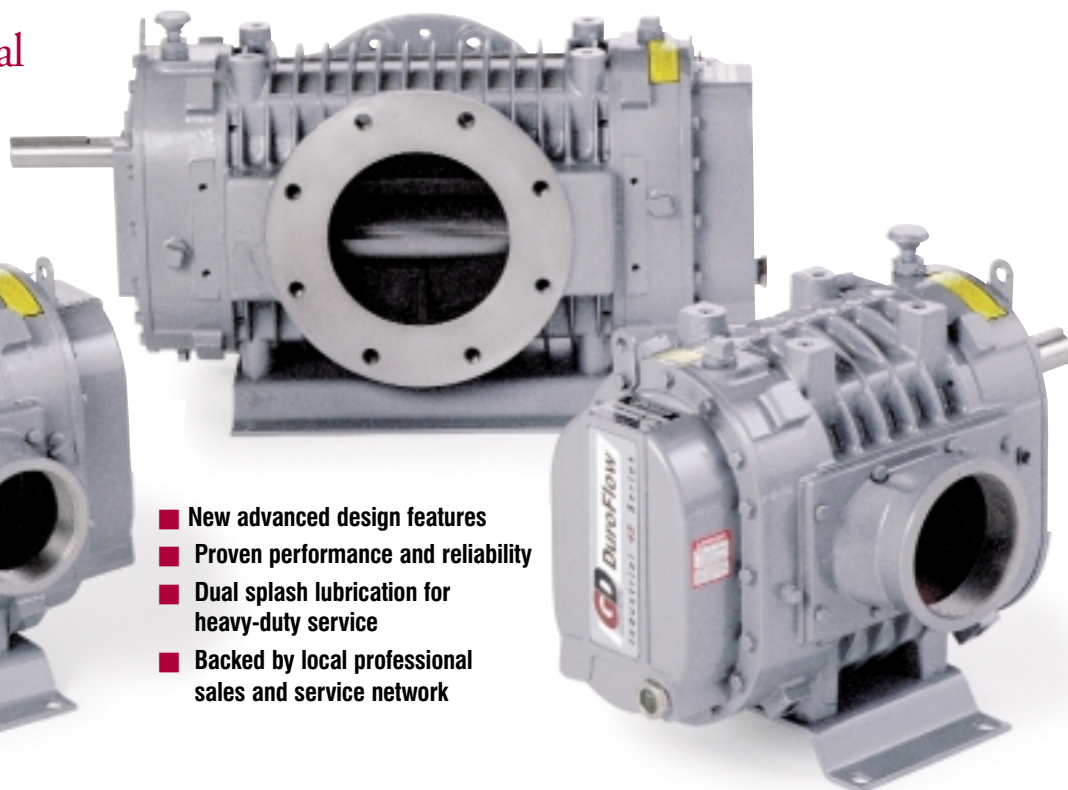




# **Positive Displacement Lobe Blowers/ Vacuum Pumps**

**INDUSTRIAL  
45 SERIES**

# DuroFlow® Industrial 45 Series Positive Displacement Lobe Blowers/Vacuum Pumps



- New advanced design features
- Proven performance and reliability
- Dual splash lubrication for heavy-duty service
- Backed by local professional sales and service network



For over forty years DuroFlow® blowers/vacuum pumps have combined leading-edge technology and on-the-job experience to continuously deliver enhanced designs and improved performance. The DuroFlow design has earned a reputation as a leader in reliability and efficiency for applications that demand a dependable supply of oil-free air. The proven DuroFlow design has been further improved by incorporating an advanced air and oil seal configuration, high strength, single-piece case and innovative one-piece rotor/shaft design for superior strength and internal air sealing. Every DuroFlow is manufactured under rigid ISO 9002 quality standards and exhaustively tested to meet strict performance criteria before shipping to ensure unequaled service life under the most severe operating conditions.

Industry	Application
Aquaculture	■ Aeration
Cement and Lime	■ Fluidization and Conveying
Chemical	■ Vacuum Processing and Conveying
Coal Bed/Landfill	■ Methane Gas Recovery
Dairy	■ Automated Milking
Dry Bulk Hauling	■ Trailer Unloading and Fluidization
Environmental Services	■ Sewer and Valve Box Cleaning
Industrial	■ Material Vacuuming
Milling and Baking	■ Blending and Conveying
Oil and Gas	■ Gas Collection and Sparging
Power Generation	■ Fly Ash Conveying and Combustion Air
Process Gas	■ Gas Boosting
Pulp and Paper	■ Chip Conveying and Process Vacuum
Resin and Plastic	■ Processing and Conveying
Soil Remediation	■ Vacuum Extraction and Sparging
Vacuum Excavation	■ Potholing and Slurry Recovery
Wastewater	■ Aeration and Backwashing

## Pressure Performance Data

MODEL	RPM	4 PSIG		6 PSIG		8 PSIG		10 PSIG		12 PSIG		15 PSIG	
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
4504	1,750	137	3.7	123	5.4	112	7.2	102	8.9	93	10.6	216	23.1
	2,950	271	7.3	258	10.2	247	13.0	237	15.9	228	18.8	333	33.1
	4,000	389	11.6	375	15.5	364	19.4	354	23.3	345	27.2		
4506	1,750	214	5.5	196	8.1	181	10.6	167	13.2	155	15.8	340	34.3
	2,950	415	10.5	397	14.8	382	19.1	369	23.5	357	27.8	517	48.5
	4,000	592	16.3	574	22.2	559	28.0	545	33.9	533	39.8		
4509	1,750	324	8.4	297	12.2	275	16.1	255	19.9	238	23.8	516	51.9
	2,950	626	16.3	600	22.7	577	29.2	558	35.7	540	42.2	781	74.1
	4,000	891	25.8	864	34.6	842	43.4	822	52.1	805	60.9		
4512	1,750	454	11.0	424	16.2	399	21.3	377	26.4	357	31.5	329	39.2
	2,950	858	21.0	828	29.6	802	38.3	780	46.9	760	55.5	732	68.5
	4,000	1,210	32.6	1,180	44.4	1,155	56.1	1,133	67.8	1,113	79.5	1,085	97.1
4518	1,750	696	16.3	654	24.0	618	31.7	587	39.3				
	2,950	1,300	30.2	1,259	43.1	1,223	56.1	1,192	69.1				
	4,000	1,830	45.8	1,788	63.3	1,752	80.9	1,721	98.5				

Performance based on air at standard conditions: Sea Level, 14.7 PSIA, 68°F Inlet Temperature, 36% Relative Humidity. For performance with gases other than air or at non-standard conditions, contact your Authorized DuroFlow Industrial 45 Series Representative.



## Improved Design Advantages

- 1 Rotors and shafts are machined from a single, high-strength ductile iron casting and dynamically balanced.**

Assures extra strength and rigidity to handle maximum loads on a continuous basis without fatigue, deflection or vibration.

- 2 Oversized drive-end double-row ball bearings support each shaft and fix rotor position.**

Prevents destructive axial rotor movement commonly caused by misaligned V-belt drives.

- 3 Innovative rotor profile, precision machined with advanced CNC milling technology.**

Increases blower efficiency and air sealing resulting in reduced power consumption and cooler operating temperature.

- 4 Advanced oil and air seal designs.**

Piston rings and flinger maximize seal life in continuous, severe duty applications to provide leak-free operation.

- 5 Helical timing gears, precision machined from alloy steel forgings.**

Guarantees quietest and smoothest mechanical operation at all speeds.

- 6 Timing gears mounted on precision machined shaft splines.**

Assures secure non-slip rotor timing even under surge conditions or high torque start-up.

- 7 Reliable splash oil lubrication at both gear and drive ends.**

Provides superior gear and bearing lubrication for longer life at all operating conditions with minimal maintenance.

- 8 Solid rotors.**

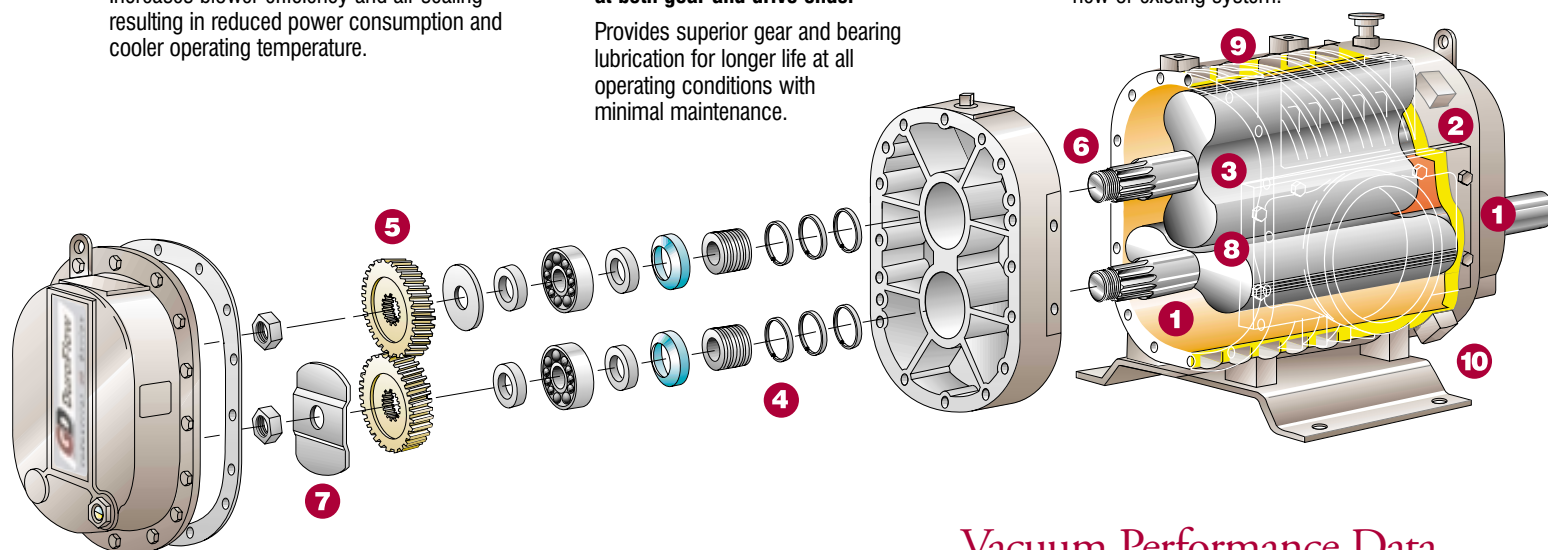
Eliminates potential for vibration caused when hollow rotors become unbalanced due to build-up of ingested material inside the rotor cavities.

- 9 Heavy-duty reinforced single piece cast iron cylinder.**

Provides greater strength and rigidity to prevent distortion that can affect internal clearances and reduce performance. Extra cylinder mass and progressive porting aid in reducing noise.

- 10 Vertical or horizontal mounting configuration with each blower.**

Provides flexibility for installing into any new or existing system.

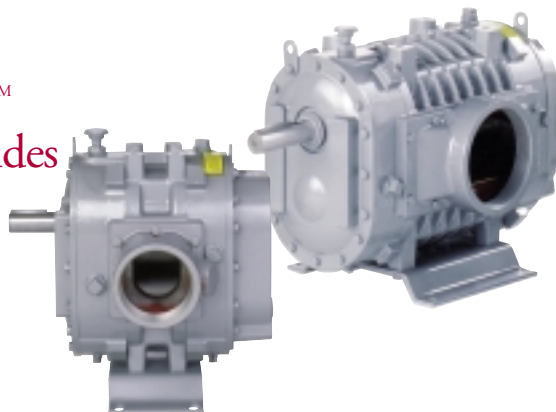


## Vacuum Performance Data

MODEL	RPM	4 "Hg		6 "Hg		8 "Hg		10 "Hg		12 "Hg		14 "Hg		15 "Hg		16 "Hg	
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
4504	1,750	151	2.0	139	2.8	127	3.6	115	4.4	103	5.2						
	2,950	286	4.2	273	5.5	262	6.8	250	8.1	237	9.4						
	4,000	403	7.1	391	8.8	379	10.5	367	12.1	355	13.8	224	10.7	334	16.3	326	17.1
4506	1,750	233	2.9	217	4.1	201	5.3	185	6.6	168	7.8						
	2,950	435	5.8	418	7.8	402	9.8	386	11.8	369	13.8	351	15.8	341	16.8	330	17.8
	4,000	611	9.7	595	12.3	579	14.9	563	17.5	546	20.0	527	22.6	517	23.9	507	25.2
4509	1,750	352	4.4	328	6.2	305	8.1	281	9.9	257	11.7						
	2,950	655	9.2	631	12.2	607	15.1	584	18.1	559	21.1	532	24.0	517	25.5	502	27.0
	4,000	919	15.7	895	19.5	872	23.3	848	27.0	824	30.8	797	34.6	782	36.5	766	38.4
4512	1,750	487	5.7	459	8.2	433	10.6	406	13.1	378	15.6						
	2,950	890	11.7	863	15.7	836	19.7	809	23.7	781	27.7	750	31.7	734	33.7	716	35.7
	4,000	1,243	19.5	1,215	24.6	1,189	29.8	1,162	34.9	1,134	40.0	1,103	45.2	1,087	47.8	1,069	50.3
4518	1,750	741	8.3	703	12.0	666	15.8	628	19.5	589	23.2						
	2,950	1,346	16.4	1,308	22.5	1,271	28.6	1,233	34.7	1,194	40.8	1,151	46.8	1,128	49.9	1,103	52.9
	4,000	1,875	26.5	1,837	34.4	1,800	42.3	1,762	50.2	1,723	58.2	1,680	66.1	1,657	70.0	1,632	74.0

Performance based on air at standard conditions: Sea Level, 14.7 PSIA, 68°F Inlet Temperature, 36% Relative Humidity. For performance with gases other than air or at non-standard conditions, contact your Authorized DuroFlow Industrial 45 Series Representative.

# Flex-Mount™ Design Provides Maximum Installation Versatility

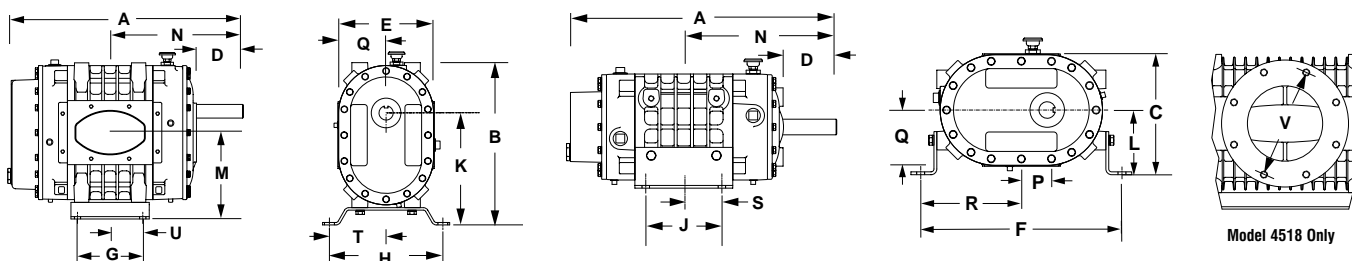


**THE FLEX-MOUNT™ DESIGN** and available porting connectors provide each DuroFlow blower/vacuum pump model total installation flexibility. This combination assures interchangeability of existing installed DuroFlow models or compatibility as replacement for most competitive models.

## GENUINE GARDNER DENVER DUROFLOW PARTS

Maintain the DuroFlow performance advantage and reliability with Genuine GD Replacement Parts available through local professional sales and service representatives.

## Dimensional Data



Model	Weight	Port Size Connectors	Mtg. Bolt Hole Dia.	Shaft Diameter	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V
4504	190 lbs.	4" NPT	0.69	1.44	17.84	16.37	10.50	3.13	9.75	17.50	4.88	11.50	5.00	11.35	5.62	9.10	10.02	2.25	4.88	8.75	2.50	5.75	2.44	—
4506	220 lbs.	4" NPT	0.69	1.44	21.34	16.37	10.50	4.63	9.75	17.50	6.88	11.50	7.00	11.35	5.62	9.10	12.52	2.25	4.88	8.75	3.50	5.75	3.44	—
4509	260 lbs.	4" OR 5" NPT	0.69	1.44	24.34	16.37	10.50	4.63	9.75	17.50	6.88	11.50	7.00	11.35	5.62	9.10	14.02	2.25	4.88	8.75	3.50	5.75	3.44	—
4512	300 lbs.	6" NPT	0.69	1.44	27.34	16.37	10.50	4.63	9.75	17.50	9.88	11.50	10.00	11.35	5.62	9.10	15.52	2.25	4.88	8.75	5.00	5.75	4.94	—
4518	460 lbs.	8" FLANGE	0.69	1.44	33.42	16.37	12.12	4.63	13.00	17.50	15.88	11.50	16.00	11.35	5.62	9.10	18.52	2.25	6.50	8.75	8.00	5.75	7.94	11.75

All dimensions shown in inches. Dimensions for installation purposes provided upon request.

## Contact Your DuroFlow Representative

## Other Gardner Denver Brochures Available

### Sutorbilt Legend Series Blowers/Vacuum Pumps



### Sutorbilt Methane Gas Blowers/Vacuum Pumps



### CycloBlower XP Series Blowers/Vacuum Pumps



For additional information, contact your local representative or

## Gardner Denver Blower Division

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Phone 770-632-5000 • Fax 770-486-5629

E-mail: [blowersmktg@gardnerdenver.com](mailto:blowersmktg@gardnerdenver.com)

Visit our web site: [www.gardnerdenver.com](http://www.gardnerdenver.com)

### For Parts Information, Contact:

Gardner Denver Blower Division Customer Service

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