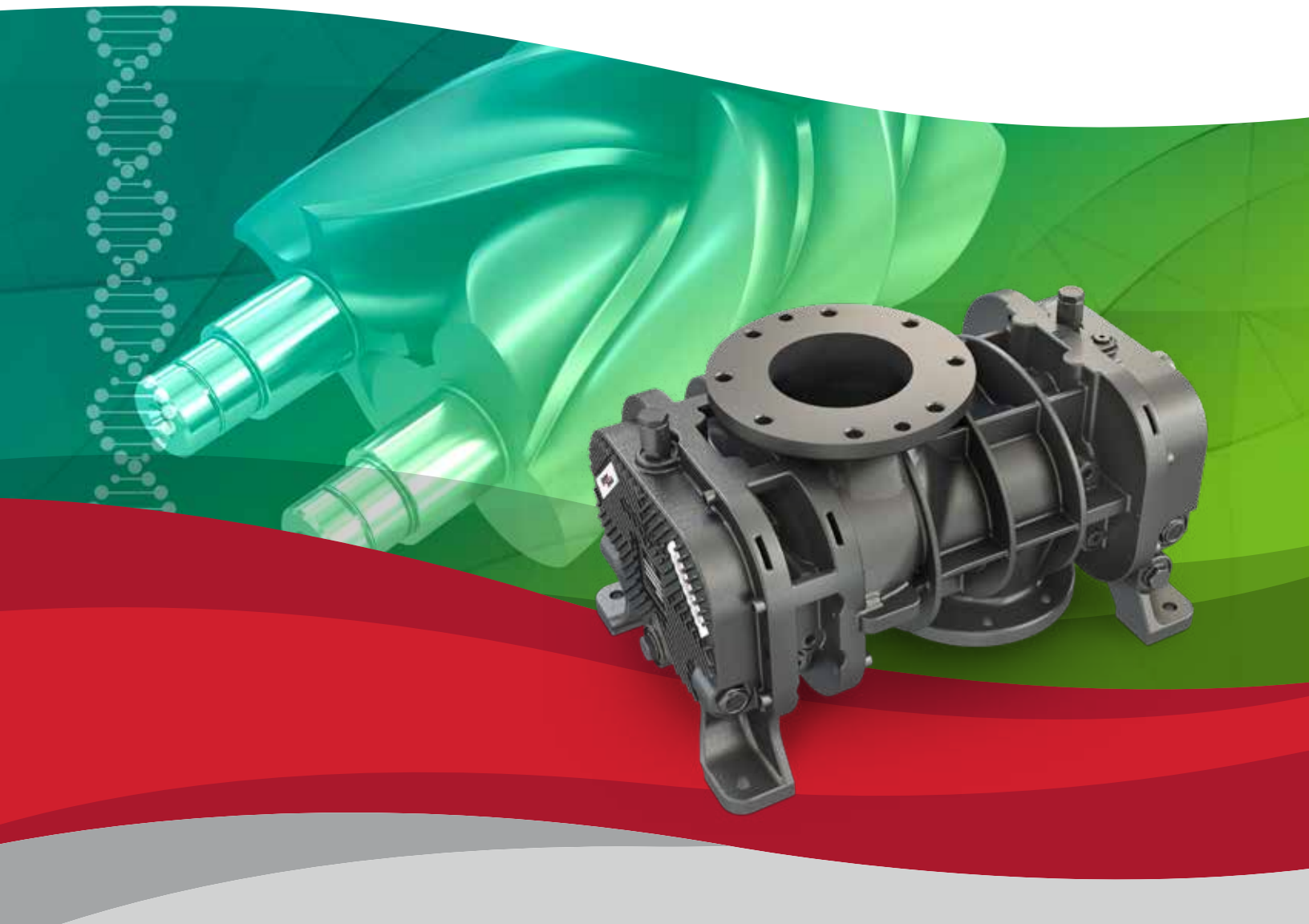


**Gardner**  
**Denver**

POSITIVE DISPLACEMENT BLOWERS & VACUUM PUMPS

# CycloBlower® VHX Series



# It's all about...

## World First Blower Technologies

**Innovation is in our DNA.** Much like DNA, the rotor design of our blowers dictate what they become. Gardner Denver has a legacy of leadership developing the world's best blowers.

### 1930's Sutorbilt Legend

- Bi-Lobe Blower Technology
- The Most Complete Offering of Air and Gas Handling Equipment in the World

### 1950's DuroFlow

- Solid Bi-Lobe Technology
- Integral Impeller-Shaft Design for Heavy-Duty Industrial Work
- Wide Operating Range = Fewer Models Needed

### 1950's CycloBlower

- **WORLD'S FIRST** 2x4 Helical Screw Blower
- Energy Efficiency Leader for Decades
- Patented Rotor Technology

### 1992 RBS Series

- Tri-Lobe Blower Technology
- Oversized Shafts Allowing Higher Operating Pressures and Rotation Speeds
- 100,000 Hour Bearing Lifespan

### 2008 HeliFlow

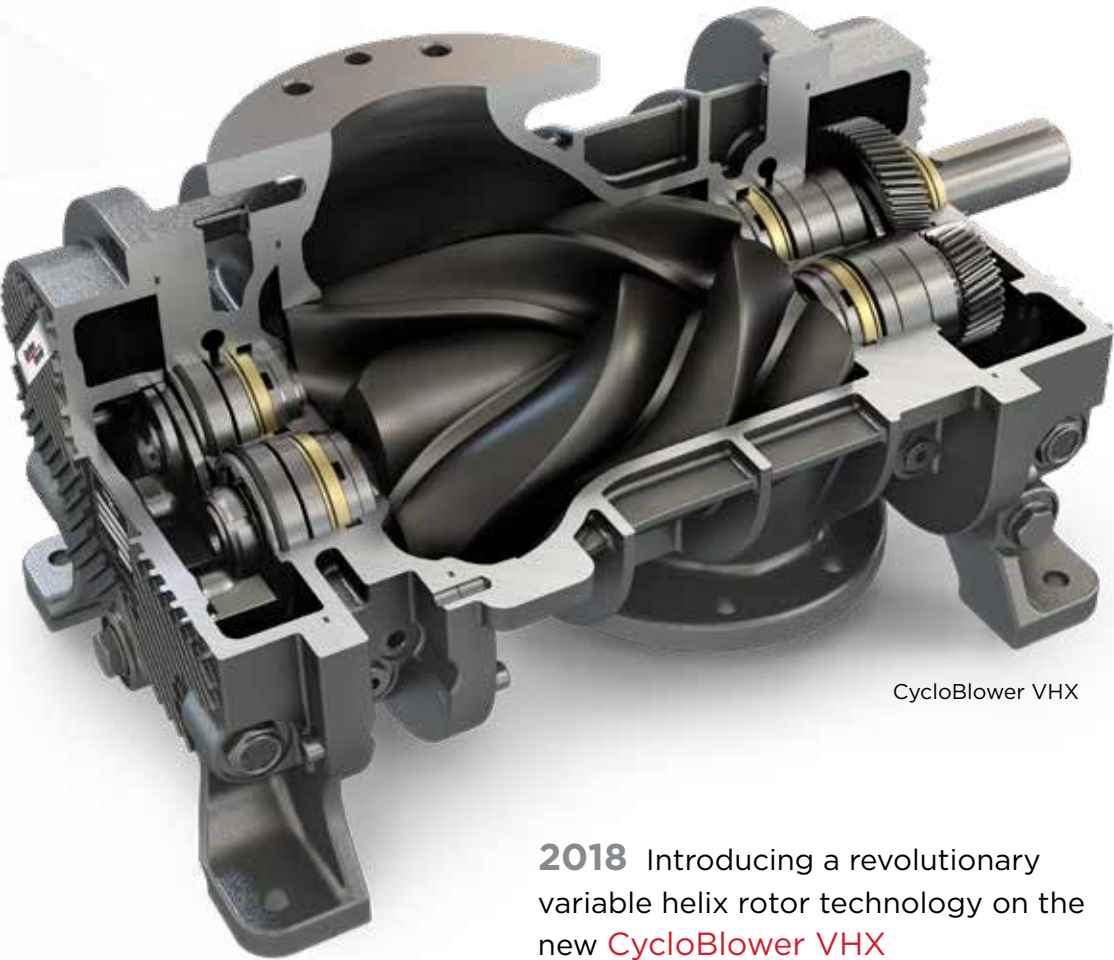
- **WORLD'S FIRST** Helical Tri-Lobe Blower
- Noise Reduction Technology
- Superior Overhung Load Capacity

### 2015 CycloBlower H.E.

- 3x5 Fixed Helical Screw Rotor Technology
- **PATENTED ROTOR TECHNOLOGY**
- Best-In-Class Energy Efficiency
- Increased Pressure Capability up to 36 psi
- Best-of-the-Best Components



The Blower Evolution continues with the **WORLD'S FIRST** variable helix technology.



CycloBlower VHX

**2018** Introducing a revolutionary variable helix rotor technology on the new **CycloBlower VHX**

- 3x5 Variable Helix Screw Rotor Technology
- Exclusive Blower Rotor Technology
- Game Changing Patent-Pending Design
- Premium Efficiency

The Result = the **Most Extensive & Innovative Blower Line** in the Industry to Meet Customer-Specific Needs



# It's all about... the Variable Helix

New revolutionary methods had to be developed to manufacture the complex variable helix rotors. This included new ideas for machining, inspection, and rotor pairing.

—Paul Dick  
Director of Operations, Americas

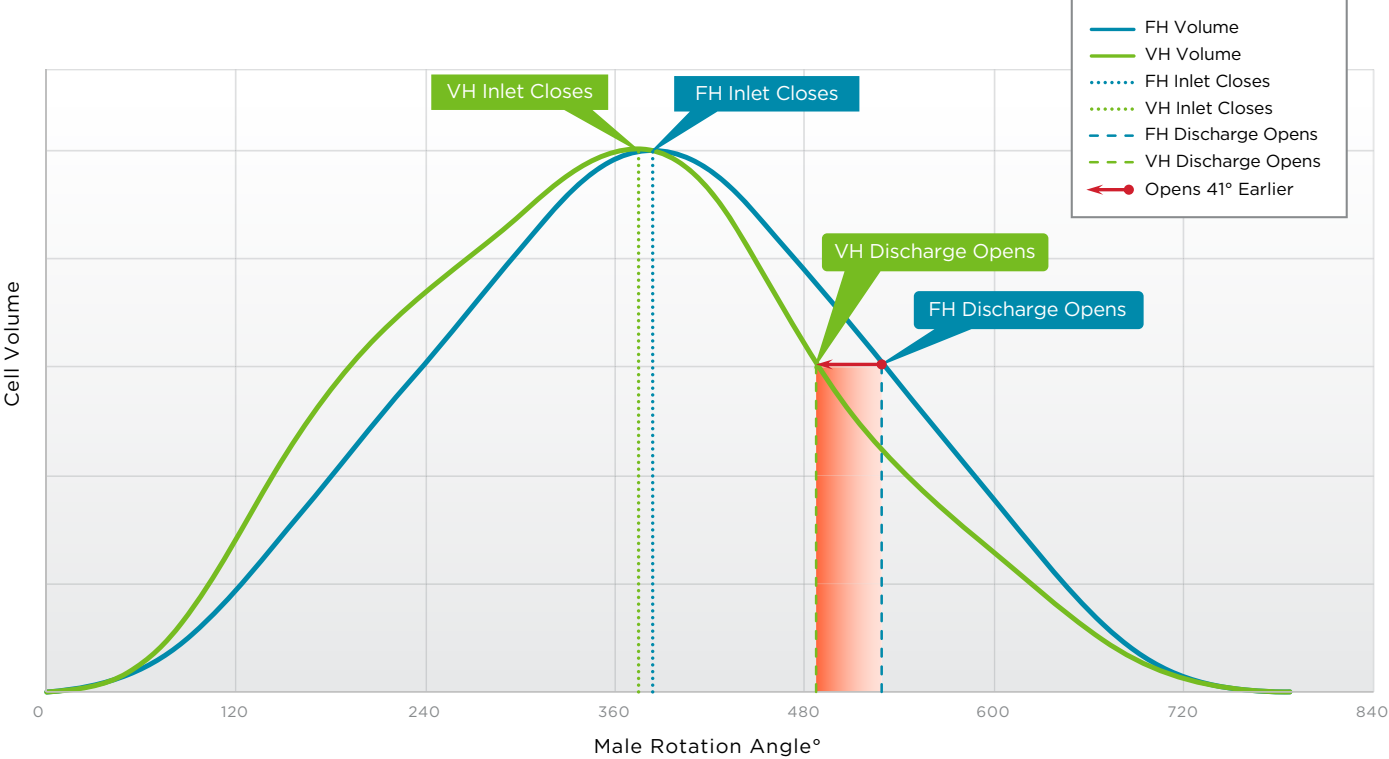
The CycloBlower VHX utilizes a revolutionary variable helix rotor design. By adding a variable helix to our helical screw rotor design, we achieve new, unmatched levels of blower performance and efficiency.

## Why Variable Helix?

- Faster Internal Compression
- Significantly Larger Discharge Port
- Eliminates Air Losses
- Higher Efficiencies
- Efficient Turndown Capability
- Save up to 35% on your Energy Costs



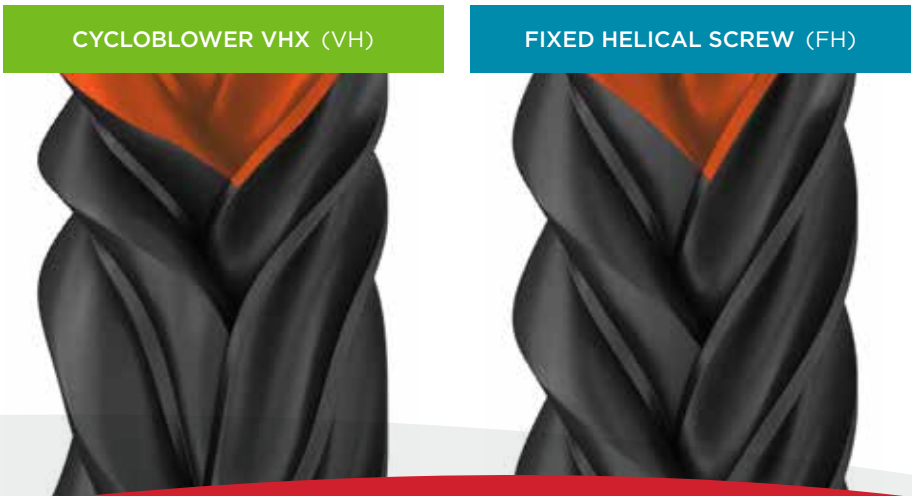
## ROTOR CELL VOLUME DEVELOPMENT CYCLE



## Variable vs. Fixed Helix

- Variable Helix Rotor Geometry Allows Discharge Port to Open 41° Earlier than Fixed Helix Design
- Lowering Flow Loss
- Increasing Efficiency

Highlighted Area = Port Exposure

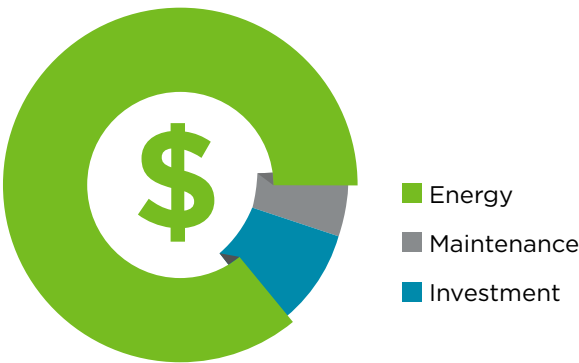


# It's all about... Energy Savings

With energy costs continuing to rise, more efficient solutions are needed to remain competitive in the global market. The CycloBlower VHX minimizes those costs without compromising on performance.

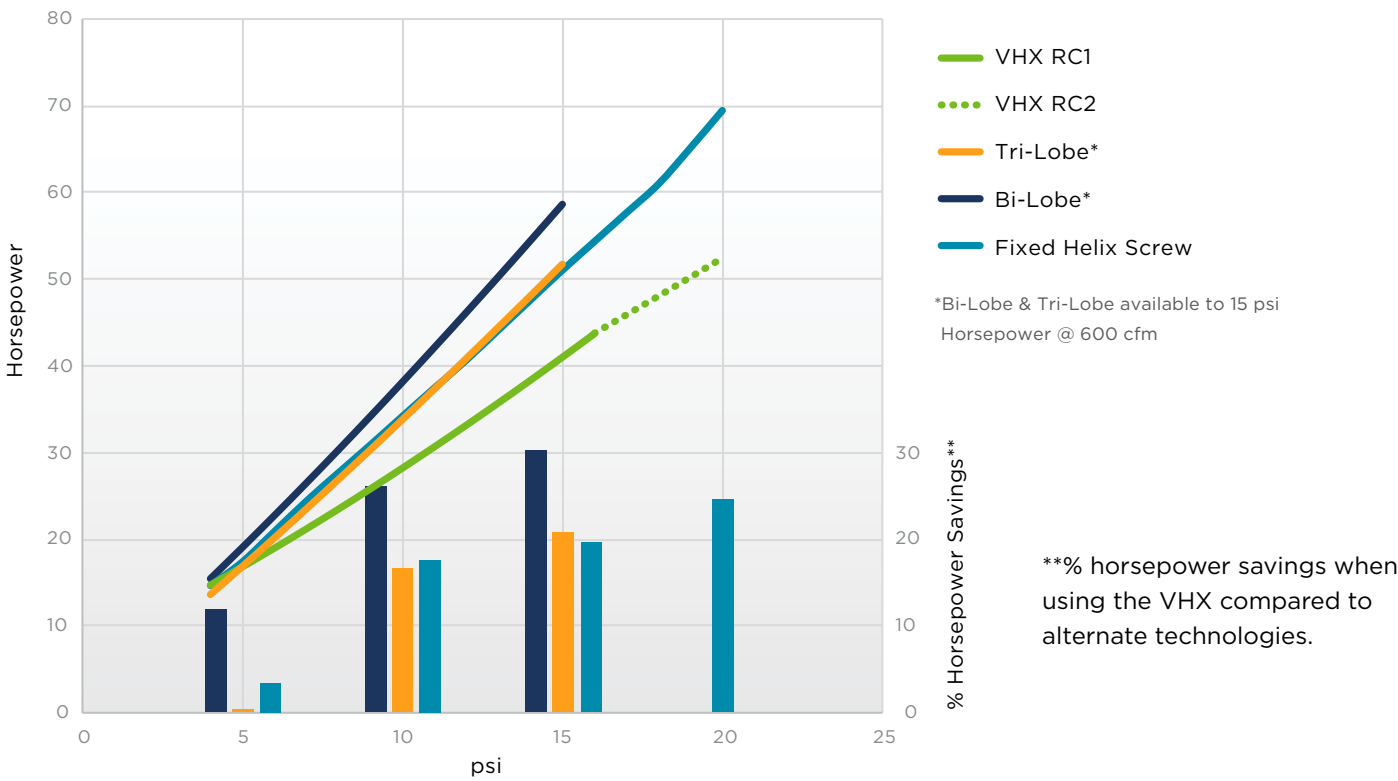
Make the Smart Choice & Get a Return on Your Investment

TOTAL COST of Blower Ownership



- Energy consumption is typically the largest cost of ownership
- Save BIG with best-in-class energy efficiency
- Lower your bottom line, increase your profits

HORSEPOWER SAVINGS



Save up to 35% on Your Energy Costs



As a company, one of our main objectives is to **increase the energy efficiency** of our products, and we continually strive to do that through innovation.

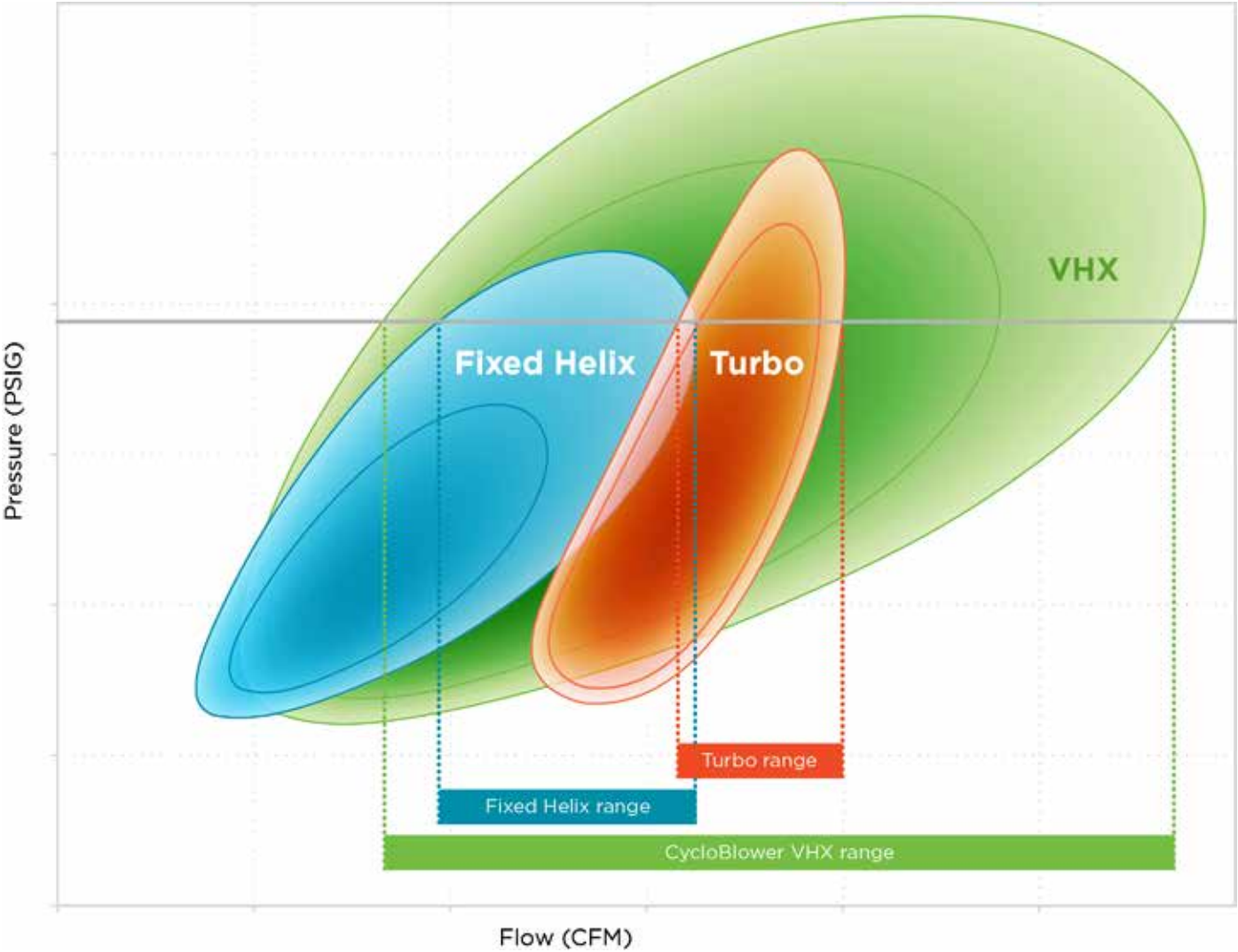
—Luke Gray  
Supervisor: Technology & Innovation



# It's all about... the Efficient Turndown

Don't Lose Efficiency for Wider Turndown Capability

Turndown Efficiency Comparison



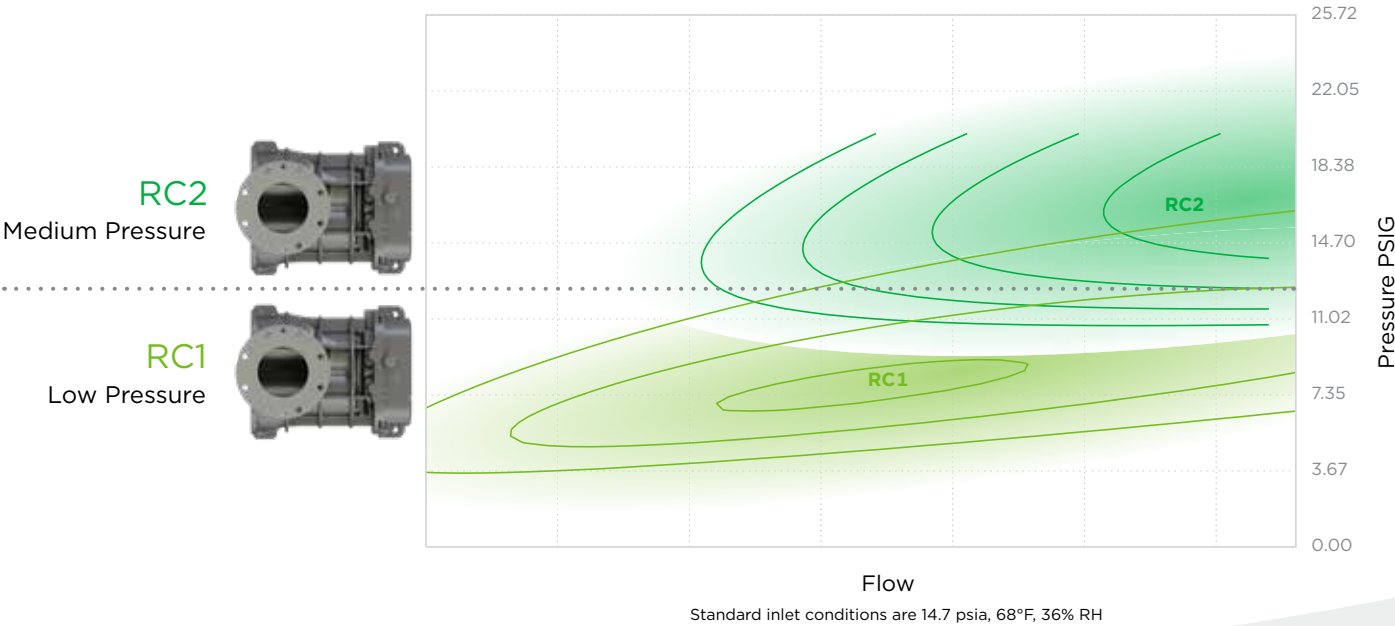
# It's all about... the Optimized Efficiency

Enhancing Performance Through Innovative Design

- Exclusive special cylinder designs match performance to your application requirements
- Two discharge port options optimize efficiencies based on your specific performance needs



Optimized Efficiency  
Modified Cylinder for Maximized Savings



It's all about...  
the **Components**



## BEST OF THE BEST

No Corners Cut | No Compromise | Premium Parts  
Quality Confidence | Beyond Expectations

To learn more about Inpro/Seal  
visit [www.inpro-seal.com](http://www.inpro-seal.com) or  
scan the QR code to the right



- 1 O-Rings**
  - O-Ring Seals
  - Durable Protection
  - No Gaskets
- 2 Helical Timing Gears**
  - Smooth, Quiet Operation at All Speeds
  - Assures Non-Slip Rotor Timing
- 3 Dual-Splash Lubrication with Eccentric Slinger Ring**
  - Unique Design
  - Maximizes Efficiency by Reducing Power Consumption
  - Optimizes Oil Distribution
- 4 Discharge Bearings**
  - Axial: 4 Point Angular Contact Bearings
  - Radial: Cylindrical Roller
  - Provides Absolute Strength and Stability on Multiple Planes to Handle Extreme Applications
  - Extended Bearing Life
- 5 Inpro/Seal® Premium Oil Seal\***
  - Contactless Dual-Ring Design
  - Non-Wearing
  - Extends Longevity Reducing Maintenance Costs
  - Market-Leading Protection Against Leaks
- 6 Piston Ring Air Seals**
  - Delivers Leak-Free Operation
  - Provides Maximized Seal Life
  - Graphite air seals for high pressure applications over 20 PSI
- 7 Robust Ductile Iron Shaft**
  - Designed & Tested for Strength
  - High Shaft Load Capacity
  - Direct & V-Belt Drive Capable
- 8 PTFE (Polytetrafluoroethylene) Coated Rotors**
  - Food Grade
  - Minimizes Air Loss
  - Maximizes Efficiency

\*Inpro/Seal is a registered trademark of Waukesha Bearings Corporation

## It's all about... Next Level Innovation

By investing in new technologies and new innovations, we are investing in our customers. We strongly believe that innovation defines our future. So, what we do today to help our customers will continue to drive our mutual success.

—**Vicente Reynal**, CEO, GDI



POWERED BY



To learn more about the CycloBlower VHX, visit [www.gardnerdenver.com/en/gdproducts/products/blowers/helical-screw-technology/cycloblower-vhx](http://www.gardnerdenver.com/en/gdproducts/products/blowers/helical-screw-technology/cycloblower-vhx) or scan the QR code.



### It's all about... the Leading Edge of Technology

The CycloBlower VHX is a world first. It's really exciting as far as blower technologies go because this is as good as it gets. It's a remarkable geometry, it's a fun project that keeps Gardner Denver where it's always been, at the very bleeding edge of technology. We're always trying to do it better. We're always trying to be innovative and the VHX is a representation of that.

—**Kenny Reekie**, Product Director Blowers & Low Pressure



### It's all about... Made in America

Customers should be excited about the CycloBlower VHX because it's the most efficient blower in the world, backed by the Gardner Denver reputation of quality and durability. Built with pride in Sedalia, Missouri with an incredible team that's committed to quality and committed to making the best blowers in the marketplace.

—**Paul Dick**, Director of Operations, Americas



### It's all about... Voice of Customer

With energy costs continuing to rise, our customers are looking for efficient solutions to minimize those costs without compromising on performance. Our latest innovation, the CycloBlower VHX incorporates a revolutionary advancement in rotor technology that addresses that energy efficiency need with a variable helix screw rotor design.

—**Carl Kruthoff**, Product Manager



### It's all about... Next Level Research & Development

At Gardner Denver, our products go through a rigorous research & development process. We have an extensive list of computer aided engineering tools allowing us to do a lot of the design in the virtual world rather than building multiple prototypes. Utilizing those tools to design new products like this was really put on display with this project in order to go from a very new concept to something that was production viable in a very efficient amount of time.

—**Luke Gray**, Supervisor: Technology & Innovation



CycloBlower VHX Performance Data

PRESSURE

MODEL	SPEED RPM	5 PSIG		8 PSIG		11 PSIG		14 PSIG		17 PSIG		20 PSIG	
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
100CDL300 RC1	1200	144.3	4.9	122.9	7.1	102.7	9.5	83.8	12.3	-	-	-	-
	1860	267.3	7.8	246.0	11.1	226.0	14.6	207.3	18.5	189.9	22.7	-	-
	2520	390.8	11.1	369.7	15.5	349.9	20.1	331.3	25.1	314.1	30.4	-	-
	3180	514.8	14.8	493.9	20.3	474.2	26.1	455.9	32.1	438.8	38.5	-	-
	3840	639.3	18.9	618.5	25.5	599.1	32.4	580.9	39.6	564.0	47.1	-	-
	4500	764.3	23.4	743.7	31.1	724.4	39.1	706.4	47.4	689.7	56.0	-	-
100CDL300 RC2	1200	144.4	5.5	128.9	7.3	114.4	9.3	100.8	11.5	88.0	13.9	-	-
	1860	263.2	9.5	248.3	12.1	234.4	14.8	221.3	17.8	209.1	21.0	-	-
	2520	383.3	13.8	369.0	17.2	355.6	20.8	343.1	24.5	331.4	28.5	320.7	32.6
	3180	504.6	18.5	490.9	22.7	478.1	27.0	466.2	31.6	455.1	36.3	444.9	41.3
	3840	627.3	23.6	614.2	28.6	601.9	33.7	590.6	39.0	580.1	44.6	570.5	50.3
	4500	751.3	29.1	738.8	34.8	727.1	40.7	716.3	46.9	706.3	53.2	697.3	59.7

VACUUM

MODEL	SPEED RPM	5 IN. HG.		8 IN. HG.		11 IN. HG.		14 IN. HG.		17 IN. HG.		18 IN. HG.	
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
100CDL300 RC1	1200	162.1	2.7	148.2	4.1	131.5	5.7	111.4	7.2	-	-	-	-
	1860	282.9	4.7	269.2	6.3	252.7	8.2	232.9	10.0	-	-	-	-
	2520	404.9	7.0	391.4	8.9	375.1	10.9	355.6	13.1	-	-	-	-
	3180	528.1	9.7	514.7	11.7	498.7	14.0	479.5	16.5	-	-	-	-
	3840	652.4	12.6	639.3	14.8	623.5	17.3	604.6	20.2	-	-	-	-
	4500	777.9	15.8	765.0	18.2	749.4	21.0	730.9	24.2	-	-	-	-
100CDL300 RC2	1200	152.0	3.2	144.7	3.9	135.4	4.8	123.5	5.8	107.7	6.9	101.4	7.2
	1860	272.5	6.4	265.6	7.1	256.8	8.0	245.5	9.1	230.8	10.3	224.8	10.6
	2520	393.3	9.8	386.7	10.6	378.4	11.5	367.9	12.6	354.0	13.9	348.5	14.3
	3180	514.4	13.4	508.2	14.2	500.4	15.2	490.4	16.4	477.6	17.7	472.5	18.2
	3840	635.7	17.3	629.9	18.1	622.6	19.1	613.3	20.4	601.4	21.8	596.8	22.3
	4500	757.4	21.4	751.8	22.2	745.0	23.3	736.4	24.6	725.5	26.1	721.3	26.6

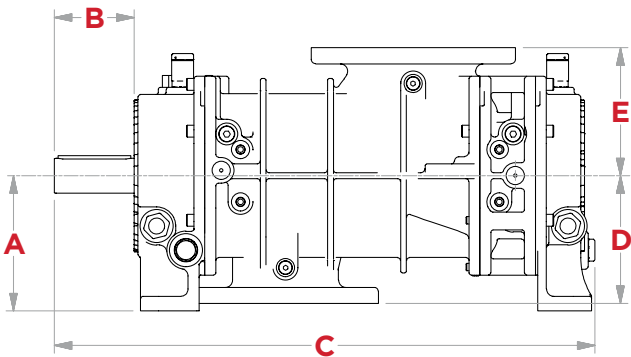
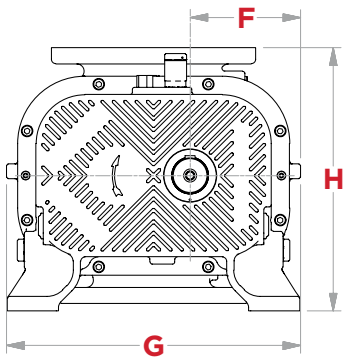
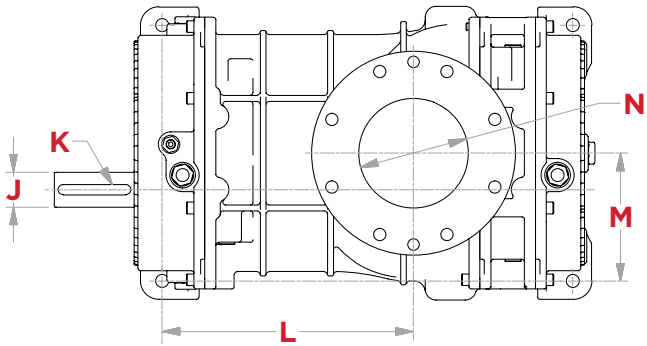
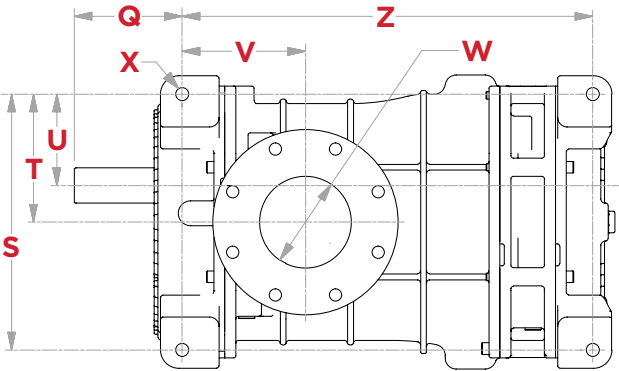
CycloBlower VHX Dimensions

MODEL 100CDL300

DIMENSIONS*	INCHES	MM
A	7.283	185.00
B	4.311	109.50
C	29.130	739.90
D	6.890	175.00
E	6.890	175.00
F	5.945	151.00
G	15.827	402.00
H	14.173	360.00
J	1.889	48.00
K	0.354 × 0.551 × 3.937	9.00 × 14.00 × 100.00
L	13.535	343.80
M	6.890	175.00
N	6.000 ANSI 125 FF	150.00 ISO 7005 ( PN10 )
Q	5.811	127.60
S	13.780	350.00
T	6.890	175.00
U	4.921	125.00
V	6.646	168.80
W	5.000 ANSI 125 FF	125.00 ISO 7005 ( PN10 )
X	0.689	17.50
Z	22.118	561.80

\*Dimensions are for a bottom-discharge unit.

WEIGHT**	LBS	KG
**approximate	380	172





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by continuously improving all business processes  
with a focus on innovation and velocity



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**Denver**

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[www.gardnerdenver.com/gdproducts](http://www.gardnerdenver.com/gdproducts)

