

# Product Catalog



The World of Automatic Lubrication

# High-tech products and customer oriented solutions set the standard in lubrication technology



perma-tec has been providing innovative and creative lubrication solutions for more than 45 years. Our single- and multi-point lubrication systems can be found in all types of industries and applications around the world.

perma-tec's leadership in single-point lubrication is based on many patents and specially certified products. All perma products meet "Made in Germany" quality standards because they are developed, tested and manufactured at our German headquarters.

Our marketing know-how and our network of subsidiaries and competent partners around the world result in lubrication solutions that meet the highest technical requirements.

With our perma product catalog we would like to invite you to "The World of Automatic Lubrication".



## → perma-tec facts

Employees worldwide  
**185**

Employees in Germany  
**132**

Turnover 2009 (not consolidated)  
**43 Mio. Euro**

Share of international sales  
**68 %**

Subsidiaries H-T-L perma  
**Australien, Frankreich, Indien, Italien, Spanien, UK, USA**

Distributor network in more than  
**60 countries**

Last update: 06/2010

### Company history

**1964**

Invention and patent of perma CLASSIC single-point lubrication system

**1991**

New management and extensive reorganization

**2000**

Change of company name to perma-tec GmbH & Co. KG

**1934**

Formation of the metal ware factory for house- and kitchen appliances in Bad Kissingen

**1989**

Acquisition by private investment group

**1995**

Foundation of subsidiaries **H-T-L-perma**  
USA (1995), France (1995)  
Iberica (1996), Italia (1997)  
UK (1998), Australia (2004)  
India (2008)

**2005**

New manufacturing and warehouse building and office building expansion

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perma lubrication systems and accessories with part numbers and pictures



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## perma SERVICE

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Your own perma lubrication system in 6 easy steps, Hotline, Homepage, perma SELECT, perma ACADEMY, perma SERVICE



## Less maintenance time, lower cost and increased safety - Your benefits from perma lubrication systems

Every 19 seconds a perma product is installed or exchanged worldwide. Manual lubrication is a thing of the past - today, if you are looking for safe and effective lubrication for your equipment and long-term cost reduction, change to perma automatic lubrication systems. They provide ideal technical solutions for different lubrication points and save you time that can be used for other more important maintenance tasks.

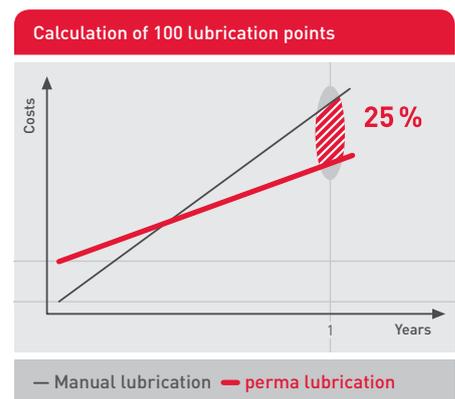
## Advantages at a glance

Less maintenance time, lower costs, increased safety

### → Economical aspects

**perma reduces costs by up to 25 %**

perma automatic lubrication systems provide lubrication while the machine is running. Continuous maintenance-free lubrication with consistently high quality lubricants can extend equipment service life and increases equipment availability. A permanent supply of fresh lubricant to the lubrication point also results in lower friction and reduced energy costs.



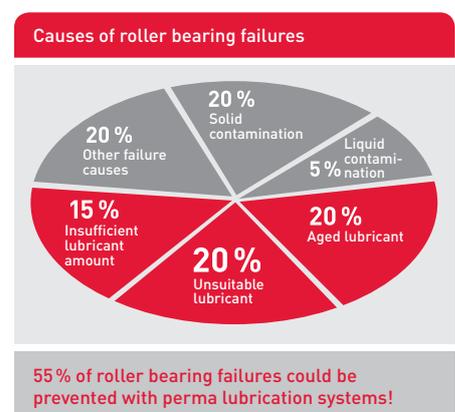
### → Technical aspects

**perma prevents up to 55 % of roller bearing failures**

Automatic lubrication systems from perma guarantee reliable, clean and precise lubrication 24 hours, every day of the year. Equipment availability increases as wear reduces when fresh grease is added in small amounts at short time intervals.

#### Sources:

Internal calculation: material cost and time, maintenance runs / source: Roller bearing industry



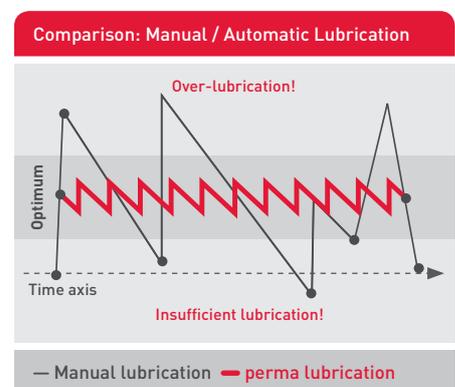
### → Safety aspects

**perma reduces the risk of accidents by up to 90 %**

Extended preventive maintenance schedules reduce the need for frequent manual lubrication runs. Workplace accidents are significantly reduced, especially at difficult to access lubrication points.



perma-tec is a member of the  
„Association of German Safety Engineers“



### → From low-cost to high-tech: Products that meet every challenge

- from simple low-cost units to technically superior systems
- programmable discharge periods from 1 day to 24 months
- from single-point systems to multi-point systems that lubricate up to 600 lube-points
- different cartridge sizes and all types of lubricants
- from self-contained systems to PLC controlled systems



## Industries around the world rely on perma lubrication systems

perma manufactures and sells single- and multi-point lubrication systems for all types of applications. Today, perma lubrication systems are used in every industry worldwide. In order to provide the best solution for each individual application, we involve our customers in the development process from start to finish. Customers from mining, steel, power plants, machine building, automotive industry, food industry, plastic and chemical industry trust automatic lubrication systems from perma.

**perma**<sup>®</sup>

# The right lubrication solution for each industry

## → Automotive

At every manufacturing stage of the vehicle, specially suited automatic lubrication systems from perma reliably supply all types of lubrication points with the correct amount of lubricant. High-end solutions like perma NET ensure that every lubrication point – even in long production lines – is individually lubricated.



## → Chemical

Safety is one of the most important factors in all areas of the chemical industry. perma automatic lubrication systems guarantee the required safety and cleanliness. They prevent contamination of equipment and ensure uninterrupted, maintenance-free, long-term lubrication.



## → Power plants

Safety and economic efficiency are two of the most important priorities for power plant operators. perma automatic lubrication systems minimize equipment failures caused by incorrect lubrication. This increases safety and reliability of power plants and prevents power outages and equipment downtime.



## → Food

Food manufacturers depend on an extremely hygienic working environment. Automatic lubrication systems from perma are clean, safe and economical. Dirt and contamination, often generated by manual lubrication, are avoided.



## → Mechanical engineering

Precision is the key to success in mechanical engineering. perma lubrication systems are capable of providing precise lubrication for roller and sliding bearings, linear guides, chains, and other moving components. Maintenance-free permanent lubrication minimizes downtime caused by unscheduled maintenance and results in more economic efficiency.



## → Steel

Equipment in the steel industry is subjected to the roughest ambient conditions, especially extremely high temperatures. Incorrect and insufficient lubrication causes unnecessary maintenance downtime. perma offers lubrication systems specially designed for machines and equipment operated under such extreme conditions.



## → Mining

Rough conditions, as in the cement, quarrying, and mining industries, require maintenance-free and precise lubrication. At the same time it is extremely important that all lubrication points and seals (between shaft and bearing housing) are totally protected against environmental influences. Some perma lubrication systems are certified for use in ex-proof areas.



# Applications

The ideal lubrication system for each application

## → Drive and conveyor chains



perma ECOSY



perma STAR VARIO



perma STAR VARIO

## → Electric motors



perma STAR VARIO



perma NOVA



perma STAR VARIO

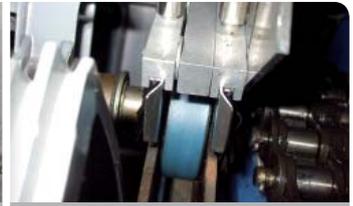
## → Escalators



perma ECOSY



perma ECOSY



perma ECOSY

## → Conveyors



perma CLASSIC



perma FUTURA



perma CLASSIC

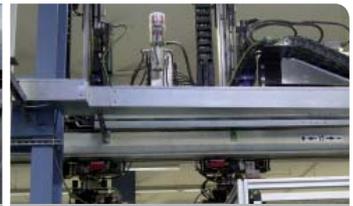
## → Linear / Sliding guides



perma PRO MP-6



perma NOVA



perma PRO MP-6

## → Blowers / Fans



perma CLASSIC /  
perma STAR VARIO



perma FUTURA



perma CLASSIC

## → Pumps



perma STAR VARIO



perma STAR VARIO



perma STAR VARIO

# perma Lubrication Systems - OVERVIEW



Roller bearings



Sliding bearings / Linear guides



Open gears / gear racks



Spindles



Shaft seals



Chains

Product	Lubricants	Discharge periods	Time / Impulse version	Max. lube-points	Max. pressure [bar]	Operating temperature [°C]	Content [cm <sup>3</sup> ]	Drive / Power supply	Operation	Applications							Certifications	Catalog page
<b>Single-point lubrication systems, electrochemical for grease and oil</b>																		
	<b>CLASSIC</b> Oil and grease (1)	1, 3, 6, 12 months (2)	Time	1	4	0 to +40	120	Electro-chemical	Activator screw	✓	✓	-	✓	✓	✓	✓	CE Ex	10-11
	<b>FUTURA</b> <b>NEW</b> Oil and grease (1)	1, 3, 6, 12 months (2)	Time	1	4	0 to +40	120	Electro-chemical	Activator screw	✓	✓	-	✓	✓	✓	✓	CE Ex	14-15
	<b>NOVA</b> Oil and grease (1)	1, 2, 3, ..., 12 months (3)	Time	1	6	-20 to +60	130	Gas cell Battery	Push button control and display	✓	✓	-	✓	✓	✓	✓	CE Ex	16-17
<b>Single-point lubrication systems, electromechanical for grease and oil</b>																		
	<b>STAR VARIO</b> Oil and grease (1)	1, 3, 6, 12 months	Time	1	5	-10 to +50	60, 120, 250	Drive motor Battery	Code switch	✓	✓	-	✓	✓	✓	✓	CE UL LISTED	18-19
	<b>STAR CONTROL TIME</b> Oil and grease (1)	Customized	Time	1	5	-10 to +50	60, 120, 250	Drive motor 15-30 V DC	Code switch	✓	✓	-	✓	✓	✓	✓	CE	20-21
	<b>STAR CONTROL IMPULSE</b> Oil and grease (1)	Customized	Impulse	1	5	-10 to +50	60, 120, 250	Drive motor 15-30 V DC	Code switch	✓	✓	-	✓	✓	✓	✓	CE (4)	20-21
<b>Multi-point lubrication systems, electromechanical for grease</b>																		
	<b>PRO MP-2</b> Grease (1)	1 day to 24 months	Time	2	25	-20 to +60	250, 500	Drive motor Pump Battery	Display with menu navigation	✓	✓	✓	✓	✓	✓	-	CE	22-23
	<b>PRO C MP-2</b> Grease (1)	Customized	Time and Impulse	2	25	-20 to +60	250, 500	Drive motor Pump 15-30 V DC	Display with menu navigation	✓	✓	✓	✓	✓	✓	-	CE	22-23
	<b>PRO MP-6</b> Grease (1)	1 day to 24 months	Time	6	25	-20 to +60	250, 500	Drive motor Pump Battery	Display with menu navigation	✓	✓	✓	✓	✓	✓	-	CE UL LISTED	24-25
	<b>PRO C MP-6</b> Grease (1)	Customized	Time and Impulse	6	25	-20 to +60	250, 500	Drive motor Pump 15-30 V DC	Display with menu navigation	✓	✓	✓	✓	✓	✓	-	CE	24-25
	<b>NET</b> Oil and grease (1)	Customized	Time and Impulse	<600	25	-20 to +60	60 - 500	Drive motor Pump 90-240 V AC	NET Software / PC	✓	✓	✓	✓	✓	✓	✓	CE	28-29
<b>Multi-point lubrication systems, electromechanical for oil</b>																		
	<b>ECOSY</b> Oil	Customized	Time and Impulse	6	10	-20 to +60	7 l	Drive motor Pump/ 15-30 V DC	Display with menu navigation	-	✓	-	-	-	-	✓	CE	26-27

(1) up to NLGI 2 (2) depending on ambient temperature (3) depending on backpressure (4) Ex-version available and on backpressure

# perma CLASSIC

The world's best selling lubrication system



CE Ex I M2 c X  
II 2G c IIC T6 X  
II 2D c T80°C X  
0 °C ≤ Ta ≤ +40 °C



## Durable, simple, reliable

perma CLASSIC can be used for all applications with ambient temperatures of 0 to +40 °C. The reliable operating principle is based on an electrochemical reaction. The lubrication period is determined by color coded activator screws. Depending on your application's requirement, you may choose to discharge 120 cm<sup>3</sup> in a period of 1, 3, 6 or 12 months. The activator screw generates pressure (max. 4 bar) which moves the piston forward and continuously injects small lubricant amounts into the lubrication point. perma CLASSIC is fully dust and water proof and can withstand impacts and accidental knocks.

**perma**<sup>®</sup>

## Application



perma CLASSIC is a single-point lubrication system for roller- and sliding bearings, sliding guides, open gears, gear racks, spindles, shaft seals, chains, etc. operated at ambient temperatures that reach from 0 up to +40 °C. Typical applications can be found in mining, steel, automotive and mechanical engineering.



Single-point lubrication systems

### Product characteristics

### Advantages

### Benefits

Simple, economical, fully automatic and reliable single-point lubrication system (for normal ambient temp.) →

- Economic change from manual to automatic perma lubrication
- Hands-free supply of fresh, clean lubricant
- Simple operating principle / color coded time settings

- Reduces maintenance costs
- Increases equipment availability
- Reliable, controlled lubrication
- Quick and easy initial installation and use
- Simple exchange / no tools necessary

Sturdy metal housing with transparent discharge indicator cap Electrochemical drive →

- Transparent end cone indicates when lubricator is empty
- Withstands impacts and accidental knocks

- Users can easily identify empty lubricators
- Lubricates even under rough conditions (mining, cement, quarrying)

Ex-proof certification →

- Can be used in areas where explosive atmospheres may occur (refer to Ex-certification on opposite page)

- Safe and reliable lubrication in dangerous areas
- Automatic lubrication reduces maintenance runs and results in less workplace accidents

## Technical data

→ Refer to page 36 for part numbers

Housing  
Metal / translucent plastics

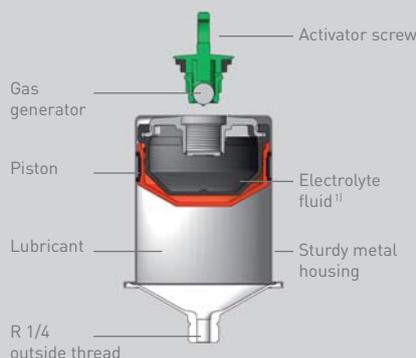
Drive  
Electrochemical reaction

Discharge period at +20 °C with SF01  
1, 3, 6 or 12 months

Lubricant volume  
120 cm<sup>3</sup>

Operating temperature  
0 °C to +40 °C

Pressure build-up  
Max. 4 bar



<sup>1)</sup> environmentally friendly citric acid

### Discharge period in months:

Time between activation and first discharge: 1 day

120 cm <sup>3</sup>				
at 0 °C	4	8	15	>18
at +10 °C	2	5	8	18
<b>at +20 °C</b>	<b>1</b>	<b>3</b>	<b>6</b>	<b>12</b>
at +30 °C	0,8	2	3	6
at +40 °C	0,6	1	2	3

Activator screw with black sealing ring. To select the most suitable activator screw → go to page 46

# perma FROST

The ideal lubrication system for frosty times



## Perfect for sub-freezing environments

perma FROST was specifically designed for use in temperatures down to  $-25^{\circ}\text{C}$ , contains  $120\text{ cm}^3$  of lubricant and can discharge grease or oil for up to 26 weeks (depending on the ambient temperature). The blue activator screw generates the pressure (max. 4 bar) which moves the piston forward and continuously injects small lubricant amounts into the lubrication point. When the lubrication system is empty, the colored piston can be seen through the transparent plastic end cone.

**perma**<sup>®</sup>

# Application



perma FROST is the ideal lubrication system for single-point lubrication of roller- and sliding bearings, sliding guides, open gears, gear racks, spindles, shaft seals, drive-, transport- and lifting chains that are operated at ambient temperatures reaching from -25 up to +10 °C. Typical applications are cold stores, refrigerating machines and aggregates, and lifts that are operated during the winter.



Single-point lubrication systems

## Product characteristics

## Advantages

## Benefits

Automatic supply of fresh lubricant to lubrication points →	<ul style="list-style-type: none"> <li>- Less maintenance runs required</li> <li>- Reduces equipment downtime</li> </ul>	<ul style="list-style-type: none"> <li>- Lower maintenance costs</li> <li>- Less workplace accidents</li> <li>- Uninterrupted operation</li> </ul>
Sturdy metal housing with transparent discharge indicator cap → Electrochemical drive Electrolyte liquid: acetic acid	<ul style="list-style-type: none"> <li>- Towards the end of the discharge period, piston appears and signals "empty"</li> <li>- Requires no external power supply</li> <li>- Acetic acid is environmentally friendly</li> </ul>	<ul style="list-style-type: none"> <li>- Users can easily identify empty lubricators</li> <li>- Reliable and fully automatic lubrication even in remote areas</li> <li>- Safe usage - easy recycling</li> </ul>
Controlled and permanent lubrication →	<ul style="list-style-type: none"> <li>- Reliable lubrication for lubrication points that require little or moderate pressure generation at low operating temperatures</li> <li>- Discharges small amounts in short intervals</li> </ul>	<ul style="list-style-type: none"> <li>- Reduces lubricant consumption</li> <li>- Saves maintenance costs</li> </ul>
Simple and quick activation, installation and exchange →	<ul style="list-style-type: none"> <li>- Minimizes maintenance work</li> <li>- Works in any position</li> </ul>	<ul style="list-style-type: none"> <li>- Low installation/maintenance costs</li> <li>- Saves time</li> <li>- No tools required</li> </ul>

## Technical data

→ Refer to page 36 for part numbers

Housing  
Metal / translucent plastics

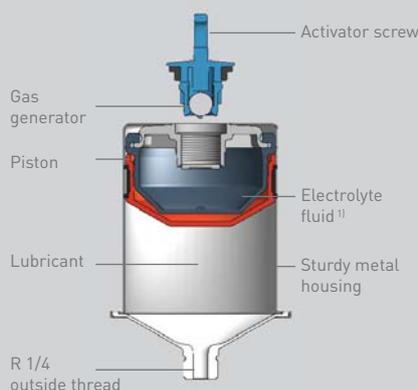
Drive  
Electrochemical reaction

Discharge period at -10 °C with SF01  
6 weeks

Lubricant volume  
120 cm<sup>3</sup>

Operating temperature  
-25 °C to +10 °C

Pressure build-up  
Max. 4 bar



<sup>1)</sup> environmentally friendly acetic acid

### Activator screw with black sealing ring

	Discharge period in weeks	Time between activation and first discharge: days
120 cm <sup>3</sup>		
at +10 °C	1	< 1
at 0 °C	2	1
<b>at -10 °C</b>	<b>6</b>	<b>3</b>
at -20 °C	14	7
at -25 °C	26	10

**⚠ Attention color change**  
Black → Blue

# perma FUTURA

Transparent housing with fill level indication



**NEW**  
→ contains 120 cm<sup>3</sup>

CE  I M2 c X  
II 2G c IIC T6 X  
II 2D c T80°C X  
0 °C ≤ Ta ≤ +40 °C

Made in  
Germany

## For high corrosion, high humidity and high contamination environments

perma FUTURA is the ideal automatic lubrication system for areas that require hygiene or for harsh operating conditions which may lead to corrosion of metal lubricators or electronic systems. Its reliable operating principle is based on an electrochemical reaction. The lubrication period is determined by color coded activator screws.

Depending on your application's requirement, you may choose to discharge 120 cm<sup>3</sup> in a period of 1, 3, 6 or 12 months. The activator screw generates pressure (max. 4 bar) which moves the piston forward and continuously injects small lubricant amounts into the lubrication point.

**perma**<sup>®</sup>

# Application



perma FUTURA is suitable for single-point lubrication of roller- and sliding bearings, sliding guides, open gears, gear racks, spindles, shaft seals and chains. This lubrication system is ideal for areas that must be kept hygienically clean. Due to its resistance to corrosion it is especially suited for applications in the food industry.



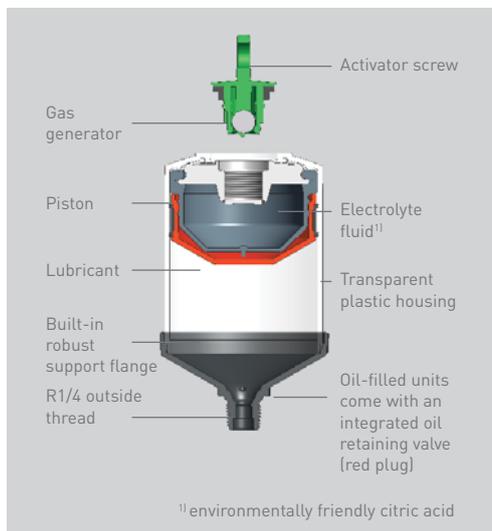
Single-point lubrication systems

Product characteristics	Advantages	Benefits
Transparent, non-corrosive plastic housing with integrated support flange Fully water and dust proof →	<ul style="list-style-type: none"> <li>- Shows remaining lubricant quantity</li> <li>- Ideal for corrosive environments</li> <li>- Ensures compliance with hygiene / environmental regulations</li> </ul>	<ul style="list-style-type: none"> <li>- Users can easily monitor the position of the lubricant delivery piston</li> <li>- Can be used in areas with harsh operating conditions and in hygienically sensitive areas</li> </ul>
Permanent supply of lubrication points with the correct amount of lubricant →	<ul style="list-style-type: none"> <li>- Discharges small amounts in short intervals</li> <li>- Reliable discharge for lubrication points that require little to moderate pressure at medium operating temperatures</li> </ul>	<ul style="list-style-type: none"> <li>- Prevents accidental grease contamination</li> <li>- Less lubricant consumption and material costs</li> </ul>
Automatic lubrication with fresh, clean lubricant Remote mounting with flexible tubing possible →	<ul style="list-style-type: none"> <li>- Less time needed for maintenance runs</li> <li>- Lubricates equipment during operation</li> <li>- Reduces wear / prevents contamination</li> <li>- Can be mounted up to 3 meters away from dangerous areas</li> </ul>	<ul style="list-style-type: none"> <li>- Less workplace accidents</li> <li>- Uninterrupted operation</li> <li>- Reduces maintenance costs</li> <li>- Extends equipment service life</li> <li>- Increases workplace safety</li> </ul>
Ex-proof certification →	<ul style="list-style-type: none"> <li>- Can be used in areas where explosive atmospheres may occur</li> </ul>	<ul style="list-style-type: none"> <li>- Safe and reliable lubrication in dangerous areas</li> </ul>

## Technical data

→ Refer to page 36 for part numbers

Housing <b>Transparent plastics</b>
Drive <b>Electrochemical reaction</b>
Discharge period at 20 °C with SF01 <b>1, 3, 6 or 12 months</b>
Lubricant volume <b>120 cm<sup>3</sup></b>
Operating temperature <b>0 °C to +40 °C</b>
Pressure build-up <b>Max. 4 bar</b>



### Discharge period in months:

Time between activation and first discharge: **1 day**

120 cm <sup>3</sup>				
at 0 °C	4	8	15	>18
at +10 °C	2	5	8	18
<b>at +20 °C</b>	<b>1</b>	<b>3</b>	<b>6</b>	<b>12</b>
at +30 °C	0,8	2	3	6
at +40 °C	0,6	1	2	3

The new perma FUTURA works with all perma CLASSIC activator screws.  
To select the most suitable activator screw  
→ go to page 46

# perma NOVA

The first temperature independent electrochemical lubrication system



I M1 Ex ia I  
II 2G Ex ia IIC T6  
II 2D Ex iaD 21 T80°C  
ZELM 09 ATEX 0420 X  
-20 °C ≤ Ta ≤ +60 °C



I M1 Ex ia I  
II 2G Ex ia IIC T6  
II 2D Ex ia IIC T80°C  
IEC Ex ZLM 09.0013X



## For applications with high variations in temperature

perma NOVA can be used for all applications that are within a temperature range of -20 °C up to +60 °C. A discharge period of 1 to 12 months can be easily programmed by pushing the selection button on the NOVA control unit. A temperature sensor periodically measures the ambient temperature and the control unit calculates the required gas generation based on this data. This ensures a continuous and controlled discharge. perma NOVA consists of a reusable control unit, a lubricant canister filled with 130 cm<sup>3</sup> of grease or oil (with integrated oil retaining valve) and a protection cover.

**perma**<sup>®</sup>

# Application



perma NOVA is especially suited to single-point lubrication of roller- and sliding bearings, sliding guides, open gears, gear racks, shaft seals and chains located in areas with considerable temperature variations (e.g. food industry) or where intrinsic safety is a requirement (as in the oil and gas industry). The lubrication system is dust-tight and protected against water jets - IP 65.



Single-point lubrication systems

Product characteristics	Advantages	Benefits
Non-corrosive plastic housing with battery, support flange and integrated oil retaining valve →  Electronic control unit with protection cover	<ul style="list-style-type: none"> <li>- Suitable for many applications</li> <li>- Ensures compliance with hygiene / environmental regulations</li> <li>- Controlled oil discharge</li> <li>- Control unit can be reused</li> </ul>	<ul style="list-style-type: none"> <li>- For harsh operating conditions and hygienically sensitive areas</li> <li>- Reduces lubricant consumption and material costs</li> <li>- Reduces maintenance costs and is environmentally friendly</li> </ul>
LCD display with push button control →	<ul style="list-style-type: none"> <li>- Discharge settings: 1 to 12 months</li> <li>- Setting can be changed any time / discharge amount is automatically adjusted</li> </ul>	<ul style="list-style-type: none"> <li>- Prevents over-lubrication especially on sensitive bearings</li> <li>- Simple handling / easy to adjust</li> </ul>
Integrated temperature compensation → Wide temperature range: -20 °C to +60 °C	<ul style="list-style-type: none"> <li>- Temperature independent discharge during the entire discharge period</li> <li>- Universal usage</li> </ul>	<ul style="list-style-type: none"> <li>- Ideal for applications with considerable temperature variations</li> <li>- One system for subfreezing as well as high temperature applications</li> </ul>
Ex-proof certification →  IP 65 protection	<ul style="list-style-type: none"> <li>- Can be used in areas where explosive atmospheres may occur (refer to Ex-certification on opposite page)</li> <li>- Dust-tight and protected against water jets</li> </ul>	<ul style="list-style-type: none"> <li>- Increases workplace safety</li> <li>- Safe and reliable lubrication in dangerous and critical areas</li> </ul>

## Technical data

→ Refer to page 36 for part numbers

Housing  
**Transparent plastics**  
 Drive - reusable  
**Electrochemical reaction via gas generating cell**  
**Electronic temperature compensation**  
 Discharge period  
**1, 2, 3, ..., 12 months**  
 Lubricant volume  
**130 cm<sup>3</sup>**  
 Operating temperature  
**-20 °C to +60 °C**  
 Pressure build-up  
**Max. 6 bar**  
 Protection class  
**IP 65**



# perma STAR VARIO

Temperature independent, precise lubrication available in different sizes



## Three different sizes for a broad range of applications

perma STAR VARIO is fully automatic, temperature independent and very precise. The user can select the discharge period (1, 3, 6 or 12 months) and the exact lubricant amount required and easily set and re-set the lubricator on site.

perma STAR VARIO consists of an electromechanical drive unit, a STAR LC unit with volumes of 60, 120 or 250 cm<sup>3</sup>, and a battery set. The operating status is constantly displayed via the LED function lights.

**perma**<sup>®</sup>

## Application



perma STAR VARIO is used for single-point lubrication of roller- and sliding bearings, sliding guides, open gears, gear racks, spindles, shaft seals and chains located. This lubrication system is ideal for applications that require precise lubricant metering even where the ambient temperature is subject to significant fluctuations. perma STAR VARIO is protected against dust and water jets when the individual parts are assembled correctly.



Single-point lubrication systems

## Product characteristics

## Advantages

## Benefits

Electromechanical drive unit →	<ul style="list-style-type: none"> <li>- Works independent of temperature, pressure, and vibration</li> <li>- Reusable</li> <li>- Can be used with any LC unit size</li> </ul>	<ul style="list-style-type: none"> <li>- Increases equipment availability</li> <li>- Ideal for areas with significant temperature fluctuations</li> <li>- Less maintenance costs</li> </ul>
LED function signals →	<ul style="list-style-type: none"> <li>- Visual control of operating status</li> <li>- Function can be checked from a distance</li> </ul>	<ul style="list-style-type: none"> <li>- Maintenance runs can be carried out much quicker</li> </ul>
Battery operation →	<ul style="list-style-type: none"> <li>- No cable laying necessary</li> <li>- Can be turned off</li> </ul>	<ul style="list-style-type: none"> <li>- Quick and easy installation</li> <li>- Lubrication only when needed - saves lubricant / prevents over-lubrication</li> </ul>
Constant pressure build-up (max. 5 bar) →	<ul style="list-style-type: none"> <li>- Can be remote mounted up to 3 m away from the lubrication point</li> </ul>	<ul style="list-style-type: none"> <li>- Installation away from dangerous areas increases workplace safety</li> </ul>
Transparent LC unit 3 different sizes: 60, 120, 250 cm <sup>3</sup> →	<ul style="list-style-type: none"> <li>- Precise discharge of the required lubricant amount</li> <li>- Visual fill level inspection</li> </ul>	<ul style="list-style-type: none"> <li>- Exact adjustment of the lubricant amount to the application requirement</li> <li>- Quick fill level check possible</li> </ul>

## Technical data

→ Refer to page 37 for part numbers

**Housing**  
Transparent plastics

**Drive – reusable**  
Electromechanical

**Power supply**  
STAR battery pack

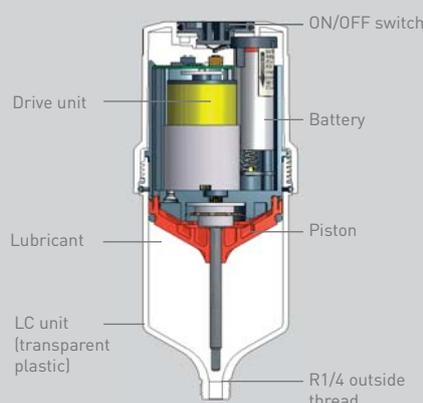
**Discharge period**  
1, 3, 6 or 12 months

**Lubricant volume**  
60 cm<sup>3</sup>, 120 cm<sup>3</sup> or 250 cm<sup>3</sup>

**Operating temperature**  
-10 °C to +50 °C

**Pressure build-up**  
Max. 5 bar

**Emission sound pressure level**  
< 70 dB(A)



### Discharge amounts per discharge cycle:

TIME	Discharge time	Pause time h:min	VOL		
			S60 60 cm <sup>3</sup>	M120 120 cm <sup>3</sup>	L250 250 cm <sup>3</sup>
1 2	1 month	1:30	0.13 cm <sup>3</sup>	0.26 cm <sup>3</sup>	0.53 cm <sup>3</sup>
1 2	3 months	4:37	0.13 cm <sup>3</sup>	0.26 cm <sup>3</sup>	0.53 cm <sup>3</sup>
1 2	6 months	9:17	0.13 cm <sup>3</sup>	0.26 cm <sup>3</sup>	0.53 cm <sup>3</sup>
1 2	12 months	18:36	0.13 cm <sup>3</sup>	0.26 cm <sup>3</sup>	0.53 cm <sup>3</sup>

To select the correct LC unit size:  
→ go to page 46

# perma STAR CONTROL TIME / STAR CONTROL IMPULSE

Individual automatic re-lubrication: PLC / machine controlled



 Ex-version available



## Controlled and consistent lubrication - temperature independent

Similar to perma STAR VARIO, the perma STAR CONTROL delivers precise amounts of lubricant and its operation is temperature independent. The unique feature of perma STAR CONTROL TIME and IMPULSE is their connection to machine control. This feature makes perma STAR CONTROL TIME and IMPULSE ideally suited to equipment where lubrication is to take place only when the machine is in operation and for critical equipment which has low utilisation. perma STAR CONTROL is available in three different sizes.

**perma**<sup>®</sup>

# Application



perma STAR CONTROL TIME or perma STAR CONTROL IMPULSE are used for lubrication of roller- and sliding bearings, sliding guides, open gears, gear racks, spindles, shaft seals and chains. These systems are ideal for applications that require lubrication to take place only when the machine is running in order to prevent over-lubrication. Connection to PLC is possible. perma STAR CONTROL TIME and IMPULSE protected against dust and water jets when the individual parts are assembled correctly.



Single-point lubrication systems

Product characteristics	Advantages	Benefits
Machined controlled (e.g. PLC connection) →	<ul style="list-style-type: none"> <li>- Control / feedback via machine / PLC connection</li> <li>- System only works when power is supplied by the machine</li> <li>- Continuous performance through optimal power supply</li> </ul>	<ul style="list-style-type: none"> <li>- Flexible control / additional monitoring</li> <li>- Reliable discharge</li> <li>- Saves lubricant / avoids over-lubrication</li> <li>- No battery exchange necessary</li> </ul>
Each drive unit (Impulse/Time) works with all LC unit sizes 60, 120, 250 cm <sup>3</sup> →	<ul style="list-style-type: none"> <li>- Reusable drive units</li> <li>- Controlled and consistent lubrication delivering small amounts frequently</li> <li>- Transparent housing for visual fill level inspection</li> </ul>	<ul style="list-style-type: none"> <li>- Less maintenance costs</li> <li>- Discharge amounts can be selected according to individual requirements and depending on machine operating time</li> <li>- Quick fill level control possible</li> </ul>
Pressure build-up to 5 bar →	<ul style="list-style-type: none"> <li>- Can be remote mounted with flexible tube extensions (up to 3 meters)</li> </ul>	<ul style="list-style-type: none"> <li>- Remote mounting at hard to access lubrication points or outside of dangerous areas increases workplace safety</li> </ul>

# Technical data

→ Refer to page 37 for part numbers

Housing  
**Transparent plastics**

Drive – reusable  
**Electromechanical**

Power supply  
**External 15-30 V DC / typ. 0.2 A**

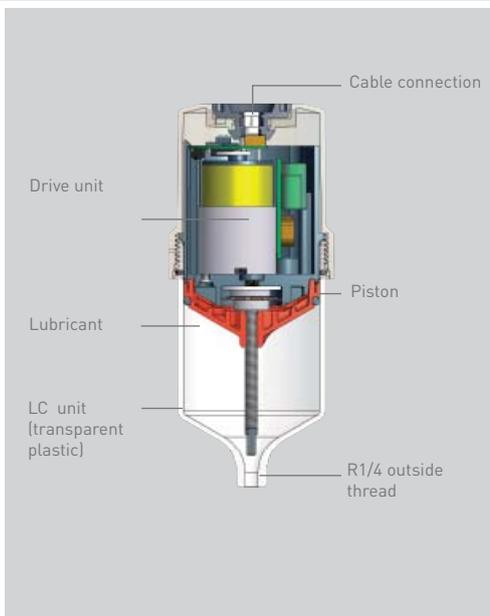
Discharge period  
**STAR CONTROL TIME: Time controlled**  
**STAR CONTROL IMPULSE: Impulse controlled**

Lubricant volume  
**60 cm<sup>3</sup>, 120 cm<sup>3</sup> or 250 cm<sup>3</sup>**

Operating temperature  
**-10 °C to +50 °C**

Pressure build-up  
**Max. 5 bar**

Emission sound pressure level  
**< 70 dB(A)**



## Discharge amounts per discharge cycle:

LC unit	STAR CONTROL TIME Discharge amount in cm <sup>3</sup> per 100 operating hours	STAR CONTROL TIME			STAR CONTROL IMPULSE		
		S60 60 cm <sup>3</sup>	M120 120 cm <sup>3</sup>	L250 250 cm <sup>3</sup>	S60 60 cm <sup>3</sup>	M120 120 cm <sup>3</sup>	L250 250 cm <sup>3</sup>
Setting position of code switches							
1:30	8,33	16,67	34,72	2,11			
4:37	2,78	5,56	11,57	1,06			
9:17	1,39	2,78	5,79	0,53			
18:36	0,69	1,39	2,89	0,26			

To select the correct LC unit size:  
 → go to page 46

## perma PRO MP-2 / PRO C MP-2

The right system for 2 lubrication points



### Precise lubricant delivery for two lubrication points

Both systems, perma PRO MP-2 and PRO C MP-2, consist of a mechanical distributor and a special PRO / PRO C drive unit. Lubricant is transported from the LC unit (available in 250 cm<sup>3</sup> or 500 cm<sup>3</sup>) through the drive unit into the MP-2 distributor. Each outlet discharges 0.25 cm<sup>3</sup> of lubricant per discharge impulse in even amounts, regardless of counter pressure.

**perma**<sup>®</sup>

# Application



perma PRO MP-2 is ideal for roller- and sliding bearings in electric motors, fans, blowers, smoke extraction motors, and pumps that require small lubricant amounts per lubrication impulse. Applications can be found in the steel and paper industry, mining, biomass power plants, waste incineration plants, automotive industry, etc. The system is delivered fully assembled, ready for immediate installation.



Product characteristics	Advantages	Benefits
<b>PRO MP-2:</b> Battery operated →	- No cables necessary - Quick and safe mounting	- Makes it easy to lubricate equipment in hard to reach areas - Existing equipment can easily be retrofitted
<b>PRO C MP-2:</b> External power supply →	- Automatic feedback from the lubrication system to machine control - No battery exchange necessary	- High equipment availability through optimized function control - Less machine downtime
Discharge period can be adjusted from 1 day to 24 months →	- Exact dosing of lubricant amount even for settings up to 24 months - Suitable for high grade lubricants	- Optimized lubricant supply to lubrication points - Minimizes material and personnel costs
<b>PRO LC unit 250 or 500 cm<sup>3</sup></b> Simple exchange of lubricant cartridge when empty →	- Fast exchange of LC units - Prevents lubricant mix-up and contamination	- Reduces the time required for maintenance - Increases workplace safety and productivity

Multi-point lubrication systems

## Technical data

→ Refer to page 38 for part numbers

Housing  
**Metal / transparent plastics**

Drive – reusable  
**PRO MP-2: Battery operated**  
**PRO C MP-2: External power supply (15–30 V)**

Discharge periods  
**1 day to 24 months**

Lubricant volume  
**250 cm<sup>3</sup> or 500 cm<sup>3</sup>**

Operating temperature  
**-20 °C to +60 °C**

Pressure build-up  
**Max. 25 bar**

Emission sound pressure level  
**< 70 dB(A)**



### Calculation of total discharge amount for the correct discharge period setting:

	Number of lubrication points:	2 x
	Discharge amount per lubrication point:	10 cm <sup>3</sup> = 5 strokes*
	Lubrication interval:	every 14 days / 336 h

$$\frac{10 \text{ cm}^3 \cdot 2}{336 \text{ hours}} \cdot 100 = 5,95$$

**5,95 = Total discharge amount in 100 h**

Selection of possible settings from the chart shown in chapt. 6.7 of the PRO/PRO C operating instructions.

\* 1 stroke with a custom grease gun = approx. 1.5 g = 2 cm<sup>3</sup> of lubricant

## perma PRO MP-6 / PRO C MP-6

The stand-alone multi-point lubrication system for up to 6 lubrication points



### Precise lubrication even under extreme operating conditions

perma PRO MP-6 is a battery operated multi-point lubrication system. perma PRO C MP-6 is the machine or PLC controlled version with external power supply. The user can select LC unit sizes 250 cm<sup>3</sup> and 500 cm<sup>3</sup>. Each perma PRO can be programmed for grease dispensing in days, weeks or months, up to a maximum dispensing period of 2 years. The MP-6 distributor dispenses directly without pressure loss.

**perma**<sup>®</sup>

# Application



perma PRO MP-6 is suitable for the lubrication of roller- and sliding bearings, linear guides, open gears, spindles, motor shaft seals, generators, pumps, fans and linear guide systems in robots. Applications can be found in all types of industries: from steel to paper, heat and power stations, from mining to automotive.



Product characteristics	Advantages	Benefits
Lubricant cartridges LC units size 250 cm <sup>3</sup> or 500 cm <sup>3</sup> →	- Discharge periods of up to 24 months possible - Simple exchange without tools	- Precise supply of lubricant to lubrication points - Less material / personnel cost
Display with two buttons and LED →	- User friendly operation - Display shows remaining volume / active outlets / blocked outlets	- Easy to program and change the discharge period and active outlets - The lubrication of critical lubrication points can be easily monitored
MP-6 distributor - up to 6 outlets can be activated →	- Supplies up to 6 lube-points with the same amount of grease - If one or more grease points are blocked, the lubricator will continue to pump to the remaining points	- The system does not shut down if one or more of the grease points are blocked (blocked grease points are identified)
Pressure build-up max. 25 bar →	- Allows the use of tube extensions up to 5 meters per outlet	- Remote mounting at hard to access lube-points or outside of dangerous areas increases workplace safety

Multi-point lubrication systems

# Technical data

→ Refer to page 38 for part numbers

Housing  
Metal / transparent plastics

Drive – reusable  
PRO MP-6: Battery operated  
PRO C MP-6: External power supply (15–30 V)

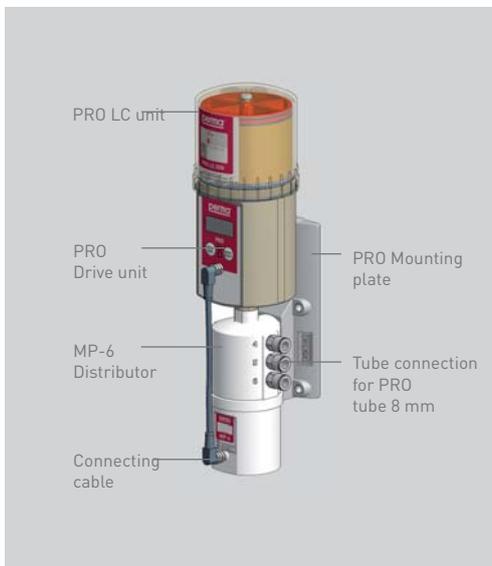
Discharge periods  
1 day to 24 months

Lubricant volume  
250 cm<sup>3</sup> or 500 cm<sup>3</sup>

Operating temperature  
-20 °C to +60 °C

Pressure build-up  
Max. 25 bar

Emission sound pressure level  
< 70 dB(A)



## Calculation of total discharge amount for the correct discharge period setting:

	Number of lubrication points:	6 x
	Discharge amount per lubrication point:	10 cm <sup>3</sup> = 5 strokes*
	Lubrication interval:	every 14 days / 336 h

$$\frac{10 \text{ cm}^3 \cdot 6}{336 \text{ hours}} \cdot 100 = 17,86$$

**17,86 = Total discharge amount in 100 h**

 Selection of possible settings from the chart shown in chapt. 6.7 of the PRO/PRO C operating instructions.

\* 1 stroke with a custom grease gun = approx. 1.5 g = 2 cm<sup>3</sup> of lubricant

## perma ECOSY

Ideal oil lubrication for challenging applications



### Exact oil discharge for every application

perma ECOSY is a compact multi-point lubrication system specifically developed for the lubrication of chains. It can lubricate up to 6 lubrication points. The discharge amount for each outlet can be set individually and separately from the other outlets. The perma ECOSY control unit can be adjusted to meet the different requirements of all types of applications. Lubrication only takes place when needed as the discharge is based on operating hours. perma ECOSY both optimizes and minimizes your oil consumption and maintenance costs. It is basically maintenance-free and only requires refills of the oil tank.

**perma**<sup>®</sup>

## Application



perma ECOSY is used for the lubrication of guideways, drive and transport chains. The system is ideal for escalators (please ask for our escalator brochure). With its interval lubrication, perma ECOSY supplies all contact areas of chains with the ideal amount of lubricant. The result: Clearly visible wear reduction and protection against corrosion and contamination.



### Product characteristics

### Advantages

### Benefits

Compact plastic housing with integrated 7 liter oil tank →

- Extended service interval

- Less maintenance runs  
- Refill only about every 2 years (depending on operating hours)

Flexible pump control for all 6 outlets →

- The oil amount for each outlet can be adjusted to meet individual requirements (0 - 9999 ml / 1000 h)  
  
- Prevents oil contamination

- Reduces oil consumption  
- Less cleaning costs  
- Extends the service life of chains  
- Active contribution to environmental protection

Special pump construction with integrated oil retaining valve →  
Special brushes available

- Discharges oil with viscosity of 65 - 2000 mm<sup>2</sup>/s (40 °C)  
- Optimal oil application

- The right quality and amount applied at the right place = ideal for many different applications

Function display with different language options →

- Easy to operate menu  
- Feedback and control via PLC possible

- No programming skills necessary  
- Optimal system control

Pressure build-up to max. 10 bar →

- Allows remote installation at hard to access places with tubes up to 10 meters per outlet

- Lowers the risk of accidents and increases workplace safety

## Technical data

→ Refer to page 39 for part numbers

Tank capacity  
**7 liter**

Housing  
**Plastic**

Number of outlets  
**1-6 (each outlet can be programmed individually)**

Discharge period  
**Machine controlled / Time controlled**

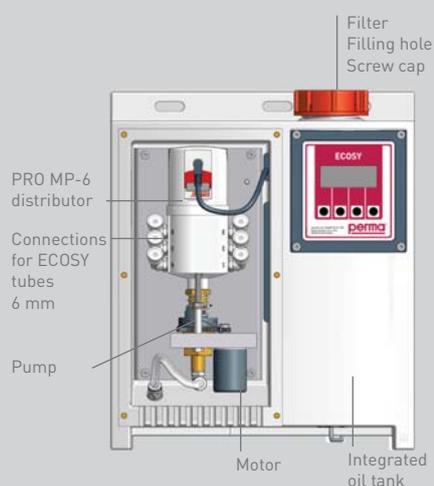
Discharge amount  
**0-9999 ml / 1000 h for each outlet**

Operating temperature  
**-20 °C to +60 °C**

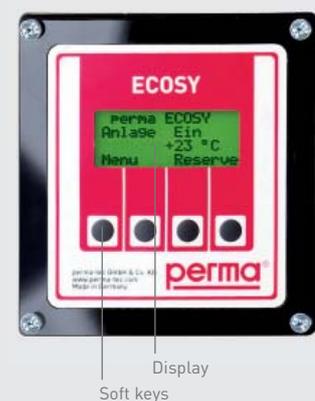
Pressure build-up  
**Max. 10 bar**

Input supply voltage  
**85-240 V AC 50/60 Hz / typ. 20 W**

Emission sound pressure level  
**< 70 dB(A)**

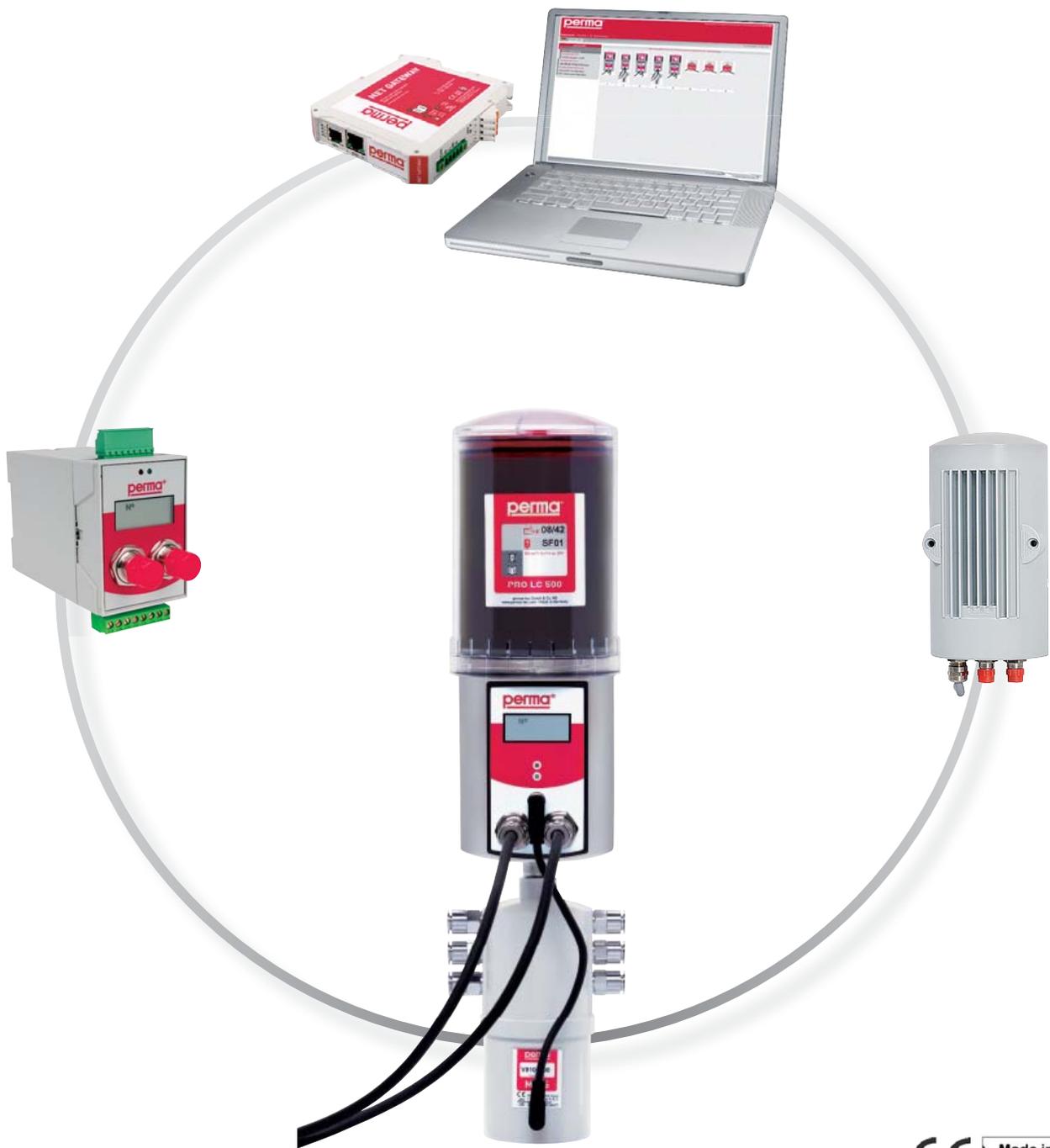


### perma ECOSY Display



# perma NET

High-end Solution: Central control for up to 600 lubrication points



## Functionality and intelligence for up to 600 lubrication points

perma NET is a centrally controlled lubrication network consisting of up to 100 multi-point lubrication systems which can be cable connected up to a distance of 1000 meters. Each system can be individually programmed and settings can be changed at any time. Configuration, control and monitoring via internet browser. perma NET has an automatic alarm and can be remote monitored from any office.

perma-tec also offers remote support.

**perma**<sup>®</sup>

## Application



perma NET is used for the lubrication of roller- and sliding bearings, drive and transport chains, guide ways, open gears and seals. In combination with different multi-point lubrication systems for different lubrication points, perma NET is extremely versatile. All lubrication points can be individually lubricated with the ideal lubricant and the optimal amount even in systems where lubrication points are great distances apart.



### Product characteristics

### Advantages

### Benefits

NET GATEWAY / Internet browser →	- Central programming, monitoring, and control of the complete network	- Prevents system downtimes and reduces costs
Up to 100 network participants can be integrated Controls up to 600 lube-points →	- Monitoring of lubrication systems from any computer with internet access - Error/function messages via email / SMS - Integration of existing equipment possible	- Less maintenance runs - Early reaction to problems - Increased flexibility - Reduced maintenance costs
NET DRIVE with MP-6 distributor = a multi-point lubrication system →	- One system for up to 6 lube-points. - Different lubricants available, depending on application requirements - Remote installation with grease lines up to 5 m away from dangerous lubrication points	- Less maintenance costs - Lets you choose the optimal lubricant for each application - Lowers the risk of workplace accidents
Up to 1000 meters of cable possible →	- Long distances between the first and the last lubrication system possible - Central monitoring even for very distant lubrication points	- Remote mounting of lubrication systems outside of hard to access areas increases workplace safety - Reduces operating and monitoring time

## Technical data

→ Refer to page 39 for part numbers

Input voltage  
**90 V to 240 V AC**

Input current **1.2 A**

Frequency **47-63 Hz**

Lubrication systems  
**NET DRIVE, NET DRIVE MP-6  
STAR CONTROL, PRO C, ECOSY to be  
integrated via NET I/O**

Connections NET GATEWAY  
**Ethernet 10/100 BaseT, RJ45-jack**

Connections NET I/O  
**Four galvanically separated, digital inputs  
(24 V DC, 5 mA)  
Four potential free outputs  
(max. load 250 V AC, 16 A)**

Emission sound pressure level  
**< 70 dB(A)**



Max. number of network participants  
**100, NET Drive and NET I/O  
to be used in any combination**

Max. number of lubrication points **600**

Max. press. build-up (per lube-point) **25 bar**

Max. tube length  
(per lube-point) **5 m**

Communication perma NET **CAN-Bus**

Max. cable length **1000 m**

Software  
**Web-Browser-based perma NET Software,  
included in Firmware of NET GATEWAY**

Browser  
**MS Internet Explorer®, as of version 8.0,  
Firefox® V3.5, Opera as of version 9.64**

Standard-IP-Address **192.168.5.155**

Standard-Netmask **255.255.255.0**



## Enter the world of automatic lubrication

perma-tec has developed special MOUNTING and STARTER SETS to make it easier for you to change to automatic lubrication. Each STARTER SET was especially designed to lubricate one or more roller bearings. The CWL MOUNTING SET was developed especially for crane wheel lubrication and the OGL MOUNTING SET was developed for open gear lubrication. Each set includes all necessary connection parts.

## perma MOUNTING SETS

### Single-point lubrication systems

#### CWL SET (Crane Wheel Lubrication)

The lubrication system perma STAR VARIO pushes lubricant into the CWL applicator assy. The spring loaded applicator applies the lubricant to the wheel flange. When the crane wheel turns, the lubricant is transferred from the wheel flange to the side of the rail. This reduces wear on the wheel flange and rail.



CWL Applicator assy  
+ CWL Applicator (replacement)  
+ STAR VARIO Drive  
incl. battery pack  
+ STAR LC L250 with grease S250  
+ Accessories  
Part No. 27.006.381



#### Accessories:

1 x Clip (plastic)	Part. no. 26.001.105	1 m Nylon tube up to +80 °C oØ 8 mm x iØ 6 mm	Part. no. 26.001.250
1 x Bracket (stainless steel) 1.4016	Part. no. 26.0012.150	1 x STAR Support Flange G1/4o x G1/4i	Part. no. 26.001.620
1 x Tube connection f. perma G1/4i f. tube oØ 8/6 mm	Part. no. 26.001.202	400 g Cartridge with S250	Part. no. 28.250.000
1 x Tube connection f. perma G1/4o f. tube oØ 8/6 mm	Part. no. 26.001.203		

#### OGL SET (Open Gear Lubrication)

The OGL system is a special solution for applying grease to open gears. The lubrication system perma STAR VARIO pushes the lubricant into the rubber applicator of the OGL. When the gear turns, grease is applied to the face of each tooth. Because the OGL only applies small grease amounts, it is both economical and environmentally friendly.



OGL System  
+ STAR VARIO Drive  
incl. battery pack  
+ STAR LC L250 with grease S250  
+ Accessories  
Part No. 27.007.381



#### Accessories:

1 x Clip (plastic)	Part. no. 26.001.105	1 x STAR Support flange G1/4o x G1/4i	Part. no. 26.001.620
1 x Bracket (stainless steel)	Part. no. 26.0012.150	1 x Mounting angle 110 x 70 x 2,5 mm	Part. no. 26.001.652
1 x Tube connection f. perma G1/4i f. tube oØ 8/6 mm	Part. no. 26.001.202	1 x Mounting plate 50 x 100 x 70 x 2,5 mm	Part. no. 26.001.653
1 x Tube connection G1/4o f. tube oØ 8/6 mm	Part. no. 26.001.203	400 g Cartridge with S250	Part. no. 28.250.000
1 m Nylon tube up to +80 °C oØ 8 mm x iØ 6 mm	Part. no. 26.001.250		

# perma STARTER SETS „Bearings“

Single-point lubrication systems



## perma NOVA



**NOVA LC 130 with SF01**  
130 cm<sup>3</sup>

- + NOVA Control unit
- + Accessories

Part no. 24.11.0001.800

**NEW**



## perma STAR VARIO



**STAR LC M120 with SF01**  
120 cm<sup>3</sup>

- + STAR VARIO Drive
- + STAR VARIO Battery pack
- + STAR Support flange G1/4o x G1/4i
- + Accessories

Part no. 24.21.0001.381

**STAR LC L250 with SF01**  
250 cm<sup>3</sup>

- + STAR VARIO Drive
- + STAR VARIO Battery pack
- + STAR Support flange G1/4o x G1/4i
- + Accessories

Part no. 24.21.1001.381

## perma STAR CONTROL



**STAR LC M120 with SF01**  
120 cm<sup>3</sup>

- + STAR CONTROL Cable (5 m)
- + STAR Support flange G1/4o x G1/4i
- + Accessories
- + STAR CONTROL TIME Drive

Part no. 24.21.0001.392

or

STAR CONTROL IMPULSE Drive

Part no. 24.21.0001.393

**STAR LC L250 with SF01**  
250 cm<sup>3</sup>

- + STAR CONTROL Cable (5 m)
- + STAR Support flange G1/4o x G1/4i
- + Accessories
- + STAR CONTROL TIME Drive

Part no. 24.21.1001.392

or

STAR CONTROL IMPULSE Drive

Part no. 24.21.1001.393

### Accessories included in each set:

- |                                    |                      |
|------------------------------------|----------------------|
| 1 x Reducer G1/8o x G1/4i (brass)  | Part no. 26.0011.501 |
| 1 x Reducer M6o x G1/4i (brass)    | Part no. 26.0011.511 |
| 1 x Reducer M8x1o x G1/4i (brass)  | Part no. 26.0011.514 |
| 1 x Reducer M10x1o x G1/4i (brass) | Part no. 26.0011.518 |



**perma PRO MP-6**



**PRO LC 250 with SF01**  
250 cm<sup>3</sup>

- + PRO MP-6 Basic system  
incl. PRO Battery B
- + PRO Cover for LC 250
- + Accessories

Part no. 24.22.0001.601

**PRO LC 500 with SF01**  
500 cm<sup>3</sup>

- + PRO MP-6 Basic system  
inkl. PRO Battery B
- + PRO Cover for LC 500
- + Accessories

Part no. 24.22.1001.601

**perma PRO C MP-6**



**PRO LC 250 with SF01**  
250 cm<sup>3</sup>

- + PRO C MP-6 Basic system  
incl. PRO C M12 Cable (5 m)
- + PRO Cover for LC 250
- + Accessories

Part no. 24.22.0001.602

**PRO C LC 500 with SF01**  
500 cm<sup>3</sup>

- + PRO C MP-6 Basic system  
incl. PRO C M12 Cable (5 m)
- + PRO Cover for LC 500
- + Accessories

Part no. 24.22.1001.602

**Accessories included in each set:**

- |   |                      |                                    |                      |
|---|----------------------|------------------------------------|----------------------|
| 30 m PRO Tube 8x1.5                                   | Part no. 27.008.009  | 6 x Reducer M6o x G1/4i (brass)    | Part no. 26.0011.511 |
| 400 g Cartridge with perma multipurpose grease (SF01) | Part no. 28.001.000  | 6 x Reducer M8x1o x G1/4i (brass)  | Part no. 26.0011.514 |
| 1 x Tube prefill adapter for tube oØ 8 mm             | Part no. 27.005.058  | 6 x Reducer M10x1o x G1/4i (brass) | Part no. 26.0011.518 |
| 6 x Tube connector G1/4a for tube oØ 8 mm straight    | Part no. 27.005.011  | 2 x Extension G1/8o x G1/8i 16 mm  | Part no. 27.008.023  |
| 6 x Reducer G1/8o x G1/4i (brass)                     | Part no. 26.0011.501 | 2 x Extension G1/8o x G1/8i 36 mm  | Part no. 27.008.024  |

**→ Advantages at a glance:**

- Simple ordering - requires only one order number
- Lower price - compared to individual orders
- All necessary parts included





## Extended equipment service life with the right lubricant

Lubricant selection is an important factor for achieving extended bearing service life. To increase the process safety of your machines and equipment you must select the right lubricant, the right place, the right time and the right amount. perma-tec's lubricant selection program helps you to select a lubricant that is especially suited for a specific application and for use in perma lubrication systems.

# perma Lubricants

Choose the right lubricant for your application

perma Code Description Identification according to 51 502 (Grease) according to DIN 51 517-3 (Oil)	NLGI-class	Thickener	Base oil	Operating temperature range (°C)	Viscosity at +40 °C	Speed index	Applications						
							Roller bearings 	Sliding bearings / guides 	Linear guides 	Open gears / gear racks 	Spindles 	Shaft seals (1) 	Chains 
<b>Grease</b>													
<b>SF01</b> Multipurpose grease KP2K-30	2	Li / Ca	Mineral oil	-30 to +130	220	350,000	✓	✓	✓	-	✓	✓	-
<b>SF02</b> Extreme pressure grease KPF2K-30	2	Li + MoS2	Mineral oil	-30 to +120	105	350,000	-	✓	-	✓	-	-	-
<b>SF03</b> High temp. grease KE1T-20	2	PHS + solids	Ester + PFPE	-20 to +220	420	300,000	✓	✓	-	-	-	-	-
<b>SF04</b> High performance grease K1S-20	0/1	PHS	Mineral oil + PAO	-20 to +160	500	200,000	✓	✓	✓	-	✓	-	-
<b>SF05</b> High temp. / extreme pressure grease KPF1S-20	0/1	PHS + MoS2	Mineral oil + PAO	-20 to +160	500	200,000	✓	✓	-	✓	-	-	-
<b>SF06</b> Liquid grease K0G-20	0	Al-Com,	Mineral oil	-20 to +130	220	300,000	✓	✓	✓	-	-	✓	-
<b>SF08</b> Low temp. grease KHC2N-50	2	Ca-Com,	PAO	-40 to +140	100	600,000	✓	✓	-	-	-	-	-
<b>SF09</b> Bio grease KPE2K-40		2	PHS	Ester	-40 to +140	100	300,000	✓	✓	-	✓	-	-
<b>SF10</b> Food grade grease NSF H1 K1K-40		1	Al-Com,	PAO	-45 to +120	150	300,000	✓	✓	✓	✓	-	-
<b>Oil</b>													
<b>S014</b> High performance oil CLPE320	Oil	-	PAO + Ester	-20 to +250	320	-	-	-	-	-	-	-	✓
<b>S032</b> Multipurpose oil CLP100	Oil	-	Mineral oil	-5 to +100	100	-	-	✓	-	✓	✓	-	✓
<b>S064</b> Bio oil low viscosity CLPE100		Oil	-	Ester	-30 to +110	100	-	-	✓	-	✓	✓	-
<b>S069</b> Bio oil high viscosity CLPE460		Oil	-	Ester	-20 to +110	460	-	-	✓	-	✓	✓	-
<b>S070</b> Food grade oil NSF H1 CLPH220		Oil	-	PAO + Ester	-30 to +120	220	-	-	✓	-	✓	✓	-

 Food and pharma industry

 Bio-degradable for all applications

→ Additional lubricants available on request  
→ For more assistance please download software perma SELECT 4.0 from our website

(1) Please check compatibility of lubricant and sealing material.

# Electrochemical single-point lubrication systems

perma CLASSIC, perma FROST, perma FUTURA, perma NOVA

→ Suitable lubricants for your application: see page 35

				 <b>NEW</b>	 <b>Control unit must be ordered separately</b>
Grease	perma Code	perma CLASSIC 120 cm³		perma FUTURA 120 cm³	perma NOVA LC 130 incl. battery 130 cm³
perma Multipurpose grease	SF01	01.001.001		070.0001.0900	111.0001.0800
perma Extreme pressure grease	SF02	01.002.001		070.0002.0900	111.0002.0800
perma High temp. grease	SF03	01.003.001		070.0003.0900	111.0003.0800
perma High performance grease	SF04	01.004.001		070.0004.0900	111.0004.0800
perma High temp. / extreme pressure grease	SF05	01.005.001		070.0005.0900	111.0005.0800
perma Liquid grease	SF06	01.006.001		070.0006.0900	111.0006.0800
perma Low temp. grease	SF08	01.008.001		070.0008.0900	111.0008.0800
perma Bio grease	SF09	01.009.001		070.0009.0900	111.0009.0800
perma Food grade grease NSF H1	SF10	01.010.001		070.0010.0900	111.0010.0800
Oil		 Order the oil retaining valve separately		perma FUTURA incl. oil retaining valve	perma NOVA LC 130 incl. battery and oil retaining valve
perma High performance oil	S014	01.414.001		070.0414.0900	111.0414.0800
perma Multipurpose oil	S032	01.432.001		070.0432.0900	111.0432.0800
perma Bio oil low viscosity	S064	01.464.001		070.0464.0900	111.0464.0800
perma Bio oil high viscosity	S069	01.469.001		070.0469.0900	111.0469.0800
perma Food grade oil NSF H1	S070	01.470.001		070.0470.0900	111.0470.0800
Activator / Control unit		Activator		Activator	Control unit
Activator yellow 1 month		20.001.001 		20.001.001 	-
Activator green 3 months		20.001.003 		20.001.003 	-
Activator red 6 months		20.001.006 		20.001.006 	-
Activator grey 12 months		20.001.012 		20.001.012 	-
Activator blue 1-26 weeks		-		-	-
NOVA Control unit 1-12 months		-		-	110.0000.0000 



Would you like to see how our electrochemical lubrication systems work?

→ Contact us and ask for your perma MINI sample [mini@perma-tec.com!](mailto:mini@perma-tec.com)

### Codes of lubricants contained in your lubrication



 AB-1022-123456-002

← Serial number  
(Product-Code - Manufacturing year/  
week - Consecutive numbers)



 SF01  
123.1234.1234

← Lubricant-Code and part no.

# Electrochemical single-point lubrication systems

## perma STAR

STAR components / accessories	perma STAR VARIO		perma STAR CONTROL TIME		perma STAR CONTROL IMPULSE	
	Pic.		Pic.		Pic.	
Drive	1	21.002.381	2	21.003.392	3	21.003.393
Battery pack	4	21.000.000		-		-
Cable (5 m)		-	5	26.004.001	5	26.004.001
Cable (10 m)		-	6	26.004.004	6	26.004.004
STAR Support flange G1/4o x G1/4i (brass/plastic)	7	26.001.620	7	26.001.620	7	26.001.620
STAR Profile seal ring (NBR)	8	26.001.623	8	26.001.623	8	26.001.623
STAR Protection cap L250 (plastic)	9	26.001.624	10	27.001.624	10	27.001.624
STAR Protection cap M120 / S60 (plastic) Can be cut to fit size S60	11	26.001.625	12	27.001.625	12	27.001.625

STAR LC (=Lubricant Canister)		STAR LC S60 60 cm <sup>3</sup>		STAR LC M120 120 cm <sup>3</sup>		STAR LC L250 250 cm <sup>3</sup>	
<p>Make sure to exchange the battery pack when you replace the empty LC</p>							
Grease	perma Code						
perma Multipurpose grease	SF01	160.001.385		16.001.348		162.001.387	
perma Extreme pressure grease	SF02	160.002.385		16.002.348		162.002.387	
perma High temp. grease	SF03	160.003.385		16.003.348		162.003.387	
perma High performance grease	SF04	160.004.385		16.004.348		162.004.387	
perma High temp. / extreme pressure grease	SF05	160.005.385		16.005.348		162.005.387	
perma Liquid grease	SF06	160.006.385		16.006.348		162.006.387	
perma Low temp. grease	SF08	160.008.385		16.008.348		162.008.387	
perma Bio grease	SF09	160.009.385		16.009.348		162.009.387	
perma Food grade grease NSF H1	SF10	160.010.385		16.010.348		162.010.387	
Oil	Order oil retaining valve separately						
perma High performance oil	S014	160.414.385		16.414.348		162.414.387	
perma Multipurpose oil	S032	160.432.385		16.432.348		162.432.387	
perma Bio oil low viscosity	S064	160.464.385		16.464.348		162.464.387	
perma Bio oil high viscosity	S069	160.469.385		16.469.348		162.469.387	
perma Food grade oil NSF H1	S070	160.470.385		16.470.348		162.470.387	

# Electromechanical multi-point lubrication systems

perma PRO MP-2 / PRO C MP-2, perma PRO MP-6 / PRO C MP-6

PRO components / accessories	Pic.	
PRO Drive	1	2290.001.601
PRO Battery B	2	2299.001.606
PRO Battery B plus (for low temperature)	3	2299.002.607
PRO C Drive	4	2290.002.602
PRO C M12 Cable (5 m)	5	2291.000.003
PRO C M12 Cable (10 m)	6	2291.000.004
PRO Mounting Device (for wall mounting)	7	27.008.007
PRO MP-6 Distributor including PRO MP-6 Accessory box: 6 x Tube connector G1/8o for tube ø8 mm straight 6 x Tube connector G1/8o for tube ø8 mm 90° - turnable 4 x PRO MP-6 Plug G1/8	8	2291.000.000
PRO MP-6 Connecting cable (14 cm)	9	2291.000.001
PRO MP-6 Connecting cable (2 m)	10	2291.000.002
PRO Protection box single (steel) Incl. mounting plate and mounting set With pre-bored holes for outlets with cable screw connections	11	27.005.059
PRO Protection box double (steel) Incl. mounting plate and mounting set No bore holes for outlets, no cable screw connections	12	27.005.019
PRO Protection box single (plastic) Incl. mounting set & boring template No bore holes for outlets, no cable screw connections	13	27.005.084



[1 example of each part displayed]  
For more connection parts please go to [→ page 41+42](#)



For extension G1/8o x G1/8i please go to [→ page 40](#)

PRO LC (=Lubricant Canister) / Covers	perma Code	PRO LC 250 250 cm <sup>3</sup>	PRO LC 500 500 cm <sup>3</sup>	
perma Multipurpose grease	SF01	222.0001.608	223.0001.609	
perma Extreme pressure grease	SF02	222.0002.608	223.0002.609	
perma High temp. grease	SF03	222.0003.608	223.0003.609	
perma High performance grease	SF04	222.0004.608	223.0004.609	
perma High temp. / extreme pressure grease	SF05	222.0005.608	223.0005.609	
perma Liquid grease	SF06	222.0006.608	223.0006.609	
perma Low temp. grease	SF08	222.0008.608	223.0008.609	
perma Bio grease	SF09	222.0009.608	223.0009.609	
perma Food grade grease NSF H1	SF10	222.0010.608	223.0010.609	
PRO Cover for LC	1	2299.101.000	2	2299.102.000

Make sure to exchange the battery pack when you replace the empty LC

Codes of lubricants contained in your lubrication systems are marked here (use for re-orders):



# Electromechanical multi-point lubrication systems

## PRO Basic systems, perma NET, perma ECOSY

PRO MP-2 Basic system	2290.008.690	PRO C MP-2 Basic system	2290.009.690
1 x PRO MP-2 Drive with mounted distributor 1 x PRO Battery B 1 x PRO Mounting device 1 x PRO MP-2 Accessory box (4 parts: Tube Connector G1/8o for tube oØ 8 mm 2 x 90°, 2 x straight)		1 x PRO C MP-2 Drive with mounted distributor 1 x PRO C M12 Cable (5 m) 1 x PRO Mounting device 1 x PRO MP-2 Accessory box (4 parts: Tube Connector G1/8o for tube oØ 8 mm 2 x 90°, 2 x straight)	
PRO MP-6 Basic system	2290.019.601	PRO C MP-6 Basic system	2290.020.602
1 x PRO Drive 1 x PRO Battery B 1 x PRO MP-6 Distributor 1 x PRO MP-6 Connecting cable (14 cm) 1 x PRO Mounting device 1 x PRO MP-6 Accessory box (consisting of 16 pcs. - go to page. 38 - Pic. 8)		1 x PRO C Drive 1 x PRO C M12 Cable (5 m) 1 x PRO MP-6 Distributor 1 x PRO MP-6 Connecting cable (14 cm) 1 x PRO Mounting device 1 x PRO MP-6 Accessory box (consisting of 16 pcs. - go to page. 38 - Pic. 8)	

For every perma PRO Basic system you also need a PRO LC unit and a PRO LC cover.

perma NET	Pic.	
NET GATEWAY	1	2399.103.004
NET Power (power supply)	2	2399.105.000
NET I/O	3	2399.104.000
NET Drive	4	2390.001.605
NET Termination resistor	5	2399.106.000
NET Connector plug	6	2399.103.002
NET Cable (per meter)	7	2399.103.003









perma ECOSY	Pic.	
ECOSY The perma ECOSY tank can be refilled manually and holds up to 7 liters	1	30.000.011
ECOSY Impulse sensor	2	27.005.071



1



2

For oil containing plastic bottles please go to → page 45

Our standard connection parts can be used (e.g. oil retaining valve)

→ **Select the most suitable accessories for your perma lubrication system**

Brackets	Pic.	Standard	Pic.	Brass	Pic.	Stainless steel
Clamp (steel, zinc-plated)	1	26.001.100		-		-
Clip for perma CLASSIC, FROST, FUTURA, STAR (plastic)	2	26.001.105		-		-
NOVA Clip (plastic)	3	26.050.150				
Bracket		-		-	4	<b>Steel 1.4016</b> 26.0012.150
Insert for Bracket G1/4o x G1/4i		-	5	26.0011.151	6	<b>Steel 1.4571</b> 26.0012.151







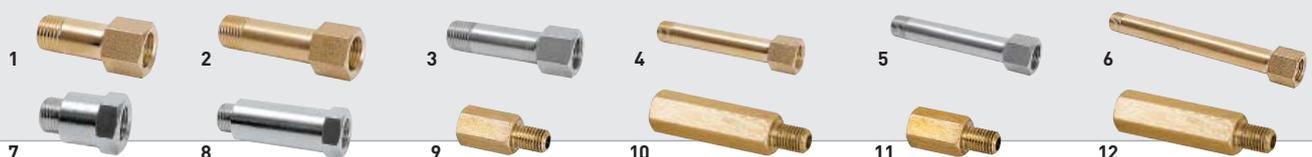

Mounting plate / angles (Hole spacing 45 mm)	Pic.	Stainless steel 1.4301
Mounting plate 110 x 70 x 2.5 mm	1	26.001.653
Mounting angle 50 x 50 x 70 x 2.5 mm	2	26.001.650
Mounting angle 50 x 70 x 70 x 2.5 mm	3	26.001.651
Mounting angle 50 x 100 x 70 x 2.5 mm	4	26.001.652
Mounting angle 50 x 180 x 70 x 5 mm	5	26.001.654







Extensions	Pic.	Brass	Pic.	Stainless steel 1.4571
Extension R1/4o x G1/4i - 30 mm	1	26.0011.700		-
Extension R1/4o x G1/4i - 45 mm	2	26.0011.701	3	26.0012.701
Extension R1/4o x G1/4i - 75 mm	4	26.0011.702	5	26.0012.702
Extension R1/4o x G1/4i - 115 mm	6	26.0011.705		-
Extension G1/8o x G1/8i - 16 mm, nickel plated	7	27.008.023		-
Extension G1/8o x G1/8i - 36 mm, nickel plated	8	27.008.024		-
Extension M6 x 0.75 - 22 mm	9	26.0011.710		-
Extension M6 x 0.75 - 38 mm	10	26.0011.711		-
Extension M6 x 1 - 22 mm	11	26.0011.712		-
Extension M6 x 1 - 38 mm	12	26.0011.713		-



→ **NOTE: Seal all connection parts with a metal bonding adhesive (medium)**

Angles / others	Pic.	Brass	Pic.	Stainless steel 1.4401
Angle 45° G1/4o x G1/4i	1	26.0011.300	2	26.0012.301
Angle 45° M6o x G1/4i	3	26.0011.304		-
Angle 45° M8x1o x G1/4i	4	26.0011.305		-
Angle 45° M10x1o x G1/4i	5	26.0011.306		-
Angle 90° G1/4o x G1/4i	6	26.0011.350	7	26.0012.350
Angle 90° M6o x G1/4i	8	26.0011.353		-
Angle 90° M8x1o x G1/4i	9	26.0011.354		-
Angle 90° M10x1o x G1/4i	10	26.0011.355		-



Swivelling screw fitting G1/4o x G1/4i	11	26.0011.360		-
T-adapter 3 x G1/4i	12	26.0011.600	13	26.0012.600
Bulkhead nipple G3/8o x G1/4i	14	26.0011.601		-
Hexagon nipple R1/4o	15	26.0011.602	16	26.0012.602
Sleeve G1/4i	17	26.0011.605		-



Tube connectors / tubes Standard: oØ 8 mm x iØ 6 mm	Pic.	Standard	Pic.	Brass	Pic.	Stainless steel 1.4571
Tube connector for perma G1/4i	1	26.001.202	2	26.0011.202	3	26.0012.202
Tube connector G1/4o	4	26.001.203	5	26.0011.203	6	26.0012.203
Tube connector G1/8o	7	26.001.204		-		-
Tube (PA) up to +80 °C oØ 8 mm x iØ 6 mm (per meter)	8	26.001.250		-		-
Tube (PTFE) up to +250 °C oØ 8 mm x iØ 6 mm (per meter)	9	26.001.260		-		-



→ **Note: Use a tube prefill adapter to prefill your tubes**

Tube connectors / tubes	Pic.	For tubes with $\text{o}\varnothing$ 6 mm	Pic.	For tubes with $\text{o}\varnothing$ 8 mm
Tube connector G1/8o straight	1	26.003.904	2	27.008.010
Tube connector G1/8o 90° - rotary type	3	26.003.907	4	27.008.011
Tube connector G1/4o straight	5	26.003.905	6	27.005.011
Tube connector G1/4i straight	7	27.005.038	8	27.005.026
Tube connector G1/4o 90° - rotary type		-	9	27.005.012
Tube connector G3/8o straight		-	10	27.005.013



	Pic.	For tubes with $\text{o}\varnothing$ 6 mm	Pic.	For tubes with $\text{o}\varnothing$ 8 mm
Tube connector M5o straight	11	26.003.906		-
Tube connector M6o straight	12	27.005.036		-
Tube connector M6o 90° - swivel type	13	27.005.042		-
Tube connector M6x0.75o 90° - swivel type	14	27.005.043		-
Tube connector M8x1o straight	15	27.005.044		-
Tube connector M10x1o straight	16	27.005.037		-
Tube connector M8x1o 90° - rotary type	17	27.005.034		-
Tube connector M10x1o 90° - rotary type	18	27.005.035		-



	Pic.	For tubes with $\text{o}\varnothing$ 6 mm	Pic.	For tubes with $\text{o}\varnothing$ 8 mm
Y-connector for tube	19	27.005.041	20	27.005.040
Extension for tube $\text{o}\varnothing$ 6 mm to $\text{o}\varnothing$ 8 mm	21	27.005.039		-
Tube prefill adapter	22	27.005.066	23	27.005.058
Tube black (per meter)	24	$\text{o}\varnothing$ 6 mm x $\text{i}\varnothing$ 4 mm for perma ECOSY 27.005.016	25	$\text{o}\varnothing$ 8 mm x $\text{i}\varnothing$ 5 mm for perma PRO 27.008.009
Tube translucent (per meter)	26	$\text{o}\varnothing$ 6 mm x $\text{i}\varnothing$ 4 mm for perma ECOSY 27.005.008		-



→ Tube lengths can be selected individually

Copper pipe / fittings	Pic.	For copper pipes with $\text{o}\varnothing$ 8 mm
Copper pipe $\text{o}\varnothing$ 8 mm x $\text{i}\varnothing$ 6 mm (per meter)	27	27.005.033
Cutting ring coupling R1/4i for copper pipe	28	27.005.045
Cutting ring coupling R1/4o for copper pipe	29	27.005.046

→ Pipe length can be selected individually



→ **Note: Use a pressure gauge to check counter pressure at lubrication point**

Reducers / reducer coupling	Pic.	Brass	Pic.	Stainless steel 1.4571
Reducer R1/2o x G1/4i	1	26.0011.500		-
Reducer G1/8o x G1/4i	2	26.0011.501	3	26.0012.501
Reducer G1/4o x G1/8i	4	26.0011.503		-
Reducer R3/4o x G1/4i	5	26.0011.504		-
Reducer R3/8o x G1/4i	6	26.0011.505		-
Reducer M6o x G1/4i	7	26.0011.511	8	26.0012.511
Reducer M8x1o x G1/4i	9	26.0011.514	10	26.0012.514
Reducer M8o x G1/4i	11	26.0011.515	12	26.0012.515
Reducer M10x1o x G1/4i	13	26.0011.518	14	26.0012.518
Reducer M10o x G1/4i	15	26.0011.520		-
Reducer M12o x G1/4i	16	26.0011.524		-
Reducer M12x1o x G1/4i	17	26.0011.525		-
Reducer M12x1.5o x G1/4i	18	26.0011.526		-
Reducer M14x1.5o x G1/4i	19	26.0011.528		-
Reducer M14o x G1/4i	20	26.0011.529		-
Reducer M16o x G1/4i	21	26.0011.530		-
Reducer M16x1,5o x G1/4i	22	26.0011.531		-
Reducer 1/4"o x G1/4i	23	26.0011.533		-
Reducer coupling G3/8i to G1/8i for tube oØ 8 mm, nickel plated	24	27.005.081		-



Oil retaining valves	Pic.	Brass	Pic.	Stainless steel 1.4571
Oil retaining valve up to +60 °C (plastic valve)	1	26.0011.810	2	26.0012.810
Oil retaining valve up to +150 °C (metal valve)	3	26.0011.811		-



→ **Note: Check the connecting thread size at the lubrication point**

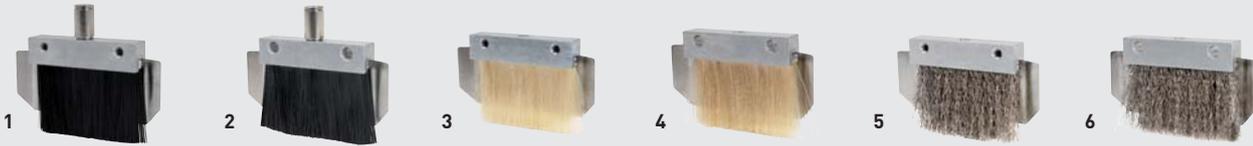
Oil brushes	Pic.	Brush with horsehair up to +80 °C	Pic.	High temperature brush with PPS-bristles up to +180 °C	Pic.	High temperature brush with stainless steel bristles up to +350 °C
Oil brush Ø20 mm G1/4i	1	26.001.400		-		-
Oil brush 40 x 30 mm G1/4i thread on top	2	26.001.410	3	26.001.420	4	26.001.430
Oil brush 60 x 30 mm G1/4i thread on top	5	26.001.411	6	26.001.421	7	26.001.431
Oil brush 100 x 30 mm G1/4i thread on top	8	26.001.412	9	26.001.422	10	26.001.432
Oil brush 40 x 30 mm G1/4i lateral thread	11	26.001.447		-		-
Oil brush 60 x 30 mm G1/4i lateral thread	12	26.001.448		-		-



Special connecting parts	Pic.		Pic.		Pic.	
<b>Rail oiler brush</b> For sliding guide lubrication (oil) Application: Elevators, high racks	1	<b>Gap width 16 mm incl. oil retaining valve</b> 27.004.002	2	<b>Gap width 20 mm incl. oil retaining valve</b> 27.004.003	3	<b>Gap width 29 mm incl. oil retaining valve</b> 27.004.004
<b>Rail oiler with foam insert</b> For sliding guide lubrication (oil) Application: Elevators, high racks	4	<b>Gap widths 5, 9, 16 mm</b> 27.003.100		-		-
<b>Lubrication pocket for gear lubrication</b> For open gear lubrication (grease) Application: Press drives, slew rings, gear racks	5	26.002.950	<b>Custom made to your specification</b> Please provide: Module, no. of teeth, radius in mm width of gear wheel in cm			
<b>Chain lubrication box with rotating brush</b> For chain lubrication from below (oil) Application: Conveyor chains	6	<b>40x75x45 mm</b> 26.002.955	7	<b>40x75x61 mm</b> 26.002.959	8	<b>40x75x77 mm</b> 26.002.960
Re-order for rotating brush (for chain lubrication box)	9	26.001.957		-		-
CWL Applicator assy with applicator insert	p. 31	27.006.001	CWL Applicator (replacement)			27.006.002
OGL System (paddle)	p. 31	27.007.000				



→ **Note: For prefilling of connection parts (400 g cartridge) always use the same lubricant that is filled in the lubrication system**

Special brushes / mounting brackets	Pic.	with tapped bore M6	Pic.	with trough hole
Special brush for large chains up to +80 °C	1	27.005.056	2	27.005.057
Special brush for large chains up to +180 °C	3	27.005.073	4	27.005.074
Special brush for large chains up to +350 °C	5	27.005.075	6	27.005.076
				
Special mounting bracket left for special brush	7	27.005.068		-
Special mounting bracket right for special brush	8	27.005.069		-
Spacer for special brush, width: 13 mm	9	27.005.070		-
				

Cartridges / bottles (for prefilling)				
Grease	perma Code	Cartridge 400 g	Container 1 kg	Container 5 kg
perma Multipurpose grease	SF01	28.001.000	281.0001.0000	285.0001.0000
perma Extreme pressure grease	SF02	28.002.000	281.0002.0000	285.0002.0000
perma High temp. grease	SF03	28.003.000	281.0003.0000	285.0003.0000
perma High performance grease	SF04	28.004.000	281.0004.0000	285.0004.0000
perma High temp. / extreme pressure grease	SF05	28.005.000	281.0005.0000	285.0005.0000
perma Liquid grease	SF06	28.006.000	281.0006.0000	285.0006.0000
perma Low temp. grease	SF08	28.008.000	281.0008.0000	285.0008.0000
perma Bio grease	SF09	28.009.000	281.0009.0000	285.0009.0000
perma Food grade grease NSF H1	SF10	28.010.000	281.0010.0000	285.0010.0000
Oil	perma Code		Bottle 1 liter	
perma High performance oil	S014		281.0414.0000	→ Use for prefilling of tubes or to fill the perma ECOSY tank
perma Multipurpose oil	S032		281.0432.0000	
perma Bio oil low viscosity	S064		281.0464.0000	
perma Bio oil high viscosity	S069		281.0469.0000	
perma Food grade oil NSF H1	S070		281.0470.0000	

Pressure tester STAR VARIO - up to 5 bar for perma CLASSIC, FROST, FUTURA, NOVA, STAR	27.001.002	
Pressure tester PRO - up to 25 bar for perma PRO	27.001.001	
Grease gun	26.005.001	
Tube with rotary joint and slide coupling for grease gun	26.005.010	

# 6 easy steps to your own perma lubrication system

## 1. What kind of application is it? How many lubrication points do you want to lubricate?

For a complete overview of all perma lubrication systems please check → [page 9](#)



## 2. How much lubricant is required?

Conversion based on given lubricant amount

**Conversion: 1 stroke of grease = approx. 1.5 cm<sup>3</sup> = 1.2 g**

or use our → [perma SELECT](#) software

## 3. Which lubricant is best suited for your application?

For a complete overview of all our standard greases and oils please check → [page 35](#)

## 4. Find the correct part number

For part numbers of all perma lubrication systems and components please check → [page 36 – 39](#)

## 5. Which connection parts are required for the installation?

For connection parts and accessories please check → [page 40 – 45](#)

## 6. Do you need help?

Our perma SERVICE team offers technical support either on the phone → **no. +49 9704 609-99** or via email: [service@perma-tec.de](mailto:service@perma-tec.de)

### perma CLASSIC / perma FUTURA with 120 cm<sup>3</sup> lubricant



Activator / months at 20° with SF 01	1	3	6	12
Lubricant / day [cm <sup>3</sup> ]	4,0	1,3	0,7	0,3
Lubricant / week [cm <sup>3</sup> ]	28,0	9,3	4,7	2,3
Strokes with grease gun / day	2-3	1	0,5	-
Strokes with grease gun / week	16-20	5-7	3,4	1-2

### perma NOVA with 130 cm<sup>3</sup> lubricant



Adjustment / month	1	2	3	4	5	6	7	8	9...	...12
Lubricant / day [cm <sup>3</sup> ]	4.3	2.2	1.4	1.1	0.9	0.7	0.6	0.5	0.5	0.4
Lubricant / 100 hours [cm <sup>3</sup> ]	18.1	9.0	6.0	4.5	3.6	3.0	2.6	2.3	2.0	1.6
Lubricant / week [cm <sup>3</sup> ]	30.3	15.2	10.1	7.6	6.1	5.1	4.3	3.8	3.4	2.7
Strokes with grease gun / day	3	1-2	1	<1	<1	0.5	-	-	-	-
Strokes with grease gun / 100 h	11-13	5-7	4	3	2-3	2	<2	1.5	<1.5	1
Strokes with grease gun / week	18-22	9-11	6-7	5	4	3-4	3	2-3	2	1-2

### perma STAR LC S60 with 60 cm<sup>3</sup> lubricant



Adjustment / month	1	3	6	12
Lubricant / day [cm <sup>3</sup> ]	2.0	0.7	0.3	0.2
Lubricant / 100 hours [cm <sup>3</sup> ]	8.3	2.8	1.4	0.7
Lubricant / week [cm <sup>3</sup> ]	14.0	4.7	2.3	1.2
Strokes with grease gun / day	1-2	0.5	-	-
Strokes with grease gun / 100 h	5-6	2	1	0.5
Strokes with grease gun / week	8-10	3-4	1-2	1

### perma STAR LC M120 with 120 cm<sup>3</sup> lubricant



Adjustment / month	1	3	6	12
Lubricant / day [cm <sup>3</sup> ]	4	1.3	0.7	0.3
Lubricant / 100 hours [cm <sup>3</sup> ]	16.7	5.5	2.8	1.4
Lubricant / week [cm <sup>3</sup> ]	28	9.3	4.7	2.3
Strokes with grease gun / day	2-3	1	0.5	-
Strokes with grease gun / 100 h	10-12	3-4	2	1
Strokes with grease gun / week	17-20	5-7	3-4	1-2

### perma STAR LC L250 with 250 cm<sup>3</sup> lubricant



Adjustment / month	1	3	6	12
Lubricant / day [cm <sup>3</sup> ]	8.3	2.8	1.4	0.7
Lubricant / 100 hours [cm <sup>3</sup> ]	34.7	11.6	5.8	2.9
Lubricant / week [cm <sup>3</sup> ]	58.3	19.4	9.7	4.9
Strokes with grease gun / day	5-6	2	1	0.5
Strokes with grease gun / 100 h	22-24	7-9	3-5	1-2
Strokes with grease gun / week	36-40	12-14	6-7	3-4

# Customer service is not just a slogan for us - we mean it!

[www.perma-tec.com](http://www.perma-tec.com)

Visit our homepage and register. As a registered user you can download all operating manuals and installation instructions, brochures, and other product information for all perma lubrication systems.



## perma SELECT 4.0 **NEW**

Our easy to use perma SELECT program will help you choose the right lubricator, lubricant, and settings for each individual application.

### Download center

under „Service & Downloads“:

- Product Data sheets
- DIN EN ISO certificate
- Operating / installation instructions
- Brochures / flyers
- perma SELECT
- Lubrication maintenance plan

### Media portal

under „Service & Downloads“:  
(prior log-in required)

- Terms of use
- Updated product images

### Product training portal

under „Members“:  
(prior log-in required)

- Product training schedule
- Product training content / agenda
- Registration form

## perma ACADEMY

We will be happy to share our know-how with you. Please check our homepage for more details about our free in-house product trainings in German and English (industry based and practical). We look forward to your registration.

## perma SERVICE

Do you have any technical questions? Do you need help selecting the right lubrication system? Your **perma SERVICE** team in Euerdorf or your local distributor will be glad to help you.

- **Equipment**
- **Needs analysis**
- **Advice**
- **Lubrication and maintenance plan**
- **Technical support**
- **Preventive maintenance**

#### Published by:

perma-tec GmbH & Co. KG  
Hammelburger Straße 21  
97717 EUERDORF  
GERMANY

#### Contact

Tel.: +49 9704 609-0  
Fax: +49 9704 609-50  
E-Mail: [info@perma-tec.com](mailto:info@perma-tec.com)  
[www.perma-tec.com](http://www.perma-tec.com)

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**perma-tec GmbH & Co. KG**

Hammelburger Straße 21  
97717 EUERDORF  
GERMANY

[info@perma-tec.com](mailto:info@perma-tec.com)  
[www.perma-tec.com](http://www.perma-tec.com)



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