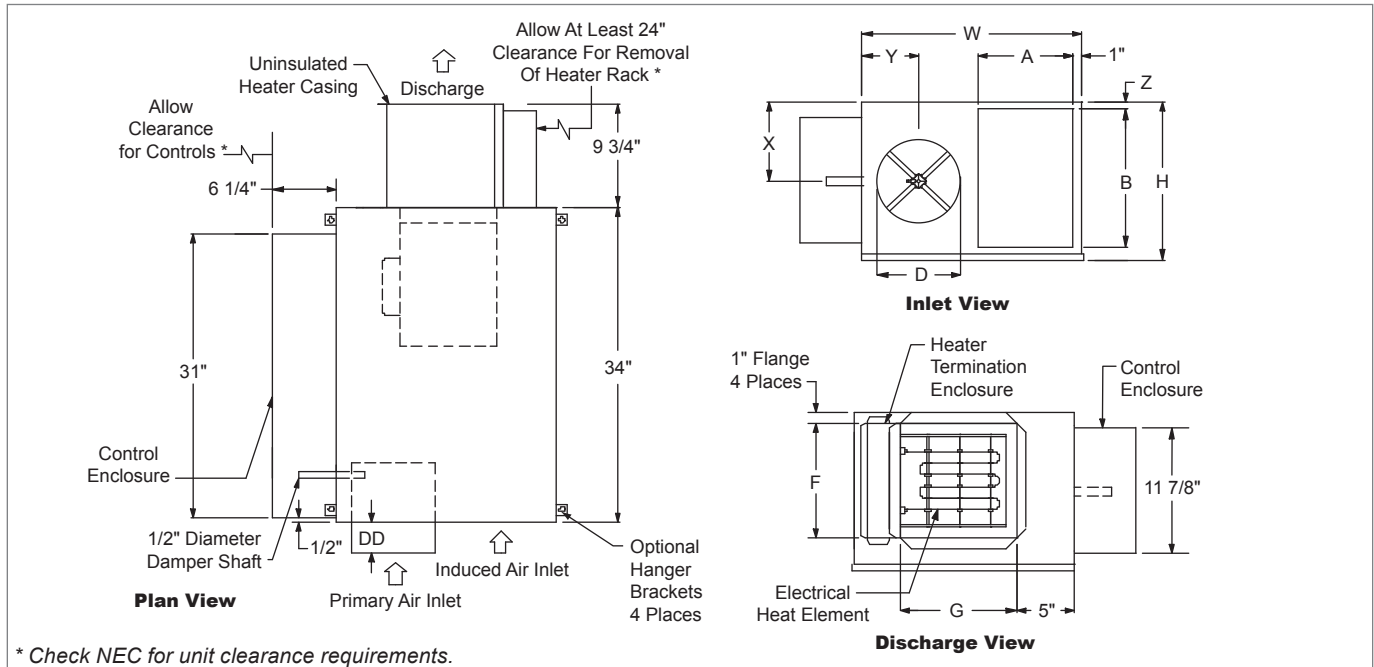


QFC Unit with Electric Heat Dimensional Information

QFC UNIT WITH ELECTRIC HEAT, INLET, PLAN, AND DISCHARGE VIEWS (UNIT SIZES 2 - 6)



FAN POWERED TERMINAL UNITS

QFC UNIT WITH ELECTRIC HEAT, DIMENSIONAL DETAILS (UNIT SIZES 2 - 6)

Unit Size	Inlet Size	Max. Primary CFM	Max. Fan CFM	PSC HP	W	H	Induced Air		D	Discharge		X	Y	Z
							A	B		F	G			
2	06	515	560	1/10	21"	15"	9"	13"	5 7/8"	11"	11"	7 1/2"	5 3/8"	1"
3	06	515	990	1/4	21"	15"	9"	13"	5 7/8"	11"	11"	7 1/2"	5 3/8"	1"
3	08	920	990	1/4	21"	15"	9"	13"	7 7/8"	11"	11"	7 1/2"	5 3/8"	1"
4	08	920	1440	1/4	32 1/4"	17 3/4"	14 3/8"	15"	7 7/8"	13"	14 1/2"	8 7/8"	5 3/8"	1 3/8"
4	10	1430	1440	1/4	32 1/4"	17 3/4"	14 3/8"	15"	9 7/8"	13"	14 1/2"	8 7/8"	7 3/8"	1 3/8"
4	12	1440	1440	1/4	32 1/4"	17 3/4"	14 3/8"	15"	11 7/8"	13"	14 1/2"	8 7/8"	8 3/8"	1 3/8"
5	10	1430	2100	1/2	32 1/4"	17 3/4"	14 3/8"	15"	9 7/8"	13"	14 1/2"	8 7/8"	7 3/8"	1 3/8"
5	12	2060	2100	1/2	32 1/4"	17 3/4"	14 3/8"	15"	11 7/8"	13"	14 1/2"	8 7/8"	8 3/8"	1 3/8"
6	12	2060	2530	3/4	32 1/4"	17 3/4"	14 3/8"	15"	11 7/8"	13"	14 1/2"	8 7/8"	8 3/8"	1 3/8"
6	14	2530	2530	3/4	32 1/4"	17 3/4"	14 3/8"	15"	13 7/8"	13"	14 1/2"	8 7/8"	8 3/8"	1 3/8"

NOTES: Left-hand base unit with electronic control enclosure shown; right hand is available. See page B2-59 for electric heat standard features.

QFC Unit with Electric Heat Features & Options

STANDARD FEATURES (UNIT SIZES 2 - 6)

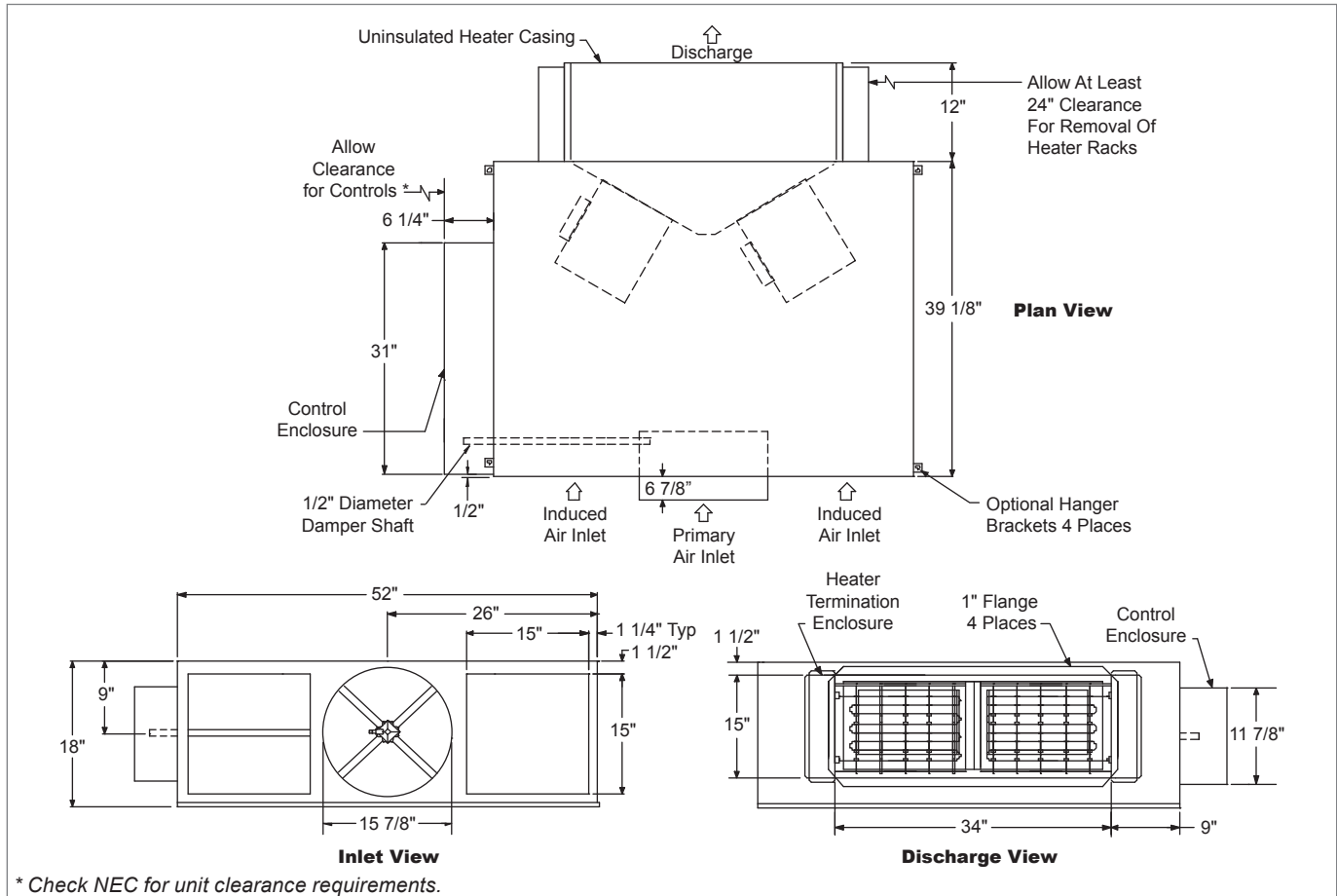
- 22 Gage galvanized steel casing construction.
- Control enclosure for electronic components.
- 1/2" Thick, Dual density fiberglass insulation that meets NFPA 90A and UL 181 safety requirements.
- [120, 208/240, or 277 volt, multi-voltage, single-phase, single-speed] permanently lubricated PSC motors.
- Field adjustable fan speed control.
- Removable bottom panel allows easy access to all internal components for maintenance.
- Four quadrant center averaging airflow sensor; inlet sizes 6 - 10 (DD = 4 7/8"); sizes 12 - 16 (DD = 6 7/8").
- Flanged discharge connection on electric heat coil.
- Single point electrical connection.
- Includes 24 volt control transformer.
- AHRI certified sound ratings.
- ETL listed; adherence to UL 1995 and CSA C22.2 No. 236.95.
- AHRI certified sound ratings.

OPTIONAL FEATURES (UNIT SIZES 2 - 6)

- 20 Gage galvanized steel casing construction.
- LineaHeat solid state electronic proportional control of electric heat.
- Liners: 1/2" or 1" Cellular insulation, 1" Dual density fiberglass insulation, or 1/2" or 1" Foil encapsulated fiberglass insulation.
- Linear averaging airflow sensor; inlet sizes 6 - 10 (DD = 4 7/8"), sizes 12 - 16 (DD = 6 7/8").
- [120, 208/240, or 277 volt, single-voltage] ECM motor with manual or remote adjustable speed controller (on sizes 3 and 6).
- Left-hand or right-hand control enclosure.
- Fused or non-fused door interlocking disconnect.
- Induced air filter, construction type; unit sizes 2 - 3 (11"x15"x1"); unit sizes 4 - 6 (17"x17"x1").
- Induced air inlet attenuator.
- Dust tight control enclosure.
- Hanger brackets.
- AC solid state relay.
- Manual reset cutout.
- Motor fusing.
- Fuse-block.

QFC Base Unit with Electric Heat Dimensional Information

QFC BASE UNIT WITH ELECTRIC HEAT, INLET, PLAN, AND DISCHARGE VIEWS (UNIT SIZE 7)



* Check NEC for unit clearance requirements.

QFC BASE UNIT WITH ELECTRIC HEAT, DIMENSIONAL DETAILS (UNIT SIZE 7)

Unit Size	Inlet Size	Max. Primary CFM	Max. Fan CFM	PSC HP
7	16	3660	3900	(2) 3/4

NOTES: Left-hand base unit with electronic control enclosure shown; right hand is available. See next page for electric heat standard features.

QFC Base Unit with Electric Heat Features & Options

STANDARD FEATURES (UNIT SIZE 7)

- 22 Gage galvanized steel casing construction.
- Control enclosure for electronic components.
- 1/2" Thick, Dual density fiberglass insulation that meets NFPA 90A and UL 181 safety requirements.
- [208/240 or 277 volt, multi-voltage, single-phase, single-speed] permanently lubricated PSC motors.
- Field adjustable fan speed control.
- Removable bottom panel allows easy access to all internal components for maintenance.
- Four quadrant center averaging airflow sensor.
- Flanged discharge connection on electric heat coil.
- Single point electrical connection.
- Includes 24 volt control transformer.
- AHRI certified sound ratings.
- ETL listed; adherence to UL 1995 and CSA C22.2 No. 236.95.
- AHRI certified sound ratings.

OPTIONAL FEATURES (UNIT SIZE 7)

- 20 Gage galvanized steel casing construction.
- Liners: 1/2" or 1" Cellular insulation, 1" Dual density fiberglass insulation, or 1/2" or 1" Foil encapsulated fiberglass insulation.
- Linear averaging airflow sensor.
- [120, 208/240, or 277 volt, single-voltage] ECM motor with manual or remote adjustable speed controller.
- Left-hand or right-hand control enclosure.
- LineaHeat solid state electronic controlled heater with or without leaving air temperature control.
- Hanger brackets.
- Motor fusing.
- Fused or non-fused door interlocking disconnect.
- Dust tight control enclosure.
- AC solid state relay.
- Manual reset cutout.
- Induced air filter, construction type; size 17"x17"x1" (qty 2).
- Induced air inlet attenuator (extends 6").
- Fuse-block.

FAN POWERED TERMINAL UNITS

Q T C

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QFC Electric Heat Features & Capacities

The kW charts below indicates the maximum and minimum safe limit capacities for each of the QFC units and has been specifically designed for Krueger fan powered terminals. For safe operation, the electric heater controls are interlocked with the airflow proving switch to allow the heater to energize only after the fan is running. Each terminal unit has been tested by ETL in accordance with UL standards.

ELECTRIC HEAT STANDARD FEATURES

- 20 Gage galvanized steel casing construction.
- Line voltage combinations:
[120, 208/240, or 277 volt, single-phase]
[208 volt, three-phase, three-wire]
[480 volt, three-phase, four-wire]
- NEMA 2 electric heat control enclosure.
- Flanged discharge for field duct connection.
- Single point connection between the heater and the fan motor (see combinations below).
- 80/20 Ni-Cr heating elements.
- Automatic reset thermal cutout.
- Magnetic contactors.
- Units with electronic/pneumatic feature a PE switch per step and a fan PE switch.
- Units with controls include a fan relay and a 24 volt control transformer.
- Positive pressure airflow switch.

NOTE: A minimum of 0.1" w.g. downstream static pressure is required in the duct to ensure proper heater operation.

OPTIONAL HEATER CONTROL

- LineaHeat solid state electronic proportional control of electric heat is available with or without leaving air temperature control. See Krueger's Terminal Unit Engineering section for additional information.
- AC solid state relays offer silent operation for staged electric heat.

QFC, MINIMUM kW

Unit Sizes	1 Phase							3 Phase			
	120 Volt	208 Volt	240 Volt		277 Volt			208 Volt	480 Volt		
Stage 1	0.5	0.5	1	0.5	1	1	1	1.5	2.5	2	3
Stage 2	1	1	1.5	1	1.5	1.5	2	1.5	2.5	2	3
Stage 3	1.5	1.5	2	1.5	2.5	2	3	1.5	2.5	2	3

QFC, MAXIMUM kW

Unit Size	1 Phase				3 Phase	
	120 Volt	208 Volt	240 Volt	277 Volt	208 Volt	480 Volt
2	5.0	5.0	5.0	5.0	5.0	5.0
3	5.0	6.0	6.0	6.0	6.0	5.0
4	4.5	9.0	9.0	10.0	12.0	13.0
5	4.5	9.0	9.0	12.0	14.0	19.0
6	4.0	8.5	8.5	12.0	13.0	23.0
7	-	8.5	8.5	10.0	11.0	25.0

NOTES: Dash indicates not applicable. Minimum and maximum values apply to staged heaters only. Contact your local Krueger representative for LineaHeat limits.

SINGLE POINT CONNECTION COMBINATIONS

ELECTRIC HEATER/FAN MOTOR

- [120, 208/240 or 277 volt, single-phase] electric heat includes fan motor wired with same line voltage.
- [208 volt, three-phase, three-wire] electric heat utilizes a 208/240 volt, single-phase fan motor.
- [480 volt, three-phase, four-wire] electric heat is equipped with 277 volt, single-phase fan motor.

$$\text{Unit} = \frac{\text{CFM} \times \Delta T (\text{°F})}{3160}$$

CALCULATING ELECTRIC HEATER AMPERES

$$\text{Single Phase Amperes} = \frac{\text{Watts}}{\text{Line Voltage}}$$

$$\text{Three Phase Amperes} = \frac{\text{Watts}}{\text{Line Voltage} \times 1.73}$$

NOTES: When selecting electric heaters, do not exceed 120°F discharge air temperature, per NEC. The ASHRAE Handbook of Fundamentals states that discharge temperatures in excess of 90°F are likely to result in objectionable air temperature stratification in the space. Also, ventilation short circuiting may occur. ASHRAE Standard 62 now limits discharge temperatures to 90°F or increasing the ventilation rate when heating from the ceiling.