

Filtration Systems with Pressure Tanks and Three Different Connection Possibilities



Description of accessories

Membrane pump

A self-priming diaphragm pump with electronic speed regulator, complete with connector tubing set. It pumps aqueous solutions quietly without stressing the product, and is equipped with an overpressure limiter which can be set at 1–3 bar. Pump, stainless steel sinker and tubing are resistant to 1N NaOH.

Membrane pump for pressure

Supply oil-free compressed air at up to 7 bar (700 kPa, 101.5 psi).

Connectors

G3/8 male thread in the pressure outlet side, 9 mm hose nipple in the air inlet side. The connectors are interchangeable.



Specifications for membrane pump

Input wattage	15 W
Electrical supply	220 V, 50 Hz
Diaphragm	Max. 3,000/min
Materials	Polypropylene housing, PTFE membrane, EPDM seals and valves.
Max. operating pressure	3 bar (43.5 psi), preset to 2.5 bar (36.3 psi)
Rated output for water	650 ml/min without pressure, 300 ml/min with Sartolab-P20
Self-priming	Up to 3 m water column. Power consumption, 0.76 A.

Order numbers for membrane pump

18059

Replacement part

6988094	Tubing set, consisting of 2.5 m silicone hose (4 mm inner diameter, 1.5 mm wall thickness, 60 Shore A hardness), 5 multi functional adapters, 1 stainless steel sinker.
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Specifications for membrane pump for pressure

Weight	ca. 15 kg
Threads for connectors	G1/4 female thread
Dimensions	35 × 25 × 26 cm
Max. performance	55 l/min
Max. ambient temp.	40°C
Power	250 W
Protection	IP 44

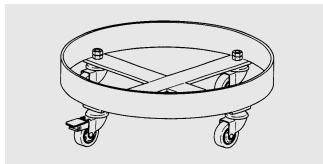
Order numbers for membrane pump for pressure

16617	(220 V, 50 Hz)
16662	(110 V, 60 Hz)

Replacement part

6986006	Spare parts kit, consisting of 2 membranes, 4 valve springs and 2 pump head gaskets.
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Filtration Systems with Pressure Tanks and Three Different Connection Possibilities (continued)



Pressure tank

Pressure tanks serve as reserve container for pressure filtration, and is also used for the transport, storage and distribution of liquids. Two handles simplify the handling and the transport. Special trolleys are available for the 40, 60, 80 and 100 liter pressure tanks.

The pressure tanks are made of 1.4401 (AISI 316) stainless steel, and meet the requirements of PED/97/23/EC of surfaces are electropolished. The tanks can be autoclaved at 121°C.

The screwed on G3/8 connectors allow the connection of PTFE pressure hoses 16823 or 16999. They can be replaced by hose nipples, sanitary flanges or connectors for quick connect systems (see accessories).

As standard, the lid is equipped with a pressure gauge, a safety valve, and a clamp for leak-proof, pressure-resistant closure. A certificate concerning construction and pressure testing according to the German decree for pressure tanks is enclosed to every tank (the tanks are specifically designed for pressure, and are not usable as vacuum containers).

Specifically for the requirements of the pharmaceutical industry, GMP-complying pressure tanks are on request available in various sizes. Benefits of the device are the ease of cleaning, the equipment with triclamp connectors on standard and the low surface roughness.

Specifications

Dimensions height × diameter weight	17530	235 × 234 mm 3.9 kg (8.6 lbs)
	17531	360 × 234 mm 5.4 kg (11.9 lbs)
	17532	600 × 234 mm 8.2 kg (18.2 lbs)
	17533	705 × 300 mm 11.8 kg (26 lbs)
	17534	643 × 400 mm 15.2 kg (33.5 lbs)
	17535	802 × 400 mm 18.4 kg (40.5 lbs)
	17536	962 × 400 mm 21.7 kg (47.8 lbs)
(opening, for all types, oval, length 98 mm, width 82 mm)		
Maximal operating pressure	7 bar (101.5 psi)	for 17530, 17531, 17532.
	5 bar (72.5 psi)	for 17533.
	3 bar (43.5 psi)	for 17534.
	2 bar (29 psi)	for 17535, 17536
Max. operating temperature	95°C	

Accessories

6985093	Spanner, 17–19 mm (to fasten connectors)
17636	Trolley for 17533
17635	Trolley for 17534, 17535 and 17536

The silicone O-rings supplied on standard can be replaced by the following Viton or EPDM O-rings

6986110	Silicone O-ring (lid)
6986132	Silicone O-ring (tubes)
6986111	EPDM O-ring (lid)
6986133	EPDM O-ring (tubes)

Other connectors

16863	Hose nipple, DN 10–19
17070	1"–1½" sanitary flange
17170	Quick connect nipple

Order numbers

17530	5 liter capacity
17531	10 liter capacity
17532	20 liter capacity
17533	40 liter capacity
17534	60 liter capacity
17535	80 liter capacity
17536	100 liter capacity

Replacement parts

For all pressure tanks	6980389	Viton O-ring (lid)
	6980395	Inlet tube
	6980396	Viton O-ring (tubes)
	6980420	Connector, G3/8
	6985131	PTFE cap (2 ×)
For 17530, 17531,17532	6980390	Pressure gauge, 7 bar
	6986112	Outlet tube (17530)
	6986113	Outlet tube (17531)
	6986114	Outlet tube (17532)
	6986130	Lid with valve
For 17533	6980415	Pressure gauge, 5 bar
	6986115	Outlet tube (17533)
	6986129	Lid with valve
For 17534	6986116	Outlet tube (17534)
	6986137	Pressure gauge, 3 bar
	6986138	Lid with valve
For 17535, 17536	6986117	Outlet tube (17535)
	6986118	Outlet tube (17536)
	6986119	Pressure gauge, 2 bar
	6986131	Lid with valve

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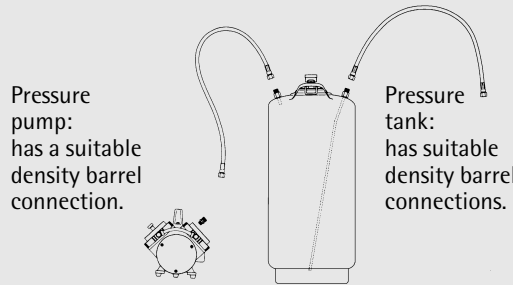
With G3/8 connectors

The pressure tank is connected to the pressure source and the filtration unit by means of stainless steel reinforced PTFE hoses. These hoses can be autoclaved and are easy to clean. Due to the density barrel

in the connections, a slight tightening with a 19 mm spanner for a leak-proof sealing. No seals and Teflon tapes are required.

Main advantage: easy cleaning.

Pressure hoses: have suitable density barrel connections.



Pressure pump: has a suitable density barrel connection.

Pressure tank: has suitable density barrel connections.

Sartobran P capsules type RO have a suitable density barrel connection. The inlet hose nipple of the holders 16249, 16275 and 16508 have to be replaced by connector 17089. Capsules, holders and holding with inlet Sanitary flange require connector 17019.

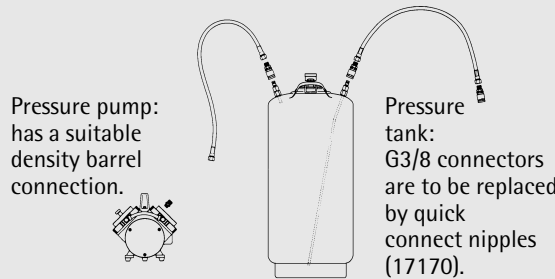
With quick connectors

The pressure tank is connected to the pressure source and the filtration unit by means of stainless steel reinforced PTFE pressure hoses and quick connect couplings. Hoses and couplings can be autoclaved. The valve in the

quick connect coupling closes automatically, when the coupling is removed from the quick connect nipple.

Main advantage: connection and removal of the coupling is quick and simple.

Pressure hoses: require an additional adapter (6985128) on the nuts to the pressure tanks inlet and outlet, and to the filter units.



Pressure pump: has a suitable density barrel connection.

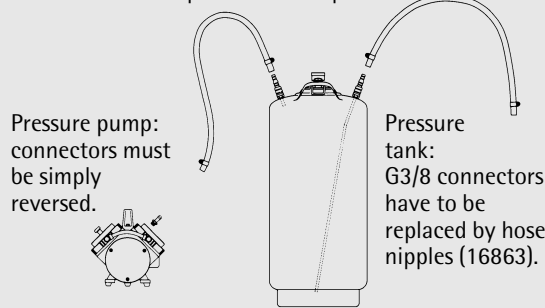
Pressure tank: G3/8 connectors are to be replaced by quick connect nipples (17170).

Not recommended for capsules, housings or devices with Sanitary flanges. The inlet hose nipple of the holders 16249, 16275, and 16508 have to be replaced by a connector 17090.

With commercially available hoses

The pressure tank is connected to the pressure source and the filtration unit by means of available pressure hoses. The hoses are to be clamped to the hose nipples. Main advantage: hoses are usually available.

Pressure hoses: require tube clamps.



Pressure pump: connectors must be simply reversed.

Pressure tank: G3/8 connectors have to be replaced by hose nipples (16863).

Sartolab P20 units, Sartobran 300 capsule, Sartobran P capsule type 00 as well as the filter holders 16249, 16275 and 16508 feature hose nipples as standard.



PTFE pressure hose

Stainless steel reinforced PTFE pressure hoses with G3/8 nuts on each side. The hoses are solvent resistant and easy to clean. They can be sterilized by autoclaving (121°C or 134°C) or by dry heat (180°C).

The nuts fit on the G3/8 male threads, and ensure a leak-proof connection without the need for sealing rings or Teflon tapes.

The nuts also fit on a function-piece with quick connect coupling (order no. 6985128) for a quick and simple connection to holders fitted with quick connect nipples. The valve in the coupling opens, when it is fitted on a quick connect nipple, and closes when removed from the nipple.



Flexible pressure hose

1 m long. G3/8 nuts on each side. It is very flexible and especially practical as pressure hose for pressure holders with capacity barrel. Can be sterilized by autoclaving or by dry heat. Not for use with liquids.



Plastic pressure hose

Flexible gas pressure hose with quick connect coupling for direct connection to pressure holders with capacity barrel, fitted with quick connect nipple and with G3/8 nut for connection to the pressure source. Not for use with liquids.



Hand-operated valve

This valve is fitted on the outlet side of a filter holder type 16275, and allows a steady regulation of the filtrate or a selective dosage when filling up liter volumes.

An adapter (order no. 17150) allows the attachment of a capsule and a mini cartridge housing with Sanitary flange.

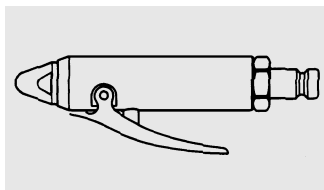
Fitted to the filter holder, the valve can be sterilized, when open, with all the usual methods. For cleaning purpose, it can be quickly taken apart without problems.

Materials: ball and housing, stainless steel (material no. 1.4401, AISI 316).
Seat and nipple for 13 mm hose, PTFE.

Clamp for sanitary flanges

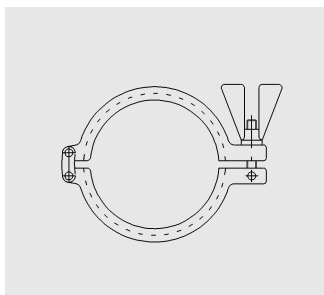
Two 1-1/2" sanitary flanges are pressed against the supplied gasket and are attached with the clamp.

Order numbers see next page.



Order numbers for PTFE pressure hose

16999	1.5 m long
16823	80 cm long



Accessories for 6985128

6980407	Trigger valve for cleaning
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Replacement part for 6985128

6985216	Seal set (Viton O-ring, flat gasket)
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Order number for flexible pressure hose

17091

Order number for plastic pressure hose

16931

Order number for hand-operated valve

16656

Replacement parts

6981314	Stainless steel bell
6986090	Valve body
6986091	Connector, M12×1
6986092	PTFE hose nipple
6988093	PTFE sealing, (pack of 2)

Order number for clamp for sanitary flanges

17033

Replacement silicone gaskets are available under the order number 6982029 (pack of 2). Ethylene polypropylene gaskets (order no. 6982060) and PTFE reinforced buna (6982061) are also available.