

Multi-line and Progressive Systems

Product Catalogue - Second Edition 2005



Productivity is key in today's global economy. Proper lubrication increases uptime and makes maintenance routines simple.



Lincoln Company Profile



Our Experience

Lincoln was established in 1910 and is the long-standing world leader in grease lubrication systems and equipment. Decades of business experience have provided us with a high level of expertise and know-how within the lubrication system industry. As a pioneer in the industry, we will continue being a trendsetter confidently providing our customers with the best lubrication system solutions in both price and quality.



Our Service

Our customer service includes the consulting, engineering and planning of customer-oriented systems for all applications, the manufacturing of standard components such as pumps, metering devices or control equipment, the installation and start up of lubrication systems on site in all parts of the world, as well as the customer training, and after-market service.



Our Quality

Our certified Quality Management System according to DIN EN ISO 9001, our expertise, consulting qualities and inventiveness, lead the way for future customer-oriented, economical and intelligent solutions.



Our Product

Lincoln lubrication systems reduce friction and wear; thereby, decreasing maintenance costs, improving productivity, ensuring a higher level of safety and contribution to the environment.

Our Environmental Management System

Our Environmental Management System according to DIN EN ISO 14001 and EMAS, is an integral part of our company philosophy that reflects Lincoln's future orientation.

Our Motto

Keep in motion –
Bleiben Sie mit uns in Bewegung!

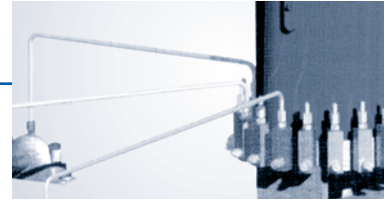
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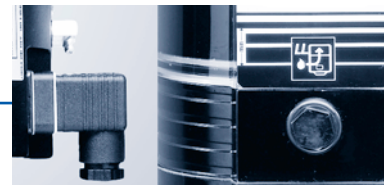
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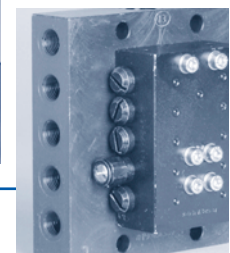


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Part Number

515-30955-1

Multi-line and Progressive Systems



Application

Pure Multi-line Systems

- 1 Dispersed, single lubrication points
- 1 Large quantities of lubricant per lube point
- 1 Individual adjustment for each lube point
- 1 Continuous supply requirement

Pure Progressive Systems

- 1 Several lubrication points within small to medium distances
- 1 Ideal for machines and small systems

Sample Applications

Small to medium sized systems and machines.

Industries

General industry, construction machines, mobile applications

Multi-line and progressive systems constantly operate as long as lubricant is fed by the pump.

For systems that have more than 1 lubrication point within a relatively short distance, a pure multi-line system is not always economical. Additionally, pure multi-line systems are not easily monitored. As a result, progressive systems or combined progressive/multi-line systems often provide the best solution.

The high-precision SSV progressive metering device divides the lubricant input into desired quantities.

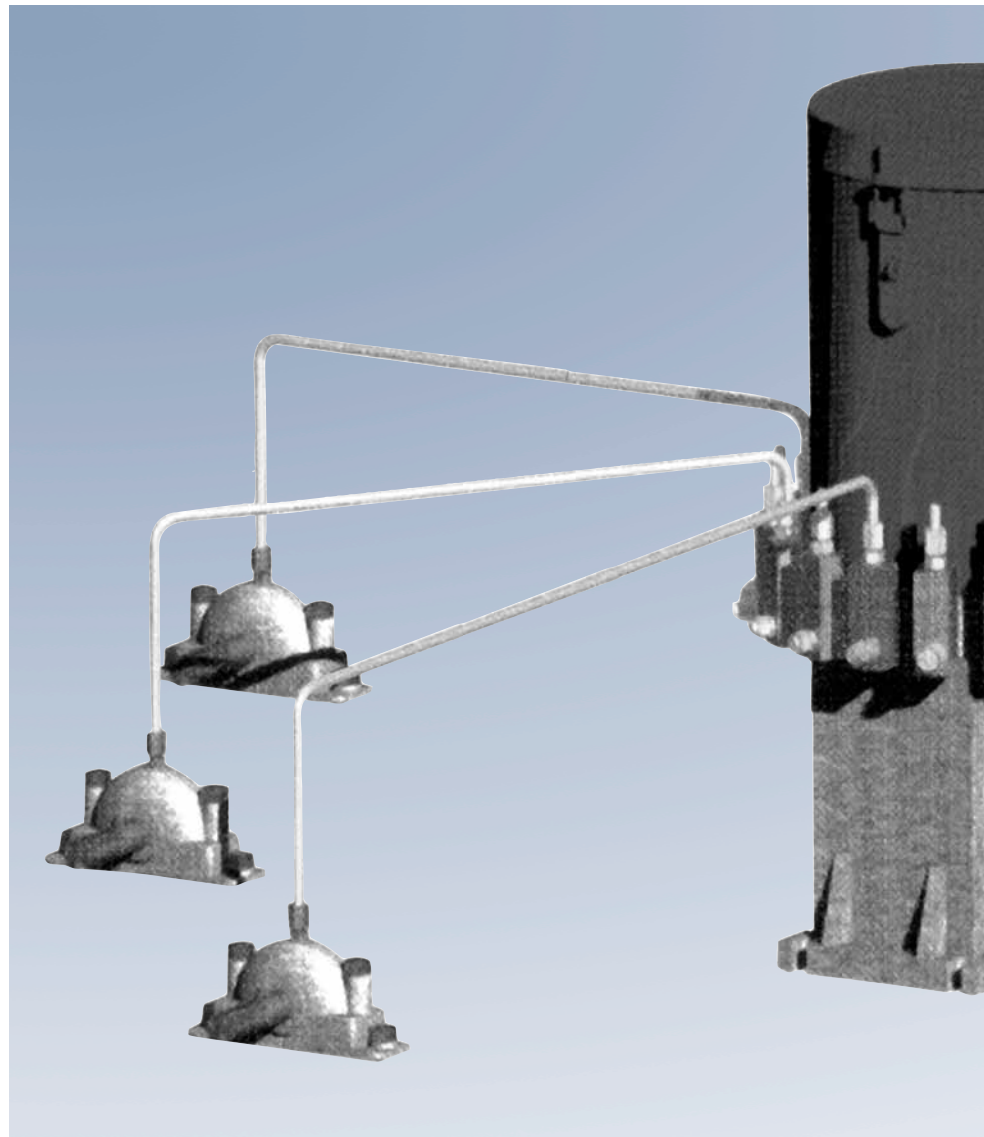
Capabilities

Capabilities of Progressive or Combined Progressive/Multi-line Systems:

- 1 Visual or electric monitoring of the entire system via metering device
- 1 Reliable lubrication even under severe conditions
- 1 Easily extendible via available pump element
- 1 Capable of completely supplying machines or small systems with lubricant.

Function

The system will continue to operate as long as the pump is in operation. When the pump is turned off, the progressive metering device will stop in its current position. Upon restarting, the progressive metering device will carry on where it left off.



Schematic Combined Multi-line / Progressive System

Common Components

Pumps:

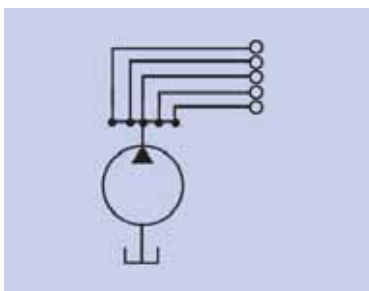
HJ*, HP, HPG/HPGO,
HP-500W manual pumps,
QLS301, QLS401, 203, 233, 205,
215, 230, ZPU01/02* electric
pumps, PPG/PPGO
pneumatic pumps,
FlowMaster hydraulic pumps**
HT1L101

Metering Devices:

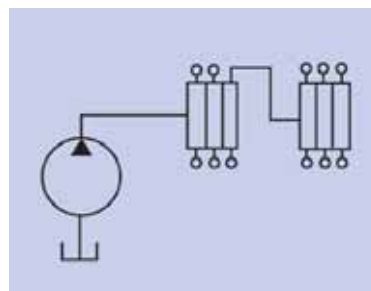
SSV, SSVD, SSVM, SSV-FL

* See Two-line catalogue

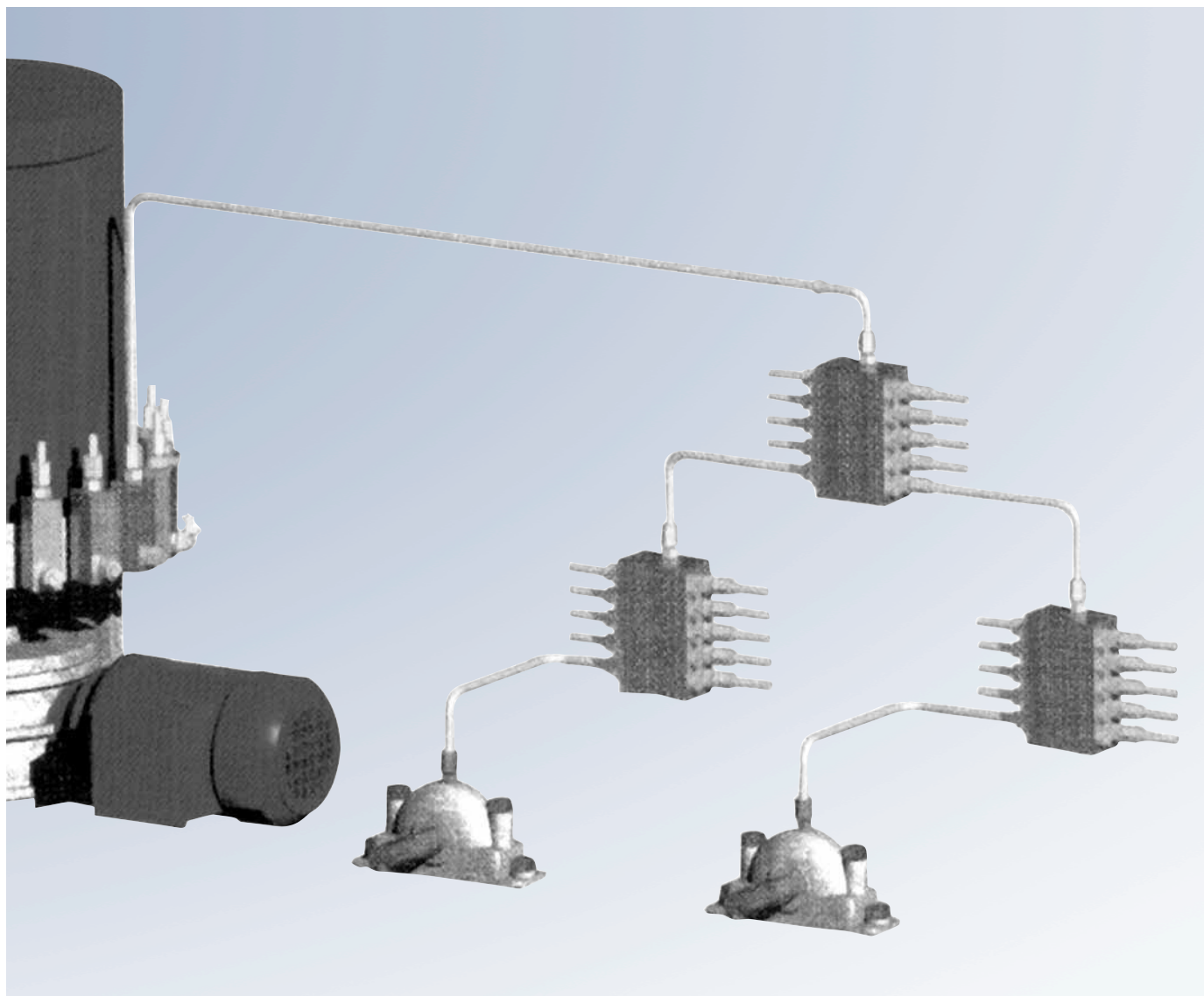
** Not covered in this catalogue -
ask your Lincoln representative
for details



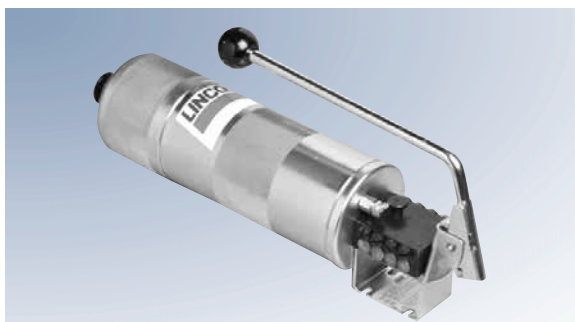
Schematic Multi-line System



Schematic Progressive System



HP, HPG, HPO, HPGO Pumps



HPG15

These economically priced hand-operated single-stroke pumps deliver an accurately metered amount of lubricant, either grease or oil, depending on the version. The grease versions, HP and HPG, are equipped with a spring-loaded follower plate and a control rod for lubricant control. The oil version comes with a clear plastic reservoir for visual level control. When used in conjunction with SSV divider blocks they can supply grease to 1 to 64 lubrication points.

Part No.	Description	Reservoir Capacity			Number of Outlets	Level Indicator
		Liters	In ³	Lbs.		
604-25103-1	HP15	1.5	91.5	3	1	indicator rod
604-25109-2	HPG15	1.5	91.5	3	2 – 8	indicator rod
604-27162-1	HPO18 (oil)	1.8	109.8	3.6	1	transparent

Technical Data

	HP	HPG
lubricant output per stroke	1.6 cm ³ (0.097 in ³)	
lubricant output per outlet metering device	0.2 cm ³ (0.012 in ³)	
maximum operating pressure	250 bar (3626 psi)	
outlet ports	R1/8 female (BSPT) suitable for 4 and 6 mm tube*	
follower	spring loaded	

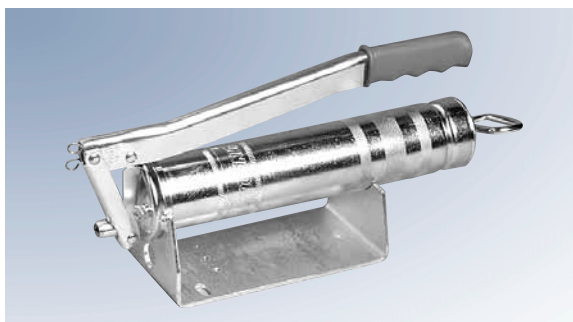
* see SSV metering devices for outlet fittings

Dimensions

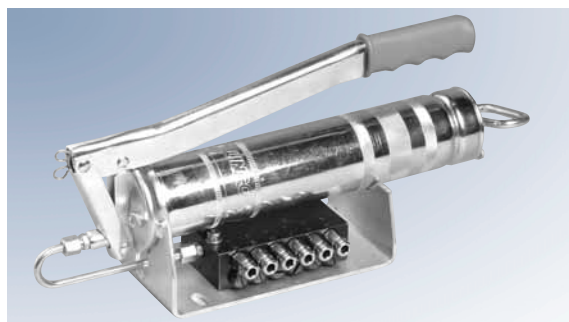
Model	Height	Width*	Depth
HP15	460 mm (18.1 in)	190 mm (7.5 in)	112 mm (4.4 in)
HPG15	635 mm (24.6 in) level indicator fully extended	190 mm (7.5 in)	112 mm (4.4 in)
HPO18	420 mm (16.5 in)	190 mm (7.5 in)	112 mm (4.4 in)

* 335 mm (13.2 in) handle extended

HP500 and HP500-SSV Pumps



HP500W



HP500W-SSV

The manual pumps HP500W and HP500W-SSV offer a special low-cost possibility of equipping a machine with a manual central lubrication pump.

The pumps are used where no automatic or continuous lubricant supply is required, but where a simple lubrication process by a central lubrication pump is desired.

The filling of the grease reservoir can be performed by means of a standard 400 g cartridge, or directly from a grease barrel or with a filling pump.

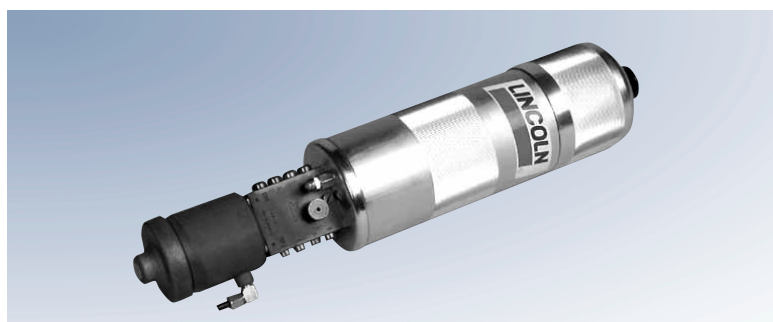
Part No.	Description	Reservoir Capacity			Number of Outlets
		Liters	In ³	Lbs.	
244-14164-1	HP500W	0.5	30	1	1
604-28766-1	HP500W-SSV6	0.5	30	1	2 – 6
604-28767-1	HP500W-SSV8	0.5	30	1	2 – 8
604-28768-1	HP500W-SSV10	0.5	30	1	2 – 10
604-28769-1	HP500W-SSV12	0.5	30	1	2 – 12

Technical Data

	HP500W	HP500W-SSV
lubricant output per stroke	1.5 cm ³ (0.091 in ³)	
lubricant output per metering device outlet		0.2 cm ³ (0.012 in ³)
outlet thread connection	M10 x 1 female	R1/8 female (BSPT)*
maximum operating pressure	400 bar (5800 psi)	350 bar (5076 psi)
suitable lubricants	NGLI 2 grease	

* see SSV metering devices for outlet fittings

PP, PPO, PPG, PPGO Pumps



PPG15-K

The pump model series PP is for progressive systems. The pump is a pneumatically operated single-stroke pump requiring a 3/2 way air-valve for activating the air cylinder. Depending on the pump version it can be used for oil (PPGO) or grease (PP and PPG)

supply. The version for grease systems is equipped with a spring-loaded follower plate and a control rod for lubricant control. The oil version comes with a clear plastic reservoir to enable visual level control.



PPGO18

Popular Models

Part No.	Description	Reservoir Capacity	Grease or Oil	Number of Outlets	Output per Stroke
604-25105-2	PP15	1.5 liters (91 in ³)	grease	1	2.6 cm ³ (0.158 in ³)
604-25111-3	PPG15	1.5 liters (91 in ³)	grease	8	2.6 cm ³ (0.158 in ³)
604-25129-2	PPG4-K	0.4 liters (24 in ³)	grease	8	0.2 cm ³ per outlet (0.012 in ³)
604-25130-3	PPG15-K	1.5 liters (91 in ³)	grease	8	2.6 cm ³ (0.158 in ³)
604-27223-1	PPO18	1.8 liters (110 in ³)	oil	1	2.6 cm ³ (0.158 in ³)
604-27213-1	PPGO18	1.8 liters (110 in ³)	oil	8	2.6 cm ³ (0.158 in ³) 0.2 cm ³ per outlet (0.012 in ³)

Technical Data

	PP	PPG	PPO	PPGO
pump pressure ratio	40:1			
air pressure	min. 4 bar (58 psi) / max. 10 bar (145 psi)			
maximum operating pressure	300 bar (4350 psi)	250 bar (3625 psi)	300 bar (4350 psi)	250 bar (3625 psi)
lube outlet	6 mm	for 4 or 6 mm tube*	6 mm	for 4 or 6 mm tube*
air inlet	G 1/8 female (BSPP)			

* see SSV metering device for outlet fittings

Dimensions

Model	Height	Width	Depth
PP 15	550 mm (22 in)	115 mm (4.6 in)	122 mm (4.8 in)
PPG 15	725 mm (29 in) level indicator fully extended	115 mm (4.6 in)	122 mm (4.8 in)
PPG 15-K			
PPO 18	473 mm (16.6 in)	115 mm (4.6 in)	122 mm (4.8 in)
PPGO 18			

QLS Pumps 301 and 311



The QLS 301, 311 or 321 is a complete monitored lubrication system with low-level control for a maximum of 18 lubrication points. The 321 is specifically for trailers and semi-trailers. The QLS family includes pumps available with or without mounted SSV valves and are made for the standard high-pressure plastic tubing $\varnothing 6 \times 1.5$. The 1 liter reservoir pumps are available in 12 or 24 VDC and 120 and 230 VAC (not available on the 321 pumps). Refer to the pump identification codes for a complete listing of available pump configurations.



QLS 301

Popular 301 Models for Grease Lubrication

Model No.	Valve Type	Valve Mount	Voltage	Cable
P30131211153	SSV6	back	12 DC	10 m (30 ft)
P30131411153	SSV6	back	24 DC	10 m (30 ft)
P30142611113	SSV8	bottom	120 AC	none
P30142811113	SSV8	bottom	230 AC	none
P30161211153	SSV12	back	12 DC	10 m (30 ft)
P30161411153	SSV12	back	24 DC	10 m (30 ft)
P30162611113	SSV12	bottom	120 AC	none
P30162811113	SSV12	bottom	230 AC	none
P30191211153	SSV18	back	12 DC	10 m (30 ft)
P30191411153	SSV18	back	24 DC	10 m (30 ft)
P30192611113	SSV18	bottom	120 AC	none
P30192811113	SSV18	bottom	230 AC	none

Popular 311 Models for Oil Lubrication

Model No.	Valve Type	Valve Mount	Voltage	Cable
P31131211153	SSV6	back	12 DC	10 m (30 ft)
P31131411153	SSV6	back	24 DC	10 m (30 ft)
P31142611113	SSV8	bottom	120 AC	none
P31142811113	SSV8	bottom	230 AC	none
P31161211153	SSV12	back	12 DC	10 m (30 ft)
P31161411153	SSV12	back	24 DC	10 m (30 ft)
P31162611113	SSV12	bottom	120 AC	none
P31162811113	SSV12	bottom	230 AC	none
P31191211153	SSV18	back	12 DC	10 m (30 ft)
P31191411153	SSV18	back	24 DC	10 m (30 ft)
P31192611113	SSV18	bottom	120 AC	none
P31192811113	SSV18	bottom	230 AC	none

QLS Pumps 301 and 311



QLS301, QLS311 with Remote Control

Popular 301/311 Models for Remote Control

Model No.	Valve Type	Valve Mount	Voltage	Lubricant
P30131411110	SSV6	back	24 VDC	grease
P30161411110	SSV12	back	24 VDC	grease
P30191411110	SSV18	back	24 VDC	grease
P31131411110	SSV6	back	24 VDC	oil
P31161411110	SSV12	back	24 VDC	oil
P31191411110	SSV18	back	24 VDC	oil
650-40768-3	SSV8	bottom	120 VAC	grease
650-40768-4	SSV12	bottom	120 VAC	grease
650-40768-5	SSV18	bottom	120 VAC	grease
650-40765-4	SSV8	bottom	120 VAC	oil
650-40765-5	SSV12	bottom	120 VAC	oil
650-40765-6	SSV18	bottom	120 VAC	oil

QLS Pumps 301 and 311



QLS Technical Data

operating pressure	
QLS301	205 bar (3000 psi)
QLS311	80 bar (1160 psi)
reservoir	1 liter - clear plastic / (61 in ³) / 2 Lbs. with low-level control
output per outlet & cycle	approx. 0.2 cm ³ / 0.012 in ³
operating voltage	24 and 12 VDC / 120 and 230 VCA, 50 / 60 Hz (not for QLS321)
operating current	12 VDC / 2.0 A, 24 VDC / 1.0 A, 120 VAC / 1.0 A, 230 VAC / 0.5 A
operating temperature	-25 to 70° C / -13 to 158° F
lubricants	
QLS301	grease up to NLGI 2
QLS311	oil
class of protection	NEMA 4, IP6K9K
number of outlets	1, 6, 8, 12 or 18 (depending on version)
number of cycles or run time	
QLS301/311	1 – 5 cycles for 12/24 VDC, for 120/230 VAC with SSV6/SSV8 1 – 3 cycles, for SSV12, SSV18 1 cycle
remote control models	max. 4 minutes run time
lubrication pause time	
QLS301/311	4 min. to 60 hours for VDC version, 20 min. to 60 hours for VAC version
remote control models	min. 4 minutes
timer memory	indefinite

Accessories for all QLS Series Pumps

Part No.	Description	Kit Size	Lube Fittings Included
550-36791-1	SSV6/8	inch size kit	yes
550-36971-2	SSV12	inch size kit	yes
550-36971-3	SSV18	inch size kit	yes
550-36970-1	SSV6/8	metric size kit	no
550-36970-2	SSV12	metric size kit	no
550-36970-3	SSV18	metric size kit	no

QLS 301 and 311 Identification Code



Pump Models Examples for Part Numbers

P3010080113
P3016240153

Pump 301 for Grease, pump 311 for oil.....P 301

SSV Divider Block

External SSV 6, SSV 8 (or SSV and 18 without PCB).....0
External, SSV 12, SSV 18.....1
SSV 6 back mounted.....3
SSV 8 bottom mounted²⁾.....4
SSV 12²⁾.....6
SSV 18²⁾.....9

²⁾ Note: for external metering device applications use only the appropriate SSV...KNQLS units. For pumps without a metering device it is only possible to switch off the system by technically modifying the PCB.

SSV Divider Block Mounting, Orientation of Divider Outlets

Without divider block.....0
Back mounted (vertical orientation).....1
Bottom mounted³⁾ (horizontal orientation).....2

³⁾ Not for use in mobile or machine applications exposed to vibrations - refer to the "safety instructions"

Operating Voltage

12 VDC¹⁾.....2
24 VDC¹⁾.....4
120 VAC¹⁾ (only with PCB).....6
230 VAC¹⁾ (only with PCB).....8

¹⁾ Note: Standard 120 & 230 VAC pumps for industrial applications are equipped without connection cable. Pumps for mobile applications (12/24 VDC) can be equipped with a 10 m cable.

Reservoir with Low-Level Control

1 liter reservoir with low-level.....1

Number of Possible Connectors

1A = 1 connection, left, supply voltage, VDC, VAC, square-type plug0
1A = 1 connection (bayonet), left, supply voltage, VDC, low-level or fault indication.....2
2A = 2 connections, (1 connection left, supply voltage, VDC, VAC, 1 connection right, low-level or fault indication) square-type plug.....1

Type of Plug Connector

* square-type plug acc. to DIN 43650 type A.....1
** bayonet plug, DIN 72585-1, 4-pole.....5

Electrical Connections

with socket, without cable*.....1
with socket, with 10m cable*.....5
with socket, with 10m ADR cable*.....6
with socket (bayonet), with 10m cable**.....7
with socket (bayonet), with 10m ADR cable**.....8

PCB

none, only connection circuit board.....0
PCB S3 for 12/24 VDC, programmable NO or NC contact, 1-5 cycles.....3
PCB S3 for 120 VAC, programmable NO or NC contact, 1-3 cycles for SSV 6/8, 1 cycle for SSV12/18.....3
PCB S3 for 230 VAC, programmable NO or NC contact, 1-3 cycles for SSV 6/8, 1 cycle for SSV12/18.....3

Accessory Kits: Inch Size Kits

SSV6/8 Part No. 550-36971-1
SSV12 Part No. 550-36971-2
SSV18 Part No. 550-36971-3

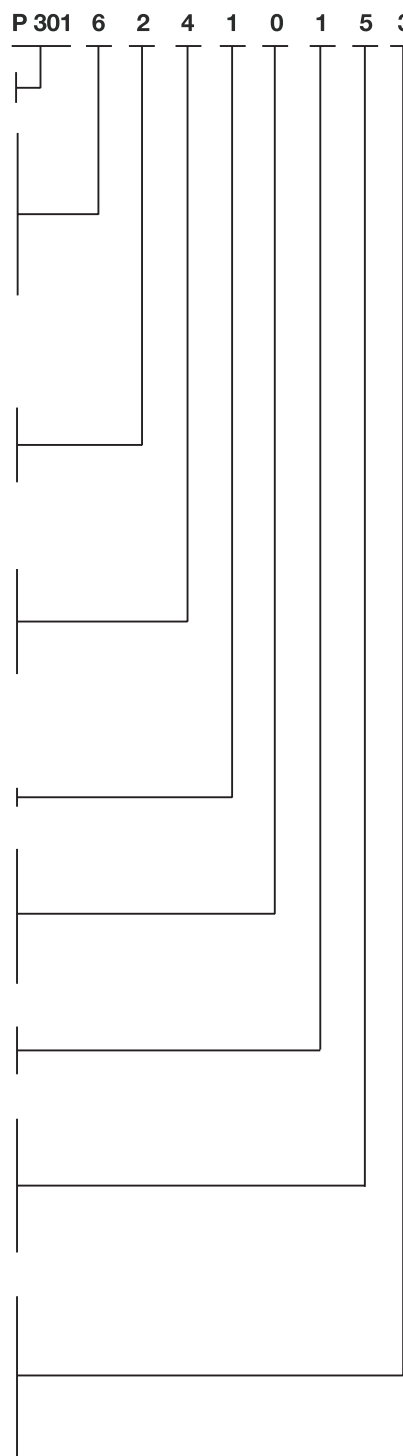
Metric Size Kits

SSV6/8 Part No. 550-36970-1***
SSV12 Part No. 550-36972-2***
SSV18 Part No. 550-36973-3***

* together with square-type plug only

** together with bayonet plug only

*** Lube fittings must be ordered separately



Pump QLS 401



The QLS 401 is a complete monitored lubrication system for up to 18 lubrication points. It is similar to the QLS 301, but incorporates a reservoir stirring paddle. The QLS family includes pumps available with or without a mounted SSV metering devices (valves) and are made for the standard high pressure plastic tubing. The 1 liter reservoir pumps are available in 12 or 24 VDC and 120 and 230 VAC. Refer to the pump selection guides for a complete listing of available pump configurations.

The pumps are available with integrated PCB for the control of pause and run times, or as an option without PCB.



QLS 401

Popular 401 Models for Lubrication

Model No.	Valve Type	Valve Mount	Voltage	Cable
P40131201153	SSV6	back	12 DC	10 m (30 ft)
P40131401153	SSV6	back	24 DC	10 m (30 ft)
P40142601113	SSV8	bottom	120 AC	none
P40142801113	SSV8	bottom	230 AC	none
P40161201153	SSV12	back	12 DC	10 m (30 ft)
P40161401153	SSV12	back	24 DC	10 m (30 ft)
P40162601113	SSV12	bottom	120 AC	none
P40162801113	SSV12	bottom	230 AC	none
P40191201153	SSV18	back	12 DC	10 m (30 ft)
P40191401153	SSV18	back	24 DC	10 m (30 ft)
P40192601113	SSV18	bottom	120 AC	none
P40192801113	SSV18	bottom	230 AC	none

Pump QLS 421



The QLS 421 is a complete lubrication system for up to 18 lubrication points. The QLS 421 is especially designed for the lubrication of truck trailers. The pump is only available with a mounted SSV metering device (valve). The pumps are made for standard high pressure plastic tubing. The 1 liter reservoir pumps are available in 12 or 24 VDC. Refer to the pump selection guides for a complete listing of available pump configurations.



QLS 421

Popular QLS 421 Models for Grease Lubrication of Trailers

Model No.	Valve Type	Valve Mount	Voltage	Cable
P42131210531	SSV6	back	12 DC	6 m (19 ft)
P42131410531	SSV6	back	24 DC	6 m (19 ft)
P42161210531	SSV12	back	12 DC	6 m (19 ft)
P42161410531	SSV12	back	24 DC	6 m (19 ft)
P42191210531	SSV18	back	12 DC	6 m (19 ft)
P42191410531	SSV18	back	24 DC	6 m (19 ft)

QLS 401 and 421 Pumps



QLS 401 and 421 Technical Data

Operating pressure	
QLS 401 / 421	max. 205 bar
Reservoir size	1 liter - clear plastic - with stirring paddle
Output per outlet & cycle	approx. 0,2 cm ³ (0,012 in ³)
Operating voltage	12 & 24 VDC / 120 & 230 VAC, 50 / 60 Hz (not for QLS 421)
Operating current	12 VDC / 2.0 A, 24 VDC / 1.0 A, 120 VAC / 1.0 A, 230 VAC / 0.5 A
Operating temperature	-25 to 70 °C
Schmierstoffe	
QLS 401/421	grease up to NLGI 2
Class of protection	IP 6K9K, NEMA 4
Number of outlets	1 to 18
Number of cycles or run time	
QLS 401	1-5 cycles for 12/24 VDC; 1-3 cycles for 120/230 VAC with SSV6 & 8 1 cycle for SSV12 & 18
QLS 421	1 to 32 minutes
QLS external control	max. 4 minutes
Pause times	
QLS 401	4 minutes to 60 hours for VDC versions; 20 minutes to 60 hours for VAC
QLS 421	1 hour to 16 hours
QLS external control	min. 4 minutes
Timer memory	indefinite (EEPROM)

Accessory Kits for QLS Systems

Part No.	Description	Type of Kit	Lube Fittings Included
550-36971-1	SSV6/8	inch	yes
550-36971-2	SSV12	inch	yes
550-36971-3	SSV18	inch	yes
550-36970-1	SSV6/8	metric	no
550-36970-2	SSV12	metric	no
550-36970-3	SSV18	metric	no

QLS 401 Identification Code



Pump Models Examples for Part Numbers

P40100800113
P40162400253

Pump 401 for Grease.....	P 401
SSV Divider Block	
External SSV 6, SSV 8 (or SSV and 18 without PCB).....	0
External SSV 12, SSV 18.....	1
SSV 6 back mounted.....	3
SSV 8 bottom mounted.....	4
SSV 12 ²	6
SSV 18 ²	9

² Note: for external metering device applications use only the appropriate SSV...KNQLS units. For pumps without a metering device it is only possible to switch off the system by technically modifying the PCB.

SSV Divider Block Mounting, Orientation of Divider Outlets	
Without divider block.....	0
Back mounted (vertical orientation).....	1
Bottom mounted ³ (horizontal orientation).....	2

³ Note: Not for use in mobile or machine applications exposed to vibrations - refer to the "safety instructions".

Operating Voltage	
12 VDC ¹	2
24 VDC ¹	4
120 VAC ¹ (only with PCB).....	6
230 VAC ¹ (only with PCB).....	8

¹ Note: Standard 120 & 230 VAC pumps for industrial applications are equipped without connection cable. Pumps for mobile applications (12/24 VDC) can be equipped with a 10 m cable.

Reservoir with & without Low-Level Control	
1 liter reservoir without low-level.....	0

Number of Possible Connectors	
1A = 1 connection, left, supply voltage, VDC, VAC, square-type plug	
.....	0
1A = 1 connection (bayonet), left, supply voltage, VDC, low-level or fault indication.....	2
2A = 2 connections, (1 connection left, supply voltage, VDC, VAC,	1
connection right low-level or fault indication) square-type plug	
.....	1

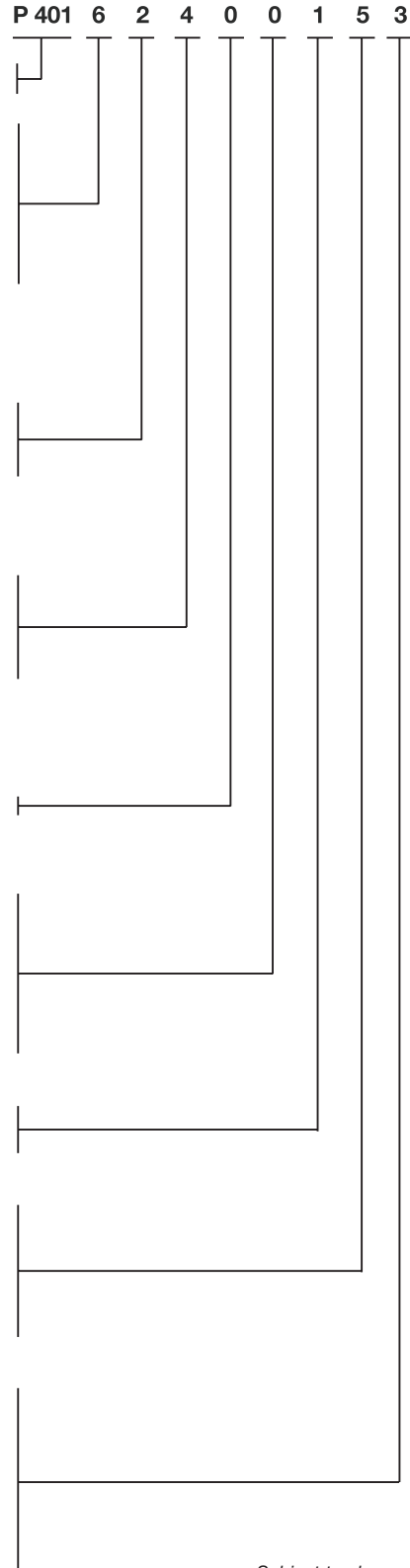
Type of Plug Connector	
* square-type plug acc. to DIN 43650 type A.....	1
** bayonet plug, DIN 72585-1, 4 ploe.....	5

Electrical Connections	
with socket, without cable*.....	1
with socket, with 10m cable*.....	5
with socket, with 10m ADR cable*.....	6
with socket (bayonet), with 10m cable*.....	7
with socket (bayonet), with 10m ADR cable*.....	8

PCB	
none, only connection circuit board.....	0
PCB S3 for 12/24 VDC, programmable NO or NC contact,	
1-5 cycles.....	3
PCB S3 for 120 VAC, programmable NO or NC contact,	
1-3 cycles for SSV 6/8, 1 cycle for SSV12/18.....	3
PCB S3 for 230 VAC, programmable NO or NC contact,	
1-3 cycles for SSV 6/8, 1 cycle for SSV12/18.....	3

* together with square-type plug only

** together with bayonet plug only



Subject to change

QLS 421 Identification Code



Pump Models Examples for Part Numbers

P42131402531
P42162402531

	P	4	2	1	6	2	4	0	2	5	3	1
Pump for grease.....P 421												
SSV Divider Block:												
SSV 6.....3												
SSV 12.....6												
SSV 18.....9												
SSV Divider Block Position, Outlet Orientation:												
back mount (vertical orientation).....1												
Operating Voltage												
12 VDC.....2												
24 VDC.....4												
Reservoir with and without Low Level												
1 liter reservoir without low-level.....0												
Number of Connection Possibilities												
1A = 1 connection (bayonet), left, supply voltage, VDC.....2												
Type of Plug Connector												
Bayonet connector, DIN 72585-1, 4 pole.....5												
Electrical Connectors												
with bayonet socket, 6 m cable.....3												
with bayonet socket, 6 m ADR cable.....4												
PCB												
with adjustable operating and pause time.....1												

203 Pumps



Pump 203

The 203 centralized lubrication pump is a powerful and robust compact multiline pump that can drive up to 3 elements and is used in progressive (Quicklub or Modular Lube) automated lubrication systems. They are perfect for mobile applications, small and medium sized machinery and general industries. Versatile, compact and economical, these pumps can be enhanced with low level control and printed circuit board that allow for controlling the lubrication cycles.

The family of 203 pumps includes 12 and 24 VDC and VAC pumps that automatically adjust to supply voltages from 94 – 265 VAC. They are available with 1, 2 or 3 elements in 5, 6 or 7 mm or with an adjustable output element. Reservoir sizes are 2, 4 and 8 liter. Refer to the pump selection guide for a complete listing of available pump configurations.

Popular Models

Part No.	Model	Power	Reservoir Capacity	Grease or Oil	Low-level	PCB
94012	P203-2XN-1K6-12-1A7.70-V20-A+SV	12 VDC	2	grease	no	yes
94024	P203-2XN-1K6-24-1A7.70-V20-A+SV	24 VDC	2	grease	no	yes
94212	P203-2XN-1K6-12-1A1.51-A+SV	12 VDC	2	grease	no	no
94224	P203-2XN-1K6-24-1A1.51-A+SV	24 VDC	2	grease	no	no
94412 C	P203-4XNBO-1K6-12-1A7.70-V20-A+SV	12 VDC	4	grease	no	yes
94424 C	P203-4XNBO-1K6-24-1A7.70-V20-A+SV	24 VDC	4	grease	no	yes
94812 C	P203-8XNBO-1K6-12-1A7.70-V20-A+SV	12 VDC	8	grease	no	yes
94824 C	P203-8XNBO-1K6-24-1A7.70-V20-A+SV	24 VDC	8	grease	no	yes
94222 C	P203-2XL-1K6-24-2A6.15M13-A-SV	24 VDC	2	grease	yes	yes
94422 C	P203-4XLBO-1K6-24-2A6.15M13-A+SV	24 VDC	4	grease	yes	yes
94822 C	P203-8XLBO-1K6-24-2A6.15M13-A+SV	24 VDC	8	grease	yes	yes
644-37426-1	*P203-2XN-1K6-24-2A1.10-V10	24 VDC	2	grease	no	yes
644-40716-2	*P203-2XNBO-1K6-AC-1A1.01-V10	AC	2	grease	no	yes
644-40717-5	*P203-2XNBO-1K6-AC-1A1.01	AC	2	grease	no	no
644-40583-3	*P203-2YLBO-1K6-24-1A1.01	24 VDC	2	oil	yes	no
644-40718-7	*P203-4XNBO-1K6-AC-1A1.01	AC	4	grease	no	no
644-40719-5	*P203-4XNBO-1K6-AC-1A1.01-V10	AC	4	grease	no	yes
644-40719-6	*P203-4YLBO-1K6-AC-1A1.01-V10	AC	4	oil	yes	yes
644-40718-1	*P203-4XLBO-1K6-AC-2A1.01	AC	4	grease	yes	no
644-40718-8	*P203-4YLBO-1K6-AC-1A1.01	AC	4	oil	yes	no
644-40718-5	*P203-4XLBO-1K7-AC-2A1.01	AC	4	grease	yes	no
644-40721-5	*P203-8XLBO-1K6-AC-2A1.01	AC	8	grease	yes	no
644-40762-2	*P203-8XLBO-1K6-AC-2A1.01-V10	AC	8	grease	yes	yes
644-40645-2	*P203-8YLBO-1K6-24-1A1.10	24 VDC	8	oil	yes	no
644-40550-4	*P203-8XLBO-1K7-24-2A1.01	24 VDC	8	grease	yes	no
644-40645-3	*P203-8XLBO-1K7-24-2A1.10	24 VDC	8	grease	yes	no

*These pumps do not include a pressure relief valve which must be ordered separately.

Dimensions

Size of Reservoir	Height	Width	Depth
2 l, standard	367 mm (14.4 in)	205 mm (8.1 in)	224 mm (8.8 in)
2 l, filling from top	403 mm (15.8 in)	205 mm (8.1 in)	224 mm (8.8 in)
2 l, flat	287 mm (11.3 in)	232 mm (9.1 in)	250 mm (9.8 in)
4 l	395 mm (15.6 in)	232 mm (9.1 in)	250 mm (9.8 in)
8 l	495 mm (19.5 in)	232 mm (9.1 in)	250 mm (9.8 in)

Accessories

Part No.	Description
600-26875-2	pump element with assy. piston ø 5 mm (K5)
600-26876-2	pump element with assy. piston ø 6 mm (K6)
600-26877-2	pump element with assy. piston ø 7 mm (K7)
600-28750-1	pump element with assy. piston for chisel paste (C7)
600-29185-1	pump element with assy. piston ø 7 mm (B7 = bypass element)
655-28716-1	adjustable pump element (KR)
624-28894-1	pressure relief valve SVTE-350-1/4 for 6 mm tube, 350 bar (5076 psi)
624-28892-1	pressure relief valve SVTE-270-1/4 for 6 mm tube, 270 bar (3916 psi)
624-28859-1	pressure relief valve SVTSV-270-1/4 with grease fitting for manual servicing, 1/8" NPT female supply line connection, 270 bar (3916 psi)
624-28891-1	pressure relief valve SVTE-200-1/4, for 6 mm tube, 200 bar (2900 psi)
624-28931-1	pressure relief valve with return to reservoir SVTSV-350-1/4 for 6 mm tube, 350 bar (5076 psi)
226-14105-5	required extension for pressure relief valve for 2 l flat, 4 l and 8 l reservoirs
244-14161-1	quick fill pump (no connecting parts)
638-37549-1	quick fill pump with straight connection fitting for 2 l reservoir
638-37548-1	quick fill pump with 90° connection fitting for 2 l reservoir
638-37561-1	quick fill pump with 90° connection fitting for 2 l flat, 4 l and 8 l reservoirs
233-13124-8	protective plug for quick fill pumps
233-13090-9	protective cap for quick fill pump
638-37549-2	quick fill pump and straight adapter for 4 l and 8 l reservoirs
538-36763-5	straight adapter for quick fill pump for 4 l and 8 l reservoirs
538-36763-4	90° adapter for quick fill pump for 4 l and 8 l reservoirs

Technical Data

operating pressure	350 bar (5076 psi)				
reservoir	2, 4, 8 liters - clear plastic / (122, 244, 488 in³) / 4, 8, 16 Lbs.				
output per element / min.	K5 mm	K6 mm	K7 mm	C7 mm (for chisel paste)	KR (adjustable)
	approx. 2 cm³/min (0.122 in³)	approx. 2.8 cm³/min (0.17 in³)	approx. 4 cm³/min (0.244 in³)	approx. 4 cm³/min (0.244 in³)	approx. 0.7 to 3 cm³/min (0.043 to 0.183 in³)
operating voltage	24 and 12 VDC / 95 to 265 VAC				
operating temperature	-25 to 75° C / -13 to 167° F				
lubricants	up to NGLI 2 / oil of at least 40 mm²/s				
class of protection	IP6K 9K acc. to DIN 40050 T9				
number of outlets	1, 2 or 3				
outlet thread	G 1/4 female (BSPP)				

223 Pumps without and 233 Pumps with Data Logger QuickData

The 233 centralized lubrication pump is a powerful and robust compact multi-line pump that can drive up to 3 elements and is used in progressive (Quicklub or Modular Lube) automated lubrication systems. The 233 is ideal for mobile applications, rental machines and construction machines. Versatile, compact and economical, this pump is enhanced with low-level control, printed circuit board MDF00 with attached data logger module and a keypad with display.

QuickData Displays

- 1 Current status and operating data
- 1 Malfunctions of the lubrication system with the time of occurrence
- 1 Remediying of the malfunction with date, time and duration of malfunction
- 1 Low-level signal of reservoir and regular refilling
- 1 Modifications in the pause time programming
- 1 Number of automatically and manually triggered lube cycles as well as the corresponding lubricant consumption
- 1 Power supply interruptions

All data can be read out by means of a laptop or p.d.a. via an integrated or separate IR interface. All indications enable the users to draw their conclusions regarding the condition, function, reliability, usability and duration of service of the machine or the device. All information can be analyzed and documented and is then available as a written protocol.



Pumpe 233

The family of 223/233 pumps includes 12 and 24 VDC pumps. They are available with 1, 2 or 3 elements in 5, 6 or 7 mm or with an adjustable output element. Reservoir sizes are 2, 4 or 8 liters. Refer to the pump identification code for a complete listing of available pump configurations.

223 Pumps without and 233 Pumps with Data Logger QuickData

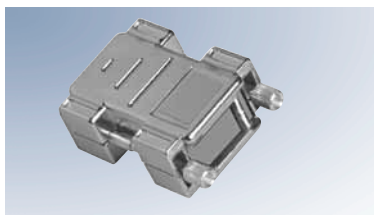


Models

Part No.	Model	Power	Reservoir Capacity			Grease	Low-Level Control	Printed Circuit Board
			Liters	In ³	Lbs.			
644-40866-1	P223-8YLBO-1K7-24-2A5.10-MF00	24 VDC	8	488	16	oil	yes	yes
644-46172-3	P223-2XN -1K6-24-2A6.15-MF00	24 VDC	2	122	4	grease	no	yes
644-40864-1	P223-2XLBO-1K7-24-2A5.10-MF00	24 VDC	2	122	4	grease	yes	yes
644-40864-2	P223-2XL -1K6-24-2A5.10-MF00	24 VDC	2	122	4	grease	yes	yes
644-46200-1	P223-8XLBO-1K6-24-2A6.15-MF00-A+SV	24 VDC	8	488	16	grease	yes	yes
644-40864-3	P223-2XLBO-1K6-24-2A5.10-MF00	24 VDC	2	122	4	grease	yes	yes
644-40824-1	P233-2XL-1K6-24-2A5.10-MDF00	24 VDC	2	122	4	grease	yes	yes
644-40824-2	P233-2XLBO-1K6-24-2A5.10-MDF00	24 VDC	2	122	4	grease	yes	yes
644-40826-1	P233-4XLBO-1K6-24-2A5.10-MDF00	24 VDC	4	244	8	grease	yes	yes
644-40827-1	P233-8XLBO-1K6-24-2A5.10-MDF00	24 VDC	8	488	16	grease	yes	yes

These pumps do not include a pressure relief valve which must be ordered separately.

Other technical data and dimensions are identical to the P203.



Infrared Interface

Accessories

designation	part no.
infrared interface	236-10127-1
diagnostic software	810-55291-1
piston detector	234-13188-2

Identification Code: P 203-VDC with/without PCB V10-V13, H



Examples of Model Designation

Note: All pumps that vary from the listed standard pumps can be built-up and ordered based on the valid identification code.

P203-	2	X	N	-	1	K6-	24-	1A	1.	10-	
P203-	4	X	N	BO	1	KR-	24-	2A	1.	01-	V12
P203-	2	X	N	-	2	K5-	12-	1A	1.	10-	H
P203-	8	X	N	BO	1	K6-	24-	1A	5.	14-	V13
P203-	4	Y	L	BO	1	K7-	24-	1A	1.	10-	V20
P203-	2	X	L	-	1	K6-	24-	1A	7.	16-	V10

Basic Pump Model
for Grease & Oil:
with 1-3 outlets and
VDC motor

Reservoir Design

2 = 2 l transparent plastic
4 = 4 l transparent plastic
8 = 8 l transparent plastic

X = reservoir for grease
Y = reservoir for oil

N = standard design
L = low-level control

w/o designation = standard 2 l, 4 l, 8 l

BO = filling from top
BF = reservoir with follower plate
FL = flat reservoir
(2 l only without low-level)

Pump Elements

1-3 = number of pump elements

K5 = piston diameter = 5 mm
K6 = piston diameter = 6 mm
K7 = piston diameter = 7 mm
KR = adjustable pump element
piston diameter = 7 mm
C7 = piston diameter = 7 mm**
B7 = piston diameter = 7 mm
(output of K5)
S7 = piston diameter = 7 mm
(food grade applications)

Operating Voltage:

12 VDC or 24 VDC

Number of Possible Connections:

1A = 1 connection (left), supply voltage ¹
1A = 1 connection (left), supply voltage ²
1A = 1 connection (left), supply voltage +
remote control for additional lubrication, low-level ³ ***
2A = 2 connections, supply voltage left ¹ + remote control for
additional lubrication, low-level (right) ¹ ***

Type of Connection:

1 = square type plug, without cable ¹
5 = bayonet plug, 4/3 pole, DIN 72585-1 ² (V10-V13, V20-V23, H)
(only for mobile applications)
7 = bayonet plug, 7/6 pole, DIN 72585-1 ³ (V10-V13, V20-V23)
(only for mobile applications)

Connection Outside of the Pump

01 = with socket-outlet, without cable ¹
10 = socket-outlet with 10 m cable ¹
11 = socket-outlet with 10 m ADR cable ¹ *
14 = bayonet socket with 10 m cable, 4/3 pole ² (V10-V13, V20-V23)
without level control and without remote control lubrication ***
16 = bayonet socket with 10 m cable, 7/6 pole ³ (V10-V13, V20-V23)
with level control or with remote control lubrication ***
17 = bayonet socket with 10 m ADR cable*, 4/3 pole ² (V10-V13, H)

PCB 12 VDC / 24 VDC

V10 - V13 with adjustable run/pause times^{1 2 3}

H = for trailer or semitrailers^{1 2}

no designation: pump without PCB^{1 2}

^{1 2 3} The numbers must correspond to the connector plugs / * for transport of hazardous goods/ ** C7 designation for chisel paste pump elements / *** low-level for oil; connection of low-level not taken into account

Identification Code: P 203-VDC with PCB M08-M23



Examples of Model Designation

Note: All pumps that vary from the listed standard pumps can be built-up and ordered based on the valid identification code.

P203-	2	X	L	-	1	K6-	24-	2A	6.	15-	M10
P203-	4	X	L	BO	1	KR-	24-	2A	6.	15-	M12
P203-	2	X	L	-	2	K5-	12-	2A	6.	15-	M12
P203-	8	X	L	BO	1	K6-	24-	2A	6.	15-	M08
P203-	4	Y	L	BO	1	K7-	12-	2A	6.	15-	M16
P203-	2	X	L	-	1	K6-	24-	2A	6.	15-	M23

Basic Pump Model
for Grease & Oil:
with 1-3 outlets and
VDC motor

Reservoir Design:

2 = 2 l transparent plastic
4 = 4 l transparent plastic
8 = 8 l transparent plastic

X = reservoir for grease
Y = reservoir for oil

N = standard design
L = low-level control

w/o designation = standard 2 or 8 l

BO = filling from top
FL = flat reservoir
(2 l only without low-level)

Pump Elements:

1-3 = number of pump elements

K5 = piston diameter = 5 mm
K6 = piston diameter = 6 mm
K7 = piston diameter = 7 mm
KR = adjustable pump element,
(piston diameter = 7 mm)
B7 = piston diameter = 7 mm
(output of K5)
S7 = piston diameter = 7 mm
(food grade applications)

Operating Voltage:

12 VDC 24 VDC

Number of Possible Connections:

2A = 2 connections, supply voltage (left) +
remote control for additional lubrication,
Low-level (right)³ *** and piston detector (right)⁴

Type of Connection:

6 = bayonet plug, 7/5 pole, DIN 72585-1³, (M08-M23)

Connection Outside of the Pump:

15 = bayonet socket with 10 m cable, 7/5 core³, M08-M23

PCB 12 / 24 VDC:

M08-M23 = with microprocessor³ (various setting
possibilities, see jumper setting combinations)

³ The number must correspond to the connector plugs

⁴ Piston detector, 4 pole

*** Low-level for oil; connection of low-level not taken into account

Subject to change

Identification Code: P 203-VAC with/without PCB V10-V13, V20-V24



Examples of Model Designation

Note: All pumps that vary from the listed standard pumps can be built-up and ordered based on the valid identification code.

P203-	2	X	N	-	1	K6-	AC-	1A	1.	01-	V10
P203-	4	X	L	BO	1	KR-	AC-	2A	1.	01-	V12
P203-	2	X	N	-	2	K5-	AC-	1A	1.	01-	
P203-	8	X	L	BO	1	K6-	AC-	2A	5.	14-	V11
P203-	4	Y	L	BO	1	K7-	AC-	1A	1.	01-	V20
P203-	2	X	L	-	1	K6-	AC-	2A	7.	16-	V10

P203, P203 UL²
Basic Pump Model
for Grease & Oil:
with 1-3 outlets and
VDC motor

Reservoir Design:

2 = 2 l transparent plastic
4 = 4 l transparent plastic
8 = 8 l transparent plastic

X = reservoir for grease
Y = reservoir for oil

N = standard design
L = low-level control

w/o designation = standard 2 or 8 l:

BO = filling from top
FL = flat reservoir
(2 l only without low-level)

Pump Elements:

1-3 = number of pump elements

K5 = piston diameter = 5 mm
K6 = piston diameter = 6 mm
K7 = piston diameter = 7 mm
KR = adjustable pump element
piston diameter = 7 mm
B7 = piston diameter = 7 mm
(output of K5)
S7 = piston diameter = 7 mm
(food grade applications)

Operating Voltage:

AC = 110-240 VAC +/- 10%, 50-60 Hz +/- 5%
(with 24 VDC motor)

Number of Possible Connections:

1A = 1 connection, supply voltage (only square plug)
left bottom¹
2A = 2 connections, supply voltage (only square plug)
left bottom¹, either low-level only (square plug)
right bottom¹ or (bayonet) left top², or illuminated push
button + low-level (bayonet), left top³

Type of Connection:

1 = square type plug (DIN 43650, Type A)¹
5 = bayonet plug, 4/3 pole², DIN 72585-1
7 = bayonet plug, 7/6 pole³, DIN 72585-1

Connection Outside of the Pump:

01 = with socket, without cable¹
14 = bayonet socket with 10 m cable, 4/3 core², V10-V13, V20-V23,
connection for low-level without illuminated push button
16 = bayonet socket with 10 m cable, 7/6 core³, V10-V13, V20-V23,
connection for low-level and illuminated push button

PCB 12 / 24 VDC:

V10-V13 = with adjustable run/pause time
V20-V23 = with adjustable run/pause time (USA)
no designation = pump without PCB

^{1 2 3} The numbers must correspond to the connector plugs

Identification Code: P 203-VAC with PCB M08-M23



Examples of Model Designation

Note: All pumps that vary from the listed standard pumps can be built-up and ordered based on the valid identification code.

P203-	2	X	L	-	1	K6-	AC-	3A	6.	15-	M08
P203-	4	X	L	BO	1	KR-	AC-	3A	6.	15-	M12
P203-	2	X	L	-	2	K5-	AC-	3A	6.	15-	M23
P203-	8	X	L	BO	1	K6-	AC-	3A	6.	15-	M09
P203-	4	Y	L	BO	1	K7-	AC-	3A	6.	15-	M20
P203-	2	X	L	-	1	K6-	AC-	3A	6.	15-	M10

P203, P203 UL²
Basic Pump Model
for Grease & Oil:
with 1-3 outlets and
VDC motor

Reservoir Design:

2 = 2 l transparent plastic
4 = 4 l transparent plastic
8 = 8 l transparent plastic

X = reservoir for grease
Y = reservoir for oil
L = low-level control

w/o designation = standard 2 or 8 l:

BO = filling from top
FL = flat reservoir
(2 l only without low-level)

Pump Elements:

1-3 = number of pump elements

K5 = piston diameter = 5 mm
K6 = piston diameter = 6 mm
K7 = piston diameter = 7 mm
KR = adjustable pump element
piston diameter = 7 mm
B7 = piston diameter = 7 mm
(output of K5)
S7 = piston diameter = 7 mm
(food grade applications)

Operating Voltage:

AC = 110-240 VAC +/- 10%, 50-60 Hz +/- 5%
(with 24 VDC motor)

Number of Possible Connections:

3A = 3 connections, supply voltage (square plug only)
left bottom, illuminated push button + low-level (bayonet plug)
left bottom and piston detector (bayonet plug) right top

Type of Connection:

1 = square type plug (DIN 43650, Type A)
6 = bayonet plug, 7/5 pole, DIN 72585-1

Connection Outside of the Pump:

15 = bayonet socket with 10 m cable, 7/5 core

PCB 12 / 24 VDC:

M08-M23 = with microprocessor (various settings, see jumper configurations)

Subject to change

Identification Code: P 223 and P 233 - VDC



Examples of Model Designation

Note: All pumps that vary from the listed standard pumps can be built-up and ordered based on the valid identification code.

P223-	2	X	L	-	1	K6-	24-	2A	6.	15-	MF00
P233-	4	X	L	BO	1	KR-	24-	2A	6.	15-	MDF00
P223-	2	X	L	-	2	K5-	12-	2A	6.	15-	MF00
P223-	8	X	L	BO	1	K7-	24-	2A	6.	15-	MF00
P233-	2	X	L	-	1	K6-	24-	2A	6.	15-	MDF00

Basic Pump Model
for Grease:
with 1 – 3 outlets and
12 / 24 VDC motor
P 223 = Pump w/o Data Logger
P 233 = Pump w. Data Logger

Reservoir Design:
2 = 2 l transparent plastic
4 = 4 l transparent plastic
8 = 8 l transparent plastic

X = reservoir for grease

L = low-level

w/o designation = standard 2 or 8 l:

BO = filling from top

Pump Elements:
1-3 = number of pump elements

K5 = piston diameter = 5 mm
K6 = piston diameter = 6 mm
K7 = piston diameter = 7 mm
KR = adjustable pump element
piston diameter = 7 mm
B7 = piston diameter = 7 mm
(output of K5)
S7 = piston diameter = 7 mm
(food grade applications)

Operating Voltage
12 VDC 24 VDC

Number of Possible Connections:
2A = 1 connection (left) for supply voltage, external illuminated
push button for additional cycle and fault indication,
low-level + 2nd connection (right) for piston detector¹

Type of Connection:
1 = bayonet plug, 7/5 pole, DIN 72585-1

Connection Outside of the Pump:
15 = bayonet socket with 10 m cable, 7/5 core

PCB 12 / 24 VDC:
MF00 = with microprocessor and touch pad
MDF00 = with microprocessor, data logger and touch pad
¹ Piston detector, bayonet plug 4 pole

Identification Code: P 223 and P 233 - VAC



Examples of Model Designation

Note: All pumps that vary from the listed standard pumps can be built-up and ordered based on the valid identification code.

P223-	2	X	L	-	1	K6-	AC-	3A	6.	15-	MF00
P233-	4	X	L	BO	1	KR-	AC-	3A	6.	15-	MDF00
P223-	2	X	L	-	2	K5-	AC-	3A	6.	15-	MF00
P223-	8	X	L	BO	1	K7-	AC-	3A	6.	15-	MF00
P233-	2	X	L	-	1	K6-	AC-	3A	6.	15-	MDF00

Basic Pump Model

for Grease:

with 1 – 3 outlets and
12 / 24 VDC motor

P 223 = pump w/o data logger

P 233 = pump w. data logger

Reservoir Design:

2 = 2 l transparent plastic

4 = 4 l transparent plastic

8 = 8 l transparent plastic

X = reservoir for grease

L = low-level control

w/o designation = standard 2 or 8 l:

BO = filling from top

FL = flat reservoir
(2 l only without low-level,
not for oil)

Pump Elements:

1-3 = number of pump elements

K5 = piston diameter = 5 mm

K6 = piston diameter = 6 mm

K7 = piston diameter = 7 mm

KR = adjustable pump element
piston diameter = 7 mm

B7 = piston diameter = 7 mm
(output of K5)

S7 = piston diameter = 7 mm
(food grade applications)

Operating Voltage:

AC = 110–240 VAC +/- 10%, 50–60 Hz +/- 5%
(with 24 VDC motor)

Number of Possible Connections:

3A = 3 connections, supply voltage (square type plug only)
left bottom, illuminated push button + low-level
(bayonet plug) left top and piston detector
(bayonet plug) right top

Type of Connection:

1 = square plug (DIN 43650, Type A)

6 = bayonet plug, 7/5 pole, DIN 72585-1

Connection Outside of the Pump:

00 = without connection socket and without cable (special)

15 = bayonet socket with 10 m cable, 7/5 core, connection
for low-level and illuminated push button.

PCB 12 / 24 VDC:

MF00 = with microprocessor and touch pad

MDF00 = with microprocessor, data logger and touch pad

Subject to change

205 Pumps



Pump205

The 205 centralized lubrication pump is a high pressure multi-line pump that can drive up to 5 elements and is used in progressive automated lubrication systems. It is capable of handling direct supply of lubrication points or as a central lubrication pump in larger progressive systems.

The design of the drive and eccentric shaft, the high efficiency worm gear, a minimal number of parts, and the multi-range motor, provide the 205 pump with several advantages. The 205 pumps are available with a three-phased flange mount and multi-range motor for 380-420 volts at 50 Hz or 440-480 volts at 60 Hz, or with a free shaft end for use with other motors. Various gear ratios and reservoir sizes, with or without level control are available. The reservoir, available in 4, 5 or 8 liter sizes, is suitable for both grease and oil.

Popular 205 Models

Part No.	Description	Motor	Gear Ratio	Reservoir Size			Level Control	Number of Elements (Size)
				Liters	In ³	Lbs.		
655-40655-9	P205-M280-4XYN-4K6-380/420-440/480	3-phase	280:1	4	244	8	no	4 (6 mm)
655-40654-2	P205-M070-5XYN-1K7-380-420/440-480	3-phase	70:1	5	305	10	no	1 (7 mm)
655-40655-3	P205-M280-5XYBU-1K6-380-420/440-480	3-phase	280:1	5	305	10	yes	1 (6 mm)
655-40673-2	P205-M070-8XYBU-1K6-380-420/440-480	3-phase	70:1	8	488	16	yes	1 (6 mm)
655-40704-2	P205-M070-5XYN-4K6-380-420/440-480	3-phase	70:1	5	305	10	no	4 (6 mm)

These pumps do not include a pressure relief valve which must be ordered separately.

Accessories

Part No.	Description
624-29056-1	relief valve SVEVT-350-G 1/4" for 6 mm tube
624-29054-1	relief valve SVEVT-350-G 1/4" for 8 mm tube
304-17571-1	filling connection G 1/4" female* (BSPP)
304-17574-1	filling connection G 1/4" female* (BSPP)
600-26875-2	pump element with assy. piston ø 5 (K5)
600-26876-2	pump element with assy. piston ø 6 (K6)
600-26877-2	pump element with assy. piston ø 7 (K7)
600-26178-1	adjustable pump element (KR)

** Filling connector is for vacant outlet ports.*

Technical Data

number of outlets	1 - 5			
threaded connection	G 1/4 female (BSPP)			
maximum operating pressure	350 bar (5076 psi)			
suitable lubricants	grease up to NGLI 2 NGLI 3 on request oil with viscosity of min. 20 mm ² /s			
lubricant output per piston stroke	5 mm 0.11 cm ³ (0.0068 in ³)	6mm 0.16 cm ³ (0.0098 in ³)	7 mm 0.23 cm ³ (0.014 in ³)	Adjustable 0.04 - .18 cm ³ (0.002 to 0.011 in ³ /min)
lubricant output per hour (output increases by 20% for 60 Hz applications)	ratio	70:1	280:1	700:1
	piston dia. 5 mm	115 cm ³ (7.01 in ³)	29 cm ³ (1.77 in ³)	11 cm ³ (0.67 in ³)
	piston dia. 6 mm	172 cm ³ (10.50 in ³)	43 cm ³ (2.62 in ³)	17 cm ³ (1.04 in ³)
	Piston dia. 7 mm	253 cm ³ (15.44 in ³)	63 cm ³ (3.84 in ³)	25 cm ³ (1.52 in ³)
	adjustable	46-200 cm ³ (2.8-12.2 in ³)	11.5 - 52 cm ³ (0.70-3.17 in ³)	5 - 22 cm ³ (0.31-1.34 in ³)
operating temperature	-20 to 70° C (-4 to 158° F)			
level control	ultrasonic sensor for low and high-level control (optional)			

Dimensions

Reservoir Size	Height	Width	Depth
8 liters (plastic) (with low-level control)	507 mm (20 in)	280 - 360 mm (11 - 14 in) depending on version	227 - 300 mm (9 - 12 in) depending on version
4 liters (plastic) (with low-level control)	406 mm (16 in)		
5 liters (metal) (with low-level control)	435 mm (17 in)		

Identification Code Pump Models 205



The complete pump unit is defined by a type code on the nameplate.

Examples of Type Codes:	Description
P205-	M 070- 4XYN- 5 K6- 380-420 / 440-480
P205-	M 070- 5XYN- 1 K7- 380-420 / 440-480
P205-	F 280- 4XYBU- 1 K7- 380-420 / 440-480
P205-	M 700- 8XYBU- 2 KR- 380-420 / 440-480

Basic Type (Housing Assembly):

P205 = housing assembly for all pump models

Drive Assembly:

M = three-phase flanged motor
the motor designation with extension e.g. for voltages, frequencies, explosion-proof design is added to the type code

F = free shaft end

280 = gear ratio $i = 1 : 280$
700 = gear ratio $i = 1 : 700$
070 = gear ratio $i = 1 : 70$

Reservoir Assembly:

4 = 4 l plastic reservoir
5 = 5 l sheet metal reservoir
8 = 8 l plastic reservoir
XY = reservoir for grease and oil
N = reservoir without level control
BU = reservoir with low and high-level control (ultrasonic sensor)

Note: The ultrasonic sensor is equipped with 2 switching points. If only one low-level control is desired, the corresponding contacts must be connected. A 24 VDC supply voltage is required for the sensor.

Pump Element Assembly:

1 to 5 = number of the pump elements
5, 6, or 7 = piston diameter (mm)
KR = pump element adjustable, piston diameter 7 mm

Extensions for the Motor Designation:

380 – 420,
440– 480 = standard multi-range motor for 380 – 420 V / 50 Hz and 440 – 480 V / 60 Hz
000 = pump without motor, however with connecting flange

215 Pumps



Pump 215

The 215 centralized lubrication pump is a high-pressure multi-line pump that can drive up to 15 adjustable pump elements and is used in progressive automated lubrication systems. It is capable of handling direct supply of lubrication points or as a central lubrication pump in large sized progressive systems.

215 pumps are available with a three-phased multi-range motor for 380–420 volts at 50 Hz or 440–480 volts at 60 Hz, with a single-range 500 volt, 50 Hz motor, with a free shaft end for use with other motors, or with an oscillating drive. Various gear ratios and reservoir sizes, with or without level control are available. The reservoir, available in 4, 8, 10 or 30 liter sizes, is suitable for both grease and oil.

Popular 215 Models

Part No.	Description	Motor	Gear Ratio	Reservoir Size			Level Control	Number of Elements (Size)
				Liters	In ³	Lbs.		
660-40707-1	P215-M100-30XYBU-13K7-380-420/440-480	3-phase	100:1	30	1830	60	yes	13 (7 mm)
660-40724-4	P215-M490-10XYBU-2K7-380-420/440-480	3-phase	490:1	10	610	20	yes	2 (7 mm)
660-40729-4	P215-M100-10XYBU-1K6-380-420/440-480	3-phase	100:1	10	610	20	yes	1 (6 mm)
660-40751-1	P215-M100-10XYBU-6K7-380-420/440-480	3-phase	100:1	10	610	20	yes	6 (7 mm)
660-40569-7	P215-F049-30XYN-13K7-000	free shaft end, no motor	49:1	30	1830	60	no	13 (7 mm)
660-40751-6	P215-M100-10XYBU-2K6-380-420/440-480	3-phase	100:1	10	610	20	yes	2 (6 mm)

These pumps do not include a pressure relief valve which must be ordered separately.

Accessories

Part No.	Description	Tube Diameter	Pressure
624-25478-1	relief valve	6 mm tube via T-fitting	200 bar (2900 psi)
624-25479-1	relief valve	6 mm tube via T-fitting	350 bar (5076 psi)
624-25480-1	relief valve	8 mm tube via T-fitting	200 bar (2900 psi)
624-25481-1	relief valve	8 mm tube via T-fitting	350 bar (5076 psi)
624-25482-1	relief valve	10 mm tube via T-fitting	200 bar (2900 psi)
624-25483-1	relief valve	10 mm tube via T-fitting	350 bar (5076 psi)
304-17571-1	filling connector G 1/4" female* (BSPP)		
304-17574-1	filling connector G 1/2" female* (BSPP)		
600-25047-3	pump element K7		
600-25046-3	pump element K6		

* For vacant outlet ports

215 Pumps



Technical Data

number of outlets	1 - 15				
threaded connection	G 1/4 female (BSPP)				
maximum operating pressure	350 bar (5076 psi)				
suitable lubricants	Grease up to NGLI 2 NGLI 3 on request oil with viscosity of min. 20 mm ² /s				
max. lubricant output per piston stroke (adjustable from max. to 25%)	6 mm		7 mm		
	0.04 – 0.16 cm ³ (0.0025 – 0.010 in ³)		0.057 – 0.23 cm ³ (0.0035 – 0.014 in ³)		
approx. max lubricant output per hour (output increases by 20% for 60 Hz applications)	ratio:	490:1	100:1	49:1	7:1 (available only for free shaft end or oscillating drive)
	piston dia. 6 mm	27 cm ³ (1.6 in ³)	132 cm ³ (8.0 in ³)	268 cm ³ (16.4 in ³)	
	piston dia. 7 mm	39 cm ³ (2.4 in ³)	189 cm ³ (11.5 in ³)	386 cm ³ (23.5 in ³)	
operating temperature	-20 to 70° C (-4 to 158° F)				
level control	ultrasonic sensor for low and high-level control (optional)				

Dimensions

Reservoir Size	Height	Width	Depth
4 liters* (without low-level control)	438 mm (17.25 in)	411 – 453 mm (16 – 18 in) depending on version	326 mm (13 in)
8 liters* (without low-level control)	539 mm (21.25 in)		
10 liters** (without low-level control)	520 mm (20.50 in)		
30 liters** (without low-level control)	760 mm (30.00 in)		
low-level sensor	30 mm (1.2 in)	125 mm (4.9 in)	65 mm (2.6 in)

* transparent plastic

** metal

230 Pump

The 230 pump is a derivative of the 215 multi-line pump. The 230 pump can drive up to 30 adjustable

pump elements. As a result of the increased number of possible pump elements, a 0.25 kW motor

is used. All other technical specifications, including accessories, are equivalent to the 215 pump.

Popular 203 Models

Part No.	Description	Motor	Gear Ratio	Reservoir Size (liter)	Level Control	Number of Elements (Size)
		3-phase	100:1	30 (7,9 gal)	yes	30 (7 mm)
		3-phase	100:1	30 (7,9 gal)	yes	17 (7 mm)

Dimensions

Height	Width	Depth
831 mm (32,7 in)	463 mm (18,2 in)	328 mm (12,9 in)

Identification Code Pump 215



The complete pump unit is defined by a type code on the nameplate.

Examples of Type Codes:	Description					
P215-	M	490-	10XYBU-	5 K6-	380-420 / 440-480,500	
P215-	F	100-	30XYN-	1 K7-		
P215-	P	007-	8XYN-	1 K7-		
P215-	M	049-	10XYBU-	2 KR-		
						000
Basic Type (Housing Assembly):						
P215	= housing assembly for all pump models					
Drive Assembly:						
M	= three-phase flanged motor the motor designation with extension e.g. for voltages, frequencies, explosion-proof design is added to the type code					
F	= free shaft end					
P	= oscillating drive					
490	= gear ratio i = 1 : 490					
100	= gear ratio i = 1 : 100					
049	= gear ratio i = 1 : 49					
007	= gear ratio i = 1 : 7 (only for F and P)					
Reservoir Assembly:						
4	= 4 l plastic reservoir					
8	= 8 l plastic reservoir					
10	= 10 l sheet metal reservoir					
30	= 30 l sheet metal reservoir					
XY	= reservoir for grease and oil					
N	= reservoir without level control					
BU	= reservoir with low- and high-level control (ultrasonic sensor)					
<i>Note: The ultrasonic sensor is equipped with 2 switching points. If only one low-level control is desired, the corresponding contacts must be connected. A 24 VDC supply voltage is required for the sensor.</i>						
Pump Element Assembly:						
1 to 15	= number of the pump elements					
K6 or K7	= piston diameter (mm)					
Extensions for the Motor Designation:						
380 - 420,						
440 - 480	= standard multi-range motor for 380 - 420 V / 50 Hz and 440 - 480 V / 60 Hz					
500	= single-range motor for network rated voltages 500 V / 50 Hz					
000	= pump without motor, however with connecting flange					

Hydraulic Tool Lubrication Pump HTL101



The HTL101 pump is a hydraulically driven centralized lubrication pump. It is used mainly for the lubrication of hydraulic hammers. However, it can also be used for the lubrication of other hydraulically driven devices.

As a compact small-sized pump, the HTL101 is ideal for being mounted directly on the hammer or any other attached devices. The drive is effected via the hydraulic system of the carrier device. While the hammer or any other attached device operates, the pump continuously supplies lubricants such as chisel paste or greases up to NLGI class 2 to the connected lube point(s).

The pump is provided with lubricant by means of an exchangeable 400 g cartridge. The red follower piston in the cartridge serves as a visual control of the grease level. When the follower piston reaches the low-level position (control window), the cartridge must be replaced.

The pump output can be controlled via an adjustable fine throttle and can therefore be adopted to most hammer sizes.

The function of the pump can be checked by observing whether the eccentric shaft turns or whether the grease-level position of the follower piston changes.



HTL 101 Pump

The pump is suitable for operating at ambient temperatures down to -25° C (-13° F) as well as under water (10 m or 32.8 feet).

Technical Data

output	0.22 cm ³ /rotation	0.13 in ³ /rotation
operating temperature	- 25° C to 80° C	- 13° F to 176° F
factory setting	4 rpm (setting range 2-20 rpm)	4 rpm
setting of pressure relief valve	120 bar (grease pressure)	1740 psi
max. hydraulic pressure	250 bar	3626 psi
min. hydraulic pressure	100 bar	1450 psi
oil pressure connector	M 16 x 1.5 mm	
oil return line connector	M 16 x 1.5 mm	
feed line connection	G 1/4	
feed line connections	3 different outlets (top, bottom, back)	

Dimensions

Height (Cartridge Included)	Width	Depth
302 mm (11.9 in)	173 mm (6.8 in)	85 mm (3.4 in)
302 mm (11.9 in)	173 mm (6.8 in)	85 mm (3.4 in)



HTL Cartridge

Popular HTL101 Models

Part No.	Model	Cartridge Capacity		Grease
		cm ³	In ³	
642-40950-1	HTL101	400	24.4	grease or chisel paste

Popular HTL cartridges

Part No.	
642-37631-1	5 packages with 12 cartridges chisel paste
642-37632-1	10 packages with 12 cartridges chisel paste
642-37609-2	1 packages with 12 cartridges grease

Multi-line and Progressive Systems

SSV Metering Devices



SSV Metering Devices

SSV progressive metering devices are piston-type metering devices which reliably dispense the lubricant volume fed to the inlet in predetermined single quantities.

By closing one outlet, the lubricant is fed to the next outlet below. This combining of outlets provides a large variety of metering possibilities. Additionally the internal porting avoids cumbersome external T-fittings. A special feature of the progressive metering device is that a previous feed line must supply lubricant before the next

one can be supplied. This makes the progressive system easy to visually or electrically monitor. It is available with 6 to 22 outlets and can be used for greases up to NLGI 2 or oils of at least 40 mm²/s.

Lincoln progressive metering devices in block design have no defect-prone rubber seals. They can therefore be used with no problem at high differential pressure (up to 100 bar between two outlets) and for a wide range of temperatures. The maximum operating pressure is 350 bar.

Advantages

- 1 No rubber seals
- 1 Single block design
- 1 Internal combining of outlets
- 1 Exact lubricant metering
- 1 Easy to monitor
- 1 Fault-free replacement: should a metering device be exchanged, connection and output or adjustment errors are avoided
- 1 High operating pressure

Models

No Monitoring

Inlet Size: R 1/8" Female (BSPP)			Number of Outlets	Inlet Size: 1/8" NPT Female	
Carbon Steel	303 Stainless Steel (VA 1.4305)	316Ti Stainless Steel (VA 1.4571)		Carbon Steel	303 Stainless Steel (VA 1.4305)
619-26473-1	619-27471-1	619-27824-1	6	619-27121-1	619-27792-1
619-25730-2	619-27473-1	619-27825-1	8	619-26396-2	619-27796-1
619-26841-1	619-27475-1	619-27889-1	10	619-26844-1	619-27800-1
619-25731-2	619-27477-1	619-27900-1	12	619-26398-2	619-27804-1
619-28862-1	619-29063-1		14		
619-28863-1	619-29064-1		16		
619-28864-1	619-29065-1		18		
619-28865-1	619-29066-1		20		
619-28866-1			22		

SSV Metering Devices



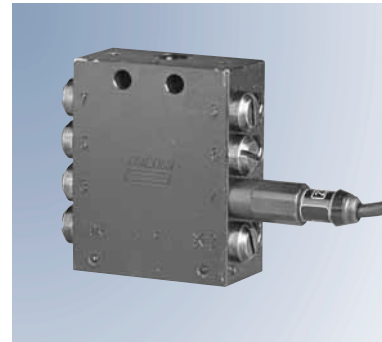
SSV6-K with Indicator Pin

Indicator Pin (K)

For Visual Monitoring

Inlet Size: R 1/8" Female (BSPP)			Number of Outlets	Inlet Size: 1/8" NPT Female	
Carbon Steel	303 Stainless Steel (VA 1.4305)	316Ti Stainless Steel (VA 1.4571)		Carbon Steel	303 Stainless Steel (VA 1.4305)
619-26474-3	619-27471-1	619-27824-1	6	619-27122-1	619-27793-1
619-25754-4	619-27473-1	619-27825-1	8	619-26646-2	619-27797-1
619-26842-2	619-27475-1	619-27889-1	10	619-26845-2	619-27801-1
619-25755-4	619-27477-1	619-27900-1	12	619-26648-2	619-27805-1
619-28871-1	619-29063-1		14	619-28899-1	
619-28872-1	619-29064-1		16	619-28900-1	
619-28873-1	619-29065-1		18	619-28901-1	
619-28874-1	619-29066-1		20	619-28902-1	
619-28875-1			22		

SSV Metering Devices



SSV8-N with Piston Detector

SSV with Piston Detector (N)

For Electrical Monitoring. Standard Cable Length: 3 m (10')

Inlet Size: G 1/8" Female (BSPP)		Number of Outlets	Inlet Size: 1/8" NPT Female
Carbon Steel	303 Stainless Steel (VA 1.4305)		Carbon Steel
619-28257-1	619-29003-1	6	619-28653-1
619-28258-1		8	619-28654-1
619-28259-1	619-28529-1	10	
619-28260-1	619-29004-1	12	
619-28890-1		14	
619-28907-1		16	
619-28957-1		18	
619-28935-1		20	
619-29015-1		22	

Piston detector is also available with plug version – ask your Lincoln representative.

Technical Data

number of outlets	6 to 22
maximum operating pressure	350 bar (5076 psi)
maximum differential pressure	100 bar (1450 psi)
metered volume per outlet	
and per stroke	0.2 cm ³ (0.012 in ³)
outlet thread	M 10 x 1 (must use Lincoln outlet fittings)
materials available	1 steel, surface zinc-iron-coated, black chromed 1 stainless steel (1.4305) 1 stainless/acid proof steel for SSV6-12 (1.4571)
operating temperature	-25 to 70° C (- 13 to 158° F)

Note: Never close outlets 1 & 2!

Dimensions

No. of Outlets	Height	Width	Depth
6	60 mm (2.4 in)	60 mm (2.4 in)	30 mm (1.2 in)
8	75 mm (3.0 in)		
10	90 mm (3.6 in)		
12	105 mm (4.2 in)		
14	120 mm (4.8 in)		
16	135 mm (5.4 in)		
18	150 mm (6.0 in)		
20	165 mm (6.6 in)		
22	180 mm (7.2 in)		

SSV-D with Metering Screws



SSV-D metering devices are adjustable per outlet pair. The metering occurs within the metering block via metering screws that are available in different sizes. The output of the progressive metering device can be easily changed, even after installation.

One or more outlet pairs of the metering device can be internally combined to achieve greater lubricant requirements. The primary function of the SSV remains unchanged in the SSV-D.

The dimensions of the SSV-D metering device have been changed from the standard SSV in order to allow for the same

thread sizes. As a result, both metering device types use the same components such as piston detector and piston-side closure plugs.

The SSV-D offers greater metering range flexibility. The SSV-D can be integrated into systems using standard SSV metering devices.

- 1 The adjustable SSV-D metering devices are available in the standard sizes from 6 to 22 outlets – using Lincoln's single-block technology.
- 1 Metering screws can be pre-assembled or supplied as a separate set.



SSVD 12

- 1 Metering screws per outlet pair are available in 10 sizes – 0.08cm³, 0.14cm³, 0.2cm³, 0.3cm³, 0.4cm³, 0.6cm³, 0.8cm³, 1.0cm³, 1.4cm³, and 1.8cm³ per outlet and stroke.

Standard with R 1/8" BSP inlet

Part No.	Description
649-29485-1	SSVD 6
649-29486-1	SSVD 8
649-29487-1	SSVD 10
649-29488-1	SSVD 12
649-29489-1	SSVD 14
649-29587-1	SSVD 16
649-29588-1	SSVD 18
649-29589-1	SSVD 20
649-29590-1	SSVD 22

Standard with piston detector

Part No.	Description
649-29495-1	SSVD 6-.-.....N
649-29496-1	SSVD 8-.-.....N
649-29497-1	SSVD 10-.-.....N
649-29498-1	SSVD 12-.-.....N
649-29499-1	SSVD 14-.-.....N
649-29611-1	SSVD 16-.-.....N
649-29612-1	SSVD 18-.-.....N
649-29613-1	SSVD 20-.-.....N
649-29614-1	SSVD 22-.-.....N

Metering device with outlets 1 & 2 together USA

Part No.	Description
649-29540-1	SSVD 6/5
649-29541-1	SSVD 8/7
649-29542-1	SSVD 10/9
649-29543-1	SSVD 12/11
649-29544-1	SSVD 14/13
649-29631-1	SSVD 16/15
649-29632-1	SSVD 18/17
649-29633-1	SSVD 20/19
649-29634-1	SSVD 22/21

Metering device with outlets 1 & 2 together

Part No.	Description
649-29490-1	SSVD 6/5
649-29491-1	SSVD 8/7
649-29492-1	SSVD 10/9
649-29493-1	SSVD 12/11
649-29494-1	SSVD 14/13
649-29591-1	SSVD 16/15
649-29592-1	SSVD 18/17
649-29593-1	SSVD 20/19
649-29594-1	SSVD 22/21

Standard with 1/8" NPT inlet USA

Part No.	Description
649-29535-1	SSVD 6
649-29536-1	SSVD 8
649-29537-1	SSVD 10
649-29538-1	SSVD 12
649-29539-1	SSVD 14
649-29627-1	SSVD 16
649-29628-1	SSVD 18
649-29629-1	SSVD 20
649-29630-1	SSVD 22

Standard with piston detector USA

Part No.	Description
649-29565-1	SSVD 6-.-.....N
649-29566-1	SSVD 8-.-.....N
649-29567-1	SSVD 10-.-.....N
649-29568-1	SSVD 12-.-.....N
649-29569-1	SSVD 14-.-.....N
649-29651-1	SSVD 16-.-.....N
649-29652-1	SSVD 18-.-.....N
649-29653-1	SSVD 20-.-.....N
649-29654-1	SSVD 22-.-.....N

Other versions are available on request

SSV-D with Metering Screws



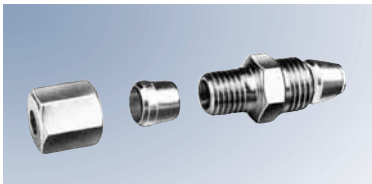
Dimensions

Model	Length	Width	Depth
SSVD 6	70 mm	60 mm	40 mm
SSVD 8	80 mm		
SSVD 10	100 mm		
SSVD 12	115 mm		
SSVD 14	130 mm		
SSVD 16	145 mm		
SSVD 18	160 mm		
SSVD 20	175 mm		
SSVD 22	190 mm		

Technical Data

Number of outlets	6 to 22
Inlet thread	R 1/8 or 1/8 NPTF
Max. differential pressure between two outlets and the inlet	100 bar
Max. pressure	350 bar
Max. starting pressure	20 bar
Metered volume per outlet and stroke in cm ³	0,08; 0,14; 0,2; 0,3; 0,4; 0,6; 0,8; 1,0; 1,4; 1,8
Piston closure plug (piston detector)	M 11 x 1
Outlet and metering screw thread	M 10 x 1
Metering Screws	0,08; 0,14; 0,2; 0,3; 0,4; 0,6; 0,8; 1,0; 1,4; 1,8

SSV and SSV-D Accessories



Check Valve, Threaded

Threaded Fittings

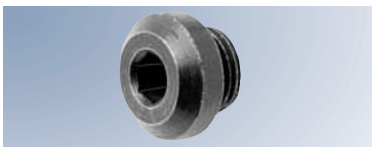
Part No.	Description
504-30345-2	check valve for 4 mm tube
504-30344-4	check valve for 6 mm tube
504-31709-1	check valve for 4 mm tube – stainless steel
504-31705-1	check valve for 6 mm tube – stainless steel



Check Valve, Quicklinec

Quicklinec – Plug-in Fittings

Part No.	Description
226-14091-4	check valve for 6 mm tube – high pressure (for primary metering devices)
226-14091-6	check valve for 4 mm tube – medium pressure (for secondary metering devices)
226-14091-2	check valve for 6 mm tube – medium pressure (for secondary metering devices)



Outlet Closure Plug

Other

Part No.	Description
303-17499-3	outlet closure plug M10 x 1
303-19346-2	outlet closure plug M10 x 1 - stainless steel
219-13798-3	o-ring for stainless steel closure plug*

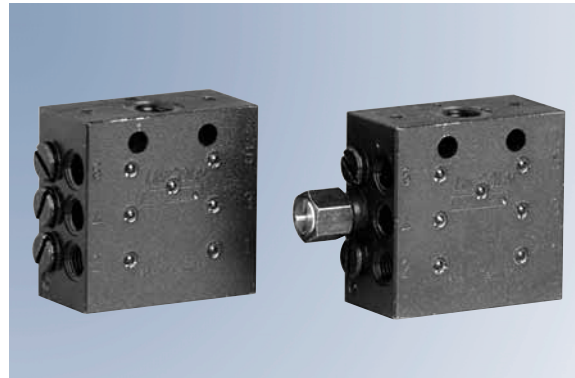
* Only required when closure plug does not seal

SSVM Metering Devices



SSVM metering devices offer similar benefits as the SSV, but are smaller in size and output. This makes the SSVM ideal for compact applications – little space and short distances.

They can be monitored visually or electronically depending on the options selected. They are available with 6 to 12 outlets and can be used for grease up to NLGI 2, or oil of at least 40 cSt.



SSVM

Standard

Inlet Size: G 1/8" Female (BSPP) Carbon Steel	Number of Outlets	Inlet Size: 1/8" NPT Female Carbon Steel
619-26761-1	6	619-26764-1
619-37044-1	8	619-26650-1
619-26846-1	10	619-26848-1
619-37049-1	12	619-26653-1

With Indicator Pin (K)

Inlet Size: G 1/8" Female (BSPP) Carbon Steel	Number of Outlets	Inlet Size: 1/8" NPT Female Carbon Steel
619-26762-3	6	619-26765-3
619-37045-3	8	619-26651-3
619-26847-2	10	619-26849-2
619-37050-3	12	619-26654-3

With Indicator Pin and Limit Switch (KS)

Inlet Size: G 1/8" Female (BSPP) Carbon Steel	Number of Outlets	Inlet Size: 1/8" NPT Female Carbon Steel
619-27078-1	6	
619-27079-1	8	
619-27080-1	10	
619-27081-1	12	

SSVM Metering Devices



With Indicator Pin and Proximity Switch (KN)

Inlet Size: R 1/8" Female (BSPP) Carbon Steel	Number of Outlets	Inlet Size: 1/8" NPT Female Carbon Steel
619-27667-1	6	
619-27668-1	8	
619-27669-1	10	
619-27670-1	12	

With Indicator Pin and Adapter for Proximity Switch (KA)

Inlet Size: R 1/8" Female (BSPP) Carbon Steel	Number of Outlets	Inlet Size: 1/8" NPT Female Carbon Steel
619-27663-1	6	
619-27664-1	8	
619-27665-1	10	
619-27666-1	12	

Technical Data

number of outlets	6 to 12
maximum operating pressure	200 bar (2900 psi)
maximum differential pressure	40 bar (580 psi)
metered volume per outlet	0.07 cm ³ (0.0043 in ³)
outlet thread	M 8 x 1 (must use Lincoln outlet fittings)
materials available	steel, surface zinc-iron-coated, black chromed
operating temperature	-25 to 70° C (-13 to 158° F)

Note: Never close outlets 1 & 2!

Dimensions

Number of outlets	Height	Width	Depth
6	48.5 mm (1.94 in)	50 mm (2.0 in)	25 mm (1.0 in)
8	60 mm (2.4 in)		
10	71.5 mm (2.86 in)		
12	83 mm (3.32 in)		

SSVM Accessories

Part No.	Description
threaded connections 519-31661-1	check valve for 4 mm tube
Quicklinec plug-in fittings 226-14091-5	check valve for 4 mm tube
other 303-17530-1 209-12464-7	outlet closure plug M8 x 1 outlet copper washer for closure plug

SSV-FL

SSV Flanged Type Metering Device

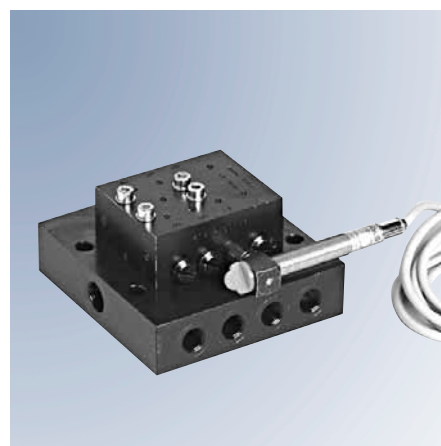


The SSV-FL is based on the standard SSV, flanged to a manifold block. Ideal for rigorous conditions such as those found in steel plants. This design allows for connections up to dia.10 mm tubing. Additionally, the metering devices can easily be exchanged during maintenance routines without having to disconnect lubricant lines – thus saving valuable time.

They can be monitored visually (SSV-FL-K) or electronically via a proximity switch (SSV-FL-KN). They are available with 1 to 12 outlets and can be used for grease up to NGLI 2 or oil of at least 40 cST.



SSV-FL10-K



SSV-FL8-KN

Models

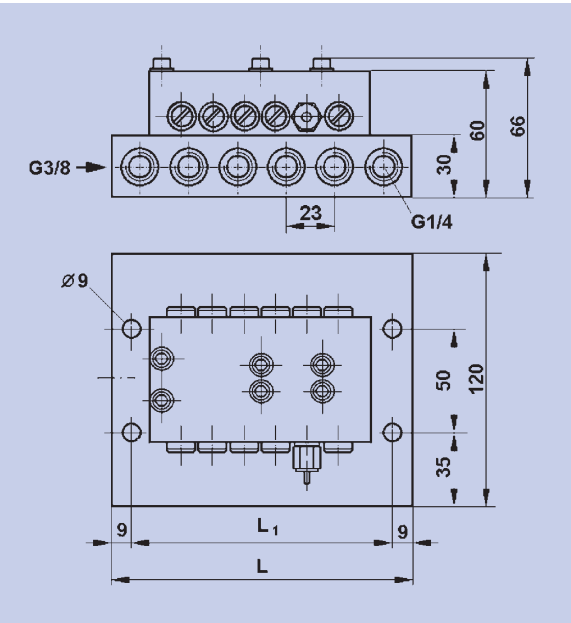
SSV-FL-K	Number of Outlets	SSV-FL-KN
619-40646-1	1	619-40678-1
619-40646-2	2	619-40678-2
619-40646-3	3	619-40678-3
619-40646-4	4	619-40678-4
619-40646-5	5	619-40678-5
619-40646-6	6	619-40678-6
619-40646-7	7	619-40678-7
619-40646-8	8	619-40678-8
619-40646-9	9	619-40678-9
619-40647-1	10	619-40679-1
619-40647-2	11	619-40679-2
619-40647-3	12	619-40679-3

Technical Information

number of outlets	1 to 12
maximum operating pressure	300 bar (4350 psi)
maximum differential pressure	100 bar (1450 bar)
metered volume per outlet and per stroke	0.2 cm ³ (0.012 in ³)
outlet thread	G 1/4 female (BSPP)
inlet thread	G 3/8 female (BSPP)
materials available	steel, surface zinc-iron-coated, black chromed
operating temperature	-25 to +70° C (-13 to 158° F)

SSV-FL

SSV Flanged Type Metering Device



Dimensions of SSV-FL

SSV-FL Accessories

Part No.	Description
223-13052-1	outlet check valve for 6 mm tube
223-13052-2	outlet check valve for 8 mm tube
223-13052-3	outlet check valve for 10 mm tube

Dimensions

Number of outlets	Length	Width	Depth
1	97 mm (3.88 in)	120 mm (4.8 in)	66 mm (2.64 in)
2			
3			
4	112 mm (4.48 in)		
5	97 mm (3.88 in)		
6			
7	112 mm (4.48 in)		
8			
9	127 mm (5.08 in)		
10			
11	142 mm (5.68 in)		
12			

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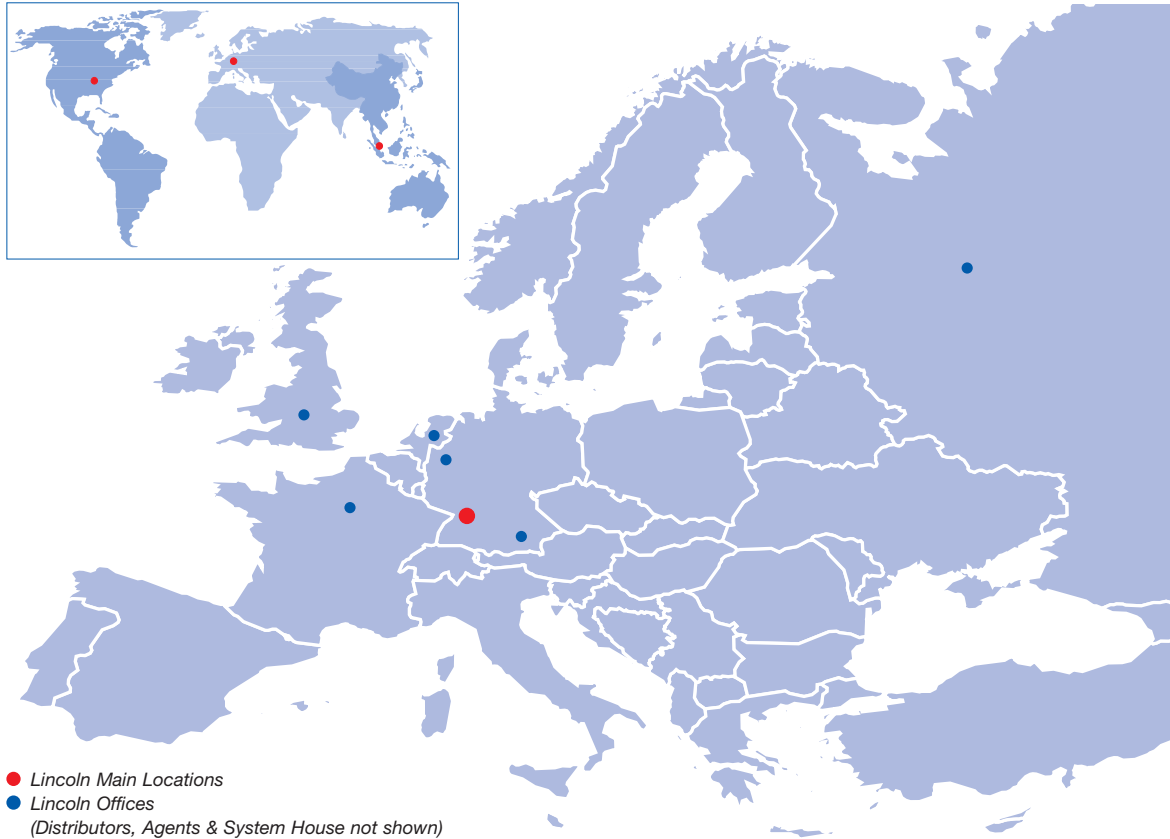
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