

# Installation Guide

## perma PRO MP-6

This installation guide provides instructions for the installation of the lubrication system perma PRO MP6 and helps in preventing basic mounting errors. The guide should be used together with the operating instructions of the corresponding perma product. Disclaimers of corresponding operating instructions apply.

### 1. Basic Guidelines

The lubrication system perma PRO used with the distributor MP-6 requires grease lines. perma-tec recommends a flexible hose (PA) with an inner diameter of at least 5 mm. All accessories and tubes must be able to withstand at least 25 bar counter pressure.

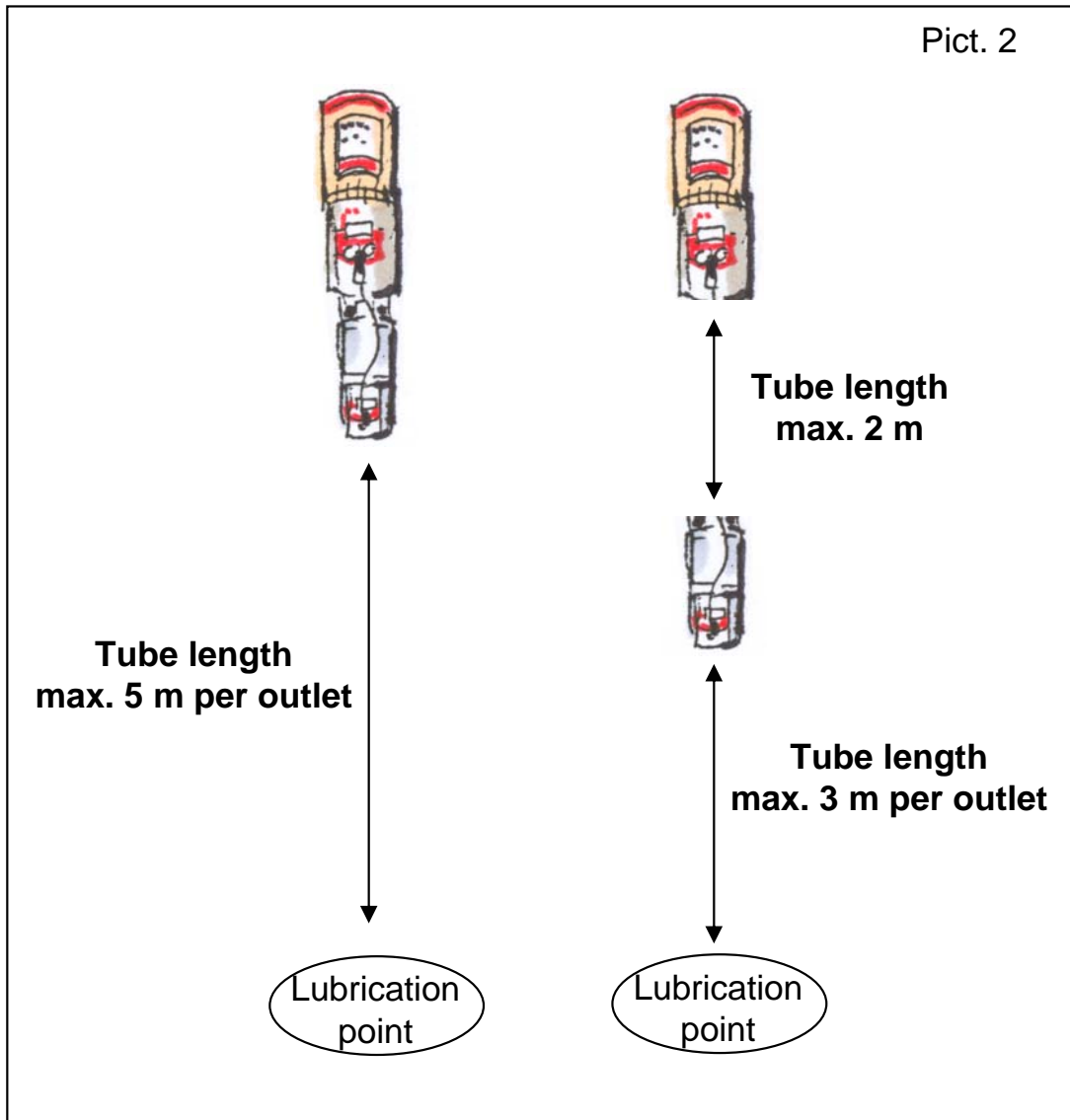
- For tube installations, perma PRO MP6 should be installed with the supplied mounting bracket.
- Select a position for perma PRO MP-6 which is easy and safe to access and which is protected from high-pressure water jets, falling materials, corrosive chemicals, strong vibrations, and extreme temperature.
- Before installation, prime grease lines and all accessories with the same grease that is contained in the lubricator (perma-tec offers 400 ccm cartridges for grease guns).
- Secure grease lines with ties or similar means to protect them from damage.
- A protection box must be used for outside installations and applications with extreme dirt or water jets (single or double protection boxes: see picture 1 / protection boxes are also available in stainless steel). perma PRO MP-6 qualifies for protection Class IP54.
- Tube length of each outlet cannot exceed 5 m (please note that actual tube length depends on ambient temperature and type of grease used). If perma PRO is separated from perma MP-6 and installed at a different place, the maximum tube length between both units cannot exceed 2 m. In total, the maximum tube length of 5 m cannot be exceeded (see picture 2).

Singe and double protection box

Pict. 1



Pict. 2



## 2. Priming of Accessories and Grease Lines

All accessories and grease lines must be primed. Without this pre-filling, the perma PRO cannot immediately support the lubrication point with lubricant but would first have to fill all accessories.

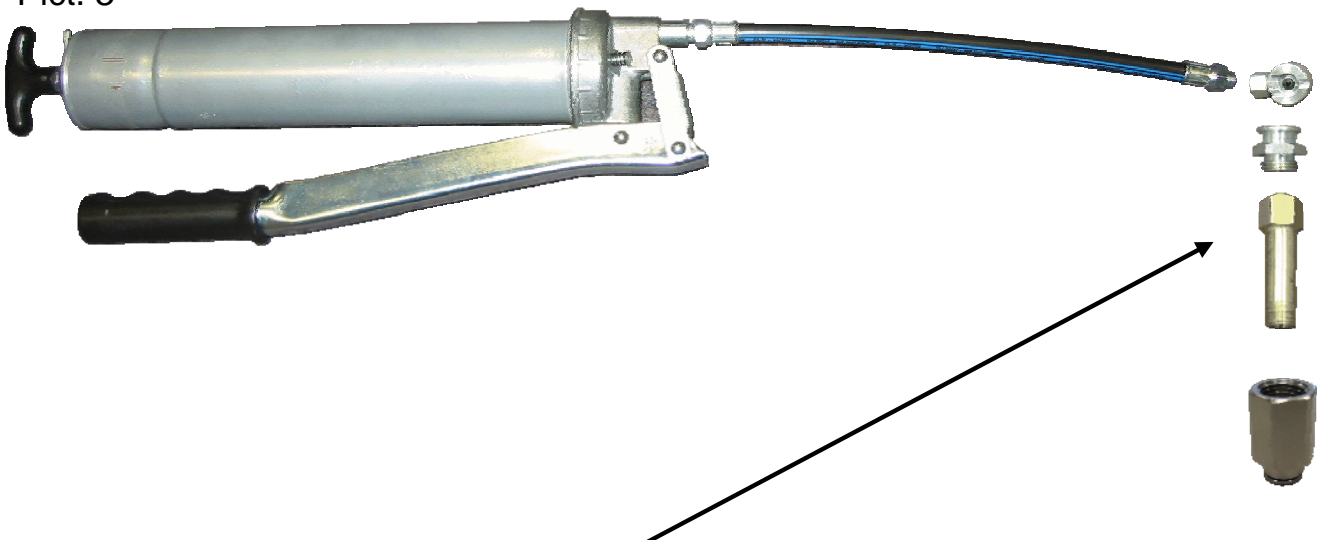
### **Example:**

A tube that is 5 m long requires about 98 ccm of lubricant.

It would take the perma PRO (with a 12 months setting and a 250 LC-unit) about 5 months to fill this tube.

The following pictures show one way of pre-filling with customary parts for a grease gun (connection thread M10x1).

Pict. 3



Pict. 4



Sliding nipple for grease gun



Sliding nipple G 1/4



Extension perma  
No: 26 0011 702



Adapter for tube  
Ø 8/5 No: 6463-8-1/4i

### 3. Mounting

perma PRO should be mounted in vertical position (horizontal positions only in extreme cases). For vertical mounting (see pict. 6), the grease canister (LC-unit) should be on top. Otherwise, the display would be up-side-down and it would be hard to read the various messages.

The supplied mounting bracket can be used to secure a perma PRO, a perma MP-6, or a perma PRO together with a perma MP-6 (see pict. 6-8). If perma PRO and distributor are not mounted together, a second mounting bracket should be used. In this case, please refer to pict. 7 and 8 (also refer to attached drilling jig). This is the only way to ensure even force distribution.



Attachment points of the bracket for wall or machine mounting

### 4. Operation

Make sure to check the following points before you turn the lubrication system perma PRO on:

1. Check code pin assignment in the distributor MP-6. Change number of pins if pin assignment is not correct. **DO NOT wipe-off grease!**
2. Close off any in-active outlets with plugs.
3. Seal connection thread of perma PRO MP-6 with LOCTITE 243.  
(When delivered as shown in pict. 6, sealing was already factory made)
4. Check discharge setting (refer to operating instructions PRO on page 15).
5. Check setting for LC250 or LC500 (jumper position).
6. Insert new battery or connect power supply cable.
7. Attach LC-unit.
8. Carry out initialization (see page 5).

### Initialization of PRO with MP-6:

1. perma PRO must be electronically connected to perma MP-6
2. perma PRO must be turned off
3. Push down on both buttons on perma PRO and hold for about 4 seconds
4. Display will show „IN“
5. Initialization is done automatically (recognition of activated outlets)
6. Turn ON lubrication system perma PRO

### Initialization PRO CONTROL with MP-6:

1. perma PRO CONTROL must be electronically connected to perma MP-6
2. perma PRO CONTROL must be turned off (pull plug or pick off voltage)
3. Push down on both buttons on perma PRO and hold for about 4 seconds
4. Display will show „IN“
5. Initialization will be done automatically after voltage is applied (recognition of activated outlets)

## 4. Warning messages

Warning messages always correspond to the sequence of activated outlets.

Example: Outlet 3, 4 and 5 are activated. Outlet 3 is blocked → Error code F1

Example: outlet 1, 2, and 3 are activated. Outlet 3 is blocked → Error code F3

If several warnings occurred one after the other, then the last warning is displayed.

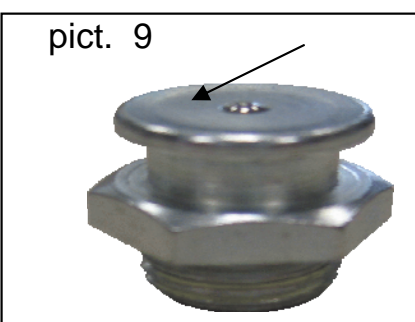
After the last warning was acknowledged, the one before last will be displayed.

For more details please refer to the operating instructions perma PRO or MP-6.

## 5. Tips and Tricks

### Electrical connections

Make sure that all U-connectors are hand tight. This will ensure sealing against dust and moisture.



### Priming of tubes

After tubes are primed, it is sometimes difficult to pull them off the adapter → push down valve on sliding nipple (pict. 9) to relieve pressure.

### Discharge Chart

Example: Your application requires 30 ccm lubricant every 1000 operating hours  
 ⇒ i.e. each outlet requires 3,0 ccm in 100 operating hours

You activated 4 outlets

⇒ 4 x 3,0 ccm = 12,0 ccm

Find a value of about 12,0 ccm in the chart below

LC – unit		Average discharge volume in cc per 100 operating hours					
		250 cc			500 cc		
Setting mode		Days	Weeks	Months	Days	Weeks	Months
Setting point Discharge period							
1		1041,7	148,8	34,3	2083,3	297,6	68,5
2		520,8	74,4	17,1	1041,7	148,8	34,3
3		347,2	49,6	11,4	694,4	99,2	22,8
4		260,4	37,2	8,6	520,8	74,4	17,1
5		208,3	29,8	6,9	416,7	59,5	13,7
6		173,6	24,8	5,7	347,2	49,6	11,4
7		148,8	21,3	4,9	297,6	42,5	9,8
8		130,2	18,6	4,3	260,4	37,2	8,6
9		115,7	16,5	3,8	231,5	33,1	7,6
10		104,2	14,9	3,4	208,3	29,8	6,9
11		94,7	13,5	3,1	189,4	27,1	6,2
12		86,8	12,4	2,9	173,6	24,8	5,7
13		80,1	11,4	2,6	160,3	22,9	--
14		74,4	10,6	2,4	148,8	21,3	--
15		69,4	9,9	2,3	138,9	19,8	--
16		65,1	9,3	2,1	130,2	18,6	--
17		61,3	8,8	2,0	122,5	17,5	--
18		57,9	8,3	1,9	115,7	16,5	--
19		54,8	7,8	1,8	109,6	15,7	--
20		52,1	7,4	1,7	104,2	14,9	--
21		49,6	7,1	1,6	99,2	14,2	--
22		47,3	6,8	1,6	94,7	13,5	--
23		45,3	6,5	1,5	90,6	12,9	--
24		43,4	6,2	1,4	86,8	12,4	--
25		41,7	--	--	83,3	--	--
26		40,1	--	--	80,1	--	--
27		38,6	--	--	77,2	--	--
28		37,2	--	--	74,4	--	--
29		35,9	--	--	71,8	--	--
30		34,7	--	--	69,4	--	--

There are 4 different settings possible in this case:

Arrow 1: 11,4 ccm in 100 h, LC 250, setting 3 months

Arrow 2: 12,4 ccm in 100 h, LC 250, setting 12 weeks (see page 7)

Arrow 3: 12,4 ccm in 100 h, LC 500, setting 24 weeks

Arrow 4: 11,4 ccm in 100 h, LC 500, setting 6 months

Example arrow 2:  
12,4 ccm in 100 h, LC 250, setting 12 weeks

LC – unit		Average discharge volume in cc per 100 operating hours					
		250 cc			500 cc		
Setting mode	Setting point Discharge period	Days	Weeks	Months	Days	Weeks	Months
		1		1041,7	148,8	34,3	2083,3
2		520,8	74,4	17,1	1041,7	148,8	34,3
3		347,2	49,6	11,4	694,4	99,2	22,8
4		260,4	37,2	8,6	520,8	74,4	17,1
5		208,3	29,8	6,9	416,7	59,5	13,7
6		173,6	24,8	5,7	347,2	49,6	11,4
7		148,8	21,3	4,9	297,6	42,5	9,8
8		130,2	18,6	4,3	260,4	37,2	8,6
9		115,7	16,5	3,8	231,5	33,1	7,6
10		104,2	14,9	3,4	208,3	29,8	6,9
11		94,7	13,5	3,1	189,4	27,1	6,2
12		86,8	12,4	2,9	173,6	24,8	5,7
13		80,1	11,4	2,6	160,3	22,9	--
14		74,4	10,6	2,4	148,8	21,3	--
15		69,4	9,9	2,3	138,9	19,8	--
16		65,1	9,3	2,1	130,2	18,6	--
17		61,3	8,8	2,0	122,5	17,5	--
18		57,9	8,3	1,9	115,7	16,5	--
19		54,8	7,8	1,8	109,6	15,7	--
20		52,1	7,4	1,7	104,2	14,9	--
21		49,6	7,1	1,6	99,2	14,2	--
22		47,3	6,8	1,6	94,7	13,5	--
23		45,3	6,5	1,5	90,6	12,9	--
24		43,4	6,2	1,4	86,8	12,4	--
25		41,7	--	--	83,3	--	--
26		40,1	--	--	80,1	--	--
27		38,6	--	--	77,2	--	--
28		37,2	--	--	74,4	--	--
29		35,9	--	--	71,8	--	--
30		34,7	--	--	69,4	--	--

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We will include any necessary changes in the next edition.

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