



HOFFMAN

Air Suspension Centrifugal Blower

REVOLUTION^{MX}





Hoffman® Revolution^{MX}

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 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.



Superior Benefits

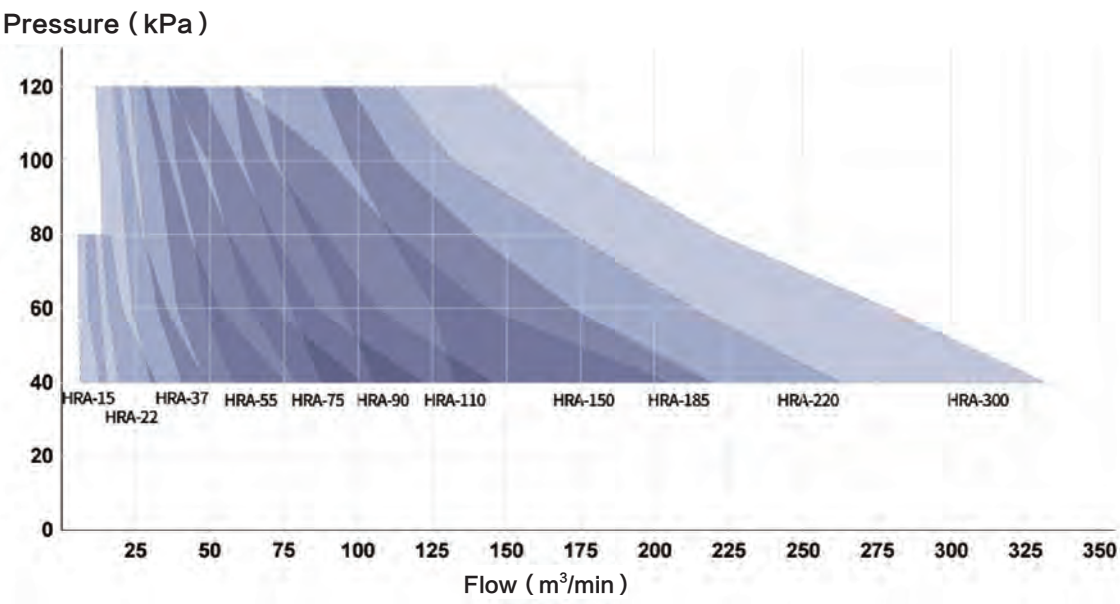
- Air serves as the air film support, oil-free, and environmentally friendly.
- Direct connection, no gear speed-increasing mechanism, and high transmission efficiency.
- No need to replace the sealing ring.
- Wear-resistant coating, with the bearing start-stop times reaching over 50,000.
- Simple structure, reliable performance, and high efficiency.
- Inherits the high-efficiency air end design of Revolution, ensuring high efficiency.
- Permanent magnet synchronous motor, with high efficiency even at low speeds.
- The integrated design reduces the requirement for air cleanliness.
- The efficiency of the permanent magnet motor is as high as 97%.

Technical Data

- High-speed permanent magnet synchronous motor, power range: 15-300kW
- Air suspension bearing, friction-free during operation
- Real-time intelligent monitoring and remote monitoring, supporting safe operation, precise maintenance, and enabling full life cycle management
- Surge prediction and protection, variable frequency regulation, helping customers maximize energy savings and better protect the blower



Performance & Specifications



Package Includes

- A single enclosure housing
- Air suspension blower main unit/motor unit
- High-speed direct-drive permanent magnet motor
- Forced air cooling system
- Air filter element
- High efficiency impeller
- Wear-Resistant Dynamic Pressure Foil Bearing
- VFD, PLC, HMI (SCADA ready)
- Anti-surge protection device
- Special frequency converter for high-speed applications



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, re- newable energy, food, and wastewater treatment markets.

The small footprint and reduced installation costs en- ables 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.

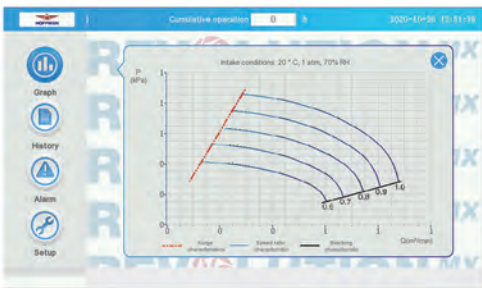
Durable, reliable, and efficient, the Revolution offers unprecedented ease of maintenance. We've leveraged decades of Hoffman blower experience and ingenuity to develop a customer solution that sets new stan- dards in efficiency, reliability, and savings.



The quietest blower in its class

HMI Touchscreen Features

- 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



Reliable Bearing Design

- Reliable bearing wear-resistant design: The air bearing is made of nickel-based superalloy with an ultra-wear-resistant coating, and is equipped with a short-term acceleration setting. This reduces the friction time of the suspension bearing during the start-stop phase and extends the bearing service life.





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. Real-time data monitoring can be realized immediately.

Control Features

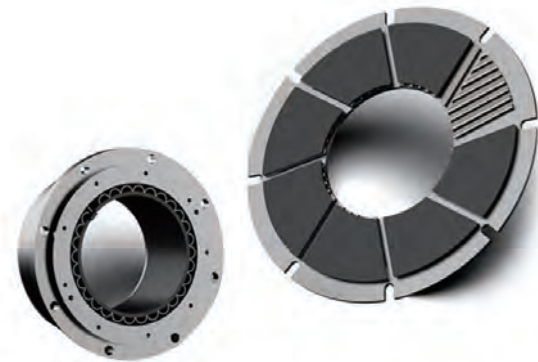
- PLC controlled
- Low voltage 24 VDC operation
- Supports VFD via Ethernet/Modbus link
- Blower air regulation via PID control
- Pressure, flow modes
- Intelligent limiting for operation in extreme environments
- Feature-rich error handling for safe machine operation
- Expandable PLC to meet I/O of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

Product series

Model Series	Motor Power (kW)	Discharge Pressure (kPa)	Airflow Rate (m³/min)	Overall Dimensions(mm)			Discharge Port Specification (DN)	Cooling Method
				L	W	H		
HRA-15	15	40 60 80	15 13 11	1400	700	1100	DN125	Air Cooling
HRA-22	22	40 60 80	32 20 16	1400	700	1100	DN150/125	
HRA-37	37	40 60 80 100 120	49 35 27 23 19	1400	700	1100	DN150	
HRA-55	55	40 60 80 100 120	75 53 43 36 29	1600	850	1400	DN200/150	
HRA-75	75	40 60 80 100 120	101 71 56 46 38	1600	850	1400	DN250/200	
HRA-90	90	40 60 80 100 120	122 86 71 59 47	1600	850	1400	DN300/200	
HRA-110	110	40 60 80 100 120	145 107 89 70 60	2100	1100	1650	DN300/250/200	
HRA-150	150	40 60 80 100 120	205 143 112 90 60	2100	1100	1650	DN300/250	
HRA-185	185	40 60 80 100 120	220 172 139 112 97	2100	1100	1650	DN300/250	
HRA-220	220	40 60 80 100 120	263 213 167 132 112	2600	1450	1700	DN500-DN250	
HRA-300	300	40 60 80 100 120	332 279 221 177 146	2600	1450	1700	DN500-DN300	Water Cooling



Air Suspension Bearing



Radial Bearing

Thrust Bearing

The Revolution Delivers!

- D** Made in USA, AM Smart Bearings vs. passive Air Foil Bearings, <80 dBa Sound Rating
- E** Over 150 years of industry—leading brands that others try to pattern, Blower Evolution—Hoffman Revolution
- L** Voice of the customer to increase efficiency, make carbon footprint smaller, and simplify operation and controls
- I** Advanced technologies that optimize aerodynamic and motor efficiencies with prevention of surge
- V** Technology product pull-through of manufacturing and testing provides a new standard in performance
- E** Engineering prowess created and delivered on-time, a breakthrough product technology setting new industry standards
- R** A product design achieving up to 45% savings with a significantly reduced carbon footprint



Official wechat account
of Gardner Denver Nash



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