



# VECTOR 5700 SERIES CENTRIFUGAL GAS BLOWERS

## PRODUCT RANGE

- 3 - 15 HP
- Capacities to 650 CFM
- Pressure to 68" H2O
- Vacuum to 58" H2O



Applied Compression is the factory authorized North American packager for Mapro International, the leading manufacturer of gas blowers for SynGas, Biogas, Digester gas and other process gas applications.

This partnership combines Mapro's blower technology with Applied Compression's North American packaging expertise, ensuring compliance with all State/Provincial electrical code and safety requirements.

Our Vector 5700 gas blower packages utilize field proven Mapro MCF Series centrifugal blowers (fans).

The Mapro MCF Series centrifugal is a gas-tight fan, with the following construction features.

- Cast aluminum casing
- Impeller made of spark proof aluminum alloy
- Bearing housing made in cast iron
- Cast aluminum caps
- Carbon steel shaft
- Casing impregnated with Loctite
- Sealed casing halves
- Shaft sealing by two special double-lip seals, lubricated for life for speed of rotation up to 4200 rpm and by an automatic lubricator for higher rpm.

For harsh gas conditions, fans with special construction features can be proposed. For example, with the cast aluminum parts treated with anodic oxidation and the blades of the impeller in stainless steel. It is also possible to fit the double-lip seals in pairs on the shaft so that they are suitable for a barrier gas in between.

## APPLICATIONS

- Biogas and digester gas compression
- Natural gas compression
- Fuel gas boosting
- Flare gas systems
- Sewage aeration
- Soil remediation
- Process vacuum
- Vapor recovery
- Refinery tail gas
- Thermal oxidation
- Offload gas recovery

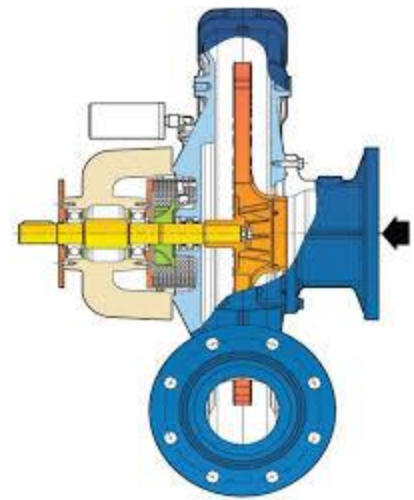


## OPERATING PRINCIPLE

The Mapro MCF Series centrifugal fan is made of:

- An intake duct conveying the aspirated gas to the impeller inlet, which is coaxial to the shaft;
- A closed impeller with axial flow inlet and radial flow exit
- A toroidal discharge volute with tangential exit

While the impeller is rotating, the vanes give a centrifugal thrust to the aspirated gas which is forced outwards into the toroidal discharge volute. The volute collects the gas delivering it to a tangential nosepiece. The compression occurs through the increase in kinetic energy given to the gas by the vanes of the impeller and the subsequent conversion of the kinetic energy into static pressure in the discharge volute.



## PACKAGE FEATURES

**RELIABLE** – MCF Series blowers are virtually maintenance free with only one main rotating component. There are no timing gears.

**OIL-FREE COMPRESSION** – The rotating parts are not in contact with the casing during rotation. There is therefore no friction during operation and no internal lubrication is required.

**QUIET** – Vector 5700 Series blower packages typically operate at 81 dBA or less measured at 3 feet.

**PULSATION FREE** – Smooth, pulsation-free gas flow

**WIDE OPERATING SPEED RANGE** – Because of the wide range of permissible operating speeds of rotation (from 2000 to 5500 rpm), a very large operating range can be achieved using a single machine size.

**GAS COMPATIBILITY** – By using different types of shaft sealing, most industrial gases as well as natural and biological gases can be handled. In the case of corrosive gases, the internal wetted parts can be treated with protective coatings.

**ELECTRIC MOTORS** – WEG brand Severe Duty, Premium Efficiency cast iron frame, TEFC electric motors with a 1.25 service factor. Inverter duty certified for 20:1 CT and 1000:1 VT.'

## WHAT WE OFFER ...

**EXPERIENCE** – Our key personnel have over 100 years of combined experience. This allows us to recommend the best technical solution and the most economical approach to your application.

**CUSTOM DESIGNED PACKAGES** – As a provider of both standard and custom fabricated blower systems, we have the expertise to design and supply the most cost-effective package for requirements. Our packages offer a clean, simple design that allows easy access for normal maintenance.

**FULLY PACKAGED** – Every blower package is completely assembled and tested under load to make sure it leaves our plant in perfect operating conditions.

**FULL RANGE OF ELECTRICAL CLASSIFICATIONS** – Blower packages are available for unclassified, Class 1, Division 2 and Class 1, Division 1 explosion proof areas.

**MODULAR DESIGN** – Our modular design allows us to select and match components that will provide the best economics for your applications.

**CADD DESIGN** – We utilize a Computer Aided Drafting Design (CADD) system, so we can provide you with a detailed look at your blower package before it's manufacture.

**DETAILED PARTS & OPERATING MANUALS** – Each blower package manufactured by us comes with a set of in-depth parts and operating manuals, so you can clearly understand the operation and maintenance requirements of the equipment.

**SHIPPING LOGISTICS** – Whether you need a package to be shipped within Canada, across North America or overseas, we can assist with final shipping arrangement to your site.

## BENEFITS

Engineering and procurement departments worldwide recognize the benefits of purchasing process gas blower packages from a company with two generations of packaging experience. Benefits that include:

- **REDUCED CONSTRUCTION COSTS:** Our shop costs are generally much lower than those of field construction.
- **REDUCED INSTALLATION TIMES:** Applied Compression's gas blower packages helps clients reduce implementation times and resources by delivering a fully designed, assembled and tested solution.
- **SINGLE SOURCE RESPONSIBILITY:** From concept to completion, we provide design, fabrication and testing.
- **GUARANTEED COMPONENT CAPABILITY:** One source for all the major components, ensuring components compatibility and process functionality throughout the entire system.
- **REDUCED LEAD TIME:** Many of the packages that we offer have been pre-designed for quick turnarounds.



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