

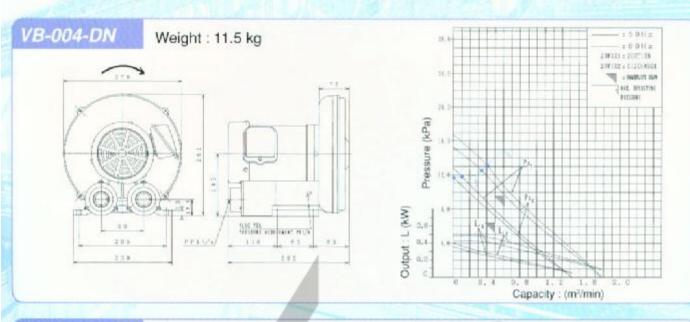
# HITACHI VORTEX BLOWERS

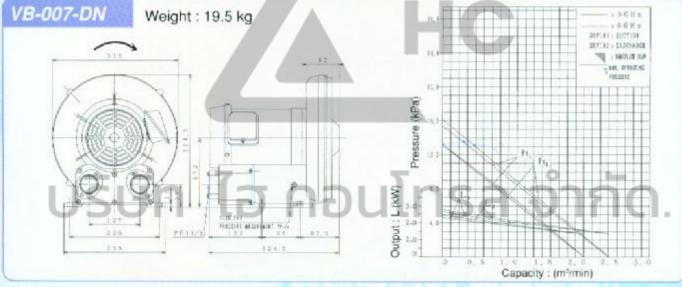
**DN Series / E2 Series** 

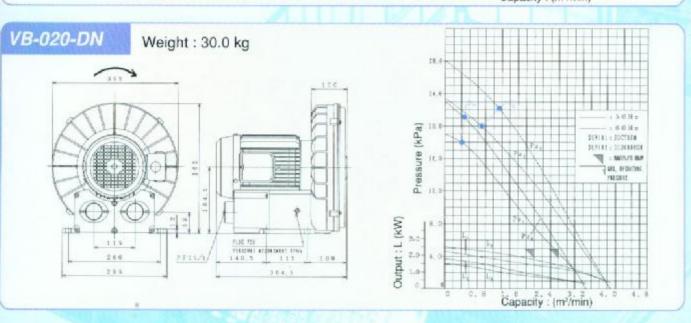


# DN Series

Outer dimensions - Characteristic diagram (mm) Symbol ; Nameplate Value Available range

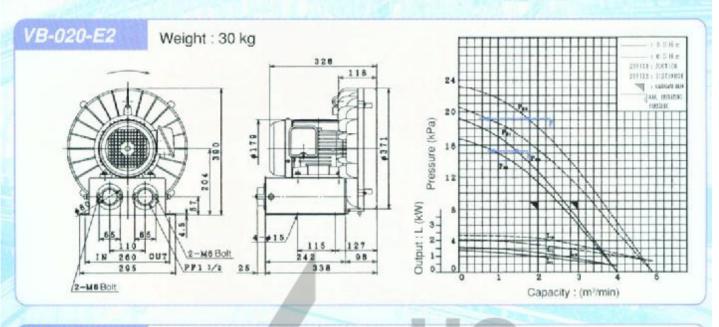


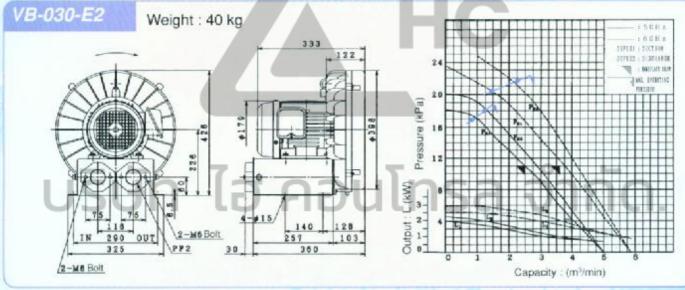


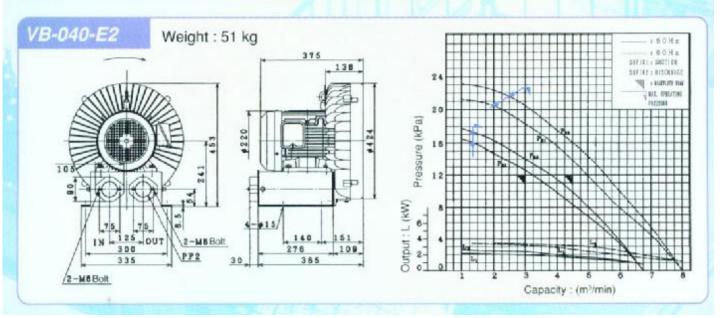


# **E2 Series**

Outer dimensions - Characteristic diagram (mm) Symbol ; Nameplate Value Available range





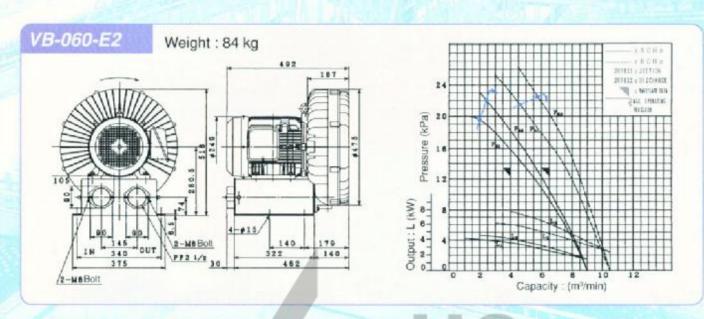


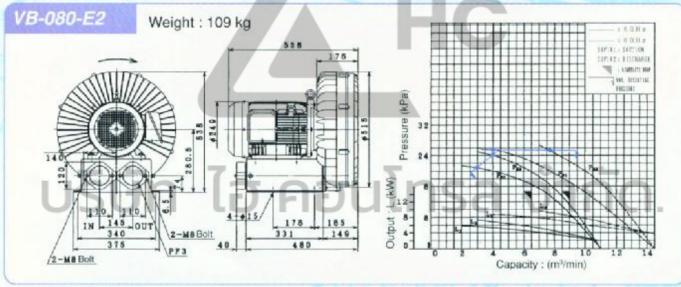
# **E2 Series**

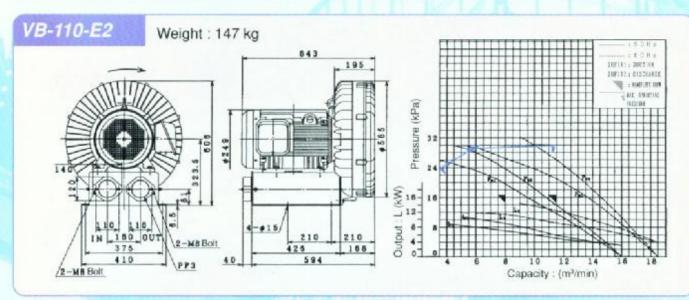
Outer dimensions - Characteristic diagram

Symbol; Nameplate Value

Available range





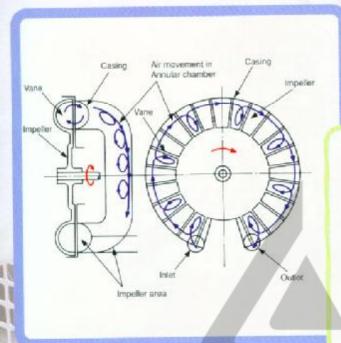


# How Vortex Blower Works.

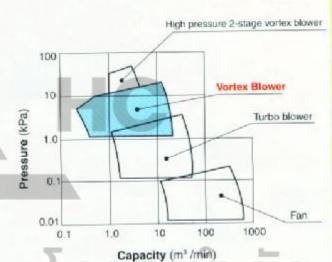
Vortex Blower are single stage units whose impellers are constructed with several vanes reminiscent of the larger but similar impellers found on steam turbines. When the impeller of a Vortex Blower turns, air between the vanes of the impeller is acted upon by centrifugal force and moves toward the periphery of the impeller.

From there, the air enters the annular chamber in the blower housing where it is directed back toward the base of the impeller vanes for recirculation in the same manner.

The circular flowing in combination with the revolution of the impeller causes air to follow a spiral path through Vortex Blower with the result that the air is under constant acceleration. The air consequently leaves the machine at a highly elevated energy state, ready to work.



### : What are Vortex Blower?



### Three-Dimensional Impeller Strong against dust.

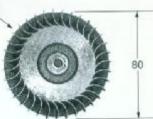
"The DN Series" is reliably invented with compact size, strong power, high durability, and low noise.

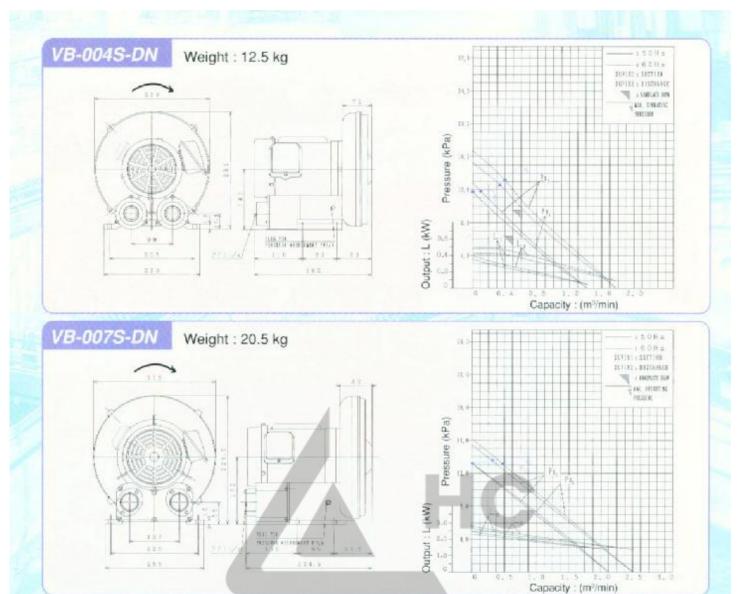


Curved impeller vanes provide smooth air flow allowing for:

- More compact size
- Higher pressure
- Lower noise

open structure





# **Applications**

### Positive Pressure (Discharge Function), Performing Excellent Work.



· Incinerators

- Transportation machines
  - · Hopper gaseous phase formation
- Medical appliances
  - · Massage machines
  - Respiratory equipment
- · Surgical glove testing machines
- · Air for air beds



- Car washing
- equipment

General industries

Food machinery

machines

Automatic bottling

Sausage peelers

· Milking machines

Medical appliances

· Dental instruments

· Filters

### Air Blast (Blow off)

- Semiconductor manufacture
- · Dust collectors
- Wood working machines
- · Shavings removal
- General industries
- · Pipe deaners
- · Air brushes
- · Sand-blastess
- Medical appliances
  - · Curtain sprayers

Textile machinery

Food machinery

Round knitting machines

· Ham processing machines

Egg washing machines

· Bottle washing machines

### Negative Pressure (Vacumm Function), Achieving Outstanding Duty.

### Air intake



### General industries

- · Press machines
- · Welders

### Textile machinery

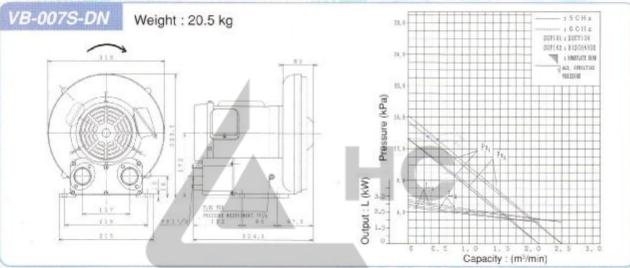
- . Twisting treatment
- . Cloth press machines
- Semiconductor manufacture
  - · Deseration treatment



- Computer devices
- · Tape winders
- machinery
  - · Automatic machines
- Pollution treatment devices
  - · Dehydrators
- · Car washing equipment
- · Hosiery knitting machines

· Stain removal machines

# VB-004S-DN Weight: 12.5 kg DEFECT - DESCRION DELICE - DUDGINGS Pressure (kPa) THE REPORT OF THE 0.4-Capacity: (m<sup>3</sup>/min)



# **Applications**

### Positive Pressure (Discharge Function), Performing Excellent Work.

- General industries
  - · Gas burners
- Transportation machines
  - · Hopper gaseous phase formation
- Medical appliances
- · Massage machines
- · Surgical glove testing machines
- · Air for air beds

- · Car washing

machines

· Milking machines

Medical appliances

· Dental instruments

### Air Blast (Blow off)

- Semiconductor manufacture Dust collectors
- · Wood working machines
- General industries
  - · Sand-blasters
- · Air brushes

- Textile machinery
- · Round knitting machines
- Food machinery
- · Ham processing machines
- · Bottle washing machines
- . Egg washing machines Green vegetables washers
- Medical appliances · Curtain sprayers

### Negative Pressure (Vacumm Function), Achieving Outstanding Duty.

- General industries
- · Press machines
- Welders
- Textile machinery
  - Twisting treatment
- · Cloth press machines
- Semiconductor manufacture
- Deseration treatment

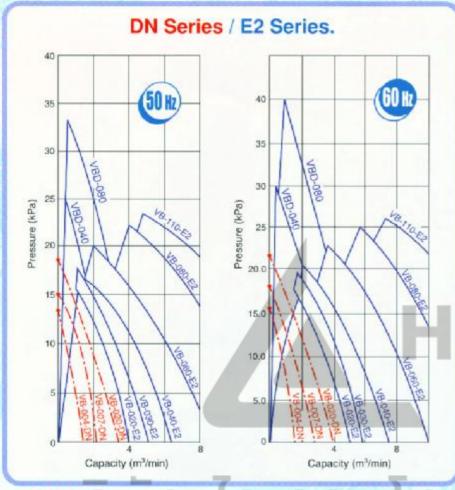


- General industries Computer devices
- Textile Food machinery · Automatic bottling
  - machinery
    - Automatic machines · Hosiery knitting machines
    - · Stain removal machines
- Pollution treatment
  - Dehydrators
- Car washing equipment
- Water removal

### High Efficiency Impeller & Strong Construction Preventing Dust!!

The Three-Dimensional Impeller is built with an open structure, along with a compact size and high static pressure. In addition, its strong structure resists dust and moisture from surrounding atmosphere. (DN Series)

- ★ Built with the Three-Dimensional Impeller, DN Series has vanes, which provide smooth air flow allowing for more compact size, higher static pressure, and lower noise.
- With an open structure of vanes, it prevents absorbtion of dust from the atmosphere, therefore, it provides high efficiency of pressure.



### Major units of Conversion

1 kgf/cm<sup>2</sup> =9.8x10<sup>4</sup> Pa =0.98 bar 1 at=9.806x10<sup>4</sup> Pa

1 atm=1.013x10<sup>5</sup> Pa 1 mmAq=9.8Pa 1 mmHg=133.3Pa 1 Torr= 133.3Pa

\* DN Series is made in Thailand.

DN Series is made by Hitachi Industrial Technology (Thailand) Co.,Ltd.

E2 Series and others are produced by Hitachi Drive Systems Co.,Ltd. in Japan.

### Standard Specifications

MODEL	50 HZ						60 HZ					
	Nameplate Value(suction)  Max. Operating		Discharge Max. Operating		Max. Capacity	Noise	Nameplate Value(suction)  Max. Operating		Discharge Max. Operating		Max. Capacity	Noise
	VB-004-DN	11.8	0.36	11.9	0.37	1.4	54	12.7	0.45	13.1	0.47	1.8
VB-007-DN	12.6	0.6	12.6	0.63	2.3	60	13.4	0.78	12.1	0.79	2.8	63
VB-020-DN	18.0	1.5	22.0	1.8	3.5	64	20	2.0	24.2	22	4.2	69
VB-0048-D	11.8	0.36	11.9	0.37	1.4	54	12.7	0.45	13.1	0.47	1.8	59
VB-0078-D	12.6	0.6	12.6	0.63	2.3	60	13.4	0.78	12.1	0.79	2.8	63
VB-020-E2	15.2	1,3	15.2	1.4	4.0	57	19.1	2.0	19.1	22	4.9	72
VB-030-E2	17.2	1.8	18.2	2.0	5.0	71	20.1	2.7	21.6	3.1	5.8	75
VB-040-E2	16.2	2.1	17.0	2.4	6.7	68.5	20.6	3.3	21.7	3.6	8.0	73
VB-060-E2	19.6	4.0	22.1	4.75	9.0	72.5	21.6	5.9	22.6	6.8	10.5	77
VB-080-E2	(21.1	5.7	24.1	6.67	11.0	77.5	25.5	8.8	25.5	9.0	14.5	81.5
VB-110-E2	25.5	8.8	28.8	10.7	16.0	77.5	29.4	12.5	30.0	14.4	18.5	81