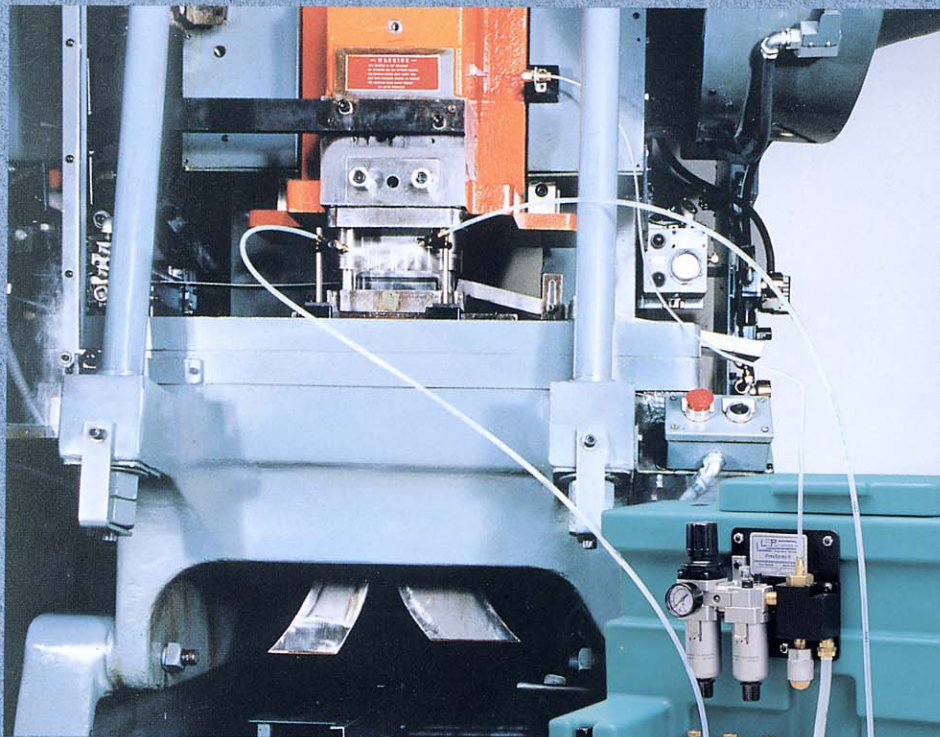


# *THE PRESSPRAY II<sup>®</sup>*

*The Next Generation Of Die Lubrication<sup>SM</sup>*



The PresSpray II, an airless spray lubricating system, is designed to deliver a predetermined amount of lubricant to the die area on each cycle of the press. The stamping industry demands versatility. PresSpray II delivers it.

**LSP** INDUSTRIES, INC.  
Rockford, Illinois



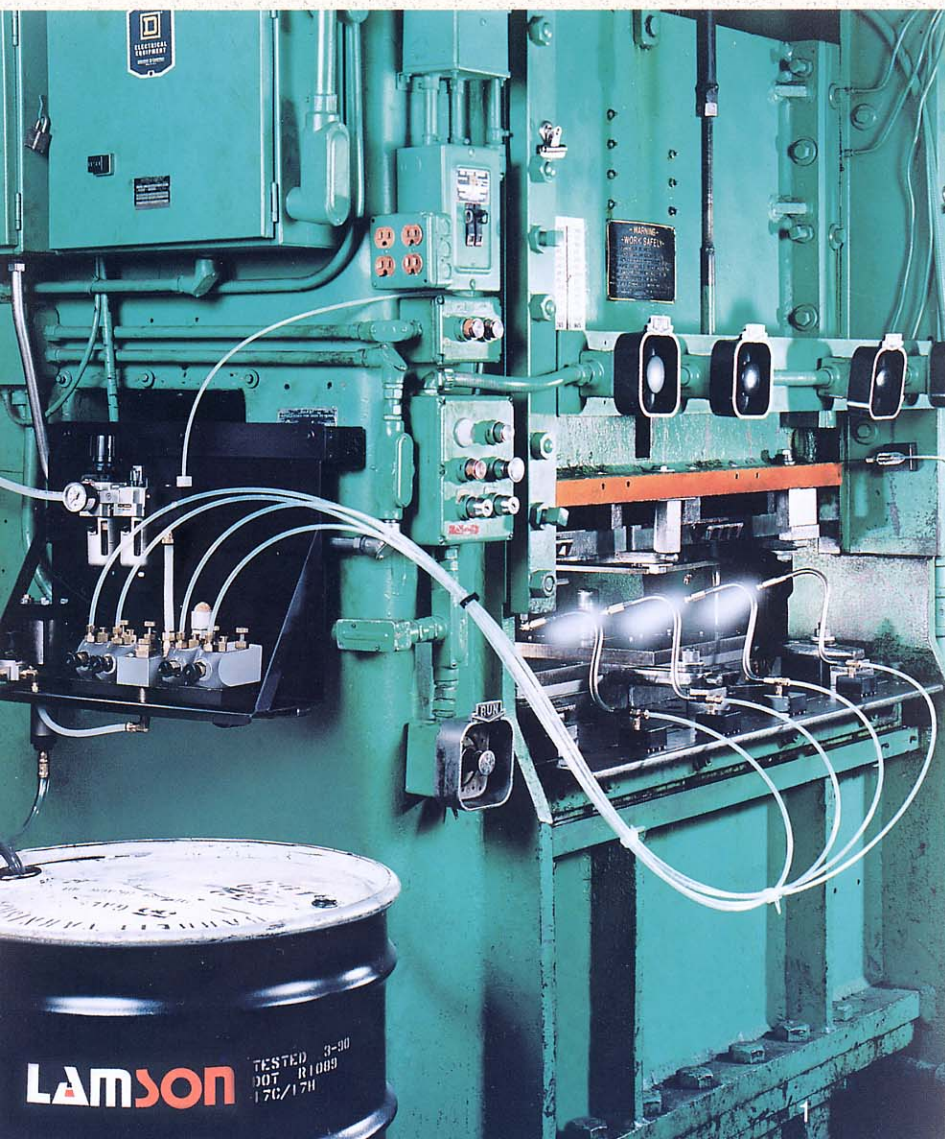


# LSP INDUSTRIES INC.

Presents The PresSpray II

## The PresSpray II

The basic design of the PresSpray II is simple but functional: it can be in operation in a matter of minutes. All of the major components are pre-installed at the factory. Install the air and the nozzles and you are ready to go. As soon as you start using the PresSpray II you immediately start reaping the benefits of its unique design. **That's why we call this equipment The Next Generation of Die Lubrication.**



*In 1964, when LSP first released the original PresSpray Lubricant Ejectors, we were at the forefront in introducing the Automatic spraying of lubricants to the stamping industry. Back then, presses were simple, the feeds slow and the lubricants primitive. Today the presses are high tech, the feeds faster, and the lubricants sophisticated. To keep up with these changes we have redesigned our equipment to incorporate the features necessary to compete in today's market.*

### • OPERATES AUTOMATICALLY

The PresSpray II is controlled by the stroke of the press; set the volume of lubricant to be dispensed and the PresSpray II will deliver that quantity, no more, no less, in a nice even coating, with every cycle of the press.

### • AIRLESS SPRAY

The PresSpray II dispenses lubricant in a fine, even coating without the use of air as a vehicle. The elimination of air means that the spray will quickly adhere in the work area and not be transmitted around the shop in a fine mist.

### • REDUCES LUBRICANT CONSUMPTION

Set the volume of lubricant that you want for each stroke of the press and that's how much you use. When the press stops the lubricant stops; no more lubricant dripping on the floor when the press is in the rest mode.

### • IMPROVES QUALITY AND REDUCES REJECTS

Eliminate galling, burrs and tears in the parts by putting the lubricant where you want it, when you want it and in the quantity you want during the stamping cycle.

### • INCREASES DIE LIFE

Dies usually have specific stations that need maintenance before other areas in the die. By applying additional lubricant to that area you can extend the life of that station and the life of the whole die.

### • INCREASES PRODUCTIVITY

Dies that are automatically lubricated with a PresSpray II run longer, cooler and faster. If the operator does not have to worry about the lubrication of the die he can devote his full time and effort to the operation of the press, thus producing maximum efficiency from the equipment.

### • REDUCES MAINTENANCE

By applying the exact amount of lubricant you not only save lubricant, you also save the cost of cleaning excess material that drops on the floor.

### • DISPENSES WIDE RANGE OF LUBRICANTS

The PresSpray II has the volume, power and fast reaction time to spray fluids encompassing a broad viscosity range—from water solubles to heavy oils—in a controlled spray pattern which covers the work area.



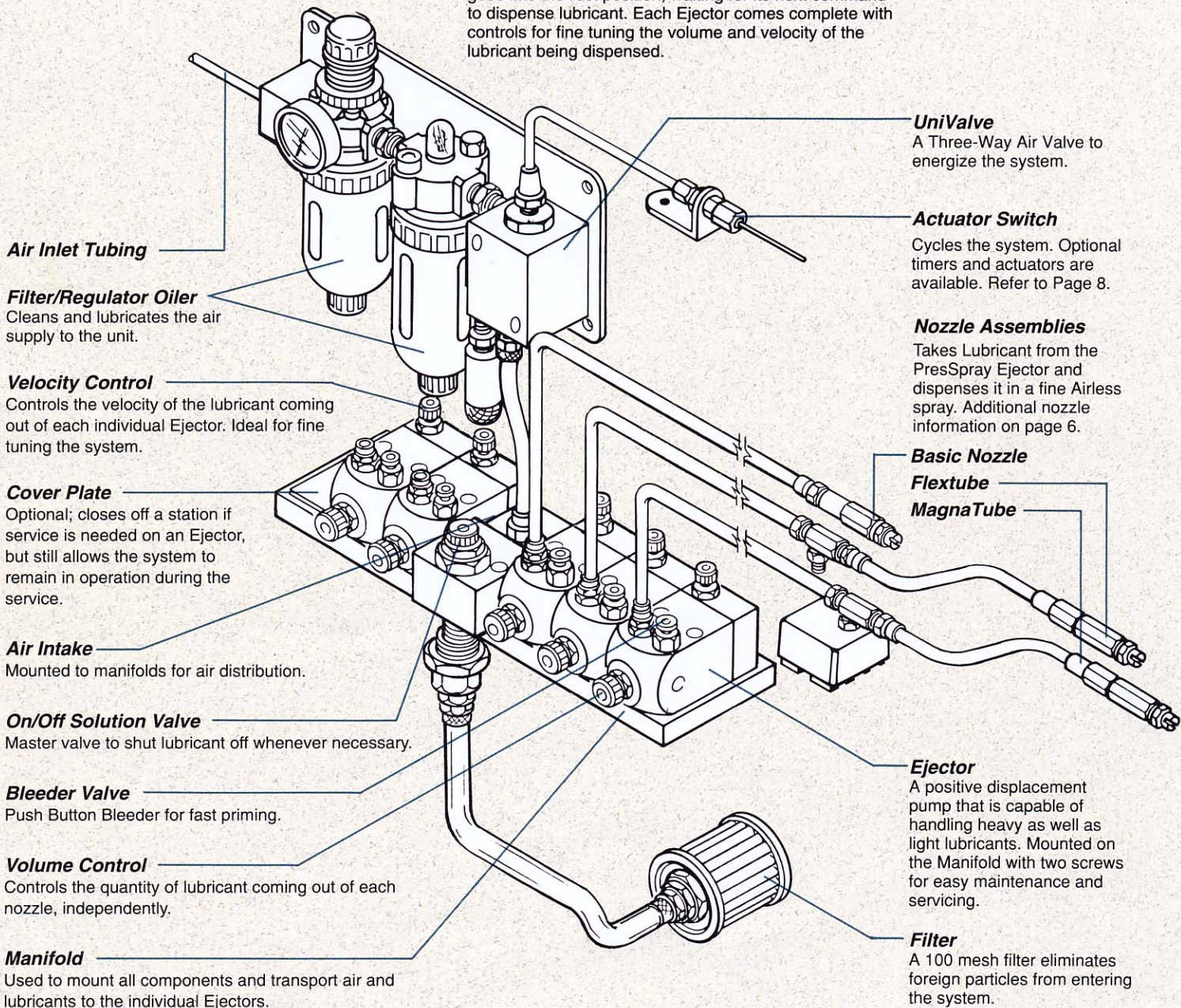
Each PresSpray II Ejector controls an individual Nozzle, allowing you infinite adjustability over the spray pattern. By simply fine tuning the Regulator, Volume Control, and/or the Velocity Control it is possible to change the spray pattern of a nozzle without changing the nozzle itself. The PresSpray II is designed and constructed to handle all the jobs, from large heavy applications to those that require just a whisper of spray. No matter what your application, the PressSpray II will deliver.

# THE PRESSPRAY II

## The Next Generation Of Die Lubrication

### HERES HOW IT WORKS:

The PresSpray II is a modular system that is mounted on various Reservoirs or Brackets. Open the Lubricant On-Off Valve and lubricant is carried through the Manifold to each Ejector. When the Actuator Switch is tripped it activates the UniValve. The UniValve dumps air through the Manifolds to each Ejector. Air energizes the Ejector causing it to dispense lubricant from a nozzle in one instantaneous burst. When the Actuator Switch is released, the system recharges itself with lubricant and goes into the rest position, waiting for its next command to dispense lubricant. Each Ejector comes complete with controls for fine tuning the volume and velocity of the lubricant being dispensed.

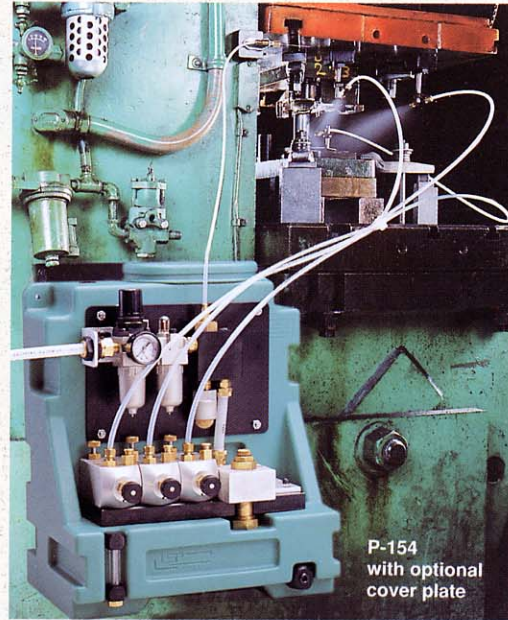




# THE PRESSPRAY II

Mounted On A Reservoir

These are free standing systems that are totally self contained and can be set up in minutes. Simply attach an air line and fill the reservoir with lubricant. Once this is done simply attach the nozzles to the Ejectors, put the actuator in place and bleed the system. The system is now operational and will work in unison with the press. The system is small enough to be moved from machine to machine, either by carrying or moving it about on the PortaPlatform but large enough for dedication to a single machine.



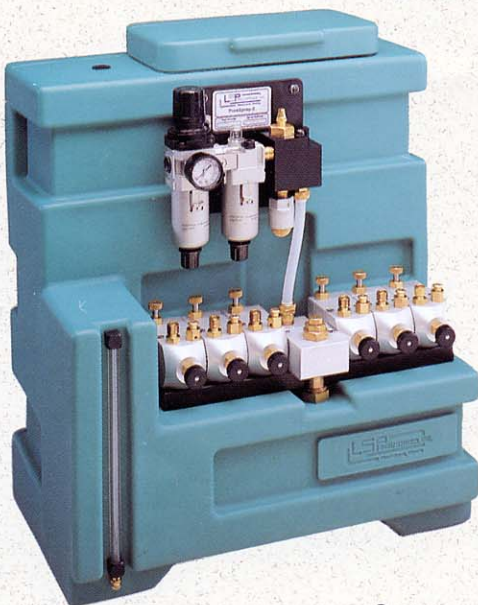
## The PresSpray II Mounted on a Four Gallon Reservoir

These units are just the right size for small jobs. They are light, compact and easy to carry from press to press. Set it on any flat surface or permanently attach it to the side of a press. Whichever system you get, you will be amazed at how a small package can do such a big job.

- **4 and 8 Gallon Reservoirs**  
Sized for smaller jobs.

## The PresSpray II Mounted on a Reservoir

A completely self contained system, large enough to hold sufficient lubricant to do the really big jobs yet sized to occupy a minimum of floor space.



- **Portable**  
Easily moved between machines. For greater mobility, mount it in a #P-930 PortaPlatform.
- **Large Capacity Reservoir**  
Less down time for refills.
- **High Impact-Strength Polymer Reservoirs.**  
No welds to leak and will not dent.
- **Corrosion Resistant**  
Will safely contain your lubricants.
- **Low Center of Gravity.**  
Won't tip over.
- **100 Mesh Filter.**  
Keeps system free of most contaminants
- **Sight Gage.**  
For determining fluid level.

- **High Impact-Strength Polymer Reservoir.**  
Same as 15 gallon reservoir.
- **Large Drain**  
For fast lubricant changes
- **Carrying Handle for Portability.**  
Easily carried between presses.
- **Adaptable for Permanent Installation.**  
Perfect for use as a dedicated system.
- **Low Center of Gravity.**  
Won't tip over.

System	No. of Pumps	Reservoir
P-152	2	4 gal.
P-154	4	4 gal.
P-156	2	8 gal.
P-157	4	8 gal.
P-158	6	8 gal.

P-144	System	No. of Pumps	Reservoir
	P-142	2	15 gal.
	P-143	4	15 gal.
	P-144	6	15 gal.



The PresSpray II mounted on a bracket is a perfect choice for those jobs that need a dedicated lubricating system. A PowerPump is the preferred choice for supplying lubricant to the system. The PowerPump can be mounted on the bracket or on a central reservoir and then used to feed multiple systems at different locations. On large presses, we recommend mounting two smaller units on opposite sides of the press, fed by a single pump. This is more efficient than a large unit and gives better spray coverage.

# THE PRESSPRAY II

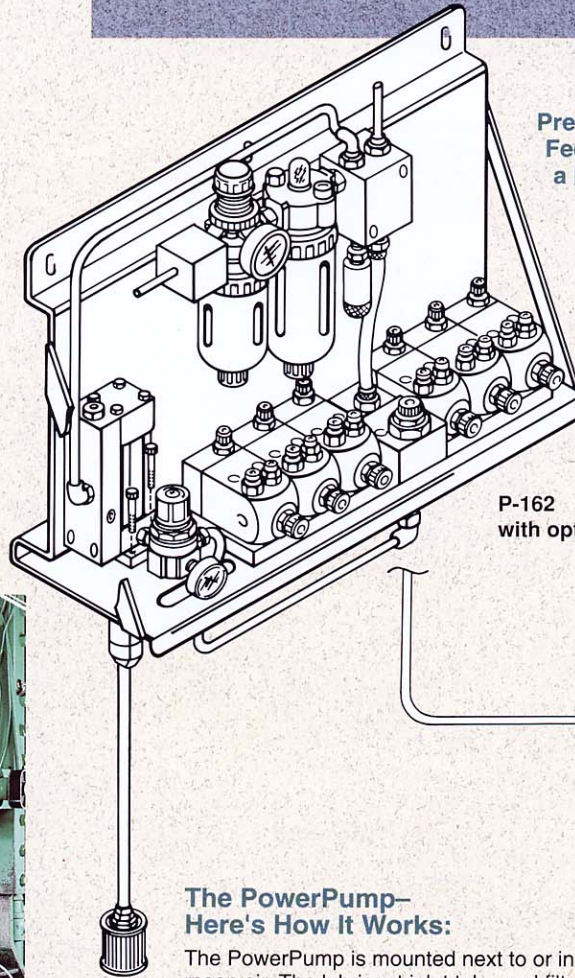
## Mounted On A Bracket

**PresSpray II Mounted on a Bracket w/Optional PowerPump Attached**



### The PresSpray II Mounted on a Bracket for The Big Jobs

The PresSpray II mounted on a bracket can be positioned or supplied with lubricant in a number of ways. On very large presses it is usually advantageous to install two smaller systems, one at each end of the press, rather than one large system. This makes for a cleaner and more efficient installation by keeping the lubricant outlet tubing as short as possible. Each system can be gravity fed with its own reservoir or can be supplied with lubricant from a centralized reservoir. Whether mounted on a bracket or a reservoir, the PresSpray II operates equally well.



**PresSpray II (mounted on a bracket) Fed by a PowerPump from a Remote Reservoir**

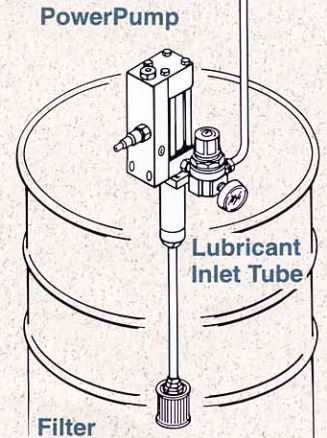
**P-162 with optional PowerPump**

**Lubricant Transport Tube**  
Moves lubricant from PowerPump to the PresSpray II.

### The PowerPump—Here's How It Works:

The PowerPump is mounted next to or in the reservoir. The lubricant inlet tube and filter are extended down into the lubricant. The lubricant is moved from the PowerPump to the PresSpray through the lubricant transfer tube. An air line, connected to the PowerPump, is kept under constant air pressure. The PowerPump will stay in the rest position until the PresSpray II goes into action. The PowerPump supplies lubricant to the PresSpray II on demand.

Catalog Numbers	Type of Bracket	Number of Ejectors
P-160	Single	2
P-161	Single	4
P-162	Single	6
P-165	Double	8
P-166	Double	10
P-167	Double	12



**PowerPump**

**Lubricant Inlet Tube**

**Filter**  
100 Mesh filter prevents impurities from entering the system.



# ACTUATORS

Activate The System

LSP Industries offers not one but four different methods of activating the PresSpray II. The system can be controlled with totally air operated actuators such as the Actuator Switch or the Air Timer. For those that demand more sophistication there is a solenoid operated actuator or the LSP Variable control package. For the unusual job it is possible to combine some actuators in combinations to produce unique results. Controllers and Solenoid Valve are supplied with 110 volt as standard. Alternate voltages are available.



Four Electronic Controllers are available for actuating the PresSpray II. Simply set the actuating times so that the PresSpray dispenses lubricant at the desired point of a cycle. A magnetic proximity switch or limit switch receives a signal and activates the controller. For ease of operation and flexibility we recommend the Electronic Controllers.

## E-200 Electronic Controller

The Ultimate PresSpray Controller, offers three individual controls in one electronic package, a Time Delay, a Pulsator and a Counter.

- 1. Time Delay:** Controls when the PresSpray dispenses lubricant relative to the position of the die.
- 2. Pulsator:** Delivers multiple sprays of lubricant to the die with each cycle of the press.
- 3. Counter:** Set the counter to signal the PresSpray to actuate on any cycle of the press from one to nine.

## E-205 Pulsator Actuator

Sends multiple signals to the PresSpray on each cycle of the press.

- 1. Time Delay:** Controls when the PresSpray dispenses lubricant relative to the position of the die.
- 2. Pulsator:** Delivers multiple sprays of lubricant to the die with each cycle of the press. Set the quantity and time length of lubricant spray needed.

## E-210 Counter Actuator

Counts cycles, and then sends a signal on a set count to the PresSpray.

- 1. Time Delay:** Controls when the PresSpray dispenses lubricant relative to the position of the die.
- 2. Counter:** Counts the cycles of the press. Set the counter to signal the PresSpray to actuate on any cycle of the press from 1 to 99.

## E-215 Timer Actuator

Sends split second signals continuously on an adjustable repetitive time cycle as long as the controller is receiving a signal. The timer is not tied into the cycle of the press.

**Actuation Adjustment Speed:** Set the numbers for the desired speed the timer is to actuate the PresSpray. The higher the number, the faster the actuation. Can give one stroke per 12 hours or up to 300 strokes per minute.



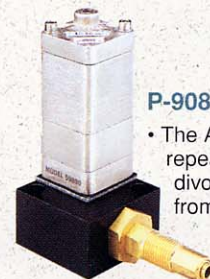
## P-901 Mechanical Actuator With (one way) Trip Bracket.

The Actuator Switch is attached to the PresSpray II by means of a 4' length of 3/16" tubing. It comes with a one way trip bracket which allows actuation in only one direction of the press. The Mechanical Actuator is totally air-operated and requires no electrical hook-up. Actuator and Trip Bracket are easily adaptable to magnetic hoses for quick set-up and take down.



## P-912 Solenoid Valve

To actuate the PresSpray II with an electrical signal, replace the Mechanical Actuator Switch with the P-912. Connect the Solenoid Valve into a controller system or to an electrical switch that can energize the Solenoid Valve. When the Solenoid valve is energized the PresSpray will cycle immediately.



## P-908 Air Timer.

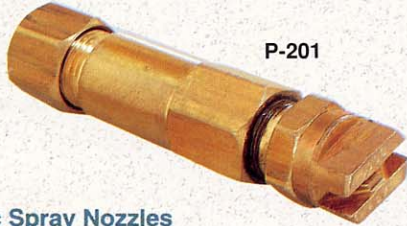
- The Air Timer actuates the ejector at repeated time intervals of set length, divorces the ejector's operations from the machine's cycle and gives it a timed cycle of it's own. The Air Timer has countless applications:
- It is totally air operated and can actuate the PresSpray II at set intervals from 5 times per second down to once every 15 seconds.
- Timing is set by adjusting a single recessed control.
- The Air Timer, like the Mechanical Actuator, can be installed up to 4' from the PresSpray II system.



# NOZZLE ASSEMBLIES

## For The PresSpray II

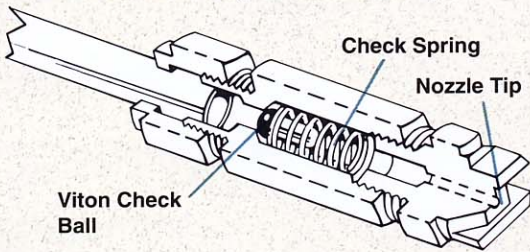
Nozzles come in an assortment of spray patterns and each comes equipped with a Check Valve that prevents dripping of the lubricant after each actuation. Various accessories are available for enhancing the portability of the nozzle or permanently mounting the nozzle to a particular part of the die or press. Magnetic bases allow rapid repositioning of the complete nozzle assembly, the flexible hoses or the swivel brackets to simplify the delicate positioning of the nozzle tip itself.



P-201

### Basic Spray Nozzles

These come complete with check valve and attach to the supply line. Use accessories for versatility: Mount on a P-925 Nozzle Bracket for permanent installations or attach to a P-905 MagnaBase for flexibility.



### Here's How The Nozzle Assembly Works:

Lubricant (from the reservoir) is routed to the PresSpray II nozzle where it is expelled (via the airless spray pump) thru the nozzle orifice. The nozzle orifice then breaks the lubricant into a spray pattern. Each nozzle includes a check-valve to prevent fluid "dripping" between actuations of the pump.

### P-925 Nozzle Bracket Holder

The Nozzle Bracket Holder moves up and down on a 5" long rod and rotates a full 360° for proper positioning of the nozzle. It holds the nozzle in a fixed position and does not wander. Adapts to a P-905 MagnaBase for mobility.



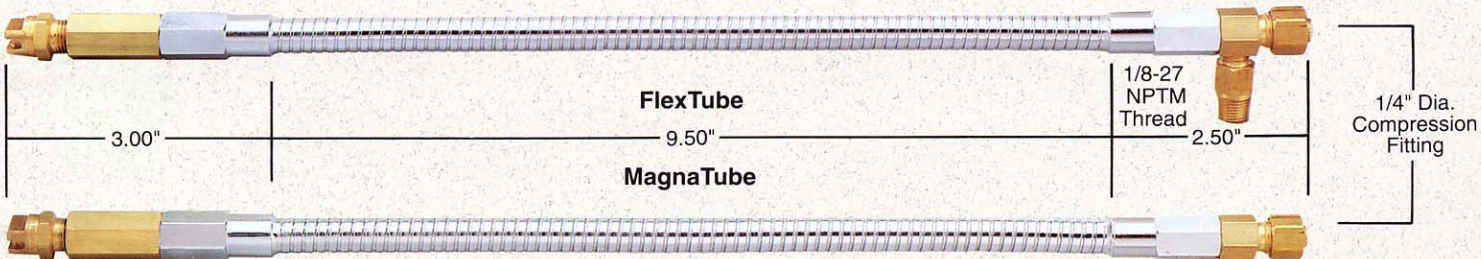
P-925

### P-905 MagnaBase

Powerful magnetic base, accepts the P-925 Nozzle Bracket. The MagnaBase offers easy placement, positioning or removal of the Spray Nozzles. It can also be used for mounting the Actuator Switch and One Way Trip Bracket. The MagnaBase has a pull strength of 200 lbs.



P-905



### FlexTubes

Consist of a spray Nozzle attached to a flexible tube with a mounting bracket at the other end. The mounting bracket is a 1/8 NPT stud. The FlexTube allows exact impingement of spray on the work piece.

### MagnaTubes

Consists of a flexible tube mounted on a powerful magnet. It can be kept out of the way for setups, die changes, or maintenance problems then replaced as soon as you are ready to start your production run.



P-940

### P-940 High Pressure Tubing

The only non-metal tubing approved for use as a supply line to the nozzles. Flexible enough to afford the user easy positioning, yet rigid enough to maintain a consistent spray pattern.

Chart Shows All Nozzles According To Catalog Number

Type of Nozzles	Type of Spray Pattern given by Nozzle (see pg. 7 also)					
	110° Fan	80° Fan	65° Fan	25° Fan	55° Round	110° Side Fan
Basic Spray Nozzles	P-201	P-202	P-203	P-205	P-207	P-209
FlexTubes	P-211	P-212	P-213	P-215	P-217	N/A
MagnaTubes	P-221	P-222	P-223	P-225	P-227	N/A

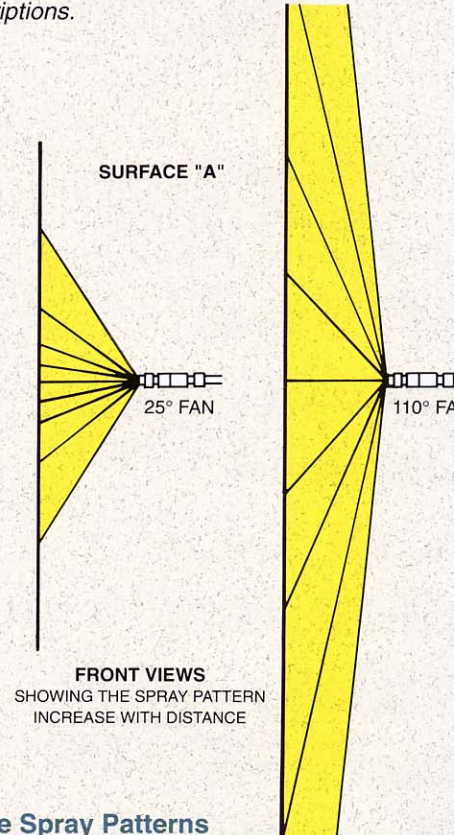
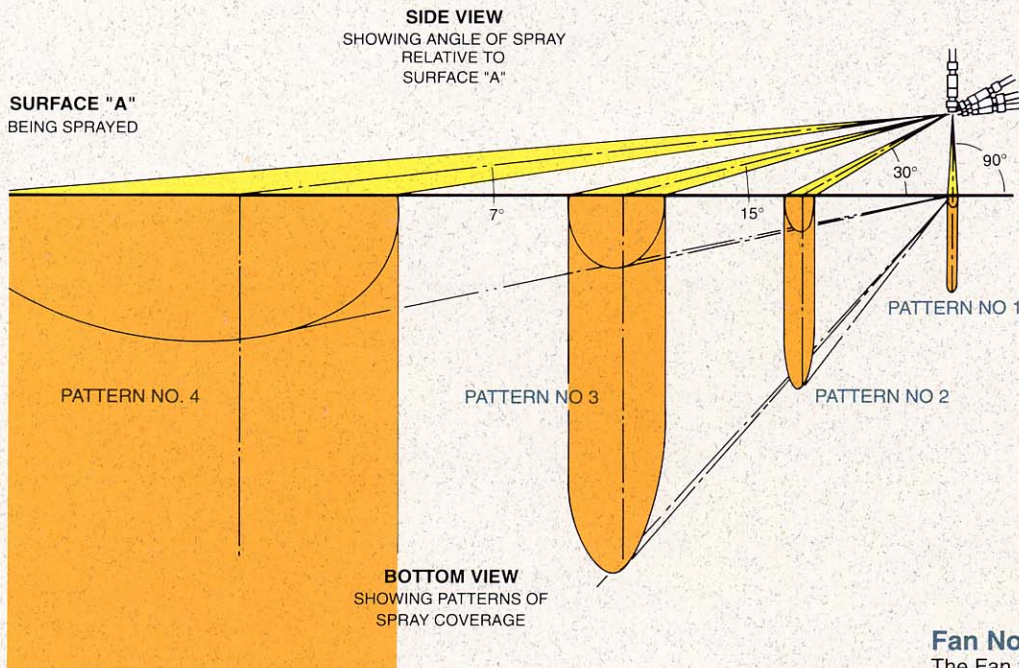


# SPRAY PATTERNS

For The PresSpray II

Selecting which Nozzle type to use for an application depends on three considerations:

- The lubricant to be sprayed—water soluble, synthetic or straight oil?
- The kind of spray coverage desired and which "Spray Pattern" will best provide it.
- How the Nozzle is to be mounted (or positioned) and its spray directed. The options offered by LSP Industries in each of these areas are described below and on page 10. To order nozzles see page 6 for Catalog Numbers and descriptions.



## Know Which Nozzles to Use and How to Use Them.

The Fan Spray nozzles are available in a diverse series allowing the user to select a spray pattern exactly suited to the job. The nozzles will dispense most types of liquid lubricants covering a wide range of viscosities. These include soluble oil emulsions, synthetics, water based fluids and straight oils. The nozzles are resistant to corrosion and erosion by the dispensed fluids.

### P-207 Round Spray Nozzle

This nozzle is quite useful since an area can be covered by spraying directly at the surface. The spray is emitted in the form of a solid cone, giving an evenly coated circular pattern for coverage. By spraying at an angle to the surface, the coverage becomes elliptical in shape. Although this is an extremely useful nozzle, its use is restricted to water soluble, synthetic and vanishing oil type products.

### P-209 Side Fan Nozzle

This nozzle is for use in close quarters where the standard type nozzle will not fit. It gives a spray pattern like the Fan Nozzles shown above, but at a 90° angle from the nozzle. The spray is formed by deflecting the lubricant off of a baffle. The illustration shows how this feature can be used in limited access application. These nozzles can spray oils as well as water solubles.

## Fan Nozzle Spray Patterns

The Fan Sprays are the most widely used because of their versatility. The illustration above shows the 110° and 25° spray patterns for different angles and distances. The 65° and 80° Fan Nozzles offer spray patterns between these extremes.

### Pattern #1

The spray is perpendicular to the surface. Coverage is a narrow strip, the length of which is governed by the fan spread and the distance to the surface.

### Pattern #2

The spray is directed at a 30° angle to the surface which widens the pattern. The distance is twice that shown in PATTERN #1, therefore the length of the pattern is doubled.

### Pattern #3

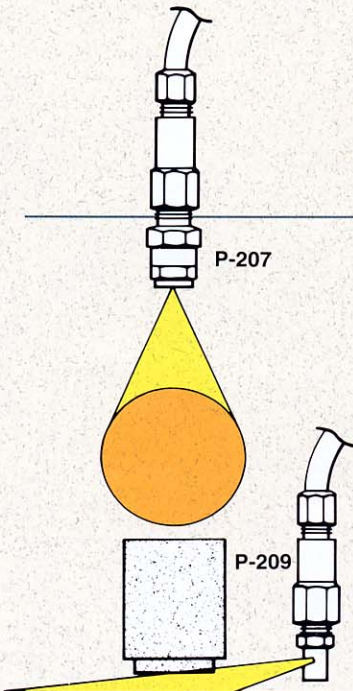
The decreased angle (15°) gives more width to the pattern, and the increased distance adds more length.

### Pattern #4

At this narrow angle (7°), the width of coverage is increased considerably. The spraying distance is eight times that of Pattern #1.

### Notes:

The angle of the spray can be decreased until the nozzle is almost parallel to the surface, at which point the coverage is quite wide and in the shape of a fan similar to the nozzle spread angle. The distance between the nozzle and the surface can be increased to give extensive coverage, or decreased to diminish the pattern.





# APPLICATION

## Variations

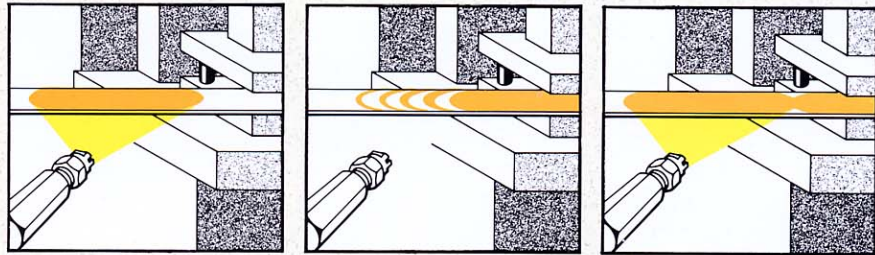
The PresSpray II was designed to handle a variety of jobs in the stamping department. Most dies can be lubricated by synchronizing the spray directly into the die, but for the unusual job it may mean lubricating prior to entering the die, making a special nozzle, or even building the nozzles into the die. Shown below are a few special applications to solve your lubrication problems.

### The Air Timer & Electronic Controls

For faster applications we recommend the PresSpray II be cycled with either the P-908 Air Timer or the E-100 PresSpray Controller. These units dispense lubricant on programmed cycles of the press, or on a completely divorced time cycle.

### Coil Feed Actuation

The Air Timer when used in conjunction with the P-912 Solenoid Valve can signal the PresSpray II to start and stop the lubrication process when a signal is received from the coil feeder, rather than the movement of the press itself.



Lubricant applied before entering the die. Use the Air Timer or PresSpray Controller to lubricate the feed stock.

### Progressive and Transfer Die Lubrication

Progressive dies are usually pulled because the last stations need sharpening. Lubricating feed stock going into the die helps but the life of die stations can be increased dramatically by spraying lubricant directly into the trouble areas.

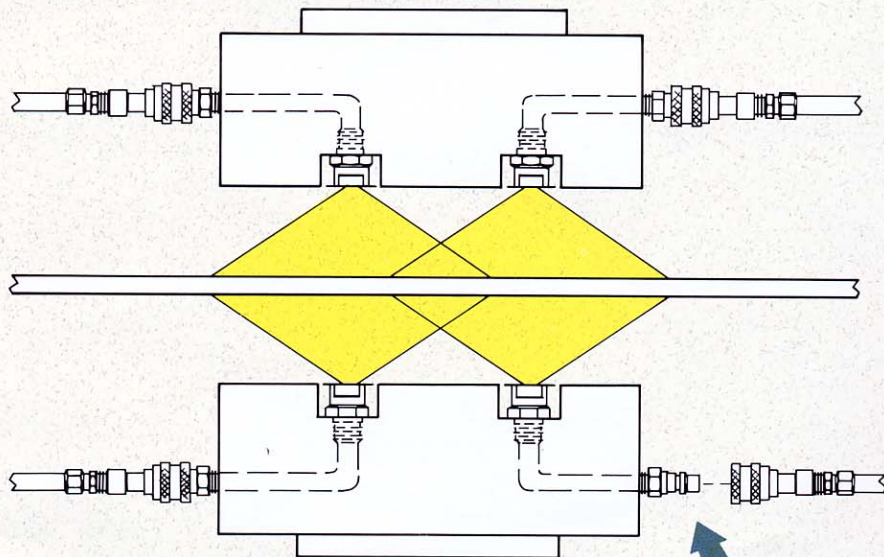


Lubricating the "trouble" stations in a Transfer Die.



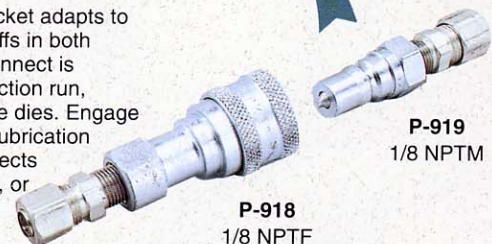
### Build Nozzles Directly into the Die

To reduce setup time, increase production and extend tool life, build the spray nozzles into the dies. By building the nozzles into the die they are permanently positioned to pinpoint the lubricant where needed. Lubricate the top and/or bottom of the stock and/or pinpoint it on a punch. To incorporate nozzles into the die, drill connecting cross holes in the die, with the nozzle at one end and the inlet at the other. Call a representative for specific details on this application.



### Quick Disconnects:

Male Plug Adapts to the die, Female Socket adapts to the tube going to the PresSprayII. Shutoffs in both ends prevent dripping when Quick Disconnect is disengaged. When finished with a production run, disengage quick disconnects and change dies. Engage Quick Disconnects to new die and your lubrication setup is complete. These Quick Disconnects can be mounted at the ejector, at the die, or in line.



Because space is limited for in-die applications, LSP has designed a miniature checkvalve that fits directly into the nozzle tip. This checkvalve acts the same as our standard checkvalve but allows for a compact, system.

**For correct In-Die nozzle recommendations, please furnish detailed information on your application or requirements.**



# SPECIFICATIONS

## For The PresSpray II

Specifying a lubricating system the easy way! Each Ejector dispenses from .000 to .040 cu. in. per actuation and can spray lubricants with viscosities up to 2500 SUS's at 100ø F. Since these parameters are fixed you just decide which package best fits your needs. Shown below are the physical dimensions of the PresSpray II.

### PresSpray II Mounted on a Small Reservoirs

Includes Filter/Regulator/Oiler.  
Order Actuator, Nozzles and Accessories Separately.

Part Number	No. of Ejectors	Size of Reservoir	All Dimensions in Inches			
			A	B	C	D
P-152	2	4 gal.	14.00	16.00	4.50	8.75
P-154	4	4 gal.	14.00	16.00	4.50	8.75
P-156	2	8 gal.	18.00	19.00	5.50	9.25
P-157	4	8 gal.	18.00	19.00	5.50	9.25
P-158	6	8 gal.	18.00	19.00	5.50	9.25

### PresSpray II Mounted on a Large Reservoir

Includes Filter/Regulator/Oiler.  
Order Actuator, Nozzles and Accessories Separately.

Part Number	Number of Ejectors	Size of Reservoir
P-142	2	15 gal.
P-143	4	15 gal.
P-144	6	15 gal.

### PresSpray II Mounted on a Single Bracket

Includes Filter/Regulator/Oiler.  
Order Actuator, Nozzles, PowerPump and Accessories Separately.

Part Number	Number of Ejectors
P-160	2
P-161	4
P-162	6

### PresSpray II Mounted on a Double Bracket

Includes Filter/Regulator/Oiler.  
Order Actuator, Nozzles, PowerPump and Accessories Separately.

Part Number	Number of Ejectors
P-165	8
P-166	10
P-167	12

