

# **Automatic Lubrication**

Series Progressive Systems Selection Guide



- Select and configure pumps, divider valves, fittings and accessories for centralized lubrication
- Dependable solution for versatile industrial applications or mobile equipment
- G-Series Pumps
- Compact Series Progressive (CSP) divider valves
- Modular Series Progressive (MSP) divider valves

## **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:



frequent intervals

## **Series Progressive 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.

In a **series progressive system**, a pump supplies the lubricant through a master metering valve and optional secondary metering valves to the lubrication points. The metering valves are custom sized for each lubrication point to deliver the required amount of lube.

### **Benefits**



## Series Progressive Automatic Lubrication Systems



### **Components of a Series Progressive Automatic Lubrication System**



**PUMP & RESERVOIRS:** store and provide the lubricant to the system

**CONTROLLER:** activates the system

### **DIVIDERS:**

dispenses the right amount of lubricant to the lubrication point.

### How it works

As the lubricant flows from the pump through the passages of each divider block, the metering pistons move to one side in sequence from inlet to end, each time "dosing " the precise amount of oil or grease required at the lube point.

### **Applications**

There are many applications and industries where Graco's series progressive automatic lubrication systems have proven to be the dependable choice, like;

- In-plant manufacturing
- Wind energy
- Mobile equipment used on- or off-road

You can also consult our complimentary brochure: **Automatic Lubrication Solutions - Single line parallel system selector guide (300763ENEU)** for more heavy-duty applications.

## Dependable Equipment for multiple applications

## G-3 Pump

### **Multiple Reservoir Sizes**

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

### **Power Choices**

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



Extensive choices within the G-Series Pump family to satisfy your application requirements.



### **Reliable Pressure**

Maximum working pressure of 352 bar (5100 psi) using grease up to NLGI2.



### **Compact Series Progressive (CSP) divider valves**



### 1/8" NPT or BSPP Inlet

### **Built-in Durability**

Zinc iron plating stands up to harsh environments

### Variety of Configurations

6-22 outlets, available with or without indicators

### High Output Pressure

Maximum working pressure of 350 bar (5,076 psi)

### **Modular Series Progressive (MSP) divider valves**

### Alternate Outlet/Monitoring

Face of valves can be fitted with optional performance indicators, taking the guesswork out of troubleshooting.



### Intelligent Feedback

Can be easily accessorized with electronic proximity switches to provide positive assurance of a successful lube event.

### **Quick Change Valve Sections**

Quick change valve sections can be removed from the base assembly without disturbing any lube lines-minimizing labour cost and maximizing your machine uptime.

### Built-in Check Valve

**Output to Meet Your Needs** 

0.2 cc (0.012 in<sup>3</sup>)/stroke output

with the ability to double-up outlets if greater output is required.

Outlet checks ensure accurate lube delivery, every time.

### **Precision Performance**

Manufactured in our factory for quality and reliability. Each assembly is honed and match-fitted for precise lube delivery every time.

## System Design Selector for G-Series & Dividers



### Select the G-Series pump model

For a complete list of available pump models, please refer to the Industrial Lubrication Buyer's guide on www.graco.com

#### Select the Pressure Relief Valve & Relief Valve Outlet Fittings

THREAD SIZE



#### **Select the CSP Divider Valve**

# of outlets	Indicator Pin ?	1/8" NPT	1/8" BSPP	
6	NO	24Z486	24Z477	
0	YES	24Z504	24Z495	
0	NO	24Z487	24Z478	
0	YES	24Z505	24Z496	
10	NO	24Z488	24Z479	479
10	YES	24Z506	24Z497	
10	NO	24Z489	24Z480	
12	12 YES		24Z498	
14	NO	24Z490	24Z481	
14	YES	24Z508	24Z499	

		THREA	D SIZE
# of outlets	Indicator Pin ?	1/8" NPT	1/8" BSPP
10	NO	24Z491	24Z482
10	YES	24Z509	24Z500
10	NO	24Z492	24Z483
18	YES	24Z510	24Z501
20	NO	24Z493	24Z484
20	YES	24Z511	24Z502
00	NO	24Z494	24Z485
22	VES	247512	247503

#### Select the Divider Valve INLET Fittings --

1/8" BSPP Valve

1/8" NPT Valve

	17L548 6 mm, Straight
Compression	OR
	17L546 6 mm, Elbow
	17L545 6 mm, Straight
G-LOCK Push-To-Connect	OR
	17L449 6 mm, Elbow
	17T780 6 mm, Straight
Compression	OR
	17T781 6 mm, Elbow



### Select the Main Line (from Pump to CSP Divider Valve)

l (comp	Hose Studs pression OR PTC)		Hose Sleeve	HP Hose (8.6mm OD)		Hose Sleeve			Hose Studs								
	17R565 6 mm, Straight			178552 25 m					17R565 6 mm, Straight								
Compression	OR			OR				Compression	OR								
	17R566 6 mm, Elbow		171.040	171 649	178553 50 m		171.040			17R566 6 mm, Elbow							
	17L649 6 mm, Straight					17L048	17L648	17L040	17L040	172040	17L040	OR		171040			17L649 6 mm, Straight
G-Lock Push-To-Connect	OR			178554 100 m			G-Lock Push-To-Connect	OR									
	17L650 6 mm, Elbow			OR					17L650 6 mm, Elbow								
				17\$555 200 m													

### Select the Divider Valve OUTLET Fittings

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Compression	17L550 6 mm X M10
G-Lock Push-To-Connect	17L458 6 mm X M10
Nylon Tube only	17L543 6 mm X M10

### Select the Secondary Line (from CSP Divider Valve to Lube Point)

					Н	IGH PRESSURE HOSE					
	I	lose Studs		Hose Sleeve		HP Hose (8.6mm OD)	Hose Sleeve			Hose Studs	
1		17R565 6 mm, Straight				17\$552 25 m				17R5	65 6 mm, Straight
1	Compression	OR				OR			Compression	OR	
1		17R566 6 mm, Elbow		1716/19		178553 50 m	171649	_		17R5	66 6 mm, Elbow
j.		17L649 6 mm, Straight		172040		OR	171040			17L64	49 6 mm, Straight
Y	G-Lock Push-To-Connect	OR				178554 100 m			G-LOCK Push-To-Connect	OR	
G-Lock Push-To-Connect	17L650 6 mm, Elbow				OR				17L6	50 6 mm, Elbow	
1						17\$555 200 m					
₿					1	VYLON TUBE (6 mm)					
	<b>17\$556</b> 6 mm x 25m	OR	6	<b>17\$557</b> 6 mm x 50m		OR	<b>17\$558</b> 6 mm x 100m		OR		<b>17\$559</b> 6 mm x 200m

C-LOCK

### Select the LUBE POINT Fittings

	COMPR	ESSION	PUSH-TO-CONNECT		
Thread size	Straight	Elbow	Straight	Elbow	
6 mm X M6	17R573	17R574	17L457	17L448	
6 mm X M8	17R575	17R576	17L456	17L447	
6 mm X M10	17R577	17R578	17L455	17L446	
6 mm X 1/4" BSP	17R571	17R572	17R569	-	
6 mm X 1/8" BSP	17L548	17L546	17L545	17L449	

## System Design Selector for G Series & Dividers





#### B. Select the MSP Working Sections (must be ordered in multiples of 5)

Outlet	Description	Output per Outlet in <sup>3</sup> (cm <sup>3</sup> )		Model Number	
			Standard Section	With Cycle Pin - Right	With Cycle Pin - Left
	MSP-5S	0.010 (0.16)	562711		
	MSP-10S	0.020 (0.33)	562712	N/	Ά
	MSP-15S	0.030 (0.49)	562713		
Single	MSP-20S	0.040 (0.66)	562714	562729	562734
Siligie	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
	MSP-5T	0.005 (0.08)	562720		
	MSP-10T	0.010 (0.16)	562721	N/	A
	MSP-15T	0.015 (0.26)	562722		
Twin	MSP-20T	0.020 (0.33)	562723	562739	562744
IWIII	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

#### **C.** Select Optional Components

Component	Description	Model Number	Note		
	Right	563469	1 outlet part plug is required for each grouppart bor		
Crossport Bar	Left	563470	i outlet port plug is required for each crossport bal		
Dui	Right + Left	563471	2 outlet port plugs are required for each double crossport bar		
Bypass Block	MSP Bypass Section	562660			
	For 1/8" BSP	558799			
Outlet Port Plugs	For 1/8" NPT	557349			

Please refer to the ILE Buyer's guide (P/N 340821, page 68) to check all of the optional Performance Indicators.

### Select the Divider Valve INLET Fittings

E	1/4" BSP Base Plate	
1 E	1/4" NPSF Base Plate	

	17R571 6 mm, Straight
Compression	OR
	17R572 6 mm, Elbow
G-Lock Push-To-Connect	17R569 6 mm, Straight
	17T782 6 mm, Straight
Compression	OR
	17T783 6 mm, Elbow

## See next page

## System Design Selector for G Series & Dividers



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### Select the Main Line (from Pump to MSP Divider Valve)

Hose Studs (compression OR PTC)		Hose Sleeve	HP Hose (8.6mm OD)	Hose Sleeve		Hose Studs
	17R565 6 mm, Straight		178552 25 m			17R565 6 mm, Straight
Compression	OR		OR		Compression	OR
	17R566 6 mm, Elbow	171.040	178553 50 m	171.040		17R566 6 mm, Elbow
	17L649 6 mm, Straight	171048	OR	17L048		17L649 6 mm, Straight
G-Lock Push-To-Connect	OR		178554 100 m		G-Lock Push-To-Connect	OR
1 0311-10-00111001	17L650 6 mm, Elbow		OR		T dan- 10-00111000	17L650 6 mm, Elbow
			17\$555 200 m			

**Select the Divider Valve OUTLET Fittings** 



#### Select the Secondary Line (from MSP Divider Valve to Lube Point)



### SYSTEM DESIGN SELECTOR FOR MSP



Select the Secondary Line HP Hose or Nylon Tube

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### Select the LUBE POINT Fittings

	COMPR	ESSION	G-L PUSH-TO	OCK •CONNECT
Thread size	Straight	Elbow	Straight	Elbov
6 mm X M6	17R573	17R574	17L457	17L44
6 mm X M8	17R575	17R576	17L456	17L44
6 mm X M10	17R577	17R578	17L455	17L44
6 mm X 1/4" BSP	17R571	17R572	17R569	-
6 mm X 1/8" BSP	17L548	17L546	17L545	17L44



## **Technical Specifications**

## Graco G3 SP Pump

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.

	VOLTACE	RESERVOIR SIZE			
VULIAGE	2 L	4 L	8 L	12 L	
	12 VDC	96G221	96G222	-	-
	24 VDC	96G223	96G224	96G225	96G226
	90-240 VAC	96G227	96G228	_	_

Please note that G3 SP pumps are for use in Series Progressive systems only and they require a proximity switch.

### **Pump Re-Fill options:**

	OPTION 1	Re-fill via	Grease Zerk
		562857	Standard option on all G-Series Pumps
			Use standard grease gun (Item # <b>562857</b> ) to fill the reservoir
	OPTION 2a	Re-fill via	High Capacity Fill Zerk (#24M644)
		<b>24M644</b>	* Order Item <b>#24M644</b> (1/4" NPT), and use instead of grease zerk or the 2 alternative ports
		121474	* Use together with female coupler Item #121474, OR with any other coupler that conforms to ISO 7241-1 Series B
$\frown$	OPTION 2b	Re-fill via	High Capacity Fill Zerk (#247886)
		247886	* Order the manual fill pump (Item #247886)
			* Female coupler #121474 already included in the manual fill pump package
	OPTION 2c	Re-fill via	Manual Hand Pump
		571162	* Order Item # <b>571162</b>
			* Screws directly into the pump element port: - remove the unused G3 pump element plug - insert the grease fill pump into the port

## **Accessories**

### **Fittings and Accessories Overview**

For a complete list of Pumps, Pressure Reliefs, Valves, Hoses, Tubes, Fittings, Adapters, and Accessories, go to the Graco Industrial Lubrication Equipment Buyer's Guide at **www.graco.com**.

### **Pressure Relief Valve & Relief Valve Outlet Fittings**

PART NUMBER	DESCRIPTION
26C176	Kit, Relief Valve and Fittings, BSP
<b>26C030</b>	Kit, Relief Valve and Fittings, NPT
17R569	Fitting, PTC, Straight, 6 mm X 1/4", BSP
17R571	Fitting, Compression, Straight, 6 mm X 1/4", BSP
17R572	Fitting, Compression, Elbow, 6 mm X 1/4", BSP
17T780	Fitting, Compression, Straight, 6 mm X 1/8" NPT
17T781	Fitting, Compression, Elbow, 6 mm X 1/8" NPT
17T782	Fitting, Compression, Straight, 6 mm X 1/4" NPT
17T783	Fitting, Compression, Elbow, 6 mm X 1/4" NPT

### **HP Hose, Nylon Tube & Mounting Accessories**

PART NUMBER	DESCRIPTION
17S552	HP Hose, 8.6 mm OD, 25 m
17S553	HP Hose, 8.6 mm OD, 50 m
17\$554	HP Hose, 8.6 mm OD, 100 m
17\$555	HP Hose, 8.6 mm OD, 200 m
17\$556	Nylon tube, 6 mm X 25 m
17\$557	Nylon tube, 6 mm X 50 m
17\$558	Nylon tube, 6 mm X 100 m
17\$559	Nylon tube, 6 mm X 200 m
17L648	Sleeve, Hose
17L649	Stud, Straight, 6 mm, G-Lock Push-To-Connect
17L650	Stud, Elbow, 6 mm, G-Lock Push-To-Connect
17R565	Stud, Straight, 6 mm, Compression
17R566	Stud, Elbow, 6 mm, Compression







## Accessories

### **CSP Outlet Fittings**

PART NUMBER	DESCRIPTION
17L550	Fitting, Compression, 6 mm X M10
17L458	Fitting, PTC, 6 mm X M10
17L543	Fitting, PTC, CSP Outlet, 6 mm X M10 - Nylon Tube only
17L651	Plug, Doubling, M10 X 1 - FOR CSP

### **MSP Outlet Fittings**

PART NUMBER	DESCRIPTION
17L548	Fitting, Compression, Straight, 6 mm X 1/8" BSP
17L546	Fitting, Compression, Elbow, 6 mm X 1/8" BSP
17L545	Fitting, G-Lock Push-To-Connect, Straight, 6 mm X 1/8" BSP
17L449	Fitting, G-Lock Push-To-Connect, Elbow, 6 mm X 1/8" BSP
17T780	Fitting, Compression, Straight, 6 mm X 1/8" NPT
17T781	Fitting, Compression, Elbow, 6 mm X 1/8" NPT

### **Optional Accessories**

PART NUMBER	DESCRIPTION
Power Cables	
124333	M12 Cable, Male & Female, 4.88 m
<b>126331</b>	Harness, Wiring, M12(F) to bare Wire, 5 m (requires 124594)
124594	M12 4-Pin Male Connector for 6-8 mm Cable
<b>24Z719</b>	Cable, M12 to 4 Pin, PNP
24Z720	Kit, M12 Cable with LED & Flying Leads, PNP (requires 124594)
<b>25M604</b>	Cable, M12 with LED to flying leads, PNP, Straight - for PLC
25M602	Cable, M12 with LED to flying leads, NPN, Straight - for G3
<b>25M603</b>	Cable, M12 with LED to M12, NPN, Straight - for G3

### **Proximity Switches & Indicators**

17L879	Switch, Proximity, M11 - FOR CSP
17L983	Switch, Proximity, 7/16-20 - FOR MSP
563251	Magnetic Visual Cycle Indicator - FOR MSP



### **Weld Stud Accessories**

26A478	Kit, Stud, Weld - FOR CSP
26A479	Kit, Plate, Weld - FOR CSP
563465	Weld bar kit - FOR MSP

## 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 heavyduty 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 Single Line Parallel Systems Selection Guide

▶ 3000763ENEU



### **ILE Buyers Guide**

▶ 340821ENEU





#### **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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All written and visual data contained in this document are based on the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

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