

# Where continuous ventilation is imperative, Car-Mon fans perform.

In a critical safety application, a fan must provide absolute performance through years of continuous use. These fans, often inaccessibly placed, must do so with minimum maintenance. When a fan breaks down, workers' health can be seriously threatened and production curtailed.

This is why we build fans the way we do. Every measure possible is taken to assure definite, high-level performance. Heavy gauge, welded steel construction is used for the frame, motor base and housing. Our wheels produce the highest efficiency in their operating range - not only through

engineering design, but by attention to detail in manufacturing: accurate blade alignment, preparation of metal surfaces to prevent spatter accumulation, smooth welds, and dynamic balancing in two planes with weights welded outside the airstream. Fans are coated inside and out with a polyester powder coating for exceptional resistance to corrosives. Each fan undergoes extensive quality control procedures, from initial components inspection to the final run tests. Every fan is individually built and tested.

The result is an exhaust fan you can rely on for the most dependable service possible.

## Belt Drive Centrifugal Fan Sample Specification

### Supplying all the fans on a job is not important to us, but supplying the important ones is.

Carbon monoxide exhaust fan shall be the standard product of a United States exhaust system manufacturer and be licensed to bear the AMCA seal for air performance.

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 to both the shroud and the backplate. The fan blades shall be free of weld spatter. The hub shall be 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 bearings shall be of the pillow block type with cast steel frame and shall be bolted to the structural angle bearing supports. 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 V-belt drive shall be adjustable. The variable pitch sheave shall be factory set at the appropriate position to provide the specified capacity in the approximate midpoint of the adjustment range. All fans shall be provided with a belt guard enclosing both sheaves and V-belts. The belt guard shall have a tachometer hole. The drive shall have two V-belts and be rated for no less than 150% of motor load.

The scroll and side sheets of the fan housing shall be fabricated of cold rolled steel of 12-gauge minimum thickness. The scroll and side sheets shall be joined through continuous welding. Spot welded or standing seam construction is not acceptable. The fan housing shall have a minimum of 8 attachment studs welded to each side sheet, one to which the inlet cone and inlet support shall bolt, and the other for joining the housing to the fan base. Any bolts, self tapping screws or fasteners that protrude into the housing interior are not acceptable.

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. A non-hardening, high elasticity caulking shall be applied during assembly between the mating surfaces of the fan housing and the fan base, of the inlet cone and the fan housing, and, the inlet support and the inlet cone. All surfaces of the centrifugal fan shall be painted completely with a polyester powder coating.

#### Testing:

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.**

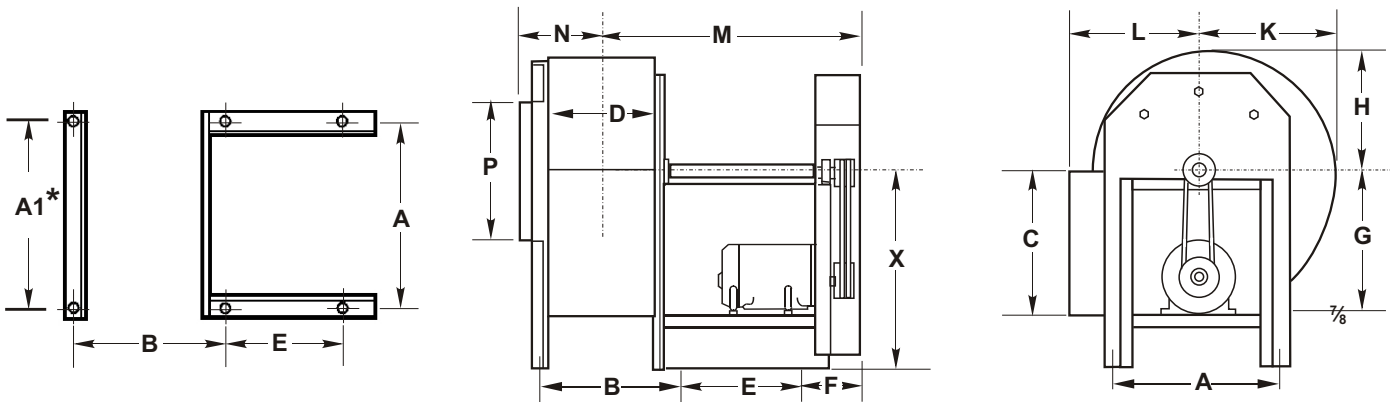
#### Optional Fan Platform

Furnish fan platform as required to match specified fan. Fan platforms feature vibration rails of 3" x 1" x 3/16" angle iron and 3" channel.

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

For fan requirements refer to fan schedule.

## Dimensions



\* Dimension A1 for size 40 and 50 size fans is 29 7/8".

Model CMB	Wheel Dia.	HP	Wt.	Dimensions (Additional dimensional data on back of sheet)													
				A	B	C	D	E	F	G	H	K	L	M	N	P	X
8	10 5/8	3/4	120	12 1/4		11 3/4	9	10 3/4	2 1/2	10 5/8	8	9 3/4	8 1/2	18 7/8	5 7/8	9	14
10	10 5/8	1	130	12 1/4		11 3/4	9	10 3/4	2 1/2	10 5/8	8	9 3/4	8 1/2	18 7/8	5 7/8	9	14
14	12 1/4	1 1/2	200	18	12 3/8	13	9 7/8	11	6 1/4	13	10 1/2	12 1/8	11 1/2	24	7	12 3/4	18
20	13 1/2	2	215	18	13 3/8	14 3/8	10 7/8	11	6 1/4	14 1/4	11 1/2	13 3/8	11 5/8	24 1/2	7 1/2	14 1/8	18
25	15	3	235	18	14 5/8	15 7/8	12	11	6 1/4	15 7/8	12 7/8	14 7/8	12 3/4	25	8 1/8	15 3/4	18
30	18 1/4	5	365	22 1/4	17 1/4	19 3/8	14 5/8	14	6 1/4	19 1/4	15 1/2	18	15 1/8	29 3/8	9 1/2	18 1/2	23
32	20	5	450	22 1/4	19 1/8	21 1/8	16	14	6 1/4	21 1/8	17	19 3/4	16 5/8	30	11 1/4	21	23
35	22 1/4	7 1/2	500	28 1/4	21 7/8	23 1/2	17 3/4	18	7 1/4	23 1/2	19	22	18 1/2	36 7/8	12 1/8	24	31
40	27	7 1/2	775	33 7/8	25 3/8	28 5/8	21 1/2	18 1/2	7 1/4	28 1/2	22 7/8	26 5/8	22	38 3/4	14	29	33 5/8
50	30	10	985	33 7/8	27 5/8	31 3/4	23 7/8	18 1/2	7 1/4	31 5/8	25 1/2	29 5/8	24 1/8	40	14 1/4	32 3/8	33 5/8

**CAR-MON**  
Products, Incorporated

1225 Davis Road  
Elgin, Illinois 60123  
847 695 9000  
847 695 9078 Fax  
www.car-mon.com