

High Vacuum Venturi Pump with Silencer

78165-40



The 78165-40 cylindrical venturi vacuum pump is our smallest complete venturi vacuum pump. Incredibly compact and powerful—it measures the size of your finger tip and generates up to 27" Hg [914mbar]. Lightweight, quiet and cool operating, 78165-40 pumps are ideal for confined spaces, where they can be mounted in-line near the point of use for rapid response.

The single-stage design allows ingested contaminants to flow through the pump without clogging ensuring continuous operation. Constructed of a single material, with no seals or moving parts, these pumps are virtually indestructible. They can be manufactured in a variety of materials, making them ideal for use in adverse operating conditions.

78165-40 pumps provide a constant vacuum flow, rather than a fluctuating flow typically associated with diaphragm pumps. They operate with an instantaneous response in pulsed applications or on a continuous basis.

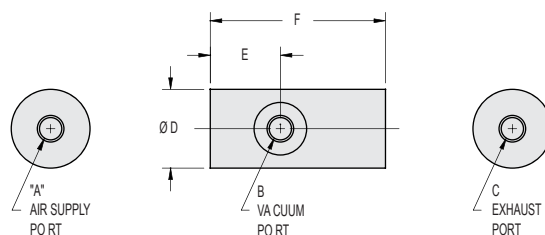
78165-40 pumps can be powered by alternate media (gases, liquids) etc.

Ideal Applications:

- Gas sampling and analysis
- Leak testing
- Portion/ drip control (suck-back) for dispensing liquids
- Liquid transfer
- Pick & place for small, non porous parts
- Small vessel evacuation
- Used as vacuum source for vacuum pencil kit

Features/Benefits:

- High performance—powerful vacuum up to 27"Hg [914mbar]
- Lightweight—less than 1 oz. [28.3g]
- Compact—1.25" x .56" OD [31.75mm x 14.22 mm OD]
- Input pressure from 5 PSI [0.34 bar]
- Fast response—Mounts in-line, and installs close to vacuum point—no delay due to long plumbing lines
- Efficient—Minimal air consumption, provides instantaneous vacuum as needed
- Safe operation—No electricity needed
- Reliable, trouble-free operation:
 - No moving parts to wear
 - No flap valves to stick open
 - No maintenance
 - No downtime



| Imperial Dimensions (in.) | | | | | | |
|---------------------------|--------|--------|--------|------|------|------|
| Item # | A | B | C | D | E | F |
| 78165-40 | 10-32F | 10-32F | 10-32F | 0.56 | 0.45 | 1.45 |

| Metric Dimensions (mm) | | | | | | |
|------------------------|----|----|----|------|------|------|
| Item # | A | B | C | D | E | F |
| 78165-40 | M5 | M5 | M5 | 14.3 | 11.4 | 36.8 |

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| Item # | Air Consumption SCFM @ 80 PSI | Imperial – Vacuum Flow (SCFM) vs. Vacuum Level ("Hg) | | | | | | | | | |
|----------|----------------------------------|--|-------|-------|-------|--------|--------|--------|--------|--------|---------|
| | | 0"Hg | 3"Hg | 6"Hg | 9"Hg | 12"Hg | 15"Hg | 18"Hg | 21"Hg | 24"Hg | 27"Hg |
| 78165-40 | 0.52 | 0.23 | 0.20 | 0.17 | 0.15 | 0.13 | 0.10 | 0.08 | 0.05 | 0.03 | 0.00 |
| | | Imperial – Evacuation Time in Seconds based on 1 Cubic Foot Volume ("Hg) | | | | | | | | | |
| | | 0"Hg | 3"Hg | 6"Hg | 9"Hg | 12"Hg | 15"Hg | 18"Hg | 21"Hg | 24"Hg | 27"Hg |
| | | 0.00 | 24.80 | 54.40 | 89.50 | 130.30 | 178.30 | 240.40 | 334.50 | 516.70 | 1028.00 |

| Item # | Air Consumption L/min | Metric – Vacuum Flow (L/min) vs. Vacuum Level (mbar) | | | | | | | | | |
|------------|--------------------------|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | | 0 mbar | 102 mbar | 203 mbar | 305 mbar | 406 mbar | 508 mbar | 609 mbar | 711 mbar | 813 mbar | 914 mbar |
| I-78165-40 | 14.7 | 6.5 | 5.7 | 4.8 | 4.2 | 3.7 | 2.8 | 2.3 | 1.4 | 0.8 | 0.0 |
| | | Metric – Evacuation Time in Seconds based on 1 Liter Volume (mbar) | | | | | | | | | |
| | | 0 mbar | 102 mbar | 203 mbar | 305 mbar | 406 mbar | 508 mbar | 609 mbar | 711 mbar | 813 mbar | 914 mbar |
| | | 0.0 | 0.9 | 1.9 | 3.2 | 4.6 | 6.3 | 8.5 | 11.8 | 18.2 | 36.3 |

