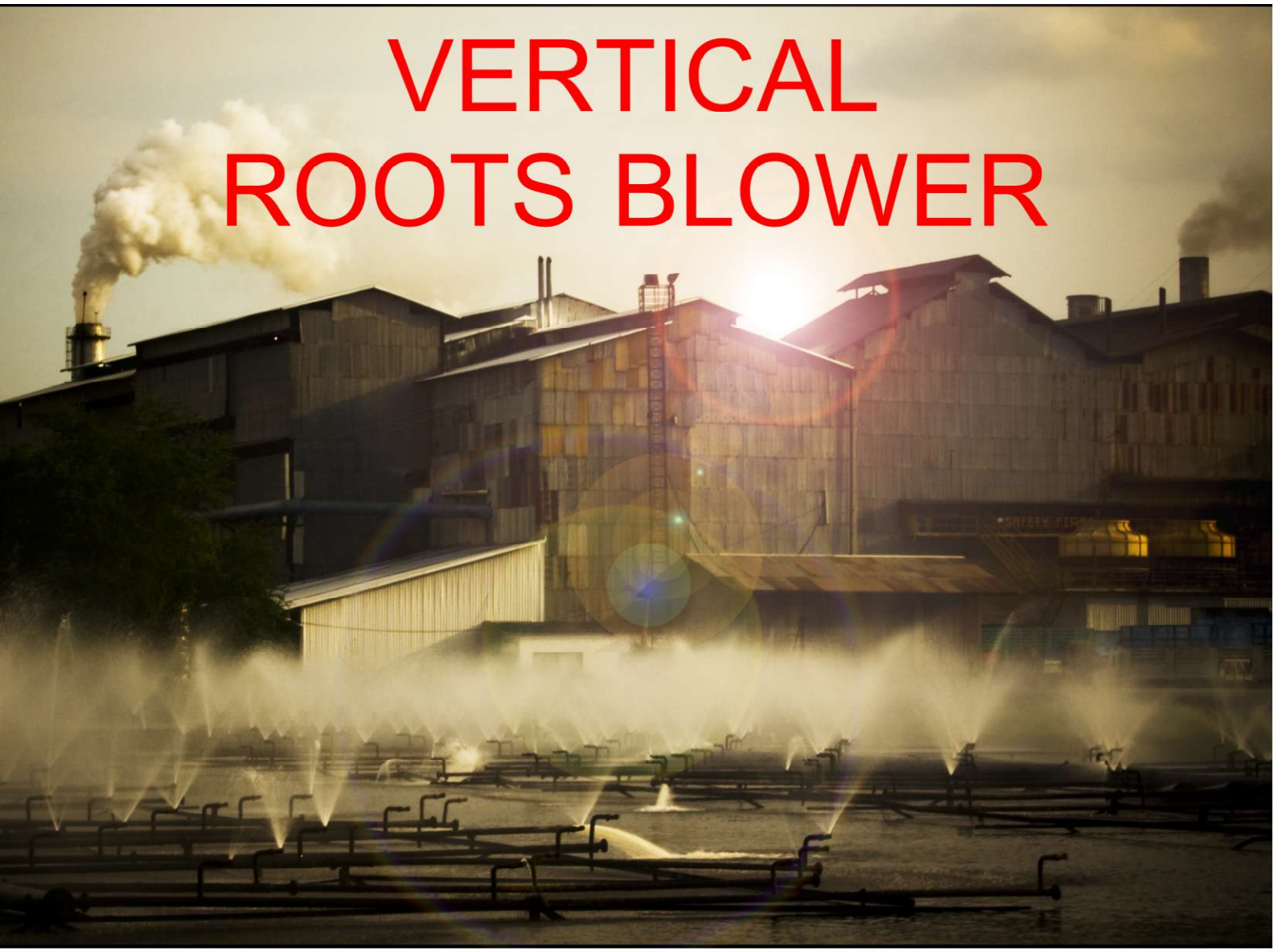
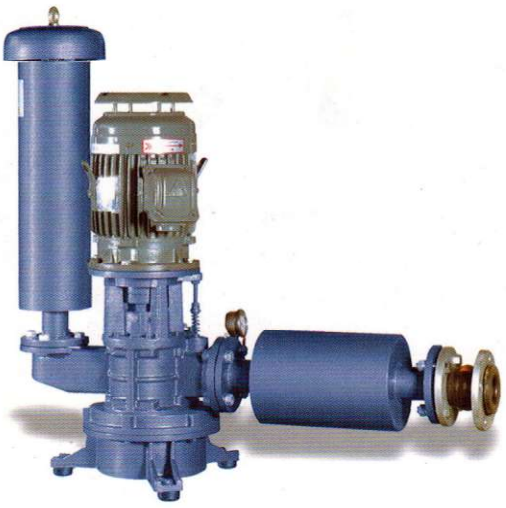
AIRFLOW

VERTICAL ROOTS BLOWER





The Characteristic of the Blower

- To reduce man-made errors, enhance the precision of the leave-wheel, and to promote the blower efficiently, our rotor has uses the most advanced--one time word precess Four- Shaft method.

- Appropriate clearance between the rotors and the rotors and the rotors with the casing ensure no direct operational contact, hence no lubrication is necessary. The synchronous gear drive system and the shafe bearings are the only parts which require lubrication. Separate lateral chambers are designed to house these moving parts with proper seals to prevent oil leakage to the main chamber. Computerized CNC machines are used to produce components and parts of high quality and precision, also saves the user both time and labor during maintenance and replacement.

- Noise and vibration reduction are the main emphasis in developing the new series of roots blower. The Blower rotor concept was adopted based on its flow characteristics which is very stable and even compared to the 3 lobes type, also coupled with the fact that it shows a considerable reduction of both noise and vibration. The extent of reduction can even allow the smaller unit to operate without the need of a silencer.

Principle of the Blower Operation

There are two sets of rotors in the air compartment of the blower body, when the rotors operate in opposite directions they suck in air to balance the pressure created due to the volume V1 change on the inlet side. And the air of the volume V2 will be sent out thru the outlet side and the high pressure will be created thru the outlet mouth. Also, there is no need to apply and lubrication between the two rotors because of the existing gap between them which gives no worry about the possibility of frection. It runs well at high speed and produces clean air. It also can be used in vacuum circumstances.

Features

Low Energy Consumption

The blower are designed to control backflow pressure to the rotor in order to reduce energy consumption.

Lower Noise

Pressure pluses are the major noise source in blowers. The Blower design can efficiently reduce noise by approximately 5 dB.

Easy Installation

The blower is simple to install, does not require much time to maintain, does not occupy much space, and provides a noise-free living environment without the need for additional noise prevention equipment.

Long Bearing Life

Less vibration transmitted through the love results in approximately 20% longer bearing life.

Reduces the amount of regular maintenance that needs to be performed.

The blower uses direct crive, reducing wear and tear on the belt, reducing the amount of maintenance needed, and reducing the risk of oil leaks.

The blower is compact, occupying only a small amount of space.

Not only is the blower very compact, the direction of the air vent can be adjusted according to actual needs, and the unit is easy to install.

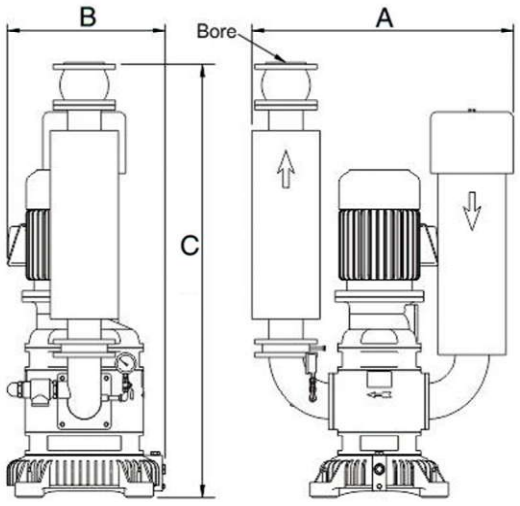
Specifications

Type	Output	Power	Freq.	1000mmAq		2000mmAq		3000mmAq		4000mmAq		5000mmAq		6000mmAq		Noise
	(in)	(HP)	(Hz)	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	(dB)
ATV-4015	1.5"	2	50	0.99	0.56	0.87	0.70	0.80	0.78	0.70	0.94	0.68	1.00	0.61	1.09	52
ATV-5022	2"	3	50	1.93	1.01	1.79	1.26	1.69	1.43	1.46	1.61	1.32	1.78	1.20	2.01	56
ATV-6537	2.5"	5	50	2.81	1.50	2.62	1.74	2.49	2.10	2.29	2.53	2.17	2.89	1.92	3.10	60
ATV-8055	3"	7.5	50	3.38	1.79	3.22	2.32	3.05	2.70	2.83	3.15	2.64	3.75	2.54	4.29	65
ATV-8075	3"	10	50	4.53	2.77	4.36	3.23	4.15	3.98	3.98	4.74	3.76	5.31	3.57	5.96	68
ATV-10011	4"	15	50	8.26	5.58	7.78	6.24	7.38	8.26	7.05	8.18	6.72	9.29	6.43	10.60	73
ATV-12515	5"	20	50	10.01	7.08	9.45	8.29	8.95	10.10	8.48	11.80	8.14	12.40	7.79	13.90	76
ATV-12518	5"	25	50	11.44	7.82	10.82	8.86	10.30	10.25	9.70	12.90	9.24	14.60	9.90	16.21	79

Qs: m^3/min, La: kW

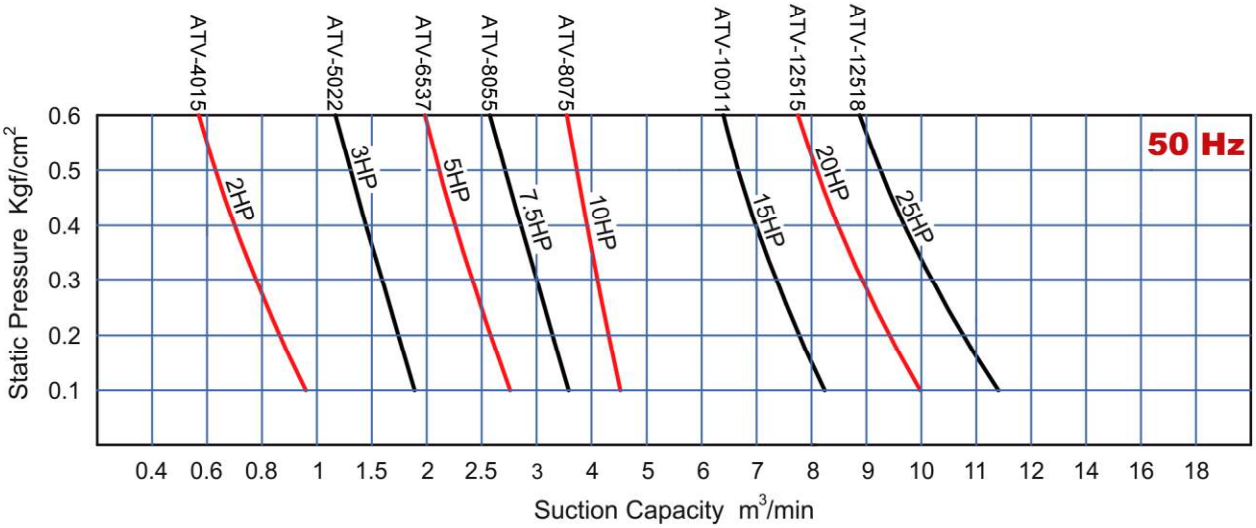
Type	Output	Power	Freq.	1000mmAq		2000mmAq		3000mmAq		4000mmAq		5000mmAq		6000mmAq		Noise
	(in)	(HP)	(Hz)	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	(dB)
ATV-4015	1.5"	2	60	1.24	0.69	1.14	0.84	0.98	1.03	0.91	1.14	0.81	1.19	0.76	1.31	54
ATV-5022	2"	3	60	2.28	1.15	2.10	1.39	1.98	1.59	1.91	1.80	1.83	1.99	1.76	2.16	58
ATV-6537	2.5"	5	60	3.15	1.88	2.88	2.17	2.74	2.49	2.67	2.83	2.58	3.24	2.52	3.61	62
ATV-8055	3"	7.5	60	4.37	2.48	4.04	2.89	3.92	3.30	3.81	3.72	3.57	4.29	3.30	4.82	67
ATV-8075	3"	10	60	6.19	3.36	5.91	4.00	5.69	4.84	5.42	5.68	5.23	6.32	4.97	6.91	70
ATV-10011	4"	15	60	10.63	6.38	10.24	7.03	9.79	8.29	9.37	9.41	9.02	11.10	8.74	12.44	75
ATV-12515	5"	20	60	12.64	8.12	12.10	9.26	11.50	11.25	11.02	12.62	10.71	14.10	10.33	15.80	78
ATV-12518	5"	25	60	14.90	9.15	14.10	10.70	13.41	13.24	12.91	14.90	12.32	16.25	11.92	17.82	81

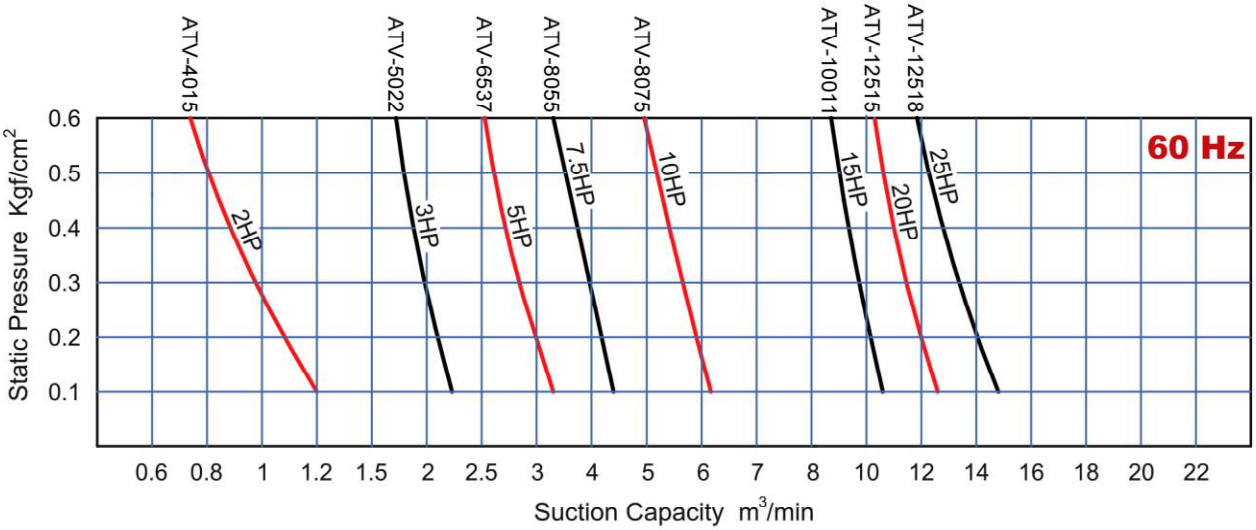
Dimensions



Type	Output	Power	Dimension (mm)		
	(in)	(HP)	A	B	C
ATV-4015	1.5"	2	590	345	845
ATV-5022	2"	3	670	420	1039
ATV-6537	2.5"	5	727	450	1055
ATV-8055	3"	7.5	824	465	1250
ATV-8075	3"	10	824	465	1295
ATV-10011	4"	15	952	580	1438
ATV-12515	5"	20	1060	580	1981
ATV-12518	5"	25	1070	580	2006

Performance Curves





Noise Curves