



AUTOMATIC LUBRICATION SYSTEMS PRODUCT GUIDE

Mining, Construction & Industrial Applications

AUSTRALIA & NEW ZEALAND



PROVEN QUALITY. LEADING TECHNOLOGY

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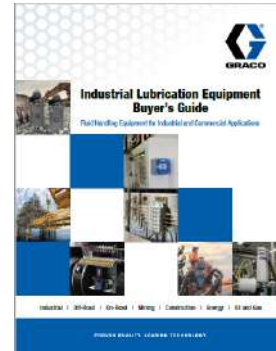
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REFER TO THE ILE BUYER'S GUIDE
(340821) FOR COMPLETE RANGE [https://
www.graco.com/content/dam/graco/led/literature/
catalogs/340821/340821EN-AC.pdf](https://www.graco.com/content/dam/graco/led/literature/catalogs/340821/340821EN-AC.pdf)

For more information on Graco products and manuals please visit www.graco.com or contact Customer Service 03 9468 8500 - csaustralia@graco.com

Heavy Equipment Automatic Lubrication System Selector

System Selector

LUBRICATION PUMPS

G-Mini®



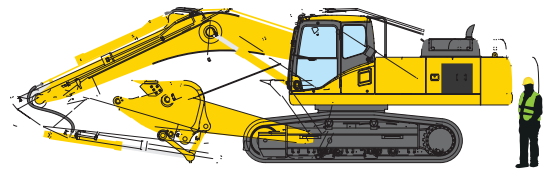
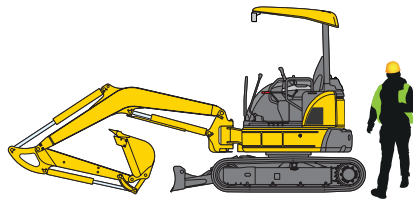
G3®



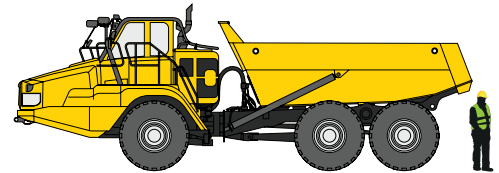
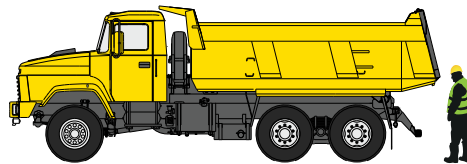
Wheel Loaders



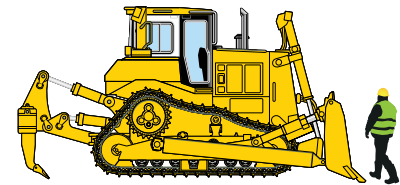
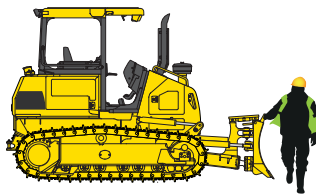
Excavators



Haul Trucks

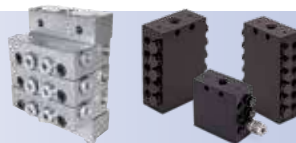


Dozers



RECOMMENDED METERING

Series Progressive



Series Progressive / Injectors



RECOMMENDED CONTROLLERS

Integrated or GLC 2200 / GLC 4400 / GLC X



Heavy Equipment Automatic Lubrication System Selector

LUBRICATION PUMPS

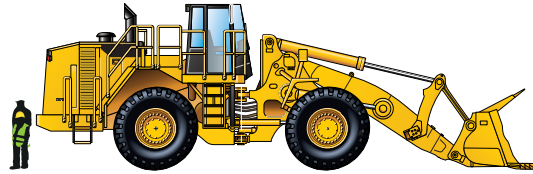
Compact Dyna-Star®



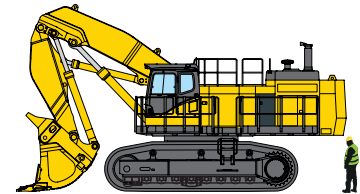
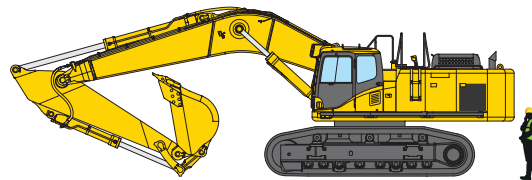
Electric Dyna-Star®



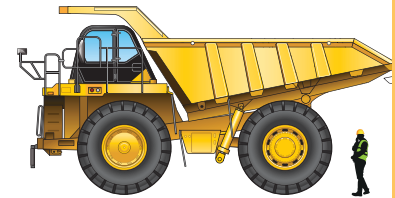
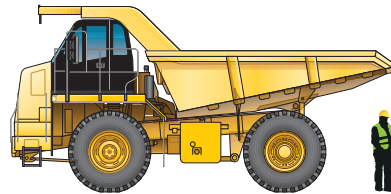
Wheel Loaders



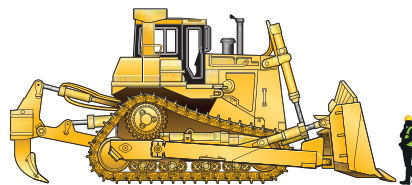
Excavators



Haul Trucks



Dozers



System Selector

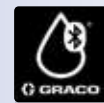
RECOMMENDED METERING

Injectors

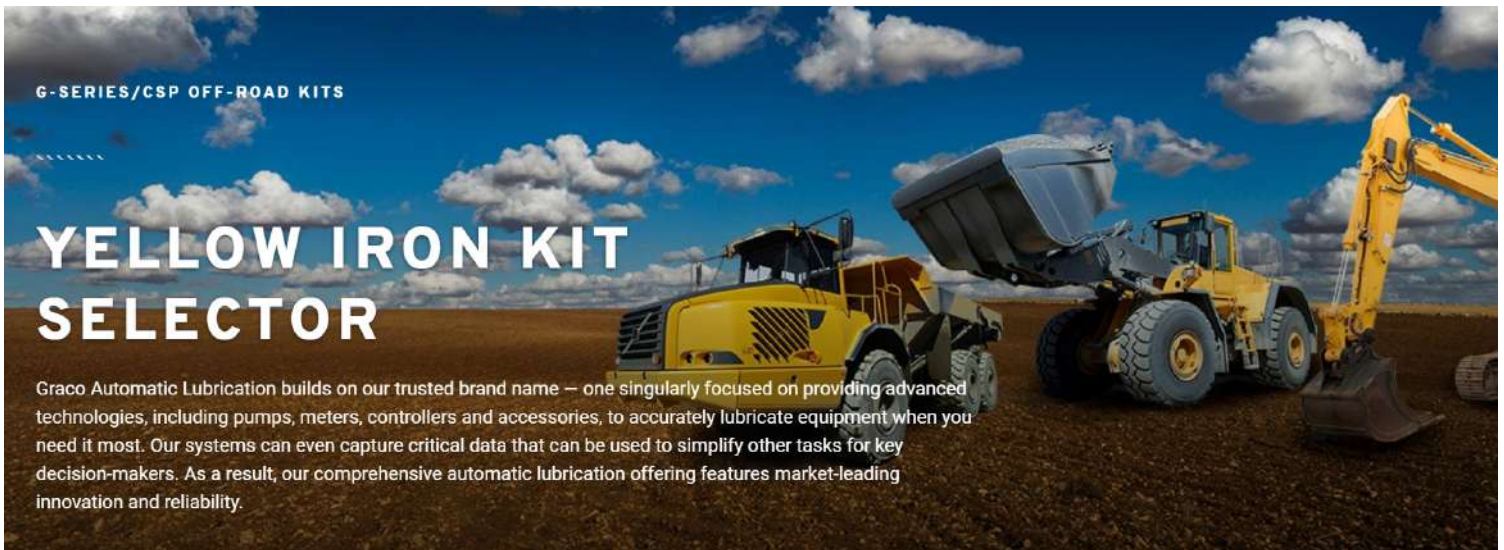


RECOMMENDED CONTROLLERS

GLC 2200 / GLC 4400 / GLC X



Yellow Iron Kit Selector



Kit Selector

THIS SELECTOR IDENTIFIES KITS AND THE INSTALLATION MANUAL.

EQUIPMENT MANUFACTURER [Manufacturer Not Listed?](#)

Please Select One

EQUIPMENT TYPE

Please Select One

MODEL NUMBER ⓘ

Please Select One

SYSTEM MONITORING ⓘ

Please Select One

PUMP RESERVOIR SIZE ⓘ

Please Select One

PUMP CONTROL TYPE

Please Select One

EQUIPMENT MANUFACTURER [Manufacturer Not Listed?](#)

CAT®

EQUIPMENT TYPE

Wheel Loader

MODEL NUMBER ⓘ

980

SYSTEM MONITORING ⓘ

Yes

PUMP RESERVOIR SIZE ⓘ

8 Liter

PUMP CONTROL TYPE

G3 Standard 24VDC / GLC2200 Controller



PUMP KIT

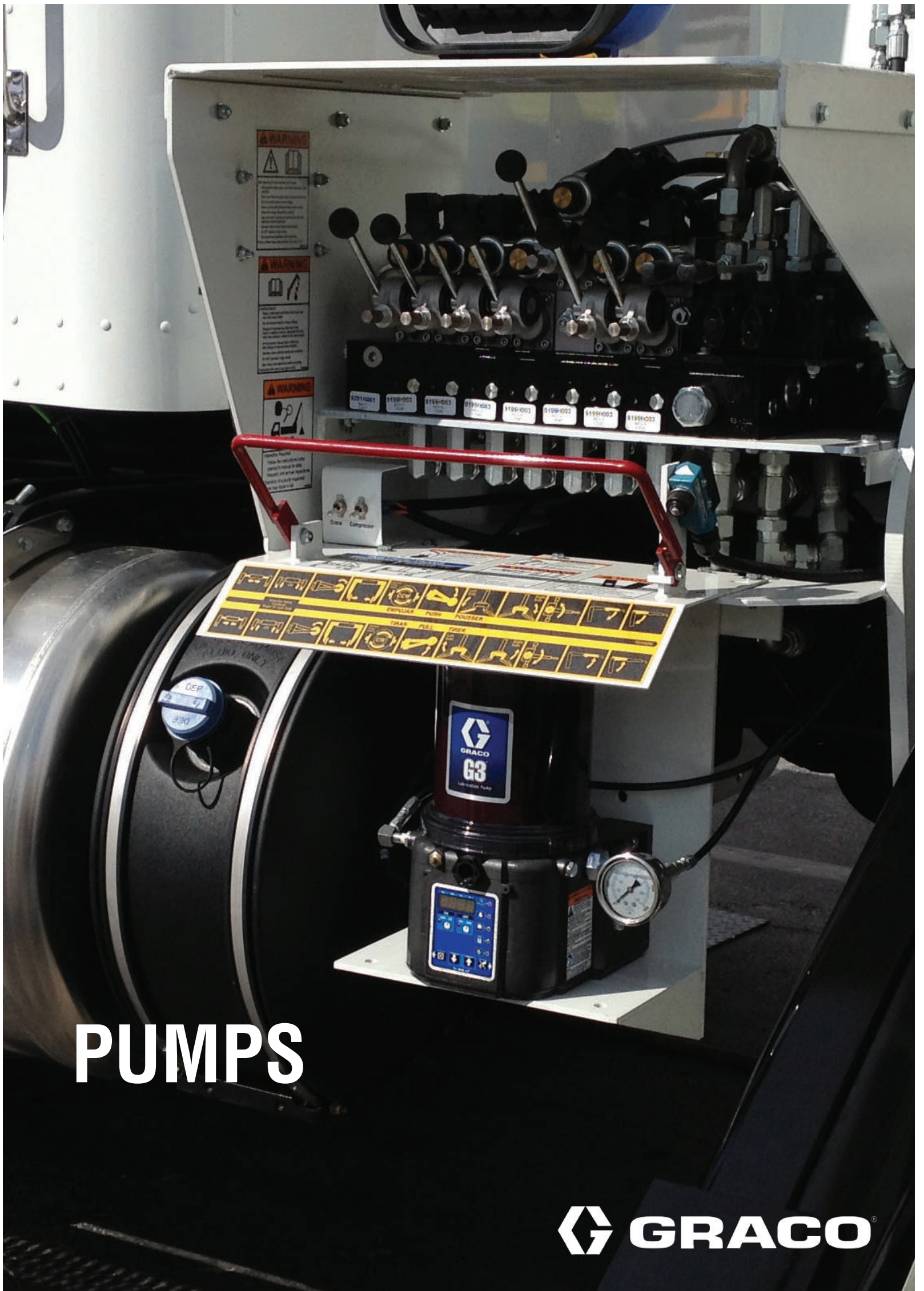
26C132

VALVE KIT

* 26C126

MANUAL NUMBER

333518



PUMPS

G-Series Pump Comparison Guide



G-Mini Pump

G1 Pump

G3 Pump

Pumps

	G-Mini Pump	G1 Pump	G3 Pump
Reservoir	0.5 and 1 L Include stir paddle and follower plate	2, 4 and 8 L Include stir paddle; follower plate available	2, 4, 8, 12 and 16 L Include stir paddle; follower plate available
Fluids	Grease up to NLGI #2	Oil, Grease up to NLGI #2	Oil, Grease up to NLGI #2
Power Source	12 VDC or 24 VDC	90-230 VAC, 12 VDC or 24 VDC	90-230 VAC, 12 VDC or 24 VDC
Control	Standard and Controller	Standard and Plus	Standard, Pro, SP, Max
Control Features	<p>One controller with 2 options:</p> <p>Time-Based:</p> <ul style="list-style-type: none"> • 1 to 30 min on time in 1-min increments • 15 min to 99 hr off time in 15-min increments up to 1 hr and then 1-hr increments from 1 to 99 hr • Manual run • Pin code • Low-level alert and alarm shutdown • Pre-lube <p>Cycle-Based:</p> <ul style="list-style-type: none"> • 1 to 99 cycles • 15 min to 99 hr off time in 15-min increments up to 1 hr and then 1-hr increments from 1 to 99 hr • Manual run • Pin code • Low-level alert and alarm shutdown • Pre-lube 	<p>Plus controller:</p> <ul style="list-style-type: none"> • 1 to 30 min on time in 1-min increments • 1 to 24 hr off time in 1-hr increments • Manual run • Pin code • Low-level shut down 	<p>Pro and Max controllers:</p> <ul style="list-style-type: none"> • 1 sec to 30 min on time • 1 min to 99 hr 59 min off time • Manual run • Pin code • Low-level alert and alarm shutdown • Machine count • Pre-lube • 1 to 3 monitoring inputs for cycle or pressure* • DMS* <p>*Max controller only</p> <p>SP controller:</p> <ul style="list-style-type: none"> • 1 to 99 cycles • 15 min to 8 hr off time in 15-min increments • 1 input for cycle • Manual run • Pin code • Low-level alert and alarm shutdown • Pre-lube
Power Cord	CPC; sold separately	DIN or CPC; sold separately	DIN or CPC; included
Pump Element	2 maximum; 1 factory-installed	1 maximum; 1 factory-installed	3 maximum; 1 factory-installed
Output Per Pump	0.18 in ³ (3 cm ³) / min	0.25 in ³ (4 cm ³) / min	0.25 in ³ (4 cm ³) / min
Maximum Working Pressure	4,100 psi (28 MPa, 280 bar)	5,100 psi (35 MPa, 352 bar)	5,100 psi (35 MPa, 352 bar)
Metering Device	Series Progressive	Series Progressive	Series Progressive or Single Line Parallel (with addition of a G3 Vent Valve)
Monitoring	Controller can monitor 1 zone for cycles	None	SP controller can monitor 1 sensor for cycles; Max controller can monitor up to 3 independent sensors for cycles or pressure
Proximity or Cycle Switch Type	PNP	Pump has no cycle input	PNP or NPN
Electric Motor	Inline gear box	Load minimizing drive with offset cam design	Load minimizing drive with offset cam design
Accessories	Uses most G3 accessories including pressure relief, power cables, high flow fill stud, 5-gallon fill pump	Uses most G3 accessories including pressure relief, power cables, high-flow fill stud, 5-gallon fill pump	See G3 Accessories in ILE Buyer's Guide (https://www.graco.com/us/en/search.html?q=340821&group=&tab=document)

G-Mini Electric Pumps

Small size. Big value. Huge impact.

Make the most of your space, budget and machines. The new full-featured G-Mini offers reliable lubrication in a small footprint to fit more types of machines. Use it to simplify everyday maintenance, extend life cycles and optimize uptime. It's rugged and tough, perfect for handling the 24/7 rigors of any job, big or small. Best of all, it comes with a modest price tag – boosting your productivity and profitability.

Follower Plate and Stir Paddle

This unique combination combats oil separation while ensuring the pump element "loading chamber" is always full.

Multiple Reservoir Options

Comes in both 0.5 liter and 1 liter sizes.

Patent-Pending Heater Option

Built-in heater option automatically turns on at 23°F (-5°C), allowing NLGI #2 grease to pump down to -40°F (-40°C).

Up to Two Pump Elements

0.18 in³/min (3 cm³/min)
4,100 psi (280 bar)

M12 Input

M12 cycle or proximity switch input standard on all pumps with a controller.

Optional Controller

No Controller: Pair with either an external controller or a PLC.

Controller: Easy-to-program controller can be utilized for both time-based and cycle-based systems and provides low-level alert and alarm.

5-Wire CPC Power Cable

Multifunction cable supplies power to the pump, pairs with a remote manual run button, and provides low level or cycle fault output.

Rugged Construction

Designed to withstand the harshest of environments; IP69K rated.



G-Mini Electric Pumps



Technical Specifications

Power source	12 VDC or 24 VDC
Fluids handled	Grease NLGI 000 to #2
System	Pump to point or series progressive
Operating temperature	-40°F to 158°F (-40°C to 70°C)
Reservoir size	0.5 L / 1 L
Control option	No control, controller (time or cycle)
Pump elements	Up to 2
Output pressure	4,100 psi (280 bar)
Pump output	0.18 in ³ /min (3 cm ³ /min)
Pump outlet	1/4-18 NPSF, mates with 1/4-18 NPT male fittings
Protection grade	IP69K
Instruction Manual	3A6714

Pumps



Pumps

G-Mini pumps **do not** come with power cables. See Accessories below for power cable options.

Controller Option	Voltage	Reservoir Size	Heater	Part Number	Part Description
No Controller	12V	0.5L	No	25R809	0.5 Liter, 12 Volt G-Mini Pump
		1L	No	25R802	1 Liter, 12 Volt G-Mini Pump
	24V	0.5L	No	25R807	0.5 Liter, 24 Volt G-Mini Pump
		1L	No	25R800	1 Liter, 24 Volt G-Mini Pump
Controller	12V	0.5L	No	25R810	0.5 Liter, 12 Volt G-Mini Pump with Controller
			No	25R803	1 Liter, 12 Volt G-Mini Pump with Controller
		Yes	25R806	1 Liter, 12 Volt G-Mini Pump with Controller and Heater	
	24V	0.5L	No	25R808	0.5 Liter, 24 Volt G-Mini Pump with Controller
			No	25R801	1 Liter, 24 Volt G-Mini Pump with Controller
		Yes	25R804	1 Liter, 24 Volt G-Mini Pump with Controller and Heater	

Accessories

Additional accessories can be found in the Graco Industrial Lubrication Equipment (ILE) Buyer's Guide (p/n 340821).



Part Number	Description
127783*	3-Wire CPC Power Cable
127780*	5-Wire CPC Power Cable
25C981	12V Manual Run Button (5-Wire CPC power cable required)
25C982	24V Manual Run Button (5-Wire CPC power cable required)
26C825	Direct Mount CSP Bracket
26C826	Universal Mounting Bracket (allows for drop-in replacement of competition)
17L879	Graco CSP Solid State Proximity Switch (DC PNP)
17R703	1 ft Proximity Switch Cable, M12 female straight to M12 male straight cable
124333	16.5 ft Proximity Cable, M12 female straight to M12 male straight
26A910	4,000 PSI Pressure Relief Kit (1/4 NPT to 1/8 NPT reducer bushing, 1/8 NPT branch T-fitting, 4,000 PSI Pressure Relief Valve)
25N827	Pump Element Kit (add a second pump element or replace existing)
24M644	High Capacity Fill Stud Quick Disconnect and Dust Cover
247886	Manual Fill Pump – fits 5 gallon or 35 lb pail (requires 24M644)

*G-Mini pumps do not come with power cables. Power cables needed for installation.

Typical Applications

- Wind energy
- Industrial
- Off-road mobile equipment
- On-road mobile equipment

G1 Series Lubrication Pumps and Accessories



G1 Plus

Built-in controller with selectable pump on/pump off timer comes with local manual run and password protection. Optional low level sensing and shut-down available, as well as remote manual run when adding the 5 wire CPC cable and remote push button accessories.

	Voltage	Reservoir Size			Wiper Arm	Follower Plate	Remote Manual Run/ Monitor Light*	Low Level	Power Connection
		2 liter	4 liter	8 liter					
Application Grease	12 VDC	94G003	94G004	94G005	•		•	•	5 Wire CPC
		94G015	94G016	94G017	•		•	•	5 Wire CPC
	24 VDC	94G024	94G025	94G026	•				DIN
		94G027	94G028	94G029	•			•	DIN

*Remote Manual Run and External Low Level indication require a 5 wire cable with CPC connector and a Remote Manual Run/Monitoring Light Device to provide external low level indication. Choose part number 571030 for 12 VDC pumps or 571031 for 24 VDC pumps.

G1 Plus Power Cables (sold separately)

Part Number	Description	Length
127783	3 wire with CPC connector	15 ft (4.6 m)
127780	5 wire with CPC connector	15 ft (4.6 m)
127781	5 wire with CPC connector	20 ft (6.1 m)
127782	5 wire with CPC connector	30 ft (9.1 m)
16U790	DIN connector	15 ft (4.6 m)

Pumps



G3™ Electric Lubrication Pump

Versatile Design Helps Solve Today's Lubrication Challenges

Temperature changes, changing grease types and challenging installation requirements are no problem for the G3 electric lubrication pump. With its flexible design, including five reservoir sizes, three controller options, three power types and an adjustable pump element, the G3 is a rugged, cost-effective pump designed to serve multiple markets and applications.

Pumps



If You're Not Using Graco G3™ Pumps, You're Not Maximizing Your Profits.

Two Reservoir Types

Stirring paddle with wiper arm to keep material from separating. Follower plate available for extreme angle installations.

Multiple Reservoir Sizes

Choice of 2, 4, 8, 12 or 16 liter U.V. resistant, high-impact reservoirs for oil and grease to meet the needs of your equipment.

Power Choices

Connect to DC (12 or 24V) and AC (90-240V) power sources with CPC or DIN-style connectors for easy, no hassle installations.

Three Pump Elements

G3 comes standard with one adjustable pump element installed – add up to two more for higher output on large projects.

Vent Valve Output

Combine Max controller with a vent valve for injector-based systems.

Multiple Cycle and Pressure Inputs

Mix and match up to three cycle and pressure switches for custom installations and feedback.

Four Controller Options

Choose from Standard, Pro, SP and Max controller options – buy only what you need for your application.

Machine Count Input

Machine count input to manage equipment with unpredictable lubrication requirements.



Data Management System (DMS)

- Simple data transfer to your PC via USB flash drive for further analysis using Excel® or Notepad®
- Provides performance history for lube system events, such as cycle detection, error logs and allows a quick check of lubrication performance to meet your system requirements
- Preferred lube cycle program can be stored and transferred to other G3 pumps in your fleet for quick and accurate repeatability
- Provides you the comfort and security in knowing your pump is being properly maintained and your lube system is protecting your valuable asset



Auto-Fill Shutoff (AFSO)

- Available on G3 Standard, Pro and Max
- Eliminates over- or under-filling
- Completely fill the reservoir every time while avoiding costly spills
- Does not require power to operate
- Complies with stringent mining regulations where a system must be powered down during fluid refilling
- Compatible with fast-fill-equipped lubrication trucks
- Reservoir Full Visual Indication
- Valve Plate activates a poppet valve, which cuts off grease flow into the reservoir

G3™ Electric Lubrication Pump

Standard, Pro, SP and Max

Choose the level of control you need for your series progressive or injector based applications.

G3 Standard

- No internal controller – use with separate or existing machine control for a low cost solution
- Capable of sending a low level signal to your external controller or PLC



G3 Pro

- Built-in controller with selectable pump on/pump off timer
- Low level indicator provides low warning and shut-down alarm
- Manual run initiates lube cycle on-demand (remote option also available)
- Password protection safeguards settings
- Pre-lube function can initiate lube cycle on start-up



G3 SP

- Simple programming and valuable system feedback
- Low level indicator provides low warning and shut-down alarm
- Only programming requirements are number of cycles and off time between lube events
- Manual run initiates lube cycle on-demand (remote option also available)
- Password protection safeguards settings
- Pre-lube function can initiate lube cycle on start-up



G3 Max

- Built-in controller with selectable pump on/pump off timer
- Low level indicator provides low warning and shut-down alarm
- Manual run initiates lube cycle on-demand (remote option also available)
- Password protection safeguards
- Pre-lube function can initiate lube cycle on start-up
- Up to three pressure or cycle switch inputs to ensure proper lubrication cycles
- Mix/match cycle and pressure switches for custom installations and feedback
- Machine count input – ideally suited for inconsistently used equipment
- Fault indication to external alarms
- Optional Data Management System™ (DMS)



Pumps

Technical Specifications

Maximum Working Pressure	5,100 psi (352 bar)
Power	12 VDC, 24 VDC, 90-240 VAC
Operating Temperature	-40 to 158° F (-40 to 70° C) depending on lubricant used
Reservoir Size	2, 4, 8, 12 or 16 liter
Adjustable Pump Output Per Element Per Minute	0.12 in ³ , 0.18 in ³ , 0.25 in ³ (2 cm ³ , 3 cm ³ , 4 cm ³)
Lube Type	Oil or Grease, up to NLGI #2
Certifications/Ratings	CE, ETL*, IP69K *Conforms to UL 73, certified to CSA 22.2 No. 68-09
Instruction Manuals	Standard - 332291 / Pro - 332298 SP - 3A4676 / Max - 332305



Check Out the Full-featured G3 Max



- | | |
|---|--|
| ① Easy-to-read LED display | ⑥ Warning signal prior to lube system shutdown |
| ② Clearly identified pump on/off indication | ⑦ Low level indication |
| ③ Monitoring of up to three independent zones | ⑧ Password protected access to control |
| ④ Programmable machine count feature | ⑨ Pre-lube capability |
| ⑤ Alarm signal of lube system shutdown | ⑩ Easy-to-use navigation keys |

G3™ Electric Lubrication Pump



G3 Standard

Comes standard with no controller for use with separate or existing machine control for a low cost solution. Some models capable of sending a low level signal to your external controller or PLC.

Application	Voltage	Reservoir Size		Wiper Arm	External Low Level	Power Connection
		4 liter	8 liter			
Grease	24 VDC	96G048	96G049	•	•	CPC
		96G184	96G189	•	• DIN	DIN



G3 Pro

Built-in controller with selectable pump on/pump off timer comes with local manual run and password protection with pre-lube function to initiate lube cycle on start-up. Optional low level sensing, warning and shut-down alarm available as well as remote manual run.

Application	Voltage	Reservoir Size		M12 Connection for Remote*	Wiper Arm	Low Level	Power Connection
		4 liter	8 liter				
Grease	24 VDC	96G068	96G069	•	•	•	CPC
		96G149	96G150		•	•	5 Wire CPC**
	90-240 VAC	96G139	96G140		•		DIN
		96G075	96G076		•	•	DIN

*G3 Pro pumps with the M12 connection for Remote Manual Run/Monitoring Light use the kit with the connecting cable to provide external low level indication. Choose part number 571032 for 12 VDC pumps or 571033 for 24 VDC and AC pumps.

**G3 Pro pumps with the 5 Wire CPC power connection are compatible with a Remote Manual Run/Monitoring Light Device to provide external low level indication. Choose part number 571030 for 12 VDC pumps or 571031 for 24 VDC pumps.



G3 SP (Series Progressive)

The G3 SP (Series Progressive) combines the robust, proven design of our G-Series pumps with simple programming and valuable system feedback. The only programming requirements are number of cycles and off time between lube events.

Application	Voltage	Reservoir Size				Wiper Arm	Low Level	Power Connection
		2 liter	4 liter	8 liter	12 liter			
Grease	12 VDC	96G221	96G222	–	–	•	•	5 Wire CPC†
	24 VDC	96G223	96G224	96G225	96G226	•	•	5 Wire CPC†
	90-240 VAC	96G227	96G228	–	–	•		DIN

Note: G3 SP pumps for use in series progressive systems only and require proximity switch with M12 connection.

G3™ Electric Lubrication Pump

G3 Max with Data Management System

Application	Voltage	Reservoir Size		Number of Cycle/ Pressure Input	Machine Count	Vent Valve Output*	DIN Alarm Output**	M12 Connection for Remote***	Wiper Arm	Follower Plate	Low Level	Power Connection
		4 liter	8 liter									
Grease	12 VDC	96G099	96G100	1-2	•	•	•	•	•		•	DIN
	24 VDC	96G111	96G112	1-2	•	•	•	•	•		•	DIN
	90-240 VAC	96G126	96G127	1-2	•	•	•	•	•		•	DIN

*If not connected, use part number 16T854 to cover the Vent Valve Output and maintain IP69K rating.

**The DIN Alarm Output is a dry contact relay which opens or closes when a fault is detected. This relay acts as a switch but supplies no power. It requires external power to energize the circuit when closed. If not connected, use part number 24P731 to cover the DIN connector and maintain IP69K rating.

***G3 Max pumps with the M12 connection for Remote Manual Run/Monitoring Light use the kit with the connecting cable to provide external fault indication. Choose part number 571032 for 12 VDC pumps or 571033 for 24 VDC and AC pumps.

†G3 Max pumps with the 5 Wire CPC power connection are compatible with a Remote Manual Run/Monitoring Light Device to provide external fault indication. Choose part number 571030 for 12 VDC pumps or 571031 for 24 VDC pumps.

G3 Pumps with Auto-Fill Shutoff

Versatile line of G3 Pumps (Standard, Pro, and Max) offered with a factory installed Auto-Fill Shutoff (AFSO). The AFSO feature automatically shuts off lubricant flow from a fill pump to the G3 reservoir once the G3 reservoir is full. The G3 AFSO is based on the same design concept as the Auto-Fill Shutoff offered in conjunction with the robust Electric Dyna-Star product line. Eliminate the need to climb up on equipment to refill an empty reservoir by adding Remote Fill Manifold 77X542 to your system at ground level.

G3 Auto-Fill Shutoff Field Conversion Kits

571286	G3 AFSO 4L Field Conversion Kit
571287	G3 AFSO 8L Field Conversion Kit
571288	G3 AFSO 12L Field Conversion Kit
571289	G3 AFSO 16L Field Conversion Kit



G3™ Electric Lubrication Pump

Ordering Information - Accessories

G3 Injector Pump Pre-assembled Modules	8 Liter	16 Liter
G3 Injector Pump Pre-assembled Module: 24V, Max, 5 Pin CPC (Alarm, Manual Run, Low Level in the CPC), 2 Pump Elements, Union Kit, Vent Valve, Pressure Switch, Pressure Gage.	17J999	17N926

G3 and G1 Accessories	
571041	G1/G3 Pump element – same adjustability as the pump included with G3 pumps.

G3 Pump Output Union Kits – pump element(s) sold separately.		
Three (3) Pumps	Two (2) Pumps – Left and Right	Description
571026	571063	For systems without a direct-mount vent valve installed on the first pump outlet.
24P295	24P296	For systems with a direct-mount vent valve installed on the first pump outlet.

Each G3 includes one pump element when it ships. Add one or two more (p/n 571041) and the appropriate union kit if needed for your application.

Relief valve options for G-series pumps		
Outlet Thread		Description
NPT	BSPP	
571028*	571071	Adjustable return-to-reservoir pressure relief kit – 500 to 3,500 psi (35 to 241 bar).
571058*	571070	Pressure relief-to-atmosphere kit – requires one of the following six pressure relief valves:
	563156*	Pressure relief valve – 750 psi (52 bar)
	563157*	Pressure relief valve – 1,000 psi (69 bar)
	563158*	Pressure relief valve – 1,500 psi (103 bar)
	563159*	Pressure relief valve – 2,000 psi (138 bar)
	563160*	Pressure relief valve – 2,500 psi (172 bar)
	563161*	Pressure relief valve – 3,000 psi (207 bar)

*Acceptable for use with G-Mini pumps.

G1/G3 Remote Manual Run/Monitoring Lights		
12 VDC	24 VDC*	M12 Cable included?
571032	571033	Yes. 16.5 ft (5 m). Use with pumps that have M12 input for manual run.

*24 VDC is also used with AC powered G-Series pumps.

G1/G3 Mounting Bracket Options	
125910	G3 pump mounting L-bracket

G1/G3 Protective Front Cover Kits	
571036	Black
571255	Clear

G1/G3 Reservoir Filling Accessories	
77X542	Remote-fill port manifold with vent – for use with reservoirs that have AFSO.

*Acceptable for use with G-Mini pumps.

Pressure Switches – use to read pressure in an injector-based system. After injectors dispense, controller or G3 Max will trigger pump shut down and vent.					
Part Number	Voltage and	Pressure Setting Range	Porting	Electrical	Notes
24K414	10-32 VDC, PNP	set: 290 to 580 PSI (20 to 40 bar) reset: 175 to 5,685 PSI (12 to 392 bar)	1/4 NPT male	M12 male	Dual pressure setting adjustments. M12 connection makes it easy to wire to a G3 Max.

For more pressure switch options and more details, see page 95.

Other wiring accessories for G-series pumps – use with a G3 Max, G3 SP or G-Mini when connecting directly to the pump, when LED cycle indication is not required.				
Part Number	1st connection	2nd connection	Length	Notes
126331	M12 female, straight	Flying leads	16.5 ft (5 m)	Requires 124594 when used with G3 Max/SP or G-Mini
124300	M12 male, straight	Flying leads	16.5 ft (5 m)	Accessory cable – add 124301 when connecting to an M12 sensor.
124333	M12 female, straight	M12 male, straight	16.5 ft (5 m)	Accessory cable

Vent Valve Ordering Information

Direct-Mount Vent Valves for G3 Pumps

G3 pump vent valve kits include adjustable pressure relief, 500-3,500 psi (35-241 bar), and mount directly to a G3 pump.

Normally Closed Vent Valves for use with G3 Max pumps		
Voltage	NPT version	Power cable
12 VDC	571169	Included
24 VDC	571170	Included
AC pumps	571170	Included

G3 Max AC pumps are 24 VDC internally, so they use 24 VDC accessories, including the vent valve and pressure sensors.

Compact Dyna-Star (CDS)

Right-Sized Solution

The Graco Compact Dyna-Star (CDS) automatic lubrication system delivers high-capacity flow, robust durability and innovative control in a smaller footprint to extend uptime for today's toughest earth-moving machines and users in the harshest environments.

Rugged Durability

Metal construction ensures trustworthy operation in the most extreme environments.

Integrated Auto-Fill Shut-Off

This option enables single-person, powered-down, ground-level refills, without the need to climb or worry about spills.

Smart Power Train

24 VDC, brushless motor and zero-maintenance gear drive deliver lubricants on time, even at -40° F (-40° C).

Intelligent Monitoring

Optional pressure and lubricant level sensors provide useful system information in real time.

Compact Power

Fits easily in space-limited applications; powerful enough to keep up with aggressive lubrication interval.



Typical Applications

- Aggregates
- Mining
- Construction
- Hydraulic Fracturing Units

Technical Specifications

Maximum Working Pressure	3,500 psi (241 bar)
Operating Temperature	-40 to 149° F (-40 to 65° C)
Reservoir Size	12 or 20 liter
Maximum Flow Output Rate	4.5 in ³ /min (74 cm ³ /min)
Lube Type	Oil and grease up to NLGI #2
Certifications/Ratings	IP69K
Manual	3A6941

Compact Dyna-Star (CDS)

Ordering Information

CD - X - X - X - X

Pump Description

Code	Description
1	12 L / 35 lb bucket length, 24 VDC
2	20 L reservoir length, 24 VDC

Metering System Feedback

Code	Description
0	Series progressive, no vent-valve, no pressure feedback (plugged outlet)
1	Vent-valve, no pressure feedback (plugged outlet)
2	Vent-valve, pressure switch
3	Vent-valve, pressure-reporting transducer

Reservoir

Code	Description
0	No reservoir, bare pump
1	12 L steel reservoir, follower plate
2	20 L steel reservoir, follower plate
3	35 lb plastic bucket kit
4	12 L steel reservoir, no follower plate
5	20 L steel reservoir, no follower plate

Reservoir Accessories

Code	Description
0	Bare pump or bucket kit (no reservoir)
1	Low-level switch
2	Level-reporting transducer
3	Auto-fill shut-off and low-level switch
4	Auto-fill shut-off and level-reporting transducer



CD1011

Ordering Information

CDS Accessories	
26A883	GLC X to CDS 3 ft (1 m) cable
26A884	CDS extension cable, 12-wire, 20 ft (6 m) with flying leads
26A889	12-pin DT female CDS mating connector kit
25R001	12 liter reservoir wall mount bracket
25R318	Mounting bracket for GLC X, Red Alert filter, 3- and 5-section MSP assemblies or 3- and 5-bank GL-1 series injectors

Pumps

Pair with the GLC X Controller and Auto Lube App

Drive More Productivity

The powerful, easy-to-use Graco GLC X automatic lubrication controller captures more information so operators, technicians and managers can make faster, smarter decisions. Paired with the intuitive Auto Lube app, users can monitor system performance and make adjustments with incredible speed, precision and freedom from their personal mobile device.



Easy-to-Read Screen

High-contrast screen features text codes, faults and other data clearly in any ambient light without distracting operators.

Real-Time System Reporting

Program and display a wide range of customizable functions – including lubrication intervals, pressure limits, lubricant levels and more.

Smart Device and Mobile App

With the Auto Lube app, monitor lubrication levels, configure settings, track system history and share important diagnostics.



Ordering Information

GLC X Controller	
26A855	GLC X controller with 20 ft (6 m) cable
26A814	GLC X controller
26A882	GLC X wiring harness, 12-wire, 20 ft (6 m) with flying leads



Electric Dyna-Star (EDS)



Safely Move Pump

Built-in lift ring is rated to 500 lbs (226 kg).

M23 Connector

Saves installation time.

Graco Advantage Drive™

Hardened steel gears are lubricated for life and sealed to keep contaminants out for longer lasting performance.

Adjustable Motor and Amp Control

Make adjustments with the turn of a dial. LED status lights.

Direct Mount Electric Vent Valve

Compact design means less parts to break or wear out.

Mechanical Auto-Fill Shutoff

Shuts off the fill pump for clean, trouble-free refilling without electronics.

Low-Level Sensor

Alerts low grease status and self-clears without a follower plate.

Strong 12 Gauge Steel Reservoir

Available in 60 lb (27 kg) or 90 lb (41 kg) reservoirs. Matches common bolt pattern.

Tube-In-Tube

Provides simple and direct venting and filling to the foot of the pump.

Remote Fill Manifold

Enables clean and efficient ground-level filling up to 5,000 psi (344 bar).

Pumps

Electric Dyna-Star (EDS)

Stand Alone Pumps	
77X000	24 VDC HP stand-alone pump for 35 or 60 pound reservoir
77X001	24 VDC HP stand-alone pump with tube-in-tube for 35 or 60 pound reservoir
77X002	24 VDC HP stand-alone pump with tube-in-tube for 90 or 120 pound reservoir
77X003	24 VDC HP stand-alone pump with tube-in-tube for 400 pound reservoir
77X014	24 VDC HF stand-alone pump for 35 or 60 pound reservoir
77X015	24 VDC HF stand-alone pump for 120 pound reservoir
77X016	24 VDC HF stand-alone pump for 400 pound reservoir

Custom Tank Injector Kits	
77X011	24 VDC HP pump and vent valve with tube-in-tube for 35 or 60 pound reservoir
77X012	24 VDC HP pump and vent valve with tube-in-tube for 90 or 120 pound reservoir
77X013	24 VDC HP pump and vent valve with tube-in-tube for 400 pound reservoir

System Installation Kits	
77X960	24 VDC HP pump with auto-fill shutoff and low-level monitor, GLC2200 controller, wiring harness, low-level sensor cable, power cable, pressure switch, and remote fill manifold for 60 pound reservoir
77X990	24 VDC HP pump with auto-fill shutoff and low-level monitor, GLC2200 controller, wiring harness, low-level sensor cable, power cable, pressure switch, and remote fill manifold for 90 pound reservoir

HP Pump Modules								
Part Number	Reservoir Size		Vent Valve	Dip Stick	Low Level 77X522 (DIN)	Follower Plate	Low Level 17L372 (M12)	Auto-Fill Shut Off
	60 lb	90 lb						
77X102	•		•					•
77X103		•	•					•
77X202	•		•				•	•
77X203		•	•				•	•

Accessories	
77X500	Follower plate for Graco 60 pound and 90 pound Graco tank for tube-in-tube
77X510	Follower plate for 35 pound bucket with and without tube-in-tube
247701	Follower plate for 120 pound drum without tube-in-tube
77X511	Follower plate for 120 pound drum with tube-in-tube
247702	Follower plate for 400 pound drum without tube-in-tube
77X512	Follower plate for 400 pound drum with for tube-in-tube
77X513	Cover, cylinder, tie-rods and base to convert 60 pound length to 35 pound bucket
77X514	Cover for 120 pound drum
77X515	Cover for 400 pound drum
77X521	Auto-fill shutoff (AFSO) – diaphragm, plate, valve, coupler, and pipes
77X522	Low level kit sight glass, electric low level switch, and cable (requires follower plate 77X500)
77X523	400 micron inline filter, maximum 5,000 psi (344 bar) inlet pressure (replacement filter 77X541)
17L366	Red alert filter with 380µm, 36 in² steel mesh filter (replacement filter 129031)
24R952	Red alert filter with reservoir mounting kit (includes 17L366)
16V678	Red alert filter mounting bracket
77X524	110-230 VAC to 24 VDC converter box
77X540	24 VDC electric vent valve with pressure relief
77X542	Remote-fill port manifold with vent
77X543	HF manifold with 4,000 psi pressure relief
77X544	HP manifold with 5,000 psi pressure relief
77X545	Power cable for series progressive systems, M23 connector, 15 ft (4.6 m)
77X546	Power cable for injector systems, M23 connector, 15 ft (4.6 m)
115124	Pressure switch – pressure adjustment visible in window
24N180	Pressure switch, 1/4 in BSPP inlet, DIN 43650 connector (1 NO/1 NC), 7,250 psi (500 bar)
24N181	Pressure switch, 1/4 in NPT(F) inlet, DIN 43650 connector (1 NO/1 NC), 7,250 psi (500 bar)



Pumps

Electric Dyna-Star Injector System Installation Kit Ordering Information

	77X960	77X990
EDS HP Pump with auto-fill shutoff and low-level monitor	77X202 (60 pound reservoir)	77X203 (90 pound reservoir)
GLC2200 controller	24N468	
GLC2200 wiring harness	24P314	
Low-level sensor cable	129072	
EDS pump power cable	77X546	
Pressure switch	24N181	
Remote fill manifold	77X542	



Refer to www.graco.com or the Graco Industrial Lubrication Equipment Buyer's Guide for additional configurations and accessories.

Dyna-Star 10:1, 5:1 and FireBall 300 50:1

Ordering Information

Dyna-Star 10:1 Modules And Kits	
24Y407	Dyna-Star 10:1 90 lb pump kit – injector – mechanical AFSSO
24Y408	Dyna-Star 10:1 60 lb pump kit – injector – mechanical AFSSO
247574	Dyna-Star 10:1 60 lb (27 kg) pump module – injector – overall height 35.15 in (842 mm). 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 – overall height 35.15 in (842 mm). 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 – divider valve – 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

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*	247705	247705	247538	247538	247538	247538	247538	247538
Vent Valve	–	–	243170	–	243170	–	243170	–
Cover	247703	247704	–	–	–	–	–	–
Pump Gasket	15M442	15M442	15M442	15M442	15M442	15M442	15M442	15M442
Custom Tank Kit**	–	–	247970	–	247456	–	247457	–

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

**Kits include pump (247540, 247443 or 247450), hydraulic control assembly (247538), vent valve (243170), and pump gasket (15M442).

Dyna-Star 10:1 Module Accessories	
243170	Vent valve
247538	Hydraulic control module
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 [†]
115124	Pressure switch
247575	Reservoir – 60 lb (27 kg)
241486	Reservoir – 90 lb (41 kg)

[†]Requires follower plate, order with part number 247700.

Fireball 300 And Dyna-Star 5:1 Modules and Accessories	
241573	Fireball 300, 50:1 90 lb (41 kg) pump module. Includes pump (239887), reservoir assembly (241486), and vent valve assembly (241572)
25D096	Fireball 300, 50:1 60 lb (27 kg) pump module. Includes pump (239877), reservoir assembly (247575), and vent valve assembly (241572)
241485	Follower plate (fits 241573 and 25D096)
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)



247574



241573

Pumps

Electric Grease Jockey Pump



Ruggedized Construction

U.V., chemical, and high-impact resistant – rigorously tested and field-proven.

NLGI #2 Compatible

NLGI #000 to #2 and 2,000 psi (138 bar).

Low Level Signal

Alerts when out of grease.

Electrical Drive

12 VDC (7 Amp) or 24 VDC (4 Amp) power. Protected against motor burn-out.

Data Management System*

Track critical lubrication data. Fast programming.

Integrated Controls

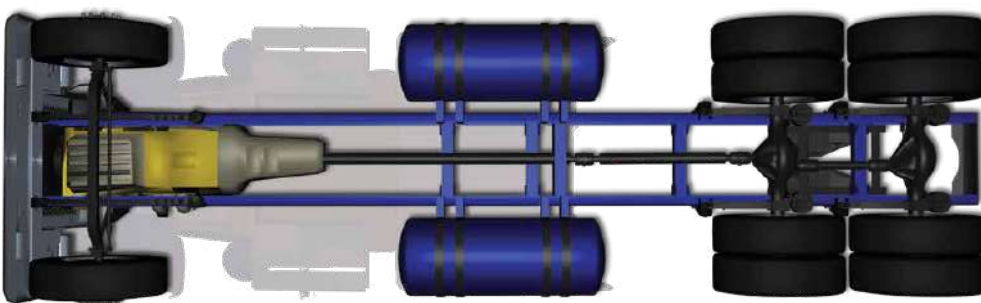
Includes adjustable ON/OFF times, PIN code lockout and on-panel alerts.

In-Cab Feedback*

Tri-color LED system feedback indicator with Manual Run button.



*DMS version optional equipment



Truck and tractor lubrication systems lubricate these parts:

- Upper King Pins
- Lower King Pins
- Hood Pins
- Spring Pins
- Drag Links
- Tie Rod Ends
- Slack Adjusters
- S-Cams
- Spring Hangers
- Clutch Pedal
- Clutch Cross Shafts
- Clutch Throw Out Bearing
- 5th Wheel Plate
- 5th Wheel Pivots

- Pump
- Right Front Module
- Left Front Module
- Rear Module
- 5th Wheel Module

Pumps

Electric Grease Jockey Pump

Electric Grease Jockey Pump Packages

	Package Number	25C990	25C991	25C992	25C993
Package Includes	Pump	24Z764	24Z959	24Z660	24Z958
	Power	12V	24V	12V	24V
	Data Management System	-	-	Yes	Yes
	Power Cable	129644	129644	127782	127782
	Manual Run Button	-	-	25C981	25C982

Electric Grease Jockey System Installation Kits

Pumps

Package Includes	Package Number	Truck with Greaseable Spring Pins			Truck with Sealed Spring Pins (non-greaseable)		
		Drum Brakes		Disc Brakes	Drum Brakes		Disc Brakes
		6 x 4 Tandem Axle	4 x 2 Single Axle		6 x 4 Tandem Axle	4 x 2 Single Axle	
		32 Point / 4 Module Kit	28 Point / 3 Module Kit	20 Point / 3 Module Kit	26 Point / 4 Module Kit	22 Point / 3 Module Kit	14 Point / 3 Module Kit
		25C971	25C972	25C973	25C974	25C975	25C976
	12 VDC Grease Jockey pump	25C990			25C990		
	18 ft mainline section/installable end kit	17S970			17S970		
	12 ft mainline section/installable end kit	17S969			17S969		
	6 ft mainline section/installable end kit (qty)	17S968 (2)	17S968 (1)	17S968 (1)	17S968 (2)	17S968 (1)	17S968 (1)
	Mainline tee (qty)	129759 (3)	129759 (2)	129759 (2)	129759 (3)	129759 (2)	129759 (2)
	Mainline elbow (2)	129755			129755		
	Front left meter module	25C854	25C854	25C857	25C858	25C858	25C849
	Front right meter module	25C859	25C859	25C850	25C851	25C851	25C852
	5th wheel meter module	25C853	25C855	25C853	25C853	25C855	25C853
	Rear axle meter module	25C856		-	25C856		-
	3/16 in to 1/8 NPT elbows, 10-Pack (qty)	25C977 (3)	25C977 (3)	25C977 (2)	25C977 (3)	25C977 (2)	25C977
	3/16 in to 1/8 NPT straights, 10-Pack	25C978			25C978		
	1/4-28 SAE to 1/8 NPT (F), 5-Pack	25C979			25C979		
	Mounting bracket	17S107			17S107		
	Zip ties, 100-count	17K063			17K063		
	Zip ties, looped, 10-count (qty)	25C980 (3)	25C980 (2)	25C980 (1)	25C980 (3)	25C980 (2)	25C980 (1)

Grease Jockey Manifolds

Grease Jockey modular design makes it easy to add or subtract lube points and commonize service parts across your fleet. Modules hold up to 6 or 12 lubrication point meters.





METERING



GL-1 Injectors

Graco quality provides consistent performance in rugged environments.

- No vent holes to leak lubricants
- Fully-enclosed press fittings

Injector Covers

Clear, polycarbonate covers protect cycle pin indicators from contamination. (Included with GL-1 X and GL-1 XL models)

Hex-Head Adjustment Nut

Heavy-duty hex-head nut makes output adjustments simple.

Unibody Design

Rugged, single-piece body for use in harsh environments.

GL-1 Manifold

6,000 psi, 3/8 in NPT port manifolds fit pre-existing mounting patterns.

Output Spectrum Sleeves

Colored-coded spacers enable simple, targeted output volume.

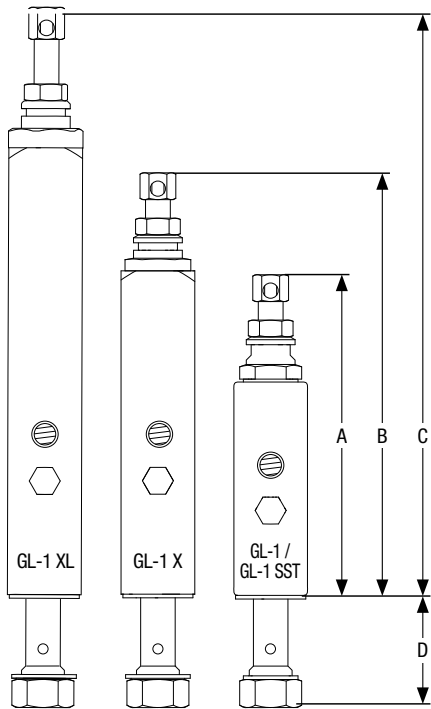


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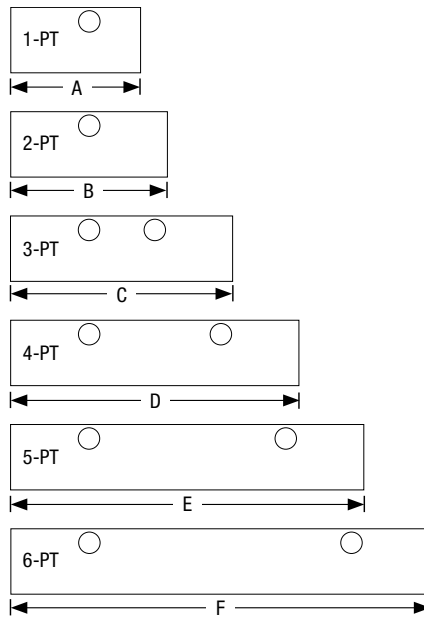
Measuring

GL-1 Injectors



GL-1 Injector Dimensions

A	5.3 in (13.46 cm)
B	6.9 in (17.53 cm)
C	9.5 in (24.13 cm)
D	1.7 in (4.32 cm)



GL-1 Manifold Dimensions

A	2.5 in (6.35 cm)
B	3.0 in (7.62 cm)
C	4.2 in (10.67 cm)
D	5.5 in (13.97 cm)
E	6.7 in (17.02 cm)
F	8.0 in (20.32 cm)



114905



24X807



24X817

Manufacturing

Ordering Information

	GL-1	GL-1 SST	GL-1 X	GL-1 XL
GL-1 Injectors and Manifold Assemblies				
GL-1 one point assembly	114901	–	24X801	24X811
GL-1 two point assembly	114902	–	24X802	24X812
GL-1 three point assembly	114903	–	24X803	24X813
GL-1 four point assembly	114904	–	24X804	24X814
GL-1 five point assembly	114905	–	24X805	24X815
GL-1 six point assembly	117206	–	24X806	24X816
GL-1 single replacement injector (no manifold)	114909	25N109	24X807	24X817
GL-1 Bare Injector Manifolds (no injectors included)				
One bank GL-1 manifold	114911	25N101	114911	114911
Two bank GL-1 manifold	114912	25N102	114912	114912
Three bank GL-1 manifold	114913	25N103	114913	114913
Four bank GL-1 manifold	114914	25N104	114914	114914
Five bank GL-1 manifold	114915	25N105	114915	114915
Six bank GL-1 manifold	118206	25N106	118206	118206

Single Line Parallel GL-32 and GL43 Injectors

Features and Benefits

- Accurate, reliable and adjustable lubrication for each lube point. Systems are easy to design, fast to set up and allow you to add or subtract lube points without having to redesign your lubrication system
- Versatile high performance – works with oil and grease grades to NLGI #2
- All injectors come standard with fluoroelastomer seals for use with synthetic lubricants and high temperature applications – up to 350°F (176°C)

Typical Applications

- In-plant machinery, mobile equipment and anywhere adjustable lubrication output is desired

Typical Fluids Handled

- Oil (10 weight minimum) and grease up to NLGI #2



24A923

Technical Specifications

	GL-32 Grease Injectors	GL-43 Oil Injectors
Maximum Operating Pressure	3,500 psi (241 bar)	1,000 psi (69 bar)
Minimum Operating Pressure	1,200 psi (83 bar)	750 psi (52 bar)
Typical Operating Pressure	1,500 psi (103 bar)	850 psi (59 bar)
Reset Pressure	200 psi (13.7 bar)	150 psi (10 bar)
Output Volume Per Cycle (adjustable)	0.001 to 0.008 in ³ (0.02 to 0.13 cm ³)	
Maximum Temperature Rating	350°F (176°C)	
Cycle Indication	Visual pin	
Instruction Manual	313798	

Metering

Ordering Information

		GL-32 Grease Injectors		GL-43 Oil Injectors
		Carbon Steel	304 Stainless	Carbon Steel
Porting	Stand-Alone Injector, 1/4 NPT male inlet, 1/8 in OD tube outlet	24A919*	24E389*	24E240*
	Replacement Injector for manifolds, 1/8 in OD tube outlet	24A920*	24E390*	24E245*
	1-Injector Manifold, 1/4 NPT female inlet, 1/8 in OD tube outlet	24A921	24E391	24E241
	2-Injector Manifold, 1/4 NPT female inlet, 1/8 in OD tube outlet	24A922	24E392	24E242
	3-Injector Manifold, 1/4 NPT female inlet, 1/8 in OD tube outlet	24A923	24E393	24E243
	4-Injector Manifold, 1/4 NPT female inlet, 1/8 in OD tube outlet	24A924	24E394	24E244
	Replacement Injector for manifolds, 6 mm OD tube outlet	24F508*	24F550*	24F543*
	1-Injector Manifold, 1/8 BSPP female inlet, 6 mm OD tube outlet	24F509	24F551	24F544
	2-Injector Manifold, 1/8 BSPP female inlet, 6 mm OD tube outlet	24F510	24F552	24F545
	3-Injector Manifold, 1/8 BSPP female inlet, 6 mm OD tube outlet	24F511	24F553	24F546
	4-Injector Manifold, 1/8 BSPP female inlet, 6 mm OD tube outlet	24F512	24F554	24F548
	Repair/Overhaul Kit	24B360	24F944	24F201

*Must be ordered in quantities of five.

		GL-32, GL-33, GL-42 and GL-43 Outlet Fittings	
		Carbon Steel	Stainless Steel
Porting	JIC-4 male	17B168	17B169
	1/8 in OD tube	24B677	24F943
	1/8 in OD Push-to-Connect	17B879	17B880
	1/8 in NPT female	17B780	17B781
	4 mm OD tube	24F513	24F555
	6 mm OD tube	24F514	24F556
	Closure Plug	17B782	17B783

Accessories	
24W495	Manual grease fitting adapter – compatible with 1/8 in OD tube outlet only
17B785	Measuring chamber vinyl cap

GL-11 Injectors

Features and Benefits

- Adjustable output volumes to custom fit the system for each lube point
- Convenient top-mounted cycle pin indicator provides quick, at-a-glance confirmation that the injector is functioning properly
- Hex head adjustment for easy turning from most any orientation

Typical Applications

- Rugged, medium-pressure metering system for pumping grease; ideal for heavier-duty applications such as mobile mining vehicles, milling, cement batch plants or material processing equipment.

Typical Fluids Handled

- Grease up to NLGI #2

Technical Specifications

Reset Pressure	600 psi (41 bar)
Maximum Pressure	3,500 psi (241 bar)
Suggested Operating Pressure.....	2,500 psi (172 bar)
Minimum Operating Pressure	1,000 psi (69 bar)
Output Range	0.05 to 0.5 in ³ (0.82 to 8.2 cm ³)
Number of Adjustment Turns.....	14
Cycle Indicator.....	Visual

Ordering Information

GL Injectors and Accessories	
24A918	GL-11 injector
24B359	GL-11 injector repair kit
114916	GL-11 zerk and cap kit



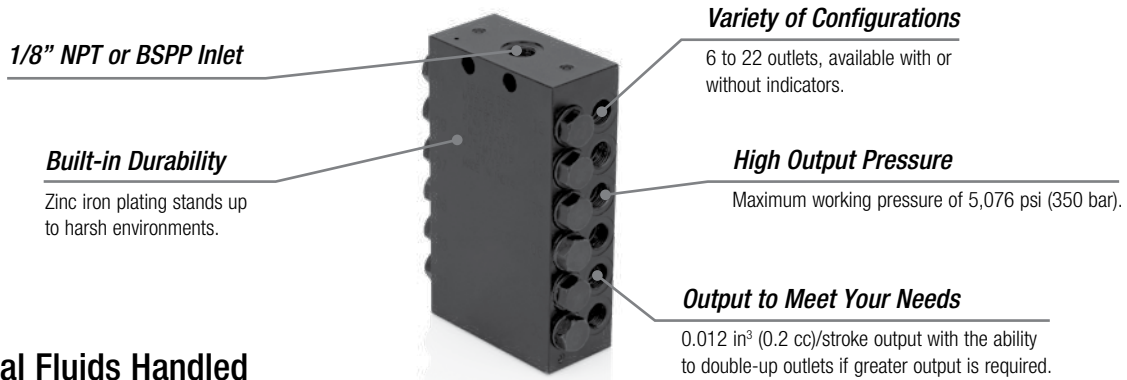
24A918

Marketing

Compact Progressive (CSP) Valves

Graco Quality in a Compact Package

Compact Series Progressive (CSP) valve with broad market versatility.
Combine with field-proven Graco pumps for a complete system solution.



Typical Fluids Handled

- Oil or grease grades up to NLGI #2

Technical Specifications

Maximum Pressure, psi (bar)	5,076 (350)
Output Single Outlet, in ³ (cm ³).....	0.012 in ³ (.20 cm ³)
Cycle Indication.....	Electronic proximity switch, magnetic visual indicator
Max Operating Temperature.....	212°F (100°C)
Material.....	Carbon alloy steel with zinc iron plating

Ordering Information

	NPT	BSPP
CSP Valves without Indicator		
6 outlet, 1/8 in inlet	24Z486	24Z477
8 outlet, 1/8 in inlet	24Z487	24Z478
10 outlet, 1/8 in inlet	24Z488	24Z479
12 outlet, 1/8 in inlet	24Z489	24Z480
14 outlet, 1/8 in inlet	24Z490	24Z481
16 outlet, 1/8 in inlet	24Z491	24Z482
18 outlet, 1/8 in inlet	24Z492	24Z483
20 outlet, 1/8 in inlet	24Z493	24Z484
22 outlet, 1/8 in inlet	24Z494	24Z485
CSP Valves with Indicator		
6 outlet, 1/8 in inlet	24Z504	24Z495
8 outlet, 1/8 in inlet	24Z505	24Z496
10 outlet, 1/8 in inlet	24Z506	24Z497
12 outlet, 1/8 in inlet	24Z507	24Z498
14 outlet, 1/8 in inlet	24Z508	24Z499
16 outlet, 1/8 in inlet	24Z509	24Z500
18 outlet, 1/8 in inlet	24Z510	24Z501
20 outlet, 1/8 in inlet	24Z511	24Z502
22 outlet, 1/8 in inlet	24Z512	24Z503
CSP Valve Accessories		
25E935	Acrylic CSP Demo Kit	

Metering

Compact Progressive (CSP) Valves

Ordering Information

G-Lock Push-to-Connect (PTC) Fittings	
For use with 1/8 in ID hose only	
17L441	1/4 in stud PTC, M10, CSP outlet
17L458	6 mm stud PTC, M10, CSP outlet. Refer to page 100 for mating 6 mm hose studs and hose.
25M496	90 degree 1/4 in field-installable stud
25M497	Straight 1/4 in field-installable stud
17L442	1/4 in stud PTC with male 1/8 in NPT, inlet or LP
17L547	1/4 in stud PTC with male 1/4 in NPT, pump outlet
Nylon Tube Push-To-Connect (PTC) Fittings	
For use with 1/4 in OD nylon tube	
17L440	1/4 in OD nylon tube PTC, M10, CSP outlet
17L652	90 degree 1/4 in OD nylon tube PTC, male 1/8 in NPT, inlet or LP
17L653	Straight 1/4 in OD nylon tube PTC, male 1/8 in NPT, inlet or LP
CSP Outlet Fittings	
25M498	1/8 in NPT female with check, M10
25M499	1/4 in compression with check, M10
17L550	6 mm stud compression, M10, CSP outlet. Refer to page 100 for mating 6 mm hose studs and hose.
Doubling Plug	
17L651	Doubling plug
Proximity Switch	
17L879	CSP – DC PNP, Solid state, 10-36 VDC, M12 connection
Weld Stud Accessories	
25N730	CSP weld bar kit
26A478	Weld stud kit
26A479	Weld stud template
1/4 in ID Hoses and Accessories	
128572	Hose, 1/4 in ID, 2,750 PSI, 100 ft, braided with polyurethane cover
128573	Hose, 1/4 in ID, 2,750 PSI, 125 ft, braided with polyurethane cover
128582	Hose guard, 1/2 in ID, 100 ft
128563	Field-installable swivel hose end fitting, 1/4 in ID hose, #4 JIC, SAE 7/16-20 female
128564	Field-installable swivel hose end fitting, 1/4 in ID Hose, 1/4 in NPT male
128565	Field-installable swivel hose end fitting, 1/4 in ID Hose, 1/8 in NPT male
1/8 in ID Hoses and Accessories	
128570	Hose, 1/8 in ID, 3,000 PSI, 200 ft, braided with polyurethane cover
128571	Hose, 1/8 in ID, 3,000 PSI, 400 ft, braided with polyurethane cover
128579	Hose guard, 3/8 in ID, 160 ft
128580	Hose guard, 3/8 in ID, 320 ft
128561	Field-installable swivel hose end fitting, 1/8 in ID hose, #4 JIC, SAE 7/16-20 female
128562	Field-installable swivel hose end fitting, 1/8 in ID hose, 1/8 in NPT male
1/4 in OD Tubing and Accessories	
127555	Tubing, 1/4 in OD, 625 PSI, 100 ft
127552	1/4 in tube x 1/4 in NPT straight compression fitting
555726	1/4 in tube x 1/4 in NPT elbow compression fitting
127553	1/4 in tube x 1/8 in NPT straight compression fitting
556634	1/4 in tube x 1/8 in NPT elbow compression fitting



17L441



17L652



25M499

Mating

Trabon MSP Divider Valve (MSP)

Features and Benefits

The Trabon MSP Series sets the industry standard for quality, reliability, and ease of use features. It was the original modular-style series progressive divider valve—and is still the best!

- Quick change valve sections can be removed from the base assembly without disturbing any lube lines—minimizing labor cost and maximizing your machine uptime
- Accessories such as magnetic and electronic proximity switch cycle indicators provide positive assurance of a successful lube event
- Alternate outlet on face of valves can be fitted with optional performance indicators, taking the guesswork out of troubleshooting
- Built-in outlet check valves ensure accurate lube delivery, every time

Pre-assembled and tested base plates now available!



Typical Applications

- Mobile, industrial, food and beverage, wind, and many more

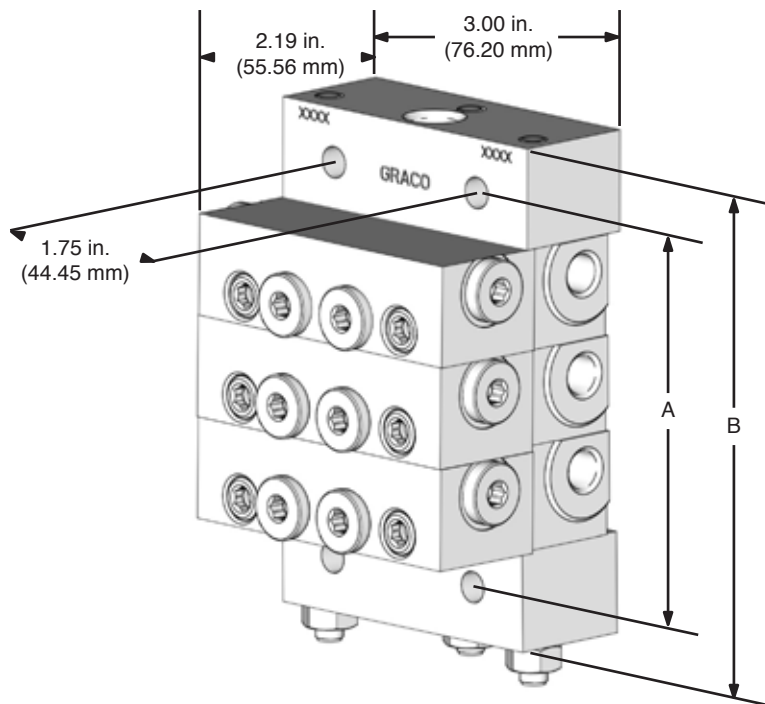
Typical Fluids Handled

- Oil or Grease up to NLGI #2

Technical Specifications

Material.....	Plated Steel
Maximum Pressure.....	3,500 psi (241 bar)
Max Operating Temperature.....	350°F (176 °C)
Max Cycle Rate with Cycle Pin.....	60 cycles/minute
Max Cycle Rate without Cycle Pin.....	200 cycles/minute

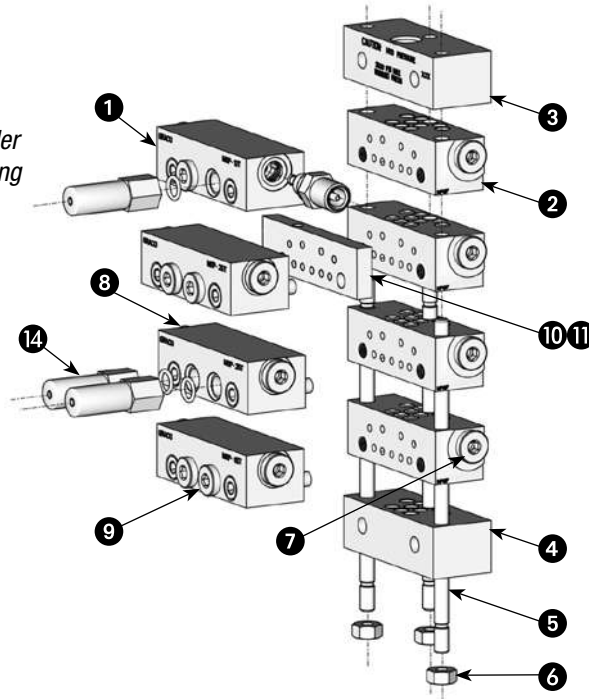
Metering



Number of Valve Sections	Dimensions (for reference only)	
	A	B
3	3.6 in (91.4 mm)	4.6 in (116.8 mm)
4	4.5 in (114.3 mm)	5.0 in (127.0 mm)
5	5.4 in (137.2 mm)	6.4 in (162.6 mm)
6	6.3 in (160.0 mm)	7.4 in (188.0 mm)
7	7.3 in (185.4 mm)	8.3 in (210.8 mm)
8	8.2 in (208.3 mm)	9.2 in (233.7 mm)

Trabon MSP Divider Valve (MSP)

Easily configure the MSP Divider Valve system using the following item selection chart.



Note: Not shown in diagram – Bypass Block (562660), Cycle Indicators and Proximity Switches (refer to specific product pages), and Mounting Brackets (see page 66).

Marketing

Ordering Information

MSP Valve Working Sections (Must be ordered in multiples of 5)						
Item	Outlet	Description	Output Per Outlet, in ³ (cm ³)	Model Number		
				Standard Section	With Cycle Pin – Right	With Cycle Pin – Left
1	Single	MSP-5S	0.010 (0.16)	562711	N/A	
		MSP-10S	0.020 (0.33)	562712	N/A	
		MSP-15S	0.030 (0.49)	562713	N/A	
		MSP-20S	0.040 (0.66)	562714	562729	562734
		MSP-25S	0.050 (0.82)	562715	562730	562735
		MSP-30S	0.060 (0.98)	562716	562731	562736
		MSP-35S	0.070 (1.15)	562717	562732	562737
	MSP-40S	0.080 (1.31)	562718	562733	562738	
	Twin	MSP-5T	0.005 (0.08)	562720	N/A	
		MSP-10T	0.010 (0.16)	562721	N/A	
		MSP-15T	0.015 (0.26)	562722	N/A	
		MSP-20T	0.020 (0.33)	562723	562739	562744
		MSP-25T	0.025 (0.41)	562724	562740	562745
		MSP-30T	0.030 (0.49)	562725	562741	562746
MSP-35T		0.035 (0.57)	562726	562742	562747	
MSP-40T	0.040 (0.66)	562727	562743	562748		

Pre-Configured MSP Base Plate Assemblies						
Includes inlets, intermediate base plate sections, end section, tie rods, and nuts.						
Item	Maximum Number of Outlets	Number of Valve Sections	Model Number		Dimensions (for reference only)	
			NPSF	BSPP	A	B
2/3/4/5/6	6	3	24G485	24N915	3.6 in (91.4 mm)	4.6 in (116.8 mm)
	8	4	24G486	24N916	4.5 in (114.3 mm)	5.0 in (127.0 mm)
	10	5	24G487	24N917	5.4 in (137.2 mm)	6.4 in (162.6 mm)
	12	6	24G488	24N918	6.3 in (160.0 mm)	7.4 in (188.0 mm)
	14	7	24G489	24N919	7.3 in (185.4 mm)	8.3 in (210.8 mm)
	16	8	24G490	24N920	8.2 in (208.3 mm)	9.2 in (233.7 mm)

Trabon MSP Divider Valve (MSP)

Ordering Information

Build Your Own MSP Base Plate Assemblies						
Item	Component	Description	Model Number			Note
			NPSF	BSPP	SAE	
2	Intermediate base plate	Single section	563425	563447	563451	Must be ordered in multiples of 5
3	Inlet options <i>Additional specialty inlets available</i>	Standard	560919	560936	560943	
		With bleed ports	563421		563422	
4	End section options	Standard	563424			
		With alternate inlet port plug	563279			
5	Tie rods (3 required)	3-section	557731			3 tie rods and tie rod nuts required for assembly
		4-section	557732			
		5-section	557733			
		6-section	557734			
		7-section	557735			
		8-section	557736			
		9-section	557738			
		10-section	557739			
6	Tie rod nuts (3 required)	Tie rod nuts	556371			

Pipe, Piston Enclosure, and Indicator Port Plugs					
Item	Component	Model Number			Note
		NPSF	BSPP	SAE	
7	Outlet Port Plug	557349 (NPT)	558799	567251 (with o-ring)	1 outlet port plug is required for each "S" valve section
8	Piston Enclosure Plug with o-ring	567251			
9	Indicator Port Plug with o-ring	16U217			

Optional Components				
Item	Component	Description	Model Number	Note
10	Crossport Bar	Right	563469	1 outlet port plug is required for each crossport bar
		Left	563470	
		Right and Left	563471	2 outlet port plugs are required for each double crossport bar
11	Singling Bar	Converts a "T" valve to an "S" valve	563472	
12	Bypass Block	MSP Bypass Section	562660	
13	Cycle Indicators and Proximity Switches	Magnetic Visual Cycle Indicator	563251	
		SPDT Cycle Switch, provides electrical signal to controller or PLC	563272	
		SPDT Cycle Switch, provides electrical signal to controller or PLC - Moisture Resistant	563273	
		6 Digit Mechanical Cycle Counter	563444	
		Proximity Switches	See Page 93	
14	Performance Indicators	Reset Indicator	See Page 88	
		Automatic Relief Indicator	See Page 89	
		Rupture to Atmosphere Indicator	See Page 91	
		Pressure Switches	See Page 95	
		Broken Line Indicator	See Page 96	
15	Mounting Brackets	Choose from universal, top, or side mounting	See Page 72	

Mounting

CONTROLLERS



 **GRACO**

GLC 2200

Features and Benefits

- Easy to mount without having to open up the control box
- LEDs let you know what your system is doing at a glance
- Easy to read digital display makes it simple to program and monitor your equipment
- In-cab visual and audible alarms let the operator know your equipment needs attention. Or set up a remote alarm to alert service or maintenance staff
- Simple icon based push buttons make programming easy
- Color coded wiring harness with flying leads and easy to follow wiring diagrams makes installations efficient

Available Inputs

- Pressure/cycle switch
- Low level switch

Available Outputs

- Pump power control
- External alarms—both low level and pressure/cycle faults

Typical Applications

- Heavy construction, mining, other mobile on-road and off-road equipment

Technical Specifications

Height	5.53 in (140 mm)
Width	2.75 in (70 mm)
Depth	1.38 in (35 mm)
Protection Grade	IP54
Operating Temperature	-40°F to 176°F (-40°C to 80°C)
Standards	CE Marked
Power Source DC	9 - 30 VDC
Manual	3A2960A

Ordering Information

GLC 2200	
24N468	GLC 2200 controller
24P314	GLC 2200 wiring harness – 5 feet (150 cm) with flying leads
24W981	GLC 2200 wiring harness – 10 feet (300 cm) with flying leads
24P686	GLC 2200 connector (1) and pins (12)
24P687	GLC 2200 connectors (5) and pins (60)
16T671	Crimper
24X606	Mounting bracket kit
17G007	Yellow iron mounting bracket with slide adjustment



Controllers

GLC-X Smart Controller

Controllers



Indoor/Outdoor Mountable (IP69K)

Designed to withstand all the elements, including high-pressure washes and inclement weather encountered at the harshest and dirtiest sites.

Easy-to-Read Screen

High-contrast screen features text codes, faults and other data clearly in any ambient light without distracting operators.

Real-Time System Reporting

Program and display a wide range of customizable functions – including lubrication intervals, pressure limits, lubricant levels and more.

Smart Device and Mobile App

With the Auto Lube™ app, monitor lubrication levels, configure settings, track history and share important diagnostics.



Universal Compatibility

One controller for all your lubrication systems simplifies training and inventory.

Quick Technical Information Access

Easily scan this QR code for access to manuals, guides, video tutorials and more.



Scan Me!

Active Current Protection

9-30 VDC, 10 amp continuous power supply protects grease pumps fr overcurrent and entire system from misfires, electrical shorts and surges.

Technical Specifications

Inputs/Outputs	4/2
Power Source	9-30 VDC
Modes	Pressure / Cycle / Timer
Dimensions	3.62 in (92 mm) wide x 6.66 in (169 mm) high x 1.98 in (50 mm) deep
Operating Temperature Range	-22°F to 158°F (-30°C to 70°C)
Protection Grade	IP69K
Manual	3A7031

Typical Applications

- Heavy construction
- Mini

Ordering Information

Controllers	
Part Number	Description
26A855	GLC X controller with 20 ft (6 m) cable
26A814	GLC X controller

Accessories	
Part Number	Description
26A853	GLC X pump simulator
26A882	GLC X 20 ft (6 m) cable
26A883	GLC X to Compact Dyna-Star® 3 ft (1 m) cable
26A888	14-pin mating connector kit

GLC-X Auto Lube App

Productivity Leads to Profitability

Help your crews work faster and minimize downtime by simplifying their everyday lubrication tasks. Designed for today's modern personal mobile device user, the Auto Lube app is intuitive and easy to learn for users in the field. They can view historical performance charts, access support and share information with a tap or swipe.



Control Lubrication Profile Configurations

- Customize profiles for equipment and end users
- Quickly and easily assign a Lube Profile Configuration with a GLC X Controller

Manage Devices

- Connect via Bluetooth to get an instant status
- Review last-known state on any historical device

Communicate in Real Time

- See, control, check and clear alarms
- Complete a manual run
- Review and share system history

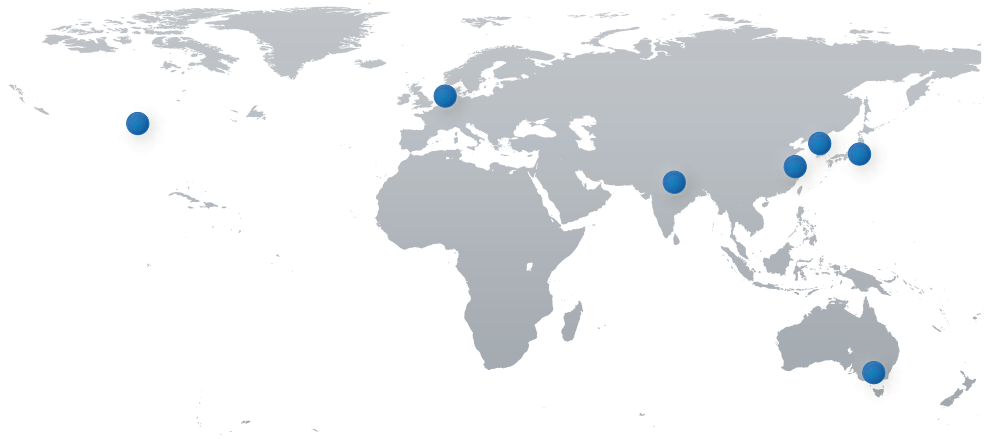
Controllers



Workers simply need to be within Bluetooth range to perform maintenance tasks faster and easier – directly from their mobile devices.



Download the **Graco Auto Lube** app from Google Play or the App Store (iOS) and perform all controller functions from the convenience of a smartphone or tablet.



Graco's got you covered

Facilities Worldwide for Global Support

Quality First

At Graco, we pride ourselves on providing best-in-class products. Engineered solutions are manufactured in our own facilities, with the highest standards in the industry. We provide you with world-class customer support and expertise to help solve your lubrication challenges.



Global Reach

Graco has facilities across the globe to provide you with the products and service *you* need, where *you* live. Plus, Graco has dedicated field experts in all areas of the world to support the products we sell.



Product Capabilities

Graco has a broad range of products to provide solutions that meet your needs. Our products are engineered and tested to perform in the harshest environments so you can be certain your equipment is protected and working at peak performance.



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