

# 3420 & 3450 Series Heavy-Duty Fan Forced Wall Heaters



## Features

- Powder coated bar stock steel tamper proof grille, with extruded Aluminum frame and 16 Gauge housing.
- In-Built double pole tamper proof thermostat with a 40°-110°F temperature range & positive off; 3 phase heaters have 3 pole thermostat for positive off position.
- Manual reset thermal limit switch.
- Corrosion resistant steel tubular element with brazed steel fins.
- Permanently lubricated, unit bearing, shaded pole motor with impedance protection.
- Propeller type fan blade:  
1400 RPM motor; 245 CFM
- Factory installed options:
  - contactors (3420 & 3450 series)
  - circuit breakers (3450 series)
  - control transformers (3450 series)



Manufactured in U.S.A.

## Standard Models

HEATER		WALL BOX		WATTS	BTU's	VOLTS	PH	AMPS	WT.	HEATER LIST	WALL BOX LIST	TOTAL LIST
UPC 686334	MODEL	UPC 686334	MODEL									
<b>SERIES 3420 - ROUGH-IN DIMENSIONS: 19-3/8" H x 14-1/4" W x 4-1/4" D</b>												
<b>GRILL DIMENSIONS: 21-15/32" H x 17-7/16" W</b>												
691130	F3422T	691574	Box 3420	2000	6826	208	1	9.6	41 lbs.	957	157	1114
691192	H3422T					240		8.3				
691178	G3422T					277		7.2				
384629	J3422T			2000	6826	208	3	5.6		1123		
384643	K3422T					240		4.8				
691239	F3423T			3000	10239	208	1	14.4		981		
691314	H3423T					240		12.5				
691277	G3423T					277		10.8				
384636	J3423T			3000	10239	208	3	8.3		1123		
384650	K3423T					240		7.3				
691338	F3424T			4000	13652	208	1	19.2		1001		
691383	H3424T					240		16.7				
691369	G3424T					277		14.4				
691406	J3424T					208	3	11.1				1123
691413	K3424T							240				
691437	F3425T					5000	17065	208				1
691512	H3425T	240	20.8									
691482	G3425T	277	18.1									
691536	J3425T	208	3	13.9	1234							
691567	K3425T			240				12.0				

HEATER		WALL BOX		WATTS	BTU's	VOLTS	PH	AMPS	WT.	HEATER LIST	WALL BOX LIST	TOTAL LIST
UPC 686334	MODEL	UPC 686334	MODEL									
<b>SERIES 3450 - ROUGH-IN DIMENSIONS: 23-1/16" H x 14-1/4" W x 4-1/4" D</b>												
<b>GRILL DIMENSIONS: 25-1/32" H x 17-7/16" W</b>												
691611	F3452T	691918	Box 3450	2000	6826	208	1	9.6	55 lbs.	1227	181	1409
691680	H3452T					240		8.3				
312295	G3452T					277		7.2				
384667	J3452T			2000	6826	208	3	5.6		1395		
384681	K3452T					240		4.8				
687683	F3453T			3000	10239	208	1	14.4		1242		
691772	H3453T					240		12.5				
312288	G3453T					277		10.8				
384674	J3453T			3000	10239	208	3	8.3		1395		
384698	K3453T					240		7.3				
691789	F3454T			4000	13652	208	1	19.2		1273		
691819	H3454T					240		16.7				
311991	G3454T					277		14.4				
691857	J3454T					208	3	11.1				1395
316651	K3454T							240				
312981	F3455T					5000	17065	208				1
312134	H3455T	240	20.8									
312387	G3455T	277	18.1									
691901	J3455T	208	3	13.9	1537							
313070	K3455T			240				12.0				

Note: Please see page 60 for custom color availability - add 10% to net heater cost.

Note: Products listed in this section are custom built and subject to 100% cancellation/restocking charges.

Contractor shall supply and install heavy duty wall mounted forced air electric heaters of the wattage, voltage and phase as specified. The heater shall so be designed to provide an even distribution of heated air to the space to be heated by drawing return air in the peripheral area of the heater across and through the element which shall then be discharged from the center section of the heater by means of an electric motor and axial flow fan blade. Heaters shall be recessed type to extend no more than 1-1/2" from the finished wall or surface mounted to extend no more than 5-3/4" from the finished wall or semi-recessed type to extend no more than 3-1/2" from finished wall or semi-recessed type to extend no more than 2-1/2" from finished wall.

### **ENCLOSURE:**

Heater front shall withstand 10.8 ft. lbs. (324 poundals) impact and 400 lbs. static force applied to an 8 sq. in. area at center grille location with less than 1/16" permanent distortion. The combination return and supply grille assembly shall be constructed of 1/16" x 3/8" rounded edge horizontal steel louvers which shall be spaced for maximum opening of 1/4". Louvers shall be welded at every intersection to three evenly spaced 1/16" diameter vertical members and completely framed in a heavy gauge natural anodized Aluminum extrusion. Front assembly shall be attached to the chassis by hidden tamper-resistant (Allen-head) machine screws. All other parts shall be 16 Gauge steel Zinc coated, both sides finished in a high gloss or bronze colored baked powder coat finish.

### **MOTOR:**

Motor shall be a permanently lubricated unit bearing, totally enclosed shaded pole type with impedance protection. Motors shall operate at no more than 1400 RPM and shall be same voltage as the heater. A protective shield shall surround the motor to separate return air from heated air.

### **PERFORMANCE:**

Heaters shall have a rating of 245 CFM at 660 F.P.M. with a maximum temperature rise of 73°F.

### **ELEMENTS:**

Element assemblies shall consist of two or three corrosion resistant steel sheathed type elements mechanically bonded to common corrosion resistant steel fins. Each sheathed element shall consist of helically coiled Nickel Chromium alloy resistant wire completely embedded in and surrounded by Magnesium Oxide, enclosed and wedged into corrosion resistant steel sheaths. Elements shall have 2" cold conductor pins extending into the sheath and shall have a density of no more than 60 Watts per inch.

### **THERMAL OVERLOAD:**

Heaters shall be equipped with a "manual reset" thermal overload which disconnects elements and motor in the event normal operating temperatures are exceeded. For safety, if opened due to abnormal temperature, thermal overload shall remain open until manually reset. Automatic reset thermal overloads which allow the element to continue to cycle under abnormal conditions will not be accepted.

### **APPROVAL:**

Heaters shall be ETL Listed.

### **OPTIONAL CONTROL SYSTEMS:**

Heaters shall be operated from wall-mounted, line voltage, heavy-duty (tamper-proof) thermostats. Heaters with built-in, pre-wired contactors shall be operated from wall-mounted, line voltage, pilot duty (tamper-proof) thermostats. Heaters built with, pre-wired contactors (and control transformers) shall be operated from wall-mounted, pilot duty (24V) or (120V) wall-mounted tamper-proof thermostats. Heaters shall be controlled by integrally mounted thermostats. Thermostats shall be heavy-duty, hydraulic type with a range of 40°F to 80°F and with remote sensing bulb placed in the return air. Thermostats shall be electrically rated at least 125% of heater rating. Thermostats

## Product Specifications

shall be heavy-duty, hydraulic type with a range of 40°F to 80°F and with remote sensing bulb placed in the return air. Thermostats shall be electrically rated at least 125% of heater rating. Thermostats shall also act as a disconnect by breaking all ungrounded conductors in the OFF position. (Thermostat control knob shall be covered by a 16 Gauge tamper-proof access plate to prevent adjustment by unauthorized personnel.)

### CONTACTORS:

Where required, heaters shall be equipped with heavy-duty, definite purpose contactors with flame path separators and dust covers. Contactors shall cycle all ungrounded conductors. Contactors shall have holding coils (of the same voltage as the heater) or (120 Volts) or (24 Volts).

### CONTROL TRANSFORMERS:

Heater shall be equipped with a Class 2 control transformer, sealed rating of 20 VA, to supply control circuits of (24 Volts) or (120 Volts). (120 Volt secondaries not available in single phase heaters over 3 KW).

### CIRCUIT BREAKERS (3450 Series Only):

Heaters shall be equipped with built-in circuit breakers in order to allow the heaters to be supplied from feeder taps. A separate switch providing a positive off for control circuits shall be included where required. Circuit breakers and control switches shall be arranged so that all line side conductors will be separately enclosed when heater front is removed for servicing so that no current carrying parts are accessible without the use of additional tools.

## Field Installed Accessories

Units with transformers must have a contactor. A control transformer with 120V secondary is available on all 3-phase models, 208V/240V 1-phase units up to 3KW, and up to 4 KW on 277V. All heaters must be installed with a wall box.

MODEL	DESCRIPTION	SERIES OPTIONS		LIST
		3420	3450	
Suffix - R	Contactor with Coil same as heater	YES	YES	182
Suffix - R1	Contactor with 24V Coil	YES	YES	
Suffix - R2	Contactor with 120V Coil	YES	YES	
Suffix - C	Circuit Breakers - all models	NO	YES	340
Suffix - A1	Control Transformers With 24V Secondary	NO	YES	100
Suffix - A2	Control Transformers With 120V Secondary	NO	YES	134

UPC# 686334	MODEL	DESCRIPTION	WT.	LIST
691949	3450EX34	4" Surface Mounting Sleeve	6 lb.	101
691932	3450EX16	2" Semi-Recessing Sleeve	4 lb.	97
691925	3450EX8	1" Semi-Recessing Sleeve	4 lb.	78
691604	3420EX34	4" Surface Mounting Sleeve	5 lb.	101
691598	3420EX16	2" Semi-Recessing Sleeve	4 lb.	97
691581	3420EX8	1" Semi-Recessing Sleeve	3 lb.	78