

# M-D Pneumatics™ **PD PLUS™**

## Model 3200 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 3200 PD PLUS heavy duty industrial blowers are designed for high performance applications, up to 15 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. Vac. (in. Hg)	Nom. Min. RPM at Max. Disch. Pressure	Nom. Max. RPM at Max. Disch. Pressure	Displ. CFR
3202	15	15	3100	3600	.028
3204	15	15	2900	3600	.045
3206	15	15	2750	3600	.0675
3210	15	15	2650	3600	.112

## 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:** Ductile iron

**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 Water Cooled End Plates:

All vertical flow 3200 PD PLUS models are available with Tuthill Vacuum & Blower Systems 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 Lubrication Systems:

All 3200 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 Integral 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 Tuthill Vacuum & Blower Systems Sales Professional or factory if higher design pressure is required.

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## 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.

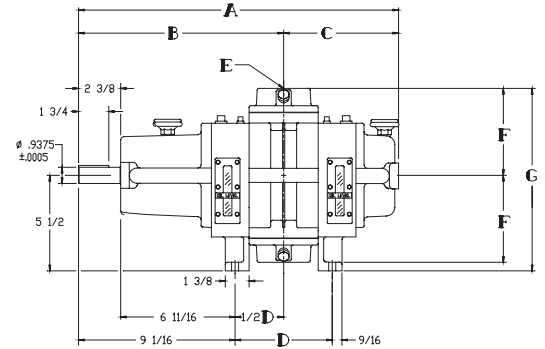
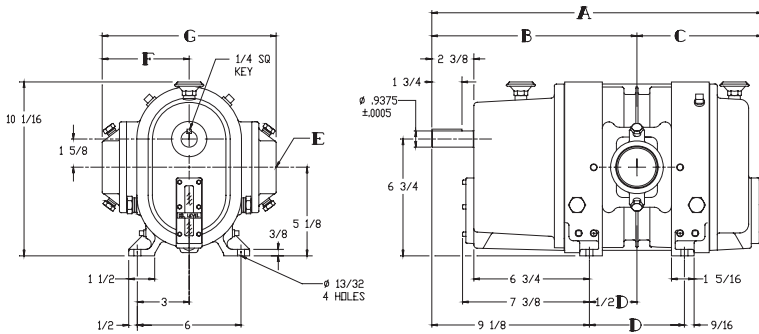
### Pressure (14.70 PSIA and 70° F Inlet)

BLOWER MODEL	SPEED (RPM)	2 PSIG		5 PSIG		8 PSIG		10 PSIG		12 PSIG		14 PSIG		15 PSIG		Max. Vacuum		
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	" Hg	CFM	BHP
3202	1150	17	0.9	8	1.3											8	7	1.2
	1750	34	1.4	25	2.0	18	2.7									11	17	2.1
	2950	67	2.4	58	3.4	52	4.5	48	5.2	45	6.0					14	43	4.1
	3600	85	2.9	76	4.2	70	5.5	66	6.4	63	7.3	60	8.2	59	8.6	15	59	5.2
3204	1150	29	1.1	16	1.8											8	14	1.5
	1750	56	1.7	43	2.7	33	3.7									11	31	2.8
	2950	110	2.8	97	4.5	87	6.3	82	7.4	77	8.6	72	9.7			14	75	5.6
	3600	139	3.4	126	5.5	116	7.7	111	9.1	106	11	101	12	99	13	15	100	7.2
3206	1150	45	1.3	26	2.3											9	20	2.1
	1750	86	2.0	67	3.5	53	5.1	46	6.1							12	46	4.0
	2950	167	3.4	148	6.0	134	8.6	127	10	120	12	113	14			15	111	8.0
	3600	211	4.1	192	7.3	178	11	170	13	163	15	157	17	154	18	15	155	9.8
3210	1150	80	1.8	51	3.4											9	42	3.1
	1750	147	2.7	118	5.2	98	7.8	86	9.5							12	87	6.0
	2950	281	4.5	253	8.8	232	13	221	16	210	19	200	22	196	23	15	197	12
	3600	354	5.5	326	11	305	16	293	20	283	23	273	27	269	28	15	270	15

## Dimensions

Series 17/57 (Horizontal Flow)

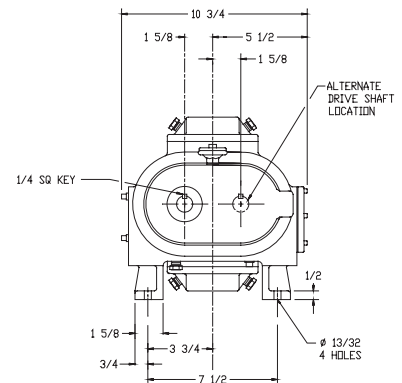
Series 46/81 (Vertical Flow)



MODEL	SERIES	A	B	C	D	E	F	G
3202	17/57 46/81	17 5/8 17	11 1/8	6 1/2 5 7/8	4 4 1/8	1 1/2" NPT	4	8 9 1/2
3204	17/57 46/81	19 1/8 18 1/2	11 7/8	7 1/4 6 5/8	5 1/2 5 5/8	2" NPT	5	10 10 1/2
3206	17/57 46/81	21 1/8 20 1/2	12 7/8	8 1/4 7 5/8	7 1/2 7 5/8	2 1/2" NPT	5	10 10 1/2
3210	17/57 46/81	25 1/8 24 1/2	14 7/8	10 1/4 9 5/8	11 1/2 11 5/8	3" NPT	6 1/2	11 10 1/2

Values are approximate and should not be used for construction.

Certified prints are available through your local Tuthill Vacuum & Blower Systems Sales Professional.



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