HITACHI
Inspire the Next

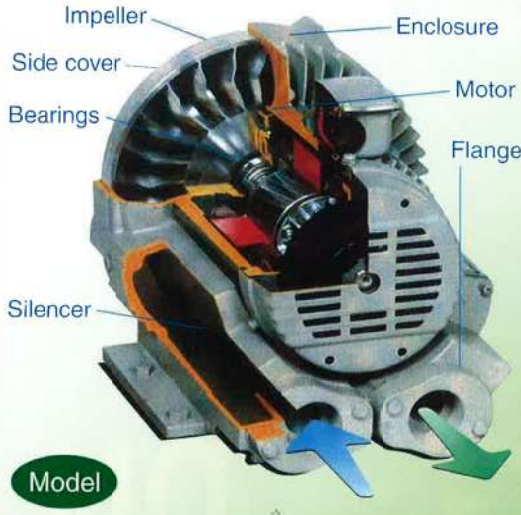
HITACHI High-Pressure Blower
Vortex Blower

**No oil fume, low noise,
energy saving and dual function of suction and discharge**



Hitachi Industrial Equipment Systems Co.,Ltd.

Hitachi Vortex Blower demonstrares its power in a wide range of application either in suction (negative pressure) or discharge (positive pressure).



Structure and Characteristics;

1. Smooth air flowing in the tube
   - High efficiency
   - Low noise
2. Cooling the surface of cabinet by cooling air generated by motor.
3. One-way closed clearance to prevent contact with the turbine blades (Simple adjustment of clearance).
4. Clockwise and counterclockwise rotation of motor at the same air volume (E Series)



High-Pressure Compact Type G Series

For suction of case packer, soldering machine, woodworking machine, etc.
For underwater blowing in Jacuzzi bath, etc.

- High pressure, low-noise, compact type adopting three-dimensional impeller
- Applicable in full range to shutoff

Output 70W~2.2kW



Volume Type E Series

For suction and blowing-off of dust collector, pneumatic transportation, printing machine, washing machine

- For pneumatic power source in various industries

Output 100W~11kW



Low-Noise Type E Series

For installation environment where low noise is required

- Low-noise type with large volume employing original structure
- Lower noise by 4 ~ 7dB in comparison with Volume Type E Series

Output 0.4W~3.0kW



Wear-Resistant Type DN Series

Suitable for a wide range of applications, including removing dust and drops of water from printed circuit boards, etc.

- For relatively dusty or dirty sites

Output 0.4W~2.0kW



High-Pressure 2-Stage Type

For underwater blowing in plating tank, purifying tank, etc.

- Suitable for long piping at high pressure

Output 4.0W~8.0kW



Large-Volume Twin Type E Series

For feeding air during tunnel construction

- Suitable for long piping at high pressure

Output 22kW

Wide lineup of products meets customers needs

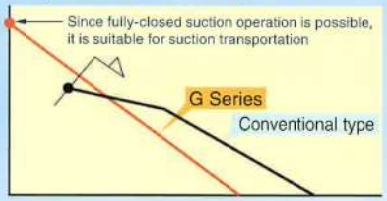
G SERIES



Compactness and high pressure thanks to the adoption of three-dimensional blade impeller



Fully-closed suction operation



Three-dimensional blade impeller

DN SERIES



- Ecuipped with a peripheral open-type impeller that is resistant to dust and dirt, for superior durability in any environment.
- Compact structure requires minimal installation space.
- As a clean air source, can be used for discharge or suction, and is suitable for a wide range of applications.



Open-type impeller

E SERIES



- A wide range of models from 100W to 11kW
- Compactness/light weight because of aluminum housing motor (8% reduction in comparison with the conventional type)
- Improved reliability thanks to urea grease bearings superior in heat resistance
- Equipped with radial vane impeller enough to produce large volume.



Radial vane impeller

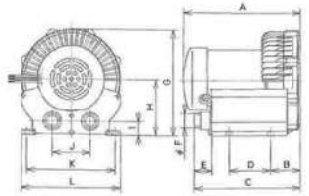
G SERIES

High-pressure compact Type

Featuring compactness, powerfulness, and low noise, it is suitable for a wide range of application.

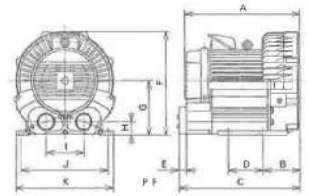
Dimensional outline drawing

VB-70W (S) -G～VB-003 (S) -G



MODEL	A	B	C	D	E	F	G	H	I	J	K	L
VB-70W (S) -G	240.5	85	201	—	28	38	106	162.5	90	75	165	190
VB-001 (S) -G	223	91	255	—	43	25.5	145	98.5	90	75	165	190
VB-002 (S) -G	249	75.5	225	75	43	30.5	111	119	90	85	165	215
VB-003 (S) -G	249.5	75	225	75	43	49.5	223.5	119.5	90	75	165	215

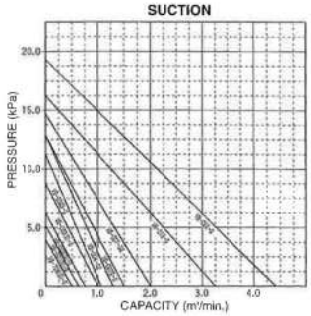
VB-004 (S) -G～VB-002 (S) -G

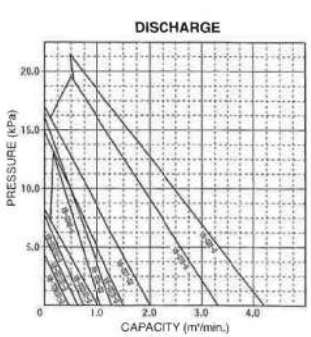


MODEL	A	B	C	D	E	F	G	H	I	J	K	L
VB-004 (S) -G	253	91	265	83	69	241	128	55	85	165	230	PT 1/4
VB-007 (S) -G	316	102	319	95	69	279	142	45	90	225	230	PT 1/2
VB-015-G2	345	127	362.8	115	69	313	163.5	45	110	265	290	PT 1/2
VB-022-G2	365	128	393	140	85	330	179	50	110	288	374	PT 1/2

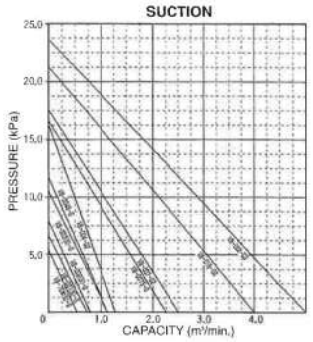
Characteristic drawing

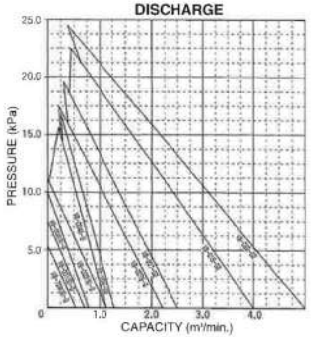
50Hz





60Hz





Standard specifications

Model	Phase	Voltage (V)	Poles	Suction Max. operating Pressure (kPa)	Suction Max. operating Output (kW)	Discharge Max. operating Pressure (kPa)	Discharge Max. operating Output (kW)	Max. capacity (m³/min.)	Noise dB (A)
				50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
VB-70WS-G	1	220	2	4.0/ 5.4	0.05 /0.075	4.2/ 5.6	0.055/0.085	0.45/0.5	45/47
VB-001S-G	1	220	2	5.4/ 6.9	0.08 /0.12	5.9/ 7.4	0.090/0.135	0.6 /0.7	48/52
VB-002S-G	1	220	2	7.6/ 9.3	0.1 /0.2	8.1/ 9.8	0.145 /0.210	0.7 /0.8	52/55
VB-003S-G	1	220	2	8.8/10.3	0.19 /0.28	9.3/10.9	0.203/0.300	1.0 /1.15	53/57
VB-004S-G	1	220	2	11.8/14.7	0.33 /0.52	14.2/15.7	0.41 /0.58	1.1 /1.3	54/58
VB-007S-G	1	220	2	12.7/16.7	0.51 /0.7	14.7/17.7	0.55 /0.77	2.0 /2.4	60/63
VB-70W-G	3	380	2	4.0/ 5.4	0.04 /0.071	4.2/ 5.6	0.048/0.083	0.45/0.5	45/47
VB-001-G	3	220/380	2	5.4/ 6.9	0.07 /0.01	5.9/ 7.4	0.080/0.113	0.6 /0.7	48/52
VB-002-G	3	220/380	2	7.6/ 9.3	0.125/0.195	8.1/ 9.8	0.130 /0.200	0.7 /0.8	52/55
VB-003-G	3	220/380	2	8.8/10.3	0.185/0.28	9.3/11.9	0.198 /0.300	1.0 /1.15	53/57
VB-004-G2	3	220/380	2	12.7/16.2	0.38 /0.55	15.7/17.2	0.49 /0.65	1.3 /1.3	54/58
VB-007-G2	3	220/380	2	14.7/17.6	0.54 /0.78	16.7/20.5	0.6 /0.92	2.6 /2.4	60/63
VB-015-G2	3	220/380	2	16.1/21.1	1.2 /1.7	19.6/22.5	1.4 /1.8	3.3 /4.0	64/69
VB-022-G2	3	220/380	2	19.6/23.5	1.6 /2.3	21.6/24.5	2.1 /2.5	4.1 /4.8	63/72

Notes)
1) The performance value are at suction conditions of 20℃ and 1,013hPa
2) Name plate value = Suction data

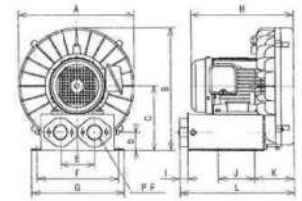
E SERIES

Volume Type

Demonstrating its power for such application as blowing-off by large volume

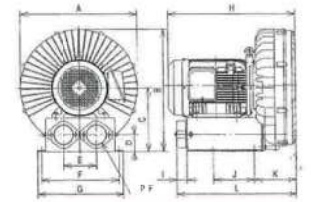
Dimensional outline drawing

VB-004～040-E2・EN



MODEL	A	B	C	D	E	F	G	H	I	J	K	L	PF
VB-004-E3	291	304	185	46	85	205	230	256	95	83	183	267	PF1½
VB-007-E3	316	329	160	61	90	225	255	286	95	85	113.5	296.5	PF1½
VB-020-E2	371	393	204	87	110	265	295	326	95	115	127	338	PF1½
VB-030-EN	394	425	206	60	116	290	325	353	98	140	106	390	PF2
VB-040-EN	434	453	241	64	123	300	335	370	98	140	138	413	PF2

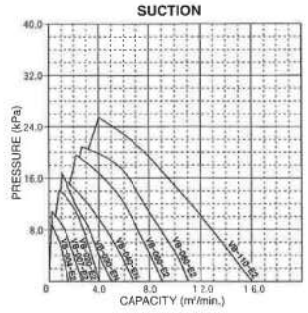
VB-060～110-E2



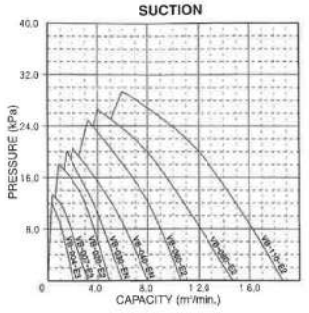
MODEL	A	B	C	D	E	F	G	H	I	J	K	L	PF
VB-060-E2	475	508	281	74	145	340	375	408	98	140	178	480	PF1½
VB-080-E2	515	538	281	74	145	340	375	408	98	140	178	485	PF2
VB-110-E2	565	605	324	84	160	376	440	543	98	210	210	524	PF2

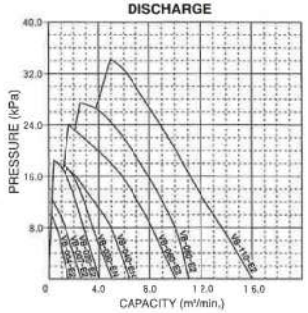
Characteristic drawing

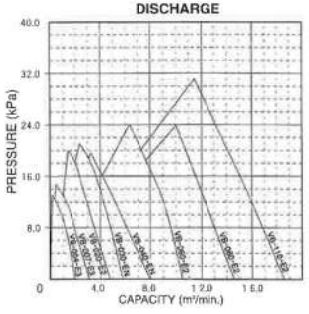
50Hz



60Hz







Standard specifications

Model	Phase	Voltage (V)	Poles	Suction		Discharge		Max. capacity (m³/min.)	Weight (Kg)
				Max. operating					
				Pressure (kPa)	Output (kW)	Pressure (kPa)	Output (kW)		
				50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	
VB-004-E3	3	220/380	2	9.2/12.2	0.33/ 0.48	10.2/12.7	0.38/ 0.56	1.7/ 2.0	15.5
VB-007-E3	3	220/380	2	10.8/13.3	0.59/ 0.78	12.3/13.5	0.67/ 0.9	2.6/ 3.1	19.5
VB-020-E2	3	220/380	2	15.2/19.1	1.3 / 2.0	18.6/20.1	1.7 / 2.2	4.0/ 4.9	30.0
VB-030-EN	3	220/380	2	17.2/20.1	1.8 / 2.7	19.4/21.1	2.0 / 2.8	5.0/ 5.8	40.0
VB-040-EN	3	220/380	2	16.2/20.6	2.1 / 3.3	18.0/19.6	2.4 / 3.5	6.7/ 8.0	50.5
VB-060-E2	3	220/380	2	19.6/25.0	4.0 / 6.2	24.0/24.0	5.0 / 6.8	9.6/10.5	84.0
VB-080-E2	3	220/380	2	21.1/25.5	5.7 / 8.8	27.4/24.5	7.2 / 9.0	11.0/14.5	109
VB-110-E2	3	220/380	2	25.5/29.4	8.8 /12.5	33.3/31.4	11.6 /14.8	16.0/18.5	147

Notes)
1) The performance value are at suction conditions of 20℃ and 1,013hPa
2) Name plate value = Suction data
3) Specifications are subject to change without notice. *Mark is design value.

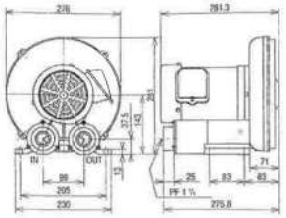
DN SERIES

Wear-Resistant Type

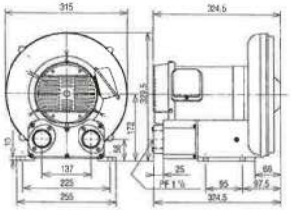
New structural design is highly wear-resistant in dusty or dirty sites, and suitable for a wide range of applications.

Dimensional outline drawing

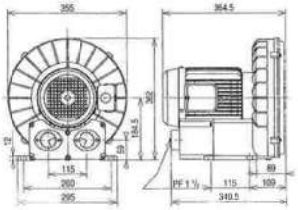
VB-004(S)-DN



VB-007(S)-DN

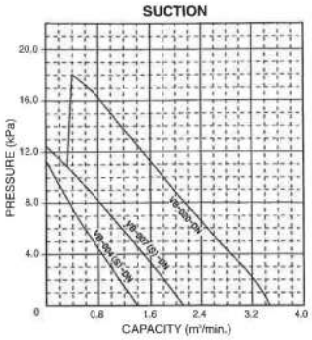


VB-020-DN

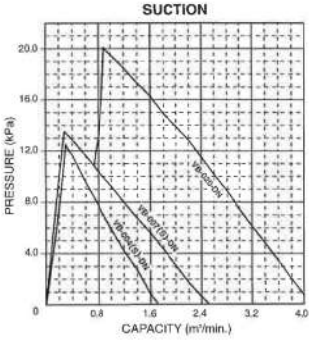


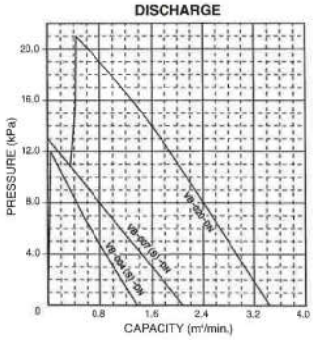
Characteristic drawing

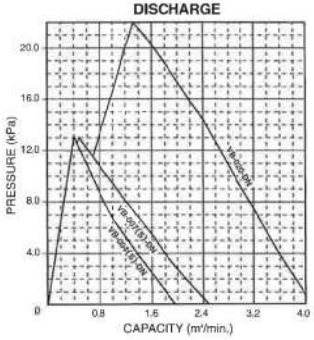
50Hz



60Hz







Standard specifications

Model	Phase	Voltage (V)	Poles	Suction		Discharge		Max. capacity (m³/min.)	Weight (Kg)
				Max. operating					
				Pressure (kPa)	Output (kW)	Pressure (kPa)	Output (kW)		
				50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	
VB-004S-DN	1	220	2	11.1/12.7	0.33/0.45	11.8/13.1	0.37/0.56	1.4/1.8	11.5
VB-007S-DN	1	220	2	12.6/13.4	0.6 /0.78	13.0/13.1	0.65/0.85	2.2/2.5	20.0
VB-004-DN	3	220/380	2	11.1/12.7	0.36/0.51	11.8/13.1	0.41/0.56	1.4/1.8	11.5
VB-007-DN	3	220/380	2	12.6/13.4	0.6 /0.78	13.0/13.1	0.65/0.85	2.2/2.5	15.0
VB-020-DN	3	220/380	2	18.0/20.0	1.5 /2.0	21.1/22.1	1.7 /2.2	3.5/4.1	31.0

SPEC 1 Voltage Alteration

We also custom-make products according to your voltage requirements.

■ **Available Models**

Single-phase models: 200 V class (excluding UL-certified products)
Three-phase models: 400 V class (excluding UL-certified products)

	Model \ Voltage	220 V class
Single-phase		200,220,230
	VB-70WS-G	△
	VB-001S-G,E	△
	VB-002S-G,E	△
	VB-003S-G,E	△
	VB-004S-G,E	○
	VB-007S-G,E	○

○ : Standard production
△ : Custom-order production

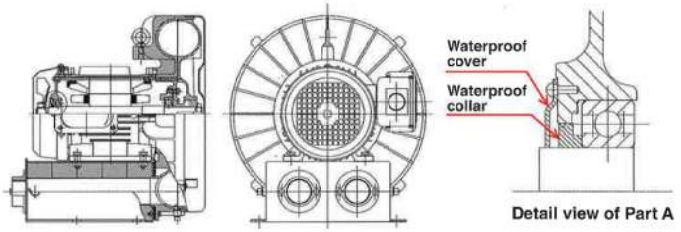
* We also manufacture products with voltages other than those listed. Please consult with us about your requirements.

Supported Voltages (at 50/60 Hz)

	Model \ Voltage	200 V class	400 V class	400 V class	500 V class
		200,220	380,400,415/ 400,440	460,480	500/500,575
Three-phase	VB-70W-G	○	△	△	△
	VB-001-G	○	△	△	△
	VB-002-G	○	△	△	△
	VB-003-G	○	△	△	△
	VB-004-G,E2	○	○	△	△
	VB-007-G,E2	○	○	△	△
	VB-015-G	○	○	△	△
	VB-020-E2	○	○	△	△
	VB-022-G	○	○	△	△
	VB-030-EN	○	○	△	△
	VB-040-EN	○	○	△	△
	VB-060-E2	○	○	△	△
	VB-080-E2	○	○	△	△
	VB-110-E2	○	○	△	△
	VB-004DN	○	△	△	△
	VB-007DN	○	△	△	△
	VB-020DN	○	△	△	△

SPEC 2 Outdoor Use

Outdoor installation types are also available. (Please seal the pipe connections so that rainwater and other forms of moisture do not enter.)

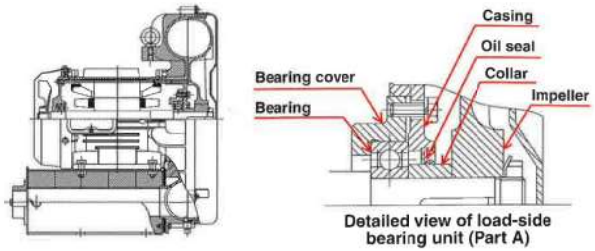


■ **Available Models**

Model	Model
VB-004-E3	VB-040-EN
VB-007-E3	VB-060-E2
VB-020-E2	VB-080-E2
VB-030-EN	VB-110-E2

SPEC 3 Bearing Waterproofing

This structure features an oil seal on the blower-side bearing. (Please avoid deliberate exposure to water.)

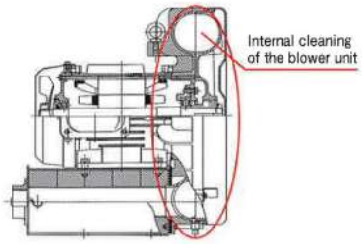


■ **Available Models**

Model	Model
VB-004-E3	VB-080-E2
VB-007-E3	VB-110-E2
VB-020-E2	VB-004DN
VB-030-EN	VB-007DN
VB-040-EN	VB-020DN
VB-060-E2	

SPEC 4 Blower Unit Degreasing (Internal cleaning)

The inside of the blower can be degreased to supply cleaner air.



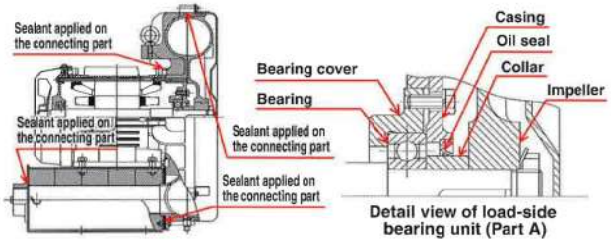
■ **Available Models**

Model	Model
VB-004-E3	VB-040-EN
VB-007-E3	VB-060-E2
VB-020-E2	VB-080-E2
VB-030-EN	VB-110-E2

■ **Inside coating is also available.**
• Improves resistance to acid and alkali and abrasion.

SPEC 5 Reduced Air Leakage

The oil seal used in the spindle penetration unit and the sealant applied on the connecting part recuce air leakage.



■ **Available Models**

Model	Model
VB-004-E3	VB-060-E2
VB-007-E3	VB-080-E2
VB-020-E2	VB-110-E2
VB-030-EN	VB-004-G2
VB-040-EN	VB-007-G2

* This modification is intended to reduce air leakage, but does not provide for complete air-tightness.

SPEC 6 Class F Insulation

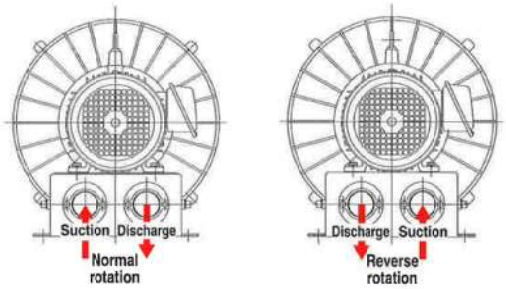
Class F insulation is available for motors operating on Class B temperature rise.

■ **Available Models**

Model	Model
VB-004-E3	VB-040-EN
VB-007-E3	VB-060-E2
VB-020-E2	VB-080-E2
VB-030-EN	VB-110-E2

SPEC 7 Same Operational Quality Ensured for Normal and Reverse Runs

Reversed blower offers the same level of performance as normal operation. Suction and discharge do not need to be switched by operating a valve.



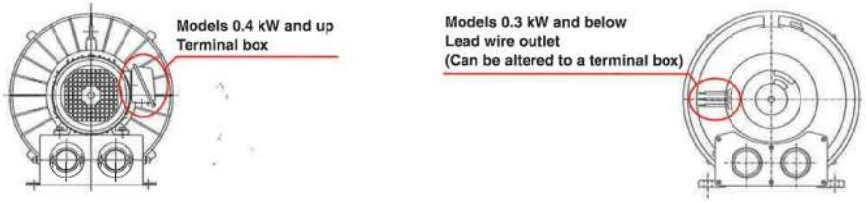
■ **Available Models: All models of the three-phase E series**

* Blower must be stopped before switching the rotation directions. (Reversing while the blower is operating can cause damage to the blower.)
* G series and DN series do not support reverse operation; Performance will be significantly reduced when reverse rotation is used.

SPEC 8 Terminal Box Equipped as Standard Feature

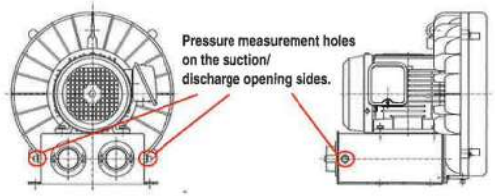
Models for 0.4 kW (VB-004) and up are provided with a terminal box as standard.

* Lead wire outlet is the standard for models using 0.3 kW (VB-003) and below, but alteration to incorporate a terminal box is also available.



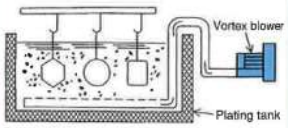
SPEC 9 Pressure Measurement Holes

Models using 0.4 kW (VB-004) and up have holes for mounting a pressure gauge, saving you from extra installation processing.



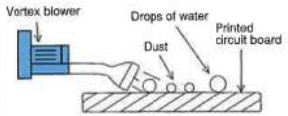
Application

Tape end processing



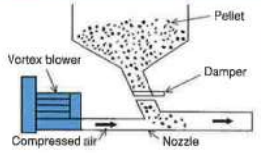
Feeds air into the tank to circulate electrolyte for improved plating quality.

Dust cleaner



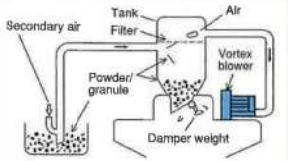
The vortex blower removes fine particles (dust and drops of water) on the printed circuit board by air-blowing.

Transportation of powder/granule



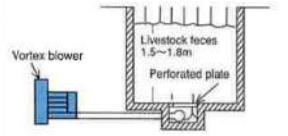
Used for pneumatic transportation of pellet material such as PVC and polyethylene. (Suction type is also available)

Transportation of powder/granule



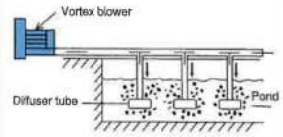
Suitable for transporting PVC, polyethylene, plastic resin, etc.

Composting through fermentation of livestock feces



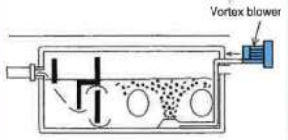
Used for promote fermentation by sending air.

Oxygen supply for cultivating pond



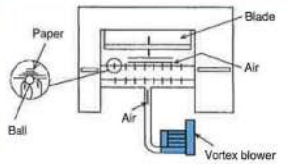
Used for underwater oxygen supply in a relatively shallow pond.

Purifying tank



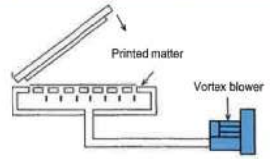
Used for stirring deposit or for purifying water in a relatively shallow water treatment plant.

Paper cutting machine



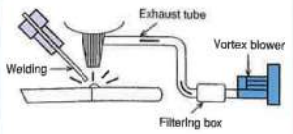
Used as air cushion for facilitating positioning or moving of stacked paper when paper is cut.

Screen plate printer



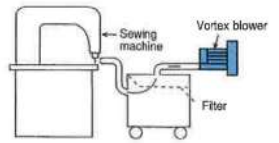
41 Suction pressure is used to fix the material, facilitating the printing process.

Collection of waste gas from welding



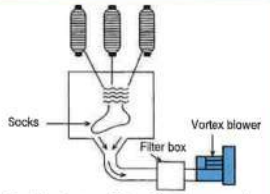
The fume and dust produced during welding can be discharged in vacuum to the other place, ensuring the safety and health of a welding operator.

Industrial sewing machine



The Vortex Blower automatically sucks lots of residual threads producing during operation of industrial sewing machine.

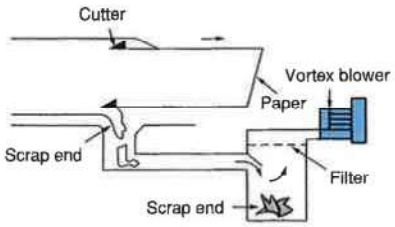
Hosiery machine



Suction force of the blower correctly holds socks and prevents tangling.

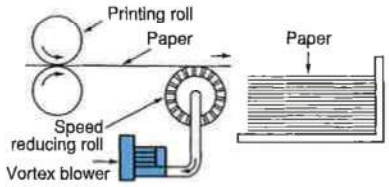
Application

Tape end processing



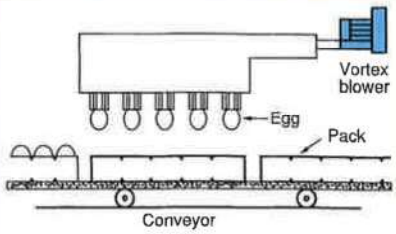
Used for removing scrap ends of tape of automatic packaging machine.

Paper feeding of printing machine



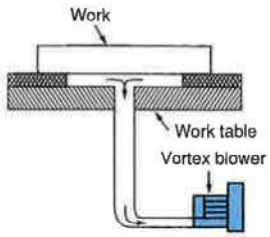
The paper printed by a high-speed press is reduced in speed before stacking, and the Vortex Blower is used for holding the paper with the speed reducing roller.

Egg suction machine



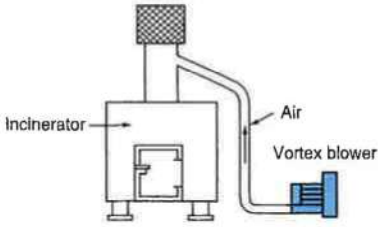
Fragile objects such as egg can be safely picked up by means of suction characteristic without pulsating.

Holding of works



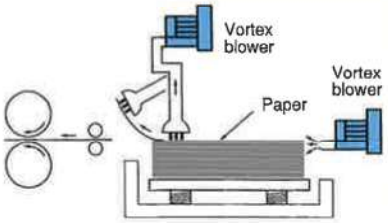
Nonmagnetic matters such as wood pieces, paint, etc. can be fixed on the work table without any fixation tools, thanks to suction function of the vortex blower.

Incinerator



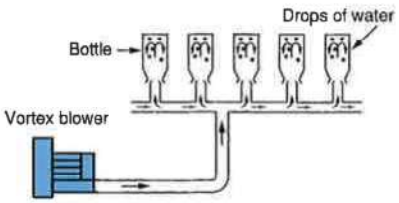
The Vortex Blower can assist combustion effect or promote removal of exhaust gas.

Paper feeding of printing machine



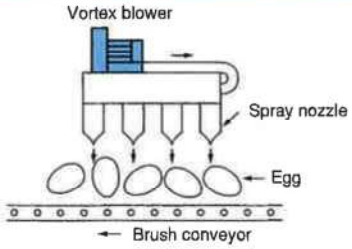
Discharged air facilitates paper separating, paper aligning, and distributing.

Bottle washing machine



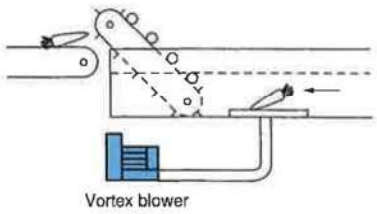
Used for removing drops of water remaining inside bottles after washing.

Egg washing machine



Used for automatic egg washing machine.

Vegetable washing machine



Used for vegetable washing machine.

⚠ Safety precautions

Please refer to the instruction manual carefully for instllation, maintenance, and inspection of the HITACHI VORTEX BLOWER. Incorrect use may cause the accident or the damage.

Hitachi Industrial Equipment Systems Co.,Ltd.

URL http://www.hitachi-ies.co.jp

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