

# SureFire II Lubricator



## Automatic, Oil & Fluid Grease, Single Phase

### General

The SureFire II Lubricator is an automatic, robust and durable pump. Its compact size is designed to fit your space requirements and lubrication demands. The SureFire II Lubricator is a self-contained electric motor-driven gear pump that can adapt to a broad range of production machinery.

The PDI version can handle oil or fluid grease for single injectors or injector groups serving up to 100 lubrication points. The SLR version uses oil to supply resistance fittings or resistance fittings groups serving up to 100 lubrication points. The SureFire pump's versatility also allows it to perform with other lubrication system types and multiple applications.

### PDI Operation

The SureFire II 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.

The pressure in the main line continues to rise activating the pressure switch until relief pressure is reached, at which stage, the relief valve opens and discharges the pressurized lubricant back into the reservoir. The pressure switch can be used to stop the motor, and momentary pressure in the main line becomes greater than the pressure at the outlet side of the gear pump. This pressure differential actuates a quick dump valve which relieves the main line pressure back into the reservoir.

### SLR Operation

The SureFire II SLR Lubricator has a motor-driven pump that pulls oil in from the reservoir and delivers pressurized oil to the distribution network through the outlet(s) in the top plate. Pressurizing the distribution network forces all of the resistance fittings in the system to discharge the lubricant in proportioned quantities to the friction points. The resistance fittings continue to flow and the pump builds pressure until pressure relief valve setting is reached (75 psi/5 bar). Once the motor is shut off, pressure in the distribution network returns to near 0 psi via a quick dump valve.

### Features

- + PDI version handles oil and fluid greases
- + SLR version handles oil
- + Low level switch for fail safe operation
- + Hydraulic outlet connections on either side for ease of installation
- + Plastic and metal reservoirs available
- + Convenient terminal block provides fault-free electrical connections
- + Large capacity fill cap with built-in strainer minimizes contamination
- + All versions are CE approved
- + Two controller versions available, Premium and Lite functionality
- + On/Off Timer version is also available
- + A terminal block version available without integral control, for operation via customer PLC, DCS, etc.



3 Litre Single Phase Standard

Refer to the following documents:

+ *Catalog #500: Surefire II*

### **Premium Controller/Monitor**

The SureFire II with the premium 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.

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

### **Lite Controller/Monitor**

The SureFire II 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 the front of the pump for easy programming
- + System monitoring capabilities
- + Data memory function initiated at power down
- + Compact design

### **ON/OFF Timer**

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

- + Digital status display on the front of the pump for easy programming
- + ON time range = 1 second to 99 hours
- + OFF time range = 1 second to 99 hours
- + ON and OFF time settings are adjusted using the programmable controller
- + Upon power up, timer begins with ON time settings
- + Customer simply connects (+) and (-) power to the lubricator controller terminals

Provide output signals for feedback of a fault to the controlling machine

### **Without Integral Control**

The SureFire II Lubricator is available without integral control option for operation via customer PLC, DCS, etc. , two options detailed below:

- + Terminal block
- + Terminal block with momentary run switch and motor 'on' LED

#### **ATTENTION**

*Additional information about the premium controller is available in Operators Manual #36414: SureFire II Controller Supplement.*

*The premium 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.*



*2 Litre Single Phase w/ Controller*

## Technical Data

Output Volume - 115 V AC, 230 V AC (max.) Single Phase	250cc/min @ 60 Hz	
	210cc/min @ 50 Hz	
Output Volume - 24 V DC (max.)	250cc/min	
Output Pressure (max.)	PDI	31 bar
	SLR	5 bar
Pressure Switch Setting <sup>1</sup>	PDI	Closes at 20 bar
	SLR	Closes at 1.4 bar
Lubricant Viscosity	<b>Standard Oil version:</b> 20 to 1500 cSt @ operating temperature	
	<b>Light Oil version:</b> 5-40 cSt @ operating temperature	
Soft Greases <sup>2</sup>	NLGI grade 000 - NLGI grade 00 (40,000 cSt max)	
Reservoir Fill Screen (oil only)	40 mesh, removable	
Reservoir Volume	2 litre	
	3 litre	
	6 litre	
	12 litre	
Reservoir Material	Luran (Blue Tint) for 2, 3 and 6 litre	
	Steel for 2, 3, 6 and 12 litre	
Motor Voltage Options	100/115 V AC 50/60 Hz Single Phase 200/230 V AC 50/60 Hz Single Phase 24 V DC	
Motor Power Requirements <sup>3</sup>	100/115 V AC Single Phase	1.0 amps
	200/230 V AC Single Phase	0.70 amps
	24 V DC	2.4 amps
Operating Temperature Range	40°F through 105°F (5°C through 40°C)	
IP Enclosure Rating	IP-54	
Electrical Fitting	Liquid tight cable gland	
Output Connection (x2, one each side)	G 1/4 BSPP	
Return Line Connection	G 1/4 BSPP	
Single (main) Feed Line	6mm O.D. minimum recommended	



2 Litre Single Phase Standard

<sup>1</sup> PDI: External end-of-line pressure switch also available (part #26772-2; 225 psi/15.5 bar).

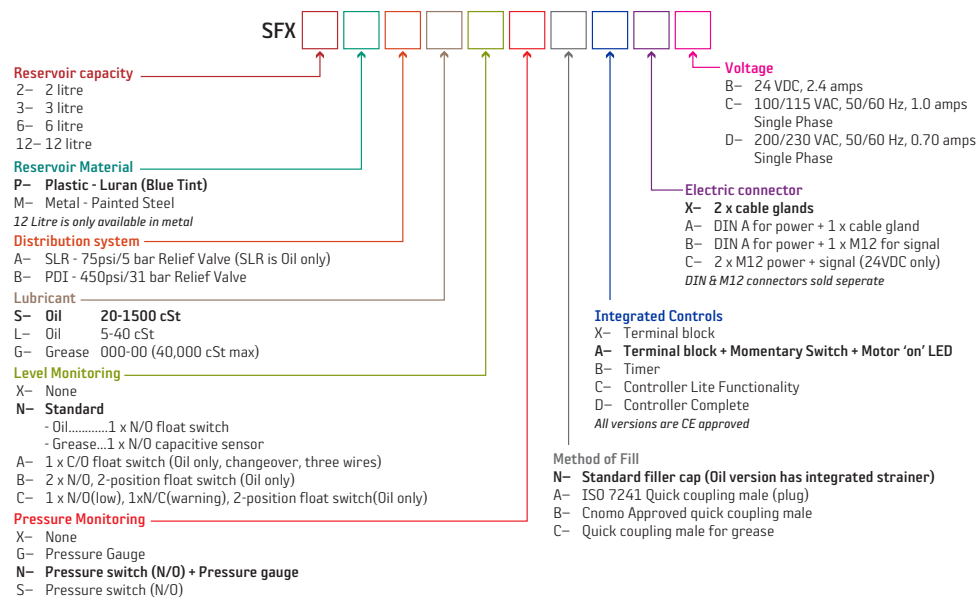
SLR: Pressure switch is optional for SLR.

External end-of-line pressure switch also available (part #26641-2; 55 psi/3.8 bar).

<sup>2</sup> PDI version only. Please contact a BIJUR DELIMON representative for applications using soft grease.

<sup>3</sup> Motor Overload Protection needs to be provided by the host machine and/or its control system.

## How to Order



### ATTENTION

Additional information about the DIN and M12 connectors is available in Catalog #500: SureFire II Lubricator.

All versions are CE approved.



### NOTE:

Items in **BOLD** are standard options. Other options may have longer lead time.

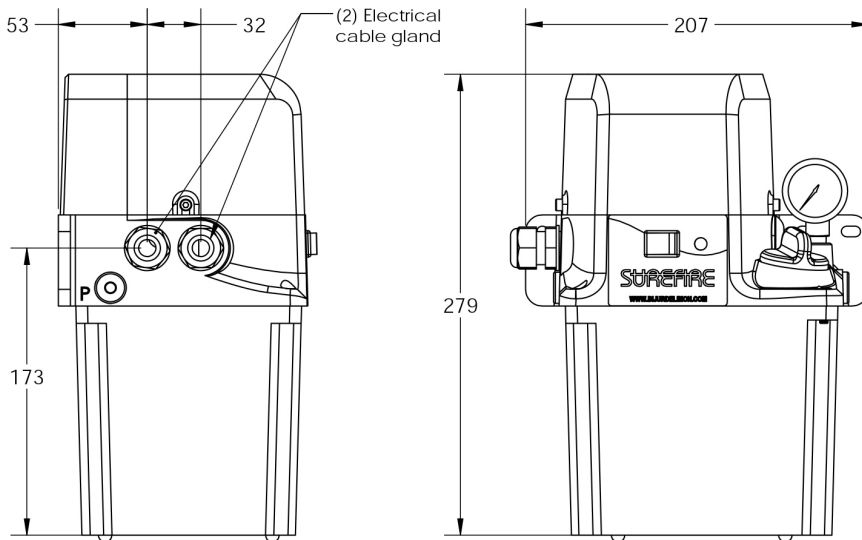
The SureFire II Lubricator features a smart part number ordering system, where you can tailor the pump to meet your needs. First, choose the reservoir capacity and material, distribution system, pump options, controller type and voltage you need. Then, put the numbers into the corresponding squares in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

Example: To order a 2 litre reservoir with a volumetric/PDI distribution system, standard options, terminal block and a 115 V AC motor, you would use Part #SFX2PBSNXXC.

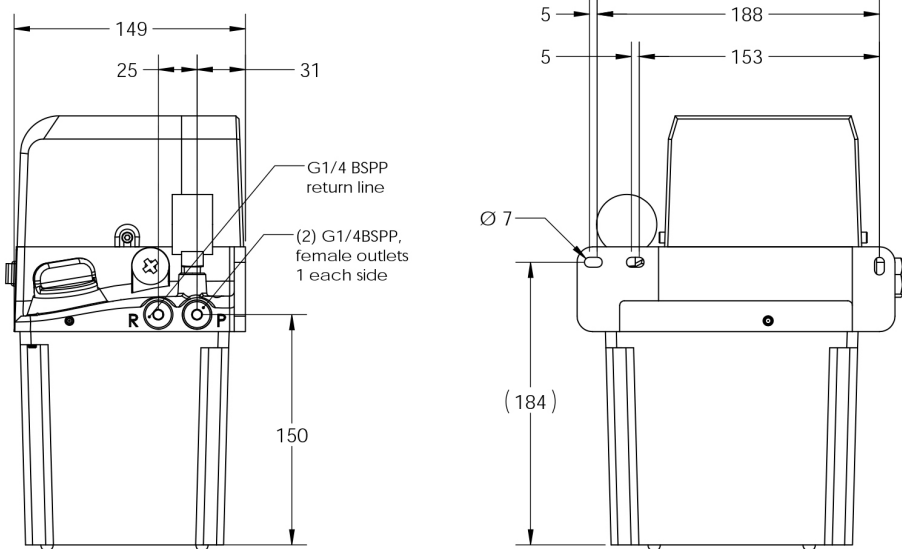
**Dimensional Schematics**

**SureFire II 2 Litre (115 V AC, 230 V AC and 24 V DC Single Phase)**

Measurements shown in millimeters.

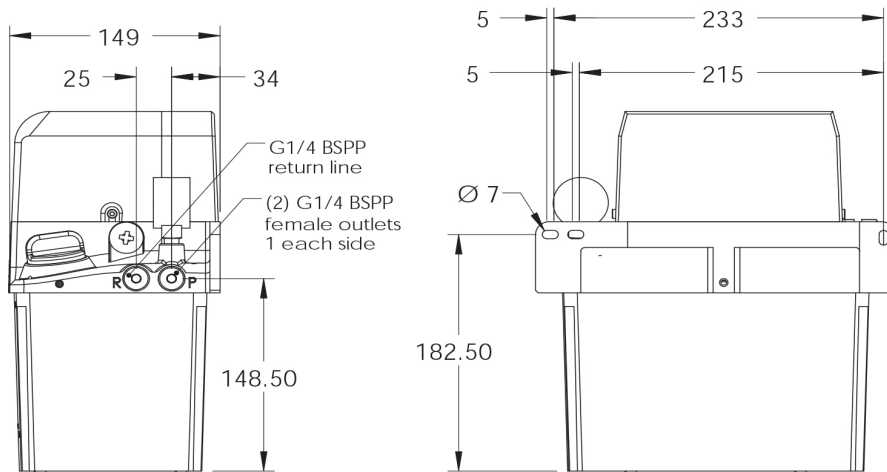
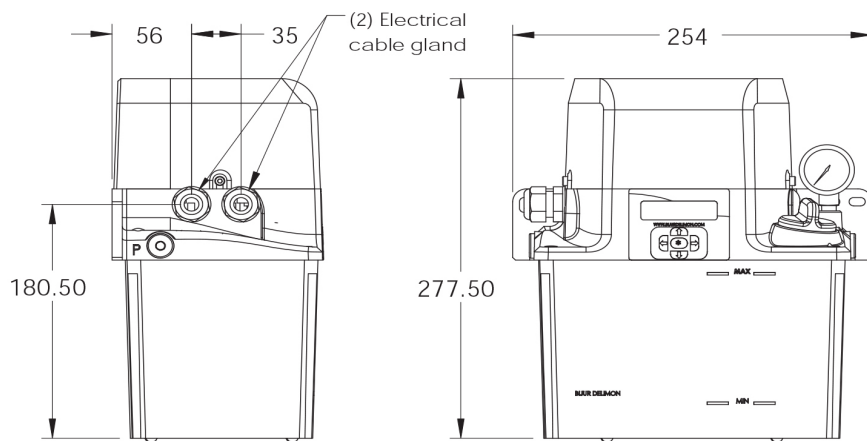


2 Liter Single Phase w/ Controller



## Dimensional Schematics

*SureFire II 3 Litre (115 V AC, 230 V AC and 24 V DC Single Phase)*



Measurements shown in millimeters.



3 Litre Single Phase Standard

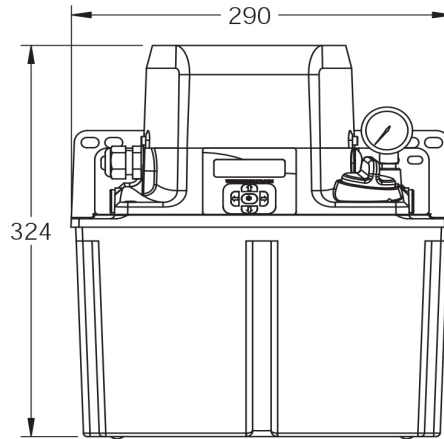
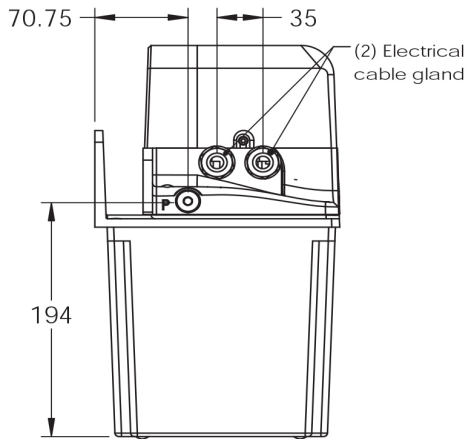


3 Litre Single Phase w/ Controller

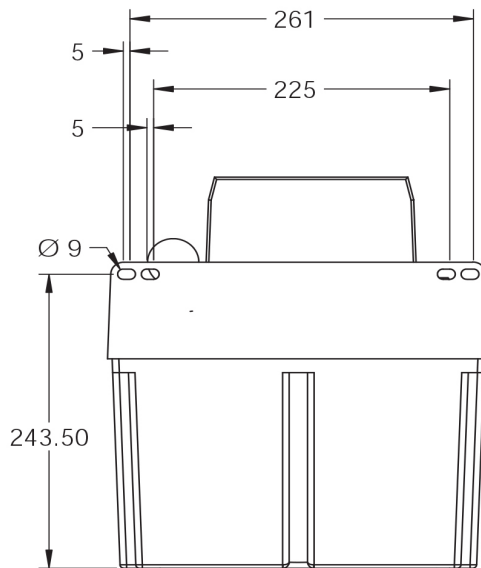
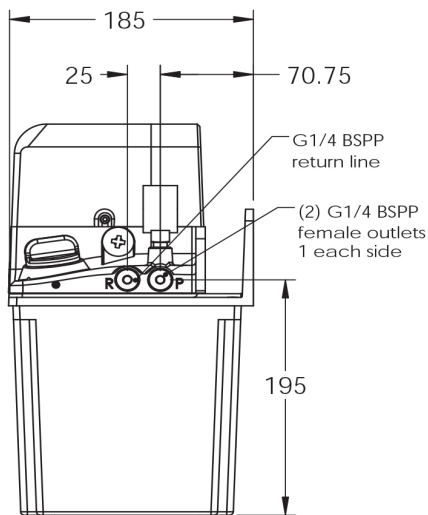
**Dimensional Schematics**

**SureFire II 6 Litre (115 V AC, 230 V AC and 24 V DC Single Phase)**

Measurements shown in millimeters.



6 Litre Single Phase Standard

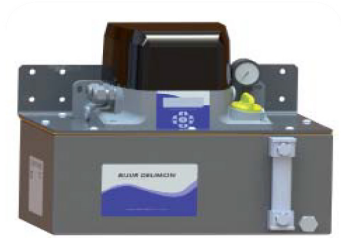
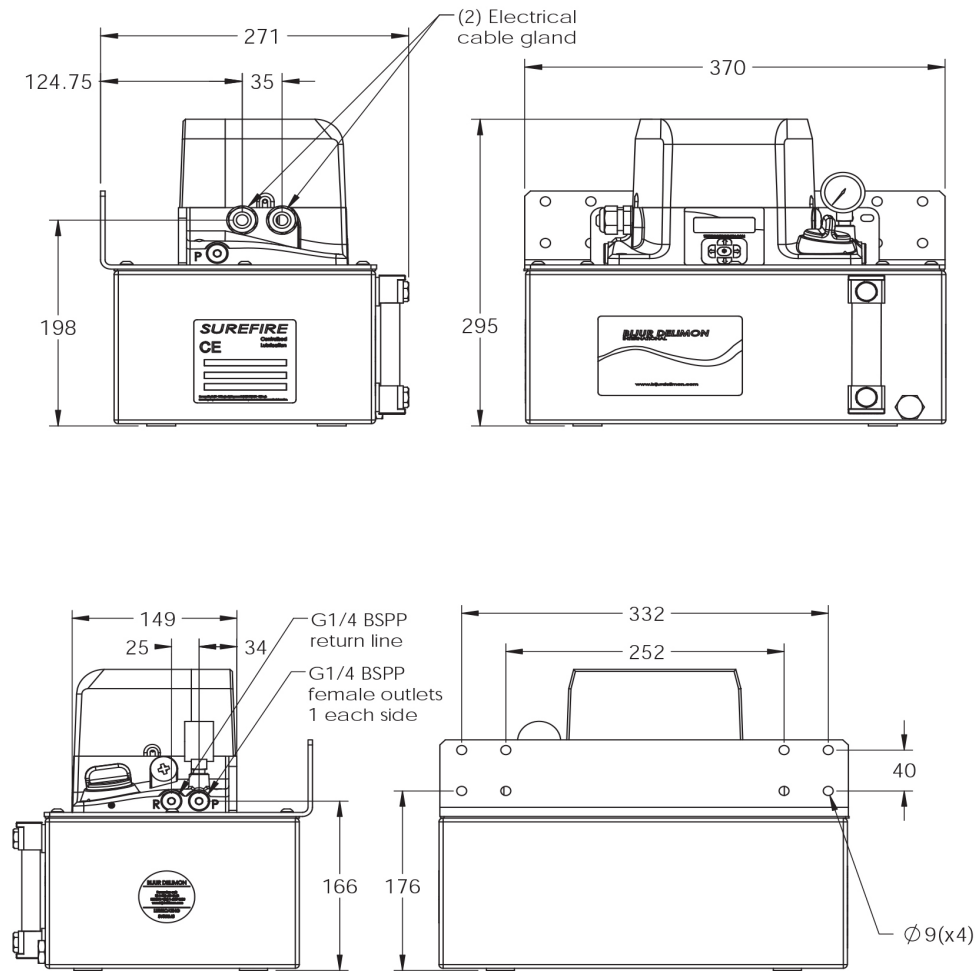


6 Litre Single Phase w/ Controller

## Dimensional Schematics

### SureFire II 12 Litre (115 V AC, 230 V AC and 24 V DC Single Phase)

Measurements shown in millimeters.



12 Litre Single Phase w/ Controller