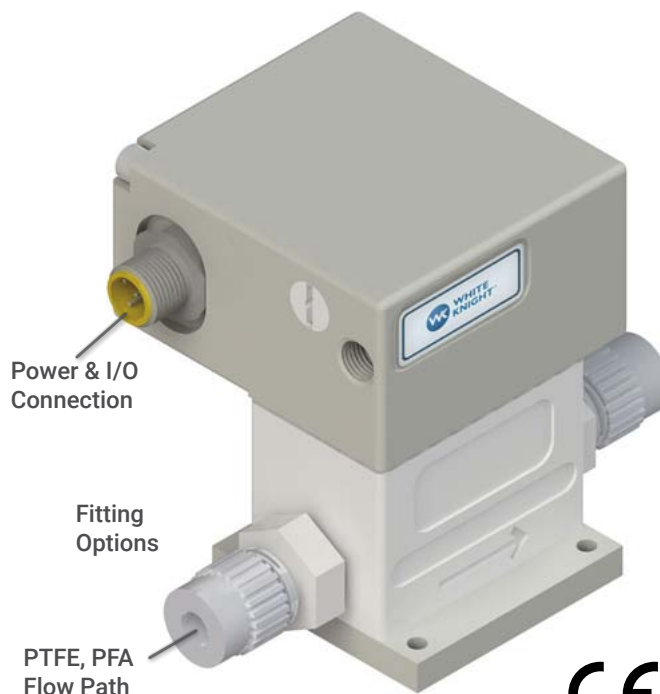


## Mini Pump for Low Flow Applications

Mini pumps feature PTFE/PFA fluid paths for high-purity chemical processes. They are capable of up to 300 ml/min flow rates and 160 psi discharge pressures.

### Features & Benefits

- Metal-free, PTFE/PFA flow path
- 300 ml/min max flow rate
- 160 psi max discharge pressure
- 100 psi max air supply pressure
- 0.5 m (20 in) suction lift
- Dry-run capable
- Safe, leak-free operation
- Mount in any direction
- Various liquid connection options
- Operates with analog or digital external inputs, or fixed cycle rate internal controls
- 24 VDC using 5 pin Turck power and input connections



**Flow Rate**  
≤ 300 ml/min

**Fluid Pressure**  
≤ 11 Bar (160 psi)

**Air Pressure**  
≤ 7 Bar (100 psi)

**Temperature**  
≤ 100°C (212°F)

**Shift Method**  
On-board controller with internal solenoid valves

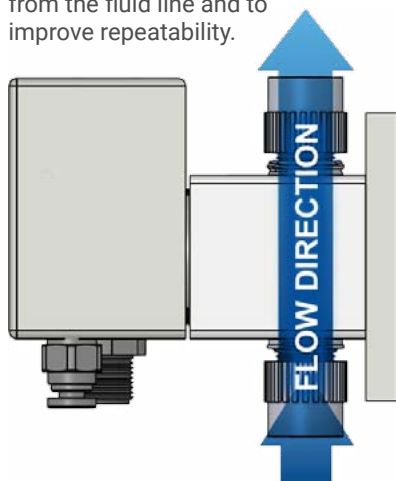
**Industries**  
Semiconductor  
LEDs & Electronics  
Flat-Panel Displays  
Photovoltaic / Solar

**Applications**  
Chemical replenishing,  
mixing, blending, dosing,  
and spiking; photoresist,  
etch and clean processes



### Operation

Mini pumps operate by two solenoid valves that actuate both the suction and dispense actions of the pump. While spring-loaded checks enable the pump to mount in any direction, an upward flow path is preferred to better evacuate air bubbles from the fluid line and to improve repeatability.



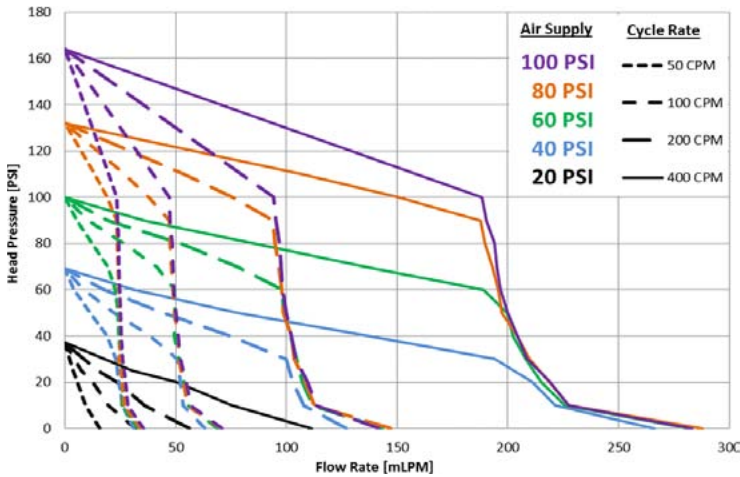
| Pin | Function                           | Connection Type  | Connector Diagram                           |
|-----|------------------------------------|--|---|
| 1   | Power                              | 24 VDC Power Supply  | <p>5 pin Turck EuroFast style connector</p> |
| 2   | Analog Input                       | 0-5 VDC Analog input to set cycle rate.<br>- 0-1 VDC = Pump Off<br>- 1-5 VDC = Pump On = 0-400 CPM |   |
| 3   | Common Ground                      | 0 VDC Ground   |   |
| 4   | Valve Control<br>Actuate Suction   | Sink Type Signal<br>- 24 VDC = Not Active<br>- 0 VDC = Active                                      |   |
| 5   | Valve Control<br>Actuate Discharge | Sink Type Signal<br>- 24 VDC = Not Active<br>- 0 VDC = Active                                      |   |

| Operation Mode                               | Description  | Notes  |
|--|--|--|
| <b>Analog Input</b>                          | Pump will stop cycling if analog input is 1 VDC or less. If analog input is 1-5 VDC, cycle rate equals: 100*Voltage-100    | Pump should be powered on and valve controls disconnected. |
| <b>External Valve Control</b>                | When pump is powered on and analog input is less than 1 VDC, solenoids and cycle rate can be controlled from external PLC. | Pump should be powered on.                                 |
| <b>Fixed Cycle Rate</b><br>* By request only | Pump cycles at desired rate when on. It continues cycling until powered off.   | Pump should be powered on and valve controls disconnected. |

<https://wkfluidhandling.com/ppmc/>



### Performance



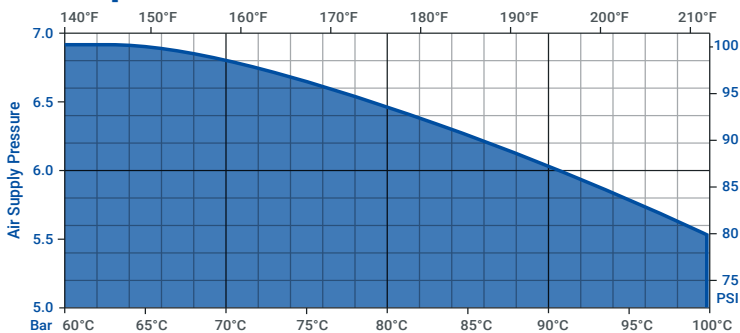
\* 300 mL/min at wide open flow path. The Flow Chart measurements shown are using a back pressure regulator to simulate a pressurized system; results may vary.

### Specifications

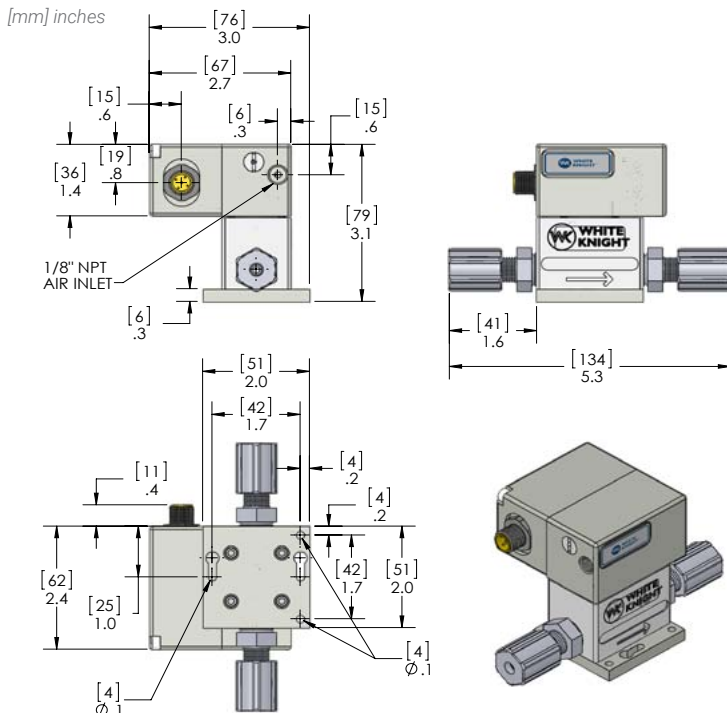
| Model                      | PPMC300  |
|----------------------------|--|
| Dispense Volume per Stroke | ~0.75 ml*  |
| Max Flow                   | ≤ 300 ml/min   |
| Max Fluid Pressure         | ≤ 11 Bar (160 psi)   |
| Max Air Pressure           | ≤ 7 Bar (100 psi)  |
| Cycles per min             | 400 max  |
| Air Consumption            | 1 SCFM   |
| Fluid Path Materials       | PTFE, PFA  |
| Max Dry Suction Lift       | ≤ 508 mm (20 in)   |
| Solenoid Valves            | 2x<br>24V Manifold Valves 0.7 CV   |
| Turck Connector            | 5 Pin O-ring Sealed  |
| On-Board Controller        | <b>Power: 24 VDC</b><br>Max Power Consumption: 6 Watts<br><b>Internal I/O:</b><br>• Two 24 VDC Valve outputs<br><b>External I/O:</b><br>• One 0-5 VDC analog input.<br>• Two NPN Compatible Signal Input |

\* Stroke length varies depending on operation.

### Temperature Limitations



### Dimensions



### Configuration

PPMC 300 CD - F 04 E3 - C1 - 001

① ② ③ ④ ⑤ ⑥ ⑦ (optional)

#### ① Pump Type

PPMC = Mini Pump

#### ② Pump Size

300 = 300 ml/min max discharge

#### ③ Liquid Valve Type

CD = Spring-loaded disk valves

#### ④ Fitting Style

F = Flaretek® compatible

P = Pillar S-300®

\* F not available in 1/8 in.

#### ⑤ Fitting Size

02 = 1/8 in

04 = 1/4 in

06 = 3/8 in

#### ⑥ Electrical Connection

E1 = 15 ft PVC Jacketed Cable

E3 = Turck Connector

E4 = Turck Connector with Cable

#### ⑦ Cycle Rate Control

C1 = Communication Based/Potentiometer

C2\* = Hard Programmed (\*Requires option 7)

#### ⑧ Cycle Rate (\*Used with option 6 C2 Only)

001 = 1 cycle per minute

400 = 400 cycles per minute

(\*Enter value between 001 and 400)

<https://wkfluidhandling.com/ppmc/>

