This is a brief guide for installing the PU-Lubrication Pinions for experienced users. The complete operating instructions, including all safety information, can be found at
www.dls-schmiersysteme.de

The optimal installation of PU-Lubrication Pinions (polyurethane foam gears) requires adherence to specific steps to ensure effective lubrication and a long service life.

General Information

Purpose:
PU-Lubrication Pinions are used exclusively for applying lubricant to the mating components requiring lubrication (e.g., steel gear or rack) and are not designed for torque transmission.

Lubricant Supply:
The lubricant (oil or grease) is typically introduced into the interior of the foam wheel via a hollow shaft or radial connection and reaches the surface through channels. There, the lubricant is stored in capillary channels and released in small doses onto the tooth surface.

Important Precautions

Avoid contact of the PU material with strong acids, alkalis, or aromatic hydrocarbons (such as benzene), as these can attack or swell the polyurethane.

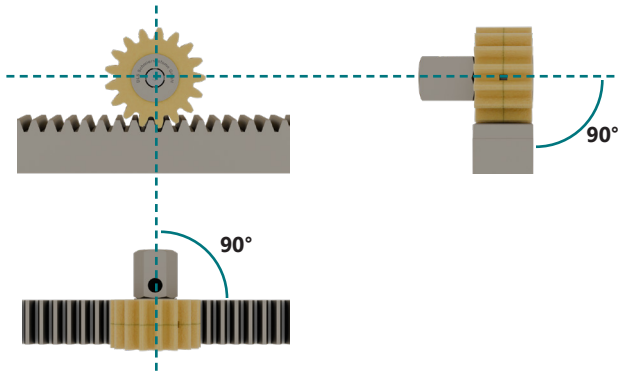
PU-Lubrication Pinions are wear parts and must be regularly inspected for wear and proper lubricant delivery and replaced as needed.

Step-by-Step Installation Instructions

1. Preparation and Cleaning:
1. Ensure that the gear teeth to be lubricated and the surrounding area are clean and free of old lubricant residue and contaminants,
2. When installing loose lubricated gears (without a pre-assembled axle), take care to prevent adhesive from getting into the bearing or lubrication channels if you are attaching the axle yourself. Allow the adhesive to cure completely (at least 7 hours).

2. Priming:
1. Before initial operation, the PU-Lubrication Pinions must be primed. To do this, immerse it in a mineral oil bath or suitable lubricant for approximately 5 to 10 minutes to saturate the foam.
2. Alternatively, the lubricant can be applied manually with a brush or spatula to ensure basic lubrication during the break-in period.

3. Mounting and Alignment:
1. Mount the PU-Lubrication Pinion so that it is **axially parallel to the mating component** (rack or pinion).
2. Adjust the correct clearance. The PU-Lubrication Pinion should have a clearance of 0.3 to 0.5 mm to the mating component to ensure even distribution of the lubricant film across the entire tooth flank width. Excessive contact pressure can lead to excessive wear of the PU-Lubrication Pinion.



3. Check the lubrication pattern. It should be evenly distributed across the entire contact area. If there are deviations, adjust the clearance and alignment.

4. Integration into the Lubrication System:
1. Pre-fill the PU-Lubrication Pinion with the appropriate lubricant using a 100 ml cartridge.

2. Connect the lubrication port (axial or radial) of the PU-Lubrication Pinion to the central lubrication pump or lubricator using suitable hoses and fittings.

3. Use compatible hoses (e.g., polyamide PA hoses) and fittings. The hoses must be pre-filled with the appropriate lubricant.

4. For peripheral speeds greater than 5 m/s, the installation of a splash guard is recommended, as fling-off of the lubricant can occur depending on the lubricant used.

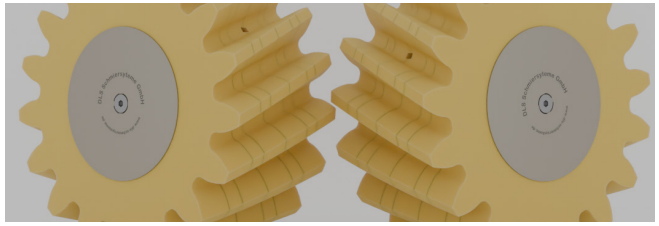
Right!

Wrong!

5. Operating settings:
1. Lubricant quantity: Adjust the delivery rate of the lubrication pump to the operating conditions (speed, temperature, environmental influences). The goal is optimal lubrication without excess lubricant being flung off, attracting contaminants, or polluting the environment.

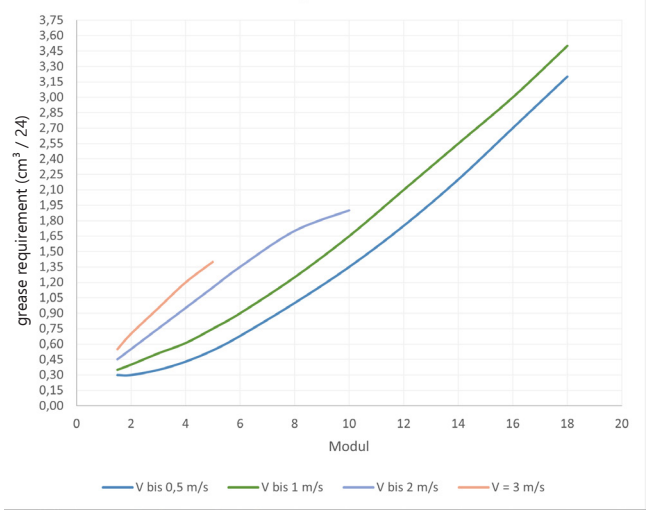
2. Lubrication intervals: For automatic lubricators, set the intervals according to the requirements.

Note regarding helix direction:
Helical gears can only be used in right/left-hand pairings. A right-hand helix drive gear/rack can only be paired with a left-hand helix PU-Lubrication Pinions (or vice versa).



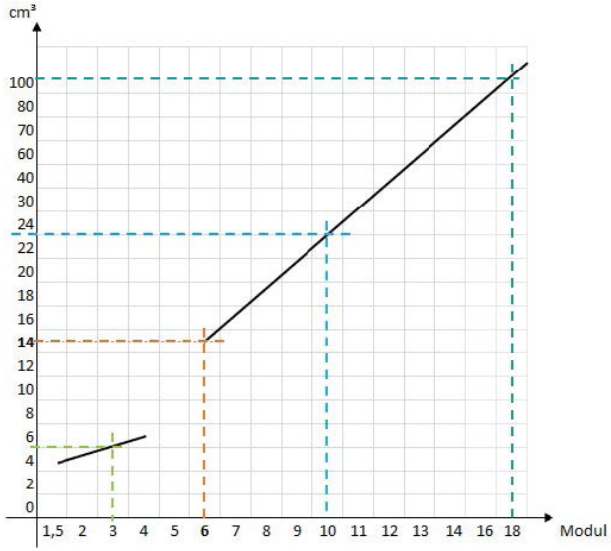
Guideline values for lubricant quantities

Grease requirements for lubrication with PU-Lubrication Pinions for applications up to 5 meters stroke



*Guide values based on a maximum stroke of 5 meters. For lubrication quantity recommendations suitable for your application, please contact us.

Initial lubrication of lubricating gears
We will gladly offer a suitable filling kit for the initial lubrication of the PU-Lubrication Pinions upon request.



Modul	Grease volume for initial greasing of the set (cm³)	Number of pump strokes with hand grease gun
1,5	4	11
2	4	11
3	**5**	14
4	6	17
5	12	34
6	**14**	40
7	17	49
8	18	61
9	20	57
10	**23**	66
11	24	69
12	27	77

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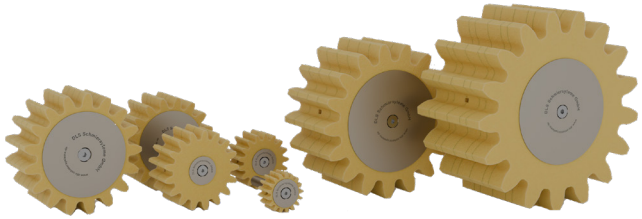

QuickStart
PU-Lubrication Pinions

V 1.00