

ShinMaywa



WWW.PROWINNERBANGKOK.CO.TH

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 blower, incorporating low noise technology.

Our outstanding technology is put to use in meeting the high-level needs of industry, at the same time giving consideration to environmental problems such as noise.

Comprehensive low-noise design

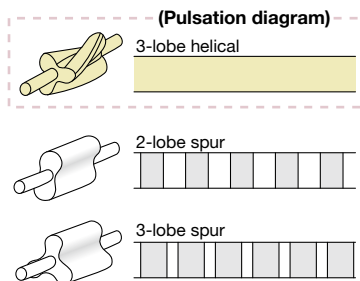
The design suppresses vibration in the low-frequency range where blower noise is generated.



Why is ShinMaywa blower noise suppressing successful? The reason is as follows. The main sources of blower noise include **pulsating rotor noise**, **gear meshing** and **bearings**. Of particular note is the pulsating noise (roots noise) generated by the air which is displaced by the rotors. At ShinMaywa we have been successfully in using a **3-lobe helical rotor** to greatly reduce the level of this pulsating noise. Furthermore, ShinMaywa sound suppressing technology 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 arranged in a spiral shape; they displace the air continuously, thus preventing the generation of a pulsating noise.



Q Dose the small gap between the spiral rotors and the rotor housing, is high-precision machining is required?

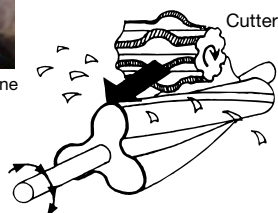
A A high-precision machine called a milling machine for machining the screws and the gears is used; the rotors are manufactured with a high degree of precision and reliability.



● Rotor processing using a milling machine

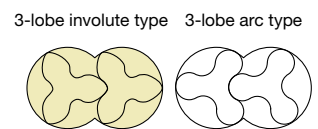
[Processing method]

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



Q Do twisted rotors mean less air blown in each rotation?

A The tips of the rotor teeth used by ShinMaywa are tapered. This means that, even though the rotors are twisted, more air is blown per rotation than with spur type blowers.

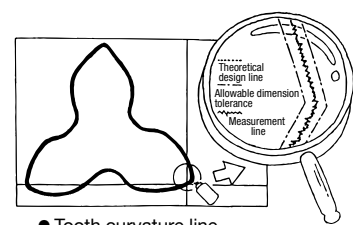


Q How are the twist of the precision rotors and the curve of the teeth inspected?

A The shape of the rotor teeth is inspected using 3-dimensional measuring equipment. Measurement results are output to a plotter. Meticulous 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

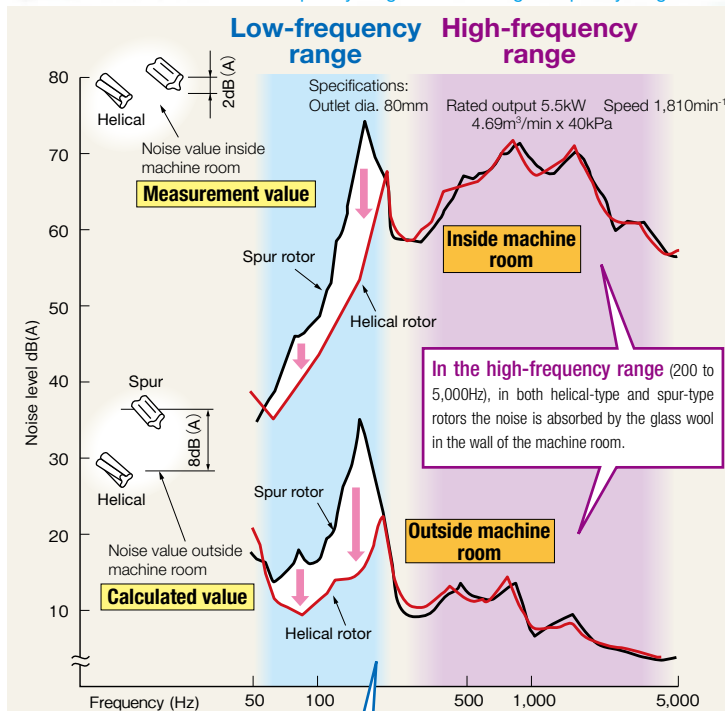
Low-frequency noise is expensive to reduce, in comparison with spur-type blowers, our design reduces the noise inside machine room by 2dB and outside the machine room by about 8 dB.

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 low-frequency range (50 to 160Hz), it can be seen that the noise volume is higher for spur-type than for helical-type. This is because noise in the low-frequency range is not absorbed by the glass wool and leaks outside the machine room. The low-noise design of ShinMaywa helical blowers significantly reduces the amount of noise output in the low-frequency range, which is the main cause of noise. This technological ability makes for a large difference in the level 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 by a labyrinth seal which is effective in preventing oil leakage.

Easy maintenance

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

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 Drive (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 range within which motor speed can be controlled depends upon blower operating conditions. When using a VFD with the blower, consult your nearest dealer.)

※The VFD used should be a constant torque type.

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

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		Rated output of standard motor (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		Rated output of standard motor (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	
		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	
150	ARH150S	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	15·18.5·22·30·37
		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	—	—	
	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	
		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 (measured in accordance with JIS B8341) indicates the volume of air on the suction side.
(2) Tolerance of air flow: ±5%.
(3) Rotor speed is provided for reference.
(4) Please contact us regarding any requirements not included in this table.

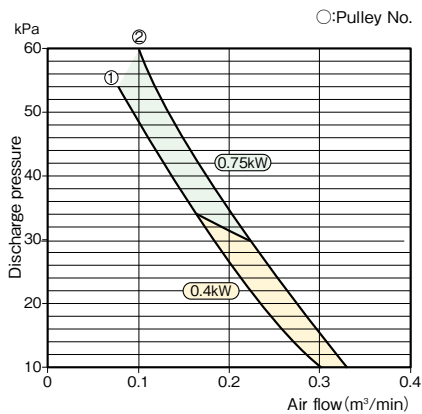
Specifications ARH-SP

Q : Air flow rate (m³/min) P : Power requirements (kW)

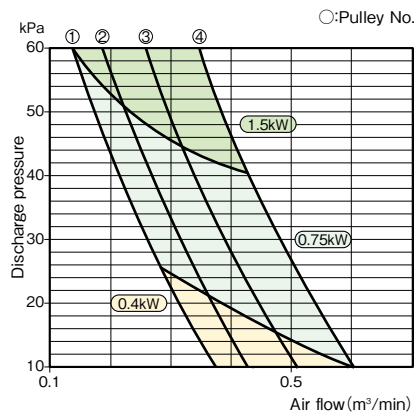
Outlet dia. (mm)	Model	Pulley No.	Rotor speed (min ⁻¹)	10kPa		15kPa		20kPa		25kPa		30kPa		35kPa		40kPa		45kPa		50kPa		55kPa		60kPa		Rated output of standard motor (kW)
				Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	
50	ARH50SP	5	2380	1.25	0.83	1.19	0.97	1.13	1.12	1.08	1.19	1.03	1.28	0.99	1.39	0.95	1.50	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	
100	ARH100SP	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	5.5·7.5·11
		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	
		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	

Performance Curves ARH-S

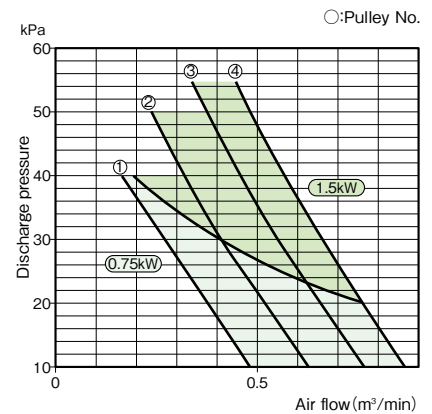
ARH20S



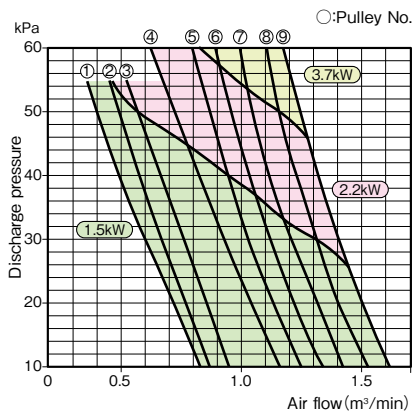
ARH25S



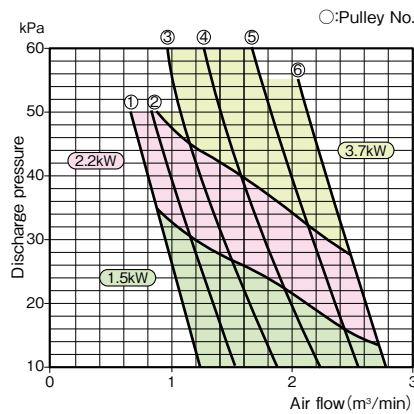
ARH32S



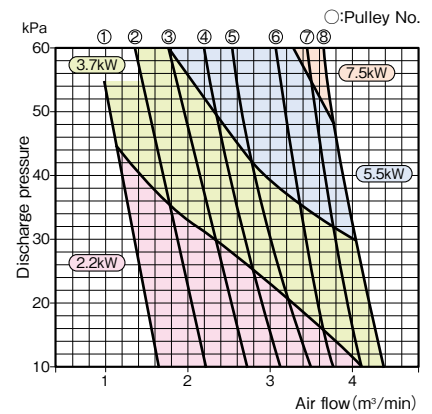
ARH40S



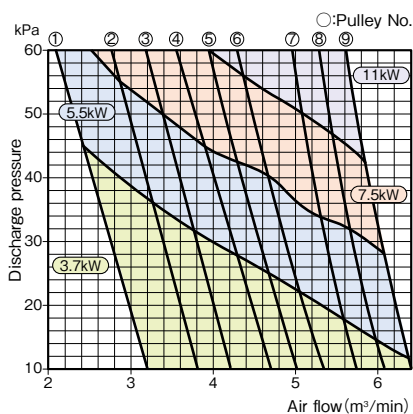
ARH50S



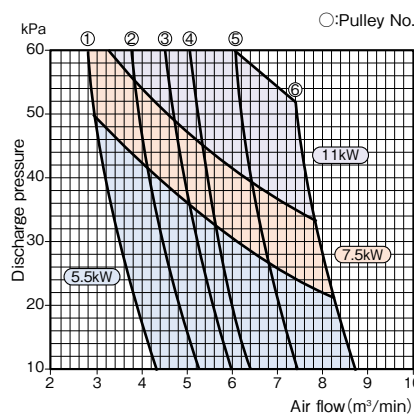
ARH65S



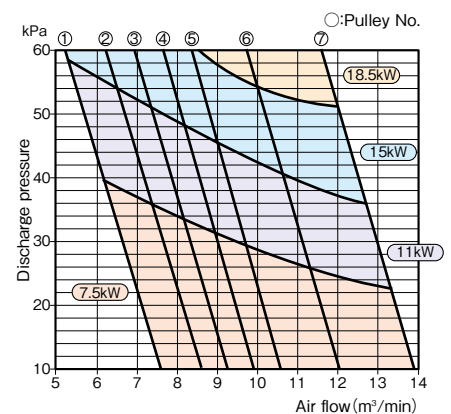
ARH80S



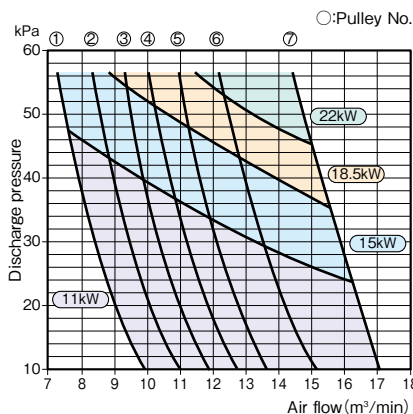
ARH100S



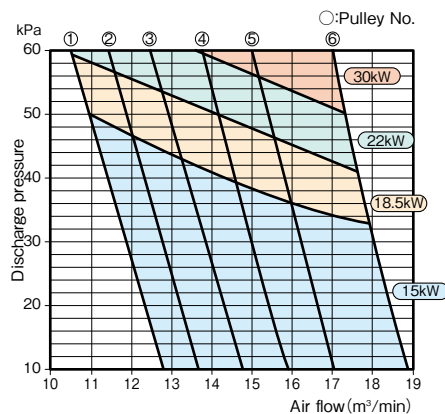
ARH125S



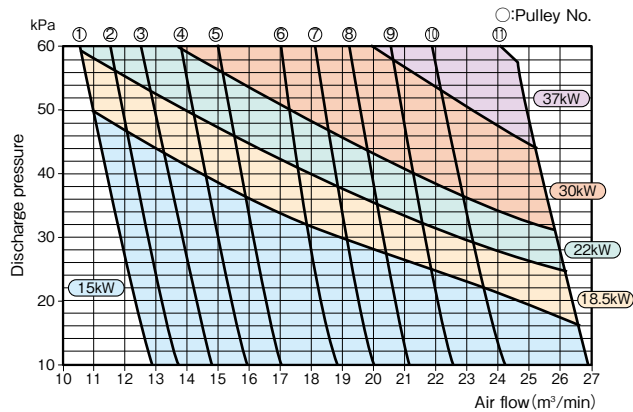
ARH125SA



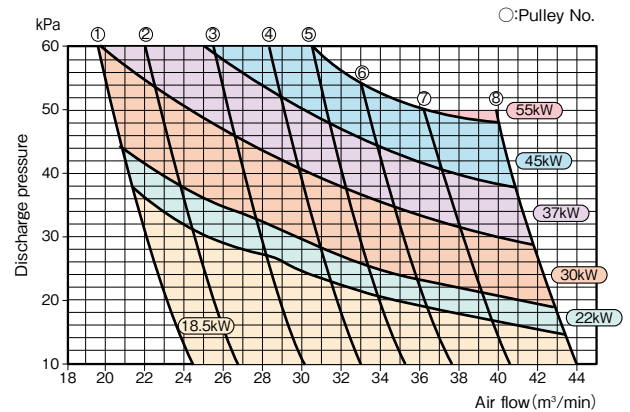
ARH125SF



ARH150S

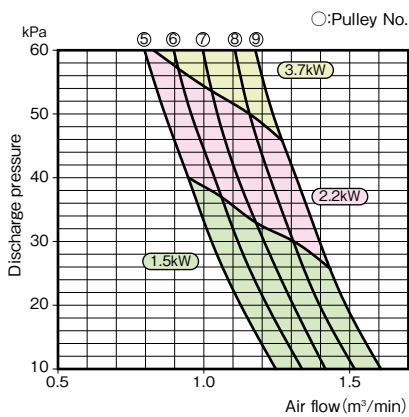


ARH200S

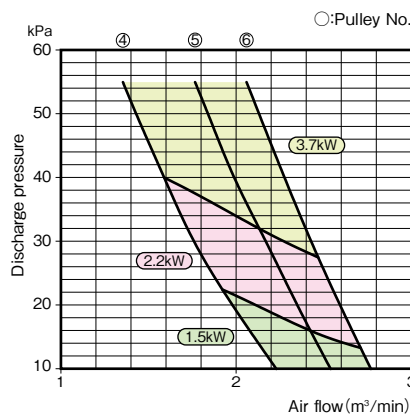


Performance Curves ARH-SP

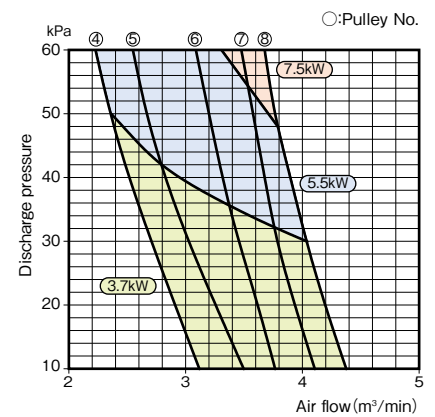
ARH50SP



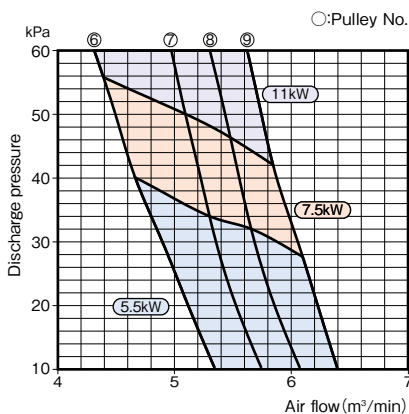
ARH65SP



ARH80SP



ARH100SP



Notes:

- (1) The air flow indicates a flow rate on the suction side.
- (2) Tolerance of air flow: $\pm 5\%$.
- (3) Please contact us regarding any requirements not included in these charts.
- (4) For indoor use only. Please contact us regarding outdoor applications.
- (5) Specifications are subject to change without notice.
- (6) Japanese regulations prevent ShinMaywa supplying IE1 / IE2 motors. Please procure these separately.

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	—
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	—

• Star-delta starting is available for motors 5.5kW and over.
• Please procure IE1/IE2 motor separately.

[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	—
	5	2080	70	71	72	73	74	—
	6	2230	72	74	74	74	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 side of the blower.
(2) Sound levels vary depending on the condition of the base (foundation) and piping configuration.
(3) Rotor speed is provided for reference.

Sectional View

No.	Name	Material	No.	Name	Material
1	Rotor (driving)	See Note (2)	8-1	Ball bearing	—
2	Rotor (driven)		8-2	Ball bearing	—
3	Bearing plate	Gray iron casting (FC200)	9	Bearing cover	Mild steel
4	Bearing case		10-1	Oil seal	Fluororubber (FKM)
5	Rotor housing		10-2	Oil seal	Acrylonitrile butadiene rubber (NBR)
6	Gear case	Chromium molybdenum steel	11	Seal box	Structural steel
7-1	Timing gear		12	Oil gauge	—
7-2	Timing gear		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 gray iron casting (FC200) (helical portion) and carbon steel (shaft portion).
ARH20S-125SA : Helical and shaft are manufactured of spheroidal graphite iron casting (FCD500) in one-piece parts.
(3) Replenish grease every three month using Shell Stamina Grease RL2.
(4) Completely replace gear oil every three months using VG 220 gear oil.
(The blower is shipped with Shell Omara S2G 220.)
(5) The ARH20S-125S uses specific bearings. During overhaul, be sure to replace them with genuine bearings. (Never use generic-brand bearings.)

Standard Motors (TEFC indoor type, IE1/IE2)

Model	Rated output of applicable motor (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										○	○	○	○	○	○	

Model	Rated output of applicable motor (kW)					
	1.5	2.2	3.7	5.5	7.5	11
ARH50SP	○	○	○			
ARH65SP	○	○	○			
ARH80SP			○	○	○	
ARH100SP				○	○	○

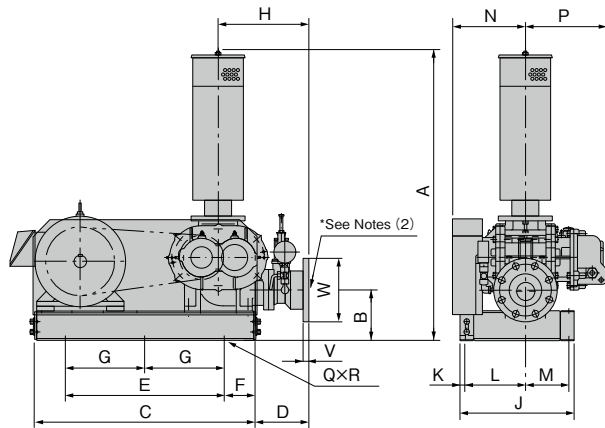
Standard Accessories

- 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

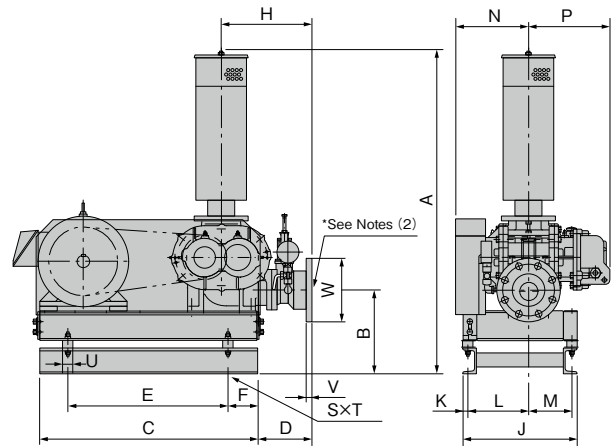
Dimensions

(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 (25)	350	25	—	256 (228)	300	13	110	164	124	156	4	12	4	12	20	—	—	22 (26)										
ARH25S	25	741 (841)	135 (235)	487 (479)	125 (129)	340	74 (70)	—	215	290	15	130	130	173	221		13			13	13	22	25	20	135 (140)	45 (53)							
ARH32S	32	809 (909)	137 (237)	556 (548)	120 (124)	400	78 (74)	—	207	330		175	125	202	228										14	14	14	14	40	26	280	155 (179)	70 (79)
ARH40S	40	948 (1,047)	147 (246)	636 (628)	138 (142)	460	88 (84)	—	245	440		174	126	212	234																	175 (185)	100 (111)
ARH50S	50	1,009 (1,108)	155 (254)	704 (696)	164 (168)	540	82 (78)	—	294	360	20	172	158	209	247	6	14	6	14	40	26	280	140 (152)										
ARH65S	65	995 (1,094)	143 (242)	722 (714)	151 (155)		91 (87)	270 (—)				281	165	245									219	221	189	288	289	145 (160)					
ARH80S	3.7~7.5kW	80	1,008 (1,197)	150 (249)	788 (780)	266 (270)	700	44 (40)	350	411		470	234	196	372								395	6	14	6	14	40	26	280	170 (184)		
	11kW																														995 (1,094)	143 (242)	722 (714)
ARH100S	100	1,008 (1,197)	150 (249)	788 (780)	266 (270)	700	44 (40)	350	411	470	234	196	372	395	221	189	288	289	210	170 (184)													
ARH125S	125	1,297 (1,396)	193 (292)	788 (780)	266 (270)	710	40	355	491	570	234	196	372	395	265	215	390	435	24	250	280 (295)												
ARH125SA		1,323 (1,422)		788	260	710	40	355			265	215	390	435	265	215	390	435			315 (332)												
ARH125SF		1,695 (1,793)		205 (303)	980 (976)	238 (240)	800	53 (51)			400	270	260	370	447	270	260	370			447	580 (598)											
ARH150S		150		1,668 (1,866)	205 (303)	980 (976)	298 (300)	800			53 (51)	400	551	570	270	260	370	447			270	260	370	447	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	566	18.5	18.5	90	330	800 (895)													

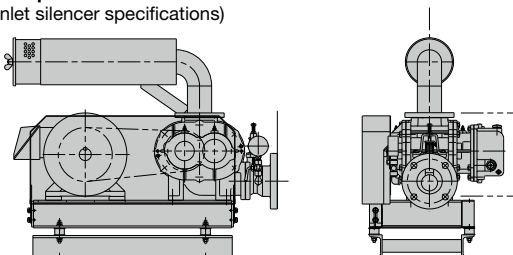
Model	Outlet dia (mm)	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	Weight (kg)
ARH50SP	50	741 (841)	135 (235)	487 (479)	120 (124)	340	74 (70)	—	210	290	15	130	130	173	221	4	13	4	13	25	16	155 (179)	45 (53)
ARH65SP	65	809 (909)	137 (237)	556 (548)	125 (129)	400	78 (74)	—	212	330		175	125	202	228							175 (185)	70 (79)
ARH80SP	80	948 (1,047)	147 (246)	636 (628)	153 (157)	460	88 (84)	—	260	440		174	126	212	234							185 (210)	100 (111)
ARH100SP	5.5, 7.5kW	1,009 (1,108)	155 (254)	704 (696)	164 (168)	540	82 (78)	—	294	570		172	158	209	247	6	13	4	13	35	18	210 (280)	140 (152)
ARH100SP	11kW	995 (1,094)	143 (242)	722 (714)	151 (155)	800	91 (87)	270 (—)	281	700	20	165	245	219	247							210 (280)	145 (160)

Notes:

- (1) The safety valve discharge outlet on the ARH20S and 25S have Rc3/4 and G1 female thread respectively, rather than a flange.
- (2) Outer diameter, hole pitch and hole diameter of flange comply with JIS B2239 : 10K.
- (3) For indoor use only. Please contact us regarding outdoor applications.
- (4) Dimensions of the blower with the anti-vibration base are shown in parentheses. * Weight dose not include the weight of the motor and motor base.
- (5) L-type inlet silencer specifications (option) for low ceilings are also available.
- (6) Dimensions are with a Japanese-brand motor (previously IE1/IE2) 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		Rated output of standard motor (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	—	—	—	—	

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		Rated output of standard motor (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	
		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	
150	ARH150E	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	15·18.5·22·30·37
		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	—	—	
		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	
		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	—	—	—	—	
200	ARH200E	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 (measured in accordance with JIS B8341) indicates the volume of air on the suction side.
 (2) Tolerance of air flow: ±5%.
 (3) Rotor speed is provided for reference.
 (4) Please contact us regarding any requirements not included in this table.

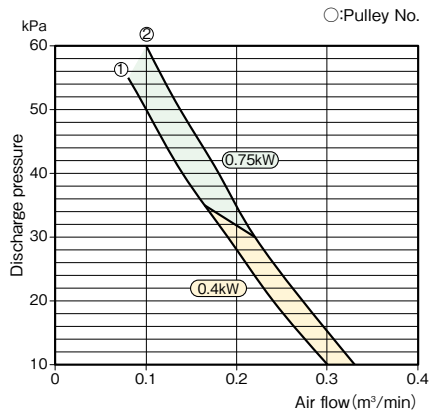
Specifications ARH-EP

Q : Air flow rate (m³/min) P : Power requirements (kW)

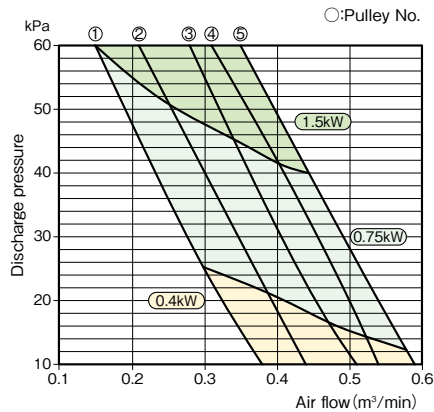
Outlet dia. (mm)	Model	Pulley No.	Rotor speed (min ⁻¹)	10kPa		15kPa		20kPa		25kPa		30kPa		35kPa		40kPa		45kPa		50kPa		55kPa		60kPa		Rated output of standard motor (kW)
				Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	
50	ARH50EP	5	2370	1.26	0.68	1.21	0.83	1.16	0.97	1.11	1.1	1.06	1.3	1.01	1.4	0.95	1.5	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	—	—	1.5·2.2·3.7
		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	—	—	
		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	—	—	
		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	

Performance Curves ARH-E

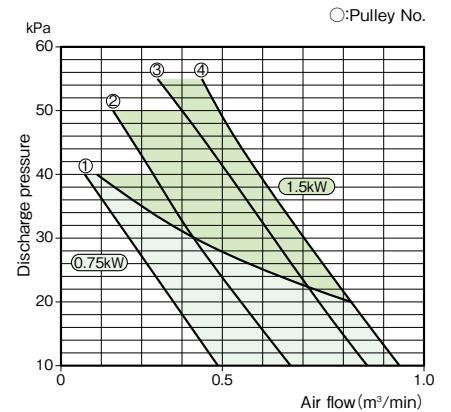
ARH20E



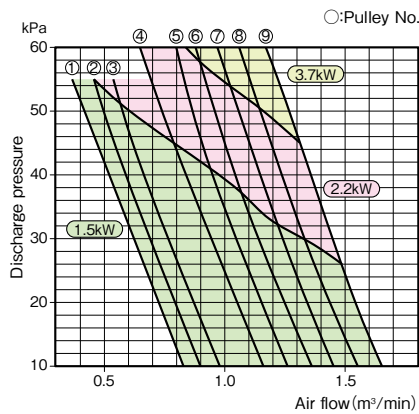
ARH25E



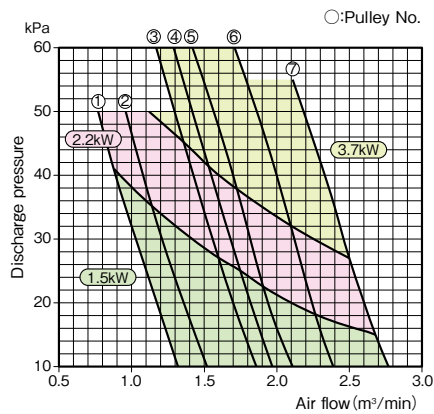
ARH32E



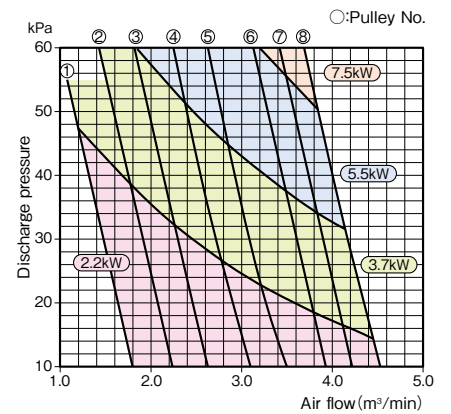
ARH40E



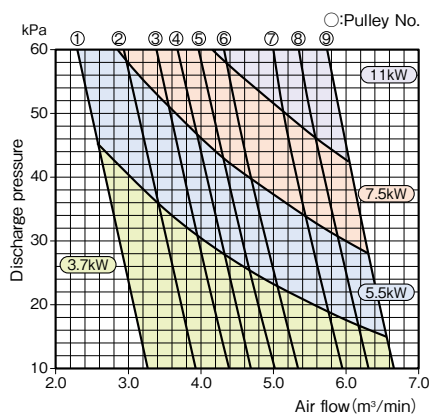
ARH50E



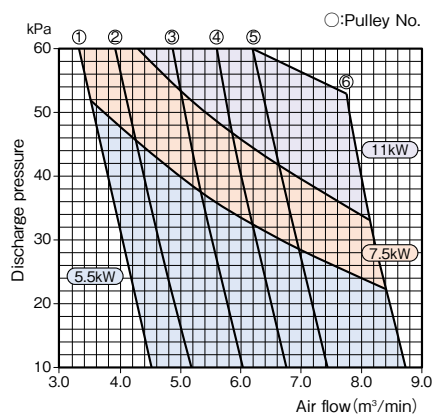
ARH65E



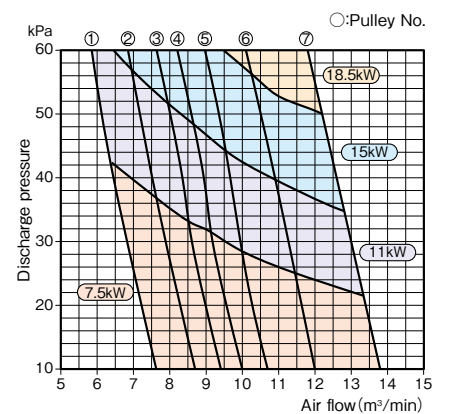
ARH80E



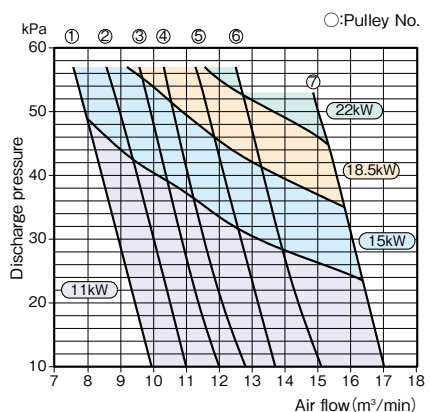
ARH100E



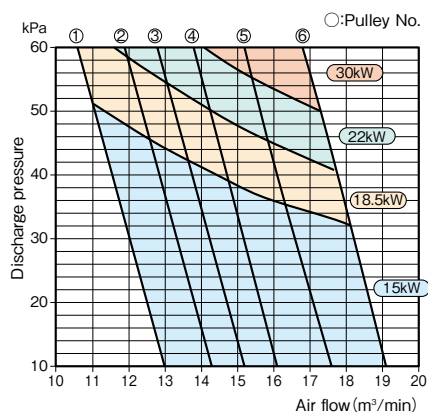
ARH125E



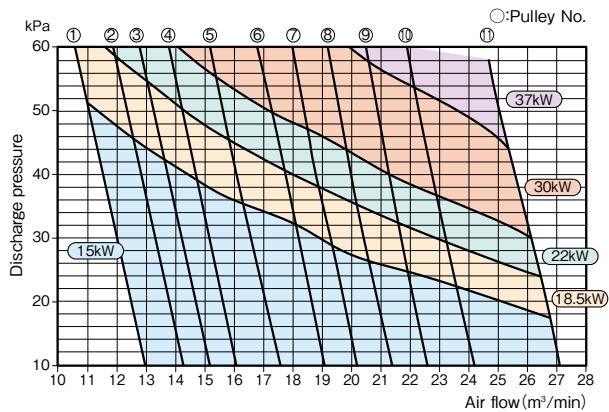
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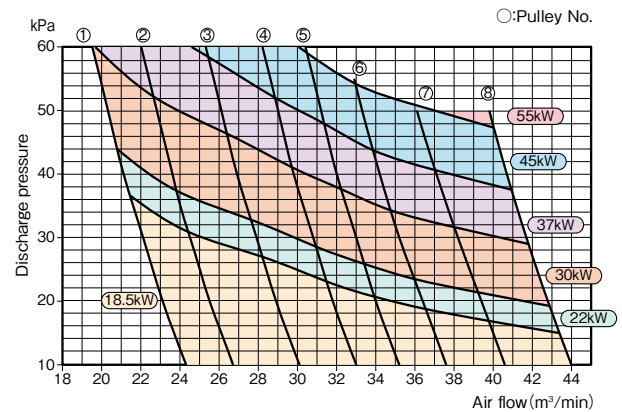
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ARH150E

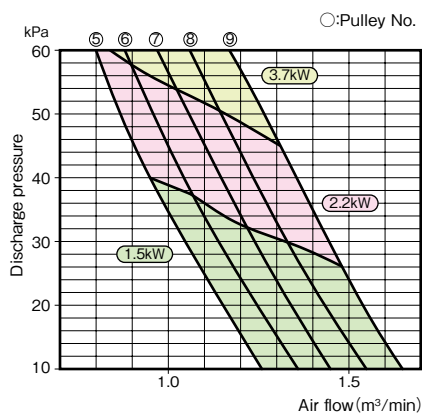


ARH200E

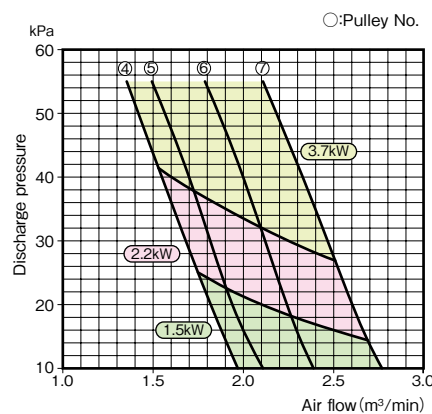


Performance Curves ARH-EP

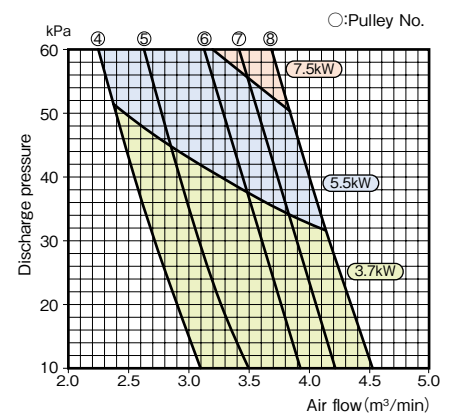
ARH50EP



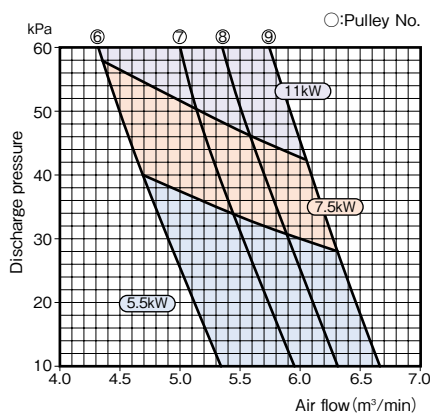
ARH65EP



ARH80EP



ARH100EP



Notes:

- (1) The air flow indicates a flow rate on the suction side.
- (2) Tolerance of air flow: $\pm 5\%$
- (3) Please contact us regarding any requirements not included in these charts.
- (4) For indoor use only. Please contact us regarding outdoor applications.
- (5) Specifications are subject to change without notice.

Sound Levels

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	—
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	—

Standard Motors (TEFC indoor type)

Model	Rated output of applicable motor (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											○	○	○	○	○

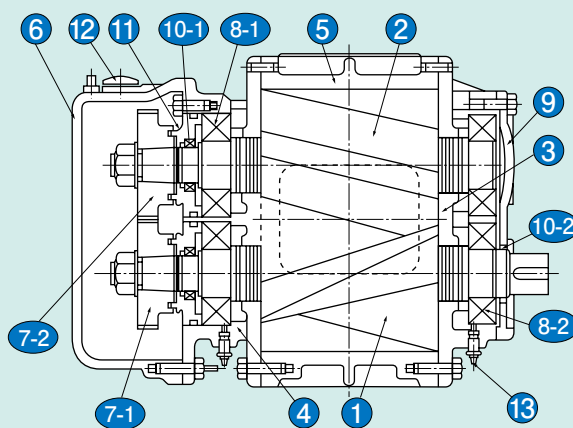
Star-delta starting is available for motors 5.5kW and over.

[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	—
	5	1870	70	71	72	73	74	—
	6	2100	71	72	73	74	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
ARH100EP	8	2540	73	74	75	76	76	77
	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 side of the blower.
(2) Sound levels vary depending on the condition of the base (foundation) and piping configuration.
(3) Rotor speed is provided for reference.

Sectional View



No.	Name	Material	No.	Name	Material
1	Rotor (driving)	See Note (2)	8-1	Ball bearing	—
2	Rotor (driven)		8-2	Ball bearing	—
3	Bearing plate	Gray iron casting (FC200)	9	Bearing cover	Mild steel
4	Bearing case		10-1	Oil seal	Fluororubber (FKM)
5	Rotor housing		10-2	Oil seal	Acrylonitrile butadiene rubber (NBR)
6	Gear case		11	Seal box	Structural steel
7-1	Timing gear	Chromium molybdenum steel	12	Oil gauge	—
7-2	Timing gear		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 gray iron casting (FC200) (helical portion) and carbon steel (shaft portion).
ARH20E-125EA : Helical and shaft are manufactured of spheroidal graphite iron casting (FCD500) in one-piece parts.
(3) Replenish grease every three months using Shell Stamina Grease RL2.
(4) Completely replace gear oil every three months using VG 220 gear oil.
(The blower is shipped with Shell Omara S2G 220.)
(5) The ARH20E-125E use specific bearings. During overhaul, be sure to replace them with genuine bearings. (Never use generic-brand bearings.)

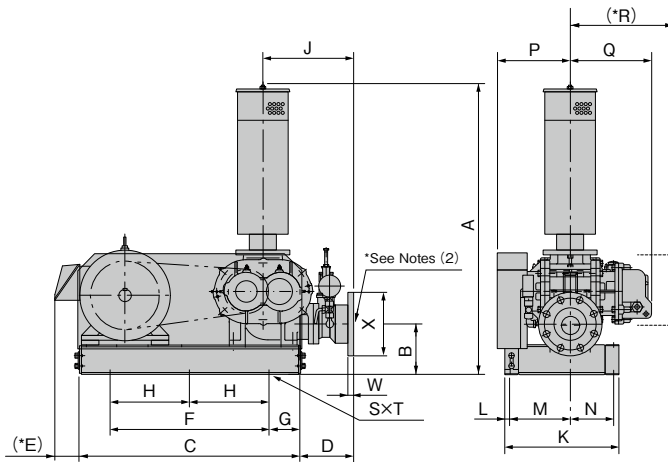
Standard Accessories

- 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

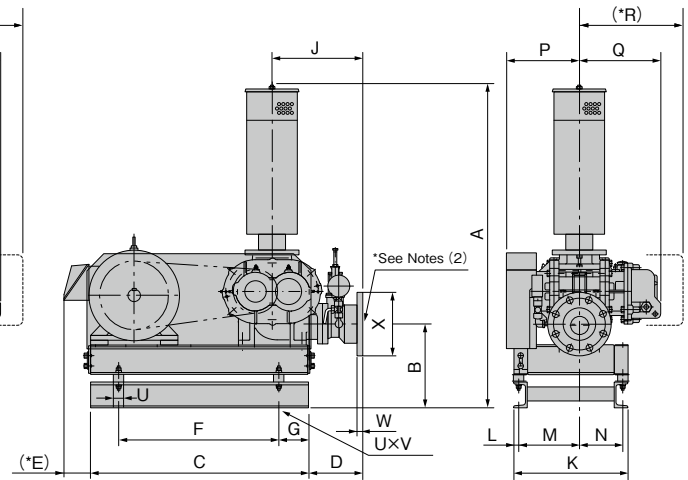
Dimensions

(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 (25)	69 (83)	350	25	—	256 (228)	300	13	110	164	124	156	175 (194)	—	12	—	12	—	—	22 (26)
ARH25E	25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
ARH32E	32	761 (861)	135 (235)	487 (479)	125 (129)	24 (28)	340	74 (70)	—	215	290	—	130	130	173	221	—	—	—	—	—	—	—	—
ARH40E	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
ARH50E	50	828 (928)	137 (237)	556 (548)	120 (124)	44 (48)	400	78 (74)	—	207	330	—	175	125	202	228	—	4	—	—	20	—	—	45 (53)
ARH65E	65	967 (1,066)	147 (246)	636 (628)	138 (142)	93 (97)	460	88 (84)	—	245	—	—	174	126	212	234	293	—	—	—	155	—	—	70 (79)
ARH80E	3.7~7.5kW	1,029 (1,127)	155 (254)	704 (696)	164 (168)	99 (103)	—	82 (78)	—	294	360	—	172	158	209	247	291	—	13	—	175	—	—	100 (111)
	11kW	1,162 (1,115)	143 (242)	722 (714)	151 (155)	115 (119)	540	91 (87)	270	—	440	—	165	245	219	247	417	—	—	—	185	—	—	140 (152)
ARH100E	100	1,117 (1,216)	150 (249)	—	122 (126)	—	—	—	—	281	—	—	221	189	288	289	361	—	—	—	210	—	—	170 (184)
ARH125E	—	1,297 (1,396)	193 (292)	788 (780)	266 (270)	164 (168)	700	44 (40)	350	411	470	—	234	196	372	395	—	—	—	—	—	—	—	280 (295)
ARH125EA	125	1,324 (1,423)	—	788	260	217 (217)	710	40	355	—	520	—	265	215	390	435	—	6	14	—	250	—	—	315 (332)
ARH125EF	—	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	—	—	—	—	—	—	—	—	—	—	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	—	330	—	—	800 (895)

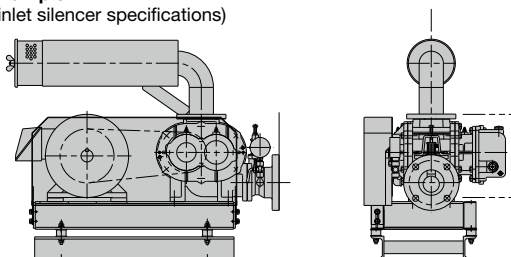
Model	Outlet dia (mm)	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Weight (kg)
ARH50EP	50	761 (861)	135 (235)	487 (479)	120 (124)	48 (52)	340	74 (70)	—	210	290	—	130	130	173	221	229	—	—	—	16	—	—	45 (53)
ARH65EP	65	828 (928)	137 (237)	556 (548)	125 (129)	44 (48)	400	78 (74)	—	212	330	—	175	125	202	228	—	4	—	—	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	—	13	4	13	—	—	100 (111)
ARH100EP	5.5, 7.5kW	1,029 (1,127)	155 (254)	704 (696)	164 (168)	99 (103)	—	82 (78)	—	294	360	—	172	158	209	247	291	—	—	—	185	—	—	140 (152)
	11kW	1,017 (1,115)	143 (242)	722 (714)	151 (155)	115 (119)	540	91 (87)	270	—	440	—	165	245	219	247	417	6	—	—	210	—	—	145 (160)

Notes:

- The ARH20E/25E safety valve discharge outlet has a tubular parallel female thread rather than a flange.
- Outer diameter, hole pitch and hole diameter of flange comply with JIS B2239 : 10K.
- This standard motor is a Japanese-brand totally-enclosed fan-cooled motor (indoor type IP44). The use of a special motor or non-Japanese brand may require a different base size.
- For indoor use only. Please contact us regarding outdoor applications.
- Dimensions of the blower with the anti-vibration base are shown in parentheses. * Weight dose not include the weight of the motor and motor base.
- *E and *R dimensions are the maximum dimensions when the largest size of standard motor is used.
- L-type inlet silencer specifications (option) for low ceilings are also available.

Setup example

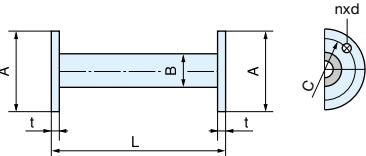
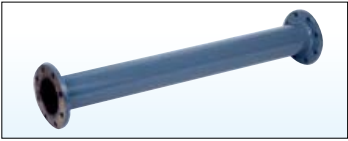
(L-type inlet silencer specifications)



Optional Accessories

●Outlet silencer

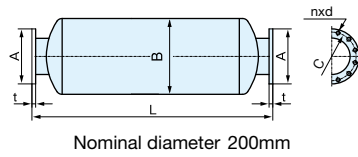
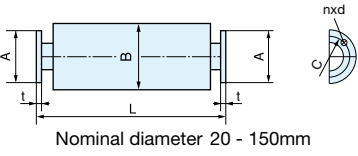
●Type A outlet silencer



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		18	6.5	
65	610	175	76	140			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 with discharge pressure less than 60 kPa.
- Outer diameter, hole pitch and hole diameter of discharge flange comply with JIS B2239 : 10K.
- Material--- Standard : Steel
Option : Stainless steel

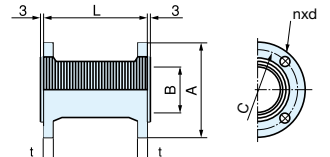
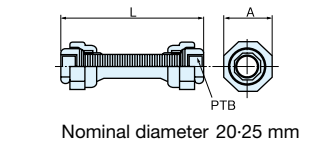
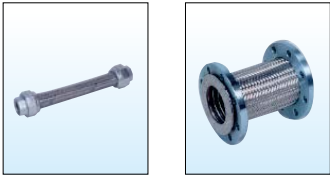
●Type B outlet silencer



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

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

●Flexible joint



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				5
50	230	155	54	120			18	6
65		175	67	140				8
80		185	79	150	8	23	20	12
100		210	104	175				15
125	300	250	129	210			22	18
150		280	152	240				—
200		330	203	290				—

- Please contact us regarding the flexible joint with nominal diameter of 250 mm.
- Outer diameter, hole pitch and hole diameter of discharge flange comply with JIS B2239 : 10K.

●Other options

Motor

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

Belt cover

- V-belt inspection window

Anti-vibration rubber mount

Gate valve

Vertical outlet silencer

Pressure gauge

- Pressure gauge stand

Packing Size

■ARH-S / ARH-E

Model	Length L	Width W	Height H
ARH20S / 20E ARH25S / 25E	520	460	300
ARH32S / 32E ARH40S / 40E	750	530	800
ARH50S / 50E ARH65S / 65E	850	610	820
ARH80S / 80E ARH100S / 100E	990	630	890
ARH125S / 125E ARH125SA / 125EA	1,100	700	950
ARH125SF / 125EF ARH150S / 150E	1,200	790	1,000
ARH150SF / 150EF ARH200S / 200E	1,280	910	1,150
	1,280	970	1,150
	1,520	960	1,310
	1,520	960	1,310
	1,780	1,230	1,300

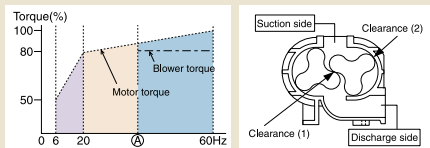
■ARH-SP / ARH-EP

Model	Length L	Width W	Height H
ARH50SP / 50EP	750	530	800
ARH65SP / 65EP	850	610	820
ARH80SP / 80EP	990	630	890
ARH100SP / 100EP	1,100	700	950

Selecting a VFD-Controlled Model

VFD control is available on 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 using 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: (A) indicates the lower limit of the frequency control range based on the rise in blower temperature.

- 1) Blower torque remains constant when the motor speed is reduced because of the blower's constant-torque feature.
- 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 can be used within the frequency range from (A) to 60 Hz because the blower torque is less than the motor torque. The blower cannot be used if the frequency falls below (A) because the blower temperature will rise.
- Blower application (b) (Fig. 2)
The blower torque exceeds the motor torque when the frequency is below (B). The blower can be used within the frequency range from (B) to 60 Hz.

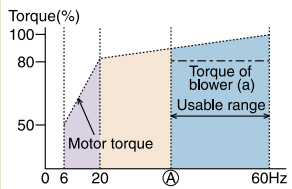


Figure 1 Blower (a)

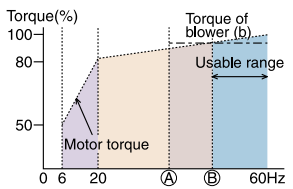


Figure 2 Blower (b)

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

- Both blowers (a) and (b) can be used within the range from (A) to 60 Hz. The blowers cannot be used below (A) because the blower temperature will rise.

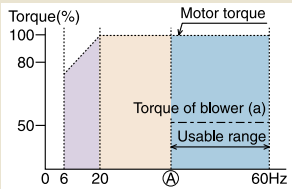


Figure 3 Blower (a)

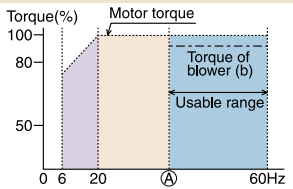


Figure 4 Blower (b)

Please contact us if you require VFD control. We can provide a VFD calculation sheet.

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

Significant differences in motor size and weight

- Motor external dimensions: The frame size of an IE3 motor does not differ from that of an IE1 motor, so it can be installed on an IE1 motor blower. However, both the diameter and length of an IE3 motor both tend to be larger. For this reason, the external dimensions of some models will be larger; check the matching dimensions for cables, etc. and make sure that there is no interference with nearby equipment during installation.
- Motor weight: As mentioned above, the motor is larger in size, as a result of which the weight of the motor is also greater. (However, this weight increase does not necessitate the reselection of the anti-vibration rubbers for ShinMaywa helical blowers as a result of this weight increase.)

Increased starting current

- The IE3 motor tends to have a larger starting current. This means it will be necessary to check equipment such as the circuit protector, to make sure they are compatible. In addition, it is also possible that the capacity of the electromagnetic switch may need to be adjusted when the motor is replaced.

Increase in rated motor operating speed

- An IE3 motor has an increased rated operating speed. When an IE1 motor is replaced with an IE3 motor, the air volume and output power will 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 to replace their motor 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 for typical ShinMaywa IE1 and IE3 motors

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

* For details, please contact to your dealer or ShinMaywa.

Application Example

• Examples of use

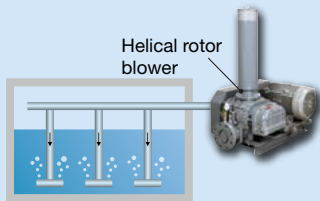
[MODELS USED]

ARH125S x 3 units

Used for aeration at a sewage treatment plant

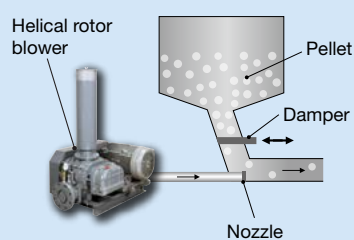


Water treatment



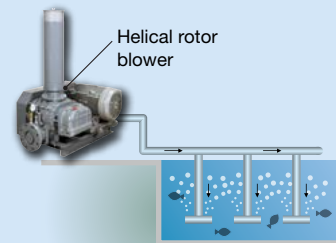
Used for water purification and for stirring of precipitates at water treatment plants.

Transport of granules



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

Oxygen supply of aquaculture ponds



Used for oxygen supply and stirring of the water in aquaculture ponds holding various types of fish and shellfish. Also used in aquariums and fish tanks.

A Variety of Uses

● Water treatment

- Aeration at sewage treatment plants
- Aeration of onsite wastewater treatment systems at condominiums, etc.
- Aeration of wastewater from food processing plants
- Aeration of wastewater from livestock farms

● Cultivation

- Oxygen supply in aquariums, aquaculture ponds, etc.

● Pneumatic transport

- Transport of cement powder, etc.
- Transport 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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ShinMaywa ONO PLANT

ISO 9001(No.956445)/ISO 14001(No.771888)