

## RESPIRATORY PROTECTION Technical Data

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### Honeywell Ambient Air Pumps for Supplied Air Respirators

#### Product description

Honeywell ambient air pumps are oil-less rotary vane pumps that supply breathing air to a Type C continuous flow airline respirator as part of a complete supplied air system. Honeywell ambient air pumps are available in three quarter horse power ( $\frac{3}{4}$  HP) and one & half horse power (1.5 HP). Pumps can be configured to support one to three people.

Continuous flow supplied air respirators that are supported by these pumps are ideally suited for applications where air-purifying respirators are not practical or a higher protection factor of a hood is required, yet where the atmospheres are not immediately dangerous to life and health (IDLH).

Ambient air pumps are not considered by the National Institute of Occupational Safety and Health (NIOSH) as part of the respirator that is tested and Certified by NIOSH.



**Ambient Air Pump  
86610**

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#### Assembly Contents

An ambient air pump for breathing air consists of the following components:

- Rotary vane system
- Inlet and exhaust filter assemblies
- Pressure gauge
- Pressure relief valve
- Electric cord
- Two or three  $\frac{3}{8}$ " NPT male thread connections

#### Assembly Part Numbers

- 86610 Ambient air pump,  $\frac{3}{4}$  H.P., for use with two tight fitting facepieces or one hood
- 86630 Ambient air pump, 1.5 H.P., for use with three tight fitting facepieces or two hoods

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#### Certification

Honeywell Ambient Air Pumps are UL 1450 recognized.

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#### Operation

##### Rotary Vane System

Honeywell ambient air pumps use an oil-less rotary vane system to supply ambient air to a continuous flow respirator.

##### Inlet and Outlet Filter Assemblies

There are two filter assemblies, one inlet and one exhaust. These filters protect the pump mechanism and do not filter contaminated air or provide oxygen.

## Pressure Gauge

The pressure gauge provides the dynamic pressure, or back pressure, and is measured in Pounds per Square Inch Gauged (PSIG), and are not an indication of the flow of air. Refer to the Operating and Maintenance Instruction Manual of your respirator for the correct pressure setting for your supplied air system.

## Pressure Relief Valve

Your ambient air pump includes a pressure relief valve that will be used to set the correct pressure for your respirator.

## Electric Cord

The On/Off switch is integrated into the electric cord of 86610 3/4 HP pump and on the unit of 86630 1.5 HP pump. Your ambient air pump uses a standard outlet of 115V/230V.

## Male Thread Connections

The 3/4 HP pump includes two and the 1.5 HP includes three male threaded connections to be used to connect the breathing hose of your respirator(s). The threaded connections are 3/8" NPT. Bushings may be required if the female connection of your hose or couplers is another size.

## Note

Honeywell offers several brands of quick connect couplers so you can select one that is incompatible with any couplers used at your site for non-breathing air and other gases. A coupler assembly includes one male and one female to be used at the connection of hose to the muffler assembly. Sperian brand hoses include OBAC couplers pre-assembled to the breathing air hose, and pumps come with compatible couplers to be used with Sperian hoses only.

## Specifications

Model	Max Face-pieces Allowed	Max Hoods Allowed	Current Draw	Noise Level	Horse Power	PSI Range	Air Delivered	Length	Width	Height	Weight
86610	2	1	12 amp/ 115V @ 60 Hz 14 amp/115V @ 50 Hz 5.9 amp/230V @ 60 Hz 7.4 amp/230V @ 50 Hz	At Pump 90 dB 6' (1.8m) 74 dB 10' (3m) 72 dB	3/4 HP	2-12	1-10 CFM	16 in (40.6cm)	9 in (23 cm)	13 in (33 cm)	53 lbs (24 kg)
86630	3	2	16amp/ 115V @ 60 Hz 8.4 amp/230V @ 60 Hz	At Pump 95 dB 6' (1.8m) 85 dB 10' (3m) 78 dB	1.5 HP	2-12	1-10 CFM	23.5 in (60 cm)	9.5 in (24 cm)	15.5 in (40 cm)	97 lbs (44 kg)

## Power Requirements

86610 3/4HP Pump 8.3 amps; 115V/230V  
86630 1.5 HP Pump 16 amps; 115V/230V

Some electrical motors are equipped with a thermal protector that shuts the motor off automatically when subjected to mechanical or electrical overloads. Ensure that the electrical power source corresponds to the specifications on the pump's motor (see the name plate on the motor).



**Ambient Air Pump  
86630**

## Breathing Air Requirements\*

Model	UNITED STATES OSHA (CGA Grade D)	CANADA CSA Z180.1
Oxygen (O <sub>2</sub> )	19.5% - 23.0%	20% - 22%
Carbon Monoxide (CO)	10 ppm Maximum	5 ppm Maximum
Carbon Dioxide (CO <sub>2</sub> )	10 ppm Maximum	500 ppm Maximum
Hydrocarbons (condensed)	5 mg/m <sup>3</sup> Maximum	Not Applicable
Volatile (hydrocarbon without methane)	Not Applicable	5 ppm Maximum
Nitrogen & other gases	Not Applicable	78% - 80%
Methane	Not Applicable	10 ppm Maximum
Oil, particles condensed	Not Applicable	1 mg/m <sup>3</sup> Maximum
No toxic chemicals at levels that would make the air unsafe to breathe		

\*If using the pump outside the US or Canada, check with local requirements and regulations.

## Major Components of the Ambient Air Pumps

### Pump Major Assemblies

An ambient air pump for breathing air consists of a rotary vane system, inlet & exhaust filter assemblies, pressure gauge, pressure relief valve, electric cord and two or three 3/8" npt male thread connections.

- 86610 Ambient air pump, 3/4 H.P., for use with two tight fitting facepieces or one hood
- 86630 Ambient air pump, 1.5 H.P., for use with three tight fitting facepieces or two hoods

### Replacement Parts

- 86612 Exhaust filter for 86610 and 86630 ambient air pumps
- 86619E Exhaust filter assembly for 86610 (includes filter element P/N 86612)
- 86634 Exhaust filter assembly for 86630 (includes filter element P/N 86612)
- 86611 Intake filter element for 86610 and 86630
- 86619 Intake filter assembly for 86610 (includes filter element P/N 86611)
- 86633 Intake filter assembly for 86630 (includes filter element P/N 86611)
- 86603 Pressure gauge for 86610 and 86630
- 86616 Pressure relief valve for 86610
- 86632 Pressure relief valve for 86630
- 86614 Service kit for 86610 (includes set of 4 vanes, filters and flushing liquid P/N 86690)
- 86631 Service kit for 86630 (includes set of 4 vanes, filters and flushing liquid P/N 86690)
- 86617 Carrying handle for 86610
- 86618 Rubber foot for 86610 and 86630
- 86605S Electric cord with integrated switch for 86610

### Accessories

- 86690 Flushing liquid for 86610 and 86630
- 86613 Universal intake hose kit with 50' of hose, for 86610 and 86630

## Country of Origin:

United States

**For more information or any technical data not included with this Tech Data Sheet, please e-mail us at [hsptechsupport@honeywell.com](mailto:hsptechsupport@honeywell.com) or call 800.873.5242**

## WARRANTY

Honeywell Safety Products warrants the Honeywell Ambient Air Pumps to the original owner to be free from defects in materials and workmanship for a period of one (1) year from the date of original shipment from Honeywell's factory. Honeywell's obligation under this warranty will be, at Honeywell's option, to repair or replace without charge the Honeywell Ambient Air Pumps or any of its components found by Honeywell to have been defective during the warranty period, under the following terms:

1. The warranty claim is made (i) by the owner who purchased the Honeywell Ambient Air Pumps new from Honeywell or an authorized Honeywell Distributor, and (ii) not more than three (3) months after the end of the warranty period.
2. The Honeywell Ambient Air Pumps or component is found by Honeywell to have been defective in normal use and service during the warranty period of one (1) year from the date of purchase by the owner.
3. The Honeywell Ambient Air Pumps or component is returned freight prepaid to Honeywell, either to its factory in Cranston, Rhode Island, or to a Honeywell authorized service center, and is thereafter returned to the owner freight collect.
4. This warranty does not apply (i) to any Honeywell Ambient Air Pumps or component found by Honeywell to have become defective as a result of any accident, alteration, misuse, abuse, or servicing with parts not approved by Honeywell; (ii) to deterioration or aging of any component made of rubber or other elastomer since such components can be adversely affected by undue exposure to heat, sun, water, chemicals, ozone or other deteriorating elements; or (iii) facepiece lens, compressed-air cylinders and parts that become defective through normal use. The decision as to what constitutes normal use shall be made solely by HONEYWELL SAFETY PRODUCTS.
5. To maintain this warranty, the purchaser must perform maintenance and inspections as prescribed in the User's Instructions which shall include prompt replacement or repair of defective parts, and replacement of parts per the maintenance schedule as prescribed in the User's Instructions.

THE OWNER ASSUMES ALL OTHER RISKS, IF ANY, SUCH AS THE RISK OF ANY DIRECT, INDIRECT OR CONSEQUENTIAL LOSS OR DAMAGE ARISING OUT OF THE USE OF, OR INABILITY TO USE, THE PRODUCT. SERVICING HONEYWELL RESPIRATORS WITH PARTS NOT APPROVED BY HONEYWELL WILL VOID THIS WARRANTY AND NIOSH APPROVAL FOR THE RESPIRATOR UNIT. THIS WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED AND MAY NOT BE VARIED OR EXTENDED EXCEPT IN WRITING BY AN AUTHORIZED OFFICIAL OF HONEYWELL SAFETY PRODUCTS

U.S.A	CANADA	LATIN AMERICA	MEXICO
2000 Plainfield Pike Cranston, RI 02921	Montreal tel: 514.351.SAFE (7233) toll free: 888.212.SAFE (7233) fax: 514.355.SAFE (7233)	tel: 514.905.3715 fax: 514.351.2645	tel: (01152) 55.9138.3491 fax: (01152) 55.9138.3492 Mexico Local Only: 01800.788.3074
tel: 800.430.4110 fax: 800.572.6346			