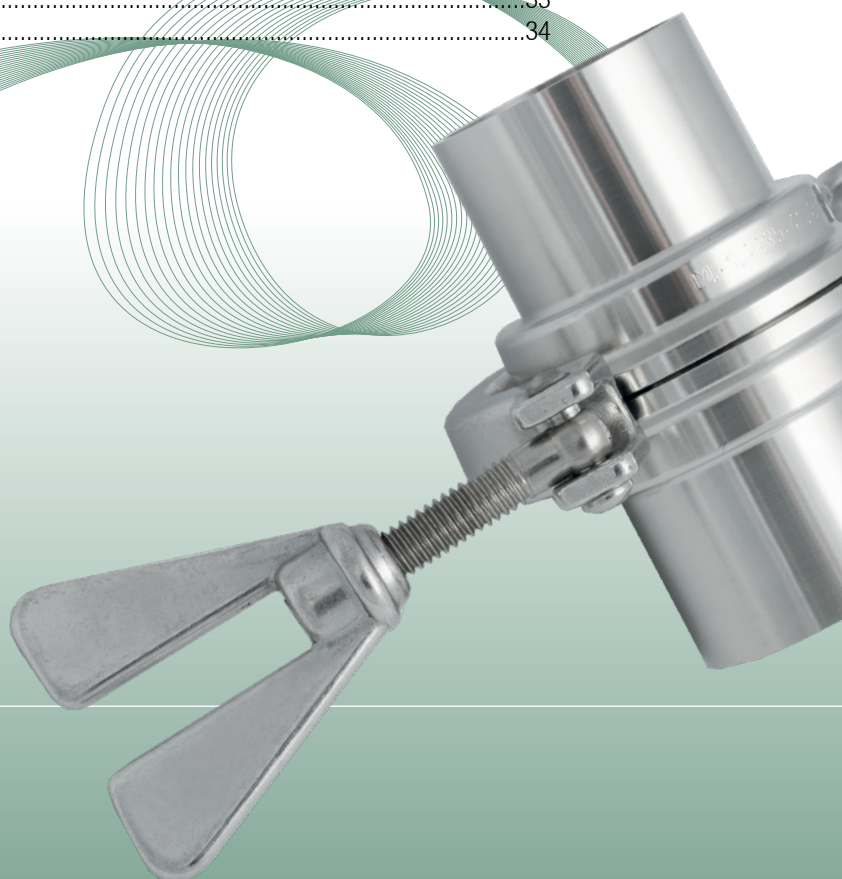




**CONNECTORS**

## TRI-CLAMP CONNECTIONS

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# SH Type Closure Clamp

**Product group:** Tri-Clamp Connections

**Title:** SH Type Closure Clamp

**Standards:** ISO 2852, DIN 32676, BS 4825 (ASME BPE) / \*non standard

**Material:** Tri-Clamp Coupling, Wingnuts and Eye-Bolt Screw from Stainless Steel USA ASTM 316 (1.4401)

**Sterilization temperature:** 150°C

**Type of construction / Surface quality:** Closure Clamp with V-Profile, for equal pressure overall the hole diameter. Surface: bright finish

**Options:** The Wing-Nut can be exchanged by a special Hexagon-Nut  
Item-No. for clamps 1/2" to 5" = 200.000.001  
Item-No. for clamps from 5 1/2" = 200.000.002.

**Remarks:** Technical contents are subject to change  
Data to the maximum operating pressure became in dependingness with the assigned seals (elastomers).  
Clamp with Wing-Nut SH Type: Torque rating 5 Nm  
Clamp with Hexagon-Nut SHX Type: Torque rating 20 Nm

Technical Datas to SH Type Closure Clamp										
Drawing to table below: see next page										
ISO 2852 DIN 32676 Rh.B	DIN 32676 Rh.A	BS 4825 DIN 32676 Rh. C	A-Mass TC-Size	B Rad.	C Length	W Thickness	max. Workingpressure at 150° C	max. Testpressure	Weight in gramm	Item-Number
DN 6 / 8 / 10	DIN 4/6/8/*10	1/2" - *3/4"	25.0	63.0	75.0	17.0	50 bar	100 bar	150 g	200.005.028
	DIN 10 / 15 / 20		34.0	67.0	85.0	17.0	50 bar	100 bar	170 g	200.010.037
DN 8* / 10* 15 / 20 / 25	DIN 25 / 32 40	1" - 1 1/2"	50.5	77.0	102.0	17.0	50 bar	100 bar	250 g	200.025.053
DN 32 / 40	DIN 50	2"	64.0	93.0	123.0	17.0	50 bar	100 bar	330 g	200.050.067
DN 50		2 1/2"	77.5	100.0	140.0	17.0	50 bar	100 bar	380 g	200.065.080
DN 65	DIN 65	3"	91.0	105.0	150.0	17.0	40 bar	80 bar	440 g	200.080.094
DN 80	DIN 80	3 1/2"	106.0	110.0	165.0	17.0	40 bar	80 bar	440 g	200.090.108
	DIN 100	4"	119.0	119.0	185.0	17.0	35 bar	70 bar	570 g	200.100.122
DN 100		4 1/2"	130.0	119.0	191.0	17.0	30 bar	60 bar	600 g	200.114.133
		*5"	144.5	131.0	215.0	19.0	30 bar	60 bar	750 g	200.125.147
	*DIN 125	5 1/2"	155.0	155.0	252.0	24.0	30 bar	60 bar	1390 g	200.125.157
		*6"	167.0	156.0	262.0	24.0	30 bar	60 bar	1380 g	200.150.170
DN 150	DIN 150	6 5/8"	183.0	164.0	280.0	24.0	25 bar	50 bar	1610 g	200.150.170.58
		8"	217.5	184.0	325.0	24.0	20 bar	40 bar	2110 g	200.200.220.1
DN 200	DIN 200	8 5/8"	233.5	185.0	333.0	24.0	20 bar	40 bar	2250 g	200.200.220.58
	*DIN 250	*10"	268.0	213.0	382.0	24.0	16 bar	32 bar	2780 g	200.250.250
	*DIN 300	*12"	319.0	242.0	458.0	24.0	10 bar	20 bar	3690 g	200.319.304.1
DN 300		12 5/8"	338.5	243.0	463.0	24.0	10 bar	20 bar	3465 g	200.300.338.1

## TRI-CLAMP CONNECTIONS

# SH Type Closure Clamp

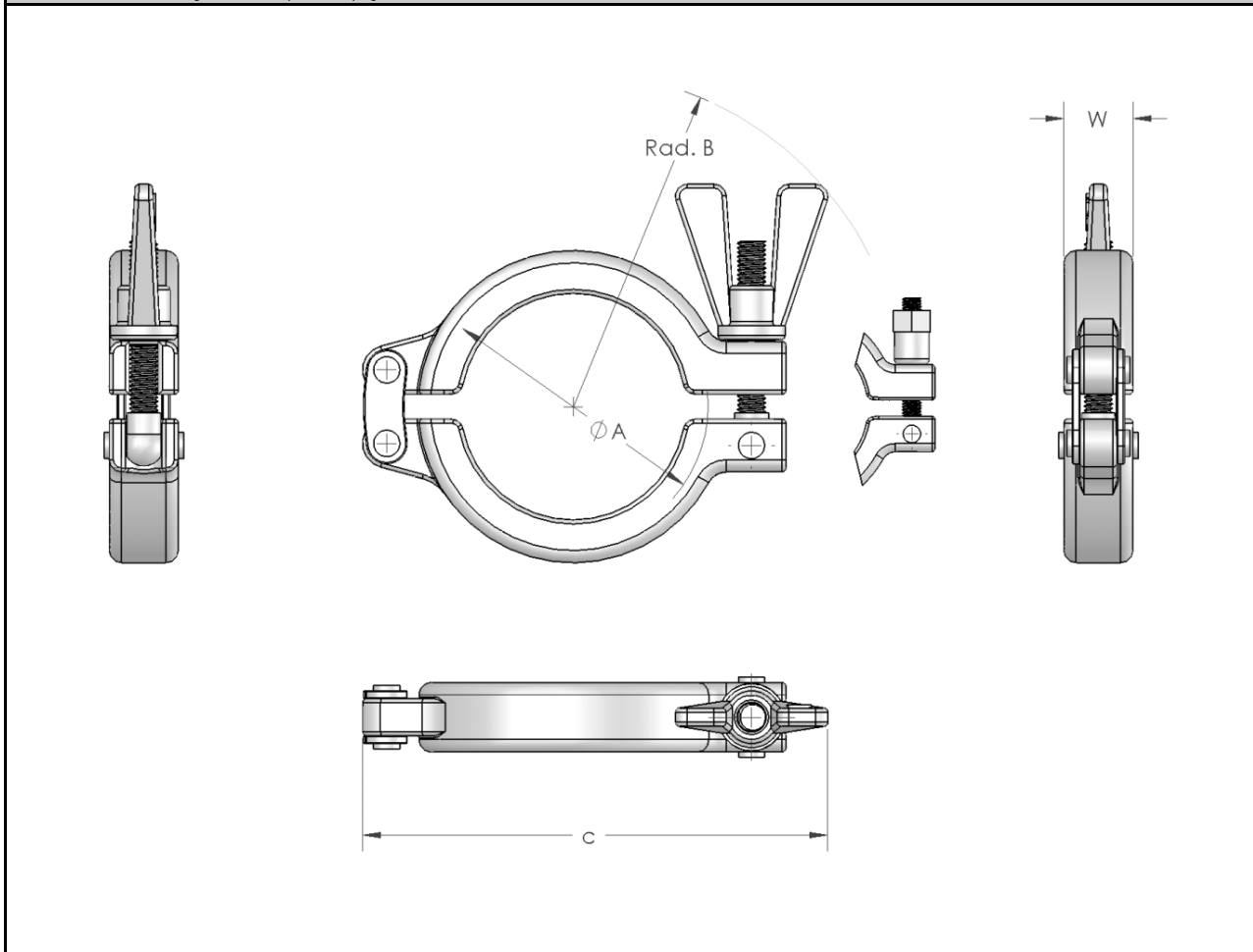
<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	SH Type Closure Clamp
<b>Standards:</b>	ISO 2852, DIN 32676, BS 4825 (ASME-BPE) / *non standard
<b>Material:</b>	Tri-Clamp Coupling, Wingnuts und Eye-Bolt Screw from AISI 316 (1.4401)
<b>Sterilization temperature:</b>	150°C
<b>Type of construction / Surface quality:</b>	Closure Clamp with V-Profile, for equal pressure overall the hole diameter. Surface: bright finish
<b>Remarks:</b>	Technical contents are subject to change

Recommended ranges of Application:

Pharma- and Biotechnology  
For all applications with with high requirements.

SH Type Closure Clamp

Technical Datas to drawing below: see previous page



# SH Type (Double Bolted) Closure Clamp

**Product group:** Tri-Clamp Connections

**Title:** SH Type (Double Bolted) Closure Clamp

**Standards:** ISO 2852, DIN 32676, BS 4825 (ASME-BPE) / \*non standard

**Material:** Tri-Clamp Coupling, Wingnuts und Eye-Bolt Screw from AISI 316 (1.4401)

**Sterilization temperature:** 150°C

**Type of construction / Surface quality:** Closure Clamp with V-Profile, for equal pressure overall the hole diameter. Surface: bright finish

**Options:** The Wing-Nuts can be exchanged by special Hexagon-Nuts:  
Item-No. for clamps 1/2" to 5" = 200.000.001  
Item-No. for clamps from 5 1/2" = 200.000.002

**Remarks:** Technical contents are subject to change  
Data to the maximum operating pressure became in dependingness with the assigned seals (elastomers).  
Clamp with Wing-Nut SH Type: Torque rating 5 Nm  
Clamp with Hexagon-Nut SHX Type: Torque rating 20 Nm

Technical Datas to SH Type (Double Bolted) Closure Clamp										
Drawing to table below: see next page										
ISO 2852	DIN 32676	BS 4825	A	B	C	W	max.	max.	Weight	Item-Number
DIN 32676	Rh.A	DIN 32676	TC-Size	Rad.	Length	Thick-ness	Workingpressure	Testpressure	in Gramm	
Rh.B		Rh.C					by 150° C			
	*DIN 125	5 1/2"	148.0	155.0	265.0	24.0	30 bar	60 bar	1470 g	200.125.157.-2
		*6"	152.0	156.0	277.0	24.0	30 bar	60 bar	1670 g	200.150.170.-2
DN 150	DIN 150	6 5/8"	183.0	164.0	297.0	24.0	25 bar	50 bar	1690 g	200.150.170.59
		8"	217.5	184.0	332.0	24.0	20 bar	40 bar	2190 g	200.200.220
DN 200	DIN 200	8 5/8"	233.5	185.0	353.0	24.0	20 bar	40 bar	2340 g	200.200.220.59
	*DIN 250	*10"	268.0	205.0	382.0	24.0	16 bar	32 bar	2780 g	200.250.250.-2
DN 250		10 5/8"	286.1	213.0	405.0	24.0	16 bar	32 bar	2970 g	200.250.250.58
	*DIN 300	*12"	319.0	242.0	458.0	24.0	10 bar	20 bar	3690 g	200.319.304.2
DN 300		12 5/8"	338.5	243.0	463.0	24.0	10 bar	20 bar	3370 g	200.300.338.2

## TRI-CLAMP CONNECTIONS

# SH Type (Double Bolted) Closure Clamp

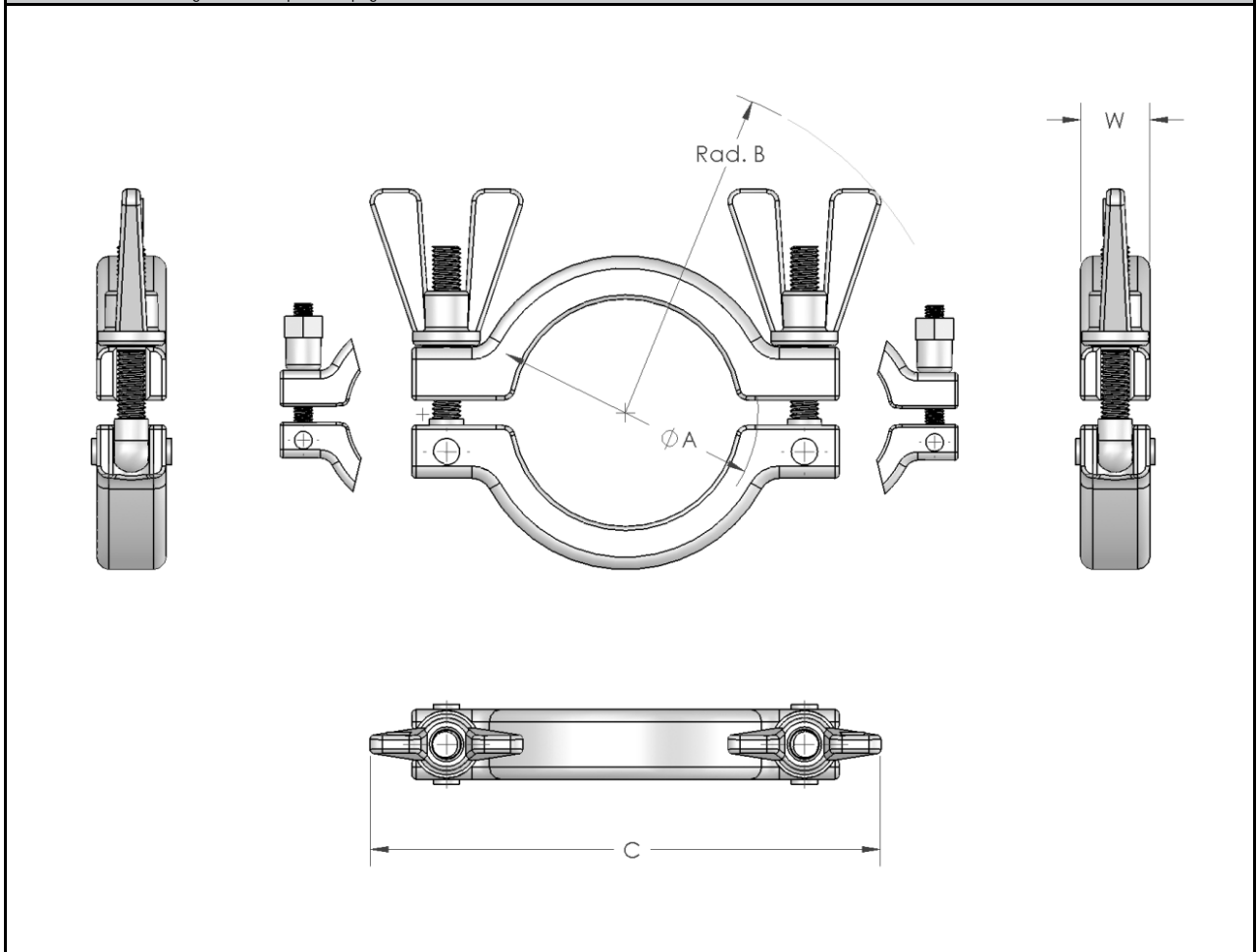
<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	SH Type (Double Bolted) Closure Clamp
<b>Standards:</b>	ISO 2852, DIN 32676, BS 4825 (ASME-BPE) / *non standard
<b>Material:</b>	Tri-Clamp Coupling, Wingnuts und Eye-Bolt Screw from AISI 316 (1.4401)
<b>Sterilization temperature:</b>	150°C
<b>Type of construction / Surface quality:</b>	Closure Clamp with V-Profile, for equal pressure overall the hole diameter. Surface: bright finish
<b>Remarks:</b>	Technical contents are subject to change

### Recommended ranges of Application:

Pharma- and Biotechnology. Suitable for the majority of all applications,  
with pressure ratings from 10bar to 30bar (dependant on clamp size).

### SH Type (Double Bolted) Closure Clamp

Technical Datas to drawing below: see previous page



# S Type Closure Clamp

**Product group:** Tri-Clamp Connections

**Title:** S-Type Closure Clamp

**Standards:** ISO 2852, DIN 32676, BS 4825 (ASME-BPE) / \*non standard

**Material:** Tri-Clamp Coupling, Wingnuts und Eye-Bolt Screw from SS 304 (1.4301)

**Sterilization temperature:** 150°C

**Type of construction / Surface quality:** Closure Clamp with V-Profile, for equal pressure overall the hole diameter. Surface: bright finish

**Remarks:** Technical contents are subject to change  
Data to the maximum operating pressure became in dependingness with the assigned seals (elastomers).  
Model with wing nut S type: torque 5 Nm  
Model with 6-hexagon nuts SX type: torque 20 Nm

Technical Datas to S Type Closure Clamp										
Drawing to table below: see next page										
ISO 2852 DIN 32676 Rh.B	DIN 32676 Rh.A	BS 4825 DIN 32676 Rh.C	A TC-Size	B Rad	C Length	W Thickness	max. Workingpressure by 150° C	max. Testpressure	Weight in Gramm	Item-Number
DN 6 / 8 / 10	DIN 4 / 6 / 8 / *10	1/2" - *3/4"	25.0	63.0	60.0	17.0	25 bar	50 bar	130 g	204.005.028
	DIN 10 / 15 / 20		34.0	73.0	69.0	17.0	25 bar	50 bar	170 g	204.010.037
DN 8* / 10* 15 / 20 / 25	DIN 25 / 32 40	1" - 1 1/2"	50.5	78.0	85.0	17.0	25 bar	50 bar	210 g	204.025.053
DN 32 / 40	DIN 50	2"	64.0	82.0	99.0	17.0	25 bar	50 bar	250 g	204.080.094
DN 50		2 1/2"	77.5	89.0	112.0	17.0	25 bar	50 bar	350 g	204.065.080
DN 65	DIN 65	3"	91.0	96.0	126.0	17.0	20 bar	40 bar	420 g	204.080.095
DN 80	DIN 80	3 1/2"	106.0	103.0	140.0	17.0	20 bar	40 bar	440 g	204.090.108
	DIN 100	4"	119.0	110.0	154.0	17.0	17 bar	34 bar	510 g	204.100.122
DN 100		4 1/2"	130.0	115.0	165.0	17.0	15 bar	30 bar	600 g	204.144.133
		*6"	167.0	134.0	216.0	25.0	15 bar	30 bar	880 g	204.150.170

## TRI-CLAMP CONNECTIONS

# S Type Closure Clamp

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	S-Type Closure Clamp
<b>Standards:</b>	ISO 2852, DIN 32676, BS 4825 (ASME BPE) / *non standard
<b>Material:</b>	Tri-Clamp Coupling, Wingnuts und Eye-Bolt Screw from SS 304 (1.4301)
<b>Sterilization temperature:</b>	150°C
<b>Type of construction / Surface quality:</b>	Closure Clamp with V-Profile, for equal pressure overall the hole diameter. Surface: bright finish
<b>Remarks:</b>	Technical contents are subject to change

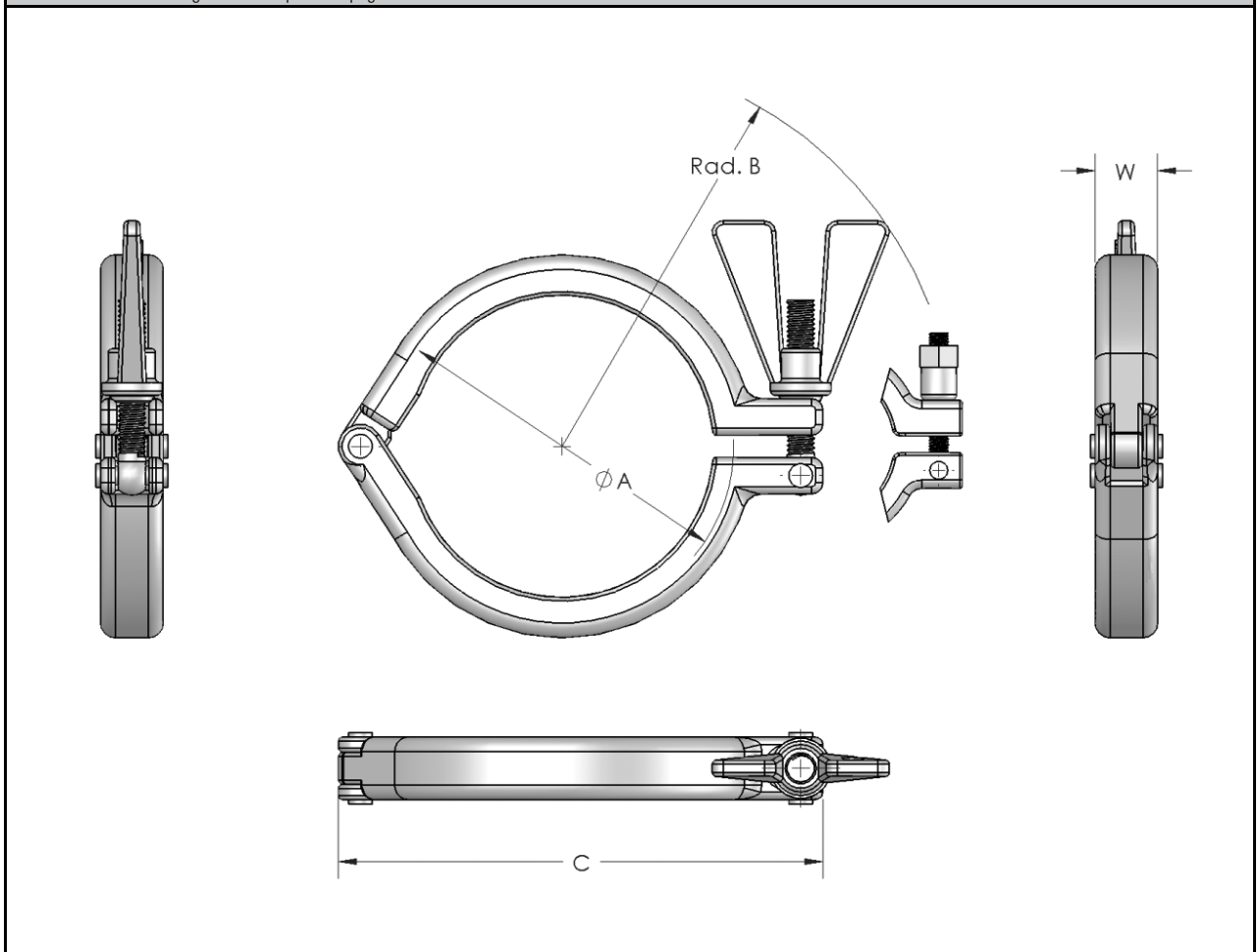
Recommended ranges of Application:

Pharma- and Biotechnology

For all application where high-pressure ratings are not a critical factor.

S-Type Closure Clamp

Technical Datas to drawing below: see previous page



# SSH Type (Heavy Duty) Closure Clamp

**Product group:** Tri-Clamp Connections

**Title:** SSH Type (Heavy Duty) Closure Clamp

**Standards:** ISO 2852, DIN 32676, BS 4825 (ASME BPE) / \*non standard

**Material:** Hexagon nut made of AISI 316 (1.4401)  
Rest made of SS 304 (1.4301)

**Sterilization temperature:** 150°C

**Type of construction / Surface quality:** Closure Clamp with V-Profile, for equal pressure overall the hole diameter. Surface: bright finish

**Remarks:** Technical contents are subject to change  
Data to the maximum operating pressure became in dependingness with the assigned seals (elastomers).  
Model with hexagon nuts SSH type: torque 27 Nm

Technical Datas to SSH Type (Heavy Duty) Closure Clamp										
Drawing to table below: see next page										
ISO 2852 DIN 32676 Rh.B	DIN 32676 Rh.A	BS 4825 DIN 32676 Rh.C	A TC-Size	B Rad.	C Length	W Thick- ness	max. Workingprssure by 150° C	max. Test- pressure	Weight in Gramm	Item-Number
DN 6 / 8 / 10	DIN 4 / 6 / 8 / *10	1/2" - *3/4"	25.0	34.0	65.0	16.0	75 bar	150 bar	160 g	203.005.028
DN 8* / 10* 15 / 20 / 25	DIN 25 / 32 40	1" - 1 1/2"	50.5	60.0	103.0	26.0	75 bar	150 bar	660 g	203.025.053
DN 32 / 40	DIN 50	2"	64.0	67.0	113.0	26.0	75 bar	150 bar	820 g	203.050.067
DN 50		2 1/2"	77.5	75.0	128.0	26.0	75 bar	150 bar	940 g	203.065.080
DN 65	DIN 65	3"	91.0	80.0	137.0	26.0	60 bar	120 bar	1020 g	203.080.094
DN 80	DIN 80	3 1/2"	106.0	88.0	150.0	26.0	60 bar	120 bar	1070 g	203.090.108
	DIN 100	4"	119.0	93.0	165.0	26.0	53 bar	105 bar	1270 g	203.100.122
DN 100		4 1/2"	130.0	97.0	174.0	26.0	45 bar	90 bar	1330 g	203.144.133
		6"	167.0	132.0	240.0	26.0	45 bar	90 bar	1930 g	203.150.170
DN 150	DIN 150	6 5/8"	183.0	142.0	260.0	26.0	38 bar	75 bar	2110 g	203.150.170.58
DN 200	DIN 200	8 5/8"	233.0	168.0	318.0	26.0	30 bar	60 bar	2520 g	203.200.220.58



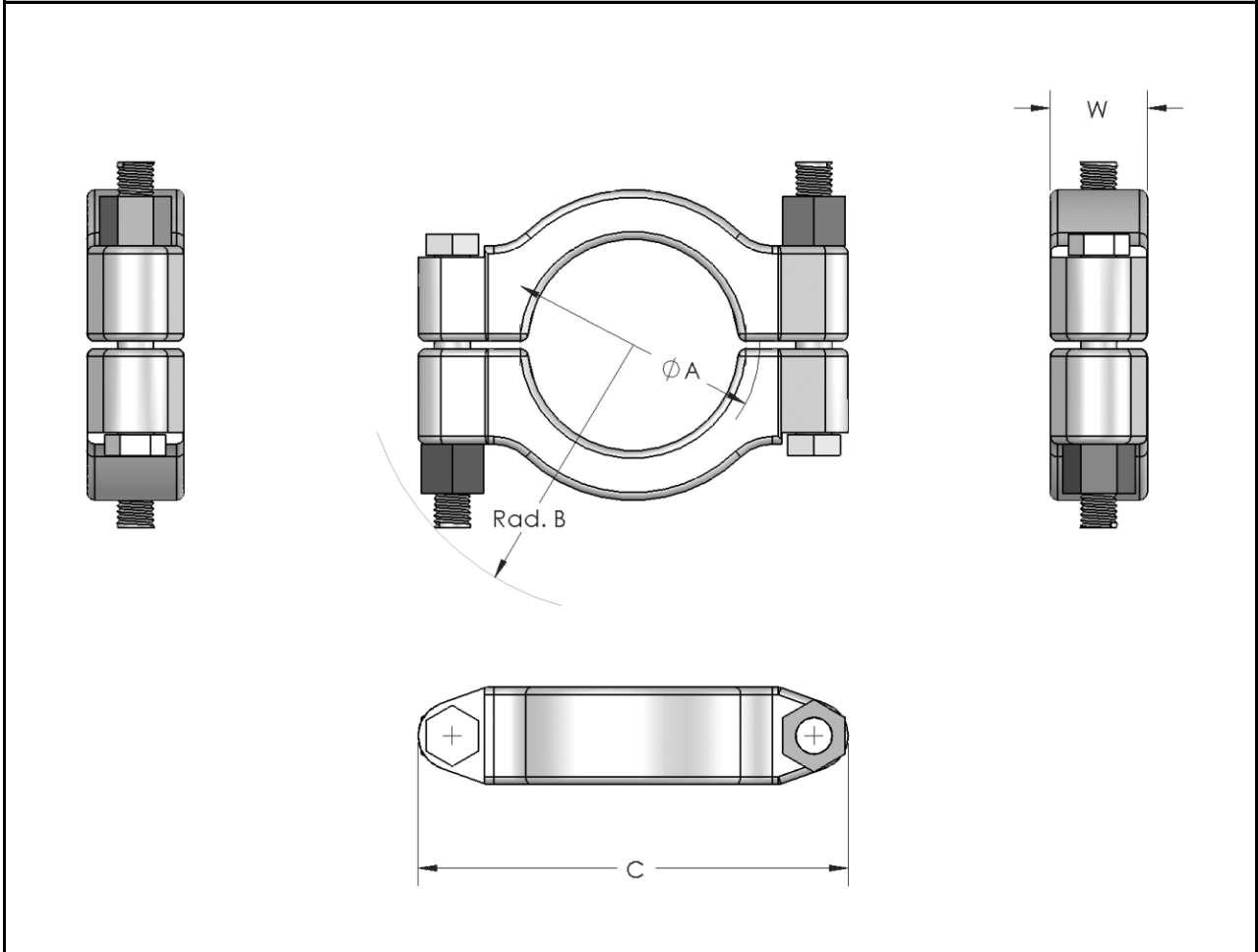
## TRI-CLAMP CONNECTIONS

# SSH Type (Heavy Duty) Closure Clamp

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	SSH Type (Heavy Duty) Closure Clamp
<b>Standards:</b>	ISO 2852, DIN 32676, BS 4825 (ASME BPE) / *non standard
<b>Material:</b>	Hexagon nut made of AISI 316 (1.4401) Rest made of SS 304 (1.4301)
<b>Sterilization temperature:</b>	150°C
<b>Type of construction / Surface quality:</b>	Closure Clamp with V-Profile, for equal pressure overall the hole diameter. Surface: bright finish
<b>Remarks:</b>	Technical contents are subject to change

<b>Recommended ranges of Application:</b>	Pharma, Biotechnology and Industry. For all applications, where very high pressure ratings are required.
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SSH Type (Heavy Duty) Closure Clamp  
Technical Datas to drawing below: see previous page



# 3 Segment Type Closure Clamp

**Product group:** Tri-Clamp Connections

**Title:** 3 Segment Type Closure Clamp

**Standards:** ISO 2852, DIN 32676, BS 4825 (ASME BPE) / \*non standard

**Material:** Tri-Clamp Coupling, Wingnuts und Eye-Bolt Screw from AISI 316 (1.4401)

**Sterilization temperature:** 150°C

**Type of construction / Surface quality:** 3 Segment-Clamp with V-profile, for equal pressure overall the hole diameter. Surface: bright finish

**Remarks:** Technical contents are subject to change  
No data to the pressure ratings. Clamp is not in accordance to the CE-guidelines.

Technical Datas to 3 Segment Type Closure Clamp										
Drawing to table below: see next page										
ISO 2852 DIN 32676 Rh.B	DIN 32676 Rh.A	BS 4825 DIN 32676 Rh.C	A TC-Size	B Rad.	C Length	W Thick- ness	max. Workingpressure by 150° C	max. Testpressure	Weight in Gramm	Item-Number
DN 8* / 10* 15 / 20 / 25	DIN 25 / 32 40	1" - 1 1/2"	50.5	76.5	81.7	19.0	----	----	370 g	201.025.053
DN 32 / 40	DIN 50	2"	64.0	82.0	93.5	19.0	----	----	420 g	201.050.067
DN 50		2 1/2"	77.5	87.0	109.0	19.5	----	----	490 g	201.065.080
DN 65	DIN 65	3"	91.0	96.0	126.5	19.5	----	----	630 g	201.080.094

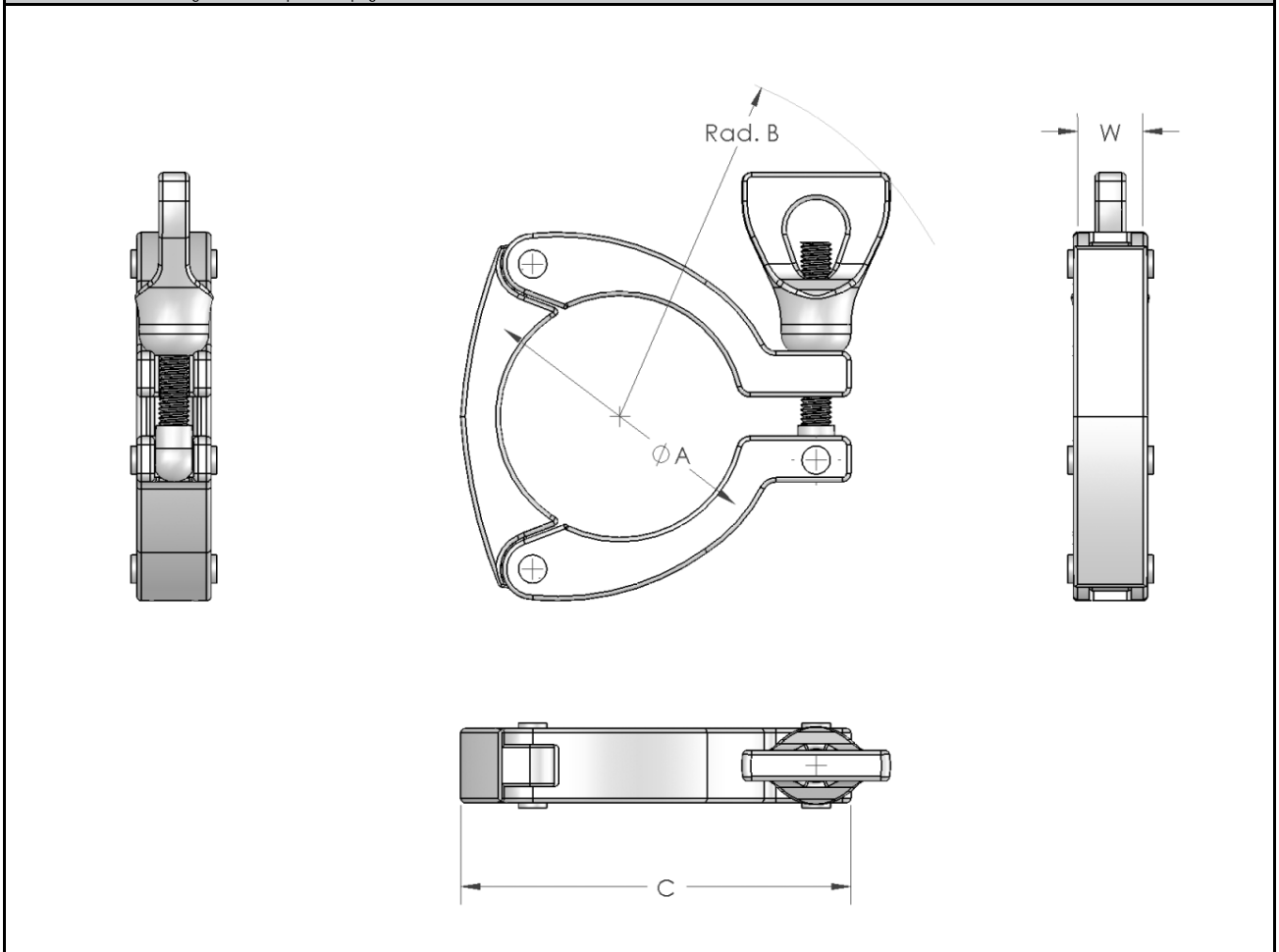
## TRI-CLAMP CONNECTIONS

# 3 Segment Type Closure Clamp

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	3 Segment Type Closure Clamp
<b>Standards:</b>	ISO 2852, DIN 32676, BS 4825 (ASME-BPE) / *non standard
<b>Material:</b>	Tri-Clamp Coupling, Wingnuts und Eye-Bolt Screw from AISI 316 (1.4401)
<b>Sterilization temperature:</b>	150°C
<b>Type of construction / Surface quality:</b>	3 Segment-Clamp with V-profile, for equal pressure overall the hole diameter. Surface: bright finish
<b>Remarks:</b>	Technical contents are subject to change

<b>Recommended ranges of Application:</b>	Pharma, Biotechnology and Industry. Everywhere where an exact passport to the flange connection is recommended.
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3 Segment Type Closure Clamp  
Technical Datas to drawing below: see previous page



## TRI-CLAMP CONNECTIONS

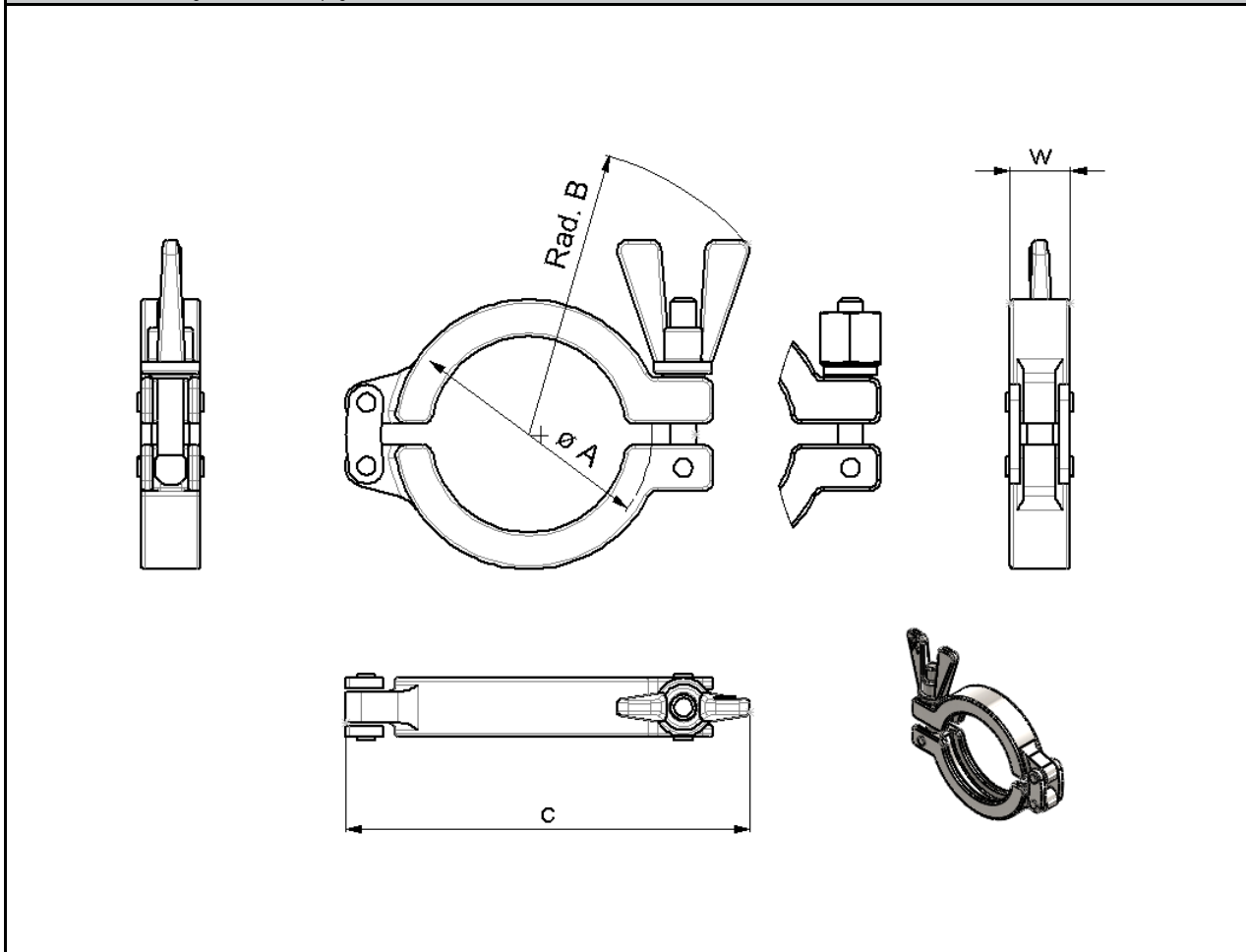
# SH Safety Clamp®

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	SH Safety Clamp®
<b>Standards:</b>	ISO 2852, DIN 32676, BS 4825 (ASME BPE) / *non standard
<b>Material:</b>	Tri-Clamp Coupling, Wingnuts und Eye-Bolt Screw from AISI 316 (1.4401)
<b>Sterilization temperature:</b>	150°C
<b>Type of construction / Surface quality:</b>	Closure Clamp with V-Profile, for equal pressure overall the hole diameter. Surface: bright finish
<b>Remarks:</b>	Technical contents are subject to change

Recommended ranges of Application:	Pharma- and Biotechnology For all applications with with high requirements.
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### SH Type Closure Clamp

Technical Datas to drawing below: see next page



# TRI-CLAMP CONNECTIONS

## SH Safety Clamp®

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	SH Safety Clamp®
<b>Standards:</b>	ISO 2852, DIN 32676, BS 4825 (ASME BPE) / *non standard
<b>Material:</b>	Tri-Clamp Coupling, Wingnuts und Eye-Bolt Screw from AISI 316 (1.4401)
<b>Sterilization temperature:</b>	150°C
<b>Type of construction / Surface quality:</b>	Closure Clamp with V-Profile, for equal pressure overall the hole diameter. Surface: bright finish
<b>Options:</b>	The Wing-Nuts can be exchanged by special Hexagon-Nuts: Item-No. for clamps 1/2" to 5" = 200.000.001 Item-No. for clamps from 5 1/2" = 200.000.002 Technical contents are subject to change
<b>Remarks:</b>	Data to the maximum operating pressure became in dependingness with the assigned seals (elastomers). Clamp with Wing-Nut SH Type: Torque rating 5 Nm Clamp with Hexagon-Nut SHX Type: Torque rating 20 Nm

Technical Datas to SH Safety Clamp®										
Drawing to table below: see previous page										
ISO 2852	DIN 32676	BS 4825	A	B	C	W	max.	max.	Weight	Item-Number
DIN 32676	Row A	DIN 32676	TC-Size	Rad.	Length	Thick- ness	Workpressure	Testpressure	in Gramm	
Row B		Row C					by 150° C			
DN 6 / 8 / 10	DIN 4 / 6 / 8 / *10	1/2" - *3/4"	25.0	63.0	75.0	17.0	50 bar	100 bar	160 g	200.105.028
	DIN 10 / 15 / 20		34.0	67.0	85.0	17.0	50 bar	100 bar	180 g	200.110.037
DN 8* / 10*	DIN 25 / 32	1" - 1 1/2"	50.5	77.0	102.0	17.0	50 bar	100 bar	260 g	200.125.053
15 / 20 / 25	40									
DN 32 / 40	DIN 50	2"	64.0	93.0	123.0	17.0	50 bar	100 bar	340 g	200.150.067
DN 50		2 1/2"	77.5	100.0	140.0	17.0	50 bar	100 bar	390 g	200.165.080
DN 65	DIN 65	3"	91.0	105.0	150.0	17.0	40 bar	80 bar	450 g	200.180.094
DN 80	DIN 80	3 1/2"	106.0	110.0	165.0	17.0	40 bar	80 bar	450 g	200.190.108
	DIN 100	4"	119.0	119.0	185.0	17.0	35 bar	70 bar	580 g	200.200.122

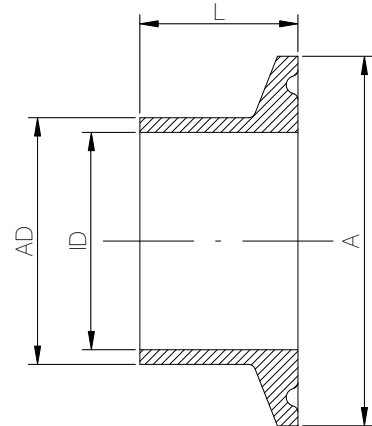
## TRI-CLAMP CONNECTIONS

# Tri-Clamp Ferrule

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	Tri-Clamp Ferrule, Type Biotechnology
<b>Valid Norms:</b>	DIN 32676 Row B (ISO 1127)
<b>Material:</b>	Stnr.-W. 1.4435 BN2 (Fe < 0,5%) acc. EN 10088
<b>Sterelizing temperature:</b>	150°C
<b>Type of construction / Surface quality:</b>	Inside and outside surface: bright finish. Butt-weld-Ends for orbital-welding. Ra inside < 0,4 µm, Ra outside: < 0.8 µm (ID ≤ 9.0mm = Ra innen < 0,6 µm)
<b>Pipe-Hygienic Classes:</b>	H 3 / H 4 acc. DIN 11866
<b>Marking:</b>	Size, Material, Batch-Number, Producer
<b>Certificates:</b>	Certificate acc. EN 10204-3.1
<b>Option:</b>	Electropolishing
<b>Remarks:</b>	Technical contents are subject to change

Dimensions for Tri-Clamp Ferrules

Sizes	A	AD	ID	L	Item-Number
acc. DIN 32676 Row B, ISO 1127					
ISO DN 6	25.0	10.2	7.0	28.5	210.010.007
ISO DN 8	25.0	13.5	10.3	28.5	210.013.010
ISO DN 8	50.5	13.5	10.3	21.6	210.013.010.S
ISO DN 10	25.0	17.2	14.0	28.5	210.017.014
ISO DN 10	50.5	17.2	14.0	21.6	210.017.013
ISO DN 10	50.5	17.2	14.0	28.5	210.017.013.28
ISO DN 15	50.5	21.3	18.1	21.6	210.021.018
ISO DN 15	50.5	21.3	18.1	28.5	210.021.018.28
ISO DN 20	50.5	26.9	22.9	21.6	210.026.022
ISO DN 20	50.5	26.9	22.9	28.5	210.026.022.28
ISO DN 20/1	50.5	26.9	23.7	21.6	210.026.023
ISO DN 20/1	50.5	26.9	23.7	28.5	210.026.023.28
ISO DN 25	50.5	33.7	28.7	21.6	210.033.028
ISO DN 25	50.5	33.7	28.7	28.5	210.033.028.28
ISO DN 25/1	50.5	33.7	29.7	21.6	210.033.029
ISO DN 25/1	50.5	33.7	29.7	28.5	210.033.029.28
ISO DN 32	64.0	42.4	38.4	21.6	210.042.038
ISO DN 32	64.0	42.4	38.4	28.5	210.042.038.28
ISO DN 40	64.0	48.3	44.3	21.6	210.048.044
ISO DN 40	64.0	48.3	44.3	28.5	210.048.044.28
ISO DN 50	77.5	60.3	56.3	21.6	210.060.056
ISO DN 50	77.5	60.3	56.3	28.5	210.060.056.28



## TRI-CLAMP CONNECTIONS

# Tri-Clamp Ferrule

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	Tri-Clamp Ferrule, Type Biotechnology
<b>Valid Norms:</b>	DIN 32676 Row B (ISO 1127) / *non standard
<b>Material:</b>	Stnr.-W. 1.4435 BN2 (Fe < 0,5%) acc. EN 10088
<b>Sterelizing temperature:</b>	150°C
<b>Type of construction / Surface quality:</b>	Inside and outside surface: bright finish. Butt-weld-Ends for orbital-welding. Ra inside < 0,4 µm, Ra outside: < 0.8 µm
<b>Pipe-Hygienic Classes:</b>	H 3 / H 4 acc. DIN 11866
<b>Marking:</b>	Size, Material, Batch-Number, Producer
<b>Certificates:</b>	Certificate acc. EN 10204-3.1
<b>Option:</b>	Electropolishing
<b>Remarks:</b>	Technical contents are subject to change

Dimensions for Tri-Clamp Ferrules						
Sizes	A	AD	ID	L	Item-Number	
acc. DIN 32676 Row B, ISO 1127						
ISO DN 65	91.0	76.1	72.1	21.6	220.076.072.SP	<p>The diagram shows a cross-section of a Tri-Clamp Ferrule. It is a cylindrical component with a central bore. The dimensions are labeled as follows: AD is the outer diameter, ID is the inner diameter, L is the length of the ferrule, and A is the height of the ferrule. The ferrule has a chamfered end and a central bore.</p>
ISO DN 65	91.0	76.1	72.1	28.5	220.076.072.28	
ISO DN 80	106.0	88.9	84.3	21.6	220.088.084	
ISO DN 80	106.0	88.9	84.3	28.5	220.088.084.28	
ISO DN 100	130.0	114.3	109.7	21.6	220.114.109.7	
ISO DN 150	183.0	168.3	163.1	28.5	220.000.150	
ISO DN 200	233.5	219.1	213.9	28.5	220.000.200	
ISO DN *250	286.1	273.1	266.3	28.5	220.000.250	
ISO DN *300	338.5	323.9	315.9	28.5	220.000.300	

## TRI-CLAMP CONNECTIONS

# Tri-Clamp Ferrule

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	Tri-Clamp Ferrule, Type Biotechnology
<b>Valid Norms:</b>	DIN 32676 Row A (DIN 11850) / *non standard
<b>Material:</b>	Stnr.-W. 1.4435 BN2 (Fe < 0,5%) acc. EN 10088
<b>Sterelizing temperature:</b>	150°C
<b>Type of construction / Surface quality:</b>	Inside and outside surface: bright finish. Butt weld-Ends for orbital-welding. Ra inside < 0,4 µm, Ra outside: < 0.8 µm (ID ≤ 9.0mm = Ra inside < 0,6 µm, ID ≤ 6.0mm = Ra inside < 0,8 µm)
<b>Pipe-Hygienic Classes:</b>	H 3 / H 4 acc. DIN 11866
<b>Marking:</b>	Size, Material, Batch-Number, Producer
<b>Certificates:</b>	Certificate acc. EN 10204-3.1
<b>Option:</b>	Electropolishing
<b>Remarks:</b>	Technical contents are subject to change

Dimensions for Tri-Clamp Ferrules						
Sizes	A	AD	ID	L	Item-Number	
acc. DIN 32676 Row A, DIN 11850						
DIN *4	25.0	6.0	4.0	28.5	210.006.004	
DIN *6	25.0	8.0	6.0	28.5	210.008.006	
DIN *8	25.0	10.0	8.0	28.5	210.010.008	
DIN *10	25.0	12.0	10.0	28.5	210.010.010	
DIN 10	34.0	13.0	10.0	28.5	215.013.010.DIN	
DIN 15	34.0	19.0	16.0	28.5	215.019.016.DIN	
DIN 20	34.0	23.0	20.0	28.5	215.023.020.DIN	
DIN 25	50.5	29.0	26.0	28.5	210.029.026.DIN	
DIN 32	50.5	35.0	32.0	28.5	210.035.032.DIN	
DIN 40	50.5	41.0	38.0	28.5	210.041.038.DIN	
DIN 50	64.0	53.0	50.0	28.5	210.053.050.DIN	
DIN 65	91.0	70.0	66.0	28.5	210.070.066.DIN	
DIN 80	106.0	85.0	81.0	28.5	210.085.081.DIN	
DIN 100	119.0	104.0	100.0	28.5	214.104.100.DIN	
DIN 125	155.0	129.0	125.0	28.5	210.129.125.DIN	
DIN 150	183.0	154.0	150.0	28.5	210.154.150.DIN	
DIN 200	233.5	204.0	200.0	28.5	210.204.200.DIN	



## TRI-CLAMP CONNECTIONS

# Tri-Clamp Ferrule

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	Tri-Clamp Ferrule, Type Biotechnology
<b>Valid Norms:</b>	DIN 32676 Row C (ASME-BPE 2009) / *non standard
<b>Material:</b>	Stnr.-W. 1.4435 BN2 (Fe < 0,5%) nach EN 10088
<b>Sterelizing temperature:</b>	150°C
<b>Type of construction / Surface quality:</b>	Inside and outside surface: bright finish. Butt weld-Ends for orbital-welding. Ra inside < 0,4 µm, Ra outside: < 0.8 µm
<b>Pipe-Hygienic Classes:</b>	H 3 / H 4 nach DIN 11866
<b>Marking:</b>	Size, Material, Batch-Number, Producer
<b>Certificates:</b>	Certificate acc. EN 10204-3.1
<b>Option:</b>	Electropolishing. Standard length: 21.6mm - Upon request 28.5mm
<b>Remarks:</b>	Technical contents are subject to change

Dimensions for Tri-Clamp Connectors						
Sizes	A	AD	ID	L	Item-Number	
acc. DIN 32676 Row C (ASME-BPE 2009)						
OD 1/2"	25.0	12.7	9.4	28.5	220.012.009	<p>The diagram shows a cross-section of a ferrule with a central bore. Dimension AD is the outer diameter, ID is the inner diameter, L is the length of the ferrule, and A is the height of the ferrule body.</p>
OD 3/4"	25.0	19.05	15.75	28.5	220.019.016	
OD 1"	50.5	25.4	22.1	21.6	220.025.022	
OD 1 1/2"	50.5	38.1	34.8	21.6	220.038.034	
OD 2"	64.0	50.8	47.5	21.6	220.050.047	
OD 2 1/2"	77.5	63.5	60.2	21.6	220.064.060	
OD 3"	91.0	76.2	72.9	21.6	220.076.072	
OD *3 1/2"	106.0	88.9	84.3	21.6	220.088.084	
OD 4"	119.0	101.6	97.4	21.6	220.102.097	
OD *4 1/2"	130.0	114.3	109.1	21.6	220.114.109	
OD *5"	144.5	127.0	120.0	21.6	220.127.120	
OD 6"	167.0	152.4	146.86	21.6	220.154.147	
OD *8"	217.5	205.0	198.0	21.6	220.205.198	
OD *10"	268.0	254.0	250.0	28.5	220.254.250	
OD *12"	319.0	304.8	300.8	28.5	220.304.300	

# TRI-CLAMP CONNECTIONS

## Tri-Clamp Gasket

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	Tri-Clamp Gasket, Type Biotechnology
<b>Valid Norms:</b>	DIN 32676 Reihe B (ISO 1127) / *non standard
<b>Material:</b>	Viton® brand, polymerisate made of vinylidene fluoride and hexafluoride propylenes. Platinum catalyser, silicone, EPDM Aethylene-propylene-diene rubber
<b>Sterelizing temperature:</b>	EPDM: 132°C (shortly up to 150°C), Silicone and Viton®: 150°C
<b>Type of construction / Surface quality:</b>	Surface smoothly and nonporously, free of laminar recesses and increases. Edges without tears and notches.
<b>Marking</b>	Marking on packing units
<b>Certificates:</b>	Incl. Certificate of conformance FDA-21 CFR 177.2600 for Elastomers. Incl. Certificate of conformance FDA-21 CFR 177.1550 for PTFE
<b>Remarks:</b>	Technical contents are subject to change Also blind gaskets available upon request Viton® and Teflon® are registred trademarks of DuPont Performance Elastomers

Dimensions for Tri-Clamp Gaskets												
Sizes	A	Item-Number Viton®			Item-Number Silikon			Item-Number EPDM				
		acc. DIN 32676 Row B, ISO 1127										
ISO DN	8	22.0	240.022.010	-	W/L	241.022.010	-	W/L	242.022.010	-	W/L	
ISO DN	*8	34.0	240.034.011	X	-	241.034.011	X	-	242.034.011	X	-	
ISO DN	8	50.5	240.050.010	X	-	241.050.010	X	-	242.050.010	X	-	
ISO DN	10	22.0	240.022.014	-	W/L	241.022.014	-	W/L	242.022.014	-	W/L	
ISO DN	*10	34.0	240.034.014	X	-	241.034.014	X	-	242.034.014	X	W/L	
ISO DN	10	50.5	240.050.014	X	-	241.050.014	X	-	242.050.014	X	-	
ISO DN	*15	34.0	240.034.019	X	-	241.034.019	X	-	242.034.019	X	-	
ISO DN	15	50.5	240.050.019	X	-	241.050.019	X	-	242.050.019	X	-	
ISO DN	20	50.5	240.050.024	X	-	241.050.024	X	-	242.050.024	X	-	
ISO DN	20/1	50.5	240.050.024	X	-	241.050.024	X	-	242.050.024	X	-	
ISO DN	25	50.5	240.050.030	X	-	241.050.030	X	-	242.050.030	X	-	
ISO DN	25/1	50.5	240.050.030	X	-	241.050.030	X	-	242.050.030	X	-	
ISO DN	32	64.0	240.064.039	X	-	241.064.039	X	-	242.064.039	X	-	
ISO DN	40	64.0	240.064.044	X	-	241.064.044	X	-	242.064.044	X	-	
ISO DN	50	77.5	240.077.056	X	-	241.077.056	X	-	242.077.056	X	-	
ISO DN	65	91.0	240.091.072	X	-	241.091.072	X	W/L	242.091.072	X	W/L	
ISO DN	80	106.0	240.106.084	X	-	241.106.084	X	-	242.106.084	X	-	
ISO DN	100	130.0	240.130.110	-	W/L	241.130.110	X	-	242.130.110	X	-	
ISO DN	150	182.7	240.000.150	X	-	241.000.150	X	-	242.000.150	X	-	
ISO DN	200	233.5	240.000.200	X	-	241.000.200	X	-	242.000.200	X	-	
ISO DN	250	287.5	240.000.250	X	-	241.000.250	X	-	242.000.250	X	-	
ISO DN	300	338.3	240.000.300	X	-	241.000.300	X	-	242.000.300	X	-	

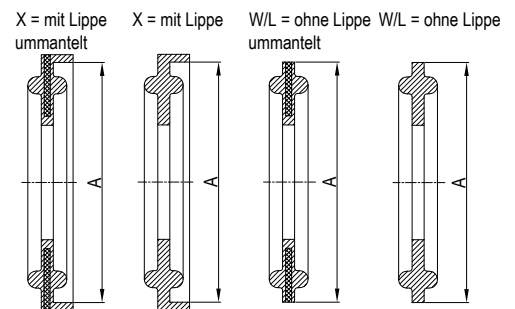
# TRI-CLAMP CONNECTIONS

## Tri-Clamp Gasket

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	Tri-Clamp Gasket, Type Biotechnology
<b>Valid Norms:</b>	acc. DIN 32676 Row B (ISO 1127) / *non standard
<b>Material:</b>	PTFE pure made of polytetrafluoride ethylene, PTFE with core made of Viton®
<b>Sterelizing temperature:</b>	PTFE: 150°C
<b>Type of construction / Surface quality:</b>	Surface smoothly and nonporously, free of laminar recesses and increases. Edges without tears and notches.
<b>Marking</b>	Marking on packing units
<b>Certificates:</b>	Incl. Certificate of conformance FDA-21 CFR 177.2600 for Elastomers. Incl. Certificate of conformance FDA-21 CFR 177.1550 for PTFE
<b>Remarks:</b>	Technical contents are subject to change Blind gaskets also available upon request Viton® and Teflon® are registered trademarks of DuPont Performance Elastomers PTFE Gaskets do not have a fixing-lip.

Dimensions for Tri-Clamp Gaskets

Sizes	A	Item-Number				Item-Number			
		Teflon®/PTFE ummantelt				Teflon®/PTFE			
acc. DIN 32676 Row B (ISO 1127)									
ISO DN	8	22.0	243.022.010	-	W/L	244.022.010	-	W/L	
ISO DN	*8	34.0	243.034.011	X	-	244.034.011	-	W/L	
ISO DN	8	50.5	243.050.010	X	-	244.050.010	-	W/L	
ISO DN	10	22.0	243.022.014	-	W/L	244.022.014	-	W/L	
ISO DN	*10	34.0	243.034.014	X	-	244.034.014	-	W/L	
ISO DN	10	50.5	243.050.014	X	-	244.050.014	-	W/L	
ISO DN	*15	34.0	243.034.019	X	W/L	244.034.019	-	W/L	
ISO DN	15	50.5	243.050.019	X	W/L	244.050.019	-	W/L	
ISO DN	20	50.5	243.050.024	X	-	244.050.024	-	W/L	
ISO DN	20/1	50.5	243.050.024	X	-	244.050.024	-	W/L	
ISO DN	25	50.5	243.050.030	-	W/L	244.050.030	-	W/L	
ISO DN	25/1	50.5	243.050.030	-	W/L	244.050.030	-	W/L	
ISO DN	32	64.0	243.064.039	X	W/L	244.064.039	-	W/L	
ISO DN	40	64.0	243.064.044	-	W/L	244.064.044	-	W/L	
ISO DN	50	77.5	243.077.056	-	W/L	244.077.056	-	W/L	
ISO DN	65	91.0	243.091.072	-	W/L	244.091.072	-	W/L	
ISO DN	80	106.0	243.106.084	X	-	244.106.084	-	W/L	
ISO DN	100	130.0	243.130.110	X	-	244.130.110	-	W/L	
ISO DN	150	182.7	243.000.150	-	W/L	244.000.150	-	W/L	
ISO DN	200	233.5	243.000.200	-	W/L	244.000.200	-	W/L	
ISO DN	250	287.5	243.000.250	X	-	244.000.250	-	W/L	
ISO DN	300	338.3	243.000.300	X	W/L	244.000.300	-	W/L	



# TRI-CLAMP CONNECTIONS

## Tri-Clamp Gasket

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	Tri-Clamp Gasket, Type Biotechnology
<b>Valid Norms:</b>	acc. DIN 32676 Row A (DIN 11850) / *non standard
<b>Material:</b>	Viton® brand, polymerisate made of vinylidene fluoride and hexafluoride propylenes. Platinum catalyser, silicone, EPDM Aethylene-propylene-diene rubber, Viton®
<b>Sterelizing temperature:</b>	EPDM: 132°C (shortly up tg 150°C), Silicone and Viton®: 150°C
<b>Type of construction / Surface quality:</b>	Surface smoothly and nonporously, free of laminar recesses and increases. Edges without tears and notches.
<b>Marking</b>	Marking on packing units
<b>Certificates:</b>	Incl. Certificate of conformance FDA-21 CFR 177.2600 for Elastomers. Incl. Certificate of conformance FDA-21 CFR 177.1550 for PTFE
<b>Remarks:</b>	Technical contents are subject to change Blind rivets also available upon request Viton® and Teflon® are registred trademarks of DuPont Performance Elastomers

Dimensions for Tri-Clamp Gaskets												
Sizes	A	Item-Number Viton®			Item-Number Silikon			Item-Number EPDM				
acc. DIN 32676 Row A (DIN 11850)												
DIN	*4	22.0	240.022.004	-	W/L	241.022.004	-	W/L	242.022.004	-	W/L	
DIN	*6	22.0	240.022.006	-	W/L	241.022.006	-	W/L	242.022.006	-	W/L	
DIN	*8	22.0	240.022.008	-	W/L	241.022.008	-	W/L	242.022.008	-	W/L	
DIN	*10	22.0	240.022.010	-	W/L	241.022.010	-	W/L	242.022.010	-	W/L	
DIN	10	34.0	240.034.010	X	-	241.034.010	X	-	242.034.010	X	-	
DIN	15	34.0	240.034.016	X	-	241.034.016	X	-	242.034.016	X	-	
DIN	20	34.0	240.034.020	X	-	241.034.020	X	-	242.034.020	X	-	
DIN	25	50.5	240.050.026	X	-	241.050.026	X	-	242.050.026	X	-	
DIN	32	50.5	240.050.032	X	-	241.050.032	X	-	242.050.032	X	-	
DIN	40	50.5	240.050.038	X	-	241.050.038	X	-	242.050.038	X	-	
DIN	50	64.0	240.064.050	X	-	241.064.050	X	-	242.064.050	X	-	
DIN	65	91.0	240.091.066	X	-	241.091.066	X	-	242.091.066	X	-	
DIN	80	106.0	240.106.081	X	-	241.106.081	X	-	242.106.081	X	-	
DIN	100	119.0	240.119.100	X	-	241.119.100	X	-	242.119.100	X	-	
DIN	125	155.0	240.155.125	X	-	241.155.125	X	-	242.155.125	X	-	
DIN	150	183.0	240.183.150	X	-	241.183.150	X	-	242.183.150	X	-	
DIN	200	233.5	240.233.200	X	-	241.233.200	X	-	242.233.200	X	-	

# TRI-CLAMP CONNECTIONS

## Tri-Clamp Gasket

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	Tri-Clamp Gasket, Type Biotechnology
<b>Valid Norms:</b>	DIN 32676 Row A (DIN 11850) / *non standard
<b>Material:</b>	PTFE pure made of polytetrafluore ethylene, PTFE with core made of Viton®
<b>Sterelizing temperature:</b>	PTFE: 150°C
<b>Type of construction / Surface quality:</b>	Surface smoothly and nonporously, free of laminar recesses and increases. Edges without tears and notches.
<b>Marking</b>	Marking on packing units
<b>Certificates:</b>	Incl. Certificate of conformance FDA-21 CFR 177.1550 for PTFE and USP Class VI
<b>Remarks:</b>	Technical contents are subject to change Blind gaskets also available upon request Viton® and Teflon® are registred trademarks of DuPont Performance Elastomers PTFE Gaskets do not have a fixing-lip.

Dimensions for Tri-Clamp Gaskets									
Sizes	A	Item-Number Teflon®/PTFE umm.				Item-Number Teflon® / PTFE			
		acc. DIN 32676 Row A (DIN 11850)							
DIN	*4	22.0	243.022.004	-	W/L	244.022.004	-	W/L	
DIN	*6	22.0	243.022.006	-	W/L	244.022.006	-	W/L	
DIN	*8	22.0	243.022.008	-	W/L	244.022.008	-	W/L	
DIN	*10	22.0	243.022.010	-	W/L	244.022.010	-	W/L	
DIN	10	34.0	243.034.010	-	W/L	244.034.010	-	W/L	
DIN	15	34.0	243.034.016	-	W/L	244.034.016	-	W/L	
DIN	20	34.0	243.034.020	X	W/L	244.034.020	-	W/L	
DIN	25	50.5	243.050.026	X	-	244.050.026	-	W/L	
DIN	32	50.5	243.050.032	-	W/L	244.050.032	-	W/L	
DIN	40	50.5	243.050.038	-	W/L	244.050.038	-	W/L	
DIN	50	64.0	243.064.050	X	-	244.064.050	-	W/L	
DIN	65	91.0	243.091.066	X	-	244.091.066	-	W/L	
DIN	80	106.0	243.106.081	X	-	244.106.081	-	W/L	
DIN	100	119.0	243.119.100	-	W/L	244.119.100	-	W/L	
DIN	125	155.0	243.155.125	-	W/L	244.155.125	-	W/L	
DIN	150	183.0	243.183.150	X	-	244.182.150	-	W/L	
DIN	200	233.5	243.233.200	X	-	244.233.200	-	W/L	

# TRI-CLAMP CONNECTIONS

## Tri-Clamp Gasket

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	Tri-Clamp Gasket, Type Biotechnology
<b>Valid Norms:</b>	DIN 32676 Row C (ASME BPE 2009) / *non standard
<b>Material:</b>	Viton® brand, polymerisate made of vinylidene fluoride and hexafluoride propylenes. Platinum catalysed silicone, EPDM aethylene-propylene-diene-rubber, Viton®
<b>Sterelizing temperature:</b>	EPDM: 132°C (shortly up to 150°C), Silicone and Viton®: 150°C
<b>Type of construction / Surface quality:</b>	Surface smoothly and nonporously, free of laminar recesses and increases. Edges without tears and notches.
<b>Marking</b>	Marking on packing units
<b>Certificates:</b>	Incl. Certificate of conformance FDA-21 CFR 177.2600 for Elastomere and USP Class VI
<b>Remarks:</b>	Technical contents are subject to change Blind gaskets also available upon request Viton® and Teflon® are registred trademarks of DuPont Performance Elastomers

Dimensions for Tri-Clamp Gaskets												
Sizes	A	Item-Number Viton®			Item-Number Silikon			Item-Number EPDM				
acc. DIN 32676 Row C (ASME BPE 2009)												
OD 1/2"	22.0	240.022.010	-	W/L	241.022.010	-	W/L	242.022.010	-	W/L		
OD 3/4"	22.0	240.022.017	-	W/L	241.022.017	-	W/L	242.022.017	-	W/L		
OD 1"	50.5	240.050.022	X	-	241.050.022	X	W/L	242.050.022	X	W/L		
OD 1 1/2"	50.5	240.050.034	X	-	241.050.034	X	W/L	242.050.034	X	W/L		
OD 2"	64.0	240.064.047	X	-	241.064.047	X	W/L	242.064.047	X	W/L		
OD 2 1/2"	77.5	240.077.059	X	-	241.077.059	X	W/L	242.077.059	X	-		
OD 3"	91.0	240.091.072	X	-	241.091.072	X	W/L	242.091.072	X	W/L		
OD *3 1/2"	106.0	240.106.084	X	-	241.106.084	X	-	242.106.084	X	-		
OD 4"	119.0	240.119.097	X	-	241.119.097	X	W/L	242.119.097	X	-		
OD *4 1/2"	130.0	240.130.109	-	W/L	241.130.109	X	-	242.130.109	X	-		
OD *5"	144.0	240.144.121	-	W/L	241.144.121	X	-	242.144.121	X	-		
OD *6"	167.0	240.167.146	X	-	241.167.146	X	-	242.167.146	X	-		
OD *8"	217.5	240.217.197	X	-	241.217.197	X	-	242.217.197	X	-		
OD *10"	268.0	240.268.250	X	-	241.268.250	X	-	242.268.250	X	-		
OD *12"	319.0	240.304.300	X	-	241.304.300	X	-	242.304.300	X	-		

# TRI-CLAMP CONNECTIONS

## Tri-Clamp Gasket

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	Tri-Clamp Gasket, Type Biotechnology
<b>Valid Norms:</b>	DIN 32676 Row C (ASME BPE 2009) / *non standard
<b>Material:</b>	PTFE pure made of polytetrafluorethylene, PTFE with core made of fluoride-rubber FPM
<b>Sterelizing temperature:</b>	PTFE: 150°C
<b>Type of construction / Surface quality:</b>	Surface smoothly and nonporously, free of laminar recesses and increases. Edges without tears and notches.
<b>Marking</b>	Marking on packing units
<b>Certificates:</b>	Incl. Certificate of conformance FDA-21 CFR 177.1550 for PTFE and USP Class VI
<b>Remarks:</b>	Technical contents are subject to change Blind gaskets also available upon request Viton® and Teflon® are registered trademarks of DuPont Performance Elastomers PTFE Gaskets do not have a fixing-lip. (except OD 12")

Dimensions for Tri-Clamp Gaskets									
Sizes	A	Item-Number Teflon®/PTFE umm.			Item-Number Teflon® / PTFE				
acc. DIN 32676 Row C (ASME BPE 2009)									
OD 1/2"	22.0	243.022.010	-	W/L	244.022.010	-	W/L		
OD 3/4"	22.0	243.022.017	-	W/L	244.022.017	-	W/L		
OD 1"	50.5	243.050.022	-	W/L	244.050.022	-	W/L		
OD 1 1/2"	50.5	243.050.034	-	W/L	244.050.034	-	W/L		
OD 2"	64.0	243.064.047	-	W/L	244.064.047	-	W/L		
OD 2 1/2"	77.5	243.077.059	-	W/L	244.077.059	-	W/L		
OD 3"	91.0	243.091.072	-	W/L	244.091.072	-	W/L		
OD *3 1/2"	106.0	243.106.084	X	-	244.106.084	-	W/L		
OD 4"	119.0	243.119.097	-	W/L	244.119.097	-	W/L		
OD *4 1/2"	130.0	243.130.109	X	-	244.130.109	-	W/L		
OD *5"	144.0	243.144.121	X	-	244.144.121	-	W/L		
OD *6"	167.0	243.167.146	-	W/L	244.167.146	-	W/L		
OD *8"	217.5	243.217.197	X	W/L	244.217.197	-	W/L		
OD *10"	268.0	243.268.250	X	W/L	244.268.250	-	W/L		
OD *12"	319.0	243.304.300	X	-	244.304.300	X	W/L		

# Tri-Clamp Gasket - Supplement Sheet

**Product group:** Tri-Clamp Connections

**Title:** Tri-Clamp Gasket, Type Biotechnology

**Valid Norms:** ISO 2852, DIN 32676, BS 4825 (ASME-BPE) / \*non standard

**Material:** PTFE pure made of polytetrafluoride ethylenes, PTFE with core made of fluoride rubber FPM, Viton® brand, polymerisate made of vinylidene fluoride and hexafluoride propylenes. Platinum-catyliised silicone, EPDM aethylene-propylene-diene-rubber, Viton®

**Sterelizing temperature:** EPDM: 132°C (shortly up to 150°C), Silicone, Viton® and PTFE: 150°C

**Type of construction / Surface quality:** Surface smoothly and nonporously, free of laminar recesses and increases. Edges without tears and notches.

**Marking** Marking on packing units

**Certificates:** Incl. Certificate of conformance FDA-21 CFR 177.2600 for Elastomers.  
Incl. Certificate of conformance FDA-21 CFR 177.1550 for PTFE and USP Class VI

**Remarks:** Technical contents are subject to change  
Viton® and Teflon® are registered trademarks of DuPont Performance Elastomers

Chemical Description	Fluorcautchuc, Viton®	Siliconecautchuc	Aethylene-Propylen-Dien-Kautschuk	Teflon®	**Silkoflon
Short Description acc. ISO 1629	FPM	VMQ	EPDM	PTFE	FEP/VMQ
<b>Specifications</b>					
Abrasion-Resistance	good	good till excellent	good till excellent	excellent	excellent
Steam-Resistance	poor	poor	good till excellent	excellent	excellent
Dielectricity Quality	good	excellent	excellent	excellent	excellent
Fire-Resistance	good	poor	gering	excellent	excellent
Ozon-Resistance	excellent	excellent	excellent	excellent	excellent
Acid-Resistance	good	good	good till excellent	excellent	excellent
Temperature-Resistance	-29°C to 204°C	-62°C to 232°C	-46°C to 132°C	-78°C to 232°C	-60°C to 200°C
Permissible sterilisation temperature	150°C	150°C	132°C shortly up to 150°C	150°C	150°C
Weather-Resistance	good	excellent	excellent	excellent	excellent
Resistance to tensile stress	neutral	excellent	gut	excellent	excellent
Tensilestrength	good till excellent	good	good till excellent	excellent	excellent

\*\*Gasketmaterial Silkoflon: For Aseptic O-Ring Unions: see page 67

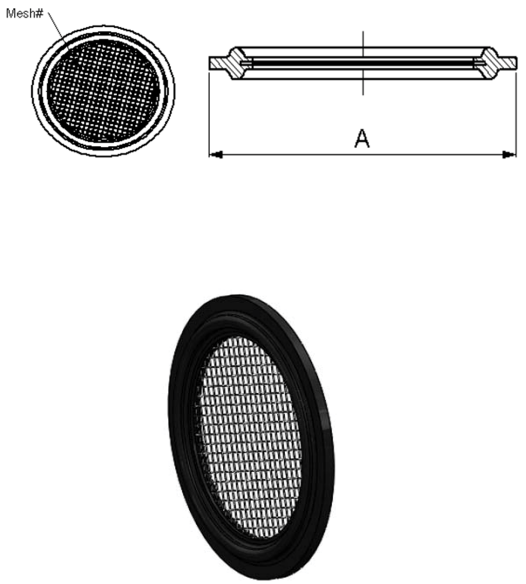


# TRI-CLAMP CONNECTIONS

## Screen Gaskets

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	Screen Gaskets
<b>Valid Norms:</b>	DIN 32676 Row C (ASME-BPE 2009)
<b>Material:</b>	EPDM Aethylen-Propylen-Dien-Kautschuk Platinkatalysierter Silikon AISI 316
<b>Sterelizing temperature:</b>	Silicone: 150°C, EPDM: 132°C shortly up to 150°C),
<b>Type of construction / Surface quality:</b>	Surface smoothly and nonporously, free of laminar recesses and increases. Edges without tears and notches.
<b>Marking</b>	Marking on packing units
<b>Certificates:</b>	Incl. Certificate of conformance FDA-21 CFR 177.2600 for Elastomers. and USP Class VI
<b>Remarks:</b>	Other dimensions and materials available upon request Technical contents are subject to change

Dimensions for Tri-Clamp Gaskets					
Sizes	A	Mesh#	Item-Number Silikon	Item-Item EPDM	
acc. DIN 32676 Row C (ASME-BPE)					
OD 1-1/2"		50.5	10	241.050.034.010	242.050.034.010
OD 1-1/2"		50.5	20	241.050.034.020	242.050.034.020
OD 1-1/2"		50.5	30	241.050.034.030	242.050.034.030
OD 1-1/2"		50.5	35	241.050.034.035	242.050.034.035
OD 1-1/2"		50.5	40	241.050.034.040	242.050.034.040
OD 1-1/2"		50.5	60	241.050.034.060	242.050.034.060
OD 1-1/2"		50.5	100	241.050.034.100	242.050.034.100
OD 2"		64.0	20	241.064.047.020	242.064.047.020
OD 2"		64.0	30	241.064.047.030	242.064.047.030
OD 2"		64.0	40	241.064.047.040	242.064.047.040
OD 2-1/2"		77.5	20	241.077.059.020	242.077.059.020
OD 4"		119.0	20	241.119.097.020	242.119.097.020
OD 4"		119.0	40	241.119.097.040	242.119.097.040



# TRI-CLAMP CONNECTIONS

## Smart Gaskets®

**Product group:** Tri-Clamp Connections

**Title:** Smart Gaskets®

**Valid Norms:** acc. DIN 32676 Row C (ASME-BPE 2009)

**Material:** EPDM aethylene-propylene-diene-rubber  
Platinum-catylished silicone

**Sterelizing temperature:** Silicone: 150°C, EPDM: 132°C (shortly up to 150°C)

**Type of construction / Surface quality:** Surface smoothly and nonporously, free of laminar recesses and increases.  
Edges without tears and notches.

**Marking:** Marking on packing units

**Certificates:** Incl. Certificate of conformance FDA-21 CFR 177.2600 for Elastomers.  
and USP Class VI

**Remarks:** Other dimensions and materials available upon request  
Function of the gasket is only guaranteed with the accompanying clamp.  
Technical contents are subject to change

Dimensions for Tri-Clamp Gaskets®						
Sizes	A	Ports	Item-Number Silikon	Item-Number EPDM	Item-Number Tri-Clamp Connections	
acc. DIN 32676 Row C (ASME-BPE 2009)						
OD 1/2"	25.0	1	241.105.000	242.105.000	209.005.028.1	
OD 1/2"	25.0	2	241.205.000	242.205.000	209.005.028.2	
OD 1/2"	25.0	3	241.305.000	242.305.000	209.005.028.2	
OD 1/2"	25.0	4	241.405.000	242.405.000	209.005.028.2	
OD 3/4"	25.0	1	241.107.000	242.107.000	209.005.028.2	
OD 3/4"	25.0	2	241.207.000	242.207.000	209.005.028.2	
OD 3/4"	25.0	3	241.307.000	242.307.000	209.005.028.2	
OD 3/4"	25.0	4	241.407.000	242.407.000	209.005.028.2	
OD 1"	50.5	1	241.110.000	242.110.000	209.025.053.1	
OD 1"	50.5	2	241.210.000	242.210.000	209.025.053.1	
OD 1"	50.5	3	241.310.000	242.310.000	209.025.053.1	
OD 1"	50.5	4	241.410.000	242.410.000	209.025.053.1	
OD 1-1/2"	50.5	1	241.115.000	242.115.000	209.025.053.1	
OD 1-1/2"	50.5	2	241.215.000	242.215.000	209.025.053.1	
OD 1-1/2"	50.5	3	241.315.000	242.315.000	209.025.053.1	
OD 1-1/2"	64.0	4	241.415.000	242.415.000	209.025.053.1	
OD 2"	64.0	1	241.120.000	242.120.000	209.050.067.1	
OD 2"	64.0	2	241.220.000	242.220.000	209.050.067.1	
OD 2"	64.0	3	241.320.000	242.320.000	209.050.067.1	
OD 2"	64.0	4	241.420.000	242.420.000	209.050.067.1	
OD 3"	91.0	1	241.130.000	242.130.000	209.050.067.1	
OD 3"	91.0	2	241.230.000	242.230.000	209.050.067.1	
OD 3"	91.0	3	241.330.000	242.330.000	209.050.067.1	
OD 3"	91.0	4	241.430.000	242.430.000	209.050.067.1	
OD 4"	119.0	1	241.140.000	242.140.000	209.100.122.1	
OD 4"	119.0	2	241.240.000	242.240.000	209.100.122.1	
OD 4"	119.0	3	241.340.000	242.340.000	209.100.122.1	
OD 4"	119.0	4	241.440.000	242.440.000	209.100.122.1	

## TRI-CLAMP CONNECTIONS

# Covers

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	Covers
<b>Valid Norms:</b>	acc. DIN 32676 Row C, (ASME-BPE 2009)
<b>Material:</b>	EPDM aethylene-propylene-diene-rubber Platinum-catyliised silicone Viton® brand, polymerisate made of vinylidene fluoride and hexafluoride propylenes. Cover made of AISI 316 (1.4401)
<b>Sterelizing temperature:</b>	Viton®, Silicone: 150°C, EPDM: 132°C (shortly up to 150°C),
<b>Type of construction /</b>	Surface smoothly and nonporously, free of laminar recesses and increases.
<b>Surface quality:</b>	Edges without tears and notches.
<b>Marking</b>	Marking on packing units
<b>Certificates:</b>	Incl. Certificate of conformance FDA-21 CFR 177.2600 for Elastomers. and USP Class VI
<b>Remarks:</b>	Other dimensions and materials made on request Also available with bore hole Technical contents are subject to change

Dimensions for Tri-Clamp Gaskets						
Sizes	A	Item-Number Viton®	Item-Number Silikon	Item-Number EPDM		
acc. DIN 32676 Row C (ASME BPE 2009)						
OD 3/4"	25.0	240.316.016.000	241.316.016.000	242.316.016.000		
OD 1"	50.5	240.316.022.000	241.316.022.000	242.316.022.000		
OD 1 1/2"	50.5	240.316.034.000	241.316.034.000	242.316.034.000		
OD 2"	64.0	240.316.047.000	241.316.047.000	242.316.047.000		
OD 2 1/2"	77.5	240.316.059.000	241.316.059.000	242.316.059.000		
OD 3"	91.0	240.316.072.000	241.316.072.000	242.316.072.000		

# Blind cover

<b>Product group:</b>	Tri-Clamp Connections
<b>Title:</b>	Blind cover, Biotechnology type
<b>Valid Norms:</b>	ISO 2852, DIN 32676, BS 4825 (ASME BPE) / *non standard
<b>Material:</b>	Str.-W. 1.4435 BN2 (Fe < 0,5%) acc. EN 10088
<b>Sterelizing temperature:</b>	150°C
<b>Type of construction / Surface quality:</b>	Surfaces interior and exterior metallic, shiny. Ra inside < 0,4 µm, Ra outside: < 0.8 µm
<b>Pipe-Hygienic Classes:</b>	H 3 / H 4 acc. DIN 11866
<b>Marking:</b>	Material number, melt number, manufacturer code
<b>Certificates:</b>	Incl. Certificate of conformance EN 10204-3.1
<b>Option:</b>	Electropolishing
<b>Remarks:</b>	Technical contents are subject to change

Dimensions for blind cover						
ISO 2852 DIN 32676 Rh.B	DIN 32676 Rh.A	BS 4825 (ASME-BPE) DIN 32676 Rh.C	A	T	Item-Number	
DN 6 / 8 / 10	DIN 4 / 6 / 8 / *10	1/2" / *3/4"	25.0	5.5	230.005.025	
	DIN 10 / 15 / 20		34.0	5.5	230.010.034	
*DN 8 / *10 / 15 20 / 25	DIN 25 / 32 / 40	1" / 1 1/2"	50.5	6.4	230.025.050	
DN 32 / 40	DIN 50	2"	64.0	6.4	230.050.064	
DN 50		2 1/2"	77.5	6.4	230.065.077	
DN 65	DIN 65	3"	91.0	6.4	230.080.091	
DN 80	DIN 80	3 1/2"	106.0	6.4	230.090.106	
	DIN 100	4"	119.0	6.4	230.100.119	
DN 100		4 1/2"	130.0	10.0	230.114.130	
	*DIN 125	*5"	144.5	10.0	230.125.144	
	DIN 125	5 1/2"	155.0	10.0	230.155.135	
		*6"	167.0	11.0	230.150.167	
DN 150	DIN 150	6 5/8"	183.0	11.0	230.000.150	
		8"	217.5	14.0	230.200.217	
DN 200	DIN 200	8 5/8"	233.5	14.0	230.000.200	
	*DIN 250	*10"	268.0	14.0	230.250.268	
DN 250		*10 5/8"	286.1	14.0	230.000.250	
		*12"	319.0	20.0	230.319.304	
DN 300		12 5/8"	338.5	20.0	230.000.300	

# Metal-melted clamp view window

**Product group:** Tri-Clamp Connections

**Title:** Metal-melted clamp view window, sterile model

**Valid Norms:** ISO 2852, DIN 32676, BS 4825 (ASME-BPE) / \* non standard

**Material:** Stnr.-W. 1.4462 Duplex acc. EN 10088  
 Glas: Borosilikat acc. DIN 7080  
 Other ring materials (e.g 2.4602 or 2.4610) on request

**Permissible operating temperatures:** -30° to +280° C

**Permissible operating pressure:** -1 to +16 bar (see table below)

**Type of construction / Surface quality:** Surfaces interior and exterior: ground and polished.  
 Ra inside < 0,25 µm, Ra outside: < 0.8 µm

**Certification:** 3A-standard for food / ASME-BPE 2009

**Marking:** Material number, melt number, certification code

**Certificates:** Incl. Certificate of conformance EN 10204-3.1

**Remarks:** Technical contents are subject to change

Dimensions for Clamp view windows								
ISO 2852 DIN 32676 Rh.B	DIN 32676 Rh.A	BS 4825 (ASME-BPE) DIN 32676 Rh.C	A	T	d1	Item-Number	max. Pressure	
*DN 8 /*10 / 15 20 / 25	DIN 25 / 32 / 40	1" / 1 1/2"	50.5	10.0	25.0	231.000.025	16 bar	
DN 32 / 40	DIN 50	2"	64.0	10.0	30.0	231.000.050	16 bar	
DN 50		2 1/2"	77.5	10.0	35.0	231.000.077	16 bar	
DN 65	DIN 65	3"	91.0	10.0	40.0	231.000.065	10 bar	
DN 80	DIN 80	3 1/2"	106.0	10.0	50.0	231.000.080	10 bar	
	DIN 100	4"	119.0	12.0	55.0	231.000.100	10 bar	
		5"	144.5	16.0	65.0	231.000.145	10 bar	
	DIN 125	*5 1/2"	155.0	16.0	70.0	231.000.155	6 bar	
		*6"	167.0	16.0	75.0	231.000.167	6 bar	
DN 150	DIN 150	6 5/8"	183.0	16.0	75.0	231.000.150	6 bar	
		8"	217.5	18.0	100.0	231.000.217	6 bar	
DN 200	DIN 200	8 5/8"	233.5	18.0	100.0	231.000.200	6 bar	
DN 250		*10"	268.0	20.0	120.0	231.000.258	6 bar	
	DIN 250	*10 5/8"	287.5	20.0	120.0	231.000.250	6 bar	
	DIN 300	*12"	319.0	22.0	140.0	231.000.319	6 bar	
DN 300		12 5/8"	338.5	22.0	140.0	231.000.300	6 bar	