

Gardner
Denver

POSITIVE DISPLACEMENT BLOWERS & VACUUM PUMPS

HeliFlow[®]
Industrial Series



It's all about...

the HeliFlow

The HeliFlow Series integrates proven experience with blower design and manufacturing techniques to create an innovative helical tri-lobe blower. Gardner Denver has created a low noise solution for positive displacement blower and vacuum pump applications.

BACKED BY A
2 YEAR
WARRANTY

From date of initial use or
30 months from date of shipment

HELIFLOW DELIVERS

- Pressure to 18 psig
- Vacuum to 17 inHg
- Airflow to 4,500 cfm



4" MODELS
406, 408, 412



5" MODEL
514

Results

Durability

Innovation

Trust

QUIET

Tradition

Strength

Quality

Efficiency

Performance



6" MODELS
616, 624

8" MODEL
825, 817

It's all about...

the Savings



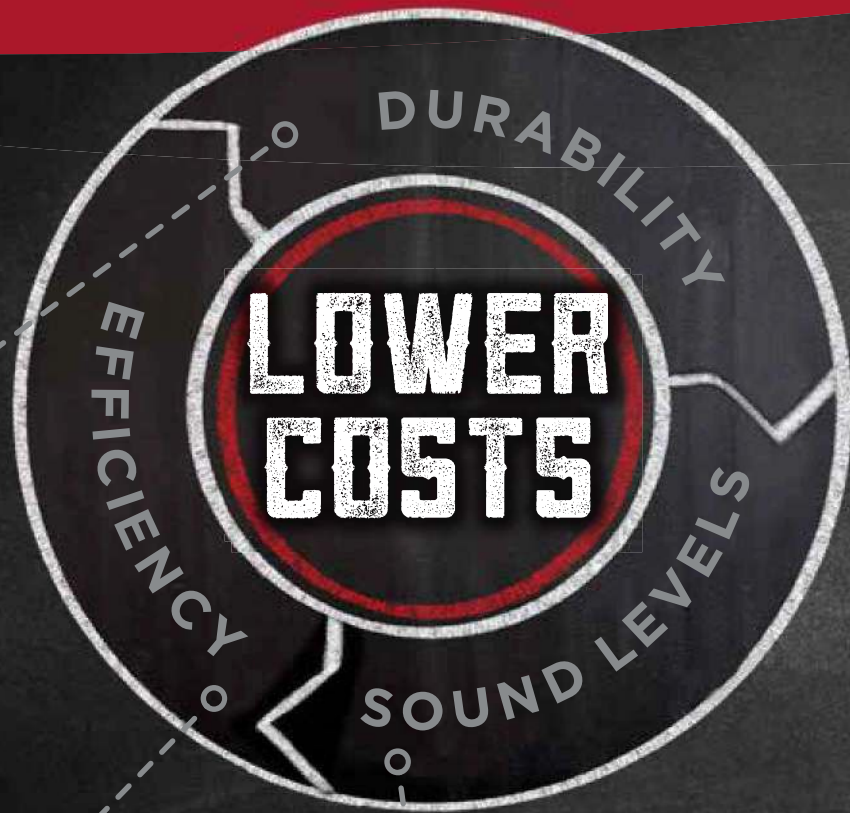
RUGGED CONSTRUCTION

Reduces maintenance and downtime



GREATER EFFICIENCY

Lowers operating costs



QUIETER OPERATION



Reduces enclosure and hearing protection requirements

Lower Cost + Higher Revenue

SAVES MONEY



**HIGHER
REVENUE**



PERFORMANCE

Higher pressure, vacuum
and temperature limits

It's all about...

the PULSE



REDUCES NOISE LEVELS

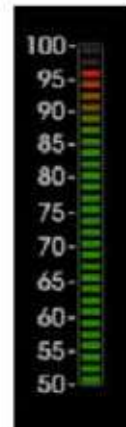
Up to 4-7 dBA

Protect your ears,
Protect your **WORKFORCE**

Noise Levels dBA



HeliFlow

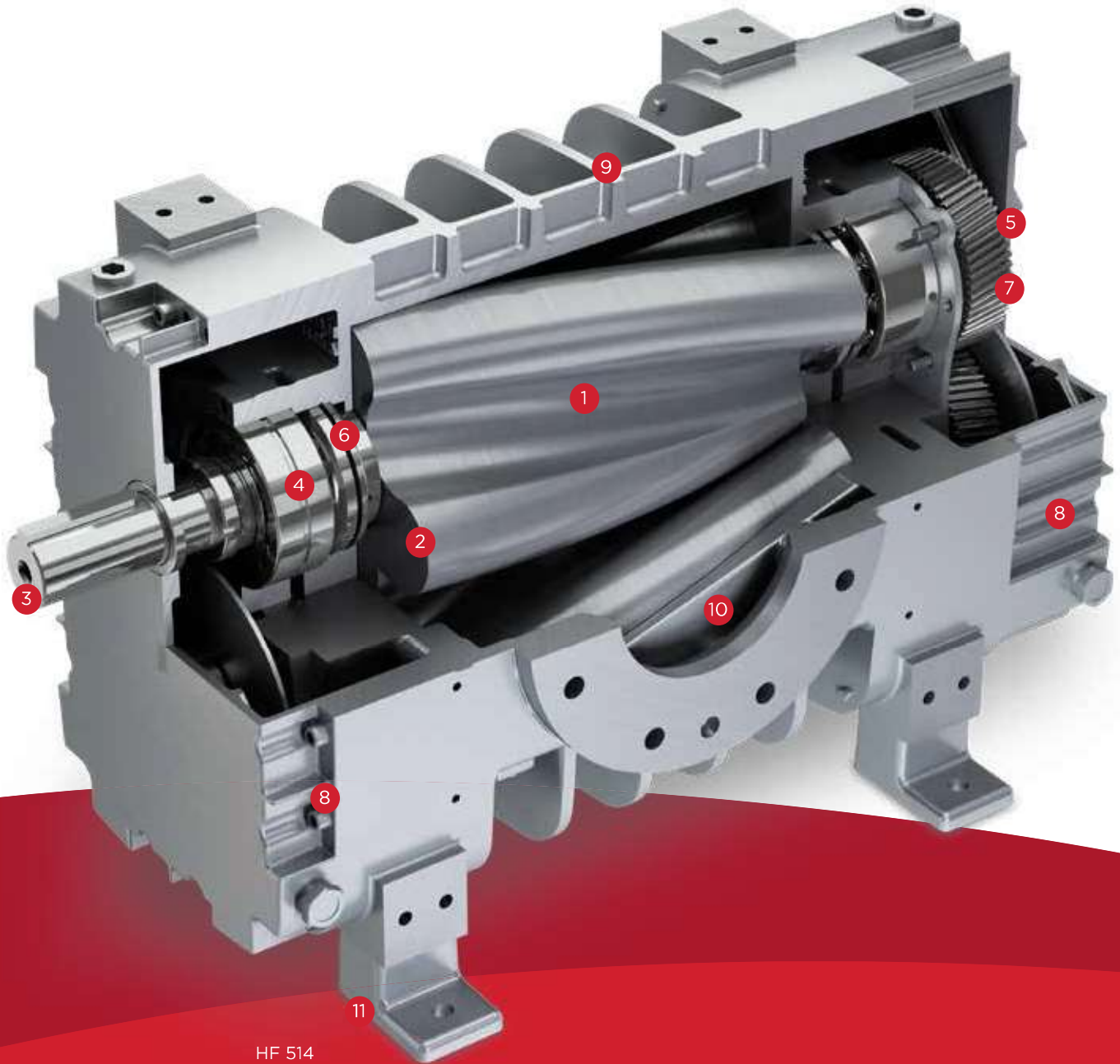


Typical
Lobe Blower



It's all about...

an Innovative Design



HeliFlow Design Advantages

1 Innovative, proprietary, smooth-running, helical rotor profile significantly reduces pulsations and discharge noise levels for quieter operation



2 Solid rotor design eliminates the potential for vibration caused when hollow rotors become unbalanced due to build-up of ingested material inside the rotor cavities

- Rotors and shafts are machined from high-strength ductile iron and are dynamically balanced to ISO Grade 6.3 as standard

3 Large diameter shafts provide superior overhung load capacity compared to competitive models

4 Oversized spherical roller bearings for superior reliability

- Precision fit bearings mounted on large diameter shafts provide longer blower service life



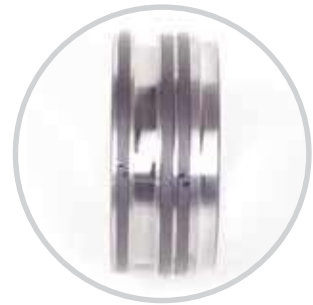
5 Refined timing and gear locking device

- Grip rings expand against the bore of the gear and compress on the shaft for a secure, mechanical shrink fit

- 8" model uses tapered press fit gears



6 Advanced piston ring oil and air seals provide leak-free operation



- 1 air and 2 oil seals

- 2 air and 2 oil seals (8" model)

7 Helical alloy steel timing gears provide quiet and smooth mechanical operation at all speeds



8 Dual splash lubrication for reduced maintenance intervals and superior durability

9 The single piece cylinder incorporates large external fins for heat dissipation and structural integrity

10 The unique triangular tuned ports and extra cylinder mass provides greater strength and noise attenuation

11 Flexible design allows mounting feet to be attached inward or outward based on installation requirements (not available on 8" model)

- Offers the ability to connect units in a variety of configurations

Raising the Bar with Cutting Edge Technology

It's all about...

the Advantages

PRODUCT DESIGN	HELIFLOW 514/616/624/624/825	COMPETITOR A	COMPETITOR B	HELIFLOW ADVANTAGES
CYLINDER & RIB DESIGN	One piece with integral ribs	One piece without ribs	One piece without ribs	<ul style="list-style-type: none"> ■ Noise & pulsation dampening ■ Improves heat dissipation ■ Reduces stress on cylinder ■ Ensures better tip clearance accuracy
DRIVE & GEAR END BEARINGS	Spherical roller	Cylindrical roller (drive) Double row ball (gear)	Cylindrical roller	<ul style="list-style-type: none"> ■ Increases bearing life ■ Better equipped to handle radial & axial loads commonly caused by misaligned V-belt drives
GEAR TYPE	Helical	Helical	Spur	<ul style="list-style-type: none"> ■ Quiet & smooth mechanical operation ■ Reduces backlash ■ Allows tighter clearances
GEAR ATTACHMENTS	Grip rings Press fit gears (825)	Keyed interference fit	Taper gear fit	<ul style="list-style-type: none"> ■ Improves reliability & eliminates timing loss ■ Easier to rebuild ■ Easily adjustable & release-able mechanical shrink fit
ROTOR PROFILE	Solid, Helical Tri-Lobe	Hollow, Dual-Lobe	Hollow, Dual-Lobe	<ul style="list-style-type: none"> ■ Reduces noise & pulsations ■ Improves blower life ■ Eliminates the potential for unbalanced rotors due to product contamination
OIL SEALS	Two piston ring seals with slinger & groove	Lip seal	Lip seal	<ul style="list-style-type: none"> ■ Superior oil sealing ■ Dependable supply of oil-free air ■ Extends maintenance intervals

PRODUCT DESIGN	HELIFLOW 514/616/624/624/825	COMPETITOR A	COMPETITOR B	HELIFLOW ADVANTAGES
MAX. OVERHUNG LIMIT (IN-LBS)	514 = 8100 616/624 = 13500 825 = 19,500	3200 <7999 18,000	1600 <7999 NA	<ul style="list-style-type: none"> More resistant to overhung loads Will not require a jack shaft at higher HP
PRESSURE CAPABILITY (PSIG)	514 = 15 624 = 12 825 = 15	10 10 15	13 10 NA	<ul style="list-style-type: none"> Increased pressure capability
TEMPERATURE RISE LIMITS (°F)	624 = 250 825 = 265	230 230	230 NA	<ul style="list-style-type: none"> Improved ability to withstand extreme operating conditions
APPROXIMATE WEIGHT (LBS)	514 = 667 616 = 865 624 = 1145 825 = 1,820	410 650 775 1,330	615 650 775 NA	<ul style="list-style-type: none"> Extra cylinder mass for reduced noise & pulsations More robust design

