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**ALFA
LAVAL**

Close at hand

Spare parts for Instrumentation, Hygienic Fluid Handling Equipment,
August 2022



1. Instrumentation

The reliable instrumentation solution that secures, optimal process control, optimization and monitoring every day year after year.



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1.1 General information

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Total piece of mind

Genuine spare parts and service kits

Alfa Laval spare parts are engineered and machined for optimal fit with guarantee for superior performance and uptime.

Using Alfa Laval genuine spare parts ensures the lowest possible total cost of ownership over the entire life cycle of your Alfa Laval equipment.

Furthermore the Alfa Laval spare parts meet all certification requirements and include documentation package with full traceability (1935/2004/EC) compliance with hygienic standards USP, FDA, EU-regulations, 3-A, EHEDG, ASME BPE, etc.

Alfa Laval spare parts are available 24/7 through extensive network of channel partners and distribution centres, and you can always contact us for technical service support and training, if needed.

Benefits when buying genuine spare parts:

- Certified materials
- Guaranteed performance - tested in laboratories.
- Maximum uptime – proven reliability.
- Longer maintenance intervals.
- Continuously improvement to meet the highest requirements and hygienic standards.
- 3 years extended warranty on the pumps & valves.

Service kits

Alfa Laval recommends that you buy complete service kits instead of individual parts, as each service kit contain all the spare parts you need for general maintenance.

Furthermore, the complete service kits gives you several other advantages such as:

- Save time - simply order one service kit, rather than a lot of individual items.
- Each service kit has a single part number - less stock numbers to deal with.
- The price of the service kits is less than the total price of the individual items.
- You do not have to carry a large spare parts inventory.
- Service kit for UltraPure products include full Alfa Laval Q-doc package.
- Each service kit contain a small instruction with a QR code, with access to our service & maintenance guidelines and videos.



The right o-ring quality

O-ring compression and swell are very important to be within the design limits of the pump and seal tolerances.

If these are not correct, the seal will leak.

The grade of manufacture of the o-rings determines its characteristics:

- Hardness
- Tensile strength
- Compression set
- Swelling

Stainless Steel and Rubber Materials

Technical Information

Stainless steel

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

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

Rubber materials

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

EPDM rubber (Ethylene Propylene)

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

Actylonitrile Butadiene Rubber, NBR

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

Silicone rubber, Q

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

Fluorine rubber, FPM

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

Hydrogenated actylonitrileButadiene Rubber, HNBR

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

Perfluoroalkoxy polymer, PFA

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

Product and chemical resistance of flexible rubber materials

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

Ratings

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

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

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

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

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

ISO = International standard.

Notes

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

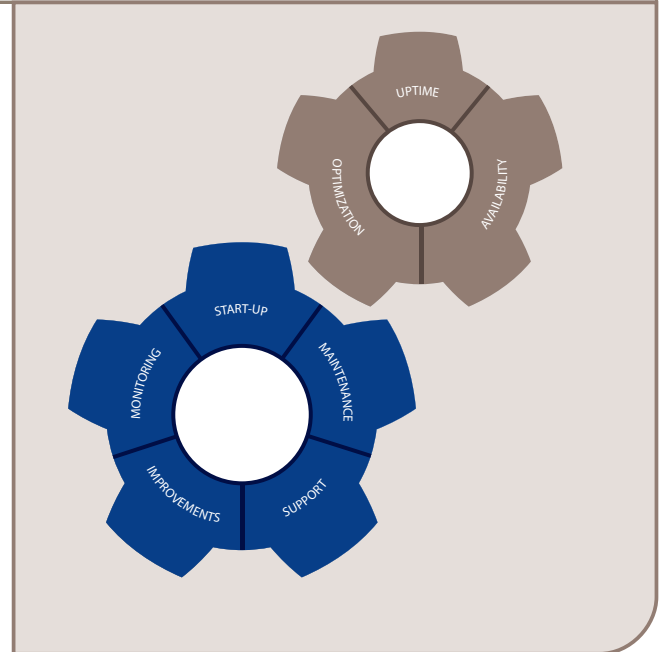
Services that extend performance

360° service portfolio

Alfa Laval's expert service is always on hand through our global network. Alfa Laval also offers a wide range of time-saving tools and resources to secure performance, making it easy to configure, size, and optimize Alfa Laval hygienic equipment.

Alfa Laval Service offers a broad range of spare parts, equipment, and services covering the entire equipment life cycle from start-up, support and maintenance to improvements and monitoring. We are committed to ensuring maximum uptime, continuous optimization of your customers' processes, Alfa Laval service kits and top quality spare parts, designed for durability and performance, are always available. We secure that Alfa Laval equipment remains in compliance with certificates and legal requirements in your market.

Alfa Laval Service maximizes the reliability and uptime of Alfa Laval equipment. The result is superior performance throughout the equipment life cycle to give you and your customers a competitive edge. Together with our global service network we can help secure long-term performance.



1.2 Weighing systems - obsolete products

Obsolete products	
Weighing systems - load cells and output modules	1.2.12

Modules for Weighing Systems from after 2017

Pos	Qty	Denomination	Weighing		
			System Module name	For number of Load cells	Serial no. required (Y/N)
		Analog (4-20 mA)	4179A	1	N
		Analog (4-20 mA)	4279A	2	N
		Analog (4-20 mA)	4379A	3	N
		Analog (4-20 mA)	4479A	4	N
		Profibus DP interface module	4135A	1	N
		Profibus DP interface module	4235A	2	N
		Profibus DP interface module	4335A	3	N
		Profibus DP interface module	4435A	4	N
		PROFINET interface module	4170A	1	N
		PROFINET interface module	4270A	2	N
		PROFINET interface module	4370A	3	N
		PROFINET interface module	4470A	4	N
		EtherNet IP interface module	4150A	1	N
		EtherNet IP interface module	4250A	2	N
		EtherNet IP interface module	4350A	3	N
		EtherNet IP interface module	4450A	4	N
		RS485 interface module	4140A	1	N
		RS485 interface module	4240A	2	N
		RS485 interface module	4340A	3	N
		RS485 interface module	4440A	4	N

Modules for Weighing Systems from before 2017

Pos	Qty	Denomination	Weighing	
			System Module name	Serial no. required (Y/N)
		Terminal Module MCE9601	MCE9601	N
		Analog (4-20 mA or 0-10 V) Output Module MCE2029	MCE2029	N
		Profibus DP Output Module MCE2035	MCE2035	N
		DeviceNet Output Module MCE9637	MCE9637	N
		Digital Load Cell Module	MCE2010	Y
		Serial (RS232, RS422/485) & Modbus ASCII/RTU Output Module	MCE2040	Y

Compression Load Cells - CLCM

Pos	Qty	Denomination
		6 meter cable with plug
		10 meter cable with plug
		20 meter cable with plug
		50 meter cable with plug
		Display for load cells

Beam Load Cells – BL

Pos	Qty	Denomination
		BL Mounting kit (<=50 kg/BL) 316L
		BL Mounting kit (>50 kg; <=100 kg/BL) 316L
		BL Mounting kit (>=150 kg; <=500 kg/BL) 316L
		BL Mounting kit (>500 kg/BL) 316L
		6 meter cable with plug
		10 meter cable with plug
		20 meter cable with plug
		50 meter cable with plug
		Display for load cells

Single Point Load Cells – SPSX

Pos	Qty	Denomination
		6 meter cable with plug
		10 meter cable with plug
		20 meter cable with plug
		50 meter cable with plug
		Display for load cells

For Weighing Systems you need to inform about the Serial Number of the Load Cell to be replaced.
 To order replacement spare Load Cell, please contact your local Sales Company.
 You must inform about needed measuring range, accuracy and if Calibration Certificate is needed Yes or No.

Analogue output modules

Pos	Qty	Denomination
		Analog (4-20 mA) output module for 1 load cell
		Analog (4-20 mA) output module for 2 load cells
		Analog (4-20 mA) output module for 3 load cells
		Analog (4-20 mA) output module for 4 load cells

Profibus output modules

Pos	Qty	Denomination
		Profibus DP interface module for 1 load cell
		Profibus DP interface module for 2 load cells
		Profibus DP interface module for 3 load cells
		Profibus DP interface module for 4 load cells

Profinet output modules

Pos	Qty	Denomination
		PROFINET interface module for 1 load cell
		PROFINET interface module for 2 load cells
		PROFINET interface module for 3 load cells
		PROFINET interface module for 4 load cells

EtherNet output modules

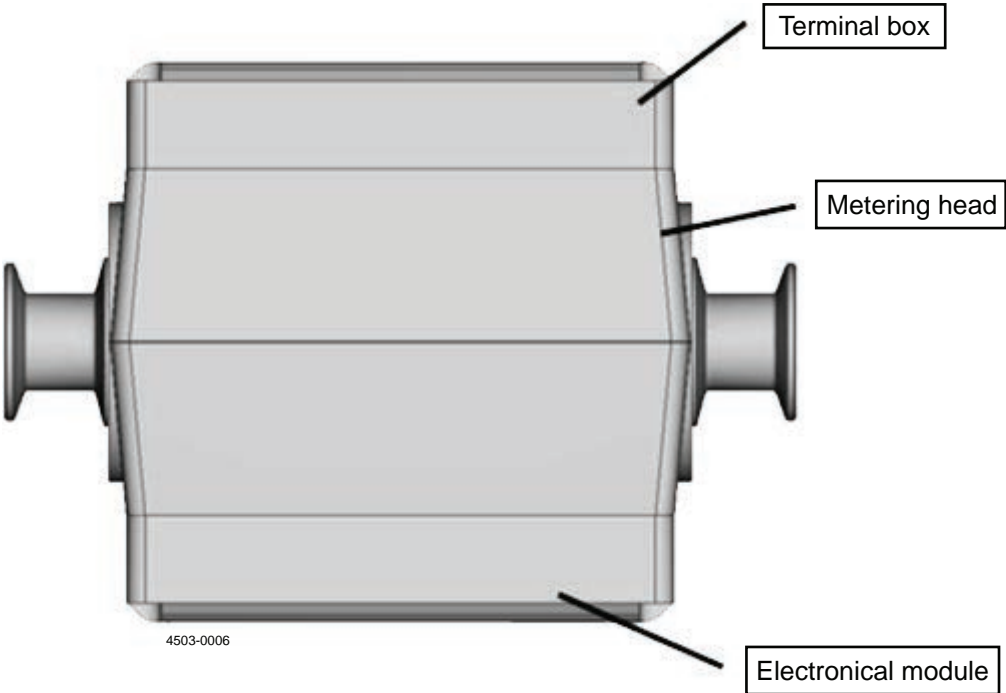
Pos	Qty	Denomination
		EtherNet IP interface module for 1 load cell
		EtherNet IP interface module for 2 load cells
		EtherNet IP interface module for 3 load cells
		EtherNet IP interface module for 4 load cells

Display interface modules

Pos	Qty	Denomination
		4140OEM, Display interface module for 1 load cell
		4240A, Display interface module for 2 load cells
		4240A, Display interface module for 3 load cells
		4240A, Display interface module for 4 load cells

1.3 Flow instruments - obsolete products

Obsolete products	
Flow transmitter	1.3.16



Flow Transmitter, Metering Head for TE67Axxxxxxx

Pos	Qty	Denomination
-	-	Metering head for TE67A1xxxxxxx
-	-	Metering head for TE67A2xxxxxxx
-	-	Metering head for TE67A3xxxxxxx
-	-	Metering head for TE67A4xxxxxxx
-	-	Metering head for TE67A5xxxxxxx

Flow transmitter, Electrical Module for TE67Axxxx1xxx (Pulse)

Pos	Qty	Denomination
-	-	Electronic module for TE67A1xxxx1xxx
-	-	Electronic module for TE67A2xxxx1xxx
-	-	Electronic module for TE67A3xxxx1xxx
-	-	Electronic module for TE67A4xxxx1xxx
-	-	Electronic module for TE67A5xxxx1xxx

Flow transmitter, Electrical Module for TE67Axxxx2xxx (Pulse and 4-20 mA)

Pos	Qty	Denomination
-	-	Electronic module for TE67A1xxxx2xxx
-	-	Electronic module for TE67A2xxxx2xxx
-	-	Electronic module for TE67A3xxxx2xxx
-	-	Electronic module for TE67A4xxxx2xxx

Flow transmitter, Terminal Box

Pos	Qty	Denomination
-	-	Terminal Box for pulse and 4-20 mA/pulse
-	-	Terminal Box for Profibus DP

Flow transmitter, other spare parts for TE67A

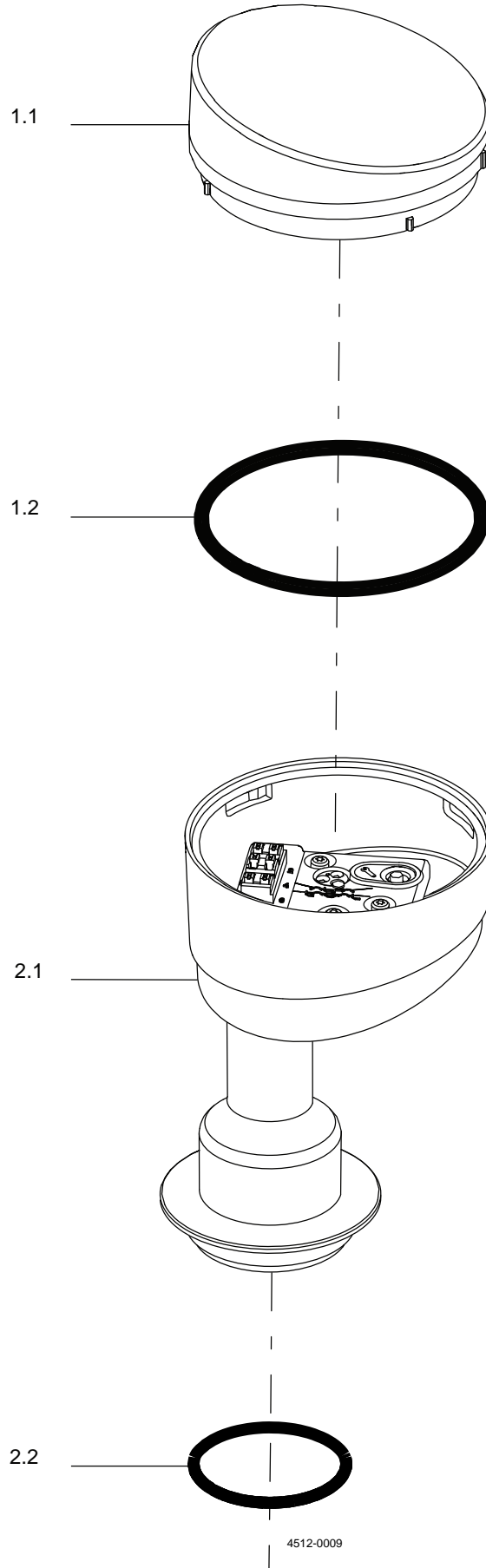
Pos	Qty	Denomination
-	-	AL keypad

1.4 Cleaning validation instruments

Spare parts

Alfa Laval Rotacheck+ and Rotacheck Basic	1.4.20
Alfa Laval Rotacheck+ and Rotacheck Basic, optional	1.4.22

Parts Drawing

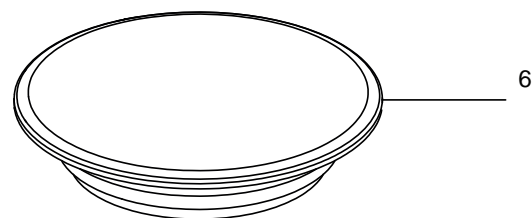
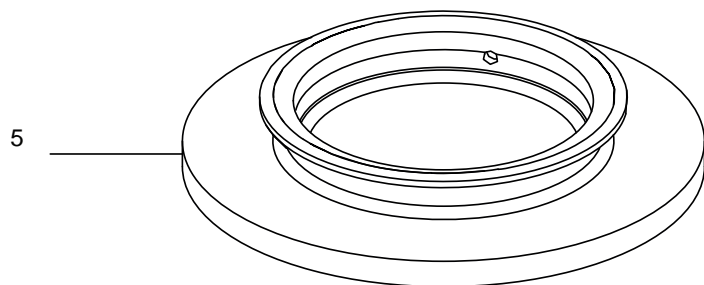
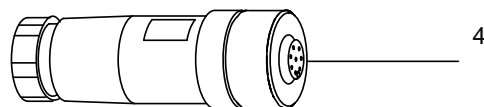
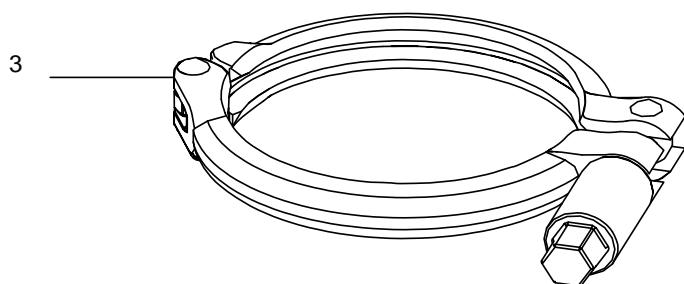


4512-0009

Parts List

Pos	Qty	Denomination	Part number
1	1	Top cover/prism and o-ring assembly	9614091103
1.1	-	Top cover/prism assembly	
1.2	-	O-ring for top cover	9611995306
2	1	Sensor unit with o-ring	
2.1	-	Sensor unit	
	□	O-ring (Q-doc version)	9611995402
	□	O-ring set (10 pcs.) EPDM	9614059422

Optional Parts Drawing



4512-0022

Optional Parts List

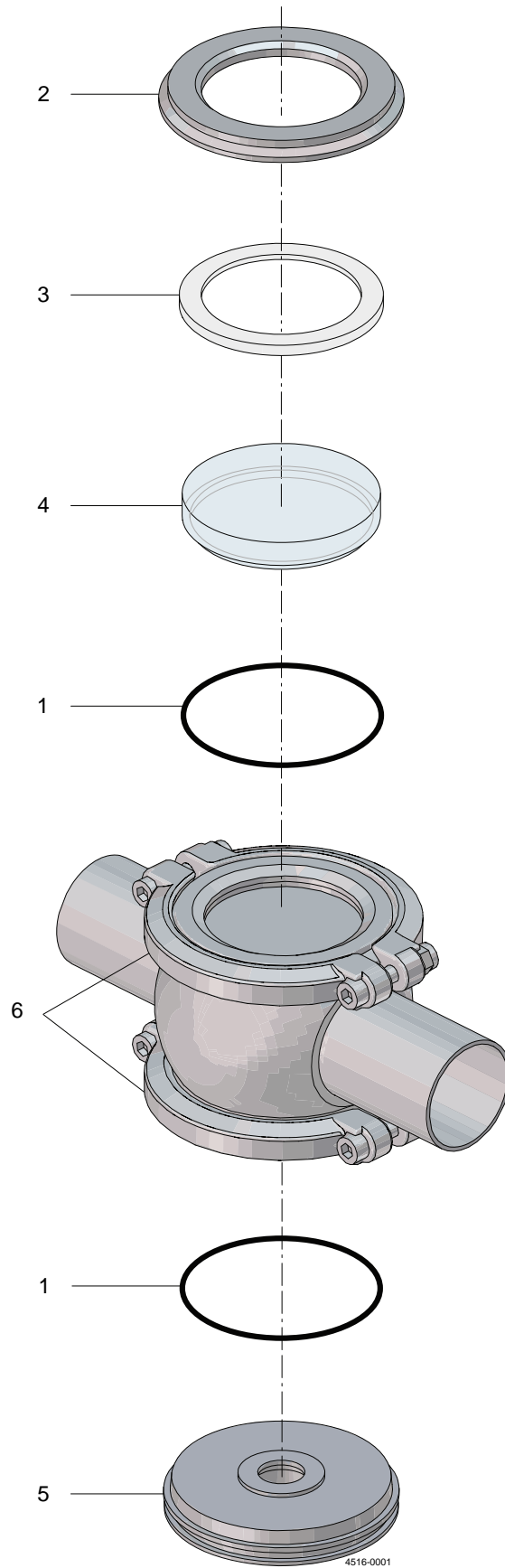
Pos	Qty	Denomination	Part number
3	1	Clamp ring	9612939303
4	1	M12 connector	9611995257
5	□	1 Tank flange, Hygienic tank connection HTC	9614070801
	□	1 Tank flange, Hygienic tank connection HTC (Q-doc version)	9614070890
6	□	1 Blind cap with o-ring	9614071001
	□	1 Blind cap with o-ring (Q-doc version)	9614071090

1.5 Instrumentation accessories

Spare parts for obsolete products	
Unique Flexbody	1.5.26

Not manufactured anymore

1.5



Pos	Qty	Denomination	UNIQUE	UNIQUE	Remark
			FLEXBODY DN40-150 Item no.	FLEXBODY DN25 Item no.	
1	□	1 O-Ring, EPDM		9614464344	Spare part
	○	1 O-Ring, FPM		9614464345	Spare part
	◆	1 O-Ring, EPDM	9614464346		Spare part
	★	1 O-Ring, FPM	9614464347		Spare part
2	◆★	1 Flange	9614465669		Spare part
	□○	1 Flange		9614465670	Spare part
3	◆★	1 Teflon ring	9614465671		Spare part
	□○	1 Teflon ring		9614465672	Spare part
4	◆★	1 Sight glass	9614465663		Spare part
	□○	1 Sight glass		9614465664	Spare part
5+1	1	Blind cap, EPDM		9614464341 ¹	Accessories
	1	Blind cap, EPDM	9614464342 ¹		Accessories
	1	Blind cap, FPM		9614465641 ¹	Accessories
	1	Blind cap, FPM	9614465642 ¹		Accessories
6	2	Clamp ring	9614465667	9614465668	Accessories

¹ Item number includes both Blind cap (pos. 5) and O-ring (pos. 1).

		UNIQUE	UNIQUE
		FLEXBODY DN40-150 Item no.	FLEXBODY DN25 Item no.
Sight glass kits			
□	Sight glass kit, EPDM		9614465673
◆	Sight glass kit, EPDM	9614465674	
○	Sight glass, FPM		9614465675
★	Sight glass kit, FPM	9614465676	

Items marked □◆○★ are included in the Sight glass kits



This is Alfa Laval

Alfa Laval is active in the areas of Energy, Marine, and Food & Water, offering its expertise, products, and service to a wide range of industries in some 100 countries. The company is committed to optimizing processes, creating responsible growth, and driving progress – always going the extra mile to support customers in achieving their business goals and sustainability targets.

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

How to contact Alfa Laval

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