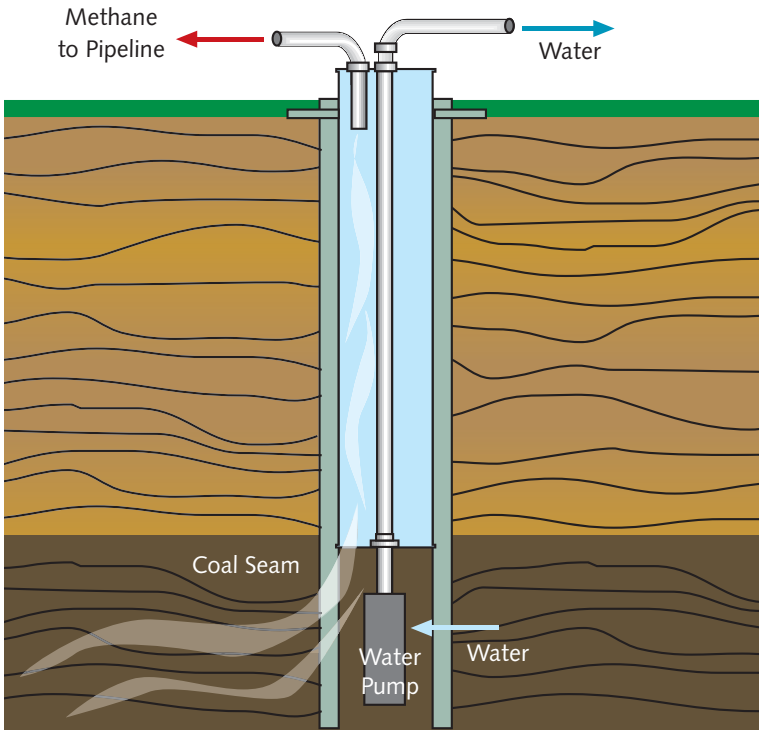
Coal Bed Methane Recovery

HOFFMAN LAMSON



A single Hoffman & Lamson product can work as both pump and blower, making it ideal for coal bed methane recovery.

Coalbed Methane

Coalbed methane (CBM), a cause of many underground mining disasters, is emerging as a source of clean energy. CBM extraction allows miners to mine at greater depths and it allows the mining companies to achieve greater safety and higher output. There is also a possibility of extracting the methane from abandoned coal mines, getting more product for the mine's owners and more "clean energy" for the population to use.

Coalbed methane, also called coalbed gas, is a form of natural gas which has no color or smell and which burns cleanly. CBM in the mine is in a near-liquid state, lining the inside of pores within the coal. The gas is mainly methane, with trace amounts of ethane, nitrogen, carbon dioxide and a few other gases. The CBM content of a the coalbed increases with depth, the rank of the coal and the reservoir pressure.

Extracting the Gas

There are small, natural fractures, called cleats, within coal seams. These are often filled with water. To extract the coalbed methane, a steel-encased hole is drilled vertically or horizontally into the coal seam. The metal casing is surrounded by cement. The pipe and cement are perforated in the coalbed area so that gas and water can flow into the well. A water pump pulls water out of the coal seam, reducing the pressure and allowing the methane molecules to detach from the coal and flow into the well bore and up to the methane pipeline.

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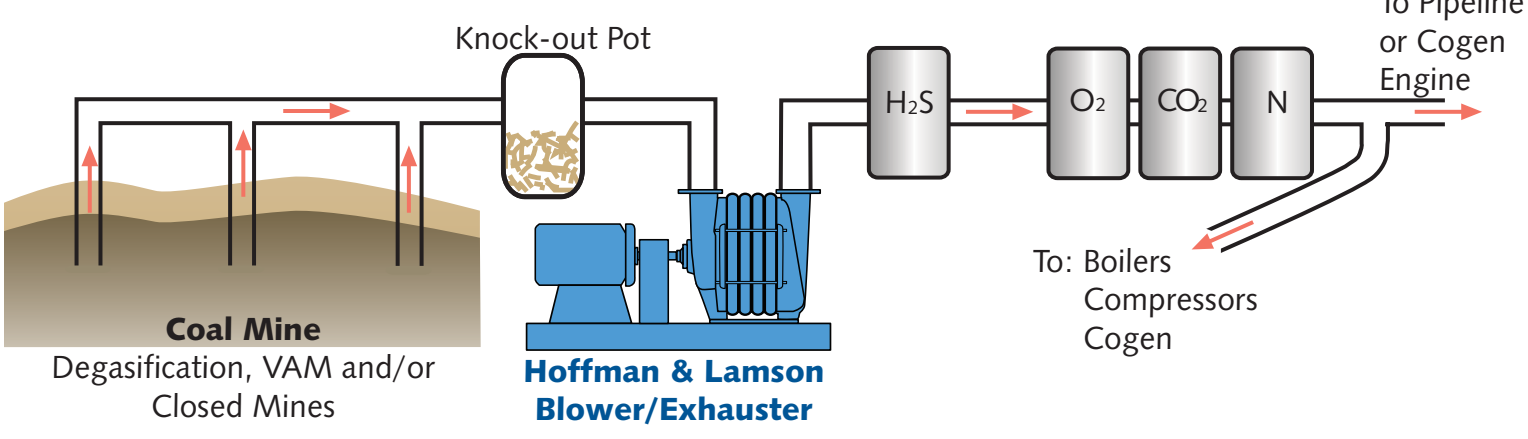

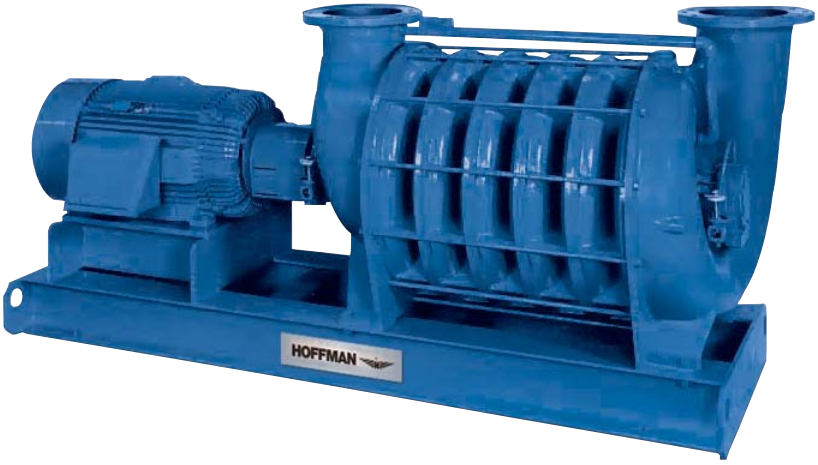

Models to 41,000 cfm

Hoffman and Lamson multistage centrifugal blower/exhauster models cover a broad performance range to meet your needs. Each base model presents its own unique performance characteristics and design features that are illustrated in the chart below and the air maps on the following pages.

Size & Performance to Fit Your Application

With 22 models to choose from and the ability to specify a variety of manufacturing options, you can be assured that the blower or exhauster you order will deliver the performance you expect. In addition to the base models available, customers can choose from a variety of design options such as special coatings, alternative component materials, oil or grease lubrication, special seals, drive couplings and power sources. The Hoffman and Lamson blower/exhauster you specify is then manufactured according to your unique application and requirements.

Choose From Multiple Drive Options

Hoffman and Lamson blowers and exhausters may be direct driven, V-belt driven or gearbox driven with an electric motor. Alternative drivers include steam turbines, diesel engines, gasoline engines and liquid petroleum or methane gas engines. Also available is the Next Generation Controls (NGC) variable frequency drive system. The NGC system automatically adjusts airflow output to match the actual airflow demand. The blower/exhauster power requirement adjusts automatically resulting in energy savings. Your Hoffman and Lamson representative can work with you to determine the best drive option and configuration to match your application.

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www.HoffmanandLamson.com
info.hoffmanlamson@gardnerdenver.com
Phone: +1 724-239-1500 Fax: +1 724-239-1502