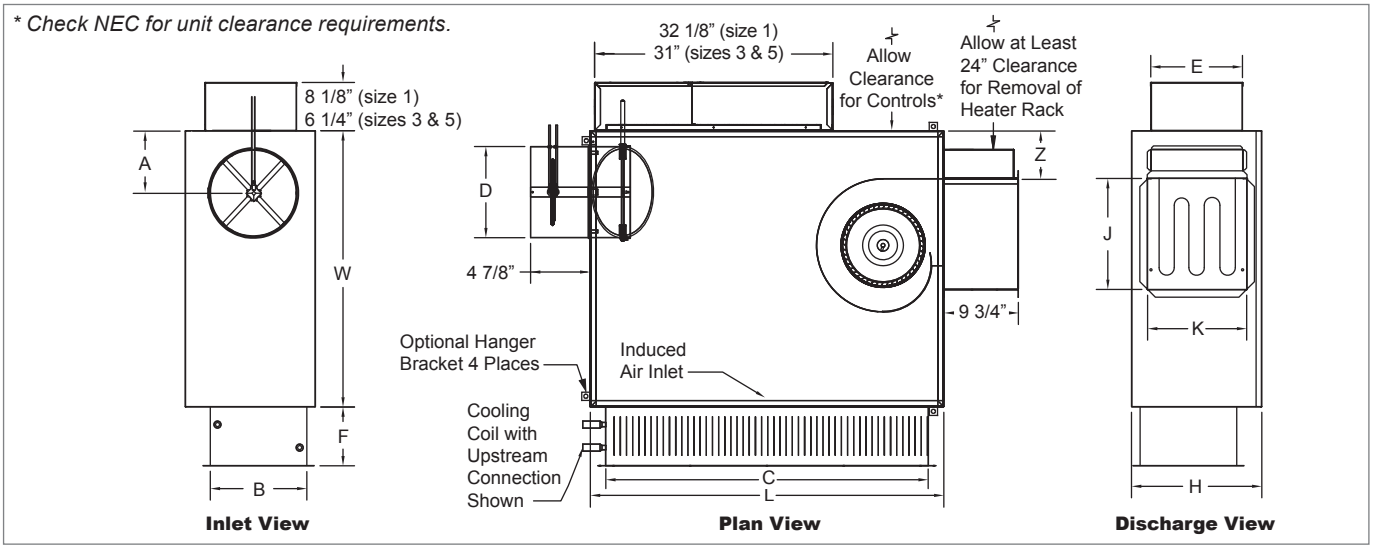
KLPS-D Unit with Electric Heat Dimensional Information

KLPS-D UNIT WITH ELECTRIC HEAT, INLET, PLAN, AND DISCHARGE VIEWS

** Check NEC for unit clearance requirements.*



KLPS-D UNIT WITH ELECTRIC HEAT, DIMENSIONAL DETAILS

Unit Size	ECM HP	L	W	H	Cooling Coil		E	Discharge		Z	F		
					B	C		J	K		2 Row	4 Row	6 Row
1	1/3	48"	32"	8 5/8"	7 1/2"	36"	8 1/8"	10 1/2"	7 3/4"	1 1/8"	7 7/8"	7 7/8"	10"
2	1/3	48"	32"	9 1/2"	7 1/2"	36"	8 1/8"	10 1/2"	7 3/4"	1 1/8"	7 7/8"	7 7/8"	10"
3	1/3	40"	26"	11"	8 3/4"	36"	9 5/8"	10 1/2"	8 3/8"	1 1/8"	7 7/8"	7 7/8"	10"
5	1/2	46"	36"	17"	12 1/2"	42"	12"	14 1/2"	12 7/8"	6 1/4"	7 7/8"	7 7/8"	10"

Unit Size	1				2				3					5			
Inlet Size	04	05	06	07	04	05	06	07	04	05	06	07	08	06	07	08	10
A	5"	5"	5"	5"	5"	5"	5"	5"	5"	6"	5"	6"	5"	5"	6"	6"	7"
D	3 7/8"	4 7/8"	5 7/8"	6 7/8"	3 7/8"	4 7/8"	5 7/8"	6 7/8"	3 7/8"	4 7/8"	5 7/8"	6 7/8"	7 7/8"	5 7/8"	6 7/8"	7 7/8"	9 7/8"

NOTES: Left-hand base unit with electronic control enclosure shown; right-hand is available. See page B2-97 for electric heat standard features.

KLPS-D Unit with Electric Heat Features & Options

STANDARD FEATURES

- 20 gage galvanized steel casing construction.
- Available in unit sizes 1, 2, 3, and 5.
- 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, single-voltage] ECM motor.
- Manual or remote adjustable speed controller.
- 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.
- Sensible Cooling Coil factory installed on induced air inlet with drip tray.
- Construction type air filter, two per unit, unit size 1 (18 7/8"x7 1/2"x1"), unit size 2 (18 7/8"x8 3/8""x1"), unit size 3 (18 1/2"x10"x1"), unit size 5 (22"x14 1/2"x1").
- ETL listed; adherence to UL 1995 and CSA C22.2 No. 236.95.

OPTIONAL FEATURES

- LineaHeat solid state electronic controlled heater with or without leaving air temperature control.
- Liners: 1/2" or 1" Cellular insulation, 1/2" or 1" Foil encapsulated fiberglass insulation, Sterilwall, Perforated doublewall, 1" Dual density fiberglass. *NOTE: 1" thick liner options are available on unit size 5 only.*
- Linear averaging airflow sensor.
- Left-hand or right-hand control enclosure.
- Upstream or downstream cooling coil connection
- MERV 8 air filter, two per unit, unit size 1 (18 7/8"x 7 1/2" x1"), unit size 2 (18 7/8"x8 3/8""x1"), unit size 3 (18 1/2"x10"x1"), and unit size 5 (22"x14 1/2"x1").
- Fused or non-fused door interlocking disconnect.
- Dust tight control enclosure.
- Hanger brackets.
- Motor fusing.
- AC Solid State Relays.
- Manual reset cutout.
- Fuse-block.
- Dual access panels with optional Cam locks.

KLPS Electric Heat Features & Capacities

The kW charts below indicates the maximum and minimum safe limit capacities for each of the KLPS 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.
- 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.

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.

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

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.

KLPS MINIMUM / MAXIMUM kW

			Unit Sizes									
			1		2		3		4		5	
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1 Phase	120 Volt	1 Stage	0.5	4.5	0.5	4.5	0.5	4.0	0.5	4.0	0.5	4.5
		2 Stage	1.0	4.5	1.0	4.5	1.0	4.0	1.0	4.0	1.0	4.5
		3 Stage	1.5	4.5	1.5	4.5	1.5	4.0	1.5	4.0	1.5	4.5
	208 Volt	1 Stage	0.5	6.0	0.5	6.0	0.5	8.0	0.5	8.0	0.5	9.0
		2 Stage	1.0	6.0	1.0	6.0	1.0	8.0	1.0	8.0	1.0	9.0
		3 Stage	1.5	6.0	1.5	6.0	1.5	8.0	1.5	8.0	1.5	9.0
	240 Volt	1 Stage	1.0	6.0	1.0	6.0	1.0	9.0	0.5	10.0	1.0	10.0
		2 Stage	1.5	6.0	1.5	6.0	1.5	9.0	1.0	10.0	1.5	10.0
		3 Stage	2.0	6.0	2.0	6.0	2.0	9.0	1.5	10.0	2.0	10.0
	277 Volt	1 Stage	1.0	6.0	1.0	6.0	1.0	9.0	0.5	12.0	0.5	12.0
		2 Stage	1.5	6.0	1.5	6.0	1.5	9.0	1.0	12.0	1.0	12.0
		3 Stage	2.5	6.0	2.5	6.0	2.5	9.0	1.5	12.0	1.5	12.0
3 Phase	208 Volt (3 Wire)	1 Stage	1.5	6.0	1.5	6.0	1.5	9.0	1.5	14.0	1.5	14.0
		2 Stage	1.5	6.0	1.5	6.0	1.5	9.0	1.5	14.0	1.5	14.0
		3 Stage	1.5	6.0	1.5	6.0	1.5	9.0	1.5	14.0	1.5	14.0
	480 Volt (4 Wire)	1 Stage	2.5	6.0	2.5	6.0	2.5	9.0	2.5	14.0	2.5	17.5
		2 Stage	2.5	6.0	2.5	6.0	2.5	9.0	2.5	14.0	2.5	17.5
		3 Stage	2.5	6.0	2.5	6.0	2.5	9.0	2.5	14.0	2.5	17.5

NOTES: Minimum and maximum values apply to staged heaters only. Contact your local Krueger representative for LineaHeat limits.