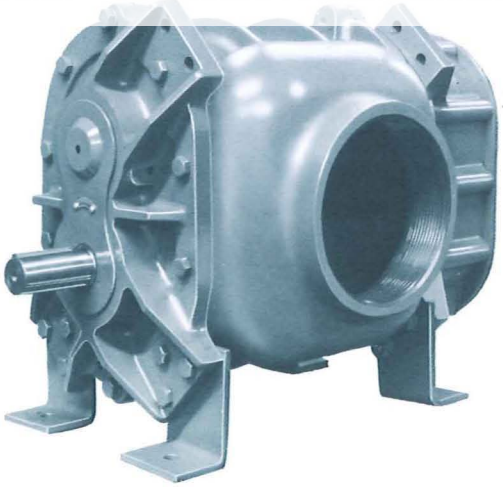
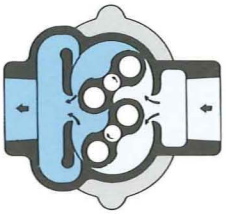


SPECIFICATIONS

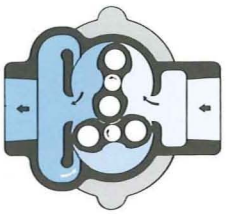
Roots Whispair Max Rotary Positive Blowers

FRAME 1702 THRU 3514J

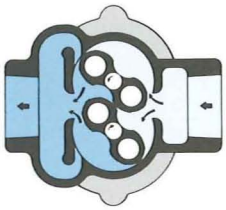
OPERATING PRINCIPLE



Incoming air (right) is trapped by impellers. Simultaneously, pressurized air (left) is being discharged.

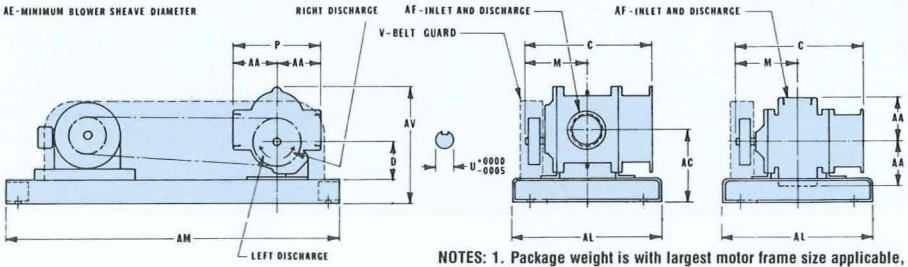


As lower impeller passes wrap-around flange, Whispair jet, (white arrow) equalizes pressure between trapped air and discharge area, aiding impeller movement and reducing power.



Impellers move air into discharge area (left). Backflow is controlled, resulting in reduction of noise relative to conventional blowers.

OUTLINE DRAWING & DIMENSIONAL TABLE



NOTES:
1. Package weight is with largest motor frame size applicable, and is in pounds.
2. All dimensions in inches.
3. Sizes 1702, 1704 and 1707 do not have the Whispair feature.
4. Do not use for construction.

FRAME SIZE	MOTOR FRAME	C	D	M	P	U	KEYWAY	AA	AC	AE	AF	AL	AM	AV	V-BELT PACKAGE WT.
1702	143T-184T	9.13	3.00	4.50	6.76	.5625	.125x.063	3.38	6.63	2.50	1.5NPT	20.00	41.00	10.13	210
1704	143T-184T	11.00	3.00	5.44	6.76	.5625	.125x.063	3.38	6.63	2.50	2NPT	20.00	41.00	10.13	214
1707	143T-184T	13.31	3.00	6.63	6.76	.5625	.125x.063	3.38	6.63	2.50	2.5NPT	20.00	41.00	10.13	217
1702J	143T-184T	9.13	3.00	4.50	7.50	.5625	.125x.063	3.75	6.63	2.50	1.5NPT	20.00	41.00	10.13	227
1704J	143T-184T	11.00	3.00	5.44	7.50	.5625	.125x.063	3.75	6.63	2.50	2NPT	20.00	41.00	10.13	232
1707J	143T-184T	13.31	3.00	6.63	7.50	.5625	.125x.063	3.75	6.63	2.50	2.5NPT	20.00	41.00	10.13	237
2504J	145T-215T	11.38	4.00	5.38	9.50	.7500	.188x.094	4.75	8.00	2.50	2.5NPT	20.00	41.00	12.63	291
2506J	145T-215T	14.00	4.00	6.72	9.50	.7500	.188x.094	4.75	8.00	2.50	3NPT	20.00	41.00	12.63	303
2510J	145T-215T	17.38	4.00	8.38	9.50	.7500	.188x.094	4.75	8.00	2.50	4NPT	20.00	41.00	12.63	338
3505J	182T-256T	14.56	5.50	6.94	13.00	1.1250	.250x.125	6.50	10.00	3.00	4NPT	29.00	46.00	16.06	491
3509J	182T-256T	18.25	5.50	8.75	13.00	1.1250	.250x.125	6.50	10.00	3.00	5NPT	29.00	46.00	16.06	513
3514J	182T-256T	22.94	5.50	11.13	13.00	1.1250	.250x.125	6.50	10.00	3.00	5NPT	29.00	46.00	16.06	551

BASIC MODEL DESCRIPTION

The Whispair Max Rotary positive blower has a proprietary design that reduces noise and power loss by utilizing an exclusive wrap-around flange and jet to control pressure equalization—eliminating rapid backflow of air into the blower from the discharge area.

The basic model consists of a grey iron casing and headplates, two ductile iron involute contoured impellers, taper mounted alloy steel timing gears and ball bearings. The unit is oil lubricated at the gear end and grease lubricated at the drive end. It has lip oil seals, NPT thread connections, standard shaft sizes and detachable feet. After standard tests, the unit is painted, corrosion protection added, and it is placed on skids or boxed for shipment. Instruction manuals are provided.

Available accessories include: a baseplate for the blower and driver, v-belt drive with guard, coupling drive with guard, flexible hose couplings, driver, relief valves, check valves, inlet filter, and silencers.

Air Blower Services, inc. AirBlowerServices.com 630.372.9222

PERFORMANCE TABLE

FRAME SIZE	SPEED RPM	2 PSIG		4 PSIG		6 PSIG		8 PSIG		10 PSIG		MAX. IN. HQ.	VACUUM	
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP		CFM	BHP
1702	2600	18.9	.4	14.1	.7	10.4	.9	7.3	1.2			10	8	.9
	3500	29.5	.5	24.6	.9	20.9	1.2	17.8	1.6	15.0	1.9	12	15	1.2
	4360	39.4	.7	34.6	1.1	30.8	1.5	27.6	2.0	24.9	2.4	12	25	1.5
1702J	5100	48.5	.8	43.7	1.3	40.1	1.9	37.1	2.4	34.4	2.9	14	31	2.1
	5900	57.9	1.0	53.1	1.7	49.5	2.2	46.4	2.8	43.7	3.4	14	40	2.4
	7000	70.8	1.2	66.0	2.0	62.4	2.7	59.3	3.4	56.6	4.1	14	53	3.0
1704	2600	32.2	.5	24.6	1.0	18.7	1.5					6	26	.8
	3500	49.7	.7	41.4	1.3	36.2	1.9					8	38	1.3
	4360	66.3	.9	58.5	1.7	52.5	2.4					8	54	1.6
1704J	5100	79.8	1.3	71.6	2.2	65.4	3.0					10	62	2.5
	5900	95.1	1.6	86.5	2.6	80.4	3.5					10	77	3.0
	7000	116.1	2.0	107.6	3.1	101.1	4.4					10	97	3.7
1707	2600	56.3	.8	47.9	1.5							4	55	.8
	3500	82.6	1.0	74.3	1.9							6	75	1.4
	4360	107.6	1.3	99.1	2.4							6	100	1.8
1707J	5100	123.5	2.1	112.6	3.5							6	114	2.7
	5900	146.4	2.5	135.2	4.0							6	136	3.2
	7000	177.9	3.0	166.4	4.8							6	168	3.9
2504J	4000	117	1.4	109	2.6	103	3.8	97	5.0	92	6.2	12	93	3.8
	4500	134	1.7	125	3.0	119	4.3	114	5.7	109	7.0	12	109	4.3
	4970	150	1.9	141	3.3	135	4.8	130	6.3	124	7.8	12	125	4.7
2506J	4000	197	2.6	184	4.6	175	6.6					12	160	6.4
	4500	225	3.1	211	5.3	201	7.5					12	186	7.4
	4970	250	3.5	237	5.9	227	8.4					12	211	8.2
2510J	3500	250	3.4	230	6.0							8.5	215	6.2
	4500	333	4.6	311	7.9							8.5	296	8.2
	4970	372	5.0	350	8.8							8.5	333	9.1
3505J	2600	213	2.7	200	4.9	190	7.0	181	9.1	173	11.3	12	174	6.9
	3100	259	3.3	245	5.9	235	8.4	226	11.0	218	13.5	12	219	8.3
	3550	300	3.9	287	6.8	275	9.7	267	12.6	259	15.6	12	259	9.5
3509J	2600	357	4.4	335	7.9	319	11.5					12	294	11.3
	3100	433	5.4	411	9.6	394	13.9					12	369	13.6
	3550	500	6.3	480	11.2	462	16.0					12	436	15.7
3514J	2600	540	6.9	510	12.2							8	493	12.0
	3100	655	8.6	626	14.9							8	610	14.7
	3550	762	10.0	732	17.3							8	715	17.0

Notes: **Ratings: Based on inlet air at standard pressure of 14.7 PSIA, standard temperature of 68° F. and specific gravity of 1.0.**

DESIGN & CONSTRUCTION FEATURES

1. Low noise level
2. Less operating power required
3. Positive air displacement
4. Fewer moving parts—no springs, valves or vanes to wear.
5. Parts interchangeable on same size models
6. Oil-free air delivery
7. High volumetric efficiency
8. Horizontal or vertical application thru simple adjustment

ROOTS DRESSER

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900 WEST MOUNT STREET, CONNERSVILLE, INDIANA 47331
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All specifications subject to change without notice.