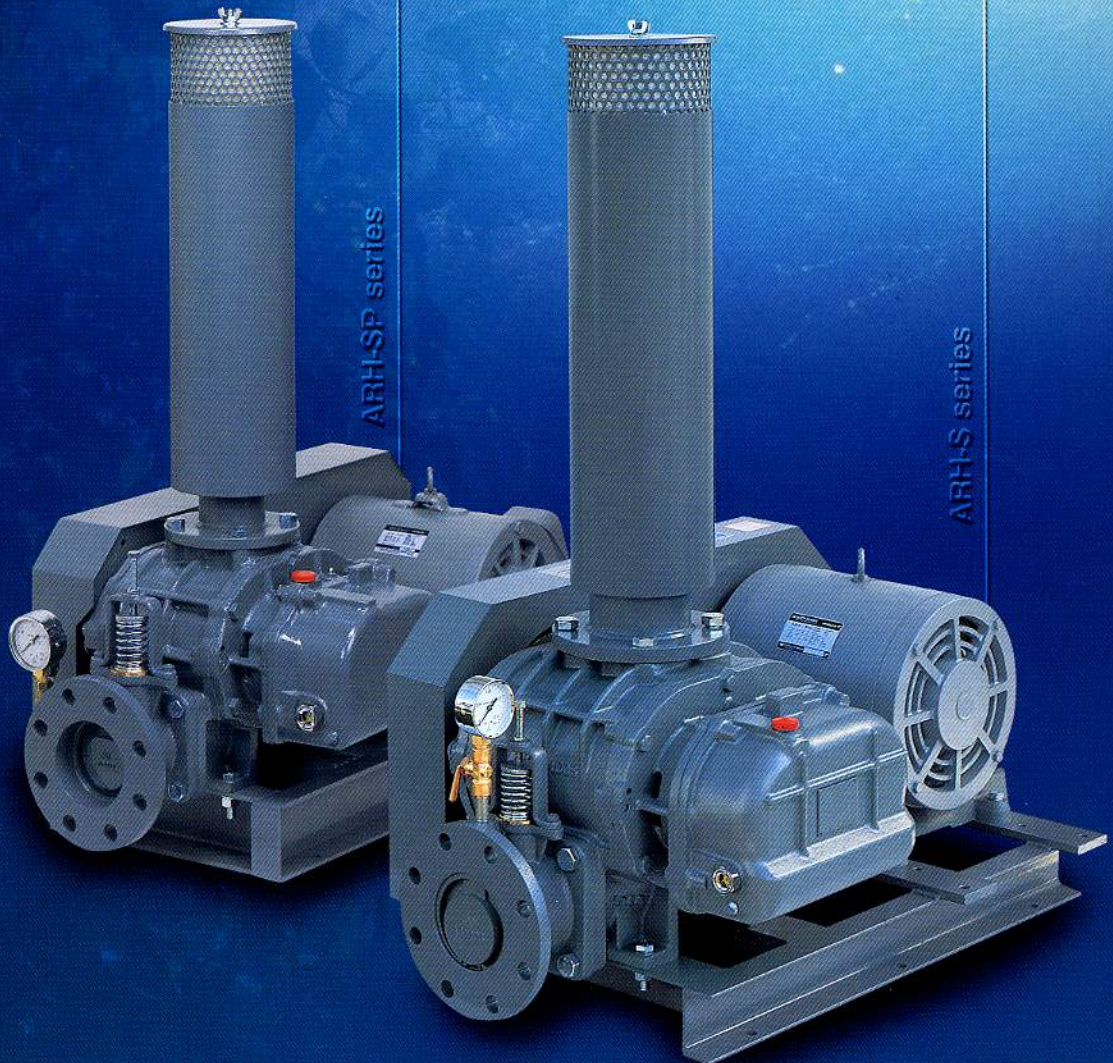


ShinMaywa

Helical Rotor Blower

(Roots Type) ARH-S/SP Series



A Compact Body Packed with a High Degree of Reliability.

The Product Lineup Has Been Further Extended!

Increased discharge pressure

The blower temperature rise has been reduced through the use of a new tooth profile and the improvement of the radiation mechanism. At the same time, the burden to the grease has been reduced. As a result, the maximum discharge pressure has been increased to 50kPa {0.51kgf/cm²} for Models ARH20S to ARH40S and 60kPa {0.61kgf/cm²} for ARH50S and higher models. All models permit the use of ordinary grease available on the market.

Reliable oil seal

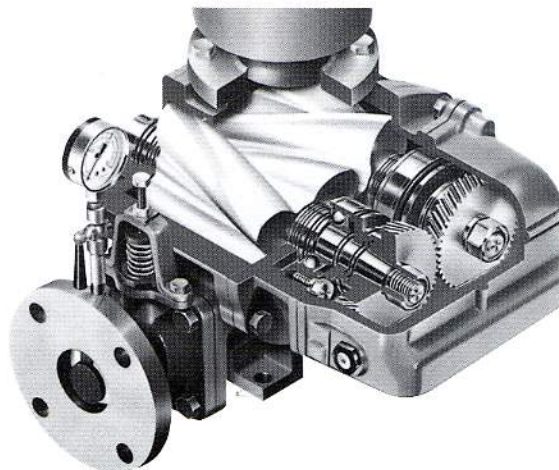
Fluororubber is used for the oil seal. The lubricating system is protected with the labyrinth seal which is effective to prevent oil leakage.

Easy maintenance

The bearing is fixed with a C-type snap 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.



Inverter-controlled air flow rate

The inverter control system permits the motor speed to be easily changed electrically. When inverter 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 an inverter with the blower, consult your nearest dealer.) ※ The inverter to be used should be a constant torque inverter.

Compact size

For example, the space required for installation of Model ARH100S has been reduced by more than 30% (compared with our former model). Thus, the new series saves your valuable space.

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

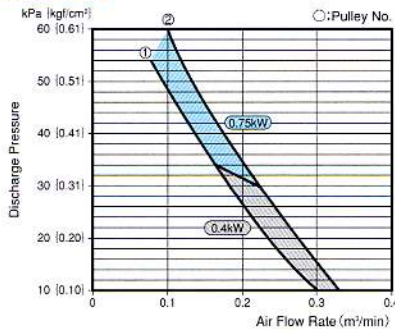
● Other

- Foaming of water in baths and swimming pools.

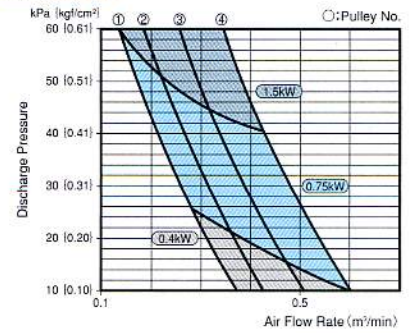
ARH-S Series

Performance Curves

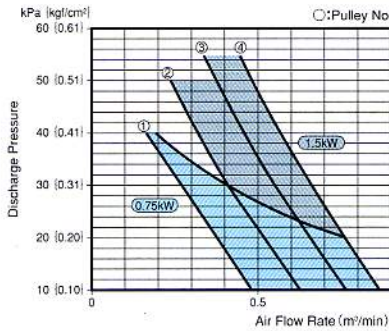
ARH20S



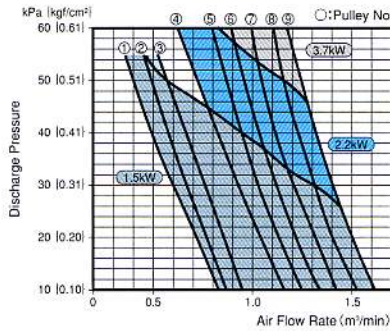
ARH25S



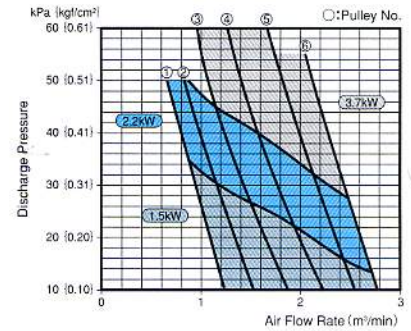
ARH32S



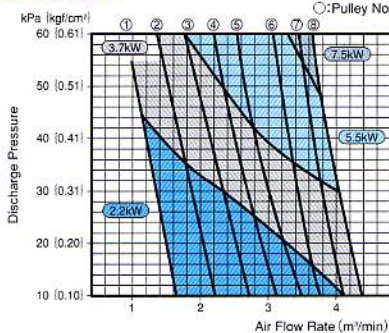
ARH40S



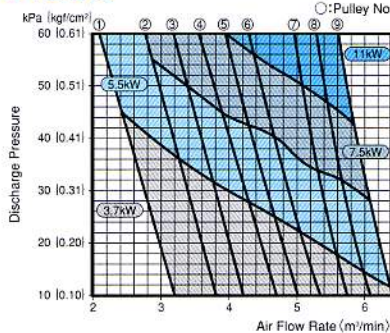
ARH50S



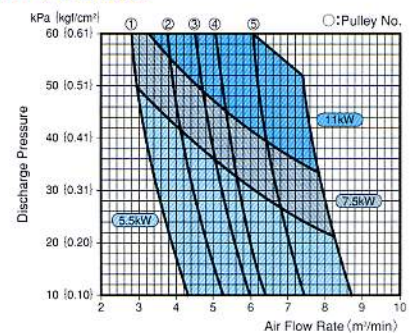
ARH65S



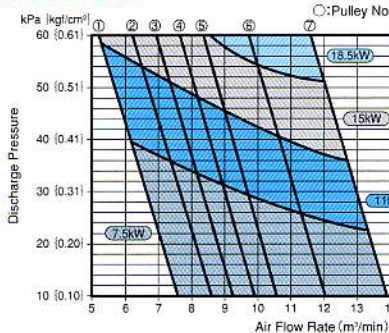
ARH80S



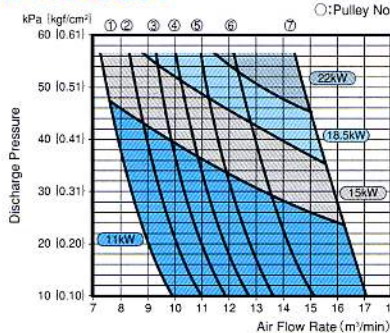
ARH100S



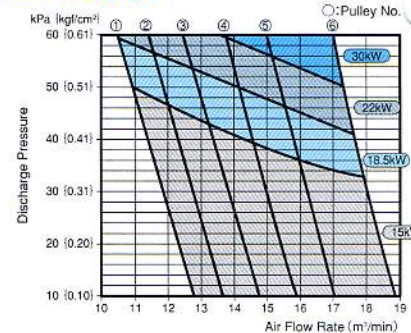
ARH125S



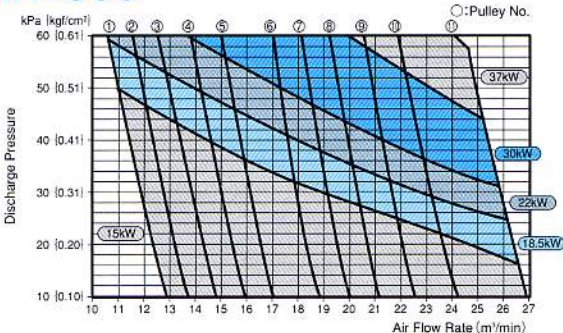
ARH125SA



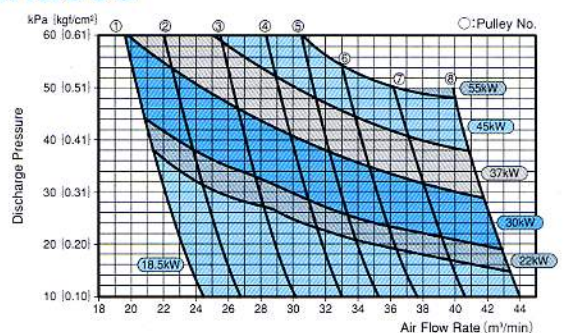
ARH125SF



ARH150S



ARH200S



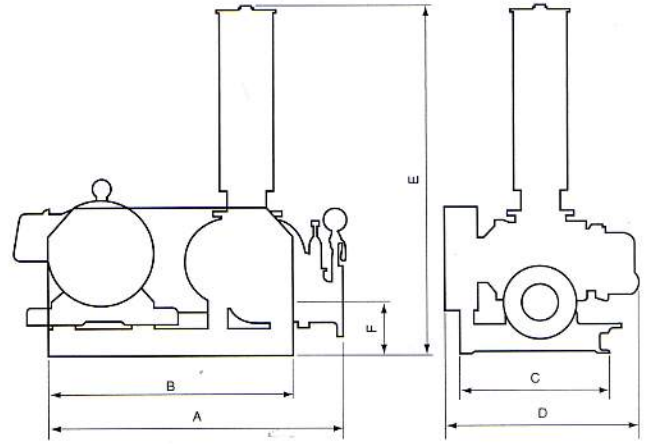
● Specifications are subject to change without notice.
● Before using the blower, read the instruction manual carefully.

Sound Levels

Model	Pulley No.	Rotor Speed (min ⁻¹)	10kPa	20kPa	30kPa	40kPa	50kPa	60kPa
			0.10kgf/cm ²	0.20kgf/cm ²	0.31kgf/cm ²	0.41kgf/cm ²	0.51kgf/cm ²	0.61kgf/cm ²
ARH20S	1	1,630	58	59	60	61	61	—
	2	1,730	60	61	62	63	63	64
ARH25S	1	1,940	62	63	63	64	64	65
	2	2,160	63	63	64	62	65	66
	3	2,400	63	64	65	66	66	67
	4	2,690	65	66	67	68	68	69
ARH32S	1	1,240	65	66	67	68	—	—
	2	1,480	66	67	68	69	70	—
	3	1,740	67	68	69	70	71	—
	4	1,910	69	70	71	72	73	—
ARH40S	1	1,720	66	67	68	69	70	—
	2	1,840	67	68	70	71	72	—
	3	1,960	69	70	71	71	72	—
	4	2,210	70	71	71	71	72	73
	5	2,380	70	71	71	71	72	74
	6	2,520	70	71	71	72	72	74
	7	2,620	71	71	72	72	73	74
	8	2,790	71	72	72	73	73	75
	9	3,000	71	72	72	73	74	75
ARH50S	1	1,270	63	64	66	67	69	—
	2	1,400	66	66	68	70	71	—
	3	1,650	69	70	71	72	73	74
	4	1,850	70	70	71	72	73	74
	5	2,080	70	71	72	73	74	75
	6	2,230	72	74	74	74	75	75
ARH65S	1	1,100	66	67	68	68	69	—
	2	1,320	66	67	68	69	71	72
	3	1,550	66	67	69	70	72	73
	4	1,730	67	68	69	71	73	73
	5	1,960	67	69	71	72	74	75
	6	2,200	68	70	71	72	74	75
	7	2,350	70	71	72	73	74	76
	8	2,500	72	73	74	75	75	76
ARH80S	1	1,130	70	71	72	73	74	75
	2	1,350	71	71	73	74	75	76
	3	1,490	72	73	73	75	76	77
	4	1,630	73	74	75	76	77	78
	5	1,730	74	75	76	76	78	79
	6	1,830	75	76	77	78	79	80
	7	2,040	76	77	78	79	79	80
	8	2,150	77	78	78	79	79	80
	9	2,270	77	78	79	79	79	80
ARH100S	1	1,020	71	72	73	74	75	76
	2	1,200	72	73	74	76	76	78
	3	1,390	74	74	75	77	78	79
	4	1,490	75	76	77	78	79	80
	5	1,630	76	77	78	79	80	80
	6	1,830	77	78	79	80	81	—
ARH125S	1	1,160	72	73	74	75	75	76
	2	1,290	72	73	74	75	76	76
	3	1,370	73	74	75	76	77	77
	4	1,460	73	74	75	76	77	78
	5	1,540	74	75	76	77	78	79
	6	1,710	75	76	77	78	79	81
	7	1,920	76	77	78	79	81	82
ARH125SA	1	1,160	72	74	75	76	77	—
	2	1,290	73	75	77	78	79	—
	3	1,370	73	75	78	78	79	—
	4	1,460	73	75	78	79	80	—
	5	1,540	74	76	79	79	80	—
	6	1,710	75	76	79	79	80	—
	7	1,920	77	79	80	81	82	—
ARH125SF	1	1,000	72	73	74	75	77	78
	2	1,060	72	73	74	75	77	78
	3	1,130	73	74	75	76	78	79
	4	1,210	74	75	76	78	79	80
	5	1,300	75	76	77	79	80	81
	6	1,420	76	77	78	80	81	82
ARH150S	1	1,000	72	73	74	75	77	78
	2	1,060	72	73	74	75	77	78
	3	1,130	73	74	75	76	78	79
	4	1,210	74	75	76	78	79	80
	5	1,300	75	76	77	79	80	81
	6	1,420	76	77	78	80	81	82
	7	1,510	77	78	80	81	82	83
	8	1,590	77	79	81	82	83	84
	9	1,680	79	80	81	82	83	84
	10	1,770	81	82	83	84	85	86
	11	1,940	83	84	85	85	86	87
ARH200S	1	1,000	79	79	81	82	84	85
	2	1,100	79	80	82	84	86	87
	3	1,240	79	80	82	84	86	87
	4	1,360	79	80	82	84	86	87
	5	1,440	80	81	83	85	86	87
	6	1,530	82	82	83	85	86	—
	7	1,660	84	85	86	87	88	—
	8	1,750	85	86	88	89	91	—

● Sound levels in dB(A) at a distance of 1m from machine side (±3 dB(A)).

Dimensions



(mm)

Bore (mm)	Model	A	B	C	D	E	F	Standard Setting Motor Output	Weight (kg)
20	ARH20S	483	430	300	280	456	133	0.4 ~ 0.75	22
25	ARH25S	455						0.4 ~ 1.5	
32	ARH32S	612	487	290	394	741	135	0.75 ~ 1.5	
40	ARH40S							1.5 ~ 3.7	
50	ARH50S	676	556	330	430	809	137	1.5 ~ 3.7	70
65	ARH65S	774	636					446	948
80	ARH80S	868	704	360	456	1,009	155	3.7 ~ 7.5	140
		886	722						466
100	ARH100S	873	788	470	767	1,297	193	5.5 ~ 11	170
125	ARH125S	1,054						470	767
	ARH125SA	1,048	520	825	1,323	—	11 ~ 22	315	
	ARH125SF	1,174	936	570	817	1,695	205	15 ~ 30	580
150	ARH150S	1,234	936	570	817	1,695	205	15 ~ 37	590
200	ARH200S	1,470						1,100	700

*The flange outside diameter and bolt hole pitch comply to JIS 10K.
 *Models ARH20S/ARH25S are not provided with a pressure gauge.
 *Indicated weight is for blower without motor (with base).

Motor Weight (with base)

Output (kW)	0.4	0.75	1.5	2.2	3.7	5.5
Weight (kg)	8	13	19	27	37	63
Output (kW)	7.5	11	15	18.5	22	30
Weight (kg)	77	105	118	133	176	191
Output (kW)	37	45	55			
Weight (kg)	236	256	306			

*The standard motor is a drip-proof type. In the case of a special motor, The base dimensions may differ.

Standard Specifications

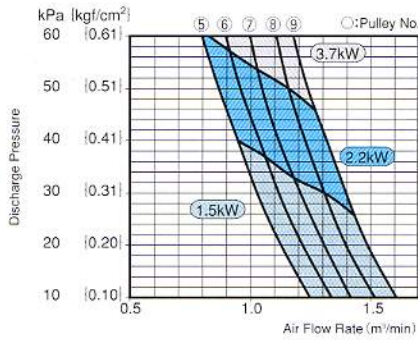
Q: Air Flow Rate (m³/min) P: Necessary Power (kW)

Discharge Hole Dia. (mm)	Model	Pulley No.	Rotor Speed (min ⁻¹)	10kPa		15kPa		20kPa		25kPa		30kPa		35kPa		40kPa		45kPa		50kPa		55kPa		60kPa		Standard Setting Motor Output
				0.10kgf/cm ²		0.15kgf/cm ²		0.20kgf/cm ²		0.26kgf/cm ²		0.31kgf/cm ²		0.36kgf/cm ²		0.41kgf/cm ²		0.46kgf/cm ²		0.51kgf/cm ²		0.56kgf/cm ²		0.61kgf/cm ²		
				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	2,380	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	1.96	0.84	2.02	0.80	2.18	1.5·2.2·3.7
		6	2,520	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	2,620	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	2,790	1.52	1.15	1.46	1.09	1.40	1.40	1.36	1.35	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	
65	ARH65SP	4	1,850	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	2,080	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	2,230	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	1,730	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	1,960	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	2,200	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	2,350	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	2,500	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	1,830	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	2,040	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	
100	ARH100SP	8	2,150	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	2,270	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	

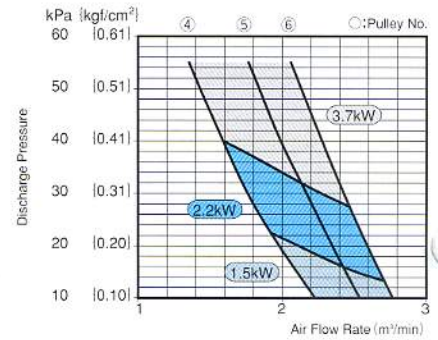
- Air flow rate indicates the volume of air under standard suction conditions (temperature 20°C (68°F), relative humidity 65%).
- The tolerance for air volume at the prescribed pressure is ±5%.

Performance Curves

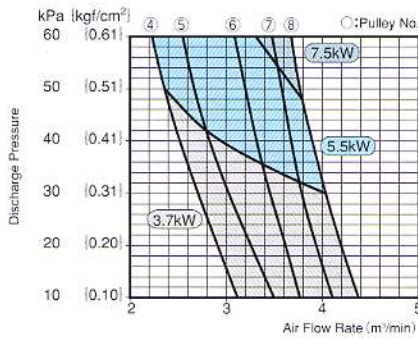
ARH50SP



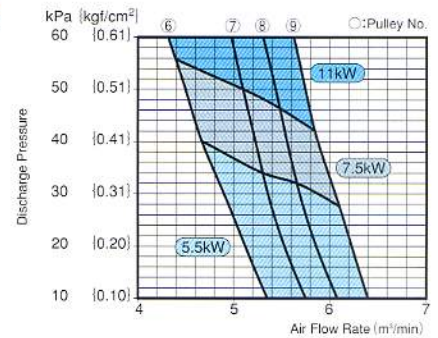
ARH65SP



ARH80SP



ARH100SP



- Specifications are subject to change without notice.
- Before using the blower, read the instruction manual carefully.

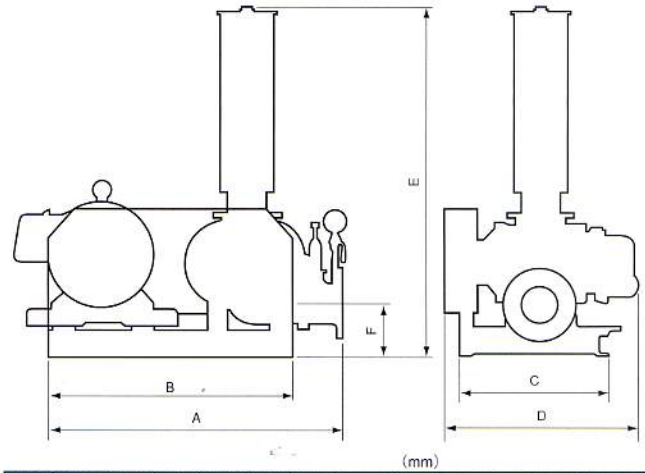
ARH-SP Series

Sound Levels

Model	Pulley No.	Rotor Speed (min ⁻¹)	10kPa	20kPa	30kPa	40kPa	50kPa	60kPa
			0.10kgf/cm ²	0.20kgf/cm ²	0.31kgf/cm ²	0.41kgf/cm ²	0.51kgf/cm ²	0.61kgf/cm ²
ARH50SP	5	2,380	70	71	71	71	72	74
	6	2,520	70	71	71	72	72	74
	7	2,620	71	71	72	72	73	74
	8	2,790	71	72	72	73	73	75
	9	3,000	71	72	72	73	74	75
ARH65SP	4	1,850	70	70	71	72	73	74
	5	2,080	70	71	72	73	74	75
ARH65SP	6	2,230	72	74	74	74	75	75
	7	2,350	70	71	72	73	74	76
ARH80SP	4	1,730	67	68	69	71	73	73
	5	1,960	67	69	71	72	74	75
	6	2,200	68	70	71	72	74	75
	7	2,350	70	71	72	73	74	76
ARH100SP	6	1,830	75	76	77	78	79	80
	7	2,040	76	77	78	79	79	80
	8	2,150	77	78	78	79	79	80
	9	2,270	77	78	79	79	79	80

● Sound levels in dB (A) at a distance of 1m from machine side (±3 dB (A)).

Dimensions



Bore (mm)	Model	A	B	C	D	E	F	Standard Setting Motor Output	Weight (kg)
50	ARH50SP	607	487	290	394	741	135	1.5~3.7	45
65	ARH65SP	681	556	330	430	809	137	1.5~3.7	70
80	ARH80SP	789	636	360	446	948	147	3.7~7.5	100
100	ARH100SP	868	704	360	456	1,009	155	5.5~7.5	140
		886	722	440	466	995	143	11	145

• The flange outside diameter and bolt hole pitch comply to JIS 10K.
 • Models ARH20S/ARH25S are not provided with a pressure gauge.
 • Indicated weight is for blower without motor (with base).

Motor Weight (with base)

Output (kW)	1.5	2.2	3.7	5.5	7.5	11
Weight (kg)	19	27	37	63	77	105

• The standard motor is a drip-proof type. In the case of a special motor, The base dimensions may differ.

Accessories

[ARH-S/SP Series]

Standard Accessories

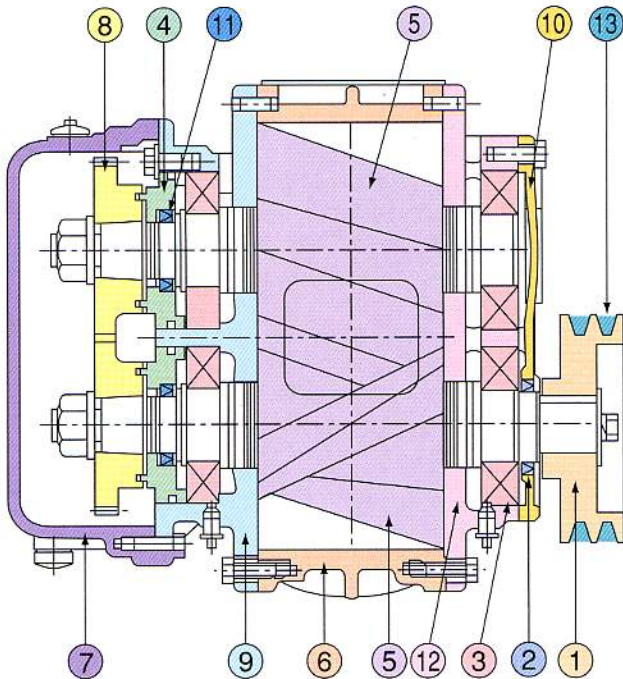
- Common base 1
- V-pulley, V-belt, Belt cover 1
- Pressure gauge (with gauge cock 160kPa) 1
- Intake silencer (with filter) 1
- Check valve (with safety valve) 1

Optional Accessories

- Discharge Silencer
 - Flexible tube
 - Rubber vibration isolator
- Pressure gauge stand, belt cover with lining, and soundproof box are also available.

ARH-S/SP Series

Sectional view



No.	Part name	Material
1	V-pulley	FC200
2	Oil seal	Nitril rubber
3	Ball bearing	—
4	Oil stopper	SS400
5	Rotor	FCD500 (FC200)
6	Casing	FC200
7	Gear case	FC200
8	Timing gear	SCM415
9	Bearing case	FC200
10	Bearing cover	ARH32S~65S:SPHC ARH80S·100S:SPCC Other:FC200
11	Oil seal	Fluoro rubber
12	Bearing plate	FC200
13	V-belt	—

Note) FC : Gray iron casting
FCD : Ductile iron casting
SCM : Chromium molybdenum steel
SS : Mild steel
SPCC/SPHC : Rolled steel

Packing Size

■ARH-S

Model	Length L	Width W	Height H (mm)	
ARH20S	520	460	300	
ARH25S				
ARH32S	750	530	800	
ARH40S				
ARH50S				
ARH65S				
ARH80S	3.7~7.5kW	1,080	700	930
	11kW	1,200	790	1,000
ARH100S	1,200	790	1,000	
ARH125S	1,280	910	1,150	
ARH125SA	1,280	970	1,150	
ARH125SF	1,520	960	1,310	
ARH150S	1,520	960	1,310	
ARH200S	1,780	1,230	1,300	

■ARH-SP

Model	Length L	Width W	Height H (mm)	
ARH50SP	750	530	800	
ARH65SP	850	610	820	
ARH80SP	990	630	890	
ARH100SP	3.7~7.5kW	1,080	700	930
	11kW	1,200	790	1,000

Specifications and dimensions are subject to change without notice.

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