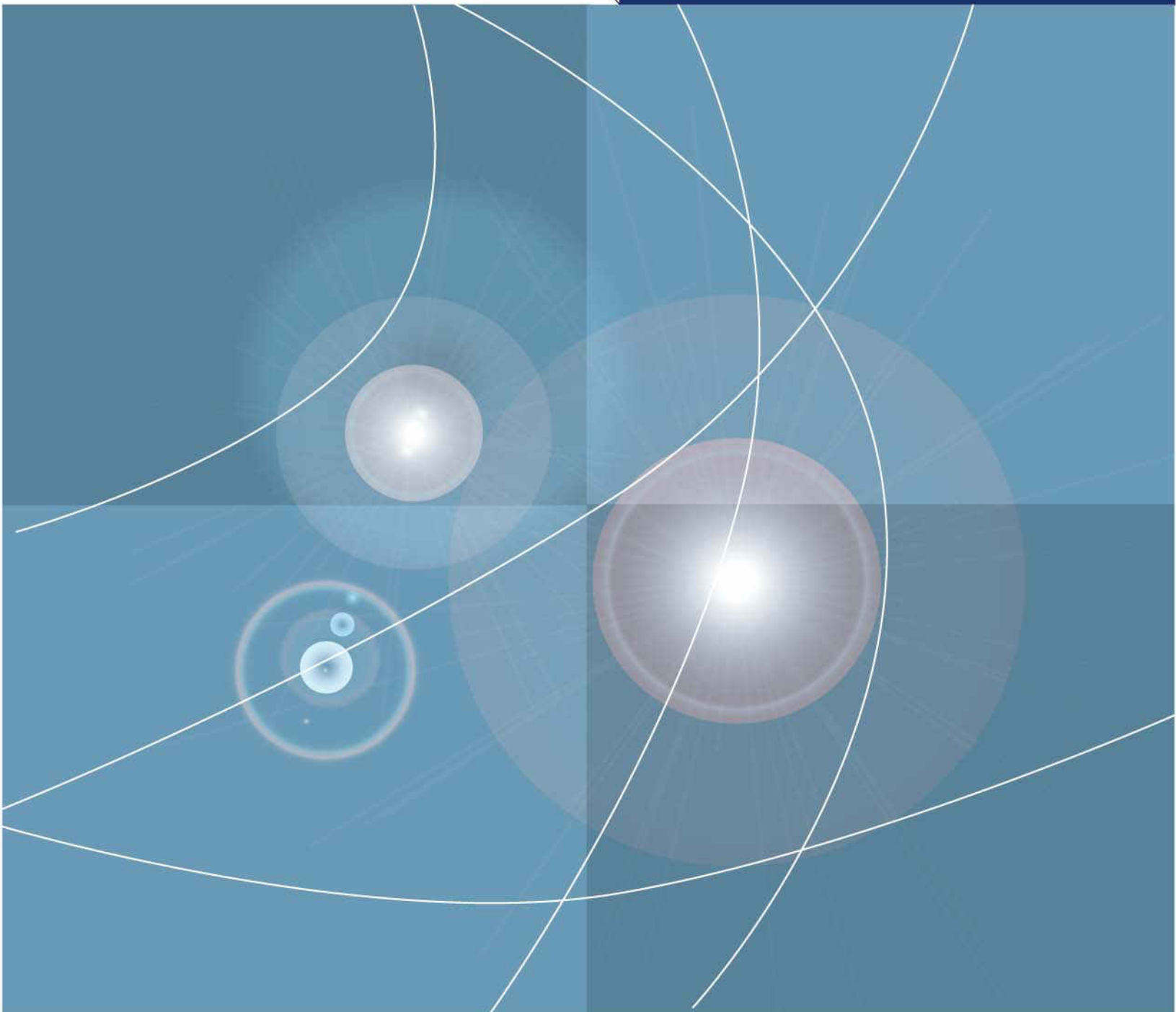


JBR Series - Roots Blower



JBR Series - Roots Blower



Introductions:

- 3-Lobe roots blowers are researched and develop.
- The biggest feature of this blower is a high rotation speed (max. 4000RPM) , high capacity .
- Break through of technology and the modification of practical application.
- Have a higher efficiency, higher pressure , lower weight and others features.
- Inlet size from 2.5" to 12".
- Pressure of single blower can be 1 Kgf / cm².

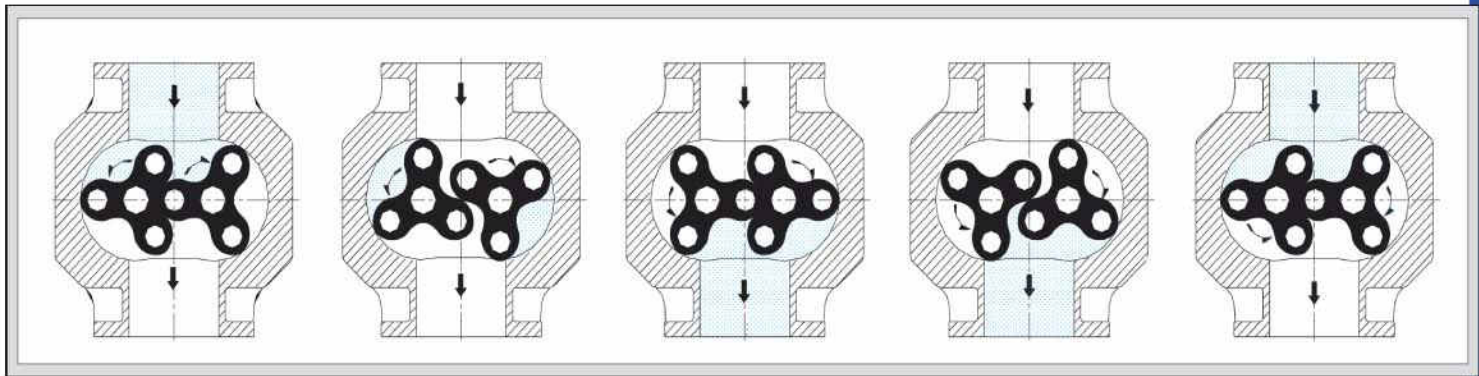


Features:

- **High Efficiency**
Great linear structure, reduce sectional area of rotors to improve capacity of blowers.
- **Low Vibration**
High grade of balance accuracy (G2.5) can control the vibration of X, Y, Z coordinate.
- **Low Lost of Pressure**
180 degrees vertical structure between inlet and outlet , reduce its pressure loss blowers.
- **High Vacuum**
The vacuum of Single EV blower can be 500mmHg, and the two stage EV blower can be 650mmHg.

JMI JMI - Simavis
JBR Series - Roots Blower

Operating Principle :



• **Blower Working Principle**

Roots blower is a cubage blower, discharge airflow scale to the blower's speed. Every rotation, there is two lobes to finish three times absorbing and discharging air, compared with two blower, the air is more smooth, smaller load change, higher strenght , lower noise and vibration.

Two parallel shafts have three lobes each, all the keep small clearance with each and housing inside. Every lobes rotation, a certain air will be absorbed an inlet abd transferred from the housing inside surface to blower's dicharge port.

Two shafts will be returned by timing gears, no any touching between lobes, so it can be turned at high speed without any lubricant inside. It has the following characteristics like as simply configuration, running smoothly , and good performance stabilization.It has been applied for many fields.

Conversion Table :

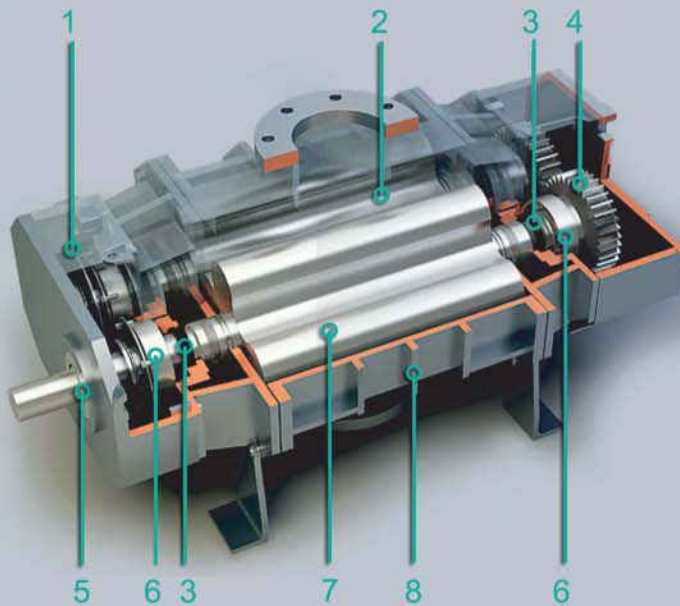
PRESSURE	atm	kPa	bar	lbt/in ²	kgf/cm ²	in Hg	ftAq	mmHg(Torr)	mmAq	CAPACITY	m ³ /min	l/min	cm ³ /s	in ³ /s	ft ³ /min(cfm)
1 atm	1	101.325	1.0325	14.696	1.0333	29.921	33.914	760	10333	1 m ³ /min	1	1000	16667	1016	35.288
1 kPt	0.0099	1	0.01	0.145	0.0102	0.295	0.335	7.5	102	1 l/min	0.001	1	16.67	1.02	0.0353
1 bar	0.9869	100	1	14.504	1.0198	29.53	33.47	750	10198	1 cm ³ /s	0.00006	0.06	1	0.061	0.002
1 lbt/in ² (psi)	0.068	6.894	0.0689	1	0.0703	2.036	2.208	51.71	703	1 in ³ /s	0.00098	0.983	16.39	1	0.035
1 kgf/cm ²	0.968	98.062	0.981	14.228	1	28.96	32.82	735.53	10000	1 ft ³ /min(cfm)	0.028	28.32	471.95	28.8	1
1 lnHg	0.0334	3.3863	0.0339	0.491	0.0345	1	1.133	25.4	345.3	Pressure Conversion Formula					
1 ftAq	0.0295	2.99	0.0299	0.434	0.0305	0.882	1	22.42	304.8	1 kPa=1000Pa=1000N/m					
1 mmHg(Torr)	0.013	0.1338	0.00138	0.019	0.0014	0.04	0.045	1	13.6	1mbar=10.198mmAq					
1 mmAq	0.000097	0.0098	0.000098	0.0014	0.0001	0.003	0.0033	0.074	1	1mmHg(torr)=133.8Pa					



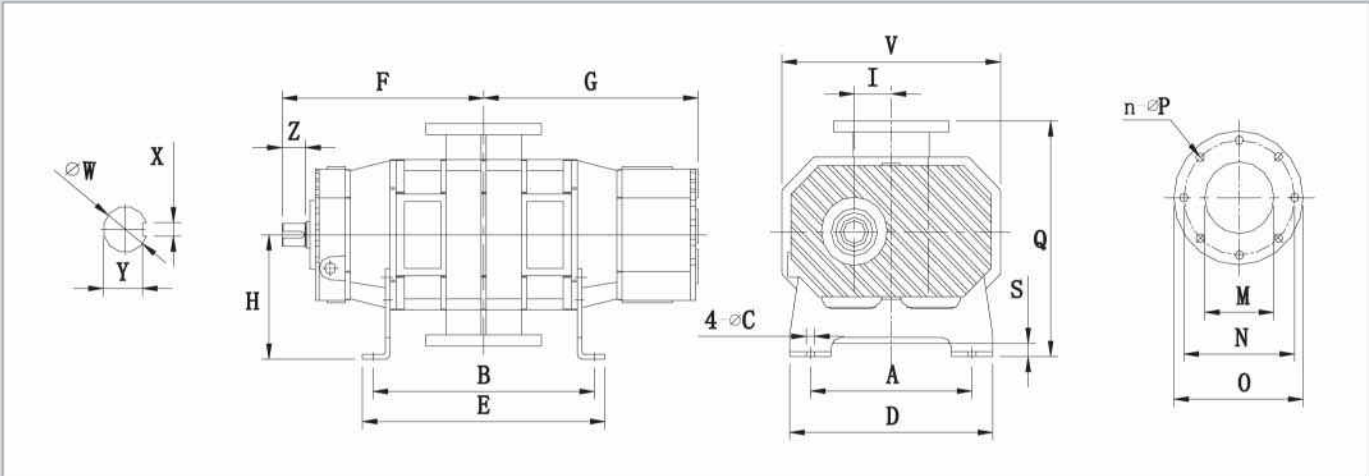
JMI - Simavis

JBR Series - Roots Blower

Main Body - 3D Drawing :



Part	Part description	n.of parts
1	oil thrower	1
2	driven rotor	1
3	v-ring	4
4	gear	2
5	oil seal	1
6	bearing	4
7	drive rotor	1
8	body	1

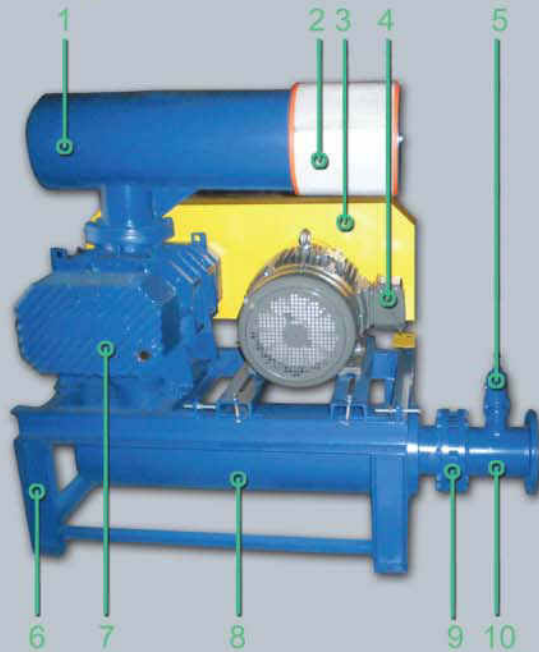


Model	A	B	C	D	E	F	G	H	I	Q	S	V	W	X	Y	Z	M	N	O	n-∅P
JBR - 65	200	240	14	260	284	219	242	160	45	305	10	274	28	8 ⁰ _{-0.036}	24 ⁰ _{-0.2}	42	60	145	150*150	4-∅18
JBR - 80	200	320	14	260	364	259	282	160	45	305	10	274	28	8 ⁰ _{-0.036}	24 ⁰ _{-0.2}	42	80	160	200	8-∅18
JBR - 100	260	280	14	360	314	323	285	220	60	409	31	370	38	10 ⁰ _{-0.036}	33 ⁰ _{-0.2}	48	100	180	220	8-∅18
JBR - 125	260	330	14	360	364	348	310	220	60	409	31	370	38	10 ⁰ _{-0.036}	33 ⁰ _{-0.2}	48	130	210	250	8-∅22
JBR - 150A	350	360	18	440	406	376	404	260	80	492	28	474	48	14 ⁰ _{-0.036}	42.5 ⁰ _{-0.2}	48	150	240	285	8-∅22
JBR - 150	350	480	18	440	526	436	464	260	80	492	28	474	48	14 ⁰ _{-0.036}	42.5 ⁰ _{-0.2}	48	150	240	285	8-∅22
JBR - 200	335	480	18	430	540	475	440	320	100	620	20	610	60	18 ⁰ _{-0.043}	53 ⁰ _{-0.2}	75	200	295	340	8-∅22
JBR - 250	420	560	22	620	620	545	502	350	120	670	30	720	65	18 ⁰ _{-0.043}	58 ⁰ _{-0.2}	75	250	350	390	12-∅22
JBR - 300	580	690	22	760	750	740	590	405	150	780	30	870	80	22 ⁰ _{-0.043}	71 ⁰ _{-0.2}	75	300	400	450	12-∅25

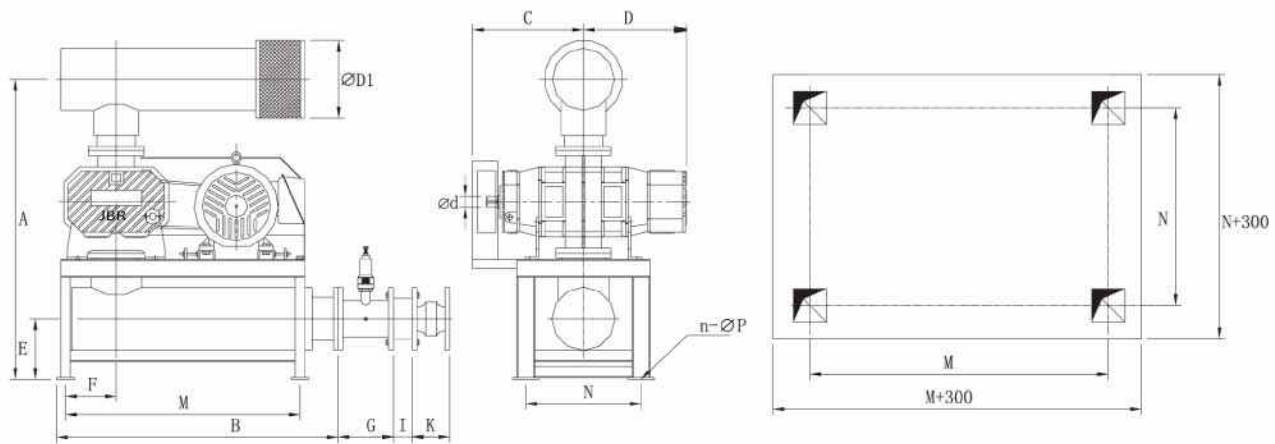
Unit: mm

JBR Series - Roots Blower

Complete Body :



Part	Part description	n.of parts
1	Inlet Silencer	1
2	Filter Barrel	1
3	Hood	1
4	Motor	1
5	Safety Valve	1
6	Bottom Case	1
7	Main Body	1
8	Outlet Silencer	1
9	Check Valve	1
10	T-joint	1



Model	A	B	C	D	D1	E	F	G	I	K	M	N	d	n-ØP
JBR - 65	910	1050	260	238	200	180	250	150	24	95	560	340	28	4-Ø18
JBR - 80	950	1150	302	278	250	170	250	180	24	110	840	360	28	4-Ø18
JBR - 100	1100	1150	381	295	280	197	250	180	22	115	950	450	38	4-Ø18
JBR - 125	1150	1250	406	320	320	192	300	250	24	140	1100	500	38	4-Ø18
JBR - 150A	1310	1250	440	395	350	230	300	250	29	170	1100	560	48	4-Ø18
JBR - 150	1310	1250	500	455	350	230	300	250	29	170	1100	560	48	4-Ø18
JBR - 200	1580	1400	520	440	450	255	300	250	27	170	1250	980	60	4-Ø22
JBR - 250	1720	1500	580	502	500	280	350	250	27	210	1250	980	65	4-Ø22
JBR - 300	1910	1600	800	590	500	310	350	300	32	240	1400	1100	80	4-Ø22

Unit: mm

