

TRI-CLAMP CONNECTIONS



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Tri-Clamp Connections

S TYPE CLOSURE CLAMP

Standards

ISO 2852, DIN 32676, BS 4825 (ASME-BPE)

Material

Tri-Clamp Coupling, Wing-Nut and Hexagon-Nut from Stainless Steel 304 (1.4301)

Sterilization temperature

150°C

Application

- Normal work
- Phamaceutical and biotechnology industries

Type of construction / Surface quality

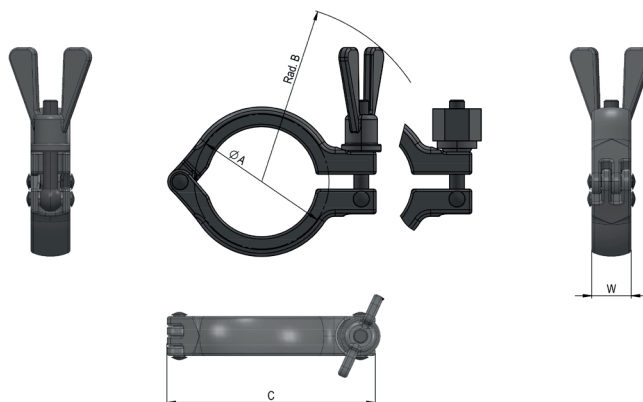
S Type Closure Clamp with V-Profile, for equal pressure over the whole circumference

Options

The Wing-Nut can be exchanged by a Hexagon-Nut

Remarks

- Technical changes reserved
- The maximum operating pressure data are determined independently of the assigned seals (elastomers)



TECHNICAL SPECIFICATIONS OF S TYPE CLOSURE CLAMP

ISO 2852	DIN 32676	BS 4825	A TC-Size (mm)	B Rad. (mm)	C Length (mm)	W Thickness (mm)	Max. Working pressure at 150° C	Max Test pressure	Recommended tightening torque before SIP	Recommended tight- ening torque before SIP Teflon® / PTFE wrapped Viton® **	Item No. Closure Clamp
DN 6/8/10	DIN 4/6/8/*10	1/2" - *3/4"	25,00	63,00	60,00	17,00	25 bars	50 bars	1.5 Nm > 10 bars	1.5 Nm >10bars	101.025.XXX
	DIN 10/15/20		34,00	73,00	69,00	17,00	25 bars	50 bars	1.5 Nm > 10 bars	1.5 Nm > 10 bars	101.034.XXX
DN 8*/10*/15/20/25	DIN 25/32/40	1" - 1 1/2"	50,50	78,00	85,00	17,00	25 bars	50 bars	1.5 Nm > 10 bars	3.0 Nm > 10 bars	101.050.XXX
DN 32/40	DIN 50	2"	64,00	82,00	99,00	17,00	25 bars	60 bars	1.5 Nm > 10 bars	4.0 Nm > 10 bars	101.064.XXX
DN 50		2 1/2"	77,50	89,00	112,00	17,00	25 bars	50 bars	1.5 Nm > 10 bars	4.0 Nm > no datas	101.077.XXX
DN 65	DIN 65	3"	91,00	96,00	126,00	17,00	20 bars	40 bars	1.5 Nm > 10 bars	6.0 Nm > 10 bars	101.091.XXX
DN 80	DIN 80	3 1/2"	106,00	103,00	140,00	17,00	20 bars	40 bars	1.5 Nm > 10 bars	no datas	101.106.XXX
	DIN 100	4"	119,00	110,00	154,00	17,00	17 bars	34 bars	1.5 Nm > 10 bars	no datas	101.119.XXX
DN 100		4 1/2"	130,00	115,00	165,00	17,00	15 bars	30 bars	1.5 Nm > 10 bars	no datas	101.130.XXX
		*6"	167,0	134,00	216,00	25,00	15 bars	30 bars	1.5 Nm > 10 bars	no datas	101.167.XXX

.XXX = 00S for Wing-Nut

.XXX = 00SX for Hexagon-Nut

* Non standard

**The recommended tightening torque is valid when the ferrules are in good condition

Tri-Clamp Connections

3 SEGMENT TYPE CLOSURE CLAMP

Standards

ISO 2852, DIN 32676, BS 4825 (ASME-BPE)

Material

Tri-Clamp Coupling, Wing-Nut and Hexagon-Nut from Stainless Steel 304 (1.4301)

Sterilization temperature

150°C

Application

- Normal work
- Pharmaceutical and biotechnology industries

Type of construction/ Surface quality

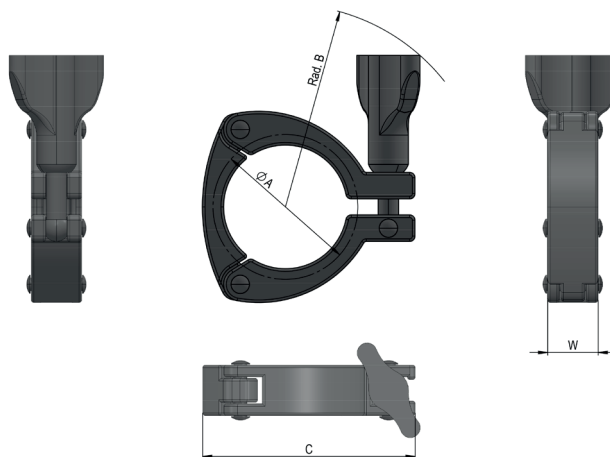
3 Segment-Clamp with V-Profile, for equal pressure over the whole circumference

Options

The Wing-Nut can be exchanged by a Hexagon-Nut

Remarks

- Technical changes reserved
- The maximum operating pressure data are determined independently of the assigned seals (elastomers)



TECHNICAL SPECIFICATIONS OF 3 SEGMENT TYPE CLOSURE CLAMP

ISO 2852	DIN 32676	BS 4825	A TC-Size (mm)	B Rad. (mm)	C Length (mm)	W Thickness (mm)	Max. Working pressure at 150° C	Max Test pressure	Recommended tightening torque before SIP	Recommended tight- ening torque before SIP Teflon® / PTFE wrapped Viton® **	Item No. Closure Clamp
DN 8*/10*/15/20/25	DIN 25/32/40	1" - 1 1/2"	50,50	76,50	81,70	19,00	25 bars	50 bars	1.5 Nm > 10 bars	3.0 Nm >10 bars	101.050.XXX
DN 32/40	DIN 50	2"	64,00	82,00	93,50	19,00	25 bars	50 bars	1.5 Nm > 10 bars	4.0 Nm > 10 bars	101.064.XXX
DN 50		2 1/2"	77,50	87,00	109,00	19,50	25 bars	50 bars	1.5 Nm > 10 bars	4.0 Nm > no datas	101.077.XXX
DN 65	DIN 65	3"	91,00	96,00	126,50	19,50	20 bars	40 bars	1.5 Nm > 10 bars	6.0 Nm > 10 bars	101.091.XXX
	DIN 100	4"	119,00	124,00	150,00	19,50	17 bars	34 bars	1.5 Nm > 10 bars	no datas	101.119.XXX

.XXX = 3SE for Wing-Nut

.XXX = 3SEX for Hexagon-Nut

* Non standard

**The recommended tightening torque is valid when the ferrules are in good condition

Tri-Clamp Connections

SH TYPE CLOSURE CLAMP

Standards

ISO 2852, DIN 32676, BS 4825 (ASME-BPE)

Material

Tri-Clamp Coupling, Wing-Nut and Hexagon-Nut from Stainless Steel 316 (1.4401)

Sterilization temperature

150°C

Application

- Normal work
- Phamaceutical and biotechnology industries

Type of construction/ Surface quality

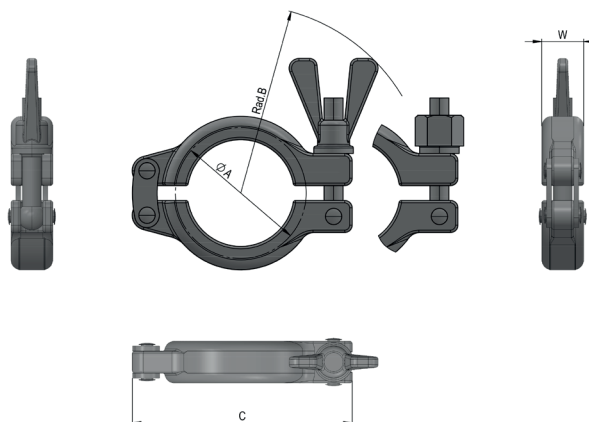
SH Type Closure Clamp with V-Profile, for equal pressure over the whole circumference

Options

The Wing-Nut can be exchanged by a Hexagon-Nut

Remarks

- Technical changes reserved
- The maximum operating pressure data are determined independently of the assigned seals (elastomers)



TECHNICAL SPECIFICATIONS OF SH TYPE CLOSURE CLAMP

ISO 2852	DIN 32676	BS 4825	A TC-Size (mm)	B Rad. (mm)	C Length (mm)	W Thickness (mm)	Max. Working pressure at 150° C	Max Test pressure	Recommended tightening torque before SIP	Recommended tight- ening torque before SIP Téflon® / PTFE wrapped Viton® **	Item No. Closure Clamp
DN 6/8/10	DIN 4/6/8/*10	1/2" - *3/4"	25,00	63,00	75,00	17,00	50 bars	100 bars	1.5 Nm > 10 bars	1.5 Nm >10 bars	101.025.XXX
	DIN 10/15/20		34,00	67,00	85,00	17,00	50 bars	100 bars	1.5 Nm > 10 bars	1.5 Nm > 10 bars	101.034.XXX
DN 8*/10*/15/20/25	DIN 25/32/40	1" - 1 1/2"	50,50	77,00	102,00	17,00	50 bars	100 bars	1.5 Nm > 10 bars	3.0 Nm > 10 bars	101.050.XXX
DN 32/40	DIN 50	2"	64,00	93,00	123,00	17,00	50 bars	100 bars	1.5 Nm > 10 bars	4.0 Nm > 10 bars	101.064.XXX
DN 50		2 1/2"	77,50	100,00	140,00	17,00	50 bars	100 bars	1.5 Nm > 10 bars	4.0 Nm > no datas	101.077.XXX
DN 65	DIN 65	3"	91,00	105,00	150,00	17,00	40 bars	80 bars	1.5 Nm > 10 bars	6.0 Nm > 10 bars	101.091.XXX
DN 80	DIN 80	3 1/2"	106,00	110,00	165,00	17,00	40 bars	80 bars	1.5 Nm > 10 bars	no datas	101.106.XXX
	DIN 100	4"	119,00	119,00	185,00	17,00	35 bars	70 bars	1.5 Nm > 10 bars	no datas	101.119.XXX
DN 100		4 1/2"	130,00	119,00	191,00	17,00	30 bars	60 bars	1.5 Nm > 10 bars	no datas	101.130.XXX
		*5"	144,50	131,00	215,00	19,00	30 bars	60 bars	1.5 Nm > 10 bars	no datas	101.144.XXX
	*DIN 125	5 1/2"	155,00	155,00	252,00	24,00	30 bars	60 bars	1.5 Nm > 10 bars	no datas	101.155.XXX
		*6"	167,00	156,00	262,00	24,00	30 bars	60 bars	1.5 Nm > 10 bars	no datas	101.167.XXX
DN 150	DN 150	6 5/8"	183,00	164,00	280,00	24,00	25 bars	50 bars	pas de données	no datas	101.183.XXX
		8"	217,50	184,00	325,00	24,00	20 bars	40 bars	pas de données	no datas	101.217.XXX
DN 200	DN 200	8 5/8"	233,50	185,00	333,00	24,00	20 bars	40 bars	pas de données	no datas	101.233.XXX
	*DN 250	*10"	268,00	213,00	382,00	24,00	16 bars	32 bars	pas de données	no datas	101.268.XXX
	*DN 300	12"	319,00	242,00	458,00	24,00	10 bars	20 bars	pas de données	no datas	101.319.XXX
DN 300		12 5/8"	338,50	243,00	463,00	24,00	10 bars	20 bars	pas de données	no datas	101.338.XXX

.XXX = SHD for Wing-Nut

.XXX = SHDX for Hexagon-Nut

* Non standard

**The recommended tightening torque is valid when the ferrules are in good condition

Tri-Clamp Connections

SH TYPE (DOUBLE BOLTED) CLOSURE CLAMP

Standards

ISO 2852, DIN 32676, BS 4825 (ASME-BPE)

Material

Tri-Clamp Coupling, Wing-Nut and Hexagon-Nut from Stainless Steel 316 (1.4401)

Sterilization temperature

150°C

Application

- Normal / Very resistant
- Pharmaceutical and biotechnology industries

Type of construction/ Surface quality

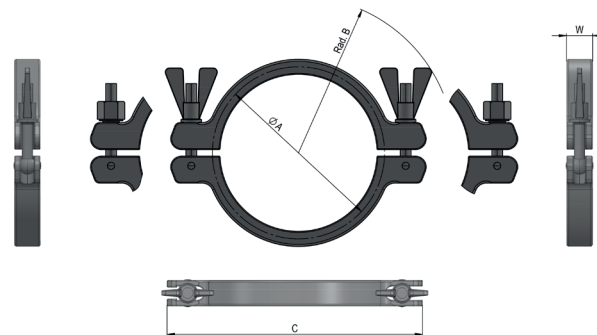
SH Type (Double Bolted) Closure Clamp with V-Profile, for equal pressure over the whole circumference

Options

The Wing-Nut can be exchanged by a Hexagon-Nut

Remarks

- Technical changes reserved
- The maximum operating pressure data are determined independently of the assigned seals (elastomers)



TECHNICAL SPECIFICATIONS OF SH TYPE (DOUBLE BOLTED) CLOSURE CLAMP

ISO 2852	DIN 32676	BS 4825	A TC-Size (mm)	B Rad. (mm)	C Length (mm)	W Thickness (mm)	Max. Working pressure at 150° C	Max Test pressure	Recommended tightening torque before SIP	Recommended tightening torque before SIP Teflon® / PTFE wrapped Viton® **	Item No. Closure Clamp
	*DIN 125	5 1/2"	155,00	148,00	265,00	24,00	30 bars	60 bars	1.5 Nm > 10 bars	pas de données	101.155.XXX
		*6"	167,00	152,00	277,00	24,00	30 bars	60 bars	1.5 Nm > 10 bars	pas de données	101.167.XXX
DN 150	DN 150	6 5/8"	183,00	164,00	297,00	24,00	25 bars	50 bars	pas de données	pas de données	101.183.XXX
		8"	217,00	184,00	332,00	24,00	20 bars	40 bars	pas de données	pas de données	101.217.XXX
DN 200	DN 200	8 5/8"	233,00	185,00	333,00	24,00	20 bars	40 bars	pas de données	pas de données	101.233.XXX
	*DN 250	*10"	268,00	205,00	382,00	24,00	16 bars	32 bars	pas de données	pas de données	101.268.XXX
DN 250		10 5/8"	286,00	213,00	405,00	24,00	16 bars	30 bars	pas de données	pas de données	101.286.XXX
	*DN 300	12"	319,00	242,00	458,00	24,00	10 bars	20 bars	pas de données	pas de données	101.319.XXX
DN 300		12 5/8"	338,50	243,00	463,00	24,00	10 bars	20 bars	pas de données	pas de données	101.338.XXX

.XXX = SHD for Wing-Nut

.XXX = SHDX for Hexagon-Nut

* Non standard

**The recommended tightening torque is valid when the ferrules are in good condition.

Tri-Clamp Connections

SSH TYPE (HEAVY DUTY) CLOSURE CLAMP

Standards

ISO 2852, DIN 32676, BS 4825 (ASME-BPE)

Material

- Tri-Clamp Coupling from Stainless Steel 316 (1.4401)
- Brass Hexagon nuts, on request Stainless Steel 304 (1.4301)
- Hexagon nuts

Sterilization temperature

150°C

Application

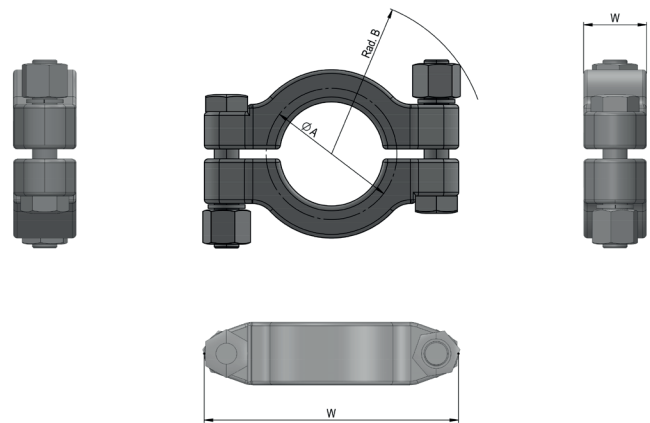
- Robust / Very resistant
- Pharmaceutical and biotechnology industries

Type of construction/ Surface quality

SSH Type (Heavy Duty) Closure Clamp with V-Profile, for equal pressure over the whole circumference

Remarks

- Technical changes reserved
- The maximum operating pressure data are determined independently of the assigned seals (elastomers)



TECHNICAL SPECIFICATIONS OF SSH TYPE (HEAVY DUTY) CLOSURE CLAMP

ISO 2852	DIN 32676	BS 4825	A TC-Size (mm)	B Rad. (mm)	C Length (mm)	W Thickness (mm)	Max. Working pressure at 150° C	Max Test pressure	Recommended tightening torque before SIP	Recommended tight- ening torque before SIP Téflon® / PTFE wrapped Viton® **	Item No. Closure Clamp
DIN 6/8/10	DIN 4/6/8/*10	1/2" - *3/4"	25,00	37,00	65,00	16,00	75 bars	150 bars	1.5 Nm > 10 bars	1.5 Nm >10 bars	101.025.SSH
DN 8*/10*/15/20/25	DIN 25/32/40	1" - 1 1/2"	50,50	64,00	103,00	26,00	75 bars	150 bars	1.5 Nm > 10 bars	2.0 Nm > 10 bars	101.050.SSH
DN 32/40	DIN 50	2"	64,00	73,00	113,00	26,00	75 bars	150 bars	1.5 Nm > 10 bars	4.0 Nm > 10 bars	101.064.SSH
DN 50		2 1/2"	77,50	80,00	128,00	26,00	75 bars	150 bars	1.5 Nm > 10 bars	4.0 Nm > no datas	101.077.SSH
DN 65	DIN 65	3"	91,00	86,00	137,00	26,00	60 bars	120 bars	1.5 Nm > 10 bars	6.0 Nm > 10 bars	101.091.SSH
DN 80	DIN 80	3 1/2"	106,00	94,00	150,00	26,00	60 bars	120 bars	1.5 Nm > 10 bars	no datas	101.106.SSH
	DIN 100	4"	119,00	102,00	165,00	26,00	53 bars	105 bars	1.5 Nm > 10 bars	no datas	101.119.SSH
DN 100		4 1/2"	130,00	105,00	174,00	26,00	45 bars	90 bars	1.5 Nm > 10 bars	no datas	101.130.SSH
		*6"	167,00	132,00	240,00	26,00	45 bars	90 bars	1.5 Nm > 10 bars	no datas	101.167.SSH
DN 150	DN 150	6 5/8"	183,00	142,00	260,00	26,00	38 bars	75 bars	pas de données	no datas	101.183.SSH
DN 200	DN 200	8 5/8"	233,00	168,00	318,00	26,00	30 bars	60 bars	pas de données	no datas	101.233.SSH

* Non standard

**The recommended tightening torque is valid when the ferrules are in good condition.

Tri-Clamp Connections

3 SEGMENT TYPE SAFETY CLOSURE CLAMP

Standards

ISO 2852, DIN 32676, BS 4825 (ASME-BPE)

Material

Tri-Clamp Coupling, Wing-Nut and Hexagon-Nut from Stainless Steel 304 (1.4301)

Sterilization temperature

150°C

Application

- Normal work
- Pharmaceutical and biotechnology industries
- This collar is designed for a safe disassembly
- Eye Bolt can not tip when the fitting is subjected to internal pressures

Type of construction/ Surface quality

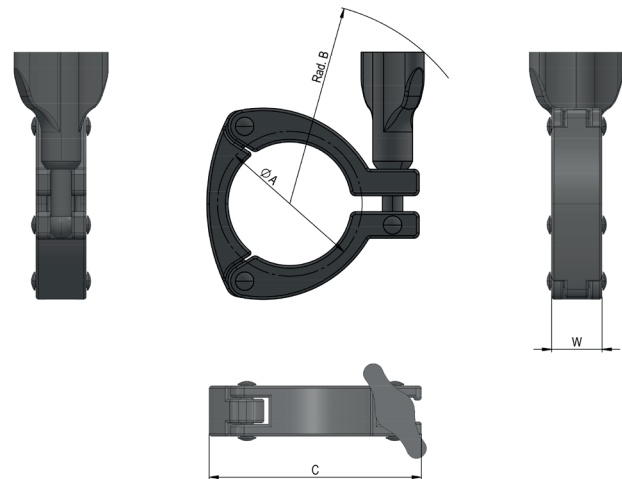
3 Segment Type SAFETY Closure Clamp with V-Profile, for equal pressure over the whole circumference

Options

The Wing-Nut can be exchanged by a Hexagon-Nut

Remarks

- Technical changes reserved
- The maximum operating pressure data are determined independently of the assigned seals (elastomers)



TECHNICAL SPECIFICATIONS OF 3 SEGMENT TYPE SAFETY CLOSURE CLAMP

ISO 2852	DIN 32676	BS 4825	A TC-Size (mm)	B Rad. (mm)	C Length (mm)	W Thickness (mm)	Max. Working pressure at 150° C	Max Test pressure	Recommended tightening torque before SIP	Recommended tightening torque before SIP Teflon® / PTFE wrapped Viton® **	Item No. Closure Clamp
DN 8*/10*/15/20/25	DIN 25/32/40	1" - 1 1/2"	50,50	76,50	81,70	19,00	25 bars	50 bars	1.5 Nm > 10 bars	3.0 Nm > 10 bars	101.050.XXX
DN 32/40	DIN 50	2"	64,00	82,00	93,50	19,00	25 bars	50 bars	1.5 Nm > 10 bars	4.0 Nm > 10 bars	101.064.XXX
DN 50		2 1/2"	77,50	87,00	109,00	19,50	25 bars	50 bars	1.5 Nm > 10 bars	4.0 Nm > no datas	101.077.XXX
DN 65	DIN 65	3"	91,00	96,00	126,50	19,50	20 bars	40 bars	1.5 Nm > 10 bars	6.0 Nm > 10 bars	101.091.XXX
	DIN 100	4"	119,00	124,00	150,00	19,50	17 bars	34 bars	1.5 Nm > 10 bars	no datas	101.119.XXX

.XXX = SAF3 for Wing-Nut

.XXX = SAF3X for Hexagon-Nut

* Non standard

**The recommended tightening torque is valid when the ferrules are in good condition

Connexions Tri-Clamp

SH TYPE SAFETY CLOSURE CLAMP

Standards

ISO 2852, DIN 32676, BS 4825 (ASME-BPE)

Material

Tri-Clamp Coupling, Wing-Nut and Hexagon-Nut from Stainless Steel 316 (1.4401)

Sterilization temperature

150°C

Application

- Normal / Very resistant
- Pharmaceutical and biotechnology industries
- This collar is designed for a safe disassembly
- Eye Bolt can not tip when the fitting is subjected to internal pressures

Type of construction/ Surface quality

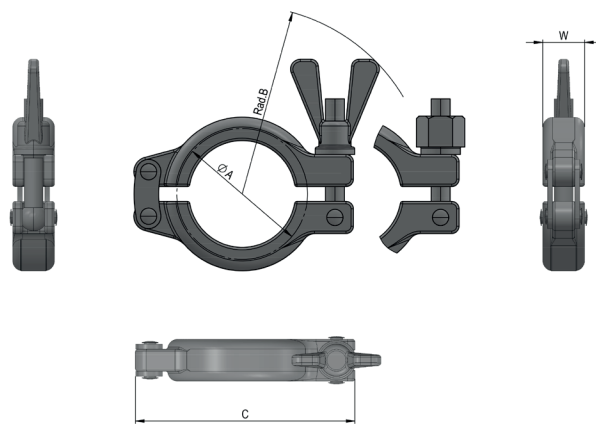
SH Type SAFETY Closure Clamp with V-Profile, for equal pressure over the whole circumference

Options

The Wing-Nut can be exchanged by a Hexagon-Nut

Remarks

- Technical changes reserved
- The maximum operating pressure data are determined independently of the assigned seals (elastomers)



TECHNICAL SPECIFICATIONS OF SH TYPE SAFETY CLOSURE CLAMP

ISO 2852	DIN 32676	BS 4825	A TC-Size (mm)	B (SAF) Rad. (mm)	C (SAF) Length. (mm)	B (SAFX) Rad. (mm)	C (SAFX) Length. (mm)	W Thickness (mm)	Max. Working pressure at 150° C	Max Test pressure	Recommended tightening torque before SIP**	Recommended tightening torque before SIP Téflon® / PTFE wrapped Viton® **	Item No. Closure Clamp
DN 6/8/10	DIN 4/6/8/*10	1/2" - *3/4"	25,00	63,00	75,00	53,00	65,00	17,00	50 bars	100 bars	1.5 Nm > 10 bars	1.5 Nm >10 bars	101.025.XXX
	DIN 10/15/20		34,00	67,00	85,00	57,00	75,00	17,00	50 bars	100 bars	1.5 Nm > 10 bars	1.5 Nm > 10 bars	101.034.XXX
DN 8*/10*/15/20/25	DIN 25/32/40	1" - 1 1/2"	50,50	77,00	102,00	72,00	92,00	17,00	50 bars	100 bars	1.5 Nm > 10 bars	3.0 Nm > 10 bars	101.050.XXX
DN 32/40	DIN 50	2"	64,00	93,00	123,00	83,00	113,00	17,00	50 bars	100 bars	1.5 Nm > 10 bars	4.0 Nm > 10 bars	101.064.XXX
DN 50		2 1/2"	77,50	100,00	140,00	90,00	130,00	17,00	50 bars	100 bars	1.5 Nm > 10 bars	4.0 Nm >no datas	101.077.XXX
DN 65	DIN 65	3"	91,00	105,00	150,00	95,00	140,00	17,00	40 bars	80 bars	1.5 Nm > 10 bars	6.0 Nm > 10 bars	101.091.XXX
DN 80	DIN 80	3 1/2"	106,00	110,00	165,00	100,00	155,00	17,00	40 bars	80 bars	1.5 Nm > 10 bars	no datas	101.106.XXX
	DIN 100	4"	119,00	119,00	185,00	109,00	175,00	17,00	35 bars	70 bars	1.5 Nm > 10 bars	no datas	101.119.XXX

.XXX = SAF for Wing-Nut

.XXX = SAFX for Hexagon-Nut

* Non standard

**The recommended tightening torque is valid when the ferrules are in good condition

Connexions Tri-Clamp

PLASTIC TRI-CLAMP CLOSURE CLAMP

Standards

ASME-BPE (2009)

Material

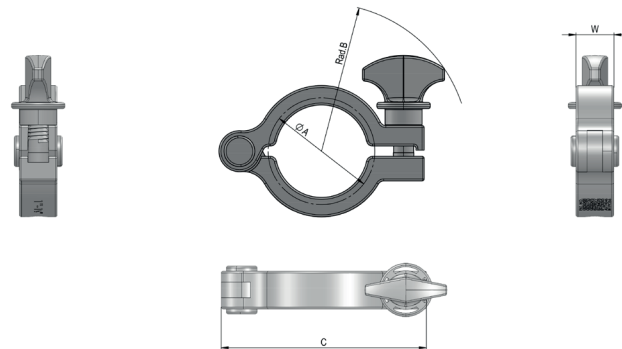
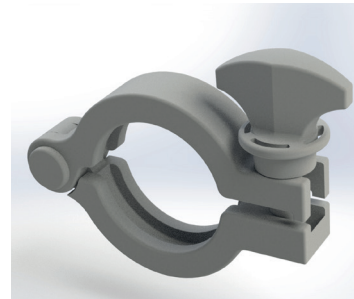
White Nylon reinforced with fiberglass

Application

Plastic collar designed to meet the needs of the pharmaceutical and biotechnology laboratories

Packaging unit

10pcs



DIMENSIONS OF PLASTIC TRI-CLAMP CLOSURE CLAMP

DIMENSION		A (mm)	AD (mm)	ID (mm)	Item No.
According to BS 4825 / ASME-BPE 1997					
OD	1/2" - 3/4"	25,00	12,70	9,40	101.025.BC
OD	1" - 1 1/2"	50,50	25,40	22,10	101.050.BC
OD	2"	64,00	50,80	47,50	101.064.BC
OD	2 1/2"	77,50	63,50	60,20	101.077.BC
OD	3"	91,00	76,20	72,90	101.091.BC
OD	4"	119,00	101,60	97,40	101.119.BC
OD	6"	167,00	152,40	146,86	101.167.BC
OD	8"	217,50	203,20	198,00	101.217.BC

Tri-Clamp Connections

EASY-OPEN PLASTIC TRI-CLAMP CLOSURE CLAMP

Standards

ASME-BPE (2009)

Material

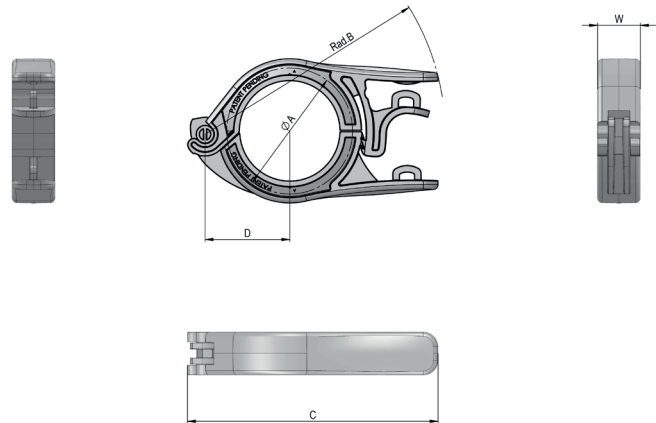
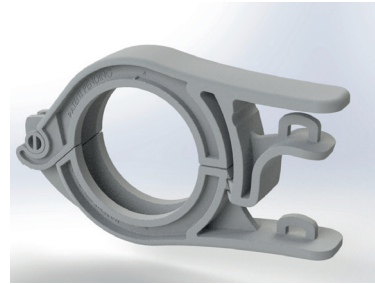
Nylon (white, orange or blue) reinforced with fiberglass

Application

Plastic collar designed to meet the needs of the pharmaceutical and biotechnology laboratories.

Packaging unit

10pcs



DIMENSIONS OF PLASTIC TRI-CLAMP CLOSURE CLAMP

DIMENSION		A (mm)	AD (mm)	ID (mm)	N° d'article
According to BS 4825 / ASME-BPE 1997					
OD	1/2" - 3/4"	25,00	12,70	9,40	101.025.XXXX
OD	1" - 1 1/2"	50,50	25,40	22,10	101.050.XXXX
.XXXXX = PLWHI for white color .XXXXX = PLORA for orange color .XXXXX = PLBLU for blue color					

Tri-Clamp Connections

TRI-CLAMP FERRULE 1/2

Standards

ISO 2852 with tube connection according to ISO 1127

Material

Stainless Steel 1.4435 BN2 (Fe < 0,5%) according to EN 10088-1

Sterilization temperature

150°C

Application

Pharmaceutical and biotechnology industries

Type of construction/ Surface quality

- Inner and outer surface: glossy finish
- Ra internal < 0,4 µm, Ra external < 0.8 µm

Hygienic tube class

H 3 / H 4 according to DIN 11866

Marking

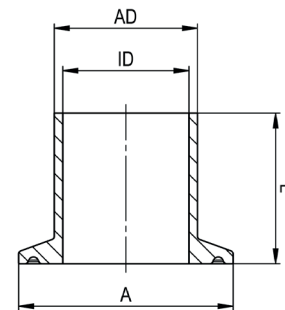
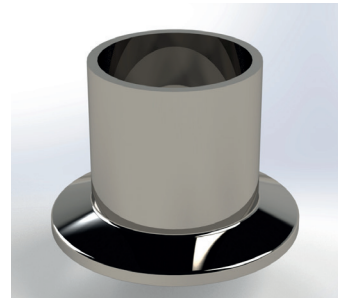
Dimension, material, casting number

Certificates

Certificate according to EN 10204-3.1

Options

Electropolishing (EP)



Remarks

Technical changes reserved

DIMENSIONS OF TRI-CLAMP FERRULE

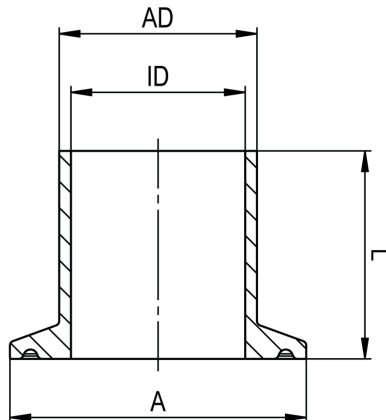
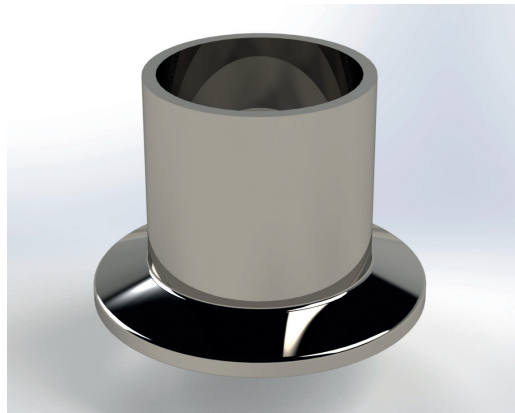
DIMENSION	A (mm)	AD (mm)	ID (mm)	L (mm)	Item No.	
According to ISO 2852 / ISO 1127						
ISO DN	6	25,00	10,20	7,00	28,50	102.I-006.025.B.XX
ISO DN	8	25,00	13,50	10,30	28,50	102.I-008.025.B.XX
ISO DN	8	50,50	13,50	10,30	21,60	102.I-008.050.A.XX
ISO DN	10	25,00	17,20	14,00	28,50	102.I-010.025.B.XX
ISO DN	10	50,50	17,20	14,00	21,60	102.I-010.050.A.XX
ISO DN	10	50,50	17,20	14,00	28,50	102.I-010.050.B.XX
ISO DN	15	50,50	21,30	18,10	21,60	102.I-015.050.A.XX
ISO DN	15	50,50	21,30	18,10	28,50	102.I-015.050.B.XX
ISO DN	20	50,50	26,90	22,90	21,60	102.I-020.050.A.04.XX
ISO DN	20	50,50	26,90	22,90	28,50	102.I-020.050.B.04.XX
ISO DN	20/1	50,50	26,90	23,70	21,60	102.I-020.050.A.XX
ISO DN	20/1	50,50	26,90	23,70	28,50	102.I-020.050.B.XX
ISO DN	25	50,50	33,70	28,70	21,60	102.I-025.050.04.A.XX
ISO DN	25	50,50	33,70	28,70	28,50	102.I-025.050.04.B.XX
ISO DN	25/1	50,50	33,70	29,70	21,60	102.I-025.050.A.XX
ISO DN	25/1	50,50	33,70	29,70	28,50	102.I-025.050.B.XX
ISO DN	32	64,00	42,40	38,40	21,60	102.I-032.064.A.XX
ISO DN	32	64,00	42,40	38,40	28,50	102.I-032.064.B.XX
* Non standard .XX = EP, Electropolishing L = 21.60 mm => standard L = 28.60 mm => for orbital welding						

Tri-Clamp Connections

TRI-CLAMP FERRULE 2/2

DIMENSIONS OF TRI-CLAMP FERRULE

DIMENSION	A (mm)	AD (mm)	ID (mm)	L (mm)	Item No.	
According to ISO 2852 / ISO 1127						
ISO DN	40	64,00	48,30	44,30	21,60	102.I-040.064.A.XX
ISO DN	40	64,00	48,30	44,30	28,50	102.I-040.064.B.XX
ISO DN	50	77,50	60,30	56,30	21,60	102.I-050.077.A.XX
ISO DN	50	77,50	60,30	56,30	28,50	102.I-050.077.B.XX
ISO DN	65	91,00	76,10	72,10	21,60	102.I-065.091.A.XX
ISO DN	65	91,00	76,10	72,10	28,50	102.I-065.091.B.XX
ISO DN	80	106,00	88,90	84,30	21,60	102.I-080.106.A.XX
ISO DN	80	106,00	88,90	84,30	28,50	102.I-080.106.B.XX
ISO DN	100	130,00	114,30	109,70	21,60	102.I-100.130.A.XX
ISO DN	150	183,00	168,30	163,10	28,50	102.I-150.183.B.XX
ISO DN	200	233,50	219,10	213,90	28,50	102.I-200.233.B.XX
ISO DN	*250	286,10	273,10	266,30	28,50	102.I-250.286.B.XX
ISO DN	*300	338,50	323,90	315,90	28,50	102.I-300.338.B.XX
* Non standard .XX = EP, Electropolishing L = 21.60 mm => standard L = 28.60 mm => for orbital welding						



Tri-Clamp Connections

TRI-CLAMP FERRULE

Standards

DIN 32676 with tube connection according to DIN 11850

Material

Stainless Steel 1.4435 BN2 (Fe < 0,5%) according to EN 10088-1

Sterilization temperature

150°C

Application

Pharmaceutical and biotechnology industries

Type of construction/ Surface quality

- Inner and outer surface: glossy finish
- Ra internal < 0,4 µm, Ra external < 0.8 µm

Hygienic tube class

H 3 / H 4 according to DIN 11866

Marking

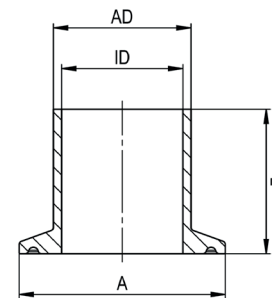
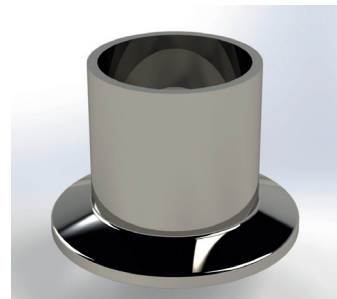
Dimension, material, casting number

Certificates

Certificate according to EN 10204-3.1

Options

Electropolishing (EP)



Remarks

Technical changes reserved

DIMENSIONS OF TRI-CLAMP FERRULE

DIMENSION		A (mm)	AD (mm)	ID (mm)	L (mm)	Item No.
According to DIN 32676 / DIN 11850						
DIN DN	*4	25,00	6,00	4,00	28,50	102.D-004.025.B.XX
DIN DN	*6	25,00	8,00	6,00	28,50	102.D-006.025.B.XX
DIN DN	*8	25,00	10,00	8,09	28,50	102.D-008.025.B.XX
DIN DN	*10	25,00	12,00	10,00	28,50	102.D-010.025.B.XX
DIN DN	10	34,00	13,00	10,00	28,50	102.D-010.034.B.XX
DIN DN	15	34,00	19,00	16,00	28,50	102.D-015.034.B.XX
DIN DN	20	34,00	23,00	20,00	28,50	102.D-020.034.B.XX
DIN DN	25	50,50	29,00	26,00	28,50	102.D-025.050.B.XX
DIN DN	32	50,50	35,00	32,00	28,50	102.D-032.050.B.XX
DIN DN	40	50,50	41,00	38,00	28,50	102.D-040.050.B.XX
DIN DN	50	64,00	53,00	50,00	28,50	102.D-050.064.B.XX
DIN DN	65	91,00	70,00	66,00	28,50	102.D-065.091.B.XX
DIN DN	80	106,00	85,00	81,00	28,50	102.D-080.106.B.XX
DIN DN	100	119,00	104,00	100,00	28,50	102.D-100.119.B.XX
DIN DN	125	155,00	129,00	125,00	28,50	102.D-125.155.B.XX
DIN DN	150	183,00	154,00	150,00	28,50	102.D-150.183.B.XX
DIN DN	200	233,50	204,00	200,00	28,50	102.D-200.233.B.XX
* Non standard .XX = EP, Electropolishing L = 28.60 mm => for orbital welding						

Tri-Clamp Connections

TRI-CLAMP FERRULE 1/2

Standards

BS 4825 with tube connection according to ASME-BPE 1997

Material

Stainless Steel 1.4435 BN2 (Fe < 0,5%) according to EN 10088-1

Sterilization temperature

150°C

Application

Pharmaceutical and biotechnology industries

Type of construction/ Surface quality

- Inner and outer surface: glossy finish
- Ra internal < 0,4 µm, Ra external < 0.8 µm

Hygienic tube class

H 3 / H 4 according to DIN 11866

Marking

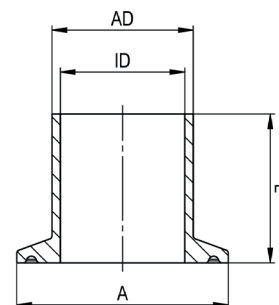
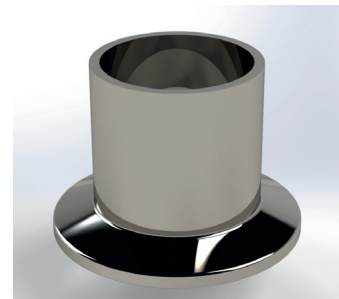
Dimension, material, casting number

Certificates

Certificate according to EN 10204-3.1

Options

Electropolishing (EP)



Remarks

Technical changes reserved

DIMENSIONS OF TRI-CLAMP FERRULE

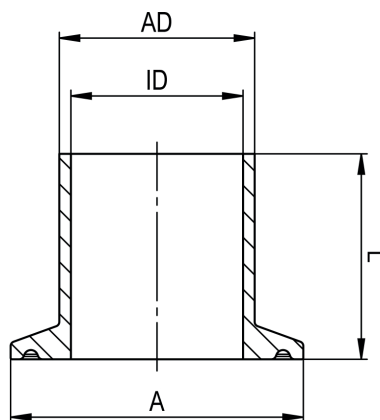
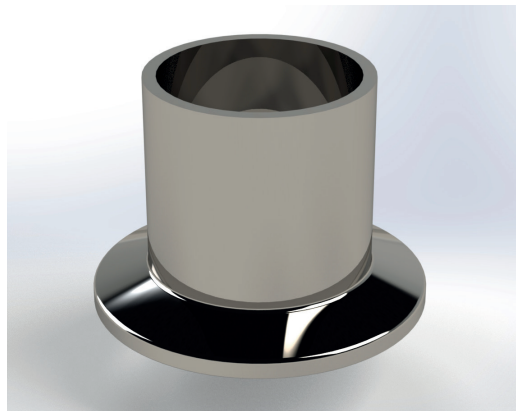
DIMENSION		A (mm)	AD (mm)	ID (mm)	L (mm)	Item No.
According to BS 4825 / ASME-BPE 1997						
OD	1/4"	25,00	6,35	4,57	28,50	102.A-025.025.B.XX
OD	3/8"	25,00	9,53	7,75	28,50	102.A-038.025.B.XX
OD	1/2"	25,00	12,70	9,40	28,50	102.A-050.025.B.XX
OD	1/2"	50,00	12,70	9,40	28,50	102.A-050.050.B.XX
OD	3/4"	25,00	19,05	15,75	21,60	102.A-075.025.A.XX
OD	3/4"	25,00	19,05	15,75	28,50	102.A-075.025.B.XX
OD	3/4"	50,00	19,05	15,75	21,60	102.A-075.050.A.XX
OD	3/4"	50,00	19,05	15,75	28,50	102.A-075.050.B.XX
OD	1"	50,50	25,40	22,10	21,60	102.A-100.050.A.XX
OD	1"	50,50	25,40	22,10	28,50	102.A-100.050.B.XX
OD	1 1/2"	50,50	38,10	34,80	21,60	102.A-150.050.A.XX
OD	1 1/2"	50,50	38,10	34,80	28,50	102.A-150.050.B.XX
OD	2"	64,00	50,80	47,50	21,60	102.A-200.064.A.XX
OD	2"	64,00	50,80	47,50	28,50	102.A-200.064.B.XX
OD	2 1/2"	77,50	63,50	60,20	21,60	102.A-250.077.A.XX
OD	2 1/2"	77,50	63,50	60,20	28,50	102.A-250.077.B.XX
OD	3"	91,00	76,20	72,90	21,60	102.A-300.091.A.XX
OD	3"	91,00	76,20	72,90	28,50	102.A-300.091.B.XX
OD	*3 1/2"	106,00	88,90	84,30	21,60	102.A-350.106.A.XX
OD	*3 1/2"	106,00	88,90	84,30	28,50	102.A-350.106.B.XX
* Non standard .XX = EP, Electropolishing L = 21.60 mm => standard L = 28.60 mm => for orbital welding						

Tri-Clamp Connections

TRI-CLAMP FERRULE 2/2

DIMENSIONS OF TRI-CLAMP FERRULE

DIMENSION		A (mm)	AD (mm)	ID (mm)	L (mm)	Item No.
According to BS 4825 / ASME-BPE 1997						
OD	4"	119,00	101,60	97,40	21,60	102.A-400.119.A.XX
OD	4"	119,00	101,60	97,40	28,50	102.A-400.119.B.XX
OD	*4 1/2"	130,00	114,30	109,10	21,60	102.A-450.130.A.XX
OD	*4 1/2"	130,00	114,30	109,10	28,50	102.A-450.130.B.XX
OD	5"	144,50	127,00	120,00	21,60	102.A-500.144.A.XX
OD	5"	144,50	127,00	120,00	28,50	102.A-500.144.B.XX
OD	6"	167,00	152,40	146,86	21,60	102.A-600.167.A.XX
OD	6"	167,00	152,40	146,86	28,50	102.A-600.167.B.XX
OD	*8"	217,50	205,00	198,00	21,60	102.A-800.217.A.XX
OD	*8"	217,50	205,00	198,00	28,50	102.A-800.217.B.XX
OD	*10"	268,00	254,00	250,00	28,50	102.A-1000.268.B.XX
OD	*12"	319,00	304,80	300,80	28,50	102.A-1200.319.B.XX
* Non standard .XX = EP, Electropolishing L = 21.60 mm => standard L = 28.60 mm => for orbital welding						



Tri-Clamp Connections

TRI-CLAMP GASKET

Standards

ISO 2852

Material

Virgin PTFE (Polytetrafluorethylen), PTFE with core in FPM, Viton®, Vinylidenfluorid Polymerase and Hexafluorpropylene Platinum cured Silicone, EPDM Ethyl-Propylene-Dien-Rubber, Viton®

Sterilization temperature

EPDM: 132°C (almost at 150°C), Silicone, Viton® and Teflon® (PTFE): 150°C

Application

Pharmaceutical and biotechnology industries

Type of construction/ Surface quality

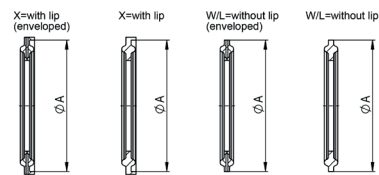
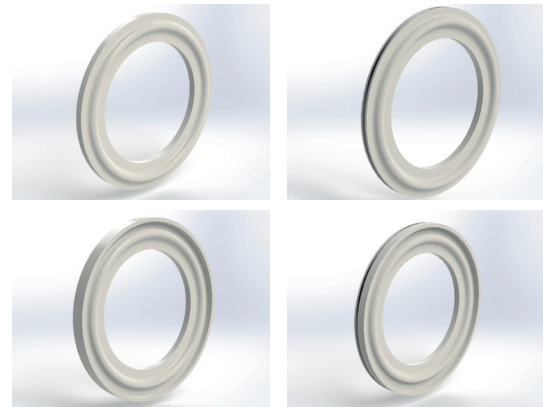
Smooth, non-porous surface, free of blind spots, edges free of burrs

Marking

Marking on packaged units

Certificates

- Incl. Certificate of conformity FDA-21 CFR 177.2600 for Elastomers
- Incl. Certificate of conformity FDA-21 CFR 177.1550 for PTFE
- Incl. USP Class VI
- Animal Derived Ingredients free (ADI) and are therefore BSE/TSE free with respect to source, manufacturing and treatment according to RoHS and REACH guidelines



Remarks

- Technical changes reserved
- Viton® and Teflon® are registered trademarks of Dupont Dow Elastomers
- Lip-free PTFE seals

DIMENSIONS OF TRI-CLAMP SEALS

DIMENSION		A (mm)	Item No. Viton®	Item No. Silicone	Item No. EPDM	Item No. Téflon® / PTFE	Item No. Téflon® / PTFE
Selon ISO 2852 / ISO 1127							
ISO DN	8	22,00	203.I-008.025.VIT	203.I-008.025.SIL	203.I-008.025.EPD	203.I-008.025.TEF	203.I-008.025.TEN
ISO DN	*8	34,00	203.I-008.034.VIT	203.I-008.034.SIL	203.I-008.034.EPD	203.I-008.034.TEF	203.I-008.034.TEN
ISO DN	8	50,50	203.I-008.050.VIT	203.I-008.050.SIL	203.I-008.050.EPD	203.I-008.050.TEF	203.I-008.050.TEN
ISO DN	10	22,00	203.I-010.025.VIT	203.I-010.025.SIL	203.I-010.025.EPD	203.I-010.025.TEF	203.I-010.025.TEN
ISO DN	*10	34,00	203.I-010.034.VIT	203.I-010.034.SIL	203.I-010.034.EPD	203.I-010.034.TEF	203.I-010.034.TEN
ISO DN	10	50,50	203.I-010.050.VIT	203.I-010.050.SIL	203.I-010.050.EPD	203.I-010.050.TEF	203.I-010.050.TEN
ISO DN	*15	34,00	203.I-015.034.VIT	203.I-015.034.SIL	203.I-015.034.EPD	203.I-015.034.TEF	203.I-015.034.TEN
ISO DN	15	50,50	203.I-015.050.VIT	203.I-015.050.SIL	203.I-015.050.EPD	203.I-015.050.TEF	203.I-015.050.TEN
ISO DN	20	50,50	203.I-020.050.VIT	203.I-020.050.SIL	203.I-020.050.EPD	203.I-020.050.TEF	203.I-020.050.TEN
ISO DN	25	50,50	203.I-025.050.VIT	203.I-025.050.SIL	203.I-025.050.EPD	203.I-025.050.TEF	203.I-025.050.TEN
ISO DN	32	64,00	203.I-032.064.VIT	203.I-032.064.SIL	203.I-032.064.EPD	203.I-032.064.TEF	203.I-032.064.TEN
ISO DN	40	64,00	203.I-040.064.VIT	203.I-040.064.SIL	203.I-040.064.EPD	203.I-040.064.TEF	203.I-040.064.TEN
ISO DN	50	77,50	203.I-050.077.VIT	203.I-050.077.SIL	203.I-050.077.EPD	203.I-050.077.TEF	203.I-050.077.TEN
ISO DN	65	91,00	203.I-065.091.VIT	203.I-065.091.SIL	203.I-065.091.EPD	203.I-065.091.TEF	203.I-065.091.TEN
ISO DN	80	106,00	203.I-080.106.VIT	203.I-080.106.SIL	203.I-080.106.EPD	203.I-080.106.TEF	203.I-080.106.TEN
ISO DN	100	130,00	203.I-100.130.VIT	203.I-100.130.SIL	203.I-100.130.EPD	203.I-100.130.TEF	203.I-100.130.TEN
ISO DN	150	182,70	203.I-150.183.VIT	203.I-150.183.SIL	203.I-150.183.EPD	203.I-150.183.TEF	203.I-150.183.TEN
ISO DN	200	233,50	203.I-200.233.VIT	203.I-200.233.SIL	203.I-200.233.EPD	203.I-200.233.TEF	203.I-200.233.TEN
ISO DN	250	287,50	203.I-250.287.VIT	203.I-250.287.SIL	203.I-250.287.EPD	203.I-250.287.TEF	203.I-250.287.TEN
ISO DN	300	338,30	203.I-300.338.VIT	203.I-300.338.SIL	203.I-300.338.EPD	203.I-300.338.TEF	203.I-300.338.TEN

***Non standard**

Lip-free code 203. / with lip code 103

Tri-Clamp Connections

TRI-CLAMP GASKET

Standards

DIN 32676

Material

Virgin PTFE (Polytetrafluorethylen), PTFE with core in FPM, Viton®, Vinylidenfluorid Polymerase and Hexafluorpropylene Platinum cured Silicone, EPDM Ethyl-Propylene-Dien-Rubber, Viton®

Sterilization temperature

EPDM: 132°C (almost at 150°C), Silicone, Viton® and Teflon® (PTFE): 150°C

Application

Pharmaceutical and biotechnology industries

Type of construction/ Surface quality

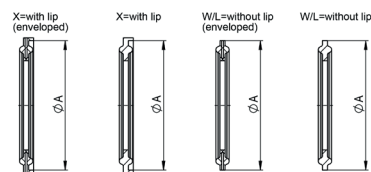
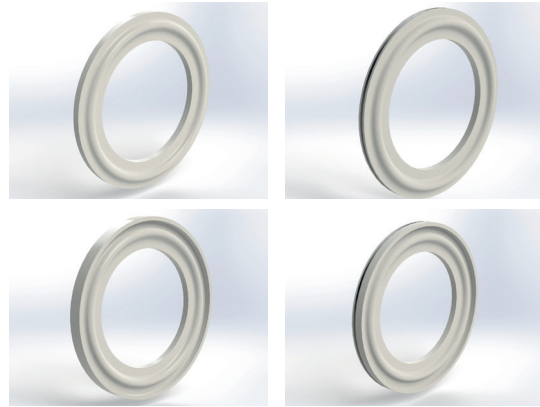
Smooth, non-porous surface, free of blind spots, edges free of burrs

Marking

Marking on packaged units

Certificates

- Incl. Certificate of conformity FDA-21 CFR 177.2600 for Elastomers
- Incl. Certificate of conformity FDA-21 CFR 177.1550 for PTFE
- Incl. USP Class VI
- Animal Derived Ingredients free (ADI) and are therefore BSE/TSE free with respect to source, manufacturing and treatment according to RoHS and REACH guidelines



Remarks

- Technical changes reserved
- Viton® and Teflon® are registered trademarks of Dupont Dow Elastomers
- Lip-free PTFE seals

DIMENSIONS OF TRI-CLAMP SEALS

DIMENSION	A (mm)	Item No. Viton®	Item No. Silicone	Item No. EPDM	Item No. Téflon® / PTFE	Item No. Téflon® / PTFE enveloped Viton®
Selon DIN 32676 / DIN 11850						
DIN	*4	22,00	203.D-004.025.VIT	203.D-004.025.SIL	203.D-004.025.EPD	203.D-004.025.TEF
DIN	*6	22,00	203.D-006.025.VIT	203.D-006.025.SIL	203.D-006.025.EPD	203.D-006.025.TEF
DIN	*8	22,00	203.D-008.025.VIT	203.D-008.025.SIL	203.D-008.025.EPD	203.D-008.025.TEF
DIN	*10	22,00	203.D-010.025.VIT	203.D-010.025.SIL	203.D-010.025.EPD	203.D-010.025.TEF
DIN	10	34,00	203.D-010.034.VIT	203.D-010.034.SIL	203.D-010.034.EPD	203.D-010.034.TEF
DIN	15	34,00	203.D-015.034.VIT	203.D-015.034.SIL	203.D-015.034.EPD	203.D-015.034.TEF
DIN	20	34,00	203.D-020.034.VIT	203.D-020.034.SIL	203.D-020.034.EPD	203.D-020.034.TEF
DIN	25	50,50	203.D-025.050.VIT	203.D-025.050.SIL	203.D-025.050.EPD	203.D-025.050.TEF
DIN	32	50,50	203.D-032.050.VIT	203.D-032.050.SIL	203.D-032.050.EPD	203.D-032.050.TEF
DIN	40	50,50	203.D-040.050.VIT	203.D-040.050.SIL	203.D-040.050.EPD	203.D-040.050.TEF
DIN	50	64,00	203.D-050.064.VIT	203.D-050.064.SIL	203.D-050.064.EPD	203.D-050.064.TEF
DIN	65	91,00	203.D-065.091.VIT	203.D-065.091.SIL	203.D-065.091.EPD	203.D-065.091.TEF
DIN	80	106,00	203.D-080.106.VIT	203.D-080.106.SIL	203.D-080.106.EPD	203.D-080.106.TEF
DIN	100	119,00	203.D-100.119.VIT	203.D-100.119.SIL	203.D-100.119.EPD	203.D-100.119.TEF
DIN	125	155,00	203.D-125.155.VIT	203.D-125.155.SIL	203.D-125.155.EPD	203.D-125.155.TEF
DIN	150	183,00	203.D-150.183.VIT	203.D-150.183.SIL	203.D-150.183.EPD	203.D-150.183.TEF
DIN	200	233,50	203.D-200.233.VIT	203.D-200.233.SIL	203.D-200.233.EPD	203.D-200.233.TEF
DIN	250	268,00	203.D-250.268.VIT	203.D-250.268.SIL	203.D-250.268.EPD	203.D-250.268.TEF
DIN	300	319,00	203.D-300.319.VIT	203.D-300.319.SIL	203.D-300.319.EPD	203.D-300.319.TEF
*Non standard						
Lip-free code 203. / with lip code 103						

Tri-Clamp Connections

TRI-CLAMP GASKET

Standards

BS 4825 (ASME-BPE)

Material

Virgin PTFE (Polytetrafluorethylen), PTFE with core in FPM, Viton®, Vinylidenfluorid Polymerase and Hexafluorpropylene Platinum cured Silicone, EPDM Ethyl-Propylene-Dien-Rubber, Viton®

Sterilization temperature

EPDM: 132°C (almost at 150°C), Silicone, Viton® and Teflon® (PTFE): 150°C

Application

Pharmaceutical and biotechnology industries

Type of construction/ Surface quality

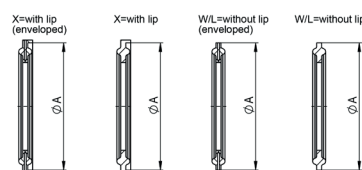
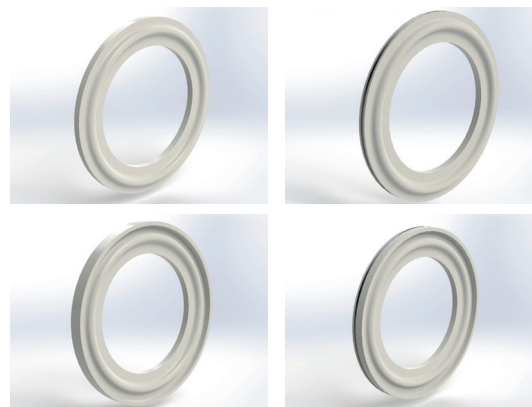
Smooth, non-porous surface, free of blind spots, edges free of burrs

Marking

Marking on packaged units

Certificates

- Incl. Certificate of conformity FDA-21 CFR 177.2600 for Elastomers
- Incl. Certificate of conformity FDA-21 CFR 177.1550 for PTFE
- Incl. USP Class VI
- Animal Derived Ingredients free (ADI) and are therefore BSE/TSE free with respect to source, manufacturing and treatment according to RoHS and REACH guidelines



Remarks

- Technical changes reserved
- Viton® and Teflon® are registered trademarks of Dupont Dow Elastomers
- Lip-free PTFE seals

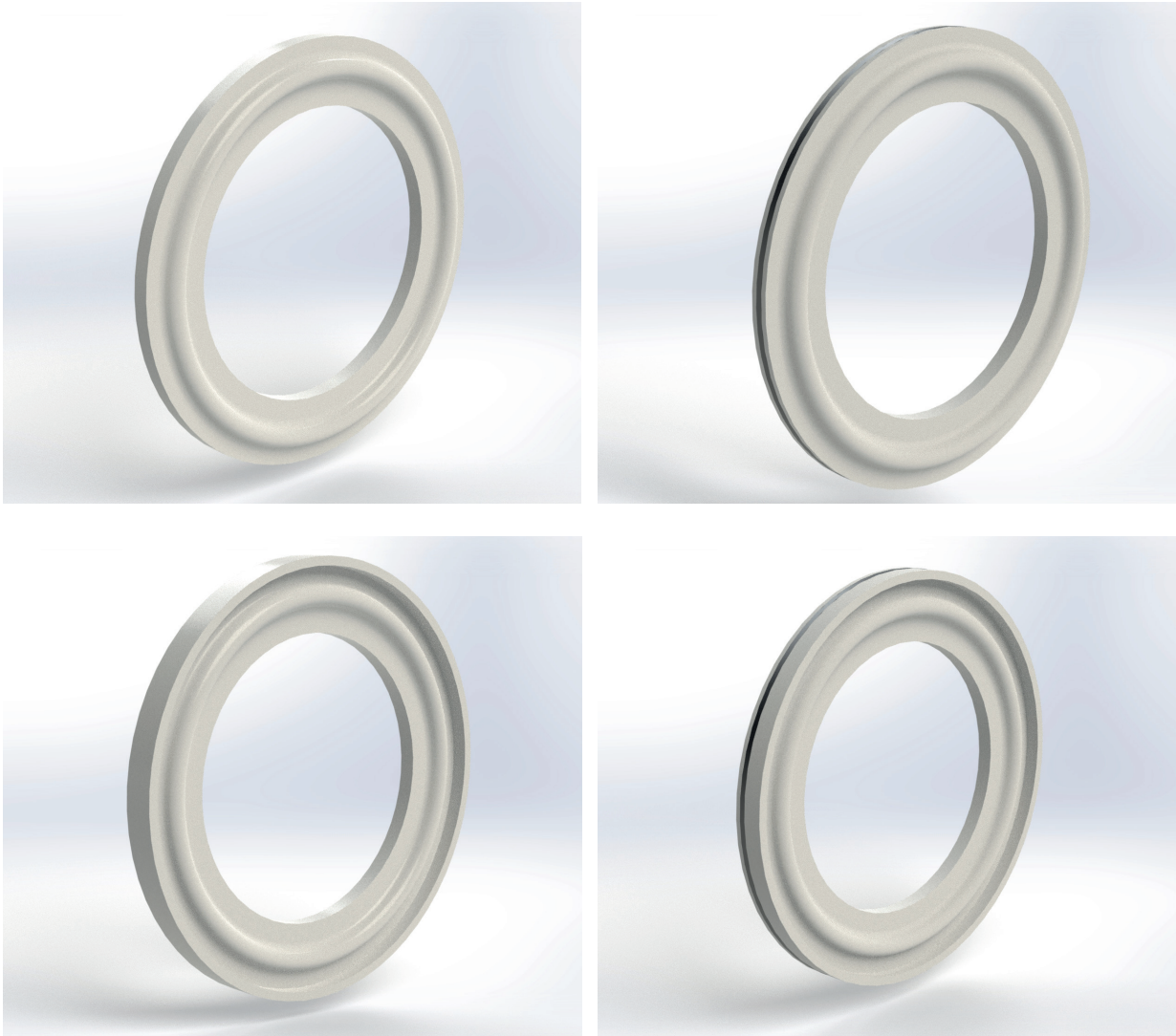
DIMENSIONS OF TRI-CLAMP GASKET

Dimension	A (mm)	Item No. Viton®	Item No. Silicone	Item No. EPDM	Item No. Teflon® / PTFE	Item No. Teflon® / PTFE enveloped Viton®	
According to BS 4825 / ASME BPE 1997							
OD	1/2"	22,00	203.A-050.025.VIT	203.A-050.025.SIL	203.A-050.025.EPD	203.A-050.025.TEF	203.A-050.025.TEN
OD	3/4"	22,00	203.A-075.025.VIT	203.A-075.025.SIL	203.A-075.025.EPD	203.A-075.025.TEF	203.A-075.025.TEN
OD	1"	50,50	203.A-100.050.VIT	203.A-100.050.SIL	203.A-100.050.EPD	203.A-100.050.TEF	203.A-100.050.TEN
OD	1 1/2"	50,50	203.A-150.050.VIT	203.A-150.050.SIL	203.A-150.050.EPD	203.A-150.050.TEF	203.A-150.050.TEN
OD	2"	64,00	203.A-200.064.VIT	203.A-200.064.SIL	203.A-200.064.EPD	203.A-200.064.TEF	203.A-200.064.TEN
OD	2 1/2"	77,50	203.A-250.077.VIT	203.A-250.077.SIL	203.A-250.077.EPD	203.A-250.077.TEF	203.A-250.077.TEN
OD	3"	91,00	203.A-300.091.VIT	203.A-300.091.SIL	203.A-300.091.EPD	203.A-300.091.TEF	203.A-300.091.TEN
OD	*3 1/2"	106,00	203.A-350.106.VIT	203.A-350.106.SIL	203.A-350.106.EPD	203.A-350.106.TEF	203.A-350.106.TEN
OD	4"	119,00	203.A-400.119.VIT	203.A-400.119.SIL	203.A-400.119.EPD	203.A-400.119.TEF	203.A-400.119.TEN
OD	*4 1/2"	130,00	203.A-450.130.VIT	203.A-450.130.SIL	203.A-450.130.EPD	203.A-450.130.TEF	203.A-450.130.TEN
OD	*5"	144,00	203.A-500.144.VIT	203.A-500.144.SIL	203.A-500.144.EPD	203.A-500.144.TEF	203.A-500.144.TEN
OD	*5 1/2"	144,00	203.A-550.144.VIT	203.A-550.144.SIL	203.A-550.144.EPD	203.A-550.144.TEF	203.A-550.144.TEN
OD	*6"	167,00	203.A-600.167.VIT	203.A-600.167.SIL	203.A-600.167.EPD	203.A-600.167.TEF	203.A-600.167.TEN
OD	*8"	217,50	203.A-800.217.VIT	203.A-800.217.SIL	203.A-800.217.EPD	203.A-800.217.TEF	203.A-800.217.TEN
OD	*10"	268,00	203.A-1000.268.VIT	203.A-1000.268.SIL	203.A-1000.268.EPD	203.A-1000.268.TEF	203.A-1000.268.TEN
OD	*12"	319,50	203.A-1200.319.VIT	203.A-1200.319.SIL	203.A-1200.319.EPD	203.A-1200.319.TEF	203.A-1200.319.TEN

***Non standard**

Lip-free code 203. / with lip code 103

MATERIAL RESISTANCE TABLE OF ELASTOMERS



Chemical description	Fluorine rubber Viton®	Silicone	Ethyl-Propylene-Dien-Rubber	Teflon®	**Coated
Short description according to ISO 1629	FPM	MVQ	EPDM	PTFE	FEP/MVQ
Specifications					
Erosion-Resistance	good	good to excellent	good to excellent	excellent	excellent
Steam-Resistance	poor	poor	good to excellent	excellent	excellent
Conductivity quality	good	excellent	excellent	excellent	excellent
Fire-Resistance	good	poor	poor	excellent	excellent
Ozone-Resistance	excellent	excellent	excellent	excellent	excellent
Acid-Resistance	good	good	good to excellent	excellent	excellent
Temperatur-Resistance	-29°C to 204°C	-62°C to 232°C	-46°C to 132°C almost to 150°C	-78°C to 232°C	-60°C to 200°C
Time-Resistance	good	excellent	excellent	excellent	excellent
Tensile strength	good to excellent	poor	good	excellent	excellent

Tri-Clamp Connections

TRI-CLAMP BLIND COVER

Standards

ISO 2852, DIN 32676, BS 4825 (ASME-BPE)

Material

Stainless Steel 1.4435 BN2 (Fe < 0,5%) according to EN 10088-1

Sterilization temperature

150°C

Application

Pharmaceutical and biotechnology industries

Type of construction/ Surface quality

- Inner and outer surface: glossy finish
- Ra internal < 0,4 µm, Ra external < 0.8 µm

Hygienic tube class

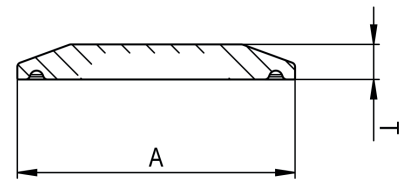
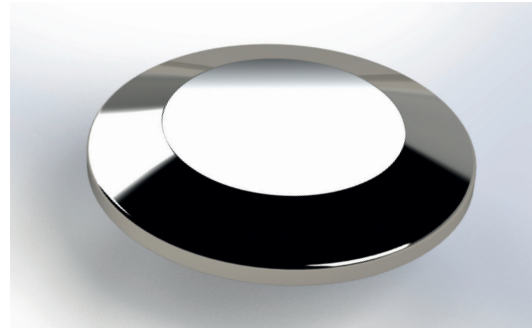
H 3 / H 4 according to DIN 11866

Marking

Dimension, material, casting number

Certificates

Certificate according to EN 10204-3.1



Option

Electropolishing (EP)

Remarks

Technical changes reserved

DIMENSIONS OF TRI-CLAMP BLIND COVER

ISO 2852	DIN 32676	BS 4825	A (mm)	T (mm)	Item No.
DN 6/8/10	DIN 4/6/8/*10	1/2"/*3/4"	25,00	4,75	104.000.025.XX
	DIN 10/15/20		34,00	6,35	104.000.034.XX
*DN 8/*10/15/20/25	DIN 25/32/40	1" - 1 1/2"	50,50	6,35	104.000.050.XX
DN 32/40	DIN 50	2"	64,00	6,35	104.000.064.XX
DN 50		2 1/2"	77,50	6,35	104.000.077.XX
DN 65	DIN 65	3"	91,00	6,35	104.000.091.XX
DN 80	DIN 80	3 1/2"	106,00	6,35	104.000.106.XX
	DIN 100	4"	119,00	8,00	104.000.119.XX
DN 100		4 1/2"	130,00	10,00	104.000.130.XX
	*DIN 125	5"	144,50	10,00	104.000.144.XX
	DIN 125	5 1/2"	155,00	10,00	104.000.155.XX
		6"	167,00	14,00	104.000.167.XX
DN 150	DIN 150	6 5/8"	183,00	14,00	104.000.183.XX
		8"	217,50	14,00	104.000.217.XX
DN 200	DIN 200	8 5/8"	233,50	14,00	104.000.233.XX
	*DIN 250	*10"	268,00	14,00	104.000.268.XX
DN 250		*10 5/8"	286,10	14,00	104.000.286.XX
		*12"	319,00	20,00	104.000.319.XX
DN 300		12 5/8"	338,50	20,00	104.000.338.XX
*Non standard					
.XX = EP, Electropolishing					

Tri-Clamp Connections

CLAMP SIGHT GLASSES

Standards

BS 4825 (ASME-BPE)

Material

- Stainless Steel 1.4462 Duplex according to EN 10088
 - Glass: Borosilicate according to DIN 7080 other materials (e.g. 2.4602 or 2.4610) on request

Permissible working temperature

-30° to +280° C

Application

Pharmaceutical and biotechnology industries

Working pressure

-1 to +16 bar (depends on the size - see table below)

Type of construction/ Surface quality

- Inner and outer surface: sanded and polished
 - Ra internal < 0,3 µm, Ra external < 0.8 µm

Permission

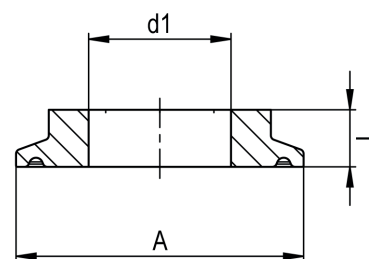
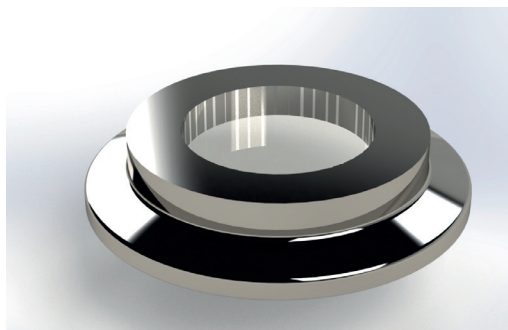
3A-Standard for food

Marking

Dimension, material, casting number

Certificates

Certificate according to EN 10204-3.1



Remarques

- Other sizes available on request
 - Technical changes reserved

DIMENSIONS OF CLAMP SIGHT GLASSES

DIMENSION			A (mm)	T (mm)	d1 (mm)	Max. pressure	Item No.
DIN 32676	ISO 2852	BS 4825					
-	DN 08/10	OD 1/2" - 3/4"	25,00	10,00	10,00	16 bars	MTG.80.016.025.06B2
DIN 10/15/20	-	-	34,00	8,00	14,00	16 bars	MTG.80.016.034.06B2
DIN 25/32/40	DN 15/20/25	OD 1" - 1 1/2"	50,50	10,00	25,00	16 bars	MTG.80.016.050.06B2
DIN 50	DN 34/40	OD 2"	64,00	10,00	30,00	16 bars	MTG.80.016.064.06B2
-	DN 50	OD 2 1/2"	77,50	10,00	35,00	10 bars	MTG.80.016.077.06B2
DIN 65	DN 65	OD 3"	91,00	10,00	40,00	10 bars	MTG.80.010.091.06B2
DIN 80	DN 80	OD 3 1/2"	106,00	10,00	50,00	10 bars	MTG.80.010.106.06B2
DIN 100	-	OD 4"	119,00	12,00	55,00	10 bars	MTG.80.010.119.06B2
-	DN 100	OD 4 1/2"	130,00	16,00	60,00	10 bars	MTG.80.010.119.06B2
-	-	OD 5"	144,50	16,00	65,00	10 bars	MTG.80.010.144.06B2
DIN 125	-	OD 5 1/2"	155,00	16,00	70,00	6 bars	MTG.80.006.155.06B2
-	-	OD 6"	167,00	16,00	75,00	6 bars	MTG.80.006.167.06B2
DIN 150	DN 150	-	183,00	16,00	80,00	6 bars	MTG.80.006.183.06B3
-	-	OD 8"	217,50	18,00	100,00	6 bars	MTG.80.006.217.06B2
DIN 200	DN 200	-	233,50	18,00	100,00	6 bars	MTG.80.006.233.06B3
-	-	OD 10"	268,00	20,00	130,00	6 bars	MTG.80.006.268.06B2
-	-	OD 12"	319,30	22,00	150,00	6 bars	MTG.80.006.319.06B2
DIN 300	DN 300	-	338,3	22,00	150,00	6 bars	MTG.80.006.338.06B3

Tri-Clamp Connections

TRI-CLAMP FILTER GASKETS 1/2

Standards

DIN 32676 Row C (ASME-BPE 2009)

Material

- EPDM ethyl-propylene-diene-rubber
- Platinum cured Silicone
- AISI 316

Sterilization temperature

Silicone: 150°C, EPDM: 132°C (almost at 150°C)

Application

Pharmaceutical and biotechnology industries

Type of construction/ Surface quality

Smooth, non-porous surface, free of blind spots, edges free of burrs

Marking

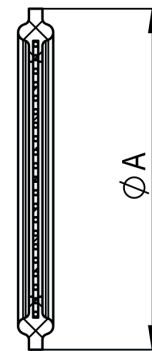
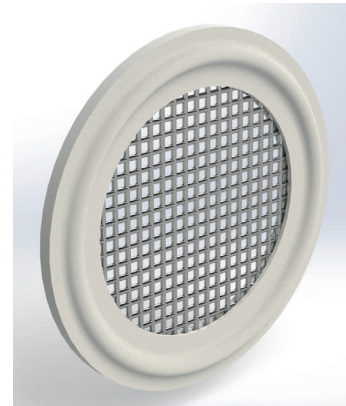
Marking on packaged units

Certificates

- Incl. Certificate of Conformity FDA-21 CFR 177.2600 for Elastomers
- Incl. USP Class VI
- Incl. Certificate material 3.1
- Animal Derived Ingredients free (ADI) and are therefore BSE/TSE free with respect to source, manufacturing and treatment according to RoHS and REACH guidelines

Remarks

- Other sizes available on request
- Technical changes reserved



DIMENSIONS OF TRI-CLAMP FILTER GASKETS

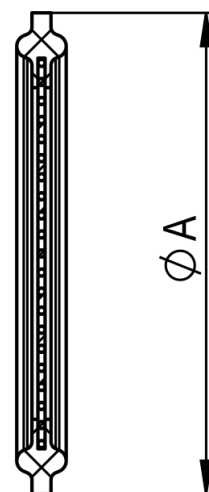
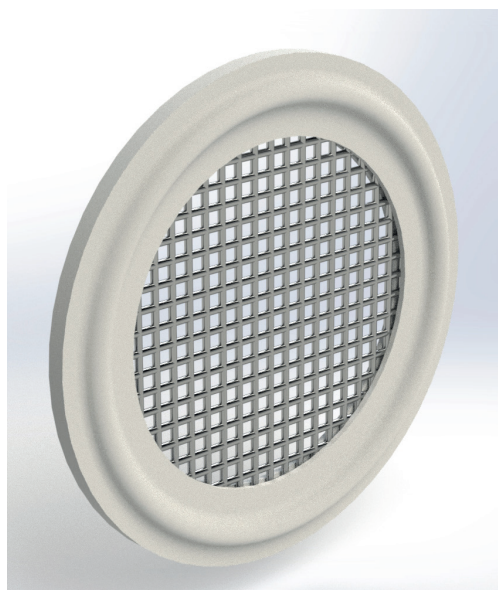
ISO 2852	A (mm)	Gasket#	Item No. Silicone	Item No. EPDM
According to DIN 32676 Row C (ASME-BPE)				
OD	1 1/2"	50,50	203.SC10.150.050.SIL	203.SC10.150.050.EPD
OD	1 1/2"	50,50	203.SC20.150.050.SIL	203.SC20.150.050.EPD
OD	1 1/2"	50,50	203.SC30.150.050.SIL	203.SC30.150.050.EPD
OD	1 1/2"	50,50	203.SC35.150.050.SIL	203.SC35.150.050.EPD
OD	1 1/2"	50,50	203.SC40.150.050.SIL	203.SC40.150.050.EPD
OD	1 1/2"	50,50	203.SC60.150.050.SIL	203.SC60.150.050.EPD
OD	1 1/2"	50,50	203.SC100.150.050.SIL	203.SC100.150.050.EPD
OD	2"	64,00	203.SC10.200.064.SIL	203.SC10.200.064.EPD
OD	2"	64,00	203.SC20.200.064.SIL	203.SC20.200.064.EPD
OD	2"	64,00	203.SC30.200.064.SIL	203.SC30.200.064.EPD
OD	2"	64,10	203.SC35.200.064.SIL	203.SC35.200.064.EPD
OD	2"	64,20	203.SC40.200.064.SIL	203.SC40.200.064.EPD
OD	2"	64,30	203.SC60.200.064.SIL	203.SC60.200.064.EPD
OD	2"	64,40	203.SC100.200.064.SIL	203.SC100.200.064.EPD
OD	2 1/2"	77,50	203.SC10.250.077.SIL	203.SC10.250.077.EPD
OD	2 1/2"	77,50	203.SC20.250.077.SIL	203.SC20.250.077.EPD
OD	2 1/2"	77,50	203.SC30.250.077.SIL	203.SC30.250.077.EPD
OD	2 1/2"	77,50	203.SC35.250.077.SIL	203.SC35.250.077.EPD
OD	2 1/2"	77,50	203.SC40.250.077.SIL	203.SC40.250.077.EPD
OD	2 1/2"	77,50	203.SC60.250.077.SIL	203.SC60.250.077.EPD
OD	2 1/2"	77,50	203.SC100.250.077.SIL	203.SC100.250.077.EPD
OD	3"	91,00	203.SC10.300.091.SIL	203.SC10.300.091.EPD
OD	3"	91,00	203.SC20.300.091.SIL	203.SC20.300.091.EPD
OD	3"	91,00	203.SC30.300.091.SIL	203.SC30.300.091.EPD
OD	3"	91,00	203.SC35.300.091.SIL	203.SC35.300.091.EPD
OD	3"	91,00	203.SC40.300.091.SIL	203.SC40.300.091.EPD
OD	3"	91,00	203.SC60.300.091.SIL	203.SC60.300.091.EPD
OD	3"	91,00	203.SC100.300.091.SIL	203.SC100.300.091.EPD

Tri-Clamp Connections

TRI-CLAMP FILTER GASKETS 2/2

CONVERSION TABLE MESH/MICRON

Mesh	Inch	Microns	Millimeters
3	0,265	6730	6,730
4	0,187	4760	4,760
5	0,157	4000	4,000
6	0,132	3360	3,360
7	0,111	2830	2,830
8	0,0937	2380	2,380
10	0,0787	2000	2,000
12	0,0661	1680	1,680
14	0,0555	1410	1,410
16	0,0469	1190	1,190
18	0,0394	1000	1,000
20	0,0331	841	0,841
25	0,028	707	0,707
30	0,0232	595	0,595
35	0,0197	500	0,500
40	0,0165	400	0,400
45	0,0138	354	0,354
50	0,0117	297	0,297
60	0,0098	250	0,250
70	0,0083	210	0,210
80	0,007	177	0,177
100	0,0059	149	0,149



Tri-Clamp Connections

SMART GASKET®

Standards

DIN 32676 Row C (ASME-BPE 2009)

Material

- EPDM ethyl-propylene-diene-rubber
- Platinum cured Silicone

Sterilization temperature

Silicone: 150°C, EPDM: 132°C (almost at 150°C)

Application

Pharmaceutical and biotechnology industries

Type of construction/ Surface quality

Smooth, non-porous surface, free of blind spots, edges free of burrs

Marking

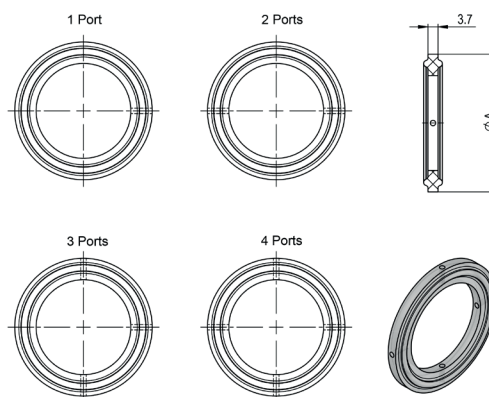
Marking on packaged units

Certificates

- Incl. Certificate of Conformity FDA-21 CFR 177.2600 for Elastomers
- Incl. USP Class VI
- Incl. Certificate material 3.1
- Animal Derived Ingredients free (ADI) and are therefore BSE/TSE free with respect to source, manufacturing and treatment according to RoHS and REACH guidelines

Remarks

- Other sizes available on request
- Technical changes reserved



DIMENSIONS OF SMART GASKET®

Dimension	A (mm)	Ports	Item No. Silicone	Item No. EPDM	Item No. Closure Clamp for Smart Gasket®	
According to DIN 32676 Row C (ASME-BPE)						
OD	1/2"	25,00	1	203.SM1.A-050.025.SIL	203.SM1.A-050.025.EPD	101.SM1.025
OD	1/2"	25,00	2	203.SM2.A-050.025.SIL	203.SM2.A-050.025.EPD	101.SM2.025
OD	1/2"	25,00	3	203.SM3.A-050.025.SIL	203.SM3.A-050.025.EPD	101.SM3.025
OD	1/2"	25,00	4	203.SM4.A-050.025.SIL	203.SM4.A-050.025.EPD	101.SM4.025
OD	3/4"	25,00	1	203.SM1.A-075.025.SIL	203.SM1.A-075.025.EPD	101.SM1.025
OD	3/4"	25,00	2	203.SM2.A-050.025.SIL	203.SM2.A-050.025.EPD	101.SM2.025
OD	3/4"	25,00	3	203.SM3.A-050.025.SIL	203.SM3.A-050.025.EPD	101.SM3.025
OD	3/4"	25,00	4	203.SM4.A-050.025.SIL	203.SM4.A-050.025.EPD	101.SM4.025
OD	1"	50,50	1	203.SM1.A-100.050.SIL	203.SM1.A-100.050.EPD	101.SM1.050
OD	1"	50,50	2	203.SM2.A-100.050.SIL	203.SM2.A-100.050.EPD	101.SM2.050
OD	1"	50,50	3	203.SM3.A-100.050.SIL	203.SM3.A-100.050.EPD	101.SM3.050
OD	1"	50,50	4	203.SM4.A-100.050.SIL	203.SM4.A-100.050.EPD	101.SM4.050
OD	1 1/2"	50,50	1	203.SM1.A-150.050.SIL	203.SM1.A-150.050.EPD	101.SM1.050
OD	1 1/2"	50,50	2	203.SM2.A-150.050.SIL	203.SM2.A-150.050.EPD	101.SM2.050
OD	1 1/2"	50,50	3	203.SM3.A-150.050.SIL	203.SM3.A-150.050.EPD	101.SM3.050
OD	1 1/2"	50,50	4	203.SM4.A-150.050.SIL	203.SM4.A-150.050.EPD	101.SM4.050
OD	2"	64,00	1	203.SM1.A-200.064.SIL	203.SM1.A-200.064.EPD	101.SM1.064
OD	2"	64,00	2	203.SM2.A-200.064.SIL	203.SM2.A-200.064.EPD	101.SM2.064
OD	2"	64,00	3	203.SM3.A-200.064.SIL	203.SM3.A-200.064.EPD	101.SM3.064
OD	2"	64,00	4	203.SM4.A-200.064.SIL	203.SM4.A-200.064.EPD	101.SM4.064
OD	3"	91,00	1	203.SM1.A-300.091.SIL	203.SM1.A-300.091.EPD	101.SM1.091
OD	3"	91,00	2	203.SM2.A-300.091.SIL	203.SM2.A-300.091.EPD	101.SM2.091
OD	3"	91,00	3	203.SM3.A-300.091.SIL	203.SM3.A-300.091.EPD	101.SM3.091
OD	3"	91,00	4	203.SM4.A-300.091.SIL	203.SM4.A-300.091.EPD	101.SM4.091
OD	4"	119,00	1	203.SM1.A-400.119.SIL	203.SM1.A-400.119.EPD	101.SM1.119
OD	4"	119,00	2	203.SM2.A-400.119.SIL	203.SM2.A-400.119.EPD	101.SM2.119
OD	4"	119,00	3	203.SM3.A-400.119.SIL	203.SM3.A-400.119.EPD	101.SM3.119
OD	4"	119,00	4	203.SM4.A-400.119.SIL	203.SM4.A-400.119.EPD	101.SM4.119

Tri-Clamp Connections

TRI-CLAMP ORIFICE PLATE

Standards

DIN 32676 Row C (ASME-BPE 2009)

Material

- EPDM ethyl-propylene-diene-rubber
- Platinum cured Silicone
- Tri-Clamp Plate made of AISI 316L

Sterilization temperature

Silicone: 150°C, EPDM: 132°C (almost at 150°C)

Application

Pharmaceutical and biotechnology industries

Type of construction/ Surface quality

Smooth, non-porous surface, free of blind spots, edges free of burrs

Marking

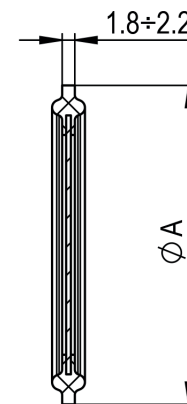
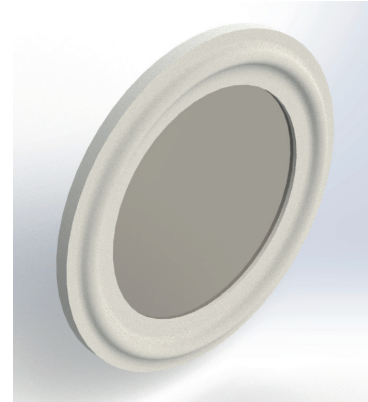
Marking on packaged units

Certificates

- Incl. Certificate of Conformity FDA-21 CFR 177.2600 for Elastomers
- Incl. USP Class VI
- Incl. Certificate material 3.1
- Animal Derived Ingredients free (ADI) and are therefore BSE/TSE free with respect to source, manufacturing and treatment according to RoHS and REACH guidelines

Remarks

- Also available with pierced hole
- Other sizes available on request
- Technical changes reserved



DIMENSIONS OF TRI-CLAMP ORIFICE PLATE

DIMENSION	A (mm)	Item No. Silicone	Item No. EPDM
According to DIN 32676 Row C (ASME-BPE)			
OD	3/4"	203.BL.A-075.025.SIL	203.BL.A-075.025.EPD
OD	1"	203.BL.A-100.050.SIL	203.BL.A-100.050.EPD
OD	1 1/2"	203.BL.A-150.050.SIL	203.BL.A-100.050.EPD
OD	2"	203.BL.A-200.064.SIL	203.BL.A-200.064.EPD
OD	2 1/2"	203.BL.A-250.077.SIL	203.BL.A-250.077.EPD
OD	3"	203.BL.A-300.091.SIL	203.BL.A-300.091.EPD