

## User Guide

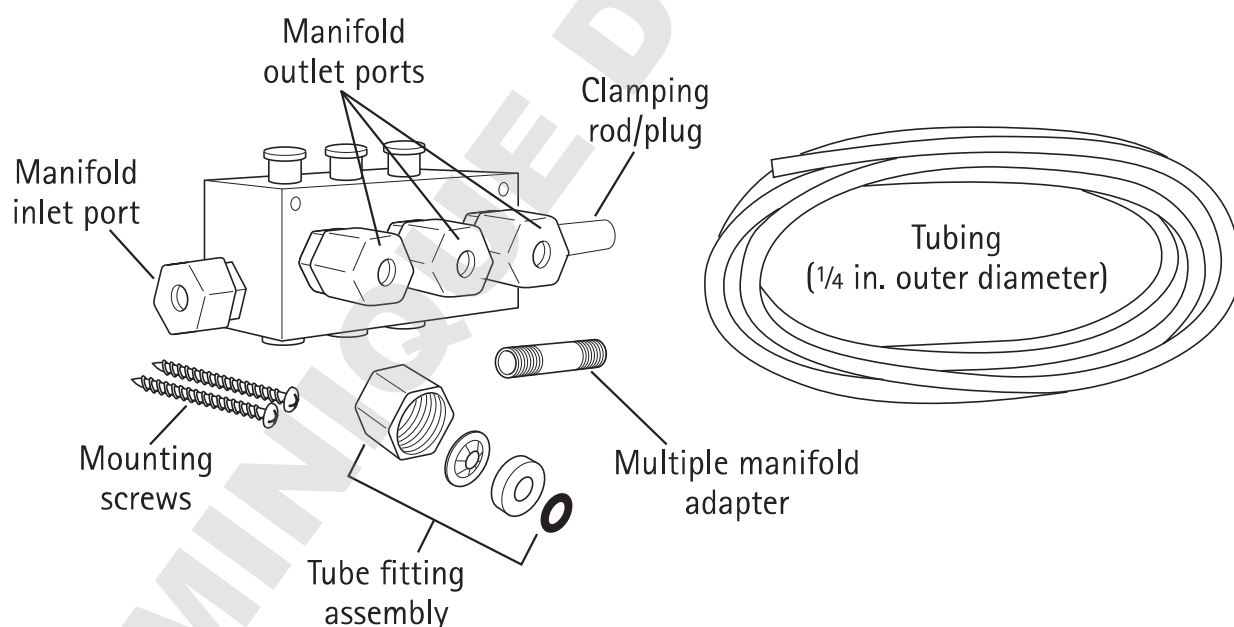
# Amicon® Stirred Cell Manifold

Cat. No. 6015

## Introduction

The Amicon® Stirred Cell Manifold is designed for use with Amicon® Stirred Cells and reservoirs. It selectively separates an inlet gas or liquid stream into multiple outlet streams. With this manifold, a single feed line can be distributed to three individual outlets. If desired, several manifolds can be grouped together to provide additional outlet streams.

## Manifold Components



## Setup

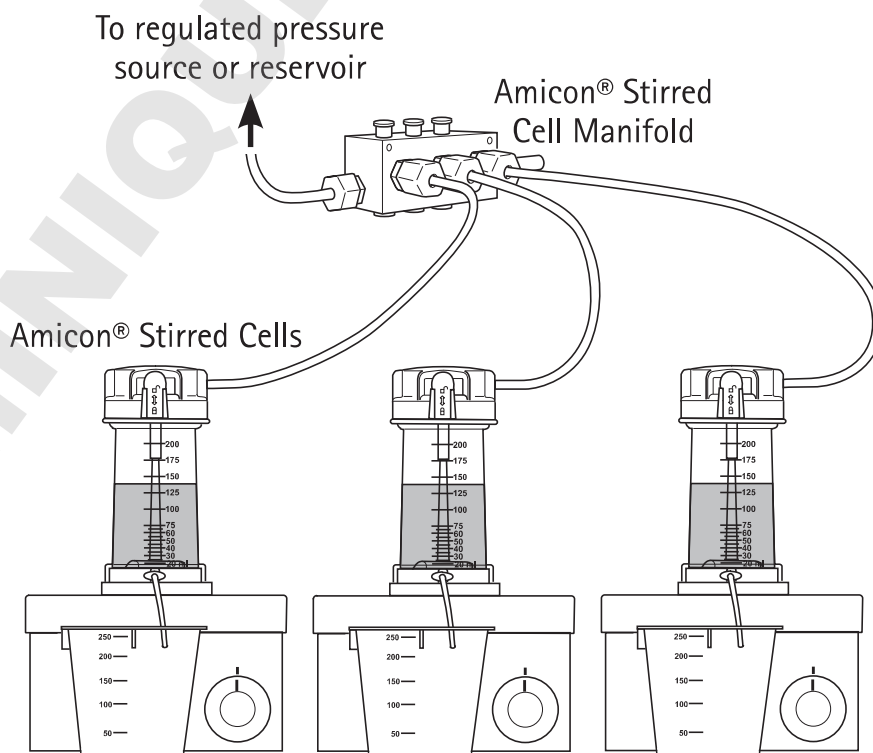
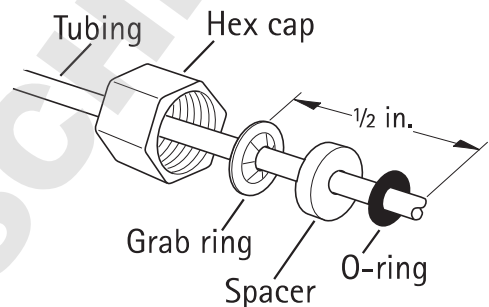
1. Position manifold body with label facing upward.
2. Attach clamping rod/plug to a ring stand or mount manifold to a support structure using two mounting holes and screws provided.
3. Group stirred cells and reservoir (if used) in positions appropriate for their use with the manifold.

# Manifold Fitting Assembly and Attachment

**NOTE:** When connecting the manifold to Amicon® Stirred Cells, use the tubing supplied with the stirred cell (quick-connect inlet tubing assembly) for the manifold outlet ports. Use the tubing supplied with the manifold for the inlet port connection.

Attachment to older model stirred cells is the same, except that the cell cap connection is the tubing assembly shown below, rather than quick-connect.

1. Estimate the length of tubing required for each connection and cut the four pieces of tubing to length if necessary.
2. Carefully unscrew each of the four hex caps from the manifold body and remove the O-ring. A grab ring and spacer are included inside each hex cap.
3. Slide the hex cap and grab ring (flat portion facing hex cap) onto one end of each of the four pieces of tubing leaving no more than 1.3 cm (1/2 in.) of tubing beyond grab ring. Add a spacer (countersink toward grab ring) and O-ring onto the end of each piece of tubing.
4. Attach each of the four tubing assemblies to the appropriate manifold port and hand tighten the hex caps.
5. Add appropriate tube fitting to the free end of the manifold inlet port tubing. The three outlet port tubing pieces already have quick-connect fittings on them.
6. Connect the quick-connect fittings to each stirred cell cap. Connect the manifold inlet fitting to a regulated pressure source, or if using a reservoir (e.g., Amicon® Stirred Cell Reservoir, cat. no. 6028), to the reservoir outlet (labeled "L").



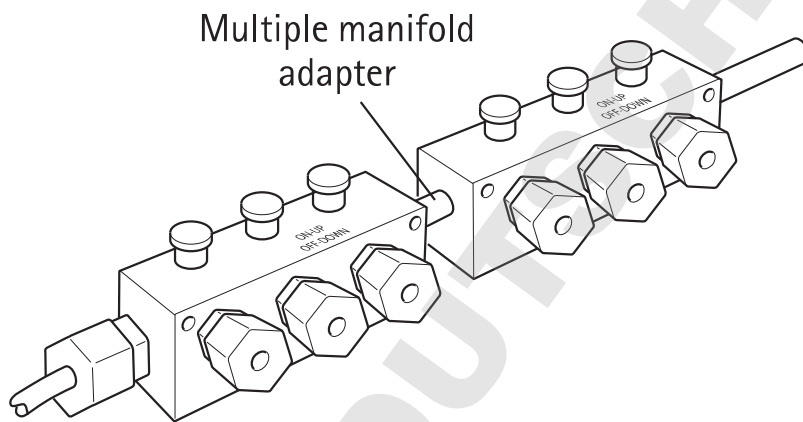
## Manifold Fitting Assembly and Attachment, continued

7. Assemble the Amicon® Stirred Cells and reservoir (if being used) according to the corresponding user guides, then fill with desired solutions.

### Grouping Multiple Manifolds

If more than three stirred cells need to be operated in parallel, two or more manifolds can be grouped together using the procedure described below.

1. Unscrew clamping rod/plug from end of manifold body, using pliers if necessary.
2. Remove entire inlet fitting from a second manifold.
3. Apply polytetrafluoroethylene tape to both ends of the multiple manifold adapter. Connect the two manifolds with the adapter. Tighten with only moderate force.

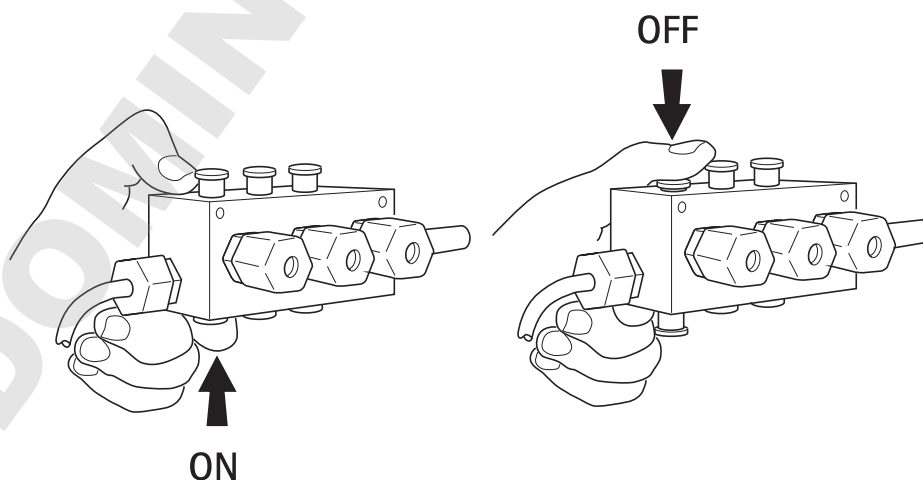


### Operation

**WARNING:** Do not exceed Amicon® Stirred Cell pressure limit of 5.2 bar (75 psi).

**NOTE:** Nitrogen gas is recommended for pressurizing the Amicon® Stirred Cell and reservoir.

1. With all manifold buttons in the **OFF** position (spools pressed downward until the plug seats fully against the top of the manifold), initiate stirring and turn the pressure on at the source.



## Operation, continued

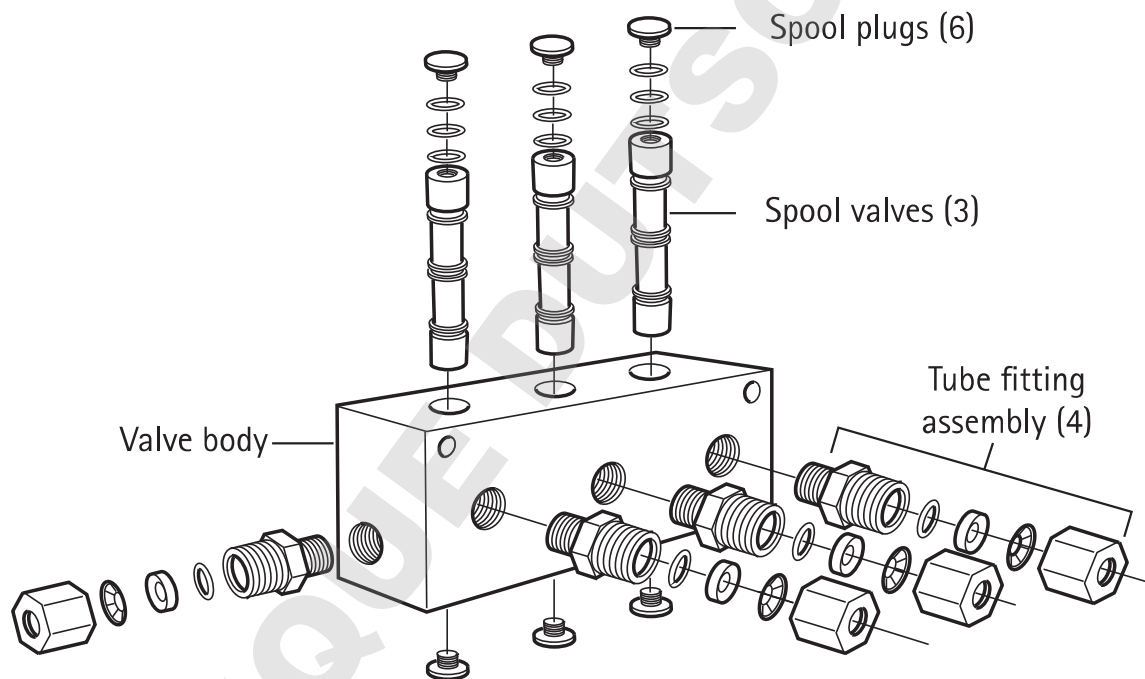
2. To turn on desired outlet(s), press corresponding spool upward until plug seats fully against the bottom of the manifold.
3. To turn off any outlet, press corresponding spool downward.

## Shutdown

1. Turn off pressure at source or turn off each outlet valve separately, then turn off magnetic stirrers.
2. Release pressure and disassemble stirred cells according to corresponding user guide.

## Cleaning and Maintenance

1. When manifold is used with liquid streams, clean both manifold and tubing after each use. Flush with mild detergent and rinse with deionized water.



2. To remove spools for cleaning, unscrew a plug from one end of each spool and push spools out from manifold body.
3. Clean spool valve and inside of the manifold body as necessary. The nine spool valve O-rings are interchangeable and may be removed for cleaning, if desired.  
**NOTE:** To prevent excessive wear to O-rings and spool valve, avoid frequent disassembly.
4. To reassemble, replace O-rings on valve spools. Lightly lubricate O-rings with petroleum jelly, then insert spools carefully into manifold body from either end. Replace plugs on spool valve ends, making sure each plug is firmly seated.
5. If tube fitting assemblies are removed for any reason, rewrap the threads with polytetrafluoroethylene tape before replacing them in manifold body. Use moderate force when replacing fittings.

## Sterilization/Sanitization

The manifold is **NOT** autoclavable. To sterilize, use standard sterilizing gas mixtures. To sanitize, use 70% ethanol or isopropanol. To disinfect, use 5% formalin.

## Chemical Resistance

Do not use the manifold with strong acids or bases ( $\text{pH} < 2$  or  $> 10$ ), ketones, acetaldehyde, acetic acid, aromatic and chlorinated hydrocarbons, polar aromatics, oxidizing agents, aniline, Cellosolve<sup>®</sup> solvent, ethers, or esters.

## Specifications

<b>Maximum operating pressure</b> Amicon <sup>®</sup> Stirred Cell Manifold Amicon <sup>®</sup> Stirred Cell Amicon <sup>®</sup> Stirred Cell Reservoir	5.2 bar (75 psi) 5.2 bar (75 psi) 5.2 bar (75 psi)
<b>Working temperature range</b>	4–40 °C (39–104 °F)
<b>Weight (without tubing)</b>	127 g (4.5 oz)
<b>Dimensions</b>	Manifold 14.6 × 5.1 × 4.4 cm (5.75 × 2 × 1.75 in.) Tubing 1/4 in. (6.4 mm) OD × 2.4 m (8 ft)
<b>Inlet and outlet port connections</b>	1/4 in. (6.4 mm) OD × 1/8 in. (3.2 mm) NPT tube fittings
<b>Materials of construction</b>	Manifold body, spool valves, clamping rod/plug, multiple manifold adapter Acetal Spool valve O-rings Buna-N Tube fittings Nylon, stainless steel, buna-N Tubing Polyethylene

## Statement Regarding Compliance with the Pressure Equipment Directive 97/23/EC

EMD Millipore Corporation certifies that this product complies with the European Pressure Equipment Directive, 97/23/EC of 29 May 1997. This product is classified under Article 3 § 3 of the Pressure Equipment Directive. It has been designed and manufactured in accordance with sound engineering practices to ensure safe use. The product is accompanied by user instructions and bears markings to permit identification of EMD Millipore Corporation as the manufacturer or authorized representative of this product within the European Community. In compliance with Article 3 § 3 of the Pressure Equipment Directive, this product does not bear the CE mark.

## Ordering Information

This section lists catalogue numbers for the Amicon® Stirred Cell Manifold and related products. See Technical Assistance section for contact information. You can purchase these products on-line at [www.millipore.com/products](http://www.millipore.com/products).

Description	Cat. No.	Qty
Amicon® Stirred Cell Manifold	6015	1
Amicon® Stirred Cell, 50 mL	UFSC05001	1
Amicon® Stirred Cell, 200 mL	UFSC20001	1
Amicon® Stirred Cell, 400 mL	USCF40001	1
Amicon® Stirred Cell Selector Valve For instant switching from concentration to diafiltration. Includes selector valve, tube fittings, tubing.	6003	1
Amicon® Stirred Cell Reservoir, 800 mL Provides 800 mL extra fluid volume; can be used for diafiltration. Includes reservoir, tube fittings, tubing.	6028	1

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