

**G.P. REEVES INC.**



**Engineered Dispensing Solutions**

# **2016 PRODUCT CATALOG**



G.P. Reeves Inc. 12764 Greenly Street Holland, MI 49424 USA  
Phone: 888.399.8893 Fax: 616.399.8867 Web: [www.gpreeves.com](http://www.gpreeves.com)

Rev. 201609-01



Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: <http://gpreeves.com>

# Introduction

Since 1971, G. P. Reeves dispensing systems have helped thousands of companies improve their products by accurately measuring and dependably injecting and depositing precise amounts of oil and grease and other assembly fluids.

Our customers are involved in almost every manufacturing industry including rubber, plastics, appliances, auto, electronics, aerospace, medical and oil exploration. A few of our customers are shown below:



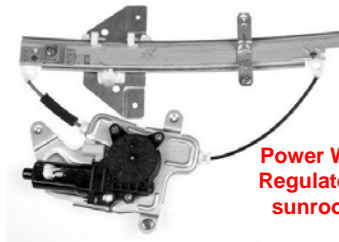
Our patented air removal system finds and removes trapped air from grease for increased product quality and production. We find and remove air before grease is dispensed. See US patent number 6,053,285.

Our specialty is applying oil and grease to production parts during production

Our dispensing equipment is accurate, repeatable, reliable and fast



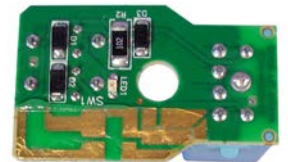
Surgical Bed



Power Window Regulators and sunroof rails



Liftgate Drive



Electronic board



Drive Line



Seat recliner



Electrical Connector Cavities



Brake back-plate



Mobile Chest Drain



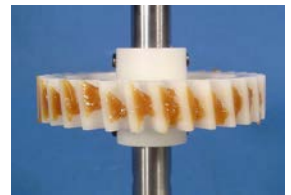
HVAC Cam



Electrical Connector Pins



Tri-cone drill bit



Garage Door Opener Drive



Serving industry  
since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)

# CATALOG INDEX

<b>Applications</b>	<b>Outside Front Cover</b>
<b>Introduction</b>	<b>Inside Front Cover</b>
<b>Catalog Index</b>	<b>Page 1</b>
<b>Air Removal Patent Explanation</b>	<b>Page 2 and 3</b>
<b>Rebuildable, Cartridge Valves (Patent Pending)</b>	<b>Page 4</b>
<b>Dispenser Types</b>	<b>Page 5</b>
<b>Selection Guide</b>	<b>Page 6 and 7</b>
<b>(Source, Preparation, Dispenser, Nozzle, Confirmation)</b>	
<b>Grease Sources</b>	
Grease Pumps with single post rams	<b>Page 8</b>
Grease Pumps with double post rams	<b>Page 9</b>
Other grease pumps	<b>Page 10</b>
<b>Grease Preparation</b>	
Grease Filters	<b>Page 11</b>
Manual and Auto-Fill grease reservoir/regulators	<b>Page 12</b>
Grease Pressure Regulators	<b>Page 13</b>
<b>Grease &amp; Oil Dispensers</b>	
GSS Air Operated Grease Dispensers	<b>Pages 14 and 15</b>
GSSM Air Operated Grease Dispensers	<b>Pages 16 and 17</b>
GPMD10000 Series Grease Dispensers	<b>Pages 18 and 19</b>
GPMD15000 Series Grease Dispensers	<b>Pages 20 and 21</b>
GPMD2000 Series	<b>Page 22</b>
GPMD3000 Series	<b>Page 23</b>
AA PLC Controlled Dispensers (shot-meters)	<b>Pages 24 and 25</b>
GUS	<b>Page 26</b>
SGPGUS	<b>Page 27</b>
Grease Dispense Valves (off-on)	<b>Page 28</b>
<b>Nozzles, Snuff-backs, “end of arm” valves, and Flow Confirmation</b>	
Snuff-Back Devices and “End of Arm” Valves	<b>Page 29</b>
Flow Confirmation	<b>Page 30</b>
Volume Confirmation	<b>Page 31</b>
<b>Miscellaneous</b>	
Grease Pressure Switches	<b>Page 32</b>
Nozzles (standard and custom)	<b>Page 32</b>
Hand Triggered Grease Guns	<b>Page 33</b>
Custom Machine Photos	<b>Page 34</b>
Grease Volumes of Paraboloids and Spheres	<b>Page 35</b>
<b>Conversion Chart &amp; Shot Size Visuals</b>	<b>Inside Back Cover</b>



Serving industry  
since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

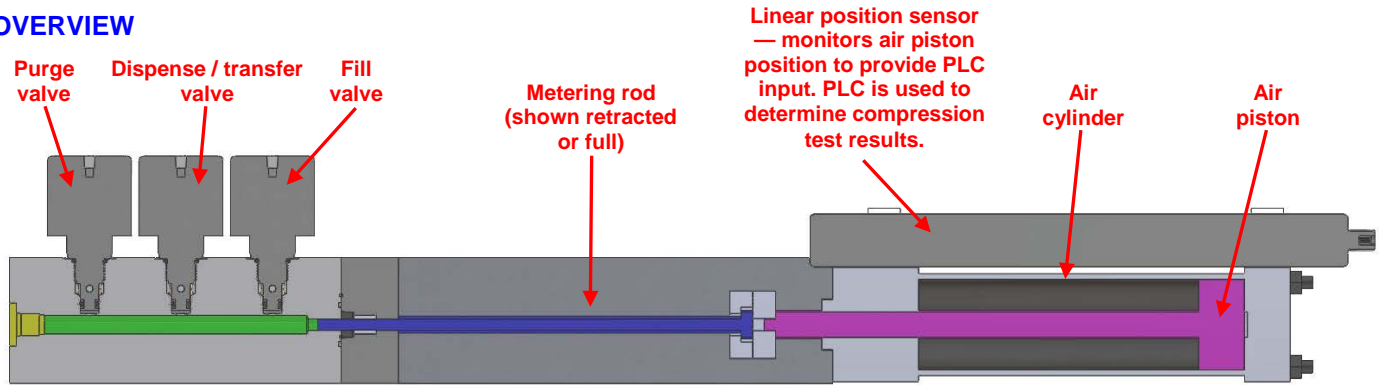
Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)

# DISPENSE PATENT

Manufactured under US  
patent number 6,053,285

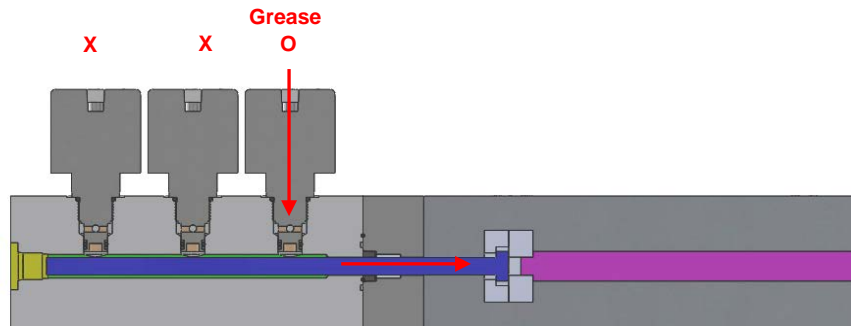
This patent is only used on the GUS, SGPGUS, and AA products. The GUS and SGPGUS units find and remove the air before feeding downstream dispensers. The AA dispensers find and remove air during the dwell time or in between dispense cycles.

## OVERVIEW

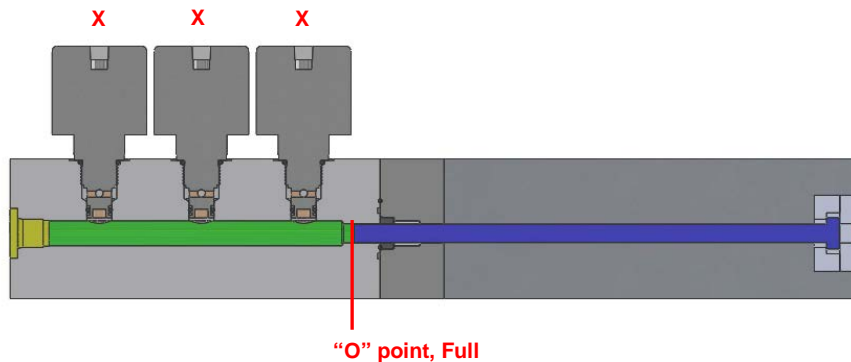


## CYCLE STEPS

Fill the chamber — open fill valve and allow grease to push the metering rod back to the full position

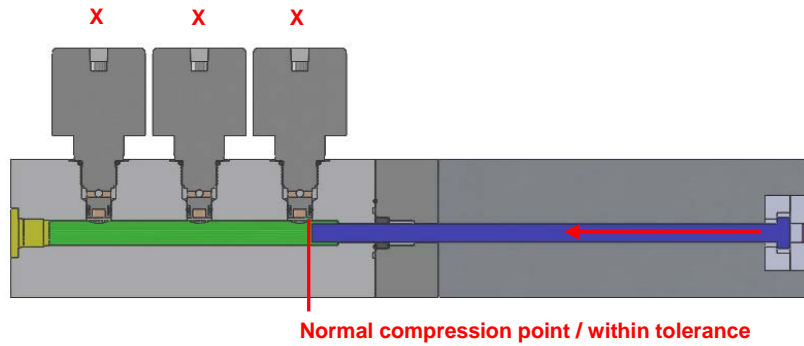


Dispenser shown full of grease

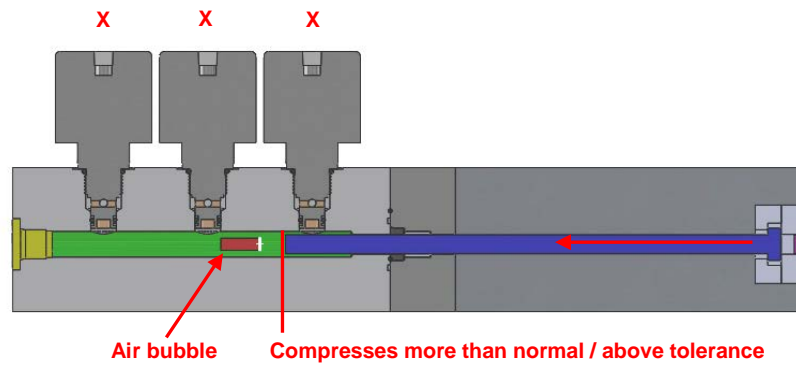


Test the grease in the chamber — push the metering rod into the chamber full of grease

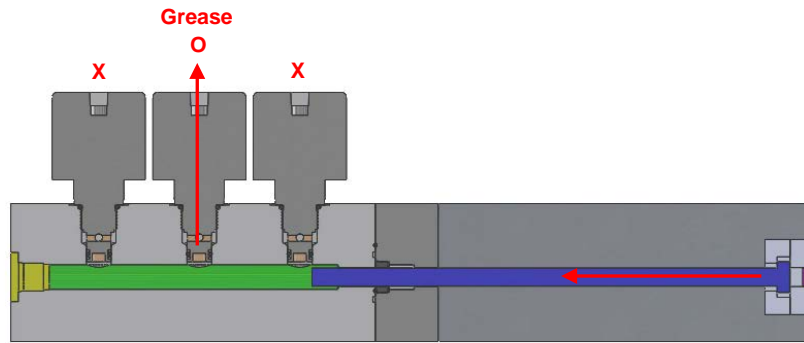
Compression test shown without an air bubble



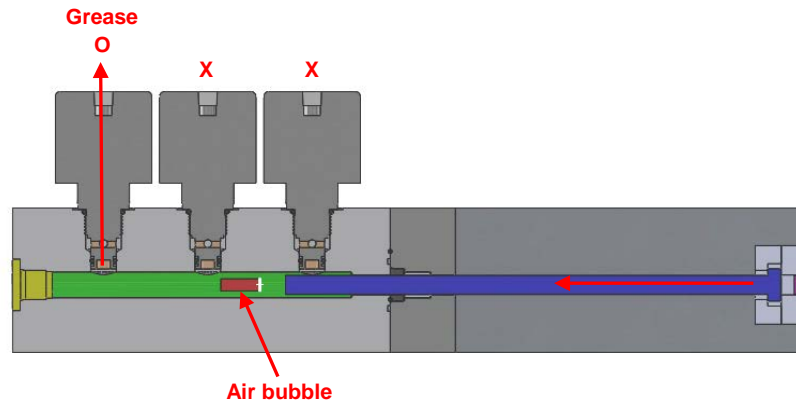
Compression test shown with an air bubble



If compression within tolerance, dispense grease — open dispense valve and push grease out the dispense port



If compression above tolerance, purge grease — open purge valve and push grease out the purge port





Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)

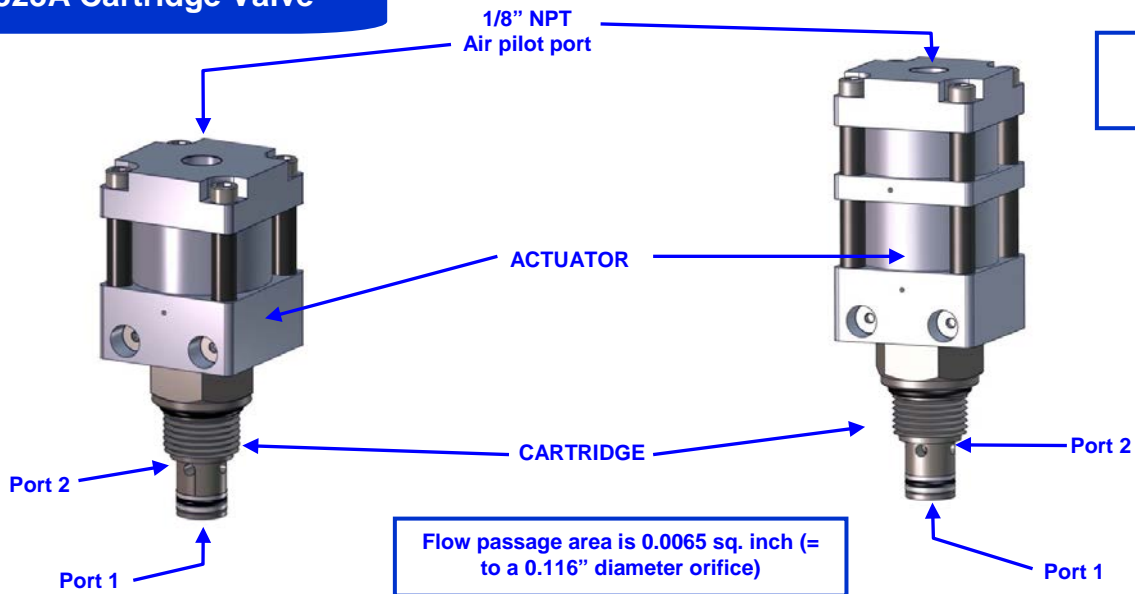
# Rebuildable, Cartridge Valves

Our answer to countless thrown away, used cartridge valves.

These patent pending cartridge valves are used on many of our products including AA, SGPGUS, GUS and many handheld dispense guns.

- 2-way, normally closed, air-actuated poppet valve, for use in SAE 8-2 cavity.
- Actuator is isolated from media section (cartridge) by a vent to atmosphere.
- Actuator is easily removed from the cartridge and it can also rotate independently of the cartridge
- Air pilot pressure range is 50 psi minimum to 130 psi maximum.
- Air pilot to open passage between port 1 and port 2.
- Media section (cartridge) capable of functioning with 3000 psi grease, oil, and similar media.
- Poppet and seat are lapped tungsten carbide for long life with abrasive grease
- Poppet seal and its backup ring are easily replaceable after actuator has been removed from cartridge.

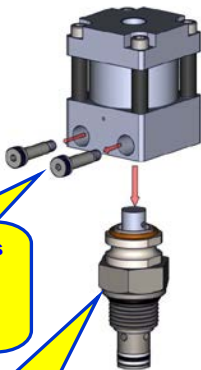
## 1322A / 1323A Cartridge Valve



PATENT PENDING

Flow passage area is 0.0065 sq. inch (= to a 0.116" diameter orifice)

Actuator can be easily removed from cartridge. 1322A shown but 1323A is similar



Shoulder screws require a 7/64 Allen (hex) wrench

Cartridge has a 1" hex for wrench

Internal components are replaceable. Contact factory for more information.

REPLACEMENT PARTS / REPAIR KITS	
Actuator	Pneumatic Actuator for 1322A and 1323A cartridge valve include the two screws for installation on cartridge.
Cartridge	Cartridge for 1322A and 1323A cartridge valve. This is the high pressure material section of the valve.
RPK1322A-P	Repair kit for pneumatic actuator section includes one compression spring, three Buna O rings, one Viton O ring and instructions. No tool kit is recommended for this repair kit.
RPK1323A-P	Repair kit for pneumatic actuator section includes one compression spring, five Buna O rings, three Viton O rings and instructions. No tool kit is recommended for this repair kit.
RPK1322A-F RPK1323A-F	Repair kit for the fluid / cartridge section includes one compression spring, one PolyMyte seal, one backup seal, one threaded spacer, two collar set screws with wrench, one SHCS seal puller and instructions. The cartridge seal tool kit listed below is recommended for the installation of this repair kit. Individual components of each kit differ while parts list is similar.
KA11633	Repair kit for the outside seals of the cartridge valve includes two Viton O rings and two Teflon backup seals. No tool kit is recommended for this repair kit.
CSTK-1	Cartridge seal tool kit consists of poppet spring compression tool, hex wrench for collar set screws, and a seal removal tool.



Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)

## Two Types of Grease Dispensers

### Not Recommended

#### TIMED GREASE DISPENSERS

Timed grease dispensers function “like a faucet” and require frequent re-adjustment, and constant monitoring. Timed grease dispensers cannot be trusted to repeatedly dispense identical amounts. Adding an expensive gear type flow meter causes very little improvement.

#### How Timed Grease Dispensers Work

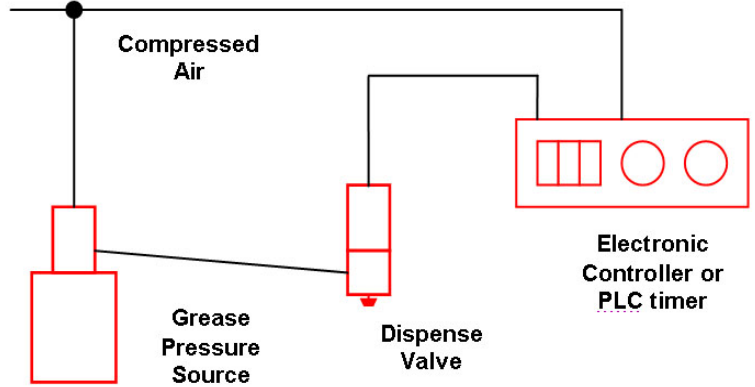
Grease under pressure is moved through an “Off-On” valve that is opened and closed by a solenoid valve controlled by a PLC or electronic timer. Pressure regulators and adjustable orifices are sometimes added to control grease flow rate.

Faucet



Because the flow characteristics of grease (a non-Newtonian fluid) are unpredictable, timed dispensers are not capable of accuracy and repeatability. You will not know how much grease is on your parts unless you weigh each part before and after.

#### Typical Timed Dispense System



### Recommended

#### POSITIVE DISPLACEMENT GREASE DISPENSERS

Positive Displacement Grease Dispensers can be adjusted and set once. Their positive displacement piston stroke dispenses grease “like a hypodermic syringe”. Positive Displacement Grease Dispensers can be trusted to repeatedly dispense identical amounts.

#### How Positive Displacement Grease Dispensers Work

Grease under pressure is transferred through self actuated or powered valves into and out of a measuring chamber. A powered piston controls the transfer volume and transfer (dispense) is directly proportional to piston area and piston travel.

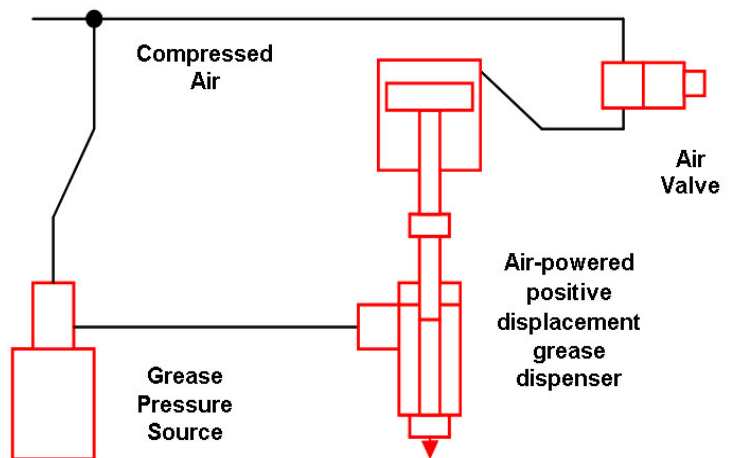
Hypodermic syringe



When accuracy and repeatability are important, a positive displacement dispense system is necessary for materials that change viscosity (grease).

GSS, GSSM, and GPMD dispensers use a mechanical adjustment stock to adjust the volume. This generally works great for applications where the volume will be set and rarely adjusted. AA dispensers use a PLC to control the piston movement to allow the PLC to control and adjust the volume.

#### Typical Positive Displacement Dispense System





Serving industry  
since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)

## Grease Dispensing System Selection Guide

Follow the steps below to select the components for a production grease dispensing system. Even though dispensers are adjustable, you will need to know the volume of grease for each dispense point. If the volume is not known, consult web page: [www.gpreeves.com/cat/cat-greasevolume.pdf](http://www.gpreeves.com/cat/cat-greasevolume.pdf) or the inside back cover of this catalog.

To choose components for a system, follow **S-P-D-N**. Select a grease pressure **Source**, **Preparation** items, the type and quantity of grease **Dispensers** required, and the **Nozzles / snuff-backs / "End of Arm" valves** to apply the grease to the part.

### Source

To use a grease dispenser, you first have to get the grease out of the original container. Prior to selecting a pump or cartridge system, you should decide how the grease will be purchased. Common containers are: 400 lb. barrel (55 Gallon), 120 lb. keg, 35 lb. pail (5 Gallon), 18kg, 25kg, and 35kg. We have single and double post ram pumps for USA and metric size containers.

**Auto-fill grease reservoir/regulators** allow grease to be stored and also reduce grease pressure.

**Manual Fill Reservoirs** allow refilling several stations from a single portable pump.

**FIFO** (First In – First Out) reservoirs minimize separation of unstable grease

Other less common choices include "Semco" cartridges, and universal 14.5 ounce (grease gun) cartridges.



### Preparation

**Filters** – A grease filter is strongly recommended when pumping from a pail or barrel. Metal chips, foreign particles, and other debris can get into the grease, and if not filtered out, they can jam up the dispensing system, or even worse, they can become a part of your product.

**Regulators** – Some dispensers require a low pressure (less than 200 psi grease supply). Because most air-operated pumps can not supply grease at low pressure, a grease pressure regulator or auto-fill reservoir is often needed to reduce the supply pressure to the dispenser(s).

**Accessories** – A ball valve to shut off the grease supply ahead of the filter makes it easier to check and clean the filter element. A pressure gauge is needed to confirm the regulator setting.



Grease filter and element



Pressure Regulator

Ball valve

### Dispensers

**Small Output** – GSS or GSSM for dispensing amounts less than 0.065 cc (cubic centimeters).

**Medium Output LOW Pressure** - GPMD10000 or GPMD15000 series for dispensing amounts from 0.02 cc to 3.66 cc. GPMD2000 for dispensing amounts from 0.02 cc to 7.31 cc.

**High Pressure** – GPMD2000 series for .02-16.00cc. GPMD3000 series for dispensing amounts from 6 cc to 292 cc.

**Advanced** - AA- PLC controlled grease dispensers detect and reject air, and dispense grease at controlled rates for even distribution.



10 GSSM  
dispensers can  
mount on a 11"  
long manifold

GPMD2000  
Series  
dispenser



GSS dispenser



GPMD15000  
series  
dispenser



### Nozzles / Snuff-Backs / "End of Arm" Valves

**Extrusion** – We offer standard extrusion nozzles and custom engineered applicators.

**Spray** - Air assisted grease spray nozzles help deliver grease to the part in "challenging" applications.

**Snuff-back / "End of Arm" Valves** - Snuff-back devices and end of arm valves help prevent oozing at the nozzle tip for cleaner applications.



Snuff-back  
device







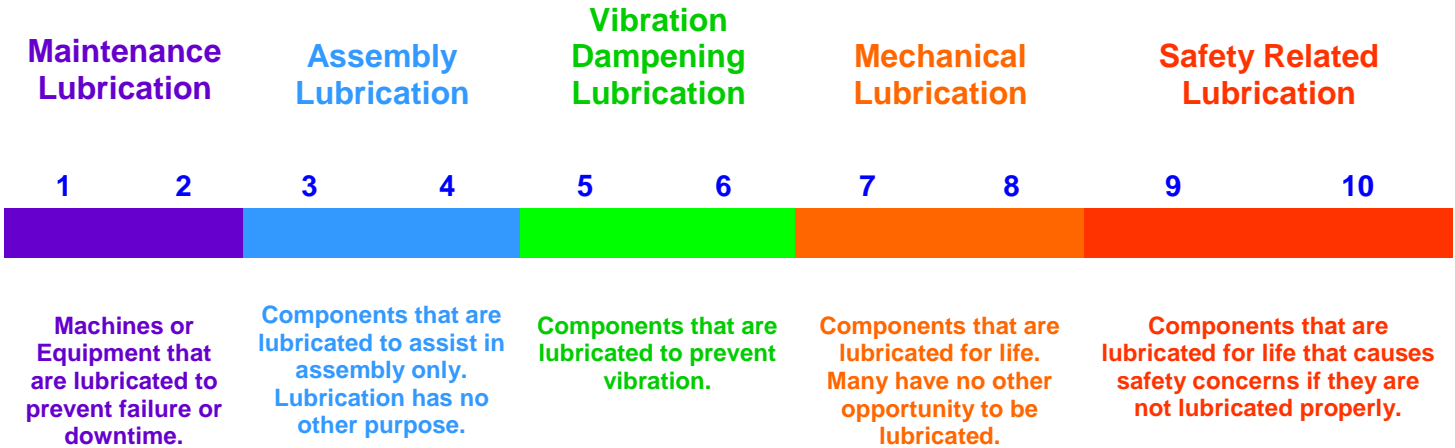
**Serving industry  
since 1971**

**G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA**

**Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)**

**HOW CRITICAL IS YOUR GREASE APPLICATION? WHAT IS YOUR NUMBER?**

(#1 is not critical, #10 is extremely critical)



**Application Questions:**

**Material**

- What is the name of the material being dispensed? Manufacturer & Product #
- What size container will the grease be purchased in? Cartridge, 5 gal, 55 gal, metric, etc.
- What is the desired shape of the material? Bead, Film, Daub, Dot, etc.
- What is the volume or amount being dispensed?
- What is the tolerance of the material?
- How many locations require grease (total for system and on each part)?

**Process**

- How critical is this grease application? (use chart above)
- What is the overall cycle time and dispense time?
- Will this be installed on an existing piece of equipment?

**Specifications**

- Is volume verification required? If so, via HMI, Info System, Green/Red panel light?
- Are there any special plant specifications? I.E. PLC, HMI, Pneumatic or Electrical components

# LUBE LOGIC®

Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

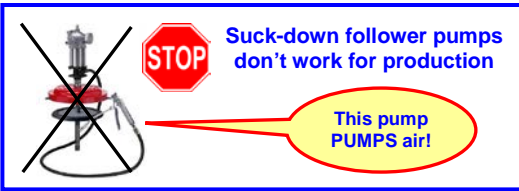
Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)

## GSP GREASE PUMPS

Reliable and Dependable  
Pump all the way to bottom of your pail  
Keep pump suction "off the floor"

Lube Logic® GSP air-operated pumps are engineered for use with lubricating grease and are available with 50:1 and 22:1 boost ratios. Because grease doesn't "seek its own level", an inductor with lip seals is forced into the grease to assure pump priming, continuous operation, and complete evacuation of the contents of the container. Every pump includes a hand lever valve to cause its ram/elevator cylinder to lift its inductor from an empty container for replacement with a full container. This also assures that the inductor and pump suction will never be in contact with the floor or other contaminated surfaces. GSP50 pumps have a 50:1 boost ratio and can be used for NLGI 00 to 3 grease. GSP22 pumps have a 22:1 boost ratio and can be used for NLGI 00 to 2 grease. 3D models are available upon request.

GSP pumps are available for 35 lb, 18 kg, 25 kg, 30 kg, 35 kg, 42 kg, 50 kg, 120 lb, and other size pails. Pail sizes are not universal. For correct inductor seals, contact G. P. Reeves with your pail dimensions.



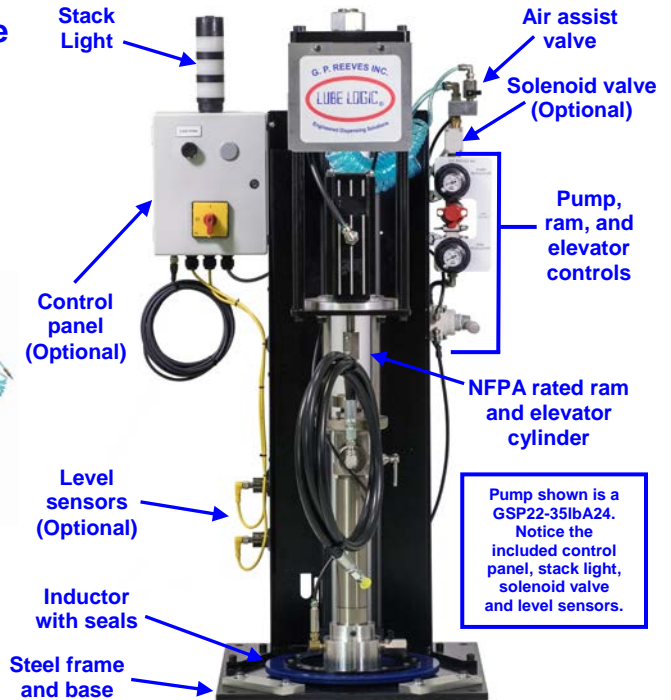
**Production grease dispensing requires a pump with a ram.**

Pump shown with options 01, 13 & 18

Pump shown with inductor in pail

Pump shown with options 05 and 07

Pump shown as GSPM50



Pump shown is a GSP22-35lbA24. Notice the included control panel, stack light, solenoid valve and level sensors.

OPTIONS AVAILABLE FOR GSP PUMPS	
Code	Description
00	Basic Pump (No Control Options)
01	Pneumatic Cam Actuated Empty Shut Off
03	One DC PNP Level Sensor
04	One DC NPN Level Sensor
05	Portability Kit with Castors and Handle
07	Grease Dispense Handle
08	24 VDC 3-way NC Solenoid Valve
09	Control Panel with Power Supply, Valve and PNP Sensors
10	24 VDC Control Panel with Valve and NPN Sensors
11	Two DC PNP Level Sensors
12	Two DC NPN Level Sensors
18	Grease Filter, Pressure Regulator and Gauge Installed
24	Control Panel with Power Supply, Prime Button and Stack Light
25	24 VDC Control Panel with Recirculation
34	Pneumatic Two Hand Safety Kit
38	24 VDC Control Panel with Prime Button and Stack Light
38R	24 VDC Control Panel and Recirculation, Prime Button and Stack Light
38D	24 VDC Control Panel with Auto-Depressurization, Prime Button and Stack Light
40	24 VDC Control Panel with Auto-Depressurization
41	Control Panel with Power Supply and Auto-Depressurization

HOW TO ORDER (PART NUMBER CODE)				
Prefix	Boost Ratio	Common Pail Sizes	Seal Code	Options
GSP	22:1 or 50:1	18 kg	A	See Control and Misc. Options
		25 kg	C	
		35 kg	D	
		35 lb	A	
		120 lb	H (22:1 only)	
GSPM	50:1	1 kg	-	Limited Options available
		18 kg	A	
		35 lb		

**Part number examples:**

GSP50-35lbA03 is a single post ram grease pump with a 50:1 boost ratio, for 35 lb. pail, with A size inductor seals, and a single PNP level sensor.  
 GSP50-120B08-11 is a single post ram grease pump with a 50:1 boost ratio, for 120 lb. pail, with size B inductor seals, solenoid valve, and two PNP level sensors.  
 GSPM50 is a single post ram grease pump with a 50:1 boost ratio with a compact design built for portability.

**Please consult factory for more information and prices.**



Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

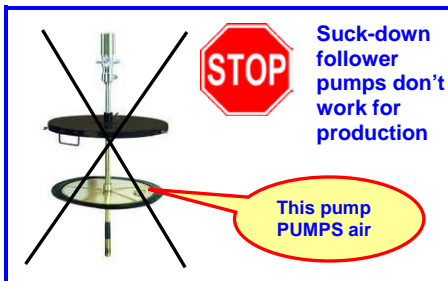
Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)

# GDP GREASE PUMPS

**Reliable and Dependable**  
**Pump all the way to bottom of your drum**  
**Keep pump suction "off the floor"**

GDP pumps are available for 55 gallon, 400 lb., 200 liter, and other size drums. Drum sizes are not always universal. For correct inductor seals, contact G. P. Reeves with your drum dimensions.

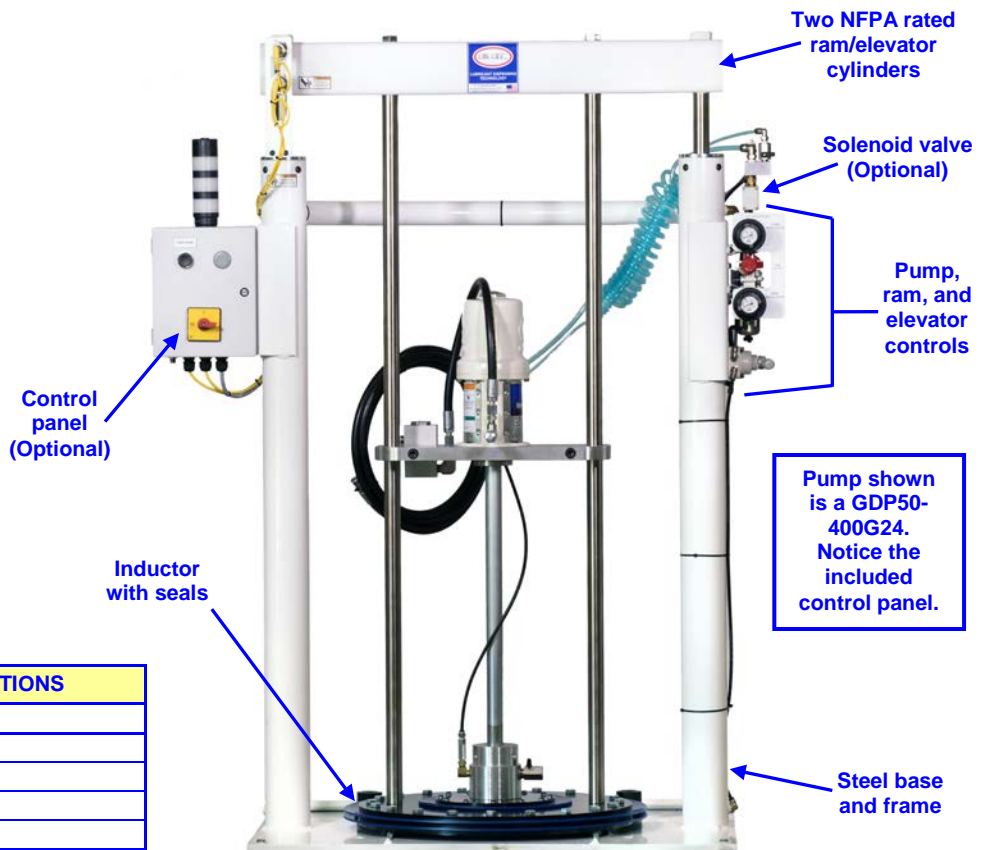
Lube Logic® GDP air-operated pumps are engineered for use with lubricating grease and are available with 50:1 and 22:1 boost ratios. Because grease doesn't "seek its own level", an inductor with lip seals is forced into the grease to assure pump priming, continuous operation, and complete evacuation of the contents of the drum. Every pump includes a hand lever valve to cause its ram/elevator cylinder to lift its inductor from an empty drum for replacement with a full drum. This also assures that the inductor and pump suction will never be in contact with the floor or other contaminated surfaces. GDP50 pumps have a 50:1 boost ratio and can be used for NLGI 00 to 3 grease. GDP22 pumps have a 22:1 boost ratio and can be used for NLGI 00 to 2 grease. 3D models are available.



Typical 400 lb. drum



Production grease dispensing requires a pump with a ram.



Pump shown is a GDP50-400G24. Notice the included control panel.

CONTROL AND MISCELLANEOUS OPTIONS	
Code	Description
00	Basic Pump (No Control Options)
01	Pneumatic Cam Actuated Empty Shut Off
03	One DC PNP Level Sensor
04	One DC NPN Level Sensor
07	Grease Dispense Handle
08	24 VDC 3-way NC Solenoid Valve
09	Control Panel with Power Supply, Valve and PNP Sensors
10	24VDC Control Panel with Valve and NPN Sensors
11	Two DC PNP Level Sensors
12	Two DC NPN Level Sensors
18	Grease Filter, Pressure Regulator and Gauge Installed
24	Control Panel with Power Supply, Prime Button and Stack Light
25	24 VDC Control Panel with Recirculation
34	Pneumatic Two Hand Safety Kit
36	Portability Kit with Castors and Handle
38	24 VDC Control Panel with Prime Button and Stack Light
38R	24 VDC Control Panel and Recirculation, Prime Button and Stack Light
38D	24 VDC Control Panel with Auto-Depressurization, Prime Button and Stack Light
40	24 VDC Control Panel with Auto-Depressurization
41	Control Panel with Power Supply and Auto-Depressurization

HOW TO ORDER (PART NUMBER CODE)				
Prefix	Boost Ratio	Common Drum Sizes	Seal Code	Options
GDP	22:1 or 50:1	400 lb.	G	See Control and Misc. Options
		55 gallon	I (22:1 only)	
		200 liter	G	
GDPM	8.5:1	1 kg	-	-

**Part number examples:**

GDP22-400G03 is a grease pump with a double post ram, 22:1 boost ratio, for 400 lb drum, size G inductor seals and a single PNP level sensor.

GDP50-400G08-11 is a grease pump with a double post ram, 50:1 boost ratio, for 400 lb. drum, size G inductor seals, solenoid valve, and two PNP level sensors.

**Please consult factory for more information and prices.**



Serving industry since 1971

G. P. Reeves Inc. 12764 Greenly Street Holland, MI 49424 USA

Phone: 888.399.8893 Fax: 616.399.8867 Web: www.gpreeves.com

# OTHER PUMPS

The pump (grease or oil source) is a vital component of the dispensing system.

## AUTOMATIC CROSS-OVER PUMPS

Dual grease pump with automatic cross-over.



Dual grease pump with automatic cross-over and automatic air removal.



## PUMPS FOR DRY GREASE

AbsoLube, Berulub, Sankol, and SynTech are a few of the suppliers for this material that sprays like water, but dries to form a thin film of grease. Re-circulation through multiple dispensers is required because of high solid content and fast dry features. Dispensers are adjustable from 0.0016 cc to 0.0655 cc and can spray or squirt.

OPD1.25V-L



OPD5V-L



Dispenser has re-circulation ports and GSS-052 adaptor for spray nozzle.



GSS-053 anti-clog spray nozzle has flat spray pattern

## PUMPS FOR OIL

Note: Many variations of these pumps are available. Even if you don't see it on this sheet, please feel free to ask.

Pump on floor stand with controller



OP15R-1



OP2R-SL



OP5-3L





Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

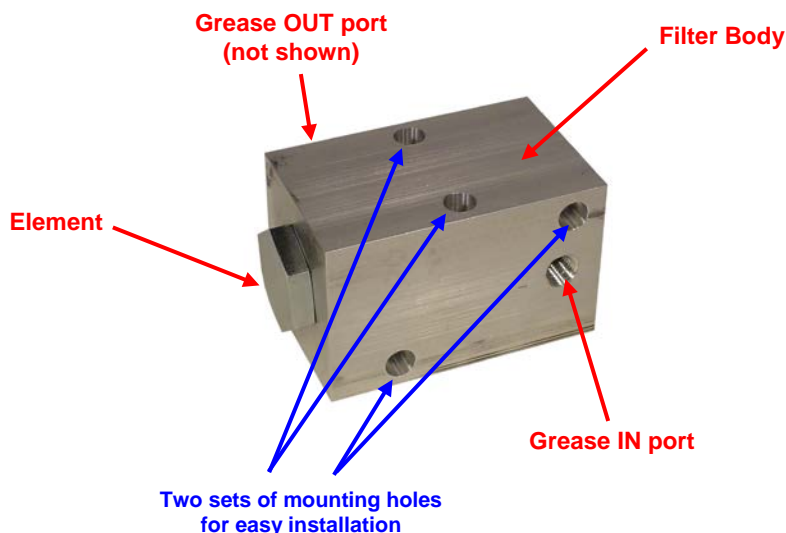
Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)

# GF1000 Series Grease Filters

Recommended for use with G. P. Reeves production grease dispensing systems

Ideal for protection of grease pressure regulator and other sensitive components

- Designed for up to 3000 psi grease
- Filter element is cleanable and replaceable
- Engineered for NLGI 000 through NLGI 3 grease
- "Inside-Out" flow path allows filtered contamination to be removed with element



**Micron To Inch Conversion Chart**  
149 micron = 0.0059"  
420 micron = 0.0165"

GREASE FILTER OPTIONS (elements are included)				
Part number	Element	Body Size	Port Size	Replacement Element
GF1149-4	149 microns * (100 mesh)	2.5" x 2.5" x 4.33"	1/4" NPT	KA10393A
GF1149-6			3/8" NPT	
GF1149-8		3" x 3" x 4.75"	1/2" NPT	
GF1149-12			3/4" NPT	
GF1149-16			1" NPT	
GF1420-4	420 microns (40 mesh)	2.5" x 2.5" x 4.33"	1/4" NPT	KA10394A
GF1420-6			3/8" NPT	
GF1420-8		3" x 3" x 4.75"	1/2" NPT	
GF1420-12			3/4" NPT	
GF1420-16			1" NPT	

**\* Do not use the 149 micron filter with NLGI #3 grease**

Metric sized filters are also available. Suffix the base part number with M to indicate metric ports. For example, GF1149M-4 would be the same size as GF1149-4 except ports would be 1/4" BSPP.



Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)

# Reservoir / Regulators

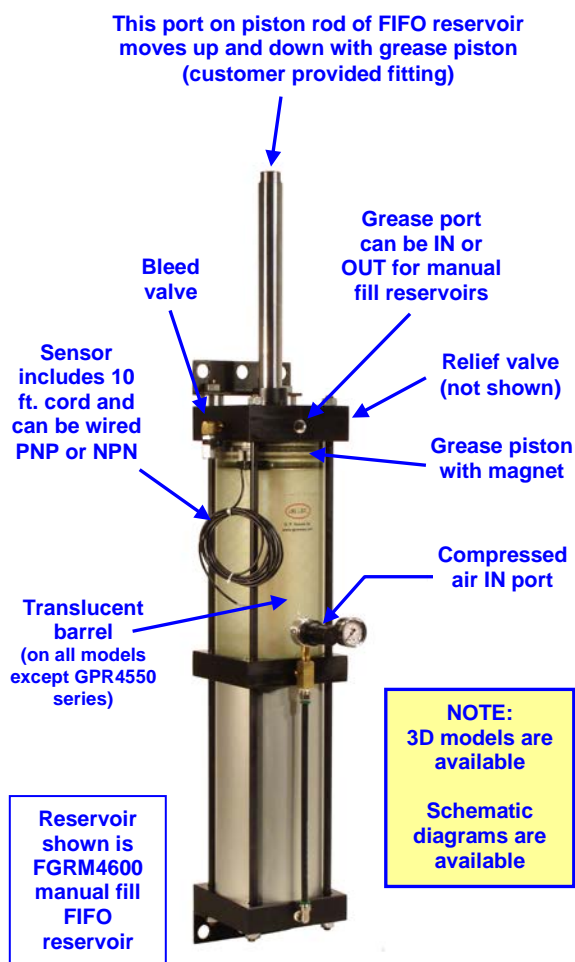
Available in both Automatic Fill / Manual Fill and FIFO / Non FIFO options

Our grease reservoir/regulators are engineered for use with NLGI 000 through 2 grease. They equipped with relief valves, air pressure regulators with gauges and are capable of handling up to 3000 psi primary grease pressure and regulating it to provide 1000 psi or less secondary grease pressure. Automatic fill reservoir / regulators include an air pilot operated fill valve.

### SELECTION GUIDE:

- Manual fill reservoirs require a temporary connection to a fill source or pump. One portable pump can be used to fill many reservoirs.
- Automatic fill reservoirs require PLC control and a direct connection to a supply source or pump.
- FIFO reservoirs are best for material that separates quickly under pressure as the oldest grease is used first.
- Carefully select the reservoir size based on grease usage.
- Carefully select boost ratio based on the viscosity of your grease to assure adequate pressure and flow.

Part Number	Type	Capacity (cc)	Boost Ratio	Sensors Installed (Can be wired PNP or NPN)
GSS-025	Manual Non-FIFO	177	1:1	None
GRRRA382	Automatic Non-FIFO	382	1:1	Two AC/DC reed switches
GRRM382	Manual Non-FIFO	382	1:1	Optional *
GRRRA1460	Automatic Non-FIFO	1460	1:1	Two AC/DC reed switches
GRRM1460	Manual Non-FIFO	1460	1:1	Optional *
GRRRA4162	Automatic Non-FIFO	4162	1:1	Two AC/DC reed switches
GRRM4162	Manual Non-FIFO	4162	1:1	Optional *
GRE11A	Automatic Non-FIFO	185	1.8:1	Two AC/DC reed switches
GRE11M	Manual Non-FIFO	185	1.8:1	Optional *
GRE64A	Automatic Non-FIFO	1048	1.8:1	Two AC/DC reed switches
GRE64M	Manual Non-FIFO	1048	1.8:1	Optional *
FGRA200	Automatic FIFO	200	2.19:1	Two magnetic sensors **
FRGM200	Manual FIFO	200	2.19:1	One magnetic sensor
FGRA1650	Automatic FIFO	1650	2.0:1	Two magnetic sensors **
FRGM1650	Manual FIFO	1650	2.0:1	One magnetic sensor
FGRA1850	Automatic FIFO	1850	0.9:1	Two magnetic sensors **
FRGM1850	Manual FIFO	1850	0.9:1	One magnetic sensor
FGRA4350	Automatic FIFO	4350	0.9:1	Two magnetic sensors **
FRGM4350	Manual FIFO	4350	0.9:1	One magnetic sensor
FGRA4600	Automatic FIFO	4600	2.0:1	Two magnetic sensors **
FRGM4600	Manual FIFO	4600	2.0:1	One magnetic sensor



DIRECT OPERATED RESERVOIR/REGULATORS (Functions automatically on 24 VDC without wiring to a PLC)		
Part Number	Capacity (cc)	Boost Ratio
FGRA200-MP	200	2.19:1
FGRA1650-MP	1650	2.0:1
FGRA4600-MP	4600	2.0:1

\* denotes optional sensors on manual non-FIFO reservoirs. Suffix the part number with the quantity and type (Examples: -1PNP or -2NPN) to add optional sensors.  
\*\* denotes automatic fill reservoirs which have analog (-A) option which replaces sensors with a linear position sensor (0-10V analog) for continuous piston sensing.

NOTE: All models are also available with metric ports. For metric ports, suffix the part number with an M.

Example: FRGM1650M



Serving industry since 1971

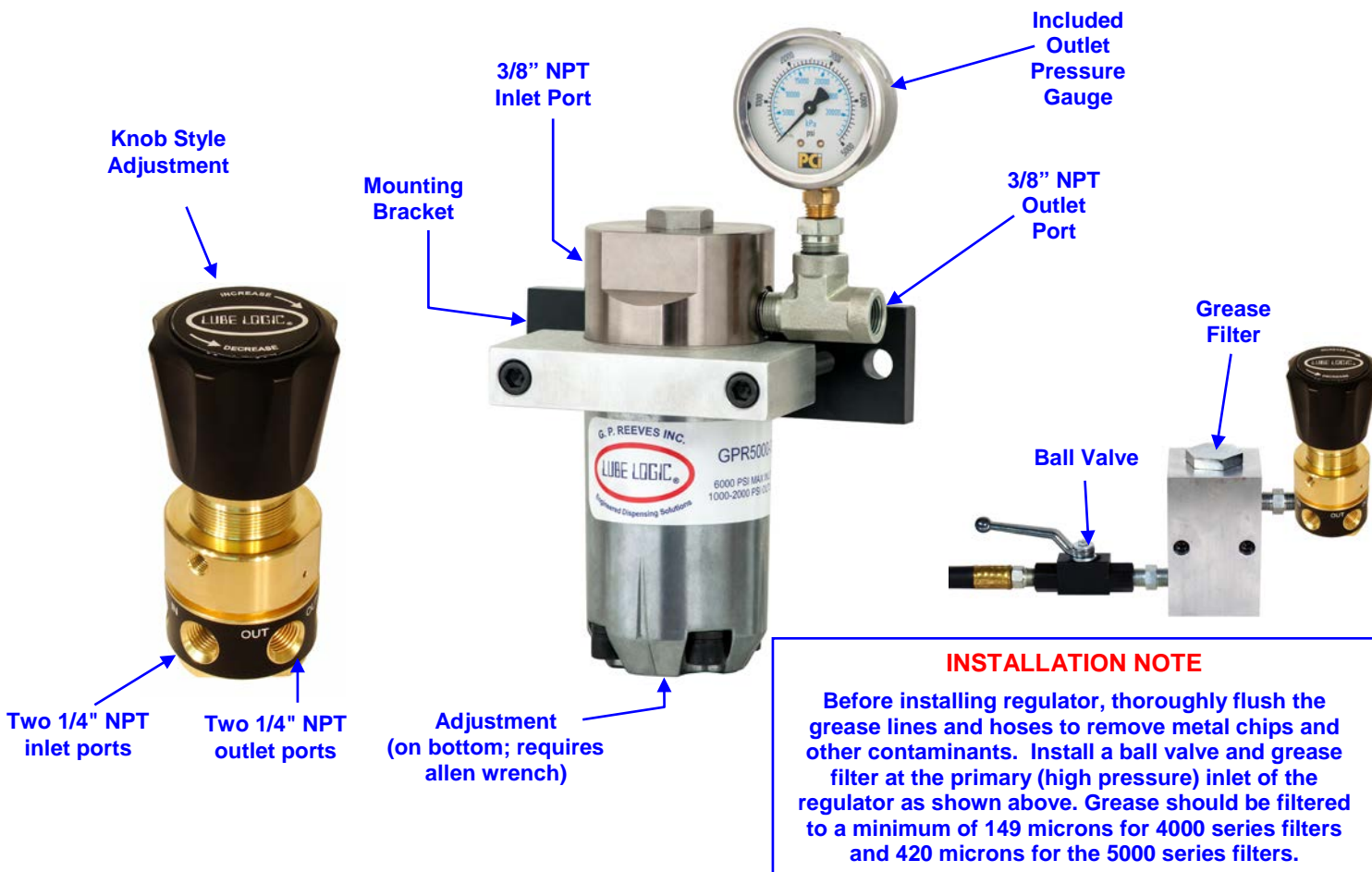
G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)

# Grease Pressure Regulators

For use with "normal" lubricating grease at up to 6000 psi (non-shock) depending on model

- Tungsten carbide poppet and seat for longer life
- For use with high pressure grease pumps
- Mounting holes or bracket provided depending on model
- Accurate secondary pressure



**INSTALLATION NOTE**

Before installing regulator, thoroughly flush the grease lines and hoses to remove metal chips and other contaminants. Install a ball valve and grease filter at the primary (high pressure) inlet of the regulator as shown above. Grease should be filtered to a minimum of 149 microns for 4000 series filters and 420 microns for the 5000 series filters.

GREASE PRESSURE REGULATOR SPECIFICATIONS			
Model Number	Maximum Primary Pressure (Non-Shock)	Secondary Pressure Range	Port Size
GPR4100C	3500 psi	20 - 250 psi	1/4" NPT
GPR4300C		20 - 500 psi	
GPR5000-1	1250 psi	30 - 200 psi	3/8" NPT
GPR5000-3	6000 psi	1000 - 3000 psi	
GPR5000-6		175 - 1000 psi	

Note: A variety of outlet pressure gauges are available to replace the default gauge. For example, GPR5000-6-300 includes a 0-300 psi gauge instead of 0-3000 psi gauge. Consult G.P. Reeves for a complete list of options.

**MATERIAL NOTE:** GPR4000 series regulators are NOT for use with material that contains Teflon, Moly, Graphite, Anti-Seize, or RTV while the GPR5000 series regulators will work with many of these materials.



Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: <http://gpreeves.com>

- ▶ ACCURATE
- ▶ RELIABLE
- ▶ REPEATABLE

## GSS Air Operated Grease Dispensers

Engineered for installation near grease application point  
3D models are available in SolidWorks

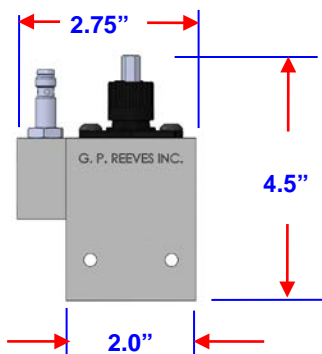
For Low Pressure Grease - 200 psi max.  
For NLGI 000 through NLGI 3 grease

- Uses adjustable volumetric piston displacement to dispense measured shots of grease
- Dispenses set amounts of grease regardless of temperature and viscosity changes. See chart for part numbers and sizes
- Fast – up to 180 operations per minute

### TYPICAL USES

Dashboard and console pivots and buttons  
Locking and latching components  
Electrical terminals  
Automotive HVAC components

GSS dispensers are less than 1" thick and can be installed on 1" centers



See KA8695 for installation & operating instructions

#### SPRAY GREASE

0.033 cc sprayed on a US quarter



#### EXTRUDE GREASE

0.000364 cc spots

0.0655 cc spot

0.131 cc spot (double shot)

Application visuals on US dimes



GSS dispenser with GSS-019 spray adaptor and KA7195-2 spray nozzle



GSS -009 remote mountable spray nozzle



M18 x 1 thread

GSS dispenser with luer-lock fitting and needle



GSS dispenser with adaptor for GSS-005 (10-32) grease outlet port



GSS dispenser with GSS-016 face mounting adaptor and GSS-005 outlet port adaptor



GSS dispenser for installation on user's tooling



Note: "O" ring seal and tapped mounting holes

GSS-060 (shown with dispenser)



GREASE DISPENSERS	
Part number	Description
GSS-001PNP	0.016 cc max. with PNP stroke sensor
GSS-002PNP	0.033 cc max. with PNP stroke sensor
GSS-004PNP	0.066 cc max. with PNP stroke sensor
GSS-001NPN	0.016 cc max. with NPN stroke sensor
GSS-002NPN	0.033 cc max. with NPN stroke sensor
GSS-004NPN	0.066 cc max. with NPN stroke sensor
GSS-011	0.016 cc max. without stroke sensor
GSS-012	0.033 cc max. without stroke sensor
GSS-014	0.066 cc max. without stroke sensor

OUTLET ADAPTORS & FITTINGS	
Part number	Description
GSS-003	Bijur port for 5/32 OD (4 mm) tube
GSS-005	10-32 port
GSS-006	1/4-28 port
GSS-007	Luer lock fitting with 1/4-28 male
GSS-008	1/8 NPT port
GSS-010	Dual inlet – single 1/8 NPT outlet
GSS-016	for installation on tapped tooling
GSS-031	M5 x .8 port
GSS-032	5/16-32 port for Chinese needle
GSS-037	SAE-2 (female) port





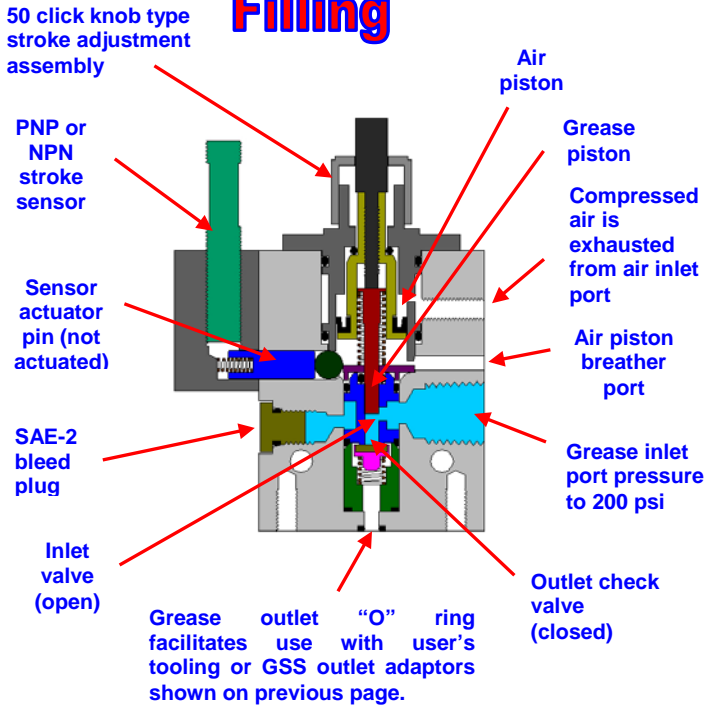
Serving industry since 1971

G. P. Reeves Inc. 12764 Greenly Street Holland, MI 49424 USA

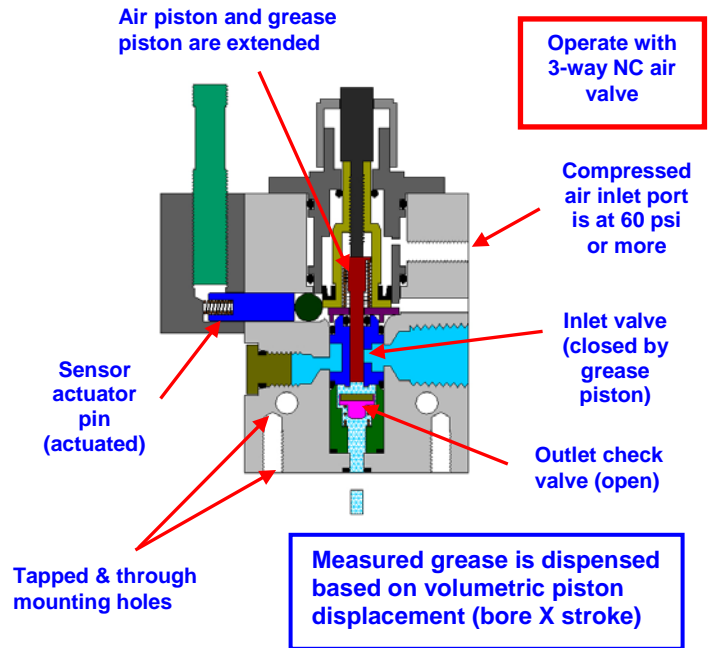
Phone: 888.399.8893 Fax: 616.399.8867 Web: http://gpreeves.com

HOW GSS DISPENSERS WORK

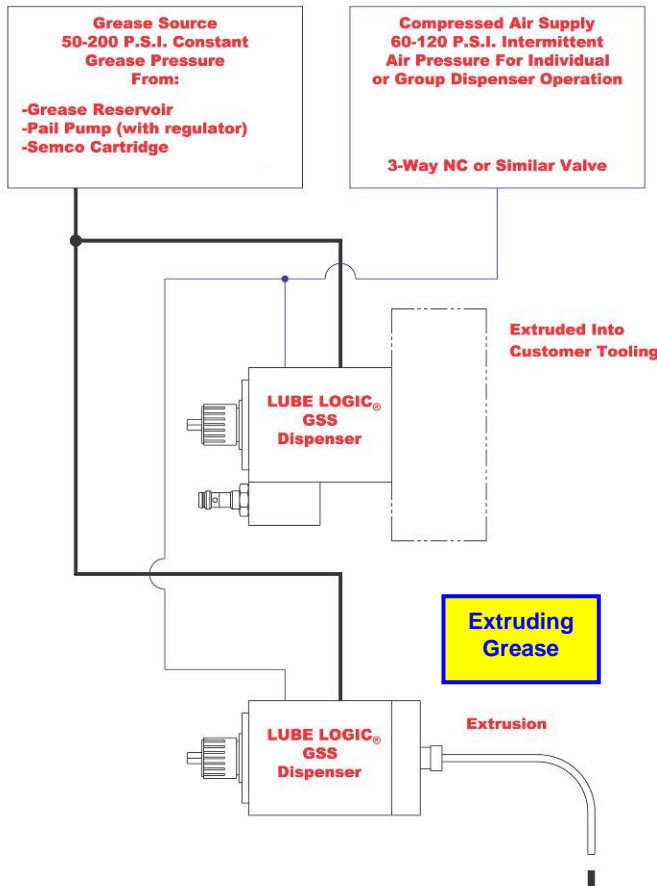
Filling



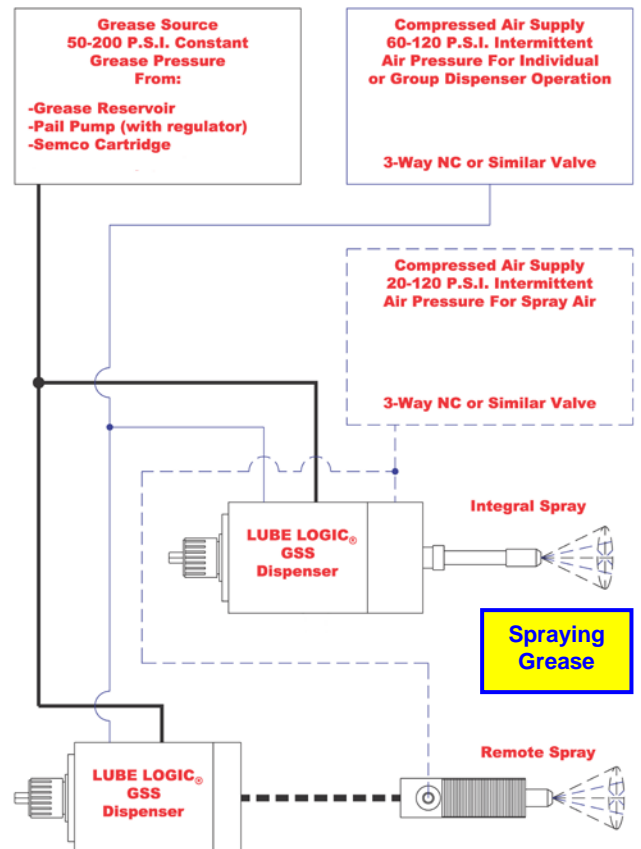
Dispensing



Schematic for extruding grease



Schematic for spraying grease





Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)

# GSSM Air Operated Grease Dispensers

- ▶ ACCURATE
- ▶ RELIABLE
- ▶ REPEATABLE

Engineered for installation on manifolds  
3D models are available in SolidWorks

For Low Pressure Grease - 200 psi max.  
For NLGI 000 through NLGI 3 grease

- Uses adjustable volumetric piston displacement to dispense measured shots of grease
- Dispenses set amounts of grease regardless of temperature and viscosity changes. See chart for part numbers and sizes
- Fast – up to 180 operations per minute

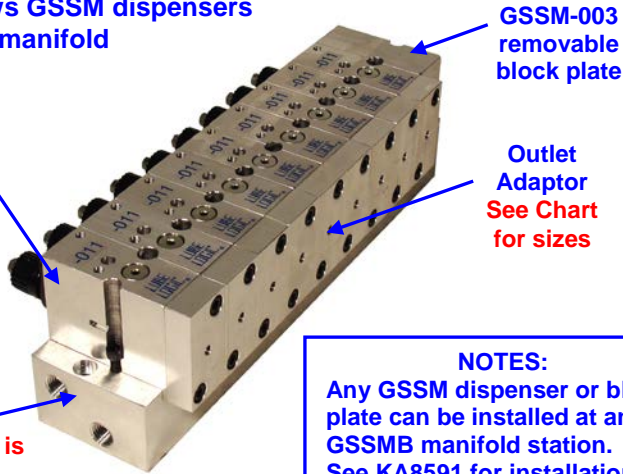
### TYPICAL USES

Dashboard and console pivots and buttons  
Locking and latching components  
Electrical terminals  
Automotive HVAC components

Photo shows GSSM dispensers on GSSMB manifold

Dispensers are on 1 inch centers  
See dispenser chart for part numbers

Manifold (GSSMB-10 is shown) see part builder



**NOTES:**  
Any GSSM dispenser or block plate can be installed at any GSSMB manifold station. See KA8591 for installation and operating instructions.

Photos show manifold mountable dispensers

Adjustment includes "fifty click" locking knob

Indicator pin moves with dispense piston

Stroke sensor uses #0983 cord



GSSM grease dispenser without stroke sensor



GSSM grease dispenser with PNP or NPN stroke sensor

GSSMB MANIFOLD PART BUILDER		
Basic Part Number	Number of Stations	Separate Air Ports
GSSMB	-10	SA
Examples: (maximum number of stations is ten) Part number GSSMB-10SA is a ten-station manifold with separate 1/8 NPT air ports Part number GSSMB-10 is a ten-station manifold without separate air ports Part number GSSMB-2 is a two-station manifold without separate air ports		



GSSM GREASE DISPENSERS	
Part number	Description
GSSM-001PNP	0.016 cc max. with PNP stroke sensor
GSSM-002PNP	0.033 cc max. with PNP stroke sensor
GSSM-004PNP	0.066 cc max. with PNP stroke sensor
GSSM-001NPN	0.016 cc max. with NPN stroke sensor
GSSM-002NPN	0.033 cc max. with NPN stroke sensor
GSSM-004NPN	0.066 cc max. with NPN stroke sensor
GSSM-011	0.016 cc max. without stroke sensor
GSSM-012	0.033 cc max. without stroke sensor
GSSM-014	0.066 cc max. without stroke sensor
GSSM-003	Manifold block plate

OUTLET ADAPTORS & FITTINGS	
Part number	Description
GSS-003	Bijur port for 5/32 OD (4 mm) tube
GSS-005	10-32 port
GSS-006	1/4-28 port
GSS-007	Leur lock fitting with 1/4-28 male
GSS-008	1/8 NPT port
GSS-010	Dual inlet – single 1/8 NPT outlet
GSS-016	for installation on tapped tooling
GSS-031	M5 x .8 port
GSS-032	5/16-32 port for Chinese needle
GSS-037	SAE-2 port



Serving industry since 1971

G. P. Reeves Inc. 12764 Greenly Street Holland, MI 49424 USA

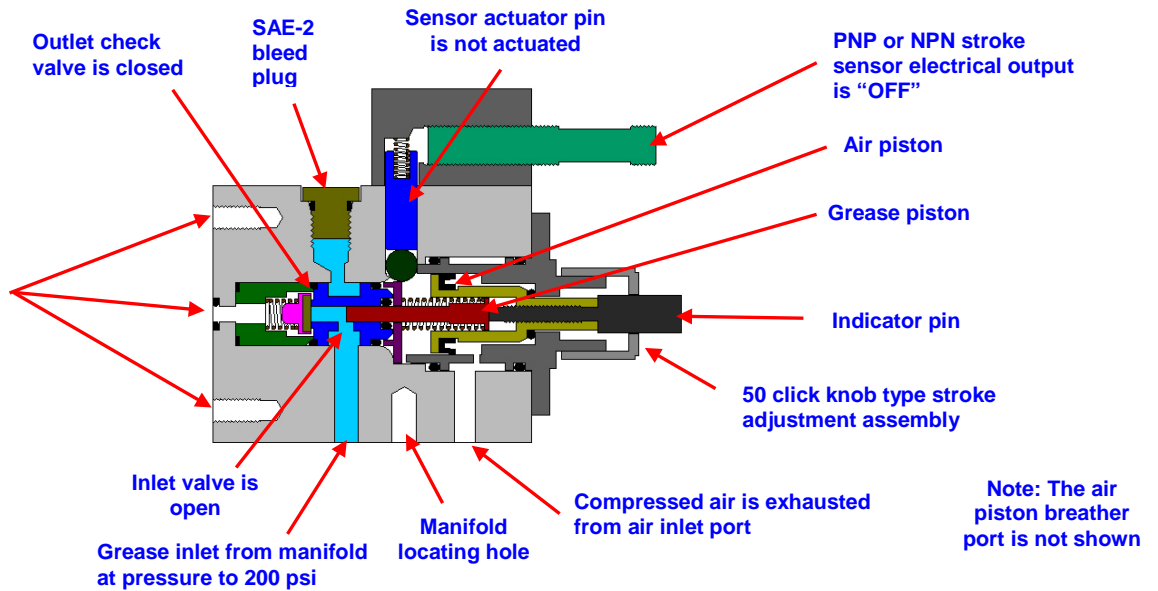
Phone: 888.399.8893 Fax: 616.399.8867 Web: www.gpreeves.com

HOW THE GSSM DISPENSERS WORK

Filling

(3-way air valve is not actuated)

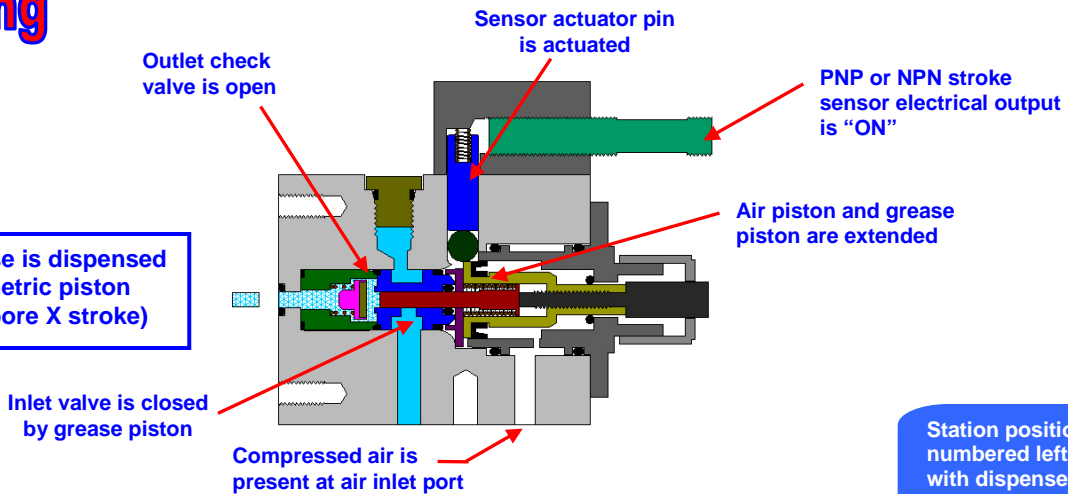
Grease outlet "O" ring and tapped holes facilitate use with any of the GSS outlet adaptors shown on previous page.



Dispensing

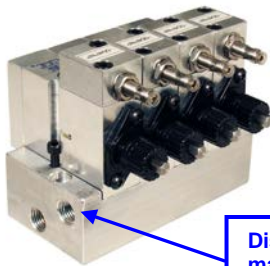
(3-way air valve is actuated)

Measured grease is dispensed based on volumetric piston displacement (bore X stroke)



Station positions are numbered left to right with dispensers installed as shown.

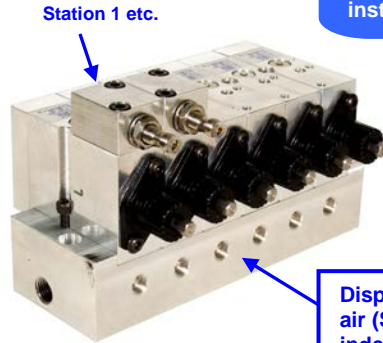
Examples:



Four-station manifold with four GSSM dispensers with stroke sensors

Dispensers on this manifold operate simultaneously

NOTE: GSSM dispensers can also be installed on MDM1000 series manifolds with a KA9533 adaptor at each station



Six-station manifold with separate air ports, two GSSM dispensers with stroke sensors, and four GSSM dispensers without stroke sensors

Dispensers on separate air (SA) manifolds can be independently operated

Manifolds are available with two, four, six, eight, and ten stations with and without separate air ports.

Three different size dispensers are available with and without stroke sensors and with a variety of outlet adaptors.

Contact factory for more information.



Serving industry since 1971

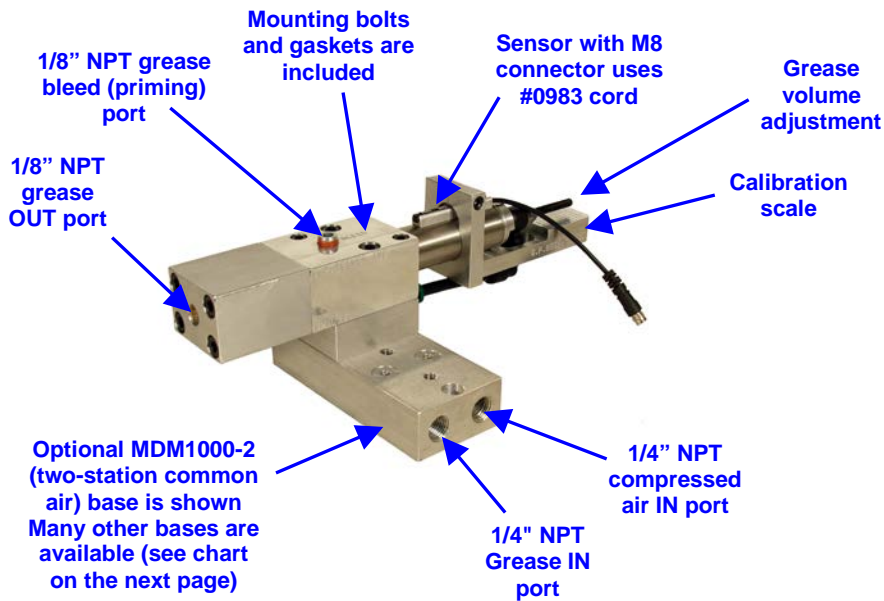
G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)

# GPMD10000 SERIES GREASE DISPENSERS

Base-mountable, air-operated, single-acting, adjustable, metered shot (piston) dispenser

- Accurate dispensing of 0.02 cc to 3.69 cc shots of grease (depending on model selected).
- Change shot size quickly and easily using fine-thread adjustment screw with lock nut.
- Can dispense up to 40 times per minute at maximum shot size.
- Operate at 50 to 120 psi with 3-way NC Air Valve.
- Positive piston displacement dispenser accurately delivers measured shots of grease.
- Bases are available with from 1 to 8 stations and also with separate air inlets for independent operation.
- Uses piston displacement to measure grease and will dispense set amounts regardless of temperature.
- Operates with low pressure grease (up to 200 psi).



## PHOTOS BELOW SHOW USES AND OPTIONAL COMPONENTS



Each flow sensor uses a single cord for two PNP outputs.

See CAT-FLOW SENSOR OPTIONS sheet for more flow sensor information.



Setup shown is five GPMD10020-06 dispensers installed on a MDM1000-5 manifold



## DISPENSER SPECIFICATIONS

Basic Part Number	Adjustable Volume	Boost Ratio (less return spring)	Note:
GPMD10020- <span style="background-color: yellow;"> </span> - <span style="background-color: yellow;"> </span> - <span style="background-color: yellow;"> </span>	0.02 to 0.20 cc	36 to 1	<span style="background-color: yellow;"> </span> - <span style="background-color: yellow;"> </span> - <span style="background-color: yellow;"> </span> See OPTION LIST to complete part number. Include at least one option. There is no maximum number of options.
GPMD10080- <span style="background-color: yellow;"> </span> - <span style="background-color: yellow;"> </span> - <span style="background-color: yellow;"> </span>	0.02 to 0.80 cc	12.25 to 1	
GPMD10125- <span style="background-color: yellow;"> </span> - <span style="background-color: yellow;"> </span> - <span style="background-color: yellow;"> </span>	0.06 to 1.25 cc	11.56 to 1	
GPMD10369- <span style="background-color: yellow;"> </span> - <span style="background-color: yellow;"> </span> - <span style="background-color: yellow;"> </span>	0.13 to 3.69 cc	11.76 to 1	

**Note:** Basic part number must include at least one Option ID to be complete. The part number for a dispenser with no options will include the suffix -00. Separate additional options with dashes. GPMD10000 Series Dispenser options are listed on the next page.

See complete part number example below: (enter option numbers in order – lowest number to highest number)  
GPMD10080-02-07 (GPMD10080 dispenser with two PNP stroke sensors and bleed valve).

<b>OPTION LIST (choose one or more)</b> <b>NOTES:</b> Each M8 stroke sensor requires a #0983 cord. Single stroke sensors will be factory set to recognize "dispense complete" message. Each flow sensor or M12 stroke sensor requires a #1850 cord. Stroke sensors with clamps (04, 05 & 08) can not be used with calibration scale (03).				
Option ID	Description	Connector(s)	Factory Install?	Customer Install?
00	No Options (dispenser will have a magnetic piston)	Not Applicable	-	-
01	Single M8 PNP Stroke Sensor	M8 DC Connector	Yes (with track)	No
02	Two M8 PNP Stroke Sensors	Two M8 DC Connectors	Yes (with track)	No
03	Calibration Scale	Not Applicable	Yes	Yes
06	Digital Flow Sensor with 2 PNP outputs. 1000 psi	M12 DC Connector	Yes	No
07	Manual Bleed Valve installed in place of 1/8" NPT bleed plug	Not Applicable	Yes	Yes
12	Two M8 NPN Stroke Sensors	Two M8 DC Connectors	Yes (with track)	No
15	Single M8 NPN Stroke Sensor	M8 DC Connector	Yes (with track)	No
16	Inductive Flow Sensor, 24 VDC PNP	M12 DC Connector	Yes	No
17	Inductive Flow Sensor, 24 VDC NPN	M12 DC Connector	Yes	No
18	Analog Flow Sensor (0-10V)	M12 DC Connector	Yes	No
22	Premium Seals for Use with Abrasive Material	Not Applicable	Yes	Yes
23	Air Operated Outlet Check Valve	Not Applicable	Yes	No
24	Hand-held Pistol Style Dispense Gun with Electronic Trigger with Assorted Nozzles	M12 DC Connector	Yes	Yes
25	Hand-held Pistol Style Dispense Gun with Pneumatic Trigger with Assorted Nozzles	M12 DC Connector	Yes	Yes
26	Flow Sensor, Digital 24 VDC PNP/NPN, Analog 0-10V or 4-20mA (IFM Sensor)	M12 DC Connector	Yes	No

**All MDM1000 manifolds have 1/4" NPT grease inlet ports on both ends.**  
**GPMD10000 Series Dispensers can not be used without manifolds.**  
**Note: All GPMD 10000 series dispensers are designed for installation on MDM1000 series manifolds and for use with a maximum of 200 psi grease inlet pressure.**

 <p>A blockplate kit is available for unused manifold stations as part number KA8258 and it includes gaskets and bolts.</p>	<p>GPMD10125-00 installed on MDM1000-2 manifold</p> 	<p>GPMD10125-04 installed on MDM1000-2 manifold</p> 
--	--	---

Bases with 1/4" NPT common air ports on both ends are for simultaneous operation of all grease dispensers	
Part Number	Description
MDM1000-1	Single station manifold
MDM1000-2	Two station manifold
MDM1000-3	Three station manifold
MDM1000-4	Four station manifold
MDM1000-5	Five station manifold
MDM1000-6	Six station manifold
MDM1000-7	Seven station manifold
MDM1000-8	Eight station manifold

Bases with 1/8" NPT separate air ports on side are for independent operation of each grease dispenser	
Part Number	Description
separate air is not necessary with a single station manifold	
MDM1000-2SA	Two station manifold- separate air
MDM1000-3SA	Three station manifold – separate air
MDM1000-4SA	Four station manifold – separate air
MDM1000-5SA	Five station manifold – separate air
MDM1000-6SA	Six station manifold – separate air
MDM1000-7SA	Seven station manifold – separate air
MDM1000-8SA	Eight station manifold – separate air



Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

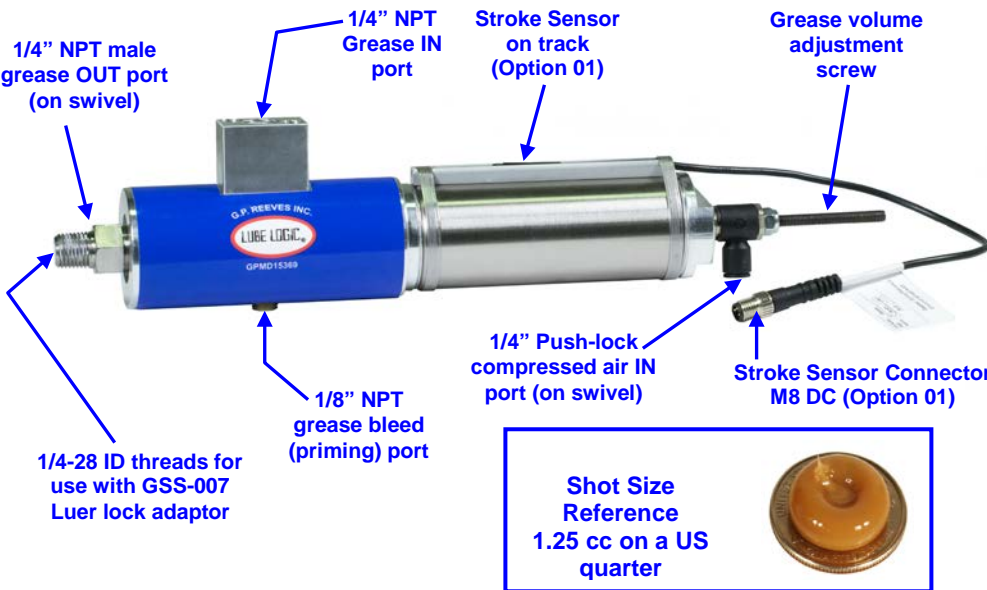
Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)

# GPMD15000 SERIES GREASE DISPENSERS

Nose-mountable, air-operated, single-acting, adjustable, metered shot (piston) dispenser

- Accurate dispensing of 0.02 cc to 6.20 cc shots of grease (depending on model selected).
- Change shot size quickly and easily using fine-thread adjustment screw with lock nut.
- Can dispense up to 40 times per minute at maximum shot size.
- Operate at 50 to 120 psi with 3-way NC Air Valve.
- Positive piston displacement dispenser accurately delivers measured shots of grease.
- Swivel grease outlet allow inlet port to point in any direction and also facilitates easy installation
- Uses piston displacement to measure grease and will dispense set amounts regardless of temperature.
- Operates with low pressure grease (up to 200 psi).

Photo shows GPMD15369-01 (others are very similar)



PHOTOS BELOW SHOW USES AND OPTIONAL COMPONENTS



(see next page for details on options)



DISPENSER SPECIFICATIONS			
Basic Part Number	Adjustable Volume	Boost Ratio (less return spring)	Note:
GPMD15020- <span style="background-color: yellow;">■</span> <span style="background-color: yellow;">■</span> <span style="background-color: yellow;">■</span>	0.02 to 0.20 cc	36 to 1	<span style="background-color: yellow;">■</span> <span style="background-color: yellow;">■</span> <span style="background-color: yellow;">■</span> See OPTION LIST to complete part number. Include at least one option. There is no maximum number of options.
GPMD15080- <span style="background-color: yellow;">■</span> <span style="background-color: yellow;">■</span> <span style="background-color: yellow;">■</span>	0.02 to 0.80 cc	12.25 to 1	
GPMD15125- <span style="background-color: yellow;">■</span> <span style="background-color: yellow;">■</span> <span style="background-color: yellow;">■</span>	0.06 to 1.25 cc	11.56 to 1	
GPMD15369- <span style="background-color: yellow;">■</span> <span style="background-color: yellow;">■</span> <span style="background-color: yellow;">■</span>	0.13 to 3.69 cc	11.76 to 1	
GPMD15620- <span style="background-color: yellow;">■</span> <span style="background-color: yellow;">■</span> <span style="background-color: yellow;">■</span>	2.00 to 6.20 cc	10.24 to 1	

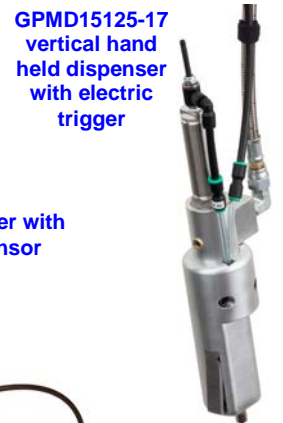
**Notes:** Basic part number must include at least one Option ID to be complete. The part number for a dispenser with no options should include the suffix -00. The GPMD15620-00 can not be adjusted to dispense less than 2 cc.

**See complete part number examples below:** (enter suffix numbers in ascending order – lowest number to highest number)

GPMD15020-00 is a 15000 series dispenser with an adjustable volume of 0.02 to 0.20 cc, a boost ratio of 36 to 1, and no other installed options.

GPMD15125-01-03-07 is a 15000 series dispenser with an adjustable volume of 0.06 to 1.25 cc, a boost ratio of 11.56 to 1, one stroke sensor, a calibration scale, and a manual bleed valve.

OPTION LIST (choose one or more)		NOTES:	Connector(s)	Factory Install?	Customer Install?
		Each M8 stroke sensor requires a #0983 cord. Single stroke sensors will be factory set to recognize "dispense complete" message. Each flow sensor or M12 stroke sensor requires a #1850 cord. Stroke sensors with clamps (04, 05 & 08) can not be used with calibration scale (03).			
Option ID	Description		Connector(s)	Factory Install?	Customer Install?
00	No Options (dispenser will have a magnetic piston)		Not Applicable	-	-
01	Single M8 PNP Stroke Sensor		One M8 DC	Yes (with track)	No
02	Two M8 PNP Stroke Sensors		Two M8 DC	Yes (with track)	No
03	Calibration Scale		Not Applicable	Yes	Yes
06	Digital Flow Sensor with 2 PNP outputs. 1000 psi		One M12 DC	Yes	No
07	Manual Bleed Valve installed in place of 1/8" NPT bleed plug		Not Applicable	Yes	Yes
09	Flow sensor has 2 PNP outputs and an M12 connector. For 3,000 psi max.		One M12 DC	Yes	Yes
11	KA6003 mounting block installed on dispenser with 1/4" NPT female outlet, vertical and horizontal mounting holes and a SAE-4 port for (not included) EPS1001 electronic pressure sensor.		Not Applicable	Yes	Yes
12	Two M8 NPN Stroke Sensors		Two M8 DC	Yes (with track)	No
15	Single M8 NPN Stroke Sensor		One M8 DC	Yes (with track)	No
16	Hand-held vertical dispense handle with bracket for tool balancer, electronic trigger, 24 VDC solenoid valve, and an assortment of stainless steel nozzles. See page 33 for details.		Not Applicable	Yes	Yes
17	Hand-held vertical dispense handle with bracket for tool balancer, pneumatic trigger and an assortment of stainless steel nozzles. See page 33 for details.		Not Applicable	Yes	Yes
18	Hand-held pistol style dispense gun with bracket for tool balancer, electronic trigger, 24 VDC solenoid valve, and an assortment of stainless steel nozzles. See page 33 for details.		Not Applicable	Yes	Yes
19	Hand-held pistol style dispense gun with bracket for tool balancer, pneumatic trigger and an assortment of stainless steel nozzles. See page 33 for details.		Not Applicable	Yes	Yes
20	Analog Flow sensor (0-10 Volt)		One M12 DC	Yes	No
21	Clamp bracket used to side mount dispenser.		Not Applicable	Yes	Yes
22	Premium Seals for Use with Abrasive Material		Not Applicable	Yes	Yes
23	Air Operated Outlet Check Valve		Not Applicable	Yes	No
26	Flow Sensor, Digital 24 VDC PNP/NPN, Analog 0-10V or 4-20mA (IFM Sensor)		One M12 DC	Yes	No





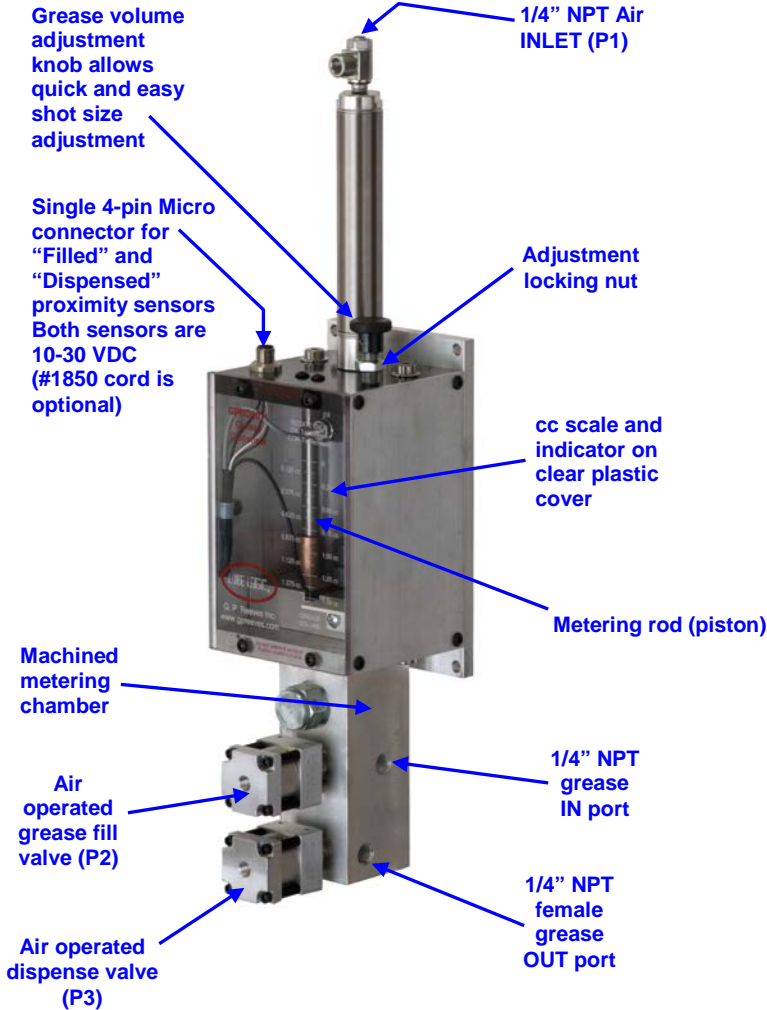
Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: www.gpreeves.com

# GPMD2000 SERIES GREASE DISPENSERS

Photo shows GPMD2011-ACE1. Other models are similar.



- Positive displacement for accurate dispense volume regardless of viscosity
- Integrated volume adjustment scale
- Integrated dispenser ready and dispenser complete sensor.
- Air operated check valves prevent leaking
- Visual indication of adjustment and function
- Designed for high pressure grease between 400 and 3,000 psi

GPMD23CP control package is available



**NOTES**

Custom dispensers are available in other sizes. Dispensers should always be installed as close to the dispense points as possible

GPMD2000 series dispensers are positive displacement and include two air pilot operated check valves, two piston position proximity sensors, a stroke adjustment mechanism, a cc scale, and require 10-30 VDC and two or three 3-way air valves and a minimum of 55 p.s.i. compressed air for operation.

Part Number	Adjustable Grease Volume
GPMD2008-ACE1	0.50 to 7.31 cc (two stroke sensors)
GPMD2009-ACE1	1 to 16 cc (two stroke sensors)
GPMD2011-ACE1	0.12 to 1.50 cc (two stroke sensors)
GPMD2012-ACE1	0.05 to 0.40 cc (two stroke sensors)
GPMD2014-ACE1	0.02 and 0.40 cc (two stroke sensors)
GPMD23CP	Controller with solenoid valves

**SEQUENCE OF OPERATION:** Dispenser requires two or three 3-way solenoid valves or one 4-way open center valve and PLC for operation. It is very important NOT to use a 4 way closed center valve.

- FILL:** Open fill valve (P2) to allow grease into the dispenser until the full sensor is actuated.
- DWELL:** Close fill valve for at least 1/3 second before dispensing.
- DISPENSE:** Open dispense valve and extend dispense cylinder (P1 and P3) until dispense complete sensor is actuated. Close P1 and P3, wait at least 1/3 second before opening fill valve.





Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)

# GPMD3000 SERIES GREASE DISPENSERS

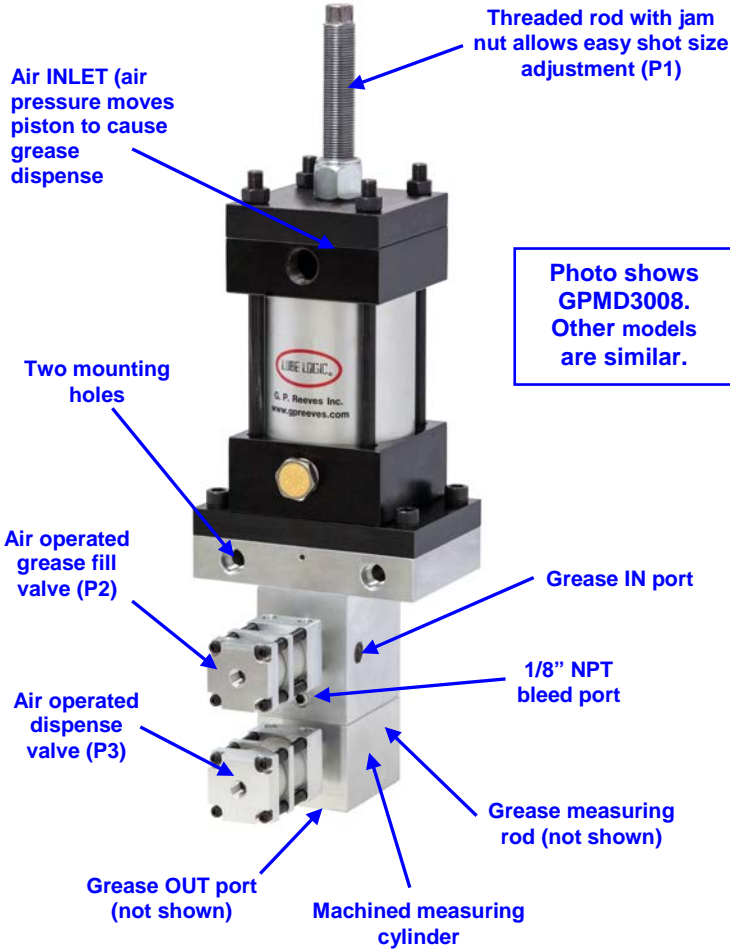


Photo shows GPMD3008. Other models are similar.

- Positive displacement for accurate repetitive dispensing regardless of temperature and viscosity changes
- Adjustment requires wrenches to prevent unauthorized volume adjustment
- Air operated check valves facilitate quick fill, quick dispense and prevent leaking
- Threaded adjustment rod is visual indication of adjustment
- Operate with grease inlet pressure between 400 and 3,000 psi

GPMD23CP control package is available



**NOTES**  
GPMD3000 series dispensers are also available with NPN stroke sensors, multiple stroke sensors, linear position sensors, and without stroke sensors.  
See drawings for dimensions, port sizes, schematic diagrams, and other details.  
Custom dispensers are available in other sizes.  
Grease dispensers should always be installed as close to the dispense points as possible

GPMD3000 series dispensers are positive displacement and include two air pilot operated check valves and a threaded rod stroke adjustment mechanism with a jam nut. Additional stroke sensors are optional and can be included in part number. Example: GPMD3020PNP

Part Number	Adjustable Grease Volume
GPMD3007	25 to 62 cc (one stroke sensor)
GPMD3008	2 to 25 cc (one stroke sensor)
GPMD3009	15 to 210 cc (two stroke sensors)
GPMD3013	0.04 to 4.00 cc (no stroke sensor)
GPMD3020	0.04 to 0.50 cc (two stroke sensors)
GPMD23CP	Controller with solenoid valves

**SEQUENCE OF OPERATION:** Dispenser requires two or three 3-way solenoid valves or one 4-way open center valve and PLC for operation. It is very important NOT to use a 4 way closed center valve.

- FILL:** Open fill valve (P2) to allow grease into the dispenser until the full sensor is actuated.
- DWELL:** Close fill valve for at least 1/3 second before dispensing.
- DISPENSE:** Open dispense valve and extend dispense cylinder (P1 and P3) until dispense complete sensor is actuated. Close P1 and P3, wait at least 1/3 second before opening fill valve.



Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: www.gpreeves.com

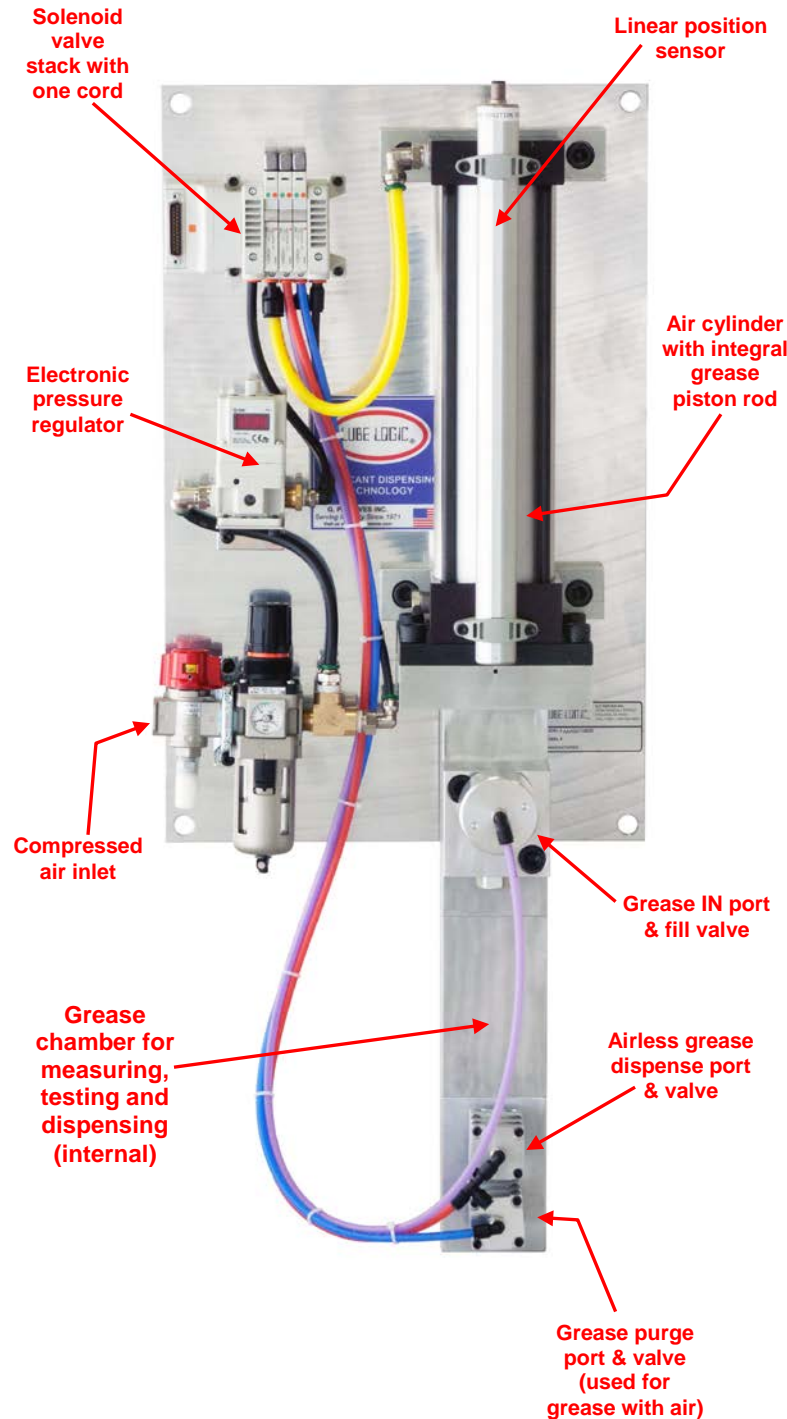


## PLC CONTROLLED DISPENSER (PNEUMATIC SHOTMETER)

Manufactured under US patent number 6,053,285

The pneumatic AA dispenser allows for PLC volume and rate control without the added cost of a servo. These are used for critical applications where the volume is critical, or volume confirmation is required, or accurate rate control is required, or recipe volume control is required.

### Pneumatic AA Dispensers



- Patented Air Removal Process ensures airless grease in your manufacturing process.
- Air cylinder with electronic regulator/linear position sensor & positive displacement meter provide accurate volume & dispense rate control.
- Flow-thru design reduces the pack out of material.
- Closed Loop System automatically compensates for temperature and viscosity changes.
- PLC Volume Confirmation.
- Also available for sealant and RTV materials.

COMMON AAPGD PART NUMBERS: ("xxxx" will be filled in depending on valve and controller options)		
PART NUMBER	TYPE	CAPACITY
AAPGD1079-xxxx	Pneumatic	.10-2.00cc
AAPGD1067-xxxx	Pneumatic	.20-4.00cc
AAPGD1070-xxxx	Pneumatic	.60-13.5cc
AAPGD1073-xxxx	Pneumatic	1.25-27cc
AAPGD1017-xxxx	Pneumatic	6-140cc
AAPGD1133-xxxx	Pneumatic	10-200cc
AAPGD1076-xxxx	Pneumatic	20-490cc

**Note: Control and Valve options are shown on the next page and are available on both Pneumatic and Electronic AA Dispensers.**



Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: www.gpreeves.com

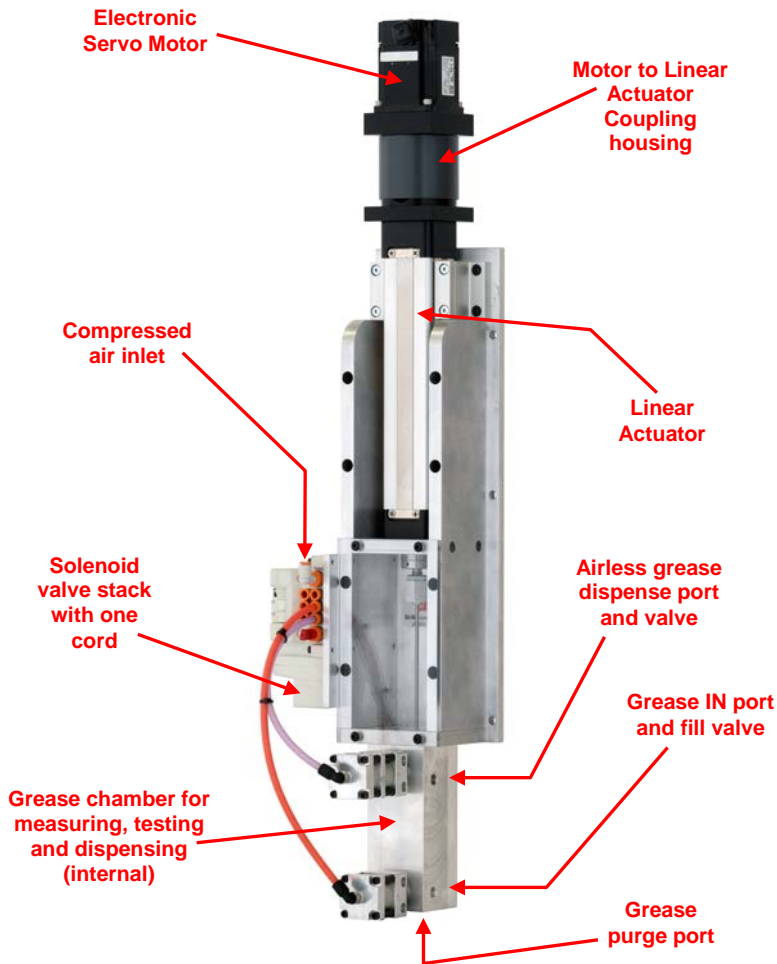


## PLC CONTROLLED DISPENSER (ELECTRONIC SHOTMETER)

Manufactured under US patent number 6,053,285

The electronic AA dispenser allows for PLC volume and rate control. These are used for critical applications where the volume is critical, or accurate rate control is required, or recipe volume control is required. The electronic control allows for incredibly accurate rate control without the limitation of dispense rate of the pneumatic AA.

### Electronic AA Dispensers



- Patented Air Removal Process ensures airless grease in your manufacturing process.
- Flow-thru design reduces the pack out of material.
- PLC Volume Confirmation.
- Linear Actuator & positive displacement meter provide accurate volume & dispense rate control.
- Also available for sealant and RTV materials.

COMMON AAPGD PART NUMBERS: (“xxxx” will be filled in depending on valve and controller options)		
PART NUMBER	TYPE	CAPACITY
AAPGD1109-xxxx	Electronic	.5 – 2.00cc
AAPGD1115-xxxx	Electronic	.005 - .79cc
AAPGD1178-xxxx	Electronic	.05 - 2.00cc
AAPGD2169-xxxx	Electronic	5.00 - 375 cc
AAPGD2170-xxxx	Electronic	.05 - 13.50 cc

**CONTROL OPTIONS**

Microprocessor      Allen Bradley  
Siemens              Omron

Sample programs are available on select PLC & HMI's for integrating into upper level PLCs.

Note: The # of meters that can be controlled vary based on the controller selected.

Please contact your local GP Reeves representative for more information.



**VALVE OPTIONS**

- Integrated Spray air regulators to feed spray nozzles
- Multiple outlet valves to be used sequentially with independent volume/rate control
- SMC solenoid valves (positive or negative common)-Standard
- SMC electronic pressure regulator-Standard
- SMC Solenoid valves for Serial I/O

**Note: Control and Valve options are available on both Pneumatic and Electronic AA Dispensers.**



Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

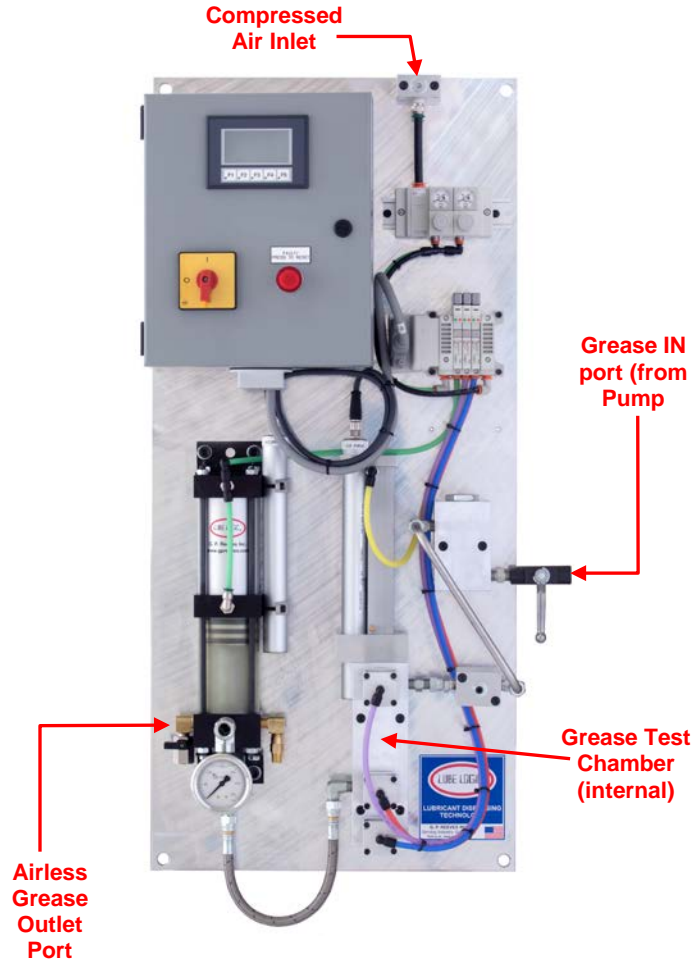
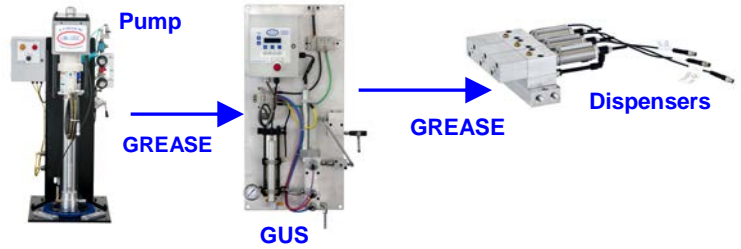
Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)

# GUS

## FINDS AND REMOVES AIR FROM GREASE!

Manufactured under US patent number 6,053,285

- Patented air removal process ensures airless grease in your manufacturing process.
- Allows for dispensing during pail or drum changes.
- One GUS can feed multiple meters or dispensers with airless grease.



### CONTROL OPTIONS

Microprocessor Siemens	Allen Bradley Omron
---------------------------	------------------------

Sample programs are available on select PLC & HMIs for integrating into upper level PLCs. Please contact your local GP Reeves representative for more information.

### OPTIONS

- SMC solenoid valves (positive or negative common) - Standard
- SMC Solenoid valves for Serial I/O - OPTIONAL
- Available with auto-fill or manual fill inlet reservoir
- Available with floor mounted or portable frame

### COMMON GUS PART NUMBERS: ("xxxx" will be filled in depending on options)

PART NUMBER	FEATURES	USAGE/FLOW	OUTPUT PRESSURE
GUS1027-xxxx	Designed for low pressure systems using GSS / GSSM series, GPMD1000 series or GPMD15000 series dispensers.	4cc / minute	50 - 180 PSI
GUS1037-xxxx	Designed to feed high pressure dispensers such as GPMD2000 series, GPMD3000 series and servo dispensers.	4cc / minute	150 - 1,000 PSI
GUS1051-xxxx	Includes manual fill inlet reservoir for small low pressure systems. Base mounted frame for bench top mounting.	2cc / minute	80 - 260 PSI
GUS1077-xxxx	Designed to feed low or high pressure systems.	20cc / minute	150 - 1,000 PSI
GUS1078-xxxx	Designed to fill manual fill and auto-fill grease reservoirs.	600cc / minute cont.	600 - 2,700 PSI



Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

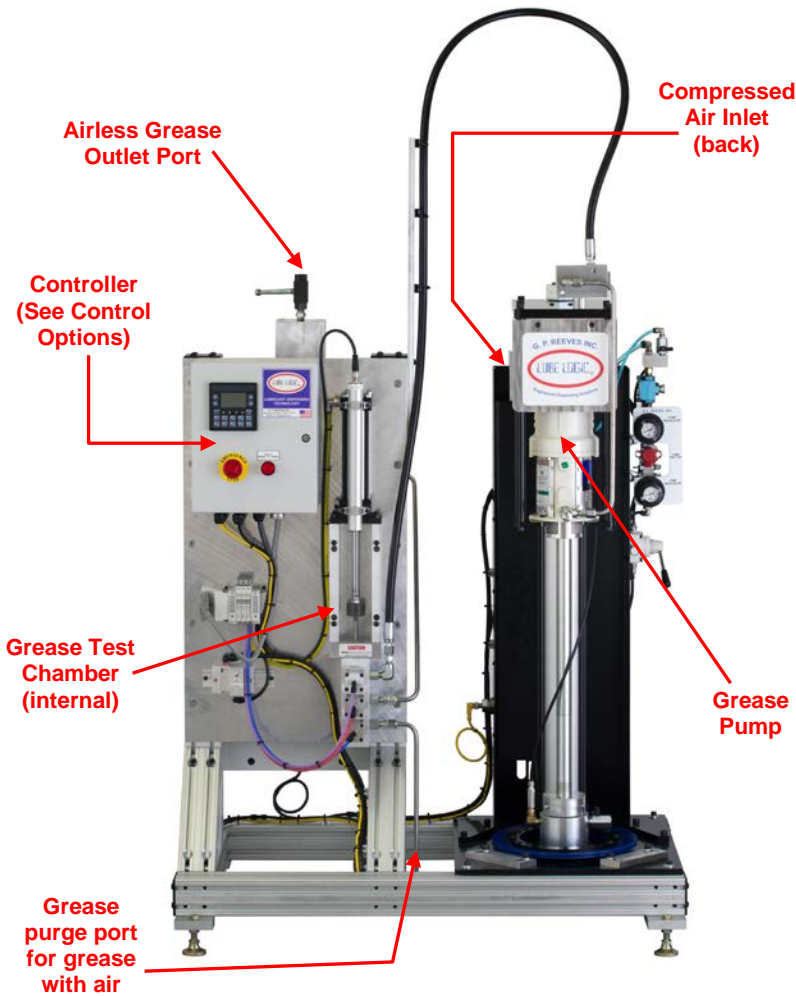
Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)

# PUMP WITH GUS

**FINDS AND REMOVES AIR FROM GREASE!**

Manufactured under US patent number 6,053,285

- Patented air removal process ensures airless grease in your manufacturing process.
- Allows for dispensing during pail or drum changes.
- One GUS can feed multiple meters or dispensers with airless grease.



**CONTROL OPTIONS**

Microprocessor Siemens	Allen Bradley Omron
---------------------------	------------------------

Sample programs are available on select PLC & HMIs for integrating into upper level PLCs. Please contact your local GP Reeves representative for more information.

**OPTIONS**

- SMC solenoid valves (positive or negative common) - Standard
- Aluminum Extrusion Frame - Standard
- SMC Solenoid valves for Serial I/O - OPTIONAL
- Portability Kit - OPTIONAL
- Welded Steel Frame - OPTIONAL

**COMMON SGPGUS PART NUMBERS:** ("xxxx" will be filled in depending on options)

PART NUMBER	FEATURES	USAGE/ FLOW OPTIONS	OUTPUT PRESSURE OPTIONS
SGPGUS35-xxxx	Includes unloader pump for 18 kg or 35 lb (five gallon) pail.	4cc / minute 30cc / minute 60cc / minute 600cc / semi-cont.	50 - 180 PSI 150 - 1,000 PSI 600 - 2,700 PSI
SGPGUS25kg-xxxx	Includes unloader pump for 25 kg. pail.		
SGPGUS35kg-xxxx	Includes unloader pump for 35 kg. pail.		
SGPGUS400-xxxx	Includes unloader pump for 400 lb (55 gallon) drum.		



Serving industry since 1971

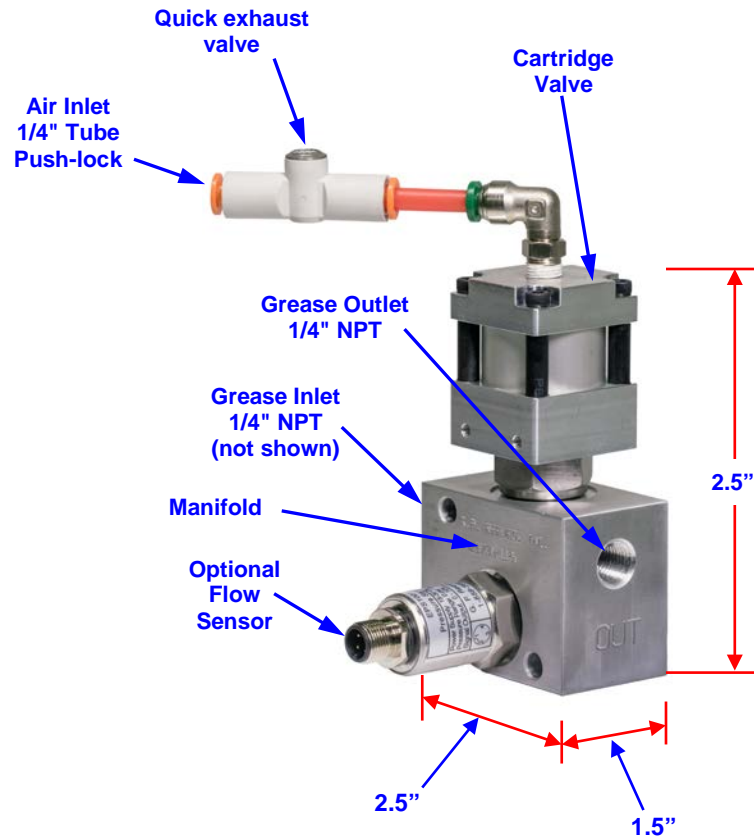
G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: www.gpreeves.com

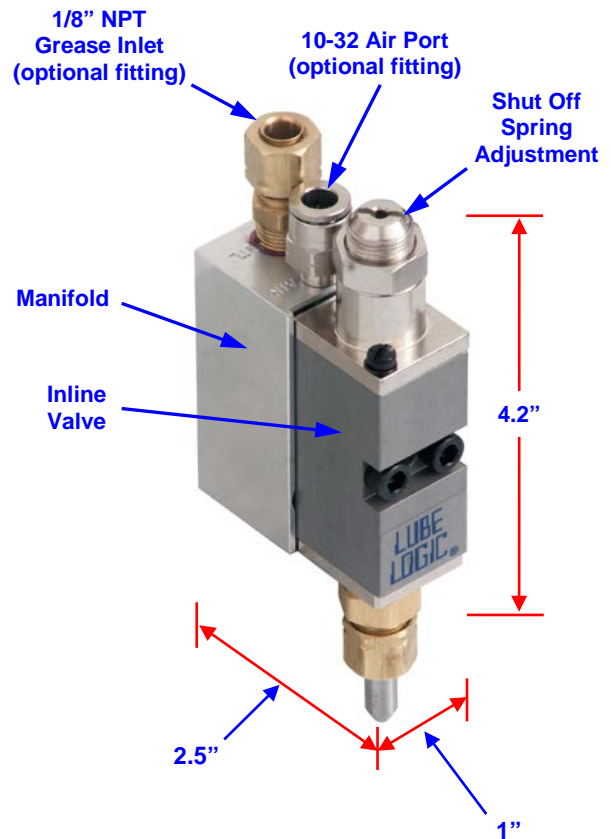
# GREASE DISPENSE VALVES

- Options for maximum 1500 or 3000 psi grease
- Available in multiple sizes and gun options
- Can be used with "timed dispense" systems
- Cleanable and repairable

## Cartridge Valve Type



## Inline Valve Type



Part Number	Material Ports	Material Pressure Rating	Dispense Valve Type	Replacement Valve	Options Available
DV1003	1/8"	1500 psi	Inline	GPR7379	-SP : Spray air nozzle included -LR : Leur Lock outlet port -TM : Includes integrated flow control for timed dispense -Z : Includes Zerk fitting
DV2003	1/4"	3000 psi		GPR8596	
DV2973A		3/8"	3000 psi	Cartridge	-EPS : Includes SAE #4 port on side for EPS1001 (purchased separately)
DV3239A				-	
DV5313				-	

Options are added to the end of the base part numbers as a suffix. For example, DV1003-SP would be a DV1003 with spray air nozzle and DV2003-Z would be a DV2003 with zerk fitting.

3D models are available

**CAUTION: Because grease viscosity varies with temperature, "timed dispense" is often not accurate enough to meet many quality control specifications**



Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: <http://gpreeves.com>

# SNUFF-BACK DEVICES

- Minimize or eliminate drooling
- Function with NLGI 000 through NLGI 2 grease
- Pull grease back from nozzle tip after dispense
- Compact for installation near grease application nozzle
- Dispense faster
- Cleanable and repairable
- Compensate for swelling or bending hoses and for compressibility of grease

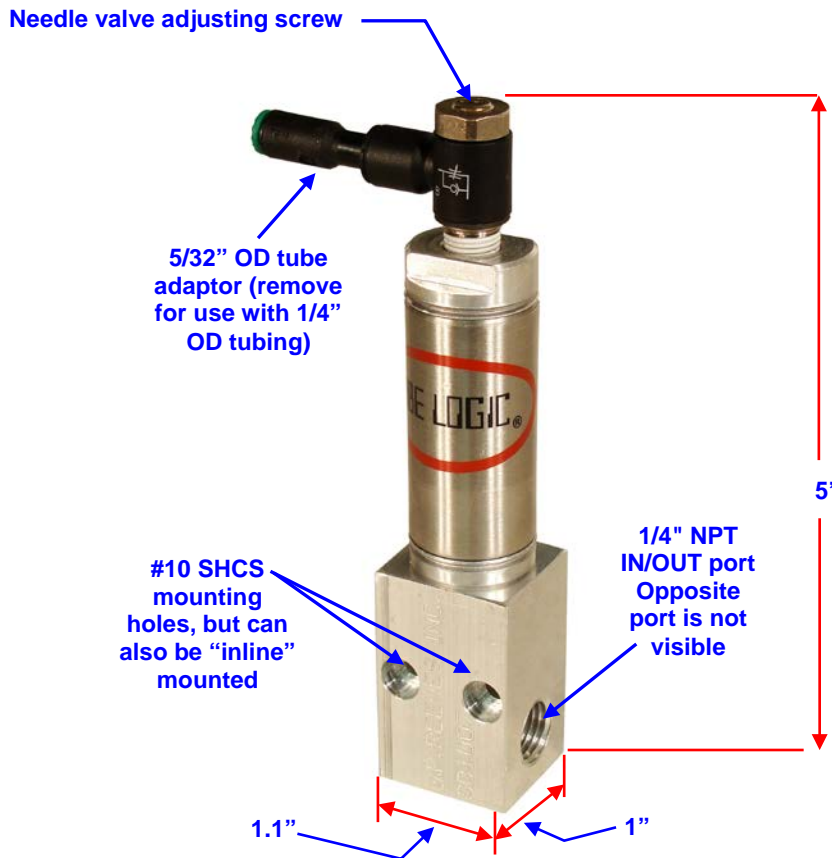


Photo shows SB1007 (others are similar)

**HOW IT WORKS**

The snuff-back device causes a decrease in the dispense tubing or hose ID volume during dispense and an increase in that volume after dispense.

AVAILABLE SNUFF-BACK DEVICES			
Part number	Snuff-back displacement	Material Port size	Push-lock air fitting for:
SB1006	1.2 cc	1/4" NPT	5/32" & 1/4" OD tube
SB1007	0.40 cc	1/4" NPT	5/32" & 1/4" OD tube
SB1019	0.10 cc	1/8" NPT	5/32" & 1/4" OD tube



Snuff-back with grease extrusion nozzle

Nozzle without snuff-back



Nozzle with snuff-back

3D models are available



Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: <http://gpreeves.com>

# FLOW CONFIRMATION DEVICES

Detect grease flow failure for critical dispense points

These devices are designed to mount between a positive displacement dispenser and the nozzle/tooling. They are designed to provide a final fail-safe to prevent reject parts from getting into the field. Keep in mind that air is the greatest threat to a dispensing system. Many of these products can find air in grease. However, preventing air using a GUS, SGPGUS or AA dispenser is highly recommended for critical applications. Keep in mind that the AA dispensers also provide PLC volume control and volume confirmation.



## INDUCTIVE FLOW SENSORS

**How They Work:** A small plunger (monitored by a sensor) is moved by the grease when grease flows through the device. The plunger is not moved by air bubbles when they pass through the device.

### Advantages:

- Simple to adjust and program
- Does a great job finding small air bubbles as they are dispensed.
- Inexpensive

## NO VOLUME CONFIRMATION

### Disadvantages:

- Does not work well with material that has contamination or debris
- Must be mounted close to dispenser or injector to assure dispense velocity.

Part Number	Description	Applications
FS3001	Manifold mounted, 20-250 V AC/DC (two wire)	For use with high pressure and high flow systems. Maximum pressure is 3000psi.
FS3002	Manifold mounted, 10-30 VDC PNP (DC three wire)	
FS3009	Inline mounted (Requires no manifold), 10-30 VDC PNP (DC three wire)	For use with low pressure and low flow systems. Maximum pressure is 1000psi.
FS3009NPN	Inline mounted (Requires no manifold), 10-30 VDC NPN (DC three wire)	
OPTION 16	Integrated onto GSS or GPMD10000 series dispensers, 10-30 VDC PNP (DC three wire)	
OPTION 17	Integrated onto GSS or GPMD10000 series dispensers, 10-30 VDC NPN (DC three wire)	



## DIGITAL FLOW SENSORS

**How They Work:** Uses dual set-point pressure to confirm flow. High limit confirms that the nozzle is not clogged. Low limit confirms that grease was dispensed. Pressure will not reach low limit if air is dispensed.

### Advantages:

- Simple to adjust and program
- Digital readout aids in troubleshooting.

### Disadvantages:

- Does not work well with a lot of tubing or stored volume downstream.
- Does not do well with viscosity changes.
- Does not do well with inconsistent dispense frequency.
- Does not do well finding small air bubbles.

## NO VOLUME CONFIRMATION

Part Number	Description	Applications
OPTION 06	Integrated onto GSS or GPMD10000 dispensers, 10-30 VDC PNP (DC three wire)	For use with low pressure and low flow systems. Maximum pressure is 1000psi.
FS4009	Inline mounted (Requires no manifold), 10-30 VDC PNP (DC three wire)	
FS4019	Inline mounted (Requires no manifold), 10-30 VDC PNP (DC three wire)	For use with high pressure and high flow systems. Maximum pressure is 3000psi.



## ANALOG FLOW SENSORS

**How They Work:** Uses analog input to monitor pressure spike to confirm flow. PLC is used to monitor and adjust pressure spikes. Often times people use a "Delta P" to allow pressure limits to self adjust as the viscosity changes.

### Advantages:

- Works well at finding small air bubbles as they are dispensed.
- Works well with low dispense velocity.
- Works well with viscosity changes.
- Works well with material that has contamination or debris.

## NO VOLUME CONFIRMATION

### Disadvantages:

- Requires analog input
- Requires PLC programming
- Must use PLC to adjust set-points.

Part Number	Description	Maximum Pressure	Applications
OPTION 18	Integrated onto GSS or GPMD10000 series dispensers, 0-10V Analog	870 psi	For use with low pressure and low flow systems.
EPS1001	Inline mounted (Requires SAE #4 Port), 0-10V Analog	870 psi	
EPS1002	Inline mounted (Requires SAE #4 Port), 0-10V Analog	3000 psi	For use with high pressure and high flow systems.
EPS1007	Inline mounted (Requires SAE #4 Port), 0-10V Digital/Analog	3500 psi	





Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: <http://gpreeves.com>

# VOLUME CONFIRMATION DEVICES

Confirms volume of flow for critical dispense points

These devices are designed to mount between a positive displacement dispenser and the nozzle/tooling. They are designed to provide a final fail-safe to prevent reject parts from getting into the field. Keep in mind that air is the greatest threat to a dispensing system. Many of these products can find air in grease. However, preventing air using a GUS, SGPGUS or AA dispenser is highly recommended for critical applications. Keep in mind that the AA dispensers also provide PLC volume control and volume confirmation.



## VOLUMETRIC MONITOR WITH GEARS

HAS VOLUME CONFIRMATION

**How They Work:** Material flows through precise gears to rotate them. Output is sent every time gear is rotated.

**Advantages:**

- Flow through device allows for continuous flow.
- Inexpensive
- Simple to adjust / program
- Small footprint

**Disadvantages:**

- Does not work well with contamination.
- Does not work well finding small air bubbles.
- Not as accurate with thin material.

Part Number	Description	Applications
VMFG-1	One switch output for every 0.10cc. Operates on 10 to 30 VDC.	For use with high pressure and high flow systems. Maximum pressure is 2900psi.
VMFG-1-C	One switch output for every 0.10cc. Operates on 10 to 30 VDC. Includes controller.	
VMFG-25	One switch output for every 0.025cc. Operates on 10 to 30 VDC.	
VMFG-25-C	One switch output for every 0.025cc. Operates on 10 to 30 VDC. Includes controller.	



## VMF FLOW SENSORS

HAS VOLUME CONFIRMATION

**How They Work:** Uses piston movement to confirm volume dispensed. Requires a two stage dispense:  
 Stage 1: Dispense into flow sensor during dwell time.  
 Stage 2: Dispense out of flow sensor out to nozzle.

**Advantages:**

- Finds air bubbles as they are dispensed.
- Available with and without controller.

**Disadvantages:**

- Large footprint makes it hard to mount close to the dispense point.
- Does not do well with dispensing beads.
- Must be mounted close to dispenser or injector to assure dispense velocity.

Part Number	Description
VMF050-xxxx	Volumetric Flow Sensor with .50cc maximum volume confirmation.
VMF10-xxxx	Volumetric Flow Sensor with 10cc maximum volume confirmation.
VMF20-xxxx	Volumetric Flow Sensor with 20cc maximum volume confirmation.
VMF100-xxxx	Volumetric Flow Sensor with 100cc maximum volume confirmation.
VMF200-xxxx	Volumetric Flow Sensor with 200cc maximum volume confirmation.



## AA DISPENSERS

HAS VOLUME CONFIRMATION

**How They Work:** PLC is used to control movement of piston to dispense and verify correct amount was dispensed. Errors are found in between dispensed shots to insure correct volume displacement.

**Advantages:**

- PLC volume rate control allows for recipe selection which controls volumes/rates.
- Air removal process insures minimal downtime and accurate volumes.

**Disadvantages:**

- Large footprint especially to dispense large volumes of material.
- Requires advanced PLC programming.
- Dispenser is filled during dwell time which can take some time depending on volume.

Part Number	Description
See page 24 and 25 for AA part numbers and options.	



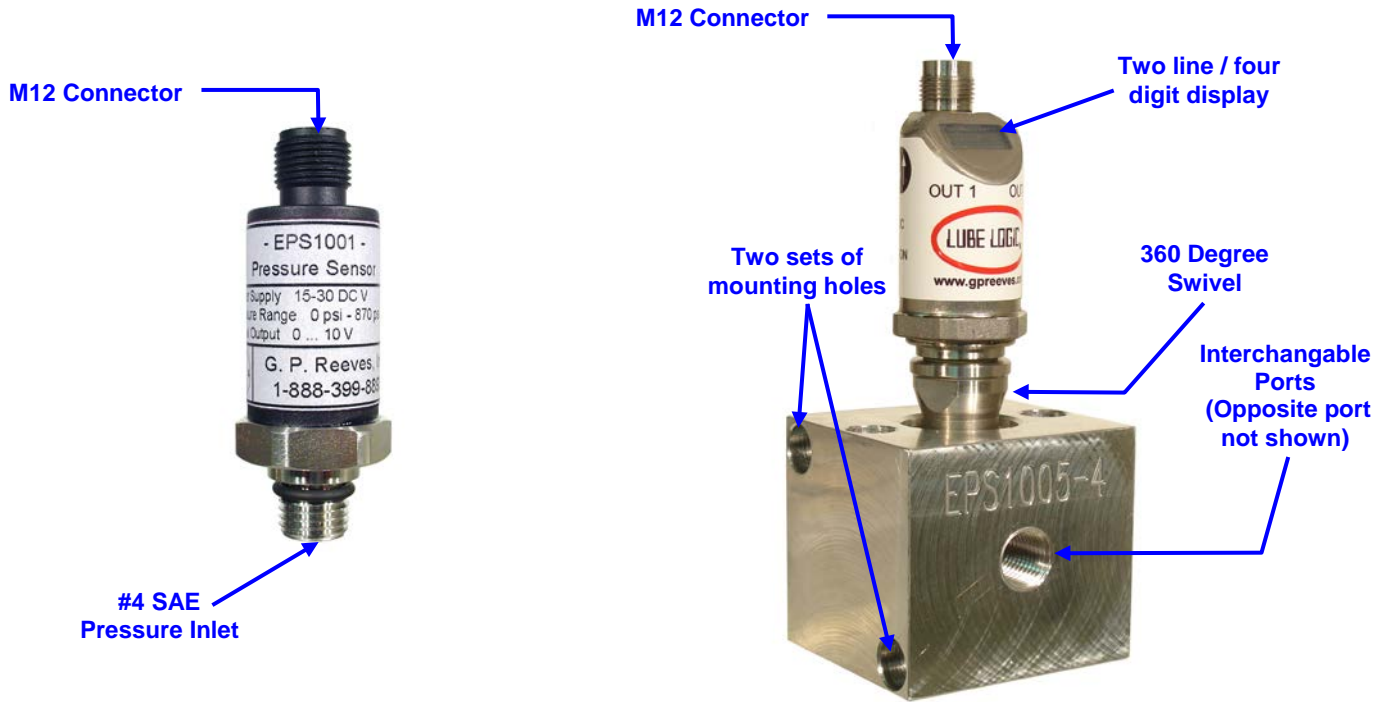
Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: [www.gpreeves.com](http://www.gpreeves.com)

# Grease Pressure Sensors / Switches

- Designed for grease but can also be used with oil
- Available in three pressure ranges
- Has rugged stainless steel membrane
- Available in two types



GREASE PRESSURE SENSOR / SWITCH OPTIONS			
Part Number (See options below to complete part number)	Type	Pressure Range (psi)	Min. Difference between High and Low
EPS1001-X	Analog	0 – 870 psi	N/A
EPS1002-X		0 – 3000 psi	N/A
EPS1004-X	Dual Setpoint	30 – 3000	30 psi
EPS1005-X		10 – 1000	10 psi
EPS1006-X		5 - 500	5 psi
EPS1007-X	Digital / Analog	0 - 3500 psi	5 psi

Blocks include the following port options:

- -2 with 1/8" NPT Ports
- -4 with 1/4" NPT Ports
- -6 with 3/8" NPT Ports

Analog Sensor / Switches output 0 – 10 V and requires input to customer supplied PLC.

Dual Setpoint Sensor / Switches use two electronic PNP switches and operate on 10 – 30 VDC. They are factory programmed for psi and normally opened ports but all settings are programmable via two buttons and digital display.

Digital / Analog Sensor / Switches uses two electronic PNP or NPN to operate on 24 VDC. They also include Analog Switch that can be programmed to 0-10v or 4-20mA.



Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: <http://gpreeves.com>

# Handheld Dispense Guns

Handheld dispense guns are available in vertical style, pistol style and wand style. The vertical and pistol style are available with electronic trigger or pneumatic trigger. The part numbers below are for the guns only, see GSS (pages 14 and 15), GPMD10000 series (pages 18 and 19) or GPMD15000 series (pages 20 and 21) to select dispenser.

VERTICAL STYLE	PISTOL STYLE	WAND STYLE
		
PART NUMBERS	PART NUMBERS	PART NUMBERS
<p><b>OPTION 16</b> with electronic trigger for GPMD15000 series dispensers.</p>	<p><b>GSS-061</b> with electronic trigger for GSS dispensers.</p> <p><b>GSS-060</b> with pneumatic trigger for GSS dispensers.</p> <p><b>DV1001PGN</b> includes dispense valve, electronic trigger, luer lock nozzle adaptor and pistol style handle. Shown in photo above as DV1001PGN.</p>	<p><b>DV1001VGN</b> includes electronic trigger and luer lock nozzle adaptor. Shown in photo above as DV1001VGN.</p>
<p><b>OPTION 17</b> with pneumatic trigger for GPMD15000 series dispensers. Shown in photo above as GPMD15080-17.</p>	<p><b>OPTION 24</b> with electronic trigger for GPMD10000 series dispensers.</p> <p><b>OPTION 25</b> with pneumatic trigger for GPMD10000 series dispensers.</p> <p><b>OPTION 18</b> with electronic trigger for GPMD15000 series dispensers.</p> <p><b>OPTION 19</b> with pneumatic trigger for GPMD15000 series dispensers.</p>	<p><b>GSS-062</b> includes electronic trigger for use with a remote mounted dispenser.</p> <p>(NOTE: Not all grease can be dispensed well with a remote dispenser.</p>

Example part numbers: GPMD15080-16, GPMD15125-17, GPMD10020-24 and GPMD10080-25

### Trigger Options:

**Electronic Trigger:** The dispense guns with electronic trigger are designed to be used with a PLC. The trigger should be used as an input to actuate an output to operate a solenoid valve. This will allow the PLC to control de-bounce time, solenoid on time, and poka-yoke the process.

**Pneumatic Trigger:** The dispense guns with pneumatic trigger do not require PLC control, but also do NOT allow for control of de-bounce time, solenoid on time, or poka-yoke.



**Serving industry  
since 1971**

**G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA**

**Phone: 888.399.8893  
Fax: 616.399.8867  
Web: <http://gpreeves.com>**

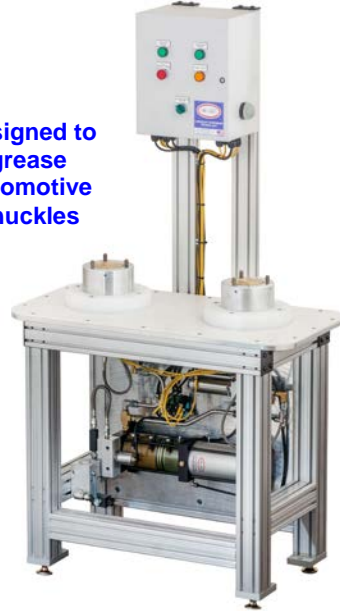
## Custom Dispensing Machines

We also engineer, design, and fabricate custom machines

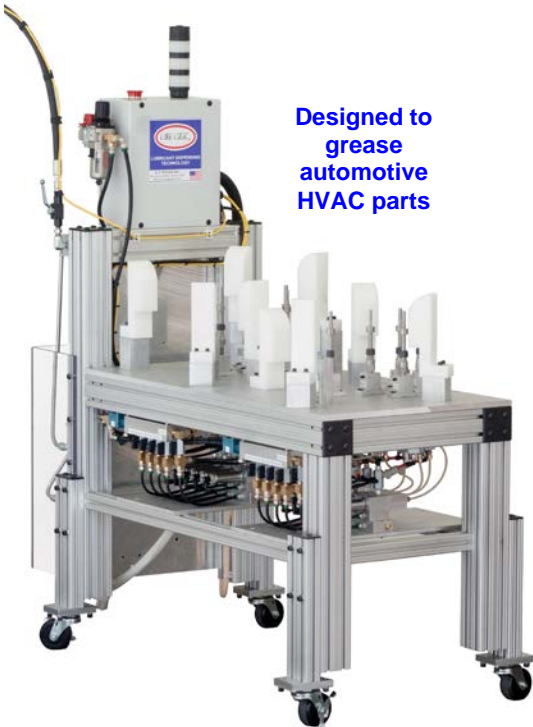
Designed to  
grease  
sunroof  
rails



Designed to  
grease  
automotive  
knuckles



Designed to  
grease  
automotive  
HVAC parts



Designed to  
grease  
natural gas  
valves



Designed to  
grease  
automotive  
electrical  
connectors  
with UV  
verification





Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: <http://gpreeves.com>

# Grease Volume

The paraboloid is a natural grease dispense shape



Grease volume is often expressed in cubic inches (<sup>3</sup>) and cubic centimeters (cc). Cubic centimeter is also known as milliliter (ml) and the terms are interchangeable. Grease weights (often expressed in grams) can be converted to cc and ml (volume) by dividing the weight by the specific gravity of the grease. EXAMPLE: The volume of one gram (weight) of grease with a specific gravity of .88 is 1.14 cubic centimeters (1 / .88 = 1.136 cc).

Formula for paraboloid volume:  
 $V = .3927d^2 h$

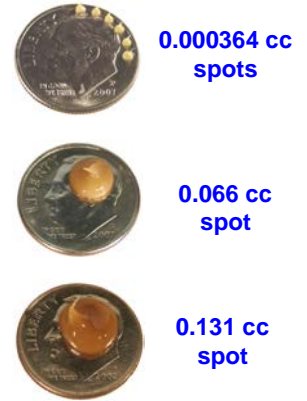
V = volume  
d = diameter  
h = height

The photo above shows the parabolic shape that often occurs when grease is extruded onto a flat surface from an open orifice type nozzle with the nozzle pulled away after grease was dispensed.

The volumes shown on the right are based on the height and diameter being equal

Volume in cubic inches and (cubic centimeters)	Height in inches and (mm)	Diameter in inches and (mm)
.001 (0.016)	.137 (3.48)	.137 (3.48)
.002 0(.033)	.172 (4.37)	.172 (4.37)
.003 (0.049)	.197 (5.00)	.197 (5.00)
.004 (0.066)	.217 (5.51)	.217 (5.51)
.005 (0.082)	.234 (5.94)	.234 (5.94)
.006 (0.098)	.248 (6.30)	.248 (6.30)
.007 (0.115)	.261 (6.63)	.261 (6.63)
.008 (0.131)	.273 (6.93)	.273 (6.93)
.009 (0.147)	.284 (7.21)	.284 (7.21)
.010 (0.164)	.294 (7.47)	.294 (7.47)
.011 0.180)	.304 (7.72)	.304 (7.72)
.012 0(.197)	.313 (7.95)	.313 (7.95)

APPLICATION VISUALS ON US DIMES



GREASE VOLUME BASED ON SPHERE DIAMETER Formula:  $V = 4\pi r^3 / 3$

V = volume, r = radius

The sphere is not a natural grease dispense shape, but it is included because it is familiar. EXAMPLE: The 0.177 caliber (4.5 mm) diameter of a BB of Daisy Red Rider fame and a 1/4" diameter ball bearing are easily visualized by many.

Diameter in inches and (mm)	Volume in cubic inches and (cubic centimeters)
0.062 (1.57)	0.000125 (0.0205)
0.125 (3.18)	0.0010 (0.0164)
0.177 (4.50)	0.0029 (0.0475)

Diameter in inches and (mm)	Volume in cubic inches and (cubic centimeters)
0.1875 (4.76)	0.00345 (0.0565)
0.25 (6.35)	0.0082 (0.1343)
0.38 (9.65)	0.0287 (0.470)



## EXTRUSION NOZZLES



Grease extruded on brake part

Grease sprayed on power window rails



## SPRAY NOZZLES

Nozzles fabricated from copper or steel tubing

Needle nozzles



Custom extrusion nozzles



GSS-009 remote threaded spray nozzle

KA0546 tubular spray nozzle

KA7802 plug-in spray nozzle



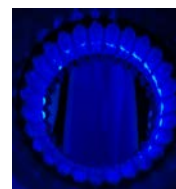
KA5360 nozzle on custom spray block

Custom spray nozzle for sunroof rails

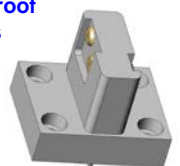


Greased connector shown with UV light

G. P. Reeves will engineer and fabricate custom extrusion and spray nozzles



Greased splines shown with UV light





Serving industry since 1971

G. P. Reeves Inc.  
12764 Greenly Street  
Holland, MI 49424 USA

Phone: 888.399.8893  
Fax: 616.399.8867  
Web: <http://gpreeves.com>

## VOLUME CONVERSION CHART

To Convert From:	Into:	Multiply By:
<b>GALLONS</b>	Quarts	4.0
	Pints	8.0
	Ounces	128.0
	Cubic inches	231.0
	Cubic centimeters	3,785.0
	Drops	112,920

To Convert From:	Into:	Multiply By:
<b>CUBIC INCHES</b>	Gallons	0.00433
	Quarts	0.01732
	Pints	0.0346
	Ounces	0.554
	Cubic centimeters	16.39
	Drops	490.0

To Convert From:	Into:	Multiply By:
<b>QUARTS</b>	Gallons	0.25
	Pints	2.0
	Ounces	32.0
	Cubic inches	57.75
	Cubic centimeters	946.52
	Drops	28,230

To Convert From:	Into:	Multiply By:
<b>CUBIC CENTIMETER</b>	Gallons	0.000264
	Quarts	0.00105
	Pints	0.0021
	Ounces	0.03381
	Cubic Inches	0.061
	Drops	30.0

To Convert From:	Into:	Multiply By:
<b>PINTS</b>	Gallons	0.125
	Quarts	0.5
	Ounces	16.0
	Cubic inches	28.87
	Cubic centimeters	473.179
	Drops	14,115

To Convert From:	Into:	Multiply By:
<b>DROPS</b>	Ounces	0.00113
	Cubic inches	0.002
	Cubic centimeters	0.033

To Convert From:	Into:	Multiply By:
<b>OUNCES</b>	Gallons	0.00781
	Quarts	0.03125
	Pints	0.0625
	Cubic inches	1.805
	Cubic centimeters	29.57
	Drops	885.0

To Convert From:	Into:	Multiply By:
<b>GRAMS</b> (Based on Specific Gravity of 0.90)	Cubic inches	0.0678
	Cubic centimeters (AKA milliliter)	1.111

### Grease Shot Size Visuals



0.000364 cc spots on a dime



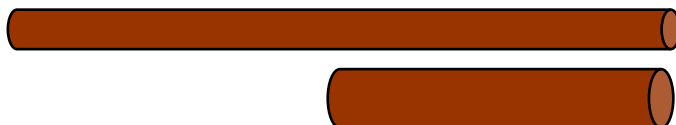
0.065 cc on a dime



0.131 cc on a dime



1.25 cc on a quarter



1/4" dia. x 4.50" lg. bead = 3.62 cc  
3/8" dia. x 2.0" lg. bead = 3.62 cc  
1/2" dia. x 1.125" lg. bead = 3.62 cc

