

# Appendix

## Gear pump head S



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## **Gear pump head S**

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# 1 Gear pump head S



*Fig. 1: Gear pump head S  
(Art. 302066)*

## Fillable products

To eliminate temperature differences and segregation, we strongly recommend processing the product by stirring well. The ideal processing temperatures for the gears are between 2 °C and max. 95 °C (chemical-resistant gears: 2 °C to max. 50 °C). The product may in general not contain abrasive ingredients (fruit pits, sand / clay particles, etc.). If necessary, the product must be filtered before filling.

The **flow** of the gear pump head S reaches about 9 litres/minute at maximum capacity.



**Products at a temperature greater than 95 °C should never be filled with the gears (chemical-resistant gears: 50 °C). Gears and pump head housing have different dimensions, which would jam the gears and thus damage the pump head and the gears themselves.**

## Installation and use of the clamp

The clamp (1) is placed via the pumphead into the appropriate grooves of the connector of pipe bend and filling pipe (see **Fig. 2**). This ensures correct installation position of pipe bend and filling pipe and they are additionally secured to the pump head.

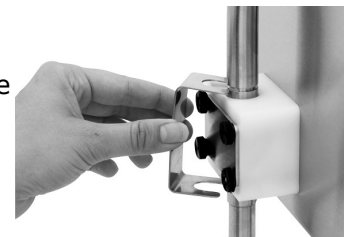


*Fig. 2:  
Installation /  
de-installation of the  
clamp*

### Cleaning

To clean the pumphead (including filling nozzle and priming hose as per our recommendation), it can be removed from the driving module and disassembled.

To do this, proceed as follows (see **Fig 3**):

- remove pump head from the driving module by unscrewing both the knurled screws (**3**) diagonally at top right and bottom left
- remove clamp (**1**) (see **Fig. 2**)
- disconnect filling pipe and pipe bend from the pump head
- loosen knurled nuts (**2**) (bottom right and top left) and remove cover (**4**)
- remove cover gasket (**5**) from the frame and the gears from the housing (**6**).

**Attention:** The gears sit tightly on the shafts due to their very precise fitting. To facilitate removal, they can be lifted with a flat screwdriver through the openings for the filling pipes

- strictly avoid force and scraping etc.

### Attention! Do not lose small parts.

Pump head housing (incl. shafts), gears and cover can now be cleaned, e.g. in the sink by hand (small parts) or in the dishwasher. Recesses can be brushed out or wiped with a small brush or a sponge respectively. Only commercially available dish washing / cleaning agents should be used for this purpose.

The assembly then takes place in reverse order. The O-rings of pipe bend and filling pipes are to be moistened with water or product before plugging in the pump head.

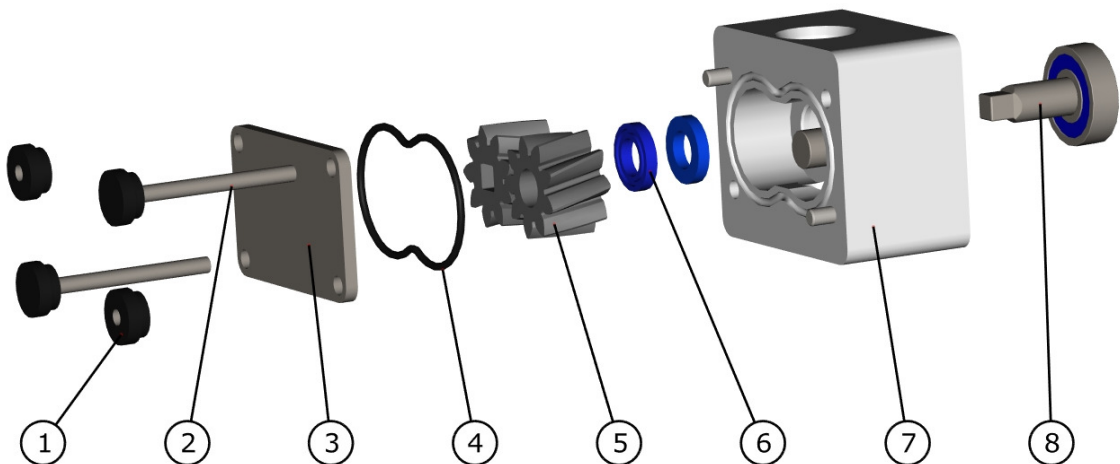


Fig. 3: Gear pumphead S, exploded view drawing

| Item     | Number | Description                                                    | Art.   |
|----------|--------|----------------------------------------------------------------|--------|
| <b>1</b> | 2 pc.  | Knurled nut                                                    |        |
| <b>2</b> | 2 pc.  | Knurled screw                                                  | 307038 |
| <b>3</b> | 1 pc.  | Lid, for gear pump head S                                      | 307035 |
| <b>4</b> | 1 pc.  | Lid seal, for gear pump head S                                 | 307087 |
| <b>5</b> | 1 pc.  | Pair of gears, for gear pump head S                            | 302073 |
| <b>6</b> | 2 pc.  | Shaft seal, for gear pump head S                               | 307031 |
| <b>7</b> | 1 pc.  | Pump head housing with passive shaft                           |        |
| <b>8</b> | 1 pc.  | Driving shaft, for gear pump head S, square, with ball bearing | 307037 |

The shaft seals (**8**) are generally to be replaced after 20,000 kg, but at least once a year. For the exchange of all seals on the pump head, we offer seal sets in different materials: Art. 307070 (food grade), Art. 307060 (chemical-resistant).



**Der Pumpenkopf darf niemals trocken, d. h. ohne Produkt, betrieben werden. Ohne den Schmiereffekt des Produkts würden die Kunststoff-Zahnräder aneinanderreiben und könnten dadurch beschädigt oder zerstört werden. Bei allen anderen Teilen der Abfüllanlage hingegen ist eine Schmierung nicht notwendig.**

## 2 Changing shaft seals



**Be careful when changing the shaft seals, not to damage any part of the pump head.**

**When assembling the shaft seals and the pump head, please pay attention to the order and installation direction according to *Fig. 3*.**



*Fig. 4: Gear pump head S, disassembled*

Disassemble the gear pump head as described in chapter **Putting into operation: Pump head** (see *Fig. 4*).



*Fig. 5: Press out the driving shaft*

Press the square-shaped driving shaft (including ball bearing) out of the housing by light pressure with the finger (see *Fig. 5*).



*Fig. 6: Remove the driving shaft*



*Fig. 7: Remove the shaft seals*

Remove the two seal shafts one after the other out of the housing with a suitable tool (see *Fig. 7*).

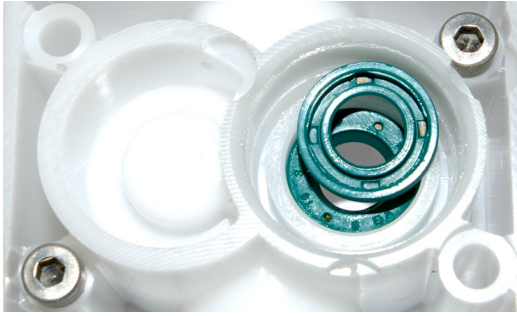


*Fig. 8: Insert the shaft seals*



*Fig. 9: Press in the driving shaft*

Lubricate the new shaft seals with food grade grease (e.g. vaseline) and insert them into the housing (see **Fig. 8**):

The first shaft seal with the groove downwards, the second one with the groove upwards. The two flat sides of the shaft seals have to face each other.

Press the two shaft seals carefully, straight and completely into the provided drilling hole.

Grease the driving shaft, insert it into the housing from behind, so that it is flush with the housing (see **Fig. 9**). Be careful not to damage the shaft seals.

Insert the pair of gears, put the cover gasket into the specific groove, place the cover and tighten (hand-tight) all the screws.

