

Eicom Model SI-60 Microdialysis Syringe Selector (Two Way Switching Valve)

1. Thank you for your purchase.

Thank you for purchasing the Microdialysis Syringe Selector Model SI-60. The SI-60 is the switching valve which is developed and produced for low pressure liquid flow such as microdialysis. This device allows the users to select the flow going to the target from two types of perfusate from two syringes or similar device.

We insist that users observe the following procedures in order to prevent accidents:

- 1) The SI-60 is designed for the people who are educated for scientific research. Do not use if you are a child or not trained about chemical handling and animal research.
- 2) Be sure to read and understand this manual completely prior to operating the SI-60.
- 3) Do not use the SI-60 on humans or animals, except for laboratory animals.
- 4) Follow all warnings listed herein very closely.
- 5) Do not alter the SI-60. This will void the warranty immediately.
- 6) Never attempt to repair or dismantle the SI-60 on your own without first reading the entirety of this manual.

Warning

This device has been produced and designed for experts who have knowledge of chemical handling and research animals. Failure to follow instructions may lead to poor quality data and could result in a safety hazard or death. Do not operate the SI-60 until reading and understanding this instruction manual.

2. Parts List

SI-60 Package includes the followings.

Valve Unit,	x 1
Cage Mount (fixed to the valve unit)	x 1
Mount Screw	x 2
Easyfit Screw	x 4
(Uniform Type, Ferrule + Screw)	x 4
Connection Needle	x 4
User Manual	x 1



3. Set Up

Warning

The needles are sharp. Be careful to not poke your finger or eye.

Warning

Be careful to not pinch your finger between the valve body and switching lever when operating the lever.

1. Please set up as diagrammed in the picture to the right.

When setting the connection needles to the ports, please tighten the screw while and pushing the needle all the way into the port. The flat end of the needle needs to be fully seated in the valve port without any gaps. Please only finger tight Easyfit Screws.

2. Connect the tubing from the syringes to Port 1 and 2. Connect the same length and diameter of tubing from the Port OUT to the microdialysis probe as from Port D (the drain). **[IMPORTANT]** This step is crucial to ensuring equal back pressure in Port D (Drain) and Port OUT. Any difference in pressure between Port OUT and D and result in a momentary change in the flow rate after switching the valve. Eicom recommends using JT-10 and JB-30 tubing for these connections (not included).

3. The port 1 and 2 are connected to syringes via the same tubing.



Keep the flat end of needle out from the tip of screw while tightening Easyfit screw. After fixing Easyfit Screw, the length of tubing sticking out inside of port will be 1 to 2 mm. If you tightened hard and then unscrew Easyfit, you can see how much the needle is projecting inside.

4. Precautions

Daily Maintenance

Please rinse the internal surface with distilled water to get rid of salt containing solutions which may crystallize after use. Crystals will scratch the seal surface and ruin the valve. A scratched seal is not covered by the warranty.

Biological Samples

If biological samples have been going through the valve, we recommend filling the valve with 50 times diluted chlorine bleach and letting it stand for 30 min. Then rinse with 10 times or more with pure water. This will prevent bacterial growth.

Lever Operation

When you switching the valve, please move smoothly and quickly. If you stop the lever in the middle, the flow will stop and the tubing will pop off.

Pressure Tolerance

Do not introduce pressure of more than 2 MPa to the valve. The SI-60 valve is designed for low pressure use only.

Clogging

If you find a clog, please remove and the needles first in order to confirm if the clog is in the needles or not. If it was in the needle, please sonicate the needle in distilled water. If this doesn't resolve the issue, the clog may be in the valve port. Please disassemble the valve by removing three hex screws on the valve and take the three PEEK (plastic) sealing parts out. Then sonicate them. Do not sonicate any metal parts. If you are uncomfortable doing this, please ship your valve back to Eicom. We will fix for you.

5. Specifications

Inlet Channels	Two (1 and 2)
Outlet Channels	Two (Out and Drain)
Liquid contact surface material	Polyethyleneetherketon (PEEK, inert)
Valve Metal Material	Stainless Steel 316
Needle Tubing Diameter	1/16 inch (1.6 mm) outer 0.005 inch (0.125 mm) inner
Pressure Tolerance	2 MPa, 20 bar
Dimension (Valve)	30 mm (Dia), 32 mm (H).
Weight (Valve)	Approx. 130 g:

Warranty

Eicom warranties Model SI-60 to be free of defects, material and workmanship, for a period of one (1) year from the original purchase date defined by Eicom's invoice date. Before returning your product, please contact Eicom in order to identify the cause of problem. The cause may be simple operator error. You must ship the defective product at your expense. We will pay return shipping. The product should be packed safely in the original packaging or similar. If you have not retained the box, one can be supplied to you at an additional cost, or you may confer with Eicom about appropriate packing material. Cost for repair of the defect parts caused by damage during shipping will be charged to you. This warranty does not include shipping, removal, or installation. This warranty does not cover:

- Connection Needles and Fittings.
- Derivative effects including data, labor and your expense.
- Damage resulting from accident, misuse or failure to provide necessary maintenance; or
- Damage due to incorrect set up, unusual physical, electrical, or environmental stress including inappropriate power sources, spikes, or surges.

Technical Support

We endeavor to answer all your technical questions by fax or e-mail but a fee is charged for on-site technical support.

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