

HYGIENIC STAINLESS STEEL CLAMP FITTINGS



Clamp fittings are used extensively throughout the food, beverage, cosmetic and pharmaceutical industries.

The clamp union is crevice free and is

designed

for quick and easy assembly without the use of tools.

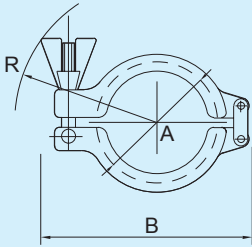


- Associated standards: BS 4825 : Part 3, ASME BPE, ISO 2852, DIN 32676, SMS 3017
- Standard, light duty and high pressure options
- Material certification to BS EN 10204 / DIN 50049 3.1 for all contact parts
- Ferrules part marked with material grade and heat number
- 0.8 Ra standard internal ferrule finishes – 0.4 μm Ra option available
- Wide range of seal materials manufactured from FDA approved polymers including EPDM, Silicone, Nitrile, *Viton[®], PTFE and PTFE encapsulated
- Intrinsically safe clamps available
- Special options include clamp ended ball valves, reducing hoseliners, sightglasses, mesh gaskets and tank ferrules
- ASME BPE and Hastelloy C-22 material options available

Clamp standard - imperial tube - 304

(also available in 316 stainless steel)

5021



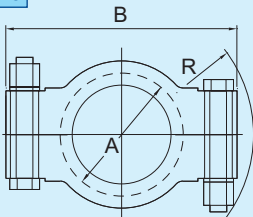
- Double wing nut design as standard for size 10" upwards
- Torque up to 5 Nm
- Light duty options available in 304 & 316 stainless steel

Nom Size	A	B	R
1/2" - 3/4"	25.4	75.0	63.0
1" - 1 1/2"	50.4	102.0	77.0
2"	64.0	123.0	93.0
2 1/2"	77.5	140.0	100.0
3"	91.0	150.0	105.0
3 1/2"	106.0	165.0	110.0
4"	119.0	185.0	119.0
4 1/2"	130.0	191.0	119.0
5"	144.0	215.0	131.0
5 1/2"	155.0	252.0	155.0
6"	167.0	262.0	156.0
6 5/8"	183.0	280.0	164.0
8"	217.0	325.0	184.0
8 5/8"	233.0	333.0	185.0
10"	268.0	382.0	205.0
10 5/8"	286.0	405.0	213.0
12"	319.0	458.0	242.0
12 5/8"	338.0	463.0	243.0

Clamp high pressure - imperial tube - 304

(also available in 316 stainless steel)

5023

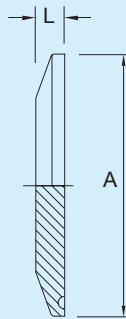


- Torque to 15 Nm if 1/2", 27 Nm > 1/2"

Nom Size	A	B	R
1/2" - 3/4"	25.0	65.0	35.0
1" - 1 1/2"	50.0	103.0	60.0
2"	64.0	113.0	67.0
2 1/2"	77.0	128.0	75.0
3"	91.0	137.0	80.0
3 1/2"	106.0	150.0	88.0
4"	119.0	165.0	93.0
4 1/2"	130.0	174.0	97.0
6"	167.0	240.0	132.0
6 5/8"	183.0	260.0	142.0
8 5/8"	233.0	318.0	168.0

Clamp blank - imperial tube - 316L

5019



- Metric, nominal bore options available
- 0.8 Ra standard internal finish, 0.4 Ra option available

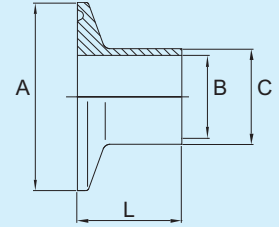
Nom Size	A	L
1/2" - 3/4"	25.4	5.6
1" - 1 1/2"	50.5	7.0
2"	64.0	7.0
2 1/2"	77.5	7.0
3"	91.0	7.0
4"	119.0	9.0
4 1/2"	130.0	9.0
5"	144.4	10.0
6"	167.0	10.0
8"	217.4	10.0
10"	268.0	10.0
12"	319.0	10.0

Clamp ferrule - imperial tube - 316L

(machined from solid)

Options available include:

- Hastelloy C-22
- Forged 1-4"
- Ferrules for DIN tube
- Tank ferrules
- Ferrules to customer specification



• 0.8 Ra standard internal finish, 0.4 Ra option available

Length	Nom Size	A	B	C	L
12.7mm	1/2"	25.4	9.5	12.7	12.7
	3/4"	25.4	15.9	19.0	12.7
	1"	50.5	22.2	25.7	12.7
	1 1/2"	50.5	34.9	38.6	12.7
	2"	64.0	47.6	51.0	12.7
21.5mm	1/2"	25.4	9.52	12.7	21.5
	3/4"	25.4	15.9	19.0	21.5
	1"	50.5	22.2	25.7	21.5
	1 1/2"	50.5	34.9	38.4	21.5
	2"	64.0	47.6	51.0	21.5
	3"	91.0	73.0	76.5	21.5
	4"	119.0	97.6	101.9	21.5
28.0mm	1/2"	25.4	9.5	12.7	28.0
	3/4"	25.4	15.9	19.0	28.0
	1"	50.5	22.2	25.7	28.0
	1 1/2"	50.5	34.9	38.4	28.0
	2"	64.0	47.6	51.0	28.0
	2 1/2"	77.5	60.3	63.8	28.0
	3"	91.0	73.0	76.5	28.0
	4"	119.0	97.6	101.9	28.0
	4 1/2"	130.0	110.3	115.0	28.0
	5"	144.4	123.0	127.0	28.0
	5 1/2"	155.0	135.0	140.6	28.0
	6"	167.0	150.0	154.0	28.0
	6 5/8"	183.0	163.1	169.4	28.0
8"	217.4	200.0	204.0	28.0	
8 5/8"	233.5	213.9	220.6	28.0	
10"	235.0	250.0	254.0	28.0	
10 5/8"	286.1	266.3	273.0	28.0	
12"	319.0	300.8	304.8	28.0	
45.0mm	1/2"	25.4	9.5	12.7	45.0
	3/4"	25.4	15.9	19.0	45.0
	1"	50.5	22.2	25.7	45.0
	1 1/2"	50.5	34.9	38.6	45.0
	2"	64.0	47.6	51.0	45.0
	2 1/2"	77.5	60.3	63.8	45.0
	3"	91.0	73.0	76.5	45.0
	4"	119.0	97.6	101.9	45.0
	4 1/2"	130.0	110.3	115.0	45.0
	5"	144.4	123.0	127.0	45.0
	5 1/2"	155.0	135.8	140.6	45.0
	6"	167.0	150.0	154.0	45.0
	6 5/8"	183.0	163.1	169.3	45.0
	8"	217.4	200.0	204.0	45.0
	8 5/8"	233.5	213.9	220.6	45.0
	10"	268.0	250.0	254.0	45.0
	10 5/8"	286.1	266.3	273.0	45.0
12"	319.0	300.8	304.8	45.0	

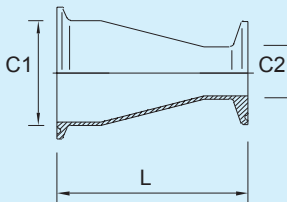
Where the environment is deemed aggressive to either the seal or clamp union, please provide details of the media and operating conditions and our technical department will assist you in the selection of the most appropriate material

NB: Standard and high pressure clamps comply with the requirements of BS 4825 :Part 1 which states that if tubes are to operate above 20 Bar or 150°C then the customer should make this known to the supplier

All data is provided in good faith and is subject to change

Clamp concentric reducers - 316L
(Clamp 316L eccentric reducers also available)

5084

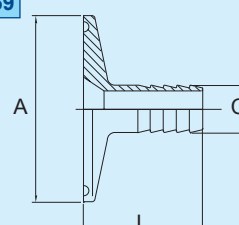


Nom Size		C1	C2	L
Larger	Smaller			
1"	1/2"	25.4	12.7	68.0
1"	3/4"	25.4	19.1	57.0
1 1/2"	1/2"	38.1	12.7	96.0
1 1/2"	3/4"	38.1	19.1	97.0
1 1/2"	1"	38.1	25.4	72.0
2"	1/2"	50.8	12.7	116.0
2"	3/4"	50.8	19.1	103.0
2"	1"	50.8	25.4	92.0
2"	1 1/2"	50.8	38.1	74.0
2 1/2"	1"	63.5	25.4	119.0
2 1/2"	1 1/2"	63.5	38.1	91.0
2 1/2"	2"	63.5	50.8	81.0
3"	1"	76.2	25.4	143.0
3"	1 1/2"	76.2	38.1	117.0
3"	2"	76.2	50.8	93.0
3"	2 1/2"	76.2	63.5	83.0
4"	1"	101.6	25.4	95.0
4"	1 1/2"	101.6	38.1	171.0
4"	2"	101.6	50.8	143.0
4"	2 1/2"	101.6	63.5	118.0
4"	3"	101.6	76.2	98.0

- Other sizes available
- Descaled ID, polished 0.8 Ra OD
- 0.4 Ra finish option available (pharmaceutical)

Clamp hoseliner - 316L
(machined from solid)

5059

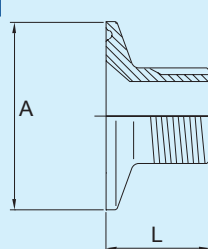


Nom Size	A	C	L
1/2"	25.4	12.7	32.0
3/4"	25.4	19.05	32.0
1"	50.5	25.4	40.0
1 1/2"	50.5	38.1	40.0
2"	64.0	50.8	60.0
2 1/2"	77.5	63.5	70.0
3"	91.0	76.2	80.0
4"	119.0	101.6	100.0

- Other metric and imperial sizes available
- 0.8 Ra standard internal finish, 0.4 Ra option available
- Reducing hoseliners stocked in various sizes including 1/2" x 1/4", 1" x 1/4", 1" x 1/2", 2" x 1/2"

Clamp - BSP male adaptor - 316L
(machined from solid)

5197

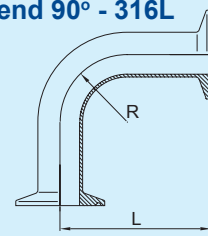


Nom Size		A	L
Clamp	BSP		
1/2"	1/4"	25.4	30.0
1/2"	3/8"	25.4	30.0
1/2"	1/2"	25.4	30.0
1 1/2"	3/8"	50.8	32.0
1 1/2"	1/2"	50.8	36.0
1 1/2"	3/4"	50.8	35.0
1 1/2"	1"	50.8	36.0

- Clamp - BSP female adaptor - 316L also available
- 0.8 Ra standard internal finish, 0.4 Ra option available

Clamp bend 90° - 316L

5072

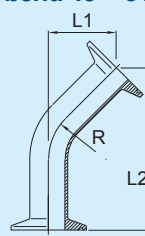


Nom Size	L	R
1/2" - 3/4"	81.5	38.1
1"	86.5	38.1
1 1/2"	106.5	57.2
2"	131.5	76.2
2 1/2"	156.5	95.3
3"	176.5	114.3
4"	216.5	152.4

- 92° & 88° options available
- Descaled ID, polished 0.8 Ra OD
- 0.4 Ra finish option available (pharmaceutical)

Clamp bend 45° - 316L

5074

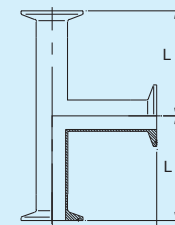


Nom Size	L1	L2	R
1/2" - 3/4"	47.0	113.5	38.1
3/4"	47.0	113.5	38.1
1"	47.2	113.5	38.1
1 1/2"	55.2	133.7	57.2
2"	60.2	144.7	76.2
2 1/2"	72.2	174.7	95.3
3"	73.2	176.7	114.3
4"	92.2	219.7	152.4

- Other sizes available
- Descaled ID, polished 0.8 Ra OD
- 0.4 Ra finish option available (pharmaceutical)

Clamp equal tee - 316L

5080

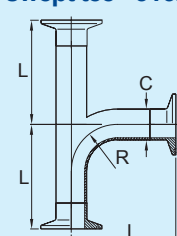


Nom Size	L
1/2"	59.5
3/4"	67.5
1"	65.0
1 1/2"	85.0
2"	110.0
2 1/2"	135.0
3"	155.0
4"	195.0

- 92° & 88° options available
- Descaled ID, polished 0.8 Ra OD
- 0.4 Ra finish option available (pharmaceutical)

Clamp swept tee - 316L

5064

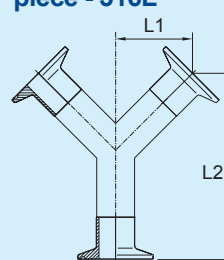


Nom Size	C	L	R
1"	25.4	86.5	38.1
1 1/2"	38.1	106.5	57.2
2"	50.8	131.5	76.2
2 1/2"	63.5	156.5	95.3
3"	76.2	176.5	114.3
4"	101.6	216.5	152.4

- Descaled ID, polished 0.8 Ra OD
- 0.4 Ra finish option available (pharmaceutical)

Clamp 'Y' piece - 316L

5061



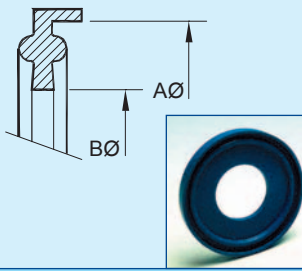
Nom Size	L1	L2
1"	47.0	113.5
1 1/2"	63.0	152.0
2"	78.8	190.3
2 1/2"	94.8	228.8
3"	110.7	267.3
4"	142.5	344.0

- Other sizes available
- 0.8 Ra standard internal finish, 0.4 Ra option available

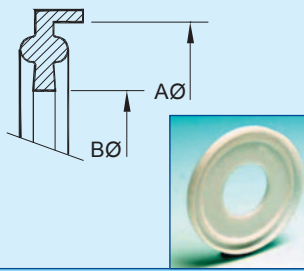
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Axium Process stocks a wide range of seal materials manufactured from FDA approved polymers

Temperature ranges				
PTFE Solid/encapsulated	Nitrile	Silicone/ Platinum Cured Silicone	EPDM	*Viton®
-25°C to +250°C	-15°C to +120°C	-90°C to +200°C	-45°C to +150°C	-30°C to +200°C

Clamp lipped EPDM seal - imperial tube (type A) 5044	Nom Size	A	B
	1"	50.5	22.8
	1½"	50.5	35.5
	2"	64.0	48.2
	2½"	77.5	60.5
	3"	91.0	73.2
	4"	119.0	97.8
	6"	167.0	150.2
8"	217.4	200.2	
10"	268.0	250.2	
12"	319.0	301.0	

- Metric, nominal bore options available
- Unlipped seals are available from ½" to 12"
- Silicone, *Viton®, nitrile material options available

Clamp lipped solid PTFE seal - imperial tube (type A) 5044	Nom Size	A	B
	1"	50.5	22.2
	1½"	50.5	34.9
	2"	64.0	47.6
	2½"	77.5	60.3
	3"	91.0	73.0
	4"	119.0	97.6
	6"	167.0	150.0
8"	217.4	200.0	
10"	268.0	250.0	
12"	319.0	301.0	

- Metric, nominal bore options available
- Unlipped seals are available from ½" to 12"
- PTFE encapsulated, *Viton®, EPDM material options available

Clamp Design	Clamp Unions - Working Pressure Data (in bar @ 150°C)						
	For applications where higher pressures are required than those specified, please consult our technical department. A safety factor of 2 has been applied to the figures illustrated.						
	½" - ¾"	1" - 1½"	2"	2½"	3"	4"	6"
Light Duty Clamp, 304	25	25	25	25	20	17	-
Standard Clamp, 304	50	50	50	50	40	35	30
High Pressure Clamp, 304	75	75	75	75	60	53	45



ASME BPE

Axium Process specialises in fabrication for the pharmaceutical and biotech industries, designing and manufacturing in accordance with ASME BPE principles. The company also supplies a range of tube and pipe fittings and components which are compliant with the ASME BPE Bioprocessing Equipment Standard.

The ASME BPE standard dictates specific conditions for the bioprocessing industry in terms of design, materials, construction, surface finish and inspection.

Axium Process Ltd

Hendy Industrial Estate, Hendy
Swansea, UK
SA4 0XP
Tel: +44 (0) 1792 883882
Fax: +44 (0) 1792 886049
Email: info@axiumprocess.com
Web: www.axiumprocess.com



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