

Series CMB and F Exhaust Fans

Car-Mon belt-drive exhaust fans, Series CMB and F, are designed for removal of vehicle exhaust, welding fumes and other noxious gases in maintenance facilities, welding shops and other industrial environments. They are built with an extra emphasis on long-term reliability due to the health hazard nature of the applications. They will provide years of heavy-duty performance with minimum maintenance, a crucial consideration where exhaust fans are inaccessibly placed. Car-Mon fans can be used in a wide variety of exhaust systems, including underfloor, hanging overhead, tubing storage reels, boom-mounted reels and drops, stationary fume hoods, fume extracting arms and custom applications. Non-overloading, backward inclined wheels, 15,000+ cfm, CW or CCW rotation; AMCA rated. Separate brochure available.

Exceptional features of Car-Mon exhaust fans include:

1. Heavy gauge welded steel construction
2. Dynamically and statically balanced, with all weights welded outside the airstream
3. All airstream parts are acid resistant, phenolic resin coated
4. Stud-mounted housing – no bolts protrude into airstream
5. Precision formed discharge curl
6. Front housing support (12-1/4" wheel and larger)
7. Fully caulked between frame, housing, inlet spinning and housing support with repositionable, non-hardening caulk
8. Close-tolerance running clearance between wheel and inlet spinning
9. Self-locking flange nuts
10. Self-lubricating, cast steel ball bearings
11. Integral formed and welded corners for exceptional strength and rigidity
12. Turned, ground and polished shafts, run-out tolerance .001"/ft.; coated against corrosion
13. Structural angle-iron bearing support
14. Double groove pulleys (1 hp and above)
15. Adjustable motor base
16. Beltguard
17. Variable speed pulleys
18. 8 discharge positions available; can be repositioned in field

Optional Accessories:

Vibration pads
Vibration rails
Vibration rail suspension platforms
Vibration rail wall platforms
Weather covers
Backdraft dampers
Access panels
Housing drain connections
Inlet and discharge flanges
Inlet transition ducts
Discharge transition ducts
Canvas connections
Disconnect switches

Special Application Equipment:

High temperature grease bearings
Shaft coolers

Aluminum wheels
Explosion resistant motors

Specification:

The fan(s) shall be single inlet, single width, Arrangement 10 and shall have a backward inclined fan wheel with single thickness flat blades. The fan blades shall be continuously welded [except 10-5/8" wheel] to both the shroud and the backplate. The fan blades shall be free of weld spatter. The hub shall be cast gray iron, bolted to the fan wheel with Grade 5 bolts.

The fan wheel shall be statically and dynamically balanced before assembly. Any required balance weights shall be welded to the outside of the shroud or backplate; no weights are to be installed in the blade airstream.

The fan shaft shall be fabricated of ground and polished cold drawn steel with machined centers and key slots for both the fan wheel and the drive sheave. It shall be given a rust-inhibitive asphaltic coating after assembly.

The bearings shall be of the pillow block type with cast steel frame and shall be bolted to the structural angle supports that form part of the fan base.

The scroll and side sheets of the fan housing, and the spun inlet cone shall be fabricated of old-rolled steel of 14 gauge minimum thickness. The scroll and side sheets shall be joined through continuous welding. Spot welded or standing seam construction is not acceptable. The inlet cone shall be bolted to the fan housing using a minimum of 8 studs welded to the housing.

The fan base and the inlet support shall be fabricated of cold-rolled steel of 12 gauge minimum thickness. The bearing supports within the base shall be fabricated of cold-rolled steel angles having a minimum 3/16" thickness and they shall be welded to the sides of the base. All seams in the individual components shall be continuous welded. The motor base shall be fabricated of cold-rolled steel of 10 gauge minimum thickness. Its position shall be adjustable through the use of bolts that travel in slots in the sides of the fan base. Caulking shall be applied during assembly to the mating surfaces of the inlet cone and the fan housing and of the fan housing and the fan base.

The V-belt drive shall be adjustable. The variable pitch sheave shall be factory set at the approximate position to provide the specified capacity. All fans shall be provided with a belt guard enclosing both sheaves and V-belts. The belt guard shall have a tachometer hole. All drives for fans having 1 HP and larger motors shall have two V-belts and be rated for no less than 150% of motor load.

All surfaces of centrifugal fans having wheel diameters of 22-1/4" and less shall be painted completely with Heresite air-dry phenolic synthetic resinous coating. All fans having wheel diameters larger than 22-1/4" shall have all parts in the airstream similarly painted, and all exterior surfaces painted with air-dry machinery enamel.

The assembled fan shall be test run before shipment with "total frequency" vibration measured at each bearing in both the vertical and horizontal planes. Any fan having an average reading of over 3 mils deflection is not acceptable. Balance report to be provided with installation and maintenance instructions.

Optional Equipment

- A. Furnish vibration isolation pads of quantity and type to suit the fan(s). The pads will have 12 gauge frame and load plate and coated fiberglass isolation medium.
- B. Furnish vibration isolation rails of size and type to match the fan(s). The rails will be fabricated of structural steel angle supported by vibration pads mounted on channel.
- C. The fan platform shall be of heavy duty, all welded construction. Both wall mount and ceiling suspension platforms shall use 1-1/2" x 1-1/2" x 3/16" angle iron. The 3" x 4.1 lb. base channel of the vibration rails shall be an integral part of the platform assembly. The wall mount platform shall have 8 mounting holes and the suspension platform is to have 4 holes for locating suspension rods.
- D. Furnish a hinged weather cover fabricated of 16 gauge cold-rolled steel, painted inside and out with air-dry phenolic synthetic resinous coating. The cover is to completely enclose the motor compartment and afford complete protection from the elements for the motor, fan shaft, bearings and V-belt drive.
- E. Furnish an automatic self-closing backdraft damper of all-aluminum construction. The blades are to be linked together so as to provide simultaneous movement. Each blade will have nylon bearings and a felt blade edge seal.

The fan(s) and accessories are to be manufactured by Car-Mon Products, Inc., of Elgin, Illinois.

For fan requirements refer to fan schedule.