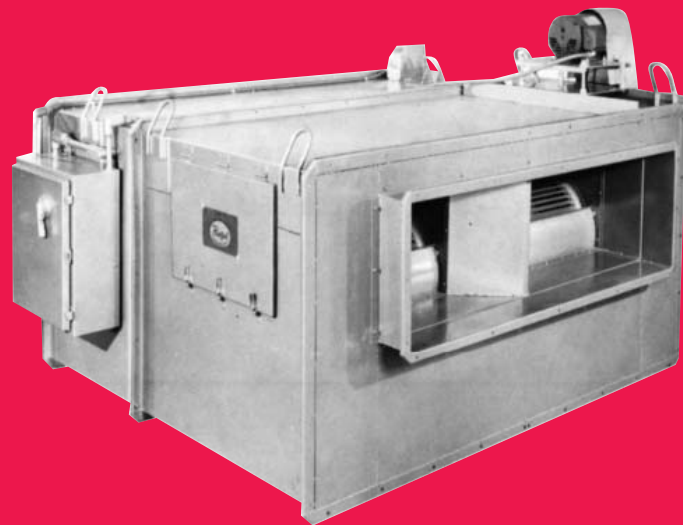
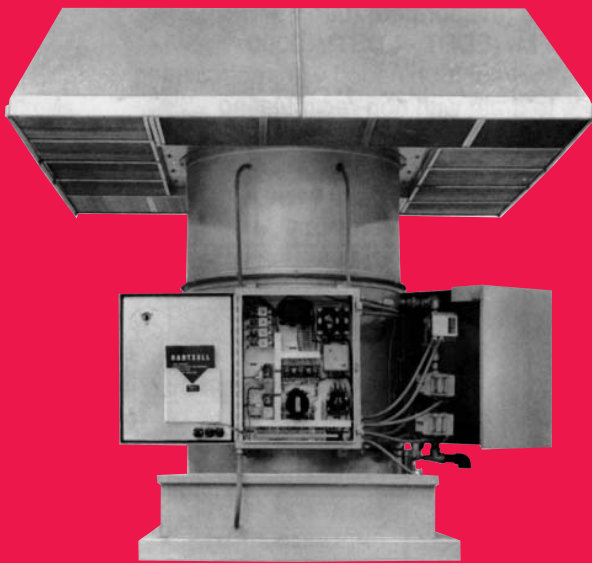
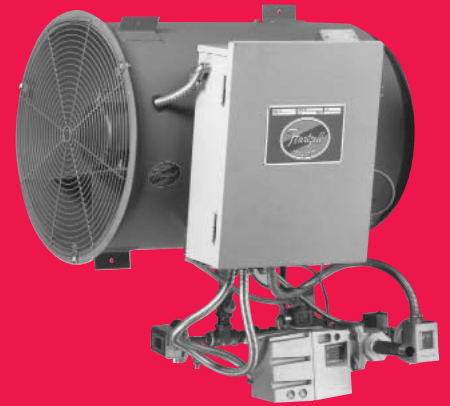


Tempered Air Heating Equipment

Series	GFR SFC 78V	GMC SMC 79	GMP SMP 811	SAH 77	SCH 78H
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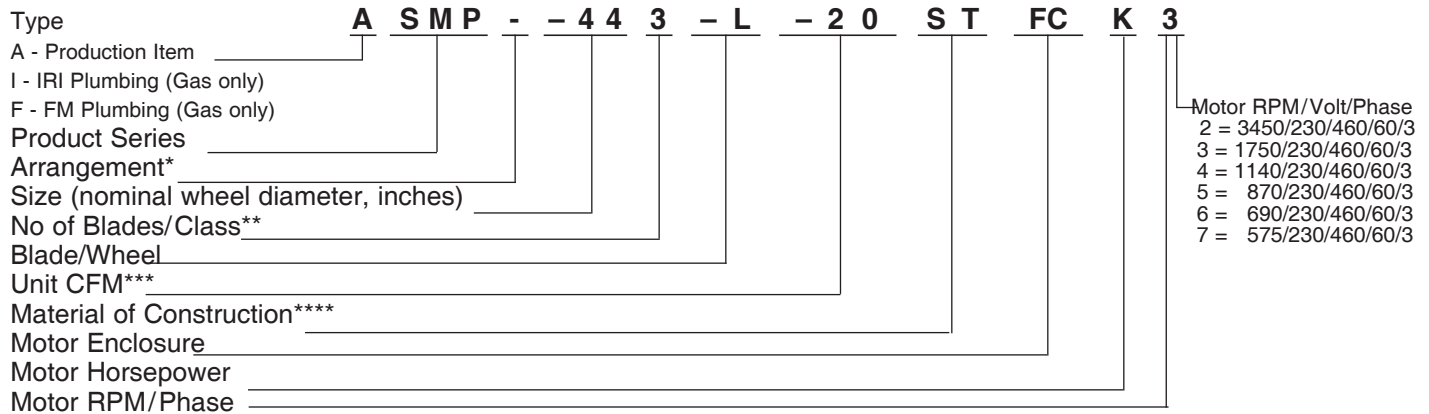
HARTZELL®

Hartzell Fan, Inc., Piqua, Ohio 45356
www.hartzellfan.com

Index

Hartzell Model Code Explanation	Page 2	Series 811 Gas Shaft Heater	Page 23
Pictorial Table of Contents	Page 3	Series SFC Centrifugal Steam Heater	Pages 24-25
Tempered Air Heating Equipment Function	Page 4	Series SMP Propeller Fan Steam Unit	Pages 26-29
Installation Configurations	Page 5	Series SMC Centrifugal Steam Unit	Pages 30-31
Series GFR FC Centrifugal Recirculation Gas Unit....	Pages 6-9	Series SAH (Axial) and SCH (Centrifugal) Face & Bypass.....	Pages 32-35
Series GMP (Propeller) and GMC (Centrifugal) Gas Unit	Pages 10-18	Series 77 Steam Unit Heaters	Pages 36-37
Series 78H and 78V Econo Gas Units.....	Pages 19-20	Options and Accessories	Pages 38-39
Series 79 Gas Fired Door Heater.....	Pages 21-22		

Hartzell Model Code Explanation



Motor Horsepower

Horsepower	1	1 1/2	2	3	5	7 1/2	10	15	20	25	30	40	50	60	75	100	125	150	200
Code Letter	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

How To Use Model Code Index:

Example –

Assume a performance of 2,000,000 BTU/Hr and 20,000 CFM at 0" Ext. S.P. at standard conditions, with filters is required. Reading the Rating Table on Page 14, we find a Series SMP Steam Make-Up Air Propeller Fan Assembly with a 44" fan at the required performance. The model code can be constructed as follows:

Type is Production (code A), Series is SMP, Size is 44, Number of blades is 3, Blade code is L. The fan is made of steel (code ST) with a totally enclosed fan cooled motor (code FC), motor HP is 3 (code K) and RPM/Voltage is 1750/460/60/3 (code 3).

Notes:

- * 3 = Drive arrangement for DWDI or FC, belt drive centrifugal fans, AMCA standard 99-2404-78
 – = Close couple belt drive, propeller fans
- ** 1 = Centrifugal fan, Class I, per AMCA standard 99-2408-69, product definitions varies = Propeller fan – number of blade for propeller
- *** Airflow delivery in thousands @ standard density (0.075 lbs/ft³)
- **** ST = Steel
 GL = Galvanized Steel
 GN = Galvannealed Steel

All other informational fields must be filled with hyphens/dashes (–) if they are not applicable to the fan being considered.

This bulletin lists Hartzell's complete line of Make-Up Air Units and accessories. More than 70 Hartzell offices can provide specific performance and installation data to meet your requirements. Call your Hartzell representative for assistance. Visit our website (www.hartzellfan.com) or call toll-free for the name of your Hartzell representative . . .

1-800-336-3267



Series 79 Gas Fired Door Heater



Heating has always been a problem in plants, warehouses, factories, etc., when overhead doors are frequently opened and closed. The rushing in of cold air when the doors are open chills personnel and lowers their working efficiency.

Normal heating systems, such as unit heaters or duct systems, are not capable of handling this problem. Furthermore, an extra, sudden load is thrown on the heating system and as a result, heating costs rise substantially.

This bothersome and costly problem can be solved by the Hartzell Automatic Door Heater which directs a blast of high velocity heated air toward the door opening. As a result of the turbulence created, the hot air mixes with the cold air, and the "bite" of the cold air is eliminated.

The Hartzell unit works whenever the door is raised far enough to trip the switch. The fan starts, after a brief pre-purge time period, and safety function check, a high velocity stream of heated air is blasted into the cold entering air.

Hartzell Automatic Door Heaters come equipped with Duct Axial propellers designed for high velocity at medium noise levels.

These heaters can be mounted in either horizontal or vertical position or at any angle in between. Every Hartzell Automatic Door Heater is completely assembled and tested at the factory and is shipped ready for installation. Generally, the only installation requirement is connecting a unit to the electrical and fuel supply systems.

Standard Features

- Electronic Flame Safeguard with LED Status Indicating Lights
- Magnetic Starter
- Control Transformer
- Ignition Transformer
- Sparktrode
- Interrupted Pilot
- Main Fuel Safety Valve
- High & Low Gas Pressure Switches*
- High Temperature Limit Switch
- Remote Station for Floor Mounting with Status Indicating Lights and Summer/Off/Winter Selector Switch
- Door Switch
- Air Flow Switch
- Inlet Guard
- 12 Ga. Hot Rolled Steel Housing
- Finish is Air-Dry Alkyd Enamel Applied over Phosphatized Steel
- Combination F.M. & I.R.I. Models Available through the HRS (Hartzell Rotating Stock) Program.

* I.R.I. units only

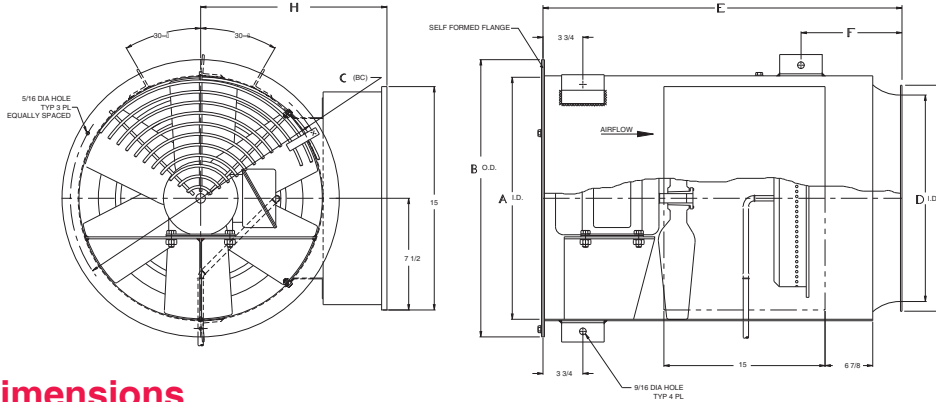
** F.M. units only

Hartzell Automatic Door Heaters are designed for heating open doorways only... they are not to be used for general-purpose plant heating.

Built to meet I.R.I. or F.M. Standards



Design and Installation Options



Principal Dimensions

Size	A	B	C	D	E	F	G	H
22	22 ^{7/8}	26 ^{1/16}	24 ^{1/2}	20	32 ^{11/16}	8 ^{7/16}	21 ^{1/2}	17 ^{1/2}
24	24 ^{7/8}	28 ^{1/16}	26 ^{5/8}	22	34 ^{3/16}	9 ^{15/16}	24	18 ^{1/2}

NOTE: Specifications are subject to change. Certified prints are available.

Rating Table

Model No.	Code No. Size	Motor H.P.	Fan RPM	CFM	Input BTU	Outlet Velocity	Final Temp. 70° Ent. Air	Temp. Rise	Inlet Gas Pressure
DH22	022	1 ^{1/2}	1750	6,500	700,000	3,000	169°	99°	5"
		1 ^{1/2}	1750	6,500	765,000	3,000	179°	109°	6"
		1 ^{1/2}	1750	6,500	820,000	3,000	187°	117°	7"
DH24	024	2	1750	7,900	865,000	3,000	171°	101°	6"
		2	1750	7,900	930,000	3,000	179°	109°	7"
		2	1750	7,900	990,000	3,000	186°	116°	8"

NOTE: Based on Natural Gas Specific Gravity 0.6
1000 BTU per cu.ft.
Shipping weights: DH22, 350 lbs.; DH 24, 400 lbs.

Automatic Door Heater Sizing Information

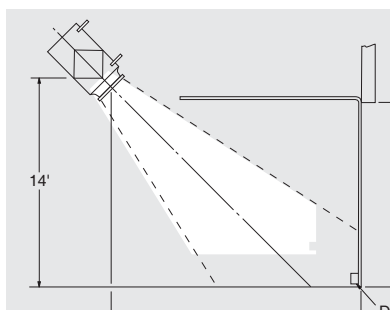
Door Size	Unit	No. of Units	Input BTU per Unit
12 x 12	DH22	1	750,000
12 x 14	DH22	1	820,000
12 x 16	DH24	1	930,000
14 x 16	DH22	2	700,000
16 x 18	DH24	2	865,000
16 x 20	DH24	2	930,000

For door sizes not covered, determine size and number of units on basis of approximately 5500 BTU/sq. ft. of door opening.

NOTE: For proper application of Hartzell Automatic Door Heaters, the maximum square foot opening should not exceed 360 sq. ft.

Overhead Door

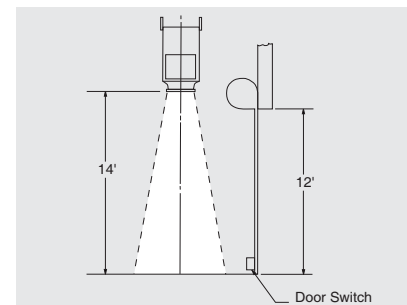
Mounted at a 45° or 30° angle, the Hartzell Automatic Door Heater directs a flow of hot air to the floor area just inside the doorway. The door switch turns on the heater when the door is opened.



Roll Top Door

Alternate vertical mounting of the Hartzell Automatic Door Heater may also be used with roll top or straight lift doors, directing a flow of hot air to the floor just inside the door opening.

NOTE: It is recommended the door switch be mounted 24" from floor level.



Hartzell Warranty

LIMITED WARRANTIES

Hartzell represents to Buyer that any goods to be delivered hereunder will be produced in compliance with the requirements of the Fair Labor Standards Act of 1938 as amended.

Hartzell also warrants to Buyer its goods to be free from defects in workmanship and material under normal use and service for one (1) year after tender of delivery by Hartzell, plus six (6) months allowance for shipment to approved stocking dealers & distributors. No warranty extends to future performance of goods and any claims for breach of warranty or otherwise accrues upon tender of delivery.

The foregoing constitute Hartzell's sole and exclusive warranties in lieu of all other warranties, whether written, oral, express, implied or statutory.

LIMITATION OF LIABILITY FOR BREACH OF WARRANTY

Hartzell's obligation for any breach of warranty is limited to repairing or replacing, at its option, without cost to Buyer at its factory any goods which shall, within such a warranty period, be returned to it with transportation charges prepaid, and which its examination shall disclose to its satisfaction to have been defective. Any request for repair or replacement should be directed to Hartzell Fan, Inc., P.O. Box 919, Piqua, Ohio 45356. Hartzell will not pay for any repairs made outside its factory without its prior written consent. This does not apply to any such Hartzell goods which have failed as a result of faulty installation or abuse, or incorrect electrical connections or alterations, made by others, or use under abnormal operating conditions or misapplication of the goods.

LIMITATION OF LIABILITY

To the extent the above limitation of liability for breach of warranty is not applicable, the liability of Hartzell on any claim of any kind, including negligence, for any loss or damage arising out of or connected with, or resulting from the sale and purchase of the goods or services covered by these Terms and Conditions of Sale or from the performance or breach of any contract pertaining to such sale or purchase or from the design manufacture, sale, delivery, resale, installation, technical direction installation, inspection repair, operation or use of any goods or services covered by these Terms and Conditions shall, in no case exceed the price allocable to the goods or services which gave rise to the claim and shall terminate one year after tender of delivery of said goods or services.

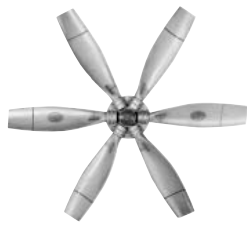
In no event whether as a result of breach of contract, or warranty or alleged negligence, defects incorrect advice or other causes, shall Hartzell be liable for special or consequential damages, including, but not limited to, loss of profits or revenue, loss of use of the equipment or any associated equipment, cost of substitute equipment, facilities or services, down time costs, or claims of customers of the Buyer for such damages. Hartzell neither assumes nor authorizes any person to assume for it any other liability in connection with the sale of its goods or services.

NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS.

HARTZELL DOES NOT WARRANT THAT SAID GOODS ARE OF MERCHANTABLE QUALITY OR THAT THEY ARE FIT FOR ANY PARTICULAR PURPOSE. THERE IS NO IMPLIED WARRANTY OF MERCHANTABILITY AND THERE IS NO IMPLIED WARRANTY OF FITNESS.



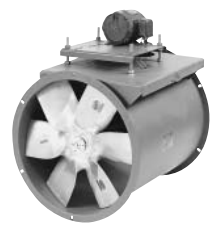
Propeller Fans



Cooling Tower &
Heat Exchanger Fans



Duct Fans



Duct Axial Fans



Vaneaxial Blowers



Cool Blast & Utility Fans



Steel Centrifugal Blowers



Roof Ventilators -
Steel & Fiberglass



Heating Equipment -
Gas & Steam



Fiberglass
Axial Flow Fans



Fiberglass
Centrifugal Blowers



Marine -
Mine Duty Blowers

Hartzell Fan, Inc., Piqua, Ohio 45356 • Plants in Piqua, Ohio and Portland, Indiana.