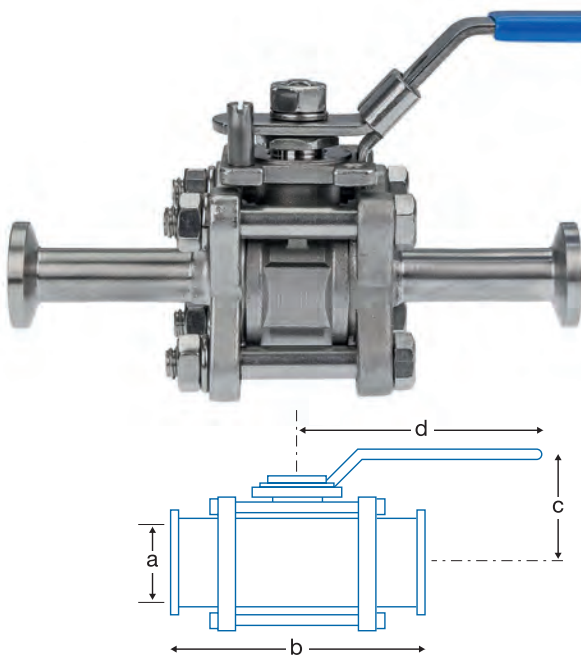# TRI-CLAMP FITTINGS

Easy to assemble and breakdown, Tri-Clamp fittings are ideal for applications requiring an easy method of cleaning to maintain optimum levels of hygiene. Their smooth crevice- and pit-free interiors offer non-contaminating, superior corrosion resistance and long service life.

Pharma Hygiene Products' Tri-Clamp fittings comprise a series of pipes and unisex joints, which are available welded or as separate elements. A gasket is sandwiched between joints and the union is completed with a clamp to create a leak-tight seal.

Our range includes 316L grade stainless steel fittings with outside pipe diameters from ½ inch to 4 inches. Gaskets are available in Silicone, Viton® and EPDM, and full material certification is available on all PHP Tri-Clamp fittings. All product contact surfaces have a surface roughness of 0.8Ra.

Please note that the Tri-Clamp items shown here on pages 22–26 are supplied as individual components. For ball valves or butterfly valves fitted to our range of containers, please see pages 19–20, or contact us for further details.

Tri-Clamp ball valves

Manufactured from 316L grade stainless steel, with a PTFE seal/stem seal, PHP Tri-Clamp ball valves are 100% air tested under water at 100 psi in open and closed positions.
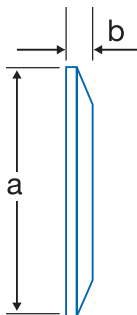
Item code	Nominal pipe size (in)	Flange (mm)	a (mm)	b (mm)	c (mm)	d (mm)
BAL60.5	0.5	25	9.5	132	55	132
BAL60.75	0.75	25	15.9	144	60	131.5
BAL61	1	50.5	22.2	157	69	165
BAL61.5	1.5	50.5	35	183	84	194.3
BAL62	2	64	47.6	199	92	194.3
BAL62.5	2.5	77.5	60.3	240	126.8	252
BAL63	3	91	73	272	136	252
BAL64	4	119	97.4	285.7	242.7	333

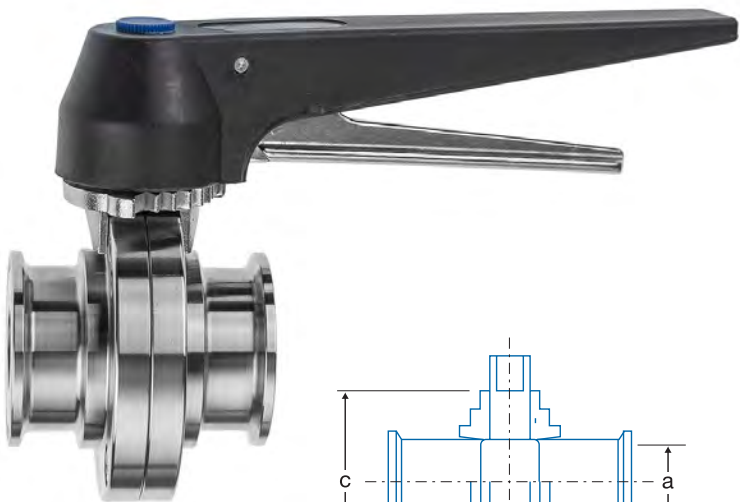| Item code	Nominal pipe size (in)	a (mm)	b (mm)
B21732012	0.5	25	5.6
B21732012	0.75	25	5.6
B21732100	1	50.5	7
B21732100	1.5	50.5	7
B21732200	2	64	7
B21732212	2.5	77.5	7
B21732300	3	91	7
B21732400	4	119	9

Tri-Clamp blank caps

Manufactured from 316L grade stainless steel and to BS4825, PHP Tri-Clamp blank caps are designed to blank off Ferrule Ends, when used with our Tri-Clamp gaskets and clamps. They are crevice- and pit-free and polished throughout.

Tri-Clamp butterfly valves

Manufactured from 316L grade stainless steel, PHP Tri-Clamp plain butterfly valves include a 12-position lockable open or close handle and four bolts to dismantle for easy cleaning.

Item code	Nominal pipe size (in)	Flange (mm)	a (mm)	b (mm)	c (mm)
BF42900100	1	50.5	22.1	33	79
BF42900112	1.5	50.5	34.8	33	85
BF42900200	2	64	47.5	35	105
BF42960212	2.5	77.5	60.2	35	112
BF42980300	3	91	72.9	38	125
BF42900400	4	119	97.4	38	157

Valves supplied as standard with an EPDM seal. Also available with a silicone seal. Please add '-SS' to the end of the part number if a silicone seal is required.

Tri-Clamp butterfly valve gasket seals

Manufactured from silicone, Viton® or EPDM, PHP butterfly valve gasket seals are designed for use with Tri-Clamp butterfly valves.

Item code	Nominal pipe size (in)
GVB*1	1
GVB*1.5	1.5
GVB*2	2
GVB*2.5	2.5
GVB*3	3
GVB*4	4

Note: in this table, replace the '*' with S' if silicone gasket is required, 'V' if Viton® is required or 'E' if EPDM is required.

Tri-Clamp clamps

Manufactured from 316L grade stainless steel, these clamps are supplied with a double hinge for heavy duty use. They are designed to hold the ferrule ends firmly together to create a leak-tight seal.

As a general rule, we would advise that if the clamp, once in use, requires repeated tightening, this may indicate that the gasket should be replaced.
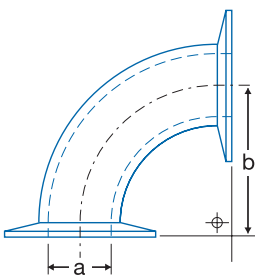
Item code	Nominal clamp size (in)	flange size (mm)
CL1703012	0.5	25
CL1703012	0.75	25
CL1703100	1	50.5
CL1703100	1.5	50.5
CL1703200	2	64
CL1703212	2.5	64
CL1703300	3	91
CL1703400	4	119

Tri-Clamp concentric reducers

Manufactured from 316L grade stainless steel, PHP concentric reducers provide the perfect solution to connecting existing Tri-Clamp connections to newer or changing ones. Available in a range of Tri-Clamp sizes, they have crevice- and pit-free interiors and are polished throughout.

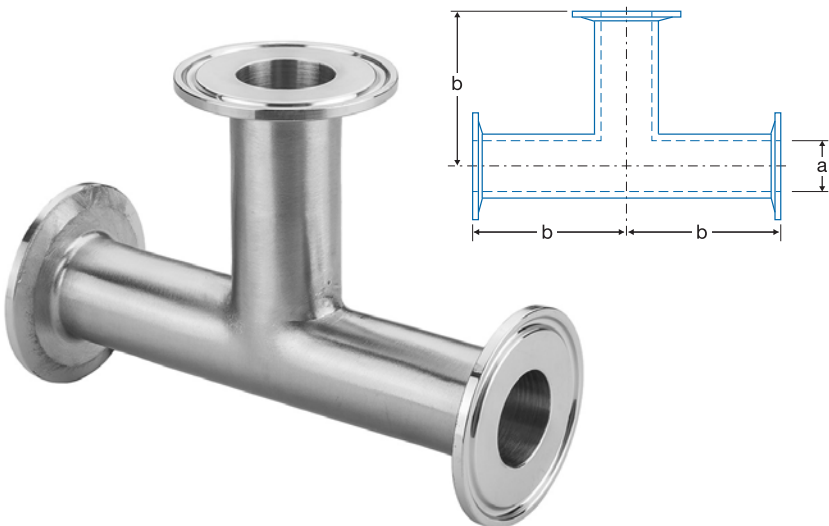| Item code	Nominal size (in)	Item code	Nominal size (in)	Item code	Nominal size (in)
COR61-0.5	1 x 0.5	COR62-1	2 x 1	COR63-2	3 x 2
COR61-0.75	1 x 0.75	COR62-1.5	2 x 1.5	COR63-2.5	3 x 2.5
COR61.5-0.5	1.5 x 0.5	COR62.5-1	2.5 x 1	COR64-1	4 x 1
COR61.5-0.75	1.5 x 0.75	COR62.5-1.5	2.5 x 1.5	COR64-1.5	4 x 1.5
COR61.5-1	1.5 x 1	COR62.5-2	2.5 x 2	COR64-2	4 x 2
COR62-0.5	2 x 0.5	COR63-1	3 x 1	COR64-2.5	4 x 2.5
COR62-0.75	2 x 0.75	COR63-1.5	3 x 1.5	COR64-3	4 x 3

Tri-Clamp elbows

Manufactured from 316L grade stainless steel. PHP 90º Tri-Clamp elbows come with ferrule ends, have crevice- and pit-free interiors and are polished throughout.

Item code	Nominal pipe size (in)	a (mm)	b (mm)
BN22117100	1	22.1	50.8
BN22117150	1.5	34.8	69.9
BN2117200	2	47.5	88.9
BN2117250	2.5	60.2	108
BN2117300	3	72.9	127
BN2117400	4	97.38	168.2

Tri-Clamp equal tees

Manufactured from 316L grade stainless steel, PHP Tri-Clamp equal tees come with ferrule ends, have crevice- and pit-free interiors and are polished throughout.

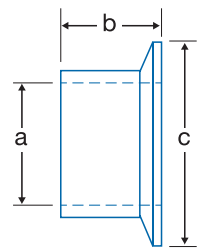| Item code	Nominal pipe size (in)	a (mm)	b (mm)
TEE61	1	25.4	60.3
TEE61.5	1.5	38.1	69.9
TEE62	2	50.8	88.9
TEE62.5	2.5	63.5	88.9
TEE63	3	76.1	95.3
TEE64	4	101.6	114.2

Tri-Clamp ferrule ends

Manufactured from 316L grade stainless steel, PHP Tri-Clamp ferrule ends are supplied polished and ready for welding to our range of stainless steel pipes. Sizes supplied in 21.5mm, 28mm or 44.5mm lengths.
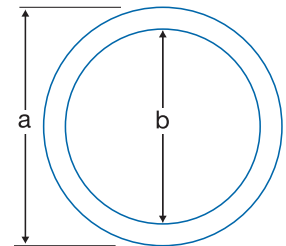
In the item codes, replace * with 'S' for a 21.5mm length, 'M' for a 28mm length, and 'L' for a 44.5mm length.

Item code	Nominal pipe size (in)	a (in)	b (mm)	c (mm)
TR*1722012	0.5	9.5	21.5, 44.5	25
TR*1722034	0.75	15.85	21.5, 44.5	25
TR*1722100	1	22.2	21.5, 28, 44.5	50.5
TR*1722112	1.5	34.9	21.5, 28, 44.5	50.5
TR*1722200	2	47.6	21.5, 28	64
TR*1722212	2.5	60.3	21.5, 28	77.5
TR*1712300	3	73	21.5, 28	91
TR*1722400	4	97.6	21.5, 28	119

Tri-Clamp ferrule end gaskets

Manufactured from silicone, PTFE, Viton and EPDM to BS4825-3, PHP Tri-Clamp ferrule end Gaskets are designed to form a seal between ferrule ends when used in conjunction with our Tri-Clamp clamps. All FDA approved.

Silicone, Viton® or EPDM gaskets

Item code	Nominal pipe size (in)	a (mm)	b (mm)
**1707012	0.5	22	9.52
**1707034	0.75	22	15.87
**1707100	1	50.5	22.2
**1707112	1.5	50.5	34.9
**1707200	2	64	47.6
**1707212	2.5	77.5	60.3
**1707300	3	91	73
**1707400	4	119	97.6

In the item codes shown in the table to the left, replace ** with SS for silicone gaskets, VI for Viton® gaskets or ES for EPDM gaskets. If PTFE Solid material is required, quote the item codes shown in the table to the right.

PTFE Solid gaskets

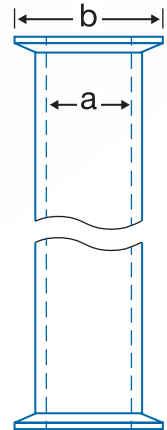| Item code	Nominal pipe size (in)	a (mm)	b (mm)
PTFE6000.5P	0.5	22	9.52
PTFE6000.75P	0.75	22	15.87
PTFE6001P	1	50.5	22.2
PTFE6001.5P	1.5	50.5	34.9
PTFE6002P	2	64	47.6
PTFE6002.5P	2.5	77.5	60.3
PTFE6003P	3	91	73
PTFE6004P	4	119	97.6

Tri-Clamp straight pipes

Manufactured from 316L grade stainless steel, PHP Tri-Clamp straight pipes have crevice- and pit-free interiors and are polished throughout.

Item code	Nominal pipe size (in)	a (in)	b (mm)
STR60.5-***	0.5	9.5	25
STR60.75-***	0.75	15.85	25
STR61-***	1	22.2	50.5
STR61.5-***	1.5	34.9	50.5
STR62-***	2	64	64
STR62.5-***	2.5	60.3	77.5
STR63-***	3	73	91
STR64-***	4	97.6	119

Note: In the item code replace ***
with the required length of pipe.

Tri-Clamp hose tail connectors

Manufactured from 316L grade stainless steel, PHP Tri-Clamp hose tail pipes have crevice- and pit-free interiors and are polished throughout.

Item code	Nominal pipe size (in)	a (in)	b (mm)	c (mm)
HTC21772012	0.5	12.7	32	25
HTC21772034	0.75	19	32	25
HTC21772100	1	26	40	50.5
HTC21772150	1.5	38.1	40	50.5
HTC21772200	2	50.8	60	60
HTC21772250	2.5	63.5	60	77.5
HTC21772300	3	76.2	60	91