

# ORSCO® Lubrication Systems

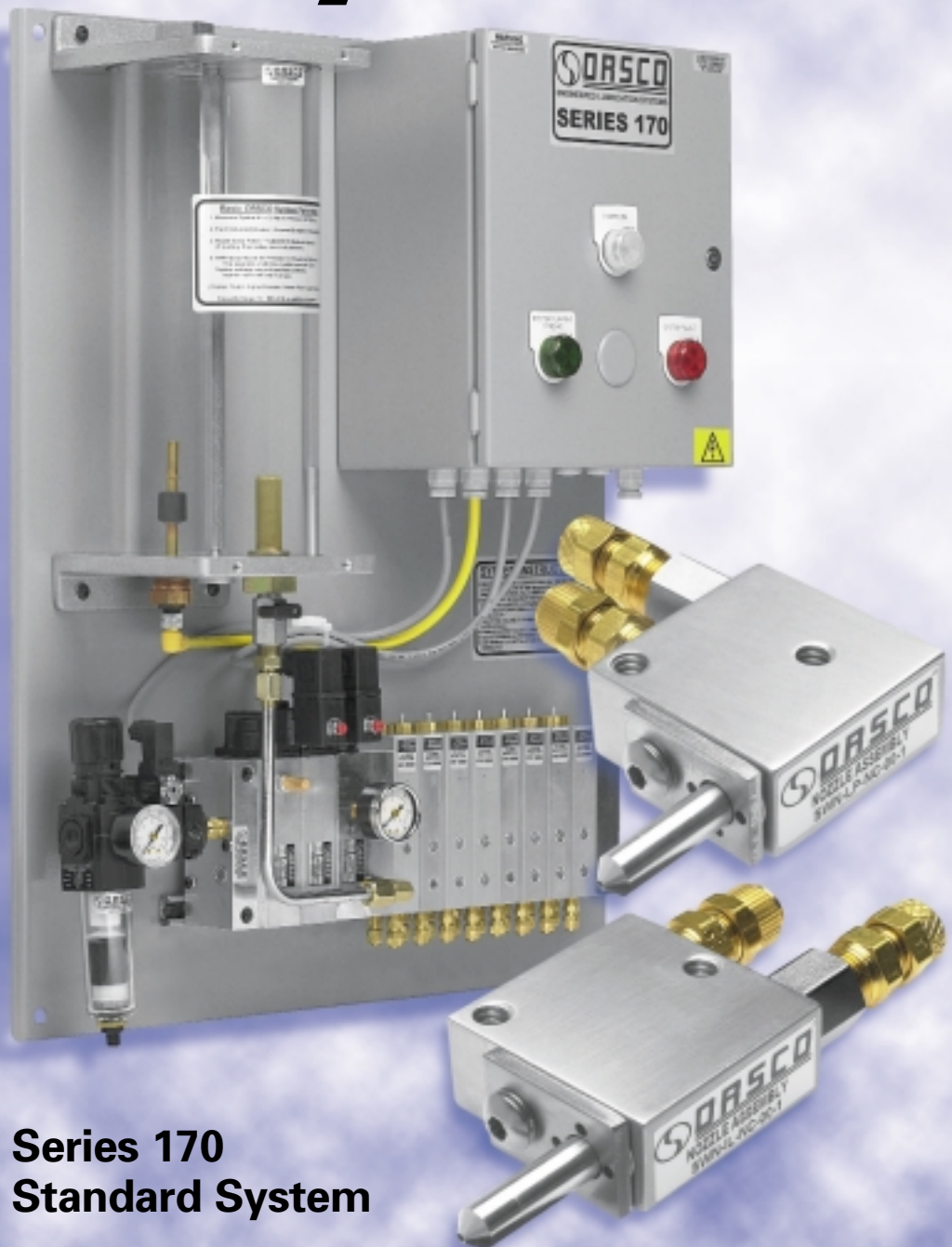
The "Oil Spray"  
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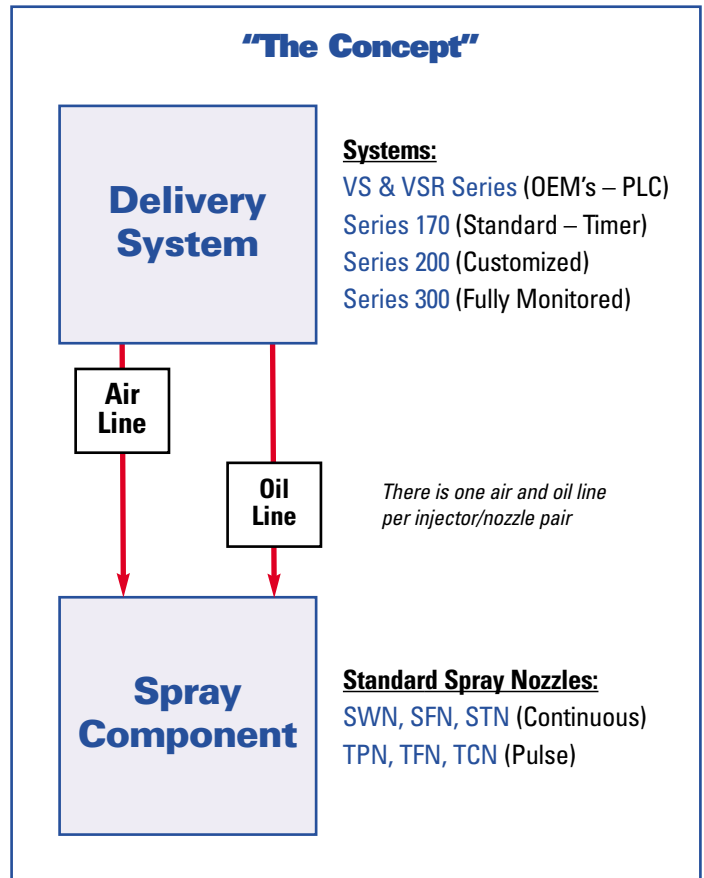
**Series 170  
Standard System**

# ORSCO® Series 170

## Extends Chain Life

- Reduce Consumption
- Short-term ROI\*
- Cleaner Systems
- Less Downtime
- Overall Energy Savings

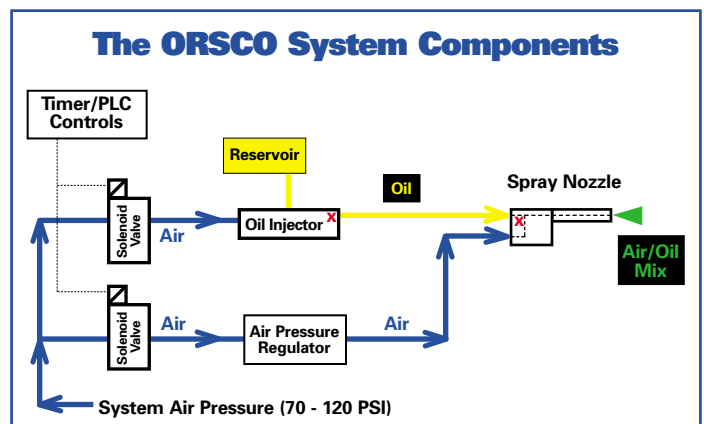
The secret of the ORSCO Series 170 is its unique ability to provide the right amount of lubricant, at the right location and at the right time, by delivering a small amount of lubricant on a continual and controlled basis. There are no worries about reliability or durability as the ORSCO Series 170 has been tested at the maximum injector rate for millions of cycles.



**"Over 60 percent of mechanical failures relate directly to poor or improper lubrication practices."\***

### Spray Nozzle Advantage: "Cleaning Effect"

Applying lubricant in a continuous fashion provides the best on-going continual maintenance for your chain and keeps all the moving parts as clean as possible, as shown.



\* Typical return on investment is less than six months

# Product Features

## A Complete System

The ORSCO Series 170 can fit the design of any piece of equipment, whether it's for an OEM or installed on-site, because it's available as a complete system or in two modular packages. The complete Series 170 combines an electrical control box with the system's innovative valve stack design and new three-piece reservoir.

## High-Output Capacity

The ORSCO Series 170 has many great features. It can handle applications that require large amounts of lubrication because its high injector cycle rate can deliver a nominal flow of up to 4 drops per second (at 2 Hz). The unit also delivers precise amounts of lubricant in two sizes: half drop (0.015 cc) and two drop (0.060 cc).

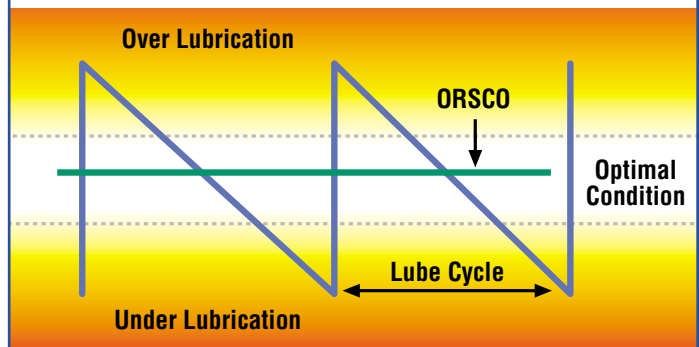
## Compact, Easy to Maintain

A consolidated manifold design, which minimizes external piping, makes the ORSCO Series 170 very compact. You can also service part of the assembly without having to replace the entire unit, plus it's easy to set up. Great reliability and durability, numerous features and benefits—Lincoln's new ORSCO Series 170 is the complete package.

## Features & Benefits

- ◆ Fixed volume delivery improves lubricant control
- ◆ High injector cycle rate (up to 2 Hz) can accommodate applications requiring large amounts of lubricant
- ◆ Three-piece reservoir design makes fluid levels easy to see and the component easy to clean and field repair
- ◆ Compact modular design with minimal external piping is ideal for Original Equipment Manufacturer (OEM) applications
- ◆ Patented spray nozzle design
- ◆ Easily adaptable modular package

**"... Proper lubrication can effectively triple the life of mechanical equipment." \***



\*Source: Lubrication for Industry, Lubrication Press, 1996

## MODULAR PACKAGES FOR OEMs AND END-USERS

### VS Series\*

The valve stack, the heart of the ORSCO family of lubrication products, comes standard with one controls network per stack and feeds up to 8 injectors. This is a great lubrication solution when matched with a customer's PLC and existing fluid source.

\* Filter pressure switch is not standard with the VS Series product



Valve Stack Series

### VSR Series

By adding a reservoir and a filter pressure switch, this package comes ready to work with a customer's timer or PLC.



Valve Stack-Reservoir Series

For an air controlled VS/VSR Series, contact your local ORSCO representative.



# ORSCO®

## Ideal for Many Industries



Pulp & Paper Industry



Beverage Industry



Textile Industry (tenterframe applications)



### Series 170 System

A standard and easy to install system for up to 16 lubrication points with multiple variations to choose.



### Series 200 "Custom" System

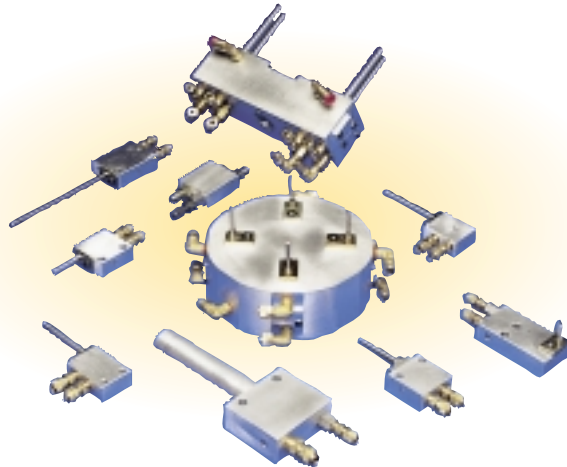
A customized system for more than 16 lubrication points, or if a customized control option is required.



### Series 300 "Monitored" System

An advanced engineered lubrication system with full- and real-time monitoring of all system functions with closed-loop feedback and alarms.

# Products



## “Customized” Oil Spray Nozzles

If necessary, ORSCO will custom design nozzles or systems specific to the particular application.

## Industrial Applications

Industry	Series 170	Series 200	Series 300	Coaxial
Assembly	◆	◆	◆	◆
Automotive	◆	◆	◆	◆
Baking	◆	◆		
Beverage	◆	◆		
Fiberglass	◆	◆		
Food Processing	◆	◆		
Gypsum	◆	◆		
Industrial Ovens	◆	◆		
Machine Tool	◆	◆	◆	
Material Handling	◆	◆		
Plastic	◆	◆	◆*	
Pulp & Paper	◆	◆		
Textile	◆	◆	◆*	

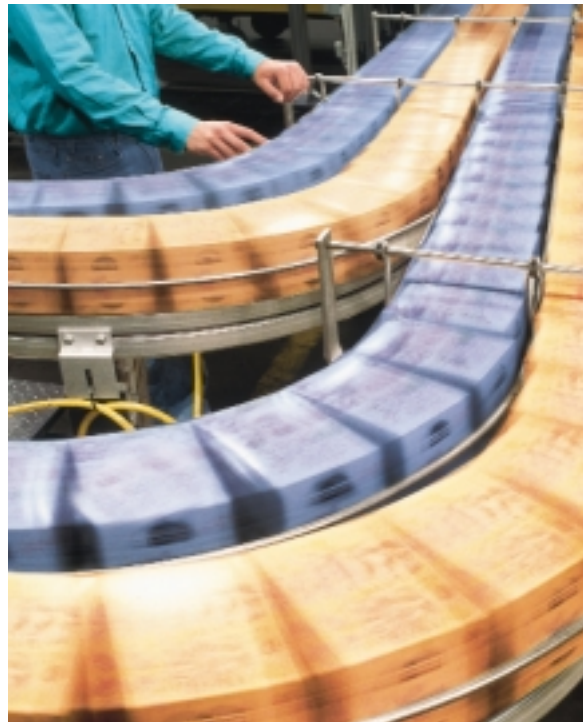
\* Tenterframe applications

## At ORSCO . . .

We don't make lubricants,  
*we make lubricants work better!*

We don't make chains,  
*we make chains last longer!*

We don't make machines,  
*we make machines more productive!*



Material Handling Industry



Auto Manufacturing Industry



# ORSCO® Series 170

## Patented Precision Delivery Nozzles

Choose from three tip lengths and three spray patterns, for versatility in any continuous spray design application. These nozzles feature 1/4-20 tapped (#10 screw clearance) mounting holes and durable aluminum construction.

**Part Number:** SWN - IL - NC - 90 - 2 (Continuous Spray)  
 TPN - LP - NC - 00 - 3 (Pulse Spray)

**Standard Nozzles:**

SWN (Continuous Spray)  
 TPN (Pulse Spray)

**Body Style:**

IL In Line  
 SS-IL Stainless Steel In Line  
 LP Low Profile  
 SS-LP Stainless Steel Low Profile

**Fittings:**

NC Nylon Compression Ftg.—Standard  
 NY Nylon Push In Tube Ftg.  
 CS Carbon Steel Ftg. (Steel Tubing)  
 SS Stainless Steel Ftg. (Steel Tubing)  
 XX No Fittings

**Oil Lines:**

Nylon—3/16" O.D. Tubing  
 Steel Tube—1/8" O.D. Tubing

**Air Lines:**

Nylon—1/4" O.D. Tubing  
 Steel Tube—1/4" O.D. Tubing

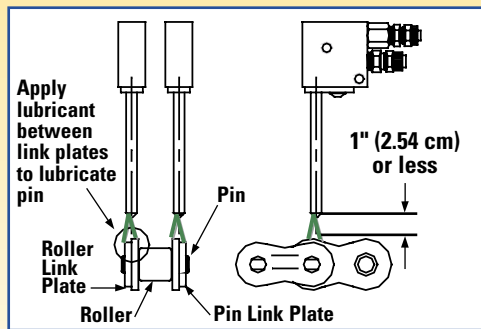
**Tip Length:**

1 One Inch  
 2 Two Inch  
 3 Three Inch

**Spray Pattern Angle:**

00 0° (straight)  
 45 45°  
 90 90°

**Continuous-Spray Nozzle**



**Continuous-Spray Nozzle**



Shown below are graphic illustrations of other popular nozzle families.



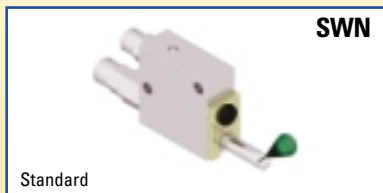
**Pulse-Spray Nozzle**  
 Assembly applications & slow moving chains



**Pulse-Spray 360° Fan Nozzle**  
 Bore lube & general assembly applications



**Pulse-Spray Cone Nozzle**  
 Engine & general assembly applications



**Continuous-Spray Nozzle**  
 Chain/gears/exposed bearings/assembly applications



**Continuous-Spray 120° Fan Nozzle**  
 Metal stamping/metal forming/food applications



**Continuous-Spray High-Flow Nozzle**  
 Spindle applications

For custom nozzle design, contact your ORSCO representative.

# Series 170 Model Code

	170	A	1	T	S	08	0000	H	M	NC	C	X	
	170	S	A	1	T	D	12	0804	T	M	NC	C	C
<b>Type of Enclosure</b> <i>(Omit for no enclosure)</i>													
30" x 24" stainless-steel enclosure with window and padlock . . . . . S													
(NEMA 4X Rating)													
30" x 24" steel enclosure with window and padlock . . . . . N													
(NEMA 12 Rating)													
<b>Voltage Requirements</b>													
110/120 VAC 50/60 HZ . . . . . A													
220/240 VAC 50/60 HZ . . . . . B													
230 VAC—24 VDC European—CE . . . . . C													
24 VDC . . . . . D													
<b>Control Networks (Two solenoid valves per network)</b>													
One Control Network . . . . . 1													
Two Control Networks ("D" option in regulator field below) . . . . . 2													
<b>Type of Control</b>													
Customer Controlled (no controls included with the system) . . . . . C													
Timer Controlled (injector timer included) . . . . . T													
(requires external signal for system "ON")													
System "ON" and Injector Timers (both included) . . . . . R													
<b>Regulators</b>													
Single Network/Single Zone (1 regulator) . . . . . S													
Single Network/Dual Zone (2 regulators) . . . . . D													
Dual Network/Single Zone per Network (2 regulators) . . . . . D													
All feed lines served by each regulator should be similar lengths (+/- 10 ft)													
<b>Number of Injectors</b> . . . . . 01-16													
<b>Spray Nozzle Regulator Assignment</b>													
One Network/One Zone . . . . . 0000													
Two Zone Combination Examples:													
Zone 1, 1 nozzle; Zone 2, 1 nozzle . . . . . 0101													
Zone 1, 8 nozzles; Zone 2, 4 nozzles . . . . . 0804													
Zone 1, 8 nozzles; Zone 2, 8 nozzles . . . . . 0808													
Combinations cannot exceed 16 nozzles													
<b>Injector Size (Fixed Output)</b>													
Half-Drop per stroke Injector (0.015 cc) . . . . . H													
Two-Drop per stroke Injector (0.060 cc) . . . . . T													
<b>Reservoir Filling Method</b>													
Central Fill (low level switch and pressurized reservoir) . . . . . P													
Central Fill with high and low level switch . . . . . PH													
Manual Fill (low level switch only) . . . . . M													
<b>Tube Fittings</b>													
Nylon Push In Tube Fittings . . . . . NY													
Nylon Compression Tube Fittings . . . . . NC													
Carbon Steel/Steel Tube Fittings . . . . . CS													
Stainless Steel/Steel Tube Fittings . . . . . SS													
No Fittings . . . . . XX													
(Oil Lines—Nylon: 3/16" O.D. Tubing; Steel: 1/8" O.D. Tubing)													
(Air Lines—Nylon and Steel: Both are 1/4" O.D. Tubing)													
<b>Control Network 1</b>													
Continuous Spray . . . . . C													
Pulsed Spray . . . . . P													
<b>Control Network 2</b>													
Continuous Spray . . . . . C													
Pulsed Spray . . . . . P													
No Second Network . . . . . X													

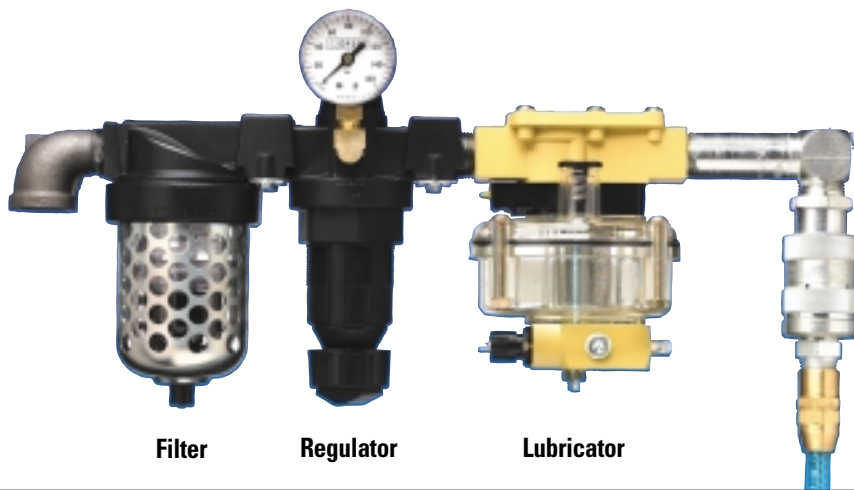
**Standard on all Models:**

- Low Reservoir Level switch
- Low air pressure switch
- Pilot Lights
  - Red light (low level/low pressure)
  - Green light (system operation for each network)

**Special Request Options:**

- (Add code to model number)
- Spindle (0-60 psi gauge, 0.015 ml fixed injector) . . . . . S1
  - Extra volume nozzles, i.e metalworking applications . . . . . S2
  - Wide Spray Nozzle (WSN) option . . . . . S3  
(every two injector oil outputs combined)

# Air Tool Lubrication Systems



Filter

Regulator

Lubricator

## Air Tool Lubrication Systems (FRL)

Point of use lubrication delivery system for air tools, cylinders, pumps, guns, drills and motors.

### SOLUTIONS

contains new product information  
for Lincoln customers.

Please direct ideas, comments or questions to:

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[www.lincolnindustrial.com](http://www.lincolnindustrial.com)

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