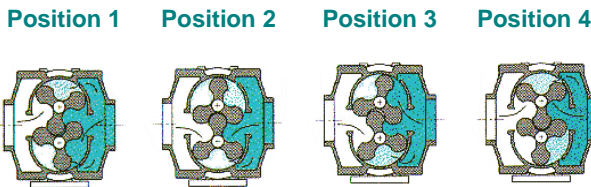


# ACOUSTICAIR™ Low-Noise Rotary Positive Blowers

**MODELS: 5607 - 5611 - 5614 - 5618**

## Operating Principle:



The operating principle provides major improvements over well proven, existing technology utilizing a wraparound expansion chamber prior to the discharge port. M-D utilizes three-lobe rotors which allow the pre-compression much sooner than a standard two-lobe design. The chamber created by the three-lobe rotor is smaller and has a longer compression time, significantly reducing the final compression. The pressure pulses are much less, reducing noise and vibration; therefore, improving bearing life. Shock waves are reduced or eliminated due to lower velocities and final differential pressures, further reducing noise. ACOUSTICAIR blowers also include an expansion chamber on the inlet side, reducing pulsing at the inlet port. The "S" port, plus design tuning, also contributes to reducing the overall noise level and the higher, and perceived "noisier" frequencies.

## THE ACOUSTICAIR ADVANTAGES:

- \* The **ACOUSTICAIR**, which utilizes tri-lobe rotors, special porting and tuning features is so revolutionary, it's patented.
- \* M-D's tri-lobe rotor profile provides increased displacement and improved noise dampening over two-lobe involute profiles.
- \* The unique shape of the **ACOUSTICAIR**'s special port fitting contributes significantly to its quieter operation.
- \* Integral silencing chambers reduce pulsation, machine noise and vibration.
- \* M-D 5600 **ACOUSTICAIR** models are interchangeable with equivalent M-D 5500 PD PLUS® models.
- \* **ACOUSTICAIR** models are manufactured under M-D's ISO 9001 registered quality assurance program, the first American manufacturer of rotary blowers to gain this certification.
- \* **ACOUSTICAIR** blowers are available through our worldwide sales and service network.

## ACOUSTICAIR™ VS. PD PLUS®

RPM	DISCHARGE PRESSURE	MODEL 5607 ACOUSTICAIR	MODEL 5507 PD PLUS
1800	5 PSIG	86 dB(A)	88 dB(A)
1800	10 PSIG	86 dB(A)	98 dB(A)
1800	15 PSIG	90 dB(A)	101 dB(A)
2400	5 PSIG	88 dB(A)	94 dB(A)
2400	10 PSIG	90 dB(A)	101 dB(A)
2400	15 PSIG	93 dB(A)	102 dB(A)
3000	5 PSIG	92 dB(A)	101 dB(A)
3000	10 PSIG	92 dB(A)	103 dB(A)
3000	15 PSIG	94 dB(A)	108 dB(A)

Measured at one meter in test cell, fully piped, without silencers.

As indicated in the above test results, ACOUSTICAIR blowers significantly reduce operating noise levels. At a rotative speed of 3000 RPM and a discharge pressure of 15 PSIG, the reduction in noise energy was 14 dB(A), or over 90%.

## Material Specifications:

- Housing: Cast iron
- End Plates: Cast iron
- End Covers: Gear end - Cast iron Free end - Aluminum
- Rotors: Ductile iron
- Shafts: Ductile iron cast integrally with rotor
- Bearings: Gear end - Double row ball  
Free end and drive shaft - Cylindrical roller
- Drive Shaft: SAE 4140 forged alloy steel
- Gears: Heat treated alloy steel, helical cut
- Seals: 17/46 series - Lip and labyrinth type on rotor shafts; lip seal on the drive shaft  
57/81 series - Mechanical and labyrinth type on rotor shafts; lip seal on the drive shaft  
64/67 series - Same as 57/81 series plus mechanical sealing on the drive shaft
- Lubrication: Oil splash system, both ends

For elevated pressure applications, 57/81 series and 64/67 series are available with high pressure sealing and testing to allow discharge pressures as high as 100 PSIG (15 PSI maximum pressure boost) \*

\* Blowers operating with a discharge pressure above 20 PSIG require mechanical rotor shaft sealing; above 25 PSIG requires hydrostatic testing and special high pressure seal leakage testing.

## Optional Features:

- Many optional features which are available on M-D model 5500 PD PLUS blowers are also available on model 5600 ACOUSTICAIR blowers such as:
    - \* Gastight features (single and double envelope)
    - \* Water Cooled End Plates (vertical flow models)
    - \* Gearhead Speed Increasing Drive
    - \* External Pressure Lubrication Systems
- Refer to M-D 5500 PD PLUS specification sheet for details on these optional features.

## LEADING THE SEARCH FOR NEW SOLUTIONS



**TUTHILL CORPORATION**

**M-D Pneumatics Division**

4840 West Kearney Street, P.O. Box 2877  
Springfield, Missouri USA 65801-2877  
Tel 417 865-8715 800 825-6937 Fax 417 865-2950

[www.mdpm pneumatics.com](http://www.mdpm pneumatics.com)





**Performance Tables**

In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data are approximate. Request a quotation for your specific application.

**Pressure (14.70 PSIA and 70°F Inlet)**

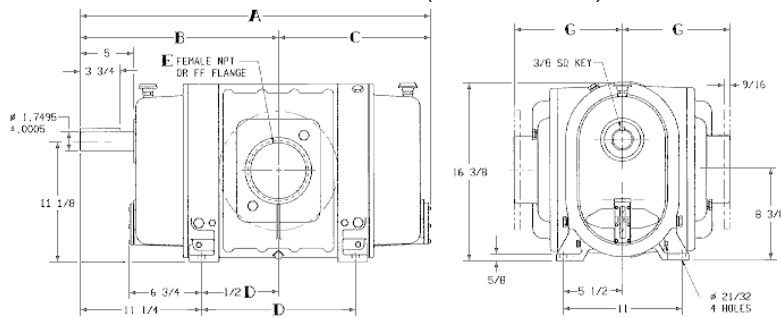
MODEL SIZE	SPEED (RPM)	2 PSIG		5 PSIG		8 PSIG		10 PSIG		12 PSIG		15 PSIG		Max. Vacuum		
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	"Hg	CFM	BHP
5607	1150	206	3.7	167	7.2	139	11	123	15					12	124	8.3
	1750	349	5.6	310	11	282	16	266	20	252	24	232	29	15	234	15
	2700	575	8.6	536	17	508	25	492	31	478	37	458	45	15	460	24
	3600	789	11	750	23	722	34	706	41	692	49	672	60	15	674	32
5611	1150	311	4.8	258	10	219	15	198	19	178	22			13	185	12
	1750	521	7.3	468	15	429	23	408	29	388	34	362	42	15	364	22
	2700	853	11	800	24	762	36	740	44	721	52	694	65	15	696	33
	3600	1168	15	1115	31	1077	48	1055	59	1036	70	1009	86	15	1011	44
5614	1150	398	5.7	333	12	2852	19	258	24	234	28			13	242	16
	1750	667	8.7	600	19	552	29	525	36	501	43	469	53	15	321	27
	2700	1088	14	1022	29	975	45	948	55	924	66	891	82	15	894	42
	3600	1489	18	1423	39	1375	60	1349	74	1325	88	1292	109	15	1294	55
5618	1150	520	7.0	440	16	383	24	350	30	321	36			13	331	20
	1750	863	11	784	24	726	37	694	46	664	54			15	627	34
	2700	1407	17	1327	37	1269	57	1237	70	1208	84			15	1171	53
	3600	1922	22	1842	49	1784	76	1752	94	1722	112			15	1685	70

Shaded areas indicate areas where intermittent operation is recommended. Applications in shaded areas must be factory approved.

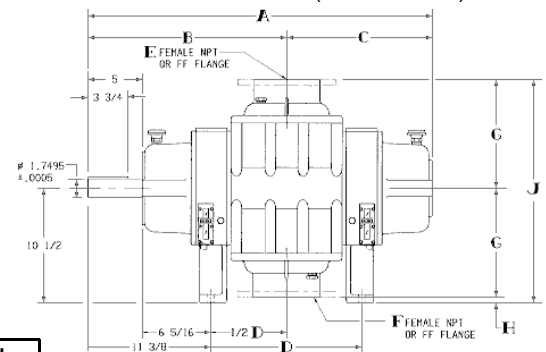
**Dimensions**

Certain dimensions for 64/67 double envelope gastight differ slightly from those shown below. Certified drawings are available through your local M-D representative.

Series 17/57 (Horizontal Flow)



Series 46/81 (Vertical Flow)



MODEL	SERIES	A	B	C	D	E	F	G	H	J
5607	17	28.94	16.63	12.31	10.75	4" NPT	4" NPT	8.50	—	—
	46	28.44	16.63	11.69	5.25	4" NPT	4" NPT	8.50	2.00	19.00
	57	28.94	16.63	12.31	10.75	4" FLG	4" FLG	10.00	—	—
	81	28.44	16.63	11.69	5.25	4" FLG	3" FLG	10.00	0.50	20.50
5611	17	32.44	18.38	14.06	14.25	5" NPT	5" NPT	8.50	—	—
	46	31.81	18.38	13.44	7.00	5" NPT	5" NPT	8.50	2.00	19.00
	57	32.44	18.38	14.06	14.25	6" FLG	6" FLG	10.00	—	—
	81	31.81	18.38	13.44	7.00	6" FLG	6" FLG	10.00	0.50	20.50
5614	17/57	35.44	19.88	15.56	17.25	6" FLG	6" FLG	10.00	—	—
	46/81	34.81	19.88	14.94	8.50	6" FLG	6" FLG	10.00	0.50	20.50
5618	17/57	39.44	21.88	17.56	21.25	8" FLG	8" FLG	10.00	—	—
	46/81	38.81	21.88	16.94	10.50	8" FLG	8" FLG	10.00	0.50	20.50

Values are approximate and should not be used for construction. Certified drawings are available through your local M-D representative.

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Division

**AirBlowerServices.com 630.372.9222**

1834 West Kansas Street, Box 287  
Springfield, Missouri USA 65801-2877  
Tel 417 865-8715 800 825-6937 Fax 417 865-2950

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