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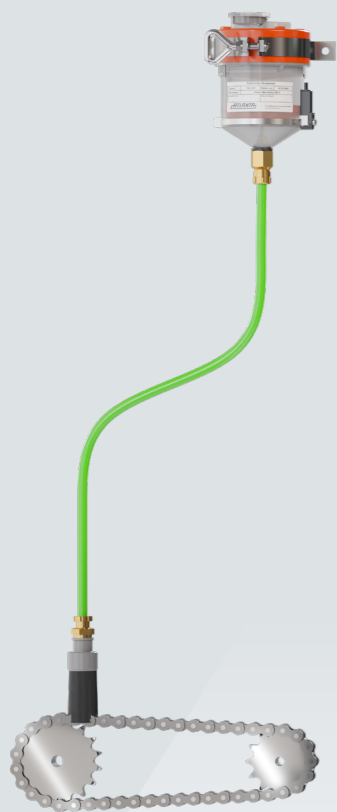
## ATLANTA Automatic Lubrication Systems

The innovative lubricant supply for your machine

Adequate lubrication is necessary to maintain the precision of the drive system over the years. Manual lubrication is often unreliable and very expensive, especially in areas that are difficult to access. Central lubrication ensures that the right amount of lubricant supplies the system with the necessary lubricant at the right time.

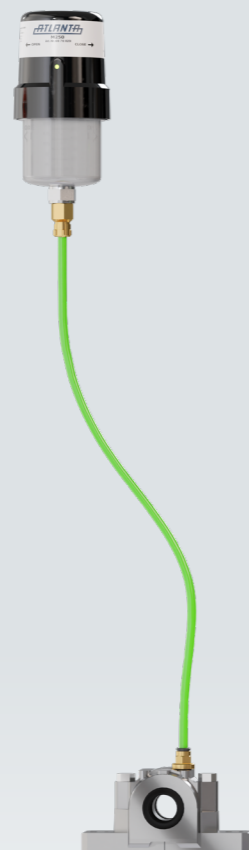
By using our electronically controlled lubrication systems, the dosing quantity of the lubricant can be individually adjusted to the respective application. In conjunction with our felt gears, our lubrication systems ensure that there is a permanent, thin lubricating film on the tooth flanks. This prevents metal-to-metal contact, which would damage the teeth and thus the entire rack and pinion drive.

Whether single-point or multi-point lubrication, you increase the performance of your machines and systems with a permanent and controlled supply of the drive with the necessary lubricant.

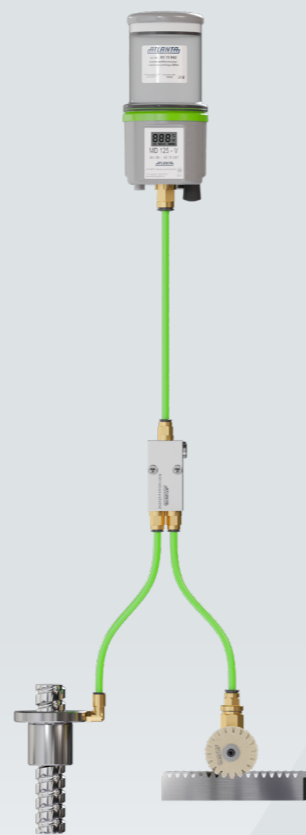


### Single-Point Lubrication Systems

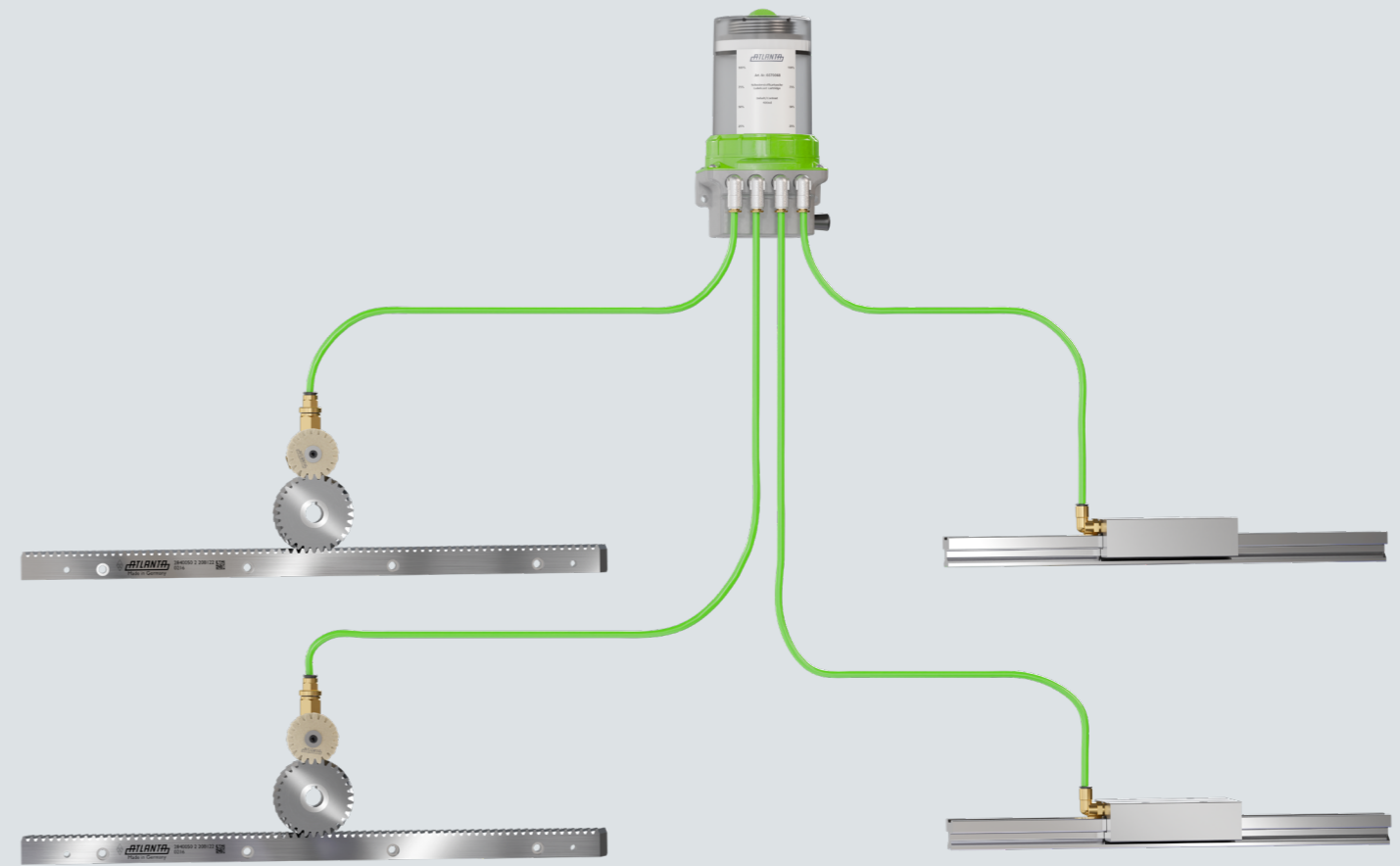
Type 125 / 475



Type M60 / M150 / M250



Type MD125



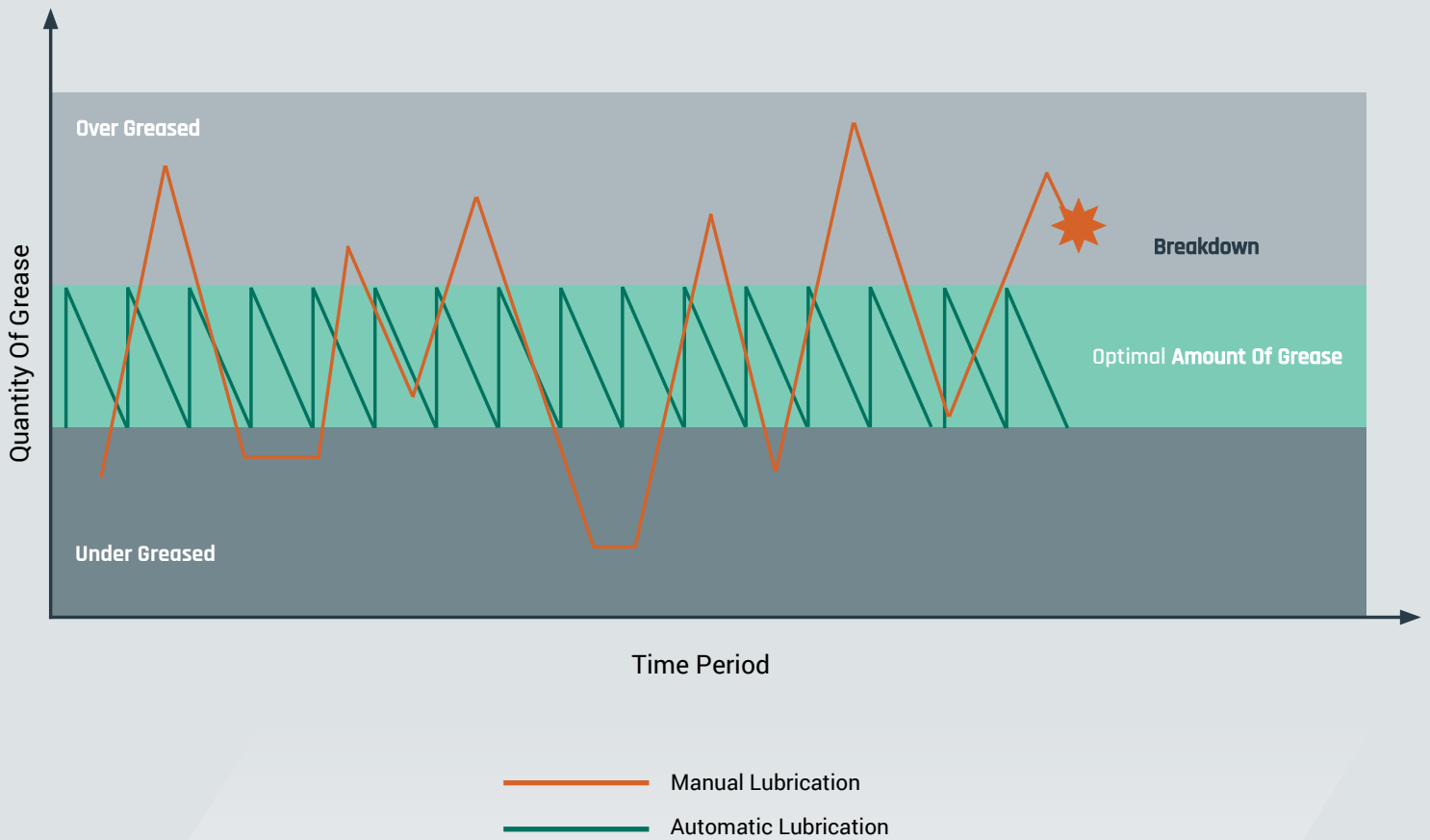
### Multi-Point Lubrication Systems

Type MD400








## Advantages Of Automatic Lubrication Systems

Compared to manual lubrication, the automatic lubrication system offers a number of advantages:

- ✦ Even supply of lubricant to the components
- ✦ Less machine downtime and less wear
- ✦ Less work and therefore lower maintenance costs
- ✦ Effective and economical use of the lubricant
- ✦ Reduced risk to staff
- ✦ Control & overview of the lubrication process of the system



## Automatic Lubricator Overview

Lubricator Model	Setting	Lubricant Volume	Maximum Operating Pressure	Operational Voltage	Refillable	Additional Information	Page	
<b>Electro-Chemical Single-Point Lubricator</b>								
	Type 125 Type 475	1-18 month	100 ml 460 ml	3 bar (44 psi)	(4) 1.5V Batteries	Yes	ATEX Optional	D-10 – D-11
<b>Electro-Mechanical Single-Point Lubricator</b>								
	M60 M150 M250	1-12 month	60 ml 150 ml 250 ml	7.5 bar (108 psi)	6V Batteries or 24 V DC	Yes		D-12 – D-13
	MD125-B	1-24 month	125 ml	35 or 15 bar (435 or 218 psi)	4.5V Batteries	No	Delivery Pressure Switchable	D-14 – D-15
<b>Electro-Mechanical Multi-Point Lubricator</b>								
	MD125-V	1-24 month Individually Adjustable	125 ml 250 ml	50 or 15 bar (725 or 218 psi)	24 V DC	No	Delivery Pressure Switchable, External Control / PLC	D-14 – D-15
	MD400-B	1-36 month	250 ml 400 ml	70 bar (1015 psi)	6V Batteries	No	1-2 Outlets	D-16 – D-18
	MD400-V	1 - 36 month Intermittent Operation Possible	250 ml 400 ml	70 bar (1015 psi)	24 V DC	No	1-2 Outlets	D-16 – D-18
	MD400-D	Individually Adjustable	250 ml 400 ml	70 bar (1015 psi)	24 V DC	No	1-4 Outlets External Control / PLC	D-16 – D-18

## Type 125 / 475 Lubricators

The single-point lubrication system type 125 and type 475 is an electronically controlled lubricator which is based on the grease gun principle. After starting the operation, a nitrogen gas is generated electronically to move a piston.

### Type 125 / 475 Long-Term Use

The grease filling by the type 125 and 475 is pressed out evenly (not pulsating) at constant pressure according to the selected dosage. Depending on requirements, an emptying time of 1-18 months can be selected for a grease filling via microswitches.

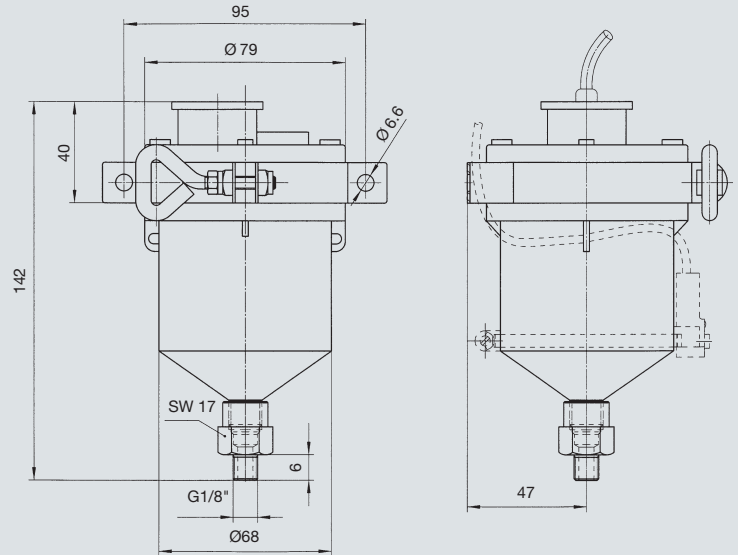
The transparent housing, which can be mounted in any position, allows a visual check of the amount of grease still available at any time. After complete emptying, further use is possible by refilling.



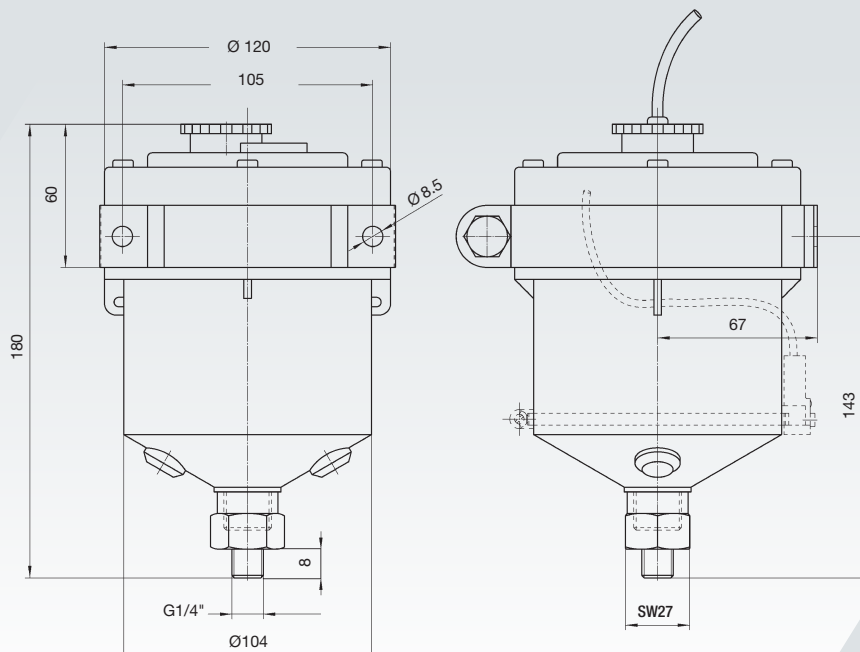
### Advantages of Type 125 / 475 Lubricators

- ⊛ Precise, reliable delivery of lubricant
- ⊛ Battery operation
- ⊛ Emptying time 1 - 18 months
- ⊛ Synchronization with the machine operating time possible
- ⊛ Visual check of level possible at all times
- ⊛ Connection of hose line possible \*
- ⊛ Special grease fillings possible
- ⊛ Delivery of oils and greases up to NLGI-1
- ⊛ ATEX possible (II 2G Ex ib IIC T4 / T3 Gb)

\* Hose length depends on lubricant and application



Type 125



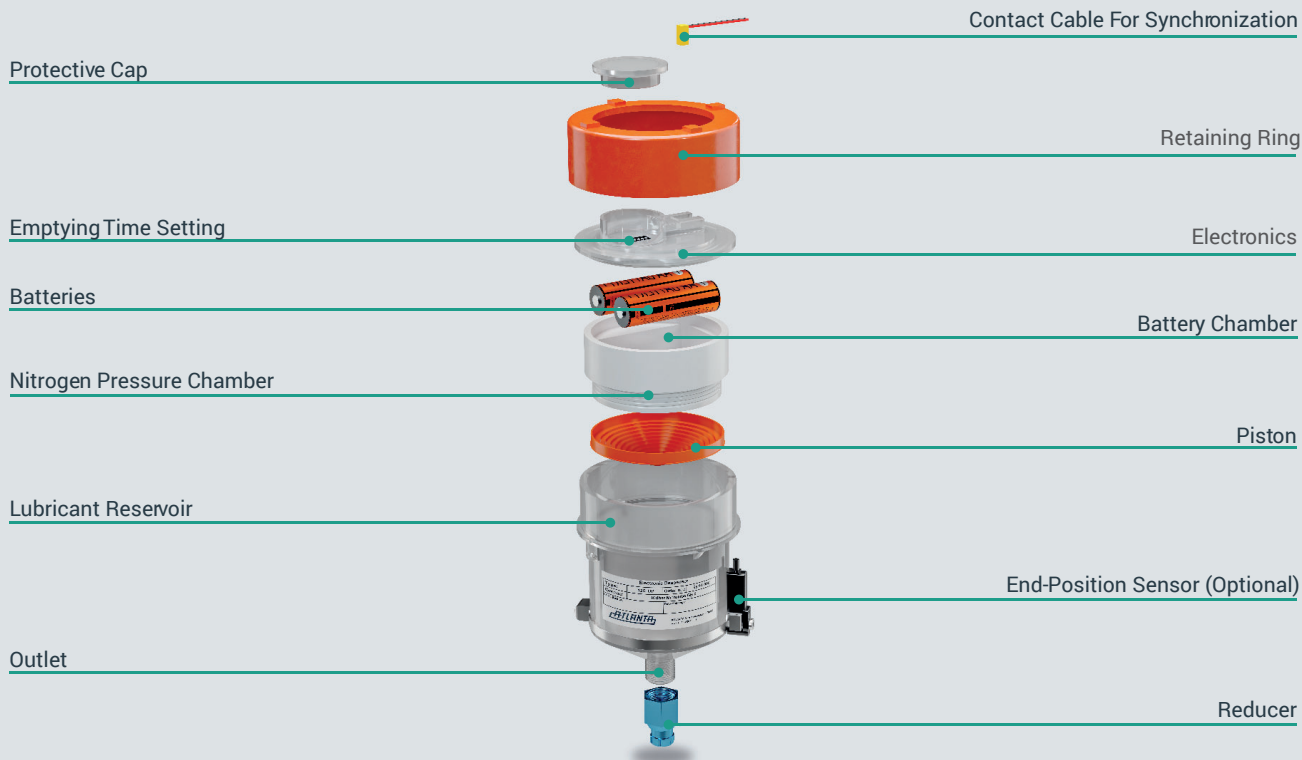
Type 475

## Technical Data

Lubricator Model		Type 125		Type 475	
		Without ATEX	With ATEX	Without ATEX	With ATEX
Order Code	Lubricant Type 1	65 91 000	65 91 006	65 91 007	-
	Lubricant Type 2	65 91 004		65 91 014	
	With Lubricant	65 91 009		65 91 069	
	Lubricant Type 1 + EP Sensor <sup>1)</sup>	65 91 050		65 91 056	
	Lubricant Typ 2 + EP Sensor <sup>1)</sup>	65 91 054		-	
	Without Lubricant + EP Sensor <sup>1)</sup>	65 91 059		-	
Drive		Nitrogen Pressure Chamber			
Operating Pressure		0.2 - 3.0 Bar / 2.9 - 43.5 psi			
Settings		1 - 18 Month			
Time or Pulse Control		Time Mode			
Lubrication Volume		100 ml		460 ml	
Lubricating Medium		Oils & Greases Up To NLGI 1			
Temperature Range		- 30 °C to +50 °C			
Operating Voltage		3.0 V Batteries *			
Weight Empty		~ 420 g		~ 600 g	
Dimensions H x Ø		100 x 80 mm		150 x 115 mm	
Outlet		G1/4 / G1/8		G1/2 / G1/4	
Performance Monitoring		LED Red/Green			

1) End-Position Sensor

## Components



## Spare Parts

Model	Type 125	Type 475
Nitrogen Pressure Chamber	65 91 001 *	65 91 017 *
Assembly Wrench	65 91 030	65 91 032
Mounting Insert	65 91 031	65 91 033

\* Batteries are included

## Type M60 / M150 / M250 Lubricators

The single-point lubrication system Type M is characterized by its reliable and user-friendly electronic control with an electromechanical drive. With its precise conveyor technology, this system is suitable for automatic lubrication of roller and sliding bearings, gear racks, open gears or chains and much more.

### Type M - Reliable Automatic Lubrication

The lubrication system type M has a robust and very precise drive motor, which is powered by a 6V Li high performance battery or externally by means of a 24V adapter. The lubricant cartridge is simply screwed to the drive unit and the drive unit is reusable.

With a delivery pressure of 7.5 bar, type M operates automatically and temperature-independently for up to one year. The emptying time of the dispenser (dosing of the lubricant can be freely selected between 1 - 12 months). It is possible to change the setting or switch off the unit at any time.

The function control of the type M is carried out by a clearly visible LED. In addition, the fill level of the lubricant cartridge is clearly visible at all times through the transparent housing. After complete emptying, further use is possible by refilling.

### The Advantages of Type M Lubricators

- ⊗ Precise, reliable delivery of lubricant
- ⊗ Battery operation, voltage supply 24V
- ⊗ Delivery pressure max. 7.5 bar (109 psi)
- ⊗ Emptying time 1 - 12 months
- ⊗ Operating temperature -20 °C to +60 °C
- ⊗ Visual warning of malfunction (LED)
- ⊗ Visual inspection of the fill level possible at any time
- ⊗ Flow rate independent of temperature
- ⊗ Connection of hose line possible \*
- ⊗ Delivery of oils and greases up to NLGI-2
- ⊗ Can be used outdoors
- ⊗ Special grease fillings possible

\* Hose length depends on lubricant and application

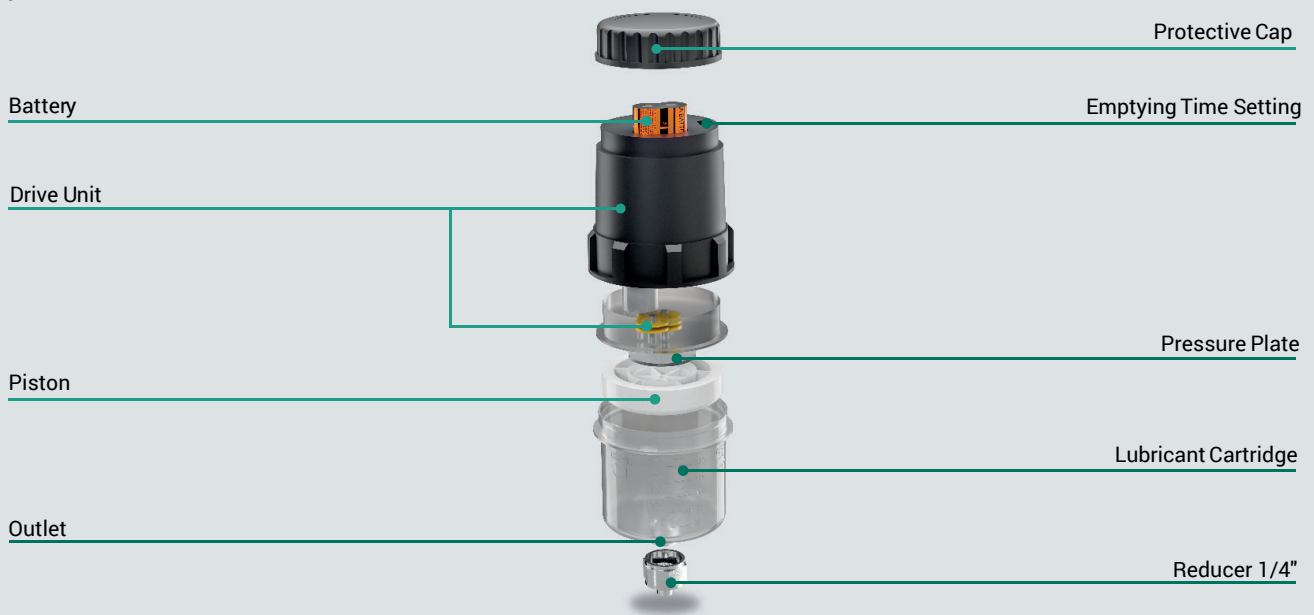


## Technical Data

Lubricator Model	Type M60	Type M150	Type M250	
Order Code Drive Unit	65 70 000	65 70 010	65 70 020	
Lubricant Cartridge Order Code	Lubricant Type 1	65 70 002 (60 ml)	65 70 012 (150 ml)	65 70 022 (250 ml)
	Lubricant Type 2	65 70 004 (60 ml)	65 70 014 (150 ml)	65 70 024 (250 ml)
	Without Lubricant	65 70 006 (60 ml)	65 70 016 (150 ml)	65 70 026 (250 ml)
Drive	Electro-Mechanical (Reusable)			
Operating Pressure	Maximum 7.5 bar (109 psi)			
Settings	1 - 12 Month			
Time or Pulse Control	Time Mode			
Lubrication Volume	60 ml	150 ml	250 ml	
Lubricating Medium	Oils & Greases Up To NLGI 2			
Temperature Range	-20 °C to +60°C			
Operating Voltage	6.0 V (Li-Batteries) * or 24 V (Adapter)			
Weight Empty	510 g	570 g	700 g	
Dimensions H x Ø	140 x 89 mm	166 x 89 mm	196 x 103 mm	
Outlet	G1/2 / G1/4			
Performance Monitoring	LED Red / Green			

\* Batteries are included in the drive unit

## Components



## Adapter For External Power Supply 24V

In addition to classic battery operation, the Type M lubricant dispenser is also available with external 24V power supply. Practical fact: With the 24V adapter even customers who are already using the battery-operated device can easily and inexpensively switch to an external power supply.

The Type M lubricant dispenser cap can be changed in seconds and intermittent machine-dependent operation is possible immediately. The adapter is connected using a two-core connection cable.



## The Advantages of Type M

- ⊗ No batteries so no additional costs
- ⊗ Type M already in use can be retrofitted



## Type MD125 Lubricators

The single-point lubrication system Type MD125 is a reliable and electronically controlled lubrication system with an electromechanical drive. It can also be used as a multi-point lubrication system by using of splitters or progressive distributors, and its extremely compact pump body and low weight make it particularly suitable for areas with limited space.

With its precise conveying technology, this system is suitable for automatic lubrication of roller and sliding bearings, gear racks, open gears, chains, ball screws, spindle drives and much more.

### Type MD125 - Flexible & Compact

Type MD125 is available in two model variants: The MD125-B works with a 4.5V battery and an operating pressure of 15 or 35 bar (218 or 508 psi - switchable). The type MD125-V is operated with 24V DC and can optionally be connected to the existing PLC. The higher operating pressure of up to 15 or 50 bar (218 or 725 psi - switchable) opens up even more application possibilities.

In addition to the 125 ml cartridge, a larger 250 ml cartridge can also be screwed onto this model. With the built-in display and micro-controller specific lubrication intervals can be programmed. Due to its compact dimensions, the type MD 125 is ideally suited for retrofitting in many applications.



### The Advantages of Type MD125 Lubricators

- ✦ Precise, reliable delivery of lubricant
- ✦ Battery operation, voltage supply 24V or connection to machine control system
- ✦ Delivery pressure 15 - 35/50 bar (174 - 508/725 psi) depending on design
- ✦ Emptying time 1 - 24 months
- ✦ Synchronization with the machine operating time possible
- ✦ Operating temperature -15 °C to +60 °C
- ✦ Visual warning of malfunction (LED and display)
- ✦ Visual inspection of the fill level possible at any time
- ✦ Empty report
- ✦ Flow rate independent of temperature
- ✦ Connection of hose line possible \*
- ✦ Delivery of oils and greases up to NLGI-2
- ✦ Compact dimensions
- ✦ Special fillings available
- ✦ Adaptable to splitter / distributor

\* Hose length depends on lubricant and application

## Technical Data

Lubricator Model		Type MD125-B	Type MD125 -V
Lubricator Order Code		65 70 040	65 70 041
Lubricant Cartridge Order Code	Lubricant Type 1 125 ml	65 70 042	
	Lubricant Type 1 250 ml		65 70 043
	Without Lubricant 125 ml	65 70 046	
	Without Lubricant 250 ml		65 70 047
Drive Type	Electro-Mechanical (Reusable)		
Operating Pressure	15 / 35 bar (switchable) 174 / 508 psi (switchable)	15 / 50 bar (switchable) 174 / 725 psi (switchable)	
Settings	1 - 24 Month	1 - 24 Month or Individually Adjustable	
Time or Pulse Control	Time Mode	Time Mode or Pulse Control Individually Adjustable	
Lubrication Volume	125 ml	125 ml / 250 ml	
Lubricating Medium	Oils & Greases Up To NLGI 2		
Temperature Range	Al-Battery +15 bis / to +60°C Li-Battery -15 bis / to +60°C	-15 to +60°C	
Operating Voltage	4.5 V *	24V DC	
Weight Empty	350 g (without cartridge)		
Dimensions H x Ø	152 x 83 mm		
Outlet	M16x1.5 / M10x1		
Performance Monitoring	Display with LED		

\* Batteries are not included

## Components



## Type MD400 Lubricators

The single & multi-point lubrication system Type MD400 is a reliable and easy to use electronic lubrication system. With its precise conveyor technology, this system is suitable for automatic lubrication of roller and sliding bearings, racks, open gears, chains, ball screws, spindle drives and much more.

The type MD400 lubrication system opens a new door in the world of automatic lubrication. With the extremely versatile MD400 lubrication system, both individual lubrication points and a whole group of different types of lubrication points can be continuously and safely supplied with lubricant over a long period of time.



### Type MD400 - Flexible Lubrication

The lubrication system type MD400 is an extremely compact and powerful lubrication unit for oils and greases up to NLGI class 2. The lubrication system works either autonomously with a battery pack (3V) or via an external power supply (24V DC). Due to its compact dimensions, type MD400 is ideally suited for retrofitting in many applications.

### The Advantages of Type MD400 Lubricators

- ✦ Precise, reliable delivery of lubricant
- ✦ Battery operation, voltage supply 24V or connection to machine control system
- ✦ Delivery pressure up to 70 bar (1015 psi)
- ✦ Dispensing period 1 - 36 months
- ✦ Synchronization with the machine operating time possible
- ✦ Operating temperature -15 °C to +70 °C
- ✦ Visual warning of malfunction (LED and display)
- ✦ Empty report
- ✦ Flow rate independent of temperature
- ✦ Visual inspection of the fill level possible at any time
- ✦ Connection of hose line possible \*
- ✦ Delivery of oils and greases up to NLGI-2
- ✦ Special grease fillings possible
- ✦ Adaptable to splitter / distributor

\* Hose length depends on lubricant and application

## Technical Data

Lubricator Model	MD400-B		MD400-V		MD400-D			
Number of Outlets	1	2	1	2	1	2	3	4
Lubricator Order Code	65 70 061	65 70 062	65 70 071	65 70 072	65 70 081	65 70 082	-	-
Lubricator Order Code With Two Pumps	-		-		-	65 70 085	65 70 083	65 70 084
	Lubricant Cartridge Order Code							
Lubricant Type 1 250 ml	65 70 063							
Lubricant Typ 1 400 ml	65 70 064							
Without Lubricant 250 ml	65 70 067							
Without Lubricant 400 ml	65 70 068							
Drive Type	Electro-Mechanical (Reusable)							
Operating Pressure	Maximum 70 bar (1015 psi)							
Settings	1 - 36 Month		1 - 36 Month (Intermittent Operation Possible)		Individually Adjustable			
Time Or Pulse Control	Time Mode		Time Mode		Pulse Control			
Lubrication Volume	400 ml							
Lubricating Medium	Oils & Greases Up To NLGI 2							
Temperature Range	-15 °C to +70°C							
Operational Voltage	6.0 V (Li-Battery) *		24 V DC		24 V DC			
Display On The Device	Yes		Yes		No			
Weight Empty	1120 g							
Dimensions L x B x H	112 x 94 x 196 mm							
Outlet	1 - 4 x Ø6 mm							
Performance Monitoring	Display with LED				-			
Operation & Control	Directly On Device				External Control / PLC			

\* Batteries are not included

## Components



## Model Variants

### Type MD400-B Lubricators

Single / Multipoint-System With Battery Power



The battery-operated variant of the MD400 lubrication system is always used when a self-sufficient operation is desired or necessary. The highly efficient battery pack can optionally be sent to empty the lubricant cartridge over a period of 1-36 month.

- ✦ 1 or 2 outlets, 70 bar (1015 psi) supply pressure
- ✦ OLED-Display
- ✦ Quick-Check (Back-Pressure Readings)
- ✦ Readout of information via display possible

### Type MD400-V Lubricators

Single / Multipoint-System With Power Supply



The 24V variant of the MD400 lubrication system is always the right choice when a power supply can be simply attached. The MD400 V strengths become particularly apparent during intermittent operations.

- ✦ 1 or 2 Outlets, 70 bar (1015 psi) Supply Pressure
- ✦ OLED-Display
- ✦ Quick-Check (Back-Pressure Readings)
- ✦ Readout of information via display possible

### Type MD400-D Lubricators

Single / Multipoint-System for PLC



MD400 D is designed for external control and 24 VDC voltage supply. Depending on the model, the MD400 lubrication system type D has 1, 2, 3 or 4 outlets. Connection to the PLC is required.

- ✦ 1, 2, 3 or 4 Outlets, 70 Bar (1015 psi) Supply Pressure
- ✦ Flexible, individual control by PLC
- ✦ Exact control and lubricant dosage
- ✦ Feedback to the connected unit

## Accessories

On the following pages you can find various accessory components that could be very helpful for the installation of our lubrication systems. Depending on whether the lubrication system is to be attached directly to the lubrication point or indirectly installed to dispense via a hose. Here you will find the right connection parts for the simply and correct installing of our lubrication systems.

Please note that some connectors are only suitable for specific lubricant dispensers.

## Fittings

Order Code	Description	Type 125/475	Type M	Type MD125	Type MD400	Material
65 71 000	Thread Adapter M16x1.5 to G1/4"			✓		Stainless Steel
65 71 001	Hose Adapter R1/4" to Ø8 mm	✓	✓			Brass Nickel-Plated
65 71 003	Reducer G1/2" to G1/4"	✓	✓			Brass Nickel-Plated
65 71 041	Reducer G1/4" to M6	✓	✓			Brass Nickel-Plated
65 71 042	Reducer G1/4" to M8	✓	✓			Brass Nickel-Plated
65 71 043	Reducer G1/4" to M8x1	✓	✓			Brass Nickel-Plated
65 71 044	Reducer G1/4" to G1/8"	✓	✓			Brass Nickel-Plated
65 71 061	Elbow Adapter	✓	✓	*	*	Brass Nickel-Plated
65 71 062	T-Adapter	*	*			Brass Nickel-Plated
65 91 025	Check Valve 0.2 bar G1/4" to R1/4"	✓	✓	*	*	Brass Nickel-Plated

\* Optionally available

## Brackets

Order Code	Description	Type 125/475	Type M	Type MD125	Type MD400	Material
65 70 019	Mounting Bracket	—	✓	—	—	Stainless Steel

## Accessories

### Lubrication Brush

Order Code	Description	Type 125/475	Type M	Type MD125	Type MD400	Material
65 91 010	Sliding-Type Lubrication Brush, Round	✓	✓	*	*	Stainless Steel

### Hoses

Order Code	Description	Type 125/475	Type M	Type MD125	Type MD400	Material
65 71 962	High pressure hose Ø 6/4 mm, length 5m	—	—	✓	✓	PA12
65 71 963	High pressure hose Ø 6/4 mm, length 10m	—	—	✓	✓	PA12
65 71 964	High pressure hose Ø 6/4 mm, length 15m	—	—	✓	✓	PA12
65 71 965	High pressure hose Ø 6/4 mm, length 20m	—	—	✓	✓	PA12
65 71 970	Hose filling adapter for hose 8 mm	—	✓	—	—	Brass Nickel-Plated
65 71 960	Hose filling adapter for hose 6 mm	—	—	✓	✓	Brass Nickel-Plated



## Accessories

### Hose-Connection Set

Order Code	Description	Type 125/475	Type M	Type MD125	Type MD400	Consisting Of
65 91 020	Hose-connection set complete for connection to mounting shafts, Ø8/6 mm, length 2m , empty	✓	✓	—	—	PE-hose AL-Ø8 to IG G1/4 AL-Ø8 to AG G1/4
65 91 021	Hose-connection set complete for connection to mounting shafts, Ø8/6 mm, length 2m , filled with lubricant type 1	✓	✓	—	—	PE-hose AL-Ø8 to IG G1/4 AL-Ø8 to AG G1/4
65 71 014 65 71 016 65 71 962	Hose-connection set complete for connection to mounting shafts, Ø6/4 mm, length 5m, empty	✓	—	✓	—	Fittings PE-hose
65 71 016 65 71 963	Hose-connection set complete for connection to mounting shafts, Ø6/4 mm, length 10m, empty	—	—	—	✓	Fitting PE-hose

### Batteries & Adapter

Order Code	Description	Type 125/475	Type M	Type MD125	Type MD400
65 70 009	6V Battery for M60/150/250 Lubricator	—	✓	—	—
65 70 018	24V Adapter for M60/150 Lubricator	—	✓	—	—
65 70 028	24V Adapter for M250 Lubricator	—	✓	—	—
65 70 049	4.5V Al-Battery for MD125 Lubricator	—	—	✓	—
65 70 050	4.5V Li-Battery for MD125 Lubricator	—	—	✓	—
65 70 069	6V Li High Performance Battery for MD400 Lubricator	—	—	—	✓



## Accessories For MD125 and MD400 Lubricators

### Fittings

The MD125 & MD400 delivers the lubricant to the lubrication point with an operating pressure of up to 70 bar (1,015 psi). Accordingly, all connecting parts must also fulfill these requirements and are designed for pressures of up to 100 bar (1,450 psi).

Order Code	Description	Type MD125	Type MD400	Material
65 71 011	Hose adapter M6	✓	✓	Brass Nickel-Plated
65 71 002	Y-Hose adapter 3 x Ø6	✓	✓	Brass Nickel-Plated
65 71 012	Hose adapter M8	✓	✓	Brass Nickel-Plated
65 71 013	Hose adapter M8 x 1	✓	✓	Brass Nickel-Plated
65 71 014	Hose adapter M10 x 1	✓	✓	Brass Nickel-Plated
65 71 015	Hose adapter G1/8"	✓	✓	Brass Nickel-Plated
65 71 016	Hose adapter G1/4"	✓	✓	Brass Nickel-Plated
65 71 021	Hose adapter elbow M6	✓	✓	Brass Nickel-Plated
65 71 022	Hose adapter elbow M8	✓	✓	Brass Nickel-Plated
65 71 023	Hose adapter elbow M8 x 1	✓	✓	Brass Nickel-Plated
65 71 025	Hose adapter elbow G1/8"	✓	✓	Brass Nickel-Plated
65 71 026	Hose adapter elbow G1/4"	✓	✓	Brass Nickel-Plated

## Accessories for MD125 and MD400 Lubricators

### Splitter

Splitters portion the lubricant quantity evenly across the outlets and are suitable for greases up to NLGI grade 2. Splitters only work when used with the MD lubrication system piston pumps. The amount of lubricant yielded by the MD125 and MD400 lubrication system can be split into two, three or four parts and then transported to the lubrication point.

Order Code	Description	Type MD125	Type MD400	Material
65 71 902	Splitter, 1:2	✓	✓	Aluminium
65 71 903	Splitter, 1:3	✓	✓	Aluminium
65 71 904	Splitter, 1:4	✓	✓	Aluminium

### Progressive Distributor

The progressive distributors for the MD125 and MD400 lubrication system have a variable modular design. Lubricant is progressively distributed via a follow-up piston. In this way, the amount of lubricant yielded by the MD125 and MD400 lubrication system can be split equally. Progressive distributors can be used greases up to NLGI grade 2.

Order Code	Description	Type MD125	Type MD400	Material
65 71 912	Distributor, 2 Outlets	✓	✓	Galvanized Steel
65 71 914	Distributor, 4 Outlets	✓	✓	Galvanized Steel
65 71 916	Distributor, 6 Outlets	✓	✓	Galvanized Steel
65 71 918	Distributor, 8 Outlets	✓	✓	Galvanized Steel

## Accessories for MD125 and MD400 Lubricators

### Connection Cables for MD125 and MD400 Lubricators

Connection cables are available in various lengths for the MD125 and MD400 lubrication system M12x1 connectors (4-pin, A-coded). The connection cable with LED angled connectors is particularly popular, as its LEDs also provide visual information about the device's operating status.

Order Code	Description	Type MD125	Type MD400
65 70 074	Connection cable, M12x1, open end, 5 m	✓	✓
65 70 076	Connection cable, M12x1, open end, 10 m	✓	✓
65 70 075	Connection cable, M12x1 with LED angled socket, open end, 5 m	✓	✓
65 70 077	Connection cable, M12x1 with LED angled socket, open end, 10 m	✓	✓

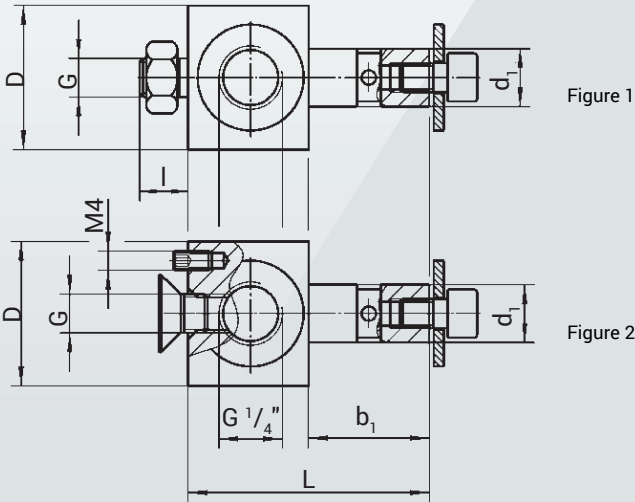
### Lubricants


Depending on the application, you will find lubricants that improve the performance and efficiency of your system. Our lubricants offer excellent wear protection, corrosion protection and long-term stability, giving you everything you need to extend the life of your machine and minimize downtime.

Order Code	Description	Brush	Felt Gear	Application
65 90 012	Lubricant Type 1 Cartridge 400 g This is a NLGI class 0 lubricant based on mineral oil and Li-Ca thickener with a temperature range of -20 to 120°C.	✓	✓	Eccentric presses, highly loaded spur and bevel gears, slide and guide rails, sump-lubricated roller bearings, gear lubrication up to peripheral speeds of approx. 3 m/s, trapezoidal spindles.
65 90 003	Lubricant Type 1 Can 1 liter This is a highly viscous mineral oil with temperature range 0 to 120°C	—	✓	Heavy loaded spur and bevel gear boxes, slide and guide rails, gear box lubrication with peripheral speeds of more than 3 m/s

# Mounting Shafts & Lubrication Gears

## Felt Gear Mounting Shafts




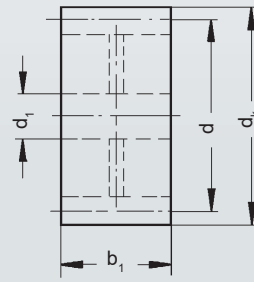
Order Code	Figure	For Modules	D	L	I	b <sub>1</sub>	d <sub>1</sub>	G	
65 91 100	1	1, 1.5	30	40	10	15	12	M8	135.0
65 91 200	1	2	30	50	10	25	12	M8	143.0
65 91 210	2	2	30	50	-	25	12	M8	140.0
65 91 220	2	2	30	62	-	25	12	M8	150.0
65 91 300	1	3	30	55	10	30	12	M8	147.0
65 91 310	2	3	30	55	-	30	12	M8	145.0
65 91 320	2	3	30	66	-	30	12	M8	155.0
65 91 400	1	4	30	65	10	40	12	M8	154.0
65 91 410	2	4	30	65	-	40	12	M8	150.0
65 91 420	2	4	30	72	-	40	12	M8	160.0
65 91 500	1	5	50	75	15	50	20	M12	520.0
65 91 510	2	5	40	75	-	50	20	M8	510.0
65 91 520	2	5	40	85	-	50	20	M8	520.0
65 91 600	1	6	50	85	15	60	20	M12	545.0
65 91 610	2	6	40	85	-	60	20	M8	535.0
65 91 620	2	6	40	97	-	60	20	M8	550.0
65 91 800	1	8	50	105	15	80	20	M12	595.0
65 91 810	2	8	50	105	-	80	20	M8	560.0
65 91 820	2	8	50	118	-	80	20	M8	600.0
65 91 101	1	10	50	125	15	100	25	M12	650.0
65 91 111	2	10	50	125	-	100	25	M8	645.0
65 91 102	1	12	50	145	15	100	25	M12	830.0
65 91 112	2	12	50	145	-	100	25	M8	810.0

# Mounting Shafts & Lubrication Gears


## Felt Lubrication Gears

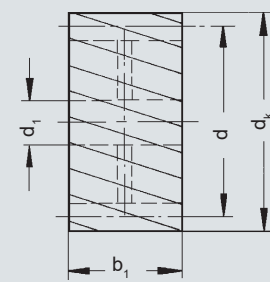
The lubricant passes through the axle and corresponding holes in the felt gear wheel. The felt used stores the lubricant and releases it again under low pressure in very small dosage quantities. Over-lubrication is avoided and wear is prevented.

Order Code	Module	No. of Teeth	d	d <sub>k</sub>	d <sub>i</sub>	b <sub>1</sub>	
65 91 140	1	40	40.0	42.0	12	15	7.5
65 91 126	1.5	26	39.0	42.0	12	15	7.2
65 91 228	2	19	38.0	42.0	12	25	11.0
65 91 236	2	36	72.0	76.0	12	25	22.0
65 91 328	3	19	57.0	63.0	12	30	37.0
65 91 428	4	19	76.0	84.0	12	40	98.0
65 91 518	5	18	90.0	100.0	20	50	133.0
65 91 618	6	18	108.0	120.0	20	60	234.0
65 91 818	8	18	144.0	160.0	20	80	562.0
65 91 118	10	18	180.0	200.0	25	100	750.0
65 91 115	12	15	180.0	204.0	25	100	800.0




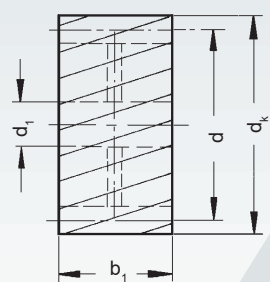
Straight-Tooth

Order Code	Module	No. of Teeth	d	d <sub>k</sub>	d <sub>i</sub>	b <sub>1</sub>	
65 91 116	1.5	24	38.2	42.0	12	15	7.0
65 91 229	2	18	38.2	42.0	12	25	11.0
65 91 234	2	34	72.2	76.2	12	25	22.0
65 91 329	3	18	57.3	63.0	12	30	36.0
65 91 429	4	18	76.5	84.0	12	40	97.0
65 91 529	5	17	90.2	100.0	20	50	133.0
65 91 629	6	17	108.2	120.0	20	60	234.0
65 91 829	8	17	144.3	160.0	20	80	562.0
65 91 129	10	17	180.4	200.0	25	100	750.0
65 91 124	12	14	178.3	202.0	25	100	800.0



Pinion Lubrication  
Helical-Tooth RH

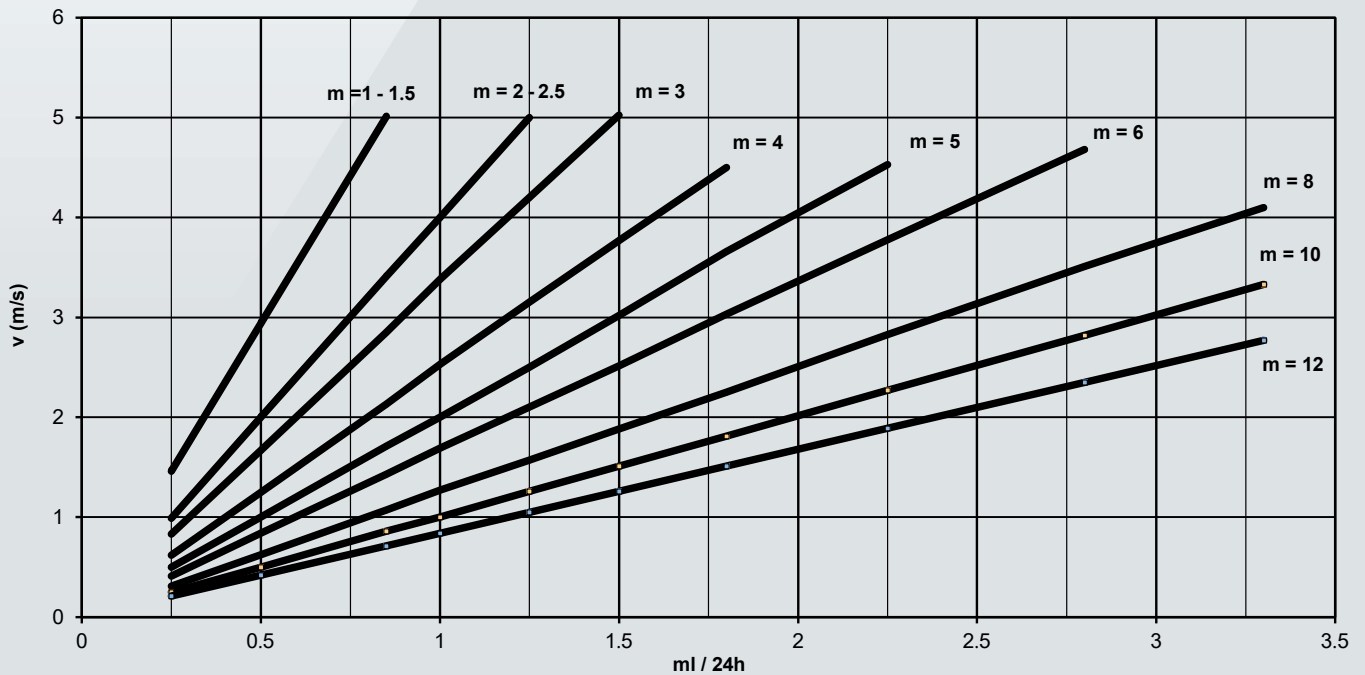
Order Code	Module	No. of Teeth	d	d <sub>k</sub>	d <sub>i</sub>	b <sub>1</sub>	
65 91 106	1.5	24	38.2	42.0	12	15	7.0
65 91 218	2	18	38.2	42.0	12	25	11.0
65 91 318	3	18	57.3	63.0	12	30	36.0
65 91 418	4	18	76.5	84.0	12	40	97.0
65 91 517	5	17	90.2	100.0	20	50	133.0
65 91 617	6	17	108.2	120.0	20	60	234.0
65 91 817	8	17	144.3	160.0	20	80	562.0
65 91 117	10	17	180.4	200.0	25	100	750.0
65 91 114	12	14	178.3	202.0	25	100	800.0



Rack Lubrication  
Helical-Tooth LH

## Lubrication Of Rack And Pinion Drives

For lubricating rack and pinion drives with a felt gear, the optimal grease supply can be seen from the diagram below. For lubricating with sliding brushes, a larger dosage should be selected. If you have values below 0.25ml / 24 hours, please extend the corresponding line.



## Lubricant Quantity Selection Tables

The tables below show you the optimal amount of lubricant you need for the lubrication system you are using.

Selection for Type 125 / Type 475 Lubricators					
Lubricant / Day (ml)		Lubrication cycle (every x hours)	Lubricant per cycle (ml)	Selection Month	DIP-Switch
Type 125	Type 475				
7.14	34.00	Continuous		0.5	1-7
3.33	14.00			1	1+7
1.67	7.50			2	2+7
1.11	4.50			3	3+7
0.55	2.50			6	4+7
0.28	1.20			12	5+7
0.185	0.60			18	6+7

Selection for M60 / M150 / M250 Lubricators								
Lubricant / Day (ml)			Lubricant per cycle (ml)			Selection Month	DIP-Switch	Lubrication cycle (every x hours)
M60	M150	M250	M60	M150	M250			
2.00	5.00	8.33	0.167	0.417	0.694	1	1	2
1.00	2.5	4.16				2	2	4
0.67	1.67	2.77				3	1+2	6
0.50	1.25	2.08				4	4	8
0.40	1.00	1.66				5	1+4	10
0.33	0.83	1.38				6	2+4	12
0.29	0.71	1.19				7	1+2+4	14
0.25	0.63	1.04				8	8	16
0.22	0.56	0.90				9	1+8	18
0.20	0.50	0.92				10	2+8	20
0.18	0.45	0.75				11	1+2+8	22
0.17	0.42	0.69				12	4+8	24

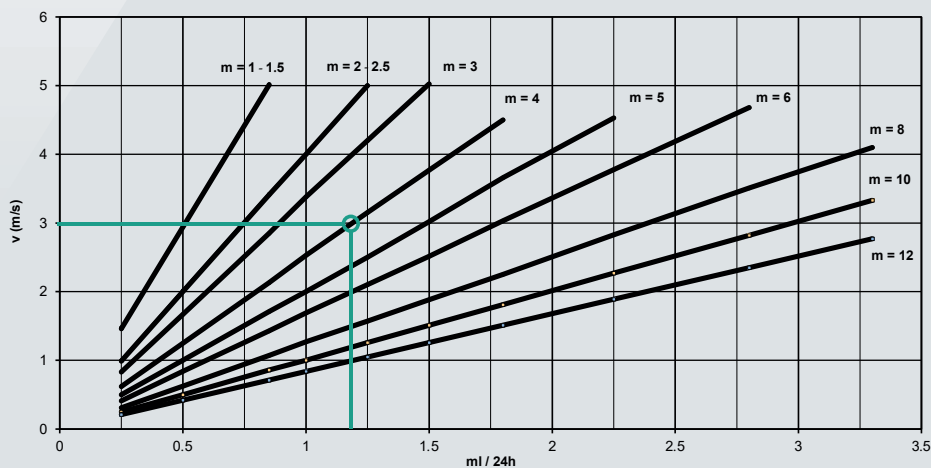
Selection for MD125 Lubricators				
Lubricant / Day (ml)		Lubricant per cycle (ml)	Selection	
MD125				
min. 0.16	max. 8.0	0.15	1-24 Monate / month	
min. 0.16	max. 38.4		Zeitsteuerung / time mode	
Individually Adjustable			Impulssteuerung / pulse control	

Selection for MD400 Lubricators				
Lubricant / Day (ml)		Lubricant per cycle (ml)	Selection	
MD125				
min. 0.36	max. 131	0.15	1-36 Month	
min. 0.15	max. 108		Time Mode	
Individually Adjustable			Pulse Control 1+2	

## Selection Example Of Lubricant Quantities

To select the required size of the lubrication unit and to set the lubrication for rack and pinion drives, please use the selection diagram on page D-27.

Draw a horizontal line from your required speed  $v$  (m/s) to the required module, here in the example module  $m=4$ , and draw a vertical line to the required value for the Lubrication ml/24h.



Now you can select the required lubricant quantity and the resulting draining times for the lubrication systems according to the selection tables on page 28.

For types MD125 and MD400 lubricators, you have to calculate the lubricant per cycle.

Here as an example the MD125 lubricator which is operated via the emptying time:

$$- 1.20 \text{ ml/24h} / 0.16 \text{ ml} = 7.5 \text{ cycles/day, rounded up to 8 cycles/day}$$

Then you should calculate the cycles per day on the month:

$$- 0.16 \text{ ml} \times 8 \text{ cycles/day} \times 30 \text{ days} = 38.4 \text{ ml/month}$$

Now you can calculate the month setting:

$$- \text{Lubricant cartridge with } 125 \text{ ml} / 38.4 \text{ ml/month} = 3.2 \text{ month}$$

- Here, we can select the setting 3 months.

Optionally you can also control via time control or pulse control.

In the time control, you should select the following setting:

$$- 24 \text{ hours} / 8 \text{ cycles/day} = \text{one cycle every 3 hours}$$

Impulse control should be set up according to the same principle.



## Lubrication System Order Example

Please note, the electromechanical lubrication systems always consists of a drive unit and a lubricant cartridge.

Order Example:

MD400 with three outlets and lubrication cartridge lubricant type1

### Step 1: Drive unit

In the technical data of the lubrication unit MD400 (page D-17)+ you will find the order code of the respective drive unit (marked blue)

Lubricator Model	MD400-B		MD400-V		MD400-D			
Number of Outlets	1	2	1	2	1	2	3	4
Lubricator Order Code	65 70 061	65 70 062	65 70 071	65 70 072	65 70 081	65 70 082	-	-
Lubricator Order Code With Two Pumps	-		-		-	65 70 085	65 70 083	65 70 084
	Lubricant Cartridge Order Code							
Lubricant type 1 250ml	65 70 063							
Lubricant type 1 400ml	65 70 064							
Without Lubricant 250ml	65 70 067							
Without Lubricant 400ml	65 70 068							

### Step 2: Lubricant Cartridge

Our standard lubricant cartridge can be found in the following sections horizontal lines (marked green)

Thus the order consists of:

- The drive unit order code: 65 70 083
- The lubricant cartridge order code: 65 70 064

Accessories such as connecting hoses, fittings, distributors, connecting cables, felt-lubricating gears, and much more can be found on the pages D-19 to D-26.

For battery-operated drive units, additional batteries are still necessary