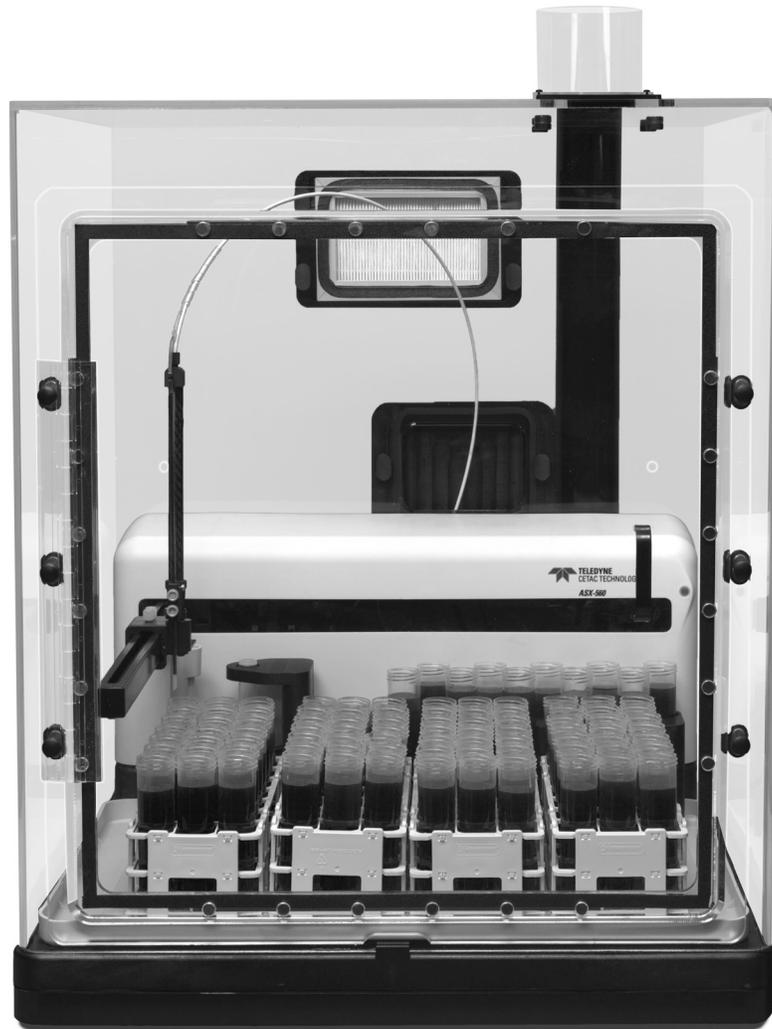




TELEDYNE
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ENC-560 Autosampler Enclosure



Installation Guide

Manual Part Number **480232** Rev 1

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Overview

This guide will help you install an ENC-560 enclosure on your existing ASX-560 autosampler.

The *ASX-560 Quick Installation Guide* contains information on setting up the autosampler. The *ASX-560 Operator's Manual*, which you can find on the CD included with the autosampler, provides information on using and maintaining the autosampler.

Tools Required

- Phillips screwdriver (A stubby style screwdriver is preferred; a power screwdriver may also be used for most of the screws.)

Enclosure Components

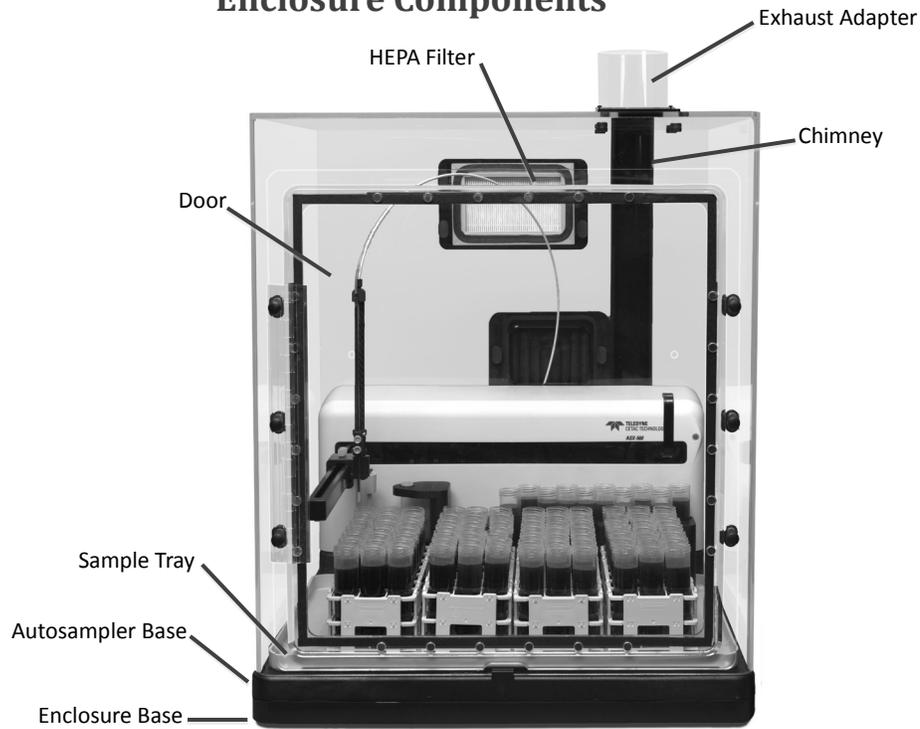


Figure 1 Front View

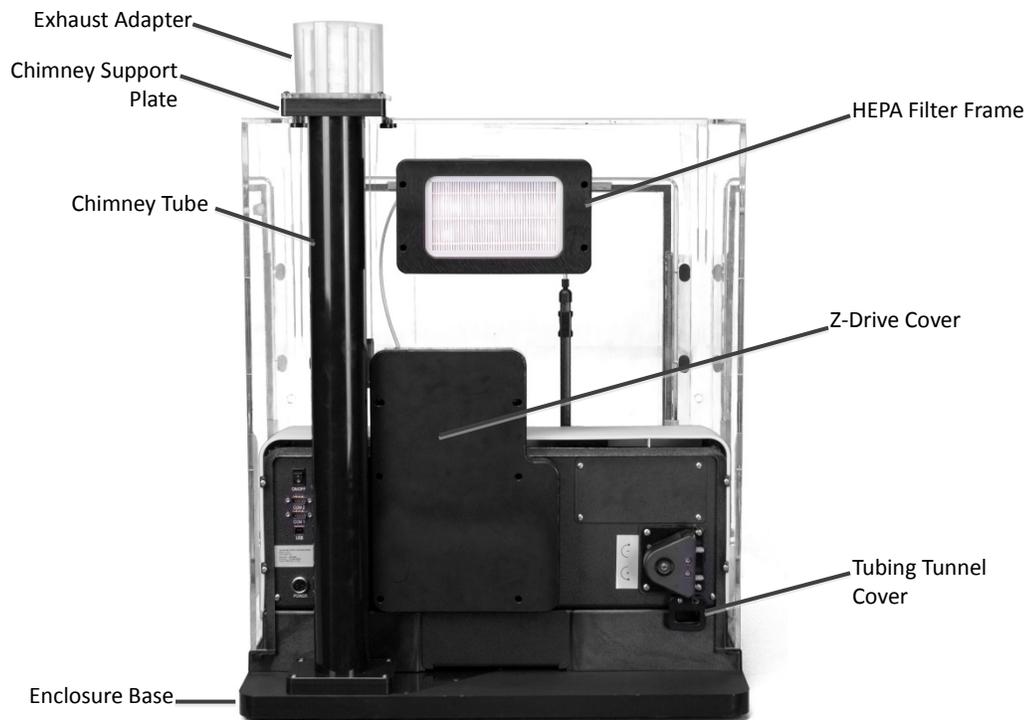


Figure 2 Back View

Installing the Enclosure on an ASX-560 Autosampler

WARNING

CHEMICAL INJURY HAZARD

Remove all hazardous chemicals from the autosampler before installing the enclosure. Make sure you know the hazards associated with all of the chemicals you are using, and take the appropriate precautions. Exposure to laboratory chemicals may result in serious injury.

MECHANICAL HAZARDS

Turn the autosampler off and disconnect the power cord before installing the enclosure.

Step 1: Mount the Autosampler on the Enclosure Base

Place the autosampler close to the ICP-MS or other analytical instrument. Place the autosampler where space, liquid waste, and power requirements can be met. If you have not already evaluated the intended location for the autosampler, see the *Operator's Manual*.

- 1 Turn the autosampler off and disconnect the power cord and any data cables.
- 2 Disconnect all tubing (such as rinse and waste lines and the probe with its sample line) from the autosampler.
- 3 Detach the Z-drive from the autosampler arm and disconnect the Z-drive cable from the rotor on the back of the autosampler.
- 4 Remove all loose objects, such as vials and racks, from the autosampler.
- 5 Lay the autosampler on its side.

TIP

Place a small object under the autosampler head so that the base is vertical.

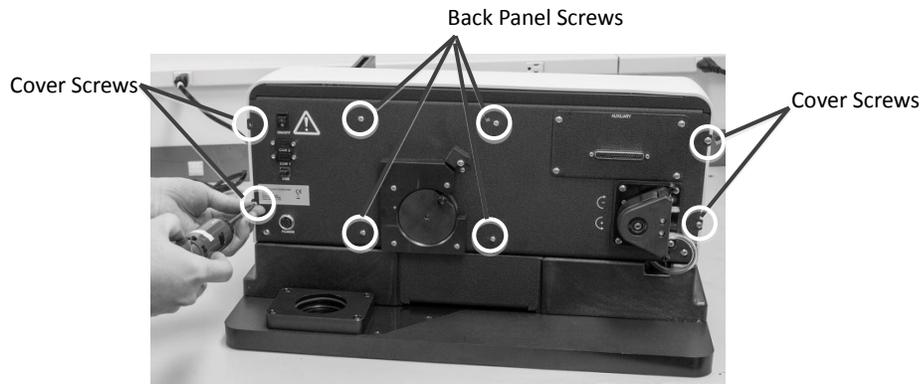
- 6 Remove the four feet from the bottom of the autosampler and discard the screws.
- 7 Press the enclosure base onto the bottom of the autosampler base.



- 8 Attach the five feet to the bottom of the enclosure base with #6-32 x 1½" screws.
- 9 Place the autosampler right-side-up.

Step 2: Install the Enclosure Shell

- 1 Install the Z drive on the autosampler arm. Do not connect the Z-drive cable to the rotor; let the cable rest on the autosampler tray.
- 2 Move the autosampler arm to the center.
- 3 Push the Z-drive back against the cover. This will help hold the cover in place once the screws have been removed.
- 4 Remove the four screws which hold the autosampler cover in place. Discard these screws; they will be replaced by longer screws.



- 5 Place the enclosure on the autosampler. The sides of the enclosure will fit into the grooves on the autosampler base. Be careful not to hit the Y-arm or the Z-drive. Be careful not to crush the loose Z-drive cable.



- Secure the enclosure to the back of the autosampler with four #6-32 x 3/4" screws. An assistant may need to hold the cover of the autosampler in place. Tighten these screws as tight as you can.



Step 3: Install the Z-Drive Cable

- Feed the Z-drive cable through the opening above the autosampler head.
- Attach the Z-drive cable to the rotor. See the *ASX-560 Quick Installation Guide* if you need instructions on how to do this.

Step 4: Install the Chimney and the Back Covers

- Remove the four back panel screws around the Z-drive motor (see the photo on page 5). Discard these screws.
- On either side of the opening, place two sealing nuts inside the enclosure. Wiggle the sealing nuts into the holes.



- Attach the Z-drive cover with six screws. The top two screws are #6-32 x 3/4" and require sealing nuts. The bottom four screws are #6-32 x 1 1/2".



- 4 Install the chimney support plate on top of the chimney tube. Push it down while twisting it until it is fully seated on top of the chimney tube.



- 5 Firmly push the chimney tube onto the enclosure base. Twist it a little bit to get it to seat completely.
- 6 Install four sealing nuts inside the enclosure, in the holes under the chimney support plate.
- 7 Secure the chimney support plate to the top of the enclosure using four #6-32 x 3/4" screws and sealing nuts.



TIPS

Ask an assistant to reach inside the enclosure and hold the nuts in place. Use a stubby screwdriver for easier access to the screws, especially if the top of the enclosure is above eye-level.

Installing the HEPA Filter (Optional)

- 1 Press the HEPA filter into the frame. Pay attention to the direction of the arrows.



- 2 Place the four sealing nuts for the HEPA filter.
- 3 Install the filter frame to the back of the enclosure using the four #6-32 x 1½" screws.

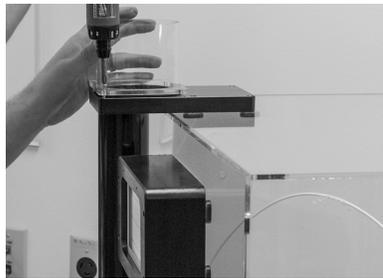
The filter frame is symmetrical—either side can face up.



Installing the Exhaust Adapter

Exhaust adapters are available in several sizes to match the tubing in your laboratory exhaust system.

- 1 Place the exhaust adapter on top of the chimney support plate and attach with four #6-32 x ½" screws.



Changing the Door Orientation

You can change the door so that the hinge is on the left or right side.

- 1 Remove the six screws, three on each side of the door.
Use a flat screwdriver to pop the screw covers open.



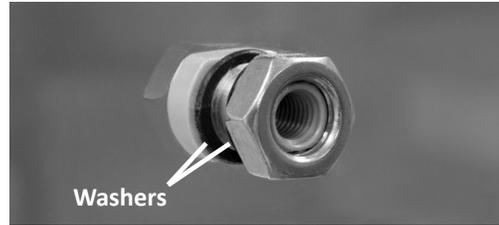
- 2 Remove the door, reorient it to the desired position, then square it in the opening.

- 3 Install the three #6-32 x $\frac{3}{4}$ " screws on the hinge side and three #6-32 x $\frac{1}{2}$ " screws on the non-hinge side.

Installing the Fittings

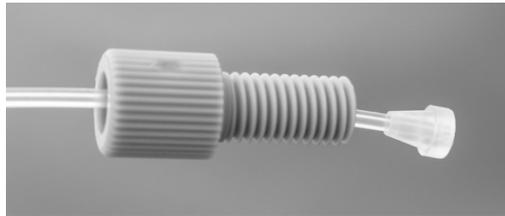
Installing the Sample Tubing Bulkhead Fitting

Use the 1/16 inch nut and ferrule to couple the sample probe tubing to the bulkhead and then to your analyzer, as described below. This fitting can be installed either on the right or left side depending upon where your analyzer sits.



Connecting the Sample Tubing

- 1 Cut the sample probe tubing to a length which will allow the probe to reach all positions.
- 2 Pass the tubing through the nut.
- 3 Place the ferrule on the end of the tubing. The tapered end of the ferrule must face the nut.

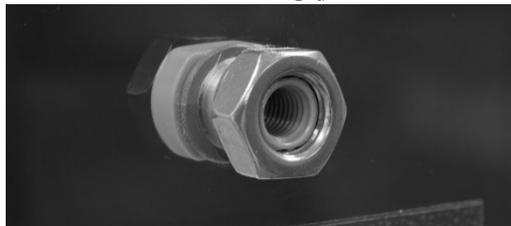


- 4 Very gently screw the nut into the bulkhead fitting.
- 5 Push the tubing all the way in.
- 6 Tighten the nut with your fingers while maintaining pressure on the tubing.
- 7 Remove the nut and check that the ferrule is flush with the end of the tubing.

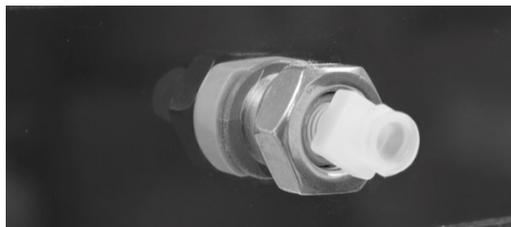
Installing the Gas Pass-Through

Use this fitting to connect a gas supply to the enclosure (to provide a nonreactive atmosphere, for example).

- 1 Install the bulkhead fitting (just as with the sample tubing).

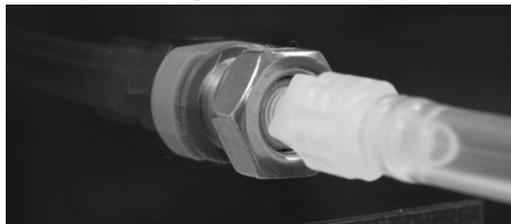


- 2 Install the threaded connector in the bulkhead fitting.



- 3 Push barbed end of the threaded fitting into the gas tubing.

- 4 Thread the fitting into the outside of the bulkhead fitting.



Be sure to plug any unused holes in the enclosure.

Installing the Rinse Tubing

The ASX-560 autosampler has a “tubing tunnel” which allows the rinse tubing to pass under the autosampler head. The ENC-560 enclosure includes a cover which seals this opening. The cover consists of a frame with a foam insert.

Most applications use the foam insert with two holes. If you are using the SDX_{HPLD} dilution system, use the foam insert with four holes.

Removing the Tubing Tunnel Cover

If the tubing tunnel cover is already installed:

- 1 Remove the two screws which hold the tubing tunnel cover in place.
- 2 Remove the foam insert.

Installing the Tubing Tunnel Cover

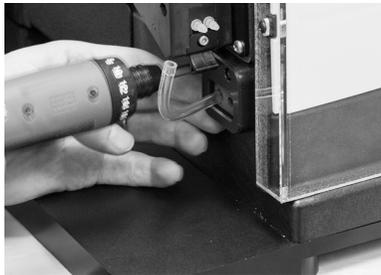
- 1 Route the tubing through the tunnel under the autosampler head.
- 2 Place the foam insert around the rinse tubing.



- 3 Press the foam insert into the tubing tunnel cover.



- 4 Attach the tubing tunnel cover to the back of the autosampler with two #6-32 x 1/2" screws.



- 5 Pull the tubing through the foam insert and connect it to the peristaltic pump. See the *ASX-560 Operator's Manual* for information on the different tubing arrangements.

Cleaning the Enclosure

NOTICE

Do not clean using solvent or ammonia based cleaning solutions. Using solvents or ammonia will cause irreversible cosmetic damage. There is also a possibility that the integrity of the enclosure will be compromised. **Using a solvent or ammonia based cleaning solution will void the warranty.**

You will need:

- At least three clean, soft, lint-free cloths or clean-room wipers.
- Cleaning solution. A recommended plastic cleaner may be ordered from Teledyne CETAC. You may also use a mild non-abrasive soap and water solution.

- 1 Use a clean cloth to remove surface dust.
- 2 Dampen a new cloth with the cleaning solution.
- 3 Wipe the enclosure.
- 4 Dry by gently buffing with a new cloth.

Avoid scratching the cover while drying. The autosampler must be thoroughly dry before you turn the power on.

Enclosure Specifications and Characteristics

Air Flow (typical)	15 cfm when the exhaust fan provides a pressure drop of 1 inch WC (25 m ³ /h at 250 Pa)
Exhaust	4", 5", or 6" fume hood exhaust attachment
Dimensions (H x W x D)	78 cm x 58 cm x 61 cm (30.5" x 22.8" x 23.8")
Opening Dimensions (H x W)	47 cm x 45 cm (18.75" x 17.75")
Materials	Walls: 1/4" acrylic Hinges: Acrylic Seals: EDPM foam Adhesive: Ethylene dichloride glue, thermoset bonded
