





Applications

Baking, Drying, Laminating, Metal Working, Packaging, Plastic Welding, Preheating, Sealing, Soldering, Shrink Fitting, Synthetic Fabric Sewing.

Features

- The Air Process heater will provide hot air and gas up to 1000°F(540°C) with infinite control by varying the voltage and air velocity supplied. Units are fitted with a tubing "T" for convenient power lead outlet, while larger diameters can be supplied with post terminals on the sheath for direct electrical connections.
- For easier installation, Hotwatt can supply male or female NPT threaded fittings, hose adapters, flanges, or custom fittings to your specifications.
- Made in U.S.A.

Multiple Heat

Whenever it is necessary to have a single unit incorporate two or more different wattages, Hotwatt will provide air heaters from %" diameter and up with multiple circuits. Some uses of these units include: quick heat-up, standby circuits for maintenance of low temperatures, providing different wattages when there is a wide variation in thermal loads, and replacing more expensive variable powerstats for wattage control.

Tolerances

Wattage tolerances are held to +5, -10% or better at the voltage specified.





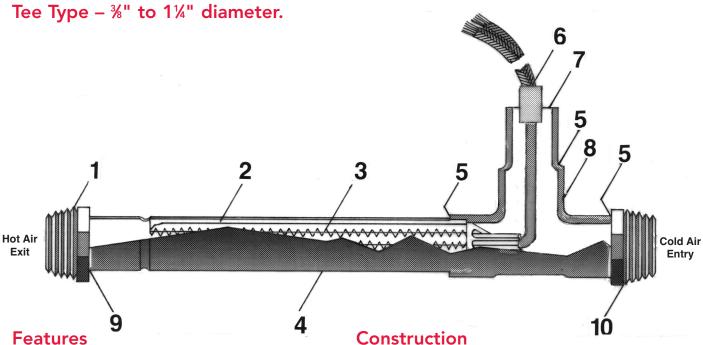
Tee Type — ¾" to 1¼" diameter

Air Heater Selection

- Determine the volume of air or gas(SCFM) you will be heating.
- Determine temperature rise in degrees Fahrenheit($\Delta T^{\circ}F$).
- Calculate wattage required as follows:

Watts =
$$\frac{\text{SCFM x } \Delta \text{T}^{\circ}\text{F}}{3}$$

- Take into consideration the physical size requirements of your application and determine from the specifications chart for each size, the air heater best suited for your application. High watt densities shown in the specifications charts are subject to factory approval due to resistance wire limitations.
- For temperature control, see page 54 and 131-134.



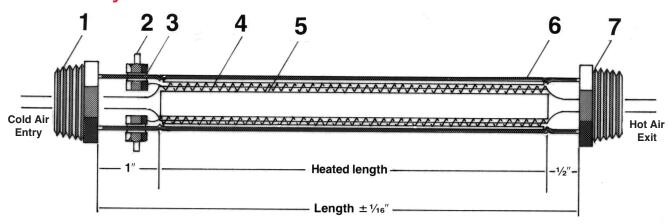
- Exit air temperatures to 1000°F (540°C).
- Standard pressure rating is 80 psig at room temperature.
- May be used with recirculating air up to 250°F (121°C).
- Designed for horizontal use.
- For use with clean, dry air.
- Made in U.S.A.

- 1 Optional stainless steel bushing.
- 2 Ceramic coil support.
- 3 Resistance element.
- 4 Stainless steel sheath.
- 5 Silver solder.
- Fiberglass insulated leads.
- Epoxy seal.
- Copper tee.
- Heliarc weld.
- 10 Optional brass bushing.





Alternate Style - ¾" to 1¼" diameter.



Features

- Low pressure applications.
- Post type terminals.
- Specify 'SF3' for alternate style.

Construction

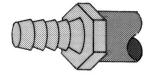
- 1 Optional brass bushing. 5 Ceramic coil support.
- 2 Post terminals. 6 Stainless steel sheath.
- Mica insulation. 7 Optional st. st. bushing.
- 4 Resistance element.

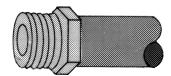
Optional Fittings

HF: Hose adapter (entry only).











How To Order

After determining the wattage required for application, select heater based upon physical space available, maximum SCFM, temperature, and pressure as shown on the following pages.

Tee Type Air Heaters are supplied with 6" (SF2) leads, all other models with Post (SF3) terminals. Longer leads are available upon request. Specify length required if other than standard.

Review stock list for in-stock items.

Specify: catalog number, wattage, voltage, and special features if required. Be sure to specify optional fitting number as suffix to base catalog number.

Example: AH50-5MF/300W120V/SF2-36.

Special Features Available.





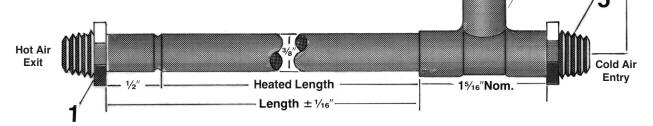
15/16"Nom.

Air Process Heaters

%" Diameter – Horizontal use only

Construction

- 1 Optional stainless steel bushing $\frac{1}{4}$ " NPT male fitting.
- **2** Fiberglass insulated leads.
- 3 Epoxy seal.
- 4 Copper tee.
- 5 Optional brass bushing ¼" NPT male fitting.



Manfactured Items

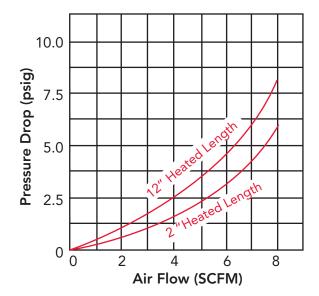
Specifications

Maximum Amperage: 6

Cross Sectional Flow Area: .03 sq. in.
Maximum CFM: 8

CFM	Max. Watts/linear in of heated length
1	60
2	60
4	100
6	150
8	200

Pressure rating: 80 psig.



Sizes

Diameter:	3/8"		
	Heated	Cat. No.	Cat. No. w/Male
Length	Length	w/o fittings	NPT fittings
2"	1½"	AH37-2	AH37-2MF
3"	2½"	AH37-3	AH37-3MF
4"	3½"	AH37-4	AH37-4MF
5"	4½"	AH37-5	AH37-5MF
6"	5½"	AH37-6	AH37-6MF
7"	6½"	AH37-7	AH37-7MF
8"	7½"	AH37-8	AH37-8MF
9"	8½"	AH37-9	AH37-9MF
10"	9½"	AH37-10	AH37-10MF

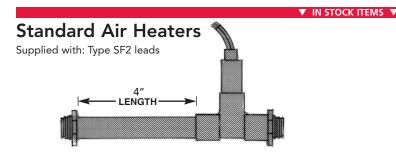
Special Features Available

MF: ¼" NPT male fittings (add MF to catalog number).

HF: Hose adapter on entry and only (add HF to catalog number and specify I.D. of hose).







					Watts/			
Length	Cat. No.	Dia.	Wattage	Voltage	Linear Inch	Weight	Lead Length	Fittings
4"	AH37-4	3/8"	50	120	14	.12	12"	_
4"	AH37-4MF	3/8"	50	120	14	.18	12"	¼" NPT
4"	AH37-4	3/8"	200	120	57	.12	12"	
4"	AH37-4MF	3/8"	200	120	57	.18	12"	1/4" NPT
4"	AH37-4	3/8"	200	240	57	.12	12"	
4"	AH37-4MF	3/8"	200	240	57	.18	12"	14" NPT

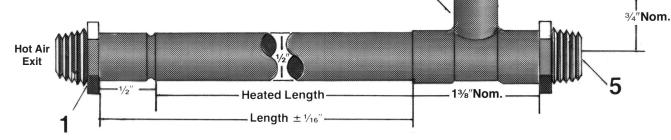




½" Diameter - Horizontal use only

Construction

- 1 Optional stainless steel bushing ¾" NPT male fitting.
- **2** Fiberglass insulated leads.
- **3** Epoxy seal.
- 4 Copper tee.
- 5 Optional brass bushing ¾" NPT male fitting.



▼ Manfactured Items

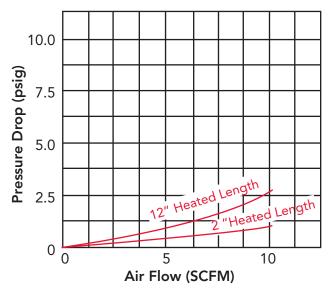
Specifications

Maximum Amperage: 10

Cross Sectional	Flow	Area:	.036	sq.	in.
Maximum CFM:	10				

	Max. Watts/linear in
CFM	of heated length
1	80
2	80
4	100
6	150
8	200
10	250

Pressure rating: 80 psig.



Sizes

	Heated	Cat. No.	Cat. No. w/Male
Length	Length	w/o fittings	NPT fittings
2"	1½"	AH50-2	AH50-2MF
3"	2½"	AH50-3	AH50-3MF
4"	3½"	AH50-4	AH50-4MF
5"	4½"	AH50-5	AH50-5MF
6"	5½"	AH50-6	AH50-6MF
7"	6½"	AH50-7	AH50-7MF
8"	7½"	AH50-8	AH50-8MF
9"	8½"	AH50-9	AH50-9MF
10"	9½"	AH50-10	AH50-10MF

Special Features Available

MF: %" NPT male fittings (add MF to catalog number).

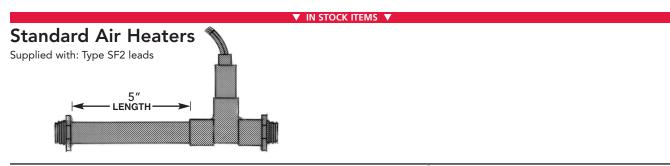
FF: 1/8" NPT female fittings (add FF to catalog number).

HF: Hose adapter on entry end only (add HF to catalog number and specify I.D. of hose).

Web: www.hotwatt.com ■ Email: sales@hotwatt.com







					Watts/			
Length	Cat. No.	Dia.	Wattage	Voltage	Linear Inch	Weight	Lead Length	Fittings
5" 5"	AH50-5 AH50-5MF	½" ½"	100 100	120 120	22 22	.18 .25	12" 12"	%" NPT
5"	AH50-5	1/2"	400	120	88	.18	12"	
5"	AH50-5MF	1/2"	400	120	88	.25	12"	%" NPT
5"	AH50-5	1/2"	400	240	88	.18	12"	
5"	AH50-5MF	1/2"	400	240	88	.25	12"	%" NPT



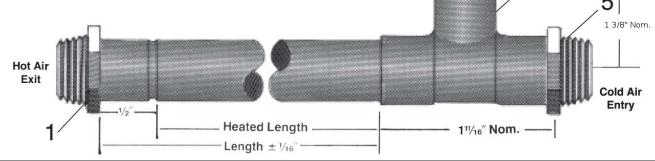


%" Diameter – Horizontal use only

4

Construction

- 1 Optional stainless steel bushing ½" NPT male fitting.
- 2 Fiberglass insulated leads.
- 3 Epoxy seal.
- 4 Copper tee.
- 5 Optional brass bushing ½" NPT male fitting.



▼ Manfactured Items

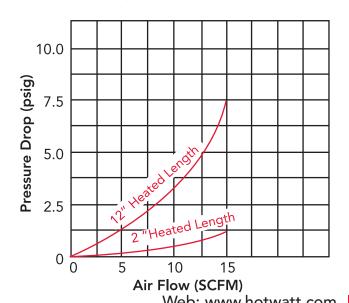
Specifications

Maximum Amperage: 15

Cross	Sect	ional	Flow	Area:	.072	sq.	in.
Maxin	num	CFM:	15				

maximum or m. 10					
CFM	Max. Watts/linear in of heated length				
1	100				
2	100				
4	100				
6	150				
8	200				
10	250				
15	375				

Pressure rating: 80 psig.



Sizes

Diameter	: %"		
	Heated	Cat. No.	Cat. No. w/Male
Length	Length	w/o fittings	NPT fittings
3"	2½"	AH62-3	AH62-3MF
4"	3½"	AH62-4	AH62-4MF
5"	4½"	AH62-5	AH62-5MF
6"	5½"	AH62-6	AH62-6MF
7"	6½"	AH62-7	AH62-7MF
8"	7½"	AH62-8	AH62-8MF
9"	8½"	AH62-9	AH62-9MF
10"	9½"	AH62-10	AH62-10MF
12"	11½"	AH62-12	AH62-12MF

Special Features Available

MF: ½" NPT male fittings (add MF to catalog number).

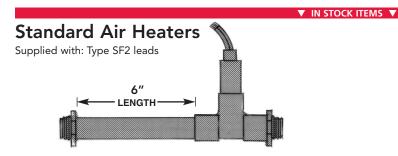
HF: Hose adapter on entry and only (add HF to catalog number and specify I.D. of hose).

SF-28: Three Phase

SF-29: Multiple Heat circuits — Specify wattages







					Watts/			
Length	Cat. No.	Dia.	Wattage	Voltage	Linear Inch	Weight	Lead Length	Fittings
6"	AH62-6	5/8"	165	120	30	.35	12"	
6"	AH62-6MF	5/8"	165	120	30	.70	12"	½" NPT
6"	AH62-6	5/8"	650	120	118	.35	12"	
6"	AH62-6MF	5/8"	650	120	118	.70	12"	½" NPT
6"	AH62-6	5/8"	650	240	118	.35	12"	
6"	AH62-6MF	5/8"	650	240	118	.70	12"	½" NPT

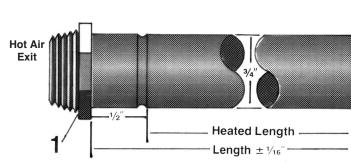


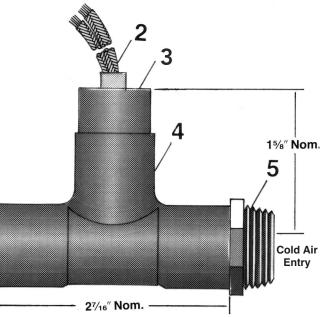


3/4" Diameter - Horizontal use only

Construction

- Optional stainless steel bushing ¾" NPT male fitting.
- Fiberglass insulated leads.
- 3 Epoxy seal.
- Copper tee.
- Optional brass bushing ¾" NPT male fitting.





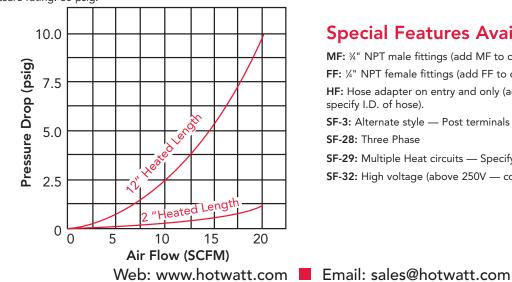
Specifications

Maximum Amperage: 20

Cross Sectional Flow Area: .126 sq. in.

Maximum CFM: 20	
CFM	Max. Watts/linear in of heated length
1	120
2	120
4	120
6	150
8	200
10	250
15	375
20	500

Pressure rating: 80 psig.



Sizes

Diameter: ¾"

	Heated	Cat. No.	Cat. No. w/Male
Length	Length	w/o fittings	NPT fittings
3"	2½"	AH75-3	AH75-3MF
4"	3½"	AH75-4	AH75-4MF
5"	4½"	AH75-5	AH75-5MF
6"	5½"	AH75-6	AH75-6MF
7"	6½"	AH75-7	AH75-7MF
8"	7½"	AH75-8	AH75-8MF
9"	8½"	AH75-9	AH75-9MF
10"	9½"	AH75-10	AH75-10MF
12"	11½"	AH75-12	AH75-12MF

Special Features Available

MF: ¾" NPT male fittings (add MF to catalog number).

FF: ¼" NPT female fittings (add FF to catalog number).

HF: Hose adapter on entry and only (add HF to catalog number and specify I.D. of hose).

SF-3: Alternate style — Post terminals

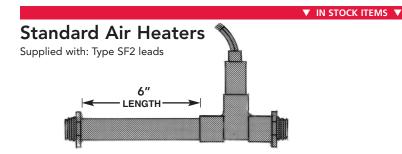
SF-28: Three Phase

SF-29: Multiple Heat circuits — Specify wattages

SF-32: High voltage (above 250V — consult factory)







					Watts/			
Length	Cat. No.	Dia.	Wattage	Voltage	Linear Inch	Weight	Lead Length	Fittings
6"	AH75-6	3/4"	190	120	34	.43	12"	
6"	AH75-6MF	3/4"	190	120	34	.68	12"	¾" NPT
6"	AH75-6	3/4"	750	120	136	.43	12"	
6"	AH75-6MF	3/4"	750	120	136	.68	12"	34" NPT
6"	AH75-6	3/4"	750	240	136	.43	12"	
6"	AH75-6MF	3/4"	750	240	136	.68	12"	34" NPT



23/16" Nom.



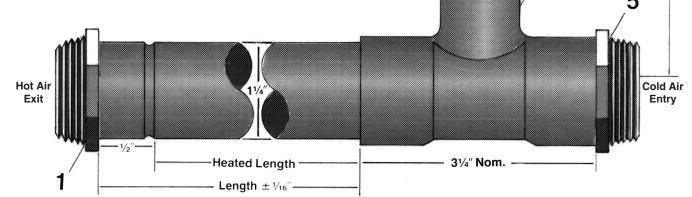
Air Process Heaters

1¼" Diameter - Horizontal use only

4

Construction

- 1 Optional stainless steel bushing 1½" NPT male fitting.
- **2** Fiberglass insulated leads.
- **3** Epoxy seal.
- 4 Copper tee.
- **5** Optional brass bushing 1½" NPT male fitting.



Specifications

Maximum Amperage: 25

Cross	Sectional	Flow	Area:	.348	sq.	in.
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Maximum CFM: 50	
CFM	Max. Watts/linear in of heated length
	or neated length
1	200
2	200
4	200
6	200
8	200
10	250
15	375
20	500
25	625
30	750
35	875
40	1000
50	1250

Pressure rating: 80 psig.

Special Features Available

MF: 11/4" NPT male fittings (add MF to catalog number).

FF: ½" NPT female fittings (add FF to catalog number).

HF: Hose adapter on entry and only (add HF to catalog number and specify I.D. of hose).

SF-3: Alternate style — Post terminals

SF-28: Three Phase

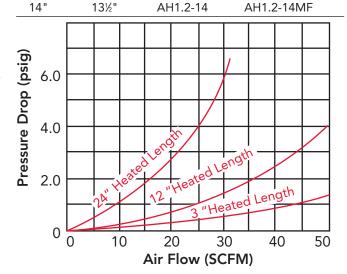
SF-29: Multiple Heat circuits — Specify wattages

SF-32: High voltage (above 250V — consult factory)

Sizes

Diameter: 11/4"

Cat. No. w/Male Heated Cat. No. Length w/o fittings **NPT fittings** Length AH1.2-4 AH1.2-4MF 4" 3½" 5" 4½" AH1.2-5 AH1.2-5MF 6" 5½" AH1.2-6 AH1.2-6MF 7" 6½" AH1.2-7 AH1.2-7MF 8" 7½" AH1.2-8 AH1.2-8MF 9" 8½" AH1.2-9 AH1.2-9MF 10" 9½" AH1.2-10 AH1.2-10MF 12" 11½" AH1.2-12 AH1.2-12MF

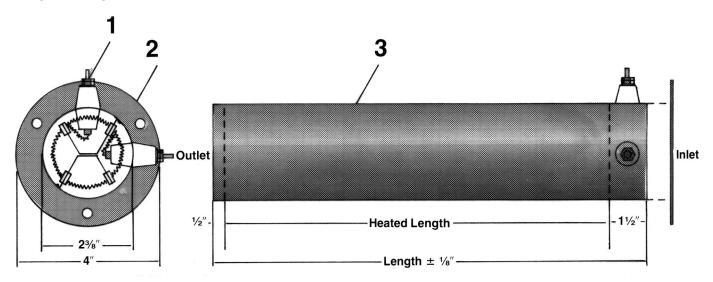






Maximum Flow

U.L. Recognized - E56973 CSA Certified - 016386-0-000



Features

- This Maximum Flow Air Heater design is encased within a 2%"
 O.D. tube with a cross frame heating element for minimum resistance to air flow. It has a practical operating range of up to 200CFM with temperatures to to 600°F (315°C).
- For easier mounting. Hotwatt can supply a 4"O.D. mounting flange on one or both ends.
- The heater is available in either aluminum or stainless steel.
- Its design features include a nickel-chrome heating element insulated by ceramic beads on a stainless steel support frame, firmly secured to the inside of the tube.
- Designed for high volume and moderate temperature.
- Low pressure for use with blowers and recirculating air.
- Made in U.S.A.

Specifications

Maximum Amperage: 15

Cross Se	ctional Flow Area: 3.5 so	դ. in.	
Aluminur	m Sheath	Stainles	s Steel Sheath
	Max. Watts/linear in.		Max. Watts/linear in
CFM	of heated length	CFM	of heated length
1	150	1	150
2	150	2	150
4	150	4	150
6	150	6	150
8	150	8	150
10	150	10	150
20	175	20	250
30	275	30	375
40	350	40	475
50	450	50	600
60	525		
	·		

Applications

Baking, Drying, Packaging, and preheating.

Construction

- Post Terminals.
- **2** Optional flanges–4"O.D. with three 9/32" diameter holes equally spaced on 3.250 circle–one or both ends.

▼ Manfactured Items **▼**

3 Standard aluminum sheath – optional stainless steel sheath.

Sizes

	Heated		Cat. No. 4" O.D. flange at entry
Length	Length	Cat. No.	end only
6"	4"	MA0-6	MA0-6F1
8"	6"	MA0-8	MA0-8F1
10"	8"	MA0-10	MA0-10F1
12"	10"	MA0-12	MA0-12F1
14"	12"	MA0-14	MA0-14F1
18"	16"	MA0-18	MA0-18F1
24"	22"	MA0-24	MA0-24F1

• 3 Phase not available in this unit.

Consult factory for:

Current ratings above 15 amps.

Wattages above 300 watts per linear inch. Longer lengths and larger sizes available.

Special Features:

Add suffix to catalog number

F1: Optional flange inlet end.

F2: Optional flanges each end.

SF37: Stainless steel sheath.



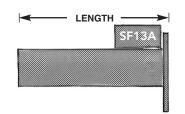


Maximum Flow

▼ IN STOCK ITEMS *

Maximum Flow Heaters: with standard entry flange.

Supplied with: Type SF3 terminals. Type SF13A enclosure.

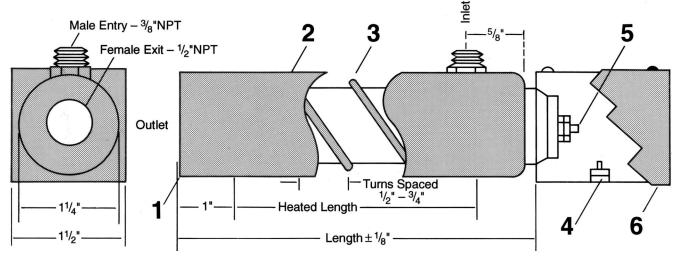


					Watts/		
Length	Cat. No.	Dia.	Wattage	Voltage	Linear Inch	Weight	Terminals
6" 10"	MA0-6F1 MA0-10F1	2¾" 2¾"	600 1000	120 120	150 125	1.00 1.25	S&N w/enclosure S&N w/enclosure
12"	MA0-12F1	2%"	375	120	38	1.50	S&N w/enclosure
12"	MA0-12F1	2%"	1500	240	150	1.50	S&N w/enclosure
14"	MA0-14F1	2%"	500	120	42	1.75	S&N w/enclosure
14"	MA0-14F1	2%"	2000	240	166	1.75	S&N w/enclosure



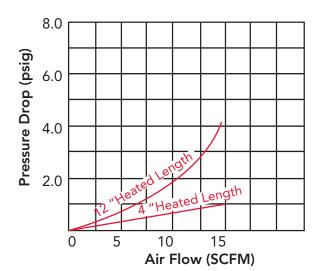


Pure Flow



Features

- The Pure Flow Air Heater is designed for applications where clean air is necessary, as in laboratories and environmental testing areas.
- This heater is unique in supplying non-contaminated heated air. The stream of air is heated by passing over an enclosed heated surface rather than directly over exposed resistance elements. This method assures that no foreign matter will enter the stream
- Constructed of 316 Stainless Steel.
- It has an operating range of up to 15 CFM with temperatures to
- For temperature control, see page 54 and 131-134.
- Pressure rating: 100 psig.
- Made in U.S.A.



Construction

- Heliarc weld.
- Stainless steel sheath.
- **3** Air turbulator wire.
- Ground post.
- 5 Post terminals.
- Connection box. 2 ¾" x 1½" x 1½". NEMA1.

Specifications

Maximum Amperage: 20

Cross Sectional Flow Area: .152 sq. in.

Maximum CFM: 15

CFM	Max. Watts/linear in of heated length
1	75
2	100
4	150
6	200
8	200
10	250
15	275

Pressure rating: 100 psig.

Length	Heated Length	Catalog No.
6"	4"	PFO-6
8"	6"	PFO-8
10"	8"	PFO-10
12"	10"	PFO-12
18"	16"	PFO-18
24"	22"	PFO-24
	6" 8" 10" 12" 18"	6" 4" 8" 6" 10" 8" 12" 10" 18" 16"





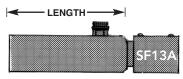
Pure Flow

▼ IN STOCK ITEMS ▼

Pure Flow Air Heaters

Supplied with: Type SF3S terminals Type SF13A enclosure

					Watts/		
Length	Cat. No.	Dia.	Wattage	Voltage	Linear Inch	Weight	Terminals
6" 6"	PFO-6 PFO-6	1¼" 1¼"	100 400	120 120	23 91	1.00 1.00	S&N w/enclosure S&N w/enclosure
6"	PFO-6	1¼"	400	240	91	1.00	S&N w/enclosure
8"	PFO-8	1¼"	150	120	23	1.18	S&N w/enclosure
8"	PFO-8	1¼"	600	120	94	1.18	S&N w/enclosure
8"	PFO-8	1¼"	600	240	94	1.18	S&N w/enclosure
10"	PFO-10	1¼"	250	120	30	1.37	S&N w/enclosure
10"	PFO-10	1¼"	1000	120	120	1.37	S&N w/enclosure
10"	PFO-10	1¼"	1000	240	120	1.37	S&N w/enclosure
12"	PFO-12	11/4"	300	120	29	1.55	S&N w/enclosure
12"	PFO-12	1¼"	1200	120	115	1.55	S&N w/enclosure
12"	PFO-12	1¼"	1200	240	115	1.55	S&N w/enclosure

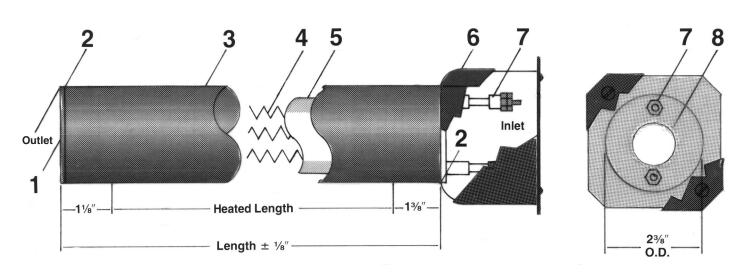






Heavy Duty-Horizontal use only





Features

- This high temperature, moderate volume air heater is principally designed for continuous high temperature operations up to 1200°F (650°C), while supplying a good flow rate up to and in excess of 50 CFM.
- This heater is especially suited for vacuum and pressure environments, as well as other applications where a heavy duty construction is desirable.
- Its design features include a nickel chromium heating element supported inside of a high quality ceramic core. Its outside sheath is stainless steel with heliarc welded and fittings. Its terminals are a high quality ceramic-to-metal especially designed for heavy loads and high pressures.
- Designed for moderate volume and high temperatures.
- Pressure rating is 100 psig at room temperature. Higher pressure ratings are available. Consult factory.
- For temperature control, see page 54 and pages 131-134.
- Made in U.S.A.

Construction

- 1 1" NPT female outlet.
- 2 Heliarc weld.
- 3 Stainless steel sheath.
- 4 Resistance coil.
- 5 Ceramic coil support.
- 6 Connection box 4" Octagonal-Nema 1.
- Ceramic to metal seal with terminals.
- 8 ½" NPT female air inlet.





Heavy Duty

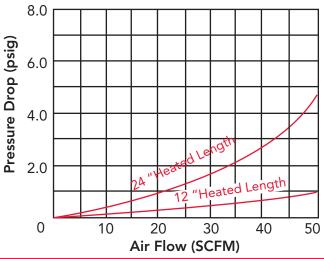
Specifications

Maximum Amperage: 30

Cross Sectional Flow Area: .	69 sq. in.
CFM	Max. Watts/linear in of heated length
1	150
2	150
4	150
6	150
8	150
10	150
15	200
20	250
25	300
30	350
35	400
40	475
45	525
50	575
55	625
D .: 400 :	·

Pressure rating: 100 psig.

Preasure Drop vs. Air Flow



Size

Lengths are available from 6"-36". Standard entry is $\frac{1}{2}$ " NPT female and the standard exit is 1" NPT female.

▼ Manfactured Items ▼						
Size						
	Length	Heated Length	Catalog No.			
	6"	3½"	HA2-6			
	8"	5½"	HA2-8			
	10"	7½"	HA2-10			
	12"	9½"	HA2-12			
	18"	15½"	HA2-18			
	24"	21½"	HA2-24			

Special Features

SF-28 Three Phase

SF-29 Multiple Heat Circuits - Specify Wattages

SF-32 High Voltage

Consult Factory For:

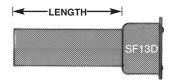
Lengths longer than those listed Current ratings above 30 amps.

✓ IN STOCK ITEMS ▼

Heavy Duty Air Heaters

Supplied with: Type SF3S terminals Type SF13D enclosure

	Watts/									
Length	Cat. No.	Dia.	Wattage	Voltage	Linear Inch	Weight	Terminals			
12"	HA2-12	2%"	375	120	40	7.0	S&N w/enclosure			
12"	HA2-12	23/8"	1500	240	158	7.0	S&N w/enclosure			
24"	HA2-24	2¾"	750	120	35	12.5	S&N w/enclosure			
24"	HA2-24	2¾"	3000	240	140	12.5	S&N w/enclosure			







Temperature Sensing

Thermocouple fittings are available for standard air heaters with male fittings 5/8" diameter and larger as well as Heavy Duty and Pure Flow types. The fittings are threaded into the exit end of the air heater and accept coupling type probes. They are designed to sense the exit air temperature. See pages 131 through 134 for details on probes and temperature controls.

Fittings - Stainless Steel

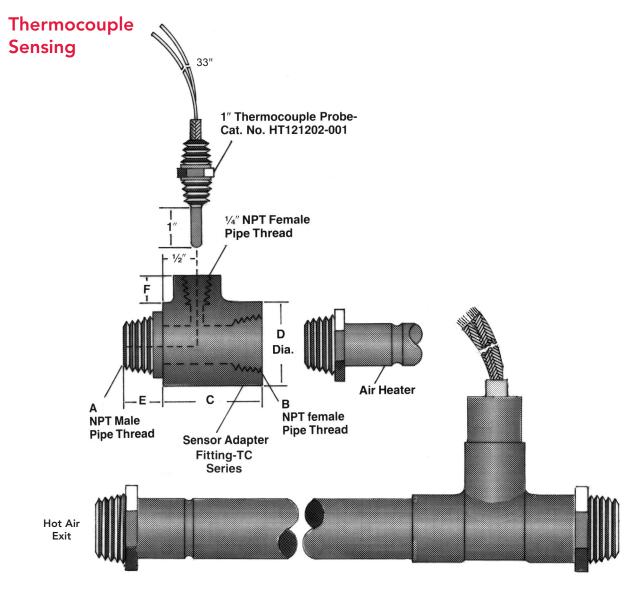
Cat.No.	A-NPT	B-NPT	С	D	E	F
TC-5	1/2"	1/2"	1%"	1%"	.562"	%6 "
TC-75	3/4"	3/4"	1½"	1¾"	.625"	7/16"
TC-1	1"	1"	1¾"	1%"	.687"	3/8"
TC-125	1¼"	1¼"	2"	2"	.719"	1/4"

Selection Chart

Heater Type	Fitting
%" dia.	TC-5
¾" dia.	TC-75
1¼" dia.	TC-125
Heavy Duty	TC-1
Pure Flow	TC-5

How To Order

Example: TC-5/HT-121202-001



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