

KQFS Product Description**CASING**

- All KQFS unit casing panels are constructed of 20 gage galvanized steel.
- Removable bottom panel allows easy access to motor/blower assemblies.

INLET COLLARS

- All round 20 gage inlet collars accommodate standard spiral and flex duct sizes.
- The primary air inlet is located on either the left-hand or right-hand side of the unit inlet panel of the KQFS unit. (Hand is determined by looking at the unit in the direction of airflow with the unit in the installed position.)

OUTLET CONNECTIONS

- All outlet connections are rectangular and require a flanged duct connection.

DAMPER ASSEMBLY

- All units utilize a round volume control damper with a solid shaft that rotates in self lubricating Delrin® bearings.
- Damper blade incorporates a flexible gasket for tight airflow shutoff and operates over a full 90° rotation.
- The damper position is marked by an arrow embossment on the end of the damper shaft.

INDUCED AIR INLET ATTENUATOR

- Integral induced air sound attenuator is a standard component for reducing radiated sound.

INDUCED AIR INLET FILTER

- Induced air inlet filters (construction type or MERV 8) are available. These filters are typically used for job start-up and are provided with clip frames for easy filter replacement.

CASING LINERS

All liners are attached to the unit casing with both adhesive and weld pins to ensure long term durability (excludes Sterilwall and Perforated Doublewall). The standard liner option is 1/2" thick, 1 1/2 lb. dual density fiberglass insulation that meets UL 181 and NFPA 90A.

- **(Optional)** 1" Thick Insulation: 1" thick, 1 1/2 lb. dual density fiberglass insulation that meets UL 181 and NFPA 90A.
- **(Optional)** Steriliner Insulation: 13/16" thick, 4 lb. density, rigid board insulation with fiber reinforced foil covering insulation fibers that meets UL 181 and NFPA 90A. Liner shall be attached to unit casing by adhesive and weld pins with foil tape sealing the insulation cut edges.
- **(Optional)** Cellular Insulation: 1/2" or 1" thick, 1 1/2 lb. density, smooth surface, polyolefin, closed-cell foam insulation for fiber free application. Cellular insulation meets UL 181 and NFPA 90A and does not support mold or bacteria growth.
- **(Optional)** Foil Encapsulated Insulation: Foil reinforced, wrapped edges, 1/2" or 1" thick, 1 1/2 lb. density fiberglass insulation that meets UL 181 and NFPA 90A.
- **(Optional)** Sterilwall Insulation: 1/2" or 1" thick, 1 1/2 lb. dual density fiberglass insulation, that meets UL 181 and NFPA 90A, enclosed between the unit casing and a non-

perforated internal sheet metal cover extending over the fiberglass insulation, as well as covering the liner cut edges.

- **(Optional)** Perforated Doublewall Insulation: 1/2" or 1" thick, 1 1/2 lb. dual density fiberglass insulation, (additional options: 1/2" or 1" thick, 1 1/2 lb. density foil reinforced fiberglass insulation or 13/16" thick, 4 lb. density, rigid board insulation with fiber reinforced foil covering) that meets UL 181 and NFPA 90A, enclosed between the unit casing and a perforated internal sheet metal cover extending over the fiberglass insulation, as well as covering the liner cut edges.
- **(Optional)** No Liner: No internal insulation liner.

AIRFLOW SENSOR

- All units are equipped with a factory installed inlet airflow sensor device.
- K4 LineaCross: A four-quadrant, multi-point, center averaging airflow sensor is standard.
- **(Optional)** A linear, multi-point, velocity averaging airflow sensor with an amplified signal.
- Balancing taps are provided to allow for easy airflow verification.

FAN MOTORS

- Fan motors for model KQFS, units sizes 2 to 6 are multi-voltage, [120, 208/240, or 277 volt, single-phase] permanent split capacitor (PSC) type. Fan motor for model KQFS, unit size 7, is single voltage [208/240 or 277 volt, single-phase] permanent split capacitor (PSC) type.
- **(Optional)** [120, 208/240, or 277 volt, single-phase] ECM (electronically commutated motor) fan motor.
- Units equipped with [120, 208/240 or 277 volt, single-phase] electric heat have fan motors wired with the same line voltage. Units with [208 volt, three-phase, three-wire] electric heat utilize [208/240 volt] fan motors. Units with [480 volt, three-phase, four-wire] heat are equipped with [277 volt, single-phase] fan motors.
- A motor disconnect switch is available (not available if the unit is equipped with electric heat including the door locking disconnect option).
- Motor fusing is available.

FAN SPEED CONTROL

- All units with PSC motors are equipped with an SCR fan speed controller capable of reducing fan output by as much as 50 to 55%.
- All units with optional ECM motors include either a manual or remote adjustable speed controller. The manual adjustable speed controller features a digital display that alternates between the RPM of the motor and percentage of flow and can be set and adjusted in the field. The remote adjustable speed controller communicates with a DDC controller to remotely set and/or adjust the fan speed using either a 0-10 VDC or 2-10 VDC signal and provides a manual override capability to set and/or adjust the fan speed in the field.

CONTROLS

- Pneumatic, analog or direct digital control types are available. Digital controls can be provided by others or Krueger for factory mounting. A "no control" unit is also available for field mounting of electronic controls.

KQFS Product Description

HOT WATER HEAT

- The model KQFS coil is factory mounted to the unit discharge.
- One or two row coils are constructed of ten aluminum fins per inch with 5/8" O.D. sweat type connection. Left-hand or right-hand tubing connections are available. The coil tubing is water leakage tested to 400 PSIG.
- The standard unit access panel provides upstream cleaning capability of the coil fins for units with discharge mounted coils.
- Vent and drain option is available.

ELECTRIC HEAT

- Heaters are ETL listed and are constructed of 20 gage galvanized steel.
- Available combinations are [120, 208/240, 277 volt, single-phase], [208/240 volt, three-phase, three-wire], and [480 volt, three-phase, four-wire]. See fan motor description for electric heat/fan motor combinations.
- Standard heaters are equipped with automatic reset thermal cutout, magnetic contactors, airflow proving switch, and 80/20 Ni-Cr heating elements.
- Electric heater options include a fused or non-fused door interlocking disconnect switch, fuse-block, manual reset cutout, and dust tight enclosure construction.
- AC solid state relays offer silent operation for staged electric heat.

- 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.

CONTROL TRANSFORMERS

- Units with and without electric heat include a factory supplied, mounted and wired control transformer, mounted inside the control enclosure for electronic control applications.

LABELS

- Label information adhered to each unit includes model name, unit size, configuration code, airflow (CFM), balancing chart, tagging data, electrical ratings, removal of fan protection packing material information, and all required agency listings.

PACKAGING

- Units are palletized. Each pallet of units is banded and stretch wrapped with cellophane.

KQFS Exploded View

KQFS, EXPLODED VIEW

