
mm	inch	PL Finish - SF1	PM Finish - SF4		
19.05 x 12.7	¾ x ½	T7RMPS-075050PL	T7RMPS-075050PM	127.0	25.4
25.4 x 12.7	1 x ½	T7RMPS-100050PL	T7RMPS-100050PM	133.4	28.6
25.4 x 19.05	1 x ¾	T7RMPS-100075PL	T7RMPS-100075PM	133.4	28.6
38.1 x 12.7	1½ x ½	T7RMPS-150050PL	T7RMPS-150050PM	146.0	34.9
38.1 x 19.05	1½ x ¾	T7RMPS-150075PL	T7RMPS-150075PM	146.0	34.9
38.1 x 25.4	1½ x 1	T7RMPS-150100P	T7RMPS-150100PM	146.0	34.9
50.8 x 12.7	2 x ½	T7RMPS-200050PL	T7RMPS-200050PM	171.4	41.3
50.8 x 19.05	2 x ¾	T7RMPS-200075PL	T7RMPS-200075PM	171.4	41.3
50.8 x 25.4	2 x 1	T7RMPS-200100PL	T7RMPS-200100PM	171.4	41.3
50.8 x 38.1	2 x 1½	T7RMPS-200150PL	T7RMPS-200150PM	171.4	41.3
63.5 x 19.05	2½ x ¾	T7RMPS-250075PL	T7RMPS-250075PM	184.2	47.6
63.5 x 25.4	2½ x 1	T7RMPS-250100PL	T7RMPS-250100PM	184.2	47.6
63.5 x 38.1	2½ x 1½	T7RMPS-250150PL	T7RMPS-250150PM	184.2	47.6
63.5 x 50.8	2½ x 2	T7RMPS-250200PL	T7RMPS-250200PM	184.2	47.6
76.2 x 12.7	3 x ½	T7RMPS-300050PL	T7RMPS-300050PM	196.8	54.0
76.2 x 19.05	3 x ¾	T7RMPS-300075PL	T7RMPS-300075PM	196.8	54.0
76.2 x 25.4	3 x 1	T7RMPS-300100PL	T7RMPS-300100PM	196.8	54.0
76.2 x 38.1	3 x 1½	T7RMPS-300150PL	T7RMPS-300150PM	196.8	54.0
76.2 x 50.8	3 x 2	T7RMPS-300200PL	T7RMPS-300200PM	196.8	54.0
76.2 x 63.5	3 x 2½	T7RMPS-300250PL	T7RMPS-300250PM	196.8	54.0
101.6 x 12.7	4 x ½	T7RMPS-400050PL	T7RMPS-400050PM	241.4	66.7
101.6 x 19.05	4 x ¾	T7RMPS-400075PL	T7RMPS-400075PM	241.4	66.7
101.6 x 25.4	4 x 1	T7RMPS-400100PL	T7RMPS-400100PM	241.4	66.7
101.6 x 38.1	4 x 1½	T7RMPS-400150PL	T7RMPS-400150PM	241.4	66.7
101.6 x 50.8	4 x 2	T7RMPS-400200PL	T7RMPS-400200PM	241.4	66.7
101.6 x 63.5	4 x 2½	T7RMPS-400250PL	T7RMPS-400250PM	241.4	66.7
101.6 x 76.2	4 x 3	T7RMPS-400300PL	T7RMPS-400300PM	241.4	66.7
152.4 x 76.2	6 x 3	T7RMPS-600300PL	T7RMPS-600300PM	362.0	92.1
152.4 x 101.6	6 x 4	T7RMPS-600400PL	T7RMPS-600400PM	362.0	95.3

Product Group: AV14

## Weld x Weld x Clamp Instrument Tees



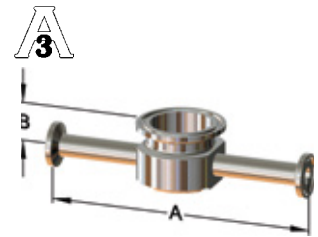
DT-4.1.2-10 (#DT-28)  
ASME BPE 2019

Tube OD Size		Part Numbers		Dimensions	
				A (mm)	B (mm)
mm	inch	PL Finish - SF1	PM Finish - SF4		
12.7 x 38.1	½ x 1½	T7IWWMS050150PL	T7IWWMS050150PM	127.0	22.2
19.05 x 38.1	¾ x 1½	T7IWWMS075150PL	T7IWWMS075150PM	127.0	25.4
25.4 x 38.1	1 x 1½	T7IWWMS100150PL	T7IWWMS100150PM	127.0	28.6
12.7 x 50.8	½ x 2	T7IWWMS050200PL	T7IWWMS050200PM	139.8	25.4
19.05 x 50.8	¾ x 2	T7IWWMS075200PL	T7IWWMS075200PM	139.8	28.6
25.4 x 50.8	1 x 2	T7IWWMS100200PL	T7IWWMS100200PM	139.8	31.8
38.1 x 50.8	1½ x 2	T7IWWMS150200PL	T7IWWMS150200PM	139.8	38.1

Product Group: AV14

## Clamp x Clamp x Clamp Instrument Tees

Tube OD Size		Part Numbers		Dimensions	
mm	inch	PL Finish - SF1	PM Finish - SF4	A (mm)	B (mm)
12.7 x 38.1	½ x 1½	T7IMPS-050150PL	T7IMPS-050150PM	152.4	22.2
19.05 x 38.1	¾ x 1½	T7IMPS-075150PL	T7IMPS-075150PM	152.4	25.4
25.4 x 38.1	1 x 1½	T7IMPS-100150PL	T7IMPS-100150PM	152.4	28.6
12.7 x 50.8	½ x 2	T7IMPS-050200PL	T7IMPS-050200PM	165.2	25.4
19.05 x 50.8	¾ x 2	T7IMPS-075200PL	T7IMPS-075200PM	165.2	28.6
25.4 x 50.8	1 x 2	T7IMPS-100200PL	T7IMPS-100200PM	165.2	31.8
38.1 x 50.8	1½ x 2	T7IMPS-150200PL	T7IMPS-150200PM	165.2	38.1

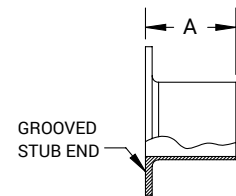


DT-4.1.211 (#DT-29)  
ASME BPE 2019

Product Group: AV14

## Stub Adaptors

Tube OD Size		Part Numbers	Dimension (A)
mm	inch	PL Finish - SF1	mm
12.7	½	T14VB-050PL	50.8
19.05	¾	T14VB-075PL	50.8
25.4	1	T14VB-100PL	50.8
38.1	1½	T14VB-150PL	50.8
50.8	2	T14VB-200PL	63.5
63.5	2½	T14VB-250PL	63.5
76.2	3	T14VB-300PL	63.5
101.6	4	T14VB-400PL	63.5
152.4	6	T14VB-600PL	76.2

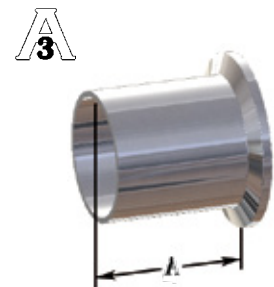


GROOVED  
STUB END

Product Group: AV14

## Automatic Weld Ferrules

Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF1	PM Finish - SF4	mm
12.7	½	TL14AM7-050PL	TL14AM7-050PM	44.45
19.05	¾	TL14AM7-075PL	TL14AM7-075PM	44.45
25.4	1	TL14AM7-100PL	TL14AM7-100PM	44.45
38.1	1½	TL14AM7-150PL	TL14AM7-150PM	44.45
50.8	2	TL14AM7-200PL	TL14AM7-200PM	57.15
63.5	2½	TL14AM7-250PL	TL14AM7-250PM	57.15
76.2	3	TL14AM7-300PL	TL14AM7-300PM	57.15
101.6	4	TL14AM7-400PL	TL14AM7-400PM	57.15
152.4	6	TL14AM7-600PL	TL14AM7-600PM	76.20



DT-4.1.4-1 (#DT-22)  
ASME BPE 2019

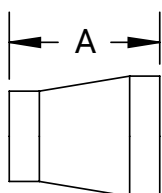
• Short and medium (Type A & B) also available

Product Group: AV14

## Weld x Weld Concentric Reducers



(#DT-4.1.3-1)  
ASME BPE 2019



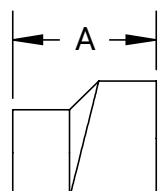
Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF1	PM Finish - SF4	mm
19.05 x 12.7	¾ x ½	2211CBB075050F1	2211CBB075050F4	54.1
25.4 x 12.7	1 x ½	2211CBB100050F1	2211CBB100050F4	63.5
25.4 x 19.05	1 x ¾	2211CBB100075F1	2211CBB100075F4	54.1
38.1 x 19.05	1½ x ¾	2211CBB150075F1	2211CBB150075F4	76.2
38.1 x 25.4	1½ x 1	2211CBB150100F1	2211CBB150100F4	63.5
50.8 x 25.4	2 x 1	2211CBB200100F1	2211CBB200100F4	85.85
50.8 x 38.1	2 x 1½	2211CBB200150F1	2211CBB200150F4	63.5
63.5 x 38.1	2½ x 1½	2211CBB250150F1	2211CBB250150F4	85.85
63.5 x 50.8	2½ x 2	2211CBB250200F1	2211CBB250200F4	63.5
76.2 x 38.1	3 x 1½	2211CBB300150F1	2211CBB300150F4	107.95
76.2 x 50.8	3 x 2	2211CBB300200F1	2211CBB300200F4	85.85
76.2 x 63.5	3 x 2½	2211CBB300250F1	2211CBB300250F4	66.8
101.6 x 50.8	4 x 2	2211CBB400200F1	2211CBB400200F4	130.3
101.6 x 63.5	4 x 2½	2211CBB400250F1	2211CBB400250F4	107.95
101.6 x 76.2	4 x 3	2211CBB400300F1	2211CBB400300F4	98.55
152.4 x 76.2	6 x 3	2211CBB600300F1	2211CBB600300F4	184.15
152.4 x 101.6	6 x 4	2211CBB600400F1	2211CBB600400F4	143

Product Group: AV14

## Weld x Weld Eccentric Reducers



(#DT-4.1.3-1)  
ASME BPE 2019



Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF1	PM Finish - SF4	mm
19.05 x 12.7	¾ x ½	2211EBB075050F1	2211EBB075050F4	54.1
25.4 x 12.7	1 x ½	2211EBB100050F1	2211EBB100050F4	63.5
25.4 x 19.05	1 x ¾	2211EBB100075F1	2211EBB100075F4	54.1
38.1 x 19.05	1½ x ¾	2211EBB150075F1	2211EBB150075F4	76.2
38.1 x 25.4	1½ x 1	2211EBB150100F1	2211EBB150100F4	63.5
50.8 x 25.4	2 x 1	2211EBB200100F1	2211EBB200100F4	85.85
50.8 x 38.1	2 x 1½	2211EBB200150F1	2211EBB200150F4	63.5
63.5 x 38.1	2½ x 1½	2211EBB250150F1	2211EBB250150F4	85.85
63.5 x 50.8	2½ x 2	2211EBB250200F1	2211EBB250200F4	63.5
76.2 x 38.1	3 x 1½	2211EBB300150F1	2211EBB300150F4	107.95
76.2 x 50.8	3 x 2	2211EBB300200F1	2211EBB300200F4	85.85
76.2 x 63.5	3 x 2½	2211EBB300250F1	2211EBB300250F4	66.8
101.6 x 50.8	4 x 2	2211EBB400200F1	2211EBB400200F4	130.3
101.6 x 63.5	4 x 2½	2211EBB400250F1	2211EBB400250F4	107.95
101.6 x 76.2	4 x 3	2211EBB400300F1	2211EBB400300F4	98.55
152.4 x 76.2	6 x 3	2211EBB600300F1	2211EBB600300F4	184.15
152.4 x 101.6	6 x 4	2211EBB600400F1	2211EBB600400F4	143

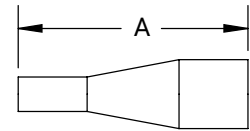
Product Group: AV14

Weld x Weld Concentric Reducers

Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF1	PM Finish - SF4	mm
19.05 x 12.7	¾ x ½	T31W-075050PL	T31W-075050PM	101.60
25.4 x 12.7	1 x ½	T31W-100050PL	T31W-100050PM	114.30
25.4 x 19.05	1 x ¾	T31W-100075PL	T31W-100075PM	101.60
38.1 x 12.7	1½ x ½	T31W-150050PL	T31W-150050PM	139.70
38.1 x 19.05	1½ x ¾	T31W-150075PL	T31W-150075PM	127.00
38.1 x 25.4	1½ x 1	T31W-150100PL	T31W-150100PM	127.00
50.8 x 12.7	2 x ½	T31W-200050PL	T31W-200050PM	196.85
50.8 x 19.05	2 x ¾	T31W-200075PL	T31W-200075PM	184.15
50.8 x 25.4	2 x 1	T31W-200100PL	T31W-200100PM	184.15
50.8 x 38.1	2 x 1½	T31W-200150PL	T31W-200150PM	133.35
63.5 x 12.7	2½ x ½	T31W-250050PL	T31W-250050PM	247.65
63.5 x 19.05	2½ x ¾	T31W-250075PL	T31W-250075PM	234.95
63.5 x 25.4	2½ x 1	T31W-250100PL	T31W-250100PM	234.95
63.5 x 38.1	2½ x 1½	T31W-250150PL	T31W-250150PM	184.15
63.5 x 50.8	2½ x 2	T31W-250200PL	T31W-250200PM	139.70
76.2 x 25.4	3 x 1	T31W-300100PL	T31W-300100PM	184.15
76.2 x 38.1	3 x 1½	T31W-300150PL	T31W-300150PM	139.70
76.2 x 50.8	3 x 2	T31W-300200PL	T31W-300200PM	285.75
76.2 x 63.5	3 x 2½	T31W-300250PL	T31W-300250PM	234.95
101.6 x 12.7	4 x ½	T31W-400050PL	T31W-400050PM	190.50
101.6 x 19.05	4 x ¾	T31W-400075PL	T31W-400075PM	139.70
101.6 x 25.4	4 x 1	T31W-400100PL	T31W-400100PM	393.70
101.6 x 38.1	4 x 1½	T31W-400150PL	T31W-400150PM	342.90
101.6 x 50.8	4 x 2	T31W-400200PL	T31W-400200PM	298.45
101.6 x 63.5	4 x 2½	T31W-400250PL	T31W-400250PM	247.65
101.6 x 76.2	4 x 3	T31W-400300PL	T31W-400300PM	196.85
152.4 x 76.2	6 x 3	T31W-600300PL	T31W-600300PM	254.00
152.4 x 101.6	6 x 4	T31W-600400PL	T31W-600400PM	254.00



DT-4.1.3-1 (#DT-11)  
ASME BPE 2012



Product Group: AV14

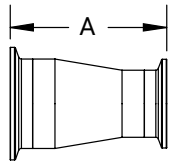
# Leading specialist in BioPharmaceutical products

Supporting the pharmaceutical manufacturing industry with ASME BPE Tube and Fittings.

## Clamp x Clamp Concentric Reducers



(#DT-4.1.3-3)  
ASME BPE 2019



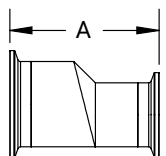
Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF1	PM Finish - SF4	mm
19.05 x 12.7	¾ x ½	2221CBB075050F1	2221CBB075050F4	54.1
25.4 x 12.7	1 x ½	2221CBB100050F1	2221CBB100050F4	63.5
25.4 x 19.05	1 x ¾	2221CBB100075F1	2221CBB100075F4	54.1
38.1 x 19.05	1½ x ¾	2221CBB150075F1	2221CBB150075F4	76.2
38.1 x 25.4	1½ x 1	2221CBB150100F1	2221CBB150100F4	63.5
50.8 x 25.4	2 x 1	2221CBB200100F1	2221CBB200100F4	85.85
50.8 x 38.1	2 x 1½	2221CBB200150F1	2221CBB200150F4	63.5
63.5 x 38.1	2½ x 1½	2221CBB250150F1	2221CBB250150F4	85.85
63.5 x 50.8	2½ x 2	2221CBB250200F1	2221CBB250200F4	63.5
76.2 x 38.1	3 x 1½	2221CBB300150F1	2221CBB300150F4	107.95
76.2 x 50.8	3 x 2	2221CBB300200F1	2221CBB300200F4	85.85
76.2 x 63.5	3 x 2½	2221CBB300250F1	2221CBB300250F4	66.8
101.6 x 50.8	4 x 2	2221CBB400200F1	2221CBB400200F4	130.3
101.6 x 63.5	4 x 2½	2221CBB400250F1	2221CBB400250F4	107.95
101.6 x 76.2	4 x 3	2221CBB400300F1	2221CBB400300F4	98.55
152.4 x 76.2	6 x 3	2221CBB600300F1	2221CBB600300F4	184.15
152.4 x 101.6	6 x 4	2221CBB600400F1	2221CBB600400F4	143

Product Group: AV14

## Clamp x Clamp Eccentric Reducers



(#DT-4.1.3-3)  
ASME BPE 2019



Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF4	PM Finish - SF4	mm
19.05 x 12.7	¾ x ½	2221EBB075050F1	2221EBB075050F4	54.1
25.4 x 12.7	1 x ½	2221EBB100050F1	2221EBB100050F4	63.5
25.4 x 19.05	1 x ¾	2221EBB100075F1	2221EBB100075F4	54.1
38.1 x 19.05	1½ x ¾	2221EBB150075F1	2221EBB150075F4	76.2
38.1 x 25.4	1½ x 1	2221EBB150100F1	2221EBB150100F4	63.5
50.8 x 25.4	2 x 1	2221EBB200100F1	2221EBB200100F4	85.85
50.8 x 38.1	2 x 1½	2221EBB200150F1	2221EBB200150F4	63.5
63.5 x 38.1	2½ x 1½	2221EBB250150F1	2221EBB250150F4	85.85
63.5 x 50.8	2½ x 2	2221EBB250200F1	2221EBB250200F4	63.5
76.2 x 38.1	3 x 1½	2221EBB300150F1	2221EBB300150F4	107.95
76.2 x 50.8	3 x 2	2221EBB300200F1	2221EBB300200F4	85.85
76.2 x 63.5	3 x 2½	2221EBB300250F1	2221EBB300250F4	66.8
101.6 x 50.8	4 x 2	2221EBB400200F1	2221EBB400200F4	130.3
101.6 x 63.5	4 x 2½	2221EBB400250F1	2221EBB400250F4	107.95
101.6 x 76.2	4 x 3	2221EBB400300F1	2221EBB400300F4	98.55
152.4 x 76.2	6 x 3	2221EBB600300F1	2221EBB600300F4	184.15
152.4 x 101.6	6 x 4	2221EBB600400F1	2221EBB600400F4	143

Product Group: AV14

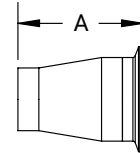
Clamp x Weld Concentric Reducers

Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF1	PM Finish - SF4	mm
19.05 x 12.7	¾ x ½	2226CBB075050F1	2226CBB075050F4	54.1
25.4 x 12.7	1 x ½	2226CBB100050F1	2226CBB100050F4	63.5
25.4 x 19.05	1 x ¾	2226CBB100075F1	2226CBB100075F4	54.1
38.1 x 19.05	1½ x ¾	2226CBB150075F1	2226CBB150075F4	76.2
38.1 x 25.4	1½ x 1	2226CBB150100F1	2226CBB150100F4	63.5
50.8 x 25.4	2 x 1	2226CBB200100F1	2226CBB200100F4	85.85
50.8 x 38.1	2 x 1½	2226CBB200150F1	2226CBB200150F4	63.5
63.5 x 38.1	2½ x 1½	2226CBB250150F1	2226CBB250150F4	85.85
63.5 x 50.8	2½ x 2	2226CBB250200F1	2226CBB250200F4	63.5
76.2 x 38.1	3 x 1½	2226CBB300150F1	2226CBB300150F4	107.95
76.2 x 50.8	3 x 2	2226CBB300200F1	2226CBB300200F4	85.85
76.2 x 63.5	3 x 2½	2226CBB300250F1	2226CBB300250F4	66.8
101.6 x 50.8	4 x 2	2226CBB400200F1	2226CBB400200F4	130.3
101.6 x 63.5	4 x 2½	2226CBB400250F1	2226CBB400250F4	107.95
101.6 x 76.2	4 x 3	2226CBB400300F1	2226CBB400300F4	98.55
152.4 x 76.2	6 x 3	2226CBB600300F1	2226CBB600300F4	184.15
152.4 x 101.6	6 x 4	2226CBB600400F1	2226CBB600400F4	143

Product Group: AV14



ASME BPE 2019



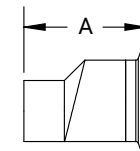
Clamp x Weld Eccentric Reducers

Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF1	PM Finish - SF4	mm
19.05 x 12.7	¾ x ½	2226EBB075050F1	2226EBB075050F4	54.1
25.4 x 12.7	1 x ½	2226EBB100050F1	2226EBB100050F4	63.5
25.4 x 19.05	1 x ¾	2226EBB100075F1	2226EBB100075F4	54.1
38.1 x 19.05	1½ x ¾	2226EBB150075F1	2226EBB150075F4	76.2
38.1 x 25.4	1½ x 1	2226EBB150100F1	2226EBB150100F4	63.5
50.8 x 25.4	2 x 1	2226EBB200100F1	2226EBB200100F4	85.85
50.8 x 38.1	2 x 1½	2226EBB200150F1	2226EBB200150F4	63.5
63.5 x 38.1	2½ x 1½	2226EBB250150F1	2226EBB250150F4	85.85
63.5 x 50.8	2½ x 2	2226EBB250200F1	2226EBB250200F4	63.5
76.2 x 38.1	3 x 1½	2226EBB300150F1	2226EBB300150F4	107.95
76.2 x 50.8	3 x 2	2226EBB300200F1	2226EBB300200F4	85.85
76.2 x 63.5	3 x 2½	2226EBB300250F1	2226EBB300250F4	66.8
101.6 x 50.8	4 x 2	2226EBB400200F1	2226EBB400200F4	130.3
101.6 x 63.5	4 x 2½	2226EBB400250F1	2226EBB400250F4	107.95
101.6 x 76.2	4 x 3	2226EBB400300F1	2226EBB400300F4	98.55
152.4 x 76.2	6 x 3	2226EBB600300F1	2226EBB600300F4	184.15
152.4 x 101.6	6 x 4	2226EBB600400F1	2226EBB600400F4	143

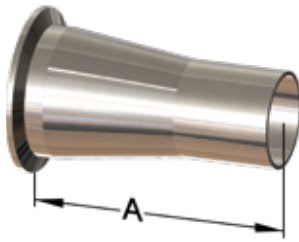
Product Group: AV14



ASME BPE 2019



## Clamp x Weld Concentric Reducers



DT-4.1.3-2 (#DT-26)  
ASME BPE 2012

Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF1	PM Finish - SF4	mm
19.05 x 12.7	¾ x ½	T31M-075050PL	T31M-075050PM	76.20
25.4 x 12.7	1 x ½	T31M-100050PL	T31M-100050PM	88.90
25.4 x 19.05	1 x ¾	T31M-100075PL	T31M-100075PM	76.20
38.1 x 12.7	1½ x ½	T31M-150050PL	T31M-150050PM	114.30
38.1 x 19.05	1½ x ¾	T31M-150075PL	T31M-150075PM	101.60
38.1 x 25.4	1½ x 1	T31M-150100PL	T31M-150100PM	101.60
50.8 x 12.7	2 x ½	T31M-200050PL	T31M-200050PM	165.10
50.8 x 19.05	2 x ¾	T31M-200075PL	T31M-200075PM	152.40
50.8 x 25.4	2 x 1	T31M-200100PL	T31M-200100PM	152.40
50.8 x 38.1	2 x 1½	T31M-200150PL	T31M-200150PM	101.60
63.5 x 12.7	2½ x ½	T31M-250050PL	T31M-250050PM	215.90
63.5 x 19.05	2½ x ¾	T31M-250075PL	T31M-250075PM	203.20
63.5 x 25.4	2½ x 1	T31M-250100PL	T31M-250100PM	203.20
63.5 x 38.1	2½ x 1½	T31M-250150PL	T31M-250150PM	152.40
63.5 x 50.8	2½ x 2	T31M-250200PL	T31M-250200PM	107.95
76.2 x 25.4	3 x 1	T31M-300100PL	T31M-300100PM	254.00
76.2 x 38.1	3 x 1½	T31M-300150PL	T31M-300150PM	203.20
76.2 x 50.8	3 x 2	T31M-300200PL	T31M-300200PM	158.75
76.2 x 63.5	3 x 2½	T31M-300250PL	T31M-300250PM	107.95
101.6 x 38.1	4 x 1½	T31M-400150PL	T31M-400150PM	307.975
101.6 x 50.8	4 x 2	T31M-400200PL	T31M-400200PM	263.525
101.6 x 63.5	4 x 2½	T31M-400250PL	T31M-400250PM	212.725
101.6 x 76.2	4 x 3	T31M-400300PL	T31M-400300PM	161.925
152.4 x 76.2	6 x 3	T31M-600300PL	T31M-600300PM	228.60
152.4 x 101.6	6 x 4	T31M-600400PL	T31M-600400PM	228.60

Product Group: AV14

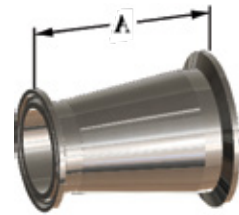
## Leader in the BioPharmaceutical Market

ASME BPE SF1 & SF4 Pharmaceutical grade tube and fittings.

Ability to supply large projects with **Comprehensive Stock Levels.**

Clamp x Clamp Concentric Reducers

Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF1	PM Finish - SF4	mm
19.05 x 12.7	¾ x ½	T3114MP075050PL	T3114MP075050PM	50.80
25.4 x 12.7	1 x ½	T3114MP100050PL	T3114MP100050PM	63.50
25.4 x 19.05	1 x ¾	T3114MP100075PL	T3114MP100075PM	50.80
38.1 x 12.7	1½ x ½	T3114MP150050PL	T3114MP150050PM	88.90
38.1 x 19.05	1½ x ¾	T3114MP150075PL	T3114MP150075PM	76.20
38.1 x 25.4	1½ x 1	T3114MP150100PL	T3114MP150100PM	76.20
50.8 x 12.7	2 x ½	T3114MP200050PL	T3114MP200050PM	139.70
50.8 x 19.05	2 x ¾	T3114MP200075PL	T3114MP200075PM	127.00
50.8 x 25.4	2 x 1	T3114MP200100PL	T3114MP200100PM	127.00
50.8 x 38.1	2 x 1½	T3114MP200150PL	T3114MP200150PM	76.20
63.5 x 12.7	2½ x ½	T3114MP250050PL	T3114MP250050PM	190.50
63.5 x 19.05	2½ x ¾	T3114MP250075PL	T3114MP250075PM	177.80
63.5 x 25.4	2½ x 1	T3114MP250100PL	T3114MP250100PM	177.80
63.5 x 38.1	2½ x 1½	T3114MP250150PL	T3114MP250150PM	127.00
63.5 x 50.8	2½ x 2	T3114MP250200PL	T3114MP250200PM	76.20
76.2 x 25.4	3 x 1	T3114MP300100PL	T3114MP300100PM	228.60
76.2 x 38.1	3 x 1½	T3114MP300150PL	T3114MP300150PM	177.80
76.2 x 50.8	3 x 2	T3114MP300200PL	T3114MP300200PM	127.00
76.2 x 63.5	3 x 2½	T3114MP300250PL	T3114MP300250PM	76.20
101.6 x 25.4	4 x 1	T3114MP400100PL	T3114MP400100PM	333.375
101.6 x 38.1	4 x 1½	T3114MP400150PL	T3114MP400150PM	282.575
101.6 x 50.8	4 x 2	T3114MP400200PL	T3114MP400200PM	231.775
101.6 x 63.5	4 x 2½	T3114MP400250PL	T3114MP400250PM	180.975
101.6 x 76.2	4 x 3	T3114MP400300PL	T3114MP400300PM	130.175
152.4 x 76.2	6 x 3	T3114MP600300PL	T3114MP600300PM	193.675
152.4 x 101.6	6 x 4	T3114MP600400PL	T3114MP600400PM	193.675

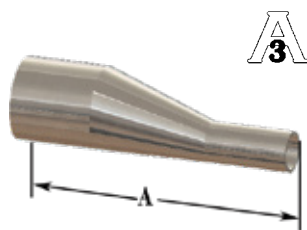


DT-4.1.3-3 (#DT-21)  
ASME BPE 2012

Product Group: AV14



## Weld x Weld Eccentric Reducers

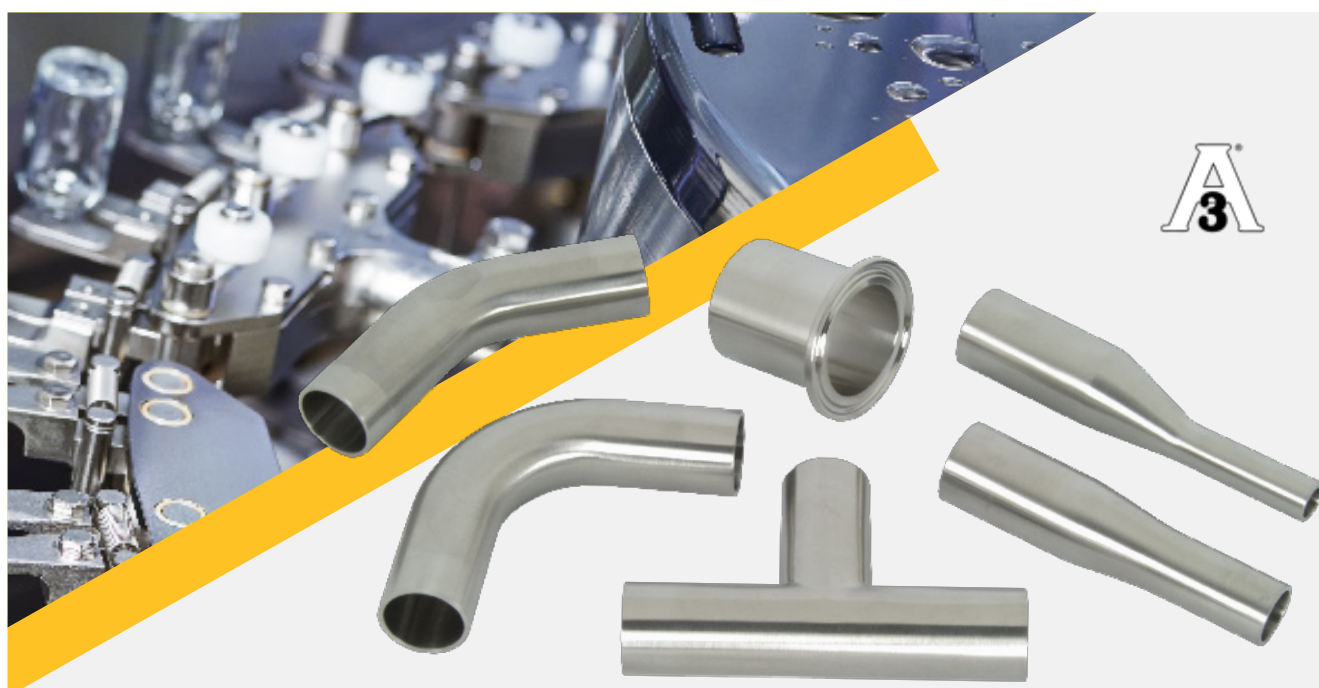


DT-4.1.3-1 (#DT-11)  
ASME BPE 2012



Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF1	PM Finish - SF4	mm
19.05 x 12.7	¾ x ½	T32W-075050PL	T32W-075050PM	101.60
25.4 x 12.7	1 x ½	T32W-100050PL	T32W-100050PM	114.30
25.4 x 19.05	1 x ¾	T32W-100075PL	T32W-100075PM	101.60
38.1 x 12.7	1½ x ½	T32W-150050PL	T32W-150050PM	139.70
38.1 x 19.05	1½ x ¾	T32W-150075PL	T32W-150075PM	127.00
38.1 x 25.4	1½ x 1	T32W-150100PL	T32W-150100PM	127.00
50.8 x 12.7	2 x ½	T32W-200050PL	T32W-200050PM	196.85
50.8 x 19.05	2 x ¾	T32W-200075PL	T32W-200075PM	184.15
50.8 x 25.4	2 x 1	T32W-200100PL	T32W-200100PM	184.15
50.8 x 38.1	2 x 1½	T32W-200150PL	T32W-200150PM	133.35
63.5 x 12.7	2½ x ½	T32W-250050PL	T32W-250050PM	247.65
63.5 x 19.05	2½ x ¾	T32W-250075PL	T32W-250075PM	234.95
63.5 x 25.4	2½ x 1	T32W-250100PL	T32W-250100PM	234.95
63.5 x 38.1	2½ x 1½	T32W-250150PL	T32W-250150PM	184.15
63.5 x 50.8	2½ x 2	T32W-250200PL	T32W-250200PM	139.70
76.2 x 25.4	3 x 1	T32W-300100PL	T32W-300100PM	285.75
76.2 x 38.1	3 x 1½	T32W-300150PL	T32W-300150PM	234.95
76.2 x 50.8	3 x 2	T32W-300200PL	T32W-300200PM	190.50
76.2 x 63.5	3 x 2½	T32W-300250PL	T32W-300250PM	139.70
101.6 x 25.4	4 x 1	T32W-400100PL	T32W-400100PM	393.70
101.6 x 38.1	4 x 1½	T32W-400150PL	T32W-400150PM	342.90
101.6 x 50.8	4 x 2	T32W-400200PL	T32W-400200PM	298.45
101.6 x 63.5	4 x 2½	T32W-400250PL	T32W-400250PM	247.65
101.6 x 76.2	4 x 3	T32W-400300PL	T32W-400300PM	196.85
152.4 x 76.2	6 x 3	T32W-600300PL	T32W-600300PM	247.65
152.4 x 101.6	6 x 4	T32W-600400PL	T32W-600400PM	254.00

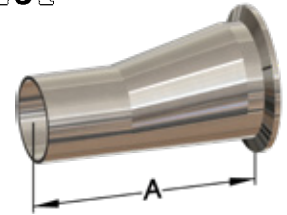
Product Group: AV14



Clamp x Weld Eccentric Reducers

Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF1	PM Finish - SF4	mm
19.05 x 12.7	¾ x ½	T32M-075050PL	T32M-075050PM	76.20
25.4 x 12.7	1 x ½	T32M-100050PL	T32M-100050PM	88.90
25.4 x 19.05	1 x ¾	T32M-100075PL	T32M-100075PM	76.20
38.1 x 12.7	1½ x ½	T32M-150050PL	T32M-150050PM	114.30
38.1 x 19.05	1½ x ¾	T32M-150075PL	T32M-150075PM	101.60
38.1 x 25.4	1½ x 1	T32M-150100PL	T32M-150100PM	101.60
50.8 x 12.7	2 x ½	T32M-200050PL	T32M-200050PM	165.10
50.8 x 19.05	2 x ¾	T32M-200075PL	T32M-200075PM	152.40
50.8 x 25.4	2 x 1	T32M-200100PL	T32M-200100PM	152.40
50.8 x 38.1	2 x 1½	T32M-200150PL	T32M-200150PM	101.60
63.5 x 12.7	2½ x ½	T32M-250050PL	T32M-250050PM	215.90
63.5 x 19.05	2½ x ¾	T32M-250075PL	T32M-250075PM	203.20
63.5 x 25.4	2½ x 1	T32M-250100PL	T32M-250100PM	203.20
63.5 x 38.1	2½ x 1½	T32M-250150PL	T32M-250150PM	152.40
63.5 x 50.8	2½ x 2	T32M-250200PL	T32M-250200PM	107.95
76.2 x 25.4	3 x 1	T32M-300100PL	T32M-300100PM	254.00
76.2 x 38.1	3 x 1½	T32M-300150PL	T32M-300150PM	203.20
76.2 x 50.8	3 x 2	T32M-300200PL	T32M-300200PM	158.75
76.2 x 63.5	3 x 2½	T32M-300250PL	T32M-300250PM	107.95
101.6 x 25.4	4 x 1	T32M-400100PL	T32M-400100PM	358.775
101.6 x 38.1	4 x 1½	T32M-400150PL	T32M-400150PM	307.975
101.6 x 50.8	4 x 2	T32M-400200PL	T32M-400200PM	263.525
101.6 x 63.5	4 x 2½	T32M-400250PL	T32M-400250PM	212.725
101.6 x 76.2	4 x 3	T32M-400300PL	T32M-400300PM	161.925
152.4 x 76.2	6 x 3	T32M-600300PL	T32M-600300PM	228.60
152.4 x 101.6	6 x 4	T32M-600400PL	T32M-600400PM	228.60

Product Group: AV14

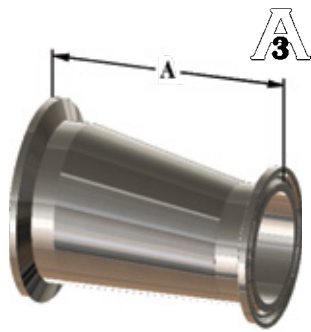


DT-4.1.3-2 (#DT-26)  
ASME BPE 2012

# Maximise efficiency and purity

in your biopharmaceutical applications with our BPE fittings and technical support.

## Clamp x Clamp Eccentric Reducers

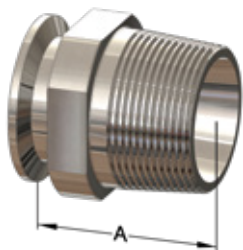


DT-4.1.3-3 (#DT-21)  
ASME BPE 2012

Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF1	PM Finish - SF4	mm
19.05 x 12.7	¾ x ½	T3214MP075050PL	T3214MP075050PM	101.60
25.4 x 12.7	1 x ½	T3214MP100050PL	T3214MP100050PM	114.30
25.4 x 19.05	1 x ¾	T3214MP100075PL	T3214MP100075PM	101.60
38.1 x 12.7	1½ x ½	T3214MP150050PL	T3214MP150050PM	139.70
38.1 x 19.05	1½ x ¾	T3214MP150075PL	T3214MP150075PM	127.00
38.1 x 25.4	1½ x 1	T3214MP150100PL	T3214MP150100PM	127.00
50.8 x 12.7	2 x ½	T3214MP200050PL	T3214MP200050PM	196.85
50.8 x 19.05	2 x ¾	T3214MP200075PL	T3214MP200075PM	184.15
50.8 x 25.4	2 x 1	T3214MP200100PL	T3214MP200100PM	184.15
50.8 x 38.1	2 x 1½	T3214MP200150PL	T3214MP200150PM	133.35
63.5 x 12.7	2½ x ½	T3214MP200150PL	T3214MP200150PM	247.65
63.5 x 19.05	2½ x ¾	T3214MP250075PL	T3214MP250075PM	234.95
63.5 x 25.4	2½ x 1	T3214MP250100PL	T3214MP250100PM	234.95
63.5 x 38.1	2½ x 1½	T3214MP250150PL	T3214MP250150PM	184.15
63.5 x 50.8	2½ x 2	T3214MP250200PL	T3214MP250200PM	139.70
76.2 x 25.4	3 x 1	T3214MP300100PL	T3214MP300100PM	285.75
76.2 x 38.1	3 x 1½	T3214MP300150PL	T3214MP300150PM	234.95
76.2 x 50.8	3 x 2	T3214MP300200PL	T3214MP300200PM	190.50
76.2 x 63.5	3 x 2½	T3214MP300250PL	T3214MP300250PM	139.70
101.6 x 25.4	4 x 1	T3214MP400100PL	T3214MP400100PM	393.70
101.6 x 38.1	4 x 1½	T3214MP400150PL	T3214MP400150PM	342.90
101.6 x 50.8	4 x 2	T3214MP400200PL	T3214MP400200PM	298.45
101.6 x 63.5	4 x 2½	T3214MP400250PL	T3214MP400250PM	247.65
101.6 x 76.2	4 x 3	T3214MP400300PL	T3214MP400300PM	196.85
152.4 x 76.2	6 x 3	T3214MP600300PL	T3214MP600300PM	190.50
152.4 x 101.6	6 x 4	T3214MP600400PL	T3214MP600400PM	254.00

Product Group: AV14

## Clamp Adaptor x Male NPT



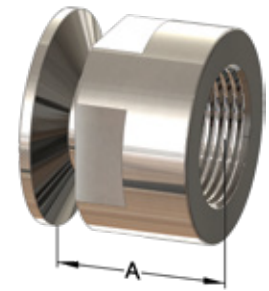
Clamp Size		NPT Thread Size		Part Numbers	Dimension (A)
mm	inch	mm	inch	PL Finish - SF1	mm
12.7	½	6	¼	T21MP-050025PL	50.800
		10	⅜	T21MP-050375PL	50.800
		12	½	T21MP-050PL	41.275
		20	¾	T21MP-050075PL	50.800
19.05	¾	6	¼	T21MP-075025PL	50.800
		12	½	T21MP-075050PL	50.800
		20	¾	T21MP-075PL	57.150
25.4	1	25	1	T21MP-100PL	57.150
38.1	1½	38	1½	T21MP-150PL	57.150
50.8	2	50	2	T21MP-200PL	67.005
63.5	2½	65	2½	T21MP-250PL	73.025
76.2	3	80	3	T21MP-300PL	77.975
101.6	4	100	4	T21MP-400PL	80.137

Product Group: AV14

Clamp Adaptor x Female NPT

Clamp Size		NPT Thread Size		Part Numbers	Dimension (A)
mm	inch	mm	inch	PL Finish - SF1	mm
12.7	½	6	¼	T22MP-050025PL	50.800
		10	⅜	T22MP-050375PL	50.800
		12	½	T22MP-050PL	41.275
		20	¾	T22MP-050075PL	50.800
19.05	¾	6	¼	T22MP-075025PL	50.800
		12	½	T22MP-075050PL	50.800
		20	¾	T22MP-075PL	57.150
25.4	1	25	1	T22MP-100PL	57.150
38.1	1½	38	1½	T22MP-150PL	57.150
50.8	2	50	2	T22MP-200PL	67.005
63.5	2½	65	2½	T22MP-250PL	73.025
76.2	3	80	3	T22MP-300PL	77.975
101.6	4	100	4	T22MP-400PL	80.137

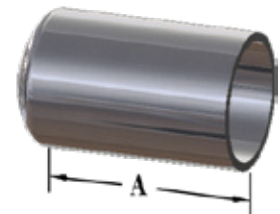
Product Group: AV14



Weld Caps

Tube OD Size		Part Numbers		Dimension (A)
mm	inch	PL Finish - SF1	PM Finish - SF4	mm
12.7	½	T16W-050PL	T16W-050PM	38.10
19.05	¾	T16W-075PL	T16W-075PM	38.10
25.4	1	T16W-100PL	T16W-100PM	38.10
38.1	1½	T16W-150PL	T16W-150PM	38.10
50.8	2	T16W-200PL	T16W-200PM	38.10
63.5	2½	T16W-250PL	T16W-250PM	38.10
76.2	3	T16W-300PL	T16W-300PM	38.10
101.6	4	T16W-400PL	T16W-400PM	50.80
152.4	6	T16W-600PL	T16W-600PM	63.50

Product Group: AV14

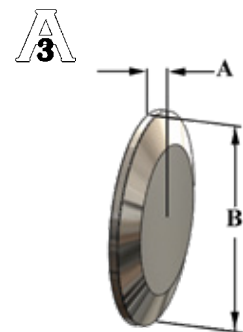


DT-4.1.5-1 (#DT-22)  
ASME BPE 2019

Solid End Caps

Tube OD Size		Part Numbers		Dimensions	
mm	inch	PL Finish - SF1	PM Finish - SF4	A (mm)	B (mm)
12.7	½ x ¾	T16AMP-050075PL	T16AMP-050075PM	4.826	25.400
38.1	1 x 1½	T16AMP-100150PL	T16AMP-100150PM	6.350	50.546
50.8	2	T16AMP-200PL	T16AMP-200PM	6.350	64.008
63.5	2½	T16AMP-250PL	T16AMP-250PM	6.350	77.470
76.2	3	T16AMP-300PL	T16AMP-300PM	6.350	90.932
101.6	4	T16AMP-400PL	T16AMP-400PM	7.874	119.126
152.4	6	T16AMP-600PL	T16AMP-600PM	11.178	166.624

Product Group: AV14



DT-4.1.5-2 (#DT-31)  
ASME BPE 2012

## Clever Clamp - Bolted Clamps - Silicone Gasket



Clever Clamp



Bolted Clamp



Gasket

Size		Clever Clamp <sup>1</sup>		Bolted Clamps	Platinum Cured Silicone Gaskets <sup>2</sup>
mm	inch	Standard	Self-Locking Lever		
12.7	½	-	-	13MHP75	42MP-XCPL50
19.05	¾	-	-	13MHP75	42MP-XCPL75
25.4	1	-	-	13MHP100-150	40MP-XCPL100
38.1	1½	13SCC-100150	13SCC-100150L	13MHP100-150	40MP-XCPL150
50.8	2	13SCC-200	13SCC-200L	13MHP200	40MP-XCPL200
63.5	2½	-	-	13MHP250	40MP-XCPL250
76.2	3	13SCC-300	13SCC-300L	13MHP300	40MP-XCPL300
101.6	4	-	-	13MHP400	40MP-XCPL400
152.4	6	-	-	13MHP600	40MPF-XCPL600
203.2	8	-	-	13MHP800	40MPF-XCPL800
254	10	-	-	13MHP1000	-
304.8	12	-	-	13MHP1200	-

<sup>1</sup>Refer to page 349 for more information on the clever clamp

<sup>2</sup>Gaskets meet 21CFR 177.2600 passed U.S.P class VI testing

Product Group: AV03

## All Fittings Comply with ASME BPE 2019 (Table DT5-1)

### Final Tolerances for Mechanically Polished Fittings and Process Components

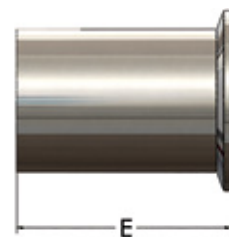
Nominal Size		OD	Wall Thickness	Squareness Face to Tangent (B)	Off Angle (O)	Tolerance on End-to-End (E) & Centre-to-End (A)	Off Plane (P)
mm	inch						
12.7	½	±0.005	±0.005/-0.008	0.005	0.014	0.050	0.030
19.05	¾	±0.005	±0.005/-0.008	0.005	0.018	0.050	0.030
25.4	1	±0.005	±0.005/-0.008	0.008	0.025	0.050	0.030
38.1	1½	±0.008	±0.005/-0.008	0.008	0.034	0.050	0.050
50.8	2	±0.008	±0.005/-0.008	0.008	0.043	0.050	0.050
63.5	2½	±0.010	±0.005/-0.008	0.010	0.054	0.050	0.050
76.2	3	±0.010	±0.005/-0.008	0.016	0.068	0.050	0.050
101.6	4	±0.015	±0.008/-0.010	0.016	0.086	0.050	0.060



Squareness to Face



Off Angle



End-to-End



Off Plane



Off Angle



Centre-to-End

Technical Specifications

Weld End Chemical Analysis (%) per ASME BPE Table DT-3

Element	C	Mn	P	S	Si	Cr	Ni	Mo
Minimum	-	-	-	0.005	-	16.00	10.00	2.00
Maximum	0.030	2.00	0.045	0.017	1.00	18.00	15.00	3.00

BPE Surface Finish Requirements (SF-3)

Mechanically Polished ID & OD

Surface Designation	Ra Maximum		Dixon Sanitary High Purity Code
	ID $\mu\text{m}$	OD $\mu\text{m}$	
SF0	No finish requirement	No finish requirement	PL
SF1	.508	.812	-
SF2	.635	.812	-
SF3	.762	.812	-

Mechanically Polished OD & Electropolished ID

Surface Designation	Ra Maximum		Dixon Sanitary High Purity Code
	ID $\mu\text{m}$	OD $\mu\text{m}$	
SF4	.381	.812	PM
SF5	.508	.812	-
SF6	.635	.812	-

Acceptance Criteria for Stainless Steel Mechanically Polished Product Contact Surface Finishes

Anomaly or Indication	Acceptance Criteria
Pits	If diameter <0.020" & bottom is shiny {Notes (2) & (4)} - pits <0.003" Diameter is irrelevant and acceptable
Cluster of Pits	No more than 4 pits per each 1/2" x 1/2" inspection window The cumulative total of all relevant pits shall not exceed 0.040"
Dents	None accepted {Note (1)}
Finishing Marks	If Ra maximum is met
Welds	As welded shall meet requirements of MJ-6. If welds are finished, shall be smooth & blended
Nicks	None accepted
Scratches	Tubing, if cumulative length is <12.0" per 20" tube length or prorated & if depth is <0.003" fittings, valves & other components, if length is <0.25" cumulatively, depth <0.003" & Ra max. is met vessels, if length <0.50" at 0.003 depth & if <3 per inspection window {Note (3)}
Surface Cracks	None accepted
Surface Inclusions	If Ra max. is met
Surface Residuals	None accepted, visual inspection
Surface Roughness (Ra)	See table SF-3 (See Above)
Weld Slag	Tubing, up to 3 per 20" length or prorated, if <75% of the width of the weld bead fittings, valves, vessels & other components, none accepted (as welded shall meet the requirements of MJ-6 & Table MJ-3)
Porosity	None Open to the Surface

Notes

- For vessels, dents in the area covered by and resulting from welding dimple heat transfer jackets are acceptable
- Black bottom pit of any depth is not acceptable
- An inspection window is defined as an area of 100mm x 100mm (4" x 4")
- Pits in super-austenitic and nickel alloys may exceed this value. Acceptance criteria for pit size shall be established by agreement between owner/user and manufacturer. All other pit criteria remain the same

## Packing Requirements

- Dixon Sanitary
  - Job number
  - 316L
  - Dixon Sanitary part number
  - Heat number(s)
  - Surface finish code
  - ASME BPE
- Per the specification, the size of the fitting may limit the space available for markings. When that occurs, the markings starting at the bottom of the list are not applied. The Dixon Sanitary part number will describe the part configuration and size
- MTR (material test report) certifications are included inside the resealable bag with each fitting. The MTRs are traceable through the job number found on each fitting. All fittings are capped to prevent damage and contamination. For easy identification, each finish will have a different colour cap

Finish <sup>1</sup>	Colour Caps
PL/SF1	Blue
PM/SF4	White

<sup>1</sup>Refer to "BPE Surface Finish Requirements (SF-3)" on page 22 for finish standards

# Dixon Sanitary High Purity BioPharm Fittings

## 316L (S31603) Stainless Steel Material Test Report

**Job Number** AG490

Dixon Part Number	Description	Size	Surface finish
T7RWW-150050PL	Automatic Weld Reducing Tee per Table DT-10	1½"x½"	SF1 (20Ra)

Chemical analysis (%) per ASME BPE 2012 Table MM-2.1-1 and Section MM-5.1.1

Item	Heat number	C	Mn	P	S	Si	Cr	Ni	Mo	N
		min/max								
		0.030	2.00	0.045	0.017	1.00	16.00	10.00	2.00	
M	858319	0.013	1.47	0.028	0.013	0.39	16.70	10.20	2.07	0.05
B	N17732	0.018	0.63	0.031	0.009	0.48	16.22	12.06	2.06	0.01

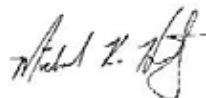
### Mechanical Test Results

Item	Yield Strength (0.2%), MPa	Tensile Strength, MPa	Elongation, %	Hardness, HRB	Specification
	170 minimum	485 minimum	35 minimum	90 maximum	
M	374	600	53	83	ASTM A270/A270M-14 S2
B	244	569.4	50.1	78.2	ASTM A270/A270M-14 S2

Product of Thailand

We certify that the above is a true copy of the test results issued by the material supplier. This report generated through the Dixon computer system and is valid without signatures.

This MTR conforms to EN10204-3.1. All fittings supplied by Dixon Sanitary conform to the requirements of the European Union Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS 2).



Michael K. Hintz  
VP/Division Manger



Dixon Sanitary  
N25 W23040 Paul Rd.  
Pewaukee, WI 53072  
USA  
800-789-1718  
dixonvalve.com

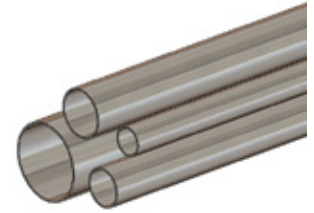
## BPE - Pharmaceutical Grade Tubing

### <sup>1</sup>SF1 Specifications

- 316L ASTM A270-S2 ASME BPE welded tube
- ID = 0.5µm Ra mechanical polish
- OD = 0.8µm Ra mechanical polish

### <sup>2</sup>SF4 Specifications

- 316L ASTM A270-S2 ASME BPE welded tube
- ID = 0.25µm Ra electropolish
- OD = 0.8µm Ra mechanical polish



Tube OD Size		Wall Thickness (mm)	Length (mm)	Part Numbers	
mm	inch			PL Finish - SF1 <sup>1</sup>	PM Finish - SF4 <sup>2</sup>
12.7	½	1.65	6096	A270-050PL	A270-050PM
19.05	¾	1.65	6096	A270-075PL	A270-075PM
25.4	1	1.65	6096	A270-100PL	A270-100PM
38.1	1½	1.65	6096	A270-150PL	A270-150PM
50.8	2	1.65	6096	A270-200PL	A270-200PM
63.5	2½	1.65	6096	A270-250PL	A270-250PM
76.2	3	1.65	6096	A270-300PL	A270-300PM
101.6	4	2.11	6096	A270-400PL	A270-400PM
152.4	6	2.11	6096	A270-600PL	A270-600PM

- Sold in lengths only, non-returnable

Product Group: AV17

## Operating Pressures - 316 Stainless Steel Tube

Tube OD Size		Tube OD Size (inch)	Pressure (PSI) bar/kPa		
mm	inch		Working	Yield	Burst
12.7	½	.065	3250	6500	19500
19.05	¾	.065	2167	4330	13000
25.4	1	.065	2280	3300	9100
38.1	1½	.065	1520	2200	6100
50.8	2	.065	1140	1600	4600
63.5	2½	.065	910	1300	3600
76.2	3	.065	760	1100	3000
101.6	4	.083	730	1000	2900
152.4	6	.109	635	900	2540

### Notes

All MTR's will be supplied by tubing manufacturer

Working pressure = ¼ of burst pressure, these valid from -29°C to 38°C (-20°F to 100°F)

The pressures shown in the table above are valid using Barlow's formula and the following properties

- Material: 316L stainless steel
- Yield Strength (PSI): 25,000 bar/kPa
- Tensile Strength (PSI): 70,000 bar/kPa

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**Dixon (Asia Pacific) Pty Ltd**

170 Francis Road  
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1300 134 651

**[dixonvalve.com.au](http://dixonvalve.com.au)**

**South Australia, Adelaide**

(Head Office)  
170 Francis Road  
Wingfield SA 5013

**Queensland, Brisbane**

6 Union Circuit  
Yatala QLD 4207

**Queensland, Mackay**

38 John Vella Drive  
Paget QLD 4740

**Victoria, Melbourne**

13 Commercial Drive  
Dandenong VIC 3175

**Western Australia, Perth**

19 Baile Road  
Canning Vale WA 6155

**New South Wales, Sydney**

15 Watsford Road  
Campbelltown NSW 2560