

Automatic Lubrication

Single Line Parallel Systems Selection Guide

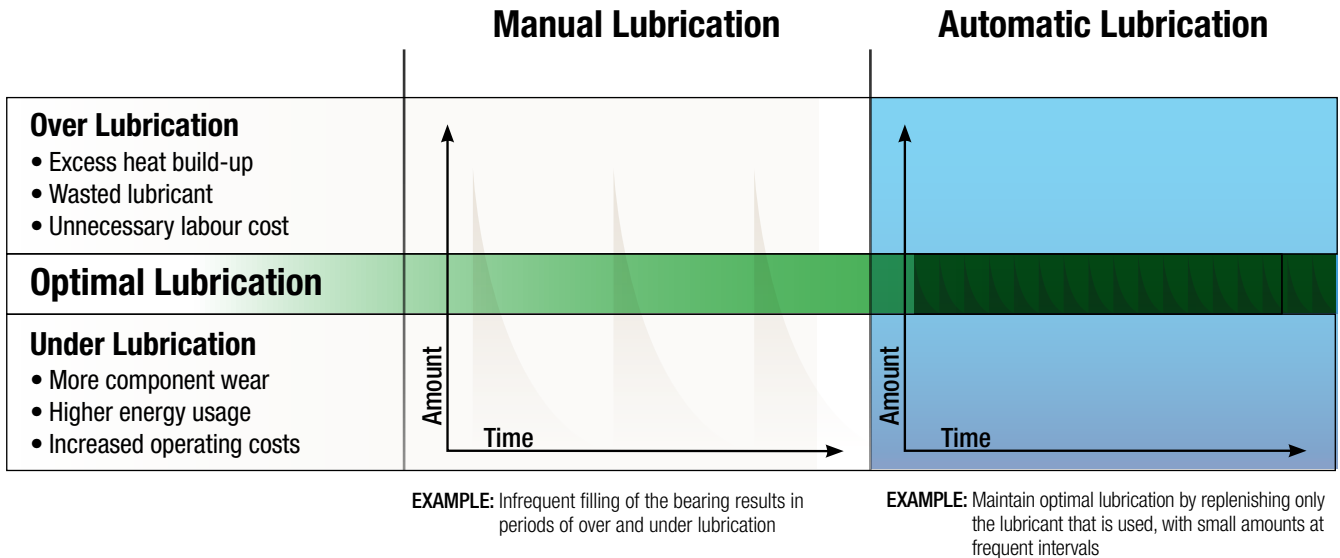


- Select and configure pumps, controllers, injectors and accessories for centralized lubrication
- Field-proven performance in rugged environment; mining, infrastructure or heavy construction
- Dyna-Star™ Lubrication Pumps
- GL-1™ Injectors

Centralized Lubrication

Graco's automatic lubrication solutions ensure that your machinery is lubricated when its needed most – while it's working. In order to avoid friction that cause severe wear and tear to your machine tool, production and press equipment, our line of centralized lubrication systems is delivering precise amounts of lubricants at frequent intervals to every lube point – even if they are hard to reach.

Choose automatic lubrication and bid fare wall to risks and other challenges related to manual lubrication:



Single Line Parallel Automatic Lubrication

Automatic lubrication systems lubricate multiple points from a single centralized system. There are many possible configurations, such as single line parallel, series progressive, dual line, multi-line, etc.

A **single line parallel system** is the simplest automatic lubrication system. A pump pressurizes a main supply line and fills a number of individual piston distributors or injector. Each injector serves one lubrication point and can be easily adjusted to deliver precise amount of lubricant with a high degree of accuracy.

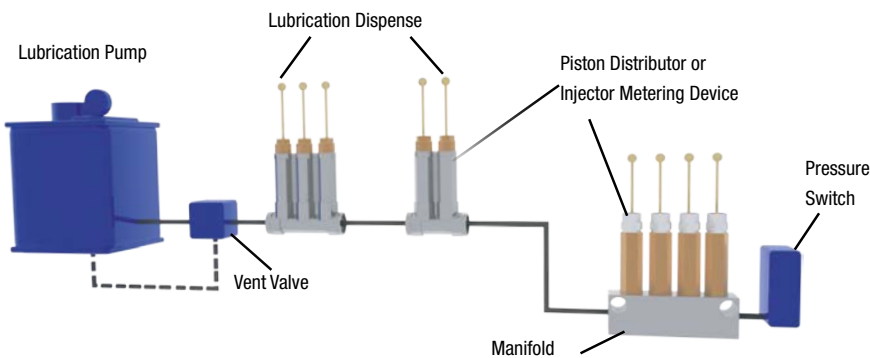
Benefits



Single Line Parallel Automatic Lubrication Systems



Components of a Single Line Parallel Automatic Lubrication System



PUMP & RESERVOIRS:

store and provide the lubricant to the system

CONTROLLER:

activates the system

INJECTOR:

dispenses the right amount of lubricant to the lubrication point.

How it works

In this configuration, the pump builds pressure to trigger the metering device and deliver the precise amount of lubricant to the lubrication point or bearing .

Applications

There are many industries that trust Graco's single line parallel automatic lubrication systems to function in the toughest and harshest heavy-duty environment like

- ▶ Mining
- ▶ Infrastructure and heavy construction

You can also consult our complimentary brochure **Automatic Lubrication - Series Progressive System selector guide (300765ENEU)** for a diverse range of industrial applications.

Rugged Equipment that works as hard as you

Electric Dyna-Star pump

Save Transport

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

Graco Advantage Drive™

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

Direct Mount Electric Vent Valve

Compact design means fewer parts to break or wear out.

Low-Level Sensor

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

Tube-In-Tube

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



M23 Connector

Saves installation time.

Adjustable Motor and Amp Control

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

Mechanical Auto-Fill Shutoff

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

Strong 12 Gauge Steel Reservoir

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

Remote Fill Manifold

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

GL-1 Series Injectors

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

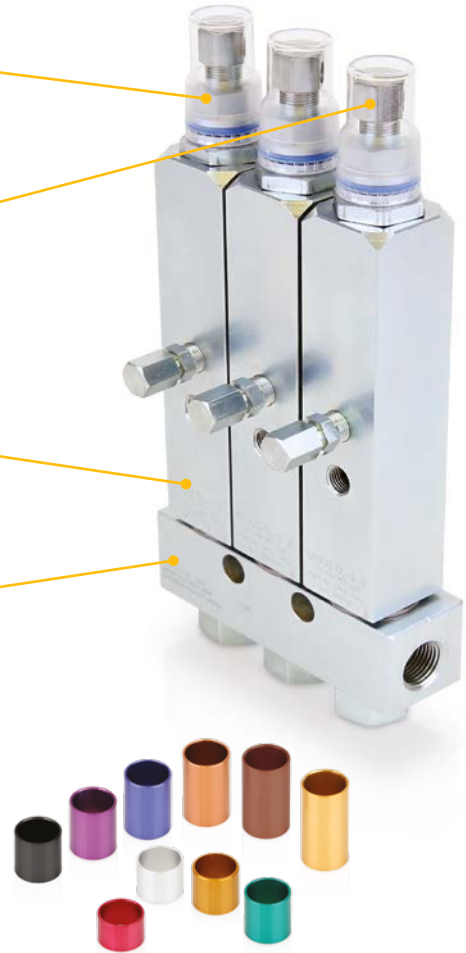
Rugged, single-piece body for use in harsh environments.

GL-1 Manifold

414 bar (6.000psi), 3/8" NPT port manifolds fit pre-existing mounting patterns.

Output Spectrum Sleeves

Colour-coded spacers enable simple, targeted output volume.



GLC2200 Controller

Monitoring LEDs

LEDs let you know what your system is doing at a glance.

Digital Readout

Easy to read digital display makes it simple to program and monitor your equipment.

Visual and Audible Alarms

In-cab visual and audible alarms let the operator know your equipment needs attention.



System Design Selector for EDS & GL-1 Injectors



Select the Electric Dyna-Star pump model
which suits your requirements



Select the Vent Valve Outlet Fitting



Select the GL-1 Series Injectors & Manifolds



Select the Injector INLET Fittings



1

Select the Electric Dyna-Star pump model

For a complete list of available Dyna-Star pump models, please refer to the Industrial Lubrication Buyer's guide (Item nr. 340821) on www.graco.com

2

Select the Vent Valve Outlet Fitting

117832

6 JIC x 3/8" NPT, straight

3

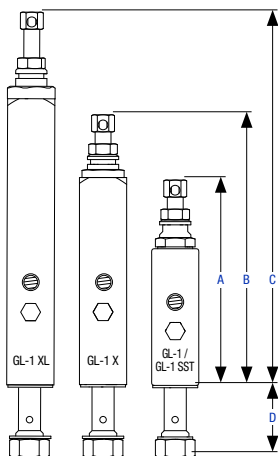
Select the GL-1 Series Injectors & Manifolds

GL-1 Injectors and Manifold Assemblies

	GL-1	GL-1 SST	GL-1 X	GL-1 XL
One-point Assembly	114901	–	24X801	24X811
Two-point Assembly	114902	–	24X802	24X812
Three-point Assembly	114903	–	24X803	24X813
Four-point Assembly	114904	–	24X804	24X814
Five-point Assembly	114905	–	24X805	24X815
Six-point Assembly	117206	–	24X806	24X816
Single Replacement Injector, no Manifold	114909	25N109	24X807	24X817

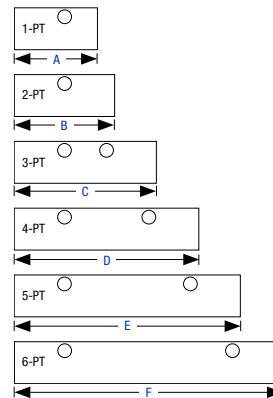
GL-1 Bare Injector Manifolds (no injectors included)

	GL-1	GL-1 SST	GL-1 X	GL-1 XL
One-point Assembly	114911	25N101	114911	114911
Two-point Assembly	114912	25N101	114912	114912
Three-point Assembly	114913	25N101	114913	114913
Four-point Assembly	114914	25N101	114914	114914
Five-point Assembly	114915	25N101	114915	114915
Six-point Assembly	118206	25N101	118206	118206



GL-1 INJECTOR DIMENSIONS

A	134.6 mm (5.3 in)
B	175.3 mm (6.9 in)
C	241.3 mm (9.5 in)
D	43.2 mm (1.7 in)



GL-1 MANIFOLD DIMENSIONS

A	63.5 mm (2.5 in)
B	76.2 mm (3.0 in)
C	106.7 mm (4.2 in)
D	139.7 mm (5.5 in)
E	170.2 mm (6.7 in)
F	203.2 mm (8.0 in)

SYSTEM DESIGN SELECTOR FOR EDS & GL-1 INJECTORS



Select the Main Line
HP Hose



Select the Injector
OUTLET Fittings



Select the Secondary Line
HP Hose



Select the
LUBE POINT Fittings

5

6

7

8

4

Select the Injector INLET Fittings and Branch Tee

117832	6 JIC x 3/8" NPT, straight
120064	6 JIC x 3/8" NPT, elbow
128567	3/8" NPT Branch Tee - to split main line and to connect 2 injector banks

Inlet Accessories

156849	Hex reducing nipple to combine 2 injector manifolds - 500 bar, 3/8" NPT (m) x 3/8" NPT (m)
100040	Injector manifold end plug - 3/8" NPT square head

5

Select the Main Line (from Pump to Injector)

Hose End Fitting	+	HP Hose	+	Hose End Fitting
17P337		17P336		17P337
6 JIC F x 3/8" Hose ID swivel F		Hose 3/8" ID, 30m		6 JIC F x 3/8" Hose ID swivel F

6

Select the Injector OUTLET Fittings

Compression	17T780	6 mm, Straight
	OR	
	17T781	6 mm, Elbow

7

Select the Secondary Line (from Injector to Lube Point)

HIGH PRESSURE HOSE									
Hose Studs	+	Hose Sleeve	+	HP Hose (8.6mm OD)	+	Hose Sleeve	+	Hose Studs	
Compression	17R565	6 mm, Straight	17L648	17S552	25 m	17L648	17R566	17R565	6 mm, Straight
	OR			OR				OR	
	17R566	6 mm, Elbow		17S553	50 m			17R566	6 mm, Elbow

8

Select the LUBE POINT Fittings

Thread size	COMPRESSION	
	Straight	Elbow
6 mm X M6	17R573	17R574
6 mm X M8	17R575	17R576
6 mm X M10	17R577	17R578
6 mm X 1/4" BSP	17R571	17R572
6 mm X 1/8" BSP	17L548	17L546

Technical Information

Dyna-Star pumps



ELECTRIC Modules	77X960	77X990
EDS HP Pump with auto-fill shutoff and low-level monitor	77X202 60 pound / 27 kg reservoir	77X203 90 pound / 41 kg 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	



PNEUMATIC Module	241573
Fire-Ball 300 pump, 50:1, 55 kg	239887
Dyna-Star pump, 10:1, 27 kg	–
Dyna-Star pump, 10:1, 55 kg	–
Reservoir assembly	241486
Hydraulic control assembly	–
Vent valve assembly	241572



HYDRAULIC Modules	247574	247444	24Y407	24Y408
Fire-Ball 300 pump, 50:1, 55 kg	–	–	–	–
Dyna-Star pump, 10:1, 27 kg	247540	–	–	–
Dyna-Star pump, 10:1, 55 kg	–	247443	–	–
Reservoir assembly	247575	241486	–	–
Hydraulic control assembly	247538	247538	–	–
Vent valve assembly	243170	243170	–	–
Dyna-Star 10:1, 90# - with mechanical AFSO	–	–	X	–
Dyna-Star 10:1, 60# - with mechanical AFSO	–	–	–	X

Please refer to the ILE Buyer's guide (Item nr. 340821) on www.graco.com to check the complete product offering.

GL-1 Series Injectors

	GL-1	GL-1 SST	GL-1 X	GL-1 XL
Maximum operating pressure	241 bar (3.500psi)	241 bar (3.500psi)	414 bar (6.000psi)	414 bar (6.000psi)
Minimum operating pressure	128 bar (1.850psi)	128 bar (1.850psi)	128 bar (1.850psi)	128 bar (1.850psi)
Reset pressure	41 bar (600psi)	41 bar (600psi)	69 bar (1.000psi)	69 bar (1.000psi)
Output volume per cycle	0.13 – 1.31 c ³ (0.008 – 0.08 in ³)	0.13 – 1.31 c ³ (0.008 – 0.08 in ³)	0.25 – 1.31 c ³ (0.015 – 0.08 in ³)	0.57 – 5.0 c ³ (0.035 – 0.305 in ³)
Materials	Zinc-plated carbon steel	316 stainless steel	Zinc-plated carbon steel	Zinc-plated carbon steel

Accessories

Injector Accessories

	GL-1	GL-1 SST	GL-1 X	GL-1 XL
Injector Cover Kit, Polycarbonate	17L754	17L754	17L754*	17L755*
Injector Crossport Kit	115120	–	115120	115120
Zerk and cap kit (5 pack)	17Y511	17Y498	17Y511	17Y511
Adjustment screw and lock nut (5 pack)	17Y510	17Y498	–	–
Seal repair kit	241234	241234	25A081	25A080

* Included with every GL-1 X and GL-1 XL Injector.

Output Spectrum Sleeves

GL-1 Output Target cc (in ³)	Output Target Ratio		Colour	10-Pack Part Number
	From Minimum	From Maximum		
GL-1 / GL-1 SST INJECTORS				
0.1 (0.01)	1.0	0.10	N/A	N/A
0.5 (0.03)	2.0	0.50	Red	17K601
0.8 (0.05)	3.0	0.60	Silver	17K602
1.0 (0.06)	4.0	0.80	Gold	17K603
1.3 (0.08)	5.0	1.00	Green	17K604
GL-1 X INJECTORS				
0.3 (0.01)	1.0	0.20	N/A	N/A
0.5 (0.03)	2.0	0.40	Red	17K601
0.7 (0.04)	3.0	0.50	Silver	17K602
0.8 (0.06)	3.3	0.60	Gold	17K603
1.2 (0.07)	5.0	0.75	Green	17K604
GL-1 XL INJECTORS				
0.6 (0.04)	1.0	0.10	N/A	N/A
0.8 (0.05)	1.5	0.15	Red	17K601
1.0 (0.06)	2.1	0.25	Silver	17K602
1.5 (0.09)	2.8	0.30	Gold	17K603
2.0 (0.12)	3.4	0.40	Green	17K604
2.0 (0.13)	3.9	0.45	Black	17N453
2.5 (0.15)	4.3	0.50	Purple	17N454
3.0 (0.18)	5.4	0.60	Blue	17N455
3.5 (0.21)	6.4	0.75	Orange	17N456
4.0 (0.24)	7.5	0.90	Brown	17N457
5.0 (0.30)	8.6	1.00	Yellow	17N458

17N455



Low Level Signal

- Alerts when lubricant is low, not out
- Reliable, follower plate-free operation
- Use with oil up to NLGI #2 grease on off-road mobile equipment

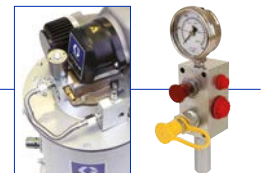
17L372



Remote Fill Manifold and Auto-Fill Shutoff Kit

- Ground-level fill port eliminates climbing
- Spill-free, single-person operations
- Mechanical system enables mine-safety, powered-down, refilling best practices

77X521



Red Alert Filter

- 380µm, 36 in² steel mesh
- Visual alert for filter service

17L366



Inline Filter

- 400µm steel mesh
- 344 bar (5,000 PSI) max pressure

77X523



More information

Additional Automatic Lubrication Solutions tools and brochures to compliment your activities:

Selector Tool

Online tool to easily find out which automatic lubrication set is compatible with different heavy-duty equipment. Select equipment specifications in the menu and the tool will returns an all-inclusive kit with a pump and a valve package part number along with a downloadable manual.



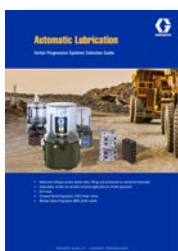
www.graco.com/gb/en/products/ad/yellow-iron-kit-selector.html

Literature



Lubrication Solutions

▶ 300742ENEU



Automatic Lubrication

Series Progressive Systems Selection Guide

▶ 3000765ENEU



ILE Buyers Guide

▶ 340821ENEU

Notes

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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.

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