



## PD PLUS®

### Model 4000 Heavy Duty High Pressure Industrial Blowers

Bi-directional Rotation

17 Series - Horizontal Air Flow

46 Series - Vertical Air Flow

57 Series - Horizontal Flow, Single Envelope Gastight

81 Series - Vertical Flow, Single Envelope Gastight

64 Series - Horizontal Flow, Double Envelope Gastight

67 Series - Vertical Flow, Double Envelope Gastight

Model 4000 PD PLUS heavy duty industrial blowers are designed for high performance applications, up to 18 PSIG pressure boost or 17" Hg dry vacuum (24" Hg water injected).

#### 17/46 Series

This series has wide application in pneumatic conveying, wastewater treatment, and the general process industry where high pressure, high volume air is required. Seal areas are vented to atmosphere to relieve process pressure against the internal lip seals, and to provide oil-free air.

#### 57/81 Series (Single Envelope Gastight)

This series is utilized in such applications as closed loop pneumatic conveying, fuel or process gas handling, or elevated pressure applications up to 100 PSIG discharge. Vent openings are tapped and plugged to prevent gas leakage, or may be plumbed to the inlet port. These fittings can also accept an inert gas purge for positive containment of the process gas.

#### 64/67 Series (Double Envelope Gastight)

This series is built to laboratory standards where virtually complete sealing is required. In addition to the features shown on the 57/81 series, the drive shaft is mechanically sealed and the oil sumps are plugged to provide an even higher degree of leakage protection.

MODEL SIZE	Max. Press. PSI	Max. Vacuum (in. Hg)	Max. Comp. Ratio	Nom. Min. RPM @ Max. Disch. Press.	Nom. Max. RPM @ Max. Disch. Press.	Displ. CFR
4006	15	15	2.02:1	2350	3600	.102
4009	18	17	2.31:1	2750	3600	.150
4012	15	15	2.02:1	1950	3600	.203

#### 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 - Single row ball

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 (18 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 Water Cooled End Plates:

All vertical flow 4000 PD PLUS models are available with M-D's exclusive optional water cooled end plates to provide cooling of lubricating oil with less than 0.5 GPM cooling water for high performance applications where external lubrication is not desired or practical. Specify "E" suffix.

#### Optional Gearhead Drive:

Many 4000 PD PLUS models are available with M-D's exclusive integral speed increasing gearhead allowing for more versatility in direct drive applications. Speed increasing ratios available are:

1.4:1      1.6:1      2.0:1      2.53:1

#### Optional Lubrication Systems:

All 4000 PD PLUS models are available with external lubrication to provide positive bearing lubrication and filtration of lubricant for extreme applications. When optional lubrication systems are specified, the series numbers change as follows:

Standard Splash Lube	Optional External Pressure Lube
17/46 series	18/85 series
57/81 series	54/84 series
64/67 series	65/68 series **

\*\* 65/68 series utilizes gastight external lubrication system rated to a maximum pressure of 15 PSIG. Consult your local M-D representative or factory if higher design pressure is required.

#### 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.mdpneumatics.com](http://www.mdpneumatics.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)

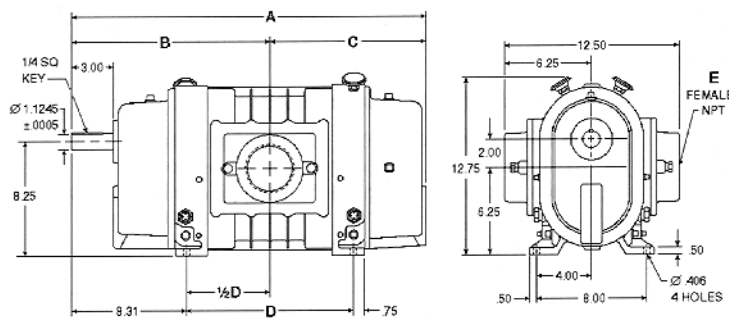
BLOWER MODEL	SPEED (RPM)	2 PSIG		5 PSIG		8 PSIG		10 PSIG		12 PSIG		15 PSIG		18 PSIG		Max. Vacuum		
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	" Hg	CFM	BHP
4006	1150	75	2.0	51	3.5											10	37	3.5
	1750	137	3.0	112	5.3	95	7.7	85	9.2							13	79	6.4
	2700	234	4.7	209	8.3	192	12	182	14	173	17	161	20			15	162	11
	3600	325	6.2	301	11	284	16	274	19	265	22	253	27			15	253	15
4009	1150	118	2.5	85	4.8	61	7.1									11	57	5.1
	1750	209	3.8	176	7.3	152	11	139	13	126	15					13	131	8.9
	2700	353	5.8	320	11	296	17	283	20	271	24	254	29			15	256	15
	3600	490	7.8	457	15	433	22	420	27	408	32	391	39	371	45	17	365	23
4012	1150	165	3.0	125	6.0	96	9.1									11	91	6.5
	1750	286	4.6	246	9.2	217	14	201	17	186	20					14	180	12
	2700	479	7.0	439	14	410	21	394	26	379	31	359	38			15	361	20
	3600	662	9.4	622	19	593	28	577	35	562	41	542	51			15	543	26

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

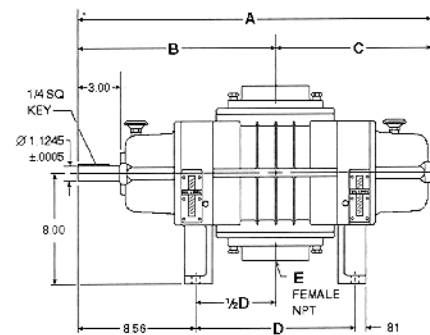
## Dimensions

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)

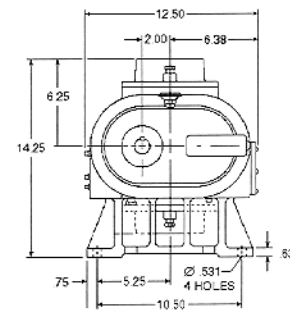


Series 46/81 (Vertical Flow)



MODEL	SERIES	A	B	C	D	E
4006	17/57	22.63	12.81	9.81	9.00	3" NPT
	46/81				8.50	
4009	17/57	25.63	14.31	11.31	12.00	3" NPT
	46/81				11.50	
4012	17/57	28.63	15.81	12.81	15.00	4" NPT
	46/81				14.50	

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



LEADING THE SEARCH FOR NEW SOLUTIONS

Global Technology & Engineering  
Toll Free (866) 630-3500  
www.globaltecheng.com



**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.mdpmneumatics.com