



High Temperature Extract Fans Centrifume (CFR) - Roof Mounted Kitchen Hood Extract

1.1. General

A. Provide a roof mounted kitchen hood extract fan unit to meet the performance and configuration as indicated in the schedule and detail drawings. The roof mounted kitchen hood extract fan unit shall conform to AMCA standard 211 and 311. The unit shall be of the Centrifume roof mounted kitchen hood extract fan type as manufactured by VES Andover Ltd a company accredited with BS EN ISO 9001:2008.

1.2. Unit Construction

A. The unit shall be provided pre-assembled comprising of a heavy-gauge aluminum case with a rigid internal support structure, centrifugal backward curved fan without scroll, and belt driven motor mounted out of air stream on a heavy gauge steel drive frame assembly.

B. the case shall be constructed with a one-piece leak proof wind band with an integral rolled bead for added strength and shall be joined to the curb cap with a continuously welded seam.

C. The unit shall be suitable for mounting on a horizontal roof curb upstand.

D. The case shall include a removable lid for motor & drive access and maintenance.

E. The unit shall be provided with a grease & water collection system incorporated into the case design, including a built-in discharge spout with support for an optional collection trough.

F. The unit casework shall incorporate a high quality leak resistant gasket on top access cover.

1.3. Fan

A. The fan impeller shall be centrifugal backward curved, constructed of aluminum and shall include a wheel cone carefully matched to the inlet eye for precise running tolerances. The impeller shall be statically and dynamically balanced to AMCA Standard 204-05, and be tested to ANSI/AMCA Standard 210-99 and AMCA Standard 300-96.

B. The unit shall be available with a High Pressure alternative impeller where the schedule specifies duty points beyond the capabilities of the standard impeller.

1.4. Motor

A. The motor shall be heavy-duty ball bearing type carefully matched to the fan load and supplied at the specified voltage, phase, and enclosure as indicated in the schedule and detail drawings.

B. Motors shall be readily accessible for maintenance.

C. The motor support frame shall be thermally insulated from the casework with a foil reinforced barrier sheet.

D. Motors and drives shall be mounted on anti vibration mounts, out of the air stream where no steel-to-steel contact between rotating components and the base shall occur.

E. Fresh air for motor cooling shall be drawn into the motor compartment through a ten- square-inch tube free of discharge contaminants.

F. Optional two speed motors shall be available on request as indicated in the schedule and detail drawings.



1.5. Drives

- A. Motors and drives shall be mounted out of the air stream and be suitable for servicing without disturbing the roof mounted housing.
- B. Precision ground and polished fan shafts shall be mounted in permanently sealed, lubricated pillow block ball bearings.
- C. Bearings shall be selected for a minimum L10 life in excess of 100,000 hours (L50 average life in excess of 500,000 hours) at maximum cataloged operating speed.
- D. Drives shall be sized for a minimum of 150 percent of driven power.
- E. Pulleys shall be of the fully machined cast iron type, keyed and securely attached to the wheel and motor shafts.
- F. Motor pulleys shall be adjustable for final system balancing.

1.6. Operation Environment

- A. The unit shall be designed to operate in ambient temperatures from 0°C up to 190°C, and can run continuously at up to 100% humidity level.

1.7. Controls

- A. The units shall be fully compatible with inverter speed control for single and three phase supply.
- B. The inverters shall be provided with a pre-programmed remote fan speed controller.
- C. The unit shall be fully compatible with two speed controllers for three phase two speed motors. mounted as indicated in the schedule and detail drawings.

1.8. Ancillaries

- A. The unit shall be fully compatible with a standard range of duct-mounted silencers.
- B. The silencer shall be a rigidly constructed single skinned galvanised sheet steel case lining incorporating internal splitting vanes lined with resin bonded mineral wool and polythene for ease of maintenance.
- C. The silencer shall incorporate removable interior splitters via a sealed service panel for ease of inspection & maintenance.
- D. The silencer casework shall be provided naturally finished in high quality galvanised steel as standard. Optional powdercoated finish as standard Signal Grey to RAL7004. Colour to be in accordance with schedule.
- E. The unit shall be available with optional backdraught shutters suitable for duct mounting prior to the unit.
- F. The unit shall be compatible with optional profiled soaker sheet bases.
- G. Ancillaries shall be of the Centrifume (CFR) type as manufactured by VES Andover Ltd.
- D. The unit shall be supplied with a pre-wired motor isolator as standard. The isolator shall be externally

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