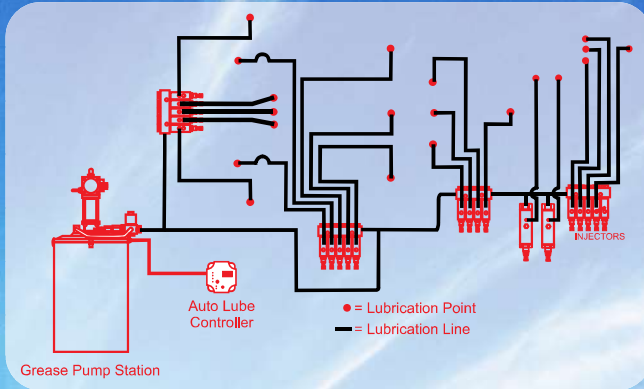




# LUBRICATION SYSTEMS



## ETI LUBRICATION PRODUCTS:

- \* ETI Lubrication Products are all fully manufactured to the highest quality by ETI in Magelang, Central Java.
- \* Grease Canisters are manufactured with low-level alarm, to AS1210 as a Certified Pressure Vessel.
- \* ETI POWER CHIEF Hydraulic Pumps are ideally suited to Dump Trucks, Excavators, Graders and Dozers alike - 10 cc/cycle with pressure ratio 16:1.
- \* ETI POWER RANGER Hydraulic Pumps are ideally suited for the largest of Excavators and machinery requiring higher grease flow rates - 21 cc/cycle with pressure ratio 10:1.
- \* Auto-Lube Systems can be set up in larger capacity canisters in Dual-Pump configuration with alarm and manual operator electric change-over control.
- \* ETI Grease Injectors are fully adjustable with both ETI Injectors and Manifolds being interchangeable with Lincoln.
- \* Covered by a full 1 YEAR INTERNATIONAL WARRANTY against manufacturer's defect.



# GREASE PUMP STATIONS

## ETI POWER CHIEF HYDRAULIC GREASE PUMP STATION

Ideally suited for auto-lube systems on dump trucks, graders, dozers & excavators

### Actuator Specifications:

- Hydraulic input oil flow rate : 0,25 – 3,0 LPM
- Hydraulic input oil pressure : 20 - 200 Bar
- Output Pressure : 300 Bar
- Operating Voltage : 24 VDC
- Operating Temperature : -10°C to +60°C
- Maximum Hydraulic oil temperature : 90° C
- Hydraulic Inlet Port : 7/16" JIC
- Hydraulic Tank Return Port : 9/16" JIC
- Pump Outlet : 1/4" BSP
- Pressure Reducing Valve Setting : 41 bar (600 psi)
- Maximum Cycle Rate : 60 CPM
- Leg Size : 51 cm

### Pump Table Specifications:

- Output Per Cycle : 10.0 cm<sup>3</sup> per cycle
- Pressure Ratio : 16:1

### Factory Setting:

- Pump Output : 150 cm<sup>3</sup> per minute



**POWER CHIEF PUMP**

## ETI POWER RANGER HYDRAULIC GREASE PUMP STATION

Developed for high cycle rate applications on large excavators and mining equipment

### Actuator Specifications:

- Hydraulic input oil flow rate : 11 LPM
- Hydraulic input oil pressure : 20 - 200 Bar
- Output Pressure : 300 Bar
- Operating Voltage : 24 VDC
- Operating Temperature : -10°C to +60°C
- Maximum Hydraulic oil temperature : 90° C
- Hydraulic Inlet Port : 7/16" JIC
- Hydraulic Tank Return Port : 9/16" JIC
- Pump Outlet : 1/4" BSP
- Pressure Reducing Valve Setting : 41 bar (600 psi)
- Maximum Cycle Rate : 60 CPM
- Leg Size : 51 cm

### Pump Table Specifications:

- Output Per Cycle : 21.0 cm<sup>3</sup> per cycle
- Pressure Ratio : 10:1

### Factory Setting:

- Pump Output : 319.5 cm<sup>3</sup> per minute



**POWER RANGER PUMP**



**GREASE FILTER with reusable element**

Installed inside canister away from risk of damage or contamination with easy to remove and clean, reusable 300micron element



**AUTO GREASE FILL SHUT-OFF VALVE**



**3WAY VALVE**



**VENT VALVE**

### ETI Hydraulic Grease Pump Station Features:

- 1. Pressure Certified Grease Canister with inspection hatch.**
  - Canister is built to an Australian Standard AS1210
  - Manufactured in High Grade 304 Stainless Steel or Carbon Steel
  - Hatch can be removed to verify canister cleanliness
  - Hatch can be changed to accommodate various pumps
  - Canister available in various sizes
- 2. Enviro-valve**
  - No overflow to ground
  - Grease flow stopped automatically when canister is full
  - Saves time and grease
  - Installed in tank out of the way
- 3. Tank Relief**
  - Failsafe device preventing canister becoming pressurised
- 4. Grease Filter**
  - Easy maintenance, reusable filter
  - 300 micron mesh element
  - Installed in tank and out of the way



## ETI EL-1 INJECTOR

ETI Grease Injectors are fully adjustable with both ETI Injectors and Manifolds being interchangeable with Lincoln.

Type EL-1 (P/N: MGP-EL-1-ASSY)

Minimum operating pressure ..... 1850 psi (12.7 MPa, 127 bar)

Maximum operating pressure ..... 3500 psi (24 MPa, 241 bar)

Recommended operating pressure ..... 2500 psi (17 MPa, 172 bar)

Reset Pressure (at the pause time) ..... 600 psi (4.1 MPa, 41 bar)

Output volume per cycle ..... 1.25 cc

Wetted parts ..... carbon steel, stainless steel, copper, fluoroelastomer

Recommended fluids ..... N.L.G.I. 0 up to N.L.G.I. 2

Temperature ..... -40° C to 93° C



## ETI EL-V-XL INJECTOR

ETI Grease Injectors are fully adjustable with both ETI Injectors and Manifolds being interchangeable with Lincoln.

Type EL-V-XL (P/N: MGP-EL-V-XL-ASSY)

Minimum operating pressure ..... 1850 psi (12.7 MPa, 127 bar)

Maximum operating pressure ..... 6000 psi (41 MPa, 413 bar)

Recommended operating pressure ..... 2500 psi (17 MPa, 172 bar)

Reset Pressure (at the pause time) ..... 1000 psi (6.9 MPa, 69 bar)

Output volume per cycle ..... 5.25 cc

Wetted parts ..... carbon steel, stainless steel, copper, fluoroelastomer

Recommended fluids ..... N.L.G.I. 0 up to N.L.G.I. 2

Temperature ..... -40° C to 93° C



## ETI EL-V INJECTOR

ETI Grease Injectors are fully adjustable with both ETI Injectors and Manifolds being interchangeable with Lincoln.

Type EL-V (P/N: MGP-EL-V-ASSY)

Minimum operating pressure ..... 1850 psi (12.7 MPa, 127 bar)

Maximum operating pressure ..... 6000 psi (41 MPa, 413 bar)

Recommended operating pressure ..... 2500 psi (17 MPa, 172 bar)

Reset Pressure (at the pause time) ..... 1000 psi (6.9 MPa, 69 bar)

Output volume per cycle ..... 1.60 cc

Wetted parts ..... carbon steel, stainless steel, copper, fluoroelastomer

Recommended fluids ..... N.L.G.I. 0 up to N.L.G.I. 2

Temperature ..... -40° C to 93° C



## ETI EL-LBH INJECTOR

ETI Grease Injectors are fully adjustable with both ETI Injectors and Manifolds being interchangeable with Lincoln.

Type EL-LBH (P/N: MGP-EL-LBH-ASSY)

Minimum operating pressure ..... 1850 psi (12.7 MPa, 127 bar)

Maximum operating pressure ..... 6000 psi (41 MPa, 413 bar)

Recommended operating pressure ..... 2500 psi (17 MPa, 172 bar)

Reset Pressure (at the pause time) ..... 1000 psi (6.9 MPa, 69 bar)

Output volume per cycle ..... 5.25 cc

Wetted parts ..... carbon steel, stainless steel, copper, fluoroelastomer

Recommended fluids ..... N.L.G.I. 0 up to N.L.G.I. 2

Temperature ..... -40° C to 93° C



## ETI EL-G INJECTOR

ETI Grease Injectors are fully adjustable with both ETI Injectors and Manifolds being interchangeable with Graco GL-1.

Type EL-G (P/N: MGP-EL-G-ASSY)

Minimum operating pressure ..... 1850 psi (12.7 MPa, 127 bar)

Maximum operating pressure ..... 3500 psi (24 MPa, 241 bar)

Recommended operating pressure ..... 2500 psi (17 MPa, 172 bar)

Reset Pressure (at the pause time) ..... 600 psi (4.1 MPa, 41 bar)

Output volume per cycle ..... 1.25 cc

Wetted parts ..... carbon steel, stainless steel, copper, fluoroelastomer

Recommended fluids ..... N.L.G.I. 0 up to N.L.G.I. 2

Temperature ..... -40° C to 93° C



A full range of ETI Injectors and Manifolds are available and designed to be interchangeable with the Lincoln brand of injectors and manifolds. The ETI Lubrication range of injectors and Lincoln equivalents are as detailed:

ETI LUBRICATION	LINCOLN
EL-1	SL-1
EL-V	SL-V
EL-V-XL	SL-V-XL
EL-LBH	LEBHERR INJECTOR

Note - also available a complete range of ETI manifolds to suit both brands in sizes designed to accommodate a single injector up to a combination of six injectors.

The ETI Lubrication range of injectors and Graco equivalents are as detailed:

ETI LUBRICATION	GRACO
EL-G	GL-1



## ETI MANIFOLDS

ETI Manifolds available in builds to accommodate 1 to 6 injectors individually.



## ETI AUTOLUBE CONTROLLER

Specification:  
 Enclosure ..... High Quality Poly Butylene Terephthalate (PBT) Protection Structure to IP67  
 Input Voltage ..... 12- 24 V DC  
 Audio Indicator ..... Buzzer - 85 dB @ 1 meter  
 Visual Indicator ..... LED with > 3000 lux and 3mm size  
 Timer (Seven Segment)



## ETI GREASE CANISTER

ETI Grease Canister available in size of 15 Kg, 25 Kg, 40 Kg, 60 Kg, 200 Kg, 350 Kg and 680 Kg.

CANISTER BUILD SPECIFICATIONS:

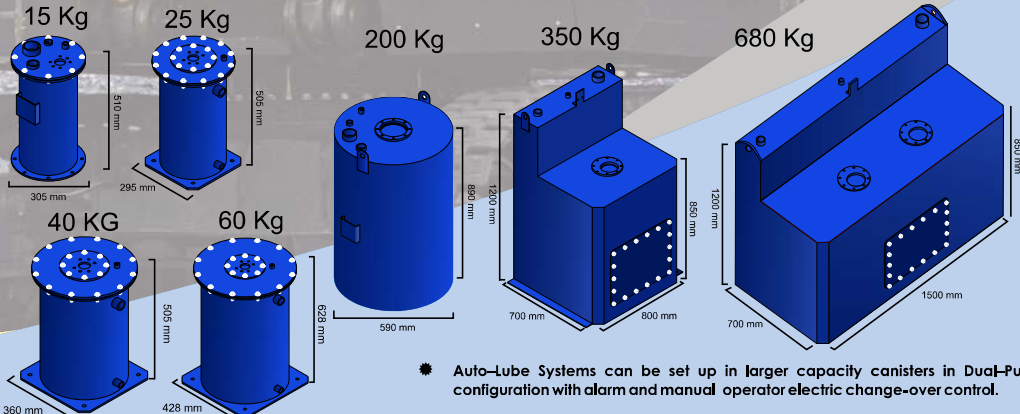
⊙ WALL CONSTRUCTION - 3 mm (for 15 Kg, 25 Kg, 40 Kg, 60 Kg and 200Kg) / 5 mm (for 350Kg) / 10 mm (for 680 Kg)

⊙ PRIMA FINISH - 2 x Coats.

⊙ PAINT FINISH - 4 x Coats 2 pack Epoxy Resin.

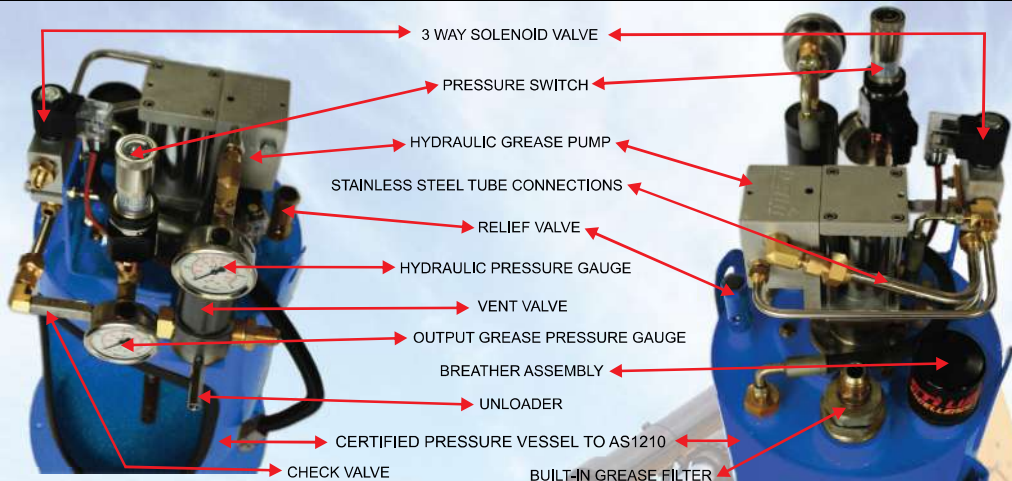
⊙ LOW-LEVEL INDICATOR (Optional) - Electrical Low Level Pressure switch internally mounted and wired to the ETI Pump Controller.

⊙ CERTIFIED PRESSURE VESSEL - Certified to AS1210

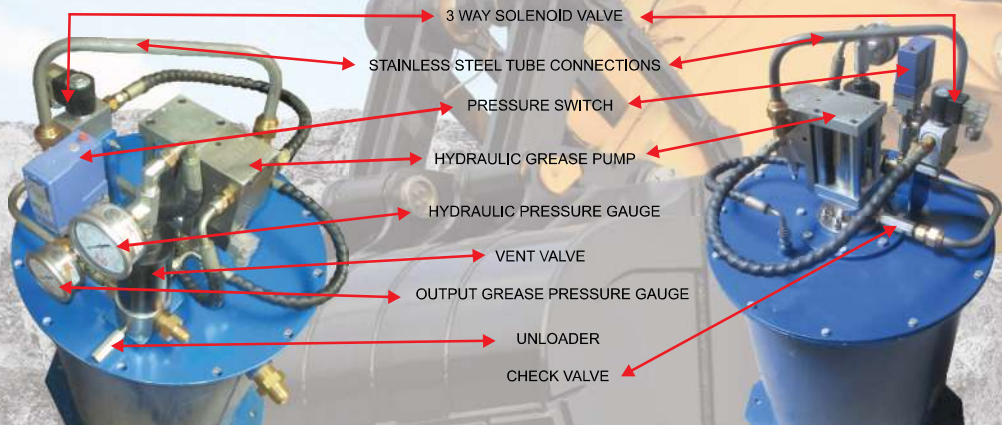


Auto-Lube Systems can be set up in larger capacity canisters in Dual-Pump configuration with alarm and manual operator electric change-over control.

# ETI SEALED SYSTEM



# ETI UNSEALED SYSTEM



**PT. ETI FIRE SYSTEMS**  
ENGINEERED FIRE PROTECTION

Jl. Magelang - Kopeng Km 11  
Tegalrejo, Magelang 56192  
Central Java, Indonesia

Phone : +62 293 314 8990  
Fax : +62 293 314 8991  
Email : [info@etifireandlubrication.com](mailto:info@etifireandlubrication.com)  
Web : [www.etifireandlubrication.com](http://www.etifireandlubrication.com)

