Operation - Maintenance

PD44
Metering Valves and Feed Systems

*Meter, mix, and dispense system for precise two-component micro-dispensing of sealants and adhesives.*
*Not approved for use in European explosive atmosphere locations.*

**Important Safety Instructions**
Read all warnings and instructions in this manual. Save these instructions.

See page 3 for model information, including maximum working pressure and approvals. See page 7 for product configuration information.

*Linear Resistive Transducer PD44 Metering Valve shown, Feed Systems not shown*
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Related Manuals

Manuals are available at www.graco.com

Component manuals in U.S. English.

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<td>PD44 Control Box Setup - Operation</td>
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<td>3A0987</td>
<td>PD44 Parts</td>
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Models

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<td>2000 (14, 138)</td>
<td>100 (0.7, 7)</td>
<td>1200 (8, 83)</td>
<td>400 (2.8, 28)</td>
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<td>2000 (14, 138)</td>
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<td>2000 (14, 138)</td>
<td>100 (0.7, 7)</td>
<td>1200 (8, 83)</td>
<td>400 (2.8, 28)</td>
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* If a custom PD44 is ordered, it will not be CE approved unless otherwise noted.
Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbol refers to procedure-specific risk. Refer back to these warnings. Additional, product-specific warnings may be found throughout the body of this manual where applicable.

### WARNINGS

#### SKIN INJECTION HAZARD

High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. **Get immediate surgical treatment.**

- Do not point gun at anyone or at any part of the body.
- Do not put your hand over the dispense outlet.
- Do not stop or deflect leaks with your hand, body, glove, or rag.
- Follow **Pressure Relief Procedure** in this manual, when you stop dispensing and before cleaning, checking, or servicing equipment.

#### TOXIC FLUID OR FUMES HAZARD

Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.

- Read MSDS’s to know the specific hazards of the fluids you are using.
- Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.
- Always wear impervious gloves when spraying or cleaning equipment.
- If this equipment is used with isocyanate material, see additional information on isocyanates in Isocyanate Conditions Section of this manual.

#### PERSONAL PROTECTIVE EQUIPMENT

You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to:

- Protective eyewear
- Clothing and respirator as recommended by the fluid and solvent manufacturer
- Gloves
- Hearing protection

#### FIRE AND EXPLOSION HAZARD

Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. To help prevent fire and explosion:

- Use equipment only in well ventilated area.
- Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc).
- Keep work area free of debris, including solvent, rags and gasoline.
- Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.
- Ground all equipment in the work area. See **Grounding** instructions.
- Use only grounded hoses.
- If there is static sparking or you feel a shock, **stop operation immediately**. Do not use equipment until you identify and correct the problem.
- Keep a working fire extinguisher in the work area.
### ELECTRIC SHOCK HAZARD
This equipment must be grounded. Improper grounding, setup, or usage of the system can cause electric shock.
- Turn off and disconnect power cord before servicing equipment.
- Use only grounded electrical outlets.
- Use only 3-wire extension cords.
- Ensure ground prongs are intact on power and extension cords.
- Do not expose to rain. Store indoors.

### EQUIPMENT MISUSE HAZARD
Misuse can cause death or serious injury.
- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See Technical Data in all equipment manuals.
- Do not leave the work area while equipment is energized or under pressure. Turn off all equipment and follow the Pressure Relief Procedure in this manual when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.

### MOVING PARTS HAZARD
Moving parts can pinch or amputate fingers and other body parts.
- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the Pressure Relief Procedure in this manual. Disconnect power or air supply.

### PLASTIC PARTS CLEANING SOLVENT HAZARD
Use only compatible water-based solvents to clean plastic structural or pressure-containing parts. Many solvents can degrade plastic parts and cause them to fail, which could cause serious injury or property damage. See Technical Data in this and all other equipment instruction manuals. Read fluid and solvent manufacturer's warnings.
Isocyanate Conditions

To prevent exposing ISO to moisture:

- Always use a sealed container with a desiccant dryer in the vent, or a nitrogen atmosphere. Never store ISO in an open container.
- Keep the ISO lube pump reservoir (if installed) filled with Graco Throat Seal Liquid (TSL™), Part 206994. The lubricant creates a barrier between the ISO and the atmosphere.
- Use moisture-proof hoses specifically designed for ISO, such as those supplied with your system.
- Never use reclaimed solvents, which may contain moisture. Always keep solvent containers closed when not in use.
- Never use solvent on one side if it has been contaminated from the other side.
- Always lubricate threaded parts with ISO pump oil or grease when reassembling.

Keep Components A and B Separate

Spraying or dispensing materials containing isocyanates creates potentially harmful mists, vapors, and atomized particulates.

Read material manufacturer’s warnings and material MSDS to know specific hazards and precautions related to isocyanates.

Prevent inhalation of isocyanate mists, vapors, and atomized particulates by providing sufficient ventilation in the work area. If sufficient ventilation is not available, a supplied-air respirator is required for everyone in the work area.

To prevent contact with isocyanates, appropriate personal protective equipment, including chemically impermeable gloves, boots, aprons, and goggles, is also required for everyone in the work area.

Material Self-ignition

Some materials may become self-igniting if applied too thickly. Read material manufacturer’s warnings and material MSDS.

Moisture Sensitivity of Isocyanates

Isocyanates (ISO) are catalysts used in two component foam and polyurea coatings. ISO will react with moisture (such as humidity) to form small, hard, abrasive crystals, which become suspended in the fluid. Eventually a film will form on the surface and the ISO will begin to gel, increasing in viscosity. If used, this partially cured ISO will reduce performance and the life of all wetted parts.

NOTE: The amount of film formation and rate of crystallization varies depending on the blend of ISO, the humidity, and the temperature.

To prevent cross-contamination of the equipment’s wetted parts, never interchange component A (isocyanate) and component B (resin) parts.

Foam Resins with 245 fa Blowing Agents

Some foam blowing agents will froth at temperatures above 90°F (33°C) when not under pressure, especially if agitated. To reduce frothing, minimize preheating in a circulation system.

Changing Materials

- When changing materials, flush the equipment multiple times to ensure it is thoroughly clean.
- Always clean the fluid inlet strainers after flushing.
- Check with your material manufacturer for chemical compatibility.
- Most materials use ISO on the A side, but some use ISO on the B side.
- Epoxies often have amines on the B (hardener) side. Polyureas often have amines on the B (resin) side.
Product Configurator

This system can be ordered with many different options as shown in the configurator below.

The following table applies to the PD44 configurations and indicates all of the options available for each letter shown above.

<table>
<thead>
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<th>Code A</th>
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<td>Micrometer PD44</td>
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<td>B</td>
<td>964001</td>
<td>Linear Resistive Transducer PD44</td>
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<td>964002</td>
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<td>B</td>
<td>9642_</td>
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<td>C</td>
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NOTE: See code CD for last two digits of part number

NOTE: See code B for first four digits of part number
## Code E

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**NOTE:** See code FG for last two digits of part number

## Code FG

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**NOTE:** See code E for first four digits of part number

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<td>964004</td>
<td>High viscosity, Stainless Steel/UHMWPE</td>
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<td>3</td>
<td>964005</td>
<td>High viscosity, TC/UHMWPE</td>
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<td>964006</td>
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## Code I

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<td>964013</td>
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## Code J

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<td>Luer lock, equal ports, no check valves</td>
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<td>964021</td>
<td>Luer lock, equal ports, dual check valves</td>
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<tr>
<td>3</td>
<td>964022</td>
<td>Equal ports, 7/8-9, no check valves</td>
</tr>
<tr>
<td>4</td>
<td>964023</td>
<td>Large and small ports, 7/8-9, no check valves</td>
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<tr>
<td>5</td>
<td>964024</td>
<td>Large and small ports, 7/8-9, single check valve</td>
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<td>6</td>
<td>964025</td>
<td>Dual small ports, 7/8-9, no check valves</td>
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<td>7</td>
<td>964026</td>
<td>Dual small ports, 7/8-9 dual check valves</td>
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## Code K

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<td>964027</td>
<td>1/8-24 Luer Lock inlet and outlet, 0.5 cc</td>
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<td>964028</td>
<td>3/16-32 bell mouth inlet, luer lock outlet, 2.0 cc</td>
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<td>964029</td>
<td>1/4-24 bell mouth inlet, luer lock outlet, 4.0 cc</td>
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<td>4</td>
<td>964030</td>
<td>1/4-32 bell mouth inlet, luer lock outlet, 5.5 cc</td>
</tr>
<tr>
<td>5</td>
<td>964031</td>
<td>1/4-48 bell mouth inlet, luer lock outlet, 8.0 cc</td>
</tr>
<tr>
<td>6</td>
<td>964032</td>
<td>3/16-32 bell mouth inlet, tapered outlet, 1.5 cc</td>
</tr>
<tr>
<td>7</td>
<td>964033</td>
<td>1/4-24 bell mouth inlet, tapered outlet, 3.5 cc</td>
</tr>
<tr>
<td>8</td>
<td>964034</td>
<td>3/16-24 bell mouth inlet, tapered outlet, 1.0 cc</td>
</tr>
</tbody>
</table>
### Product Configurator

#### Controls

<table>
<thead>
<tr>
<th>Code L</th>
<th>Part</th>
<th>Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>964035</td>
<td>Pneumatic, micrometer, wire harness only</td>
</tr>
<tr>
<td>2</td>
<td>964036</td>
<td>Pneumatic, micrometer, HMI controls, low level</td>
</tr>
<tr>
<td>3</td>
<td>964037</td>
<td>Pneumatic, micrometer, HMI controls, low level, I/O package</td>
</tr>
<tr>
<td>4</td>
<td>964038</td>
<td>Pneumatic, micrometer, HMI controls, low level, high level</td>
</tr>
<tr>
<td>5</td>
<td>964039</td>
<td>Pneumatic, micrometer, HMI controls, low level, high level, I/O package</td>
</tr>
<tr>
<td>6</td>
<td>964040</td>
<td>Pneumatic, linear resistive transducer, wire harness only</td>
</tr>
<tr>
<td>7</td>
<td>964041</td>
<td>Pneumatic, linear resistive transducer, HMI controls, low level</td>
</tr>
<tr>
<td>8</td>
<td>964042</td>
<td>Pneumatic, linear resistive transducer, HMI controls, low level, I/O package</td>
</tr>
<tr>
<td>9</td>
<td>964043</td>
<td>Pneumatic, linear resistive transducer, HMI controls, low level, high level</td>
</tr>
<tr>
<td>A</td>
<td>964044</td>
<td>Pneumatic, linear resistive transducer, HMI controls, low level, high level, I/O package</td>
</tr>
<tr>
<td>B</td>
<td>964045</td>
<td>Motor driven, I/O, wire harness only</td>
</tr>
<tr>
<td>C</td>
<td>964046</td>
<td>Stepper motor, HMI control, low level, high level, I/O package</td>
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</tbody>
</table>

#### Power Cord

<table>
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<tr>
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<th>Part</th>
<th>Power Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>121055</td>
<td>120 VAC, North American cord set</td>
</tr>
<tr>
<td>2</td>
<td>121054</td>
<td>250 VAC, 1 phase, no plug</td>
</tr>
<tr>
<td>3</td>
<td>121056</td>
<td>10 amp, 250 volt, continental Europe</td>
</tr>
<tr>
<td>4</td>
<td>121057</td>
<td>10 amp, 250 volt, United Kingdom and Ireland</td>
</tr>
<tr>
<td>5</td>
<td>121058</td>
<td>10 amp, 250 volt, Israel</td>
</tr>
<tr>
<td>6</td>
<td>124864</td>
<td>10 amp, 250 volt, Australia</td>
</tr>
<tr>
<td>7</td>
<td>124861</td>
<td>10 amp, 250 volt, Italy</td>
</tr>
<tr>
<td>8</td>
<td>124863</td>
<td>10 amp, 250 volt, Switzerland</td>
</tr>
<tr>
<td>9</td>
<td>124862</td>
<td>10 amp, 250 volt, Denmark</td>
</tr>
<tr>
<td>A</td>
<td>121060</td>
<td>10 amp, 250 volt, India</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>None</td>
</tr>
</tbody>
</table>

#### High Volume Feed Hose

<table>
<thead>
<tr>
<th>Code P</th>
<th>Part</th>
<th>High Volume Feed Hose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>964082</td>
<td>1/2 in. x 8 ft PTFE and stainless steel hose, stainless steel fittings</td>
</tr>
<tr>
<td>3</td>
<td>964084</td>
<td>1/2 in. x 10 ft PTFE and stainless steel hose, stainless steel fittings</td>
</tr>
<tr>
<td>5</td>
<td>964086</td>
<td>1/2 in. x 15 ft PTFE and stainless steel hose, stainless steel fittings</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>None</td>
</tr>
</tbody>
</table>

#### High Volume Feed

<table>
<thead>
<tr>
<th>Code Q</th>
<th>Part</th>
<th>High Volume Feed</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>964090</td>
<td>Low level sensor 11:1 Ram only</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>None</td>
</tr>
</tbody>
</table>

#### Low Volume Feed

<table>
<thead>
<tr>
<th>Code RS</th>
<th>Part</th>
<th>Low Volume Feed</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>964050</td>
<td>20 oz cartridge feed with mounting post</td>
</tr>
<tr>
<td>02</td>
<td>964051</td>
<td>1 gallon pail Ram and transfer pump</td>
</tr>
<tr>
<td>03</td>
<td>964052</td>
<td>5 gallon pail cover with diaphragm pump</td>
</tr>
<tr>
<td>04</td>
<td>964053</td>
<td>5 gallon pail cover diaphragm pump and agitator</td>
</tr>
<tr>
<td>05</td>
<td>964054</td>
<td>5 gallon pail cover and 5:1 transfer pump</td>
</tr>
<tr>
<td>06</td>
<td>964055</td>
<td>5 gallon pail cover, 1:1 pump with dip tube for moisture sensitive materials</td>
</tr>
<tr>
<td>07</td>
<td>964056</td>
<td>5 gallon single post Ram with 11:1 pump, mild steel</td>
</tr>
<tr>
<td>08</td>
<td>964057</td>
<td>5 gallon single post Ram with 11:1 pump, stainless steel</td>
</tr>
<tr>
<td>NN</td>
<td></td>
<td>None</td>
</tr>
</tbody>
</table>

#### Low Volume Feed Hose

<table>
<thead>
<tr>
<th>Code T</th>
<th>Part</th>
<th>Low Volume Feed Hose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>964082</td>
<td>1/2 in. x 8 ft PTFE and stainless steel hose, stainless steel fittings</td>
</tr>
<tr>
<td>3</td>
<td>964084</td>
<td>1/2 in. x 10 ft PTFE and stainless steel hose, stainless steel fittings</td>
</tr>
<tr>
<td>5</td>
<td>964086</td>
<td>1/2 in. x 15 ft PTFE and stainless steel hose, stainless steel fittings</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>None</td>
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</table>

#### Low Volume Feed

<table>
<thead>
<tr>
<th>Code U</th>
<th>Part</th>
<th>Low Volume Feed</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>964090</td>
<td>Low level sensor 11:1 Ram only</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>None</td>
</tr>
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#### Vacuum Pump(s)

<table>
<thead>
<tr>
<th>Code V</th>
<th>Part</th>
<th>Vacuum Pump(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
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<td>None</td>
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#### Bench Stand

<table>
<thead>
<tr>
<th>Code W</th>
<th>Part</th>
<th>Bench Stand</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>964095</td>
<td>Adjustable height bench stand</td>
</tr>
<tr>
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<td></td>
<td>None</td>
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#### Seal Lubricant

<table>
<thead>
<tr>
<th>Code X</th>
<th>Part</th>
<th>Seal Lubricant</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>206994</td>
<td>Fluid, TSL, 8 ounce bottle</td>
</tr>
</tbody>
</table>

313876L 9
## Accessories

### Mixer Kits with Shroud

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>964034</td>
<td>Mixer, Kit, 3/16 in. (4.8mm) x 24, 10 taper tip mixers with shroud</td>
</tr>
<tr>
<td>964032</td>
<td>Mixer, Kit, 3/16 in. (4.8mm) x 32, 10 taper tip mixers with shroud</td>
</tr>
<tr>
<td>964028</td>
<td>Mixer, Kit, 3/16 in. (4.8mm) x 32, 10 Luer Lock tip mixers with shroud/sleeve</td>
</tr>
<tr>
<td>964033</td>
<td>Mixer, Kit, 1/4 in. (6.5mm) x 24, 10 taper tip mixers with shroud</td>
</tr>
<tr>
<td>964029</td>
<td>Mixer, Kit, 1/4 in. (6.5mm) x 24, 10 Luer Lock tip mixers with shroud/sleeve</td>
</tr>
<tr>
<td>964030</td>
<td>Mixer, Kit, 1/4 in. (6.5mm) x 32, 10 Luer Lock tip mixers with shroud/sleeve</td>
</tr>
<tr>
<td>964031</td>
<td>Mixer, Kit, 1/4 in. (6.5mm) x 48, 10 Luer Lock tip mixers with shroud/sleeve</td>
</tr>
</tbody>
</table>

### Mixer Packs

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>964027</td>
<td>Mixer, 1/8 in. (3.2mm) x 24 Luer Lock inlet/tip, 10 Pack</td>
</tr>
<tr>
<td>16D962</td>
<td>Mixer, 1/8 in. (3.2mm) x 24 Luer Lock inlet/tip, 50 Pack</td>
</tr>
<tr>
<td>16D963</td>
<td>Mixer, 1/8 in. (3.2mm) x 24 Luer Lock inlet/tip, 250 Pack</td>
</tr>
<tr>
<td>16D978</td>
<td>Mixer, 3/16 in. (4.8mm) x 24 taper tip, 50 Pack</td>
</tr>
<tr>
<td>16D979</td>
<td>Mixer, 3/16 in. (4.8mm) x 24 taper tip, 250 Pack</td>
</tr>
<tr>
<td>LC0077</td>
<td>Mixer, 3/16 in. (4.8mm) x 32 taper tip, 50 Pack</td>
</tr>
<tr>
<td>LC0084</td>
<td>Mixer, 3/16 in. (4.8mm) x 32 taper tip, 250 Pack</td>
</tr>
<tr>
<td>LC0082</td>
<td>Mixer, 3/16 in. (4.8mm) x 32 Luer Lock tip, 50 Pack</td>
</tr>
<tr>
<td>LC0089</td>
<td>Mixer, 3/16 in. (4.8mm) x 32 Luer Lock tip, 250 Pack</td>
</tr>
<tr>
<td>LC0078</td>
<td>Mixer, 1/4 in. (6.5mm) x 24 taper tip mixer, 50 Pack</td>
</tr>
<tr>
<td>LC0085</td>
<td>Mixer, 1/4 in. (6.5mm) x 24 taper tip mixer, 250 Pack</td>
</tr>
<tr>
<td>LC0083</td>
<td>Mixer, 1/4 in. (6.5mm) x 24 Luer Lock tip, 50 Pack</td>
</tr>
<tr>
<td>LC0090</td>
<td>Mixer, 1/4 in. (6.5mm) x 24 Luer Lock tip, 250 Pack</td>
</tr>
<tr>
<td>16D968</td>
<td>Mixer, 1/4 in. (6.5mm) x 32 Luer Lock tip, 50 Pack</td>
</tr>
<tr>
<td>16D969</td>
<td>Mixer, 1/4 in. (6.5mm) x 32 Luer Lock tip, 250 Pack</td>
</tr>
<tr>
<td>16D970</td>
<td>Mixer, 1/4 in. (6.5mm) x 48 Luer Lock tip, 50 Pack</td>
</tr>
<tr>
<td>16D973</td>
<td>Mixer, 1/4 in. (6.5mm) x 48 Luer Lock tip, 250 Pack</td>
</tr>
</tbody>
</table>
## O-Rings and Seals

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>24E247</td>
<td>Kit, O-ring, chemical resistant, PD44</td>
</tr>
<tr>
<td>24E248</td>
<td>Kit, Seal, Spool, H.V., PD44</td>
</tr>
<tr>
<td>24E249</td>
<td>Kit, Seal, Spool, L.V., PD44</td>
</tr>
<tr>
<td>16B265</td>
<td>Seal, Posipack, 1.25, ZAP</td>
</tr>
<tr>
<td>16B266</td>
<td>Seal, Posipack, 1.38, ZAP</td>
</tr>
<tr>
<td>16B267</td>
<td>Seal, Posipack, 1.50, ZAP</td>
</tr>
<tr>
<td>16B268</td>
<td>Seal, Posipack, 1.63, ZAP</td>
</tr>
<tr>
<td>16B269</td>
<td>Seal, Posipack, 1.75, ZAP</td>
</tr>
<tr>
<td>16B270</td>
<td>Seal, Posipack, 2.00, ZAP</td>
</tr>
<tr>
<td>16B271</td>
<td>Seal, Posipack, 2.13, ZAP</td>
</tr>
<tr>
<td>16B272</td>
<td>Seal, Posipack, 2.25, ZAP</td>
</tr>
<tr>
<td>16B273</td>
<td>Seal, Posipack, 2.38, ZAP</td>
</tr>
<tr>
<td>16B274</td>
<td>Seal, Posipack, 2.50, ZAP</td>
</tr>
<tr>
<td>16B275</td>
<td>Seal, Posipack, 2.63, ZAP</td>
</tr>
<tr>
<td>16B276</td>
<td>Seal, Posipack, 2.75, ZAP</td>
</tr>
<tr>
<td>16B277</td>
<td>Seal, Posipack, 3.00, ZAP</td>
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<tr>
<td>16B278</td>
<td>Seal, Posipack, 3.13, ZAP</td>
</tr>
<tr>
<td>16B279</td>
<td>Seal, Posipack, 3.25, ZAP</td>
</tr>
<tr>
<td>16B280</td>
<td>Seal, Posipack, 3.38, ZAP</td>
</tr>
<tr>
<td>16B281</td>
<td>Seal, Posipack, 3.50, ZAP</td>
</tr>
<tr>
<td>16B282</td>
<td>Seal, Posipack, 3.63, ZAP</td>
</tr>
<tr>
<td>16B283</td>
<td>Seal, Posipack, 3.75, ZAP</td>
</tr>
<tr>
<td>16B284</td>
<td>Seal, Posipack, 4.00, ZAP</td>
</tr>
<tr>
<td>16B285</td>
<td>Seal, Posipack, 4.25, ZAP</td>
</tr>
</tbody>
</table>

## Needles

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E4000025-50</td>
<td>Needle, Luer Lock, Sampler Package (10 each 14 ga x 1/2 in., 16 ga x 1/2 in., 18 ga x 1/2 in., 20 ga x 1/2 in., 22 ga x 1/2 in.)</td>
</tr>
<tr>
<td>E4000001-50</td>
<td>Needle, Luer Lock, 14 Gauge x 1/2 in., 50 Pack</td>
</tr>
<tr>
<td>E4000004-50</td>
<td>Needle, Luer Lock, 15 Gauge x 1/2 in., 50 Pack</td>
</tr>
<tr>
<td>E4000005-50</td>
<td>Needle, Luer Lock, 16 Gauge x 1 in., 50 Pack</td>
</tr>
</tbody>
</table>

## Part Description

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E4000006-50</td>
<td>Needle, Luer Lock, 18 Gauge x 1 in., 50 Pack</td>
</tr>
<tr>
<td>E4000011-50</td>
<td>Needle, Luer Lock, 22 Gauge x 1/2 in., 50 Pack</td>
</tr>
<tr>
<td>E4000014-50</td>
<td>Needle, Luer Lock, 14 Gauge x 1 in., 50 Pack</td>
</tr>
<tr>
<td>E4000024-50</td>
<td>Needle, Luer Lock, 23 Gauge x 1/2 in., 50 Pack</td>
</tr>
<tr>
<td>E4000088-50</td>
<td>Needle, Luer Lock, 16 Gauge x 1/2 in., 50 Pack</td>
</tr>
</tbody>
</table>
Grounding

This product must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current.

**Metering valve:** attach ground wire from grounding lug to true earth ground. See **Component Identification** starting on page 13.

**Fluid hoses:** use only electrically conductive hoses.

**Feed system components:** attach ground wire from grounding lug to true earth ground. See feed system manual for grounding points. See **Related Manuals** on page 3.

**Fluid supply container:** follow local code.

**Solvent pails used when flushing:** follow local code. Use only conductive metal pails, placed on a grounded surface. Do not place the pail on a nonconductive surface, such as paper or cardboard, which interrupts grounding continuity.

Overview

This plural component meter, mix, and dispense device accurately meters liquid and semi-paste materials.

The machine is ideal for a two-component application requiring very small and precisely mixed shots.

The ratio of the pneumatic cylinder area to pump shaft area provides the adjustable pressure intensification needed to move the separate liquids through the mixer with a flow rate suitable for production requirements.

The complete system is enclosed. Mixing of the two materials takes place only in the mixer at the final stage of metering valve operation. See **Sequence of Operation** on page 24.
Component Identification

Typical System Configurations

Fig. 1
Component Identification

Typical Feed System Components

20 oz Cartridge Feed with Mounting Post

1 Gallon Ram and Pump

5 Gallon Pail Cover with Diaphragm Pump

5 Gallon Pail Cover with Diaphragm Pump and Agitator

5 Gallon Pail Cover with 5:1 Transfer Pump

5 Gallon Pail Cover with Diaphragm Pump

5 Gallon Ram and 11:1 Transfer Pump

FIG. 2
Micrometer PD44 Metering Valve

Key:
A  A Material Inlet (1/4 NPT)
B  B Material Inlet (1/4 NPT)
C  Grounding Lug
D  Spool Assemblies
E  Metering Rods
F  Oil Cup Retaining Block
G  Extend Air Inlet
H  Retract Air Inlet
J  Dispense Air Inlet
K  Reload Air Inlet
L  Extend Air Flow Adjustment Knob
M  Retract Air Flow Adjustment Knob
N  Retract Proximity Switch
P  Extend Proximity Switch
R  Spool Valve Proximity Switch
S  Shot Size Locking Ring
T  Shot Size Adjuster

FIG. 3
Component Identification

LRT PD44 Metering Valve

Key:
A  A Material Inlet (1/4 NPT)
B  B Material Inlet (1/4 NPT)
C  Grounding Lug
D  Spool Assemblies
E  Metering Rods
F  Oil Cup Retaining Block
G  Extend Air Inlet
H  Retract Air Inlet
J  Dispense Air Inlet
K  Reload Air Inlet
L  Extend Air Flow Adjustment Knob
M  Retract Air Flow Adjustment Knob
R  Spool Valve Proximity Switch
U  Transducer Connection

FIG. 4
Motor Driven PD44 Metering Valve

**Key:**
- A Material Inlet (1/4 NPT)
- B Material Inlet (1/4 NPT)
- C Grounding Lug
- D Spool Assemblies
- E Metering Rods
- F Oil Cup Retaining Block
- J Dispense Air Inlet
- K Reload Air Inlet
- L Extend Air Flow Adjustment Knob
- M Retract Air Flow Adjustment Knob
- N Over-travel Proximity Switch
- P Home Proximity Switch
- R Spool Valve Proximity Switch
- V Optional Motor (provided with configured controls)
- W Over-travel Proximity Switch
- X Main Air Inlet (on far side of valve as shown)

**Fig. 5**
Setup

NOTE: See Typical Installation diagram.

1. Perform Setup procedure for feed system components. See feed system manuals. See Related Manuals on page 3.
2. Place an in-line air pressure regulator, air-water separator/filter, and shut-off/bleed valve between the air supply and the control solenoids.
3. Connect each 1/4 in. outside diameter supplied air line to the corresponding control solenoid. See Component Identification starting on page 13.
4. On the Motor Driven PD44, if a non-Graco motor is used, install the motor onto the metering valve. See Motor Mounting Diagram, page 20.
5. On the Motor Driven PD44, connect the required electrical power to the metering valve. See Motor Specifications, page 40.

Typical Installation

```
<table>
<thead>
<tr>
<th>Air Supply</th>
<th>User Supplied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Shut-off and Bleed Valve</td>
<td></td>
</tr>
<tr>
<td>Air-Water Separator/Filter</td>
<td></td>
</tr>
<tr>
<td>Air Pressure Regulator</td>
<td></td>
</tr>
<tr>
<td>A Side Material Tank (optional)</td>
<td></td>
</tr>
<tr>
<td>A Side Pump</td>
<td>A Side Fluid Shut-Off Valve</td>
</tr>
<tr>
<td>B Side Pump</td>
<td>B Side Fluid Shut-Off Valve</td>
</tr>
<tr>
<td>B Side Material Tank</td>
<td></td>
</tr>
</tbody>
</table>
```

Fig. 6
Tank Level Sensor Wiring Schematic

As desired, use the following diagram to mount the metering valve.

Valve Mounting Diagram

Front of Metering Valve

Bottom View
(Spool Assembly Not Shown)
**Motor Mounting Diagram**

If using a non-Graco motor with the Motor Driven PD44, use the following diagram to install the non-Graco motor onto the Motor Driven PD44 metering valve. See Motor Specifications, page 40.

![Motor Mounting Diagram](image)

**Custom Drive Mounting Diagram**

If using a non-Graco lead screw or housing, use the following diagram to ensure that the guide rods will align properly with the custom housing.

![Custom Drive Mounting Diagram](image)
1. Fill the spool valve ports with compatible lubricant. Consult with your material supplier to select an acceptable lubricant. Regularly verify that lubricant is present.

2. Perform Ratio Check, page 23.

3. Install mixer and shroud.

4. Pressurize the A and B material feed systems connected to the metering valve to prime the system. See page 3 for maximum inlet feed pressures.

5. Dispense several full stroke shots until material is air-free and has good shut-off at the nose.

**NOTE:** Very viscous, compressible materials may continue to drool after system is primed. Reduce flow rate as required to produce air-free dispense.

**NOTE:** Very thin materials may require tilting the valve greater than 45 degrees and dispensing shots until material is air-free. Remove oil from cups before proceeding.
Adjusting the Shot Size

Micrometer PD44 Only

1. Rotate the shot size locking ring counterclockwise to loosen.

2. Rotate the shot size adjuster to adjust shot size.

3. Rotate the shot size locking ring clockwise to tighten.

4. Dispense into waste container to test shot size.

5. Repeat until desired shot size is achieved.

6. If LED on the extend proximity switch is not illuminated, slide the proximity switch until the LED on the proximity switch is illuminated.

NOTE: The retract proximity switch (PX-RET) is factory preset and does not need to be adjusted. If the lower proximity switch is changed from the factory setting, see the assembly drawings for more information on readjustment. This switch is marked with a RET tag on the wire.

LRT and Motor Driven PD44

On LRT and Motor Driven PD44s, shot size is controlled by the PD44 Control Box. See the PD44 Control Box manual. See Related Manuals on page 3.
Ratio Check

Perform ratio check procedure at startup and after rebuild.

1. Weigh six small cups and label as indicated. Record weights.
2. Remove mixer.
3. Install the ratio check nozzle.
4. Dispense into a waste container to prime the ratio check nozzle.
5. Place cups as indicated under ratio check nozzle and cycle machine once.
6. Repeat until all three sets of cups have been used.
7. Re-weigh all six cups and record weights.
8. Subtract weight of empty cups from weight of filled cups to get material weights.
9. Complete ratio calculations.
Operation

The operation of the PD44 metering valve is controlled by an external source. If a PD44 Control Box was purchased, see the PD44 Control Box manual for operation instructions. See Related Manuals on page 3.

Sequence of Operation

Step 1: Reload

- Spools shift to the right
- Material feed inlets are opened
- Materials are transferred into the metering chambers by a pressurized feed system
- Outlet ports are blocked
- Metering rods are retracted to a precise position determining the volume of each material

Step 2: Shift

- The balanced spool assemblies shift to the dispense position
- Material path to the mixer inlet is opened
- Material feed inlet ports are blocked
- Metering rods remain in the retracted position

Step 3: Dispense

- Metering rods extend
- A and B materials are simultaneously dispensed from the metering chamber into the disposable mixer
- A and B materials are dispensed at the predetermined volume ratio.

Upon completion of the dispense stroke, the metering rod and spool assemblies shift back to the reload position.
Pressure Relief Procedure

1. Retract the metering rods. See the PD44 Control Box manual. See Related Manuals on page 3.
2. Close both the A side and B side fluid shut-off valves.
3. Remove static mixer.
4. Dispense 5 shots. Shots should be at least 75% of the full stroke.
5. Extend the metering rods into the tubes. If Graco controls are provided with the system, see the PD44 Controls manual. See Related Manuals on page 3.
6. Close the incoming air shut-off/bleed valve that supplies air to the metering valve.
7. Close the incoming air shut-off/bleed valve that supplies the A feed system. Repeat for the B side feed system. Refer to feed system manual for pressure relief procedure. See Related Manuals on page 3.

Shutdown

1. Perform Pressure Relief Procedure.
2. Inspect the metering rods for material buildup. Clean as necessary.
3. Install storage cap on outlet nose.

Maintenance

Perform the following procedures once a shift.

NOTE: If material is leaking, see Troubleshooting on page 26.

Material Reservoirs
Check material levels and refill as necessary. Ensure that the material reservoirs are properly vented.

Air Dryer
Check the condition of the desiccant air dryer. Replace as necessary.

Spool Valve Ports
Fill with compatible lubricant such as TSL. See FIG. 10 on page 21.

Ratio Check
See Ratio Check on page 23.
Troubleshooting

Perform **Pressure Relief Procedure** before performing any troubleshooting procedure.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metering valve stalling and no material being dispensed despite adequate input pressure</td>
<td>Blocked mixer</td>
<td>Check mixer for cured material, replace mixer as required</td>
</tr>
<tr>
<td></td>
<td>Flow control valve closed</td>
<td>Open</td>
</tr>
<tr>
<td>Metering valve not discharging normal or full volume</td>
<td>Low material level in reservoirs</td>
<td>Fill material reservoirs and prime the machine</td>
</tr>
<tr>
<td></td>
<td>Air in material tanks</td>
<td>Fill reservoirs and prime machine</td>
</tr>
<tr>
<td>Material leaks past spool valves</td>
<td>Spool valve worn or damaged</td>
<td>Replace the spool valve and sleeve</td>
</tr>
<tr>
<td>Improper material mixing</td>
<td>Mixer not clean or free</td>
<td>Remove and replace the mixer</td>
</tr>
<tr>
<td>Material leaks around mixer while dispensing</td>
<td>Cured material in mixer</td>
<td>Check mixer for cured material, replace mixer</td>
</tr>
</tbody>
</table>

Schematics

**For standard machines**, the schematics will be included in the PD44 Parts manual. See **Related Manuals** on page 3.

**For custom machines**, the schematics will be included in the assembly drawings manual.
Wetted Section Disassembly

1. Perform Pressure Relief Procedure, page 25.

2. On Motor Driven PD44s, remove electrical power.

3. Mark and disconnect all material feed lines, pneumatic lines, and proximity switch wiring. Remove the metering valve from mounts.

   **NOTE:** On Micrometer and Motor Driven PD44s, the rear tie plate is the tie plate with the proximity switches.

   **NOTE:** On LRT PD44s, the rear tie plate is the tie plate on the same side of the metering valve as the main air inlets.

4. Remove the four cap screws to remove the rear tie plate.

5. Manually move the connecting block down so that rods are in the extended position.

6. Loosen set screws on top of the connecting block.

7. Slide the metering rod retaining plate until the larger hole position is in-line with the metering rod. See Fig. 11 in the following step.

8. Once the metering rod plate is in position, manually move connecting block up. Rods will remain in position and connecting block is separated from rods.

9. Once the metering rods are disconnected from the retaining plate, remove the four cap screws from the front tie plate.

10. Separate the drive cylinder and the valve guides from the oil cup retaining block.
11. Remove the four cap screws located at the top of the oil cup retaining block.

12. Remove the metering rods and oil cup retaining block.

**NOTE:** The metering rods and the tubes (tubes will be removed in step 14) are a matched set. Make note where each metering rod was located to ensure that the rods will be matched accordingly with the respective tube.

13. Remove the eight cap screws attaching the material inlet blocks. Remove the material inlet blocks.

14. Remove the two tubes. Always keep rods and tubes together as they are a matched set.

15. Remove the protruding cap screws on each spool block.

16. Remove the two pneumatic spools.
Wetted Section Reassembly

1. Install the pneumatic spool rod drive. Torque fasteners to 67-70 in-lb (7.5-7.9 N•m).

2. Repeat for other side.

3. Install guide rods. Refer to Wetted Section Rebuild on page 31 for details on spool valve and metering rod assembly.

4. Install drive assembly to the guides.

5. Attach the front plate to the serial number side of the metering body.

6. On Micrometer and LRT PD44s, ensure the air inlet ports are pointed towards the front plate.

7. Install the cap head screws to the back plate.

8. Slide connecting block down until rod heads are inserted into retaining plate keyway.

9. Slide the metering rod retaining plate to the locked position.

10. Tighten set screw located on top of connecting block until it contacts the top of the metering rod head. Evenly torque the A and B set screws to 4-8 in-lb (0.45-0.9 N•m).
11. Manually move connecting block up and down to insure rods are properly installed.

12. Install the back plate and cap screws.

13. Install material inlet blocks with new o-rings.


15. Attach material line, pneumatic line, and electrical harness.


---

**Spool Valve Rebuild**

1. Perform **Wetted Section Disassembly**, page 27.

2. Remove the two cap screws.

3. Disassemble the spool cylinder.

4. Remove the piston from the cylinder.

5. Install new u-cup seal on piston.
6. Insert new o-ring into spool air cylinder end cap.

7. Install proximity switch.

8. Apply Krytox or compatible lubricant to cylinder.

9. Insert piston into cylinder with the u-cup lip pointed in the direction of the tapered end of the cylinder. The “U” points toward the air inlet.

10. Careful not to cut the o-ring, install pneumatic spool blocks.

11. Install the two cap screws.

12. Repeat for opposite side pneumatic spool rod drive.

Wetted Section Rebuild

2. Remove spool rods and sleeves from the metering block.

NOTE: The spool sleeve can be removed by sliding the sleeve in the direction of the identification marking.

3. Remove the pneumatic drive spool bearing, seals, and seal retainer for both spools.

4. Inspect the metering rod and sleeve assemblies and the spool rod and sleeve assemblies for excessive wear. If there are any scratches on the rod that can be felt by a fingernail, replace the rod and sleeve assembly.

5. Clean all wetted components thoroughly with compatible solvent.

1. Perform Wetted Section Disassembly, page 27.
6. For each pneumatic drive spool block, install new zap seals and o-rings onto o-ring retainer.

7. Lubricate o-rings and bearing surfaces with Krytox or compatible lubricant.

8. Re-install the rod bearings, zap seals, and o-rings retainers into each spool block.

**NOTE:** Typically, the spring in the zap seal and the o-rings in the retainers point toward the metering block which is in the direction of the material.

9. On each spool sleeve, install new zap seal (on low viscosity spool), and o-rings on the outside of the sleeves.

10. Lubricate o-rings and bearing surfaces with Krytox or compatible lubricant.

**NOTE:** Correct orientation of seals shown.

11. Carefully install the spool sleeves into the metering block. Make sure the notched edge will align with the pin in the metering block and not cut the spool sleeve o-rings.
12. Apply Krytox to spool rod then carefully install the spool rod into the spool sleeve (inside the metering block). Make sure not to cut the spool sleeve zap seals (on low viscosity spools).

13. Torque bolts 67-70 in-lb (7.6-7.9 N\text{•m})

14. Install new zap seal in the metering tube sleeve with the spring facing down or toward the material pressure side of the sleeve.

**NOTE:** Seals are individually packaged with part number and size. Verify rod nominal size matches seal prior to installation.

15. Install the metering sleeve PTFE seal in the metering block. Replace the metering sleeve PTFE seal with a new one every rebuild.

16. Install metering tube sleeve into the metering block.

17. Install the wetcup sleeve onto the metering sleeve.

18. Install the oil cup retaining block. Torque to 77 in-lb (8.7 N\text{•m}).

19. Apply Krytox grease to chamfer of metering rod.

20. Carefully insert metering rod through bearing, seal, and metering tube. Make sure not to cut the metering sleeve zap seals.


22. Move slide plate to capture the metering rods.

23. Install the set screw until it contacts the top of the metering rod. Torque set screw to 4-8 in-lb (0.45-0.90 N\text{•m}).
Micrometer Drive Rebuild
(Micrometer PD44 Only)

1. Perform Wetted Section Disassembly, page 27.
2. Remove the four cap screws located at the top of the pneumatic drive assembly.
3. Remove the drive top cap.
4. Slide the drive rod into the open slot.
5. Slide the pneumatic drive piston off the drive rod.
6. Slide the air cylinder mounting block off the drive rod.
7. Install new seals on the drive piston. Make sure the lip of the seal points toward the pressure side of the drive. See the following illustration and the assembly drawings for more information.
8. Remove retaining ring, washer, and posipak seal from the air cylinder mounting block.
9. Install new posipak seal with the o-ring pointed towards the drive piston, then install washer and retaining ring.

10. Apply Krytox or compatible lubricant to drive rod.

11. Careful not to cut the posipak seal, install drive rod into the block.

12. Install the drive rod into the piston.

13. Slide the drive rod into the closed slot in the piston.

14. Install the cylinder o-ring then, careful not to cut the piston seal, install the drive rod into the block.

15. Install the upper cylinder o-ring.

16. Install top cap block to cylinder.

17. Install drive housing bolts to the cylinder mounting block.
Electrical Requirements

Electrical requirements for pneumatically driven and stepper driven control boxes can be found in the PD44 Control Box manual. See Related Manuals, page 3.

**PD44 metering valve only:** Wiring harness sensors are 24 VDC normally open PNP. See Fig. 12, Fig. 13, or Fig. 14 as appropriate.

![Diagram of Micrometer PD44 Metering Valve](image-url)

**Fig. 12:** Micrometer PD44 Metering Valve Electrical Requirements
FIG. 13: Motor Driven PD44 Metering Valve Electrical Requirements

NOTES:
1) SENSORS ARE PNP NORMALLY OPEN
2) FOR PX-UP AND PX-DOWN, USE SCREW PROVIDED WITH SENSORS
3) PX-UP AND DOWN TO BE USED FOR OVER TRAVELS

VIEW A-A

YELLOW DISPENSE

GND

BLU (DC COM)

BLK (SIG)

BRN (24VDC+)

LABEL PX-HOME

LABEL PX-OSV

LABEL PX-CSV

LABEL PX-UP

GGREEEN (39")

GROUNDD STUDD

GND

BLU  (DC COM)

BRN (24VDC+)

YELLOW FRONNT

FRONT

WIRE LABEL TYP

PX-OSV (42.5")

GREEN (39")

PX-CSSV (39.5")

A
NOTES:
LRT SIGNAL INPUT: 10 VDC TYPICAL
INPUT IMPEDANCE REQ: 1 MOhm
SPEED: 25 INCHES/SECOND
SIGNAL OUTPUT: >0 TO SLIGHTLY LESS THAN FS SIGNAL INPUT

RED EXTEND
BLUE RETRACT
YELLOW DISPENSE
GREEN DISPENSE

RED (OUTPUT)
BLK (-10VDC)
WHT (+10VDC)

GND

PG-7 LOOKING FROM SOLDER SIDE
3 WHT 1 BLK
2 RED
1 BLK 3 WHT
2 RED
FEMALE
MALE

DETAIL 1

SEE 02/2980-4/25
SEE DETAIL 1

RED (48°)
BLUE (45°)
YELLOW (44°)

PX-CVS (39.5°)
GREEN (39°)

3 WHT
1 BLK
2 RED
PG-7

RED EXTEND
BLUE RETRACT
YELLOW DISPENSE
GREEN DISPENSE

DETAIL 1

1 BLK
3 WHT
2 RED
PG-7

RED (48°)
BLUE (45°)
YELLOW (44°)

PX-CVS (39.5°)
GREEN (39°)

3 WHT
1 BLK
2 RED
PG-7

RED EXTEND
BLUE RETRACT
YELLOW DISPENSE
GREEN DISPENSE

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GREEN DISPENSE

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YELLOW (44°)

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GREEN DISPENSE

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GREEN DISPENSE

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YELLOW DISPENSE
GREEN DISPENSE

DETAIL 1

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YELLOW DISPENSE
GREEN DISPENSE

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YELLOW DISPENSE
GREEN DISPENSE

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YELLOW DISPENSE
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PG-7

RED EXTEND
BLUE RETRACT
YELLOW DISPENSE
GREEN DISPENSE

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2 RED
PG-7

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BLUE (45°)
YELLOW (44°)

PX-CVS (39.5°)
GREEN (39°)

3 WHT
1 BLK
2 RED
PG-7

RED EXTEND
BLUE RETRACT
YELLOW DISPENSE
GREEN DISPENSE

DETAIL 1

1 BLK
Technical Data

NOTE: See feed system manuals for dimensions, weights, and wetted parts lists for those components. Dimensions, weights, and wetted parts for components not covered in component feed system manuals and for combined assemblies are listed below.

Maximum Ambient Temperature ........................ 110°F (43°C)
Maximum Operating Temp............................... 150°F (65°C)
Maximum Outlet Fluid Working Pressure ............... 2000 psi (14 MPa, 138 bar)
Maximum Air Working Pressure ......................... 100 psi (0.7 MPa, 7 bar)
Maximum Material Inlet Pressure ....................... Metal Sleeves: 1200 psi (8 MPa, 83 bar)
                                                Plastic Sleeves: 400 psi (2.8 MPa, 28 bar)
Supplied Air Requirements ........................... 1 to 3 cfm at 80 psi to 100 psi
Ratio Range (depending on metering rods selected) ... 1:1 to 25:1
Shot Size Range (depending on metering rods selected) 0.005 cc to 5.0 cc
Maximum Cycle Rate (application dependent) ........ Micrometer PD44: Up to 60 cycles per minute
                                                LRT PD44: Up to 60 cycles per minute
                                                Motor Driven PD44: Up to 15 cycles per minute (with standard Graco motor)
Dimensions (H x L x W), height to end of material inlet block ........................................ Micrometer PD44: 17.5 x 4.13 x 7.57 in.
                                                (445 x 105 x 192 mm)
                                                LRT PD44: 14.5 x 4.13 x 7.57 in. (368 x 105 x 192 mm)
                                                Motor Driven PD44 (with Graco motor): 17.5 x 4.13 x 7.57 in. (445 x 105 x 192 mm)
                                                Mixer: 4 - 14.75 in. (102 - 375 mm)
                                                Graco-supplied Feed System Assemblies
                                                (depends on selected options):
                                                Smallest: 22.5 x 10 x 4 in. (572 x 254 x 102 mm)
                                                Largest: 60 x 28 x 19 in. (1524 x 711 x 483 mm)
Weight ......................................................... PD44 Metering Valve: 14 - 15 lb (6.35 - 6.80 kg)
                                                Valve stand only: 8 lb (3.6 kg)
                                                Feed Systems: 4 - 175 lb (1.8 - 79.4 kg)
Sound Data* .................................................. PD44 Metering Valve: 76.5 dBA Sound Power Level
                                                92.8 dB Max Sound Pressure
                                                Graco-supplied Feed Systems:
                                                See Related Manuals, page 3.
Wetted Parts. .............................................. PD44 Metering Valve: Hardened steel, 303/304, 404, UHMWPE, Tungsten, carbide, fluoroelastomer, EPDM, PTFE
                                                Graco-supplied Feed System Hoses and Fittings: Mild steel, 303/304, PTFE, buna, polyethylene, polypropylene
                                                Graco-supplied Tanks: Polyethylene, 303/304, mild steel

Motor Specifications

If a non-Graco motor is used with the Motor Driven PD44 Metering Valve, it must meet the following specifications.

**Frame:** NEMA 23

**Torque at Typical Dispense Speed:** 180 oz-in. (11.25 in-lb) at 10 revolutions per second (1/2 in. rod travel per second) or less. Above 10 revolutions per second, the power declines.

**Torque at Maximum Speed:** 117 oz-in (7.3 in-lb) at 20 revolutions per second (1 in. of rod travel per second).

**Motor Face Pilot Boss:** 1.5 in. diameter by 0.0625 in. projection from motor face flange.

**Shaft Size:** 0.25 diameter by 0.75 in. projection from motor face pilot boss to end of shaft.

California Proposition 65

**CALIFORNIA RESIDENTS**

⚠️ **WARNING:** Cancer and reproductive harm – www.P65warnings.ca.gov.
Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco’s written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco’s sole obligation and buyer’s sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

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Graco Information

Sealant and Adhesive Dispensing Equipment

For the latest information about Graco products, visit www.graco.com.
For patent information, see www.graco.com/patents.
TO PLACE AN ORDER, contact your Graco distributor, go to www.graco.com, or call to identify the nearest distributor.

If calling from the USA: 1-800-746-1334
If calling from outside the USA: 0-1-330-966-3000