Installing a Capillary Flow Restrictor

Flow restrictors serve to partially constrict or block the flow of water in the waste water tube leading from the RO membrane housing. This flow restriction causes pressure to build inside the housing, and it is this pressure which drives water through the RO membrane to produce purified water. Flow restrictors for RO systems up to 150 gallons per day consist of a plastic body with or without a small diameter (capillary) plastic tube often referred to as a “tail.” It is the size of the 1) hole in the restrictor body, 2) the inside diameter of the capillary tube, and 3) the length of the tube which determine the water flow allowed by the restrictor under specific conditions of water temperature and water pressure. Please read these instructions in their entirety before installing your new flow restrictor.

Here for instance are four flow restrictors – Nos. 1 and 2 do not have capillary tubes; flow through these restrictors is limited by the size of the hole in the restrictor body. No. 3 has a short tail, and No. 4 has a longer tail. The actual length of restrictor No. 4 is 3.25 inches.

To begin the installation process, first identify the RO membrane housing. You’ll note that one end of the housing is a cap which unscrews. This cap has a single fitting. It is through this fitting and port that water is delivered to the membrane.
At the other end of the housing you'll see two ports, each with a fitting. The fitting near the center of the end of the housing carries purified water away from the RO membrane. Waste water flows through the port, fitting, and tube located near the edge of the end of the housing.

Locate and remove your old flow restrictor. Capillary flow restrictors like Nos. 1-4 above are installed inside the 1/4” tube leading from the waste water port. Insert the “tail” into the tube until the end of the restrictor hits the end of the tube. Insert the tube back into the fitting in the waste water port.