

**Lafil 300 - LF 30**  
**Lafil 400 - LF 30**  
**Lafil 300 - LF 32**  
**Lafil 400 - LF 32**  
**Lafil 400 - LF 5a - 500**  
**Lafil 300 Plus**  
**Lafil 400 Plus**  
**Lafil 300 - BioDolphin**  
**Lafil 400 - BioDolphin**

Vacuum Filtration / Suction System

## Important notice

- Please study this instruction manual carefully before using this product.
- Please discard packing material according to related regulations.
- Please make sure the supply voltage and frequency conform to power specified on main unit.
- Please operate the instrument in well ventilated areas and keep away from inflammables.
- Filtration accessories (include overflow protection) are applicable to most of low concentrated acid, base, organic solution but not all solution.
- When restarting the vacuum pump during operation, always release the vacuum from the control knob first and turn on again.
- This pump is not corrosion-proof. Please do not pump acid, base or organic vapors or gases directly.
- Please clean and maintain the instrument and accessories according to the maintenance method after every use.
- For more product details, please refer our latest catalog and company website.

## Unpacking

Carefully check if the shipping carton is damaged before unpacking. Please check the items according to standard package list. If you have any questions, please preserve serial no., shipping carton and contact your dealer for quick solution.

Model	Lafil 400 - LF 5a - 500
1	Lafil 400 oil free vacuum pump
2	LF 5a funnel, 500ml
3	Silicone fixing sucker
4	Silicone tube
5	500ml tissue bottle
6	Power cord
7	Instruction manual



Model	<b>Lafil 300/400 - LF 30</b>
1	Lafil 300/400 oil free vacuum pump
2	LF 30 Filtration Set
3	Silicone tube
4	Power cord
5	Instruction manual



Model	<b>Lafil 300/400 - LF 32</b>
1	Lafil 300/400 oil free vacuum pump
2	LF 32 Filtration Set
3	Silicone tube
4	Power cord
5	Instruction manual



Model	Lafil 300/400 Plus
1	Lafil 300/400 oil free vacuum pump
2	PC waste bottle, 1200ml
3	2m silicone tube
4	Handle
5	Disc filter
6	8-channel tip adaptor with ejector
7	1-channel tip adaptor with ejector
8	1-channel tip adaptor (150 mm)
9	Accessory package
10	Power cord
11	Instruction manual



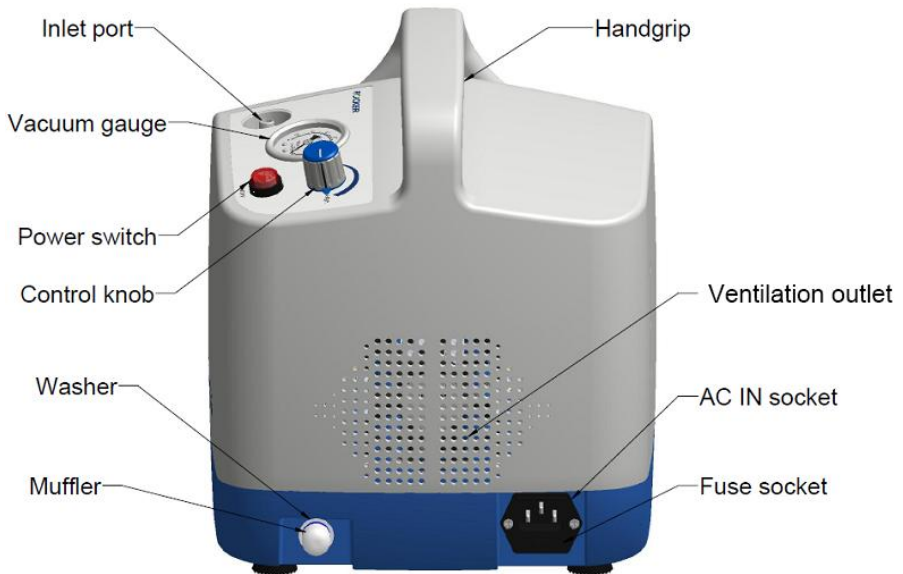
Model	Lafil 300/400 - BioDolpin
1	Lafil 300/400 oil free vacuum pump
2	PC waste bottle, 1200ml
3	2m silicone tube
4	BioDolpin suction kit
5	Disc filter
6	Accessory package
7	Power cord
8	Instruction manual



## Instruction of operation panel

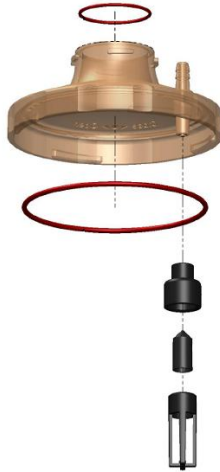


## Instruction of Lafil 300/400 oil free vacuum pump

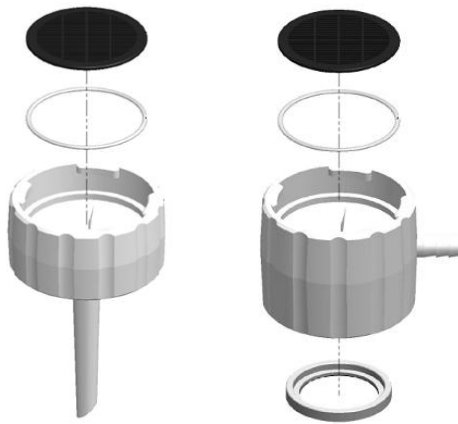


# Operating Procedure: Lafil 300/400 - LF 30 / 32 / LF 5a-500

Install overflow protection



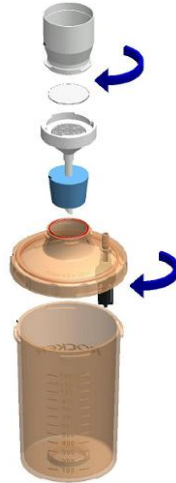
Install the base of filter holder



Install LF 30 / LF 32 / LF 5a - 500 filtration set



LF 30 filtration set



LF 32 filtration set



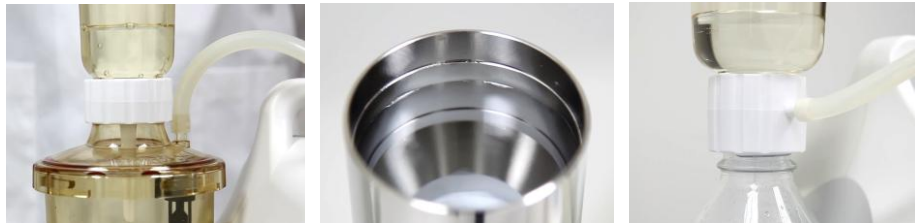
LF 5a - 500 filtration set



Install Lafil 300/400 - LF 30 / LF32/ 5a - 500 vacuum filtration system



Pour liquid sample into funnel



Switch on the power / Start filtration



## Operating Procedure : Lafil 300/400 Plus / Lafil 300/400 - BioDolphin

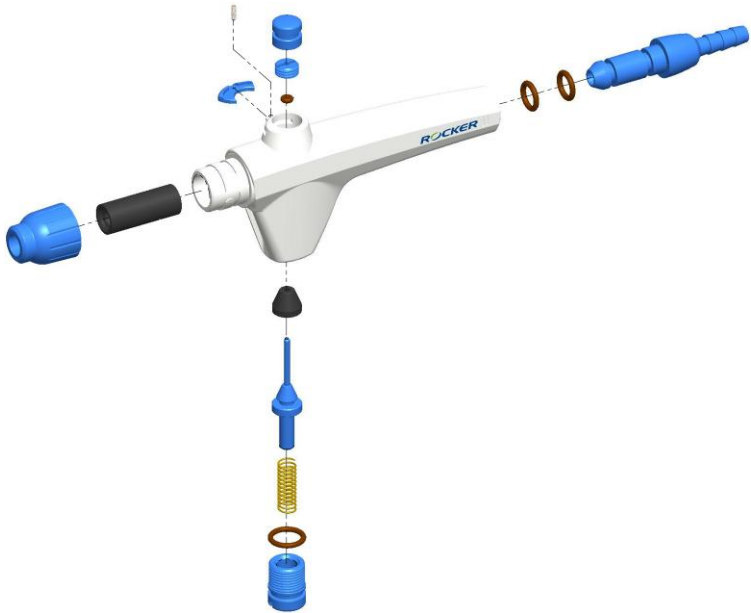
### Install Overflow protection



### Install PC waste bottle



Install the handle of BioDolphin suction kit



Install BioDolphin suction kit

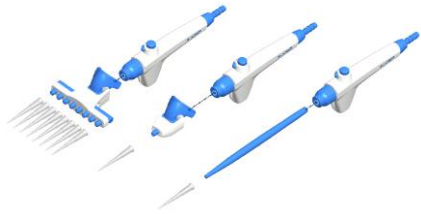


Install Lafil 300/400 Plus / Lafil 300/400 - BioDolphin suction system



Connect the power supply and switch on the power.

Choose the suitable adaptor to connect with the handle.



You can press the lock switch for continuous operation.



You can press the ejector bottom to eject tips.



## Maintenance

1. Funnel lid, funnel, support base, waste bottle cover, cap, overflow protection, waste bottle and silicone tube and sealing ring are made of high temperature resistant material. Please rinse them with water and wipe with a dry cloth after every use. Autoclave is available.
2. S.S. funnel and S.S. support base are made of SUS 316 material. Please rinse them with water and wipe with a dry cloth after every use. Autoclave is available.
3. For autoclave, you are suggested to set up at 121°C for 30 minutes at least.
4. Lafil 400 built-in an oil free pump, no maintenance is necessary. Please turn off the switch and wipe the platform with a dry cloth after every use.
5. Please maintain the accessories of suction kit by following our instruction manual.
6. Muffler, disc filter and silicone tube are consumables. Please replace these parts at least every half year to make sure the flow rate is not affected.
7. When the fuse need to be replaced, you can get the backup fuse (110V: use 4A; 220V: use 1.5A) from the fuse box

## Troubleshooting

Symptoms	Possible causes and Solution
<b>Device fails to start</b>	<ol style="list-style-type: none"> <li>1. Check the power supply conform to power specified on main unit</li> <li>2. Blown fuse → replace fuse if it is burnt out</li> <li>3. Check if the power switch is in the ON position</li> <li>4. Vacuum still exists in system → release vacuum and restart</li> <li>5. Defective switch → contact your distributor for repair</li> </ol>
<b>Vacuum fails to adjust</b>	<ol style="list-style-type: none"> <li>1. Faulty gauge → contact your distributor for repair</li> <li>2. Loose regulator → tighten the regulator by yourself or contact your distributor for repair</li> <li>3. Faulty regulator → contact your distributor for repair</li> </ol>
<b>Reduced /low vacuum</b>	<ol style="list-style-type: none"> <li>1. Regulator improperly set → set regulator vacuum level following instruction manual</li> <li>2. Clogged muffler → check if the muffler is clogged</li> <li>3. Air leak → Check the tubing and connected accessories for possible leaks. (Attach, tighten or replace)</li> </ol>
<b>Low filtration speed</b>	<ol style="list-style-type: none"> <li>1. Regulator improperly set → set regulator vacuum level following instruction manual</li> <li>2. Air leak → Check the tubing and connected accessories for possible leaks. (Attach, tighten or replace)</li> <li>3. Check if the waste bottle is overflowing</li> <li>4. Check if the specification of membrane filter is correct</li> </ol>

## Order Information

197300-11/22	Lafil 300 oil free vacuum pump, AC110V / AC220V
197400-11/22	Lafil 400 oil free vacuum pump, AC110V/AC220V
197301-11/22	Lafil 300 - LF 30, Vacuum filtration system, AC110V / AC220V
197401-11/22	Lafil 400 - LF 30, Vacuum filtration system, AC110V / AC220V
197302-11/22	Lafil 300 - LF 32, Vacuum filtration system, AC110V / AC220V
197402-11/22	Lafil 400 - LF 32, Vacuum filtration system, AC110V / AC220V
197303-11/22	Lafil 300 - BioDolphin, portable suction system, AC110V / AC220V
197403-11/22	Lafil 400 - BioDolphin, portable suction system, AC110V / AC220V
197305-11/22	Lafil 300 – Plus, portable suction system, AC110V / AC220V
197405-11/22	Lafil 400 – Plus, portable suction system, AC110V / AC220V
199100-00	BioDolphin-LB, Suction kit, light blue
199110-00	BioDolphin-DB, Suction kit, deep blue
199120-00	BioDolphin-P, Suction kit, pink
199130-00	BioDolphin-G, Suction kit, green
199100-75	1-channel tip adaptor with ejector
199100-76	1-channel tip adaptor (150 mm)
197010-30	LF 30, 300ml PES filtration set
197010-50	LF 50, 500 ml PES filtration set
197010-32	LF 32, 100 ml Stainless steel filtration set
197010-33	LF 33, 300 ml Stainless steel filtration set
197000-01	LF 3, 300 ml PES filter holder (include funnel lid)
167103-10	100 ml Stainless steel filter holder
167103-30	300 ml Stainless steel filter holder
197000-36	PP lid kit
197000-35	PES support base, 47mm
197000-11	PES waste bottle (1200 ml)
197000-39	Overflow protection
197400-45	PE Muffler (1/8 PT, port size:20 µm, length:26 mm)
167200-35	PTFE disc filter