

M-D Pneumatics™

Vacuum Boosters

Bi-directional Rotation

90 Series - Vertical Flow, Mechanical Seals

91 Series - Horizontal Flow, Mechanical Seals

92 Series - Vertical Flow, Slinger Seals

93 Series - Horizontal Flow, Slinger Seals

Vacuum boosters are used to “supercharge” vacuum pumps to greatly extend pump performance. This allows for much faster pumping speeds and deeper vacuum levels. M-D Pneumatics vacuum boosters from Tuthill Vacuum & Blower Systems are utilized worldwide in the manufacture of chemicals, petrochemicals, plastics, semiconductors and wood composites as well as food processing, vacuum furnace applications and many other general applications in industry.

90/91 Series

These series incorporate mechanical sealing on the rotor shafts and the drive shaft. 90/91 series vacuum boosters provide dependable oil-free discharge with seal leakage rates no greater than 10^{-4} mL/second.

92/93 Series

These series utilize a mechanical drive shaft seal in conjunction with non-contacting, non-wearing slinger seals on the rotor shafts, and are dependable performers for air and many gas applications.

Optional Materials and Coatings Available

Standard construction materials include cast iron housing, end plates and port fittings with ductile iron rotors and shafts. In addition to standard construction, the following materials are available:

Special Materials

Ductile Iron

Steel

Stainless Steel

Hastelloy®

Special Coatings

Armoloy® electrochromium

Nickel

Ryton® polyphenylene sulfide (PPS)

Low Mechanical Noise

Every M-D Pneumatics vacuum booster is designed to operate at 82 dB(A) or less at blank-off (open field; motor and background noise excluded)

Material Specifications:

Housing: Cast iron

End Plates: Cast iron

End Covers: Cast iron

Rotors: Ductile iron

Shafts: Ductile iron cast integrally with rotors

Drive Shaft: Model 3200 - Ductile iron

All others - SAE 4140 forged alloy steel

Bearings: Gear end - All models: Double row ball, both rotors

Back end - Models 3200-7000: Cylindrical roller

Models 9000-1200: Double row ball

Drive Shaft: Models 3200-4000: Double row ball

Model 5500: Single row ball

Model 7000: Cylindrical roller

Models 9000-1200: Spherical roller

Gears: Heat-treated alloy steel, helical cut and precision ground

Seals: Drive shaft - Mechanical

Rotor shafts - Mechanical on 90/91 series

Non-contacting slinger on 92/93 series

Lubrication: Models 3200-5500: Oil splash system, both ends

Models 7000-9000: Oil splash system standard,
Integral pressure lube optional

Model 1200: Integral pressure lube standard

Optional Motor Mounting Flanges

All models 3200-7000 are available with flange adapters for mounting either a NEMA C-face motor (up to 75 HP) or an IEC D-flange motor (up to 55 kW) directly to the vacuum booster, eliminating the need for a separate base mounted assembly and coupling guard for the vacuum booster. Specify “C” suffix.

Metric Availability

All M-D Pneumatics Vacuum Boosters are available with metric drive shaft and process connections.

Individually Tested

Every M-D Pneumatics vacuum booster is fully factory run tested, including blank-off test and heat run to assure you of the highest quality. Tuthill Vacuum & Blower Systems goes the distance to insure that your vacuum booster meets our rigid ISO 9001 registered quality standards.

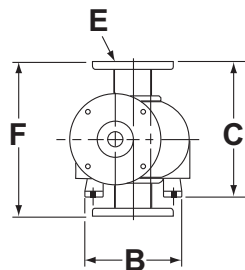
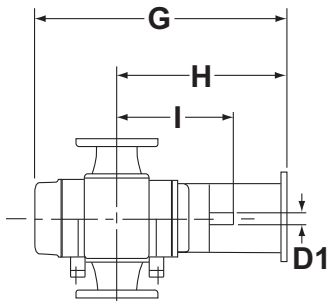
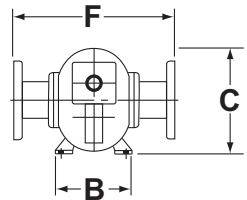
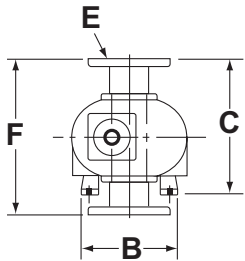
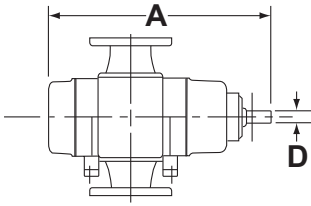
Worldwide Sales and Service

With sales offices and service facilities located on six continents, you can be assured of availability and service for your M-D Pneumatics Vacuum Boosters.

M-D Pneumatics™ Vacuum Boosters Dimensional Table

Values shown are approximate and should not be used for construction.

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



MODEL	SERIES	DISPL. CFM	A	B	C	D Ø	D1 Ø	E	F	G	H	I
3204	90	160	18.63	9.00	12.13	1.125	.875	2" FLG	13.25	20.69	14.06	11.00
	91		19.25	7.00	10.06							
3206	90	240	20.63	9.00	12.94	1.125	.875	3" FLG	14.88	22.69	15.06	12.00
	91		21.25	7.00	10.06							
3210	90	400	24.63	9.00	12.94	1.125	.875	4" FLG	14.88	26.69	17.06	14.00
	91		25.25	7.00	10.06							
4009	90	540	27.69	12.00	15.50	1.125	.9995	4" FLG	15.00	27.63	16.56	13.88
	91		27.69	9.00	12.25							
4012	90	720	30.69	12.00	15.50	1.125	.9995	4" FLG	15.00	30.63	18.06	15.38
	91		30.69	9.00	12.25							
5507	90	800	29.19	16.00	20.50	1.375	1.375	6" FLG	20.00	29.00	17.63	14.13
	91		29.81	12.25	16.38							
5511	90	1200	32.69	16.00	20.50	1.375	1.375	6" FLG	20.00	32.50	19.38	15.88
	91		33.31	12.25	16.38							
5514	90	1600	35.69	16.00	20.50	1.375	1.375	6" FLG	20.00	35.50	20.88	17.38
	91		36.31	12.25	16.38							
5518	90	2000	39.69	16.00	20.50	1.375	1.375	8" FLG	20.00	39.50	22.88	19.38
	91		40.31	12.25	16.38							
5524	90	2700	45.69	16.00	20.50	1.375	1.375	10" FLG	20.00	45.50	25.88	22.38
	91		46.31	12.25	16.38							
7010	90	1800	44.94	17.50	25.63	2.375	1.875	6" FLG	23.50	38.56	16.56	20.00
	91				25.75							
7013	90	2300	47.69	17.50	25.63	2.375	1.875	8" FLG	23.50	41.31	17.94	21.38
	91				25.75							
7017	90	3000	51.69	17.50	25.63	2.375	1.875	10" FLG	23.50	45.31	19.94	23.38
	91				25.75							
7021	90	3600	55.69	17.50	25.63	2.375	1.875	12" FLG	23.50	49.31	21.94	25.38
	91				25.75							
7026	90	4600	60.69	17.50	25.63	3.125	1.875	12" FLG	23.50	54.31	24.44	27.88
	91				25.75							
9012	90	2300	45.75	22.88	28.25	3.125	—	10" FLG	30.69	—	—	—
	91				13.81							
9016	90	3100	49.69	22.88	28.25	3.125	—	12" FLG	30.69	—	—	—
	91				13.81							
9020	90	4100	54.59	22.88	28.25	3.125	—	12" FLG	30.69	—	—	—
	91				13.81							
9027	90	5500	61.50	22.88	28.25	3.125	—	14" FLG	30.69	—	—	—
	91				13.81							
9036	90	7300	70.19	22.84	28.24	3.125	—	16" FLG	30.70	—	—	—
	91			13.78	3.12							
1215	31	4000	65.75	33.75	29.31	3.500	—	12" FLG	26.00	—	—	—
	33			20.38	40.50							
1224	31	6200	74.75	33.75	29.31	3.500	—	14" FLG	26.00	—	—	—
	33			20.38	40.50							
1230	31	7800	80.75	33.75	29.31	3.500	—	14" FLG	26.00	—	—	—
	33			20.38	40.50							
1236	31	9400	86.75	33.75	29.31	3.500	—	18" FLG	26.00	—	—	—
	33			20.38	40.50							
1248	31	12700	98.75	33.75	29.31	3.500	—	20" FLG	26.00	—	—	—
	33			20.38	40.50							

* The shaft diameters identified as "D1" apply only to C-Face vacuum boosters.

Your Local Tuthill Vacuum & Blower Systems Sales Professional:



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