

UNITED BLOWER INC., ESTABLISHED IN 1989, HAS OVER 10,000 BLOWER SYSTEMS INSTALLED TO DATE. WE SERVE THE WATER AND WASTEWATER MUNICIPAL MARKETS AS WELL AS PNEUMATIC AND INDUSTRIAL PLANT APPLICATIONS. OUR PRODUCT LINE INCLUDES A MULTITUDE OF STYLES RANGING FROM MULTISTAGE CENTRIFUGAL, REGENERATIVE, HIGH SPEED TURBO, AND POSITIVE DISPLACEMENT BLOWER PACKAGES. WE OFFER OUR FLAGSHIP PREMIUM PD QUIET PULSE PACKAGE AS WELL AS OUR ECONOMICAL ENVIROPAK, ECONOPAK, & ECONOTOP DESIGNS. UBI ALSO FURNISHES DROP-IN AND RETROFITTED BARE SHAFT BLOWER REPLACEMENTS IN ADDITION TO A VAST INVENTORY OF REPLACEMENT PARTS. LET UNITED BLOWER BECOME YOUR ONE STOP SHOP FOR ALL OF YOUR AERATION NEEDS.

MULTISTAGE CENTRIFUGAL BLOWERS



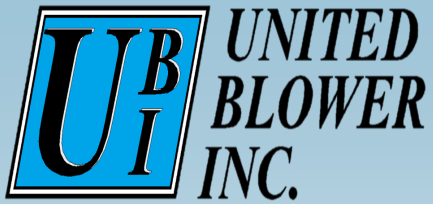
FEATURES

- PACKAGES MANUFACTURED IN BALL GROUND, GA SINCE 1989
- ALL CAST STAGES AND ENDS
- SMOOTH TRANSITION CASTING INLET & OUTLET PORTS
- VIBRATION AND TEMPERATURE PROBE TAPS CAST IN PLACE
- INTAKE SEAL-INDUCER OF THE IMPELLER IMPROVES INLET FLUIDITY TO THE IMPELLER
- FLUID ANALYSIS TECHNOLOGY USED TO OPTIMIZE BLOWER
- AIRFOIL RETURN FLOW BLADE IS DESIGNED TO REDUCE LOSSES
- STRINGENT BALANCING PROCESS PROVIDES VERY LOW VIBRATION AND HIGH RELIABILITY
- IMPELLER IS SPECIALLY DESIGNED USING THREE DIMENSIONAL MERIDIAN PLANE AND COMPOUND CURVE TECHNOLOGY
- SPECIAL INTERNAL MATERIALS OF CONSTRUCTION AND COATINGS ARE AVAILABLE

Packaged Systems & Distribution By:

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SERIES MC MULTISTAGE CENTRIFUGAL BLOWERS



Shandong Zhangqiu Blower Co., Ltd is one of the most important blower manufacturers in China. Our company has nearly 40 years of research and development experience with multistage centrifugal and positive displacement blowers. SZB Co. has two Chinese-Japanese joint ventures, one provincial class technology research center and a large foreign trade division. SZB Co. employs more than 10 distinguished individuals who have won state and local government honors/awards. Our company is regarded as a large-scale modern manufacturing enterprise featuring research design and production of blowers.

One of SZB's primary goals is new product development. Our company is ranked among the top 500 enterprises in the Chinese machinery industry, the top 10 innovative enterprises in the domestic blower and packaged equipment industries and the top 50 enterprises in gross revenue in Shandong Province. SZB Co. is cordially known as the "client satisfaction enterprise in the blower industry".

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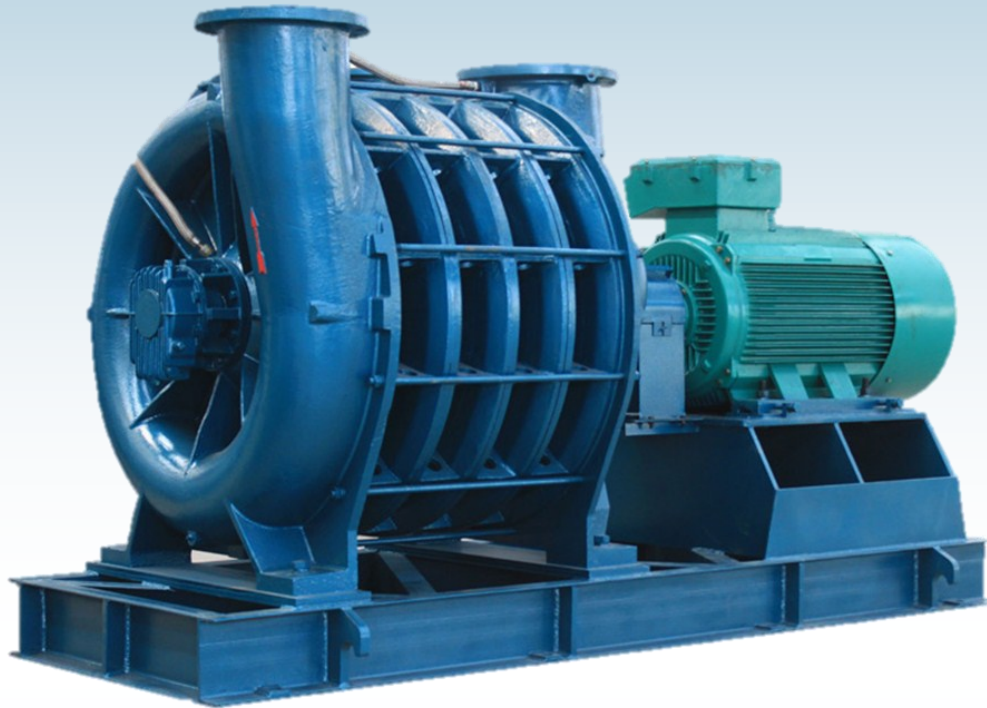
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PRODUCT INTRODUCTION



A multistage centrifugal blower (MSCB) is a mass flow machine. Therefore, it has the advantage that capacity is easily adjustable using the simplicity of an inlet butterfly valve adjustment. The addition of a VFD, provides even more flexibility and efficiency. The MSCB smoothly compresses air one stage at a time. Impeller designs are specifically selected to achieve the best combination of flow and pressure (or vacuum). In addition, the MSCB is regarded for having a low level of noise emissions. The Multistage is widely used for aeration in sewage treatment plants, metal processing, chemical plants, printing lines as well as numerous other industrial applications. The latest series of MSCB has the combined theoretical expertise of Xi'an Jiao Tong University Mechanical Engineering department, as well as 40 years of experience and production experience of Shandong Zhangqiu Blower Corporation.

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FEATURES & USAGE



- The profile curve of the MSCB impeller is advanced. As a result, the overall efficiency of the blower is close to 80%.
- The casing and return channel have a unique design, which makes the flow smoother and simplistic.
- After strict dynamic balance the impeller achieves very low vibration and noise. Long-working life and high reliability is attained.
- The mechanical structure is advanced, with very few wearing parts. Installation, operation and maintenance is convenient and easy to follow.
- Adjusting capacity is convenient. When the blower is at the specified pressure it has a wide range of capacity suitable for various conditions.
- The MSCB is mainly used in the fields of sewage treatment, coal separation, furnace blasting, co-gen plants, oil refineries and printing.
- The internals feature aluminum impellers which allows the transfer of many noncorrosive gases apart from air.
- Special internal materials including SST cast impellers, as well as coatings of the wetted parts, are available.

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STRUCTURAL FEATURES

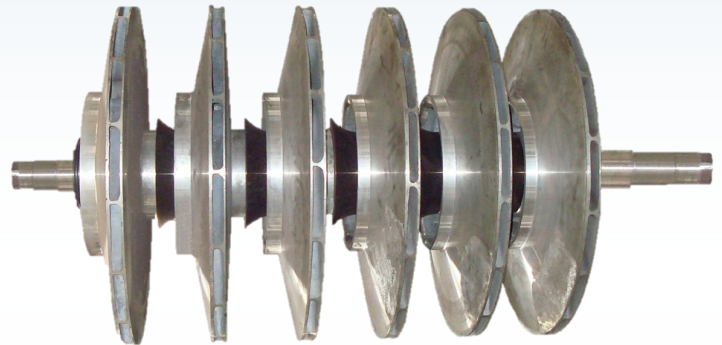
STATOR

Stator is hardened and tempered strictly after welding, to remove the stress and reduce the distortion. The machining is performed all at one time using a machine center imported from Japan. Casing with heavy duty bearing bores to ensure solid location for rotor assembly.



ROTOR

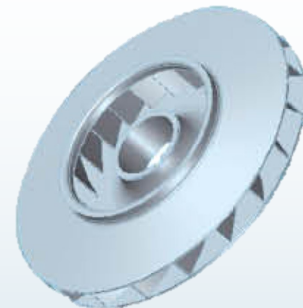
The rotor consists of impellers, a main shaft and sleeves. The rotor is dynamically balanced to ensure that the unit can run dependably for many years.



IMPELLER

Based on the requirement, both the cast impeller and weld impeller styles are adopted. A cast impeller is precisely cast with high strength aluminum-alloy, which then undergoes a solution treatment by a nationally recognized factory.

During the course of welding, the hub, impeller and vanes are put through a heat treatment several times to eliminate welding stress. Each welded single impeller is dynamically balanced and tested with high speed after precise machining.



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STRUCTURAL FEATURES

BEARINGS

Both roller bearings and ball bearings may be used. The roller bearing consist of rollers running in a cylindrical track. The bearings are SKF products which are lubricated by employing high grade grease or lubricating oil. Ball bearings consists of a journal bearing and thrust journal bearing, the body of which is made of superb quality carbon steel with an inner surface of coated Babbitt metal. Temperature measuring pickup points are casted and tapped at each bearing location. These sensors measure the bearing temperature when the unit is in operation and can report to SCADA or an LCP.



SEALS

According to the different gas and pressure, the labyrinth and carbon ring seals will be adopted as an option at the blower shaft end. The shaft seals are a horizontally split structure, so the seals can be replaced without disassembly of the rotor. The carbon ring is a wearable graphite ring. It contacts with the shaft directly without oil lubrication. The spring on the outer edge can compensate for the wear of the graphite ring.

The labyrinth seal is very common amongst MSCB manufacturers. This is a non-contacting replaceable seal.

Finally, seals can also be offered in gas inflatable or gas suction type for specialized applications



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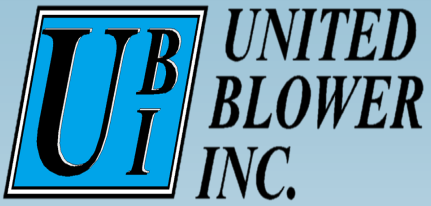
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INTERNATIONAL ADVANCED MANUFACTURING EQUIPMENT



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