

16LPH-3

USER GUIDE



COOPERATE

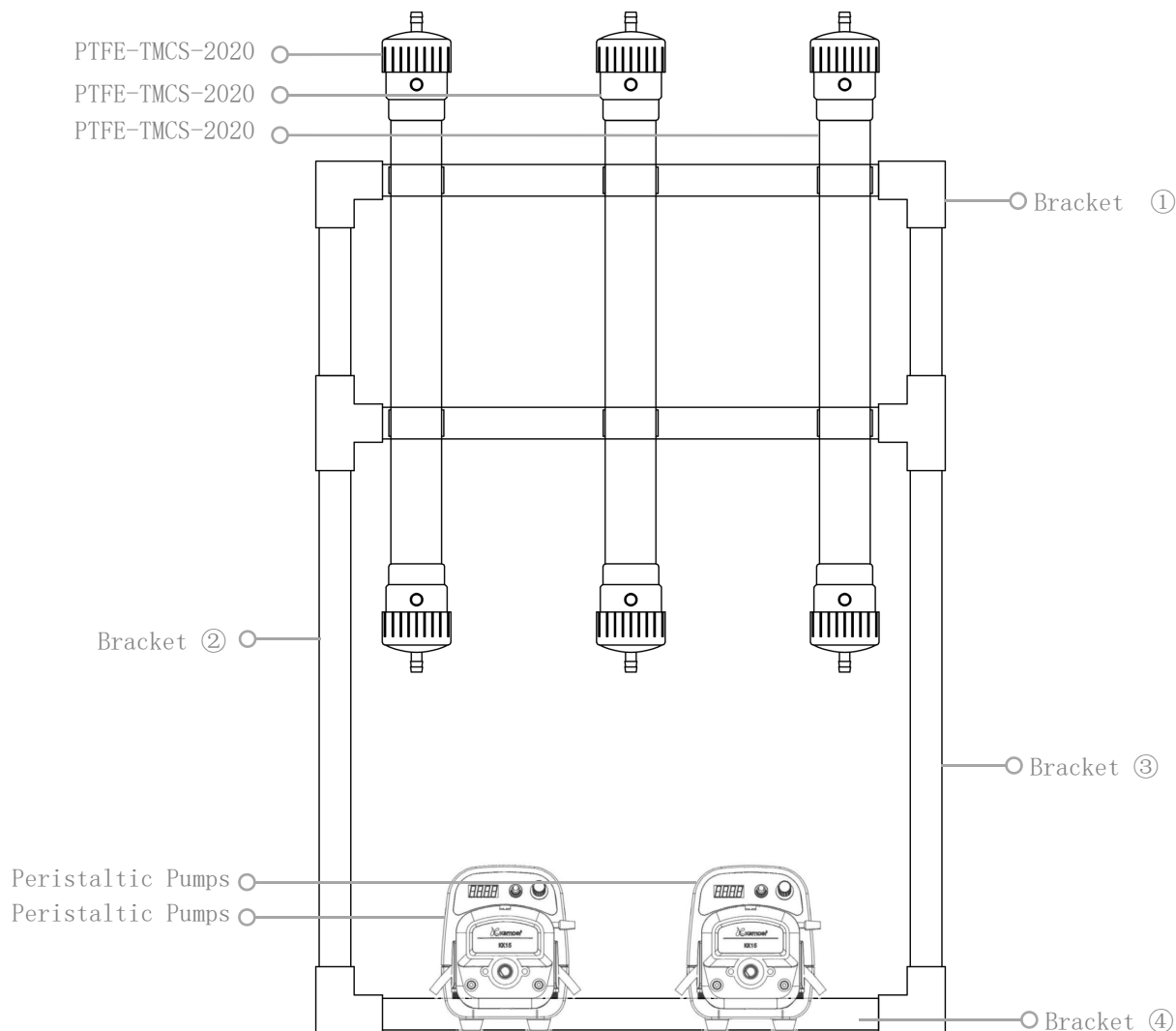
SAFETY TIPS

Please read this manual carefully before using the product and keep it properly.

- This device is for indoor use only.
- This product is not intended for use by people with physical, sensory or intellectual disabilities or those without relevant experience and knowledge. persons (including children) unless they are supervised or guided by a guardian to ensure that they are safe to use this product.
- If the power cord is damaged, it must be replaced by the manufacturer, its maintenance department or professionals from similar departments to avoid danger.
- Do not pull the power cord. Be sure to disconnect the power supply before moving the device.
- Please do not disassemble, repair or modify this product without authorization.
- If there is any abnormal phenomenon during use of the product, please unplug it immediately and contact after sales service.
- When not in use for a long time, please clean and dry it.

Tips: The illustrations of products, accessories, user interfaces, etc. in the manual are schematic diagrams and are for reference only. Due to product updates and upgrades, the actual product may be slightly different from the schematic diagram, Please refer to the actual product.

PRODUCT INTRODUCTION



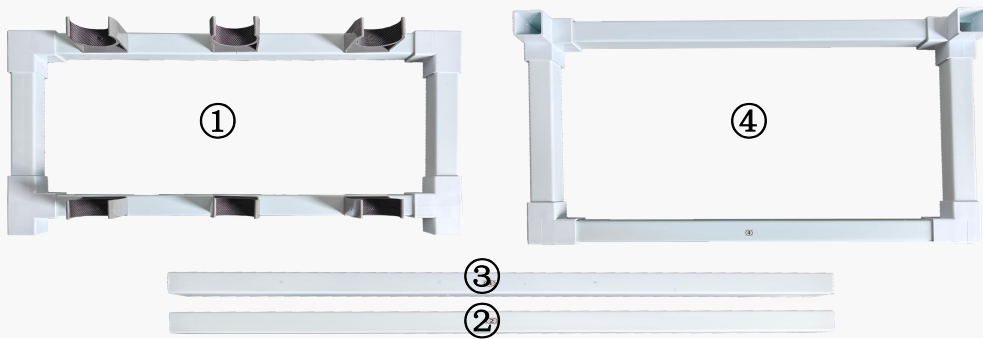
INSTALL

Tips: Before installation, take out the device parts in sequence and install them in the following order. Assemble the equipment in sequence according to the diagram and numbers.

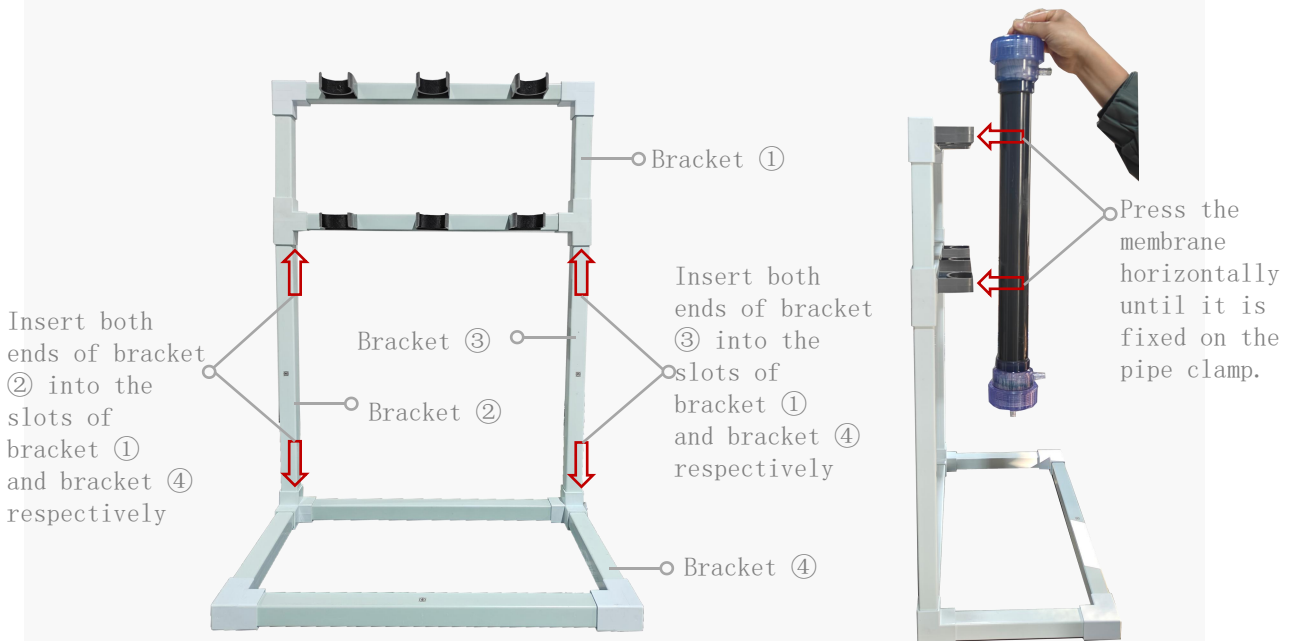
A. Bracket installation

First, install the parts numbered ①, ②, ③, and ④ in the following

order.
Bracket accessory set:



Bracket combination diagram:



INSTALL

B. Peristaltic pump installation

Take out the peristaltic pump and place it flat on the table. Rotate the buckle of the peristaltic pump's peristaltic component counterclockwise

to a horizontal position and remove the buckle. Place the included peristaltic tube on the peristaltic wheel of the peristaltic

component and rotate it clockwise to horizontal.

Turn the pump head buckle clockwise to horizontal



clockwise to

Remove the pump head buckle



The peristaltic tube is placed flat on the pump head



Place the pump head clip



Rotate the pump head buckle counterclockwise to horizontal position and fasten the peristaltic tube to the pump head.

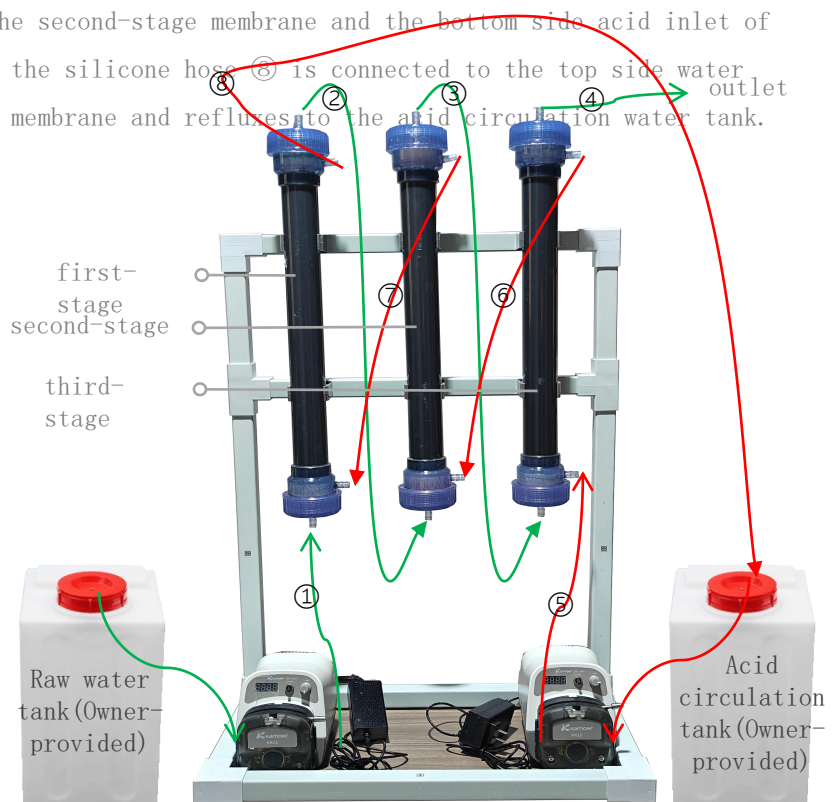
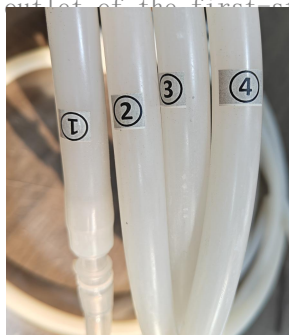
INSTALL

C. Pipeline connection

Connect the silicone hose ① to the bottom water inlet of the first-stage membrane assembly, and place the peristaltic tube part on the peristaltic pump peristaltic component. Connect the silicone hose ② to the top water outlet of the first-stage membrane and the second-stage. The bottom water inlet of the secondary membrane is connected, the silicone hose ③ connects the top water outlet of the secondary membrane and the bottom water inlet of the third-stage membrane, and the silicone hose ④ connects the top water outlet of the third-stage membrane and discharges it externally.

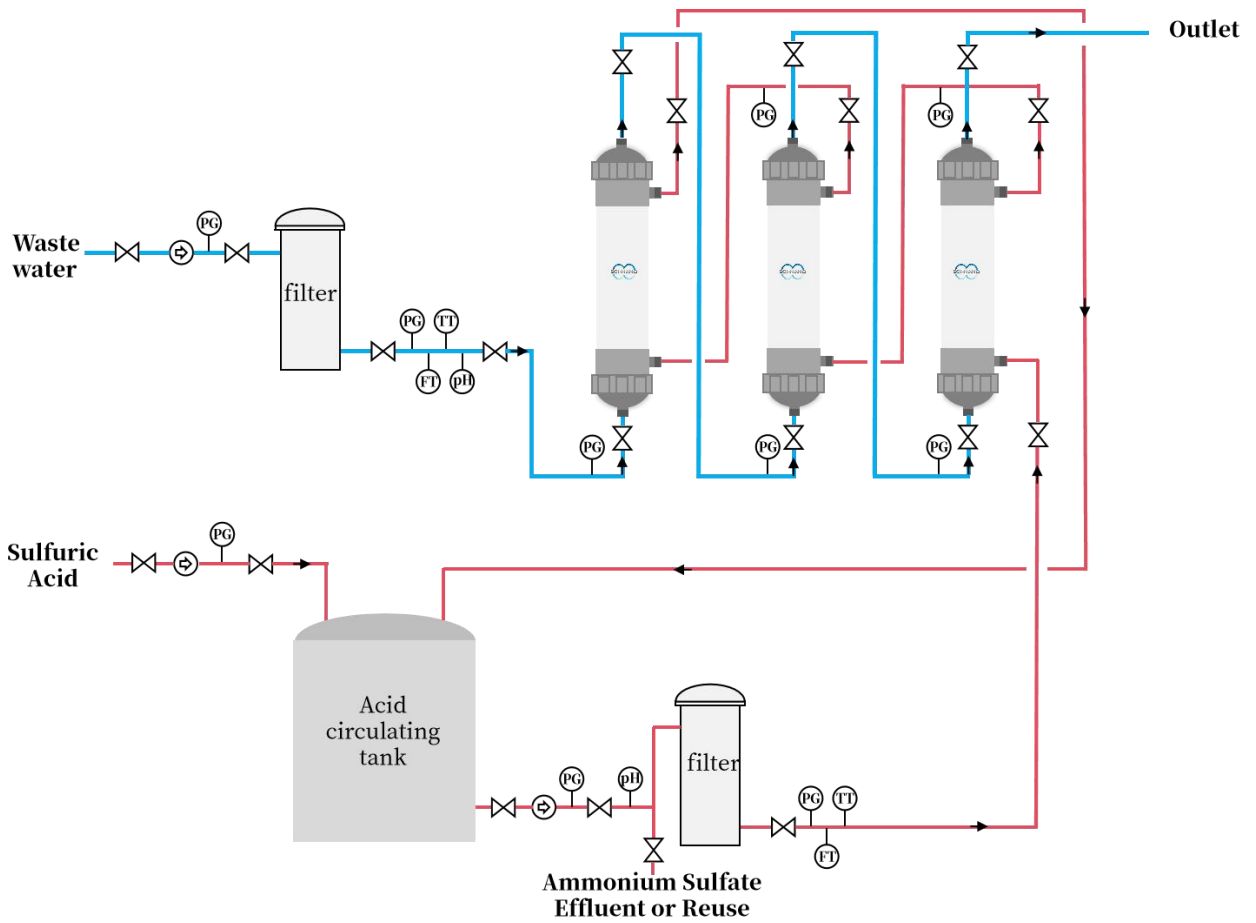
Connect the silicone hose ⑤ outlet to the acid inlet at the bottom side of the third-stage membrane assembly, with the peristaltic tube part placed on the peristaltic pump peristaltic component. Then use the silicone hose ⑥ to connect the third-stage membrane assembly. The top side acid outlet is connected to the bottom side acid inlet of the second-stage membrane, the silicone hose ⑦ is connected to the

top side acid outlet of the second-stage membrane and the bottom side acid inlet of the first-stage membrane, the silicone hose ⑧ is connected to the top side water outlet of the first-stage membrane and refluxes to the acid circulation water tank.



INSTALL

D. Generic P&ID with Three Membrane Contactors in Series for TMCS of Ammonia



POWER ON

After completing the above installation steps, follow the steps below to power on.

(a). It is recommended to prepare 5L of dilute sulfuric acid with pH=1 as the absorption liquid and place the inlet and outlet pipes at bottom of the tank.

(b). Adjust the pH value of the wastewater to 12 and raise the temperature to 40~45°C.

(c). After the above raw materials are prepared, turn on the acid circulation pump, and turn on the raw water pump after 3 minutes of circulation. Adjust the appropriate frequency to achieve the estimated flow rate. Usually, the acid circulation flow rate = inlet flow rate \times (2~4 times). After 15 minutes of stable operation, take samples to test ammonia. During operation, always pay attention to the pH value of the absorption liquid not higher than 2 and the raw water temperature not lower than 40°C.



DOWNTIME

After the experiment is completed, first turn off the raw water pump, then turn off the acid circulation pump. Then connect the water inlet pipe and the acid inlet pipe to tap water and run for 30 minutes to ensure that the waste water and waste acid in the membrane are cleaned.

Then disassemble the device in the reverse order of the installation operation.

MAINTENANCE

(a). If the device is out of use for a long time, be sure to clean the membrane assembly to avoid long-term contact between the membrane fibers.

(b). The equipment must be stored in a dry, room temperature environment.

(c). When there is liquid in the membrane assembly, it is strictly forbidden to place it in a sub-zero temperature environment.

(d). It is strictly forbidden to pass low surface tension liquid ($\leq 60\text{mN/m}$) into the device, such as: surfactants, oils, etc.

PRECAUTIONS

A. It is strictly forbidden to adjust the key parameters of the equipment (such as pressure, flow, etc.) at will during the operation of the equipment. If adjustment is required, it should be carried out under the guidance of professionals and in accordance with the prescribed procedures.

B. When handling high-concentration ammonia nitrogen solutions or corrosive solutions, special attention should be paid to the material compatibility and corrosion resistance of the equipment to prevent equipment damage.

C. Operators should wear necessary protective equipment (such as work clothes, gloves, goggles, etc.) to avoid contact with ammonia solutions or gases to prevent safety accidents such as poisoning.

D. If the equipment is found to have abnormal sounds, vibrations, leaks, etc., it should be stopped immediately for inspection and can only continue to operate after troubleshooting.

AFTER-SALES SERVICE

16LPH-3 after-sales service content is as follows:

A. Policy

If the product encounters any of the conditions listed in the performance failure table, we will provide 24/7 technical service support.

B. 16LPH-3 product performance fault table

16LPH-3	<ol style="list-style-type: none">1. Unable to start/shut down normally2. No removal efficiency under normal working conditions3. Abnormal noise4. Broken membrane components
---------	--

C. Non-after-sales service regulations

(a). Unauthorized repair, misuse, collision, negligence, abuse, liquid ingress, accident, modification, improper use of accessories other than this product;

(b). Damage caused by force majeure;

(c). Failure to meet the performance failure listed in the "16LPH-3 Product Performance Failure Table";

(d). Performance failures listed in the "16LPH-3 Product Performance Failure Table" caused by human factors in this product and its accessories;

(e). The filter is a consumable and there is no after-sales service.

AFTER-SALES SERVICE

D. Tips

(a). Since the packaging box is required to ensure the safety of product transportation during transportation, it is recommended that you keep the packaging box for at least 30 days from the date of receipt;

(b). This product is only sold in China and South Korea, so this product only provides after-sales service in China and South Korea, and this regulation only applies to China and South Korea.

Service phone: +86 15556910898

Service website: <https://www.coopmem.com/>

Address: Building 17, Hefei High-tech International
Enterprise Port, Liandong U Valley, No. 2899 Kongquetai
Road, High-tech Zone, Hefei, China