



Alfa Laval DIN fittings and tubes

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1. DIN Fittings and Tubes

Brand-new catalogue for DIN Fittings

Intro	1.1
DIN Fittings and Tubes	1.2
Marking and Surface	1.3
Technical information	1.4
DIN Standard, new surface	1.5
DIN Standard, old surface	1.6
Fit To DIN Tubes	1.7

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Intro

DIN Fittings and Tubes

Introduction

Dear Reader,

You are sitting with our brand-new catalogue for DIN Fittings, but why, a new catalogue?

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"

"DIN Standard, old 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.



DIN Standard, Overview

Product	DIN Standard	Surface ¹	Material ²	Application	Part
Tubes	EN 10357- A/DIN 11850 DIN 11866-A ³	BC, BD, CC and CD H3	1.4307 (304L) 1.4404 (316L) 1.4404 (316L)	Hygienic Aseptic	
Bends, Tees and Reducers	DIN 11852	HSF3 HSF2	1.4307 (304L) 1.4404 (316L)	Hygienic	
	DIN 11865 ³	H3	1.4404 (316L)	Aseptic	For Welding. Ends are ready for Orbital Welding
Connections	DIN 11851	HSF0	1.4307 (304L) 1.4404 (316L)	Hygienic	(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) 1.4404 (316L)	Hygienic	Clamp connection
		H3	1.4404 (316L)		

¹) Surface table is available later in the document

²) 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.

³) We do currently not offer this part of the DIN standard

1.2 DIN Fittings and Tubes

Tubes	1.2.6
Bends, Tees and Reducers	1.2.8
Connections	1.2.10

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	2
DN65	70	66	
DN80	85	81	
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

DIN Fittings and Tubes

Tubes

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.

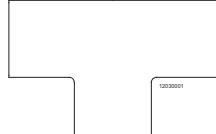
Comment to DIN 11851 W

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".

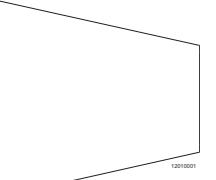
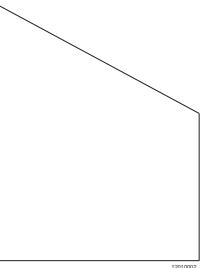
DIN 11850 Reihe 1, different measures up to DN50:

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 $d_1=d_2$	Standard Tee	
	RTS $d_1>d_2$ (d_2 pointing down)	Reduced Tee	
	TK $d_1=d_2$	Short Tee	
	RTK $d_1>d_2$ (d_2 pointing down)	Reduced Short Tee	

Reducers

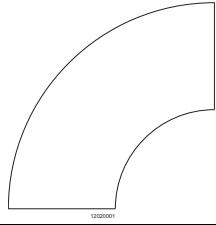
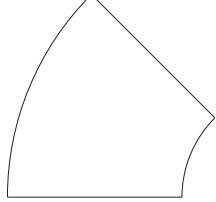
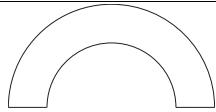
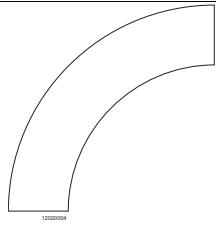
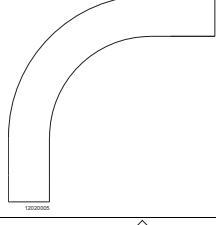
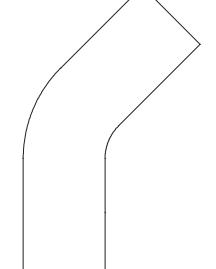
Type Name	Design Name	Comment	Picture
Reducers	RK	Concentric Reducer	
	RE	Eccentric Reducer	

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
Bends	BS-90	Standard Bend 90 Degrees	 1202001
	BS-45	Standard Bend 45 Degrees	 1202002
	BS-180	Standard Bend 180 Degrees	 1202003
	BA5-903	Radius and l_0 are the same in mm	 1202004
	BL-90	Long Bend 90	 1202005
	BL-45	Long Bend 45	 1202006

Connections

Overview

DIN Standard	Surface	Material (Steel parts)	Material (Rubber parts)	Part	Seal Type
DIN 11851	HSF0	1.4307 (304L) 1.4404 (316L)	EPDM FPM NBR PTFE Q	Screw Connection W: Expanding (only 11851, Liner and Male end are expanded to the tube) S: Welding	 15100001
DIN 11853	H3	1.4404 (316L)	FPM EPDM	1: Screw Connection 2: Flange Connection 3: Clamp Connection	 15100002
DIN 11864	H3	1.4404 (316L)	FPM EPDM	1: Screw Connection 2: Flange Connection 3: Clamp Connection	 15100002
DIN 32676	HSF0	1.4307 (304L) 1.4404 (316L)	PTFE FPM	Clamp Connection	 15100003
	H3	1.4404 (316L)			 15100003

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)	Alfa Laval does currently not offer this (real design name is "C")
Liner (Kegelstutzen)	SKD		
Blind Male (Blind-Gewindestutzen)	BC		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
Blind Liner (Blind-Kegelstutzen)	BD		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
Currently not part of offering Flange Groove (Nutflansch)	NF	
Currently not part of offering 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
Currently not part of offering Clamp Liner Groove (Nutklemmstutzen)	NKS	
Currently not part of offering Clamp Liner Collar (Bundklemmstutzen)	BKS	
Blind Clamp Liner Groove (Blindnutklemmstutzen) (Same Item As In 11864-3)	BNKS	K
Blind Clamp Liner Collar (Blindbundklemmstutzen) (Same Item As In 11864-3)	BBKS	
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 11864-1

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	
Blind Clamp Liner Collar (Blindbundklemmstutzen)	BBKS	
Clamp Ring (Klammer)		
O-Ring	R	K

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.

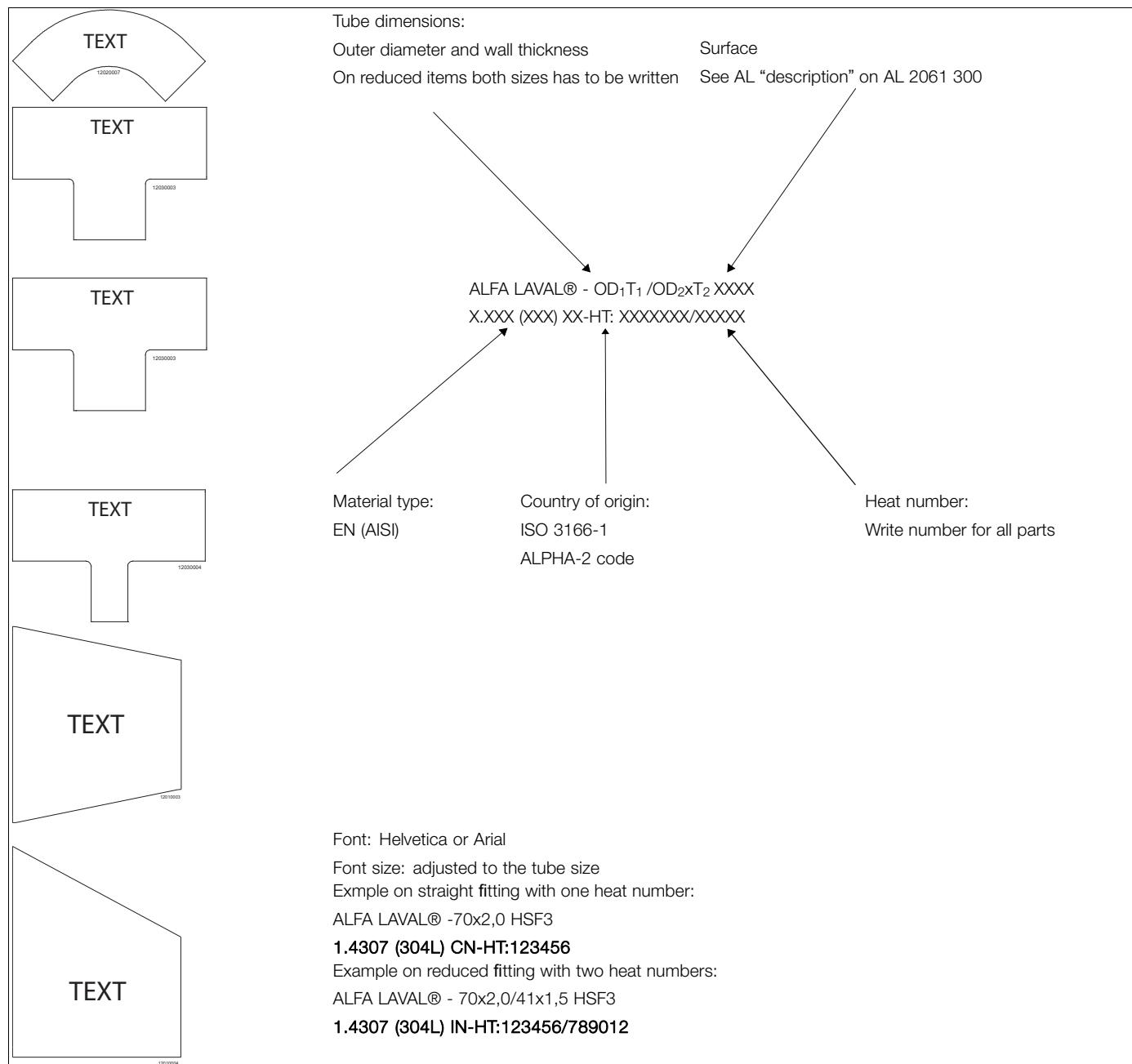
1.3 Marking and Surface

Marking and Surface 1.3.18

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".

Nut	Primary option Secondary option	End cap union and ferrule Blind	End cap flange Blind
Nut			
Male Part		Dimensions: Outer diameter and wall thickness On nut and blanks the standard size is added. Eg.: for DIN: DIN:DN50, For ISO: 2	
Liner		Surface: See "AL description" on AL 2062 301	
Ferrule		ALFA LAVAL® - OD _x T XXXX X.XXX (XXX) ZZ-HT: XXXXXXXX	
Flange		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_a μm ($\mu\text{-inch}$)	
		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_a μm ($\mu\text{-inch}$)			
			Wetted		Not wetted	
			Surface	weld bead	Surface	weld bead
HSF2	DIN (Hygienic)	Polished/Shot blasted	<0.8 (32)	<0.8 (32)	<1.6 (64)	<1.6 (64)
HSF3 ¹	DIN (Hygienic)	Polished/Polished	< 0.8 (32)	< 0.8 (32)	< 0.8 (32)	< 0.8 (32)

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

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

1.4 Technical information

Basics	1.4.22
Rubber material and application	1.4.23
Elastomer review	1.4.24
Pressure ratings	1.4.25
Steelgrades	1.4.28
Treatment of stainless steel	1.4.29

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.

Acrylonitrile 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 acrylonitrileButadiene 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).

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 complied 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		NBR¹⁾	EPDM²⁾	Q³⁾	FPM⁴⁾	PTFE⁵⁾
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 ethereal 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
Resistance			
Steam resistance	Yes	No	Yes
Alkali resistance	Yes	No	Yes
Resistance to fats/oils	No	Yes	Yes
Ozone resistance	Yes	Yes	Yes

EN 10357-A Tubes**Permissible max. Operating Pressures at a temperature of 20°C**

DN	Nominal diameters												
	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

DN	Nominal diameters												
	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							
DN15							
DN20	40	40	25	40	40	25	40
DN25							
DN32							
DN40							
DN50				25			25
DN65		25	16		25	16	
DN80				16			16
DN100							
DN125	16		10			10	
DN150							

Pressure ratings

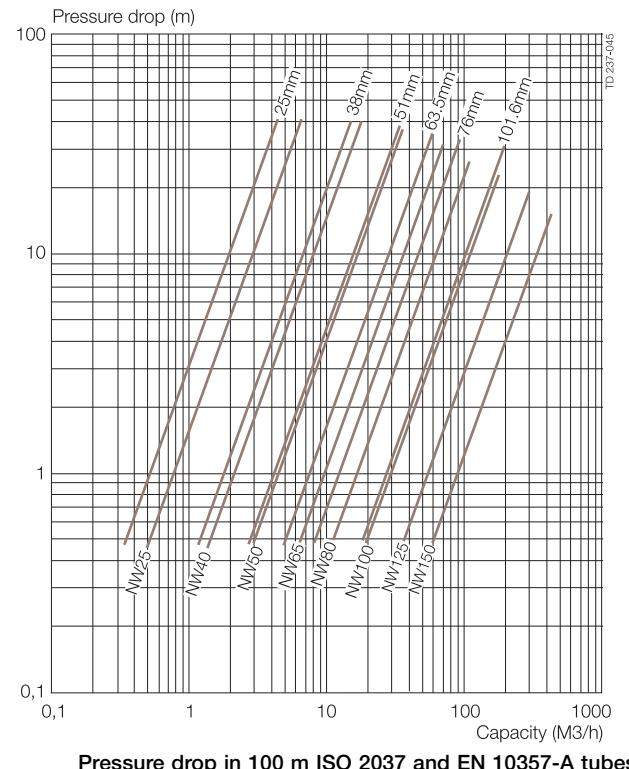
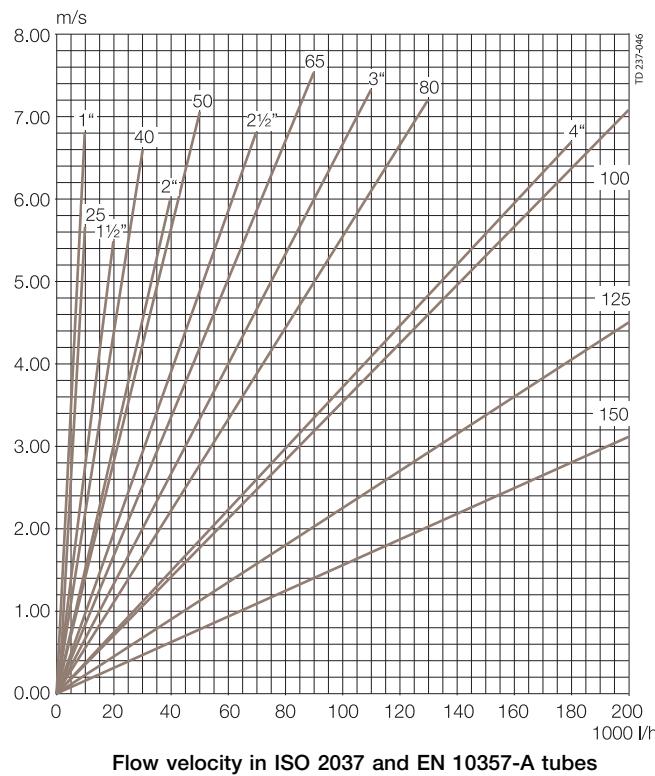
Maximum pressure for the Tubular Fittings [bar]

The pressures are usable up to maximum 150°C

Size	DIN 11852		
	TEES	BENDS	REDUCERS
DN10			
DN15			
DN20			
DN25	25	25	25
DN32			
DN40			
DN50			
DN65	16	16	16
DN80			
DN100	12.5		
DN125	10		
DN150	8	10	10
DN200	5		

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

Pressure drop and flow velocity curves



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.

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 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.

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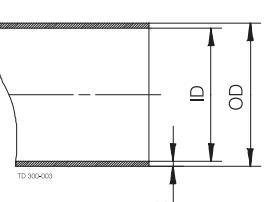
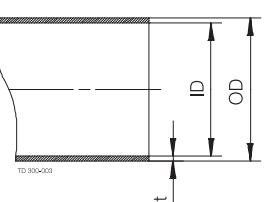
1.5 DIN Standard, new surface

Price lists

Hygienic Tubes EN 10357-A (DIN 11850)	1.5.32
Hygienic Bends DIN 11852	1.5.34
Hygienic Tees DIN 11852	1.5.37
Hygienic Reducers DIN 11852	1.5.43
Hygienic Screw Connections DIN 11851 W (Expanding)	1.5.49
Hygienic Screw Connections DIN 11851 S (Welding)	1.5.50
Hygienic Screw Connections DIN 11853-1	1.5.52
Hygienic Flange Connections DIN 11853-2	1.5.53
Hygienic Clamp Connections DIN 11853-3	1.5.54
Aseptic Screw Connections DIN 11864-1	1.5.55
Aseptic Flange Connections DIN 11864-2	1.5.56
Aseptic Clamp Connections DIN 11864-3	1.5.57
Hygienic Clamp Connections DIN 32676	1.5.58
Blinds for DIN 11851, DIN 11853, DIN 11864 and DIN 32676	1.5.59
Nuts for DIN Screw Connections	1.5.64
Seals for DIN Connections	1.5.65
Clamp Rings for DIN Clamp Connections	1.5.68
Screw and nut set for DIN 11864-2/11853-2	1.5.69

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

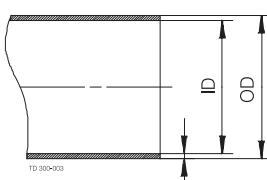
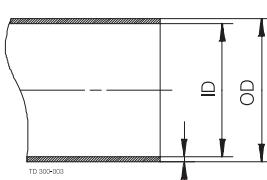
1.5

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	BD finish
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	
BC finish						
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

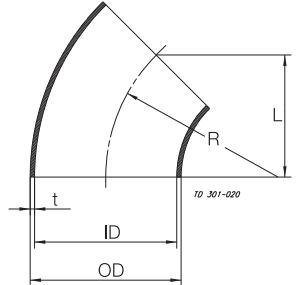
Please contact your Alfa Laval contact person for further information.

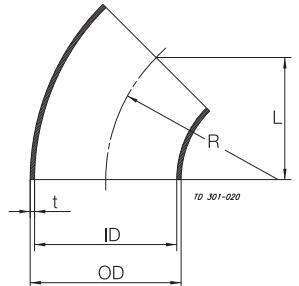
Tubes of manufacturing lengths of approx 6 meters
Product code: 5108

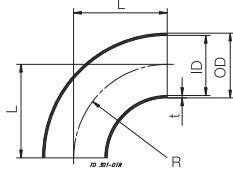
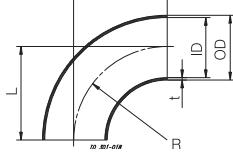
Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)	
1.4301 (304)		1.4404 (316L)		mm	OD/ID x t	CC finish
9611819683	*	9611819528	*	15	19.00/16.00 x 1.50	
9611819684	*	9611819529	*	20	23.00/20.00 x 1.50	
9611819519	*	9611819627	*	25	29.00/26.00 x 1.50	
9611819520	*	9611819628	*	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	
CD finish						
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

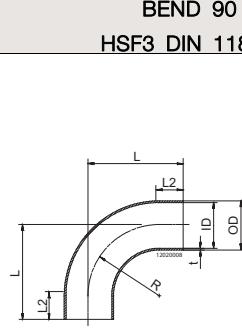
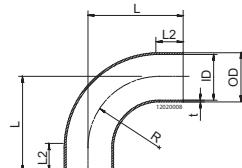
Please contact your Alfa Laval contact person for further information.

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 DIN 11852
9615227331	18.94	9615227343	24.62	10	13.00/10.00 x 1.50	18.38	26.00	
9615227332	20.05	9615227344	26.07	15	19.00/16.00 x 1.50	24.75	35.00	
9615227333	21.17	9615227345	27.52	20	23.00/20.00 x 1.50	28.28	40.00	
9612154642	23.06	9612154611	29.97	25	29.00/26.00 x 1.50	35.36	50.00	
9612154643	25.20	9612154612	32.77	32	35.00/32.00 x 1.50	38.89	55.00	
9612154644	27.67	9612154613	35.97	40	41.00/38.00 x 1.50	42.43	60.00	
9612154645	30.75	9612154614	39.96	50	53.00/50.00 x 1.50	49.5	70.00	
9611293861	42.48	9611293862	55.21	65	70.00/66.00 x 2.00	56.57	80.00	
9611293871	68.40	9611293872	88.92	80	85.00/81.00 x 2.00	63.64	90.00	
9611293881	106.83	9611293882	138.89	100	104.00/100.00 x 2.00	70.71	100.00	
9611293891	187.36	9611293892	243.54	125	129.00/125.00 x 2.00	132.58	187.50	
9611293901	288.21	9611293902	374.68	150	154.00/150.00 x 2.00	159.1	225.00	
9615227359	410.81	9615227360	534.04	200	204.00/200.00 x 2.00	212.13	300.00	

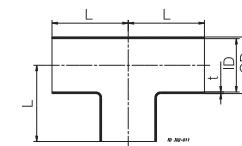
Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			
1.4307 (304)		1.4404 (316L)		mm	OD/IDxt	L	R	BEND 45 BS, HSF2 DIN 11852
9615227307	18.94	9615227319	24.62	10	13.00/10.00 x 1.50	18.38	26.00	
9615227308	20.05	9615227320	26.07	15	19.00/16.00 x 1.50	24.75	35.00	
9615227309	21.17	9615227321	27.52	20	23.00/20.00 x 1.50	28.28	40.00	
9615227310	23.06	9615227322	29.97	25	29.00/26.00 x 1.50	35.36	50.00	
9615227311	25.20	9615227323	32.77	32	35.00/32.00 x 1.50	38.89	55.00	
9615227312	27.67	9615227324	35.97	40	41.00/38.00 x 1.50	42.43	60.00	
9615227313	30.75	9615227325	39.96	50	53.00/50.00 x 1.50	49.5	70.00	
9615227314	42.48	9615227326	55.21	65	70.00/66.00 x 2.00	56.57	80.00	
9615227315	68.40	9615227327	88.92	80	85.00/81.00 x 2.00	63.64	90.00	
9615227316	106.83	9615227328	138.89	100	104.00/100.00 x 2.00	70.71	100.00	
9615227317	187.36	9615227329	243.54	125	129.00/125.00 x 2.00	132.58	187.50	
9615227318	288.21	9615227330	374.68	150	154.00/150.00 x 2.00	159.1	225.00	
9615227357	410.81	9615227358	534.04	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 (304L)		1.4404 (316L)		mm	OD/ID x t	L	R	L2	BEND 90 BS HSF2 DIN 11852	
9615220205	10.96	9615220217	12.94	10	13.00/10.00 x 1.50	26.00	26.00			
9615220206	11.87	9615220218	14.03	15	19.00/16.00 x 1.50	35.00	35.00			
9615220207	12.78	9615220219	15.10	20	23.00/20.00 x 1.50	40.00	40.00			
9615220208	13.69	9615220220	16.18	25	29.00/26.00 x 1.50	50.00	50.00			
9615220209	14.09	9615220221	18.32	32	35.00/32.00 x 1.50	55.00	55.00			
9615220210	16.43	9615220222	19.43	40	41.00/38.00 x 1.50	60.00	60.00			
9615220211	18.26	9615220223	21.59	50	53.00/50.00 x 1.50	70.00	70.00			
9615220212	25.21	9615220224	29.81	65	70.00/66.00 x 2.00	80.00	80.00			
9615220213	40.64	9615220225	48.01	80	85.00/81.00 x 2.00	90.00	90.00			
9615220214	65.17	9615220226	77.02	100	104.00/100.00 x 2.00	100.00	100.00			
9615220215	118.89	9615220227	154.58	125	129.00/125.00 x 2.00	187.50	187.50			
9615220216	196.70	9615220228	255.74	150	154.00/150.00 x 2.00	225.00	225.00			
9615220231	285.47	9615220232	371.12	200	204.00/200.00 x 2.00	300.00	300.00			
BEND 90 BS HSF3 DIN 11852										
9612150558	10.96	9612150508	12.94	10	13.00/10.00 x 1.50	26.00	26.00			
9612150559	11.87	9612150509	14.03	15	19.00/16.00 x 1.50	35.00	35.00			
9612150560	12.78	9612150510	15.10	20	23.00/20.00 x 1.50	40.00	40.00			
9612150561	13.69	9612150511	16.18	25	29.00/26.00 x 1.50	50.00	50.00			
9612150562	14.09	9612150512	18.32	32	35.00/32.00 x 1.50	55.00	55.00			
9612150563	16.43	9612150513	19.43	40	41.00/38.00 x 1.50	60.00	60.00			
9612150564	18.26	9612150514	21.59	50	53.00/50.00 x 1.50	70.00	70.00			
9611301066	25.21	9611309171	29.81	65	70.00/66.00 x 2.00	80.00	80.00			
9611301067	40.64	9611309181	48.01	80	85.00/81.00 x 2.00	90.00	90.00			
9611301068	65.17	9611309191	77.02	100	104.00/100.00 x 2.00	100.00	100.00			
9611309200	118.89	9611309201	154.58	125	129.00/125.00 x 2.00	187.50	187.50			
9611309210	196.70	9611309211	255.74	150	154.00/150.00 x 2.00	225.00	225.00			
9615220233	285.47	9615220234	371.12	200	204.00/200.00 x 2.00	300.00	300.00			

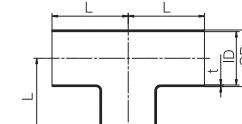
Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				
1.4307 (304L)		1.4404 (316L)		mm	OD/ID x t	L	R	L2	BEND 90 BL HSF2 DIN 11852
9615220125	20.52	9615220137	26.68	10	13.00/10.00 x 1.50	51.00	26.00	25.00	
9615220126	21.93	9615220138	28.50	15	19.00/16.00 x 1.50	60.00	35.00	25.00	
9615220127	23.34	9615220139	30.34	20	23.00/20.00 x 1.50	65.00	40.00	25.00	
9615220128	15.91	9615220140	20.69	25	29.00/26.00 x 1.50	90.00	50.00	40.00	
9615220129	17.90	9615220141	23.27	32	35.00/32.00 x 1.50	95.00	55.00	40.00	
9615220130	20.16	9615220142	26.21	40	41.00/38.00 x 1.50	100.00	60.00	40.00	
9615220131	22.99	9615220143	29.89	50	53.00/50.00 x 1.50	110.00	70.00	40.00	
9615220132	39.09	9615220144	50.81	65	70.00/66.00 x 2.00	120.00	80.00	40.00	
9615220133	62.96	9615220145	81.85	80	85.00/81.00 x 2.00	145.00	90.00	55.00	
9615220134	98.33	9615220146	127.82	100	104.00/100.00 x 2.00	155.00	100.00	55.00	
9615220135	150.99	9615220147	196.29	125	129.00/125.00 x 2.00	245.00	187.50	57.50	
9615220136	249.81	9615220148	324.75	150	154.00/150.00 x 2.00	285.00	225.00	57.50	
9615220175	362.56	9615220176	471.32	200	204.00/200.00 x 2.00	340.00	300.00	57.50	
BEND 90 BL HSF3 DIN 11852									
9615220149	20.52	9615220161	26.68	10	13.00/10.00 x 1.50	51.00	26.00	25.00	
9615220150	21.93	9615220162	28.50	15	19.00/16.00 x 1.50	60.00	35.00	25.00	
9615220151	23.34	9615220163	30.34	20	23.00/20.00 x 1.50	65.00	40.00	25.00	
9615220152	15.91	9615220164	20.69	25	29.00/26.00 x 1.50	90.00	50.00	40.00	
9615220153	17.90	9615220165	23.27	32	35.00/32.00 x 1.50	95.00	55.00	40.00	
9615220154	20.16	9615220166	26.21	40	41.00/38.00 x 1.50	100.00	60.00	40.00	
9615220155	22.99	9615220167	29.89	50	53.00/50.00 x 1.50	110.00	70.00	40.00	
9615220156	39.09	9615220168	50.81	65	70.00/66.00 x 2.00	120.00	80.00	40.00	
9615220157	62.96	9615220169	81.85	80	85.00/81.00 x 2.00	145.00	90.00	55.00	
9615220158	98.33	9615220170	127.82	100	104.00/100.00 x 2.00	155.00	100.00	55.00	
9615220159	150.99	9615220171	196.29	125	129.00/125.00 x 2.00	245.00	187.50	57.50	
9615220160	249.81	9615220172	324.75	150	154.00/150.00 x 2.00	285.00	225.00	57.50	
9615220177	362.56	9615220178	471.32	200	204.00/200.00 x 2.00	340.00	300.00	57.50	



Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			TEE TS HSF3 DIN 11852
					mm	OD/ID x t	L	
1.4307 (304L)		1.4404 (316L)		mm	OD/ID x t	L		TEE TS HSF3 DIN 11852
9612155558	18.84	9612155508	24.49	10	13.00/10.00 x 1.50	26.00		
9612155559	20.40	9612155509	26.53	15	19.00/16.00 x 1.50	35.00		
9612155560	21.98	9612155510	28.58	20	23.00/20.00 x 1.50	40.00		
9612155561	23.56	9612155511	30.62	25	29.00/26.00 x 1.50	50.00		
9612155562	25.75	9612155512	33.48	32	35.00/32.00 x 1.50	55.00		
9612155563	28.26	9612155513	36.74	40	41.00/38.00 x 1.50	60.00		
9612155564	31.40	9612155514	40.82	50	53.00/50.00 x 1.50	70.00		
9611309290	38.48	9611309291	50.02	65	70.00/66.00 x 2.00	80.00		
9611309300	58.09	9611309301	75.52	80	85.00/81.00 x 2.00	90.00		
9611309310	92.64	9611309311	120.30	100	104.00/100.00 x 2.00	100.00		
9611309320	295.65	9611309321	384.34	125	129.00/125.00 x 2.00	187.50		
9611309330	538.76	9611309331	700.39	150	154.00/150.00 x 2.00	225.00		
9615227429	1024.97	9615227430	1332.47	200	204.00/200.00 x 2.00	300.00		

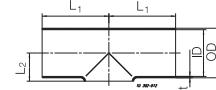


Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			TEE TS HSF2 DIN 11852
					mm	OD/ID x t	L	
1.4307 (304L)		1.4404 (316L)		mm	OD/ID x t	L		TEE TS HSF2 DIN 11852
9615227401	18.84	9615227413	24.49	10	13.00/10.00 x 1.50	26.00		
9615227402	20.40	9615227414	26.53	15	19.00/16.00 x 1.50	35.00		
9615227403	21.98	9615227415	28.58	20	23.00/20.00 x 1.50	40.00		
9615227404	23.56	9615227416	30.62	25	29.00/26.00 x 1.50	50.00		
9615227405	25.75	9615227417	33.48	32	35.00/32.00 x 1.50	55.00		
9615227406	28.26	9615227418	36.74	40	41.00/38.00 x 1.50	60.00		
9615227407	31.40	9615227419	40.82	50	53.00/50.00 x 1.50	70.00		
9615227408	38.48	9615227420	50.02	65	70.00/66.00 x 2.00	80.00		
9615227409	58.09	9615227421	75.52	80	85.00/81.00 x 2.00	90.00		
9615227410	92.64	9615227422	120.30	100	104.00/100.00 x 2.00	100.00		
9615227411	295.65	9615227423	384.34	125	129.00/125.00 x 2.00	187.50		
9615227412	538.76	9615227424	700.39	150	154.00/150.00 x 2.00	225.00		
9615227427	1024.97	9615227428	1332.47	200	204.00/200.00 x 2.00	300.00		



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	L ₁	L ₂	TEE TK HSF3 DIN 11852
9612928701	15.71	9612928711	20.40	15	19.00/16.00 x 1.50	35.00	11.00	
9612928702	16.91	9612928712	21.98	20	23.00/20.00 x 1.50	40.00	13.00	
9612928703	18.12	9612928713	23.56	25	29.00/26.00 x 1.50	50.00	16.00	
9612928704	19.81	9612928714	25.75	32	35.00/32.00 x 1.50	55.00	19.50	
9612928705	21.74	9612928715	28.26	40	41.00/38.00 x 1.50	60.00	23.00	
9612928706	24.15	9612928716	31.40	50	53.00/50.00 x 1.50	70.00	30.00	
9611304580	29.58	9611304582	38.48	65	70.00/66.00 x 2.00	80.00	40.00	
9611304600	44.69	9611304602	58.09	80	85.00/81.00 x 2.00	90.00	47.50	
9611304620	71.26	9611304622	92.64	100	104.00/100.00 x 2.00	100.00	58.00	
9611304640	227.38	9611304642	295.60	125	129.00/125.00 x 2.00	187.50	74.00	
9612150053	414.36	9612150040	538.67	150	154.00/150.00 x 2.00	225.00	90.00	
9615227533	788.31	9615227534	1024.80	200	204.00/200.00 x 2.00	300.00	115.00	

* On request

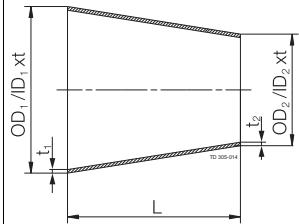


Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			
1.4307 (304L)		1.4404 (316L)		mm	OD/ID x t	L ₁	L ₂	TEE TK HSF2 DIN 11852
9615227504	15.71	9615227516	20.40	15	19.00/16.00 x 1.50	35.00	11.00	
9615227505	16.91	9615227517	21.98	20	23.00/20.00 x 1.50	40.00	13.00	
9615227506	18.12	9615227518	23.56	25	29.00/26.00 x 1.50	50.00	16.00	
9615227507	19.81	9615227519	25.75	32	35.00/32.00 x 1.50	55.00	19.50	
9615227508	21.74	9615227520	28.26	40	41.00/38.00 x 1.50	60.00	23.00	
9615227509	24.15	9615227521	31.40	50	53.00/50.00 x 1.50	70.00	30.00	
9615227510	29.58	9615227522	38.48	65	70.00/66.00 x 2.00	80.00	40.00	
9615227511	44.69	9615227523	58.09	80	85.00/81.00 x 2.00	90.00	47.50	
9615227512	71.26	9615227524	92.64	100	104.00/100.00 x 2.00	100.00	58.00	
9615227513	227.38	9615227525	295.60	125	129.00/125.00 x 2.00	187.50	74.00	
9615227514	414.36	9615227526	538.67	150	154.00/150.00 x 2.00	225.00	90.00	
9615227531	788.31	9615227532	1024.80	200	204.00/200.00 x 2.00	300.00	115.00	

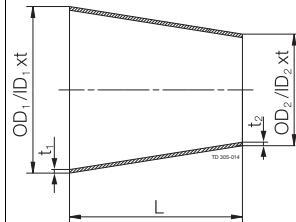


* On request

Item No	PPL Eur	item No	PPL Eur	Size DN	Dimension (mm)			RED RK HSF3 DIN 11852
					mm	OD ₁ /ID ₁ x t ₁	OD ₂ /ID ₂ x t ₂	
1.4307 (304L)		1.4404 (316L)						
9615227039	190.70	9615317239	215.59	150/65	154.00/150.00 x 2.00	70.00/66.00 x 2.00	151.00	
9615227040	154.96	9615317240	175.16	150/80	154.00/150.00 x 2.00	85.00/81.00 x 2.00	124.00	
9615227041	123.96	9615317241	140.13	150/100	154.00/150.00 x 2.00	104.00/100.00 x 2.00	90.00	
9615227042	99.17	9615317242	112.11	150/125	154.00/150.00 x 2.00	129.00/125.00 x 2.00	45.00	
9615227043	220.03	9615317243	286.03	200/65	204.00/200.00 x 2.00	70.00/66.00 x 2.00	250.00	
9615227044	217.24	9615317244	282.42	200/80	204.00/200.00 x 2.00	85.00/81.00 x 2.00	222.00	
9615227045	213.52	9615317245	277.58	200/100	204.00/200.00 x 2.00	104.00/100.00 x 2.00	186.00	
9615227046	208.88	9615317246	271.55	200/125	204.00/200.00 x 2.00	129.00/125.00 x 2.00	140.00	
9615227047	204.25	9615317247	265.51	200/150	204.00/200.00 x 2.00	154.00/150.00 x 2.00	93.00	

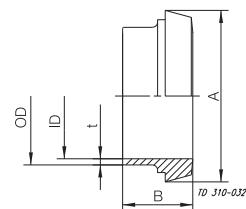
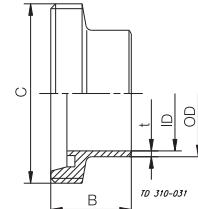


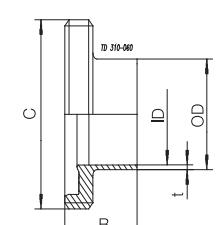
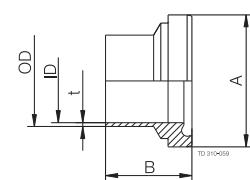
Item No	PPL Eur	item No	PPL Eur	Size DN	Dimension (mm)			RED RK HSF2 DIN 11852
					mm	OD ₁ /ID ₁ x t ₁	OD ₂ /ID ₂ x t ₂	
1.4307 (304L)		1.4404 (316L)						
9615226939	190.70	9615332639	215.59	150/65	154.00/150.00 x 2.00	70.00/66.00 x 2.00	151.00	
9615226940	154.96	9615332640	175.16	150/80	154.00/150.00 x 2.00	85.00/81.00 x 2.00	124.00	
9615226941	123.96	9615332641	140.13	150/100	154.00/150.00 x 2.00	104.00/100.00 x 2.00	90.00	
9615226942	99.17	9615332642	112.11	150/125	154.00/150.00 x 2.00	129.00/125.00 x 2.00	45.00	
9615226943	220.03	9615332643	286.03	200/65	204.00/200.00 x 2.00	70.00/66.00 x 2.00	250.00	
9615226944	217.24	9615332644	282.42	200/80	204.00/200.00 x 2.00	85.00/81.00 x 2.00	222.00	
9615226945	213.52	9615332645	277.58	200/100	204.00/200.00 x 2.00	104.00/100.00 x 2.00	186.00	
9615226946	208.88	9615332646	271.55	200/125	204.00/200.00 x 2.00	129.00/125.00 x 2.00	140.00	
9615226947	204.25	9615332647	265.51	200/150	204.00/200.00 x 2.00	154.00/150.00 x 2.00	93.00	



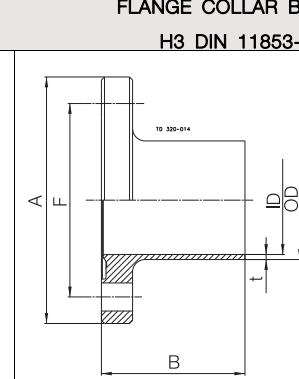
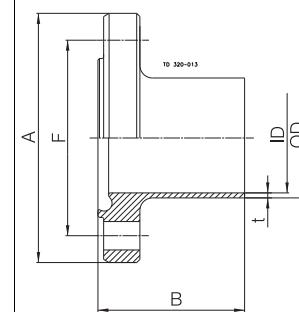
Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				MALE C HSF0 DIN 11851
					mm	A	B	C	
1.4301 (304)		1.4404 (316L)		25		29.00	52 x 1/6	28.20	
3131800391	12.37	9611306602	16.09	32		32.00	58 x 1/6	34.20	
3131800392	13.95	9611306612	18.13	40		33.00	65 x 1/6	40.20	
3131800393	15.75	9611306622	20.47	50		35.00	78 x 1/6	52.20	
3131800394	17.99	9611306632	23.39	65		40.00	95 x 1/6	70.30	
3131800395	24.52	9611306642	31.88	80		45.00	110 x 1/4	85.30	
3131800396	32.62	9611306652	42.41	100		54.00	130 x 1/4	104.30	
3131800398	50.61	9611306662	65.80						TD 310-026
LINER D HSF0 DIN 11851									
3131800151	10.74	9611306672	13.97	25	44.00	22.00		28.20	
3131800152	11.82	9611306682	15.37	32	50.00	25.00		34.20	
3131800153	13.06	9611306692	16.98	40	56.00	26.00		40.20	
3131800154	14.61	9611306702	18.99	50	68.00	28.00		52.20	
3131800155	21.57	9611306712	28.04	65	86.00	32.00		70.30	
3131800156	29.79	9611306722	38.73	80	100.00	37.00		85.30	
3131800158	41.60	9611306732	54.09	100	121.00	44.00		104.30	TD 310-027

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	MALE SC HSF0 DIN 11851
9611306100	7.39	9611306101	9.60	10	13.00/10.00 x 1.50	21.00	28 x 1/8	
9611306110	8.30	9611306111	10.79	15	19.00/16.00 x 1.50	21.00	34 x 1/8	
9611290081	9.22	9611290082	11.99	20	23.00/20.00 x 1.50	24.00	44 x 1/6	
9611301103	10.15	9611331103	13.18	25	29.00/26.00 x 1.50	29.00	52 x 1/6	
9611301104	11.44	9611331104	14.87	32	35.00/32.00 x 1.50	32.00	58 x 1/6	
9611301105	12.91	9611331105	16.79	40	41.00/38.00 x 1.50	33.00	65 x 1/6	
9611301106	14.76	9611331106	19.19	50	53.00/50.00 x 1.50	35.00	78 x 1/6	
9611301107	20.11	9611331107	26.15	65	70.00/66.00 x 2.00	40.00	95 x 1/6	
9611301108	26.75	9611331108	34.77	80	85.00/81.00 x 2.00	45.00	110 x 1/4	
9611301110	41.51	9611331110	53.95	100	104.00/100.00 x 2.00	54.00	130 x 1/4	
9611306130	69.17	9611306131	89.93	125	129.00/125.00 x 2.00	46.00	160 x 1/4	
9611306140	101.46	9611306141	131.88	150	154.00/150.00 x 2.00	50.00	190 x 1/4	
								LINER SD HSF0 DIN 11851
9611306150	6.91	9611306151	8.98	10	13.00/10.00 x 1.50	22.00	17.00	
9611306160	7.54	9611306161	9.81	15	19.00/16.00 x 1.50	28.00	17.00	
9611290091	8.18	9611290092	10.63	20	23.00/20.00 x 1.50	36.00	18.00	
9611301111	8.81	9611331111	11.45	25	29.00/26.00 x 1.50	44.00	22.00	
9611301112	9.69	9611331112	12.61	32	35.00/32.00 x 1.50	50.00	25.00	
9611301113	10.70	9611331113	13.93	40	41.00/38.00 x 1.50	56.00	26.00	
9611301114	11.98	9611331114	15.56	50	53.00/50.00 x 1.50	68.00	28.00	
9611301115	17.69	9611331115	22.99	65	70.00/66.00 x 2.00	86.00	32.00	
9611301116	24.43	9611331116	31.75	80	85.00/81.00 x 2.00	100.00	37.00	
9611301118	34.11	9611331118	44.35	100	104.00/100.00 x 2.00	121.00	44.00	
9611306180	85.99	9611306181	111.80	125	129.00/125.00 x 2.00	150.00	34.00	
9611306190	137.88	9611306191	179.23	150	154.00/150.00 x 2.00	176.00	37.00	



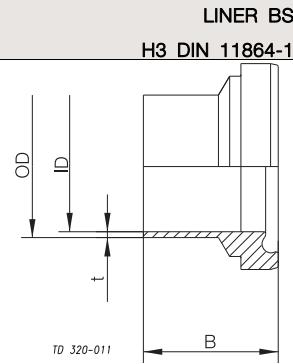
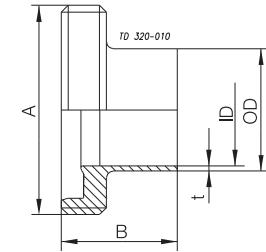
Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)			
1.4307 (304L)		1.4404 (316L)		mm	OD/ID x t	B	C	MALE GS H3 DIN 11853-1
8010000569	13.48	9615362901	16.44	10	13.00/10.00 x 1.50	19.00	28 x 1/8	
8010000571	15.16	9615362902	18.49	15	19.00/16.00 x 1.50	19.00	34 x 1/8	
8010000572	16.85	9615362903	20.55	20	23.00/20.00 x 1.50	21.00	44 x 1/6	
8010000573	18.53	9612928834	22.60	25	29.00/26.00 x 1.50	26.00	52 x 1/6	
8010000574	20.90	9612928835	25.48	32	35.00/32.00 x 1.50	30.00	58 x 1/6	
8010000575	23.60	9612928836	28.78	40	41.00/38.00 x 1.50	31.00	65 x 1/6	
8010000576	26.97	9612928837	32.89	50	53.00/50.00 x 1.50	31.00	78 x 1/6	
8010000577	36.74	9612928838	44.81	65	70.00/66.00 x 2.00	36.00	95 x 1/6	
8010000578	48.88	9612928839	59.62	80	85.00/81.00 x 2.00	42.00	110 x 1/4	
8010000579	75.85	9612928840	92.49	100	104.00/100.00 x 2.00	50.00	130 x 1/4	
					A	B		LINER BS H3 DIN 11853-1
8010000580	11.78	9615363101	14.37	10	13.00/10.00 x 1.50	21.90	17.00	
8010000581	12.86	9615363102	15.69	15	19.00/16.00 x 1.50	27.90	17.00	
8010000582	13.95	9615363103	17.01	20	23.00/20.00 x 1.50	35.90	18.00	
8010000583	15.03	9612928844	18.32	25	29.00/26.00 x 1.50	42.90	22.00	
8010000585	16.54	9612928845	20.17	32	35.00/32.00 x 1.50	48.90	25.00	
8010000586	18.27	9612928846	22.28	40	41.00/38.00 x 1.50	54.90	26.00	
8010000587	20.44	9612928847	24.92	50	53.00/50.00 x 1.50	66.90	30.00	
8010000589	30.16	9612928848	36.78	65	70.00/66.00 x 2.00	84.90	34.00	
8010000590	41.67	9612928849	50.82	80	85.00/81.00 x 2.00	98.90	38.00	
8010000591	58.18	9612928850	70.96	100	104.00/100.00 x 2.00	118.90	46.00	

Item No	PPL EUR	Item No	PPL EUR	Size DN	Dimension (mm)				FLANGE GROOVE NF H3 DIN 11853-2
					mm	OD/ID x t	A	B	
1.4307 (304L)		1.4404 (316L)							
8010000383	28.88	8010000506	36.11	10	13.00/10.00 x 1.50	54.00	25.50	37.00	
8010000384	33.61	8010000507	40.99	15	19.00/16.00 x 1.50	59.00	25.50	42.00	
8010000385	37.61	8010000508	45.87	20	23.00/20.00 x 1.50	64.00	25.50	47.00	
8010000386	41.61	8010000509	50.75	25	29.00/26.00 x 1.50	70.00	25.50	53.00	
8010000388	47.22	8010000510	57.58	32	35.00/32.00 x 1.50	76.00	25.50	59.00	
8010000390	53.62	8010000511	65.39	40	41.00/38.00 x 1.50	82.00	25.50	65.00	
8010000391	61.62	8010000512	75.15	50	53.00/50.00 x 1.50	94.00	25.50	77.00	
8010000392	75.63	8010000513	92.24	65	70.00/66.00 x 2.00	113.00	25.50	95.00	
8010000394	93.64	8010000514	114.20	80	85.00/81.00 x 2.00	133.00	27.50	112.00	
8010000395	180.06	8010000515	219.59	100	104.00/100.00 x 2.00	159.00	27.50	137.00	
8010000396	228.08	8010000516	278.15	125	129.00/125.00 x 2.00	183.00	29.50	161.00	
8010000397	324.12	8010000517	395.26	150	154.00/150.00 x 2.00	213.00	29.50	188.00	
FLANGE COLLAR BF H3 DIN 11853-2									
8010000398	29.61	8010000518	36.11	10	13.00/10.00 x 1.50	54.00	24.00	37.00	
8010000399	33.61	8010000519	40.99	15	19.00/16.00 x 1.50	59.00	24.00	42.00	
8010000400	37.61	8010000520	45.87	20	23.00/20.00 x 1.50	64.00	24.00	47.00	
8010000401	41.61	8010000521	50.75	25	29.00/26.00 x 1.50	70.00	24.00	53.00	
8010000402	47.22	8010000522	57.58	32	35.00/32.00 x 1.50	76.00	24.00	59.00	
8010000403	53.62	8010000523	65.39	40	41.00/38.00 x 1.50	82.00	24.00	65.00	
8010000404	61.62	8010000524	75.15	50	53.00/50.00 x 1.50	94.00	24.00	77.00	
8010000405	75.63	8010000525	92.24	65	70.00/66.00 x 2.00	113.00	24.00	95.00	
8010000406	93.64	8010000526	114.20	80	85.00/81.00 x 2.00	133.00	26.00	112.00	
8010000408	180.06	8010000527	219.59	100	104.00/100.00 x 2.00	159.00	26.00	137.00	
8010000409	228.08	8010000528	278.15	125	129.00/125.00 x 2.00	183.00	28.00	161.00	
8010000410	324.12	8010000529	395.26	150	154.00/150.00 x 2.00	213.00	28.00	188.00	

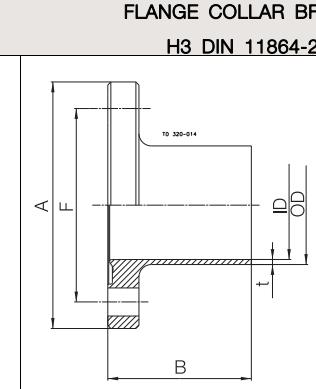
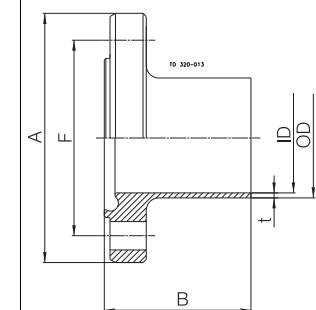


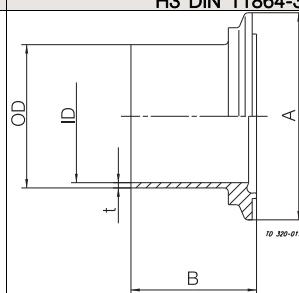
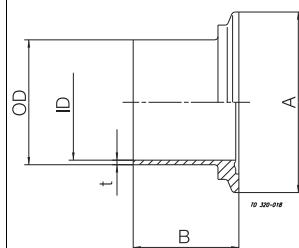
11853-3 NKS and BKS in 1.4404 and H3, not available, please use 11864-3

Material Item No.	PPL EUR	Size DN	Dimension (mm)			
			mm	OD/ID x t	A	
1.4404 (316L)						MALE GS H3 DIN 11864-1
9613403901	19.55	10	13.00/10.00 x 1.50	28 x 1/8	41.00	
9613403902	21.99	15	19.00/16.00 x 1.50	34 x 1/8	41.00	
9613403903	24.44	20	23.00/20.00 x 1.50	44 x 1/6	43.00	
9613403904	26.88	25	29.00/26.00 x 1.50	52 x 1/6	43.00	
9613403905	30.30	32	35.00/32.00 x 1.50	58 x 1/6	48.00	
9613403906	34.22	40	41.00/38.00 x 1.50	65 x 1/6	48.00	
9613403907	39.10	50	53.00/50.00 x 1.50	78 x 1/6	48.00	
9613403908	53.28	65	70.00/66.00 x 2.00	95 x 1/6	60.00	
9613403909	70.87	80	85.00/81.00 x 2.00	110 x 1/4	64.00	
9613403910	109.97	100	104.00/100.00 x 2.00	130 x 1/4	64.00	
LINER BS H3 DIN 11864-1						
9613403911	15.40	10	13.00/10.00 x 1.50		39.00	
9613403912	16.81	15	19.00/16.00 x 1.50		39.00	
9613403913	18.23	20	23.00/20.00 x 1.50		38.00	
9613403914	19.64	25	29.00/26.00 x 1.50		40.00	
9613403915	21.62	32	35.00/32.00 x 1.50		47.00	
9613403916	23.89	40	41.00/38.00 x 1.50		47.00	
9613403917	26.71	50	53.00/50.00 x 1.50		48.00	
9613403918	39.44	65	70.00/66.00 x 2.00		61.00	
9613403919	54.47	80	85.00/81.00 x 2.00		61.00	
9613403920	76.07	100	104.00/100.00 x 2.00		66.00	



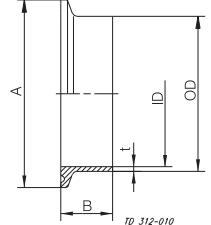
Item No	PPL EUR	Size DN	Dimension (mm)				
			mm	OD/ID x t	A	B	
1.4404 (316L)							FLANGE GROOVE NF H3 DIN 11864-2
9613403921	38.01	10		13.00/10.00 x 1.50	54.00	41.50	37.00
9613403922	43.15	15		19.00/16.00 x 1.50	59.00	41.50	42.00
9613403923	48.28	20		23.00/20.00 x 1.50	64.00	41.50	47.00
9613403924	53.42	25		29.00/26.00 x 1.50	70.00	41.50	53.00
9613403925	60.61	32		35.00/32.00 x 1.50	76.00	46.50	59.00
9613403926	68.83	40		41.00/38.00 x 1.50	82.00	46.50	65.00
9613403927	79.10	50		53.00/50.00 x 1.50	94.00	46.50	77.00
9613403928	97.09	65		70.00/66.00 x 2.00	113.00	55.50	95.00
9613403929	120.20	80		85.00/81.00 x 2.00	133.00	59.50	112.00
9613403930	231.14	100		104.00/100.00 x 2.00	159.00	59.50	137.00
9615331113	292.79	125		129.00/125.00 x 2.00	183.00	61.50	161.00
9615331114	416.07	150		154.00/150.00 x 2.00	213.00	61.50	188.00
FLANGE COLLAR BF H3 DIN 11864-2							
9613403931	38.01	10		13.00/10.00 x 1.50	54.00	40.00	37.00
9613403932	43.15	15		19.00/16.00 x 1.50	59.00	40.00	42.00
9613403933	48.28	20		23.00/20.00 x 1.50	64.00	40.00	47.00
9613403934	53.42	25		29.00/26.00 x 1.50	70.00	40.00	53.00
9613403935	60.61	32		35.00/32.00 x 1.50	76.00	45.00	59.00
9613403936	68.83	40		41.00/38.00 x 1.50	82.00	45.00	65.00
9613403937	79.10	50		53.00/50.00 x 1.50	94.00	45.00	77.00
9613403938	97.09	65		70.00/66.00 x 2.00	113.00	54.00	95.00
9613403939	120.20	80		85.00/81.00 x 2.00	133.00	58.00	112.00
9613403940	231.14	100		104.00/100.00 x 2.00	159.00	58.00	137.00
9615331013	292.79	125		129.00/125.00 x 2.00	183.00	60.00	161.00
9615331014	416.07	150		154.00/150.00 x 2.00	213.00	60.00	188.00

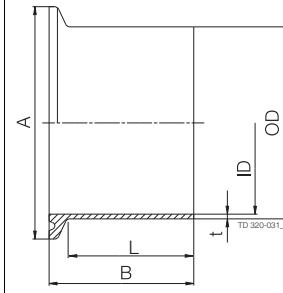


Item No.	PPL-EUR	Size DN	Dimension (mm)			
			mm	OD/ID x t	A	
1.4404 (316L)						CLAMP LINER GROOVE NKS H3 DIN 11864-3
9613403941	50.39	10	13.00/10.00 x 1.50	34.00	39.50	
9613403942	51.57	15	19.00/16.00 x 1.50	34.00	39.50	
9613403943	52.76	20	23.00/20.00 x 1.50	50.50	39.50	
9613403944	53.93	25	29.00/26.00 x 1.50	50.50	40.00	
9613403945	55.59	32	35.00/32.00 x 1.50	50.50	45.50	
9613403946	57.48	40	41.00/38.00 x 1.50	64.00	45.50	
9613403947	59.84	50	53.00/50.00 x 1.50	77.50	46.00	
9613403948	91.11	65	70.00/66.00 x 2.00	91.00	58.00	
9613403949	133.22	80	85.00/81.00 x 2.00	106.00	60.00	
9613403950	195.29	100	104.00/100.00 x 2.00	130.00	61.50	
CLAMP LINER COLLAR BKS H3 DIN 11864-3						
9613403951	50.39	10	13.00/10.00 x 1.50	34.00	38.00	
9613403952	51.57	15	19.00/16.00 x 1.50	34.00	38.00	
9613403953	52.76	20	23.00/20.00 x 1.50	50.50	38.00	
9613403954	53.93	25	29.00/26.00 x 1.50	50.50	38.50	
9613403955	55.59	32	35.00/32.00 x 1.50	50.50	44.00	
9613403956	57.48	40	41.00/38.00 x 1.50	64.00	44.00	
9613403957	59.84	50	53.00/50.00 x 1.50	77.50	44.50	
9613403958	91.11	65	70.00/66.00 x 2.00	91.00	56.50	
9613403959	133.22	80	85.00/81.00 x 2.00	106.00	58.50	
9613403960	195.29	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

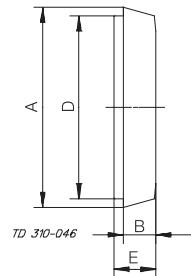
Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			
1.4307 (304L)		1.4404 (316L)		mm	OD/ID x t	A	B	FERRULE KK HSF0 DIN 32676
9612156101	12.91	9612156121	16.79	10	13.00/10.00 x 1.50	34.00	18.00	
9612156102	13.21	9612156122	17.18	15	19.00/16.00 x 1.50	34.00	18.00	
9612156103	13.53	9612156123	17.58	20	23.00/20.00 x 1.50	34.00	18.00	
9612156104	13.82	9612156124	17.97	25	29.00/26.00 x 1.50	50.50	21.50	
9612156105	14.24	9612156125	18.52	32	35.00/32.00 x 1.50	50.50	21.50	
9612156106	14.74	9612156126	19.17	40	41.00/38.00 x 1.50	50.50	21.50	
9612156107	15.34	9612156127	19.93	50	53.00/50.00 x 1.50	64.00	21.50	
9612156108	23.35	9612156128	30.35	65	70.00/66.00 x 2.00	91.00	28.00	
9612156109	34.17	9612156129	44.40	80	85.00/81.00 x 2.00	106.00	28.00	
9612156110	50.07	9612156130	65.08	100	104.00/100.00 x 2.00	119.00	28.00	
9612156141	142.05	9612156145	184.67	125	129.00/125.00 x 2.00	155.00	28.00	
9612156142	161.00	9612156146	209.30	150	154.00/150.00 x 2.00	183.00	28.00	

Item No.	PPL EUR	Size DN	Dimension (mm)				
1.4404 (316L)		mm	OD/ID x t	A	B	L	FERRULE KL HSF0 DIN 32676
9613444001	21.37	10	13.00/10.00 x 1.50	34.00	28.60	23.00	
9613444002	21.87	15	19.00/16.00 x 1.50	34.00	28.60	24.00	
9613444003	22.37	20	23.00/20.00 x 1.50	34.00	28.60	25.00	
9613444004	22.88	25	29.00/26.00 x 1.50	50.50	36.00	30.00	
9613444005	23.58	32	35.00/32.00 x 1.50	50.50	36.00	32.00	
9613444006	24.38	40	41.00/38.00 x 1.50	50.50	36.00	33.00	
9613444007	25.38	50	53.00/50.00 x 1.50	64.00	36.00	33.00	
9613444008	38.64	65	70.00/66.00 x 2.00	91.00	48.00	42.00	
9613444009	56.50	80	85.00/81.00 x 2.00	106.00	48.00	42.00	
9613444010	82.82	100	104.00/100.00 x 2.00	119.00	48.00	44.00	

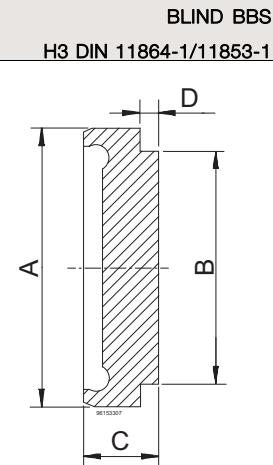
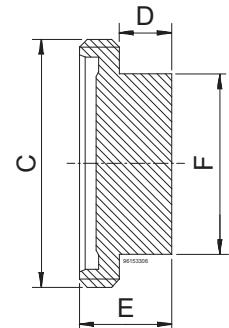
Recommended clamp ring for DIN 32676 FERRULE

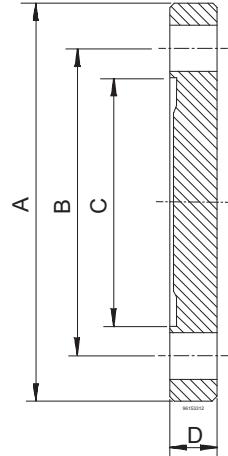
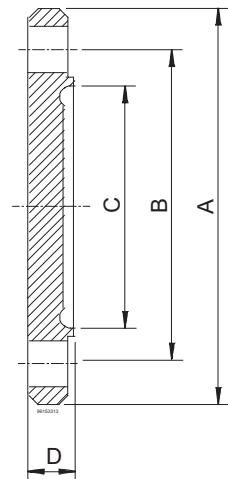
FERRULE DN	Item no. Clamp ring
10	9611993113
15	9611993113
20	9611993113
25	211053
32	211053
40	211053
50	211054
65	211056
80	9611993114
100	211057
125	9611993203
150	9611993204

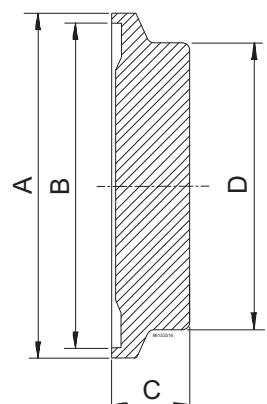
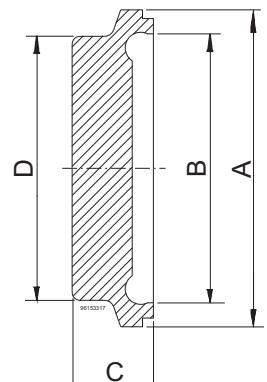
Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				
1.4307 (304L)		1.4404 (316L)		mm	A	B	D	E	BLIND BD HSFO DIN 11851
9611306470	12.40	9612152413	18.89	10	22.50	6.00	18.00	9.00	
9611306480	13.05	9612152414	19.85	15	28.50	6.00	24.00	9.00	
9611291111	13.68	9612152415	20.82	20	36.50	8.00	30.00	11.00	
3131800351	14.32	9612152416	21.79	25	44.00	10.00	35.00	13.00	
3131800352	15.21	9612152417	23.14	32	50.00	10.00	41.00	13.00	
3131800353	16.23	9612152418	24.69	40	56.00	10.00	48.00	13.00	
3131800354	17.50	9612152419	26.64	50	68.50	11.00	61.00	14.00	
3131800355	21.96	9612152420	33.41	65	86.00	12.00	79.00	16.00	
3131800356	31.93	9612152422	48.59	80	100.00	12.00	93.00	16.00	
3131800358	52.51	9612152423	79.90	100	121.00	15.00	114.00	20.00	
9611306500	163.87	9612152424	249.04	125	150.00	17.00	137.00	22.00	
9611306510	321.06	9612152425	487.93	150	176.00	18.00	163.00	24.00	



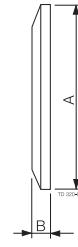
Material Item No.	PPL EUR	Size DN	Dimension (mm)						
1.4404 (316L)		mm	A	B	C	D	E	F	BLIND BGS H3 DIN 11864-1/11853-1
9615330601	31.44	10	22.00	12.00	28 x 1/8	4.00	24.00	13.00	
9615330602	33.04	15	28.00	12.00	34 x 1/8	4.00	24.00	19.00	
9615330603	34.66	20	36.00	14.00	44 x 1/6	5.00	24.00	23.00	
9615330604	36.27	25	43.00	14.00	52 x 1/6	6.00	24.00	29.00	
9615330605	38.52	32	49.00	14.00	58 x 1/6	7.00	24.00	35.00	
9615330606	41.11	40	55.00	14.00	65 x 1/6	7.00	24.00	41.00	
9615330607	44.33	50	67.00	14.00	78 x 1/6	7.00	24.00	53.00	
9615330608	55.61	65	85.00	16.00	95 x 1/6	8.00	28.00	70.00	
9615330609	80.87	80	99.00	20.00	110 x 1/4	8.00	28.00	85.00	
9615330610	132.98	100	119.00	20.00	130 x 1/4	10.00	30.00	104.00	
									BLIND BBS H3 DIN 11864-1/11853-1
9615330701	20.74	10	21.90	18.00	9.00	3.00			
9615330702	21.81	15	27.90	24.00	9.00	3.00			
9615330703	22.88	20	35.90	30.00	10.00	3.00			
9615330704	23.94	25	42.90	35.00	12.00	3.00			
9615330705	25.43	32	48.90	41.00	13.00	3.00			
9615330706	27.13	40	54.90	48.00	13.00	3.00			
9615330707	29.25	50	66.90	61.00	14.00	3.00			
9615330708	36.70	65	84.90	79.00	16.00	4.00			
9615330709	53.37	80	98.90	93.00	16.00	4.00			
9615330710	87.77	100	118.90	114.00	20.00	5.00			



Material Item No.	PPL EUR	Size DN	Dimension (mm)					
1.4404 (316L)		mm	A	B	C	D	E	BLIND BBF H3 DIN 11864-2/11853-2
9615331203	32.90	10	54.00	37.00	22.40	10.00	4.00 x 9.00	
9615331204	34.59	15	59.00	42.00	28.40	10.00	4.00 x 9.00	
9615331205	36.28	20	64.00	47.00	32.40	10.00	4.00 x 9.00	
9615331206	37.97	25	70.00	53.00	38.40	10.00	4.00 x 9.00	
9615331207	40.32	32	76.00	59.00	47.70	10.00	4.00 x 9.00	
9615331208	43.02	40	82.00	65.00	53.70	10.00	4.00 x 9.00	
9615331209	46.40	50	94.00	77.00	65.70	10.00	4.00 x 9.00	
9615331210	58.21	65	113.00	95.00	81.70	10.00	8.00 x 9.00	
9615331211	84.64	80	133.00	112.00	97.70	12.00	8.00 x 11.00	
9615331212	139.19	100	159.00	137.00	116.70	14.00	8.00 x 11.00	
9615331213	434.44	125	183.00	161.00	141.70	14.00	8.00 x 11.00	
9615331214	851.17	150	213.00	188.00	167.70	16.00	8.00 x 14.00	
								
								BLIND BNF H3 DIN 11864-2/11853-2
9615331303	35.63	10	54.00	37.00	22.30	11.50	4.00 x 9.00	
9615331304	37.45	15	59.00	42.00	28.30	11.50	4.00 x 9.00	
9615331305	39.27	20	64.00	47.00	32.30	11.50	4.00 x 9.00	
9615331306	41.11	25	70.00	53.00	38.30	11.50	4.00 x 9.00	
9615331307	43.66	32	76.00	59.00	47.60	11.50	4.00 x 9.00	
9615331308	46.59	40	82.00	65.00	53.60	11.50	4.00 x 9.00	
9615331309	50.24	50	94.00	77.00	65.60	11.50	4.00 x 9.00	
9615331310	63.03	65	113.00	95.00	81.60	11.50	8.00 x 9.00	
9615331311	91.65	80	133.00	112.00	97.60	13.50	8.00 x 11.00	
9615331312	150.72	100	159.00	137.00	116.60	15.50	8.00 x 11.00	
9615331313	470.42	125	183.00	161.00	141.60	15.50	8.00 x 11.00	
9615331314	921.65	150	213.00	188.00	167.60	17.50	8.00 x 14.00	
								

Material Item No.	PPL EUR	Size DN	Dimension (mm)				
1.4404 (316L)		mm	A	B	C	D	BLIND BBKS H3 DIN 11864-3/11853-3
9615331601	25.14	10	34.00	22.40	11.50	25.00	
9615331602	26.44	15	34.00	28.40	11.50	25.00	
9615331603	27.73	20	50.50	32.40	11.50	42.00	
9615331604	29.02	25	50.50	38.40	11.50	42.00	
9615331605	30.82	32	50.50	47.70	11.50	42.00	
9615331606	32.89	40	64.00	53.70	11.50	54.00	
9615331607	35.46	50	77.50	65.70	13.50	62.00	
9615331608	44.49	65	91.00	81.70	13.50	78.00	
9615331609	64.69	80	106.00	97.70	13.50	93.00	
9615331610	106.39	100	130.00	116.70	13.50	115.00	
							BLIND BNKS H3 DIN 11864-3/11853-3
9615331701	25.14	10	34.00	22.40	13.00	25.00	
9615331702	26.44	15	34.00	28.40	13.00	25.00	
9615331703	27.73	20	50.50	32.40	13.00	42.00	
9615331704	29.02	25	50.50	38.40	13.00	42.00	
9615331705	30.82	32	50.50	47.70	13.00	42.00	
9615331706	32.89	40	64.00	53.70	13.00	54.00	
9615331707	35.46	50	77.50	65.70	15.00	62.00	
9615331708	44.49	65	91.00	81.70	15.00	78.00	
9615331709	64.69	80	106.00	97.70	15.00	93.00	
9615331710	106.39	100	130.00	116.70	15.00	115.00	

Material Item No.	PPL EUR	Size DN	Dimension (mm)		
1.4404 (316L)		mm	A	B	BLIND B H3 DIN 32676
9612935302	19.06	10-20	34.00	6.00	
9612935303	21.98	25-40	50.50	6.00	
9612935304	26.86	50	64.00	6.00	
9612935305	33.70	65	91.00	7.00	
9612935306	49.01	80	106.00	8.00	
9612935307	80.60	100	119.00	8.00	
9612935308	251.56	125	155.00	12.00	
9612935301	492.87	150	183.00	12.00	



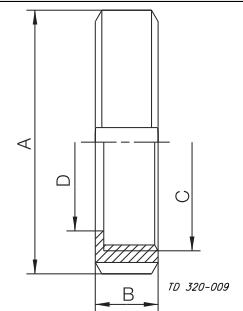
Nuts for DIN Screw Connections

DIN Standard, new surface

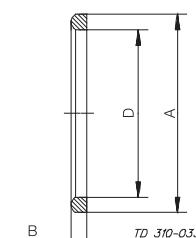
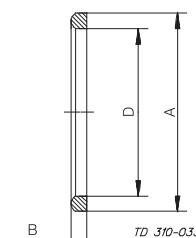
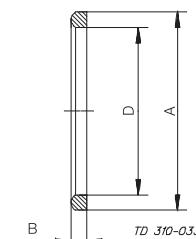
Product code: 5044

1.5

Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)				NUT F HSF0 DIN 11851
					mm	A	B	C	
1.4301 (304)		1.4404 (316L)							
9611306420	10.82	9612150701	21.08	10	38.00	18.00	28 x 1/8	19.00	
9611306430	11.68	9612150702	22.74	15	44.00	18.00	34 x 1/8	25.00	
9611290021	12.54	9612150703	24.41	20	54.00	20.00	44 x 1/6	31.00	
3131800141	13.39	9612150704	26.08	25	63.00	21.00	52 x 1/6	36.00	
3131800142	14.58	9612150705	28.41	32	70.00	21.00	58 x 1/6	42.00	
3131800143	15.97	9612150706	31.08	40	78.00	21.00	65 x 1/6	49.00	
3131800144	17.67	9612150707	34.42	50	92.00	22.00	78 x 1/6	62.00	
3131800145	26.68	9612150708	51.94	65	112.00	25.00	95 x 1/6	80.00	
3131800146	35.67	9612150710	69.47	80	127.00	29.00	110 x 1/4	94.00	
3131800148	54.31	9612150711	105.78	100	148.00	31.00	130 x 1/4	115.00	
9611306450	102.52	9612150712	199.67	125	178.00	34.00	160 x 1/4	138.00	
9611306460	150.72	9612150713	293.55	150	210.00	40.00	190 x 1/4	164.00	



Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)			
NBR		FPM		mm	A	B	D	GASKET G DIN 11851
52734601	1.38	9611991861	4.13	10	20.00	4.50	12.00	
52734602	1.44	9611991862	4.40	15	26.00	4.50	18.00	
52734603	1.52	9611991863	4.50	20	33.00	4.50	23.00	
52734604	1.60	9611991864	4.62	25	40.00	5.00	30.00	
52734605	1.67	9611991865	4.77	32	46.00	5.00	36.00	
52734606	1.77	9611991866	5.52	40	52.00	5.00	42.00	
52734607	1.85	9611991867	5.82	50	64.00	5.00	54.00	
52734608	1.94	9611991868	10.86	65	81.00	5.00	71.00	
9611991264	4.18	9611991869	34.79	75	88.00	5.00	78.00	
52734609	2.04	9611991128	10.38	80	95.00	5.00	85.00	
52734611	2.15	9611991870	17.23	100	114.00	6.00	104.00	
9611991265	4.92	9611991871	29.99	125	142.00	7.00	130.00	
9611991266	6.46	9611991872	34.79	150	167.00	7.00	155.00	
EPDM		Silicone (Q)						GASKET G DIN 11851
9611991267	2.16	9611991917	1.14	10	20.00	4.50	12.00	
9611991268	2.19	9611991918	1.30	15	26.00	4.50	18.00	
9611991323	2.24	9611991919	1.35	20	33.00	4.50	23.00	
9611991269	2.30	9611991920	1.43	25	40.00	5.00	30.00	
9611991270	2.32	9611991921	1.59	32	46.00	5.00	36.00	
9611991271	2.35	9611991922	1.77	40	52.00	5.00	42.00	
9611991272	2.37	9611991923	2.53	50	64.00	5.00	54.00	
9611991273	2.77	9611991924	2.93	65	81.00	5.00	71.00	
9611991274	2.86	9611991925	4.54	75	88.00	5.00	78.00	
9611991275	3.75	9611991926	4.77	80	95.00	5.00	85.00	
9611991276	4.79	9611991927	4.97	100	114.00	6.00	104.00	
9611991277	9.47	9611991928	14.84	125	142.00	7.00	130.00	
9611991278	9.59	9611991929	18.72	150	167.00	7.00	155.00	
PTFE								GASKET G DIN 11851
9611991873	3.49			10	20.00	4.50	12.00	
9611991874	3.65			15	26.00	4.50	18.00	
9611991875	4.77			20	33.00	4.50	23.00	
9611991876	5.17			25	40.00	5.00	30.00	
9611991877	5.41			32	46.00	5.00	36.00	
9611991878	6.25			40	52.00	5.00	42.00	
9611991879	6.82			50	64.00	5.00	54.00	
9611991880	12.17			65	81.00	5.00	71.00	
9611991881	27.73			75	88.00	5.00	78.00	
9611991882	29.30			80	95.00	5.00	85.00	
9611991883	31.32			100	114.00	6.00	104.00	
9611991884	33.73			125	142.00	7.00	130.00	
9611991885	29.99			150	167.00	7.00	155.00	

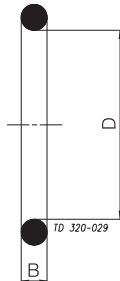


Seals for DIN Connections

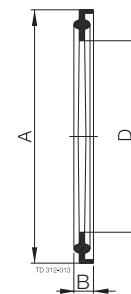
DIN Standard, new surface

Product code: 5035

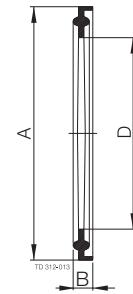
1.5

Item No.	PPL EUR	Item No.	PPL EUR			Size DN	Dimension (mm)		O-RING R DIN 11864/11853
							mm	B	
EPDM		FPM				mm	B	D	O-RING R DIN 11864/11853
9612906201	19.69	9612906211	21.59			10	3.50	12.00	
9612906202	20.56	9612906212	21.72			15	3.50	18.00	
9612906203	22.11	9612906213	38.39			20	3.50	22.00	
9612906204	18.23	9612906214	26.81			25	3.50	28.00	
9612906205	16.76	9612906215	31.06			32	5.00	34.00	
9612906206	16.93	9612906216	31.25			40	5.00	40.00	
9612906207	17.48	9612906217	32.55			50	5.00	52.00	
9612906208	19.30	9612906218	34.53			65	5.00	68.00	
9612906209	27.15	9612906219	41.60			80	5.00	83.00	
9612906210	31.77	9612906220	53.11			100	5.00	102.00	
9612906221	83.89	9612906223	216.85			125	5.00	127.00	
9612906222	104.90	9612906224	318.94			150	5.00	152.00	

Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)			
EPDM		PTFE		mm	A	B	D	GASKET D DIN 32676
9613470001	9.72	9612991586	38.39	10	36.20	5.50	10.20	
9613470002	9.74	9612991587	49.97	15	36.20	5.50	16.20	
9613470003	13.36	9612991588	51.59	20	36.20	5.50	20.20	
9613470004	9.81	9612991589	51.86	25	52.70	5.50	26.20	
9613470005	5.40	9612991590	72.81	32	52.70	5.50	32.20	
9613470006	9.83	9612991591	54.95	40	52.70	5.50	38.20	
9613470007	9.93	9612991592	54.95	50	66.20	5.50	50.20	
9613470008	9.01	9612991593	96.66	65	93.20	5.50	66.20	
9613470009	10.20	9612991594	107.97	80	108.20	5.50	81.20	
9613470010	26.07	9612991595	107.18	100	121.20	5.50	100.20	



Item No.	PPL EUR	Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)			
EPDM		NBR		FPM		mm	A	B	D	GASKET D DIN 32676
9611992009	8.95	9611991999	9.58	9611994182	35.99	10	36.20	5.50	10.20	
9611992010	7.42	9611992000	9.58	9611994183	27.03	15	36.20	5.50	16.20	
9611992011	7.75	9611992001	5.07	9611994184	39.59	20	36.20	5.50	20.20	
9611992012	4.52	9611992002	5.17	9611994185	29.16	25	52.70	5.50	26.20	
9611992013	4.78	9611992003	8.64	9611994186	31.25	32	52.70	5.50	32.20	
9611992014	4.91	9611992004	6.13	9611994187	37.32	40	52.70	5.50	38.20	
9611992015	5.08	9611992005	6.44	9611994188	54.31	50	66.20	5.50	50.20	
9611992016	7.31	9611992006	8.47	9611994189	50.41	65	93.20	5.50	66.20	
9611992017	7.59	9611992007	11.66	9611994190	58.52	80	108.20	5.50	81.20	
9611992018	7.75	9611992008	16.80	9611994191	61.86	100	121.20	5.50	100.20	
9611993205	11.76	*		9611995100	277.01	125	157.20	5.50	125.20	
9611993206	20.39	*		9611993210	225.93	150	185.20	5.50	150.20	



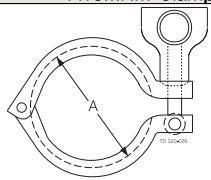
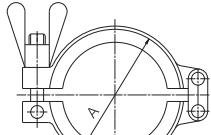
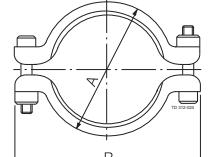
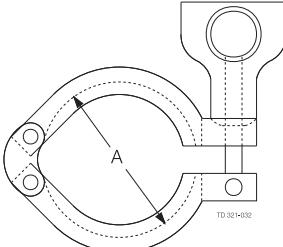
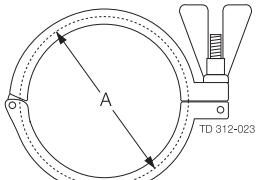
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Clamp Rings for DIN Clamp Connections

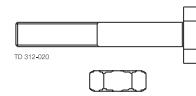
DIN Standard, new surface

Product code: 5049

1.5

Item No.	PPL EUR	Size DN	Dimension (mm)			
			A	B	C	
1.4301 (304)		mm				A13MHM Clamp ring
211053	30.02	25-40	54.00			
211054	36.59	50	67.10			
211056	46.07	65	94.50			
211057	55.92	100	122.20			
Clamp ring						
9611993113	34.69	10-15-20	37.00			
9611993114	61.07	80	109.00			
9611994192	72.92	100	134.00			
9611993203	352.05	125	159.00			
9611993204	429.86	150	187.00			
Clamp ring (Allen Screws)						
9611311051	13.47	25-40	58.50	85.50		
9611311052	13.47	50	72.00	99.00		
9611311054	18.06	65	99.00	126.00		
9611311055	18.32	100	127.00	154.00		
13MHHM						
212195	41.13	25-40	54.00			
212196	46.48	50	67.50			
212198	61.69	65	94.50			
212199	74.84	100	122.60			
Clamp ring, wingnut						
9611994458	34.69	10-20	37.50			
9611994453	34.71	25-40	54.00			
9611994454	42.28	50	67.50			
9611994456	65.63	65	94.50			
9611994459	61.07	80	109.50			
9611994457	74.39	100	122.60			

Item No.	PPL EUR	Flange size DIN/DN	Nuts	Screws	
1.4301 (304)		mm			Screws and nut set
9612905161	17.99	10-50	4 x M8 x 30	4 x M8	
9612905162	20.39	65	8 x M8 x 30	8 x M8	
9612905164	21.60	80	8 x M10 x 35	8 x M10	
9612905165	29.99	100-125	8 x M10 x 40	8 x M10	
9612905166	30.77	150	8 x M12 x 50	8 x M12	



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1.6 DIN Standard, old surface

Price lists

Hygienic Reducers DIN 11852	1.6.72
Hygienic Screw Connections DIN 11851 S (Welding)	1.6.72

Hygienic Screw Connections DIN 11851 S (Welding)

DIN Standard, old surface

Product code: 5044

Finish: Mat

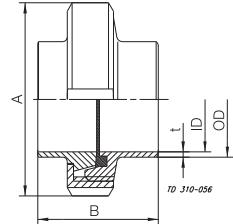
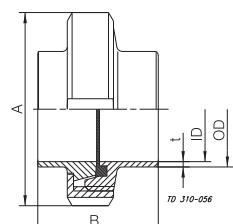
Seals: Nitrile

Thread: Round type

1.6

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				
				mm	OD/ID x t	A	B		
1.4307 (304L)		1.4404 (316L)			Union, Acc. to DIN 11851, 2nd series				
9611305792	39.06	9611305793	*	10	13.00/10.00 x 1.50	38.00	25.00		
9611305802	42.68	9611305803	*	15	19.00/16.00 x 1.50	44.00	25.00		
9611290013	*	9611290014	53.80	20	23.00/20.00 x 1.50	54.00	25.00		
9611306742	50.00	9611306743	58.11	25	29.00/26.00 x 1.50	63.00	31.00		
9611306752	55.06	9611306753	64.10	32	35.00/32.00 x 1.50	70.00	31.00		
9611306762	60.86	9611306763	70.97	40	41.00/38.00 x 1.50	78.00	31.00		
9611306772	68.06	9611306773	79.52	50	53.00/50.00 x 1.50	92.00	33.00		
9611306782	97.79	9611306783	113.96	65	70.00/66.00 x 2.00	112.00	35.00		
9611306792	130.84	9611306793	152.76	80	85.00/81.00 x 2.00	127.00	35.00		
9611306802	194.53	9611306803	226.90	100	104.00/100.00 x 2.00	148.00	41.00		
					A	B	C	D	Nut, acc. to DIN 11851
9611306421	16.60	9612150714	*	10	38.00	18.00	28 x 1/8	19.00	Nut, acc. to DIN 11851
9611306431	17.93	9612150715	23.30	15	44.00	18.00	34 x 1/8	25.00	
9611290022	19.24	9612150716	25.02	20	54.00	20.00	44 x 1/6	31.00	
9611307091	20.56	9612150717	26.74	25	63.00	21.00	52 x 1/6	36.00	
9611307101	22.40	9612150718	29.14	32	70.00	21.00	58 x 1/6	42.00	
9611307111	24.50	9612150719	31.85	40	78.00	21.00	65 x 1/6	49.00	
9611307121	27.14	9612150720	35.29	50	92.00	22.00	78 x 1/6	62.00	
9611307131	40.95	9612150721	53.25	65	112.00	25.00	95 x 1/6	80.00	
9611307141	54.79	9612150723	71.20	80	127.00	29.00	110 x 1/4	94.00	
9611307151	83.41	9612150724	108.42	100	148.00	31.00	130 x 1/4	115.00	
					OD/ID x t	B	C		Male part, Acc. to DIN 11851, 2nd series
9611305902	10.53	9611305903	*	10	13.00/10.00 x 1.50	17.00	28 x 1/8		Male part, Acc. to DIN 11851, 2nd series
9611305912	11.86	9611305913	24.07	15	19.00/16.00 x 1.50	17.00	34 x 1/8		
9611290033	*	9611290034	17.11	20	23.00/20.00 x 1.50	19.00	44 x 1/6		
9611306812	14.47	9611306813	18.83	25	29.00/26.00 x 1.50	22.00	52 x 1/6		
9611306822	16.33	9611306823	21.22	32	35.00/32.00 x 1.50	22.00	58 x 1/6		
9611306832	18.43	9611306833	23.95	40	41.00/38.00 x 1.50	22.00	65 x 1/6		
9611306842	21.05	9611306843	27.38	50	53.00/50.00 x 1.50	23.00	78 x 1/6		
9611306852	28.71	9611306853	37.30	65	70.00/66.00 x 2.00	25.00	95 x 1/6		
9611306862	38.16	9611306863	49.62	80	85.00/81.00 x 2.00	25.00	110 x 1/4		
9611306872	59.23	9611306873	76.98	100	104.00/100.00 x 2.00	30.00	130 x 1/4		
					A	B	C		Liner Acc. to DIN 11851, 2nd series
9611305952	9.86	9611305953	*	10	13.00/10.00 x 1.50	22.00	13.00		Liner Acc. to DIN 11851, 2nd series
9611305962	10.75	9611305963	*	15	19.00/16.00 x 1.50	28.00	13.00		
9611290043	*	9611290044	15.17	20	23.00/20.00 x 1.50	36.00	13.00		
9611306882	12.57	9611306883	16.35	25	29.00/26.00 x 1.50	44.00	15.00		
9611306892	13.82	9611306893	17.97	32	35.00/32.00 x 1.50	50.00	15.00		
9611306902	15.27	9611306903	19.88	40	41.00/38.00 x 1.50	56.00	15.00		
9611306912	17.10	9611306913	22.22	50	53.00/50.00 x 1.50	68.00	16.00		
9611306922	25.24	9611306923	32.81	65	70.00/66.00 x 2.00	86.00	17.00		
9611306932	34.86	9611306933	45.32	80	85.00/81.00 x 2.00	100.00	17.00		
9611306942	48.67	9611306943	63.28	100	104.00/100.00 x 2.00	121.00	20.00		

*On request

Material Item No.	PPL EUR	Size DN	Dimension (mm)			
1.4307 (304L) - NBR		mm	OD/ID x t	A	B	Union, long. Acc. to DIN 11851, 2nd series
9612151313	40.09	10	13.00/10.00 x 1.50	38.00	34.00	
9612151314	43.83	15	19.00/16.00 x 1.50	44.00	34.00	
9612151315	47.59	20	23.00/20.00 x 1.50	54.00	36.00	
9612151316	51.34	25	29.00/26.00 x 1.50	63.00	45.00	
9612151317	56.57	32	35.00/32.00 x 1.50	70.00	51.00	
9612151318	62.53	40	41.00/38.00 x 1.50	78.00	53.00	
9612151319	69.97	50	53.00/50.00 x 1.50	92.00	57.00	
9612151320	100.48	65	70.00/66.00 x 2.00	112.00	65.00	
9612151321	134.50	80	85.00/81.00 x 2.00	127.00	75.00	
9612151322	199.92	100	104.00/100.00 x 2.00	148.00	89.00	
9612151323	455.56	125	129.00/125.00 x 2.00	178.00	70.00	
9612151324	707.25	150	154.00/150.00 x 2.00	210.00	76.00	
EPDM						
9612151325	41.26	10	13.00/10.00 x 1.50	38.00	34.00	
9612151326	44.95	15	19.00/16.00 x 1.50	44.00	34.00	
9612151327	48.66	20	23.00/20.00 x 1.50	54.00	36.00	
9612151328	52.39	25	29.00/26.00 x 1.50	63.00	45.00	
9612151329	57.53	32	35.00/32.00 x 1.50	70.00	51.00	
9612151330	63.40	40	41.00/38.00 x 1.50	78.00	53.00	
9612151331	70.74	50	53.00/50.00 x 1.50	92.00	57.00	
9612151332	101.74	65	70.00/66.00 x 2.00	112.00	65.00	
9612151333	137.07	80	85.00/81.00 x 2.00	127.00	75.00	
9612151334	203.88	100	104.00/100.00 x 2.00	148.00	89.00	
9612151335	549.62	125	129.00/125.00 x 2.00	178.00	70.00	
9612151336	604.36	150	154.00/150.00 x 2.00	210.00	76.00	

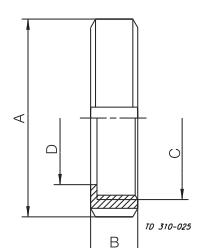
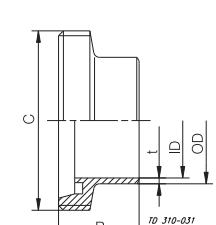
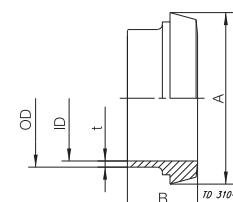
Hygienic Screw Connections DIN 11851 S (Welding)

DIN Standard, old surface

Product code: 5044

Finish: Mat
Thread: Round type

1.6

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				
1.4301 (304)	1.4404 (316L)			mm	A	B	C	D	Nut, acc. to DIN 11851
9611306421	16.60	96112150714	*	10	38.00	18.00	28 x 1/8	19.00	
9611306431	17.93	96112150715	23.30	15	44.00	18.00	34 x 1/8	25.00	
9611290022	19.24	96112150716	25.02	20	54.00	20.00	44 x 1/6	31.00	
9611307091	20.56	96112150717	26.74	25	63.00	21.00	52 x 1/6	36.00	
9611307101	22.40	96112150718	29.14	32	70.00	21.00	58 x 1/6	42.00	
9611307111	24.50	96112150719	31.85	40	78.00	21.00	65 x 1/6	49.00	
9611307121	27.14	96112150720	35.29	50	92.00	22.00	78 x 1/6	62.00	
9611307131	40.95	96112150721	53.25	65	112.00	25.00	95 x 1/6	80.00	
9611307141	54.79	96112150723	71.20	80	127.00	29.00	110 x 1/4	94.00	
9611307151	83.41	96112150724	108.42	100	148.00	31.00	130 x 1/4	115.00	
9611306451	157.41	*	*	125	178.00	34.00	160 x 1/4	138.00	
9611306461	231.45	*	*	150	210.00	40.00	190 x 1/4	164.00	
1.4307 (304L)					OD/ID x t		B	C	Male part, long. Acc. to DIN 11851, 2nd series
9611306102	11.06	9611306103	14.38	10	13.00/10.00 x 1.50		21.00	28 x 1/8	
9611306112	12.44	9611306113	16.17	15	19.00/16.00 x 1.50		21.00	34 x 1/8	
9611290083	13.81	9611290084	17.96	20	23.00/20.00 x 1.50		24.00	44 x 1/6	
9611306952	15.20	9611306953	19.76	25	29.00/26.00 x 1.50		29.00	52 x 1/6	
9611306962	17.14	9611306963	22.28	32	35.00/32.00 x 1.50		32.00	58 x 1/6	
9611306972	19.33	9611306973	25.15	40	41.00/38.00 x 1.50		33.00	65 x 1/6	
9611306982	22.11	9611306983	28.75	50	53.00/50.00 x 1.50		35.00	78 x 1/6	
9611306992	30.12	9611306993	39.18	65	70.00/66.00 x 2.00		40.00	95 x 1/6	
9611307002	40.08	9611307003	52.10	80	85.00/81.00 x 2.00		45.00	110 x 1/4	
9611307012	62.19	9611307013	80.82	100	104.00/100.00 x 2.00		54.00	130 x 1/4	
9611306132	161.94	9611306133	210.51	125	129.00/125.00 x 2.00		46.00	160 x 1/4	
9611306142	152.00	9611306143	197.58	150	154.00/150.00 x 2.00		50.00	190 x 1/4	
					A		B	C	Liner, long. Acc. to DIN 11851, 2nd series
9611306152	10.35	9611306153	13.45	10	13.00/10.00 x 1.50		22.00	17.00	
9611306162	11.30	9611306163	14.69	15	19.00/16.00 x 1.50		28.00	17.00	
9611290093	12.26	9611290094	15.92	20	23.00/20.00 x 1.50		36.00	18.00	
9611307022	13.19	9611307023	17.16	25	29.00/26.00 x 1.50		44.00	22.00	
9611307032	14.52	9611307033	18.89	32	35.00/32.00 x 1.50		50.00	25.00	
9611307042	16.04	9611307043	20.87	40	41.00/38.00 x 1.50		56.00	26.00	
9611307052	17.94	9611307053	23.32	50	53.00/50.00 x 1.50		68.00	28.00	
9611307062	26.49	9611307063	34.44	65	70.00/66.00 x 2.00		86.00	32.00	
9611307072	36.61	9611307073	47.58	80	85.00/81.00 x 2.00		100.00	37.00	
9611307082	51.11	9611307083	66.45	100	104.00/100.00 x 2.00		121.00	44.00	
9611306182	128.83	9611306183	167.49	125	129.00/125.00 x 2.00		150.00	34.00	
9611306192	206.57	9611306193	268.52	150	154.00/150.00 x 2.00		176.00	37.00	

* On request

1.7 Fit To DIN Tubes

Price lists

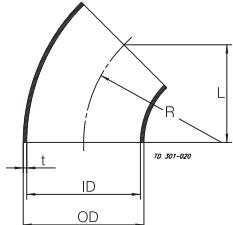
Fit to DIN Tubes, Bends	1.7.76
Fit to DIN Tubes, Tees	1.7.80
FIT To DIN Tubes, Flanges	1.7.83
Fit to DIN Tubes, Seals	1.7.84
Fit to DIN Tubes, End Caps with Thread	1.7.86
Fit To DIN Tubes, Hose Liner	1.7.87
Fit to DIN Tubes, Other Fittings	1.7.88

Fit to DIN Tubes, Bends

Fit To DIN Tubes

Product code: 5012

1.7

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				BEND 45 HSF3
					mm	OD/ID x t	L		
1.4307 (304)	1.4404 (316L)								
9611293821	23.72	9611293822	30.83	25	28.00/25.00 x 1.50	34.00	50.00		
9611293831	25.94	9611293832	33.71	32	34.00/31.00 x 1.50	37.00	55.00		
9611293841	28.46	9611293842	37.00	40	40.00/37.00 x 1.50	41.00	60.00		
9611293851	31.62	9611293852	41.12	50	52.00/49.00 x 1.50	48.00	70.00		
<hr/>									
BEND 45 MAT									
9611293823	22.40	9611293824	29.12	25	28.00/25.00 x 1.50	34.00	50.00		
		9611293834	*	32	34.00/31.00 x 1.50	37.00	55.00		
9611293843	26.87	9611293844	34.94	40	40.00/37.00 x 1.50	41.00	60.00		
9611293853	29.87	9611293854	38.82	50	52.00/49.00 x 1.50	48.00	70.00		

*On request

Fit To DIN Tubes

Fit to DIN Tubes, Bends

Product code: 5012

1.7

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
9612154558	12.17	9612154508	14.39	10	13.00/10.00 x 1.50	38.00	26.00	
9612154559	13.18	9612154509	15.59	15	19.00/16.00 x 1.50	47.00	35.00	
9612154560	14.20	9612154510	16.79	20	23.00/20.00 x 1.50	52.00	40.00	
9612154561	15.22	9612154511	17.98	25	29.00/26.00 x 1.50	70.00	50.00	
9612154562	16.85	9612154512	20.33	32	35.00/32.00 x 1.50	78.00	55.00	
9612154563	18.26	9612154513	21.59	40	41.00/38.00 x 1.50	85.00	60.00	
9612154564	20.29	9612154514	23.99	50	53.00/50.00 x 1.50	97.00	70.00	
9611304060	28.04	9611304062	33.12	65	70.00/66.00 x 2.00	110.00	80.00	
9611304080	45.16	9611304082	53.34	80	85.00/81.00 x 2.00	118.00	90.00	
9611304090	72.41	9611304092	85.58	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
9615220009	12.17	9615220021	14.39	10	13.00/10.00 x 1.50	38.00	26.00	
9615220010	13.18	9615220022	15.59	15	19.00/16.00 x 1.50	47.00	35.00	
9615220011	14.20	9615220023	16.79	20	23.00/20.00 x 1.50	52.00	40.00	
9615220012	15.22	9615220024	17.98	25	29.00/26.00 x 1.50	70.00	50.00	
9615220013	16.85	9615220025	20.33	32	35.00/32.00 x 1.50	78.00	55.00	
9615220014	18.26	9615220026	21.59	40	41.00/38.00 x 1.50	85.00	60.00	
9615220015	20.29	9615220027	23.99	50	53.00/50.00 x 1.50	97.00	70.00	
9615220016	28.04	9615220028	33.12	65	70.00/66.00 x 2.00	110.00	80.00	
9615220017	45.16	9615220029	53.34	80	85.00/81.00 x 2.00	118.00	90.00	
9615220018	72.41	9615220030	85.58	100	104.00/100.00 x 2.00	140.00	100.00	
BEND 90 HSF3 SHORT								
9611309100	12.52	9611309101	14.80	10	12.00/9.00 x 1.50	26.00	26.00	
9611301060	13.58	9611309111	16.04	15	18.00/15.00 x 1.50	35.00	35.00	
9611301061	14.62	9611309131	17.25	20	22.00/19.00 x 1.50	40.00	40.00	
9611301062	15.66	9611309121	18.50	25	28.00/25.00 x 1.50	50.00	50.00	
9611301063	16.07	9611309141	20.89	32	34.00/31.00 x 1.50	55.20	55.00	
9611301064	18.79	9611309151	22.21	40	40.00/37.00 x 1.50	60.00	60.00	
9611301065	20.88	9611309161	24.66	50	52.00/49.00 x 1.50	70.00	70.00	
BEND 90 HSF3								
9611304120	13.92	9611304122	16.44	10	12.00/9.00 x 1.50	38.00	26.00	
9611304130	15.07	9611304132	17.82	15	18.00/15.00 x 1.50	47.00	35.00	
9611293921	16.23	9611293922	19.19	20	22.00/19.00 x 1.50	52.00	40.00	
9611304140	17.40	9611304142	20.56	25	28.00/25.00 x 1.50	70.00	50.00	
9611304150	17.90	9611304152	23.27	32	34.00/31.00 x 1.50	78.00	55.00	
9611304160	20.88	9611304162	24.66	40	40.00/37.00 x 1.50	85.00	60.00	
9611304170	23.20	9611304172	27.40	50	52.00/49.00 x 1.50	97.00	70.00	

Fit to DIN Tubes, Bends

Fit To DIN Tubes

Product code: 5012

Finish: OD: Mat
ID: Mat

1.7

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			
					mm	OD/ID x t	L	
1.4307 (304L)		1.4404 (316L)						Bend 90, 2nd series
9612154565	10.43	9612154527	12.33	10	13.00/10.00 x 1.50	38.00	26.00	
9612154566	11.31	9612154528	13.36	15	19.00/16.00 x 1.50	47.00	35.00	
9612154567	12.17	9612154529	14.39	20	23.00/20.00 x 1.50	52.00	40.00	
9612154568	13.05	9612154530	15.42	25	29.00/26.00 x 1.50	70.00	50.00	
9612154569	14.26	9612154531	16.85	32	35.00/32.00 x 1.50	78.00	55.00	
9612154570	15.66	9612154532	18.50	40	41.00/38.00 x 1.50	85.00	60.00	
9612154571	17.40	9612154533	20.56	50	53.00/50.00 x 1.50	97.00	70.00	
9611304061	24.03	9611304063	28.40	65	70.00/66.00 x 2.00	110.00	80.00	
9611304081	38.69	9611304083	45.73	80	85.00/81.00 x 2.00	118.00	90.00	
9611304091	62.07	9611304093	73.36	100	104.00/100.00 x 2.00	140.00	100.00	
*	*	*	*	125				
*	*	*	*	150				
Not according to standard								
*		9611304123	19.73	10	12.00/9.00 x 1.50	38.00	26.00	
9611304131	18.09	9611304133	21.38	15	18.00/15.00 x 1.50	47.00	35.00	
9611293923	19.48	9611293924	23.02	20	22.00/19.00 x 1.50	52.00	40.00	
9611304141	20.88	9611304143	24.66	25	28.00/25.00 x 1.50	70.00	50.00	
9611304151	22.81	9611304153	26.97	32	34.00/31.00 x 1.50	78.00	55.00	
9611304161	25.05	9611304163	29.60	40	40.00/37.00 x 1.50	85.00	60.00	
9611304171	27.82	9611304173	32.89	50	52.00/49.00 x 1.50	97.00	70.00	
Not according to standard								
9611309102	15.03	9611309103	17.75	10	132.00/9.00 x 1.50	26.00	26.00	
9611309112	16.28	9611309113	19.24	15	18.00/15.00 x 1.50	35.00	35.00	
9611309132	17.53	9611309133	20.71	20	22.00/19.00 x 1.50	40.00	40.00	
9611309122	18.79	9611309123	22.21	25	28.00/25.00 x 1.50	50.00	50.00	
9611309142	20.54	9611309143	24.27	32	34.00/31.00 x 1.50	55.00	55.00	
9611309152	22.54	9611309153	26.64	40	40.00/37.00 x 1.50	60.00	60.00	
9611309162	25.05	9611309163	29.60	50	52.00/49.00 x 1.50	70.00	70.00	

* On request

Fit To DIN Tubes

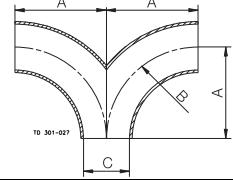
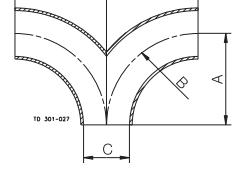
Fit to DIN Tubes, Bends

Product code: 5012

DIN 2351-180° Bend

DIN 2351-180° bend for tube sizes 10 to 100 mm.

1.7

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				Bend 180°, OD: Semi bright, ID: Raw, non standard
				mm	OD/ID x t	A	B	C	
1.4301 (304)		1.4404 (316L)							
				mm	OD/ID x t	A	B	C	
9612156801	*	9612156825	57.09	10	12.00/9.00 x 1.50	52.00			
9612156802	59.29	9612156826	77.09	15	18.00/15.00 x 1.50	68.00			
9612156803	74.66	9612156827	97.06	20	22.00/19.00 x 1.50	76.00			
9612156804	90.03	9612156828	117.05	25	28.00/25.00 x 1.50	100.00			
9612156805	*	9612156829	145.02	32	34.00/31.00 x 1.50	110.00			
9612156806	136.15	9612156830	177.00	40	40.00/37.00 x 1.50	120.00			
9612156807	185.56	9612156831	241.23	50	52.00/49.00 x 1.50	140.00			
9612156808	259.67	9612156832	337.58	65	70.00/66.00 x 2.00	160.00			
9612156809	333.78	9612156833	433.92	80	85.00/81.00 x 2.00	180.00			
9612156810	432.60	9612156834	562.39	100	104.00/100.00 x 2.00	200.00			
Bend 180°, OD/ID: Mat, non standard									
9612156813	*	9612156837	*	10	12.00/9.00 x 1.50	52.00			
9612156814	59.29	9612156838	*	15	18.00/15.00 x 1.50	68.00			
9612156815	*	9612156839	97.06	20	22.00/19.00 x 1.50	76.00			
9612156816	90.03	9612156840	117.05	25	28.00/25.00 x 1.50	100.00			
9612156817	111.56	9612156841	*	32	34.00/31.00 x 1.50	110.00			
9612156818	136.15	9612156842	177.00	40	40.00/37.00 x 1.50	120.00			
9612156819	185.56	9612156843	241.23	50	52.00/49.00 x 1.50	140.00			
9612156820	259.67	9612156844	*	65	70.00/66.00 x 2.00	160.00			
9612156821	333.78	9612156845	*	80	85.00/81.00 x 2.00	180.00			
9612156822	432.60	9612156846	562.39	100	104.00/100.00 x 2.00	200.00			
T-double bend - OD: Semi bright, ID: Raw									
9612154201	103.75	9612154215	134.89	25		49.00	50.00	25.00	
9612154202	*	9612154216	*	32		54.00	55.00	31.00	
9612154203	124.52	9612154217	161.86	40		59.00	60.00	37.00	
9612154204	138.35	9612154218	179.86	50		69.00	70.00	49.00	
9612154205	179.86	9612154219	233.80	65		79.00	80.00	66.00	
9612154206	249.02	9612154220	323.73	80		89.00	90.00	81.00	
9612154207	401.21	9612154221	521.57	100		99.00	100.00	100.00	
T-double bend - OD/ID: Mat									
9612154208	103.75	9612154222	*	25		49.00	50.00	25.00	
9612154209	113.44	9612154223	*	32		54.00	55.00	31.00	
9612154210	124.52	9612154224	*	40		59.00	60.00	37.00	
9612154211	138.35	9612154225	*	50		69.00	70.00	49.00	
9612154212	179.86	9612154226	233.80	65		79.00	80.00	66.00	
9612154213	249.02	9612154227	*	80		89.00	90.00	81.00	
9612154214	401.21	9612154228	521.57	100		99.00	100.00	100.00	

*On request

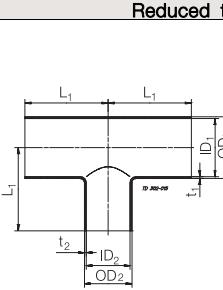
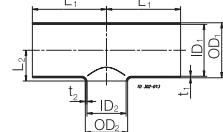
Fit to DIN Tubes, Tees

Fit To DIN Tubes

Product code: 5038

1.7

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				Finish: OD/ID: Mat
1.4307 (304L)	1.4404 (316L)			mm	OD ₁ /ID ₁ x t ₁	OD ₂ /ID ₂ x t ₂	L ₁	L ₂	Reduced tee, short*
9612155609	25.90	9612155628	36.26	32/25	34.00/31.00 x 1.50	28.00/25.00 x 1.50	55.00	20.50	
9612155610	28.83	9612155629	40.36	40/25	40.00/37.00 x 1.50	28.00/25.00 x 1.50	60.00	23.50	
9612155611	28.65	9612155630	40.12	40/32	40.00/37.00 x 1.50	34.00/31.00 x 1.50	60.00	23.00	
9612155612	28.92	9612155631	40.49	50/32	52.00/49.00 x 1.50	34.00/31.00 x 1.50	70.00	29.00	
9612155613	28.65	9612155632	40.12	50/40	52.00/49.00 x 1.50	40.00/37.00 x 1.50	70.00	29.00	
9611304571	47.07	9611304573	65.89	65/50	70.00/66.00 x 2.00	52.00/49.00 x 1.50	80.00	39.00	
9612155614	63.41	9612155634	88.77	80/50	85.00/81.00 x 2.00	52.00/49.00 x 1.50	90.00	47.00	
9611304591	63.30	9611304593	88.63	80/65	85.00/81.00 x 2.00	70.00/66.00 x 2.00	90.00	47.00	
9612155615	85.64	9612155636	119.90	100/50	104.00/100.00 x 2.00	52.00/49.00 x 1.50	100.00	58.00	
9612155616	86.62	9612155637	121.28	100/65	104.00/100.00 x 2.00	70.00/66.00 x 2.00	100.00	58.00	
9611304611	92.04	9611304613	128.83	100/80	104.00/100.00 x 2.00	85.00/81.00 x 2.00	100.00	59.00	
Reduced tee*									
9612157412	28.49	9612157423	39.88	32/25	34.00/31.00 x 1.50	28.00/25.00 x 1.50	54.00		
9612157413	31.70	9612157424	44.39	40/25	40.00/37.00 x 1.50	28.00/25.00 x 1.50	58.00		
9612157414	31.53	9612157425	*	40/32	40.00/37.00 x 1.50	34.00/31.00 x 1.50	59.00		
9612157415	*	9612157426	44.53	50/32	52.00/49.00 x 1.50	34.00/31.00 x 1.50	65.50		
9612157416	31.53	9612157427	44.13	50/40	52.00/49.00 x 1.50	40.00/37.00 x 1.50	67.00		
9612157417	51.77	9612157428	72.48	65/50	70.00/66.00 x 2.00	52.00/49.00 x 1.50	78.50		
9612157418	69.75	9612157429	97.65	80/50	85.00/81.00 x 2.00	52.00/49.00 x 1.50	88.00		
9612157419	69.64	9612157430	97.49	80/65	85.00/81.00 x 2.00	70.00/66.00 x 2.00	87.50		
9612157420	94.21	9612157431	131.88	100/50	104.00/100.00 x 2.00	52.00/49.00 x 1.50	99.00		
9612157421	95.30	9612157432	133.42	100/65	104.00/100.00 x 2.00	70.00/66.00 x 2.00	98.50		
9612157422	94.92	9612157433	132.90	100/80	104.00/100.00 x 2.00	85.00/81.00 x 2.00	99.50		



*On request

Fit To DIN Tubes

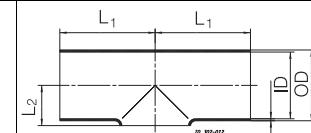
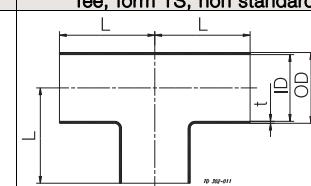
Product code: 5038

Fit to DIN Tubes, Tees

Finish: OD/ID: Polished

1.7

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			Tee, form TS, non standard
					mm	OD/ID x t	L	
1.4307 (304L)		1.4404 (316L)						
9611309220	21.74	9611309221	28.26	10	12.00/9.00 x 1.50	26.00		
9611309230	23.56	9611309231	30.62	15	18.00/15.00 x 1.50	35.00		
9611309240	25.37	9611309241	32.97	20	22.00/19.00 x 1.50	40.00		
9611309250	27.17	9611309251	35.33	25	28.00/25.00 x 1.50	50.00		
9611309260	29.69	9611309261	38.60	32	34.00/31.00 x 1.50	55.00		
9611309270	32.61	9611309271	42.39	40	40.00/37.00 x 1.50	60.00		
9611309280	36.24	9611309281	47.10	50	52.00/49.00 x 1.50	70.00		
1.4301 (304)						L ₁	L ₂	Tee, short, form TK, Non standard
9612150004	18.12	9612150032	23.56	25	28.00/25.00 x 1.50	50.00	15.50	
9612150005	19.81	9612150033	25.75	32	34.00/31.00 x 1.50	55.00	18.50	
9612150006	21.74	9612150034	28.26	40	40.00/37.00 x 1.50	60.00	21.50	
9612150007	24.15	9612150035	31.40	50	52.00/49.00 x 1.50	70.00	29.50	



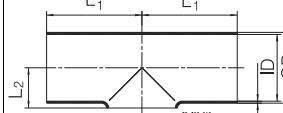
Fit to DIN Tubes, Tees

Fit To DIN Tubes

Product code: 5038

Finish: OD/ID: Mat

1.7

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)			
					mm	OD/ID x t	L1	
1.4301 (304)		1.4404 (316L)						Tee, short, non standard
9612150009	12.34	9612150042	16.04	15	18.00/15.00 x 1.50	35.00	10.00	
9612150010	13.29	9612150043	17.27	20	22.00/19.00 x 1.50	40.00	12.00	
9612150011	14.23	9612150044	18.51	25	28.00/25.00 x 1.50	50.00	15.50	
9612150012	15.56	9612150045	20.24	32	34.00/31.00 x 1.50	55.00	18.50	
9612150013	17.09	9612150046	22.21	40	40.00/37.00 x 1.50	60.00	21.50	
9612150014	18.98	9612150047	24.68	50	52.00/49.00 x 1.50	70.00	29.50	
1.4307 (304L)						L		Tee, form TS, non standard
9611309222	17.13	9611309223	22.27	10	12.00/9.00 x 1.50	26.00		
9611309232	18.55	9611309233	24.12	15	18.00/15.00 x 1.50	35.00		
9611309242	19.99	9611309243	25.98	20	22.00/19.00 x 1.50	40.00		
9611309252	21.41	9611309253	27.83	25	28.00/25.00 x 1.50	50.00		
9611309262	23.36	9611309263	30.37	32	34.00/31.00 x 1.50	55.00		
9611309272	25.70	9611309273	33.40	40	40.00/37.00 x 1.50	60.00		
9611309282	28.55	9611309283	37.12	50	52.00/49.00 x 1.50	70.00		

Fit To DIN Tubes

FIT To DIN Tubes, Flanges

Product code: 5044

Finish: Semi bright
Seals: EPDM

1.7

Material Item No.	PPL EUR	Size DN	Pressure class	Dimension (mm)				Complete flange
				mm	PN (bar)	OD/ID x t	A	
1.4404 (316L)								
9612498701	123.17	25	16	29.00/26.00 x 1.50	79.00	50.00	4 x M8	
9612498702	141.32	32	16	35.00/32.00 x 1.50	79.00	50.00	4 x M8	
9612498703	158.54	40	16	41.00/38.00 x 1.50	87.00	50.00	4 x M8	
9612498704	180.02	50	16	53.00/50.00 x 1.50	106.00	50.00	4 x M8	
9612498705	217.63	65	10	70.00/66.00 x 2.00	125.00	50.00	4 x M8	
9612498706	271.49	80	10	85.00/81.00 x 2.00	140.00	50.00	8 x M8	
9612498707	502.82	100	10	104.00/100.00 x 2.00	160.00	50.00	8 x M8	
9612498708	898.25	125	10	129.00/125.00 x 2.00	190.00	60.00	8 x M10	
9612498709	1681.06	150	10	154.00/150.00 x 2.00	215.00	60.00	8 x M10	
								Flange with O-ring groove
9612493001	37.12	25	16	29.00/26.00 x 1.50	25.00	10.00	64.00	
9612493002	42.11	32	16	35.00/32.00 x 1.50	25.00	10.00	64.00	
9612493003	47.82	40	16	41.00/38.00 x 1.50	25.00	10.00	72.00	
9612493004	54.95	50	16	53.00/50.00 x 1.50	25.00	10.00	91.00	
9612493005	67.45	65	10	70.00/66.00 x 2.00	25.00	10.00	110.00	
9612493006	83.50	80	10	85.00/81.00 x 2.00	25.00	10.00	125.00	
9612493007	160.59	100	10	104.00/100.00 x 2.00	25.00	10.00	143.00	
9612493008	203.32	125	10	129.00/125.00 x 2.00	30.00	15.00	171.00	
9612493009	288.94	150	10	154.00/150.00 x 2.00	30.00	15.00	196.00	
								Flange without O-ring groove
9612492901	37.12	25	16	29.00/26.00 x 1.50	25.00	10.00	64.00	
9612492902	42.11	32	16	35.00/32.00 x 1.50	25.00	10.00	64.00	
9612492903	47.82	40	16	41.00/38.00 x 1.50	25.00	10.00	72.00	
9612492904	54.95	50	16	53.00/50.00 x 1.50	25.00	10.00	91.00	
9612492905	67.45	65	10	70.00/66.00 x 2.00	25.00	10.00	110.00	
9612492906	83.50	80	10	85.00/81.00 x 2.00	25.00	10.00	125.00	
9612492907	160.59	100	10	104.00/100.00 x 2.00	25.00	10.00	143.00	
9612492908	203.32	125	10	129.00/125.00 x 2.00	30.00	15.00	171.00	
9612492909	288.94	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	5.28	DN 25-65	4xM8x30	4xM8	
9612499302	8.03	DN 80 -100	8xM8x30	8xM8	
9612499302	8.03	DN 125-150	8xM10x40	8xM10	

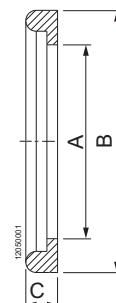
Fit to DIN Tubes, Seals

Fit To DIN Tubes

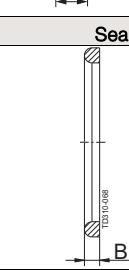
Product code: 5063

1.7

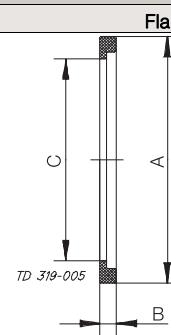
Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)			
NBR		EPDM		mm	A	B	C	Seal ring
		9611900253	1.57	10	10.50	20.00	5.00	
		9611900254	1.87	15	16.50	26.00	5.00	
		9611900255	1.92	20	20.50	33.00	5.00	
		9611900256	2.00	25	26.50	40.00	6.00	
		9611900257	2.15	32	32.50	46.00	6.00	
		9611900258	2.30	40	38.50	52.00	6.00	
		9611900259	2.46	50	50.50	64.00	6.00	
		9611900260	2.63	65	66.50	81.00	6.00	
		9611900261	2.79	80	81.50	88.00	6.00	
		9611900263	3.82	100	100.50	104.00	6.00	
		9611900264	11.40	125	125.00	142.00	7.00	
		9611900265	12.00	150	150.00	167.00	7.00	



Item No.	PPL EUR	Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)	Seal ring, 8 mm
9611991838	3.02	9611991851	4.71	25			8.00	
9611991839	4.26	9611991852	4.92	32			8.00	
9611991840	2.75	9611991853	5.19	40			8.00	
9611991841	3.59	9611991854	5.47	50			8.00	
9611991842	4.80	9611991855	5.60	65			8.00	
9611991843	15.54	9611991856	11.46	75			8.00	
9611991844	3.19	9611991857	5.87	80			8.00	
9611991845	3.34	9611991858	5.97	100			8.00	



Item No.	PPL EUR	Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)		Flange seal
EPDM		Silicone (Q)		FPM		mm	A	B	C
9612402601	2.70	9612402611	5.56	9612402621	6.93	25	37.20	4.10	27.40
9612402602	4.83	9612402612	4.21	9612402622	15.85	32	43.20	4.10	33.40
9612402603	4.90	9612402613	5.74	9612402623	10.20	40	49.20	4.10	39.40
9612402604	4.97	9612402614	5.90	9612402624	16.64	50	61.20	4.10	51.40
9612402605	5.08	9612402615	8.51	9612402625	17.47	65	77.20	4.10	67.40
9612402606	6.17	9612402616	12.12	9612402626	18.35	80	92.20	4.10	82.40
9612402607	6.42	9612402617	16.95	9612402627	19.27	100	111.20	4.10	101.40
9612402608	10.14	9612402618	14.40	9612402628	20.24	125	136.20	4.10	126.40
9612402609	16.67	9612402619	39.56	9612402629	38.32	150	161.20	4.10	151.40



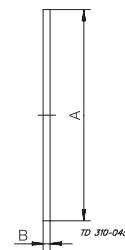
Fit To DIN Tubes

Fit to DIN Tubes, Seals

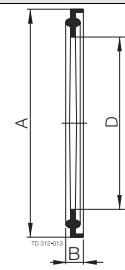
Product code: 5063

1.7

Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)			Seal disc
					mm	A	B	
NBR		EPDM						
9611291131	1.44			10	28.00	3.00		
9611291141	2.07			15	34.00	3.00		
9611291151	2.18			20	44.00	3.00		
9611291161	2.29			25	52.00	3.00		
9611291171	2.39			32	58.00	3.00		
9611291181	2.53			40	65.00	3.00		
9611291191	2.65			50	78.00	3.00		
9611291201	2.77			65	95.00	3.00		
9611291221	4.87			80	110.00	3.00		
9611291241	11.24			100	130.00	3.00		
9611291251	29.25			125	160.00	3.00		
9611291261	16.80			150	190.00	3.00		



Item No.	PPL EUR	Item No.	PPL EUR	Item No.	PPL EUR	Size DN	Dimension (mm)			Seal ring
							mm	A	B	
PTFE		NBR		FPM						
9611992019	78.76					10	36.20	5.10	10.00	
9611992020	62.40					15	36.20	5.10	16.00	
9611992021	64.80					20	36.20	5.10	20.00	
9611992022	67.19					25	52.70	5.10	26.00	
9611992023	71.47					32	52.70	5.10	32.00	
9611992024	74.39					40	52.70	5.10	38.00	
9611992025	76.80					50	66.20	5.10	50.00	
9611992026	90.84					65	93.20	5.10	66.00	
9611992027	109.43					80	108.20	5.10	81.00	
9611992028	133.54					100	121.20	5.10	100.00	



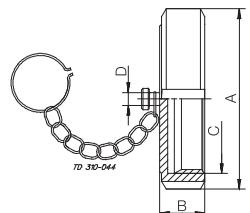
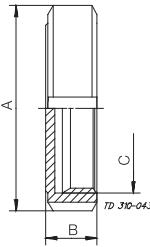
Fit to DIN Tubes, End Caps with Thread

Fit To DIN Tubes

Product code: 5044

Finish: Semi bright
Thread: Round type

1.7

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size DN	Dimension (mm)				
1.4301 (304)		1.4404 (316L)		mm	A	B	C	D	End cap with chain and NBR seal disc
9611291411	17.46	9612152301	20.36	10	38.00	18.00	28.00 x 1/8	8.00	
9611291421	18.58	9612152302	21.69	15	44.00	18.00	34.00 x 1/8	8.00	
9611291431	19.73	9612152303	23.02	20	54.00	21.00	44.00 x 1/6	8.00	
9611291441	20.88	9612152304	24.35	25	63.00	21.00	52.00 x 1/6	8.00	
9611291451	22.46	9612152305	26.21	32	70.00	22.00	58.00 x 1/6	8.00	
9611291461	24.29	9612152306	28.34	40	78.00	21.00	65.00 x 1/6	8.00	
9611291471	51.23	9612152307	59.76	50	92.00	22.00	78.00 x 1/6	8.00	
9611291481	65.46	9612152308	76.36	65	112.00	25.00	95.00 x 1/6	8.00	
9611291491	146.48	9612152309	170.89	80	127.00	29.00	110.00 x 1/4	8.00	
9611291511	197.32	9612152310	230.21	100	148.00	31.00	130.00 x 1/4	8.00	
9611291521	260.88	9612152311	304.37	125	178.00	34.00	160.00 x 1/4	8.00	
9611291531	341.52	9612152312	398.43	150	210.00	40.00	190.00 x 1/4	8.00	
End cap									
9611291271	17.21	9612152201	20.09	10	38.00	19.00	28.00 x 1/8		
9611291281	18.33	9612152202	21.39	15	44.00	19.00	34.00 x 1/8		
9611291291	19.46	9612152203	22.71	20	54.00	21.00	44.00 x 1/6		
9611291301	20.58	9612152204	24.02	25	63.00	22.00	52.00 x 1/6		
9611291311	22.16	9612152205	25.85	32	70.00	22.00	58.00 x 1/6		
9611291321	23.95	9612152206	27.94	40	78.00	22.00	65.00 x 1/6		
9611291331	50.52	9612152207	58.94	50	92.00	23.00	78.00 x 1/6		
9611291341	64.55	9612152208	75.30	65	112.00	26.00	95.00 x 1/6		
9611291351	144.44	9612152209	168.51	80	127.00	30.00	110.00 x 1/4		
9611291371	194.59	9612152210	227.01	100	148.00	33.00	130.00 x 1/4		
9611291381	257.26	9612152211	300.13	125	178.00	36.00	160.00 x 1/4		
9611291391	336.78	9612152212	392.90	150	210.00	41.00	190.00 x 1/4		

Fit To DIN Tubes

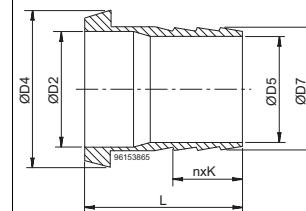
Fit To DIN Tubes, Hose Liner

Product code: 5044

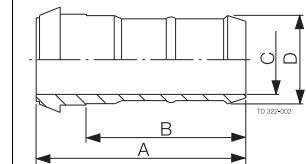
Finish: Semi bright
Thread: Round type

1.7

Material Item No.	PPL EUR	Size DN	Dimension (mm)					Hose liner
			ØD4	ØD5	ØD7	L	n x K	
1.4404 (316L)		mm						
9615386501	47.99	15	28.30	12.00	19.00	40.00	3 x 6	
9615386502	72.69	20	36.30	16.00	23.00	40.00	3 x 6	
9615386503	83.99	25	43.80	23.00	29.00	53.00	3 x 8	
9615386504	89.99	32	49.80	29.50	35.00	53.00	3 x 8	
9615386505	95.99	40	55.80	35.00	41.00	63.00	3 x 9	
9615386506	107.97	50	68.30	46.00	53.00	68.00	3 x 10	
9615386507	113.70	65	85.60	65.00	70.00	77.00	3 x 10	
9615386508	119.97	80	99.40	80.00	85.00	87.00	3 x 12	
9615386509	155.97	100	120.40	98.00	104.00	110.00	4 x 15	



Material Item No.	PPL EUR	Size DN	Dimension (mm)				Hose liner, beer
			mm	A	B	C	
1.4301 (304)							
9612157704	99.49	25	80.00	63.00	24.00	27.00	
9612157705	*	32	90.00	70.00	31.00	34.00	
9612157706	115.58	40	105.00	84.00	32.00	43.00	
9612157707	140.32	50	120.00	97.00	45.00	53.00	
9612157708	152.80	65	140.00	113.00	60.00	68.00	
9612157709	287.60	80	160.00	132.00	74.00	83.00	
9612157710	359.50	100	180.00	141.00	93.00	103.00	



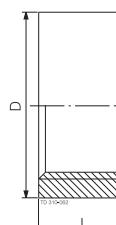
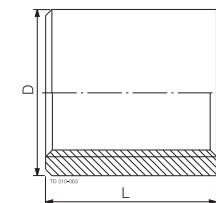
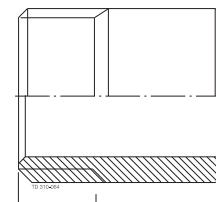
*On request

Fit to DIN Tubes, Other Fittings

Fit To DIN Tubes

Sockets and male parts
Product code: 5044

1.7

Material Item No.	PPL EUR	Size DN	Dimension (mm)		
1.4404 (316L)		mm	D	L	Half socket
9611295663	*	1/8	14.00	7.50	
9611295673	10.78	1/4	18.00	11.00	
9611295683	14.38	3/8	21.30	11.50	
9611295693	16.19	1/2	26.40	15.00	
9611295703	19.77	3/4	31.80	16.50	
9611295713	22.36	1	39.50	19.00	
9611295723	25.17	1 1/4	48.30	21.50	
9611295733	28.77	1 1/2	54.50	21.50	
9611295743	39.55	2	66.30	26.00	
9611295753	71.89	2 1/2	82.00	30.00	
9611295763	80.82	3	95.00	33.00	
Socket					
9611295443	8.98	1/8	14.00	17.00	
9611295453	12.58	1/4	18.00	25.00	
9611295463	15.27	3/8	21.30	26.00	
9611295473	16.19	1/2	26.40	34.00	
9611295483	17.97	3/4	31.80	36.00	
9611295493	21.57	1	39.50	43.00	
9611295503	25.17	1 1/4	48.30	48.00	
9611295513	32.36	1 1/2	54.50	48.00	
9611295523	53.92	2	66.30	56.00	
9611295533	*	2 1/2	82.00	65.00	
9611295543	143.81	3	95.00	71.00	
Welding male part					
9611295884	8.98	1/8		30.00	
9611295894	10.78	1/4		30.00	
9611295904	14.38	3/8		30.00	
9611295914	17.97	1/2		35.00	
9611295924	21.57	3/4		40.00	
9611295934	25.17	1		40.00	
9611295944	28.77	1 1/4		50.00	
9611295954	32.36	1 1/2		50.00	
9611295964	39.55	2		55.00	
9611295974	53.92	2 1/2		60.00	
9611295984	71.89	3		65.00	

*On request

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Alfa Laval in brief

Alfa Laval is a leading global provider of specialized products and engineered solutions.

Our equipment, systems and services are dedicated to helping customers to optimize the performance of their processes. Time and time again.

We help our customers to heat, cool, separate and transport products such as oil, water, chemicals, beverages, foodstuffs, starch and pharmaceuticals.

Our worldwide organization works closely with customers in almost 100 countries to help them stay ahead.

How to contact Alfa Laval

Contact details for all countries are continually updated on our website. Please visit www.alfalaval.com to access the information.

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