

# Lincoln Modular Lube automatic lubrication systems



**LINCOLN**

# People, capabilities and systems to save money and increase productivity

We're the largest and most successful company in our field because we continually satisfy our customers with the world's best lubrication and pumping systems. For more than a century, companies have relied on our technical and quality leadership, our world-class manufacturing and customer service, and our vast network of distributors and support facilities.

Lincoln develops new products and systems at research and development facilities in the U.S., Germany and India that provide global and regional application solutions.

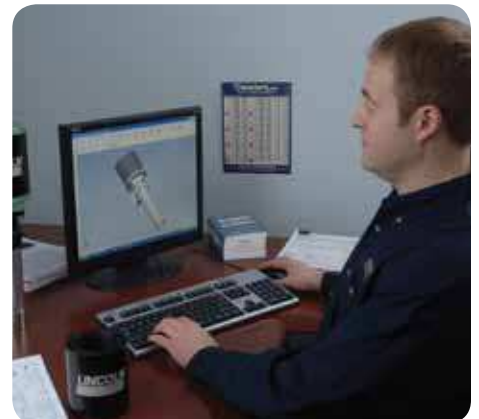
We have solutions for large processing plants, automotive manufacturing, pulp and paper mills, and food and beverage facilities. Virtually every industrial professional involved in operations and maintenance can benefit from Lincoln systems.

On the road or in the field, Lincoln protects heavy equipment used in mining, construction, agriculture and over-the-road trucking. The world's leading manufacturers offer our systems as standard equipment or factory options.

Lincoln builds precision metal components, state-of-the-art electronic controls, and the industry's top-performing pump systems. Our quality systems in the United States and Germany are ISO 9001 registered.

With five technical support centers on three continents, and a network of systems houses and distributors supported by regional sales and service offices, our customers can always draw on our worldwide resources.

To make sure your investment results in significant savings, Lincoln developed a unique program called BearingSaver. You not only get a complete audit of your facility, you also receive an analysis of your return on investment.



|   |    |
|---|----|
| <i>Introduction to Modular Lube®</i> .....                          | 2  |
| <i>UV Divider Valves</i> .....                                      | 4  |
| <i>MC<sup>2</sup>-HP Divider Valves</i> .....                       | 5  |
| <i>XL Divider Valves</i> .....                                      | 6  |
| <i>UV, XL and MC<sup>2</sup>-HP Divider Valve Accessories</i> ..... | 7  |
| <i>Divider Valve Accessories</i> .....                              | 8  |
| <i>Installation Components</i> .....                                | 10 |
| <i>Introduction to Pumps</i> .....                                  | 11 |
| <i>Pneumatic Modular Pumps</i> .....                                | 12 |
| <i>Hydraulic Modular Pumps</i> .....                                | 12 |
| <i>Baseplates and Reservoirs</i> .....                              | 13 |
| <i>Modular Pump Accessories</i> .....                               | 14 |
| <i>Modular LP Pumps</i> .....                                       | 15 |
| <i>Reciprocating Pumps</i> .....                                    | 16 |
| <i>MCLP Pumps</i> .....   | 17 |
| <i>Pump Accessories</i> .....                                       | 19 |
| <i>Pump to Point Lubricators</i> .....                              | 20 |
| <i>Pump to Point Lubricator Accessories</i> .....                   | 23 |
| <i>System Controls</i> .....  | 24 |
| <i>Numerical Index</i> .....  | 27 |

# Modular Lube® Lubrication Systems

## Introduction to Modular Lube



### Built-in design options

When new technology calls for design alterations, the system designer can add or delete lubrication points without disturbing existing piping.

### It's an economical system

Lincoln's Modular Lube single-line progressive system requires less piping and lower tubing costs at installation—and costs less to maintain or change when the need arises.

### Patented by-pass block

This unique feature enables design engineers to extend any Lincoln Modular Lube system simply by removing the by-pass block and replacing it with a metering valve. When new machine accessories are added, Modular Lube stands ready to service any bearing point requirements.

### Central Signaling

If a malfunction should occur due to a broken air line, low lubricant level, high pressure or line blockage, Lincoln's Modular Lube automatic lube system controls can be configured to signal the operator with a visual or audible alarm, and interlock contacts activate a machine shut-down circuit.

### Plug-in concept

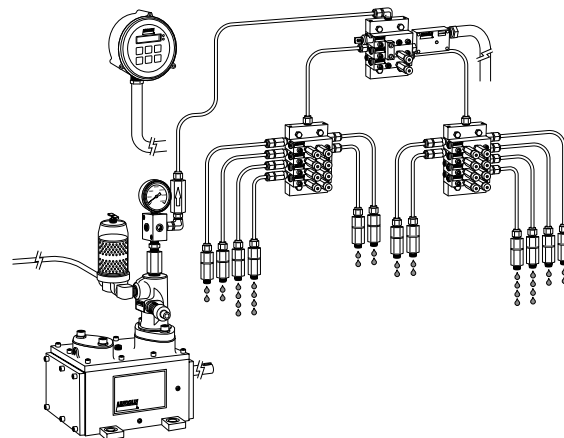
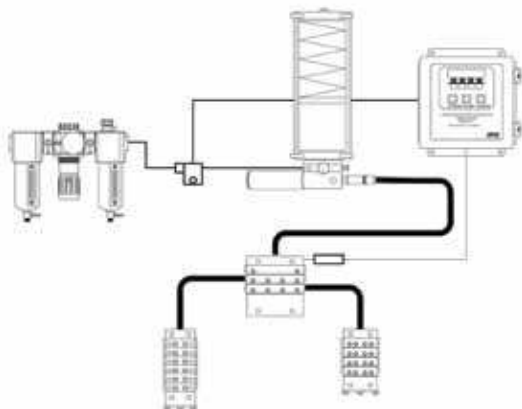
The Lincoln modular concept allows faster and easier changing of metering valve sizes. Modular pumps, reservoirs and timers make up a compact easy-to-mount lube system, simplifying the work of system designers and maintenance engineers.

### Versatile interchangeable components

Divider valves, pumps reservoirs and controls can be used to tailor a Lincoln Modular Lube system to suit individual needs and/or requirements. Inventory costs are reduced to a minimum by purchasing modular components.

### You're assured of positive stall

If a lubricating line plugs, any progressive lube system should shut down entirely—that's what it's designed to do. However, when a feed line becomes plugged on some systems, system pressure can cause lubrication to gradually slip by a valve piston, allowing the system to resume functioning—with one or more lubricating lines out of operation. Machinery bearings could run dry with disastrous results. Modular Lube has the closest piston-to-valve tolerances in the industry, virtually assuring you a positive stall every time.



### UV, XL Series

Designed for standard industrial applications. UV and XL Modular Lube systems are fully automatic, centralized lubrication systems for use on all types of industrial machinery.

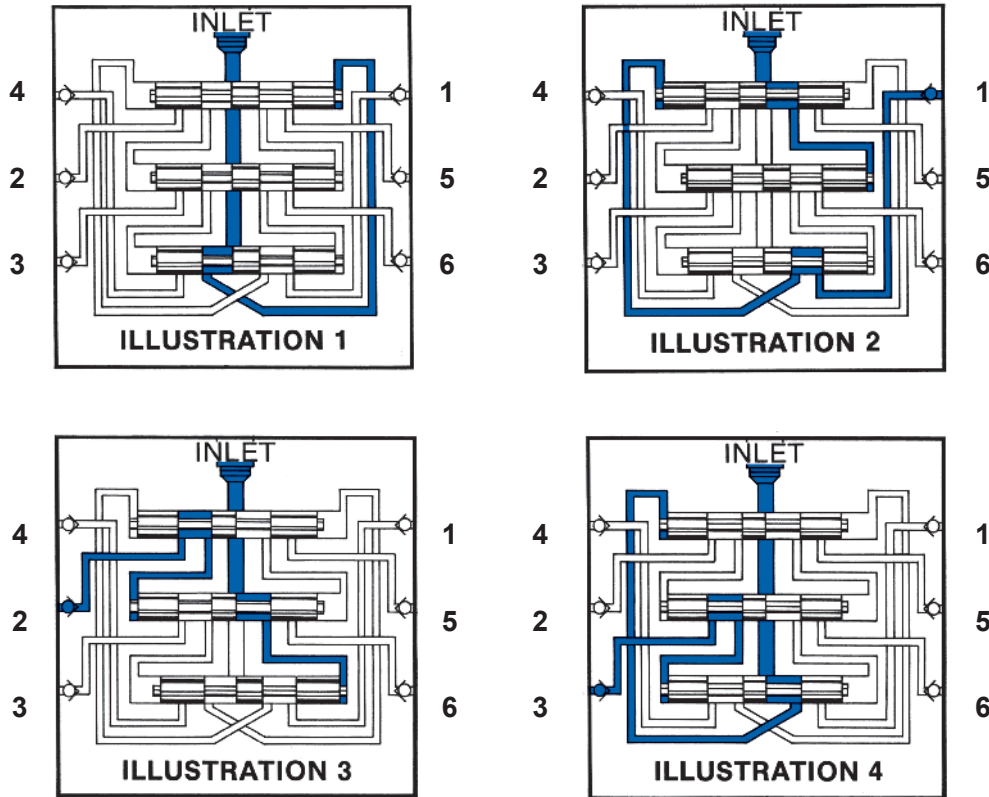
Type UV and XL are available in several divider valve sizes and outputs, and provides maximum flexibility in application. This is the most versatile of the Modular Lube systems. It can be installed on all machine tools (metalcutting, metal forming), foundry machinery, wood-working and wood processing equipment, printing machinery, mining equipment and material handling machinery.

### MC²-HP Series (High Pressure)

Designed for gas engine and compressor lubrication systems. MC²-HP series systems are designed for the gas transmission industry and are available with fluoroelastomer seals. The divider valves are compatible with either synthetic or petroleum-based lubricants. High-pressure capability to overcome back pressure with CSA-approved monitoring components available.

### Modular Lube Divider Valves

Lincoln divider valve assemblies are comprised of three or more metering valves mounted to a segmented baseplate. The metering valves are available with single or twin outlets and may be externally singled or cross-ported. Extremely close tolerances between piston and valve body allow metering valves to deliver precise volumes of lubricant at high operating pressures.



#### Illustration 1

The inlet passageway is connected to all piston chambers at all times with only one piston free to move at any one time. With all the pistons at the far right, lubricant from the inlet flows against the right end of piston 1 (top).

#### Illustration 2

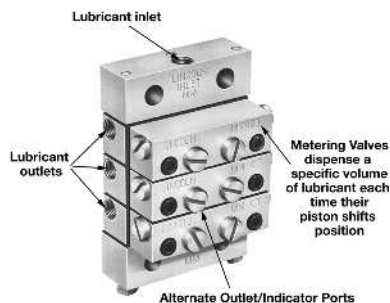
Lubricant flow shifts piston 1 from right to left, dispensing lube from outlet 1. The shifting piston 1 directs the lubricant flow against the right side of piston 2 (center).

#### Illustration 3

Lubricant flow shifts piston 2 from right to left, dispensing lube through valve ports of piston 1 and through outlet 2. The shift of piston 2 directs lubricant flow against the right side of piston 3.

#### Illustration 4

Lubricant flow shifts piston 3 (bottom) from right to left, dispensing lube through the valve ports of piston 2 and through outlet 3. The shift of piston 3 directs lubricant through a connecting passage to the left side of piston 1. Lubricant flow against the left side of piston 1 begins the second half-cycle, which shifts pistons from left to right, dispensing lubricant through outlets 4, 5 and 6 of the divider valve.



### Applications

Lincoln Modular Lube systems are popular in metal cutting and machining applications and for lubricating large compressors and other equipment in the oil and gas market.

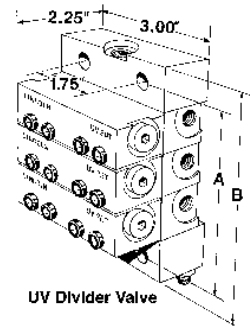
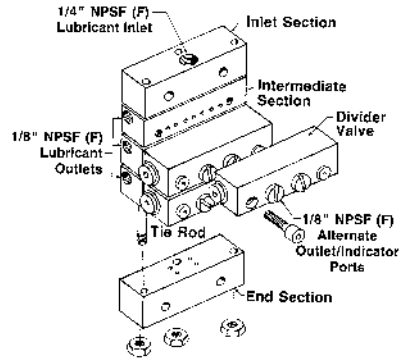
Many machine makers specify that Modular Lube be installed right at their factory. Customers who have purchased machines without automatic lubrication can have Modular Lube systems retro-fitted in the field.

# Modular Lube® Lubrication Systems

## Divider Valves



### UV Divider Valves



UV Divider Valves are designed to meter oil or grease in automatic or manual systems installed on all types of industrial machinery. Segmented baseplate assembly contains all inlet and outlet connections. Alternate outlet ports are located on the face of the divider valve which may be used for installation of performance indicators.

### Specifications:

| Max. Lube Points/ Assembly | Max. Oper. press. psig / bar | Inlet Section |              | Intermediate Section |              | Performance Indicator Port* | Material of Construction     | Seal Construction |
|----------------------------|------------------------------|---------------|--------------|----------------------|--------------|-----------------------------|------------------------------|-------------------|
|                            |                              | Model         | Thread       | Model                | Thread       |                             |                              |                   |
| 16                         | 3500 / 240                   | 87918         | 1/4" NPSF(F) | 87919                | 1/8" NPSF(F) | 1/8" NPSF(F)                | Yellow chromate plated steel | Flouroelastomer   |

\* Can also be used as an alternate outlet port.

### UV Baseplate and Tie Rod Specifications:

| Max. No. of Outlets | No. of Divider Valves | End Section | Tie Rod* | Dimensions |       |       |       |
|---------------------|-----------------------|-------------|----------|------------|-------|-------|-------|
|                     |                       |             |          | A in.      | A mm  | B in. | B mm  |
| 6                   | 3                     | 87920       | 250290   | 3.58       | 90.9  | 4.52  | 114.8 |
| 8                   | 4                     |             | 250291   | 4.5        | 114.3 | 5.44  | 138.2 |
| 10                  | 5                     |             | 250292   | 5.42       | 137.7 | 6.36  | 161.5 |
| 12                  | 6                     |             | 250293   | 6.34       | 161.0 | 7.28  | 184.9 |
| 14                  | 7                     |             | 250294   | 7.27       | 184.6 | 8.20  | 208.3 |
| 16                  | 8                     |             | 250295   | 8.19       | 208.0 | 9.13  | 231.9 |

\* Each tie rod model number includes three tie rods and three fastening nuts.  
Note: Use 68645 closure plug (1/8" NPT) to plug non-working outlets.

### UV Divider Valve Specifications:

| Designation | Single Outlet  |                              |                             |       |
|-------------|----------------|------------------------------|-----------------------------|-------|
|             | Model Number   |                              | Lubricant Output per Outlet |       |
|             | Standard Model | W/Right Side Cycle Indicator | cu. in.                     | cc    |
| 05S         | 882051         | —                            | .010                        | .164  |
| 10S         | 882101         | —                            | .020                        | .328  |
| 15S         | 882151         | —                            | .030                        | .492  |
| 20S         | 882201         | 882203                       | .040                        | .656  |
| 25S         | 882251         | 882253                       | .050                        | .820  |
| 30S         | 882301         | 882303                       | .060                        | .983  |
| 35S         | 882351         | 882353                       | .070                        | 1.147 |
| 40S         | 882401         | 882403                       | .080                        | 1.311 |

| Designation | Twin Outlet    |                              |                             |      |
|-------------|----------------|------------------------------|-----------------------------|------|
|             | Model Number   |                              | Lubricant output per Outlet |      |
|             | Standard Model | W/Right Side Cycle Indicator | cu. in.                     | cc   |
| 05T         | 882052         | —                            | .005                        | .082 |
| 10T         | 882102         | —                            | .010                        | .164 |
| 15T         | 882152         | —                            | .015                        | .246 |
| 20T         | 882202         | 882204                       | .020                        | .328 |
| 25T         | 882252         | 882254                       | .025                        | .410 |
| 30T         | 882302         | 882304                       | .030                        | .492 |
| 35T         | 882352         | 882354                       | .035                        | .574 |
| 40T         | 882402         | 882404                       | .040                        | .656 |

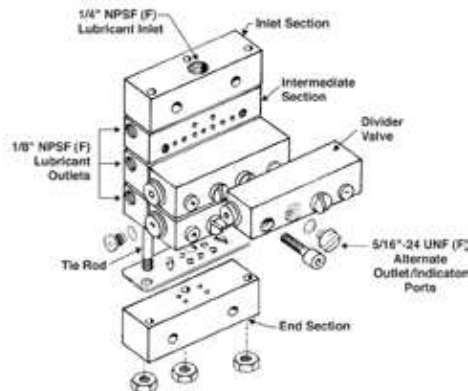
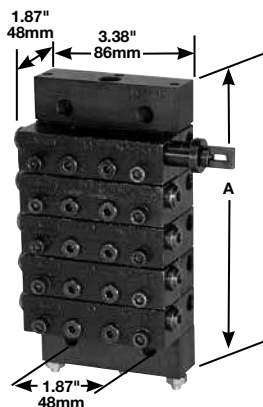
**Model 882000 UV Bypass Block** Optional by-pass block permits addition or deletion of lubrication points without disturbing existing installations. Includes mounting screws and Buna-N seals.

# Modular Lube<sup>®</sup> Lubrication Systems

## Divider Valves



### MC<sup>2</sup>-HP Divider Valves



MC<sup>2</sup>-HP High Pressure Divider Valves are designed to dispense either petroleum-based or synthetic lubricants in gas engine and compressor lubrication systems.

Segmented baseplate assembly contains all inlet and outlet connections. Alternate outlet ports are located on the face of the divider valve which may be used for installation of performance indicators.

### Specifications:

| Maximum Lube Points/ Assembly | Maximum Operating Press. psig / bar | Lube Inlet | Lube Outlet | Performance Indicator Port | Material of Construction    | Seal Construction |
|-------------------------------|-------------------------------------|------------|-------------|----------------------------|-----------------------------|-------------------|
| 16                            | 7500 / 512                          | ¼" NPTF(F) | ⅜" NPSF(F)  | ⅝" - 24 UNF                | Black chromate plated steel | Flouroelastomer   |

\* Can also be used as an alternate outlet port.

### MC<sup>2</sup>-HP Baseplate and Tie Rod Specifications:

| Maximum Number of Outlets | Number of Divider Valves | Inlet Section | End Section | Tie Rod* (Qty Req'd) | Intermediate Section (Qty Req'd) | Dimensions |     |
|---------------------------|--------------------------|---------------|-------------|----------------------|----------------------------------|------------|-----|
|                           |                          |               |             |                      |                                  | A          |     |
|                           |                          |               |             |                      |                                  | in.        | mm  |
| 6                         | 3                        | 87955         | 87956       | 236640 (3)           | 87957 (3)                        | 5.09       | 129 |
| 8                         | 4                        |               |             | 236641 (3)           | 87957 (4)                        | 6.00       | 152 |
| 10                        | 5                        |               |             | 236642 (3)           | 87957 (5)                        | 6.91       | 176 |
| 12                        | 6                        |               |             | 236643 (3)           | 87957 (6)                        | 7.81       | 198 |
| 14                        | 7                        |               |             | 236644 (3)           | 87957 (7)                        | 8.72       | 221 |
| 16                        | 8                        |               |             | 236645 (3)           | 87957 (8)                        | 9.63       | 245 |

\* Each tie rod model number includes three tie rods.

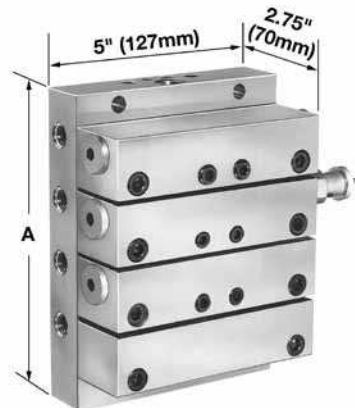
Note: Use 68645 closure plug (⅜" NPT) to plug non-working outlets. Each 87956 end section contains three tie rod nuts

### MC<sup>2</sup>-HP Divider Valve Specifications:

| Single Outlet |                |                              |                             |      | Twin Outlet |              |                              |                             |      |
|---------------|----------------|------------------------------|-----------------------------|------|-------------|--------------|------------------------------|-----------------------------|------|
| Designation   | Model Number   |                              | Lubricant Output per Outlet |      | Designation | Model Number |                              | Lubricant Output per Outlet |      |
|               | Standard Model | W/Right Side Cycle Indicator | cu. in.                     | cc   |             | Standard     | W/Right Side Cycle Indicator | cu. in.                     | cc   |
| 06S           | 876061         | -                            | .012                        | .196 | 06T         | 876062       | -                            | .006                        | .098 |
| 09S           | 876091         | -                            | .018                        | .295 | 09T         | 876092       | -                            | .009                        | .147 |
| 12S           | 876121         | 876123                       | .024                        | .393 | 12T         | 876122       | 876124                       | .012                        | .197 |
| 18S           | 876181         | 876183                       | .036                        | .590 | 18T         | 876182       | 876184                       | .018                        | .295 |
| 24S           | 876241         | 876243                       | .048                        | .787 | 24T         | 876242       | 876244                       | .024                        | .393 |

**Model 874000 MC<sup>2</sup>-HP Bypass Block** Optional by-pass block permits addition or deletion of lubrication points without disturbing existing installations. Includes mounting screws and flouroelastomer gasket plate.

### XL Divider Valves



XL Divider Valves are designed to meter large volumes of oil or grease in manual or automatic lubrication systems for all types of industrial machinery. These units can be used in complete XL systems or integrated as a primary divider valve assembly in systems using UV divider valves as secondaries.

Solid one piece baseplate contains all inlet and outlet connections. Convenient front located ports on the divider valve are provided for installation of any desired performance indicators.

### Specifications:

| Maximum Lube Points/ Assembly | Maximum Operating Press. psig / bar | Lube Inlet   | Lube Outlet  | Performance Indicator Port* | Material of Construction | Seal Construction |
|-------------------------------|-------------------------------------|--------------|--------------|-----------------------------|--------------------------|-------------------|
| 12                            | 2500 / 172                          | 3/8" NPTF(F) | 1/4" NPTF(F) | 1/8" NPTF(F)                | Zinc plated steel        | Buna-N            |

\* Can also be used as an alternate outlet port.

### XL Baseplate Specifications:

| Model No. | Maximum Number of Outlets | No. of Divider Valves* | Dimensions |     |
|-----------|---------------------------|------------------------|------------|-----|
|           |                           |                        | A          |     |
|           |                           |                        | in.        | mm  |
| 87030-3   | 6                         | 3                      | 5.34       | 136 |
| 87030-4   | 8                         | 4                      | 6.69       | 170 |
| 87030-6   | 12                        | 6                      | 9.38       | 238 |

\* Use No.67359 closure plug (1/4" NPT) to plug non-working outlets.

### XL Divider Valve Specifications:

| Single Outlet |                |                              |                        |      |
|---------------|----------------|------------------------------|------------------------|------|
| Designation   | Standard Model | W/Right Side Cycle Indicator | Total Lubricant Output |      |
|               |                |                              | cu. in.                | cc   |
| 30S           | 87026-03S      | -                            | .060                   | .983 |
| 50S           | 87026-05S      | -                            | .100                   | 1.64 |
| 80S           | 87026-08S      | -                            | .160                   | 2.62 |
| 100S          | 87026-10S      | -                            | .200                   | 3.28 |
| 120S          | 87026-12S      | -                            | .240                   | 3.93 |
| 150S          | 87026-15S      | -                            | .300                   | 4.92 |

| Twin Outlet |                |                              |                        |      |
|-------------|----------------|------------------------------|------------------------|------|
| Designation | Standard Model | W/Right Side Cycle Indicator | Total Lubricant Output |      |
|             |                |                              | cu. in.                | cc   |
| 30T         | 87026-03T      | -                            | .030                   | .492 |
| 50T         | 87026-05T      | -                            | .050                   | .820 |
| 80T         | 87026-08T      | -                            | .080                   | 1.31 |
| 100T        | 87026-10T      | -                            | .100                   | 1.64 |
| 120T        | 87026-12T      | -                            | .120                   | 1.97 |
| 150T        | 87026-15T      | -                            | .150                   | 2.46 |

**Model 87028 XL Bypass Block** Optional by-pass block permits addition or deletion of lubrication points without disturbing existing installations. Includes mounting screws and fluoroelastomer o-ring seals.





**UV, XL Divider Valve Accessories**

**Atmospheric Safety Relief Indicators**

High pressure ruptures disc, pressure and lubricant vents to the atmosphere.

| UV, XL Model | Pressure Rating |     | Disc Color | Replacement Disc Model (10/pkg) | Connector    |
|--------------|-----------------|-----|------------|---------------------------------|--------------|
|              | psig            | bar |            |                                 |              |
| 87934        | 1450            | 100 | Yellow     | 69813-10                        | 1/8" NPTF(M) |
| 87935        | 1750            | 120 | Red        | 69813-12                        |              |
| 87936        | 3250            | 224 | Purple     | 250312                          |              |
| 87937        | 3700            | 255 | Yel/Nat    | 250313                          |              |



**Reset-Type Performance Indicators**

High pressure extends indicator. Reset the indicator after pressure is relieved.

| UV, XL Model | Pressure Rating |     | Connector    |
|--------------|-----------------|-----|--------------|
|              | psig            | bar |              |
| 87938        | 500             | 34  | 1/8" NPTF(M) |
| 87939        | 1000            | 69  |              |
| 87940        | 1500            | 103 |              |
| 87941        | 2000            | 138 |              |
| 87942        | 3000            | 207 |              |

**Note:** O-rings are fluoroelastomer



**Adapter**

Adapter connects UV, XL style performance indicators to MC<sup>2</sup> style divider valves and old style ML. Includes fluoroelastomer O-ring.

| Model | Thread                        |
|-------|-------------------------------|
| 87915 | 5/16" -24 Male x 1/8" NPTF(F) |

**MC<sup>2</sup> Divider Valve Accessories**



**Pin Type Performance Indicators**

High pressure ruptures internal disc and extends indicator.

| MC Model | Pressure Rating |     | Disc Color | Replacement Disc Model (10/pkg) | Connector     |
|----------|-----------------|-----|------------|---------------------------------|---------------|
|          | psig            | bar |            |                                 |               |
| 87895    | 1450            | 109 | Yellow     | 69813-10                        | 5/16"-24 Male |
| 87896    | 1750            | 120 | Red        | 69813-12                        |               |
| 87897    | 2050            | 141 | Orange     | 69813-14                        |               |

**Note:** O-rings are fluoroelastomer



**Reset-Type Performance Indicators**

High pressure extends indicator. Reset the indicator after pressure is relieved.

| Model | Pressure Rating |     | Spring/Tag Color | Connector     |
|-------|-----------------|-----|------------------|---------------|
|       | psig            | bar |                  |               |
| 87885 | 1000            | 69  | Green            | 5/16"-24 Male |
| 87886 | 1500            | 103 | Yellow           |               |
| 87887 | 2000            | 138 | Red              |               |
| 87888 | 2500            | 172 | Orange           |               |
| 87889 | 3000            | 207 | Blue             |               |

**Note:** O-rings are fluoroelastomer

### Cycle Switch for Natural Gas Compressors

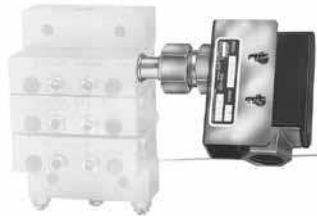
Designed to work with Lincoln MC, MC<sup>2</sup> HP valves as well as with other brands. Simple installation reduces labor costs. Features captured magnet assembly and hall effect switch.

#### Cycle Switch with Shutdown Feature

- Lower-cost, stand-alone solution
- Shut down protection for “no flow” conditions is factory set at two minutes
- Operates from 5-30 VDC for increased reliability



| Part No. | Description  | Power Req.               | Maximum Working Pressure | Temperature Range              | Material  | EX Rating  |
|----------|--|--------------------------|--------------------------|--------------------------------|---|--|
| 249123   | Hall Effect/Cycle Switch with Shutdown for Lincoln MC <sup>2</sup> -HP series block                      | 5 to 30 VDC, 100 UA max. | 7500 psi                 | -40°C to 85°C (-40°F to 185°F) | Aluminum Housing, Stainless Steel Magnet Assembly | Approval pending for Class I, Groups A, B, C & D, Div. 1 & 2 CE, II 3G Ex Na IIA |
| 249124   | Hall Effect/Cycle Switch with Shutdown for Lincoln UV and Graco Lubriquip®-Manzel MHP series style block |                          |                          |                                |   |  |



### Cycle Switch

Cycle Switch attaches to valve with cycle indicator pin, sends electrical signal to controller.



| Model | Switch Type | Switch Capacity                             | Conduit Connector |
|-------|-------------|---|-------------------|
| 87070 | SPDT        | 15 Amps @ 125/250 VAC<br>0.5 Amps @ 125 VDC | ½" - 14 NPSM      |

### Cycle Counter

Cycle Counter attaches to valve with cycle indicator pin, counts and records cycles.



| Model | Maximum Counts |
|-------|----------------|
| 87828 | 99,999         |

### Proximity Switch

Cycle Switch for Natural Gas Compressors



| Model  | Block Style        | Switch Type | Switch Capacity                | CSA Certification   | Conduit Connector |
|--------|--------------------|-------------|--------------------------------|---|-------------------|
| 85651  | UV                 | SPST        | 10 Watts<br>200 VDC<br>0.5 Amp | Class I, Group A, B, C & D / Class II, Group E, F & G Hazardous Locations | ½" NPT(F)         |
| 87617* | MC                 |             |                                |   |                   |
| 87618  | XL Size 03 thru 12 |             |                                |   |                   |

\*Can be used with Model 87630 Datalogger Lubrication Monitor

### External Singling/Cross Port Kit

External Cross Port Kit connects alternate outlet ports to combine the volume of two divider valves through a single outlet.



| Model | Block Type | Application/Usage    |
|-------|------------|----------------------|
| 87905 | MC         | Single and Crossport |
| 87823 | XL         | Crossport            |
| 87824 | XL         | Singling             |
| 87825 | UV         | Crossport            |

### Balancing Valve

Model 87865 Balancing Valve is used when back pressure differential between divider valve outlets exceeds 1000 psi (69 bar).

| Model | Pressure Adjustment |     |      |     | Inlet/Outlet | Seal Material   |
|-------|---------------------|-----|------|-----|--------------|-----------------|
|       | Min                 |     | Max  |     |              |                 |
|       | psig                | bar | psig | bar |              |                 |
| 87865 | 250                 | 17  | 6000 | 414 | ½" NPTF(F)   | Fluoroelastomer |



### Mounting Bracket

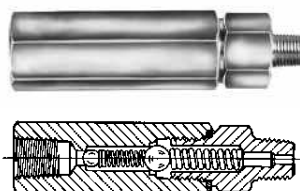
#### Model 250286 (UV) and Model 360675 (MC<sup>2</sup>) Mounting Brackets—

Mount divider valve assembly off the face of vertical surfaces. Use two brackets per divider valve assembly.

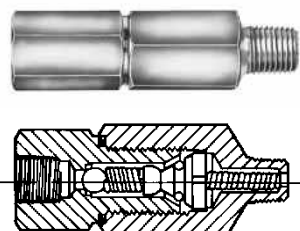
### Check Valves

Check valves maintain prime in feed lines and check back pressure from pressurized lubrication points.

### Double Ball, Straight

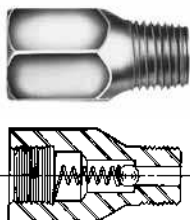


| Model    | Pressure             |                    | Inlet           | Outlet          | Hex Material    | Hex Inlet-in. | Hex Outlet-in. | Length in./mm |
|----------|----------------------|--------------------|-----------------|-----------------|-----------------|---------------|----------------|---------------|
|          | Max                  | Opening            |                 |                 |                 |               |                |               |
| 880511   | 8000 psig<br>552 bar | 145 psig<br>10 bar | 1/4" NPTF(F)    | 1/4" NPTF(M)    | Carbon Steel    | 13/16"        | 3/4"           | 3.72/94.5     |
| 880518-9 |                      |                    |                 |                 | 316 S.S.        |               |                | 3.75/95.3     |
| 880517   |                      |                    | Carbon Steel    | 3.31 / 84.1     |                 |               |                |               |
| 880519-9 |                      |                    | 316 S.S.        |                 |                 |               |                |               |
| 880015-9 | 5000 psig<br>345 bar | 80 psig<br>6 bar   | 9/16-18 UNF (M) | 7/16-20 UNF (M) | Stainless Steel | 3/4"          |                | 2.75/70       |



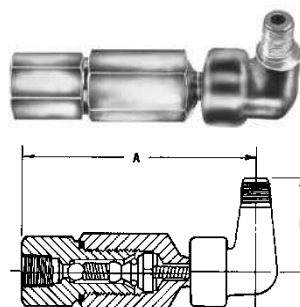
### Ball & Poppet, Straight

| Model  | Pressure             |                    | Inlet        | Outlet       | Hex Material | Hex Inlet-in. | Hex Outlet-in. | Length in./mm |
|--------|----------------------|--------------------|--------------|--------------|--------------|---------------|----------------|---------------|
|        | Max                  | Opening            |              |              |              |               |                |               |
| 880513 | 2000 psig<br>138 bar | 50 psig<br>3.5 bar | 1/8" NPTF(F) | 1/8" NPTF(M) | Carbon Steel | 3/4"          | 13/16"         | 2.75<br>70.0  |
| 880514 |                      |                    | 1/4" NPTF(F) | 1/4" NPTF(M) |              |               |                | 3.06<br>77.7  |



### Ball Type, Straight

| Model    | Pressure             |                       | Inlet        | Outlet       | Hex Material | Hex in. | Length in./mm |
|----------|----------------------|-----------------------|--------------|--------------|--------------|---------|---------------|
|          | Max                  | Opening               |              |              |              |         |               |
| 87817    | 7500 psig            | 20-70 psig            | 1/4" NPTF(M) | 1/4" NPSF(F) | Carbon Steel | 11/16"  | 1.38/35.1     |
| 87818    | 517 bar              | 1.5-5 bar             | 1/8" NPTF(M) | 1/8" NPTF(F) |              | 9/16"   | 1.19/30.2     |
| 130021-3 | 6000 psig<br>414 bar | 31-70 psig<br>2-5 bar | 1/8" NPTF(F) | 1/8" NPTF(M) |              | 1/2"    | 1.06/27.0     |



### Ball & Poppet, 90°

| Model  | Pressure             |                    | Inlet        | Outlet       | Hex Material | Hex Inlet-in. | Hex Outlet-in. | Dimensions in. / mm |              |
|--------|----------------------|--------------------|--------------|--------------|--------------|---------------|----------------|---------------------|--------------|
|        | Max                  | Opening            |              |              |              |               |                | A                   | B            |
| 880515 | 2000 psig<br>138 bar | 50 psig<br>3.5 bar | 1/8" NPTF(F) | 1/8" NPTF(M) | Carbon Steel | 3/4"          | 13/16"         | 3.38<br>86          | 1.25<br>31.8 |

# Modular Lube® Lubrication Systems

## Installation Components



Lubricant flows through Supply Lines between the pump and divider valves, then through Feed Lines between the divider valve and the bearing. Tubing and/or pipe sizes are determined after considering both the length of the line and the specific lubricant intended for use in the system.

Your Lincoln representative can assist you in the proper selection of supply and feed line material to optimize your application.

Listed below is a simplified outline of the installation components offered. For a complete listing of products, please refer to the Installation Components catalog.

### TUBING

- Hydraulic, Steel, Stainless Steel and Nylon
- Single and Multiple Tube Clamps
- Heavy-Duty, Standard-Duty, Threaded Sleeve and Snap-On Coupler Tube Fittings
- Quicklinc® Tubing Adapter
- Zerk-Lock™ Grease Fitting Adapters
- Non-Metallic

### PIPING

- Seamless
- Continuous Welded
- Forged Fittings
- Malleable Iron Fittings
- 316 Stainless Steel Pipe and Fittings
- Stainless Steel Fittings
- Galvanized Pipe, Threaded Plug and Fittings

### ACCESSORIES

- Supply, Feed and Bulk Feed Line Hose
- Air Hose
- Kits for Hose Repair
- Heavy-Duty Air Line Quick Disconnects

### AIR CONTROL AND ACCESSORIES

- Manual Shut-Off Valves
- Pressure Gauges
- Lubricant Filters and Strainers

### AIRCARE™ AIR PREPARATION SYSTEMS

- Modular Air Line Filters, Regulators and Lubricators
- Integrated/Modular Filter/Regulator with Gauge
- Modular Air Line Combination Units
- High-Capacity Air Line Filters, Regulators and Lubricators
- High-Capacity Air Line Combination Units
- Miniature Air Line Components—Air Line Filter, Regulator and Lubricator
- Miniature Air Line Combination Units

- Modular Air Line Equipment Accessories: Lockout Valve, Quick Clamp, Quick Clamp Wall Mounting Bracket, Porting Block, Quick Mount Pipe Adapters, Manifold Block, Pressure Switch, Panel Nut, Wall Mount Bracket, Tamper Resistant Cover & Seal Wire

- Air Line Equipment Accessories: Wall Mount Bracket, High-Capacity; Mounting Bracket and Nut, Miniature; Pressure Gauges

### PIPE FITTINGS

- Reducing Bushings
- Nipples
- Couplings
- Reducing Couplings
- Street Elbs
- Tees
- Crosses
- Adapter Unions
- Elbows
- Pipe Fitting Adapters
- Supply Line Swivels
- Feed Line Swivels
- Anchor and Junction Blocks

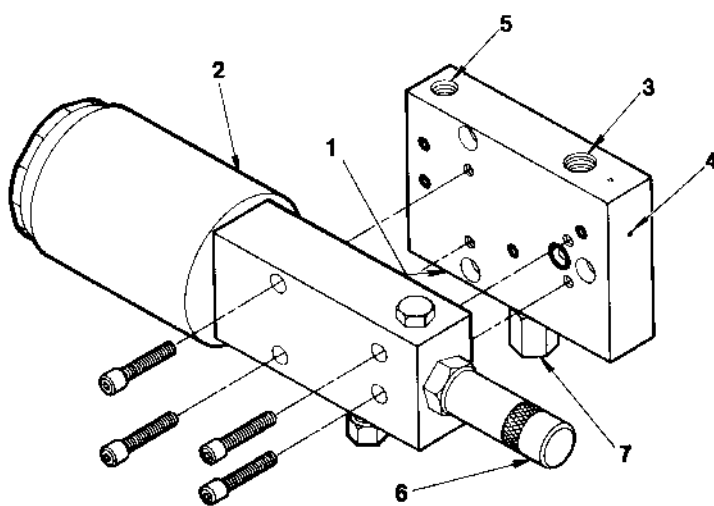
### Modular Pumps

Lincoln's modular pumps are designed to efficiently supply either grease or oil in automatic systems using divider valve metering devices. Air, hydraulic and mechanically operated units are available. These units are then matched with an appropriate intermediate baseplate, and an appropriate reservoir to make up a pump assembly.

If required, the reservoir can be remotely mounted for ease of filling, utilizing a machine mounted baseplate and pump.

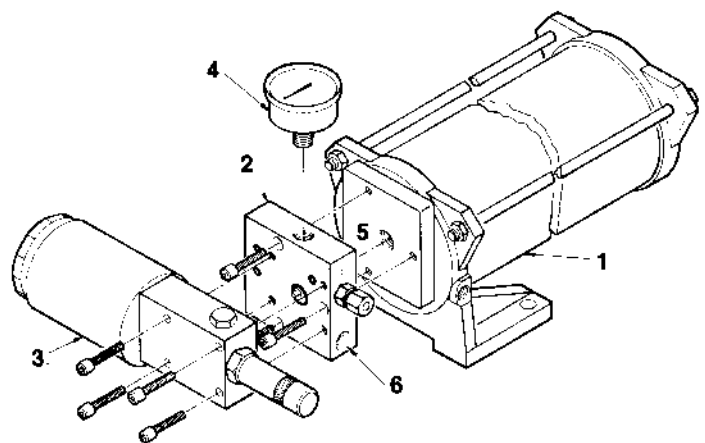
Baseplates contain all of the inlet and outlet connections for the pump and lube system. Intermediate baseplates mounted between the pump and reservoir allow for quick pump removal without disturbing any existing piping. Removal of the pump does not require draining of the reservoir due to an integral check-valve in the baseplate.

All modular reservoirs are compatible with all pumps, offering extreme flexibility in system design.



1. Base Plate
2. Pump Body
3. Lubricant Inlet
4. Bleed or Test Screw
5. Air inlet for both Single Acting and Double Acting Pumps
6. Adjustment Screw Assembly
7. Lubricant Outlet

### PUMP & RESERVOIR



1. Cylindrical Oil Reservoir
2. Intermediate Base Plate
3. Modular Automation Pump
4. Pressure Gauge
5. Lubricant Inlet
6. Lubricant Outlet

# Modular Lube® Lubrication Systems

## Air Operated Modular Pumps



### Model 87200

|                           |                              |
|---------------------------|------------------------------|
| Model:                    | 87200                        |
| Ratio:                    | 25:1                         |
| Displacement – Min.:      | .025 cu. in. / .410 cc       |
| Displacement – Max.:      | .100 cu. in. / 1.639 cc      |
| Air Pressure – Min.:      | 65 psig / 4.5 bar            |
| Air Pressure – Max.:      | 150 psig / 10 bar            |
| Dimensions (HxWxL) – in.: | 2.75" x 9.88" x 2.75"        |
| Dimensions (HxWxL) – mm:  | 69.8 x 250.9 x 69.8 mm       |
| Cylinder Type:            | Single acting, spring return |
| Air Valve Requirement:    | 3-Way                        |

### Model 87216

|                           |                              |
|---------------------------|------------------------------|
| Model:                    | 87216                        |
| Ratio:                    | 50:1                         |
| Displacement – Min.:      | .010 cu. in. / .164 cc       |
| Displacement – Max.:      | .050 cu. in. / .820 cc       |
| Air Pressure – Min.:      | 35 psig / 2.5 bar            |
| Air Pressure – Max.:      | 150 psig / 10 bar            |
| Dimensions (HxWxL) – in.: | 2.75" x 9.88" x 2.75"        |
| Dimensions (HxWxL) – mm:  | 69.8 x 250.9 x 69.8 mm       |
| Cylinder Type:            | Single acting, spring return |
| Air Valve Requirement:    | 3-Way                        |



### Model 130179

|                           |                              |
|---------------------------|------------------------------|
| Model:                    | 130179                       |
| Ratio:                    | 25:1                         |
| Displacement – Min.:      | .25 cu. in. / 1.0 cc         |
| Displacement – Max.:      | 1.0 cu. in. / 16.39 cc       |
| Air Pressure – Min.:      | 65 psig / 4.5 bar            |
| Air Pressure – Max.:      | 150 psig / 10 bar            |
| Dimensions (HxWxL) – in.: | 5.50" x 15.38" x 4.50"       |
| Dimensions (HxWxL) – mm:  | 139.7 x 290.6 x 114.3 mm     |
| Cylinder Type:            | Single acting, spring return |
| Air Valve Requirement:    | 3-Way                        |

#### Notes:

Model 87200, 87216, 130280 pumps do not have valved pistons. Use Modular Lube reservoirs only.  
 Model 130179 pump with valved piston uses Modular Lube reservoir or pressurized (max. 2000 psig/140 bar) lube supply.  
 All pumps include fluoroelastomer O-rings for standard or synthetic lubricant.

## Hydraulic Operated Modular Pumps



### Model 87202

|                                |                        |
|--------------------------------|------------------------|
| Model:                         | 87202                  |
| Ratio:                         | 7:1                    |
| Displacement – Min.:           | .025 cu. in. / .100 cc |
| Displacement – Max.:           | .10 cu. in. / 1.639 cc |
| Hydraulic Pressure – Min.:     | 275 psig / 20 bar      |
| Hydraulic Pressure – Max.:     | 2000 psig / 138 bar    |
| Dimensions (HxWxL) – in.:      | 2.13" x 9.50" x 1.88"  |
| Dimensions (HxWxL) – mm:       | 54.1 x 241.3 x 47.7 mm |
| Cylinder Type:                 | Double acting          |
| Directional Valve Requirement: | 4-Way                  |

#### Notes:

Pump includes fluoroelastomer O-rings for standard or synthetic lubricants.  
 Pump does not have valved pistons. Use Modular Lube reservoirs only.



### Modular Pump Baseplates

Mount pump directly to a modular reservoir with intermediate baseplate.  
Use machine mounted baseplates with remote reservoirs.

| Model  | Description   | Use with Pump Model | Air/ Hydraulic Inlet | Lube Inlet   | Lube Outlet  | Dimensions in. / mm |       |       | Atmos. Indicator psi / bar |
|--------|---------------|---------------------|----------------------|--------------|--------------|---------------------|-------|-------|----------------------------|
|        |               |                     |                      |              |              | Height              | Width | Depth |                            |
| 87218  | Inter-mediate | 87200, 87202, 87216 | 1/8" NPTF(F)         | —            | 1/4" NPTF(F) | 3.25                | 3.25  | 1.00  | 1450<br>100                |
| 87204  | Machine Mount |                     |                      |              |              | 82.6                | 82.6  |       |                            |
| 130095 |               | 130179              | 1/4" NPTF(F)         | 3/8" NPTF(F) |              | 4.00                | 4.50  | 150   |                            |

**Note:**

Baseplates include flouroelastomer O-rings for standard or synthetic lubricants.



### Modular Reservoirs for Oil Systems

| Model | Type        |              | Capacity |       |         |       | Material | Dimensions - in. / mm |       |       |       |
|-------|-------------|--------------|----------|-------|---------|-------|----------|-----------------------|-------|-------|-------|
|       | Style       | Outlet       | gal.     | liter | cu. in. | cc    |          | Height                | Width | Depth |       |
| 87400 | Cylindrical | 1/2" NPTF(F) | .625     | 2.4   | 144     | 2350  | Acrylic  | 15.69                 | 6.00  | 5.31  |       |
| 87413 |             |              | 1.25     | 4.7   | 289     | 4750  |          | 17.69                 | 7.31  | 7.47  |       |
| 87417 | Tank        | 3/8" NPTF(F) | 5        | 18.9  | 1155    | 18900 | Steel    | 10.12<br>257.4        | 17.50 | 12.56 |       |
| 87418 |             |              | 3        | 11.3  | 693     | 11350 |          |                       | 445.2 | 13.50 | 11.56 |
| 87419 |             |              | 1.5      | 5.7   | 346     | 5675  |          |                       | 267.1 | 10.50 | 7.56  |
|       |             |              |          |       |         |       |          | 186.0                 | 192.3 |       |       |

**Note:**

All reservoirs will accept 87218 Intermediate Baseplates.

### Modular Reservoirs for Grease Systems



| Model   | Capacity |      |         |      | Material | Dimensions - in. / mm |       |       |
|---------|----------|------|---------|------|----------|-----------------------|-------|-------|
|         | lbs.     | kg   | cu. in. | cc   |          | Height                | Width | Depth |
| 87406   | 10       | 4.54 | 300     | 4900 | Acrylic  | 17.69                 | 7.31  | 7.47  |
| 87416   | 15       | 6.82 | 450     | 7350 |          | 450                   |       | 186.0 |
| 87421 * | 10       | 4.54 | 300     | 4900 | Steel    | 25.19                 | 7.31  | 7.47  |
| 87423 * | 15       | 6.82 | 450     | 7350 |          | 640.8                 |       | 186.0 |
|         |          |      |         |      |          | 17.69                 | 7.31  | 7.41  |
|         |          |      |         |      |          | 450                   |       |       |
|         |          |      |         |      |          | 25.19                 |       |       |
|         |          |      |         |      |          | 640.8                 |       |       |

\* Includes visual level indicator rod.

**Note:**

All reservoirs accept Model 87218 Intermediate Baseplates. Reservoirs include standard 1/2" NPTF(F) outlet. Filler fitting Model 632004.



### Low-Level Switches

Low-level switches for modular design reservoirs.

| Model | Use with Reservoir #       | Switch Type | Electrical Rating   |
|-------|----------------------------|-------------|---|
| 84235 | 87417, 87418, 87419        | SPDT        | 7 Amps<br>125 / 250 VAC   |
| 84250 | 87400                      | SPDT        |   |
| 84252 | 87414                      | SPDT        |   |
| 87852 | 87402, 87403, 87406, 87416 | SPDT        | 15 Amps<br>125 / 250 VAC  |
| 83371 |                            | SPDT        | 15 Amps; 125, 250, 480 VAC<br>.5 Amp 125 VDC<br>.25 Amp 250 VDC |



Low-Level Switch Assembly Kits for pneumatic and electric reciprocating pumps with self-contained reservoirs.

| Model | Use with Pump Model | Switch Type | Electrical Rating   |
|-------|---------------------|-------------|---|
| 83671 | 87240, 87228        | SPDT        | 15 Amps; 125, 250, 480 VAC<br>.5 Amp 125 VDC<br>.25 Amp 250 VDC |
| 83696 | 87239               |             |   |



### High-Pressure Switch

High-pressure switch signals blockage and returns pump output to reservoir.

| Model | Pressure Rating - psig / bar | Switch Type | Electrical Rating    |
|-------|------------------------------|-------------|----------------------|
| 87851 | 1450 / 99                    | SPDT        | 15 Amps, 125/250 VAC |





### Model 87212

|                                       |                        |
|---------------------------------------|------------------------|
| <b>Model:</b>                         | 87212                  |
| <b>Type:</b>                          | Hydraulic              |
| <b>Ratio:</b>                         | 5:1                    |
| <b>Hydraulic Pressure – Min.:</b>     | 200 psi / 14 bar       |
| <b>Hydraulic Pressure – Max.:</b>     | 1000 psi / 68 bar      |
| <b>Lubricant Output/Cycle – Min.:</b> | .010 cu. in. / .164 cc |
| <b>Lubricant Output/Cycle – Max.:</b> | .060 cu. in. / .983 cc |
| <b>Cylinder Type:</b>                 | Double acting          |
| <b>Directional Valve Requirement:</b> | 4-Way                  |

### Model 87214

|                                       |                        |
|---------------------------------------|------------------------|
| <b>Model:</b>                         | 87214                  |
| <b>Type:</b>                          | Air                    |
| <b>Ratio:</b>                         | 18:1                   |
| <b>Air Pressure – Min.:</b>           | 60 psi / 4 bar         |
| <b>Air Pressure – Max.:</b>           | 200 psi / 14 bar       |
| <b>Lubricant Output/Cycle – Min.:</b> | .010 cu. in. / .164 cc |
| <b>Lubricant Output/Cycle – Max.:</b> | .060 cu. in. / .983 cc |
| <b>Cylinder Type:</b>                 | Single acting          |
| <b>Directional Valve Requirement:</b> | 3-Way                  |

**Note:**  
Pumps include Buna-N O-rings.



### Modular LP-Style Reservoirs

Mount directly to LP pumps. Includes 3000 psig (200 bar) gauge and 900 psig (62 bar) atmospheric indicator. Transparent, polycarbonate construction.

| Model | Lubricant Type | Capacity |      |       |         |      | Air Hydraulic | Lube Outlet | Dimensions - in. / mm |       |       |
|-------|----------------|----------|------|-------|---------|------|---------------|-------------|-----------------------|-------|-------|
|       |                | lb/pint  | kg.  | liter | cu. in. | cc   |               |             | Height                | Width | Depth |
| 87402 | Grease         | 3 lb     | 1.36 | —     | 90      | 1475 | 1/8"          | 1/8"        | 11.6 / 295            | 6.78  | 7.06  |
| 87403 |                | 5 lb     | 2.27 | —     | 150     | 2450 |               |             | 14.6 / 371            |       |       |
| 87405 | Oil            | 5 pint   | —    | 2.36  | 144     | 2365 | (F)           | (F)         | 10.3 / 262            |       |       |



### Model 87240 Air-Operated Reciprocating Pump

|  |                      |
|--|----------------------|
| <b>Model:</b>                                | 87240                |
| <b>Lubricant Type:</b>                       | Grease               |
| <b>Lubricant/Air Ratio:</b>                  | 40:1                 |
| <b>Output/Min. @ 100 psig Air (cu. in.):</b> | 12                   |
| <b>Output/Min. @ 100 psig Air (cc):</b>      | 197                  |
| <b>Reservoir Capacity* (lbs.):</b>           | 12                   |
| <b>Reservoir Capacity* (kg):</b>             | 5.45                 |
| <b>Reservoir Capacity* (cu. in.):</b>        | 360                  |
| <b>Reservoir Capacity* (cc):</b>             | 5900                 |
| <b>Air Inlet:</b>                            | 1/8" NPTF(F)         |
| <b>Lube Outlet:</b>                          | 1/4" NPTF(F)         |
| <b>Dimensions (HxWxD) – in:</b>              | 20.5" x 9" x 16.25"  |
| <b>Dimensions (HxWxD) – mm:</b>              | 521.3 x 229 x 413 mm |

\* Transparent Acrylic Reservoir

### Model 87239 Air-Operated Reciprocating Pump

|  |                     |
|--|---------------------|
| <b>Model:</b>                                | 87239               |
| <b>Lubricant Type:</b>                       | Oil                 |
| <b>Lubricant/Air Ratio:</b>                  | 40:1                |
| <b>Output/Min. @ 100 psig Air (cu. in.):</b> | 12                  |
| <b>Output/Min. @ 100 psig Air (cc):</b>      | 197                 |
| <b>Reservoir Capacity* (pints):</b>          | 15                  |
| <b>Reservoir Capacity* (liter):</b>          | 7.1                 |
| <b>Reservoir Capacity* (cu. in.):</b>        | 433                 |
| <b>Reservoir Capacity* (cc):</b>             | 7100                |
| <b>Air Inlet:</b>                            | 1/8" NPTF(F)        |
| <b>Lube Outlet:</b>                          | 1/4" NPTF(F)        |
| <b>Dimensions (HxWxD) – in:</b>              | 20.5" x 9" x 16.25" |
| <b>Dimensions (HxWxD) – mm:</b>              | 521.3 x 229 x 413mm |

\* Transparent Acrylic Reservoir

**Note:**

Both models require a 3-way air valve.

**Atmospheric Indicator Pressure: Model 87240** – 2650 psi/183 bar  
**Model 87239** – 1450 psi/100 bar

### Model 87228 Electric-Operated Reciprocating Pump



|                                       |                         |
|---------------------------------------|-------------------------|
| <b>Model:</b>                         | 87228                   |
| <b>Lubricant Type:</b>                | Grease                  |
| <b>Electrical Requirements:</b>       | 220/440, 60 Hz 3 ph     |
| <b>Output/Minute (cu. in.):</b>       | 18                      |
| <b>Output/Minute (cc):</b>            | 295                     |
| <b>Reservoir Capacity* (lbs.):</b>    | 12                      |
| <b>Reservoir Capacity* (kg):</b>      | 5.45                    |
| <b>Reservoir Capacity* (cu. in.):</b> | 360                     |
| <b>Reservoir Capacity* (cc):</b>      | 5900                    |
| <b>Lube Outlet:</b>                   | 1/4" NPTF(F)            |
| <b>Dimensions (HxWxD) – in:</b>       | 25.38" x 9.94" x 18.06" |
| <b>Dimensions (HxWxD) – mm:</b>       | 645 x 253 x 459 mm      |
| <b>Relief Valve (psig):</b>           | 3700 psig               |
| <b>Relief Valve (bar):</b>            | 255 bar                 |

\* Transparent Acrylic Reservoir



### MCLP Pumps

For natural gas engine/compressor lubrication systems.

#### Model 130201BCC

MCLP Pump complete with pump heads.

|                                   |                           |
|-----------------------------------|---------------------------|
| <b>Model:</b>                     | 130201BCC                 |
| <b>Type Drive:</b>                | Rotary                    |
| <b>Shaft Description:</b>         | Left-hand end, long shaft |
| <b>Gear Ratio:</b>                | 2:1                       |
| <b>Decimal Gear Ratio:</b>        | .5                        |
| <b>Cam:</b>                       | Single lobe               |
| <b>Pump Heads: (Model 130335)</b> | 10 mm (2 each)            |
| <b>Performance Indicator:</b>     | 7300 psig / 500 bar       |



#### Model 130200GEE

|                               |                        |
|-------------------------------|------------------------|
| <b>Model:</b>                 | 130200GEE              |
| <b>Type Drive:</b>            | Rotary                 |
| <b>Shaft Description:</b>     | Left-hand end          |
| <b>Gear Ratio:</b>            | 8:1                    |
| <b>Decimal Gear Ratio:</b>    | .125                   |
| <b>Cam:</b>                   | Single lobe            |
| <b>Pump Heads (Max of 2):</b> | Order separately       |
| <b>Performance Indicator:</b> | Dependent on pump head |

#### Model 130200KEE

|                               |                        |
|-------------------------------|------------------------|
| <b>Model:</b>                 | 130200KEE              |
| <b>Type Drive:</b>            | Rotary                 |
| <b>Shaft Description:</b>     | Left-hand end          |
| <b>Gear Ratio:</b>            | 21.5:1                 |
| <b>Decimal Gear Ratio:</b>    | .047                   |
| <b>Cam:</b>                   | Single lobe            |
| <b>Pump Heads (Max of 2):</b> | Order separately       |
| <b>Performance Indicator:</b> | Dependent on pump head |

### Model 130200DEE

|                               |                        |
|-------------------------------|------------------------|
| <b>Model</b>                  | 130200DEE              |
| <b>Type Drive:</b>            | Rotary                 |
| <b>Shaft Description:</b>     | Left-hand end          |
| <b>Gear Ratio:</b>            | 4:1                    |
| <b>Decimal Gear Ratio:</b>    | .25                    |
| <b>Cam:</b>                   | Single lobe            |
| <b>Pump Heads (Max of 2):</b> | Order separately       |
| <b>Performance Indicator:</b> | Dependent on pump head |

### Model 130300GEE

|                               |                        |
|-------------------------------|------------------------|
| <b>Model:</b>                 | 130300GEE              |
| <b>Type Drive:</b>            | Rotary                 |
| <b>Shaft Description:</b>     | Right-hand end         |
| <b>Gear Ratio:</b>            | 8:1                    |
| <b>Decimal Gear Ratio:</b>    | .125                   |
| <b>Cam:</b>                   | Single lobe            |
| <b>Pump Heads (Max of 2):</b> | Order separately       |
| <b>Performance Indicator:</b> | Dependent on pump head |



### Model 130300KEE

|                               |                        |
|-------------------------------|------------------------|
| <b>Model:</b>                 | 130300KEE              |
| <b>Type Drive:</b>            | Rotary                 |
| <b>Shaft Description:</b>     | Right-hand end         |
| <b>Gear Ratio:</b>            | 21.5:1                 |
| <b>Decimal Gear Ratio:</b>    | .047                   |
| <b>Cam:</b>                   | Single lobe            |
| <b>Pump Heads (Max of 2):</b> | Order separately       |
| <b>Performance Indicator:</b> | Dependent on pump head |

**Notes:**

1. Recommended camshaft speed (RPM) for all pumps is: 12 to 75 rpm.
  2. MCLP output (per pump) = Input speed x decimal ratio x pump output factor\* = pints per day
- \* See MCLP pump head chart for pump output factor



### MCLP Pump Heads

| Model  | Piston Diameter | Max. Working Pressure<br>psig/bar | Pump Output Factor |             | Max. Inlet Pressure<br>psig/bar | Pump Inlet | Pump Outlet | Performance Indicator<br>psi/bar |
|--------|-----------------|-----------------------------------|--------------------|-------------|---------------------------------|------------|-------------|----------------------------------|
|        |                 |                                   | Min 1 Turn         | Max 5 Turns |                                 |            |             |                                  |
| 130332 | 7mm             | 8000/544                          | .10                | .731        | 50                              | 3/8"       | 1/4"        | 5500/374                         |
| 130335 | 10mm            | 3500/238                          | .213               | 1.491       | 3.5                             | NPTF(F)    | NPTF(F)     | 3250/221                         |

### Flow Restrictor

Flow restrictor for LP Pumps with high air or hydraulic supply pressure.



| Model | For Pressure Exceeding - psig / bar |           | Connections                 |
|-------|-------------------------------------|-----------|-----------------------------|
|       | Pneumatic                           | Hydraulic |                             |
| 15104 | 100 / 7                             | 500 / 34  | 1/8" NPTF(F) x 1/8" NPTF(M) |

### MCLP Pump Inlet Filters



| Model  | Pump Heads Served | Filter Size | Inlet      | Max. Inlet Pressure<br>psig / bar |
|--------|-------------------|-------------|------------|-----------------------------------|
| 130067 | 2                 | 10 Micron   | 1" NPTF(F) | 50 / 3.5                          |

### In-Line Lubricant Filters

Remove solid contaminants before delivering lubricants to the supply line.



| Part No. | Element Size<br>micron | Maximum Pressure    | Connections<br>in. | Hex Body<br>Size - in. |
|----------|------------------------|---------------------|--------------------|------------------------|
| * 84239  | 10                     | 6000 psig / 414 bar | 1/4 NPTF (F)       | 1 1/4                  |

\* In-line filter with fluoroelastomer seal.

### Filler Pump

Manual pump for system purging and troubleshooting.



| Model  | Max. Press. Gauge Reading<br>psig / bar | Reservoir Capacity | Outlet Adapters   |
|--------|---|--------------------|---|
| 130117 | 3000 / 207                              | 16 oz.             | 5/16" - 24 UNF(M), 7/16" - 20 UNF(M),<br>1/8" NPTF(M), 1/4" NPTF(M) |

### No-Flow Valves

MCL pump no-flow valves shut down engine or signal fault if oil flow is interrupted.



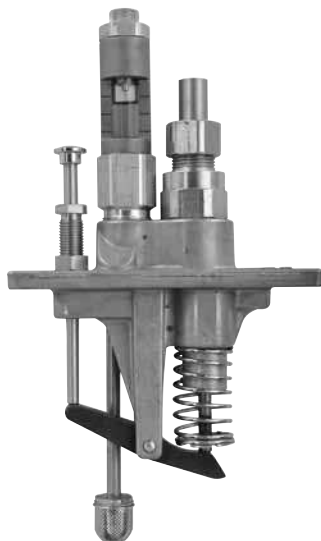
| Model | Signal Type | Max. Operating Pressure<br>psig / bar | Oil Viscosity Range | Inlet/Outlet |      | Air Supply  | Electrical Rating                      | 3rd Party Approvals                                       |
|-------|-------------|---------------------------------------|---------------------|--------------|------|-------------|--|---|
|       |             |                                       |                     | Air          | Oil  |             |  |   |
| 87862 | Pneum.      | 6000 / 414                            | 60 SSU-<br>3000 SSU | 1/8"         | 1/4" | 150 psi max | —                                      | —   |
| 87601 | Electric    |                                       |                     |              |      | —           | 1 amp,<br>115 VAC<br>.5 amp,<br>32 VDC | CSA Class I,<br>Group D<br>Class II,<br>Group E, F<br>& G |

#### Notes:

1. Minimum flow rate .060 cu. in./minute with time delay setting of 90 seconds.
2. Includes fluoroelastomer oil seals.

### Model 55i Lubricator Pump

Universal lubricator pump fits most major manufacturers' lubricator boxes. One piece pump body eliminates leak points.



| Model    | Type                         | Piston Dia. in. / mm | Inlet        | Sight Glass | Max. Operating Pressure psi / bar | Max. Oil Viscosity (SUS) | Max. Output Per Stroke Drops (in <sup>3</sup> / cc) |
|----------|------------------------------|----------------------|--------------|-------------|-----------------------------------|--------------------------|---|
| 880550   | Vacuum Feed                  | ¼ / 6.4              | Suction Tube | Yes         | 6000 / 400                        | 8000 / 540               | 9 (.0184 / .302)                                    |
| 880560   | Feed                         | ⅜ / 9.5              |              |             | 3500 / 240                        |                          | 21 (.0415 / .680)                                   |
| 880551   | Press. Inlet (Manifold) Feed | ¼ / 6.4              | ⅜" NPTM      | Yes         | 6000 / 400                        |                          | 9 (.0184 / .302)                                    |
| 880561   |                              | ⅜ / 9.5              |              |             | 3500 / 240                        |                          | 21 (.0415 / .680)                                   |
| 880552   | Direct Feed                  | ¼ / 6.4              | ⅜" NPTF      | No          | 6000 / 400                        |                          | 9 (.0184 / .302)                                    |
| 880554   | Direct Feed                  | ⅜ / 9.5              |              | Yes         | 3500 / 240                        |                          | 21 (.0415 / .680)                                   |
| 880553 * | Press. Inlet (Manifold) Feed | ⅜ / 4.8              |              |             | 3500 / 240                        |                          |   |

\* Similar to model 880561 but does not include tubing and valve connections.

**Notes:** Standard fluoroelastomer seals.

Sight glass is armored Pyrex® glass.

See Pump to Point Lubricator Accessories page for armored site glass kit (model 250176).

### End Rotary Drive Lubricators

**Internal Gear and Ratchet**

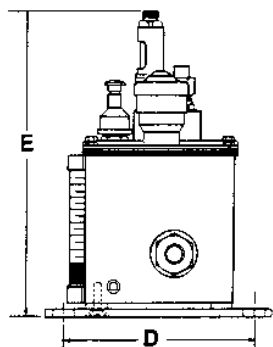
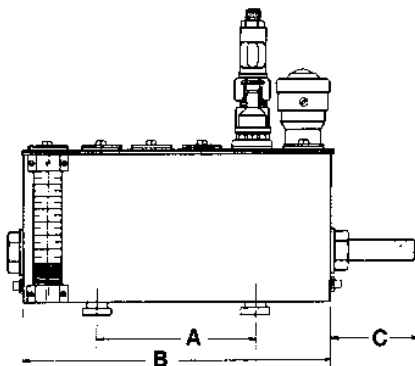
**Drive Data: Type** – End rotary with internal gear and ratchet. **37.5:1 ratio.**

**Rotation** – Either clockwise or counterclockwise.

**Power Source** – Machine drive; not recommended for motor drive.

**Maximum Input Speed** – 700 RPM.

**Note:** Number following dash in the part number indicates quantity of pumps included.



| Model    | Reservoir Capacity | Max. No. of Pumps | Drive Location | Service Sheet Number |
|----------|--------------------|-------------------|----------------|----------------------|
| 800037-1 | 4 pint / 1.9L      | 5                 | RH             | M2-26                |
| 800037-3 | 4 pint / 1.9L      | 5                 | RH             | M2-26                |
| 800037-4 | 4 pint / 1.9L      | 5                 | RH             | M2-26                |
| 800028-3 | 4 pint / 1.9L      | 5                 | LH             | M2-43                |
| 800131-5 | 8 Pint / 3.8L      | 7                 | RH             | M2-25                |
| 800019-5 | 8 Pint / 3.8L      | 7                 | LH             | M2-40                |

| Model    | Dimensions—in. / mm |           |        |          |           | Shaft Dia. |
|----------|---------------------|-----------|--------|----------|-----------|------------|
|          | A                   | B         | C      | D        | E         |            |
| 800037-1 | 5½ / 140            | 10⅝ / 270 | 3 / 76 | 6⅞ / 167 | 10⅝ / 264 | ⅝ / 16     |
| 800037-3 |                     |           |        |          |           |            |
| 800037-4 |                     |           |        |          |           |            |
| 800028-3 |                     |           |        |          |           |            |
| 800131-5 | 8¾ / 222            | 14⅞ / 359 |        |          |           |            |
| 800019-5 |                     |           |        |          |           |            |

### End Rotary Drive Lubricators

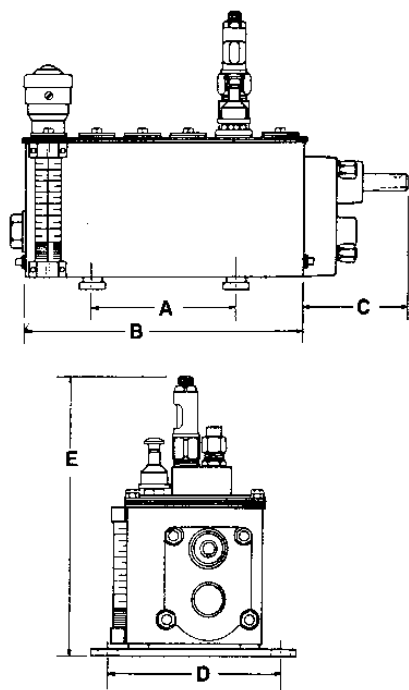
Spur Gear

Drive Data: Type – End rotary with spur gear. 112.5:1 ratio.

Rotation – Either clockwise or counterclockwise.

Power Source – Machine drive; not recommended for motor drive.

Note: Number following dash in the part number indicates quantity of pumps included.



| Model    | Reservoir Capacity | Max. No. of Pumps | Drive Location | Service Sheet Number |
|----------|--------------------|-------------------|----------------|----------------------|
| 800066-2 | 4 pint / 1.9L      | 5                 | RH             | M2-20                |
| 800066-3 | 4 pint / 1.9L      | 5                 | RH             | M2-20                |
| 800143-3 | 4 pint / 1.9L      | 5                 | LH             | M2-136               |
| 800289-4 | 8 Pint / 3.8L      | 7                 | RH             | M3-21                |
| 800289-5 | 8 Pint / 3.8L      | 7                 | RH             | M3-21                |
| 800289-6 | 8 Pint / 3.8L      | 7                 | RH             | M3-21                |

| Model    | Dimensions—in. / mm |           |         |          |           | Shaft Dia. |
|----------|---------------------|-----------|---------|----------|-----------|------------|
|          | A                   | B         | C       | D        | E         |            |
| 800066-2 | 5½ / 140            | 10⅝ / 270 | 4 / 102 | 6⅞ / 167 | 10¾ / 273 | ⅝ / 16     |
| 800066-3 | 5½ / 140            | 10⅝ / 270 | 4 / 102 | 6⅞ / 167 | 10¾ / 273 | ⅝ / 16     |
| 800143-3 | 5½ / 140            | 10⅝ / 270 | 4 / 102 | 6⅞ / 167 | 10¾ / 273 | ⅝ / 16     |
| 800289-4 | 8¾ / 222            | 14⅞ / 359 | 4 / 102 | 6⅞ / 167 | 10¾ / 273 | ⅝ / 16     |
| 800289-5 | 8¾ / 222            | 14⅞ / 359 | 4 / 102 | 6⅞ / 167 | 10¾ / 273 | ⅝ / 16     |
| 800289-6 | 8¾ / 222            | 14⅞ / 359 | 4 / 102 | 6⅞ / 167 | 10¾ / 273 | ⅝ / 16     |



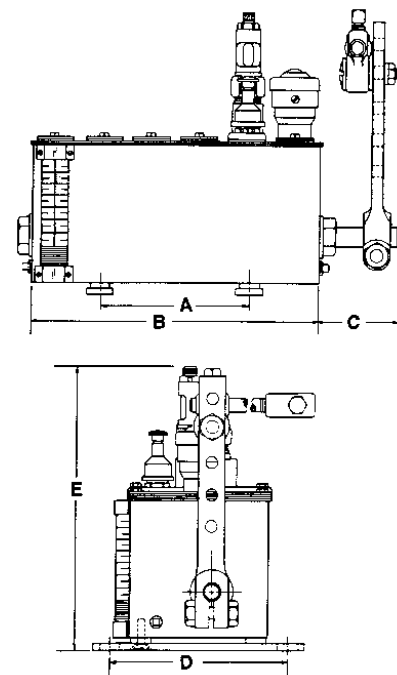
### Internal Ratchet Drive Lubricators

Drive Data: Type – Internal 75-tooth ratchet gear.

Rotation – See chart for power stroke direction.

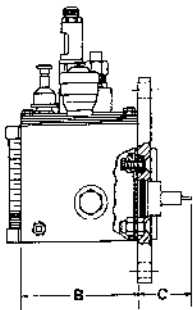
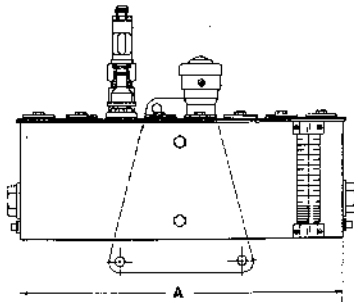
Power Source – Machine drive.

Note: Number following dash in the part number indicates quantity of pumps included.



| Model    | Reservoir Capacity | Max. No. of Pumps | Drive Location | Power Stroke | Service Sheet Number |
|----------|--------------------|-------------------|----------------|--------------|----------------------|
| 800065-1 | 2 pint / .95L      | 2                 | LH             | CW           | M3-31                |
| 800376-2 | 3 pint / 1.4L      | 3                 | RH             | CW           | M3-31                |
| 800118-2 | 4 Pint / 1.9L      | 5                 | RH             | CW           | M2-164               |
| 800118-3 | 4 Pint / 1.9L      | 5                 | RH             | CW           | M2-164               |
| 800100-2 | 4 Pint / 1.9L      | 5                 | LH             | CW           | M3-31                |
| 800031-3 | 8 Pint / 3.8L      | 5                 | RH             | CW           | M3-31                |

| Model    | Dimensions—in. / mm |           |        |          |           | Shaft Dia. |
|----------|---------------------|-----------|--------|----------|-----------|------------|
|          | A                   | B         | C      | D        | E         |            |
| 800065-1 | 5½ / 140            | 5⅝ / 137  | 3 / 76 | 6⅞ / 167 | 10½ / 269 | ⅝ / 16     |
| 800376-2 |                     | 7⅞ / 181  |        |          | 10¾ / 273 |            |
| 800118-2 |                     | 10⅝ / 270 |        |          | 10⅞ / 264 |            |
| 800118-3 |                     | 10⅞ / 264 |        |          |           |            |
| 800100-2 |                     | 10¾ / 273 |        |          |           |            |
| 800031-3 | 8¾ / 222            | 14⅞ / 359 |        |          |           |            |

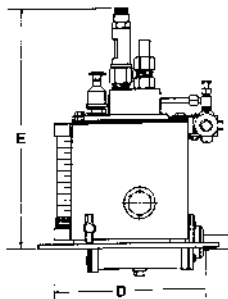
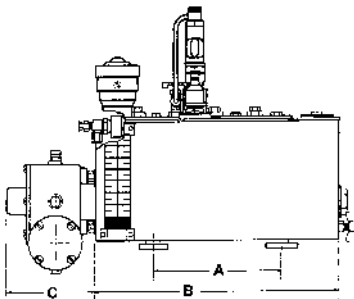


### Rear Rotary Drive Lubricators

**Note:** Number following dash in the part number indicates quantity of pumps included.

| Model    | Reservoir Capacity | Max. No. of Pumps | Drive Location | Ratio   | Service Sheet Number |
|----------|--------------------|-------------------|----------------|---------|----------------------|
| 800621-4 | 8 Pint / 3.8L      | 6                 | LH             | 60:1    | M2-42                |
| 800784-2 | 8 Pint / 3.8L      | 6                 | LH             | 137.5:1 | M3-18                |

| Model    | Dimensions—in. / mm    |                        |                      | Shaft Dia.         |
|----------|------------------------|------------------------|----------------------|--------------------|
|          | A                      | B                      | C                    |                    |
| 800621-4 | 10 $\frac{5}{8}$ / 270 | 5 $\frac{5}{16}$ / 132 | 1 $\frac{1}{8}$ / 48 | $\frac{3}{4}$ / 16 |
| 800784-2 | 14 $\frac{1}{8}$ / 359 | 5 $\frac{5}{16}$ / 132 | 2 $\frac{1}{4}$ / 57 | $\frac{1}{2}$ / 13 |

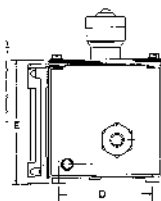
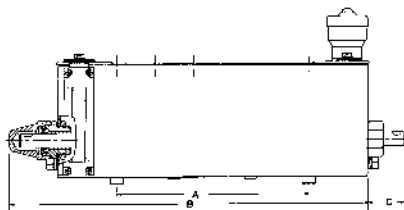


### Left-Hand Rear Gearhead Drive Lubricators

**Note:** Number following dash in the part number indicates quantity of pumps included.

| Model    | Reservoir Capacity | Max. No. of Pumps | Ratio | Service Sheet Number |
|----------|--------------------|-------------------|-------|----------------------|
| 800059-1 | 4 pint / 1.9L      | 5                 | 60:1  | M2-19                |
| 800059-2 |                    |                   |       |                      |

| Model    | Dimensions—in. / mm   |                        |                       |                        |                        | Shaft Dia.         |
|----------|-----------------------|------------------------|-----------------------|------------------------|------------------------|--------------------|
|          | A                     | B                      | C                     | D                      | E                      |                    |
| 800059-1 | 5 $\frac{1}{2}$ / 140 | 10 $\frac{5}{8}$ / 270 | 3 $\frac{1}{16}$ / 97 | 6 $\frac{5}{16}$ / 167 | 10 $\frac{5}{8}$ / 276 | $\frac{3}{4}$ / 16 |
| 800059-2 |                       |                        |                       |                        |                        |                    |



### End Rotary Drive Tandem Lubricators

**Drive Data:** Type – End rotary all gear.

**Rotation** – Either clockwise or counterclockwise.

**Power Source** – Machine drive; also suitable for motor drive.

**Note:** Pumps and slot covers must be purchased separately

| Model  | Reservoir Capacity | Max. No. of Pumps | Drive Location | Ratio | Service Sheet Number |
|--------|--------------------|-------------------|----------------|-------|----------------------|
| 847400 | 8 pint / 3.8L      | 6                 | RH             | 300:1 | M2-218               |

| Model  | Dimensions—in. / mm   |                         |                      |                       |                        | Shaft Dia.         |
|--------|-----------------------|-------------------------|----------------------|-----------------------|------------------------|--------------------|
|        | A                     | B                       | C                    | D                     | E                      |                    |
| 847400 | 8 $\frac{3}{4}$ / 222 | 16 $\frac{5}{16}$ / 414 | 2 $\frac{5}{8}$ / 67 | 4 $\frac{1}{4}$ / 108 | 5 $\frac{1}{16}$ / 138 | $\frac{5}{8}$ / 16 |



**Model 276517 Armored Sight Glass Kit**

With pyrex sight tube.



**Model 880555 Lube Sentry**

Monitors camshaft rotation and reservoir level.

**Model 880556 Lube Sentry**

Same as Model 880555 except suction tube is 1/2" shorter.

**Model 880496 Oil Level Regulator**

Automatically fills lubricator reservoir.



**Model 880463\* Lubricator Flow Switch**

Monitors Model 55i lubricant flow.

**Model 880466\* Lubrication Flow Switch**

Same as Model 880463 except includes terminal for series wiring.

\* Use with non-conductive fluids only. Lubricator must be properly grounded.

**Lubricator Cover Plate Assembly**

**Model 360654** - Cover Plate

**Model 250132** - Gasket

**Model 70224** - Screws



## Lincoln's New Product Lineup for the Natural Gas Compression Industry

Innovative solution designed to protect your compressors against untimely lubrication faults or “no flow” conditions.

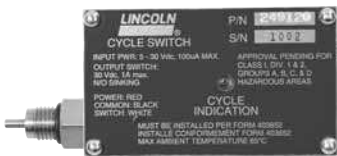
### Model 87630 Datalogger Lubrication Monitor

- Three mounting options
- Two primary power sources available
- Continuously monitors the packing and cylinder lubrication system
- Download feature allows history to be transferred to a CSV report via a USB flash drive in less than a minute
- Store data for up to one year
- No special software or hand-held hardware device needed
- One model will monitor either a single or dual lubrication system
- Designed for use with Reed or Hall effect cycle switches

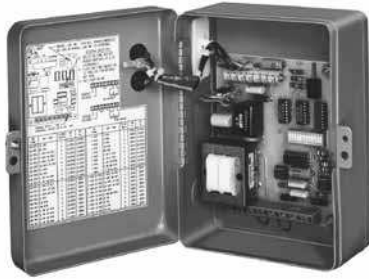
|                              |  |
|------------------------------|--|
| <b>Part No.</b>              | <b>87630</b>   |
| <b>Input Power:</b>          | 10-30 VDC 0.25 Amp Max.  |
| <b>Internal Battery:</b>     | 3.6 V Long-Life Lithium Tadiran TL-5930, battery life 4-6 years                            |
| <b>Output Switches:</b>      | 2 each open drain sinking FET's, rated 30 VDC 500mA max.                                   |
| <b>Ambient Temp. Range:</b>  | Operation, -40°C to 85°C (-40°F to 185°F)<br>LCD -20°C to 70°C<br>USB Download 0°C to 70°C |
| <b>Display:</b>              | 2x16 Backlit Character   |
| <b>Input Cycle Range:</b>    | 5 to 300 seconds   |
| <b>Units of Measure:</b>     | Pints, liters or gallons   |
| <b>Alarm Time:</b>           | Adjustable from 5 to 300 seconds   |
| <b>Switch Response Time:</b> | 250 mS max.  |
| <b>USB Download Port:</b>    | USB 2.0 compliant, accepts universal flash drive   |
| <b>Data Log File Format:</b> | Comma-Separated Values File (CSV) for use in programs including Microsoft® Excel           |
| <b>EX Rating:</b>            | Class I, Groups A, B, C & D, Div. 2 CE, II 3G Ex Na IIA                                    |
| <b>Outlet Thread:</b>        | 1/2" NPT (F)   |

## Cycle Switch and Accessories for use with Datalogger Lubrication Monitor

Designed to work with Lincoln MC, MC<sup>2</sup> HP valves as well as with other brands. Simple installation reduces labor costs. Features captured magnet assembly and Hall Effect Switch. The industry's FIRST cycle switch with a cycle indicator light.



| Model  | Description  | Power Req.               | Maximum Working Pressure | Temp. Range                    | Material  | EX Rating  |
|--------|--|--------------------------|--------------------------|--------------------------------|---|--|
| 249120 | Hall Effect Cycle Switch for Lincoln MC <sup>2</sup> -HP series blocks                     | 5 to 30 VDC, 100 UA max. | 7500 psi                 | -40°C to 85°C (-40°F to 185°F) | Aluminum Housing, Stainless Steel Magnet Assembly | Approval pending for Class I, Groups A, B, C & D, Div. 1 & 2 CE, II 3G Ex Na IIA |
| 249122 | Hall Effect Cycle Switch for Lincoln UV and Graco Lubriquip®-Manzel MHP series style block |                          |                          |                                |   |  |
| 87617  | Reed Type Cycle Switch for Lincoln MC and MC <sup>2</sup> -HP series block                 |                          |                          |                                |   |  |
| 250001 | Wall Mounting Bracket for 87630  |                          |                          |                                |   |  |
| 249125 | EX Housing, Rated Class 1, Div 1 and 2, Group B, C, D                                      |                          |                          |                                |   |  |
| 250002 | Internal 3.6v Lithium Replacement Battery  |                          |                          |                                |   |  |
| 250010 | Replacement USB Port Cap   |                          |                          |                                |   |  |



### Model 84501 Program Timer-Solid State

Designed to control the lubrication cycle frequency of air-operated single-stroke pumps. Timer turns pump on/off at programmed intervals via a 3-way or 4-way air solenoid valve (not included) installed in the air line to pump.

| Off Time<br>(Cycle Time) |         | On Time<br>(Pumping Time) |                   | Power Requirement       | Approvals | Switch Capacity                      |
|--------------------------|---------|---------------------------|-------------------|-------------------------|-----------|--------------------------------------|
| Min.                     | Max.    | Min.                      | Max.              |                         |           |                                      |
| 20 Sec.                  | 24 Hrs. | 10 Sec.                   | 1 Min.<br>24 Sec. | 120/230 VAC<br>50/60 Hz | UL, CSA   | 120 VAC, 5 Amps<br>230 VAC, 1.5 Amps |



| Built-In Program Options |                  | Enclosure |                   |          | Ambient Operating Temperature Range |            |              |
|--------------------------|------------------|-----------|-------------------|----------|-------------------------------------|------------|--------------|
| 3 Hr. Program Memory     | Prelube Function | Rating    | Dimensions-in./mm |          |                                     | Minimum    | Maximum      |
|                          |                  |           | Height            | Width    | Depth                               |            |              |
| Yes / No                 | Yes / No         | NEMA #1   | 8¼ / 210          | 6¼ / 173 | 4¼ / 125                            | 0°F / 18°C | 130°F / 54°C |

**Note:** Refer to Technical Manual for a full explanation of available program options.

### Model 84511 Economy Timer for Single Stroke Pumps

Uses a timing motor, cam and Micro-Switch to turn pump off and on. NEMA 1 enclosure, UL and CSA listed. Switch capacity 10 amps non-inductive.



| Off Time<br>(Cycle Time) |       | On Time<br>(Pumping Time) |         | Power Requirement | Approvals | Switch Capacity |
|--------------------------|-------|---------------------------|---------|-------------------|-----------|-----------------|
| Min.                     | Max.  | Min.                      | Max.    |                   |           |                 |
| 5 Min.                   | 1 Hr. | 30 Sec.                   | 90 Sec. | 120 VAC, 60Hz     | UL, CSA   | 10 Amps         |

| Enclosure |                       |           |         |
|-----------|-----------------------|-----------|---------|
| Rating    | Dimensions - in. / mm |           |         |
|           | Height                | Width     | Depth   |
| NEMA 1    | 5 / 127               | 3¼ / 82.5 | 3½ / 89 |

**Note:** Off-time selectable in 5 minute intervals.

### Model 84015 Timer-12-24V DC

Solid-state microprocessor-based controller for automated lubrication systems on mobile equipment or where AC power is not available. Rugged construction with liquid- and dust-tight enclosure. Includes manual push-button for remote initiation of a lube cycle.



| Off Time**<br>(Cycle Time) |         | Fixed On Time<br>(Pumping Time) | Power Requirement | Switch Capacity |
|----------------------------|---------|---------------------------------|-------------------|-----------------|
| Min.                       | Max.    |                                 |                   |                 |
| 2.5 Min.                   | 80 Min. | 75 Sec.                         | 10-30 VDC 25 MA*  | 5 Amps          |

\* Less load.

\*\* Available selections are 2.5, 5, 10, 20, 40 or 80 minutes.



| Enclosure |                     |         |        | Ambient Operating Temperature Range |              |
|-----------|---------------------|---------|--------|-------------------------------------|--------------|
| Rating    | Dimensions-in. / mm |         |        | Minimum                             | Maximum      |
|           | Height              | Width   | Depth  |                                     |              |
| NEMA 12   | 5¼ / 133            | 3¾ / 79 | 3 / 76 | 0°F / -18°C                         | 131°F / 55°C |

## Model 85530 Lubrication System Controller

Controls lubrication frequency, master divider valve cycle and monitors supply line pressure. The LCD displays operating status.



| Lube Cycle          |               |                         |               | Max Count Rate*          | Pumping Time Before Alarm |            |
|---------------------|---------------|-------------------------|---------------|--------------------------|---------------------------|------------|
| Timer Mode Off Time |               | Counter Mode Off Counts |               |                          | Minimum                   | Maximum    |
| Min.                | Max.          | Min.                    | Max.          |                          |                           |            |
| 1 Minute            | 99,000 Counts | 1 Count                 | 9,900 Minutes | 30/Sec. @ 50% Duty Cycle | 1 Minute                  | 99 Minutes |

\* Minimum duration of count signal is 33 milliseconds.

| Power Requirements (less load) |         | Pump, Solenoid, or Alarm Capacity | Ambient Temperature Range     | Enclosure |                     |                |              |
|--------------------------------|---------|-----------------------------------|-------------------------------|-----------|---------------------|----------------|--------------|
| Voltage                        | Current |                                   |                               | Rating    | Dimensions-in. / mm |                |              |
|                                |         | Height                            | Width                         |           | Depth               |                |              |
| 120 VAC, 50/60 Hz              | 85 MA   | 360 VA                            | 32° to 122°F<br>-0° to +50° C | NEMA 12   | 9 ½<br>241          | 8 15/16<br>227 | 4 1/8<br>105 |
| 230 VAC, 50/60 HZ              | 45 MA   |                                   |                               |           |                     |                |              |
| 24 VDC                         | 250 MA  | 5 Amps                            |                               |           |                     |                |              |

Note: Model 85530 is CSA/NRTL approved.

## Model 247333 Pressure Transducer

Pressure Transducer signals actual system pressure. Comes with 72 inch (1.8 m) shielded 24-gauge connecting wire. Maximum length of wire between transducer and monitor is 30 ft. (9.1 m).



| Range                    | Accuracy | Proof                | Pressure Connection | Ambient Temp.                   | Input        | Voltage Output | Offset | Enclosure                                       |
|--------------------------|----------|----------------------|---------------------|---------------------------------|--------------|----------------|--------|---|
| 0 to 4000 psi<br>276 bar | ±1%      | 7500 psig<br>517 bar | ¼" NPT Male Thread  | -20° to 180° F<br>-29° to 82° C | 10 to 30 VDC | 1-6 VDC        | 1 VDC  | NEMA 4X Rating<br>300 Series<br>Stainless Steel |

## Electric Solenoid-Operated Air Valves



| Model            | Type  | Electrical Characteristics                 |                     |                      | Air Inlet/Outlet | Ambient Temperature Range   | Cv Factor | Max. Pressure psi/bar | Conduit Connection |
|------------------|-------|--|---------------------|----------------------|------------------|-----------------------------|-----------|-----------------------|--------------------|
|                  |       | Power Requirements                         | Inrush Current Amps | Holding Current Amps |                  |                             |           |                       |                    |
| 350244           | 4-Way | 110 VAC, 50 Hz<br>120 VAC, 60 Hz<br>8.4 VA | .11                 | .07                  | ¼" NPT(F)        | 0° to 120°F<br>-18° to 49°C | 1.2       | 150 / 10.3            | ½" NPS(F)          |
| 350245           |       | 220 VAC, 50 Hz<br>240 VAC, 60 Hz<br>8.4 VA | .055                | .035                 |                  |                             |           |                       |                    |
| 350241           | 3-Way | 110 VAC, 50 Hz<br>120 VAC, 60 Hz<br>8.4 VA | .11                 | .07                  | ¼" NPT(F)        | 0° to 140°F<br>-18° to 60°C | .18       | 150 / 10.3            | N/A                |
| 350242           |       | 220 VAC, 50 Hz<br>240 VAC, 60 Hz<br>8.4 VA | .055                | .035                 |                  |                             |           |                       |                    |
| 350282<br>350283 |       | 12 VDC 6 Watts<br>24 VDC 6 Watts           | N/A                 | N/A                  |                  |                             |           |                       |                    |
| 68586            | 2-Way | 120V, 60 Hz 12 VA                          | .2                  | .1                   | ¾" NPT(F)        |                             | 2.4       |                       | ½" NPT(F)          |
| 274398           | 3-Way | 24 VDC 8.5 Watts                           | N/A                 | N/A                  | ¼" NPT(F)        |                             | .5        |                       | N/A                |
| 244727           |       | 110 VAC, 50 Hz<br>120 VAC, 60 Hz<br>11 VA  | .12                 | .09                  | ¾" NPT(F)        | 0° to 120°F<br>-18° to 49°C | 4.4       |                       | ½" NPT(F)          |

# Modular Lube® Lubrication Systems

## Numerical Index



| Model No. | Page No. | Model No. | Page No. | Model No. | Page No. |
|-----------|----------|-----------|----------|-----------|----------|
| 15104     | 19       | 87402     | 14, 15   | 87957     | 5        |
| 67359     | 6        | 87403     | 14, 15   | 130021-3  | 9        |
| 68586     | 26       | 87405     | 15       | 130067    | 19       |
| 68645     | 4, 5     | 87406     | 13, 14   | 130095    | 13       |
| 69813-10  | 7        | 87413     | 13       | 130117    | 19       |
| 69813-12  | 7        | 87414     | 14       | 130179    | 12, 13   |
| 69813-14  | 7        | 87416     | 13, 14   | 130200DEE | 18       |
| 70224     | 23       | 87417     | 13, 14   | 130200GEE | 17       |
| 83371     | 14       | 87418     | 13, 14   | 130200KEE | 17       |
| 83671     | 14       | 87419     | 13, 14   | 130201BCC | 17       |
| 83696     | 14       | 87421     | 13       | 130280    | 12       |
| 84015     | 25       | 87423     | 13       | 130300GEE | 18       |
| 84235     | 14       | 87601     | 19       | 130300KEE | 18       |
| 84239     | 19       | 87617     | 8, 24    | 130332    | 19       |
| 84250     | 14       | 87618     | 8        | 130335    | 19       |
| 84252     | 14       | 87817     | 9        | 236640    | 5        |
| 84501     | 25       | 87818     | 9        | 236641    | 5        |
| 84511     | 25       | 87823     | 8        | 236642    | 5        |
| 84700     | 14       | 87824     | 8        | 236643    | 5        |
| 85530     | 26       | 87825     | 8        | 236644    | 5        |
| 85651     | 8        | 87828     | 8        | 236645    | 5        |
| 87026-03S | 6        | 87851     | 14       | 244727    | 26       |
| 87026-03T | 6        | 87852     | 14       | 247333    | 26       |
| 87026-05S | 6        | 87862     | 19       | 249120    | 24       |
| 87026-05T | 6        | 87865     | 8        | 249122    | 24       |
| 87026-08S | 6        | 87885     | 7        | 249123    | 8        |
| 87026-08T | 6        | 87886     | 7        | 249124    | 8        |
| 87026-10S | 6        | 87887     | 7        | 249125    | 24       |
| 87026-10T | 6        | 87888     | 7        | 250001    | 24       |
| 87026-12S | 6        | 87889     | 7        | 250002    | 24       |
| 87026-12T | 6        | 87895     | 7        | 250010    | 24       |
| 87026-15S | 6        | 87896     | 7        | 250132    | 23       |
| 87026-15T | 6        | 87897     | 7        | 250286    | 9        |
| 87028     | 6        | 87905     | 8        | 250290    | 4        |
| 87030-3   | 6        | 87915     | 7        | 250291    | 4        |
| 87030-4   | 6        | 87918     | 4        | 250292    | 4        |
| 87030-6   | 6        | 87919     | 4        | 250293    | 4        |
| 87070     | 8        | 87920     | 4        | 250294    | 4        |
| 87200     | 12, 13   | 87934     | 7        | 250295    | 4        |
| 87202     | 12, 13   | 87935     | 7        | 250312    | 7        |
| 87204     | 13       | 87936     | 7        | 250313    | 7        |
| 87212     | 15       | 87937     | 7        | 274398    | 26       |
| 87214     | 15       | 87938     | 7        | 276517    | 23       |
| 87216     | 12, 13   | 87939     | 7        | 350241    | 26       |
| 87218     | 13       | 87940     | 7        | 350242    | 26       |
| 87228     | 14, 16   | 87941     | 7        | 350244    | 26       |
| 87239     | 14, 16   | 87942     | 7        | 350245    | 26       |
| 87240     | 14, 16   | 87955     | 5        | 350282    | 26       |
| 87400     | 13       | 87956     | 5        | 350283    | 26       |

# Modular Lube® Lubrication Systems

## Numerical Index



| Model No.    | Page No. | Model No. | Page No. | Model No. | Page No. |
|--------------|----------|-----------|----------|-----------|----------|
| 360654       | .23      | 876123    | .5       | 880561    | .20      |
| 360675       | .9       | 876124    | .5       | 882051    | .4       |
| 632004       | .13      | 876181    | .5       | 882052    | .4       |
| 800019-5     | .20      | 876182    | .5       | 882101    | .4       |
| 800028-3     | .20      | 876183    | .5       | 882102    | .4       |
| 800031-3     | .21      | 876184    | .5       | 882151    | .4       |
| 800037-1,3,4 | .20      | 876241    | .5       | 882152    | .4       |
| 800059-1,2   | .22      | 876242    | .5       | 882201    | .4       |
| 800065-1     | .21      | 876243    | .5       | 882202    | .4       |
| 800066-2,3   | .21      | 876244    | .5       | 882203    | .4       |
| 800100-2     | .21      | 880015-9  | .9       | 882204    | .4       |
| 800118-2     | .21      | 880463    | .23      | 882251    | .4       |
| 800118-3     | .21      | 880466    | .23      | 882252    | .4       |
| 800131-5     | .20      | 880496    | .23      | 882253    | .4       |
| 800143-3     | .21      | 880511    | .9       | 882254    | .4       |
| 800289-4,5   | .21      | 880513    | .9       | 882301    | .4       |
| 800289-6     | .21      | 880514    | .9       | 882302    | .4       |
| 800376-2     | .21      | 880515    | .9       | 882303    | .4       |
| 800469-2     | .22      | 880517    | .9       | 882304    | .4       |
| 800621-4     | .22      | 880518-9  | .9       | 882351    | .4       |
| 800784-2     | .22      | 880519-9  | .9       | 882352    | .4       |
| 847400       | .22      | 880550    | .20      | 882353    | .4       |
| 874000       | .5       | 880551    | .20      | 882354    | .4       |
| 876061       | .5       | 880552    | .20      | 882401    | .4       |
| 876062       | .5       | 880553    | .20      | 882402    | .4       |
| 876091       | .5       | 880554    | .20      | 882403    | .4       |
| 876092       | .5       | 880555    | .23      | 882404    | .4       |
| 876121       | .5       | 880556    | .23      |           |          |
| 876122       | .5       | 880560    | .20      |           |          |

# A complete line of lubrication solutions and industrial pumping products

## Automatic lubrication

Our automatic systems dispense measured amounts of lubricant at predetermined intervals. Systems include Helios and Duo-Matic™ two-line systems, and Centro-Matic, Modular Lube, Quicklub and ORSCO precision oil lubrication. With our BearingSaver program, we find the best automatic solution for you from our wide range of systems for grease, fluid grease and oil.

## General lubrication

Sometimes a simple approach is the best solution. Our wide range of products includes smaller, self-contained automatic lubricators and general lubrication equipment.

## Industrial pumping

Lincoln has developed specialized pumps and pumping stations to handle the difficult job of transferring thick fluids. From the industry-best PileDriver III and PowerMaster III pumps and air motors to specialty pumps, controls and mounting accessories, Lincoln is the preferred pumping system for many tough applications.





© SKF is a registered trademark of the SKF Group.

© Lincoln, Modular Lube, Bearing Saver, Helios, Centro-Matic, Quickclub, PileDriver III and PowerMaster III are registered trademarks of Lincoln Industrial Corp.

© SKF Group 2014

The contents of this publication are the copyright of the publisher and may not be reproduced (even extracts) unless prior written permission is granted. Every care has been taken to ensure the accuracy of the information contained in this publication but no liability can be accepted for any loss or damage whether direct, indirect or consequential arising out of the use of the information contained herein.

March 2014 · FORM 442834



[skf.com](http://skf.com)