

# PSM

3B0405C

## 1K Ambient and 1K Warm Melt Precision Metering System

EN

***For accurate metering and dispensing of ambient and warm melt materials. For professional use only.***

***Not approved for use in explosive atmospheres or hazardous (classified) locations.***

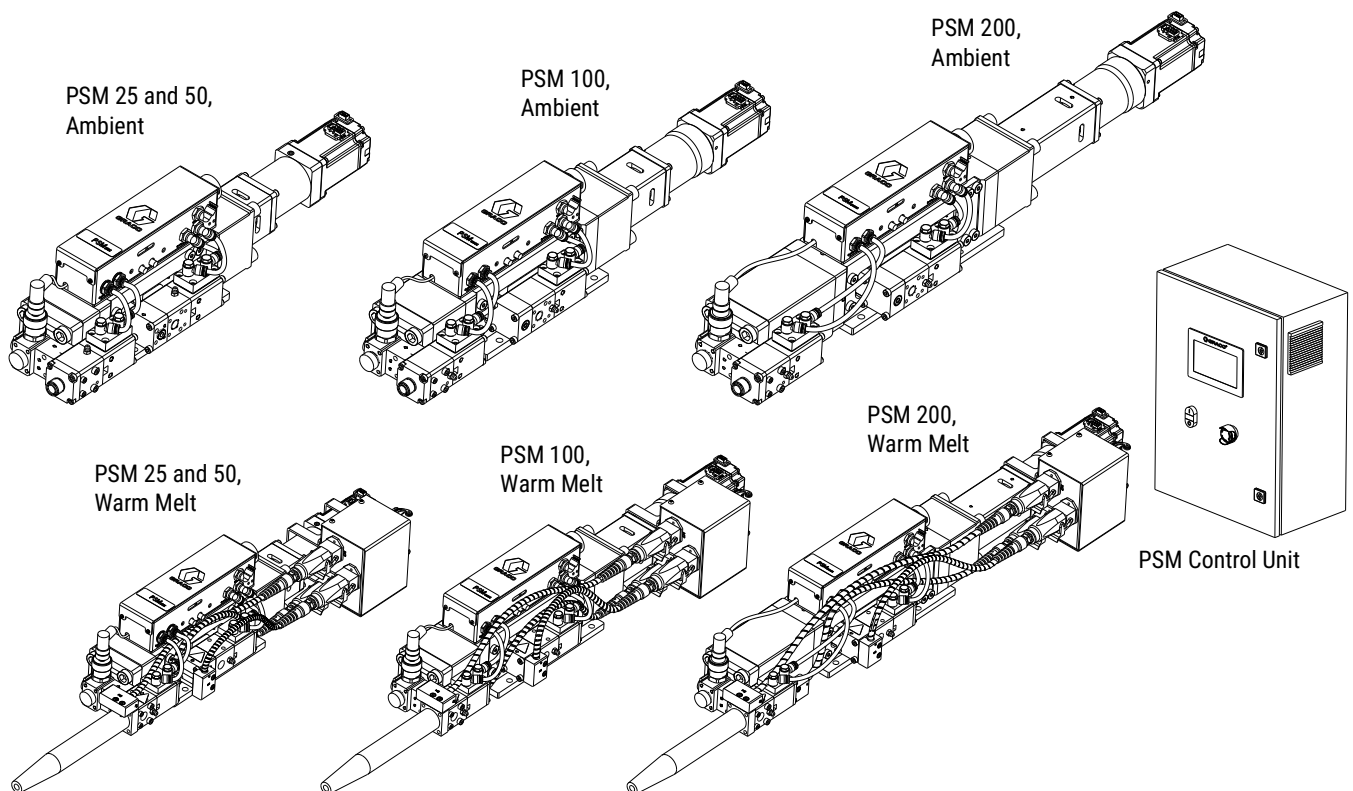
100 psi (0.7 MPa, 7 bar) Maximum Air Inlet Pressure.

See page 3 for model information, including maximum fluid working pressure.



### Important Safety Instructions

Read all warnings and instructions in this manual, your PSM instruction manual, and your dispensing manuals before using the equipment. Save these instructions.



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# Related Manuals

| Manuals in English | Description                                                       |
|--------------------|-------------------------------------------------------------------|
| 3B0404             | PSM Instruction Manual                                            |
| 3B0465             | Communications Gateway Module Installation Kit Instruction Manual |
| X032396            | iQ Dispense Valves Instructions and Parts List Manual             |
| 3A8005             | Therm-O-Flow® Warm Melt Instructions and Parts List Manual        |

# Models

## Models, PSM Ambient

| Part    | Capacity | Maximum Fluid Working Pressure<br>psi (MPa, bar) | Description                                                  |
|---------|----------|--------------------------------------------------|--------------------------------------------------------------|
| 2009034 | 25cc     | 3000 psi (20.7 MPa, 207 bar)                     | System, PSM25, SST <sup>(1)</sup> , PCB, I/O <sup>(3)</sup>  |
| 2009035 | 25cc     | 3000 psi (20.7 MPa, 207 bar)                     | System, PSM25, CER <sup>(2)</sup> , PCB, I/O <sup>(3)</sup>  |
| 2008986 | 50cc     | 3000 psi (20.7 MPa, 207 bar)                     | System, PSM50, SST <sup>(1)</sup> , PCB, I/O <sup>(3)</sup>  |
| 2008987 | 50cc     | 3000 psi (20.7 MPa, 207 bar)                     | System, PSM50, CER <sup>(2)</sup> , PCB, I/O <sup>(3)</sup>  |
| 2008990 | 100cc    | 3000 psi (20.7 MPa, 207 bar)                     | System, PSM100, SST <sup>(1)</sup> , PCB, I/O <sup>(3)</sup> |
| 2008992 | 200cc    | 3000 psi (20.7 MPa, 207 bar)                     | System, PSM200, SST <sup>(1)</sup> , PCB, I/O <sup>(3)</sup> |

## Models, PSM Warm Melt

| Part    | Capacity | Maximum Fluid Working Pressure<br>psi (MPa, bar) | Description                                                             |
|---------|----------|--------------------------------------------------|-------------------------------------------------------------------------|
| 2009036 | 25cc     | 3000 psi (20.7 MPa, 207 bar)                     | System, PSM25, SST <sup>(1)</sup> , Warm Melt, PCB, I/O <sup>(3)</sup>  |
| 2008988 | 50cc     | 3000 psi (20.7 MPa, 207 bar)                     | System, PSM50, SST <sup>(1)</sup> , Warm Melt, PCB, I/O <sup>(3)</sup>  |
| 2008991 | 100cc    | 3000 psi (20.7 MPa, 207 bar)                     | System, PSM100, SST <sup>(1)</sup> , Warm Melt, PCB, I/O <sup>(3)</sup> |
| 2008993 | 200cc    | 3000 psi (20.7 MPa, 207 bar)                     | System, PSM200, SST <sup>(1)</sup> , Warm Melt, PCB, I/O <sup>(3)</sup> |

<sup>(1)</sup> SST: Stainless steel material

<sup>(2)</sup> CER: Ceramic material

<sup>(3)</sup> Any I/O communication mode can be converted to Profinet or Ethernet IP communication mode. Order Profinet ModBus kit 2005273 for Profinet communication mode or Ethernet IP Modbus kit 2000362 for Ethernet IP communication mode, and perform communication mode adding procedures. See your Communications Gateway Module Installation Kit Instruction Manual for details. See **Related Manuals**, page 2.

# Safety Symbols

The following safety symbols appear throughout this manual and on warning labels. Read the table to understand what each symbol means.

| Symbol                                                                              | Meaning                     |
|-------------------------------------------------------------------------------------|-----------------------------|
|    | Burn Hazard                 |
|    | Electric Shock Hazard       |
|    | Equipment Misuse Hazard     |
|   | Fire and Explosion Hazard   |
|  | Moving Parts Hazard         |
|  | Skin Injection Hazard       |
|  | Skin Injection Hazard       |
|  | Splash Hazard               |
|  | Toxic Fluid or Fumes Hazard |

| Symbol                                                                              | Meaning                                                  |
|-------------------------------------------------------------------------------------|----------------------------------------------------------|
|    | Do Not Place Hands or Other Body Parts Near Fluid Outlet |
|    | Do Not Stop Leaks with Hand, Body, Glove or Rag          |
|    | Eliminate Ignition Sources                               |
|    | Follow Pressure Relief Procedure                         |
|  | Ground Equipment                                         |
|  | Read Manual                                              |
|  | Ventilate Work Area                                      |
|  | Wear Personal Protective Equipment                       |



## Safety Alert Symbol

This symbol indicates: Attention! Become Alert! Look for this symbol throughout the manual to indicate important safety messages.

# General Warnings

The following warnings apply throughout this manual. Read, understand, and follow the warnings before using this equipment. Failure to follow these warnings can result in serious injury.

|  <b>WARNING</b>                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>                                                                                                                                                                                                                                                                       | <p><b>ELECTRIC SHOCK HAZARD</b></p> <p>This equipment must be grounded. Improper grounding, setup, or usage of the system can cause electric shock.</p> <ul style="list-style-type: none"> <li>• Turn off and disconnect all power before disconnecting any cables and before servicing or installing equipment.</li> <li>• Connect only to grounded power source.</li> <li>• All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations.</li> </ul>                                                                                                                                                                                                                                                                                                                                           |
| <br><br><br><br> | <p><b>SKIN INJECTION HAZARD</b></p> <p>High-pressure fluid from dispensing device, 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. <b>Get immediate surgical treatment.</b></p> <ul style="list-style-type: none"> <li>• Do not point dispensing device at anyone or at any part of the body.</li> <li>• Do not put your hand over the fluid outlet.</li> <li>• Do not stop or deflect leaks with your hand, body, glove, or rag.</li> <li>• Follow the <b>Pressure Relief Procedure</b> when you stop dispensing and before cleaning, checking, or servicing equipment.</li> <li>• Tighten all fluid connections before operating the equipment.</li> <li>• Check hoses and couplings daily. Replace worn or damaged parts immediately.</li> </ul> |

# **WARNING**



## **FIRE AND EXPLOSION HAZARD**

Flammable fumes, such as solvent and paint fumes, in **work area** can ignite or explode. Paint or solvent flowing through the equipment can cause static sparking. 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 sparking).
- Ground all equipment in the work area. See **Grounding** instructions.
- Never spray or flush solvent at high pressure.
- 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.
- Use only grounded hoses.
- Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are anti-static or conductive.
- **Stop operation immediately** if static sparking occurs or you feel a shock. Do not use equipment until you identify and correct the problem.
- Keep a working fire extinguisher in the work area.



## **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 Specifications** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Specifications** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request Safety Data Sheets (SDSs) from distributor or retailer.
- Turn off all equipment and follow the **Pressure Relief Procedure** 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. Alterations or modifications may void agency approvals and create safety hazards.
- Make sure all equipment is rated and approved for the environment in which you are using it.
- 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, cut or amputate fingers and other body parts.

- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Equipment can start without warning. Before checking, moving, or servicing equipment, follow the **Pressure Relief Procedure** and disconnect all power sources.



## **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.

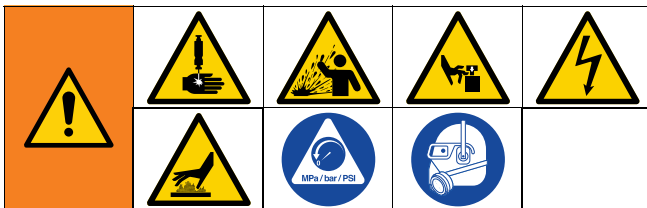
- Read Safety Data Sheets (SDSs) to know the specific hazards of the fluids you are using.
- Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.

|  <b>WARNING</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <p><b>BURN HAZARD</b></p> <p>Equipment surfaces and fluid that is heated can become very hot during operation. To avoid severe burns:</p> <ul style="list-style-type: none"> <li>• Do not touch hot fluid or equipment.</li> </ul>                                                                                                                                                                                                                                                          |
|                 | <p><b>PERSONAL PROTECTIVE EQUIPMENT</b></p> <p>Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. Protective equipment includes but is not limited to:</p> <ul style="list-style-type: none"> <li>• Protective eyewear, and hearing protection.</li> <li>• Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.</li> </ul> |

## Changing Materials

| <b>NOTICE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Changing the material types used in your equipment requires special attention to avoid equipment damage and downtime.</p> <ul style="list-style-type: none"> <li>• When changing materials, flush the equipment multiple times to ensure it is thoroughly clean.</li> <li>• Always clean the fluid inlet strainers after flushing.</li> <li>• Check with your material manufacturer for chemical compatibility.</li> <li>• When changing between epoxies and urethanes or polyureas, disassemble and clean all fluid components and change hoses. Epoxies often have amines on the B (hardener) side. Polyureas often have amines on the B (resin) side.</li> </ul> |

# Repair



This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashing fluid and moving parts, follow **Pressure Relief Procedure** in your PSM Instruction Manual when you stop operating and before cleaning, checking, or servicing the equipment.

To avoid injury from toxic fluids or fumes, such as splashing in the eyes or on skin, wear appropriate personal protective equipment.

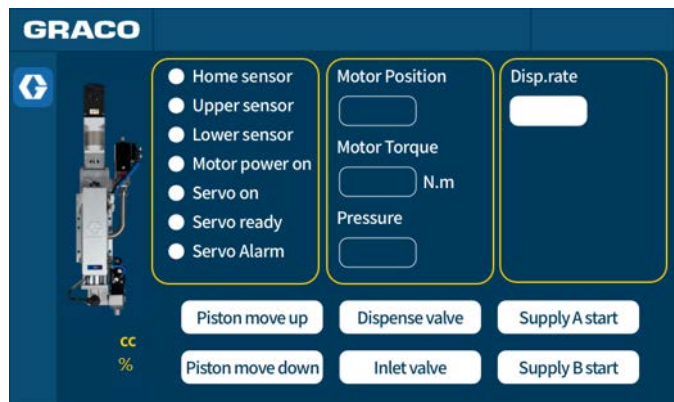
To avoid injury from fire, explosion, or electric shock, all electrical wiring must be done by a qualified electrician and comply with all local codes and regulations.

To avoid severe burns, do not touch hot fluid or equipment.

## Preparation

**NOTE:** Graco suggests using TSL™ only in repair procedures. All procedures should be performed by an appropriate professional.

1. Follow steps 1 through 3 of the **Pressure Relief Procedure** in your PSM Instruction Manual. See **Related Manuals**, page 2.
2. Turn off the air supply when the fluid pressure drops to ZERO.
3. Go to the Advanced Screen of the PSM Control Unit (F on Typical Installation page in your PSM Instruction Manual, see **Related Manuals**, page 2). Set the move speed at about 0.2 cc/s, then jog select "Piston move down" until the lower switch light is activated.



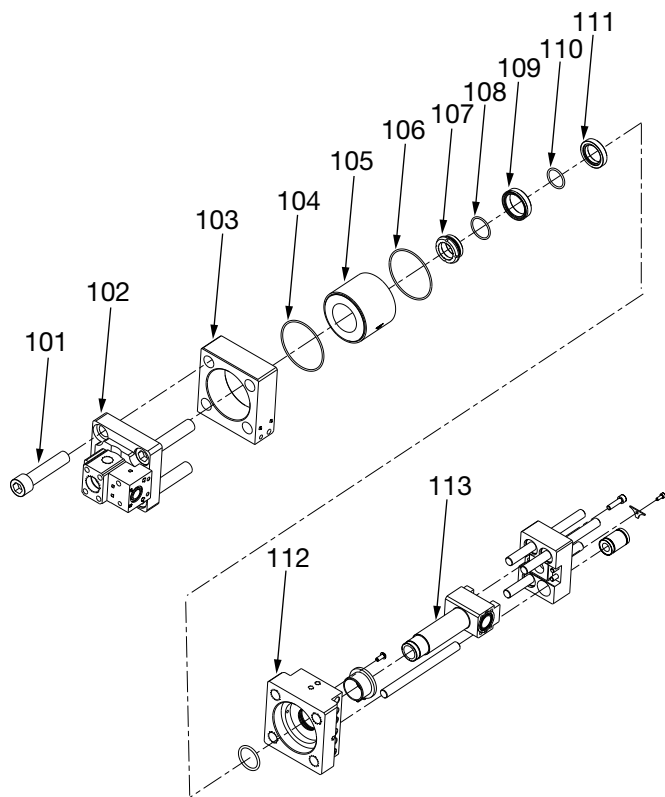
**Fig. 1 Advanced Screen**

**NOTE:** To open the Advanced mode, the operator must enter the password **1492**.

4. Turn off the system power.
5. Disconnect all cables and tubes from Junction Box Assembly (AA on Component Identification page in your PSM Instruction Manual, see **Related Manuals**, page 2).
6. Open the top cover of the Junction Box Assembly (AA on Component Identification page in your PSM Instruction Manual, see **Related Manuals**, page 2) and loosen the two fix screws in the cylinder housing (112). Next, take off the Junction Box Assembly (AA).

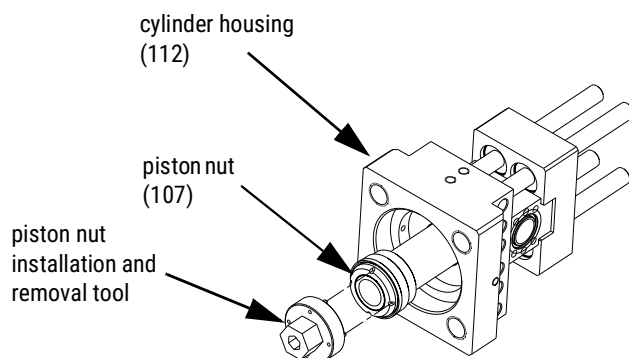
## Piston/Cylinder Replacement

### Disassemble Metering Module



**Fig. 2 Disassemble Cylinder of 50 cc and 100 cc**

1. Remove the four screws (101).
2. Remove the support block (102) and the sleeves (103).
3. Remove the cylinder (105) and O-rings (104 and 106) from the cylinder housing (112).
4. Using piston nut installation and removal tool (2013509), remove the piston nut (107) and the O-ring (108, only for PSM25) from the rod (113).



5. Remove the piston (109) from the rod (113).
6. Remove the O-ring (110).
7. Remove the washer (111) from the rod (113).
8. Clean all parts that have been removed.

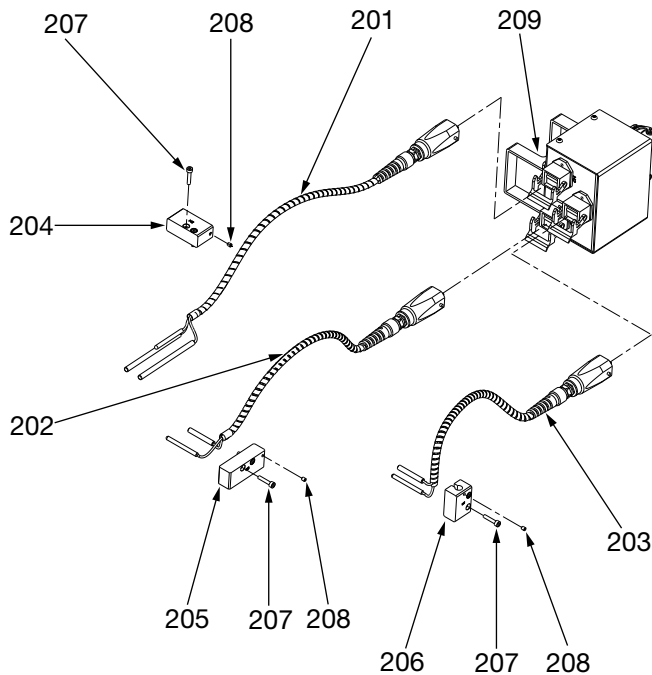
### Install Metering Module

1. Install the washer (111) to the rod (113) with TSL oil.
2. Install the new O-ring (110) with TSL oil.
3. Install the new piston (109) in the correct direction.
4. Install the new O-ring (108, only for PSM25cc) to the piston nut (107) with TSL oil.
5. Install the piston nut (107) and tighten the piston nut with correct torque.
6. Install the lubricated new O-ring (106) into the grooves of cylinder housing (112) with TSL oil.
7. Carefully slide the end of the cylinder (105) into the cylinder housing (112) in the correct direction. Ensure the cylinder doesn't damage the sides of the piston as the cylinder is inserted.
8. Insert the lubricated new O-ring (104) into the grooves of the cylinder (105).
9. Secure cylinder in place with the sleeves (103), support block (102) screws (101). Diagonally tighten the screws (101) by slowly and progressively increasing torque until the screws are securely housed.
10. Install other parts.

**NOTE:** Not all parts need to be replaced with new ones. The operator may replace the parts per actual situation.

## Warm Melt Module Replacement (Only for PSM Warm Melt)

### Disassemble Warm Melt Module



**Fig. 3 Disassemble Cylinder of 50 cc and 100 cc**

1. Unlock and pull the cables (201, 202, and 203) out of the connector (209).
2. Remove the screws (207 and 208) from the covers (204, 205, and 206).
3. Remove the covers (204, 205, and 206) from the cables (201, 202, and 203).

### Disassemble Warm Melt Module

1. Install the covers (204, 205, and 206) to the cables (201, 202, and 203) with screws (207 and 208).
2. Insert the cables (201, 202, and 203) into the connector (209) and lock the cables.

## Prepare for Operation

1. Pressurize Supply Pump System (E on Typical Installation page in your PSM Instruction Manual) connected to the PSM Reload Valve (AD on Component Identification page in your PSM Instruction Manual). See **Related Manuals**, page 2.
2. Perform the **Prime the System** as outlined in your PSM Instruction Manual. See **Related Manuals**, page 2.
3. Perform the **Weight Check** as outlined in your PSM Instruction Manual. See **Related Manuals**, page 2.
4. Dispense several full stroke shots until the PSM Metering Unit (H on Typical Installation page in your PSM Instruction Manual, see **Related Manuals**, page 2) is free of air and there is no leakage at the dispense outlet after shutoff. See your PSM Instruction Manual.

## Recycling and Disposal

### End of Product Life

At the end of the product's useful life, dismantle and recycle it in a responsible manner.

- Follow the **Pressure Relief Procedure** in your PSM Instruction Manual. See **Related Manuals**, page 2.
- Drain and dispose of fluids according to applicable regulations. Refer to the material manufacturer's Safety Data Sheet.
- Remove motors, circuit boards, LCDs (liquid crystal displays), and other electronic components. Recycle according to applicable regulations.
- Do not dispose of electronic components with household or commercial waste. 
- Deliver remaining product to a recycling facility.

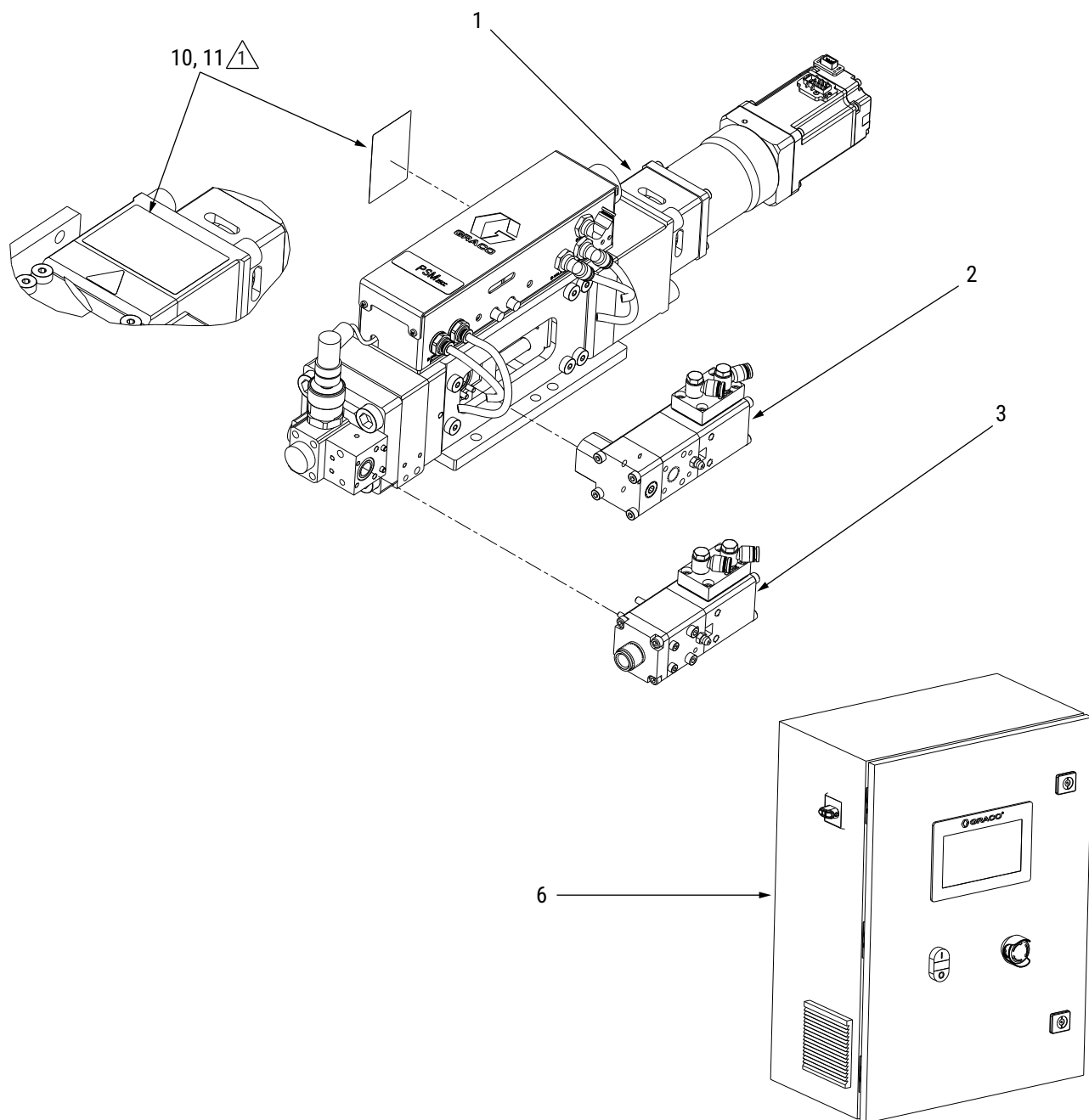
# Parts

## Overview

| Parts Description                         | Page |
|-------------------------------------------|------|
| System                                    | 12   |
| Base                                      | 16   |
| Metering Module                           | 18   |
| Power Transmission Module                 | 20   |
| Junction Box                              | 22   |
| Inlet Valve Module                        | 24   |
| 1K Inlet Valve Module                     | 26   |
| Outlet Valve Module                       | 28   |
| 1K Outlet Valve Module                    | 30   |
| Warm Melt Module (Only for PSM Warm Melt) | 32   |
| Control Unit                              | 34   |

## System

System, PSM Ambient, 2009034, 2009035, 2008986, 2008987, 2008990, and 2008992



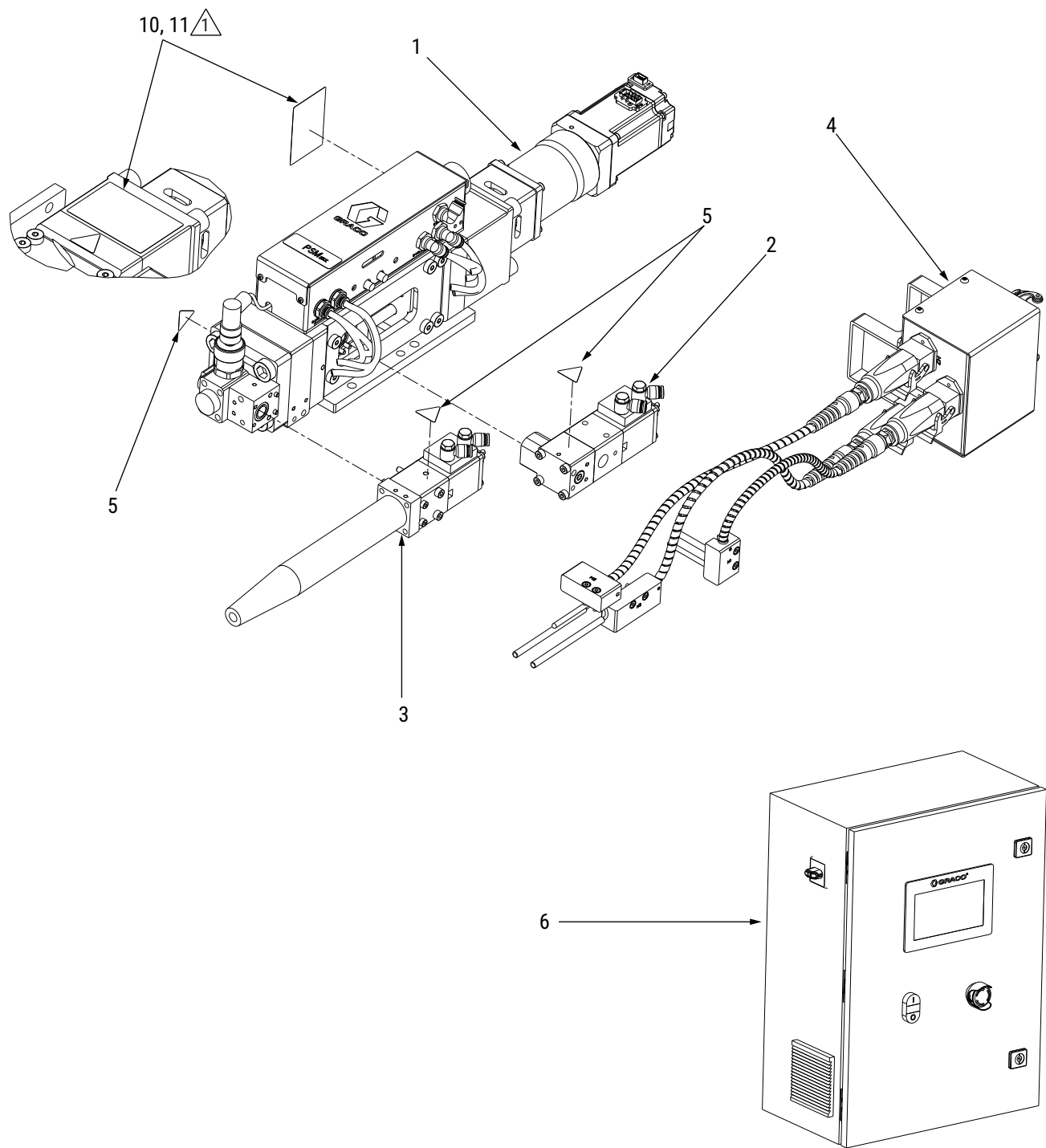
 Pasted on the left side of base part.

## PSM Ambient System Parts List

| Ref. | Part    | Description                                                                 | Qty.    |         |         |         |         |         |
|------|---------|-----------------------------------------------------------------------------|---------|---------|---------|---------|---------|---------|
|      |         |                                                                             | 25cc    |         | 50cc    |         | 100cc   | 200cc   |
|      |         |                                                                             | 2009034 | 2009035 | 2008986 | 2008987 | 2008990 | 2008992 |
| 1    | ----    | BASE, PSM25, SST; See <b>Base</b> , page 16                                 | 1       |         |         |         |         |         |
|      | ----    | BASE, PSM25, CER; See <b>Base</b> , page 16                                 |         | 1       |         |         |         |         |
|      | ----    | BASE, PSM50, SST; See <b>Base</b> , page 16                                 |         |         | 1       |         |         |         |
|      | ----    | BASE, PSM50, CER; See <b>Base</b> , page 16                                 |         |         |         | 1       |         |         |
|      | ----    | BASE, PSM100, SST; See <b>Base</b> , page 16                                |         |         |         |         | 1       |         |
|      | ----    | BASE, PSM200, SST; See <b>Base</b> , page 16                                |         |         |         |         |         | 1       |
| 2    | ----    | VALVE, kit, 1K, inlet; See <b>Inlet Valve, PSM Ambient</b> , page 24        | 1       | 1       | 1       | 1       | 1       | 1       |
| 3    | ----    | VALVE, kit, 1K, outlet, HW; See <b>Outlet Valve, PSM Ambient</b> , page 28  |         | 1       |         | 1       |         |         |
|      | ----    | VALVE, kit, 1K, outlet, SST; See <b>Outlet Valve, PSM Ambient</b> , page 28 | 1       |         | 1       |         | 1       | 1       |
| 6    | 2002837 | CONTROL, PSM, PCB; See <b>Control Unit</b> , page 34                        | 1       | 1       | 1       | 1       | 1       | 1       |
| 7*   | 2000277 | CABLE, servo motor-A, 10m                                                   | 1       | 1       | 1       | 1       | 1       | 1       |
| 8*   | 2000274 | CABLE, servo encoder-A, 10m                                                 | 1       | 1       | 1       | 1       | 1       | 1       |
| 9*   | 2000270 | CABLE, junction box, 10m                                                    | 1       | 1       | 1       | 1       | 1       | 1       |
| 10   | ----    | BLANK, label, kit                                                           | 1       | 1       | 1       | 1       | 1       | 1       |
| 11   | ----    | IDENTIFICATION, PSM product                                                 | 1       | 1       | 1       | 1       | 1       | 1       |
| 12*  | ----    | WIRE, grounding assembly                                                    | 1       | 1       | 1       | 1       | 1       | 1       |
| 13*  | ----    | SCREW, ground                                                               | 1       | 1       | 1       | 1       | 1       | 1       |
| 14*  | 2013509 | TOOL, four claw spanner, PSM                                                | 1       | 1       | 1       | 1       | 1       | 1       |

\* These parts are not shown on the sketch.

**System, PSM Warm Melt, 2009036, 2008988, 2008991, and 2008993**



 Pasted on the left side of base part.

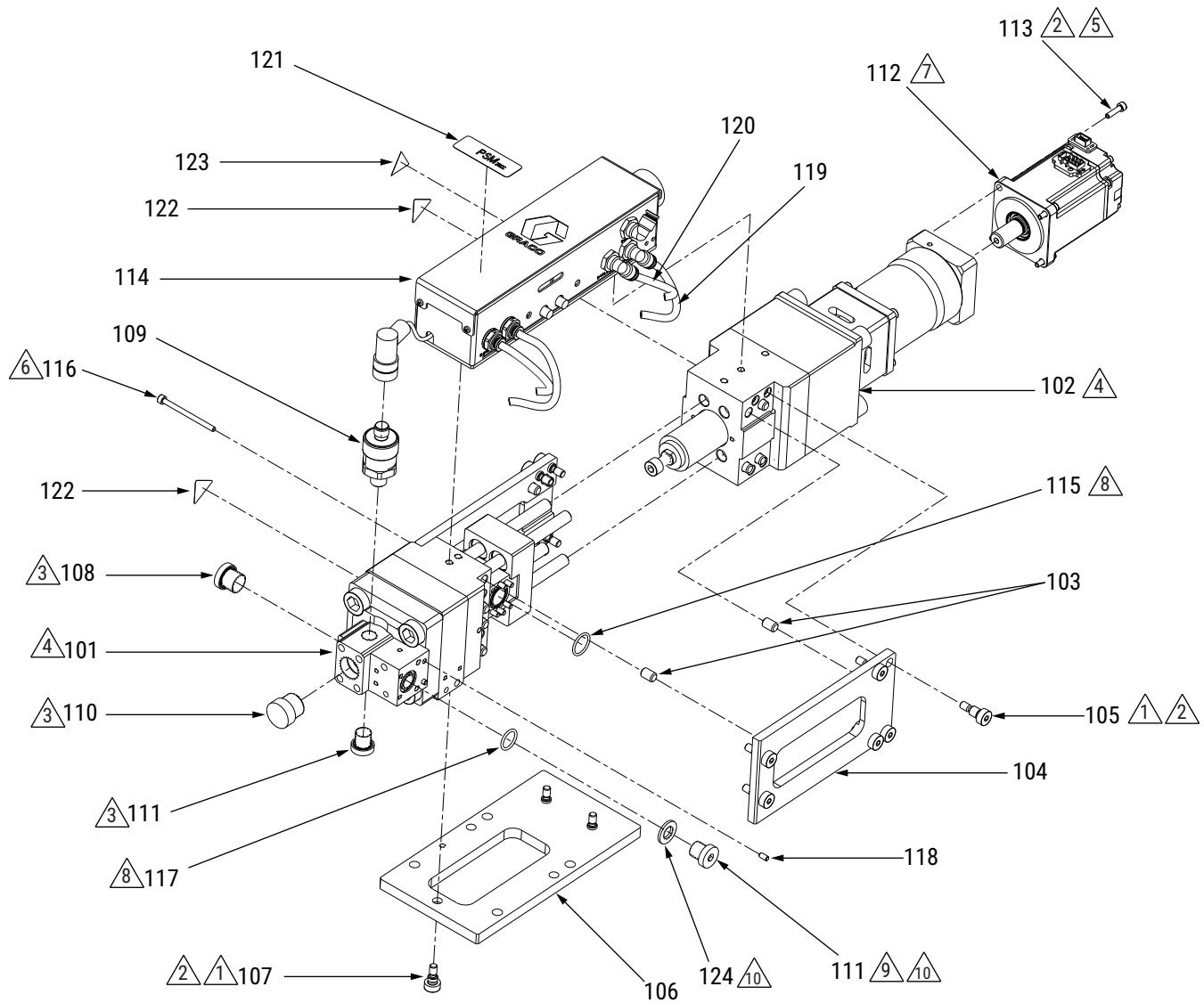
### PSM Warm Melt System Parts List

| Ref. | Part    | Description                                                                                       | Qty.    |         |         |         |
|------|---------|---------------------------------------------------------------------------------------------------|---------|---------|---------|---------|
|      |         |                                                                                                   | 25cc    | 50cc    | 100cc   | 200cc   |
|      |         |                                                                                                   | 2009036 | 2008988 | 2008991 | 2008993 |
| 1    | ----    | BASE, PSM25, SST; See <b>Base</b> , page 16                                                       | 1       |         |         |         |
|      | ----    | BASE, PSM25, CER; See <b>Base</b> , page 16                                                       |         |         |         |         |
|      | ----    | BASE, PSM50, SST; See <b>Base</b> , page 16                                                       |         | 1       |         |         |
|      | ----    | BASE, PSM50, CER; See <b>Base</b> , page 16                                                       |         |         |         |         |
|      | ----    | BASE, PSM100, SST; See <b>Base</b> , page 16                                                      |         |         | 1       |         |
|      | ----    | BASE, PSM200, SST; See <b>Base</b> , page 16                                                      |         |         |         | 1       |
| 2    | ----    | VALVE, kit, iQ, inlet; See <b>Inlet Valve, PSM Warm Melt</b> , page 25                            | 1       | 1       | 1       | 1       |
| 3    | ----    | VALVE, kit, iQ, outlet; See <b>Outlet Valve, PSM Warm Melt</b> , page 29                          | 1       | 1       | 1       | 1       |
| 4    | 2009219 | MODULE, PSM25, 50, 100, warm melt; See <b>Warm Melt Module (Only for PSM Warm Melt)</b> , page 32 | 1       | 1       | 1       |         |
|      | 2009220 | MODULE, PSM200, warm melt; See <b>Warm Melt Module (Only for PSM Warm Melt)</b> , page 32         |         |         |         | 1       |
| 5▲   | 290228  | LABEL, safety, warning, burn                                                                      | 1       | 1       | 1       | 1       |
| 6    | 2002837 | CONTROL, PSM, PCB; See <b>Control Unit</b> , page 34                                              | 1       | 1       | 1       | 1       |
| 7*   | 2000277 | CABLE, servo motor-A, 10m                                                                         | 1       | 1       | 1       | 1       |
| 8*   | 2000274 | CABLE, servo encoder-A, 10m                                                                       | 1       | 1       | 1       | 1       |
| 9*   | 2000270 | CABLE, junction box, 10m                                                                          | 1       | 1       | 1       | 1       |
| 10   | ----    | BLANK, label, kit                                                                                 | 1       | 1       | 1       | 1       |
| 11   | ----    | IDENTIFICATION, PSM product                                                                       | 1       | 1       | 1       | 1       |
| 12*  | ----    | WIRE, grounding assembly                                                                          | 1       | 1       | 1       | 1       |
| 13*  | ----    | SCREW, ground                                                                                     | 1       | 1       | 1       | 1       |
| 14*  | 2013509 | TOOL, four claw spanner, PSM                                                                      | 1       | 1       | 1       | 1       |

\* These parts are not shown on the sketch.

▲ Replacement safety labels, tags, and cards are available at no cost.

## Base



① Torque to 5.16-6.64 ft-lb (7.0-9.0 N•m).

② Apply blue Anaerobic sealant.

③ Apply SST pipe sealant.

④ Apply lubricant grease.

⑤ Torque to 0.37-0.74 ft-lb (0.5-1.0 N•m).

⑥ Torque to 1.25-1.70 ft-lb (1.7-2.3 N•m).

⑦ Installation direction as show.

⑧ Apply TSL oil.

⑨ Apply white oil 0553-6.

⑩ Spare part and not installed on the product.

## Base Parts List

| Ref. | Part                  | Description                                    | Qty.    |         |         |         |         |         |         |         |         |
|------|-----------------------|------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|      |                       |                                                | 25cc    |         |         | 50cc    |         | 100cc   | 200cc   |         |         |
|      |                       |                                                | 2009036 | 2009034 | 2009035 | 2008988 | 2008986 | 2008987 | 2008991 | 2008990 | 2008993 |
| 101  | ----                  | MODULE, metering, SST, PSM25; See page 18      | 1       |         |         |         |         |         |         |         |         |
|      | ----                  | MODULE, metering, CER, PSM25; See page 18      |         | 1       |         |         |         |         |         |         |         |
|      | ----                  | MODULE, metering, SST, PSM50; See page 18      |         |         |         | 1       |         |         |         |         |         |
|      | ----                  | MODULE, metering, CER, PSM50; See page 18      |         |         |         |         | 1       |         |         |         |         |
|      | ----                  | MODULE, metering, SST, PSM100; See page 18     |         |         |         |         |         | 1       |         |         |         |
|      | ----                  | MODULE, metering, SST, PSM200; See page 18     |         |         |         |         |         |         |         |         | 1       |
| 102  | ----                  | MODULE, power transmission, PSM25; See page 20 | 1       | 1       |         |         |         |         |         |         |         |
|      | ----                  | MODULE, power transmission, PSM50; See page 20 |         |         |         | 1       | 1       |         |         |         |         |
|      | ----                  | MODULE, power transmission, PSM100 See page 20 |         |         |         |         |         |         | 1       |         |         |
|      | ----                  | MODULE, power transmission, PSM200 See page 20 |         |         |         |         |         |         |         |         | 1       |
| 103  | 18D920                | PIN, dowel, DIA 8-12                           | 16      | 16      | 16      | 16      | 16      | 16      | 16      | 16      |         |
| 104  | 18D648                | PLATE, side, base, pump, PSM25,50              | 2       | 2       | 2       | 2       |         |         |         |         |         |
|      | 18D649                | PLATE, side, base, pump, PSM100                |         |         |         |         |         |         | 2       |         |         |
|      | 2008980               | PLATE, side, base, pump, PSM200                |         |         |         |         |         |         |         | 2       |         |
| 105  | 18B949                | SCREW, shoulder, DIA 8, M6                     | 12      | 12      | 12      | 12      | 12      | 12      | 12      | 12      |         |
| 106  | 2010110               | PLATE, bottom, base, PSM25,50                  | 1       | 1       | 1       | 1       |         |         |         |         |         |
|      | 2010111               | PLATE, bottom, base, PSM100                    |         |         |         |         |         |         | 1       |         |         |
|      | 2008981               | PLATE, bottom, base, PSM200                    |         |         |         |         |         |         |         | 1       |         |
| 107  | 18B951                | SCREW, DIA 8, M6                               | 3       | 3       | 3       | 3       | 3       | 3       | 3       | 3       |         |
| 108  | 18D732                | PLUG, blind flange, G 3/8                      | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       |         |
| 109  | 18C018                | TRANSMITTER, pressure                          | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       |         |
| 110  | 18D886                | PLUG, UN 13/16-16                              | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       |         |
| 111  | 18D615                | PLUG, blind flange, G 1/4                      | 2       | 2       | 2       | 2       | 2       | 2       | 2       | 2       |         |
| 112  | 18D881                | MOTOR, servo, 220V, 400W, INO                  | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       |         |
| 113  | ----                  | SCREW, M4 × 0.7-16, socket head, SST           | 4       | 4       | 4       | 4       | 4       | 4       | 4       | 4       |         |
| 114  | 2011564               | JUNCTION BOX, PSM25,50; See page 22            | 1       | 1       | 1       | 1       |         |         |         |         |         |
|      | 2011565               | JUNCTION BOX, PSM100; See page 22              |         |         |         |         |         |         | 1       |         |         |
|      | 2011566               | JUNCTION BOX, PSM200; See page 22              |         |         |         |         |         |         |         | 1       |         |
| 115  | 18D626 <sup>(1)</sup> | O-RING                                         | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       |         |
| 116  | ----                  | SCREW, M4 × 0.7-55, socket head                | 6       | 6       | 6       | 6       | 6       | 6       | 6       | 6       |         |
| 117  | 18D698 <sup>(1)</sup> | O-RING                                         | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       |         |
| 118  | 18D684                | PIN, dowel, DIA 4-8                            | 2       | 2       | 2       | 2       | 2       | 2       | 2       | 2       |         |
| 119  | ----                  | TUBE, 6mm OD × 4mm ID, PU, Black               | 0.6 ft  | 0.6 ft  | 0.6 ft  | 0.6 ft  | 0.6 ft  | 0.6 ft  | 0.6 ft  | 0.6 ft  |         |
| 120  | ----                  | TUBE, 6mm OD × 4mm ID, PU, Blue                | 0.6 ft  | 0.6 ft  | 0.6 ft  | 0.6 ft  | 0.6 ft  | 0.6 ft  | 0.6 ft  | 0.6 ft  |         |
| 121  | ----                  | IDENTIFICATION, PSM25                          | 1       | 1       |         |         |         |         |         |         |         |
|      | ----                  | IDENTIFICATION, PSM50                          |         |         |         | 1       | 1       |         |         |         |         |
|      | ----                  | IDENTIFICATION, PSM100                         |         |         |         |         |         |         | 1       |         |         |
|      | ----                  | IDENTIFICATION, PSM200                         |         |         |         |         |         |         |         | 1       |         |
| 122▲ | 15H108                | LABEL, safety, warning, pinch                  | 2       | 2       | 2       | 2       | 2       | 2       | 2       | 2       |         |
| 123▲ | 189930                | LABEL, caution                                 | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       |         |
| 124  | 2013470               | PLATE, seal                                    | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       |         |

▲ Replacement of safety labels, tags, and cards are available at no cost.

(1) This part is not sold separately. Order sealing kit 2009677 when ordering this part.

3B0405C

| Ref. | Part                       | Description                        | Qty.    |         |         |         |         |         |         |         |
|------|----------------------------|------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
|      |                            |                                    | 25cc    |         | 50cc    |         | 100cc   |         | 200cc   |         |
|      |                            |                                    | 2009036 | 2009034 | 2009035 | 2008988 | 2008986 | 2008987 | 2008990 | 2008992 |
| 1007 | 18D712                     | PLATE, bearing limit               | 2       |         | 2       | 2       | 2       | 2       | 2       | 2       |
| 1008 | 18B942                     | BEARING                            | 4       | 4       | 4       | 4       | 4       | 4       | 4       | 4       |
| 1009 | ---                        | SCREW, M3 × 0.5-8, socket          | 2       | 2       | 2       | 2       | 2       | 2       | 2       | 2       |
| 1010 | 18D709                     | ROD, guide, PSM25,50               | 4       | 4       | 4       | 4       |         |         |         |         |
|      | 18D710                     | ROD, guide, PSM100                 |         |         |         |         |         | 4       |         |         |
|      | 2008970                    | ROD, guide, PSM200                 |         |         |         |         |         |         |         | 4       |
| 1011 | 18D690 <sup>(1)</sup> ◆✓❁❖ | O-RING                             | 2       | 2       | 2       | 2       | 2       | 2       | 2       | 2       |
| 1012 | 2009061                    | CYLINDER, 25, SST, PSM             | 1       |         |         |         |         |         |         |         |
|      | 2009062                    | CYLINDER, 25, CER, PSM             |         | 1       |         |         |         |         |         |         |
|      | 18D703                     | CYLINDER, 50, SST, PSM             |         |         | 1       |         |         |         |         |         |
|      | 18D606                     | CYLINDER, 50, CRE, PSM             |         |         |         | 1       |         |         |         |         |
|      | 18D704                     | CYLINDER, 100, SST, PSM            |         |         |         |         |         | 1       |         |         |
|      | 2008971                    | CYLINDER, 200, SST, PSM            |         |         |         |         |         |         |         | 1       |
| 1013 | 18D955 <sup>(1)</sup>      | O-RING, 25 × 2.65                  | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       |
| 1014 | --- †                      | PLATE, support back, PSM25         | 1       | 1       |         |         |         |         |         |         |
|      | --- ‡ ❁                    | PLATE, support back, PSM50,100,200 |         |         | 1       | 1       | 1       | 1       | 1       | 1       |
| 1015 | 18D751 <sup>(1)</sup> ◆✓❁❖ | O-RING                             | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       |
| 1016 | --- ◆                      | PISTON, 960, PSM25, UHMW PE        | 1       |         |         |         |         |         |         |         |
|      | --- ✓                      | PISTON, 960, PSM25, UPE M22        |         | 1       |         |         |         |         |         |         |
|      | --- ❁                      | PISTON, 1800, PSM50,100            |         |         | 1       | 1       | 1       |         |         |         |
|      | --- ❖                      | PISTON, PSM200                     |         |         |         |         |         |         |         | 1       |
| 1017 | --- †                      | PLATE, support front, PSM25        | 1       | 1       |         |         |         |         |         |         |
|      | --- ‡                      | PLATE, support front, PSM50,100    |         |         | 1       | 1       | 1       |         |         |         |
|      | --- ❁                      | NUT, support front, PSM200         |         |         |         |         |         |         |         | 1       |
| 1018 | 18D765 <sup>(1)</sup> ◆✓   | O-RING                             | 1       | 1       |         |         |         |         |         |         |
| 1019 | 18D968                     | SLEEVE, tube, PSM25,50, warm melt  | 1       | 1       | 1       | 1       |         |         |         |         |
|      | 18D969                     | SLEEVE, tube, PSM100, warm melt    |         |         |         |         |         | 1       |         |         |
|      | 2008974                    | SLEEVE, tube, PSM200               |         |         |         |         |         |         |         | 1       |
| 1020 | 18D686                     | BLOCK, support                     | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       |
| 1021 | ---                        | SCREW, M14 × 2.0-65, socket head   | 4       | 4       | 4       | 4       |         |         |         |         |
|      | ---                        | SCREW, M14 × 2.0-95, socket head   |         |         |         |         |         | 4       |         |         |
|      | ---                        | SCREW, M14 × 2.0-155, socket head  |         |         |         |         |         |         |         | 4       |

◆ Parts included in 25cc SST piston kit 2009678.

✓ Parts included in 25cc CER piston kit 2009679.

❁ Parts included in 50cc and 100cc piston kit 2009680.

❖ Parts included in 200cc piston kit 2009681.

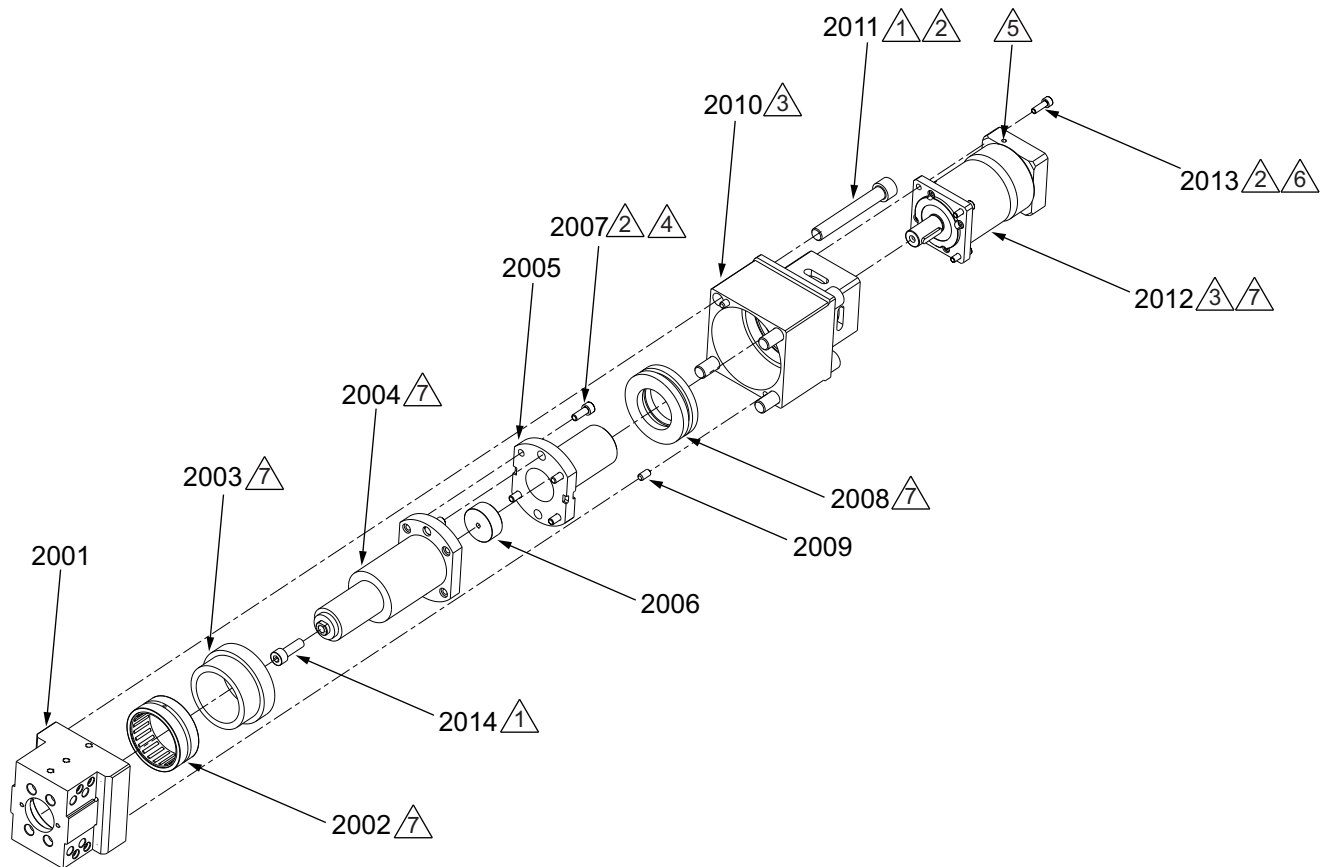
† Parts included in 25cc nut and back plate kit 2012437.

‡ Parts included in 50cc and 100cc nut and back plate kit 2012438.

❁ Parts included in 200cc nut and back plate kit 2012439.

(1) This part is not sold separately. Order sealing kit 2009677 when ordering this part.

## Power Transmission Module



① Torque to 5.90-6.64 ft-lb (8.0-9.0 N•m).

② Apply blue Anaerobic sealant.

③ Installation direction as show.

④ Torque to 2.21-2.95 ft-lb (3.0-4.0 N•m).

⑤ When installing, ensure the two threaded holes are on the left and right side of PSM metering unit.

⑥ Torque to 1.25-1.7 ft-lb (1.7-2.3 N•m).

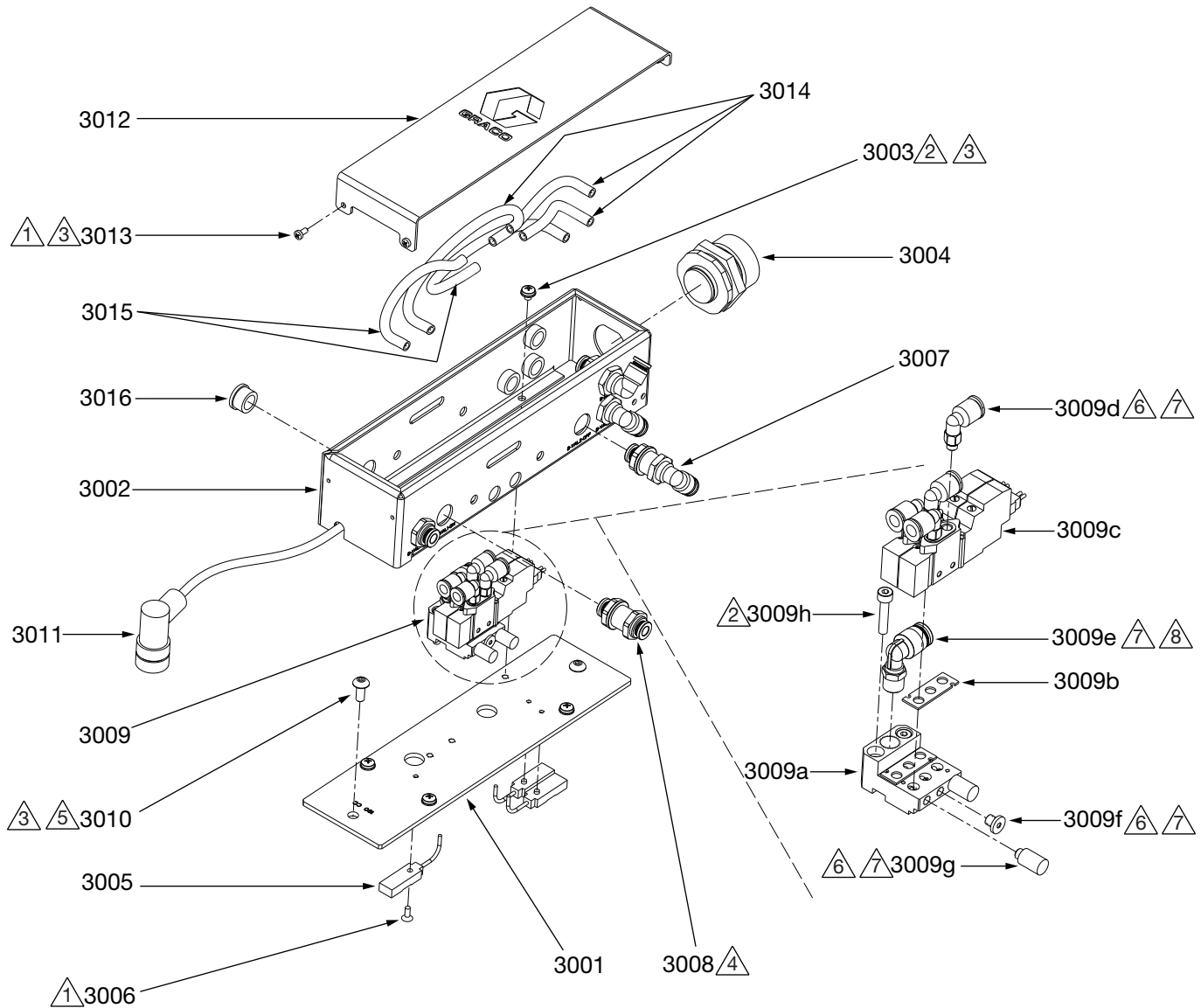
⑦ Apply synthetic lubricant grease.

## Power Transmission Module Parts List

| Ref. | Part    | Description                          | Qty.                          |                               |                               |                               |
|------|---------|--------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
|      |         |                                      | 25cc                          | 50cc                          | 100cc                         | 200cc                         |
|      |         |                                      | 2009036<br>2009035<br>2009034 | 2008988<br>2008987<br>2008986 | 2008991<br>2008990<br>2008991 | 2008992<br>2008993<br>2008992 |
| 2001 | 18D674  | BLOCK, sleeve                        | 1                             | 1                             | 1                             | 1                             |
| 2002 | 18D895  | BEARING, needle bearing              | 1                             | 1                             | 1                             | 1                             |
| 2003 | 18D672  | BEARING, composite                   | 1                             | 1                             | 1                             | 1                             |
| 2004 | 2002387 | KIT, ball screw, nut, PSM25,50       | 1                             | 1                             |                               |                               |
|      | 2002388 | KIT, ball screw, nut, PSM100         |                               |                               | 1                             |                               |
|      | 2008976 | KIT, ball screw, nut, PSM200         |                               |                               |                               | 1                             |
| 2005 | ----    | ADAPTER, axle sleeve, PSM25,50       | 1                             | 1                             |                               |                               |
|      | ----    | ADAPTER, axle sleeve, PSM100         |                               |                               | 1                             |                               |
|      | ----    | ADAPTER, axle sleeve, PSM200         |                               |                               |                               | 1                             |
| 2006 | ----    | GASKET, axle sleeve, PSM25,50,100    | 1                             | 1                             | 1                             |                               |
|      | ----    | GASKET, axle sleeve, PSM200          |                               |                               |                               | 1                             |
| 2007 | ----    | SCREW, M6 × 1.0-16, socket head      | 4                             | 4                             | 4                             | 4                             |
| 2008 | 18D660  | BEARING, single thrust               | 1                             | 1                             | 1                             | 1                             |
| 2009 | ----    | PIN, dowel, DIA 6-12                 | 2                             | 2                             | 2                             | 2                             |
| 2010 | 18D655  | SEAT, reduction box, PSM25,50        | 1                             | 1                             |                               |                               |
|      | 18D656  | SEAT, reduction box, PSM100          |                               |                               | 1                             |                               |
|      | 2008979 | SEAT, reduction box, PSM200          |                               |                               |                               | 1                             |
| 2011 | ----    | SCREW, M12 × 1.75-85, socket head    | 4                             | 4                             | 4                             | 4                             |
| 2012 | 2012441 | BOX, reduction, ratio 40             | 1                             |                               |                               |                               |
|      | 18D723  | BOX, reduction, ratio 60             |                               | 1                             | 1                             | 1                             |
| 2013 | ----    | SCREW, M5 × 0.8-16, socket head, SST | 4                             | 4                             | 4                             | 4                             |
| 2014 | ----    | SCREW, M8 × 1.25-25, socket head     | 1                             | 1                             | 1                             | 1                             |

# Junction Box

## Junction Box, 2011564, 2011565, and 2011566



△1 Torque to 0-0.37 ft-lb (0-0.5 N•m).

△2 Torque to 0.37-0.74 ft-lb (0.5-1.0 N•m).

△3 Apply blue Anaerobic sealant.

△4 Rubber gasket should be assembled on the outer surface.

△5 Torque to 1.25-1.7 ft-lb (1.7-2.3 N•m).

△6 Torque to 1.70-2.58 ft-lb (2.3-3.5 N•m).

△7 Apply SST pipe sealant.

△8 Torque to 4.43-5.16 ft-lb (6.0-7.0 N•m).

## Junction Box Parts List

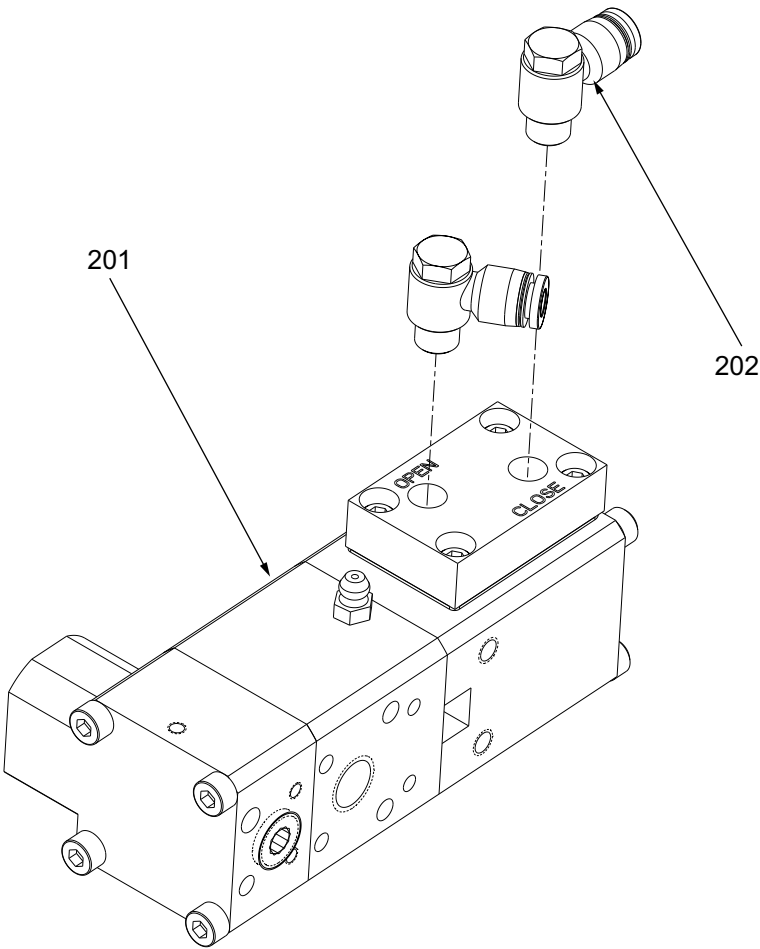
| Ref.   | Part   | Description                              | Qty.                          |                               |                               |                               |
|--------|--------|------------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
|        |        |                                          | 25cc                          | 50cc                          | 100cc                         | 200cc                         |
|        |        |                                          | 2009036<br>2009035<br>2009034 | 2008988<br>2008987<br>2008986 | 2008991<br>2008990<br>2008991 | 2008992<br>2008993<br>2008992 |
| 3001   | ----   | PLATE, junction box, PSM25,50            | 1                             | 1                             |                               |                               |
|        | ----   | PLATE, junction box, PSM100              |                               |                               | 1                             |                               |
|        | ----   | PLATE, junction box, PSM200              |                               |                               |                               | 1                             |
| 3002   | ----   | FRAME, control                           | 1                             | 1                             | 1                             | 1                             |
| 3003   | ----   | SCREW, M4 x 0.7-5, Phillips, with washer | 4                             | 4                             | 4                             | 4                             |
| 3004   | ----   | ADAPTER, WF20, M26                       | 1                             | 1                             | 1                             | 1                             |
| 3005   | 18D624 | SENSOR, position                         | 3                             | 3                             | 3                             | 3                             |
| 3006   | ----   | SCREW, M3 x 0.5-8, flat head, SST        | 3                             | 3                             | 3                             | 3                             |
| 3007   | 18D617 | FITTING, DIA 6, M14, PLM6                | 3                             | 3                             | 3                             | 3                             |
| 3008   | 18B922 | FITTING, DIA 6, M14 x 1                  | 2                             | 2                             | 2                             | 2                             |
| 3009   | 25S118 | MODULE, solenoid valve, PSM              | 1                             | 1                             | 1                             | 1                             |
| 3009a  | ----   | BLOCK, support, PSM                      | 1                             | 1                             | 1                             | 1                             |
| 3009b* | ----   | GASKET, rubber, PSM                      | 2                             | 2                             | 2                             | 2                             |
| 3009c* | ----   | KIT, solenoid valve, PSM                 | 2                             | 2                             | 2                             | 2                             |
| 3009d* | ----   | FITTING, DIA 6, M5 x 0.8                 | 4                             | 4                             | 4                             | 4                             |
| 3009e  | ----   | FITTING, DIA 6, PT1/8                    | 1                             | 1                             | 1                             | 1                             |
| 3009f  | ----   | PLUG, blind flange, M5                   | 1                             | 1                             | 1                             | 1                             |
| 3009g  | ----   | MUFFLER, M5                              | 2                             | 2                             | 2                             | 2                             |
| 3009h  | ----   | SCREW, M4 x 0.7-20, socket               | 2                             | 2                             | 2                             | 2                             |
| 3010   | ----   | SCREW, M6 x 1.0-10, socket head          | 2                             | 2                             | 2                             | 2                             |
| 3011   | ----   | FITTING, transmitter, PSM25,50,100       | 1                             | 1                             | 1                             |                               |
|        | ----   | FITTING, transmitter, PSM200             |                               |                               |                               | 1                             |
| 3012   | ----   | COVER, control, PSM                      | 1                             | 1                             | 1                             | 1                             |
| 3013   | ----   | SCREW, M3 x 0.5-6, pan head, SST         | 4                             | 4                             | 4                             | 4                             |
| 3014   | ----   | TUBE, 6 mm OD x 4 mm ID, PU, black       | 2 ft                          | 2 ft                          | 2 ft                          | 2 ft                          |
| 3015   | ----   | TUBE, 6 mm OD x 4 mm ID, PU, blue        | 1.5 ft                        | 1.5 ft                        | 1.5 ft                        | 1.5 ft                        |
| 3016   | ----   | CAP, hole, M14                           | 5                             | 5                             | 5                             | 5                             |
| 3017*  | ----   | IDENTIFICATION, driver, tru-shot         | 1                             | 1                             | 1                             | 1                             |
| 3018*  | ----   | LABEL, blank                             | 1                             | 1                             | 1                             | 1                             |

\* Parts included in fitting solenoid valve kit 2006571.

\* These parts are not shown on the sketch.

# Inlet Valve Module

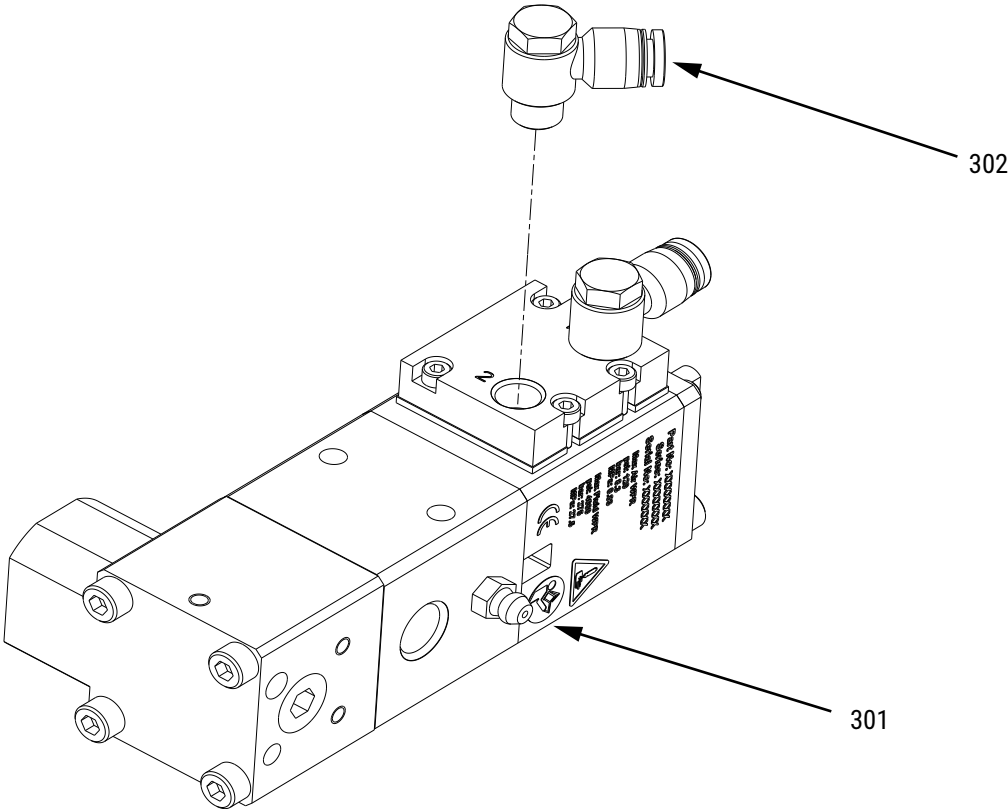
## Inlet Valve, PSM Ambient



### PSM Ambient Inlet Valve Module Parts List

| Ref. | Part    | Description                                                      | Qty.    |         |         |         |
|------|---------|------------------------------------------------------------------|---------|---------|---------|---------|
|      |         |                                                                  | 25cc    | 50cc    | 100cc   | 200cc   |
|      |         |                                                                  | 2009035 | 2008987 | 2008990 | 2008992 |
| 201  | 2009194 | VALVE, 1K, ball seat; See <b>1K Inlet Valve Module</b> , page 26 | 1       | 1       | 1       | 1       |
| 202  | 18C103  | FITTING, DIA 6, PT1/8, PV                                        | 2       | 2       | 2       | 2       |

Inlet Valve, PSM Warm Melt



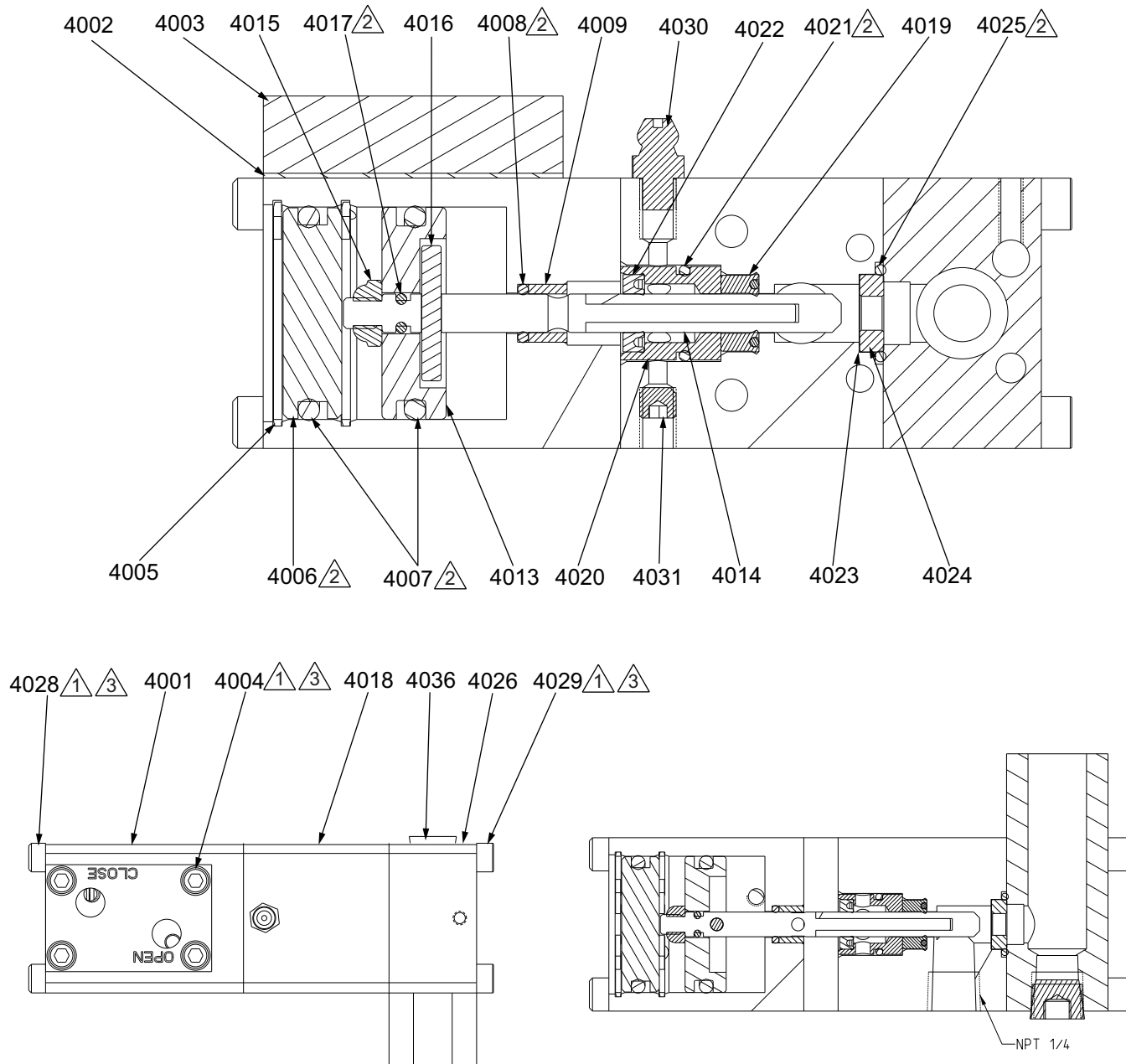
Valve shown for assembling reference.

PSM Warm Melt Inlet Valve Module Parts List

| Ref. | Part    | Description               | Qty.    |         |         |         |
|------|---------|---------------------------|---------|---------|---------|---------|
|      |         |                           | 25cc    | 50cc    | 100cc   | 200cc   |
|      |         |                           | 2009036 | 2008988 | 2008991 | 2008993 |
| 301  | 2011771 | VALVE, PSM, 90DEG outlet  | 1       | 1       | 1       | 1       |
| 302  | 18C103  | FITTING, DIA 6, PT1/8, PV | 2       | 2       | 2       | 2       |

# 1K Inlet Valve Module

## Valve, 1K, Inlet, Ball Seat, 2009194



## 1K Inlet Valve Module Parts List

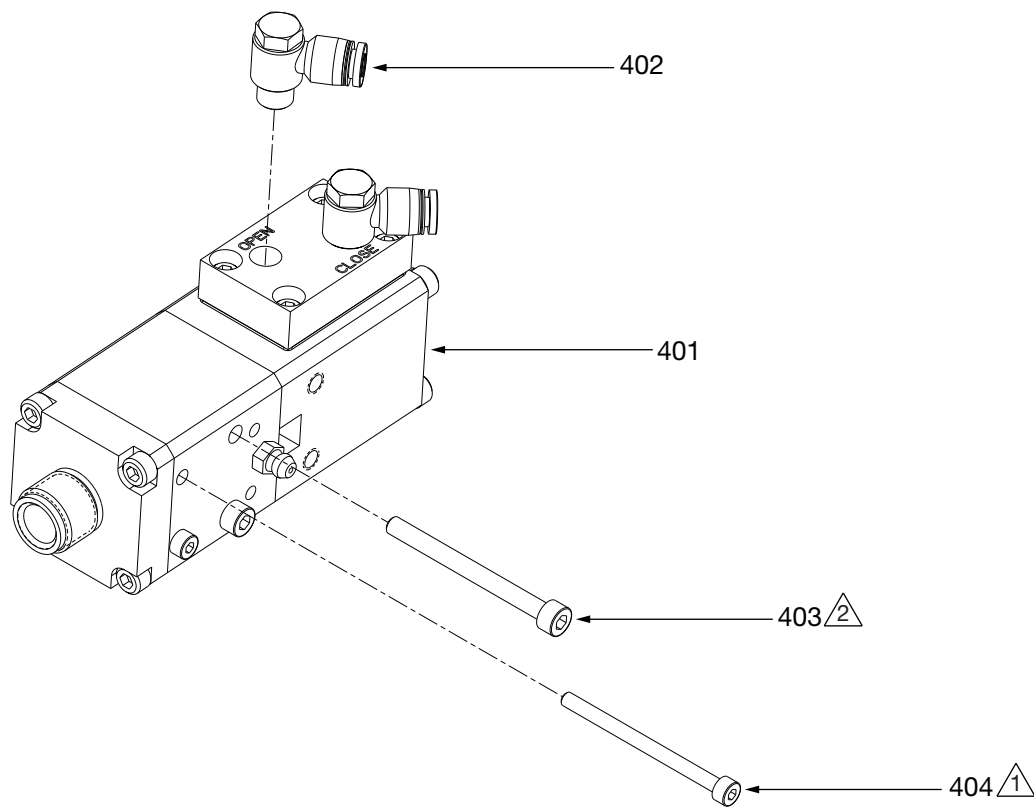
| Ref. | Part      | Description                              | Qty.               |                    |         |         |
|------|-----------|------------------------------------------|--------------------|--------------------|---------|---------|
|      |           |                                          | 25cc               | 50cc               | 100cc   | 200cc   |
|      |           |                                          | 2009034<br>2009035 | 2008986<br>2008987 | 2008990 | 2008992 |
| 4001 | 2009379   | HOUSING, air cylinder                    | 1                  | 1                  | 1       | 1       |
| 4002 | 626057 ♦  | GASKET, air manifold                     | 1                  | 1                  | 1       | 1       |
| 4003 | 626069    | PLATE, air control 2K2                   | 1                  | 1                  | 1       | 1       |
| 4004 | 104371    | SCREW, cap screw 10-32 x 0.375           | 4                  | 4                  | 4       | 4       |
| 4005 | 552163    | RING, retaining                          | 2                  | 2                  | 2       | 2       |
| 4006 | 196018    | CAP, air cylinder SD                     | 1                  | 1                  | 1       | 1       |
| 4007 | 154662 ♦  | PACKING, O-ring                          | 2                  | 2                  | 2       | 2       |
| 4008 | 156454 ♦  | PACKING, O-ring                          | 1                  | 1                  | 1       | 1       |
| 4009 | 551181 ♦  | BEARING, sleeve 1/4, 3/8, 1/4 NYL        | 1                  | 1                  | 1       | 1       |
| 4013 | 626703    | PISTON, air                              | 1                  | 1                  | 1       | 1       |
| 4014 | 2009384 ♦ | SHAFT, piston, high flow                 | 1                  | 1                  | 1       | 1       |
| 4015 | 102920    | NUT, lock                                | 1                  | 1                  | 1       | 1       |
| 4016 | 16D760 ♦  | PIN, trigger                             | 1                  | 1                  | 1       | 1       |
| 4017 | 157628 ♦  | PACKING, O-ring                          | 1                  | 1                  | 1       | 1       |
| 4018 | 2009380   | HOUSING, material                        | 1                  | 1                  | 1       | 1       |
| 4019 | 551190 ✓♦ | SEAL, U-cup polymt 1/4, 1/2, 1/4         | 1                  | 1                  | 1       | 1       |
| 4020 | 2010702 ♦ | BEARING, seal, TC                        | 1                  | 1                  | 1       | 1       |
| 4021 | 103610 ✓♦ | PACKING, O-ring                          | 1                  | 1                  | 1       | 1       |
| 4022 | 551191 ✓♦ | PACKING, seal U-cup URT 1/4, 1/2, 1/8 UR | 1                  | 1                  | 1       | 1       |
| 4023 | 171860 ✓♦ | GASKET, seat                             | 1                  | 1                  | 1       | 1       |
| 4024 | 185467 ♦  | SEAT, valve                              | 1                  | 1                  | 1       | 1       |
| 4025 | 104319 ✓♦ | PACKING, O-ring                          | 1                  | 1                  | 1       | 1       |
| 4026 | 2009001   | SEAT, 1K valve, PSM                      | 1                  | 1                  | 1       | 1       |
| 4028 | 2009383   | SCREW, M5 x 0.8-70, socket head          | 4                  | 4                  | 4       | 4       |
| 4029 | 18D935    | SCREW, M5 x 0.8-45, socket               | 4                  | 4                  | 4       | 4       |
| 4030 | 120892    | FITTING, grease                          | 1                  | 1                  | 1       | 1       |
| 4031 | 18B944    | SCREW, set, M6 x 1.0-5, flat             | 1                  | 1                  | 1       | 1       |
| 4036 | 18F960    | PLUG, 1/4 NPT                            | 1                  | 1                  | 1       | 1       |

✓ Parts included in 1K valve sealing kit 2009688.

♦ Parts included in ball seat 1K valve rebuild kit 2009689.

# Outlet Valve Module

## Outlet Valve, PSM Ambient



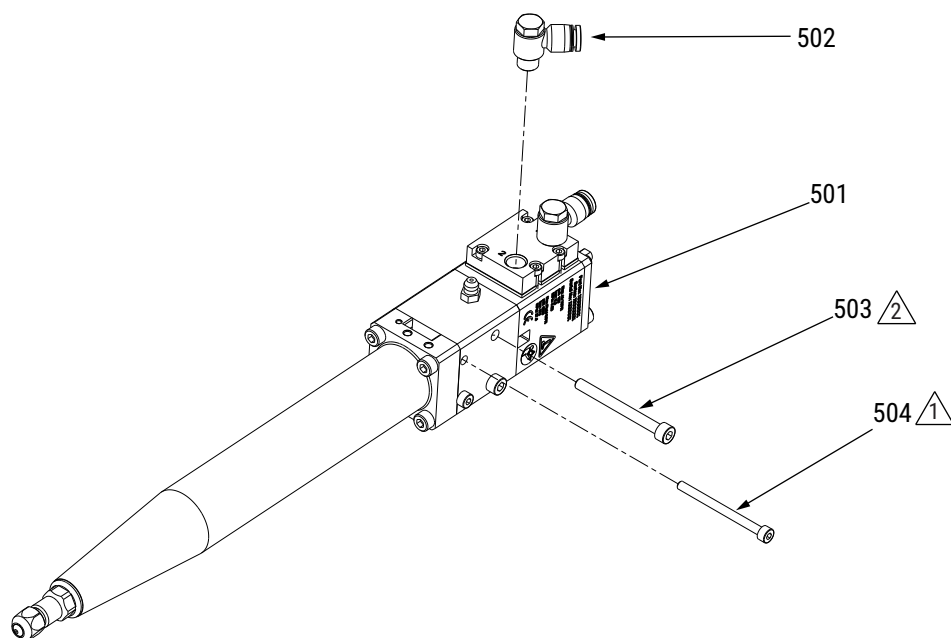
 Torque to 0.37-0.74 ft-lb (0.5-1.0 N•m).

 Torque to 1.7-2.2 ft-lb (2.3-3.0 N•m).

### PSM Ambient Outlet Valve Module Parts List

| Ref. | Part    | Description                                                             | Qty.    |         |         |         |         |         |
|------|---------|-------------------------------------------------------------------------|---------|---------|---------|---------|---------|---------|
|      |         |                                                                         | 25cc    |         | 50cc    |         | 100cc   | 200cc   |
|      |         |                                                                         | 2009034 | 2009035 | 2008986 | 2008987 | 2008990 | 2008992 |
| 401  | 2009195 | VALVE, 1K, snaff back, HW; See <b>1K Outlet Valve Module</b> , page 30  |         | 1       |         | 1       |         |         |
|      | 2011633 | VALVE, 1K, snaff back, SST; See <b>1K Outlet Valve Module</b> , page 30 | 1       |         | 1       |         | 1       | 1       |
| 402  | 18C103  | FITTING, DIA 6, PT1/8, PV                                               | 2       | 2       | 2       | 2       | 2       | 2       |
| 403  | ----    | SCREW, M5 × 0.8-55, socket head                                         | 2       | 2       | 2       | 2       | 2       | 2       |
| 404  | ----    | SCREW, M4 × 0.7-55, socket head                                         | 2       | 2       | 2       | 2       | 2       | 2       |

## Outlet Valve, PSM Warm Melt



△1 Torque to 0.37-0.74 ft-lb (0.5-1.0 N•m).

△2 Torque to 1.7-2.2 ft-lb (2.3-3.0 N•m).

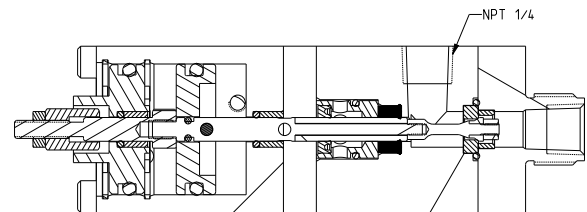
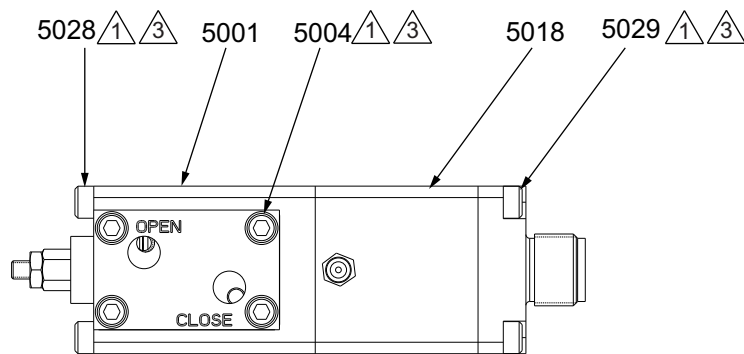
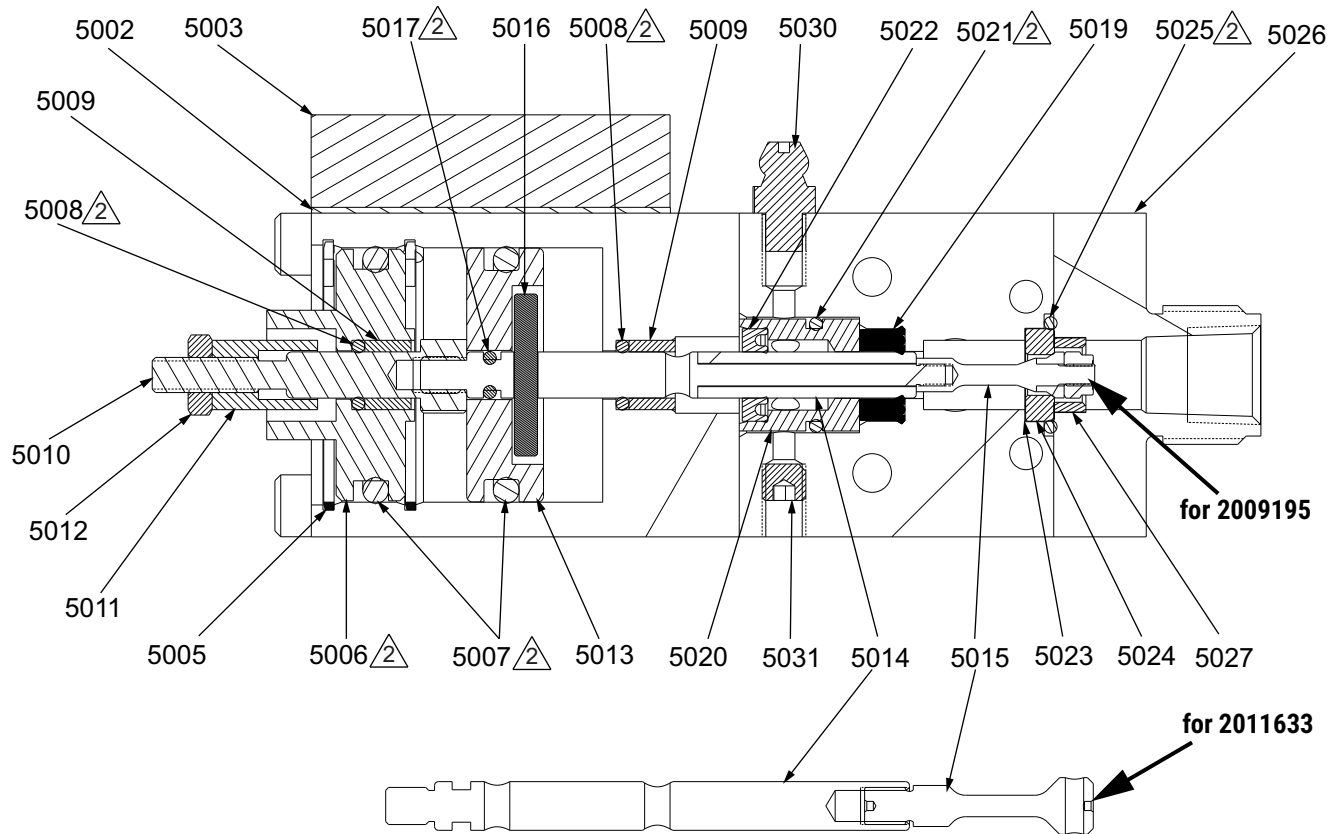
Valve shown for assembling reference.

## PSM Warm Melt Outlet Valve Module Parts List

| Ref. | Part    | Description                     | Qty.    |         |         |         |
|------|---------|---------------------------------|---------|---------|---------|---------|
|      |         |                                 | 25cc    | 50cc    | 100cc   | 200cc   |
|      |         |                                 | 2009036 | 2008988 | 2008991 | 2008993 |
| 501  | 2012490 | VALVE,T, NPT, 200, RM, AMB, PSM | 1       | 1       | 1       | 1       |
| 502  | 18C103  | FITTING, DIA 6, PT1/8, PV       | 2       | 2       | 2       | 2       |
| 503  | ---     | SCREW, M5 × 0.8-50, socket head | 2       | 2       | 2       | 2       |
| 504  | ---     | SCREW, M4 × 0.7-50, socket head | 2       | 2       | 2       | 2       |

# 1K Outlet Valve Module

## Valve, 1K, Outlet, Snaff Back, 2009195 and 2011633



-  Apply blue Anaerobic sealant.
-  Assemble all o-ring and seals with a hight coat of lubricant grease.Torque to 1.25-1.7 ft-lb (1.7-2.3 N•m).
-  Torque to 1.25-1.7 ft-lb (1.7-2.3 N•m).

# 1K Outlet Valve Module Parts List

| Ref. | Part       | Description                              | Qty.    |         |         |         |         |         |
|------|------------|------------------------------------------|---------|---------|---------|---------|---------|---------|
|      |            |                                          | 25cc    |         | 50cc    |         | 100cc   | 200cc   |
|      |            |                                          | 2009034 | 2009035 | 2008986 | 2008987 | 2008990 | 2008992 |
| 5001 | 2009379    | HOUSING, air cylinder                    | 1       | 1       | 1       | 1       | 1       | 1       |
| 5002 | 626057 ♦+  | GASKET, air manifold                     | 1       | 1       | 1       | 1       | 1       | 1       |
| 5003 | 626069     | PLATE, air control 2K2                   | 1       | 1       | 1       | 1       | 1       | 1       |
| 5004 | 104371     | SCREW, cap screw 10-32 x 0.375           | 4       | 4       | 4       | 4       | 4       | 4       |
| 5005 | 552163     | RING, retaining                          | 2       | 2       | 2       | 2       | 2       | 2       |
| 5006 | 626704     | CAP, air cylinder                        | 1       | 1       | 1       | 1       | 1       | 1       |
| 5007 | 154662 ♦+  | PACKING, O-ring                          | 2       | 2       | 2       | 2       | 2       | 2       |
| 5008 | 156454 ♦+  | PACKING, O-ring                          | 2       | 2       | 2       | 2       | 2       | 2       |
| 5009 | 551181 ♦+  | BEARING, sleeve 1/4, 3/8, 1/4 NYL        | 2       | 2       | 2       | 2       | 2       | 2       |
| 5010 | 626708     | SHAFT, adjustment                        | 1       | 1       | 1       | 1       | 1       | 1       |
| 5011 | 626709     | NUT, adjustment                          | 1       | 1       | 1       | 1       | 1       | 1       |
| 5012 | 100166     | NUT, full, hex                           | 1       | 1       | 1       | 1       | 1       | 1       |
| 5013 | 626703     | PISTON, air                              | 1       | 1       | 1       | 1       | 1       | 1       |
| 5014 | 18F856 ♦   | SHAFT, piston, high flow                 |         | 1       |         | 1       |         |         |
|      | 15K421 +   | SHAFT, primary                           | 1       |         | 1       |         | 1       | 1       |
| 5015 | 26D829 ♦   | NUT, lock                                |         | 1       |         | 1       |         |         |
|      | 626062 +   | NEEDLE, 2K2 SST hardened                 | 1       |         | 1       |         | 1       | 1       |
| 5016 | 16D760 ♦+  | PIN, trigger                             | 1       | 1       | 1       | 1       | 1       | 1       |
| 5017 | 157628 ♦+  | PACKING, O-ring                          | 1       | 1       | 1       | 1       | 1       | 1       |
| 5018 | 2009380    | HOUSING, material                        | 1       | 1       | 1       | 1       | 1       | 1       |
| 5019 | 551190 ✓♦+ | SEAL, U-cup polymt 1/4, 1/2, 1/4         | 1       | 1       | 1       | 1       | 1       | 1       |
| 5020 | 2010702 ♦+ | BEARING, seal, TC                        | 1       | 1       | 1       | 1       | 1       | 1       |
| 5021 | 103610 ✓♦+ | PACKING, O-ring                          | 1       | 1       | 1       | 1       | 1       | 1       |
| 5022 | 551191 ✓♦+ | PACKING, seal U-cup URT 1/4, 1/2, 1/8 UR | 1       | 1       | 1       | 1       | 1       | 1       |
| 5023 | 171860 ✓♦+ | GASKET, seat                             | 1       | 1       | 1       | 1       | 1       | 1       |
| 5024 | 185467 ♦+  | SEAT, valve                              | 1       | 1       | 1       | 1       | 1       | 1       |
| 5025 | 104319 ✓♦+ | PACKING, O-ring                          | 1       | 1       | 1       | 1       | 1       | 1       |
| 5026 | 2009381    | FLANGE, nose piece                       | 1       | 1       | 1       | 1       | 1       | 1       |
| 5027 | 626060 ♦+  | INSERT, suff-back, 2K2                   | 1       | 1       | 1       | 1       | 1       | 1       |
| 5028 | 2009383    | SCREW, M5 x 0.8-70, socket head          | 4       | 4       | 4       | 4       | 4       | 4       |
| 5029 | 2009382    | SCREW, M5 x 0.8-16, socket head          | 4       | 4       | 4       | 4       | 4       | 4       |
| 5030 | 120892     | FITTING, grease                          | 1       | 1       | 1       | 1       | 1       | 1       |
| 5031 | 18B944     | SCREW, set, M6 x 1.0-5, flat             | 1       | 1       | 1       | 1       | 1       | 1       |

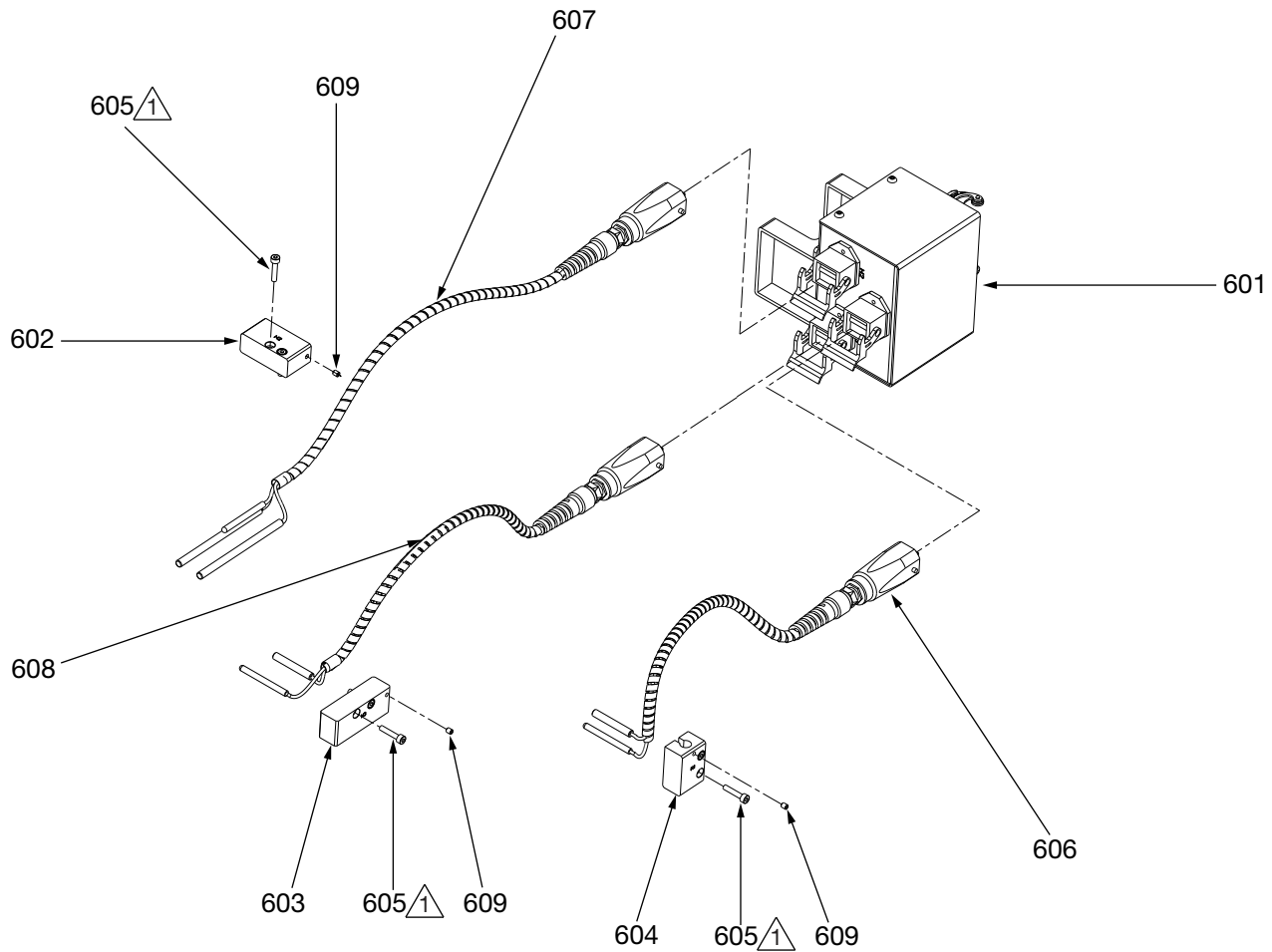
✓ Parts included in 1K valve sealing kit 2009688.

♦ Parts included in snaff back 1K valve rebuild kit 2009690.

+ Parts included in snaff back 1K valve rebuild kit 2012253.

## Warm Melt Module (Only for PSM Warm Melt)

Warm Melt Module, 2009219 and 2009220\*



 Torque to 0.37-0.74 ft-lb (0.5-1.0 N•m).

\* Part 2009219 is for PSM Warm Melt 25cc, 50cc, and 100cc.  
Part 2009220 is for PSM Warm Melt 200cc.

## Warm Melt Module Parts List

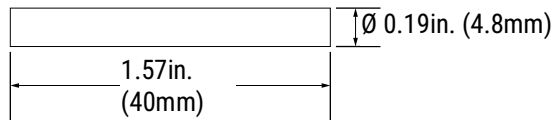
| Ref. | Part    | Description                                                | Qty.    |         |         |         |
|------|---------|------------------------------------------------------------|---------|---------|---------|---------|
|      |         |                                                            | 25cc    | 50cc    | 100cc   | 200cc   |
|      |         |                                                            | 2009036 | 2008988 | 2008991 | 2008993 |
| 601  | ----    | MODULE, connector, warm melt                               | 1       | 1       | 1       | 1       |
| 602  | ----    | COVER, heater, H2                                          | 1       | 1       | 1       | 1       |
| 603  | ----    | COVER, heater, H3                                          | 1       | 1       | 1       | 1       |
| 604  | ----    | COVER, heater, H1                                          | 1       | 1       | 1       | 1       |
| 605  | ----    | SCREW, M4 × 0.7-20, socket                                 | 6       | 6       | 6       | 6       |
| 606* | 2009236 | CABLE, PSM, warm melt, 400mm, 1 heated and 1 sensor        | 1       | 1       | 1       | 1       |
|      | 2009237 | CABLE, PSM, warm melt, 500mm, 1 heated and 1 sensor        |         |         |         | 1       |
| 607* | 2009240 | CABLE, PSM, warm melt, 550mm, 2 heated and 1 sensor        | 1       | 1       | 1       |         |
|      | 2009241 | CABLE, PSM, warm melt, 700mm, 2 heated and 1 sensor        |         |         |         | 1       |
| 608* | 2009238 | CABLE, PSM, warm melt, 550mm, 1 heated and 1 sensor        | 1       | 1       | 1       |         |
|      | 2009243 | CABLE, PSM, warm melt, 650mm, 2 heated and 1 sensor, short |         |         |         | 1       |
| 609  | ----    | SCREW, set, M4 × 0.7-5                                     | 8       | 8       | 8       | 8       |

\* Include temperature sensors and heating rods.

### Temperature Sensor

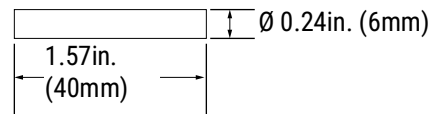
The temperature sensor is specified with the following parameters:

- Voltage: 220V
- Power: 150W
- Dimensions:
  - Length: 1.57in. (40mm)
  - Diameter: 0.19in. (4.8mm)

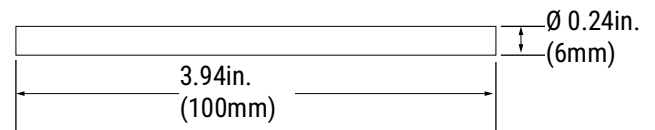


### Heating rod

#### 2009236, 2009237, 2009238, and 2009243

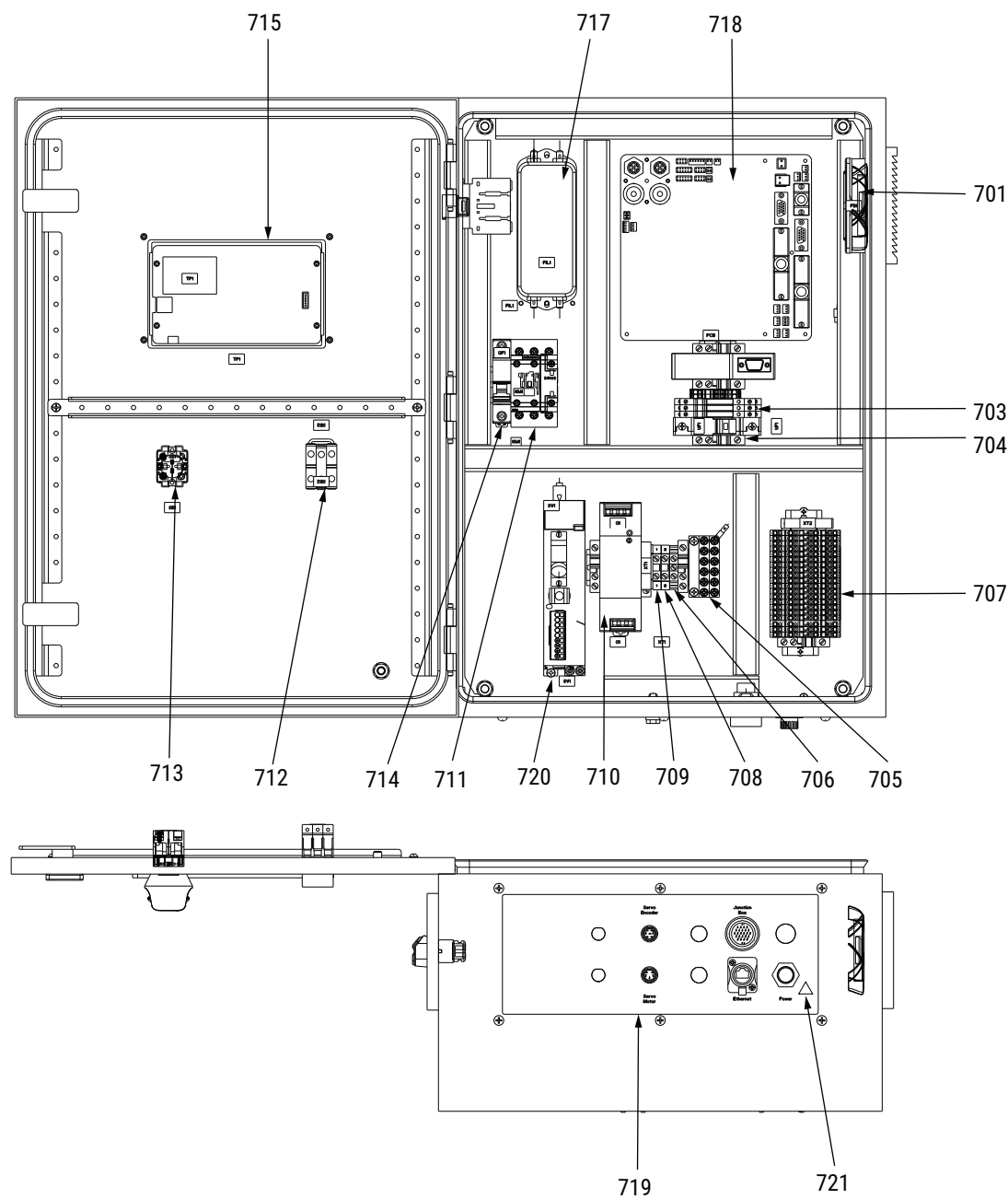


#### 2009240 and 2009241



Control Unit

2002837



## Control Unit Parts List

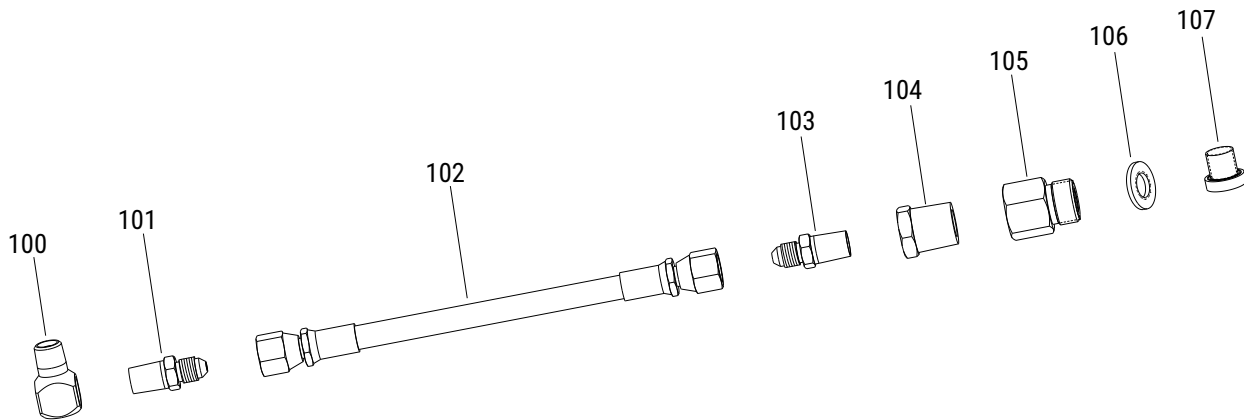
| Ref. | Part    | Description                      | Qty. |
|------|---------|----------------------------------|------|
| 701  | ----    | FAN, assembly                    | 1    |
| 703  | ----    | RELAY, module with base          | 3    |
| 704  | CU0018  | HOLDER, fuse, ABB                | 1    |
|      | CU0341  | FUSE                             | 1    |
| 705  | ----    | GROUNDING BAR                    | 1    |
| 706  | ----    | TERMINAL, ground, green-yellow   | 1    |
| 707  | ----    | TERMINAL, block, gray            | 20   |
| 708  | ----    | TERMINAL, blue                   | 1    |
| 709  | ----    | TERMINAL, gray                   | 1    |
| 710  | 2009725 | POWER SUPPLY, 150W, 24VDC, MW    | 1    |
| 711  | CU0017  | CONTACT, 3P, 1NO+1NC, SIEMENS    | 1    |
| 712  | 2000176 | STARTER, operator                | 1    |
| 713  | 2000178 | STOP, emergency                  | 1    |
| 714  | CU0022  | CIRCUIT BRKR, 1P, 6A, SCHNEIDER  | 1    |
| 715  | CU7788  | DISPLAY, PCB                     | 1    |
| 717  | ----    | KIT, filter                      | 1    |
| 718  | 2000267 | BOARD, PCB, assembly             | 1    |
| 719  | ----    | PANEL, socket, external cables   | 1    |
| 720  | 2000343 | DRIVER, servo                    | 1    |
| 721▲ | 189930  | Label, caution                   | 1    |
| 722* | 2000316 | BRAND, PSM                       | 1    |
| 723* | ----    | Blank, label kit                 | 1    |
| 724* | ----    | IDENTIFICATION, PSM product      | 1    |
| 725* | 15G280  | LABEL, warning, safety, multiple | 1    |

\* Not Shown.

▲ Replacement safety labels, tags, and cards are available at no cost.

# Kits and Accessories

## Remote Kits



| Kits    | Description                                  | 100               | 101            | 102    | 103            | 104     | 105     | 106     | 107    |
|---------|----------------------------------------------|-------------------|----------------|--------|----------------|---------|---------|---------|--------|
|         |                                              | Adapter           | Fitting        | Hose   | Fitting        | Bushing | Bushing | Seal    | Plug   |
| 2000842 | KIT, hose, ASSY, JIC fitting, PSM, 3/32 x 60 | 166866            | 124961         | 16W047 | 124961         | 102022  | 18D958  | 2013470 | 18D615 |
| 2000843 | KIT, hose, ASSY, JIC fitting, PSM, 1/8 x 60  |                   |                | 16V531 |                |         |         |         |        |
| 2000844 | KIT, hose, ASSY, JIC fitting, PSM, 3/16 x 36 | 166866<br>+100030 | 94/1000/<br>98 | 16C502 | 94/1000<br>/98 | 100329  |         |         |        |
| 2000845 | KIT, hose, ASSY, JIC fitting, PSM, 3/16 x 48 |                   |                | 16C503 |                |         |         |         |        |
| 2000847 | KIT, hose, ASSY, JIC fitting, PSM, 3/16 x 72 |                   |                | 16C504 |                |         |         |         |        |
| 2000848 | KIT, hose, ASSY, JIC fitting, PSM, 1/4 x 36  | 166866            | 124961         | 16C511 | 124961         | 102022  |         |         |        |
| 2000849 | KIT, hose, ASSY, JIC fitting, PSM, 1/4 x 48  |                   |                | 16C512 |                |         |         |         |        |
| 2000850 | KIT, hose, ASSY, JIC fitting, PSM, 1/4 x 60  |                   |                | 24G990 |                |         |         |         |        |
| 2000851 | KIT, hose, ASSY, JIC fitting, PSM, 1/4 x 72  |                   |                | 16C513 |                |         |         |         |        |
| 2000852 | KIT, hose, ASSY, JIC fitting, PSM, 3/8 x 36  |                   | 116704         | 16C520 | 112100         | 504285  |         |         |        |
| 2000853 | KIT, hose, ASSY, JIC fitting, PSM, 3/8 x 48  | 16C521            |                |        |                |         |         |         |        |
| 2000854 | KIT, hose, ASSY, JIC fitting, PSM, 3/8 x 60  | 24F994            |                |        |                |         |         |         |        |
| 2000855 | KIT, hose, ASSY, JIC fitting, PSM, 3/8 x 72  | 16C522            |                |        |                |         |         |         |        |
| 2000856 | KIT, hose, ASSY, JIC fitting, PSM, 1/2 x 36  | 116703            | 16C530         | C20700 | ----           |         |         |         |        |
| 2000857 | KIT, hose, ASSY, JIC fitting, PSM, 1/2 x 48  |                   | 16C531         |        |                |         |         |         |        |
| 2000858 | KIT, hose, ASSY, JIC fitting, PSM, 1/2 x 60  |                   | 24G996         |        |                |         |         |         |        |
| 2000859 | KIT, hose, ASSY, JIC fitting, PSM, 1/2 x 72  |                   | 16C532         |        |                |         |         |         |        |

## Communication Module Kits

| Part    | Description              | Qty. |
|---------|--------------------------|------|
| 2005273 | KIT, module, Profinet    | 1    |
| 2000362 | KIT, module, Ethernet IP | 1    |

## Piston Kits

| Part    | Description                     | Qty. |
|---------|---------------------------------|------|
| 2009678 | KIT, piston, PSM 25cc, SST      | 1    |
| 2009679 | KIT, piston, PSM 25cc, CER      | 1    |
| 2009680 | KIT, piston, PSM 50cc and 100cc | 1    |
| 2009681 | KIT, piston, PSM 200cc          | 1    |

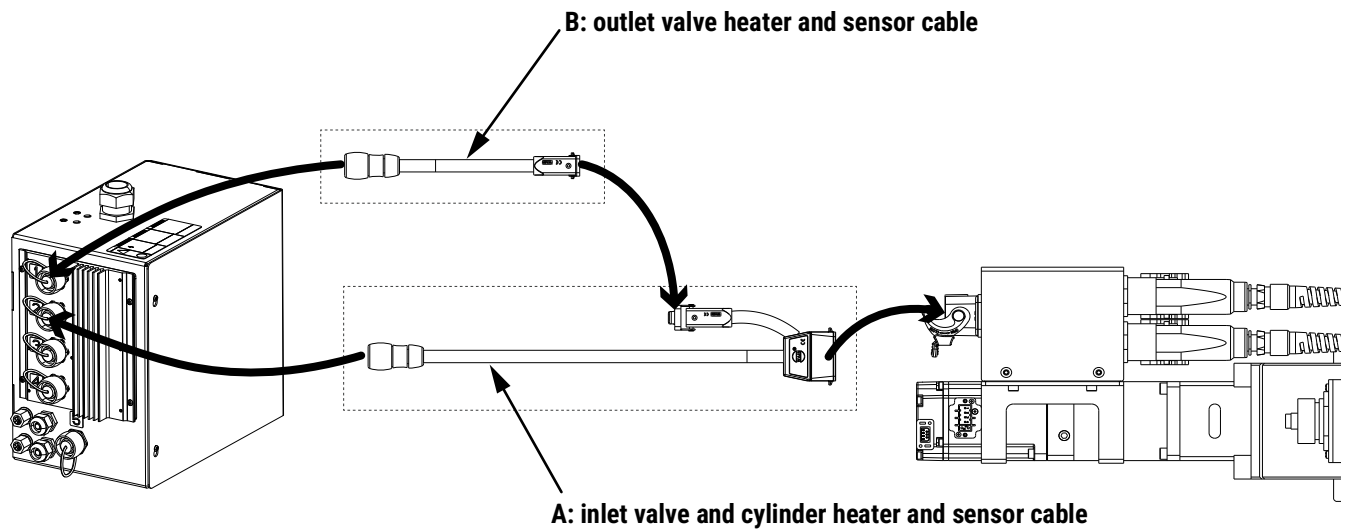
## Metering Module Kits

| Part    | Description                            | Qty. |
|---------|----------------------------------------|------|
| 2012437 | KIT, nut, back plate, PSM 25cc         | 1    |
| 2012438 | KIT, nut, back plate, PSM 50 and 100cc | 1    |
| 2012439 | KIT, nut, back plate, PSM 200cc        | 1    |

## Sealing Kits

| Part    | Description       | Qty. |
|---------|-------------------|------|
| 2009677 | KIT, sealing, PSM | 1    |

## Cables for Warm Melt Pump



| Part    | Description                   | Qty. |
|---------|-------------------------------|------|
| 2009698 | Cable, PSM, Warm Melt, A, 10m | 1    |
| 2009699 | Cable, PSM, Warm Melt, A, 15m | 1    |
| 2009700 | Cable, PSM, Warm Melt, A, 20m | 1    |
| 2009701 | Cable, PSM, Warm Melt, B, 9m  | 1    |
| 2009702 | Cable, PSM, Warm Melt, B, 14m | 1    |
| 2009703 | Cable, PSM, Warm Melt, B, 19m | 1    |

## Appendix: Spare Parts

| Part    | Description                                                  | Qty Per Machine |
|---------|--------------------------------------------------------------|-----------------|
| 18D881  | MOTOR, servo, 220V, 400W                                     | 1               |
| 18C018  | TRANSMITTER, pressure                                        | 1               |
| 18D718  | SLEEVE, guide, PSM                                           | 1               |
| 2009678 | KIT, piston, PSM25, SST                                      | 1               |
| 2009679 | KIT, piston, PSM25, CER                                      | 1               |
| 2009680 | KIT, piston, PSM50, 100                                      | 1               |
| 2009681 | KIT, piston, PSM200                                          | 1               |
| 2012437 | KIT, nut, bake plate, PSM25                                  | 1               |
| 2012438 | KIT, nut, bake plate, PSM50,100                              | 1               |
| 2012439 | KIT, nut, bake plate, PSM200                                 | 1               |
| 2009061 | CYLINDER, 25, SST, PSM                                       | 1               |
| 2009062 | CYLINDER, 25, CER, PSM                                       | 1               |
| 18D703  | CYLINDER, 50, SST, PSM                                       | 1               |
| 18D606  | CYLINDER, 50, CER, PSM                                       | 1               |
| 18D704  | CYLINDER, 100, SST, PSM                                      | 1               |
| 2008971 | CYLINDER, 200, SST, PSM                                      | 1               |
| 2009677 | KIT, sealing, PSM                                            | 1               |
| 18D962  | ROD, piston, PSM25, WM                                       | 1               |
| 18D963  | ROD, piston, PSM50, WM                                       | 1               |
| 18D964  | ROD, piston, PSM100, WM                                      | 1               |
| 2008969 | ROD, piston, PSM200, WM                                      | 1               |
| 18D660  | BEARING, PSM                                                 | 1               |
| 2002387 | KIT, ball screw, PSM25, 50                                   | 1               |
| 2002388 | KIT, ball screw, PSM100                                      | 1               |
| 2008976 | KIT, ball screw, nut, PSM200                                 | 1               |
| 2012441 | BOX, reduction, PSM25                                        | 1               |
| 18D723  | BOX, reduction, PSM50/100/200                                | 1               |
| 2009688 | KIT, sealing, 1K valve                                       | 1               |
| 2009689 | KIT, rebuild, 1K valve, ball seat                            | 1               |
| 2009690 | KIT, rebuild, 1K valve, snaff back, 000, HW                  | 1               |
| 2012253 | KIT, rebuild, 1K valve, snaff back, 000, SST                 | 1               |
| 18D617  | FITTING, DIA 6, M14, PLM6                                    | 3               |
| 18B922  | FITTING, DIA 6, M14 × 1                                      | 2               |
| 25S118  | MODULE, solenoid valve, PSM                                  | 1               |
| 2006571 | KIT, solenoid valve, FITT M5 × 0.8, DIA6                     | 1               |
| 18D624  | SENSOR, position                                             | 3               |
| 2009236 | CABLE, PSM, WM, 400mm, 1 heated and 1 sensor, PSM25, 50, 100 | 1               |
| 2009240 | CABLE, PSM, WM, 550mm, 2 heated and 1 sensor, PSM25, 50, 100 | 1               |
| 2009238 | CABLE, PSM, WM, 550mm, 1 heated and 1 sensor, PSM25, 50, 100 | 1               |
| 2009237 | CABLE, PSM, WM, 500mm, 1 heated and 1 sensor, PSM200         | 1               |
| 2009241 | CABLE, PSM, WM, 700mm, 2 heated and 1 sensor, PSM200         | 1               |
| 2009243 | CABLE, PSM, WM, 650mm, 2 heated and 1 sensor, short, PSM200  | 1               |
| 2009725 | POWER SUPPLY, 150W, 24VDC, MW                                | 1               |
| 2000267 | BOARD, PCB, assembly                                         | 1               |
| CU7788  | DISPLAY, PCB                                                 | 1               |

# Technical Specifications

| PSM System                                                                                                  |                                                                                                                                               |                                                                      |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
|                                                                                                             | US                                                                                                                                            | Metric                                                               |
| Maximum Inlet Fluid Pressure                                                                                | 3000 psi                                                                                                                                      | 20.7 MPa, 207 bar                                                    |
| Maximum Working Fluid Pressure                                                                              | 3000 psi                                                                                                                                      | 20.7 MPa, 207 bar                                                    |
| Maximum Air Pressure                                                                                        | 100 psi                                                                                                                                       | 0.7 MPa, 7 bar                                                       |
| Electrical Power                                                                                            | 200–240 VAC, 50/60 Hz, 10 A                                                                                                                   |                                                                      |
| Viscosity Range                                                                                             | 20–1,000,000 cps                                                                                                                              |                                                                      |
| Wetted Parts                                                                                                | 304 Stainless Steel, 7075-T651, Ceramic, FKM, FFKM, Hard Chrome, PEEK, PH17-4, Ethylene Propylene, Parker PolyMyte™, Tungsten Carbide, UHMWPE |                                                                      |
| Shot Size Range <sup>(1)</sup>                                                                              | 25 cc: 0.1–25cc<br>50 cc: 0.2–50 cc<br>100 cc: 0.5–100 cc<br>200 cc: 0.5–200cc                                                                |                                                                      |
| Shot Size Repeatability                                                                                     | 1%                                                                                                                                            |                                                                      |
| Maximum Flowrate <sup>(2)</sup>                                                                             | 25 cc: 12 cc/s<br>50 cc: 15 cc/s<br>100 cc: 15 cc/s<br>200 cc: 15 cc/s                                                                        |                                                                      |
| Maximum Working Temperature                                                                                 | 158°F                                                                                                                                         | 70°C                                                                 |
| Inlet / Outlet Sizes                                                                                        |                                                                                                                                               |                                                                      |
| Air Inlet Size                                                                                              | 1/4 in.                                                                                                                                       | 6 mm                                                                 |
| Fluid Inlet Size                                                                                            | 1/4 in. npt (f)                                                                                                                               |                                                                      |
| Fluid Outlet                                                                                                | iQ valve: 1.7mm tip size<br>1K valve: 1/4 in. npt(f)                                                                                          |                                                                      |
| Weight                                                                                                      |                                                                                                                                               |                                                                      |
| PSM Metering Unit                                                                                           | 25 cc: 40.8 lb<br>50 cc: 40.8 lb<br>100 cc: 43.0 lb<br>200 cc: 48.5 lb                                                                        | 25 cc: 18.5 kg<br>50 cc: 18.5 kg<br>100 cc: 19.5 kg<br>200 cc: 22 kg |
| PSM Warm Melt Metering Unit (with warm melt module)                                                         | 25 cc: 45.2 lb<br>50 cc: 45.2 lb<br>100 cc: 49.6 lb<br>200 cc: 52.9 lb                                                                        | 25 cc: 20.5 kg<br>50 cc: 20.5 kg<br>100 cc: 22.5 kg<br>200 cc: 24 kg |
| Warm Melt Module                                                                                            | 6.1 lb                                                                                                                                        | 2.75 kg                                                              |
| PSM Control Unit                                                                                            | 70.5 lb                                                                                                                                       | 32 kg                                                                |
| Notes                                                                                                       |                                                                                                                                               |                                                                      |
| All trademarks or registered trademarks are the property of their respective owners.                        |                                                                                                                                               |                                                                      |
| <sup>(1)</sup> Minimum shot size varies based on the material type and the customer tolerance requirements. |                                                                                                                                               |                                                                      |
| <sup>(2)</sup> Maximum flowrate varies based on the material viscosity.                                     |                                                                                                                                               |                                                                      |

# California Proposition 65

## CALIFORNIA RESIDENTS

 **WARNING:** Cancer and reproductive harm – [www.P65warnings.ca.gov](http://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.

## FOR GRACO CANADA CUSTOMERS

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

## Graco Information

### Sealant and Adhesive Dispensing Equipment

For the latest information about Graco products, visit [www.graco.com](http://www.graco.com).

For patent information, see [www.graco.com/patents](http://www.graco.com/patents).

**TO PLACE AN ORDER**, contact your Graco distributor, go to [www.graco.com](http://www.graco.com), or call to identify the nearest distributor.

**If calling from the USA:** 1-800-746-1334

**If calling from Asia Pacific:** 00-86-512-6260-5711 or 00-86-21-2310-6198

**If calling from Europe:** 00-32-89-770-862

*All written and visual data contained in this document reflects the latest product information available at the time of publication.  
Graco reserves the right to make changes at any time without notice.*

Original instructions. This manual contains English. MM 3B0405

**Graco Headquarters:** Minneapolis

**International Offices:** Belgium, China, Japan, Korea

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