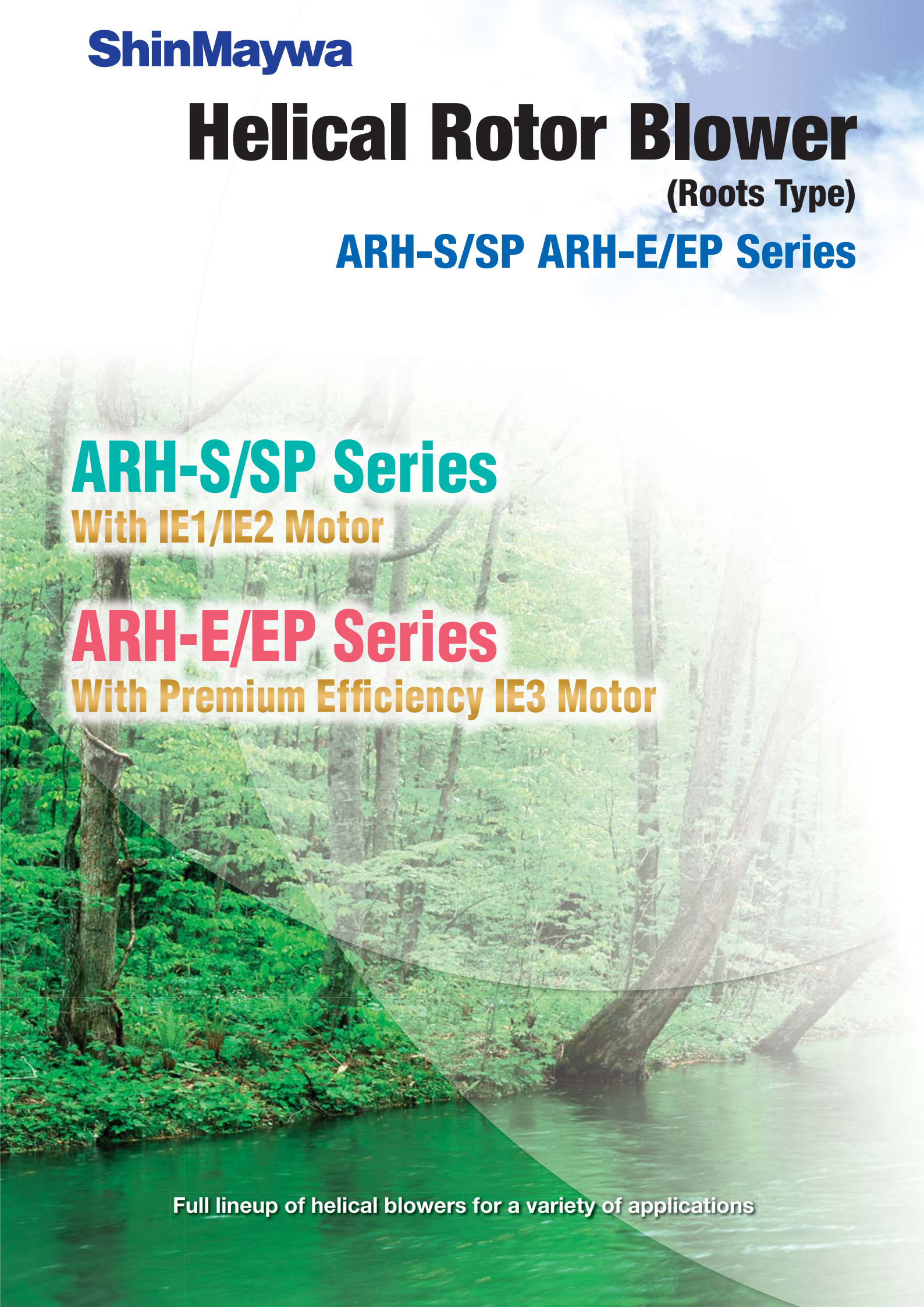
ShinMaywa

Helical Rotor Blower

(Roots Type)

ARH-S/SP ARH-E/EP Series



ARH-S/SP Series

With IE1/IE2 Motor

ARH-E/EP Series

With Premium Efficiency IE3 Motor

Full lineup of helical blowers for a variety of applications

ShinMaywa helical blowers are the latest in roots-type blowers which incorporate low noise technology.

We use our outstanding technology to meet the high-level needs of the world of industry by also giving consideration to environmental problems such as noise.

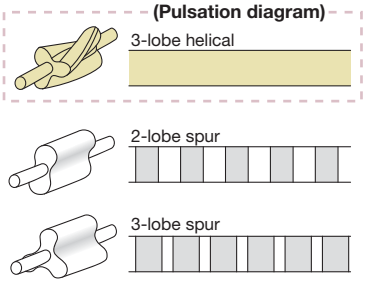
Comprehensive low-noise design

The design suppresses vibration in the low-frequency range where blower noise is generated.

The reason why ShinMaywa blower noise suppression is successful is as follows. The main sources of blower noise include sources such as "**pulsating noise of rotor**", followed by "**gear meshing**", and then "**bearings**". Of particular note is the pulsating noise (roots noise) generated by the air which is displaced by the rotors. At ShinMaywa we have successfully used "**3-lobe helical rotor**" to greatly reduce the amount of this pulsating noise. Furthermore, ShinMaywa technology for suppressing sound is not limited to just the rotors. We have also devised a torsional shape for the teeth gears which drive the rotors.

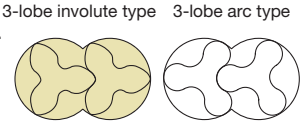
Q What is the difference between helical-type rotors and spur-type rotors?

A ShinMaywa helical rotors have three lobes twisted in a spiral shape, so that they displace the air continuously to prevent pulsating noise from occurring.



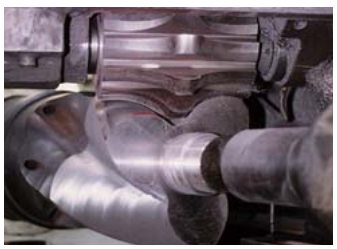
Q When the rotors are twisted, does the amount of blown air drop for each rotation?

A The tips of the rotor teeth used by ShinMaywa are slim. Therefore, even though the rotors are twisted, the amount of air blown per rotation is more than spur type blowers.



Q Because there is only a small gap between the twisted rotors and the rotor housing, is high-precision machining required?

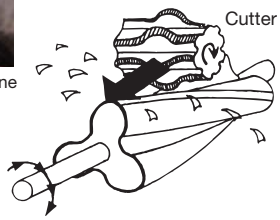
A A high-precision machine called a "milling machine" is used for machining the screws and the gears, so that the rotors are manufactured with high precision and high reliability.



●Rotor processing using a milling machine

[Processing method]

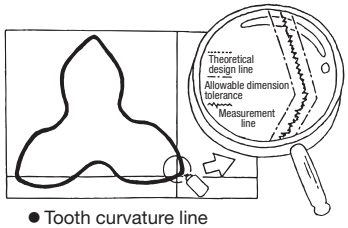
The rotor turns slowly to match the rotation of the cutter.
The cutter moves forward in the direction of the arrow while rotating.



Q How do you inspect the twisting of the precision rotors and the curve of the teeth?

A The shape of the rotor teeth is inspected using 3-dimensional measuring equipment. Measurement results are output to a plotter. Thorough quality control is carried out to ensure that the curvature of the teeth is within the allowable tolerances.

Results are output



● Tooth curvature line

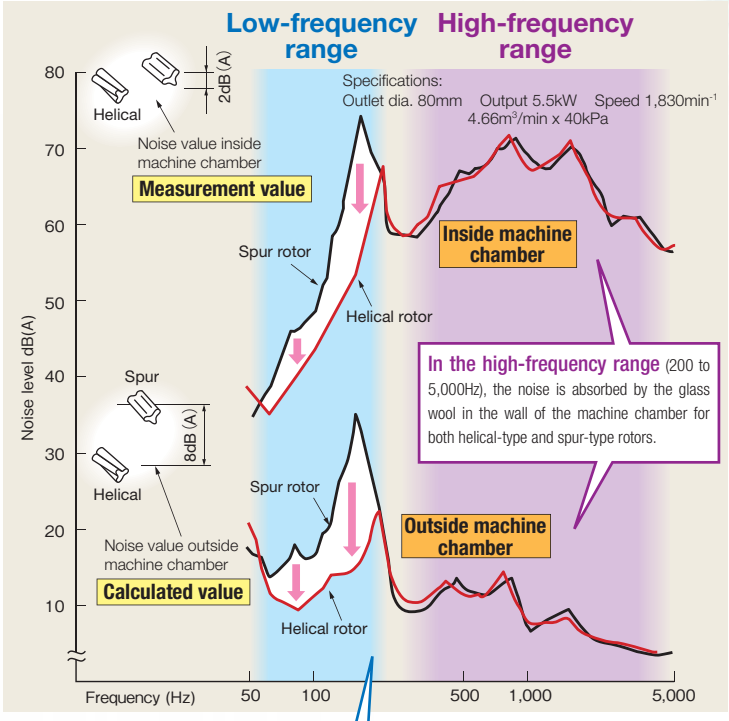
Data showing the low-noise operation of ShinMaywa helical blowers

For low-frequency noise which is expensive to reduce, our design reduces the noise inside machine chambers by 2dB and outside the machine chambers by about 8 dB compared to spur-type blowers.

A difference of 3dB doubles the perceived noise! A difference of 8dB increases the perceived noise by about 7 times.

■ Comparison of noise frequencies between ShinMaywa helical blowers and general spur-type blowers

●Blower noise consists of low-frequency range noise and high-frequency range noise.



In the high-frequency range (200 to 5,000Hz), the noise is absorbed by the glass wool in the wall of the machine chamber for both helical-type and spur-type rotors.

In the low-frequency range (50 to 160Hz), it can be seen that the noise volume is higher for spur-type rotors than for helical-type rotors. This is because noise in the low-frequency range is not absorbed by the glass wool and leaks outside the machine chamber. The low-noise design of ShinMaywa helical blowers significantly reduce the amount of noise output in the low-frequency band, which is the main cause of noise. This technological ability provides a large difference in the amount of noise in the low-frequency range.

When installed near the workplace or in apartment blocks, it can greatly reduce the costs of noise-reduction measures.

Reliable oil seal

Fluororubber is used for the oil seal. The lubricating system is protected with the labyrinth seal which is effective to prevent oil leakage.

Easy maintenance

The bearing is fixed with a C-type retaining ring. The timing gear can be disassembled easily by a gear puller. A ball bearing is employed instead of a roller bearing, to avoid damaging the inner case during reassembly. Thus, the blower maintenance has been significantly simplified.

Improved durability

The blower durability has been improved through the use of a larger bearing and the lowering of motor speed, as well as the reduction of temperature rise.

Variable Frequency Driver (VFD) controlled air flow rate

VFD control system permits the motor speed to be easily changed electrically. When VFD control is used with the blower, the air flow rate can be varied freely. Also, by using a suitable control device with the blower, it is possible to implement automatic control of the blower. (The controllable range of motor speed depends upon blower working conditions. When using a VFD with the blower, consult your nearest dealer.)

※The VFD to be used should be a constant torque type.

ARH-S・ARH-SP Series With IE1/IE2 Motor

Specifications ARH-S

Q : Air Flow Rate (m^3/min)　P : Power Requirements (kW)

Outlet Dia. (mm)	Model	Pulley No.	Rotor Speed (min^{-1})	10kPa		15kPa		20kPa		25kPa		30kPa		35kPa		40kPa		45kPa		50kPa		55kPa		60kPa		Standard Setting Motor Output (kW)
				Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	
20	ARH20S	1	1630	0.30	0.25	0.27	0.29	0.24	0.32	0.22	0.35	0.19	0.38	0.17	0.40	0.14	0.46	0.12	0.52	0.10	0.58	0.08	0.65	—	—	0.4・0.75
		2	1730	0.33	0.26	0.30	0.30	0.28	0.34	0.25	0.38	0.22	0.40	0.20	0.45	0.18	0.51	0.16	0.56	0.14	0.61	0.12	0.67	0.10	0.72	
25	ARH25S	1	1940	0.38	0.28	0.35	0.31	0.32	0.35	0.29	0.40	0.27	0.44	0.24	0.49	0.22	0.53	0.20	0.58	0.18	0.63	0.16	0.69	0.14	0.75	0.4・0.75・1.5
		2	2160	0.43	0.30	0.40	0.33	0.37	0.38	0.35	0.41	0.32	0.48	0.30	0.52	0.27	0.56	0.25	0.63	0.23	0.74	0.21	0.83	0.19	0.93	
		3	2400	0.51	0.35	0.48	0.40	0.45	0.43	0.42	0.48	0.39	0.53	0.37	0.58	0.34	0.65	0.32	0.75	0.30	0.86	0.28	0.97	0.26	1.07	
		4	2690	0.60	0.40	0.57	0.47	0.54	0.50	0.51	0.54	0.48	0.60	0.46	0.66	0.43	0.75	0.41	0.84	0.39	0.91	0.37	1.00	0.35	1.10	
32	ARH32S	1	1240	0.48	0.53	0.43	0.57	0.38	0.61	0.33	0.64	0.27	0.68	0.22	0.71	0.17	0.74	—	—	—	—	—	—	—	—	0.75・1.5
		2	1480	0.62	0.57	0.57	0.62	0.52	0.67	0.47	0.70	0.41	0.75	0.36	0.95	0.32	1.13	0.28	1.18	0.24	1.23	—	—	—	—	
		3	1740	0.76	0.60	0.71	0.64	0.66	0.69	0.61	0.79	0.55	1.00	0.50	1.10	0.46	1.22	0.42	1.24	0.38	1.27	0.34	1.30	—	—	
		4	1910	0.86	0.64	0.81	0.69	0.76	0.75	0.71	0.90	0.66	1.05	0.61	1.15	0.57	1.25	0.53	1.35	0.49	1.42	0.45	1.49	—	—	
40	ARH40S	1	1720	0.83	0.61	0.78	0.66	0.72	0.72	0.67	0.92	0.60	1.11	0.56	1.17	0.50	1.24	0.45	1.26	0.41	1.29	0.37	1.32	—	—	1.5・2.2・3.7
		2	1840	0.87	0.64	0.82	0.69	0.77	0.76	0.74	0.95	0.67	1.14	0.63	1.20	0.58	1.28	0.55	1.35	0.50	1.42	0.46	1.49	—	—	
		3	1960	0.95	0.71	0.91	0.77	0.86	0.85	0.80	1.03	0.76	1.20	0.71	1.27	0.67	1.35	0.63	1.43	0.58	1.50	0.53	1.61	—	—	
		4	2210	1.16	0.77	1.10	0.87	1.04	0.99	0.99	1.11	0.93	1.24	0.88	1.33	0.83	1.45	0.78	1.50	0.73	1.76	0.68	1.84	0.63	1.99	
		5	2380	1.25	0.83	1.19	0.97	1.13	1.12	1.08	1.19	1.03	1.28	0.99	1.39	0.95	1.50	0.91	1.68	0.87	1.86	0.84	2.02	0.80	2.18	
		6	2520	1.34	0.95	1.28	1.08	1.22	1.20	1.17	1.28	1.12	1.35	1.08	1.45	1.04	1.55	1.00	1.76	0.96	1.96	0.93	2.13	0.90	2.30	
		7	2620	1.42	1.07	1.37	1.19	1.31	1.32	1.26	1.36	1.21	1.42	1.17	1.55	1.12	1.70	1.09	1.89	1.05	2.08	1.03	2.25	1.00	2.41	
		8	2790	1.52	1.15	1.46	1.29	1.40	1.40	1.36	1.45	1.31	1.50	1.27	1.66	1.23	1.82	1.20	2.01	1.16	2.20	1.14	2.39	1.11	2.57	
		9	3000	1.61	1.30	1.55	1.40	1.49	1.50	1.45	1.64	1.40	1.78	1.36	1.92	1.32	2.06	1.28	2.20	1.24	2.33	1.21	2.51	1.18	2.69	
50	ARH50S	1	1270	1.27	0.7	1.17	0.8	1.09	1.0	1.02	1.1	0.95	1.3	0.88	1.5	0.81	1.7	0.74	1.8	0.67	2.0	—	—	—	—	1.5・2.2・3.7
		2	1400	1.53	0.9	1.43	1.0	1.34	1.2	1.25	1.3	1.17	1.4	1.09	1.7	1.01	1.8	0.93	1.9	0.86	2.1	—	—	—	—	
		3	1650	1.85	1.0	1.74	1.2	1.64	1.3	1.54	1.4	1.44	1.7	1.35	1.8	1.27	2.0	1.19	2.2	1.11	2.5	1.04	2.7	0.98	2.9	
		4	1850	2.23	1.1	2.11	1.3	1.98	1.4	1.87	1.6	1.76	1.8	1.68	2.0	1.59	2.2	1.51	2.5	1.43	2.7	1.35	2.9	1.28	3.1	
		5	2080	2.54	1.2	2.45	1.5	2.35	1.7	2.26	1.9	2.17	2.1	2.08	2.4	1.99	2.6	1.92	2.8	1.84	3.0	1.76	3.2	1.69	3.4	
		6	2230	2.77	1.3	2.68	1.6	2.59	1.9	2.51	2.1	2.43	2.3	2.36	2.6	2.28	2.8	2.21	3.1	2.13	3.3	2.06	3.4	—	—	
65	ARH65S	1	1100	1.64	0.9	1.57	1.1	1.49	1.3	1.41	1.5	1.34	1.7	1.27	1.9	1.20	2.1	1.13	2.2	1.07	2.6	1.01	2.8	—	—	2.2・3.7・5.5・7.5
		2	1320	2.22	1.2	2.12	1.4	2.03	1.6	1.94	1.8	1.86	2.0	1.78	2.2	1.70	2.4	1.62	2.7	1.53	3.0	1.45	3.2	1.37	3.4	
		3	1550	2.72	1.3	2.62	1.6	2.53	1.8	2.44	2.0	2.35	2.2	2.26	2.5	2.17	2.8	2.07	3.0	1.98	3.3	1.89	3.5	1.79	3.7	
		4	1730	3.12	1.5	3.01	1.8	2.91	2.0	2.81	2.2	2.71	2.7	2.61	2.9	2.52	3.2	2.44	3.4	2.36	3.7	2.30	3.9	2.23	4.2	
		5	1960	3.50	1.7	3.37	2.0	3.26	2.2	3.14	2.7	3.03	3.1	2.92	3.3	2.83	3.6	2.75	3.9	2.67	4.1	2.61	4.3	2.55	4.6	
		6	2200	3.77	1.9	3.70	2.2	3.62	2.4	3.54	2.8	3.46	3.2	3.39	3.7	3.32	4.1	3.26	4.5	3.20	4.9	3.15	5.2	3.09	5.4	
		7	2350	4.11	2.2	4.03	2.3	3.94	2.5	3.87	3.0	3.79	3.5	3.74	4.0	3.68	4.4	3.63	4.8	3.58	5.1	3.53	5.5	3.48	6.0	
		8	2500	4.38	2.4	4.29	2.6	4.20	2.8	4.12	3.3	4.04	3.7	3.97	4.2	3.90	4.7	3.84	5.2	3.77	5.7	3.73	6.1	3.68	6.5	
80	ARH80S	1	1130	3.21	1.4	3.10	1.7	2.99	2.1	2.88	2.4	2.77	2.8	2.65	3.1	2.54	3.5	2.43	3.7	2.32	4.3	2.21	4.7	2.09	5.1	3.7・5.5・7.5・11
		2	1350	3.81	1.8	3.70	2.1	3.60	2.5	3.50	2.8	3.40	3.2	3.30	3.6	3.19	4.1	3.09	4.5	2.99	5.0	2.89	5.5	2.79	6.1	
		3	1490	4.22	2.1	4.11	2.4	4.01	2.8	3.91	3.2	3.81	3.6	3.71	4.0	3.60	4.5	3.50	5.0	3.40	5.5	3.30	6.1	3.20	6.6	
		4	1630	4.70	2.2	4.58	2.7	4.47	3.2	4.36	3.6	4.25	4.1	4.13	4.5	4.02	5.0	3.91	5.5	3.80	6.0	3.69	6.6	3.57	7.2	
		5	1730	5.02	2.3	4.90	2.8	4.79	3.4	4.68	3.7	4.57	4.3	4.45	4.7	4.34	5.2	4.25	5.9	4.15	6.5	4.06	7.1	3.96	7.5	
		6	1830	5.34	2.4	5.22	3.0	5.11	3.5	5.00	4.1	4.89	4.6	4.78	5.1	4.66	5.5	4.58	6.2	4.49	6.8	4.40	7.4	4.31	8.0	
		7	2040	5.74	2.8	5.63	3.4	5.52	4.0	5.44	4.6	5.35	5.2	5.29	5.6	5.22	6.2	5.16	6.9	5.09	7.5	5.03	8.1	4.97	8.6	
		8	2150	6.07	3.0	5.96	3.7	5.85	4.2	5.77	4.8	5.68	5.3	5.62	6.0	5.55	6.6	5.49	7.4	5.43	7.8	5.37	8.5	5.30	9.1	
		9	2270	6.39	3.5	6.31	4.1	6.22	4.6	6.14	5.2	6.05	5.8	5.96	6.6	5.87	7.3	5.81	7.8	5.74	8.5	5.68	9.1	5.62	9.7	
100	ARH100S	1	1020	4.29	2.3	4.11	2.7	3.94	3.1	3.75	3.4	3.58	3.7	3.43	4.0	3.30	4.4	3.17	5.1	3.03	5.5	2.90	6.2	2.77	6.8	5.5・7.5・11
		2	1200	5.19	2.5	5.04	3.0	4.89	3.5	4.74	4.0	4.58	4.5	4.44	5.0	4.31	5.5	4.19	6.2	4.08	6.8	3.98	7.4	3.88	8.1	
		3	1390	5.94	2.9	5.79	3.4	5.64	3.9	5.49	4.4	5.33	4.9	5.19	5.5	5.06	6.2	4.94	6.9	4.83	7.6	4.73	8.4	4.63	9.2	
		4	1490	6.44	3.3	6.29	3.8	6.14	4.4	5.99	4.9	5.83	5.4	5.69	6.0	5.56	6.8	5.44	7.5	5.33	8.2	5.23	9.0	5.13	9.8	
		5	1630	7.39	3.9	7.24	4.4	7.09	4.9	6.94	5.4	6.78	5.9	6.65	6.8	6.53	7.5	6.43	8.5	6.33	9.4	6.23	10.3	6.13	11.0	
		6	1830	8.69	4.6	8.54	5.0	8.39	5.4	8.24	6.2	8.08	7.1	7.93	8.0	7.78	8.9	7.62	9.8	7.47	10.7	—	—	—	—	

Specifications ARH-S

Q : Air Flow Rate (m³/min)　P : Power Requirements (kW)

Outlet Dia. (mm)	Model	Pulley No.	Rotor Speed (min⁻¹)	10kPa		15kPa		20kPa		25kPa		30kPa		35kPa		40kPa		45kPa		50kPa		55kPa		60kPa		Standard Setting Motor Output (kW)
				Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	
125	ARH125S	1	1160	7.58	2.5	7.35	3.4	7.11	4.3	6.88	5.0	6.64	5.8	6.41	6.7	6.17	7.6	5.94	8.5	5.70	9.4	5.46	10.3	5.23	11.3	7.5・11・15・18.5
		2	1290	8.67	3.4	8.43	4.0	8.19	4.7	7.95	5.4	7.71	6.3	7.47	7.2	7.23	8.2	6.99	9.1	6.75	10.1	6.51	11.2	6.26	12.3	
		3	1370	9.29	3.9	9.06	4.4	8.83	4.9	8.59	5.7	8.37	6.7	8.13	7.7	7.91	8.5	7.67	9.5	7.44	10.7	7.21	11.8	6.98	13.0	
		4	1460	10.0	4.2	9.77	4.6	9.53	5.1	9.30	6.0	9.06	7.1	8.84	8.1	8.60	9.2	8.37	10.2	8.14	11.3	7.91	12.5	7.67	13.9	
		5	1540	10.7	4.4	10.4	5.0	10.2	5.7	9.98	6.6	9.76	7.7	9.53	8.8	9.31	10.0	9.08	11.0	8.86	12.1	8.64	13.4	8.41	14.8	
		6	1710	12.0	4.7	11.8	5.4	11.5	6.2	11.3	7.4	11.1	8.6	10.9	9.7	10.7	10.9	10.5	12.3	10.3	13.8	10.1	15.1	9.84	16.5	
		7	1920	13.9	5.1	13.6	5.9	13.4	6.8	13.2	8.2	13.0	9.7	12.7	10.9	12.5	12.2	12.3	13.2	12.1	14.5	11.8	16.2	11.6	18.1	
	ARH125SA	1	1160	9.93	3.5	9.50	4.5	9.14	5.4	8.82	6.4	8.54	7.4	8.27	8.4	8.02	9.4	7.76	10.4	7.52	11.4	7.30	12.4	—	—	11・15・18.5・22
		2	1290	11.0	3.8	10.6	4.9	10.2	6.0	9.89	7.1	9.58	8.2	9.30	9.3	9.03	10.4	8.77	11.5	8.53	12.7	8.31	13.9	—	—	
		3	1370	12.0	4.1	11.6	5.3	11.3	6.5	10.9	7.7	10.6	8.9	10.3	10.1	10.0	11.3	9.75	12.5	9.46	13.7	9.11	14.9	—	—	
		4	1460	12.8	4.5	12.4	5.7	12.0	6.9	11.6	8.2	11.3	9.5	11.0	10.7	10.7	12.0	10.4	13.3	10.2	14.6	9.97	15.9	—	—	
		5	1540	13.7	4.8	13.3	6.1	13.0	7.4	12.6	8.8	12.3	10.2	12.0	11.5	11.7	12.9	11.4	14.3	11.2	15.6	11.0	16.9	—	—	
		6	1710	15.1	5.5	14.7	7.0	14.3	8.4	14.0	9.9	13.7	11.4	13.4	12.9	13.1	14.3	12.8	15.9	12.6	17.4	12.3	18.9	—	—	
		7	1920	17.0	6.4	16.7	8.1	16.4	9.8	16.2	11.4	15.9	13.0	15.7	14.8	15.5	16.6	15.2	18.3	14.9	19.9	14.6	21.6	—	—	
	ARH125SF	1	1000	12.9	6.7	12.7	7.5	12.4	8.3	12.2	9.2	12.0	10.1	11.7	11.0	11.5	11.9	11.3	13.4	11.0	15.0	10.8	16.8	10.6	18.7	15・18.5・22・30
		2	1060	13.7	7.1	13.5	7.9	13.3	8.7	13.1	9.7	12.9	10.8	12.6	11.7	12.4	12.7	12.2	14.4	12.0	16.1	11.8	17.8	11.6	19.7	
		3	1130	14.8	7.9	14.6	8.6	14.4	9.4	14.1	10.3	13.9	11.4	13.7	12.6	13.5	14.0	13.2	15.7	13.0	17.3	12.8	18.9	12.6	20.8	
		4	1210	15.9	8.1	15.7	9.0	15.5	9.9	15.3	11.1	15.1	12.2	14.8	13.8	14.6	15.3	14.4	16.8	14.2	18.5	14.0	20.3	13.8	22.2	
		5	1300	17.0	8.5	16.8	9.5	16.6	10.5	16.4	11.6	16.2	12.8	16.0	14.6	15.8	16.5	15.6	18.1	15.4	19.8	15.2	21.6	15.0	23.5	
		6	1420	18.8	9.1	18.6	10.1	18.4	11.1	18.2	12.4	18.0	13.8	17.8	16.1	17.7	18.2	17.5	20.1	17.3	22.0	17.2	23.7	17.0	25.5	
150	ARH150S	1	1000	12.9	6.7	12.7	7.5	12.4	8.3	12.2	9.2	12.0	10.1	11.7	11.0	11.5	11.9	11.3	13.4	11.0	15.0	10.8	16.8	10.6	18.7	15・18.5・22・30・37
		2	1060	13.7	7.1	13.5	7.9	13.3	8.7	13.1	9.7	12.9	10.8	12.6	11.7	12.4	12.7	12.2	14.4	12.0	16.1	11.8	17.8	11.6	19.7	
		3	1130	14.8	7.9	14.6	8.6	14.4	9.4	14.1	10.3	13.9	11.4	13.7	12.6	13.5	14.0	13.2	15.7	13.0	17.3	12.8	18.9	12.6	20.8	
		4	1210	15.9	8.1	15.7	9.0	15.5	9.9	15.3	11.1	15.1	12.2	14.8	13.8	14.6	15.3	14.4	16.8	14.2	18.5	14.0	20.3	13.8	22.2	
		5	1300	17.0	8.5	16.8	9.5	16.6	10.5	16.4	11.6	16.2	12.8	16.0	14.6	15.8	16.5	15.6	18.1	15.4	19.8	15.2	21.6	15.0	23.5	
		6	1420	18.8	9.1	18.6	10.1	18.4	11.1	18.2	12.4	18.0	13.8	17.8	16.1	17.7	18.2	17.5	20.1	17.3	22.0	17.2	23.7	17.0	25.5	
		7	1510	19.9	9.5	19.7	10.6	19.5	11.8	19.4	13.5	19.2	15.3	19.0	17.2	18.8	19.3	18.6	21.2	18.5	23.2	18.3	24.9	18.1	26.8	
		8	1590	21.1	9.9	20.9	11.1	20.7	12.4	20.5	14.3	20.3	16.4	20.1	18.3	20.0	20.4	19.8	22.5	19.6	24.7	19.4	26.7	19.2	28.7	
		9	1680	22.5	10.5	22.3	11.6	22.1	12.8	21.9	15.1	21.7	17.4	21.5	19.7	21.3	21.9	21.1	24.2	20.9	26.5	20.7	28.8	20.5	31.1	
		10	1770	24.1	11.9	23.9	12.7	23.7	13.7	23.4	16.3	23.2	18.8	23.0	21.2	22.8	23.6	22.5	26.1	22.3	28.5	22.1	30.6	21.9	33.0	
		11	1940	26.9	12.2	26.7	14.4	26.4	16.6	26.2	18.8	25.9	21.4	25.7	24.0	25.5	26.9	25.2	30.2	24.9	33.6	24.7	35.4	—	—	
200	ARH200S	1	1000	24.3	5.7	23.7	8.1	23.1	10.5	22.6	12.9	22.1	15.3	21.6	17.7	21.1	20.1	20.7	22.5	20.3	24.9	19.9	27.3	19.5	29.7	18.5・22・30・37・45・55
		2	1100	26.7	7.2	26.1	9.9	25.5	12.6	25.0	15.3	24.5	18.0	24.0	20.7	23.6	23.4	23.2	26.1	22.8	28.8	22.4	31.5	22.0	34.2	
		3	1240	30.1	8.3	29.5	11.3	28.9	14.3	28.4	17.3	27.9	20.3	27.4	23.3	26.9	26.3	26.5	29.2	26.1	32.1	25.7	35.0	25.3	37.9	
		4	1360	33.0	10.1	32.4	13.3	31.8	16.5	31.3	19.7	30.8	22.9	30.3	26.1	29.8	29.3	29.4	32.5	29.0	35.7	28.6	38.9	28.2	42.0	
		5	1440	35.2	11.2	34.6	14.6	34.0	18.0	33.5	21.4	33.0	24.8	32.5	28.2	32.0	31.6	31.6	35.0	31.2	38.4	30.8	41.8	30.4	45.2	
		6	1530	37.6	12.0	37.0	15.7	36.4	19.4	35.8	23.1	35.2	26.8	34.7	30.5	34.2	34.2	33.7	37.9	33.3	41.5	32.9	45.1	—	—	
		7	1660	40.6	13.1	40.0	17.0	39.4	20.9	38.8	24.8	38.2	28.7	37.6	32.6	37.1	36.5	36.6	40.4	36.1	44.3	—	—	—	—	
		8	1750	44.0	14.4	43.4	18.5	42.8	22.6	42.2	26.7	41.7	30.8	41.2	34.9	40.7	39.0	40.2	43.1	39.8	47.2	—	—	—	—	

Notes: (1) The air flow rate (measured according to JIS B8341) indicates the volume of air on the suction side.
(2) Air flow rate tolerance: ±5%
(3) Blower Rotation Speed is for reference.
(4) Consult us for any requirements not included in the table.

Specifications ARH-SP

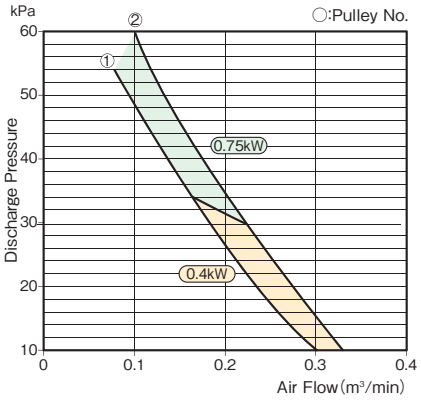
Q : Air Flow Rate (m³/min)　P : Power Requirements (kW)

Outlet Dia. (mm)	Model	Pulley No.	Rotor Speed (min⁻¹)	10kPa		15kPa		20kPa		25kPa		30kPa		35kPa		40kPa		45kPa		50kPa		55kPa		60kPa		Standard Setting Motor Output
				Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	
50	ARH50SP	5	2380	1.25	0.83	1.19	0.97	1.13	1.12	1.08	1.19	1.03	1.28	0.99	1.39	0.95	1.50	0.91	1.68	0.87	1.86	0.84	2.02	0.80	2.18	1.5・2.2・3.7
		6	2520	1.34	0.95	1.28	1.08	1.22	1.20	1.17	1.28	1.12	1.35	1.08	1.45	1.04	1.55	1.00	1.76	0.96	1.96	0.93	2.13	0.90	2.30	
		7	2620	1.42	1.07	1.37	1.19	1.31	1.32	1.26	1.36	1.21	1.42	1.17	1.55	1.12	1.70	1.09	1.89	1.05	2.08	1.03	2.25	1.00	2.41	
		8	2790	1.52	1.15	1.46	1.09	1.40	1.40	1.36	1.45	1.31	1.50	1.27	1.66	1.23	1.82	1.20	2.01	1.16	2.20	1.14	2.39	1.11	2.57	
		9	3000	1.61	1.30	1.55	1.40	1.49	1.50	1.45	1.64	1.40	1.78	1.36	1.92	1.32	2.06	1.28	2.20	1.24	2.33	1.21	2.51	1.18	2.69	
65	ARH65SP	4	1850	2.23	1.1	2.11	1.3	1.98	1.4	1.87	1.6	1.76	1.8	1.67	2.0	1.59	2.2	1.51	2.5	1.43	2.7	1.35	2.9	—	—	1.5・2.2・3.7
		5	2080	2.54	1.2	2.45	1.5	2.35	1.7	2.26	1.9	2.17	2.1	2.08	2.4	1.99	2.6	1.91	2.8	1.84	3.0	1.76	3.2	—	—	
		6	2230	2.77	1.3	2.68	1.6	2.59	1.9	2.51	2.1	2.43	2.3	2.36	2.6	2.28	2.8	2.21	3.1	2.13	3.3	2.06	3.4	—	—	
80	ARH80SP	4	1730	3.12	1.5	3.01	1.8	2.91	2.0	2.81	2.2	2.71	2.7	2.61	2.9	2.52	3.2	2.42	3.4	2.36	3.7	2.30	3.9	2.23	4.2	3.7・5.5・7.5
		5	1960	3.50	1.7	3.37	2.0	3.26	2.2	3.14	2.7	3.03	3.1	2.92	3.3	2.83	3.6	2.73	3.9	2.67	4.1	2.61	4.3	2.55	4.6	
		6	2200	3.77	1.9	3.70	2.2	3.62	2.4	3.54	2.8	3.46	3.2	3.39	3.7	3.32	4.1	3.26	4.5	3.20	4.9	3.15	5.2	3.09	5.4	
		7	2350	4.11	2.2	4.03	2.3	3.94	2.5	3.87	3.0	3.79	3.5	3.74	4.0	3.68	4.4	3.63	4.8	3.58	5.1	3.53	5.5	3.48	6.0	
		8	2500	4.38	2.4	4.29	2.6	4.20	2.8	4.12	3.3	4.04	3.7	3.97	4.2	3.90	4.7	3.84	5.2	3.77	5.7	3.73	6.1	3.68	6.5	
100	ARH100SP	6	1830	5.34	2.4	5.22	3.0	5.11	3.5	5.00	4.1	4.89	4.6	4.77	5.1	4.66	5.5	4.58	6.2	4.49	6.8	4.40	7.4	4.31	8.0	5.5・7.5・11
		7	2040	5.74	2.8	5.63	3.4	5.52	4.0	5.44	4.6	5.35	5.2	5.29	5.6	5.22	6.2	5.16	6.9	5.09	7.5	5.03	8.1	4.97	8.6	
		8	2150	6.07	3.0	5.96	3.7	5.85	4.2	5.77	4.8	5.68	5.3	5.62	6.0	5.55	6.6	5.49	7.4	5.43	7.8	5.37	8.5	5.30	9.1	
		9	2270	6.39	3.5	6.31	4.1	6.22	4.6	6.14	5.2	6.05	5.8	5.96	6.6	5.87	7.3	5.81	7.8	5.74	8.5	5.68	9.1	5.62	9.7	

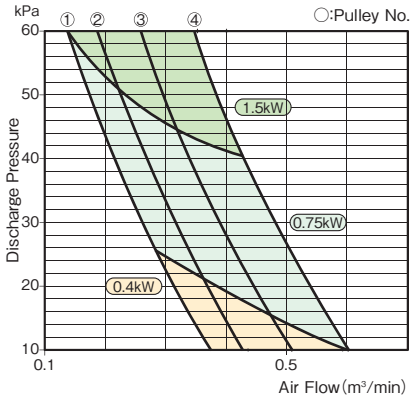
Notes: (1) The air flow rate (measured according to JIS B8341) indicates the volume of air on the suction side.
(2) Air flow rate tolerance: ±5%
(3) Blower Rotation Speed is for reference.
(4) Consult us for any requirements not included in the table.

Performance Curve ARH-S

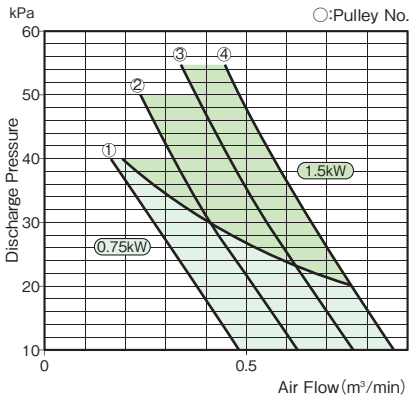
ARH20S



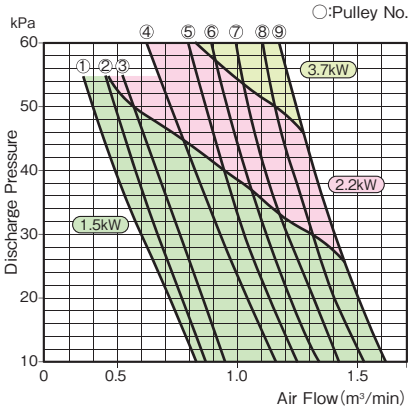
ARH25S



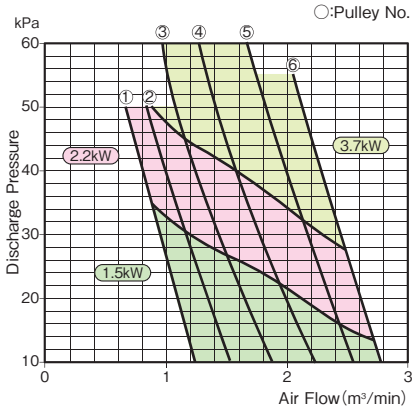
ARH32S



ARH40S



ARH50S



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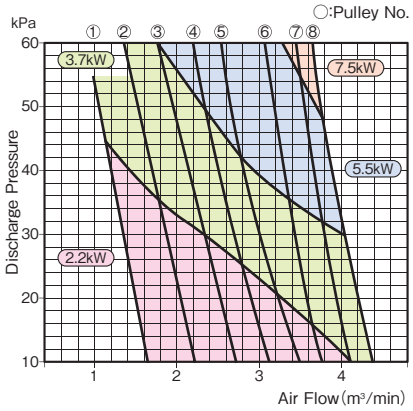

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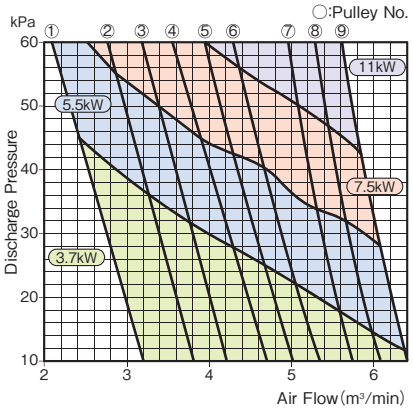
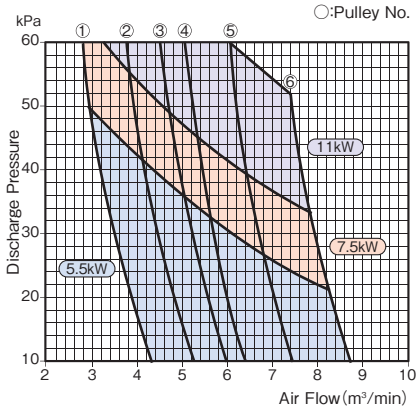


ARH100S



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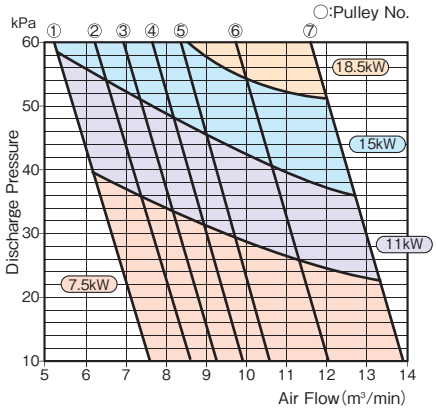

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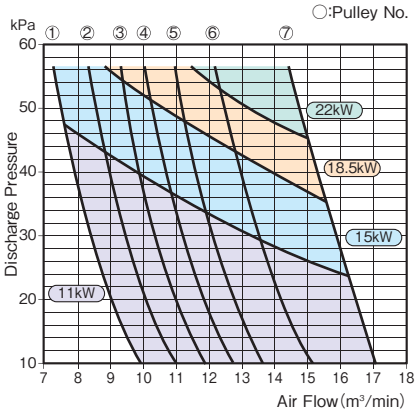

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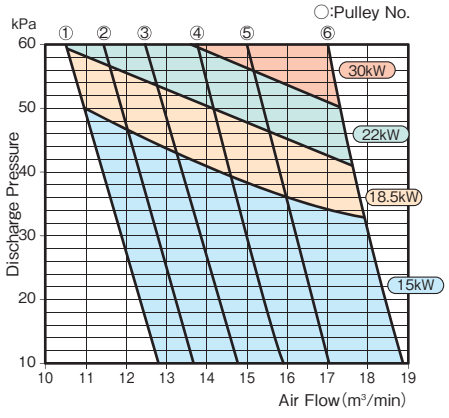

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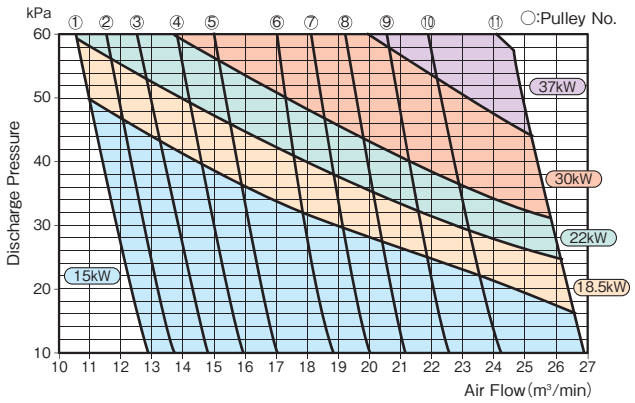
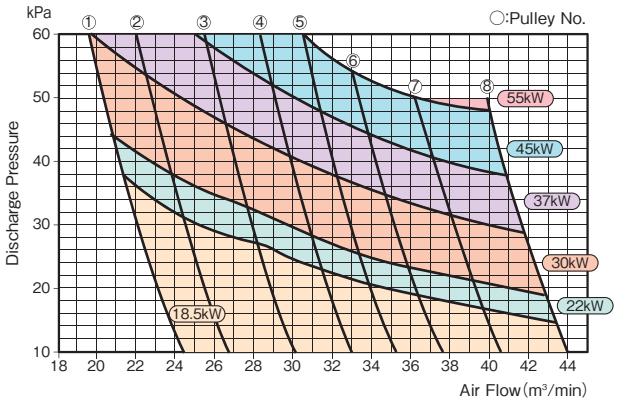
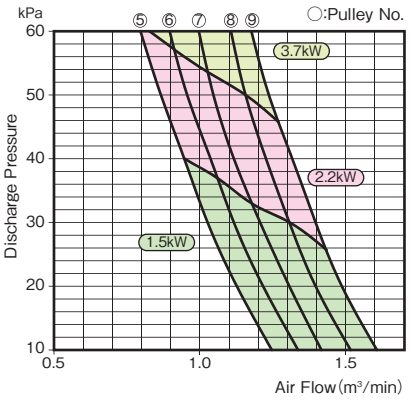


ARH200S

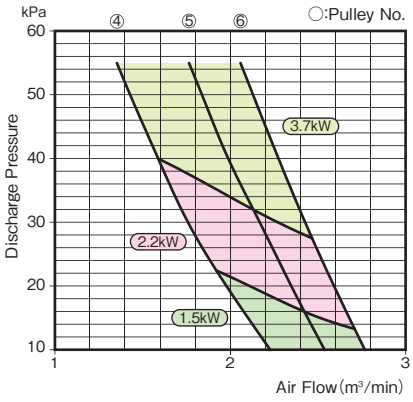


Performance Curve ARH-SP

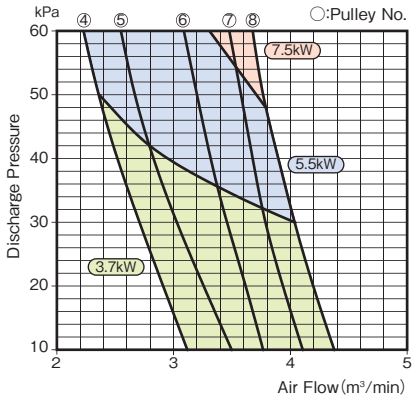
ARH50SP



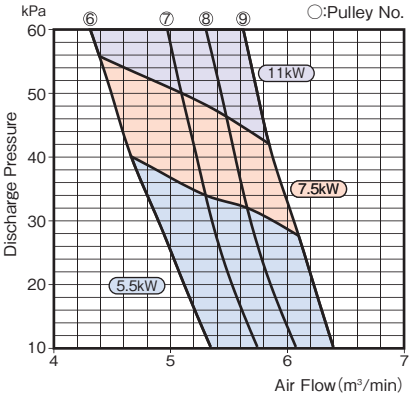
ARH65SP



ARH80SP



ARH100SP



Notes:
(1) The air flow rate indicates the volume of air on the suction side.
(2) Air flow rate tolerance: ±5%
(3) Consult us for any requirements not included in the table.
(4) For indoor use only. Consult us for outdoor applications.
(5) Specifications are subject to change without notice.
**(6) Please prepare IE1 / IE2 motor by yourself.
Since ShinMaywa cannot supply IE1 / IE2 motor due to Japanese regulation.**

Sound Levels

[dB(A)]

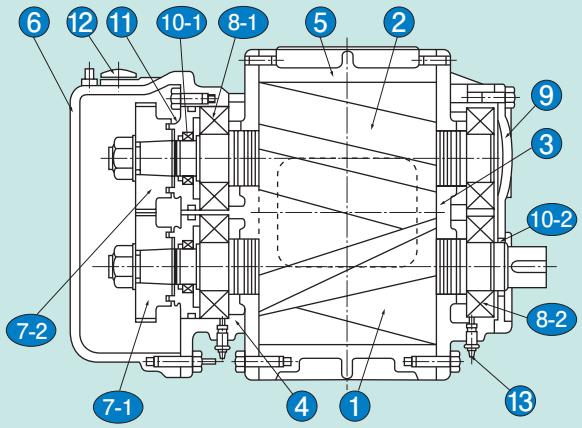
Model	Pulley No.	Rotor Speed (min⁻¹)	Discharge Pressure (kPa)					
			10	20	30	40	50	60
ARH20S	1	1630	58	59	60	61	61	—
	2	1730	60	61	62	63	63	64
ARH25S	1	1940	62	63	63	64	64	65
	2	2160	63	63	64	65	65	66
	3	2400	63	64	65	66	66	67
	4	2690	65	66	67	68	68	69
ARH32S	1	1240	65	66	67	68	—	—
	2	1480	66	67	68	69	70	—
	3	1740	67	68	69	70	71	—
	4	1910	69	70	71	72	73	—
ARH40S	1	1720	66	67	68	69	70	—
	2	1840	67	68	70	71	72	—
	3	1960	69	70	71	71	72	—
	4	2210	70	71	71	71	72	73
	5	2380	70	71	71	71	72	74
	6	2520	70	71	71	72	72	74
	7	2620	71	71	72	72	73	74
	8	2790	71	72	72	73	73	75
	9	3000	71	72	72	73	74	75
ARH50S	1	1270	63	64	66	67	69	—
	2	1400	66	66	68	70	71	—
	3	1650	69	70	71	72	73	74
	4	1850	70	70	71	72	73	74
	5	2080	70	71	72	73	74	75
	6	2230	72	74	74	74	75	75
ARH65S	1	1100	66	67	68	68	69	—
	2	1320	66	67	68	69	71	72
	3	1550	66	67	69	70	72	73
	4	1730	67	68	69	71	73	73
	5	1960	67	69	71	72	74	75
	6	2200	68	70	71	72	74	75
	7	2350	70	71	72	73	74	76
	8	2500	72	73	74	75	75	76
ARH80S	1	1130	70	71	72	73	74	75
	2	1350	71	71	73	74	75	76
	3	1490	72	73	73	75	76	77
	4	1630	73	74	75	76	77	78
	5	1730	74	75	76	76	78	79
	6	1830	75	76	77	78	79	80
	7	2040	76	77	78	79	79	80
	8	2150	77	78	78	79	79	80
	9	2270	77	78	79	79	79	80
ARH100S	1	1020	71	72	73	74	75	76
	2	1200	72	73	74	76	76	78
	3	1390	74	74	75	77	78	79
	4	1490	75	76	77	78	79	80
	5	1630	76	77	78	79	80	80
	6	1830	77	78	79	80	81	—
ARH125S	1	1160	72	73	74	75	75	76
	2	1290	72	73	74	75	76	76
	3	1370	73	74	75	76	77	77
	4	1460	73	74	75	76	77	78
	5	1540	74	75	76	77	78	79
	6	1710	75	76	77	78	79	81
	7	1920	76	77	78	79	81	82
ARH125SA	1	1160	72	74	75	76	77	—
	2	1290	73	75	77	78	79	—
	3	1370	73	75	78	78	79	—
	4	1460	73	75	78	79	80	—
	5	1540	74	76	79	79	80	—
	6	1710	75	76	79	79	80	—
	7	1920	77	79	80	81	82	—
ARH125SF	1	1000	72	73	74	75	77	78
	2	1060	72	73	74	75	77	78
	3	1130	73	74	75	76	78	79
	4	1210	74	75	76	78	79	80
	5	1300	75	76	77	79	80	81
	6	1420	76	77	78	80	81	82
ARH150S	1	1000	72	73	74	75	77	78
	2	1060	72	73	74	75	77	78
	3	1130	73	74	75	76	78	79
	4	1210	74	75	76	78	79	80
	5	1300	75	76	77	79	80	81
	6	1420	76	77	78	80	81	82
	7	1510	77	78	80	81	82	83
	8	1590	77	79	81	82	83	84
	9	1680	79	80	81	82	83	84
	10	1770	81	82	83	84	85	86
	11	1940	83	84	85	85	86	87
ARH200S	1	1000	79	79	81	82	84	85
	2	1100	79	80	82	84	86	87
	3	1240	79	80	82	84	86	87
	4	1360	79	80	82	84	86	87
	5	1440	80	81	83	85	86	87
	6	1530	82	82	83	85	86	—
	7	1660	84	85	86	87	88	—
	8	1750	85	86	88	89	91	—

[dB(A)]

Model	Pulley No.	Rotor Speed (min⁻¹)	Discharge Pressure (kPa)					
			10	20	30	40	50	60
ARH50SP	5	2380	70	71	71	71	72	74
	6	2520	70	71	71	72	72	74
	7	2620	71	71	72	72	73	74
	8	2790	71	72	72	73	73	75
	9	3000	71	72	72	73	74	75
ARH65SP	4	1850	70	70	71	72	73	74
	5	2080	70	71	72	73	74	75
	6	2230	72	74	74	74	75	75
ARH80SP	4	1730	67	68	69	71	73	73
	5	1960	67	69	71	72	74	75
	6	2200	68	70	71	72	74	75
	7	2350	70	71	72	73	74	76
	8	2500	72	73	74	75	75	76
ARH100SP	6	1830	75	76	77	78	79	80
	7	2040	76	77	78	79	79	80
	8	2150	77	78	78	79	79	80
	9	2270	77	78	79	79	79	80

(1) Typical sound levels [±3db(A)] are measured at a distance of one meter from the blower side. Provided for reference only.
(2) Sound levels vary depending on the base (foundation) condition and piping configuration.
(3) Blower Rotation Speed is for reference.

Sectional View



No.	Name	Material	No.	Name	Material
1	Rotor (driving)	FCD500	8-1	Ball bearing	—
2	Rotor (driven)	FCD500	8-2	Ball bearing	—
3	Bearing plate	FC200	9	Bearing cover	SS400/SPHC/SPCC
4	Bearing case	FC200	10-1	Oil seal	Fluoro rubber
5	Rotor housing	FC200	10-2	Oil seal	NBR
6	Gear case	FC200	11	Seal box	SS400
7-1	Timing gear	SCM415	12	Oil gauge	—
7-2	Timing gear	SCM415	13	Grease nipple	—

Notes:
(1) For Models ARH20S, ARH25S, ARH32S, ARH40S and ARH50SP, bearing plate No.3 and rotor housing No.5 are constructed as one piece.
(2) ARH125SF · 150S · 200S : Rotor is made of FC200 (helical portion) and S45C (shaft portion). ARH20S–125SA : Helical and shaft are manufactured of FCD500 in one piece parts.
(3) Use Shell Stamina Grease RL2 to replenish grease every three months.
(4) Completely replace gear oil with VG 220 gear oil every three months. (The blower is shipped with Shell Omara S2G 220.)
(5) Bearings of ARH20S–125S are special ones. Be sure to replace them with genuine ones upon overhaul. (Never use a commercialize bearings.)

Standard Motors (TEFC indoor type, IE1/IE2)

Model	Applicable Motor Output (kW)														
	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55
ARH20S	○	○													
ARH25S	○	○	○												
ARH32S		○	○												
ARH40S			○	○	○										
ARH50S			○	○	○										
ARH65S				○	○	○	○								
ARH80S					○	○	○	○							
ARH100S						○	○	○							
ARH125S							○	○	○	○					
ARH125SA								○	○	○	○				
ARH125SF									○	○	○	○			
ARH150S									○	○	○	○	○		
ARH200S										○	○	○	○	○	○

• Star-delta starting is available for motors 5.5kW and over.
• Please prepare IE1/IE2 motor by yourself.

Model	Applicable Motor Output (kW)					
	1.5	2.2	3.7	5.5	7.5	11
ARH50SP	○	○	○			
ARH65SP	○	○	○			
ARH80SP			○	○	○	
ARH100SP				○	○	○

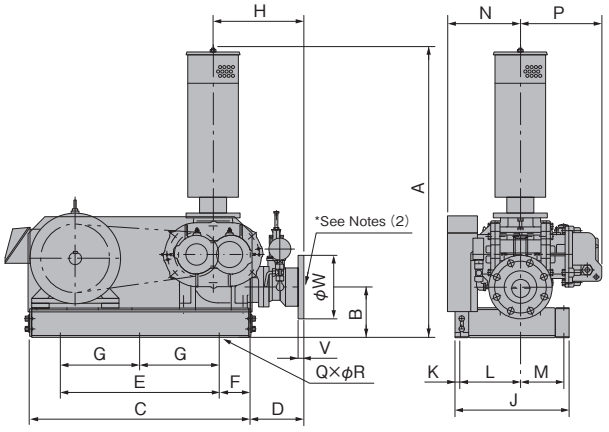
Standard Accessories

- Common Base 1
- V-pulley, V-belt, Belt Cover 1
- Pressure Gauge (160 kPa, with gauge cock and R1/4 setscrew) ... 1
- Inlet Silencer (with filter) 1
- Safety Valve (with check valve) 1

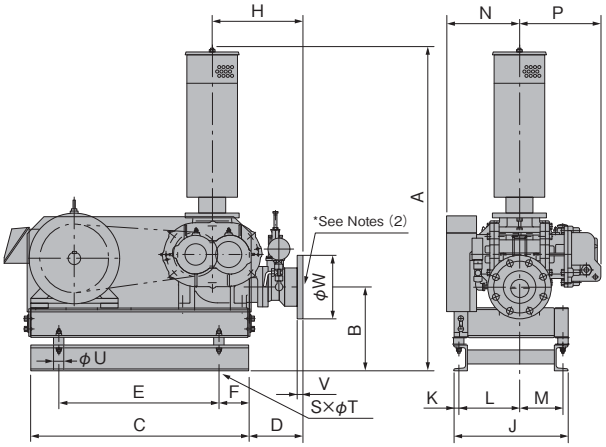
Dimensions

(mm)

Standard Dimensions



Dimensions with anti-vibration base

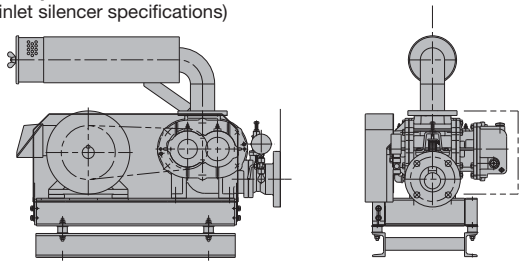


Model		Outlet dia (mm)	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	Weight (kg)
ARH20S		20	456 (511)	133 (188)	430	53	350	25	–	256	300	13	110	164	124	156	4	12	4	12	20	–	–	22 (26)
ARH25S		25				25				228														
ARH32S		32	741 (841)	135 (235)	487 (479)	125 (129)	340	74 (70)	–	215	290	15	130	130	173	221		13			25	20	135	45 (53)
ARH40S		40																					140	
ARH50S		50	809 (909)	137 (237)	556 (548)	120 (124)	400	78 (74)	–	207	330		175	125	202	228				13			155	70 (79)
ARH65S		65	948 (1,047)	147 (246)	636 (628)	138 (142)	460	88 (84)	–	245			174	126	212	234					35	22	175	100 (111)
ARH80S	3.7~7.5kW	80	1,009 (1,108)	155 (254)	704 (696)	164 (168)	540	82 (78)	–	294	360		172	158	209	247							185	140 (152)
	11kW		995 (1,094)	143 (242)	722 (714)			91 (87)	270 (—)		440		165	245	219		6							145 (160)
ARH100S		100	1,098 (1,197)	150 (249)		151 (155)				281			221	189	288	289						24	210	170 (184)
ARH125S		125	1,297 (1,396)	193 (292)	788 (780)	266 (270)	700	44 (40)	350	411	470	20	234	196	372	395		14	6	14	40		250	280 (295)
ARH125SA		125	1,323 (1,422)		788	260	710	40	355		520		265	215	390	435								315 (332)
ARH125SF		125	1,695 (1,793)	205 (303)	980 (976)	238 (240)	800	53 (51)	400	491	570		270	260	370	447						26		580 (598)
ARH150S		150				298 (300)				551													280	590 (608)
ARH200S		200	1,668 (1,866)	274 (472)	1,100 (1,260)	370 (290)	900	100 (180)	450	560	700		406	254	511 (521)	566		18.5		18.5	90		330	800 (895)

Model		Outlet dia (mm)	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	Weight (kg)
ARH50SP		50	741 (841)	135 (235)	487 (479)	120 (124)	340	74 (70)	–	210	290	15	130	130	173	221	4	13	4	13	25	16	155	45 (53)
ARH65SP		65	809 (909)	137 (237)	556 (548)	125 (129)	400	78 (74)	–	212	330		175	125	202	228							175	70 (79)
ARH80SP		80	948 (1,047)	147 (246)	636 (628)	153 (157)	460	88 (84)	–	260			174	126	212	234					35	18	185	100 (111)
ARH100SP	5.5, 7.5kW	100	1,009 (1,108)	155 (254)	704 (696)	164 (168)	540	82 (78)	–	294	360		172	158	209	247							210	140 (152)
	11kW	100	995 (1,094)	143 (242)	722 (714)			91 (87)	270 (—)		440		165	245	219		6							145 (160)

Notes:
(1) The safety valve discharge outlet of ARH20S and 25S have Rc3/4 and G1 female thread respectively rather than flange.
(2) Bolt hole diameter and pitch of the discharge flange comply with JIS B2239 : 10K flange.
(3) For indoor use only. Consult us regarding outdoor applications.
(4) Dimensions of the blower with the anti-vibration base are shown in parentheses. * The weight excludes the weight of the motor and motor base.
(5) L-type inlet silencer specifications (option) for low ceilings are also available.
(6) Dimensions are when Japanese-brand motor (previous IE1/IE2) is mounted.

Setup example
(L-type inlet silencer specifications)



ARH-E・ARH-EP Series With Premium Efficiency IE3 Motor

Specifications ARH-E

Q : Air Flow Rate (m³/min)　P : Power Requirements (kW)

Outlet Dia. (mm)	Model	Pulley No.	Rotor Speed (min⁻¹)	10kPa		15kPa		20kPa		25kPa		30kPa		35kPa		40kPa		45kPa		50kPa		55kPa		60kPa		Standard Setting Motor Output (kW)
				Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	
20	ARH20E	1	1630	0.30	0.25	0.27	0.29	0.24	0.32	0.22	0.35	0.19	0.38	0.17	0.40	0.14	0.46	0.12	0.52	0.10	0.58	0.08	0.65	–	–	0.4・0.75
		2	1730	0.33	0.26	0.30	0.30	0.28	0.34	0.25	0.38	0.22	0.40	0.20	0.45	0.18	0.51	0.16	0.56	0.14	0.61	0.12	0.67	0.10	0.72	
25	ARH25E	1	1940	0.38	0.25	0.35	0.30	0.32	0.35	0.30	0.40	0.28	0.46	0.26	0.51	0.24	0.56	0.22	0.61	0.19	0.66	0.17	0.71	0.15	0.75	0.4・0.75・1.5
		2	2180	0.44	0.28	0.41	0.34	0.38	0.39	0.37	0.46	0.35	0.51	0.32	0.57	0.30	0.62	0.27	0.68	0.25	0.73	0.23	0.80	0.21	0.85	
		3	2440	0.51	0.32	0.48	0.38	0.46	0.45	0.44	0.51	0.42	0.57	0.39	0.63	0.36	0.69	0.34	0.75	0.32	0.82	0.30	0.88	0.28	0.94	
		4	2580	0.54	0.34	0.53	0.41	0.50	0.48	0.48	0.54	0.45	0.60	0.43	0.67	0.41	0.73	0.39	0.80	0.37	0.86	0.34	0.93	0.31	0.99	
		5	2730	0.59	0.36	0.57	0.44	0.54	0.51	0.51	0.57	0.49	0.64	0.46	0.71	0.44	0.75	0.42	0.85	0.40	0.91	0.37	0.98	0.35	1.0	
32	ARH32E	1	1200	0.49	0.35	0.43	0.42	0.38	0.49	0.32	0.56	0.27	0.63	0.21	0.70	0.16	0.75	–	–	–	–	–	–	–	–	0.75・1.5
		2	1440	0.67	0.41	0.61	0.50	0.55	0.59	0.49	0.67	0.43	0.75	0.39	0.85	0.33	0.93	0.28	1.0	0.23	1.1	–	–	–	–	
		3	1710	0.86	0.49	0.80	0.59	0.74	0.70	0.68	0.81	0.63	0.91	0.57	1.00	0.51	1.1	0.46	1.2	0.40	1.3	0.34	1.4	–	–	
		4	1860	0.94	0.53	0.88	0.64	0.82	0.75	0.77	0.88	0.71	0.99	0.66	1.10	0.59	1.2	0.54	1.3	0.49	1.4	0.45	1.5	–	–	
40	ARH40E	1	1680	0.83	0.46	0.78	0.56	0.72	0.66	0.67	0.77	0.62	0.87	0.57	0.97	0.52	1.1	0.47	1.2	0.42	1.3	0.37	1.4	–	–	1.5・2.2・3.7
		2	1820	0.90	0.50	0.85	0.61	0.80	0.72	0.75	0.84	0.69	0.95	0.65	1.1	0.60	1.2	0.55	1.3	0.50	1.4	0.46	1.5	–	–	
		3	1920	0.98	0.53	0.93	0.65	0.87	0.77	0.82	0.89	0.77	1.0	0.72	1.1	0.67	1.2	0.62	1.4	0.58	1.5	0.54	1.6	–	–	
		4	2200	1.16	0.63	1.10	0.76	1.05	0.89	0.99	1.0	0.94	1.2	0.89	1.3	0.84	1.4	0.79	1.5	0.74	1.7	0.70	1.9	0.65	2.0	
		5	2370	1.26	0.68	1.21	0.83	1.16	0.97	1.11	1.1	1.06	1.3	1.01	1.4	0.95	1.5	0.92	1.7	0.88	1.8	0.84	2.0	0.80	2.1	
		6	2520	1.36	0.73	1.30	0.89	1.25	1.0	1.19	1.2	1.14	1.3	1.09	1.5	1.06	1.7	1.02	1.8	0.97	2.0	0.93	2.1	0.88	2.3	
		7	2690	1.45	0.79	1.40	0.96	1.35	1.1	1.29	1.3	1.24	1.4	1.21	1.6	1.16	1.8	1.11	1.9	1.06	2.1	1.02	2.3	0.97	2.4	
		8	2840	1.55	0.85	1.49	1.00	1.44	1.2	1.39	1.4	1.33	1.5	1.31	1.7	1.24	1.9	1.21	2.1	1.16	2.2	1.10	2.4	1.06	2.6	
		9	3020	1.65	0.92	1.60	1.10	1.54	1.3	1.52	1.4	1.47	1.7	1.42	1.8	1.36	2.0	1.31	2.2	1.27	2.4	1.22	2.6	1.17	2.8	
50	ARH50E	1	1240	1.32	0.58	1.24	0.73	1.17	0.88	1.10	1.0	1.03	1.2	0.96	1.3	0.89	1.5	0.84	1.6	0.77	1.8	–	–	–	–	1.5・2.2・3.7
		2	1390	1.52	0.66	1.44	0.83	1.36	1.0	1.28	1.2	1.21	1.3	1.15	1.5	1.08	1.7	1.03	1.8	0.96	2.0	–	–	–	–	
		3	1680	1.86	0.83	1.78	1.0	1.70	1.2	1.63	1.4	1.56	1.6	1.48	1.8	1.43	2.0	1.38	2.2	1.31	2.4	1.25	2.6	1.17	2.8	
		4	1770	1.97	0.89	1.89	1.1	1.82	1.3	1.74	1.5	1.68	1.7	1.63	1.9	1.56	2.2	1.50	2.4	1.43	2.6	1.36	2.8	1.29	3.0	
		5	1870	2.11	0.95	2.02	1.2	1.94	1.4	1.90	1.6	1.83	1.8	1.76	2.1	1.70	2.3	1.63	2.5	1.56	2.7	1.49	3.0	1.42	3.2	
		6	2100	2.39	1.1	2.31	1.3	2.24	1.6	2.20	1.9	2.13	2.1	2.06	2.4	2.00	2.6	1.92	2.8	1.86	3.1	1.78	3.3	1.71	3.6	
		7	2390	2.77	1.3	2.68	1.6	2.61	1.9	2.53	2.2	2.47	2.4	2.40	2.7	2.32	3.0	2.25	3.3	2.18	3.5	2.11	3.7	–	–	
65	ARH65E	1	1140	1.80	0.75	1.72	0.95	1.64	1.1	1.56	1.3	1.48	1.5	1.40	1.7	1.32	1.9	1.24	2.1	1.16	2.3	1.08	2.5	–	–	2.2・3.7・5.5・7.5
		2	1350	2.24	0.90	2.15	1.1	2.06	1.4	1.98	1.6	1.91	1.8	1.83	2.1	1.75	2.3	1.67	2.5	1.59	2.8	1.51	3.0	1.43	3.2	
		3	1550	2.63	1.0	2.54	1.3	2.46	1.6	2.38	1.8	2.29	2.1	2.22	2.4	2.15	2.6	2.06	2.9	1.98	3.2	1.90	3.4	1.82	3.7	
		4	1770	3.10	1.2	2.99	1.5	2.90	1.8	2.81	2.1	2.73	2.4	2.64	2.8	2.55	3.1	2.48	3.4	2.40	3.7	2.32	4.0	2.25	4.3	
		5	1980	3.50	1.4	3.37	1.7	3.27	2.1	3.19	2.4	3.09	2.8	3.03	3.1	2.94	3.5	2.87	3.8	2.79	4.2	2.71	4.5	2.63	4.8	
		6	2250	3.93	1.6	3.84	2.0	3.77	2.4	3.69	2.8	3.60	3.2	3.52	3.6	3.45	4.0	3.36	4.4	3.29	4.8	3.20	5.2	3.13	5.5	
		7	2400	4.22	1.7	4.14	2.1	4.08	2.5	3.99	3.0	3.90	3.4	3.83	3.8	3.75	4.3	3.67	4.7	3.58	5.1	3.53	5.5	3.42	6.0	
		8	2540	4.53	1.8	4.44	2.3	4.35	2.7	4.26	3.2	4.17	3.6	4.10	4.1	4.02	4.6	3.93	5.0	3.85	5.5	3.77	5.9	3.69	6.4	
80	ARH80E	1	1170	3.27	1.3	3.17	1.7	3.07	2.0	2.97	2.4	2.87	2.7	2.78	3.0	2.68	3.4	2.58	3.7	2.49	4.1	2.39	4.4	2.30	4.7	3.7・5.5・7.5・11
		2	1370	3.93	1.6	3.83	2.0	3.73	2.4	3.63	2.8	3.53	3.2	3.43	3.6	3.34	4.0	3.24	4.4	3.14	4.8	3.04	5.2	2.94	5.6	
		3	1520	4.39	1.8	4.28	2.3	4.18	2.7	4.08	3.2	3.97	3.6	3.88	4.1	3.79	4.5	3.69	5.0	3.59	5.4	3.49	5.9	3.39	6.3	
		4	1620	4.69	2.0	4.59	2.5	4.48	2.9	4.38	3.4	4.29	3.9	4.19	4.4	4.08	4.9	3.98	5.3	3.88	5.8	3.78	6.3	3.68	6.8	
		5	1710	5.02	2.1	4.90	2.6	4.79	3.2	4.68	3.7	4.57	4.2	4.47	4.7	4.37	5.2	4.27	5.7	4.17	6.2	4.07	6.7	3.97	7.2	
		6	1810	5.34	2.3	5.22	2.8	5.11	3.4	5.00	3.9	4.90	4.5	4.80	5.0	4.69	5.5	4.60	6.1	4.50	6.6	4.40	7.1	4.32	7.8	
		7	2010	5.95	2.6	5.84	3.2	5.76	3.8	5.65	4.4	5.54	5.0	5.45	5.7	5.35	6.3	5.24	6.9	5.14	7.4	5.07	8.2	5.00	8.8	
		8	2130	6.31	2.8	6.20	3.5	6.11	4.1	6.01	4.8	5.90	5.4	5.80	6.1	5.70	6.7	5.60	7.3	5.51	8.1	5.44	8.7	5.35	9.4	
		9	2250	6.66	3.0	6.56	3.7	6.46	4.4	6.37	5.1	6.27	5.8	6.16	6.5	6.06	7.1	6.01	7.9	5.93	8.6	5.84	9.3	5.74	10.0	
100	ARH100E	1	1000	4.53	1.5	4.42	2.0	4.29	2.5	4.17	3.0	4.05	3.4	3.93	3.9	3.81	4.4	3.69	4.8	3.57	5.3	3.45	5.8	3.33	6.3	5.5・7.5・11
		2	1110	5.19	1.7	5.04	2.3	4.90	2.8	4.78	3.3	4.65	3.9	4.53	4.4	4.41	4.9	4.29	5.4	4.17	6.0	4.04	6.5	3.93	7.0	
		3	1280	6.04	2.1	5.91	2.7	5.78	3.3	5.65	4.0	5.53	4.6	5.40	5.2	5.29	5.8	5.16	6.4	5.08	7.0	4.99	7.7	4.88	8.4	
		4	1420	6.76	2.4	6.64	3.1	6.52	3.8	6.40	4.5	6.26	5.2	6.14	5.9	6.02	6.5	5.90	7.2	5.79	8.0	5.73	8.7	5.61	9.4	
		5	1550	7.44	2.7	7.32	3.4	7.19	4.2	7.05	5.0	6.93	5.7	6.81	6.5	6.68	7.2	6.56	8.1	6.44	8.8	6.32	9.6	6.20	10.3	
		6	1820	8.73	3.3	8.60	4.2	8.47	5.1	8.34	6.0	8.21	6.9	8.08	7.9	7.98	8.8	7.92	9.7	7.79	10.6	–	–	–	–	

* Efficiency class of 0.4kW motors used for ARH20E/ARH25E blowers are not IE3.

Specifications ARH-E

Q : Air Flow Rate (m³/min)　P : Power Requirements (kW)

Outlet Dia. (mm)	Model	Pulley No.	Rotor Speed (min⁻¹)	10kPa		15kPa		20kPa		25kPa		30kPa		35kPa		40kPa		45kPa		50kPa		55kPa		60kPa		Standard Setting Motor Output (kW)
				Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	
125	ARH125E	1	1150	7.63	2.5	7.44	3.3	7.25	4.0	7.05	4.8	6.85	5.6	6.65	6.3	6.45	7.1	6.35	7.9	6.18	8.7	6.00	9.5	5.85	10.2	7.5・11・15・18.5
		2	1290	8.70	2.9	8.50	3.8	8.30	4.6	8.10	5.5	7.88	6.4	7.70	7.2	7.55	8.2	7.40	9.0	7.25	9.9	7.05	10.8	6.85	11.7	
		3	1390	9.41	3.2	9.21	4.1	9.01	5.1	8.81	6.0	8.61	6.9	8.53	8.0	8.35	8.9	8.16	9.9	7.98	10.8	7.82	11.8	7.64	12.7	
		4	1470	10.0	3.4	9.79	4.4	9.59	5.4	9.38	6.4	9.18	7.3	9.08	8.4	8.94	9.4	8.76	10.4	8.58	11.4	8.40	12.4	8.21	13.4	
		5	1570	10.7	3.7	10.5	4.8	10.3	5.8	10.1	6.9	9.9	8.0	9.87	9.1	9.69	10.2	9.52	11.3	9.33	12.3	9.15	13.4	8.97	14.4	
		6	1730	12.0	4.2	11.8	5.4	11.5	6.5	11.4	7.8	11.2	9.0	11.0	10.2	10.9	11.3	10.7	12.5	10.5	13.7	10.3	14.9	10.1	16.1	
		7	1960	13.8	4.9	13.5	6.2	13.3	7.5	13.2	9.0	13.0	10.4	12.7	11.7	12.5	13.0	12.3	14.4	12.2	15.8	12.0	17.1	11.8	18.4	
	ARH125EA	1	1170	10.0	3.1	9.70	4.1	9.45	5.1	9.20	6.1	8.95	7.1	8.70	8.2	8.45	9.2	8.20	10.2	7.94	11.2	7.68	12.2	–	–	11・15・18.5・22.2
		2	1280	11.0	3.5	10.7	4.6	10.5	5.8	10.2	6.9	10.0	8.0	9.70	9.1	9.50	10.3	9.20	11.4	9.00	12.5	8.70	13.6	–	–	
		3	1400	12.0	4.0	11.7	5.2	11.4	6.4	11.2	7.7	10.9	8.9	10.7	10.1	10.4	11.4	10.1	12.6	9.93	13.8	9.68	15.0	–	–	
		4	1470	12.8	4.3	12.4	5.6	12.1	6.9	11.8	8.2	11.6	9.5	11.3	10.8	11.1	12.1	10.8	13.4	10.6	14.7	10.4	16.1	–	–	
		5	1600	13.7	4.9	13.4	6.3	13.2	7.7	12.9	9.1	12.6	10.5	12.4	11.9	12.1	13.3	11.9	14.7	11.7	16.2	11.4	17.7	–	–	
		6	1740	15.1	5.5	14.7	7.0	14.4	8.6	14.1	10.1	13.8	11.7	13.6	13.2	13.3	15.0	13.1	16.4	12.8	17.9	12.6	19.4	–	–	
		7	1990	17.0	6.8	16.7	8.5	16.4	10.3	16.2	12.1	15.9	13.9	15.8	15.7	15.6	17.5	15.3	19.3	15.0	21.0	–	–	–	–	
	ARH125EF	1	980	13.0	4.8	12.7	6.1	12.5	7.3	12.2	8.5	12.0	9.8	11.8	11.0	11.5	12.2	11.3	13.5	11.0	14.7	10.8	16.0	10.6	17.2	15・18.5・22・30
		2	1060	14.3	5.3	14.1	6.7	13.8	8.0	13.6	9.4	13.3	10.8	13.1	12.1	12.8	13.5	12.6	14.8	12.4	16.3	12.2	17.6	11.9	19.0	
		3	1120	15.2	5.6	15.0	7.1	14.7	8.5	14.5	10.0	14.2	11.4	14.0	12.9	13.7	14.3	13.5	15.9	13.3	17.3	13.0	18.8	12.8	20.2	
		4	1180	16.1	5.9	15.9	7.5	15.6	9.0	15.3	10.6	15.1	12.1	14.8	13.6	14.6	15.3	14.4	16.8	14.2	18.3	14.0	19.9	13.8	21.4	
		5	1290	17.6	6.5	17.3	8.3	17.1	10.0	16.8	11.7	16.5	13.4	16.3	15.0	16.1	16.8	15.9	18.5	15.6	20.2	15.4	21.9	15.2	23.7	
		6	1390	19.1	7.1	18.8	9.0	18.6	10.9	18.4	12.8	18.2	14.6	18.0	16.6	17.8	18.5	17.5	20.3	17.3	22.2	17.0	24.1	16.8	26.0	
150	ARH150E	1	980	13.0	4.8	12.7	6.1	12.5	7.3	12.2	8.5	12.0	9.8	11.8	11.0	11.5	12.2	11.3	13.5	11.0	14.7	10.8	16.0	10.6	17.2	15・18.5・22・30・37
		2	1060	14.3	5.3	14.1	6.7	13.8	8.0	13.6	9.4	13.3	10.8	13.1	12.1	12.8	13.5	12.6	14.8	12.4	16.3	12.2	17.6	11.9	19.0	
		3	1120	15.2	5.6	15.0	7.1	14.7	8.5	14.5	10.0	14.2	11.4	14.0	12.9	13.7	14.3	13.5	15.9	13.3	17.3	13.0	18.8	12.8	20.2	
		4	1180	16.1	5.9	15.9	7.5	15.6	9.0	15.3	10.6	15.1	12.1	14.8	13.6	14.6	15.3	14.4	16.8	14.2	18.3	14.0	19.9	13.8	21.4	
		5	1290	17.6	6.5	17.3	8.3	17.1	10.0	16.8	11.7	16.5	13.4	16.3	15.0	16.1	16.8	15.9	18.5	15.6	20.2	15.4	21.9	15.2	23.7	
		6	1390	19.1	7.1	18.8	9.0	18.6	10.9	18.4	12.8	18.2	14.6	18.0	16.6	17.8	18.5	17.5	20.3	17.3	22.2	17.0	24.1	16.8	26.0	
		7	1480	20.2	7.6	20.0	9.6	19.7	11.6	19.5	13.6	19.3	15.7	19.1	17.7	18.8	19.7	18.6	21.7	18.5	23.8	18.3	25.8	18.0	27.8	
		8	1570	21.4	8.1	21.2	10.3	20.9	12.4	20.6	14.6	20.5	16.8	20.2	19.0	20.0	21.1	19.8	23.3	19.6	25.5	19.4	27.6	19.2	29.8	
		9	1650	22.6	8.6	22.4	11.0	22.1	13.3	21.9	15.6	21.7	17.9	21.5	20.2	21.3	22.6	21.1	24.9	20.9	27.2	20.7	29.5	20.5	31.9	
		10	1770	24.2	9.4	23.9	11.9	23.7	14.4	23.5	17.0	23.2	19.5	23.0	22.0	22.8	24.5	22.6	27.0	22.3	29.5	22.1	32.1	21.9	34.6	
		11	1980	27.1	10.6	26.9	13.5	26.7	16.4	26.4	19.3	26.2	22.3	25.9	25.1	25.6	28.0	25.3	30.9	25.1	33.8	24.8	36.7	–	–	
200	ARH200E	1	1010	24.3	5.7	23.7	8.1	23.1	10.5	22.6	12.9	22.1	15.3	21.6	17.7	21.1	20.1	20.7	22.5	20.3	24.9	19.9	27.3	19.5	29.7	18.5・22・30・37・45・55
		2	1110	26.7	7.2	26.1	9.9	25.5	12.6	25.0	15.3	24.5	18.0	24.0	20.7	23.6	23.4	23.2	26.1	22.8	28.8	22.4	31.5	22.0	34.2	
		3	1260	30.1	8.3	29.5	11.3	28.9	14.3	28.4	17.3	27.9	20.3	27.4	23.3	26.9	26.3	26.5	29.2	26.1	32.1	25.7	35.0	25.3	37.9	
		4	1370	33.0	10.1	32.4	13.3	31.8	16.5	31.3	19.7	30.8	22.9	30.3	26.1	29.8	29.3	29.4	32.5	29.0	35.7	28.6	38.9	28.2	42.0	
		5	1480	35.2	11.2	34.6	14.6	34.0	18.0	33.5	21.4	33.0	24.8	32.5	28.2	32.0	31.6	31.6	35.0	31.2	38.4	30.8	41.8	30.4	45.2	
		6	1570	37.6	12.0	37.0	15.7	36.4	19.4	35.8	23.1	35.2	26.8	34.7	30.5	34.2	34.2	33.7	37.9	33.3	41.5	32.9	45.1	–	–	
		7	1670	40.6	13.1	40.0	17.0	39.4	20.9	38.8	24.8	38.2	28.7	37.6	32.6	37.1	36.5	36.6	40.4	36.1	44.3	–	–	–	–	
		8	1770	44.0	14.4	43.4	18.5	42.8	22.6	42.2	26.7	41.7	30.8	41.2	34.9	40.7	39.0	40.2	43.1	39.8	47.2	–	–	–	–	

Notes: (1) The air flow rate (measured according to JIS B8341) indicates the volume of air on the suction side.
(2) Air flow rate tolerance: ±5%
(3) Blower Rotation Speed is for reference.
(4) Consult us for any requirements not included in the table.

Specifications ARH-EP

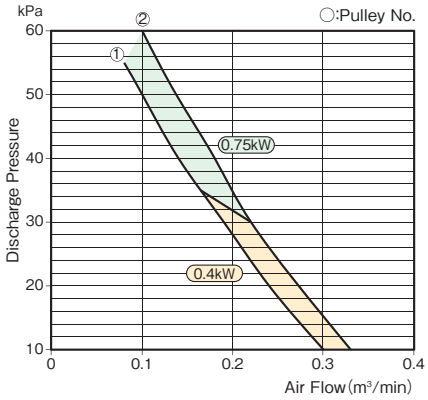
Q : Air Flow Rate (m³/min)　P : Power Requirements (kW)

Outlet Dia. (mm)	Model	Pulley No.	Rotor Speed (min⁻¹)	10kPa		15kPa		20kPa		25kPa		30kPa		35kPa		40kPa		45kPa		50kPa		55kPa		60kPa		Standard Setting Motor Output (kW)
				Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	
50	ARH50EP	5	2370	1.26	0.68	1.21	0.83	1.16	0.97	1.11	1.1	1.06	1.3	1.01	1.4	0.95	1.5	0.92	1.7	0.88	1.8	0.84	2.0	0.80	2.1	1.5・2.2・3.7
		6	2520	1.36	0.73	1.30	0.89	1.25	1.0	1.19	1.2	1.14	1.3	1.09	1.5	1.06	1.7	1.02	1.8	0.97	2.0	0.93	2.1	0.88	2.3	
		7	2690	1.45	0.79	1.40	0.96	1.35	1.1	1.29	1.3	1.24	1.4	1.21	1.6	1.16	1.8	1.11	1.9	1.06	2.1	1.02	2.3	0.97	2.4	
		8	2840	1.55	0.85	1.49	1.0	1.44	1.2	1.39	1.4	1.33	1.5	1.31	1.7	1.24	1.9	1.21	2.1	1.16	2.2	1.10	2.4	1.06	2.6	
		9	3020	1.65	0.92	1.60	1.1	1.54	1.3	1.52	1.4	1.47	1.7	1.42	1.8	1.36	2.0	1.31	2.2	1.27	2.4	1.22	2.6	1.17	2.8	
65	ARH65EP	4	1770	1.97	0.89	1.89	1.1	1.82	1.3	1.74	1.5	1.68	1.7	1.63	1.9	1.56	2.2	1.50	2.4	1.43	2.6	1.36	2.8	1.29	3.0	1.5・2.2・3.7
		5	1870	2.11	0.95	2.02	1.2	1.94	1.4	1.90	1.6	1.83	1.8	1.76	2.1	1.70	2.3	1.63	2.5	1.56	2.7	1.49	3.0	1.42	3.2	
		6	2100	2.39	1.1	2.31	1.3	2.24	1.6	2.20	1.9	2.13	2.1	2.06	2.4	2.00	2.6	1.92	2.8	1.86	3.1	1.78	3.3	1.71	3.6	
		7	2390	2.77	1.3	2.68	1.6	2.61	1.9	2.53	2.2	2.47	2.4	2.40	2.7	2.32	3.0	2.25	3.3	2.18	3.5	2.11	3.7	–	–	
80	ARH80EP	4	1770	3.10	1.2	2.99	1.5	2.90	1.8	2.81	2.1	2.73	2.4	2.64	2.8	2.55	3.1	2.48	3.4	2.40	3.7	2.32	4.0	2.25	4.3	3.7・5.5・7.5
		5	1980	3.50	1.4	3.37	1.7	3.27	2.1	3.19	2.4	3.09	2.8	3.03	3.1	2.94	3.5	2.87	3.8	2.79	4.2	2.71	4.5	2.63	4.8	
		6	2250	3.93	1.6	3.84	2.0	3.77	2.4	3.69	2.8	3.60	3.2	3.52	3.6	3.45	4.0	3.36	4.4	3.29	4.8	3.20	5.2	3.13	5.5	
		7	2400	4.22	1.7	4.14	2.1	4.08	2.5	3.99	3.0	3.90	3.4	3.83	3.8	3.75	4.3	3.67	4.7	3.58	5.1	3.53	5.5	3.42	6.0	
		8	2540	4.53	1.8	4.44	2.3	4.35	2.7	4.26	3.2	4.17	3.6	4.10	4.1	4.02	4.6	3.93	5.0	3.85	5.5	3.77	5.9	3.69	6.4	
100	ARH100EP	6	1810	5.34	2.3	5.22	2.8	5.11	3.4	5.00	3.9	4.90	4.5	4.80	5.0	4.69	5.5	4.60	6.1	4.50	6.6	4.40	7.1	3.68	7.8	5.5・7.5・11
		7	2010	5.95	2.6	5.84	3.2	5.76	3.8	5.65	4.4	5.54	5.0	5.45	5.7	5.35	6.3	5.24	6.9	5.14	7.4	5.07	8.2	3.97	8.8	
		8	2130	6.31	2.8	6.20	3.5	6.11	4.1	6.01	4.8	5.90	5.4	5.80	6.1	5.70	6.7	5.60	7.3	5.51	8.1	5.44	8.7	4.32	9.4	
		9	2250	6.66	3.0	6.56	3.7	6.46	4.4	6.37	5.1	6.27	5.8	6.16	6.5	6.06	7.1	6.01	7.9	5.93	8.6	5.84	9.3	5.00	10.0	

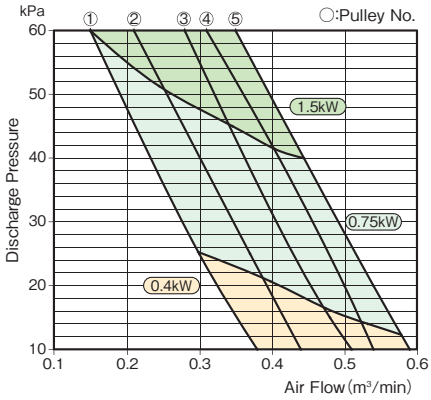
Notes: (1) The air flow rate (measured according to JIS B8341) indicates the volume of air on the suction side.
(2) Air flow rate tolerance: ±5%
(3) Blower Rotation Speed is for reference.
(4) Consult us for any requirements not included in the table.

Performance Curve ARH-E

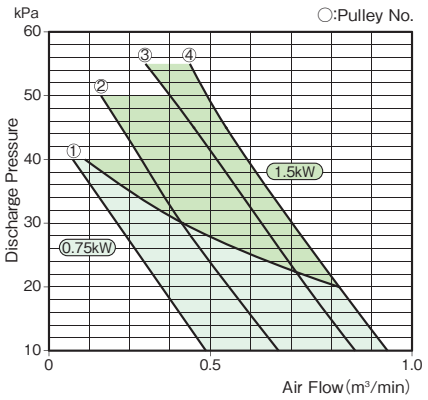
ARH20E



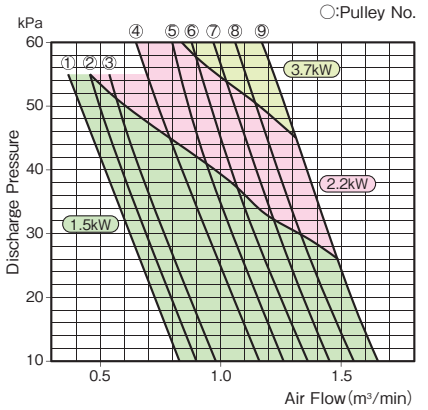
ARH25E



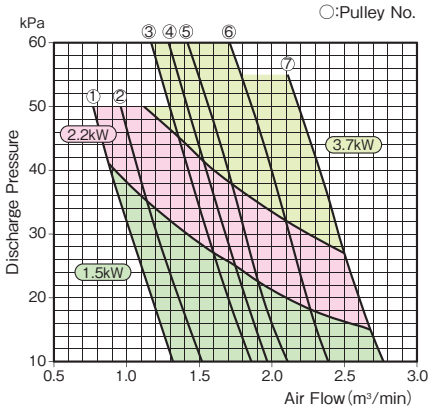
ARH32E



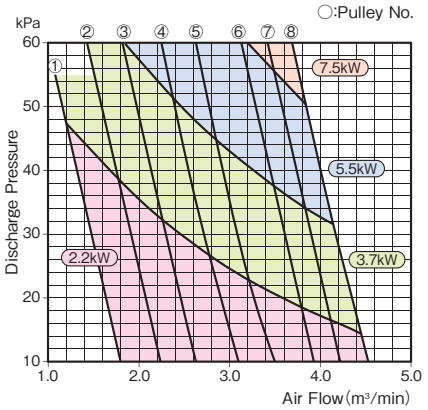
ARH40E



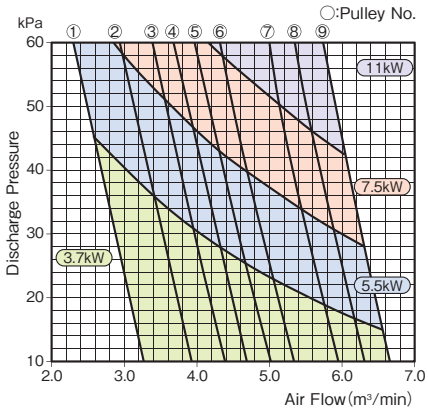
ARH50E



ARH65E



ARH80E



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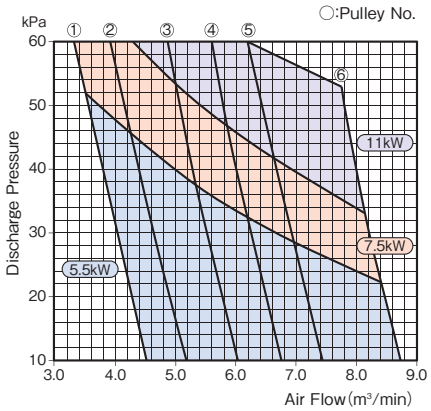
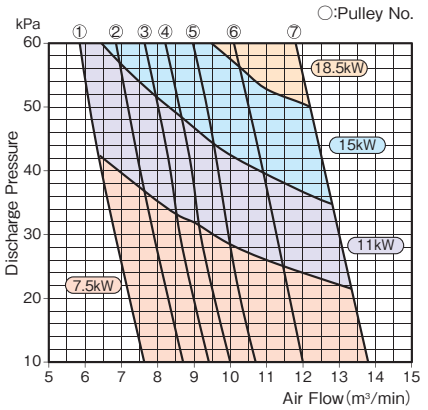


ARH125E



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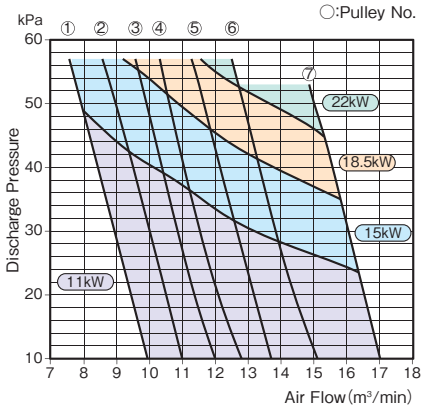

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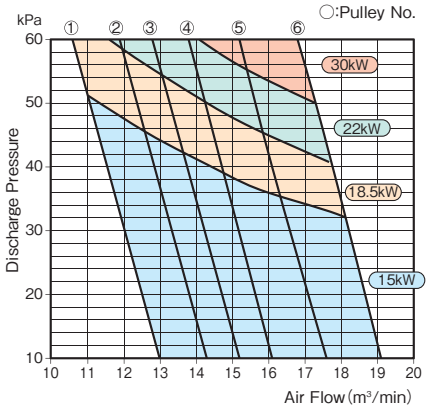
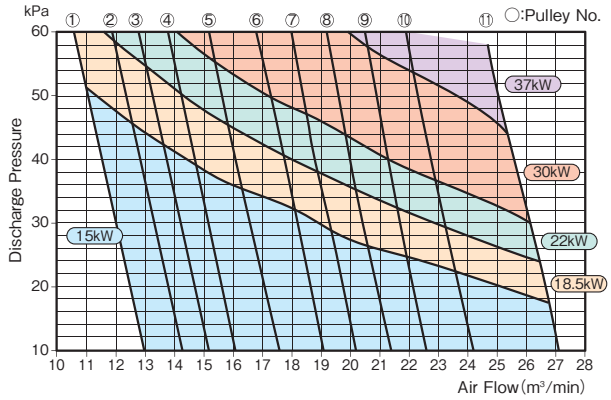
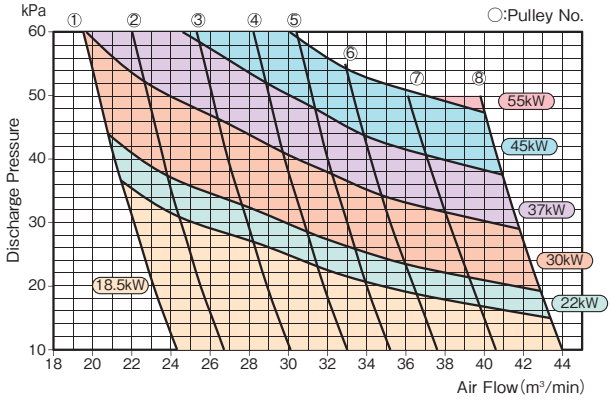


ARH150E

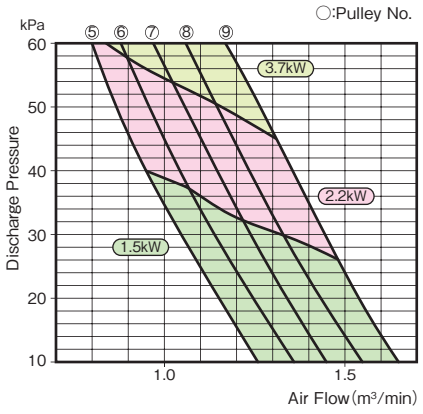


ARH200E

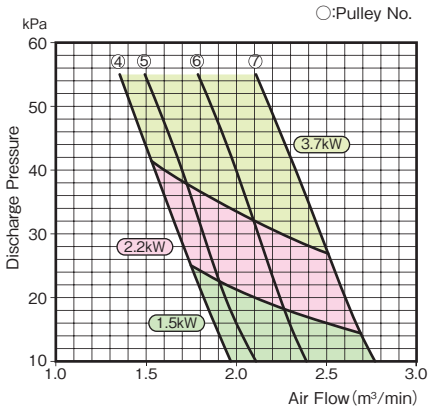


Performance Curve ARH-EP

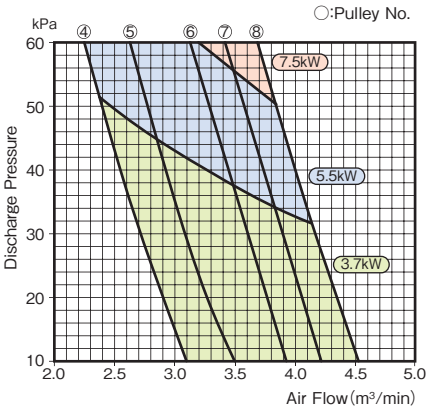
ARH50EP



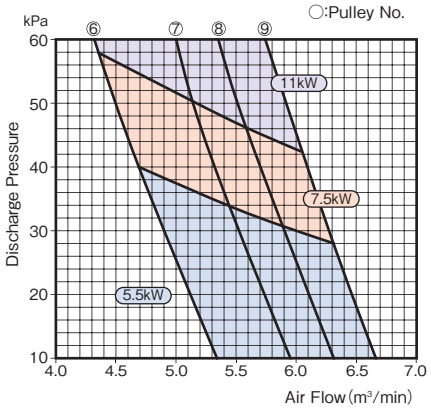
ARH65EP



ARH80EP



ARH100EP



Notes:
(1) The air flow rate indicates the volume of air on the suction side.
(2) Air flow rate tolerance: ±5%
(3) Consult us for any requirements not included in the table.
(4) For indoor use only. Consult us for outdoor applications.
(5) Specifications are subject to change without notice.

Sound Levels

[dB(A)]

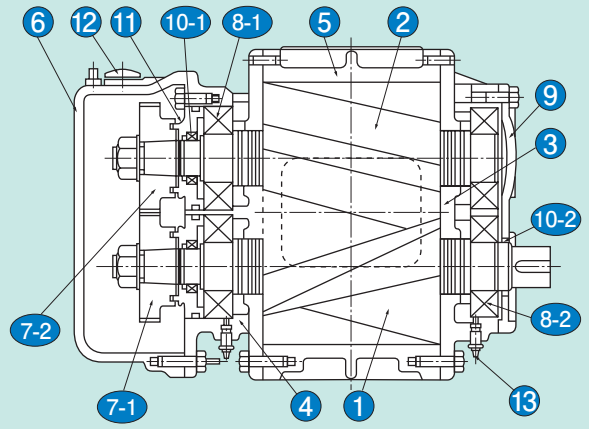
Model	Pulley No.	Rotor Speed (min⁻¹)	Discharge Pressure (kPa)					
			10	20	30	40	50	60
ARH20E	1	1630	58	59	60	61	61	—
	2	1730	60	61	62	63	63	64
ARH25E	1	1940	62	63	63	64	64	65
	2	2180	63	64	65	66	66	67
	3	2440	64	65	66	67	67	68
	4	2580	65	66	67	68	68	69
	5	2730	66	67	68	69	69	70
ARH32E	1	1200	65	66	67	68	—	—
	2	1440	66	67	68	69	70	—
	3	1710	67	68	69	70	71	—
	4	1860	69	70	71	72	73	—
ARH40E	1	1680	66	67	68	69	70	—
	2	1820	67	68	70	71	72	—
	3	1920	69	70	71	71	72	—
	4	2200	70	71	71	71	72	73
	5	2370	70	71	71	71	72	74
	6	2520	70	71	71	72	72	74
	7	2690	71	72	72	73	73	75
	8	2840	71	72	72	73	74	75
	9	3020	71	72	72	73	74	75
ARH50E	1	1240	63	64	66	67	69	—
	2	1390	66	66	68	70	71	—
	3	1680	70	70	71	72	73	74
	4	1770	70	70	71	72	73	74
	5	1870	70	71	72	73	74	74
	6	2100	71	72	73	74	75	75
	7	2390	73	75	75	75	76	—
ARH65E	1	1140	66	67	68	68	69	—
	2	1350	66	67	69	70	71	72
	3	1550	66	67	69	70	72	73
	4	1770	67	69	70	72	74	74
	5	1980	68	70	71	72	74	75
	6	2250	69	71	72	73	74	76
	7	2400	71	72	73	74	75	76
	8	2540	73	74	75	76	76	77
ARH80E	1	1170	70	71	72	73	74	75
	2	1370	72	72	73	74	75	76
	3	1520	73	74	74	76	77	78
	4	1620	73	74	75	76	77	78
	5	1710	74	75	76	76	78	79
	6	1810	75	76	77	78	79	80
	7	2010	76	77	78	79	79	80
	8	2130	77	78	78	79	79	80
	9	2250	77	78	79	79	79	80
ARH100E	1	1000	71	72	73	74	75	76
	2	1110	72	73	74	75	76	77
	3	1280	73	74	75	77	77	79
	4	1420	75	75	76	78	79	80
	5	1550	76	77	78	79	80	80
	6	1820	77	78	79	80	81	—
ARH125E	1	1150	72	73	74	75	75	76
	2	1290	72	73	74	75	76	76
	3	1390	73	74	75	76	77	77
	4	1470	74	74	75	76	77	78
	5	1570	75	76	76	77	78	79
	6	1730	76	77	77	78	79	81
	7	1960	77	78	78	79	81	83
ARH125EA	1	1170	72	74	75	76	77	—
	2	1280	73	75	77	78	79	—
	3	1400	73	75	78	79	80	—
	4	1470	73	75	78	79	80	—
	5	1600	75	76	79	79	80	—
	6	1740	76	77	79	80	81	—
	7	1990	77	78	80	81	82	—
ARH125EF	1	980	72	73	74	75	77	78
	2	1060	72	73	74	75	77	78
	3	1120	73	74	75	76	78	79
	4	1180	74	75	76	78	79	80
	5	1290	75	76	77	79	80	81
	6	1390	76	77	78	80	81	82
ARH150E	1	980	72	73	74	75	77	78
	2	1060	72	73	74	75	77	78
	3	1120	73	74	75	76	78	79
	4	1180	74	75	76	78	79	80
	5	1290	75	76	77	79	80	81
	6	1390	76	77	78	80	81	82
	7	1480	77	78	80	81	82	83
	8	1570	77	79	81	82	83	84
	9	1650	79	80	81	82	83	84
	10	1770	81	82	83	84	85	86
	11	1980	84	85	86	86	87	88
ARH200E	1	1010	79	79	81	82	84	85
	2	1110	79	80	82	84	86	87
	3	1260	79	80	82	84	86	87
	4	1370	79	80	82	84	86	87
	5	1480	81	82	83	85	86	87
	6	1570	82	83	84	85	86	—
	7	1670	84	85	86	87	88	—
	8	1770	85	86	88	89	91	—

[dB(A)]

Model	Pulley No.	Rotor Speed (min⁻¹)	Discharge Pressure (kPa)					
			10	20	30	40	50	60
ARH50EP	5	2370	70	71	71	71	72	74
	6	2520	70	71	71	72	72	74
	7	2690	71	72	72	73	73	75
	8	2840	71	72	72	73	74	75
	9	3020	71	72	72	73	74	75
ARH65EP	4	1770	70	70	71	72	73	74
	5	1870	70	71	72	73	74	75
	6	2100	71	72	73	74	75	75
	7	2390	73	75	75	75	76	—
ARH80EP	4	1770	67	69	70	72	74	74
	5	1980	68	70	71	72	74	75
	6	2250	69	71	72	73	74	76
	7	2400	71	72	73	74	75	76
	8	2540	73	74	75	76	76	77
ARH100EP	6	1810	75	76	77	78	79	80
	7	2010	76	77	78	79	79	80
	8	2130	77	78	78	79	79	80
	9	2250	77	78	79	79	79	80

(1) Typical sound levels [±3db(A)] are measured at a distance of one meter from the blower side. Provided for reference only.
(2) Sound levels vary depending on the base (foundation) condition and piping configuration.
(3) Blower Rotation Speed is for reference.

Sectional View



No.	Name	Material	No.	Name	Material
1	Rotor (driving)	FCD500	8-1	Ball bearing	—
2	Rotor (driven)	FCD500	8-2	Ball bearing	—
3	Bearing plate	FC200	9	Bearing cover	SS400/SPHC/SPCC
4	Bearing case	FC200	10-1	Oil seal	Fluoro rubber
5	Rotor housing	FC200	10-2	Oil seal	NBR
6	Gear case	FC200	11	Seal box	SS400
7-1	Timing gear	SCM415	12	Oil gauge	—
7-2	Timing gear	SCM415	13	Grease nipple	—

Notes:
(1) For Models ARH20E, ARH25E, ARH32E, ARH40E and ARH50EP, bearing plate No.3 and rotor housing No.5 are constructed as one piece.
(2) ARH125EF · 150E · 200E : Rotor is made of FC200 (helical portion) and S45C (shaft portion). ARH20E–125EA : Helical and shaft are manufactured of FCD500 in one piece parts.
(3) Use Shell Stamina Grease RL2 to replenish grease every three months.
(4) Completely replace gear oil with VG 220 gear oil every three months. (The blower is shipped with Shell Omara S2G 220.)
(5) Bearings of ARH20E–125E are special ones. Be sure to replace them with genuine ones upon overhaul. (Never use a commercialize bearings.)

Standard Motors (TEFC indoor type)

Model	Applicable Motor Output (kW)														
	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55
ARH20E	○	○													
ARH25E	○	○	○												
ARH32E		○	○												
ARH40E			○	○	○										
ARH50E			○	○	○										
ARH65E				○	○	○	○								
ARH80E					○	○	○	○							
ARH100E						○	○	○							
ARH125E							○	○	○	○					
ARH125EA								○	○	○	○				
ARH125EF									○	○	○	○			
ARH150E									○	○	○	○	○		
ARH200E										○	○	○	○	○	○

Star-delta starting is available for motors 5.5kW and over.

Model	Applicable Motor Output (kW)					
	1.5	2.2	3.7	5.5	7.5	11
ARH50EP	○	○	○			
ARH65EP	○	○	○			
ARH80EP			○	○	○	
ARH100EP				○	○	○

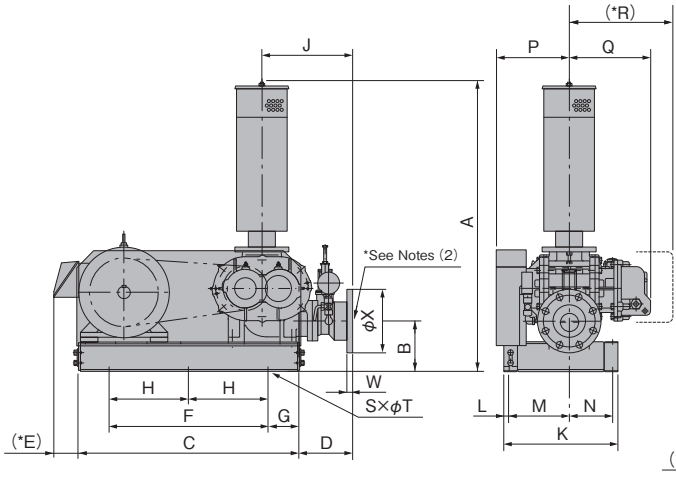
Standard Accessories

- Common Base 1
- V-pulley, V-belt, Belt Cover 1
- Pressure Gauge (160 kPa, with gauge cock and R1/4 setscrew) 1
- Inlet Silencer (with filter) 1
- Safety Valve (with check valve) 1
- IP44-compliant TEFC Motor (indoor type) with base. 1

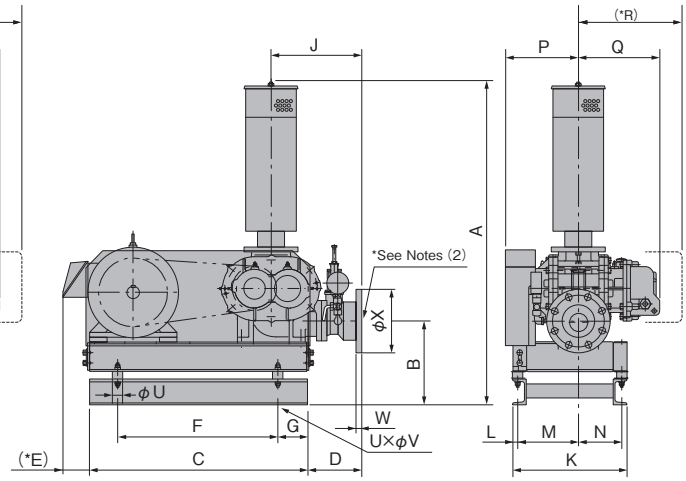
Dimensions

(mm)

Standard Dimensions



Dimensions with anti-vibration base

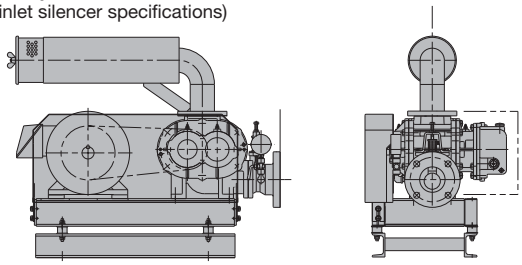


Model		Outlet dia (mm)	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Weight (kg)
ARH20E		20	456 (511)	133 (188)	430	53	69(69)	350	25	–	256	300	13	110	164	124	156	175	4	12	4	12	–	–	22 (26)
ARH25E		25				25	83(83)				228							194							
ARH32E		32	761 (861)	135 (235)	487 (479)	125 (129)	24(28)	340	74 (70)	–	215	290	15	130	130	173	221	–		13		13	20	135	45 (53)
ARH40E		40					48(52)											229						140	
ARH50E		50	828 (928)	137 (237)	556 (548)	120 (124)	44 (48)	400	78 (74)	–	207	330		175	125	202	228	–						155	70 (79)
ARH65E		65	967 (1,066)	147 (246)	636 (628)	138 (142)	93 (97)	460	88 (84)	–	245			174	126	212	234	293					22	175	100 (111)
ARH80E	3.7~7.5kW	80	1,029 (1,127)	155 (254)	704 (696)	164 (168)	99 (103)	540	82 (78)	–	294	360		172	158	209	247	291						185	140 (152)
	11kW		1,162 (1,115)	143 (242)	722 (714)		115 (119)		91 (87)	270		440		165	245	219		417							145 (160)
ARH100E		100	1,117 (1,216)	150 (249)		151 (155)	122 (126)				281			221	189	288	289	361						210	170 (184)
ARH125E		125	1,297 (1,396)	193 (292)	788 (780)	266 (270)	164 (168)	700	44 (40)	350	411	470	20	234	196	372	395	–			6	14	24	250	280 (295)
ARH125EA		125	1,324 (1,423)		788	260	217 (217)	710	40	355		520		265	215	390	435	–	6	14		14			315 (332)
ARH125EF		125	1,695 (1,793)	205 (303)	980 (976)	238 (240)	195 (197)	800	53 (51)	400	491	570		270	260	370	447	490							580 (598)
ARH150E		150				298 (300)					551												26	280	590 (608)
ARH200E		200	1.669 (1,867)	274 (472)	1,100 (1,250)	370 (290)	161 (81)	900	100 (180)	450	560	700		406	254	511 (521)	566	–		18.5		18.5		330	800 (895)

Model		Outlet dia (mm)	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Weight (kg)
ARH50EP		50	761 (861)	135 (235)	487 (479)	120 (124)	48 (52)	340	74 (70)	–	210	290	15	130	130	173	221	229	4	13	4	13	16	155	45 (53)
ARH65EP		65	828 (928)	137 (237)	556 (548)	125 (129)	44 (48)	400	78 (74)	–	212	330		175	125	202	228	–						175	70 (79)
ARH80EP		80	967 (1,066)	147 (246)	636 (628)	153 (157)	93 (97)	460	88 (84)	–	260			174	126	212	234	293					18	185	100 (111)
ARH100EP	5.5, 7.5kW	100	1,029 (1,127)	155 (254)	704 (696)	164 (168)	99 (103)	540	82 (78)	–	294	360		172	158	209	247	291						210	140 (152)
	11kW	100	1,017 (1,115)	143 (242)	722 (714)		115 (119)		91 (87)	270		440		165	245	219		417	6						145 (160)

Notes:
(1) The ARH20E/25E safety valve discharge outlet is a tubular parallel female thread rather than a flange.
(2) Bolt hole diameter and pitch of the discharge flange comply with JIS B2239 : 10K flange.
(3) This standard motor is Japanese-brand totally enclosed fan cooled motor (indoor type IP44). Use of a special motor or non-Japanese brand may require a different base size.
(4) For indoor use only. Consult us regarding outdoor applications.
(5) Dimensions of the blower with the anti-vibration base are shown in parentheses. * The weight excludes the weight of the motor and motor base.
(6) *E and *R dimensions are the maximum dimensions when equipped with the largest size of standard motor.
(7) L-type inlet silencer specifications (option) for low ceilings are also available.

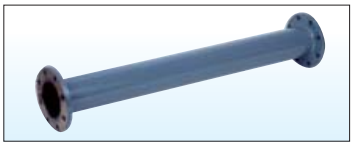
Setup example
(L-type inlet silencer specifications)

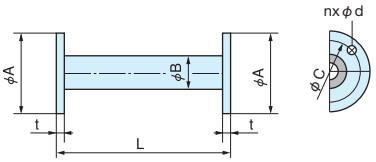


Optional Accessories

●Outlet Silencer

●Type A Outlet Silencer

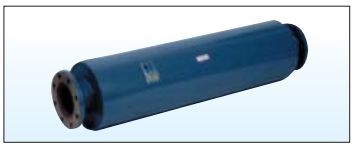


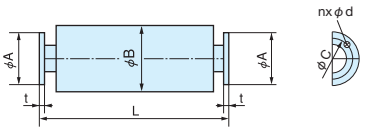


Nominal Diameter(mm)	L	A	B	C	n	d	t	Weight (kg)
20	380	100	43	75	4	15	14	2.5
25		125		90		19		4.0
32	450	135		100			16	4.5
40		140	49	105				4.8
50	560	155	61	120				6.5
65	610	175	76	140			18	9.0
80	770	185	89	150	8			11
100	1,060	210	114	175				18
125	1,160	250	140	210		23	20	27

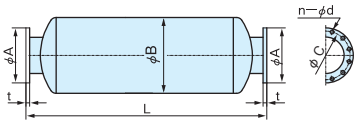
- Use the blower under discharge pressure less than 60 kPa.
- Outer diameter, hole pitch and hole diameter of discharge flange comply with JIS B2239 : 10K flange.
- Material··· Standard : Steel
  Option : Stainless Steel

●Type B Outlet Silencer





Nominal Diameter 20～150mm

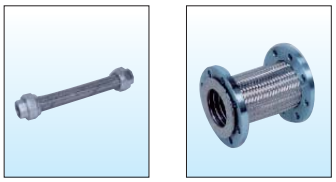


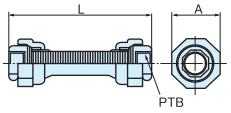
Nominal Diameter 200mm

Nominal Diameter(mm)	L	A	B	C	n	d	t	Weight (kg)
20	380	100	102	75	4	15	14	4.6
25		125		90		19		5.6
32	450	135	140	100			16	8.1
40		140		105				8.4
50	560	155		120				11
65	610	175	170	140			18	15
80	770	185	210	150	8			22
100	1,060	210	250	175				39
125	1,160	250	290	210		23	20	59
150	1,110	280	350	240			22	69
200	1,440	330	462	290	12			95

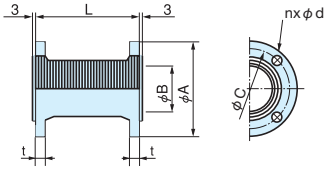
- Outer diameter, hole pitch and hole diameter of discharge flange comply with JIS B2239 : 10K flange.

●Flexible joint





Nominal Diameter 20·25 mm



Nominal Diameter 32～200mm

Nominal Diameter(mm)	L	A	B	C	n	d	t	Weight (kg)
20	300	47	Rc3/4	—	—	—	—	1
25		56	Rc1	—	—	—		
32		135	41	100	4	19	16	4
40		140	46	105				
50		155	54	120				5
65	230	175	67	140	8		18	6
80		185	79	150				
100		210	104	175				8
125	300	250	129	210		23	20	12
150		280	152	240			22	15
200		330	203	290	12			18

- Consult us for a nominal diameter of 250.
- Outer diameter, hole pitch and hole diameter of discharge flange comply with JIS B2239 : 10K flange.

●Other Options

Motor
- Totally enclosed fan-cooled outdoor type
- Tropical climate specification

Belt Cover
- V-belt inspection window

Pressure Gauge
- Pressure gauge stand

Rubber Vibration Isolator

Gate Valve

Vertical Outlet Silencer

Packing Size

■ARH-S／ARH-E

(mm)

Model		Length L	Width W	Height H
ARH20S / 20E ARH25S / 25E		520	460	300
ARH32S / 32E ARH40S / 40E		750	530	800
ARH50S / 50E		850	610	820
ARH65S / 65E		990	630	890
ARH80S / 80E	3.7～7.5kW	1,080	700	930
	11kW	1,200	790	1,000
ARH100S / 100E		1,200	790	1,000
ARH125S / 125E		1,280	910	1,150
ARH125SA / 125EA		1,280	970	1,150
ARH125SF / 125EF		1,520	960	1,310
ARH150S / 150E		1,520	960	1,310
ARH200S / 200E		1,780	1,230	1,300

■ARH-SP／ARH-EP

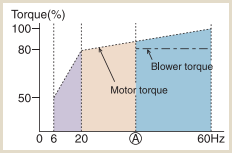
(mm)

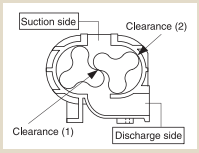
Model		Length L	Width W	Height H
ARH50SP / 50EP		750	530	800
ARH65SP / 65EP		850	610	820
ARH80SP / 80EP		990	630	890
ARH100SP / 100EP	3.7～7.5kW	1,080	700	930
	11kW	1,200	790	1,000

Selecting a VFD-Controlled Model

VFD control is available for all models. This feature allows precise control of the air flow rate to accommodate water treatment volumes that vary over season and time.

Operation at excessively slow speeds with the VFD may allow high-temperature compressed air to leak into the suction side through Clearance (1) between rotors and Clearance (2) between rotors and housing wall, as illustrated below. This may result in a temperature rise that exceeds the bearing temperature limit, resulting in a blower failure.





Notes:Ⓐ indicates the lower limit of the frequency control range based on the blower temperature rise.

1) Blower torque remains constant when the motor speed is reduced because of the blower's constant-torque characteristic.
2) When selecting a VFD, ensure the rated output of the VFD is equal to or greater than the rated output of the motor.
3) The control range of the VFD starts at 60 Hz regardless of the frequency of the power source. The control range depends on several factors including the application, motor output, and model.

Combination 1 General-purpose motor and VFD (V/F control)

Blower application (a) (Fig. 1)
The blower is usable within the frequency range from Ⓐ to 60 Hz because the blower torque is less than the motor torque. The blower is not usable if the frequency falls below Ⓐ because the blower temperature will rise.

Blower application (b) (Fig. 2)
The blower torque exceeds the motor torque when the frequency is below Ⓑ. The blower is usable within the frequency range from Ⓑ to 60 Hz.

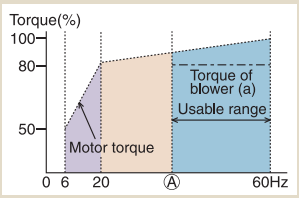


Figure 1 Blower(a) Frequency(Hz)

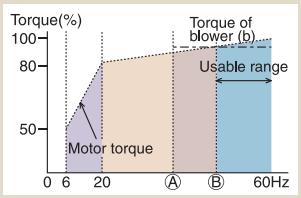


Figure 2 Blower (b) Frequency(Hz)

Combination 2 General-purpose motor and VFD (Vector control)

Both blowers (a) and (b) are usable within the range from Ⓐ to 60 Hz. The blowers are not usable below Ⓐ because the blower temperature will rise.

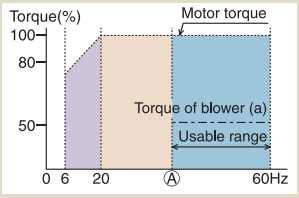


Figure 3 Blower(a) Frequency(Hz)

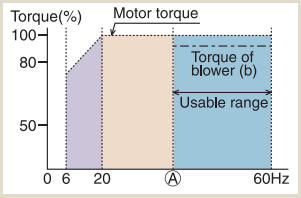


Figure 4 Blower (b) Frequency(Hz)

Consult us if you require VFD control. We can provide an VFD calculation sheet.

Differences between ARH-E type equipped with IE3 motor and type equipped with IE1 motor
(Points to note if replacing your previous model with the IE3 motor)

Significant differences in motor size and weight

- Motor outer dimensions: The frame size of IE3 motor does not differ from the IE1 motor, so it can be installed to the blower with IE1 motor. However, with the IE3 motor, the diameter and length of motor both tend to be larger. Because of this, the outer dimensions will be larger for some models, and so check the matching dimensions for cables, etc. and make sure that there is no interference with surrounding equipment during installation.
- Motor weight: As mentioned above, the motor size is larger, and so the weight of the motor has also increased as a result. (However, there is no need to reselect the anti vibration rubbers for ShinMaywa helical blowers as a result of this weight increase.)

Starting current increased

- With the IE3 motor, the starting current tends to be larger. As a result of this, it will be necessary to inspect equipment such as circuit protector to make sure they are appropriate. In addition, it is also possible that the capacity of the electromagnetic switch may need to be changed when replacing the motor.

Increase in rated operating speed of motors

- With the IE3 motor, the rated operating speed will increase. When replacing an IE1 motor with an IE3 motor, the air volume and output power increase as a result of the increased operating speed. Customers using the motor at around the maximum rated current (95% or more of the rated current), and looking into replacing their motors should notify ShinMaywa, as there is a possibility that excessive power may be generated as a result of the increased air volume.

Comparison of starting current values between ShinMaywa typical IE1 and IE3 motors

5.5kW (50Hz/60Hz)	150/131 ▶ 203/167
7.5kW (50Hz/60Hz)	206/180 ▶ 261/217

* For details, contact to your dealer or ShinMaywa.

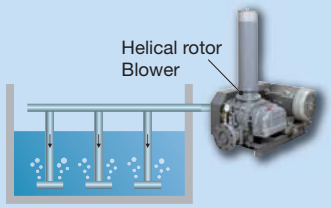
Application example

• Examples of use

[MODELS USED]
ARH125S x 3 units

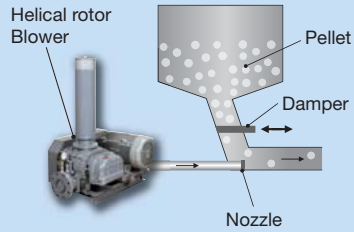
Used for aeration at sewage treatment plant

Water treatment



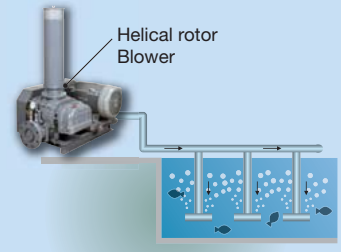
Used for water purification and for stirring precipitates at water treatment plants.

Transport of granules



Used for pneumatic transport of pelletized raw materials such as vinyl chloride and polyethylene. (Suction type is also available)

Oxygenation of aquaculture ponds



Used for oxygenation and stirring of the water in aquaculture ponds for various types of fish and shellfish. They are also used for aquariums and fish tanks.

A Variety of Uses

Water treatment
- Aeration at sewage treatment plants
- Aeration of purifying tanks in condominiums, etc.
- Aeration of wastewater from food processing plants
- Aeration of wastewater from livestock farms

Cultivation
- Oxygen supply in aquariums, culture ponds, etc.

Pneumatic transportation
- Transportation of cement powder, etc.
- Transportation of wheat, soybeans, etc.
- Transfer of dust
- Collection of dust

Other
- Foaming of water in baths and swimming pools.

Specifications and dimensions are subject to change without notice.

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http://www.shinmaywa.co.jp/english/products/pump.htm

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