Tuthill

M-D Pneumatics™
Rotary Positive Displacement Blowers

CP Series

CP Series rotary blowers are designed to be interchangeable with equivalent sizes of Roots Universal RAI®, and many Sutorbilt® Legend® blowers. CP Series models are rated up to 18 PSIG discharge pressure or 16" Hg dry vacuum. All models have sight glasses and triple lip seals as standard features.

Reduced Noise Versions Available

CP Series standard models feature a bi-lobe design. Many models are available with tri-lobe rotors and a specially tuned housing to reduce blower noise.

Triple Lip Seals

Standard on all models, triple lip seals provide improved lubrication to extend the life of the seal up to 50% also resulting in longer bearing life.

Helical Gearing

CP Series blowers are timed with precision helical gears, keyed to the rotor shafts, not taper fit spur gears as offered by other manufacturers, which have greater backlash, can slip and lose timing. Helical gears are also quieter, reducing mechanical noise.

Stronger Bearings

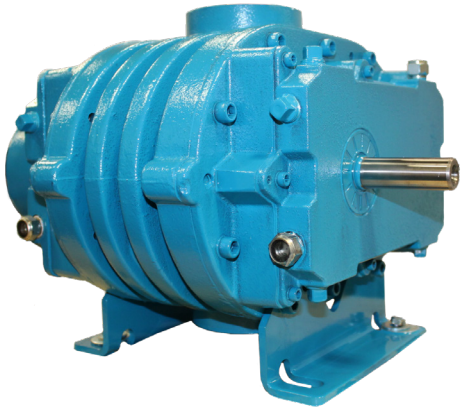
All CP Series blowers include double-row ball bearings at the gear end, stronger than single row ball bearings offered by other manufacturers. Drive shaft bearing is cylindrical roller type for additional strength against side loading from V-belt drives. As a result of this superior design, CP Series blowers offer design bearing life as much as 50% greater than models offered by other manufacturers.

Rotors with Integral Shafts

CP Series blowers include precision machined ductile iron rotors with large, integrally cast shafts, not press fit and/or pinned shafts offered by other manufacturers, which can loosen over time and cause rotor clash.

Versatility

CP Series blowers can be field converted from horizontal to vertical flow, or vice versa, without any special tools or additional components.



Metric Availability

CP Series blowers are available with metric drive shaft and process connections.

Lubrication

Many CP Series models include dual oil splash lubrication at both the gear end and drive end of the blower. Splash lubrication provides for longer bearing and seal life through improved heat dissipation versus grease lubrication.

Material Specifications:

Housing: Cast iron
End Plates: Cast iron
End Cover: Cast iron
Rotors: Ductile iron
Shafts: Ductile iron, cast integrally with rotors
Bearings: Gear end - Double row ball, both rotors
Drive end - Cylindrical roller on drive rotor
Single row ball on driven rotor
Drive Shaft: Ductile iron, cast integrally with drive rotor
Gears: Heat treated alloy steel, helical cut
Seals: Lip seals on rotor shafts and drive shaft
Lubrication: Oil splash on gear end, grease on drive end
Models available with dual oil splash lubrication

All blowers are factory tested to meet ISO 9001 registered quality standards. Rotors are dynamically balanced to meet ISO1940 Grade 6.3 specifications.

Performance

Pressure performance is based on inlet conditions of 14.70 PSIA (1.03 kg/sq cm) and 70°F (21°C). Vacuum performance is based on inlet temperature of 70°F (21°C) and discharge pressure of 14.70 PSIA (1.03 kg/sq cm). 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.

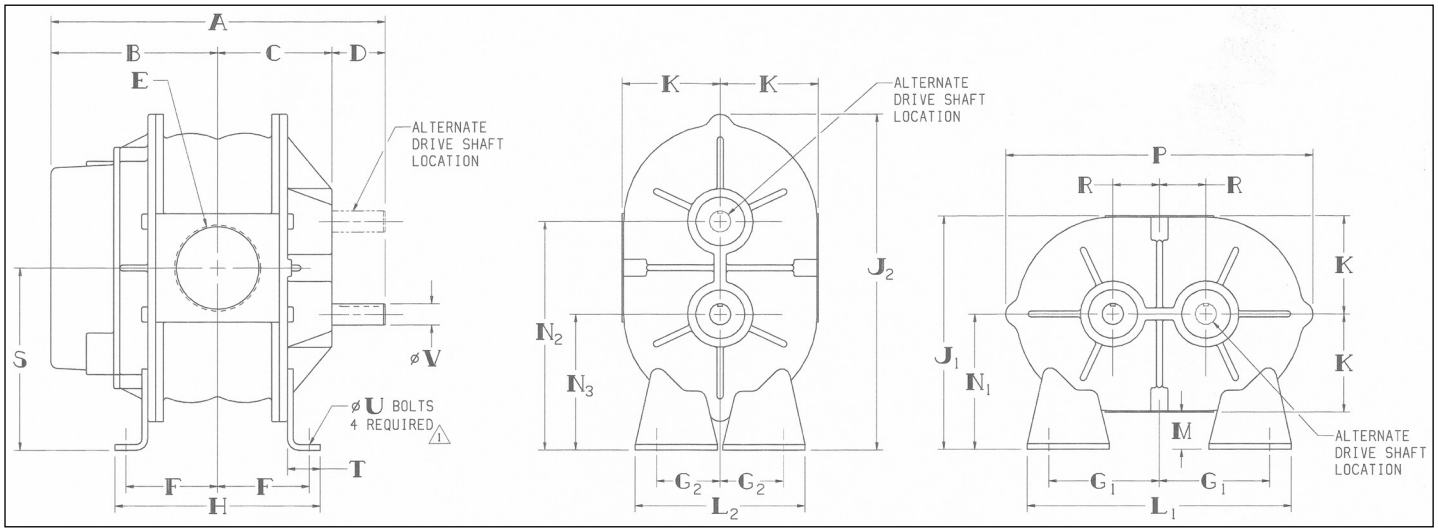
Model	Lobe	RPM	6 psig		7 psig		8 psig		10 psig		12 psig		13 psig		14 psig		15 psig		16 psig		17 psig		18 psig		Max. Vacuum		
			CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	" Hg	CFM	BHP
2002	2-lobe	1750	8	0.9	6	1.0	5	1.1	2	1.4															9	7	0.7
2002	2-lobe	3600	38	1.8	36	2.1	35	2.3	32	2.8	29	3.3													14	28	2.1
2002	2-lobe	5275	64	2.7	63	3.1	61	3.4	59	4.2	56	4.9													16	51	3.4
2004	2-lobe	1750	24	1.6	21	1.9																			10	20	1.4
2004	2-lobe	3600	83	3.3	80	3.8																			15	65	4.0
2004	2-lobe	5275	137	4.9	134	5.6																			16	115	6.3
3002	2-lobe	1150	22	1.6	19	1.8	17	2.1																	10	18	1.3
3002	2-lobe	2700	94	3.8	92	4.3	89	4.9	85	6.0	81	7.1													16	72	4.8
3002	2-lobe	3600	136	5.0	134	5.7	131	6.5	127	7.9	123	9.4	121	10.1	119	10.9	118	11.6							16	114	6.4
3003	2-lobe	1150	30	2.0	27	2.4																			10	26	1.7
3003	2-lobe	2700	126	4.8	122	5.5	119	6.3	114	7.7	109	9.2	106	9.9											14	107	5.4
3003	2-lobe	3600	181	6.4	178	7.4	175	8.3	169	10.3	164	12.2	162	13.2	160	14.1	157	15.1							15	158	7.7
3003	3-lobe	1150	32	2.1	28	2.5																			10	27	1.8
3003	3-lobe	2700	132	5.0	129	5.8	126	6.6																	14	112	5.7
3003	3-lobe	3600	191	6.7	187	7.7	184	8.8	178	10.8	173	12.8													15	166	8.1
3006	2-lobe	1150	60	4.8	55	5.3																			11	49	4.5
3006	2-lobe	2700	218	11.3	213	12.5	209	13.7	201	16.1	194	18.5	191	19.7											15	185	12.9
3006	2-lobe	3600	310	15.0	305	16.6	301	18.2	293	21.4	286	24.6	283	26.2	279	27.8	276	29.4	273	31.0					15	277	17.2
3006	3-lobe	1150	58	6.0	53	6.5																			11	46	5.7
3006	3-lobe	2700	218	14.0	213	15.2																			15	183	15.7
3006	3-lobe	3600	310	18.7	305	20.3																			15	276	20.9
4002	2-lobe	850	18	1.5	15	1.7																			10	14	1.3
4002	2-lobe	1760	73	3.1	70	3.6	68	4.1	63	5.0	59	5.9	57	6.4											14	58	3.5
4002	2-lobe	3600	184	6.4	182	7.4	179	8.3	175	10.2	171	12.1	169	13.1	167	14.0	165	15.0							16	162	8.2
4005	2-lobe	850	40	2.9	35	3.3	30	3.8																	9	38	2.2
4005	2-lobe	1760	150	5.9	145	6.9	140	7.8	132	9.6															14	121	6.7
4005	2-lobe	3600	373	12.1	368	14.0	363	15.9	354	19.7	347	23.5	343	25.4	340	27.3	336	29.2	333	31.1					16	330	15.7
4005	3-lobe	850	44	3.5	40	3.9	36	4.3																	9	43	2.8
4005	3-lobe	1760	149	7.2	145	8.1	141	9.0	133	10.8															14	124	8.0
4005	3-lobe	3600	360	14.8	356	16.6	352	18.4	345	22.0															16	324	18.1
4007	2-lobe	850	54	3.7	47	4.3																			10	45	3.1
4007	2-lobe	1760	199	7.7	192	8.9	186	10.1	175	12.6	165	15.0	160	16.3											14	160	8.8
4007	2-lobe	3600	492	15.8	486	18.3	479	20.8	468	25.8	458	30.8	453	33.3	449	35.8	444	38.3	440	40.8	436	43.3			16	437	20.4
4007	3-lobe	850	59	4.2	53	4.8																			10	51	3.6
4007	3-lobe	1760	193	8.8	188	9.9																			14	162	9.7
4007	3-lobe	3600	466	17.9	460	20.2																			16	420	22.2
5003	2-lobe	700	41	2.6	36	3.0	33	3.4																	10	35	2.2
5003	2-lobe	1760	180	6.6	176	7.6	172	8.6	165	10.7	159	12.7	156	13.7	153	14.7	150	15.7							14	156	7.5
5003	2-lobe	2850	324	10.7	320	12.3	316	14.0	309	17.2	303	20.5	300	22.2	297	23.8	294	25.4	291	27.1	289	28.7			16	289	13.7
5006	2-lobe	700	68	4.3	61	4.9	55	5.6																	10	59	3.5
5006	2-lobe	1760	302	10.7	295	12.4	289	14.1	277	17.5	266	20.9	261	22.6	257	24.3	252	26.0							14	262	12.2
5006	2-lobe	2850	543	17.3	536	20.1	530	22.8	518	28.3	507	33.8	502	36.6	498	39.3	493	42.1	488	44.8	484	47.6	480	50.3	16	485	22.5
5006	3-lobe	700	65	4.6	57	5.3	51	6.0																	10	55	3.9
5006	3-lobe	1760	300	11.7	293	13.4	286	15.1	273	18.5	262	21.9	257	23.6	252	25.3	247	27.0							14	257	13.2
5006	3-lobe	2850	542	18.9	535	21.7	528	24.4	515	30.0	504	35.5	499	38.2	494	41.0	489	43.8							16	480	24.1
5009	2-lobe	700	130	6.1	122	7.1	115	8.1																	11	111	5.5
5009	2-lobe	1760	472	15.4	464	17.9	457	20.4	444	25.3	432	30.3	426	32.8	421	35.2									14	427	17.6
5009	2-lobe	2850	824	25.0	816	29.0	809	33.0	796	41.0	784	49.0													15	769	30.4
5009	3-lobe	700	116	6.8	107	7.8	98	8.8																	11	93	6.1
5009	3-lobe	1760	473	17.0	464	19.6	455	22.2																	14	417	19.2
5009	3-lobe	2850	841	27.5	831	31.7	822	35.9																	15	773	33.2

Performance continued

Model	Lobe	RPM	6 psig		7 psig		8 psig		10 psig		12 psig		13 psig		14 psig		15 psig		16 psig		17 psig		18 psig		Max. Vacuum		
			CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	" Hg	CFM	BHP
6005	2-lobe	700	91	4.9	84	5.6	78	6.4	67	7.9															12	68	4.8
6005	2-lobe	1760	352	12.3	345	14.2	339	16.1	328	19.9	318	23.6	313	25.5	309	27.4	304	29.3	300	31.2					16	296	15.8
6005	2-lobe	2350	497	16.4	490	19.0	484	21.5	473	26.5	463	31.6	458	34.1	454	36.6	449	39.1	445	41.6	441	44.2	437	46.7	16	442	21.1
6008	2-lobe	700	146	7.6	135	8.8	126	10.0	108	12.4															12	109	7.5
6008	2-lobe	1760	565	19.2	554	22.2	544	25.2	527	31.3	510	37.4	503	40.4	496	43.4	489	46.4	482	49.5					15	490	23.3
6008	2-lobe	2350	798	25.6	787	29.6	777	33.7	760	41.8	744	49.9	736	53.9	729	58.0	722	62.0	715	66.1	708	70.1	702	74.2	16	709	33.1
6015	2-lobe	700	273	13.9	254	16.2																			10	247	11.5
6015	2-lobe	1760	1058	35.0	1038	40.7																			14	943	40.0
6015	2-lobe	2350	1494	46.8	1475	54.4																			14	1380	53.4
7006	2-lobe	650	171	7.2	163	8.3	157	9.5	144	11.8	133	14.0	128	15.2											13	137	7.6
7006	2-lobe	1760	617	19.5	610	22.6	603	25.7	591	31.8	579	38.0	574	41.1	569	44.2	564	47.3							16	556	25.2
7006	2-lobe	2050	734	22.7	726	26.3	719	29.9	707	37.1	696	44.3	691	47.8	686	51.4	681	55.0							16	672	29.4
7011	2-lobe	650	322	12.9	310	15.0	298	17.1	277	21.3															13	264	13.7
7011	2-lobe	1760	1142	35.0	1129	40.6	1117	46.3	1096	57.6															16	1035	45.5
7011	2-lobe	2050	1356	40.7	1343	47.3	1331	53.9	1310	67.1															16	1249	53.0
7018	2-lobe	650	560	20.8																					10	536	17.1
7018	2-lobe	1760	1892	56.2																					12	1830	55.3
7018	2-lobe	2050	2240	65.5																					12	2178	64.4

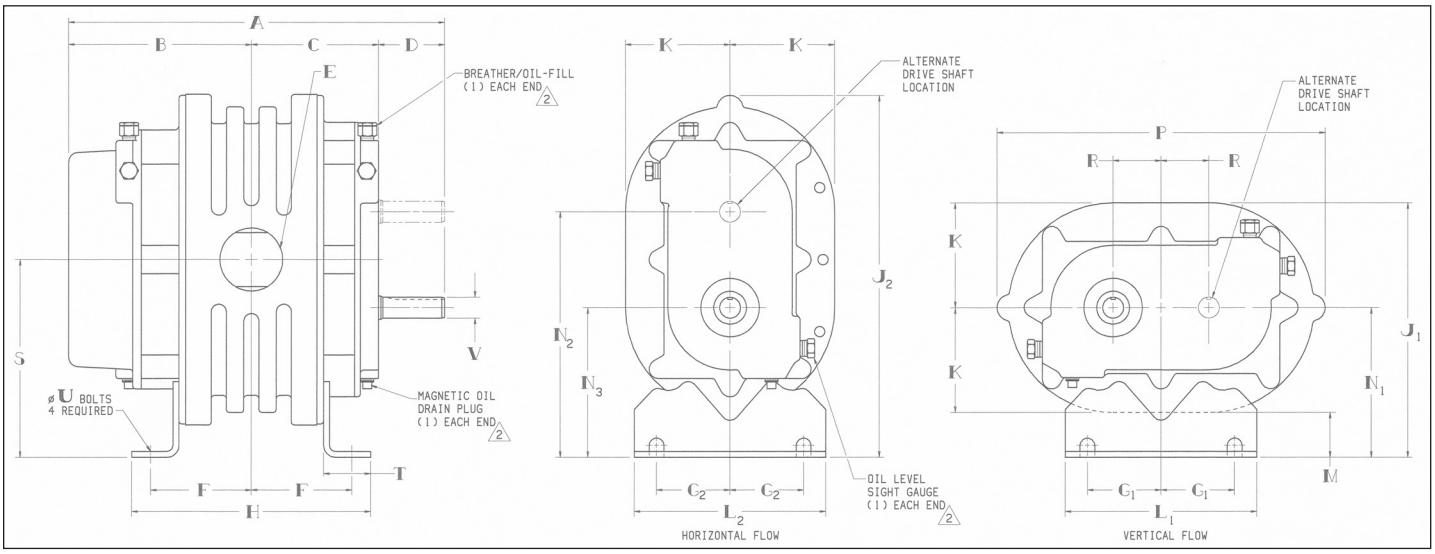
Dimensions: Standard Models/6

Model Size	A	B	C	D	E	F	G1	G2	H	J1	J2	K	L1	L2	M	N1	N2	N3	P	R	S	T	U	V	Weight (lbs.)
2002	10.13	5.00	2.63	2.50	1" NPT	2.00	1.75	1.75	5.06	6.88	9.69	3.13	5.13	5.13	.63	3.75	6.25	3.75	9.38	1.25	5.00	1.25	⅜"	.625	41
2004	12.13	6.00	3.63		2" NPT	3.00	1.75	–	7.06																53
3002	11.50	5.69	3.38	2.44	1¼" NPT	2.69	2.69	2.69	6.75	8.94	12.81	3.94	7.25	7.25	1.06	5.00	8.50	5.00	12.19	1.75	6.75	1.75	¾"	.875	78
3003	12.38	6.13	3.81		2" NPT	3.13			7.63																83
3006	14.75	7.31	5		2½" NPT	4.31			10.00																113
4002	12.94	6.25	3.69	3.00	1½" NPT	2.75	3.07	3.07	7.25	10.63	15.13	4.38	8.00	8.00	1.87	6.25	10.25	6.25	13.69	2.00	8.25	2.00	½"	.875	95
4005	15.69	7.63	5.06		2½" NPT	4.13			10.00																119
4007	17.44	8.50	5.94		3" NPT	5.00			11.75																138
5003	15.25	7.38	4.50	3.38	2½" NPT	3.50	3.50	3.50	8.44	12.13	17.38	5.38	10.50	10.50	1.43	6.75	11.25	6.25	17.19	2.50	8.75	1.88	⅝"	1.125	152
5006	17.88	8.69	5.81		4" NPT	4.81			11.06																185
5009	20.88	10.19	7.31		4" NPT	6.25			14.06																222
6005	18.69	9.38	5.63	3.69	3" NPT	4.25	4.13	4.06	10.00	15.00	21.69	6.25	17.06	11.00	2.47	8.75	14.75	8.75	19.81	3.00	11.75	2.13	¾"	1.375	250
6008	21.69	10.88	7.13		5" NPT	5.75	7.13		13.00	15.00		6.25													310
6015	28.69	14.38	10.63		6" FLG	9.25			20.00	16.25		7.50													456
7006	20.31	10.31	5.94	4.06	4" NPT	4.88	5.50	7.17	11.75	20.69	26.13	9.69	21.06	14.00	3.74	11.00	18.00	11.00	23.25	3.50	14.50	2.38	¾"	1.562	425
7011	25.31	12.81	8.44		6" FLG	7.38	9.00		16.75	19.50		8.50													555
7018	32.31	16.31	11.94		8" FLG	10.88			23.75	19.50		8.50													675



Dimensions: Splash Lube Models/7

Model Size	A	B	C	D	E	F	G1	G2	H	J1	J2	K	L1	L2	M	N1	N2	N3	P	R	S	T	U	V	Weight (lbs.)
3002	11.50	5.69	3.75		1¼" NPT	2.63			6.75																
3003	12.38	6.13	4.19	2.06	2" NPT	3.00	2.68	2.69	7.63	8.94	12.81	3.94	7.25	7.25	1.04	5.00	8.50	5.00	12.19	1.75	6.75	1.75	¾"	.875	82 88
3006	14.75	7.31	5.38		2½" NPT	4.30			10.00																120
4002	12.94	6.25	3.94		1½" NPT	2.75			7.25																102
4005	15.69	7.63	5.31	2.75	2½" NPT	4.13	3.07	3.07	10.00	10.63	15.13	4.38	8.00	8.00	1.87	6.25	10.25	6.25	13.69	2.00	8.25	2.00	½"	.875	127
4007	17.44	8.50	6.19		3" NPT	5.00			11.75																146
5003	15.25	7.38	4.81		2½" NPT	3.50			8.44																161
5006	17.88	8.69	6.13	3.06	4" NPT	4.81	3.50	3.50	11.06	12.13	17.38	5.38	10.50	10.50	1.43	6.75	11.25	6.25	17.19	2.50	8.75	1.88	⅝"	1.125	196
5009	20.88	10.19	7.63		4" NPT	6.25			14.06																235
6005	18.06	9.38	5.63		3" NPT	4.25			10.00	15.00		6.25													255
6008	21.06	10.88	7.13	3.69	5" NPT	5.75	4.13	4.06	13.00	15.00	21.69	6.25	17.06	11.00	2.47	8.75	14.75	8.75	19.81	3.00	11.75	2.13	¾"	1.375	315
6015	28.06	14.38	10.63		6" FLG	10.88	7.13		20.00	16.25		7.50													461



Values shown are approximate and should not be used for construction. Certified drawings are available through your local Tuthill Vacuum & Blower Systems Sales Professional.

The tri-lobe CP Series units have a cast-in noise reduction on the discharge port. This will reduce the sound level of the blower 3-5dB, or by half.

Your Local Tuthill Vacuum Blower Systems Sales Professional:

Tuthill
PUMP YOUR HEART INTO IT

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