

MV Series Vacuum Pumps

60, 90, 100, 150

- Modular components allow the designer to specify only those features necessary for their specific application.
- Interchangeable cartridge venturies increase flexibility.
- Eliminates plumbing between components for faster installation.
- MV6 Vacuum Pump comes with integral 6 way solenoid valve and silencer as standard.
- Integral 6 way valve energizes venturi rapidly for high cycle rates—no loss due to plumbing lines.
- Optional air reservoir (P/N NQR10) can be added for even faster vacuum release (MV6-only).

Technical Data

6-Way MV Spool Valve

6 Way Valve Type: 6/2 pilot operated solenoid valve w/ spring return

Valve Body Material: Die cast zinc

Spool Material: Polished aluminum

Seal Material: Polyethylene

Media: Filtered (50 micron), non-lubricated air

Operating Pressure: 45-150 PSI

Operating Temperature: 15°-140°F

Average Life: 100,000,000 cycles

Power Consumption:

AC - 110 VAC, 50/60 Hz, 1 Watt (w/o LED)

DC - 24 VDC, 2 Watt (w/LED)

Response Time: 11ms open, 22 ms close

Cycle Rate: 2000 Cycles per minute

Electrical Connection: DIN 40050

Manual Override: Standard with pushbutton

Venturi Specifications

Medium: Compressed air or other gases

Operating Pressure: 80 PSI

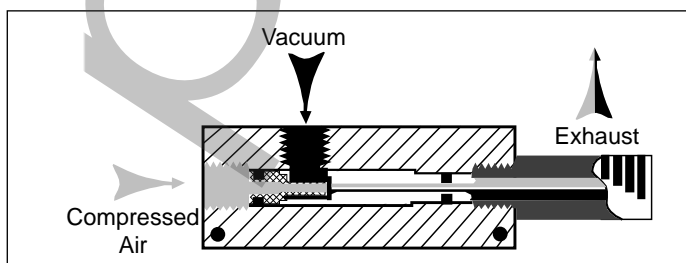
Operating Temperature: 15°-140°F

Operating Noise Level: 72 dBA

Material: Anodized Aluminum, Brass, and Buna-N

Principles of Operation

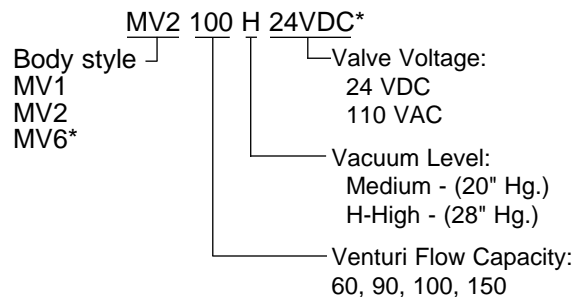
A transducer produces a vacuum by forcing compressed air through a limiting orifice into a venturi section. As the air exits the orifice it expands, increasing in velocity to supersonic speeds before entering the venturi section. This creates a vacuum or negative pressure at the vacuum inlet port located between the orifice and venturi section. This high velocity insures efficient and effective operation.



Ordering Information

Choose a body style based on features and accessories. Venturi size is based on vacuum level and flow requirements. If required, indicate the valve operating voltage.

Order using the following designates:



Select the venturi that best fits your application based on the four performance characteristics: vacuum level, vacuum flow, evacuation speed, and air consumption (see facing page). To simplify selection, venturi performance has been separated into two categories, "M" for medium and "H" for high vacuum applications.

*24 VDC or 110 AC available on MV6

NORVAC venturi pumps are designed to operate at peak efficiency at 80 PSI. Systems requiring operation at **60 PSI** should be ordered with the designate **-60** at the end of the part number, i.e. MV1100H60

MV Series Vacuum Pumps



All Dimensions in Inches (mm)

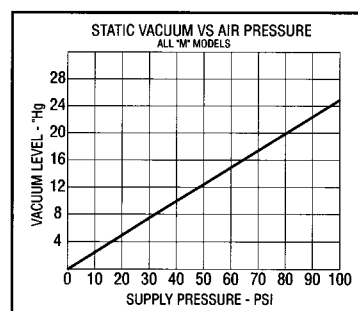
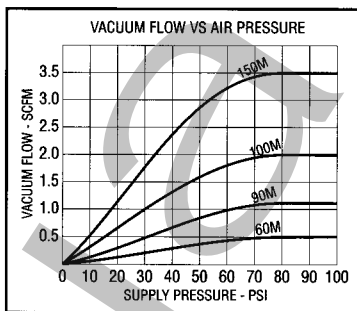
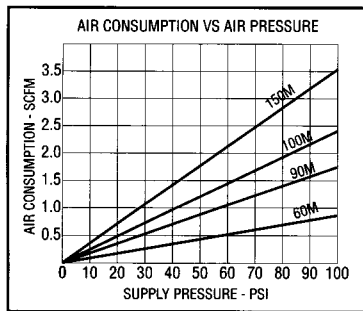
Performance Data

M Series Venturis Medium Vacuum Applications

The "M" series for "Medium" vacuum levels of up to 20" Hg for applications involving porous materials (cardboard, wood, fabric, etc.)

Model	Air Consumption (SCFM) @ 80 PSI	Vacuum Flow (scfm) vs. Vacuum Level ("Hg) @ 80 PSI							
		0"	3"	6"	9"	12"	15"	18"	20"
60M	0.50	0.50	0.40	0.30	0.22	0.15	0.08	0.03	0.00
90M	1.40	1.40	1.25	1.20	1.05	0.85	0.65	0.25	0.00
100M	1.80	2.10	2.00	1.85	1.75	1.60	1.25	0.80	0.00
150M	2.80	3.50	3.20	2.95	2.75	2.50	1.80	0.95	0.00

Model	Evacuation Time (seconds) based on 1 cu. ft. volume ("Hg)							
	0"	3"	6"	9"	12"	15"	18"	20"
60M	0.00	12.50	25.10	43.90	68.60	99.30	153.70	227.00
90M	0.00	3.75	7.20	12.40	19.10	29.90	52.00	104.00
100M	0.00	2.65	5.80	9.90	16.20	22.90	36.20	56.60
150M	0.00	1.35	3.20	5.20	7.70	11.80	23.40	52.00

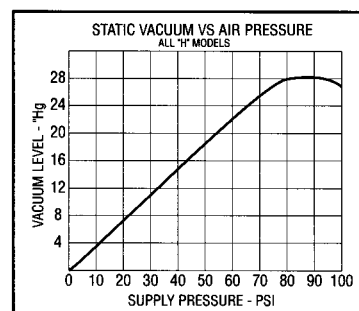
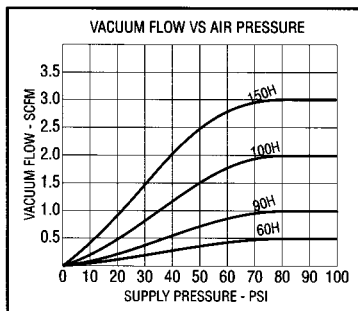
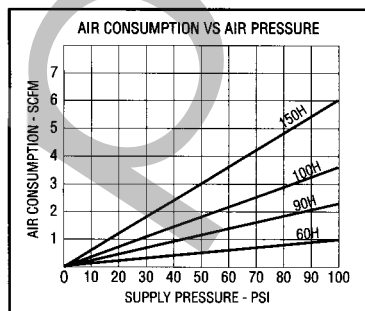


H Series Venturis High Vacuum Applications

The "H" series for "High" vacuum levels of up to 28" Hg for applications involving non-porous materials (steel, plastic, glass, etc.)

Model	Air Consumption (SCFM) @ 80 PSI	Vacuum Flow (scfm) vs. Vacuum Level ("Hg) @ 80 psi										
		0"	3"	6"	9"	12"	15"	18"	21"	24"	27"	28"
60H	0.80	0.50	0.38	0.32	0.30	0.27	0.23	0.20	0.13	0.05	0.02	0.00
90H	1.80	1.20	1.00	0.95	0.90	0.85	0.75	0.70	0.52	0.47	0.20	0.00
100H	2.80	2.00	1.85	1.75	1.57	1.40	1.25	1.05	0.84	0.70	0.35	0.00
150H	4.80	3.20	2.80	2.50	2.30	2.00	1.60	1.40	1.20	0.80	0.50	0.00

Model	Evacuation Time (seconds) based on 1 cu. ft. volume ("Hg)										
	0"	3"	6"	9"	12"	15"	18"	21"	24"	27"	28"
60H	0.00	15.00	29.80	50.60	74.50	102.80	135.90	183.20	245.90	410.20	790.80
90H	0.00	6.50	12.30	18.90	32.50	47.00	65.40	92.20	130.00	222.20	281.30
100H	0.00	2.70	6.50	11.20	17.50	25.80	38.40	55.20	79.20	166.70	251.80
150H	0.00	2.30	3.80	6.50	10.20	14.10	21.30	44.90	55.00	81.00	125.00

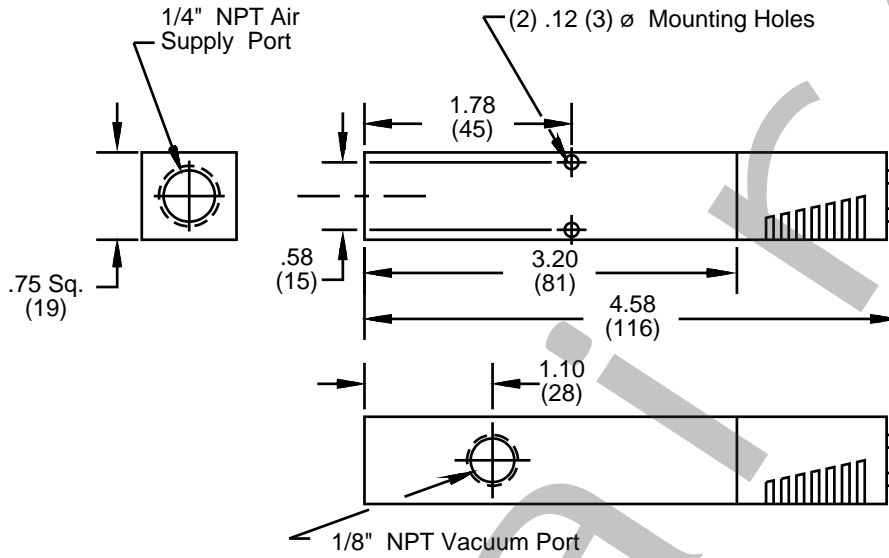




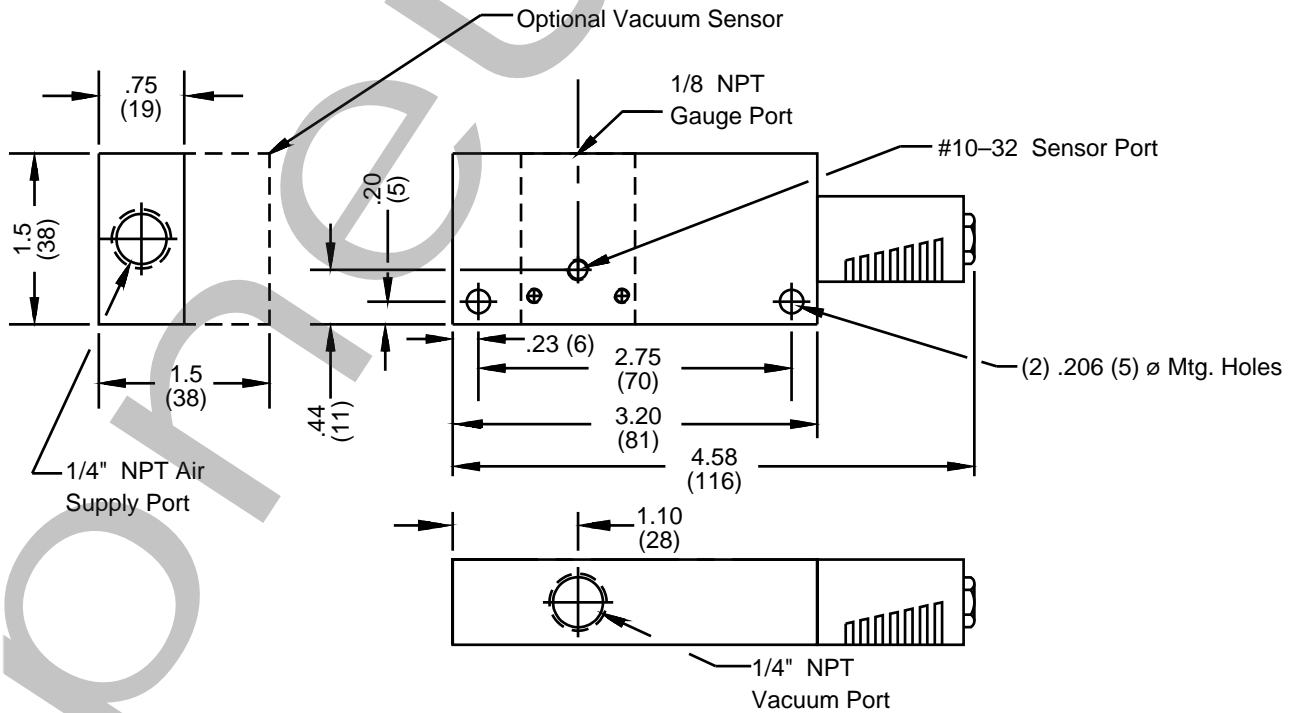
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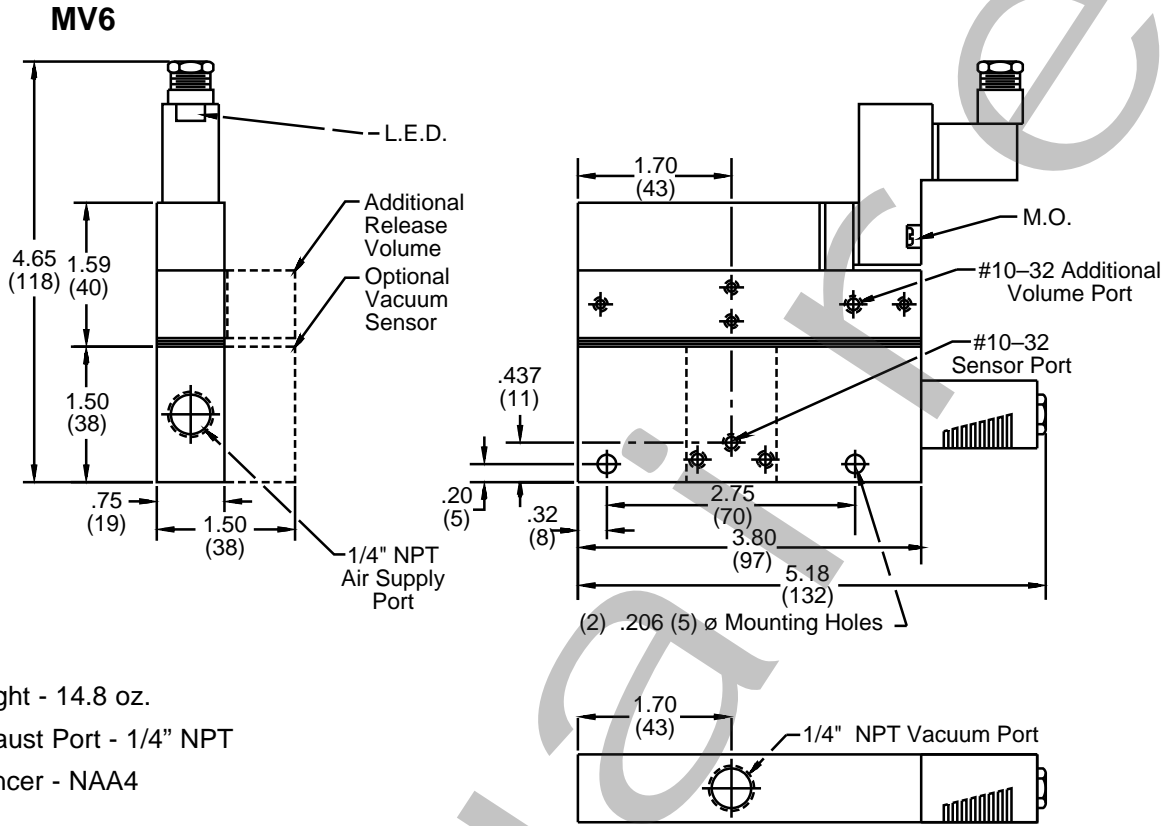
All Dimensions in Inches (mm)

MV1



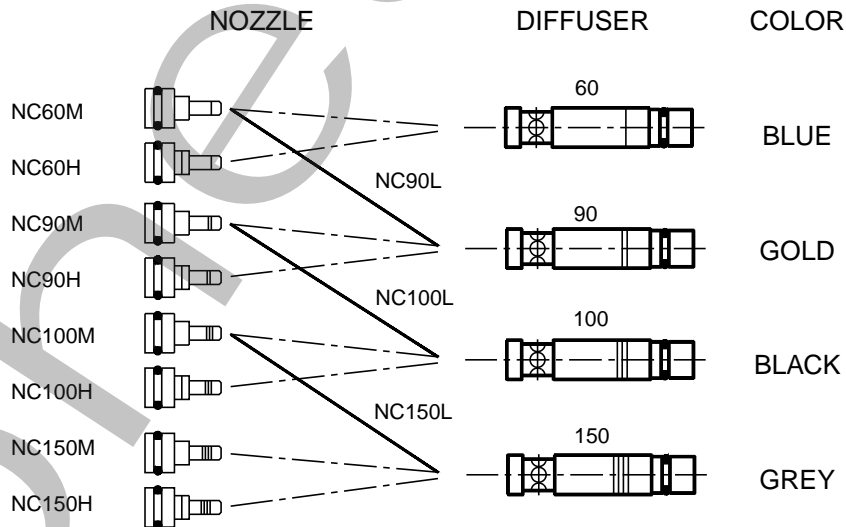
MV2





Weight - 14.8 oz.
 Exhaust Port - 1/4" NPT
 Silencer - NAA4

MV SERIES CARTRIDGE IDENTIFICATION CODE



"L" Series Cartridge - 10"Hg.
 "M" Series Cartridge - 20"Hg.
 "H" Series Cartridge - 28"Hg.