

# #60-1267-011 Single Electric Valve SyriXus® 1000x/500x/260x Installation Instructions



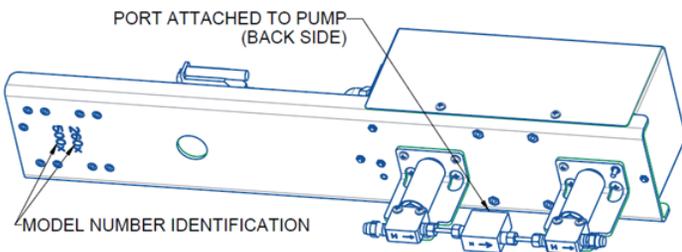
Instruction Sheet #60-1262-272  
Revision -, May 2022

## Overview

The SyriXus 1000x / 500x / 260x single electric valve option is designed to automatically allow the SyriXus pumps to operate continuously under software control. The SyriXus pump will switch between refill and delivery, allowing the pump to cyclically operate without user input. The controller can also be manually instructed to refill or deliver, and the appropriate valve will be activated for proper delivery. The single electric valve option mounts to the side of the pump and can be optionally mounted on either side of the pump.

## Parts of the Valve Assembly

Most of the valve assembly will be assembled at the factory, but two 'L' shaped mounting brackets and three pump tubing assemblies will be separate. Additionally, the reagent supply tubing is shipped unattached to prevent damage to the plastic tubing during shipping. Screws and washers are supplied in a separate plastic bag.



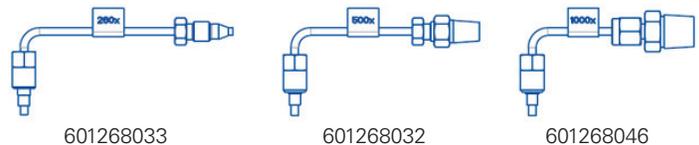
## Prepare the Valve Assembly for Installation

The valve assembly is designed to optionally be used on either a 1000x, 500x or 260x SyriXus pump. Tubing to connect to the pump is included for the SyriXus 1000x, SyriXus 500x and SyriXus 260x pumps. Only the tubing for the pump being attached to will be used, the other pump tubing should be retained to allow the valve to be mounted on a different size pump if this becomes desired in the future.

Remove the valve assembly from the packaging and identify the port on the valve assembly that will be attached to the tubing to the pump. Notice there is lettering on the opposite end of the assembly relative to the valve identifying two of the model numbers.

## Pump Tubing

There are three pump tubing assemblies supplied in the SyriXus Single Electric Valve Package shown below:



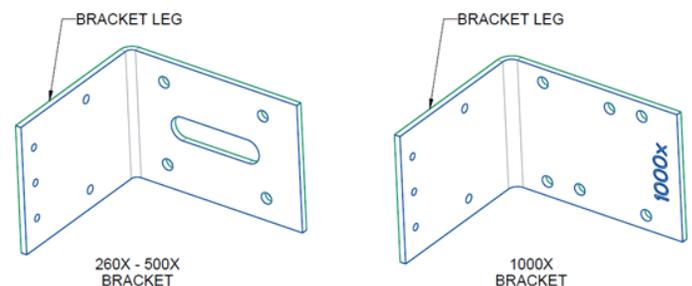
Each tubing assembly has a label identifying which SyriXus pump model that the tubing is to be used with. Below each assembly shown in the figure is the part number for the assembly to assist in ordering replacement parts when necessary. Note that the tubing differs in length and that different fittings are on the longer tubing length. Select the tubing assembly applicable to the pump being connected to.

Orient the valve assembly with the valve facing up, and the model identifier lettering closer to you. The end of the valve assembly with the Model Identifier Lettering represents the "bottom" of the valve assembly.

Decide which side of the pump that the valve assembly is to be mounted to. Select the pump tube appropriate for the SyriXus model that the valve assembly will be used with. Screw the tubing fitting into the valve assembly finger tight with the tubing corresponding with the side the pump will be on. That is, if the valve is to be on the right side of the pump, the tubing must be directed toward the left of the valve assembly (toward the pump). Leave the tubing finger tight at this point to assist in assembly later.

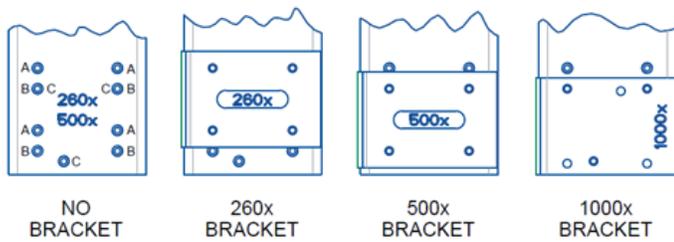
## Mounting Bracket

There are two mounting brackets supplied with the Single Electric Valve Package; one for the 1000x model, the other used for both the 260x and 500x models.



Select the bracket appropriate for the pump model that this valve package will be attached to. Note that each bracket has a surface (Bracket Leg as shown in the above figure) that will mate with the pump. This Bracket Leg must be oriented to the same side of the valve assembly as the pump tubing installed above and directed away from the valve assembly plate.

Place the mounting bracket over the Model Identifier Lettering so that the model number that this valve assembly will be used with is visible through the opening in the bracket (260x and 500x) or with the 1000x identifier visible. Orient the bracket leg so that it is on the SAME SIDE of the valve assembly as the Pump Attachment Port mentioned above. When the valve assembly is mounted on the other side of the pump (discussed below), the pump port would be on the other side of the assembly, and therefore so would be the bracket leg.

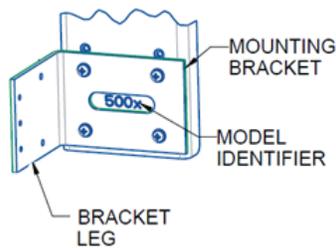


The image above shows the Bracket Leg on the left side of the valve assembly (mounting to the right side of the pump). The other orientation will be similar.

The bracket will align with threaded holes in the valve assembly as shown above. When correctly placed, the alignment will be:

- For the 260x, the bracket holes will align with four threaded holes marked 'A'.
- For the 500x, the bracket holes will align with four threaded holes marked 'B'.
- For the 1000x, the bracket holes will align with three threaded holes marked 'C'.

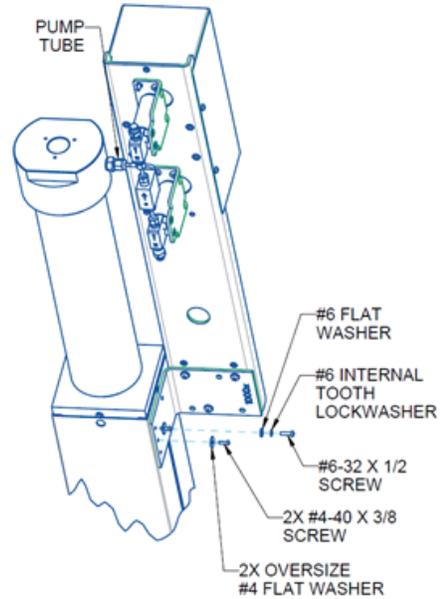
The image to the right shows the appearance for use with a SyriXus 500x pump; other models and bracket orientations would be similar. Observe that the holes in the bracket align with threaded holes in the valve assembly as described above.



Locate the #8-32 x 3/8" long screws in the hardware package; and install a single #8 internal thread lock washer on each screw, followed by a single #8 flat washer on each screw. Thread these screws with washers into each of the specified holes in the mounting bracket. Finger tighten these screws

but do not completely tighten them down yet. When properly installed, the specified screws will be in place and the correct model identification number will be visible, but the bracket can be moved slightly to assist on installation later.

Insert a #6-32 x 1/2 screw into a #6 internal tooth lock washer, then insert the #6-32 x 1/2 screw with lock washer into a #6 flat washer. Next, insert two #4-40 x 3/8 screws each into an oversize #4 flat washer. Place these screws and washers within convenient reach near the pump.



Position the valve assembly on the side of the pump with the pump tube aligned with the port in the cap. The 1000x model is shown in the figure, other models are installed in the same way. While holding the valve in place, thread the port fitting into the pump cylinder cap. Tighten the fitting on the tubing finger tight.

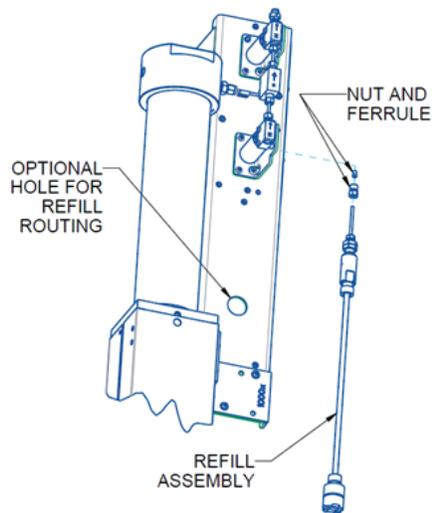
Continuing to hold the valve assembly in place, insert the #6 screw with washers into the valve mounting bracket in the bottom hole closest to the valve as shown in the figure. Tighten this screw only finger tight. Install the two #4-40 screws in the top two holes in the mounting plate near the front of the pump as shown.

Adjust the position of the valve assembly and then tighten the three screws just installed.

Tighten the fitting on the tubing in the cylinder cap and on the valve assembly.

Tighten the pump tubing to the valve assembly to no more than 120 inch-pounds [14 N-m]. Use a wrench on the flats of the tee to prevent damage while tightening the fitting.

With the valve assembly positioned satisfactorily, tighten the screws near the model identifier lettering at the bottom of the valve assembly.



## Converting the Valve for Left-Hand Mounting

### Overview

The SyriXus Electric Valve Assembly is designed to be easily mounted on either side of a single pump. All that is required is to rotate the mounting bracket as defined above and repositioning the pump tubing to point to the other side of the valve assembly.

If the valve assembly is not currently installed on a pump (either as shipped or detached from the pump), simply follow the instructions outlined above. If the valve package is currently installed on a pump, it must be removed from the pump first and then follow the instructions outlined above.

Locate the refill tubing assembly. The gland nut and ferrule to attach the refill assembly to the valve may already be swaged onto the refill assembly or be in the package of loose parts. Thread the nut and ferrule into the bottom of the valve and tighten to no more than 120 inch-pounds [14 N·m]. While tightening, use a wrench on the flats of the valve to prevent damaging the valve while tightening the gland nut.

Optional: Depending on the location where the pump is to be installed, the refill fluid source may be located either in front of the valve assembly (as shown in the figure) or behind the pump. A hole in the valve plate allows for the refill tubing to be routed behind the pump if desired.

The pump and valve can now be moved to the location where it is to be used. The valve can then be electrically connected to the controller as described in the user's manual.

NOTE: The refill tubing can be shortened by removing the fitting and ferrule at the filter end and cutting the tubing shorter.

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