ICEMINI & Vertical MTI Units

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ICEMINI UNITS

FEATURES

- Multiposition, Upflow/Downflow/Horizontal Configurations.
- Single Stage, Two Stage, Variable Speed, Modulating Design.
- Airflow from 1200 CFM to 4400 CFM.
- Heating Capacity from 40,000 btuh to 242,000 btuh.

MODEL NUMBER IDENTIFICATION







ICE					TITLE MODEL: IC	EMINI-8MPI	N (HORIZ	ONTAL SMALL)	
WESTERN					DRAWN BY	ISSUED BY	SCALE N.T.S.	DRW. NO.	
ICEMINI MODEL	Rev	Ву	Revision Description	Date	CHK. BY	DATE	•	JOB NO.	PAGE K-3





MODEL	A	в	CFM	INPUT (btuh)	HTG. CAP. (btuh)	AFUE% (ICS)	TEMP.RISE (deg.F)	VOLTS/ PH/HZ	MIN./MAX. VOLTAGE	RATING PLATE AMPS.	TRANSFORMER (V.A.)	GAS PIPE SIZE (IN.)
ICEMINI-8MPN050B12	15.5	12.5	1200	50,000	40,000	80%	35-65	115/1/60	104/127	9.7	40	0.5
ICEMINI-8MPN075B12	15.5	12.5	1200	75,000	60,000	80%	30-60	115/1/60	104/127	9.0	40	0.5
ICEMINI-8MPN075F16			1600	75,000	60,000	80%	30-60	115/1/60	104/127	9.7	40	0.5
ICEMINI-8MPN100F14	19.125	16	1400	100,000	81,000	80%	35-65	115/1/60	104/127	9.2	40	0.5
ICEMINI-8MPN100F20			2000	100,000	81,000	80%	35-65	115/1/60	104/127	12.0	40	0.5
ICEMINI-8MPN100J22			2200	100,000	81,000	80%	35-65	115/1/60	104/127	12.0	40	0.5
ICEMINI-8MPN125J20	22.75	21.25	2000	125,000	101,000	80%	35-65	115/1/60	104/127	12.0	40	0.5

NOTES:
1. 1 1/2 DISCHARGE FLANGES.
2. SERVICE ACCESS PANELS MUST NOT BE OBSTRUCTED RECOMMENDED CLEARANCE 30 INCHES.
3. DIMMESIONS ARE SUBJECT TO MANUFACTURING TOLERANCES. FOR REFERENCE USE ONLY, SUBJECT TO CHANGE WITHOUT NOTICE.

ICE						MODEL: ICEMINI-8MPN (VERTICAL SMALL)						
WESTERN					DRAWN BY	ISSUED BY	SCALE N.T.S.	DRW. NO.				
ICEMINI MODEL	Rev	By	Revision Description	Date	СНК. ВҮ	DATE		JOB NO.	PAGE K-4			



TOP VIEW



FRONT VIEW

MODEL	A	в	с	CFM	INPUT (btuh)	HTG. CAP. (btuh)	AFUE% (ICS)	TEMP.RISE (deg.F)	VOLTS/ PH/HZ	MIN./MAX. VOLTAGE	RATING PLATE AMPS.	TRANSFORMER (V.A.)	GAS PIPE SIZE (IN.)
ICEMINI-8MPN050B12	15.5 14	14	35.5	1200	50,000	40,000	80%	35-65	115/1/60	104/127	9.7	40	0.5
ICEMINI-8MPN075B12	15.5	17	55.5	1200	75,000	60,000	80%	30-60	115/1/60	104/127	9.0	40	0.5
ICEMINI-8MPN075F16				1600	75,000	60,000	80%	30-60	115/1/60	104/127	9.7	40	0.5
ICEMINI-8MPN100F14	19.125	17.625	39.125	1400	100,000	81,000	80%	35-65	115/1/60	104/127	9.2	40	0.5
ICEMINI-8MPN100F20				2000	100,000	81,000	80%	35-65	115/1/60	104/127	12.0	40	0.5
ICEMINI-8MPN100J22	00.75	01.05	40.75	2200	100,000	81,000	80%	35-65	115/1/60	104/127	12.0	40	0.5
ICEMINI-8MPN125J20	22.75	21.25	42.75	2000	125,000	101,000	80%	35-65	115/1/60	104/127	12.0	40	0.5

NOTES:

1. 1 1/2 DISCHARGE FLANGES.
 2. SERVICE ACCESS PANELS MUST NOT BE OBSTRUCTED RECOMMENDED CLEARANCE 30 INCHES.
 3. DIMMESIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
 FOR REFERENCE USE ONLY, SUBJECT TO CHANGE WITHOUT NOTICE.

ICG					TITLE MODEL: ICEMINI-8MPN (VERTICAL W/ MIX BOX)						
WESTERN					DRAWN BY	ISSUED BY	SCALE N.T.S.	DRW. NO.			
ICEMINI MODEL	Rev	Ву	Revision Description	Date	CHK. BY	DATE		JOB NO.	PAGE K-5		



Revision Description Date

Rev By







Horizontal ICEMINI



Specification

ICEW model custom 202/100F Indoor vertical up flow indirect make-up unit w/ heat wheel 1200-1400 cfm @ 1/4" esp 1/2 HP motor 115/1/60

100MBH input at sea level and 80,000 Btuh output at sea level

62 degree F temp rise with 1200 cfm from the gas heat exchanger

7-14" w.c. natural gas manifold

c/w stainless steel heat exchanger, ID fan, S/A blower section, filter sections for R/A, F/A, and heat wheel R/A, modulating gas valve w/ discharge air sensor, heat wheel plenum w/ enthalpy heat recovery wheel for latent and sensible heat recovery, modulating controller on heat wheel for frost control with frost sensor, heat wheel sized and selected for 450 cfm of exhaust (in line exhauster or roof exhauster by other).

ICE								OM UNIT	
WESTERN					DRAWN BY	ISSUED BY	SCALE	DRW. NO.	
ICEMINI MODEL	Rev	By	Revision Description	Date	CHK. BY	DATE		JOB NO.	PAGE K-9









MTI –SERIES -VERTICAL -Industrial Indirect Fired Series-TYPICAL SPECIFICATIONS

TYPE AND DESCRIPTION

Supply an ICE .Manufacturing Ltd.. indirect fired heat vent unit designed for (indoor) installation. The capacity and configuration shall be as detailed on the drawings. The unit shall be ETL certified and listed to be in compliance with the current ANSI Z83.8 second edition; CSA/CGA 2.6-2002; Addenda A-2003; Addenda B-2004.

The burners, gas train and controls are to be in accordance with (ANSI) (FM) (IRI) (FM and IRI) requirements. Both burner and blower shall be compensated for altitude of operation.

The unit is to be completely factory test fired to verify proper operation. The unit capacity is to be validated with an instantaneous flow meter. A complete electrical circuit analysis is to be conducted and all systems operated and measured. A combustion analyzer is to be employed while unit is operating at full capacity to verify combustion emissions. Burner combustion must be clean and odorless and no aliphatic aldahydes are to be detectable. Combustion efficiency is to be at least 80% while maintaining clean emissions.

UNIT CASING

Unit construction is to be of industrial quality heavy gauge bonderized steel. The unit design shall incorporate a full base pan supported by an integral heavy base.

To ensure the casings are airtight and weatherproof, all panels are to be caulked during assembly. All casings are to be hand fitted and secured with gasketed self-tapping screws. Roof casing are to feature three-break standing seam panel design.

Entire unit casing and accessories are to be insulated with fiberglass insulation with hard neoprene facing. (1 or 2 in. thick 1-1/2# or 2# density) insulation is to be secured with industrial glue and welded pin spots. Insulation is to be certified to fire and flamespread ratings as outlined by the ANSI code. The entire floor of the unit is to feature a steel liner sandwiching the insulation.

Units are to be equipped with access doors to all serviceable components. Access doors are to have full-length stainless steel piano hinges. All access doors are to be equipped with an insulation liner, positive seal latches and gasketing. Access doors are to open outward on negative pressure sections and inward on positive pressure sections. Access doors to feature 6 in. handles with locking roller mechanism for ease of latching. All outdoor unit access doors are to be equipped with drain troughs.

Units are to be finished with an industrial grade chain stop alkyd enamel paint. The medium grey finish coat is to be a minum of 3 mils thick and provide 100% coverage.

BLOWER / MOTOR SECTION

Unit(s) shall be supplied with a single AMCA rated centrifugal forward curved insdustrial statically and dynamically balanced blower. The fan shall be mounted on a heavy duty machined and polished shaft. The shafts maximum operating speed is not to exceed 75% of its first critical speed. The bearings and motor shall be mounted in the airstream. The T-frame motor shall be mounted in a motor compartment on a fully adjustable base. The bearings are to be industrial pillow block type supplied with extended grease lines. The blower is to be driven with an (adjustable) (fixed) 1.25 s.f. V-belt drive package concealed in a belt guard.

FURNACE SECTION

The furnace section shall be positioned downstream of the blower section to ensure it is operating in a positive pressure chamber. The furnace is to be constructed of minimum 16 gauge heavy duty 409 (optional 304) stainless steel tubes. The furnace shall include heavy duty inshot burners.

The furnace section will operate under a negative pressure as induced by the power venter. The power venter will be two speed to provide optimum combustion and efficiency levels on reduced capacities. The power ventor shall come standard with a blocked flue switch, and the burner equipped with a flame roll out switch. A modulating electro-mechanical valve will reduce gas flow in response to the signal from the unit mounted PLC. The modulation will allow reduction of capacity down to 1/6 of high fire per furnace.

Indoor units shall be suitable for sidewall venting, and shall come with optional sealed combustion kit.

CONTROL/MANIFOLD COMPARTMENT

Terminal strip and all wiring shall be numbered. The controls for the heater shall include;

- blower motor starter w/ambient compensated overloads and auxiliary contact(s).
- primary to 120v control transformer
- 6,000 volt ignition transformer
- control circuit breaker and service switch
- manual reset temperature high limit
- flamesafeguard circuit
- discharge temperature control sensor
- differential air proving safety switch
- automatic low temperature limit (optional)
- All wiring external to control enclosure shall be run in conduit. The gas manifold shall include;
- main gas pressure regulator
- high gas pressure regulator (optional)
- manual shutoff & test firing valve
- main gas automatic shutoff valve
- auxiliary main gas automatic shutoff valve
- modulating control system

- •
- pilot pressure regulator pilot automatic shutoff valve pilot manual shutoff valve pilot needle valve multiple test ports •
- •
- •
- •



MTI Performance Specifications

MTI 11-200- 200 MBH INPUT/160 MBH OUTPUT

Air	Temp.	0.25"	0.5"	0.75"	1.0"	1.5"	2.0"	Gas
Capacity	Rise	W.C.	W.C.	W.C.	W.C.	W.C.	W.C.	Conn.
(CFM)		BHP	BHP	BHP	BHP	BHP	BHP	Inches
3704	40	1.97	2.16	1.85	2.56	2.96	3.34	•
2963	50	1.28	1.45	1.60	1.75	2.05	2.35	
2469	60	1.28	1.41	1.53	1.67	1.97	2.28	
2116	70	0.95	1.07	1.20	1.33	1.58	1.83	3/4
1852	80	0.74	0.86	0.97	1.08	1.29	1.51	
1646	90	0.60	0.70	0.80	0.89	1.08	1.27	

MTI 11-300 - 300 MBH INPUT/240 MBH OUTPUT

Air	Temp.	0.25"	0.5"	0 .75"	1.0"	1.5"	2.0"	Gas
Capacity	Rise	W.C.	W.C.	W.C.	W.C.	W.C.	W.C.	Conn.
(CFM)		BHP	BHP	BHP	BHP	BHP	BHP	Inches
5556	40	2.48	2.75	3.02	3.30	3.87	4.47	
4444	50	2.83	3.04	3.27	3.49	3.96	4.45	
3704	60	1.89	2.08	2.28	2.48	2.89	3.27	
3175	70	1.38	1.56	1.73	1.90	2.22	2.54	3/4
2778	80	1.08	1.23	1.37	1.51	1.79	2.08	
2469	90	0.87	1.00	1.12	1.25	1.51	1.77	♦

MTI 11-400 - 400 MBH INPUT/320 MBH OUTPUT

Air	Temp.	0.25"	0.5"	0 .75"	1.0"	1.5"	2.0"	Gas
Capacity	Rise	W.C.	W.C.	W.C.	W.C.	W.C.	W.C.	Conn.
(CFM)		BHP	BHP	BHP	BHP	BHP	BHP	Inches
7407	40	3.46	3.86	4.26	4.67	5.51	6.36	
5926	50	2.74	3.02	3.31	3.60	4.20	4.81	
4938	60	2.97	3.18	3.40	3.65	4.17	4.71	
4233	70	2.09	2.29	2.51	2.74	3.20	3.67	3/4
3704	80	1.58	1.78	1.98	2.18	2.60	3.02	
3292	90	1.26	1.44	1.62	1.81	2.19	2.59	

NOTES:

-All Static Values Include Blower, Burner, Casing and Filters -Accesory Static Values Must be Added to Obtain the Total Static -Brake Horsepower Does Not Include Drive Losses - Units can be derated to achieve specific heat requirements, please note on your order your specific heat requirement **Consult factory for:**

> -Higher Air Capacities or Special Applications -Performance Data on Higher Statics than Listed -Performance Data at Elevations Other Than Sea Level