



Clamp Fittings



Sanitary
flow
equipment

HIGH QUALITY SANITARY FITTINGS

for the success of your pharmaceutical process

PRODUCT

Stainless Steel fittings comply with ASME BPE standards. All clamp gaskets compounds meet the criteria of the FDA, and some compound formulations have also been certified and accepted by the USDA, cGMP Sanitary Standard, and USP Class VI certifications.

MATERIAL

Fittings are fabricated in AISI 316L Stainless Steel (EN 1.4404 - 1.4435). Sulfur controlled to 0,005 @ 0,017% on all weld ends, allowing for consistent and high quality orbital welding process. Sulfur has the biggest impact on weld quality.

SIZES

Stainless Steel fittings in size 1/2" @ 4" as standard. Larger sizes are available upon request.

DIMENSIONS & TOLERANCES

Dimensions according to ASTM A270 Tolerance as per ASTM A269 or as specified in ASME BPE Part DT - Table DT-DT3 (for BPE fittings only).

FINISH

Stainless Steel fittings internal surface finish comply with ASME BPE std. as specified in ASME BPE Part SF - Table SF 2. Surface designation code SF1. Mechanical polish consists of abrasive polishing. External surface finish: scotchbrite.

MARKING

Each fittings is marked with the following: heat number, size, material grade, brand name.

DOCUMENTATION

Material Test Reports (MTR) are delivered with the material.

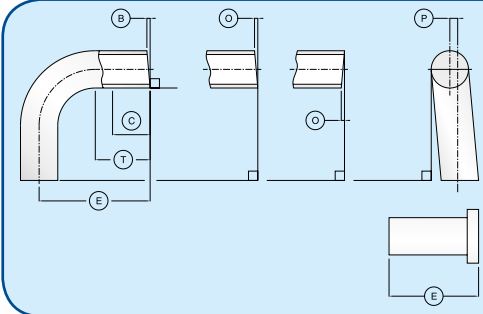
SPECIALTY ITEMS

Contact Aerre Inox for information for fittings not shown in this brochure.



TOLERANCES TABLE DT3

Final tolerances for mechanically polished fittings and process components



Nominal Size	OD mm	Wall thickness mm	Squareness face to tangent, B mm	Off Angle, O mm	Off Plane, P mm
1/2"	±0,13	+0,13/-0,20	0,13	0,36	0,76
3/4"	±0,13	+0,13/-0,20	0,13	0,46	0,76
1"	±0,13	+0,13/-0,20	0,20	0,64	0,76
1 1/2"	±0,20	+0,13/-0,20	0,20	0,86	1,27
2"	±0,20	+0,13/-0,20	0,20	1,09	1,27
2 1/2"	±0,25	+0,13/-0,20	0,25	1,37	1,27
3"	±0,25	+0,13/-0,20	0,41	1,73	1,27
4"	±0,38	+0,20/-0,25	0,41	2,18	1,52
6"	±0,76	+0,30/-0,38	0,76	3,43	1,52

GENERAL NOTE: tolerances on E end-to-end, center-to-end: 1,27 mm.
The length of the control portion C is fixed for all size at 19 mm.

SURFACE FINISH TABLE SF2 Ra readings for fittings

ASME BPE Surface designation	INSIDE SURFACE		
	Ra Maximum μ in	Ra Maximum μ m	Surface treatment
SF1	20	0,51	Mechanically polished
SF2	25	0,64	Mechanically polished
SF3	30	0,76	Mechanically polished
SF4	15	0,38	Mech.pol. & Electropoli.
SF5	20	0,51	Mech.pol. & Electropoli.
SF6	25	0,64	Mech.pol. & Electropoli.

GENERAL NOTE: All Ra readings are taken across the lay, wherever possible.
The average Ra is derived from readings taken at four cross sections approximately 90° apart. No single reading exceeding Ra max.

Sanitary Clamp Gaskets

Standard Clamp sanitary gaskets are manufactured using FDA compliant compounds, and according to cGMP guidelines.

Our 1/2" - 4" Type I EPDM, FKM Fluoroelastomer, Silicone and PTFE, Tuf-Flex®, & Tuf-Steel® Clamp® gaskets are USP Class VI and FDA CFR 177.2600 & 177.1550 and ADI (Animal Derived Ingredient Free) certified.



PERFORMANCE PROPERTIES

Property	Nitrile(Bruna-U)	Ethylene-Propylene (EPDM-E)	Silicone (X)	Fluoroelastomer (Viton®-SFY)	Teflon® PTFE (G)
Tensile Strength	Fair-Good	Good-Excellent	Good	Good-Excellent	Excellent
Electrical Properties	Poor	Excellent	Excellent	Good	Excellent
Weather Resistance	Good	Excellent	Excellent	Good	Excellent
Ozone Resistance	Fair	Excellent	Excellent	Excellent	Excellent
Heat Resistance	Good (99 °C)	Excellent (149 °C)	Excellent (232 °C)	Excellent (177 °C)	Excellent (232 °C)
Cold Resistance	Fair-Good (-54 °C)	Good-Excellent (-51 °C)	Excellent (-62 °C)	Good (-29 °C)	Fair (-40 °C)
Steam Resistance	Good	Good	Poor	Good	Excellent
Tear Resistance	Good	Good	Excellent	Fair	Excellent
Abrasion	Good	Good-Excellent	Good-Excellent	Good	Excellent
Acid Resistance	Good	Good-Excellent	Good	Good	Excellent
Petroleum Oil	Excellent	Poor	Good	Excellent	Excellent
Flame Resistance	Poor	Poor	Poor	Good	Excellent
Vegetable Oil	Good	Good (Most)	Good (Intermittent)	Excellent	Excellent

Silicone-X is not recommended for use with glicerina.

Guarnizioni prodotte in quattro versioni base in una varietà di materiali atossici, non igroscopici.

Gaskets are produced in four basic designs in a variety of materials that are non-toxic, absorbent free.

- Meet U.S. Pharmacopoeia Class VI
- Comply with title 21 CFR 177.2600
- Comply with USDA



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AERRE INOX s.r.l.
Via Gerola, 4
I-26010 Fiesco (Cremona)
Tel. +39 0374 370 828 Fax +39 0374 370 833
www.aerreinox.it

BIMEX
Vertriebs-, Handels- und Service GmbH

Tel. +49(0)30/3670 50-90
Fax +49(0)30/3670 50-92
E-Mail mail@bimex-gmbh.de
Web www.bimex-gmbh.de

Zimmerstraße 22
D-13595 Berlin

Get the information you need and more at info@erreinox.it