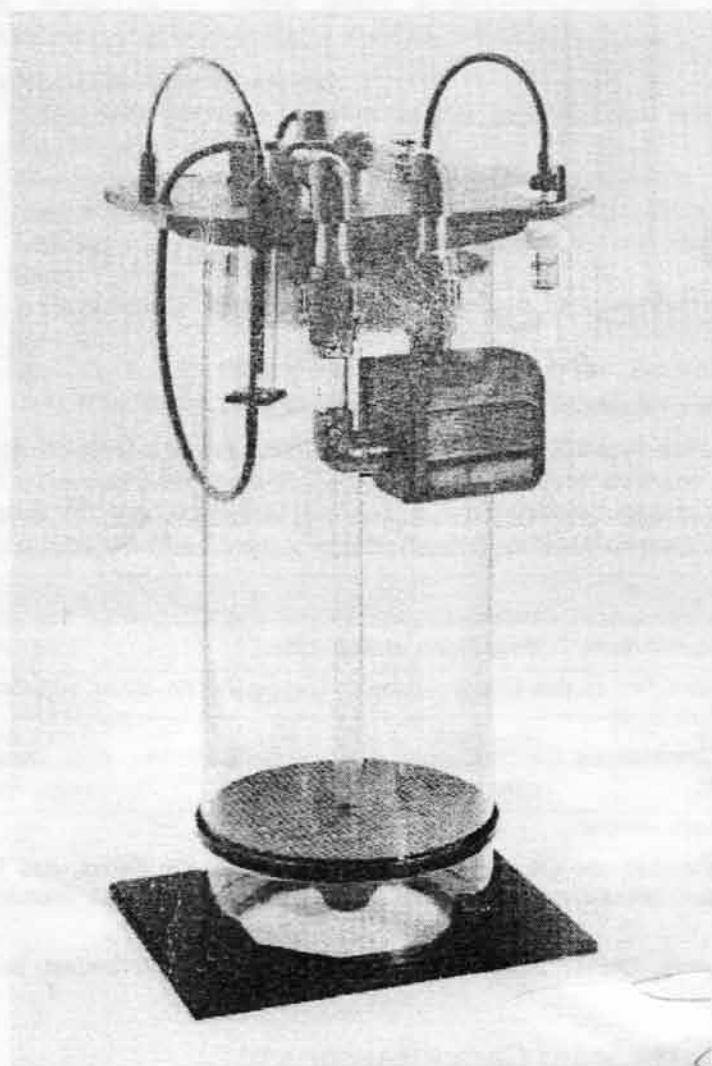


PF 501 – PF 1001



Bedienungsanleitung
und Ersatzteilliste

Operating instruction
and Spare parts list

Istruzioni d'uso
e parti di ricambio

Instructions d'emploi et
Accessoires et pièces
détachées

Руководство по
обслуживанию и список
запасных частей

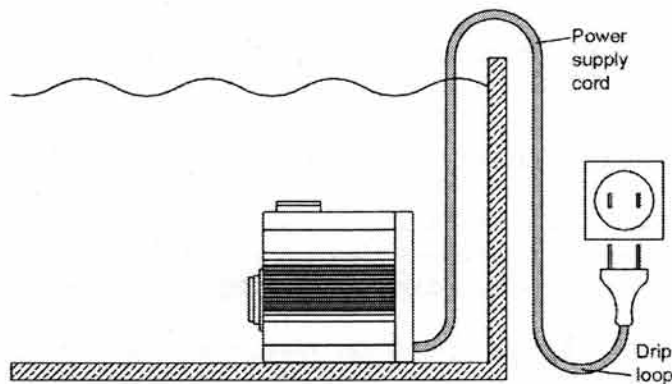
IMPORTANT SAFETY INSTRUCTIONS

WARNING To guard against injury, basic safety precautions should be observed, including the following.

- 1) READ AND FOLLOW ALL SAFETY INSTRUCTIONS.
- 2) **DANGER** – To avoid possible electric shock, special care should be taken since water is employed in the use of aquarium equipment. For each of the following situations, do not attempt repairs by yourself; return the appliance to an authorized service facility for service or discard the appliance.
 - a) If the appliance falls into the water **DON'T** reach for it! First unplug it and then retrieve it. If electrical components of the appliance get wet, unplug the appliance immediately. (Non-immersible equipment only)
 - b) If the appliance shows any sign of abnormal water leakage, immediately unplug it from the power source. (Immersible equipment only)
 - c) Carefully examine the appliance after installation. It should not be plugged in if there is water on parts not intended to be wet.
 - d) Do not operate any appliance if it has a damaged cord or plug, or if it is malfunctioning or has been dropped or damaged in any manner.
 - e) To avoid the possibility of the appliance plug or receptacle getting wet, position aquarium stand and tank to one side of a wall-mounted receptacle to prevent water from dripping onto the receptacle or plug.

A "drip-loop", shown in the figure below, should be arranged by the user for each cord connecting an aquarium appliance to a receptacle. The "drip-loop" is that part of the cord below the level of the receptacle, or the connector if an extension cord is used, to prevent water travelling along the cord and coming in contact with the receptacle.

If the plug or socket does get wet, **DON'T** unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the appliance. Then unplug and examine for presence of water in the receptacle.



- 3) Close supervision is necessary when any appliance is used by or near children.
- 4) Always unplug an appliance from an outlet when not in use, before putting on or taking off parts, and before cleaning. Never yank cord to pull plug from outlet. Grasp the plug and pull to disconnect.
- 5) Do not use an appliance for other than intended use. The use of attachments not recommended or sold by the appliance manufacturer may cause an unsafe condition.
- 6) Make sure an appliance mounted on a tank is securely installed before operating it.
- 7) Read and observe all the important notices on the appliance.
- 8) If an extension cord is necessary, a cord with a proper rating should be used. A cord rated for less amperes or watts than the appliance rating may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.
- 9) This appliance has a polarized plug (one blade is wider than the other). As safety feature, this plug will fit in a polarized outlet only one way. If the plug does not fit, contact a qualified electrician. Never use with an extension cord unless plug can be fully inserted. Do not attempt to defeat this safety feature.

Exception: This instruction may be omitted for an appliance that is not provided with a polarized attachment plug.

Removing of the plug invalidates the warranty!

SAVE THESE INSTRUCTIONS

Deltec **Fluidised Bed Calcium Reactor PF501 - PF1001**

The correct calcium level is a vital requirement in keeping and growing corals successfully in marine aquaria. The calcium level should be kept above 400 and preferably at 470/500 mg/litre.

With the **Deltec calcium reactor** it is possible to adjust and control the calcium level in a simple manner.

The **Deltec calcium reactor** consists of

- a cylindrical transparent container
- bubble counter
- solenoid valve (optional)
- non return valve
- provision for pH electrode
- gas collector
- micro filter

Installation and operating instruction

Wash the granulate to be used **thoroughly** before filling it into the **Deltec calcium reactor**. The granulate must be free of all floating matters and other foreign particles.

The **Deltec** PF Calcium reactors operate on the fluidized bed principle; it is therefore important to use only **Deltec** Hy Carb Media to achieve best results.

- Remove the reactor head by turning it anticlockwise.
- Remove the strainer plate and sponge.
- Fit the cap No. 12 over the central feed pipe No. 15 to prevent media to enter the pipe.
- Fill the Vessel up to the fill line.
- Refit the strainer plate with the sponge pointing downwards.
- Clean the O-Ring and all sealing surfaces and grease the O-Ring with silicon spray or silicon grease.
- Refit the reactor head and turn it clockwise

Place the **Deltec calcium reactor** on an even surface, close to the filter sump or the aquarium.

Please note

The bubble counter should be filled with tap water. To do this, loosen the cap nut of the pressure fitting, remove the hoses, withdraw the bubble counter and fill it under a tap.

Connecting the reactor

- Connect a flexible CO₂ supply hose to the bubble counter (or the solenoid valve if supplied).
- The micro filter ^{should} be connected to a water supply either from a separate pump or else to a bypass of the main aquarium pump.
- Open the tap at the micro filter and allow the **Deltec calcium reactor** to be filled.
- Start the circulation pump
- To ease bleeding, raise the outlet hose higher than the reactor body for a short period.

Open and set the CO₂ supply to app. one bubble per second. Adjust the tap at the micro filter to a drip (app. 2-4 drops/second, coming out at the outlet hose).

Please note

To adjust the DKH (calcium level) either increase the CO₂ or decrease the water flow. Avoid excessive supply of CO₂. Please ensure that sufficient time is allowed for any adjustments to take effect before testing the water. The **Deltec calcium reactor** can also be operated automatically by fitting a pH electrode instead of the red plug at the top of the **Deltec calcium reactor**. A suitable pH controller would control the pH value by opening/closing the solenoid valve. For normal operation the pH level should be between 6,2-6,5.

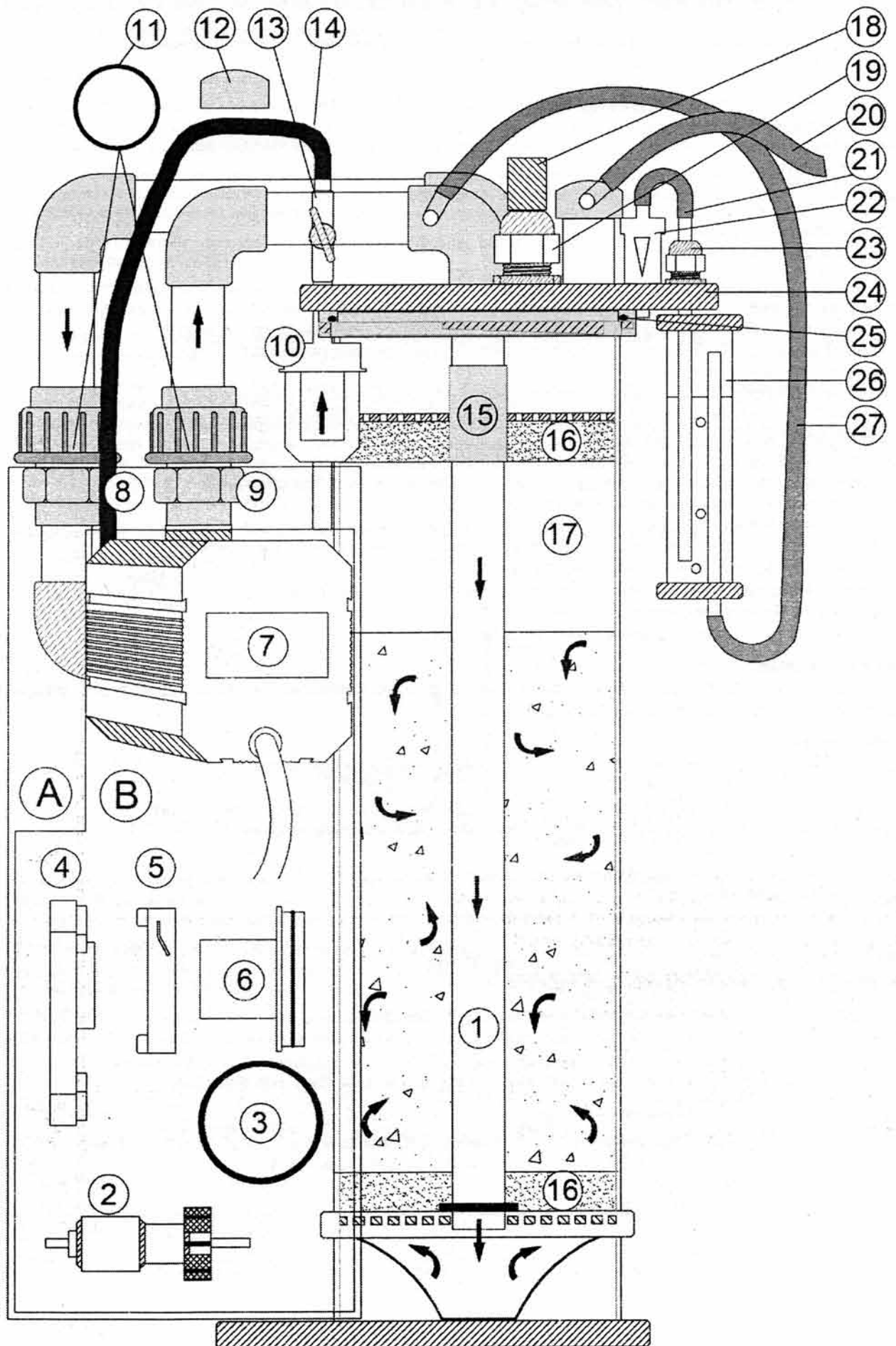
To get best results, it is important to check the correct water flow and CO₂ supply on a regular basis and the resulting DKH level at the outlet.

Important

Never restrict or block the water flow from the outlet hose, since this could lead to an increase of pressure inside the reactor.

technical data	dimensions (l/w/h) app.	quantity app.	for aquaria up to	tube ø
PF 501	200 x 170 x 500 mm	2,9 kilos	1000 ltr.	110 mm
PF 601	260 x 210 x 550 mm	8,7 kilos	2000 ltr.	160 mm
PF 601S	305 x 255 x 550 mm	14,0 kilos	3000 ltr.	200 mm
PF 1001	375 x 305 x 1080 mm	34,0 kilos	5000 ltr.	200 mm

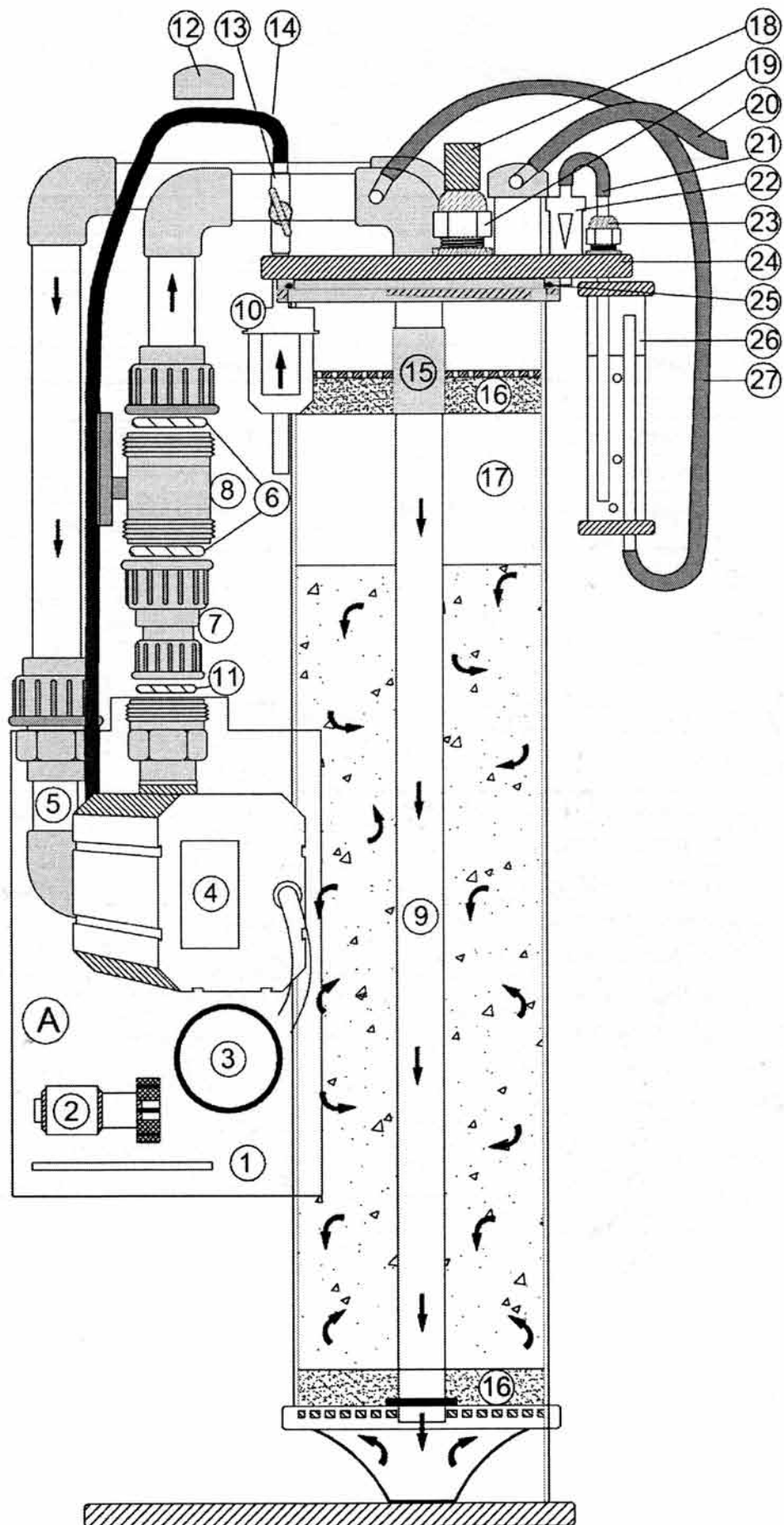
PF 501 / PF 601 / PF 601S



Ersatzteilliste / Spare parts list

	Art. Nr. PF 501	Art. Nr. PF 601	Art. Nr. PF 601S	Bezeichnung	Description
	87300000	87320000	87340000	PF 501 / PF 601	PF 501 / PF 601
				PF 601S	PF 601S
A	28055000	28060000	28065000	Pumpe + Verrohrung	Pump + piping
B	xxxxxxxx	25020000	25030000	Pumpe	Pump
1	87308000	87328000	87348000	Innenrohr	Pipe inside
2	27015000	27020000	27030000	Laufeinheit-07	Impellor-07
3	69511000	69513000	69513000	O-Ring Pumpe	O-Ring pump
4	xxxxxxxx	69530000	69530000	Frontplatte Pumpe	Front cover
5	69517000	69527000	69527000	Bajonett Pumpe	Bayonet ring
6	xxxxxxxx	25094000	25094000	Front Lagerplatte-07	Bearing plate-07
7	26015000	26020000	26030000	Stator-07	Stator-07
8	28056000	28061000	28066000	Saugleitung-07	Suction line
9	xxxxxxxx	87327000	87327000	Druckleitung	Adapter
10	64056000	64056000	64056000	Micro Filter	Micro filter
11	93041400	93041400	93041400	O-Ring Verschraubung	O-Ring coupling
12	93141000	93141000	93141000	Klebkappe	Cap
13	93010010	93010010	93010010	Mini Regulierventil	Tap
14	61751019	61751020	61751022	Silikonschlauch 5/8	Silicon hose 5/8
15	87303000	87323000	87343000	Siebplatte	Strainer
16	65426000	65425000	65428000	Schwamm Satz 2 Stück	Sponge Set 2 pcs.
17	87301000	87321000	87341000	Grundgerät	Body
18	65900000	65900000	65900000	Stopfen rot	Plug red
19	65904000	65904000	65904000	Verschraubung PG 13,5	Fitting PG 13,5
20	61751050	61751060	61751060	Silikonschlauch 5/8	Silicon hose 5/8
21	61750014	61750020	61750021	Silikonschlauch 4/6	Silicon hose 4/6
22	87140000	87140000	87140000	Rückschlagventil	Non return valve
23	65901000	65901000	65901000	Verschraubung PG 7	Fitting PG 7
24	87302000	87322000	87342000	Deckel	Cover
25	10400560	10400400	10400430	O-Ring Bajonett	O-Ring Bayonet
26	87252000	87252000	87252000	Blasenzähler	Bubble counter
27	61751035	61751046	61751046	Silikonschlauch 5/8	Silicon hose 5/8

PF 1001



Ersatzteilliste / Spare parts list

	Art. Nr. PF 1001	Bezeichnung	Description
	87360000	PF 1001	PF 1001
A	87158000	Pumpe (Punkt 1-5)	Pump (point 1-5)
1	89130000	Welle	Shaft
2	89036000	Laufeinheit	Impellor
3	10501700	O-Ring Pumpe	O-Ring pump
4	69704200	Stator	Stator
5	87366000	Saugleitung	Suction line
6	93402300	O-Ring Kugelhahn	O-Ring shut off val.
7	87365000	Verbindungsstück	Connector
8	93402100	Kugelhahn o. Überwurfmutter	Shut off valve
9	87328000	Innenrohr	Pipe inside
10	64056000	Micro Filter	Micro filter
11	93042400	O-Ring Verschraubung	O-Ring coupling
12	93142000	Klebkappe	Cap
13	93010010	Mini Regulierventil	Tap
14	61751022	Silikonschlauch 5/8	Silicon hose 5/8
15	87363000	Siebplatte	Strainer
16	65428000	Schwamm Satz 2 Stück	Sponge Set 2 pcs.
17	87361000	Grundgerät	Body
18	65900000	Stopfen rot	Plug red
19	65904000	Verschraubung PG 13,5	Fitting PG 13,5
20	61751100	Silikonschlauch 5/8	Silicon hose 5/8
21	61750021	Silikonschlauch 4/6	Silicon hose 4/6
22	87140000	Rückschlagventil	Non return valve
23	65901000	Verschraubung PG 7	Fitting PG 7
24	87362000	Deckel	Cover
25	10400430	O-Ring Bajonett	O-Ring Bayonet
26	87252000	Blasenzähler	Bubble counter
27	61751046	Silikonschlauch 5/8	Silicon hose 5/8