

# SureFire PDI Lubricator

## Automatic, Oil & Fluid Grease



### General

The SureFire PDI Lubricator is an automatic, robust and durable pump that can handle oil and soft greases. Its compact size is designed to fit your space requirements and lubrication demands. The SureFire PDI Lubricator is a self-contained electric motor-driven gear pump that can adapt to a broad range of production machinery. It can handle single injectors or injector groups serving up to 100 lubrication points. Its versatility also allows it to perform with other lubrication system types and multiple applications.

### Operation

The SureFire PDI Lubricator has a motor-driven pump that pulls lubricant in from the reservoir and delivers pressurized lubricant to the distribution network through the outlet(s) in the top plate. Pressurizing the distribution network forces all of the positive displacement injectors (PDIs) in the system to fire, discharging the lubricant that was stored in each of their discharge chambers during the last pump cycle.

Once all of the PDIs discharge, the pressure in the network continues to rise until the limit in the pressure switch is reached. Once this limit is reached, the pressure switch can be used to stop the motor, and momentary pressure in the distribution network becomes greater than the pressure at the outlet side of the gear pump. This pressure differential actuates a quick dump valve which relieves the distribution line pressure back into the reservoir.

### Features

- + Handles oil and fluid greases
- + Low level switch for failsafe operation
- + Hydraulic outlet connections on either side for easy installations
- + Quick-snap reservoir release for fast and easy removal and service
- + Convenient plug-in type terminal block provides fault-free electrical connections
- + Large capacity fill cap with built-in strainer minimizes contamination
- + Two controller versions available
- + Optional timer available on some models

### Standard Controller/Monitor (Only Available on Single Phase Units)

The SureFire with on-board controller/monitor is designed to precisely control the lubrication to a piece of equipment. It does this by controlling the pump's cycle time, monitoring both internal and external inputs or switches, detecting and reporting faults, and offering visual feedback that can be continuously updated and improved to enhance the user's experience with the product. Four screen languages are available for global use (English, German, French, Spanish).

The functions of this microprocessor-based controller are as follows:

- + Manage the on times and the off times of the pump
- + Provide prelube functionality on start up
- + Detect and respond to various input signals
- + Display in real time the status of the pump at any time
- + Monitor for faults in the system
- + Provide output signals for feedback to the controlling machine



Single Phase w/ Controller



Single Phase w/ Lite Controller

#### ATTENTION

Additional information about the standard controller is available in Operators Manual #35462: SureFire Controller Supplement.

The standard controller also features the protection of settings, through password based security, protection of motors with limited duty cycles and restoration of default settings if required.

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### Lite Controller/Monitor (Only Available on Single Phase Units)

The SureFire Lite Controller is a multi-purpose programmable controller. Controller settings are saved whenever power is interrupted. Up to four operating modes can be selected which allows the controller to be used with various lubrication system designs.

- + Digital status display on front cover for easy programming
- + System monitoring capabilities
- + Data memory function initiated at power down
- + Compact design

### ON/OFF Timer (Only Available on Single Phase Units)

The SureFire Lubricator is also available with an ON/OFF timer to provide basic timing functions, as detailed below:

- + ON time range = 0.1 seconds to 100 hours
- + OFF time range = 0.1 seconds to 100 hours
- + ON and OFF time settings are adjusted with dials, using a screwdriver
- + Upon power up, timer begins with ON time settings
- + Timer is wired at the factory in series with each motor and will handle the maximum amp draw of each motor used (no fusing is required)
- + Customer simply connects (+) and (-) power to the lubricator terminal block

#### ATTENTION

Additional information about the lite controller is available in Supplement #35989: SureFire Lite Controller.

Additional information about the timer is available in Supplement #35144: SureFire On/Off Timer.

## Technical Data

Output Volume - 115 VAC, 230 VAC (max.)	200cc/min @ 60 Hz (167cc/min @ 50 Hz)
Output Volume - 24 VDC (max.)	250cc/min
Output Volume - Three phase (max.)	200 or 500cc/min @ 60 Hz; 167 or 415cc/min @ 50 Hz
Output Pressure (max.)	450 psi (31 bar)
Pressure Switch Setting <sup>1,2</sup>	Closes at 290 psi (20 bar), opens at 392 psi (27 bar)
Lubricant Viscosity	Oil: 20 to 1500 cSt at operating temperature
Soft Greases <sup>3</sup>	NLGI grade 000 & NLGI grade 00 (40,000 cSt max)
Reservoir Fill Screen (oil only)	40 mesh, removable
Reservoir Volume	1.8 liter, 2.7 liter, 6.0 liter, 12.0 liter
Reservoir Material	Clear Terlux Plastic for 1.8, 2.7 and 6.0 liter, Steel for 12.0 liter
Motor Voltage Options	115 VAC, 230 VAC 50/60 Hz, 24 VDC (single phase) 230/415 VAC 50 Hz, 260/480 VAC 60 Hz (three phase)
Motor Power Requirements <sup>4,5</sup>	Approximately 140 watts
Operating Temperature Range	40°F through 105°F (5°C through 40°C)
IP Enclosure Rating	IP-54
Electrical Fitting	Liquid tight
Output Connection	G 1/4 BSPP
Single (main) Feed Line	6mm O.D. minimum recommended

<sup>1</sup> Pressure switch is not available on three phase models.

<sup>2</sup> External end-of-line pressure switch also available (part #26772-2; 225 psi).

<sup>3</sup> Please contact a Bijur representative for applications using soft grease.

<sup>4</sup> Only applies to SureFire PDI single phase models.

<sup>5</sup> Motor Overload Protection needs to be provided by the host machine and/or its control system.

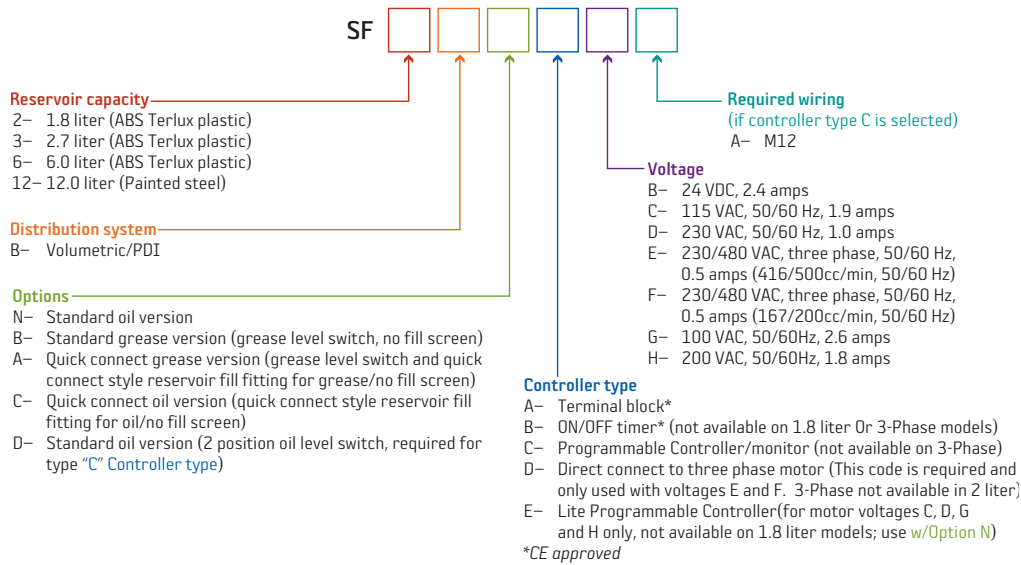
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## How to Order



### ATTENTION

Standard versions include:  
float type reservoir low level switch,  
standard reservoir fill-cap screen, quick  
dump valve for PDI's, 450 psi pressure  
relief valve.

\* Additional information about the M12  
connectors is available in Brochure  
#200: SureFire PDI Lubricator.

\*\* Controller type A & B are CE approved.



The SureFire PDI Lubricator features a smart part number ordering system, where you can tailor the pump to meet your needs. First, choose the reservoir capacity, distribution system, pump options, controller type and voltage you need. Then, put the numbers into the corresponding squares in the easy-to-use grid. You now have the customized part number.

Example: To order a 1.8 liter reservoir with a volumetric/PDI distribution system, standard options, terminal block controller and a 115 VAC motor, you would use Part #SF2BNAC.

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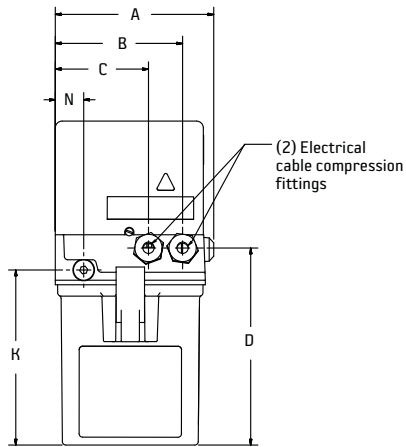
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## Dimensional Schematics

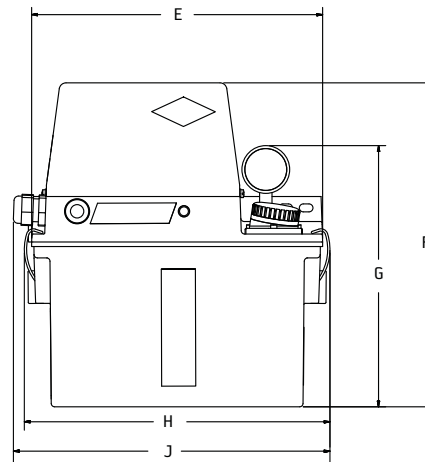
Measurements shown in millimeters.

### SureFire PDI 1.8, 2.7 & 6.0 Liter (115 VAC, 230 VAC and 24 VDC Single Phase)

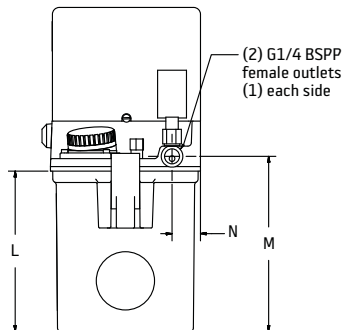
Left View



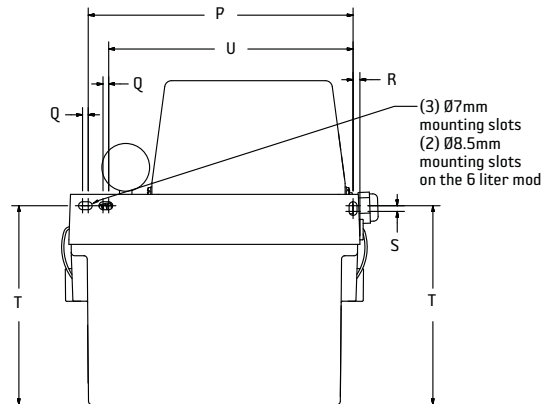
Front View



Right View



Back View



Reference	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U
1.8 liter	136	114	82	174	170	285	230	183	204	154	141	154	25	153	5	6	5	175	N/A
2.7 liter	139	114	82	174	256	285	230	269	279	154	141	154	25	233	5	6	5	175	215
6.0 liter	186	117	85	204	290	318	264	303	N/A	187	174	187	25	220	5	35	5	209	N/A

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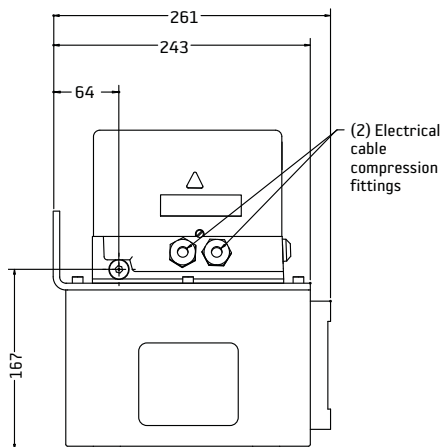
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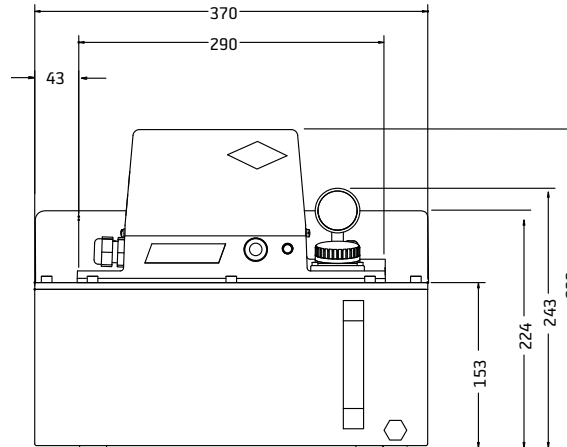
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### SureFire PDI 12.0 Liter (115 VAC, 230 VAC and 24 VDC Single Phase)

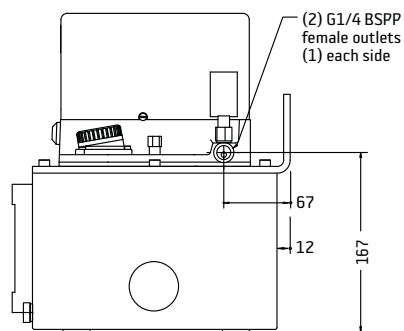
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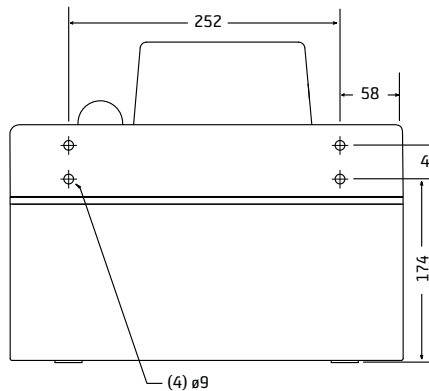
Front View



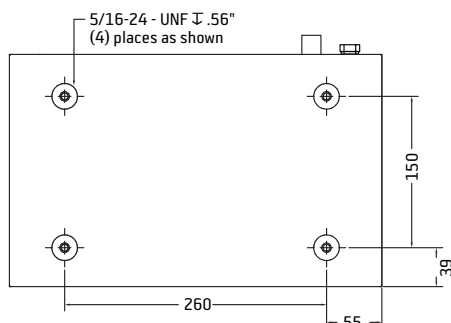
Right View



Back View



Bottom View



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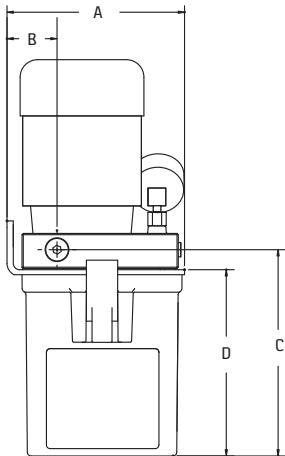
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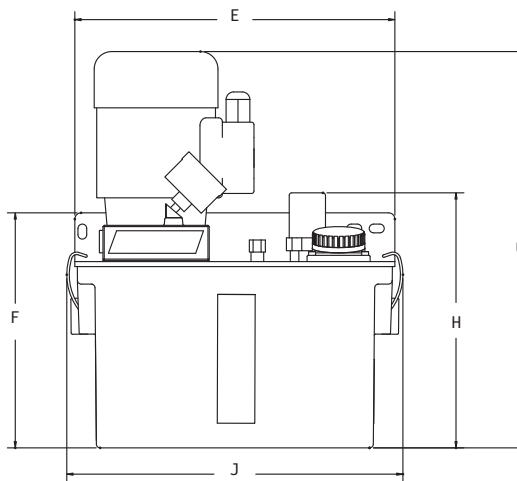
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### SureFire PDI 1.8, 2.7 & 6.0 Liter (230/480 VAC Three Phase)

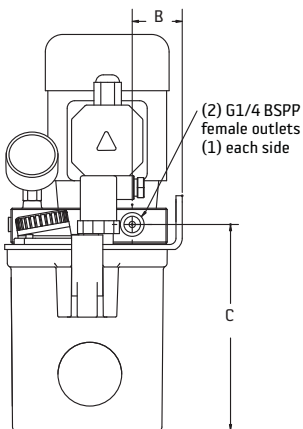
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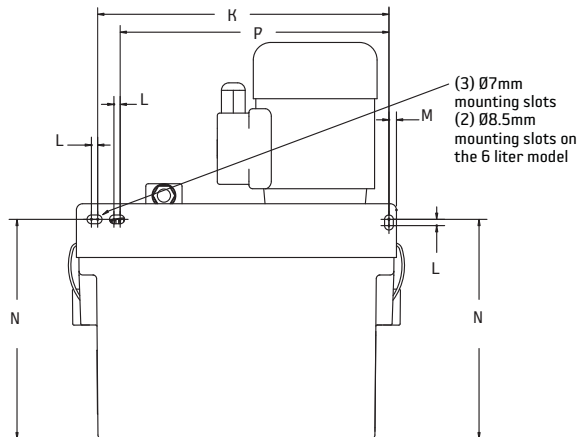
Front View



Right View



Back View



Reference	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U
1.8 liter	135	36	163	149	170	188	317	202	183	153	5	6	175.5	N/A	5	6	5	175	N/A
2.7 liter	144	45	163	149	256	188	317	202	269	233	5	6	175.5	215	5	6	5	175	215
6.0 liter	190	48	196	182	290	221	350	237	303	220	5	35	209	N/A	5	35	5	209	N/A

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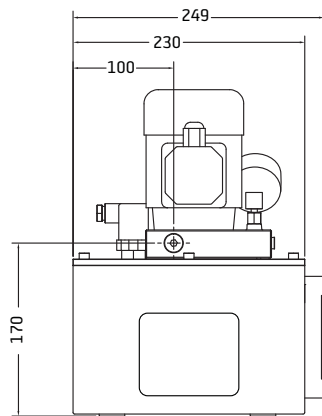
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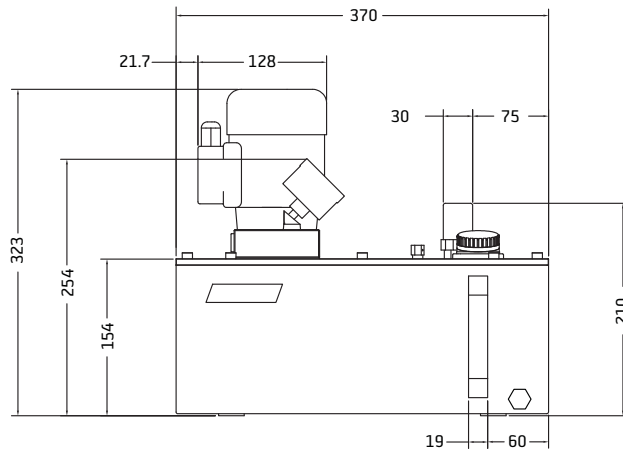
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### SureFire PDI 12.0 Liter (230/480 VAC Three Phase)

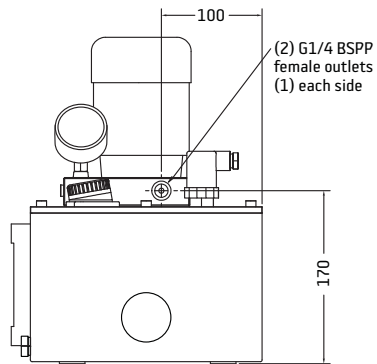
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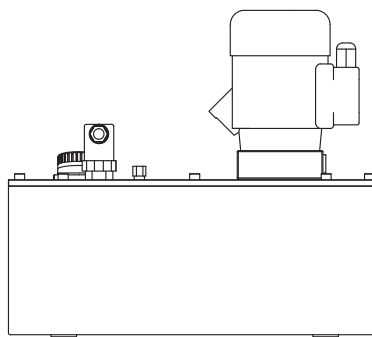
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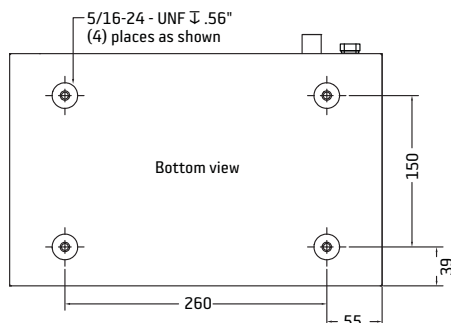
Right View



Back View



Bottom View



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