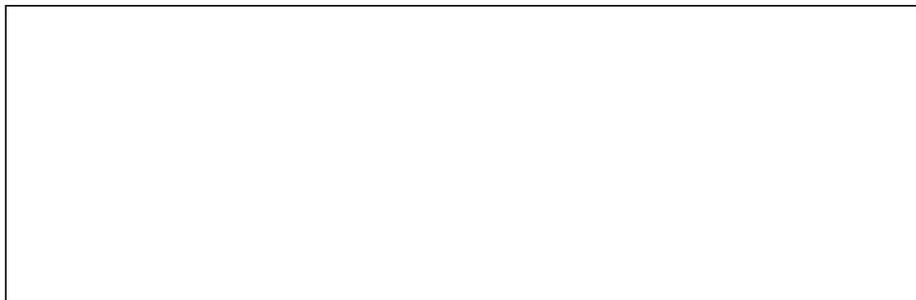


## 9 Spare Parts List

Contact your Local B. Braun Avitum AG Representative for Service Support or [www.bbraun.com](http://www.bbraun.com)



### Spare Parts List

Spare parts are sorted by the respective locations in the machine (e.g. Top Level Sub Rack). Spare parts can be ordered using their article number (Art. No) via the following contacts

**B. Braun Avitum AG**  
Schwarzenberger Weg 73 – 79  
34212 Melsungen  
Germany

### Spare Parts

Contact: <https://jira.bbraun.com/servicedesk/customer/portal/10>

### Refurbished Spare Parts

Conditions for Delivery of Refurbished Spare Parts (depending on availability):

Defective spare parts must be sent back with the accompanying documents (Material Return Form) to B. Braun Avitum AG via the representative of the respective country for the ability to supply refurbished spare parts. The condition and the version of the defective spare parts must allow a qualified refurbishment.

### Backward Compatibility of Spare Parts

Dialog<sup>+</sup> SW 9.xx is a product, which is available on the market since more than a decade. Many components were modified since first release and many different configurations do exist. In general, the available spare parts are backwards compatible and can be used even for older configurations. In case a spare part is modified the last digit of the article number changes to an alphabetic character with the initial index A. However, in some cases the usage of spare parts does have some preconditions. For example, electronic parts may require a certain software version. In case these preconditions exist, they are mentioned in the comment field of the spare parts list. Furthermore, for some parts multiple spare parts are available, which can be used depending on the configuration of Dialog+. Circuit boards are labeled with a material number (8-digit number), which can help to identify which version of a circuit board is used in the current configuration. If applicable, the material number is written in brackets below the article number of the spare part.

9.1 Material Return Form

<p><b>B. Braun Avitum AG</b>                  Wareneingang - Service                  Schwarzenberger Weg 73-79                  D-34212 Melsungen                  Germany</p>	<p>Reason for returning the part (please tick <input checked="" type="checkbox"/>):</p> <p>Warranty return (replacement to be ordered separately) <input type="checkbox"/></p> <p>Defective part for refurbishment <input type="checkbox"/></p> <p>Wrong shipment <input type="checkbox"/></p> <p>Spare part returned for investigation <input type="checkbox"/></p> <p>Disposal and take-back of spare parts and machines <input type="checkbox"/></p>
---	---

**Sender:**

Name of Company:

Country: City:

Customer number: Name or responsible person:

Telephone/e-mail:

**Returned spare part**

Article number: Spare part serial number:

Part description:

Description of the defect:

**From machine type:** Serial number: Working hours:

Software Version: Description of problem on machine:

**The described defect appears:** Intermittently  Permanently  (please tick )

**Cleaned/disinfected:** Cleaned  yes Disinfected  yes (please tick )

**Disinfectant:**

 **Disposal and Take-Back of Spare Parts and Old Machines**

Dispose spare parts (e.g. boards or batteries) or machines according to the applicable laws and local regulations (e.g. directive 2012/19/EU). Batteries shall be removed before disposing a machine. B. Braun Avitum AG guarantees the taking back of spare parts and old machines.

**Cleaning and Disinfection of Used Spare Parts Used Machines**

All spare parts sent by the customer to the B. Braun Avitum AG representative for repair, refurbishment, technical analysis, warranty or disposal shall be cleaned and disinfected (exception: boards). Spare parts considerably contaminated, damaged or not disinfected are scrapped. Machines shall be cleaned and disinfected before shipment.

**Packaging Notice**

**Each returned part shall be properly packed to prevent any damage during transportation due to mechanical impact or due to electrostatic discharge. The safest way to prevent damage is by using the packaging material from the new spare part and by packing the returned part exactly in the same way.**

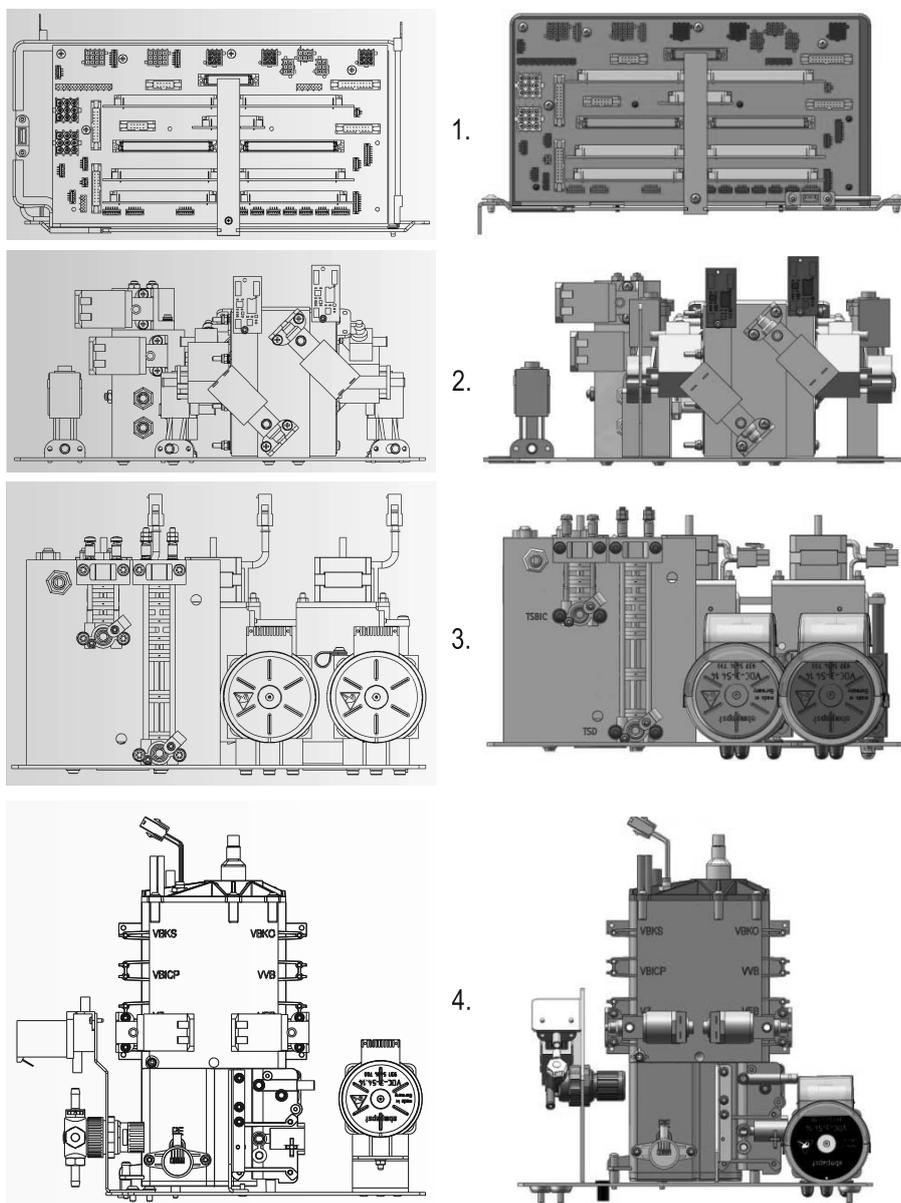
Returned parts containing electronic components (electrostatic sensitive devices) shall be packed in special ESD packaging material. Only shielded bags or antistatic bags may be used. Unprotected electronic parts (e.g. wrapped in normal plastic bags or parts padded with Styrofoam) are assumed to be damaged by electrostatic discharge and will be scrapped.

**Please Copy!**

## 9.2 Sub-Racks

Up to S/N 200,000

From S/N 200,000



9

Fig. 9-1 Sub racks

Pos.	Art.No	Qty.	Description	Comments
1	-	-	Top level sub-rack	see paragraph 9.7 for single parts
2	-	-	UF sub-rack	see paragraph 9.6 for single parts
3	-	-	DF sub-rack	see paragraph 9.5 for single parts

Pos.	Art.No	Qty.	Description	Comments
4	-	-	Water sub-rack	see paragraph 9.4 for single parts
2-3	34562257	1	Locking pin	locking mechanism for the sub racks

9.3 Solenoid Valves

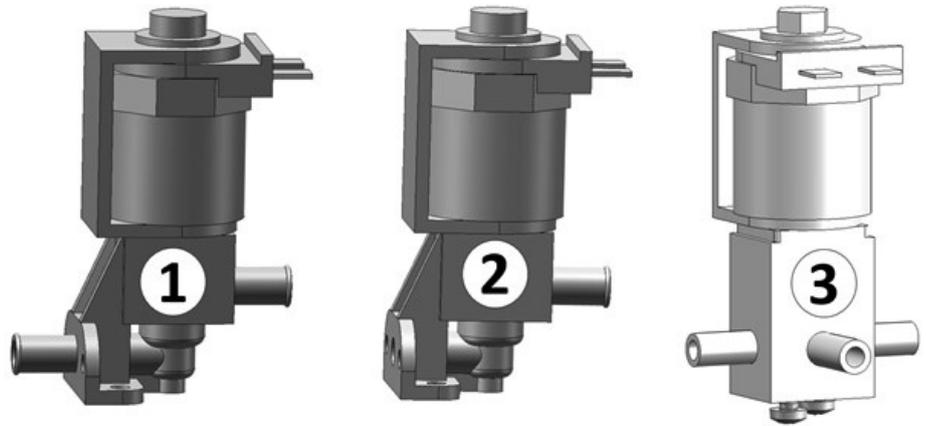


Fig. 9-2 Solenoid valves

Pos.	Art.No	Qty.	Description	Comments
1	3451902C	1	Solenoid valve 2/2 way	Connector/flange
2	34561609	1	Solenoid valve 2/2 way VEB +bypass	Connector/Connector
2	3451906C	1	Solenoid valve 2/2 way	Connector/Connector
3	3451900A	1	Solenoid valve 2/3 way HDF online	Connector/Connector

9.4 Water Sub-Rack

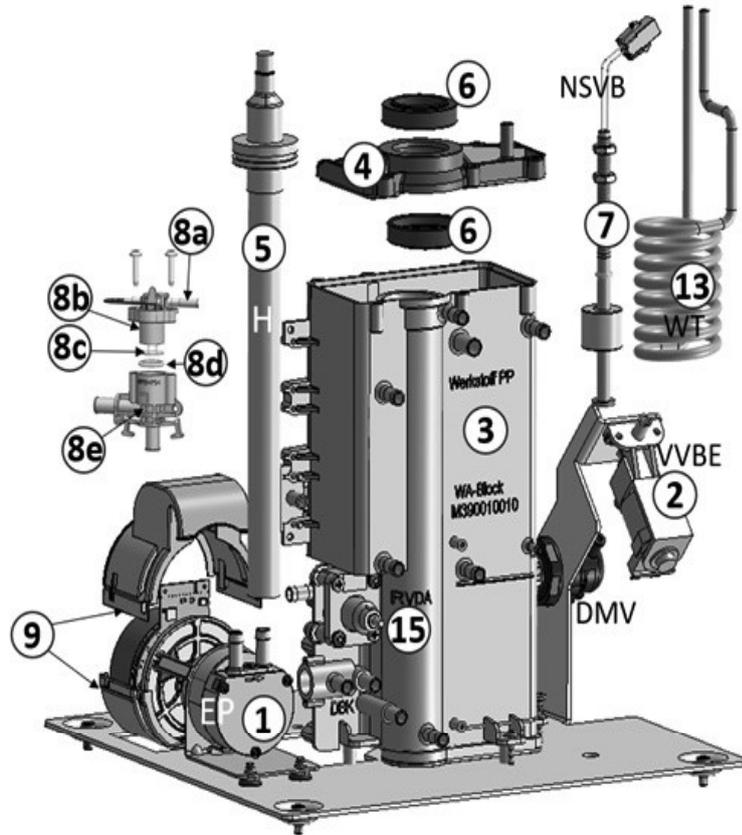


Fig. 9-3 Water sub rack front view

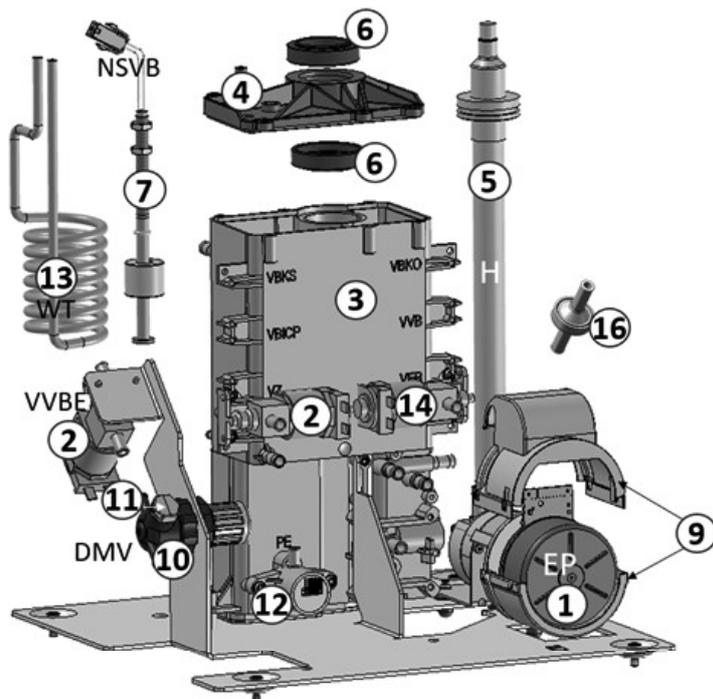


Fig. 9-4 Water sub rack, back view

Pos.	Art.No	Qty.	Description	Comments
1	-	-	Gear pump	see chapter 9.4.1 Gear Pump for EP (868)
2	3451906C	1	Solenoid valve	VBKS, VBKO, VVB, VBIC, VZ, VVBE
3	34561315	1	Water block without lid	-
4	34561323	1	Lid for water block	-
5	3456021B	1	Heater element 120 V/2x900 W	incl. two seals
5	3456020B	1	Heater element 240 V/2x900 W	incl. two seals
6	34560467	1	Seal	seal only, 2pc needed to seal the heater
7	34560459	1	Level sensor complete	with float ball
8a	34562060	1	Temperature Sensor Cable 4-pol	O-ring, L-shape housing, heat shrink, Wire incl. 4pol connector, Long and Short plugs, Screws
8b	34570381	10	Plug (short)	for TSE and TSHE (> SW 9.13)
8c	3451614B	1	Temperature sensor	without connector
8d	3477104A	10	O-ring 8.3 x 2.4	temperature sensor, requires soldering
8e	34570730	1	Housing complete for temp. sensor, o-ring, L-shape housing, short plug, heat shrink, screws	for TSDA, TSD-S, TSDE, TSDE-S, TSE
9	34562256	1	Pump cover	top and bottom pieces
10	3456168B	1	Pressure reducer valve DMV	V3.incl. tubing and clamps
11	3451357A	1	Stop screw	DMV
12	3456124A	1	Pressure sensor incl. O-ring	O-ring 9.25 x 1.78 incl.
13	-	-	Heat exchanger	not available for order
14	34561609	1	Solenoid valve 2/2 way with bypass	VEB degassing circuit only
15	34561714	1	Pressure Controller 0.5 bar (RVDA)	HDF-online
15	34561706	1	Pressure Controller 0.4 bar (RVDA)	standard machine
16	34561501	1	Disposable filter 4.6 mm	FEP and FVE

9.4.1 Gear Pump for EP

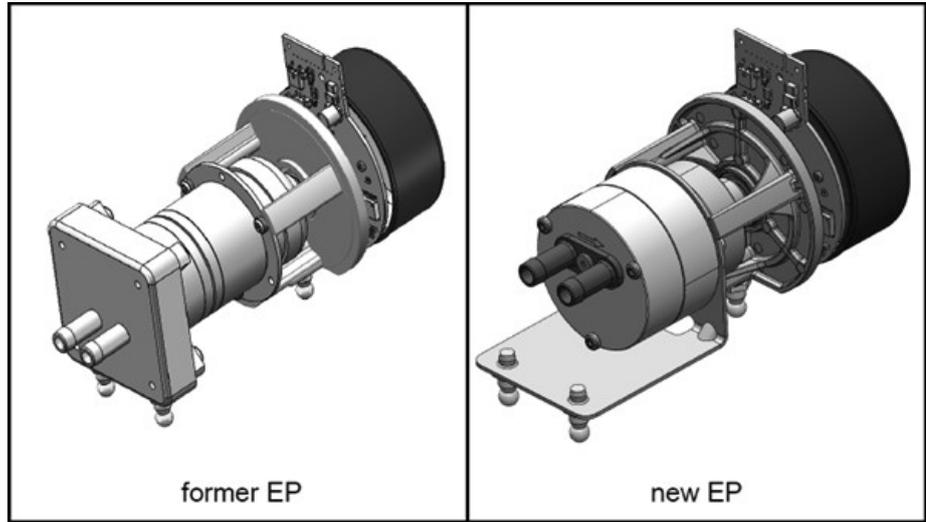


Fig. 9-5 EP Gear pump SN < 200,000

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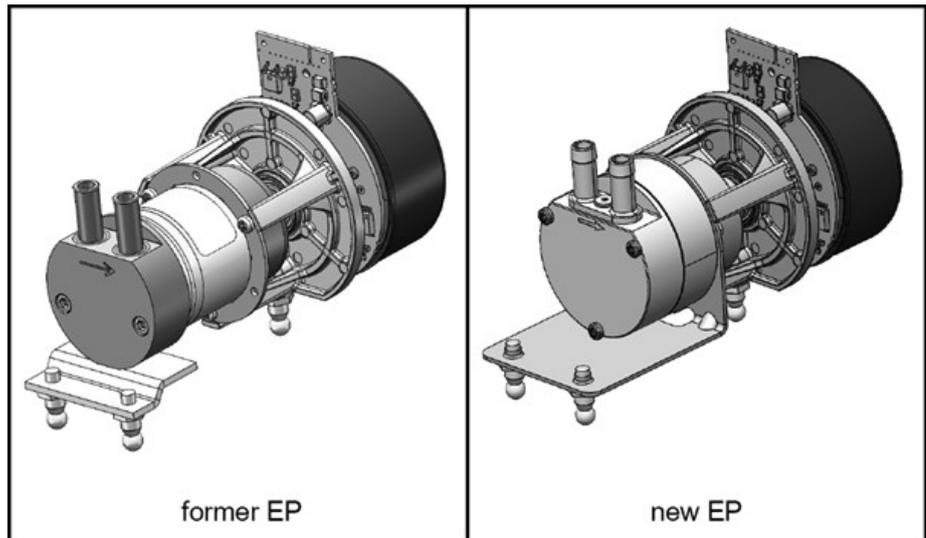


Fig. 9-6 EP Gear pump SN ≥ 200,000

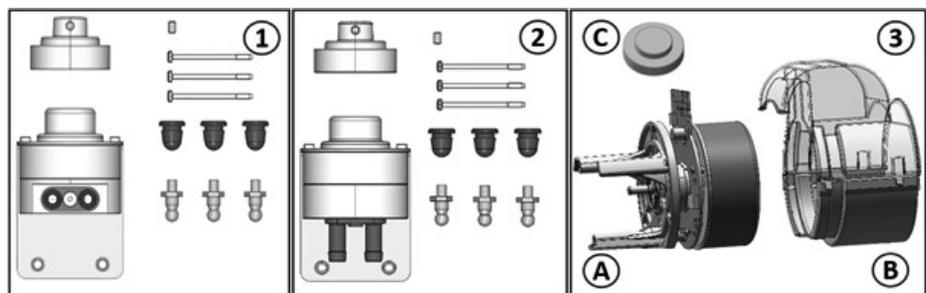


Fig. 9-7 EP Gear pump parts

Pos.	Art.No	Qty.	Description	Comments
1	34562332	1	Gear pump	For Dialog SN ≥ 200,000
		1	Magnet	
		1	Screw M4 x 6	
		3	Screw M3 x 43,3	
		3	Snap lock couplings EPDM	
		3	Snap lock couplings M5 x 6	
2	3461097	1	Gear pump	For Dialog SN < 200,000
		1	Magnet	
		1	Screw M4 x 6	
		3	Screw M3 x 43,3	
		3	Snap lock couplings EPDM	
		3	Snap lock couplings M5 x 6	
3a	34560718	1	Motor for gear pump	
3b	34562256	1	White plastic cover	Top and bottom pieces
3c	7704134	1	Distance gauge gear pump	
-	3456222A	1	Cable harness pumps / valves	Full harness: connections from Basic Board to WB, DF, BK Valves, FPE,FPA,EP adapters

9.5 DF Sub-Rack

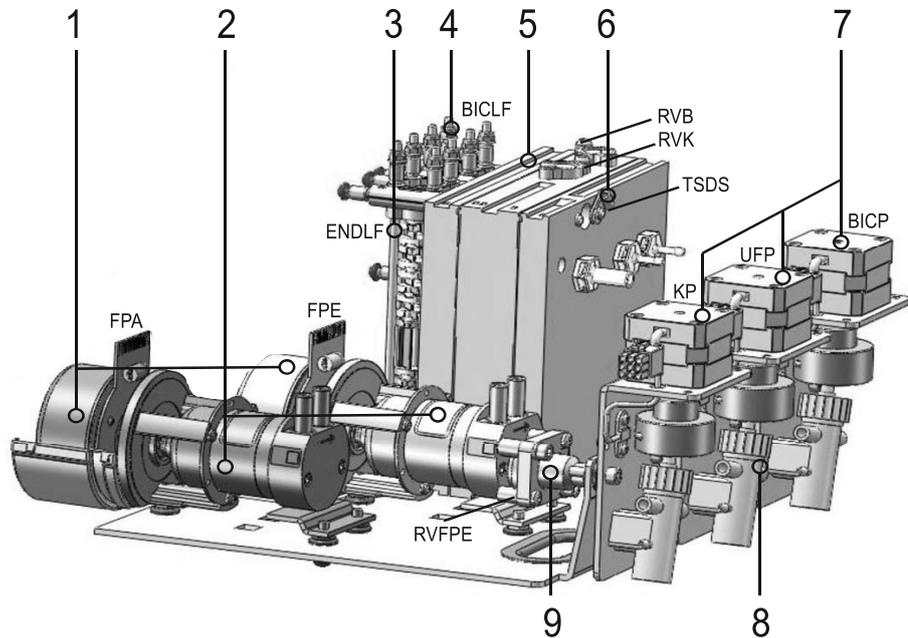


Fig. 9-8 DF sub rack < SW 9.1E with micro pump

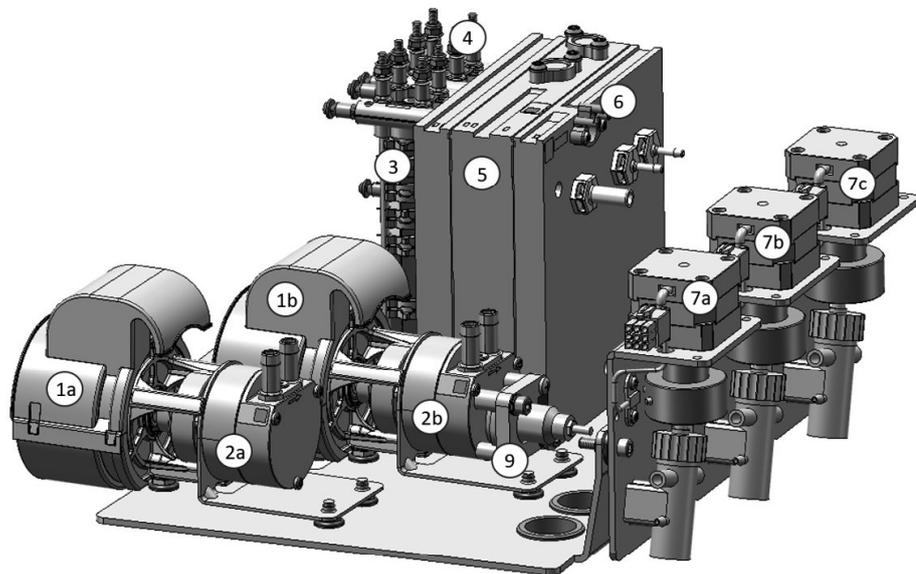


Fig. 9-9 DF sub rack ≥ SW 9.1E with Diener pump

Pos.	Art.No	Qty.	Description	Comments
1	-	-	1a Motor for FPA gear pump 1b Motor for FPE gear pump	see chapter 9.5.1 Gear Pump for FPE/FPA (874)
2	-	-	2a FPA Gear pump 2b FPE Gear pump	see chapter 9.5.1 Gear Pump for FPE/FPA (874)
3	3456103A	1	END conductivity sensor version 2	With temperature sensor
4	3456102A	1	Bicarbonate conductivity sensor version 2	With temperature sensor

Pos.	Art.No	Qty.	Description	Comments
5	-	-	DF Block	Old DF block, for new DF block see next pages
6	-	-	Temperature sensor TSD-S	See next pages
7a	-	-	Concentrate piston pump	see chapter 9.5.2 Piston Pumps (876)
7b	-	-	Ultra filtration piston pump	see chapter 9.5.2 Piston Pumps (876)
7c	-	-	Bicarbonate piston pump	see chapter 9.5.2 Piston Pumps (876)
8	34514988	1	UFP Non return valve, incl. 2 x tubing clamps, 2 x cable ties	For < SW 9.1E
9	34561722	1	Pressure Controller 1.3 Bar	RVFPE
9	34570683	10	O-Ring 4.47 x 1.78	RVFPE

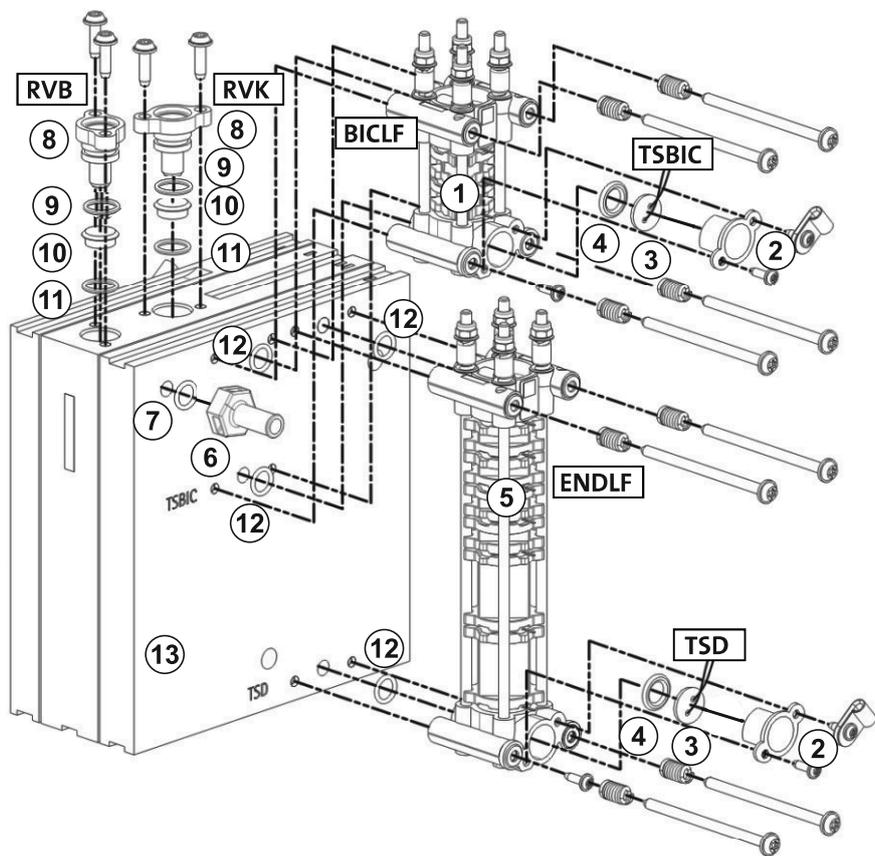


Fig. 9-10 DF Block 3 parts

Pos.	Art.No	Qty.	Description	Comments
1	3456102A	1	Conductivity sensor (BIC) version 2	without temperature sensor
2	34570373	10	Plug (Long)	TSBIC/TSD
3	3451614B	1	Temperature sensor	w/o connector (requires soldering)
4	3477104A	10	O-ring 8.3 x 2.4	TSBIC/TSD
5	3456103A	1	Conductivity sensor (END) version 2	without temperature sensor
6	3451916A	5	Tubing connector 6 mm	plastic
7	34770852	5	O-ring 11.1 x 1.6	-
8	34770925	5	Plug	RVB/RVK (also DBK)
9	34770852	5	O-ring 11.1 x 1.6	RVB/RVK
-	34771050	10	Pressure spring	spare part not illustrated
10	34772928	3	Center disc	RVB/RVK
11	34771085	5	Seal center disk	RVB/RVK
12	34770950	5	O-ring 8 x 1,6	greased
13	-	-	DF block	Old DF block for new DF block see next pages

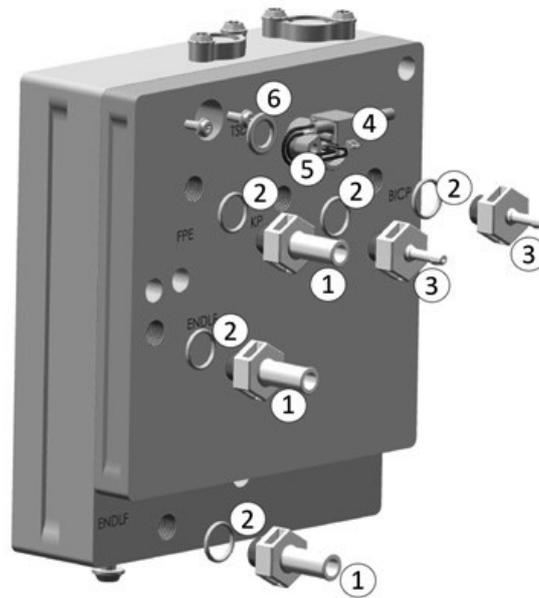


Fig. 9-11 DF block 2 parts (rear view)

Pos.	Art.No	Qty.	Description	Comments
1	3451916A	5	Tubing connector 6 mm	Plastic
2	34770852	5	O-ring 11.1 x 1.6	
3	3477103A	1	Tubing connector 3,5 mm	Plastic
4	34570381	10	Plug (Short)	for TSDS
5	3451614B	1	Temperature sensor	w/o connector (requires soldering)
6	3477104A	10	O-ring 8.3 x 2.4	for TSDS

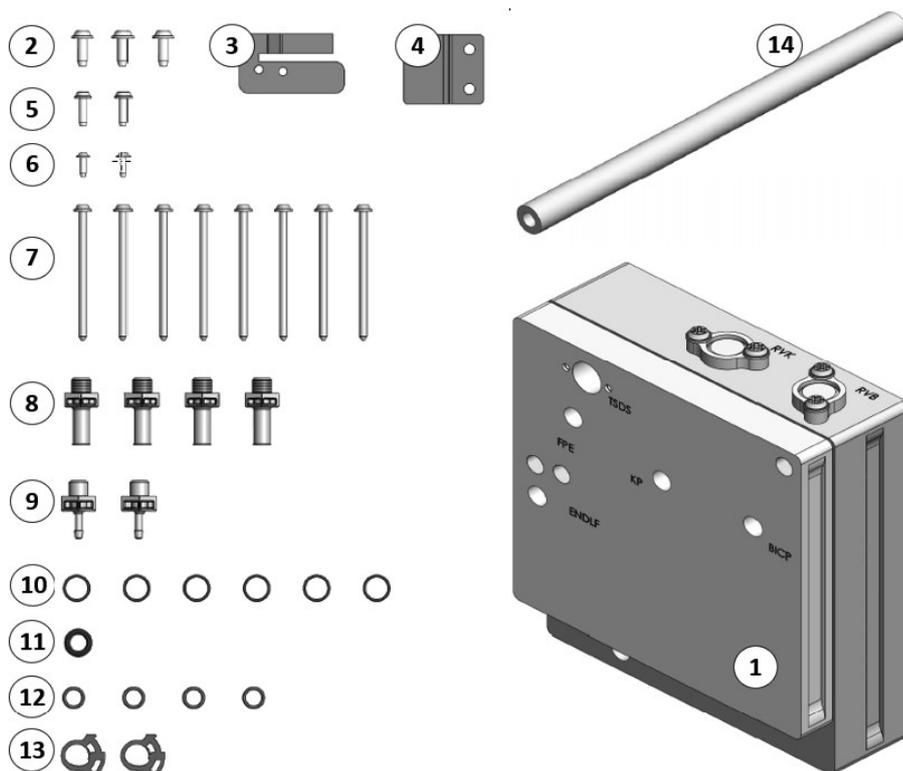


Fig. 9-12 Retrofit kit DF block 2 parts

Pos.	Art.No	Qty.	Description	Comments
1	34562329	1	Retrofit Kit DF block 2 parts (DF block 3 parts is not available)	See contents below
2		3	M 50 x 14	for support plate
3		1	Support plate	-
4		1	Assembly adapter	-
5		2	M 40x14	for assembly adapter
6		2	M 30 x 10	for TSD-S
7		8	Delta PT screw 40 x 65 x 20	for conductivity sensor
8		4	Tubing connector Ø 8x1/8"	
9		2	Tubing connector Ø 3.5x1/8"	for KP and BICP
10		6	O-ring 11.1 x 1.6	
11		1	O-ring 8.3 x 2.4	for TSD-S
12		4	O-ring 8.0 x 1.6	for conductivity sensor
13		2	Tubing clamps	
14		1	Tubing	

9.5.1 Gear Pump for FPE/FPA

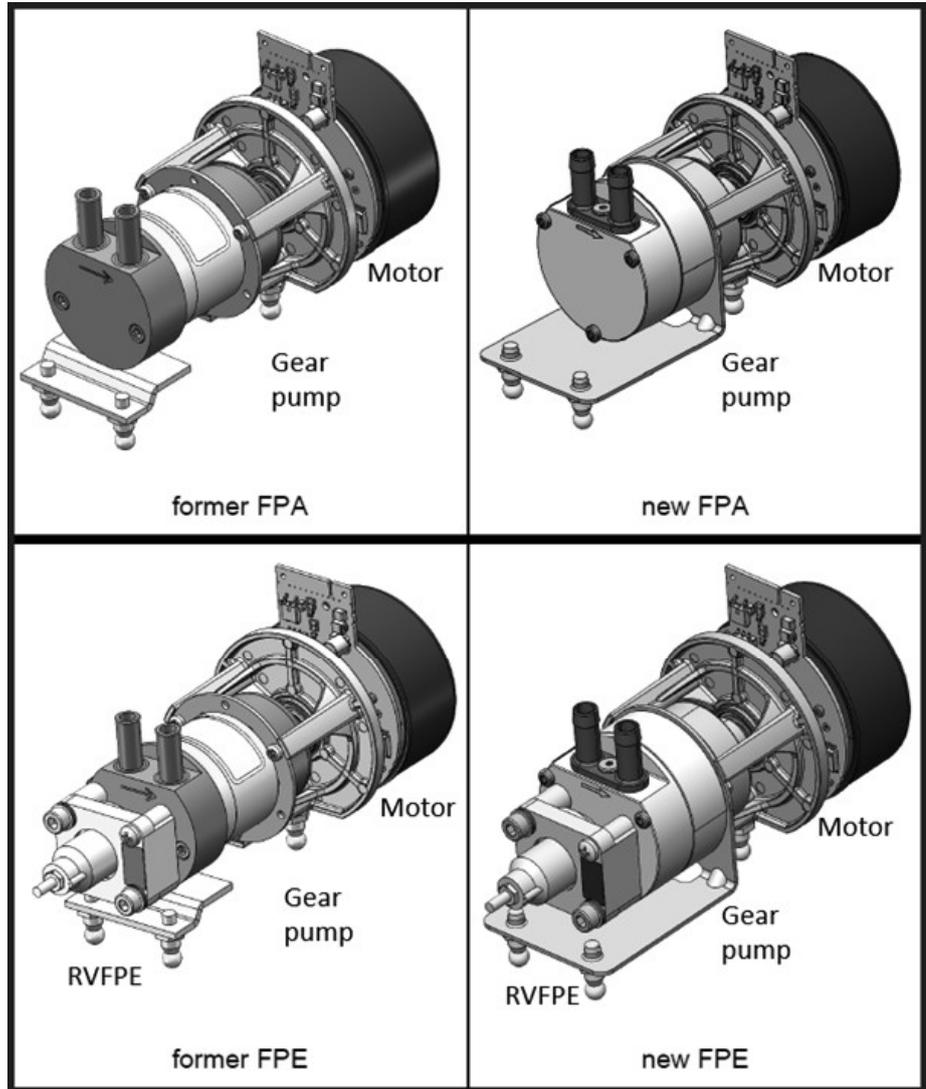


Fig. 9-13 Gear pump FPA/FPE

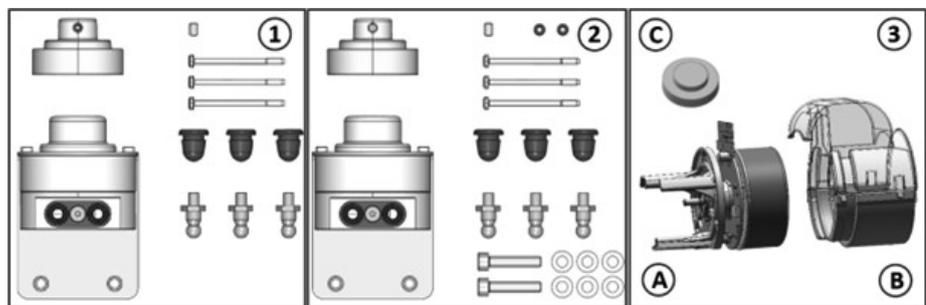


Fig. 9-14 Gear pump parts

Pos.	Art.No	Qty.	Description	Comments
1	34562330	1	Kit gear pump FPA	Consisting of:
		1	Gear pump FPA	
		1	Magnet	

Pos.	Art.No	Qty.	Description	Comments
		1	Screw M 4 x 6	
		3	Snap lock couplings EPDM	
		3	Snap lock couplings M5x6	
		3	Screw M 3 x 43,3	

Pos.	Art.No	Qty.	Description	Comments
2	34562331	1	Kit gear pump FPE	Consisting of:
		1	Gear pump FPE	
		1	Magnet	
		1	Screw M 4 x 6	
		3	Screw M 3 x 43,3	
		3	Snap lock couplings EPDM	
		3	Snap lock couplings M5x6	
		2	Screw M 5 x 25	to mount RVFPE
		6	Spring washer	to mount RVFPE
		2	O-ring 4,47 x 1,78	for RVFPE

Pos.	Art.No	Qty.	Description	Comments
3a	34560718	1	Motor for gear pump	FPA or FPE
3b	34562256	1	White plastic cover	Top and bottom pieces
3c	7704134	1	Distance gauge gear pump	to install gear pump magnet
-	3456222A	1	Cable harness pumps/valves	Power and control cable
-	34770950	1	O-Ring 8.0 x 1.6	Old pump tubing connector
-	34561722	1	(RVFPA, RVFPE)	Press. Control 1.3 bar
-	34570683	1	O-ring 4,47 x 1,78	for RVFPA, RVFPE

9.5.2 Piston Pumps

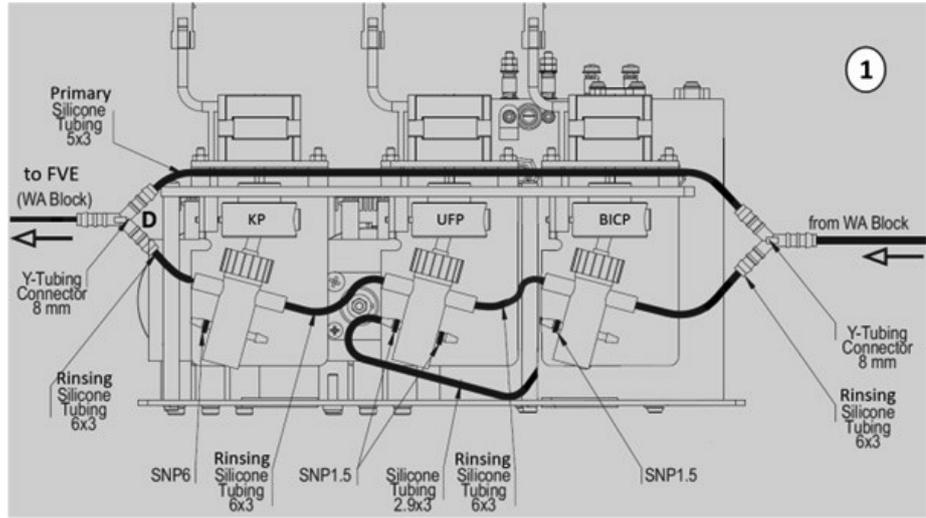


Fig. 9-15 Piston pumps overview

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Fig. 9-16 Piston pumps parts

Pos.	Art.No	Qty.	Description	Comments
1	–	1	Piston pumps overview	for Art.No, connection parts, see other chapter.
2a	34519246	1	Reed sensor complete	up to serial numbers 100413/150224
2b	34561480	1	Hall sensor	from serial numbers 100414/150225
3	3456055B	1	Motor for piston pump	–
3a	34570903	50	Service kit Piston Pumps	50x stickers to close the axle hole of the motor.
4a	-	1	Bell joint for piston pump (Reed sensor)	1 magnet, not available anymore
4b	34561471	1	Bell joint for piston pump (Hall sensor)	2 magnets
5	34560602	1	Pump body for piston pump	–
6	34570799	2	Vibration damper	for KP, UFP, BICP
7	7703848	1	Assembly jig	required for bell joint assembly

Pos.	Art.No	Qty.	Description	Comments
-	3456222A	1	Wire Harness Valves and pumps	Electrical connection cable
-	34570861	5	T-tubing connector 6-4-6 mm	
-	34570705	1	Y-tubing connector 8 mm	

9.6 UF Sub-Rack

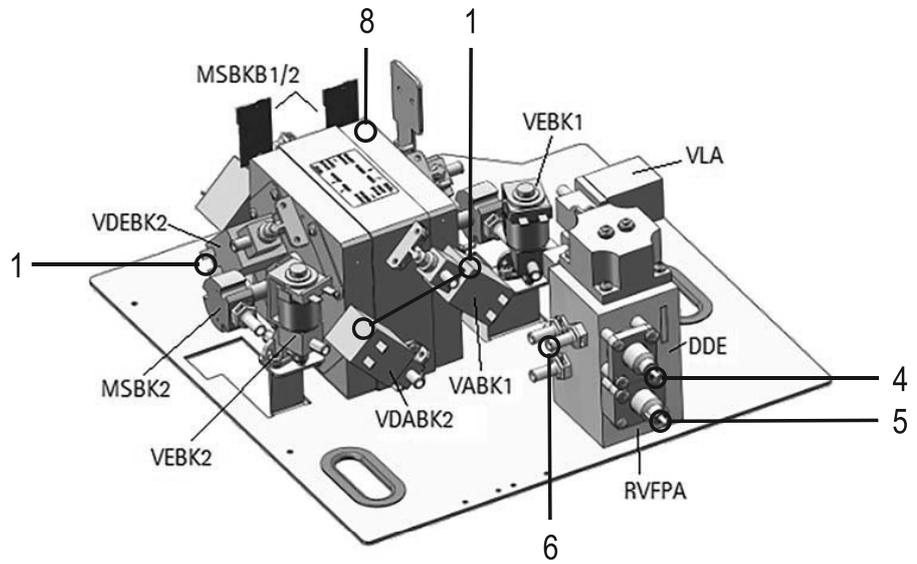


Fig. 9-17 UF sub-rack from serial number 200,000, view 1

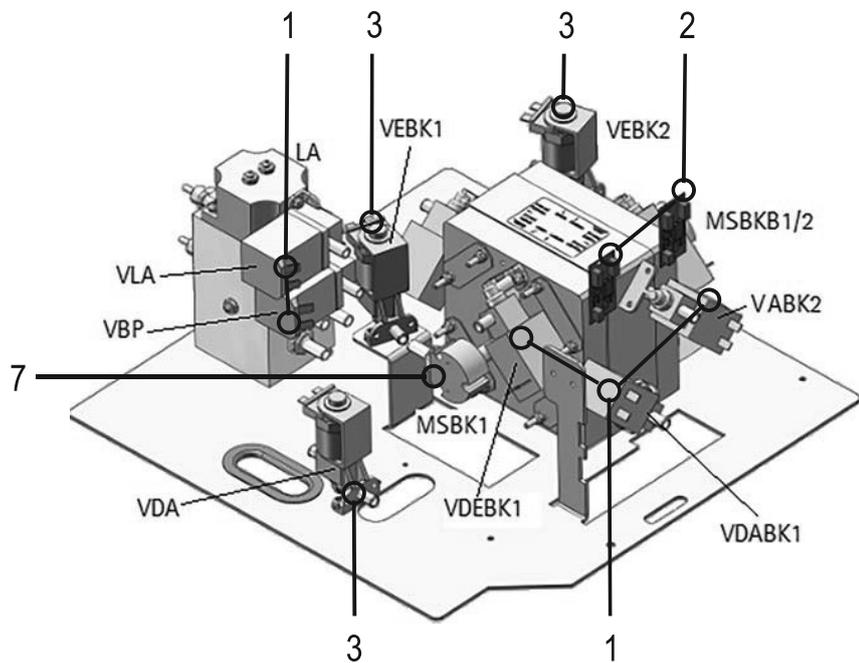


Fig. 9-18 UF sub-rack from serial number 200,000, view 2

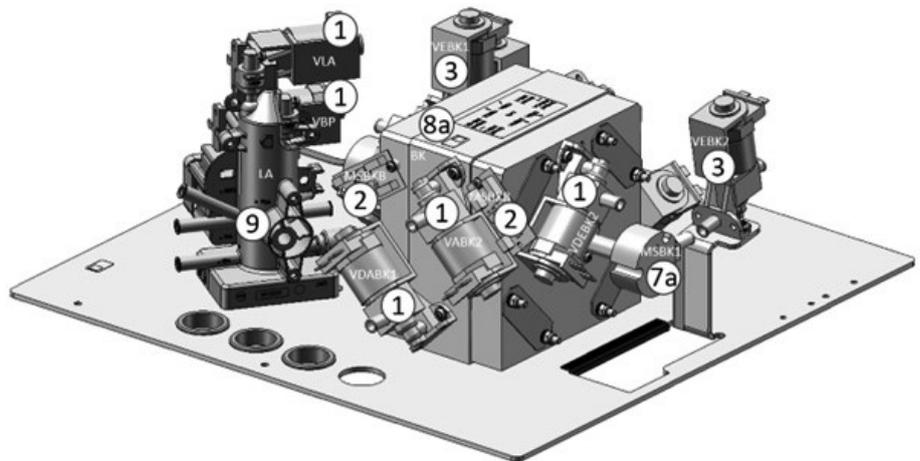


Fig. 9-19 UF sub-rack front view, from serial number: 230.000 / 307.941 / 503.077

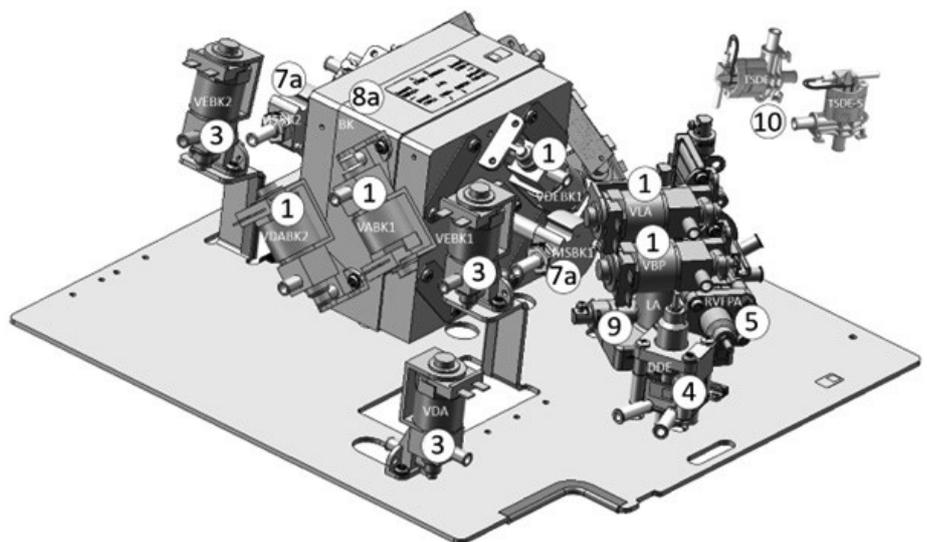


Fig. 9-20 UF sub-rack back view, from serial number: 230.000 / 307.941 / 503.077

Pos.	Art.No	Qty.	Description	Comments
1	3451902C	1	Solenoid valve 2/2 way	connector/flange
1	34770852	5	O-ring 11.1 x 1.6	–
2	3451665A	2	Membrane position sensor board	single exchange possible
3	3451906C	1	Solenoid valve 2/2 way	connector/connector
4/5/6/9	–	–	DDE / RVFPA / Air separator	see chapter 9.6.1 Air Separator Assembly Group (883)
7	-	1	Coil for BK Version 1	No longer available
7	34770976	10	O-ring 15.6 x 1.78 for coil	for BK Version 1
7a	34562293	1	Coil for BK Version 2	
7a	34770852	5	O-ring 11.1 x 1.6 for coil	for BK Version 2
8	-	-	Balance chamber V1	No longer available
8a	-	-	Balance chamber V2	See next pages
-	34570195	20	Tubing clamp SNP-1.5 Ø 7-8 mm	no picture
-	34570209	20	Tubing clamp SNP-4 Ø 10-11 mm	no picture

Pos.	Art.No	Qty.	Description	Comments
-	34570365	20	Tubing Clamp SNP-6 Ø 11-13 mm	no picture
10	3451614B	1	Temperature sensor	w/o connector (requires soldering)
10	34570730	1	Housing complete for temperature sensor	Temp.Sensor, O-ring, L-shape housing, heat shrink, Short plug, Screws
10	34562060	1	Temperature sensor cable set 4pol	Temp.Sensor, O-ring, L-shape housing, heat shrink, Wire incl. 4pol connector, Long and Short plugs, Screws
10	3477104A	10	O-ring 8.3 x 2.4	Temperature sensor

UF Sub-Rack with new Balance Chamber V2 ≥ 267,600/320,906/522,214

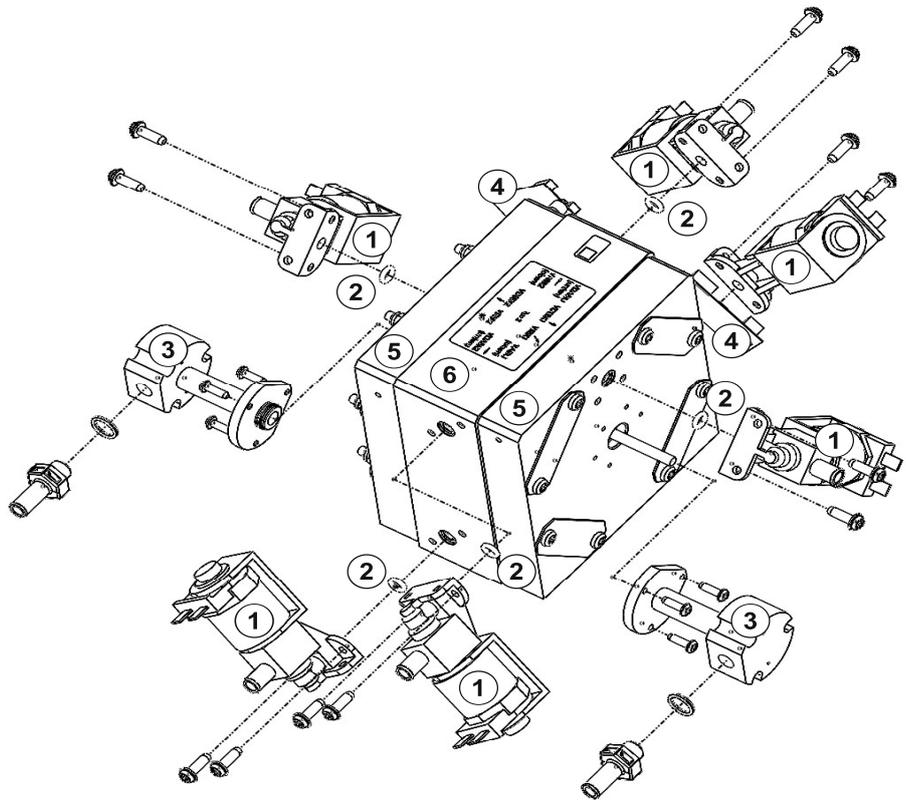


Fig. 9-21 Balance chamber assembly group

Pos .	Version balance chamber	Art.No.	Scope of delivery	Description	Comments
1	V2	3451902C	1	Solenoid valve 2/2 way	connector/flange
2	V2	34570901	3	O-ring 5.6 x 1.6	
3	V2	34562293	1	Coil	Screws and o-ring
-	V2	34770852	5	O-ring 11.1 x 1.6	Coil O-ring (spare part not illustrated)
4	V2	3451665A	1	Membrane position sensor board	single exchange possible
5	V2	34562292	1	Balance chamber outer part	
6	V2	34562291	1	Balance chamber middle part	label for balance chamber middle part is included

Balance Chamber V1 parts that are still available

Pos .	Version balance chamber	Art.No.	Scope of delivery	Description	Comments
1	V1	3451902C	1	Solenoid valve 2/2 way	connector/flange
2	V1	34770852	3	O-ring 11.1 x 1.6	Valves
3	V1	-	1	Coil	Not available anymore
-	V1	34770976	5	O-ring 15.6 x 1.78	Coil O-ring (spare part not illustrated)

Pos.	Version balance chamber	Art.No.	Scope of delivery	Description	Comments
4	V1	3451665A	1	Membrane position sensor board	single exchange possible
5	V1	-	-	Balance chamber outer part	Not available anymore
6	V1	-	-	Balance chamber middle part	Not available anymore

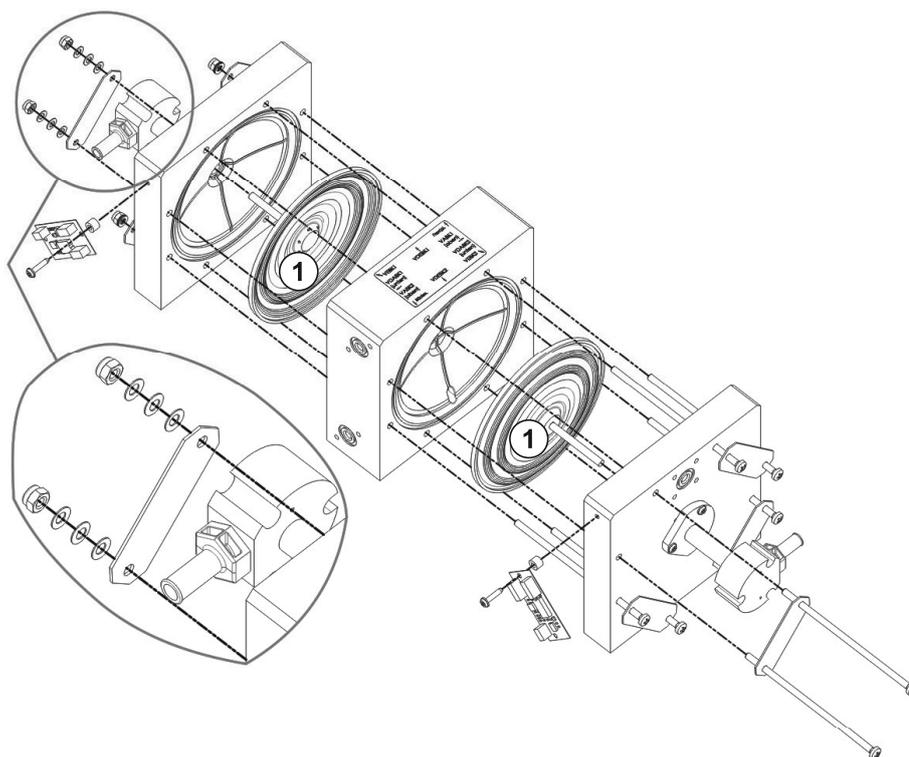


Fig. 9-22 Membranes in balance chamber

Pos.	Art.No.	Qty.	Description	Comments
1	3451615A	1	Membrane for balance chamber	single exchange possible
-	3451897B	1	Repair kit balance chamber Version 2: 2 x balance chamber membrane 8 x disc spring 8 x nut M4 8 x screw M4 x 105 1 x metal plate 2 x O-ring 11.1 x 1.6 6 x O-ring 5.6 x 1x8 12 x screws 40 x 14	

9.6.1 Air Separator Assembly Group

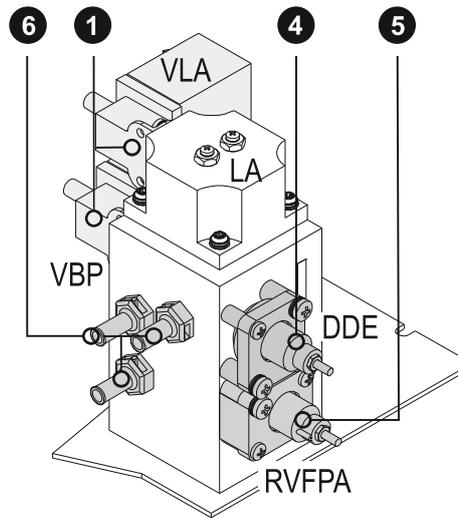


Fig. 9-23 Air separator assembly group, old version.

Pos.	Art.No	Qty.	Description	Comments
1	3451902C	1	Solenoid valve 2/2 way	VLA - VBP
1/6	34770852	5	O-ring 11.1 x 1.6	Valve/Tubing connector
4	34561706	1	Pressure controller 0.4 bar	DDE
4/5	34570683	10	O-ring 4.47 x 1.78	for pressure controllers
5	34561722	1	Pressure controller 1.3 bar	RVFPA
6	3451916A	5	Tubing connector 6 mm	plastic
-	34562215	1	Housing air separator	Square block w/o lid, SN<230332

9.6.2 Air Separator Assembly Group from SN 230,000/307,941/  
503,077

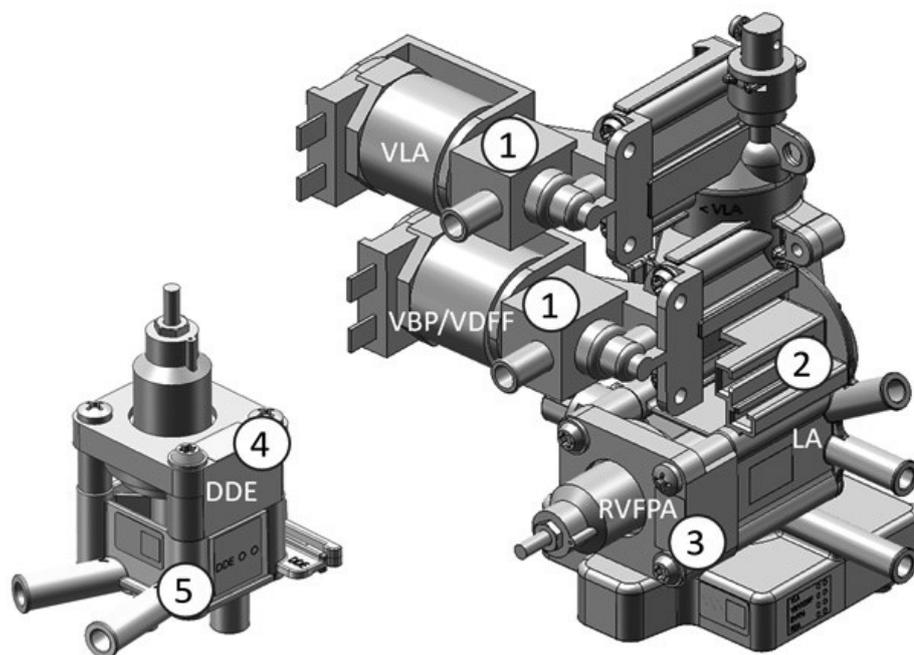


Fig. 9-24 Air separator assembly group, new version.

Pos.	Art.No	Qty.	Description	Comments
1	3451902C	1	Solenoid valve 2/2 way	connector/flange
1	34570901	3	O-ring 5.6 x 1.8	for valves
2	34562216	1	Air separator housing, consisting of: 1 x Air separator v2 1 x Cable adapter sensor UF 3 x Countersunk screw M 3 x 6 3 x Serrated wash locker	LA injection molded version complete
3	34561722	1	Pressure controller 1.3 bar	RVFPA
4	34561706	1	Pressure controller 0.4 bar	DDE
3-4	34570683	10	O-ring 4.47 x 1.78	for RVFPA + DDE
5	34562217	1	Adapter DDE	-

9.7 Top Level Sub Rack

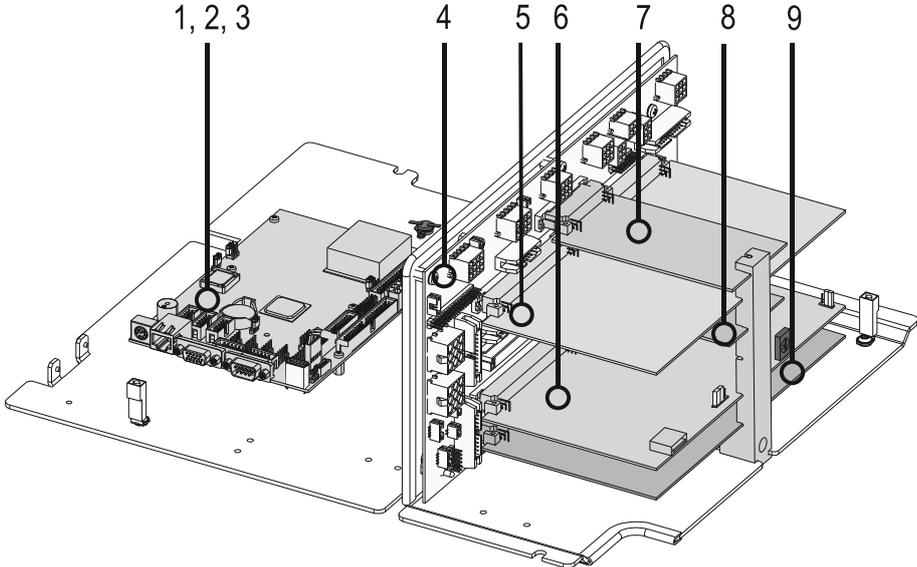


Fig. 9-25 Top level sub-rack LX800 motherboard

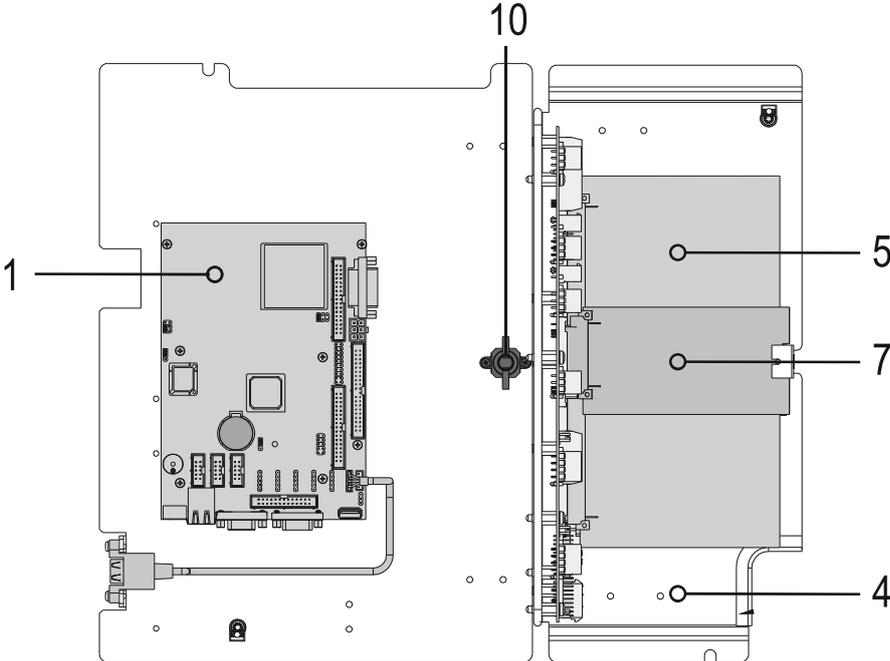


Fig. 9-26 Top level sub-rack LX800 motherboard top view

Pos.	Art.No	Qty.	Description	Comments
1	34560610	1	LX800 motherboard No longer produced, only available in limited quantities For Conversion kit see next pages	until SW 9.1E / SW 9.27, see chapter 9.7.2 LX800 Motherboard (888), from SW 9.1E / SW 9.27, see AI Exchange LX800 Motherboard to BSW Motherboard
2	34519327	1	Battery 2032, 3 V	for LX 800 and BSW motherboard, or the original Panasonic CR2032 can be purchased locally.
3	3456088A	1	Compact flash card 1 GB	only for LX 800 motherboard
4	34562168	1	Basic board	–
5	34562150	1	Power board valves	–
6	34562303	1	Digital board, version 6 no USB port	Exchange requires update to SW 9.1E / 9.27 or higher
7	34560866	1	HDF online board	for HDF online machines only
8	34560750	1	Power board motors	–
9	34560734	1	Analog board	–
10	3456127A	1	Temperature switch	assemble temperature switch on TL sub-rack with heat sink paste

## 9.7.1 Compatibility Table for Boards

Modification Matrix			Hardware Modification	
	Art.No.	Compatibility with	ex Factory	Retrofitting
Digital Board DB Version 6	34562303	from SW 9.1E/ 9.27	–	–
Power Board Valves PBV Version 2		any SW version 9.xx	–	–
Power Board Valves PBV Version 3	34562150	any SW version 9.xx	from serial numbers 218,832 304,349	–
Power Board Motors BPM	34560750	any SW version 9.xx	–	–
Basic Board BB Version 2		any SW version 9.xx	–	–
Basic Board BB Version 3	34562168	any SW version 9.xx	from serial numbers 218,832 304,349	–
Analog Board AB	34560734	any SW version 9.xx	–	–
HDF Online Board HOB	34560866	any SW version 9.xx	–	–
MSBK Board	3451665A	any SW version 9.xx	–	–

## 9.7.2 LX800 Motherboard

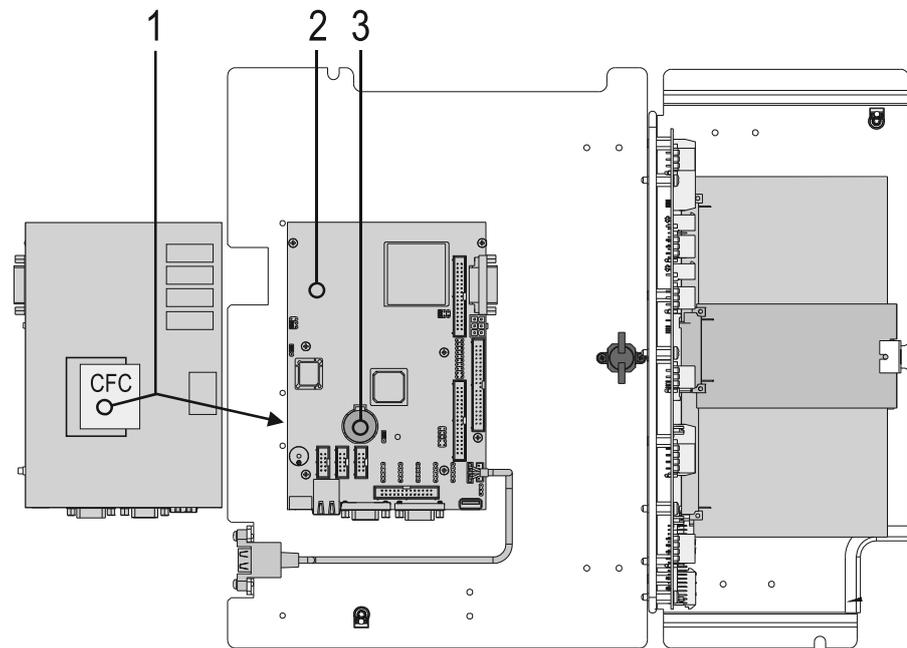


Fig. 9-27 LX800 Motherboard

Pos.	Art.No	Qty.	Description	Comments
1	3456088A	1	Compact flash card 1 GB	The SW for the machine has to be installed again after replacing the CFC
2	34560610	1	LX800 Motherboard No longer produced, only available in limited quantities	–See conversion kit LX 800 -> BSW
3	34519327	1	Battery 2032, 3 V	Or the original Panasonic CR2032 can be purchased locally
–	34562221	1	Ribbon cable 10 conductors (TCB – Motherboard)	–
–	34562225	1	Ribbon cable 26 conductors (FPB – Motherboard)	–
2	-	-	Conversion kit Motherboard LX 800 -> BSW	see below the different service kits for connection parts.
2	34562294	1	Service kit 1: Card reader LX 800 -> BSW	incl. HID card reader
2	34562295	1	Service kit 2: Motherboard LX 800 -> BSW	incl. BSW, MSATA card, adapter plate + cables for: Adimea, ABPM and Diabus
2	34562296	1	Service kit 3: HWBSL & DCI Option LX 800 -> BSW	Ribbon cable Autocal BSW
2	34562297	1	Service kit 4: Monitor Cable BSW LX 800 -> BSW	Rotatable screen
2	34562298	1	Service kit 5: Monitor Cable BSW LX 800 -> BSW	Non rotatable screen
2	34562299	1	Service kit 6: FPB Board LX 800 -> BSW	FPB w/ integrated LED BIB

9.7.3 BSW Motherboard (from SW 9.1E / SW 9.27)

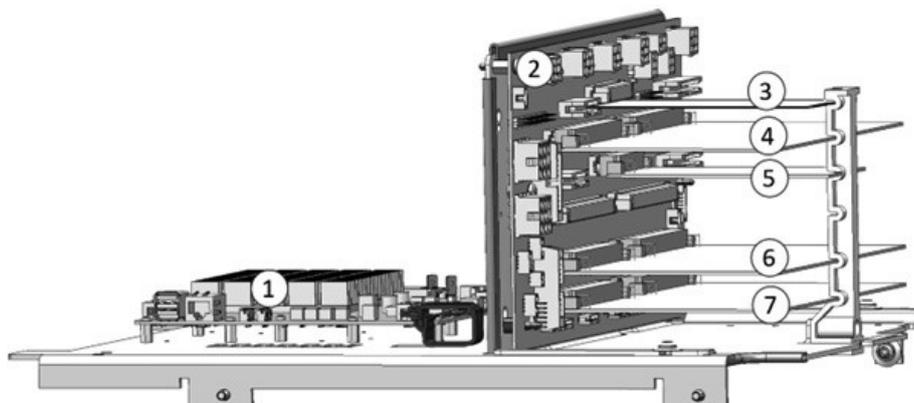


Fig. 9-28 Top Level sub rack BSW side view

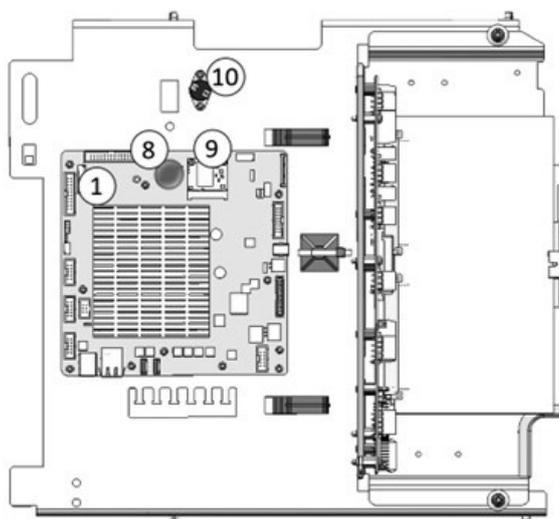


Fig. 9-29 Top level sub rack BSW top view

Pos.	Art.No	Qty.	Description	Comments
1	34562301	1	BSW motherboard	from SW 9.1E / SW 9.27, see AI Exchange LX 800 Motherboard to new BSW Motherboard
2	34562168	1	Basic board	-
3	34562168	1	HDF online board	For HDF online machines only
4	34562150	1	Power board valves	-
5	34560750	1	Power board motors	-
6	34560750	1	Digital board, version 6 no USB	Exchange requires update to SW 9.1E / 9.27 or higher
7	34560734	1	Analog board	-
8	34519327	1	Battery CR 2032, 3 V	Or original Panasonic CR 2032 battery can be purchased locally

Pos.	Art.No	Qty.	Description	Comments
9	34562302	1	mSATA mini Card 1 GB	The SW for the machine has to be installed again after replacing the storage medium
10	3456127A	1	Temperature switch	assemble temperature switch on TL sub-rack with heat sink paste

9.8 Rear Door

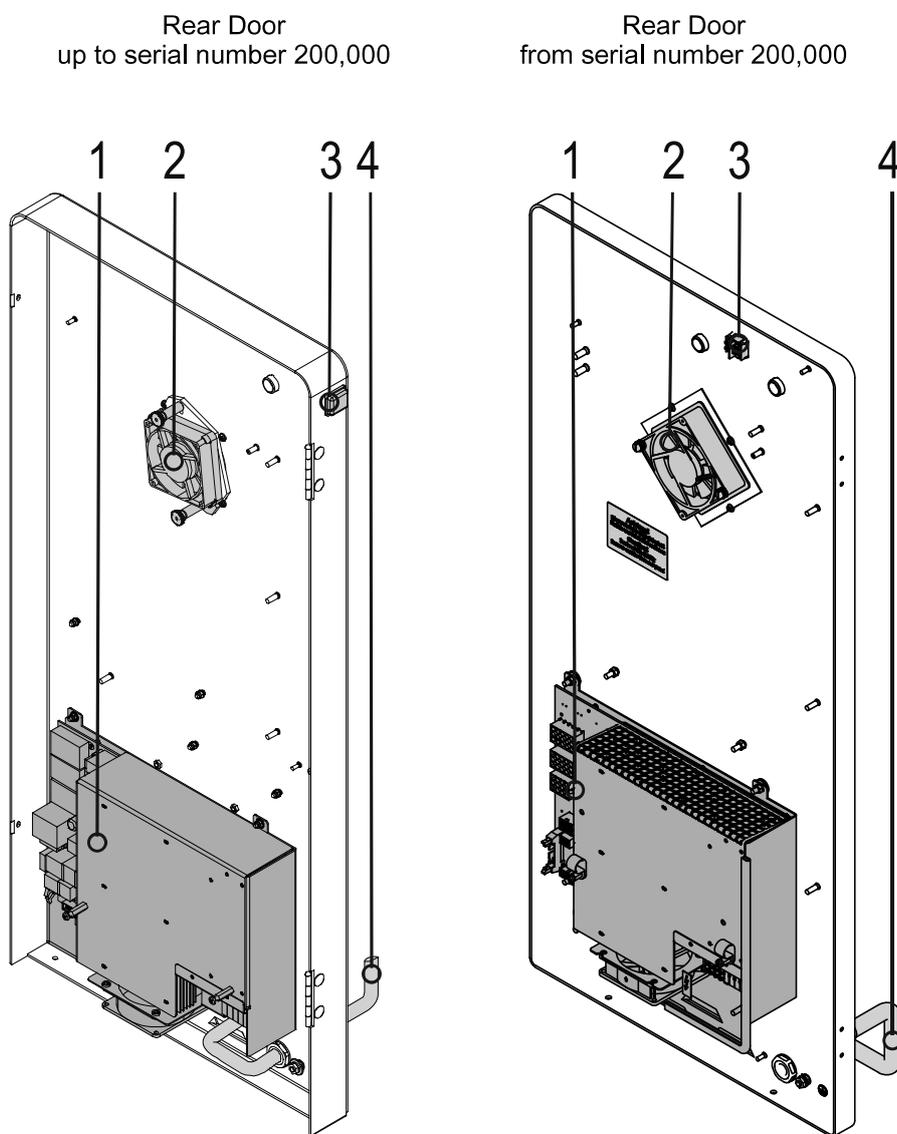


Fig. 9-30 Rear door inside view

Pos.	Art.No	Qty.	Description	Comments
1	3461076	1	Switch Mode Power Supply-MC2	–
2	3456130A	1	Fan 92 x 92 mm with connector	–
2	3457028A	5	Dust filter	–
3	3451059A	1	Mains switch	–
3	34770003	5	Protection cap for mains switch	–
4	–	–	Mains cord	see chapter 9.8.1 Mains Cord (894)
–	8701628	1	Potential equalization cable	–

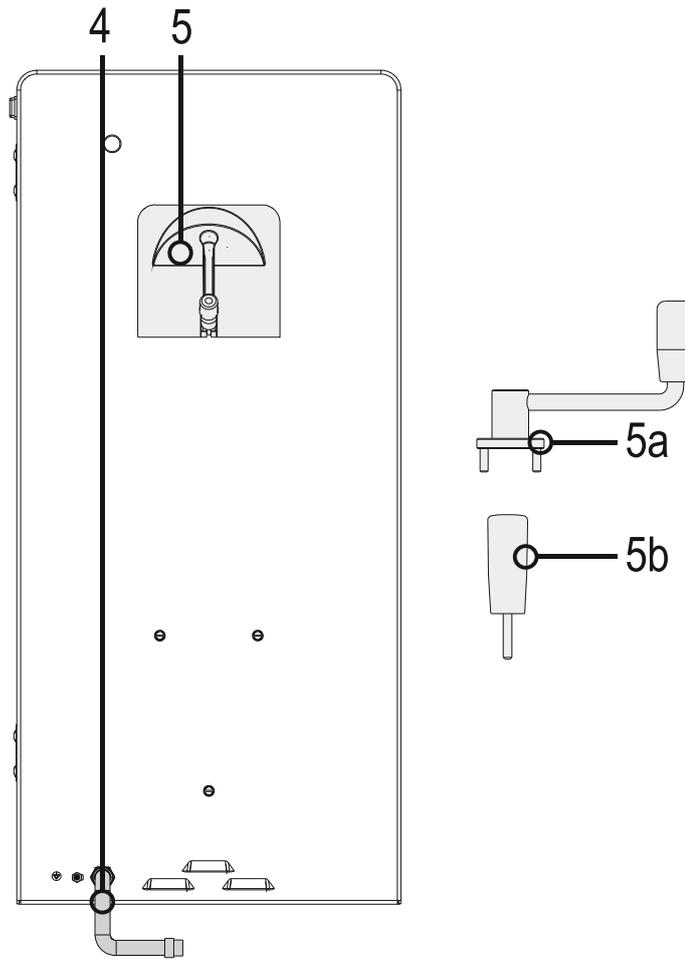


Fig. 9-31 Rear door outside view

Pos.	Art.No	Qty.	Description	Comments
4	34518029	1	Strain relief	–
5	3451441A	1	Tubing holder/fan cover	compatible to crank 5a/5b
5a	3451835A	1	Crank for blood pump	–
5b	34560157	1	Crank to blood pump	–

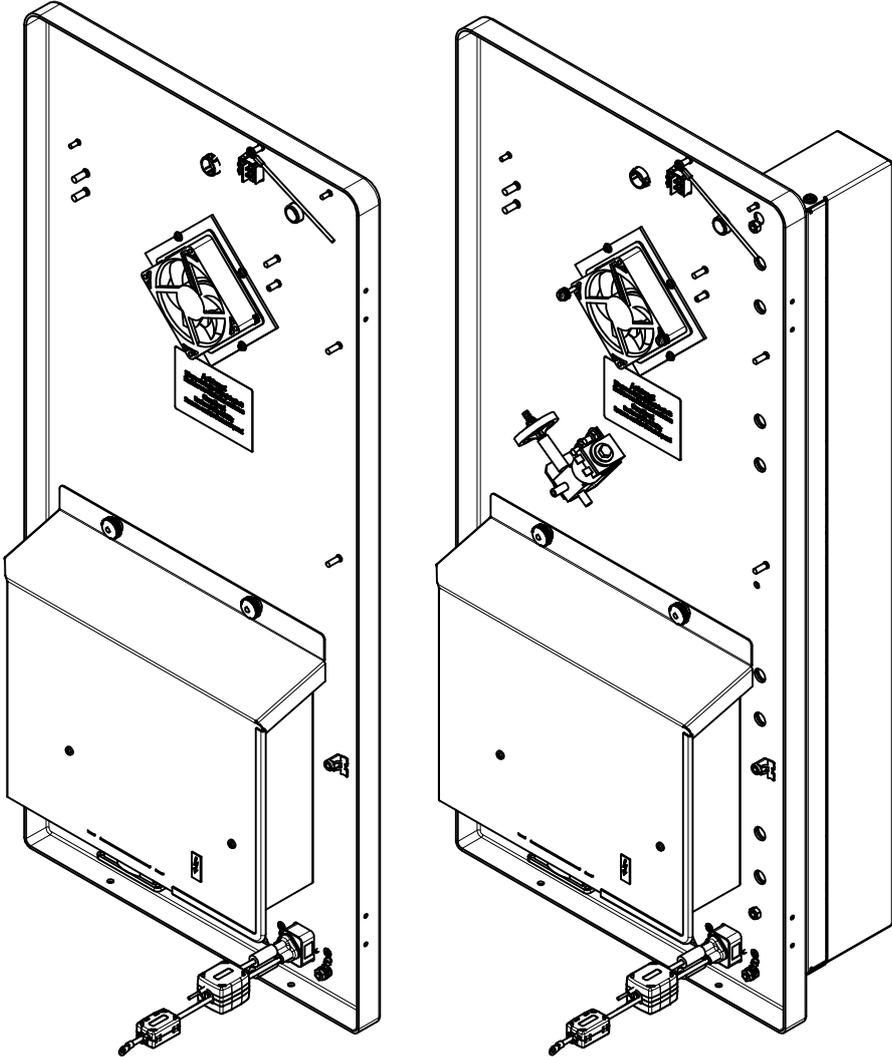


Fig. 9-32 Rear Door Standard Machine (left) and HDF-Online (right)

## 9.8.1 Mains Cord

## 9.8.1.1 Mains Cord for Clamp Terminal

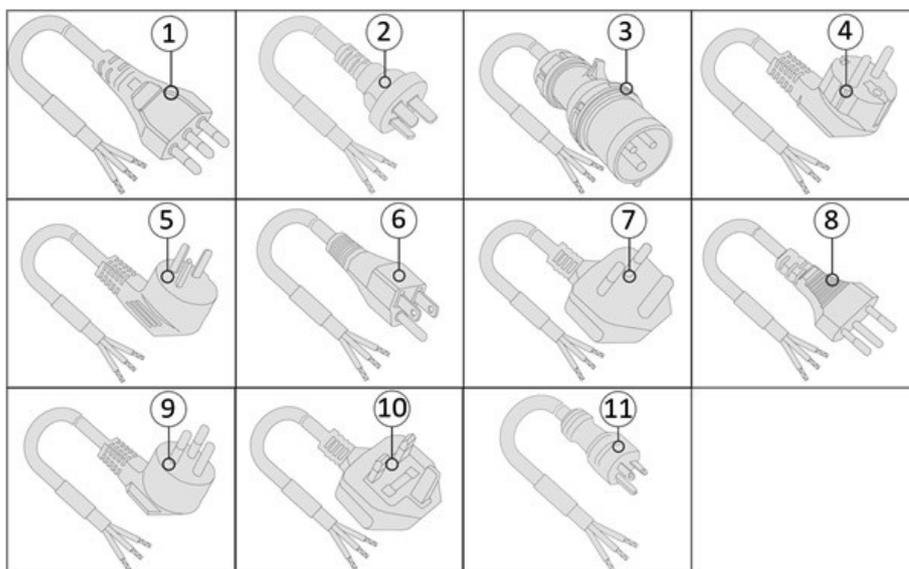


Fig. 9-33 Mains Cord old version

Pos.	Art.No	Qty.	Description	Comments
1	34561218	1	Mains cord (Brazil)	–
2	34561226	1	Mains cord (China)	–
3	34561145	1	Mains cord (Germany, CeKon)	–
4	34561153	1	Mains cord (Germany, Schuko)	–
5	34561200	1	Mains cord (Israel)	–
6	34561170	1	Mains cord (Philippines)	–
7	34561196	1	Mains cord (South Africa/India)	–
8	34562264	1	Mains cord (Switzerland)	–
9	34561234	1	Mains cord (Thailand)	–
10	34561188	1	Mains cord (U.K.)	–
11	34561161	1	Mains cord (U.S.A.)	–

## 9.8.1.2 Mains Cord for Mains Socket

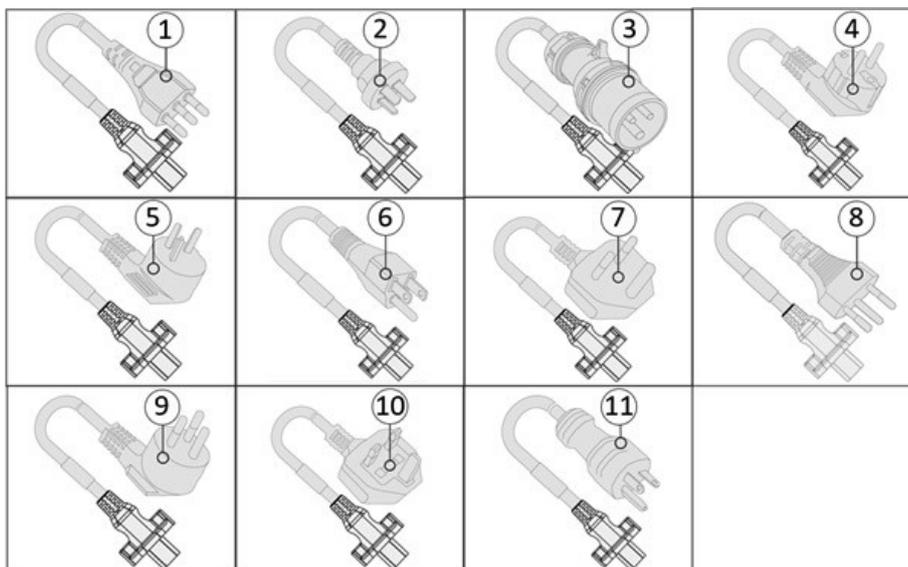


Fig. 9-34 Mains Cord for Mains Socket new version

Pos.	Art.No	Qty.	Description	Comments
1	3461068	1	Mains cord (Brazil), incl. all seals	–
2	3461085	1	Mains cord (China), incl. all seals	–
3	3461065	1	Mains cord (Germany, CeKon), incl. all seals	–
4	3461066	1	Mains cord (Germany, Schuko), incl. all seals	–
5	3461084	1	Mains cord (Israel), incl. all seals	–
6	3461086	1	Mains cord (Philippines), incl. all seals	–
7	34561099	1	Mains cord (South Africa/India), incl. all seals	–
8	3461074	1	Mains cord (Switzerland), incl. all seals	–
9	3461070	1	Mains cord (Thailand), incl. all seals	–
10	3461067	1	Mains cord (U.K.), incl. all seals	–
11	3461069	1	Mains cord (U.S.A.), incl. all seals	–

9.8.2 Switch Mode Power Supply Microcontroller SMPS-MC2

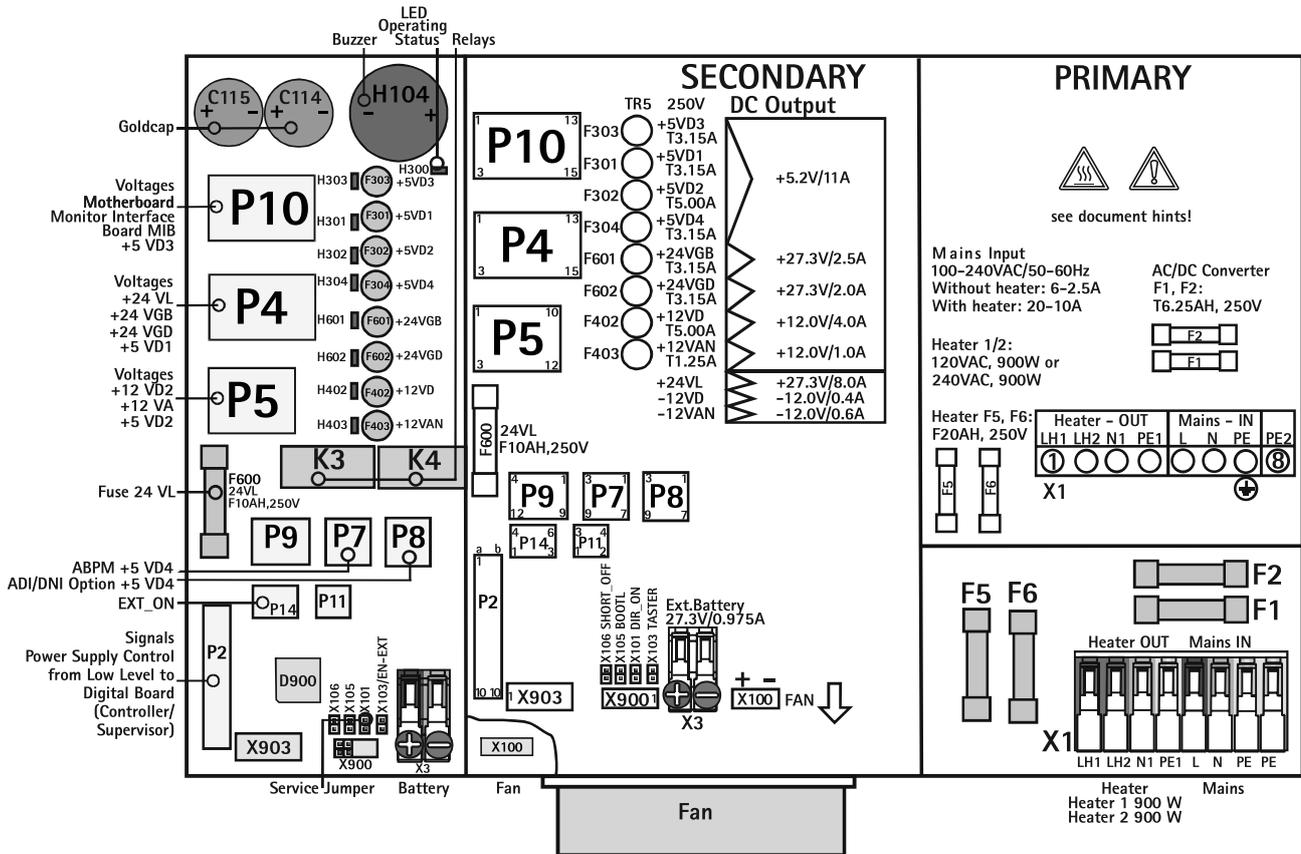


Fig. 9-35 Switch mode power supply microcontroller SMPS-MC2

Pos.	Art.No	Qty.	Description	Comments
1	3461076	1	Switch mode power supply microcontroller SMPS-MC2,	for 110/240V
F1/F2	34570462	10	Fuse T6.25 A (6.3 x 32 mm)	-
F5	34570462	10	Fuse T6.25 A (6.3 x 32 mm)	for 230 V
F5	34771328	10	Fuse F12 A (6.3 x 32 mm)	for 110/120 V
F6	34771328	10	Fuse F12 A (6.3 x 32 mm)	for 230 V
F6	34570187	10	Fuse M20 A (6.3 x 32 mm)	for 110/120 V
F301	34570160	10	Fuse T3.15 A (TR5)	-
F302	34570470	10	Fuse T5 A (TR5)	-
F303	34570160	10	Fuse T3.15 A (TR5)	-
F304	34570160	10	Fuse T3.15 A (TR5)	-
F402	34570470	10	Fuse T5 A (TR5)	-
F403	34518819	10	Fuse T1.25 A (TR5)	-
F600	34570179	10	Fuse M10 A (6.3 x 32 mm)	-
F601	34570160	10	Fuse T3.15 A (TR5)	-
F602	34570160	10	Fuse T3.15 A (TR5)	-
K3/ K4	34514775	2	Relay (12 V)	-
C114/ C115	34519912	2	Capacitor 1F	-

Pos.	Art.No	Qty.	Description	Comments
H104	34560580	1	Buzzer	-
-	34560416	10	Plug for buzzer	lower buzzer sound level

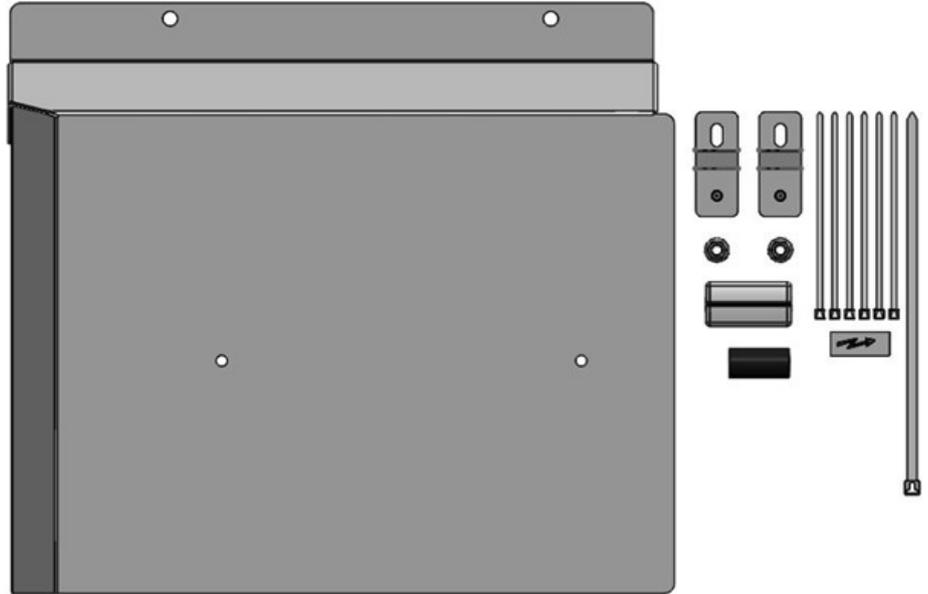


Fig. 9-36 Retrofit kit Power Supply SMPS-MC2 to SMPS-MC3

Art.No	Qty.	Description	Comments
34562338	1	Retrofit kit Power Supply consisting of:	From SMPS-MC2 to SMPS-MC3,
	2	Adapter mounting bracket	-
	1	Adapter cover	
	2	Hexagon flange nut M5	
	6	Pan head screw M 4 x 8	
	1	Cable tie T18	
	1	Ferrite sleeve for cable	

9.8.3 Switch Mode Power Supply Microcontroller SMPS-MC3

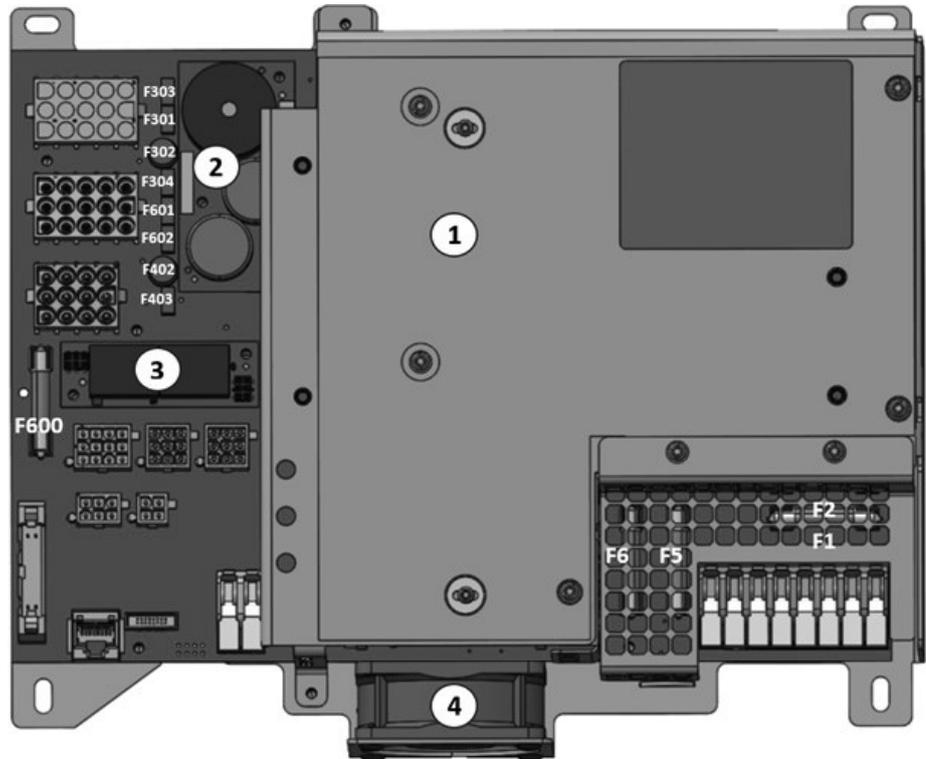


Fig. 9-37 Power supply micro-controller SMPS-MC3

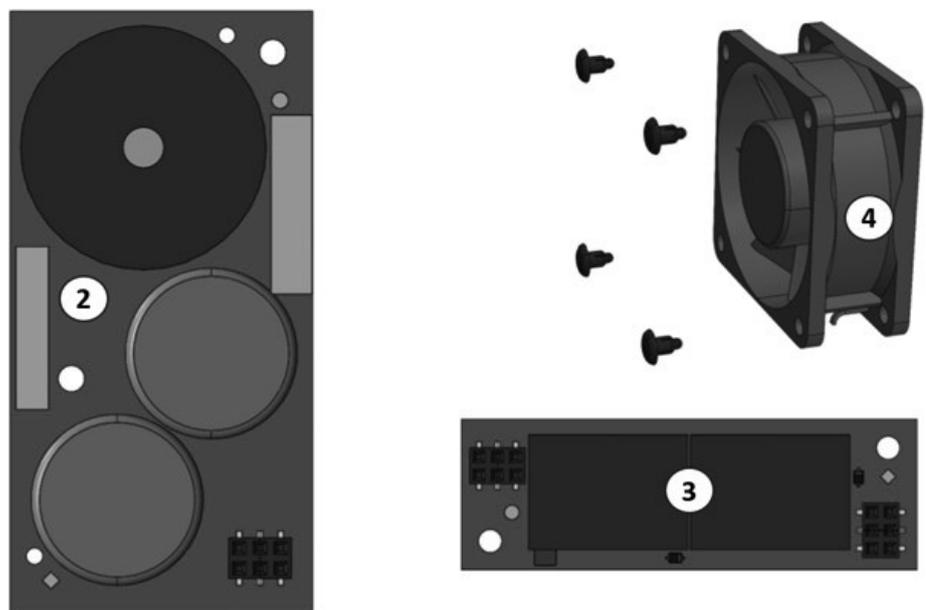


Fig. 9-38 Power supply micro-controller SMPS-MC3 spare parts

Pos.	Art.No	Qty.	Description	Comments
1	34562337	1	Switch mode power supply SMPS-MC3	new version, backwards compatible, 110/240V
2	34562339	1	PCB Alarm supply	-
3	34562340	2	PCB Relay (12 V)	-

Pos.	Art.No	Qty.	Description	Comments
4	34562343	1	Fan	incl. snap rivet (4x)
F1/F2	34570462	10	Fuse T6.25 A (6.3 x 32 mm)	–
F5	34570462	10	Fuse T6.25 A (6.3 x 32 mm)	for 230 V
F5	34771328	10	Fuse F12 A (6.3 x 32 mm)	for 110/120 V
F6	34771328	10	Fuse F12 A (6.3 x 32 mm)	for 230 V
F6	34570187	10	Fuse M20 A (6.3 x 32 mm)	for 110/120 V
F301	34562341	10	Fuse T3.15 A (TR5)	–
F302	34570470	10	Fuse T5 A (TR5)	–
F303	34562341	10	Fuse T3.15 A (TR5)	–
F304	34562341	10	Fuse T3.15 A (TR5)	–
F402	34570470	10	Fuse T5 A (TR5)	–
F403	34562342	10	Fuse T1.25 A (TR5)	–
F600	34570179	10	Fuse M10 A (6.3 x 32 mm)	–
F601	34562341	10	Fuse T3.15 A (TR5)	–
F602	34562341	10	Fuse T3.15 A (TR5)	–
–	34560416	10	Plug for buzzer	lower buzzer sound level

9.9 Front Door

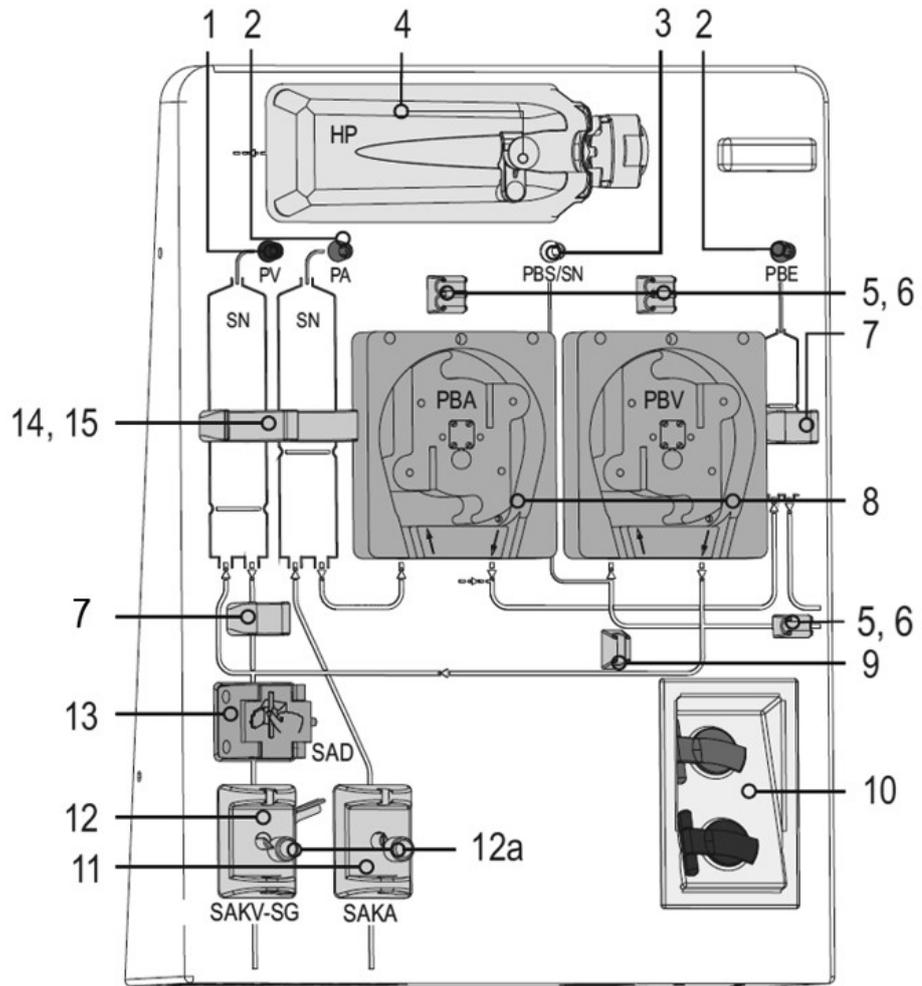


Fig. 9-39 Front door old version, outside view

Pos.	Art.No	Qty.	Description	Comments
1,2,3	-	5	Luer-Lock manometer connector, blue, for PV	see chapter 9.9.3 Luer-Lock Connector (908)
4	-	1	Heparin pump Compact	See chapter 9.9.3
5	34570535	1	Single tubing holder	6.8 mm
6	34570543	1	Double tubing holder	6.8 mm
7	34570527	1	Single holder, small	-
8	3456079A	1	Blood pump without roller	see chapter 9.9.5 Blood Pump (910)
9	34570560	1	Single tubing holder	∅ 6 mm
10	3451415A	1	Cover complete	-
11	34570578	1	SAKA Cover with tubing holder	-
12	34514317	1	SAKV-SG Cover with tubing holder	-
12a	34570896	20	Cover cap for SAKA and SAKV	-

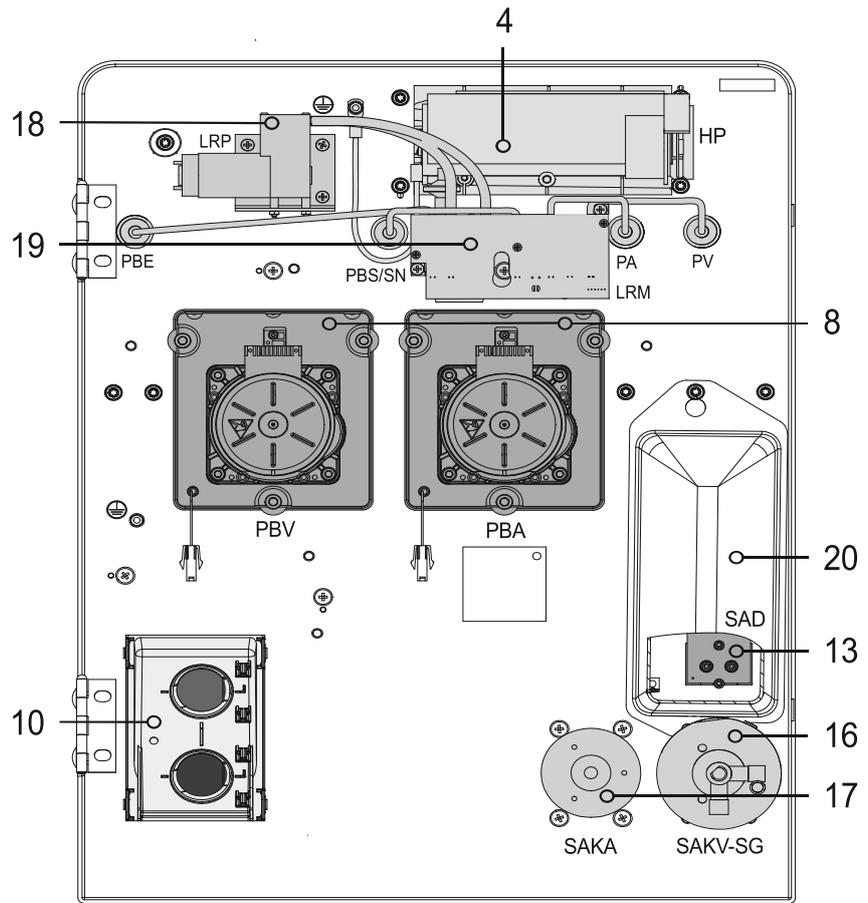


Fig. 9-40 Front door old version, inside view

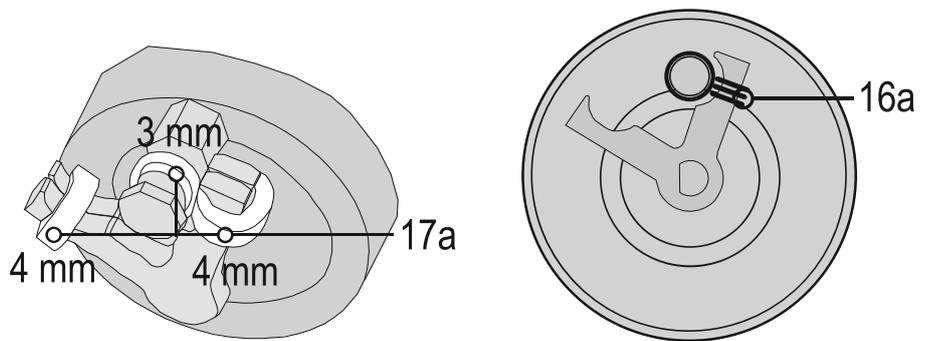
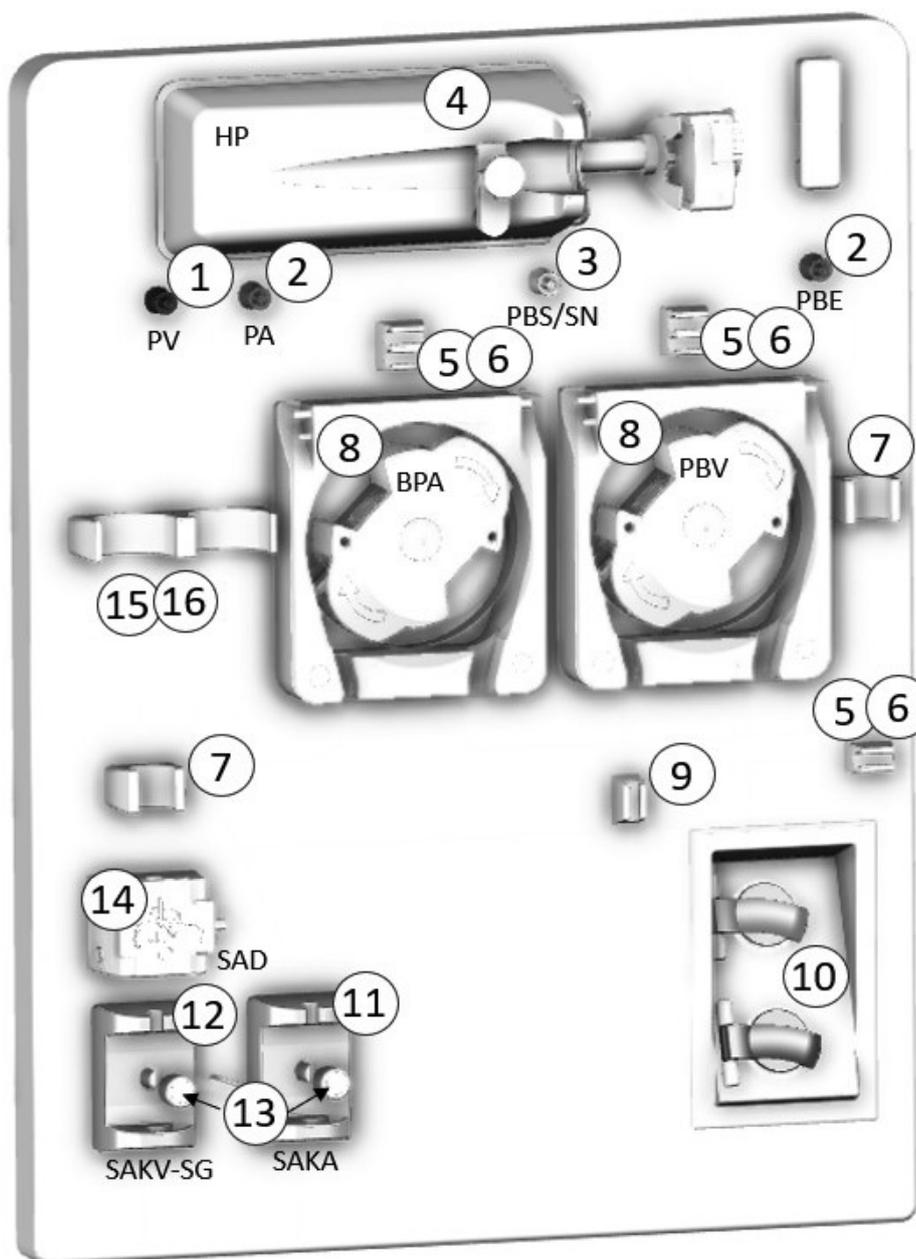


Fig. 9-41 Front Door old version, SAKA, SAKV-SG

Pos.	Art.No	Qty.	Description	Comments
13	3456005E	1	SAD version 4 with red detector	until SW 9.1E / 9.27 see chapter 9.9.6 Safety Air Detector SAD (913)
13	-	1	SAD version 5 with red detector Only from ≥ SW 9.32	from SW 9.32 see chapter 9.9.6 Safety Air Detector SAD (913)
14	34570551	1	Double holder, big	-
15	34570519	1	Single holder, big	-
16	34514107	1	Rotary magnet (currentless closed)	for SAKV-SG
16a	34570624	9	O-ring 7.0 x 1.5	for SAKV-SG

Pos.	Art.No	Qty.	Description	Comments
17	3456000A	1	Rotary magnet	for SAKA
17a	34570675	10	Soft silicone stopper	2 silicone tubes used as a buffer
18	34560823	1	Diaphragm pump	with assembly elbow
19	3456081B	1	Valve block level regulation (single pump)	see chapter 9.9.7
19	3456083B	1	Valve block level regulation (double pump)	see chapter 9.9.7
20	34561803	1	SAD cover	–
–	34561641	1	Pressure Monitoring Module PA/PV	for machines without level regulation
–	–	–	Front door HDF Online	see chapter 9.18 HDF Online (952)
–	34561650	1	Front door Single pump	Metal base
–	34561668	1	Front door Double pump	Metal base

9.9.1 Front Door New Version  
Front Door Double Pump



9

Fig. 9-42 Front door new version, outside view

Pos.	Art.No	Qty.	Description	Comments
1,2,3	-	-	Luer-Lock connector,	see chapter 9.9.3 Luer-Lock Connector (908)
4	-	-	Heparin pump Compact	See chapter 9.9.3
5	34570535	1	Single tubing holder	6,8 mm
6	34570543	1	Double tubing holder	6,8 mm
7	34570527	1	Single holder, small	-
8	3456079A	1	Blood pump without roller	see chapter 9.9.5 Blood Pump (910)
9	34570560	1	Single tubing holder	∅ 6 mm

Pos.	Art.No	Qty.	Description	Comments
10	3451415A	1	Cover complete	-
11	34570578	1	SAKA Cover with tubing holder	-
12	34514317	1	SAKV-SG Cover with tubing holder	-
13	34570896	20	Cover cap for SAKA and SAKV	-
14	3456005E	1	SAD version 4 with red detector	until SW 9.1E / 9.27 see chapter 9.9.6 Safety Air Detector SAD (913)
15	34570551	1	Double holder, big	-
16	34570519	1	Single holder, big	-

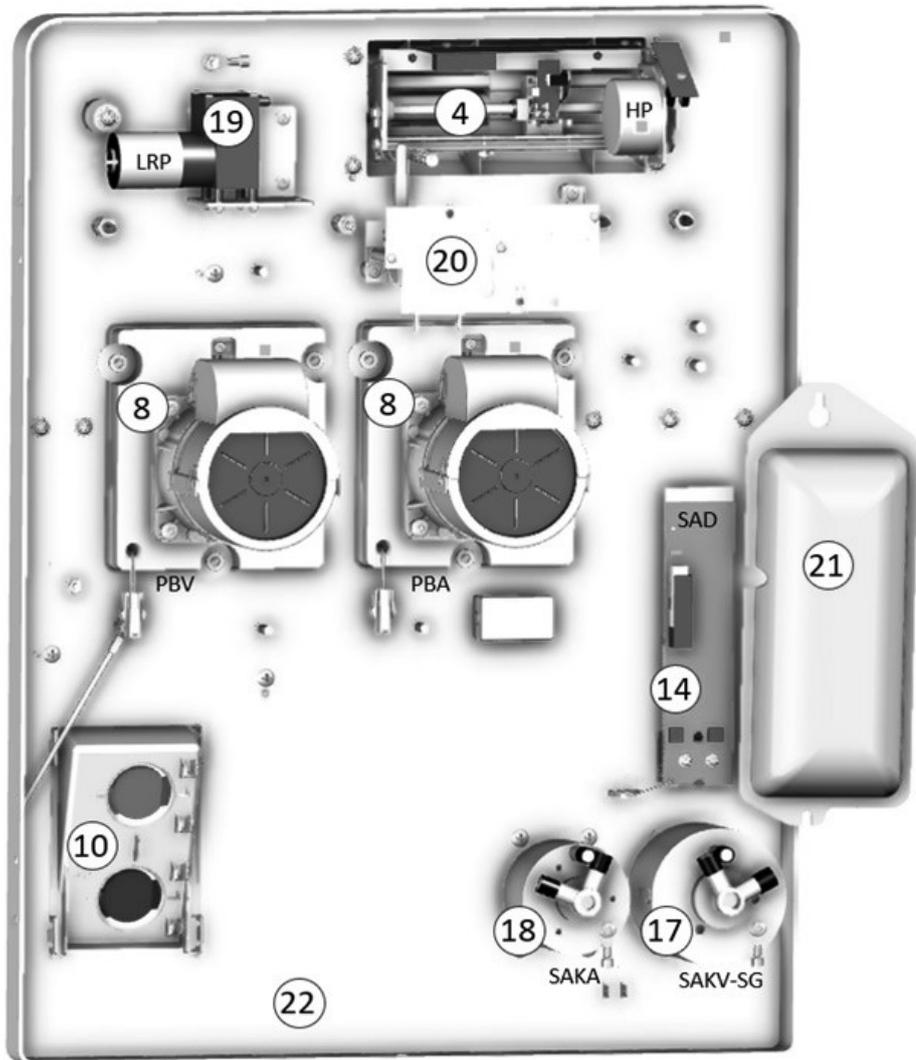


Fig. 9-43 Front door new version, inside view

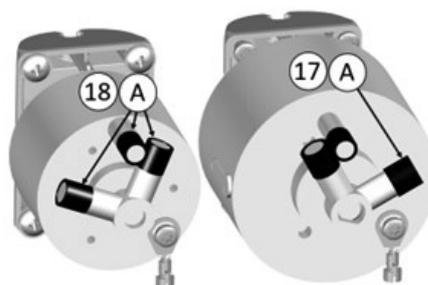


Fig. 9-44 Front door new version SAKA, SAKV-SG

Pos.	Art.No	Qty.	Description	Comments
14	3456005E	1	SAD version 4 with red detector	until SW 9.1E / 9.27 see chapter 9.9.6 Safety Air Detector SAD (913)
15	34570551	1	Double holder, big	–
16	34570519	1	Single holder, big	–
17	34514107	1	Rotary magnet (currentless closed)	for SAKV-SG
17a	34570624	9	O-ring 7.0 x 1.5	for SAKV-SG
18	3456000A	1	Rotary magnet	for SAKA
18a	34570675	10	Soft silicone stopper	2 silicone tubes used as a buffer
19	34560823	1	Diaphragm pump	with assembly elbow
20	3456081B	1	Valve block level regulation (single pump)	see chapter 9.9.7
20	3456083B	1	Valve block level regulation (double pump)	see chapter 9.9.7
20	34561641	1	Pressure Monitoring Module PA/PV for machines without level regulation	see chapter 9.9.7
21	34561803	1	SAD cover	–
22	–	–	Front door HDF Online	see chapter 9.18 HDF Online (952)
22	34562247	1	Front door Single pump	Metal base
22	34562248	1	Front door Double pump	Metal base

9.9.2 Front Door With Integrated Display

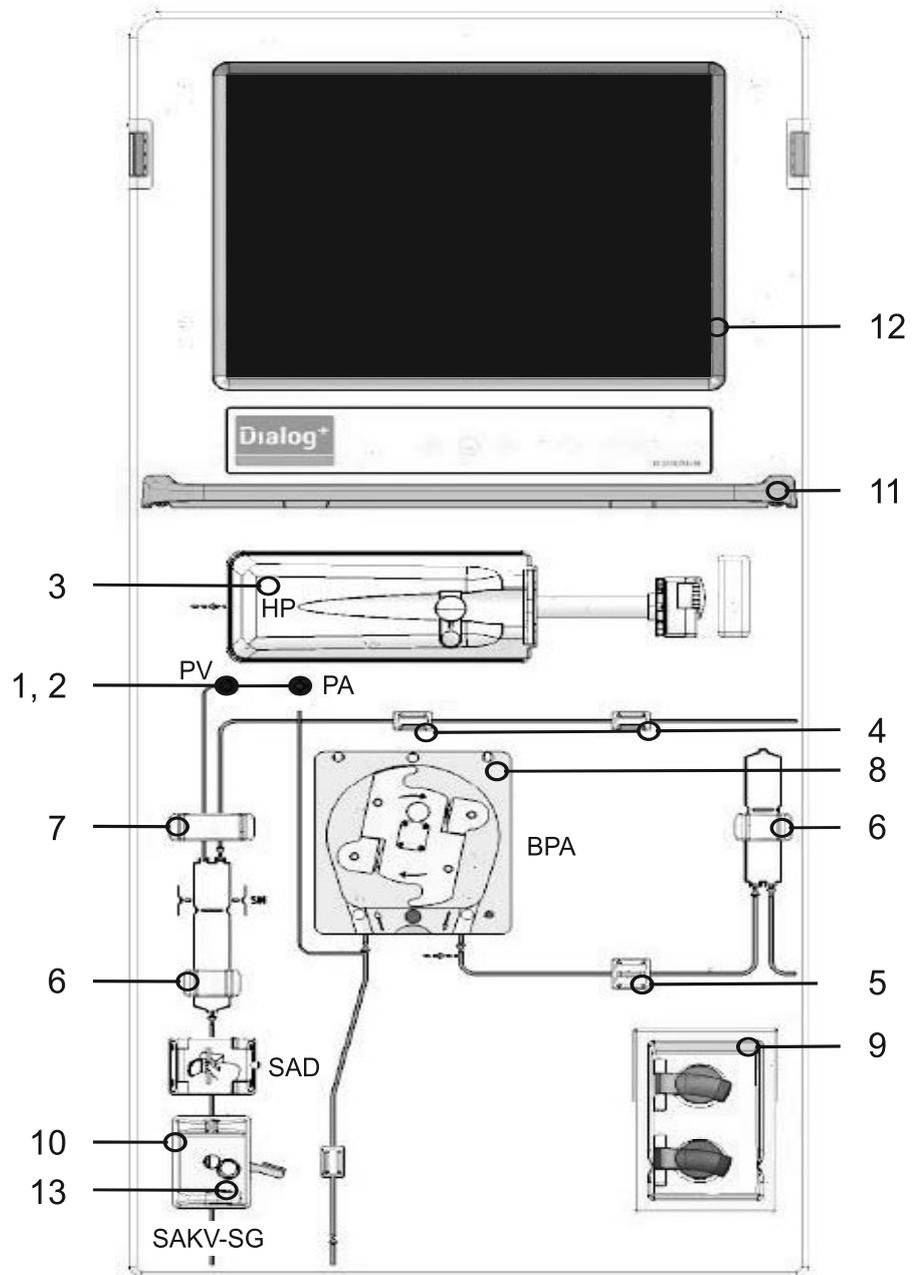


Fig. 9-45 Front door with integrated display, outside view

Pos.	Art.No	Qty.	Description	Comments
1,2	-	-	Luer-Lock connector,	see chapter 9.9.3 Luer-Lock Connector (908)
3	-	1	Heparin pump Compact	See chapter 9.9.3
4	34570535	1	Single tubing holder	6.8 mm
5	34570543	1	Double tubing holder	6.8 mm
6	34570527	1	Single holder, small	-
7	34570519	1	Single holder, big	-
8	3456079A	1	Blood pump without roller	see chapter 9.9.5 Blood Pump (910)

Pos.	Art.No	Qty.	Description	Comments
9	3451415A	1	Cover complete	-
10	34570578	1	SAKV-SG Cover with tubing holder	-
11	34562236	1	Front tray	Green
12	-	-	LCD-Monitor	- see chapter 9.11.1 LCDMonitor Integrated in door
13	34570896	20	Cover cap for SAKV	-

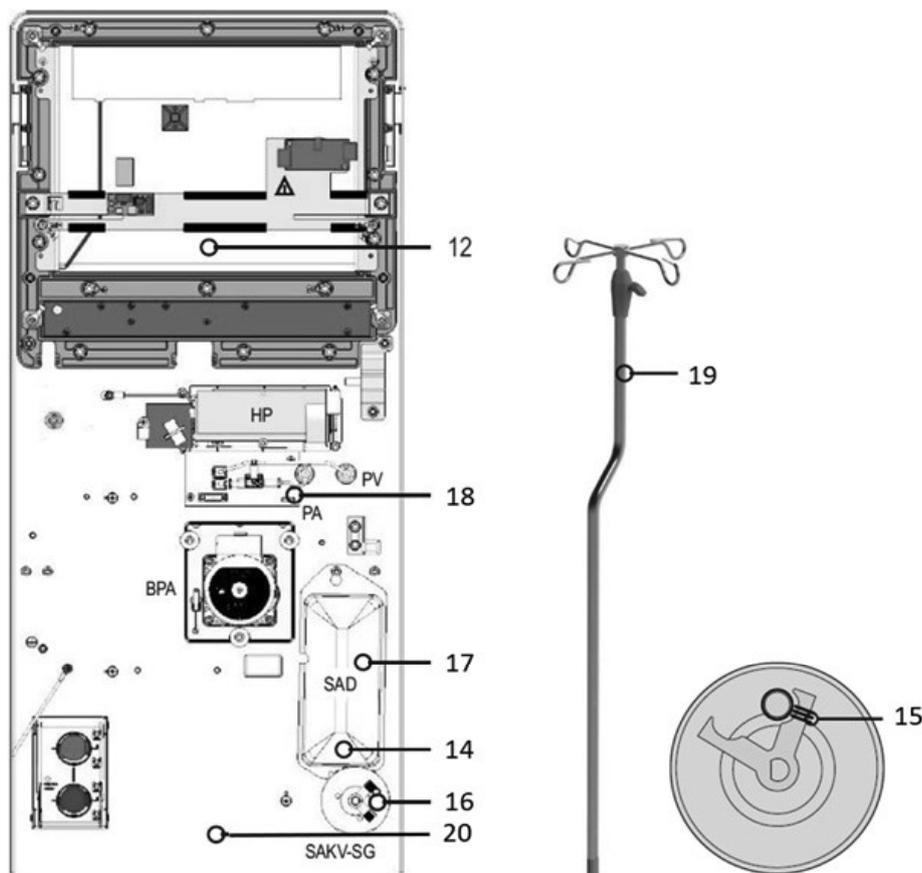


Fig. 9-46 Front door with integrated display, inside view

Pos.	Art.No	Qty.	Description	Comments
14	3456005E	1	SAD version 4 with red detector	until SW 9.1E / 9.27 see chapter 9.9.6 Safety Air Detector SAD (913)
15	34570624	9	O-ring 7.0 x 1.5	for SAKV-SG
16	34514107	1	Rotary magnet (current less closed)	for SAKV-SG
17	34561803	1	SAD cover	-
18	34561641	1	Pressure Monitoring Module PA/PV	for machines without level regulation see chapter 9.9.7
19	34562273	1	IV pole	for Front Door Display version
20	34562250	1	Front door for integrated display	Metal base

## 9.9.3 Luer-Lock Connector

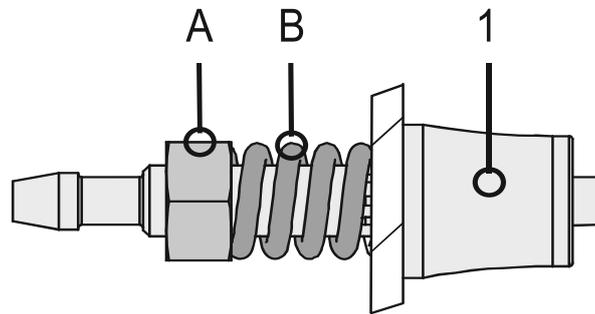


Fig. 9-47 Luer-Lock connector spring, loaded

Pos.	Art.No	Qty.	Description	Comments
1	34570845	5	Luer-Lock connector, blue, for PV	A: Nut; B: Spring
1	34570853	5	Luer-Lock connector, red, for PA/PBE	A: Nut; B: Spring
1	34570837	5	Luer-Lock connector, white, for PBS/SN	A: Nut; B: Spring

9.9.4 Heparin Pump

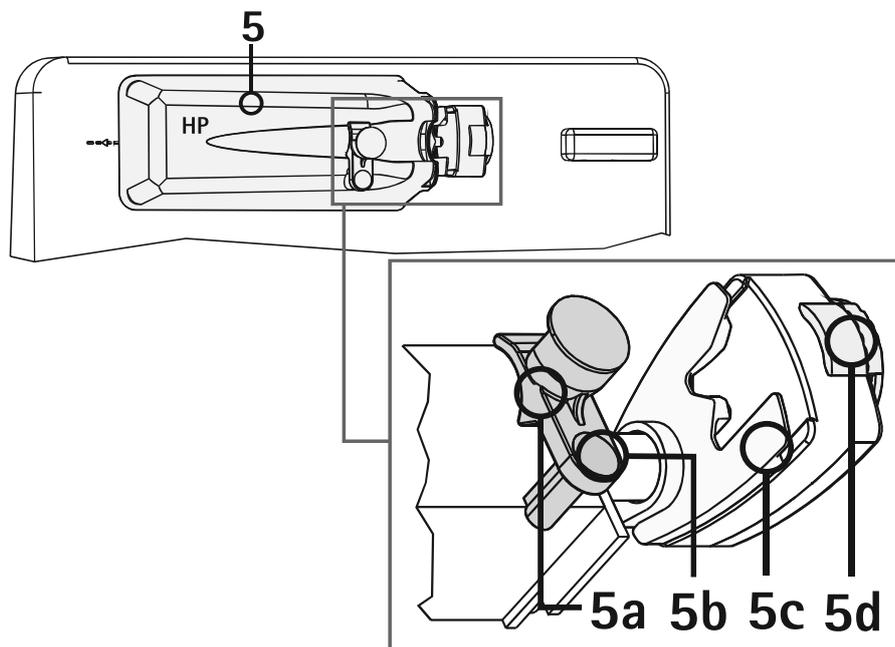


Fig. 9-48 Heparin pump compact

Pos.	Art.No	Qty.	Description	Comments
5	3451432D	1	Heparin pump compact	–
5a	34514732	1	Syringe holder	–
5b	34570640	5	Dummy plug	–
5c	34570667	1	Clamp	–
5d	34570659	1	Unlocking lever set	–
-	34562226	1	Ribbon cable 20pin (HEP,P6)	Connection cable, no image

9.9.5 Blood Pump

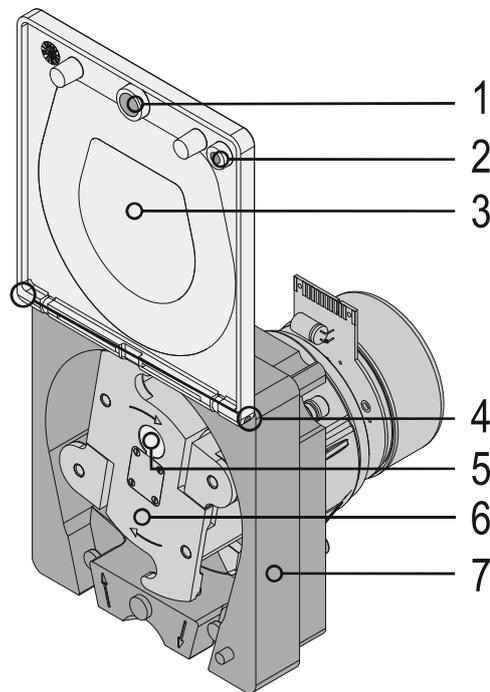


Fig. 9-49 Blood pump old version, front view

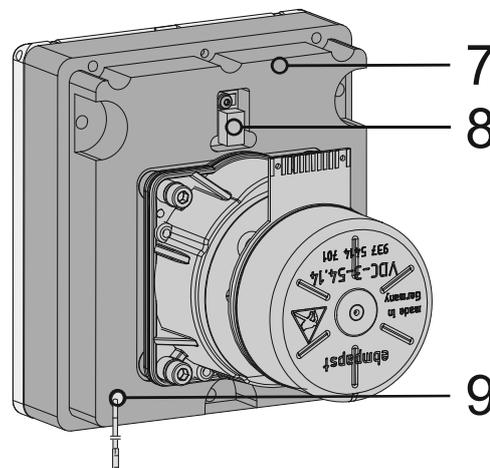


Fig. 9-50 Blood pump old version, rear view

Pos.	Art.No	Qty.	Description	Comments
1	3456003B	1	Metal disc Ø 10 mm	for cover
2	34560025	1	Magnet Ø 5 mm	for cover
3	3451669F	1	Cover for blood pump	no hinge
4	34519823	1	Hinge pin with internal thread	hinge pin
5	34570616	5	Latch	–
6	3456080A	1	Roller 8 x 12 for blood pump	old version with 2 magnets
7	3456079A	1	Blood pump without roller	old version

Pos.	Art.No	Qty.	Description	Comments
8	34561358	1	Direction of rotation board for blood pump	–
9	34517138	1	Reed sensor with contacts and O-ring 3.68 x 1.78	–
–	34562256	1	Pump motor cover	No image
–	34516670	1	Seal for blood pump	old version no image
–	7703708	1	Grease S.K.D. 4002	100g tube (to lubricate the shaft of the blood pump)

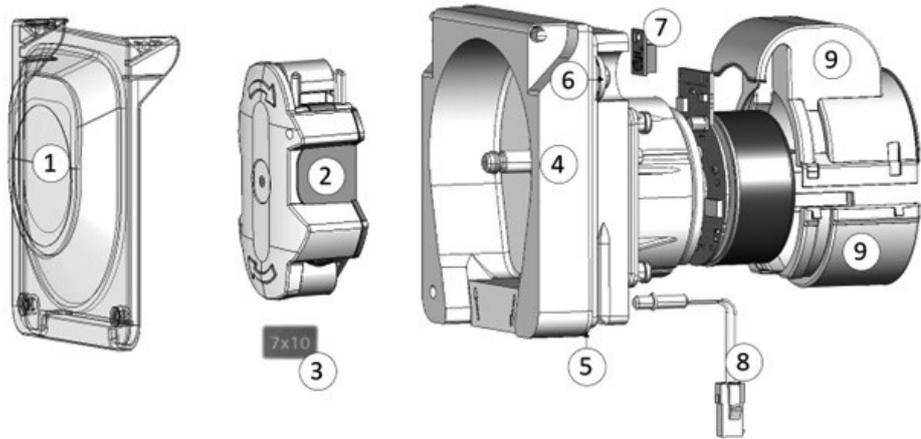


Fig. 9-51 Blood pump, new version front view

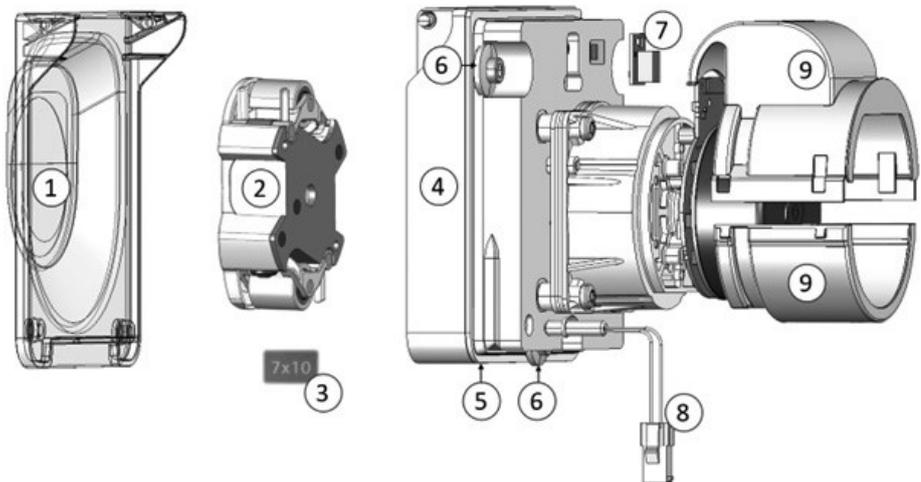


Fig. 9-52 Blood pump, new version rear view

Pos.	Art.No	Qty.	Description	Comments
1	34562317	1	Cover for blood pump	not backwards compatible
2	34562318	1	Roller 8 x 12 for blood pump	not backwards compatible
3	34562320	1	Label 7 x 10 for blood pump	–
4	34562319	1	Blood pump without roller	new version, incl. cover and seal
5	–	–	Seal for blood pump	Not available, incl. in 34562319
6	34570713	1	Tooth washer	–
7	34561358	1	Direction of rotation board for blood pump	–
8	34517138	1	Reed sensor with contacts and O-ring 3.68 x 1.78	–
9	34562256	1	Motor cover	top and bottom pieces
–	7703708	1	Grease S.K.D. 4002	100g tube (to lubricate the shaft of the blood pump)

9.9.6 Safety Air Detector SAD

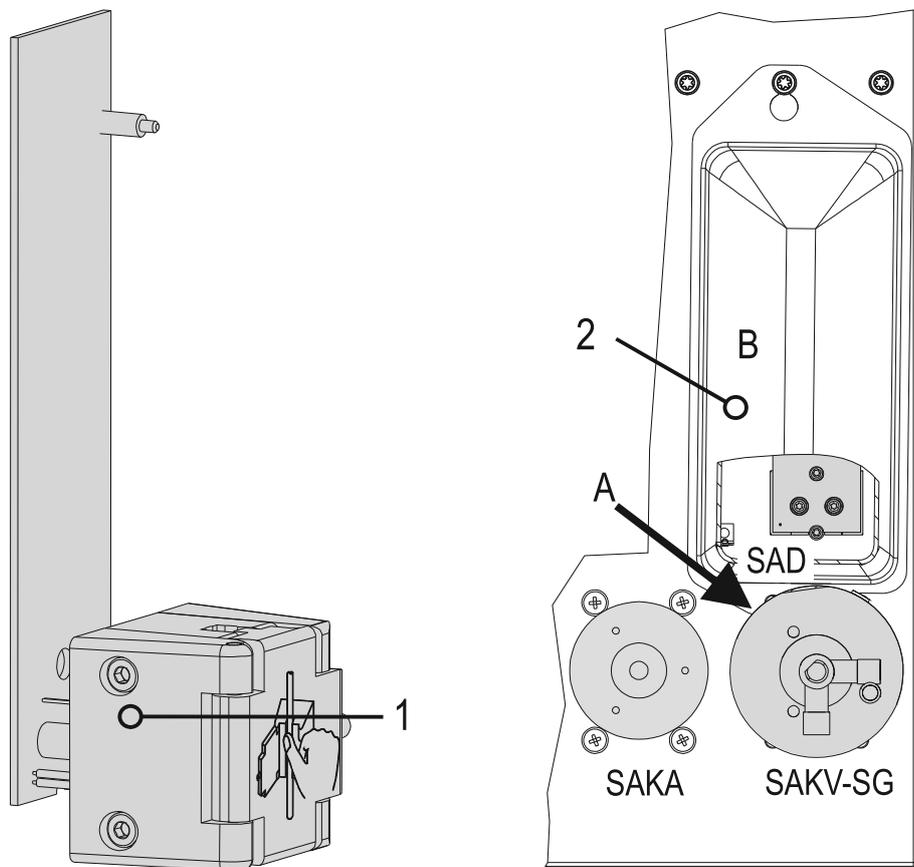


Fig. 9-53 Safety air detector SAD

Pos.	Art.No	Qty.	Description	Comments
1	3456005E	1	SAD version 4 with red detector	until SW 9.1E / 9.27
1	-	1	SAD version 5 with red detector Only from ≥ SW 9.32	do not use in ≤ SW 9.1E / 9.27
2	34561803	1	SAD cover	A ball head Allen key 2.5/3 is required for bottom screw A behind rotary magnet to remove cover for SAD B
-	34562228	1	Ribbon cable 20-pin (SAD, BB)	-

9.9.7 Level Regulation (Option) and Pressure Monitoring

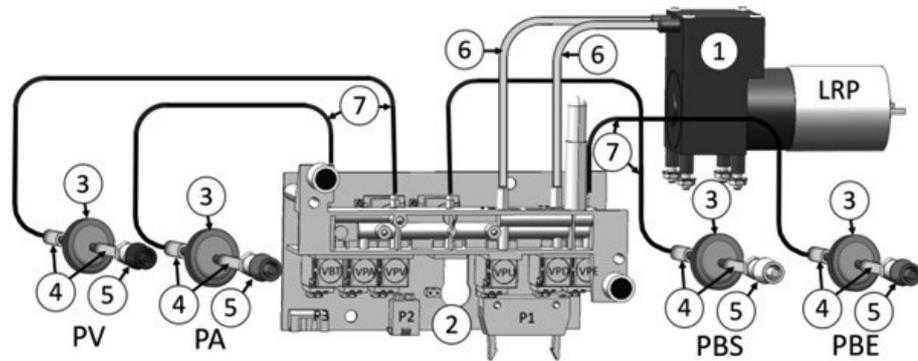


Fig. 9-54 Level regulation module

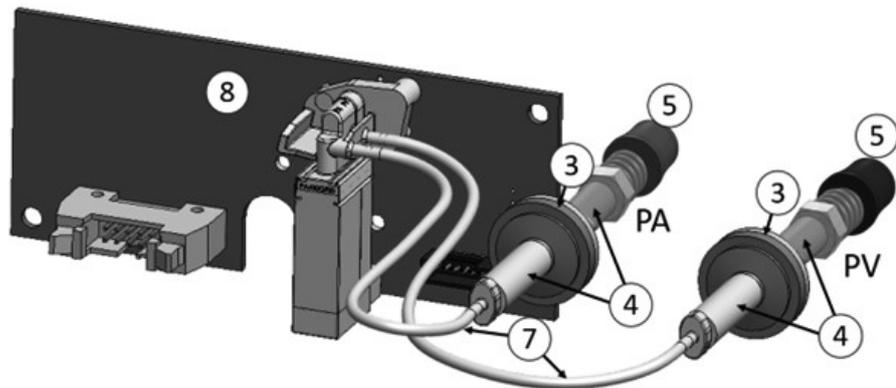


Fig. 9-55 Pressure monitoring module

Pos.	Art.No	Qty.	Description	Comments
1	34560823	1	Diaphragm pump	LRP with assembly bracket and connection tube.
2	3456081B	1	Valve block level regulation (single pump)	complete with 3 pressure sensors (for PA, PV, PBE), 5 valves, incl. filter and tubing
2	3456083B	1	Valve block level regulation (double pump)	complete with 4 pressure sensors (for PA, PV, PBE, PBS), 6 valves, incl. filter and tubing
3	34516409	1	Filter	pay attention to the assembly position of the filter: transparent side towards the block
4	34565213	3 m	Silicon tubing 2.9 x 3 mm	for connection Hydrophobic filters
5	-	-	Luer-Lock connector,	9.9.3 Luer-Lock Connector (908)
6	-	-	Silicon tubing connection LRP	Not available for order
7	34562287	5 m	FKM tubes	Black elastic tube for connecting components
8	34561641	1	Pressure monitoring module	for machines without level regulation only
-	34562224	1	Ribbon cable 10-pin (LR, P11)	-

9.10 Basic Housing

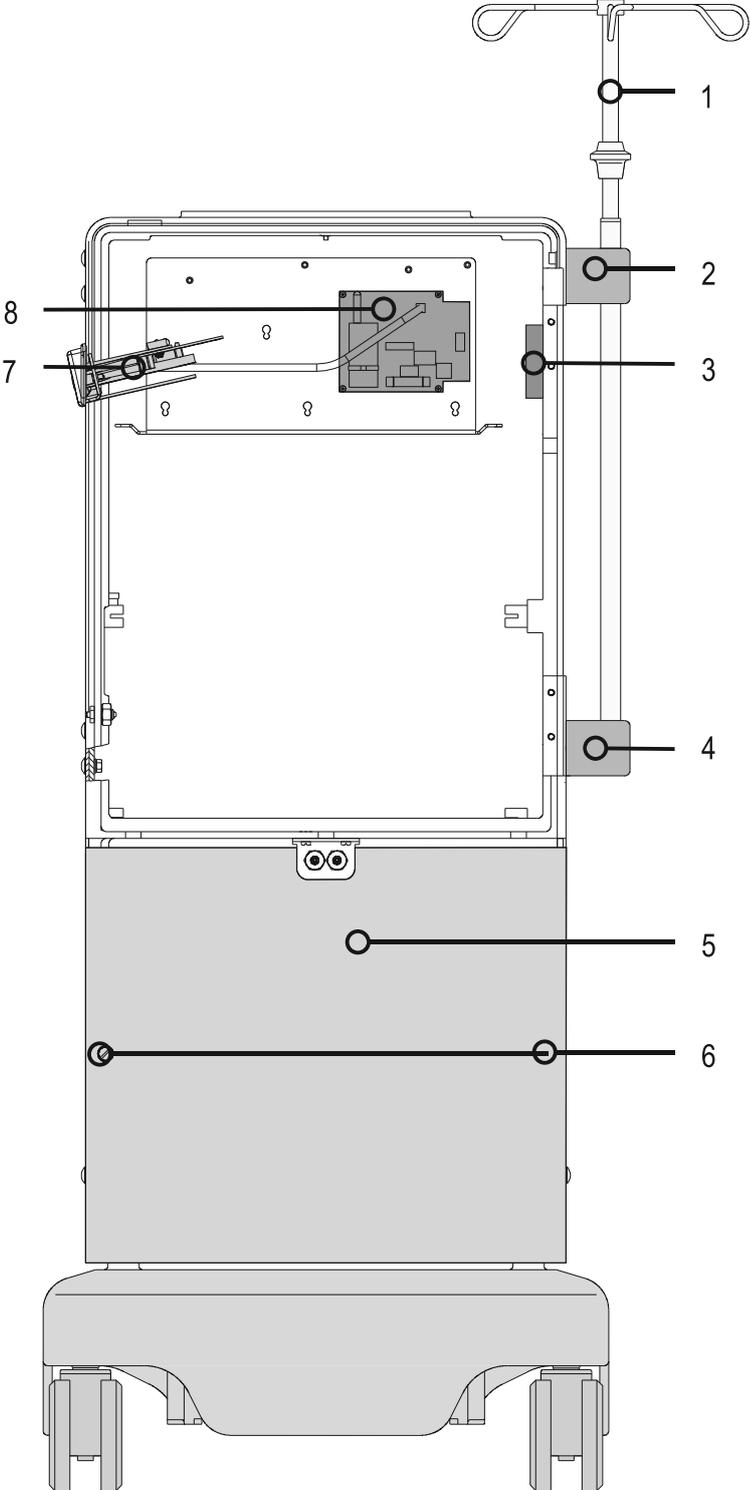


Fig. 9-56 Basic Housing

Pos.	Art.No	Qty.	Description	Comments
1	3451962C	1	IV pole with 3 hooks	height adjustable, with quick release clutch
1	34562237	1	IV pole with 3 hooks	Dialog <sup>+</sup> for front door with integrated display
2	3451439A	1	Holder, top	–
3	34514929	1	Loud speaker	–
4	3451438A	1	Holder, bottom	–
5	34562267	1	Front panel, bottom + M4 x 12 (Torx)	Old version
5	–	1	Front panel, bottom New version	Not available
6	34570772	6	Countersunk screw M 4 x 30 (Torx)	–
7	34560548	1	Card-Reader-Board	see chapter 9.22 Card Reader (Option) (969)
8	3451487E	1	ABPM module M2015 with filter	see chapter 9.19 Automatic Blood Pressure Measurement ABPM Module M2015 (Option) (964)

9.10.1 Base Platform 2 Swivel Casters with Brakes

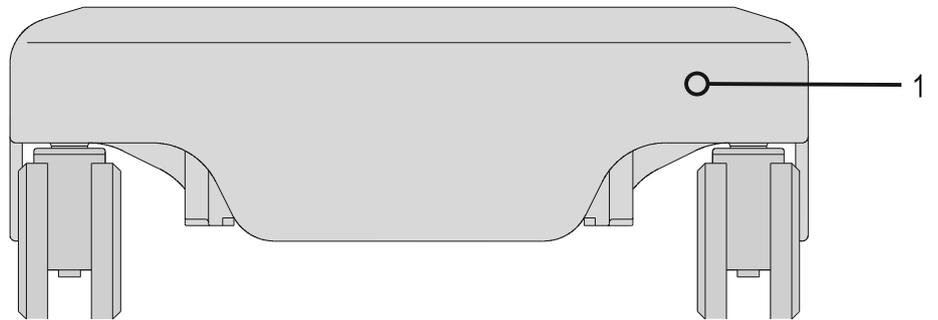


Fig. 9-57 Base Platform, 2 Swivel Caster with Brake, Front View

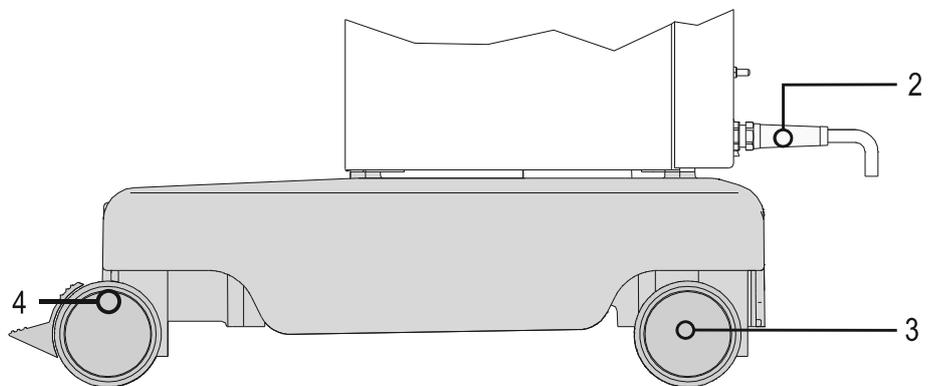


Fig. 9-58 Base Platform, 2 Swivel Caster with Brake, Side View

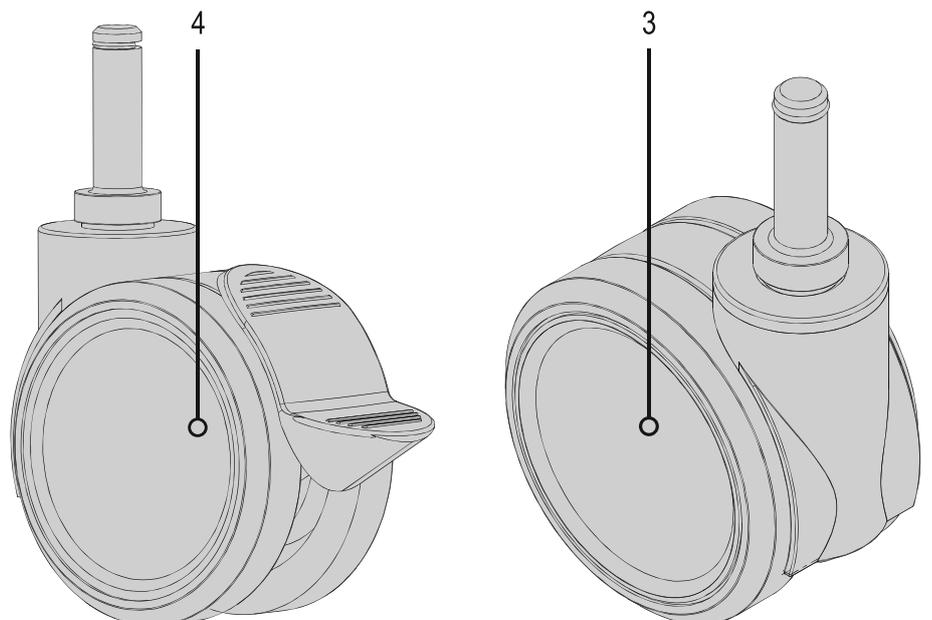


Fig. 9-59 Swivel Caster, with and without brake

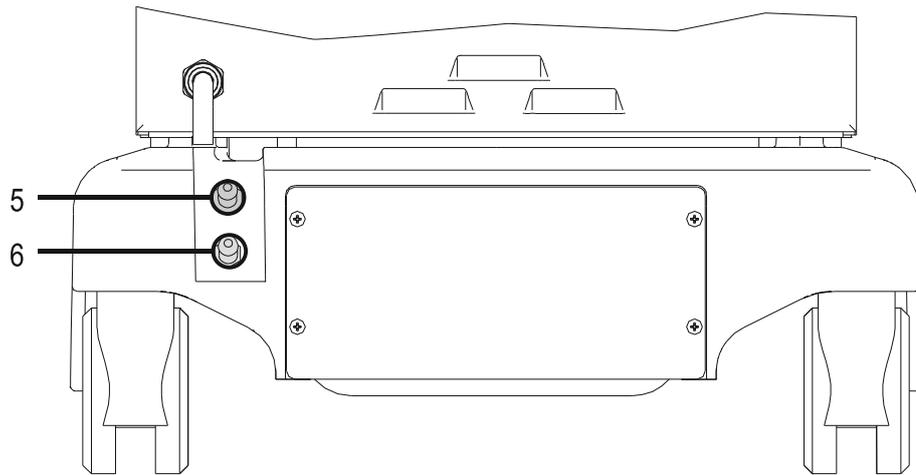


Fig. 9-60 Tubing Connectors on Base Platform

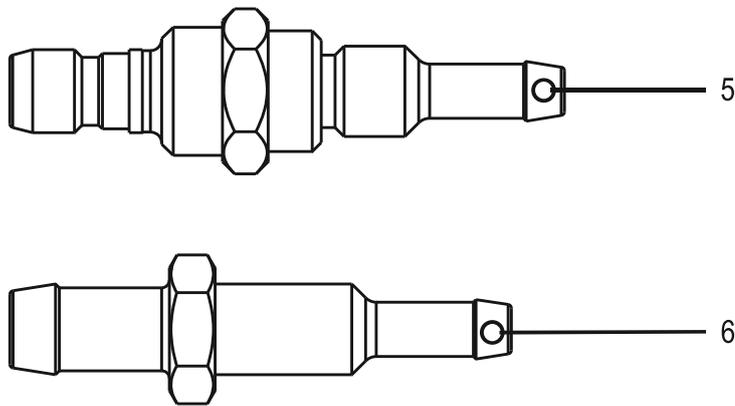


Fig. 9-61 Double Tubing Connector 3456012A and 34560130

Pos.	Art.No	Qty.	Description	Comments
1	34561781	1	Base platform	–
2	34518029	1	Strain relief	–
3	3451489A	1	Swivel caster	–
4	3451490A	1	Swivel caster with brake	–
5	3456012A	1	Double tubing connector 11 x M12	stainless steel, for water inlet
6	34560130	1	Double tubing connector 11 x M12	plastic, for dialysate outlet
–	34770852	5	O-ring 11.1 x 1.6	–
–	34565140	50 m	PVC tubing 10 x 3, red	for water inlet, cold
–	3456517C	3 m	PVC tubing 10 x 3, red, with two single ear clamps 19.5	for water inlet, cold
–	34565159	50 m	PVC tubing 10 x 3, black	for dialysate outlet
–	3456518A	3m	PVC tubing 10 x 3, black, with a single ear clamps 19.5 and a tubing clamp 12-20 mm	for dialysate outlet
–	3456516A	3m	Silicone tubing 8 x 3.2, red, with two single ear clamps 17.5	external high temperature tubing
–	34561749	50m	Silicone tubing 8 x 3.2, red	external high temperature tubing

9.10.2 Base Platform 4 Swivel Casters with Brakes

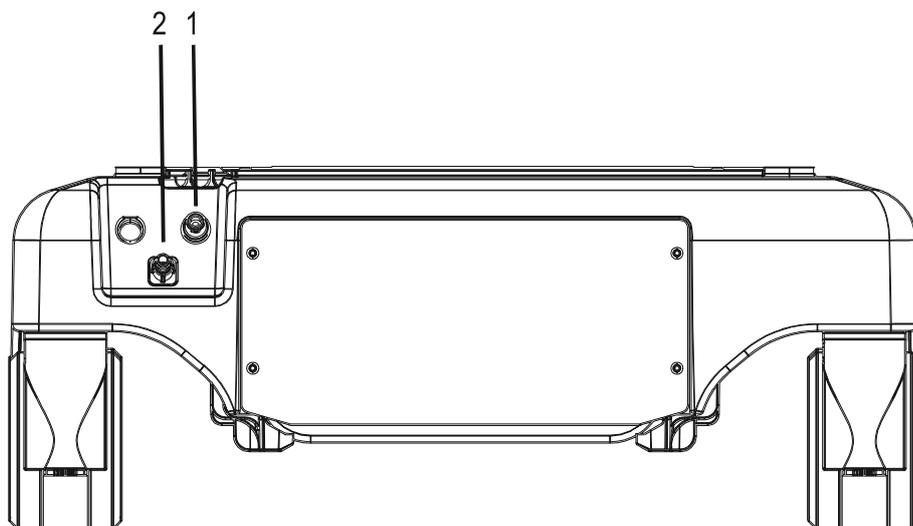


Fig. 9-62 Base Platform, 4 Swivel Caster with Brake, Back View

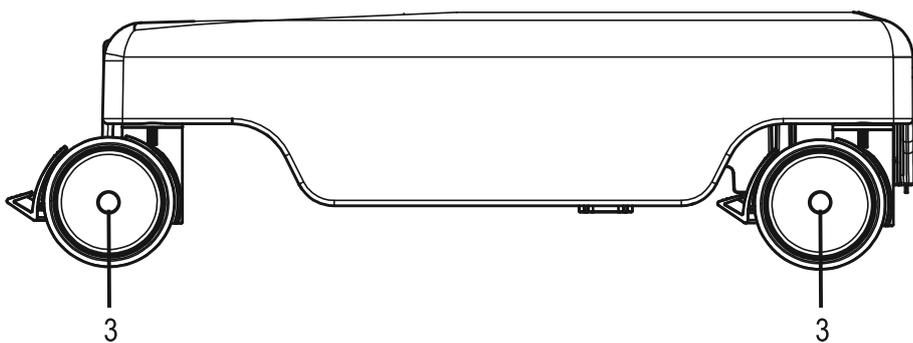


Fig. 9-63 Base Platform, 4 Swivel Caster with Brake, Side View

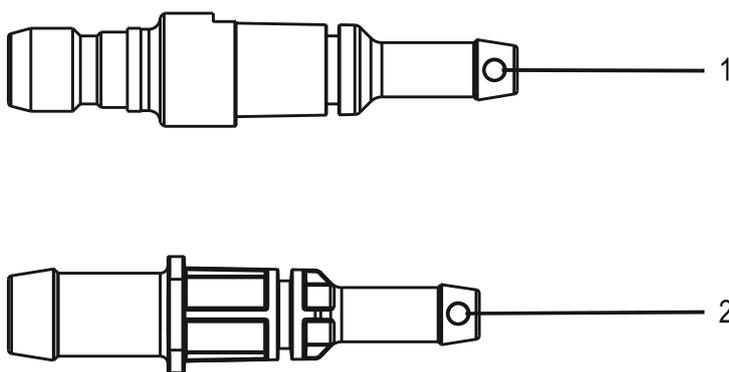


Fig. 9-64 Double Tubing Connector 34562278 and 34562279

Pos.	Art.No	Qty.	Description	Comments
1	34562278	1	Double tubing connector, for Base Platform, 4 Swivel Caster with Brake	for water inlet
2	34562279	1	Double tubing connector, for Base Platform, 4 Swivel Caster with Brake	for dialysate outlet
3	3451490A	1	Swivel caster with brake	-

9.10.3 Concentrate Suction Rods

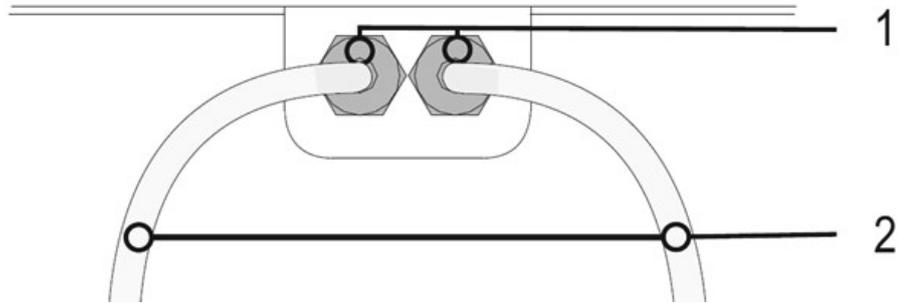


Fig. 9-65 Concentrate suction rods tube connection old version

Pos.	Art.No	Qty.	Description	Comments
1	3451726A	1	Feed-through connector	Old version
2	34565213	10m	Silicone tubing 2,9 x 3	-

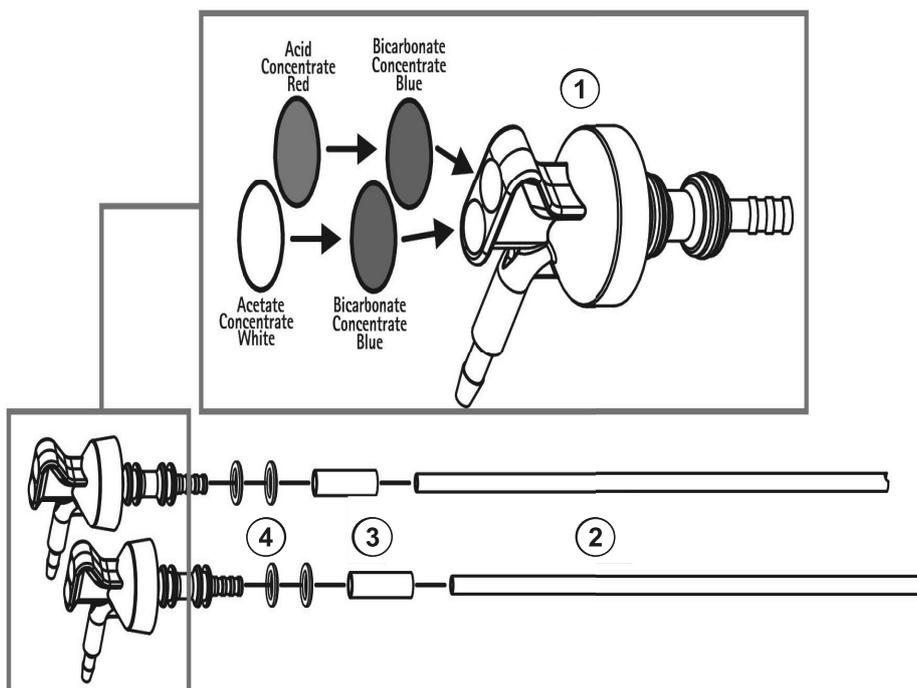


Fig. 9-66 Concentrate suction rods

Pos.	Art. No.	Scope of delivery	Description	Comments
1	34562260	1	Male connector for suction rod	
2	3451728A	1	PE tube 4 x 1 (short)	for all machines
2	34562272	1	PE tube 4 x 1 (long)	for machines with serial number $\geq$ 237000 / 310464/506069 (for deep canisters)
3	34565280	3m	Silicone tubing 3.2 x 1.6	for machines with serial number $>$ 255998 / 515810 / 316795
4	34570241	5	O-ring 9.19 x 2.62	for $>$ SN: 255998 / 515810/316795
4	34570004	5	O-ring 9.3 x 2.4	for $<$ SN: 255998 / 515810/316795

9.10.4 Rinsing Chamber for Concentrate Suction Rods

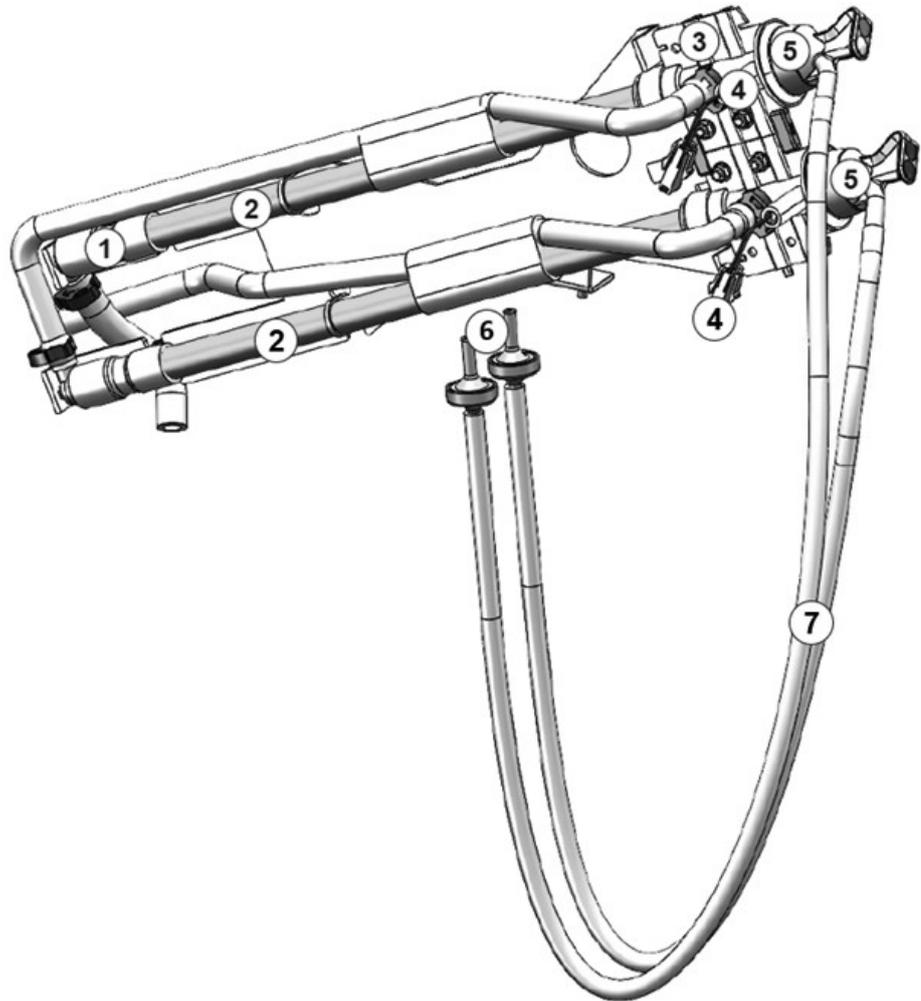


Fig. 9-67 Rinsing chambers for concentrate suction rods

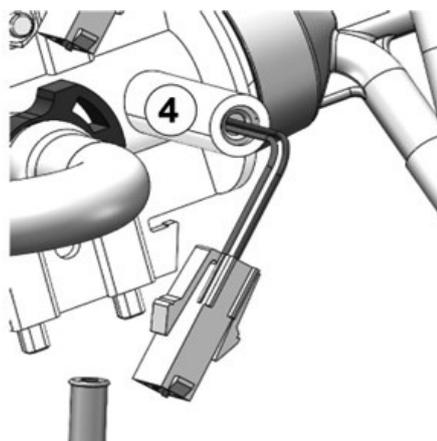


Fig. 9-68 Reed sensor

Pos.	Art. No.	Qty.	Description	Comments
1	34565345	1 m	Silicone tubing 12 x 2.5	transparent silicone tube
2	3456077A	1	Retainer tubes (green) for suction rods	1 x 260 mm and 1 x 280 mm

Pos.	Art. No.	Qty.	Description	Comments
2	34562271	1	Retainer tubes (green) for suction rods (long)	1 x 320 mm and 1 x 340 mm
3	34514120	1	Retainer for suction rods	–
4	34517138	1	Reed sensor with contacts and O-ring 3.68 x 1.78	Pay attention to the assembly position of the Reed sensors (red left/gray right)
5	3451476A	1	Male connector for suction rod	–
6	34561498	5	Disposable filter 2.6 mm	–
7	34565213	10m	Silicone tubing 2.9 x 3	–

9.10.5 Central Concentrate Supply (Option)

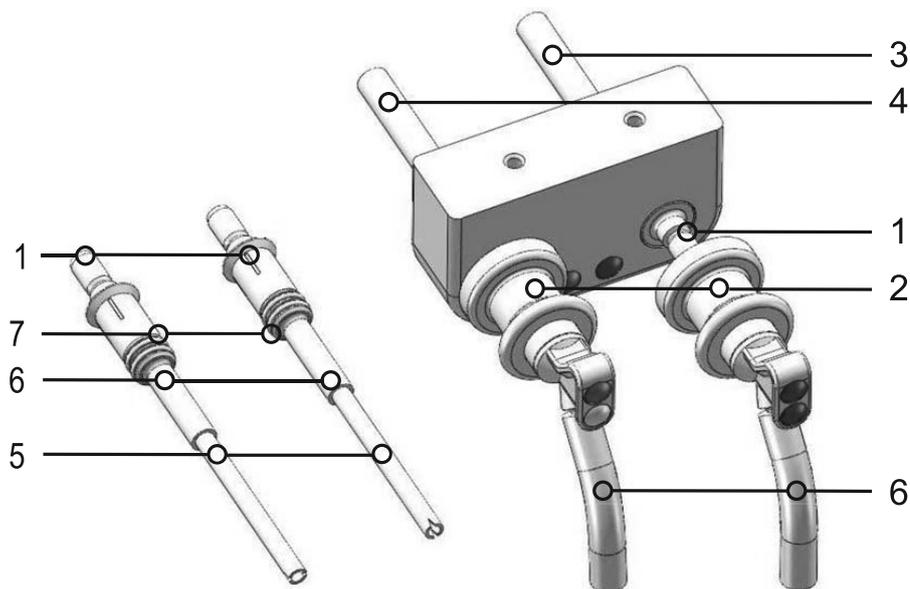


Fig. 9-69 Central concentrate supply, option

Pos.	Art.No	Qty.	Description	Comments
1	34560939	1	Suction nipple with O-rings 9.3 x 2.4	–
2	34560920	1	Suction coupling	–
2	34570438	5	O-ring 8.0 x 1.25	for suction coupling
3	34565248	10 m	Silicone tubing 5x 1.5, blue	–
4	34565230	10 m	Silicone tubing 5 x 1.5, red	–
5	3451728A	1	PE tube 4 x 1 + silicone tubing	standard
5	34562272	1	PE tube 4 x 1 (long) + silicone tubing	for deep canisters
6	34565280	3.3 m	Silicone tubing 3.2 x 1.6	–
7	34570004	5	O-ring 9.3 x 2.4	for < SN: 255998 / 515810 / 316795
7	34570241	5	O-ring 9.19 x 2.62	for > SN: 255998 / 515810 / 316795

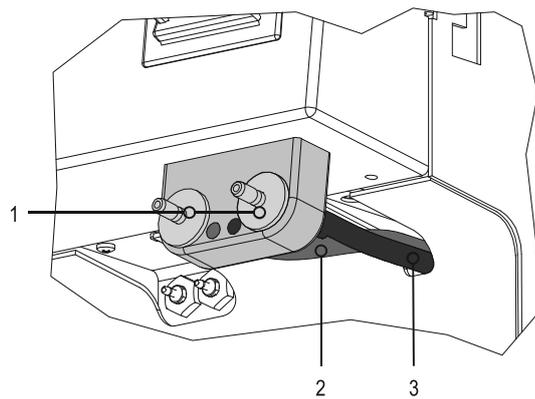


Fig. 9-70 Suction nipple with O-rings

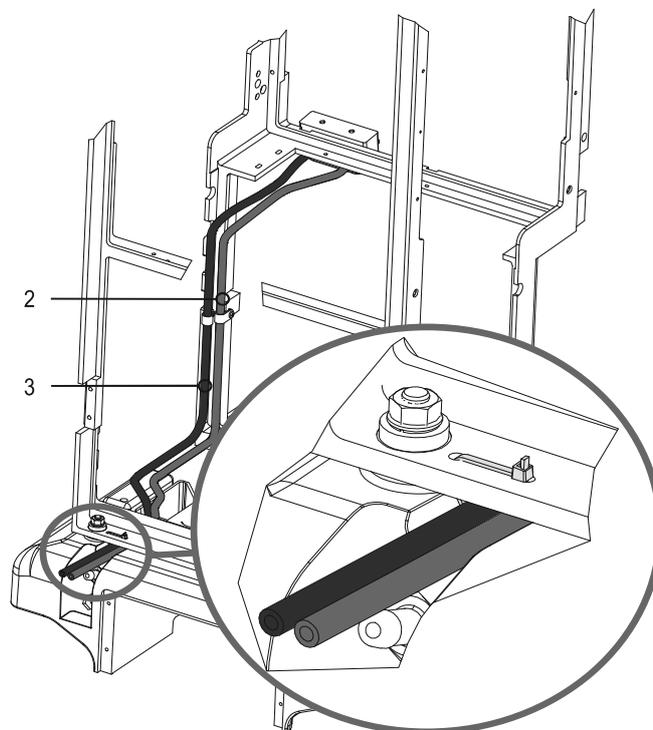


Fig. 9-71 Silicone tubing

Pos.	Art.No	Qty.	Description	Comments
1	34560939	1	Suction nipple with O-rings 9,3 x 2,4	–
2	34565230	10 m	Silicone tubing 5 x 1,5, red	–
3	34565248	10 m	Silicone tubing 5 x 1,5, blue	–

9.10.6 Rinsing Bridge

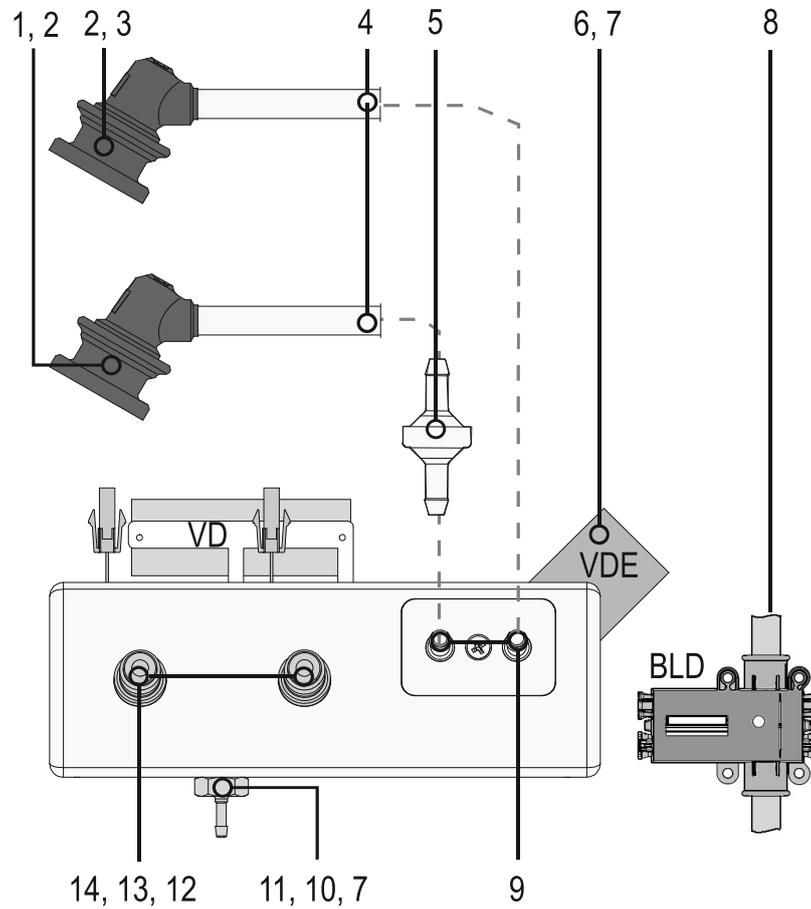


Fig. 9-72 Rinsing bridge version 4, view 1

Pos.	Art.No	Qty.	Description	Comments
1	34561382	1	Dialyzer coupling, red	without sampling port
2	34990445	5	O-ring 12.37 x 2.62	for dialyzer coupling
3	34561390	1	Dialyzer coupling, blue	without sampling port
4	34565191	10 m	Silicone tubing 5 x 3	–
5	34561501	5	Disposable filter 4.6 mm	–
6	3451902C	1	Solenoid valve 2/2 way	connector/flange (AKM)
7	34770852	5	O-ring 11.1 x 1.6	–
8	34561692	1	Blood leak detector, version 4	–
9	34773762	10	O-ring 9.25 x 1.78	–
10	34517251	1	Tubing connector 3.5 x 1/8"	stainless steel
11	34517294	1	Suction set with tubing, suction port and black lid	for disinfection
11	34514562	1	Suction set with tubing, suction port and yellow lid	for disinfection
11	34565272	10 m	PVC tubing 3.5 x 1	for disinfection
11	34512675	1	Suction port	for suction tubing

Pos.	Art.No	Qty.	Description	Comments
12	34511792	1	Tubing connector	–
13	34517138	1	Reed sensor with contacts and O-ring 3.68 x 1.78	without housing
14	34771255	20	O-ring 14 x 1.5	–
–	3456173A	1	Sample port	–

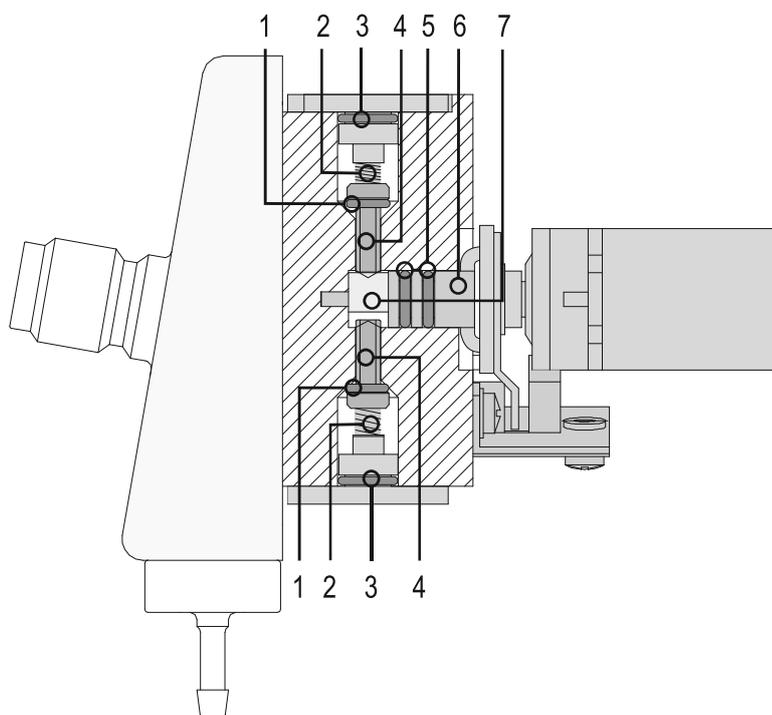


Fig. 9-73 Rinsing bridge version 4, view 2

Pos.	Art.No	Qty.	Description	Comments
–	3451898B	1	Repair kit disinfection valve consisting of: 2 x O-ring 2.7 x 1.5 2 x O-ring 5 x 1.6 3 x O-ring 6.4 x 1.3 2 x Cover 4 x Countersunk screw M 3 x 8 2 x Valve tappet 2 x Pressure spring 1 x Eccentric roller 1 x Eccentric shaft	for the complete replacement of all small parts in the disinfection valve
1	34570012	10	O-ring 2.7 x 1.5	for valve tappet
2	34517332	2	Pressure spring	for valve tappet
3	3477106A	5	O-ring 6.4 x 1.3	for cover valve tappet
4	34517324	2	Valve tappet	for VD
5	34570457	10	O-ring 5.0 x 1.6	for eccentric shaft
6	34560840	1	Eccentric shaft	–
7	34560858	1	Eccentric roller	–

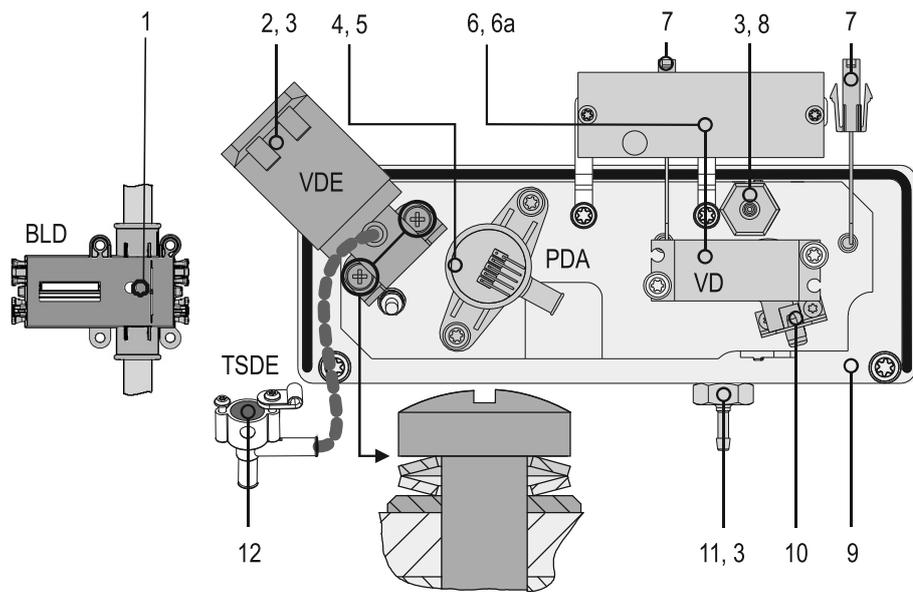


Fig. 9-74 Rinsing bridge version 4, view 3

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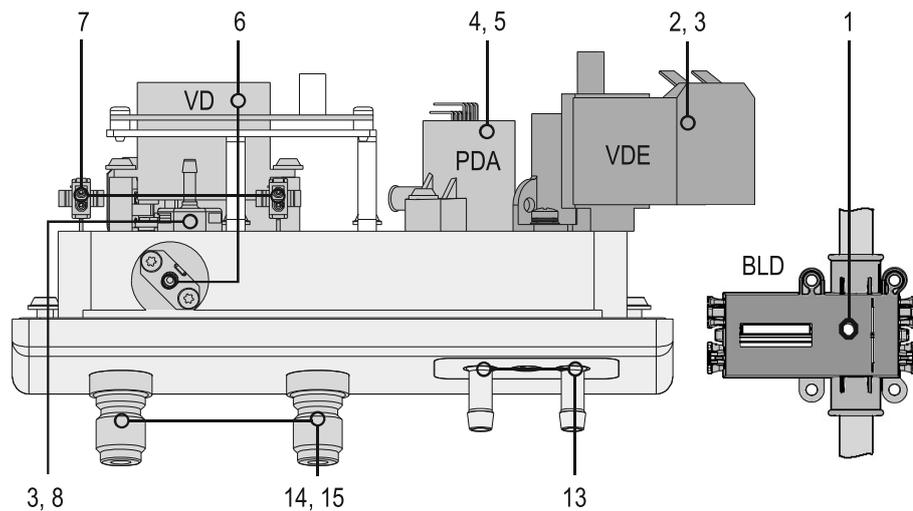


Fig. 9-75 Rinsing bridge version 4, view 4

Pos.	Art.No	Qty.	Description	Comments
1	34561692	1	Blood leak detector version 4	–
2	3451902C	1	Solenoid valve 2/2 way	connector/flange AKM
3	34770852	5	O-Ring 11.1 x 1.6	–
4	3456124A	1	Pressure sensor	–
5	34773762	10	O-ring 9.25 x 1.78	–
6	34561838	1	Board disinfection-valve Analog	limited availability green
6a	-	1	Servo motor disinfection Analog	not available
6	34562312	1	Board disinfection-valve Digital	black colored
6a	34562311	1	Servo motor disinfection Digital	inclusive flag
7	34517138	1	Reed sensor with contacts and O-ring 3.68 x 1.78	without housing
8	3477103A	2	Tubing connector Ø 3.5 x 1/8"	–

Pos.	Art.No	Qty.	Description	Comments
9	3451462A	1	Rinsing bridge housing, version 4	–
10	3451660A	1	Fork light barrier for servomotor	–
11	34517251	1	Tubing connector $\varnothing$ 3.5 x 1/8"	–
12	3451614B	1	Temperature sensor	with shrinking tube, without connector/housing
12	34570381	10	Plug (short)	for TSDE and TSDE-S
12	34570730	1	Housing complete for temperature sensor	–
12	34562060	1	Temp.sensor cable set 4pol	–
13	34773762	10	O-ring 9.25 x 1.78	–
14	34511792	1	Tubing connector	–
15	34771255	20	O-ring 14 x 1.5	–

9.10.6.1 Rinsing Bridge Version 5 from Serial Number 201,787/  
300,384

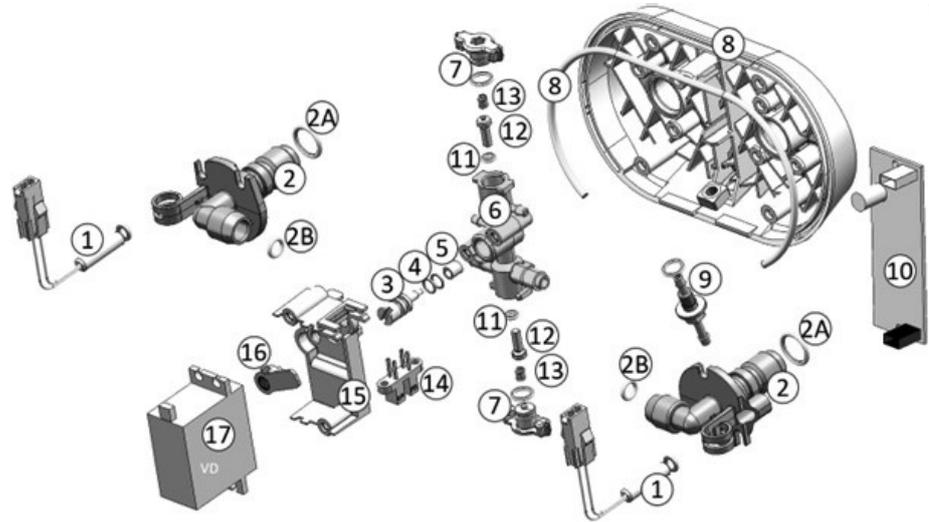


Fig. 9-76 Rinsing bridge version 5, view 01

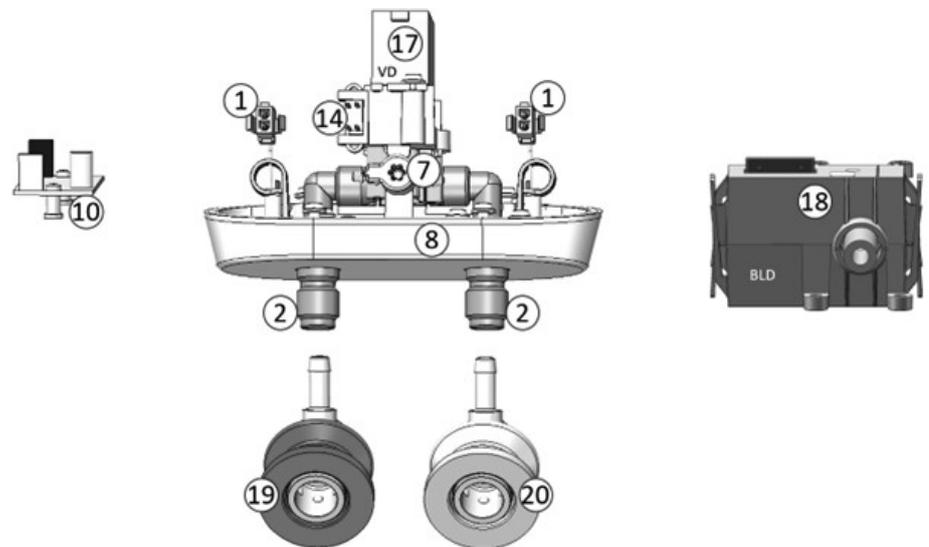


Fig. 9-77 Rinsing bridge version 5, view 02

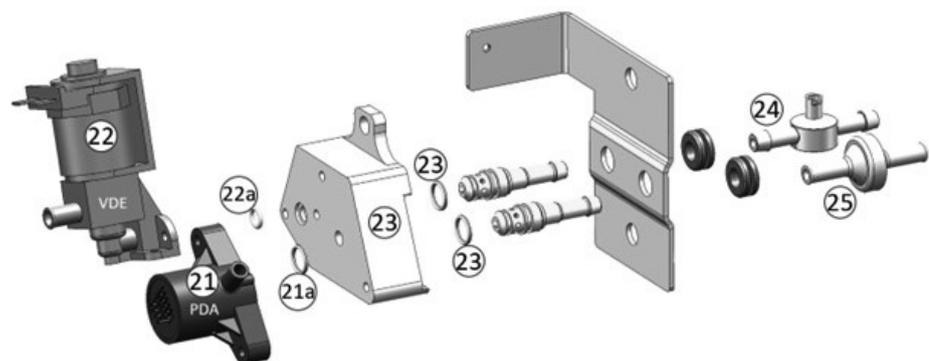


Fig. 9-78 Rinsing bridge version 5, view 03

Pos.	Art.No	Qty.	Description	Comments
1	34517138	1	Reed sensor with contacts and O-ring 3.68 x 1.78	without housing
2	34561862	1	Tubing connector (male), incl. O-ring 11,91 x 1,78 and O-ring 5,6 x 1,8	rinsing bridge
2a	-	-	O-ring 11,91 x 1,78	Not separate available, only together with 34561862
2b	34570901	3	O-ring 5,6 x 1,8	Tubing connector rinsing bridge
3	34560840	1	Eccentric shaft	-
4	34570457	10	O-ring 5.0 x 1.6	-
5	34560858	1	Eccentric roller	-
6	34561994	1	Valve housing	-
7	34561986	1	Valve housing lid with O-ring 6.4 x 1.3	-
8	34561846	1	Rinsing bridge housing version 5, incl. seal	-
9	34561854	1	Tubing connector 3,5 x 1/8", incl. O-ring 6.4 x 1.3	disinfection port
10	34561838	1	Board disinfection-valve Analog	limited availability green, works only with analog servo motor
10	34562312	1	Board disinfection-valve Digital	Black colored, works only with digital servo motor
11	34570012	10	O-ring 2.7 x 1.5	-
12	34517324	2	Valve tappet	for VD
13	34517332	1	Pressure spring	for valve tappet
14	3451660A	1	Fork light barrier for servomotor	-
15	34562001	1	Servomotor holder	-
16	34570870	5	Flag Servomotor	-
17	34562311	1	Servo motor disinfection Digital	inclusive flag, works only with black digital board
17	-	-	Servo motor disinfection Analog	Not available
18	34561692	1	Blood leak detector version 4	modified calibration for BLD V4
19	34561382	1	Dialyzer coupling, red	-
20	34561390	1	Dialyzer coupling, blue	-
21	3456124A	1	Pressure sensor PDA	-
21a	34773762	10	O-ring 9.25 x 1.78	for PDA
22	3451902C	1	Solenoid valve 2/2 way VDE	connector/flange AKM
22a	3451902C	3	O-ring 9.25 x 1.78	for VDE
23	34562010	1	Plastic holder, incl. 2 x O-ring 9.25 x 1.78	-
24	3456173A	1	Sample port	-
25	34561501	5	Filter 4.6 mm	-
-	3451898B	1	Repair Kit Disinfection Valve	disinfection valve internals

9.11 LCD Monitor

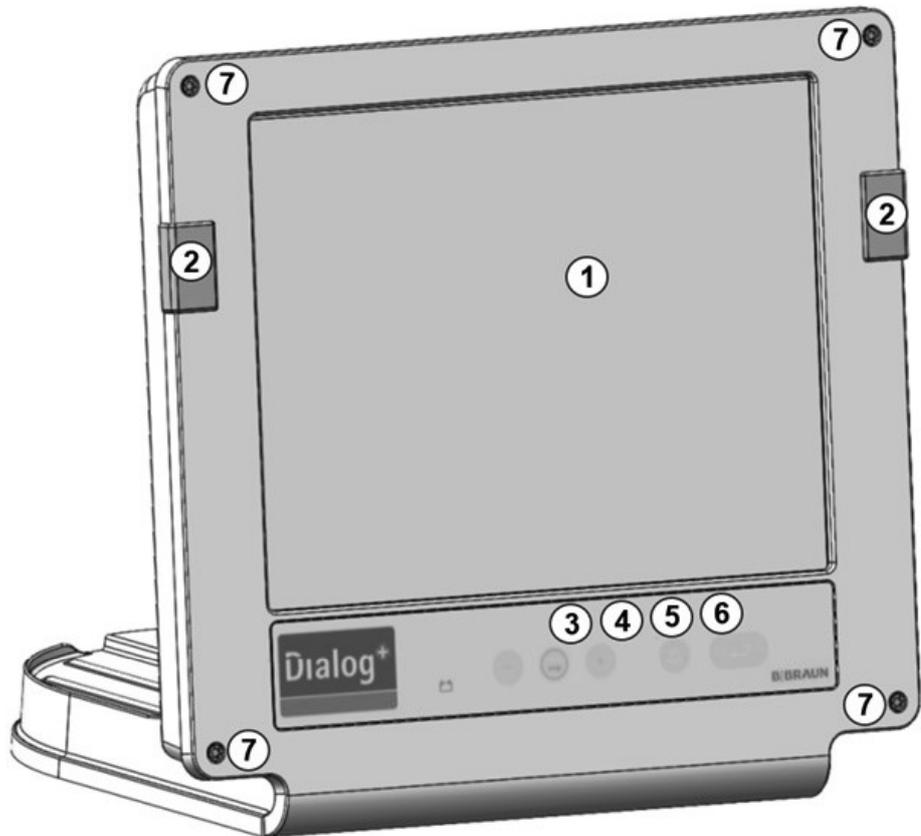


Fig. 9-79 TFT monitor outside, front view

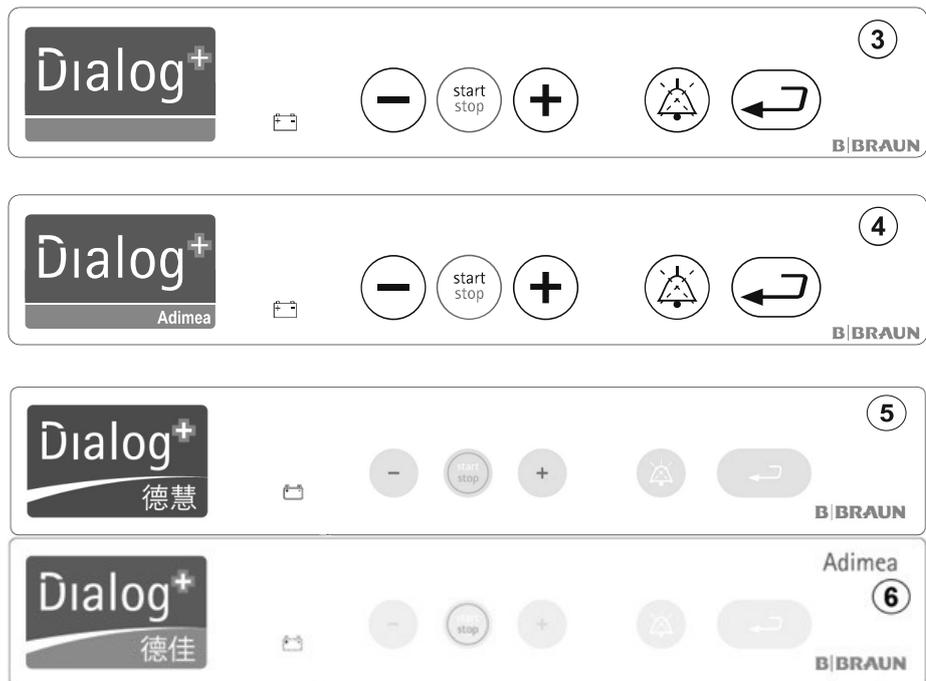


Fig. 9-80 Membranes

Pos.	Art.No	Qty.	Description	Comments
1	34514260	1	Touch screen for LCD	–
2	3457069A	2	OSD cover	complete with seal and screws
3	34562275	1	Membrane	from SW 9.1A
4	34562276	1	Membrane for Adimea option	from SW 9.1A
5	34562347	1	Membrane for China	Only for SW 9.32
6	34562277	1	Membrane China for Adimea option	from SW 9.1A
7	34570772	6	Countersunk screw M4 x 30 (Torx)	–

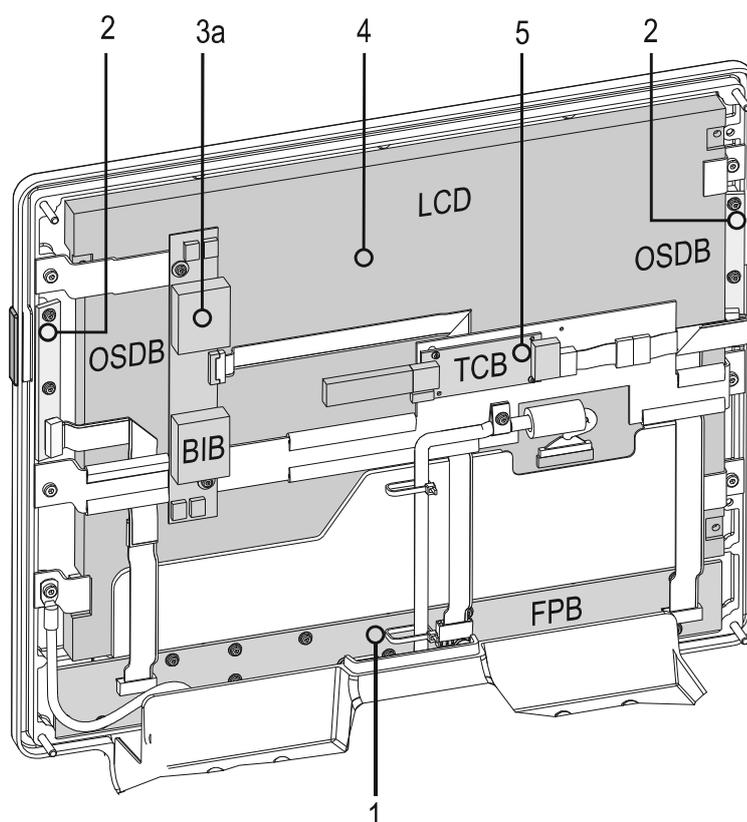


Fig. 9-81 LCD monitor inside, rear view, old version

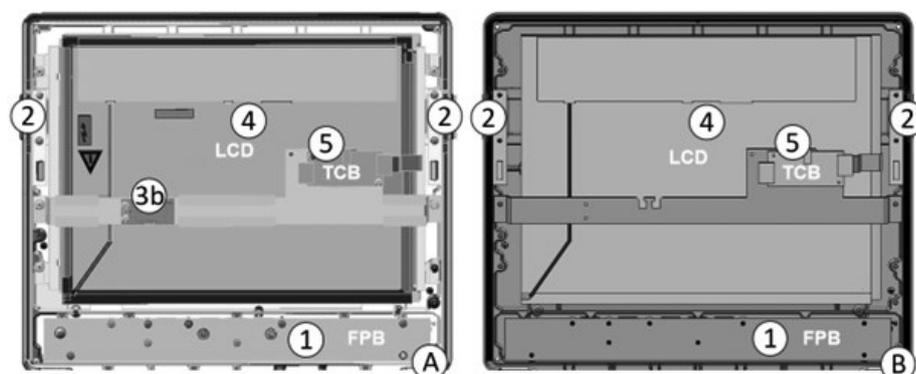


Fig. 9-82 LCD monitor inside, front view, new version A and latest version B.

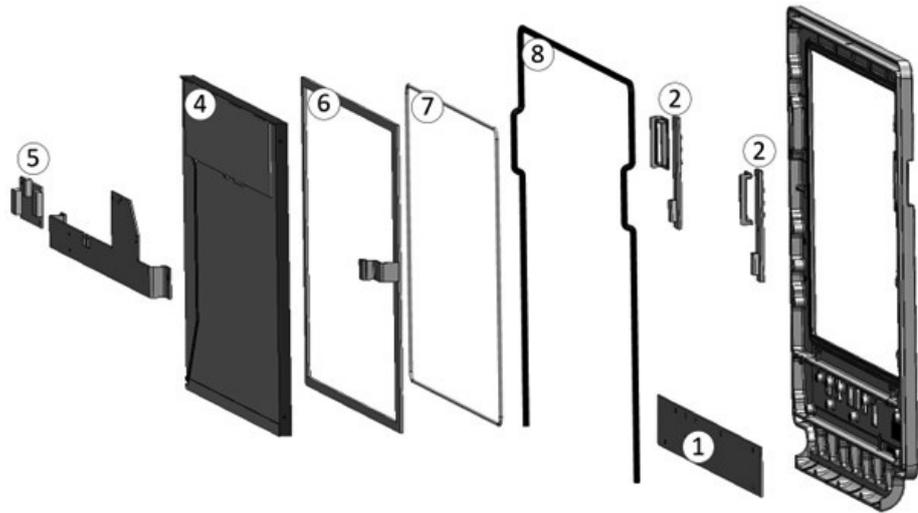


Fig. 9-83 LCD monitor inside, exploded view latest version.

Pos.	Art.No	Qty.	Description	Comments
1	–	–	Front-Panel-Board, FPB version1 + 2	not available
1	34562299	1	Service kit FPB for BSW	conversion LX 800->BSW
1	34562282	1	Front-Panel-Board, FPB incl. BIB	Version 3 from SN: 245466
1	34562283	1	FPB Retrofit kit	Needed to change Version 1,2 to 3
2	3451429A	1	OSD-Board+	–
3a	–	1	Backlight inverter board BIB for Boe Hydys/Samsung LCD	obsolete, is included in the FPB version 3
3b	34562184	1	Backlight inverter board BIB for G150XGE LCD	–
–	34561757	1	Retrofit kit LCD – display G150XGE, consists of: <ul style="list-style-type: none"> <li>• backlight inverter board for G150XGE</li> <li>• cables, brackets and screws</li> <li>• cleaning cloth</li> </ul>	for the retrofitting of TFT with large BIB 3a display to be ordered separately
4	3461013B	1	TFT display 15"	from serial number 105218/151935
5	3451460A	1	Touch controller board TCB version 3	–
6	34514260	1	Touch screen for LCD	–
7	34515755	1	Seal cord 3 mm	seal for TFT display
8	34561900	1	Seal cord 5 mm	seal for Monitor house
–	34562221	1	Ribbon cable 10 conductors (TCB – Motherboard COM4)	–
–	34560912	1	Ribbon cable 12 conductors (FPB – OSD)	–
–	34560971	1	Ribbon cable 10 conductors (FPB – BIB)	–
–	34562225	1	Ribbon cable 26 conductors (FPB – Motherboard)	–
–	34562304	1	Ribbon cable 16 conductors (FPB – BB)	BSW

Pos.	Art.No	Qty.	Description	Comments
-	34562242	1	Ribbon cable 26 conductors (FPB – Motherboard)	FPB MB LPT
-	34562306	1	Ribbon cable conductors (FPB – Motherboard)	FPB MB LPT with Locking

## 9.11.1 LCD Monitor Integrated in Door

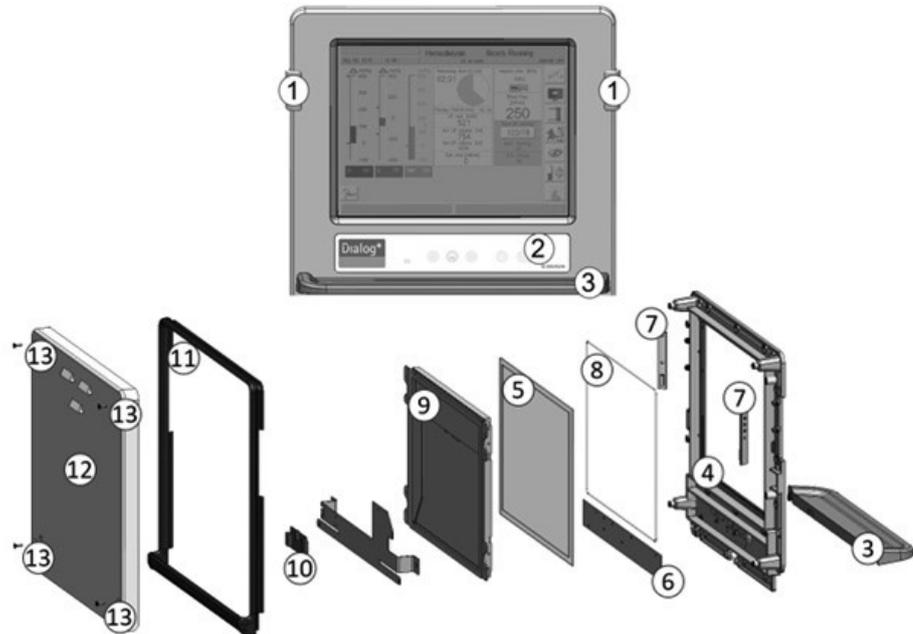


Fig. 9-84 LCD monitor

Pos.	Art.No	Qty.	Description	Comments
1	34562231	2	OSD cover	incl. seal, spring nut and expanding rivet
2	34562275	1	Membrane	from SW 9.1A
2	34562276	1	Membrane Adimea	from SW 9.1A
2	34562277	1	Membrane China	from SW 9.1A
3	34562236	1	Front tray	green
4	34562230	1	Monitor frame	incl. seal, EMC cords and insert sleeves
5	34514260	1	Touch screen for LCD	–
6	–	–	Front panel board (FPB) Version 1+2	not available
6	34562282	1	Front panel board (FPB incl. BIB)	Version 3 from SN: 510431
7	3451429A	1	OSD-Board	–
8	34515755	1	Seal cord 3 mm	seal for TFT display
9	3461013B	1	TFT display 15"	–
10	3451460A	1	Touch controller board TCB version 3	–
11	34562234	1	Seal monitor back	–
12	34562233	1	Monitor back	incl. seal
13	34570772	6	Countersunk screw M4 x 30 (Torx)	–
–	34562238	1	Ribbon cable 20 conductors (LVDS – LCD)	LX800
–	34562241	1	Ribbon cable (TCB – COM4)	–
–	34562239	1	Ribbon cable 12 conductors (FPB – OSD)	–

Pos.	Art.No	Qty.	Description	Comments
-	34562240	1	Ribbon cable 16 conductors (FPB – BB)	-
-	34562305	1	Ribbon cable 16 conductors (FPB – BB)	-
-	34562309	1	Ribbon cable conductors (FPB – Motherboard)	-
-	34562308	1	Repair kit Groundning Wire	-

## 9.12 Test and Calibration Equipment and Tools



### Inspection for Calibration Equipment

Calibration equipment is subject to inspection and must be checked and calibrated in regular intervals.

**Tabelle 1: Measuring Instruments**

Pos.	Art. No.	Qty.	Description	Comments
–	7701357	1	Manometer 0 – 4 bar	Analog
–	34511571	1	Manometer 2.5 bar	Analog
–	770085A	1	Flow meter 1.1 l/min	Analog
–	7704104	1	Connection set digital manometer	incl. digital manometer
–	7704106	1	Digital manometer Ashcroft	Digital. To measure pressures in liquids
–	7704105	1	Small parts connection kit	contains parts for art. no. 770104
–	–	*	Dialysis measurement instrument, e.g. HDM97BQ For example manufacturer: IBP Medical GmbH Internet: www.ibpmedical.com	Digital, for temperature, conductivity, flow and pressure measurement for detailed information contact the manufacturer directly
–	–	*	Electrical safety analyzer, e.g. Rigel 288 For example manufacturer: Rigel Medical Internet: www.rigelmedical.com	for electrical safety check according to IEC 62353/ IEC 60601-1 for detailed information contact the manufacturer directly
–	–	*	Balance, e.g. pocket balance CM 320-1N For example manufacturer: Kern & Sohn GmbH Internet: www.kern-sohn.com	for calibration of UFP, BICP and KP for detailed information contact the manufacturer directly

**Tabelle 2: Calibers and reference products**

Pos.	Art. No.	Qty.	Description	Comments
–	7701861	1	Measuring cylinder 250 mL	tool for measuring liquid quantities
–	7700911	1	Reference solution (red)	for calibration of blood leak detector
–	7702493	1	Template 1.4/1.5	for tubing clamps
–	7703090	1	Expansion chamber 500 mL	for function test of ABPM module and LRP
–	7704134	1	Template gear pump	for external magnet Diener
–	7703848	1	Assembly jig (motor for piston pump)	required for motor assembly

Tabelle 3: Connection Tools

Pos.	Art. No.	Qty.	Description	Comments
-	7701756	1	Extraction tool set (AMP)	for pin removal from electrical connectors
-	7702736	1	Extraction Tool for Hinge Pin	for old blood pump cover
-	7704102	1	Tube Extraction Tool	for silicon tubings

Tabelle 4: Auxiliary Connections

Pos.	Art. No.	Qty.	Description	Comments
-	770203A	1	Stopcock system with five stopcocks, incl. lines	for the common calibration of the blood pressure sensors (5 x original Perfusor lines 50 cm)
-	7703805	1	Male to male connector	Adapter to connect both dialyzer couplings for the measurement of the patient leakage current
-	7704090	1	Door latch	to keep front door open during service
-	5206634	1	Combifix adapter female/female	to connect instruments on bloodlines
-	5206642	1	Combifix adapter male/male	to connect instruments on bloodlines
-	7711122	1	Recirculation kit - three-way tap with spike	for function test of ABPM module and LRP
-	8728844F	1	Syringe 30 mL Omnifix luer lock	for function test heparin pump
-	4617304F	1	Syringe 50 mL original perfusor luer lock	for function test of ABPM module and LRP

Tabelle 5: Configuration and Network tools

Pos.	Art. No.	Qty.	Description	Comments
-	7703864	1	Field Service Utility (FSU) stick V2.00	for data transfer
-	7703597	1	Coupling RJ45	for network
-	7703643	1	Chip card for BSL-Nexadia	for network
-	7703473	1	Test plug RS 232	for network
-	7703856	1	Chip card for card reader	-
-	770284A	1	DCI cable, external	-
-	7701497	1	Special socket spanner $\varnothing$ 18mm	for mounting
-	7703643	1	Chip card	for BSL-Nexadia
-	7703856	1	Chip card	for card reader
-	770284A	1	DCI cable	for external connection
-	7703597	1	Coupling RJ45	-
-	7703473	1	Test plug RS232	to perform the DBI test
-	7701497	1	Special spanner M18	installation tool for MFC socket

\* not in the product range of B. Braun Avitum AG

## 9.13 Service Kits

Tabelle 6: Maintenance

Pos.	Art. No.	Qty.	Description	Comments
–	34562307	1	Maintenance kit	contains all parts as per Preventive Maintenance Check List for standard machine
–	34519327	1	Battery 2032/3 Volt	only for LX800 motherboard
–	34560661	1	Hydrophobic filter HDF	with tubing adapter
–	34990445	5	O-Ring 12,37x2,62	–
–	34560661	5	Filter 4.6 mm	–

Tabelle 7: Modification

Pos.	Art. No.	Qty.	Description	Comments
–	34562294	1	Service Kit 1: HID Card Reader	incl. HID card reader
–	34562295	1	Service kit 2 Motherboard LX 800 -> BSW	incl. BSW, MSATA card, adapter plate, Adimea cable, ABPM cable, Diabus cable
–	34562296	1	Service kit 3 HWBSL & DCI Option	Ribbon cable Autocal BSW
–	34562297	1	Service kit 4 Monitor Cable BSW Motherboard	for rotatable screen
–	34562298	1	Service kit 5 Monitor Cable for BSW Motherboard	for integrated door screen
–	34562299	1	Service kit 6 FPB Board	contains all parts to exchange old FPB to the new FPB with integrated BIB
–	34570903	1	Service kit Piston Pumps	50x stickers to apply on piston pumps
–	34561757	1	Retrofit Kit LCD-Display G150XGE, consists of: <ul style="list-style-type: none"> <li>• Backlight Inverter Board for G150XGE</li> <li>• Cables, brackets and screws</li> <li>• Cleaning cloth</li> </ul>	for retrofitting of Boe Hydys/Samsung to Chimeii display  display is not included
–	34562274	1	Retrofit kit relocation temperature sensors TSHE to TSDE-S	for SW 9.12 update to SW 9.1A

Tabelle 8: Retrofit cables for new articles in old machines

Pos.	Art. No.	Qty.	Description	Comments
–	34562321	1	Cable USB card reader for LX800	for option produced later than September 2021, only with SW-version $\geq 9.1E (=9.27)$
–	34562322	1	Adimea cable USB for LX800	for option produced later than September 2021
–	34562323	1	Adimea cable USB for BSW	for option produced earlier than September 2021
–	34562324	1	Cable BSL for LX800	for option produced later than September 2021

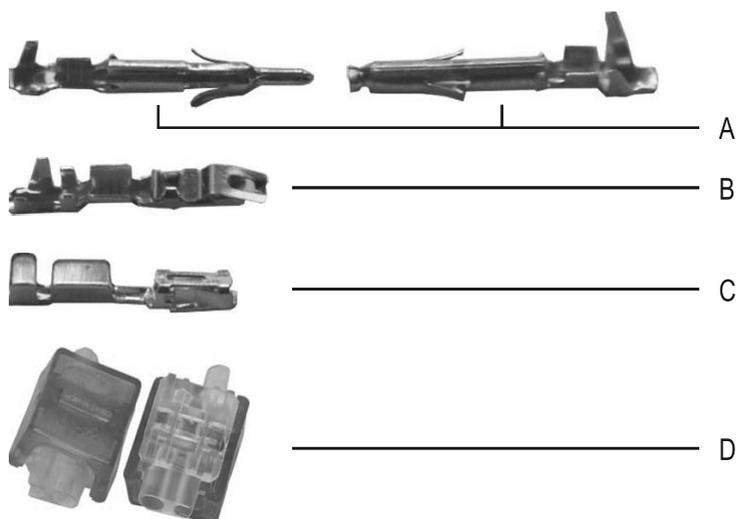


Fig. 9-85 Wire repair kit

Tabelle 9: Repair

Pos.	Art. No.	Qty.	Description	Comments												
-	34561811	1	Wire repair kit, consisting of: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px;">A</td> <td>10 x 30 cm wire 0.25 mm<sup>2</sup> with MMNL ST/BU 0.25 male/female (tin-plated)</td> </tr> <tr> <td></td> <td>10 x 30 cm wire 0.25 mm<sup>2</sup> with MMNL ST/BU 0.25 male/female (gold-plated)</td> </tr> <tr> <td></td> <td>10 x 30 cm wire 0.5 mm<sup>2</sup> with MMNL ST/BU 0.25 male/female (tin-plated)</td> </tr> <tr> <td>B</td> <td>10 x 30 cm wire 0.25 mm<sup>2</sup> with locking clip both female (tin-/gold-plated)</td> </tr> <tr> <td>C</td> <td>10 x 30 cm wire 0.5 mm<sup>2</sup> with MODU 4 both female (tin-/gold-plated)</td> </tr> <tr> <td>D</td> <td>30 x 3M Scotchlok wire connector UB2A</td> </tr> </table>	A	10 x 30 cm wire 0.25 mm <sup>2</sup> with MMNL ST/BU 0.25 male/female (tin-plated)		10 x 30 cm wire 0.25 mm <sup>2</sup> with MMNL ST/BU 0.25 male/female (gold-plated)		10 x 30 cm wire 0.5 mm <sup>2</sup> with MMNL ST/BU 0.25 male/female (tin-plated)	B	10 x 30 cm wire 0.25 mm <sup>2</sup> with locking clip both female (tin-/gold-plated)	C	10 x 30 cm wire 0.5 mm <sup>2</sup> with MODU 4 both female (tin-/gold-plated)	D	30 x 3M Scotchlok wire connector UB2A	for repairs on wire harness where crimping contact pins are damaged
A	10 x 30 cm wire 0.25 mm <sup>2</sup> with MMNL ST/BU 0.25 male/female (tin-plated)															
	10 x 30 cm wire 0.25 mm <sup>2</sup> with MMNL ST/BU 0.25 male/female (gold-plated)															
	10 x 30 cm wire 0.5 mm <sup>2</sup> with MMNL ST/BU 0.25 male/female (tin-plated)															
B	10 x 30 cm wire 0.25 mm <sup>2</sup> with locking clip both female (tin-/gold-plated)															
C	10 x 30 cm wire 0.5 mm <sup>2</sup> with MODU 4 both female (tin-/gold-plated)															
D	30 x 3M Scotchlok wire connector UB2A															
-	34562283	1	Retrofit kit FPB III: 1 x FPB III 5 x Key cap 1 x Adapter cable 1 x BLI cable long	for replacement of FPB 1 or 2												
-	3451898B	1	Repair kit disinfection valve, consisting of: 2 x O-ring 2.7 x 1.5 2 x O-ring 5 x 1.6 3 x O-ring 6.4 x 1.3 2 x Cover 4 x Countersunk screw M 3 x 8 2 x Valve tappet 2 x Pressure spring 1 x Eccentric roller 1 x Eccentric shaft	for the complete replacement of all small parts in the disinfection valve												

Tabelle 9: Repair

Pos.	Art. No.	Qty.	Description	Comments
–	34562308	1	Repair kit grounding wire	–
–	34562255	1	Connector housing male/female	1 pair each of mal/fem 2, 4, 6, 9, 12-pole conn. housing. 1 female 15-pole conn. housing.

## 9.14 Software

Pos.	Art. No.	Qty.	Description	Comments
-	7703864	1	Field service utility FSU version 2.00	-
-	77091B	1	Software 9.1B	USB-Stick with TLC/LLS/LLC
-	77091E	2	Software 9.1E	USB Stick with Boot Loader Software USB Stick with TLC/ LLS/LLC
-	770927	2	Software 9.27 (only for China)	USB Stick with Boot Loader Software USB Stick with TLC/ LLS/LLC
-	7704131	1	USB-Stick empty	Special Swissbit USB Stick

## 9.14.1 Software Compatibility Table

Software	Dialog <sup>+</sup> SW 9.XX LX800	Dialog <sup>+</sup> SW 9.1E BSW
Software 9.1B (Linux)	X	–
Software 9.1E (Linux)	X	X
Software 9.27 (Linux)	X	X

## 9.15 Miscellaneous

Tabelle 10: Silicone Tubing

Pos.	Art. No.	Qty.	Description	Comments
–	34565299	3 m	Silicone tubing 2 x 3	transparent
–	34565302	5 m	Silicone tubing 2 x 1,5	–
–	34565213	10 m	Silicone tubing 2,9 x 3	–
–	34565280	3 m	Silicone tubing 3,2 x 1,6	–
–	34565248	10 m	Silicone tubing 5 x 1,5/blue	–
–	34565230	10 m	Silicone tubing 5 x 1,5/red	–
–	34565191	10 m	Silicone tubing 5 x 3	–
–	34565256	2 m	Silicone tubing 6 x 1,75/red	internal high temperature tubing for DF filter option
–	34562265	2 m	Silicone tubing 6 x 1,75/blue	for DF filter option
–	34565264	2 m	Silicone tubing 6 x 1,75/white	for DF filter option
–	34565337	2 m	Silicone tubing 8 x 2	see 8 Flow, Wiring and Tubing Diagrams (801)
–	34565221	10 m	Silicone tubing 6 x 3	–
–	34561749	50 m	Silicone tubing 8 x 3,2/red	external high temperature tubing
–	34565345	1 m	Silicone tubing 12 x 2,5	transparent silicone tube
–	3456516A	3 m	Silicone tubing 8 x 3,2/red, with two single ear clamps 17,5	external high temperature tubing

Tabelle 11: PVC Tubing

Pos.	Art. No.	Qty.	Description	Comments
–	34565272	10 m	PVC tubing 3,5 x 1	–
–	34565140	50 m	PVC tubing 10 x 3/red	for only cold water inlet
–	34565159	50 m	PVC tubing 10 x 3/black	for dialysate outlet
–	3456517C	3 m	PVC tubing 10 x 3/red, with two single ear clamps 19,5	for only cold water inlet,
–	3456518A	3 m	PVC tubing 10 x 3/black, with one single ear clamp 19,5 and one tubing clamp 12-20 mm	for dialysate outlet

Tabelle 12: Tubing Clamp and Connections

Pos.	Art. No.	Qty.	Description	Comments
–	34570195	20	Tubing clamp SNP-1,5 Ø 7-8 mm	plastic
–	34570209	20	Tubing clamp SNP-4 Ø 10-11 mm	plastic
–	34570365	20	Tubing clamp SNP-6 Ø 11,4-13 mm	plastic
–	34570861	5	T-Tubing connector 6-4-6 mm	for UFP, FPA, LA
–	34570780	5	Y-Tubing connector 4-5-4 mm	BIC holder option
–	34570705	5	Y-Tubing connector 8 mm	–VBI/CP, VVB, DF block (ceramic pumps bypass) BC tubings
–	34773770	5	Y-Tubing connector 6 mm	DF option

Tabelle 13: Canisters

Pos.	Art. No.	Qty.	Description	Comments
–	34517766	10	Canister lid, red	with retainer for suction rod
–	34517774	10	Canister lid, blue	with retainer for suction rod
–	34562334	10	Canister lid for new canister	–

Tabelle 14: Paint and Lubricants

Pos.	Art. No.	Qty.	Description	Comments
–	7702345	1	Silicone grease 410	(Renolit) 100 g tube
–	7702353	1	Silicone rubber adhesive (white) RTV 162	for securing connectors
–	7702388	1	Silicone rubber adhesive (transparent) RTV118	must not be used for electronic components
–	7703708	1	Grease SKD 4002	100 g tube (to lubricate shaft of blood pump)
–	7703619	1	Touch-up pen, pale green	–
–	7703627	1	Touch-up pen, light gray	–

Tabelle 15: Thread repair

Pos.	Art. No.	Qty.	Description	Comments
–	34570900	10	Threaded insert M4	<b>Note:</b> max. drilling depth 11 mm +0.1 Drill with $\varnothing$ 5.7 mm is required

Tabelle 16: Intern Cables

Pos.	Art. No.	Qty.	Description	Comments
–	34562224	1	Ribbon cable 10PIN (LR, P11)	Basic Board -> Level Regulation
–	34562239	1	Ribbon cable 12 conductors	Display FPB-OSD
–	34560912	1	Ribbon cable 12 conductors	Door Display FPB-OSD
–	34560971	1	Ribbon cable	Display FPB-BIB
–	34562240	1	Ribbon cable 16PIN	FPB-Basic Board
–	34562222	1	Ribbon cable 16PIN	Display FPB-P14 BB
–	34562228	1	Ribbon cable 20PIN	SAD v4+v5-Basic Board
–	34562226	1	Ribbon cable 20PIN	Heparin Pump-Basic Board
–	34562223	1	Ribbon cable 20PIN	Power Supply-Basic Board
–	34562304	1	Ribbon cable	Display FPB-P14
–	34562305	1	Ribbon cable	Door Display FPB-P14
–	34562218	1	Ribbon cable 20 conductors	Display LVDS-LCD
–	34562238	1	Ribbon cable 20 conductors	Door Display LVDS-LCD
–	3456222A	1	Harness pumps/valves	–

Tabelle 16: Intern Cables

Pos.	Art. No.	Qty.	Description	Comments
-	34562255	1	Connector housing female/male	Empty 1 pair each of mal/fem 2, 4, 6, 9, 12-pole conn. housing. 1 female 15-pole conn. housing
-	-	-	Cable - Motherboard LX800-BSW	See chapter: Top Level Sub Rack

9.16 Staff Call (Option)

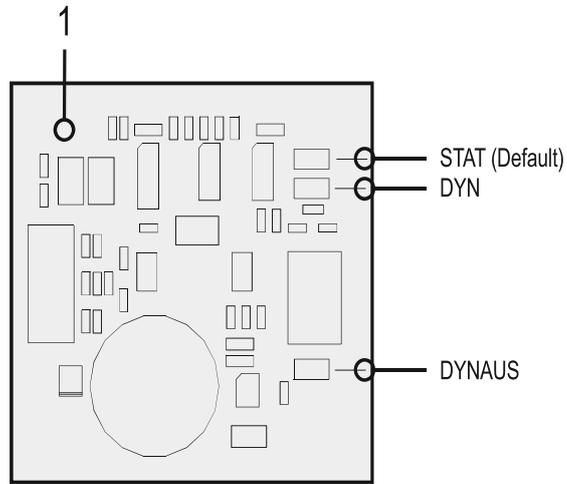


Fig. 9-86 Staff call, option

9

Pos.	Art. No.	Qty.	Description	Comments
1	34517685	–	Staff call board	–

9.17 Bicarbonate Cartridge Holder (Option)

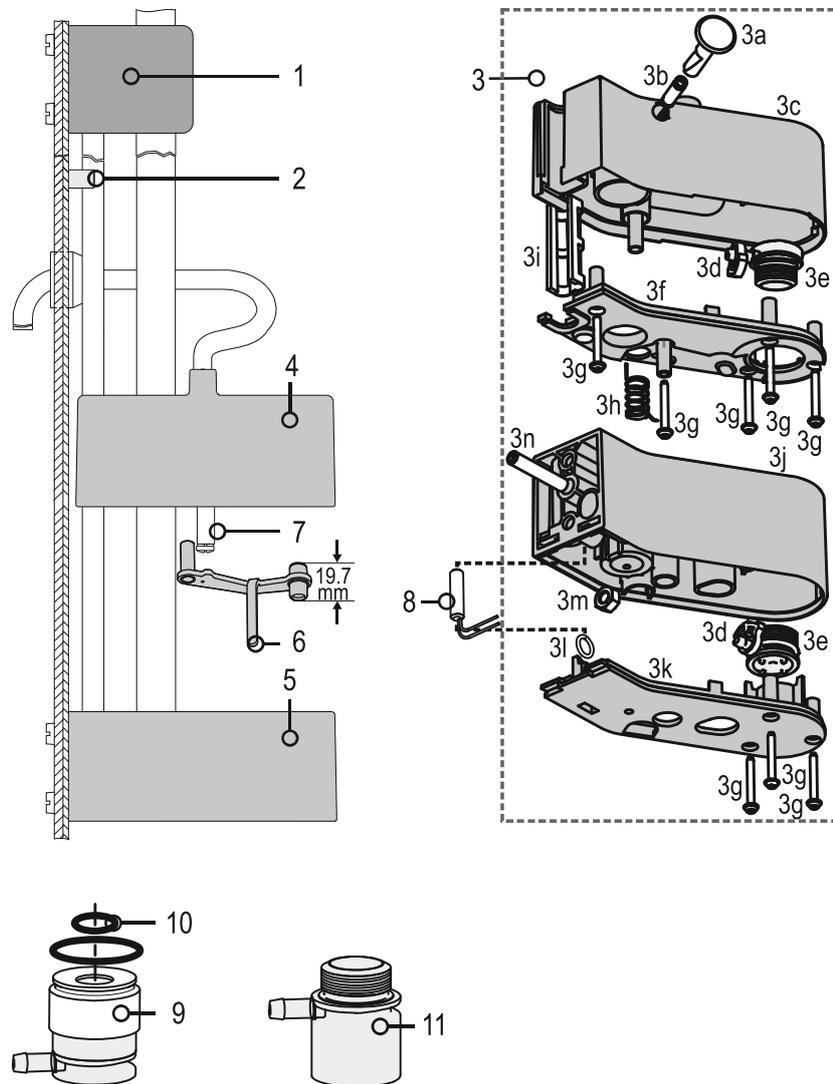


Fig. 9-87 Bicarbonate cartridge holder, option

Pos.	Art.No	Qty.	Description	Comments
1	3451439A	1	Holder, top	–
2	34570748	5	Stop position for BIC holder	–
3	34562079	1	Top/bottom housings including: <b>3a:</b> push button; <b>3b:</b> pressure spring; <b>3c:</b> top housing; <b>3d:</b> two tubing clamps SNP1,5; <b>3e:</b> two short lids incl. o-rings, without valves with piercing spikes; <b>3f:</b> top lid; <b>3g:</b> eight screws 35x25; <b>3h:</b> torsion spring; <b>3i:</b> slide rail (conical); <b>3j:</b> bottom housing; <b>3k:</b> bottom lid incl. o-ring (pos. 3l); <b>3l:</b> o-ring 8.0 x 1.6; <b>3m:</b> nut M6; <b>3n:</b> socket set screw M6x35 (to fasten infusion pole)	without valves and swivel arm, not backward compatible to previous version
3h	34570420	5	Torsion spring	–
4	34562087	1	Top housing	incl. lid and screws
5	34562095	1	Bottom housing	incl. lid, screws and seal

Pos.	Art.No	Qty.	Description	Comments
6	3456009A	1	Swivel arm version 2	pay attention to dimension
7	34562252	1	Eccentric for swivel arm	for all housing versions
8	34517138	1	Reed sensor with contacts and o-ring 3.68 x 1.78	bottom BIC cartridge holder, o-ring 3.68 x 1.78 not required
9	34562109	1	Short valve lid incl. valve with piercing spike	complete with o-rings
10	34570594	10	O-ring 9.2 x 2.7	alternative (silicone) for
10	34570241	5	O-ring 9.19 x 2.62	alternative (black)
11	34562117	1	Long valve lid	for previous housing version, complete with o-ring
-	34519866	1	Slide ring	for previous housing version (IV pole)
-	34561498	5	Disposable filter 2.6 mm	filter FBIC
-	34570780	5	Y-Tubing connector 4-6-4mm	Bottom part of Bic Cartridge and BICP
-	34570861	5	T-Tubing connector 4-6-4mm	VBKS, VBKO and upper part of Bic Cartridge
-	34565213	10m	Silicone tubing 2.9x3 mm	connects Y-tubing with BICP



9.18 HDF Online

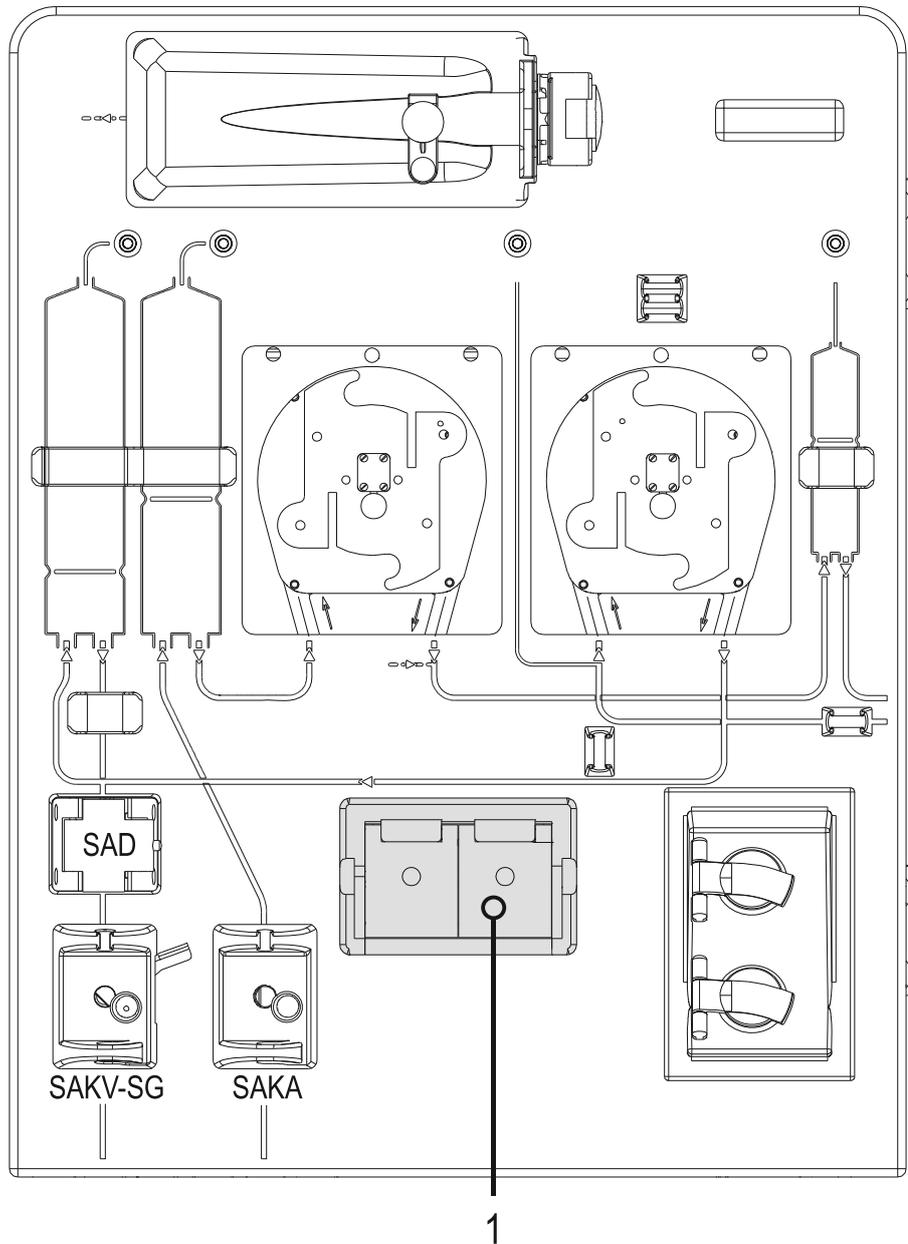


Fig. 9-89 HDF online, front door old version

9

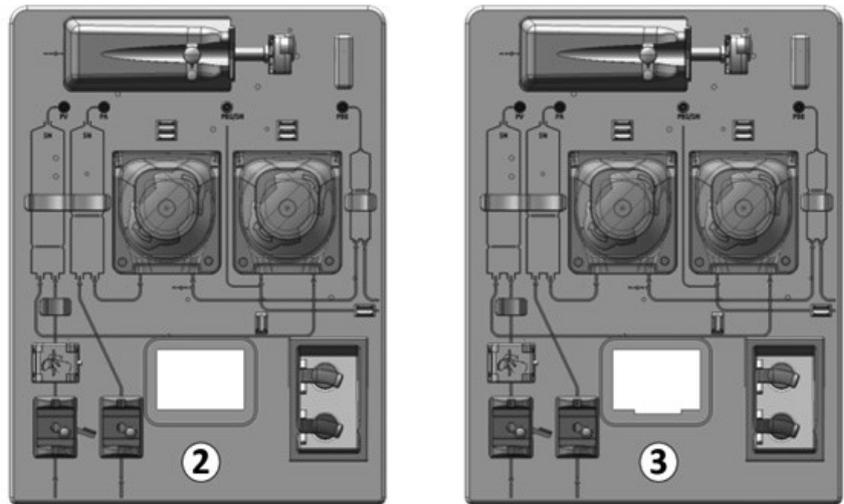


Fig. 9-90 HDF online, front door new versions

Pos.	Art.No	Qty.	Description	Comments
1	34561676	1	Front door HDF Online	Old version
2	3451448A	1	Front door HDF Online	New version
3	3461059	1	Front door HDF Online	New version + new online port

9.18.1 Substitution Port

Substitution Port up to SN 329058 and 662223

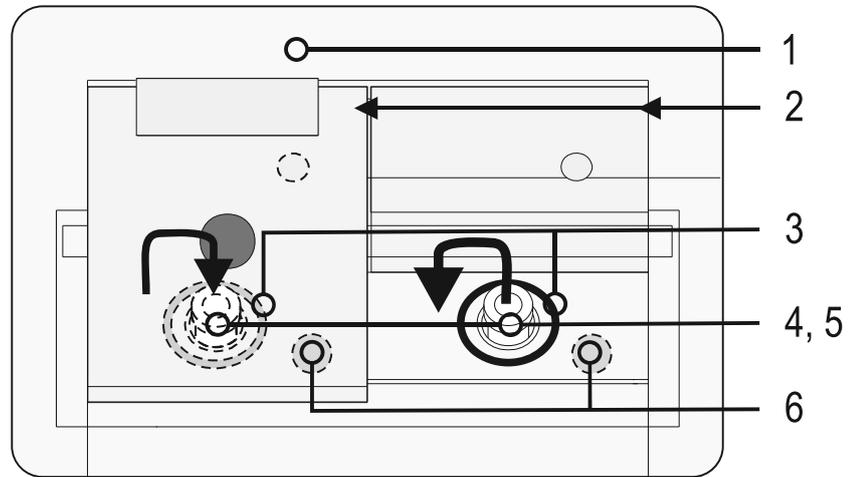


Fig. 9-91 Substitution port complete

9

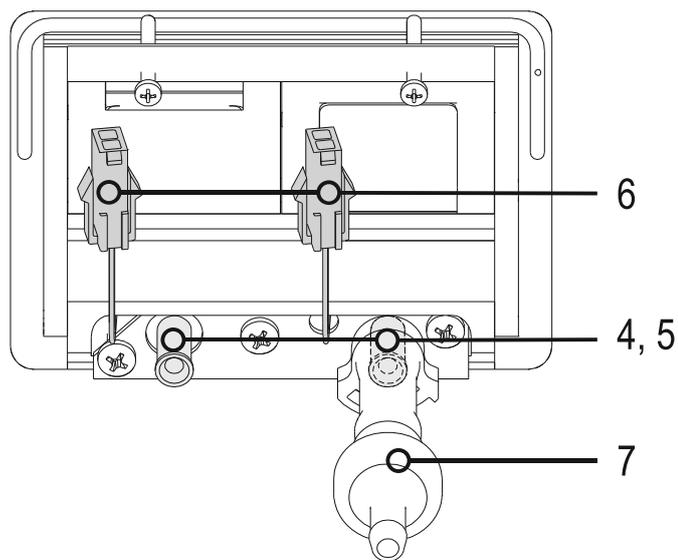
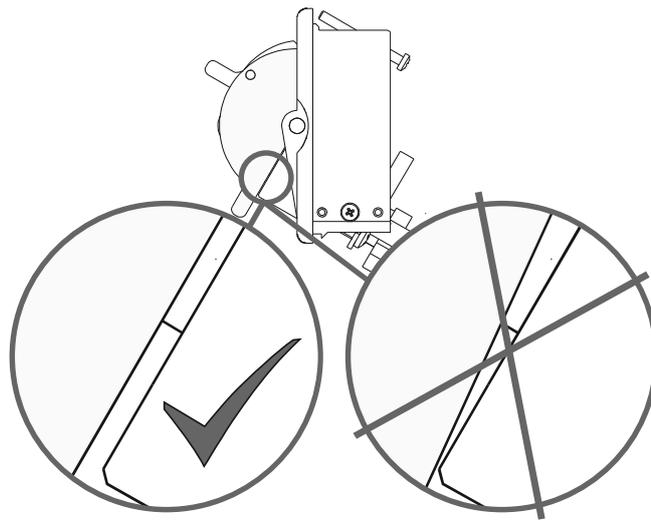


Fig. 9-92 Reed sensor with disposable filter

Pos.	Art. No.	Qty.	Description	Comments
1	3451448A	1	Substitution port complete	–
2	3457034A	5	Pressure spring $\varnothing$ 4.6 x 14 mm	–
3	3457035A	2	Quad ring 12.37 x 2.62 incl. spacer	–
4	34560017	1	Substitution connector	stainless steel, without o-ring
5	3477106A	5	O-ring 6.4 x 1.3	–
6	34517138	1	Reed sensor with contacts and o-ring 3.68 x 1.78	–
7	34561501	5	Disposable filter 4.6 mm	–



A or A+B

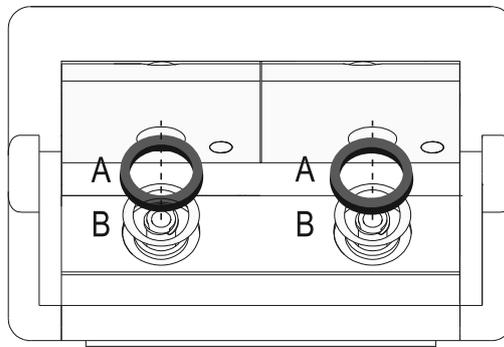


Fig. 9-93 Quad ring and spacer for substitution port

Substitution Port From SN 329059 and 662224 not backwards compatible

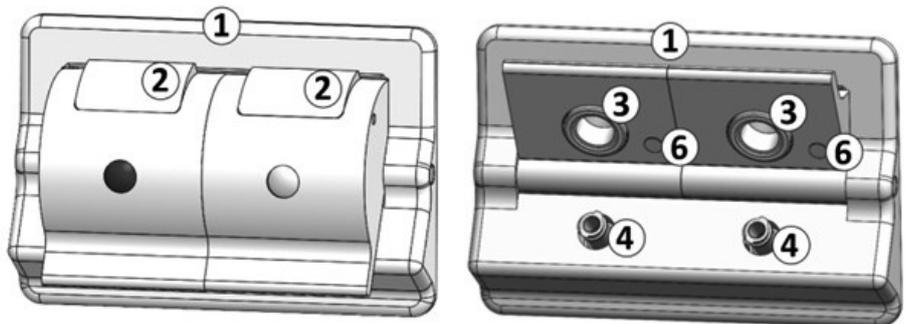


Fig. 9-94 Substitution port front complete

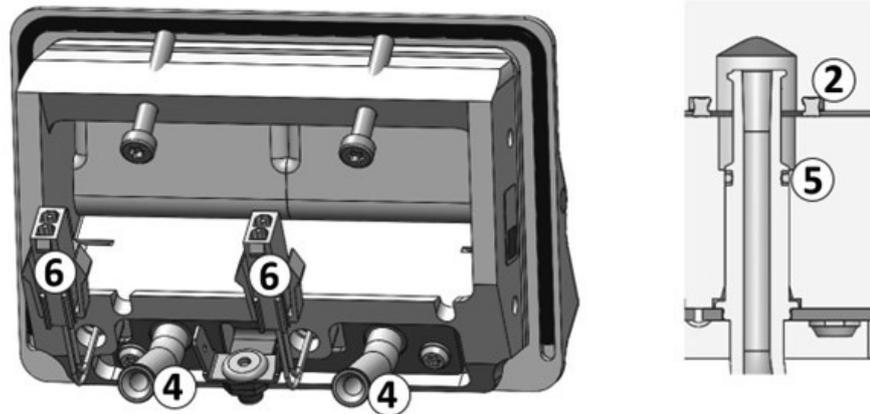


Fig. 9-95 Substitution port back complete

Pos.	Art. No.	Qty.	Description	Comments
1	3461059	1	Substitution port complete	not backwards compatible
2	3457034A	5	Pressure spring $\varnothing$ 4.6 x 14 mm	without housing
3	3457035A	2	Quad ring 12.37 x 2.62 incl. spacer	–
4	34560017	1	Substitution connector	stainless steel, without o-ring
5	3477106A	5	O-ring 6.4 x 1.3	–
6	34517138	1	Reed sensor with contacts and o-ring 3.68 x 1.78	–



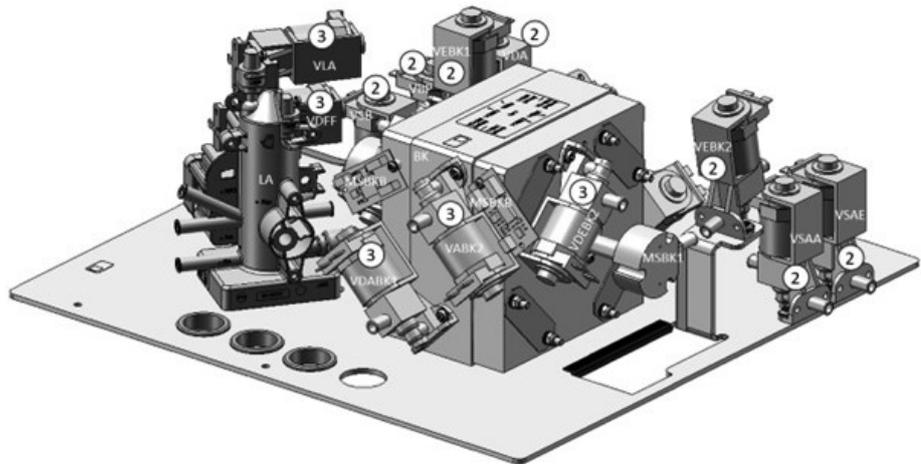


Fig. 9-98 UF sub rack HDF online new version front view

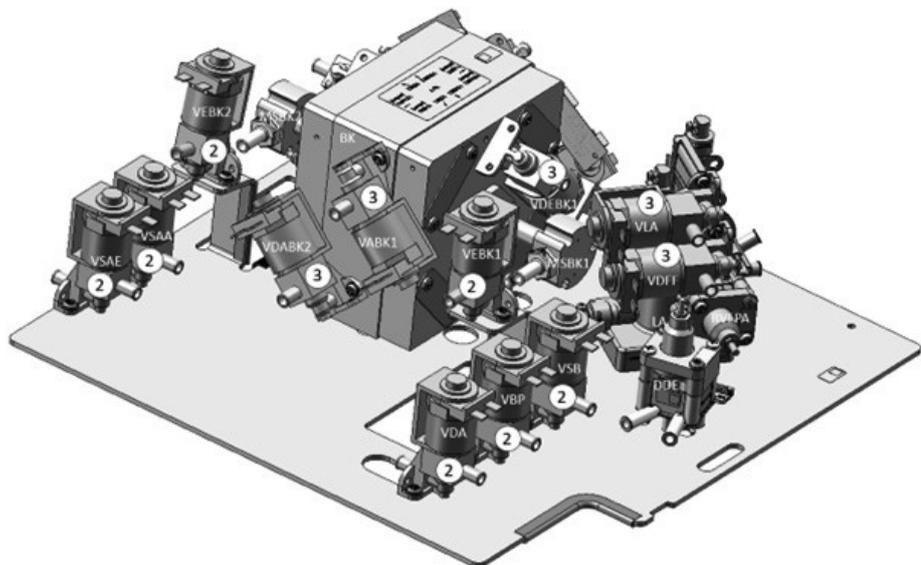


Fig. 9-99 UF sub rack HDF online new version front view

Pos.	Art. No.	Qty.	Description	Comments
1	-	-	Valve block	see chapter 9.18.3 Valve Block HDF Online (959)
2	3451906C	1	Solenoid valve 2/2 way	manuf. AKM only, connector/connector
3	3451900A	1	Solenoid valve 3/2 way	manuf. AKM only, connector/flange
-	34770852	5	O-ring 11.1 x 1.6	for valve 3

9.18.3 Valve Block HDF Online

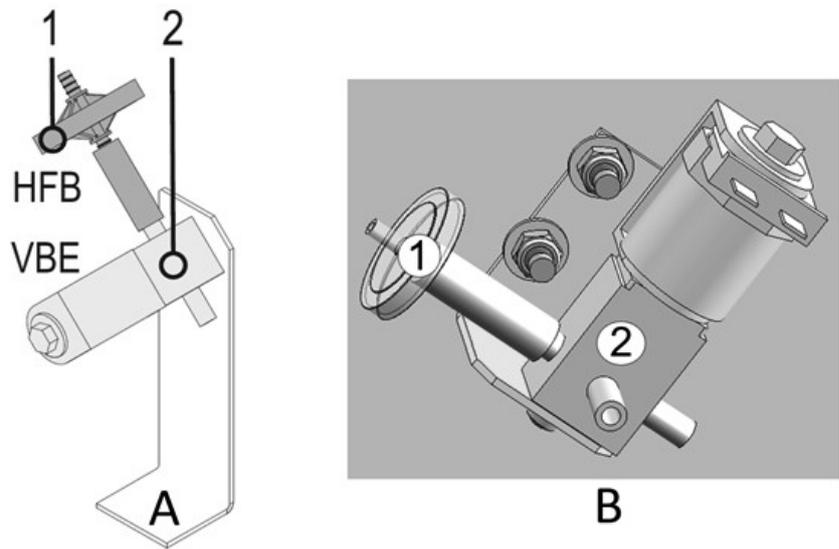


Fig. 9-100 Valve block HDF online, old version A on UF sub rack, new version B on back door.

Pos.	Art.No	Qty.	Description	Comments
1	34560661	1	Hydrophobic filter	with tubing adapter
2	3451900A	1	Solenoid valve 3/2 way	-

9.18.4 DF/HDF Filter Holder HDF Online

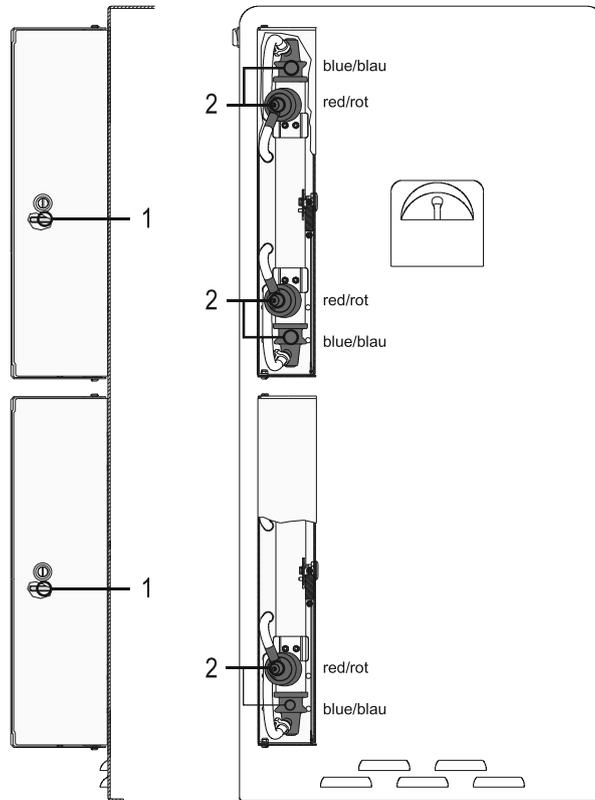


Fig. 9-101 DF/HDF filter holder up to serial number 200,000

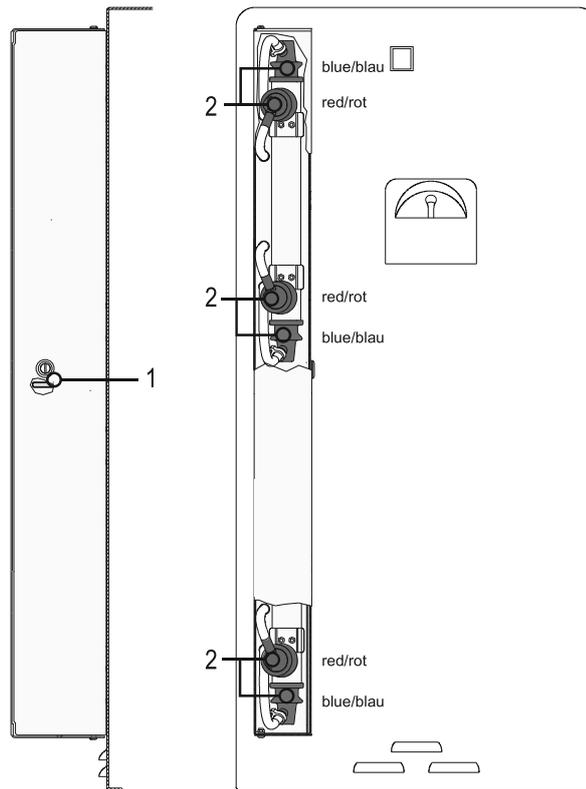


Fig. 9-102 DF/HDF filter holder, HDF online from serial number 200,000

Pos.	Art.No	Qty.	Description	Comments
1	34517138	1	Reed sensor with contacts and o-ring 3.68 x 1.78	–
1	34562284	1	Latch filter holder door	–
2	34561633	1	Coupling without magnet	color coding by colored wire ties
2	34990445	5	O-ring 12.37 x 2.62	–

**HDF Online Filter Holder Lock until SW 9.18**

To open the lock, a slotted screwdriver is required.



**Fig. 9-103** Filter Holder Lock until SW 9.18

**HDF Online Filter Holder Lock from to SW 9.1B**

To open the lock, no special tool is required.



**Fig. 9-104** Filter Holder Lock from SW 9.1B

HDF Online Filter Housing from SN ≥ 325,298/660,596

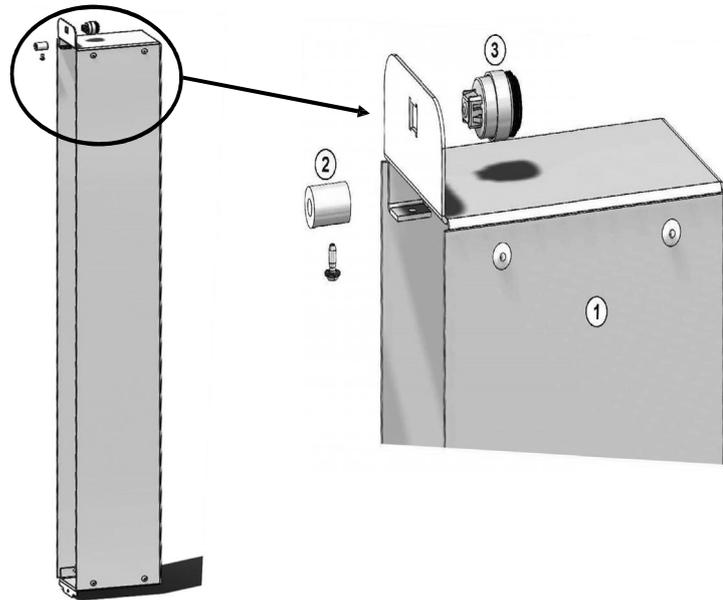


Fig. 9-105 HDF Online filter housing latest version

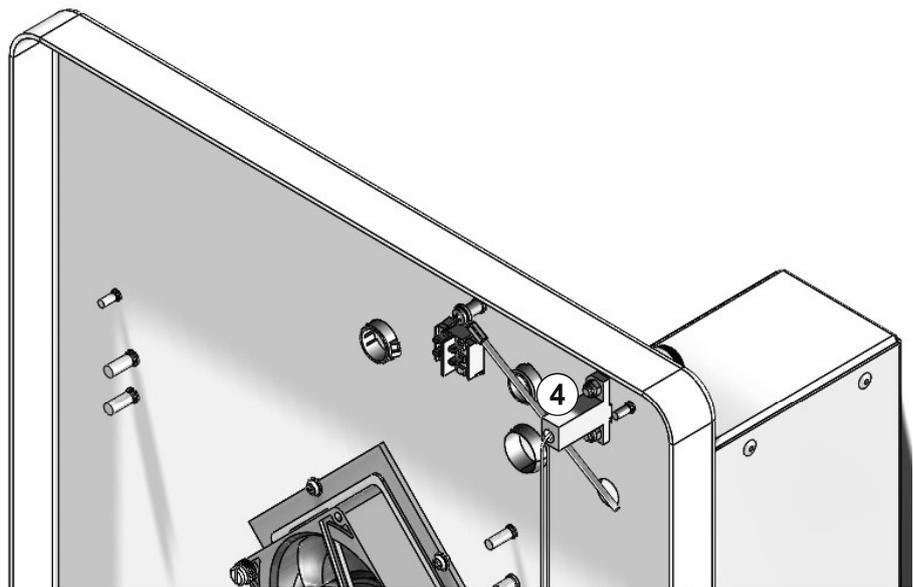


Fig. 9-106 Rear door inside view

Pos.	Art.No	Qty.	Description	Comments
1	34562326	1	Filter cover	–
2	34562325	1	Magnet holder	–
3	34562327	1	Connector filter cover	–
4	34517138	1	Reed sensor with contacts and O-ring 3.68 x 1.78	–

9.19 Automatic Blood Pressure Measurement ABPM Module M2015 (Option)

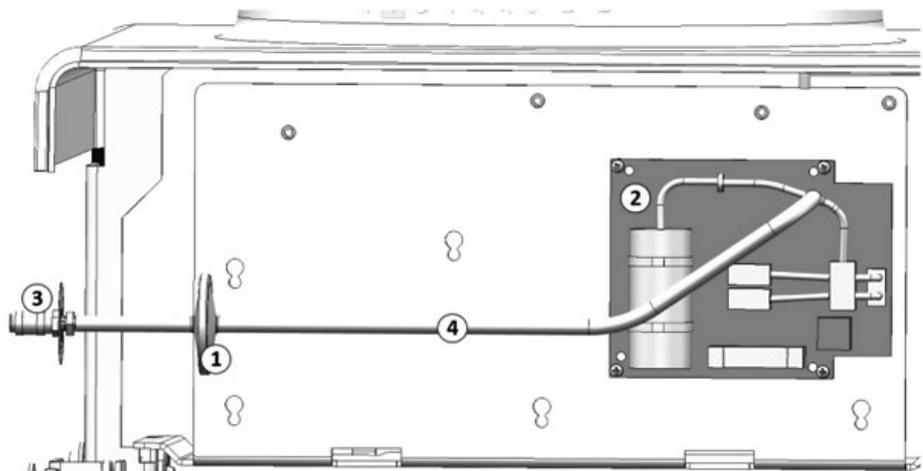


Fig. 9-107 ABPM module M2015, option

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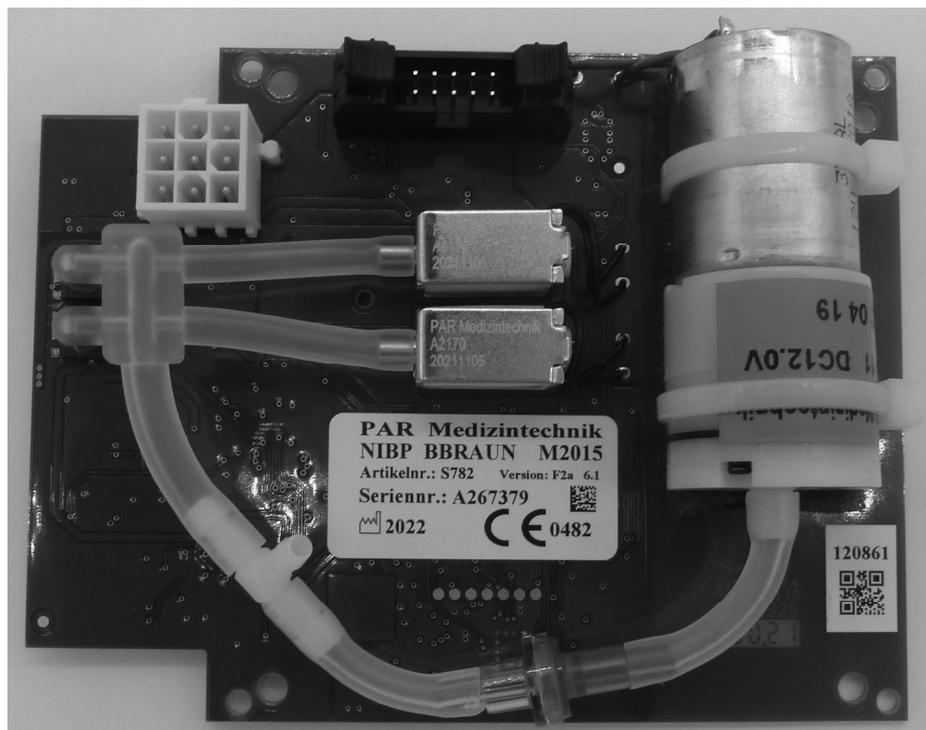


Fig. 9-108 ABPM module M2015 version number

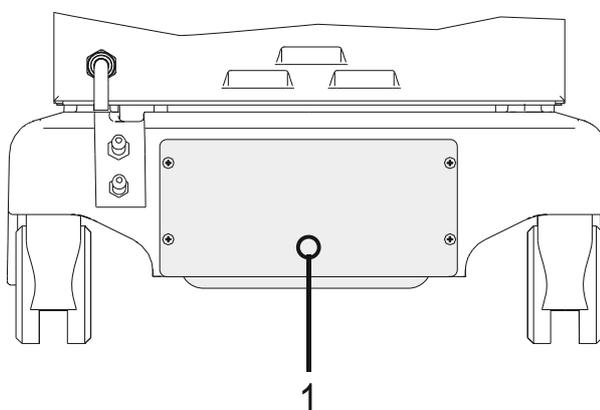
Pos.	Art.No	Qty.	Description	Comments
1	34560955	1	Filter, ABPM module	–
2	3451487E	1	ABPM module M2015 with filter	firmware version of ABPM module on sticker: Version Y (FW): X.X
3	34562044	1	Connector, Male	machine site
3	34562254	1	Connector, Female	machine site
–	34518517	1	Connector, Female	cuff site
4	34565280	1	Silicone tubing 3,2 x 1,6mm	–
–	34562227	1	Ribbon cable 10 pin	ABPM, MB, LX800

## 9.20 Emergency Power Supply (Option)

### **NOTICE!**

The battery (rechargeable) contains diluted sulfuric acid, a very toxic substance.

- If the battery leaks and the liquid inside spills on the skin or clothing, immediately wash it off with plenty of clean water.
- If the liquid splashes into the eyes, immediately flush the eyes with plenty of clean water and consult a doctor. Sulfuric acid in the eyes may cause loss of eyesight and acid on the skin will cause burns.
- Pay attention to the included documentation of the battery supplier!



**Fig. 9-109** Emergency power supply, option

Pos.	Art. No.	Qty.	Description	Comments
1	–	–	Battery sub-rack	see chapter 9.20.1 Battery Sub-Rack (966)

## 9.20.1 Battery Sub-Rack

**NOTICE!**

If a battery must be replaced exchange the complete battery set!

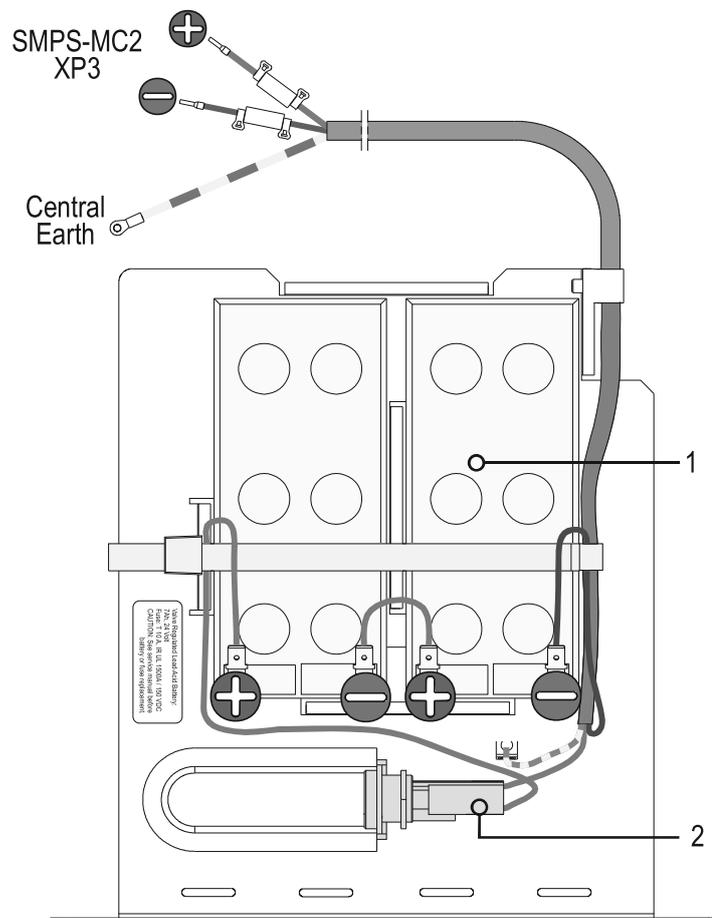
- Prevent short circuits in the battery compartment during disassembly and assembly:  
Please pay attention to the correct disassembly/assembly sequence during the connection and disconnection of the batteries.

**Connection**

1. Connect (+) terminal (brown).
2. Connect (-) terminal (blue).
3. Connect ground terminal (green/yellow).

**Disconnection**

1. Disconnect (-) terminal (blue)
2. Disconnect ground terminal (green/yellow).
3. Disconnect (+) terminal (brown).



**Fig. 9-110** Battery sub rack with fuse

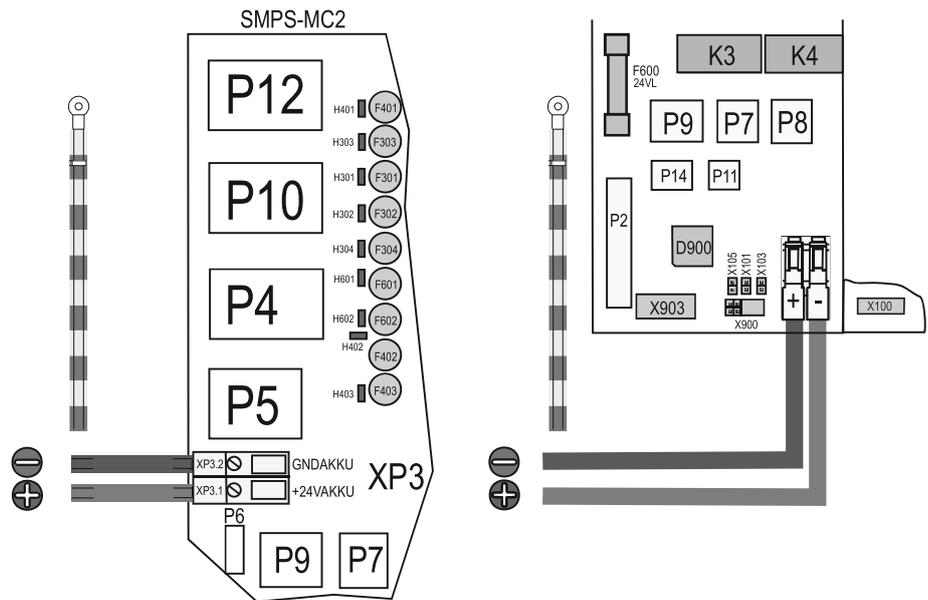


Fig. 9-111 SMPS-MC2 XP3

Pos.	Art. No.	Qty.	Description	Comments
1	34561250	1	Battery (rechargeable) set 12 V/7 Ah, incl. cable tie	2 x battery (rechargeable) 12 V/7 Ah
2	34570721	10	Fuse T10 A (5 x 20 mm)	-

## 9.21 Nexadia-BSL/WAN-BSL (Option)

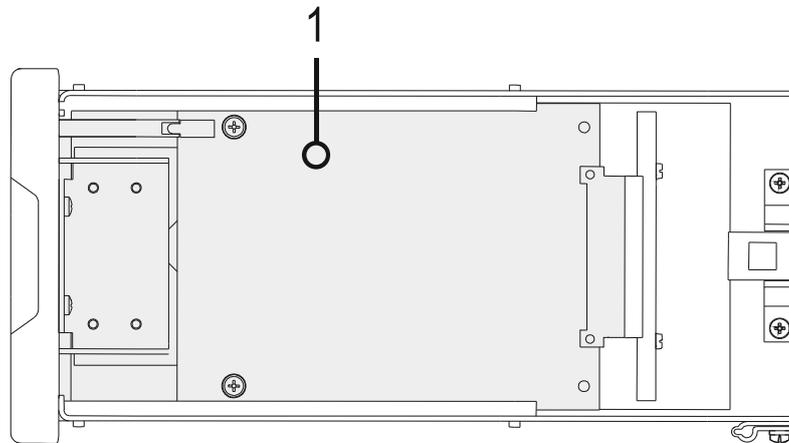


Fig. 9-112 Nexadia – BSL/WAN-BSL (option)



Fig. 9-113 Nexadia – BSL/WAN-BSL (option) testing tools

Pos.	Art.No	Qty.	Description	Comments
1	34514554	1	Bedside link board (BSL board)	without firmware
-	34562324	1	Cable set BSL - LX800	for BSL option produced later than Sept 2021
2	34562296	1	HWBSL Option	adapter cable for testing
3	7701497	1	Installation tool	special socket spanner Ø18mm
4	7703473	1	Test plug	RS 232

9.22 Card Reader (Option)

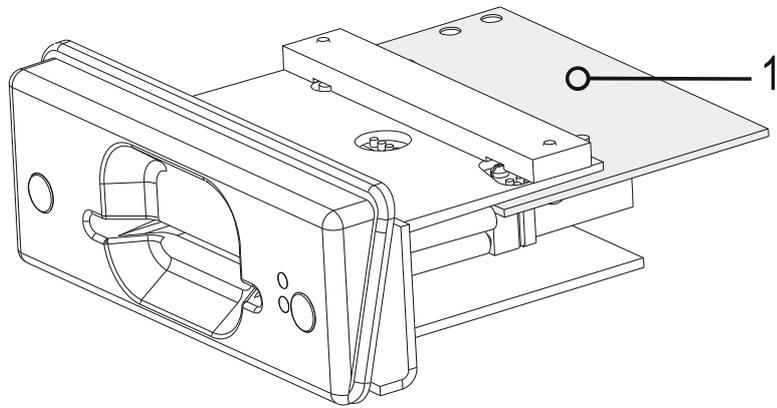


Fig. 9-114 Card reader, option, old version

Pos.	Art.No	Qty.	Description	Comments
1	34560548	1	Card reader board	-

## 9.22.1 Card Reader (Option) ≥ SW 9.1E

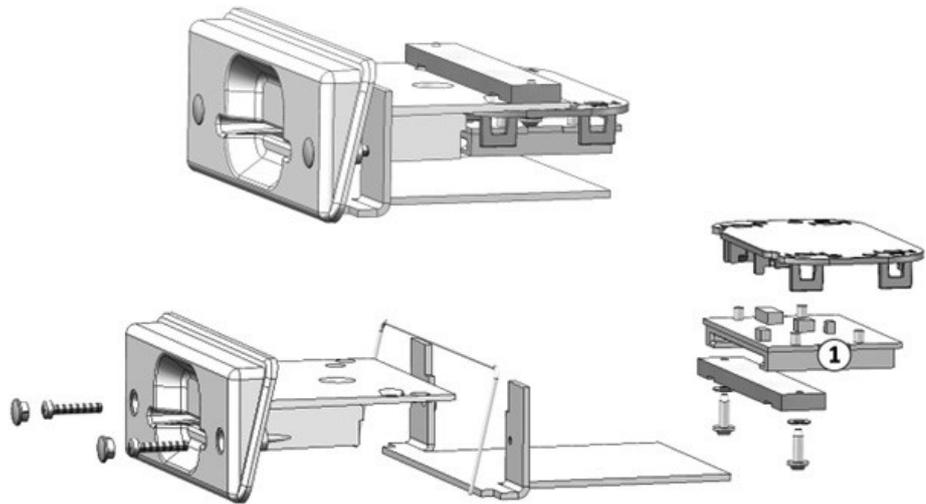


Fig. 9-115 HID Card reader, option, new version

Pos.	Art.No	Qty.	Description	Comments
1	34562300	1	HID Card reader board	requires SW 9.1E / SW 9.27 and BSW motherboard, see AI 2022-02 or next row
-	34562321	1	Cable USB card reader - LX800	requires SW 9.1E / SW 9.27 and with this cable it is possible to connect the 34562300 to the LX800
-	34562294	1	Service kit HID card reader 34562300	if LX800 is exchanged by BSW

9.23 Adimea (Option)

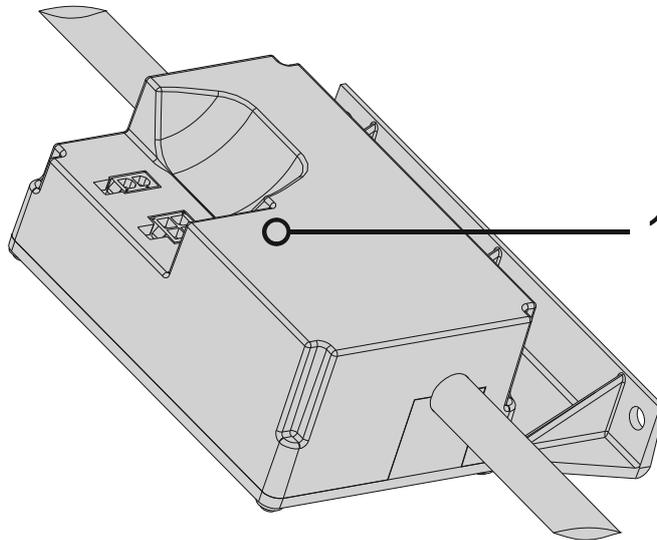


Fig. 9-116 Adimea (option)

Pos.	Art.No	Qty.	Description	Comments
1	3456063D	1	Kt/V-UV board	complete with housing and tubing
-	34562322	1	Cable USB Adimea - LX800	-
-	34562323	1	Cable USB Adimea - BSW	-