

PRECISION METERING PUMP - AIR OPERATED

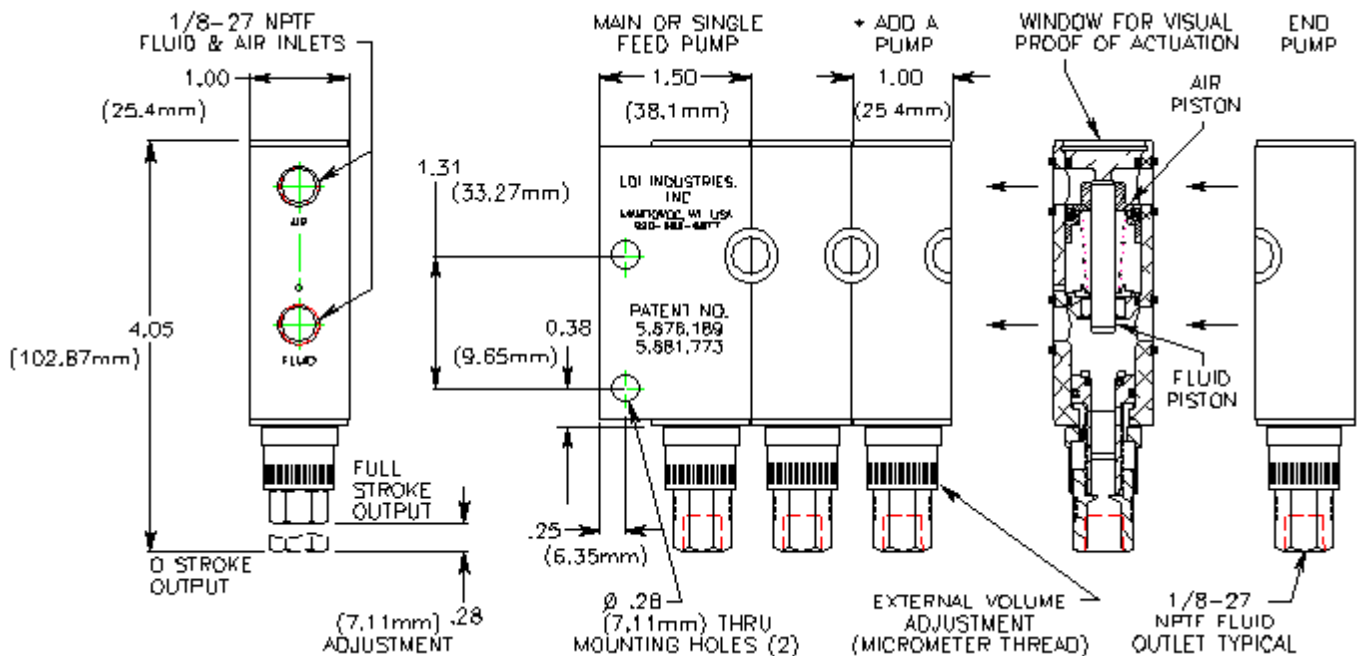
LDI INDUSTRIES' air operated metering pumps are unique in that each outlet/feed is an individual positive displacement pump. These pumps are ideal for dispensing precise easily adjustable volumes of a variety of fluids including: oils or grease for lubrication, inks, dyes, chemical additives and cutting fluids. The factory should be consulted before using with high water base fluids. The air operated metering pumps are positive displacement, self priming with up to 27 InHg (686mmHg) and will operate in any position. They are available in 1 to 15 feeds for oil or 1 to 5 feeds for grease with each feed independently and externally adjustable from 0 to .012 cu. in. (0 to .197 cu. cm.) by a micrometer thread .025 (.572mm) pitch. A patented feature allows additional pumps (AMP100) to be easily added to a PMP100-02 or more pump banks. The air operated metering pumps are intended for "on command", higher output pressure applications where a compressed air supply of 25 to 125 PSIG (172.5 to 862.5 kPa) is available. All feeds will actuate at the same time "on command" by using compressed air through LDI Industries' 3-way Solenoid Valve (item no. 832160) actuated by LDI Industries' Repeat Cycle Timers (item no. 832150 or 833380). LDI Industries' R100 series filtered reservoirs (Bulletin F357-7) are ideal for oil applications. Grease applications should use LDI Industries' GCA100 or GCA200 Grease Cartridge Adapters (Bulletin F1867-1) or GR75 or GR168 Grease Reservoirs (Bulletin F1867-2).

STANDARD MATERIALS:

- Aluminum, Brass, Steel, Acrylic
- Buna N & Viton seals

OPERATING CONDITIONS:

- Maximum working temperature up to 120°F (48.9°C)
Minimum working temperature 0°F (-17.7°C) oil
Minimum working temperature 32°F (0°C), grease
- Maximum output pressure up to 300 PSIG (2068 kPa)



- **PATENT NUMBERS: 5,876,189 and 5,881,773**

HOW TO ORDER:

After **PMP100** catalog number, specify number of feeds required, separated by a dash (-).
Specify 1 through 15 feeds-01/-15

EXAMPLE:

PMP100-05 — 5 FEED

*TO "ADD A PUMP", to existing multiple feed bank, order catalog number **AMP100**
(Not used with single feed P/N PMP100-01)



Lube Devices • Flodar • Hydra-Tool • Vescor
1864 Nagle Ave. P. O. Box 1810
Manitowoc, WI 54221-1810
Phone: (920) 682-6877 Fax: (920) 684-7210
E-MAIL: sales@ldi-industries.com WEBSITE: www.ldi-industries.com

PRECISION METERING PUMP
AIR OPERATED
5/07 **BULLETIN F1837-1**
ISO9001:2000 CERTIFIED

PRECISION METERING PUMP- MOTOR OPERATED

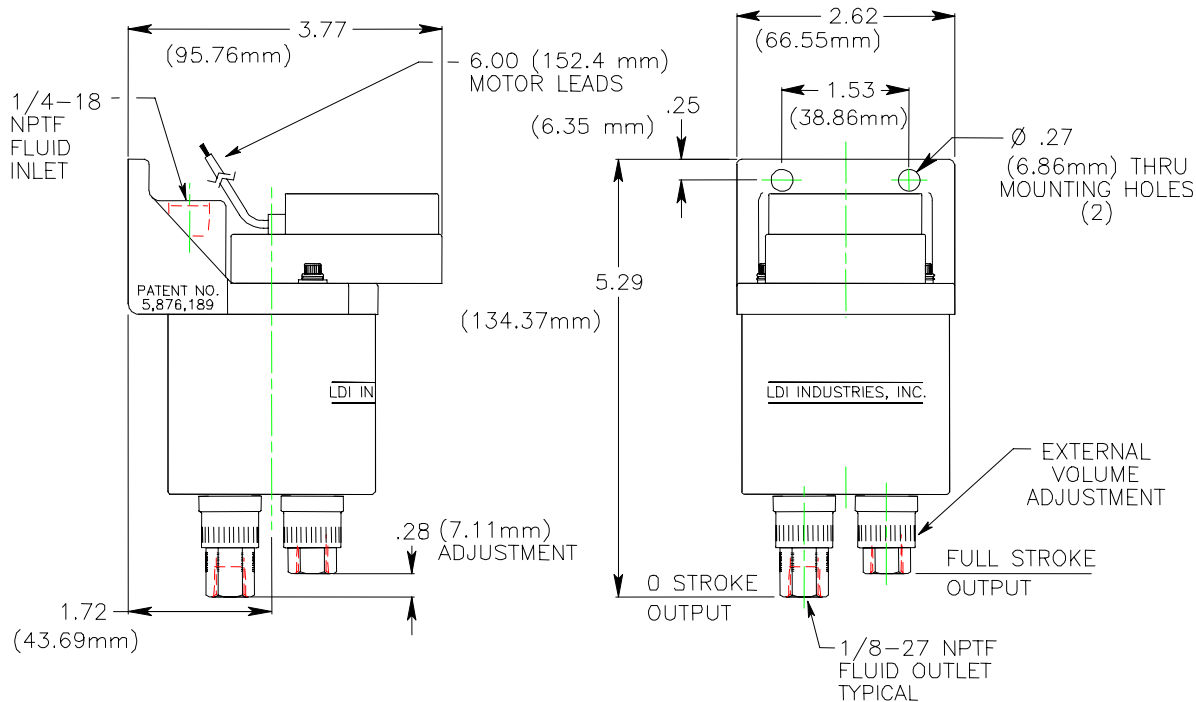
LDI Industries' motor operated metering pumps are unique in that each outlet/feed is an individual positive displacement pump. These pumps are ideal for dispensing precise easily adjustable volumes of a variety of fluids including: oils or grease for lubrication, inks, dyes, chemical additives and cutting fluids. The factory should be consulted before using with high water base fluids. The motor operated metering pumps are positive displacement, self priming with up to 27 InHg (686mmHg) and will operate in any position. They are available in 1 to 4 pumps with each pump independently and externally adjustable from 0 to .012 cu. in. (0 to .197 cu. cm.) by a micrometer thread .025 (.572mm) pitch. Each pump will actuate once per minute of motor run time. The motor operated metering pumps are intended for lower output pressure applications or where a compressed air supply is not available. **LDI Industries'** **R100** series filtered reservoirs (Bulletin F357-7) are ideal for oil applications. Grease applications should use **LDI Industries'** **GCA100** or **GCA200 Grease Cartridge Adapters** (Bulletin F1867-1) or **GR75** or **GR168 Grease Reservoirs** (Bulletin F1867-2).

STANDARD MATERIALS:

- Aluminum, Brass, Steel
- Buna N & Viton seals

OPERATING CONDITIONS:

- Maximum working temperature up to 120°F (48.9°C)
Minimum working temperature 0°F (-17.7°C) oil
Minimum working temperature 32°F (0°C), grease
- Maximum output pressure up to 50 PSIG (345 kPa)
- 120V, 60Hz, 4 W



- **PATENT NUMBER 5,876,189**

HOW TO ORDER:

After **PMP200** catalog number, specify number of feeds required, separated by a dash (-).

Specify 1 through 4 feeds -01/-04

EXAMPLE: **PMP200-04** — 4 FEED (shown)

PRECISION METERING PUMP
MOTOR OPERATED
5/07 **BULLETIN F1837-2**
ISO9001:2000 CERTIFIED



Lube Devices • Flodar • Hydra-Tool • Vescor
1864 Nagle Ave. P. O. Box 1810
Manitowoc, WI 54221-1810
Phone: (920) 682-6877 Fax: (920) 684-7210
E-MAIL: sales@ldi-industries.com WEBSITE: www.ldi-industries.com

PRECISION METERING PUMP SYSTEMS- AIR OPERATED, PANEL MOUNTED

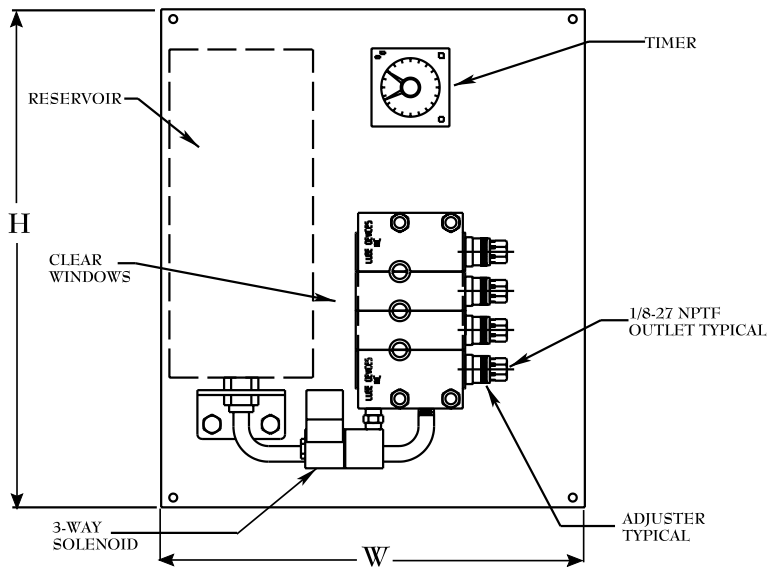
These "quick install" cost effective Centralized Lubrication Systems are pre-assembled with compatible components to minimize specification, purchasing and installation time. The automatic lubrication systems operate on 25 to 125 PSIG regulated & filtered shop air and a 120V, 60Hz 1Ph electrical supply for the included dual adjustable Repeat Cycle Timer and 3-Way Solenoid Valve. The systems are sized to meet most lubrication requirements. Each feed pump is independently and externally adjustable 0 to .012 cu in (0 to .197 cu cm) by using a fine micrometer thread .025 (.572mm) pitch adjustment. A clear window is provided on each Metering Pump for visual proof of actuation.

STANDARD MATERIALS:

- Aluminum, Brass, Steel, transparent polymer
- Buna N & Viton seals
- Nema compliant panels
- For additional component information see Bulletins F1837-1, F357-7, F1867-1 & F1867-2

OPERATING CONDITIONS:

- Maximum operating temperature up to 120°F (48.9°C)
Minimum operating temperature 0°F (-17.7°C) oil
- Minimum operating temperature 32°F (0°C), grease
- Maximum output pressure up to 300 PSIG (2068 kPa)



***Caution:** When using grease both the PMP100 Series and PMP200 Series Precision Metering Pumps are capable of dispensing nearly all types and grades of grease used in most general industrial, indoor or controlled temperature applications of 32°F (0°C) or above. The combination of higher viscosities, ambient temperatures lower than 32°F (0°C), excessively long runs of output feed lines, along with the type and use of smaller inside diameter feed lines, will have an effect on the feed rate and output capabilities of these pumps.

MODIFICATIONS AVAILABLE MADE TO ORDER - CONSULT OUR FACTORY

FOR OIL APPLICATION				
CAT NO.	RES CAP	NO. OF FEEDS	NEMA PANEL W x H	O. A. DEPTH
PMP340-04	1 QT.	4	10.88" x 12.75"	4.75"
PMP340-06	1 QT.	6		
PMP340-08	1 QT.	8		
PMP360-06	.5 GAL	6		
PMP360-08	.5 GAL	8	6.00"	
PMP360-12	.5 GAL	12		

*FOR GREASE APPLICATION				
CAT NO.	RES CAP	NO. OF FEEDS	NEMA PANEL W x H	O. A. DEPTH
PMP330-02	75 CU IN	2	10.88" X 12.75"	7.00"
PMP330-04	75 CU IN	4		
PMP330-06	75 CU IN	6		
PMP350-02	168 CU IN	2	12.88" X 14.75"	
PMP350-04	168 CU IN	4		
PMP350-06	168 CU IN	6		
PMP390-02	14 OZ CART. ADAPT.	2	8.88" X 14.75"	3.75"
PMP390-04		4		
PMP390-06		6		



Lube Devices • Flodar • Hydra-Tool • Vescor
 1864 Nagle Ave. P. O. Box 1810
 Manitowoc, WI 54221-1810
 Phone: (920) 682-6877 Fax: (920) 684-7210
 E-MAIL: sales@ldi-industries.com WEBSITE: www.ldi-industries.com

**PRECISION METERING PUMP SYSTEMS-
AIR OPERATED, PANEL MOUNTED**

9/06 **BULLETIN F1837-3**
ISO9001:2000 CERTIFIED

PRECISION METERING PUMP SYSTEMS- MOTOR OPERATED, PANEL MOUNTED

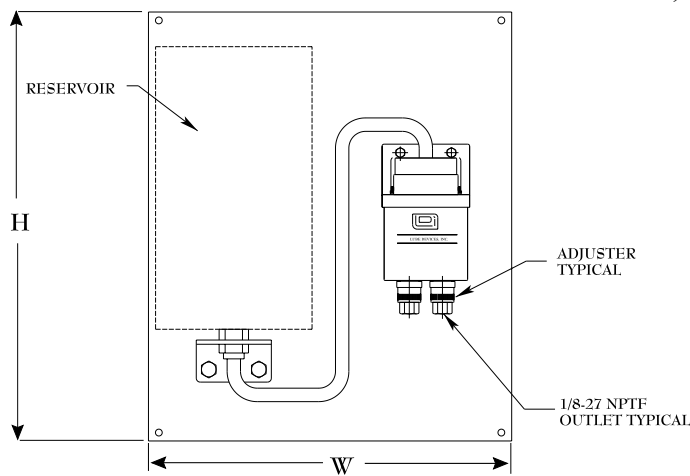
These "quick install" cost effective Centralized Lubrication Systems are pre-assembled with compatible components to minimize specification, purchasing and installation time. The automatic lubrication systems operate on a 120V, 60Hz 1Ph electrical supply for the motor. The systems are sized to meet most lubrication requirements where a compressed air supply is not available. Each feed pump is independently and externally adjustable 0 to .012 cu in (0 to .197 cu cm) by using a fine micrometer thread .025 (.572mm) pitch adjustment. Each feed pump will actuate once per minute of motor run time.

STANDARD MATERIALS:

- Aluminum, Brass, Steel, transparent polymer
- Buna N & Viton seals
- Nema compliant panels
- For additional component information see Bulletins F1837-2, F357-7, F1867-1 & F1867-2

OPERATING CONDITIONS:

- Maximum operating temperature up to 120°F (48.9°C)
Minimum operating temperature 0°F (-17.7°C) oil
- Minimum operating temperature 32°F (0°C), grease
- Maximum output pressure up to 50 PSIG (345 kPa)
- 120V, 60Hz, 4 W



***Caution:** When using grease both the PMP100 Series and PMP200 Series Precision Metering Pumps are capable of dispensing nearly all types and grades of grease used in most general industrial, indoor or controlled temperature applications of 32°F (0°C) or above. The combination of higher viscosities, ambient temperatures lower than 32°F (0°C), excessively long runs of output feed lines, along with the type and use of smaller inside diameter feed lines, will have an effect on the feed rate and output capabilities of these pumps.

MODIFICATIONS AVAILABLE MADE TO ORDER - CONSULT OUR FACTORY

FOR OIL APPLICATION				
CAT NO.	RES CAP	NO OF FEEDS	NEMA PANEL W x H	O. A. DEPTH
PMP440-01	1 QT.	1	10.88" X 12.75"	4.75"
PMP440-02	1 QT.	2		
PMP440-03	1 QT.	3		
PMP440-04	1 QT.	4		
PMP460-01	.5 GAL	1	10.88" X 12.75"	6.00"
PMP460-02	.5 GAL	2		
PMP460-03	.5 GAL	3		
PMP460-04	.5 GAL	4		

*FOR GREASE APPLICATION				
CAT NO.	RES CAP	NO OF FEEDS	NEMA PANEL W x H	O. A. DEPTH
PMP430-01	75 CU IN	1	10.88" X 12.75"	7.00"
PMP430-02	75 CU IN	2		
PMP430-03	75 CU IN	3		
PMP430-04	75 CU IN	4		
PMP450-01	168 CU IN	1	12.88" X 14.75"	7.00"
PMP450-02	168 CU IN	2		
PMP450-03	168 CU IN	3		
PMP450-04	168 CU IN	4		
PMP490-01	14 OZ CART. ADAPT.	1	8.88" X 14.75"	4.00"
PMP490-02		2		
PMP490-03		3		
PMP490-04		4		

PRECISION METERING PUMP SYSTEMS
MOTOR OPERATED, PANEL MOUNTED
9/06 **BULLETIN F1837-4**
ISO9001:2000 CERTIFIED



Lube Devices • Flodar • Hydra-Tool • Vescor
1864 Nagle Ave. P. O. Box 1810
Manitowoc, WI 54221-1810
Phone: (920) 682-6877 Fax: (920) 684-7210
E-MAIL: sales@ldi-industries.com WEBSITE: www.ldi-industries.com

PRECISION METERING PUMP SYSTEMS- AIR OPERATED, NEMA BOX MOUNTED

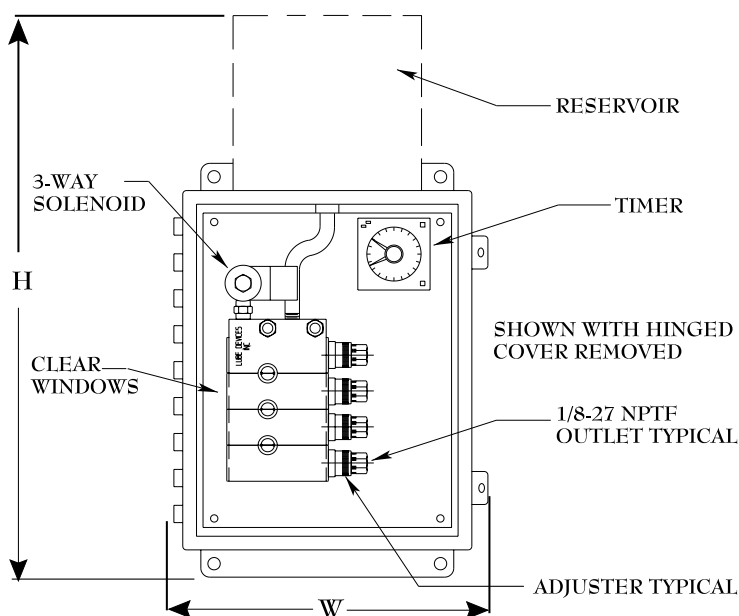
These "quick install" cost effective Centralized Lubrication Systems are pre-assembled with compatible components to minimize specification, purchasing and installation time. The automatic lubrication systems operate on 25 to 125 PSIG regulated & filtered shop air and a 120V, 60Hz 1Ph electrical supply for the included dual adjustable Repeat Cycle Timer and 3-Way Solenoid Valve. The systems are sized to meet most lubrication requirements. Each pump outlet is independently and externally adjustable 0 to .012 cu in (0 to .197 cu cm) by using a fine micrometer thread .025 (.572mm) pitch adjustment.

STANDARD MATERIALS:

- Aluminum, Brass, Steel, transparent polymer
- Buna N & Viton seals
- Painted Steel Nema Type 12 & 13 Box
- For additional component information see Bulletins F1837-1, F357-7, F1867-1 & F1867-2

OPERATING CONDITIONS:

- Maximum operating temperature up to 120°F (48.9°C)
Minimum operating temperature 0°F (-17.7°C), oil
Minimum operating temperature 32°F (0°C), grease
- Maximum output pressure up to 300 PSIG (2068 kPa)



**Caution:* When using grease both the PMP100 Series and PMP200 Series Precision Metering Pumps are capable of dispensing nearly all types and grades of grease used in most general industrial, indoor or controlled temperature applications of 32°F (0°C) or above. The combination of higher viscosities, ambient temperatures lower than 32°F (0°C), excessively long runs of output feed lines, along with the type and use of smaller inside diameter feed lines, will have an effect on the feed rate and output capabilities of these pumps.

MODIFICATIONS AVAILABLE MADE TO ORDER - CONSULT OUR FACTORY

FOR OIL APPLICATION				
CAT NO.	RES CAP	NO OF FEEDS	W x H	O. A. DEPTH
PMP540-04	1 QT.	4	9.00" X 18.00"	6.38"
PMP540-06	1 QT.	6		
PMP540-08	1 QT.	8		
PMP560-06	.5 GAL	6	9.00" X 20.12"	
PMP560-08	.5 GAL	8		
PMP560-12	.5 GAL	12		

*FOR GREASE APPLICATION				
CAT NO.	RES CAP	NO OF FEEDS	W x H	O. A. DEPTH
PMP530-02	75 CU IN	2	9.00" X 19.80"	6.56"
PMP530-04	75 CU IN	4		
PMP530-06	75 CU IN	6		
PMP550-02	168 CU IN	2	9.00" X 24.55"	
PMP550-04	168 CU IN	4		
PMP550-06	168 CU IN	6		



Lube Devices • Flodar • Hydra-Tool • Vescor
 1864 Nagle Ave. P. O. Box 1810
 Manitowoc, WI 54221-1810
 Phone: (920) 682-6877 Fax: (920) 684-7210
 E-MAIL: sales@ldi-industries.com WEBSITE: www.ldi-industries.com

**PRECISION METERING PUMP SYSTEMS-
AIR OPERATED, NEMA BOX MOUNTED**
 7/06 **BULLETIN F1837-5**
ISO9001:2000 CERTIFIED

PRECISION METERING PUMP SYSTEMS- MOTOR OPERATED, NEMA BOX MOUNTED

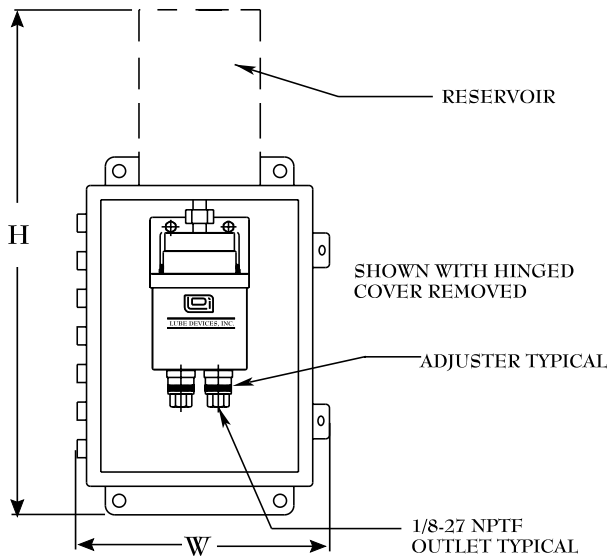
These "quick install" cost effective Centralized Lubrication Systems are pre-assembled with compatible components to minimize specification, purchasing and installation time. The automatic lubrication systems operate on a 120V, 60Hz 1Ph electrical supply for the motor. The systems are sized to meet most lubrication requirements where a compressed air supply is not available. Each pump outlet is independently and externally adjustable 0 to .012 cu in (0 to .197 cu cm) by using a fine micrometer thread .025 (.572mm) pitch adjustment. Each pump outlet will actuate once per minute of motor run time.

STANDARD MATERIALS:

- Aluminum, Brass, Steel, transparent polymer
- Buna N & Viton seals
- Painted Steel Nema Type 12 & 13 Box
- For additional component information see Bulletins F1837-2, F357-7, F1867-1 & F1867-2

OPERATING CONDITIONS:

- Maximum operating temperature up to 120°F (48.9°C)
Minimum operating temperature 0°F (-17.7°C), oil
- Minimum operating temperature 32°F (0°C), grease
- Maximum output pressure up to 50 PSIG (345 kPa)
- 120 V, 60 Hz, 4 W



***Caution:** When using grease both the PMP100 Series and PMP200 Series Precision Metering Pumps are capable of dispensing nearly all types and grades of grease used in most general industrial, indoor or controlled temperature applications of 32°F (0°C) or above. The combination of higher viscosities, ambient temperatures lower than 32°F (0°C), excessively long runs of output feed lines, along with the type and use of smaller inside diameter feed lines, will have an effect on the feed rate and output capabilities of these pumps.

MODIFICATIONS AVAILABLE MADE TO ORDER - CONSULT OUR FACTORY

FOR OIL APPLICATION				
CAT NO.	RES CAP	NO OF FEEDS	W x H	O. A. DEPTH
PMP640-01	1 QT.	1	7.00" X 16.00"	6.38"
PMP640-02	1 QT.	2		
PMP640-03	1 QT.	3		
PMP640-04	1 QT.	4		
PMP660-01	.5 GAL	1	7.00" X 18.12"	
PMP660-02	.5 GAL	2		
PMP660-03	.5 GAL	3		
PMP660-04	.5 GAL	4		

*FOR GREASE APPLICATION				
CAT NO.	RES CAP	NO OF FEEDS	W x H	O. A. DEPTH
PMP630-01	75 CU IN	1	7.00" X 17.80"	6.56"
PMP630-02	75 CU IN	2		
PMP630-03	75 CU IN	3		
PMP630-04	75 CU IN	4		
PMP650-01	168 CU IN	1	7.00" X 22.55"	
PMP650-02	168 CU IN	2		
PMP650-03	168 CU IN	3		
PMP650-04	168 CU IN	4		

PRECISION METERING PUMP SYSTEMS-
MOTOR OPERATED, NEMA BOX MOUNTED

7/06 **BULLETIN F1837-6**

ISO9001:2000 CERTIFIED



Lube Devices • Flodar • Hydra-Tool • Vescor

1864 Nagle Ave. P. O. Box 1810

Manitowoc, WI 54221-1810

Phone: (920) 682-6877 Fax: (920) 684-7210

E-MAIL: sales@ldi-industries.com WEBSITE: www.ldi-industries.com

GREASE CARTRIDGE ADAPTER

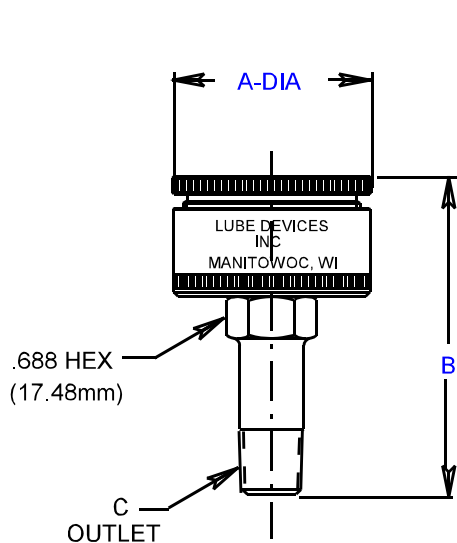
“NEW” Grease cartridge adapters are designed to take advantage of readily available grease cartridges. These cartridges are available in most commonly used NLGI grades at the retail or wholesale level. These brass adapters are ideally suited for operation with **LUBE DEVICES, INC.** Precision metering pumps **PMP100** (air operated Bulletin F1837-1) and **PMP200** (motor operated Bulletin F1837-2).

STANDARD MATERIALS:

- Brass construction
- Buna N Seals

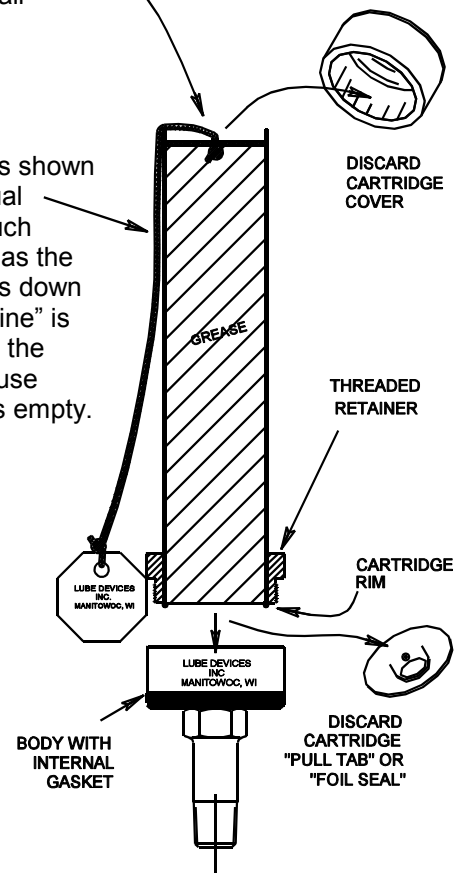
OPERATING CONDITIONS:

- Maximum working temperature up to 120°F (48.9°C)



Insert the “follower disc” until it touches grease (do not force). The “follower disc” is required to exclude dirt and prevent air holes in the grease.

Leave the disc “line” extended and free as shown and it will give a visual indication of how much grease is remaining as the “follower disc” moves down the cartridge. The “line” is also used to retrieve the “follower disc” for reuse when the cartridge is empty.



GCA100 Adapts the nominal 3 ounce (85g) standard cartridge size 1.31 (33.27mm) dia x 6.00 (152.40mm) long

GCA200 Adapts the nominal 14 ounce (397g) standard cartridge size 2.12 (53.85mm) dia x 9.00 (228.60mm) long

- Patent Number 6,149,037

CATALOG NUMBER	A INCHES (mm)	B INCHES (mm)	C OUTLET	CAPACITY-NOMINAL CARTRIDGE WEIGHT
GCA100	1.75 (44.45)	2.75 (69.85)	1/4-18NPTF	3 ounce (85g)
GCA200	2.50 (63.50)	2.81 (71.37)	1/4-18NPTF	14 ounce (397g)



LUBE DEVICES, INC.

1864 NAGLE AVE., P.O. BOX 1810, MANITOWOC, WI 54221-1810
 PHONE: (920) 682-6877 FAX: (920) 684-7210
 E-MAIL: sales@lubedevices.com WEBSITE: www.lubedevices.com

GREASE CARTRIDGE ADAPTER

12/02 **BULLETIN F1867-1**

GREASE RESERVOIRS - REMOTE/WALL MOUNT

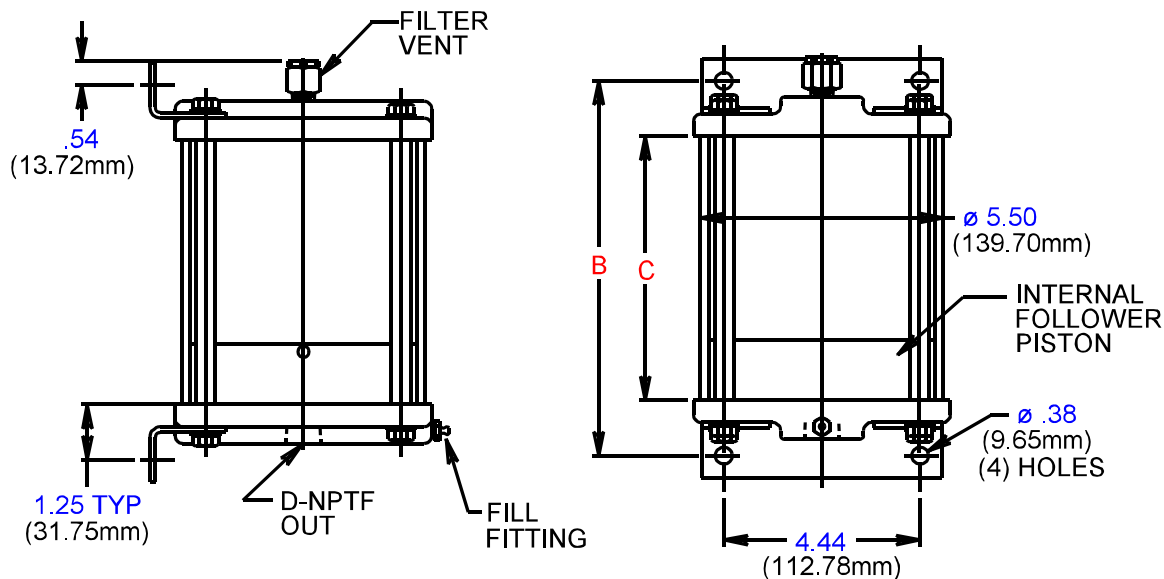
LUBE DEVICES' grease reservoirs are ideal for supplying positive displacement pumps such as the PMP100 or PMP200 (Bulletins F1837-1 and -2) when larger capacities are required than offered by the GCA100 or GCA200 Grease Cartridge Adapters (Bulletin F1867-1). These reservoirs feature: mounting brackets to minimize installation time, a conveniently located grease fitting for filling, an internal follower piston to prevent air passing through the grease to the outlet and a large outlet to minimize restriction when connecting to a pump. The reservoirs also feature a 40 micron air filter vent to minimize contamination. The clear reservoir provides a full 360° visual check of the grease level. The reservoir must be mounted vertically with the outlet down and must not be pressurized on the grease side or the vent side.

STANDARD MATERIALS:

- Aluminum construction
- Buna N Seals
- Break resistant, colorless transparent acrylic

OPERATING CONDITIONS:

- Maximum working temperature up to 160°F (71.1°C)
- Working pressure is from atmospheric to minus 29 InHg (737mmHg)



CATALOG NUMBER	CAPACITY [weight]	B INCHES (mm)	C INCHES (mm)	D Thread NPTF
GR75	75 cu. in. (1229 cu. cm.) [41 ounce (1.16kg)]	8.50 (215.90)	6.06 (153.92)	1/2
GR168	168 cu. in. (2753 cu. cm.) [91 ounce (2.58kg)]	13.25 (336.55)	10.69 (271.53)	1/2

GREASE RESERVOIRS
REMOTE/WALL MOUNT
BULLETIN F1867-2

12/02



LUBE DEVICES, INC.

1864 NAGLE AVE., P.O. BOX 1810, MANITOWOC, WI 54221-1810
PHONE: (920) 682-6877 FAX: (920) 684-7210
E-MAIL: sales@lubedevices.com WEBSITE: www.lubedevices.com