

## Quick Start Guide

# Minimate™ TFF System

### Component Information

Part No.	Description
OAPMP110	<b>Minimate TFF System, 115V AC 50/60 Hz</b>
OAPMP220	<b>Minimate TFF System, 230V AC 50/60 Hz</b>

Systems include:

- MasterFlex® L/S®, Variable pump with L/S Easy-Load®, pump head
- Lab disc stir plate
- 500 mL reservoir with stir bar
- Pressure gauge
- Drip tray
- Fittings:
  - **1)** 3-way valves for reservoir
  - **2)** Male luer coupler
  - **3)** Male luer slip to hose barb
  - **4)** Male luer to 1/8" (3.2 mm) hose barb
  - **5)** Male luer elbow 1/8"
  - **6)** 1- and 3-way valves for lid
  - **7)** Pharmed® tubing (2 ft.)
  - **8)** Sinkers

OARES110	<b>Minimate TFF Reservoir Assembly, 115V AC 50/60 Hz</b>
OARES220	<b>Minimate TFF Reservoir Assembly, 230V AC 50/60 Hz</b>

Reservoir assemblies include:

- Lab disc stir plate
- 500 mL reservoir with stir bar
- Pressure gauge
- Drip tray
- Fittings:
  - **1)** 3-way valves for reservoir
  - **2)** Male luer coupler
  - **3)** Male luer slip to hose barb
  - **4)** Male luer to 1/8" (3.2 mm) hose barb
  - **5)** Male luer elbow 1/8"
  - **6)** 1- and 3-way valves for lid
  - **7)** Pharmed® tubing (2 ft.)
  - **8)** Sinkers

Part No.	Description
88216	<b>Minimate Fittings Kit</b>

Complete assembly requires the fittings kit, which is included with each Minimate TFF Capsule.

Kit includes:

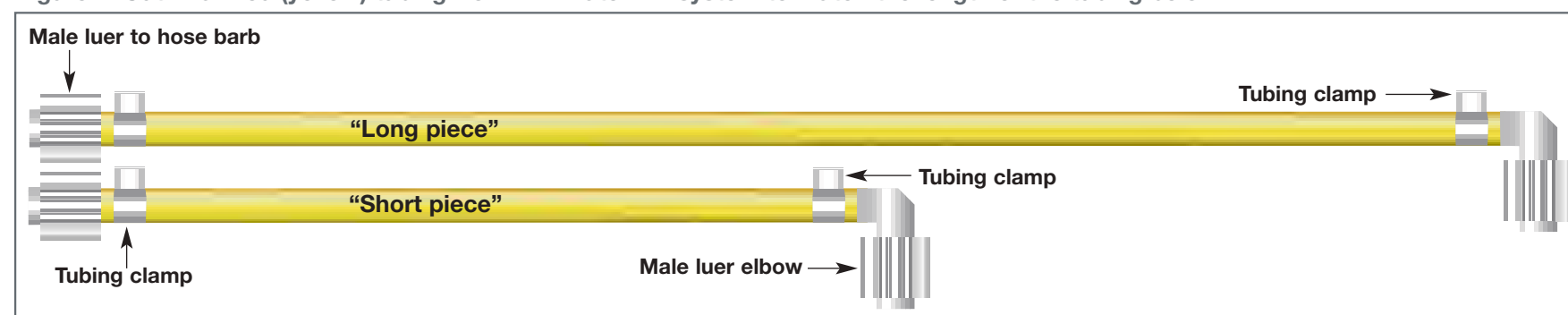
- **A)** Male luer to 3.2 mm (1/8") hose barb
- **B)** Female luer to 3.2 mm (1/8") hose barb
- **C)** 3.2 mm (1/8") tubing
- **D)** Tubing screw clamp
- **E)** Tubing clamps
- **F)** Adhesive strips (loop and hook)

Additional components required but not supplied:

- Beaker or vessel to collect filtrate
- Beaker or vessel for constant diafiltration, if required



Figure 1: Cut Pharmed (yellow) tubing from Minimate TFF system to match the length of the tubing below:



## Assemble the System

### Installation

1. Cut Pharmed (yellow) tubing to lengths specified in Figure 1.
2. Install male-luer to 1/8" (3.2 mm) hose barb fitting in one end of both pieces of tubing.
3. Install the male luer elbow fitting into the other end of each piece of tubing. Install a tubing clamp on each end of tubing. Pinch to tighten the clamp, securing the tubing to the ends of the fittings.
4. Attach the male luer coupler to the front side of the gauge. (See Figure 2)



Figure 2

5. Connect the 3-way valves to the Inlet and Outlet of the reservoir. Note: Three-way valve on the lower port of reservoir is positioned with the handle on bottom. (See Figure 3)
6. Slide the lab disc stir plate into the left compartment of the drip tray.
7. Place the reservoir on top of the stir plate by sliding the reservoir base under the wire bracket locating it on top of the stir plate. Orient reservoir so the lowest port points out the back. (See Figure 3)



Figure 3

8. To connect the pump and drip tray, lift the front of the pump assembly and slide the drip tray beneath so that the rear edge of the tray is in the space between the pump head and the main body of the pump drive.
9. Install the "long piece" of tubing between the reservoir outlet and the back of the feed pressure gauge. Connect the male luer fitting to the 3-way valve on the outlet of the reservoir. Connect the male elbow luer fitting to the back of the gauge. Thread the tubing through the pump head. Close the pump head.



Figure 4

10. Lean the Minimate on the wire support so that the "Feed" port is the lowest port on the back of the capsule. Remove the cap from the "Feed" port and attach the Minimate to the male luer coupler on the front of the gauge. (See Figure 4)
11. Remove the Minimate cap from the "Filtrate" port at the top of the device. Attach a female luer-to-hose-barb fitting to the "Filtrate" port. Attach a piece of tubing that is long enough to reach your filtrate collection vessel. (See Figure 5)
12. Remove the Minimate cap from the "Retentate" port. Install the "short piece" of tubing between the reservoir and the Minimate "Retentate" port by connecting the male luer fitting to the 3-way valve on the front of the reservoir. (See Figure 5)

13. Connect the end with the male elbow fitting to the "Retentate" port on the Minimate.
14. Attach the tubing clamp to the "short piece" of tubing. (See Figure 5)



Figure 5

15. Connect 1-and 3-way valve into stainless fittings on the reservoir lid. If performing diafiltration, press the male luer slip to hose barb fitting into underside of the reservoir cover. Cut appropriate length of clear tubing to bring diafiltration buffer to sample. Attach sinker to one end of tubing. Press fit other end of tubing to hose barb on underside of reservoir cover. (See Figure 6)



Figure 6

### Operation

- Confirm that all fittings are secure prior to running liquid through the system.
- Refer to the IKA® lab disc operating manual for operation of the stir plate. Use of the reverse mode on the stir plate is not recommended with the Minimate TFF System. To avoid over-driving the stirring mechanism, always use the minus button until the LED stops flashing. Then press the minus or plus button to set the required speed.
- Refer to the MasterFlex L/S Variable Speed pump and L/S Easy-Load pump head for proper tubing installation and operation.
- Refer to the Minimate TFF Capsule Care and Use manual for operation of the TFF Capsule.

Tip: A 60cc syringe can be attached to the 3-way fitting on the reservoir cover to assist in drawing a vacuum for continuous diafiltration.



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