# Installation Guide

## perma PRO MP-6

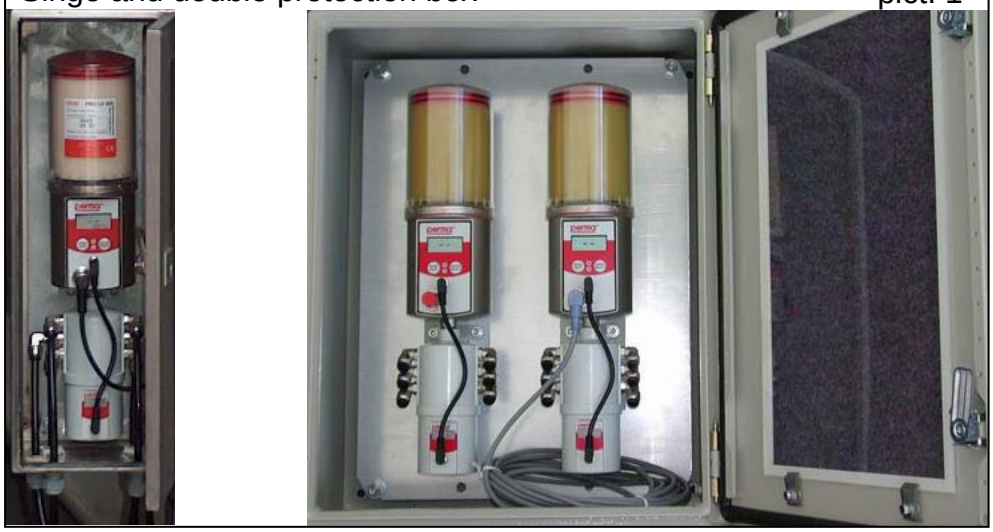
**This installation guide provides instructions for the installation of the lubrication system perma PRO MP6 and helps in preventing basic mounting errors. The guide should be used together with the operating instructions of the corresponding perma product. Disclaimers of corresponding operating instructions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

## 1. Basic Guidelines

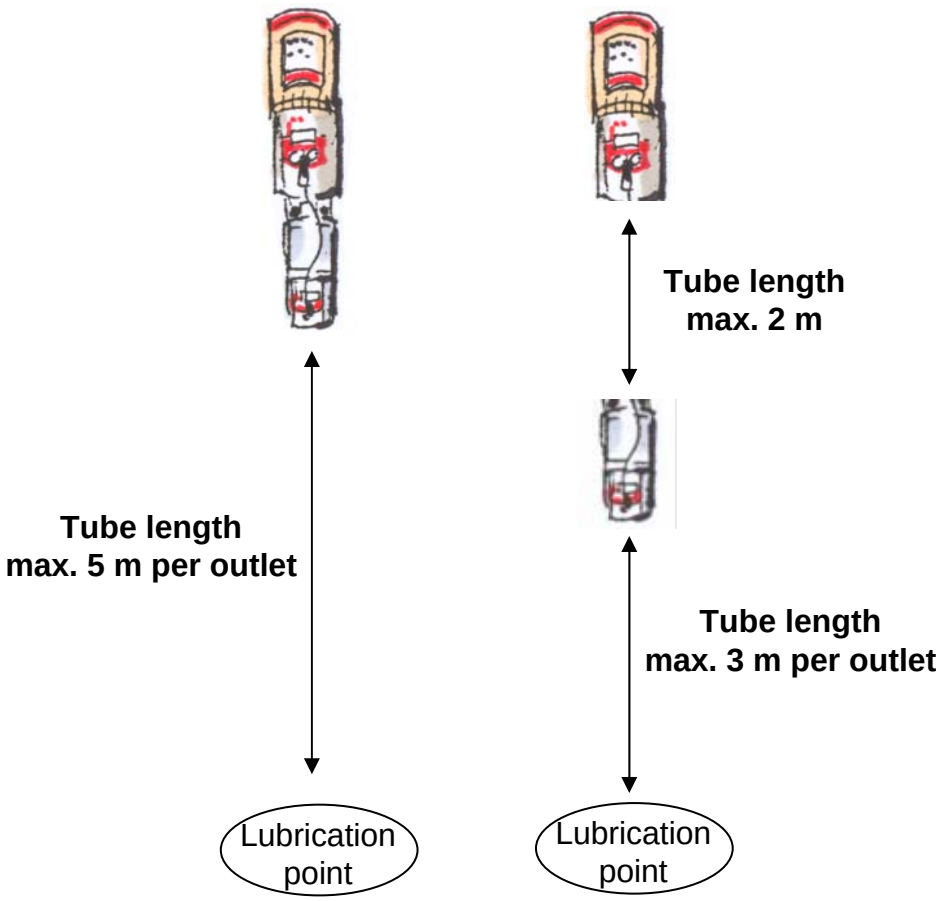
The lubrication system perma PRO used with the distributor MP-6 requires grease lines. perma-tec recommends a flexible hose (PA) with an inner diameter of at least 5 mm. All accessories and tubes must be able to withstand at least 25 bar counter pressure.

- 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 (singe 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).

Grease gun for 400 ccm cartridges
order no. 26.005.001

High pressure tube with swivel joint and nipple
order no. 26.005.010

pict. 3

perma pre-filling adapter for tubes outer ∅ 8mm (grease)
order no. 27.005.058

pict. 4

perma pre-filling adapter for tubes outer ∅ 6mm (oil)
order no. 27.005.066

pict. 5

# 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.

pict. 6

pict. 7

pict. 8

Attachment points of the bracket for wall or machine mounting

# 4. Tips and Tricks

**Electrical connections**

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

pict. 9

**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

1 2 3 4

| | Average discharge volume in cc per 100 operating hours | | | | | |
|---|---|---|---|---|---|---|
| LC – unit | 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 | 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

| | Average discharge volume in cc per 100 operating hours | | | | | |
|---|---|---|---|---|---|---|
| LC – unit | 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 | 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 | -- | -- |