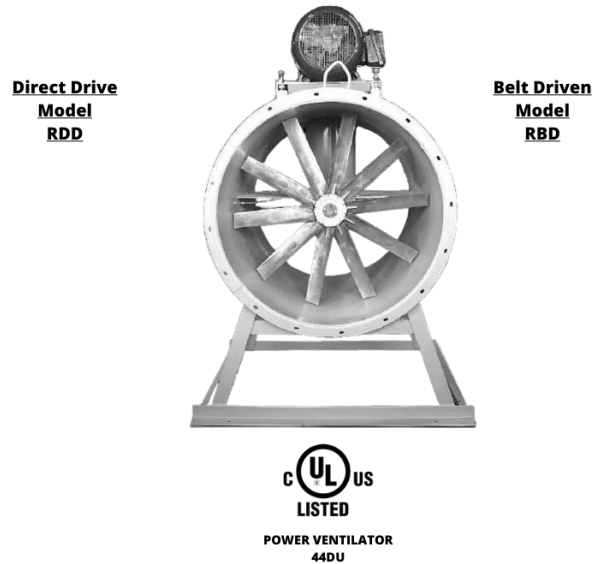


## Reversomatic Commercial Fans: Exploring the Versatility of RBD and RDD Models

### AIRFOIL TUBEAXIAL FANS



### Introduction

Efficient ventilation plays a vital role in maintaining optimal air quality and comfortable working conditions in commercial settings. Reversomatic, a renowned manufacturer, has revolutionized the commercial fan industry with their cutting-edge technology and innovative designs. In this comprehensive blog post, we will delve into Reversomatic's RBD (Belt Drive Model) and RDD (Direct Drive Model) tube axial fans, focusing on their features, applications, and differences.

### Reversomatic Commercial Fans Overview

Reversomatic offers a range of tube axial fans designed for low to medium pressure ducted applications. The RBD and RDD models are versatile options that excel in removing contaminated air or hot air found in industrial applications. Additionally, they can be used to supply air through ductwork for cooling or pressurizing interior spaces, such as elevator shafts and stairwells in condominiums. These tube axial fans are known for their compact design and ability to move large volumes of air in duct systems with relatively low-pressure losses.

### Construction and Features of RBD and RDD Models

The RBD model represents Reversomatic's Belt Drive Model, where the motor and drive assembly are positioned outside the airstream. The housing of the RBD fan is constructed using heavy gauge steel, providing durability and longevity. The propeller blades are made of extruded aluminum and mounted in a cast aluminum hub. Reversomatic ensures that all propellers are statically and dynamically balanced for vibration-free operation. RBD tube axial fans are available in various sizes, offering a range of CFM (cubic feet per minute) options from 1,300 to 70,000, with static pressure ranging from 0 to 3" SP.

On the other hand, the RDD model represents Reversomatic's Direct Drive Model, where the motor is positioned within the airstream. The RDD fan shares the same heavy gauge steel housing as the RBD model. The direct drive configuration eliminates the need for belts and pulleys, making the fan more compact. RDD tube axial fans offer CFM options ranging from 800 to 44,000, with static pressure capabilities ranging from 0 to 3" SP.

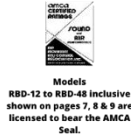
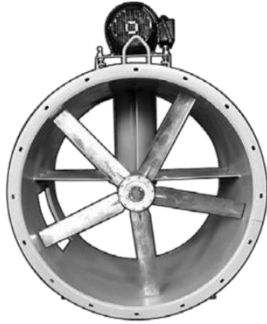
Both RBD and RDD models utilize grease-lubricated ball bearing pillow block type bearings with a minimum average life of 40,000 hours. The tube axial fans are equipped with external grease fittings for easy lubrication. Reversomatic ensures that all fans bear the AMCA seal for sound and air performance. The steel sheet metal parts are cleaned, conditioned, and painted with enamel paint finish prior to assembly, with a final coat of gray enamel applied to all exterior surfaces.

### **Applications and Benefits of RBD and RDD Tube Axial Fans**

Reversomatic RBD and RDD tube axial fans find applications in various commercial and industrial settings where efficient ventilation is essential. These fans excel in removing contaminated air and hot air, creating a safer and more comfortable working environment. In industrial applications, they effectively remove pollutants and heat, maintaining optimal working conditions. Additionally, RBD and RDD tube axial fans are suitable for supplying air to cool or pressurize interior spaces like elevator shafts and stairwells in condominiums.

One notable difference between the RBD and RDD models is the positioning of the motor. The RBD model has the motor and drive assembly located outside the airstream, while the RDD model places the motor within the airstream. This difference affects the installation and maintenance of the fans. Direct drive units, such as RDD models, provide easy access to the motor through adjacent ductwork, whereas belt drive units, such as RBD models, require careful consideration of motor positioning for service and adjacent objects like walls and ceilings

## **Model RBD**



- Housing Construction of Heavy Gauge Steel
- Airfoil Cast Aluminum Propeller Blade ranging from 12" to 48"
- Airflow capacity ranging from 1300 to 70,000 CFM
- Adjustable Static Pressure from 0 to 3" SP
- Motor sizes range from 1/4 to 50 HP based on propeller size and desired CFM
- Belt drive fan design with motor and drives positioned outside the airstream

## **Model RDD**



- Heavy Gauge Steel Housing Construction
- Airfoil Cast Aluminum Propeller Blade range from 12" to 42"
- Airflow capacity ranges from 800 to 44,000 CFM
- Adjustable Static Pressure from 0 to 3" SP
- Motor sizes vary from 1/4 to 30 HP based on propeller size and desired CFM
- RDD is a Direct Drive fan with the motor located in the airstream.

### **Installation and Mounting Options**

Reversomatic RBD and RDD tube axial fans offer flexible installation and mounting options to suit various requirements. These fans can be mounted in any position using mounting brackets for ceiling suspension, support legs for floor mounting, or angle supports for rod hangers. To facilitate wiring and service, it is recommended to ensure easy access to the motor. For direct drive units like RDD models, access through adjacent ductwork is ideal. For belt drive units like RBD models, motor positioning should consider service access and adjacent objects. Access doors are provided for convenient maintenance and servicing.

The steel housing of RBD and RDD tube axial fans has flanged ends, allowing for convenient mounting directly in the duct system. Flexible connections or transition pieces can be utilized to reduce noise transmission, simplify duct attachment, and provide access to the fan's interior.

## ALUMINUM DIE CAST PROPELLER

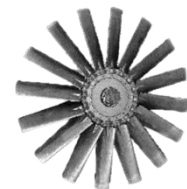
The RBD/RDD aluminum die cast propeller is the ultimate solution for applications requiring high static pressure. Engineered with precision, these propellers offer exceptional performance and durability. With a variety of blade options and pitch settings, they provide a wide performance range to suit diverse needs. Reversomatic airfoil blade design ensures non-overloading characteristics similar to centrifugal wheels, promoting efficient airflow. Available in different sizes and compatible with both belt drive RBD and direct drive RDD systems, these propellers cover a static pressure range of 0" to 3". Let's delve deeper into the features and benefits of these innovative propellers.



Standard Duty Blade  
(500 to 40,000 CFM)

The RBD/RDD aluminum die cast propellers are designed to meet the demands of high static pressure environments. Here's what makes them stand out:

- **Multiple Blade Configurations:** Featuring 5, 7, 8, 9, 10, 14, and 16 blades, these propellers offer flexibility to achieve optimal performance in various settings. The blades are securely locked in place using self-locking pins, ensuring stability and reliable operation.
- **Wide Range of Pitch Settings:** Factory-set pitch settings range from 5° to 45°, allowing for a diverse performance range. This adjustability enables precise control over airflow and ensures the propeller's compatibility with different operating conditions.
- **Non-Overloading Airfoil Blade Design:** The propellers incorporate an airfoil blade design, providing a non-overloading characteristic similar to centrifugal wheels. This design enhances efficiency, preventing excessive strain on the system and optimizing overall performance.



Heavy Duty Blade  
(40,000 to 70,000 CFM)

- Size Options for Different Drive Types: The RBD propellers are available in sizes ranging from 12" to 48" for belt drive systems, while the RDD propellers come in sizes from 12" to 40" for direct drive applications. This versatility allows for seamless integration into various setups.
- Reliable Operation and Balanced Performance: Each propeller undergoes static and dynamic balancing to ensure vibration-free operation. This meticulous balancing process guarantees smooth and efficient performance, reducing the risk of wear and tear.
- Wide Temperature Range: Designed to withstand challenging conditions, these propellers offer a temperature range of -40°F to 302°F (-40°C to 60°C). This temperature tolerance makes them suitable for a wide range of industrial environments.
- When it comes to achieving high static pressure performance, the RBD/RDD aluminum die cast propellers deliver exceptional results. Their multiple blade configurations, adjustable pitch settings, and non-overloading airfoil blade design optimize airflow efficiency. With a range of sizes available for different drive types, these propellers can be seamlessly integrated into various systems. Moreover, their reliable operation, balanced performance, and wide temperature range make them a reliable choice for demanding applications. Upgrade your ventilation system with these advanced propellers to enhance performance and efficiency in your industrial processes.

## Conclusion

Reversomatic's RBD (Belt Drive Model) and RDD (Direct Drive Model) tube axial fans are versatile solutions for low to medium pressure ducted applications. With their robust construction, high-performance propellers, and flexible mounting options, these fans are ideal for removing contaminated or hot air from industrial environments and supplying air for cooling or pressurizing interior spaces. Understanding the differences between the RBD and RDD models allows businesses to choose the appropriate tube axial fan based on their specific needs. Upgrade your ventilation system with Reversomatic commercial fans and experience improved air quality and optimized airflow in your commercial space. For more information visit [RBD/RDD page](#) on [Reversomatic Website](#).