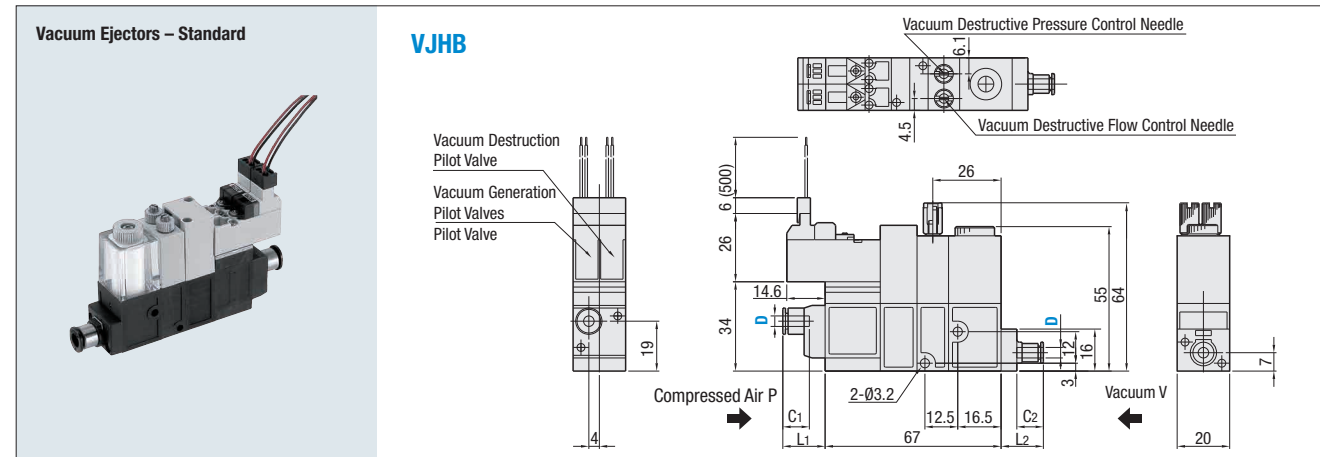
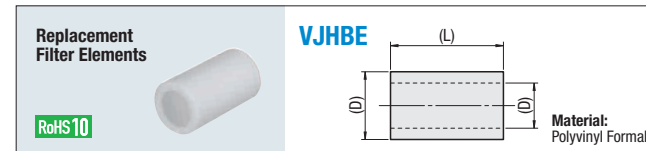


Vacuum Ejectors

Standard

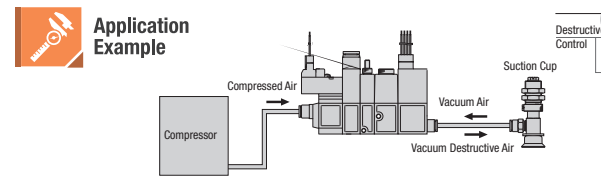


Part Number Type	Nozzle Dia. Nominal	Nozzle Dia. (mm)	L ₁	L ₂	C ₁	C ₂	Ultimate Vacuum (-kPa)		Suction Flow Rate (L/min (ANR))		Flow Consumption (L/min (ANR))		Mass (g)
							90.4	93.1	7	13	11.5	23	
VJHB	4	5	14.6	14.3	10.9	10.9	90.4	93.1	7	13	11.5	23	164.5
		7					90.4	93.1	7	13	11.5	23	
	6	5	17.1	17.2	11.7	11.7	90.4	93.1	7	13	11.5	23	
		7					90.4	93.1	7	13	11.5	23	



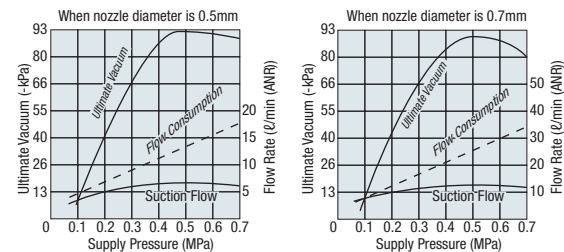
Part Number	(D)	(D)	(L)	Filtration Level	Filter Surface Area
VJHBE	12	8	30	10 μm	1130 mm ²

VJHBE is special element for replacement for vacuum ejector.



Properties

Supply Pressure, Ultimate Vacuum, Suction Flow & Flow Consumption



- The characteristic supply pressure above is for vacuum generation.
- Valve can cause abnormal sounds just before the supply pressure (0.4–0.45 MPa) of Ultimate Vacuum is reached. This abnormal sound indicates unstable properties, and the noise will be large. It may affect the sensor and other objects and cause troubles. Please reset supply pressure.
- [Ex. 1] When pressure is 0.5 Mpa with vacuum generator operating, pressure supply declines until 0.43 Mpa due to pressure drop and abnormal noise occurs.
 - Reset the supply pressure to 0.5 Mpa when vacuum generator is operating.
- [Ex. 2] Though the pressure is 0.5 Mpa when vacuum generator is operating, abnormal sound occurs.
 - Insufficient supply air flow rate (Air flow is squeezed by pipe resistance in the vacuum generator, not obtaining supply air flow rate that meets the characteristics).
 - Select plumbing and equipment to confirm necessary effective sectional area.
- [Ex. 3] When nozzle diameter is 0.5 mm, the sectional area is 0.25×0.25×π×3=0.59 mm²
 - Select plumbing and equipment to spare necessary effective sectional area, 0.6 mm² or more.

Part Number Example: VJHB4 - 7

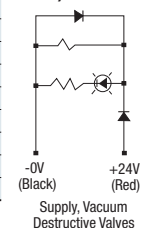
Features

- Vacuum generator with built-in electromagnetic valve enables compact wiring.
- Because of the vacuum break air (air used for release vacuum environment) pressure, work is protected from being blown off.
- Relief function (relieves extra pressure) on vacuum release circuit shortens vacuum break time.

Material List

Name	Material
Body Resin	Glass Fiber Filled PBT (Polybutylene Terephthalate)
Seal Rubber	Nitrile Rubber
Main Valves	Aluminum Alloy
Joint Portion Metal	Brass + Electroless Nickel Plating
Vacuum Filter Covers	PCT (Polycarbonate)
Filter Cover Holders	Aluminum Alloy
Vacuum Generation Nozzles	Brass + Electroless Nickel Plating
Vacuum Generation Diffusers	Brass + Electroless Nickel Plating
Break Air Flow Rate Control Needles	Brass + Electroless Nickel Plating

Electrical Circuit (Electromagnetic Valve)



Specification

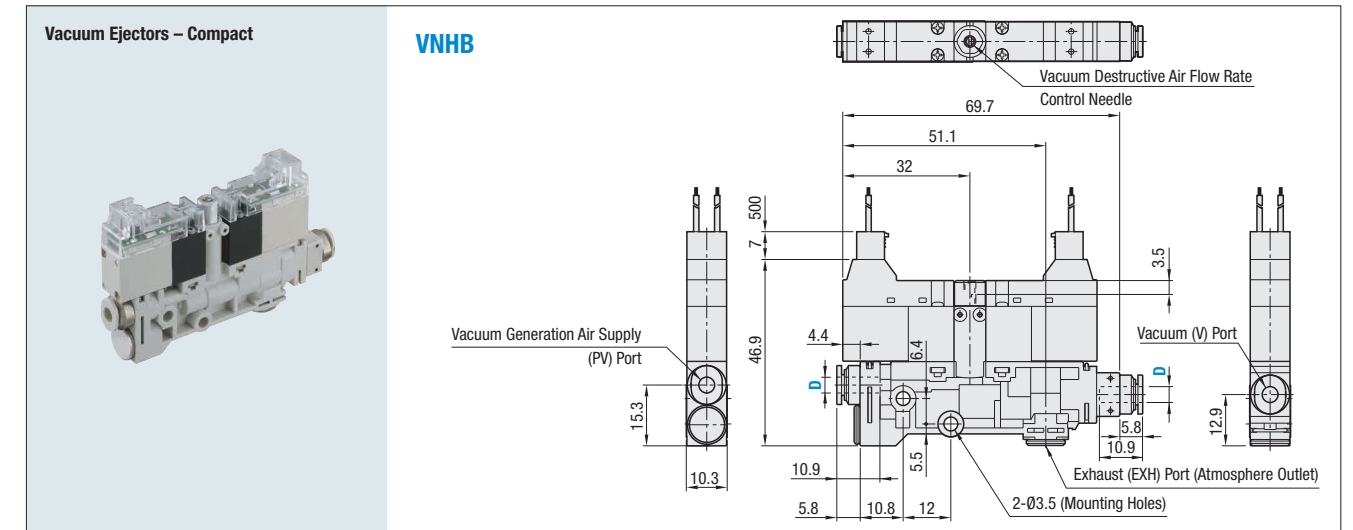
Applicable Fluid	Air
Operating Temperature Range	5–50°C
Operating Pressure Range	0.3–0.7 MPa
Rated Supply Pressure	0.5 MPa
Break Air Flow Rate	0–50 L/min (ANR) (When Supply Pressure 0.5 MPa)
Structure of Break Air Relief Valves	Elastic Seal, Poppet Valve
Relief Pressure Selecting Range	0.005–0.05 MPa

Electromagnetic Valve Specifications

Item	Electromagnetic Valve for Vacuum Generation	Electromagnetic Valve for Vacuum Destruction
Operation Method	Direct operation	Direct operation
Valve Structure	Elastic Seal, Poppet Valve	Elastic Seal, Poppet Valve
Rated Voltage	DC24V	DC24V
Allowable Voltage Range	DC24V±10%	DC24V±10%
Surge Protection Circuit	Diode	Diode
Power Consumption	1.2 W (With LED)	1.2 W (With LED)
Manual Operation	Push Type / Non-Locking	Push Type / Non-Locking
Operation Indicator	Coil Excitation Operation: Red LED On	Coil Excitation Operation: Red LED On
Connection Method	Red: DC24V Black: COM	Red: DC24V Black: COM
Operation Method	Air pressure operation with Pilot Valve	Air pressure operation with Pilot Valve
Valve Structure	Elastic Seal, Poppet Valve	Elastic Seal, Poppet Valve
Pressure Resistance	1.05 MPa	1.05 MPa
Valve Type	NC (Normally Closed)	NC (Normally Closed)
Lubrication	Not Required	Not Required
Effective Sectional Area	Air Supply Port Size: Ø4: 3.5 mm ² Ø6: 5 mm ²	1 mm ²

Vacuum Ejectors

Compact Type



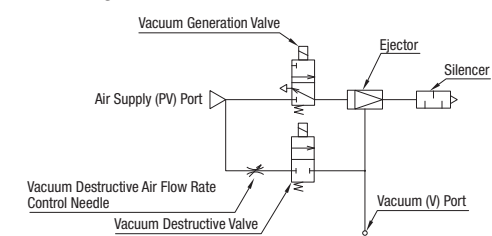
Part Number Type	Nozzle Dia. Nominal	Nozzle Dia. (mm)	Rated Supply Pressure (Mpa)	Ultimate Vacuum (-kPa)		Suction Flow Rate (L/min(ANR))		Flow Consumption (L/min(ANR))		Mass (g)
				90.4	93.1	7	9.5	11.5	16	
VNHB	4	5	0.5	90.4	93.1	7	9.5	11.5	16	50.5
		6	0.5							

Part Number Example: VNHB4 - 6

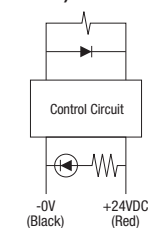
Features

- Compact and lightweight and usable in small space.
- High speed and stable responsiveness (ON/OFF = 5 m/sec or less)
- Vacuum Filters are not built-in. Use vacuum filters on P.357.

Circuit Diagram

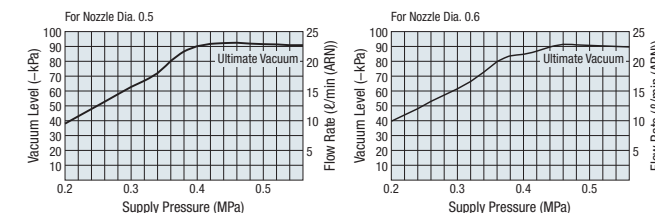


Electrical Circuit (Electromagnetic Valve)

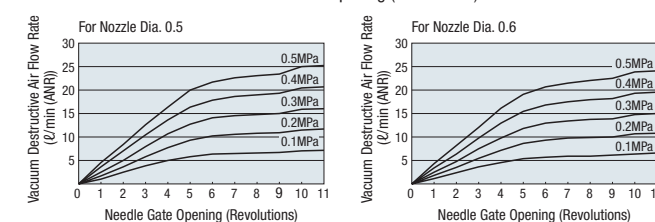


Properties

Supply Pressure, Ultimate Vacuum, Suction Air Rate & Flow Consumption

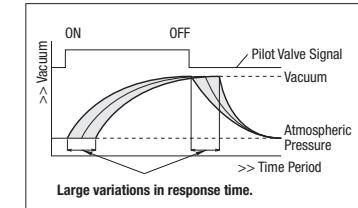


Vacuum Break Air Flow Rate & Needle Gate Opening (Revolutions)

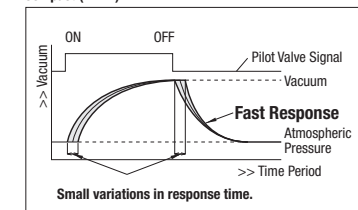


Application Example

Standard (VJHB)



Compact (VNHB)



Specification

Applicable Fluid	Compressed Air
Operating Temperature Range	5–50°C (Not To Be Dewed)
Operating Pressure Range	0–0.55 MPa
Operating Temperature Range	35–85% AH (No Condensation)
Protection Structure	IEC Standards (Conforming to IP40)
Vibration Resistance / Impact Resistance	50 m/s ² or Less / 150m/s ² or Less
Break Air Flow Rate	0–20 L/min (ANR) (When Supply Pressure 0.5 MPa)

Electromagnetic Valve Specifications

Item	Electromagnetic Valve for Vacuum Supply	Electromagnetic Valve for Vacuum Destruction
Operation Method	Direct operation	Direct operation
Valve Structure	Elastic Seal, Poppet Valve	Elastic Seal, Poppet Valve
Rated Voltage	DC24V	DC24V
Allowable Voltage Range	±10%	±10%
Surge Protection Circuit	Built-in Surge Killer Circuit	Built-in Surge Killer Circuit
Power Consumption	At the Start-Up Point: 2.2 W	Retention Time: 0.6W (Built-in Electrical Power Saving Circuit)
Operation Indicator	Green LED	Green LED
Operating Pressure Range	0–0.55 MPa	0–0.55 MPa
Valve Type	Normal Close Type	Normal Close Type
Response Time	Vacuum Start (OFF-ON) / Vacuum Stop (ON-OFF) Both are 5 m/sec or Less	
Connection Method	Connector Style (Cable Length: 500 mm) Red Lead Wire: +24DC, Black Lead Wire: -0V	