**GREASE INGREDIENTS**

*Base Oil*
- Mineral oil
- Synthetic oil

*Thickener*
- Simple metal soaps
- Complex metal soaps
- Non-soap thickeners

*Additives*
- Enhance desirable properties
- Suppress undesirable properties
- Add new properties

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GREASE DISPENSERS

*Designed to be used as an alternative to manual lubrication*

- Manual lubrication limitations
  - Cost of labor
  - Reliability of application
  - Difficult to access or safety hazard concerns
  - Contamination of equipment between lubrication intervals

*Designed to be used as an alternative to integrated automatic lubrication systems*

*Provide a constant flow of lubricant in small volumes to achieve lubrication at point of friction*
HOW MUCH GREASE IS ENOUGH?

- Over greased bearings.

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SINGLE POINT GREASE LUBRICATOR

Why use single point grease lubricators?

To prevent contamination
Provides a constant flow of lubricant in a small volume to achieve superior lubrication at a low cost
As alternative to manual lubrication
When there is insufficient staff to ensure proper lubrication
Cost of automatic lubrication system can’t be justified
Difficult to access or safety hazard for manual system

Easy to operate

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Opportunities for single point grease lubricators cover many industries and application sectors.

Electric motors
Conveyors
Pillow blocks
Pumps

Sheaves
Couplings
Line shafts
Valves and gates
STREAMLINER PRODUCT FAMILY

Three different types of single point grease lubricators

Mechanical spring loaded
- Streamliner S
- Streamliner GL-P
- Streamliner GL-M

Electro-Chemical
- Streamliner V

Electro-Mechanical
- Streamliner M
- Streamliner M UL

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MECHANICAL SPRING LOADED

**GL-M**
- 2-1/4 oz (66.5cc) capacity
- Double spring design for uniform dispensing
- Base and fitting zinc plated
- Buna-N seals
- Zinc plated reservoir with external level indicator
- Max temp = 212°F
- 3 different spring sizes (sold separately)
- Easily refillable
- Excellent for high vibration applications

**GL-P**
- 2-1/2 oz (74cc) capacity
- Base and fitting are anodized aluminum
- Buna-N seals
- Polycarbonate reservoir (clear viewing of grease level)
- Max temp = 250°F
- 3 different spring sizes supplied with each unit
- Easily refillable

**Guidelines**
- Pressure of the three different springs
  - Light – 4.57 lb/in²
  - Medium – 10.04 lb/in²
  - Heavy – 14.35 lb/in²
- Do not overfill lubricators with grease
- Do not use lubricators for multiple point lubrication
MECHANICAL SPRING LOADED – CONT.

Streamliner S
- Five different control settings
- Double spring design for more uniform dispensing pressure
- Clear reservoir for easy viewing of grease levels
- Refillable through zerk fitting

<table>
<thead>
<tr>
<th>Bearing Shaft Diameter</th>
<th>Up to 2 in or 50 mm</th>
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</thead>
<tbody>
<tr>
<td>Operating Condition</td>
<td>Intermittent</td>
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<tr>
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<tr>
<td>Bearing Type</td>
<td>Shielded</td>
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<td>Open</td>
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<tr>
<td></td>
<td>Shielded</td>
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<td>Open</td>
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<td>Regardless of RPM</td>
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<table>
<thead>
<tr>
<th>Bearing Shaft Diameter</th>
<th>Over 2 in or 50 mm</th>
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<tr>
<td></td>
<td>Shielded</td>
</tr>
<tr>
<td></td>
<td>Open</td>
</tr>
<tr>
<td>Under 1,000 RPM</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td>1,000 – 3,000 RPM</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Over 3,000 RPM</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5</td>
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</tbody>
</table>

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MECHANICAL SPRING LOADED APPLICATIONS

GL-P lubricating a bearing on a dynamometer machine.
Electro-chemical drive operation
- Electrical current by two double “AA” alkaline batteries
- Produces nitrogen gas
- Builds pressure
- Pushes piston
- Dispenses grease
ELECTRO-CHEMICAL – STREAMLINER V

250 cc capacity
Operating temp. -4°F to 140°F
Maximum working pressure 80 psi
Thread size 3/8”NPT
LCD display
Dispensing rates 1, 2, 3, 6, 12 months and purge
Pre-filled with 1 of 6 standard grease types
Disposable
Intrinsically Safe Cert. Grade: Exia I/II BT6
– fully sealed
Can be deactivated and adjusted to different rates
Transparent reservoir for easy visual of grease level

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STREAMLINER V - GUIDELINES

Can be remote mounted – maximum 3 feet line
- Line (minimum of ¼” dia.) should be pre-filled with grease
- Dispensing pressure decreases along distance, recommend using shorter dispensing rate
- Recommended if high vibration exists

Temperature variances effect dispense rate
- Decrease in temperature lowers rate due to increase in viscosity
- Recommend shorter dispensing rates when temperature fluctuation occurs

Unit designed for dispensing grease to one bearing only

Purge function will shut off after 20 minutes to protect unit

Streamliner V remote mounted on a bearing housing

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STREAMLINER V - APPLICATIONS

Streamliner V lubricating bearing on a blower fan
ELECTRO-MECHANICAL – STREAMLINER M

125 cc to 500 cc size
Replaceable pouch/cartridge pre-filled with one of six standard greases
Operating temp = -4°F to 140°F
Normal operating pressure 280 psi
Maximum operating pressure 800 psi
Thread size 3/8” NPT
Dispensing rates half, 1, 2, 3, 6, and 12 months
Up to 8 lubrication points

Streamliner M and 500cc are capable of feeding 2 to 8 points via distribution block.

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ELECTRO-MECHANICAL – STREAMLINER M

Electro-mechanical drive operation
- Electrical motor
- Drive gear set
- Activates piston
- Dispenses grease
STREAMLINER M – LCD DISPLAYS

Ex: If high backpressure exists – red LED will flash, the motor overload button will flash and the days will read “Exx” for days since malfunction occurred.

- Four Options
  - Days remaining to cycle completion
  - S** - Days since cycle completion based on original setting (ex: if set for 1 month on day 32 it will flash “SO2”)
  - E** - Days since malfunction occurred
  - TST – Test mode

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STREAMLINER M – LCD DISPLAYS

- Dispensing period set
- Days remaining
- Days since malfunction (E=error)
- Days since cycle completion (S=stop)

- Dispensing test mode
- Low battery
- Motor overload
- Low grease level

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STREAMLINER M - GUIDELINES

Service packs contain grease pouch and battery
- Battery should be changed each time pouch is changed
- Only use original OEM battery

Can be remote mounted
- Line (min of ¼” dia) should be pre-filled with grease
- If more than 3 ft – may reduce the ability of the unit to dispense against elevated back pressure
  - Back pressure should be checked prior
- Recommended in high vibration or temperature exists

Multiple lines capable with divider block
- 2 or 4
- Lines and blocks need to be pre-filled with grease
STREAMLINER M - ACCESSORIES

Installation kit – single

Multiple point installation kits (2 or 8)

Service pack

- 125 cc with battery and protective cover
- 250 cc with battery and protective cover
Some restrictions may occur:
- Line length
- Line diameter
- System Pressure

Note: Not all systems are capable of multi-point lubrication. Units that are capable can lubricate from 2 to 8 points.
STREAMLINER M

Streamliner M lubricating a 4-bolt flange bearing on a sprocket gear screw conveyor designed to transport whole wheat (acts as an auger).
STREAMLINER M

Lubricating a motor thrust bearing on a Reliance Electric Liberator Motor.
## Standard Available Grease Types

<table>
<thead>
<tr>
<th>Grease Type</th>
<th>Grease</th>
<th>NLGI#</th>
<th>Thickener Type</th>
<th>Base Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-purpose</td>
<td>Mobilgrease XHP 222</td>
<td>2</td>
<td>Lithium complex</td>
<td>Mineral</td>
</tr>
<tr>
<td>Heavy-duty</td>
<td>Exxon Unirex EP2</td>
<td>2</td>
<td>Lithium complex</td>
<td>Mineral</td>
</tr>
<tr>
<td>High speed</td>
<td>Mobilith SHC 100</td>
<td>2</td>
<td>Lithium complex</td>
<td>Mineral</td>
</tr>
<tr>
<td>Food grade</td>
<td>Mobil FM 222</td>
<td>2</td>
<td>Aluminum complex</td>
<td>Synthetic</td>
</tr>
<tr>
<td>High Temp.</td>
<td>Mobilith SHC 220</td>
<td>2</td>
<td>Lithium complex</td>
<td>Synthetic</td>
</tr>
<tr>
<td>Pulp &amp; Paper</td>
<td>Mobilith SHC PM 460</td>
<td>1.5</td>
<td>Lithium complex</td>
<td>Synthetic</td>
</tr>
</tbody>
</table>
# STREAMLINER - DISPENSING RATES

<table>
<thead>
<tr>
<th></th>
<th>125 cc - M unit (cc)</th>
<th>250 cc - M &amp; V unit (cc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Half Month</td>
<td>8.33</td>
<td>16.67 (M unit only)</td>
</tr>
<tr>
<td>1 month</td>
<td>4.17</td>
<td>8.33</td>
</tr>
<tr>
<td>2 month</td>
<td>2.08</td>
<td>4.17</td>
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<tr>
<td>3 month</td>
<td>1.39</td>
<td>2.78</td>
</tr>
<tr>
<td>6 month</td>
<td>0.69</td>
<td>1.39</td>
</tr>
<tr>
<td>12 month</td>
<td>0.35</td>
<td>0.69</td>
</tr>
</tbody>
</table>

To calculate daily dispensing rate take total volume and divide by number of days ex: 250/30 days = 8.33 cc per day

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STREAMLINER SUMMARY

Spring loaded (GL-P, GL-M, and S)
- Lower capacity (66 – 74 cc)
- Lower pressure (5-15 psi)
- Refillable

Electro-chemical (Streamliner V)
- 250 cc capacity
- Medium pressure (80 psi)
- Disposable
- 5 different dispensing rates

Electro-mechanical (Streamliner M)
- 125 or 250 cc capacity
- High working pressure (280 psi)
- Replaceable grease pouches
- 6 different dispensing rates
  Multiple point capacity