

# Close at hand

Installation material for Hygienic Fluid Handling Equipment,  
October 2021



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# Everything at your fingertips

Alfa Laval's solutions for hygienic applications are the result of continuous innovation, and our dedicated efforts to meet the challenges faced by industries. With the Alfa Laval online catalogue, detail of our comprehensive product range can now be conveniently at your fingertips at all times.

Whatever you need, and wherever you are, Alfa Laval's components and expertise are always readily available through our network of over 1500 channel partners, supported by our own sales companies around the world.

Alfa Laval has a wide range of tools and resources to make life easier. Our online catalogue is easily accessible and updated regularly. We also offer the possibility to download 2D and 3D drawings. Go to [www.alfalaval.com/high](http://www.alfalaval.com/high).

At [www.alfalaval.com/biopharm](http://www.alfalaval.com/biopharm) you can download the comprehensive Q-doc documentation for our UltraPure portfolio.

Our channel partners also have access to a growing pool of resources at the Alfa Laval eBusiness portal, including full documentation, real-time stock availability and the opportunity to order and track shipments online. As well as being kept up to date on the latest developments through the InSight newsletter.

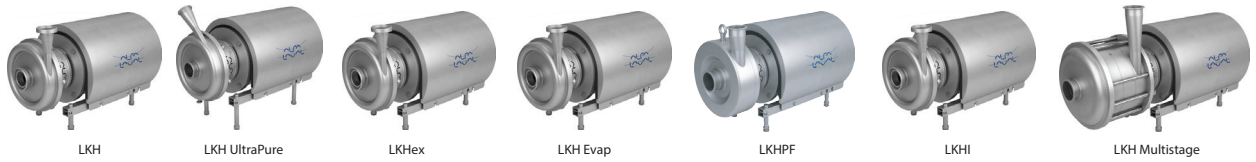
Discover a world of hygienic solutions at our dedicated portals:

[www.alfalaval.com/biopharm](http://www.alfalaval.com/biopharm)

[www.alfalaval.com/food](http://www.alfalaval.com/food)



## Pumps Centrifugal Pumps



LKH

LKH UltraPure

LKH Hex

LKH Evap

LKH PF

LKH I

LKH Multistage

## Valves and Automation Double Seat Valves



Aseptic Mixproof

Unique Mixproof

Unique Mixproof 3-body

Unique Mixproof High Alloy

Unique Mixproof UltraPure

Unique Mixproof Large Particle

Unique Mixproof Tank Outlet

Unique Mixproof Horizontal Tank

### Shutter Valve



MH Shutter

### Control/Check Valves



Unique Vacuum Breaker



LKC-2 Non-Return



LKC UltraPure



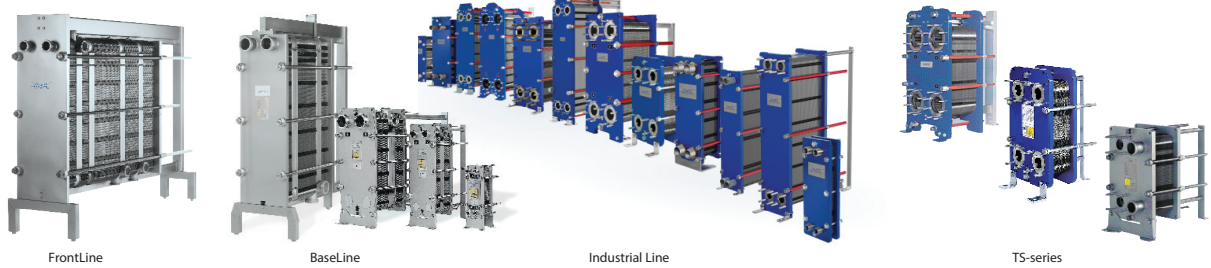
LKV-2 Air-Relief



LKBV Air-Blow

## Heat Transfer

### Gasketed Plate Heat Exchangers



FrontLine

BaseLine

Industrial Line

TS-series

## Tank Equipment

### Tank cleaning machines



TJ20G

TJ40G

SaniJet 25 UltraPure

SaniJet 20

Multijet 25

GJ 7

### Agitators and Mixers



Hybrid Powder Mixer

Rotary Jet Mixer

LeviMag

LeviMag UltraPure

ALS

## Installation Hygienic Tubes and Fittings



Flanges, Clamps and Unions

Bends, Tees and Reducers

Tubes and Tube Support

UltraPure Tubes &amp; Fittings

Strainers

### Filters and Strainers



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LKH Prime



LKH Prime UltraPure



SolidC



SolidC UltraPure



MR

Double Seal Valves



SMP-BC



SMP-BC 22

Single Seat Valves



Unique SSV



Unique SSV Change-over



Unique SSV Aseptic



SSV Tangential



Unique SSV Tank Outlet



Unique SSV Manual



Unique SSSV Small Single Seat



LKAP Air-Operated

Safety Valves



Safety Valve



SB Anti Vacuum House



SB Anti Vacuum Valve



SB Pressure Relief Valve

Sample Valves



Unique Sampling Valve



SB Membrane Sample Valve



SB Micro Sample Port



SB Micro Sample Port Type M

Fusion-Bonded Plate Heat Exchangers



AlfaCond / AlfaVap

Brazed Plate Heat Exchangers



AlfaNova



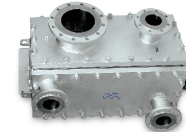
Brazed PHE

Welded Spiral Heat Exchangers



Spiral Heat Exchangers

Welded Plate and Block Heat Exchangers



Combabloc Free Flow



GJ A6



GJ 9



GJ 4



Rotacheck



SaniMidget Retractor



SaniMicro



SaniMidget

Tank Covers



ALB



ALTB



LKDC-LP



Type R



LKD



Type CG

Membranes and Filters



Spiral Membranes



Plate and Frame module



Flat sheet membranes



Test Units



Housing



ATD Couplers



Safety Filters

Auxiliary Membrane Equipment



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Rotary Lobe Pumps



OptiLobe



SRU



SX



SX UltraPure



DuraCirc



DuraCirc Aseptic



Twin Screw

Circumferential Piston Pumps

Twin Screw

Butterfly Valves



LKB



LKB-F



LKB UltraPure

Diaphragm Valves



Unique DV-ST UltraPure

Ball Valves



SBV Sanitary

Regulating Valves



Unique RV-ST



Unique RV-P



CPM-2

Sensing and Control



ThinkTop V70



ThinkTop V50



ThinkTop D30



ThinkTop Basic Intrinsically safe



IndiTop



Unique Control LKB

Scraped Surface Heat Exchangers



Contherm

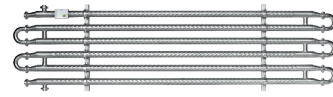
Turbular Heat Exchangers



Pharma-Line



Pharma-X



Visco-Line



SaniMagnum



SaniMidget SB



SaniMagnum SB



SaniMega SB

Static Spray Balls



LKRK Static Spray Ball

Tank Accessories



Type C



Sight Glasses



Tank Feet



Unique Flexbody

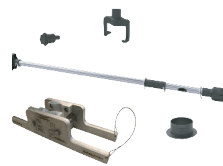
Service and Spare Parts



Service Kits



Service Tools Valves



Service Tools Mixing & Blending



Service Tools Tank Cleaning



Service Tools Pumps

Service Tools



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# Technical Information

## Stainless Steel and Rubber Materials

### Stainless steel

Our stainless steel material have the following demands to the contents of the most essential alloys:

Descriptions	Standard	Chrome Cr%	Nickel Ni%	Molybdenum	
				Mo%	Carbon C%
AISI 304	ASTM A270	18.0-20.0	8.0-10.5	0.0	≤ 0.08
AISI 304L	ASTM A270	18.0-20.0	8.0-12.0	0.0	≤ 0.03
AISI 316L	ASTM A270	16.0-18.0	10.0-14.0	2.0-3.0	≤ 0.03
1.4301 (304)	EN 10088-1 (X 5CrNi18-10)	17.0-19.5	8.0-10.5	0.0	≤ 0.07
1.4307 (304L)	EN 10088-1 (X 2CrNi18-9)	17.5-19.5	8.0-10.0	0.0	≤ 0.03
1.4401 (316)	EN 10088-1 (X 5CrNiMo17-12-2)	16.5-18.5	10.0-13.0	2.0-2.5	≤ 0.07
1.4404 (316L)	EN 10088-1 (X 2CrNiMo17-12-2)	16.5-18.5	10.0-13.0	2.0-2.5	≤ 0.03
1.4435 (316L)	EN 10088-1 (X 2CrNiMo18-14-3)	17.0-19.0	12.5-15.0	2.5-3.0	≤ 0.03
1.4571 (316Ti)	EN 10088-1 (X6CrNiMoTi17-12-2)	16.5-18.5	10.5-13.5	2.0-2.5	≤ 0.08

### Rubber materials

In order to obtain the longest possible lifetime for rubber seals it is essential to choose the right quality for the actual duty. Consequently when choosing rubber quality, the characteristics of the different rubber types should be considered. All product wetted rubber material are in conformity of FDA.

#### EPDM rubber (Ethylene Propylene)

EPDM rubber is widely used within the food industry as it is resistant to most products used in this sector. Another advantage is that it may be used to a recommend max. temperatures of 140°C (244°F). However, there is one essential limitation, EPDM is not resistant to organic and non-organic oils and fats.

#### Actylonitrile Butadiene Rubber, NBR

NBR is the rubber type most frequently used for technical purposes. It is quite resistant to most hydrocarbons, e.g oil, grease and fat. It is sufficiently resistant to diluted lye and nitric acid and may be used to a recommend max. 95°C (203°F). As NBR is attacked by ozone it may not be exposed to ultraviolet rays and should thus consequently be stored so that this is avoided.

#### Silicone rubber, Q

The most significant quality of silicone rubber is that it can be applied from temperatures below -50°C (-58°F) to approx. + 180°C (356°F) and still keep its elasticity. The chemical resistance is satisfactory to most products. However, undiluted lye and acids as well as hot water and steam may destroy silicone rubber. The resistance to ozone is good.

#### Fluorine rubber, FPM

FPM is often used when other rubber types are unsuited, especially at high temperatures up to approx. 180°C (356°F). The chemical resistance is good to most products, however hot water, steam, lye, acid and alcohol should be avoided. The resistance to ozone is good.

#### Hydrogenated actylonitrileButadiene Rubber, HNBR

Mechanically strong and normally resistant to ozone and strong oxidizers, animal and vegetable fats, nonpolar solvents, oils and lubricants, water and aqueous solutions. The recommend max. temperature is 130°C (266°F).

#### Perfluoroalkoxy polymer, PFA

PFA is very similar to PTFE, but opposite to those PFA is thermo plastic and has minimal porosity. PFA has a very high mechanical strength which makes it a perfect choice when dealing with abrasive products. The PFA seal offers longer service intervals. The recommend max. temperature for the PFA seal is 90°C (194°F).



# Technical Information

## Product and chemical resistance of flexible rubber materials

The information below is intended as an aid in selecting the best rubber quality for an actual application. It is not possible to state any general lifetime of rubber seals as many factors influence it: chemical attack, temperature, mechanical wear etc. Extreme temperatures, even within the generally accepted limits, may worsen other kinds of attack and thus reduce the lifetime.

### Ratings

1 = Unsuitable.

2 = Limited suitability.

3 = Normal suitability.

4 = High suitability.

- = Not recommended for other reasons.

The table contains data which have been compiled from the results of our own tests and the recommendations of our raw material suppliers. The data should be considered as recommendations only and will be brought up-to-date from time to time. They are based on constant contact with the specified product.

In case of doubt or lack of information it would be advisable to consult us directly, which will enable us to investigate specific applications.

Product or process		NBR <sup>1)</sup>	HNBR <sup>2)</sup>	EPDM <sup>3)</sup>	Q <sup>4)</sup>	FPM <sup>5)</sup>	PTFE <sup>6)</sup>
Dairy products (milk, cream)		3	3-4	3-4	3-4	-	3-4
Dairy products (sour milk products)		3	3-4	3-4	3-4	-	3-4
Brewery products (beer, hops etc.)		3	3-4	3-4	1-2	2-3	3-4
Wine and yeast		3	3-4	4	4	2-3	3-4
Animal and vegetable fats	100°C	3	4	1-2	3	4	3-4
Water and water solutions	< 70°C	3	4	4	3	2-4	3-4
Hot water and steam	< 130°C	1	4	4	2	-	3-4
Concentrated fruit juices and ethereal oils	< 100°C	1	-	1	1	3	3-4
Non-oxydising acids	< 80°C	1-2	2	3	1-2	2	3-4
Oxydising acids	< 80°C	-	2	3	1	2	3-4
Weak concentrate of lye	< 100°C	2	3-4	4	2	2	3-4
Strong concentrate of lye	< 100°C	1	2-3	3	1	1	3-4
Mineral oils	< 110°C	3	4	-	-	4	3-4
Aliphatic carburetted hydrogen (hexane)		3	3	1	1	4	3-4
Aromatic carburetted hydrogen (benzole)		1	2	1	1	3	3-4
Alcohols		1-3	2-3	2-3	3-4	3-4	3-4
Ester and ketones		1-2	1-2	1-2	1-2	3-4	3-4
Ether		1	2	1	1-3	3-4	3-4
Methylene chloride		1	2	1	2-3	3-4	3-4
Ozone and atmospheric conditions		1-2	3	4	4	3-4	3-4

International designation of flexible rubber materials according to ISO R 1629.

ISO = International standard.

### Notes

	Designation of flexible rubber materials	Abbreviation symbol
1)	Nitrile rubber	N
2)	Hydrogenated acrylonitrile rubber	H
3)	Ethylene propylene rubber	E
4)	Silicone rubber	Q
5)	Fluorinated rubber	F
6)	Polytetrafluor ethylene	



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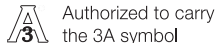
## Compliance and certification

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We can provide documented and certified compliance with a broad spectrum of relevant international and local hygiene standards, worldwide. This helps you significantly reduce the engineering costs of setting up and operating standards-compliant processing plants around the world.

Alfa Laval components covered by this catalog is designed to meet the hygienic design guidelines in the industry.

For special requests please contact your local Alfa Laval organisation



The mission of 3-A SSI is to enhance product safety for consumers of food, beverages, and pharmaceutical products through the development and use of 3-A Sanitary Standards and 3-A Accepted Practices. The 3-A Symbol is a registered mark used to identify equipment that meets 3-A Sanitary Standards for design and fabrication.



ATEX is based on the requirement of the European Directive 94/9/EC (also known as ATEX 95 (100a)), the Equipment Directive. The name ATEX (ATmospheres EXplosible) is commonly given to the framework for controlling explosive atmospheres and the standards of equipment and protective systems used in them



Alfa Laval Q-doc includes:

- 3.1 certificate in accordance to EN 10204 (MTR)
- Elastomer compliance declarations
- Surface finish conformity declaration
- Compliance to the Regulation (EC) No. 1935/2004



CE marking is a mandatory conformity mark for products placed on the market in the European Economic Area (EEA). With the CE marking on a product the manufacturer ensures that the product conforms with the essential requirements of the applicable EC directives. The letters "CE" stand for "Conformité Européenne" ("European Conformity").



The ASME BPE Certification Program is unique in the world, having resulted from widespread industry requested for standardization. It is the leading standard on how to design and build equipment and systems used in the production of biopharmaceuticals. It incorporates current best-practices for enhancing product production efficiencies, lower development and manufacturing costs, and increase quality and safety, while complying with regulations. The Certification Mark with a BPE Designator indicates that components bearing the mark have been manufactured and certified by ASME BPE Certificate Holder.



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# 1. Installation Material

Alfa Laval constantly focuses on producing installation material with long durability, problem-free welding and assembly, and highest possible strength.



Product Presentation .....	1.0
Hygienic, ISO 2037 .....	1.1
DIN Fittings and Tubes .....	1.2
Hygienic, BS 4825, Part 1 .....	1.3
Tri-Clover® Hygienic Installation Material .....	1.4
Tri-Clover ® UltraPure, ASME BPE .....	1.5
Unique Flexbody .....	1.6
Installation accessories .....	1.7

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## Sanitary fittings and tubes

The complete line



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# Performance in good hands

Working with hygienic applications is a question of care, attention to detail and dedication to outstanding performance. Alfa Laval has a proven track record in delivering superior safety, gentle efficiency and uncompromising cleanliness.

In fact, Alfa Laval has the world's broadest portfolio of components and solutions for the food, dairy, beverage, biotech, pharmaceutical and personal care industries. We draw on decades of experience in coming up with innovative and hygienic solutions based on our key technologies of separation, heat transfer, fluid handling, as well as tank equipment and installation material.

We create real value throughout your processes by helping you to optimize your processes, providing reliability, uptime, fast access to replacement parts and service. All this is readily available through our local offices and more than 1,500 sales and working partners around the world.

Here you will find an overview of Alfa Laval tubes and fittings for hygienic applications. For complete technical details and product specification, contact your local Alfa Laval supplier or visit us at [www.alfalaval.com](http://www.alfalaval.com)



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# Unions, clamp fittings and flanges

In order to sustain high quality, it is important that the products are uniform. Therefore tolerances and finishes are carefully controlled. Alfa Laval follows developments in the area of standards.

To enable you to select the best quality rubber seal for your process, Alfa Laval is able to offer various options in addition to its standard seal, including:

- NBR, Nitrile Rubber
- FPM, Fluorine Rubber
- EPDM, Ethylene Propylene
- Nitrile (Buna-N)
- White Nitrile (White Buna-N)
- Viton ®
- PTFE
- Silicone (Q)

Flanges and clamp fittings are suitable for flexible and easy maintenance. Flanges and clamp fittings with finger nuts are especially suited for processes where the load on seals is extra high, where easy control and replacement of seals is necessary and where optimal cleaning is required.



Unions are available in a number of standards, including SMS, ISO, BS, IDF, DS, DIN and clamps.



Alfa Laval's program of bends, tees and reducers are available in diameters from 1" to 4" and from DN10 to DN150.



## Bends, tees and reducers

Alfa Laval constantly focuses on producing installation material with long durability, problem-free welding and assembly, and highest possible strength. Key criteria in the manufacturing process include tight tolerances, a variety of finishes and uniform wall thickness.

### Welding

Alfa Laval is aware of the constantly increasing demands for the quality of welding. In accordance with these demands, all our weld end fittings meet the highest of standards.

The reducers have welding ends and are available for all tube combinations, ensuring you the right diameter and wall thickness for your process.

### Tolerances

Alfa Laval ensures that all the angles are exact and that all the tube, bend and tee connections are uniform. It is very important that you do not have to compensate for any welding irregularities.

### Finishes

In order to ensure that you are able to select a finish that exactly matches your process, Alfa Laval offers a wide range of finishes, including matt, raw, bright and polished.

## The right part for your application

Alfa Laval provides many different standards of tubes and fittings. This means you can always find the part most suitable for your specific application, with exactly the process quality you need.

### Sanitary range tubes and fittings

This product range provides a wide range of tubes and fittings with internal surface finishes that have a Roughness average (Ra) of  $<0.8\text{--}1.6\ \mu\text{m}$ . Tubes and fittings in the Sanitary range comply with DIN 11850, ISO 2037, BS 4825, JIS G 3447 and ASME dimension standards.



### Tri-Clover BioPharm range tubes and fittings

The Tri-Clover BioPharm product range includes a comprehensive selection of tubes and fittings with internal surface finishes with a Roughness average (Ra) of  $<0.4\text{--}0.8\ \mu\text{m}$ , either electropolished or mechanically polished.

Tubes and fittings in this range comply with DIN 11850, ISO 1127 and ASME BPE dimension standards.



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# Tubing

Alfa Laval offers a variety of tubes for the sanitary application process in all worldwide standards.

A flexible pipe support system is also included in the Alfa Laval product program. The system can be used for floor, wall or ceiling installations, by means of a combination of connection pieces and anchor plates.

## Tri-Clover BioPharm tubes

The Alfa Laval tubes are the perfect choice for ultra-clean processes within the demanding pharmaceutical, biotech and light chemical industries.

The tubes are produced in compliance with the DIN 11866, ASME BPE, ISO 2037 and BS 4825, with extremely high demands on materials, hygiene and manufacturing accuracy.



Whatever your sanitary application, Alfa Laval is able to supply the right tube.

# Tri-Clover BioPharm packages

Alfa Laval is your complete source for specialized tubing and fittings required in biotech and pharmaceutical process applications. The quality and surface finish of the Tri-Clover BioPharm products match the exact requirements of the industry. So regardless of your installation material needs, we are able to supply you with the right product – making sure that your process quality is never compromised.



Tri-Clover BioPharm.

## Tri-Clover BioPharm tubes and fittings

Tubes and fittings in the BioPharm range are manufactured in accordance with extra-strict quality assurance procedures.

All cold-formed BioPharm tubular products feature consistent wall thicknesses as a result of the use of fabrication-grade tubing. Once cold forming has been completed, these tubular products are resized to ensure that their ovality always falls within the prescribed tolerances.

A machined square-cut method is used to provide properly finished end facings, ensuring the most accurate, consistent orbital welds. All fittings are inspected visually, while ovality and squareness tolerances are inspected with calibrated equipment. All surface finishes are inspected with a calibrated profilometer to measure the Roughness average (Ra).



The quality and surface finish of the Tri-Clover BioPharm products are determined to match the exact requirements of the industry.



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## Alfa Laval Installation Material

Alfa Laval is your complete source for specialized fittings and tubing required in food, dairy, beverage, personal care, biotechnology and pharmaceutical process applications. Smooth, crevice-free interiors and secure, self-aligning joints are characteristic for Alfa Laval Fittings. Each offers superior corrosion-resistance and unmatched service life. Alfa Laval fittings are designed and manufactured to ensure dimensional accuracy and structural integrity, making them easy to install. Tubing is manufactured to Alfa Laval's stringent specifications, making it a perfect match for the weld fittings. Choose from a wide range of tube sizes, surface finishes and connect options. All products are labelled with a bar code, product information and manufacturing date. This provides the optimum identification and ensures that the product arrives to the job site in a clean orbital weld condition.

The Alfa Laval tubes and fittings are divided into two product ranges, Hygienic and UltraPure. The Hygienic range is suitable for most standard duties and the UltraPure range is suitable for duties with extra high demands on hygiene and cleanability.

### Hygienic range tubes and fittings

The Hygienic product range offers a wide range of tubes and fittings with an internal surface finish from  $Ra < 0.8 \mu\text{m}$  to  $Ra < 1.6 \mu\text{m}$ . The Hygienic range has tubes and fittings according to EN10357-A (DIN 11850), ISO 2037, BS 4825 and ASME BPE dimension standards.

### UltraPure range tubes and fittings

The UltraPure product range offers a wide range of tubes and fittings with an internal surface finish from  $Ra < 0.4 \mu\text{m}$  to  $Ra < 0.8 \mu\text{m}$ , either electro polished or mechanically polished. The UltraPure range has tubes and fittings according to ASME BPE dimension standard. The UltraPure range is manufactured in compliance with the ASME BPE standard. All tubes and fittings are internally cleaned and individually capped and bagged. All product wetted stainless steel products in the UltraPure range are delivered with MTR (Mill Test Report) or with 3.1. certificate in accordance to EN 10204.

The UltraPure range is manufactured under extra strict and thorough quality control methods. Wall thickness integrity is maintained through the use of fabrication grade minimum wall tubing for all cold-formed tubular products. After cold forming, our tube product is resized to ensure that the ovality falls within the prescribed tolerances. End facing is provided with a machined square-cut method. This allows for the most accurate and consistent orbital weld result. All fittings are put through 100% visual inspection and ovality and squareness tolerances are inspected with calibrated equipment. Surface finish is inspected with a calibrated profilometer to ensure the Roughness average (Ra) maximum is not exceeded.



## Surface specification for Alfa Laval Hygienic range

## Hygienic tubes

Alfa Laval designation	Surface texture (Ra $\mu\text{m}$ )			Standard designation	According to	Treatment	Dimension ranges			Tri-Clover® Hygienic
	Internal Surface	Welded area	External				EN 10357-A	ISO 2037	BS 4825	
BC	< 0.8	< 1.6	pickled	BC	EN 10357-A	Annealed	X	X	X	
BD	< 0.8	< 1.6	< 1.0	BD	EN 10357-A	Annealed	X	X	X	
CC	< 0.8	< 1.6	pickled	CC	EN 10357-A	Not annealed	X			
CD	< 0.8	< 1.6	< 1.0	CD	EN 10357-A	Not annealed	X			
Tri-Clover® Hygienic	< 0.8	< 0.8	< 0.8	No. 4 <sup>1)</sup>	3A	Annealed				X

1) According to 3A 33-01 section D1

## Hygienic Fittings

Product	Surface designation		DIN	ISO	Dimension ranges		Tri-Clover® Hygienic
	Internal	External			BS		
Unions	Mat	Mat	X				
	Semi bright	Semi bright	X	X	X		
	Mirror	Mirror					
	3A	3A					X
Bends	Mat	Mat	X				
	Raw	Raw			X		
	Raw	Semi bright	X				
	Raw	Polished	X	X			
	Semi bright	Semi bright		X			
	Polished	Polished			X		
	Mirror	Mirror					
	3A	3A					X
Tees	Mat	Mat	X				
	Raw	Raw			X		
	Polished	Polished	X	X	X		
	Mirror	Mirror					
Reducers	3A	3A					X
	Mat	Mat	X				
	Raw	Semi bright	X				
	Raw	Polished		X	X		
	Semi bright	Semi bright		X			

## Explanation of surface designation for fittings

Alfa Laval designation	Surface texture (Ra $\mu\text{m}$ )		Method
	Internal	Bended area	
Mat	< 1.6	Not spec.	Shot Blasted
Raw	< 0.8 <sup>1)</sup>	Not spec.	As fabricated or tumbled
Semi bright	< 0.8	Not spec.	As fabricated or tumbled
Polished	< 0.8	Not spec.	Mechanically polished
Mirror	< 0.8	Not spec.	Mechanically polished and buffed for a shiny surface
3A	< 0.8	< 0.8	Mechanically polished or as fabricated

1) Not guaranteed in welds.



Surface specification for Alfa Laval Tri-Clover® UltraPure range  
UltraPure tubes and fittings

Alfa Laval designation	Surface texture (Ra $\mu\text{m}$ )			Standard designation		According to	Treatment	Tri-Clover® UltraPure ASME-BPE
	Internal	Welded / Bended area	External	Tubular	Machined			
PL	< 0.5	< 0.5	< 0.8	SF1	SF1	ASME BPE	Annealed	X
PM	< 0.4 EP <sup>3)</sup>	< 0.4 EP <sup>3)</sup>	< 0.8	SF4	SF4	ASME BPE	Annealed	X

<sup>3)</sup> Electro polished

\* SF-Surface Finish. SF4: Ra < 0.375 EP

Conversion table - Surface finish

Correlation between Grit and Ra values

Ra ( $\mu\text{m}$ )	Ra ( $\mu$ inch)	US Grit	UK Grit
3	125		120
2	85		180
1.65	70	80	
1.5	50		240
0.75	30		320
0.62	25	180	
0.45	18	240	
0.40	15		500
0.25	10	320	

Material specification for Alfa Laval Hygienic range

Wetted steel parts

Material	Dimension ranges			
	EN 10357-A	ISO 2037	BS 4825	Tri-Clover® Hygienic
1.4301* (304)	X	X		
1.4307* (304L)	X	X	X	
1.4401* (316)			<sup>1)</sup>	
1.4404* (316L)	X	X	X	
304**				X
316L**				X

<sup>1)</sup> Reducing tees are only available in 1.4401 (316)

\* According to DIN EN 10088-1

\*\* According to ASTM A 269 and A 270.

Seal ring material for clamp fittings

Material	Dimension ranges			
	EN 10357-A	ISO 2037	BS 4825	Tri-Clover® Hygienic
NBR	X	X	X	
Nitrile (Buna-N)				X
White Nitrile (White Buna-N)				X
EPDM	X	X	X	X
FPM	X	X	X	
Viton®				X
PTFE	X	X	X	X
Silicone (Q)	X	X		X

Material specification for Alfa Laval Tri-Clover® UltraPure range

Wetted steel parts

Material	Dimension ranges
	Tri-Clover® UltraPure ASME-BPE
316L*	X

\* According to ASTM A 269 and A 270 S2. All Tri-Clover® UltraPure ASME BPE weld ends are also according to ASME BPE sulphur content 0.005-0.017%



## Gasket material in fittings

Material	Dimension ranges	
	Tri-Clover®	UltraPure
	ASME-BPE	
Nitrile (Buna-N)	X	
White Nitrile (White Buna-N)	X	
EPDM	X <sup>1)</sup>	
FPM		
Viton®	X <sup>1)</sup>	
White Viton®	X	
PTFE	X	
Silicone (Q)	X <sup>1)</sup>	

<sup>1)</sup> EPDM, Viton and Silicone available with USP Class 6 certificate - please request by order.

## Chemical composition table

Material Grade		C	Si	Mn	Chemical composition in % by mass					
Material Number	Standard				P	S	N	Cr	Ni	Mo
1.4404	DIN-EN 10088-1	≤ 0.030	≤ 1.000	≤ 2.00	0.045	≤ 0.015	≤ 0.11	16.50 - 18.50	10.00 - 13.00	2.00 - 2.50
316L	ASTM A 269	≤ 0.035	≤ 0.750	≤ 2.00	0.040	≤ 0.030		16.00 - 18.00	10.00 - 15.00	2.00 - 3.00
316L*	ASTM BPE / ASTM A 270 S-2	≤ 0.035	≤ 0.075	≤ 2.00	0.040	0.005 - 0.017		16.00 - 18.00	10.00 - 10.00	2.00 - 3.00

\*According to ASTM A 269 and A 270 S2. All Tri-Clover® UltraPure ASME BPE weld ends are also according to ASME BPE sulphur content 0.005-0.017%



## Pressure ratings (bar) for Alfa Laval Hygienic range

Material	Dimension ranges			
	DIN	SMS / ISO 2037	BS 4825	Tri-Clover® Hygienic
Tubes (20°C)	39/355	39/355	56-467*	56-351*
Bends, Tees, Reducers (80/200°C)	40/16	40/16	25/15	25/15
Nut unions (80/200°C)	40/16	40/16	25/15	
Flange unions (80/200°C)	25/16	25/16	25/15	

\* Tube pressure ratings depending on size (larger diameter smaller pressure rating)

## Pressure ratings (bar) of Tri-Clamp® Connections

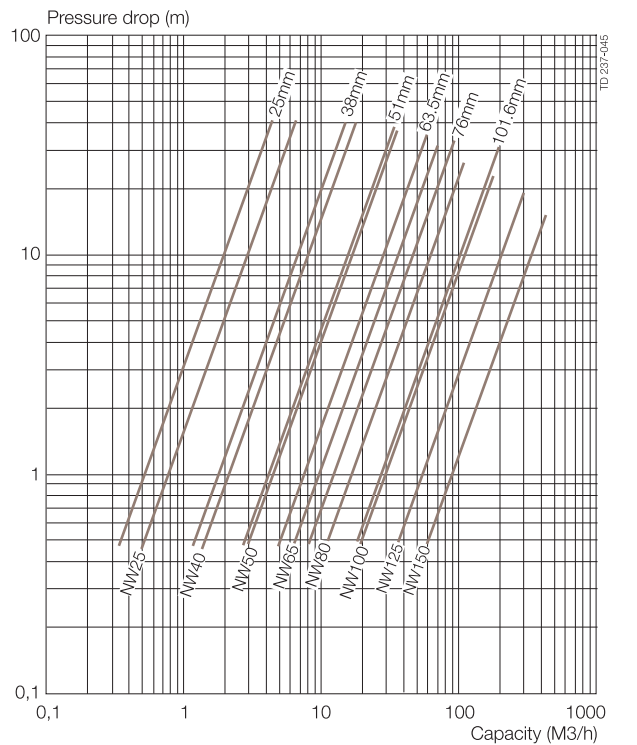
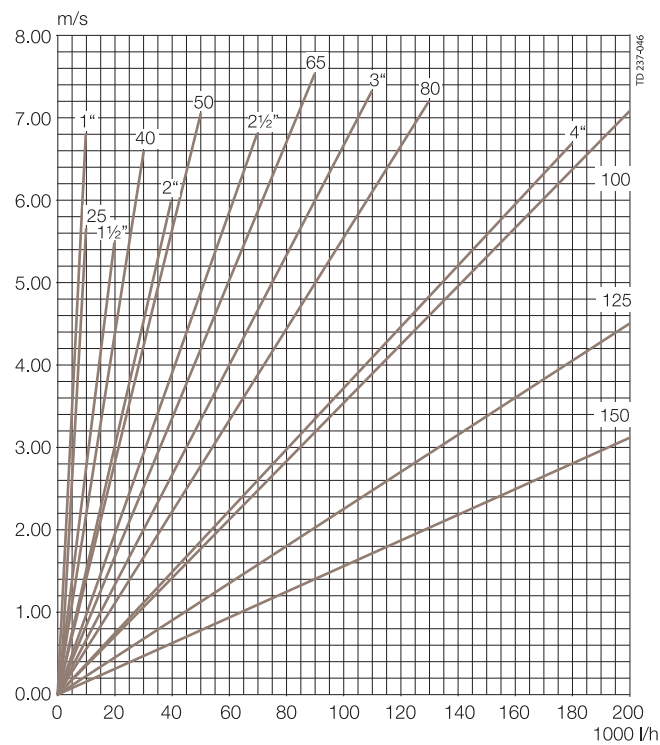
Size Tube OD	Service Ratings* (bar)						
	1/2 & 3/4 inch	1 & 1 1/2 inch	2 inch	2 1/2 inch	3 inch	4 inch	6 inch
<b>13MHLA</b> (Screw tightened to maximum)							
at 20°C	--	10.3	10.3	10.3	10.3	10.3	--
at 120°C	--	8.6	8.6	8.6	8.6	5.2	--
<b>13MHMM</b> (Wing nut tightened to 2.8 Nm of torque)							
at 20°C	--	34.5	31.0	27.6	24.1	20.7	10.3
at 120°C	--	20.7	20.7	13.8	13.4	10.3	5.2
<b>13MHHS</b> (Wing nut tightened to 2.8 Nm of torque)							
at 20°C	151.7	41.4	37.9	31.0	24.1	20.7	--
at 120°C	82.7	20.7	19.0	15.5	12.1	10.3	--
<b>13MHP</b> (Bolts tightened to 2.71 Nm of torque)							
at 20°C	--	103	68.9	68.9	68.9	55.1	20.7
at 120°C	--	82.7	55.2	55.2	55.2	41.4	13.8
<b>A13MO</b> (1-3" nuts tightened to 2.3 Nm, 4-6" 3.4 Nm of torque)							
at 20°C	--	34.5	24.1	20.7	13.8	10.3	5.2
at 120°C	--	17.2	13.8	10.3	10.3	10.3	3.4
<b>A13MHM</b> (Wing nut tightened to 2.8 Nm of torque)							
at 20°C	--	34.5	31	27.6	24.1	20.7	10.3
at 120°C	--	20.7	17.2	13.8	12.1	10.3	5.2

\* Service ratings are based on hydrostatic tests using standard-molded Buna-N material gaskets, with proper installation of ferrules, assembly of joints and absence of shock pressure.

All ratings shown are dependent upon related components within the systems and proper installation. For temperatures above at 120°C, we recommend using only 13MHP clamps.



Pressure drop and flow velocity curves





# 1.1 Hygienic, ISO 2037

The installation material in this section is manufactured to meet ISO 2037 tube dimensions.



## Ordering leaflets

Tubes .....	1.1.26
Reducers .....	1.1.27
Bends .....	1.1.29
Hose Liners .....	1.1.32
Tees .....	1.1.33
SMS Union Parts .....	1.1.34
Seal rings for SMS Union Parts .....	1.1.40
ISO Union Parts .....	1.1.41
DS Union Parts DS 720 tubes .....	1.1.43
DIN Union Parts .....	1.1.46
Clamp Union Parts .....	1.1.49
Clamp Rings for Clamp Union Parts .....	1.1.51
Flange connections .....	1.1.52

Tubes of manufacturing lengths of approx 6 meters  
 Product code: 5102  
 According to standard: ISO 2037

Finish: BD and BC

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)	
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>BD finish Inch tubes ISO 2037</b>
9611819010	*	9611819210	*	25.00	25.00/22.60x1.20	
9611819030	*	9611819230	*	38.00	38.00/35.60x1.20	
9611819060	*	9611819260	*	51.00	51.00/48.60x1.20	
9611819090	*	9611819280	*	63.50	63.50/60.30x1.60	
9611819101	*	9611819290	*	76.10	76.10/72.90x1.60	
9611819120	*	9611819310	*	101.60	101.60/97.60x2.00	
9611819008	*	9611819868	*	25.00	25.00/22.60x1.20	
9611819863	*	9611819870	*	38.00	38.00/35.60x1.20	
9611819864	*	9611819871	*	51.00	51.00/48.60x1.20	
9611819865	*	9611819872	*	63.50	63.50/60.30x1.60	
9611819866	*	9611819873	*	76.10	76.10/72.90x1.60	
9611819867	*	9611819874	*	101.60	101.60/97.60x2.00	
9614042502	*	9614042509	*	25.00	25.00/22.60x1.20	
9614042504	*	9614042511	*	38.00	38.00/35.60x1.20	
9614042505	*	9614042512	*	51.00	51.00/48.60x1.20	
9614042506	*	9614042513	*	63.50	63.50/60.30x1.60	
9614042507	*	9614042514	*	76.10	76.10/72.90x1.60	
9614042508	*	9614042515	*	101.60	101.60/97.60x2.00	
9614042501	*	9614042522	*	25.00	25.00/22.60x1.20	
9614042517	*	9614042524	*	38.00	38.00/35.60x1.20	
9614042518	*	9614042525	*	51.00	51.00/48.60x1.20	
9614042519	*	9614042526	*	63.50	63.50/60.30x1.60	
9614042520	*	9614042527	*	76.10	76.10/72.90x1.60	
9614042521	*	9614042528	*	101.60	101.60/97.60x2.00	

\* PPL prices per meter are updated monthly

\*\* H3 execution = Inside surface texture (Ra μm) including welded area ≤ 0.8 (EHEDG certified)

Please contact your Alfa Laval contact person for further information.



Product code: 5064

Finish: OD: Semi bright  
ID: Semi bright

Material Item No.	PPL EUR	Size	Dimension (mm)			
			OD <sub>1</sub> /ID <sub>1</sub> x t <sub>1</sub>	OD <sub>2</sub> /ID <sub>2</sub> x t <sub>2</sub>	L	
<b>1.4404 (316L)</b>		<b>mm</b>				<b>Concentric reducer</b>
3131708951		38.00/25.00	38.00/35.60x1.20	25.00/22.60x1.20	44.00	
3131708952		51.00/25.00	51.00/48.60x1.20	25.00/22.60x1.20	86.00	
3131708953		51.00/38.00	51.00/48.60x1.20	38.00/35.60x1.20	42.00	
3131708954		63.50/38.00	63.50/61.10x1.20	38.00/35.60x1.20	82.00	
3131708955		63.50/51.00	63.50/61.10x1.20	51.00/48.60x1.20	40.00	
3131708956		76.10/51.00	76.10/72.90x1.60	51.00/47.80x1.60	79.00	
3131708957		76.10/63.50	76.10/72.90x1.60	63.50/60.30x1.60	39.00	
3131708958		101.60/76.10	101.60/97.60x2.00	76.10/72.10x2.00	81.00	
						<b>Eccentric reducer</b>
3131708961		38.00/25.00	38.00/35.60x1.20	25.00/22.60x1.20	44.00	
3131708962		51.00/25.00	51.00/48.60x1.20	25.00/22.60x1.20	86.00	
3131708963		51.00/38.00	51.00/48.60x1.20	38.00/35.60x1.20	42.00	
3131708964		63.50/38.00	63.50/61.10x1.20	38.00/35.60x1.20	82.00	
3131708965		63.50/51.00	63.50/61.10x1.20	51.00/48.60x1.20	40.00	
3131708966		76.10/51.00	76.10/72.90x1.60	51.00/47.80x1.60	79.00	
3131708967		76.10/63.50	76.10/72.90x1.60	63.50/60.30x1.60	39.00	
3131708968		101.60/76.10	101.60/97.60x2.00	76.10/72.10x2.00	81.00	

NOTE: For pressure and surface, please see product leaflet.



Item No.	PPL EUR	Item No.	PPL EUR	Size	Dimension (mm)			
1.4307 (304L)		1.4404 (316L)		mm	OD <sub>1</sub> /ID <sub>1</sub> x t <sub>1</sub>	OD <sub>2</sub> /ID <sub>2</sub> x t <sub>2</sub>	L	Concentric reducer
9612928250		9612928259		38.10/25.40	38.10/34.90x1.60	25.40/22.20x1.60	40.00	
9612928251		9612928260		50.80/25.40	50.80/47.60x1.60	25.40/22.20x1.60	80.00	
9612928252		9612928261		50.80/38.10	50.80/47.60x1.60	38.10/34.90x1.60	41.00	
9612928253		9612928262		63.50/38.10	63.50/60.30x1.60	38.10/34.90x1.60	80.00	
9612928254		9612928263		63.50/50.80	63.50/60.30x1.60	50.80/47.60x1.60	38.00	
9612928255		9612928264		76.10/50.80	76.10/73.00x1.60	50.80/47.60x1.60	76.00	
9612928256		9612928265		76.10/63.50	76.10/73.00x1.60	63.50/60.30x1.60	38.00	
9612928257		9612928266		101.60/76.10	101.60/97.60x2.00	76.20/73.00x1.60	76.00	
9612928258		9612928267		101.60/63.50	101.60/97.60x2.00	63.50/60.30x1.60	108.00	
		9612928274		38.10/25.40	38.10/34.90x1.60	25.40/22.20x1.60	97.00	
		9612928275		50.80/38.10	50.80/47.60x1.60	38.10/34.90x1.60	97.00	
		9612928276		50.80/25.40	50.80/47.60x1.60	25.40/22.20x1.60	115.00	
		9612928277		63.50/50.80	63.50/60.30x1.60	50.80/47.60x1.60	97.00	
		9612928278		63.50/38.10	63.50/60.30x1.60	38.10/34.90x1.60	120.00	
		9612928279		76.20/63.50	76.10/73.00x1.60	63.50/60.30x1.60	97.00	
		9612928280		76.20/50.80	76.10/72.90x1.60	50.80/47.60x1.60	115.00	
		9612928281		76.20/38.10	76.10/72.10x2.00	38.10/34.90x1.60	130.00	
		9612928282		101.60/76.20	101.60/97.60x2.00	76.20/73.00x1.60	120.00	
		9612928283		101.60/63.50	101.60/97.60x2.00	63.50/60.30x1.60	141.00	
		9612928284		101.60/50.80	101.60/97.60x2.00	50.80/47.60x1.60	151.00	
								Eccentric reducer
		9612928285		38.10/25.40	38.10/34.90x1.60	25.4/22.20x1.60	100.00	
		9612928286		50.80/38.10	50.80/47.60x1.60	38.10/34.90x1.60	100.00	
		9612928287		50.80/25.40	50.80/47.60x1.60	25.40/22.20x1.60	120.00	
		9612928288		63.50/50.80	63.50/60.30x1.60	50.80/47.60x1.60	105.00	
		9612928289		63.50/38.10	63.50/60.30x1.60	38.10/34.90x1.60	140.00	
		9612928290		76.20/63.50	76.10/73.00x1.60	63.50/60.30x1.60	105.00	
		9612928291		76.20/50.80	76.10/73.00x1.60	50.80/47.60x1.60	135.00	
		9612928292		101.60/76.20	101.60/97.60x2.00	76.20/73.00x1.60	140.00	
		9612928293		101.60/63.50	101.60/97.60x2.00	63.50/60.30x1.60	170.00	
		9612929372		104.00/76.10	104.00/100.00x2.00	76.20/73.00x1.60	125.00	
		9612929373		104.00/63.50	104.00/100.00x2.00	63.50/60.30x1.60	170.00	

NOTE: For pressure and surface, please see product leaflet.

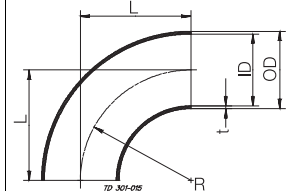
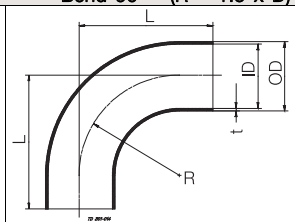
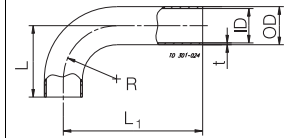
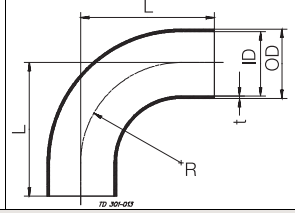
Wall thickness is not according to ISO 2037.



Product code: 5004

Finish: OD: Semi bright  
ID: Semi bright

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)			Bend 90° - (R = 1 x D)
					OD/ID x t	L	L <sub>1</sub>	
1.4307 (304L)		1.4404 (316L)		mm				
190683		191507		25.00	25.00/22.60x1.20	55.00		25.00
3131902101		3131902111		38.00	38.00/35.60x1.20	70.00		38.00
3131902181		3131902191		51.00	51.00/48.60x1.20	82.00		51.00
3131902261		3131902271		63.50	63.50/60.30x1.60	105.00		64.00
3131902341		3131902351		76.10	76.00/72.00x2.00	110.00		76.00
								<b>Bend 90° - (R = 1 x D)</b>
		191699		25.00	25.00/22.60x1.20	55.00	255.00	25.00
		3131902671		38.00	38.00/35.60x1.20	70.00	270.00	38.00
		3131902751		51.00	51.00/48.60x1.20	82.00	282.00	51.00
		3131902831		63.50	63.50/60.30x1.60	105.00	305.00	64.00
		3131902911		76.10	76.10/72.10x2.00	110.00	310.00	76.00
								<b>Bend 90° - (R = 1.5 x D)</b>
<b>According to standard: ISO 2851</b>								<b>Bend 90° - (R = 1.5 x D)</b>
9611310010		9611310011		25.00	25.00/22.60x1.20	65.00		37.50
9611310020		9611310021		38.00	38.00/35.60x1.20	85.00		57.00
9611310030		9611310031		51.00	51.00/48.60x1.20	110.00		76.50
9611310040		9611310041		63.50	63.50/60.30x1.60	135.00		95.30
9611310050		9611310051		76.10	76.10/72.90x1.60	155.00		114.20
9611310060		9611310061		101.60	101.60/97.60x2.00	195.00		152.50
								<b>Bend 90° - (R = 1.5 x D)</b>
9611312661		9611312671		25.00	25.00/22.60x1.20	38.00		37.50
9611312662		9611312672		38.00	38.00/35.60x1.20	57.00		57.00
9611312663		9611312673		51.00	51.00/48.60x1.20	76.00		76.50
9611312664		9611312674		63.50	63.50/60.30x1.60	95.00		95.30
9611312665		9611312675		76.10	76.10/72.90x1.60	114.00		114.20
9611312666		9611312676		101.60	101.60/97.60x2.00	152.00		152.50



Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)			ID: Raw
					OD x t	L	R	
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		mm				<b>Bend 90° - (R = 1 x D)</b>
9612027715		9612027722		25.00	25.00x1.20	55.00	25.00	
9612027717		9612027724		38.00	38.00x1.20	70.00	38.00	
9612027718		9612027725		51.00	51.00x1.20	82.00	51.00	
9612027719		9612027726		63.50	63.50x1.60	105.00	64.00	
9612027720		9612027727		76.10	76.10x2.00	110.00	76.00	
								<b>Bend 90° - (R = 1.5 x D)</b>
9613404201		9613404207		25.00	25.00/22.60x1.20	38.00	37.50	
9613404202		9613404208		38.00	38.00/35.60x1.20	57.00	57.00	
9613404203		9613404209		51.00	51.00/48.60x1.20	76.00	76.50	
9613404204		9613404210		63.50	63.50/60.30x1.60	95.00	95.30	
9613404205		9613404211		76.10	76.10/72.90x1.60	114.00	114.20	
9613404206		9613404212		101.60	101.60/97.60x2.00	152.00	152.50	
								<b>Bend 90° - (R = 3 x D)</b>
		9612928268		25.40	25.40/22.90 X 1.25	115.00	75.00	
		9612928269		31.80	31.80/29.30 X 1.25	136.00	93.00	
		9612928270		38.10	38.10/35.60 X 1.25	140.00	115.00	
		9612928271		50.80	50.80/48.30 X 1.25	225.00	150.00	
		9612928272		63.50	63.50/60.50x1.50	240.00	185.00	
		9612928273		76.00	76.00/72.80x1.60	250.00	215.00	



Product code: 5004

Finish: OD: Polished  
ID: Raw

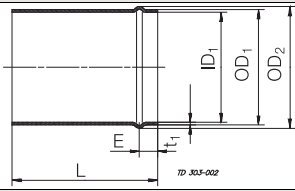
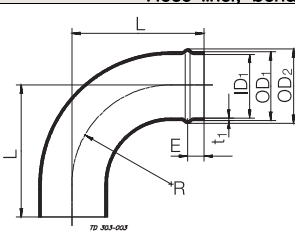
Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)			Finish: OD: Semi bright ID: Semi bright Bend 45°, OD/ID: Semi bright
					OD/ID x t	L <sub>1</sub>	L <sub>2</sub>	
1.4307 (304L)		1.4404 (316L)		mm				
9611300661		9611300809		25.00	25.00/22.60x1.20	70.00	47.00	
9611300662		9611300810		38.00	38.00/35.60x1.20	87.00	63.00	
9611300663		9611300811		51.00	51.00/48.60x1.20	119.50	86.50	
9611300664		9611300812		63.50	63.50/60.30x1.60	136.00	101.00	
9611300665		9611300813		76.10	76.10/72.10x2.00	157.00	119.00	
9611300778		9611300667		101.60	101.60/97.60x2.00	226.50	166.00	
								<b>Bend 45°, OD/ID: Polished</b>
9613404301		9613404307		25.00	25.00/22.60x1.20	70.00	47.00	
9613404302		9613404308		38.00	38.00/35.60x1.20	87.00	63.00	
9613404303		9613404309		51.00	51.00/48.60x1.20	119.50	86.50	
9613404304		9613404310		63.50	63.50/60.30x1.60	136.00	101.00	
9613404305		9613404311		76.10	76.10/72.10x2.00	157.00	119.00	
9613404306		9613404312		101.60	101.60/97.60x2.00	226.50	166.00	

NOTE: For pressure and surface, please see product leaflet.



Product code: 5086, 5018

Finish: OD: Semi bright  
ID: Semi bright

Material Item No.	PPL EUR	Size	Dimension (mm)					
			OD <sub>1</sub> /ID <sub>1</sub> x t <sub>1</sub>	OD <sub>2</sub>	E	L	R	
1.4404 (316L)		mm						Hose liner, straight
<b>Product code: 5086</b>								
191570		25.00	25.00/22.60x1.20	29.00	10.00	42.50		
191572		38.00	38.00/35.60x1.20	42.00	10.00	71.00		
191573		51.00	51.00/48.60x1.20	55.00	10.00	101.00		
191574		63.50	63.50/60.30x1.60	67.00	10.00	116.00		
191575		76.10	76.10/72.10x2.00	80.00	10.00	140.00		
3131708021		101.60	101.60/97.60x2.00	105.60	10.00	163.00		
<b>Product code: 5018</b>								
<b>Hose liner, bend</b>								
191596		25.00	25.00/22.60x1.20	29.00	10.00	55.00	25.00	
191598		38.00	38.00/35.60x1.20	42.00	10.00	70.00	38.00	
191599		51.00	51.00/48.60x1.20	55.00	10.00	82.00	51.00	
191600		63.50	63.5/60.30x1.60	67.00	10.00	105.00	63.50	
191601		76.10	76.10/72.10x2.00	80.00	10.00	110.00	76.00	
3131705681		101.60	101.60/97.60x2.00	105.60	10.00	150.00	150.00	

NOTE: For pressure and surface, please see product leaflet.





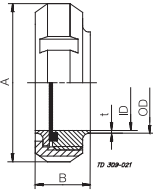
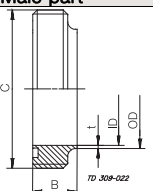
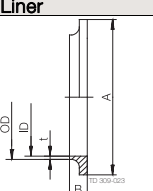
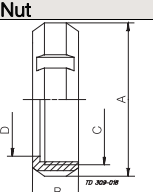
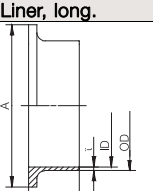
Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)				
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>OD<sub>2</sub> /ID<sub>2</sub> x t<sub>2</sub></b>	<b>L<sub>1</sub></b>	<b>L<sub>2</sub></b>	<b>Tee</b>
190725		191652		25.00	25.00/22.60x1.20		55.00		
190727		191654		38.00	38.00/35.60x1.20		70.00		
190728		191655		51.00	51.00/48.60x1.20		82.00		
190729		191656		63.50	63.50/60.30x1.60		105.00		
190730		191657		76.10	76.10/72.10x2.00		110.00		
3131708511		3131708512		101.60	101.60/97.60x2.00		150.00		
<b>Tee, short outlet</b>									
9611302052		9611302155		25.00	25.00/22.60x1.20		55.00	27.00	
9611302053		9611302156		38.00	38.00/35.60x1.20		70.00	40.50	
9611302054		9611302157		51.00	51.00/48.60x1.20		82.00	54.50	
9611302055		9611302158		63.50	63.50/60.30x1.60		105.00	67.00	
9611302056		9611302159		76.10	76.10/72.10x2.00		110.00	81.00	
9611302057		9611302160		101.60	101.60/97.60x2.00		150.00	107.00	
<b>Tee, reduced</b>									
		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD<sub>1</sub>/ID<sub>1</sub> x t<sub>1</sub></b>	<b>OD<sub>2</sub> /ID<sub>2</sub> x t<sub>2</sub></b>	<b>L<sub>1</sub></b>	<b>L<sub>2</sub></b>	
		3131708061		51.00/38.00	51.00/48.60x1.20	38.00/35.60x1.20	82.00	70.00	
		3131708071		63.50/38.00	63.50/60.3x1.60	38.00/35.60x1.20	105.00	70.00	
		3131708081		63.50/51.00	63.50/60.30x1.60	51.00/48.6x1.20	105.00	82.00	
		3131708091		76.10/38.00	76.10/72.10x2.00	38.10/34.90x1.60	110.00	80.00	
		3131708101		76.10/51.00	76.10/72.10x2.00	50.80/47.60x1.60	110.00	82.00	
<b>Tee, reduced, short outlet</b>									
		3180190391		38.00/25.00	38.00/35.60x1.20	25.00/22.60x1.20	70.00	40.70	
		3180190392		51.00/25.00	51.00/48.60x1.20	25.00/22.60x1.20	82.00	54.10	
		3180190393		51.00/38.00	51.00/48.60x1.20	38.00/35.60x1.20	82.00	54.10	
		3180190394		63.50/25.00	63.50/60.30x1.60	25.00/22.60x1.20	105.00	66.50	
		3180190395		63.50/38.00	63.50/60.30x1.60	38.00/35.60x1.20	105.00	67.60	
		3180190396		63.50/51.00	63.50/60.3x1.60	51.00/48.60x1.20	105.00	66.50	
		3180190397		76.10/25.00	76.10/72.10x2.00	25.00/21.80x1.60	110.00	79.30	
		3180190398		76.10/38.00	76.10/72.10x2.00	38.00/34.80x1.60	110.00	80.60	
		3180190399		76.10/51.00	76.10/72.10x2.00	51.00/47.80x1.60	110.00	80.60	
		3180190401		76.10/63.50	76.10/72.10x2.00	63.50/60.30x1.60	110.00	80.00	
		3180190402		101.60/25.00	101.60/97.60x2.00	25.00/21.80x1.60	150.00	105.00	
		3180190403		101.60/38.00	101.60/97.60x2.00	38.00/34.80x1.60	150.00	106.60	
		3180190404		101.60/51.00	101.60/97.60x2.00	51.00/47.80x1.60	150.00	106.60	
		3180190405		101.60/63.50	101.60/97.60x2.00	63.50/60.30x1.60	150.00	106.60	
		3180190406		101.60/76.10	101.60/97.60x2.00	76.10/72.90x1.60	150.00	106.60	
		9612927740		104.00/25.00	104.00/100.00x2.00	25.40/21.40x2.00	150.00	108.00	
		9612927741		104.00/38.00	104.00/100.00x2.00	38.10/34.10x2.00	150.00	110.00	
		9612927742		104.00/51.00	104.00/100.00x2.00	50.80/46.80x2.00	150.00	110.00	
		9612927743		104.00/63.50	104.00/100.00x2.00	63.50/59.50x2.00	150.00	112.00	
		9612927744		104.00/76.10	104.00/100.00x2.00	76.10/72.10x2.00	150.00	112.00	

NOTE: For pressure and surface, please see product leaflet.



Product code: 5043

Finish: OD: Semi bright  
Seals: Nitrile  
Thread: RdG according to DIN 405

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)				
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>A</b>	<b>B</b>	<b>Union</b>	
9611300382		9611330382		25.00	25.00/22.60x1.20	51.00	23.50		
9611300383		9611330383		38.00	38.00/35.60x1.20	74.00	30.00		
9611300384		9611330384		51.00	51.00/48.60x1.20	84.00	30.00		
9611300385		9611330385		63.50	63.50/60.30x1.60	100.00	33.00		
9611300386		9611330386		76.10	76.10/72.90x1.60	114.00	35.00		
9611300387		9611330387		101.60	101.60/97.60x2.00	154.00	48.00		
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>B</b>	<b>C</b>	<b>Male part</b>	
190711		191001		25.00	25.00/22.60x1.20	15.00	40.00x1/6		
190713		191003		38.00	38.00/35.60x1.20	20.00	60.00x1/6		
190714		191004		51.00	51.00/48.60x1.20	20.00	70.00x1/6		
190715		191005		63.50	63.50/60.30x1.60	24.00	85.00x1/6		
190716		191006		76.10	76.10/72.90x1.60	24.00	98.00x1/6		
3131708171		3131708173		101.60	101.60/97.60x2.00	35.00	132.00x1/6		
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>A</b>	<b>B</b>	<b>Liner</b>	
190704		190994		25.00	25.00/22.60x1.20	35.50	7.50		
190706		190996		38.00	38.00/35.60x1.20	55.00	9.00		
190707		190997		51.00	51.00/48.60x1.20	65.00	9.00		
190708		190998		63.50	63.50/60.30x1.60	80.00	9.00		
190709		190999		76.10	76.10/72.90x1.60	93.00	10.00		
3131708851		3131708852		101.60	101.60/97.60x2.00	127.00	12.00		
<b>1.4301 (304)</b>				<b>mm</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>Nut</b>
190613				25.00	51.00	20.00	40.00x1/6	32.00	
190615				38.00	74.00	25.00	60.00x1/6	48.00	
190616				51.00	84.00	26.00	70.00x1/6	60.50	
190617				63.50	100.00	30.00	85.00x1/6	74.00	
190618				76.10	114.00	32.00	98.00x1/6	87.00	
3131708841				101.60	154.00	45.00	132.00x1/6	117.00	
9613496401				104.00	138.00	31.00	125.00x1/4	113.00	
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>A</b>	<b>B</b>	<b>Liner, long.</b>	
		9611309611		25.00	25.00/22.60x1.20	35.50	17.00		
		9611309613		38.00	38.00/35.60x1.20	55.00	20.00		
		9611309614		51.00	51.00/48.60x1.20	65.00	20.00		
		9611309615		63.50	63.50/60.30x1.60	80.00	25.00		
		9611309616		76.10	76.10/72.90x1.60	93.00	30.00		
		9611309617		101.60	101.60/97.60x2.00	127.00	35.00		

NOTE: Seal rings - please see later this chapter.

NOTE: For pressure and surface, please see product leaflet.



Product code: 5043

Finish: OD: Semi bright  
 Seals: Nitrile  
 Thread: RdG according to DIN 405  
 Connections: Expanding

Material Item No	PPL EUR	Size	Dimension (mm)				Union
			A	B	C	D	
1.4301 (304)		mm					
190655		25.00	51.00	38.00		25.20	
190657		38.00	74.00	44.00		38.20	
190658		51.00	84.00	46.00		51.20	
190659		63.50	100.00	56.00		63.80	
190660		76.10	114.00	66.00		76.30	
							<b>Male part</b>
190641		25.00		20.00	40.00x1/6	25.20	
190643		38.00		23.00	60.00x1/6	38.20	
190644		51.00		25.00	70.00x1/6	51.20	
190645		63.50		30.00	85.00x1/6	63.80	
190646		76.10		35.00	98.00x1/6	76.30	
190627		25.00	35.50	17.00		25.20	
190629		38.00	55.00	20.00		38.20	
190630		51.00	65.00	20.00		51.20	
190631		63.50	80.00	25.00		63.80	
190632		76.10	93.00	30.00		76.30	
190613		25.00	51.00	20.00	40.00x1/6	32.00	
190615		38.00	74.00	25.00	60.00x1/6	48.00	
190616		51.00	84.00	26.00	70.00x1/6	60.50	
190617		63.50	100.00	30.00	85.00x1/6	74.00	
190618		76.10	114.00	32.00	98.00x1/6	87.00	
3131708841		101.60	154.00	45.00	132.00x1/6	117.00	

NOTE: Seal rings - please see later this chapter.

NOTE: For pressure and surface, please see product leaflet.

Product code: 5043

Finish: OD: Semi bright  
 Seals: Nitrile  
 Thread: RdG according to DIN 405  
 Connections: Expanding/welding

Material Item No	PPL EUR	Size	Dimension (mm)				Diagram	
			A	B	D			
<b>1.4404 (316L)</b>				<b>A</b>	<b>B</b>	<b>D</b>	<b>Expanding Reducing liner</b>	
191669		38.00/25.00		55.00	17.00	25.20		
191670		51.00/25.00		65.00	17.00	25.20		
191675		51.00/38.00		65.00	20.00	38.20		
191676		63.50/38.00		80.00	20.00	38.20		
191678		63.50/51.00		80.00	20.00	51.20		
191677		76.10/38.00		93.00	20.00	38.20		
191679		76.10/51.00		93.00	20.00	51.20		
191680		76.10/63.50		93.00	25.00	63.80		
<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>Reducing male part</b>	
3131707372		38.00/25.00	25.00/22.60x1.20	35.60	20.00	60.00x1/6		
3131708911		51.00/25.00	25.00/22.60x1.20	48.60	20.00	70.00x1/6		
3131706571		51.00/38.00	38.00/35.60x1.20	48.60	20.00	70.00x1/6		
3131708921		63.50/38.00	38.00/35.60x1.20	60.30	24.00	85.00x1/6		
3131706591		63.50/51.00	51.00/48.60x1.20	60.30	24.00	85.00x1/6		
3131708221		76.10/51.00	51.00/48.60x1.20	72.90	24.00	98.00x1/6		
3131705121		76.10/63.50	63.50/60.30x1.60	72.90	24.00	98.00x1/6		
<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>A</b>	<b>B</b>		<b>Reducing liner</b>	
3131707652		38.00/25.00	25.00/22.60x1.20	55.00	9.00			
3131707642		51.00/25.00	25.00/22.60x1.20	65.00	9.00			
3131706611		51.00/38.00	38.00/35.60x1.20	65.00	9.00			
3131707941		63.50/38.00	38.00/35.60x1.20	80.00	9.00			
3131706631		63.50/51.00	51.00/48.60x1.20	80.00	9.00			
3131707931		76.10/51.00	51.00/48.60x1.20	93.00	10.00			
3131708881		76.10/63.50	63.50/60.30x1.60	93.00	10.00			
3131708891		101.60/63.50	63.50/60.30x1.60	127.00	15.00			
3131708901		101.60/76.10	76.10/72.90x1.60	127.00	15.00			
<b>1.4301 (304)</b>		<b>mm</b>		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>Nut</b>
190613		25.00		51.00	20.00	40.00x1/6	32.00	
190615		38.00		74.00	25.00	60.00x1/6	48.00	
190616		51.00		84.00	26.00	70.00x1/6	60.50	
190617		63.50		100.00	30.00	85.00x1/6	74.00	
190618		76.10		114.00	32.00	98.00x1/6	87.00	
3131708841		101.60		154.00	45.00	132.00x1/6	117.00	

NOTE: Seal rings - please see later this chapter.

NOTE: For pressure and surface, please see product leaflet.



Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)				
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		mm	<b>OD/ID x t</b>	<b>B</b>	<b>C</b>		<b>Male part</b>
9613409501		9613409507		25.00	25.00/22.50 x 1.25	19.00	40.00x1/6		
9613409502		9613409508		38.00	38.00/35.50 x 1.25	23.00	60.00x1/6		
9613409503		9613409509		51.00	51.00/48.50 x 1.25	23.00	70.00x1/6		
9613409504		9613409510		63.50	63.50/60.40x1.55	27.00	85.00x1/6		
9613409505		9613409511		76.10	76.10/72.70x1.70	27.00	98.00x1/6		
9613409506		9613409512		104.00	104.00/99.90 x 2.05	30.00	125 x 1/4		
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		mm	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>Liner</b>
9613409401		9613409407		25.00	22.50	25.00	15.60	35.50	
9613409402		9613409408		38.00	35.50	38.00	16.00	55.00	
9613409403		9613409409		51.00	48.50	51.00	17.00	65.00	
9613409404		9613409410		63.50	60.40	63.50	17.00	80.00	
9613409405		9613409411		76.10	72.70	76.10	19.00	93.00	
9613409406		9613409412		104.00	99.90	104.00	19.00	118.00	
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		mm	<b>OD<sub>1</sub>/ID<sub>1</sub> x t<sub>1</sub></b>	<b>B</b>	<b>OD<sub>2</sub></b>	<b>E</b>	<b>Hose liner</b>
		191577		25.00	25.00/22.60x1.20	50.00	29.00	10.00	
		191579		38.00	38.00/35.60x1.20	80.00	42.00	10.00	
		191580		51.00	51.00/48.60x1.20	110.00	55.00	10.00	
		191581		63.50	63.50/60.30x1.60	125.00	67.00	10.00	
		191582		76.10	76.10/72.10x2.00	150.00	80.00	10.00	
<b>1.4301 (304)</b>				mm	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>Nut</b>
190613				25.00	51.00	20.00	40.00x1/6	32.00	
190615				38.00	74.00	25.00	60.00x1/6	48.00	
190616				51.00	84.00	26.00	70.00x1/6	60.50	
190617				63.50	100.00	30.00	85.00x1/6	74.00	
190618				76.10	114.00	32.00	98.00x1/6	87.00	
3131708841				101.60	154.00	45.00	132.00x1/6	117.00	

NOTE: Seal rings - please see later this chapter.

NOTE: For pressure and surface, please see product leaflet.

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)			
1.4301 (304)		1.4404 (316L)		mm	A	B	C	End cap
9612143001		9612143008		25.00	51.00	20.00	40.00x1/6	
9612143002		9612143009		38.00	74.00	25.00	60.00x1/6	
9612143003		9612143010		51.00	84.00	26.00	70.00x1/6	
9612143004		9612143011		63.50	100.00	31.00	85.00x1/6	
9612143005		9612143012		76.10	114.00	32.00	98.00x1/6	
9612143006		9612143013		101.60	154.00	45.00	132.00x1/6	
								<b>End cap with chain</b>
9612145101		9612145108		25.00	51.00	20.00	40.00x1/6	
9612145102		9612145109		38.00	74.00	25.00	60.00x1/6	
9612145103		9612145110		51.00	84.00	26.00	70.00x1/6	
9612145104		9612145111		63.50	100.00	31.00	85.00x1/6	
9612145105		9612145112		76.10	114.00	32.00	98.00x1/6	
9612145106		9612145113		101.60	154.00	45.00	132.00x1/6	
								<b>Blank</b>
		190084		25.00	35.50	3.00		
		190086		38.00	55.00	4.00		
		190087		51.00	65.00	4.00		
		190088		63.50	80.00	4.00		
		190089		76.10	93.00	5.00		
		3131703341		101.60	127.00	6.00		

NOTE: Seal rings - please see later this chapter.

NOTE: For pressure and surface, please see product leaflet.



Product code: 5043  
 Product code: 5004, 5018

Finish: Machined

Material Item No.	PPL EUR	Size	Dimension (mm)					Adapter, male to BSP male
			A	B	C	D	E	
<b>Product code: 5043</b>								
190502		25.00	40.00x1/6	30.00	1"	22.50	15.00	
190506		38.00	60.00x1/6	42.00	1 1/2"	35.50	23.00	
190508		51.00	70.00x1/6	47.00	2"	48.50	28.00	
190510		63.50	85.00x1/6	55.00	2 1/2"	60.50	32.00	
<b>Product code: 5004</b>								
190514		25.00	40.00x1/6	15.00	1"	22.50	23.00	
190518		38.00	60.00x1/6	22.00	1 1/2"	35.50	32.00	
190520		51.00	70.00x1/6	27.00	2"	48.50	38.00	
190522		63.50	85.00x1/6	31.00	2 1/2"	60.50	42.00	

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)				Thread: RdG according to DIN 405	
					OD/ID x t	A	B			
<b>Product code: 5004</b>										
190760		191029		25.00	25.00/22.60x1.20	55.00	55.00			
190762		191031		38.00	38.00/35.60x1.20	70.00	70.00			
190763		191032		51.00	51.00/48.60x1.20	82.00	82.00			
190765		191034		76.10	76.10/72.10x2.00	110.00	110.00			
		1.4404 (316L)		mm	OD <sub>1</sub> /ID <sub>1</sub> x t <sub>1</sub>	A	B	OD <sub>2</sub>		
<b>Product code: 5018</b>										
		191603		25.00	25.00/22.60x1.20	62.00	55.00	29.00	10.00	
		191605		38.00	38.00/35.60x1.20	79.00	70.00	42.00	10.00	
		191606		51.00	51.00/48.60x1.20	91.00	82.00	55.00	10.00	
		191607		63.50	63.50/60.30x1.60	114.00	105.00	67.00	10.00	
				mm	OD <sub>1</sub> /ID <sub>1</sub> x t <sub>1</sub>	A	B	OD <sub>2</sub>	E	

NOTE: Seal rings - please see later this chapter.

NOTE: For pressure and surface, please see product leaflet.



Product code: 5043

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)			
						mm	A	B	D	Seal ring
<b>NBR</b>		<b>EPDM</b>		<b>FPM</b>						
190601		3131703753		3131703752		25.00	32.00	5.50	24.80	
190603		3131703772		191661		38.00	48.00	5.50	37.80	
190604		3131703785		3131703782		51.00	61.00	5.50	50.80	
190605		3131703793		3131703792		63.50	73.50	5.50	63.20	
190606		3131703803		3131703801		76.10	86.00	5.50	75.50	
3131708861		3131708862		3131708863		101.60	114.00	5.50	101.00	
9611994547		9611994546		9611994548		104.00	116.00	5.50	104.00	
										Seal ring
<b>PTFE</b>										
3131705511						25.00	32.00	4.00	25.00	
3131705513						38.00	48.00	4.00	38.00	
3131705514						51.00	61.00	4.00	51.00	
3131705515						63.50	73.50	4.00	63.50	
3131705516						76.10	86.00	4.00	76.10	
3131705517						101.60	114.00	4.00	101.60	
										Seal ring
<b>PTFE</b>										
190987						25.00	32.00	4.00	22.50	
190989						38.00	48.00	4.00	35.50	
190990						51.00	61.00	4.00	48.50	
190991						63.50	73.50	4.00	60.50	
190992						76.10	86.00	4.00	72.00	
3131705171						101.60	114.00	4.00	97.60	





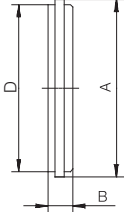
Product code: 5041  
IDF

Finish: Machined  
Seals: Nitrile  
Thread: Trapezoidal type

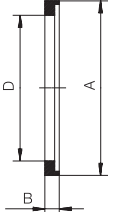
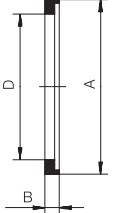
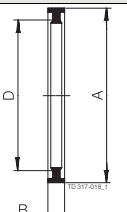
Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)				
		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>A</b>	<b>B</b>	<b>Union</b>	
		9611330955		25.00	25.60/22.50x1.55	48.00	35.50	<p>TD 317-019</p>	
		9611330956		38.00	38.60/35.50x1.55	64.00	35.50		
		9611330957		51.00	51.60/48.50x1.55	77.00	35.50		
		9611330958		63.50	64.10/60.50x1.80	91.00	35.50		
		9611330959		76.10	76.60/72.00x2.30	106.00	35.50		
		9611330960		101.60	102.50/97.60x2.45	135.00	45.00		
<b>1.4301 (304)</b>				<b>mm</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>Nut</b>
3131900011				25.00	48.00	30.00	38.30 x 1/8	30.50	<p>TD 317-002</p>
3131900021				38.00	64.00	30.00	51.80 x 1/8	43.50	
3131900031				51.00	77.00	30.00	65.30 x 1/8	57.00	
3131900041				63.50	91.00	30.00	78.80 x 1/8	70.70	
3131900051				76.10	106.00	30.00	92.30 x 1/8	83.30	
9611300149				101.60	135.00	30.00	119.40 x 1/8	110.00	
		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>B</b>	<b>C</b>	<b>Male part</b>	
		3131900621		25.00	25.60/22.50x1.55	21.50	37.10 x 1/8	<p>TD 317-020</p>	
		3131900631		38.00	38.60/35.50x1.55	21.50	50.60 x 1/8		
		3131900153		51.00	51.60/48.50x1.55	21.50	64.10 x 1/8		
		3131900163		63.50	64.10/60.50x1.80	21.50	77.60 x 1/8		
		3131900173		76.10	76.60/72.00x2.30	21.50	91.10 x 1/8		
		9611300899		101.60	102.50/97.60x2.45	21.50	118.40 x 1/8		
		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>A</b>	<b>B</b>	<b>Liner</b>	
		3131900681		25.00	25.60/22.50x1.55	33.80	12.00	<p>TD 317-021</p>	
		3131900691		38.00	38.60/35.50x1.55	47.00	12.00		
		3131900273		51.00	51.60/48.50x1.55	60.50	12.00		
		3131900711		63.50	64.10/60.50x1.80	74.00	12.00		
		3131900721		76.10	76.60/72.00x2.30	87.50	12.00		
		9611300898		101.60	102.50/97.60x2.45	114.10	21.50		

NOTE: Seal rings - please see later this chapter.

NOTE: For pressure and surface, please see PD-sheet.

Material Item No.	PPL EUR	Size	Dimension (mm)			
1.4404 (316L)		mm	A	B	D	Blank
9611308290		25.00	33.80	10.50	29.00	 <p>TD 317-04</p>
9611308291		38.00	47.00	10.50	42.50	
9611308292		51.00	60.50	10.50	56.00	
9611308293		63.50	74.00	10.50	69.70	
9611308294		76.10	87.50	10.50	82.30	
9611308295		101.60	114.10	10.50	108.40	

NOTE: For pressure and surface, please see product leaflet.

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)			
NBR		EPDM				mm	A	B	D	Seal ring
9611990953		9611991390				25.00	32.50	6.00	23.60	 <p>TD 317-017</p>
9611990954		9611991392				38.00	46.00	6.00	36.60	
9611990955		9611991393				51.00	59.50	6.00	49.60	
9611990956		9611991394				63.50	73.20	6.00	61.30	
9611990957		9611991395				76.10	86.50	6.00	73.90	
PTFE						mm	A	B	D	Seal ring
9611991424						25.00	32.50	6.00	22.80	 <p>TD 317-017</p>
9611991426						38.00	46.00	6.00	35.90	
9611991427						51.00	59.9	6.00	48.90	
9611991428						63.50	73.00	6.00	60.90	
9611991429						76.10	86.50	6.00	73.30	
9611991431						101.60	113.00	6.00	98.00	
NBR		EPDM		FPM		mm	A	B	D	Seal ring
3131900311		3131900314		3131900313		25.00	32.50	7.00	25.50	 <p>TD 317-018, T</p>
3131900321		3131900324		3131900323		38.00	46.00	7.00	38.00	
3131900331		3131900334		3131900333		51.00	59.50	7.00	51.00	
3131900341		3131900344		3131900343		63.50	73.00	7.00	63.00	
3131900351		3131900354		3131900353		76.10	86.50	7.00	75.50	

\* On request



Product code: 5042

Finish: Machined  
Seals: Nitrile  
Thread: Round type

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)			Union	
					OD/ID x t	A	B		
		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>A</b>	<b>B</b>		
		9611330264		25.00	25.40/22.50x1.45	57.00	30.00		
		9611330265		38.00	38.40/35.50x1.45	71.00	31.50		
		9611330266		51.00	51.04/48.50x1.45	86.00	31.50		
		9611330267		63.50	63.90/60.50x1.70	103.00	36.50		
		9611330268 9611330269		76.10 101.60	76.40/72.00x2.20 102.00/97.60x2.20	115.00 150.00	36.50 36.50		
<b>1.4301 (304)</b>				<b>mm</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	
9611300197				25.00	57.00	20.00	44.00x1/6	35.00	
9611300198				38.00	71.00	20.00	58.00x1/6	48.50	
9611300199				51.00	86.00	22.00	72.00x1/6	62.50	
9611300200				63.50	103.00	24.00	88.00x1/6	76.50	
9611300201 9611300263				76.10 101.60	115.00 150.00	25.00 28.00	100.00x1/6 130.00x1/6	88.50 117.00	
		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>B</b>	<b>C</b>		
		9611330684		25.00	25.40/22.50x1.45	18.50	44.00x1/6		
		9611330685		38.00	38.40/35.50x1.45	20.00	58.00x1/6		
		9611330686		51.00	51.40/48.50x1.45	20.00	72 x 1/6		
		9611330687		63.50	63.90/60.50x1.70	24.00	88 x 1/6		
		9611330688 9611330690		76.10 101.60	76.40/72.00x2.20 102.00/97.60x2.20	24.00	100 x 1/6 130 x 1/6		
		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>A</b>	<b>B</b>		
		9611330691		25.00	25.40/22.50x1.45	40.00	11.00		
		9611330692		38.00	38.40/35.50x1.45	54.00	11.00		
		9611330693		51.00	51.40/48.50x1.45	68.00	11.00		
		9611330694		63.50	63.90/60.50x1.70	84.00	12.00		
		9611330695 9611330697		76.10 101.60	76.40/72.00x2.20 102.00/97.60x2.20	96.00 124.00	12.00 12.00		

NOTE: For pressure and surface, please see product leaflet.



Product code: 5042

Finish: Machined  
Thread: Round type  
Connections: Expanding ends

Material Item No.	PPL EUR	Size	Dimension (mm)				Male part
			A	B	C	D	
<b>1.4301 (304)</b>		<b>mm</b>					
9611300203		25.00		20.00	44.00x1/6	25.00	
9611300204		38.00		22.00	58.00x1/6	38.00	
9611300205		51.00		24.00	72.00x1/6	51.00	
9611300206		63.50		26.00	88.00x1/6	63.50	
9611300207		76.10		28.00	100.00x1/6	76.00	
							<b>Liner</b>
9611300209		25.00	40.00	16.00		25.00	
9611300210		38.00	54.00	18.00		38.00	
9611300211		51.00	68.00	20.00		51.00	
9611300212		63.50	84.00	22.00		63.50	
9611300213		76.10	96.00	24.00		76.00	

Material Item No.	PPL EUR	Size	Dimension (mm)				End cap for chain
			A	B			
<b>1.4301 (304)</b>		<b>mm</b>					
9611303520		25.00	57.00	20.00			
9611303530		38.00	71.00	20.00			
9611303540		51.00	86.00	22.00			
9611303550		63.50	103.00	24.00			
9611303560		76.10	115.00	25.00			

NOTE: Seal rings - please see later this chapter.

NOTE: For pressure and surface, please see product leaflet.



Product code: 5042

Finish: Machined  
Thread: Round type  
Connections: Expanding ends

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)			
		<b>1.4404 (316L)</b>		<b>mm</b>	<b>A</b>	<b>B</b>		<b>Blank</b>
		9611300253		25.00	40.00	3.00		
		9611300254		38.00	54.00	3.00		
		9611300255		51.00	68.00	3.00		
		9611300256		63.50	84.00	4.00		
		9611300257		76.10	96.00	4.00		
		9611300259		101.60	124.00	4.00		

NOTE: For pressure and surface, please see product leaflet.

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)			
<b>NBR</b>		<b>EPDM</b>		<b>mm</b>	<b>A</b>	<b>B</b>	<b>D</b>	<b>Seal ring</b>
9611990120		9611992814		25.00	32.00	4.50	25.00	
9611990121		9611992816		38.00	47.00	4.50	38.00	
9611990122		9611992817		51.00	59.00	4.50	51.00	
9611990123		9611992818		63.50	74.50	4.50	63.50	
9611990124		9611992819		76.10	88.00	4.50	76.10	
9611990558		9611992820		101.60	112.50	4.50	101.60	
<b>PTFE</b>		<b>FPM</b>		<b>mm</b>	<b>A</b>	<b>B</b>	<b>D</b>	<b>Seal ring</b>
9611991167		9611992833		25.00	32.00	4.50	25.00	
9611991168		9611992835		38.00	47.00	4.50	38.00	
9611991170		9611992836		51.00	59.00	4.50	51.00	
9611991171		9611992837		63.50	74.50	4.50	63.50	
9611991172		9611992838		76.10	88.00	4.50	76.10	
9611991173		9611992839		101.60	112.50	4.50	101.60	



Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)				
<b>1.4301 (304)</b>				<b>mm</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>Nut</b>
3131800141				25.00	63.00	21.00	52.00x1/6	36.00	
3131800142			32.00	70.00	21.00	58.00x1/6	42.00		
3131800143			40.00	78.00	21.00	65.00x1/6	49.00		
3131800144			50.00	92.00	22.00	78.00x1/6	62.00		
3131800145			65.00	112.00	25.00	95.00x1/6	80.00		
9611306440			75.00	120.00	26.00	104.00x1/6	87.00		
3131800146			80.00	127.00	30.00	110.00x1/4	94.00		
3131800148			100.00	148.00	31.00	130.00x1/4	115.00		
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>B</b>	<b>C</b>	<b>Male part</b>	
9612157901		9612157917		25.00	25.40/22.90 x 1.25	29.00	52.00x1/6		
9612157903		9612157919		40.00	38.10/35.10x1.50	33.00	65.00x1/6		
9612157904		9612157920		50.00	50.80/47.80x1.50	35.00	78.00x1/6		
9612157905		9612157921		65.00	63.50/60.50x1.50	40.00	95.00x1/6		
9612157906		9612157922		75.00	76.10/73.10x1.50	40.00	104 x 1/6		
9612157907		9612157923		80.00	76.10/72.10x2.00	45.00	110.00x1/4		
9612157908		9612157924		100.00	101.60/97.60x2.00	54.00	130.00x1/4		
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>A</b>	<b>B</b>		<b>Liner</b>
9612158001		9612158017		25.00	25.40/22.90 x 1.25	44.00	22.00		
9612158003		9612158019		40.00	38.10/35.10x1.50	56.00	26.00		
9612158004		9612158020		50.00	50.80/47.80x1.50	68.50	28.00		
9612158005		9612158021		65.00	63.50/60.50x1.50	86.00	32.00		
9612158006		9612158022		75.00	76.10/73.10x1.50	93.70	32.00		
9612158007		9612158023		80.00	76.10/72.10x2.00	100.00	37.00		
9612158008		9612158024		100.00	101.60/97.60x2.00	121.00	44.00		

NOTE: Seal rings - please see later this chapter.

NOTE: For pressure and surface, please see product leaflet.

Product code: 5044

Finish: Machined  
Thread: Round type

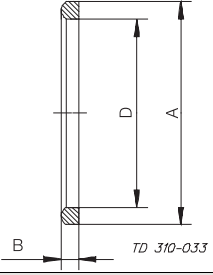
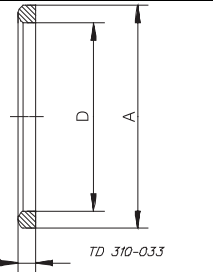
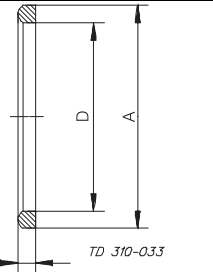
Material Item No.	PPL EUR	Size	Dimension (mm)				Male part
			A	B	C	D	
<b>1.4301 (304)</b>		mm					
9611300977		25.00		29.00	52.00x1/6	25.20	
9611300978		40.00		33.00	65.00x1/6	38.20	
9611300979		50.00		35.00	78.00x1/6	51.20	
9611300980		65.00		40.00	95.00x1/6	63.80	
9611306330		75.00		40.00	104.00x1/6	76.30	
							<b>Liner</b>
9611300984		25.00	44.00	22.00		25.20	
9611300985		40.00	56.00	26.00		38.20	
9611300986		50.00	68.00	28.00		51.20	
9611300987		65.00	86.00	32.00		63.80	
9611306390		75.00	95.00	32.00		76.30	
9611300990		100.00	121.00	44.00		101.90	

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)			Male part
					OD/ID x t	B	C	
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		mm				
3131800072		3131800071		25.00	25.00/22.60x1.20	22.00	52.00x1/6	
3131800092		3131800091		40.00	38.00/35.60x1.20	22.00	65.00x1/6	
3131800102		3131800101		50.00	51.00/48.60x1.20	22.00	78.00x1/6	
3131800112		3131800111		65.00	63.50/60.30x1.60	25.00	95.00x1/6	
9611306020		9611306021		75.00	76.10/73.10x1.50	30.00	104 x 1/6	
3131800122		3131800121		80.00	76.10/72.90x1.60	30.00	110.00x1/4	
3131800342		3131800341		100.00	101.60/97.60x2.00	30.00	130.00x1/4	
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		mm	OD/ID x t	A	B	
3131800182		3131800181		25.00	25.00/22.60x1.20	44.00	18.00	
9611300721				32.00	33.70/31.30x1.20	50.00	15.00	
3131800192		3131800191		40.00	38.00/35.60x1.20	56.00	18.00	
3131800202		3131800201		50.00	51.00/48.60x1.20	68.00	20.00	
3131800212		3131800211		65.00	63.50/60.30x1.60	86.00	20.00	
9611306070		9611306071		75.00	76.10/73.10x1.50	95.00	20.00	
3131800222		3131800221		80.00	76.10/72.90x1.60	100.00	20.00	
3131800232		3131800231		100.00	101.60/97.60x2.00	121.00	23.00	

NOTE: Seal rings - please see later this chapter.

NOTE: For pressure and surface, please see product leaflet.



Material Item No.	PPL EUR	Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)			Seal ring 	
NBR		EPDM		FPM		mm	A	B	D		
52734604		9611991269		9611991864		25.00	40.00	5.00	30.00		
52734605		9611991270				32.00	46.00	5.00	36.00		
52734606		9611991271		9611991866		40.00	52.00	5.00	42.00		
52734607		9611991272		9611991867		50.00	64.00	5.00	54.00		
52734608		9611991273		9611991868		65.00	81.00	5.00	71.00		
9611991264		9611991274		9611991869		75.00	88.00	5.00	78.00		
52734609		9611991275		9611991128		80.00	95.00	5.00	85.00		
52734611		9611991276		9611991870		100.00	114.00	6.00	104.00		
Silicone (Q)		PTFE				mm	A	B	D		
9611991920		9611991876				25.00	40.00	5.00	30.00		
9611991922		9611991878				40.00	52.00	5.00	42.00		
9611991923		9611991879				50.00	64.00	5.00	54.00		
9611991924		9611991880				65.00	81.00	5.00	71.00		
9611991925		9611991881				75.00	88.00	5.00	78.00		
9611991926		9611991882				80.00	95.00	5.00	85.00		
9611991927		9611991883				10.00	114.00	6.00	104.00		

NOTE: For pressure and surface, please see product leaflet.





Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)			
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>A</b>	<b>B</b>	<b>Clamp ferrule ISO 2852</b>
9611310191		9611310190		25.00	25.60/22.60x1.50	50.50	21.50	
9611310201		9611310200		38.00	38.60/35.60x1.50	50.50	21.50	
9611310211		9611310210		51.00	51.60/48.60x1.50	64.00	21.50	
9611310221		9611310220		63.50	64.10/60.30 x 1.90	77.50	21.50	
9611310231		9611310230		76.10	76.70/72.90 x 1.90	91.00	21.50	
9611310241		9611310240		101.60	102.50/97.60x2.45	119.00	21.50	
9611310311		9611310310		114.30	115.60/110.30 x 2.65	130.00	28.00	
		9611310320		139.70	141.20/135.70 x 2.75	155.00	28.00	
9611310331		9611310330		168.30	170.00/163.10 x 3.45	183.00	28.00	
								<b>Clamp ferrule</b>
		9612990107		25.00	25.00/22.60x1.20	50.50	21.50	
		9612990108		38.00	38.00/35.60x1.20	50.50	21.50	
		9612990109		51.00	51.00/48.60x1.20	64.00	21.50	
		9612990110		63.50	63.50/60.30x1.60	77.50	21.50	
		9612990111		76.10	76.10/72.90x1.60	91.00	21.50	
		9612990112		101.60	101.60/97.60x2.00	119.00	21.50	
<b>1.4301 (304)</b>				<b>mm</b>	<b>A</b>	<b>B</b>	<b>D</b>	<b>Clamp ferrule</b>
9611310660				25.00	50.50	20.00	25.00	
9611310670				38.00	50.50	20.00	38.00	
9611310680				51.00	64.00	25.00	51.00	
9611310700				76.10	91.00	30.00	76.10	
		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>A</b>	<b>B</b>	<b>Clamp reducing ferrule</b>
		9611310500		38.00 - 25.00	25.60/22.60x1.50	50.50	12.00	
		9611310510		38.00 - 32.00	32.60/29.60x1.50	50.50	12.00	
		9611310530		51.00 - 38.00	38.60/35.60x1.50	64.00	12.00	
		9611310550		63.50 - 51.00	51.60/48.60x1.50	77.50	12.00	
		9611310570		76.10 - 63.50	64.10/60.30 x 1.90	91.00	12.00	

NOTE: For pressure and surface, please see product leaflet.

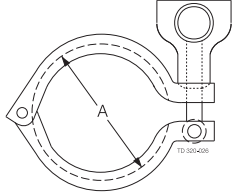
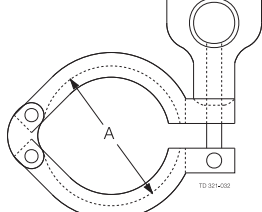
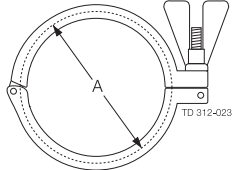
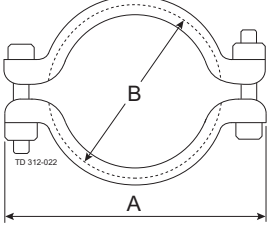
Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)		
1.4307 (304L)		1.4404 (316L)		mm	A	B	Blank
<b>Product code: 5045</b>							
9611340590		9611340600		25.00-38.00	50.40	6.40	
9611340591		9611340601		51.00	63.90	6.40	
9611340592		9611340602		63.50	77.40	6.40	
9611340593		9611340603		76.10	90.90	6.40	
210506		9611340604		101.60	118.90	6.40	
**		9612464001		168.30	183.00	11.00	

\*\* Not available

Item No.	PPL EUR	Item No.	PPL EUR	Item No.	PPL EUR	Size	Dimension (mm)				
NBR		EPDM		FPM		mm	A	B	D	Seal ring	
<b>Product code: 5031</b>											
9611990765		9611991358		9611991890		25.00	52.70	5.50	22.80		
9611990766		9611991359		9611991891		38.00	52.70	5.50	35.80		
9611990767		9611991360		9611991892		51.00	66.20	5.50	48.80		
9611990768		9611991361		9611991893		63.50	79.70	5.50	60.50		
9611990769		9611991362		9611991894		76.10	93.20	5.50	73.10		
9611990770		9611991363		9611991895		101.60	121.20	5.50	97.80		
9611991354		9611991364		9611991896		114.30	132.20	5.50	110.50		
9611991355		9611991365		9611991897		139.70	157.20	5.50	135.90		
9611991356		9611991366		9611991898		168.30	185.20	5.50	163.30		
9611991357		9611991367		9611991899		219.10	235.70	5.50	214.10		
PTFE						mm	A	B	D		Seal ring - (Modified ISO 2852, type A)
<b>Product code: 5031</b>											
9611991403						25.00	52.70	5.10	22.60		
9611991404						38.00	52.70	5.10	35.60		
9611991405						51.00	66.20	5.10	48.60		
9611991406						63.50	79.70	5.10	60.30		
9611991407						76.10	93.20	5.10	72.90		
9611991408						101.60	121.20	5.10	97.60		



Product code: 5049

Material Item No.	PPL EUR	Size	Dimension (mm)		
			A	B	
<b>1.4301 (304)</b>		<b>mm</b>			<b>A13MHM - Clamp ring</b>
211053		25.00/38.00	54.00		
211054		51.00	67.10		
211055		63.50	81.00		
211056		76.10	94.50		
211057		101.60	122.20		
<b>13MHM Clamp ring</b>					
212195		25.00/38.00	54.00		
212196		51.00	67.50		
212197		63.50	81.00		
212198		76.10	94.50		
212199		101.60	122.60		
<b>Clamp ring, wingnut</b>					
9611994453		25.00/38.00	54.00		
9611994454		51.00	67.50		
9611994455		63.50	81.00		
9611994456		76.10	94.50		
9611994457		101.60	122.60		
<b>Clamp ring (Allen screws)</b>					
9611311051		25.00-38.00	85.50	54.50	
9611311052		51.00	99.00	68.00	
9611311053		63.50	112.50	81.50	
9611311054		76.10	126.00	95.00	
9611311055		101.60	154.00	123.00	
9611311056		114.30	165.00	134.00	
9611311057		139.70	198.00	159.00	
9611311058		168.30	226.00	187.00	
9611311059		219.10	280.50	237.50	

NOTE: For pressure and surface, please see product leaflet.

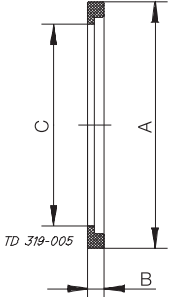
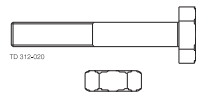
Material Item No.	PPL EUR	Size	Pressure class	Dimension (mm)				
				OD/ID x t	A	B		C
<b>1.4404 (316L)</b>		<b>mm</b>	<b>PN (bar)</b>				<b>Complete flange</b>	
9612498710		25.00	16	25.00/22.60x1.20	79.00	50.00	4 x M8	
9612498711		38.00	16	38.00/35.60x1.20	79.00	50.00	4 x M8	
9612498712		51.00	16	51.00/48.60x1.20	99.00	50.00	4 x M8	
9612498713		63.50	10	63.50/60.30x1.60	117.00	50.00	4 x M8	
9612498714		76.10	10	76.10/72.90x1.60	132.00	50.00	4 x M8	
9612498715		101.60	10	101.60/97.60x2.00	160.00	50.00	8 x M8	
<b>1.4404 (316L)</b>		<b>mm</b>		<b>OD/ID x t</b>	<b>B</b>	<b>E</b>	<b>F</b>	<b>Flange with O-ring groove</b>
9612493010		25.00		25.00/22.60x1.20	25.00	10.00	64.00	
9612493011		38.00		38.00/35.60x1.20	25.00	10.00	64.00	
9612493012		51.00		51.00/48.60x1.20	25.00	10.00	84.00	
9612493013		63.50		63.50/60.30x1.60	25.00	10.00	102.00	
9612493014		76.10		76.10/72.90x1.60	25.00	10.00	117.00	
9612493015		101.60		101.60/97.60x2.00	25.00	10.00	143.00	
								<b>Flange without O-ring groove</b>
9612492910		25.00		25.00/22.60x1.20	25.00	10.00	64.00	
9612492911		38.00		38.00/35.60x1.20	25.00	10.00	64.00	
9612492912		51.00		51.00/48.60x1.20	25.00	10.00	84.00	
9612492913		63.50		63.50/60.30x1.60	25.00	10.00	102.00	
9612492914		76.10		76.10/72.90x1.60	25.00	10.00	117.00	
9612492915		101.60		101.60/97.60x2.00	25.00	10.00	143.00	

NOTE: Seal rings - please see later this chapter.

NOTE: For pressure and surface, please see product leaflet.



Product code: 5058

Item No.	PPL EUR	Item No.	PPL EUR	Item No.	PPL EUR	Size	Dimension (mm)			
Silicone (Q)		EPDM		FPM		mm	A	B	C	Flange seal
9612402641		9612402631		9612402651		25.00	33.70	4.10	23.90	
9612402642		9612402632		9612402652		38.00	46.70	4.10	36.90	
9612402643		9612402633		9612402653		51.00	59.70	4.10	49.90	
9612402644		9612402634		9612402654		63.50	71.70	4.10	61.90	
9612402645		9612402635		9612402655		76.10	83.20	4.10	73.40	
9612402646		9612402636		9612402656		101.60	108.80	4.10	99.00	
				<b>Flange size</b>		<b>Screws</b>	<b>Nuts</b>		<b>Screws and nut set</b>	
		9612499301		25.00-76.10		4xM8 x 30.00	4 x M8			
		9612499302		101.60		8xM8 x 30.00	8 x M8			
		9612499303		125.00-150.00		8xM10 x 40.00	8 x M10			

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# 1.2 DIN Fittings and Tubes



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# 1.2 DIN Fittings and Tubes

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# Intro

## DIN Fittings and Tubes

### Intro

After years of intensive work with the portfolio we have achieved a unique surface appearance across the different DIN Fittings of which we are very proud. We have uniformed our marking, to support our high-quality Fittings and the result is fantastic. We call this range for "DIN Standard, new surface", to highlight it, and give it a special space in the new catalogue, because it truly is unique. With focus on simplicity we have reduced the surface appearances to two on machined and one on tubular Fittings and we have concentrated on "Hygienic Fittings" with an exception of DIN 11864. We have invested heavily in availability of "DIN Standard, new surface" portfolio and supported by the new automatic warehouse in Kolding and our online ordering tool "Anytime", this will provide a superior customer experience. Moreover, we have divided the catalogue into the different DIN standards, to show the differences and make it easy to choose the right product.

The old portfolio is, where possible and convenient, upgraded to our "DIN Standard, new surface", the rest we have kept "as is". In the price files we have made the following split:

"DIN Standard, new surface"

"Fit to DIN Tubes"

The complete DIN Fittings range we supply fits with the tube dimensions of EN 10357-A and DIN 11866- Reihe A (except from DIN 11851 W, which is according to the standard). The products in the chapter "Fit to DIN Tubes", have deviations from the DIN standards, but will still fit to EN 10357-A tubes.

Thank You for reading this and we hope You enjoy!

### Product presentation

Alfa Laval's range of DIN Tubes & Fittings are used in food, dairy, beverage, personal care, biotechnology and pharmaceutical process applications. Smooth, crevice-free interiors and secure, self-aligning joints are characteristic for Alfa Laval fittings. Each offers superior corrosion-resistance and unmatched service life. Alfa Laval fittings are designed and manufactured to ensure dimensional accuracy and structural integrity, making them easy to install. Tubing is manufactured to Alfa Laval's stringent specifications, making it a perfect match for the fittings. All products are labelled with a bar code, product information and manufacturing date. This provides the optimum identification and ensures that the product arrives to the job site in a clean orbital weld condition. On the product we have laser marked all the needed information such as heat number, dimension, surface, material and country of origin.



Product	DIN Standard	Surface <sup>1</sup>	Material <sup>2</sup>	Application	Part	
Tubes	EN 10357-	BC, BD, CC	1.4307 (304L)	Hygienic		
	A/DIN 11850	and CD	1.4404 (316L)			
	DIN 11866-A <sup>3</sup>	H3	1.4404 (316L)	Aseptic		
Bends, Tees and Reducers	DIN 11852	HSF3	1.4307 (304L)	Hygienic		
	DIN 11865 <sup>3</sup>	HSF2	1.4404 (316L)	Aseptic		
Connections	DIN 11851	HSF0	1.4307 (304L) 1.4404 (316L)	Hygienic	For Welding. Ends are ready for Orbital Welding (Screw connections) W: Expanding S: Welding	
	DIN 11853	H3	1.4404 (316L)	Hygienic	1: Screw connection 2: Flange connection 3: Clamp connection	
	DIN 11864	H3	1.4404 (316L)	Aseptic	1: Screw connection 2: Flange Connection 3: Clamp connection	
	DIN 32676		HSF0	1.4307 (304L)	Hygienic	Clamp connection
			H3	1.4404 (316L)		

<sup>1</sup>) Surface table is available later in the document

<sup>2</sup>) Material is according to EN 10088-1. Regarding complete Connections, Nut is always in 1.4301. A Nut in 1.4404 is available as a single item. We hold the right to deliver better material than stated in our brochures and order confirmation. Meaning, if stated 1.4301, it is allowed for us to deliver 1.4307 or 1.4404, at same price of course.

<sup>3</sup>) We do currently not offer this part of the DIN standard

Tubes

Standard	Material	Symbol	Surface			Heat Treatment
			External surface and Welded area	Internal surface	Internal Welded area	
EN 10357-A /DIN 11850	1.4307 (304L)	CC	Pickled and passivated	Ra< 0.8 µm Pickled and passivated	Ra < 1.6 µm Pickled and passivated	No
		CD	Polished Ra < 1.0 µm			
	1.4404 (316L)	BC	Pickled and passivated or Bright annealed	Ra< 0.8 µm Pickled and passivated or Bright annealed	Ra < 1.6 µm Pickled and passivated or Bright annealed	
		BD	Polished Ra < 1.0 µm			
DIN 11866-A	1.4404 (316L)	H3	Pickled or Bright annealed without Ra requirement, or Polished to Ra < 1.0 µm	Ra < 0.8 µm	Ra < 0.8 µm	Yes

Sizes

We supply EN10357-A which has the same dimensions as former DIN 11850 Reihe 2, and DIN 11866-A.

Please also notice "Nominal size" is not always equal to inner diameter (see DN15, DN25, DN40, DN65 and DN 80). The EN 10357-A standard is only referring to outer diameter. All dimensions in this catalogue are in millimeter.

Nominal size (only DIN 11866)	OD (outer diameter)	ID (inner diameter)	t (wall thickness)
DN10	13	10	1,5
DN15	19	16	
DN20	23	20	
DN25	29	26	
DN32	35	32	
DN40	41	38	
DN50	53	50	
DN65	70	66	
DN80	85	81	2
DN100	104	100	
DN125	129	125	
DN150	154	150	
DN200	204	200	

Tolerances

Outer diameter tolerances in DIN 11866 are lower from DN100 to DN200.

Outer diameter tolerances

Nominal size:	DN10	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200
OD:	13	19	23	29	35	41	53	70	85	104	129	154	204
EN 10357-A	±0,10	±0,10	±0,12	±0,15	±0,18	±0,21	±0,27	±0,35	±0,43	±0,78	±0,97	±1,16	±1,53
DIN 11866	±0,10	±0,10	±0,12	±0,15	±0,18	±0,21	±0,27	±0,35	±0,43	±0,52	±0,65	±0,77	±1,02



Wall thickness tolerances in DIN 11866 are lower from DN65 to DN200.

#### Wall thickness tolerances

Nominal size:	DN10	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200
OD:	13	19	23	29	35	41	53	70	85	104	129	154	204
EN 10357-A	±0,15	±0,15	±0,15	±0,15	±0,15	±0,15	±0,15	±0,20	±0,20	±0,20	±0,20	±0,20	±0,20
DIN 11866	±0,15	±0,15	±0,15	±0,15	±0,15	±0,15	±0,15	±0,15	±0,15	±0,15	±0,15	±0,15	±0,15

#### EN 10357-A/DIN 11850

The stainless-steel tubes in this standard are for the food, chemical and pharmaceutical industry.

Typically used with DIN 11852, DIN 11851, DIN 11853 and DIN 32676.

BC and BD tubes are annealed, whereas CC and CD tubes are pickled and passivated internal and external

All materials according to EN 10217-7.

#### DIN 11866

The stainless-steel tubes in this standard are for aseptic, chemical and pharmaceutical industry.

Typically used with DIN 11864 and DIN 11865.

All tubes are annealed, pickled and passivated in accordance with DIN EN 10217-7 W2Ab.

#### Comment to DIN 11851 W

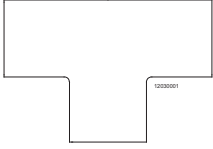



Regarding Connections DIN 11851 W (Expanding), this is the only product in this catalogue which does not match tube EN 10357-A from sizes up to DN50, above DN50 they fit. This standard is meant for the old "DIN 11850, Reihe 1".

#### DIN 11850 Reihe 1, different measures up to DN50:

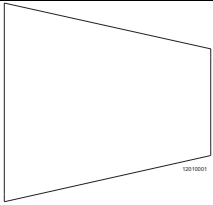
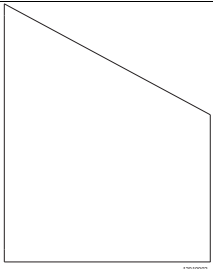
Dimensions	DN10	DN15	DN20	DN25	DN32	DN40	DN50
OD	12	18	22	28	34	40	52
ID	10	16	20	26	32	38	50
Thickness	1						



Tees

Type Name	Design Name	Comment	Picture
Tees	TS d <sub>1</sub> =d <sub>2</sub>	Standard Tee	
	RTS d <sub>1</sub> >d <sub>2</sub> (d <sub>2</sub> pointing down)	Reduced Tee	
	TK d <sub>1</sub> =d <sub>2</sub>	Short Tee	
	RTK d <sub>1</sub> >d <sub>2</sub> (d <sub>2</sub> pointing down)	Reduced Short Tee	

Reducers

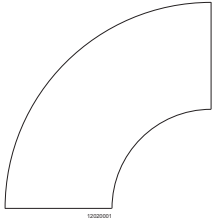
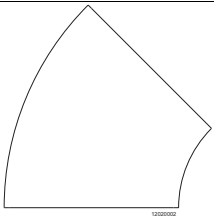
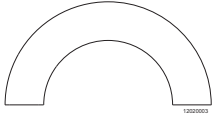
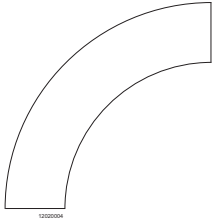
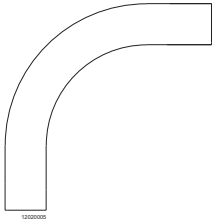
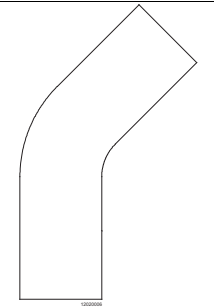
Type Name	Design Name	Comment	Picture
Reducers	RK	Concentric Reducer	
	RE	Eccentric Reducer	

Example of the Alfa Laval name for a short tee according to DIN 11852:

TEE TK DN25 HSF3 1.4404 DIN 11852



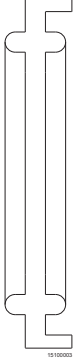
TEE	TK	DN25	HSF3	1.4404	DIN 11852
Type Name	Design Name	Nominal Size	Surface	Material	Standard

Bends

Type Name	Design Name	Comment	Picture
	BS-90	Standard Bend 90 Degrees	
	BS-45	Standard Bend 45 Degrees	
	BS-180	Standard Bend 180 Degrees	
Bends	BA5-90 <sup>3</sup>	Radius and l <sub>0</sub> are the same in mm	
	BL-90	Long Bend 90	
	BL-45	Long Bend 45	

Connections

Overview

DIN Standard	Surface	Material (Steel parts)	Material (Rubber parts)	Part	Seal Type
DIN 11851	HSF0	1.4307 (304L) 1.4404 (316L)	EPDM	Screw Connection	
			FPM	W: Expanding	
			NBR	(only 11851, Liner and Male end are expanded to the tube)	
			PTFE		
			Q	S: Welding	
DIN 11853	H3	1.4404 (316L)	FPM	1: Screw Connection	
			EPDM	2: Flange Connection 3: Clamp Connection	
DIN 11864	H3	1.4404 (316L)	FPM EPDM	1: Screw Connection 2: Flange Connection 3: Clamp Connection	
DIN 32676	HSF0	1.4307 (304L)	PTFE	Clamp Connection	
	H3	1.4404 (316L)	FPM		
		1.4404 (316L)			

Gasket (G)

O-Ring (R)

Gasket (D)

DIN 11851 overview

All Connections in DIN 11851 are screw connections

Parts Type Name	Parts Design Name	Connection Name	Comment
Male (Gewindestutzen)	C	W	Connection to tube by expanding, DN10-DN100
Liner (Kegelstutzen)	D		
Male (Gewindestutzen)	SC	S	Connection to tube by welding, DN10-DN150
Liner (Kegelstutzen)	SD		
Male (Gewindestutzen)	SKC	SK (Short)	
Liner (Kegelstutzen)	SKD		
Blind Male (Blind-Gewindestutzen)	BC		Alfa Laval does currently not offer this (real design name is "C")
Blind Liner (Blind-Kegelstutzen)	BD		The real design name is "D" but Alfa Laval has chosen to call it "BD". The blind is not expanded or welded to the tube, therefore it can be used for all connection versions in DIN 11851
Nut (Nutüberwurfmutter)	F		Used for all connection versions in DIN 11851
Gasket (Dichtring)	G		Used for all connection versions in DIN 11851

A Complete connection is Male + Liner + Gasket + Nut. It is possible to blind from Liner side. Please do not mix connection W with connection S.

The "Connection Name" equal to W, is from the German word, Walzen, which in English is translated to Expanding.

The "Connection Name" equal to S, is from the German word, Schweissen, which in English is translated to Welding.

The "Connection Name" equal to SK, is from the German word, Schweissen, Kurz, which in English is translated to Welding, Short.

Examples of DIN 11851 products:

SKC:		
S	K	C
Welding	Short	Male

SKD:		
S	K	D
Welding	Short	Liner

Example of the Alfa Laval name for a complete Connection, DIN 11851:

**CONNECTION S DN50 HSF0 1.4307 DIN 11851 EPDM**

CONNECTION	S	DN50	HSF0	1.4307	DIN 11851	EPDM
Type Name	Design Name (S=Welding)	Nominal Size	Surface	Material	Standard	Seal Type

Example of the Alfa Laval name for a Male, DIN 11851:

**MALE SC DN50 HSF0 1.4307 DIN 11851**

MALE	SC	DN50	HSF0	1.4307	DIN 11851
Type Name	Design Name	Nominal Size	Surface	Material	Standard





## DIN 11853 overview

We state this product group is for hygienic application, but please be aware it is using the same O-ring as 11864 which is for aseptic applications, the only difference between the two standards is the "build in length". "Build in length" of DIN 11864 is longer than DIN 11853, which makes it easier to perform orbital welding.

## DIN 11853-1

## Screw Connection (Verschraubungen)

Parts Type Name	Parts Design Name	Connection Name
Male (Gewindestutzen)	GS	
Liner (Bundstutzen)	BS	
Blind Male (Blindgewindestutzen) (same item as in 11864-1)	BGS	V
Blind Liner (Blindbundstutzen) (same item as in 11864-1)	BBS	
Nut (Nutüberwurfmutter)	F (DIN 11851)	
O-Ring	R	

A complete connection (V) is: Male (GS) + Liner (BS) + O-Ring (R) + Nut (F).

It is possible to blind from both Liner and Male side, you will have to replace normal Male or Liner. The Nut for DIN 11853 is the same as in DIN 11851.

## DIN 11853-2

## Flange Connection (Flanschverbindung)

Parts Type Name	Parts Design Name	Connection Name
<b>Currently not part of offering</b>		
Flange Groove (Nutflansch)	NF	
<b>Currently not part of offering</b>		
Flange Collar (Bundflansch)	BF	
Blind Flange Groove (Blindnutflansch) (same item as in 11864-2)	BNF	F
Blind Flange Collar (Blindbundflansch) same item as in 11864-2)	BBF	
Screw (Sechskantshraube, DIN EN ISO 4017)		
Nut (Sechskantmutter, DIN ISO 4032)		
O-Ring	R	

For NF and BF please use 11864-2 NF and BF

A complete connection (F) is Flange Groove (NF) + Flange Collar (BF) + O-Ring (R) + Screw and Nut set.

It is possible to blind from both Groove and Collar side, you will have to replace normal Groove or Collar.



DIN 11853 overview

DIN 11853-3

Clamp Connection (Klemmverbindung)

Parts Type Name	Parts Design Name	Connection Name
<b>Currently not part of offering</b>		
Clamp Liner Groove (Nutmlemmstutzen)	NKS	
<b>Currently not part of offering</b>		
Clamp Liner Collar (Bundklemmstutzen)	BKS	
Blind Clamp Liner Groove (Blindnutklemmstutzen)	BNKS	K
<i>(Same Item As In 11864-3)</i>		
Blind Clamp Liner Collar (Blindbundklemmstutzen)	BBKS	
<i>(Same Item As In 11864-3)</i>		
Clamp Ring (Klammer)		
O-Ring	R	

For NKS and BKS please use from 11864-3.

A complete connection (K) is: Clamp Liner Groove (NKS) + Clamp Liner Collar (BKS) + O-Ring (R) + Clamp Ring.

It is possible to blind from both Groove and Collar side, you will have to replace normal Groove or Collar.



## DIN 11864

**DIN 11864-1**

Same structure as DIN 11853-1. Only “build in length” is different on Male and Liner (GS and BS), both are longer in the DIN 11864-1 version.

**Screw Connection (Verschraubungen)**

Parts Type Name	Parts Design Name	Connection Name
Male (Gewindestutzen)	GS	V
Liner (Bundstutzen)	BS	
Blind Male (Blindgewindestutzen)	BGS	
Blind Liner (Blindbundstutzen)	BBS	
Nut (Nutüberwurfmutter)	F (DIN 11851)	
O-Ring	R	

A complete connection (V) is: Male (GS) + Liner (BS) + O-Ring (R) + Nut (F).

It is possible to blind from both Liner and Male side. Both “Blind Male” and “Blind Liner” are equal to the ones in DIN 11853-1. The Nut for DIN 11864 is the same as in DIN 11851.

**DIN 11864-2**

Same structure as DIN 11853-2. Only “build in length” is different on Flange Groove and Flange Collar (NF and BF), both are longer in the DIN 11864-2 version.

**Flange Connection (Flanschverbindung)**

Parts Type Name	Parts Design Name	Connection Name
Flange Groove (Nutflansch)	NF	F
Flange Collar (Bundflansch)	BF	
Blind Flange Groove (Blindnutflansch)	BNF	
Blind Flange Collar (Blindbundflansch)	BBF	
Screw (Sechskantshraube, Din En Iso 4017)		
Nut (Sechskantmutter, Din En Iso 4032)		
O-Ring	R	

It is possible to blind from both Groove and Collar side, BNF and BBF in DIN 11853-2 and DIN 11864-2 are identical.

A complete connection (F) is: Flange Groove (NF) + Flange Collar (BF) + O-Ring (R) + Screw and Nut set.

## DIN 11864

**DIN 11864-3**

Same structure as DIN 11853-3. Only "build in length" is different on "Clamp Liner Groove" and Clamp Liner Collar (NKS and BKS), both are longer in the DIN 11864-3 version.

**Clamp Connection (Klemmverbindung)**

Parts Type Name	Parts Design Name	Connection Name
Clamp Liner Groove (Nutklemmstutzen)	NKS	
Clamp Liner Collar (Bundklemmstutzen)	BKS	
Blind Clamp Liner Groove (Blindnutklemmstutzen)	BNKS	K
Blind Clamp Liner Collar (Blindbundklemmstutzen)	BBKS	
Clamp Ring (Klammer)		
O-Ring	R	

A complete connection (K) is: Clamp Liner Groove (NKS) + Clamp Liner Collar (BKS) + O-Ring (R) + Clamp Ring.

It is possible to blind from both Groove and Collar side, BNKS and BBKS in DIN 11853-3 and DIN 11864-3 are identical.

## Clamp Connection (Klemmverbindung)

Parts Type Name	Parts Design Name	Connection Name
Ferrule Short (Klemmstutzen Kurz)	KK	
Ferrule Long (Klemmstutzen Lang)	KL	
Blind (Blindklemmstutzen)	B	KK KL
Gasket (Dichtring)	D	
Clamp Ring (Klammer)		

A complete connection is: Ferrule x 2 + Gasket (D) + Clamp Ring.

It is possible to blind from both sides by changing one of the Ferrules with a Blind.

## Length of assembled connections

Approx. length in mm of the assembled connections (Baulänge)

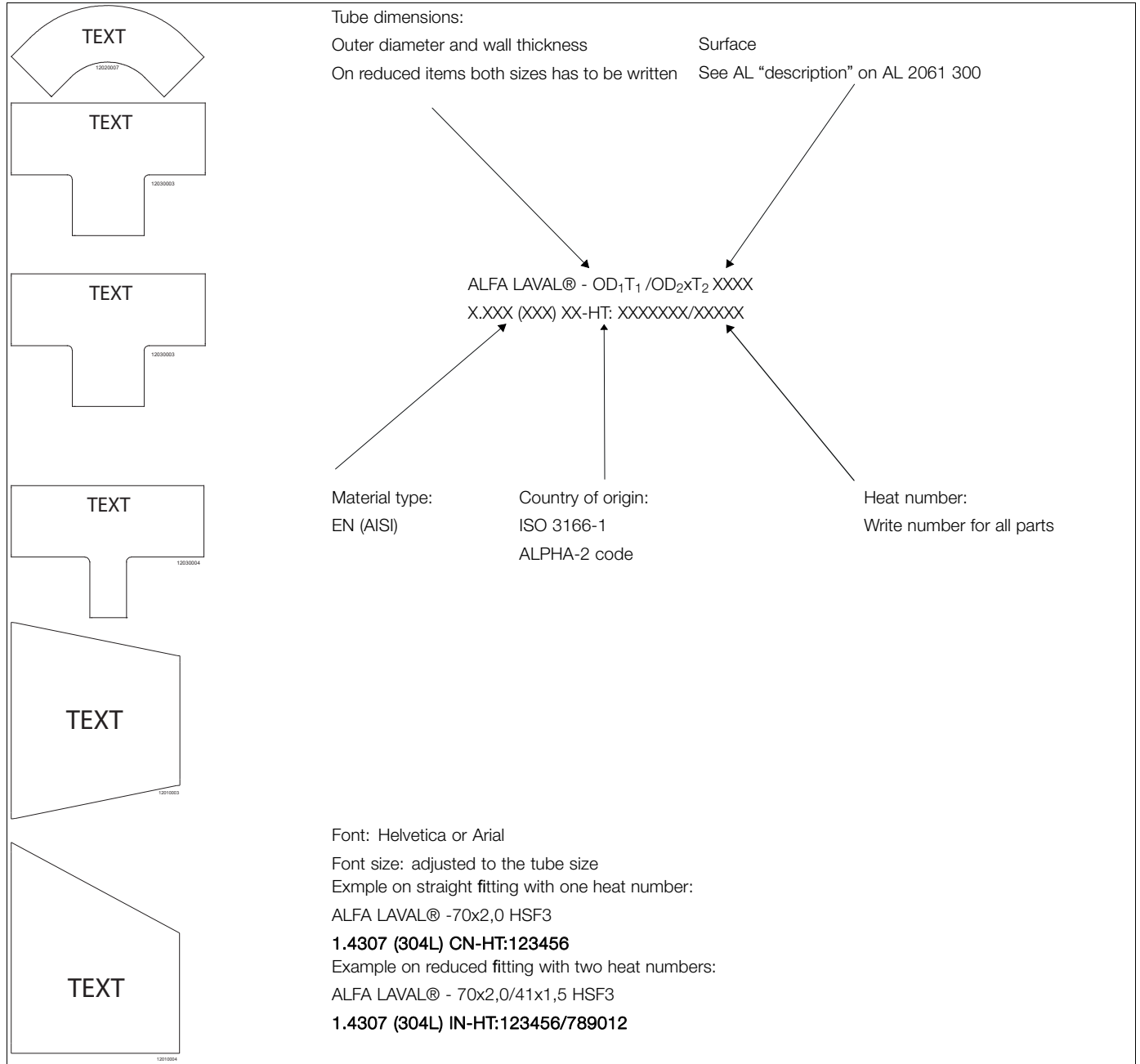
Nominal size	DIN 11851		DIN 11853			DIN 11864			DIN 32676	
	W and S	SK	1	2	3	1	2	3	KK	KL
DN10	35		32							
DN15		27				76			37,7	58,9
DN20	37		34		44		80	76		
DN25	45		42			77		77		
DN32	51	31	48	48		88		88	44,7	73,7
DN40	53		50		48		90	88		
DN50	57	33	54		49	89		89		
DN65	65	35	62		53	113	108	113		
DN80	75		72		57	117		117		97,7
DN100	89	41	86	52	60	120	116	120	57,7	
DN125	70	49								
DN150	76	56		56			120			133,7



Marking

In Alfa Laval we have chosen to mark our product as shown in this chapter. The marking provides all the needed information and is placed logical on the products.

Tubular



Machined

Some of our machined products are very small and marking on the optimal place is impossible therefore we use "Secondary Option" instead of "Primary Option".

	Primary option	Secondary option	
Nut			End cap union and ferrule Blind
Male Part			End cap flange Blind
Liner			Dimensions: Outer diameter and wall thickness On nut and blanks the standard size is added. Eg.:for DIN: DIN:DN50,For ISO: 2
Ferrule			Surface: See "AL description" on AL 2062 301
Flange			ALFA LAVAL® -OD <sub>x</sub> T XXXX X.XXX (XXX) ZZ-HT: XXXXXXX

Material type: EN (AISI)

Country of origin: ISO 3166-1 ALPHA-2 code

Heat number: Nut do not have a heat number  
All other fittings need a heat number

Font: Helvetica or Arial  
Font size: adjusted to the tube size

**Example on male part, liner, ferrule, and flange**  
ALFA LAVAL® - 70x2.0 HSF0  
1.4301 (304) CN-HT : 123456

**Example on nut and blanks**  
ALFA LAVAL® - 70x2.0 HSF0  
1.4301 (304) IN-HT : 123456

**Example on secondary option, on nut, male part, liner and ferrule**  
ALFA LAVAL® - 70x2.0 HSF0 1.4301 (304) DK-HT : 123456

Surface descriptions

We have chosen to provide a limited choice, most used, of all the surface possibilities. We have given them an Alfa Laval name. The names and descriptions are like in the below table.

Our surface philosophy has been to create a uniform surface finish which meets the standard or better and at the same time fits with the outer surface appearance of the DIN tubes across all DIN Fittings. The range "DIN Standard, new surface" will provide this benefit and will be visible in plants using Alfa Laval DIN Fittings only.

The new uniform appearance of all Alfa Laval DIN Fittings is also the reason for new surface descriptions. This is a unique product and therefore it deserves a unique surface description.

The surface on tubular fittings exceeds the requirement in DIN 11852. We are meeting the requirements to surface roughness in EHEDG and 3A. Our customers are therefore buying a product with a better surface roughness than most of the market supplies.

Machined Fittings

AL description	Standard	Surface texture R <sub>a</sub> μm (μ-inch)	
		Wetted	Not wetted
HSF0	DIN (Hygienic)	< 0.8 (32)	< 1.6 (64)
H3	DIN UltraPure	< 0.8 (32)	< 1.0 (40)

Tubular Fittings

AL description	Standard	Surface structure ID/OD	Surface texture R <sub>a</sub> μm (μ-inch)			
			Wetted		Not wetted	
			Surface	weld bead	Surface	weld bead
HSF2	DIN (Hygienic)	Polished/Shot blasted	<0.8 (32)	<0.8 (32)	<1.6 (64) <sup>2</sup>	<1.6 (64) <sup>2</sup>
HSF3 <sup>1</sup>	DIN (Hygienic)	Polished/Polished	< 0.8 (32)	< 0.8 (32)	< 0.8 (32)	< 0.8 (32)

<sup>1</sup>For sizes larger than DN100, the "Not wetted" surface Ra can be upto 1.0 μm.

<sup>2</sup>Tolerances according to DIN 11852

Our products are mechanical polished. Mechanical polishing is achieved by using a progressive series of abrasives, from low to high grit. This allows a consistent internal finish and both optimal and economical cleaning.

HSF2 is our tubular "MAT" version. Inside it is polished to Ra <0.8 and outside it is shot blasted to a surface Ra<1.6





**Test procedure**

Our manufacturing facilities operate under an approved ISO 9001 quality standard. Wall thickness integrity is maintained using fabrication grade minimum wall tubing for all cold-formed tubular products.

Our fittings are put through visual inspection and ovality and squareness tolerances are inspected with calibrated equipment. Surface finish is inspected with calibrated profilometer to ensure the Roughness average (Ra) maximum is not exceeded.

**Certificates**

All product wetted stainless-steel products are delivered with a 3.1 certificate in accordance to EN 10204. You can find the certificates here: <https://heatbase.alfalaval.com/Certificates>

**Packing**

We protect our products by packing them into high quality cardboard boxes. This ensure they keep the high quality during storing and transportation.

Packing sizes as below:

DN10-DN80 = 10 pcs per cardboard box

DN100 = 5 pcs per cardboard box

> DN100 = 1 pcs per cardboard box

**Rubber****Rubber Materials**

In order to obtain the longest possible lifetime for rubber seals it is essential to choose the right quality for the actual duty. Consequently when choosing rubber quality, the characteristics of the different rubber types should be considered. All product wetted rubber material are in conformity of FDA.

**EPDM Rubber (Ethylene Propylene)**

EPDM rubber is widely used within the food industry as it is resistant to most products used in this sector. Another advantage is that it may be used to a recommend max. temperatures of 140°C (244°F). However, there is one essential limitation, EPDM is not resistant to organic and non-organic oils and fats. The resistance to ozone is excellent.

**Actylonitrile Butadiene Rubber, NBR**

NBR is the rubber type most frequently used for technical purposes. It is quite resistant to most hydrocarbons, e.g oil, grease and fat. It is sufficiently resistant to diluted lye and nitric acid and may be used to a recommend max. 95°C (203°F). As NBR is attacked by ozone it may not be exposed to ultraviolet rays and should thus consequently be stored so that this is avoided.

**Silicone Rubber, Q**

The most significant quality of silicone rubber is that it can be applied from temperatures below -50°C (-58°F) to approx. + 180°C (356°F) and still keep its elasticity. The chemical resistance is satisfactory to most products. However, undiluted lye and acids as well as hot water and steam may destroy silicone rubber. The resistance to ozone is good.

**Fluorine Rubber, FPM**

FPM is often used when other rubber types are unsuited, especially at high temperatures up to approx. 180°C (356°F). The chemical resistance is good to most products, however hot water, steam, lye, acid and alcohol should be avoided. The resistance to ozone is good.

**Hydrogenated actylonitrileButadiene Rubber, HNBR**

Mechanically strong and normally resistant to ozone and strong oxidizers, animal and vegetable fats, nonpolar solvents, oils and lubricants, water and aqueous solutions. The recommend max. temperature is 130°C (266°F).

**Perfluoroalkoxy polymer, PFA**

PFA is very similar to PTFE, but opposite to those PFA is thermo plastic and has minimal porosity. PFA has a very high mechanical strength which makes it a perfect choice when dealing with abrasive products. The PFA seal offers longer service intervals. The recommend max. temperature for the PFA seal is 90°C (194°F).



## Product and chemical resistance of flexible rubber materials

The information below is intended as an aid in selecting the best rubber quality for an actual application. It is not possible to state any general lifetime of rubber seals as many factors influence it: chemical attack, temperature, mechanical wear etc. Extreme temperatures, even within the generally accepted limits, may worsen other kinds of attack and thus reduce the lifetime.

### Ratings

- 1 = Unsuitable.
- 2 = Limited suitability.
- 3 = Normal suitability.
- 4 = High suitability.
- = Not recommended for other reasons.

The table contains data which have been compiled from the results of our own tests and the recommendations of our raw material suppliers. The data should be considered as recommendations only and will be brought up-to-date from time to time. They are based on constant contact with the specified product.

In case of doubt or lack of information it would be advisable to consult us directly, which will enable us to investigate specific applications.

Product or process		NBR <sup>1)</sup>	EPDM <sup>2)</sup>	Q <sup>3)</sup>	FPM <sup>4)</sup>	PTFE <sup>5)</sup>
Dairy products (milk, cream)		3	3-4	3-4	-	3-4
Dairy products (sour milk products)		3	3-4	3-4	-	3-4
Brewery products (beer, hops etc.)		3	3-4	1-2	2-3	3-4
Wine and yeast		3	4	4	2-3	3-4
Animal and vegetable fats	100°C	3	1-2	3	4	3-4
Water and water solutions	< 70°C	3	4	3	2-4	3-4
Hot water and steam	< 130°C	1	4	2	-	3-4
Concentrated fruit juices and etheral oils	< 100°C	1	1	1	3	3-4
Non-oxydising acids	< 80°C	1-2	3	1-2	2	3-4
Oxydising acids	< 80°C	-	3	1	2	3-4
Weak concentrate of lye	< 100°C	2	4	2	2	3-4
Strong concentrate of lye	< 100°C	1	3	1	1	3-4
Mineral oils	< 110°C	3	-	-	4	3-4
Aliphatic carburetted hydrogen (hexane)		3	1	1	4	3-4
Aromatic carburetted hydrogen (benzole)		1	1	1	3	3-4
Alcohols		1-3	2-3	3-4	3-4	3-4
Ester and ketones		1-2	1-2	1-2	3-4	3-4
Ether		1	1	1-3	3-4	3-4
Methylene chloride		1	1	2-3	3-4	3-4
Ozyne and atmospheric conditions		1-2	4	4	3-4	3-4

International designation of flexible rubber materials according to ISO R 1629.

ISO = International standard.

### Notes

Designation of flexible rubber materials	Abbreviation symbol
1) Nitrile rubber	N
2) Ethylene propylene rubber	E
3) Silicone rubber	Q
4) Fluorinated rubber	F
5) Polytetraflour ethylene	



## Elastomers

Seal rings are available in EPDM, FPM and PTFE

## Elastomer properties

	EPDM	FPM	PTFE
FDA (CFR 21: 177.2600)	Yes	Yes	Yes
USP Class VI certified	No	No	No
Recommended operating temperature. °C	-10°C to +140°C	-10°C to +180°C	-10°C to +220°C
<b>Resistance</b>			
Steam resistance	Yes	No	Yes
Alkali resistance	Yes	No	Yes
Resistance to fats/oils	No	Yes	Yes
Ozone resistance	Yes	Yes	Yes

Pressure ratings

EN 10357-A Tubes

Permissible max. Operating Pressures at a temperature of 20°C

Nominal diameters													
DN	10	15	20	25	32	40	50	65	80	100	125	150	200
Permissible operating pressures in bar for tubes													
	355	242	200	159	131	112	87	87	72	59	47	39	30

The permissible operating pressures have been calculated for welded pipes with the calculation value for material number 1.4301 acc. to DIN EN 10088-2 product shape C (cold strip) taking into consideration calculation voltage of 100% in the welded seam.

Permissible max. Operating Pressures at a temperature of 150°C

Nominal diameters													
DN	10	15	20	25	32	40	50	65	80	100	125	150	200
Permissible operating pressures in bar for tubes													
	219	150	124	98	81	69	53	54	44	36	29	24	18

Maximum pressure for the DIN Connections [bar]

The pressures are usable up to maximum 140°C

Size	Standard						
	11851	11853-1	11853-2	11853-3	11864-1	11864-2	11864-3
DN10	40	40	25	40	40	25	40
DN15							
DN20							
DN25							
DN32							
DN40	25	25	16	25	16	16	
DN50							
DN65							
DN80							
DN100	16		10			10	
DN125							
DN150							



## Pressure ratings

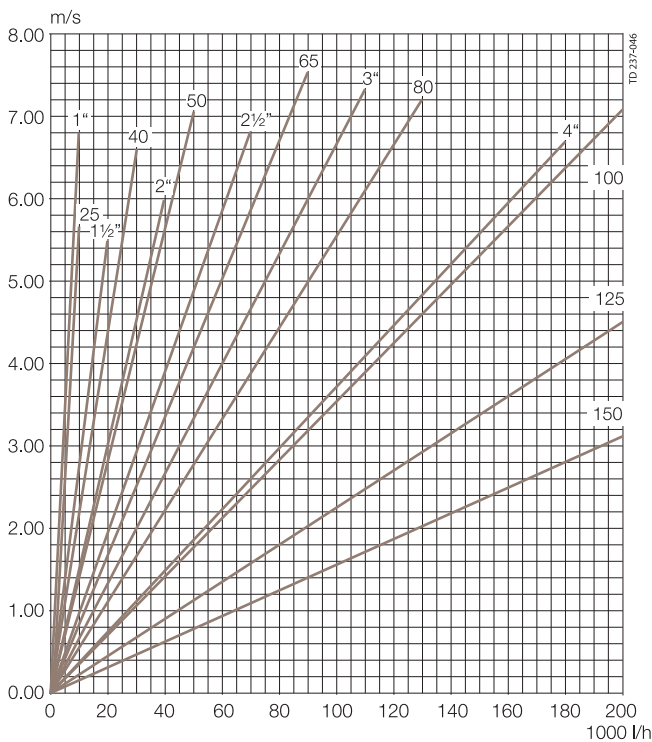
**Maximum pressure for the Tubular Fittings [bar]**

The pressures are usable up to maximum 150°C

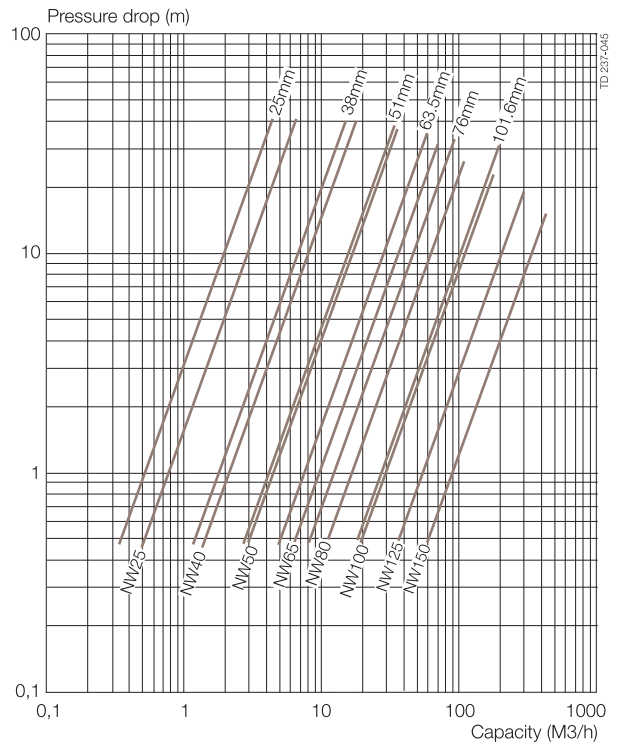
Size	DIN 11852		
	TEES	BENDS	REDUCERS
DN10	25	25	25
DN15			
DN20			
DN25			
DN32			
DN40			
DN50	16	16	16
DN65			
DN80			
DN100	10	10	10
DN125			
DN150			
DN200			

For reduced Tees and Reducers the DN size refers to the largest diameter.

Pressure drop and flow velocity curves



Flow velocity in ISO 2037 and EN 10357-A tubes



Pressure drop in 100 m ISO 2037 and EN 10357-A tubes



## Steelgrades

**Most common steelgrades**

In the table below, we have shown the chemical composition of the materials.

Name	Material	Chemical composition								
		C	Si	Mn	Pmax.	S	N	Cr	Mo	Ni
X5CrNi18-10	1.4301 (304)	≤ 0.070	≤ 1.00	≤ 2.00	0.045	≤ 0.015	≤ 0.011	17.5 to 19.5		8.0 to 10.5
X2CrNi18-9	1.4307 (304L)	≤ 0.030	≤ 1.00	≤ 2.00	0.045	≤ 0.015	≤ 0.011	17.5 to 19.5		8.0 to 10.5
X5CrNiMo17-12-2	1.4401 (316)	≤ 0.070	≤ 1.00	≤ 2.00	0.045	≤ 0.015	≤ 0.011	16.5 to 18.5	2.0 to 2.5	10.0 to 13.0
X2CrNiMo17-12-2	1.4404 (316L)	≤ 0.030	≤ 1.00	≤ 2.00	0.045	≤ 0.015	≤ 0.011	16.5 to 18.5	2.0 to 2.5	10.0 to 13.0
X2CrNiMo18-14-3	1.4435 (316L)	≤ 0.030	≤ 1.00	≤ 2.00	0.045	≤ 0.015	≤ 0.011	17.0 to 19.0	2.5 to 3.0	12.5 to 15.0

(According to EN 10088-1)

(The material names 304, 304L, 316 and 316L according to AISI/SAE)

We do not offer 1.4435, we have chosen 1.4404 instead. Both materials are designed for highly corrosive environments. Material 1.4435 has due to the higher content of Chromium and Nickel a better corrosion resistance and formability than 1.4404, it also has a significantly higher price. Our many years in the Installation Material Business has proven 1.4404 as the best match for our customers processes.

**Treatment of stainless steel**

We will shortly touch two of the most important areas:

- 1.Heat treatment
- 2.Chemical surface treatment

**Heat treatment**

Processes where you are heating the metal to a certain temperature, which will make the atoms migrate in the in the crystal lattice.

We will focus on the most important.

**Annealing**

A process where the metal is heated to a temperature around 1050° - 1150°C, kept there for a specific time and then cooled at a very slow and controlled rate. The process is used to:

- °Reduce hardness
- °Increase ductility
- °Release mechanical stresses

After annealing the metal is more workable.

**Chemical surface treatment**

To understand why we do surface treatments, it is important to understand the role of the passive layer

The passive layer is a thin invisible oxide film (most important are the chromium- and iron oxides), which protects the steel from its surroundings, and therefore from corrosion. If the layer is locally broken, for example by a scratch, it will, under normal conditions (clean surface and enough oxygen), naturally self-passivate, and thereby restore the ability to avoid corrosion. Stainless steels ability to have this in-built self-repairing corrosion protection system, is what we benefit from.

In some cases, typically after reworking the steel, we need to help the steel to restore the oxide film, here the surface treatment is important. The good thing is, stainless steel treated in the right way and not exposed above its "chemical strength", will last very long. On the other side, if the "rules" working with stainless steel are not followed or the stainless steel is placed in an environment above its "chemical strength", the oxide layer will "break" and corrosion will start, once the corrosion has started it will proceed very fast.

The two most common mentioned chemical surface treatments are "Pickling" and "Passivation"

**Pickling**

A process where the metal is put into an acid bath (typically 15% Nitric acid and 3% Hydrofluoric acid). Time and temperature of the bath is depending by the case. Pickling is used to remove weld heat tinted layers from the surface. A thin layer of metal is removed by the process and cleaning the steel, after the process the steel has totally lost its oxide film, but after flushing with water it will automatically be reestablished. It will take up to 24 hours before the layer is as robust as before the welding process.

**Passivation**

When the surface is clean the passivation (reestablishing the oxide film), is happening automatically, but as discussed above it will take some time before the layer has the natural strength. This can be forced to happen very fast by a chemical passivation. The passivation bath is one type of acid (normally 20% Nitric acid). No metal is removed from the surface and the surface roughness is not changed, only the passive layer is strengthened.





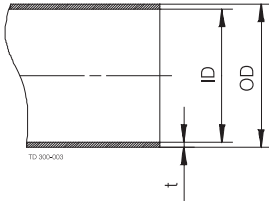
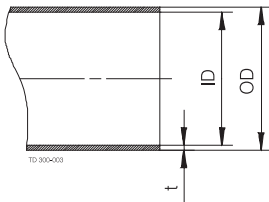
Tubes of manufacturing lengths of approx 6 meters  
 Product code: 5108

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)	
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>BD EHEDG 0.8/.08</b>
8010007788		8010007790		10	16.00/13.00 x 1.50	
9611819440		9611819592		15	19.00/16.00 x 1.50	
9611819442		9611819594		20	23.00/20.00 x 1.50	
9611819133		9611819596		25	29.00/26.00 x 1.50	
9611819443		9611819598		32	35.00/32.00 x 1.50	
9611819444		9611819544		40	41.00/38.00 x 1.50	
9611819445		9611819554		50	53.00/50.00 x 1.50	
9611819170		9611819365		65	70.00/66.00 x 2.00	
9611819175		9611819375		80	85.00/81.00 x 2.00	
9611819184		9611819388		100	104.00/100.00 x 2.00	
						<b>BC EHEDG 0.8/.08</b>
8010007789		8010007791		10	16.00/13.00 x 1.50	
9611819798		9611819647		15	19.00/16.00 x 1.50	
9611819800		9611819648		20	23.00/20.00 x 1.50	
9611819802		9611819649		25	29.00/26.00 x 1.50	
9611819804		9611819650		32	35.00/32.00 x 1.50	
9611819806		9611819651		40	41.00/38.00 x 1.50	
9611819808		9611819652		50	53.00/50.00 x 1.50	
9611819171		9611819363		65	70.00/66.00 x 2.00	
9611819176		9611819656		80	85.00/81.00 x 2.00	
9611819186		9611819657		100	104.00/100.00 x 2.00	

\* PPL prices per meter are updated monthly

Please contact your Alfa Laval contact person for further information.

Tubes of manufacturing lengths of approx 6 meters  
 Product code: 5108

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)	
<b>1.4301 (304)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>CC finish</b>
9611819683		9611819528		15	19.00/16.00 x 1.50	
		9611819529		20	23.00/20.00 x 1.50	
9611819519		9611819627		25	29.00/26.00 x 1.50	
9611819520		9611819628		32	35.00/32.00 x 1.50	
9611819521		9611819629		40	41.00/38.00 x 1.50	
9611819522		9611819630		50	53.00/50.00 x 1.50	
9611819689		9611819631		65	70.00/66.00 x 2.00	
9611819690		9611819632		80	85.00/81.00 x 2.00	
9611819691		9611819633		100	104.00/100.00 x 2.00	
9611819692		9611819634		125	129.00/125.00 x 2.00	
9611819693		9611819534		150	154.00/150.00 x 2.00	
						<b>CD finish</b>
9611819660		9611819413		15	19.00/16.00 x 1.50	
9611819661		9611819414		20	23.00/20.00 x 1.50	
9611819674		9611819435		25	29.00/26.00 x 1.50	
9611819675		9611819436		32	35.00/32.00 x 1.50	
9611819676		9611819437		40	41.00/38.00 x 1.50	
9611819677		9611819438		50	53.00/50.00 x 1.50	
9611819425		9611819450		65	70.00/66.00 x 2.00	
9611819426		9611819451		80	85.00/81.00 x 2.00	
9611819427		9611819935		100	104.00/100.00 x 2.00	
9611819428		9611819936		125	129.00/125.00 x 2.00	
9611819429		9611819449		150	154.00/150.00 x 2.00	

\* PPL prices per meter are updated monthly  
 Please contact your Alfa Laval contact person for further information.



Product code: 5007

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			
1.4307 (304)		1.4404 (316L)		mm	OD/IDxt	L	R	BEND 45 BS, HSF3 (ID=0.8/OD=0.8) DIN 11852
9615227331		9615227343		10	13.00/10.00 x 1.50	18.38	26.00	
9615227332		9615227344		15	19.00/16.00 x 1.50	24.75	35.00	
9615227333		9615227345		20	23.00/20.00 x 1.50	28.28	40.00	
9612154642		9612154611		25	29.00/26.00 x 1.50	35.36	50.00	
9612154643		9612154612		32	35.00/32.00 x 1.50	38.89	55.00	
9612154644		9612154613		40	41.00/38.00 x 1.50	42.43	60.00	
9612154645		9612154614		50	53.00/50.00 x 1.50	49.5	70.00	
9611293861		9611293862		65	70.00/66.00 x 2.00	56.57	80.00	
9611293871		9611293872		80	85.00/81.00 x 2.00	63.64	90.00	
9611293881		9611293882		100	104.00/100.00 x 2.00	70.71	100.00	
9611293891		9611293892		125	129.00/125.00 x 2.00	132.58	187.50	
9611293901		9611293902		150	154.00/150.00 x 2.00	159.1	225.00	
9615227359		9615227360		200	204.00/200.00 x 2.00	212.13	300.00	

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			
1.4307 (304)		1.4404 (316L)		mm	OD/IDxt	L	R	BEND 45 BS, HSF2 (ID=0.8/OD=1.6) DIN 11852
9615227307		9615227319		10	13.00/10.00 x 1.50	18.38	26.00	
9615227308		9615227320		15	19.00/16.00 x 1.50	24.75	35.00	
9615227309		9615227321		20	23.00/20.00 x 1.50	28.28	40.00	
9615227310		9615227322		25	29.00/26.00 x 1.50	35.36	50.00	
9615227311		9615227323		32	35.00/32.00 x 1.50	38.89	55.00	
9615227312		9615227324		40	41.00/38.00 x 1.50	42.43	60.00	
9615227313		9615227325		50	53.00/50.00 x 1.50	49.5	70.00	
9615227314		9615227326		65	70.00/66.00 x 2.00	56.57	80.00	
9615227315		9615227327		80	85.00/81.00 x 2.00	63.64	90.00	
9615227316		9615227328		100	104.00/100.00 x 2.00	70.71	100.00	
9615227317		9615227329		125	129.00/125.00 x 2.00	132.58	187.50	
9615227318		9615227330		150	154.00/150.00 x 2.00	159.1	225.00	
9615227357		9615227358		200	204.00/200.00 x 2.00	212.13	300.00	

Product code: 5007

1.2

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				
<b>BEND 90 BS</b> <b>HSF3 (ID=0.8/OD=0.8)</b> <b>DIN 11852</b>									
9612150558		9612150508		10	13.00/10.00 x 1.50	26.00	26.00		
9612150559		9612150509		15	19.00/16.00 x 1.50	35.00	35.00		
9612150560		9612150510		20	23.00/20.00 x 1.50	40.00	40.00		
9612150561		9612150511		25	29.00/26.00 x 1.50	50.00	50.00		
9612150562		9612150512		32	35.00/32.00 x 1.50	55.00	55.00		
9612150563		9612150513		40	41.00/38.00 x 1.50	60.00	60.00		
9612150564		9612150514		50	53.00/50.00 x 1.50	70.00	70.00		
9611301066		9611309171		65	70.00/66.00 x 2.00	80.00	80.00		
9611301067		9611309181		80	85.00/81.00 x 2.00	90.00	90.00		
9611301068		9611309191		100	104.00/100.00 x 2.00	100.00	100.00		
9611309200		9611309201		125	129.00/125.00 x 2.00	187.50	187.50		
9611309210		9611309211		150	154.00/150.00 x 2.00	225.00	225.00		
9615220233		9615220234		200	204.00/200.00 x 2.00	300.00	300.00		
<b>BEND 90 BS</b> <b>HSF2 (ID=0.8/OD=1.6)</b> <b>DIN 11852</b>									
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>L</b>	<b>R</b>	<b>L2</b>	
9615220205		9615220217		10	13.00/10.00 x 1.50	26.00	26.00		
9615220206		9615220218		15	19.00/16.00 x 1.50	35.00	35.00		
9615220207		9615220219		20	23.00/20.00 x 1.50	40.00	40.00		
9615220208		9615220220		25	29.00/26.00 x 1.50	50.00	50.00		
9615220209		9615220221		32	35.00/32.00 x 1.50	55.00	55.00		
9615220210		9615220222		40	41.00/38.00 x 1.50	60.00	60.00		
9615220211		9615220223		50	53.00/50.00 x 1.50	70.00	70.00		
9615220212		9615220224		65	70.00/66.00 x 2.00	80.00	80.00		
9615220213		9615220225		80	85.00/81.00 x 2.00	90.00	90.00		
9615220214		9615220226		100	104.00/100.00 x 2.00	100.00	100.00		
9615220215		9615220227		125	129.00/125.00 x 2.00	187.50	187.50		
9615220216		9615220228		150	154.00/150.00 x 2.00	225.00	225.00		
9615220231		9615220232		200	204.00/200.00 x 2.00	300.00	300.00		

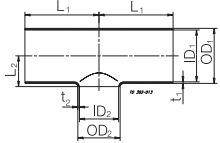


Product code: 5007

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)					
					OD/ID x t	L	R	L2		
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		<b>mm</b>					<b>BEND 90 BL HSF3 (ID=0.8/OD=0.8) DIN 11852</b>	
9615220149		9615220161		10	13.00/10.00 x 1.50	51.00	26.00	25.00		
9615220150		9615220162		15	19.00/16.00 x 1.50	60.00	35.00	25.00		
9615220151		9615220163		20	23.00/20.00 x 1.50	65.00	40.00	25.00		
9615220152		9615220164		25	29.00/26.00 x 1.50	90.00	50.00	40.00		
9615220153		9615220165		32	35.00/32.00 x 1.50	95.00	55.00	40.00		
9615220154		9615220166		40	41.00/38.00 x 1.50	100.00	60.00	40.00		
9615220155		9615220167		50	53.00/50.00 x 1.50	110.00	70.00	40.00		
9615220156		9615220168		65	70.00/66.00 x 2.00	120.00	80.00	40.00		
9615220157		9615220169		80	85.00/81.00 x 2.00	145.00	90.00	55.00		
9615220158		9615220170		100	104.00/100.00 x 2.00	155.00	100.00	55.00		
9615220159		9615220171		125	129.00/125.00 x 2.00	245.00	187.50	57.50		
9615220160		9615220172		150	154.00/150.00 x 2.00	285.00	225.00	60.00		
9615220177		9615220178		200	204.00/200.00 x 2.00	340.00	300.00	40.00		
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		<b>mm</b>						<b>BEND 90 BL HSF2 (ID=0.8/OD=1.6) DIN 11852</b>
9615220125		9615220137		10	13.00/10.00 x 1.50	51.00	26.00	25.00		
9615220126		9615220138		15	19.00/16.00 x 1.50	60.00	35.00	25.00		
9615220127		9615220139		20	23.00/20.00 x 1.50	65.00	40.00	25.00		
9615220128		9615220140		25	29.00/26.00 x 1.50	90.00	50.00	40.00		
9615220129		9615220141		32	35.00/32.00 x 1.50	95.00	55.00	40.00		
9615220130		9615220142		40	41.00/38.00 x 1.50	100.00	60.00	40.00		
9615220131		9615220143		50	53.00/50.00 x 1.50	110.00	70.00	40.00		
9615220132		9615220144		65	70.00/66.00 x 2.00	120.00	80.00	40.00		
9615220133		9615220145		80	85.00/81.00 x 2.00	145.00	90.00	55.00		
9615220134		9615220146		100	104.00/100.00 x 2.00	155.00	100.00	55.00		
9615220135		9615220147		125	129.00/125.00 x 2.00	245.00	187.50	57.50		
9615220136		9615220148		150	154.00/150.00 x 2.00	285.00	225.00	60.00		
9615220175		9615220176		200	204.00/200.00 x 2.00	340.00	300.00	40.00		

Product code: 5026

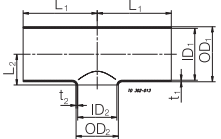
1.2

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				TEE RTK HSF3 (ID=0.8/OD=0.8) DIN 11852
					mm	OD <sub>1</sub> /ID <sub>1</sub> x t <sub>1</sub>	OD <sub>2</sub> /ID <sub>2</sub> x t <sub>2</sub>	L <sub>1</sub>	
9615247201		9615247231		32/25	35.00/32.00 x 1.50	29.00/26.00 x 1.50	55.00	19.00	
9615247202		9615247232		40/25	41.00/38.00 x 1.50	29.00/26.00 x 1.50	60.00	22.00	
9615247203		9615247233		40/32	41.00/38.00 x 1.50	35.00/32.00 x 1.50	60.00	22.50	
9615247204		9615247234		50/25	53.00/50.00 x 1.50	29.00/26.00 x 1.50	70.00	28.00	
9615247205		9615247235		50/32	53.00/50.00 x 1.50	35.00/32.00 x 1.50	70.00	28.50	
9615247206		9615247236		50/40	53.00/50.00 x 1.50	41.00/38.00 x 1.50	70.00	29.00	
9615247207		9615247237		65/25	70.00/66.00 x 2.00	29.00/26.00 x 1.50	80.00	37.00	
9615247208		9615247238		65/32	70.00/66.00 x 2.00	35.00/32.00 x 1.50	80.00	37.00	
9615247209		9615247239		65/40	70.00/66.00 x 2.00	41.00/38.00 x 1.50	80.00	37.50	
9615247210		9615247240		65/50	70.00/66.00 x 2.00	53.00/50.00 x 1.50	80.00	38.50	
9615247211		9615247241		80/25	85.00/81.00 x 2.00	29.00/26.00 x 1.50	90.00	45.00	
9615247212		9615247242		80/32	85.00/81.00 x 2.00	35.00/32.00 x 1.50	90.00	45.00	
9615247213		9615247243		80/40	85.00/81.00 x 2.00	41.00/38.00 x 1.50	90.00	45.00	
9615247214		9615247244		80/50	85.00/81.00 x 2.00	53.00/50.00 x 1.50	90.00	46.00	
9615247215		9615247245		80/65	85.00/81.00 x 2.00	70.00/66.00 x 2.00	90.00	47.50	
9615247261		9615247267		100/25	104.00/100.00 x 2.00	29.00/26.00 x 1.50	100.00	55.50	
9615247216		9615247246		100/32	104.00/100.00 x 2.00	35.00/32.00 x 1.50	100.00	55.50	
9615247217		9615247247		100/40	104.00/100.00 x 2.00	41.00/38.00 x 1.50	100.00	55.50	
9615247218		9615247248		100/50	104.00/100.00 x 2.00	53.00/50.00 x 1.50	100.00	55.50	
9615247219		9615247249		100/65	104.00/100.00 x 2.00	70.00/66.00 x 2.00	100.00	57.00	
9615247220		9615247250		100/80	104.00/100.00 x 2.00	85.00/81.00 x 2.00	100.00	57.00	
9615247221		9615247251		125/40	129.00/125.00 x 2.00	41.00/38.00 x 1.50	187.50	69.50	
9615247222		9615247252		125/50	129.00/125.00 x 2.00	53.00/50.00 x 1.50	187.50	69.50	
9615247223		9615247253		125/65	129.00/125.00 x 2.00	70.00/66.00 x 2.00	187.50	69.50	
9615247224		9615247254		125/80	129.00/125.00 x 2.00	85.00/81.00 x 2.00	187.50	69.50	
9615247225		9615247255		125/100	129.00/125.00 x 2.00	104.00/100.00 x 2.00	187.50	70.50	
9615247226		9615247256		150/50	154.00/150.00 x 2.00	53.00/50.00 x 1.50	225.00	82.00	
9615247227		9615247257		150/65	154.00/150.00 x 2.00	70.00/66.00 x 2.00	225.00	82.00	
9615247228		9615247258		150/80	154.00/150.00 x 2.00	85.00/81.00 x 2.00	225.00	82.00	
9615247229		9615247259		150/100	154.00/150.00 x 2.00	104.00/100.00 x 2.00	225.00	83.00	
9615247230		9615247260		150/125	154.00/150.00 x 2.00	129.00/125.00 x 2.00	225.00	86.50	
9615247262		9615247268		200/65	204.00/200.00 x 2.00	70.00/66.00 x 2.00	300.00	108.00	
9615247263		9615247269		200/80	204.00/200.00 x 2.00	85.00/81.00 x 2.00	300.00	108.00	
9615247264		9615247270		200/100	204.00/200.00 x 2.00	104.00/100.00 x 2.00	300.00	108.00	
9615247265		9615247271		200/125	204.00/200.00 x 2.00	129.00/125.00 x 2.00	300.00	111.50	
9615247266		9615247272		200/150	204.00/200.00 x 2.00	154.00/150.00 x 2.00	300.00	115.00	



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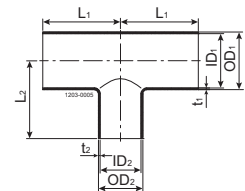
Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				TEE RTK HSF2 (ID=0.8/OD=1.6) DIN 11852
					mm	OD <sub>1</sub> /ID <sub>1</sub> x t <sub>1</sub>	OD <sub>2</sub> /ID <sub>2</sub> x t <sub>2</sub>	L <sub>1</sub>	
9615227901		9615227931		32/25	35.00/32.00 x 1.50	29.00/26.00 x 1.50	55.00	19.00	
9615227902		9615227932		40/25	41.00/38.00 x 1.50	29.00/26.00 x 1.50	60.00	22.00	
9615227903		9615227933		40/32	41.00/38.00 x 1.50	35.00/32.00 x 1.50	60.00	22.50	
9615227904		9615227934		50/25	53.00/50.00 x 1.50	29.00/26.00 x 1.50	70.00	28.00	
9615227905		9615227935		50/32	53.00/50.00 x 1.50	35.00/32.00 x 1.50	70.00	28.50	
9615227906		9615227936		50/40	53.00/50.00 x 1.50	41.00/38.00 x 1.50	70.00	29.00	
9615227907		9615227937		65/25	70.00/66.00 x 2.00	29.00/26.00 x 1.50	80.00	37.00	
9615227908		9615227938		65/32	70.00/66.00 x 2.00	35.00/32.00 x 1.50	80.00	37.00	
9615227909		9615227939		65/40	70.00/66.00 x 2.00	41.00/38.00 x 1.50	80.00	37.50	
9615227910		9615227940		65/50	70.00/66.00 x 2.00	53.00/50.00 x 1.50	80.00	38.50	
9615227911		9615227941		80/25	85.00/81.00 x 2.00	29.00/26.00 x 1.50	90.00	45.00	
9615227912		9615227942		80/32	85.00/81.00 x 2.00	35.00/32.00 x 1.50	90.00	45.00	
9615227913		9615227943		80/40	85.00/81.00 x 2.00	41.00/38.00 x 1.50	90.00	45.00	
9615227914		9615227944		80/50	85.00/81.00 x 2.00	53.00/50.00 x 1.50	90.00	46.00	
9615227915		9615227945		80/65	85.00/81.00 x 2.00	70.00/66.00 x 2.00	90.00	47.50	
9615227961		9615227967		100/25	104.00/100.00 x 2.00	29.00/26.00 x 1.50	100.00	55.50	
9615227916		9615227946		100/32	104.00/100.00 x 2.00	35.00/32.00 x 1.50	100.00	55.50	
9615227917		9615227947		100/40	104.00/100.00 x 2.00	41.00/38.00 x 1.50	100.00	55.50	
9615227918		9615227948		100/50	104.00/100.00 x 2.00	53.00/50.00 x 1.50	100.00	55.50	
9615227919		9615227949		100/65	104.00/100.00 x 2.00	70.00/66.00 x 2.00	100.00	57.00	
9615227920		9615227950		100/80	104.00/100.00 x 2.00	85.00/81.00 x 2.00	100.00	57.00	
9615227921		9615227951		125/40	129.00/125.00 x 2.00	41.00/38.00 x 1.50	187.50	69.50	
9615227922		9615227952		125/50	129.00/125.00 x 2.00	53.00/50.00 x 1.50	187.50	69.50	
9615227923		9615227953		125/65	129.00/125.00 x 2.00	70.00/66.00 x 2.00	187.50	69.50	
9615227924		9615227954		125/80	129.00/125.00 x 2.00	85.00/81.00 x 2.00	187.50	69.50	
9615227925		9615227955		125/100	129.00/125.00 x 2.00	104.00/100.00 x 2.00	187.50	70.50	
9615227926		9615227956		150/50	154.00/150.00 x 2.00	53.00/50.00 x 1.50	225.00	82.00	
9615227927		9615227957		150/65	154.00/150.00 x 2.00	70.00/66.00 x 2.00	225.00	82.00	
9615227928		9615227958		150/80	154.00/150.00 x 2.00	85.00/81.00 x 2.00	225.00	82.00	
9615227929		9615227959		150/100	154.00/150.00 x 2.00	104.00/100.00 x 2.00	225.00	83.00	
9615227930		9615227960		150/125	154.00/150.00 x 2.00	129.00/125.00 x 2.00	225.00	86.50	
9615227962		9615227968		200/65	204.00/200.00 x 2.00	70.00/66.00 x 2.00	300.00	108.00	
9615227963		9615227969		200/80	204.00/200.00 x 2.00	85.00/81.00 x 2.00	300.00	108.00	
9615227964		9615227970		200/100	204.00/200.00 x 2.00	104.00/100.00 x 2.00	300.00	108.00	
9615227965		9615227971		200/125	204.00/200.00 x 2.00	129.00/125.00 x 2.00	300.00	111.50	
9615227966		9615227972		200/150	204.00/200.00 x 2.00	154.00/150.00 x 2.00	300.00	115.00	



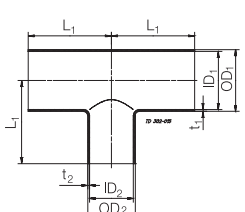
Product code: 5026

1.2

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				TEE RTS HSF3 (ID=0.8/OD=0.8) DIN 11852
1.4307 (304L)		1.4404 (316L)		mm	OD <sub>1</sub> /ID <sub>1</sub> x t <sub>1</sub>	OD <sub>2</sub> /ID <sub>2</sub> x t <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	
9615247101		9615247131		32/25	35.00/32.00 x 1.50	29.00/26.00 x 1.50	55.00	53.00	
9615247102		9615247132		40/25	41.00/38.00 x 1.50	29.00/26.00 x 1.50	60.00	53.00	
9615247103		9615247133		40/32	41.00/38.00 x 1.50	35.00/32.00 x 1.50	60.00	58.00	
9615247104		9615247134		50/25	53.00/50.00 x 1.50	29.00/26.00 x 1.50	70.00	62.00	
9615247105		9615247135		50/32	53.00/50.00 x 1.50	35.00/32.00 x 1.50	70.00	64.00	
9615247106		9615247136		50/40	53.00/50.00 x 1.50	41.00/38.00 x 1.50	70.00	66.00	
9615247107		9615247137		65/25	70.00/66.00 x 2.00	29.00/26.00 x 1.50	80.00	70.50	
9615247108		9615247138		65/32	70.00/66.00 x 2.00	35.00/32.00 x 1.50	80.00	72.50	
9615247109		9615247139		65/40	70.00/66.00 x 2.00	41.00/38.00 x 1.50	80.00	74.50	
9615247110		9615247140		65/50	70.00/66.00 x 2.00	53.00/50.00 x 1.50	80.00	78.50	
9615247111		9615247141		80/25	85.00/81.00 x 2.00	29.00/26.00 x 1.50	90.00	78.00	
9615247112		9615247142		80/32	85.00/81.00 x 2.00	35.00/32.00 x 1.50	90.00	80.00	
9615247113		9615247143		80/40	85.00/81.00 x 2.00	41.00/38.00 x 1.50	90.00	82.00	
9615247114		9615247144		80/50	85.00/81.00 x 2.00	53.00/50.00 x 1.50	90.00	86.00	
9615247115		9615247145		80/65	85.00/81.00 x 2.00	70.00/66.00 x 2.00	90.00	87.50	
9615247161		9615247167		100/25	104.00/100.00 x 2.00	29.00/26.00 x 1.50	100.00	92.50	
9615247116		9615247146		100/32	104.00/100.00 x 2.00	35.00/32.00 x 1.50	100.00	92.50	
9615247117		9615247147		100/40	104.00/100.00 x 2.00	41.00/38.00 x 1.50	100.00	94.00	
9615247118		9615247148		100/50	104.00/100.00 x 2.00	53.00/50.00 x 1.50	100.00	95.50	
9615247119		9615247149		100/65	104.00/100.00 x 2.00	70.00/66.00 x 2.00	100.00	97.00	
9615247120		9615247150		100/80	104.00/100.00 x 2.00	85.00/81.00 x 2.00	100.00	99.50	
9615247121		9615247151		125/40	129.00/125.00 x 2.00	41.00/38.00 x 1.50	187.50	104.50	
9615247122		9615247152		125/50	129.00/125.00 x 2.00	53.00/50.00 x 1.50	187.50	107.00	
9615247123		9615247153		125/65	129.00/125.00 x 2.00	70.00/66.00 x 2.00	187.50	109.50	
9615247124		9615247154		125/80	129.00/125.00 x 2.00	85.00/81.00 x 2.00	187.50	112.00	
9615247125		9615247155		125/100	129.00/125.00 x 2.00	104.00/100.00 x 2.00	187.50	112.50	
9615247126		9615247156		150/50	154.00/150.00 x 2.00	53.00/50.00 x 1.50	225.00	123.50	
9615247127		9615247157		150/65	154.00/150.00 x 2.00	70.00/66.00 x 2.00	225.00	124.00	
9615247128		9615247158		150/80	154.00/150.00 x 2.00	85.00/81.00 x 2.00	225.00	124.50	
9615247129		9615247159		150/100	154.00/150.00 x 2.00	104.00/100.00 x 2.00	225.00	125.00	
9615247130		9615247160		150/125	154.00/150.00 x 2.00	129.00/125.00 x 2.00	225.00	200.00	
9615247162		9615247168		200/65	204.00/200.00 x 2.00	70.00/66.00 x 2.00	300.00	115.00	
9615247163		9615247169		200/80	204.00/200.00 x 2.00	85.00/81.00 x 2.00	300.00	130.00	
9615247164		9615247170		200/100	204.00/200.00 x 2.00	104.00/100.00 x 2.00	300.00	150.00	
9615247165		9615247171		200/125	204.00/200.00 x 2.00	129.00/125.00 x 2.00	300.00	225.00	
9615247166		9615247172		200/150	204.00/200.00 x 2.00	154.00/150.00 x 2.00	300.00	250.00	





Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				TEE RTS HSF2 (ID=0.8/OD=1.6) DIN 11852
					mm	OD <sub>1</sub> /ID <sub>1</sub> x t <sub>1</sub>	OD <sub>2</sub> /ID <sub>2</sub> x t <sub>2</sub>	L <sub>1</sub>	
9615227701		9615227731		32/25	35.00/32.00 x 1.50	29.00/26.00 x 1.50	55.00	53.00	
9615227702		9615227732		40/25	41.00/38.00 x 1.50	29.00/26.00 x 1.50	60.00	53.00	
9615227703		9615227733		40/32	41.00/38.00 x 1.50	35.00/32.00 x 1.50	60.00	58.00	
9615227704		9615227734		50/25	53.00/50.00 x 1.50	29.00/26.00 x 1.50	70.00	62.00	
9615227705		9615227735		50/32	53.00/50.00 x 1.50	35.00/32.00 x 1.50	70.00	64.00	
9615227706		9615227736		50/40	53.00/50.00 x 1.50	41.00/38.00 x 1.50	70.00	66.00	
9615227707		9615227737		65/25	70.00/66.00 x 2.00	29.00/26.00 x 1.50	80.00	70.50	
9615227708		9615227738		65/32	70.00/66.00 x 2.00	35.00/32.00 x 1.50	80.00	72.50	
9615227709		9615227739		65/40	70.00/66.00 x 2.00	41.00/38.00 x 1.50	80.00	74.50	
9615227710		9615227740		65/50	70.00/66.00 x 2.00	53.00/50.00 x 1.50	80.00	78.50	
9615227711		9615227741		80/25	85.00/81.00 x 2.00	29.00/26.00 x 1.50	90.00	78.00	
9615227712		9615227742		80/32	85.00/81.00 x 2.00	35.00/32.00 x 1.50	90.00	80.00	
9615227713		9615227743		80/40	85.00/81.00 x 2.00	41.00/38.00 x 1.50	90.00	82.00	
9615227714		9615227744		80/50	85.00/81.00 x 2.00	53.00/50.00 x 1.50	90.00	86.00	
9615227715		9615227745		80/65	85.00/81.00 x 2.00	70.00/66.00 x 2.00	90.00	87.50	
9615227761		9615227767		100/25	104.00/100.00 x 2.00	29.00/26.00 x 1.50	100.00	92.50	
9615227716		9615227746		100/32	104.00/100.00 x 2.00	35.00/32.00 x 1.50	100.00	92.50	
9615227717		9615227747		100/40	104.00/100.00 x 2.00	41.00/38.00 x 1.50	100.00	94.00	
9615227718		9615227748		100/50	104.00/100.00 x 2.00	53.00/50.00 x 1.50	100.00	95.50	
9615227719		9615227749		100/65	104.00/100.00 x 2.00	70.00/66.00 x 2.00	100.00	97.00	
9615227720		9615227750		100/80	104.00/100.00 x 2.00	85.00/81.00 x 2.00	100.00	99.50	
9615227721		9615227751		125/40	129.00/125.00 x 2.00	41.00/38.00 x 1.50	187.50	104.50	
9615227722		9615227752		125/50	129.00/125.00 x 2.00	53.00/50.00 x 1.50	187.50	107.00	
9615227723		9615227753		125/65	129.00/125.00 x 2.00	70.00/66.00 x 2.00	187.50	109.50	
9615227724		9615227754		125/80	129.00/125.00 x 2.00	85.00/81.00 x 2.00	187.50	112.00	
9615227725		9615227755		125/100	129.00/125.00 x 2.00	104.00/100.00 x 2.00	187.50	112.50	
9615227726		9615227756		150/50	154.00/150.00 x 2.00	53.00/50.00 x 1.50	225.00	123.50	
9615227727		9615227757		150/65	154.00/150.00 x 2.00	70.00/66.00 x 2.00	225.00	124.00	
9615227728		9615227758		150/80	154.00/150.00 x 2.00	85.00/81.00 x 2.00	225.00	124.50	
9615227729		9615227759		150/100	154.00/150.00 x 2.00	104.00/100.00 x 2.00	225.00	125.00	
9615227730		9615227760		150/125	154.00/150.00 x 2.00	129.00/125.00 x 2.00	225.00	200.00	
9615227762		9615227768		200/65	204.00/200.00 x 2.00	70.00/66.00 x 2.00	300.00	115.00	
9615227763		9615227769		200/80	204.00/200.00 x 2.00	85.00/81.00 x 2.00	300.00	130.00	
9615227764		9615227770		200/100	204.00/200.00 x 2.00	104.00/100.00 x 2.00	300.00	150.00	
9615227765		9615227771		200/125	204.00/200.00 x 2.00	129.00/125.00 x 2.00	300.00	225.00	
9615227766		9615227772		200/150	204.00/200.00 x 2.00	154.00/150.00 x 2.00	300.00	250.00	

Product code: 5026

1.2

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			TEE TS HSF3 (ID=0.8/OD=0.8) DIN 11852
1.4307 (304L)		1.4404 (316L)		mm	OD/ID x t	L		
9612155558		9612155508		10	13.00/10.00 x 1.50	26.00		
9612155559		9612155509		15	19.00/16.00 x 1.50	35.00		
9612155560		9612155510		20	23.00/20.00 x 1.50	40.00		
9612155561		9612155511		25	29.00/26.00 x 1.50	50.00		
9612155562		9612155512		32	35.00/32.00 x 1.50	55.00		
9612155563		9612155513		40	41.00/38.00 x 1.50	60.00		
9612155564		9612155514		50	53.00/50.00 x 1.50	70.00		
9611309290		9611309291		65	70.00/66.00 x 2.00	80.00		
9611309300		9611309301		80	85.00/81.00 x 2.00	90.00		
9611309310		9611309311		100	104.00/100.00 x 2.00	100.00		
9611309320		9611309321		125	129.00/125.00 x 2.00	187.50		
9611309330		9611309331		150	154.00/150.00 x 2.00	225.00		
9615227429		9615227430		200	204.00/200.00 x 2.00	300.00		

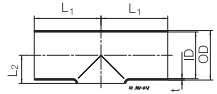
Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			TEE TS HSF2 (ID=0.8/OD=1.6) DIN 11852
1.4307 (304L)		1.4404 (316L)		mm	OD/ID x t	L		
9615227401		9615227413		10	13.00/10.00 x 1.50	26.00		
9615227402		9615227414		15	19.00/16.00 x 1.50	35.00		
9615227403		9615227415		20	23.00/20.00 x 1.50	40.00		
9615227404		9615227416		25	29.00/26.00 x 1.50	50.00		
9615227405		9615227417		32	35.00/32.00 x 1.50	55.00		
9615227406		9615227418		40	41.00/38.00 x 1.50	60.00		
9615227407		9615227419		50	53.00/50.00 x 1.50	70.00		
9615227408		9615227420		65	70.00/66.00 x 2.00	80.00		
9615227409		9615227421		80	85.00/81.00 x 2.00	90.00		
9615227410		9615227422		100	104.00/100.00 x 2.00	100.00		
9615227411		9615227423		125	129.00/125.00 x 2.00	187.50		
9615227412		9615227424		150	154.00/150.00 x 2.00	225.00		
9615227427		9615227428		200	204.00/200.00 x 2.00	300.00		



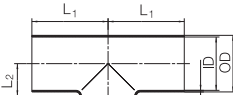
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Product code: 5026

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			TEE TK HSF3 (ID=0.8/OD=0.8) DIN 11852
				mm	OD/ID x t	L <sub>1</sub>	L <sub>2</sub>	
1.4307 (304L)		1.4404 (316L)		mm				
9612928701		9612928711		15	19.00/16.00 x 1.50	35.00	11.00	
9612928702		9612928712		20	23.00/20.00 x 1.50	40.00	13.00	
9612928703		9612928713		25	29.00/26.00 x 1.50	50.00	16.00	
9612928704		9612928714		32	35.00/32.00 x 1.50	55.00	19.50	
9612928705		9612928715		40	41.00/38.00 x 1.50	60.00	23.00	
9612928706		9612928716		50	53.00/50.00 x 1.50	70.00	30.00	
9611304580		9611304582		65	70.00/66.00 x 2.00	80.00	40.00	
9611304600		9611304602		80	85.00/81.00 x 2.00	90.00	47.50	
9611304620		9611304622		100	104.00/100.00 x 2.00	100.00	58.00	
9611304640		9611304642		125	129.00/125.00 x 2.00	187.50	74.00	
9612150053		9612150040		150	154.00/150.00 x 2.00	225.00	90.00	
9615227533		9615227534		200	204.00/200.00 x 2.00	300.00	115.00	

\* On request

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			TEE TK HSF2 (ID=0.8/OD=1.6) DIN 11852
				mm	OD/ID x t	L <sub>1</sub>	L <sub>2</sub>	
1.4307 (304L)		1.4404 (316L)		mm				
9615227504		9615227516		15	19.00/16.00 x 1.50	35.00	11.00	
9615227505		9615227517		20	23.00/20.00 x 1.50	40.00	13.00	
9615227506		9615227518		25	29.00/26.00 x 1.50	50.00	16.00	
9615227507		9615227519		32	35.00/32.00 x 1.50	55.00	19.50	
9615227508		9615227520		40	41.00/38.00 x 1.50	60.00	23.00	
9615227509		9615227521		50	53.00/50.00 x 1.50	70.00	30.00	
9615227510		9615227522		65	70.00/66.00 x 2.00	80.00	40.00	
9615227511		9615227523		80	85.00/81.00 x 2.00	90.00	47.50	
9615227512		9615227524		100	104.00/100.00 x 2.00	100.00	58.00	
9615227513		9615227525		125	129.00/125.00 x 2.00	187.50	74.00	
9615227514		9615227526		150	154.00/150.00 x 2.00	225.00	90.00	
9615227531		9615227532		200	204.00/200.00 x 2.00	300.00	115.00	

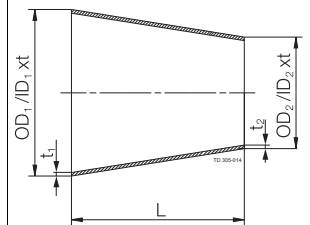
\* On request



Product code: 5068

1.2

Item No	PPL Eur	item No	PPL Eur	Size DN	Dimension (mm)			RED RK
1.4307 (304L)		1.4404 (316L)		mm	OD <sub>1</sub> /ID <sub>1</sub> x t <sub>1</sub>	OD <sub>2</sub> /ID <sub>2</sub> x t <sub>2</sub>	L	HSF3 (ID=0.8/OD=0.8)
								DIN 11852
9615227001		9615317201		15/10	19.00/16.00 x 1.50	13.00/10.00 x 1.50	11.00	
9615227002		9615317202		20/10	23.00/20.00 x 1.50	13.00/10.00 x 1.50	18.00	
9615227003		9615317203		20/15	23.00/20.00 x 1.50	19.00/16.00 x 1.50	7.00	
9615227004		9615317204		25/10	29.00/26.00 x 1.50	13.00/10.00 x 1.50	29.00	
9615227005		9615317205		25/15	29.00/26.00 x 1.50	19.00/16.00 x 1.50	18.00	
9615227006		9615317206		25/20	29.00/26.00 x 1.50	23.00/20.00 x 1.50	11.00	
9615227007		9615317207		32/15	35.00/32.00 x 1.50	19.00/16.00 x 1.50	29.00	
9615227008		9615317208		32/20	35.00/32.00 x 1.50	23.00/20.00 x 1.50	22.00	
9615227009		9615317209		32/25	35.00/32.00 x 1.50	29.00/26.00 x 1.50	11.00	
9615227010		9615317210		40/15	41.00/38.00 x 1.50	19.00/16.00 x 1.50	40.00	
9615227011		9615317211		40/20	41.00/38.00 x 1.50	23.00/20.00 x 1.50	33.00	
9615227012		9615317212		40/25	41.00/38.00 x 1.50	29.00/26.00 x 1.50	22.00	
9615227013		9615317213		40/32	41.00/38.00 x 1.50	35.00/32.00 x 1.50	11.00	
9615227014		9615317214		50/25	53.00/50.00 x 1.50	29.00/26.00 x 1.50	44.00	
9615227015		9615317215		50/32	53.00/50.00 x 1.50	35.00/32.00 x 1.50	33.00	
9615227016		9615317216		50/40	53.00/50.00 x 1.50	41.00/38.00 x 1.50	22.00	
9615227017		9615317217		65/25	70.00/66.00 x 2.00	29.00/26.00 x 1.50	73.00	
9615227018		9615317218		65/32	70.00/66.00 x 2.00	35.00/32.00 x 1.50	62.00	
9615227019		9615317219		65/40	70.00/66.00 x 2.00	42.00/38.00 x 2.00	51.00	
9615227020		9615317220		65/50	70.00/66.00 x 2.00	54.00/50.00 x 2.00	29.00	
9615227021		9615317221		80/25	85.00/81.00 x 2.00	29.00/26.00 x 1.50	100.00	
9615227022		9615317222		80/32	85.00/81.00 x 2.00	35.00/32.00 x 1.50	89.00	
9615227023		9615317223		80/40	85.00/81.00 x 2.00	41.00/38.00 x 1.50	78.00	
9615227024		9615317224		80/50	85.00/81.00 x 2.00	54.00/50.00 x 2.00	56.00	
9615227025		9615317225		80/65	85.00/81.00 x 2.00	70.00/66.00 x 2.00	27.00	
9615227026		9615317226		100/25	104.00/100.00 x 2.00	29.00/26.00 x 1.50	134.00	
9615227027		9615317227		100/32	104.00/100.00 x 2.00	35.00/32.00 x 1.50	123.00	
9615227028		9615317228		100/40	104.00/100.00 x 2.00	42.00/38.00 x 2.00	112.00	
9615227029		9615317229		100/50	104.00/100.00 x 2.00	54.00/50.00 x 2.00	90.00	
9615227030		9615317230		100/65	104.00/100.00 x 2.00	70.00/66.00 x 2.00	61.00	
9615227031		9615317231		100/80	104.00/100.00 x 2.00	85.00/81.00 x 2.00	34.00	
9615227032		9615317232		125/25	129.00/125.00 x 2.00	29.00/26.00 x 1.50	179.00	
9615227033		9615317233		125/32	129.00/125.00 x 2.00	35.00/32.00 x 1.50	168.00	
9615227034		9615317234		125/40	129.00/125.00 x 2.00	41.00/38.00 x 1.50	157.00	
9615227035		9615317235		125/50	129.00/125.00 x 2.00	54.00/50.00 x 2.00	135.00	
9615227036		9615317236		125/65	129.00/125.00 x 2.00	70.00/66.00 x 2.00	106.00	
9615227037		9615317237		125/80	129.00/125.00 x 2.00	85.00/81.00 x 2.00	79.00	
9615227038		9615317238		125/100	129.00/125.00 x 2.00	104.00/100.00 x 2.00	45.00	



Product code: 5068

Item No	PPL Eur	item No	PPL Eur	Size DN	Dimension (mm)			RED RK HSF3 (ID=0.8/OD=0.8) DIN 11852
					OD <sub>1</sub> /ID <sub>1</sub> x t <sub>1</sub>	OD <sub>2</sub> /ID <sub>2</sub> x t <sub>2</sub>	L	
1.4307 (304L)		1.4404 (316L)		mm				
9615227039		9615317239		150/65	154.00/150.00 x 2.00	70.00/66.00 x 2.00	151.00	
9615227040		9615317240		150/80	154.00/150.00 x 2.00	85.00/81.00 x 2.00	124.00	
9615227041		9615317241		150/100	154.00/150.00 x 2.00	104.00/100.00 x 2.00	90.00	
9615227042		9615317242		150/125	154.00/150.00 x 2.00	129.00/125.00 x 2.00	45.00	
9615227043		9615317243		200/65	204.00/200.00 x 2.00	70.00/66.00 x 2.00	250.00	
9615227044		9615317244		200/80	204.00/200.00 x 2.00	85.00/81.00 x 2.00	222.00	
9615227045		9615317245		200/100	204.00/200.00 x 2.00	104.00/100.00 x 2.00	186.00	
9615227046		9615317246		200/125	204.00/200.00 x 2.00	129.00/125.00 x 2.00	140.00	
9615227047		9615317247		200/150	204.00/200.00 x 2.00	154.00/150.00 x 2.00	93.00	

Product code: 5068

1.2

Item No	PPL Eur	item No	PPL Eur	Size DN	Dimension (mm)			RED RK
1.4307 (304L)		1.4404 (316L)		mm	OD <sub>1</sub> /ID <sub>1</sub> x t <sub>1</sub>	OD <sub>2</sub> /ID <sub>2</sub> x t <sub>2</sub>	L	HSF2 (ID=0.8/OD=1.6)
								DIN 11852
9615226901		9615332601		15/10	19.00/16.00 x 1.50	13.00/10.00 x 1.50	11.00	
9615226902		9615332602		20/10	23.00/20.00 x 1.50	13.00/10.00 x 1.50	18.00	
9615226903		9615332603		20/15	23.00/20.00 x 1.50	19.00/16.00 x 1.50	7.00	
9615226904		9615332604		25/10	29.00/26.00 x 1.50	13.00/10.00 x 1.50	29.00	
9615226905		9615332605		25/15	29.00/26.00 x 1.50	19.00/16.00 x 1.50	18.00	
9615226906		9615332606		25/20	29.00/26.00 x 1.50	23.00/20.00 x 1.50	11.00	
9615226907		9615332607		32/15	35.00/32.00 x 1.50	19.00/16.00 x 1.50	29.00	
9615226908		9615332608		32/20	35.00/32.00 x 1.50	23.00/20.00 x 1.50	22.00	
9615226909		9615332609		32/25	35.00/32.00 x 1.50	29.00/26.00 x 1.50	11.00	
9615226910		9615332610		40/15	41.00/38.00 x 1.50	19.00/16.00 x 1.50	40.00	
9615226911		9615332611		40/20	41.00/38.00 x 1.50	23.00/20.00 x 1.50	33.00	
9615226912		9615332612		40/25	41.00/38.00 x 1.50	29.00/26.00 x 1.50	22.00	
9615226913		9615332613		40/32	41.00/38.00 x 1.50	35.00/32.00 x 1.50	11.00	
9615226914		9615332614		50/25	53.00/50.00 x 1.50	29.00/26.00 x 1.50	44.00	
9615226915		9615332615		50/32	53.00/50.00 x 1.50	35.00/32.00 x 1.50	33.00	
9615226916		9615332616		50/40	53.00/50.00 x 1.50	41.00/38.00 x 1.50	22.00	
9615226917		9615332617		65/25	70.00/66.00 x 2.00	29.00/26.00 x 1.50	73.00	
9615226918		9615332618		65/32	70.00/66.00 x 2.00	35.00/32.00 x 1.50	62.00	
9615226919		9615332619		65/40	70.00/66.00 x 2.00	42.00/38.00 x 2.00	51.00	
9615226920		9615332620		65/50	70.00/66.00 x 2.00	54.00/50.00 x 2.00	29.00	
9615226921		9615332621		80/25	85.00/81.00 x 2.00	29.00/26.00 x 1.50	100.00	
9615226922		9615332622		80/32	85.00/81.00 x 2.00	35.00/32.00 x 1.50	89.00	
9615226923		9615332623		80/40	85.00/81.00 x 2.00	41.00/38.00 x 1.50	78.00	
9615226924		9615332624		80/50	85.00/81.00 x 2.00	54.00/50.00 x 2.00	56.00	
9615226925		9615332625		80/65	85.00/81.00 x 2.00	70.00/66.00 x 2.00	27.00	
9615226926		9615332626		100/25	104.00/100.00 x 2.00	29.00/26.00 x 1.50	134.00	
9615226927		9615332627		100/32	104.00/100.00 x 2.00	35.00/32.00 x 1.50	123.00	
9615226928		9615332628		100/40	104.00/100.00 x 2.00	42.00/38.00 x 2.00	112.00	
9615226929		9615332629		100/50	104.00/100.00 x 2.00	54.00/50.00 x 2.00	90.00	
9615226930		9615332630		100/65	104.00/100.00 x 2.00	70.00/66.00 x 2.00	61.00	
9615226931		9615332631		100/80	104.00/100.00 x 2.00	85.00/81.00 x 2.00	34.00	
9615226932		9615332632		125/25	129.00/125.00 x 2.00	29.00/26.00 x 1.50	179.00	
9615226933		9615332633		125/32	129.00/125.00 x 2.00	35.00/32.00 x 1.50	168.00	
9615226934		9615332634		125/40	129.00/125.00 x 2.00	41.00/38.00 x 1.50	157.00	
9615226935		9615332635		125/50	129.00/125.00 x 2.00	54.00/50.00 x 2.00	135.00	
9615226936		9615332636		125/65	129.00/125.00 x 2.00	70.00/66.00 x 2.00	106.00	
9615226937		9615332637		125/80	129.00/125.00 x 2.00	85.00/81.00 x 2.00	79.00	
9615226938		9615332638		125/100	129.00/125.00 x 2.00	104.00/100.00 x 2.00	45.00	



Product code: 5068

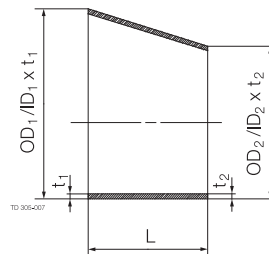
Item No	PPL Eur	item No	PPL Eur	Size DN	Dimension (mm)			RED RK HSF2 (ID=0.8/OD=1.6) DIN 11852
					OD <sub>1</sub> /ID <sub>1</sub> x t <sub>1</sub>	OD <sub>2</sub> /ID <sub>2</sub> x t <sub>2</sub>	L	
1.4307 (304L)		1.4404 (316L)		mm				
9615226939		9615332639		150/65	154.00/150.00 x 2.00	70.00/66.00 x 2.00	151.00	
9615226940		9615332640		150/80	154.00/150.00 x 2.00	85.00/81.00 x 2.00	124.00	
9615226941		9615332641		150/100	154.00/150.00 x 2.00	104.00/100.00 x 2.00	90.00	
9615226942		9615332642		150/125	154.00/150.00 x 2.00	129.00/125.00 x 2.00	45.00	
9615226943		9615332643		200/65	204.00/200.00 x 2.00	70.00/66.00 x 2.00	250.00	
9615226944		9615332644		200/80	204.00/200.00 x 2.00	85.00/81.00 x 2.00	222.00	
9615226945		9615332645		200/100	204.00/200.00 x 2.00	104.00/100.00 x 2.00	186.00	
9615226946		9615332646		200/125	204.00/200.00 x 2.00	129.00/125.00 x 2.00	140.00	
9615226947		9615332647		200/150	204.00/200.00 x 2.00	154.00/150.00 x 2.00	93.00	



Product code: 5068

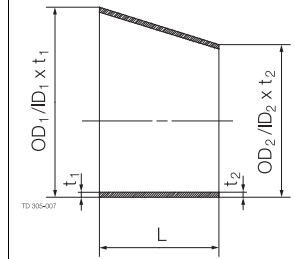
1.2

Item No	PPL Eur	item No	PPL Eur	Size DN	Dimension (mm)			RED RE HSF3 (ID=0.8/OD=0.8) DIN 11852
					mm	OD <sub>1</sub> /ID <sub>1</sub> x t <sub>1</sub>	OD <sub>2</sub> /ID <sub>2</sub> x t <sub>2</sub>	
9615234401		9615317501		15/10	19.00/16.00 x 1.50	13.00/10.00 x 1.50	16.50	
9615234402		9615317502		20/10	23.00/20.00 x 1.50	13.00/10.00 x 1.50	27.50	
9615234403		9615317503		20/15	23.00/20.00 x 1.50	19.00/16.00 x 1.50	11.00	
9615234404		9615317504		25/10	29.00/26.00 x 1.50	13.00/10.00 x 1.50	44.00	
9615234405		9615317505		25/15	29.00/26.00 x 1.50	19.00/16.00 x 1.50	27.50	
9615234406		9615317506		25/20	29.00/26.00 x 1.50	23.00/20.00 x 1.50	16.50	
9615234407		9615317507		32/15	35.00/32.00 x 1.50	19.00/16.00 x 1.50	44.00	
9615234408		9615317508		32/20	35.00/32.00 x 1.50	23.00/20.00 x 1.50	33.00	
9615234409		9615317509		32/25	35.00/32.00 x 1.50	29.00/26.00 x 1.50	16.50	
9615234410		9615317510		40/15	41.00/38.00 x 1.50	19.00/16.00 x 1.50	60.40	
9615234411		9615317511		40/20	41.00/38.00 x 1.50	23.00/20.00 x 1.50	49.50	
9615234412		9615317512		40/25	41.00/38.00 x 1.50	29.00/26.00 x 1.50	33.00	
9615234413		9615317513		40/32	41.00/38.00 x 1.50	35.00/32.00 x 1.50	16.50	
9615234414		9615317514		50/25	53.00/50.00 x 1.50	29.00/26.00 x 1.50	65.90	
9615234415		9615317515		50/32	53.00/50.00 x 1.50	35.00/32.00 x 1.50	49.50	
9615234416		9615317516		50/40	53.00/50.00 x 1.50	41.00/38.00 x 1.50	33.00	
9615234417		9615317517		65/25	70.00/66.00 x 2.00	29.00/26.00 x 1.50	109.90	
9615234418		9615317518		65/32	70.00/66.00 x 2.00	35.00/32.00 x 1.50	93.40	
9615234419		9615317519		65/40	70.00/66.00 x 2.00	42.00/38.00 x 2.00	76.90	
9615234420		9615317520		65/50	70.00/66.00 x 2.00	54.00/50.00 x 2.00	44.00	
9615234421		9615317521		80/25	85.00/81.00 x 2.00	29.00/26.00 x 1.50	151.10	
9615234422		9615317522		80/32	85.00/81.00 x 2.00	35.00/32.00 x 1.50	134.60	
9615234423		9615317523		80/40	85.00/81.00 x 2.00	41.00/38.00 x 1.50	118.10	
9615234424		9615317524		80/50	85.00/81.00 x 2.00	54.00/50.00 x 2.00	85.20	
9615234425		9615317525		80/65	85.00/81.00 x 2.00	70.00/66.00 x 2.00	41.20	
9615234426		9615317526		100/25	104.00/100.00 x 2.00	29.00/26.00 x 1.50	203.30	
9615234427		9615317527		100/32	104.00/100.00 x 2.00	35.00/32.00 x 1.50	186.80	
9615234428		9615317528		100/40	104.00/100.00 x 2.00	42.00/38.00 x 2.00	170.30	
9615234429		9615317529		100/50	104.00/100.00 x 2.00	54.00/50.00 x 2.00	137.40	
9615234430		9615317530		100/65	104.00/100.00 x 2.00	70.00/66.00 x 2.00	93.40	
9615234431		9615317531		100/80	104.00/100.00 x 2.00	85.00/81.00 x 2.00	52.20	
9615234432		9615317532		125/25	129.00/125.00 x 2.00	29.00/26.00 x 1.50	272.00	
9615234433		9615317533		125/32	129.00/125.00 x 2.00	35.00/32.00 x 1.50	255.50	
9615234434		9615317534		125/40	129.00/125.00 x 2.00	41.00/38.00 x 1.50	239.00	
9615234435		9615317535		125/50	129.00/125.00 x 2.00	54.00/50.00 x 2.00	206.10	
9615234436		9615317536		125/65	129.00/125.00 x 2.00	70.00/66.00 x 2.00	162.10	
9615234437		9615317537		125/80	129.00/125.00 x 2.00	85.00/81.00 x 2.00	120.90	
9615234438		9615317538		125/100	129.00/125.00 x 2.00	104.00/100.00 x 2.00	68.70	
9615234439		9615317539		150/65	154.00/150.00 x 2.00	70.00/66.00 x 2.00	230.80	
9615234440		9615317540		150/80	154.00/150.00 x 2.00	85.00/81.00 x 2.00	189.60	
9615234441		9615317541		150/100	154.00/150.00 x 2.00	104.00/100.00 x 2.00	137.40	
9615234442		9615317542		150/125	154.00/150.00 x 2.00	129.00/125.00 x 2.00	68.70	
9615234443		9615317543		200/65	204.00/200.00 x 2.00	70.00/66.00 x 2.00	368.00	
9615234444		9615317544		200/80	204.00/200.00 x 2.00	85.00/81.00 x 2.00	327.00	
9615234445		9615317545		200/100	204.00/200.00 x 2.00	104.00/100.00 x 2.00	275.00	
9615234446		9615317546		200/125	204.00/200.00 x 2.00	129.00/125.00 x 2.00	206.00	
9615234447		9615317547		200/150	204.00/200.00 x 2.00	154.00/150.00 x 2.00	137.00	





Item No	PPL Eur	item No	PPL Eur	Size DN	Dimension (mm)			RED RE HSF2 (ID=0.8/OD=1.6) DIN 11852
					mm	OD <sub>1</sub> /ID <sub>1</sub> x t <sub>1</sub>	OD <sub>2</sub> /ID <sub>2</sub> x t <sub>2</sub>	
9615227201		9615332801		15/10	19.00/16.00 x 1.50	13.00/10.00 x 1.50	16.50	
9615227202		9615332802		20/10	23.00/20.00 x 1.50	13.00/10.00 x 1.50	27.50	
9615227203		9615332803		20/15	23.00/20.00 x 1.50	19.00/16.00 x 1.50	11.00	
9615227204		9615332804		25/10	29.00/26.00 x 1.50	13.00/10.00 x 1.50	44.00	
9615227205		9615332805		25/15	29.00/26.00 x 1.50	19.00/16.00 x 1.50	27.50	
9615227206		9615332806		25/20	29.00/26.00 x 1.50	23.00/20.00 x 1.50	16.50	
9615227207		9615332807		32/15	35.00/32.00 x 1.50	19.00/16.00 x 1.50	44.00	
9615227208		9615332808		32/20	35.00/32.00 x 1.50	23.00/20.00 x 1.50	33.00	
9615227209		9615332809		32/25	35.00/32.00 x 1.50	29.00/26.00 x 1.50	16.50	
9615227210		9615332810		40/15	41.00/38.00 x 1.50	19.00/16.00 x 1.50	60.40	
9615227211		9615332811		40/20	41.00/38.00 x 1.50	23.00/20.00 x 1.50	49.50	
9615227212		9615332812		40/25	41.00/38.00 x 1.50	29.00/26.00 x 1.50	33.00	
9615227213		9615332813		40/32	41.00/38.00 x 1.50	35.00/32.00 x 1.50	16.50	
9615227214		9615332814		50/25	53.00/50.00 x 1.50	29.00/26.00 x 1.50	65.90	
9615227215		9615332815		50/32	53.00/50.00 x 1.50	35.00/32.00 x 1.50	49.50	
9615227216		9615332816		50/40	53.00/50.00 x 1.50	41.00/38.00 x 1.50	33.00	
9615227217		9615332817		65/25	70.00/66.00 x 2.00	29.00/26.00 x 1.50	109.90	
9615227218		9615332818		65/32	70.00/66.00 x 2.00	35.00/32.00 x 1.50	93.40	
9615227219		9615332819		65/40	70.00/66.00 x 2.00	42.00/38.00 x 2.00	76.90	
9615227220		9615332820		65/50	70.00/66.00 x 2.00	54.00/50.00 x 2.00	44.00	
9615227221		9615332821		80/25	85.00/81.00 x 2.00	29.00/26.00 x 1.50	151.10	
9615227222		9615332822		80/32	85.00/81.00 x 2.00	35.00/32.00 x 1.50	134.60	
9615227223		9615332823		80/40	85.00/81.00 x 2.00	41.00/38.00 x 1.50	118.10	
9615227224		9615332824		80/50	85.00/81.00 x 2.00	54.00/50.00 x 2.00	85.20	
9615227225		9615332825		80/65	85.00/81.00 x 2.00	70.00/66.00 x 2.00	41.20	
9615227226		9615332826		100/25	104.00/100.00 x 2.00	29.00/26.00 x 1.50	203.30	
9615227227		9615332827		100/32	104.00/100.00 x 2.00	35.00/32.00 x 1.50	186.80	
9615227228		9615332828		100/40	104.00/100.00 x 2.00	42.00/38.00 x 2.00	170.30	
9615227229		9615332829		100/50	104.00/100.00 x 2.00	54.00/50.00 x 2.00	137.40	
9615227230		9615332830		100/65	104.00/100.00 x 2.00	70.00/66.00 x 2.00	93.40	
9615227231		9615332831		100/80	104.00/100.00 x 2.00	85.00/81.00 x 2.00	52.20	
9615227232		9615332832		125/25	129.00/125.00 x 2.00	29.00/26.00 x 1.50	272.00	
9615227233		9615332833		125/32	129.00/125.00 x 2.00	35.00/32.00 x 1.50	255.50	
9615227234		9615332834		125/40	129.00/125.00 x 2.00	41.00/38.00 x 1.50	239.00	
9615227235		9615332835		125/50	129.00/125.00 x 2.00	54.00/50.00 x 2.00	206.10	
9615227236		9615332836		125/65	129.00/125.00 x 2.00	70.00/66.00 x 2.00	162.10	
9615227237		9615332837		125/80	129.00/125.00 x 2.00	85.00/81.00 x 2.00	120.90	
9615227238		9615332838		125/100	129.00/125.00 x 2.00	104.00/100.00 x 2.00	68.70	
9615227239		9615332839		150/65	154.00/150.00 x 2.00	70.00/66.00 x 2.00	230.80	
9615227240		9615332840		150/80	154.00/150.00 x 2.00	85.00/81.00 x 2.00	189.60	
9615227241		9615332841		150/100	154.00/150.00 x 2.00	104.00/100.00 x 2.00	137.40	
9615227242		9615332842		150/125	154.00/150.00 x 2.00	129.00/125.00 x 2.00	68.70	
9615227243		9615332843		200/65	204.00/200.00 x 2.00	70.00/66.00 x 2.00	368.00	
9615227244		9615332844		200/80	204.00/200.00 x 2.00	85.00/81.00 x 2.00	327.00	
9615227245		9615332845		200/100	204.00/200.00 x 2.00	104.00/100.00 x 2.00	275.00	
9615227246		9615332846		200/125	204.00/200.00 x 2.00	129.00/125.00 x 2.00	206.00	
9615227247		9615332847		200/150	204.00/200.00 x 2.00	154.00/150.00 x 2.00	137.00	



Product code: 5044

1.2

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				
<b>1.4301 (304)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>MALE C</b> <b>HSF0 (ID=0.8/OD=1.6)</b> <b>DIN 11851</b>
3131800391		9611306602		25		29.00	52 x 1/6	28.20	
3131800392		9611306612		32		32.00	58 x 1/6	34.20	
3131800393		9611306622		40		33.00	65 x 1/6	40.20	
3131800394		9611306632		50		35.00	78 x 1/6	52.20	
3131800395		9611306642		65		40.00	95 x 1/6	70.30	
3131800396		9611306652		80		45.00	110 x 1/4	85.30	
3131800398		9611306662		100		54.00	130 x 1/4	104.30	
									<b>LINER D</b> <b>HSF0 (ID=0.8/OD=1.6)</b> <b>DIN 11851</b>
3131800151		9611306672		25	44.00	22.00		28.20	
3131800152		9611306682		32	50.00	25.00		34.20	
3131800153		9611306692		40	56.00	26.00		40.20	
3131800154		9611306702		50	68.00	28.00		52.20	
3131800155		9611306712		65	86.00	32.00		70.30	
3131800156		9611306722		80	100.00	37.00		85.30	
3131800158		9611306732		100	121.00	44.00		104.30	

Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)				
<b>1.4301 (304)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>NUT F</b> <b>HSF0 (ID=0.8/OD=1.6)</b> <b>DIN 11851</b>
9611306420		9612150701		10	38.00	18.00	28 x 1/8	19.00	
9611306430		9612150702		15	44.00	18.00	34 x 1/8	25.00	
9611290021		9612150703		20	54.00	20.00	44 x 1/6	31.00	
3131800141		9612150704		25	63.00	21.00	52 x 1/6	36.00	
3131800142		9612150705		32	70.00	21.00	58 x 1/6	42.00	
3131800143		9612150706		40	78.00	21.00	65 x 1/6	49.00	
3131800144		9612150707		50	92.00	22.00	78 x 1/6	62.00	
3131800145		9612150708		65	112.00	25.00	95 x 1/6	80.00	
3131800146		9612150710		80	127.00	29.00	110 x 1/4	94.00	
3131800148		9612150711		100	148.00	31.00	130 x 1/4	115.00	
9611306450		9612150712		125	178.00	34.00	160 x 1/4	138.00	
9611306460		9612150713		150	210.00	40.00	190 x 1/4	164.00	



Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				BLIND BD HSF0 (ID=0.8/OD=1.6) DIN 11851
					A	B	D	E	
1.4307 (304L)		1.4404 (316L)		mm					
9611306470		9612152413		10	22.50	6.00	18.00	9.00	
9611306480		9612152414		15	28.50	6.00	24.00	9.00	
9611291111		9612152415		20	36.50	8.00	30.00	11.00	
3131800351		9612152416		25	44.00	10.00	35.00	13.00	
3131800352		9612152417		32	50.00	10.00	41.00	13.00	
3131800353		9612152418		40	56.00	10.00	48.00	13.00	
3131800354		9612152419		50	68.50	11.00	61.00	14.00	
3131800355		9612152420		65	86.00	12.00	79.00	16.00	
3131800356		9612152422		80	100.00	12.00	93.00	16.00	
3131800358		9612152423		100	121.00	15.00	114.00	20.00	
9611306500		9612152424		125	150.00	17.00	137.00	22.00	
9611306510		9612152425		150	176.00	18.00	163.00	24.00	

Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)			GASKET G DIN 11851	
NBR		FPM		mm	A	B	D		
<b>Product code 5063</b>									
52734601		9611991861		10	20.00	4.50	12.00		
52734602		9611991862		15	26.00	4.50	18.00		
52734603		9611991863		20	33.00	4.50	23.00		
52734604		9611991864		25	40.00	5.00	30.00		
52734605		9611991865		32	46.00	5.00	36.00		
52734606		9611991866		40	52.00	5.00	42.00		
52734607		9611991867		50	64.00	5.00	54.00		
52734608		9611991868		65	81.00	5.00	71.00		
9611991264		9611991869		75	88.00	5.00	78.00		
52734609		9611991128		80	95.00	5.00	85.00		
52734611		9611991870		100	114.00	6.00	104.00		
9611991265		9611991871		125	142.00	7.00	130.00		
9611991266		9611991872		150	167.00	7.00	155.00		
<b>GASKET G DIN 11851</b>									
<b>EPDM</b>		<b>Silicone (Q)</b>							
9611991267		9611991917		10	20.00	4.50	12.00		
9611991268		9611991918		15	26.00	4.50	18.00		
9611991323		9611991919		20	33.00	4.50	23.00		
9611991269		9611991920		25	40.00	5.00	30.00		
9611991270		9611991921		32	46.00	5.00	36.00		
9611991271		9611991922		40	52.00	5.00	42.00		
9611991272		9611991923		50	64.00	5.00	54.00		
9611991273		9611991924		65	81.00	5.00	71.00		
9611991274		9611991925		75	88.00	5.00	78.00		
9611991275		9611991926		80	95.00	5.00	85.00		
9611991276		9611991927		100	114.00	6.00	104.00		
9611991277		9611991928		125	142.00	7.00	130.00		
9611991278		9611991929		150	167.00	7.00	155.00		
<b>GASKET G DIN 11851</b>									
<b>PTFE</b>									
9611991873				10	20.00	4.50	12.00		
9611991874				15	26.00	4.50	18.00		
9611991875				20	33.00	4.50	23.00		
9611991876				25	40.00	5.00	30.00		
9611991877				32	46.00	5.00	36.00		
9611991878				40	52.00	5.00	42.00		
9611991879				50	64.00	5.00	54.00		
9611991880				65	81.00	5.00	71.00		
9611991881				75	88.00	5.00	78.00		
9611991882				80	95.00	5.00	85.00		
9611991883				100	114.00	6.00	104.00		
9611991884				125	142.00	7.00	130.00		
9611991885				150	167.00	7.00	155.00		



Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				
1.4307 (304L)		1.4404 (316L)		mm	OD/ID x t	B	C	<b>MALE SC</b> HSF0 (ID=0.8/OD=1.6) <b>DIN 11851</b>	
9611306100		9611306101		10	13.00/10.00 x 1.50	21.00	28 x 1/8		
9611306110		9611306111		15	19.00/16.00 x 1.50	21.00	34 x 1/8		
9611290081		9611290082		20	23.00/20.00 x 1.50	24.00	44 x 1/6		
9611301103		9611331103		25	29.00/26.00 x 1.50	29.00	52 x 1/6		
9611301104		9611331104		32	35.00/32.00 x 1.50	32.00	58 x 1/6		
9611301105		9611331105		40	41.00/38.00 x 1.50	33.00	65 x 1/6		
9611301106		9611331106		50	53.00/50.00 x 1.50	35.00	78 x 1/6		
9611301107		9611331107		65	70.00/66.00 x 2.00	40.00	95 x 1/6		
9611301108		9611331108		80	85.00/81.00 x 2.00	45.00	110 x 1/4		
9611301110		9611331110		100	104.00/100.00 x 2.00	54.00	130 x 1/4		
9611306130		9611306131		125	129.00/125.00 x 2.00	46.00	160 x 1/4		
9611306140		9611306141		150	154.00/150.00 x 2.00	50.00	190 x 1/4		
						A	B		<b>LINER SD</b> HSF0 (ID=0.8/OD=1.6) <b>DIN 11851</b>
9611306150		9611306151		10	13.00/10.00 x 1.50	22.50	17.00		
9611306160		9611306161		15	19.00/16.00 x 1.50	28.50	17.00		
9611290091		9611290092		20	23.00/20.00 x 1.50	36.50	18.00		
9611301111		9611331111		25	29.00/26.00 x 1.50	44.00	22.00		
9611301112		9611331112		32	35.00/32.00 x 1.50	50.00	25.00		
9611301113		9611331113		40	41.00/38.00 x 1.50	56.00	26.00		
9611301114		9611331114		50	53.00/50.00 x 1.50	68.50	28.00		
9611301115		9611331115		65	70.00/66.00 x 2.00	86.00	32.00		
9611301116		9611331116		80	85.00/81.00 x 2.00	100.00	37.00		
9611301118		9611331118		100	104.00/100.00 x 2.00	121.00	44.00		
9611306180		9611306181		125	129.00/125.00 x 2.00	150.00	34.00		
9611306190		9611306191		150	154.00/150.00 x 2.00	176.00	37.00		

Product code: 5044

1.2

Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)				
<b>1.4301 (304)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>NUT F HSF0 (ID=0.8/OD=1.6) DIN 11851</b>
9611306420		9612150701		10	38.00	18.00	28 x 1/8	19.00	
9611306430		9612150702		15	44.00	18.00	34 x 1/8	25.00	
9611290021		9612150703		20	54.00	20.00	44 x 1/6	31.00	
3131800141		9612150704		25	63.00	21.00	52 x 1/6	36.00	
3131800142		9612150705		32	70.00	21.00	58 x 1/6	42.00	
3131800143		9612150706		40	78.00	21.00	65 x 1/6	49.00	
3131800144		9612150707		50	92.00	22.00	78 x 1/6	62.00	
3131800145		9612150708		65	112.00	25.00	95 x 1/6	80.00	
3131800146		9612150710		80	127.00	29.00	110 x 1/4	94.00	
3131800148		9612150711		100	148.00	31.00	130 x 1/4	115.00	
9611306450		9612150712		125	178.00	34.00	160 x 1/4	138.00	
9611306460		9612150713		150	210.00	40.00	190 x 1/4	164.00	

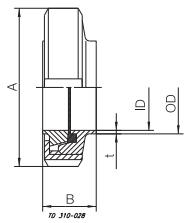
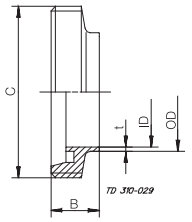
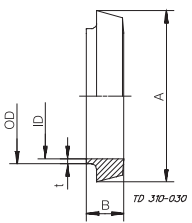
Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>A</b>	<b>B</b>	<b>D</b>	<b>E</b>	<b>BLIND BD HSF0 (ID=0.8/OD=1.6) DIN 11851</b>
9611306470		9612152413		10	22.50	6.00	18.00	9.00	
9611306480		9612152414		15	28.50	6.00	24.00	9.00	
9611291111		9612152415		20	36.50	8.00	30.00	11.00	
3131800351		9612152416		25	44.00	10.00	35.00	13.00	
3131800352		9612152417		32	50.00	10.00	41.00	13.00	
3131800353		9612152418		40	56.00	10.00	48.00	13.00	
3131800354		9612152419		50	68.50	11.00	61.00	14.00	
3131800355		9612152420		65	86.00	12.00	79.00	16.00	
3131800356		9612152422		80	100.00	12.00	93.00	16.00	
3131800358		9612152423		100	121.00	15.00	114.00	20.00	
9611306500		9612152424		125	150.00	17.00	137.00	22.00	
9611306510		9612152425		150	176.00	18.00	163.00	24.00	



Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)				
NBR		FPM		mm	A	B	D	GASKET G DIN 11851	
52734601		9611991861		10	20.00	4.50	12.00		
52734602		9611991862		15	26.00	4.50	18.00		
52734603		9611991863		20	33.00	4.50	23.00		
52734604		9611991864		25	40.00	5.00	30.00		
52734605		9611991865		32	46.00	5.00	36.00		
52734606		9611991866		40	52.00	5.00	42.00		
52734607		9611991867		50	64.00	5.00	54.00		
52734608		9611991868		65	81.00	5.00	71.00		
9611991264		9611991869		75	88.00	5.00	78.00		
52734609		9611991128		80	95.00	5.00	85.00		
52734611		9611991870		100	114.00	6.00	104.00		
9611991265		9611991871		125	142.00	7.00	130.00		
9611991266		9611991872		150	167.00	7.00	155.00		
EPDM		Silicone (Q)							GASKET G DIN 11851
9611991267		9611991917		10	20.00	4.50	12.00		
9611991268		9611991918		15	26.00	4.50	18.00		
9611991323		9611991919		20	33.00	4.50	23.00		
9611991269		9611991920		25	40.00	5.00	30.00		
9611991270		9611991921		32	46.00	5.00	36.00		
9611991271		9611991922		40	52.00	5.00	42.00		
9611991272		9611991923		50	64.00	5.00	54.00		
9611991273		9611991924		65	81.00	5.00	71.00		
9611991274		9611991925		75	88.00	5.00	78.00		
9611991275		9611991926		80	95.00	5.00	85.00		
9611991276		9611991927		100	114.00	6.00	104.00		
9611991277		9611991928		125	142.00	7.00	130.00		
9611991278		9611991929		150	167.00	7.00	155.00		
PTFE								GASKET G DIN 11851	
9611991873				10	20.00	4.50	12.00		
9611991874				15	26.00	4.50	18.00		
9611991875				20	33.00	4.50	23.00		
9611991876				25	40.00	5.00	30.00		
9611991877				32	46.00	5.00	36.00		
9611991878				40	52.00	5.00	42.00		
9611991879				50	64.00	5.00	54.00		
9611991880				65	81.00	5.00	71.00		
9611991881				75	88.00	5.00	78.00		
9611991882				80	95.00	5.00	85.00		
9611991883				100	114.00	6.00	104.00		
9611991884				125	142.00	7.00	130.00		
9611991885				150	167.00	7.00	155.00		

Product code: 5044

1.2

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			
					OD/ID x t	A	B	
1.4307 (304L)		1.4404 (316L)		mm				<b>CONNECTION SK</b> HSF0 (ID=0.8/OD=1.6) DIN 11851 NBR
9611305790		9611305791		10	13.00/10.00 x 1.50	38.00	25.00	
9611305800		9611305801		15	19.00/16.00 x 1.50	44.00	25.00	
9611290011		9611290012		20	23.00/20.00 x 1.50	54.00	25.00	
9611301119		9611331119		25	29.00/26.00 x 1.50	63.00	31.00	
9611301120		9611331120		32	35.00/32.00 x 1.50	70.00	31.00	
9611301121		9611331121		40	41.00/38.00 x 1.50	78.00	31.00	
9611301122		9611331122		50	53.00/50.00 x 1.50	92.00	33.00	
9611301123		9611331123		65	70.00/66.00 x 2.00	112.00	35.00	
9611301124		9611331124		80	85.00/81.00 x 2.00	127.00	35.00	
9611301126		9611331126		100	104.00/100.00 x 2.00	148.00	41.00	
						<b>B</b>	<b>C</b>	
9611305900		9611305901		10	13.00/10.00 x 1.50	17.00	28 x 1/8	
9611305910		9611305911		15	19.00/16.00 x 1.50	17.00	34 x 1/8	
9611290031		9611290032		20	23.00/20.00 x 1.50	19.00	44 x 1/6	
9611301087		9611331087		25	29.00/26.00 x 1.50	22.00	52 x 1/6	
9611301088		9611331088		32	35.00/32.00 x 1.50	22.00	58 x 1/6	
9611301089		9611331089		40	41.00/38.00 x 1.50	22.00	65 x 1/6	
9611301090		9611331090		50	53.00/50.00 x 1.50	23.00	78 x 1/6	
9611301091		9611331091		65	70.00/66.00 x 2.00	25.00	95 x 1/6	
9611301092		9611331092		80	85.00/81.00 x 2.00	25.00	110 x 1/4	
9611301094		9611331094		100	104.00/100.00 x 2.00	30.00	130 x 1/4	
9611305930		9611305931		125	129.00/125.00 x 2.00	35.50	160 x 1/4	
9611305940		9611305941		150	154.00/150.00 x 2.00	40.00	190 x 1/4	
						<b>A</b>	<b>B</b>	<b>LINER SKD</b> HSF0 (ID=0.8/OD=1.6) DIN 11851
9611305950		9611305951		10	13.00/10.00 x 1.50	22.00	13.00	
9611305960		9611305961		15	19.00/16.00 x 1.50	28.00	13.00	
9611290041		9611290042		20	23.00/20.00 x 1.50	36.00	13.00	
9611301095		9611331095		25	29.00/26.00 x 1.50	44.00	15.00	
9611301096		9611331096		32	35.00/32.00 x 1.50	50.00	15.00	
9611301097		9611331097		40	41.00/38.00 x 1.50	56.00	15.00	
9611301098		9611331098		50	53.00/50.00 x 1.50	68.00	16.00	
9611301099		9611331099		65	70.00/66.00 x 2.00	86.00	17.00	
9611301100		9611331100		80	85.00/81.00 x 2.00	100.00	17.00	
9611301102		9611331102		100	104.00/100.00 x 2.00	121.00	20.00	
9611305970		9611305971		125	129.00/125.00 x 2.00	150.00	23.50	
9611305980		9611305981		150	154.00/150.00 x 2.00	176.00	27.00	





Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)				
1.4301 (304)		1.4404 (316L)		mm	A	B	C	D	NUT F HSF0 (ID=0.8/OD=1.6) DIN 11851
9611306420		9612150701		10	38.00	18.00	28 x 1/8	19.00	
9611306430		9612150702		15	44.00	18.00	34 x 1/8	25.00	
9611290021		9612150703		20	54.00	20.00	44 x 1/6	31.00	
3131800141		9612150704		25	63.00	21.00	52 x 1/6	36.00	
3131800142		9612150705		32	70.00	21.00	58 x 1/6	42.00	
3131800143		9612150706		40	78.00	21.00	65 x 1/6	49.00	
3131800144		9612150707		50	92.00	22.00	78 x 1/6	62.00	
3131800145		9612150708		65	112.00	25.00	95 x 1/6	80.00	
3131800146		9612150710		80	127.00	29.00	110 x 1/4	94.00	
3131800148		9612150711		100	148.00	31.00	130 x 1/4	115.00	
9611306450		9612150712		125	178.00	34.00	160 x 1/4	138.00	
9611306460		9612150713		150	210.00	40.00	190 x 1/4	164.00	

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				
1.4307 (304L)		1.4404 (316L)		mm	A	B	D	E	BLIND BD HSF0 (ID=0.8/OD=1.6) DIN 11851
9611306470		9612152413		10	22.50	6.00	18.00	9.00	
9611306480		9612152414		15	28.50	6.00	24.00	9.00	
9611291111		9612152415		20	36.50	8.00	30.00	11.00	
3131800351		9612152416		25	44.00	10.00	35.00	13.00	
3131800352		9612152417		32	50.00	10.00	41.00	13.00	
3131800353		9612152418		40	56.00	10.00	48.00	13.00	
3131800354		9612152419		50	68.50	11.00	61.00	14.00	
3131800355		9612152420		65	86.00	12.00	79.00	16.00	
3131800356		9612152422		80	100.00	12.00	93.00	16.00	
3131800358		9612152423		100	121.00	15.00	114.00	20.00	
9611306500		9612152424		125	150.00	17.00	137.00	22.00	
9611306510		9612152425		150	176.00	18.00	163.00	24.00	

Product code: 5063

1.2

Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)			GASKET G DIN 11851
NBR		FPM		mm	A	B	D	
52734601		9611991861		10	20.00	4.50	12.00	
52734602		9611991862		15	26.00	4.50	18.00	
52734603		9611991863		20	33.00	4.50	23.00	
52734604		9611991864		25	40.00	5.00	30.00	
52734605		9611991865		32	46.00	5.00	36.00	
52734606		9611991866		40	52.00	5.00	42.00	
52734607		9611991867		50	64.00	5.00	54.00	
52734608		9611991868		65	81.00	5.00	71.00	
9611991264		9611991869		75	88.00	5.00	78.00	
52734609		9611991128		80	95.00	5.00	85.00	
52734611		9611991870		100	114.00	6.00	104.00	
9611991265		9611991871		125	142.00	7.00	130.00	
9611991266		9611991872		150	167.00	7.00	155.00	
<b>EPDM</b>		<b>Silicone (Q)</b>						
9611991267		9611991917		10	20.00	4.50	12.00	
9611991268		9611991918		15	26.00	4.50	18.00	
9611991323		9611991919		20	33.00	4.50	23.00	
9611991269		9611991920		25	40.00	5.00	30.00	
9611991270		9611991921		32	46.00	5.00	36.00	
9611991271		9611991922		40	52.00	5.00	42.00	
9611991272		9611991923		50	64.00	5.00	54.00	
9611991273		9611991924		65	81.00	5.00	71.00	
9611991274		9611991925		75	88.00	5.00	78.00	
9611991275		9611991926		80	95.00	5.00	85.00	
9611991276		9611991927		100	114.00	6.00	104.00	
9611991277		9611991928		125	142.00	7.00	130.00	
9611991278		9611991929		150	167.00	7.00	155.00	
<b>PTFE</b>								
9611991873				10	20.00	4.50	12.00	
9611991874				15	26.00	4.50	18.00	
9611991875				20	33.00	4.50	23.00	
9611991876				25	40.00	5.00	30.00	
9611991877				32	46.00	5.00	36.00	
9611991878				40	52.00	5.00	42.00	
9611991879				50	64.00	5.00	54.00	
9611991880				65	81.00	5.00	71.00	
9611991881				75	88.00	5.00	78.00	
9611991882				80	95.00	5.00	85.00	
9611991883				100	114.00	6.00	104.00	
9611991884				125	142.00	7.00	130.00	
9611991885				150	167.00	7.00	155.00	



Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)			
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>B</b>	<b>C</b>	<b>MALE GS H3 (ID=0.8/OD=1.0) DIN 11853-1</b>
8010000569		9615362901		10	13.00/10.00 x 1.50	19.00	28 x 1/8	
8010000571		9615362902		15	19.00/16.00 x 1.50	19.00	34 x 1/8	
8010000572		9615362903		20	23.00/20.00 x 1.50	21.00	44 x 1/6	
8010000573		9612928834		25	29.00/26.00 x 1.50	26.00	52 x 1/6	
8010000574		9612928835		32	35.00/32.00 x 1.50	30.00	58 x 1/6	
8010000575		9612928836		40	41.00/38.00 x 1.50	31.00	65 x 1/6	
8010000576		9612928837		50	53.00/50.00 x 1.50	31.00	78 x 1/6	
8010000577		9612928838		65	70.00/66.00 x 2.00	36.00	95 x 1/6	
8010000578		9612928839		80	85.00/81.00 x 2.00	42.00	110 x 1/4	
8010000579		9612928840		100	104.00/100.00 x 2.00	50.00	130 x 1/4	
						<b>A</b>	<b>B</b>	
8010000580		9615363101		10	13.00/10.00 x 1.50	21.90	17.00	
8010000581		9615363102		15	19.00/16.00 x 1.50	27.90	17.00	
8010000582		9615363103		20	23.00/20.00 x 1.50	35.90	18.00	
8010000583		9612928844		25	29.00/26.00 x 1.50	42.90	22.00	
8010000585		9612928845		32	35.00/32.00 x 1.50	48.90	25.00	
8010000586		9612928846		40	41.00/38.00 x 1.50	54.90	26.00	
8010000587		9612928847		50	53.00/50.00 x 1.50	66.90	30.00	
8010000589		9612928848		65	70.00/66.00 x 2.00	84.90	34.00	
8010000590		9612928849		80	85.00/81.00 x 2.00	98.90	38.00	
8010000591		9612928850		100	104.00/100.00 x 2.00	118.90	46.00	

Product code: 5044

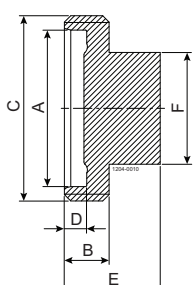
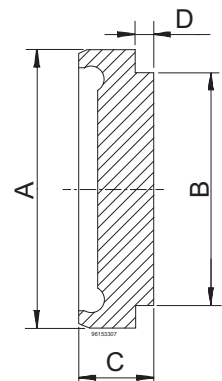
1.2

Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)				
1.4301 (304)		1.4404 (316L)		mm	A	B	C	D	NUT F HSF0 (ID=0.8/OD=1.6) DIN 11851
9611306420		9612150701		10	38.00	18.00	28 x 1/8	19.00	
9611306430		9612150702		15	44.00	18.00	34 x 1/8	25.00	
9611290021		9612150703		20	54.00	20.00	44 x 1/6	31.00	
3131800141		9612150704		25	63.00	21.00	52 x 1/6	36.00	
3131800142		9612150705		32	70.00	21.00	58 x 1/6	42.00	
3131800143		9612150706		40	78.00	21.00	65 x 1/6	49.00	
3131800144		9612150707		50	92.00	22.00	78 x 1/6	62.00	
3131800145		9612150708		65	112.00	25.00	95 x 1/6	80.00	
3131800146		9612150710		80	127.00	29.00	110 x 1/4	94.00	
3131800148		9612150711		100	148.00	31.00	130 x 1/4	115.00	
9611306450		9612150712		125	178.00	34.00	160 x 1/4	138.00	
9611306460		9612150713		150	210.00	40.00	190 x 1/4	164.00	



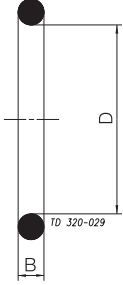
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Material Item No.	PPL EUR	Size DN	Dimension (mm)							
			A	B	C	D	E	F		
<b>1.4404 (316L)</b>			<b>mm</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>BLIND BGS</b> <b>H3 (ID=0.8/OD=1.0)</b> <b>DIN 11864-1/11853-1</b>
9615330601		10	22.00	12.00	28 x 1/8	4.00	24.00	13.00		
9615330602		15	28.00	12.00	34 x 1/8	4.00	24.00	19.00		
9615330603		20	36.00	14.00	44 x 1/6	5.00	24.00	23.00		
9615330604		25	43.00	14.00	52 x 1/6	6.00	24.00	29.00		
9615330605		32	49.00	14.00	58 x 1/6	7.00	24.00	35.00		
9615330606		40	55.00	14.00	65 x 1/6	7.00	24.00	41.00		
9615330607		50	67.00	14.00	78 x 1/6	7.00	24.00	53.00		
9615330608		65	85.00	16.00	95 x 1/6	8.00	28.00	70.00		
9615330609		80	99.00	20.00	110 x 1/4	8.00	28.00	85.00		
9615330610		100	119.00	20.00	130 x 1/4	10.00	30.00	104.00		
									<b>BLIND BBS</b> <b>H3 (ID=0.8/OD=1.0)</b> <b>DIN 11864-1/11853-1</b>	
9615330701		10	21.90	18.00	9.00	3.00				
9615330702		15	27.90	24.00	9.00	3.00				
9615330703		20	35.90	30.00	10.00	3.00				
9615330704		25	42.90	35.00	12.00	3.00				
9615330705		32	48.90	41.00	13.00	3.00				
9615330706		40	54.90	48.00	13.00	3.00				
9615330707		50	66.90	61.00	14.00	3.00				
9615330708		65	84.90	79.00	16.00	4.00				
9615330709		80	98.90	93.00	16.00	4.00				
9615330710		100	118.90	114.00	20.00	5.00				

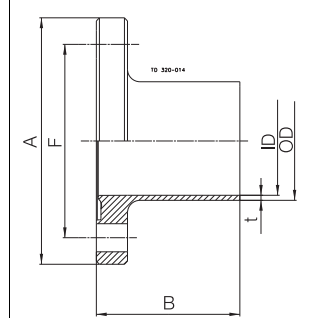
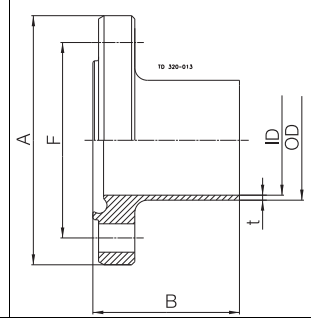
Product code: 5035

1.2

Item No.	PPL EUR	Item No.	PPL EUR			Size DN	Dimension (mm)		
EPDM		FPM				mm	B	D	O-RING R DIN 11864/11853
9612906201		9612906211				10	3.50	12.00	
9612906202		9612906212				15	3.50	18.00	
9612906203		9612906213				20	3.50	22.00	
9612906204		9612906214				25	3.50	28.00	
9612906205		9612906215				32	5.00	34.00	
9612906206		9612906216				40	5.00	40.00	
9612906207		9612906217				50	5.00	52.00	
9612906208		9612906218				65	5.00	68.00	
9612906209		9612906219				80	5.00	83.00	
9612906210		9612906220				100	5.00	102.00	
9612906221		9612906223				125	5.00	127.00	
9612906222		9612906224				150	5.00	152.00	

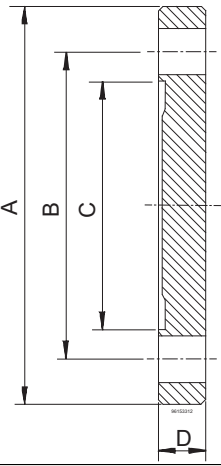
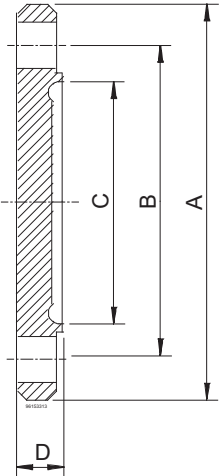


Item No	PPL EUR	Item No	PPL EUR	Size DN	Dimension (mm)			FLANGE GROOVE NF H3 (ID=0.8/OD=1.0) DIN 11853-2
					OD/ID x t	A	B	
1.4307 (304L)		1.4404 (316L)		mm				
8010000383		8010000506		10	13.00/10.00 x 1.50	54.00	25.50	37.00
8010000384		8010000507		15	19.00/16.00 x 1.50	59.00	25.50	42.00
8010000385		8010000508		20	23.00/20.00 x 1.50	64.00	25.50	47.00
8010000386		8010000509		25	29.00/26.00 x 1.50	70.00	25.50	53.00
8010000388		8010000510		32	35.00/32.00 x 1.50	76.00	25.50	59.00
8010000390		8010000511		40	41.00/38.00 x 1.50	82.00	25.50	65.00
8010000391		8010000512		50	53.00/50.00 x 1.50	94.00	25.50	77.00
8010000392		8010000513		65	70.00/66.00 x 2.00	113.00	25.50	95.00
8010000394		8010000514		80	85.00/81.00 x 2.00	133.00	27.50	112.00
8010000395		8010000515		100	104.00/100.00 x 2.00	159.00	27.50	137.00
8010000396		8010000516		125	129.00/125.00 x 2.00	183.00	29.50	161.00
8010000397		8010000517		150	154.00/150.00 x 2.00	213.00	29.50	188.00
								FLANGE COLLAR BF H3 (ID=0.8/OD=1.0) DIN 11853-2
8010000398		8010000518		10	13.00/10.00 x 1.50	54.00	24.00	37.00
8010000399		8010000519		15	19.00/16.00 x 1.50	59.00	24.00	42.00
8010000400		8010000520		20	23.00/20.00 x 1.50	64.00	24.00	47.00
8010000401		8010000521		25	29.00/26.00 x 1.50	70.00	24.00	53.00
8010000402		8010000522		32	35.00/32.00 x 1.50	76.00	24.00	59.00
8010000403		8010000523		40	41.00/38.00 x 1.50	82.00	24.00	65.00
8010000404		8010000524		50	53.00/50.00 x 1.50	94.00	24.00	77.00
8010000405		8010000525		65	70.00/66.00 x 2.00	113.00	24.00	95.00
8010000406		8010000526		80	85.00/81.00 x 2.00	133.00	26.00	112.00
8010000408		8010000527		100	104.00/100.00 x 2.00	159.00	26.00	137.00
8010000409		8010000528		125	129.00/125.00 x 2.00	183.00	28.00	161.00
8010000410		8010000529		150	154.00/150.00 x 2.00	213.00	28.00	188.00



Product code: 5060

1.2

Material Item No.	PPL EUR	Size DN	Dimension (mm)						
<b>BLIND BBF</b>									
<b>H3 (ID=0.8/OD=1.0)</b>									
<b>DIN 11864-2/11853-2</b>									
1.4404 (316L)		mm	A	B	C	D	E		
9615331203		10	54.00	37.00	22.40	10.00	4.00 x 9.00		
9615331204		15	59.00	42.00	28.40	10.00	4.00 x 9.00		
9615331205		20	64.00	47.00	32.40	10.00	4.00 x 9.00		
9615331206		25	70.00	53.00	38.40	10.00	4.00 x 9.00		
9615331207		32	76.00	59.00	47.70	10.00	4.00 x 9.00		
9615331208		40	82.00	65.00	53.70	10.00	4.00 x 9.00		
9615331209		50	94.00	77.00	65.70	10.00	4.00 x 9.00		
9615331210		65	113.00	95.00	81.70	10.00	8.00 x 9.00		
9615331211		80	133.00	112.00	97.70	12.00	8.00 x 11.00		
9615331212		100	159.00	137.00	116.70	14.00	8.00 x 11.00		
9615331213		125	183.00	161.00	141.70	14.00	8.00 x 11.00		
9615331214		150	213.00	188.00	167.70	16.00	8.00 x 14.00		
<b>BLIND BNF</b>									
<b>H3 (ID=0.8/OD=1.0)</b>									
<b>DIN 11864-2/11853-2</b>									
9615331303		10	54.00	37.00	22.30	11.50	4.00 x 9.00		
9615331304		15	59.00	42.00	28.30	11.50	4.00 x 9.00		
9615331305		20	64.00	47.00	32.30	11.50	4.00 x 9.00		
9615331306		25	70.00	53.00	38.30	11.50	4.00 x 9.00		
9615331307		32	76.00	59.00	47.60	11.50	4.00 x 9.00		
9615331308		40	82.00	65.00	53.60	11.50	4.00 x 9.00		
9615331309		50	94.00	77.00	65.60	11.50	4.00 x 9.00		
9615331310		65	113.00	95.00	81.60	11.50	8.00 x 9.00		
9615331311		80	133.00	112.00	97.60	13.50	8.00 x 11.00		
9615331312		100	159.00	137.00	116.60	15.50	8.00 x 11.00		
9615331313		125	183.00	161.00	141.60	15.50	8.00 x 11.00		
9615331314		150	213.00	188.00	167.60	17.50	8.00 x 14.00		

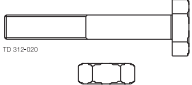




Item No.	PPL EUR	Item No.	PPL EUR			Size DN	Dimension (mm)		
EPDM		FPM				mm	B	D	O-RING R DIN 11864/11853
9612906201		9612906211				10	3.50	12.00	
9612906202		9612906212				15	3.50	18.00	
9612906203		9612906213				20	3.50	22.00	
9612906204		9612906214				25	3.50	28.00	
9612906205		9612906215				32	5.00	34.00	
9612906206		9612906216				40	5.00	40.00	
9612906207		9612906217				50	5.00	52.00	
9612906208		9612906218				65	5.00	68.00	
9612906209		9612906219				80	5.00	83.00	
9612906210		9612906220				100	5.00	102.00	
9612906221		9612906223				125	5.00	127.00	
9612906222		9612906224				150	5.00	152.00	

Product code: 5060

1.2

Item No.	PPL EUR	Flange size DIN/DN mm	Nuts	Screws	Screws and nut set
9612905161		10-50	4 x M8 x 30	4 x M8	
9612905162		65	8 x M8 x 30	8 x M8	
9612905164		80	8 x M10 x 35	8 x M10	
9612905165		100-125	8 x M10 x 40	8 x M10	
9612905166		150	8 x M12 x 50	8 x M12	

11853-3 NKS and BKS in 1.4404 and H3

11853-3 NKS and BKS in 1.4404 and H3, not available, please use 11864-3



Product code: 5060

1.2

Material Item No.	PPL EUR	Size DN	Dimension (mm)			
			OD/ID x t	A	B	
<b>MALE GS</b>						
<b>H3 (ID=0.8/OD=1.0)</b>						
<b>DIN 11864-1</b>						
9613403901		10	13.00/10.00 x 1.50	28 x 1/8	41.00	
9613403902		15	19.00/16.00 x 1.50	34 x 1/8	41.00	
9613403903		20	23.00/20.00 x 1.50	44 x 1/6	43.00	
9613403904		25	29.00/26.00 x 1.50	52 x 1/6	43.00	
9613403905		32	35.00/32.00 x 1.50	58 x 1/6	48.00	
9613403906		40	41.00/38.00 x 1.50	65 x 1/6	48.00	
9613403907		50	53.00/50.00 x 1.50	78 x 1/6	48.00	
9613403908		65	70.00/66.00 x 2.00	95 x 1/6	60.00	
9613403909		80	85.00/81.00 x 2.00	110 x 1/4	64.00	
9613403910		100	104.00/100.00 x 2.00	130 x 1/4	64.00	
<b>LINER BS</b>						
<b>H3 (ID=0.8/OD=1.0)</b>						
<b>DIN 11864-1</b>						
9613403911		10	13.00/10.00 x 1.50		39.00	
9613403912		15	19.00/16.00 x 1.50		39.00	
9613403913		20	23.00/20.00 x 1.50		38.00	
9613403914		25	29.00/26.00 x 1.50		40.00	
9613403915		32	35.00/32.00 x 1.50		47.00	
9613403916		40	41.00/38.00 x 1.50		47.00	
9613403917		50	53.00/50.00 x 1.50		48.00	
9613403918		65	70.00/66.00 x 2.00		61.00	
9613403919		80	85.00/81.00 x 2.00		61.00	
9613403920		100	104.00/100.00 x 2.00		66.00	



Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)				
1.4301 (304)		1.4404 (316L)		mm	A	B	C	D	NUT F HSF0 (ID=0.8/OD=1.6) DIN 11851
9611306420		9612150701		10	38.00	18.00	28 x 1/8	19.00	
9611306430		9612150702		15	44.00	18.00	34 x 1/8	25.00	
9611290021		9612150703		20	54.00	20.00	44 x 1/6	31.00	
3131800141		9612150704		25	63.00	21.00	52 x 1/6	36.00	
3131800142		9612150705		32	70.00	21.00	58 x 1/6	42.00	
3131800143		9612150706		40	78.00	21.00	65 x 1/6	49.00	
3131800144		9612150707		50	92.00	22.00	78 x 1/6	62.00	
3131800145		9612150708		65	112.00	25.00	95 x 1/6	80.00	
3131800146		9612150710		80	127.00	29.00	110 x 1/4	94.00	
3131800148		9612150711		100	148.00	31.00	130 x 1/4	115.00	
9611306450		9612150712		125	178.00	34.00	160 x 1/4	138.00	
9611306460		9612150713		150	210.00	40.00	190 x 1/4	164.00	

Product code: 5060

1.2

Material Item No.	PPL EUR	Size DN	Dimension (mm)						
1.4404 (316L)		mm	A	B	C	D	E	F	BLIND BGS H3 (ID=0.8/OD=1.0) DIN 11864-1/11853-1
9615330601		10	22.00	12.00	28 x 1/8	4.00	24.00	13.00	
9615330602		15	28.00	12.00	34 x 1/8	4.00	24.00	19.00	
9615330603		20	36.00	14.00	44 x 1/6	5.00	24.00	23.00	
9615330604		25	43.00	14.00	52 x 1/6	6.00	24.00	29.00	
9615330605		32	49.00	14.00	58 x 1/6	7.00	24.00	35.00	
9615330606		40	55.00	14.00	65 x 1/6	7.00	24.00	41.00	
9615330607		50	67.00	14.00	78 x 1/6	7.00	24.00	53.00	
9615330608		65	85.00	16.00	95 x 1/6	8.00	28.00	70.00	
9615330609		80	99.00	20.00	110 x 1/4	8.00	28.00	85.00	
9615330610		100	119.00	20.00	130 x 1/4	10.00	30.00	104.00	
									BLIND BBS H3 (ID=0.8/OD=1.0) DIN 11864-1/11853-1
9615330701		10	21.90	18.00	9.00	3.00			
9615330702		15	27.90	24.00	9.00	3.00			
9615330703		20	35.90	30.00	10.00	3.00			
9615330704		25	42.90	35.00	12.00	3.00			
9615330705		32	48.90	41.00	13.00	3.00			
9615330706		40	54.90	48.00	13.00	3.00			
9615330707		50	66.90	61.00	14.00	3.00			
9615330708		65	84.90	79.00	16.00	4.00			
9615330709		80	98.90	93.00	16.00	4.00			
9615330710		100	118.90	114.00	20.00	5.00			



Product code: 5035

Item No.	PPL EUR	Item No.	PPL EUR			Size DN	Dimension (mm)		
EPDM		FPM				mm	B	D	O-RING R DIN 11864/11853
9612906201		9612906211				10	3.50	12.00	
9612906202		9612906212				15	3.50	18.00	
9612906203		9612906213				20	3.50	22.00	
9612906204		9612906214				25	3.50	28.00	
9612906205		9612906215				32	5.00	34.00	
9612906206		9612906216				40	5.00	40.00	
9612906207		9612906217				50	5.00	52.00	
9612906208		9612906218				65	5.00	68.00	
9612906209		9612906219				80	5.00	83.00	
9612906210		9612906220				100	5.00	102.00	
9612906221		9612906223				125	5.00	127.00	
9612906222		9612906224				150	5.00	152.00	

Product code: 5060

1.2

Item No	PPL EUR	Size DN	Dimension (mm)				FLANGE GROOVE NF H3 (ID=0.8/OD=1.0) DIN 11864-2	
			OD/ID x t	A	B	F		
1.4404 (316L)		mm						
9613403921		10	13.00/10.00 x 1.50	54.00	41.50	37.00		
9613403922		15	19.00/16.00 x 1.50	59.00	41.50	42.00		
9613403923		20	23.00/20.00 x 1.50	64.00	41.50	47.00		
9613403924		25	29.00/26.00 x 1.50	70.00	41.50	53.00		
9613403925		32	35.00/32.00 x 1.50	76.00	46.50	59.00		
9613403926		40	41.00/38.00 x 1.50	82.00	46.50	65.00		
9613403927		50	53.00/50.00 x 1.50	94.00	46.50	77.00		
9613403928		65	70.00/66.00 x 2.00	113.00	55.50	95.00		
9613403929		80	85.00/81.00 x 2.00	133.00	59.50	112.00		
9613403930		100	104.00/100.00 x 2.00	159.00	59.50	137.00		
9615331113		125	129.00/125.00 x 2.00	183.00	61.50	161.00		
9615331114		150	154.00/150.00 x 2.00	213.00	61.50	188.00		
								FLANGE COLLAR BF H3 (ID=0.8/OD=1.0) DIN 11864-2
9613403931		10	13.00/10.00 x 1.50	54.00	40.00	37.00		
9613403932		15	19.00/16.00 x 1.50	59.00	40.00	42.00		
9613403933		20	23.00/20.00 x 1.50	64.00	40.00	47.00		
9613403934		25	29.00/26.00 x 1.50	70.00	40.00	53.00		
9613403935		32	35.00/32.00 x 1.50	76.00	45.00	59.00		
9613403936		40	41.00/38.00 x 1.50	82.00	45.00	65.00		
9613403937		50	53.00/50.00 x 1.50	94.00	45.00	77.00		
9613403938		65	70.00/66.00 x 2.00	113.00	54.00	95.00		
9613403939		80	85.00/81.00 x 2.00	133.00	58.00	112.00		
9613403940		100	104.00/100.00 x 2.00	159.00	58.00	137.00		
9615331013		125	129.00/125.00 x 2.00	183.00	60.00	161.00		
9615331014		150	154.00/150.00 x 2.00	213.00	60.00	188.00		



CSI

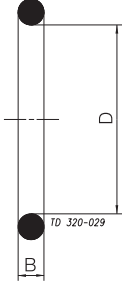
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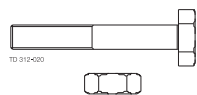
Material Item No.	PPL EUR	Size DN	Dimension (mm)					
1.4404 (316L)		mm	A	B	C	D	E	
<b>BLIND BBF</b> H3 (ID=0.8/OD=1.0) DIN 11864-2/11853-2								
9615331203		10	54.00	37.00	22.40	10.00	4.00 x 9.00	
9615331204		15	59.00	42.00	28.40	10.00	4.00 x 9.00	
9615331205		20	64.00	47.00	32.40	10.00	4.00 x 9.00	
9615331206		25	70.00	53.00	38.40	10.00	4.00 x 9.00	
9615331207		32	76.00	59.00	47.70	10.00	4.00 x 9.00	
9615331208		40	82.00	65.00	53.70	10.00	4.00 x 9.00	
9615331209		50	94.00	77.00	65.70	10.00	4.00 x 9.00	
9615331210		65	113.00	95.00	81.70	10.00	8.00 x 9.00	
9615331211		80	133.00	112.00	97.70	12.00	8.00 x 11.00	
9615331212		100	159.00	137.00	116.70	14.00	8.00 x 11.00	
9615331213		125	183.00	161.00	141.70	14.00	8.00 x 11.00	
9615331214		150	213.00	188.00	167.70	16.00	8.00 x 14.00	
<b>BLIND BNF</b> H3 (ID=0.8/OD=1.0) DIN 11864-2/11853-2								
9615331303		10	54.00	37.00	22.30	11.50	4.00 x 9.00	
9615331304		15	59.00	42.00	28.30	11.50	4.00 x 9.00	
9615331305		20	64.00	47.00	32.30	11.50	4.00 x 9.00	
9615331306		25	70.00	53.00	38.30	11.50	4.00 x 9.00	
9615331307		32	76.00	59.00	47.60	11.50	4.00 x 9.00	
9615331308		40	82.00	65.00	53.60	11.50	4.00 x 9.00	
9615331309		50	94.00	77.00	65.60	11.50	4.00 x 9.00	
9615331310		65	113.00	95.00	81.60	11.50	8.00 x 9.00	
9615331311		80	133.00	112.00	97.60	13.50	8.00 x 11.00	
9615331312		100	159.00	137.00	116.60	15.50	8.00 x 11.00	
9615331313		125	183.00	161.00	141.60	15.50	8.00 x 11.00	
9615331314		150	213.00	188.00	167.60	17.50	8.00 x 14.00	

Product code: 5035

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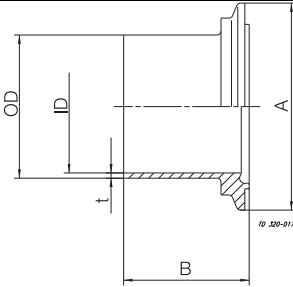
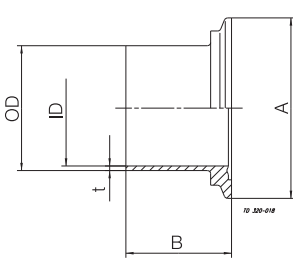
Item No.	PPL EUR	Item No.	PPL EUR			Size DN	Dimension (mm)		
EPDM		FPM				mm	B	D	O-RING R DIN 11864/11853
9612906201		9612906211				10	3.50	12.00	
9612906202		9612906212			15	3.50	18.00		
9612906203		9612906213			20	3.50	22.00		
9612906204		9612906214			25	3.50	28.00		
9612906205		9612906215			32	5.00	34.00		
9612906206		9612906216			40	5.00	40.00		
9612906207		9612906217			50	5.00	52.00		
9612906208		9612906218			65	5.00	68.00		
9612906209		9612906219			80	5.00	83.00		
9612906210		9612906220			100	5.00	102.00		
9612906221		9612906223			125	5.00	127.00		
9612906222		9612906224			150	5.00	152.00		

Product code: 5060

Item No.	PPL EUR	Flange size DIN/DN mm	Nuts	Screws	Screws and nut set
1.4301 (304)					
9612905161		10-50	4 x M8 x 30	4 x M8	
9612905162		65	8 x M8 x 30	8 x M8	
9612905164		80	8 x M10 x 35	8 x M10	
9612905165		100-125	8 x M10 x 40	8 x M10	
9612905166		150	8 x M12 x 50	8 x M12	

Product code: 5060

1.2

Item No.	PPL EUR	Size DN	Dimension (mm)			CLAMP LINER GROOVE NKS H3 (ID=0.8/OD=1.0) DIN 11864-3
			OD/ID x t	A	B	
1.4404 (316L)		mm				
9613403941		10	13.00/10.00 x 1.50	34.00	39.50	
9613403942		15	19.00/16.00 x 1.50	34.00	39.50	
9613403943		20	23.00/20.00 x 1.50	50.50	39.50	
9613403944		25	29.00/26.00 x 1.50	50.50	40.00	
9613403945		32	35.00/32.00 x 1.50	50.50	45.50	
9613403946		40	41.00/38.00 x 1.50	64.00	45.50	
9613403947		50	53.00/50.00 x 1.50	77.50	46.00	
9613403948		65	70.00/66.00 x 2.00	91.00	58.00	
9613403949		80	85.00/81.00 x 2.00	106.00	60.00	
9613403950		100	104.00/100.00 x 2.00	130.00	61.50	
						CLAMP LINER COLLAR BKS H3 (ID=0.8/OD=1.0) DIN 11864-3
9613403951		10	13.00/10.00 x 1.50	34.00	38.00	
9613403952		15	19.00/16.00 x 1.50	34.00	38.00	
9613403953		20	23.00/20.00 x 1.50	50.50	38.00	
9613403954		25	29.00/26.00 x 1.50	50.50	38.50	
9613403955		32	35.00/32.00 x 1.50	50.50	44.00	
9613403956		40	41.00/38.00 x 1.50	64.00	44.00	
9613403957		50	53.00/50.00 x 1.50	77.50	44.50	
9613403958		65	70.00/66.00 x 2.00	91.00	56.50	
9613403959		80	85.00/81.00 x 2.00	106.00	58.50	
9613403960		100	104.00/100.00 x 2.00	130.00	60.00	

Recommended clamp ring for DIN 11864-3 LINER

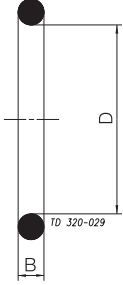
LINER DN	Item no. Clamp ring
10	9611993113
15	9611993113
20	211053
25	211053
32	211053
40	211054
50	211055
65	211056
80	9611993114
100	9611994192



Material Item No.	PPL EUR	Size DN	Dimension (mm)				D	BLIND BBKS H3 (ID=0.8/OD=1.0) DIN 11864-3/11853-3
			A	B	C			
9615331601		10	34.00	22.40	11.50	25.00		
9615331602		15	34.00	28.40	11.50	25.00		
9615331603		20	50.50	32.40	11.50	42.00		
9615331604		25	50.50	38.40	11.50	42.00		
9615331605		32	50.50	47.70	11.50	42.00		
9615331606		40	64.00	53.70	11.50	54.00		
9615331607		50	77.50	65.70	13.50	62.00		
9615331608		65	91.00	81.70	13.50	78.00		
9615331609		80	106.00	97.70	13.50	93.00		
9615331610		100	130.00	116.70	13.50	115.00		
							BLIND BBKS H3 (ID=0.8/OD=1.0) DIN 11864-3/11853-3	
9615331701		10	34.00	22.40	13.00	25.00		
9615331702		15	34.00	28.40	13.00	25.00		
9615331703		20	50.50	32.40	13.00	42.00		
9615331704		25	50.50	38.40	13.00	42.00		
9615331705		32	50.50	47.70	13.00	42.00		
9615331706		40	64.00	53.70	13.00	54.00		
9615331707		50	77.50	65.70	15.00	62.00		
9615331708		65	91.00	81.70	15.00	78.00		
9615331709		80	106.00	97.70	15.00	93.00		
9615331710		100	130.00	116.70	15.00	115.00		

Product code: 5035

1.2

Item No.	PPL EUR	Item No.	PPL EUR			Size DN	Dimension (mm)		
EPDM		FPM				mm	B	D	O-RING R DIN 11864/11853
9612906201		9612906211				10	3.50	12.00	
9612906202		9612906212			15	3.50	18.00		
9612906203		9612906213			20	3.50	22.00		
9612906204		9612906214			25	3.50	28.00		
9612906205		9612906215			32	5.00	34.00		
9612906206		9612906216			40	5.00	40.00		
9612906207		9612906217			50	5.00	52.00		
9612906208		9612906218			65	5.00	68.00		
9612906209		9612906219			80	5.00	83.00		
9612906210		9612906220			100	5.00	102.00		
9612906221		9612906223			125	5.00	127.00		
9612906222		9612906224			150	5.00	152.00		



Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			FERRULE KK HSF0 (ID=0.8/OD=1.6) DIN 32676
1.4307 (304L)		1.4404 (316L)		mm	OD/ID x t	A	B	
9612156101		9612156121		10	13.00/10.00 x 1.50	34.00	18.00	
9612156102		9612156122		15	19.00/16.00 x 1.50	34.00	18.00	
9612156103		9612156123		20	23.00/20.00 x 1.50	34.00	18.00	
9612156104		9612156124		25	29.00/26.00 x 1.50	50.50	21.50	
9612156105		9612156125		32	35.00/32.00 x 1.50	50.50	21.50	
9612156106		9612156126		40	41.00/38.00 x 1.50	50.50	21.50	
9612156107		9612156127		50	53.00/50.00 x 1.50	64.00	21.50	
9612156108		9612156128		65	70.00/66.00 x 2.00	91.00	28.00	
9612156109		9612156129		80	85.00/81.00 x 2.00	106.00	28.00	
9612156110		9612156130		100	104.00/100.00 x 2.00	119.00	28.00	
9612156141		9612156145		125	129.00/125.00 x 2.00	155.00	28.00	
9612156142		9612156146		150	154.00/150.00 x 2.00	183.00	28.00	

Item No.	PPL EUR	Size DN	Dimension (mm)				FERRULE KL HSF0 (ID=0.8/OD=1.6) DIN 32676
1.4404 (316L)		mm	OD/ID x t	A	B	L	
9613444001		10	13.00/10.00 x 1.50	34.00	28.60	23.00	
9613444002		15	19.00/16.00 x 1.50	34.00	28.60	24.00	
9613444003		20	23.00/20.00 x 1.50	34.00	28.60	25.00	
9613444004		25	29.00/26.00 x 1.50	50.50	36.00	30.00	
9613444005		32	35.00/32.00 x 1.50	50.50	36.00	32.00	
9613444006		40	41.00/38.00 x 1.50	50.50	36.00	33.00	
9613444007		50	53.00/50.00 x 1.50	64.00	36.00	33.00	
9613444008		65	70.00/66.00 x 2.00	91.00	48.00	42.00	
9613444009		80	85.00/81.00 x 2.00	106.00	48.00	42.00	
9613444010		100	104.00/100.00 x 2.00	119.00	48.00	44.00	

Recommended clamp ring for DIN 32676 FERRULE

FERRULE DN	Item no. Clamp ring
10	9611993113
15	9611993113
20	9611993113
25	211053
32	211053
40	211053
50	211054
65	211056
80	9611993114
100	211057
125	9611993203
150	9611993204

Product code: 5054

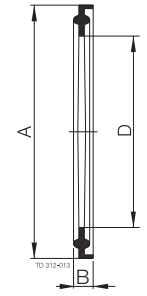
1.2

Material Item No.	PPL EUR	Size DN	Dimensions (mm)		Blind B H3 DIN 32676
			A	B	
1.4404 (316L)		mm			
9612935302		10-20	34.00	6.00	
9612935303		25-40	50.50	6.00	
9612935304		50	64.00	6.00	
9612935305		65	91.00	7.00	
9612935306		80	106.00	8.00	
9612935307		100	119.00	8.00	
9612935308		125	155.00	12.00	
9612935301		150	183.00	12.00	

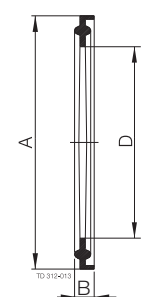


Product code: 5035

Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimensions (mm)			Gasket D DIN 32676
EPDM		PTFE		mm	A	B	D	
9611992009		9612991586		10	36.20	5.50	10.20	
9611992010		9612991587		15	36.20	5.50	16.20	
9611992011		9612991588		20	36.20	5.50	20.20	
9611992012		9612991589		25	52.70	5.50	26.20	
9611992013		9612991590		32	52.70	5.50	32.20	
9611992014		9612991591		40	52.70	5.50	38.20	
9611992015		9612991592		50	66.20	5.50	50.20	
9611992016		9612991593		65	93.20	5.50	66.20	
9611992017		9612991594		80	108.20	5.50	81.20	
9611992018		9612991595		100	121.20	5.50	100.20	
9611993205				125	157.20	5.50	125.20	
9611993206				150	185.20	5.50	150.20	



Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimensions (mm)			Gasket D DIN 32676
NBR		FPM		mm	A	B	D	
9611991999		9611994182		10	36.20	5.50	10.20	
9600992000		9611994183		15	36.20	5.50	16.20	
9600992001		9611994184		20	36.20	5.50	20.20	
9600992002		9611994185		25	52.70	5.50	26.20	
9600992003		9611994186		32	52.70	5.50	32.20	
9600992004		9611994187		40	52.70	5.50	38.20	
9600992005		9611994188		50	66.20	5.50	50.20	
9600992006		9611994189		65	93.20	5.50	66.20	
9600992007		9611994190		80	108.20	5.50	81.20	
9600992008		9611994191		100	121.20	5.50	100.20	
*		9611995100		125	157.20	5.50	125.20	
*		9611993210		150	185.20	5.50	150.20	



\* On request



Product code: 5049

1.2

Item No.	PPL EUR	Size DN mm	Dimension (mm)			Image
			A	B	C	
<b>1.4301 (304)</b>						<b>A13MHM Clamp ring</b>
211053		25-40	54.00			
211054		50	67.10			
211056		65	94.50			
211057		100	122.20			
<b>Clamp ring</b>						
9611993113		10-15-20	37.00			
9611993114		80	109.00			
9611994192		100	134.00			
9611993203		125	159.00			
9611993204		150	187.00			
<b>Clamp ring (Allen Screws)</b>						
9611311051		25-40	58.50	85.50		
9611311052		50	72.00	99.00		
9611311054		65	99.00	126.00		
9611311055		100	127.00	154.00		
<b>13MHM</b>						
212195		25-40	54.00			
212196		50	67.50			
212198		65	94.50			
212199		100	122.60			
<b>Clamp ring, wingnut</b>						
9611994458		10-20	37.50			
9611994453		25-40	54.00			
9611994454		50	67.50			
9611994456		65	94.50			
9611994459		80	109.50			
9611994457		100	122.60			



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Product code: 5012

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			BEND 45 HSF3 (ID=0.8/OD=0.8)
				mm	OD/ID x t	L	R	
9611293821		9611293822		25	28.00/25.00 x 1.50	34.00	50.00	
9611293831		9611293832		32	34.00/31.00 x 1.50	37.00	55.00	
9611293841		9611293842		40	40.00/37.00 x 1.50	41.00	60.00	
9611293851		9611293852		50	52.00/49.00 x 1.50	48.00	70.00	

\*On request

Product code: 5012

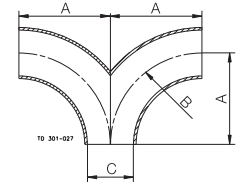
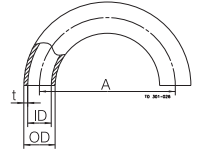
Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			
1.4307 (304L)		1.4404 (316L)		mm	OD/ID x t	L	R	BEND 90 HSF3 (ID=0.8/OD=0.8)
9612154558		9612154508		10	13.00/10.00 x 1.50	38.00	26.00	
9612154559		9612154509		15	19.00/16.00 x 1.50	47.00	35.00	
9612154560		9612154510		20	23.00/20.00 x 1.50	52.00	40.00	
9612154561		9612154511		25	29.00/26.00 x 1.50	70.00	50.00	
9612154562		9612154512		32	35.00/32.00 x 1.50	78.00	55.00	
9612154563		9612154513		40	41.00/38.00 x 1.50	85.00	60.00	
9612154564		9612154514		50	53.00/50.00 x 1.50	97.00	70.00	
9611304060		9611304062		65	70.00/66.00 x 2.00	110.00	80.00	
9611304080		9611304082		80	85.00/81.00 x 2.00	118.00	90.00	
9611304090		9611304092		100	104.00/100.00 x 2.00	140.00	100.00	
1.4307 (304L)		1.4404 (316L)		mm	OD/ID x t	L	R	BEND 90 HSF2 (ID=0.8/OD=1.6)
9615220009		9615220021		10	13.00/10.00 x 1.50	38.00	26.00	
9615220010		9615220022		15	19.00/16.00 x 1.50	47.00	35.00	
9615220011		9615220023		20	23.00/20.00 x 1.50	52.00	40.00	
9615220012		9615220024		25	29.00/26.00 x 1.50	70.00	50.00	
9615220013		9615220025		32	35.00/32.00 x 1.50	78.00	55.00	
9615220014		9615220026		40	41.00/38.00 x 1.50	85.00	60.00	
9615220015		9615220027		50	53.00/50.00 x 1.50	97.00	70.00	
9615220016		9615220028		65	70.00/66.00 x 2.00	110.00	80.00	
9615220017		9615220029		80	85.00/81.00 x 2.00	118.00	90.00	
9615220018		9615220030		100	104.00/100.00 x 2.00	140.00	100.00	
								BEND 90 HSF3 (ID=0.8/OD=0.8) SHORT
9611309100		9611309101		10	12.00/9.00 x 1.50	26.00	26.00	
9611301060		9611309111		15	18.00/15.00 x 1.50	35.00	35.00	
9611301061		9611309131		20	22.00/19.00 x 1.50	40.00	40.00	
9611301062		9611309121		25	28.00/25.00 x 1.50	50.00	50.00	
9611301063		9611309141		32	34.00/31.00 x 1.50	55.20	55.00	
9611301064		9611309151		40	40.00/37.00 x 1.50	60.00	60.00	
9611301065		9611309161		50	52.00/49.00 x 1.50	70.00	70.00	
								BEND 90 HSF3 (ID=0.8/OD=0.8)
9611304120		9611304122		10	12.00/9.00 x 1.50	38.00	26.00	
9611304130		9611304132		15	18.00/15.00 x 1.50	47.00	35.00	
9611293921		9611293922		20	22.00/19.00 x 1.50	52.00	40.00	
9611304140		9611304142		25	28.00/25.00 x 1.50	70.00	50.00	
9611304150		9611304152		32	34.00/31.00 x 1.50	78.00	55.00	
9611304160		9611304162		40	40.00/37.00 x 1.50	85.00	60.00	
9611304170		9611304172		50	52.00/49.00 x 1.50	97.00	70.00	



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Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			Bend 180°, OD: Semi bright, ID: Raw, non standard
					OD/ID x t	A	B	
1.4301 (304)		1.4404 (316L)		mm				
9612156801		9612156825		10	12.00/9.00 x 1.50	52.00		
9612156802		9612156826		15	18.00/15.00 x 1.50	68.00		
9612156803		9612156827		20	22.00/19.00 x 1.50	76.00		
9612156804		9612156828		25	28.00/25.00 x 1.50	100.00		
9612156805		9612156829		32	34.00/31.00 x 1.50	110.00		
9612156806		9612156830		40	40.00/37.00 x 1.50	120.00		
9612156807		9612156831		50	52.00/49.00 x 1.50	140.00		
9612156808		9612156832		65	70.00/66.00 x 2.00	160.00		
9612156809		9612156833		80	85.00/81.00 x 2.00	180.00		
9612156810		9612156834		100	104.00/100.00 x 2.00	200.00		
<b>T-double bend - OD: Semi bright, ID: Raw</b>								
9612154201		9612154215		25		49.00	50.00	25.00
9612154202		9612154216		32		54.00	55.00	31.00
9612154203		9612154217		40		59.00	60.00	37.00
9612154204		9612154218		50		69.00	70.00	49.00
9612154205		9612154219		65		79.00	80.00	66.00
9612154206		9612154220		80		89.00	90.00	81.00
9612154207		9612154221		100		99.00	100.00	100.00



\*On request

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		mm	OD/ID x t	L		<b>Tee, form TS, non standard</b>
9611309220		9611309221		10	12.00/9.00 x 1.50	26.00		
9611309230		9611309231		15	18.00/15.00 x 1.50	35.00		
9611309240		9611309241		20	22.00/19.00 x 1.50	40.00		
9611309250		9611309251		25	28.00/25.00 x 1.50	50.00		
9611309260		9611309261		32	34.00/31.00 x 1.50	55.00		
9611309270		9611309271		40	40.00/37.00 x 1.50	60.00		
9611309280		9611309281		50	52.00/49.00 x 1.50	70.00		
<b>1.4301 (304)</b>						<b>L<sub>1</sub></b>	<b>L<sub>2</sub></b>	<b>Tee, short, form TK, non standard</b>
9612150004		9612150032		25	28.00/25.00 x 1.50	50.00	15.50	
9612150005		9612150033		32	34.00/31.00 x 1.50	55.00	18.50	
9612150006		9612150034		40	40.00/37.00 x 1.50	60.00	21.50	
9612150007		9612150035		50	52.00/49.00 x 1.50	70.00	29.50	



Material Item No.	PPL EUR	Size DN mm	Pressure class PN (bar)	Dimension (mm)			Complete flange	
				OD/ID x t	A	B		C
9612498701		25	16	29.00/26.00 x 1.50	79.00	50.00	4 x M8	
9612498702		32	16	35.00/32.00 x 1.50	79.00	50.00	4 x M8	
9612498703		40	16	41.00/38.00 x 1.50	87.00	50.00	4 x M8	
9612498704		50	16	53.00/50.00 x 1.50	106.00	50.00	4 x M8	
9612498705		65	10	70.00/66.00 x 2.00	125.00	50.00	4 x M8	
9612498706		80	10	85.00/81.00 x 2.00	140.00	50.00	8 x M8	
9612498707		100	10	104.00/100.00 x 2.00	160.00	50.00	8 x M8	
9612498708		125	10	129.00/125.00 x 2.00	190.00	60.00	8 x M10	
9612498709		150	10	154.00/150.00 x 2.00	215.00	60.00	8 x M10	
					B	E	F	
9612493001		25	16	29.00/26.00 x 1.50	25.00	10.00	64.00	
9612493002		32	16	35.00/32.00 x 1.50	25.00	10.00	64.00	
9612493003		40	16	41.00/38.00 x 1.50	25.00	10.00	72.00	
9612493004		50	16	53.00/50.00 x 1.50	25.00	10.00	91.00	
9612493005		65	10	70.00/66.00 x 2.00	25.00	10.00	110.00	
9612493006		80	10	85.00/81.00 x 2.00	25.00	10.00	125.00	
9612493007		100	10	104.00/100.00 x 2.00	25.00	10.00	143.00	
9612493008		125	10	129.00/125.00 x 2.00	30.00	15.00	171.00	
9612493009		150	10	154.00/150.00 x 2.00	30.00	15.00	196.00	
					B	E	F	
9612492901		25	16	29.00/26.00 x 1.50	25.00	10.00	64.00	
9612492902		32	16	35.00/32.00 x 1.50	25.00	10.00	64.00	
9612492903		40	16	41.00/38.00 x 1.50	25.00	10.00	72.00	
9612492904		50	16	53.00/50.00 x 1.50	25.00	10.00	91.00	
9612492905		65	10	70.00/66.00 x 2.00	25.00	10.00	110.00	
9612492906		80	10	85.00/81.00 x 2.00	25.00	10.00	125.00	
9612492907		100	10	104.00/100.00 x 2.00	25.00	10.00	143.00	
9612492908		125	10	129.00/125.00 x 2.00	30.00	15.00	171.00	
9612492909		150	10	154.00/150.00 x 2.00	30.00	15.00	196.00	

Item No.	PPL EUR	Flange size	Screws	Nut	Screws and nut set for pressure flanges, Fit to EN 10357-A tubes
9612499301		DN 25-65	4xM8x30	4xM8	
9612499302		DN 80 -100	8xM8x30	8xM8	
9612499302		DN 125-150	8xM10x40	8xM10	

Product code: 5063

1.2

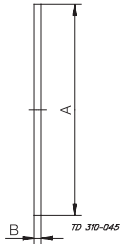
Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)			
NBR		EPDM		mm	A	B	C	Seal ring
		9611900253		10	10.50	20.00	5.00	
		9611900254		15	16.50	26.00	5.00	
		9611900255		20	20.50	33.00	5.00	
		9611900256		25	26.50	40.00	6.00	
		9611900257		32	32.50	46.00	6.00	
		9611900258		40	38.50	52.00	6.00	
		9611900259		50	50.50	64.00	6.00	
		9611900260		65	66.50	81.00	6.00	
		9611900261		80	81.50	88.00	6.00	
		9611900263		100	100.50	104.00	6.00	
		9611900264		125	125.00	142.00	7.00	
		9611900265		150	150.00	167.00	7.00	
								Seal ring, 8 mm
9611991838		9611991851		25		8.00		
9611991839		9611991852		32		8.00		
9611991840		9611991853		40		8.00		
9611991841		9611991854		50		8.00		
9611991842		9611991855		65		8.00		
9611991843		9611991856		75		8.00		
9611991844		9611991857		80		8.00		
9611991845		9611991858		100		8.00		

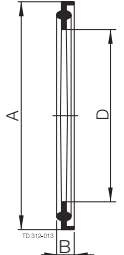
Item No.	PPL EUR	Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)			
EPDM		Silicone (Q)		FPM		mm	A	B	C	Flange seal
9612402601		9612402611		9612402621		25	37.20	4.10	27.40	
9612402602		9612402612		9612402622		32	43.20	4.10	33.40	
9612402603		9612402613		9612402623		40	49.20	4.10	39.40	
9612402604		9612402614		9612402624		50	61.20	4.10	51.40	
9612402605		9612402615		9612402625		65	77.20	4.10	67.40	
9612402606		9612402616		9612402626		80	92.20	4.10	82.40	
9612402607		9612402617		9612402627		100	111.20	4.10	101.40	
9612402608		9612402618		9612402628		125	136.20	4.10	126.40	
9612402609		9612402619		9612402629		150	161.20	4.10	151.40	





Product code: 5063

Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)		Seal disc
NBR		EPDM		mm	A	B	
9611291131				10	28.00	3.00	
9611291141				15	34.00	3.00	
9611291151				20	44.00	3.00	
9611291161				25	52.00	3.00	
9611291171				32	58.00	3.00	
9611291181				40	65.00	3.00	
9611291191				50	78.00	3.00	
9611291201				65	95.00	3.00	
9611291221				80	110.00	3.00	
9611291241				100	130.00	3.00	
9611291251				125	160.00	3.00	
9611291261				150	190.00	3.00	

Item No.	PPL EUR	Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)			Seal ring
PTFE		NBR		FPM		mm	A	B	D	
9611992019						10	36.20	5.10	10.00	
9611992020						15	36.20	5.10	16.00	
9611992021						20	36.20	5.10	20.00	
9611992022						25	52.70	5.10	26.00	
9611992023						32	52.70	5.10	32.00	
9611992024						40	52.70	5.10	38.00	
9611992025						50	66.20	5.10	50.00	
9611992026						65	93.20	5.10	66.00	
9611992027						80	108.20	5.10	81.00	
9611992028						100	121.20	5.10	100.00	

Product code: 5044

Finish: Semi bright  
Thread: Round type

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				
1.4307 (304L)		1.4404 (316L)		mm	A	B	C	End cap with chain and NBR seal disc	
9611291411		9612152301		10	38.00	19.00	28.00 x 1/8		
9611291421		9612152302		15	44.00	19.00	34.00 x 1/8		
9611291431		9612152303		20	54.00	21.00	44.00 x 1/6		
9611291441		9612152304		25	63.00	22.00	52.00 x 1/6		
9611291451		9612152305		32	70.00	22.00	58.00 x 1/6		
9611291461		9612152306		40	78.00	22.00	65.00 x 1/6		
9611291471		9612152307		50	92.00	23.00	78.00 x 1/6		
9611291481		9612152308		65	112.00	26.00	95.00 x 1/6		
9611291491		9612152309		80	127.00	30.00	110.00 x 1/4		
9611291511		9612152310		100	148.00	32.00	130.00 x 1/4		
9611291521		9612152311		125	178.00	36.00	160.00 x 1/4		
9611291531		9612152312		150	210.00	41.00	190.00 x 1/4		
									End cap
9611291271		9612152201		10	38.00	19.00	28.00 x 1/8		
9611291281		9612152202		15	44.00	19.00	34.00 x 1/8		
9611291291		9612152203		20	54.00	21.00	44.00 x 1/6		
9611291301		9612152204		25	63.00	22.00	52.00 x 1/6		
9611291311		9612152205		32	70.00	22.00	58.00 x 1/6		
9611291321		9612152206		40	78.00	22.00	65.00 x 1/6		
9611291331		9612152207		50	92.00	23.00	78.00 x 1/6		
9611291341		9612152208		65	112.00	26.00	95.00 x 1/6		
9611291351		9612152209		80	127.00	30.00	110.00 x 1/4		
9611291371		9612152210		100	148.00	32.00	130.00 x 1/4		
9611291381		9612152211		125	178.00	36.00	160.00 x 1/4		
9611291391		9612152212		150	210.00	41.00	190.00 x 1/4		



Material Item No.	PPL EUR	Size DN	Dimension (mm)					n x K	Hose liner
			ØD4	ØD5	ØD7	L			
1.4404 (316L)		mm							
9615386501		15	28.30	12.00	19.00	40.00	3 x 6		
9615386502		20	36.30	16.00	23.00	40.00	3 x 6		
9615386503		25	43.80	23.00	29.00	53.00	3 x 8		
9615386504		32	49.80	29.50	35.00	53.00	3 x 8		
9615386505		40	55.80	35.00	41.00	63.00	3 x 9		
9615386506		50	68.30	46.00	53.00	68.00	3 x 10		
9615386507		65	85.60	65.00	70.00	77.00	3 x 10		
9615386508		80	99.40	80.00	85.00	87.00	3 x 12		
9615386509		100	120.40	98.00	104.00	110.00	4 x 15		

Material Item No.	PPL EUR	Size DN	Dimension (mm)				Hose liner, beer
			A	B	C	D	
1.4301 (304)		mm					
9612157704		25	80.00	63.00	24.00	27.00	
9612157705		32	90.00	70.00	31.00	34.00	
9612157706		40	105.00	84.00	32.00	43.00	
9612157707		50	120.00	97.00	45.00	53.00	
9612157708		65	140.00	113.00	60.00	68.00	
9612157709		80	160.00	132.00	74.00	83.00	
9612157710		100	180.00	141.00	93.00	103.00	

\*On request

Sockets and male parts  
Product code: 5044

Material Item No.	PPL EUR	Size DN	Dimension (mm)		
			D	L	
<b>1.4404 (316L)</b>					<b>Half socket</b>
9611295663		1/8	14.00	7.50	
9611295673		1/4	18.00	11.00	
9611295683		3/8	21.30	11.50	
9611295693		1/2	26.40	15.00	
9611295703		3/4	31.80	16.50	
9611295713		1	39.50	19.00	
9611295723		1 1/4	48.30	21.50	
9611295733		1 1/2	54.50	21.50	
9611295743		2	66.30	26.00	
9611295753		2 1/2	82.00	30.00	
9611295763		3	95.00	33.00	
					<b>Socket</b>
9611295443		1/8	14.00	17.00	
9611295453		1/4	18.00	25.00	
9611295463		3/8	21.30	26.00	
9611295473		1/2	26.40	34.00	
9611295483		3/4	31.80	36.00	
9611295493		1	39.50	43.00	
9611295503		1 1/4	48.30	48.00	
9611295513		1 1/2	54.50	48.00	
9611295523		2	66.30	56.00	
9611295533		2 1/2	82.00	65.00	
9611295543		3	95.00	71.00	
<b>1.4571 (316Ti)</b>					<b>Welding male part</b>
9611295884		1/8		30.00	
9611295894		1/4		30.00	
9611295904		3/8		30.00	
9611295914		1/2		35.00	
9611295924		3/4		40.00	
9611295934		1		40.00	
9611295944		1 1/4		50.00	
9611295954		1 1/2		50.00	
9611295964		2		55.00	
9611295974		2 1/2		60.00	
9611295984		3		65.00	

\*On request



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# 1.3 Hygienic, BS 4825, Part 1

The installation material in this section is manufactured to meet BS 4825, Part 1 tube dimensions.



**Ordering leaflets**

Reducers, Part 1 .....	1.3.142
Bends, Part 1 .....	1.3.143
Tees, Part 1 .....	1.3.144
IDF Union parts, Part 1 .....	1.3.146
RJT Union Parts, Part 1 .....	1.3.148
SMS Union Parts, Part 1 .....	1.3.150
Clamp Union Parts, Part 1 .....	1.3.151

Material Item No.	PPL EUR	Size	Dimension (mm)			
			OD <sub>1</sub> /ID <sub>1</sub> x t <sub>1</sub>	OD <sub>2</sub> /ID <sub>2</sub> x t <sub>2</sub>	L	
<b>1.4404 (316L)</b>		<b>mm</b>				<b>Concentric reducer</b>
9612927601		25.40x12.70	25.40/22.20x1.60	12.70/9.50x1.60	21.00	
9612927602		25.40x19.00	25.40/22.20x1.60	19.00/15.80x1.60	22.00	
9612927603		38.10x25.40	38.10/34.90x1.60	25.40/22.20x1.60	30.00	
9612927604		50.80x25.40	50.80/47.60x1.60	25.40/22.20x1.60	55.00	
9612927605		50.80x38.10	50.80/47.60x1.60	38.10/34.90x1.60	40.00	
9612927606		63.50x25.40	63.50/60.30x1.60	25.40/22.20x1.60	80.00	
9612927607		63.50x38.10	63.50/60.30x1.60	38.10/34.90x1.60	75.00	
9612927608		63.50x50.80	63.50/60.30x1.60	50.80/47.60x1.60	40.00	
9612927609		76.10x25.40	76.10/73.00x1.60	25.40/22.20x1.60	108.00	
9612927610		76.10x38.10	76.10/73.00x1.60	38.10/34.90x1.60	82.00	
9612927611		76.10x50.80	76.10/73.00x1.60	50.80/47.60x1.60	52.00	
9612927612		76.10x63.50	76.10/73.00x1.60	63.50/60.30x1.60	40.00	
9612927613		101.60x25.40	101.60/97.60x2.00	25.40/22.20x1.60	160.00	
9612927614		101.60x38.10	101.60/97.60x2.00	38.10/34.90x1.60	136.00	
9612927615		101.60x50.80	101.60/97.60x2.00	50.80/47.60x1.60	103.00	
9612927616		101.60x63.50	101.60/97.60x2.00	63.50/60.30x1.60	79.00	
9612927617		101.60x72.20	101.60/97.60x2.00	76.10/73.00x1.60	54.00	
						<b>Eccentric reducer</b>
9612927618		38.10x25.40	38.10/34.90x1.60	25.40/22.20x1.60	36.00	
9612927619		50.80x25.40	50.80/47.60x1.60	25.40/22.20x1.60	54.00	
9612927620		50.80x38.10	50.80/47.60x1.60	38.10/34.90x1.60	34.00	
9612927621		63.50x25.40	63.50/60.30x1.60	25.40/22.20x1.60	76.00	
9612927622		63.50x38.10	63.50/60.30x1.60	38.10/34.90x1.60	75.00	
9612927623		63.50x50.80	63.50/60.30x1.60	50.80/47.60x1.60	34.00	
9612927624		76.10x25.40	76.10/73.00x1.60	25.40/22.20x1.60	101.00	
9612927625		76.10x38.10	76.10/73.00x1.60	38.10/34.90x1.60	76.00	
9612927626		76.10x50.80	76.10/73.00x1.60	50.80/47.60x1.60	67.00	
9612927627		76.10x63.50	76.10/73.00x1.60	63.50/60.30x1.60	42.00	
9612927628		101.60x25.40	101.60/97.60x2.00	25.40/22.20x1.60	156.00	
9612927629		101.60x38.10	101.60/97.60x2.00	38.10/34.90x1.60	130.00	
9612927630		101.60x50.80	101.60/97.60x2.00	50.80/47.60x1.60	100.00	
9612927631		101.60x63.50	101.60/97.60x2.00	63.50/60.30x1.60	73.00	
9612927632		101.60x72.20	101.60/97.60x2.00	76.10/73.00x1.60	72.00	

NOTE: For pressure and surface, please see product leaflet.



Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)			
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		mm	OD/ID x t	L	R	<b>Bend 90°, Finish: OD/ID: Polished</b>
9612636501		9612636507		25.00	25.40/22.20x1.60	65.00	37.50	
9612636502		9612636508		38.00	38.10/34.90x1.60	85.00	57.00	
9612636503		9612636509		51.00	50.80/47.60x1.60	110.00	76.50	
9612636504		9612636510		63.50	63.50/60.30x1.60	135.00	95.30	
9612636505		9612636511		76.10	76.20/73.00x1.60	155.00	114.20	
9612636506		9612636512		101.60	101.60/97.60x2.00	195.00	152.50	
								<b>Bend 90°, OD/ID: Raw</b>
9611311568		9611311569		25.00	25.40/22.20x1.60	65.00	37.50	
9611311578		9611311579		38.00	38.10/34.90x1.60	85.00	57.00	
9611311588		9611311589		51.00	50.80/47.60x1.60	110.00	76.50	
9611311598		9611311599		63.50	63.50/60.30x1.60	135.00	95.30	
9611311608		9611311609		76.10	76.20/73.00x1.60	155.00	114.20	
9611311618		9611311619		101.60	101.60/97.60x2.00	195.00	152.50	

Material Item No.	PPL EUR	Size	Dimension (mm)			
<b>1.4404 (316L)</b>		mm	OD/ID x t	L <sub>1</sub>	L <sub>2</sub>	<b>Bend 45°, Finish: OD/ID: Polished</b>
9612636607		25.00	25.40/22.20x1.60	108.10	62.70	
9612636608		38.00	38.10/34.90x1.60	127.20	79.60	
9612636609		51.00	50.80/47.60x1.60	146.30	96.00	
9612636610		63.50	63.50/60.30x1.60	165.80	113.60	
9612636611		76.10	76.20/73.00x1.60	185.00	130.50	
9612636612		101.60	101.60/97.60x2.00	223.10	164.30	

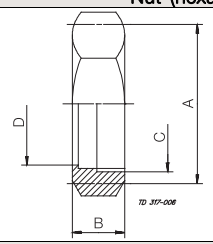
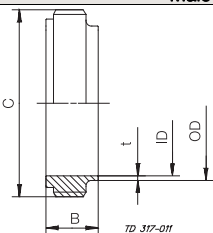
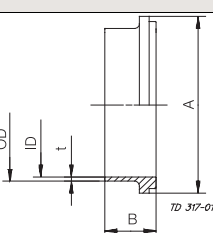
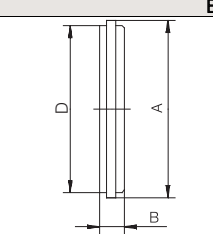
NOTE: For pressure and surface, please see product leaflet.

Material Item No.	PPL EUR	Size	Dimension (mm)			Diagram
			OD/ID x t	L		
<b>1.4404 (316L)</b>		<b>mm</b>				<b>Tee, OD/ID: Polished</b>
9612636707		25.00	25.40/22.20x1.60	44.00		
9612636708		38.00	38.10/34.90x1.60	64.00		
9612636709		51.00	50.80/47.60x1.60	89.00		
9612636710		63.50	63.50/60.30x1.60	114.00		
9612636711		76.10	76.20/73.00x1.60	134.00		
9612636712		101.60	101.60/97.60x2.00	195.00		
						<b>Tee, OD/ID: Raw</b>
9611311699		38.00	38.10/34.90x1.60	64.00		
9611311729		76.10	76.20/73.00x1.60	134.00		
<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>L<sub>1</sub></b>	<b>L<sub>2</sub></b>	<b>Tee, short. OD/ID: Polished</b>
9612158243		25.00	25.40/22.20x1.60	44.00	27.00	
9612158244		38.00	38.10/34.90x1.60	64.00	40.60	
9612158245		51.00	50.80/47.60x1.60	89.00	54.30	
9612158246		63.50	63.50/60.30x1.60	114.00	67.00	
9612158247		76.10	76.20/73.00x1.60	134.00	81.20	
9612158248		101.60	101.60/97.60x2.00	195.00	107.00	

NOTE: For pressure and surface, please see product leaflet.



Material Item No.	PPL EUR	Size	Dimension (mm)				Reducing tee
			OD <sub>1</sub> /ID <sub>1</sub> x t <sub>1</sub>	OD <sub>2</sub> /ID <sub>2</sub> x t <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	
<b>1.4401 (316)</b>		<b>mm</b>					
9612927692		38.10/25.40	38.10/34.90x1.60	25.40/22.20x1.60	75.00	40.60	
9612927694		50.80/25.40	50.80/47.60x1.60	25.40/22.20x1.60	89.00	54.30	
9612927695		50.80/38.10	50.80/47.60x1.60	38.10/34.90x1.60	89.00	54.30	
9612927697		63.50/25.40	63.50/60.30x1.60	25.40/22.20x1.60	95.00	67.00	
9612927698		63.50/38.10	63.50/60.30x1.60	38.10/34.90x1.60	95.00	67.00	
9612927699		63.50/50.80	63.50/60.30x1.60	50.80/47.60x1.60	95.00	67.00	
9612927702		76.10/25.40	76.10/73.00x1.60	25.40/22.20x1.60	95.00	81.20	
9612927703		76.10/38.10	76.10/73.00x1.60	38.10/34.90x1.60	95.00	81.20	
9612927704		76.10/50.80	76.10/73.00x1.60	50.80/47.60x1.60	95.00	81.20	
9612927705		76.10/63.50	76.10/73.00x1.60	63.50/60.30x1.60	95.00	81.20	
9612927707		101.60/25.40	101.60/97.60x2.00	25.40/22.20x1.60	127.00	107.00	
9612927708		101.60/38.10	101.60/97.60x2.00	38.10/34.90x1.60	127.00	107.00	
9612927709		101.60/50.80	101.60/97.60x2.00	50.80/47.60x1.60	127.00	107.00	
9612927710		101.60/63.50	101.60/97.60x2.00	63.50/60.30x1.60	127.00	107.00	
9612927711		101.60/76.10	101.60/97.60x2.00	76.10/73.00x1.60	127.00	107.00	
9612927712		152.40/50.80	152.4/148.4x2.00	50.80/47.60x1.60	154.00	156.00	
9612927713		152.40/63.50	152.4/148.4x2.00	63.50/60.30x1.60	154.00	156.00	
9612927714		152.40/76.10	152.4/148.4x2.00	76.10/73.00x1.60	154.00	156.00	
9612927715		152.40/101.60	152.4/148.4x2.00	101.60/97.60x2.00	154.00	156.00	

Material Item No.	PPL EUR	Size	Dimension (mm)				Nut (hexagon)
			OD/ID x t	A	B	C	
<b>1.4301 (304)</b>		<b>mm</b>					
9611300053		25.00		46.00	30.00	38.30x1/8	30.50
9611300054		38.00		61.00	30.00	51.80x1/8	43.50
9611300055		51.00		76.00	30.00	65.30x1/8	57.00
9611300056		63.50		91.00	30.00	78.80x1/8	70.00
9611300057		76.10		106.50	30.00	92.30x1/8	83.00
9611303970		101.60		133.40	35.00	126.80x1/6	112.00
							
<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>Male part</b>
9611303810		25.00	25.80/22.20x1.80		21.50	37.10x1/8	
9611303811		38.00	38.50/34.90x1.80		21.50	50.60x1/8	
9611303812		51.00	51.20/47.60x1.80		21.50	64.10x1/8	
9611303813		63.50	63.90/60.30x1.80		21.50	77.60x1/8	
9611303814		76.10	76.60/73.00x1.80		21.50	91.10x1/8	
9611303815		101.60	102.10/97.30x2.40		30.00	125.90x1/6	
							
							<b>Liner</b>
9611309520		25.00	25.80/22.20x1.80	33.80	21.50		
9611309521		38.00	38.50/34.90x1.80	47.00	21.50		
9611309522		51.00	51.20/47.60x1.80	60.50	21.50		
9611309523		63.50	63.90/60.30x1.80	74.00	21.50		
9611309524		76.10	76.60/73.00x1.80	87.50	21.50		
9611303835		101.60	102.10/97.30x2.40	120.70	30.00		
							
<b>1.4404 (316L)</b>		<b>mm</b>		<b>A</b>	<b>B</b>	<b>C</b>	<b>Blank</b>
9611308290		25.00		33.80	10.50	29.00	
9611308291		38.00		47.00	10.50	42.50	
9611308292		51.00		60.50	10.50	56.00	
9611308293		63.50		74.00	10.50	69.70	
9611308294		76.10		87.50	10.50	82.30	
							

NOTE: Seal rings - please see later this chapter.

NOTE: For pressure and surface, please see product leaflet.



Product code: 5041

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)			
NBR		EPDM				mm	A	B	D	Seal ring
9611990953		9611991390				25.00	32.50	6.00	23.60	
9611990954		9611991392			38.00	46.00	6.00	36.60		
9611990955		9611991393			51.00	59.50	6.00	49.60		
9611990956		9611991394			63.50	73.20	6.00	61.30		
9611990957		9611991395			76.10	86.50	6.00	73.90		
9611990959		9611991397			101.60	112.50	6.00	98.60		
PTFE						mm	A	B	D	Seal ring
9611991424						25.00	32.50	6.00	22.80	
9611991426					38.00	46.00	6.00	35.90		
9611991427					51.00	59.90	6.00	48.90		
9611991428					63.50	73.00	6.00	60.90		
9611991429					76.10	86.50	6.00	73.30		
9611993254					101.60	119.70	6.20	97.70		
NBR		EPDM		FPM		mm	A	B	D	Seal ring
3131900311		3131900314		3131900313		25.00	25.50	7.00	32.50	
3131900321		3131900324		3131900323		38.00	38.00	7.00	46.00	
3131900331		3131900334		3131900333		51.00	51.00	7.00	59.50	
3131900341		3131900344		3131900343		63.50	63.00	7.00	73.00	
3131900351		3131900354		3131900353		76.10	75.50	7.00	86.50	
9611991477		9611993692		**		101.60	110.00	9.50	119.00	

\*\*Not available



Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)				
<b>1.4301 (304)</b>				mm	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>Nut</b>
9611300575				25.00	51.00	22.00	46.30x1/8	33.30	
9611300576				38.00	65.00	22.00	59.00x1/8	46.00	
9611300577				51.00	79.00	22.00	73.30x1/6	58.70	
9611300578				63.50	92.00	22.00	86.00x1/6	71.40	
9611300579				76.10	105.00	22.00	98.70x1/6	84.10	
9611300521				101.60	130.00	22.00	124.40x1/6	110.00	
<b>1.4301 (304)</b>		<b>1.4404 (316L)</b>		mm	<b>OD/ID x t</b>	<b>C</b>	<b>B</b>	<b>Male part</b>	
9611303880		9611303890		25.00	25.80/22.20x1.80	45.70x1/8	27.00		
9611303881		9611303891		38.00	38.50/34.90x1.80	58.40x1/8	27.00		
9611303882		9611303892		51.00	51.20/47.60x1.80	72.70x1/6	27.00		
9611303883		9611303893		63.50	63.90/60.60x1.80	85.40x1/6	27.00		
9611303884		9611303894		76.10	76.60/73.00x1.80	98.10x1/6	27.00		
9611303885		9611303895		101.60	102.00/97.60x2.20	123.80x1/6	31.80		
		<b>1.4404 (316L)</b>		mm	<b>OD/ID x t</b>	<b>A</b>	<b>B</b>	<b>Liner</b>	
		9611303991		25.00	25.80/22.20x1.80	41.30	12.70		
		9611303992		38.00	38.50/34.90x1.80	54.00	12.70		
		9611303993		51.00	51.20/47.60x1.80	66.70	12.70		
		9611303994		63.50	63.90/60.60x1.80	79.40	12.70		
		9611303995		76.10	76.60/73.00x1.80	92.10	12.70		
		9611303996		101.60	102.00/97.60x2.20	117.80	12.70		

NOTE: Seal rings - please see later this chapter.

NOTE: For pressure and surface, please see product leaflet.



Material Item No.	PPL EUR	Size mm	Dimension (mm)			Blank
			OD/ID x t	A	B	
9611330629		25.00		41.30	8.70	
9611330630		38.00		54.00	8.70	
9611330631		51.00		66.70	8.70	
9611330632		63.50		79.40	8.70	
9611330633		76.10		92.10	8.70	
9611330634		101.60		117.80	8.70	

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size mm	Dimension (mm)		Seal ring
							A	B	
9611990145		9611992821		9611992827		25.00	33.30	6.60	
9611990146		9611992822		9611992828		38.00	46.00	6.60	
9611990147		9611992823		9611992829		51.00	58.70	6.60	
9611990148		9611992824		9611992830		63.50	71.40	6.60	
9611990149		9611992825		9611992831		76.10	84.10	6.60	
9611990550		9611992826		9611992832		101.60	109.50	6.60	

NOTE: For pressure and surface, please see product leaflet.

1.3

Material Item No.	PPL EUR	Size	Dimension (mm)			Male part
			OD/ID x t	A	B	
1.4404 (316L)		mm				
9612512905		25.40	25.40/22.20x1.60	40.00x1/6	15.00	
9612512906		38.00	38.00/34.80x1.60	60.00x1/6	20.00	
9612512907		51.00	51.00/47.80x1.60	70.00x1/6	20.00	
9612512908		76.10	76.10/72.10x2.00	98.00x1/6	24.00	
1.4404 (316L)		mm				Liner
9612513005		25.40	25.40/22.20x1.60	35.50	7.50	
9612513006		38.00	38.00/34.80x1.60	55.00	9.00	
9612513007		51.00	51.00/47.80x1.60	65.00	9.00	
9612513008		76.10	76.10/72.10x2.00	93.00	10.00	
						Liner, long.
9612513305		25.40	25.40/22.20x1.60	35.50	17.00	
9612513306		38.00	38.00/34.80x1.60	55.00	20.00	
9612513307		51.00	51.00/47.80x1.60	65.00	20.00	
9612513308		76.10	76.10/72.10x2.00	93.00	30.00	

NOTE: For nuts and seal rings, please see under SMS fittings.

NOTE: For pressure and surface, please see product leaflet.



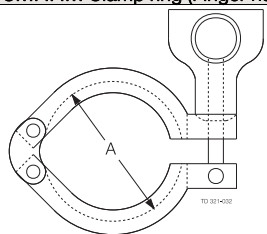
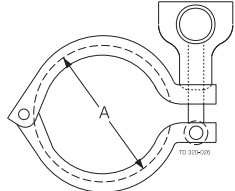
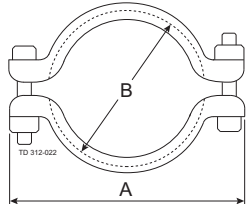
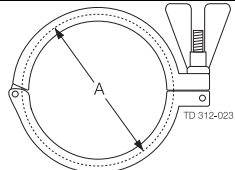
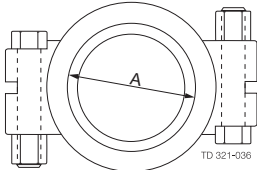
Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)				
<b>1.4307 (304L)</b>		<b>1.4404 (316L)</b>		<b>mm</b>	<b>OD/ID x t</b>		<b>A</b>	<b>B</b>	<b>Clamp ferrule</b>
9611340170		9611340180		25.00	25.70/22.20x1.75		50.40	12.70	
9611340171		9611340181		38.00	38.40/34.90x1.75		50.40	12.70	
9611340172		9611340182		51.00	51.10/47.50x1.80		63.90	12.70	
9611340173		9611340183		63.50	63.80/60.20x1.80		77.40	12.70	
9611340174		9611340184		76.10	76.50/72.90x1.80		90.90	12.70	
9611340175		9611340185		101.60	101.90/97.40x2.25		118.90	15.90	
		<b>1.4404 (316L)</b>		<b>mm</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>Clamp ferrule</b>
		9613417203		25.40	22.20	25.40	50.50	21.50	
		9613417204		38.10	34.90	38.10	50.50	21.50	
		9613417205		51.00	47.60	50.80	64.00	21.50	
		9613417206		63.50	60.30	63.50	77.50	21.50	
		9613417207		76.10	73.00	76.20	91.00	21.50	
		9613417208		101.60	97.60	101.60	119.00	21.50	
									<b>Blank</b>
9611340590		9611340600		25.00	50.40	6.40			
9611340590		9611340600		38.00	50.40	6.40			
9611340591		9611340601		51.00	63.90	6.40			
9611340592		9611340602		63.50	77.40	6.40			
9611340593		9611340603		76.10	90.90	6.40			
		9611340604		101.60	118.90	6.40			

NOTE: Seal rings - please see later this chapter.

NOTE: For pressure and surface, please see product leaflet.

Product code: 5049

1.3

Material Item No.	PPL EUR	Size	Dimension (mm)			
			A	B		
<b>1.4301 (304)</b>		<b>mm</b>			<b>13MHHM Clamp ring (Finger nut)</b>	
212195		25.00/38.00	54.00			
212196		51.00	67.50			
212197		63.50	81.00			
212198		76.10	94.50			
212199		101.60	122.60			
210129		152.40	169.90			
					<b>A13MHHM Clamp ring (Finger nut)</b>	
211053		25.00/38.00	54.00			
211054		51.00	67.10			
211055		63.50	81.00			
211056		76.10	94.50			
211057		101.60	122.20			
211058		152.40	169.90			
					<b>Clamp ring (Allen Screws)</b>	
9611311051		25.00	85.50	54.50		
9611311051		38.00	85.50	54.50		
9611311052		51.00	99.00	68.00		
9611311053		63.50	112.50	81.50		
9611311054		76.10	126.00	95.00		
9611311055		101.60	154.00	123.00		
					<b>Clamp ring, wingnut</b>	
9611994453		25.00/38.00	54.00			
9611994454		51.00	67.50			
9611994455		63.50	81.00			
9611994456		76.10	94.50			
9611994457		101.60	122.60			
Material Item number	PPL EUR	Size DN/OD	Dimension A			
<b>304</b>		<b>Inch</b>	<b>mm</b>	<b>Inch</b>	<b>mm</b>	
9615476401		1/2 - 3/4	12.70- 19.00	1.04	26.40	
9615265201		1/2 - 3/4	12.70- 19.00	1.04	26.40	
9615265301		1 - 1 1/2	25.40 - 38.10	2.05	52.00	
9615265401		2	50.80	2.58	65.50	
9615265501		2 1/2	63.50	3.11	79.00	
9615265601		3	76.20	3.64	92.50	
9615265701		4	101.60	4.73	120.30	
9634048982		6	152.40	6.63	168.40	

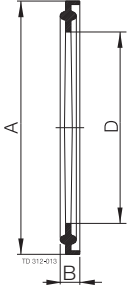
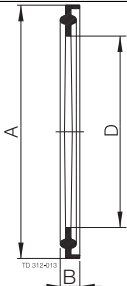
NOTE: Seal rings - please see later this chapter.

NOTE: For pressure and surface, please see product leaflet.





Product code: 5045

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	Dimension (mm)			
							A	B	D	
<b>EPDM</b>		<b>NBR</b>		<b>FPM</b>		mm	A	B	D	<b>Seal ring ISO 2852</b>
9611991358		9611990765		9611991890		25.00	52.70	5.50	22.80	
9611991359		9611990766		9611991891		38.00	52.70	5.50	35.80	
9611991360		9611990767		9611991892		51.00	66.20	5.50	48.80	
9611991361		9611990768		9611991893		63.50	79.70	5.50	60.50	
9611991362		9611990769		9611991894		76.10	93.20	5.50	73.10	
9611991363		9611990770		9611991895		101.60	121.20	5.50	97.80	
290131						154.00	169.00	5.00	147.00	
<b>PTFE</b>						mm	A	B	D	<b>Seal ring, (Modified ISO 2852, type A)</b>
9611991403						25.00	52.70	5.10	22.60	
9611991404						38.00	52.70	5.10	35.60	
9611991405						51.00	66.20	5.10	48.60	
9611991406						63.50	79.70	5.10	60.30	
9611991407						76.10	93.20	5.10	72.90	
9611991408						101.60	121.20	5.10	97.60	

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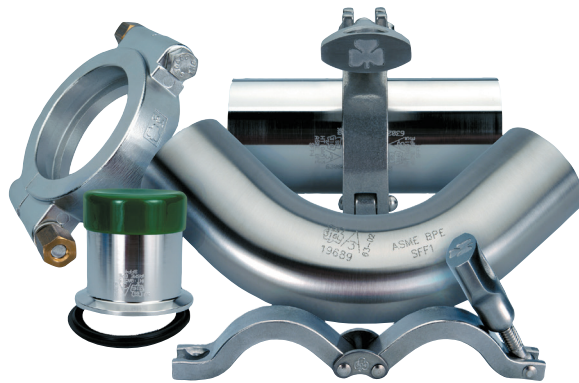


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# 1.4 Tri-Clover® Hygienic Installation Material

The Tri-Clover® Hygienic installation material in this section is with dimensions according to ASME BPE.



## Ordering leaflets

Tri-Clover® Hygienic Tubes .....	1.4.156
Tri-Clover® Hygienic Bends .....	1.4.157
Tri-Clover® Hygienic Tees .....	1.4.161
Tri-Clover® Hygienic Reducing Tees .....	1.4.162
Tri-Clover® Hygienic Crosses .....	1.4.163
Tri-Clover® Hygienic Reducers .....	1.4.164
Tri-Clover® Hygienic Clamp Ferrule .....	1.4.165
Tri-Clover® Hygienic Clamp Ferrules and End Caps .....	1.4.166
Tri-Clover® Hygienic Thermometer Caps .....	1.4.167
Clamp Rings for Clamp Union Parts .....	1.4.168
Tri-Clover® Hygienic Gaskets .....	1.4.170
Tri-Clover® Hygienic Adapters .....	1.4.173

1.4

Please see Tri-Clover® UltraPure tubes



Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size		Dimension		
				DN/OD		A		
				Inch	mm	Inch	mm	<b>B2S (3A)</b>
9634000308		9634000322		1	25.40	3.00	76.20	
9634000309		9634000323		1 1/2	38.10	3.75	95.30	
9634000310		9634000324		2	50.80	4.75	120.70	
9634000311		9634000325		2 1/2	63.50	5.50	139.70	
9634000312		9634000326		3	76.20	6.25	158.80	
9634000313		9634000327		4	101.60	8.00	203.20	
**		9634048644		6	152.40	11.50	292.10	
								<b>L2S (3A)</b>
240403		245904		1	25.40	2.06	52.40	
241403		240015		1 1/2	38.10	2.94	74.60	
242403		240034		2	50.80	4.06	103.20	
243403		245966		2 1/2	63.50	5.19	131.80	
244403		240012		3	76.20	6.31	160.30	
								<b>2WCL (3A)</b>
060487		060589		1	25.40	1.50	38.10	
060084		060590		1 1/2	38.10	2.25	57.20	
060033		060421		2	50.80	3.00	76.20	
060185		060025		2 1/2	63.50	3.75	95.30	
060488		060281		3	76.20	4.50	114.30	
060275		060591		4	101.60	6.00	152.40	
060293		060268		6	152.40	9.00	228.60	

\*\* Not available

\*\*\*AISI 304

NOTE: For pressure and surface, please see product leaflet.



1.4

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size		Dimension		
				DN/OD		A		
<b>304L</b>		<b>316L</b>		Inch	mm	Inch	mm	<b>B2KS (3A)</b>
9634000508		9634000522		1	25.40	2.25	57.20	
9634000509		9634000523		1½	38.10	2.50	63.50	
9634000510		9634000524		2	50.80	3.00	76.20	
9634000511		9634000525		2½	63.50	3.38	85.70	
9634000512		9634000526		3	76.20	3.63	92.10	
9634000513		9634000527		4	101.60	4.50	114.30	
9636000258		9634048643		6	152.40	6.25	158.80	
								<b>2WK (3A)</b>
		060728		1	25.40	0.63	15.90	
		060729		1½	38.10	0.94	23.80	
		060730		2	50.80	1.25	31.80	
		060731		2½	63.50	1.56	39.70	
		060283		3	76.20	1.88	47.60	
		060732		4	101.60	2.50	63.50	
		9634050000		6	152.40	3.75	95.30	

\*\* Not available

\*\*\* 304

NOTE: For pressure and surface, please see product leaflet.



Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size		Dimension				
				DN/OD		A		B		
304L		316L		Inch	mm	Inch	mm	Inch	mm	L2CM - #7 (3A)
<b>Product code: 5009</b>										
240226		246076		1	25.40	2.06	52.40	2.56	65.10	
241229		246038		1½	38.10	2.94	74.60	3.44	87.30	
242227		245920		2	50.80	4.06	103.20	4.56	115.90	
243229		246100		2½	63.50	5.19	131.80	5.69	144.50	
244229		246096		3	76.20	6.31	160.30	6.81	173.00	
245210		242068		4	101.60	8.31	211.10	8.94	227.00	
<b>Product code: 5010</b>										
<b>B2CMP - #7 (3A)</b>										
9634002915		9634002936		1	25.40	2.00	50.80			
9634002916		9634002937		1½	38.10	2.75	69.90			
9634002917		9634002938		2	50.80	3.50	88.90			
9634002918		9634002939		2½	63.50	4.25	108.00			
9634002919		9634002940		3	76.20	5.00	127.00			
9634002920		9634002941		4	101.60	6.63	168.30			
**		9634050009		6	152.40	10.50	266.70			

\*\* Not available

NOTE: For pressure and surface, please see product leaflet.



1.4

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size		Dimension				B2KMP - #7 (3A)
				DN/OD		A		B		
304		316L		Inch	mm	Inch	mm	Inch	mm	
9634003115		9634003136		1	25.40	1.13	28.60			
9634003116		9634003137		1½	38.10	1.44	36.50			
9634003117		9634003138		2	50.80	1.75	44.50			
9634003118		9634003139		2½	63.50	2.06	52.40			
9634003119		9634003140		3	76.20	2.38	60.30			
9634003120		9634003141		4	101.60	3.13	79.40			
**		9634003142		6	152.40	5.25	133.40			

\* On request

\*\* Not available

NOTE: For pressure and surface, please see product leaflet.





Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size		Dimension A		Dimension B		
				DN/OD		Inch	mm	Inch	mm	
<b>304L</b>		<b>316L</b>		Inch	mm	Inch	mm	Inch	mm	<b>B7WWW (3A)</b>
<b>Product code: 5029</b>										
9634000708		9634000722		1	25.40	2.13	54.00			
9634000709		9634000723		1½	38.10	2.38	60.30			
9634000710		9634000724		2	50.80	2.88	73.00			
9634000711		9634000725		2½	63.50	3.13	79.40			
9634000712		9634000726		3	76.20	3.38	85.70			
9634000713		9634000727		4	101.60	4.13	104.80			
**		9634000728		6	152.40	5.63	142.90			
<b>304L</b>										<b>L7WWW</b>
9613466607		9613466619		1	25.40	1.13	28.60			
9613466608		9613466620		1½	38.10	1.66	42.10			
9613466609		9613466621		2	50.80	2.06	52.40			
9613466610		9613466622		2½	63.50	2.34	59.50			
9613466611		9613466623		3	76.20	2.59	65.90			
9613466612		9613466624		4	101.60	3.44	87.30			
<b>304L</b>										<b>B7MP (3A)</b>
<b>Product code: 5030</b>										
9634003315		9634003336		1	25.40	2.63	66.70			
9634003316		9634003337		1½	38.10	2.88	73.00			
9634003317		9634003338		2	50.80	3.38	85.70			
9634003318		9634003339		2½	63.50	3.63	92.10			
9634003319		9634003340		3	76.20	3.88	98.40			
9634003320		9634003341		4	101.60	7.13	181.00			
**		9634003342		6	152.40	7.13	181.00			

\* On request

\*\* Not available

NOTE: For pressure and surface, please see product leaflet.



1.4

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN/OD		Dimension A		Dimension B		B7RWWW (3A)
				Inch	mm	Inch	mm	Inch	mm	
304L	PPL EUR	316L								
<b>Product code: 5029</b>										
9634001217		9634001249		1 1/2 x 1	38.10x25.40	2.38	60.30	2.38	60.30	
9634001218		9634001250		2 x 1	50.80x25.40	2.88	73.00	2.63	66.70	
9634001219		9634001251		2 x 1 1/2	50.80x38.10	2.88	73.00	2.63	66.70	
9634001220		9634001252		2 1/2 x 1	63.50x25.40	3.13	79.40	2.88	73.00	
9634001221		9634001253		2 1/2 x 1 1/2	63.50x38.10	3.13	79.40	2.88	73.00	
9634001222		9634001254		2 1/2 x 2	63.50x50.80	3.13	79.40	2.88	73.00	
9634001223		9634001255		3 x 1	76.20x25.40	3.38	85.70	2.88	79.40	
9634001224		9634001256		3 x 1 1/2	76.20x38.10	3.38	85.70	3.13	79.40	
9634001225		9634001257		3 x 2	76.20x50.80	3.38	85.70	3.13	79.40	
9634001226		9634001258		3 x 2 1/2	76.20x63.50	3.38	85.70	3.13	79.40	
9634001227		9634001259		4 x 1	101.60x25.40	4.13	104.80	3.13	92.10	
9634001228		9634001260		4 x 1 1/2	101.60x38.10	4.13	104.80	3.63	92.10	
9634001229		9634001261		4 x 2	101.60x50.80	4.13	104.80	3.88	98.40	
9634001230		9634001262		4 x 2 1/2	101.60x63.50	4.13	104.80	3.88	98.40	
9634001231		9634001263		4 x 3	101.60x76.20	4.13	104.80	3.88	98.40	
		9634048303		6 x 1	152.40x25.40	5.63	142.90	5.13	130.20	
		9634048304		6 x 1 1/2	152.40x38.10	5.63	142.90	5.13	130.20	
**		*		6 x 1/2	152.40x12.70	5.63	142.90	5.13	130.20	
**		*		6 x 3/4	152.40x19.00	5.63	142.90	5.13	130.20	
**		*		6 x 1	152.40x25.40	5.63	142.90	5.13	130.20	
**		9634048305		6 x 1 1/2	152.40x38.10	5.63	142.90	5.13	130.20	
**		9634048306		6 x 2	152.40x50.80	5.63	142.90	5.13	130.20	
**		9634048307		6 x 2 1/2	152.40x63.50	5.63	142.90	5.13	130.20	
**		9634048307		6 x 3	152.40x76.20	5.63	142.90	5.13	130.20	
**		9634001264		6 x 4	152.40x101.60	5.63	142.90	5.13	130.20	
<b>304</b>										<b>B7RMP - #7 (3A)</b>
<b>Product code: 5030</b>										
		9634003882		2 x 1	50.80x25.40	3.38	85.70	3.13	79.40	
		9634003883		2 x 1 1/2	50.80x38.10	3.38	85.70	3.13	79.40	
		9634003886		2 1/2 x 2	63.50x50.80	3.63	92.10	3.38	85.70	
		8010002819		3 x 2	76.20x50.80	3.88	98.40	3.88	98.40	
		8010002821		3 x 2 1/2	76.20x63.50	3.88	98.40	3.88	98.40	
				4 x 1 1/2	101.60x38.10	4.75	120.70	4.13	104.80	
		9634003893		4 x 2	101.60x50.80	4.75	120.70	4.38	111.10	
				4 x 3	101.60x76.20	4.75	120.70	4.38	111.10	

\* On request

\*\* Not available

NOTE: For pressure and surface, please see product leaflet.



Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN/OD		Dimension A		
				Inch	mm	Inch	mm	
304		316L						B9WWWW (3A)
<b>Product code: 5029</b>								
9634000908		9634000922		1	25.40	2.13	54.00	
9634000909		9634000923		1½	38.10	2.38	60.30	
9634000910		9634000924		2	50.80	2.88	73.00	
9634000911		9634000925		2½	63.50	3.13	79.40	
9634000912		9634000926		3	76.20	3.38	85.70	
9634000913		9634000927		4	101.60	4.13	104.80	
<b>Product code: 5030</b>								
								B9MP (3A)
9634003515		9634003536		1	25.40	2.63	66.70	
9634003516		9634003537		1½	38.10	2.88	73.00	
9634003517		9634003538		2	50.80	3.38	85.70	
		9634003539		2½	63.50	3.63	92.10	
9634003519		9634003540		3	76.20	3.88	98.40	
9634003520				4	101.60	4.75	120.70	

NOTE: For pressure and surface, please see product leaflet.



Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN/OD		Dimension A		
				Inch	mm	Inch	mm	
304		316L						L31 (3A)
Product code: 5069								
		246214		1 1/2 x 1	38.10x25.40	2.00	50.80	
		9634047934		2 x 1	50.80x25.40	4.00	101.60	
		240030		2 x 1 1/2	50.80x38.10	2.00	50.80	
		240962		2 1/2 x 1 1/2	63.50x38.10	4.00	101.60	
		246005		2 1/2 x 2	63.50x50.80	2.00	50.80	
		246129		3 x 1 1/2	76.20x38.10	6.00	152.40	
		240029		3 x 2	76.20x50.80	4.00	101.60	
		246036		3 x 2 1/2	76.20x63.50	2.00	50.80	
		240963		4 x 2	101.60x50.80	8.00	203.20	
		240964		4 x 2 1/2	101.60x63.50	6.00	152.40	
		246067		4 x 3	101.60x76.20	4.00	101.60	
		9634049355		6 x 3	152.40x76.20	5.50	139.70	
		9634049356		6 x 4	152.40x101.60	5.50	139.70	
L32 (3A)								
		240976		1 1/2 x 1	38.10x25.40	2.00	50.80	
		240977		2 x 1	50.80x25.40	4.00	101.60	
		240978		2 x 1 1/2	50.80x38.10	2.00	50.80	
		240979		2 1/2 x 1 1/2	63.50x38.10	4.00	101.60	
		240980		2 1/2 x 2	63.50x50.80	2.00	50.80	
		240982		3 x 2	76.20x50.80	4.00	101.60	
		240983		3 x 2 1/2	76.20x63.50	2.00	50.80	
		240984		4 x 2	101.60x50.80	8.00	203.20	
		240985		4 x 2 1/2	101.60x63.50	6.00	152.40	
		240986		4 x 3	101.60x76.20	4.00	101.60	
		9634050002		6 x 3	152.40x76.20	5.50	139.70	
		9634049354		6 x 4	152.40x101.60	5.50	139.70	
Product code: 5070								
B31-14MP (3A)								
9634054258		9634039716		1 1/2 x 1	38.10x25.40	3.00	76.20	
9634054259		9634039717		2 x 1	50.80x25.40	5.00	127.00	
9634054260		9634039718		2 x 1 1/2	50.80x38.10	3.00	76.20	
9634069011		9634039720		2 1/2 x 1 1/2	63.50x38.10	5.00	127.00	
9634054261		9634039721		2 1/2 x 2	63.50x50.80	3.00	76.20	
9634600003		9634039724		3 x 2	76.20x50.80	5.00	127.00	
9634600002		9634039725		3 x 2 1/2	76.20x63.50	3.00	76.20	
9634000006		9634039730		4 x 3	101.60x76.20	5.13	130.20	
		9634050022		6 x 3	152.40x76.20	7.63	193.70	
		9634050025		6 x 4	152.40x101.60	7.63	193.70	
B32-14MP (3A)								
9634600007		9634039816		1 1/2 x 1	38.10x25.40	3.00	76.20	
		9634039817		2 x 1	50.80x25.40	5.00	127.00	
9634600010		9634039818		2 x 1 1/2	50.80x38.10	3.00	76.20	
		9634039820		2 1/2 x 1 1/2	63.50x38.10	5.00	127.00	
9634600009		9634039821		2 1/2 x 2	63.50x50.80	3.00	76.20	
9634600013		9634039824		3 x 2	76.20x50.80	5.00	127.00	
9634600012		9634039825		3 x 2 1/2	76.20x63.50	3.00	76.20	
9634600016		9634039830		4 x 3	101.60x76.20	5.13	130.20	
		*		6 x 3	152.40x76.20	7.63	193.70	
		9634050021		6 x 4	152.40x101.60	7.63	193.70	

\* On request

NOTE: For pressure and surface, please see product leaflet.



Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN/OD		Dimension				
				Inch	mm	A		B		
<b>L14AM (3A)</b>										
240606		240644		1	25.40	1.13	28.60	1.98	50.39	
241605		240028		1 1/2	38.10	1.13	28.60	1.98	50.39	
242605		240027		2	50.80	1.13	28.60	2.52	63.91	
243605		246226		2 1/2	63.50	1.13	28.60	3.05	77.39	
244606		246124		3	76.20	1.13	28.60	3.58	90.91	
245596		246200		4	101.60	1.13	28.60	4.69	118.92	
660016		9634049938		6	152.40	1.50	38.10	6.57	166.88	
<b>14WMPS (3A)</b>										
**		610205		1/2	12.70	0.50	12.70	0.98	24.90	
**		610238		3/4	19.00	0.50	12.70	0.98	24.90	
610854		610365		1	25.40	0.50	12.70	1.98	50.40	
610855		610367		1 1/2	38.10	0.50	12.70	1.98	50.40	
610856		610368		2	50.80	0.50	12.70	2.52	63.90	
610857		610369		2 1/2	63.50	0.50	12.70	3.05	77.40	
610858		610370		3	76.20	0.50	12.70	3.58	90.90	
610859		610373		4	101.60	0.63	15.90	4.69	118.92	
88123417		88214659		6	152.40	1.50	38.10	6.57	166.88	
<b>14WLMP - #7 (3A)</b>										
210908		210348		1	25.40	3.00	76.20	1.98	50.39	
210491		210374		1 1/2	38.10	3.00	76.20	1.98	50.39	
212101		210375		2	50.80	3.00	76.20	2.52	63.91	
212108		210376		2 1/2	63.50	3.00	76.20	3.05	77.39	
211209		210377		3	76.20	4.00	101.60	3.58	90.91	
210492		210378		4	101.60	4.00	101.60	4.69	118.92	
261218		260235		6	152.40	6.00	152.40	6.57	166.88	

\*\* Not available

NOTE: For pressure and surface, please see product leaflet.



1.4

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size		Dimension						
				DN/OD		A		B		C		
				Inch	mm	Inch	mm	Inch	mm	Inch	mm	
<b>304</b>				<b>316L</b>								<b>14RMP - #7</b>
210447		213447		1	25.40	0.75	19.10	1.00	25.40			<p>TD 321-012</p>
210449		213449		1 1/2	38.10	1.13	28.60	1.50	38.10			
210450		213450		2	50.80	1.31	33.30	2.00	50.80			
210451		213451		2 1/2	63.50	1.38	34.90	2.50	63.50			
210452		213452		3	76.20	1.44	36.50	3.00	76.20			
210454				4	101.60	1.50	38.10	4.00	101.60			
												<b>14MPW - #7 (3A)</b>
210519		210525		1	25.40	1.63	41.30	0.88	22.20	1.16	29.40	<p>TD 321-013</p>
210465		210526		1 1/2	38.10	1.63	41.30	1.38	34.90	1.67	42.50	
210466		210527		2	50.80	1.75	44.50	1.88	47.60	2.19	55.60	
210467		210528		2 1/2	63.50	1.75	44.50	2.38	60.30	2.70	68.70	
210468		210529		3	76.20	1.81	46.00	2.88	73.00	3.22	81.80	
210469		210530		4	101.60	2.13	54.00	3.83	97.20	4.25	108.00	
												<b>16AMP (3A)</b>
**		210518		3/4	19.00	0.19	4.80	0.98	24.90			<p>TD 321-030</p>
210501		210854		1 1/2	38.10	0.25	6.40	1.98	50.39			
210502		210855		2	50.80	0.25	6.40	2.52	63.91			
210503		210856		2 1/2	63.50	0.25	6.40	3.05	77.39			
210504		210857		3	76.20	0.25	6.40	3.58	90.91			
210506		210858		4	101.60	0.25	6.40	4.69	118.92			
261220		260237		6	152.40	0.44	6.58	6.57	166.88			

\*\* Not available

NOTE: For pressure and surface, please see product leaflet.



Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size		Dimension				
				DN/OD		A		B		
304		316L		Inch	mm	Inch	mm	Inch	mm	23BMP - Solid - #7
615959		615966		1 + 1/2	38.10	1.98	50.40	0.63	15.90	
615958		615967		2	50.80	2.52	63.90	0.63	15.90	
615960		**		2 1/2	63.50	3.05	77.40	0.63	15.90	
615961		615969		3	76.20	3.58	90.90	0.63	15.90	
*		615971		4	101.60	4.69	119.10	0.63	15.90	
<b>23BMP - Tapped with NPT threads - #7</b>										
210623		214206		1 x 1/2	25.40x12.70	1.98	50.30	0.63	15.90	
210596		211677		1 1/2 x 3/4	38.10x19.00	1.98	50.30	0.63	15.90	
210626		213599		2 x 3/4	50.80x19.00	2.52	64.00	0.63	15.90	
211448		610723		2 1/2 x 3/4	63.50x19.00	3.05	77.50	0.63	15.90	
211555		610724		3 x 3/4	76.20x19.00	3.58	90.90	0.63	15.90	
211439		610726		4 x 3/4	101.60x19.00	4.69	119.10	0.63	15.90	

\* On request.

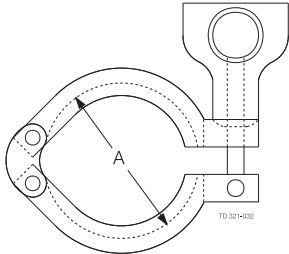
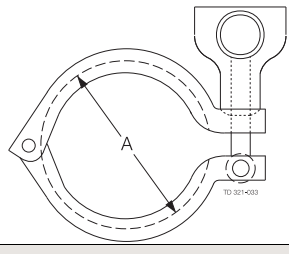
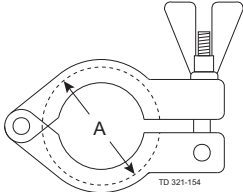
\*\* Not available

NOTE: For pressure and surface, please see product leaflet.



Product code: 5049

1.4

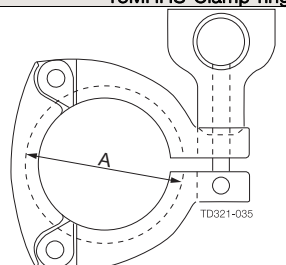
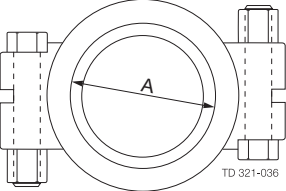
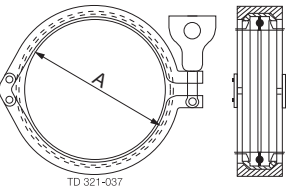
Material Item No.	PPL EUR	Size DN/OD		Dimension A		
		Inch	mm	Inch	mm	
<b>13MHHM Clamp ring</b>						
9613408801		1/2-3/4	12.70-19.00	1.13	28.00	
212195		1-1 1/2	25.40-38.10	2.13	54.00	
212196		2	50.80	2.66	67.50	
212197		2 1/2	63.50	3.19	81.00	
212198		3	76.20	3.72	94.50	
212199		4	101.60	4.83	122.60	
210129		6	152.40	6.69	169.90	
<b>A13MHHM Clamp ring</b>						
211290		1/2-3/4	12.70- 19.00	1.13	28.60	
211053		1-1 1/2	25.40-38.10	2.13	54.00	
211054		2	50.80	2.64	67.10	
211055		2 1/2	63.50	3.19	81.00	
211056		3	76.20	3.72	94.50	
211057		4	101.60	4.83	122.20	
211058		6	152.40	6.69	169.90	
<b>13MHHS Clamp ring, Wingnut</b>						
9611994452		1/2-3/4	12.70- 19.00	1.13	28.60	

NOTE: For pressure and surface, please see product leaflet.





Product code: 5049



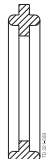
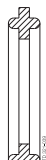
Material Item No.	PPL EUR	Size DN/OD		Dimension A		
		Inch	mm	Inch	mm	
<b>304</b>						<b>13MHHS Clamp ring</b>
211283		1 1/2	38.10	2.13	54.00	
211284		2	50.80	2.66	67.50	
211286		2 1/2	63.50	3.19	81.00	
211287		3	76.20	3.72	94.50	
211289		4	101.60	4.83	122.60	
<b>Material Item number</b>	<b>PPL EUR</b>	<b>Size DN/OD</b>		<b>Dimension A</b>		
<b>304</b>		<b>Inch</b>	<b>mm</b>	<b>Inch</b>	<b>mm</b>	<b>A13MHP Clamp ring</b>
9615476401		1/2 - 3/4	12.70- 19.00	1.04	26.40	
9615265201		1/2 - 3/4	12.70- 19.00	1.04	26.40	
9615265301		1 - 1 1/2	25.40 - 38.10	2.05	52.00	
9615265401		2	50.80	2.58	65.50	
9615265501		2 1/2	63.50	3.11	79.00	
9615265601		3	76.20	3.64	92.50	
9615265701		4	101.60	4.73	120.30	
9634048982		6	152.40	6.63	168.40	
						<b>A12MPS Clamp ring</b>
210135		1 1/2	38.10	1.98	50.40	
210136		2	50.80	2.52	63.90	
210137		2 1/2	63.50	3.05	77.40	
210138		3	76.20	3.58	90.90	
210140		4	101.60	4.69	119.10	

NOTE: For pressure and surface, please see product leaflet.



Product code: 5046

1.4

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	
<b>42MP-E</b>				<b>42MP-U</b>		<b>42MP-SFY</b>		Inch	<b>42MP</b>
290273 290265				290272 290264		290274 290266 9614006403		1/2 3/4 1	
<b>42MP-G</b>		<b>42MP-X</b>						Inch	<b>42MP</b>
290270 290271 9614006404		290090 290099						1/2 3/4 1	
<b>40MP-E</b>				<b>40MP-U</b>		<b>40MP-SFY</b>		Inch	<b>40MP/40MO</b>
290141 290044 290043 290048 290036 290018 290234				298451 298452 298453 298454 298455 298456 290112		290009 290022 290030 290040 290049 290053 290220		1 1 1/2 2 2 1/2 3 4 6	
<b>40MP-G</b>		<b>40MP-X</b>		<b>40MP-UW</b>				Inch	<b>40MP/40MO</b>
298224 298227 298228 298223 298225 298226 298235		298512 298507 298508 298509 298510 298511 **		298501 298495 298496 298499 298497 298498 290195				1 1 1/2 2 2 1/2 3 4 6	



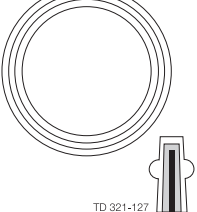
\*\* Not available

Material Descriptions

Code Letter	Material	Code Letter	Material
E	EPDM	SFY	Steam Resistant Fluoroelastomer
G	PTFE	X	Silicone (Q)
		UW	White Buna N
		U	Buna N



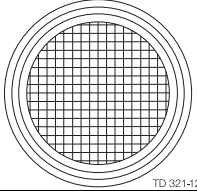
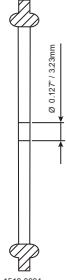
Product code: 5046

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	
<b>40MPF-E</b>		<b>40MPF-U</b>		<b>40MPF-SFY</b>		<b>Inch</b>	<b>40MPF/40MOF</b>
290038		298346		290097		1	
290017		298347		290115		1 1/2	
290035		298376		290117		2	
290138		298348		290118		2 1/2	
290025		298375		290119		3	
290131		298349		290172		4	
		298220		290182		6	
<b>40MPF-X</b>		<b>40MPF-UW</b>					<b>40MPF/40MOF</b>
298411		298308				1	
298412		298431				1 1/2	
298413		298417				2	
298414		290069				2 1/2	
298415		298432				3	
298416		298433				4	
298605		290236				6	
<b>A40MP-GR</b>							<b>A40MP/A40MO.</b>
							<b>PTFE Envelope Gasket with SFY</b>
290072						1	
290073						1 1/2	
290074						2	
290075						2 1/2	
290076						3	
290077						4	
290085						6	



Product code: 5046

1.4

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size		
<b>40MPS-U</b>						Inch	mm	<b>40MPS, 10 - Mesh Screen Gasket*</b>
298488						1 1/2	38.10	
298434					2	50.80		
298436					2 1/2	63.50		
290034					3	76.20		
298438					4	101.60		
<b>A80MP-E</b>		<b>A80MP-SFY</b>		<b>A80MP-U</b>		Inch	mm	<b>A80MP, Orifice Plate - 316L</b>
290248		290207		290216		1 1/2	38.10	
290255		290001		290221		2	50.80	
290314		290002		290222		2 1/2	63.50	
290275		290180		290223		3	76.20	

Material Descriptions

Code Letter	Material	Code Letter	Material
E	EPDM	SFY	Steam Resistant Fluoroelastomer
		U	Buna N

\* Wire diameter = 0.64 mm

Holes = 1.9 mm square

Open area = 56.3%



Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size		Dimension						
				DN/OD		A						
304		316L		Inch	mm	Inch	mm			14MPHR		
211469		213384		1 x 1	25.40x25.40	1.69	42.90					
211393		213382		1 1/2 x 1 1/2	38.10x38.10	1.69	42.90					
211387		213383		2 x 2	50.80x50.80	2.31	58.70					
211480		210722		2 1/2 x 2 1/2	63.50x63.50	2.00	50.80					
211481		211534		3 x 3	76.20x76.20	3.11	79.00					
211482		211535		4 x 4	101.60x101.60	3.41	86.50					
Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size		Dimension						
304		316L		DN/OD		A		B		C		
211399		211526		1	25.40	4.50	114.30	0.88	22.20	1.00	25.40	
211396		211527		1 1/2	38.10	4.50	114.30	1.38	34.90	1.50	38.10	
211398		211793		2	50.80	4.50	114.30	1.88	47.60	2.00	50.80	
211394		212039		2 1/2	63.50	4.50	114.30	2.38	60.30	2.50	63.50	
211392		213468		3	76.20	4.50	114.30	2.88	73.00	3.00	76.20	
211402		213493		4	101.60	4.63	117.50	3.83	97.20	4.00	101.60	

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size		Dimension				
				DN/OD		A		B		
304		316L		Inch	mm	Inch	mm	Inch	mm	22MP - #7
211378		210984		1 x 3/4	25.40x19.00	1.63	41.30			
211331		213625		1 x 1	25.40x25.40	1.63	41.30			
211334		213913		1 1/2 x 1 1/4	38.10 x 31.8	2.25	57.20			
211335		213733		1 1/2 x 1 1/2	38.10x38.10	2.25	57.20			
211434		213821		1 1/2 x 3/4	38.10x19.00	1.63	41.30			
211336		211736		1 1/2 x 1	38.10x25.40	1.63	41.30			
211362		213914		2 x 1 1/2	50.80x38.10	2.34	59.50			
211337		213623		2 x 2	50.80x50.80	1.69	42.90			
211539		210249		2 1/2 x 2	63.50x50.80	1.41	35.70			
211332		210318		2 1/2 x 2 1/2	63.50x63.50	2.09	53.20			
211340		213649		3 x 3	76.20x76.20	2.19	55.60			
211339		210737		4 x 4	101.60x101.60	2.66	67.50			
21MP (N.P.T. Pipe Thread)										
211371		213650		1 x 3/4	25.40x19.00	0.98	25.00	2.19	55.60	
211299		213598		1 x 1	25.40x25.40	0.69	17.50	2.25	57.20	
211363		213741		1 1/2 x 1 1/4	38.10 x 31.8	0.70	17.90	2.44	61.90	
211300		213626		1 1/2 x 1 1/2	38.10x38.10	0.72	18.30	2.44	61.90	
211421		212034		1 1/2 x 3/4	38.10x19.00	0.55	13.90	2.19	55.60	
211306		213740		1 1/2 x 1	38.10x25.40	0.72	18.30	2.31	58.70	
211305		210821		1 1/2 x 2	38.10x50.80	0.72	18.30	2.63	66.70	
211354		214198		2 x 1 1/2	50.80x38.10	0.75	19.10	2.47	62.70	
211301		213624		2 x 2	50.80x50.80	0.75	19.10	2.66	67.50	
211369		214009		2 1/2 x 2	63.50x50.80	1.14	29.00	3.13	79.40	
211302		213918		2 1/2 x 2 1/2	63.50x63.50	1.38	34.90	3.28	83.30	
211303		213597		3 x 3	76.20x76.20	1.20	30.60	3.50	88.90	
211304		213596		4 x 4	101.60x101.60	1.30	32.90	3.81	96.80	

NOTE: For pressure and surface, please see product leaflet.



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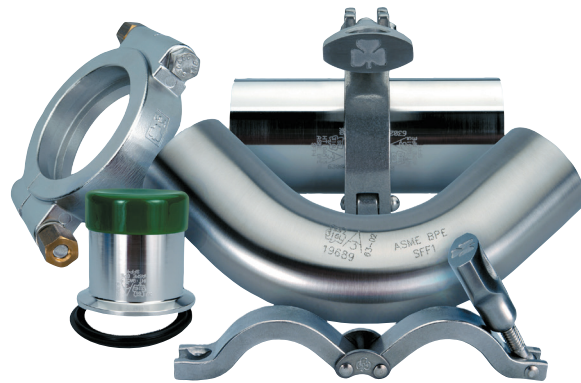


**CSI**

CONTACT CSI FOR MORE INFORMATION | [CSIDESIGNS.COM](http://CSIDESIGNS.COM) | [SALES@CSIDESIGNS.COM](mailto:SALES@CSIDESIGNS.COM) | 417.831.1411

# 1.5 Tri-Clover ® UltraPure, ASME BPE

The installation material in this section is manufactured to meet Tri-Clover ® UltraPure, ASME BPE tube dimensions.



## Ordering leaflets

Tri-Clover® UltraPure Tubes	1.5.176
Tri-Clover® UltraPure Bends	1.5.177
Tri-Clover® UltraPure Tees	1.5.180
Tri-Clover® UltraPure Reducing Tees	1.5.182
Tri-Clover® UltraPure Instrument Tees	1.5.187
Tri-Clover® UltraPure Crosses / Reducing Crosses	1.5.188
Tri-Clover® UltraPure Reducers	1.5.189
Tri-Clover® UltraPure Ferrules and End Caps	1.5.195
Tri-Clover® UltraPure Clamp Rings	1.5.196
Tri-Clover® UltraPure Seal rings	1.5.198
Tri-Clover® UltraPure Adaptors	1.5.200
Tri-Clover® UltraPure Adaptors Use-Point Fittings	1.5.202

1.5

Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension (mm) OD/ID x t	DT-4-1 ASME BPE
				Inch	mm		
9613407101		9613407111		1/2	12.70	12.70/9.40x1.65	
9613407102		9613407112		3/4	19.05	19.00/15.75x1.65	
9613407103		9613407113		1	25.40	25.40/22.10x1.65	
9613407104		9613407114		1 1/2	38.10	38.10/34.80x1.65	
9613407105		9613407115		2	50.80	50.80/47.50x1.65	
9613407106		9613407116		2 1/2	63.50	63.50/60.2x1.65	
9613407107		9613407117		3	76.20	76.20/72.90x1.65	
9613407108		9613407118		4	101.60	101.60/97.38x2.11	

\* PPL prices per meter are updated monthly  
 Please contact your Alfa Laval contact person for further information.  
 NOTE: All tubes are delivered in lengths of 6.10 meters.





Product code: 5016, 5017  
 Clamp Ferrules according to DT-7-1

Material: 316L

1.5

Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension A		DT-4.1.1-1 B2S Bend 90° (3A)
				Inch	mm	Inch	mm	
<b>Product code: 5016</b>								
9634000219		9634000228		1/2	12.70	3.00	76.20	
9634000220		9634000229		3/4	19.00	3.00	76.20	
9634000221		9634000230		1	25.40	3.00	76.20	
9634000222		9634000231		1 1/2	38.10	3.75	95.30	
9634000223		9634000232		2	50.80	4.75	120.70	
9634000224		9634000233		2 1/2	63.50	5.50	139.70	
9634000225		9634000234		3	76.20	6.25	158.80	
9634000226		9634000235		4	101.60	8.00	203.20	
9634000227		9634000236		6	152.40	11.50	292.10	

NOTE: For pressure and surface, please see product leaflet.

OD/ID and t (wall thickness) please see page 1.5.176

Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension				DT-4.1.1-2 B2CMW Bend 90° (A3)
				Inch	mm	A		B		
				Inch	mm	Inch	mm	Inch	mm	
<b>Product code: 5016</b>										
9634001919		9634001928		1/2	12.70	3.00	76.20	1.63	41.30	
9634001920		9634001929		3/4	19.00	3.00	76.20	1.63	41.30	
9634001921		9634001930		1	25.40	3.00	76.20	2.00	50.80	
9634001922		9634001931		1 1/2	38.10	3.75	95.30	2.75	69.90	
9634001923		9634001932		2	50.80	4.75	120.70	3.50	88.90	
9634001924		9634001933		2 1/2	63.50	5.50	139.70	4.25	108.00	
9634001925		9634001934		3	76.20	6.25	158.80	5.00	127.00	
9634001926		9634001935		4	101.60	8.00	203.20	6.63	168.20	
<b>Product code: 5017</b>										
9634002819		9634002828		1/2	12.70	1.63	41.30			
9634002820		9634002829		3/4	19.00	1.63	41.30			
9634002821		9634002830		1	25.40	2.00	50.80			
9634002822		9634002831		1 1/2	38.10	2.75	69.90			
9634002823		9634002832		2	50.80	3.50	88.90			
9634002824		9634002833		2 1/2	63.50	4.25	108.00			
9634002825		9634002834		3	76.20	5.00	127.00			
9634002826		9634002835		4	101.60	6.63	168.30			
9634002827		9634002836		6	152.40	10.50	266.70			

NOTE: For pressure and surface, please see product leaflet.

OD/ID and t (wall thickness) please see page 1.5.176



Product code: 5016, 5017  
Clamp Ferrules according to DT-7-1

Material: 316L

1.5

Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension A		DT-4.1.1-4 B2KS (3A) Bend 45°
				Inch	mm	Inch	mm	
<b>Product code: 5016</b>								
9634000419		9634000428		1/2	12.70	2.25	57.20	
9634000420		9634000429		3/4	19.00	2.25	57.20	
9634000421		9634000430		1	25.40	2.25	57.20	
9634000422		9634000431		1 1/2	38.10	2.50	63.50	
9634000423		9634000432		2	50.80	3.00	76.20	
9634000424		9634000433		2 1/2	63.50	3.38	85.70	
9634000425		9634000434		3	76.20	3.63	92.10	
9634000426		9634000435		4	101.60	4.50	114.30	
9634000427		9634000436		6	152.40	6.25	158.80	

OD/ID and t (wall thickness) please see page 1.5.176

Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension				DT-4.1.1-5 B2KMW (3A) Bend 45°
				Inch	mm	A		B		
PL (SF1)		PM (SF4)		Inch	mm	Inch	mm	Inch	mm	
<b>Product code: 5016</b>										
9634002119		9634002128		1/2	12.70	2.25	57.20	1.00	25.40	
9634002120		9634002129		3/4	19.00	2.25	57.20	1.00	25.40	
9634002121		9634002130		1	25.40	2.25	57.20	1.10	28.60	
9634002122		9634002131		1 1/2	38.10	2.50	63.50	1.40	36.50	
9634002123		9634002132		2	50.80	3.00	76.20	1.80	44.50	
9634002124		9634002133		2 1/2	63.50	3.38	85.70	2.10	52.40	
9634002125		9634002134		3	76.20	3.63	92.10	2.30	60.30	
9634002126		9634002135		4	101.60	4.50	114.30	3.10	79.40	
<b>Product code: 5017</b>										
<b>DT-4.1.1-6 B2KMP Bend 45° (3A)</b>										
9634003019		9634003028		1/2	12.70	1.00	25.40			
9634003020		9634003029		3/4	19.00	1.00	25.40			
9634003021		9634003030		1	25.40	1.13	28.60			
9634003022		9634003031		1 1/2	38.10	1.44	36.50			
9634003023		9634003032		2	50.80	1.75	44.50			
9634003024		9634003033		2 1/2	63.50	2.06	52.40			
9634003025		9634003034		3	76.20	2.38	60.30			
9634003026		9634003035		4	101.60	3.13	79.40			

NOTE: For pressure and surface, please see product leaflet.

OD/ID and t (wall thickness) please see page 1.5.176



Item number PL (SF1)	PPL EUR	Item number PM (SF4)	PPL EUR	Size	Dimensions				
					A (H)		B (L)		
					in	mm	in	mm	
<b>B2CMP - 88</b>									
9634080392				1/2	1.657	42.10	1.602	40.70	
9634080394		9634080395		3/4	1.654	42.00	1.598	40.60	
9634080396		9634080397		1	2.035	51.70	1.965	49.90	
9634080398		9634080399		1 1/2	2.791	70.90	2.697	68.50	
9634080400		9634080401		2	3.551	90.20	3.429	87.10	
9634080404		9634080405		3	5.067	128.70	4.894	124.30	
<b>B2CMP - 92</b>									
9634080412		9634080411		3/4	1.583	40.20	1.638	41.60	
		9634080415		1	1.949	49.50	2.016	51.20	
9634080416		9634080417		1 1/2	2.681	68.10	2.776	70.50	
9634080418				2	3.413	86.70	3.531	89.70	
9634080420		9634080421		2 1/2	4.146	105.30	4.291	109.00	
				3	4.878	123.90	5.051	128.30	
<b>B2S - 88</b>									
9634080424		9634080425		1/2	3.079	78.20	2.976	75.60	
9634080426		9634080427		3/4	3.079	78.20	2.972	75.50	
9634080428		9634080429		1	3.071	78.00	2.965	75.30	
9634080430		9634080431		1 1/2	3.827	97.20	3.697	93.90	
9634080432		9634080433		2	4.846	123.10	4.681	118.90	
9634080434		9634080435		2 1/2	5.602	142.30	5.409	137.40	
9634080436		9634080437		3	6.362	161.60	6.146	156.10	
9634080438		9634080439		4	8.138	206.70	7.858	199.60	
<b>B2S - 92</b>									
9634080440		9634080441		1/2	2.913	74.00	3.016	76.60	
9634080442		9634080443		3/4	2.874	73.00	3.012	76.50	
9634080444		9634080445		1	2.913	74.00	3.016	76.60	
9634080446		9634080447		1 1/2	3.646	92.60	3.776	95.90	
9634080448		9634080449		2	4.618	117.30	4.783	121.50	
9634080450		9634080451		2 1/2	5.350	135.90	5.543	140.80	
9634080452		9634080453		3	6.083	154.50	6.299	160.00	
9634080454		9634080455		4	7.791	197.90	8.067	204.90	



Product code: 5036, 5037  
Clamp Ferrules according to DT-7-1

Material: 316L

1.5

Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension				
						A		B		
PL (SF1)		PM (SF4)		Inch	mm	Inch	mm	Inch	mm	DT-4.1.2-1 B7WWW Tee (3A)
<b>Product code: 5036</b>										
9634000619		9634000628		1/2	12.70	1.88	47.60			
9634000620		9634000629		3/4	19.00	2.00	50.80			
9634000621		9634000630		1	25.40	2.13	54.00			
9634000622		9634000631		1 1/2	38.10	2.38	60.30			
9634000623		9634000632		2	50.80	2.88	73.00			
9634000624		9634000633		2 1/2	63.50	3.13	79.40			
9634000625		9634000634		3	76.20	3.38	85.70			
9634000626		9634000635		4	101.60	4.13	104.80			
9634000627		9634000636		6	152.40	5.63	142.90			
<b>Product code: 5037</b>										
<b>DT-4.1.2-4 B7MP Tee (3A)</b>										
8010002853		8010002855		1/2	12.70	2.38	60.33			
8010002856		8010002857		3/4	19.00	2.50	63.50			
9634003221		9634003230		1	25.40	2.63	66.68			
9634003222		9634003231		1 1/2	38.10	2.88	73.03			
9634003223		9634003232		2	50.80	3.38	85.73			
9634003224		9634003233		2 1/2	63.50	3.63	92.08			
9634003225		9634003234		3	76.20	3.88	98.43			
9634003226		9634003235		4	101.60	4.76	120.65			
9634003227				6	152.40	7.13	180.98			

\* on request

NOTE: For pressure and surface, please see product leaflet.

OD/ID and t (wall thickness) please see page 1.5.176



Product code: 5036, 5037  
 Clamp Ferrules according to DT-7-1

Material: 316L

1.5

Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension				
						A		B		
PL (SF1)		PM (SF4)		Inch	mm	Inch	mm	Inch	mm	DT-4.1.2-2 B7WWMS (3A) Short outlet tee
<b>Product code: 5036</b>										
9634002619		9634002628		1/2	12.70	1.88	47.60	1.00	25.40	
9634002620		9634002629		3/4	19.00	2.00	50.80	1.13	28.60	
9634002621		9634002630		1	25.40	2.13	54.00	1.13	28.60	
9634002622		9634002631		1 1/2	38.10	2.38	60.30	1.38	34.90	
9634002623		9634002632		2	50.80	2.88	73.00	1.63	41.30	
9634002624		9634002633		2 1/2	63.50	3.13	79.40	1.88	47.60	
9634002625		9634002634		3	76.20	3.38	85.70	2.13	54.00	
9634002626		9634002635		4	101.60	4.13	104.80	2.75	69.90	
9634002627		9634002636		6	152.40	5.63	142.90	3.75	95.30	
<b>DT-4.1.2-3 B7WWMSW (3A) Tee</b>										
9634037719		9634037728		1/2	12.70	0.88	22.40	1.88	47.60	
9634037720		9634037729		3/4	19.00	1.00	25.40	2.00	50.80	
9634037721		9634037730		1	25.40	1.13	28.50	2.13	54.00	
9634037722		9634037731		1 1/2	38.10	1.38	35.10	2.38	60.30	
9634037723		9634037732		2	50.80	1.63	41.20	2.88	73.00	
9634037724		9634037733		2 1/2	63.50	1.88	47.80	3.13	79.40	
9634037725		9634037734		3	76.20	2.13	53.90	3.38	85.70	
9634037726		9634037735		4	101.60	2.75	69.90	4.13	104.80	
<b>DT-4.1.2-5 B7MPS Tee (3A)</b>										
<b>Product code: 5037</b>										
8010002826		8010002827		1/2	12.70	2.38	60.33	1.00	25.40	
8010002828		8010002829		3/4	19.00	2.50	63.50	1.13	28.58	
9634043019		9634043027		1	25.40	2.63	66.68	1.13	28.58	
9634043020		9634043028		1 1/2	38.10	2.88	73.03	1.38	34.93	
9634043021		9634043029		2	50.80	3.38	85.73	1.63	41.28	
9634043022		9634043030		2 1/2	63.50	3.63	92.08	1.88	47.63	
9634043023		9634043031		3	76.20	3.88	98.43	2.13	53.98	
9634043024		9634043032		4	101.60	4.75	120.65	2.75	69.85	

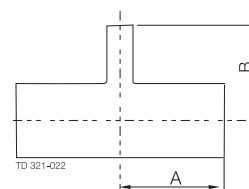
NOTE: For pressure and surface, please see product leaflet.

OD/ID and t (wall thickness) please see page 1.5.176



1.5

Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size		Dimension				DT-4.1.2-6 B7RWWW (3A) Reducing tee
				DN/OD		A		B		
PL (SF1)		PM (SF4)		Inch	mm	Inch	mm	Inch	mm	
9634001043		9634001064		3/4 x 1/2	19.00x12.70	2.00	50.80	2.00	50.80	
9634001044		9634001065		1 x 1/2	25.40x12.70	2.13	54.00	2.13	54.00	
9634001045		9634001066		1 x 3/4	25.40x19.00	2.13	54.00	2.13	54.00	
9634001046		9634001067		1 1/2 x 1/2	38.10x12.70	2.38	60.30	2.38	60.30	
9634001047		9634001068		1 1/2 x 3/4	38.10x19.00	2.38	60.30	2.38	60.30	
9634001048		9634001069		1 1/2 x 1	38.10x25.40	2.38	60.30	2.38	60.30	
9634001049		9634001070		2 x 1/2	50.80x12.70	2.88	73.00	2.63	66.70	
9634001050		9634001071		2 x 3/4	50.80x19.00	2.88	73.00	2.63	66.70	
9634001051		9634001072		2 x 1	50.80x25.40	2.88	73.00	2.63	66.70	
9634001052		9634001073		2 x 1 1/2	50.80x38.10	2.88	73.00	2.63	66.70	
9634001053		9634001074		2 1/2 x 1/2	63.50x12.70	3.13	79.40	2.88	73.00	
9634001054		9634001075		2 1/2 x 3/4	63.50x19.00	3.13	79.40	2.88	73.00	
9634001055		9634001076		2 1/2 x 1	63.50x25.40	3.13	79.40	2.88	73.00	
9634001056		9634001077		2 1/2 x 1 1/2	63.50x38.10	3.13	79.40	2.88	73.00	
9634001057		9634001078		2 1/2 x 2	63.50x50.80	3.13	79.40	2.88	73.00	
9634001058		9634001079		3 x 1/2	76.20x12.70	3.38	85.70	3.13	79.40	
9634001059		9634001080		3 x 3/4	76.20x19.00	3.38	85.70	3.13	79.40	
9634001060		9634001081		3 x 1	76.20x25.40	3.38	85.70	3.13	79.40	
9634001061		9634001082		3 x 1 1/2	76.20x38.10	3.38	85.70	3.13	79.40	
9634001062		9634001083		3 x 2	76.20x50.80	3.38	85.70	3.13	79.40	
9634001063		9634001084		3 x 2 1/2	76.20x63.50	3.38	85.70	3.13	79.40	
9634001117		9634001125		4 x 1/2	101.60x12.70	4.13	104.80	3.63	92.10	
9634001118		9634001126		4 x 3/4	101.60x19.00	4.13	104.80	3.63	92.10	
9634001119		9634001127		4 x 1	101.60x25.40	4.13	104.80	3.63	92.10	
9634001120		9634001128		4 x 1 1/2	101.60x38.10	4.13	104.80	3.63	92.10	
9634001121		9634001129		4 x 2	101.60x50.80	4.13	104.80	3.88	98.40	
9634001122		9634001130		4 x 2 1/2	101.60x63.50	4.13	104.80	3.88	98.40	
9634001123		9634001131		4 x 3	101.60x76.20	4.13	104.80	3.88	98.40	
9613600781		9634048315		6 x 1/2	152.40x12.70	5.63	142.90	5.13	130.20	
9613600782		9634048316		6 x 3/4	152.40x19.00	5.63	142.90	5.13	130.20	
		9634048317		6 x 1	152.40x25.40	5.63	142.90	5.13	130.20	
9613600784		9634048318		6 x 1 1/2	152.40x38.10	5.63	142.90	5.13	130.20	
9634048312		9634048319		6 x 2	152.40x50.80	5.63	142.90	5.13	130.20	
		9634048320		6 x 2 1/2	152.40x63.50	5.63	142.90	5.13	130.20	
		9634048321		6 x 3	152.40x76.20	5.63	142.90	5.13	130.20	
9634001124		9634001132		6 x 4	152.40x101.60	5.63	142.90	5.13	130.20	



\* On request

NOTE: For pressure and surface, please see product leaflet.

OD/ID and t (wall thickness) please see page 1.5.176



Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size		Dimension				B7RWWM (3A) Reducing tee
				DN/OD		A		B		
PL (SF1)		PM (SF4)		Inch	mm	Inch	mm	Inch	mm	
9634039943		9634039964		3/4 x 1/2	19.00x12.70	2.00	50.80	2.50	63.50	
9634039944		9634039965		1 x 1/2	25.40x12.70	2.13	54.00	2.63	66.70	
9634039945		9634039966		1 x 3/4	25.40x19.00	2.13	54.00	2.63	66.70	
9634039946		9634039967		1 1/2 x 1/2	38.10x12.70	2.38	60.30	2.88	73.00	
9634039947		9634039968		1 1/2 x 3/4	38.10x19.00	2.38	60.30	2.88	73.00	
9634039948		9634039969		1 1/2 x 1	38.10x25.40	2.38	60.30	2.88	73.00	
9634039949		9634039970		2 x 1/2	50.80x12.70	2.88	73.00	3.13	79.40	
9634039950		9634039971		2 x 3/4	50.80x19.00	2.88	73.00	3.13	79.40	
9634039951		9634039972		2 x 1	50.80x25.40	2.88	73.00	3.13	79.40	
9634039952		9634039973		2 x 1 1/2	50.80x38.10	2.88	73.00	3.13	79.40	
9634039955		9634039976		2 1/2 x 1	63.50x25.40	3.13	79.40	3.38	85.70	
9634039956		9634039977		2 1/2 x 1 1/2	63.50x38.10	3.13	79.40	3.38	85.7	
9634039957		9634039978		2 1/2 x 2	63.50x50.80	3.13	79.40	3.38	85.7	
9634039960		9634039981		3 x 1	76.20x25.40	3.38	85.70	3.63	92.10	
9634039961		9634039982		3 x 1 1/2	76.20x38.10	3.38	85.70	3.63	92.10	
9634039962		9634039983		3 x 2	76.20x50.80	3.38	85.70	3.63	92.10	
9634039963		9634039984		3 x 2 1/2	76.20x63.50	3.38	85.70	3.63	92.10	
9634040019				4 x 1	101.60x25.40	4.13	104.80	4.13	104.8	
9634040020				4 x 1 1/2	101.60x38.10	4.13	104.80	4.13	104.8	
9634040021		9634040029		4 x 2	101.60x50.80	4.13	104.80	4.38	111.10	
9634040022				4 x 2 1/2	101.60x63.50	4.13	104.80	4.38	111.10	
9634040023		9634040031		4 x 3	101.60x76.20	4.13	104.80	4.38	111.10	

NOTE: For pressure and surface, please see product leaflet.

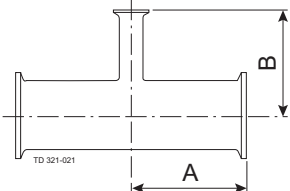
OD/ID and t (wall thickness) please see page 1.5.176



Product code: 5037  
Clamp Ferrules according to DT-7-1

Material: 316L

1.5

Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension				DT-4.1.2-8 B7RMP Reducing tee (3A)
						A		B		
PL (SF1)		PM (SF4)		Inch	mm	Inch	mm	Inch	mm	
9634003643		9634003664		3/4 x 1/2	19.00x12.70	2.50	63.50	2.50	63.50	
9634003644		9634003665		1 x 1/2	25.40x12.70	2.63	66.70	2.63	66.70	
9634003645		9634003666		1 x 3/4	25.40x19.00	2.63	66.70	2.63	66.70	
9634003646		9634003667		1 1/2 x 1/2	38.10x12.70	2.88	73.00	2.88	73.00	
9634003647		9634003668		1 1/2 x 3/4	38.10x19.00	2.88	73.00	2.88	73.00	
9634003648		9634003669		1 1/2 x 1	38.10x25.40	2.88	73.00	2.88	73.00	
9634003649		9634003670		2 x 1/2	50.80x12.70	3.38	85.70	3.13	79.40	
9634003650		9634003671		2 x 3/4	50.80x19.00	3.38	85.70	3.13	79.40	
9634003651		9634003672		2 x 1	50.80x25.40	3.38	85.70	3.13	79.40	
9634003652		9634003673		2 x 1 1/2	50.80x38.10	3.38	85.70	3.13	79.40	
9634003653				2 1/2 x 1/2	63.50x12.70	3.63	92.10	3.38	85.70	
9634003654		9634003675		2 1/2 x 3/4	63.50x19.00	3.63	92.10	3.38	85.70	
9634003655				2 1/2 x 1	63.50x25.40	3.63	92.10	3.38	85.70	
9634003656		9634003677		2 1/2 x 1 1/2	63.50x38.10	3.63	92.10	3.38	85.70	
9634003657		9634003678		2 1/2 x 2	63.50x50.80	3.63	92.10	3.38	85.70	
9634003658		9634003679		3 x 1/2	76.20x12.70	3.88	98.40	3.63	92.10	
9634003659				3 x 3/4	76.20x19.00	3.88	98.40	3.63	92.10	
9634003660		9634003681		3 x 1	76.20x25.40	3.88	98.40	3.63	92.10	
9634003661		9634003682		3 x 1 1/2	76.20x38.10	3.88	98.40	3.63	92.10	
8010002831		8010002830		3 x 2	76.20x50.80	3.88	98.40	3.88	98.40	
8010002832		8010002833		3 x 2 1/2	76.20x63.50	3.88	98.40	3.88	98.40	
9634003717				4 x 1/2	101.60x12.70	4.75	120.70	4.13	104.80	
9634003719				4 x 1	101.60x25.40	4.75	120.70	4.13	104.80	
9634003720				4 x 1 1/2	101.60x38.10	4.75	120.70	4.13	104.80	
9634003721		9634003729		4 x 2	101.60x50.80	4.75	120.70	4.38	111.10	
9634003722				4 x 2 1/2	101.60x63.50	4.75	120.70	4.38	111.10	
9634003723		9634003731		4 x 3	101.60x76.20	4.75	120.70	4.38	111.10	

NOTE: For pressure and surface, please see product leaflet.





Product code: 5036  
Clamp Ferrules according to DT-7-1

Material: 316L

1.5

Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size		Dimension				DT-4.1.2-7 B7RWWMS (3A) Short outlet reducing tee
						A		B		
PL (SF1)		PM (SF4)		Inch	mm	Inch	mm	Inch	mm	
9634002343		9634002364		3/4 x 1/2	19.00x12.70	2.00	50.80	1.00	25.40	
9634002344		9634002365		1 x 1/2	25.40x12.70	2.13	54.00	1.13	28.60	
9634002345		9634002366		1 x 3/4	25.40x19.00	2.13	54.00	1.13	28.60	
9634002346		9634002367		1 1/2 x 1/2	38.10x12.70	2.38	60.30	1.38	34.90	
9634002347		9634002368		1 1/2 x 3/4	38.10x19.00	2.38	60.30	1.38	34.90	
9634002348		9634002369		1 1/2 x 1	38.10x25.40	2.38	60.30	1.38	34.90	
9634002349		9634002370		2 x 1/2	50.80x12.70	2.88	73.00	1.63	41.30	
9634002350		9634002371		2 x 3/4	50.80x19.00	2.88	73.00	1.63	41.30	
9634002351		9634002372		2 x 1	50.80x25.40	2.88	73.00	1.63	41.30	
9634002352		9634002373		2 x 1 1/2	50.80x38.10	2.88	73.00	1.63	41.30	
9634002353		9634002374		2 1/2 x 1/2	63.50x12.70	3.13	79.40	1.88	47.60	
9634002354		9634002375		2 1/2 x 3/4	63.50x19.00	3.13	79.40	1.88	47.60	
9634002355		9634002376		2 1/2 x 1	63.50x25.40	3.13	79.40	1.88	47.60	
9634002356		9634002377		2 1/2 x 1 1/2	63.50x38.10	3.13	79.40	1.88	47.60	
9634002357		9634002378		2 1/2 x 2	63.50x50.80	3.13	79.40	1.88	47.60	
9634002358		9634002379		3 x 1/2	76.20x12.70	3.38	85.70	2.13	54.00	
9634002359		9634002380		3 x 3/4	76.20x19.00	3.38	85.70	2.13	54.00	
9634002360		9634002381		3 x 1	76.20x25.40	3.38	85.70	2.13	54.00	
9634002361		9634002382		3 x 1 1/2	76.20x38.10	3.38	85.70	2.13	54.00	
9634002362		9634002383		3 x 2	76.20x50.80	3.38	85.70	2.13	54.00	
9634002363		9634002384		3 x 2 1/2	76.20x63.50	3.38	85.70	2.13	54.00	
9634002417		9634002425		4 x 1/2	101.60x12.70	4.13	104.80	2.63	66.70	
9634002418		9634002426		4 x 3/4	101.60x19.00	4.13	104.80	2.63	66.70	
9634002419		9634002427		4 x 1	101.60x25.40	4.13	104.80	2.63	66.70	
9634002420		9634002428		4 x 1 1/2	101.60x38.10	4.13	104.80	2.63	66.70	
9634002421		9634002429		4 x 2	101.60x50.80	4.13	104.80	2.63	66.70	
9634002422		9634002430		4 x 2 1/2	101.60x63.50	4.13	104.80	2.63	66.70	
9634002423		9634002431		4 x 3	101.60x76.20	4.13	104.80	2.63	66.70	

NOTE: For pressure and surface, please see product leaflet.

OD/ID and t (wall thickness) please see page 1.5.176

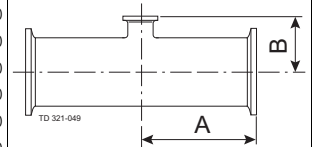


Product code: 5037  
 Clamp Ferrules according to DT-7-1

Material: 316L

1.5

Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension				DT-4.1.2-9 B7RMPS Short Outlet Reducing Tee - #7 (3A)
						A		B		
PL (SF1)		PM (SF4)		Inch	mm	Inch	mm	Inch	mm	
9634003943		9634003964		3/4 x 1/2	19.00x12.70	2.50	63.5	1.00	25.40	
9634003944		9634003965		1 x 1/2	25.40x12.70	2.63	66.7	1.13	28.60	
9634003945		9634003966		1 x 3/4	25.40x19.00	2.63	66.7	1.13	28.60	
9634003946		9634003967		1 1/2 x 1/2	38.10x12.70	2.88	73.00	1.38	34.90	
9634003947		9634003968		1 1/2 x 3/4	38.10x19.00	2.88	73.00	1.38	34.90	
9634003948		9634003969		1 1/2 x 1	38.10x25.40	2.88	73.00	1.38	34.90	
9634003949		9634003970		2 x 1/2	50.80x12.70	3.38	85.7	1.63	41.30	
9634003950		9634003971		2 x 3/4	50.80x19.00	3.38	85.7	1.63	41.30	
9634003951		9634003972		2 x 1	50.80x25.40	3.38	85.7	1.63	41.30	
9634003952		9634003973		2 x 1 1/2	50.80x38.10	3.38	85.7	1.63	41.30	
9634003953		9634003974		2 1/2 x 1/2	63.50x12.70	3.63	92.10	1.88	47.60	
9634003954		9634003975		2 1/2 x 3/4	63.50x19.00	3.63	92.10	1.88	47.60	
9634003955		9634003976		2 1/2 x 1	63.50x25.40	3.63	92.10	1.88	47.60	
9634003956		9634003977		2 1/2 x 1 1/2	63.50x38.10	3.63	92.10	1.88	47.60	
9634003957		9634003978		2 1/2 x 2	63.50x50.80	3.63	92.10	1.88	47.60	
9634003958		9634003979		3 x 1/2	76.20x12.70	3.88	98.40	2.13	54.00	
9634003959				3 x 3/4	76.20x19.00	3.88	98.40	2.13	54.00	
9634003960		9634003981		3 x 1	76.20x25.40	3.88	98.40	2.13	54.00	
9634003961		9634003982		3 x 1 1/2	76.20x38.10	3.88	98.40	2.13	54.00	
9634003962		9634003983		3 x 2	76.20x50.80	3.88	98.40	2.13	54.00	
9634003963				3 x 2 1/2	76.20x63.50	3.88	98.40	2.13	54.00	
9634004017				4 x 1/2	101.60x12.70	4.75	120.70	2.63	66.70	
9634004018		9634004026		4 x 3/4	101.6x19.00	4.75	120.70	2.63	66.70	
9634004019		9634004027		4 x 1	101.60x25.40	4.75	120.70	2.63	66.70	
9634004020		9634004028		4 x 1 1/2	101.60x38.10	4.75	120.70	2.63	66.70	
9634004021		9634004029		4 x 2	101.60x50.80	4.75	120.70	2.63	66.70	
9634004022				4 x 2 1/2	101.60x63.50	4.75	120.70	2.63	66.70	
9634004023				4 x 3	101.60x76.20	4.75	120.70	2.63	66.70	
9634050035				6 x 1/2	152.40x12.70	7.13	181.00	3.75	95.30	
9634050038				6 x 3/4	152.40x19.00	7.13	181.00	3.75	95.30	
9634050041				6 x 1	152.40x25.40	7.13	181.00	3.75	95.30	
9634050044				6 x 1 1/2	152.40x38.10	7.13	181.00	3.75	95.30	
9634050047				6 x 2	152.40x50.80	7.13	181.00	3.75	95.30	
9634050050				6 x 2 1/2	152.40x63.50	7.13	181.00	3.75	95.30	
9634050053				6 x 3	152.40x76.20	7.13	181.00	3.75	95.30	
9634004024				6 x 4	152.40x101.60	7.13	181.00	3.75	95.30	



NOTE: For pressure and surface, please see product leaflet.



Product code: 5036, 5037  
Clamp Ferrules according to DT-7-1

Material: 316L

1.5

Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension				DT-4.1.2-11 B7IMPS Instrument tee (3A)
						A		B		
PL (SF1)		PM (SF4)		Inch	mm	Inch	mm	Inch	mm	
<b>Product code: 5037</b>										
211171		211169		1/2 x 1 1/2	12.70x38.10	3.00	76.20	0.88	22.20	
211543		211544		1/2 x 2	12.70x50.80	3.25	82.50	1.00	25.40	
211170		211377		3/4 x 1 1/2	19.00x38.10	3.00	76.20	1.00	25.40	
211545		211546		3/4 x 2	19.00x50.80	3.25	82.50	1.13	28.60	
211173		211158		1 x 1 1/2	25.40x38.10	3.00	76.20	1.13	28.60	
211547		211616		1 x 2	25.40x50.80	3.25	82.50	1.25	31.70	
211172		211187		1 1/2 x 2	38.10x50.80	3.25	82.50	1.50	38.10	
<b>Product code: 5036</b>										
<b>DT-4.1.2-10 B7IWWMS (3A) Instrument tee</b>										
241737		241751		1/2 x 1 1/2	12.70x38.10	2.50	63.50	0.88	22.20	
241738		242082		1/2 x 2	12.70x50.80	2.75	69.80	1.00	25.40	
241739		241870		3/4 x 1 1/2	19.00x38.10	2.50	63.50	1.00	25.40	
241740		242083		3/4 x 2	19.00x50.80	2.75	69.80	1.13	28.60	
241741		241753		1 x 1 1/2	25.40x38.10	2.50	63.50	1.13	28.60	
241742		241898		1 x 2	25.40x50.80	2.75	69.80	1.25	31.70	
241743		241869		1 1/2 x 2	38.10x50.80	2.75	69.80	1.50	38.10	

NOTE: For pressure and surface, please see product leaflet.

OD/ID and t (wall thickness) please see page 1.5.176



Product code: 5036, 5037  
 Clamp Ferrules according to DT-7-1

Material: 316L

1.5

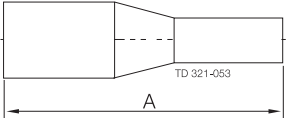
Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension				DT-4.1.2-1 B9WWWW (3A) Cross
				Inch	mm	A		B		
PL (SF1)		PM (SF4)				Inch	mm	Inch	mm	
<b>Product code: 5036</b>										
9634000819		9634000828		1/2	12.70	1.88	47.60			
9634000820		9634000829		3/4	19.00	2.00	50.80			
9634000821		9634000830		1	25.40	2.13	54.00			
9634000822		9634000831		1 1/2	38.10	2.38	60.30			
9634000823		9634000832		2	50.80	2.88	73.00			
9634000824		9634000833		2 1/2	63.50	3.13	79.40			
9634000825		9634000834		3	76.20	3.38	85.70			
9634000826		9634000835		4	101.60	4.13	104.80			
<b>Product code: 5037</b>										
<b>DT-4.1.2-4 B9MP - #7 (3A)</b>										
8010002824		8010002825		1/2	12.70	2.25	57.20			
8010002822		8010002823		3/4	19.00	2.38	60.30			
9634003421		9634003430		1	25.40	2.63	66.70			
9634003422		9634003431		1 1/2	38.10	2.88	73.00			
9634003423		9634003432		2	50.80	3.38	85.70			
9634003424				2 1/2	63.50	3.63	92.10			
9634003425				3	76.20	3.88	98.40			
9634003426		9634003435		4	101.60	4.75	120.70			

\* on request

NOTE: For pressure and surface, please see product leaflet.

OD/ID and t (wall thickness) please see page 1.5.176



Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension A		B31 Concentric reducer (3A)
				Inch	mm	Inch	mm	
9634001701		9634001726		3/4 x 1/2	19.00x12.70	4.00	101.60	
9634001702		9634001727		1 x 1/2	25.40x12.70	4.50	114.30	
9634001703		9634001728		1 x 3/4	25.40x19.00	4.00	101.60	
9634001704		9634001729		1 1/2 x 1/2	38.10x12.70	5.50	139.70	
9634001705		9634001730		1 1/2 x 3/4	38.10x19.00	5.00	127.00	
9634001706		9634001731		1 1/2 x 1	38.10x25.40	5.00	127.00	
9634001708		9634001733		2 x 3/4	50.80x19.00	7.25	184.20	
9634001709		9634001734		2 x 1	50.80x25.40	7.25	184.20	
9634001710		9634001735		2 x 1 1/2	50.80x38.10	5.25	133.40	
9634001714		9634001739		2 1/2 x 1 1/2	63.50x38.10	7.50	184.20	
9634001715		9634001740		2 1/2 x 2	63.50x50.80	5.50	139.70	
9634001717		9634001742		3 x 1 1/2	76.20x38.10	9.25	235.00	
9634001718		9634001743		3 x 2	76.20x50.80	7.50	190.50	
9634001719		9634001744		3 x 2 1/2	76.20x63.50	5.50	139.70	
9634001722		9634001747		4 x 2	101.60x50.80	11.75	298.40	
9634001723		9634001748		4 x 2 1/2	101.60x63.50	9.75	247.70	
9634001724		9634001749		4 x 3	101.60x76.20	7.75	196.90	
9634050058		9634050059		6 x 3	152.40x76.20	10.00	254.00	
9634001725		9634001750		6 x 4	152.40x101.60	10.00	254.00	

NOTE: For pressure and surface, please see product leaflet



1.5

Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension A		B32 Eccentric Reducer (3A)
				Inch	mm	Inch	mm	
9634039401		9634039426		3/4 x 1/2	19.00x12.70	4.00	101.60	
9634039402		9634039427		1 x 1/2	25.40x12.70	4.50	114.30	
9634039403		9634039428		1 x 3/4	25.40x19.00	4.00	101.60	
9634039404		9634039429		1 1/2 x 1/2	38.10x12.70	5.50	139.70	
9634039405		9634039430		1 1/2 x 3/4	38.10x19.00	5.00	127.00	
9634039406		9634039431		1 1/2 x 1	38.10x25.40	5.00	127.00	
9634039409		9634039434		2 x 1	50.80x25.40	7.25	184.20	
9634039410		9634039435		2 x 1 1/2	50.80x38.10	5.25	133.40	
9634039414		9634039439		2 1/2 x 1 1/2	63.50x38.10	7.25	184.20	
9634039415		9634039440		2 1/2 x 2	63.50x50.80	5.50	139.70	
9634039417		9634039442		3 x 1 1/2	76.20x38.10	9.25	235.00	
9634039418		9634039443		3 x 2	76.20x50.80	7.50	190.50	
9634039419		9634039444		3 x 2 1/2	76.20x63.50	5.50	139.70	
9634039422		9634039447		4 x 2	101.60x50.80	11.75	298.40	
9634039423		9634039448		4 x 2 1/2	101.60x63.50	9.75	247.70	
9634039424		9634039449		4 x 3	101.60x76.20	7.75	196.90	
On request		9634039452		6 x 3	152.40x76.20	10.00	254.00	
9634039425		9634039450		6 x 4	152.40x101.60	10.00	254.00	

NOTE: For pressure and surface, please see product leaflet.



Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension A		
				Inch	mm	Inch	mm	
								<b>B31-14MP Concentric reducer (3A)</b>
9634004301		9634004326		3/4 x 1/2	19.00x12.70	2.00	50.80	
9634004302		9634004327		1 x 1/2	25.40x12.70	2.50	63.50	
9634004303		9634004328		1 x 3/4	25.40x19.00	2.00	50.80	
9634004304		9634004329		1 1/2 x 1/2	38.10x12.70	3.50	88.90	
9634004305		9634004330		1 1/2 x 3/4	38.10x19.00	3.00	76.20	
9634004306		9634004331		1 1/2 x 1	38.10x25.40	3.00	76.20	
9634004308		9634004333		2 x 3/4	50.80x19.00	5.00	127.00	
9634004309		9634004334		2 x 1	50.80x25.40	5.00	127.00	
9634004310		9634004335		2 x 1 1/2	50.80x38.10	3.00	76.20	
9634004314		9634004339		2 1/2 x 1 1/2	63.50x38.10	5.00	127.00	
9634004315		9634004340		2 1/2 x 2	63.50x50.80	3.00	76.20	
9634004317		9634004342		3 x 1 1/2	76.20x38.10	7.00	177.80	
9634004318		9634004343		3 x 2	76.20x50.80	5.00	127.00	
9634004319		9634004344		3 x 2 1/2	76.20x63.50	3.00	76.20	
9634004322		9634004347		4 x 2	101.60x50.80	9.13	231.80	
9634004323		9634004348		4 x 2 1/2	101.60x63.50	9.13	231.80	
9634004324		9634004349		4 x 3	101.60x76.20	5.13	130.20	
9634004325		9634004350		6 x 4	152.40x101.60	7.63	193.70	
9634039201		9634039226		3/4 x 1/2	19.00x12.70	2.00	50.80	
9634039202		9634039227		1 x 1/2	25.40x12.70	2.50	63.50	
9634039203		9634039228		1 x 3/4	25.40x19.00	2.00	50.80	
9634039204		9634039229		1 1/2 x 1/2	38.10x12.70	3.50	88.90	
9634039205		9634039230		1 1/2 x 3/4	38.10x19.00	3.00	76.20	
9634039206		9634039231		1 1/2 x 1	38.10x25.40	3.00	76.20	
9634039209		9634039234		2 x 1	50.80x25.40	5.00	127.00	
9634039210		9634039235		2 x 1 1/2	50.80x38.10	3.00	76.20	
9634039214		9634039239		2 1/2 x 1 1/2	63.50x38.10	5.00	127.00	
9634039215		9634039240		2 1/2 x 2	63.50x50.80	3.00	76.20	
9634039217		9634039242		3 x 1 1/2	76.20x38.10	7.00	177.80	
9634039218		9634039243		3 x 2	76.20x50.80	5.00	127.00	
9634039219		9634039244		3 x 2 1/2	76.20x63.50	3.00	76.20	
9634039222		9634039247		4 x 2	101.60x50.80	9.13	231.80	
9634039223		9634039248		4 x 2 1/2	101.60x63.50	7.13	181.00	
9634039224		9634039249		4 x 3	101.60x76.20	5.13	130.20	

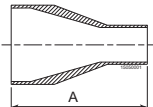
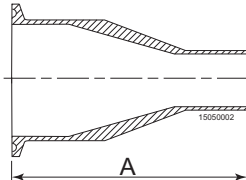
NOTE: For pressure and surface, please see product leaflet.



Product code: 5076  
 Clamp Ferrules according to DT-7-1

Material: 316L

1.5

Finish Item No. PL (SF1)	PPL EUR	Finish Item No. PM (SF4)	PPL EUR	Size		Dimension A		
				Inch	mm	Inch	mm	
<b>DT-4.1.3-1</b>								
<b>B31S Concentric reducer</b>								
9614206101		9614206122		3/8 x 1/4	9.53/6.35	1.626	41.30	
9614206102		9614206123		1/2 x 1/4	12.70/6.35	1.875	46.50	
9614206103		9614206124		1/2 x 3/8	12.70/9.53	1.875	46.50	
9614206104		9614206125		3/4 x 3/8	19.05/9.53	2.000	50.80	
9614206105		9614206126		3/4 x 1/2	19.05/12.70	2.125	54.00	
9614206106		9614206127		1 x 1/2	25.40/12.70	2.500	63.50	
9614206107		9614206128		1 x 3/4	25.40/19.05	2.125	54.00	
9614206108		9614206129		1 1/2 x 3/4	38.10/19.05	3.000	76.20	
9614206109		9614206130		1 1/2 x 1	38.10/25.40	2.500	63.50	
9614206110		9614206131		2 x 1	50.80/25.40	3.375	85.80	
9614206111		9614206132		2 x 1 1/2	50.80/38.10	2.500	63.50	
9614206112		9614206133		2 1/2 x 1 1/2	63.50/38.10	3.375	85.80	
9614206113		9614206134		2 1/2 x 2	63.50/50.80	2.500	63.50	
9614206114		9614206135		3 x 1 1/2	76.20/38.10	4.250	108.00	
9614206115		9614206136		3 x 2	76.20/50.80	3.375	85.80	
9614206116		9614206137		3 x 2 1/2	76.20/63.50	2.625	66.70	
9614206117		9614206138		4 x 2	101.60/50.80	5.125	130.20	
9614206118		9614206139		4 x 2 1/2	101.60/63.50	7.087	180.00	
9614206119		9614206140		4 x 3	101.60/76.20	3.875	98.40	
9614206120		9614206141		6 x 3	152.40/76.20	7.250	184.20	
9614206121		9614206142		6 x 4	152.40/101.60	5.625	142.90	
<b>DT-4.1.3-2</b>								
<b>B31MS Concentric reducer,</b>								
9614206301		9614206317		1 x 1/2	25.40/12.70	3.000	76.20	
9614206302		9614206318		1 x 3/4	25.40/19.05	2.626	66.70	
9614206303		9614206319		1 1/2 x 3/4	38.10/19.05	3.500	88.90	
9614206304		9614206320		1 1/2 x 1	38.10/25.40	3.000	76.20	
9614206305		9614206321		2 x 1	50.80/25.40	3.874	98.40	
9614206306		9614206322		2 x 1 1/2	50.80/38.10	3.000	76.20	
9614206307		9614206323		2 1/2 x 1 1/2	63.50/38.10	3.874	98.40	
9614206308		9614206324		2 1/2 x 2	63.50/50.80	3.000	76.20	
9614206309		9614206325		3 x 1 1/2	76.20/38.10	4.752	120.70	
9614206310		9614206326		3 x 2	76.20/50.80	3.878	98.50	
9614206311		9614206327		3 x 2 1/2	76.20/63.50	3.126	79.40	
9614206312		9614206328		4 x 2	101.60/50.80	5.752	146.10	
9614206313		9614206329		4 x 2 1/2	101.60/63.50	4.878	123.90	
9614206314		9614206330		4 x 3	101.60/76.20	4.500	114.30	
9614206315		9614206331		6 x 3	152.40/76.20	8.000	203.20	
9614206316		9614206332		6 x 4	152.40/101.60	6.374	161.90	





Finish Item No. PL (SF1)	PPL EUR	Finish Item No. PM (SF4)	PPL EUR	Size		Dimension A		
				Inch	mm	Inch	mm	
<b>DT-4.1.3-1B32S</b>								
<b>Eccentric reducer</b>								
9614207601		9614207622		3/8 x 1/4	9.53/6.35	1.626	41.30	
9614207602		9614207623		1/2 x 1/4	12.70/6.35	1.831	46.50	
9614207603		9614207624		1/2 x 3/8	12.70/9.53	1.831	46.50	
9614207604		9614207625		3/4 x 3/8	19.05/9.53	2.000	50.80	
9614207605		9614207626		3/4 x 1/2	19.05/12.70	2.126	54.00	
9614207606		9614207627		1 x 1/2	25.40/12.70	2.500	63.50	
9614207607		9614207628		1 x 3/4	25.40/19.05	2.126	54.00	
9614207608		9614207629		1 1/2 x 3/4	38.10/19.05	3.000	76.20	
9614207609		9614207630		1 1/2 x 1	38.10/25.40	2.500	63.50	
9614207610		9614207631		2 x 1	50.80/25.40	3.378	85.80	
9614207611		9614207632		2 x 1 1/2	50.80/38.10	2.500	63.50	
9614207612		9614207633		2 1/2 x 1 1/2	63.50/38.10	3.378	85.80	
9614207613		9614207634		2 1/2 x 2	63.50/50.80	2.500	63.50	
9614207614		9614207635		3 x 1 1/2	76.20/38.10	4.252	108.00	
9614207615		9614207636		3 x 2	76.20/50.80	3.378	85.80	
9614207616		9614207637		3 x 2 1/2	76.20/63.50	2.626	66.70	
9614207617		9614207638		4 x 2	101.60/50.80	5.126	130.20	
9614207618		9614207639		4 x 2 1/2	101.60/63.50	7.087	180.00	
9614207619		9614207640		4 x 3	101.60/76.20	3.874	98.40	
9614207620		9614207641		6 x 3	152.40/76.20	7.252	184.20	
				6 x 4	152.40/101.60	5.626	142.90	
<b>DT-4.1.3-2</b>								
<b>B32MS Eccentric reducer</b>								
9614207705		9614207712		3/4 x 1/2	19.05/12.70	2.626	66.70	
9614207801		9614207817		1 x 1/2	25.40/12.70	3.000	76.20	
9614207802		9614207818		1 x 3/4	25.40/19.05	2.626	66.70	
9614207803		9614207819		1 1/2 x 3/4	38.10/19.05	3.500	88.90	
9614207804		9614207820		1 1/2 x 1	38.10/25.40	3.000	76.20	
9614207805		9614207821		2 x 1	50.80/25.40	3.874	98.40	
9614207806		9614207822		2 x 1 1/2	50.80/38.10	3.000	76.20	
9614207807		9614207823		2 1/2 x 1 1/2	63.50/38.10	3.874	98.40	
9614207808		9614207824		2 1/2 x 2	63.50/50.80	3.000	76.20	
9614207809		9614207825		3 x 1 1/2	76.20/38.10	4.752	120.70	
9614207810		9614207826		3 x 2	76.20/50.80	3.878	98.50	
9614207811		9614207827		3 x 2 1/2	76.20/63.50	3.126	79.40	
9614207812		9614207828		4 x 2	101.60/50.80	5.752	146.10	
9614207813		9614207829		4 x 2 1/2	101.60/63.50	4.878	123.90	
9614207814		9614207830		4 x 3	101.60/76.20	4.500	114.30	
9614207815		9614207831		6 x 3	152.40/76.20	8.000	203.20	
9614207816		9614207832		6 x 4	152.40/101.60	6.374	161.90	



Product code: 5076  
 Clamp Ferrules according to DT-7-1

Material: 316L

1.5

Finish Item No. PL (SF1)	PPL EUR	Finish Item No. PM (SF4)	PPL EUR	Size		Dimension A		
				Inch	mm	Inch	mm	
<b>DT-4.1.3-3</b>								
<b>B31S-14MP Concentric reducer</b>								
9614207305		9614207312		¾ x ½	19.05/12.70	3.126	79.40	
9614207401		9614207406		1 x ½	25.40/12.70	3.500	88.90	
9614207402		9614207407		1 x ¾	25.40/19.05	3.126	79.40	
9614207403		9614207408		1½ x ¾	38.10/19.05	4.000	101.60	
9614207501		9614207514		1½ x 1	38.10/25.40	3.500	88.90	
9614207502		9614207515		2 x 1	50.80/25.40	4.374	111.10	
9614207503		9614207516		2 x 1½	50.80/38.10	3.500	88.90	
9614207504		9614207517		2½ x 1½	63.50/38.10	4.374	111.10	
9614207505		9614207518		2½ x 2	63.50/50.80	3.500	88.90	
9614207506		9614207519		3 x 1½	76.20/38.10	5.250	133.35	
9614207507		9614207520		3 x 2	76.20/50.80	4.374	111.10	
9614207508		9614207521		3 x 2½	76.20/63.50	3.626	92.10	
9614207509		9614207522		4 x 2	101.60/50.80	6.250	158.75	
9614207510		9614207523		4 x 2½	101.60/63.50	5.374	136.50	
9614207511		9614207524		4 x 3	101.60/76.20	5.000	127.00	
9614207512		9614207525		6 x 3	152.40/76.20	8.500	215.90	
9614207513		9614207526		6 x 4	152.40/101.60	7.000	177.80	
<b>DT-4.1.3-3</b>								
<b>B32S-14MP Eccentric reducer</b>								
9614207905		9614207912		¾ x ½	19.05/12.70	3.126	79.40	
9614208001		9614208006		1 x ½	25.40/12.70	3.500	88.90	
9614208002		9614208007		1 x ¾	25.40/19.05	3.126	79.40	
9614208003		9614208008		1½ x ¾	38.10/19.05	4.000	101.60	
9614208101				1½ x 1	38.10/25.40	3.500	88.90	
9614208102		9614208115		2 x 1	50.80/25.40	4.374	111.10	
9614208103		9614208116		2 x 1½	50.80/38.10	3.500	88.90	
9614208104		9614208117		2½ x 1½	63.50/38.10	4.374	111.10	
9614208105		9614208118		2½ x 2	63.50/50.80	3.500	88.90	
9614208106		9614208119		3 x 1½	76.20/38.10	5.250	133.35	
9614208107		9614208120		3 x 2	76.20/50.80	4.374	111.10	
9614208108		9614208121		3 x 2½	76.20/63.50	3.626	92.10	
9614208109		9614208122		4 x 2	101.60/50.80	6.250	158.75	
9614208110		9614208123		4 x 2½	101.60/63.50	5.374	136.50	
9614208111		9614208124		4 x 3	101.60/76.20	5.000	127.00	
9614208112		9614208125		6 x 3	152.40/76.20	8.500	215.90	
9614208113		9614208126		6 x 4	152.40/101.60	7.000	177.80	



Product code: 5056  
Clamp Ferrules according to DT-7-1

Material: 316L

1.5

Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension					
						A		B			
PL (SF1)		PM (SF4)		Inch	mm	Inch	mm	Inch	mm		
<b>DT-4.1.4-1</b>											
<b>L14AM Ferrule (3A)</b>											
9615323102		9615323104		½	12.70	1.13	28.58	0.98	25.00	Type	
9615323101		9615323103		¾	19.00	1.13	28.58	0.98	25.00	A	
9615266801		9615266808		1	25.40	1.13	28.58	1.98	50.39	Type B	
9615266802		9615266809		1½	38.10	1.13	28.58	1.98	50.39		
9615266803		9615266810		2	50.80	1.13	28.58	2.52	63.91		
9615266804		9615266811		2½	63.50	1.13	28.58	3.05	77.39		
9615266805		9615266812		3	76.20	1.13	28.58	3.58	90.91		
9615266806		9615266813		4	101.60	1.13	28.58	4.68	118.92		
9615266807		9615266814		6	152.40	1.5	38.10	6.57	166.88		
<b>DT-4.1.4-1, BS14AM Ferrule (3A)</b>											
9634004801		9634004810		½	12.70	1.75	44.45	0.98	25.00	Type	
9634004802		9634004811		¾	19.00	1.75	44.45	0.98	25.00	A	
9634004803		9634004812		1	25.40	1.75	44.45	1.98	50.39	Type B	
9634004804		9634004813		1½	38.10	1.75	44.45	1.98	50.39		
9634004805		9634004814		2	50.80	2.25	57.15	2.52	63.91		
9634004806		9634004815		2½	63.50	2.25	57.15	3.05	77.39		
9634004807		9634004816		3	76.20	2.25	57.15	3.58	90.91		
9634004808		9634004817		4	101.60	2.25	57.15	4.68	118.92		
9634004809		9634004818		6	152.40	3.00	76.20	6.57	166.88		
<b>DT-4.1.4-1, 14WMPS Short ferrule (3A)</b>											
610264		610265		½	12.70	0.50	12.70	0.98	25.00	Type	
610269		610270		¾	19.00	0.50	12.70	0.98	25.00	A	
610274		610275		1	25.40	0.50	12.70	1.98	50.39	Type B	
610276		610812		1½	38.10	0.50	12.70	1.98	50.39		
610790		610277		2	50.80	0.50	12.70	2.52	63.91		
610278		610279		2½	63.50	0.50	12.70	3.05	77.39		
610280		610281		3	76.20	0.50	12.70	3.58	90.91		
610282		610283		4	101.60	0.75	15.88	4.69	118.92		
660028		9615393812		6	152.40	1.50	19.05	6.58	166.88		
<b>DT-4.1.5-2, 16AMP - #7 (3A)End cap</b>											
219123		210009		½ - ¾	19.00	0.19	4.80	0.98	25.00	Type	
210273		210162		1-1½	38.10	0.25	6.40	1.98	50.39	A	
210831		210891		2	50.80	0.25	6.40	2.52	63.91	Type B	
219124		210349		2½	63.50	0.25	6.40	3.05	77.39		
210770		210894		3	76.20	0.25	6.40	3.58	90.91		
210783		210121		4	101.60	0.25	6.40	4.69	118.92		
260214		260213		6	152.40	0.44	11.10	6.58	166.88		
247018		247020		½	12.70	1.69	42.90				
247022		247024		¾	19.00	1.69	42.90				
241546		242099		1	25.40	1.69	42.90				
241678		242100		1½	38.10	1.83	46.48				
241681		242101		2	50.80	2.02	51.34				
242104		242102		2½	63.50	2.14	54.40				
241683		242105		3	76.20	2.30	58.51				
241221		242103		4	101.60	2.52	64.01				
9635000195		9615399001		6	152.40	2.98	75.75				

\* On request

NOTE: For pressure and surface, please see product leaflet. OD/ID and t (wall thickness) please see page 1.5.176



Product code: 5049

1.5

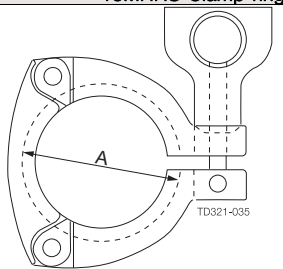
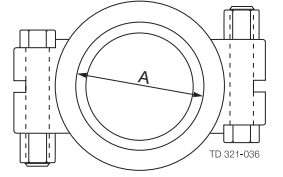
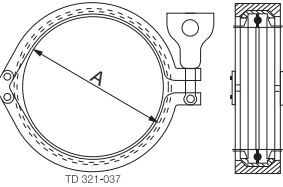
Material Item No.	PPL EUR	Size DN/OD		Dimension A		
		Inch	mm	Inch	mm	
<b>13MHHM Clamp ring</b>						
9613408801		1/2-3/4	12.70-19.00	1.13	28.00	
212195		1-1 1/2	25.40-38.10	2.13	54.00	
212196		2	50.80	2.66	67.50	
212197		2 1/2	63.50	3.19	81.00	
212198		3	76.20	3.72	94.50	
212199		4	101.60	4.83	122.60	
210129		6	152.40	6.69	169.90	
<b>Clamp ring</b>						
9611993113		1	25.40	1.45	37.00	
<b>A13MHHM Clamp ring</b>						
211290		1/2-3/4	12.70-19.00	1.13	28.60	
211053		1 - 1 1/2	25.40-38.10	2.13	54.00	
211054		2	50.80	2.66	67.10	
211055		2 1/2	63.50	3.19	81.00	
211056		3	76.20	3.72	94.50	
211057		4	101.60	4.83	122.20	
211058		6	152.40	6.69	169.90	

NOTE: For pressure and surface, please see product leaflet.



Product code: 5049

1.5

Material Item No.	PPL EUR	Size DN/OD		Dimension A		
		Inch	mm	Inch	mm	
						<b>13MHHS Clamp ring</b>
211283		1-1 1/2	25.40-38.10	2.13	54.00	
211284		2	50.80	2.66	67.50	
211286		2 1/2	63.50	3.19	81.00	
211287		3	76.20	3.72	94.50	
211289		4	101.60	4.83	122.60	
						<b>A13MHP Clamp ring</b>
9615476401		1/2 - 3/4	12.70- 19.00	1.04	26.40	
9615265201		1/2 - 3/4	12.70- 19.00	1.04	26.40	
9615265301		1 - 1 1/2	25.40 - 38.10	2.05	52.00	
9615265401		2	50.80	2.58	65.50	
9615265501		2 1/2	63.50	3.11	79.00	
9615265601		3	76.20	3.64	92.50	
9615265701		4	101.60	4.73	120.30	
9634048982		6	152.40	6.63	168.40	
						<b>A12MPS Clamp ring</b>
210135		1 1/2	38.10	1.98	50.40	
210136		2	50.80	2.52	63.90	
210137		2 1/2	63.50	3.05	77.40	
210138		3	76.20	3.58	90.90	
210140		4	101.60	4.69	119.10	



NOTE: For pressure and surface, please see product leaflet.



Product code: 5046

1.5

Seal rings for type A

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	
<b>42MP-E</b>				<b>42MP-U</b>		<b>42MP-SFY</b>		Inch	<b>42MP Seal ring</b>
290273 290265				290272 290264		290274 290266 9614006403		1/2 3/4 1	
<b>42MP-G</b>		<b>42MP-X</b>						Inch	<b>42MP Seal ring</b>
290270 290271 9614006404		290090 290099						1/2 3/4 1	

Seal rings for type B

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	
<b>40MP-E</b>				<b>40MP-U</b>		<b>40MP-SFY</b>		Inch	<b>40MP/MO Seal ring</b>
290141 290044 290043 290048 290036 290018 290234				298451 298452 298453 298454 298455 298456 290112		290009 290022 290030 290040 290049 290053 290220		1 1 1/2 2 2 1/2 3 4 6	
<b>40MP-G</b>		<b>40MP-X</b>		<b>40MP-UW</b>		<b>40MP-SFYW</b>		Inch	<b>40MP/MO Seal ring</b>
298224 298227 298228 298223 298225 298226 298235		298512 298507 298508 298509 298510 298511 **		298501 298495 298496 298499 298497 298498 290195		290071 290070 290062 290057 290055 290086 Not available		1 1 1/2 2 2 1/2 3 4 6	

\*\* Not available

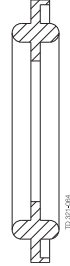
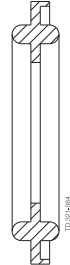
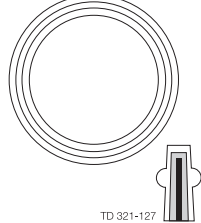
Material Descriptions

Code Letter	Material	Code Letter	Material
E	EPDM	U	Buna N
G	PTFE	UW	White Buna N
SFY	Steam Resistant Fluoroelastomer	SFY-W	White Viton
		X	Silicone (Q)



Product code: 5046

1.5

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size	
<b>40MPF-E</b>		<b>40MPF-U</b>		<b>40MPF-SFY</b>		<b>Inch</b>	<b>40MPF/MOF Seal ring</b>
290031		298346		290097		1	
290038		298347		290115		1 1/2	
290017		298376		290117		2	
290035		298348		290118		2 1/2	
290138		298375		290119		3	
290025		298349		290172		4	
290131		298220		290182		6	
<b>40MPF-X</b>		<b>40MPF-UW</b>				<b>Inch</b>	<b>40MPF/MOF Seal ring</b>
298411		298308				1	
298412		298431				1 1/2	
298413		298417				2	
298414		290069				2 1/2	
298415		298432				3	
298416		298433				4	
298605		290236				6	
<b>A40MP-GR</b>						<b>Inch</b>	<b>A40MP/A40MO. PTFE Envelope Gasket with SFY Seal ring</b>
290072						1	
290073						1 1/2	
290074						2	
290075						2 1/2	
290076						3	
290077						4	
290085						6	



1.5

Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension				
						A		B		
PL (SF1)		PM (SF4)		Inch	mm	Inch	mm	Inch	mm	14MPHR Hose adapter
210493		210954		1/2 x 1/4	12.70x6.40	1.50	38.10			
210494		210667		1/2 x 3/8	12.70x9.70	1.50	38.10			
210495		210321		1/2 x 1/2	12.70x12.70	1.50	38.10			
210603		**		3/4 x 1/4	19.00x6.40	1.50	38.10			
210604		**		3/4 x 3/8	19.00x9.70	1.50	38.10			
210541		**		3/4 x 1/2	19.00x12.70	1.50	38.10			
210539		210019		3/4 x 3/4	19.00x19.00	1.50	38.10			
210924		210365		1 x 1	25.40x25.40	1.69	42.90			
210369		210370		1 1/2 x 1 1/2	38.10x38.10	1.69	42.90			
210373		210382		2 x 2	50.80x50.80	2.31	58.70			
210386		210387		2 1/2 x 2 1/2	63.50x63.50	2.00	50.80			
210390		210391	*	3 x 3	76.20x76.20	3.11	79.00			
211618		**	*	4 x 4	101.60x101.60	3.41	86.50			
<b>21MP Male NPT adapter</b>										
210577		210579		1/2 x 1/8	12.70x3.20	2.00	50.80	0.40	10.20	
210545		210581		1/2 x 1/4	12.70x6.40	2.00	50.80	0.59	15.00	
210582		210584		1/2 x 3/8	12.70x9.50	2.00	50.80	0.60	15.20	
210537		210586		1/2 x 1/2	12.70x12.70	2.00	50.80	0.78	19.80	
210551		210588		1/2 x 3/4	12.70x19.00	2.00	50.80	0.79	20.10	
**		211551		3/4 x 1/8	19.00x3.20	2.00	50.80	0.40	10.20	
210592		210993		3/4 x 1/4	19.00x6.40	2.00	50.80	0.59	15.00	
210548		210738		3/4 x 3/8	19.00x9.50	2.00	50.80	0.60	15.20	
210538		210593		3/4 x 1/2	19.00x12.70	2.00	50.80	0.78	19.80	
210542		210601		3/4 x 3/4	19.00x19.00	2.00	50.80	0.79	20.10	
219125		210840		1 x 1	25.40x25.40	2.25	57.20	0.69	17.50	
219126		210841		1 1/2 x 1 1/2	38.10x38.10	2.44	61.90	0.72	18.30	
219131		211552		2 x 2	50.80x50.80	2.66	67.50	0.75	19.10	
211549		211553		2 1/2 x 2 1/2	63.50x63.50	3.28	83.30	1.38	34.90	
210591		211554		3 x 3	76.20x76.20	3.50	88.90	1.20	30.60	
211550				4 x 4	101.60x101.60	3.81	96.80	1.30	32.90	

\* On request

\*\* Not available





Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension A		22MP Female NPT adapter
				Inch	mm	Inch	mm	
210686		211559		1/2 x 1/8	12.70x3.20	1.25	31.80	
210367		210878		1/2 x 1/4	12.70x6.40	1.50	38.10	
210420		211562		1/2 x 3/8	12.70x9.70	1.50	38.10	
210550		210055		1/2 x 1/2	12.70x12.70	1.50	38.10	
210543		211145		1/2 x 3/4	12.70x19.00	1.62	41.10	
210554		211564		3/4 x 1/8	19.00x3.20	1.25	31.80	
210557		211566		3/4 x 1/4	19.00x6.40	1.50	38.10	
210560				3/4 x 3/8	19.00x9.50	1.50	38.10	
210563		211144		3/4 x 1/2	19.00x12.70	1.50	38.10	
210536		210567		3/4 x 3/4	19.00x19.00	1.62	41.10	
219129		211570		1 x 1	25.40x25.40	1.63	41.30	
210460		210897		1 1/2 x 1 1/2	38.10x38.10	2.25	57.20	
210459		210769		2 x 2	50.80x50.80	2.34	59.20	
211558		211571		2 1/2 x 2 1/2	63.50x63.50	2.09	53.20	
210915		211572		3 x 3	76.20x76.20	2.19	55.60	
211560				4 x 4	101.60x101.60	2.66	67.50	

NOTE: For pressure and surface, please see product leaflet.

OD/ID and t (wall thickness) please see page 1.5.176



1.5

Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN/OD		Dimension						B2UMPBOA (3A)
						A		B		C		
PL (SF1)		PM (SF4)		Inch	mm	Inch	mm	Inch	mm	Inch	mm	
9634037401		9634037428		1 x 1/2	25.40x12.70	3.00	76.20	3.00	76.20	4.13	104.80	
9634037402		9634037429		1 x 3/4	25.40x19.00	3.00	76.20	3.00	76.20	4.13	104.80	
9634037403		9634037430		1 1/2 x 1/2	38.10x12.70	4.50	114.30	4.50	114.30	5.88	149.20	
9634037404		9634037431		1 1/2 x 3/4	38.10x19.00	4.50	114.30	4.50	114.30	5.88	149.20	
9634037405		9634037432		1 1/2 x 1	38.10x25.40	4.50	114.30	4.50	114.30	5.88	149.20	
9634037406		9634037433		2 x 1/2	50.80x12.70	5.00	127.00	6.00	152.40	6.63	168.30	
9634037407		9634037434		2 x 3/4	50.80x19.00	5.00	127.00	6.00	152.40	6.63	168.30	
9634037408		9634037435		2 x 1	50.80x25.40	5.00	127.00	6.00	152.40	6.63	168.30	
9634037409		9634037436		2 x 1 1/2	50.80x38.10	5.00	127.00	6.00	152.40	6.63	168.30	
9634037410		9634037437		2 1/2 x 1/2	63.50x12.70	5.75	146.10	7.50	190.50	7.63	193.70	
9634037411		9634037438		2 1/2 x 3/4	63.50x19.00	5.75	146.10	7.50	190.50	7.63	193.70	
9634037412		9634037439		2 1/2 x 1	63.50x25.40	5.75	146.10	7.50	190.50	7.63	193.70	
9634037413		9634037440		2 1/2 x 1 1/2	63.50x38.10	5.75	146.10	7.50	190.50	7.63	193.70	
9634037414		9634037441		2 1/2 x 2	63.50x50.80	5.75	146.10	7.50	190.50	7.63	193.70	
9634037415		9634037442		3 x 1/2	76.20x12.70	6.50	165.10	9.00	228.60	8.63	219.10	
9634037416		9634037443		3 x 3/4	76.20x19.00	6.50	165.10	9.00	228.60	8.63	219.10	
9634037417		9634037444		3 x 1	76.20x25.40	6.50	165.10	9.00	228.60	8.63	219.10	
9634037418		9634037445		3 x 1 1/2	76.20x38.10	6.50	165.10	9.00	228.60	8.63	219.10	
9634037419		9634037446		3 x 2	76.20x50.80	6.50	165.10	9.00	228.60	8.63	219.10	
9634037420				3 x 2 1/2	76.20x63.50	6.50	165.10	9.00	228.60	8.63	219.10	
9634037423				4 x 1	101.60x25.40	8.50	215.90	12.00	304.80	11.13	282.60	
9634037424				4 x 1 1/2	101.60x38.10	8.50	215.90	12.00	304.80	11.13	282.60	
9634037425				4 x 2	101.60x50.80	8.50	215.90	12.00	304.80	11.13	282.60	

OD/ID and t (wall thickness) please see page 1.5.176



# 1.6 Unique Flexbody

The Alfa Laval Unique Flexbody is a flexible in-line housing to fit instruments or sight glasses into hygienic fluid processing lines. Up to two instruments or sight glasses can be positioned in any pipeline. Its simple, no-dead-zone design makes the Unique Flexbody easy to use, maintain and clean.

<b>Product leaflet</b>	
Unique Flexbody .....	1.6.204
<b>Ordering leaflet</b>	
Unique Flexbody .....	1.6.206



# Alfa Laval Unique Flexbody

## Instrumentation Accessories

1.6

### Introduction

The Alfa Laval Unique Flexbody is a flexible in-line platform or housing to fit instruments or sight glasses into hygienic fluid processing lines. It easily fits into any piping system to enhance process monitoring and control. Up to two instruments or sight glasses can be positioned in any pipeline. Its simple, no-dead-zone design makes the Unique Flexbody easy to use, maintain and clean.

### Application

The Alfa Laval Unique Flexbody is designed to enable various instruments or sight glasses to be installed into any pipeline in hygienic applications across the dairy, food, beverage, brewery and pharmaceutical industries.

### Benefits

- Improve control, measurement and visual inspection of your hygienic fluid process lines
- Higher productivity and profitability
- Ensure process hygiene due to ease of cleaning—no dead zones, domes or sumps
- Two connection sizes fit all instrumentation and sight glasses
- Easy to remove, clean, calibrate and maintain instrumentation or sight glasses

### Standard design

The Unique Flexbody consists of hygienic stainless steel in-line housing, two o-rings, and a choice between either a blind cap and one sight glass or two sight glasses. It can be welded into any piping system with various pipe diameters. The process connection can be sealed with the hygienic blind cap when instrument or sight glass is not attached.

### Working principle

The Unique Flexbody has two openings to accommodate two instruments or sight glasses at the same time. When one or both of the openings is not being used for measurement or visual monitoring, hygienic blind caps can seal the process connections.



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**TECHNICAL DATA****Temperature**

Temperature range:	-5 - 140 °C
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**Pressure**

Max product pressure:	10 bar
Min product pressure:	full vacuum

Please note: apply the relevant temperature and pressure ranges of the instrumentation that is applicable!

**Selection guide**

Select the option Unique Flexbody or Unique Flexbody with sight glasses

Choose the size of the piping.

**Standard configuration**

The Unique Flexbody has two main configurations

The Unique Flexbody includes a housing, one blind cap, one sight glass, 2 clamp rings and 2 O-rings

The Unique Flexbody with sight glass includes a housing, 2 sight glasses, 2 clamp rings and 2 O-rings.

**PHYSICAL DATA****Materials**

Product wetted part:	1.4404 (316L)
Surface finish internal /external:	Ra<0.8 µm
Product wetted elastomer:	EPDM
Sight glass:	Option: FPM Borosilicate

**Available sizes**

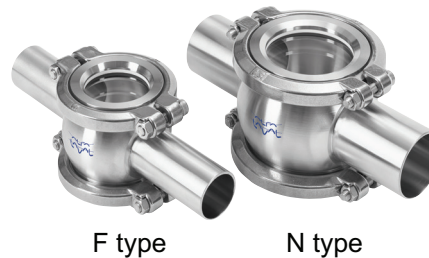
EN 10357-A:	DN25, 40, 50, 60, 80, 100, 125, 150
ISO2037:	ISO25, 38, 51, 63.5, 76.1, 101.6
ASME BPE:	1", 1½", 2", 2½", 3", 4"

**Unique Flexbody F type**

- EN 10357-A: DN 25,
- ISO 2037: ISO 25,
- ASME BPE: 1"

**Unique Flexbody N type**

- EN 10357-A: DN40, 50, 65, 80, 100, 125,
- ISO 2037: ISO 38, 51, 63.5, 76.1, 101.6,
- ASME BPE: 1½", 2", 2½", 3", 4"



F type

N type

1.6

Item no	PPL EUR	Size		Dimensions (mm)			Unique Flexbody ISO with 1 blind cap, 1 sightglass, 2 clamp rings, 2 O-rings
		ISO (2037) DN	Inch	A	B	C	
9614464317		25	1"	180	25	59.4	
9614464318		38	1.5"	180	38	72.0	
9614464319		51	2"	180	51	85.0	
9614464320		63.5	2.5"	250	63.5	96.5	
9614464321		76.1	3"	250	76.1	108.2	
9614464322		101.6	4"	250	101.6	135.6	
Item no	PPL EUR	Size		Dimensions (mm)			Unique Flexbody ISO with 2 sightglasses, 2 clamp rings, 2 O-rings
		ISO (2037) DN	Inch	A	B	C	
9614464323		25	1"	180	25	59.4	
9614464324		38	1.5"	180	38	72.0	
9614464325		51	2"	180	51	85.0	
9614464326		63.5	2.5"	250	63.5	96.5	
9614464327		76.1	3"	250	76.1	108.2	
9614464328		101.6	4"	250	101.6	135.6	

Item no	PPL EUR	Size		Dimensions (mm)			Unique Flexbody DIN with 1 blind cap, 1 sightglass, 2 clamp rings, 2 O-rings
		DIN (EN10357-A) DN	Inch	A	B	C	
9614464301		25	1"	180	29	62.0	
9614464302		40	1½"	180	41	74.0	
9614464303		50	2"	180	53	86.0	
9614464304		65	2½"	250	70	104.0	
9614464305		80	3"	250	85	119.0	
9614464306		100	4"	250	104	138.0	
9614464307		125	5"	250	129	163.0	
9614464308		150	6"	250	154	192.5	

Item no	PPL EUR	Size		Dimensions (mm)			Unique Flexbody DIN with 2 sightglasses, 2 clamp rings, 2 O-rings
		DIN (EN10357-A) DN	Inch	A	B	C	
9614464309		25	1"	180	29	62.0	
9614464310		40	1½"	180	41	74.0	
9614464311		50	2"	180	53	86.0	
9614464312		65	2½"	250	70	104.0	
9614464313		80	3"	250	85	119.0	
9614464314		100	4"	250	104	138.0	
9614464315		125	5"	250	129	163.0	
9614464316		150	6"	250	154	192.5	

Item no	PPL EUR	Size		Dimensions (mm)			Unique Flexbody ASME BPE with 1 blind cap, 1 sightglass, 2 clamp rings, 2 O-rings	
		ASME BPE		A	B	C		
9614464329		1"		180	25.4	59.4		
9614464330		1½"		180	38.1	72.0		
9614464331		2"		180	50.8	85.0		
9614464332		2½"		250	63.5	96.5		
9614464333		3"		250	76.2	108.2		
9614464334		4"		250	101.6	135.6		
		ASME BPE		A	B	Unique Flexbody ASME BPE with 2 sightglasses, 2 clamp rings, 2 O-rings		
9614464335		1"		180	25.4	59.4		
9614464336		1½"		180	38.1	72.0		
9614464337		2"		180	50.8	85.0		
9614464338		2½"		250	63.5	96.5		
9614464339		3"		250	76.2	108.2		
9614464340		4"		250	101.6	135.6		
							<b>Blind cap incl. O-ring</b>	
9614464341		Blind cap for Unique Flexbody type F (DN25)						
9614464342		Blind cap for Unique Flexbody type N (DN38-150)						

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# 1.7 Installation accessories

Tube support systems and tools make our installation material package complete.



**Ordering leaflets**

Tube Holders ISO 2037 tubes .....	1.7.210
Tube Holders DIN 11850 tubes .....	1.7.213
Tube Support System .....	1.7.215
Tools for Unions .....	1.7.220
Tools for Tubing .....	1.7.221
End Caps & Mounting Plates .....	1.7.222

1.7

Material Item No.	PPL EUR	Size DN	Dimension (mm)				Tube holder with welding attachment
			A	B	C (BSP)	D	
1.4301 (304)		mm					
9611850250		25.00	49.00	34.90			
9611850251		38.00	62.00	41.40			
9611850252		51.00	75.00	47.90			
9611850253		63.50	87.60	54.20			
9611850254		76.10	100.00	60.50			
9611850255		101.60	125.60	73.40			
<b>Tube holder without welding attachment</b>							
9612483201		25.00	49.00	14.90			
9612483202		38.00	62.00	21.40			
9612483203		51.00	75.00	27.90			
9612483204		63.50	87.60	34.20			
9612483205		76.10	100.00	40.50			
9612483206		101.60	125.60	53.40			



Product code: 5082

Tube: ISO  
Material: 1.4301 (304)

1.7

Item No.	PPL EUR	Size DN mm	Dimension (mm)				Tube holder with short shaft
			A	B	C	E	
<b>Loose</b>							
9612411107		25.00	80.00	27.00	90.00	21.30	
9612411108		38.00	93.00	40.00	90.00	21.30	
9612411109		51.00	106.00	53.00	90.00	21.30	
9612411110		63.50	118.00	65.50	90.00	21.30	
9612411112		101.60	157.00	104.00	90.00	21.30	
<b>Tight</b>							
9612411101		25.00	78.00	24.00	90.00	21.30	
9612411102		38.00	91.00	38.10	90.00	21.30	
9612411103		51.00	104.00	51.00	90.00	21.30	
9612411104		63.50	116.00	63.50	90.00	21.30	
9612411106		101.60	155.00	101.60	90.00	21.30	
<b>Loose</b>							
9612411119		25.00	80.00	27.00	150.00	21.30	
9612411120		38.00	93.00	40.00	150.00	21.30	
9612411121		51.00	106.00	53.00	150.00	21.30	
9612411122		63.50	118.00	65.50	150.00	21.30	
9612411124		101.60	157.00	104.00	150.00	21.30	
<b>Tight</b>							
9612411113		25.00	78.00	25.40	150.00	21.30	
9612411114		38.00	91.00	38.10	150.00	21.30	
9612411115		51.00	104.00	51.00	150.00	21.30	
9612411116		63.50	116.00	63.50	150.00	21.30	
9612411118		101.60	155.00	101.60	150.00	21.30	
<b>Tight</b>							
9612991005			101.00	48.30	90.00	21.30	
9612991006			113.00	60.30	90.00	21.30	
9612991007			143.00	88.90	90.00	21.30	
9612991008			167.00	114.00	95.00	21.30	



Hinged Hex pipe holders  
 Product code: 5082

Tube: ISO  
 Material: 1.4301 (304)

1.7

Material Item No.	PPL EUR	Size DN mm	Dimension (mm)				HKO, hinged HEX - No Attachment
			A	B	C	D	
9612928213		25.00	25.00	15.00			
9612928214		38.00	38.00	21.50			
9612928215		51.00	51.00	28.00			
9612928216		63.50	63.50	34.50			
9612928217		76.00	76.00	40.50			
9612928218		104.00	104.00	54.50			
<b>HKB, hinged HEX</b>							
9612928219		25.00	25.00	100.00	10.00		
9612928220		38.00	38.00	100.00	10.00		
9612928221		51.00	51.00	100.00	12.00		
9612928222		63.50	63.50	100.00	12.00		
9612928223		76.00	76.00	100.00	12.00		
9612928224		104.00	104.00	100.00	14.00		



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Product code: 5082

Tube: DIN  
Material: 1.4301 (304)

Finish Item No.	PPL EUR	Finish Item No.	PPL EUR	Size DN mm	Dimension (mm)						
<b>Semi bright</b>		<b>Mat</b>			<b>B</b>	<b>C</b>	<b>D</b>				<b>Tube holder with shaft</b>
9611980700		9611980701		10.00	62.50	12.00	8.00				
9611980710		9611980711		15.00	65.50	18.00	8.00				
9611981132		9611981131		20.00	68.50	22.00	8.00				
9611980720		9611980721		25.00	71.50	28.00	10.00				
9611980740		9611980741		40.00	77.50	40.00	10.00				
9611980750		9611980751		50.00	83.50	52.00	12.00				
9611980760		9611980761		65.00	92.50	70.00	12.00				
9611980780		9611980781		80.00	100.00	85.00	12.00				
9611980790		9611980791		100.00	109.50	104.00	12.00				
9611980800		9611980801		125.00	140.50	129.00	16.00				
9611980810		9611980811		150.00	179.50	154.00	16.00				
					<b>A</b>	<b>B</b>	<b>C</b>	<b>H</b>	<b>S</b>	<b>Bolt</b>	<b>Tube holder without shaft</b>
9611981152		9611981151		10.00	51	16	12	36	2	M6x20	
9611981162		9611981161		15.00	57	22	18	42	2	M6x20	
9611981172		9611981171		20.00	61	28	22	46	3	M6x20	
9611981182		9611981181		25.00	67	34	28	52	3	M6x20	
9611981202		9611981201		40.00	79	46	40	64	3	M6x20	
9611981212		9611981211		50.00	91	58	52	76	3	M6x20	
9611981222		9611981221		65.00	109	76	70	94	3	M6x20	
9611981232		9611981231		80.00	124	91	85	109	3	M6x20	
9611981242		9611981241		100.00	143	110	104	128	3	M6x20	
9611981252		9611981251		125.00	168	135	129	153	3	M6x20	
9611981262		9611981261		150.00	193	160	154	178	3	M6x20	

1.7



Product code: 5082

Tube: DIN  
Material: 1.4301 (304)

1.7

Item No.	PPL EUR	Size DN mm	Dimension (mm)					Tube holder with short shaft
			A	B	C	D	E	
<b>Loose</b>								
9612411019		50.00	109.00	54.00	90.00		21.30	
9612411020		65.00	125.00	72.00	90.00		21.30	
9612411021		80.00	139.00	87.00	90.00		21.30	
9612411022		100.00	159.00	106.00		50.00	21.30	
9612411023 9612411024		125.00 150.00	184.00 209.00	131.00 156.00		50.00 50.00	21.30 21.30	
<b>Tight</b>								
9612411003		20.00	72.00	23.00	90.00		21.30	
9612411004		25.00	80.00	29.00	90.00		21.30	
9612411005		32.00	88.00	35.00	90.00		21.30	
9612411006		40.00	94.00	41.00	90.00		21.30	
9612411007		50.00	107.00	53.00	90.00		21.30	
9612411008		65.00	123.00	70.00	90.00		21.30	
9612411009		80.00	137.00	85.00	90.00		21.30	
9612411010		100.00	157.00	104.00		50.00	21.30	
9612411011 9612411012		125.00 150.00	182.00 207.00	129.00 154.00		50.00 50.00	21.30 21.30	

Supports system  
 Product code: 5118, 5084

1.7

Material Item No.	PPL EUR			Size DN	Dimension (mm)			
1.4301 (304)				mm	A	B	C	Square tube
<b>Product code: 5118</b>								
9611831493	*				25.00	25.00	2.00	
9611831496	*				35.00	35.00	2.00	
9611831501	*				40.00	40.00	1.50	
9611831504	*				40.00	40.00	2.00	
9611831513	*				50.00	50.00	2.00	
9611831381	*				50.00	50.00	3.00	
9611831382	*				60.00	60.00	2.00	
9611831383	*				60.00	60.00	3.00	
9611831384	*				80.00	80.00	2.00	
9611831573	*				80.00	80.00	3.00	
9611831387	*				100.00	100.00	3.00	
1.4301 (304)					A	B	C	Rectangular tube
<b>Product code: 5118</b>								
9611831390	*				40.00	20.00	2.00	
9611831391	*				50.00	30.00	2.00	
9611831527	*				60.00	40.00	2.00	
9611831393	*				80.00	40.00	2.00	
9611831565	*				80.00	40.00	3.00	
9611831397	*				100.00	50.00	3.00	

\* PPL prices are updated monthly  
 All tubes are in lengths of 6 meters .



Supports system  
Product code: 5118, 5084

1.7

Material Item No.	PPL EUR			Size DN	Dimension (mm)			
1.4301 (304)					A	B		Flat steel
<b>Product code: 5118</b>								
9611831401	*				20.00	3.00		
9611831403	*				25.00	3.00		
9611831408	*				30.00	6.00		
9611831414	*				40.00	4.00		
9611831416	*				40.00	6.00		
9611831420	*				50.00	8.00		
9611831430	*				100.00	10.00		
1.4301 (304)					A	B		Angle steel
<b>Product code: 5118</b>								
9611831431	*				20.00	3.00		
9611831435	*				40.00	4.00		
9611831436	*				50.00	5.00		
<b>Product code: 5084</b>								
9611850720					110.00	M12		Stud bolt

\* PPL prices are updated monthly  
All tubes are in lengths of 6 meters .





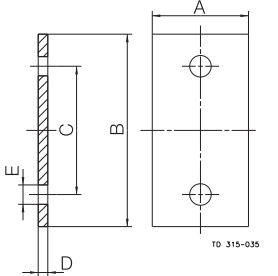
Supports system  
Product code: 5084

1.7

Material Item No.	PPL EUR	Dimension (mm)		Diagram
		A	B	
1.4301 (304) 9611850660		150.00	40.00	<p style="text-align: right;"><b>Floor plate</b></p>
9611850730		150.00	40.00	<p style="text-align: right;"><b>Wall plate, ceiling plate</b></p>
9611850740		150.00	9.00	<p style="text-align: right;"><b>Wall plate, ceiling plate</b></p>

Supports system  
Product code: 5084

1.7

Material Item No.	PPL EUR	Dimension (mm)					Wall plate
		A	B	C	D	E	
9611880370		60.00	120.00	80.00	6.00	13.50	 <p style="text-align: right; font-size: small;">TD 315-035</p>

Supports system  
 Product code: 5084, 5086

Material Item No.	PPL EUR	Size DN	Dimension (mm)			Tube holder
			A	B	C	
Product code: 5084						
9611850530		25.00	40.50	25.00	12.70	
9611850531		38.00	40.50	35.00	19.30	
9611850532		51.00	40.50	35.00	25.60	
9611850533		63.50	40.50	35.00	32.00	
9611850534		76.10	40.50	35.00	38.40	
9611850535		101.60	40.50	35.00	51.20	

1.7



Union spanners  
Product code: 5086

1.7

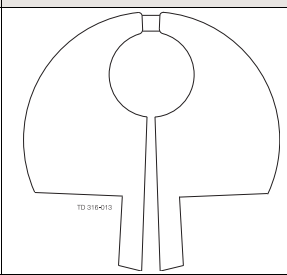
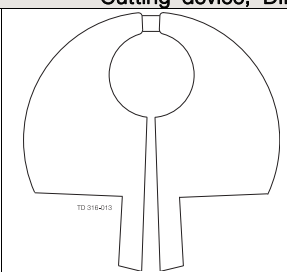
Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)		Spanners for SMS and DS round nuts	
					For nut diam.			
Zink plated steel		Light alloy		mm	A	from	to	
9611980118				25.00		58.00	62.00	
9611980119				38.00		68.00	75.00	
9611980120				51.00		80.00	90.00	
9611980123				63.50		95.00	100.00	
9611980121				76.10		110.00	115.00	
9611980125				101.60		155.00	165.00	
<b>Spanners for IDF round nuts</b>								
9611980117				25.00		45.00	50.00	
9611980118				38.00		58.00	62.00	
9611980119				51.00		68.00	75.00	
9611980120				63.50		80.00	90.00	
9611980121				76.10		110.00	115.00	
9611980126				101.60		135.00	145.00	
<b>Spanner, hexagon nuts - IDF/ISO</b>								
		9611980111		25.00	47.00			
		9611980112		38.00	62.00			
		9611980113		51.00	77.00			
		9611980114		63.50	92.00			
		9611980115		76.10	108.00			
		9611980127		101.60	135.50			
<b>Universal spanners for round nuts</b>								
3131709351				25.00-76.10				
<b>Spanners for RJT (BS) hexagon nuts</b>								
		9611980140		25.00	52.00			
		9611980141		38.00	66.00			
		9611980142		51.00	80.00			
		9611980114		63.50	92.00			
		9611981121		76.10	106.00			

Material Item No.	PPL EUR	Size DN	Dimension (mm)		Universal spanner for ISO/DIN
			For nut diam.		
1.4301 (304)		mm	from	to	
69696		25.00-76.00			
<b>Spanners for DIN</b>					
9611980118		25.00	58.00	62.00	
9611980119		40.00	68.00	75.00	
9611980120		50.00	80.00	90.00	
9611980121		65.00	110.00	115.00	
9611980124		80.00	120.00	125.00	
9611980126		100.00	135.00	145.00	
<b>"C" spanners for DIN</b>					
9611901027		10.00-20.00	35.00	60.00	
9611901028		25.00-40.00	60.00	90.00	
9611901029		50.00-100.00	90.00	155.00	
9611901030		125.00-150.00	155.00	230.00	



Product code: 5086

1.7

Item No.	PPL EUR	Size		Dimension (mm)	Cutting device, ISO
		DN mm	DN mm	Max. thickness of saw blades	
9611981070		25.00		1.40	
9611981071		38.00		1.50	
9611981072		51.00		1.60	
9611981073		63.50		1.70	
9611981074		76.10		1.70	
9611981075		101.60		1.90	
<b>Cutting device, DIN</b>					
9611981080			15.00		
9611981081			20.00		
9611981082			25.00		
9611981084			40.00		
9611981085			50.00		
9611981086			65.00		
9611981087			80.00		
9611981089			100.00		

1.7

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				End cap, ISO
					A	B	C	D	
1.4301 (304)		1.4404 (316L)		mm					
		9612446401		25.00	25.00	21.80	9.00		
		9612446402		38.00	38.00	34.80	10.00		
		9612446403		51.00	51.00	47.80	12.00		
		9612446404		63.50	63.50	60.30	14.00		
		9612446405		76.00	76.00	72.00	17.00		
		9612446406		101.60	101.60	97.60	26.00		

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			
					A	B	C	
<b>1.4301 (304)</b>		<b>1.4404 (316L)</b>		mm				<b>End cap (Polished)</b>
9611901011		9611907350		25.00	28.00	25.00	11.00	
9611901013		9611907352		40.00	40.00	37.00	14.00	
9611901014		9611907353		50.00	52.00	49.00	17.00	
9611901015		9611907354		65.00	70.00	66.00	22.00	
9611901016		9611907355		80.00	85.00	81.00	24.00	
9611901017		9611907356		100.00	104.00	100.00	28.00	
9611901018		9611907357		125.00	129.00	125.00	33.00	
9611901019		9611907358		150.00	154.00	150.00	38.00	
9611901020		9611907359		200.00	204.00	200.00	47.00	
9611901021		9611907360		250.00	254.00	250.00	50.00	
3180153911					120.00	5.00		
3180153912					160.00	8.00		

1.7



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Alfa Laval's innovative technologies are dedicated to purifying, refining, and reusing materials, promoting more responsible use of natural resources. They contribute to improved energy efficiency and heat recovery, better water treatment, and reduced emissions. Thereby, Alfa Laval is not only accelerating success for its customers, but also for people and the planet. Making the world better, every day. It's all about *Advancing better™*.

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