

UNDERSTANDING EQUIPMENT NAMEPLATES

Nameplates provide useful information about equipment. Among other things, the information can be used to understand energy use, find compatible or more efficient replacements for equipment and troubleshoot problems. This fact sheet provides details about types of information found on nameplates.

Basic Nameplate Information

General Information:

Most equipment nameplates will have some common items of information. Many of these are self-explanatory, and include:

- Manufacturer
- Manufacturer's address
- Model number
- Serial number
- Certification mark(s)

This general information can be useful in finding out more details about particular through the manufacturer's published information. Various certification marks are shown below.

The model number and serial number may provide specific information. The manufacturer's literature may help decipher the coding used for particular equipment.

As an example, a generator serial number might be **P4W00236D05045**, where:

P4W - Product designation

00236 – Sequential number assigned on manufacturing date

D – Manufacturing location letter code

05 – Year manufactured

045 – Day of the year manufactured (045 = Feb 14)

A light fixture model number might be **SH 400MP A16 240 HEB WGA16**, where:

SH - Fixture series

400MP – Lamp type

A16 – Reflector style

240 – Voltage

HEB – HID electronic ballast

WGA16 – Wire guard for A16 reflector

Basic electrical information, common to lighting fixtures, motors, electrical appliances and heating and cooling equipment, includes the following:

- Voltage (V)
- Amperage (A, Amps)
- Frequency (Hz or cycles per second)
- Power in Watts (W) or Horsepower (HP)

Nameplate Data for Different Equipment Types

Motors:

The National Electric Code requires that motor nameplates include the following information in addition to the manufacturer's name and address:

Rated voltage(s)

Rated full-load amperage at each voltage level (FLA)

Frequency – typically 60 or 50hz

Phase – Single or three phase

Speed - Rated full-load speed (in RPM)

Insulation Class and rated ambient temperature – Insulation class may be B, F and H, and the rated ambient temperature is the maximum allowable ambient temperature during operation.

Rated Horsepower

Time Rating – Usually continuous duty, but some motors may be rated for as low as 5 minutes of continuous operation.

Locked-rotor code letter

Other motor data may include:

Frame size

NEMA design letter – indicates the relationship between speed and torque

Full-load efficiency

Power factor



Pumps:

Items specific to pumps may include:

Rated Flow (Q) - gallons or liters per minute (GPM or lpm)

Head pressure at rated flow - feet of water, pounds per square inch (psi), pascals (pa)

Power – Horsepower (HP)

Rated rotational speed – revolutions per minute (RPM)

Maximum pressure – feet of water, psi

Maximum fluid temperature – degrees Fahrenheit or Celsius (°F or °C)

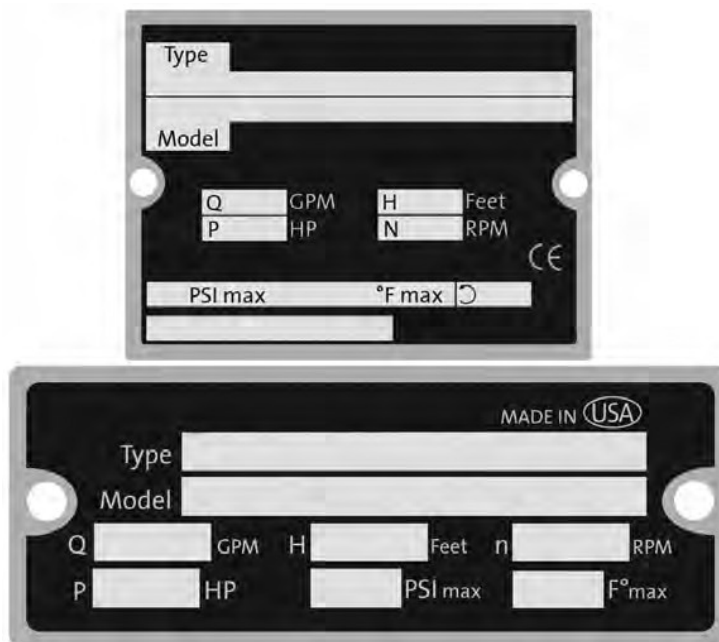
Other information that may appear on the nameplate, or may be encoded in the Type or Model number, may include:

Type of pump – centrifugal

Materials used in components – Seals, impellers, shafts, etc.

Number of stages

Number of impellers





Fans:



- Air flow – CFM**
- Static pressure – inches of water**
- Fan diameter – inches, for centrifugal fans**

Heating Equipment:

- Fuel Type – Natural gas, LPG (propane), #2 oil, etc.**
- Input – Heat input in Btu/hr**
- Minimum input – minimum heat input in Btu/hr**
- Thermal Output – Useful heat, in Btu/hr**
- Efficiency – In percent (can be estimated by dividing thermal output by the input)**
- Gas Supply Pressure**

Modine Manufacturing Company				UNIT HEATER FOR INDUSTRIAL / COMMERCIAL USE AÉROTHERME POUR USAGE INDUSTRIEL / COMMERCIAL				
1221 Magnolia Ave., Buena Vista, VA 24416; Phone: 540-261-2166				Made in U.S.A.				
MODEL NUMBER NUMERO DE MODELE	PD 150AA0111			MIN. INPUT BTU/HR DEBIT CALORIFIQUE MIN. BTU/HEURE	VOLTS	AMPS	PHASE	HERTZ
SERIAL NUMBER NUMERO DE SERIE	05011012999-4150			MIN. INLET PRESS. FOR PURPOSE OF INPUT ADJUSTMENT PRESSION D'ALIMENTATION EN GAZ MIN. ADMISE	6.0	IN. WC PO.C.D.E	CATEGORY CATEGORIE	DESIGN COMPLIES WITH UNIT HEATER STANDARD ANS Z83.8 - 96
TYPE OF GAS TYPE DE GAZ	Natural			MANIFOLD PRESSURE PRESSION A LA TUBULURE D'ALIMENTATION	3.5	IN. WC PO.C.D.E	APPROVALS	CGA 2.6 - M96
				MAXIMUM EXTERNAL STATIC PRESSURE PRESSION STATIQUE EXTERIEUR MAXIMUM	0.0	IN. WC PO.C.D.E	ACCEPTED BY CITY OF NEW YORK	MEA 293-96-E
		8 TO 2000 FT. 8 ET 610 M.	(IN CANADA) 2000 TO 4500 FT. 610 ET 1370 M.	MINIMUM CLEARANCE TO COMBUSTIBLE MATERIAL DÉGAGEMENT MINIMUM POUR MATIÈRES COMBUSTIBLES		PENNSYLVANIA APPROVAL NO. 3465		
INPUT BTU/HR DEBIT CALORIFIQUE BTU/HEURE	150000	135000	TOP HAUT	IN. PO	RIGHT SIDE COTE DROIT	18	IN. PO	
OUTPUT BTU/HR RENDMENT BTU/HEURE	120000	108000	BOTTOM BAS	12	VENT CONNECTOR CONNECTEUR D'AERATION	3	IN. PO	APPROVED FOR USE IN CA BY THE CEC WHEN EQUIPPED WITH IPI
ORIFICE SIZE DIM DE L'INJECTEUR	21	24	LEFT SIDE COTE GAUCHE	18	SERIES UNIT HEATER IS FOR USE WITH DUCTS AT A TEMPERATURE RISE RANGE SERIE AÉROTHERME FONCTIONNE AVEC DES CONDUITS A UNE ELEVATION DE TEMPERATURE DE			
GENERAL				LIGHTING INSTRUCTIONS				
(IN USA) FOR INSTALLATIONS ABOVE 2000 FEET DERATE 4 PERCENT FOR EACH 1000 FEET OF ELEVATION ABOVE SEA LEVEL				FOR UNITS WITH INTERMITTENT PILOT				
LUBRICATE MOTOR EVERY 2000 HOURS OF OPERATION WITH SAE #20 OIL				1 SET THERMOSTAT TO LOWEST SETTING. MOVE GAS CONTROL KNOB (OR LEVER) TO OFF AND WAIT 5 MINUTES.				
FILTERS, WHEN USED ON BLOWER UNIT HEATERS, MUST BE INSTALLED EXTERNAL TO THE HEATER CASING.				2 MOVE GAS CONTROL KNOB (OR LEVER) TO ON.				
PROPELLER UNIT HEATERS ARE NOT FOR USE WITH FILTERS				3 SET THERMOSTAT TO DESIRED SETTING. (PILOT AND MAIN BURNER WILL LIGHT AUTOMATICALLY WHEN THERMOSTAT CALLS FOR HEAT.)				
INSTALLATIONS IN AIRCRAFT HANGARS, PARKING STRUCTURES, AND REPAIR GARAGES SHALL BE IN ACCORDANCE WITH THE STANDARD ON AIRCRAFT HANGARS, ANS/NFPA 409 THE STANDARD FOR PARKING STRUCTURES, ANS/NFPA 88A, THE STANDARD FOR REPAIR GARAGES, ANS/NFPA 88B, AND IN CANADA WITH THE CAN 1-8149 CODES				4 SET THERMOSTAT TO DESIRED SETTING.				
				SHUT DOWN INSTRUCTIONS - TURN OFF POWER & CLOSE ALL GAS VALVES				
COMMON REPLACEMENT PARTS				Combination Gas Control	24V Control Transformer	Main Burner		
<p>For parts ordering, contact the parts wholesaler or the manufacturer's representative serving your area. A complete listing of both can be found in your Installation and Service Manual.</p> <p>When inquiring about parts, always provide model number, serial number, description and part number. When ordering parts, provide part number listed.</p> <p>For service, contact your local qualified installation and service contractor or appropriate utility company.</p>				5H71923	5H71956B1	3H33073B5		
				Ignition Control	Fan/Blower Motor	Belt (Blower)		
				None	9F30212	None		
				Limit Control	Time Delay Relay	Thermocouple		
				5H73593	5H73035	5H69336B6		
				Pressure Switch	Heat Exchanger	Wiring Diagram		
				None	3H34721B11	5H73095C2		
GÉNÉRAL				INSTRUCTIONS D'ALLUMAGE				
 <p>TOUTES LES 2000 HEURES DE FONCTIONNEMENT LUBRIFIER LE MOTEUR AVEC DE L'HUILE SAE N° 20.</p> <p>LORSQU'ILS SONT UTILISÉS SUR LES APPAREILS DE CHAUFFAGE A SOUFFLANTE, LES FILTRES DOIVENT ÊTRE INSTALLÉS À L'EXTÉRIEUR DU BOÎTIER DE L'APPAREIL.</p> <p>NE PAS UTILISER DE FILTRES AVEC LES APPAREILS DE CHAUFFAGE A PROPULSION.</p> <p>L'INSTALLATION DANS LES HANGARS D'AVIONS DOIT CONFORMER AUX EXIGENCES DES AUTORITÉS COMPÉTENTES, ET DANS LES GARAGES PUBLICS DOIT CONFORMER AUX CODES CAN 1-8149</p>				POUR UNITE EQUIPEE D'UNE VEILLEUSE INTERMITTENTE				
				<p>1 REGLER LE THERMOSTAT SUR LE DEGRE LE PLUS BAS. TOURNER LA MOLETTE (OU LE LEVIER) DE COMMANDE DU GAZ SUR OFF ET ATTENDRE 5 MINUTES.</p> <p>2 TOURNER LA MOLETTE (OU LE LEVIER) DE COMMANDE DU GAZ SUR ON.</p> <p>3 LA VEILLEUSE ET LE BRULEUR PRINCIPAL S'ALLUMENT AUTOMATIQUEMENT QUAND LE THERMOSTAT LES DECLENCHE.</p>				
				POUR UNITE EQUIPEE D'UNE VEILLEUSE PERMANENTE				
				<p>1 REGLER LE THERMOSTAT SUR LE DEGRE LE PLUS BAS. TOURNER LA MOLETTE (OU LE LEVIER) DE COMMANDE DU GAZ SUR OFF ET ATTENDRE 5 MINUTES.</p> <p>2 TOURNER LA MOLETTE DE COMMANDE DU GAZ SUR PILOT (OU TOURNER LE LEVIER DE COMMANDE SUR SET) ET TOUT EN ALLUMANT LA VEILLEUSE, APPUYER SUR LE BOUTON DE REENCLENCHEMENT ET LE MARCHER ENFONCE PENDANT 1 MINUTE APRES ALLUMAGE DE LA VEILLEUSE.</p> <p>3 TOURNER LA MOLETTE (OU LE LEVIER) DE COMMANDE DU GAZ SUR ON.</p> <p>4 REGLER LE THERMOSTAT SUR LE DEGRE DESIRE</p>				
INSPECTED BY #5				INSTRUCTIONS DE PER METURE - COUPER LE COURANT ET FERMER TOUTES LES ROBINETS A GAZ				
				5H7337B Rev C				

Refrigeration Condenser Nameplate

CONDENSING UNIT					
MODEL	TEHA 030H2-HS2A-B				
SERIAL NO.	050301402				
CONDENSING MEDIA	AIR COOLED				
UNIT ENTERING ELECTRICAL SERVICE					
VOLTS	208-230	PHASE	1	Hz	60
MINIMUM CIRCUIT AMPACITY			22.9	AMPS	
MAX. OVERCURRENT PROTECTION			35	AMPS	
COMP. MTR	QTY	VOLTS	PH	RLA	LRA
	1	208-230	1	16.7	100
COND. FAN MTR	QTY	VOLTS	PH	FLA	HP
	1	208-230	1	2.1	1/3
CC HEATER	0.25 AMPS	REC. HEATER	N/A AMPS		
DESIGNATED OPERATING REFRIGERANT			R22		
HELIUM HOLDING CHARGE					
DESIGNED WORKING PRESSURE			450 P.S.I.G.		
FOR	OUTDOOR	USE			
					
National Refrigeration & Air Conditioning Canada Corp. 159 Roy Blvd. Brantford Ont., Canada Phone: 800-463-9517 *519-751-0444 Fax: 519-753-1140			LISTED-4L06 Made In Canada		

Lighting Fixtures:

Lighting ballasts generally have nameplates with a variety of information, including:

Operating temperatures

Input voltage(s) – V

Output voltage(s) – V

Input frequency (usually 50 or 60) – Hz

Sound rating

Ballast type and class

The ballast nameplate may also indicate compatible bulbs and include wiring diagrams, start temperatures and other characteristics.

Common Nameplate Information, Abbreviations, and Units

Description	Abbreviation	Common Units and notes
Rated Flow	Q	Gallons per minute (GPM) Liters per minute (lpm)
Air Flow		Cubic feet per minute (CFM)
Pressure	P	Inches of water (in.) Feet of water (feet, ft.) Pounds per square inch (psi) Pascals (pa)
Power		Horsepower (HP) Watts (W)
Rated Rotational Speed		Revolutions per minute (RPM)
Head pressure at rated flow	H, TDH	See <i>Pressure</i>
Maximum pressure	Pmax	See <i>Pressure</i>
Maximum fluid temperature	Tmax	Degrees Fahrenheit (°F) Degrees Celsius (°C)
Fuel Type		Natural gas Propane (LPG) #2 Oil
Minimum input		British Thermal Units per hour (Btu/hr, BTUh)
Thermal Output		British Thermal Units per hour (Btu/hr, BTUh)
Efficiency		Percent (%)
Gas Supply Pressure		inches of water (in., in-wc) Pounds per square inch (psi) Pascals (pa)
Rated voltage(s)	V	Volts (V)
Rated full-load amperage	A	Amperes (A) – <i>listed for each voltage</i>
Frequency		
Phase	ϕ	<i>Single or three</i>
Speed		Revolutions per minute (RPM, R.P.M.)
Full Load Efficiency		Percent (%)
Power Factor	PF	

Abbreviations and Certification Marks

Common Abbreviations

A – Amperes or amperage (electrical current)

AC (A.C.) – Alternating current

AFUE – Annual Fuel Utilization Efficiency

Amp. – Amperes (electrical current)

BTU – British thermal units (heat energy)

BTU/hr – BTUs per hour (rate of heat delivery)

CFM – Cubic feet per minute

EER – Energy Efficiency Ratio

FLA – Full load amperes (electrical current)

°F – Degrees Fahrenheit

°C – Degrees Celsius

DC (D.C.) – Direct current

Feet – On pumps, feet of water (pressure)

Gal. – Gallons (liquid volume)

GPM – Gallons per minute (flow)

HP (H.P.) – Horsepower (motor power)

HSPF – Heating Season Performance Factor

Hz – Hertz (alternating current frequency in cycles per minute, typically 60 or 50)

In. W.C. (also “W.C.”) – Inches of water column (pressure)

LRA – Locked rotor amperes (electrical current)

PSI – Pounds per square inch (pressure)

PSIG (P.S.I.G.) – Gauge pressure in pounds per square inch

PH or Φ – Phase (typically single or three)

QTY - Quantity

RLA – Running load amperes (electrical current)

RPM (R.P.M.) – Revolutions per minute (rotational speed)

SEER – Seasonal Energy Efficiency Ratio

S.F. – Service Factor

W – Watts (power)

Common Certification Marks

Canadian Standards Association (CSA)	
Conformité Européene (European Conformity)	
CSA Gas Appliance Certification	
EPA Energy Star	
Factory Mutual (FM)	
Federal Communications Commission (FCC)	
Intertek Equipment Testing Laboratory (ETL)	
Standards Council of Canada Labtest Certification	
Underwriters Laboratory (UL)	
Underwriters Laboratory Recognized Component Mark	