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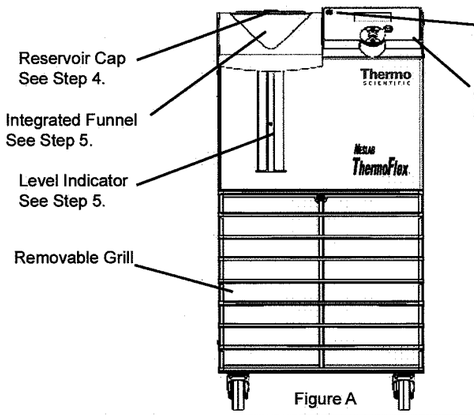


Figure A

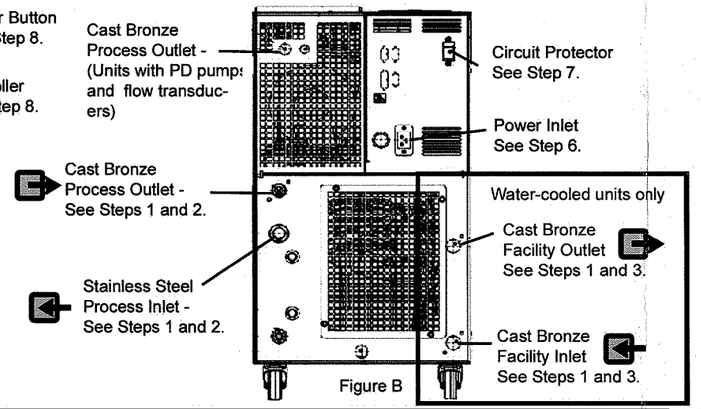


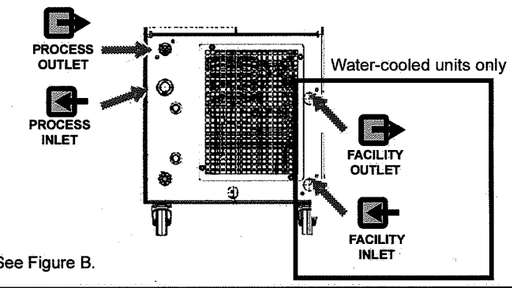
Figure B

What you need to get started:

- An adjustable wrench
- Facility water supply and return (water-cooled units)
- Appropriate hose or plumbing
- Appropriate size clamps or connection type
- Teflon® Tape or appropriate sealant

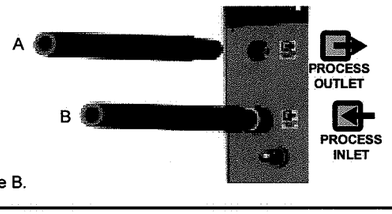
Thermo SCIENTIFIC

① Pull out the plastic shipping plugs.



See Figure B.

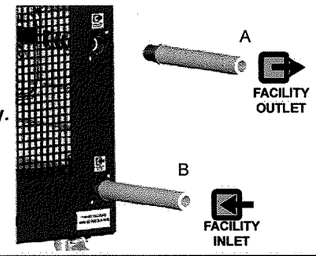
② Connect the ThermoFlex PROCESS OUTLET (A) to the fluid inlet on your application. Connect the ThermoFlex PROCESS INLET (B) to the fluid outlet on your application. Ensure the connections are sealed and secure. **For air-cooled units skip to Step 4.**



See Figure B.

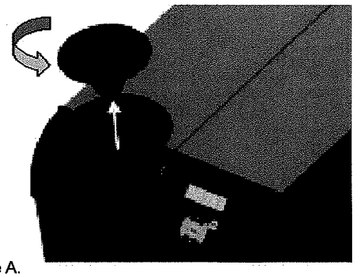
③ Connect the ThermoFlex FACILITY OUTLET (A) to your facility water return or drain. Connect the ThermoFlex FACILITY INLET (B) to your facility water supply. Ensure the connections are sealed and secure.

For water-cooled units only.



See Figure B.

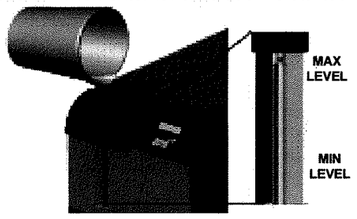
④ Remove the reservoir cap by unscrewing it counter-clockwise.



See Figure A.

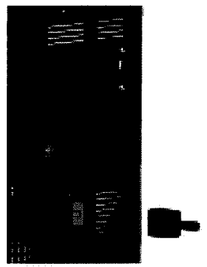
⑤ *Slowly* fill reservoir with clean process fluid (see Table 1), utilizing sight tube for easy fluid level monitoring. When the reservoir is full replace the reservoir cap, hand tight. Since the reservoir capacity may be small compared to your application and air may need to be purged from the lines, have extra cooling fluid on hand to keep the system topped off when external circulation is started.

Note: Be careful not to fill the reservoir above MAX LEVEL fill line. This will result in a unit over flow error (O FLO) which will cause the unit to shut down.



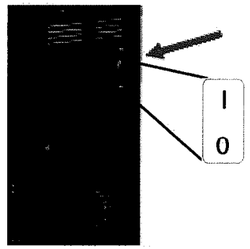
See Figure A.

⑥ Verify the appropriate voltage. Insert female end of power cord into chiller and then insert male end of power cord into power outlet.



See Figure B.

⑦ Place the circuit protector located on the rear of the unit to the on (I) position. The controller display will indicate a series of scrolling bars (≡ ≡). The bars will scroll upward indicating the controller is doing a self-test which takes approximately 15 seconds.

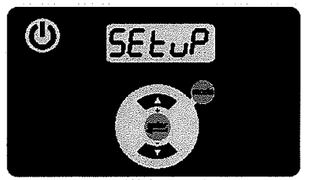


See Figure B.

⑧ Press ⏻.

The controller will display **SEtuP**.

Please see reverse side for additional steps.



See Figure A.

Safety Precautions:

The unit is designed for indoor use only.

Never place unit in a location where excessive heat, moisture, inadequate ventilation, or corrosive materials are present.

Never use flammable or corrosive fluids with this unit.

Never connect process fluid lines to your facility water supply or to any pressurized liquid source.

If your unit is equipped with a positive displacement pump, ensure your application plumbing lines and fittings are rated to withstand a minimum of 110 psi.

Before using any fluid or performing maintenance where contact with the fluid is likely refer to the manufacturer's MSDS for handling precautions.

Table 1.

Appropriate Fluids:
Filtered/Single Distilled Water
Deionized water (1-3 MΩcm, compensated)
0 – 95% Ethylene Glycol/Water
0 – 95% Propylene Glycol/Water

Thermo Scientific Part Number U00945
Rev. 09/23/08

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Quick Start - Used for Initial Start Up Only — perform steps 9 to 20 for all units.

NOTE: Once any Setup step is completed, meaning you pressed the enter key a second time, you cannot repeat the step to make corrections. You *can* make corrections after the unit is started, refer to the manual Section 4.

SEtuP Press enter to continue the setup procedure.

⑨ Un itS **UnitS are the temperature, fluid flow (optional) and pressure scales.**

Scales: °C/°F Gallons/Liters PSI/Bar/KPAS

- Press enter
- The display will flash between **UnitS** and **°C**
- If desired, use ▲ to change the scale to °F
- Press enter to sequence to the next display
- Do the same for **Gallons** and **PSI**

⑩ Hi t **Hi t sets the fluid's High Temperature Alarm Limit.**

Range: +4°C to +42°C
Factory Default: +42°C

- Press enter
- The display will flash between **Hi t** and **42**
- If desired, use ▲▼ to adjust the value
- Press enter to sequence to the next display

⑪ Lo t **Lo t sets the fluid's Low Temperature Alarm Limit.**

Range: +4°C to +40°C
Factory Default: +4°C

- Press enter
- The display will flash between **Lo t** and **4**
- If desired, use ▲▼ to adjust the value
- Press enter

⑫ Hi PI **Hi P1 sets the Pump's High Pressure Discharge Alarm Limit.**

Range: 4 to 100 psi
Factory Default: 100 psi

- Press enter
- The display will flash between **Hi P1** and **100**
- If desired, use ▲▼ to adjust the value
- Press enter

⑬ dELAY **dELAY is the length of time the pump can exceed the Hi P1 Alarm Limit before shutting down.**

Range: 0 to 30 seconds
Factory Default: 0 seconds

- The display will flash between **dELAY** and **0**
- If desired, use ▲▼ to adjust the value
- Press enter

⑭ Lo PI **Lo P1 sets the Pump's Low Pressure Discharge Alarm Limit.**

Range: 4 to 40 psi
Factory Default: 4 psi

- Press enter
- The display will flash between **Lo P1** and **4**
- If desired, use ▲▼ to adjust the value
- Press enter

⑮ dELAY **dELAY is the length of time the pump can exceed the Lo P1 Alarm Limit before shutting down.**

Range: 0 to 30 seconds
Factory Default: 10 seconds

- The display will flash between **dELAY** and **10**
- If desired, use ▲▼ to adjust the value
- Press enter

⑯ ALr **ALr configures the unit's reaction to temperature, pressure, and flow (optional) alarm limits - either shut down (fLt) or continue to run (indC). See manual for more information.**

Range: fLt* or indC**
Factory Default: fLt

- Press enter
- The display will flash between **ALr** and **fLt**
- If desired, press ▲ to display **indC**
- Press enter

*fLt = fault (shut down)
**indC = indicate (continue to run)

⑰ Sound **Turns the unit's audible alarm on or off.**

Range: on or OFF
Factory Default: on

- Press enter
- The display will flash between **Sound** and **on**
- If desired, press ▼ to display **OFF**
- Press enter

⑱ StArt **StArt enables/disables auto restart.**

Range: on or OFF
Factory Default: on

- Press enter
- The display will flash between **StArt** and **on**
- If desired, press ▼ to display **OFF**
- Press enter

⑲ CArE **CArE is used to set the preventative care cleaning frequency reminder for the unit's air and fluid filters.**

Range: off, L1 - 1000 hours, L2 - 2000 hours, L3 -3000 hours
Factory Default: L1

- Press enter
- The display will flash between **CArE** and **L1**
- If desired, use ▲▼ to change display to off, L2 or L3
- Press enter

(If applicable, see boxes on right to set up options)

⑳ StorE

- Press ▲ to save all settings

The unit will automatically start.

- Press ▼ to abort all settings
  The display will go blank
  Press ⏻ to restart the procedure

The Setup procedure is now complete.

When the unit starts the controller will display the process fluid temperature.

If desired, you can change/verify the unit's setpoint by pressing mode.

SP **SP is used to adjust the setpoint.**

Range: +5°C to +40°C
Factory Default: +20°C

- The display will flash between **SP** and **20**
- If desired, use ▲▼ to change the setting
- Press enter to return to the temperature display

Option - Flow Transducer (Steps A and B)

Ⓐ Hi FLo **HiFLO sets the high flow alarm limit.**

Range: 0.5 to 20.0 GPM
Factory Default: 5.0 GPM

- Press enter
- The display will flash between **HiFLO** and **5.0**
- If desired, use ▲▼ to adjust the value
- Press enter

Ⓑ LoFLo **LoFLO sets the low flow alarm limit.**

Range: 0.5 to 20.0 GPM
Factory Default: 0.5 GPM

- Press enter
- The display will flash between **LoFLO** and **0.5**
- If desired, use ▲▼ to adjust the value
- Press enter

If your unit does not have serial communications see Step 20.

Option - Serial Communications (Steps C to H)

Ⓒ SEr **SEr is used to enable/disable and to configure serial communications mode.**

Range: off, rS232, rS485
Factory Default: off

- Press enter
- The display will flash between **SEr** and **OFF**
- If desired, use ▲▼ to change the mode
- Press enter

Ⓓ BAud **BAud is used to select the speed rate for serial communication.**

Range: 9600, 4800, 2400, 1200, 600, or 300 bits per second.
Factory Default: 9600

- Press enter
- The display will flash between **BAud** and **9600**
- If desired, use ▲▼ to change the rate
- Press enter

Ⓔ dAtA **dAtA is used to display the number of bits per communication.**

Display: 8

- Press enter
- The display will flash between **dAtA** and **8**
- Press enter

Ⓕ StoP **StoP is used to indicate the end of a communication's packet.**

Range: 2 or 1
Factory Default: 1

- Press enter
- The display will flash between **StoP** and **1**
- If desired, use ▲▼ to change the setting
- Press enter

Ⓖ PAr **PAr is used as a means to check for communication errors.**

Range: even, odd, or none
Factory Default: none

- Press enter
- The display will flash between **PAr** and **none**
- If desired, use ▲▼ to change the setting
- Press enter

Ⓗ u id **u id (unit id) is used in RS485 only. Identifies devices connected to the RS485 port.**

Range: 1 to 32
Factory Default: 1

- Press enter
- The display will flash between **u id** and **1**
- If desired, use ▲▼ to change the setting
- Press enter

See Step 20.

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