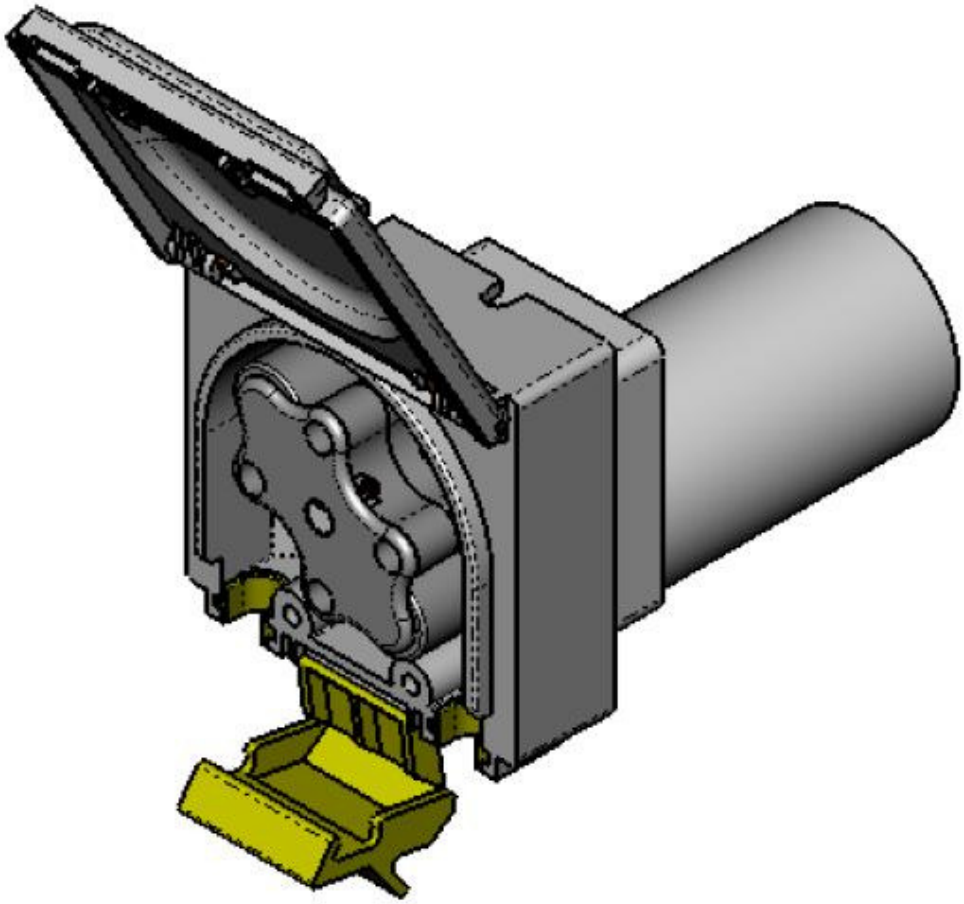
Operating Instructions

Peristaltic Pump TP 4000



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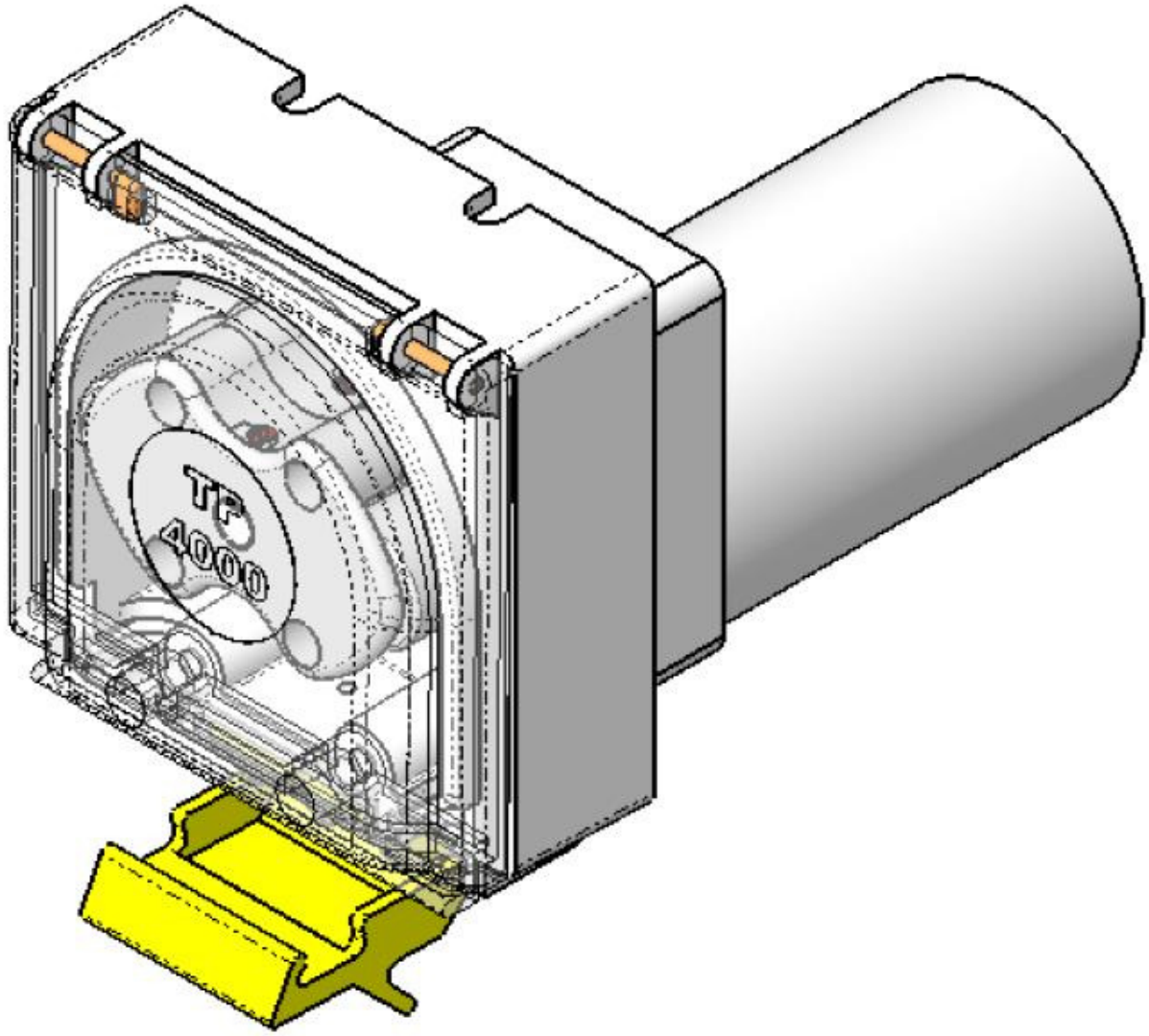


Figure 1: TP 4000 with high quality motor

Introduction

Dear customer,

We would like to congratulate you for the acquisition of this product and to thank you for the trust in our company.
The TP 4000 is a quality product on the state of the art.
The demand of Thölen Pumpen GmbH is highest quality at top price. It is our target to improve our products continually. If you have any ideas or requests for the improvement of one of our products, we are looking forward to your constructive suggestions.

Security advices & danger warnings

Please note:

In case of damage which will be caused by the nonobservance of the operating instructions the warranty voids! We assume no liability for consequential damage and for damage to person & property caused by inappropriate operation or nonobservance of the security devices!

- Because of security and approval reasons unapproved rebuilding or modifications of the unit are inadmissible.
- It is only allowed to use the unit in a dry environment.
- To avoid damages of the unit only tubes permitted by Thölen Pumpen GmbH are to be used.
- The installation of the unit is to be carried out only by authorized technical staff.
- Repairs are also to be carried out only by authorized technical staff.
- The operation in explosive environment is not allowed.
- The pump should never transport against a closed discharge line (danger of tube breakage).
- Because of security reasons the operation of the pump with open cover is forbidden.

Scope of delivery

The delivery contains the TP 4000, if necessary including a tube lubricant. A hold for the manually movement of the rotor is part of the pump; he is fixed on the top side of the pump head.

Control of transport damages

Please control the equipment regarding intactness before assembling the pump. In case of finding transport damage contrary to expectations, please contact us immediately.

Technical description

Warranty regulation

The TP 4000 has been manufactured according to high quality guidelines. Because of the warranty regulation of the Thölen Pumpen GmbH we give a warranty of 1 year for this unit. The condition therefore is the running of the equipment according to these operation instructions.

Wear parts (i.e. tube) are excluded from the warranty.

Technical data

Flow rate:	depending on tube from 10 ml/min up to 4 l/min
Dimensions without drive:	49 x 116 x 117,4 mm
Dimensions with motor:	196,7 x 116 x 130 mm (varied depending on drive)
Weight:	Standard Motor: 0,93 kg
	„High quality“ Motor: 1,8 kg
Motor protection class:	IP20
Nominal voltage:	24V DC
Current consumption maximum:	Standard Motor: 1,1 A
	„High quality“ Motor: 1,5 - 2,0 A
Current consumption nominal:	Standard Motor: 0,5 A
	„High quality“ Motor: 0,6 A

The cover of the TP 4000 is fixed with a simple closing device on the rear side. Thus it is possible to open the cover with a handhold, for example for change of tubing. Optionally there is the possibility to lock additionally the cover with two screws of the size M 5x16.

Installation

The pump will be delivered alternatively with a 24 V DC high quality motor or with a 24 V DC standard motor. Both versions are illustrated below.

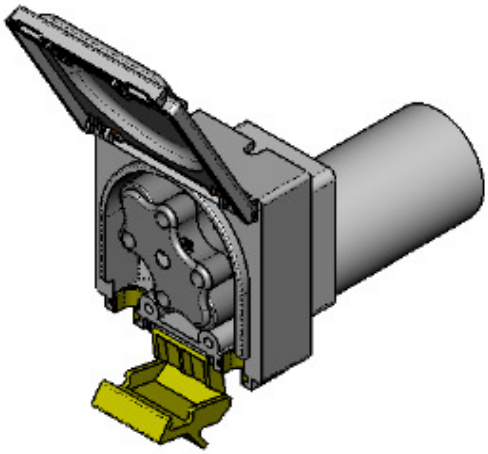


Figure 2: TP 4000 with high quality motor

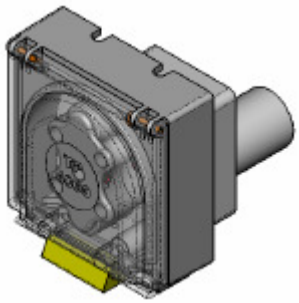


Figure 3: TP 4000 with 24V DC standard motor

The mounting is in general in two ways possible. On the one hand there is the possibility to fix the pump with self tapping screws of the size 5 to six different points on the back side of the housing. The position of the therefore designed mounting holes can be seen on the following figure 4.

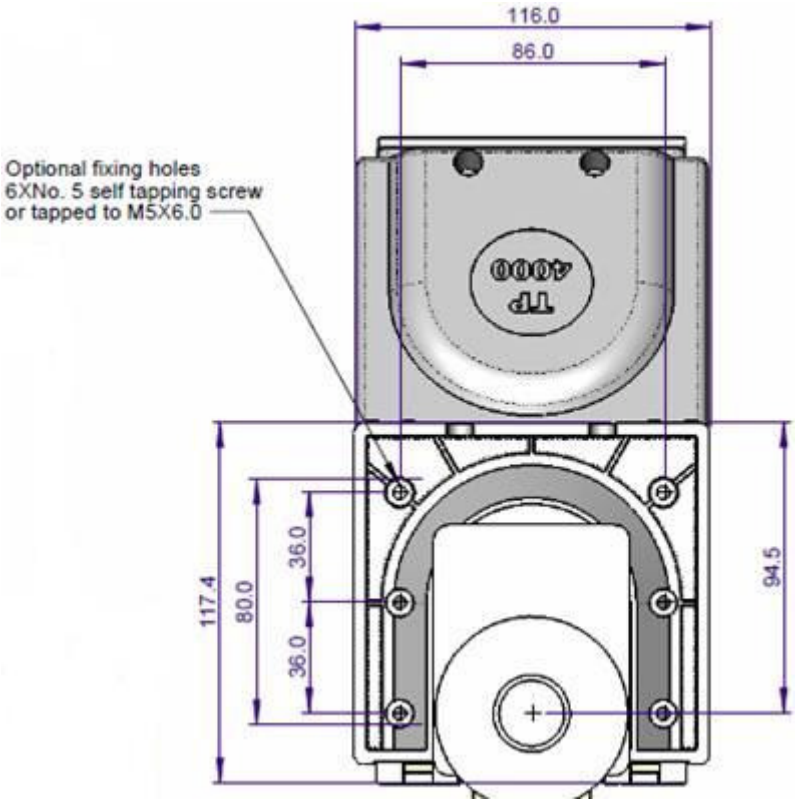


Figure 4: Position of the six mounting holes

The alternative is the mounting of the pump to a casing. Here the motor will be installed from inside and the pump head from outside onto the housing. But in this case the wall size of the housing should not exceed 1,5 mm because with the wall of the housing the relative strength between motor and pump will be modified which is of disadvantage for the running of the pump and could lead in extreme case to the breakdown of the pump.

Changing of tube

First of all switch off the mains supply to change the tube. Now remove the broken tube completely. Therefore you can use the included hold for the manually movement of the rotor. Simply insert it with the two pins into two faced screw holes. Now the rotor should be relatively easy turned by hand.
After removing the broken tube, clean the head carefully. If necessary, water can be used for cleaning. Do not use alcohol or similar substances for cleaning because residua of these substances can pollute the new tube.
After cleaning the pump head, the new tube can be inserted. Normally the tube has a length of 330 mm and should be - if possible – inserted with equal length of the tube ends on the suction side and on the discharge side (approx. 45 mm). It is important for the insertion of the tube to note that the tube will be inserted without breaks between head and roller on the entirety of the head, thus adjacent on the inner wall, and completely crushed by the tread of the roller. The tube should overlap neither forwards nor backwards the tread of the roller because leakage loss could occur and the danger of tube breakage during the operation is increased.

Note:
If it is important for you that the medium does not flow on the suction side or on the discharge side out of the feed pipe, please take i.e. a suitable non-return valve on the particular side into consideration. (The draining of the pipes causes normally no problems to the pump because peristaltic pumps are dry self priming pumps. Only problems on the suction side can occur when priming if the vertical height is too high between the pump and the tank.)

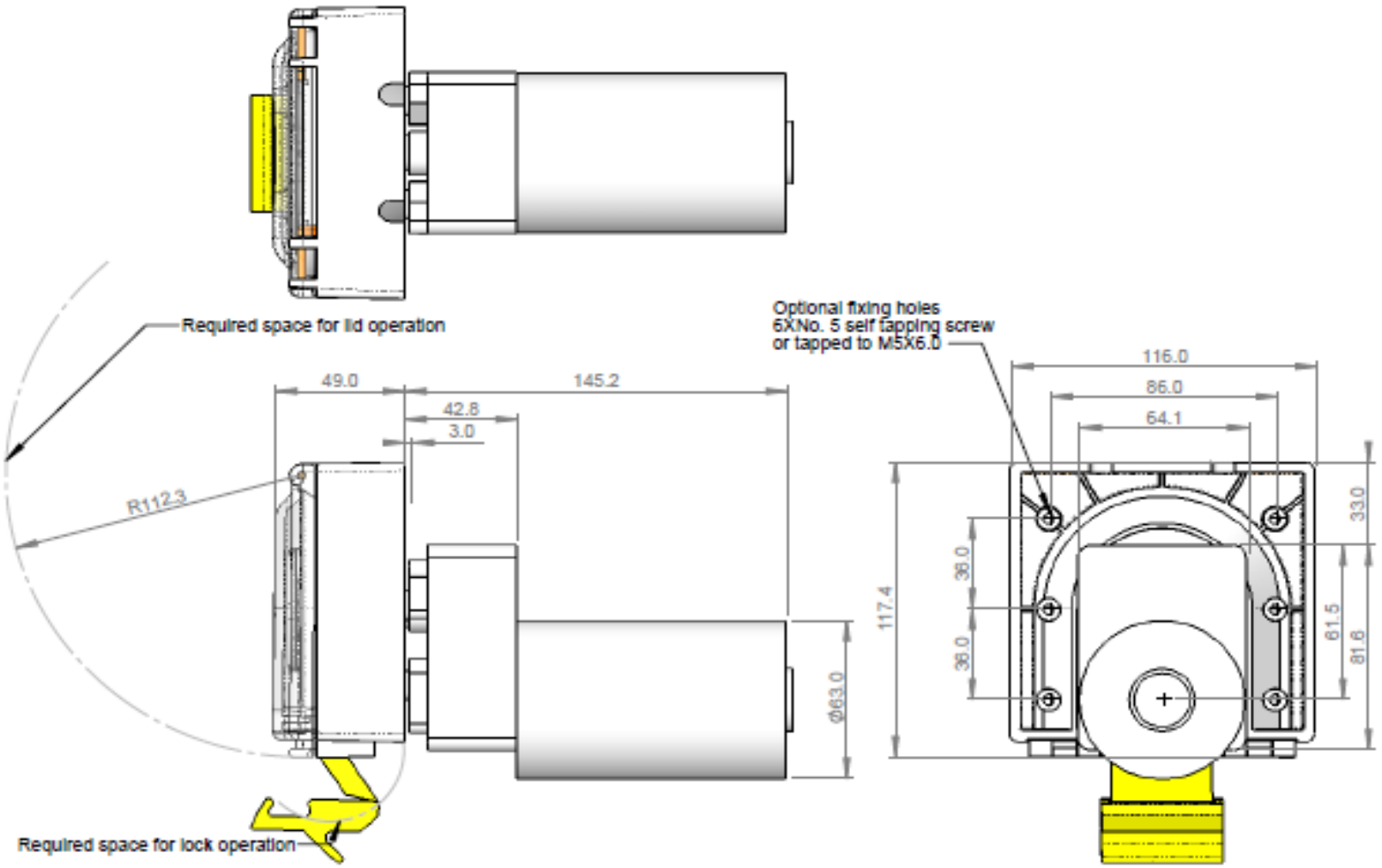
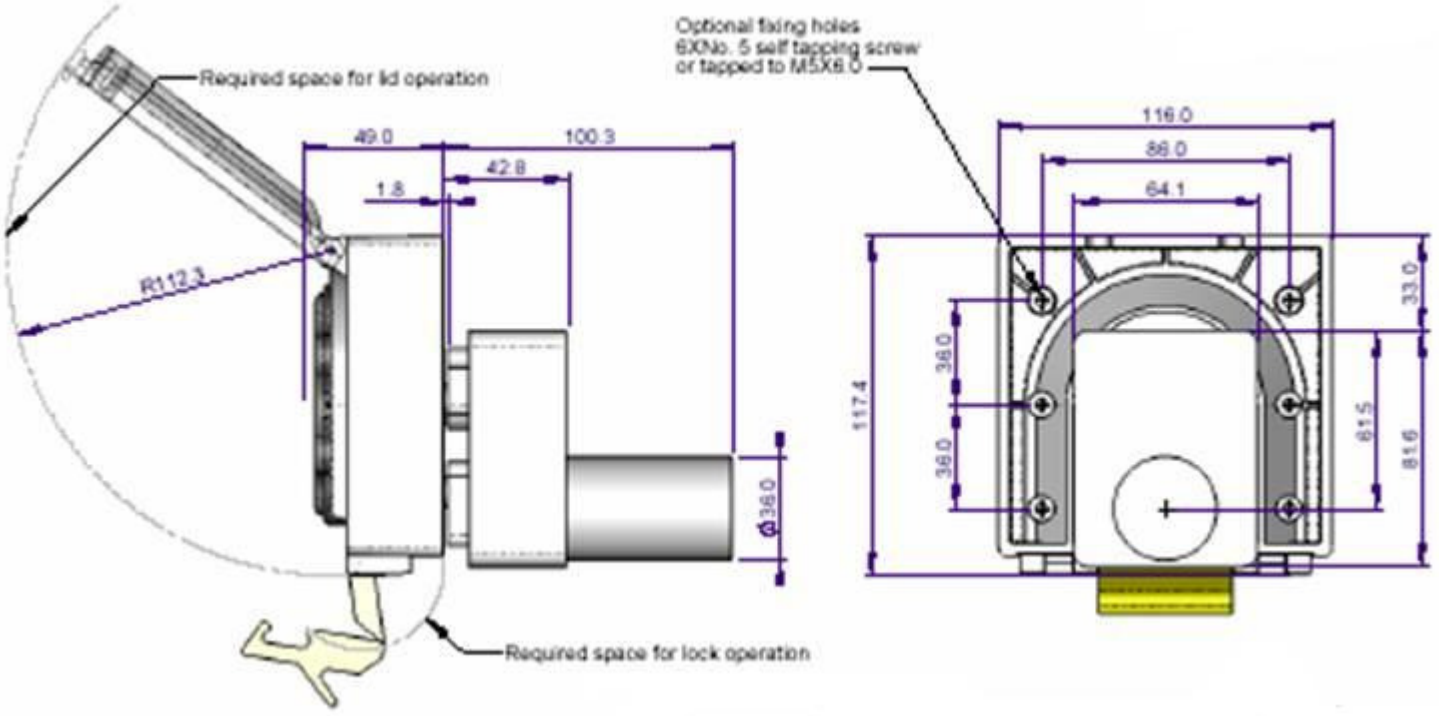


Figure 5: Dimensions of the TP 4000 with high quality motor


Optional fixing holes
6XNo. 5 self tapping screw
or tapped to M5X6.0
Required space for lid operation
49.0
100.3
42.8
1.8
R112.3
Ø36.0
Required space for lock operation
116.0
86.0
64.1
33.0
36.0
36.0
117.4
61.5
81.6

Address:

Thölen Pumpen GmbH

Singendonkskamp 1

47626 Kevelaer

Germany

Phone: +49 028 32 80 950

Fax: +49 028 32 899 625

Web: www.peristalticpumps.org

Email: info@thoelen-pumpen.de

Version: 15.08.2008