

Installation Guide

perma STAR

This installation guide provides instructions for the installation of the perma STAR lubricator and helps in preventing basic mounting errors. The guide should be used together with the operating instructions of the corresponding perma product. The displayed installation drawings are only examples. There are many other possibilities of mounting depending on local conditions.

Disclaimers of corresponding operating instructions apply.

1. Determination of Mounting Method

Direct mounting should be used for lubrication points that are easily accessible. Direct mounting is not recommended if application limits are exceeded (see operating instructions). If your answer to any of the questions listed below is YES, remote mounting is recommended:

1. Is the ambient temperature at the lubrication point higher than +50°C (122°F)

Yes

No

2. Is it necessary to remove protective screens, walls, or other types of protection in order to reach the lubrication point?

Yes

No

3. Is the lubrication point exposed to high vibrations?

Yes

No

4. Is it difficult or dangerous to access the lubrication point during operation of the machine?

Yes

No

5. Is the lubrication point exposed to any of the following:

- water jets from high-pressure cleaning machines
- acidly / corrosive cleaning chemicals
- mechanical forces like falling rocks

Yes

No

2. Basic Guidelines

- One perma lubricator per lubrication point
- When oil is used for lubrication, a non-return valve (oil throttle A 810) must be installed. This will prevent oil leakage from the lubricator. An oil-filled perma STAR must be installed vertically (outlet down).
- The grease nozzle of perma STAR has a ¼ " male thread. If your application has a different thread you may need to use an adaptor. perma-tec offers a wide range of adaptors which are shown on our web site www.perma-tec.com.
- Do not over-tighten the plastic thread of perma STAR
- For all metal to metal connections (extensions, reducers etc.) make sure to use LOCTITE 243 (semi-tight screw locking).

3. Guidelines for Direct Mounting

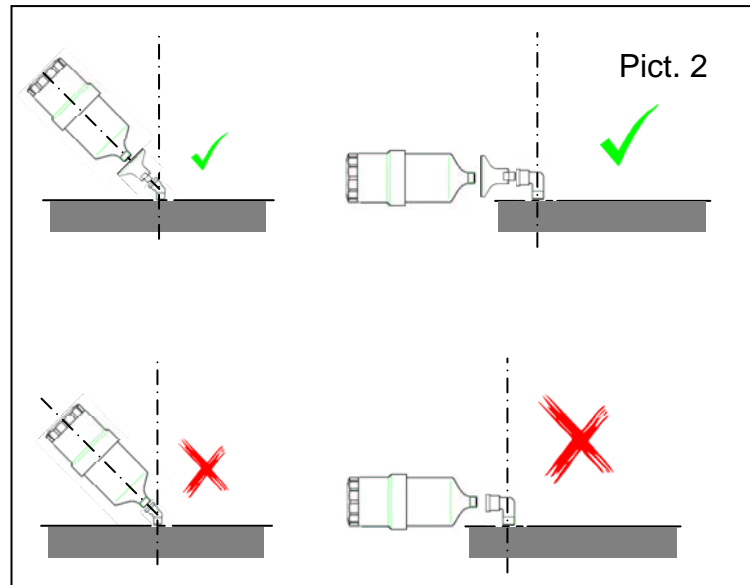
1. If at all possible, install the perma STAR in the vertical position (mandatory for all oil-filled perma STARs) basically, we recommend to always use support flange A 620 (see Pict. 1).
2. Pre-lube all accessories (extensions, angles, etc...) prior to installation of the perma STAR with the same grease that is contained in the lubricator (400 g cartridges for grease guns are available at perma-tec).

Pict. 1



A 620 Support flange

Pict. 2 shows four direct mounting examples (2 examples of correct mounting and 2 examples of incorrect mounting).



4. Guidelines for Remote Mounting

Remote installations require a grease line. perma-tec recommends a flexible hose with OD 8mm / ID 6mm.

1. For remote mounting, the perma STAR has to be secured by special brackets. Pictures 7-9 show several installation examples.
2. Select a position for perma STAR which is easy and safe to access and which is protected from high-pressure water jets, falling materials, corrosive chemicals and extreme temperature.
3. Prime the grease line and all accessories with the same grease that is contained in the lubricator before the lubricator is installed (perma-tec offers 400 ccm cartridges for grease guns).
4. Secure grease lines with ties or similar means to protect them from damage.
5. If you are using a mounting bracket other than perma clip A 105, please make sure that it does not squeeze the LC-unit as this could block the piston inside the LC unit.

Acceptable Grease Lines:

Determined at \varnothing 20°C/68°F ambient temperature, using grease with NLGI 2 and a tube with 6mm inside diameter.

Depending on the selected lubricant and the ambient conditions, tubes up to 3 m are possible. Oil-filled lubricators can be used with tubes up to 5 m.

5. Priming of Accessories and Grease Lines

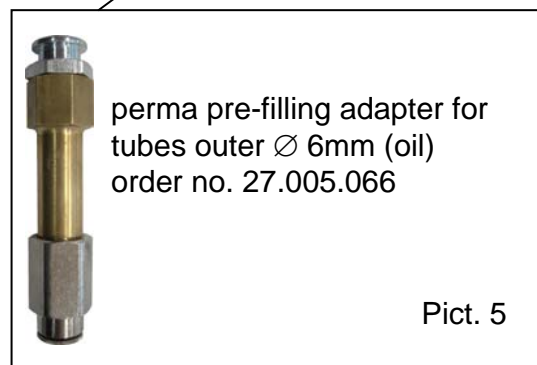
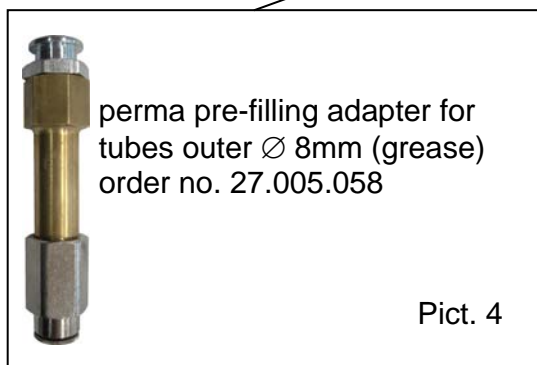
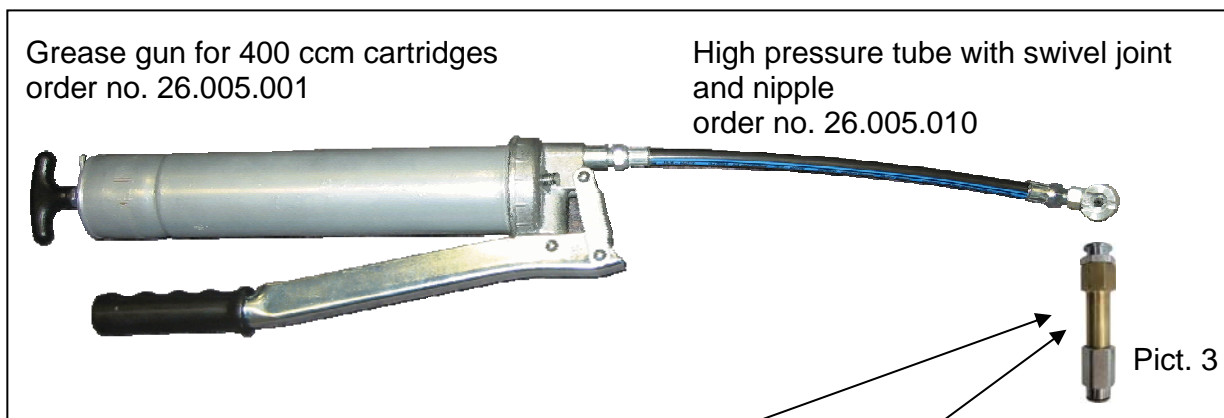
All accessories and grease lines must be primed. Without this pre-filling, the perma STAR cannot immediately support the lubrication point with lubricant but would first have to fill all accessories.

Example:

A tube that is one meter long requires about 28 ccm of lubricant.

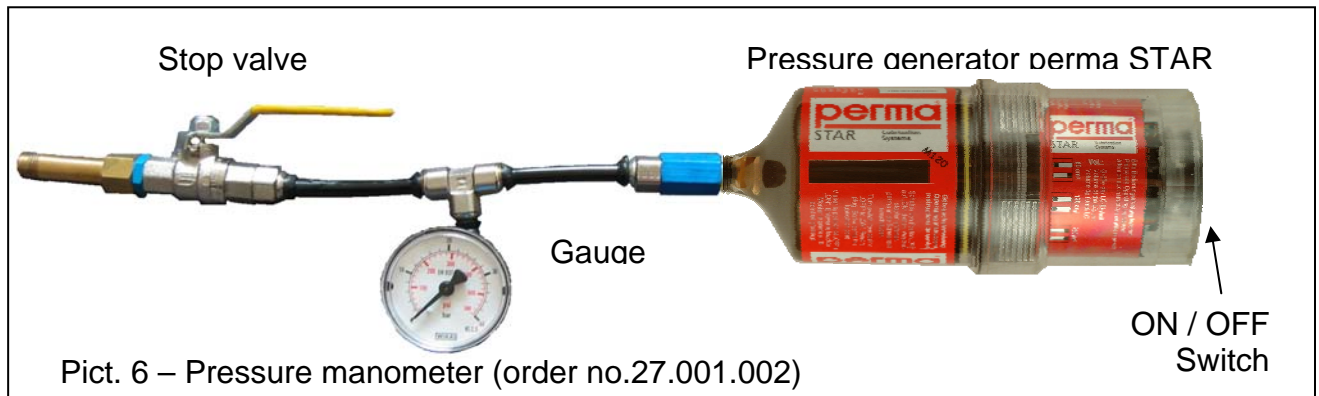
It would take the perma STAR, with a 12 months setting and a M120 LC-unit, about 3 months to fill this 1 meter tube.

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



6. Preparation for Installation

perma STAR has a self protection mechanism which shuts off the drive unit at higher counter pressure (5 bar). Most bearings require 0.5 – 2 bar pressure (without tubes, extensions, angles etc.). Therefore, prior to installing the perma STAR, please check the counter pressure of the application as following:



This pressure manometer can be purchased from perma-tec.

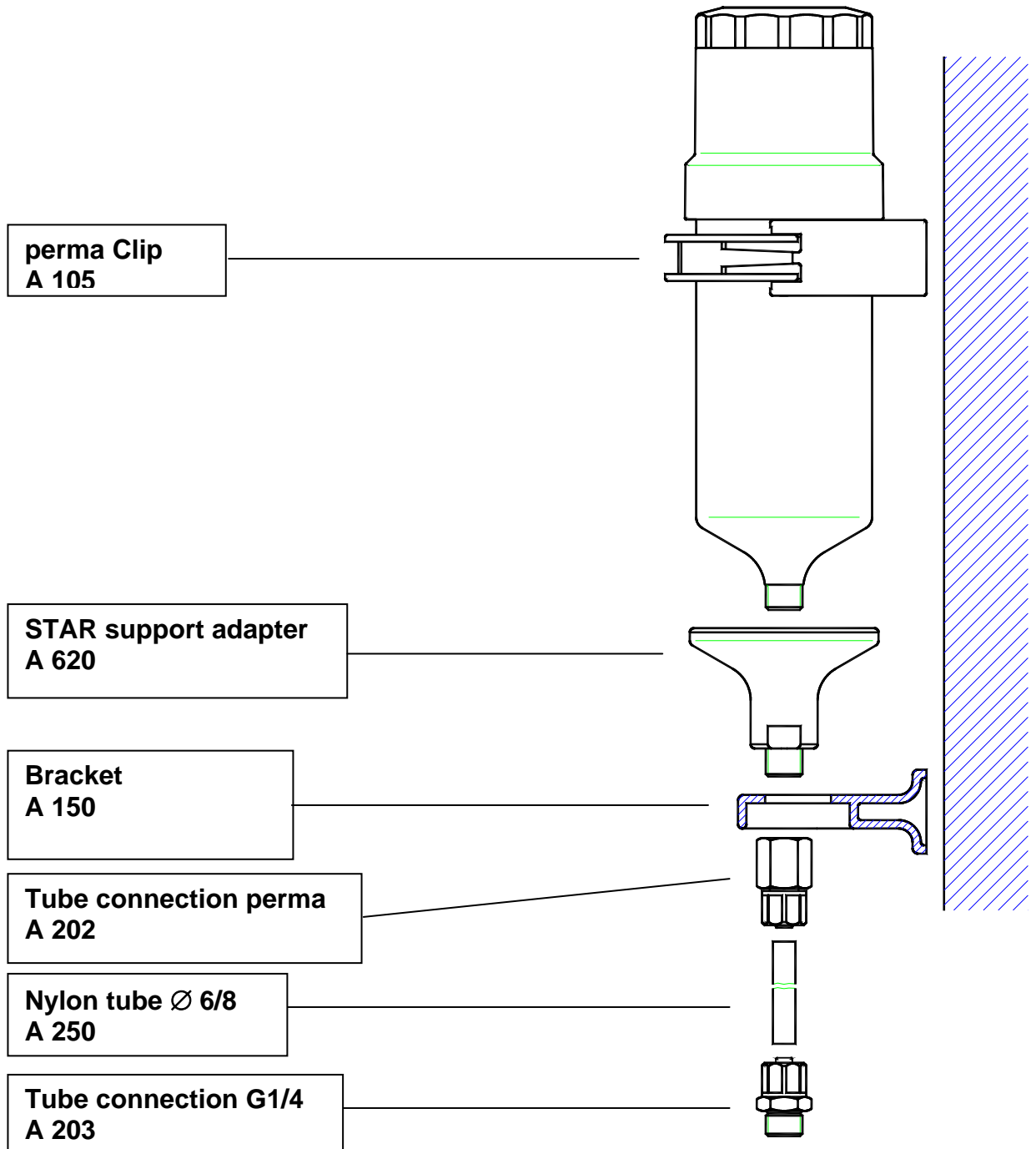
Make sure to order the pressure manometer with a lubricant cartridge that contains the same grease as used in /selected for the application.

Handling the pressure manometer:

1. Clean the lubrication point to remove any potential contaminants
2. Remove the grease nipple
3. Install reducers, extensions, grease line etc.. if necessary
4. Screw the pressure manometer into the lubrication point
5. The best measurement results are achieved during operation
(Caution: Make sure to observe rules for accident prevention).
6. Ensure that stop valve of pressure manometer is open
7. Press the small black switch on the pressure generator perma STAR for appr. 20 seconds. Observe the gauge and repeat this procedure until the pressure registered on the gauge stays constant. Wait for appr. 5 minutes until the system has relaxed and do one more discharge for **max. 5 seconds**. By doing so, the system pressure (= counter pressure) of your application is determined.
8. If the counter pressure is 5 bar or higher, you should “rinse” the lubrication point with a grease gun. If the counter pressure does not decrease you might need a different lubricant or lubricator. Please contact perma-tec for assistance.

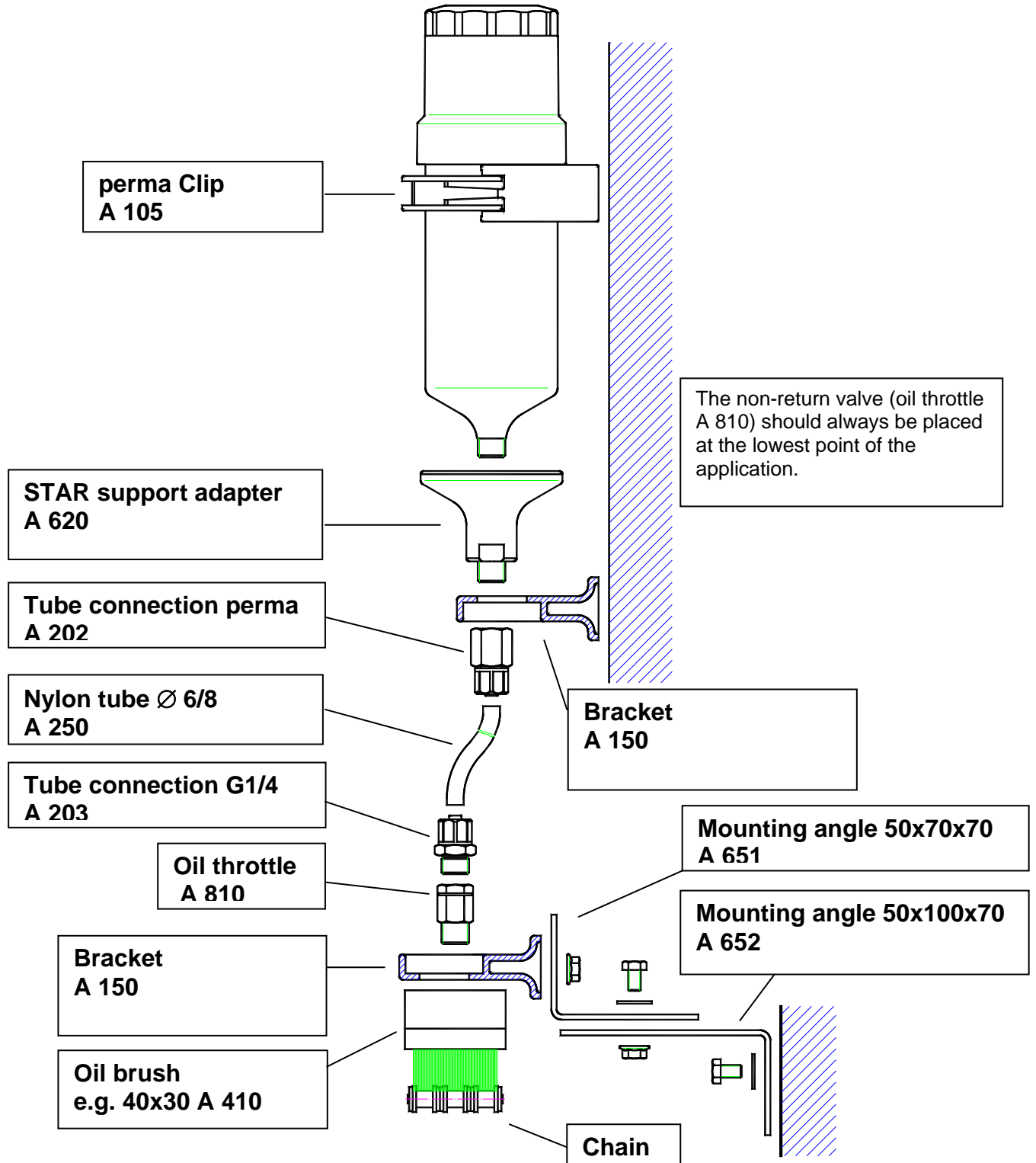
Grease lubrication with tube

Pict. 7



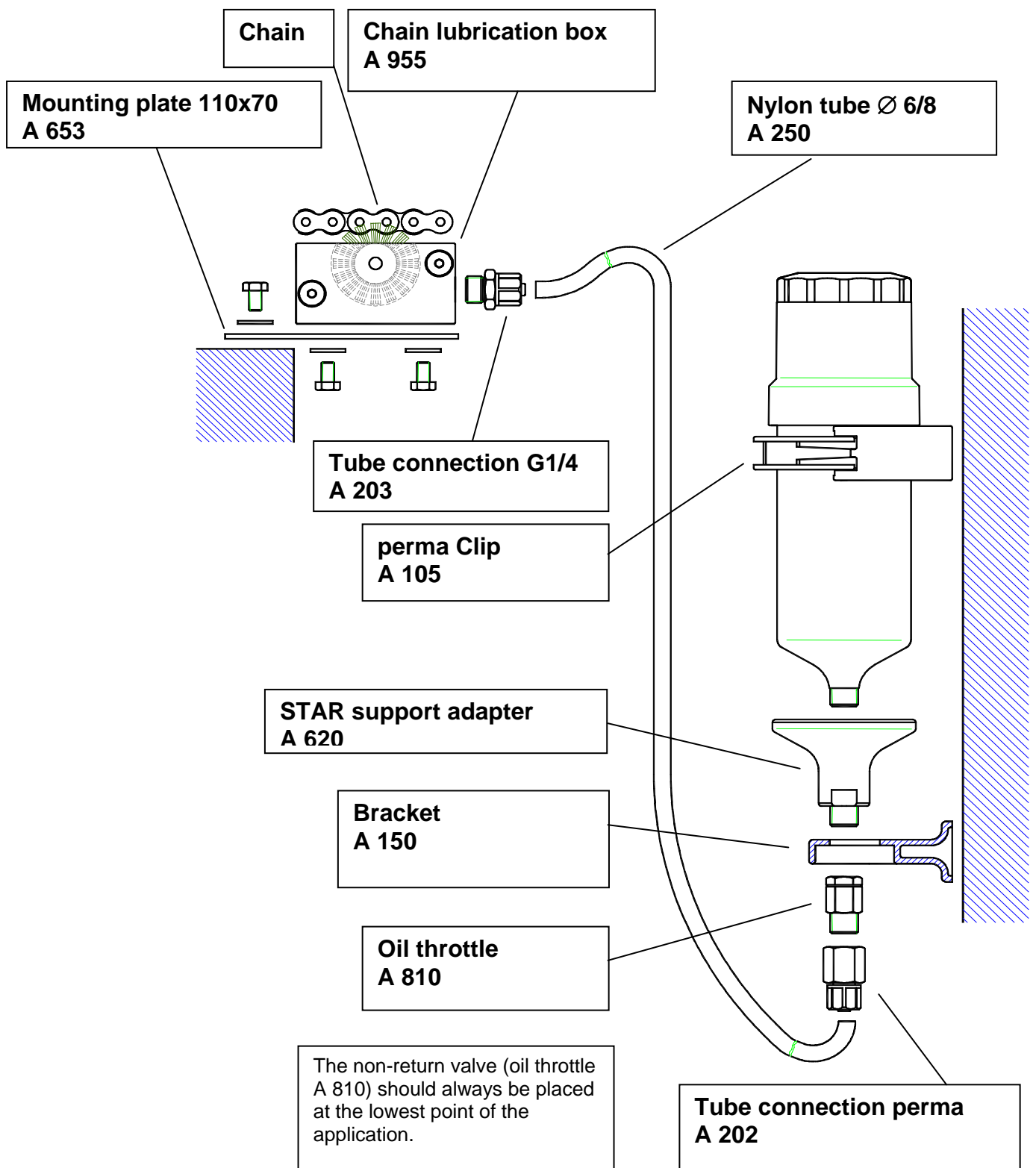
From-top-lubrication of a chain with oil

Pict. 8



Lubrication of elevated chain with oil

Pict. 9



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We do not assume any judicial responsibility or liability for damages which may ensue as a result.

We will include any necessary changes in the next edition.

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