

Revolution

HIGH SPEED CENTRIFUGAL BLOWERS



HOFFMAN



LAMSON

by Gardner Denver

Hoffman® Revolution™

THE ONE YOU WANT

Revolutionary Philosophy

The top of our operating philosophy is the customer. We strive to serve customers and their needs through a family dedicated to continue over 150 years of faithful service. We deliver industry leading products, through a highly skilled and experienced workforce. Our Shareholders and Employees make it possible and are the corner stones of this support. The fabric of customer trust in our long line of successful product brands is woven with exceptional resources, value, and commitment. Our product innovation is ground breaking and delivered with high velocity. The Hoffman Revolution is a direct result of this philosophy, an example of our commitment to the environment and response to the voice of the customer.

Efficiency Is Priority One

We have many customers that count on us to help them reduce their carbon foot print, increase efficiency, and improve their energy savings. Since 75% or more of the total life cycle costs of operating aeration equipment is energy, energy efficiency is our number one priority. Technological improvements allows the footprint of the Revolution to be significantly smaller than traditional blowers—reducing energy consumption—and reducing carbon foot print.

The Hoffman Revolution is the world's most advanced blower energy management system. The culmination of blower design and leadership delivers a new standard in efficiency and environmental protection. The first high speed centrifugal in its class—designed, built, and tested in the United States of America. Through advanced technologies, the Revolution delivers up to 45% energy savings, provides increased reliability with little or no maintenance, and comes factory prewired and tested in an ergonomically designed sound enclosure for plug-and-play operation.



REVOLUTION

Revolution at Work

On the job, nothing compares to the efficiency and power of the Revolution. It's ideally suited for a range of applications in the oil and gas, air separation, renewable energy, and wastewater treatment markets. The small footprint and reduced installation costs enables the Revolution to function in places traditional blowers cannot. It is the quietest high-speed blower in its class with a one meter certified sound rating at below 80 dBa.

Durable, reliable, and efficient, the Revolution offers unprecedented ease of maintenance. We've leveraged decades of Hoffman blower experience and ingenuity to develop a customer solution that sets new standards in efficiency, reliability, and savings.

Package Includes

- A single enclosure housing
- High speed blower/motor unit
- Direct-driven, high-speed motor
- Self-contained cooling system
- Air filtration elements
- High efficiency impeller
- Magnetic smart bearings
- VFD, PLC, HMI (SCADA ready)
- Blow-off valve assembly
- Start-up training
- CSA, UL, and CE quality certified



The quietest blower in its class



Customer Comments

ILLINOIS SEWAGE TREATMENT PLANT



A customer in Illinois, USA operating a 3.3 MGD DAF, 6.0 MGD DMF sewage treatment plant purchased a Hoffman Revolution through the American Recovery and Reinvestment Act (ARRA.) They replaced three Hoffman multistage units (two-250 HP and one-125 HP) supporting multiple air needs for activated sludge, aerobic sludge, and return-activated sludge pumping processes. The Hoffman multistage units served the customer for 40 years with no failures. After the Revolution was installed the savings began immediately. In the first month of operation, the customer realized a **47% reduction in kilowatt (kw) usage** over the same period of the prior year.

In the customer's words:

The purchasing process was simple and quick. The only requirement was that we receive the unit by end of July 2011, and that requirement was met. What I like the most is the energy savings. I also see that it allows more flexibility in my aeration. As an employee of an American community, I have always felt it necessary to keep my departmental funds as close to home as possible. When making purchases I always look in my home town, then the county, region, state and nation. Hoffman, in my opinion, has set the standard in the industry in the past—and I see no change in this for the future. I believe that the Revolution design will prove more reliable and more economical to operate than the other variations of the "Turbo Blower" types. I would recommend the Hoffman Revolution to anyone who asked.



Precise Control

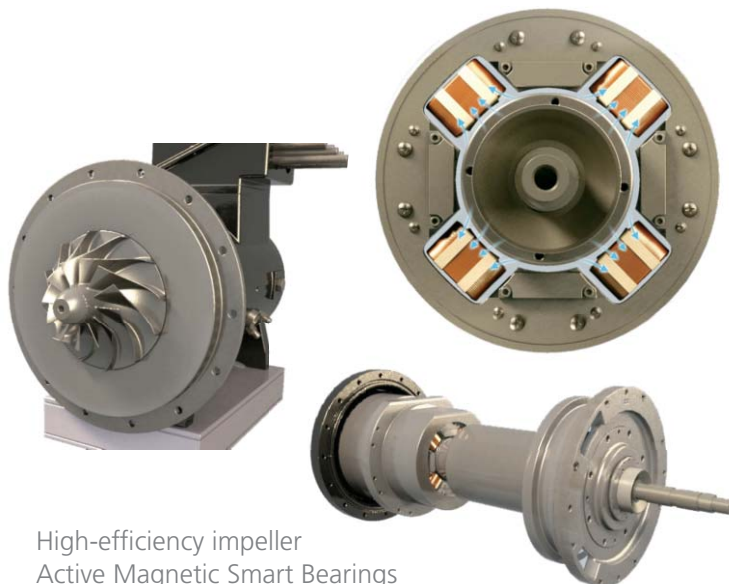
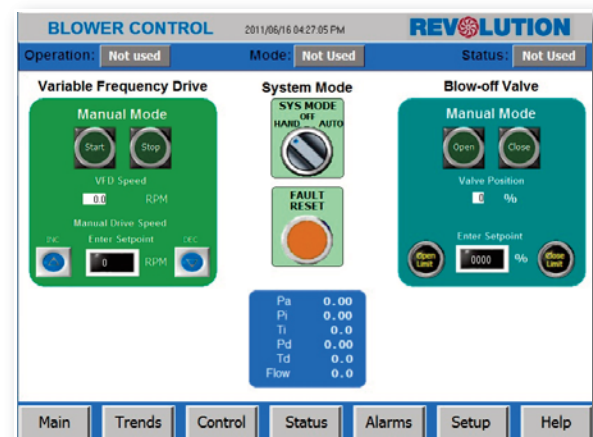
The Revolution features the latest Human Machine Interface (HMI), a smart touch screen. Simple and easy to use, it places the power of advanced technologies at your finger tip. Experience intuitive monitoring and control with customized depth of displayed data functions. The PLC protects and controls with pre-programmed run permissives and is SCADA ready via Modbus over TCP/IP communications at the touch of a button.

Control Features

- PLC controlled
- Low voltage 24 VDC operation
- Supports VFD via Ethernet/Modbus link
- Blower air regulation via PID control
- Pressure, flow, dissolved oxygen modes
- Intelligent limiting for operation in extreme environments
- Feature-rich error handling for safe machine operation
- Expandable PLC to meet I/O of industrial applications
- Up to 4 pressure and 4 temperature transducer inputs
- Expandable discrete inputs and outputs for user control
- Sequencing capability for control of up to 8 blowers
- Ethernet communications for remote monitoring

HMI Touchscreen Features

- 8.4 inch, 640 x 480 LCD color display with LED backlighting
- Touchscreen for blower control menu navigation
- Comprehensive screens for "at-a-glance" blower status
- Password protection of control parameter and setup menus
- Multiple language support



High-efficiency impeller
Active Magnetic Smart Bearings





Performance & Specifications

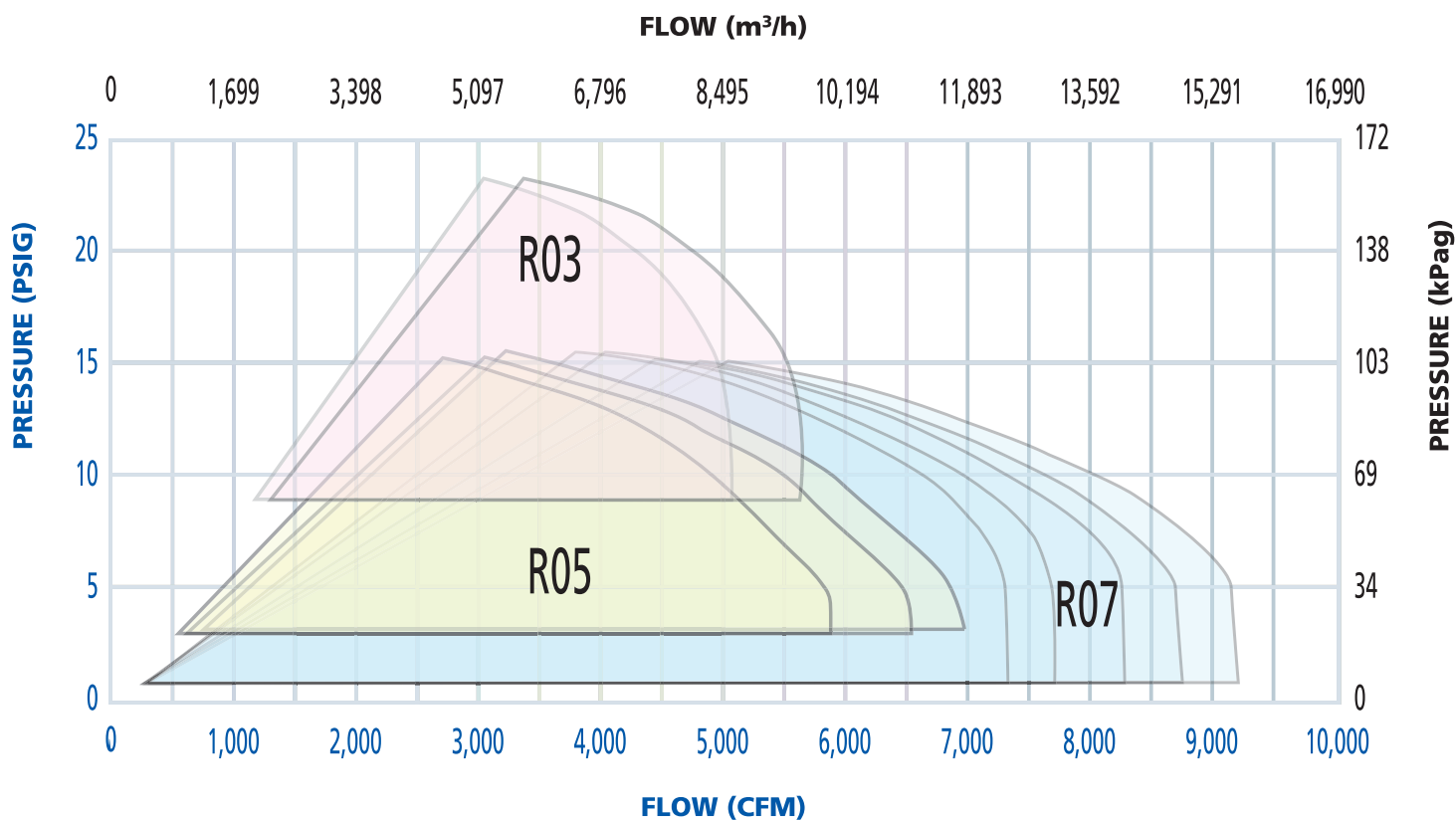
Shown in inches (cm)

All dimensions are approximate

Weight is approximately 4,400 lbs (9,768 kg)

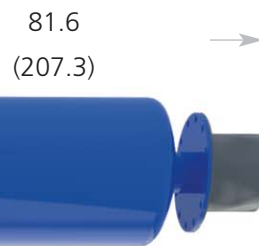
Weight varies by model.

10" (25.4) NPS 150#
FF ANSI FLANGE*





R05 shown



*If there are height restrictions, optional Blow-off valve configurations are available



Superior Benefits

- No lubrication changes
- No bearing changes
- No seal changes
- No gears
- No user-servicable blower parts
- No wearing parts
- No minimum lift-off RPM speed
- No efficiency loss at air intake
- No heat transfer at air intake
- No external water supply needed
- No effect on magnetic bearings by air-intake contaminants

Technical Data

- Permanent Magnet TEWAC motor rated for 380 to 460 Vac service
- IP54 Electrical Enclosure for Drive and Controller
- 99% @ 5 micron air intake filter rating
- 24 VDC Blow-off valve actuator receives a 4–20 ma operation signal
- Blow-off valve bearings require no lubrication and are PTFE 400F rated

The Revolution Delivers!

Differentiate	D	Made in USA, AM Smart Bearings vs. passive Air Foil Bearings, UPS Back-up System, <80 dBa Sound Rating, 5 year warranty
Evolve	E	Over 150 years of industry-leading brands that others try to pattern, Blower Evolution—Hoffman Revolution
Listen	L	Voice of the customer to increase efficiency, make carbon footprint smaller, and simplify operation and controls
Innovate	I	Advanced technologies that optimize aerodynamic and motor efficiencies with proprietary real surge, not predicted surge
Velocity	V	Technology product pull-through of manufacturing and testing provides a new standard in performance
Execute	E	Engineering prowess created and delivered on-time, a break through product technology setting new industry standards
Results	R	A product design achieving up to 45% savings with a significantly reduced carbon footprint

**Gardner
Denver**

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Specifications subject to change without notice.  Please recycle after use.



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