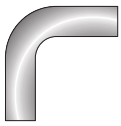
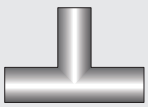
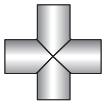
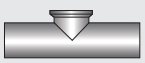
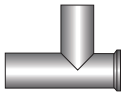
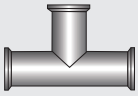
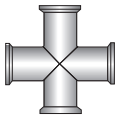
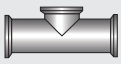
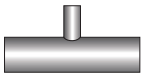
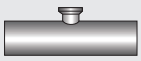
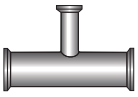
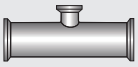
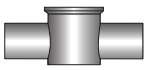
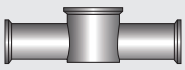
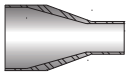
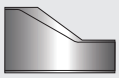
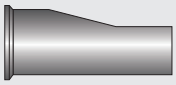
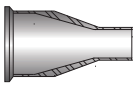
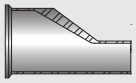
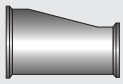
ASME BPE DT Index

Drawing	Part Description	2009 DT ASME-BPE 2009	2012 DT ASME-BPE 2012	2019 DT ASME-BPE 2019
	**TE2S** 90° Elbow	DT-7	DT-4.1.1-1	DT-4.1.1-1
	**TE2C** 90° Elbow Clamp One End	DT-12	DT-4.1.1-2	DT-4.1.1-2
	**TEG2C** 90° Elbow	DT-16	DT-4.1.1-3	DT-4.1.1-3
	**TE2KS** 45° Elbow	DT-8	DT-4.1.1-4	DT-4.1.1-4
	**TE2KC** 45° Elbow Clamp One End	DT-13	DT-4.1.1-5	DT-4.1.1-5
	**TEG2K** 45° Elbow	DT-17	DT-4.1.1-6	DT-4.1.1-6
	**TE2UBWWW** 180° Bottom Outlet Weld Use Point	DT-23	DT-4.1.1-7	DT-4.1.1-7
	**TE7WWW** Equal Tee	DT-9	DT-4.1.2-1	DT-4.1.2-1
	**TE9WWWW** Equal Cross	DT-9	DT-4.1.2-1	DT-4.1.2-1
	**TE7WWCS** Short Outlet Tee	DT-15	DT-4.1.2-2	DT-4.1.2-2

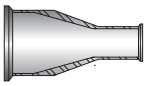
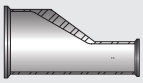
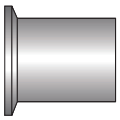
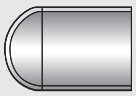
ASME BPE DT Index

Drawing	Part Description	2009 DT ASME-BPE 2009	2012 DT ASME-BPE 2012	2019 DT ASME-BPE 2019
	**TE7WCSW** Short Outlet Run Tee	DT-25	DT-4.1.2-3	DT-4.1.2-3
	**TEG7** Equal Tee C	DT-18	DT-4.1.2-4	DT-4.1.2-4
	**TEG9** Cross	DT-18	DT-4.1.2-4	DT-4.1.2-4
	**TEG7S** Short Outlet Tee	DT-27	DT-4.1.2-5	DT-4.1.2-5
	**TE7RWWW** Reducing Tee	DT-10	DT-4.1.2-6	DT-4.1.2-6
	**TE7RWWCS** Short Outlet Reducing Tee	DT-14	DT-4.1.2-7	DT-4.1.2-7
	**TEG7R** Reducing Tee	DT-19	DT-4.1.2-8	DT-4.1.2-8
	**TEG7RS** Short Outlet Reducing Tee	DT-20	DT-4.1.2-9	DT-4.1.2-9
	**TE7IWWCS** Instrument Tee	DT-28	DT-4.1.2-10	DT-4.1.2-10
	**TEG71S** Instrument Tee	DT-29	DT-4.1.2-11	DT-4.1.2-11

ASME BPE DT Index

Drawing	Part Description	2009 DT ASME-BPE 2009	2012 DT ASME-BPE 2012	2019 DT ASME-BPE 2019
	**TE31WW** Long Concentric Reducer	DT-11	DT-4.1.3-1 (a)	N/A
	**TE32WW** Long Concentric Reducer	DT-11	DT-4.1.3-1 (a)	N/A
	**TE31SWW** Short Concentric Reducer	N/A	DT-4.1.3-1 (b)	DT-4.1.3-1
	**TE32SWW** Short Eccentric Reducer	N/A	DT-4.1.3-1 (b)	DT-4.1.3-1
	**TE31CW** Long Concentric Reducer	DT-26	DT-4.1.3-2 (a)	N/A
	**TE32CW** Long Concentric Reducer	DT-26	DT-4.1.3-2 (a)	N/A
	**TE31SCW** Short Concentric Reducer	N/A	DT-4.1.3-2 (b)	DT-4.1.3-2
	**TE32SCW** Short Eccentric Reducer	N/A	DT-4.1.3-2 (b)	DT-4.1.3-2
	**TEG31CC** Long Concentric Reducer	DT-21	DT-4.1.3-3 (a)	N/A
	**TEG32CC** Long Eccentric Reducer	DT-21	DT-4.1.3-3 (a)	N/A

ASME BPE DT Index

Drawing	Part Description	2009 DT ASME-BPE 2009	2012 DT ASME-BPE 2012	2019 DT ASME-BPE 2019
	**TEG31SCC** Short Concentric Reducer	N/A	DT-4.1.3-3 (b)	DT-4.1.3-3
	**TEG32SCC** Short Eccentric Reducer	N/A	DT-4.1.3-3 (b)	DT-4.1.3-3
	**TEG14AM7** Clamp Ferrule Long	DT-22	DT-4.1.4-1	DT-4.1.4-1
	**TE16W** Weld Cap	DT-30	DT-4.1.5-1	DT-4.1.5-1
	**TEG16A** Solid End Cap	DT-31	DT-4.1.5-2	DT-4.1.5-2

ASME BPE - Certificate

The American Society of Mechanical Engineers

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.

COMPANY:

EGMO Ltd.
MaxPure
1 Hayotsrim St.
Nahariya 22110
Israel

SCOPE:

Manufacture of ferrous and nonferrous fittings at the above location only

AUTHORIZED:	**May 1, 2018**
EXPIRES:	**May 21, 2023**
CERTIFICATE NUMBER:	**BPE-102**

Vice President, Conformity Assessment

Managing Director, Conformity Assessment

MaxPure – Fittings Specifications

Product:

Stainless Steel fittings comply with ASME BPE standards.
Gaskets are made from compounds which are FDA approved and USP 87, 88 Pharmaceutical Class VI certified.

Sizes:

Stainless Steel fittings are available in sizes ¼" - 6" O.D. tube size.

Material:

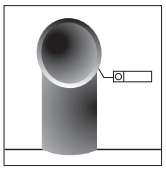
Fittings are fabricated in AISI 316L Stainless Steel with sulfur content of 0.005-0.017% achieving superior repeatability for automatic orbital welding process.

Dimensions & Tolerances:

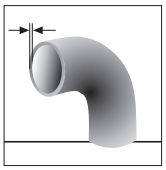
Dimensions as specified in ASME BPE Part DT-3-1

Nominal Size	O.D.		Wall Thickness Mechanical Polish (MP)		Wall Thickness Electropolish (EP)		Squareness Face to Tangent, B		Off Angle, 0		Equivalent Angle (for O)	Off Plane, P		Centerline Radius (CLR), R	
in.	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	deg	in.	mm	in.	mm
1/4	± 0.005	± 0.13	+0.003/-0.004	+0.08/-0.10	+0.003/-0.006	+0.08/-0.15	0.005	0.13	0.009	0.23	2.1	0.030	0.76	0.563	14.30
3/8	± 0.005	± 0.13	+0.003/-0.004	+0.08/-0.10	+0.003/-0.006	+0.08/-0.15	0.005	0.13	0.012	0.30	1.8	0.030	0.76	1.125	28.58
1/2	± 0.005	± 0.13	+0.005/-0.008	+0.13/-0.20	+0.005/-0.010	+0.13/-0.25	0.005	0.13	0.014	0.36	1.6	0.030	0.76	1.125	28.58
3/4	± 0.005	± 0.13	+0.005/-0.008	+0.13/-0.20	+0.005/-0.010	+0.13/-0.25	0.005	0.13	0.018	0.46	1.4	0.030	0.76	1.125	28.58
1	± 0.005	± 0.13	+0.005/-0.008	+0.13/-0.20	+0.005/-0.010	+0.13/-0.25	0.008	0.20	0.025	0.64	1.4	0.030	0.76	1.500	38.10
1 1/2	± 0.008	± 0.20	+0.005/-0.008	+0.13/-0.20	+0.005/-0.010	+0.13/-0.25	0.008	0.20	0.034	0.86	1.3	0.050	1.27	2.250	57.15
2	± 0.008	± 0.20	+0.005/-0.008	+0.13/-0.20	+0.005/-0.010	+0.13/-0.25	0.008	0.20	0.043	1.09	1.2	0.050	1.27	3.000	76.20
2 1/2	± 0.010	± 0.25	+0.005/-0.008	+0.13/-0.20	+0.005/-0.010	+0.13/-0.25	0.010	0.25	0.054	1.37	1.2	0.050	1.27	3.750	95.25
3	± 0.010	± 0.25	+0.005/-0.008	+0.13/-0.20	+0.005/-0.010	+0.13/-0.25	0.016	0.41	0.068	1.73	1.3	0.050	1.27	4.500	114.30
4	± 0.015	± 0.38	+0.008/-0.010	+0.20/-0.25	+0.008/-0.012	+0.20/-0.30	0.016	0.41	0.086	2.18	1.2	0.060	1.52	6.000	152.40
6	± 0.030	± 0.76	+0.015/-0.015	+0.38/-0.38	+0.015/-0.017	+0.38/-0.43	0.030	0.76	0.135	3.43	1.3	0.060	1.52	9.000	228.60

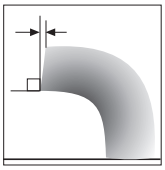
Roundness



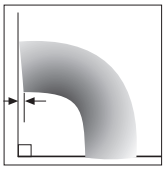
Wall Thickness



Squareness Face to Tangent

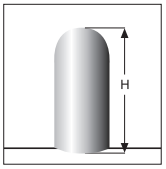


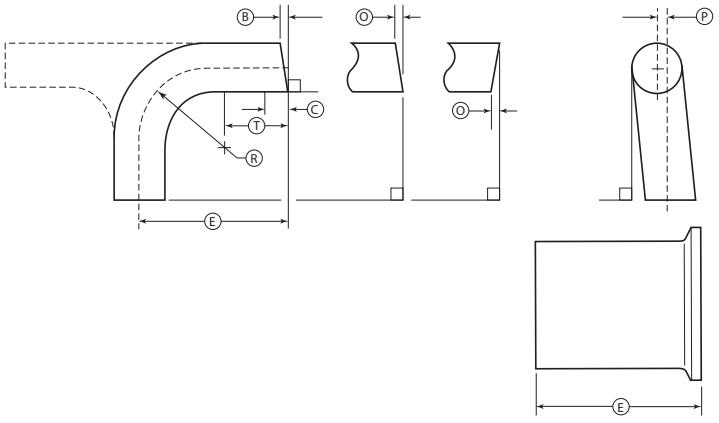
Off Angle



Off Plane

Height





General Notes:

a. Tolerance on (E) end-to-end and center-to-end: 0.050 in. (1.27 mm)
b. Tolerance for centerline radius (CLR) is ±10% of the nominal dimension

Fittings Specifications

Surface Finish:

Reference: ASME BPE, 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		
PX	SF0			No finish requirement	No finish requirement
PC	SF1	20	0.51	Mechanically Polished [1]	Light Polish
PL	SF1	20	0.51	Mechanically Polished [1]	Mechanically polished to 32 Ra µ-in.
PD	SF4	15	0.38	Mechanically Polished [1] & Electropolished	Light Polish
PM	SF4	15	0.38	Mechanically Polished [1] & Electropolished	Mechanically polished to 32 Ra µ-in.
PR	-	10	0.25	Mechanically Polished [1] & Electropolished	Mechanically polished to 32 Ra µ-in.

[1] Or any other finishing method that meets the Ra max.

- MaxPure 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 EGMO 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 specification. All dimensional characteristics are inspected for tolerances listed in parts DT-3-1 to DT-9.3-1 in the ASME BPE specification.

Fitting Marking Information:

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

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

Packaging & Labeling:

Each fitting is capped, bagged and labeled in full compliance with the ASME BPE standard.
Every label includes a QR Code which directs to the fitting's Material Test Report (Please refer to page 48).

Documentation:

Full Material Test Reports are supplied with the finished products and are available On-Line at www.MaxPure.net