

EQUALIZER®

Rotary Positive Blowers

Models: 4604 4606 4609 4612
6012 6016 6024

Bi-directional Rotation

17 Series - Horizontal Air Flow

46 Series - Vertical Air Flow

Designed to be interchangeable with models supplied by competing manufacturers, **EQUALIZER** rotary positive blowers offer many distinct advantages when compared to other brands:

Helical Gearing

EQUALIZER blowers are timed with hardened, precision helical gears, keyed to the rotor shafts. Helical gearing reduces backlash and mechanical noise as compared to spur gears offered by other manufacturers. Keyed interference fit reduces the risk of slippage of the gear on the shaft and loss of timing, one of the leading causes of blower failure.

One Piece Housing

Every **EQUALIZER** blower includes a housing constructed of a single piece of precision machined cast iron, rather than a two piece housing which is subject to misalignment and loss of operating clearances.

Rotors with Integral Shafts

EQUALIZER blowers include precision machined and dynamically balanced ductile iron rotors with large, integrally cast shafts to provide a single unitized rotor to prevent rotor clash as a result of the impeller moving on its shaft.

Positive End Clearances

End clearances are **positively established** at the blower gear end, eliminating the risk of shifting end clearances. End clearances are not "floating", and allowing incidental contact between rotors and end plates. "Floating" end clearances can result in unnecessary rotor and end plate wear, shortening overall blower life.

Polished Sealing Surfaces

All shaft surfaces in contact with sealing members are polished to reduce seal wear and risk of leakage.

Individually Tested

Every **EQUALIZER** blower is factory tested to assure you of the highest quality. Tuthill Pneumatics Group goes the distance to insure that your blower meets our rigid ISO 9001 registered quality standards.

ISO 9001 Registration

EQUALIZER blowers are manufactured under Tuthill Pneumatics Group's ISO 9001 registered quality assurance program, the first American manufacturer of rotary blowers to gain such international recognition.

Versatility

Flow configuration is field convertible from horizontal to vertical flow, or vice versa without replacement of end plates.

Metric Availability

All **EQUALIZER** blowers are available with metric drive shaft and process connections.

Worldwide Sales and Service

With sales offices and service facilities located on six continents, you can be assured of availability and service for your **EQUALIZER** blowers.

Material Specifications:

Housing: Cast iron

End Plates: Cast iron

End Covers: Cast iron

Rotors: Ductile iron

Shafts: Ductile iron cast integrally with rotors

Bearings: Gear end - Double row ball

Drive end - Cylindrical roller

Drive Shaft: Ductile iron cast integrally with drive rotor

Gears: Heat treated alloy steel, helical cut

Seals: Lip and piston ring labyrinth type on rotor shafts;
lip seal on the drive shaft

Lubrication: Oil splash system, both ends

Gastight and Elevated Pressure Designs

Refer to Tuthill Pneumatics 4000/5500 PD PLUS® and 4100/5600 ACOUSTICAIR™ specification sheets for additional information on these features.

ACOUSTICAIR™ Low Noise Versions Available

Tuthill Pneumatics Group manufactures ACOUSTICAIR versions of the models 4606, 4609 and 4612. Refer to Tuthill Pneumatics 4700 ACOUSTICAIR specification sheet for additional information.

Model Size	Max. Press. PSI	Max. Vac. (in. Hg)	Maximum RPM	Displ. CFR
4604	18	16	4000	.112
4606	18	16	4000	.171
4609	18	16	4000	.249
4612	15	16	4000	.328
6012	15	16	3000	.587
6016	15	16	3000	.783
6024	10	16	3000	1.174

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Performance

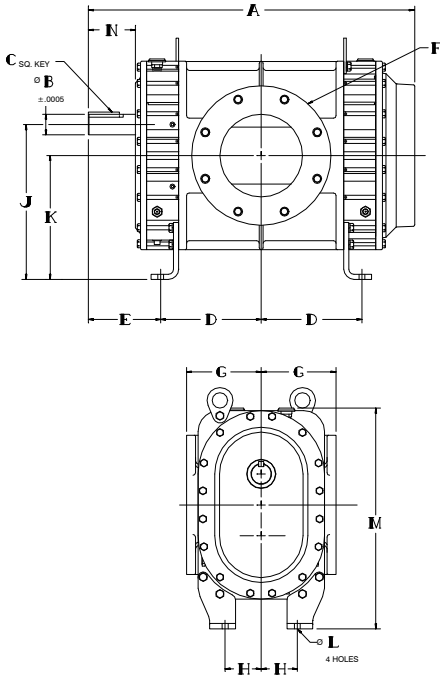
Pressure performance is based on inlet conditions of 14.70 PSIA and 70° F.

Vacuum performance is based on inlet temperature of 70° F and discharge pressure of 14.70 PSIA.

In conjunction with our program of continuous testing and upgrading, all specifications are subject to change without notice.

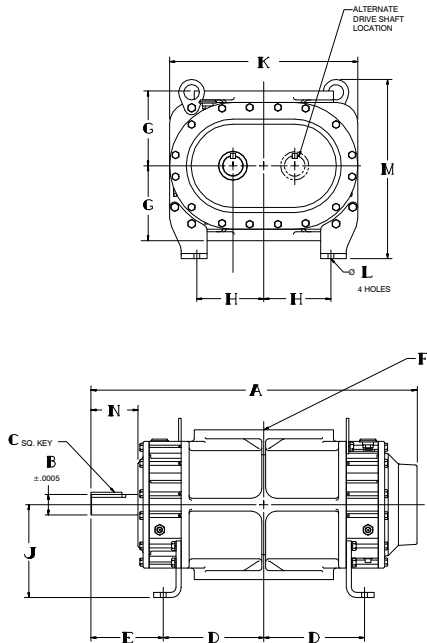
All data are approximate. Request a quotation for your specific application.

Horizontal Flow (17 series)



Blower Model	Replacement For	SPEED (RPM)	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	" Hg	CFM	BHP
4604D	DuroFlow® 4504	1150	57	3.9	39	5.6									10	42	3.9
		1750	125	6.0	106	8.5	95	10	85	12					13	89	7.2
		2950	259	10	240	14	229	17	220	20	207	24	257	34	14	216	13
		3500	321	12	302	17	291	20	281	24	324	33	313	39	16	261	17
		4000	377	14	358	20	347	23	337	27					16	317	19
4606	Roots 406 RAM	1150	109	5.4	85	8.0								11	82	5.8	
		1750	211	8.2	188	12	175	15	163	17				14	158	11	
4606D	DuroFlow® 4506	2950	417	14	393	20	380	25	368	29	352	36		15	353	19	
		3500	511	16	487	24	474	29	462	35	446	43	432	50	16	437	24
		4000	596	19	573	28	560	34	548	40	532	49	517	58	16	522	27
4609	Roots 409 RAM	1150	175	7.4	145	11	129	14	123	14				12	130	8.5	
		1750	324	11	295	17	278	21	263	24				14	257	15	
4609D	DuroFlow® 4509	2950	623	19	594	28	577	35	562	41	542	51	523	61	16	530	28
		3500	760	22	731	34	714	41	699	49	679	60	660	72	16	667	33
		4000	885	26	855	39	839	47	823	56	803	69	785	82	16	791	38
4612	Roots 412 RAM	1150	245	9.3	210	14	190	18	173	21				13	179	12	
		1750	442	14	407	22	387	27	369	32				15	347	20	
4612D	DuroFlow® 4512	2950	836	24	801	37	781	45	763	53	739	66		16	725	36	
		3500	1016	28	981	43	961	53	943	63	919	78		16	905	43	
		4000	1180	32	1145	50	1125	61	1107	73	1083	90		16	1069	49	
6012	Sutorbilt® 612 4500 Series	1150	465	16	409	25	378	31	350	37				14	337	22	
		1450	641	20	586	31	554	39	526	46	487	57		15	490	29	
		1750	817	24	762	38	730	47	702	56	663	69		16	641	37	
		2400	1199	33	1143	52	1112	64	1083	76	1045	95		16	1023	51	
		3000	1551	42	1495	65	1464	80	1436	95	1397	119		16	1375	64	
6016	Roots 616 RCS	1150	638	21	568	33	529	41	494	48				14	478	28	
		1450	873	26	803	41	764	51	728	61	680	76		15	684	38	
		1750	1108	32	1038	50	999	62	963	74	915	92		16	888	49	
		2400	1617	44	1547	68	1508	85	1472	101	1424	126		16	1397	67	
		3000	2086	55	2017	85	1978	106	1942	126	1894	157		16	1866	84	
6024	Roots 624 RCS	1150	983	31	885	48	830	60						13	798	39	
		1450	1335	39	1237	61	1183	76						14	1111	53	
		1750	1687	47	1590	74	1535	92						15	1423	68	
		2400	2450	64	2353	101	2298	126						16	2142	99	
		3000	3154	80	3057	126	3002	157						16	2847	124	

Vertical Flow (46 series)



Dimensions

Model	Series	A	B	C	D	E	F	G	H	J	K	L	M	N
4604D	17	17.77	1.500	.375	2.44	6.88	4" NPT	9.00	5.75	11.40	9.09	.656	16.71	3.69
	2.50				6.82	8.75			5.62	14.25	14.50			
4606	17	20.00	1.500	.375	4.75	5.69	4" NPT	6.00	2.50	11.30	9.00	.438	16.62	3.69
	3.50				6.94	4.75			7.50	14.25	13.50			
4606D	17	20.00	1.500	.375	3.44	7.00	4" NPT	6.00	5.75	11.40	9.09	.656	16.71	3.69
	3.50				6.94	8.75			5.62	14.25	11.63			
4609	17	23.00	1.500	.375	6.25	5.69	4" NPT	5.50	2.50	11.30	9.00	.438	16.62	3.69
	4.75				7.50	14.25			13.00					
4609D	17	23.00	1.500	.375	3.44	8.50	4" NPT	6.88	5.75	11.40	9.09	.656	16.71	3.69
	3.50				8.44	8.75			5.62	14.25	12.50			
4612	17	26.00	1.500	.375	7.75	5.69	6" FLG	5.50	2.50	11.30	9.00	.438	16.62	3.69
	4.75				7.50	14.25			13.00					
4612D	17	26.00	1.500	.375	4.94	8.50	6" NPT	7.56	5.75	11.40	9.09	.656	16.71	3.69
	5.00				8.44	8.75			5.62	14.25	13.19			
6012	17	27.63	1.562	.375	7.31	7.44	8" FLG	9.00	4.00	15.00	12.00	.750	23.37	4.56
	6.00				9.00	18.25			17.37					
6016	17	31.63	2.000	.500	9.75	7.00	8" FLG	7.25	3.50	15.00	12.00	.562	23.37	4.56
	6.50				9.00	18.25			17.37					
6024	17	39.63	2.000	.500	13.75	7.00	10" FLG	7.25	3.50	15.00	12.00	.562	23.37	4.56
	6.50				9.00	18.25			17.37					

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

Certified drawings are available through your local Tuthill Pneumatics Sales Professional.

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