T2-01

Up to 66 LPM Free Flow

High Capacity Pumps (air/gas)

Twin Head

The T2-01 high-performance pump, available in a single and twin head, features Parker's patented high-efficiency dynamic valve design and achieves remarkable performance and efficiency. With the most compact, lightweight package in its performance range, this pump is ideal for use in portable air and gas applications.

Features

• **High Capacity:**
The T2-01 pumps are capable of flow rates greater than 32 lpm with the single head and up to 66 lpm with the twin head.
• **Motor Options:**
T2-01 pumps are available with DC brush and DC brushless motors with integral controllers.
• **Mounting Capabilities:**
The pump body is specially designed with durable mounting ears.
• **Optimized Configuration:**
Parker can configure the pump to meet specific requirements.
• **Additional Features:**
- Oil Free/Contaminant-Free Operation
- Pneumatic Termination: 3/8" Hose Barb
- Electrical Termination: Wire Leads

Typical Applications

• Portable Aspirators
• Medical Instruments
• Fuel Cells
• Industrial Systems

Performance Data

Physical Properties

Operating Environment:
32 to 122°F (0 to 50°C)
Media:
Most non-condensing gases
Humidity:
5% -95% RH
Wetted Material:
EPDM
Valves:
Neoprene
Pump Head:
PPS, PTFE

Electrical

Motor Type (DC):
Brush, Brushless
Nominal Motor Voltages:
12, 24 VDC
Current Range:
.5 A-5.75 A*
*Dependent on motor type, voltage, pressure/vacuum and flow requirement
Motor Control:
2-wire (Analog or PWM) Brush
Multi-wire (Analog or PWM) Brushless

Pneumatic

Head Configuration:
Single, Twin
Max Unrestricted Flow:
66 LPM
*Varies depending on pump configuration
Pressure Range:
0 - 20 PSI
Vacuum Range:
0 - 24 in Hg

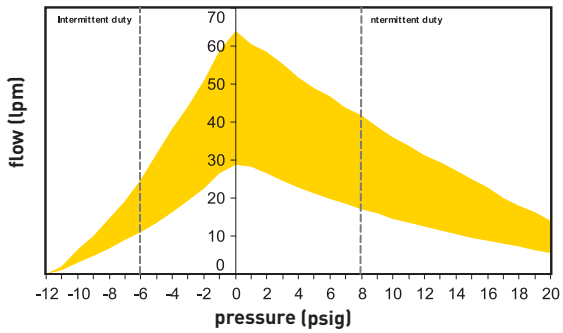
T2-01

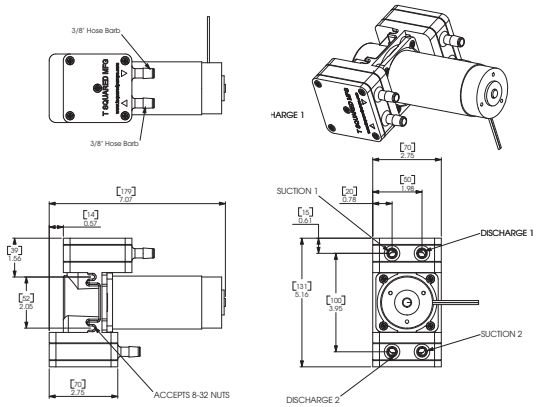
High Capacity Pumps (air/gas)

Flow

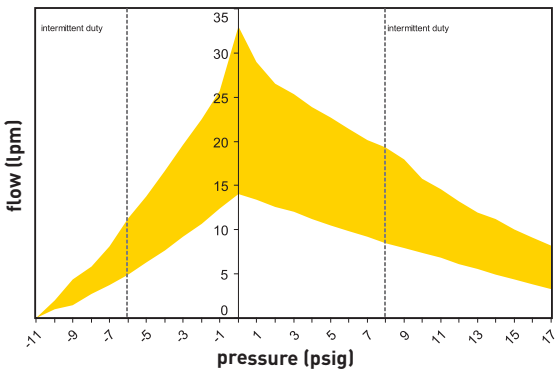
Dimensions

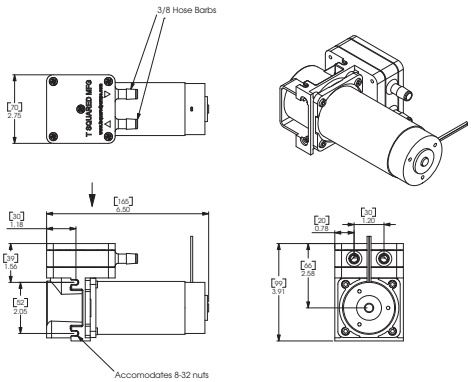
T2-01 TH Flow



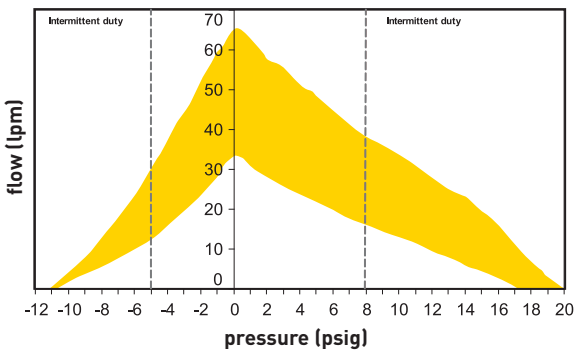


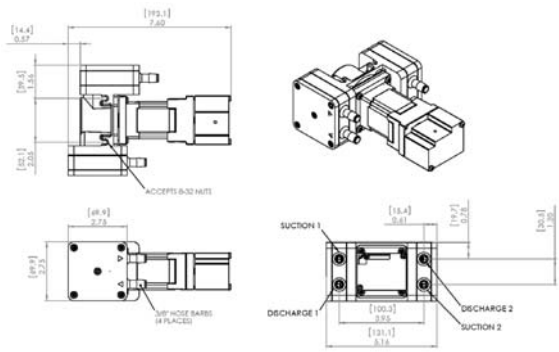
T2-01 SH Flow





T2-01 TH Flow (BLDC)





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T2-02

High Capacity Pumps (air/gas)

Up to 28.5 LPM Free Flow

The T2-02 is a high performance pump that features Parker's patented dynamic valve design. Remarkable performance and efficiency are achieved, particularly at lower loads. With flows up to about 28.5 LPM, this is the most compact, lightweight package in its class. The motor, pump head, and valve combination provide reliable, long life operation.

Features

• High Efficiency

The design has been optimized to provide the highest flowrates available with the lowest power draw, especially in vacuum applications. Low power leads to longer battery life and smaller instrument size.

• Long Life

The wear components of these pumps have been designed to provide maximum life.

• Small Size and Lightweight

The pumps fit into the tight spaces demanded of today's battery powered instruments. The lightweight design keeps instrument weight minimized. Ideal for today's handheld systems that were not possible with yesterday's technology.

Typical Applications

- Portable Aspirators
- Medical Instruments
- Fuel Cells
- Industrial Systems

Performance Data

Physical Properties

Operating Environment:
32 to 122°F (0 to 50°C)
Wetted Material:
EPDM, CR, PPS+PTFE

Electrical

Motor Type (DC):
Heavy Duty Brush
Nominal Motor Voltages (DC):
12, 24 VDC (other options available)
Electrical Termination:
18" Wire Leads

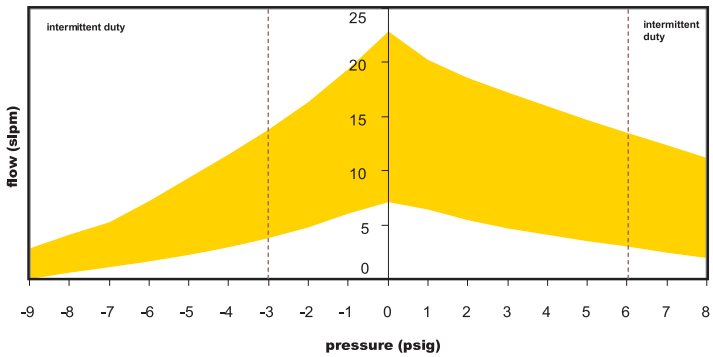
Pneumatic

Head Configuration:
Single
Max Flow:
12V: 24.2 lpm, 24V: 28.5 lpm
Max Intermittent Pressure:
12V: 20 psi (1380 mbar), 24V: 20.5 psi (1415 mbar)
Max Continuous Pressure:
12V & 24V: 2 psi (138 mbar)
Max Intermittent Vacuum:
12V: 21.8 in Hg (740 mbar) 24v: 24.3 in Hg (820 mbar)
Max Continuous Vacuum:
12V & 24V: 4.1 in Hg (138 mbar)

T2-02

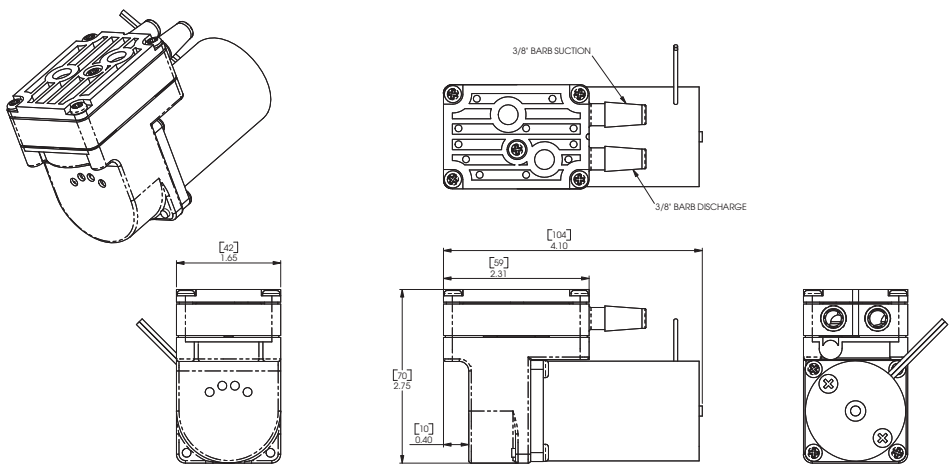
High Capacity Pumps (air/gas)

T20-02 Flow



NOTE: All performance data is typical based on standard conditions: 70°F and 14.7 psia

Dimensions



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T2-03

Up to 2.5 LPM Free Flow

Micro Pumps (air/gas)

The T2-03 DC motor-driven pump line is a miniature powerhouse ideal for use in portable air and gas applications. The pump head and patented valve design provide reliable, highly efficient, long life operation. Size and power draw are minimized. The pumps are available in "Compact" (high efficiency ironless core motor), "eCompact" (iron core brush motor), and "HP" (premium duty brush motor). Motor choice is driven by application requirements.

Features

• High Efficiency

The patented valve design has been optimized to provide the highest flow-rates available with the lowest power draw. Lower power results in longer battery life and smaller instrument size. A

• Long Life

The wear components of these pumps have been designed to provide maximum life. Many applications for these pumps require 10,000+ hours of operation.

• Small Size and Lightweight

The pumps fit into the extremely tight spaces demanded of today's handheld instruments, such as portable gas detectors. The lightweight design keeps instrument weight minimized.

• Intrinsic Safety Capability

The motors used in the 'Compact' and 'HP' pumps can satisfy intrinsic safety requirements. They have been proven in applications for sampling of hazardous gases, vapors, and aerosols in a range of fixed and portable instruments.

Typical Applications

- Industrial Hygiene
- Medical Instruments
- Aerosols and Particle Analysis
- Air over Liquid Control
- Combustion Analyzers
- Trace Detection
- Fixed Gas Detectors

Performance Data

Physical Properties

Operating Environment:
32 to 122°F (0 to 50°C)
Media:
Most non-condensing gases
Humidity:
5 - 95% RH
Wetted Material:
Neoprene, EPDM, FKM
Valves:
Silicone, FKM
Pump Head:
ABS, PPS

Electrical

Motor Type (DC):
Iron Core, Ironless Core, Premium Duty
Nominal Motor Voltages:
4, 5.6, 8.3, 12.4 VDC
Current Range:
18 mA - 400 mA*
*Dependent on motor type, voltage, pressure/vacuum and flow requirement
Motor Control:
2-wire (Analog or PWM) Brush Solder Tabs (Analog or PWM)

Pneumatic

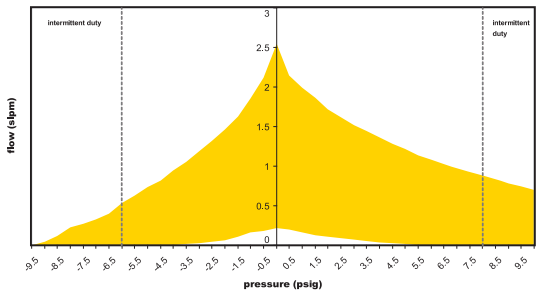
Head Configuration:
Single
Max Unrestricted Flow:
2.5 LPM*
Pressure Range:
0 - 12 PSI*
Vacuum Range:
0 - 24 in Hg*
*Varies depending on pump configuration

T2-03

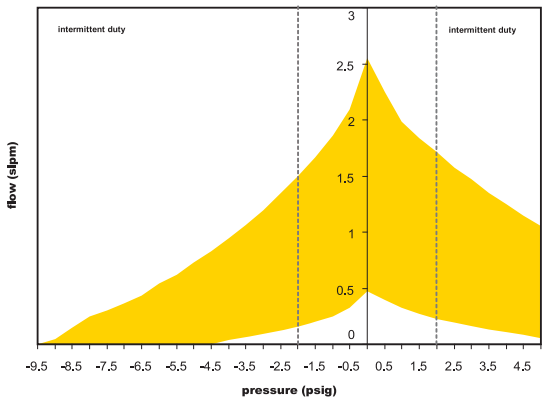
Micro Pumps (air/gas)

Flow

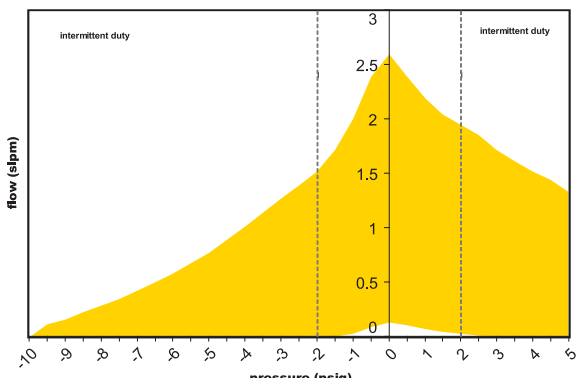
T2-03 HP



T2-03 Compact

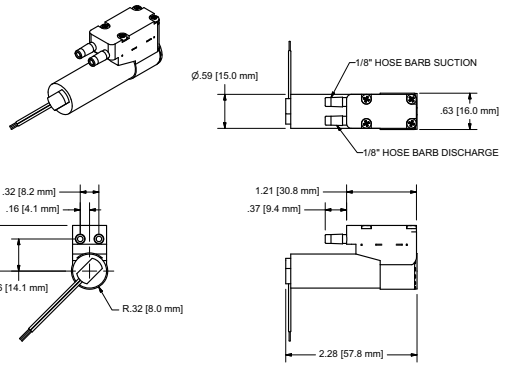


T2-03 e-Compact

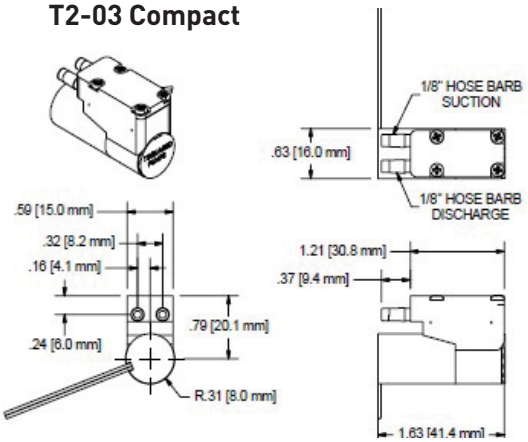


Dimensions

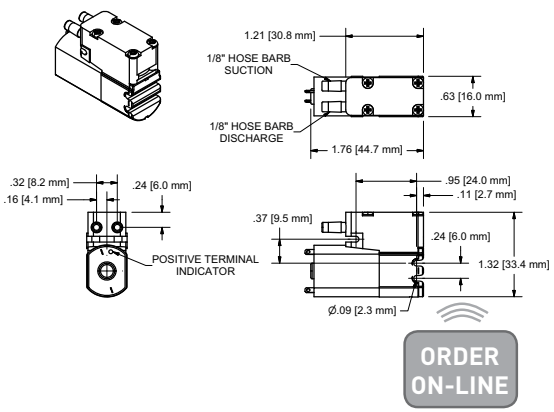
T2-03 HP



T2-03 Compact



T2-03 e-Compact



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T2-04

Up to 7.5 LPM Free Flow

Mini Pumps (air/gas)

The T2-04 is a twin head pump with single set of ports that is ideal for higher suction flows in portable gas sampling systems. A unique double diaphragm design minimizes losses inside the pump. With flows up to 7.5 LPM, the efficiency of this pump is without equal. The motor, pump head, and valve combination provide reliable, long life operation. The pump was designed for higher flow suction applications where low power, small size, and light weight are critical.

Typical Applications

- Industrial Hygiene
- Medical Instruments
- Air over Liquid Control
- Trace Detection
- Fuel Cells
- Particle & Aerosol Sampling

Features

• High Efficiency

The double diaphragm and patented valve design have been optimized to provide the highest flowrates available with the lowest power draw, especially in vacuum applications. Low power leads to longer battery life and smaller instrument size.

• Long Life

The wear components of these pumps have been designed to provide maximum life while maintaining high efficiency.

• Small Size and Lightweight

The pumps fit into the tight spaces demanded of today's battery powered instruments. The lightweight design keeps instrument weight minimized. A single set of barbs provides twice the flow and eliminates tubing 'nests' in the system.

• Intrinsic Safety Capability

The high efficiency ironless core motor can satisfy intrinsic safety requirements. It has been proven in applications for sampling of medical gases, hazardous gases, particles, and aerosols in a range of fixed and portable instruments.

Performance Data

Physical Properties

Operating Environment:
32 to 122°F (0 to 50°C)
Wetted Material:
Neoprene Rubber, Silicone, Polyphthalamide (PPA)

Electrical

Motor Type:
High Efficiency Ironless Core
Nominal Motor Voltages:
6, 12 VDC
Voltage:
6, 12 VDC (other options available)
Electrical Termination:
5" Wire Leads

Pneumatic

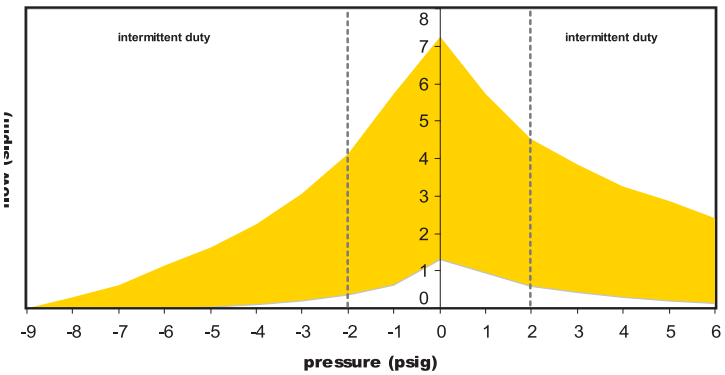
Head Configuration:
Twin
Max Flow:
7.5 lpm
Max Intermittent Pressure:
11.9 psi (820 mbar)
Max Continuous Pressure:
2 psi (138 mbar)
Max Intermittent Vacuum:
17.6 in Hg (596 mbar)
Max Continuous Vacuum:
4 in Hg (138 mbar)

T2-04

Mini Pumps (air/gas)

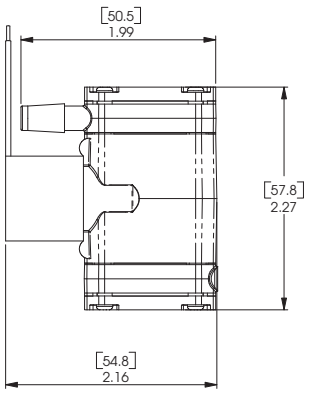
Typical Flow Curve

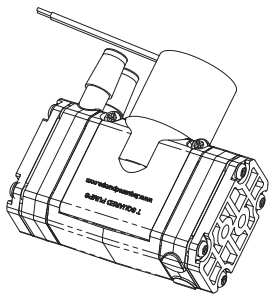
Flow

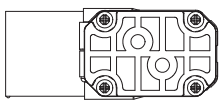


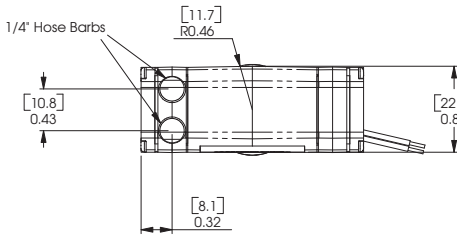
NOTE: All performance data is typical based on standard conditions: 70°F and 14.7 psia

Dimensions









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T2-05

Micro Pumps (air/gas)

Up to 650 mLPM Free Flow

Designed to fit where other pumps can't, the T2-05 DC motor-driven pump's extra small size and high efficiency reduce footprints and extend battery life. The motor, pump head, and valve combination provide reliable, long life operation. Our smallest pump was designed for applications where low power, small size, and light weight are critical. Unique valve design minimizes leakage to maximize flow.

Typical Applications

- Industrial Hygiene
- Medical Instruments
- Air over Liquid Control
- Combustion Analyzers
- Trace Detection

Features

• High Efficiency

The valve design has been optimized to provide the highest flowrates available with the lowest power draw. Low power leads to longer battery life and smaller instrument size.

• Long Life

The wear components of these pumps have been designed to provide maximum life. Many applications for these pumps require 10,000+ hours of operation.

• Small Size and Lightweight

The pumps fit into the extremely tight spaces demanded of today's handheld instruments, such as portable gas detectors. The lightweight design keeps instrument weight minimized.

• Intrinsic Safety Capability

The high efficiency ironless core motor can satisfy intrinsic safety requirements. It has been proven in applications for sampling of hazardous gases, vapors, and aerosols in a range of fixed and portable instruments.

Performance Data

Physical Properties

Operating Environment:
32 to 122°F (0 to 50°C)
Wetted Material:
EPDM (Diaphragm/Valves), ABS (Head)

Electrical

Motor Type:
Hi-efficiency Ironless Core
Nominal Motor Voltages (DC):
3.3, (other options available)
Max Power at Nominal Voltage:
.36 (watts)
Electrical Termination:
5.9" Wire Leads

Pneumatic

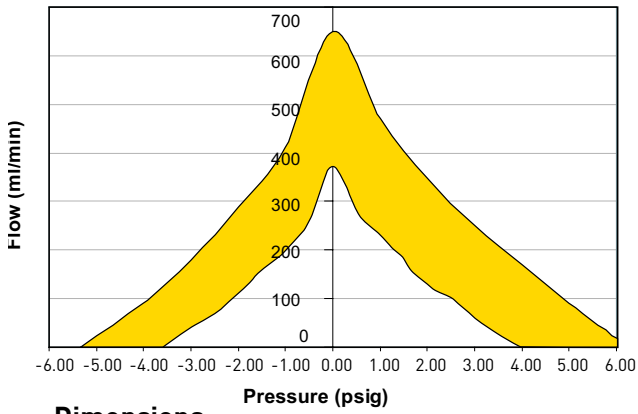
Head Configuration:
Single
Max Flow:
0.65 lpm
Max Intermittent Pressure:
6.2 psi (430 mbar)
Max Continuous Pressure:
2.0 psi (138 mbar)
Max Intermittent Vacuum:
10.8 in Hg (365 mbar)
Max Continuous Vacuum:
4.1 in Hg (138 mbar)

NOTE: All performance data is typical based on standard conditions: 70°F and 14.7 psia

T2-05

Micro Pumps (air/gas)

Flow



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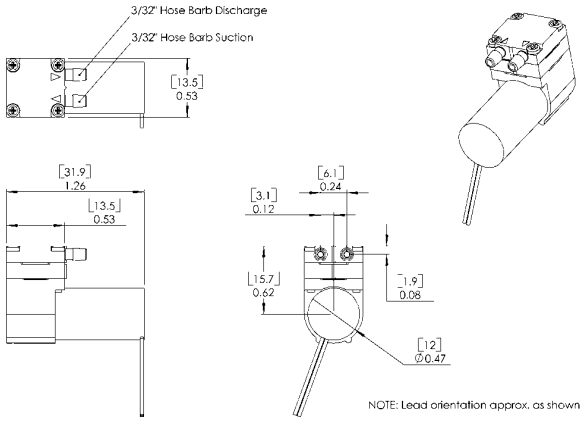
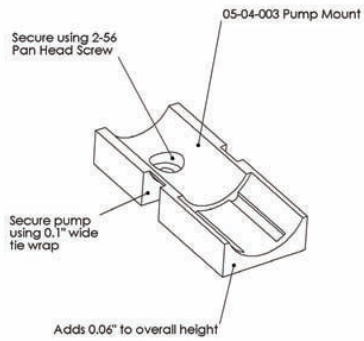
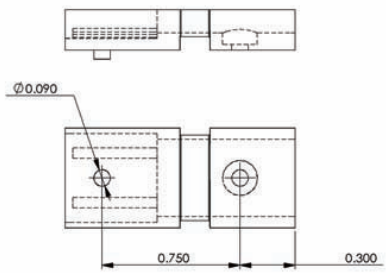
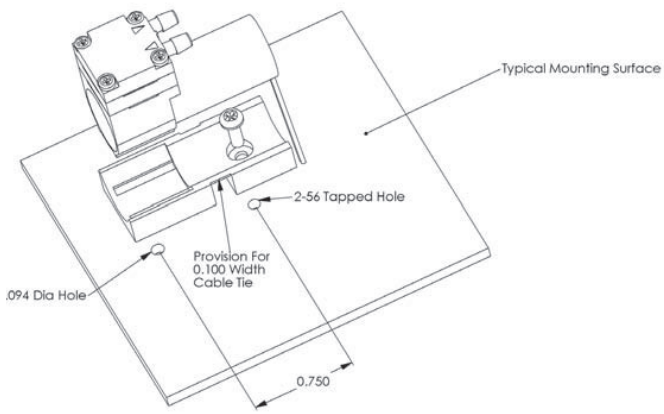


Optional Mounting Bracket





Detailed View



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