



HRW-CF001

Contaminant filter

Operation Manual

Applicable model : HRW Series
(Thermo Chiller)

Introduction

This operation manual is for personnel with adequate knowledge of general industrial equipment and device and also the knowledge of assembly, operation, and maintenance of them. Do not start assembly, operation and maintenance before thoroughly reading and understanding of this operation manual and the manual of Thermo Chiller, HRW series.
Please refer the operation manual of Thermo Chiller for the guarantee.
This manual is subject to change without prior notice.

Safety caution

- Please read through after understanding display and symbol

Display	Meaning
Warning	Incorrect operation leads to cause loss of life or serious injury of operator
Caution	Incorrect operation leads to cause injury or damage or failure to the product facility and equipment.

Warning

- Confirm the specification range**
This product is designed as contaminant filter for Thermo Chiller, HRW series. Do not use this of application other than that in specification range.
- Operation manual and procedure shall be fully understood**
Read Thermo Chiller operation manual (HRX-OM-K003) thoroughly to understand the contents, especially for operating environment and specification range.
- Do not supply power during mounting**
Ensure lock out and tag out of the power supply. Otherwise, Thermo Chiller may start by mistake.
- Mount parts while circulating fluid is room temperature**
Circulating fluid temperature shall be back to room temperature before discharge to avoid burn

Caution

- Do not disassemble nor remode to avoid fluid leakage and operation failure**
Fluid leakage and performance fall are led to cause.
- Do not drop or strongly impact the unit**
The components may shift from their proper mounting position or leakage and performance fall may occur
- Use silicone sealant (SMC part no.:HRZ-S0003) for sealing meaterial .**
Sealing material is not equipped. Please purchase separately.
Other material is used fluid may leak.
- Ensure no leakage after mounting**
Operate the Thermo Chiller and ensure no fluid leakage. If fluid leaks, stop operation immediately and check the cause of leakage, and operate again after doing proper countermeasure to the part of leakage
- Use under steady state condition with no fluctuation of circulating fluid flow rate and pressure**
There should be no fluctuation of flow rate and pressure in circulating fluid circuit caused by water hammer or so. Performance fall and breakage of element may occur

• Exchange filter element (SMC part no.:HRW-CF002) periodically

Filter element needs to be exchanged periodically. Circulating fluid flow rate decreases gradually by generated after using the filter for long time. Set the standard for exchanging period after considering the influence on the system caused by decrease of flow rate. At longest, exchange the filter element when the pressure drop comes to be 0.1 MPa, or 12 months from start to use (variable by the operating condition). Circulating fluid low flow alarm and breakage of element may occur

Part descriptions

Part No.	Part name	Quantity
1	Filter	1 pc.
2	Tube fitting	1 pc.
3	Filter insulator (upper)	1 pc.
4	Filter insulator (middle)	1 pc.
5	Filter insulator (lower)	1 pc.
6	Operation manual (This manual / HRX-OM-L006)	1 pc.
7	Operation manual (HRX-OM-K028)	1 pc.

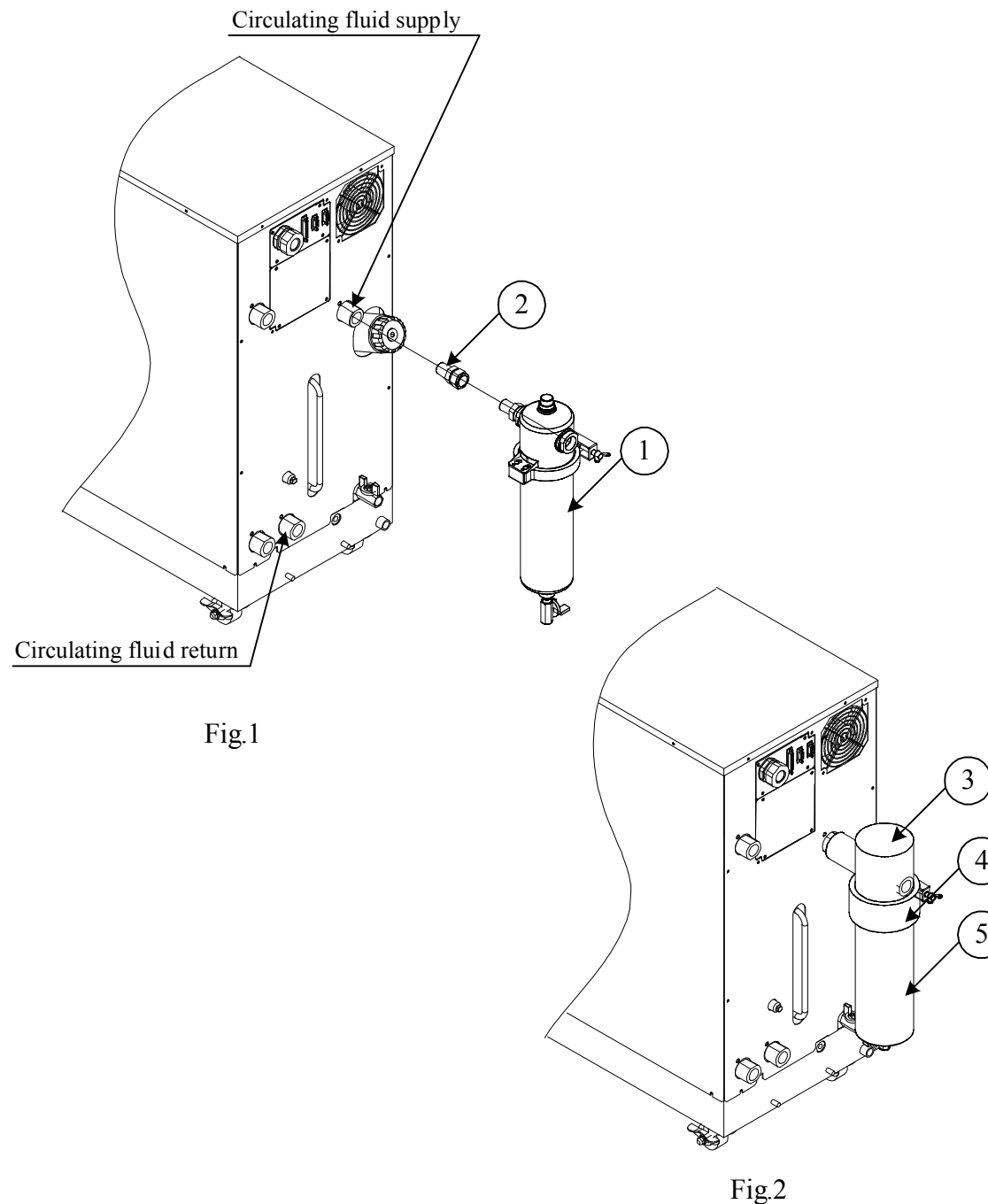


Fig.1

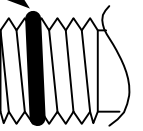
Fig.2

Parts Mounting

Procedure 1.

Apply the sealant to part 2 and screw the fittings into the circulating fluid supply port (spanner across flat: 27mm recommended torque: 28 to 30Nm). It will take approx. 8 hours for the sealant to be hardened. Do not operate the Thermo Chiller while the sealant is hardening.

Apply sealing material to the part one thread apart from the end the thread (all around)
Too much sealing material may leak.



Procedure 2.

Insert part 1 into part 2, and temporarily tighten the nut.

Procedure 3 .

By hand, tighten the nuts that were temporarily tightened in procedure 2, and additionally tighten their 1/4 turns with spanners. Use two wrenches (across flat: 27mm, 29mm) so that the fittings tightened in procedure do not rotate.

Procedure 4.

Install parts 3 to 5 in accordance with Figure 2 (By using double coated adhesive tape attached to the slit of the insulator).
Installation is now complete.

How to Operate

Procedure 1.

Operate the Thermo Chiller at close to room temperature and check that there is no leakage

Specifications

Applicable model	Thermo Chiller HRW series
Purpose	Removal solid foreign object from circulating fluid
Specifications	In accordance with the product specifications for the Thermo Chiller HRW series (Doc. No. HRX-PS-K002).
Filtration	20 μm

Flow chart

