The Pharmaseal exhaust housing is a simple, yet highly effective solution for exhaust and recirculation applications in pharmaceutical and biotechnology facilities, hospitals, surgical suites, neonatal care units, animal labs, sterile manufacturing areas and the food service processing and packaging areas. The Camfil Farr Pharmaseal room side replaceable exhaust housing:

- Allows a maintenance-friendly filter change from within the room, through a removable stainless steel filter face grille.
- Enclosure is manufactured from 0.063 aluminum or 304/304L stainless steel. All units include 304 stainless steel grille and trim.
- Is bubble leak tested to 3.0" w.g. to ensure that the housing will not leak under normal operating conditions. The housing is also visually inspected at the factory and tested for filter fit before shipment.
- Mounting hardware is available, as are the choices of an inward-turned flange, an outward-turned flange or an integral plenum with 12" round flex duct connection.
- The unit includes integral flush perimeter trim. Unit may be mounted in sheet rock walls, plaster, conventional aluminum or stainless steel honeycomb panels.
- Is available in four standard filter configurations, a 100mm filter with 30/30® prefiltro, a 100 mm filter without prefiltro, a Filtra 2000™ filter with prefiltro and a Filtra 2000 filter without a prefiltro.
- Includes integral filter guides that ensure proper filter fit within the gel to knife-edge alignment with the filter.
- Includes a static pressure port with quick-disconnect fitting for convenient room side filter evaluation.
- Optional test shroud and sampling ports allow all efficiency measurements from the room side.
- Optional hygienic change that allows filter removal through a bag so service personnel do not have direct contact with contaminated HEPA filter.

The Pharmaseal exhaust housing offers the convenience of room side service.
### Data Notes

**Dimensions & Capacities**

<table>
<thead>
<tr>
<th>Filter application</th>
<th>Size</th>
<th>Perimeter Trim</th>
<th>Resistance</th>
<th>Rated Airflow</th>
</tr>
</thead>
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<tr>
<td>4&quot; deep Megalam® with 2&quot; deep prefilter</td>
<td>½ x 1</td>
<td>18 x 30</td>
<td>0.45</td>
<td>200</td>
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<td>1.05</td>
<td>1000</td>
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<td>30 x 30</td>
<td>0.85</td>
<td>1000</td>
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</tbody>
</table>

**Pharmaseal Exhaust Unit**

- with in-tumed flange for direct duct connection.
- with auxiliary plenum and round flexible duct connection.

### Pharmaseal® Wall Mount Exhaust

**Model Designator**

- **PW** 30230Z 15D OB E BK S F 0 0 0 0 1

**Specifications for Pharmaseal Hood (Exhaust) and Test Fixture**

1. **Downstream Test Kit Contents**
   - 1 ea. DynAir Instruments test port model PTP-1. The port includes a sponge neoprene gasket to seal to customer duct and a red molded plastic knob to release the port from the exhaust hood/housing.
   - Test fixture shall be constructed from 0.063” thick aluminum and shall weigh approximately 18 lbs. [8.2kg].
   - Test fixture shall be compact in size (9.5” x 5”) and designed to be easily stored and transported.
   - Test fixture shall include a high density plug, fitted with a neoprene O-ring.
   - Tylok male elbow SST fitting SS-4-2ME-8 with downstream sample probe.
   - NPT brass plugs. The aerosol downstream sample port shall have Vinyl Tylok SST elbow SS-4-2ME-8 with downstream sample probe.
   - Smoke generator with 30/30 prefilter installed.

2. **Test Port Installation**
   - 2.1 Find the proper location for the test port. The port should be located at least 10 duct diameters (or 2 duct diameters) downstream of the filter. Do not locate the port in the main ductwork (see Pharmatain and Pharmaseal details).
   - 2.2 Place test port in desired location on ductwork. Mark location of access hole and the mounting holes. Drill the access hole ½” diameter max. Drill the two (2) mounting holes using a #30 drill bit.
   - 2.3 Caulk the under side of the assembly between the gasket and the ductwork using customer 100% approved RTV silicone rubber.
   - 2.4 Place test port and fit neoprene mounting gasket over the hole.
   - 2.5 Fasten the test port to the duct using two (2) #10 sheet metal screws. After installation is complete, caulk over the heads of the screws.
   - 3. Connection Between the Test Port and Exhaust Hood/Housing. (See Detail "A")
   - 3.1 Remove and discard red plug from test port. Replace the red plug with the Tylok SST elbow SS-4-2ME-8 with downstream sample probe.
   - 3.2 Replace and discard 3/8” brass plug from the 3/8” coupling located on top of the exhaust Pharmaseal® Wall Mount exhaust housing. Replace the plug with the Tylok SST male connector SS-4-NIC-6.
   - 3.3 Cut the 1/4” OD Vinyl tubing to desired length and connect the two Tylok fittings together. Properly secure the tubing to the ductwork between the fittings.

3. **Test Fixture**
   - 4.1 Test fixture shall be constructed from 0.093” thick aluminum and shall weigh approximately 18 lbs. [8.2kg].
   - 4.2 Test fixture shall have a flange around the large end with a soft gasket and fasteners for connection to the hood during testing.
   - 4.3 Test fixture shall have a test collar.
   - 4.4 Features of the test fixture shall include an aerosol dispersion system, aerosol upstream sample port, and aerosol downstream sample port. These ports shall include 3/8” NPT chrome-plated brass quick disconnects or 3/8” NPT brass plugs. The aerosol downstream sample port shall have Vinyl Tylok tubing that allows connection to the hood before actually attaching the test fixture.

4. **Testing Steps (Overall Penetration Method)**
   - 4.1 Remove grille from Pharmatain/Pharmaseal.
   - 2. Install test fixture to system.
   - 1. Connect photometer to test fixture upstream aerosol sample port and the downstream aerosol sample port.
   - 4. Connect smoke generator to aerosol dispersion port.
   - 5. Conduct test of filter.
   - 6. If result is acceptable, remove test instruments and test fixture.
   - 7. Replace grille on Pharmatain/Pharmaseal.
Pharmaseal Wall Mount Exhaust Specification

This specification covers most options for the Pharmaseal Wall Mount Exhaust. Please, Reference to selectable items are in bold.

1 - Wall & Knife-Edge Construction for PT and SRT Trim
1.1 - Unit shall be constructed from [0.063” aluminum, 16ga 304/L or 16ga 316/L] with all pressure boundary joints and seams continuously welded and sealed airtight, including the knife-edge. The use of silastic sealants, RTV6, or other such materials is prohibited for sealing the pressure boundary.
1.2 - Unit shall include an integral knife-edge on the inside perimeter for a downstream filter-to-housing seal. A fluid gel in the filter shall seal against the knife edge. The unit shall include four (4) filter guides to self-center the filter on the knife-edge during filter installation. The filter shall be secured by four (4) captive retainers.

2 - Trim (2) options available (PICK 1)
2.1 - Permanent perimeter trim shall be fabricated from 14-gauge, [304 or 316L] stainless steel. Interfaces between adjacent side and end pieces shall be continuously welded to create a single, leak-tight assembly. The perimeter trim shall be 2” [50.8mm] wide and the corners shall be radiused in order to eliminate sharp edges. Finish shall be #3.
2.2 - Permanent trim shall be suitable for mounting into a wall. The flatness of the horizontal perimeter flange of the permanent stainless steel trim must be within 1/16” (0.062”) [1.6mm].
2.3 - Trim assembly shall be permanently attached to the aluminum wall with solid stainless steel rivets that are seal welded to prevent leakage. Interfaces between adjacent side and end pieces shall be continuously welded to create a single, leak-tight assembly. The perimeter trim shall be 2” [50.8mm] wide and the corners shall be radiused in order to eliminate sharp edges. Finish shall be #3.

3 - Duct Connection
The wall shall have an integral duct connection collar for slip joint connection that extends a minimum of 3” [76.2mm] above the top surface. The collar shall have a raised rib to prevent flexible duct blow-off. The collar shall be continuously welded to the top of the unit.

4 - Test Port
A labeled test port shall be provided through the knife-edge, which is accessible from the room side of the wall while the filter is installed and the grille removed. The test port is designed to measure the static pressure in the wall and to test the aerosol concentration in the hood upstream of the filter. The test port shall be sealed using a 3/8” NPT chrome-plated brass Quick Disconnect with a snap-in barbed connector (see spec. 10).

5 - Flush Acorn Nut Grille
The grille shall be the flush-mounted type, manufactured from 20-gauge, perforated [304 or 316L] stainless steel, 2B finish, with a minimum of 40% open area. The perimeter flange of the grille shall be solid, perforated and shall not be hemmed for standard 18” x 30” and 30” x 30” walls. For all other sizes the grille perimeter flange shall be perforated and hemmed. The grille shall utilize stainless steel threaded studs, and stainless steel acorn nuts and washers to secure the grille in place without the use of tools.

7 - Hanging Tabs
Hanging tabs shall be fabricated from [0.063” aluminum or 16ga 304/L] and permanently welded to the Pharmaseal.

8 - Aerosol Downstream Sample Port - Exhaust Units
8.1 - The knife-edge assembly shall include a port connected to a sample test probe located downstream in the duct, providing the capability of performing overall efficiency test from the room side. An “Installation Kit” consisting of the PVC tubing and fittings to connect the port on the hood to the probe port in the duct work shall be furnished with each unit (installation by others). Downstream sample probe to be inserted into duct work approximately ten duct diameters downstream of unit and penetration must be sealed with included bulkhead fittings. The sample port shall be permanently attached to the knife-edge assembly by continuously welding and sealed using a 3/8” NPT chrome-plated brass Quick Disconnect with a snap-in barbed connector (see spec. 10).

8.2 - Camfil Farr Overall Efficiency Test Shroud required. Shroud body/plenum and dispersion plate shall be fabricated of 0.063 aluminum.

11 - Foil Back Insulation
Wall shall be insulated externally; both top and sides, with 2” [50.8mm] thick foiled back insulation held in place with 3” [76.2mm] aluminum foil tape and Tac-Toos.

12 - Quality Assurance & Factory Testing
12.1 - Pharmaseal shall be manufactured under a quality program that has been assessed and independently certified to meet the requirements of ISO 9001:2000 for the design, manufacture and distribution of containment and HVAC air filtration products. The certification shall be valid during the time frame in which the hoods are manufactured.
12.2 - All hoods shall be visually inspected for: pinholes, porosity, excessive indentations, inclusions, or weld build-up.
12.3 - Each Pharmaseal shall be leak tested per Camfil Farr Work Instruction CFWS-5001. The knife-edge shall be sealed off with a jig and the wall plenum area pressurized to 3” w.g. [0.75kPa]. All welds in the knife-edge area and all penetrations such as the damper control rod, static and aerosol ports will be bubble-tested for leaks.

For detailed specifications please consult your local Camfil Distributor or Representative or www.camfil.com.