Choosing the Right Ventilation Solution: Reversomatic A Series (Direct Drive) vs. BE Series (Belt Driven)







Reversomatic Propeller Fan (ENCLOSED BELT DRIVEN WALL EXHAUST FAN) "BE" Series

Reversomatic Direct Drive, Wall Exhaust Fan A SERIES

#### Enhancing Ventilation Efficiency with Reversomatic Propeller Fans (BE Series)



In the pursuit of optimal ventilation and air circulation in various environments, the Reversomatic Propeller Fan "BE" Series, specifically designed as an Enclosed Belt Driven Wall Exhaust Fan, stands out as a reliable and efficient solution. With a diverse range of applications, sizes, and features, these fans are indispensable in maintaining air quality and temperature control in settings as varied as underground garages, warehouses, public buildings, and greenhouses. In this section, we'll dive deep into the specifications, features, installation guidelines, and maintenance requirements of the Reversomatic BE Series fans, shedding light on their importance and functionality.

#### The Reversomatic Propeller Fan "BE" Series (Belt Driven): Size and Capacity Variability

The Reversomatic BE Series is available in sizes ranging from 24 inches to a substantial 72 inches, catering to a wide array of ventilation needs. Their impressive capacities span from 1,000 to a whopping 60,000 CFM (Cubic Feet per Minute). This extensive range ensures that there's a suitable BE Series fan for virtually any space, from compact rooms to large industrial facilities.

#### **Certified Quality Assurance**

Reversomatic Manufacturing Limited takes pride in certifying that Models BEA-24 to BEA-60 are authorized to bear the AMCA Seal, a testament to their quality and performance. These certifications are based on rigorous testing procedures conducted in accordance with AMCA publications 211 and 311. Furthermore, these fans also meet the stringent requirements of the AMCA Certified Ratings Program. Additionally, the product has undergone evaluation by UL (Underwriters Laboratories) as per UL 705 standards for the United States and CSA (Canadian Standards Association) Standard C22.2 No.113-M1984 for Canada, further confirming their compliance and safety.



## Notable Features of the Enclosed Belt Driven Wall Exhaust Fan

The Reversomatic BE Series boasts a range of features that make them well-suited for a multitude of applications:

**Robust Construction**: The fan's frame features a venturi orifice and sturdy welded construction suitable for industrial, commercial, and agricultural environments.

**Noise Reduction**: An innovative design properly spaces the fan's blades from the structure, eliminating vibration and reducing excess noise, ensuring a quieter workspace.

**Durable Components**: Shafts rotate in permanently lubricated heavy-duty ball bearing pillow blocks, selected for a minimum average life of 200,000 hours at maximum operating speeds.

**Balanced Blades**: The propeller blades are made of heavy-gauge steel and are statically balanced for smooth operation.

**Belt Drive Efficiency**: Belt drives are engineered to handle up to 50% overload, ensuring longevity and reliable performance.

**Motor Matching**: Motors are of the heavy-duty ball bearing type, carefully matched to the load to optimize efficiency.

**Rugged Cabinet**: The cabinet is constructed from heavy-duty 18-gauge enamel finish satin coat or galvanized steel, ensuring durability.

**Efficient Ventilation**: Shutter blades are made of heavy gauge extruded aluminum, equipped with a neoprene gasket for an airtight seal.

**Safety Measures**: The fan includes a rear guard made of finger-proof expanded metal and a center access door for easy serviceability.

#### **Optional Accessories for Customization**

To further tailor these fans to specific needs, Reversomatic offers a range of optional accessories, including:

Two-Speed Motor: For enhanced control over ventilation.

Anti-Corrosive Coatings: Essential for environments prone to corrosion.

Pulleys and Static-Free Belts: For specialized requirements.

Mounting Flanges and Wall Cabinets: For convenient installation.

Weather Cowl with Bird Screen: For outdoor applications.

Gravity Shutter and Back Guard: Additional customization options for specific use cases.

Reversomatic Propeller Fan "BE" Serie								
DIMENSIONS								
MODEL	A''	В"	C''	D''	E''	F"	G"	S"
BE24	30	30 5/8	13 1/2	11 1/2	26 3/4	27	3	25
BE30	36	36 5/8	14	12 1/2	32 3/4	27	3	31
BE36	42	42 5/8	16	13	38 3/4	27	3	37
BE42	49 1/4	49 5/8	16 1/2	14	45 3/4	30	3	43
BE48	55	55 5/8	19	16	51 3/4	30	3	49
BE54	60	60 1/2	21	18	56 3/4	32	3	55
BE60	68	68 1/2	22	19	64 3/4	33	3	61
BE66	74	74 1/8	23	20	70 3/4	40	3	67
BE72	79	79 5/8	24	21	75 3/4	40	3	73

Consult factory representative for information on special applications and larger sizes. Order by Catalogue Number and state voltage required.









#### Installation and Maintenance Guidelines

Proper installation and regular maintenance are crucial to ensuring the longevity and efficiency of Reversomatic BE Series fans. Follow these essential guidelines:

**Regular Maintenance**: Lubricate and service the unit regularly to maintain the manufacturer's warranty.

Soft Start Control: For motors larger than 7.5 HP, consider using an electronic "soft start" control to prolong belt life.

**Pre-Startup Inspections**: Before operating the fan, perform thorough inspections, including checking belt tightness and alignment, fan blade centering and rotation, fan blade mounting bolt tightness, motor mounting plate bolt tightness, and bearing lubrication.

**Safety First**: Adhere to safety warnings and instructions, including providing adequate guards, disconnect switches, and grounding.

**Vibration Monitoring**: Consider implementing vibration limiting switches to detect sudden changes in fan operation, especially in high-temperature or corrosive environments.

**Bearings and Belt Tension**: Periodically check and grease bearings, and monitor belt tension to ensure optimal performance.

**Electrical Wiring**: Installation and electrical wiring should be carried out by qualified personnel in accordance with relevant codes and standards.

#### **Field Overload Protection Installation**

For motors with specific service factor and temperature rise ratings, Reversomatic recommends the use of overload relays. Ensure that the relay rating does not exceed a certain percentage of the motor's full load current, depending on the motor type.

In summary, Reversomatic's Propeller Fan "<u>BE</u>" Series, designed as Enclosed Belt Driven Wall Exhaust Fans, are versatile, reliable, and efficient solutions for a wide range of ventilation needs. From underground garages to greenhouses, these fans excel in maintaining air quality and temperature control. With their certified quality, robust construction, and various customization options, they prove invaluable in industrial, commercial, and agricultural settings. Remember, proper installation and regular maintenance are essential to maximizing their lifespan and efficiency, ensuring you get the most out of these exceptional fans.

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# Reversomatic <u>A Series</u> Wall Exhaust Fans: Efficient Ventilation Solutions for Commercial and Industrial Spaces



In the quest for efficient ventilation solutions that can rapidly remove smoke, steam, heat, and fumes while providing general airflow in commercial and industrial settings, the Reversomatic A Series Direct Drive Wall Exhaust Fans emerge as a reliable choice. Available in sizes ranging from 8 inches to 36 inches and offering capacities from 200 to 12,000 cubic feet per minute (C.F.M.), these fans have been designed with precision and feature a range of benefits and optional accessories to cater to diverse ventilation needs. In this comprehensive blog post, we'll delve into the applications, features, optional accessories, installation instructions, and safety precautions associated with the Reversomatic A Series fans.

## **Applications: Where the Reversomatic A Series Shines**

The Reversomatic A Series Direct Drive Wall Exhaust Fans are engineered to excel in specific applications:

**Smoke Evacuation**: These fans are specifically designed for the rapid removal of smoke, making them invaluable in settings such as commercial kitchens, industrial facilities, and restaurants.

**Steam Ventilation**: In environments where steam is generated, efficient steam ventilation is essential to maintaining a comfortable and safe workspace. The A Series fans are up to the task.

**Heat Dispersal**: Industrial spaces often generate significant heat. These fans aid in heat dispersal, preventing uncomfortable working conditions.

**Fume Extraction**: Whether in laboratories, manufacturing plants, or workshops, effective fume extraction is crucial for the safety and well-being of workers. The A Series fans provide this essential function.

General Ventilation: Beyond specialized applications, these fans offer general ventilation, ensuring a continuous flow of fresh air in commercial and industrial buildings.

#### **Key Features: The Backbone of Efficiency**

The Reversomatic A Series fans come equipped with several notable features that contribute to their efficiency and performance:

Balanced Blades: The fan blades are die stamped and die formed to ensure balance, reducing vibrations and enhancing longevity.

Standard Guard: A standard guard is included to provide protection and safety in various settings.

Motor Variability: These fans come with a choice of a totally enclosed one, two, or variable speed motor, allowing for flexibility in operation.

Non-Overloading: The A Series fans exhibit non-overloading characteristics, preventing undue strain on the motor and ensuring reliable performance.

Attractive Finish: An attractive enamel finish not only enhances aesthetics but also adds an extra layer of durability.

Installation Versatility: These fans can be installed both vertically and horizontally, adapting to the specific needs and constraints of the space.

Self-Acting Shutters: Extruded aluminum blade shutters operate self-actively, ensuring efficient airflow control.

Sturdy Frames: The frames are constructed with steel panels, incorporating mounting flanges and a Venturi orifice, facilitating easy installation.

#### **Reversomatic Direct Drive, Wall Exhaust Fan A SERIES**

DIMENSIONS

#### FAN DIMENSIONS C D FAN R N 8 13-1/4 10 10-3/4 10" 15-1/4 14 12" 14" 16" 19-1/4 21-1/4 14 311 18 23-1/4 15 4-3/4 22 20-3/4 20" 25-1/4 16" 24 22-3/4 4-3/4" 16" 24" 29-1/4" 4-3/4 28 26-3/4 30" 36" 36-1/2 14-1/2 36-1/2 8 10

42-1/2

42-1/2"

14-1/2"



#### **Optional Accessories: Tailoring to Specific Needs**

To cater to unique requirements and operational preferences, Reversomatic offers a range of optional accessories for the A Series fans, including:

**Adjustable Louvers**: These can be operated manually or with a motorized system, allowing precise control over the direction and flow of air.

**Fan Guards**: Constructed of expanded metal, these guards can be used for either the intake or the discharge side of the fan.

**Special Coatings**: In environments with contaminated atmospheres, fans can be equipped with special coatings to enhance their durability and resistance.

Variable Speed Motors: For enhanced control and adaptability in various scenarios.

**Custom Consultation**: For specialized applications and unique needs, the Reversomatic factory or your representative can provide guidance and information.

## Installation Instructions: Ensuring Safe and Effective Operation

For optimal performance and safety, it's imperative to follow proper installation instructions. Here are some **key installation guidelines**:

Always read and save the manufacturer's instructions for reference.

**Disconnect Power:** Unplug or disconnect the appliance from the power supply source before servicing to reduce the risk of electric shock.

**Use as Intended**: Use the unit only in the manner intended by the manufacturer, and if you have any questions or doubts, contact the manufacturer for clarification.

**Secure Power Off:** Before servicing or cleaning the unit, switch off the power at the service panel and take measures to lock the service disconnecting means to prevent accidental power activation.

**Qualified Personnel**: Ensure that installation work and electrical wiring are carried out by qualified individuals in accordance with all applicable codes and standards, including fire-rated construction.

**Avoid Damage**: When cutting or drilling into walls or ceilings, exercise caution to avoid damaging electrical wiring and other hidden utilities.

REVERSOMATIC A SERIES (DIRECT DRIVE) VS. BE SERIES (BELT DRIVEN)

Outdoor Ventilation: Ducted fans should always vent to the outdoors.

## Safety Precautions: Prioritizing Safety First

To mitigate risks associated with fan operation, Reversomatic provides safety instructions:

**Use for General Ventilation**: These fans are intended for general ventilation use only and should not be used to exhaust hazardous or explosive materials and vapors.

Compliance with OSHA: OSHA-approved guards are available to ensure compliance with safety standards.

## The Versatility of Reversomatic A Series Fans

In summary, the Reversomatic A Series Direct Drive Wall Exhaust Fans offer efficient and versatile ventilation solutions for a wide range of commercial and industrial applications. Their ability to swiftly remove smoke, steam, heat, and fumes, in addition to providing general ventilation, makes them indispensable in various settings. With balanced blades, a choice of motors, and optional accessories, these fans can be tailored to meet specific needs. Proper installation, adherence to safety guidelines, and regular maintenance ensure safe and effective operation, making these fans a reliable choice for maintaining optimal air quality and working conditions.

A Series (Direct Drive) vs. BE Series (Belt Driven)

When it comes to efficient ventilation in commercial and industrial spaces, Reversomatic offers two outstanding options: the A Series (Direct Drive) and the BE Series (Belt Driven). Both are designed to provide fresh air, remove smoke, steam, heat, and fumes, but they come with distinct features and applications that make them suitable for different needs. In this section, we'll compare the Reversomatic A Series and the BE Series, highlighting their key differences and helping you make an informed choice for your specific ventilation requirements.

#### Type of Drive: Direct Drive vs. Belt Driven

#### **Reversomatic A Series (Direct Drive):**

These fans feature a direct drive mechanism, which means that the fan blades are directly connected to the motor shaft. This results in a more straightforward and maintenance-friendly design.

#### **Reversomatic BE Series (Belt Driven):**

The BE Series, on the other hand, utilizes a belt-driven system where the motor's power is transferred to the fan blades via a belt and pulley system. This design offers certain advantages, especially in larger, industrial applications.

#### Size and Capacity: A vs. BE Series

**Reversomatic A Series:** 

Available Sizes: 8" to 36"

Capacities: 200 to 12,000 C.F.M.

**Reversomatic BE Series:** 

Available Sizes: 24" to 72"

Capacities: 1,000 to 60,000 C.F.M.

Applications: Where Each Series Excels

#### **Reversomatic A Series (Direct Drive):**



Compact Spaces: A Series fans are ideal for smaller spaces where efficient ventilation is needed, such as kitchens or small workshops.

Lower Static Pressure: They are practical for use at static pressures below 0.25" W.G. This makes them suitable for environments where lower airflow resistance is essential.

#### **Reversomatic BE Series (Belt Driven):**

Industrial Environments: BE Series fans are designed to handle more extensive industrial needs. They excel in applications like warehouses, public buildings, and greenhouses, where higher airflow capacity is required.

Larger Spaces: BE Series fans cover a broader range of sizes, making them a better choice for larger areas where robust ventilation is a must.



#### Key Features: <u>A vs. <u>BE Series</u></u>

Reversomatic A Series (Direct Drive):

Balanced Blades: The A Series fans are equipped with balanced blades, reducing vibrations for quieter operation.

Motor Variability: You can choose from one, two, or variable speed motors, providing flexibility in controlling airflow.

Attractive Finish: They come with an enamel finish for added durability and aesthetics.

Reversomatic BE Series (Belt Driven):

Certified Quality: BE Series models are certified by AMCA and UL for quality assurance, ensuring their compliance with industry standards.

Robust Construction: Designed for industrial use, BE Series fans have sturdy welded construction for long-lasting performance.

Optional Accessories: The BE Series offers a wider range of optional accessories, including adjustable louvers, special coatings, variable speed motors, and more.

#### Installation and Maintenance: A vs. BE Series

Both series come with installation instructions to ensure safe and efficient operation. However, due to their type of drive and size, the BE Series fans may require more detailed installation procedures. Regular maintenance is essential for all fans to maintain their efficiency and lifespan.

## Safety Precautions: A vs. BE Series

Both series emphasize safety in their operation. Adhering to safety instructions is crucial to prevent accidents or damage. OSHA-approved guards are available for both series to comply with safety standards.

#### **Conclusion: Making the Right Choice**

In summary, the choice between Reversomatic's A Series (Direct Drive) and BE Series (Belt Driven) fans depends not only on your space and airflow requirements but also on your preference for drive mechanism. The A Series offers a straightforward and maintenance-friendly design, making it suitable for smaller spaces with lower static pressure needs. On the other hand, the BE Series excels in larger industrial environments that demand high airflow capacity and comes with a robust belt-driven system.

Consider factors like the size of your space, the level of ventilation required, and your preference for drive mechanism when making your decision. Whichever series you choose, proper installation, maintenance, and safety precautions are essential to ensure the longevity and efficiency of your ventilation solution. Remember, when in doubt or for more specialized applications, it's always a good idea to consult with the Reversomatic technical department or your representative for expert guidance. In conclusion, whether you opt for the A Series (Direct Drive) with its certified quality or the BE Series (Belt Driven) designed for industrial might, Reversomatic has a ventilation solution to suit your needs. To explore our full range of commercial fans and find the perfect fit for your space, we invite you to visit us at <u>Reversomatic.com</u>. Discover how our fans can elevate your ventilation and air quality needs today!

