



CONNECTORS

Connecting technology for Pharma & Biotech.

CONNECTORS STERILE COMPONENTS

Member of the NORMA Group





CONNECTORS

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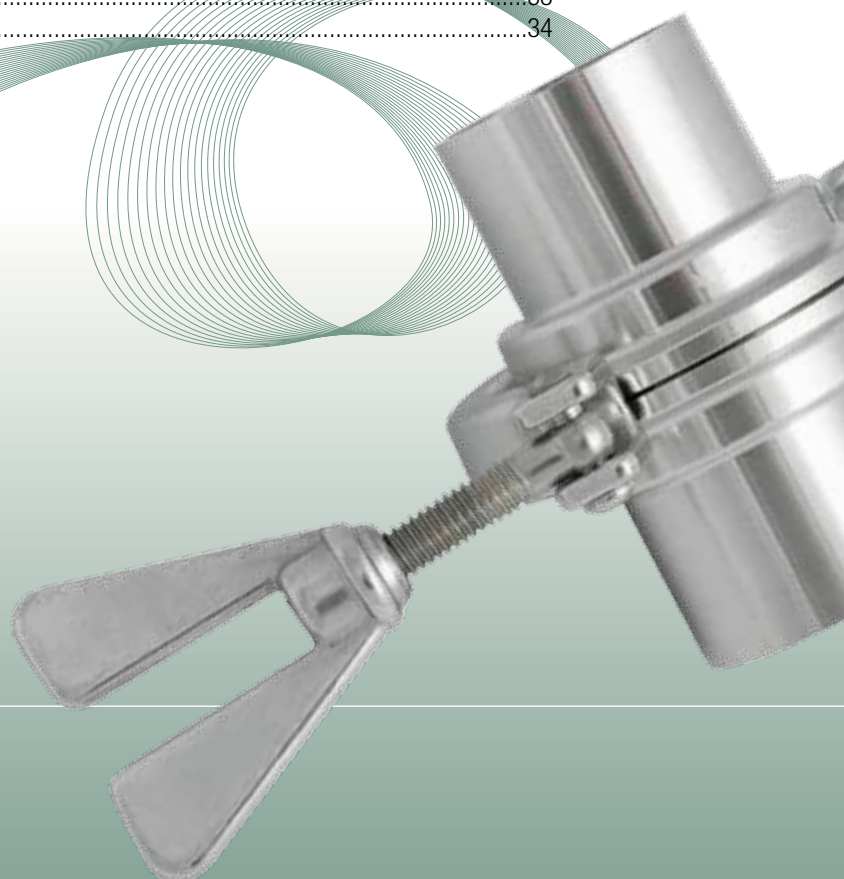
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TRI-CLAMP CONNECTIONS

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SH Type Closure Clamp

Product group:	Tri-Clamp Connections
Description:	SH Type Closure Clamp
Valid standards:	ISO 2852, DIN 32676, BS 4825 (ASME BPE) / *non standard
Material:	Tri-Clamp Coupling, Wingnuts and Eye-Bolt Screw from AISI 316 (1.4401)
Permissible sterilization temperature:	150°C
Version / Surface quality:	Closure Clamp with V-Profile, for equal pressure over the whole circumference. Surface, internal and external bright finish Hexagon nuts are also available as an alternative to the wingnuts
Options:	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 on the maximum operating pressure is dependent on the seals used (elastomers). Model with Wingnut SH Type: Torque rating 5 Nm Model with Hexagon-Nut SHX Type: Torque rating 20 Nm

Technical data on SH Type Closure Clamp										
Drawing for table below: see next page										
ISO 2852 DIN 32676 Series B	DIN 32676 Series A	BS 4825 DIN 32676 Series C	A-Mass TC-Size	B Rad.	C Length	W Thickness	max. Working pressure at 150° C	max. Test pressure	Weight in grams	Item No.
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

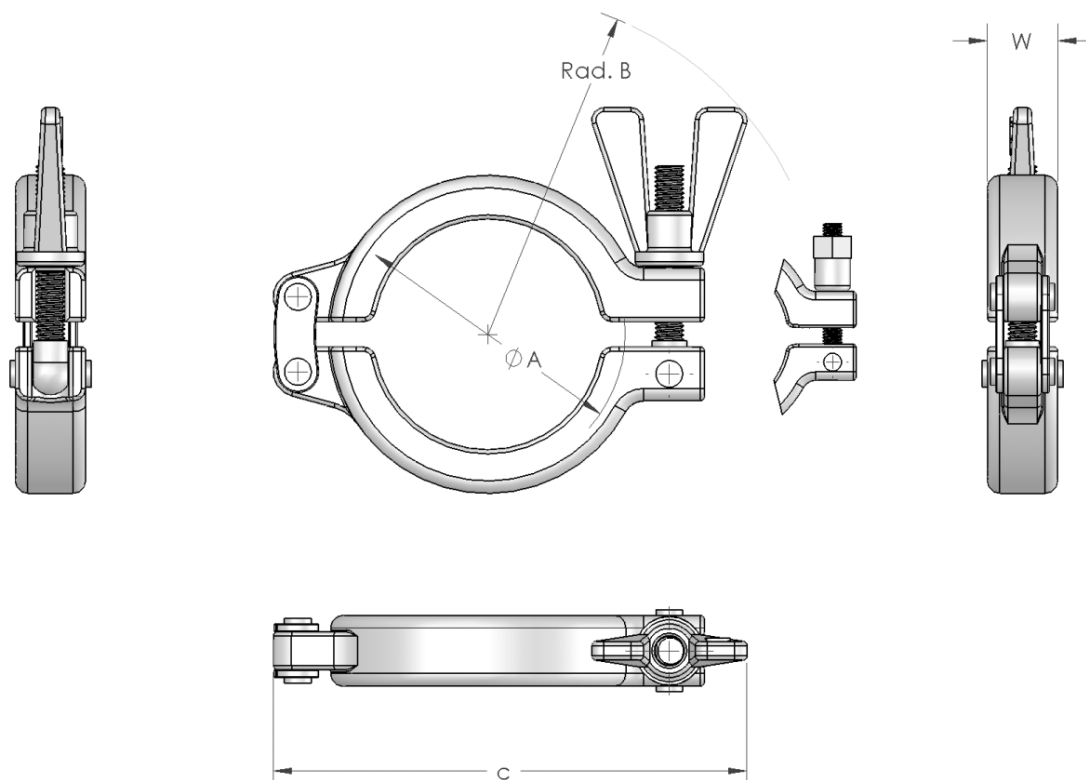
SH Type Closure Clamp

Product group:	Tri-Clamp Connections
Description:	SH Type Closure Clamp
Valid standards:	ISO 2852, DIN 32676, BS 4825 (ASME-BPE) / *non standard
Material:	Tri-Clamp Coupling, Eye nuts and Eye-Bolt Screw from AISI 316 (1.4401)
Permissible sterilization temperature:	150°C
Version / Surface quality:	Closure Clamp with V-Prole, for equal pressure over the whole circumference. Surface, internal and external bright finish
Remarks:	Technical contents are subject to change

Recommended areas of application: Pharma, Biotechnology and Industry.

SH Type Closure Clamp

Technical data on drawing below: see previous page



SH Type (Double Bolted) Closure Clamp

Product group:	Tri-Clamp Connections
Description:	SH Type (Double Bolted) Closure Clamp
Valid standards:	ISO 2852, DIN 32676, BS 4825 (ASME-BPE) / *non standard
Material:	Tri-Clamp Coupling, Wingnuts and Eye-Bolt Screw from AISI 316 (1.4401)
Permissible sterilization temperature:	150°C
Version / Surface quality:	Closure Clamp with V-Prole, for equal pressure over the whole circumference. Surface, internal and external bright finish Hexagon nuts are also available as an alternative to the wingnuts
Options:	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 on the maximum operating pressure is dependent on the seals used (elastomers). Model with Wingnut SH Type: Torque rating 5 Nm Model with Hexagon-Nut SHX Type: Torque rating 20 Nm

Technical data on SH Type (Double Bolted) Closure Clamp										
Drawing for table below: see next page										
ISO 2852 DIN 32676 Series B	DIN 32676 Series A	BS 4825 DIN 32676 Series C	A TC-Size	B Rad.	C Length	W Thick- ness	max. Working pressure by 150° C	max. Test pressure	Weight in gram	Item No.
	*DIN 125	5 1/2"	155.0	155.0	265.0	24.0	30 bar	60 bar	1470 g	200.125.157.-2
		*6"	167.0	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

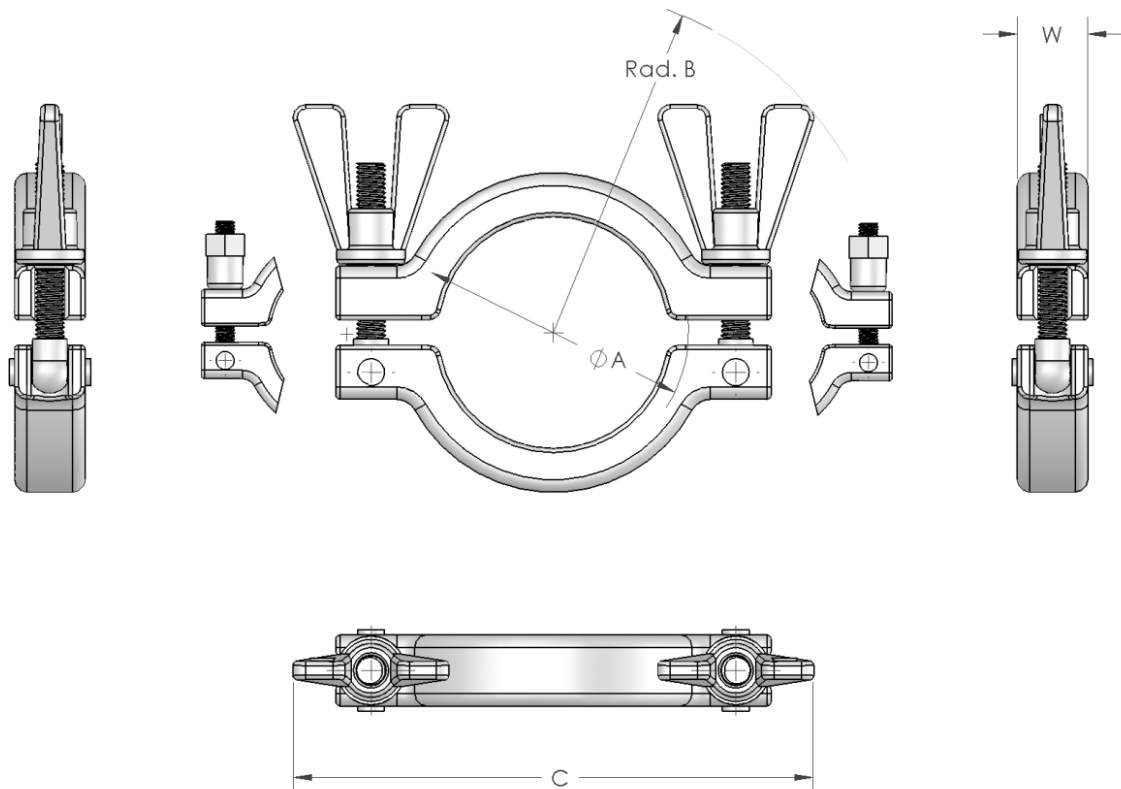
SH Type (Double Bolted) Closure Clamp

Product group:	Tri-Clamp Connections
Description:	SH Type (Double Bolted) Closure Clamp
Valid standards:	ISO 2852, DIN 32676, BS 4825 (ASME-BPE) / *non standard
Material:	Tri-Clamp Coupling, Wingnuts and Eye-Bolt Screw from AISI 316 (1.4401)
Permissible sterilization temperature:	150°C
Version / Surface quality:	Closure Clamp with V-Prole, for equal pressure over the whole circumference. Surface, internal and external bright finish
Remarks:	Technical contents are subject to change

Recommended areas of application: Pharma, Biotechnology and Industry.

SH Type (Double Bolted) Closure Clamp

Technical Datas to drawing below: see previous page



S Type Closure Clamp

Product group:	Tri-Clamp Connections
Description:	S-Type Closure Clamp
Valid standards:	ISO 2852, DIN 32676, BS 4825 (ASME-BPE) / *non standard
Material:	Tri-Clamp Coupling, Wingnuts and Eye-Bolt Screw from SS 304 (1.4301)
Permissible sterilization temperature:	150°C
Version / Surface quality:	Closure Clamp with V-Prole, for equal pressure over the whole circumference. Surface, internal and external bright finish
Remarks:	Technical contents are subject to change Data on the maximum operating pressure is dependent on the seals used (elastomers). Model with Wingnut S type: torque 5 Nm Model with 6-Hexagon Nuts SX type: torque 20 Nm

Technical data on S Type Closure Clamp										
Drawing for table below: see next page										
ISO 2852 DIN 32676 Series B	DIN 32676 Series A	BS 4825 DIN 32676 Series C	A TC-Size	B Rad	C Length	W Thickness	max. Working pressure by 150° C	max. Test pressure	Weight in grams	Item No.
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

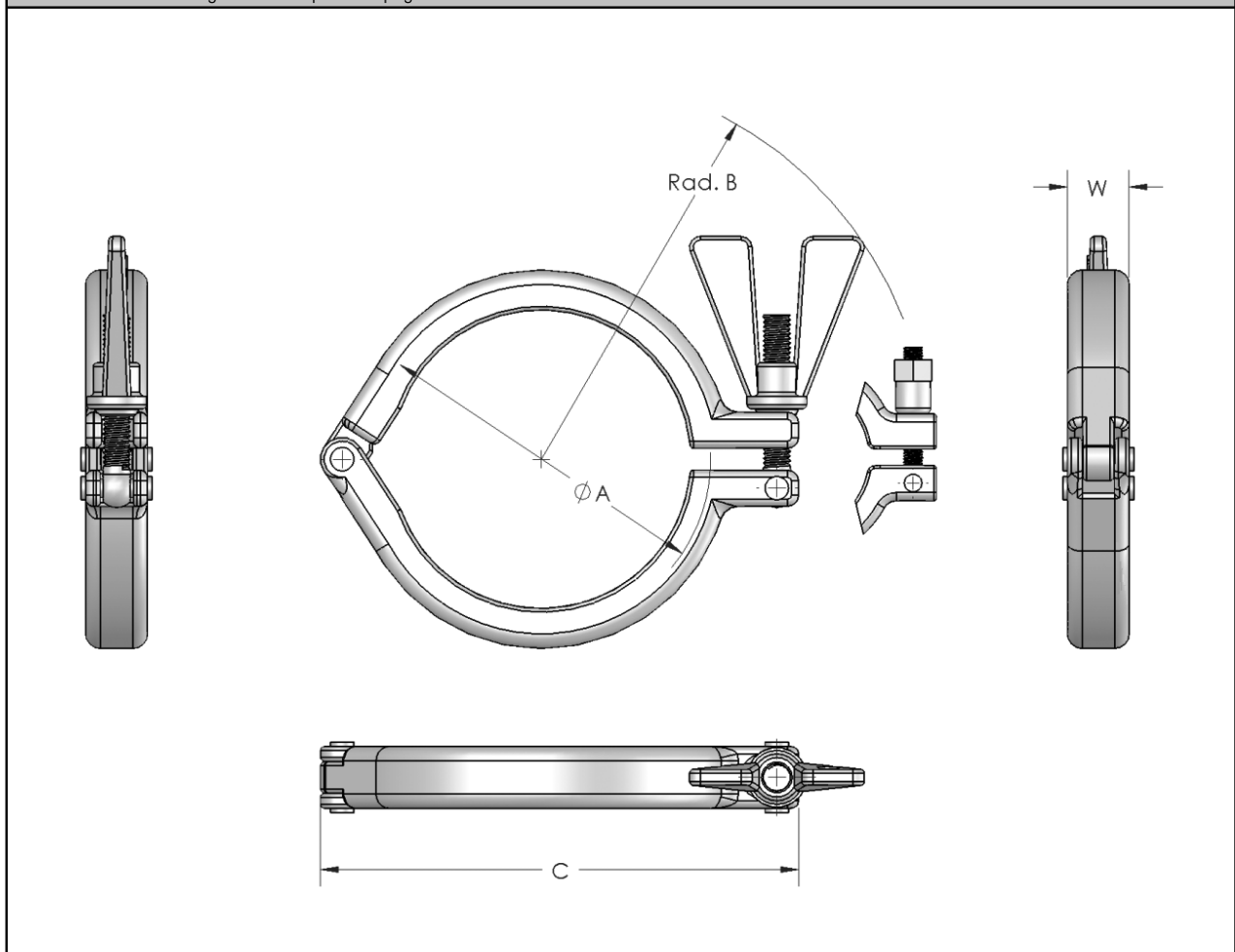
S Type Closure Clamp

Product group:	Tri-Clamp Connections
Description:	S-Type Closure Clamp
Valid standards:	ISO 2852, DIN 32676, BS 4825 (ASME BPE) / *non standard
Material:	Tri-Clamp Coupling, Wingnuts and Eye-Bolt Screw from SS 304 (1.4301)
Permissible sterilization temperature:	150°C
Version / Surface quality:	Closure Clamp with V-Prole, for equal pressure over the whole circumference. Surface, internal and external bright finish
Remarks:	Technical contents are subject to change

Recommended areas of application: Pharma, Biotechnology and Industry.

S-Type Closure Clamp

Technical data on drawing below: see previous page



SSH Type (Heavy Duty) Closure Clamp

Product group:	Tri-Clamp Connections
Description:	SSH Type (Heavy Duty) Closure Clamp
Valid 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)
Permissible sterilization temperature:	150°C
Version / Surface quality:	Closure Clamp with V-Profile, for equal pressure over the whole circumference. Surface, internal and external bright finish
Remarks:	Technical contents are subject to change Data on the maximum operating pressure is dependent on the seals used (elastomers). Model with Hexagon Nuts SSH type: torque 27 Nm

Technical data on SSH Type (Heavy Duty) Closure Clamp										
Drawing for table below: see next page										
ISO 2852 DIN 32676 Series B	DIN 32676 Series A	BS 4825 DIN 32676 Series C	A TC-Size	B Rad.	C Length	W Thick- ness	max. Working pressure by 150° C	max. Test pressure	Weight in grams	Item No.
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

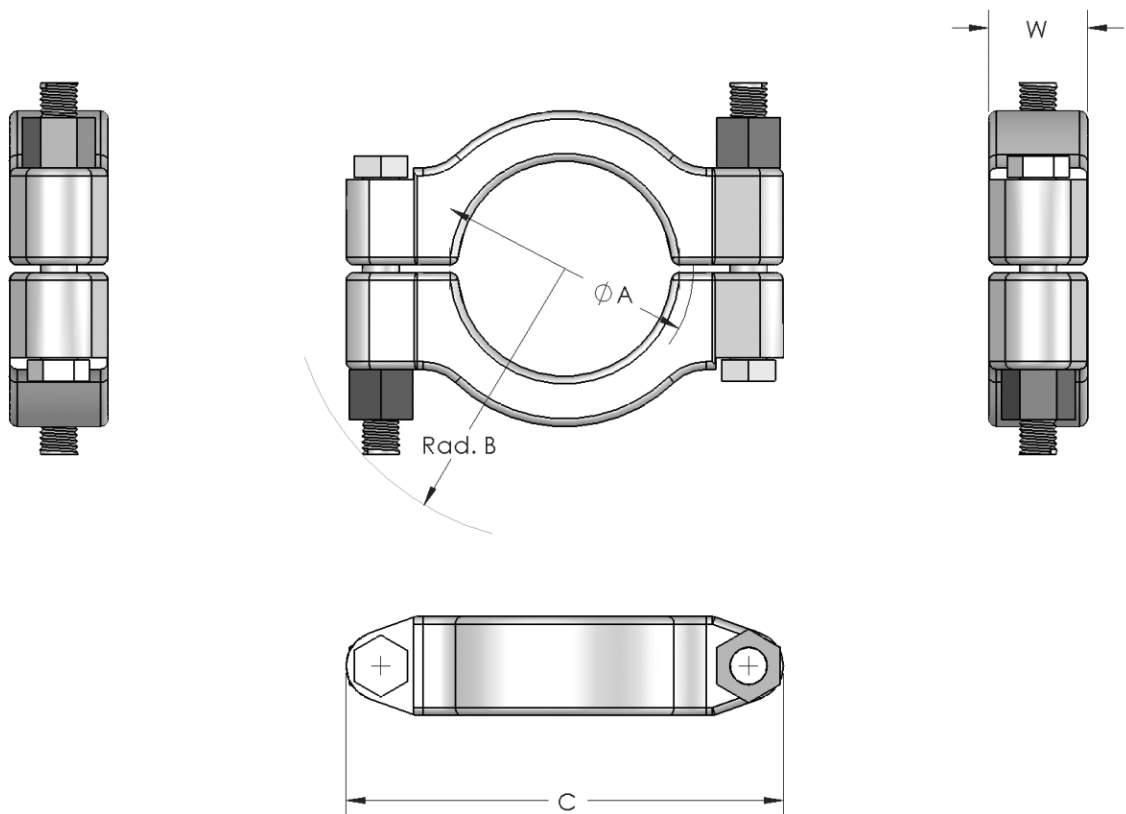
SSH Type (Heavy Duty) Closure Clamp

Product group:	Tri-Clamp Connections
Description:	SSH Type (Heavy Duty) Closure Clamp
Valid 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)
Permissible sterilization temperature:	150°C
Version / Surface quality:	Closure Clamp with V-Profile, for equal pressure over the whole circumference. Surface, internal and external bright finish
Remarks:	Technical contents are subject to change

Recommended areas of application: Pharma, Biotechnology and Industry.

S-Type Closure Clamp

Technical data on drawing below: see previous page



3 Segment Type Closure Clamp

Product group:	Tri-Clamp Connections
Description:	3 Segment Type Closure Clamp
Valid standards:	ISO 2852, DIN 32676, BS 4825 (ASME BPE) / *non standard
Material:	Tri-Clamp Coupling, Wingnuts and Eye-Bolt Screw from AISI 316 (1.4401)
Permissible sterilization temperature:	150°C
Version / Surface quality:	3 Segment-Clamp with V-prole, for equal pressure over the whole circumference. Surface, internal and external bright finish
Remarks:	Technical contents are subject to change No data on the pressure ratings. Clamp is not in accordance with CE-guidelines.

Technical data on 3 Segment Type Closure Clamp										
Drawing for table below: see next page										
ISO 2852 DIN 32676 Series B	DIN 32676 Series A	BS 4825 DIN 32676 Series C	A TC-Size	B Rad.	C Length	W Thick- ness	max. Working pressure by 150° C	max. Test pressure	Weight in grams	Item No.
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

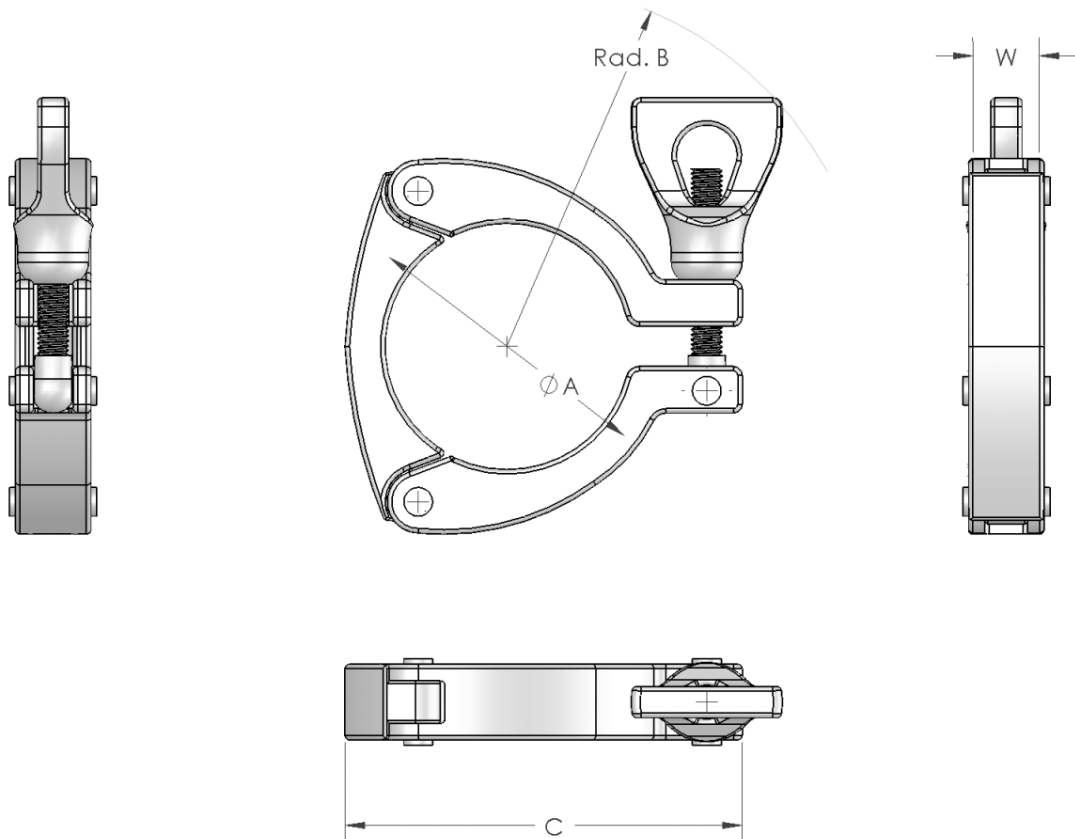
3 Segment Type Closure Clamp

Product group:	Tri-Clamp Connections
Description:	3 Segment Type Closure Clamp
Valid standards:	ISO 2852, DIN 32676, BS 4825 (ASME BPE) / *non standard
Material:	Tri-Clamp Coupling, Eye nuts and Eye-Bolt Screw from AISI 316 (1.4401)
Permissible sterilization temperature:	150°C
Version / Surface quality: 3	Segment-Clamp with V-prole, for equal pressure over the whole circumference. Surface, internal and external bright finish
Remarks:	Technical contents are subject to change

Recommended areas of application: Pharma, Biotechnology and Industry.

3 Segment Type Closure Clamp

Technical data on drawing below: see previous page



SH Safety Clamp®

Product group:	Tri-Clamp Connections
Description:	SH Safety Clamp®
Valid standards:	ISO 2852, DIN 32676, BS 4825 (ASME BPE) / *non standard
Material:	Tri-Clamp Coupling, Wingnuts and Eye-Bolt Screw from AISI 316 (1.4401)
Permissible sterilization temperature:	150°C
Version / Surface quality:	Closure Clamp with V-Profile, for equal pressure over the whole circumference. Surface, internal and external bright finish Hexagon nuts are also available as an alternative to the wingnuts
Options:	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
Remarks:	Data on the maximum operating pressure is dependent on the seals used (elastomers). Model with Wingnut SH Type: Torque rating 5 Nm Model with Hexagon-Nut SHX Type: Torque rating 20 Nm

Technical data on SH Safety Clamp®										
Drawing for table below: see previous page										
ISO 2852 DIN 32676 Series B	DIN 32676 Series A	BS 4825 DIN 32676 Series C	A TC-Size	B Rad.	C Length	W Thick- ness	max. Working pressure by 150° C	max. Test pressure	Weight in grams	Item No.
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* 15 / 20 / 25	DIN 25 / 32 40	1" - 1 1/2"	50.5	77.0	102.0	17.0	50 bar	100 bar	260 g	200.125.053
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

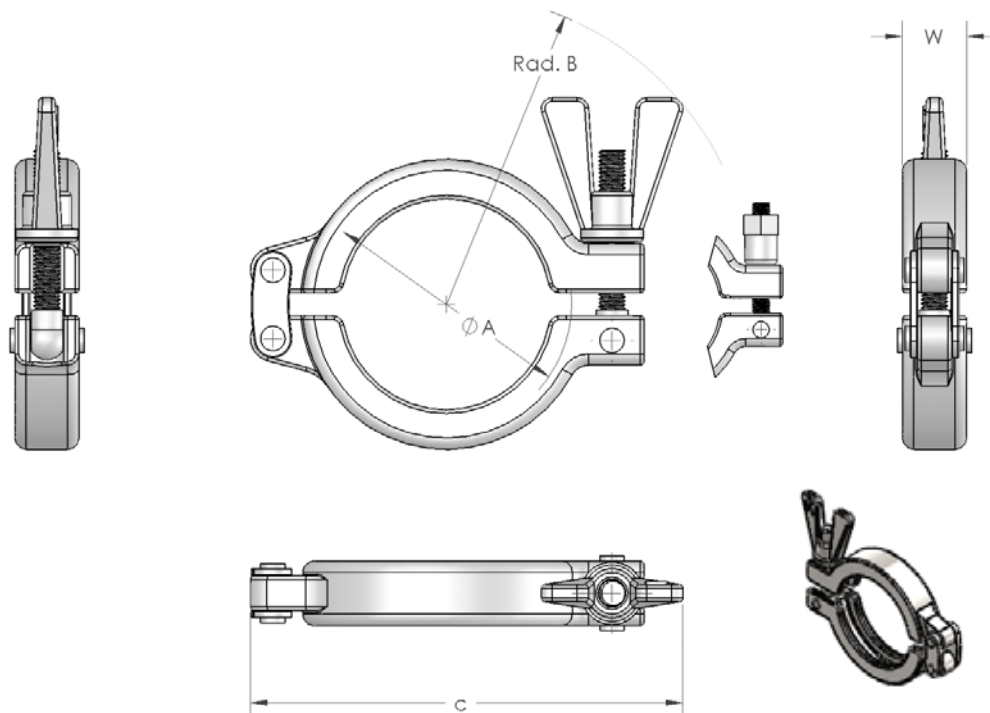
SH Safety Clamp®

Product group:	Tri-Clamp Connections
Description:	SH Safety Clamp®
Valid standards:	ISO 2852, DIN 32676, BS 4825 (ASME BPE) / *non standard
Material:	Tri-Clamp Coupling, Wingnuts and Eye-Bolt Screw from AISI 316 (1.4401)
Permissible sterilization temperature:	150°C
Version / Surface quality:	Closure Clamp with V-Profile, for equal pressure over the whole circumference. Surface, internal and external bright finish
Remarks:	Technical contents are subject to change

Recommended areas of application: Pharma, Biotechnology and Industry.

SH Type Closure Clamp

Technical data on drawing below: see next page



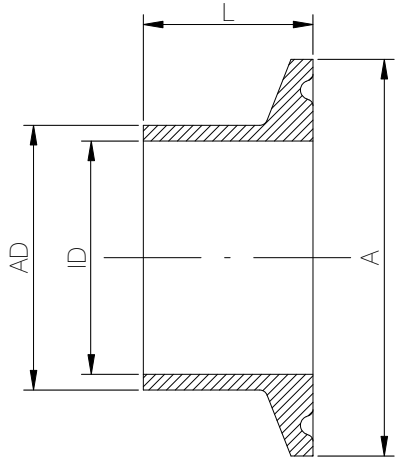
Tri-Clamp Ferrule

Product group:	Tri-Clamp Connections
Description:	Tri-Clamp Ferrule, Type Biotechnology
Valid standards:	DIN 32676 Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal and external bright finish. Weld-on ends for orbital-welding. Ra, internal < 0.4 µm, Ra, external < 0.8 µm (ID ≤ 9.0 mm = Ra, internal < 0.6 µm)
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, Material, Melt number, Manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Tri-Clamp Ferrules						
Sizes	A	AD	ID	L	Item No.	
acc. DIN 32676 Series 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	

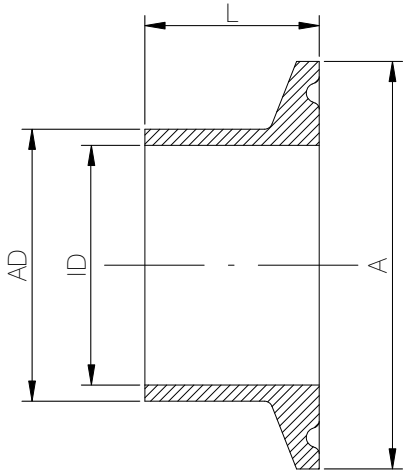
Tri-Clamp Ferrule

Product group:	Tri-Clamp Connections
Description:	Tri-Clamp Ferrule, Type Biotechnology
Valid standards:	DIN 32676 Series B (ISO 1127) / *non standard
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal and external bright finish. Weld-on ends for orbital-welding. Ra, internal < 0.4 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, Material, Melt number, Manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Tri-Clamp Ferrules						
Sizes	A	AD	ID	L	Item No.	
acc. DIN 32676 Series B, ISO 1127						
ISO DN 65	91.0	76.1	72.1	21.6	220.076.072.SP	
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 Ferrule

Product group:	Tri-Clamp Connections
Description:	Tri-Clamp Ferrule, Type Biotechnology
Valid standards:	DIN 32676 Series A (DIN 11850) / *non standard
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal and external bright finish. Weld-on ends for orbital-welding. Ra, internal < 0.4 µm, Ra, external < 0.8 µm (ID ≤ 9.0 mm = Ra, internal < 0.6 µm, ID ≤ 6.0 mm = Ra, internal < 0.8 µm)
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, Material, Melt number, Manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Tri-Clamp Ferrules						
Sizes	A	AD	ID	L	Item No.	
acc. DIN 32676 Series 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	

All lengths in millimeters (if not specified differently).

Tri-Clamp Ferrule

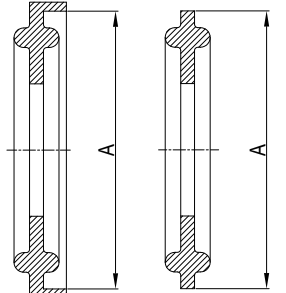
Product group:	Tri-Clamp Connections
Description:	Tri-Clamp Ferrule, Type Biotechnology
Valid standards:	DIN 32676 (ASME BPE 2009) / *non standard
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal and external bright finish. Weld-on ends for orbital-welding. Ra, internal < 0.4 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, Material, Melt number, Manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing. Standard length: 21.6 mm - Upon request 28.5 mm
Remarks:	Technical contents are subject to change

Dimensions for Tri-Clamp Connectors						
Sizes	A	AD	ID	L	Item No.	
acc. DIN 32676 Series C (ASME BPE 2009)						
OD 1/2"	25.0	12.70	9.40	28.5	220.012.009	
OD 3/4"	25.0	19.05	15.75	28.5	220.019.016	
OD 1"	50.5	25.40	22.10	21.6	220.025.022	
OD 1 1/2"	50.5	38.10	34.80	21.6	220.038.034	
OD 2"	64.0	50.80	47.50	21.6	220.050.047	
OD 2 1/2"	77.5	63.50	60.20	21.6	220.064.060	
OD 3"	91.0	76.20	72.90	21.6	220.076.072	
OD *3 1/2"	106.0	88.90	84.30	21.6	220.088.084	
OD 4"	119.0	101.60	97.40	21.6	220.102.097	
OD *4 1/2"	130.0	114.30	109.10	21.6	220.114.109	
OD *5"	144.5	127.00	120.00	21.6	220.127.120	
OD 6"	167.0	152.40	146.86	21.6	220.154.147	
OD *8"	217.5	205.00	198.00	21.6	220.205.198	
OD *10"	268.0	254.00	250.00	28.5	220.254.250	
OD *12"	319.0	304.80	300.80	28.5	220.304.300	

TRI-CLAMP CONNECTIONS

Tri-Clamp Gasket

Product group:	Tri-Clamp Connections
Description:	Tri-Clamp Gasket, Type Biotechnology
Valid standards:	DIN 32676 Series B (ISO 1127) / *non standard
Material:	Viton®, polymerisate made of vinylidene fluoride and hexafluoride propylenes. Platinum catalyzed silicone, EPDM Aethylene-propylene-diene rubber
Permissible sterilization temperature:	EPDM: 132°C (150°C for a short time), Silicone and Viton®: 150°C
Version / Surface quality:	Surface smooth and nonporous, free of laminar recesses and ridges. 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 IV
Remarks:	Technical contents are subject to change Blind gaskets also available upon request Viton® and Teflon® are registered trademarks of DuPont Performance Elastomers

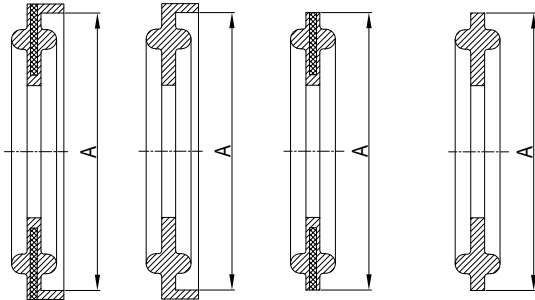
Dimensions for Tri-Clamp Gaskets												
Sizes		A	Item No. Viton®			Item No. Silicone			Item No. EPDM			
acc. DIN 32676 Series B, ISO 1127												
ISO DN	8	22.0	240.022.010	-	W/L	241.022.010	-	W/L	242.022.010	-	W/L	X = with lip W/L = without lip 
ISO DN	*8	34.0	240.034.011	X	-	241.034.011	X	-	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	-	

All lengths in millimeters (if not specified differently).

Connectors Verbindungstechnik AG, Zürcherstrasse 53, CH-8317 Tagelswangen, Phone: +41 (0)52 354 68 68, Telefax: +41 (0)52 354 68 60
Catalogue Sterile Components Version CS004, Printed 07/2014, Version 2. More information: www.connectors.ch or email: info@connectors.ch

Tri-Clamp Gasket

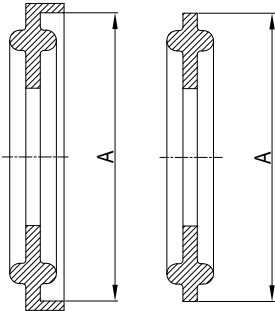
Product group:	Tri-Clamp Connections
Description:	Tri-Clamp Gasket, Type Biotechnology
Valid standards:	acc. DIN 32676 Series B (ISO 1127) / *non standard
Material:	PTFE made purely of polytetrafluorethylene, PTFE enveloped with filler made of Viton®
Permissible sterilization temperature:	PTFE and PTFE coated: 150°C
Version / Surface quality:	Surface smooth and nonporous, free of laminar recesses and ridges. 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 IV
Remarks:	Technical contents are subject to change Blind gaskets also available upon request Viton® and Teflon® are registered trademarks of DuPont Performance Elastomers

Dimensions for Tri-Clamp Gaskets										
Sizes		A	Item No. Teflon®/PTFE enveloped			Item No. Teflon®/PTFE				
acc. DIN 32676 Series B, ISO 1127										
ISO DN	8	22.0	243.022.010	-	W/L	244.022.010	-	W/L	X = with lip (enveloped) X = with lip W/L = without lip (enveloped) W/L = without lip 	
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	W/L	244.050.024	-	W/L		
ISO DN	20/1	50.5	243.050.024	X	W/L	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

Product group:	Tri-Clamp Connections
Description:	Tri-Clamp Gasket, Type Biotechnology
Valid standards:	acc. DIN 32676 Series A (DIN 11850) / *non standard
Material:	Viton®, polymerisate made of vinylidene fluoride and hexafluoride propylenes. Platinum catalyzed silicone, EPDM Aethylene-propylene-diene rubber, Viton®
Permissible sterilization temperature:	EPDM: 132°C (150°C for a short time), Silicone and Viton: 150°C
Version / Surface quality:	Surface smooth and nonporous, free of laminar recesses and ridges. 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 IV
Remarks:	Technical contents are subject to change Blind rivets also available upon request Viton® and Teflon® are registered trademarks of DuPont Performance Elastomers

Dimensions for Tri-Clamp Gaskets												
Sizes	A	Item No. Viton®			Item No. Silicone			Item No. EPDM				
acc. DIN 32676 Series A (DIN 11850)												
DIN *4	22.0	240.022.004	-	W/L	241.022.004	-	W/L	242.022.004	-	W/L	X = with lip W/L = without lip 	
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	-		

All lengths in millimeters (if not specified differently).

Connectors Verbindungstechnik AG, Zürcherstrasse 53, CH-8317 Tagelswangen, Phone: +41 (0)52 354 68 68, Telefax: +41 (0)52 354 68 60
Catalogue Sterile Components Version CS004, Printed 07/2014, Version 2. More information: www.connectors.ch or email: info@connectors.ch

TRI-CLAMP CONNECTIONS

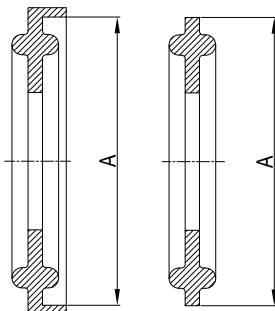
Tri-Clamp Gasket

Product group:	Tri-Clamp Connections
Description:	Tri-Clamp Gasket, Type Biotechnology
Valid standards:	DIN 32676, DIN 11850 / *non standard
Material:	PTFE made purely of polytetrafluoride ethylene, PTFE enveloped with filler made of Viton®
Permissible sterilization temperature:	PTFE and PTFE coated: 150°C
Version / Surface quality:	Surface smooth and nonporous, free of laminar recesses and ridges. Edges without tears and notches.
Marking	Marking on packing units
Certificates:	Incl. Certificate of conformance FDA-21 CFR 177.1550 for PTFE and USP Class VI
Remarks:	Technical contents are subject to change Blind gaskets also available upon request Viton® and Teflon® are registered trademarks of DuPont Performance Elastomers

Dimensions for Tri-Clamp Gaskets									
Sizes		A	Item No. Teflon®/PTFE enveloped			Item No. Teflon®/PTFE			
acc. DIN 32676 Series A (DIN 11850)									
DIN	*4	22.0	-	-	-	244.022.004	-	W/L	X = with lip (enveloped) X = with lip W/L = without lip (enveloped) W/L = without lip
DIN	*6	22.0	-	-	-	244.022.006	-	W/L	
DIN	*8	22.0	-	-	-	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 Gasket

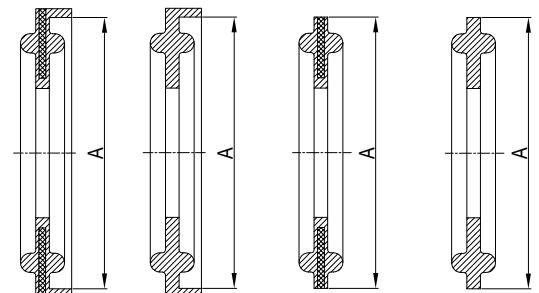
Product group:	Tri-Clamp Connections
Description:	Tri-Clamp Gasket, Type Biotechnology
Valid standards:	DIN 32676 Series C (ASME BPE 2009) / *non standard
Material:	Viton®, polymerisate made of vinylidene fluoride and hexafluoride propylenes. Platinum catalyzed silicone, EPDM aethylene-propylene-diene-rubber
Permissible sterilization temperature:	EPDM: 132°C (150°C for a short time), Silicone and Viton®: 150°C
Version / Surface quality:	Surface smooth and nonporous, free of laminar recesses and ridges. 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:	Technical contents are subject to change Blind gaskets also available upon request Viton® and Teflon® are registered trademarks of DuPont Performance Elastomers

Dimensions for Tri-Clamp Gaskets											
Sizes	A	Item No. Viton®			Item No. Silicone			Item No. EPDM			
acc. DIN 32676 Series C (ASME BPE 2009)											
OD 1/2"	22.0	240.022.010	-	W/L	241.022.010	-	W/L	242.022.010	-	W/L	X = with lip W/L = without lip 
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	-	

All lengths in millimeters (if not specified differently).

Tri-Clamp Gasket

Product group:	Tri-Clamp Connections
Description:	Tri-Clamp Gasket, Type Biotechnology
Valid standards:	DIN 32676 Series C (ASME BPE 2009) / *non standard
Material:	PTFE made purely of polytetrafluoride ethylene, PTFE with core made of fluoride-rubber FPM
Permissible sterilization temperature:	PTFE and PTFE coated: 150°C
Version / Surface quality:	Surface smooth and nonporous, free of laminar recesses and ridges. Edges without tears and notches.
Marking	Marking on packing units
Certificates:	Incl. Certificate of conformance FDA-21 CFR 177.1550 for PTFE and USP Class VI
Remarks:	Technical contents are subject to change Blind gaskets also available upon request Viton® and Teflon® are registered trademarks of DuPont Performance Elastomers

Dimensions for Tri-Clamp Gaskets										
Sizes	A	Item No. Teflon®/PTFE coated				Item No. 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	X = with lip (coated) X = with lip W/L = without lip (coated) W/L = without lip 		
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

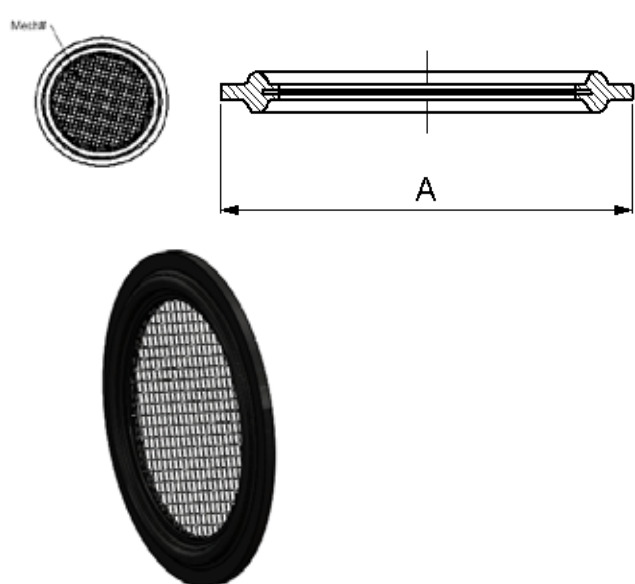
Product group:	Tri-Clamp Connections
Description:	Tri-Clamp Gasket, Type Biotechnology
Valid standards:	ISO 2852, DIN 32676, BS 4825 (ASME BPE) / *non standard
Material:	PTFE made purely of polytetrafluoride ethylenes, PTFE with core made of fluoride rubber FPM, Viton®, polymerisate made of vinylidene fluoride and hexafluoride propylenes. Platinum catalyzed silicone, EPDM aethylene-propylene-diene-rubber
Permissible sterilization temperature:	EPDM: 132°C (150°C for a short time), Silicone, Viton® and PTFE: 150°C
Version / Surface quality:	Surface smooth and nonporous, free of laminar recesses and ridges. 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	Fluoro-rubber, Viton®	Silicone rubber	Aethylene-propylene-diene-rubber	Teflon®	**Silkoflon
Short Description acc. ISO 1629	FPM	MVQ	EPDM	PTFE	FEP/MVQ
Specifications					
Abrasion-Resistance	good	good to excellent	good to excellent	excellent	excellent
Steam-Resistance	poor	poor	good to excellent	excellent	excellent
Dielectricity 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
Temperature-Resistance Material	-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 sterilization temperature	150°C	150°C	132°C 150°C for a short time	150°C	150°C
Weather-Resistance	good	excellent	excellent	excellent	excellent
Tear resistance	neutral	excellent	good	excellent	excellent
Tensile strength	good to excellent	good	good to excellent	excellent	excellent

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

Screen Gaskets – Tri-Clamp Gasket with mesh

Product group:	Tri-Clamp Connections
Description:	Screen Gaskets
Valid standards:	DIN 32676 Series C (ASME BPE 2009)
Material:	EPDM aethylene-propylene-diene-rubber Platinum catalyzed silicone AISI 316
Permissible sterilization temperature:	Silicone: 150°C, EPDM: 132°C (150°C for a short time),
Version / Surface quality:	Surface smooth and nonporous, free of laminar recesses and ridges. 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 Technical contents are subject to change

Dimensions for Tri-Clamp Screen Gaskets					
Sizes	A	Mesh#	Item No. Silicone	Item No. EPDM	
acc. DIN 32676 Series 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	

Smart Gaskets® – Tri-Clamp Gasket with mesh

Product group:	Tri-Clamp Connections
Description:	Smart Gaskets®
Valid standards:	DIN 32676
Material:	EPDM aethylene-propylene-diene-rubber Platinum catalyzed silicone
Permissible sterilization temperature:	Silicone: 150°C, EPDM: 132°C (150°C for a short time)
Version / Surface quality:	Surface smooth and nonporous, free of laminar recesses and ridges. 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 materials and dimensions available upon request The function of the gasket is only guaranteed if used with the appertaining clamp Technical contents are subject to change

Dimensions for Tri-Clamp Smart Gaskets®						
Sizes	A	Ports	Item No. Silicone	Item No. EPDM	Item No. Tri-Clamp Connections	
acc. DIN 32676 Series C (ASME BPE)						
OD 1/2"	25.0	1	241.105.000	242.105.000	209.005.028.	
OD 1/2"	25.0	2	241.205.000	242.205.000	209.005.028.	
OD 1/2"	25.0	3	241.305.000	242.305.000	209.005.028.	
OD 1/2"	25.0	4	241.405.000	242.405.000	209.005.028.	
OD 3/4"	25.0	1	241.107.000	242.107.000	209.005.028.	
OD 3/4"	25.0	2	241.207.000	242.207.000	209.005.028.	
OD 3/4"	25.0	3	241.307.000	242.307.000	209.005.028.	
OD 3/4"	25.0	4	241.407.000	242.407.000	209.005.028.	
OD 1"	50.5	1	241.110.000	242.110.000	209.025.053.	
OD 1"	50.5	2	241.210.000	242.210.000	209.025.053.	
OD 1"	50.5	3	241.310.000	242.310.000	209.025.053.	
OD 1"	50.5	4	241.410.000	242.410.000	209.025.053.	
OD 1-1/2"	50.5	1	241.115.000	242.115.000	209.025.053.	
OD 1-1/2"	50.5	2	241.215.000	242.215.000	209.025.053.	
OD 1-1/2"	50.5	3	241.315.000	242.315.000	209.025.053.	
OD 1-1/2"	50.5	4	241.415.000	242.415.000	209.025.053.	
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	209.050.067.2	
OD 2"	64.0	3	241.320.000	242.320.000	209.050.067.3	
OD 2"	64.0	4	241.420.000	242.420.000	209.050.067.4	
OD 3"	91.0	1	241.130.000	242.130.000	209.080.094.1	
OD 3"	91.0	2	241.230.000	242.230.000	209.080.094.2	
OD 3"	91.0	3	241.330.000	242.330.000	209.080.094.3	
OD 3"	91.0	4	241.430.000	242.430.000	209.080.094.4	
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	209.100.122.2	
OD 4"	119.0	3	241.340.000	242.340.000	209.100.122.3	
OD 4"	119.0	4	241.440.000	242.440.000	209.100.122.4	

All lengths in millimeters (if not specified differently).

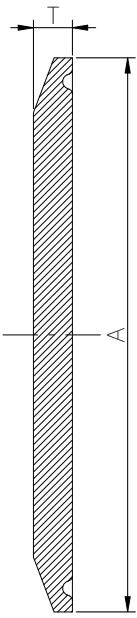
Covers

Product group:	Tri-Clamp Connections
Description:	Covers
Valid standards:	acc. DIN 32676 Series C, (ASME BPE 2009)
Material:	EPDM aethylene-propylene-diene-rubber Platinum catalyzed silicone Viton®, polymerisate made of vinylidene fluoride and hexafluoride propylenes. Cover made of AISI 316 (1.4401)
Permissible sterilization temperature:	Viton®, Silicone: 150°C, EPDM: 132°C (150°C for a short time),
Version / Surface quality:	Surface smooth and nonporous, free of laminar recesses and ridges. 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 made on request Also available with bore hole Technical contents are subject to change

Dimensions for Covers					
Sizes	A	Item No. Viton®	Item No. Silicone	Item No. EPDM	
acc. DIN 32676 Series 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

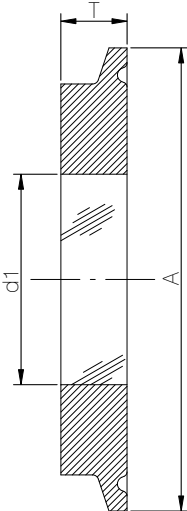
Product group:	Tri-Clamp Connections
Description:	Blind cover, Type Biotechnology
Valid standards:	ISO 2852, DIN 32676, BS 4825 (ASME BPE) / *non standard
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surfaces internal and external metallic, shiny. Ra, internal < 0.4 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Material number, melt number, manufacturer code
Certificates:	Incl. Certificate of conformance EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Blind Cover						
ISO 2852 DIN 32676 Series B	DIN 32676 Series A	BS 4825 (ASME BPE) DIN 32676 Series C	A	T	Item No.	
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	

All lengths in millimeters (if not specified differently).

Clamp sight glass

Product group:	Tri-Clamp Connections
Description:	Metal-melted clamp view window, sterile model
Valid standards:	ISO 2852, DIN 32676, BS 4825 (ASME BPE) / * non standard
Material:	Stnr.-W. 1.4462 Duplex acc. EN 10088 Glass: Borosilicate 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)
Version / Surface quality:	Surfaces internal and external sanded and polished. Ra, internal < 0.25 µm, Ra, external < 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 Series B	DIN 32676 Series A	BS 4825 (ASME BPE) DIN 32676 Series C	A	T	d1	max. Pressure	Item No.	
*DN 8 / *10 / 15 20 / 25	DIN 25 / 32 / 40	1" / 1 1/2"	50.5	10.0	25.0	16 bar	231.000.025	
DN 32 / 40	DIN 50	2"	64.0	10.0	30.0	16 bar	231.000.050	
DN 50		2 1/2"	77.5	10.0	35.0	16 bar	231.000.077	
DN 65	DIN 65	3"	91.0	10.0	40.0	10 bar	231.000.065	
DN 80	DIN 80	3 1/2"	106.0	10.0	50.0	10 bar	231.000.080	
	DIN 100	4"	119.0	12.0	55.0	10 bar	231.000.100	
		5"	144.5	16.0	65.0	10 bar	231.000.145	
	DIN 125	*5 1/2"	155.0	16.0	70.0	6 bar	231.000.155	
		*6"	167.0	16.0	75.0	6 bar	231.000.167	
DN 150	DIN 150	6 5/8"	183.0	16.0	75.0	6 bar	231.000.150	
		8"	217.5	18.0	100.0	6 bar	231.000.217	
DN 200	DIN 200	8 5/8"	233.5	18.0	100.0	6 bar	231.000.200	
DN 250		*10"	268.0	20.0	120.0	6 bar	231.000.258	
	DIN 250	*10 5/8"	287.5	20.0	120.0	6 bar	231.000.250	
	DIN 300	*12"	319.0	22.0	140.0	6 bar	231.000.319	
DN 300		12 5/8"	338.5	22.0	140.0	6 bar	231.000.300	



CONNECTORS

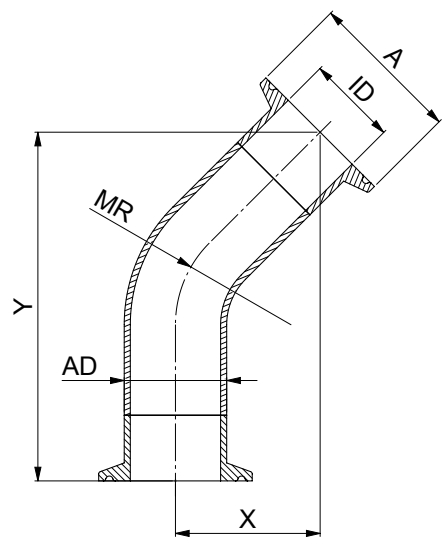
TRI-CLAMP FITTINGS

Clamp Elbow 45°	36
Clamp Elbow 90°	37
Clamp T-Piece, equal	38
Clamp T-Piece, short Outlet	39
Concentric Clamp Reducer	40
Reduced TC-Adapter, concentric	41
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TC-Interior Thread-Adapter	43
TC-External Thread-Adapter	44



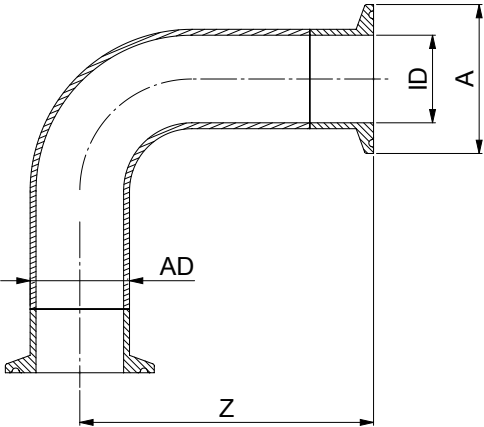
Clamp Elbow 45°

Product group:	Tri-Clamp Fittings
Description:	Clamp Elbow 45°
Valid standards:	45° Elbow acc. DIN 11865, TC acc. DIN 32676, ASME BPE 2009
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088, welding seam Fe < 1%
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal: sanded and polished. Ra, internal < 0.6 µm Elbow surface, external bright finish. Welding seam: Annealing color removed.
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Tolerances:	Measurements x / y: +/- 2 mm
Option:	Electropolishing. Further dimensions available on request.
Remarks:	Technical contents are subject to change

Dimensions for Clamp Elbow 45°								
Sizes	A	AD	ID	MR	X	Y	Item No.	
acc. DIN 32676 Series B, ISO 1127								
ISO DN 8	25.0	13.5	10.3	20.0	43.7	105.5	252.145.008	
ISO DN 10	25.0	17.2	14.0	28.0	46.0	111.1	252.145.010	
ISO DN 15	50.5	21.3	18.1	28.0	41.7	100.7	252.145.015	
ISO DN 20	50.5	26.9	23.7	28.5	51.9	125.3	252.145.020	
ISO DN 25	50.5	33.7	29.7	38.0	54.7	132.0	252.145.025	
ISO DN 32	64.0	42.4	38.4	47.5	57.5	138.8	252.145.032	
ISO DN 40	64.0	48.3	44.3	57.0	60.2	145.4	252.145.040	
ISO DN 50	77.5	60.3	56.3	76.0	65.8	158.9	252.145.050	
ISO DN 65	91.0	76.1	72.1	95.0	82.0	198.0	252.145.065	
acc. DIN 32676 Series C, ASME BPE 2009								
OD 1/2"	25.0	12.70	9.40	27.0	60.6	146.3	252.105.025	
OD 3/4"	25.0	19.05	15.75	26.0	60.6	146.3	252.107.025	
OD 1"	50.5	25.40	22.10	38.1	55.7	134.5	252.110.050	
OD 1 1/2"	50.5	38.10	34.80	57.2	60.2	145.3	252.115.050	
OD 2"	64.0	50.80	47.50	76.2	69.2	167.0	252.120.064	
OD 2 1/2"	77.5	63.50	60.20	95.3	75.9	183.2	252.125.077	
OD 3"	91.0	76.20	72.90	114.3	80.4	194.1	252.130.091	
OD 4"	119.0	101.60	97.40	152.4	96.1	232.0	252.140.119	

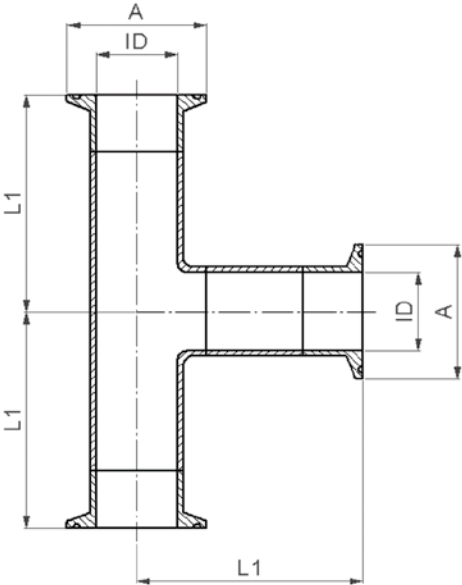
Clamp Elbow 90°

Product group:	Tri-Clamp Fittings
Description:	Clamp Elbow 90°
Valid standards:	90° Elbow acc. DIN 11865, TC acc. DIN 32676, ASME BPE 2009
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088, welding seam Fe < 1%
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal: sanded and polished. Ra, internal < 0.6 µm Elbow surface, external bright finish. Welding seam: Annealing color removed.
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Tolerances:	Measurements Z: +/- 2 mm
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimension for Clamp Elbow 90°						
Sizes	A	AD	ID	Z	Item No.	
acc. DIN 32676 Series B, ISO 1127						
ISO DN 6	25.0	10.2	7.0	43.1	**252.050.006	
ISO DN 8	50.5	13.5	10.3	66.6	252.050.008	
ISO DN 10	50.5	17.2	14.0	74.6	252.050.010	
ISO DN 15	50.5	21.3	18.1	76.6	252.045.015	
ISO DN 20	50.5	26.9	23.7	90.1	252.045.020	
ISO DN 25	50.5	33.7	29.7	99.6	252.045.025	
ISO DN 32	64.0	42.4	38.4	109.1	252.045.032	
ISO DN 40	64.0	48.3	44.3	118.6	252.045.040	
ISO DN 50	77.5	60.3	56.3	137.6	252.045.050	
ISO DN 65	91.0	76.1	72.1	171.6	252.045.065	
acc. DIN 32676 Series C, ASME BPE 2009						
OD 1/2"	25.0	12.70	9.40	104.7	252.005.025	
OD 3/4"	25.0	19.05	15.75	104.7	252.007.025	
OD 1"	50.5	25.40	22.10	97.8	252.010.050	
OD 1 1/2"	50.5	38.10	34.80	116.9	252.015.050	
OD 2"	64.0	50.80	47.50	142.3	252.020.064	
OD 2 1/2"	77.5	63.50	60.20	161.4	252.025.077	
OD 3"	91.0	76.20	72.90	180.4	252.030.091	
OD 4"	119.0	101.60	97.40	224.8	252.040.119	
**90° Elbow is made from solid material						

Clamp T-Piece, equal

Product group:	Tri-Clamp Fittings
Description:	Clamp T-Piece, equal
Valid standards:	T-Piece acc. DIN 11865, TC acc. DIN 32676, ASME BPE 2009
Material:	Stnr.-W. 1.4435 BN2 acc. EN 10088, welding seam Fe < 1%
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal: sanded and polished. Ra, internal < 0.6 µm T-Piece surface outside: bright finish. Welding seam: Annealing color removed.
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Tolerances:	Measurements L1= +/- 2 mm
Option:	Electropolishing
Remarks:	Technical contents are subject to change

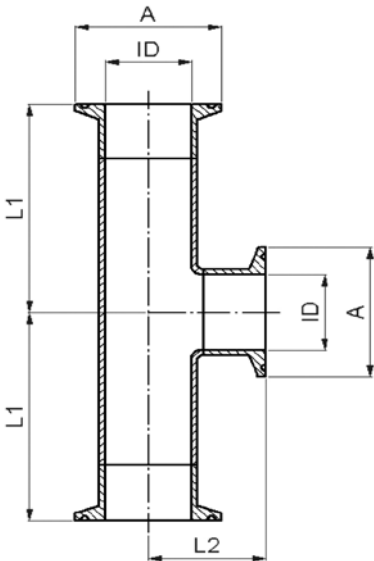
Dimensions for Clamp T-Piece, equal						
Sizes	A	AD	ID	L1	Item No.	
acc. DIN 32676 Series B, ISO 1127						
ISO DN 6	25.0	10.2	7.0	36.5	**253.050.006	
ISO DN 8	25.0	13.5	10.2	60.5	253.050.008	
ISO DN 10	25.0	17.2	15.0	62.5	253.050.010	
ISO DN 10	50.5	17.2	14.0	55.6	253.100.010	
ISO DN 15	50.5	21.3	18.1	57.6	253.045.015	
ISO DN 20	50.5	26.9	23.7	76.6	253.045.020	
ISO DN 25	50.5	33.7	29.7	81.6	253.045.025	
ISO DN 32	64.0	42.4	38.4	86.6	253.045.032	
ISO DN 40	64.0	48.3	44.3	86.6	253.045.040	
ISO DN 50	77.5	60.3	56.3	111.6	253.045.050	
ISO DN 65	91.0	76.1	72.1	131.6	253.045.065	
ISO DN 80	106.0	88.9	84.3	151.6	253.045.080	
ISO DN 100	130.0	114.3	109.7	181.6	253.045.100	
acc. DIN 32676 Series C, ASME BPE 2009						
OD 1/2"	25.0	12.70	9.40	76.1	253.005.025	
OD 3/4"	25.0	19.05	15.75	79.3	253.007.025	
OD 1"	50.5	25.40	22.10	75.6	253.010.050	
OD 1 1/2"	50.5	38.10	34.80	81.9	253.015.050	
OD 2"	64.0	50.80	47.50	94.6	253.020.064	
OD 2 1/2"	77.5	63.50	60.20	101.0	253.025.077	
OD 3"	91.0	76.20	72.90	107.3	253.030.091	
OD 4"	119.0	101.60	97.40	126.4	253.040.119	

**made from solid material

**made from solid material

Clamp T-Piece, short Outlet

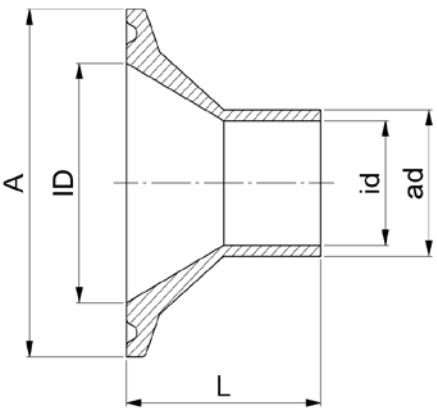
Product group:	Tri-Clamp Fittings
Description:	Clamp T-Piece, short Outlet
Valid standards:	T-Piece acc.DIN 11865, TC acc. ISO 2852 / BS 4825
Material:	Stnr.-W. 1.4435 BN2 acc. EN 10088, welding seam Fe < 1%
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal: sanded and polished. Ra, internal < 0.6 µm T-Piece surface outside: bright finish. Welding seam: Annealing color removed.
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Tolerances:	Measurements L1 / L2: +/- 2 mm
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for T-Piece, short branch							
Sizes	A	AD	ID	L1	L2	Item No.	
acc. ISO 2852 / ISO 1127							
ISO DN 8	25.0	13.5	10.3	60.5	39.9	253.145.008	
ISO DN 10	25.0	17.2	14.0	62.5	39.9	253.145.010	
ISO DN 15	50.5	21.3	18.1	57.6	33.8	253.145.015	
ISO DN 20	50.5	26.9	23.7	76.6	37.1	253.145.020	
ISO DN 25	50.5	33.7	29.7	81.6	40.5	253.145.025	
ISO DN 32	64.0	42.4	38.4	86.6	45.3	253.145.032	
ISO DN 40	64.0	48.3	44.3	86.6	48.8	253.145.040	
ISO DN 50	77.5	60.3	56.3	111.6	55.8	253.145.050	
ISO DN 65	91.0	76.1	72.1	131.6	64.7	253.145.065	
acc. BS 4825 / ASME BPE 2009							
OD 1/2"	25.0	12.70	9.40	76.1	39.9	253.105.025	
OD 3/4"	25.0	19.05	15.75	79.3	39.5	253.107.025	
OD 1"	50.5	25.40	22.10	75.6	35.8	253.110.050	
OD 1 1/2"	50.5	38.10	34.80	81.9	42.2	253.115.050	
OD 2"	64.0	50.80	47.50	94.6	50.0	253.120.064	
OD 2 1/2"	77.5	63.50	60.20	101.0	57.4	253.125.077	
OD *3"	91.0	76.20	72.90	107.3	64.7	253.130.091	
OD 4"	119.0	101.60	97.40	126.4	77.4	253.140.119	

All lengths in millimeters (if not specified differently).

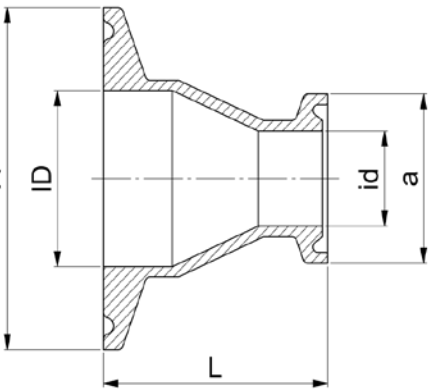
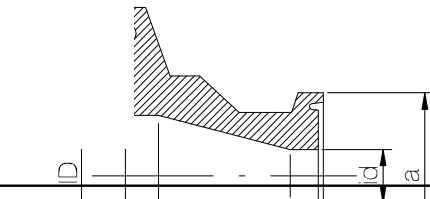
Concentric Clamp Reducer

Product group:	Tri-Clamp Fittings
Description:	Concentric Clamp Reducer
Valid standards:	DIN 32676 Series B with pipe ends acc. ISO 1127 DIN 32676 Series C with pipe ends acc. ASME BPE 2009
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal and external bright finish. Weld-on ends for orbital-welding. Ra, internal < 0.4 µm.
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing. Other dimensions on request.
Remarks:	Technical contents are subject to change

Dimensions for Concentric Clamp Reducer							
Sizes	A	ID	ad	id	L	Item No.	
acc. DIN 32676 Series B (ISO 1127) / DIN 32676 Series C (ASME BPE 2009)							
ISO DN 15 / 8	50.5	18.1	13.5	10.3	35.0	257.181.135	
ISO DN 20 / 10	50.5	23.7	17.2	14.0	35.0	257.237.172	
ISO DN 25 / 10	50.5	29.7	21.3	18.1	35.0	257.297.213	
BS 1-1/2" / 1"	50.5	34.8	25.4	22.1	35.0	257.344.254	
ISO DN *15 / 8	64.0	18.1	13.5	10.3	35.0	257.064.135	
ISO DN *20 / 10	64.0	23.7	17.2	14.0	35.0	257.004.172	

Reduced TC-Adapter, concentric

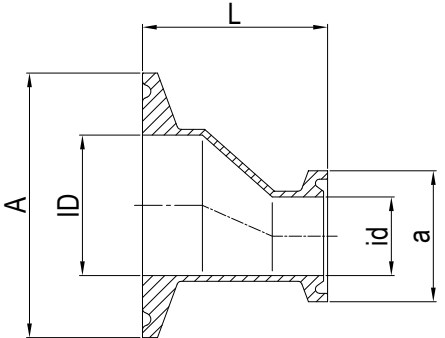
Product group:	Tri-Clamp Fittings
Description:	Reduced TC-Adapter, concentric
Valid standards:	ISO 2852 / ISO 1127 to DIN 32676 / DIN 11850, *non-standard
Material:	1) Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088 2) AISI 316L (1.4404)
Permissible sterilization temperature:	150°C
Version / Surface quality:	1) Surface, internal and external bright finish. Ra, internal < 0.4 µm 2) Surface, internal and external bright finish. Ra, internal < 0.5 µm
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing. Further dimensions available on request.
Remarks:	Technical contents are subject to change

Dimensions for Reduced TC-Adapter							
Sizes	A	a	ID	id	L	Item No.	
acc. ISO 2852 to DIN 32676 1)							
ISO 15 / DIN 8	50.5	25.0	18.1	8.0	30.0	225.181.008	
DIN 20 / DIN 15	50.5	25.0	23.0	16.0	30.0	225.230.016	
DIN *20 / ISO 8	64.0	25.0	23.0	10.3	30.0	225.230.010	
DIN *20 / DIN 15	64.0	25.0	23.0	16.0	30.0	225.023.016	
DIN *40 / DIN 15	64.0	25.0	44.0	16.0	30.0	225.440.016	
acc. DIN 32676 Series C (ASME BPE 2009) 2)							
OD 3/4" / 1/2"	25.0	25.0	15.8	9.4	40.0	255.007.005.	
OD 1" / 1/2"	50.5	25.0	22.1	9.4	40.0	255.010.005.	
OD 1" / 3/4"	50.5	25.0	22.1	15.8	40.0	255.010.007.	
OD 1 1/2" / 1/2"	50.5	25.0	34.8	9.4	40.0	255.015.005.	
OD 1 1/2" / 3/4"	50.5	25.0	34.8	15.8	40.0	255.015.007.	
OD 1 1/2" / 1"	50.5	50.5	34.8	22.1	40.0	255.015.010.	
OD 2" / 1/2"	64.0	25.0	47.5	9.4	60.0	255.020.005.	
OD 2" / 3/4"	64.0	25.0	47.5	15.8	60.0	255.020.007.	
OD 2" / 1"	64.0	50.5	47.5	22.1	45.0	255.020.010.	
OD 2" / 1 1/2"	64.0	50.5	47.5	34.8	45.0	255.020.015.	
OD 2 1/2" / 1/2"	77.5	25.0	60.2	9.4	60.0	255.025.005.	
OD 2 1/2" / 3/4"	77.5	25.0	60.2	15.8	60.0	255.025.007.	
OD 2 1/2" / 1"	77.5	50.5	60.2	22.1	45.0	255.025.010.	
OD 2 1/2" / 1 1/2"	77.5	50.5	60.2	34.8	45.0	255.025.015.	
OD 2 1/2" / 2"	77.5	64.0	60.2	47.5	45.0	255.025.020.	
OD 3" / 1"	91.0	50.5	72.9	22.1	60.0	255.030.010.	
OD 3" / 1 1/2"	91.0	50.5	72.9	34.8	60.0	255.030.015.	
OD 3" / 2"	91.0	64.0	72.9	47.5	60.0	255.030.020.	
OD 3" / 2 1/2"	91.0	77.5	72.9	60.2	60.0	255.030.025.	

All lengths in millimeters (if not specified differently).

Reduced TC-Adapter, Excentric

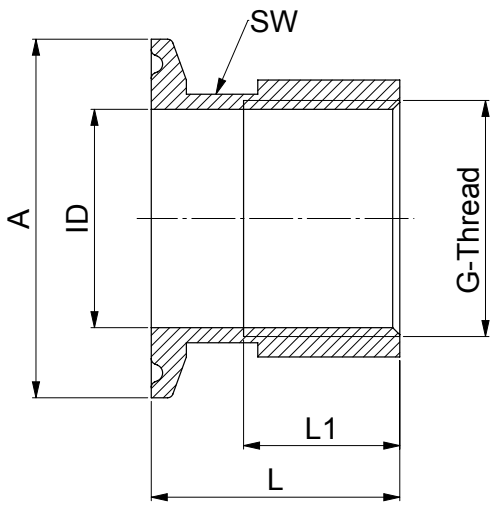
Product group:	Tri-Clamp Fittings
Description:	Reduced TC-Adapter, excentric
Valid standards:	DIN 32676 Series C (ASME BPE 2009)
Material:	AISI 316L (1.4404)
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal and external bright finish. Ra, internal < 0.5 µm
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing. Further dimensions available on request.
Remarks:	Technical contents are subject to change

Dimensions for Reduced TC-Adapter							
Sizes	A	a	ID	id	L	Item No.	
acc. DIN 32676 Series C (ASME BPE 2009)							
OD 3/4" / 1/2"	25.0	25.0	15.8	9.4	40.0	256.007.005.	
OD 1" / 1/2"	50.5	25.0	22.1	9.4	40.0	256.010.005.	
OD 1" / 3/4"	50.5	25.0	22.1	15.8	40.0	256.010.007.	
OD 1 1/2" / 1/2"	50.5	25.0	34.8	9.4	40.0	256.015.005.	
OD 1 1/2" / 3/4"	50.5	25.0	34.8	15.8	40.0	256.015.007.	
OD 1 1/2" / 1"	50.5	50.5	34.8	22.1	40.0	255.015.010.	
OD 2" / 1/2"	64.0	25.0	47.5	9.4	50.0	256.020.005.	
OD 2" / 3/4"	64.0	25.0	47.5	15.8	50.0	256.020.007.	
OD 2" / 1"	64.0	50.5	47.5	22.1	50.0	256.020.010.	
OD 2" / 1 1/2"	64.0	50.5	47.5	34.8	50.0	256.020.015.	
OD 2 1/2" / 1/2"	77.5	25.0	60.2	9.4	190.0	256.025.005.	
OD 2 1/2" / 3/4"	77.5	25.0	60.2	15.8	190.0	256.025.007.	
OD 2 1/2" / 1"	77.5	50.5	60.2	22.1	127.0	256.025.010.	
OD 2 1/2" / 1 1/2"	77.5	50.5	60.2	34.8	178.0	256.025.015.	
OD 2 1/2" / 2"	77.5	64.0	60.2	47.5	178.0	256.025.020.	
OD 3" / 1"	91.0	50.5	72.9	22.1	229.0	256.030.010.	
OD 3" / 1 1/2"	91.0	50.5	72.9	34.8	178.0	256.030.015.	
OD 3" / 2"	91.0	64.0	72.9	47.5	127.0	256.030.020.	
OD 3" / 2 1/2"	91.0	77.5	72.9	60.2	76.0	256.030.025.	

I

TC-Interior Thread-Adapter

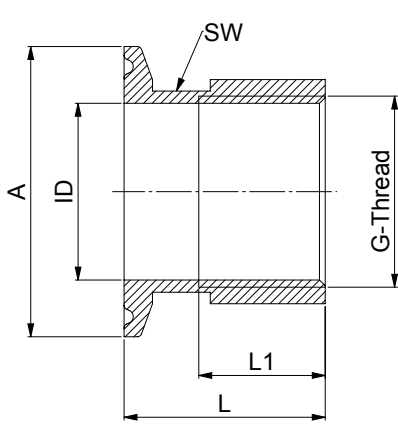
Product group:	Tri-Clamp Fittings
Description:	TC-Interior Thread-Adapter
Valid standards:	TC acc. DIN 32676, Thread acc. ISO 228-1
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface external Ra < 0.8 µm Surface, internal: Ra < 0.4 µm (ID 9.0 mm = Ra < 0.6 µm)
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Material number, melt number, manufacturer code, threading size
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing. Upon request, transition facets can be turned
Remarks:	Technical contents are subject to change

Dimensions for TC-Interior Thread-Adapter								
Sizes	G	L1	A	ID	L	SW	Item No.	
TC acc. DIN 32676, Thread acc. ISO 228-1								
IG 05	1/8"	12.0	25.0	8.6	30.0	17	263.005.025	
IG 1	1/8"	12.0	50.5	8.6	30.0	24	263.010.050	
IG 05	1/4"	12.0	25.0	11.5	30.0	17	263.007.025	
IG 2	1/4"	12.0	50.5	11.5	30.0	24	263.020.050	
IG 2	1/4"	12.0	64.0	11.5	30.0	24	263.020.064	
IG 3	3/8"	12.0	25.0	12.0	30.0	17	263.030.025	
IG 3	3/8"	12.0	50.5	15.0	30.0	24	263.030.050	
IG 3	1/2"	14.0	34.0	18.6	30.0	24	263.030.034	
IG 3	1/2"	14.0	50.5	18.6	30.0	24	263.030.070	
IG 4	3/4"	14.5	50.5	24.1	30.0	34	263.040.050	
IG 5	1"	22.0	50.5	30.3	35.0	34	263.050.050	
IG 5	1"	17.0	64.0	30.3	35.0	34	263.050.064	
IG 6	1-1/4"	17.0	64.0	39.0	35.0	46	263.064.050	
IG 7	1-1/2"	20.0	64.0	44.8	40.0	50	263.038.064	
IG 8	2"	25.0	77.5	56.5	40.0	65	263.070.077	

All lengths in millimeters (if not specified differently).

TC-External Thread-Adapter

Product group:	Tri-Clamp Fittings
Description:	TC-External Thread-Adapter
Valid standards:	TC acc. DIN 32676, Thread acc. ISO 228-1
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc.EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface external Ra, external < 0.8 µm Surface, internal: Ra, internal < 0.4 µm (ID ≤ 9.0 mm = Ra < 0.6 µm)
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Material number, melt number, manufacturer code, threading size
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing Upon request, transition facets can be turned
Remarks:	Technical contents are subject to change

Dimensions for TC-External Thread-Adapter								
Sizes	G	L1	A	ID	L	SW	Item No.	
TC acc. DIN 32676, Thread acc. ISO 228-1								
AG 05	1/8"	10.0	25.0	5.6	30.0	12	265.010.025	
AG 1	1/8"	10.0	50.5	5.6	30.0	12	265.010.050	
AG 05	1/4"	10.0	25.0	8.6	30.0	17	265.005.025	
AG 2	1/4"	10.0	50.5	8.6	30.0	17	265.020.050	
AG 3	3/8"	12.0	25.0	12.1	30.0	17	265.030.025	
AG 3	3/8"	12.0	50.5	12.1	30.0	17	265.030.050	
AG 3	1/2"	13.0	50.5	15.8	30.0	22	265.030.070	
AG 3	1/2"	13.0	64.0	15.8	30.0	22	265.030.064	
AG 4	3/4"	18.0	50.5	21.7	35.0	27	265.040.050	
AG 4	3/4"	18.0	64.0	21.7	35.0	27	265.040.064	
AG 5	1"	21.0	50.5	26.8	41.0	34	265.050.050	
AG 6	1-1/4"	20.0	50.5	35.5	35.0	38	265.060.050	
AG 7	1-1/2"	22.0	50.5	34.8	40.0	41	265.038.050	
AG 8	2"	20.0	77.5	47.5	40.0	60	265.070.077	



CONNECTORS

WELDING-FITTINGS

Pipes acc. DIN 11866	46
Pipes acc. DIN 11866	47
Elbow equal sided 45°	48
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Pipes acc. DIN 11866 Series B

Product group:	Welding-Fittings
Description:	Pipes acc. DIN 11866
Valid standards:	DIN 11866 Series B
Material:	Seamless or welded austenite stainless-steel pipe Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal and external bright finish. Weld-on ends for orbital-welding Bright finish: Ra, internal < 0.4 µm, Ra, external < 0.8 µm Electropolishing: Ra, internal < 0.6 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866 *H4 (Ra < 0.4µm), *H5 (Ra < 0.25µm) / *available on request
Tolerance:	acc. DIN EN 11127 / ISO 5252 D4/T3 and ASTM A269 / A270
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Remarks:	Pipes according to DIN 11866, Series A (DIN 11850), available on request Technical contents are subject to change

Dimensions for pipes acc. DIN 11866, Series B (ISO 1127)						
Standard Length: 6 meters						
Sizes	ø AD	ø ID	S	Weight kg / m	Item No. Bright finish	Item No. Electropolishing
acc. DIN 11866, Series B						
ISO DN 8	13.5	10.3	1.6	0.477	258.135.103.MB	258.135.103
ISO DN 10	17.2	14.0	1.6	0.626	258.172.140.MB	258.172.140
ISO DN 15	21.3	18.1	1.6	0.790	258.213.181.MB	258.213.181
ISO DN 20	26.9	23.7	1.6	1.015	258.269.237.MB	258.269.237
ISO DN 25	33.7	29.7	2.0	1.589	258.337.297.MB	258.337.297
ISO DN 32	42.4	38.4	2.0	2.026	258.424.384.MB	258.424.384
ISO DN 40	48.3	44.3	2.0	2.322	258.483.443.MB	258.483.443
ISO DN 50	60.3	56.3	2.0	2.923	258.603.560.MB	258.603.560
ISO DN 65	76.1	72.1	2.0	3.715	258.761.721.MB	258.761.721
ISO DN 80	88.9	84.3	2.3	4.993	258.889.843.MB	258.889.843
ISO DN 100	114.3	109.7	2.3	6.458	258.114.109.MB	258.114.109
ISO DN 150	168.3	163.1	2.6	10.800	258.168.163.MB	258.168.163
ISO DN 200	219.1	213.9	2.6	14.112	258.219.213.MB	258.219.213

Pipes acc. DIN 11866 Series C

Product group:	Welding-Fittings
Description:	Pipes acc. DIN 11866
Valid standards:	acc. DIN 11866 Series C (ASME BPE 2009)
Material:	Seamless or welded austenite stainless-steel pipe Strn.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1
Permissible sterilization temperature:	150°C
Version / Surface quality:	Right-angled welding ends, prepared for orbital welding Bright finish: Ra, internal < 0.4 µm, Ra, external < 0.8 µm Electropolishing: Ra, internal < 0.6 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866 *H4 (Ra < 0.4 µm), *H5 (Ra < 0.25 µm) / *available on request
Tolerance:	acc. ISO 5252 D4/T3 and ASTM A269 / A270
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Remarks:	Pipes acc. DIN 11866, Series A (DIN 11850) available on request. Technical contents are subject to change

Dimensions for pipes acc. DIN 11866, Series C (ASME BPE 2009)							
Standard Length: 6 meters							
Sizes	ø AD	ø ID	S	Weight kg / m	Item No. Bright finish	Item No. Electropolishing	
acc. DIN 11866 Series C (ASME BPE 2009)							
OD 1/8"	3.18	2.06	0.56	0.036	258.318.206.MB	258.318.206	
OD 1/4"	6.35	4.37	0.89	0.124	258.063.045.MB	258.063.045	
OD 3/8"	9.53	7.55	0.89	0.196	258.953.775.MB	258.953.775	
OD 1/2"	12.70	9.40	1.65	0.457	258.127.094.MB	258.127.094	
OD 3/4"	19.05	15.75	1.65	0.720	258.195.157.MB	258.195.157	
OD 1"	25.40	22.10	1.65	0.982	258.254.221.MB	258.254.221	
OD 1 1/2"	38.10	34.80	1.65	1.507	258.381.348.MB	258.381.348	
OD 2"	50.80	47.50	1.65	2.033	258.508.475.MB	258.508.475	
OD 2 1/2"	63.50	60.20	1.65	2.559	258.635.602.MB	258.635.602	
OD 3"	76.20	72.90	1.65	3.083	258.761.719.MB	258.761.719	
OD 4"	101.60	97.38	2.11	5.262	258.101.974.MB	258.101.974	
OD 6"	152.40	146.86	2.77	10.390	258.152.146.MB	258.152.146	

The diagram illustrates the cross-section of a pipe. It shows a rectangular profile with hatched areas representing the wall thickness. A horizontal dashed line runs through the center. To the right of the pipe, three vertical dimension lines are shown: the top one is labeled 'S' and indicates the wall thickness; the middle one is labeled 'øID' and indicates the inner diameter; the bottom one is labeled 'øAD' and indicates the outer diameter.

All lengths in millimeters (if not specified differently).

Elbow equal sided 45°

Product group:	Welding-Fittings
Description:	Elbow equal sided 45° acc. DIN 11865
Valid standards:	DIN 11865 with pipe connection acc. DIN 11866 Series B (ISO 1127)
Material:	Seamless or welded austenite stainless-steel pipe Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Right-angled weld-on ends for orbital-welding Bright finish: Ra, internal < 0.8 µm, Ra, external < 0.8 µm Electropolishing: Ra, internal < 0.6 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H3 acc. DIN 11866 *H4 (Ra < 0.4 µm), *H5 (Ra < 0.25 µm) / *available on request
Tolerance:	acc. ISO 5252 D4/T3 and ASTM A269 / A270
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Remarks:	Dimensions acc. DIN 11866, Series A (DIN 11850) available on request. Technical contents are subject to change

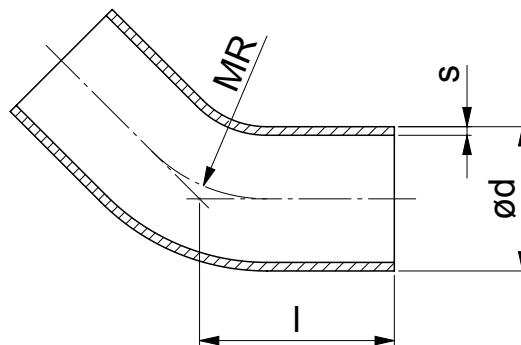
Dimensions for Elbow 45° acc. DIN 11865							
Sizes	d	S	I	MR	Item No. Bright finish	Item No. Electropolishing	
acc. DIN 11866 Series B (ISO 1127)							
ISO DN 8	13.50	1.60	33.30	20.00	252.135.103.45MB	252.135.103.45	
ISO DN 10	17.20	1.60	36.60	28.00	252.172.140.45MB	252.172.140.45	
ISO DN 15	21.30	1.60	37.40	30.00	252.213.181.45MB	252.213.181.45	
ISO DN 20	26.90	1.60	51.80	28.50	252.269.237.45MB	252.269.237.45	
ISO DN 25	33.70	2.00	55.70	38.00	252.337.297.45MB	252.337.297.45	
ISO DN 32	42.40	2.00	59.70	47.50	252.424.384.45MB	252.424.384.45	
ISO DN 40	48.30	2.00	63.60	57.00	252.483.443.45MB	252.483.443.45	
ISO DN 50	60.30	2.00	71.50	76.00	252.603.563.45MB	252.603.563.45	
ISO DN 65	76.10	2.00	94.40	95.00	252.761.721.45MB	252.761.721.45	
ISO DN 80	88.90	2.30	102.40	114.50	252.889.844.45MB	252.889.844.45	
ISO DN 100	114.30	2.30	118.20	152.50	252.114.109.45MB	252.114.109.45	

Elbow equal sided 45°

Product group:	Welding-Fittings
Description:	Elbow equal sided 45° acc. DIN 11865
Valid standards:	DIN 11865 with pipe connection acc. DIN 11866 Series C (ASME BPE 2009)
Material:	Seamless or welded austenite stainless-steel pipe Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1
Permissible sterilization temperature:	150°C
Version / Surface quality:	Right-angled weld-on ends for orbital-welding Bright finish: Ra, internal < 0.8 µm, Ra, external < 0.8 µm Electropolishing: Ra, internal < 0.6 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H3 acc. DIN 11866 *H4 (Ra < 0.4 µm), *H5 (Ra < 0.25 µm) / *available on request
Tolerance:	acc. ISO 5252 D4/T3 and ASTM A269 / A270
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1B
Remarks:	Dimensions acc. DIN 11866, Series A (DIN 11850) available on request. Technical contents are subject to change

Dimensions for Elbow 45° acc. DIN 11865

Sizes	d	S	I/A	MR	Item No. Bright finish	Item No. Electropolishing
acc. DIN 11866 Series B (ASME BPE 2009)						
OD 1/4"	6.35	0.89	50.80	15.90	252.063.045.45MB	252.063.045.45
OD 3/8"	9.53	0.89	50.80	23.80	252.095.077.45MB	252.095.077.45
OD 1/2"	12.70	1.65	57.20	27.00	252.127.094.45MB	252.127.094.45
OD 3/4"	19.05	1.65	57.20	26.00	252.195.157.45MB	252.195.157.45
OD 1"	25.40	1.65	57.20	38.10	252.254.221.45MB	252.254.221.45
OD 1 1/2"	38.10	1.65	63.50	57.20	252.381.348.45MB	252.371.348.45
OD 2"	50.80	1.65	76.20	76.20	252.508.475.45MB	252.508.475.45
OD 2 1/2"	63.50	1.65	85.70	95.30	252.635.602.45MB	252.635.602.45
OD 3"	76.20	1.65	92.10	114.30	252.762.729.45MB	252.762.729.45
OD 4"	101.60	2.11	114.30	152.40	252.101.973.45MB	252.101.973.45
OD 6"	152.40	2.77	158.80	228.60	252.152.146.45MB	252.152.146.45



All lengths in millimeters (if not specified differently).

Connectors Verbindungstechnik AG, Zürcherstrasse 53, CH-8317 Tagelswangen, Phone: +41 (0)52 354 68 68, Telefax: +41 (0)52 354 68 60
Catalogue Sterile Components Version CS004, Printed 07/2014, Version 2. More information: www.connectors.ch or email: info@connectors.ch

Elbow equal sided 90°

Product group:	Welding-Fittings
Description:	Elbow equal sided 90° acc. DIN 11865
Valid standards:	DIN 11865 with pipe connection acc. DIN 11866 Series B (ISO 1127)
Material:	Seamless or welded austenite stainless-steel pipe Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1
Permissible sterilization temperature:	150°C
Version / Surface quality:	Right-angled weld-on ends for orbital-welding Bright finish: Ra, internal < 0.8 µm, Ra, external < 0.8 µm Electropolishing: Ra, internal < 0.6 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H3 acc. DIN 11866 *H4 (Ra < 0.4 µm), *H5 (Ra < 0.25 µm) / *available on request
Tolerance:	acc. ISO 5252 D4/T3 and ASTM A269 / A270
Marking:	Size, material number, melt number, manufacturer code
Certificate:	Certificate acc. EN 10204-3.1
Remarks:	Dimensions acc. ISO 11865 Technical contents are subject to change

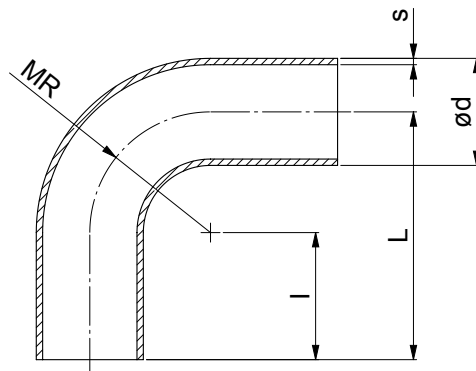
Dimensions for Elbow 45° acc. DIN 11865								
Sizes	d	S	L	I	MR	Item No. Bright finish	Item No. Electropolishing	
acc. DIN 11866 Series B (ISO 1127)								
ISO DN 8	13.50	1.60	45.00	25.00	20.00	252.135.103.MB	252.135.103	
ISO DN 10	17.20	1.60	53.00	25.00	28.00	252.172.140.MB	252.172.140	
ISO DN 15	21.30	1.60	55.00	25.00	30.00	252.213.181.MB	252.213.181	
ISO DN 20	26.90	1.60	68.50	40.00	28.50	252.269.237.MB	252.269.237	
ISO DN 25	33.70	2.00	78.00	40.00	38.00	252.337.297.MB	252.337.297	
ISO DN 32	42.40	2.00	87.50	40.00	47.50	252.424.384.MB	252.424.384	
ISO DN 40	48.30	2.00	97.00	40.00	57.00	252.483.443.MB	252.483.443	
ISO DN 50	60.30	2.00	116.00	40.00	76.00	252.603.563.MB	252.603.563	
ISO DN 65	76.10	2.00	150.00	55.00	95.00	252.761.721.MB	252.761.721	
ISO DN 80	88.90	2.30	169.50	55.00	114.50	252.889.844.MB	252.889.844	
ISO DN 100	114.30	2.30	207.50	55.00	152.50	252.114.109.MB	252.114.109	

Elbow equal sided 90°

Product group:	Welding-Fittings
Description:	Elbow equal sided 90° acc. DIN 11865
Valid standards:	DIN 11865 with pipe connection acc. DIN 11866 Series C (ASME BPE 2009)
Material:	Seamless or welded austenite stainless-steel pipe Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1
Permissible sterilization temperature:	150°C
Version / Surface quality:	Right-angled weld-on ends for orbital-welding Bright finish: Ra, internal < 0.8 µm, Ra, external < 0.8 µm Electropolishing: Ra, internal < 0.6 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H3 acc. DIN 11866 *H4 (Ra < 0.4 µm), *H5 (Ra < 0.25 µm) / *available on request
Tolerance:	acc. DIN EN 1127 / ISO 5252 D4/T3 and ASTM A269 / A270
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1B
Remarks:	Dimensions acc. DIN 11866, Series A (DIN 11850) available on request. Technical contents are subject to change

Dimensions for Elbow 90° acc. DIN 11865

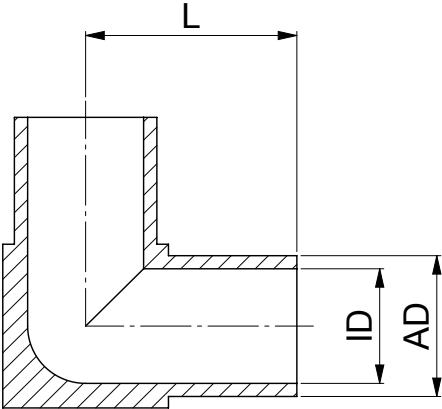
Sizes	d	S	L / A	I	MR	Item No. Bright finish	Item No. Electropolishing
acc. DIN 11866 Series C (ASME BPE 2009)							
OD 1/4"	6.35	0.89	66.70	50.80	14.30	252.063.045.MB	252.063.045
OD 3/8"	9.53	0.89	66.70	42.70	28.60	252.095.077.MB	252.095.077
OD 1/2"	12.70	1.65	76.20	49.20	28.60	252.127.094.MB	252.127.094
OD 3/4"	19.05	1.65	76.20	50.20	28.60	252.195.157.MB	252.195.157
OD 1"	25.40	1.65	76.20	38.10	38.10	252.254.221.MB	252.254.221
OD 1 1/2"	38.10	1.65	95.30	38.10	57.20	252.381.348.MB	252.381.348
OD 2"	50.80	1.65	120.70	44.50	76.20	252.508.475.MB	252.508.475
OD 2 1/2"	63.50	1.65	139.70	44.50	95.30	252.635.602.MB	252.635.602
OD 3"	76.20	1.65	158.50	44.50	114.30	252.762.729.MB	252.762.729
OD 4"	101.60	2.11	203.20	50.80	152.40	252.101.974.MB	252.101.974
OD 6"	152.40	2.77	292.10	63.50	228.60	252.152.146.MB	252.152.146



All lengths in millimeters (if not specified differently).

Elbow equal sided 90° (from solid material)

Product group:	Welding-Fittings
Description:	Elbow equal sided 90° (from solid material)
Valid standards:	Pipe connection acc. DIN 11866 Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal and external bright finish. Right angled weld-on ends for welding Ra, internal < 0.6 µm, Ra, externa < 0.8 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing. Further dimensions available on request.
Remarks:	All sizes made from solid material Technical contents are subject to change

Dimensions for Elbow 90°					
Sizes	AD	ID	L	Item No.	
acc. DIN 11866 Series B (ISO 1127)					
ISO DN	6	10.2	7.0	24.0	252.045.006
ISO DN	8	13.5	10.3	24,0	252.045.008
ISO DN	10	17.2	14.0	24.0	252.045.010
					

T-Piece, equal

Product group:	Welding-Fittings
Description:	T-Piece, equal acc. DIN 11865
Valid standards:	DIN 11865 with pipe connection acc. DIN 11866 Series B (ISO 1127)
Material:	Seamless or welded austenite stainless-steel pipe Strn.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1, welding seam Fe < 1%
Permissible sterilization temperature:	150°C
Version / Surface quality:	Right-angled weld-on ends for orbital-welding Bright finish: Ra, internal < 0.8 µm, Ra, external < 0.8 µm Electropolishing: Ra, internal < 0.6 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H3 acc. DIN 11866 *H4 (Ra < 0.4 µm), *H5 (Ra < 0.25 µm) / *available on request
Tolerance:	acc. ISO 5252 D4/T3 and ASTM A269 / A270
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Remarks:	Dimensions acc. DIN 11866, Series A (DIN 11850) available on request. T-pieces with short outlet also available upon request Technical contents are subject to change

Dimensions for T-Piece, equal							
Sizes		D / d	S1 / S2	L	I	Item No. Bright finish	Item No. Electropolishing
acc. DIN 11866 Series B (ISO 1127)							
ISO DN	8 x 8	13.50 x 13.50	1.60 / 1.60	64.00	32.00	253.135.103.MB	253.135.103
ISO DN	10 x 8	17.20 x 13.50	1.60 / 1.60	68.00	34.00	253.172.135.MB	253.172.135
ISO DN	10 x 10	17.20 x 17.20	1.60 / 1.60	68.00	34.00	253.172.140.MB	253.172.140
ISO DN	15 x 8	21.30 x 13.50	1.60 / 1.60	72.00	36.00	253.213.135.MB	253.213.135
ISO DN	15 x 10	21.30 x 17.20	1.60 / 1.60	72.00	36.00	253.213.172.MB	253.213.172
ISO DN	15 x 15	21.30 x 21.30	1.60 / 1.60	72.00	36.00	253.213.181.MB	253.213.181
ISO DN	20 x 8	26.90 x 13.50	1.60 / 1.60	110.00	55.00	253.269.135.MB	253.269.135
ISO DN	20 x 10	26.90 x 17.20	1.60 / 1.60	110.00	55.00	253.269.172.MB	253.269.172
ISO DN	20 x 15	26.90 x 21.30	1.60 / 1.60	110.00	55.00	253.269.213.MB	253.269.213
ISO DN	20 x 20	26.90 x 26.90	1.60 / 1.60	110.00	55.00	253.269.237.MB	253.269.237

All lengths in millimeters (if not specified differently).

T-Piece, equal

Product group:

Welding-Fittings

Valid standards:

DIN 11865 with pipe connection acc. DIN 11866 Series B (ISO 1127)

Remarks:

Dimensions acc. DIN 11866, Series A (DIN 11850) available on request
 T-pieces with a short outlet also available upon request
 Technical contents are subject to change

Dimensions for T-Piece							
Sizes		D / d	S1 / S2	L	I	Item No. Bright finish	Item No. Electropolishing
acc. DIN 11866 Series B (ISO 1127)							
ISO DN	25 x 10	33.70 x 17.20	2.00 / 1.60	120.00	60.00	253.337.172.MB	253.337.172
ISO DN	25 x 15	33.70 x 21.30	2.00 / 1.60	120.00	60.00	253.337.213.MB	253.337.213
ISO DN	25 x 20	33.70 x 26.90	2.00 / 1.60	120.00	60.00	253.337.269.MB	253.337.269
ISO DN	25 x 25	33.70 x 33.70	2.00 / 2.00	120.00	60.00	253.337.297.MB	253.337.297
ISO DN	32 x 15	42.40 x 21.30	2.00 / 1.60	130.00	65.00	253.424.213.MB	253.424.213
ISO DN	32 x 20	42.40 x 26.90	2.00 / 1.60	130.00	65.00	253.424.269.MB	253.424.269
ISO DN	32 x 25	42.40 x 33.70	2.00 / 2.00	130.00	65.00	253.424.337.MB	253.424.337
ISO DN	32 x 32	42.40 x 42.40	2.00 / 2.00	130.00	65.00	253.424.384.MB	253.424.384
ISO DN	40 x 15	48.30 x 21.30	2.00 / 1.60	130.00	65.00	253.483.213.MB	253.483.213
ISO DN	40 x 20	48.30 x 26.90	2.00 / 1.60	130.00	65.00	253.483.269.MB	253.483.269
ISO DN	40 x 25	48.30 x 33.70	2.00 / 2.00	130.00	65.00	253.483.337.MB	253.483.337
ISO DN	40 x 32	48.30 x 42.40	2.00 / 2.00	130.00	65.00	253.483.424.MB	253.483.424
ISO DN	40 x 40	48.30 x 48.30	2.00 / 2.00	130.00	65.00	253.483.443.MB	253.483.443
ISO DN	50 x 20	60.30 x 26.90	2.00 / 1.60	180.00	90.00	253.603.269.MB	253.603.269
ISO DN	50 x 25	60.30 x 33.70	2.00 / 2.00	180.00	90.00	253.603.337.MB	253.603.337
ISO DN	50 x 32	60.30 x 42.40	2.00 / 2.00	180.00	90.00	253.603.424.MB	253.603.424
ISO DN	50 x 40	60.30 x 48.30	2.00 / 2.00	180.00	90.00	253.603.483.MB	253.603.483
ISO DN	50 x 50	60.30 x 60.30	2.00 / 2.00	180.00	90.00	253.603.563.MB	253.603.563
ISO DN	65 x 25	76.10 x 33.70	2.00 / 2.00	220.00	90.00	253.761.337.MB	253.761.337
ISO DN	65 x 32	76.10 x 42.40	2.00 / 2.00	220.00	90.00	253.761.424.MB	253.761.424
ISO DN	65 x 40	76.10 x 48.30	2.00 / 2.00	220.00	90.00	253.761.483.MB	253.761.483
ISO DN	65 x 50	76.10 x 60.30	2.00 / 2.00	220.00	90.00	253.761.603.MB	253.761.603
ISO DN	65 x 65	76.10 x 76.10	2.00 / 2.00	220.00	110.00	253.761.721.MB	253.761.721
ISO DN	80 x 32	88.90 x 42.40	2.30 / 2.00	260.00	110.00	253.889.424.MB	253.889.424
ISO DN	80 x 40	88.90 x 48.30	2.30 / 2.00	260.00	110.00	253.889.483.MB	253.889.483
ISO DN	80 x 50	88.90 x 60.30	2.30 / 2.00	160.00	110.00	253.889.603.MB	253.889.603
ISO DN	80 x 65	88.90 x 76.10	2.30 / 2.00	260.00	110.00	253.889.761.MB	253.889.761
ISO DN	80 x 80	88.90 x 88.90	2.30 / 2.30	260.00	130.00	253.889.884.MB	253.889.884
ISO DN	100 x 50	114.30 x 60.30	2.30 / 2.00	320.00	130.00	253.114.603.MB	253.114.603
ISO DN	100 x 65	114.30 x 76.10	2.30 / 2.00	320.00	130.00	253.114.761.MB	253.114.761
ISO DN	100 x 80	114.30 x 88.90	2.30 / 2.30	320.00	130.00	253.114.889.MB	253.114.889

T-Piece, equal

Product group:	Welding-Fittings
Description:	T-Piece, equal acc. DIN 11865
Valid standards:	DIN 11865 with pipe connection acc. DIN 11866 Series C (ASME BPE 2009)
Material:	Seamless or welded austenite stainless-steel pipe Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1, welding seam Fe < 1%
Permissible sterilization temperature:	150°C
Version / Surface quality:	Right-angled weld-on ends for orbital-welding Bright finish: Ra, internal < 0.8 µm, Ra, external < 0.8 µm Electropolishing: Ra, internal < 0.6 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H3 acc. DIN 11866 *H4 (Ra < 0.4 µm), *H5 (Ra < 0.25 µm) / *available on request
Tolerance:	acc. ISO 5252 D4/T3 and ASTM A269 / A270
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Remarks:	Dimensions acc. DIN 11866, Series A (DIN 11850) available on request T-Piece with short outlet available upon request Technical contents are subject to change

Dimensions for T-Piece, equal acc. DIN 11865							
Sizes	D / d	S1 / S2	L	I	Item No. Bright finish	Item No. Electropolishing	
acc. DIN 11866 Series C (ASME BPE 2009)							
BS	1/4" x 1/4"	6.35 x 6.35	0.89 / 0.89	89.00	44.50	253.063.045.MB	253.063.045
BS	3/8" x 1/4"	9.53 x 6.35	0.89 / 0.89	89.00	44.50	253.095.063.MB	253.095.063
BS	3/8" x 3/8"	9.53 x 9.53	0.89 / 0.89	89.00	44.50	253.095.077.MB	253.095.077
BS	1/2" x 1/4"	12.70 x 6.35	1.65 / 0.89	95.20	47.60	253.127.063.MB	253.127.094
BS	1/2" x 3/8"	12.70 x 9.53	1.65 / 0.89	95.20	47.60	253.127.095.MB	253.127.095
BS	1/2" x 1/2"	12.70 x 12.70	1.65 / 1.65	95.20	47.60	253.127.094.MB	253.127.094
BS	3/4" x 1/4"	19.05 x 6.35	1.65 / 0.89	101.60	50.80	253.195.063.MB	253.195.063
BS	3/4" x 3/8"	19.05 x 9.53	1.65 / 0.89	101.60	50.80	253.195.095.MB	253.195.095
BS	3/4" x 1/2"	19.05 x 12.70	1.65 / 1.65	101.60	50.80	253.195.127.MB	253.195.127
BS	3/4" x 3/4"	19.05 x 19.05	1.65 / 1.65	101.60	50.80	253.195.157.MB	253.195.157

All lengths in millimeters (if not specified differently).

T-Piece, equal

Product group:

Welding-Fittings

Bezeichnung:

DIN 11865 with pipe connection acc. DIN 11866 Series C (ASME BPE 2009)

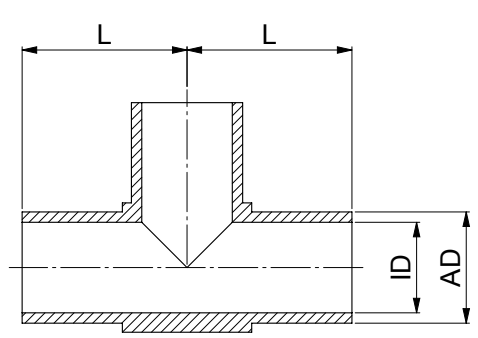
Remarks:

Dimensions acc. DIN 11866, Series A (DIN 11850) available on request
 T-pieces with short outlet also available upon request
 Technical contents are subject to change

Dimensions for T-Piece, equal acc. DIN 11865								
Sizes		D / d	S1 / S2	L	I	Item No. Bright finish	Item No. Electropolishing	
acc. DIN 11866 Series C (ASME BPE 2009)								
BS	1" x 1/4"	25.40 x 6.35	1.65 / 0.89	108.00	54.00	253.254.063.MB	253.254.063	
BS	1" x 3/8"	25.40 x 9.53	1.65 / 0.89	108.00	54.00	253.254.095.MB	253.254.095	
BS	1" x 1/2"	25.40 x 12.70	1.65 / 1.65	108.00	54.00	253.254.127.MB	253.254.127	
BS	1" x 3/4"	25.40 x 19.05	1.65 / 1.65	108.00	54.00	253.254.195.MB	253.254.195	
BS	1" x 1"	25.40 x 25.40	1.65 / 1.65	108.00	54.00	253.254.221.MB	253.254.221	
BS	1 1/2" x 1/2"	38.10 x 12.70	1.65 / 1.65	120.60	60.30	253.381.127.MB	253.381.127	
BS	1 1/2" x 3/4"	38.10 x 19.05	1.65 / 1.65	120.60	60.30	253.381.195.MB	253.381.195	
BS	1 1/2" x 1"	38.10 x 25.40	1.65 / 1.65	120.60	60.30	253.381.254.MB	253.381.254	
BS	1 1/2" x 1 1/2"	38.10 x 38.10	1.65 / 1.65	120.60	60.30	253.381.348.MB	253.381.348	
BS	2" x 1/2"	50.80 x 12.70	1.65 / 1.65	146.00	66.70	253.508.127.MB	253.508.127	
BS	2" x 3/4"	50.80 x 19.05	1.65 / 1.65	146.00	66.70	253.508.195.MB	253.508.195	
BS	2" x 1"	50.80 x 25.40	1.65 / 1.65	146.00	66.70	253.508.254.MB	253.508.254	
BS	2" x 1 1/2"	50.80 x 38.10	1.65 / 1.65	146.00	66.70	253.508.381.MB	253.508.381	
BS	2" x 2"	50.80 x 50.80	1.65 / 1.65	146.00	66.70	253.508.475.MB	253.508.475	
BS	2 1/2" x 1/2"	63.50 x 12.70	1.65 / 1.65	158.80	73.00	253.635.127.MB	253.635.127	
BS	2 1/2" x 3/4"	63.50 x 19.05	1.65 / 1.65	158.80	73.00	253.635.195.MB	253.635.195	
BS	2 1/2" x 1"	63.50 x 25.40	1.65 / 1.65	158.80	73.00	253.635.254.MB	253.635.254	
BS	2 1/2" x 1 1/2"	63.50 x 38.10	1.65 / 1.65	158.80	73.00	253.635.381.MB	253.635.381	
BS	2 1/2" x 2"	63.50 x 50.80	1.65 / 1.65	158.80	73.00	253.635.508.MB	253.635.508	
BS	2 1/2" x 2 1/2"	63.50 x 63.50	1.65 / 1.65	158.80	73.00	253.635.602.MB	253.635.602	
BS	3" x 1/2"	76.20 x 12.70	1.65 / 1.65	171.40	79.40	253.762.127.MB	253.762.127	
BS	3" x 3/4"	76.20 x 19.05	1.65 / 1.65	171.40	79.40	253.762.195.MB	253.762.195	
BS	3" x 1"	76.20 x 25.40	1.65 / 1.65	171.40	79.40	253.762.254.MB	253.762.254	
BS	3" x 1 1/2"	76.20 x 38.10	1.65 / 1.65	171.40	79.40	253.762.381.MB	253.762.381	
BS	3" x 2"	76.20 x 50.80	1.65 / 1.65	171.40	79.40	253.762.508.MB	253.762.508	
BS	3" x 2 1/2"	76.20 x 63.50	1.65 / 1.65	171.40	79.40	253.762.635.MB	253.762.635	
BS	3" x 3"	76.20 x 76.20	1.65 / 1.65	171.40	79.40	253.762.729.MB	253.762.729	
BS	4" x 1/2"	101.60 x 12.70	2.11 / 1.65	209.60	98.40	253.101.127.MB	253.101.127	
BS	4" x 3/4"	101.60 x 19.05	2.11 / 1.65	209.60	98.40	253.101.195.MB	253.101.195	
BS	4" x 1"	101.60 x 25.40	2.11 / 1.65	209.60	98.40	253.101.254.MB	253.101.254	
BS	4" x 1 1/2"	101.60 x 38.10	2.11 / 1.65	209.60	98.40	253.101.381.MB	253.101.381	
BS	4" x 2"	101.60 x 50.80	2.11 / 1.65	209.60	98.40	253.101.508.MB	253.101.508	
BS	4" x 2 1/2"	101.60 x 63.50	2.11 / 1.65	209.60	98.40	253.101.635.MB	253.101.635	
BS	4" x 3"	101.60 x 76.20	2.11 / 1.65	209.60	98.40	253.101.762.MB	253.101.762	
BS	4" x 4"	101.60 x 101.60	2.11 / 2.11	209.60	104.80	253.101.974.MB	253.101.974	
BS	6" x 4"	152.40 x 101.60	2.77 / 2.11	285.80	130.20	253.152.101.MB	253.152.101	
BS	6" x 6"	152.40 x 152.40	2.77 / 2.77	285.80	142.90	253.152.146.MB	253.152.146	

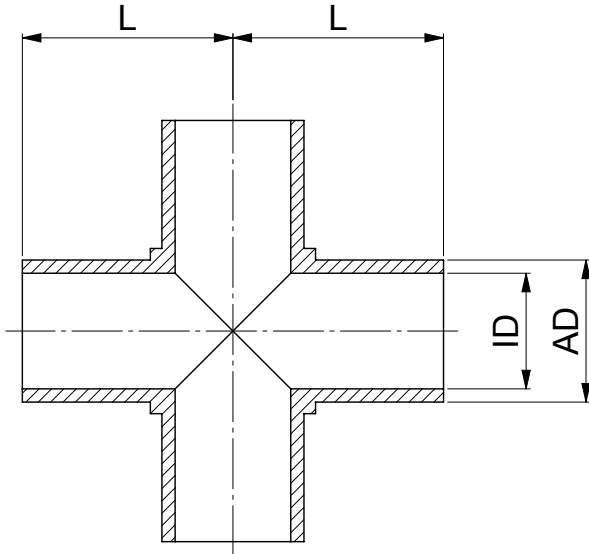
T-Piece, equal (from solid material)

Product group:	Welding-Fittings
Description:	T-Piece, equal (from solid material)
Valid standards:	Pipe connection acc. DIN 11866 Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal and external bright finish. Right-angled weld-on ends for welding. Ra, internal < 0.4 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H3 / H4 acc. DIN 11866
Marking:	Material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing and further dimensions available on request.
Remarks:	All sizes made from solid material Technical contents are subject to change

Dimensions for T-Piece (from solid material)					
Sizes	AD	ID	L	Item No.	
acc. DIN 11866 Series B (ISO 1127)					
ISO DN 6	10.2	7.0	24.0	253.045.006	
ISO DN 8	13.5	10.3	24.0	253.045.008	

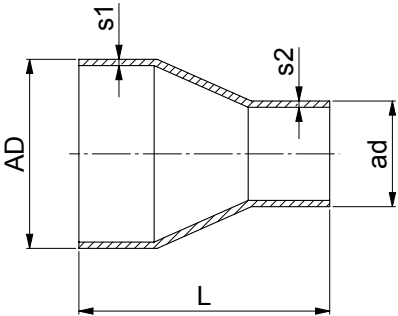
Cross-Piece, equal (from solid material)

Product group:	Welding-Fittings
Description:	Cross-Piece, equal (from solid material)
Valid standards:	Pipe connection acc. DIN 11866 Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal and external bright finish. Right-angled weld-on ends for welding Ra, internal < 0.4 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H3 / H4 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing and further dimensions available on request
Remarks:	All sizes made from solid material Technical contents are subject to change

Dimensions for Cross-Piece (from solid material)					
Sizes	AD	ID	L	Item No.	
acc. DIN 11866 Series B (ISO 1127)					
ISO DN	6	10.2	7.0	24.0	254.045.006
ISO DN	8	13.5	10.3	24.0	254.045.008
ISO DN	10	17.2	14.0	24.0	254.045.010
					

Concentric Reducer

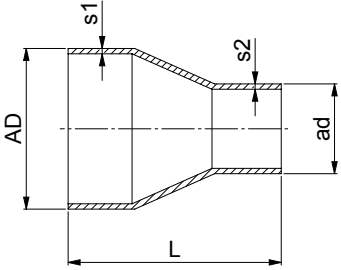
Product group:	Welding-Fittings
Description:	Concentric Reducer
Valid standards:	DIN 11865 with pipe connection acc. DIN 11866 Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal and external bright finish. Right-angled weld-on ends for orbital-welding Ra, internal < 0.8 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H3 acc. DIN 11866 *H4 (Ra < 0.4 µm), *H5 (Ra < 0.25 µm) / *available on request
Marking:	Material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing and further dimensions available on request
Remarks:	Technical contents are subject to change

Dimensions for Concentric Reducer							
Sizes	AD	ad	s1	s2	L	Item No.	
acc. DIN 11866 Series (ISO 1127)							
DN 10 - DN 08	17.2	13.5	1.6	1.6	60.0	255.172.135.DOCK	
DN 15 - DN 08	21.3	13.5	1.6	1.6	60.0	255.213.135.DOCK	
DN 15 - DN 10	21.3	17.2	1.6	1.6	60.0	255.213.172.DOCK	
DN 20/1 - DN 08	26.9	13.5	1.6	1.6	60.0	255.269.135.DOCK	
DN 20/1 - DN 10	26.9	17.2	1.6	1.6	60.0	255.269.172.DOCK	
DN 20/1 - DN 15	26.9	21.3	1.6	1.6	60.0	255.269.213.DOCK	
DN 25/1 - DN 15	33.7	21.3	2.0	1.6	70.0	255.337.213.DOCK	
DN 25/1 - DN 20/1	33.7	26.9	2.0	1.6	70.0	255.337.269.DOCK	
DN 32 - DN 15	42.4	21.3	2.0	1.6	80.0	255.424.213.DOCK	
DN 32 - DN 20/1	42.4	26.9	2.0	1.6	80.0	255.424.269.DOCK	
DN 32 - DN 25/1	42.4	33.7	2.0	2.0	80.0	255.424.337.DOCK	
DN 40 - DN 15	48.3	21.3	2.0	1.6	90.0	255.483.213.DOCK	
DN 40 - DN 20/1	48.3	26.9	2.0	1.6	90.0	255.483.269.DOCK	
DN 40 - DN 25/1	48.3	33.7	2.0	2.0	90.0	255.483.337.DOCK	
DN 40 - DN 32	48.3	42.4	2.0	2.0	90.0	255.483.424.DOCK	

All lengths in millimeters (if not specified differently).

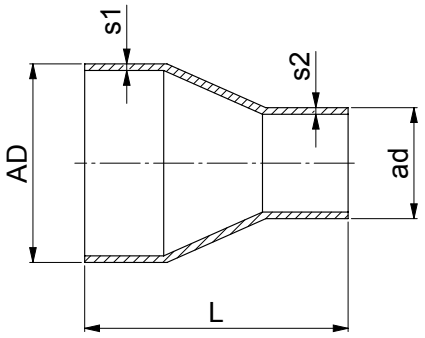
Concentric Reducer

Product group:	Welding-Fittings
Description:	Concentric Reducer
Valid standards:	DIN 11865 with pipe connection acc. DIN 11866 Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal and external bright finish. Right-angled weld-on ends for orbital-welding Ra, internal < 0.8 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H3 acc. DIN 11866 *H4 (Ra < 0.4 µm), *H5 (Ra < 0.25 µm) / *available on request
Marking:	Material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing and further dimensions available on request
Remarks:	Technical contents are subject to change

Dimensions for Concentric Reducer							
Sizes	AD	ad	s1	s2	L	Item No.	
acc. DIN 11866 Series B (ISO 1127)							
DN 50 - DN 20/1	60.3	26.9	2.0	1.6	100.0	255.603.269.DOCK	
DN 50 - DN 25/1	60.3	33.7	2.0	2.0	100.0	255.603.337.DOCK	
DN 50 - DN 32	60.3	42.4	2.0	2.0	100.0	255.603.424.DOCK	
DN 50 - DN 40	60.3	48.3	2.0	2.0	100.0	255.603.483.DOCK	
DN 65 - DN 25/1	76.1	33.7	2.0	2.0	110.0	255.761.337.DOCK	
DN 65 - DN 32	76.1	42.4	2.0	2.0	110.0	255.761.424.DOCK	
DN 65 - DN 40	76.1	48.3	2.0	2.0	110.0	255.761.483.DOCK	
DN 65 - DN 50	76.1	60.3	2.0	2.0	110.0	255.761.603.DOCK	
DN 80 - DN 50	88.9	60.3	2.3	2.0	110.0	255.889.603.DOCK	
DN 80 - DN 65	88.9	76.1	2.3	2.0	110.0	255.889.761.DOCK	
DN 100 - DN 65	114.3	76.1	2.3	2.3	135.0	255.114.761.DOCK	
DN 100 - DN 80	114.3	88.9	2.3	2.3	135.0	255.114.889.DOCK	

Concentric Reducer

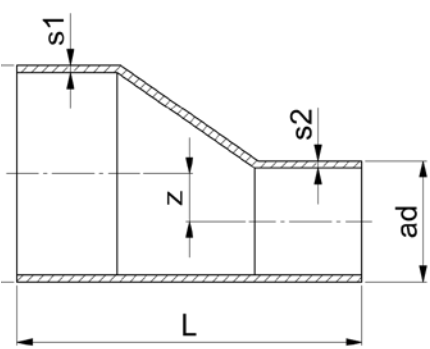
Product group:	Welding-Fittings
Description:	Concentric Reducer
Valid standards:	DIN 11865 with pipe connection acc.DIN 11866 Series C (ASME BPE 2009)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal and external bright finish. Right-angled weld-on ends for orbital-welding Ra, internal < 0.8 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H3 acc. DIN 11866 *H4 (Ra < 0.4 µm), *H5 (Ra < 0.25 µm) / *available on request
Marking:	Material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing and further dimensions available on request
Remarks:	Technical contents are subject to change

Dimensions for Concentric Reducer							
Sizes	AD	ad	s1	s2	L	Item No.	
acc. DIN 11866 Series C (ASME BPE 2009)							
NW 1/2" - 1/4"	12.70	6.35	1.65	0.89	38.0	255.127.063.DOCK	
NW 1/2" - 3/8"	12.70	9.53	1.65	0.89	38.0	255.127.095.DOCK	
NW 3/4" - 3/8"	19.05	9.53	1.65	0.89	60.0	255.190.095.DOCK	
NW 3/4" - 1/2"	19.05	12.70	1.65	1.65	60.0	255.190.127.DOCK	
NW 1" - 1/2"	25.40	12.70	1.65	1.65	60.0	255.254.127.DOCK	
NW 1" - 3/4"	25.40	19.05	1.65	1.65	60.0	255.254.190.DOCK	
NW 1 1/2" - 1/2"	38.10	12.70	1.65	1.65	80.0	255.381.127.DOCK	
NW 1 1/2" - 3/4"	38.10	19.05	1.65	1.65	80.0	255.381.190.DOCK	
NW 1 1/2" - 1"	38.10	25.40	1.65	1.65	80.0	255.381.254.DOCK	
NW 2" - 1"	50.80	25.40	1.65	1.65	90.0	255.508.254.DOCK	
NW 2" - 1 1/2"	50.80	38.10	1.65	1.65	90.0	255.508.381.DOCK	
NW 2 1/2" - 1 1/2"	63.50	38.10	1.65	1.65	100.0	255.635.381.DOCK	
NW 2 1/2" - 2"	63.50	50.80	1.65	1.65	100.0	255.635.508.DOCK	
NW 3" - 1 1/2"	76.20	38.10	1.65	1.65	110.0	255.762.381.DOCK	
NW 3" - 2"	76.20	50.80	1.65	1.65	110.0	255.762.508.DOCK	
NW 3" - 2 1/2"	76.20	63.50	1.65	1.65	110.0	255.762.635.DOCK	
NW 4" - 2"	101.60	50.80	2.11	1.65	135.0	255.102.508.DOCK	
NW 4" - 2 1/2"	101.60	63.50	2.11	1.65	135.0	255.102.635.DOCK	
NW 4" - 3"	101.60	76.20	2.11	1.65	135.0	255.102.762.DOCK	

All lengths in millimeters (if not specified differently).

Excentric Reducer

Product group:	Welding-Fittings
Description:	Excentric Reducer
Valid standards:	DIN 11865 with pipe connection acc. DIN 11866 Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface Quality:	Surface, internal and external bright finish. Right-angled weld-on ends for orbital-welding Ra, internal < 0.8 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H3 acc. DIN 11866 *H4 (Ra < 0.4 µm), *H5 (Ra < 0.25 µm) / *available on request
Marking:	Material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing and further dimensions available on request
Remarks:	Technical contents are subject to change

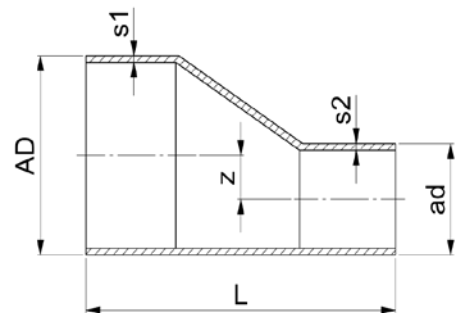
Dimensions for Excentric Reducer								
Sizes	AD	ad	s1	s2	L	z	Item No.	
acc. DIN 11866 Series B (ISO 1127)								
DN 10 - DN 08	17.2	13.5	1.6	1.6	60.0	1.85	256.172.135.DOCK	
DN 15 - DN 08	21.3	13.5	1.6	1.6	60.0	3.90	256.213.135.DOCK	
DN 15 - DN 10	21.3	17.2	1.6	1.6	60.0	2.05	256.213.172.DOCK	
DN 20/1 - DN 08	26.9	13.5	1.6	1.6	60.0	6.70	256.269.135.DOCK	
DN 20/1 - DN 10	26.9	17.2	1.6	1.6	60.0	4.85	256.269.172.DOCK	
DN 20/1 - DN 15	26.9	21.3	1.6	1.6	60.0	2.80	256.269.213.DOCK	
DN 25/1 - DN 15	33.7	21.3	2.0	1.6	70.0	6.20	256.337.213.DOCK	
DN 25/1 - DN 20/1	33.7	26.9	2.0	1.6	70.0	3.40	256.337.269.DOCK	
DN 32 - DN 15	42.4	21.3	2.0	1.6	80.0	10.55	256.424.213.DOCK	
DN 32 - DN 20/1	42.4	26.9	2.0	1.6	80.0	7.75	256.424.269.DOCK	
DN 32 - DN 25/1	42.4	33.7	2.0	2.0	80.0	4.35	256.424.337.DOCK	
DN 40 - DN 15	48.3	21.3	2.0	1.6	90.0	13.50	256.483.213.DOCK	
DN 40 - DN 20/1	48.3	26.9	2.0	1.6	90.0	10.70	256.483.269.DOCK	
DN 40 - DN 25/1	48.3	33.7	2.0	2.0	90.0	7.30	256.483.337.DOCK	
DN 40 - DN 32	48.3	42.4	2.0	2.0	90.0	2.95	256.483.424.DOCK	

Excentric Reducer

Product group:	Welding-Fittings
Description:	Excentric Reducer
Valid standards:	DIN 11865 with pipe connection acc. DIN 11866 Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal and external bright finish. Right-angled weld-on ends for orbital-welding Ra, internal < 0.8 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H3 acc. DIN 11866 *H4 (Ra < 0.4 µm), *H5 (Ra < 0.25 µm) / *available on request.
Marking:	Material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing and further dimensions available on request
Remarks:	Technical contents are subject to change

Dimensions for Excentric Reducer

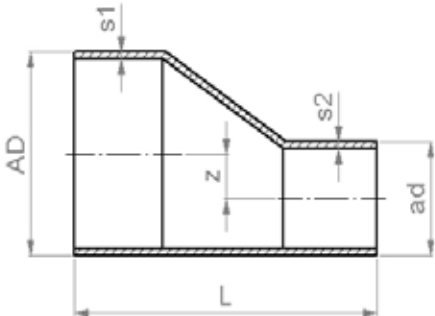
Sizes	AD	ad	s1	s2	L	z	Item No.
acc. DIN 11866 Series B (ISO 1127)							
DN 50 - DN 20/1	60.3	26.9	2.0	1.6	100.0	16.70	256.603.269.DOCK
DN 50 - DN 25/1	60.3	33.7	2.0	2.0	100.0	13.30	256.603.337.DOCK
DN 50 - DN 32	60.3	42.4	2.0	2.0	100.0	8.95	256.603.424.DOCK
DN 50 - DN 40	60.3	48.3	2.0	2.0	100.0	6.00	256.603.483.DOCK
DN 65 - DN 25/1	76.1	33.7	2.0	2.0	110.0	21.20	256.761.337.DOCK
DN 65 - DN 40	76.1	48.3	2.0	2.0	110.0	13.90	256.761.483.DOCK
DN 65 - DN 50	76.1	60.3	2.0	2.0	110.0	7.90	256.761.603.DOCK
DN 80 - DN 50	88.9	60.3	2.3	2.0	110.0	14.30	256.889.603.DOCK
DN 80 - DN 65	88.9	76.1	2.3	2.0	110.0	6.40	256.889.761.DOCK
DN 100 - DN 65	114.3	76.1	2.3	2.0	135.0	19.10	256.114.761.DOCK
DN 100 - DN 80	114.3	88.9	2.3	2.3	135.0	12.70	256.114.889.DOCK



All lengths in millimeters (if not specified differently).

Excentric Reducer

Product group:	Welding-Fittings
Description:	Excentric Reducer
Valid standards:	DIN 11865 with pipe connection acc. DIN 11866 Series C (ASME BPE 2009)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal and external bright finish. Right-angled weld-on ends for orbital-welding Ra, internal < 0.8 µm, Ra, external < 0.8 µm
Pipe-Hygiene Classes:	H3 acc. DIN 11866 *H4 (Ra < 0.4 µm), *H5 (Ra < 0.25 µm) / *available on request
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing and further dimensions available on request
Remarks:	Technical contents are subject to change

Dimensions for Excentric Reducer								
Sizes	AD	ad	s1	s2	L	z	Item No.	
acc. DIN 11866 Series C (ASME BPE 2009)								
NW 1/2" - 3/8"	12.70	9.53	1.65	0.89	47.63	1.59	256.127.095.DOCK	
NW 3/4" - 3/8"	19.05	9.53	1.65	0.89	50.80	4.76	256.190.095.DOCK	
NW 3/4" - 1/2"	19.05	12.70	1.65	1.65	53.98	3.18	256.190.127.DOCK	
NW 1" - 1/2"	25.40	12.70	1.65	1.65	63.50	6.35	256.254.127.DOCK	
NW 1" - 3/4"	25.40	19.05	1.65	1.65	53.98	3.18	256.254.190.DOCK	
NW 1 1/2" - 1/2"	38.10	12.70	1.65	1.65	80.00	12.70	256.381.127.DOCK	
NW 1 1/2" - 3/4"	38.10	19.05	1.65	1.65	76.20	9.53	256.381.190.DOCK	
NW 1 1/2" - 1"	38.10	25.40	1.65	1.65	63.50	6.35	256.381.254.DOCK	
NW 2" - 1"	50.80	25.40	1.65	1.65	85.73	12.70	256.508.254.DOCK	
NW 2" - 1 1/2"	50.80	38.10	1.65	1.65	63.50	6.35	256.508.381.DOCK	
NW 2 1/2" - 1"	63.50	25.40	1.65	1.65	100.00	19.05	256.635.254.DOCK	
NW 2 1/2" - 1 1/2"	63.50	38.10	1.65	1.65	85.73	12.70	256.635.381.DOCK	
NW 3" - 1 1/2"	76.20	38.10	1.65	1.65	107.95	19.05	256.762.381.DOCK	
NW 3" - 2"	76.20	50.80	1.65	1.65	85.73	12.70	256.762.508.DOCK	
NW 3" - 2 1/2"	76.20	63.50	1.65	1.65	66.68	6.35	256.762.635.DOCK	
NW 4" - 2"	101.60	50.80	2.11	1.65	130.18	25.40	256.102.508.DOCK	
NW 4" - 2 1/2"	101.60	63.50	2.11	1.65	107.95	19.05	256.102.635.DOCK	
NW 4" - 3"	101.60	76.20	2.11	1.65	98.43	12.70	256.102.762.DOCK	

Inline Sight Glass

Product group:	Welding-Fittings
Description:	Inline Sight Glass
Valid standards:	Pipe connection acc. DIN 11866 Series A (DIN 11850) / Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088, Borosilicate (DURAN Cylinder) O-Rings: EPDM
Permissible sterilization temperature:	135°C
Version / Surface quality:	Surface, external, Bright finish, tarnish removed Surface, internal, sanded and polished Ra internal < 0.4 µm
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing. Operating temperature can be increased in special cases to 100°C (medium-dependent).
Remarks:	Technical contents are subject to change

Dimensions for Inline Sight Glass										
Sizes	d1	d2	L1	Thread	SW	Nut	max. working- pressure in bar	max. working- * temperature	Item No.	
acc. DIN 11866 Series A (DIN 11850)										
DIN 8	10.0	8.0	80.0	M 22 x 1.5	22.0	-	19.1	80° C	249.001.008	
DIN 10	12.0	10.0	80.0	M 22 x 1.5	27.0	-	18.9	80° C	249.001.010	
acc. DIN 11866 Series B (ISO 1127)										
ISO DN 8	13.5	10.3	90.0	M 22 x 1.5	27.0	-	18.7	80° C	249.000.008	
ISO DN 10	17.2	14.0	90.0	M 26 x 1.5	32.0	-	14.1	80° C	249.000.010	
ISO DN 15	21.3	18.1	100.0	M 30 x 2.0	36.0	-	10.8	80° C	249.000.015	
ISO DN 20	26.9	23.7	110.0	M 36 x 2.0	-	48.0	9.6	80° C	249.000.020	
ISO DN 25	33.7	29.7	120.0	M 42 x 2.0	-	52.0	7.9	80° C	249.000.025	
ISO DN 32	42.4	38.4	130.0	M 52 x 2.0	-	62.0	6.9	80° C	249.000.032	
ISO DN 40	48.3	44.3	140.0	M 56 x 2.0	-	65.0	7.0	80° C	249.000.040	
ISO DN 50	60.3	56.3	140.0	M 74 x 2.0	-	80.0	6.4	80° C	249.000.050	

Nut

Female Union

Glass-Support

L1

Thread

d2

d1

All lengths in millimeters (if not specified differently).

Inline Sight Glass

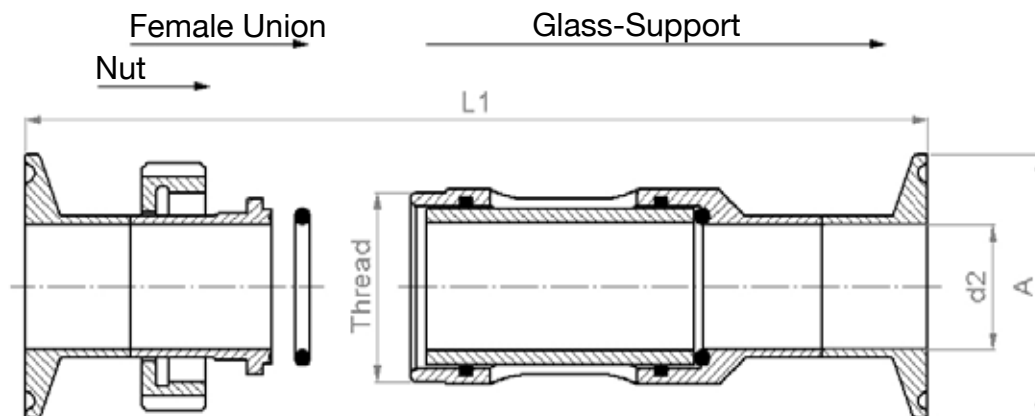
Product group:	Welding-Fittings
Description:	Inline Sight Glass with TC-Ends or other connections
Valid standards:	TC - Version: DIN 32676 with pipe connection acc. DIN 11866 Series B (ISO 1127) Other connections acc. Connectors standard or as specified.
Material:	Str.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088, Borosilicate (DURAN Cylinder) O-Rings: EPDM
Permissible sterilization temperature:	135°C
Version / Surface quality:	Surface, external, Bright finish, tarnish removed Surface, internal, sanded and polished Ra internal < 0.4 µm
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing. Sanded. Operating temperature can be increased in special cases to 100°C (medium-dependent). Available in screwed form on request.
Remarks:	Technical contents are subject to change

Inline Sight Glass with TC-Ends or other connections on request.

Measurements and sizes available on request. All Tri-Clamp Connections are orbitally welded.

Length of Tri-Clamp Ferrules: see Chapter 1: Tri-Clamp Connections

Inline Sight Glass with Tri-Clamp Connections:



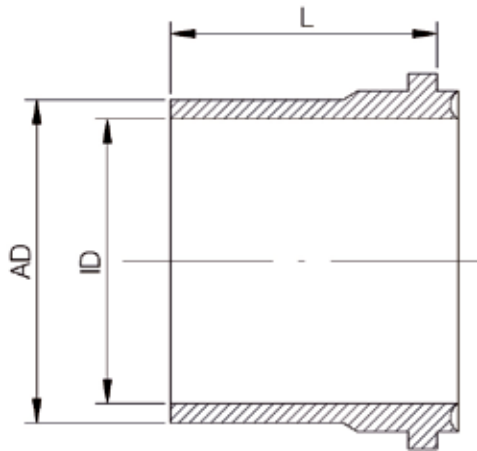


Female Union	68
Union Nut	69
Male Union	70
O-Ring	71
Reduced Female Union	72
Reduced Male Union	73
Female Cap	74
Male Cap	75



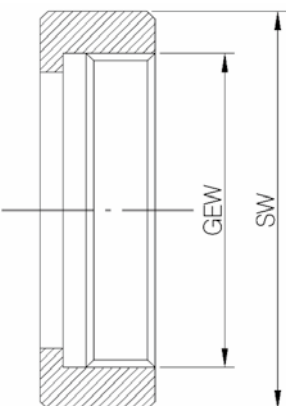
Female Union

Product group:	Aseptic-O-Ring Unions
Description:	Female Union
Valid standards:	CONNECTORS-Standard with pipe connection acc. DIN 11866 Series A (DIN11850) / Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface external bright finish Surface, internal: Ra < 0.4 µm
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Female Union					
Sizes	AD	ID	L	Item No.	
acc. ISO 1127					
ISO DN 8	13.5	10.3	28.0	247.000.008	
ISO DN 10	17.2	14.0	29.0	247.000.010	
ISO DN 15	21.3	18.1	29.0	247.000.015	
ISO DN 20	26.9	23.7	29.0	247.000.020	
ISO DN 25	33.7	29.7	30.0	247.000.025	
ISO DN 32	42.4	38.4	32.0	247.000.032	
ISO DN 40	48.3	44.3	32.0	247.000.040	
ISO DN 50	60.3	56.3	32.0	247.000.050	
acc. DIN 11850					
DIN 4	6.0	4.0	28.0	247.000.004.DIN	
DIN 6	8.0	6.0	28.0	247.000.006.DIN	
DIN 8	10.0	8.0	28.0	247.000.008.DIN	
DIN 10	12.0	10.0	28.0	247.000.010.DIN	

Union Nut

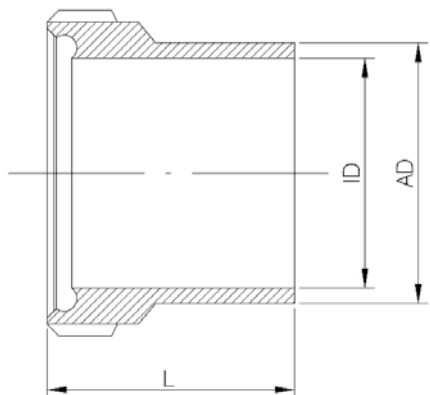
Product group:	Aseptic O-Ring Unions
Description:	Union Nut
Valid standards:	CONNECTORS-Standard
Material:	Stnr.-W. 1.4301 acc. EN 10088
Permissible sterilization temperature:	150°C
Form:	Up to ISO DN 15: Hexagonnut, from ISO DN 20: Union-Nut
Version / Surface quality:	Surface external bright finish
Marking:	On request: Lasermarking
Certificates:	On request: Certificate of acceptance acc. EN 10204-2.2
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Union Nut				
Sizes	GEW	SW / AD	Item-No.	
acc. CONNECTORS-Standard / in accordance with ISO DN				
ISO DN 8	M 22 x 1.5	SW 27.0	245.000.008	
ISO DN 10	M 26 x 1.5	SW 32.0	245.000.010	
ISO DN 15	M 30 x 2.0	SW 36.0	245.000.015	
ISO DN 20	M 36 x 2.0	AD 48.0	245.000.020	
ISO DN 25	M 42 x 2.0	AD 52.0	245.000.025	
ISO DN 32	M 52 x 2.0	AD 62.0	245.000.032	
ISO DN 40	M 56 x 2.0	AD 65.0	245.000.040	
ISO DN 50	M 68 x 2.0	AD 80.0	245.000.050	
acc. CONNECTORS Standard / in accordance with DIN				
DIN 4	M 16 x 1.5	SW 19.0	245.000.004.DIN	
DIN 6	M 16 x 1.5	SW 19.0	245.000.006.DIN	
DIN 8	M 18 x 1.5	SW 22.0	245.000.008.DIN	
DIN 10	M 22 x 1.5	SW 27.0	245.000.010.DIN	

Male Union

Product group:	Aseptic-O-Ring Unions
Description:	Male Union
Valid standards:	CONNECTORS-Standard with pipe connection acc. DIN 11866 Series A (DIN11850) / Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface external Ra < 0.8 µm Surface, internal: Ra < 0.4 µm
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Male Union					
Sizes	A	ID	L	Item No.	
acc. ISO 1127					
ISO DN	8	13.5	10.3	32.0	246.000.008
ISO DN	10	17.2	14.0	31.0	246.000.010
ISO DN	15	21.3	18.1	32.0	246.000.015
ISO DN	20	26.9	23.7	30.0	246.000.020
ISO DN	25	33.7	29.7	32.0	246.000.025
ISO DN	32	42.4	38.4	34.0	246.000.032
ISO DN	40	48.3	44.3	34.0	246.000.040
ISO DN	50	60.3	56.3	34.0	246.000.050
acc. DIN 11850					
DIN	4	6.0	4.0	31.0	246.000.004.DIN
DIN	6	8.0	6.0	31.0	246.000.006.DIN
DIN	8	10.0	8.0	31.0	246.000.008.DIN
DIN	10	12.0	10.0	31.0	246.000.010.DIN



O-Ring

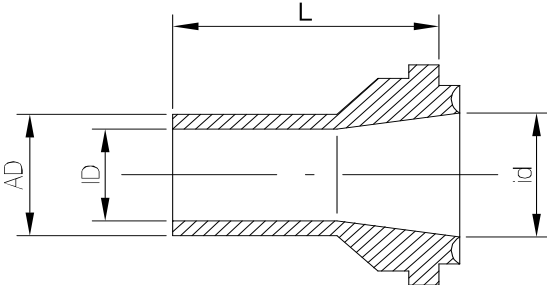
Product group:	Aseptic-O-Ring Unions
Description:	O-Ring
Valid standards:	CONNECTORS-Standard
Material:	See table below
Permissible sterilization temperature:	EPDM: 132°C (150°C for a short time) Silicone, Viton®, Teflon® and SilkoFlon (PTFE): 150°C
Version / Surface quality:	CONNECTORS Standard
Marking:	-
Certificates:	FDA Certificate
Option:	Further dimensions available on request.
Remarks:	Technical contents are subject to change Viton® and Teflon® are registered trademarks of DuPont Dow Elastomers

Item-Numbers for O-Ring						
Sizes	EPDM	Silicone	Viton®	Teflon® PTFE	SilkoFlon (FEP/MVQ)	
acc. ISO 1127	Item No.	Item No.	Item No.	Item No.	Item No.	
ISO DN 8	248.000.008	248.001.008	248.002.008	248.003.008	248.004.008	
ISO DN 10	248.000.010	248.001.010	248.002.010	248.003.010	248.004.010	
ISO DN 15	248.000.015	248.001.015	248.002.015	248.003.015	248.004.015	
ISO DN 20	248.000.020	248.001.020	248.002.020	248.003.020	248.004.020	
ISO DN 25	248.000.025	248.001.025	248.002.025	248.003.025	248.004.025	
ISO DN 32	248.000.032	248.001.032	248.002.032	248.003.032	248.004.032	
ISO DN 40	248.000.040	248.001.040	248.002.040	248.003.040	248.004.040	
ISO DN 50	248.000.050	248.001.050	248.002.050	248.003.050	248.004.050	
acc. DIN 11850	Item No.	Item No.	Item No.	Item No.	Item-Number	
DIN 4	248.000.004.DIN	248.001.004.DIN	248.002.004.DIN	248.003.004.DIN	248.004.004.DIN	
DIN 6	248.000.006.DIN	248.001.006.DIN	248.002.006.DIN	248.003.006.DIN	248.004.006.DIN	
DIN 8	248.000.008.DIN	248.001.008.DIN	248.002.008.DIN	248.003.008.DIN	248.004.008.DIN	
DIN 10	248.000.010.DIN	248.001.010.DIN	248.002.010.DIN	248.003.010.DIN	248.004.010.DIN	

Material resistance: see chapter Tri-Clamp Connections (Page 29)

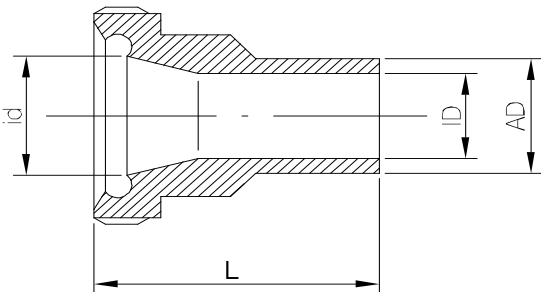
Reduced Female Union

Product group:	Aseptic O-Ring Unions
Description:	Reduced Female Union
Valid standards:	CONNECTORS-Standard with pipe connection acc. DIN 11866 Series A (DIN11850) / Series B (ISO 1127) *non standard
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface external Ra < 0.8 µm Surface, internal: Ra < 0.4 µm
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code, Manufacturer's Logo
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing.
Remarks:	Technical contents are subject to change

Dimensions for Reduced Female Union						
Sizes	AD	ID	id	L	Item No.	
acc. ISO 1127						
DN 10 - DN 8	13.5	10.3	14.0	30.9	247.002.010	
DN 15 - DN 10	17.2	14.0	18.1	31.1	247.002.015	
DN 20 - DN 15	21.3	18.1	23.7	29.0	247.002.020	
DN 25 - DN 20	26.9	23.7	29.7	32.4	247.002.025	
DN 32 - DN 25	33.7	29.7	38.4	35.3	247.002.032	
DN 40 - DN 32	42.4	38.4	44.3	31.9	247.002.040	
DN 50 - DN 40	48.3	44.3	56.3	33.0	247.002.050	
acc. DIN 11850						
DIN 6 - DIN 4	6.0	4.0	6.0	29.0	247.002.006.DIN	
DIN 8 - DIN 6	8.0	6.0	8.0	29.0	247.002.008.DIN	
DIN 10 - DIN 8	10.0	8.0	10.0	29.0	247.002.010.DIN	
*DN 8 - DIN 8	10.0	8.0	10.3	29.8	247.002.008	

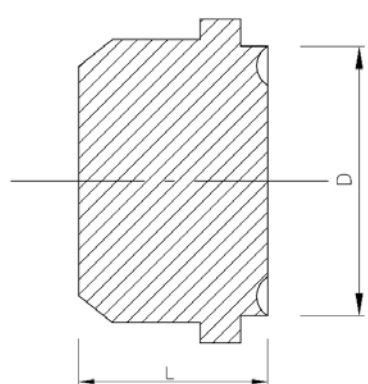
Reduced Male Union

Product group:	Aseptic-O-Ring Unions
Description:	Reduced Male Union
Valid standards:	CONNECTORS-Standard with pipe connection acc. DIN 11866 Series A (DIN11850) / Series B (ISO 1127) *non standard
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface external Ra < 0.8 µm Surface, internal: Ra < 0.4 µm
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Reduced Male Union						
Sizes	AD	ID	id	L	Item No.	
acc. ISO 1127						
DN 10 - DN 8	13.5	10.3	14.0	33.0	246.002.010	
DN 15 - DN 10	17.2	14.0	18.1	34.0	246.002.015	
DN 20 - DN 15	21.3	18.1	23.7	32.0	246.002.020	
DN 25 - DN 20	26.9	23.7	29.7	34.4	246.002.025	
DN 32 - DN 25	33.7	29.7	38.4	37.4	246.002.032	
DN 40 - DN 32	42.4	38.4	44.3	36.0	246.002.040	
DN 50 - DN 40	48.3	44.3	56.3	39.0	246.002.050	
acc. DIN 11850						
DIN 6 - DIN 4	6.0	4.0	6.0	32.0	246.002.006.DIN	
DIN 8 - DIN 6	8.0	6.0	8.0	32.0	246.002.008.DIN	
DIN 10 - DIN 8	10.0	8.0	10.0	32.0	246.002.010.DIN	
*DN 8 - DIN 8	10.0	8.0	10.3	34.0	246.002.008	

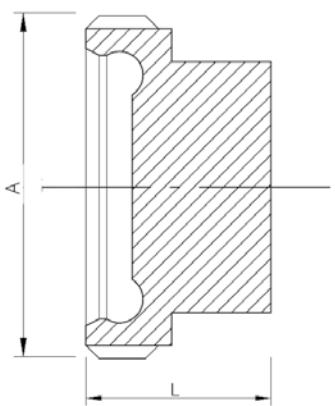
Female Cap

Product group:	Aseptic-O-Ring Unions
Description:	Female Cap
Valid standards:	CONNECTORS-Standard with pipe connection acc. DIN 11866 Series A (DIN11850) / Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface external Ra < 0.8 µm Surface, internal: Ra < 0.4 µm
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Female Cap					
Sizes	L	D	Item No.		
acc. ISO 1127					
DN 8	12.0	15.1	247.001.008		
DN 10	14.0	19.9	247.001.010		
DN 15	14.0	23.9	247.001.015		
DN 20	14.0	29.4	247.001.020		
DN 25	14.0	35.6	247.001.025		
DN 32	17.0	44.2	247.001.032		
DN 40	17.0	50.2	247.001.040		
DN 50	17.0	61.2	247.001.050		
acc. DIN 11850					
DIN 4	12.0	7.9	247.001.004.DIN		
DIN 6	12.0	10.9	247.001.006.DIN		
DIN 8	12.0	12.9	247.001.008.DIN		
DIN 10	12.0	14.9	247.001.010.DIN		

Male Cap

Product group:	Aseptic-O-Ring Unions
Description:	Male Cap
Valid standards:	CONNECTORS-Standard with pipe connection acc. DIN 11866 Series A (DIN11850) / Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface external Ra < 0.8 µm Surface, internal: Ra < 0.4 µm
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Male Cap					
Size	A	L	Item No.		
acc. ISO 1127					
DN 8	M 22 x 1.5	13.0	246.001.008		
DN 10	M 26 x 1.5	14.0	246.001.010		
DN 15	M 30 x 2.0	15.0	246.001.015		
DN 20	M 36 x 2.0	15.0	246.001.020		
DN 25	M 42 x 2.0	15.0	246.001.025		
DN 32	M 52 x 2.0	16.0	246.001.032		
DN 40	M 56 x 2.0	16.0	246.001.040		
DN 50	M 68 x 2.0	18.0	246.001.050		
acc. DIN 11850					
DIN 4	M 16 x 1.5	12.0	246.001.004.DIN		
DIN 6	M 16 x 1.5	12.0	246.001.006.DIN		
DIN 8	M 18 x 1.5	12.0	246.001.008.DIN		
DIN 10	M 22 x 1.5	12.0	246.001.010.DIN		

All lengths in millimeters (if not specified differently).



CONNECTORS

MEASURING INSTRUMENTS

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Pressure Gauge T-Piece

Product group:	Measuring instruments
Description:	Pressure Gauge T-Piece
Valid standards:	Connectors-Standard, DIN 32676 Series B (ISO 1127)
Materials:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal and external bright finish Ra, internal < 0.4 µm
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11865
Marking:	Size, material number, melt number, manufacturer code
Certificate:	Certificate acc. EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change Further dimensions available on request.

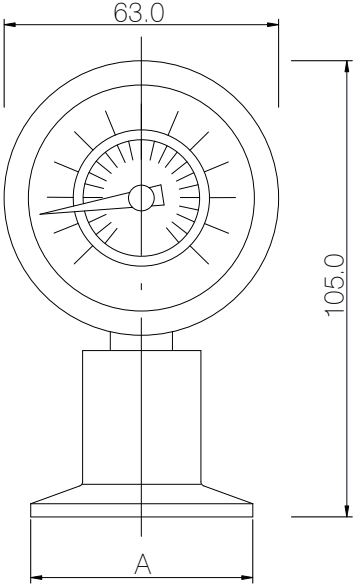
Dimensions for Pressure Gauge T-Piece								
Sizes	AD	S1	A	ID	L	T	H	Item No.
acc. ISO 2852 / ISO 1127								
ISO DN 15	21.3	1.6	25.0	16.0	60.0	16.0	22.70	253.213.025
ISO DN 20	26.9	1.6	25.0	16.0	60.0	16.0	25.50	253.269.025
ISO DN 25	33.7	2.0	25.0	16.0	60.0	16.0	28.80	253.337.025
ISO DN 40	48.3	2.0	25.0	16.0	60.0	16.0	36.10	253.482.025

The diagram is a cross-sectional view of a T-piece. It shows a vertical pipe with a horizontal gauge port. Dimensions are labeled: AD is the outer diameter of the vertical pipe; S1 is the wall thickness of the vertical pipe; A is the outer diameter of the gauge port; ID is the internal diameter of the gauge port; L is the total length of the vertical pipe; T is the thickness of the T-piece body; and H is the height of the T-piece body.

All lengths in millimeters (if not specified differently).

Pressure Gauge TC 25.0, Connection Below

Product group:	Measuring instruments
Description:	Pressure Gauge TC 25.0, connection below
Valid standards:	TC acc. DIN 32676
Materials:	Diaphragm: Stnr.-W. 1.4435 acc. EN 10088-3 (AISI 316 L) Case: CrNi steel (AISI 316 L), connector: 1.4435 BN2 KN 7 Glycerin (FDA 21 CFR 182.1320)
Diaphragm filling liquid:	1.6
Accuracy class without diaphragm seal:	2.5 at 20°C
Accuracy class, with diaphragm seal:	121°C
Permissible sterilization temperature:	Acc. to measuring range
Permitted vacuum:	Surface, internal and external bright finish
Version / Surface quality:	Ra, internal < 0.8 µm
Marking:	Material number, melt number Serial number on face
Optional extras:	Inspection Certificate for parts in contact with product: 2.2 or 3.1 acc. EN 10204 Option: calibration 5 or 10 measured points (990.000.004.3, 990.000.004.4) Other Measuring ranges and pressure gauge displays with Circumference 100 mm available on request
Remarks:	Technical contents are subject to change

Dimensions for Pressure Gauge TC 25.0, connection below				
Model	Measuring ranges	A	Item No.	
MDM 05 - 3 U	-1 to + 3 bar	25.0	280.005.003	
MDM 05 - 6 U	-1 to + 6 bar	25.0	280.005.006	
MDM 05 - 9 U	-1 to + 9 bar	25.0	280.005.009	
MDM 05 - 25 U	0 to + 25 bar	25.0	280.005.025	
MDM 05 - 40 U	0 to + 40 bar	25.0	280.005.040	
MDM 05 - 45 PSI	-15 to + 45 PSI	25.0	282.005.045	
MDM 05 - 75 PSI	-15 to + 75 PSI	25.0	282.005.075	
MDM 05 - 100 PSI	-15 to + 100 PSI	25.0	282.005.100	

Pressure Gauge TC 25.0, Connection Behind

Product group:	Measuring instruments
Description:	Pressure Gauge TC 25.0, connection behind
Valid standards:	TC acc. DIN 32676
Materials:	Diaphragm: Stnr.-W. 1.4435 acc. EN 10088-3 (AISI 316 L) Housing: CrNi steel, supports: 1.4435 BN2 KN 7 Glycerin (FDA 21 CFR 182.1320)
Diaphragm filling liquid:	1.6
Accuracy class without diaphragm seal:	2.5 at 20°C
Accuracy class, with diaphragm seal:	1.6
Permissible sterilization temperature:	121°C
Permitted vacuum:	Acc. measuring ranges
Version / Surface quality:	Surface, internal and external bright finish Ra, internal < 0.8 µm
Markings:	Size, material number, melt number Serial number on face
Optional extras:	Inspection Certificate for parts in contact with product: 2.2 or 3.1 acc. EN 10204 Option: calibration 5 or 10 measured points (990.000.004.3, 990.000.004.4) Other Measuring ranges and pressure gauge displays with Circumference 100 mm available on request
Remarks:	Technical contents are subject to change

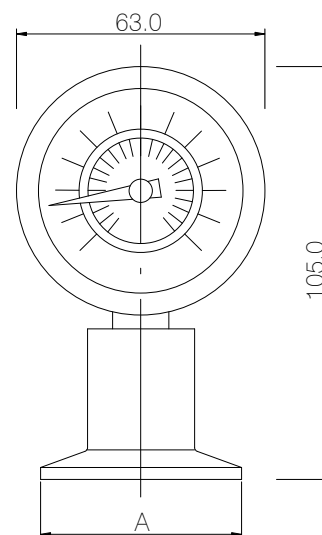
Dimensions for Pressure Gauge TC 25.0, connection behind			
Model	Measuring ranges	A	Item No.
MDM 05 - 3 H	-1 to + 3 bar	25.0	280.005.003.H
MDM 05 - 6 H	-1 to + 6 bar	25.0	280.005.006.H
MDM 05 - 9 H	-1 to + 9 bar	25.0	280.005.009.H
MDM 05 - 45 PSI/H	-15 to + 45 PSI	25.0	282.005.045.H
MDM 05 - 75 PSI/H	-15 to + 75 PSI	25.0	282.005.075.H
MDM 05 - 100 PSI/H	-15 to + 100 PSI	25.0	282.005.100.H

Pressure Gauge TC 50.5, Connection Below

Product group:	Measuring instruments
Description:	Pressure Gauge TC 50.5, below connection
Valid standards:	TC acc. DIN 32676
Materials:	Diaphragm: Stnr.-W. 1.4435 acc. EN 10088-3 (AISI 316 L)
Housing:	CrNi steel, supports: 1.4435 BN2
Diaphragm filling liquid:	KN 7 Glycerin (FDA 21 CFR 182.1320)
Accuracy class, without diaphragm seal:	1.6
Accuracy class, assembled with diaphragm:	2.5 at 20°C
Permissible sterilization temperature:	121°C
Permitted vacuum:	Acc. measuring ranges
Version / Surface quality:	Surface, internal and external bright finish Ra, internal < 0.8 µm
Marking:	Size, material number, melt number Serial number on face
Optional extras:	Inspection Certificate for parts in contact with product: 2.2 or 3.1 acc. EN 10204 Option: calibration 5 or 10 measured points (990.000.004.3, 990.000.004.4) Other pressure ranges and pressure gauge displays with Circumference 100 mm available on request
Remarks:	Technical contents are subject to change

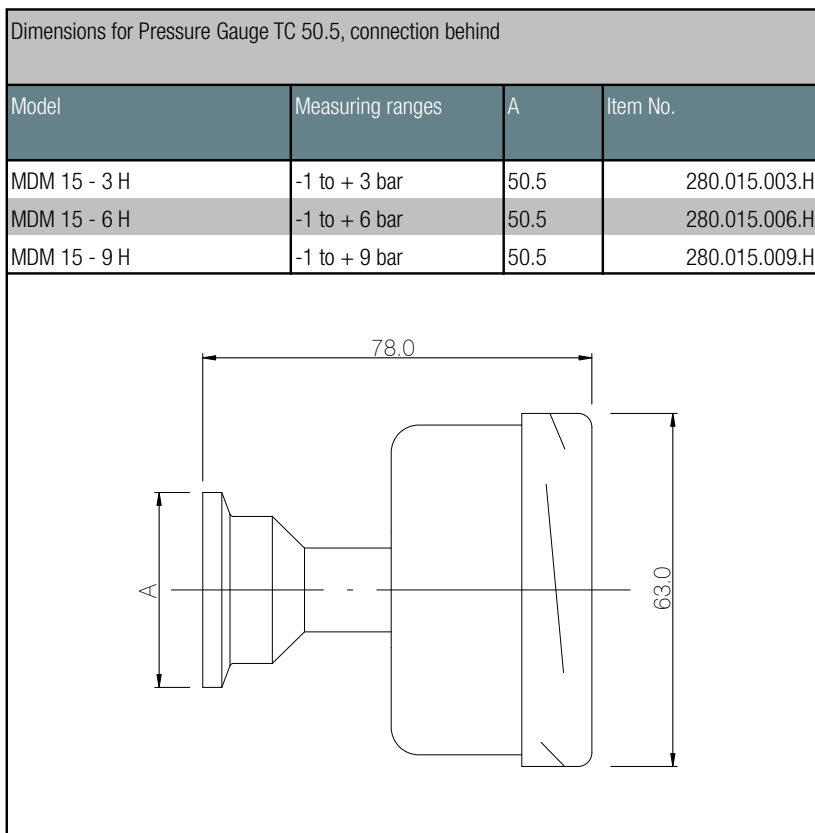
Dimensions for Pressure Gauge TC 50.5, connection below

Model	Measuring ranges	A	Item No.
MDM 15 - 3 U	-1 to + 3 bar	50.5	280.015.003
MDM 15 - 6 U	-1 to + 6 bar	50.5	280.015.006
MDM 15 - 9 U	-1 to + 9 bar	50.5	280.015.009
MDM 15 - 25 U	0 to + 25 bar	50.5	280.015.025
MDM 15 - 40 U	0 to + 40 bar	50.5	280.015.040



Pressure Gauge TC 50.5, Connection Behind

Product group:	Measuring instruments
Description:	Pressure Gauge TC 50.5, connection behind
Valid standards:	TC acc. DIN 32676
Materials:	Diaphragm: Stnr.-W. 1.4435 acc. EN 10088-3 (AISI 316 L) Housing: CrNi steel, supports: 1.4435 BN2 KN 7 Glycerin (FDA 21 CFR 182.1320)
Diaphragm filling liquid:	1.6
Accuracy class, without diaphragm seal:	2.5 at 20°C
Accuracy class, with diaphragm seal:	1.6
Permissible sterilization temperature:	121°C
Permitted vacuum:	Acc. measuring range
Version / Surface quality:	Surface, internal and external bright finish Ra, internal < 0.8 µm
Markings:	Size, material number, melt number Serial number on face
Optional extras:	Inspection Certificate for parts in contact with product: 2.2 or 3.1 acc. EN 10204 Option: calibration 5 or 10 measured points (990.000.004.3, 990.000.004.4) Other Measuring ranges and pressure gauge displays with Circumference 100 mm available on request
Remarks:	Technical contents are subject to change



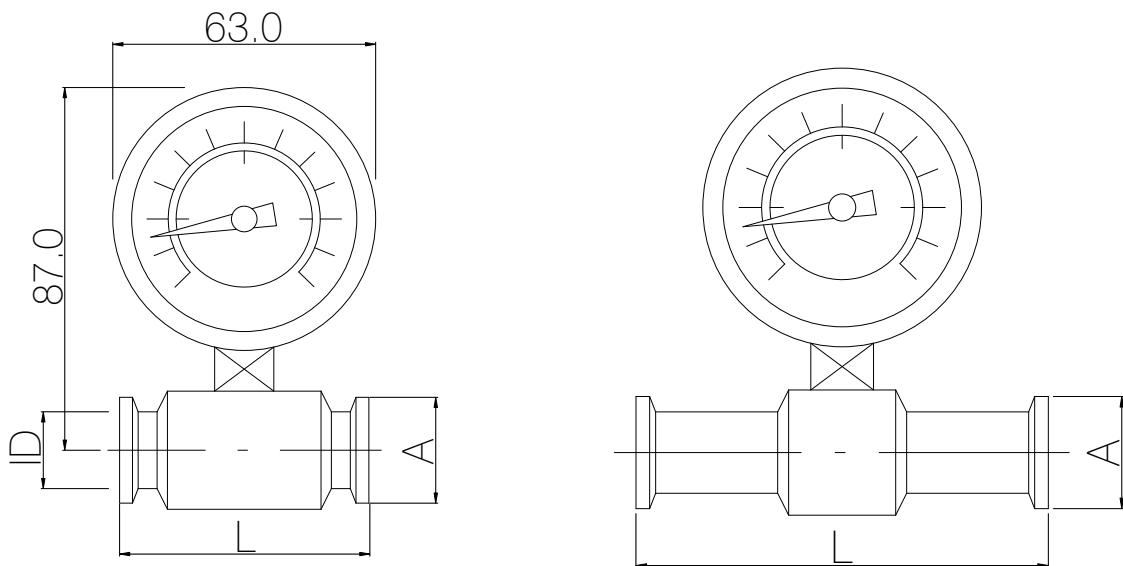
In-line Seal

Product group:	Measuring Instruments
Description:	Tri-Clamp In-line Seal
Valid standards:	TC acc. DIN 32676
Materials:	Diaphragm: Stnr.-W. 1.4435 acc. EN 10088-3 welded on body. Housing: CrNi steel, supports: 1.4435 BN2 KN 7 Glycerin (FDA 21 CFR 182.1320)
Filling medium:	1.6
Accuracy class, without diaphragm seal:	2.5
Accuracy class, with diaphragm seal:	Acc. measuring range
Permitted Pressure:	121°C
Permissible sterilization temperature:	Acc. measuring range
Permitted vacuum:	Surfaces, internal: thin-walled diaphragm welded on body Surfaces, external bright finish, Ra on the medium side < 0.8 µm
Version / Surface quality:	Size, material number, melt number, manufacturer code Serial number on dial
Markings:	Inspection Certificate for parts in contact with product: 2.2 oder 3.1 acc. EN 10204 Option: calibration 5 or 10 measured points (990.000.004.3, 990.000.004.4) In-line seal with 50.5mm clamp connection or with integrated temperature measurement available on request
Optional extras:	Technical contents are subject to change
Remarks:	

Dimensions for Tri-Clamp In-line seal				
Model	Measuring ranges	A	Size of connection (ID)	Item No.
RDM 05 - 6	-1 to + 6 bar	25.0	10	283.005.006.SP
RDM 05 - 9	-1 to + 9 bar	25.0	10	283.005.009.SP
RDM 05 - 25	0 to + 25 bar	25.0	10	283.005.025.SP
RDM 05 - 40	0 to + 40 bar	25.0	10	283.005.040.SP
RDM 05 - 3	-1 to + 3 bar	25.0	16	283.005.003
RDM 05 - 6	-1 to + 6 bar	25.0	16	283.005.006
RDM 05 - 9	-1 to + 9 bar	25.0	16	283.005.009
RDM 05 - 25	0 to + 25 bar	25.0	16	283.005.025
RDM 05 - 40	0 to + 40 bar	25.0	16	283.005.040

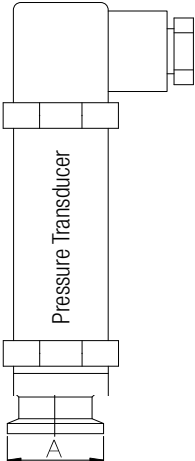
In-Line Seal - supplement sheet

Product group:	Measuring instruments
Description:	Tri-Clamp In-line Seal
Application and construction:	The in-line seal is ideally suited for applications with flowing and highly viscous measuring media. Since it is completely integrated into the process line, there are no disturbing turbulences, corners, dead spaces or other obstructions in the direction of flow. The medium can flow without hindrance and thus effects the self-cleaning of the measuring chamber. The diaphragm seal is manufactured from a cylindric jacket section, into which a thin-walled diaphragm is welded in.
Assembly:	The in-line seal is clamped between two clamp connections directly in the pipeline, so that there is no need for any special measuring point connections.
Optional extras:	In-line seal with clamp connection 50.5 mm available on request. In-line seal with integrated temperature measurement available on request.



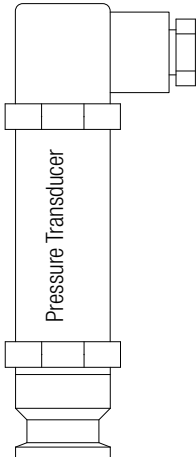
Pressure Transducer for TC 25.0

Product group:	Measuring instruments
Description:	Pressure Transducer for TC 25.0
Valid standards:	TC acc. DIN 32676
Materials:	Support material: 1.4435, diaphragm, parts in contact with medium, and housing: CrNi steel Cap: Plastic All parts in contact with medium: CrNi steel manufactured and completely welded
Outlet signal:	As standard available with 4...20 mA 2-wire outlet signal
Option:	0...5 V: 3-wire, 0...10 V: 3-wire
Voltage signals:	4...20 mA and 0...5 V (power supply: 10...30 V), 0...10 V (power supply: 14...30 V) Other signals available on request
Pressure ranges:	Acc. table
Ingress protection:	IP 65
Optional extras:	Inspection Certificate for parts in contact with product: 2.2 or 3.1 acc. EN 10204 Option: calibration 5 or 10 measured points (990.000.004.3, 990.000.004.4) Digital indicator without external supply for direct connection to Pressure Transducer available on request Tested version (ATEX) available on request
Remarks:	Technical contents are subject to change

Dimensions to Pressure Transducer for TC 25.0				
Model	Measuring ranges	A	Item No.	
MDM-D 05 - 3	-1 to + 3 bar	25.0	282.005.003	
MDM-D 05 - 6	-1 to + 6 bar	25.0	282.005.006	
MDM-D 05 - 9	-1 to + 9 bar	25.0	282.005.009	
MDM-D 05 - 25	0 to + 25 bar	25.0	282.005.025	
MDM-D 05 - 40	0 to + 40 bar	25.0	282.005.040	

Pressure Transducer for TC 50.5

Product group:	Measuring Instruments
Description:	Pressure Transducer for TC 50.5
Valid standards:	TC acc. DIN 32676
Materials:	Support material: 1.4435, diaphragm, parts in contact with medium and housing: CrNi steel Cap: Plastic All parts in contact with medium: CrNi steel manufactured and completely welded
Outlet signal:	As standard available with 4...20 mA 2-wire outlet signal
Option:	0...5 V: 3-wire, 0...10 V: 3-wire
Voltage signals:	4...20 mA and 0...5 V (power supply: 10...30 V), 0...10 V (power supply: 14...30 V) Other signals available on request
Pressure ranges:	Acc. table
Ingress protection:	IP 65
Options:	Inspection Certificate for parts in contact with product: 2.2 or 3.1 acc. EN 10204 Option: calibration 5 or 10 measured points (990.000.004.3, 990.000.004.4) Digital indicator without external supply for direct connection to Pressure Transducer available on request Tested version (ATEX) available on request
Remarks:	Technical contents are subject to change

Dimensions for TC 50.5				
Type	Measuring ranges	A	Item No.	
MDM-D 05 - 3	-1 to + 3 bar	50.5	282.015.003	
MDM-D 05 - 6	-1 to + 6 bar	50.5	282.015.006	
MDM-D 05 - 9	-1 to + 9 bar	50.5	282.015.009	
MDM-D 05 - 25	0 to + 25 bar	50.5	282.015.025	
MDM-D 05 - 40	0 to + 40 bar	50.5	282.015.040	



CONNECTORS

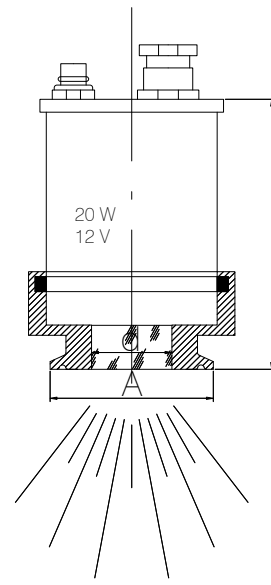
SIGHT GLASS LIGHT

CONNLUX Sight Glass Light..... 87



CONNLUX Sight Glass Light

Product group:	Sight Glass Light
Description:	CONNLUX Sight Glass Light
Valid standards:	TC acc. ISO 2852
Material:	Housing from CrNi-steel, glass cover Sight Glass from Borosilicate glass acc. DIN 7080 Ring material: Stnr.-W. 1.4462 acc. EN 10088, O-Ring: EPDM
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Lamp:	Halogen
Power:	20 W / 50 W / 100 W
Supply:	24 V AC/DC or 12 V AC/DC
Protection class:	IP 65
Max. Working temperature:	For mounting plate: 220° C, Ambient temperature for Lamp: max. 90° C
Pressure Range:	-1 to +16 bar
Description:	CONNLUX sight glass lights with in-built pressure switch are designed to be directly connected to Tri-Clamp fittings.
Advantages:	Brilliant and glare free illumination. For sterile applications. High safety. Easy installation.
Option:	Also available explosion-proof on request. Further sizes or materials (e.g. Hastelloy) available on request. Transformer or timer on request.
Remarks:	Lamp is not waterproof. Technical contents are subject to change.

Dimensions for CONNLUX-Sight Glass Light					
Model	A	d	H	Item No.	
Light 12 V AC/DC, 20 W *				232.000.001	
Light 12 V AC/DC, 50 W *				232.000.002	
Light 24 V AC/DC, 50 W *				232.000.003	
Light 24 V AC/DC, 100 W *				232.000.004	
Sight Glass connection	50.5	25.0	85.0	232.000.050	
Sight Glass connection	64.0	30.0	85.0	232.000.064	
Sight Glass connection	91.0	40.0	85.0	232.000.091	
*Not suitable for continuous operation (only with timer).					



CONNECTORS

VALVES

NRV-Non Return Valve acc. ISO	89
NRV-Non Return Valve acc. DIN	90
NRV-Non Return Valve / Gasket-Kit	91
NRV-Non Return Valve / Spring Forces	92
Tri-Clamp Flap Valve	93
Sterile-Air-Bleeder and Extraction Valve	94



NRV-Non Return Valve

Product group:	Valves
Description:	NRV-Non Return Valve
Valid standards:	TC acc. ISO 2852 with pipe connection acc. ISO 1127
Material:	Casing: Stnr.-W.: 1.4435 BN2 (Fe < 0,5%) acc. EN 10088 Springmaterial and Spider: 1.4435 / Bearing bush: 1.4435 BN2 with PTFE Seals: EPDM as standard
Working temperature:	max. 80° C
Permissible sterilization temperature:	150° C
Opening pressure:	see additional datasheet for NRV-Spring Specification
Working Overpressure:	max 10 bar g
Version / Surface quality:	Surfaces, internal: Bright finish. Surfaces, exterior: Bright finish Ra, internal < 0,4 µm
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, material number, manufacturer code, flow-direction
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electro-polishing. Upon request: Material certificates and test logs
Remarks:	NRV-Non Return Valves in inch dimensions: available on request Technical contents are subject to change

Dimensions for NRV-Non Return Valve						
Sizes	A	ID	AD	L1	L	Item No.
acc. ISO 2852 / ISO 1127						
NRV DN 8	25.0	10.3	50.5	46.0	107.0	272.008.102
NRV DN 10	25.0	14.0	50.5	46.0	107.0	272.010.142
NRV DN 15	50.5	18.1	64.0	51.0	117.0	272.015.181
NRV DN 20	50.5	23.7	64.0	51.0	117.0	272.020.237
NRV DN 25	50.5	29.7	77.5	51.0	117.0	272.025.297
NRV DN 32	64.0	38.4	91.0	51.0	117.0	272.032.384
NRV DN 40	64.0	44.3	91.0	51.0	117.0	272.040.443
NRV DN 50	77.5	56.3	106.0	51.0	117.0	272.050.560
NRV DN 65	91.0	72.1	119.0	51.0	117.0	272.065.719
NRV DN 80	106.0	84.3	180.0	70.0	160.0	272.080.840

All lengths in millimeters (if not specified differently).

NRV-Non Return Valve

Product group:	Valves
Description:	NRV-Non Return Valve
Standards:	TC acc. DIN 32676 Series C (ASME BPE 2009)
Material:	Casing: Stnr.-W.: 1.4435 BN2 (Fe < 0,5%) acc. EN 10088 Springmaterial and Spider: 1.4435 / Bearing bush: 1.4435 BN2 with PTFE Seals: EPDM as standard
Working temperature:	max. 80° C
Permissible sterilization temperature:	150° C
Opening pressure:	see additional datasheet for NRV-Spring Specification
Working Overpressure:	max 10 bar g
Version / Surface quality:	Surfaces, internal: Bright finish. Surfaces, external Bright finish. Ra, internal < 0.4 µm
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Manufacturer number, manufacturer code, flow-direction
Certificates:	Certificate according EN 10204-3.1
Option:	Electro-polishing. Upon request: Material certificates and test logs
Remarks:	NRV-Non Return Valves in inch dimensions: on request available Technical contents are subject to change

Dimensions for NRV-Non Return Valve						
Sizes	A	ID	AD	L1	L	Item No.
acc. DIN 32676 Row C (ASME BPE 2009)						
NRV 05 - 1/4"	25.0	4.57	50.5	46.0	107.0	272.005.305
NRV 05 - 1/2"	25.0	9.40	50.5	46.0	107.0	272.005.098
NRV 05 - 3/4"	25.0	15.75	50.5	46.0	107.0	272.005.016
NRV 10 - 1"	50.5	22.10	64.0	51.0	117.0	272.010.000
NRV 15 - 1 1/2"	50.5	34.80	77.5	51.0	117.0	272.015.000
NRV 20 - 2"	64.0	47.50	91.0	51.0	117.0	272.020.000
NRV 25 - 2 1/2"	77.5	60.30	106.0	51.0	117.0	272.025.000
NRV 30 - 3"	91.0	72.90	119.0	51.0	117.0	272.030.000
NRV 40 - 4"	119.0	97.40	170.0	72.0	162.0	272.040.000

NRV-Non Return Valve – Gasket-Kit

Product group:	NRV check valves
Description:	NRV-Non Return Valve - Gasket-Kit
Valid standards:	CONNECTORS Standard
Material:	As per table below
Permissible sterilization temperature:	EPDM: 132°C (150°C for a short time), Silicone, Viton® and Teflon® (PTFE): 150°C
Version / Surface quality:	CONNECTORS Standard
Marking:	-
Certificates:	FDA-Conformity
Option:	-
Remarks:	Technical contents are subject to change The Gasket-Kit can be exchanged for payment Viton® and Teflon® are registered trademarks of DuPont Dow Elastomers

Item Numbers for NRV-Non Return Valve - Gasket-Kit				
Sizes	EPDM	Silicone	Viton®	Teflon® PTFE
acc. ISO 1127 / BS 4825	Item No.	Item No.	Item No.	Item No.
NRV DN 8/10, 1/2", 3/4"	272.000.008	272.001.008	272.003.008	272.002.008
NRV DN 15/20, 1"	272.000.015	272.001.015	272.003.015	272.002.015
NRV DN 25, 1 1/2"	272.000.025	272.001.025	272.003.025	272.002.025
NRV DN 32/40, 2"	272.000.032	272.001.032	272.003.032	272.002.032
NRV DN 50, 2 1/2"	272.000.050	272.001.050	272.003.050	272.002.050
NRV DN 65, 3"	272.000.065	272.001.065	272.003.065	272.002.065
NRV DN 80, 4"	272.000.080	272.001.080	272.003.080	272.002.080
Table of Material-Resistance: Chapter Tri-Clamp Connections				

NRV Non Return Valve / Spring Forces

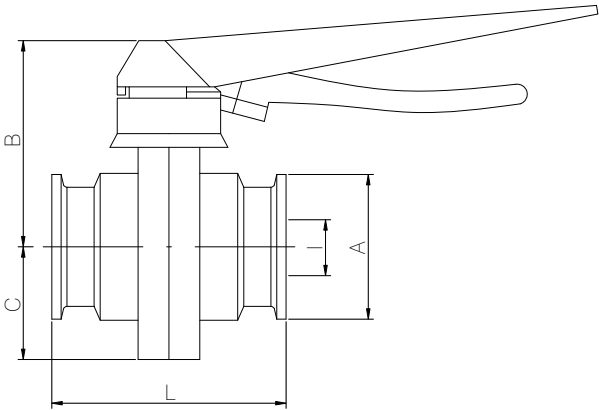
Product group:	Valves
Description:	NRV Check Valve / Spring Forces
Material:	Springmaterial: 1.4435
Optional Extras:	Spring-tolerances available on request
Certification:	Material certificate acc. EN 10204 2.2 or 3.1
Remarks:	Technical contents are subject to change

Spring Forces and opening pressures for NRV-Non Return Valves												
Sizes	Spring 0.3 kg	Spring 0.4 kg	Spring 0.7 kg	Spring 1 kg	Spring 1.5 kg	Spring 2 kg	Spring 2.5 kg	Spring 3.0 kg	Spring 3.5 kg	Spring 4.0 kg	Spring 6.0 kg	Spring 8.0 kg
Opening-Pressure in bar g in reference to DN												
NRV DN 8, 1/2"	0.17	0.16	0.29	0.41	0.61	0.82	1.02	1.22	1.43	1.63	2.45	3.26
NRV DN 10, 3/4"	0.17	0.16	0.29	0.41	0.61	0.82	1.02	1.22	1.43	1.63	2.45	3.26
NRV DN 15, 1"	0.09	0.10	0.17	0.24	0.36	0.48	0.60	0.72	0.84	0.97	1.45	1.93
NRV DN 20, 1"	0.09	0.10	0.17	0.24	0.36	0.48	0.60	0.72	0.84	0.97	1.45	1.93
NRV DN 25, 1 1/2"	0.03	0.04	0.07	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.60	0.79
NRV DN 32, 2"	0.02	0.02	0.04	0.05	0.08	0.11	0.14	0.16	0.19	0.22	0.33	0.44
NRV DN 40, 2"	0.02	0.02	0.04	0.05	0.08	0.11	0.14	0.16	0.19	0.22	0.33	0.44
NRV DN 50, 2 1/2"	0.01	0.01	0.02	0.03	0.05	0.07	0.09	0.10	0.12	0.14	0.21	0.28
NRV DN 65, 3"	0.01	0.01	0.02	0.02	0.03	0.05	0.06	0.07	0.08	0.09	0.14	0.19
NRV DN 80, 4"	On request.											

Tri-Clamp Flap Valve

Product group:	Ventile
Description:	Tri-Clamp Buttery Valve
Valid standards:	TC acc. DIN 32676 Series C (ASME BPE 2009)
Material:	Body: 316L, gasket material: EPDM, Handle: 1.4301
Working Temperature:	-10° C to +150° C (Depending on gasket material)
Automatization:	Manual with 5-step lock Drive unit: air-opening and spring-closing or vice-versa
Working Pressure:	-0.9 to +10 bar
Version / Surface quality:	Surface, internal: sanded and polished. Surface, external bright finish. Ra, internal < 0.8 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Marking with Manufacturer-Name and Dimension
Certificates:	Acceptance Certificate 3.1
Option:	On request: internal surface with Ra < 0.4 µm On request: gasket material: Viton® or Silicone available For pneumatic drive-unit: use Item-Number 270.061.100
Remarks:	Technical contents are subject to change Viton® is a registered trademark of DuPont Dow Elastomers

Dimensions for Tri-Clamp Flap Valve						
Sizes	A	ID	L	B	C	Item No.
acc. DIN 32676 Series C (ASME BPE 2009)						
1"	50.5	22.1	60.0	90.0	39.5	271.010.003
1 1/2"	50.5	34.8	60.0	94.0	43.5	271.015.003
2"	64.0	47.5	60.0	101.0	50.5	271.020.003
2 1/2"	77.5	60.2	60.0	107.0	57.0	271.025.003
3"	91.0	72.9	60.0	113.0	63.0	271.030.003
4"	119.0	97.4	100.0	129.0	79.0	271.040.003



The technical drawing shows a side view of the Tri-Clamp Flap Valve. Dimension A is the width of the valve body. Dimension B is the total height of the valve assembly. Dimension C is the height of the valve body. Dimension L is the length of the valve body. Dimension ID is the internal diameter of the valve body. The drawing also shows the handle and the locking mechanism.

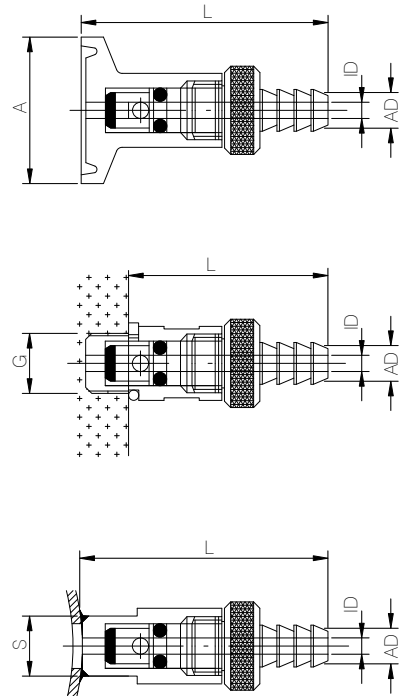
All lengths in millimeters (if not specified differently).

Sterile-Air-Bleeder and Extraction Valve

Product group:	Valves
Description:	Sterile-Air-Bleeder and Extraction Valve
Valid standards:	CONNECTORS standard with TC according to DIN 32676
Material:	Body: 1.4435 acc. EN 10088, Valve-Sealing: Teflon® (PTFE) O-Ring-Protection Seal: Viton®
Working Temperature:	-10° C to +150° C
Version / Surface quality:	Surface, internal: Ra < 0.8 µm, Surface, external bright finish
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Marking with manufacturer name and melt number
Certificates:	Certificate acc. EN 10204-3.1, FDA-Certificate for Seals
Option:	On request: internal surface with Ra < 0.4 µm Available with safety lock on request
Remarks:	Technical contents are subject to change Viton® and Teflon® are registered trademarks of DuPont Dow Elastomers

Dimensions for Sterile-Air-Bleeder and Extraction

Type	A	AD	ID	L	Item No.
With Tri-Clamp Adaption					
E-V DN 6 TC	25.0	6.0	3.0	43.0	269.010.000
E-V DN 8 TC	25.0	8.0	4.0	53.0	269.015.000
Type	G	AD	ID	L	Item No.
With Thread-Connection					
E-V DN 6 R 1/8	R 1/8	6.0	3.0	35.0	269.010.006.G
E-V DN 8 R 1/4	R 1/4	8.0	4.0	42.0	269.015.008.G
Type	S	AD	ID	L	Item No.
With Butt Weld End					
E-V DN 6 BW	10.0	6.0	3.0	43.0	269.010.006.A
E-V DN 8 BW	12.5	8.0	4.0	53.0	269.015.008.A





CONNECTORS

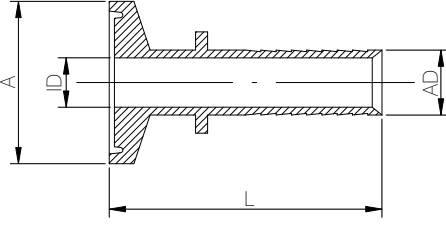
HOSE CONNECTIONS

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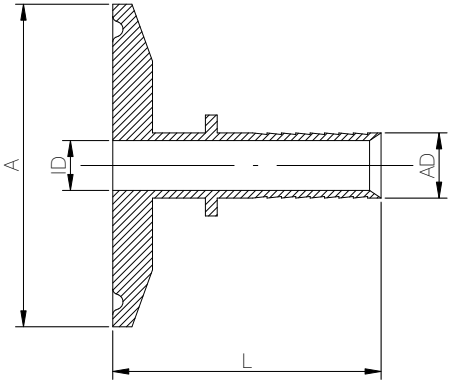
Tri-Clamp Hose Barb

Product group:	Hose Connections
Description:	Tri-Clamp Hose Barb
Valid standards:	TC acc. DIN 32676 / *non standard
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal: bright finish. Ra < 0.4 µm (ID ≤ 9.5 mm = Ra, internal < 0.6 µm, ID ≤ 6.0 mm = Ra, internal < 0.8 µm) Surface external bright finish
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing and further dimensions available on request
Remarks:	Technical contents are subject to change **ID countersunk to connection size.

Dimensions for Tri-Clamp Hose Barb							
Type	A	AD	ID	L	Item No.		
acc. DIN 32676							
SA 25 D 6.0	25.0	6.0	3.6	42.0	261.004.025		
SA 25 D 8.0	25.0	7.9	5.5	42.0	261.005.025.8		
SA 25 D 9.4	25.0	9.4	**9.4	42.0	261.009.025		
SA 25 D 10.0	25.0	10.0	7.6	42.0	261.006.025		
SA 25 D 12.7	25.0	12.7	9.5	42.0	261.005.025		
SA 25 D 17.2	25.0	17.2	14.0	42.0	261.008.025		
SA 25 D 19.0	25.0	19.0	15.8	42.0	261.007.025		
SA 34 D 6.0	34.0	6.0	3.6	42.0	261.004.034		
SA 34 D 8.0	34.0	8.0	**6.0	42.0	261.006.034		
SA 34 D 10.0	34.0	10.0	7.6	42.0	261.020.034		
SA 34 D 12.7	34.0	12.7	9.5	42.0	261.005.034		
SA 34 D 14.0	34.0	14.0	10.8	50.0	261.010.034		
SA 34 D 16.0	34.0	16.0	12.0	50.0	261.016.034		
SA 34 D 17.2	34.0	17.2	14.0	42.0	261.030.034		
SA 34 D 19.0	34.0	19.0	**15.8	42.0	261.007.034		

Tri-Clamp Hose Barb

Product group:	Hose Connections
Description:	Tri-Clamp Hose Barb
Valid standards:	TC acc. DIN 32676 / **non standard
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal: bright finish. Ra < 0.4 µm (ID ≤ 9.5 mm = Ra, internal < 0.6 µm, ID ≤ 6.0 mm = Ra, internal < 0.8 µm) Surface external bright finish
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing and further dimensions available on request
Remarks:	Technical contents are subject to change **ID countersunk to connection size.

Dimensions for Tri-Clamp Hose Barb						
Type	A	AD	ID	L	Item No.	
acc. DIN 32676						
SA 50.5 D 6.0	50.5	6.0	3.6	42.0	261.008.050	
SA 50.5 D 8.0	50.5	7.9	5.5	42.0	261.005.050.8	
SA 50.5 D 10.2	50.5	10.0	7.6	42.0	261.020.050	
SA 50.5 D 12.7	50.5	12.7	9.5	42.0	261.005.050	
SA 50.5 D 14.0	50.5	14.0	10.8	42.0	261.010.050	
SA 50.5 D 17.2	50.5	17.2	14.0	42.0	261.030.050	
SA 50.5 D 19.0	50.5	19.0	15.8	42.0	261.007.050	
SA 50.5 D 22.2	50.5	22.2	18.2	50.0	261.021.050	
SA 50.5 D 25.4	50.5	25.4	21.4	50.0	261.040.050	
SA 50.5 D 31.8	50.5	31.8	**29.7	50.0	261.032.050	
SA 50.5 D 38.0	50.5	38.0	33.6	50.0	261.050.050	
SA 64.0 D 31.8	64.0	31.8	**38.4	55.0	261.032.064	
SA 64.0 D 38.0	64.0	38.0	33.6	60.0	261.038.064	
SA 64.0 D 42.0	64.0	42.0	37.6	60.0	261.070.064	
SA 64.0 D 48.0	64.0	48.0	43.6	60.0	261.080.064	
SA 64.0 D 51.0	64.0	51.0	46.6	60.0	261.060.064	
SA 77.5 D 50.8	77.5	50.8	**56.3	48.0	261.056.077	
SA 91.0 D 64.0	91.0	64.0	59.6	60.0	261.091.064	

All lengths in millimeters (if not specified differently).

CONNLOCK - MR-DN Hose Connection

Product group:	Hose Connections
Description:	CONNLOCK - MR-DN Hose Connection
Valid standards:	Pipe connection acc. ISO 1127 / *non standard
Material:	Hose Barb: Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088 Union Nut: Stnr.-W. 1.4301, Collet: autoclavable PVDF
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal: bright finish Ra < 0.4 µm (ID ≤ 9.5 mm = Ra, internal < 0.6 µm, ID ≤ 6.0 mm = Ra, internal < 0.8 µm) Surface external bright finish
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing.
Remarks:	Technical contents are subject to change

Dimensions for CONNLOCK - MRDN Hose Connection with weld-on ends								
Type		A	B min./max.	C	AD	ID	L	Item No.
acc. ISO 1127 / *non standard								
MR-DN ISO *6		26.0	12.2 - 13.2	6.4	10.2	7.0	45.0	261.100.006.ISO
MR-DN ISO 8		30.0	15.0 - 17.0	9.5	13.5	10.3	61.0	261.100.008.375
MR-DN ISO 8		36.0	16.4 - 18.0	9.5	13.5	10.3	61.0	261.100.008
MR-DN ISO 8		36.0	19.5 - 21.8	12.7	13.5	10.3	60.0	261.100.008.500
MR-DN ISO 10		36.0	19.5 - 21.8	12.7	17.2	14.0	60.0	261.100.010
MR-DN ISO 15		48.0	27.2 - 30.0	19.1	21.3	18.1	64.0	261.100.015
MR-DN ISO 20		54.0	33.2 - 37.0	25.4	26.9	23.7	64.0	261.100.020
MR-DN ISO 25		63.0	39.5 - 42.0	31.8	33.7	29.7	68.0	261.100.025
MR-DN ISO 32		70.0	46.0 - 51.1	38.1	42.4	38.4	68.0	261.100.032
MR-DN ISO 40		88.0	59.0 - 63.8	50.8	48.3	44.3	95.0	261.100.040
MR-DN ISO 50		116.0	71.0 - 74.5	63.5	60.3	56.3	100.0	261.100.050
MR-DN ISO 65		140.0	85.0 - 88.3	76.2	76.1	72.1	120.0	261.100.076

CONNLOCK - MR-DN Hose Connection

Product group:	Hose Connections
Description:	CONNLOCK - MR-DN Hose Connection
Valid standards:	Pipe connection acc. DIN 11866 Series A (DIN 11850) / *non standard
Material:	Hose Barb: Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088 Union Nut: Stnr.-W. 1.4301, Collet: autoclavable PVDF
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal: bright finish Ra < 0.4 µm (ID ≤ 9.5 mm = Ra, internal < 0.6 µm, ID ≤ 6.0 mm = Ra, internal < 0.8 µm) Surface external bright finish
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing.
Remarks:	Technical contents are subject to change

Dimensions for CONNLOCK - MRDN Hose Connection with weld-on ends								
Type	A	B	C	AD	ID	L	Item No.	
		min./max.						
acc. DIN 11866 Series A (DIN 11850)								
MR-DN DIN *6	28.0	12.2 - 13.2	6.4	8.0	6.0	45.0	261.100.006.DIN	
MR-DN DIN 8	36.0	16.4 - 18.0	9.5	10.0	8.0	61.0	261.100.008.DIN	
MR-DN DIN 10	36.0	19.5 - 21.8	12.7	13.0	10.0	60.0	261.100.010.DIN	
MR-DN DIN 15	48.0	27.2 - 30.0	19.1	19.0	16.0	64.0	261.100.015.DIN	
MR-DN DIN 20	54.0	33.2 - 37.0	25.4	23.0	20.0	64.0	261.100.020.DIN	
MR-DN DIN 25	54.0	33.2 - 37.0	25.4	29.0	26.0	60.0	261.100.025.DIN	
MR-DN DIN 32	63.0	39.5 - 42.0	31.8	35.0	32.0	68.0	261.100.032.DIN	
MR-DN DIN 40	70.0	46.0 - 51.1	38.1	41.0	38.0	68.0	261.100.040.DIN	
MR-DN DIN 50	88.0	59.0 - 63.8	50.8	53.0	50.0	95.0	261.100.050.DIN	

The technical drawing shows a cross-section of the hose connection. Dimension A is the total length of the assembly. Dimension B is the length of the hose barb. Dimension C is the length of the union nut. Dimension AD is the length of the collet. Dimension ID is the internal diameter of the hose. Dimension L is the length of the hose.

All lengths in millimeters (if not specified differently).

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Catalogue Sterile Components Version CS004, Printed 07/2014, Version 2. More information: www.connectors.ch or email: info@connectors.ch

CONNLOCK - MR-DN Hose Connection

Product group:	Hose Connections
Description:	CONNLOCK - MR-DN Hose Connection
Valid standards:	Pipe connection acc. DIN 11866 Series C (ASME BPE 2009) / *non standard
Material:	Hose Barb: Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088 Union Nut: Stnr.-W. 1.4301, Collet: autoclavable PVDF
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal: bright finish Ra < 0.4 µm (ID ≤ 9.5 mm = Ra, internal < 0.6 µm, ID ≤ 6.0 mm = Ra, internal < 0.8 µm) Surface external bright finish
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for CONNLOCK - MRDN Hose Connection with weld-on ends								
Type	A	B	C	AD	ID	L	Item No.	
		min./max.						
acc. DIN 11866 Series C (ASME BPE 2009)								
MR-DN 1/4"	28.0	12.2 - 13.2	6.4	6.35	4.57	45.0	261.100.006	
MR-DN 3/8"	30.0	15.0 - 17.0	9.5	9.53	7.75	60.0	261.100.009	
MR-DN 1/2"	36.0	19.5 - 21.8	12.7	12.70	9.40	60.0	261.100.012	
MR-DN 3/4"	48.0	27.2 - 30.0	19.1	19.10	15.80	64.0	261.100.019	
MR-DN 1"	54.0	33.2 - 37.0	25.4	25.40	22.10	64.0	261.100.026	
MR-DN 1 1/2"	70.0	46.0 - 51.1	38.1	38.10	34.80	65.0	261.100.038	
MR-DN 2"	88.0	59.0 - 63.8	50.8	50.80	47.50	95.0	261.100.051	
MR-DN 2 1/2"	116.0	71.0 - 74.5	63.5	63.50	60.30	100.0	261.100.063	
MR-DN 3"	140.0	85.0 - 88.3	76.2	76.20	72.90	120.0	261.100.762	

CONNLOCK - MR-DN Hose Connection

Product group:	Hose Connections
Description:	CONNLOCK - MR-DN Hose Connection
Valid standards:	TC acc. DIN 32676 Series B (ISO 1127) / *non standard
Material:	Hose Barb: Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088 Union Nut: Stnr.-W. 1.4301, Collet: autoclavable PVDF
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal: bright finish Ra < 0.4 µm (ID ≤ 9.5 mm = Ra, internal < 0.6 µm, ID ≤ 6.0 mm = Ra, internal < 0.8 µm) Surface external bright finish
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for CONNLOCK - MRDN Hose Connection with Tri-Clamp ends								
Type		A	B min./max.	C	TC	ID	L	Item No.
acc. DIN 32676 Series B (ISO 1127)								
MR-DN	DIN *6	26.0	12.2 - 13.2	6.4	25.0	6.0	50.0	261.025.106
MR-DN	DIN *6	26.0	12.2 - 13.2	6.4	50.5	6.0	50.0	261.050.106
MR-DN	ISO 8	30.0	15.0 - 17.0	9.5	25.0	10.3	52.0	261.025.108.375
MR-DN	ISO 8	30.0	15.0 - 17.0	9.5	50.5	10.3	60.0	261.050.108.375
MR-DN	ISO 8	36.0	16.4 - 18.0	9.5	25.0	10.3	52.0	261.025.108
MR-DN	ISO 8	36.0	16.4 - 18.0	9.5	50.5	10.3	60.0	261.050.108
MR-DN	ISO 10	36.0	19.5 - 21.8	12.7	25.0	14.0	55.0	261.025.110.500
MR-DN	ISO 10	36.0	19.5 - 21.8	12.7	50.5	14.0	61.0	261.050.110
MR-DN	ISO 15	48.0	27.2 - 29.0	19.1	50.5	18.1	64.0	261.050.115
MR-DN	ISO 20	54.0	33.2 - 36.0	25.4	50.5	23.7	60.0	261.050.120
MR-DN	ISO 25	63.0	39.5 - 42.0	31.8	50.5	29.7	65.0	261.050.125

The technical drawing shows a cross-section of the hose connection. Dimension A is the total length of the assembly. Dimension B is the length of the hose barb. Dimension C is the length of the union nut. Dimension L is the length of the collet. Dimension TC is the thickness of the hose wall.

All lengths in millimeters (if not specified differently).

CONNLOCK - MR-DN Hose Connection

Product group:	Hose Connections
Description:	CONNLOCK - MR-DN Hose Connection
Valid standards:	TC acc. DIN 32676 Series B (ISO 1127)
Material:	Hose Barb: Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088 Union Nut: Stnr.-W. 1.4301, Collet: autoclavable PVDF
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal: bright finish Ra < 0.4 µm (ID ≤ 9.5 mm = Ra, internal < 0.6 µm, ID ≤ 6.0 mm = Ra, internal < 0.8 µm) Surface external bright finish
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for CONNLOCK - MRDN Hose Connection with Tri-Clamp ends								
Type		A	B min./max.	C	TC	ID	L	Item No.
acc.DIN 32676 Series B (ISO 1127)								
MR-DN	ISO 32	70.0	46.0 - 49.5	38.1	64.0	38.4	64.0	261.064.132
MR-DN	ISO 40	88.0	59.0 - 63.0	50.8	64.0	44.3	75.0	261.064.140
MR-DN	ISO 50	116.0	71.0 - 74.5	63.5	77.5	56.3	100.0	261.077.150
MR-DN	ISO 65	140.0	85.0 - 88.3	76.2	91.0	72.1	120.0	261.091.165

CONNLOCK - MR-DN Hose Connection

Product group:	Hose Connections
Description:	CONNLOCK - MR-DN Hose Connection
Valid standards:	TC acc. DIN 32676 Series C (ASME BPE 2009)
Material:	Hose Barb: Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088 Union Nut: Stnr.-W. 1.4301, Collet: autoclavable PVDF
Permissible sterilization temperature:	150°C
Version / Surface quality:	Surface, internal: bright finish Ra < 0.4 µm (ID ≤ 9.5 mm = Ra, internal < 0.6 µm, ID ≤ 6.0 mm = Ra, internal < 0.8 µm) Surface external bright finish
Pipe-Hygiene Classes:	H 3 / H 4 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for CONNLOCK - MRDN Hose Connection with Tri-Clamp ends								
Type	A	B	C	TC	ID	L	Item No.	
		min./max.						
acc. DIN 32676 Series C (ASME BPE 2009)								
MR-DN 1/4"	26.0	12.2 - 13.2	6.4	25.0	4.60	50.0	261.025.204	
MR-DN 3/8"	30.0	15.0 - 17.0	9.5	25.0	7.75	52.0	261.025.009	
MR-DN 1/2"	36.0	19.5 - 21.8	12.7	25.0	9.40	55.0	261.025.212.500	
MR-DN 5/8"	44.0	24.0 - 25.0	15.9	25.0	15.80	60.0	261.025.258	
MR-DN 5/8"	44.0	24.0 - 25.0	15.9	50.5	15.80	60.0	261.050.258	
MR-DN 3/4"	48.0	27.2 - 29.0	19.1	25.0	15.80	64.0	261.025.219	
MR-DN 1"	54.0	33.2 - 36.0	25.4	50.5	22.10	60.0	261.050.225	
MR-DN 1 1/2"	70.0	46.0 - 49.5	38.1	50.5	34.80	64.0	261.050.238	
MR-DN 2"	88.0	59.0 - 63.0	50.8	64.0	47.50	95.0	261.064.247	
MR-DN 2 1/2"	116.0	71.0 - 74.5	63.5	77.5	60.20	100.0	261.077.603	
MR-DN 3"	140.0	85.0 - 88.3	76.2	91.0	72.90	120.0	261.091.762	

The technical drawing shows a cross-section of the hose connection. Dimension A is the total length of the assembly. Dimension B is the length of the hose barb. Dimension C is the length of the union nut. Dimension TC is the thickness of the union nut. Dimension L is the length of the hose. Dimension ID is the internal diameter of the hose.

All lengths in millimeters (if not specified differently).

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Catalogue Sterile Components Version CS004, Printed 07/2014, Version 2. More information: www.connectors.ch or email: info@connectors.ch

CONNLOCK - MR-DN Hose Connection

Product group:

Hose Connections

Description:

CONNLOCK - MR-DN hose connection
Hose connections with welded end

Remarks:

Technical contents are subject to change.
Pressure / Temperature ratings may be limited by the end connections.
Item-Numbers for hose types - see chapter hoses

CONNLOCK - MR-DN Hose Connection joint / hose type							
Hose connection joint with welded end							
Hose Connection Type	Item No. for Hose Connection	Standard Pipe Connection	Hose Type				Hose ID
MR-DN ISO 6	261.100.006 .ISO	acc. DIN 11866 Series B	STHT-R 250				6.4
MR-DN ISO 8	261.100.008.375	acc. DIN 11866 Series B	STHT-R 375				9.5
MR-DN ISO 8	261.100.008	acc. DIN 11866 Series B	STHT-R 375HW				9.5
MR-DN ISO 8	261.100.008 .500	acc. DIN 11866 Series B		STHT-W 500			12.7
MR-DN ISO 10	261.100.010	acc. DIN 11866 Series B	STHT-R 500	STHT-W 500	U-Cor 08		12.7
MR-DN ISO 15	261.100.015	acc. DIN 11866 Series B	STHT-R 750	STHT-W 750	U-Cor 12		19.1
MR-DN ISO 20	261.100.020	acc. DIN 11866 Series B	STHT-R 1000	STHT-W 1000	U-Cor 16		25.4
MR-DN ISO 25	261.100.025	acc. DIN 11866 Series B	STHT-R 1250	STHT-W 1250	U-Cor 20		31.8
MR-DN ISO 32	261.100.032	acc. DIN 11866 Series B		STHT-W 1500	U-Cor 24		38.1
MR-DN ISO 40	261.100.040	acc. DIN 11866 Series B		STHT-W 2000	U-Cor 32		50.8
MR-DN ISO 50	261.100.050	acc. DIN 11866 Series B		STHT-W 2500			63.5
MR-DN ISO 65	261.100.076	acc. DIN 11866 Series B		STHT-W 3000			76.2
MR-DN DIN 6	261.100.006.DIN	acc. DIN 11866 Series A	STHT-R 250				6.4
MR-DN DIN 8	261.100.008.DIN	acc. DIN 11866 Series A	STHT-R 375HW				9.5
MR-DN DIN 10	261.100.010.DIN	acc. DIN 11866 Series A	STHT-R 500	STHT-W 500	U-Cor 08		12.7
MR-DN DIN 15	261.100.015.DIN	acc. DIN 11866 Series A	STHT-R 750	STHT-W 750	U-Cor 12		19.1
MR-DN DIN 20	261.100.020.DIN	acc. DIN 11866 Series A	STHT-R 1000	STHT-W 1000	U-Cor 16		25.4
MR-DN DIN 25	261.100.025.DIN	acc. DIN 11866 Series A	STHT-R 1000	STHT-W 1000	U-Cor 16		25.4
MR-DN DIN 32	261.100.032.DIN	acc. DIN 11866 Series A		STHT-W 1250	U-Cor 20		31.8
MR-DN DIN 40	261.100.040.DIN	acc. DIN 11866 Series A		STHT-W 1500	U-Cor 24		38.1
MR-DN DIN 50	261.100.050.DIN	acc. DIN 11866 Series A		STHT-W 2000	U-Cor 32		50.8
MR-DN 1/4"	261.100.006	acc. DIN 11866 Series C	STHT-R 250				6.4
MR-DN 3/8"	261.100.009	acc. DIN 11866 Series C	STHT-R 375				9.5
MR-DN 1/2"	261.100.012	acc. DIN 11866 Series C	STHT-R 500	STHT-W 500	U-Cor 08		12.7
MR-DN 3/4"	261.100.019	acc. DIN 11866 Series C	STHT-R 750	STHT-W 750	U-Cor 12		19.1
MR-DN 1"	261.100.026	acc. DIN 11866 Series C	STHT-R 1000	STHT-W 1000	U-Cor 16		25.4
MR-DN 1 1/2"	261.100.038	acc. DIN 11866 Series C		STHT-W 1500	U-Cor 24		38.1
MR-DN 2"	261.100.051	acc. DIN 11866 Series C		STHT-W 2000	U-Cor 32		50.8
MR-DN 2 1/2"	261.100.063	acc. DIN 11866 Series C		STHT-W 2500			63.5
MR-DN 3"	261.100.076	acc. DIN 11866 Series C		STHT-W 3000			76.2

CONNLOCK - MR-DN Hose Connection

Product group:

Hose Connections

Description:

CONNLOCK - MR-DN hose connection
Hose connections with Tri-Clamp ends

Remarks:

Technical contents are subject to change
Pressure / Temperature ratings may be limited by the end connections.
Item-Numbers for hose types - see chapter hoses

CONNLOCK - MRDN Hose Connection joint / hose type								
Hose Connection joints with Tri-Clamp ends								
Hose Connection Type	TC-Size	Item No. for Hose Connection	Standard TC / Pipe sizes	Hose Type				Hose ID
MR-DN DIN 6	TC 25.0	261.025.106	acc. DIN 11866 Series A	STHT-R 250				6.4
MR-DN DIN 6	TC 50.5	261.050.106	acc. DIN 11866 Series A	STHT-R 250				6.4
MR-DN ISO 8	TC 25.0	261.025.108.375	acc. DIN 11866 Series B	STHT-R 375				9.5
MR-DN ISO 8	TC 50.5	261.050.108.375	acc. DIN 11866 Series B	STHT-R 375				9.5
MR-DN ISO 8	TC 25.0	261.025.108	acc. DIN 11866 Series B	STHT-R 375HW				9.5
MR-DN ISO 8	TC 50.5	261.050.108	acc. DIN 11866 Series B	STHT-R 375HW				9.5
MR-DN ISO 10	TC 25.0	261.025.110.500	acc. DIN 11866 Series B	STHT-R 500	STHT-W 500	U-Cor 08		12.7
MR-DN ISO 10	TC 50.5	261.050.110	acc. DIN 11866 Series B	STHT-R 500	STHT-W 500	U-Cor 08		12.7
MR-DN ISO 15	TC 50.5	261.050.115	acc. DIN 11866 Series B	STHT-R 750	STHT-W 750	U-Cor 12		19.1
MR-DN ISO 20	TC 50.5	261.050.120	acc. DIN 11866 Series B	STHT-R 1000	STHT-W 1000	U-Cor 16		25.4
MR-DN ISO 25	TC 50.5	261.050.125	acc. DIN 11866 Series B	STHT-R 1250	STHT-W 1250	U-Cor 20		31.8
MR-DN ISO 32	TC 64.0	261.064.132	acc. DIN 11866 Series B		STHT-W 1500	U-Cor 24		38.1
MR-DN ISO 40	TC 64.0	261.064.140	acc. DIN 11866 Series B		STHT-W 2000	U-Cor 32		50.8
MR-DN ISO 50	TC 77.5	261.077.150	acc. DIN 11866 Series B		STHT-W 2500			63.5
MR-DN ISO 65	TC 91.0	261.091.165	acc. DIN 11866 Series B		STHT-W 3000			76.2
MR-DN 1/4"	TC 25.0	261.025.204	acc. DIN 11866 Series C	STHT-R 250				6.4
MR-DN 3/8"	TC 25.0	261.025.009	acc. DIN 11866 Series C	STHT-R 375				9.5
MR-DN 1/2"	TC 25.0	261.025.212.500	acc. DIN 11866 Series C	STHT-R 500	STHT-W 500	U-Cor 08		12.7
MR-DN 5/8"	TC 25.0	261.025.258	acc. DIN 11866 Series C	STHT-R 625				15.9
MR-DN 5/8"	TC 50.5	261.050.258	acc. DIN 11866 Series C	STHT-R 625				15.9
MR-DN 3/4"	TC 25.0	261.025.219	acc. DIN 11866 Series C	STHT-R 750	STHT-W 750	U-Cor 12		19.1
MR-DN 1"	TC 50.5	261.050.225	acc. DIN 11866 Series C	STHT-R 1000	STHT-W 1000	U-Cor 16		25.4
MR-DN 1 1/2"	TC 50.5	261.050.238	acc. DIN 11866 Series C		STHT-W 1500	U-Cor 24		38.1
MR-DN 2"	TC 64.0	261.064.247	acc. DIN 11866 Series C		STHT-W 2000	U-Cor 32		50.8
MR-DN 2 1/2"	TC 77.5	261.077.603	acc. DIN 11866 Series C		STHT-W 2500			63.5
MR-DN 3"	TC 91.0	261.091.165	acc. DIN 11866 Series C		STHT-W 3000			76.2

All lengths in millimeters (if not specified differently).

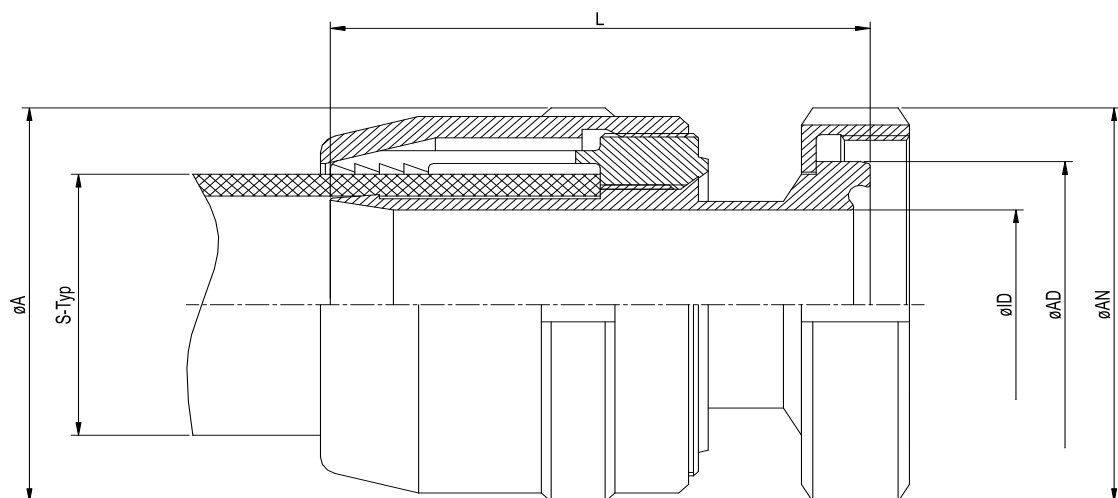
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Catalogue Sterile Components Version CS004, Printed 07/2014, Version 2. More information: www.connectors.ch or email: info@connectors.ch

MR-DN with aseptic Female Unions acc. DIN 11864 and Grooved Nut acc. DIN 11851

Product group:	Connection acc. DIN 11864 / Form A
Description:	MR-DN with aseptic female unions acc. DIN 11864-1 and grooved nut DIN 11851
Valid standards:	DIN 11864-1 with pipe connection acc. DIN 11866, Series B ISO 1127
Material:	Nipple: Stnr.-W.. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1 welding seam Fe < 1% Knurled and grooved nut: control no. -W. 1.4301 Collet: PVDF, autoclavable
Version / Surface quality:	Surfaces, internal: bright finish Ra < 0.4 µm Surfaces, external bright finish
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change Pressure / Temperature-ratings may be limited by the end connections.

Dimensions for MR-DN with aseptic Female Unions acc. DIN 11864-1 and Grooved Nut DIN 11851

Type	ø A	ø AD	ø ID	ø AN	L	S-Type = Hose Type	Item No. MR-DN	Item No. Grooved Nut
acc. DIN 11866, Series B (ISO 1127)								
ISO DN 10	38.2	27.9	14.0	44.0	70.0	STHT-R / W 0500	U-Cor 08	261.012.010
ISO DN 15	50.0	35.9	18.1	54.0	75.0	STHT-R / W 0750	U-Cor 12	261.012.015
ISO DN 20	56.0	42.9	23.7	63.0	75.0	STHT-R / W 1000	U-Cor 16	261.012.020
ISO DN 25	67.0	48.9	29.7	70.0	82.0	STHT-R / W 1250	U-Cor 20	261.012.025
ISO DN 32	74.0	54.9	38.4	78.0	82.0	STHT-W 1500	U-Cor 24	261.012.032
ISO DN 40	92.0	66.9	44.3	92.0	110.0	STHT-W 2000	U-Cor 32	261.012.040
ISO DN 50	120.0	84.9	56.3	112.0	120.0	STHT-W 2500	-	261.012.050



MR-DN with aseptic Grooved Flange acc. DIN 11864-2, Orbitally welded

Product group:	Connection acc. DIN 11864 / Form A
Description:	MR-DN with aseptic groove flange acc. DIN 11864-2, Orbitally welded
Valid standards:	DIN 11864-2 with pipe connection acc. DIN 11866, Series B ISO 1127
Material:	Nipple and flange: Stnr.-W.. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1 welding seam Fe < 1% Knurled nut: control number W. 1.4301, collet: PVDF, autoclavable
Version / Surface quality:	Surfaces, internal: bright finish Ra < 0.4 µm Surfaces, external bright finish
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change Pressure / Temperature ratings may be limited by the end connections. MR-DN with aseptic collared flange acc. DIN 11864-2 on request

Dimensions for MR-DN with aseptic Grooved Flange acc. DIN 11864-2										
Type	ø A	ø AD	ø ID	L1	L2	L1 + L2	S-Type = Hose Type	Item No. MR-DN		
acc. DIN 11866, Series B (ISO 1127)										
ISO DN 8	38.2	54.0	10.3	44.0	41.5	85.5	STHT-R 0375 HW	-	261.021.008	
ISO DN 10	38.2	59.0	14.0	44.0	41.5	85.5	STHT-R / W 0500	U-Cor 08	261.021.010	
ISO DN 15	50.0	62.0	18.1	47.0	41.5	88.5	STHT-R / W 0750	U-Cor 12	261.021.015	
ISO DN 20	56.0	69.0	23.7	47.0	41.5	88.5	STHT-R / W 1000	U-Cor 16	261.021.020	
ISO DN 25	67.0	74.0	29.7	52.0	46.5	98.5	STHT-R / W 1250	U-Cor 20	261.021.025	
ISO DN 32	74.0	82.0	38.4	52.0	46.5	98.5	STHT-W 1500	U-Cor 24	261.021.032	
ISO DN 40	92.0	88.0	44.3	79.0	46.5	125.5	STHT-W 2000	U-Cor 32	261.021.040	
ISO DN 50	120.0	103.0	56.3	84.0	55.5	139.5	STHT-W 2500	-	261.021.603	

The technical drawing illustrates the MR-DN with aseptic Grooved Flange connection. It shows a cross-section of the assembly with the following dimensions and labels:

- L**: Total length of the assembly.
- L1**: Length of the main body.
- L2**: Length of the flange.
- øA**: Outer diameter of the main body.
- øAD**: Outer diameter of the flange.
- øID**: Inner diameter of the flange.
- S-Type**: Dimension of the S-Type connection.
- Orbitally welded**: Label indicating the welding method used for the flange.

All lengths in millimeters (if not specified differently).

MR-DN with aseptic Grooved Clamp

acc. DIN 11864-3

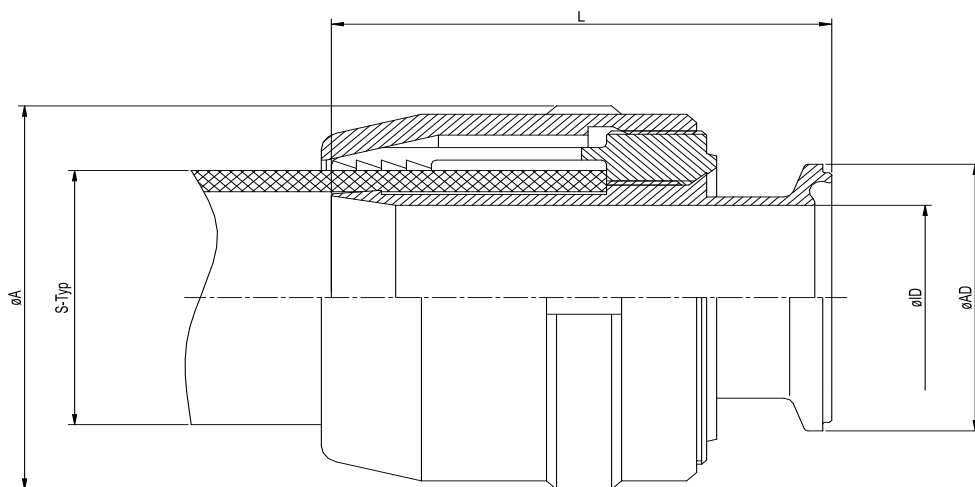
Product group:	Connection acc. DIN 11864 / Form A
Description:	MR-DN with aseptic grooved clamp acc. DIN 11864-3
Valid standards:	DIN 11864-3 with pipe connection acc. DIN 11866, Series B ISO 1127
Material:	Nipple: control no. Stnr -W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1 welding seam Fe < 1% Knurled nut: control no. -W. 1.4301, collet: PVDF, autoclavable
Version / Surface quality:	Surfaces, internal: bright finish Ra < 0.4 µm Surfaces, external bright finish
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change Pressure /Temperature ratings may be limited by the end connections

Dimensions for MR-DN with aseptic Grooved Clamp support acc. DIN 11864-3								
Type	ø A	ø AD	ø ID	L	S-Type = Hose Type		Item No. MR-DN	
acc. DIN 11866, Series B (ISO 1127)								
ISO DN	8	38.2	34.0	10.3	60.0	STHT-R 0375 HW	-	261.031.008
ISO DN	10	38.2	34.0	14.0	60.0	STHT-R / W 0500	U-Cor 08	261.031.010
ISO DN	15	50.0	34.0	18.1	65.0	STHT-R / W 0750	U-Cor 12	261.031.015
ISO DN	20	56.0	50.5	23.7	70.0	STHT-R / W 1000	U-Cor 16	261.031.020
ISO DN	25	67.0	50.5	29.7	70.0	STHT-R / W 1250	U-Cor 20	261.031.025
ISO DN	32	74.0	64.0	38.4	75.0	STHT-W 1500	U-Cor 24	261.031.032
ISO DN	40	92.0	64.0	44.3	100.0	STHT-W 2000	U-Cor 32	261.031.040
ISO DN	50	120.0	91.0	56.3	110.0	STHT-W 2500	-	261.031.050

MR-DN with aseptic with Lapped Clamp acc. DIN 11864-3

Product group:	Connections acc. DIN 11864 / form A
Description:	MR-DN with aseptic lapped clamp acc. DIN 11864-3
Valid standards:	DIN 11864-3 with pipe connection acc. DIN 11866, Series B ISO 1127
Material:	Nipple: control no. Stnr -W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1 welding seam Fe < 1% Knurled nut: control no. -W. 1.4301, collet: PVDF, autoclavable
Version / Surface quality:	Surfaces, internal: bright finish, shiny Ra < 0.4 µm . Surfaces, external bright finish
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1
Option:	Electropolishing
Remarks:	Technical contents are subject to change Pressure /Temperature ratings may be limited by the end connections

Dimensions for MR-DN with aseptic Lapped Clamp support acc. DIN 11864-3								
Type	ø A	ø AD	ø ID	L	S-Type = Hose Type		Item No. MR-DN	
acc. DIN 11866, Series B (ISO 1127)								
ISO DN	8	38.2	34.0	10.3	60.0	STHT-R 0375 HW	-	261.032.008
ISO DN	10	38.2	34.0	14.0	60.0	STHT-R / W 0500	U-Cor 08	261.032.010
ISO DN	15	50.0	34.0	18.1	65.0	STHT-R / W 0750	U-Cor 12	261.032.015
ISO DN	20	56.0	50.5	23.7	70.0	STHT-R / W 1000	U-Cor 16	261.032.020
ISO DN	25	67.0	50.5	29.7	70.0	STHT-R / W 1250	U-Cor 20	261.032.025
ISO DN	32	74.0	64.0	38.4	75.0	STHT-W 1500	U-Cor 24	261.032.032
ISO DN	40	92.0	64.0	44.3	100.0	STHT-W 2000	U-Cor 32	261.032.040
ISO DN	50	120.0	91.0	56.3	110.0	STHT-W 2500	-	261.032.050

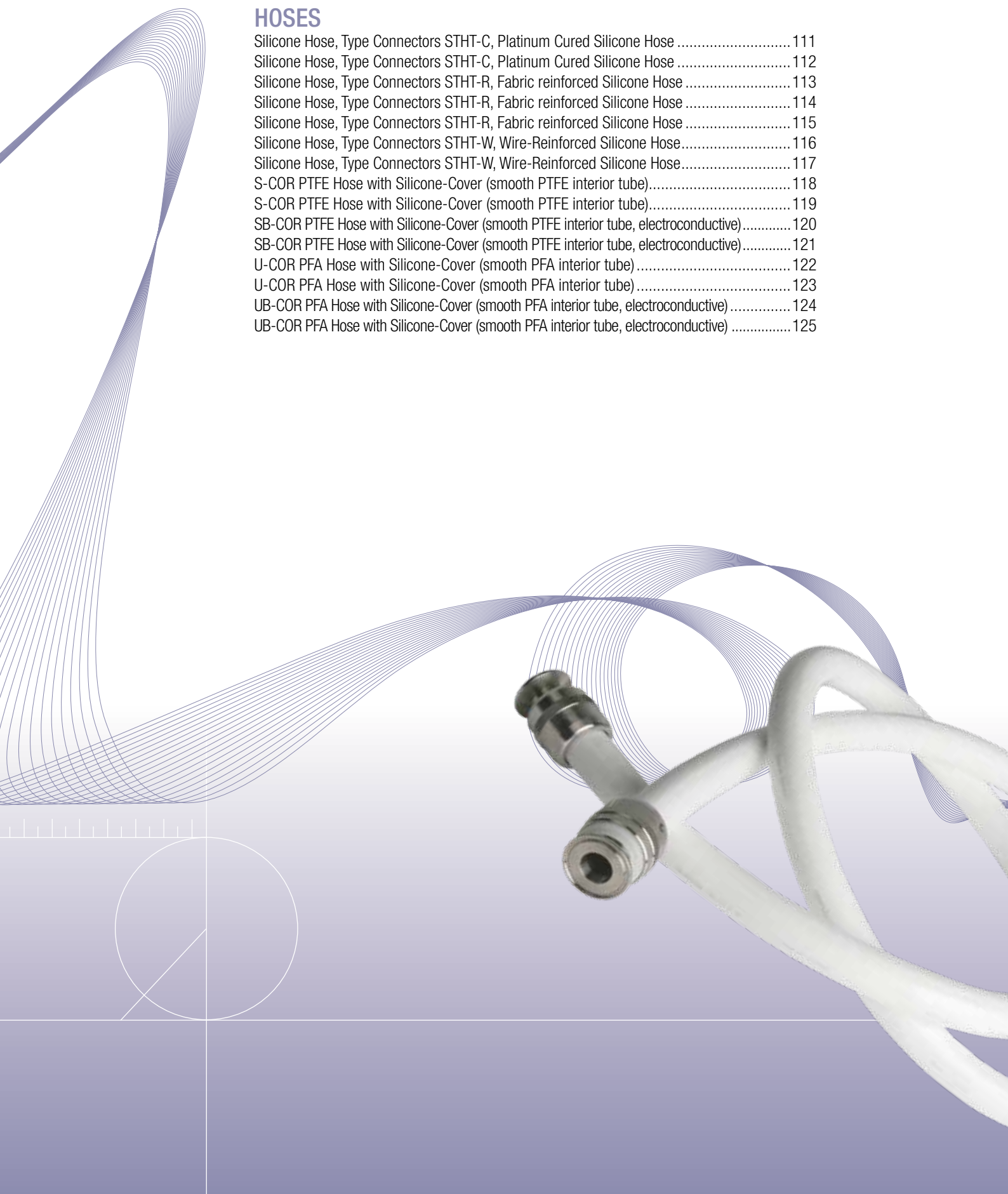




CONNECTORS

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HOSES

Silicone Hose, Type Connectors STHT-C, Platinum Cured Silicone Hose

Product group:	Hoses
Description:	Silicone Hose, Type Connectors STHT-C Platinum cured silicone hose
Characteristics:	Ultra-flexible Autoclavable Hardness: 45 – 55 Shore A Ultrapure bio-pharmaceutical grade Taste- and odorless Unsurpassed surface quality Available in coils of: 7.62 m / 15.24 m / 30.48 m Further units available on request (e.g. on reel) for pressure-free and low pressure applications
Temperature range:	-62°C to max. 232°C
Applications:	Pharmaceutical processes Biotechnology Food industry Cell culture
Certificates:	FDA 21 CFR 177.2600 USDA certied suitable for food USP Class VI 3A Standard EP 3.1.9 ISO 10993
Connections:	On request, can be produced with: vulcanized non-metallic fittings

Platinum cured silicone hose, Type Connectors STHT-C

The Connectors STHT-C platinum cured silicone hose exhibits very good temperature behavior. Other properties of the Connectors STHT-C hose are its perfect flexibility and good chemical stability. The hose is naturally colored and flexible. The Connectors STHT-C hose is suitable only for pressure free or low pressure applications.



All hoses are marked
on the packing units
with the length,
Lot-No., etc.



All hoses are marked
with reference to
manufacturer, type, size,
Lot-No., etc



All lengths in millimeters (if not specified differently).

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Catalogue Sterile Components Version CS004, Printed 07/2014, Version 2. More information: www.connectors.ch or email: info@connectors.ch

HOSES

Silicone Hose, Type Connectors STHT-C, Platinum Cured Silicone Hose

Product group:	Hoses
Description:	Silicone Hose, Type Connectors STHT-C Platinum cured silicone hose
Remarks:	Technical contents are subject to change

Dimensions for Connectors STHT-C Hose (Platinum Cured Silicone Hose)			
Hose Type	Connectors Item No.	ID	AD
Connectors STHT-C 012-0	601.000.012	0.30	0.61
Connectors STHT-C 030-0	601.000.030	0.75	1.70
Connectors STHT-C 040-0	601.000.040	1.00	2.20
Connectors STHT-C 058-0	601.000.058	1.50	1.90
Connectors STHT-C 062-0	601.000.062	1.60	2.40
Connectors STHT-C 062-2	601.000.062.-2	1.60	4.70
Connectors STHT-C 062-3	601.000.062.-3	1.60	6.40
Connectors STHT-C 078-0	601.000.078	1.98	3.20
Connectors STHT-C 078-2	601.000.078.-2	1.98	5.20
Connectors STHT-C 078-3	601.000.078.-3	1.98	6.70
Connectors STHT-C 093-2	601.000.093.-2	2.36	5.50
Connectors STHT-C 093-3	601.000.093.-3	2.36	7.10
Connectors STHT-C 125-2	601.000.125.-2	3.17	6.40
Connectors STHT-C 125-3	601.000.125.-3	3.17	7.90
Connectors STHT-C 125-4	601.000.125.-4	3.17	9.50
Connectors STHT-C 156-2	601.000.156.-2	3.96	7.10
Connectors STHT-C 156-3	601.000.156.-3	3.96	8.70
Connectors STHT-C 156-4	601.000.156.-4	3.96	10.30
Connectors STHT-C 187-2	601.000.187.-2	4.75	7.90
Connectors STHT-C 187-3	601.000.187.-3	4.75	9.50
Connectors STHT-C 187-4	601.000.187.-4	4.75	11.10
Connectors STHT-C 250-2	601.000.250.-2	6.35	9.50
Connectors STHT-C 250-3	601.000.250.-3	6.35	11.10
Connectors STHT-C 250-4	601.000.250.-4	6.35	12.70
Connectors STHT-C 312-2	601.000.312.-2	7.90	11.10
Connectors STHT-C 312-3	601.000.312.-3	7.90	12.70
Connectors STHT-C 312-4	601.000.312.-4	7.90	14.30
Connectors STHT-C 375-2	601.000.375.-2	9.50	12.70
Connectors STHT-C 375-3	601.000.375.-3	9.50	14.30
Connectors STHT-C 375-4	601.000.375.-4	9.50	15.90
Connectors STHT-C 375-5	601.000.375.-5	9.50	19.10

Dimensions for Connectors STHT-C Hose (Platinum Cured Silicone Hose)			
Hose Type	Connectors Item No.	ID	AD
Connectors STHT-C 500-2	601.000.500.-2	12.70	15.90
Connectors STHT-C 500-3	601.000.500.-3	12.70	17.40
Connectors STHT-C 500-4	601.000.500.-4	12.70	19.10
Connectors STHT-C 500-5	601.000.500.-5	12.70	22.20
Connectors STHT-C 625-2	601.000.625.-2	15.90	19.10
Connectors STHT-C 625-3	601.000.625.-3	15.90	20.60
Connectors STHT-C 625-4	601.000.625.-4	15.90	22.20
Connectors STHT-C 750-2	601.000.750.-2	19.10	22.20
Connectors STHT-C 750-3	601.000.750.-3	19.10	23.80
Connectors STHT-C 750-4	601.000.750.-4	19.10	25.40
Connectors STHT-C 750-5	601.000.750.-5	19.10	28.60
Connectors STHT-C 875-2	601.000.875.-2	22.20	25.40
Connectors STHT-C 875-3	601.000.875.-3	22.20	27.00
Connectors STHT-C 875-4	601.000.875.-4	22.20	28.60
Connectors STHT-C 1000-2	601.001.000.-2	25.40	28.60
Connectors STHT-C 1000-3	601.001.000.-3	25.40	30.10
Connectors STHT-C 1000-4	601.001.000.-4	25.40	31.80
Connectors STHT-C 1000-5	601.001.000.-5	25.40	34.90
Connectors STHT-C 1000-6	601.001.000.-6	25.40	38.10
More dimensions			
Please consult us for other dimensions.			

HOSES

Silicone Hose, Type Connectors STHT-R, Fabric reinforced Silicone Hose

Product group:	Hoses
Description:	Silicone Hose, Type Connectors STHT-R Fabric reinforced Silicone Hose
Benets:	Flexible Sterilizable, Autoclavable, Extremely Durable Hardness: 60 – 70 Shore A Taste- and odorless Product Code Marking High Pressure Rating
Remarks:	Technical contents are subject to change

Connectors STHT-R Fabric reinforced Silicone Hose								
Connectors material reinforced STHT-R exhibits very good temperature behaviour. The inliner is made exclusively from platinum catalyzed silicone. Continuous extrusion of the inliner allows a smooth internal surface and the most optimum cleaning and sterilization results. The material reinforcement was developed for increased system pressures. Other properties of the connector STHT-R silicone hose are ist flawless exibility and good chemical resistance.								
 Fabric-Reinforced for pressure applications.								
Connectors STHT-R Hose Inventory Sizes								
* C/F: consult factory								
Hose Type	Connectors Item No.	ID	ID Tol.	OD	Recommended Working pressure at 20°C bar g	Minimum Burst pressure at 20°C	Minimum Bending radius	Weight per kg/m
Connectors STHT-R 0125	602.000.125	3.2	+/- 0.3	8.2 - 8.8	11.8	48.3	*C/F	*C/F
Connectors STHT-R 0187	602.000.187	4.8	+/- 0.3	9.8 - 10.4	11.0	44.8	*C/F	*C/F
Connectors STHT-R 0250	602.000.250	6.4	+/- 0.3	12.2 - 14.2	10.4	43.1	26.0	0.12
Connectors STHT-R 0375	602.000.375	9.5	+/- 0.3	16.5 - 17.0	9.3	37.9	53.0	0.20
Connectors STHT-R 0375HW	602.000.375.HW	9.5	+/- 0.3	17.0 - 18.0	9.3	37.9	53.0	0.20
Connectors STHT-R 0500	602.000.500	12.7	+/- 0.5	19.5 - 20.5	8.3	34.5	77.0	0.23
Connectors STHT-R 0625	602.000.625	15.9	+/- 0.5	24.0 - 25.0	6.9	28.9	102.0	0.33
Connectors STHT-R 0750	602.000.750	19.1	+/- 0.5	27.2 - 28.2	6.2	24.1	102.0	0.40
Connectors STHT-R 1000	602.001.000	25.4	+/- 0.5	33.2 - 34.6	4.8	15.1	150.0	0.50
Connectors STHT-R 1250	602.001.250	31.8	+/- 0.5	40.0 - 41.7	3.1	8.9	180.0	0.60

Pressure/limit rates can be limited by end connections.

All lengths in millimeters (if not specified differently).

Connectors Verbindungstechnik AG, Zürcherstrasse 53, CH-8317 Tagelswangen, Phone: +41 (0)52 354 68 68, Telefax: +41 (0)52 354 68 60
Catalogue Sterile Components Version CS004, Printed 07/2014, Version 2. More information: www.connectors.ch or email: info@connectors.ch

Silicone Hose, Type Connectors STHT-R, Fabric reinforced Silicone Hose

Product group:

Hoses

Description:

Silicone Hose, Type Connectors STHT-R
Fabric reinforced Silicone Hose

Technical characteristics:

Connections:	Upon request, can be produced with: • vulcanized, non-metallic fittings • pressed, metallic connections • Connlock MR-DN (reusable connections)
Temperature range:	Maximum temperature depends on the fabric used -62°C to 177°C for Polyester higher temperatures upon request
Fabric material:	Polyester
Available lengths:	available in coils of 7.62m (25 feet) - tolerances 0 + 50mm available in coils of 15.24m (50 feet) - tolerances 0 + 50mm available in coils of 30.48m (100 feet) - tolerances 0 + 50mm
Burst pressure in relation to the temperature:	The bursting pressure of the Connector STHT-R hose is reduced by around 20% per temperature increase of 93°C until the maximum hose temperature is reached. The reduction is linear.
Characteristics	The bio-compatibility of Connectors STHT platinum-cured silicone hose, manufactured with only PLATINUM CURED SILICONE MATERIALS, has been tested and complies with the parameters set forth in the following test protocols: • Meets or Exceeds FDA, USDA regulations CFR 177.2600 for contact with food • Meets or Exceeds European Pharmacopoeia 3.1.9, Current revision • ISO 10993 • Meets or Exceeds USP Class VI certification • USDA and 3A accepted

HOSES

Silicone Hose, Type Connectors STHT-R, Fabric reinforced Silicone Hose

Product group:

Hoses

Description:

Silicone Hose, Type Connectors STHT-R
Fabric reinforced Silicone Hose

Technical characteristics:

Marking:

All hoses are marked according to CVAG_APN_0001.0 with the following:

- Supplier
- Hose type and size
- Lot No
- Norms
- Production date

Physical Properties:

According CVAG_FGS_0001.0

Sterilization Methods:

Autoclavable
Gas - Ethylene Oxide
Radiation - up to 2.5 Mrad (25 Kilogray)
Inline sterilizable (steam)

Perfect connections: CONNLOCK the suitable hose coupling for the Connectors STHT-T and STHT-W Hoses

CONNLOCK® is an absolutely high-quality, re-usable quick coupling connector, which is developed for the highest demands of the pharmaceutical and biochemical industry. CONNLOCK® is available in dimensions from DN6 to DN65 as "Buttend-Weld" version, with Tri-Clamp Ends or customized connections. The quick coupling is made from the material 1.4435 Bn2 and the collet from autoclavable PVDF.

The PVDF collet permits for the complete unit to adjust to different wall thicknesses of the silicone hoses, without affecting the pressure rating. Please also check the chapter 8 for further information on CONNLOCK® and the selection list for the suitable hoses.



Traceability of the materials

The PVDF collet is laser-marked with the suitable hose-type and drawing-number of screw-connection.



All lengths in millimeters (if not specified differently).

Connectors Verbindungstechnik AG, Zürcherstrasse 53, CH-8317 Tagelswangen, Phone: +41 (0)52 354 68 68, Telefax: +41 (0)52 354 68 60
Catalogue Sterile Components Version CS004, Printed 07/2014, Version 2. More information: www.connectors.ch or email: info@connectors.ch

HOSES

Silicone Hose, Type Connectors STHT-W, Wire-Reinforced Silicone Hose

Product group:	Hoses
Description:	Silicone Hose, Type Connectors STHT-W Wire-Reinforced Silicone Hose
Benets:	Flexible Sterilizable, Autoclavable Hardness: 60 – 70 Shore A Taste- and odorless Product Code Marking High Pressure and Vacuum Resistance Extremely Resistant
Connections:	On request, can be produced with: Vulcanized, Non-Metallic Fittings, Pressed, Metallic Connections Connlock MR-DN (Reusable Connections)
Remarks:	Technical contents are subject to change

Connectors STHT-W Wire-Reinforced Silicone Hose

Connectors material reinforced STHT-R exhibits very good temperature behaviour. The inliner is created exclusively from platinum cataylized silicone. Continuous extrusion of the inliner allows a smooth internal surface and the most optimum cleaning and sterilization results. The material reinforcement was developed for increased system pressures. Other properties of the connector STHT-R silicone hose are flawless flexibility and good chemical resistance.



With Stainless Steel wire and multiple ply for higher pressure and vacuum applications.

Connectors STHT-W Hose Inventory Sizes

* C/F: consult factory

Hose Type	Connectors Item No.	ID	ID Tol.	OD Range	Recommended Working pressure at 20°C (bar g)	Minimum Burst pressure at 20°C (bar g)	Minimum Bending radius	Weight per kg/m	Vacuum-rating (bar)
Connectors STHT-W 0500	603.000.500	12.7	+/- 0.2	19.5 - 21.3	10.3	34.5	77.0	0.5	-0.99
Connectors STHT-W 0750	603.000.750	19.1	+/- 0.3	27.5 - 30.0	8.6	34.5	102.0	0.6	-0.99
Connectors STHT-W 1000	603.001.000	25.4	+/- 0.3	34.5 - 37.0	8.6	34.5	153.0	0.7	-0.99
Connectors STHT-W 1250	603.001.250	31.8	+/- 0.3	39.5 - 42.0	8.6	34.5	193.0	1.4	-0.99
Connectors STHT-W 1500	603.001.500	38.1	+/- 0.3	46.0 - 49.5	8.6	34.5	203.0	1.5	-0.99
Connectors STHT-W 2000	603.002.000	50.8	+/- 0.5	59.0 - 63.0	6.9	24.1	203.0	1.6	-0.99
Connectors STHT-W 2500	603.002.500	63.5	+/- 0.5	71.0 - 74.5	5.2	24.1	228.6	1.7	-0.99
Connectors STHT-W 3000	603.003.000	76.2	+/- 0.5	85.0 - 88.3	5.2	24.1	254.0	2.1	-0.99
Connectors STHT-W 4000	603.004.000	101.6	+/- 0.5	107.8 - 110.7	*C/F	*C/F	*C/F	*C/F	*C/F

Pressure/limit rates can be limited by end connections.

Silicone Hose, Type Connectors STHT-W, Wire-Reinforced Silicone Hose

Product group:

Hoses

Description:

Silicone Hose, Type Connectors STHT-W
Wire-Reinforced Silicone Hose

Technical characteristics:

Temperature range:	Maximum temperature depends on the fabric used. -62°C to 177°C for Polyester - higher temperatures upon request
Braid material:	Polyester all sizes are covered with 4 ply reinforcement. The Connectors STHT-W 0500 is only 2 ply.
Wire spiral	Wire spiral made of AISI 316
Available lengths:	Available in rods of 3.66 m (tolerances 0 + 50 mm) Available in rods of 7.32 m (tolerances 0 + 50 mm)
Burst pressure in relation to the temperature:	The bursting pressure is reduced by around 10% per temperature increase of 93°C until the maximum hose temperature is reached. The reduction is linear.
Characterization	The bio-compatibility of Connectors STHT platinum-cured silicone hose, manufactured with only PLATINUM CURED SILICONE MATERIALS, has been tested and complies with the parameters set forth in the following test protocols: • Meets or Exceeds FDA, USDA regulations CFR 177.2600 for contact with food • Meets or Exceeds European Pharmacopoeia 3.1.9, Current revision • ISO 10993 • Meets or Exceeds USP Class VI certification • USDA and 3A accepted
Marking:	All hoses are marked according to CVAG_APN_0001.0 with the following: • Supplier • Hose type and size • Lot No • Norms • Production date
Physical Properties:	According CVAG_FGS_0001.0
Sterilization Methods:	Autoclavable Gas - Ethylene Oxide Radiation - up to 2.5 Mrad (25 Kilogray) Inline sterilizable (steam)

HOSES

S-COR PTFE Hose with Silicone-Cover (smooth PTFE interior tube)

Product group:

Hoses

Description:

S-COR PTFE Hose with Silicone-Cover (smooth PTFE Interior core)

Remarks:

Technical contents are subject to change

S-COR PTFE Hose with smooth inner core for the highest demands

The S-COR PTFE hose has excellent chemical resistance. The inliner is made exclusively of Dupont T-62 - PTFE and is free of softeners, supplementary materials and stabilisers. The continuous extrusion of the inliner guarantees a smooth interior surface and optimum sterilization results.



Technical data for S-COR PTFE hose

Hose-Type	Connectors Item No.	Interior diameter	Exterior diameter	Minimum bending radius	Operating pressure at 20°C	Bursting pressure at 20°C	Temperature range °C	Hose weight kg/m
S-COR 04	604.100.250	6.4	14.0	31.8	241.0	964	-53 to 230	0.28
S-COR 06	604.100.375	9.6	18.0	44.4	206.0	826	-53 to 230	0.37
S-COR 08	604.100.500	12.7	21.8	63.5	124.0	496	-53 to 230	0.51
S-COR 12	604.100.750	19.0	28.4	88.9	86.1	344	-53 to 230	0.70
S-COR 16	604.101.000	25.4	39.4	140.0	68.9	275	-53 to 230	2.70

Pressure/limit rates can be limited by end connections.

Pressure and temperature rates

Hose-Type	S-COR 04	S-COR 06	S-COR 08	S-COR 12	S-COR 16
Temperature, °C	Operating pressure, bar				
-53 to 37	241	206	124	86.1	68.9
93	241	182	124	86.1	68.9
148	236	172	124	86.1	68.9
204	228	171	124	86.1	68.9
230	228	159	124	75.7	68.9

S-COR PTFE Hose with Silicone-Cover (smooth PTFE interior tube)

Product group:

Hoses

Description:

S-COR PTFE Hose with Silicone-Cover (smooth PTFE Interior core)

Characteristics of S-COR PTFE Hose with Silicone-Cover

Characterization:

- Highly pure: Ideal for demanding analytic sampling and production processes. Guaranteed taste, odor and color neutral. Maximum resistance against chemicals with highest compatibility.
- Absorption resistant: The special PTFE surface minimizes the absorption of materials such as color extracts, essential oils and proteins. The hose does not discolour. Humidity absorption <0.01%, corrosion resistant and non oxidizing.
- Temperature-resistant: For temperature ranges from -62°C to +232°C. Autoclavable multiple times; ideal for steam or applications with hot oil. Also suitable for sterilization by means of UV-RADIATION or other methods.
- Perfect surface: Maximum flow rates. Ideal for adhesive and viscous liquids. Simple and reliable cleaning.
- Chemically inert: recognised as the most chemically inert material. Absolutely corrosion resistant and non oxidizing.
- Age resistant: irrespective of time, weather or UV-RADIATION. Does not age during use.
- Frictionless inside and outside: High-quality finished braiding. Smooth for walls and equipment. Frictionless connections/fittings. Smooth and clean, temperature resistant covering.
- Completely vacuum and high pressure suitable: Absolutely safe. Highest level of pliancy without kink remaining. Constant flow rates also with bent S-COR hoses.
- With ATEX permit for zone 1 (interior)

Connections:

- Crimped with Tri-Clamp Ends
- Crimped with customized Connections

Applications:

- Pharmaceutical processes
- Biotechnology
- Food industry
- Cell culture

Certificates:

- USP Class VI
- 3A Standard
- FDA 21 CFR 177.1550
- USDA food-suited

Crimp with Tri-Clamp Ends, Screw Flanges or customized connections.



HOSES

SB-COR PTFE Hose with Silicone-Cover (smooth PTFE interior tube, electroconductive)

Product group:	Hoses
Description:	SB-COR PTFE Hose with Silicone-Cover (smooth PTFE interior tube, electroconductive)
Remarks:	Technical contents are subject to change

SB-COR PTFE hose with smooth interior tube (electrically conducting) for the highest demands

The SB-COR PTFE hose has excellent chemical resistance and excellent electrical conductivity. The inliner is made exclusively of PTFE which is covered with black graphite. The black graphite meets the requirements of the FDA 21CFR 178.3297 standard. Continuous extrusion of the inliners ensures a smooth interior surface and optimum sterilization results.



Technical data for S-COR PTFE hose

Hose-Type	Connectors Item No.	Interior diameter	Exterior diameter	Minimum bending radius	Operating pressure at 20°C	Bursting pressure at 20°C	Temperature range °C	Hose weight kg/m
SB-COR 04	604.200.250	6.4	14.0	31.8	241	964	-53 to 230	0.28
SB-COR 06	604.200.375	9.6	18.0	44.4	206	826	-53 to 230	0.37
SB-COR 08	604.200.500	12.7	21.8	63.5	124	496	-53 to 230	0.51
SB-COR 12	604.200.750	19.0	28.4	88.9	86.1	344	-53 to 230	0.70
SB-COR 16	604.201.000	25.4	39.4	140.0	68.9	275	-53 to 230	2.70

Pressure/ temperature rates can be limited by end connections.

Pressure and temperature rates

Hose-Type	SB-COR 04	SB-COR 06	SB-COR 08	SB-COR 12	SB-COR 16
Temperature, °C	Operating pressure, bar				
-53 to 37	241	206	124	86.1	68.9
93	241	182	124	86.1	68.9
148	236	172	124	86.1	68.9
204	228	171	124	86.1	68.9
230	228	159	124	75.7	68.9

HOSES

SB-COR PTFE Hose with Silicone-Cover (smooth PTFE interior tube, electroconductive)

Product group:

Hoses

Description:

SB-COR PTFE Hose with Silicone-Cover (smooth PTFE interior tube, electroconductive)

SB-COR PTFE Hose with Silicone-Cover

Characterization:

- Highly pure: Ideal for demanding analytic sampling and production processes. Guaranteed taste, odor and color neutral. Maximum resistance against chemicals with highest compatibility.
- Electrically conducting: for applications where electrostatic charges inside the hose must be avoided.
- With ATEX permit for zone 0 (interior)
- Absorption resistant: The special PTFE surface minimizes the absorption of materials such as color excerpts, essential oils and proteins. The hose does not discolour. Humidity absorption <0.01%, corrosion resistant and non oxidizing.
- Temperature-resistant: For temperature ranges from -53°C to +230°C. Autoclavable multiple times; ideal for steam or applications with hot oil. Also suitable for sterilization by means of UV-RADIATION or other methods.
- Perfect surface: Maximum flow rates. Ideal for adhesive and viscous liquids. Simple and reliable cleaning.
- Chemically inert: recognised as the most chemically inert material. Absolutely corrosion resistant and non oxidizing.
- Age resistant: irrespective of time, weather or UV-RADIATION. Does not age during use.
- Frictionless inside and outside: High-quality finished braiding. Smooth for walls and equipment. Frictionless connections/fittings. Smooth and clean, temperature resistant covering.
- Completely vacuum and high pressure suitable: Absolutely safe. Highest level of pliancy without kink remaining. Constant flow rates also with bent SB-COR hoses.

Connections:

- Crimped with Tri-Clamp Ends
- Crimped with customized Connections

Applications:

- Pharmaceutical processes
- Biotechnology
- Food industry
- Cell culture

Certificates:

- USP Class VI
- 3A Standard
- FDA 21 CFR 177.1550
- USDA food-suited

– Various Connection-Types available.
– Customized Connectors on request



All lengths in millimeters (if not specified differently).

Connectors Verbindungstechnik AG, Zürcherstrasse 53, CH-8317 Tagelswangen, Phone: +41 (0)52 354 68 68, Telefax: +41 (0)52 354 68 60
Catalogue Sterile Components Version CS004, Printed 07/2014, Version 2. More information: www.connectors.ch or email: info@connectors.ch

HOSES

U-COR PFA Hose with Silicone-Cover (smooth PFA interior tube)

Product group:

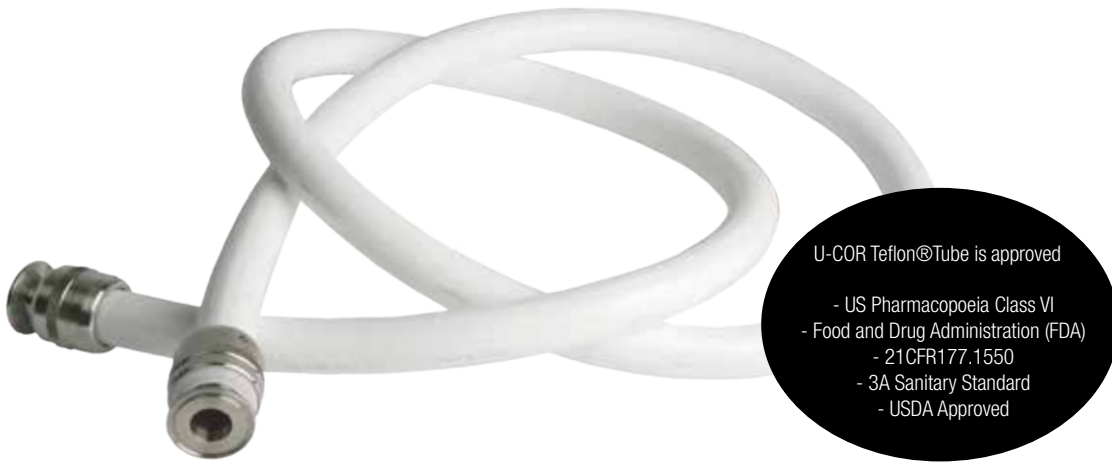
Hoses

Description:

U-COR PFA hose with Silicone-Cover (smooth PFA interior tube)

Remarks:

Technical contents are subject to change

U-COR PFA hose with smooth interior tube for the highest demands								
The U-COR PFA hose has excellent chemical resistance. The inliner is made exclusively from PFA and is free of softeners, additives, and stabilizers. The continuous extrusion of the inliner ensures a smooth internal surface and optimum sterilization results.								
 U-COR Teflon®Tube is approved - US Pharmacopoeia Class VI - Food and Drug Administration (FDA) - 21CFR177.1550 - 3A Sanitary Standard - USDA Approved								
Technical data for S-COR PTFE hose								
Hose-Type	Connectors Item No.	Interior diameter	Exterior diameter	Minimum bending radius	Operating pressure at 20°C	Bursting pressure at 20°C	Temperature range °C	Hose weight kg/m
U-COR 08	604.400.500	12.70	20.3	38.1	20.6	82.6	-53 to 230	0.30
U-COR 12	604.400.750	19.05	28.6	63.5	20.6	82.6	-53 to 230	0.57
U-COR 16	604.401.000	25.40	37.0	102.0	17.2	68.9	-53 to 230	0.94
U-COR 20	604.401.250	31.75	40.5	177.8	13.8	55.1	-53 to 230	1.30
U-COR 24	604.401.500	38.10	51.1	178.0	13.7	55.1	-53 to 230	1.30
U-COR 32	604.402.000	50.80	63.8	178.0	10.3	41.3	-53 to 230	1.90

Pressure/Temperature rates can be limited by end connections.

Pressure and temperature rates					
Hose-Type	U-COR 08	U-COR 12	U-COR 16	U-COR 24	U-COR 32
Temperature, °C	Operating pressure, bar				
-53	13.7	7.9	17.2	13.7	10.3
-17 to 37	20.6	20.6	17.2	13.7	10.3
93	19.2	20.6	17.2	13.7	10.3
148	14.4	18.6	15.8	13.7	10.3
204	11.0	13.4	12.0	13.7	10.3
230	9.6	10.3	10.3	13.0	10.3

U-COR PFA Hose with Silicone-Cover (smooth PFA interior tube)

Product group:

Hoses

Description:

U-COR PFA hose with silicone sheathing (smooth PFA interior tube)

Characteristics of the U-COR PFA hose

Characterization:

- Highly pure: Ideal for demanding analytic sampling and production processes. Guaranteed taste, odor and color neutral. Maximum resistance against chemicals with highest compatibility.
- Absorption resistant: The special PTFE surface minimizes the absorption of materials such as color excerpts, essential oils and proteins. The hose does not discolour. Humidity absorption <0.01%, corrosion resistant and non oxidizing.
- Temperature-resistant: For temperature ranges from -53°C to +230°C. Autoclavable multiple times; ideal for steam or applications with hot oil. Also suitable for sterilization by means of UV-RADIATION or other methods.
- Perfect surface: Maximum flow rates. Ideal for adhesive and viscose rayon liquids. Simple and reliable cleaning.
- Chemically inert: recognised as the most chemically inert material. Absolutely corrosion resistant and non oxidizing.
- Age resistant: irrespective of time, weather or UV-RADIATION. Does not age during use.
- Frictionless inside and outside: High-quality finished braiding. Smooth for walls and equipment. Frictionless connections/fittings. Smooth and clean, temperature resistant covering.
- Completely vacuum and high pressure suitable: Absolutely safe. Highest level of pliancy without kink remaining. Constant flow rates also with bent SB-COR hoses.
- With ATEX permit for zone 1 (interior)

Connections:

- Crimped with tri-clamp ends
- Crimped with customized connections
- Connlock MR-DN (reusable connections)

Applications:

- Pharmaceutical processes
- Biotechnology
- Food industry
- Cell culture

Certificates:

- USP Class VI
- 3A Standard
- FDA 21 CFR 177.1550
- USDA food-suited

HOSES

UB-COR PFA Hose with Silicone-Cover (smooth PFA interior tube, electroconductive)

Product group:

Hoses

Description:

UB-COR PFA hose with silicone sheathing (smooth PFA interior tube, electroconductive)

Remarks:

Technical contents are subject to change

UB-COR PFA Hose with smooth interior tube (electroconductive) for the highest demands								
The UB-COR PFA hose has excellent chemical resistance. The inliner is made exclusively of PFA and is free of softeners, additives and stabilizers. The black graphite meets the requirements of the FDA 21CFR 178.3297 standard. The continuous extrusion of the inliner guarantees a smooth interior surface and optimum sterilization results.								
 UB-COR Teflon®Tube is approved - Food and Drug Administration (FDA) - 21CFR177.1550 (PTFE) - 21CFR178.3297 (Graphit) - 3A Sanitary Standard - USDA Approved								
Technical data for UB-COR PFA hose								
Hose-Type	Connectors Item No.	Interior diameter	Exterior diameter	Minimum bending radius	Operating pressure at 20°C	Bursting pressure at 20°C	Temperature range °C	Hose weight kg/m
UB-COR 08*	604.500.500	12.7	20.3	38.1	20.6	82.6	-53 to 230	0.30
UB-COR 12*	604.500.750	19.0	28.6	63.5	20.6	82.6	-53 to 230	0.57
UB-COR 16	604.501.000	25.4	37.0	102.0	17.2	68.9	-53 to 230	0.94
UB-COR 24	604.501.500	38.1	51.1	178.0	13.7	55.1	-53 to 230	1.30
UB-COR 32	604.502.000	50.8	63.8	178.0	10.3	41.3	-53 to 230	1.90

Pressure/Temperature rates can be limited by the end connections.

*consult factory

Pressure and temperature rates					
Hose-Type	UB-COR 08	UB-COR 12	UB-COR 16	UB-COR 24	UB-COR32
Temperature, °C	Operating pressure, bar				
-53	13.7	7.9	17.2	13.7	10.3
-17 to 37	20.6	20.6	17.2	13.7	10.3
93	19.2	20.6	17.2	13.7	10.3
148	14.4	18.6	15.8	13.7	10.3
204	11.0	13.4	12.0	13.7	10.3
230	9.6	10.3	10.3	13.0	10.3

UB-COR PFA Hose with Silicone-Cover (smooth PFA interior tube, electroconductive)

Product group:

Hoses

Description:

UB-COR PFA hose with silicone sheathing (smooth PTFE interior tube, electroconductive)

Characteristics of the UB-COR PFA hose	
Characterization:	• Highly pure: Ideal for demanding analytic sampling and production processes. Guaranteed taste, odor and color neutral. Maximum resistance against chemicals with highest compatibility. • Electrically conducting: for applications where electrostatic charges must be avoided in the hose interior. • With ATEX permit for zone 0 (interior) • Absorption resistant: The special PTFE surface minimizes the absorption of materials such as color extracts, essential oils and proteins. The hose does not discolor. Humidity absorption <0.01%, corrosion resistant and non oxidizing. • Temperature-resistant: For temperature ranges from -53°C to +230°C. Autoclavable multiple times; ideal for steam or applications with hot oil. Also suitable for sterilization by means of UV-RADIATION or other methods. • Perfect surface: Maximum flow rates. Ideal for adhesive and viscous liquids. Simple and reliable cleaning. • Chemically inert: recognised as the most chemically inert material. Absolutely corrosion resistant and not oxidizing. • Age resistant: irrespective of time, weather or UV-RADIATION. Does not age during the use. • Frictionless inside and outside: High-quality finished braiding. Smooth for walls and equipment. Frictionless connections/fittings. Smooth and clean, temperature resistant covering. • Completely vacuum and high pressure suitable: Absolutely safe. Highest level of pliancy without kink remaining. Constant flow rates also with bent SB-COR hoses.
Connections:	• Crimped with Tri-Clamp ends • Crimped with customized connections
Applications:	• Pharmaceutical processes • Biotechnology • Food industry • Cell culture
Certificates:	• USP Class VI • 3A Standard • FDA 21 CFR 177.1550 • USDA food-suited



CONNECTORS

MOLDED SILICONE ASSEMBLIES

Cell Cull - Bottle Top.....	127
Pump Segments	128



Cell Cull - Bottle Top

Product group:	Molded Silicone Assemblies
Description:	Cell Cull - Bottle Top
Material:	Platinum cured silicone medical grade
Characteristics:	Cast from one piece
Temperature range:	-20°C to max. +130°C
Certificates:	USP Class VI 3A Standard FDA 21 CFR 177.2600

Easy and Quick with moderate prices

Our Cell Cull - Tops are manufactured from medical-grade platinum-cured silicone material that complies with USP Class VI, and USDA Standards.

Custom configurations

The Cell Cull - Bottle Tops are also available in sizes other than those in our table below as well as in custom sizes. Please consult our factory for dimensions, design and prices.



Dimensions for Cell Cull - Bottle Top

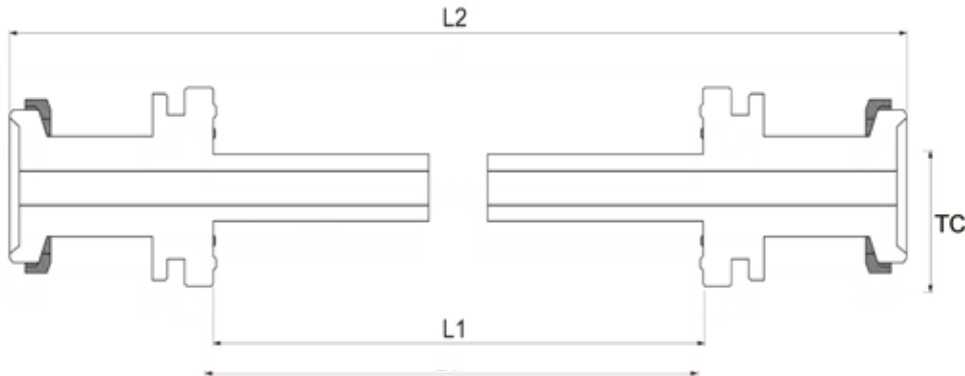
Variants	Material	Ports	AD 1	AD 2	AD 3	ID 1	ID 2	ID 3	Item No.
Variants 1.1	Silicone	3	9.50	9.50	7.00	6.40	6.40	2.40	601.001.999.-1
Variants 2.1	Silicone	2	9.50	9.50	-	6.40	6.40	-	601.001.996.-1
Accessory:									
GL45 screw cap, red	PBT								601.001.995

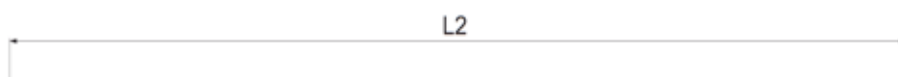
All lengths in millimeters (if not specified differently).

Connectors Verbindungstechnik AG, Zürcherstrasse 53, CH-8317 Tagelswangen, Phone: +41 (0)52 354 68 68, Telefax: +41 (0)52 354 68 60
Catalogue Sterile Components Version CS004, Printed 07/2014, Version 2. More information: www.connectors.ch or email: info@connectors.ch

Connectors Pump Segments

Product Group:	Molded Silicone Assemblies
Description:	Connectors Pump Segments
Material:	platinum-cured LSR (liquid silicone rubber)
Characteristics:	- short, easy to replace pump segments for peristaltic pumps - completely free from dead space and reductions / expansions - with undetachable integrated gasket and supporting ring (no additional TC gasket) - ready-to-use system manufactured under cleanroom conditions, double-packaged and gamma sterilized
Sterilization:	sterilizable at 134°C
Certificates:	- USP Class VI Bio-Comp. - ISO 10993-4 to 10993-18 - radiation Certificate

Brief description:						
Pump tubes are subjected to very heavy mechanical loads. Connectors pump segments are highly resistant and very easy to replace. Only the segment of the pump segment that is put under the most severe stress is replaced.						
Connectors pump segments are suitable for many conventional peristaltic pump heads. For more information please contact Connectors.						
						
Dimensions for Connectors pump segments (further dimensions on request):						
L2	L1	TC	ID	WS	Item No.	
346	280	25	1.6	1.6	699.000.K05	
346	280	25	3.2	2.4	699.000.K06	
346	280	25	4.8	2.4	699.000.K07	
346	280	25	6.4	2.4	699.000.K08	
346	280	25	8.0	2.4	699.000.K09	
346	280	25	9.6	2.4	699.000.K10	





CONNECTORS

PIPE CONNECTIONS ACC. DIN 11864 / FORM A

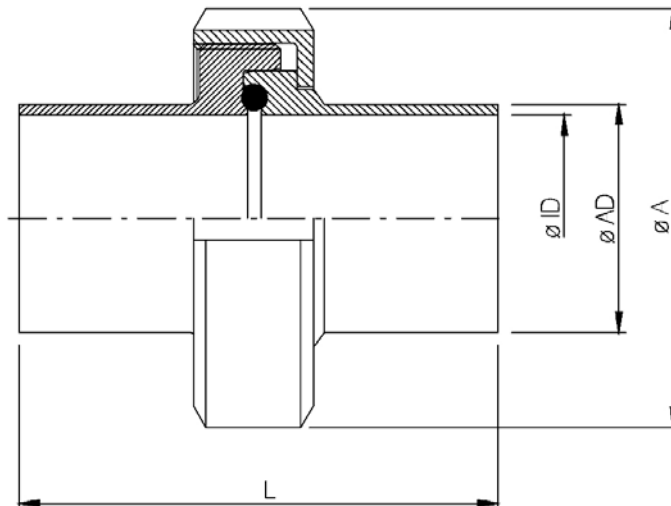
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Aseptic-Screw-Connections acc. DIN 11864-1

Product group:	Pipe Connections acc. DIN 11864 / Form A
Description:	Aseptic-Screw-Connections acc. DIN 11864-1 incl. O-ring
Valid standards:	DIN 11864-1 with weld-on end acc. DIN 11866, Series B (ISO 1127) Nut acc. DIN 11851
Material:	Stnr.-W. 1.4435 BN2 & 1.4301 (Fe < 0.5%) acc. EN 10088-1 EPDM Ethylene-Propylene-Diene rubber
Version / Surface quality:	Right-angled weld-on ends for orbital-welding Ra, internal < 0.4 µm, Ra, external < 1.6 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1B, FDA-Certificate, Certificate acc. EN 10204-2.2
Option:	Electropolishing
Remarks:	*All pressures can be used up to 140°C when using suitable elastomers. Technical contents are subject to change

Dimensions for Aseptic-Screw-Connections acc. DIN 11864-1								
Sizes	A	AD	ID	L	O-Ring	*Max pressure resistance	Item No.	
DIN 11864-1 with weld-on ends acc. DIN 11866, Reihe B (ISO 1127)								
ISO DN 8	38.0	13.5	10.3	76.0	EPDM	40 bar	222.010.008	
ISO DN 10	44.0	17.2	14.0	76.0	EPDM	40 bar	222.010.010	
ISO DN 15	54.0	21.3	18.1	78.0	EPDM	40 bar	222.010.015	
ISO DN 20	63.0	26.9	23.7	78.0	EPDM	40 bar	222.010.020	
ISO DN 25	70.0	33.7	29.7	88.0	EPDM	40 bar	222.010.025	
ISO DN 32	78.0	42.4	38.4	88.0	EPDM	25 bar	222.010.032	
ISO DN 40	92.0	48.3	44.3	90.0	EPDM	25 bar	222.010.040	
ISO DN 50	112.0	60.3	56.3	114.0	EPDM	25 bar	222.010.050	
ISO DN 65	127.0	76.1	72.1	117.0	EPDM	25 bar	222.010.065	
ISO DN 80	148.0	88.9	84.3	122.0	EPDM	25 bar	222.010.080	



Aseptic-Male Union acc. DIN 11864-1

Product group:	Pipe Connections acc. DIN 11864 / Form A
Description:	Aseptic Male union acc. DIN 11864-1
Valid standards:	DIN 11864-1 with weld-on end acc. DIN 11866, Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1
Permissible sterilization temperature:	150°C
Version / Surface quality:	Right-angled weld-on ends for orbital-welding Ra, internal < 0.4 µm, Ra, external < 1.6 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1B
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Aseptic Male Union acc. DIN 11864-1 / Form A						
Sizes	Threading	AD	ID	L	Item No.	
DIN 11864-1 with weld-on ends acc. DIN 11866, Series B (ISO 1127)						
ISO DN	8	RD 28 x 1/8"	13.5	10.3	41.0	222.011.008
ISO DN	10	RD 34 x 1/8"	17.2	14.0	41.0	222.011.010
ISO DN	15	RD 44 x 1/6"	21.3	18.1	43.0	222.011.015
ISO DN	20	RD 52 x 1/6"	26.9	23.7	43.0	222.011.020
ISO DN	25	RD 58 x 1/6"	33.7	29.7	48.0	222.011.025
ISO DN	32	RD 65 x 1/6"	42.4	38.4	48.0	222.011.032
ISO DN	40	RD 78 x 1/6"	48.3	44.3	49.0	222.011.040
ISO DN	50	RD 95 x 1/6"	60.3	56.3	60.0	222.011.050
ISO DN	65	RD 110 x 1/4"	76.1	72.1	64.0	222.011.065
ISO DN	80	RD 130 x 1/4"	88.9	84.3	64.0	222.011.080

The technical drawing shows a cross-section of the aseptic male union. It is a T-shaped component with a central vertical section and two horizontal flanges. The dimensions are labeled as follows: $\varnothing AD$ for the outer diameter of the flanges, $\varnothing ID$ for the inner diameter of the central section, L for the total length of the central section, and $\varnothing Gewinde$ for the thread diameter on the right side of the central section.

All lengths in millimeters (if not specified differently).

Aseptic-Female Union acc. DIN 11864-1

Product group:	Pipe Connections acc. DIN 11864 / Form A
Description:	Aseptic Female union acc. DIN 11864-1
Valid standards:	DIN 11864-1 with weld-on end acc. DIN 11866, Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1
Permissible sterilization temperature:	150°C
Version / Surface quality:	Right-angled weld-on ends for orbital-welding Ra, internal < 0.8 µm, Ra, external < 1.6 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1B
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Aseptic Female Union acc. DIN 11864-1 / Form A						
Sizes	A	AD	ID	L	Item No.	
DIN 11864-1 with weld-on ends acc. DIN 11866, Series B (ISO 1127)						
ISO DN 8	21.9	13.5	10.3	39.0	222.012.008	
ISO DN 10	27.9	17.2	14.0	39.0	222.012.010	
ISO DN 15	35.9	21.3	18.1	40.0	222.012.015	
ISO DN 20	42.9	26.9	23.7	41.0	222.012.020	
ISO DN 25	48.9	33.7	29.7	47.0	222.012.025	
ISO DN 32	54.9	42.4	38.4	47.0	222.012.032	
ISO DN 40	66.9	48.3	44.3	48.0	222.012.040	
ISO DN 50	84.9	60.3	56.3	62.0	222.012.050	
ISO DN 65	98.9	76.1	72.1	61.0	222.012.065	
ISO DN 80	118.9	88.9	84.3	68.0	222.012.080	

Technical drawing of the Aseptic Female Union showing dimensions. The drawing is a cross-section of the union. It shows a central bore with diameter ID. The outer diameter is labeled as A. The length of the union is labeled as L. The drawing also shows the internal thread and the weld-on ends.

Aseptic-Blind-Male Union acc. DIN 11864-1

Product group:	Pipe Connections acc. DIN 11864 / Form A
Description:	Aseptic-Blind-Male union acc. DIN 11864-1
Valid standards:	DIN 11864-1 for pipe connection acc. DIN 11866, Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1
Permissible sterilization temperature:	150°C
Version / Surface quality:	Ra, internal < 0.8 µm, Ra, external < 1.6 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1B
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Aseptic Blind-Male Union acc. DIN 11864-1 / Form A						
Sizes	Threading	AD	SW	L	Item No.	
DIN 11864-1						
ISO DN 8	RD 28 x 1/8"	23.0	19.0	24.0	222.013.008	
ISO DN 10	RD 34 x 1/8"	28.0	24.0	24.0	222.013.010	
ISO DN 15	RD 44 x 1/6"	34.0	30.0	24.0	222.013.015	
ISO DN 20	RD 52 x 1/6"	44.0	41.0	24.0	222.013.020	
ISO DN 25	RD 58 x 1/6"	53.0	46.0	24.0	222.013.025	
ISO DN 32	RD 65 x 1/6"	58.0	50.0	24.0	222.013.032	
ISO DN 40	RD 78 x 1/6"	72.0	65.0	24.0	222.013.040	
ISO DN 50	RD 95 x 1/6"	87.0	80.0	28.0	222.013.050	
ISO DN 65	RD 110 x 1/4"	100.0	95.0	28.0	222.013.065	
ISO DN 80	RD 130 x 1/4"	120.0	115.0	30.0	222.013.080	

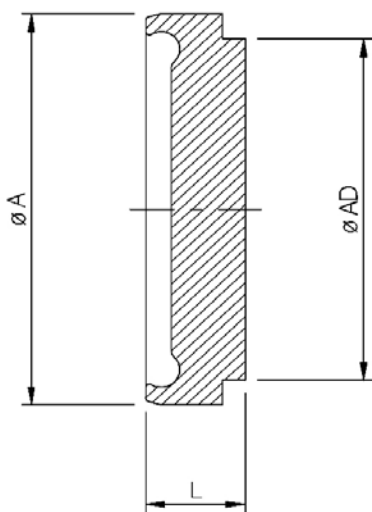
The technical drawing shows a cross-section of the Aseptic Blind-Male Union. It features a central threaded section with a diameter labeled 'Ø Threading'. The total length of the component is labeled 'L'. The outer diameter of the main body is labeled 'Ø AD'. The width of the threaded section is labeled 'SW'. The drawing also shows the internal structure of the union, including the blind end and the male thread profile.

All lengths in millimeters (if not specified differently).

Aseptic-Blind-Female Union acc. DIN 11864-1

Product group:	Pipe Connections acc. DIN 11864 / Form A
Description:	Aseptic-Blind female union acc. DIN 11864-1
Valid standards:	DIN 11864-1 for pipe connection acc. DIN 11866 Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1
Permissible sterilization temperature:	150°C
Version / Surface quality:	Ra, internal < 0.8 µm, Ra, external < 1.6 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1B
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Aseptic-Blind-Female Union acc. DIN 11864-1 / Form A					
Sizes	A	AD	L	Item No.	
DIN 11864-1					
ISO DN 8	21.9	18.0	9.0	222.014.008	
ISO DN 10	27.9	24.0	9.0	222.014.010	
ISO DN 15	35.9	30.0	10.0	222.014.015	
ISO DN 20	42.9	35.0	12.0	222.014.020	
ISO DN 25	48.9	41.0	13.0	222.014.025	
ISO DN 32	54.9	48.0	13.0	222.014.032	
ISO DN 40	66.9	61.0	14.0	222.014.040	
ISO DN 50	84.9	79.0	16.0	222.014.050	
ISO DN 65	98.9	93.0	16.0	222.014.065	
ISO DN 80	118.9	114.0	20.0	222.014.080	



The technical drawing shows a cross-section of the Aseptic-Blind-Female Union. Dimension A is the outer diameter of the main body. Dimension AD is the outer diameter of the blind flange. Dimension L is the length of the blind flange.

Aseptic-Flange-Connections acc. DIN 11864-2 Incl. O-Ring

Product group:	Pipe Connections acc. DIN 11864 / Form A
Description:	Aseptic-Flange-Connections acc. DIN 11864-2 incl. O-Ring
Valid standards:	DIN 11864-2 with weld-on end acc. DIN 11866, Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1 EPDM Ethylene-Propylene-Diene rubber
Version / Surface quality:	Right-angled weld-on ends for orbital-welding Ra, internal < 0.8 µm, Ra, external < 1.6 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1B, FDA-Certificate
Option:	Electropolishing
Remarks:	*All pressures can be used up to 140°C when using suitable elastomers. Torque rating for screws/nuts DN 8 to DN 50: 23 Nm DN 65 to DN 100: 46 Nm. Technical contents are subject to change

Dimensions for Aseptic-Flange-Connections acc. DIN 11864-2 / Form A									
Sizes	A	AD	ID	L	Screw Nut	O-Ring	*Max. pressure resistance	Item No.	
DIN 11864-2 with weld-on ends acc. DIN 11866, Series B (ISO 1127)									
ISO DN 8	8	54.0	13.5	10.3	80.0	4 x M8 x 30	EPDM	40 bar	222.020.008
ISO DN 10	10	59.0	17.2	14.0	80.0	4 x M8 x 30	EPDM	40 bar	222.020.010
ISO DN 15	15	62.0	21.3	18.1	80.0	4 x M8 x 30	EPDM	40 bar	222.020.015
ISO DN 20	20	69.0	26.9	23.7	80.0	4 x M8 x 30	EPDM	40 bar	222.020.020
ISO DN 25	25	74.0	33.7	29.7	90.0	4 x M8 x 30	EPDM	40 bar	222.020.025
ISO DN 32	32	82.0	42.4	38.4	90.0	4 x M8 x 30	EPDM	25 bar	222.020.032
ISO DN 40	40	88.0	48.3	44.3	90.0	4 x M8 x 30	EPDM	25 bar	222.020.040
ISO DN 50	50	103.0	60.3	56.3	108.0	4 x M8 x 30	EPDM	25 bar	222.020.050
ISO DN 65	65	125.0	76.1	72.1	112.0	8 x M10 x 30	EPDM	25 bar	222.020.065
ISO DN 80	80	137.0	88.9	84.3	116.0	8 x M10 x 35	EPDM	25 bar	222.020.080
ISO DN 100	100	168.0	114.3	109.7	116.0	8 x M10 x 35	EPDM	10 bar	222.020.100

The technical drawing illustrates a cross-section of the aseptic flange connection. It shows a central vertical pipe with a flange at the top. The flange has a central hole for a screw and nut. The dimensions are labeled as follows: L is the total length of the pipe assembly; A is the outer diameter of the flange; AD is the inner diameter of the flange; and ID is the inner diameter of the central pipe.

All lengths in millimeters (if not specified differently).

Aseptic-Flange with Groove acc. DIN 11864-2

Product group:	Pipe Connections acc. DIN 11864 / Form A
Description:	Aseptic-Flange with Groove acc. DIN 11864-2
Valid standards:	DIN 11864-2 with weld-on end acc. DIN 11866, Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1
Permissible sterilization temperature:	150°C
Version / Surface quality:	Weld-on ends for orbital-welding Ra, internal < 0.8 µm, Ra, external < 1.6 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1B
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Aseptic-Flange with Groove acc. DIN 11864-2 / Form A						
Sizes	A	AD	ID	L	S	Item No.
DIN 11864-2 with weld-on ends acc. DIN 11866, Series B (ISO 1127)						
ISO DN 8	54.0	13.5	10.3	41.5	37.0	222.021.008
ISO DN 10	59.0	17.2	14.0	41.5	42.0	222.021.010
ISO DN 15	62.0	21.3	18.1	41.5	45.0	222.021.015
ISO DN 20	69.0	26.9	23.7	41.5	52.0	222.021.020
ISO DN 25	74.0	33.7	29.7	46.5	57.0	222.021.025
ISO DN 32	82.0	42.4	38.4	46.5	65.0	222.021.032
ISO DN 40	88.0	48.3	44.3	46.5	71.0	222.021.040
ISO DN 50	103.0	60.3	56.3	55.5	85.0	222.021.050
ISO DN 65	125.0	76.1	72.1	57.5	104.0	222.021.065
ISO DN 80	137.0	88.9	84.3	59.5	116.0	222.021.080
ISO DN 100	168.0	114.3	109.7	59.5	146.0	222.021.100

The technical drawing shows a cross-section of the aseptic flange. It features a central vertical pipe with a horizontal flange. The flange has a raised outer rim and a central bore. Dimensions are indicated with arrows: L is the length of the central pipe; S is the thickness of the flange; A is the outer diameter of the flange; AD is the outer diameter of the central pipe; and ID is the inner diameter of the central pipe.

Aseptic-Lapped Flange acc. DIN 11864-2

Product group:	Pipe Connections acc. DIN 11864 / Form A
Description:	Aseptic-Lapped Flange acc. DIN 11864-2
Valid standards:	DIN 11864-2 with pipe connection acc. DIN 11866, Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1
Permissible sterilization temperature:	150°C
Version / Surface quality:	Right-angled weld-on ends for orbital-welding Ra, internal < 0.8 µm, Ra, external < 1.6 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1B
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Aseptic-Lapped Flange acc. DIN 11864-2 / Form A							
Sizes	A	AD	ID	L	S	Item No.	
DIN 11864-2 with with pipe connection acc. DIN 11866, Series B (ISO 1127)							
ISO DN 8	8	54.0	13.5	10.3	40.0	37.0	222.022.008
ISO DN 10	10	59.0	17.2	14.0	40.0	42.0	222.022.010
ISO DN 15	15	62.0	21.3	18.1	40.0	45.0	222.022.015
ISO DN 20	20	69.0	26.9	23.7	40.0	52.0	222.022.020
ISO DN 25	25	74.0	33.7	29.7	45.0	57.0	222.022.025
ISO DN 32	32	82.0	42.4	38.4	45.0	65.0	222.022.032
ISO DN 40	40	88.0	48.3	44.3	45.0	71.0	222.022.040
ISO DN 50	50	103.0	60.3	56.3	54.0	85.0	222.022.050
ISO DN 65	65	125.0	76.1	72.1	56.0	104.0	222.022.065
ISO DN 80	80	137.0	88.9	84.3	58.0	116.0	222.022.080
ISO DN 100	100	168.0	114.3	109.7	58.0	146.0	222.022.100

Technical drawing of an aseptic-lapped flange showing dimensions A, AD, ID, L, and S. The drawing is a cross-section view of the flange, which has a central bore and a flange with a lapped joint. Dimension A is the total height of the flange. Dimension AD is the height of the flange flange. Dimension ID is the internal diameter of the central bore. Dimension L is the length of the flange. Dimension S is the height of the flange flange.

All lengths in millimeters (if not specified differently).

Aseptic-Blind-Flange with Groove acc. DIN 11864-2

Product group:	Pipe Connections acc. DIN 11864 / Form A
Description:	Aseptic Blind-Flange with Groove acc. DIN 11864-2
Valid standards:	DIN 11864-2 for pipe connection acc. DIN 11866 Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1
Permissible sterilization temperature:	150°C
Version / Surface quality:	Right-angled weld-on ends for orbital-welding Ra, internal < 0.8 µm, Ra, external < 1.6 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1B
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Aseptic-Blind Flange with Groove acc. DIN 11864-2					
Sizes	A	S	L	Item No.	
DIN 11864-2					
ISO DN	8	54.0	37.0	11.5	222.023.008
ISO DN	10	59.0	42.0	11.5	222.023.010
ISO DN	15	62.0	45.0	11.5	222.023.015
ISO DN	20	69.0	52.0	11.5	222.023.020
ISO DN	25	74.0	57.0	11.5	222.023.025
ISO DN	32	82.0	65.0	11.5	222.023.032
ISO DN	40	88.0	71.0	11.5	222.023.040
ISO DN	50	103.0	85.0	11.5	222.023.050
ISO DN	65	125.0	104.0	13.5	222.023.065
ISO DN	80	137.0	116.0	13.5	222.023.080
ISO DN	100	168.0	146.0	15.5	222.023.100

Technical drawing of an aseptic blind flange with groove. The drawing shows a cross-section of the flange with dimensions L (total length), S (groove depth), and A (flange thickness). The flange has a central bore and a groove on the outer edge.

Aseptic-Blind Lapped Flange acc. DIN 11864-2

Product group:	Pipe Connections acc. DIN 11864 / Form A
Description:	Aseptic Blind-Lapped Flange acc. DIN 11864-2
Valid standards:	DIN 11864-2 for pipe connection acc. DIN 11866 Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1
Permissible sterilization temperature:	150°C
Version / Surface quality:	Ra, internal < 0.8 µm, Ra, external < 1.6 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1B
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Aseptic-Blind Lapped Flange acc. DIN 11864-2				
Sizes	A	S	L	Item No.
DIN 11864-2				
ISO DN 8	54.0	37.0	10.0	222.024.008
ISO DN 10	59.0	42.0	10.0	222.024.010
ISO DN 15	62.0	45.0	10.0	222.024.015
ISO DN 20	69.0	52.0	10.0	222.024.020
ISO DN 25	74.0	57.0	10.0	222.024.025
ISO DN 32	82.0	65.0	10.0	222.024.032
ISO DN 40	88.0	71.0	10.0	222.024.040
ISO DN 50	103.0	85.0	10.0	222.024.050
ISO DN 65	125.0	104.0	12.0	222.024.065
ISO DN 80	137.0	116.0	12.0	222.024.080
ISO DN 100	168.0	146.0	14.0	222.024.100

The drawing shows a cross-section of the flange. Dimension A is the total height of the flange. Dimension S is the height of the central bore. Dimension L is the length of the lapped section.

All lengths in millimeters (if not specified differently).

Aseptic-Clamp-Connections acc. DIN 11864-3

Product group:	Pipe Connections acc. DIN 11864 / Form A
Description:	Aseptic-Clamp-Connections acc. DIN 11864-3 incl. O-Ring
Valid standards:	DIN 11864-3 with pipe connection acc. DIN 11866, Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1 EPDM Ethylene-Propylene-Diene rubber
Version / Surface quality:	Right-angled weld-on ends for orbital-welding Ra, internal < 0.8 µm, Ra, external < 1.6 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1B, FDA-Certificate
Option:	Electropolishing
Remarks:	*All pressures can be used up to 140°C when using suitable elastomers. Torque rating Hexagon-Nut: 5 Nm Technical contents are subject to change

Dimensions for Aseptic-Clamp-Connections acc. DIN 11864-3 / Form A								
Sizes	A	AD	ID	KI	L	O-Ring	*Max. pressure resistance	Item No.
DIN 11864-3 with with pipe connection acc. DIN 11866, Series B (ISO 1127)								
ISO DN 8	34.0	13.5	10.3	70.0	76	EPDM	40 bar	222.030.008
ISO DN 10	34.0	17.2	14.0	70.0	76	EPDM	40 bar	222.030.010
ISO DN 15	34.0	21.3	18.1	70.0	78	EPDM	40 bar	222.030.015
ISO DN 20	50.5	26.9	23.7	90.0	78	EPDM	40 bar	222.030.020
ISO DN 25	50.5	33.7	29.7	90.0	88	EPDM	40 bar	222.030.025
ISO DN 32	64.0	42.4	38.4	106.0	88	EPDM	25 bar	222.030.032
ISO DN 40	64.0	48.3	44.3	106.0	90	EPDM	25 bar	222.030.040
ISO DN 50	91.0	60.3	56.3	135.0	114	EPDM	25 bar	222.030.050
ISO DN 65	106.0	76.1	72.1	149.0	117	EPDM	16 bar	222.030.065
ISO DN 80	119.0	88.9	84.3	162.0	122	EPDM	16 bar	222.030.080
ISO DN 100	144.4	114.3	109.7	210.0	130	EPDM	16 bar	222.030.100

The technical drawing illustrates a cross-section of an aseptic clamp connection. It shows two pipe flanges joined by a clamp with a central O-ring. Dimension A is the total height of the assembly. Dimension AD is the height of the flange. Dimension ID is the inner diameter of the pipe. Dimension KI is the inner diameter of the clamp. Dimension L is the length of the clamp. The O-ring is shown in the center of the clamp.

Aseptic-Grooved Clamp acc. DIN 11864-3

Product group:	Pipe Connections acc. DIN 11864 / Form A
Description:	Aseptic-Grooved Clamp acc. DIN 11864-3
Valid standards:	DIN 11864-3 with pipe connection acc. DIN 11866, Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2(Fe < 0.5%) acc. EN 10088-1
Permissible sterilization temperature:	150°C
Version / Surface quality:	Right-angled weld-on ends for orbital-welding Ra, internal < 0.8 µm, Ra, external < 1.6 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1B
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Aseptic-Grooved Clamp acc. DIN 11864-3 / Form A							
Sizes	A	AD	ID	L1	L2	Item No.	
DIN 11864-3 with pipe connection acc. DIN 11866, Series B (ISO 1127)							
ISO DN 8	34.0	13.5	10.3	26.0	39.5	222.031.008	
ISO DN 10	34.0	17.2	14.0	26.0	39.5	222.031.010	
ISO DN 15	34.0	21.3	18.1	26.0	40.5	222.031.015	
ISO DN 20	50.5	26.9	23.7	30.0	40.0	222.031.020	
ISO DN 25	50.5	33.7	29.7	30.0	45.5	222.031.025	
ISO DN 32	64.0	42.4	38.4	30.0	45.5	222.031.032	
ISO DN 40	64.0	48.3	44.3	30.0	46.5	222.031.040	
ISO DN 50	91.0	60.3	56.3	40.0	58.5	222.031.050	
ISO DN 65	106.0	76.1	72.1	40.0	60.0	222.031.065	
ISO DN 80	119.0	88.9	84.3	40.0	62.5	222.031.080	
ISO DN 100	144.4	114.3	109.7	40.0	66.5	222.031.100	

Technical drawing of the Aseptic-Grooved Clamp showing dimensions. The drawing is a cross-section of the clamp. It shows an outer diameter labeled $\varnothing AD$, an inner diameter labeled $\varnothing ID$, and a total width labeled $\varnothing A$. The clamp has two flanges, one on the left and one on the right. The left flange has a thickness labeled $L1$ and the right flange has a thickness labeled $L2$.

All lengths in millimeters (if not specified differently).

Aseptic-Lapped Clamp acc. DIN 11864-3

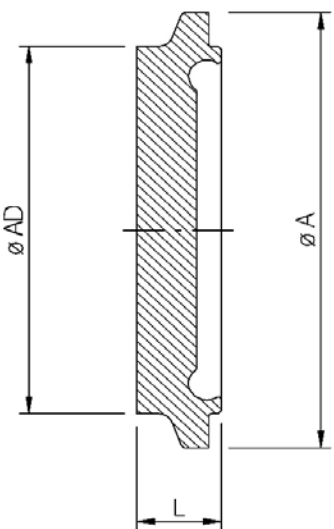
Product group:	Pipe Connections acc. DIN 11864 / Form A
Description:	Aseptic-Lapped Clamp acc. DIN 11864-3
Valid standards:	DIN 11864-3 with pipe connection acc. DIN 11866, Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1
Permissible sterilization temperature:	150°C
Version / Surface quality:	Right-angled weld-on ends for orbital-welding Ra, internal < 0.8 µm, Ra, external < 1.6 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1B
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Aseptic-Lapped Clamp acc. DIN 11864-3 / Form A							
Sizes	A	AD	ID	L1	L2	Item No.	
DIN 11864-3 with pipe connection acc. DIN 11866, Series B (ISO 1127)							
DIN 11864-3	8	34.0	13.5	10.3	26.0	38.0	222.032.008
DIN 11864-3	10	34.0	17.2	14.0	26.0	38.0	222.032.010
DIN 11864-3	15	34.0	21.3	18.1	26.0	39.0	222.032.015
DIN 11864-3	20	50.5	26.9	23.7	30.0	39.0	222.032.020
DIN 11864-3	25	50.5	33.7	29.7	30.0	44.0	222.032.025
DIN 11864-3	32	64.0	42.4	38.4	30.0	44.0	222.032.032
DIN 11864-3	40	64.0	48.3	44.3	30.0	45.0	222.032.040
DIN 11864-3	50	91.0	60.3	56.3	40.0	57.0	222.032.050
DIN 11864-3	65	106.0	76.1	72.1	40.0	58.5	222.032.065
DIN 11864-3	80	119.0	88.9	84.3	40.0	61.0	222.032.080
DIN 11864-3	100	144.4	114.3	109.7	40.0	65.0	222.032.100

Aseptic-Blind-Grooved Clamp acc. DIN 11864-3

Product group:	Pipe Connections acc. DIN 11864 / Form A
Description:	Aseptic-Blind-Grooved Clamp with groove acc. DIN 11864-3
Valid standards:	DIN 11864-3 for pipe connection acc. DIN 11866, Series B (ISO 1127)
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1
Permissible sterilization temperature:	150°C
Version / Surface quality:	Ra, internal < 0.8 µm, Ra, external < 1.6 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1B
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Aseptic-Blind-Grooved Clamp acc. DIN 11864-3				
Sizes	A	AD	L	Item No.
DIN 11864-3				
ISO DN 8	34.0	25.0	11.5	222.033.008
ISO DN 10	34.0	25.0	11.5	222.033.010
ISO DN 15	34.0	25.0	11.5	222.033.015
ISO DN 20	50.5	42.0	11.5	222.033.020
ISO DN 25	50.5	42.0	11.5	222.033.025
ISO DN 32	64.0	54.0	11.5	222.033.032
ISO DN 40	64.0	54.0	11.5	222.033.040
ISO DN 50	91.0	78.0	11.5	222.033.050
ISO DN 65	106.0	93.0	13.5	222.033.065
ISO DN 80	119.0	104.0	13.5	222.033.080
ISO DN 100	144.4	124.0	15.5	222.033.100



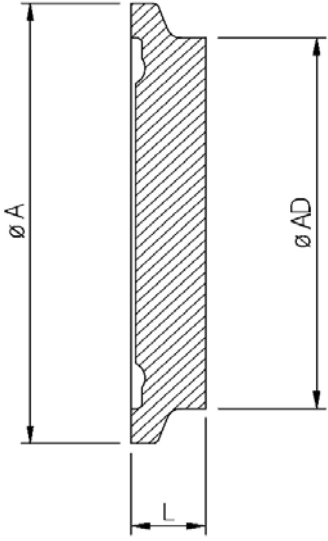
The diagram shows a cross-section of the clamp. Dimension A is the outer diameter, AD is the inner diameter, and L is the length of the clamp body.

All lengths in millimeters (if not specified differently).

Aseptic-Blind-Lapped Clamp acc. DIN 11864-3

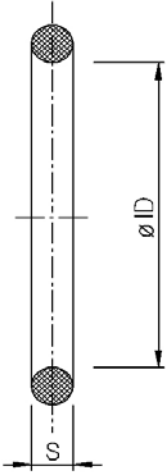
Product group:	Pipe Connections acc. DIN 11864 / Form A
Description:	Aseptic Blind-Lapped Clamp acc. DIN 11864-3
Valid standards:	DIN 11864-3 for pipe connection acc. DIN 11866 Series B ISO 1127
Material:	Stnr.-W. 1.4435 BN2 (Fe < 0.5%) acc. EN 10088-1
Permissible sterilization temperature:	150°C
Version / Surface quality:	Ra, internal < 0.8 µm, Ra, external < 1.6 µm
Pipe-Hygiene Classes:	H 3 acc. DIN 11866
Marking:	Size, material number, melt number, manufacturer code
Certificates:	Certificate acc. EN 10204-3.1B
Option:	Electropolishing
Remarks:	Technical contents are subject to change

Dimensions for Aseptic-Blind-Lapped Clamp acc. DIN 11864-3				
Sizes	A	AD	L	Item No.
DIN 11864-3				
ISO DN 8	34.0	25.0	11.5	222.034.008
ISO DN 10	34.0	25.0	11.5	222.034.010
ISO DN 15	34.0	25.0	11.5	222.034.015
ISO DN 20	50.5	42.0	11.5	222.034.020
ISO DN 25	50.5	42.0	11.5	222.034.025
ISO DN 32	64.0	54.0	11.5	222.034.032
ISO DN 40	64.0	54.0	11.5	222.034.040
ISO DN 50	91.0	78.0	13.5	222.034.050
ISO DN 65	106.0	93.0	13.5	222.034.065
ISO DN 80	119.0	104.0	13.5	222.034.080
ISO DN 100	144.4	124.0	13.5	222.034.100



Aseptic-O-Ring acc. DIN 11864 / Form A

Product group:	Pipe Connections acc. DIN 11864 / Form A
Description:	Aseptic O-Ring acc. DIN 11864 / Form A
Valid standards:	DIN 11864 for pipe connection acc. DIN 11866, Series B (ISO 1127)
Material:	EPDM Ethylene-Propylene-Diene rubber Viton® (FEP), Viton® polymerisate made of vinylidene fluorides and hexafluoride propylenes
Permissible sterilization temperature:	Viton® (FEP): 150°C, EPDM: 132°C (150°C for a short time)
Version / Surface quality:	Surface smooth and nonporous, free of laminar recesses and ridges. Edges without tears and notches.
Marking:	Marking on packing units
Certificates:	Incl. Certificate of conformance FDA-21 CFR 177.2600 for gasket materials.
Remarks:	Technical contents are subject to change Viton® is a registered trademark of DuPont Dow Elastomers

Dimensions for Aseptic-O-Ring					
Sizes	ID	S	Item No. Viton®/FEP	Item No. EPDM	
DIN 11864 with pipe connection acc. DIN 11866, Series B (ISO 1127)					
ISO DN 8	12.0	3.5	222.040.008	222.042.008	
ISO DN 10	16.0	3.5	222.040.010	222.042.010	
ISO DN 15	20.0	3.5	222.040.015	222.042.015	
ISO DN 20	26.0	3.5	222.040.020	222.042.020	
ISO DN 25	32.0	5.0	222.040.025	222.042.025	
ISO DN 32	40.5	5.0	222.040.032	222.042.032	
ISO DN 40	46.5	5.0	222.040.040	222.042.040	
ISO DN 50	58.5	5.0	222.040.050	222.042.050	
ISO DN 65	73.5	5.0	222.040.065	222.042.065	
ISO DN 80	86.5	5.0	222.040.080	222.042.080	
ISO DN 100	111.0	5.0	222.040.100	222.042.100	
Material resistance: see chapter Tri-Clamp Connections (Page 29)					



CONNECTORS

CONDITIONS OF SALE AND SUPPLY

Connectors Verbindungstechnik AG Conditions of Sale and Supply



1. SCOPE

- 1.1 These General Terms and Conditions of Purchase (the "Purchase Terms") shall apply exclusively for the delivery of products and the performance of related works or services (the "Products") by the supplier (the "Supplier") to Connectors Verbindungstechnik AG ("Connectors").
- 1.2 Other provisions, in particular the Supplier's general terms and conditions, shall not apply, irrespective of whether or not such general terms and conditions have been expressly rejected by Connectors or not. The Purchase Terms shall also apply exclusively if Connectors, having knowledge of other general terms and conditions, effects contractual performance without reservation.
- 1.3 Any additional or special agreements between Connectors and the Supplier require written form in order to be effective. This also applies to the cancellation of this written form requirement.

2. PURCHASE ORDERS

- 2.1 Purchase orders by Connectors are valid only if made in writing, text form (including fax and e-mail) or through electronic data interchange (EDI) by authorized representatives of Connectors.
- 2.2 Purchase orders by Connectors are to be accepted by the Supplier within one week. Thereafter, Connectors shall no longer be bound by the respective purchase order. As of the second delivery, the respective purchase order shall be deemed accepted if the Supplier does not accept such a purchaser order within one week.
- 2.3 Changes or amendments to a purchase order require Connectors express confirmation in order to be effective. The confirmation is subject to the requirements of Clause. Connectors may request the Supplier to accept reasonable changes in manufacture or processing of the Products.
- 2.4 Unless otherwise agreed in writing, no remuneration or reimbursement of costs shall be paid for visits or the drawing-up of cost estimates, project studies or other preparatory documents for the conclusion of a contract.

3. PRODUCT SPECIFICATIONS AND COMPLIANCE WITH REGULATIONS

- 3.1 The Products shall comply with the specifications (e.g. drawings for production material and technical specifications for tools and equipment) and shall be state-of-the-art and fulfil the indicated functions and purposes.
- 3.2 The Supplier shall remain competitive with other suppliers in terms of price, technology, quality or other material terms of supply.
- 3.3 The Supplier guarantees that the Products comply with all applicable statutory laws and regulations, in particular with all regulatory requirements under applicable product safety, environmental and export control laws. The Supplier further guarantees to comply with all applicable anti-corruption laws and shall observe the "NORMA-Group Anti-Corruption and Anti-Money-Laundering Contractual Provisions" (available on www.normagroup.com), as amended from time to time by NORMA.
- 3.4 The Supplier guarantees that the Products are free from defects in Description (Rechtsmängel), and notably free from patent rights, copyrights and other intellectual property rights of third parties in the member states of the European Union and in the agreed country of destination, and that no patents, copyrights or other intellectual property rights of third parties are infringed, notably by the delivery and the use of the Products. The Supplier shall review and inform Connectors in writing of third party rights as well as its own patent rights, copyrights and other intellectual property rights.
- 3.5 The Supplier shall observe the "Logistics Quality Requirements for Deliveries of Suppliers to the NORMA-Group" (available on www.normagroup.com), as amended from time to time by NORMA.

4. QUALITY AND DOCUMENTATION

- 4.1 The Supplier shall ensure that only qualified personnel is employed for the Products.
- 4.2 The Supplier shall ensure that defective Products, as well as other malfunctions or malpractices within the manufacture of the ordered Products, will be immediately, at the latest 48 hours after occurrence, communicated in writing to Connectors. This applies especially for already delivered Products in order to enable Connectors to take immediate measures or action.
- 4.3 Any changes concerning the specified ordered Products or the related processes are subject to Connectors' prior written approval.
- 4.4 The Supplier shall constantly test and monitor the quality and specification of the Products. Furthermore, the Supplier shall keep corresponding records of the test results available for Connectors.
- 4.5 The Supplier shall ensure, with respect to an audit, that Connectors (as well as customers of Connectors and any authorities) have access to all facilities and documents concerning the placed purchase order.
- 4.6 The Supplier shall archive documents to be filed for ten years and shall secure these documents against unauthorized access and protect against deterioration.

5. DELIVERY, DELIVERY DATES AND RETENTION OF DESCRIPTION

- 5.1 Unless otherwise agreed in writing, deliveries of the Products shall be made DDP Incoterms© 2010 to the place of delivery specified by Connectors in the purchase order.
- 5.2 Shipment shall be made at the Supplier's risk. The Supplier shall bear the risk of loss, damage or destruction of the Products up to the time of delivery. This shall also apply if the shipment is made at the request of Connectors. For deliveries including installation or assembly or in the case of other works or services to be performed by the Supplier in relation to the delivery of the Products, the Supplier shall bear the risk up to the time of acceptance of the works or services by Connectors.
- 5.3 In all transit documents, consignment notes or other delivery documents, invoices and any other correspondence, the complete purchase order numbers and any other agreed information shall be stated.
- 5.4 Agreed delivery periods and dates are binding. The date of receipt of the Products at the place of delivery specified by Connectors shall be decisive for adherence to the delivery periods and dates by the Supplier. For deliveries including installation or assembly or in the case of other works or services to be performed by the Supplier in relation to the delivery of Products, the time of acceptance of the works or services by Connectors shall be decisive.
- 5.5 If circumstances become known to the Supplier as a result of which the delivery periods or dates cannot be adhered to, the Supplier shall inform Connectors thereof immediately in writing, stating the reasons and the probable duration of the delay. This shall not affect the agreed delivery periods and dates. In the case of a supply shortfall or any other shortage on the part of the Supplier, the Supplier shall use its best efforts to preferentially fulfil its supply obligations towards Connectors (e.g. privileged allocation to Connectors).
- 5.6 If the delivery periods or dates cannot be adhered to and unless a substitute delivery date for the Products has been expressly agreed by Connectors, the Supplier's failure to effect the delivery of the Products shall entitle Connectors to cancel the Order without liability to the Supplier, to purchase substitute items or services elsewhere and to recover from the Supplier any loss and additional costs incurred.
- 5.7 In the case of default in delivery the Supplier shall pay to Connectors a contractual penalty (Verzugspönale) to the amount of 1% of the delivery value for each completed week of such default, but not exceeding a total of 5% of the delivery value. Connectors may claim additional damages; in this case the contractual penalty is to be accounted against the total damages claim.

- 5.8 Unless otherwise agreed in writing, Connectors will not accept deliveries prior to the agreed delivery periods or dates. Connectors reserves the right to return the Products at the Supplier's expense and risk. If the Products are not returned, they shall be stored by Connectors up to the agreed delivery periods or dates at the Supplier's expense and risk; alternatively, Connectors may accept early deliveries, but the initially agreed terms of payment shall remain unaffected.
- 5.9 Connectors will accept part deliveries only if separately agreed in writing. In such case the Supplier shall indicate in the delivery documents the remaining portion still outstanding including the delivery periods or dates pertaining thereto.
- 5.10 Connectors will accept retention of description to Products ("Reserved Products") if requested by the Supplier, provided that such retention of description shall expire upon payment of the purchase price agreed for the individual Reserved Product, and furthermore provided that Connectors shall be authorized by the Supplier to resell, process and rework the Reserved Products in the course of its ordinary business activities.
- 6. PRICES AND TERMS OF PAYMENTS**
- 6.1 The agreed prices are fixed prices plus the statutory value-added tax, if applicable, as given separately in the invoice. The prices include all charges for delivery, packaging and insurance as well as any duties, charges or levies.
- 6.2 The Supplier shall send auditable invoices in duplicate to the invoice address indicated in the purchase order. Invoices shall not be issued prior to dispatch of the Products and shall not be sent together with the Products.
- 6.3 Invoices will be processed by Connectors only if Connectors' purchase order number is accurately quoted. Inaccurate or incomplete invoices shall be deemed not to have been received until such time as they have been corrected or completed; in this case Connectors will inform the Supplier within a reasonable period.
- 6.4 Unless otherwise agreed in writing, payment shall be made within 14 days of due and proper delivery of the Products and receipt of the invoice with a discount of 3%. At Connectors' choice, payment shall alternatively be made within 90 days of due and proper delivery of the Products and receipt of the invoice. For deliveries including installation or assembly or in the case of other works or services to be performed by the Supplier in relation to the delivery of the Products, the payment periods shall not start before the time of acceptance of the works or services by Connectors.
- 6.5 The interest rate in the case of default of payment for remuneration claims shall be 5% per annum.
- 7. NOTIFICATION OF AND CLAIMS FOR DEFECTS**
- 7.1 Defect shall mean any fault in the Products in deviation from the specification and any other improper function of the Products. A defect shall be assumed even if the item's usefulness has only been slightly impaired or there is only a slight deviation from the agreed quality. Obvious defects are externally visible defects such as obvious damages in transit as well as obvious deviations of identity and quantity of the Products.
- 7.2 Connectors shall examine the state of the Product as soon as the regular course of business permits, generally speaking within 30 days following receipt and shall notify the Supplier of all obvious defects in writing. For deliveries including installation or assembly or in the case of other works or services to be performed by the Supplier in relation to the delivery of the Products, obvious defects shall be notified within 30 days of acceptance of the works or services by Connectors. Defects which are not obvious shall be notified within 30 days of being discovered.
- 7.3 Should there be a defect, Connectors may, at its choice, demand a rectification of the defect free of charge, a reduction in the price corresponding to the reduced value, rescind the contract, or demand a delivery of substitute goods. Substitute deliveries may, in particular, be effected by exchanging the defective components. Connectors reserves the right to demand compensation in all cases. The Supplier shall be liable for any follow-up action, any pure financial losses or any consequential harm caused by a defect within the period of limitation for compensation for damages or defects, without regard to any fault.
- 7.4 If the Supplier grants a guarantee with respect to certain qualities, which restricts the aforementioned rights of Connectors (e.g. exclusion of repudiation of contract for breach of warranty and reduction of purchase price) the warranty claims of these Purchase Terms shall prevail. If the said guarantee exceeds the rights under these Purchase Terms (e.g. longer guarantee period), the Supplier's guarantee shall apply.
- 7.5 The limitation period for claims for defects shall be 3 years commencing from delivery of the Product unless the Supplier has granted a longer guarantee period. Article 210 of the Swiss Code of Obligations is hereby explicitly excluded.
- 7.6 In the case of serial defects (defects of the same type which occur in at least 5% of the Products delivered), Connectors may reject the entire delivery as defective and assert the above mentioned claims for defects in the entire delivery. Connectors reserves the right to reject the entire delivery for any other quality related reason.
- 7.7 Should the Supplier fail to make subsequent performance within a reasonable period as set by Connectors, Connectors may, at the Supplier's expense, perform itself any acts reasonably required to rectify the defect or have such acts performed by a third party. Connectors may, by way of mitigation of damages, itself rectify defects that are not of a material nature, at the Supplier's expense.
- 7.8 The place of subsequent performance (Erfüllungsort der Nacherfüllung) shall be the place where the defective Product is currently located in accordance with its usual or agreed function.
- 7.9 In the case of subsequent performance by way of replacement delivery (Nachlieferung), the limitation period shall commence anew from the time of replacement delivery, unless such replacement delivery appears insignificant in light of its volume, duration and costs, or unless Connectors had to assume that, in light of the Supplier's reaction, the Supplier did not consider being obliged to make subsequent performance but rather did so as a gesture of goodwill or for other similar reasons. The same shall apply in the case of rectification (Nachbesserung) as far as the same defect or the consequences of a failed rectification are concerned.
- 8. INTELLECTUAL PROPERTY RIGHTS**
- 8.1 The Supplier shall hold harmless, indemnify and defend Connectors as well as its affiliates and customers against any third party claims asserted due to an infringement by the Products of patent rights, copyrights or other intellectual property rights. Further claims for defects shall not be affected thereby.
- 8.2 In the event that the Products infringe patent rights, copyrights or other intellectual property rights of third parties, the Supplier shall use its best efforts to place Connectors in a position to use the Products without infringing such intellectual property rights of third parties.
- 9. PRODUCT LIABILITY AND LIABILITY FOR REGULATORY REQUIREMENTS**
- 9.1 In the case that claims are asserted against Connectors for infringement of official safety, environmental, export control or anti-corruption laws and regulations or other applicable regulatory requirements as well as national or foreign product liability laws, based on such defects in Connectors' products that are attributable to the delivery of defective Products or based on other acts or omissions attributable to the Supplier, the Supplier shall hold harmless, indemnify and defend Connectors against such claims insofar as the damage caused originates from the sphere of responsibility or the organisation of the Supplier. This obligation to indemnify and defend shall apply on first demand.
- 9.2 The Supplier shall reimburse Connectors for all expenses reasonably incurred for recall actions and other damage prevention actions by Connectors or its customers, e.g. public warnings, insofar as such actions originate from the sphere of responsibility or the organisation of the Supplier. Connectors shall inform the Supplier of the type and scope of any such actions and give the Supplier the opportunity to comment thereon.
- 9.3 The Supplier shall take out and maintain adequate product liability insurance and insurance coverage for the costs of recall actions and other damage prevention actions. At Connectors request copies of the insurance policies shall be submitted.
- 10. OBJECTS AND TOOLS BELONGING TO CONNECTORS**
- 10.1 Connectors shall retain title of any objects made available by Connectors to the Supplier. The processing (Verarbeitung) or reworking (Umbildung) of such objects by the Supplier shall always be carried out for Connectors.
- 10.2 Any tools made available by Connectors to the Supplier shall remain the property of Connectors and shall be clearly marked as such by the Supplier. The Supplier shall use such tools exclusively for the manufacture of the Products ordered by Connectors. The Supplier shall provide sufficient insurance for such tools at their replacement value against loss, damage and destruction of such tools. Any incidents shall be notified by the Supplier to Connectors without undue delay in writing.

11. FORECASTS

- 11.1 Unless otherwise agreed in writing, Connectors may inform the Supplier on a regular basis of the updated expected supply requirements for the Products for the following months. Such forecasts shall be binding purchase orders for the Products only to the extent designated by Connectors.
- 11.2 Connectors may place additional short-term purchase orders if further Products are needed in addition to the quantities set out in the forecast. The Supplier shall always use its best efforts to meet the supply requirements of Connectors.
- 11.3 Clauses 2.1 and 2.2 shall apply to such purchase orders.

12. TERMINATION OF CONTRACT

- 12.1 Connectors may terminate any contract with immediate effect if:
- (a) the Supplier commits a material breach of a contract;
 - (b) the Supplier becomes insolvent, an application to initiate insolvency proceedings against the Supplier has been filed, any such application has been rejected due to lack of assets, any executions against the Supplier have been fruitless or any execution measures have been initiated against the Supplier which have not been cancelled within one month (e.g. cancellation of seizure);
 - (c) the Supplier has breached applicable anti-corruption laws [or has failed to comply with the current "NORMA-Group Anti-Corruption and Anti-Money-Laundering Contractual Provisions"];
 - (d) the Supplier is in default in delivery, but only after fruitless expiry of an additional period for delivery as set by Connectors if required;
 - (e) the Supplier is not competitive with other suppliers in terms of price, technology, quality or other material terms of supply; or
 - (f) an event occurs which alters the equilibrium of the contract either because the cost of Connectors' performance has increased or because the value of the performance Connectors receives has diminished, provided that such event is beyond Connectors' reasonable control and could not reasonably have been foreseen by Connectors at the time of the conclusion of the contract.
- 12.2 Termination notices have to be made in writing.

13. CONFIDENTIALITY AND PUBLIC ANNOUNCEMENTS

- 13.1 The Supplier shall keep secret all documents, information and data (including, without limitation, drawings, plans, specifications, technical data, samples, processes as well as prices and other contractual terms agreed with the Supplier) which Connectors orally or in writing marks or designates as or presumes to be 'confidential' and which are made available or known to the Supplier on the basis of the co-operation ("Confidential Information"). The Supplier shall treat Confidential Information in the same way as its own confidential information, but at least with the due care of a prudent businessman.
- 13.2 Any disclosure of Confidential Information to a third party requires Connectors' prior written approval. Disclosure of Confidential Information to employees and agents is permitted only to the extent that disclosure is required for the performance of the Supplier's contractual obligations in relation to Connectors. The Supplier shall impose the same confidentiality obligations on all persons or companies entrusted by the Supplier with Confidential Information.
- 13.3 The confidentiality obligations shall not apply for information
- (a) which had been known to the Supplier prior to receipt of the same from Connectors;
 - (b) which was independently developed by the Supplier without reference to or use of Connectors' information;
 - (c) which the Supplier lawfully obtained from a third party who, to the Supplier's knowledge, was not subject to a confidentiality undertaking vis-à-vis Connectors;
 - (d) which became known to the Supplier without violation of these provisions or any other regulations on the protection of Connectors' business secrets or which are or were publicly known; or
 - (e) which the Supplier is obligated to disclose based on statutory, official or judicial requirements, in which case the Supplier shall inform Connectors prior to such disclosure and shall restrict as far as possible the extent of such disclosure.
- 13.4 Confidential Information shall remain the property of Connectors and may neither be copied nor reproduced without Connectors' prior written approval unless required for the performance of the Supplier's contractual obligations in relation to Connectors. At Connectors' request Confidential Information shall be returned to Connectors or destroyed.
- 13.5 Where the Products are customized for Connectors in accordance with Confidential Information, none of such Products or documents manufactured by the Supplier in accordance with such Confidential Information may be made available to third parties without Connectors' prior written approval.
- 13.6 The Supplier may not make public announcements on or otherwise publicly refer to the contractual relationship without Connectors' prior written approval.
- 13.7 The foregoing obligations shall continue to be in effect after the expiration or termination of the contractual relationship.

14. SET-OFF AND RIGHT OF RETENTION

- 14.1 Set-off and exercise of a right of retention by the Supplier due to contested counterclaims or counterclaims which are not final or res judicata are excluded.

15. ASSIGNMENT AND SUBCONTRACTING

- 15.1 Without Connectors' prior written approval, the Supplier shall not assign its rights and obligations under the contractual relationship, neither in part nor in whole. Connectors may assign its rights and obligations, notably to affiliated companies.
- 15.2 Without Connectors' prior written approval, the Supplier shall not subcontract the performance of any deliveries, works or services to be delivered to Connectors. Irrespective of such approval by Connectors, the Supplier shall remain responsible and be liable for the performance of any subcontractor.

16. GOVERNING LAW AND PLACE OF JURISDICTION

- 16.1 All legal relations between Connectors and the Supplier shall be governed exclusively by Swiss substantive law, with the exclusion of the United Nations Convention on Contracts for the International Sale of Goods (CISG).
- 16.2 The exclusive place of jurisdiction shall be Tagelswangen, Switzerland. However, Connectors may at its choice sue the Supplier at the latter's registered office.

17. SEVERABILITY

- 17.1 Should individual provisions of these Purchase Terms be or become invalid, the validity of the remaining provisions shall not be affected thereby.



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