

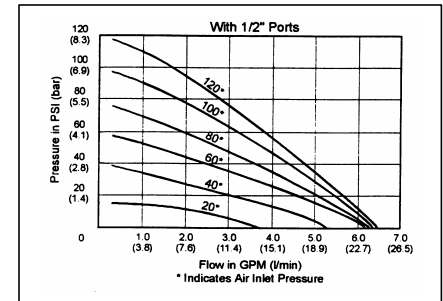
# UV PROCESS SUPPLY, INC.

## CON-TROL-CURE<sup>®</sup> TRANSFER PUMP 4 INSTRUCTION MANUAL

PART # J004-079

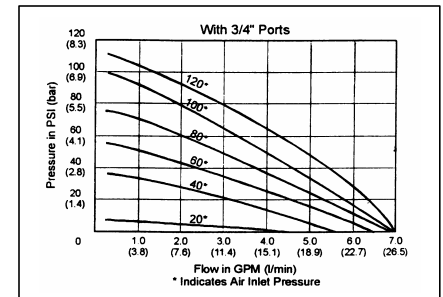
### Product Data

Pump Design: Duplex Diaphragm  
Wetted Parts: Diaphragm Material Santoprene  
Check Valve Material Santoprene  
Housing Material Polypropylene (Glass Reinforced)  
Springs 316 Stainless Steel or Hastelloy  
Ports: Gas Inlet & Outlet 1/4" (6.3 mm)  
Product Inlet 1/2" (12.7 mm)-3/4" (19.1 mm)  
Product Outlet 1/2" (12.7 mm) - 3/4" (19.1 mm)  
Net Weight: 1.32 Pounds (0.60kg)



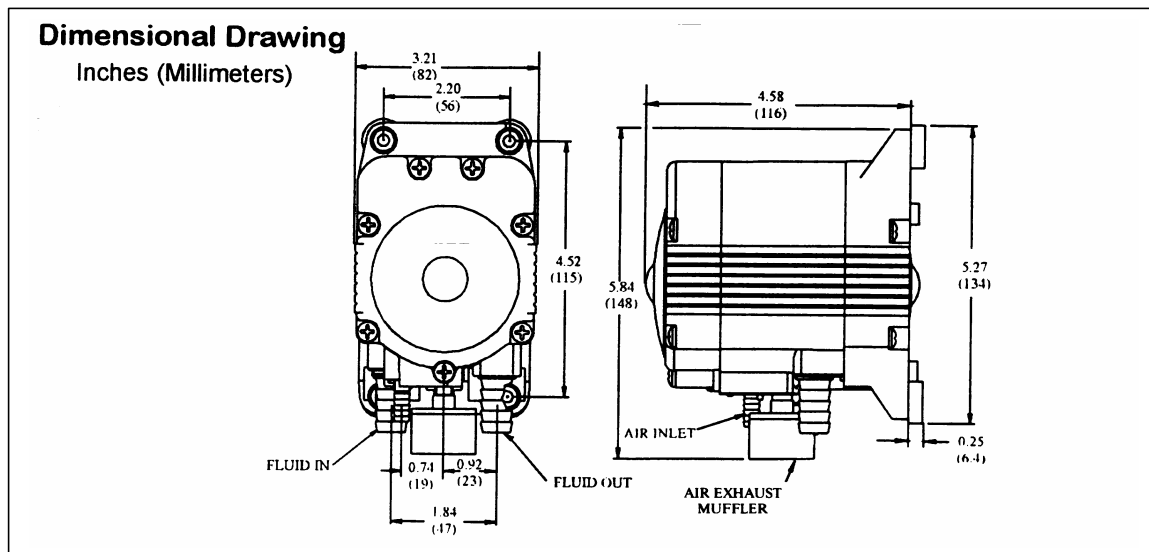
### Performance Specifications

Liquid Temperature: Min. 40°F (4.4°C)  
Max. 110°F (43.3°C)  
Priming: Dry 15 ft. (4.5 m)  
Wet 20 ft. (6.1 m)  
Flow Rates: Max 7 GPM (26.5 L/min)  
Gas Supply Pressure: 20 to 120 PSI (1.4 to 8.3 bar)



### Description

The CON-TROL-CURE<sup>®</sup> Transfer Pump 4 is designed for general commercial and industrial applications. This pump is constructed from a selection of materials for handling a broad range of chemicals. This diaphragm pump is self-priming and can run dry without harm. Some pump uses are; liquid transfer, spraying applications, cooling, circulation, filtration and dispensing.



### Mounting

The CON-TROL-CURE<sup>®</sup> Transfer Pump 4 is a self-priming pump and should be mounted in a dry and adequately ventilated area. This pump can be mounted several feet from the tank, above or below the fluid level. For most applications, no more than 4 feet above the fluid level is recommended. This is not a submersible pump. Secure pump to desired fixture by screws through the rubber grommets in the baseplate of the pump. **Ports must be facing down.**

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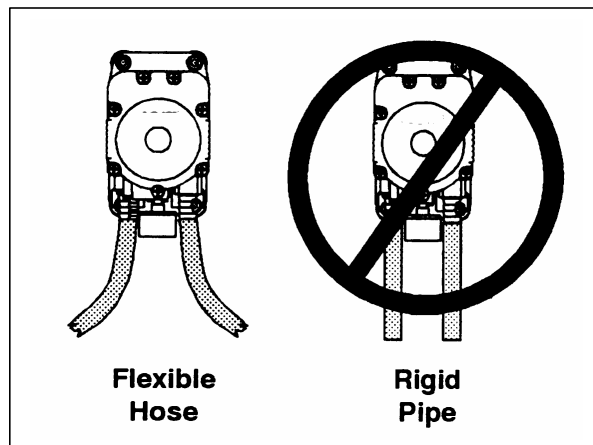
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### Hose Connections

Product In - Use 1/2" or 3/4", reinforced hose or equivalent. Avoid sharp bends that could restrict flow or cause hose to collapse under vacuum.

Product Out - Use reinforced 1/2" or 3/4" I.D. hose for discharge tube.

Gas In - Make sure gas regulator is set at zero. Use reinforced 1/4" hose, connect "Gas In" to gas supply fitting on regulator. If pumps are installed in an enclosed area, it is recommended to connect a hose to the gas discharge port (exhaust) and vent gas to atmosphere. (Requires 'small' exhaust port)



### Plumbing

Use a flexible hose to avoid excess stress on pump ports. DO NOT crimp or kink hose. All hose should be the same size as the pump port fittings. All fittings must be compatible with fluid being pumped. It is recommended to use plastic fittings only. The use of check valves in the plumbing system could interfere with the priming ability of the pump. If unavoidable, check valves in the pumping system must have a cracking pressure of 2 PSI or less.

Use a minimum 40 mesh strainer or filter in the tank or pump inlet line to keep large foreign particles out of the system.

### Operation

At start-up, regulate gas pressure to desired setting. For most installations 20 PSI (1.4 bar) inlet will be adequate, although DO NOT go below 20 PSI. Pump will operate according to air supply. Flow and pressure can be adjusted by increasing or decreasing gas pressure to accommodate varying product viscosities, length of lines or other installation conditions. Review flow curves located on page 1 for further assistance. High viscosity fluids and hose length will limit priming distance. If pump is to be used in high flow, low pressure applications, adjust gas pressure to 20 PSI (1.38 bar) above discharge pressure.

**CAUTION: DO NOT EXCEED 120 PSI (8.3 bar) GAS INLET PRESSURE**

### General Safety Information

Protect yourself and others by observing all safety information. Follow all safety codes, as well as the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

*IF USING PUMP TO MOVE FLAMMABLE OR COMBUSTIBLE SUBSTANCES (E.G., GASOLINE, FUEL OIL, PAINTS, SOLVENTS, LACOUERS, ETC.), OR WHEN PUMPING IN AN ENVIRONMENT CONDUCIVE TO SPONTANEOUS COMBUSTION, FAILURE TO SAFEGUARD AGAINST STATIC SPARK, OPEN FLAME, HEAT AND IMPROPER VENTILATION COULD RESULT IN EXPLOSION AND/OR FIRE CAUSING SEVERE PERSONAL INJURY OR DEATH AND/OR PROPERTY DAMAGE. IT IS RECOMMENDED TO GROUND PUMP WITH A GROUND WIRE TO LIMIT THE RISK OF EXPLOSION. CONSULT LOCAL ELECTRIC CODES FOR SPECIFIC GROUNDING REQUIREMENTS.*

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#### **Preventive Maintenance Tips**

Tips to help prolong your pump's life.

- If pumping liquid other than water, pump should be flushed with water (if applicable) after every use.
- Before freezing conditions occur, pump must be liquid free.
- If mounting pump in an outdoor environment, shield pump from environmental extremes (i.e. sunlight, water from wash down spray, rain, etc.).
- When using an air compressor, use an inline air dryer before the pump to limit water build-up.

#### **Caution**

Do not clean or service pump, hoses or valves while the system is pressurized. Plastic CO2 air inlet ports do not have a check valve. Prior to cleaning or servicing, purge the pump by carefully tilting the pump so ports are facing up and remove suction line from source. Turn air off and disconnect air inlet line. (Brass air inlet ports have a check valve)

**TROUBLESHOOTING CHART** - Most problems can be avoided through regular cleaning and maintenance. If the pump is not properly cleaned or maintained, dried ink or foreign matter may accumulate within the pump, and block or reduce material flow.

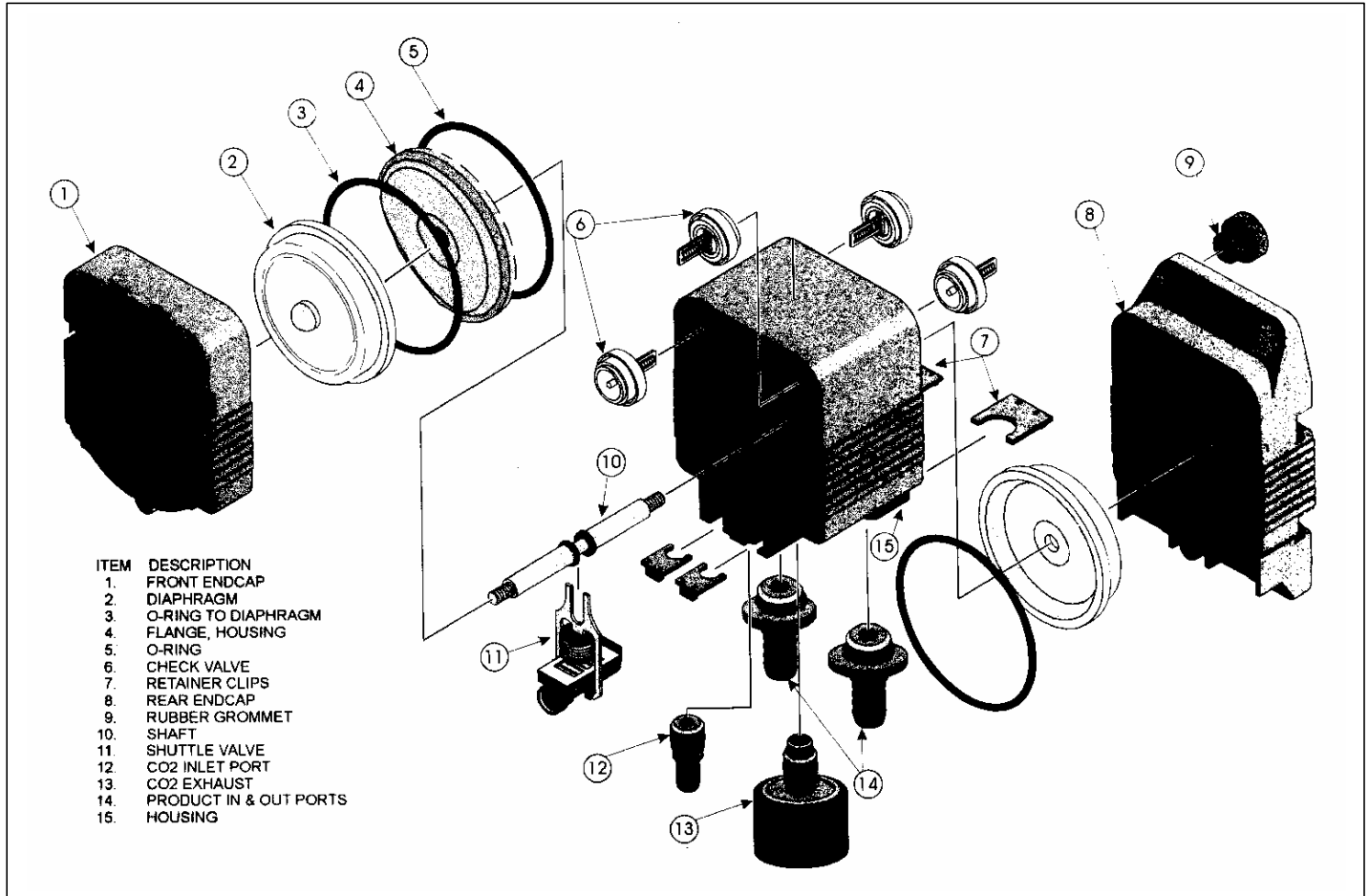
<b>SYMPTOM</b>	<b>POSSIBLE CAUSE</b>	<b>CORRECTIVE ACTION</b>
Pump will not start (stalls)*	<ol style="list-style-type: none"> <li>1. Inadequate air supply (20 PSI Min.)</li> <li>2. Contaminated air supply</li> <li>3. Ruptured diaphragm (2)</li> <li>4. Check shuttle valve for wear (11)</li> <li>5. Check shaft seal o-rings for wear</li> <li>6. Debris is blocking flow*</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase air inlet pressure</li> <li>2. An air dryer might be required</li> <li>3. Replace diaphragm (2)</li> <li>4. Replace shuttle valve if necessary (11)</li> <li>5. Replace o-rings if necessary</li> <li>6. Clean blockage*</li> </ol>
Pump runs, but no fluid	<ol style="list-style-type: none"> <li>1. A leak or break in the product inlet line</li> <li>2. A leak or break in the product discharge line</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace product line</li> <li>2. Replace product line</li> </ol>
Pump leaks thru exhaust port	<ol style="list-style-type: none"> <li>1. Leak at upper exhaust port o-ring (13)</li> <li>2. Shaft seal o-rings damaged or worn</li> <li>3. Inadequate slide lubrication</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace exhaust port (13)</li> <li>2. Replace shaft seal o-rings</li> <li>3. Replace with shuttle valve kit</li> </ol>
Flow rate is low	<ol style="list-style-type: none"> <li>1. Tubing or hose is damaged or blocked</li> <li>2. Check viscosity of medium being pumped</li> <li>3. Check valves not seated correctly (6)</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean or replace</li> <li>2. Reduce viscosity of medium, increase hose diameter or contact factory for recommendation</li> <li>3. Reinstall check valves (6)</li> </ol>
Pump leaks	<ol style="list-style-type: none"> <li>1. Ruptured or worn out diaphragm (2)</li> <li>2. Pump housing screws not torque adequately</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace diaphragm (2)</li> <li>2. Torque screws to 20 in/lb.</li> </ol>

\*To remove material blockage, you must open the pump, clean out all dried ink and foreign particulate. After cleaning, examine air pressure, air and material lines, the diaphragm and other internal components. If components are OK, reassemble the pump and test. If these troubleshooting remedies and the others listed above do not correct the problem, the pump may be returned for evaluation (must obtain return authorization number first). **Failure to clean the pump prior to return will result in a cleaning and maintenance fee above and beyond any repair costs, and regardless of whether the repair is covered by warranty.**

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