



Installation Instructions

Part Number 32LH900003

SAFETY CONSIDERATIONS

Installation, start-up, and servicing of this equipment can be hazardous due to system pressures, electrical components, and equipment location (roofs, elevated structures, etc.).

Only trained, qualified installers and service technicians should install, start up, and service this equipment.

When working on this equipment, observe precautions in the literature, tags, stickers, and labels attached to the equipment, and any other safety precautions that may apply.

⚠ WARNING

Open all remote disconnects before servicing this equipment. Electrical shock could result in personal injury.

GENERAL

The Motormaster IV Head Pressure Controller is a cycle control device activated by a pressure sensor mounted on the Schrader port of the liquid line (see Fig. 1). It is designed to cycle the outdoor-fan motors to maintain the saturated condensing temperature within normal operating limits of approximately 110 F (high) and 60 F (low). The compressor maintains working head pressure at low ambient temperatures down to 0° F.

INSTALLATION

1. Disconnect power to unit.
2. Disconnect outdoor-fan motor (OFM) wires at the contactor (21 for size 004-007 units, 3 for size 008-014 units).
3. Securely connect pressure switch flare nut (on pressure switch assembly) to either male flare fitting on adapter tee provided in kit (see Fig. 2). Be sure to **use a flare gasket** (provided in the kit).
4. Locate service fitting on tube. Remove cap from service fitting and place on remaining male flare fitting on adapter tee.
5. Securely connect female flare nut on adapter tee to service fitting. Be sure to **use a flare gasket** (provided in the kit).
6. Check all refrigerant connections for leaks, repair if necessary.
7. Connect OFM wire to one lead of pressure switch using a crimp connector or wire nut (see Fig. 3-6).
8. Connect other lead of pressure switch to T1 (21 for size 004-007 units, 3 for size 008-014 units) at the unit contactor, securing excess wire.
9. If installing on a heat pump, a field-supplied relay 24-volt coil (normally closed) must be added and wired per Fig. 5 and 6.

10. Wind baffles are required to prevent wind crosscurrents from causing abnormally low condensing temperatures. Wind baffle fabrication details are described in Fig. 7A and 7B.
11. Reconnect power to unit.

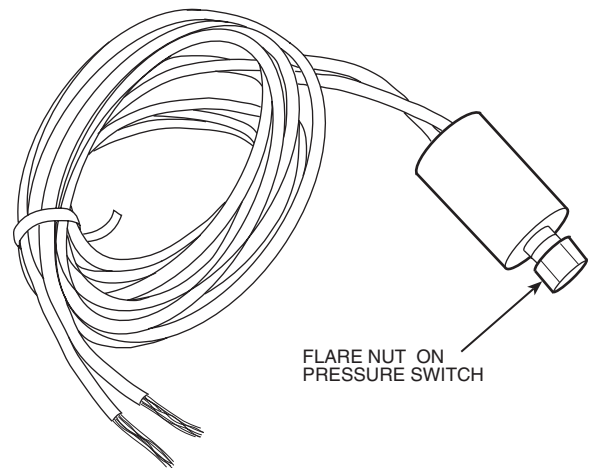


Fig. 1 — Motormaster IV Head Pressure Controller

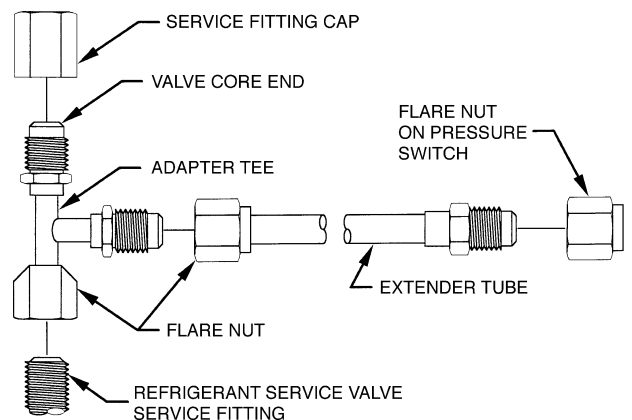
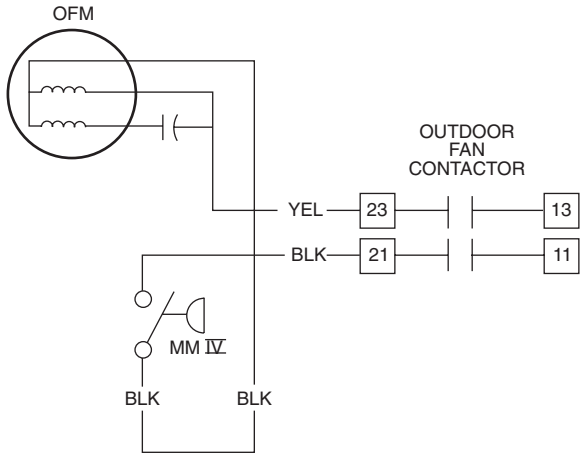


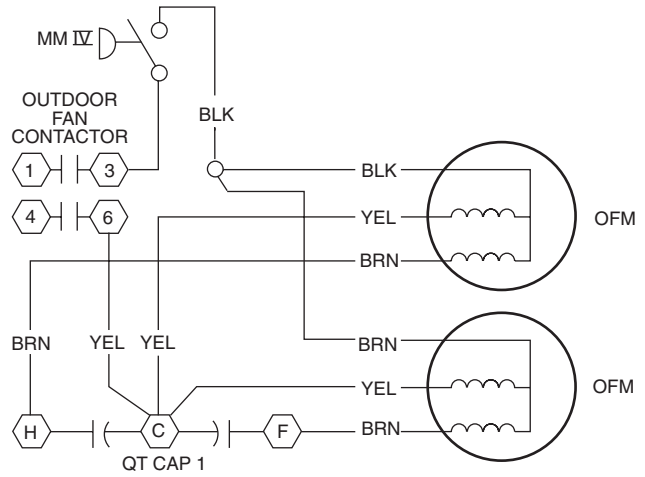
Fig. 2 — High- and Low-Pressure Switch Refrigerant Connections



LEGEND

- OFM** — Outdoor Fan Motor
- Motormaster® IV Controller (32LH900003 Pressure Switch)

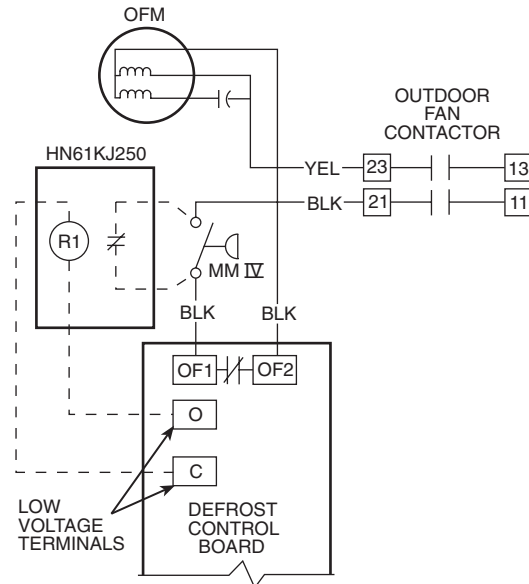
Fig. 3 — Wiring Schematic — Gas Heat/ Electric Cooling and Electric Cooling Units — Sizes 004-007



LEGEND

- OFM** — Outdoor Fan Motor
- Motormaster IV Controller (32LH900003 Pressure Switch)

Fig. 4 — Wiring Schematic — Gas Heat/ Electric Cooling and Electric Cooling Units — Sizes 008-014



LEGEND

- OFM** — Outdoor Fan Motor
- - - Aux Wiring for Heat Pump
- HN61KJ250 or Equivalent
- Motormaster IV Controller (32LH900003 Pressure Switch)

Fig. 5 — Wiring Schematic — Heat Pump Units, Sizes 004-007

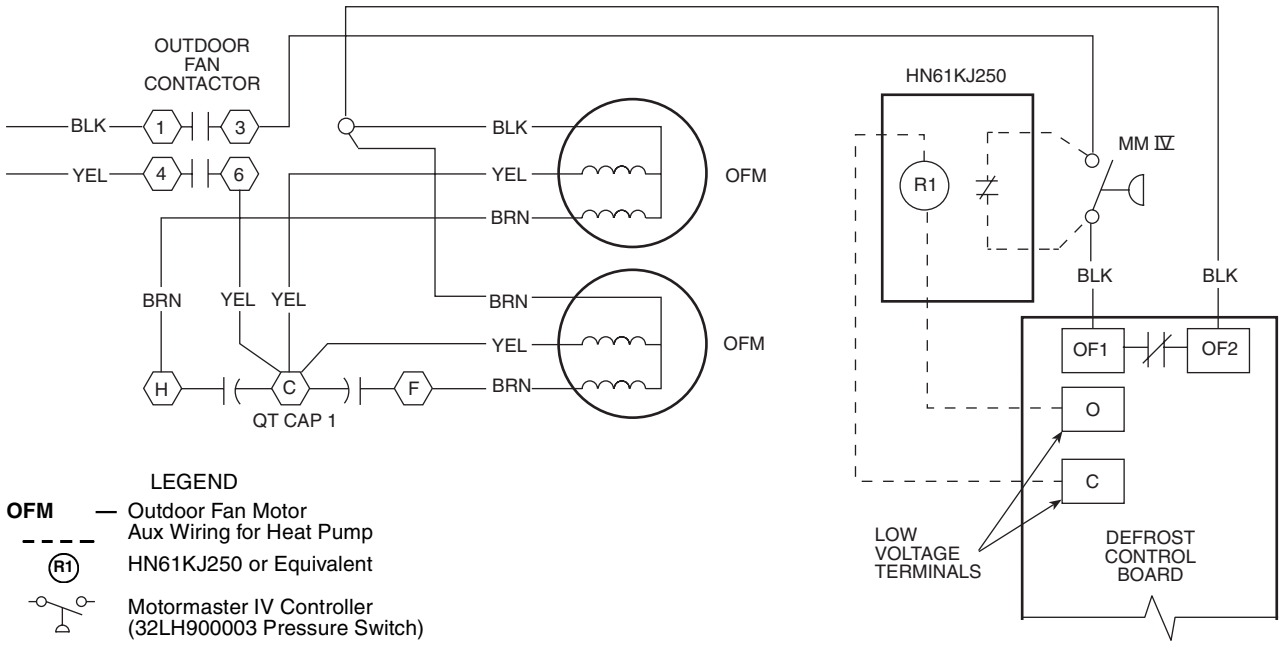
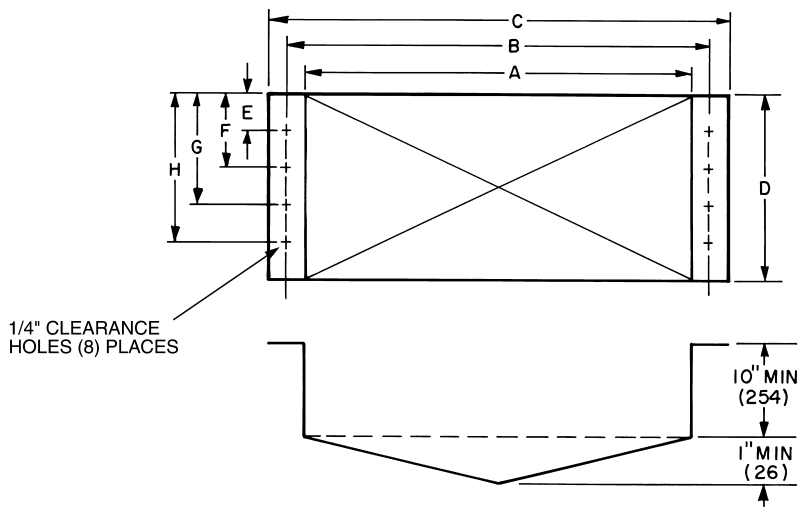
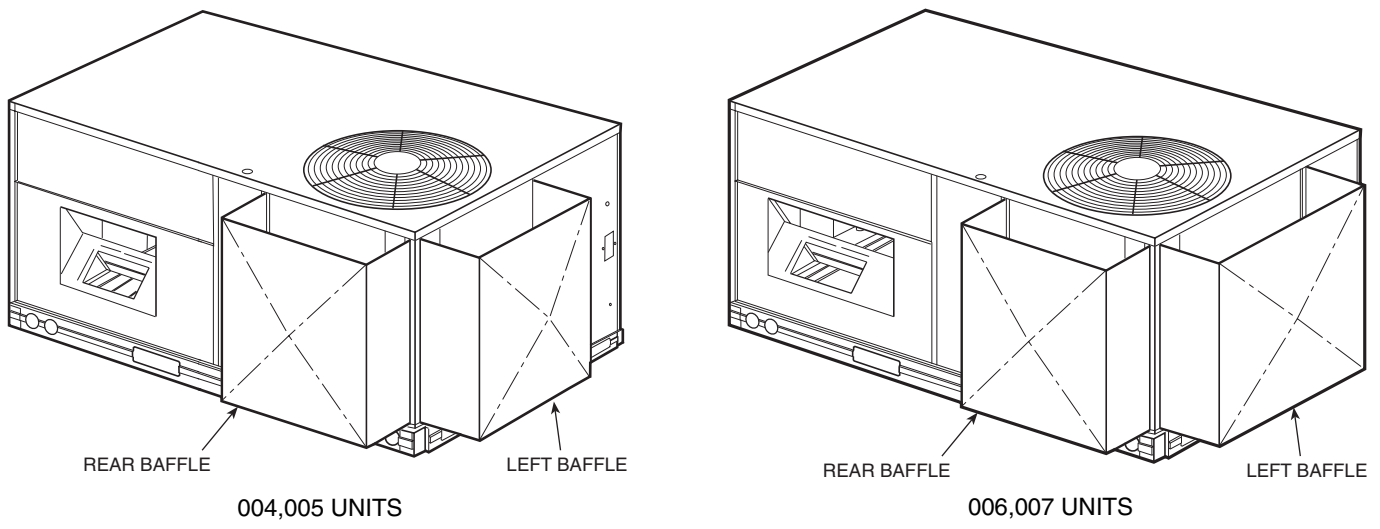


Fig. 6 — Wiring Schematic — Heat Pump Units, Sizes 008,012



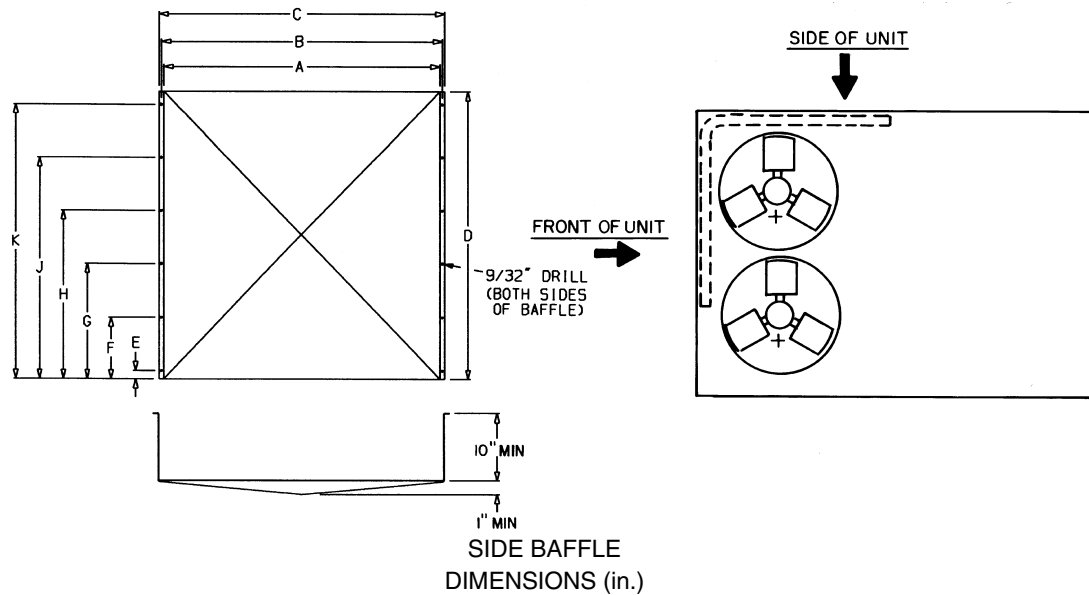
NOTE: Dimensions in () are millimeters.

Fig. 7A — Wind Baffle Mounting Details, Size 004-007 Units

DIMENSIONS (in.)

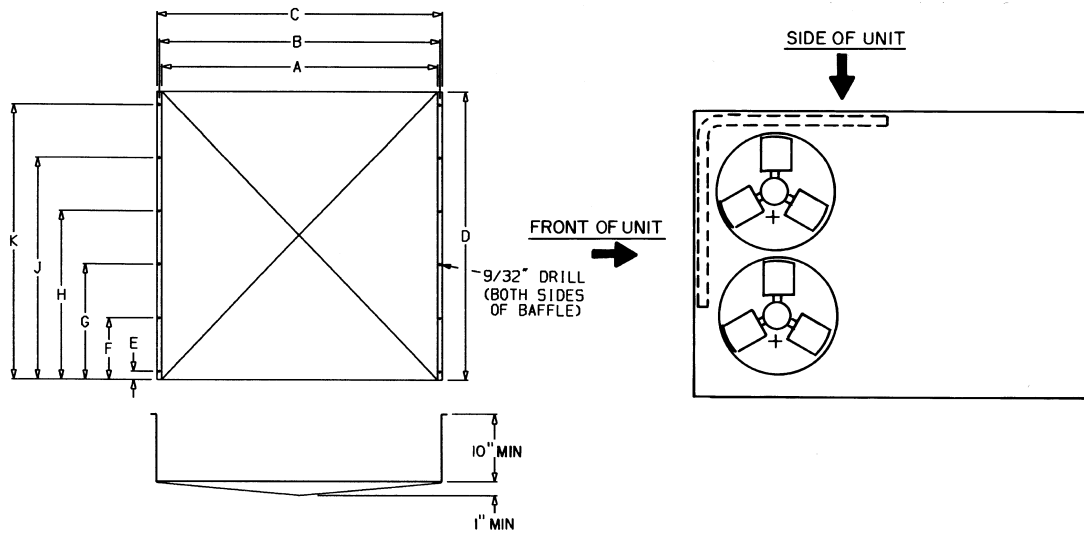
UNIT	SIZE	LEFT BAFFLE								REAR BAFFLE								
		A	B	C	D	E	F	G	H	A	B	C	D	E	F	G	H	
48HJ	004	33 ¹¹ / ₁₆	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	9 ³ / ₃₂	16 ³ / ₃₂	23 ³ / ₃₂	—	—	—	—	—	—	—	—	—
	005,006	33 ²⁵ / ₃₂	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	9 ³ / ₃₂	16 ³ / ₃₂	23 ³ / ₃₂	28 ⁹ / ₃₂	28 ²⁹ / ₃₂	29 ²⁷ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	10 ³ / ₃₂	18 ³ / ₃₂	26 ³ / ₃₂	
	007 (serial numbers prior to 2602)	33 ²⁵ / ₃₂	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	9 ³ / ₃₂	16 ³ / ₃₂	23 ³ / ₃₂	28 ⁹ / ₃₂	28 ²⁹ / ₃₂	29 ²⁷ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	10 ³ / ₃₂	18 ³ / ₃₂	26 ³ / ₃₂	
	007 (serial numbers starting at 2602)	33 ²⁵ / ₃₂	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	35 ³ / ₈	5 ⁷ / ₈	14 ⁷ / ₈	22 ¹ / ₄	30 ¹ / ₂	28 ⁹ / ₃₂	28 ²⁹ / ₃₂	28 ²⁷ / ₃₂	35 ³ / ₈	5 ⁷ / ₈	14 ⁷ / ₈	22 ¹ / ₄	30 ¹ / ₂	
48TF	004,005	21 ¹ / ₂	22 ¹ / ₄	23	27 ³ / ₈	1 ³ / ₃₂	9 ³ / ₃₂	17 ³ / ₃₂	25 ³ / ₃₂	25 ³ / ₃₂	25 ³ / ₄	26 ⁵ / ₃₂	27 ³ / ₈	4 ⁹ / ₁₆	11 ⁵ / ₁₆	18 ⁵ / ₁₆	25 ⁵ / ₁₆	
	006,007	31 ⁷ / ₈	32 ⁵ / ₈	33 ⁷ / ₁₆	27 ³ / ₈	1 ³ / ₃₂	9 ³ / ₃₂	17 ³ / ₃₂	25 ³ / ₃₂	25 ³ / ₃₂	25 ³ / ₄	26 ⁵ / ₃₂	27 ³ / ₈	4 ⁹ / ₁₆	11 ⁵ / ₁₆	18 ⁵ / ₁₆	25 ⁵ / ₁₆	
48TJ	004-007	42 ¹³ / ₁₆	43 ³ / ₁₆	44 ¹³ / ₁₆	19 ²¹ / ₃₂	3 ¹⁵ / ₁₆	7 ⁷ / ₈	11 ²⁵ / ₃₂	15 ³ / ₄	26 ³ / ₄	27 ³ / ₄	28 ³ / ₄	19 ²¹ / ₃₂	3 ¹⁵ / ₁₆	7 ⁷ / ₈	11 ²⁵ / ₃₂	15 ³ / ₄	
48TM	004	33 ¹¹ / ₁₆	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	9 ³ / ₃₂	16 ³ / ₃₂	23 ³ / ₃₂	—	—	—	—	—	—	—	—	
	005,006	33 ²⁵ / ₃₂	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	9 ³ / ₃₂	16 ³ / ₃₂	23 ³ / ₃₂	28 ⁹ / ₃₂	28 ²⁹ / ₃₂	29 ²⁷ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	10 ³ / ₃₂	18 ³ / ₃₂	26 ³ / ₃₂	
	007 (serial numbers prior to 2602)	33 ²⁵ / ₃₂	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	9 ³ / ₃₂	16 ³ / ₃₂	23 ³ / ₃₂	28 ⁹ / ₃₂	28 ²⁹ / ₃₂	29 ²⁷ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	10 ³ / ₃₂	18 ³ / ₃₂	26 ³ / ₃₂	
	007 (serial numbers starting at 2602)	33 ²⁵ / ₃₂	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	35 ³ / ₈	5 ⁷ / ₈	14 ⁷ / ₈	22 ¹ / ₄	30 ¹ / ₂	28 ⁹ / ₃₂	28 ²⁹ / ₃₂	28 ²⁷ / ₃₂	35 ³ / ₈	5 ⁷ / ₈	14 ⁷ / ₈	22 ¹ / ₄	30 ¹ / ₂	
50HJ, HJQ	004	33 ¹¹ / ₁₆	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	9 ³ / ₃₂	16 ³ / ₃₂	23 ³ / ₃₂	—	—	—	—	—	—	—	—	
	005,006	33 ²⁵ / ₃₂	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	9 ³ / ₃₂	16 ³ / ₃₂	23 ³ / ₃₂	28 ⁹ / ₃₂	28 ²⁹ / ₃₂	29 ²⁷ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	10 ³ / ₃₂	18 ³ / ₃₂	26 ³ / ₃₂	
	007 (HJ only) (serial numbers prior to 2602)	33 ²⁵ / ₃₂	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	9 ³ / ₃₂	16 ³ / ₃₂	23 ³ / ₃₂	28 ⁹ / ₃₂	28 ²⁹ / ₃₂	29 ²⁷ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	10 ³ / ₃₂	18 ³ / ₃₂	26 ³ / ₃₂	
	007 (HJQ only) (serial numbers starting at 2602)	33 ²⁵ / ₃₂	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	35 ³ / ₈	5 ⁷ / ₈	14 ⁷ / ₈	22 ¹ / ₄	30 ¹ / ₂	28 ⁹ / ₃₂	28 ²⁹ / ₃₂	28 ²⁷ / ₃₂	35 ³ / ₈	5 ⁷ / ₈	14 ⁷ / ₈	22 ¹ / ₄	30 ¹ / ₂	
	007 (HJQ only) (serial numbers prior to 5001)	33 ²⁵ / ₃₂	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	9 ³ / ₃₂	16 ³ / ₃₂	23 ³ / ₃₂	28 ⁹ / ₃₂	28 ²⁹ / ₃₂	29 ²⁷ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	10 ³ / ₃₂	18 ³ / ₃₂	26 ³ / ₃₂	
	007 (HJQ only) (serial numbers starting at 5001)	33 ²⁵ / ₃₂	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	35 ³ / ₈	5 ⁷ / ₈	14 ⁷ / ₈	22 ¹ / ₄	30 ¹ / ₂	28 ⁹ / ₃₂	28 ²⁹ / ₃₂	28 ²⁷ / ₃₂	35 ³ / ₈	5 ⁷ / ₈	14 ⁷ / ₈	22 ¹ / ₄	30 ¹ / ₂	
50TFF, TFQ, TJQ	004,005	21 ¹ / ₂	22 ¹ / ₄	23	27 ³ / ₈	1 ³ / ₃₂	9 ³ / ₃₂	17 ³ / ₃₂	25 ³ / ₃₂	25 ³ / ₃₂	25 ³ / ₄	26 ⁵ / ₃₂	27 ³ / ₈	4 ⁹ / ₁₆	11 ⁵ / ₁₆	18 ⁵ / ₁₆	25 ⁵ / ₁₆	
	006,007	31 ⁷ / ₈	32 ⁵ / ₈	33 ⁷ / ₁₆	27 ³ / ₈	1 ³ / ₃₂	9 ³ / ₃₂	17 ³ / ₃₂	25 ³ / ₃₂	25 ³ / ₃₂	25 ³ / ₄	26 ⁵ / ₃₂	27 ³ / ₈	4 ⁹ / ₁₆	11 ⁵ / ₁₆	18 ⁵ / ₁₆	25 ⁵ / ₁₆	
50TJ	004-007	42 ¹³ / ₁₆	43 ³ / ₁₆	44 ¹³ / ₁₆	19 ²¹ / ₃₂	3 ¹⁵ / ₁₆	7 ⁷ / ₈	11 ²⁵ / ₃₂	15 ³ / ₄	26 ³ / ₄	27 ³ / ₄	28 ³ / ₄	19 ²¹ / ₃₂	3 ¹⁵ / ₁₆	7 ⁷ / ₈	11 ²⁵ / ₃₂	15 ³ / ₄	
50TM	004	33 ¹¹ / ₁₆	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	9 ³ / ₃₂	16 ³ / ₃₂	23 ³ / ₃₂	—	—	—	—	—	—	—	—	
	005,006	33 ²⁵ / ₃₂	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	9 ³ / ₃₂	16 ³ / ₃₂	23 ³ / ₃₂	28 ⁹ / ₃₂	28 ²⁹ / ₃₂	29 ²⁷ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	10 ³ / ₃₂	18 ³ / ₃₂	26 ³ / ₃₂	
	007 (serial numbers prior to 2602)	33 ²⁵ / ₃₂	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	9 ³ / ₃₂	16 ³ / ₃₂	23 ³ / ₃₂	28 ⁹ / ₃₂	28 ²⁹ / ₃₂	29 ²⁷ / ₃₂	27 ³ / ₈	2 ³ / ₃₂	10 ³ / ₃₂	18 ³ / ₃₂	26 ³ / ₃₂	
	007 (serial numbers starting at 2602)	33 ²⁵ / ₃₂	34 ⁹ / ₁₆	35 ¹¹ / ₃₂	35 ³ / ₈	5 ⁷ / ₈	14 ⁷ / ₈	22 ¹ / ₄	30 ¹ / ₂	28 ⁹ / ₃₂	28 ²⁹ / ₃₂	28 ²⁷ / ₃₂	35 ³ / ₈	5 ⁷ / ₈	14 ⁷ / ₈	22 ¹ / ₄	30 ¹ / ₂	

Fig. 7A — Wind Baffle Mounting Details, Size 004-007 Units (cont)



UNIT	SIZE	A	B	C	D	E	F	G	H	J	K
48HJ 48TF 48TJ 48TM	008,009	43 ¹ / ₈	43 ⁷ / ₈	44 ⁵ / ₈	35 ¹ / ₄	5 ⁷ / ₈	14 ⁷ / ₈	22 ¹ / ₄	30 ¹ / ₂	—	—
	012,014	43 ¹ / ₈	43 ⁷ / ₈	44 ⁵ / ₈	43 ¹ / ₄	5 ⁷ / ₈	14 ⁷ / ₈	22 ¹ / ₄	30 ¹ / ₂	38 ¹ / ₈	—
50HJ 50HJQ 50TFF 50TFQ 50TJ 50TJQ 50TM	008,009	43 ¹ / ₈	43 ⁷ / ₈	44 ⁵ / ₈	35 ¹ / ₄	5 ⁷ / ₈	14 ⁷ / ₈	22 ¹ / ₄	30 ¹ / ₂	—	—
50HJ 50TFF 50TJ 50TM	012,014	43 ¹ / ₈	43 ⁷ / ₈	44 ⁵ / ₈	43 ¹ / ₄	5 ⁷ / ₈	14 ⁷ / ₈	22 ¹ / ₄	30 ¹ / ₂	38 ¹ / ₈	—
50HJQ,TFQ,TJQ	012	43 ¹ / ₈	43 ⁷ / ₈	44 ⁵ / ₈	43 ¹ / ₄	5 ⁷ / ₈	14 ⁷ / ₈	22 ¹ / ₄	30 ¹ / ₂	38 ¹ / ₈	—

Fig. 7B — Wind Baffle Mounting Details, Size 008-014 Units



FRONT BAFFLE
DIMENSIONS (in.)

UNIT	SIZE	A	B	C	D	E	F	G	H	J	K
48HJ	008	31 ³ / ₄	32 ¹ / ₂	33 ¹ / ₄	35 ¹ / ₄	1 ¹ / ₄	9 ¹ / ₄	17 ¹ / ₄	25 ¹ / ₄	33 ¹ / ₄	—
48TF 48TJ 48TM	008	41 ⁵ / ₈	42 ³ / ₈	43 ¹ / ₈	35 ¹ / ₄	1 ¹ / ₄	9 ¹ / ₄	17 ¹ / ₄	25 ¹ / ₄	33 ¹ / ₄	—
48HJ 48TF 48TJ 48TM	009	41 ⁵ / ₈	42 ³ / ₈	43 ¹ / ₈	35 ¹ / ₄	1 ¹ / ₄	9 ¹ / ₄	17 ¹ / ₄	25 ¹ / ₄	33 ¹ / ₄	—
48TF 48TJ 48TM	012	26 ⁵ / ₈	27 ³ / ₈	28 ¹ / ₈	43 ¹ / ₄	1 ¹ / ₄	9 ¹ / ₄	17 ¹ / ₄	25 ¹ / ₄	33 ¹ / ₄	41 ¹ / ₄
48HJ	012, 014	41 ⁵ / ₈	42 ³ / ₈	43 ¹ / ₈	43 ¹ / ₄	1 ¹ / ₄	9 ¹ / ₄	17 ¹ / ₄	25 ¹ / ₄	33 ¹ / ₄	41 ¹ / ₄
48TF 48TJ 48TM	014	41 ⁵ / ₈	42 ³ / ₈	43 ¹ / ₈	43 ¹ / ₄	1 ¹ / ₄	9 ¹ / ₄	17 ¹ / ₄	25 ¹ / ₄	33 ¹ / ₄	41 ¹ / ₄
50HJ	008	31 ³ / ₄	32 ¹ / ₂	33 ¹ / ₄	35 ¹ / ₄	1 ¹ / ₄	9 ¹ / ₄	17 ¹ / ₄	25 ¹ / ₄	33 ¹ / ₄	—
50TFF 50TJ 50TM	008	41 ⁵ / ₈	42 ³ / ₈	43 ¹ / ₈	35 ¹ / ₄	1 ¹ / ₄	9 ¹ / ₄	17 ¹ / ₄	25 ¹ / ₄	33 ¹ / ₄	—
50HJ 50TFF 50TJ 50TM	009	41 ⁵ / ₈	42 ³ / ₈	43 ¹ / ₈	35 ¹ / ₄	1 ¹ / ₄	9 ¹ / ₄	17 ¹ / ₄	25 ¹ / ₄	33 ¹ / ₄	—
50HJQ,TFQ,TJQ	009	16 ⁵ / ₈	17 ³ / ₈	18 ¹ / ₈	35 ¹ / ₄	1 ¹ / ₄	9 ¹ / ₄	17 ¹ / ₄	25 ¹ / ₄	33 ¹ / ₄	—
50HJQ 50TFF 50TFQ 50TJ 50TJQ 50TM	012	26 ⁵ / ₈	27 ³ / ₈	28 ¹ / ₈	43 ¹ / ₄	1 ¹ / ₄	9 ¹ / ₄	17 ¹ / ₄	25 ¹ / ₄	33 ¹ / ₄	41 ¹ / ₄
50HJ	012, 014	41 ⁵ / ₈	42 ³ / ₈	43 ¹ / ₈	43 ¹ / ₄	1 ¹ / ₄	9 ¹ / ₄	17 ¹ / ₄	25 ¹ / ₄	33 ¹ / ₄	41 ¹ / ₄
50TFF 50TJ 50TM	014	41 ⁵ / ₈	42 ³ / ₈	43 ¹ / ₈	43 ¹ / ₄	1 ¹ / ₄	9 ¹ / ₄	17 ¹ / ₄	25 ¹ / ₄	33 ¹ / ₄	41 ¹ / ₄

Fig. 7B — Wind Baffle Mounting Details, Size 008-014 Units (cont)

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.