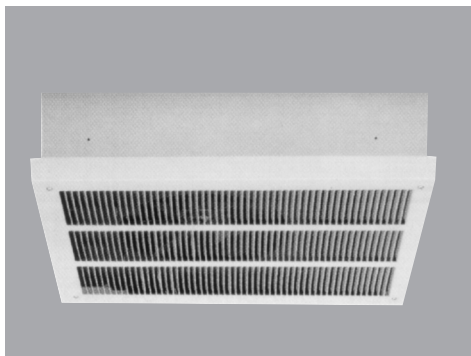
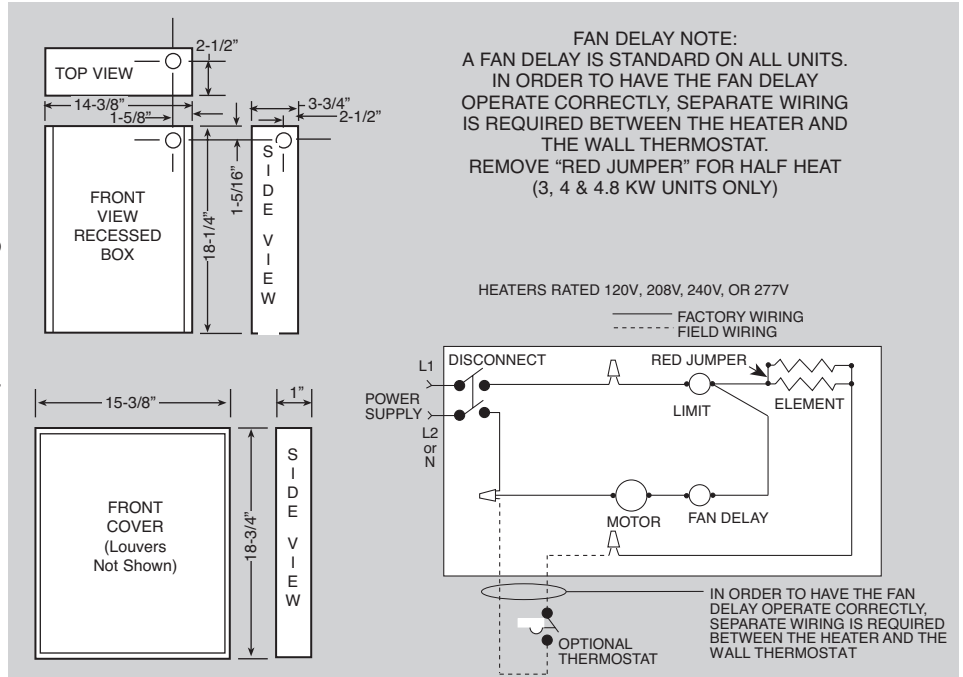


## TYPE EFF CEILING MOUNTED FAN FORCED HEATERS

- EFF type fan forced ceiling mounted heaters are designed for use almost anywhere in institutional, commercial or industrial areas where wall space is not available.
- 14 gauge louver front cover (painted Navajo White) with tamper resistant screws and 1/4 inch mesh screen.
- Models from 1500 to 4800 watts (5120 to 16382 BTU/HR.) provide outstanding performance. The EFF is ideal for high heat-loss areas that wall heaters cannot handle.
- The heater can be ceiling mounted either recessed, surface or in a T-bar application. The basic unit is designed for recessed installation, but is easily adapted for surface mounting with the use of the optional surface mounting frame.
- Rugged steel fins are copper-brazed to the low watt density, steel sheathed, tubular heating elements which are arranged in a uniform pattern.
- Room temperature is controlled by a remote wall or built-in thermostat which must be purchased separately.
- A thermal cutout shuts off the heater in the event of overheating.
- Optional: 24 or 120 volt control relay, SP or DP thermostat, transformer relay and PE kits for field installation.
- 150 CFM.
- A double-pole single throw disconnect switch is provided.



Heavy duty 14-gauge louvered front cover grille with tamper resistant screws and 1/4 inch mesh screen.

### SELECTION CHART

CATALOG NO.	VOLTS*	WATTS#	BTU/HR	AMPS
EFF1500	120	1500	5120	12.5
EFF3007	277	3000/1500	10,239	10.8
EFF4008	208	4000/2000	13,652	19.2
EFF4004	240	4000/2000	13,652/10,239	16.7/14.4
	208	3000/1500	10,239/5,120	14.4/7.2
EFF4007	277	4000/2000	13,652/6,826	14.4/12.5
	240	3000/1500	10,239/5,120	12.5/6.2
EFF4804	240/208	4800/3600	16,382/12,287	20.0/17.3
EFF4807	277/240	4800/3600	16,382/12,287	17.3/15.0
EFF3003	347	3000	10,239	8.6
EFF3006	600	3000	10,239	5.0
EFF4003	347	4000	13,652	11.5
EFF4006	600	4000	13,652	6.7
EFF4803	347	4800	16,382	13.8
EFF4806	600	4800	16,382	8.0

#Factory wired at higher wattage

### ACCESSORIES & CONTROLS

CATALOG NO.	DESCRIPTION
EFFSM	Surface Mounting Frame
EFFR2 (24V)	Time Delay Relay, 45 - 60 seconds to close when energized. Uses remote 24V or 120V power source
EFFR12 (120V)	
EFFTBF	T-bar Frame Kit
EFFT1	Single-pole Thermostat (field Installed) Range: 40° - 90°F
EFFT2	Double-pole Thermostat (field Installed) Range: 40° - 90°F
EFFTR4	208/240V Primary Transformer/24V Secondary Control Relay
EFFTR7	277V Primary Transformer/24V Secondary Control Relay

# Architect's and Engineer's Specifications\*

The heating equipment shall include a ceiling mounted EFF electric automatic fan forced heater suitable for large area heating as manufactured by QMark, a Marley Engineered Products Brand, Bennettsville, SC. The heater shall be designed for ceiling surface, recess or T-bar mounting. Heaters shall be UL Listed.

**HEATER ASSEMBLY:** The heater assembly, which fits in the back box, shall consist of a fan panel upon which is mounted all of the operational parts of the heater.

**HEATING ELEMENT:** The heating element shall be of the non-glowing design consisting of 80/20 NiCh resistance wire and closed in a steel sheath to which plate fins are copper brazed. It shall be warranted for 5 years.

**FAN AND FAN MOTOR:** The fan shall be five-bladed aluminum. The fan motor shall be totally enclosed.

**FAN DELAY SWITCH:** Fan control shall be of bi-metallic, snap-action type and shall activate fan after heating element reaches operating temperature. The fan shall continue to operate after thermostat is satisfied and until the heating element is cool.

**THERMAL CUTOUT:** A thermal cutout shall be built into the system to shut off the heater in the event of overheating.

**THERMOSTAT:** The optional tamper-resistant thermostat shall be of the bi-metallic, snap-action type with enclosed contacts. It shall be completely concealed behind the faceplate to become tamper-resistant.

**DISCONNECT SWITCH:** A double-pole single throw disconnect switch shall be mounted on the back box for positive disconnect or power supply. It will be completely concealed behind the faceplate.

**LOW VOLTAGE RELAYS:** 24 volta and 120 volt low voltage relays shall be available as optional equipment to

control 208, 240 or 277 volt heaters (with an external supplied 24 or 120 volt control circuit) in conjunction with central energy control systems. The built-in thermostat can then be used as one of the thermostats in an automatic night set-back operation.

**LOW VOLTAGE TRANSFORMER/RELAYS:**

Transformer/Relays shall be available as optional equipment to control 208, 240 or 277 volt heaters (with single point supply connection and internal supplied 24 volt control circuit) in conjunction with central energy control systems. The built-in thermostat can then be used as one of the thermostat in an automatic night set-back operation.

**BACK BOX:** The back box shall be designed for duty as a recessed rough-in box in either masonry or frame installations, and is also used with the surface mounting frame in surface mounting installations. The back box shall be 20-gauge galvanized steel and shall contain knockouts through which power leads are brought.

**FACEPLATE:** The louvered faceplate shall be of 14-gauge cold-rolled steel, phosphatized, then electrostatically painted Navajo White by a baked enamel process. A 1/4 inch mesh screen shall be installed beneath the faceplate to deter the insertion of foreign objects. The faceplate shall be secured to the heating unit with tamper-resistant screws.

**THREE PIECE DESIGN:** The heater shall be made up of a back box, a heater assembly and a faceplate.

**SURFACE MOUNTING FRAME:** The surface mounting frame, designed to allow full surface mounting, shall be of 14-gauge cold-rolled steel, phosphatized, then electrostatically painted by a baked enamel process, shall be available. Frame shall be designed to mount in a standard 2' x 2' ceiling grid.

\* QMark reserves the right to change specifications without prior notice.

