



PARAG ENGINEERING



**TWIN LOBE AIR / WATER COOLED COMPRESSOR
(ROOTS BLOWER)**



Decide with Confidence

PERFORMANCE DATA

△ P-MM-WG		1000		2000		3000		4000		5000		6000		7000		8000		9000		10000	
Machine Rpm	Motor Rpm	M ³ /Hr	Kw	M ³ /Hr	Kw	M ³ /Hr	Kw	M ³ /Hr	Kw	M ³ /Hr	Kw	M ³ /Hr	Kw	M ³ /Hr	Kw	M ³ /Hr	Kw	M ³ /Hr	Kw	M ³ /Hr	Kw
PR-9	1090	1450	61	0.28	46	0.59	34	0.87	25	1.15	16	1.43	-	-	-	-	-	-	-	-	-
	1196	1450	72	0.32	57	0.65	46	0.97	36	1.29	28	1.61	-	-	-	-	-	-	-	-	-
	1275	1450	80	0.35	65	0.69	53	1.03	44	1.37	35	1.72	-	-	-	-	-	-	-	-	-
PR-10	1450	1450	96	0.39	81	0.78	70	1.17	60	1.56	52	1.95	44	2.34	-	-	-	-	-	-	-
	1810	1450	130	0.49	115	0.98	104	1.46	94	1.95	86	2.44	78	2.92	72	3.41	-	-	-	-	-
	2127	2900	160	0.57	145	1.15	133	1.72	124	2.29	116	2.86	108	3.43	101	4.01	95	4.58	-	-	-
	2391	2900	185	0.65	170	1.29	158	1.93	149	2.57	141	3.22	133	3.86	126	4.50	120	5.15	114	5.79	-
	2549	2900	200	0.69	185	1.37	173	2.06	164	2.74	155	3.43	148	4.11	141	4.80	135	5.49	129	6.17	-
PR-12	1275	1450	143	0.56	124	1.11	109	1.66	96	2.22	86	2.77	76	3.32	-	-	-	-	-	-	-
	1450	1450	170	0.63	150	1.26	135	1.89	123	2.52	112	3.15	102	3.78	93	4.41	-	-	-	-	-
	1810	1450	224	0.79	205	1.57	190	2.36	177	3.14	166	3.93	156	4.71	147	5.50	139	6.28	131	7.07	-
	2239	2900	289	0.97	269	1.95	255	2.92	242	3.89	231	4.86	221	5.83	212	6.80	204	7.77	196	8.74	-
	2549	2900	336	1.11	316	2.21	301	3.32	289	4.43	278	5.53	268	6.64	259	7.74	251	8.85	243	9.95	235
PR-14	1275	1450	208	0.76	185	1.51	167	2.26	152	3.01	139	3.76	127	4.52	116	5.27	-	-	-	-	-
	1450	1450	244	0.86	221	1.71	203	2.57	188	3.42	175	4.28	163	5.14	152	5.99	142	6.85	-	-	-
	1810	1450	318	1.07	295	2.14	277	3.21	262	4.27	249	5.34	237	6.41	226	7.48	216	8.54	206	9.61	-
	2239	2900	406	1.32	383	2.64	365	3.97	350	5.29	337	6.61	325	7.93	314	9.25	304	10.6	294	11.9	285
	2549	2900	470	1.51	447	3.01	429	4.51	414	6.02	401	7.52	389	9.02	378	10.6	368	12.1	358	13.6	349
PR-16	1073	965	272	0.98	242	1.96	219	2.94	199	3.91	182	4.89	166	5.87	151	6.85	-	-	-	-	-
	1275	1450	336	1.17	306	2.33	283	3.49	263	4.65	246	5.81	230	6.98	216	8.14	202	9.30	-	-	-
	1450	1450	392	1.32	362	2.65	339	3.97	319	5.29	302	6.61	286	7.93	271	9.25	258	10.6	245	11.9	-
	1810	1450	506	1.65	476	3.30	453	4.95	434	6.60	416	8.25	400	9.90	386	11.6	372	13.2	359	14.9	347
	2127	2900	607	1.94	577	3.88	554	5.82	534	7.76	517	9.70	501	11.7	487	13.6	473	15.5	460	17.5	448
PR-19	965	965	385	1.34	346	2.68	316	4.02	290	5.36	266	6.70	245	8.04	225	9.38	207	10.7	-	-	-
	1165	1450	482	1.62	444	3.24	413	4.85	387	6.47	364	8.09	342	9.70	323	11.3	304	13.0	-	-	-
	1450	1450	621	2.02	582	4.03	552	6.04	525	8.05	502	10.1	481	12.1	461	14.1	443	16.1	425	18.1	-
	1720	1450	752	2.39	713	4.78	683	7.16	657	9.55	633	12.0	612	14.4	592	16.7	574	19.1	556	21.5	540
	1969	1450	873	2.74	834	5.47	804	8.20	778	11.0	754	13.7	733	16.4	713	19.2	695	21.9	677	24.6	661
	2203	2900	987	3.06	948	6.12	918	9.17	891	12.3	868	15.3	847	18.4	827	21.4	809	24.5	791	27.5	774
PR-22	980	965	680	2.25	627	4.50	585	6.75	548	8.99	515	11.3	485	13.5	457	15.8	430	18.0	-	-	-
	1230	1450	881	2.82	828	5.65	785	8.47	749	11.3	716	14.1	686	17.0	658	19.8	631	22.6	606	25.4	-
	1450	1450	1057	3.33	1004	6.65	962	9.98	926	13.3	893	16.7	863	20.0	834	23.3	808	26.6	783	30.0	759
	1625	1450	1198	3.73	1145	7.46	1103	11.2	1066	14.9	1033	18.7	1003	22.4	975	26.1	948	29.8	923	33.6	899
	1825	1450	1358	4.19	1306	8.37	1263	12.6	1227	16.8	1194	21.0	1164	25.1	1136	29.3	1109	33.5	1084	37.7	1060
	2035	1450	1527	4.67	1474	9.34	1432	14.0	1395	18.7	1362	23.4	1332	28.0	1304	32.7	1278	37.4	1253	42.0	1229
PR-24	980	980	884	2.9	815	5.8	761	8.7	713	11.6	670	14.6	631	17.5	595	20.5	560	23.4	-	-	-
	1230	1450	1145	3.6	1076	7.3	1021	11.0	975	14.6	932	18.3	891	22.0	856	25.7	820	29.3	790	33.0	-
	1450	1450	1375	4.3	1305	8.6	1251	12.9	1205	17.3	1161	21.7	1122	26.0	1084	30.2	1050	34.5	1020	39.0	990
	1625	1450	1560	4.8	1490	9.7	1434	14.5	1386	19.3	1345	24.3	1304	29.1	1268	33.9	1232	38.7	1200	43.6	1169
	1825	1450	1765	5.4	1700	10.8	1642	16.3	1595	21.8	1555	27.3	1513	32.6	1477	38.0	1442	43.5	1410	49.0	1378
	2035	1450	1985	6.0	1920	12.1	1862	18.0	1814	24.3	1773	30.4	1732	36.0	1695	42.5	1665	48.6	1630	54.0	1598
PR-26	875	965	970	3.20	900	6.39	845	9.59	797	12.8	755	16.0	716	19.2	680	22.4	647	25.6	615	28.8	-
	980	965	1104	3.58	1034	7.16	979	10.8	931	14.3	889	17.9	850	21.5	814	25.1	781	28.7	749	32.2	718
	1165	1450	1340	4.26	1270	8.51	1215	12.8	1168	17.0	1125	21.3	1086	25.6	1050	29.8	1017	34.1	985	38.3	954
	1300	1450	1512	4.75	1442	9.50	1387	14.3	1340	19.0	1297	23.8	1259	28.5	1223	33.3	1189	38.0	1157	42.87	1126
	1450	1450	1703	5.30	1634	10.6	1579	15.9	1531	21.2	1489	26.5	1450	31.8	1414	37.1	1380	42.4	1348	47.7	1318
	1620	1450	1920	5.92	1851	11.9	1796	17.8	1748	23.7	1706	29.6	1667	35.5	1631	41.4	1597	47.4	1565	53.3	1535
	1720	1450	2048	6.28	1978	12.6	1923	18.9	1876	25.2	1833	31.4	1795	37.7	1759	44.0	1725	50.3	1693	56.6	1662
PR-30	716	965	1289	4.28	1199	8.56	1129	12.9	1069	17.1	1015	21.4	967	26.7	922	30.0	879	34.3	-	-	-
	807	965	1479	4.83	1389	9.65	1318	14.5	1258	19.3	1205	24.1	1156	29.0	1111	33.8	1069	38.6	-	-	-
	965	965	1807	5.77	1717	11.0	1647	17.3	1587	23.1	1533	28.9	1485	34.5	1440	40.4	1398	46.2	1358	51.9	1320
	1088	1450	2063	6.51	1973	13.0	1903	19.5	1843	26.0	1789	32.5	1741	39.1	1696	45.6	1654	52.1	1614	58.6	1576
	1212	1450	2321	7.25	2231	14.5	2161	21.8	2101	29.0	2047	36.3	1999	43.5	1954	50.7	1912	58.0	1872	65.2	1834
	1366	1450	2642	8.17	2552	16.4	2481	24.5	2421	32.7	2368	40.9	2319	49.0	2274	57.2	2232	65.4	2192	73.5	2155
	1539	1450	3002	9.20	2912	18.4	2841	27.6	2781	36.8	2728	46.0	2679	55.2	2634	64.4	2592	73.6	2552	81.8	2515

△ P-MM-WG		1000		2000		3000		4000		5000		6000		7000		8000		9000		10000	
Machine Rpm	Motor Rpm	M ³ /Hr	Kw	M ³ /Hr	Kw	M ³ /Hr	Kw	M ³ /Hr	Kw	M ³ /Hr	Kw	M ³ /Hr	Kw	M ³ /Hr	Kw	M ³ /Hr	Kw	M ³ /Hr	Kw	M ³ /Hr	Kw

PR-36	716	965	2311	7.43	2181	14.9	2079	22.3	1992	29.7	1914	37.1	1843	44.6	1777	52.0	1716	59.4	1657	66.8	1602	74.3
	807	965	2640	8.37	2511	16.8	2409	25.1	2321	33.5	2244	41.9	2173	50.2	2107	58.6	2045	67.0	1987	75.3	1931	83.7
	856	965	2818	8.88	2688	17.8	2586	26.7	2499	35.5	2421	44.4	2350	53.3	2284	62.1	2222	71.0	2164	79.9	2109	88.8
	965	965	3212	10.0	3083	20.0	2981	30.0	2894	40.0	2816	50.0	2745	60.0	2679	70.1	2617	80.1	2559	90.1	2503	101
	1088	1450	3658	11.3	3528	22.6	3426	33.9	3339	45.1	3261	56.4	3190	67.7	3124	79.0	3063	90.3	3004	102	2949	114
	1212	1450	4107	12.6	3977	25.2	3875	37.7	3788	50.3	3710	62.8	3639	75.4	3573	88.0	3512	101	3453	114	3398	126
	1366	1450	4664	14.2	4535	28.4	4433	42.5	4346	56.7	4268	70.8	4197	85.0	4131	99.2	4069	114	4011	128	3956	142

PR-42	716	965	3704	11.7	3531	23.4	3394	35.0	3276	46.7	3171	58.3	3075	70.0	2986	81.7	2902	93.3	2823	106	2748	117
	807	965	4222	13.2	4049	26.3	3912	39.5	3794	52.6	3689	65.8	3593	78.9	3504	92.0	3420	106	3341	119	3266	132
	856	965	4501	14.0	4328	27.9	4191	41.9	4073	55.8	3968	69.7	3872	83.7	3783	97.6	3699	112	3620	126	3545	140
	965	965	5122	15.7	4948	31.5	4811	47.3	4694	62.9	4588	78.6	4492	94.3	4403	111	4320	127	4241	142	4166	158
	1024	965	5458	16.7	5284	33.4	5147	50.1	5029	66.7	4924	83.4	4828	101	4739	118	4656	134	4577	151	4501	168
	1088	1450	5822	17.8	5649	35.5	5511	53.2	5393	70.9	5289	88.6	5193	107	5104	125	5020	143	4941	160	4866	178
	1155	1450	6204	18.8	6030	37.7	5893	56.5	5775	75.3	5670	94.1	5574	114	5485	132	5401	151	5322	170	5247	189

PR-50	643	725	5672	17.7	5428	35.4	5233	53.1	5066	70.7	4916	88.4	4778	107	4650	125	4529	142	4415	160	4307	178
	716	965	6373	19.7	6129	39.4	5935	59.1	5767	78.8	5617	98.4	5479	119	5351	139	5231	158	5117	178	5008	198
	807	965	7247	22.2	7003	44.4	6809	66.6	6641	88.8	6491	112	6353	134	6225	156	6105	178	5991	200	5882	223
	856	965	7718	23.6	7474	47.1	7280	70.6	7112	94.1	6962	118	6824	142	6696	166	6576	189	6462	213	6353	236
	909	965	8227	25.0	7983	50.0	7789	75.0	7621	100	7471	126	7333	151	7205	176	7085	201	6971	226	6862	251
	965	965	8765	26.5	8521	53.1	8327	79.6	8159	107	8009	133	7871	160	7743	186	7623	213	7509	240	7400	266
	1088	1450	9947	29.9	9703	59.8	9508	89.7	9341	120	9191	150	9053	180	8925	210	8805	240	8691	270	8582	300

Tolerance on Capacity & Power 5%
 Technical data's are subjected to change without prior notice due to continual improvement in design.
 Above Date is for Suction Medium - Air

BLOWER DIMENSIONS

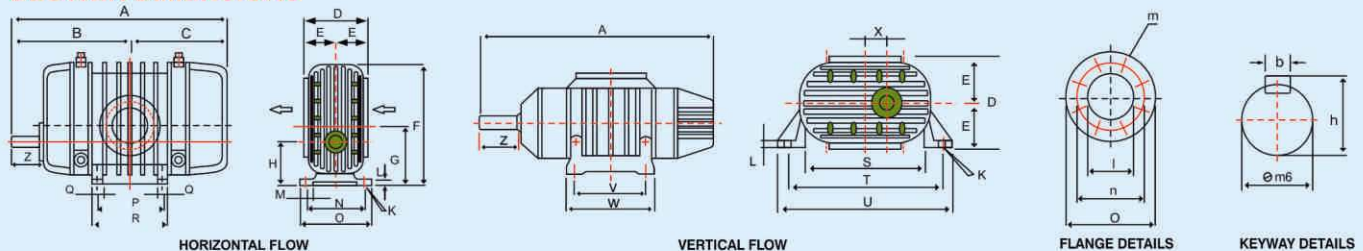


TABLE OF DIMENSIONS

Type	A	B	C	D	E	F	G	H	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Z	b	h	o	i	m	n	o
PR-10	514	252	262	224	112	274	148	112	14	12	46	180	220	100	50	150	200	280	310	130	170	36	60	8	28	25	70	4XM12	130	160
PR-12	602	305	297	264	132	320	174	132	14	15	42	205	240	120	56	176	230	310	350	160	200	42	80	8	33	30	80	4XM16	150	190
PR-14	644	527	517	280	140	337	180	132	18	15	50	220	260	140	56	196	260	340	380	180	220	48	80	10	38.5	35	100	4XM16	170	210
PR-16	707	352	355	320	160	400	214	160	18	15	52	260	300	170	64	234	270	360	400	210	250	54	80	10	41.5	38	125	8XM16	200	240
PR-19	820	425	395	360	180	448	243	180	18	18	60	300	340	200	68	268	310	400	440	250	300	63	110	12	45.5	42	150	8XM16	225	265
PR-22	905	465	440	400	200	508	274	200	18	20	65	340	380	240	75	315	370	470	510	300	350	74	110	14	52.0	48	175	8XM16	255	295
PR-24	1015	520	495	400	200	508	274	200	18	20	65	340	380	240	75	315	370	470	510	300	350	74	110	14	52.0	48	175	8XM16	255	295
PR-26	1010	515	495	450	225	595	311	225	18	20	65	380	430	295	75	370	430	530	580	355	405	86	140	18	64.0	60	200	8XM16	280	320
PR-30	1165	590	575	500	250	675	350	250	22	20	60	430	480	360	85	445	500	620	670	390	440	100	140	20	74.5	70	250	12XM16	335	375
PR-36	1330	690	640	630	315	770	400	280	22	25	80	520	580	440	100	540	560	700	760	480	540	120	170	22	85.0	80	300	12XM20	395	440
PR-42	1460	745	715	710	355	480	455	315	26	25	105	620	680	540	100	640	640	800	860	580	640	140	170	25	95.0	90	350	12XM20	445	490
PR-50	1755	890	865	850	425	425	-	-	30	35	-	-	-	-	-	-	380	900	980	650	770	167	210	28	11.5	105	400	16XM20	495	540

Working Performance

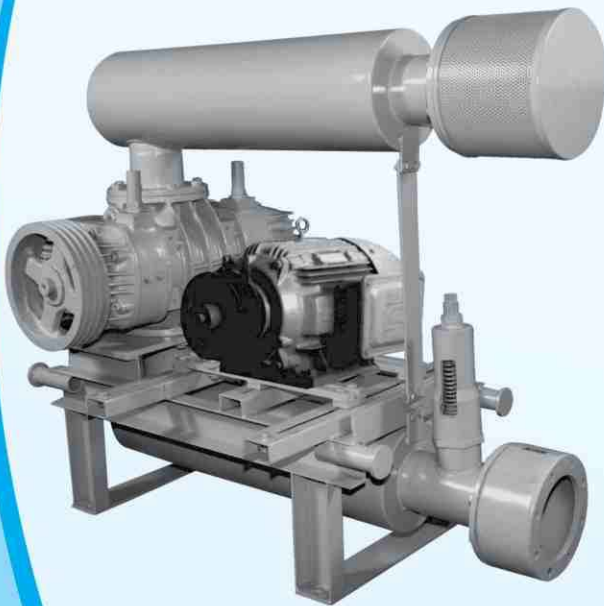
These are positive displacement Twin lobe Air Compressor (Roots Blower) suitable for a wide range of operating speeds to meet the exact capacity requirements of the applications. They can be offered for pressure duty up to 10,000 mmwg and vacuum duty up to 6,000 mmwg. two stage machines can be offered for pressure up to 22,000 mmwg. These machines can be used for compression or boosting of vacuum gases.

The working chamber consists of two parallel cylindrical bores containing two rotors, each with two lobes which counter rotate without touching with each other, or the casing. Heavy duty gears ensure that a correct clearance is maintained between the rotors. The working chamber requires no lubrication hence the medium handled does not get contaminated with oil.

SPECIAL FEATURES

- Machines Are air cooled so water cooling is not required.
- Positive displacement machine with constant volume characteristic.
- Effective sealing ensured by mean of temperature-insensitive labyrinth system.
- 100% oil free compression.
- High precision helical timing gears for reliability and long life.
- Overhung V-Belt drive for all operating pressure ranges. Direct Coupling also possible.
- Dynamically balanced rotating components to ensure vibration free operation.
- Suitable for various gases such as air, town gas, Natural gas, nitrogen gas, carbon dioxide, inert gases.
- Solid, noise-absorbing construction in gray cast iron.
- Special air filter are provide depending upon the application and working environment.

IMPORTANT APPLICATIONS



REFINERIES

Sulphur recovery & dewaxing
Nitrogen boosting & conveying
Hydro treater

WASTE WATER, EFFLUENT & SEWAGE TREATMENT

Tank aeration
Digester gas processing
Bio gas boosting
Back washing of filter / mixer beds

ENVIRONMENTAL

Dust and fumes extraction
Air sparging
Compost aeration
Dust collection and disposal

PAPER PLANTS

Knife edge coating
Drying, conveying & vacuum pickup

SPONGE IRON PLANTS

Injecting Blower

POWER PLANTS

Ash conveying
Fluidising

CEMENT PLANTS

Conveying
Blending, aeration & fluidization

FOOD PROCESSING

Conveying grains, flour etc.
Dehydration
packing
Fermentation Process

CHEMICAL, PETROCHEMICALS

Handling corrosive gases
Gas boosting, circulation & evacuation
liquid injection blowers

PNEUMATIC CONVEYING

Fluidization and agitation.
Pressure conveying of cement.
sand, lime etc.
Blending powdered materials.
Vaccum conveying of temperature sensitive products.

SUGAR PLANTS

Sulphitation process
Agitation of slurry

INDUSTRIAL

Vacuum boosting
Super-charging
Vacuum cleaning and drying
Oil free conveying of industrial gases
Fluid bad combustion



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**Manufacturer & Exporter of
Twin Lobe Air Compressor
(Roots Blower),
Mechanical Vacuum Booster
& Spares**