



ATEX



# Atex/IECEx Approved Explosion-Proof Unit Heater for Hazardous Locations



1 800 463-7043 • [www.ouellet.com](http://www.ouellet.com)



The AHX series of explosion-proof unit heaters is designed to meet the most demanding requirements of heavy industry. The harsh operating conditions of this industry require heating equipment that is safe, reliable, dependable, and available when you need it. AHX unit heaters are designed to provide primary or supplementary heating for comfort or freeze protection in areas that are classified as hazardous locations (Gas atmosphere).

### **Designed for hazardous locations!**



All Ouellet Canada AHX models are CE Marked and certified for hazardous locations to meet ATEX and IECEx requirements. The three sizes of AHX heaters include our high performance liquid-to-air heat-exchanger cores that are available in fourteen 400V, 50 Hz model choices to meet your specific heat output requirements at supply voltages between 380V to 440V and fourteen 480V, 60 Hz models to accommodate North American equipment used in Europe requiring ATEX and IECEx approval.

The rugged and versatile AHX heater incorporates a high quality immersion heater, high performance fan and motor assembly, a sturdy 2 mm (14-gauge) steel cabinet with epoxy/polyester powder coating for corrosion resistance, large control enclosure with an extra port for convenient wiring of an external room thermostat, and enclosure O-rings to minimize moisture ingress. Standard safety features include two temperature high limits and a pressure relief device.

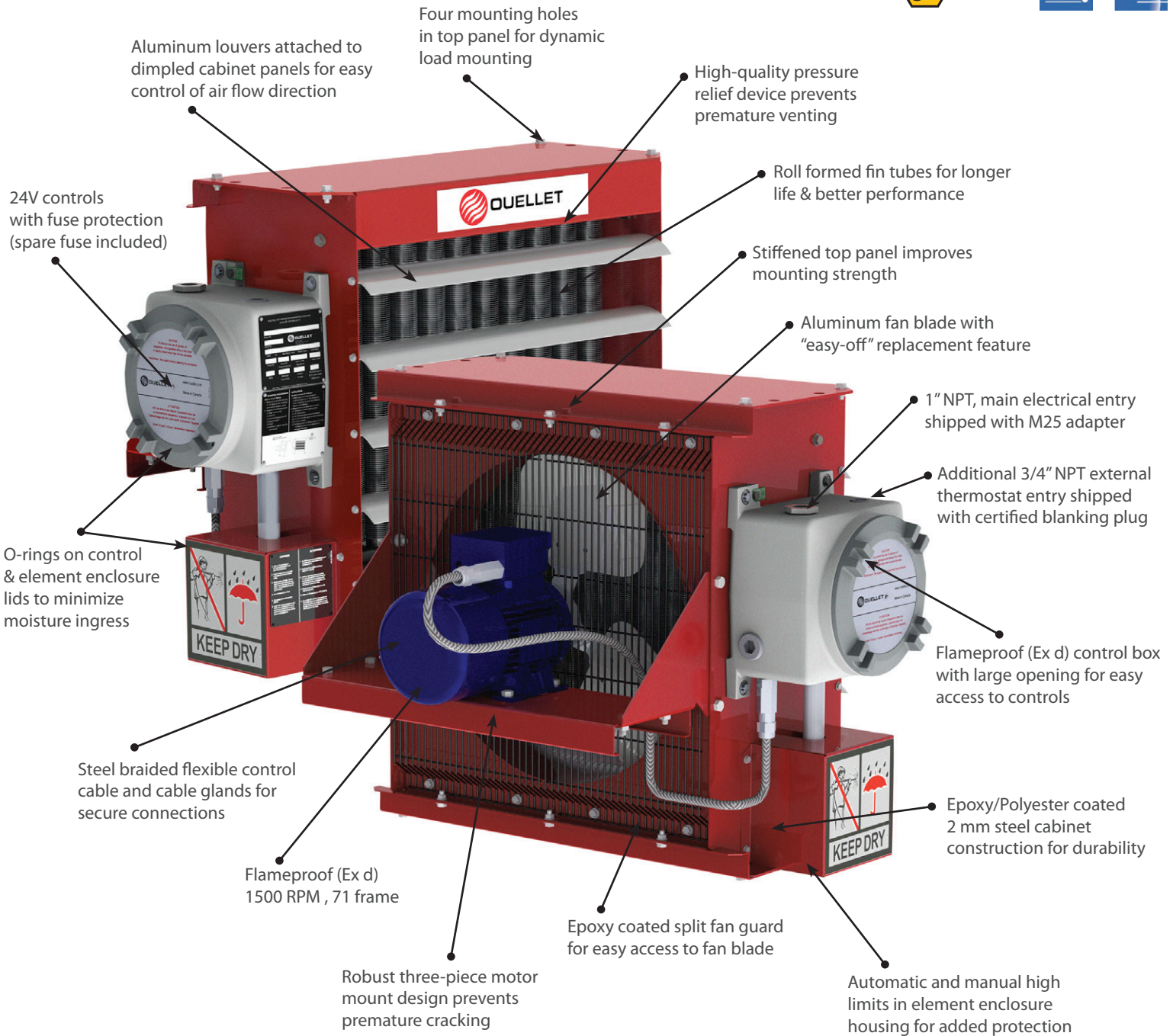
AHX heaters are suitable for a wide variety of applications that include but are not limited to oil & gas drilling rigs, petrochemical facilities, refineries, chemical storage and handling facilities, paint storage areas, sewage treatment plants, aircraft servicing areas, or other areas with potentially explosive gas atmospheres.

### **Rugged design, but easily maintained!**

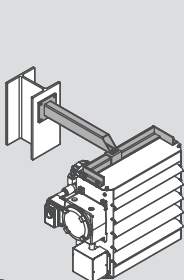
All AHX heaters are designed for industrial applications with all features being heavy-duty to meet your most demanding environments and long-life expectations. Even with heavy-gauge steel construction used throughout the heater it does not inhibit maintenance of the product since the AHX has been designed for easy field servicing with a removable heat exchanger core assembly, split fan guard, and replaceable automatic and manual reset high-limits. An added benefit is our 36-month heater warranty!

### **Maximum durability... rugged fin tubes!**

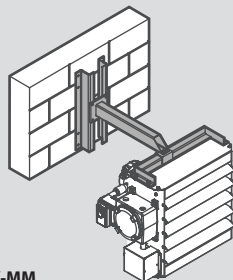
All AHX liquid-to-air heat-exchanger cores are evacuated & sealed and are constructed using rugged carbon-steel tubes with roll-formed aluminum fins to maximize heat transfer and carbon-steel headers for maximum durability, resistance to corrosion, and longer life in your demanding applications.



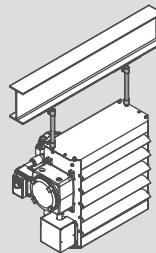
### Accessories Mounting Brackets



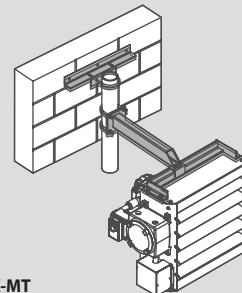
**AHX-MB**  
**Basic Mounting Bracket**  
 Suitable for applications where the support arm can be bolted or welded directly to structural steel or concrete.



**AHX-MM**  
**Wall Mounting Bracket**  
 For use in buildings that have substantial walls. The Z sections provide additional support where necessary.



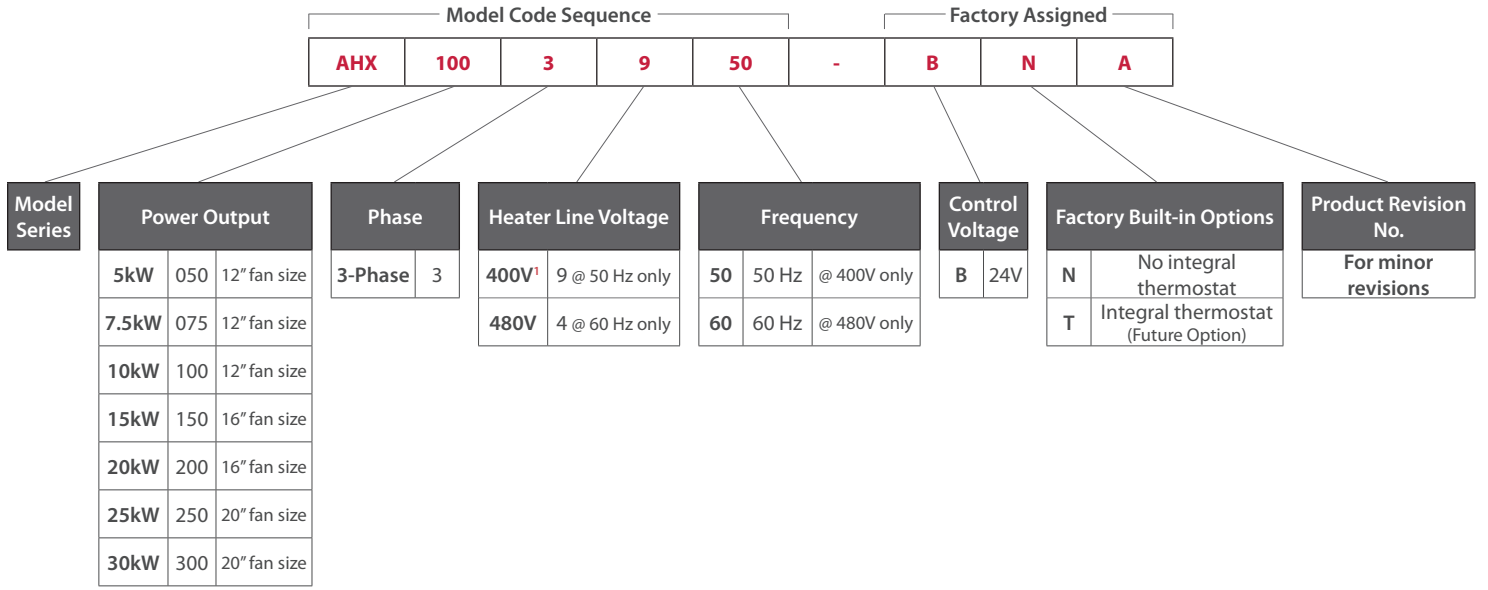
**AHX-MS**  
**Hanging Mounting Bracket**  
 Ideal and economical if adequate overhead structure exists. Requires 1/2 in. (12.5 mm) pipe, cut and threaded (min. Sch. 40) not supplied.



**AHX-MT**  
**Pipe Mounting Bracket**  
 For buildings with insufficient strength to use other types of mounting brackets. Requires 3 in. (75 mm) pipe (3 1/2 in. [87.5 mm] O.D., min. Sch. 40) not supplied.

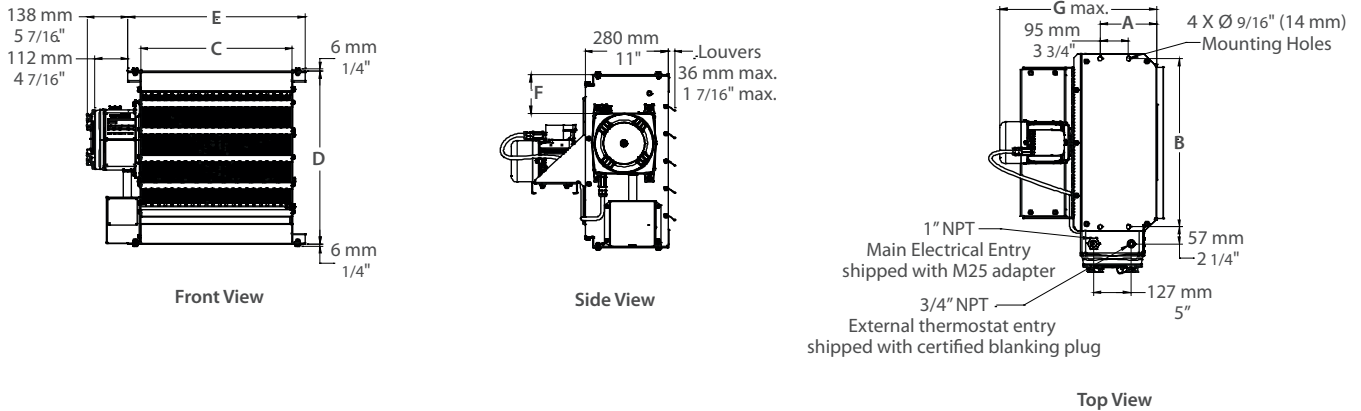
**Note:** Mounting kits are made of steel with a black enamel paint finish. Structural support of heater and bracket during transit is required.

# AHX Model Coding



<sup>1</sup> Line Voltage is 400V +/- 10%. For EU countries utilizing line voltages of 380V to 440V, refer to Page 7 for heater performance data. Do not exceed 440V power supply.

# AHX Physical Dimensions



Models	5 to 10kW	15 to 20kW	25 to 30kW
<b>Fan</b>	12" (305 mm)	16" (406.4 mm)	20" (508 mm)
<b>Dim.</b>	<b>in. (mm)</b>	<b>in. (mm)</b>	<b>in. (mm)</b>
<b>A</b>	7.5 (191)	7.5 (191)	7.5 (191)
<b>B</b>	18.2 (462)	22.3 (566)	26.3 (667)
<b>C</b>	16.3 (414)	20.3 (515)	24.3 (617)
<b>D</b>	19.0 (482)	23.0 (583)	27.0 (686)
<b>E</b>	19.5 (494)	23.5 (596)	27.4 (697)
<b>F</b>	3.1 (79)	5.1 (130)	7.1 (181)
<b>G</b>	21.1 (535)	21.1 (535)	21.1 (535)

## AHX Specifications for all 50 Hz Models by Size

Model		AEU1-12			AEU1-16		AEU1-20	
Fan diameter	in. (mm)	12 (305)			16 (406)		20 (508)	
Nominal	kW	5	7.5	10	15	20	25	30
Air delivery	m <sup>3</sup> /hr	680	1019	1359	2039	2888	3568	5097
Approximate air velocity	m/s	2.4	3.6	4.9	4.1	5.8	4.6	6.6
Approximate horizontal air throw	m	4.6	6.7	9.1	10.1	14.0	12.5	18.6
Motor power	kW (HP)	0.37 (1/2)						
Maximum mounting height (to underside of heater)	m	2.1	2.3	2.9	3.0	3.4	3.6	4.6
Approximate net weight	kg (lb)	65.4 (144)		67.2 (148)	79.8 (1796)		91.5 (201)	
Approximate shipping weight	kg (lb)	92.2 (203)		94.0 (207)	108.4 (239)		122.8 (270)	
Wood crate dimensions Wood packaging material is in compliance with ISPM No. 15.	W x D x H in. mm	31 1/2 X 29 1/2 X 29 1/4 800 X 749 X 743			35 1/2 X 29 1/2 X 31 3/4 902 X 749 X 806		39 1/2 X 29 1/2 X 37 3/4 1003 X 749 X 908	

## AHX Specifications for all 60 Hz Models by Size

Model		AEU1-12			AEU1-16		AEU1-20	
Fan diameter	in. (mm)	12 (305)			16 (406)		20 (508)	
Nominal	kW	5	7.5	10	15	20	25	30
Air delivery	m <sup>3</sup> /hr	815	1225	1630	2445	3465	4280	6115
Approximate air velocity	m/s	2.9	4.3	5.9	4.9	7.0	5.5	7.9
Approximate horizontal air throw	m	5.5	8.0	11.0	12.1	16.8	15.0	22.3
Motor power	kW (HP)	0.37 (1/2)						
Maximum mounting height (to underside of heater)	m	2.1	2.3	2.9	3.0	3.4	3.6	4.6
Approximate net weight	kg (lb)	65.4 (144)		67.2 (148)	79.8 (1796)		91.5 (201)	
Approximate shipping weight	kg (lb)	92.2 (203)		94.0 (207)	108.4 (239)		122.8 (270)	
Wood crate dimensions Wood packaging material is in compliance with ISPM No. 15.	W x D x H in. mm	31 1/2 X 29 1/2 X 29 1/4 800 X 749 X 743			35 1/2 X 29 1/2 X 31 3/4 902 X 749 X 806		39 1/2 X 29 1/2 X 37 3/4 1003 X 749 X 908	

### How to Order

When ordering refer to Page 7 to determine the specific model and then please follow the “*Model Code Sequence Required for Ordering*” format on Page 4.

**Example Model Code: AHX1003950-B-N**

### Important:

Heater is to be used only in atmospheres that are compliant with the hazardous area atmosphere certification of the heater. Please ensure equipment is suitable for your application.

Based on the environment the heater is installed in ensure the maintenance program is designed to meet this criteria.

Do not operate heater in atmospheres which are corrosive to aluminum or steel.

## General Specifications

<b>Hazardous Location Approvals</b>	<b>ATEX (Gas atmospheres)</b>	SIRA 13 ATEX 1240X CE 0518 II 2G Ex d IIB T4 Gb IP55 -40 °C ≤ T <sub>amb</sub> ≤ +40 °C (Suitable for Zone 1 and 2)
	<b>IECEX (Gas atmospheres)</b>	IECEX CSA 13.0034X Ex d IIB T4 Gb IP55 -40 °C ≤ T <sub>amb</sub> ≤ +40 °C (Suitable for Zone 1 and 2)
<b>Cabinet</b>	<b>Cabinet material</b>	2 mm (14-gauge) steel. Red epoxy/polyester powder coated with five-stage pretreatment, including iron phosphate.
	<b>Fan guard</b>	Split design with close wire spacing. A 9.5 mm diameter probe will not enter. Black polyester powder coated.
	<b>Louver blades</b>	Anodized extruded aluminum.
	<b>Fasteners</b>	Zinc plated steel for corrosion resistance.
	<b>Enclosure</b>	Flameproof (Ex d) cast aluminum with O-ring.
	<b>Mounting holes</b>	14 mm diameter holes – Four located on the top face of heater.
<b>Motor/Fan</b>	<b>Motor type</b>	Flameproof (Ex d), thermally protected, 1500 RPM (nominal) permanently lubricated ball bearing type with 71 frame and “easy-off” fan blade replacement feature.
	<b>Fan</b>	Multi-blade non sparking aluminum, steel spider and hub with 14 mm bore.
<b>Heat Exchanger</b>	<b>Heat transfer fluid</b>	Ethylene glycol and water including corrosion inhibitors.
	<b>Core</b>	Carbon steel shells and carbon steel tubes with copper-free, roll-formed aluminum fins @ 2.5 mm pitch. Evacuated and sealed. Sprayed with black, high heat enamel paint.
<b>Protection</b>	<b>Temperature high limits</b>	One automatic reset rated for 100,000 cycles, and one manual reset. Both are snap-action bimetal type, open on temperature rise.
	<b>Pressure relief</b>	High-quality pressure relief device.
<b>Controls</b>	<b>Control circuit</b>	Built-in 24V control.
	<b>Control contactor</b>	40 FLA amp (50A resistive per pole) Definite Purpose. Rated for 500,000 mechanical operations.
	<b>Control transformer</b>	24 VAC output.
	<b>Fuse protection</b>	Thermal delay fuse (with spare fuse included).
	<b>Room thermostat</b>	A wall mount thermostat is available. Consult factory for integral thermostat availability.
<b>Operating Limits</b>	<b>Ambient temperature</b>	-40 °C to 40 °C. Storage -40 °C to 60 °C.
	<b>Maximum altitude</b>	3000 m above sea level.

## AHX Heater 50 Hz Performance Data

kW	Line Volts	Phase Ø	Fan Dia. in.	Model See page 4 to complete model coding	Total Amps A	Air Temp. Rise °C
4.5 <sup>1</sup>	380 <sup>1</sup>	3	12	AHX0503950-B- <sup>2</sup>	7.9 <sup>1</sup>	19.1 <sup>1</sup>
<b>5</b>	<b>400</b>				<b>8.2</b>	<b>21.2</b>
5.4 <sup>1</sup>	415 <sup>1</sup>				8.5 <sup>1</sup>	22.8 <sup>1</sup>
6.1 <sup>1</sup>	440 <sup>1</sup> max				8.9 <sup>1</sup>	25.7 <sup>1</sup>
6.8 <sup>1</sup>	380 <sup>1</sup>	3	12	AHX0753950-B- <sup>2</sup>	11.3 <sup>1</sup>	20.2 <sup>1</sup>
<b>7.5</b>	<b>400</b>				<b>11.8</b>	<b>22.4</b>
8.1 <sup>1</sup>	415 <sup>1</sup>				12.2 <sup>1</sup>	24.1 <sup>1</sup>
9.1 <sup>1</sup>	440 <sup>1</sup> max				12.9 <sup>1</sup>	27.1 <sup>1</sup>
9.0 <sup>1</sup>	380 <sup>1</sup>	3	12	AHX1003950-B- <sup>2</sup>	14.7 <sup>1</sup>	19.5 <sup>1</sup>
<b>10</b>	<b>400</b>				<b>15.4</b>	<b>21.6</b>
10.8 <sup>1</sup>	415 <sup>1</sup>				16.0 <sup>1</sup>	23.3 <sup>1</sup>
12.1 <sup>1</sup>	440 <sup>1</sup> max				16.9 <sup>1</sup>	26.1 <sup>1</sup>
13.5 <sup>1</sup>	380 <sup>1</sup>	3	16	AHX1503950-B- <sup>2</sup>	21.6 <sup>1</sup>	19.6 <sup>1</sup>
<b>15</b>	<b>400</b>				<b>22.7</b>	<b>21.7</b>
16.1 <sup>1</sup>	415 <sup>1</sup>				23.5 <sup>1</sup>	23.4 <sup>1</sup>
18.2 <sup>1</sup>	440 <sup>1</sup> max				24.8 <sup>1</sup>	26.3 <sup>1</sup>
18.1 <sup>1</sup>	380 <sup>1</sup>	3	16	AHX2003950-B- <sup>2</sup>	28.4 <sup>1</sup>	18.7 <sup>1</sup>
<b>20</b>	<b>400</b>				<b>29.9</b>	<b>20.7</b>
21.5 <sup>1</sup>	415 <sup>1</sup>				31.0 <sup>1</sup>	22.3 <sup>1</sup>
24.2 <sup>1</sup>	440 <sup>1</sup> max				32.8 <sup>1</sup>	25.0 <sup>1</sup>
22.6 <sup>1</sup>	380 <sup>1</sup>	3	20	AHX2503950-B- <sup>2</sup>	35.3 <sup>1</sup>	18.8 <sup>1</sup>
<b>25</b>	<b>400</b>				<b>37.1</b>	<b>20.8</b>
26.9 <sup>1</sup>	415 <sup>1</sup>				38.4 <sup>1</sup>	22.4 <sup>1</sup>
30.3 <sup>1</sup>	440 <sup>1</sup> max				40.7 <sup>1</sup>	25.2 <sup>1</sup>
27.1 <sup>1</sup>	380 <sup>1</sup>	3	20	AHX3003950-B- <sup>2</sup>	42.1 <sup>1</sup>	15.8 <sup>1</sup>
<b>30</b>	<b>400</b>				<b>44.3</b>	<b>17.5</b>
32.3 <sup>1</sup>	415 <sup>1</sup>				45.9 <sup>1</sup>	18.8 <sup>1</sup>
36.3 <sup>1</sup>	440 <sup>1</sup> max				48.6 <sup>1</sup>	21.2 <sup>1</sup>

## AHX Heater 60 Hz Performance Data

kW	Line Volts	Phase Ø	Fan Dia. in.	Model See page 4 to complete model coding	Total Amps A	Air Temp. Rise °C
5	480	3	12	AHX0503460-B- <sup>2</sup>	6.7	17.7
7.5	480	3	12	AHX0753460-B- <sup>2</sup>	9.7	18.7
10	480	3	12	AHX1003460-B- <sup>2</sup>	12.7	18.0
15	480	3	16	AHX1503460-B- <sup>2</sup>	18.7	18.1
20	480	3	16	AHX2003460-B- <sup>2</sup>	24.8	17.3
25	480	3	20	AHX2503460-B- <sup>2</sup>	31.1	17.4
30	480	3	20	AHX3003460-B- <sup>2</sup>	37.1	14.6

<sup>1</sup> Actual output figures are prorated based on 400V wye connected heating elements. Do not exceed 440V supply power.

<sup>2</sup> Refer to Page 4 for Factory Option codes to complete entire model code for ordering.



## **Packaging Certification**

Wood packaging material is in compliance with International Standard for Phytosanitary Measures No. 15 (ISPM No. 15).

## **Limited 36-Month Warranty**

Ouellet Canada Inc. warrants all AHX series of explosion-proof unit heaters against defects in materials and workmanship under normal conditions of use for a period of thirty-six (36) months from date of purchase based on the following terms:

1. The heater must not be modified in any way.
2. The heater must be stored, installed and used only in accordance with the owner's manual and attached data plate information.
3. Replacement parts will be provided free of charge as necessary to restore any unit to normal operating condition, provided that the defective parts be returned to us freight prepaid and that the replacement parts be accepted freight collect.
4. The complete heater may be returned to our manufacturing plant for repair or replacement (at our discretion), freight charges prepaid.
5. Contamination by water, dirt, dust, etc. or corrosion will not be considered as defects.
6. This warranty shall be limited to the actual equipment involved and, under no circumstances, shall include or extend to installation or removal costs, or to consequential damages or losses.