



# Dyna-Star® 10:1

High Ratio Hydraulically-Powered Lubrication Pump

Available Electronically Only



## Long-lasting, flexible design saves money and is easy to use and install

- Achieve full pressure performance by safely tapping low pressure hydraulics
- Pre-packaged modules ready-to-work with both injector and divider valve systems
- Multiple pump and accessory options for use with refinery drum and custom tank installations
- Self-lubricating for long life and reliable operation
- Ultra-quiet hydraulic motor—no need for add-on mufflers
- High efficiency motor design uses less hydraulic oil

PROVEN QUALITY. LEADING TECHNOLOGY.

# Graco® Quality by Design

## Superior System Performance

Heavy-duty construction and mining equipment rely on fresh lubricant to flush contaminants from critical pivot points. An automatic lubrication system from Graco provides constant lube replenishment, preventing expensive and catastrophic component failures. Divider valves and injectors accurately distribute lubricant to multiple lube points and are designed to accept a variety of system accessories which include electronic controllers, pressure switches and level indicators.

### GL-1 and GI-11 Injectors

- Exclusive seal design for up to 30% longer life
- Field adjustable output for most every application



### Trabon® Divider Valve Assembly

- Accurately meters lubrication to each point
- Add performance indicators to ensure vital components have been lubricated



### Pressure Switch

Lets the controller know when optimum system pressure is reached ensuring complete lubrication cycle



### Rugged Digital Controller

Full featured performance—time- or pressure-based control to monitor reservoir levels and system pressure



### Level Indicator

- Positive, at-a-glance indication of reservoir lubrication level
- Auto shut-down when low level is reached

### Follower Plate

Innovative design forces grease into the pump for consistent operation

### Center-Feed Vent and Refill Port

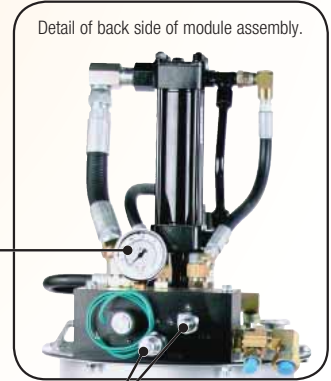
Located below follower plate for trouble-free venting and refilling

### Field-Proven Graco Fire-Ball® Grease Pump Lower

Double-acting piston design—the industry standard for long life

For optimal system performance NLGI #1 grease is recommended

Detail of back side of module assembly.



### Built-In Gauge

Conveniently monitor hydraulic output pressure

### Pressure and Flow Control

Ability to adjust pressure and flow puts you in control

## Module and Kit Accessories

247700	Follower plate for 60 lb (27 kg) and 90 lb (41 kg) modules
244023	Level indicator for 60 lb (27 kg) and 90 lb (41 kg) modules*
24B591	GLC 4400, 12/24 VDC controller
115124	Pressure switch

\* Follower plate 247700 required for level indicator 244023 to function



# Typical Applications



## Mobile

- Front-end loaders - 12 cu. yd. or higher
- Mining trucks - 100 ton capacity or higher
- Shovel fronts
- Drag lines
- Bucket wheel excavators

## Stationary

- Cement plant
- Jaw and gyratory crushers
- Grinding mill seals
- Mineral sizers
- Ship loaders - slew bearings
- Sludge pumps

## Ordering Information

### DYNA-STAR 10:1 MODULES AND KITS

247574	Dyna-Star 10:1 60 lb (27 kg) Pump Module - Injector - Overall height 35.15 in (842mm). Includes pump (247540), reservoir assembly (247575), hydraulic control assembly (247538) and vent valve assembly (243170) fully assembled.
247706	Dyna-Star 10:1 60 lb (27 kg) Pump Kit - Divider Valve (DV) - Overall height 35.15 in (842mm). Includes pump (247540), reservoir assembly (247575) and hydraulic control assembly (247538) not assembled.
247444	Dyna-Star 10:1 90 lb (41 kg) Pump Module - Injector - Overall height 42.75 in (1086 mm). Includes pump (247443), reservoir assembly (241486), hydraulic control assembly (247538) and vent valve assembly (243170) fully assembled.
247707	Dyna-Star 10:1 90 lb (41 kg) Pump Kit - DV - Overall height 42.75 in (1086 mm). Includes pump (247443), reservoir assembly (241486) and hydraulic control assembly (247538) not assembled.
247902	Pressure relief kit for 247706 and 247707
312349	Manual for 247574, 247706, 247444, 247707

**Maximum fluid output for modules and kits = 3,500 PSI (241 bar)**

### DYNA-STAR 10:1 REFINERY DRUM AND CUSTOM TANK APPLICATIONS

Description	Refinery Drums		Custom Tank Applications					
	120 (55)	400 (180)	60 (27)	60 (27)	120 (55)	120 (55)	400 (180)	400 (180)
Divider Valve (DV) or Injector Based	DV	DV	Injector	DV	Injector	DV	Injector	DV
Pump	247443	247450	247540	247540	247443	247443	247450	247450
Hydraulic Control (1)	247705	247705	247538	247538	247538	247538	247538	247538
Vent Valve			243170		243170		243170	
Cover	247703	247704						
Follower Plate	247701	247702						
Pump Gasket	15M442	15M442	15M442	15M442	15M442	15M442	15M442	15M442
Custom Tank Kit (2)			247970		247456		247457	

(1) Hydraulic control assembly (247705) includes longer hoses to enable remote mounting.

(2) Kits include pump (24750, 247443 or 247450), hydraulic control assembly (247538), vent valve (243170) and pump gasket (15M442).

### FIREBALL 300 AND DYNA-STAR 5:1 MODULES & ACCESSORIES

241573	Fireball 300, 50:1 90 lb (41 kg) Pump Module. Includes pump (239887), reservoir assembly (241486) and vent valve assembly (241572).
241485	Follower plate (fits 241573).
243159	Dyna-Star 5:1 90 lb (41 kg) Pump Module. Includes pump (224751), reservoir assembly (241486), hydraulic control assembly (243501) and vent valve assembly (243170).
243191	Follower plate (fits 243159).

See Lubrication Equipment Buyer's Guide section 14 for more information.

### GL INJECTORS

114901	One GL-1 injector and manifold
114902	Two GL-1 injectors and manifold
114903	Three GL-1 injectors and manifold
114904	Four GL-1 injectors and manifold
114905	Five GL-1 injectors and manifold
114909	Replacement GL-1 injector
24A918	GL-11 injector





## Technical Specifications

### DYNA-STAR 10:1 PUMPS



Part Number	247540	247443	247450
Drum Size	60 lb (27 kg)	120 lb (55 kg)	400 lb (180 kg)
Overall Pump Length	33.9 in (861 mm)	41.5 in (1054 mm)	48.5 in (1232 mm)
Pump Lower Length	19.75 in (501 mm)	26.75 in (679 mm)	33.75 in (857 mm)
Maximum Hydraulic Input Pressure	600 psi (41 bar)	600 psi (41 bar)	600 psi (41 bar)
Maximum Hydraulic Fluid Input Volume	3 gpm (11.4 lpm)	3 gpm (11.4 lpm)	3 gpm (11.4 lpm)
Maximum Flow Output Rate	1.1 lb/min (0.5 kg/min)	1.1 lb/min (0.5 kg/min)	1.1 lb/min (0.5 kg/min)
Maximum CPM	60	60	60
Maximum Fluid Output Pressure	7500 psi (517 bar)	7500 psi (517 bar)	7500 psi (517 bar)
Hydraulic Supply Inlet	3/4"-16 JIC (37° Flare)	3/4"-16 JIC (37° Flare)	3/4"-16 JIC (37° Flare)
Hydraulic Return Outlet	3/4" npt	3/4" npt	3/4" npt
Fluid Outlet	1/2" npt	1/2" npt	1/2" npt
Maximum Incoming Hydraulic Fluid Temp.	200°F (93°C)	200°F (93°C)	200°F (93°C)
312350	Manual for 247540, 247443, 247450		

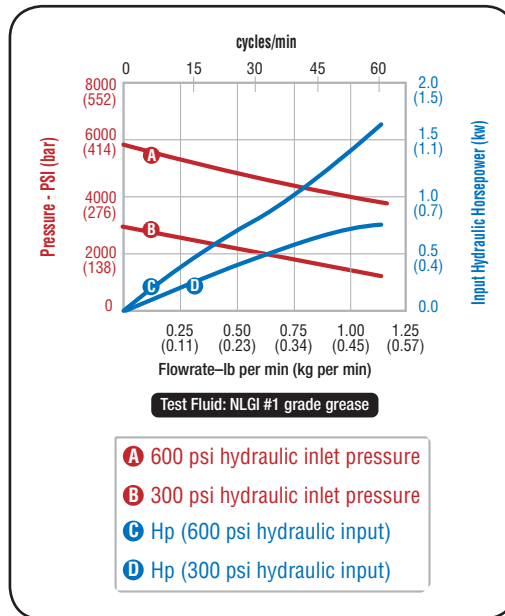
## ABOUT GRACO

Founded in 1926, Graco is a world leader in fluid handling systems and components. Graco products move, measure, control, dispense and apply a wide range of fluids and viscous materials used in vehicle lubrication, commercial and industrial settings.

The company's success is based on its unwavering commitment to technical excellence, world-class manufacturing and unparalleled customer service. Working closely with qualified distributors, Graco offers systems, products and technology that set the quality standard in a wide range of fluid handling solutions.

Graco provides equipment for spray finishing, protective coating, paint circulation, lubrication, and dispensing sealants and adhesives, along with power application equipment for the contractor industry. Graco's ongoing investment in fluid management and control will continue to provide innovative solutions to a diverse global market.

## TYPICAL PUMP PERFORMANCE



Call today for product information or talk to a Graco representative at 1.800.533.9655 or visit us online at [www.graco.com](http://www.graco.com).