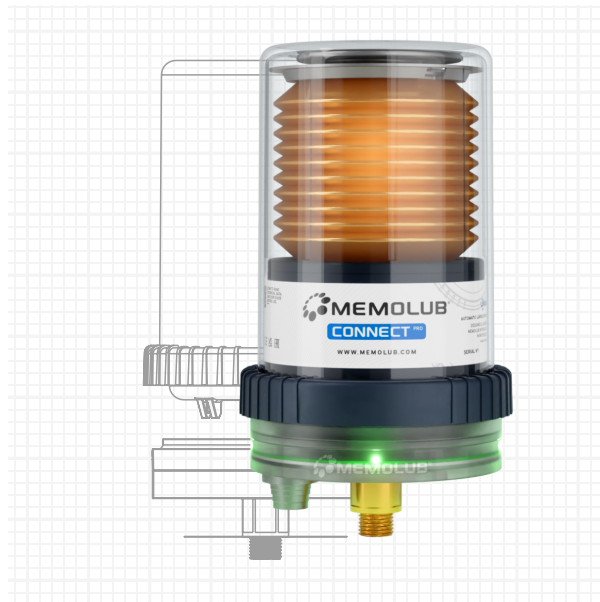




MEMOLUB CONNECT SERIES USER GUIDE

INTRODUCTION

At a glance

MEMOLUB CONNECT PRO is an electro-mechanical lubrication system for single-point and multi-point applications. It is available in three grease cartridge sizes (120cc, 240cc, 480cc) and one refillable oil container (OIL-R500, 500cc), making it suitable for both grease and oil lubrication requirements.

The unit operates on a battery pack or an external power supply between 6 and 36 VDC. Its two-component design separates serviceable parts (replaceable cartridge or refillable container, batteries) from the permanently installed settings, allowing maintenance without disturbing the configuration at the lubrication point.

With an ejection pressure of 25 bar, the system covers applications beyond the range of conventional lubrication systems. Using a progressive distributor block (available as an accessory), it supports up to 8 grease points or 12 oil points simultaneously. The unit mounts directly on the lubrication point or remotely via pipe or flexible tubing.

Connectivity and remote monitoring

MEMOLUB CONNECT PRO integrates Bluetooth and LoRaWAN connectivity. The Bluetooth app provides on-site access to device status and settings. LoRaWAN enables full remote access: monitoring, alerts, and settings adjustment from any location. Memolub offers a ready-to-use platform, and integration into customer-owned LoRaWAN platforms is supported.

All-directional, high-visibility LEDs indicate device status locally. The system monitors pump operation, battery level, and cartridge fill level. Alerts are accessible via the Bluetooth app and the LoRaWAN platform, with automatic email notification on alarm detection. Internal temperature is also readable through both platforms. A test button at the base of the unit allows manual verification.

DIMENSIONS

120CC

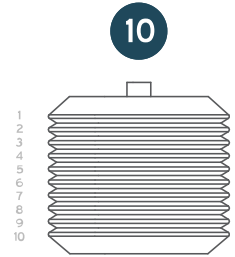
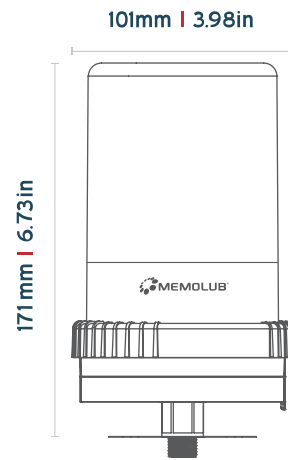
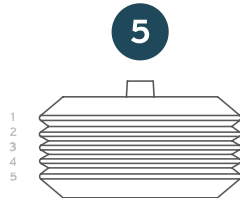
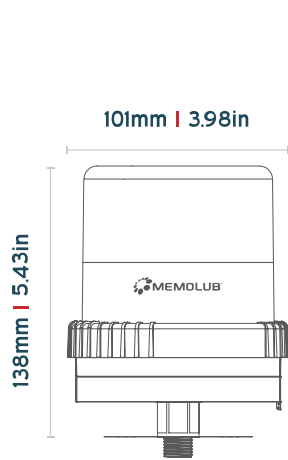
Grease / Oil Cartridge

120cc | 4oz

240CC

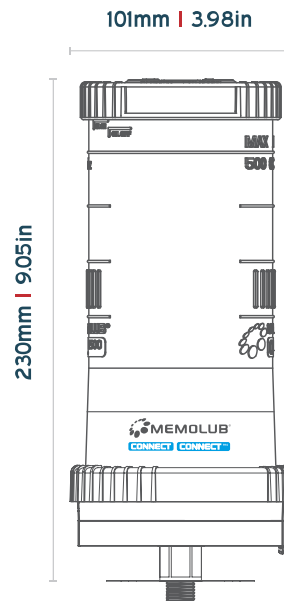
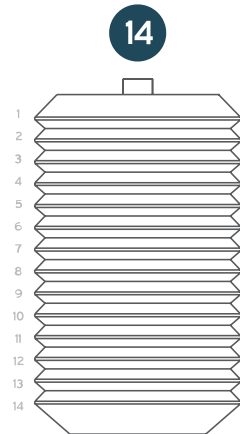
Grease / Oil Cartridge

240cc | 8.1oz



480CC
Grease / Oil Cartridge
480cc | 16.2oz

OIL R-500
Refillable Oil Reservoir
500cc | 16.9oz



PRECAUTIONS

- Do not open the housing: loaded spring
- Hold MEMOLUB® down during manual checks
- Leq <70 dB
- Use MEMOLUB® only for greasing machinery
- Use only lubricant cartridges and batteries recommended by the manufacturer



SPECIFICATIONS

GENERAL

	MEMOLUB® CONNECT PRO
External dimensions	Ø101mm, H138 (std) to 251mm (Giga)
Temperature exposure range	-40 to +60°C*
Connections	BSP M1/4"
Lubricants	Oil and grease, up to NLGI 2**
Maximum stroke pressure	25 bar/ 350 PSI

*Only applicable with batteries and lubricant suitable for low temperatures

** For other consistencies, please contact your local distributor

ELECTRICAL

	MEMOLUB® CONNECT PRO
Power Source	Battery / External
Voltage	4.5V DC (3x1.5V DC AA) OR 24V
Short circuit protection	Yes
Stroke duration	8 seconds
Minimum stroke interval	15 minutes
Communication Protocol	LoRaWAN + Bluetooth
Display	Local: RGB Leds; Remote: via app and cloud interface

LUBRICATION

There are basically two modes to use the VISIO CONNECT for lubricating an application:

- 1) Periodic mode: the systems makes an expulsion for each defined period. The period can be set either:
 - a) Locally on the rotary encoder wheel - positions 1 to 9, with corresponding preset frequencies listed in the "FREQUENCY" section (see next section).
 - b) Remotely, using the wireless LoRa or the BlueTooth interface *
- 2) on-demand mode: using the wired connection (6 DIN M16 connector - wires n1 & n2) **

LUBRICATION MODE	MIN. OUTPUT	MAX. OUTPUT	INTERFACE
Periodic	0.17 cc/day	14.4cc/day	Local: encoder wheel, stroke washers
Periodic	0 cc/day	57.6cc/day	Remote: LoRaWAN, Bluetooth
On-demand	0 cc/day	864 cc/day	6-DIN M16 connector

* Local rotary encoder wheel set on position 0. See WIRELESS CONTROL section for detailed information.

** See CABLING and WIRED CONTROL sections for implementation.

LORAWAN

	MEMOLUB® CONNECT PRO
Version	1.1.4
Supported Frequency Plans	EU863-870, AU915-928, US902-928,
Range (outdoor, line of sight)	1km*

* Range based on field tests conducted in an urban environment using a gateway equipped with a 3 dBi antenna.

BLUETOOTH

	MEMOLUB® CONNECT PRO
Version	5.2
Frequency	2,4 GHz
Range (indoor, office environment)	30m
Range (outdoor, line of sight)	150m

SETTINGS & FEEDBACK

FREQUENCY SETTINGS

The below table relates to the settings available in the periodic mode of lubrication.

WHEEL POSITION	DOSING PERIODICITY	MAX. DAILY OUTPUT*	REFILLING FREQUENCY VS. CARTRIDGE CONTENT (120CC)	REFILLING FREQUENCY VS. CARTRIDGE CONTENT (240CC)	REFILLING FREQUENCY VS. CARTRIDGE CONTENT (480CC)
0	External (Interface / App)				
1	48 hours	0.3 cc/day	12 months	24 months**	48 months**
2	24 hours	0.6 cc/day	6 months	12 months	24 months**
3	16 hours	0.9 cc/day	4 months	8 months	16 months**
4	12 hours	1.2 cc/day	3 months	6 months	12 months
5	8 hours	1.8 cc/day	2 months	4 months	8 months
6	6 hours	2.4 cc/day	1.5 month	3 months	6 months
7	4 hour	3.6 cc/day	1 month	2 months	4 months
8	2 hour	7.2 cc/day	0.5 month	1 month	2 months
9	1 hour	14.4 cc/day	0.25 month	0.5 month	1 month

*Maximum daily output without stroke washers.

** Please consider lubricant expiry date for long cartridge lifetimes.

VOLUME SETTINGS [CM³/DAY]

By using stroke washers you can adjust the amount of lubricant discharged per pumping cycle.

NUMBER OF STROKE WASHERS	WHEEL POSITION									
	0	1	2	3	4	5	6	7	8	9
-	External (Interface / App)	0.3	0.6	0.9	1.2	1.8	2.4	3.6	7.2	14.4
	External (Interface / App)	0.28	0.56	0.84	1.12	1.7	2.2	3.4	6.7	13.5
 + 	External (Interface / App)	0.26	0.52	0.79	1.04	1.62	2.1	3.15	6.3	12.6
2  + 	External (Interface / App)	0.24	0.49	0.73	0.98	1.46	1.95	2.92	5.85	11.7
3  + 	External (Interface / App)	0.22	0.45	0.67	0.9	1.35	1.8	2.7	5.4	10.8
4  + 	External (Interface / App)	0.2	0.41	0.62	0.82	1.23	1.65	2.47	4.95	9.9
5  + 	External (Interface / App)	0.18	0.37	0.55	0.74	1.1	1.5	2.2	4.5	9
6  + 	External (Interface / App)	0.17	0.34	0.5	0.68	1	1.35	2.02	4.05	8.1

*The circlip must always be added on top of the washers.

 The circlip must always be added on top of the washers.

1ST GENERATION (SERIAL NUMBERS CNP-XX-XXXX)

COLOR	STATUS
	The pumping cycle was completed successfully, or a test run was initiated via the pushbutton.
	The batteries are low, or the lubricant cartridge is empty.
	The gearbox or motor is damaged or malfunctioning, or the pipe may be clogged.
	A data connection has been established successfully.

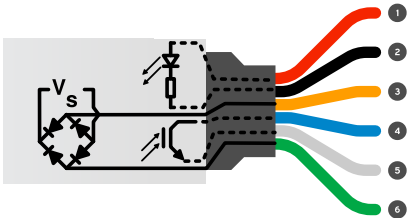
REMOTE INSTALLATION DISTANCES

TYPE OF INSTALLATION	MAXIMUM DISTANCE
Single point	8m
Multipoint with 2 outlets	6m
Multipoint with 4 outlets	

CABLE

MEMOLUB CONNECT PRO

The Connect Pro is delivered with a 6 x 0.25mm² cable with a 6DIN M16 female connector.

DESCRIPTION	
1. EXTERNAL INPUT (OPTOCOUPLER INPUT +)	
2. EXTERNAL INPUT (OPTOCOUPLER INPUT -)	
3. POWER SUPPLY + (24VAC/DC)*	
4. STATUS OUTPUT (OPTOCOUPLER COLLECTOR)	
5. STATUS OUTPUT (OPTOCOUPLER EMITTER)	
6. POWER SUPPLY - (0VDC)	

* Operating voltage ranges from 6 to 36 VDC

WIRED CONTROL

ON-DEMAND MODE

As mentionned in the specifications, single ejections can be triggered by wire control. This section explains the signal requirements for this control to be effective.

Note that periodic and on-demand mode are NOT exclusive: both can be active simultaneously. If you don't want the periodic mode to be active, please set the encoder wheel on position "0" and don't use wireless interfaces.

Finally, on-demand control is more flexible than periodic control and should be implemented carefully, considering lubricant and application particularities. Otherwise, effective lubricant output could not match expected values.

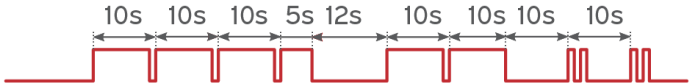


INTERMITTENT SIGNAL

MEMOLUB CONNECT	
DESCRIPTION	SIGNAL
INPUT SIGNAL (FROM CUSTOMER PLC/TIMER)	$1s < t_i < 5s$ $V_i = 24Vdc$
OUTPUT SIGNAL "BUSY" (TO CUSTOMER PLC)	17s
PUMP OUTLET (TO LUBRICATION)	$P_{max} = 25bars, V = 0.6cc$
OUTPUT SIGNAL "DEFAULT" (TO CUSTOMER PLC)	10s 10s 10s

CONTINUOUS SIGNAL



DESCRIPTION	SIGNAL
INPUT SIGNAL (FROM CUSTOMER PLC/TIMER)	
OUTPUT SIGNAL "BUSY" (TO CUSTOMER PLC)	
PUMP OUTLET (TO LUBRICATION)	
OUTPUT SIGNAL "DEFAULT" (TO CUSTOMER PLC)	

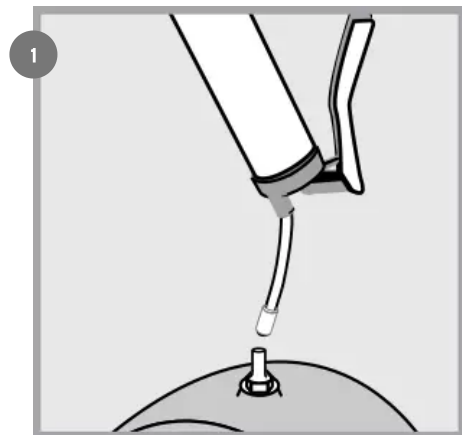
WIRELESS CONTROL

LEARNING PERIOD

The Memolub Connect Pro are equipped with advanced machine learning capabilities, allowing it to account for environmental conditions when calculating its status. A learning period of 20 cycles is required, during which the lubricator must remain in the same environment without any changes to its position, fastening, support, or grease type. If any of these parameters are altered, the learning process can be reset by pressing and holding the pushbutton for more than 5 seconds.

INSTALLATION GUIDELINES

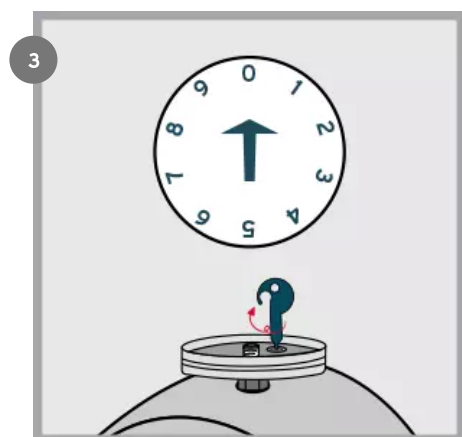
DIRECT INSTALLATION



Prime lube point and remove nipple.



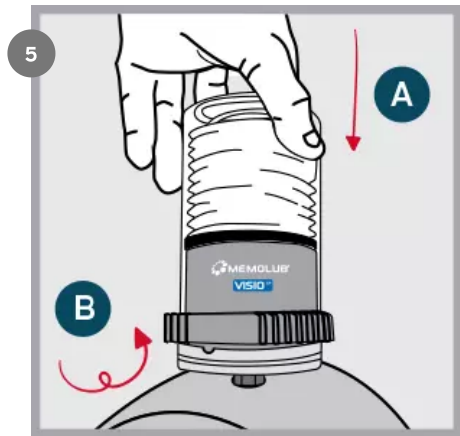
Install VISIO Base using a strong threadlocker (BSP 1/4).



With setting key, choose wheel position according to "Settings" table above.



Align the pin of VISIO Module with the notch of VISIO Base.



Screw tightly keeping the assembly aligned.

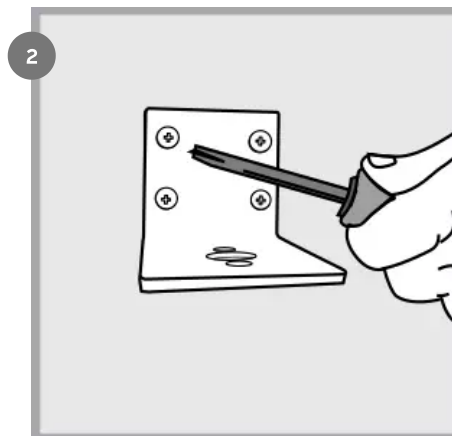


VISIO initializes, flashes each color on, and makes one expulsion. Green lights confirm normal operation.

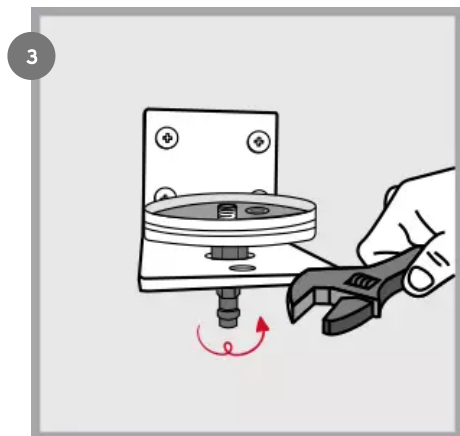
REMOTE INSTALLATION



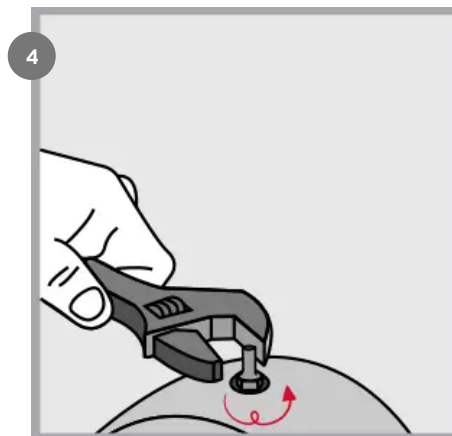
Prime lube point and remove nipple.



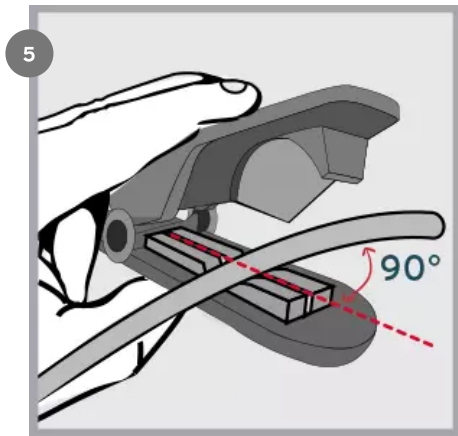
Secure the mounting bracket.



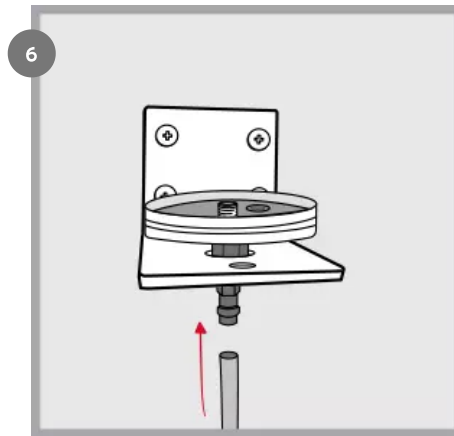
Install VISIO Base and F1/4 fitting on bracket using a strong threadlocker.



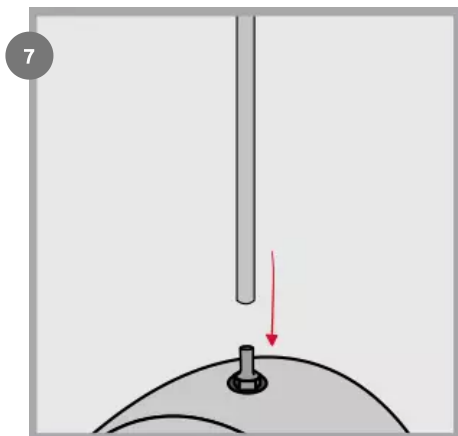
Install BSP 1/8 fitting on lube point.



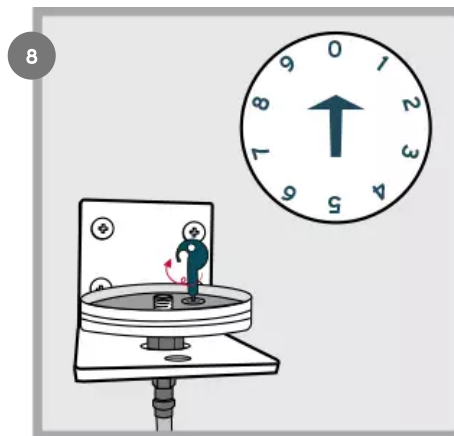
Cut hose to required size.



Insert hose into bracket's quick fitting.



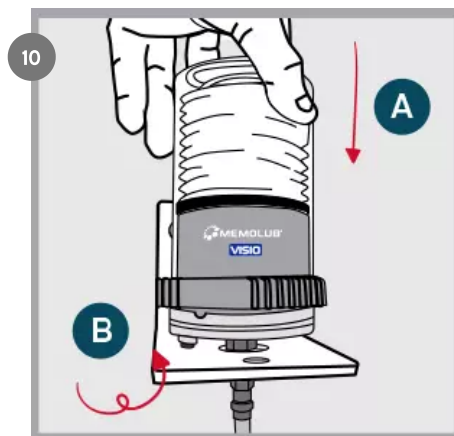
Insert hose into lube point's quick fitting.



With setting key, choose wheel position according to "Settings" table above.



Align the pin of VISIO Module with the notch of VISIO Base.



Screw tightly keeping the assembly aligned.

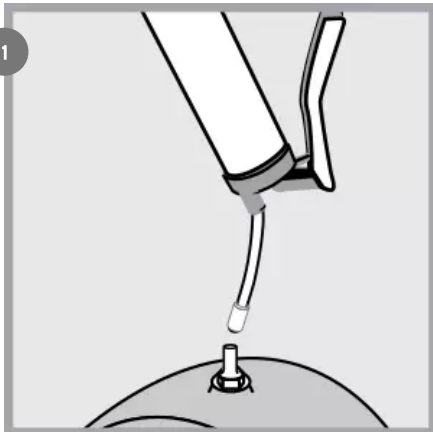
11

BZZZZZ...

VISIO initializes, flashes each color on, and makes one expulsion. Green lights confirm normal operation.

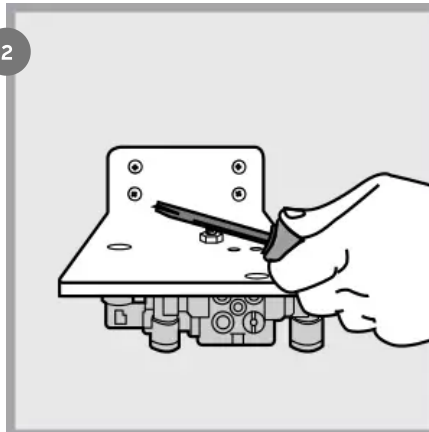
MULTIPOINT INSTALLATION

1



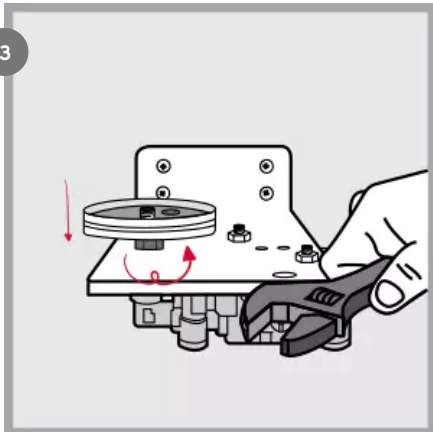
Prime lube point and remove nipple.

2



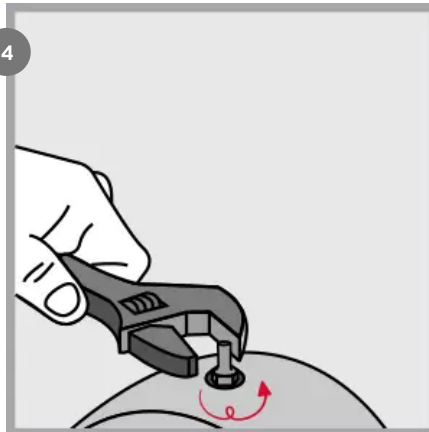
Secure the mounting bracket.

3

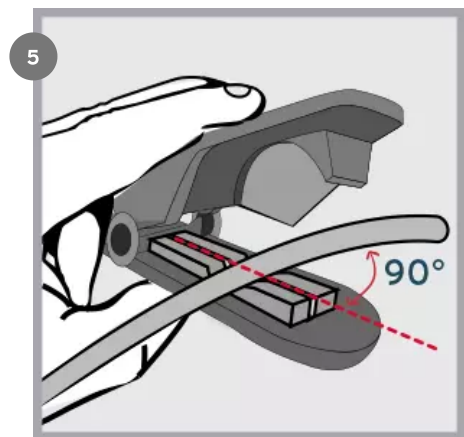


Install VISIO Base and F1/4 fitting on bracket using a strong threadlocker.

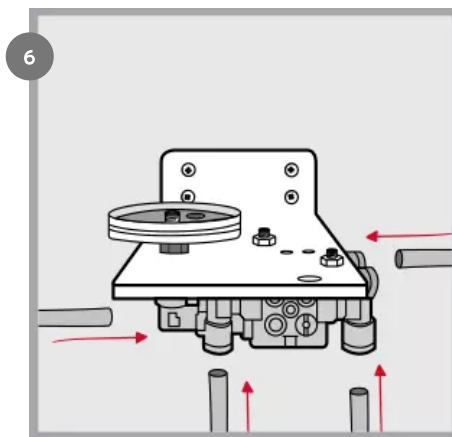
4



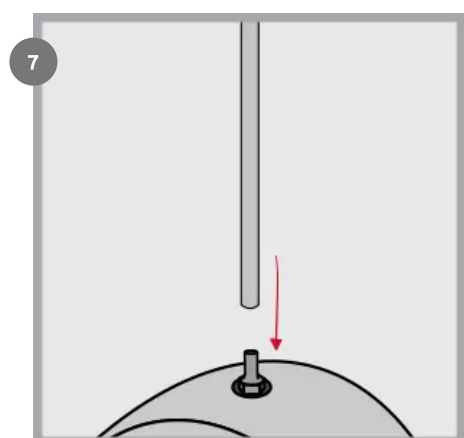
Install BSP 1/8 fitting on lube point.



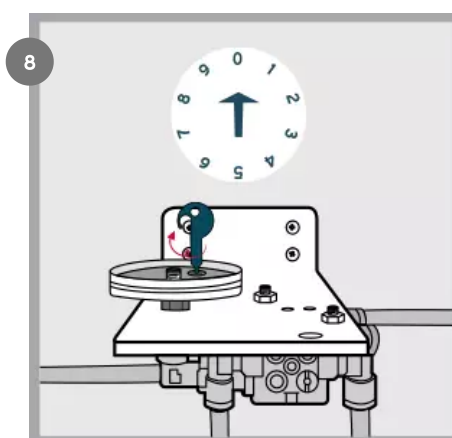
Cut the hoses to required size.



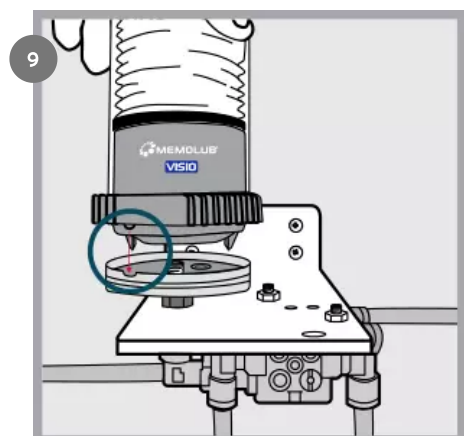
Insert hoses into bracket's quick fittings.



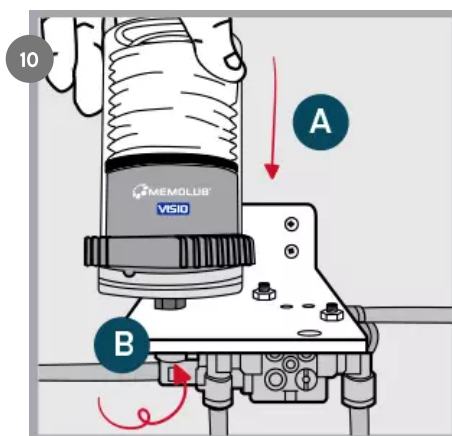
Insert hoses into lube points' quick fittings.



With setting key, choose wheel position according to "Settings" table above.



Align the pin of VISIO Module with the notch of VISIO Base.



Screw tightly keeping the assembly aligned.

11



VISIO initializes, flashes each color on, and makes one expulsion. Green lights confirm normal operation.

PUSH BUTTON

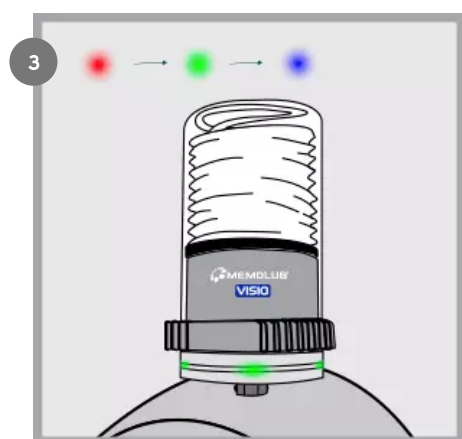
TEST YOUR MEMOLUB / FORCE EXPULSION



1
Locate the push button on the bottom of the memo



2
Push the button

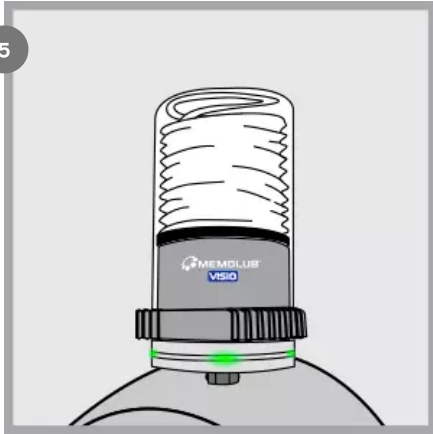


3
VISIO initializes, flashing each color on successively.



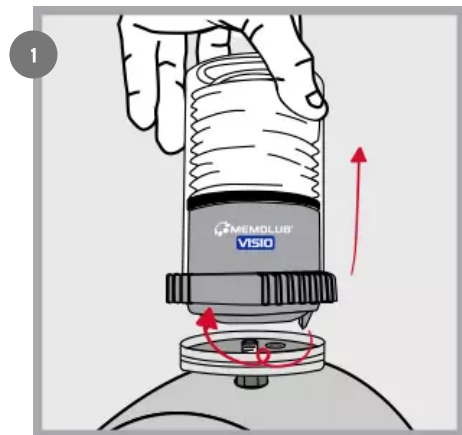
4
VISIO makes 1 expulsion.

5

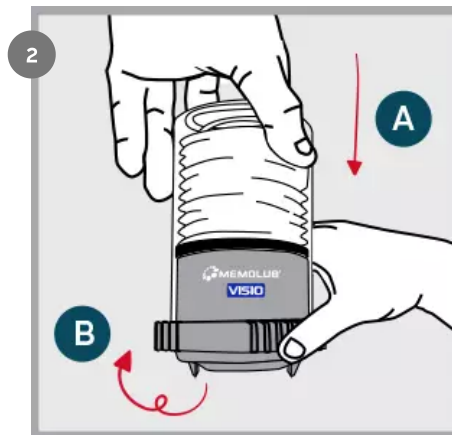


After scanning all parameters, VISIO flashes green lights in case of normal operation. For any other colors, please refer to the FAQ section.

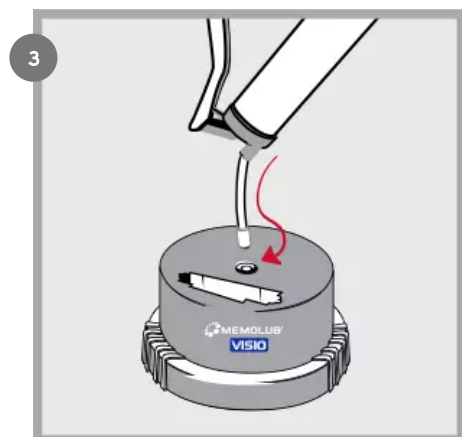
CARTRIDGE (RE)PLACEMENT GUIDELINES



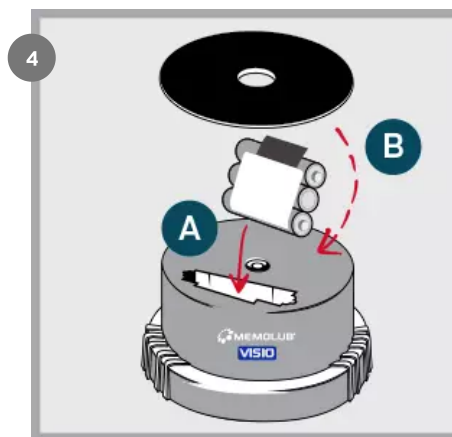
Remove VISIO Module from VISIO Base.



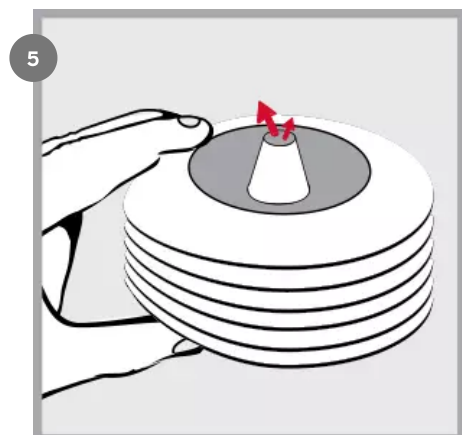
Open VISIO Module (fingers on ribs). Remove the used cartridge, if any.



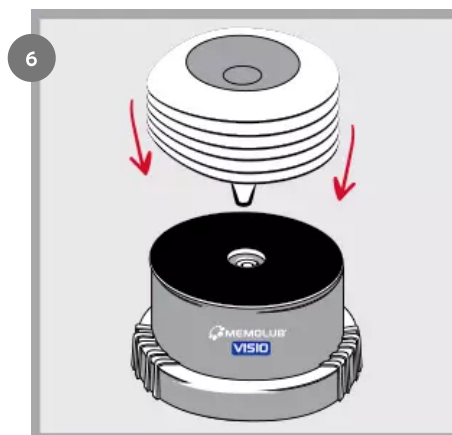
Prime VISIO Pump.



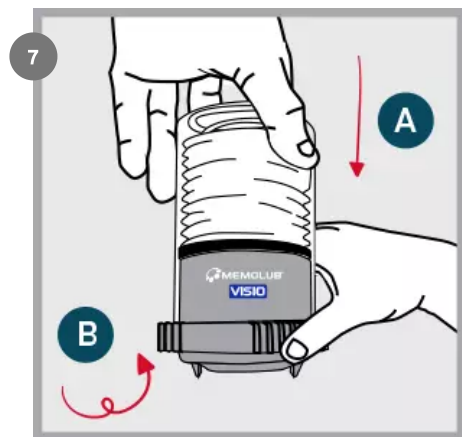
Insert new battery pack and seal. NOTE: the battery seal can be removed for 480cc cartridges



Squeeze air out of the cartridge.



Replace the cartridge on VISIO Pump.



Close and lock VISIO Module (fingers on ribs).



Align the pin of VISIO Module with the notch of VISIO Base.



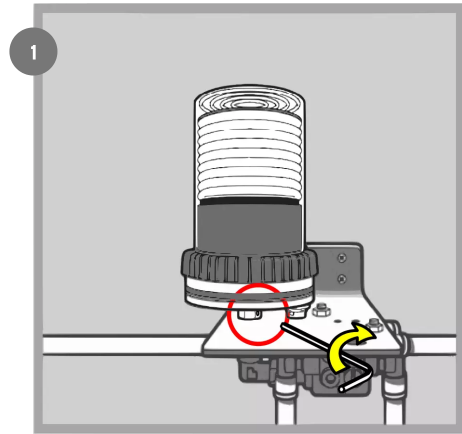
Screw tightly keeping the assembly aligned.



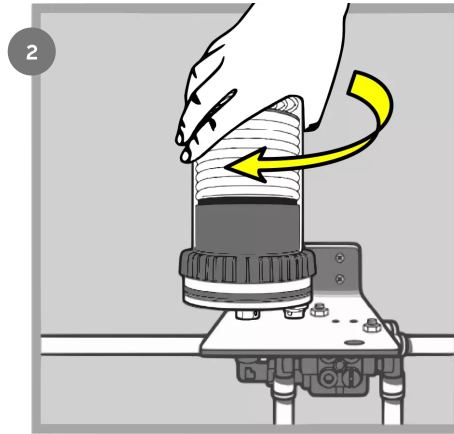
VISIO initializes, flashes each color on, and makes one expulsion. Green light confirms proper functioning.

EXTERNAL POWER CONNECTION

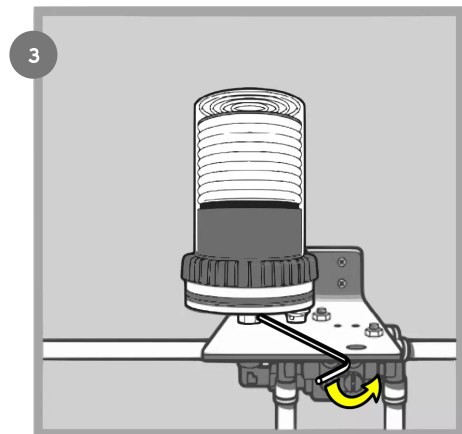
INSTALLING THE CONNECTOR (CONNECT PRO ONLY)



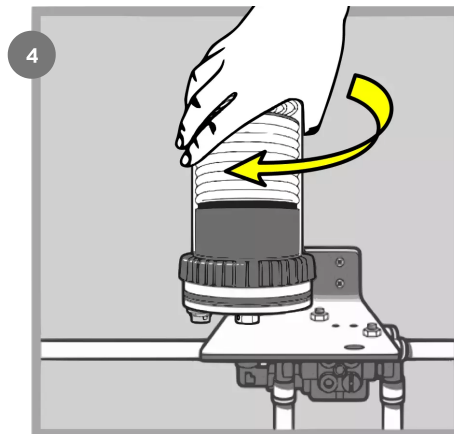
1
Locate the M4 set screw on the CONNECT PRO BASE rotary coupling. Screw it tightly.



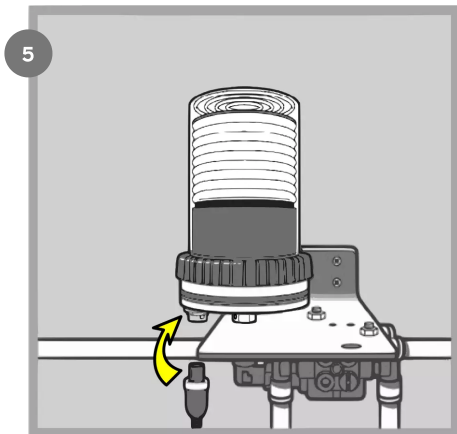
2
Screw tightly the CONNECT PRO pump & base on the bracket elbow



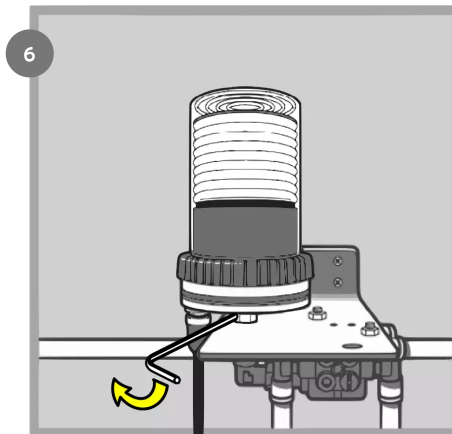
3
Release the rotary coupling by unscrewing the M4 screw.



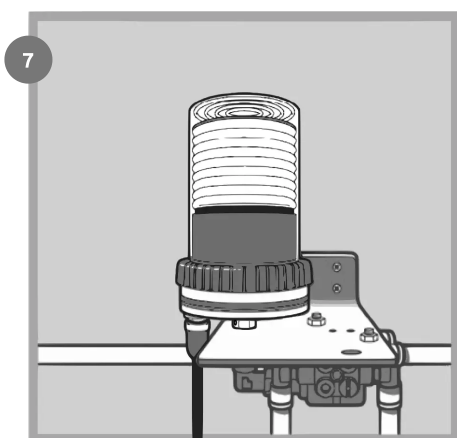
4
Rotate the CONNECT PRO pump & base assembly clockwise, until the connector socket is outside the bracket.



Check that the cable plug can engage properly on the connector socket



Keeping the plug engaged, secure the M4 set screw tightly.



The rotary coupling is now set. When disassembling/reassembling pump and base for maintenance pruposes, the connector will always find the same place.

REMOTE CONTROL

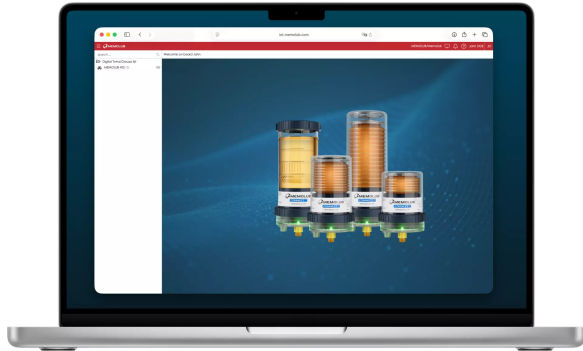
INTERMITTENT MODE

MEMOLUB VISIO PRO	
DESCRIPTION	SIGNAL
INPUT SIGNAL (FROM CUSTOMER PLC/TIMER)	$5s < t_i \leq 17s, V_i = 24Vdc$ 
OUTPUT SIGNAL "BUSY" (TO CUSTOMER PLC)	$17s$ 
PUMP OUTLET (TO LUBRICATION)	$P_{max} = 25bars, V = 0.6cc$ 
OUTPUT SIGNAL "DEFAULT" (TO CUSTOMER PLC)	$10s \ 10s \ 10s$ 

CONTINUOUS MODE

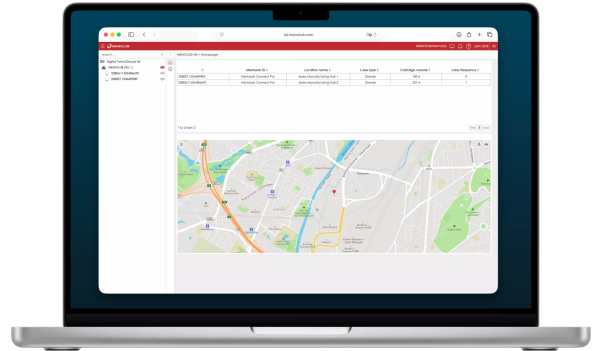
MEMOLUB VISIO PRO	
DESCRIPTION	SIGNAL
INPUT SIGNAL (FROM CUSTOMER PLC/TIMER)	$V_i = 24Vdc$ 
OUTPUT SIGNAL "BUSY" (TO CUSTOMER PLC)	$17s$ 
PUMP OUTLET (TO LUBRICATION)	$P_{max} = 25bars, V=0.6cc$ 
OUTPUT SIGNAL "DEFAULT" (TO CUSTOMER PLC)	$10s \ 10s \ 10s \ 5s \ 12s \ 10s \ 10s \ 10s \ 10s$ 

CLOUD INTERFACE



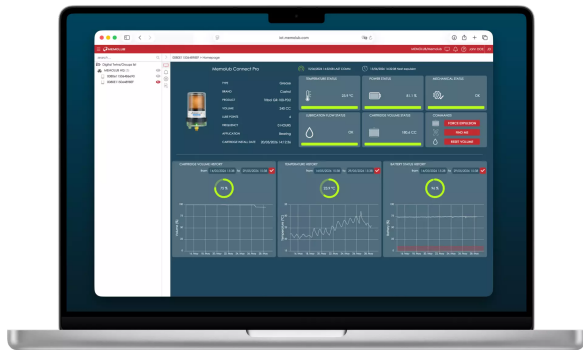
PLATFORM HOME

The platform home screen welcomes the user and provides an entry point into the connected device fleet. From here, users navigate to their assigned sites and device groups via the left-hand panel.



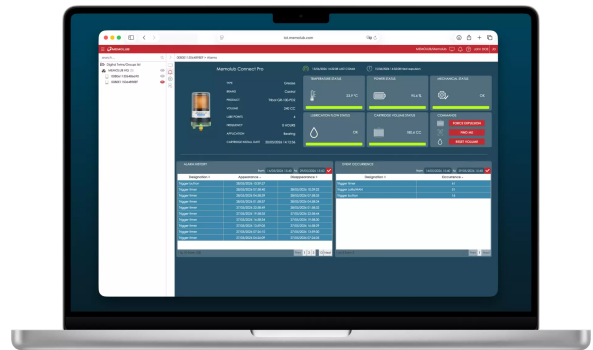
DEVICE OVERVIEW

The device overview lists all connected units within a site, showing key identifiers such as Memolub ID, location name, lubricant type, cartridge volume, and lubrication frequency. A map view below the list displays the geographic position of all installed units, giving operators an immediate picture of their installation footprint.



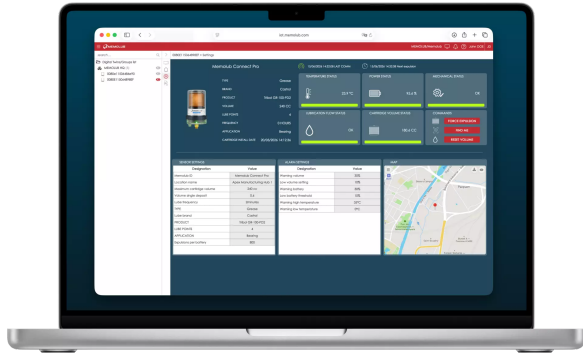
LUBRICATOR DASHBOARD

The device dashboard provides a full status overview of a single unit, including real-time readings for temperature, battery level, mechanical condition, lubrication flow, and remaining cartridge volume. Device configuration and alarm thresholds are accessible and adjustable directly from this screen. Three remote commands are available: Force Expulsion, Find Me, and Reset Volume.



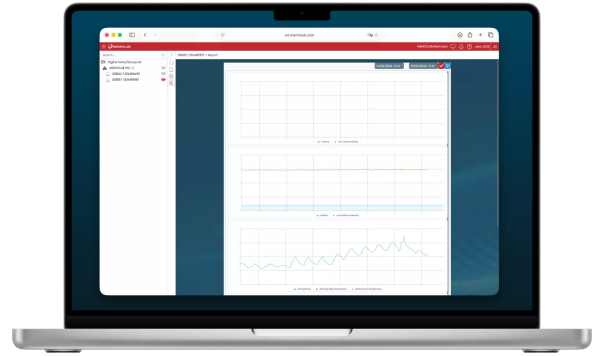
ALARM AND EVENT LOG

The alarm screen logs all alarm events for the selected device, showing appearance and disappearance timestamps for each triggered condition. An event occurrence table alongside it summarises trigger sources and their frequency over a user-defined time period, supporting trend analysis and maintenance planning.



SETTINGS AND ALARM THRESHOLDS

The settings view exposes sensor parameters and configurable alarm thresholds in a single screen. Thresholds cover cartridge volume, battery level, and temperature, each with warning and critical levels. All settings are adjustable remotely via the platform.



REPORTS

The report screen presents cartridge volume, battery level, and temperature as separate time-series charts over a user-defined period. Each chart plots the measured value against its configured alarm threshold, giving operators a clear visual reference for how device performance compares to set limits over time.

FAQ

Nothing happens after screwing the module on the base.

- The pin of the module is possibly not properly aligned with the notch of the base. Unscrew the module from the base, align correctly and screw it again.
- VISIO Module is not tightly screwed to VISIO Base. Turn it clockwise until stop.
- There is possibly no battery inside the module. Insert 3x 1,5 VDC AA batteries to resolve the issue.
- There is possibly something obstructing the communication between the base and the module contacts. Unscrew the module from the base, remove any dust or obstacles from the base and the module contacts and screw back together tightly.

The touchpad does not work after initialisation was completed successfully.

Your MEMOLUB® VISIO possibly initialized in an unstable environment. Unscrew the base from the module and screw again to reset the system. Wait until one expulsion is performed and you observe green lights, indicating the initialization is complete.

The red lights are blinking periodically.

- There is possibly a too high back pressure present in the system. Inspect your downstream piping to remove any clogging or jam. Activate the touchpad and check for at least 2 expulsions if the systems operate fine.
- There is possibly something obstructing the communication between the base and the module contacts. Unscrew the module from the base, remove any dust or obstacles from the base and the module contacts and screw back together tightly.

- The motor is broken. Replacement of the module is necessary.

The yellow lights are blinking periodically.

- There is possibly something obstructing the communication between the base and the module contacts. Unscrew the module from the base, remove any dust or obstacles from the base and the module contacts and screw back together tightly.
- The batteries are empty. Replacement of the battery pack is necessary.

The blue lights are blinking periodically.

- The cartridge is possibly out of grease. Replacement of the cartridge is necessary.
- The system is not primed. Prime the system using a manual grease pump.
- The system is operating out of its minimum and maximum temperature range. Please make sure the system is operating within the recommended temperature range.

VIDEO'S

Getting started: initiating a Memolub with a 6-DIN connec

Memolub



Ansehen auf

REGULATORY INFORMATION

SYMBOL	DESCRIPTION
	This product is compliant with Directives 2006/42/EC (Machinery). The relevant Declaration of Conformity is available here [https://memolub.eu/assets/uploads/Support/Visio/DoC-CE-VISIO-HPS-2023.pdf].
	This product is compliant with UK regulations 2008 No. 1597 (Supply of Machinery). The relevant Declaration of Conformity is available here [https://memolub.eu/assets/uploads/Support/Visio/DoC-UKCA-VISIO-HPS-2023.pdf].
	This product is compliant with customs union technical regulation TR CU 010/2011 (safety of machines and equipment). The relevant Declaration of Conformity is available here [https://memolub.eu/assets/uploads/Support/Visio/DoC-EAC-VISIO-HPS-2023.pdf].
	The WEEE symbol is attached to the product in compliance with the EU directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE). It is intended to deter the improper disposal of this product and to promote reuse and recycling.
	The packaging material can be recycled. Please arrange for the environmental appropriate disposal of the packaging.