

AHPF Series In-Line Air Heaters



**INSTRUCTION
SHEET**

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GENERAL DESCRIPTION

The AHPF Series heaters are used to heat low flows of air, gas, water, or aqueous solutions. Applications include those where clean air is necessary, as in laboratories and environmental testing areas. The stream of air is heated by passing over an enclosed heated surface rather than directly over resistance elements. This method assures that no foreign matter will enter the stream of flow. Outlet temperatures can be controlled by varying the voltage or flow rate, or by using thermocouples and time proportional temperature controllers. Consult tables below to determine maximum and minimum recommended flow rates.

Calculate the flow rate, temperature rise, or power requirement as follows:

$$\text{Watts} = \text{SCFM} \times \Delta T / 3$$

SCFM = Standard Cubic Feet per Minute

ΔT = Temperature Rise in Degrees F from the Inlet to the Outlet

The cold air entry should always be at the termination end of the heater. Do not run without proper air flow. Controls should be used to prevent operation of the heater without air flow, i.e. and air flow switch. Incoming air should be filtered prior to passing through the heater and be free of moisture, condensation or other contaminants.

Model Number	Volts	Watts	Heated Length mm (inch)	Watts/ Inch [†]	Maximum CFM	Diameter mm (inch)	Weight kg (lb)
120 Vac Models							
AHPF-061	120	400	102 (4)	91	15	152 (6)	0.45 (1.00)
AHPF-081	120	600	152 (6)	94	15	203 (8)	0.54 (1.18)
AHPF-101	120	1000	203 (8)	120	15	254 (10)	0.62 (1.37)
AHPF-121	120	1200	254 (10)	115	15	305 (12)	0.70 (1.55)
20/240 Volt Models**							
AHPF-062	120	100	102 (4)	23	15	152 (6)	0.45 (1.00)
	240	400	102 (4)	91	15		
AHPF-082	120	150	152 (6)	23	15	203 (8)	0.54 (1.18)
	240	600	152 (6)	94	15		
AHPF-102	120	250	203 (8)	30	15	254 (10)	0.62 (1.37)
	240	1000	203 (8)	120	15		
AHPF-122	120	300	254 (10)	29	15	305 (12)	0.70 (1.55)
	240	1200	254 (10)	115	15		

* Indicates watts per inch of heated length.

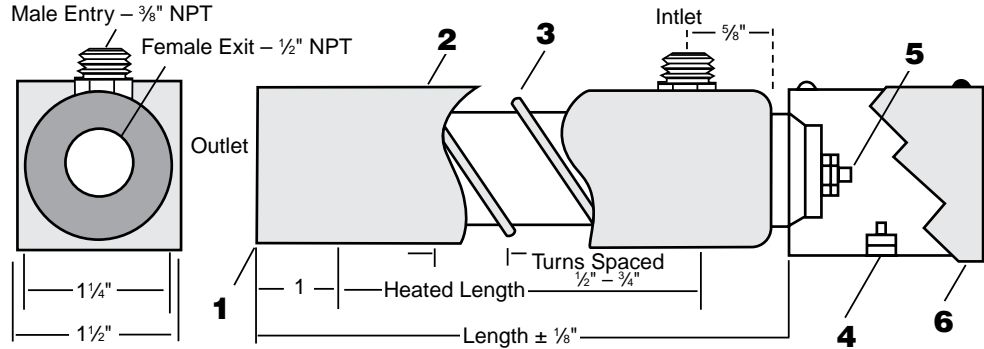
** These air heaters can be operated on either 120 or 240V. Specifications are shown for operation on both 120 and 240V.

Specifications

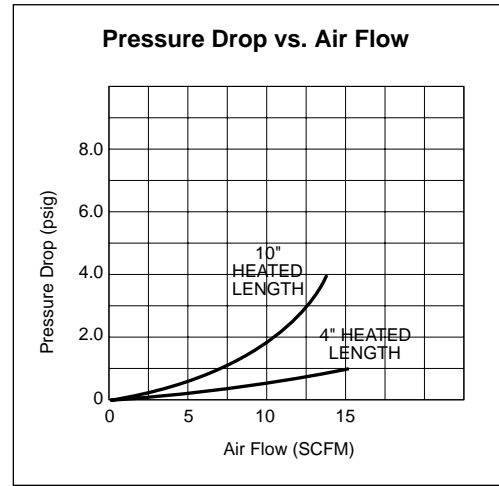
Cross Sectional Area: 0.152 square inches
Pressure Rating: Up to 100 PSIG
Wattage Tolerance: +5,-10% or better at the voltage specified

Construction

1. Heliarc weld
2. Stainless steel sheath
3. Liquid turbulator wire
4. Ground post
5. Post terminals
6. Connection box



Minimum CFM	Maximum Watts/Linear Inch of Heated Length
1	75
2	100
4	150
6	200
8	200
10	250
15	275



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The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC., warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA'S WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product. If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA'S WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY RETURNS**, please have the following information available BEFORE contacting OMEGA.

1. Purchase order number which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords customers the latest technology and engineering.

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FOR **NON-WARRANTY RETURNS**, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA.

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product and
3. Repair instructions and/or specific problems relative to the product.