

Aug 04, 2025

PROJECT FOR THE PRODUCTION OF ELECTRICITY

DOI

<https://dx.doi.org/10.17504/protocols.io.kxygx4z64l8j/v1>

project_for_electricity .¹

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Protocol Citation: project_for_electricity . 2025. PROJECT FOR THE PRODUCTION OF ELECTRICITY. protocols.io
<https://dx.doi.org/10.17504/protocols.io.kxygx4z64l8j/v1>

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Protocol status: Working

We use this protocol and it's working

Created: August 04, 2025

Last Modified: August 04, 2025

Protocol Integer ID: 224008

Keywords: liquid pump, vacuum pump, electricity, electric power, project for the production, electricity the aim, low viscosity oil, crankshaft, piston, fluid, project

Abstract

The aim of this project is to generate electric power using a device (O.D.) made of a container, a crankshaft, a liquid pump, vacuum pump, and units which have a function similar to that of a piston, any fluid can be used which is most appropriate, maybe a low viscosity oil.

Image Attribution

Figures 8 and 9: Schematic diagrams and 3D renderings of piston movement and device details, including synchronous belt and support, created by the protocol author. Additional 3D renderings on this and following pages created by the protocol author. Details of motor B and its connection to the belt (figure on this page and following page) created by the protocol author. Gear which connects the motor to the belt (figure on this page) created by the protocol author.

Guidelines

When a piston is moving upwards the hollow space of the shaft is facing the compartment at the back of each unit and the liquid flows inside it and in the unit; and when the piston is moving downwards the hollow space of this shaft faces the compartment containing vacuum, in front of the unit.

To prevent the liquid to completely fill also the compartment containing the vacuum a pump moves the liquid from these compartments to those at the back of the units (in the example shown specifically from compartment 1 to compartment 2, 3 to 4, 5 to 6 and from 7 to 8).

A second pump is also used to form the vacuum inside the compartments.

Components of each unit:

- crankshaft
- hollow shaft
- connecting rod
- gear
- bearings
- external case (the space in which each piston moves is delimited by an external case which can be made of the container itself)

Position of the hollow space:

- When the liquid is moving inside it
- When the piston is moving the liquid to the compartment in front.

The following images show the movement of each piston.

Piston is moving upwards, and the fluid is passing through the shaft inside the unit.

Piston is moving downwards, and the fluid is passing through the shaft into the compartment with vacuum.

The following images show details of the device and the position of the shaft at the base of each unit during the transfer of the liquid.

Support used for the belt and synchronous belt are shown in the detailed device images.

Rotation of the shaft at the base of the units when the fluid is passing through the shaft into the unit.

Rotation of the shaft when the fluid is passing through the shaft into the compartment with vacuum.

Details of motor B and its connection to the belt are shown in the following images.

Gear which connects the motor to the belt is shown in the following images.



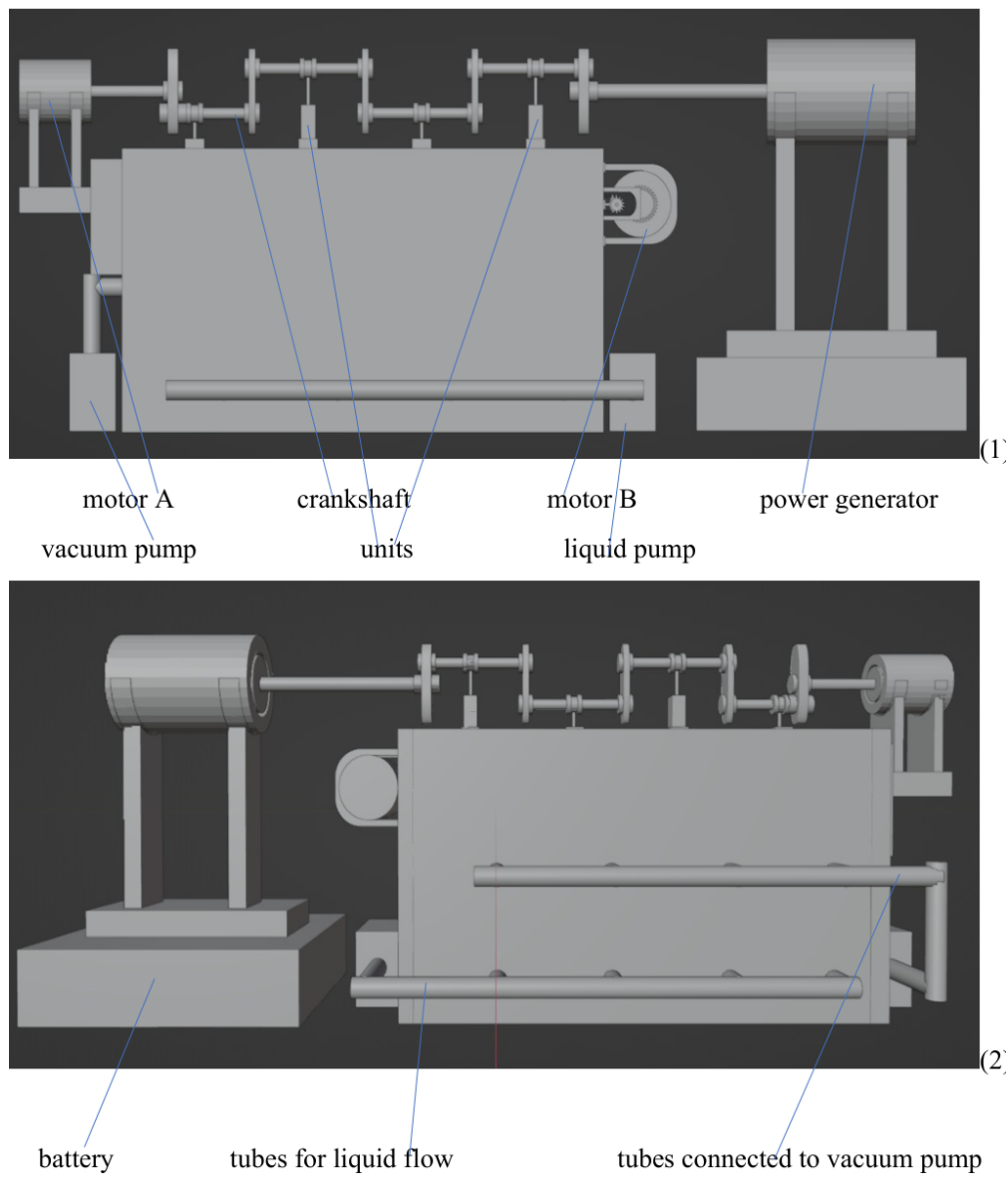
Materials

Container (with compartments), crankshaft, liquid pump, vacuum pump, units with piston-like function, connecting rods, power generator, battery, motor A, motor B, synchronous belt, gears, tubes for liquid flow, tubes connected to vacuum pump, low viscosity oil or other suitable fluid, tubes used to make vacuum inside compartments 1, 3, 5, and 7, hollow shaft, bearings, external case.

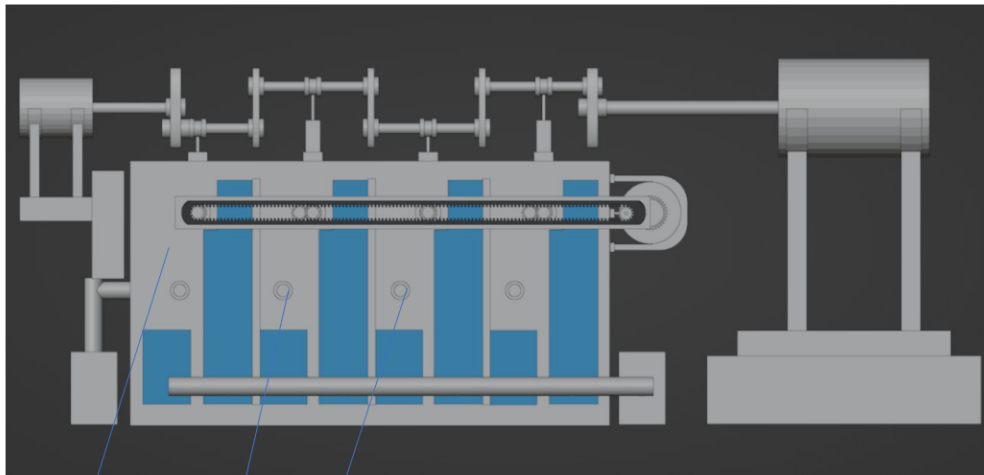
DESCRIPTION

- 1 Divide the container into compartments. In this example, use 8 compartments, but more can be used if desired. Fill one set of compartments with liquid, and partially fill the others with liquid so that they also contain vacuum in the upper part.
- 2 Position the desired number of units (e.g., 4) on top of the container. Each unit should have a piston linked to a crankshaft via a connecting rod. The pistons' function is to move the crankshaft, which in turn rotates a rod linked to a power generator that produces electricity transferred to a battery.
- 3 When a piston moves upwards, it causes the liquid to pass inside the unit from the compartment at the back.
- 4 The downward movement of each piston is caused by the vacuum in the compartment in front of the unit. The pressure from the air outside the container moves the liquid inside the unit into the compartment containing the vacuum, which also causes the upward movement of the other pistons.
- 5 Optionally, assist the movement of the crankshaft with a motor (motor A) to maintain a constant speed.
- 6 Allow the passage of liquid in and out of each unit using a shaft with a hollow space at the base of each unit. Connect this shaft to a gear, which is in turn connected to a synchronous belt moved by a motor (motor B). The belt rotates in alternating sequence in opposite directions, causing the shafts to rotate 90 degrees first in one direction, then in the opposite. The time between rotations matches the time for a piston to complete one upward or downward movement. When half of the pistons move upwards, the other half move downwards.
- 7 When a piston is moving upwards, the hollow space of the shaft faces the compartment at the back of each unit, allowing liquid to flow inside it and into the unit. When the piston is moving downwards, the hollow space of the shaft faces the compartment containing vacuum, in front of the unit.
- 8 To prevent the liquid from completely filling the compartment containing the vacuum, use a pump to move the liquid from these compartments to those at the back of the units (e.g., from compartment 1 to 2, 3 to 4, 5 to 6, and 7 to 8).
- 9 Use a second pump to form the vacuum inside the compartments.

10



11 Inside of the device

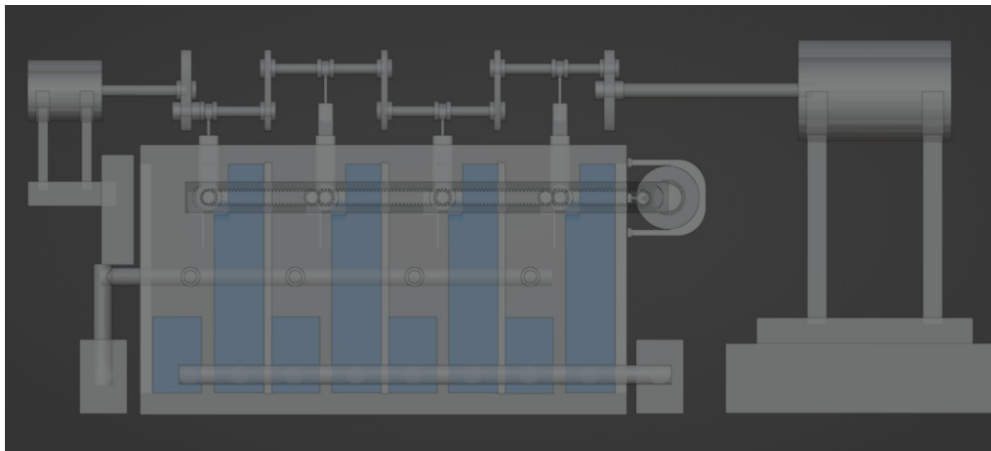


3)

Compartments from 1 to 8

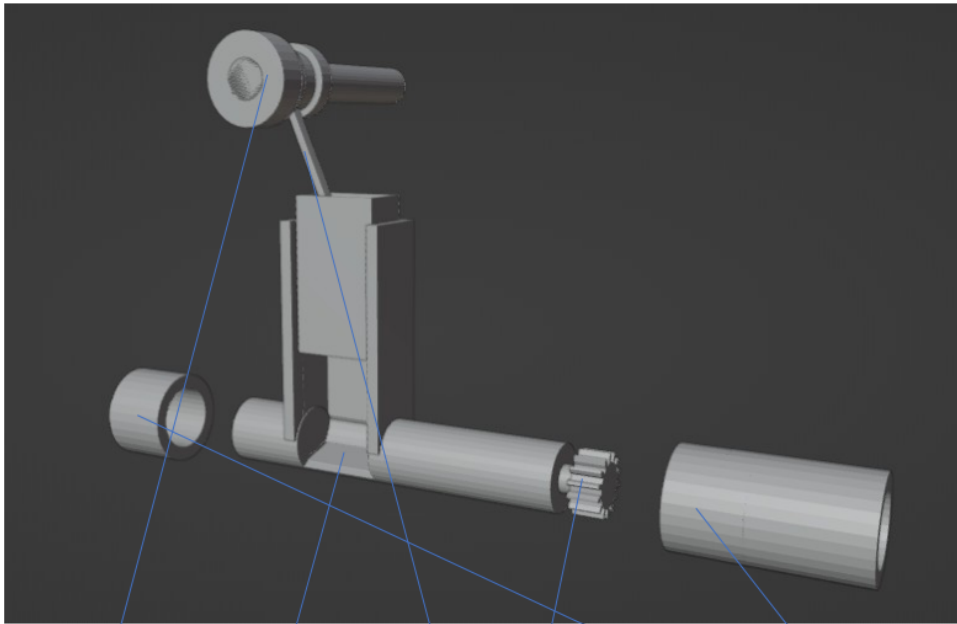
Tubes used to make vacuum inside compartments 1, 3, 5, and 7. Vacuum.

12



4)

13 its of each unit.



(5)

crankshaft

hollow shaft

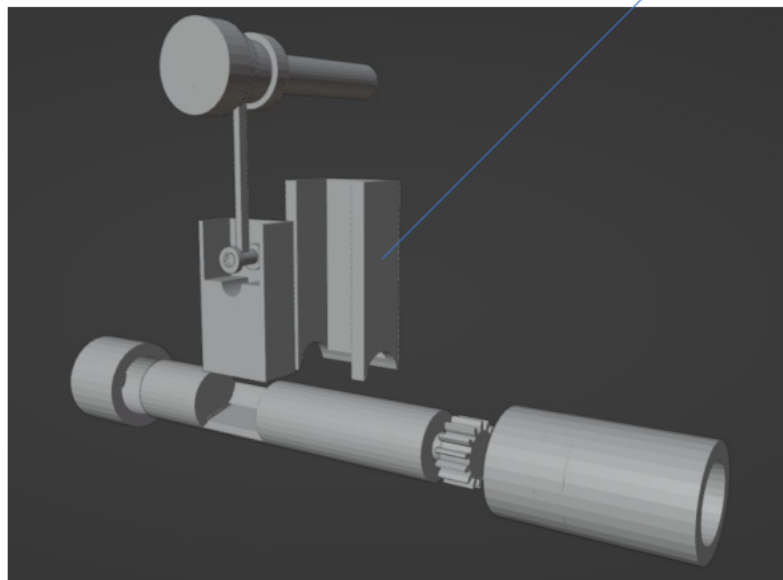
gear

Bearings

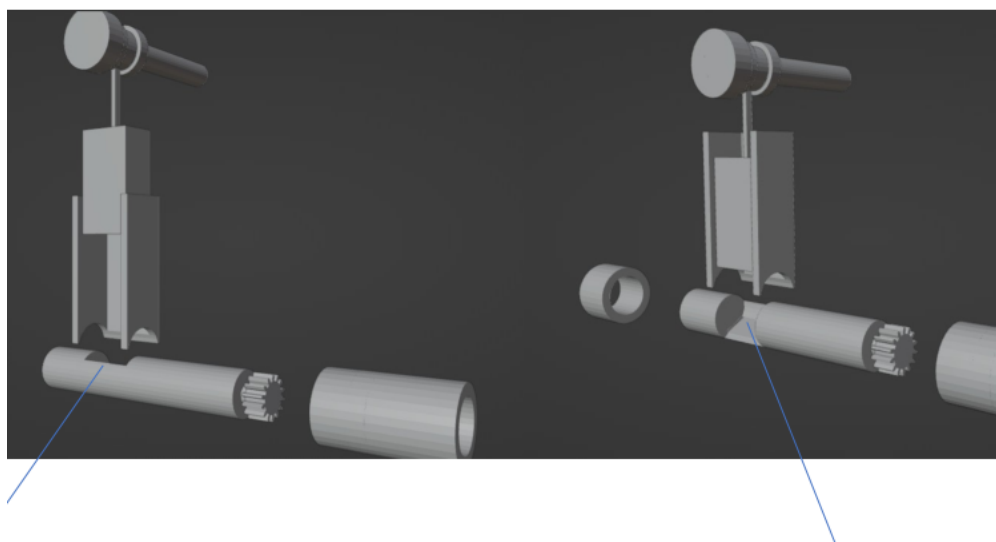
connecting rod

14 The space in which each piston moves is delimited by an *external case* which can be made of the container itself.

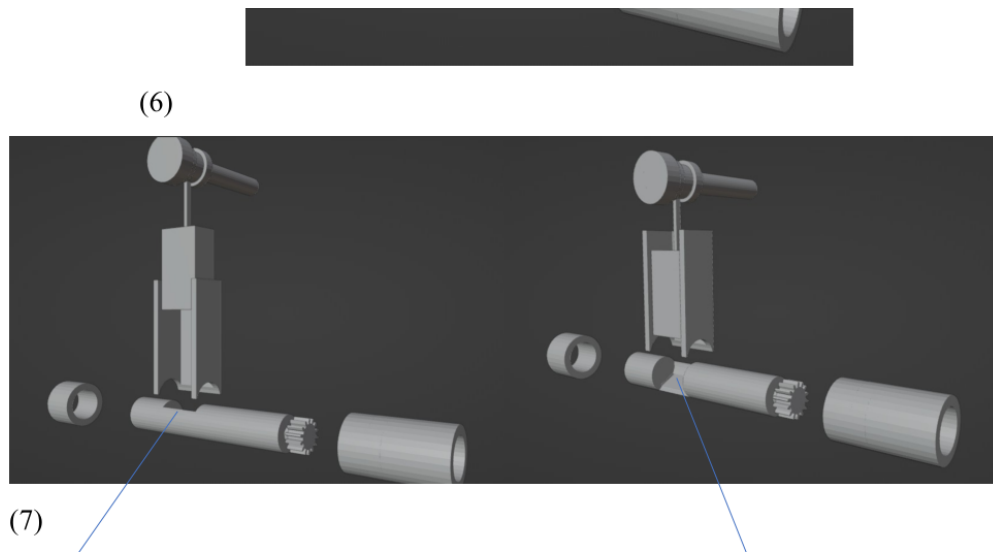
ainer itself.



(6)



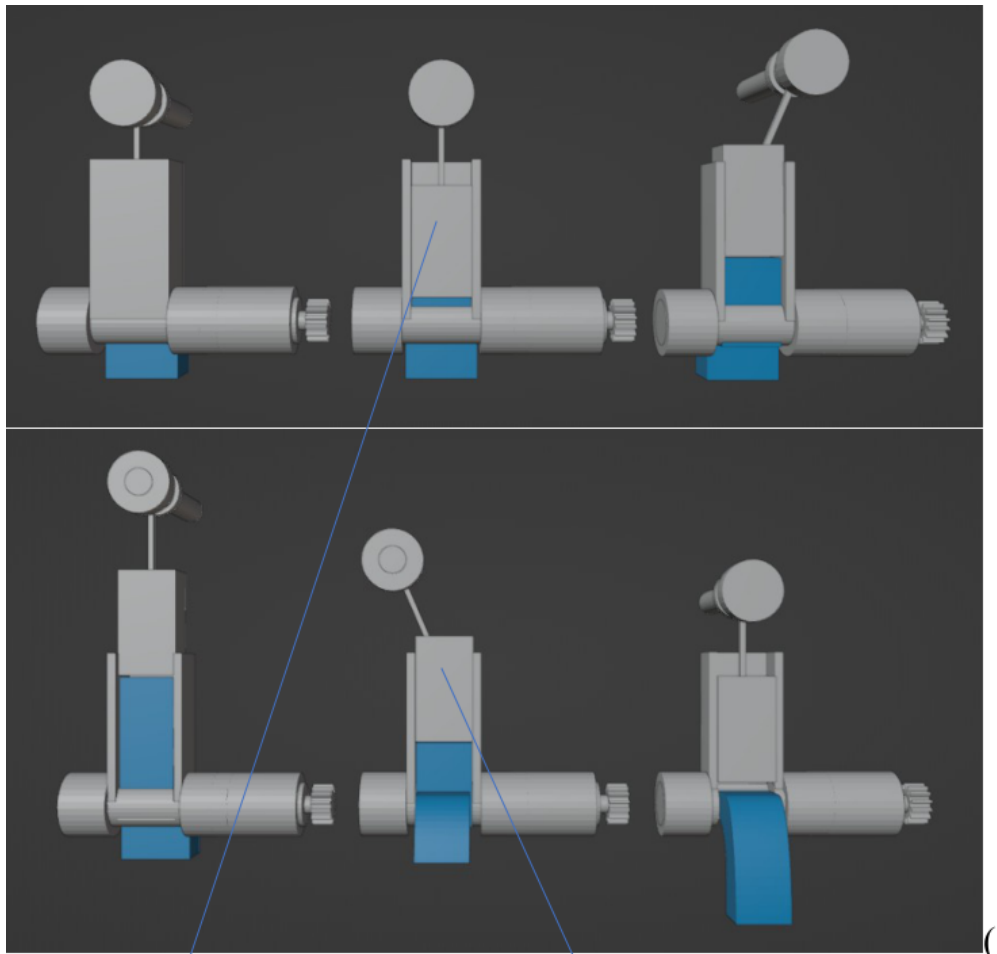
15



Position of the hollow space when the liquid is moving inside it; and when the piston is moving the liquid to the compartment in front.

16

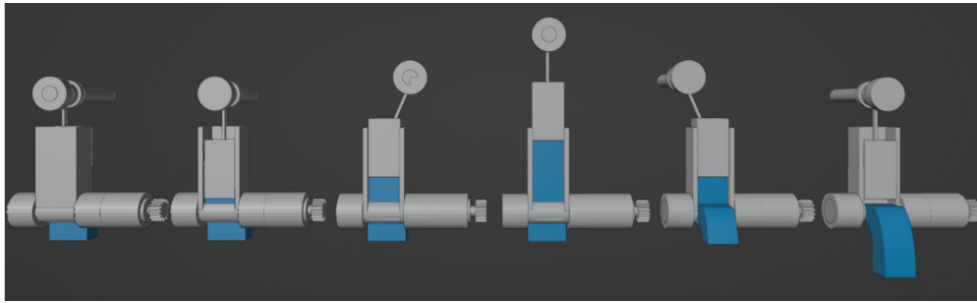
The following images show the movement of each piston.



Piston is moving upwards, and the fluid is passing through the shaft inside the unit.

Piston is moving downwards, and the fluid is passing through the shaft into the compartment with vacuum.

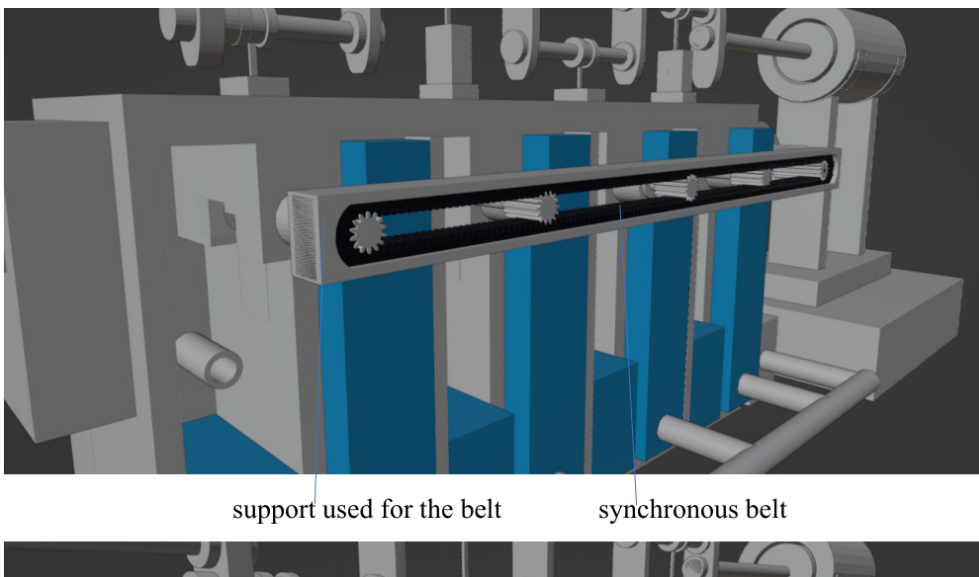
17



(9)

The following images show details of the device and the position of the shaft at the base of each unit during the transfer of the liquid.

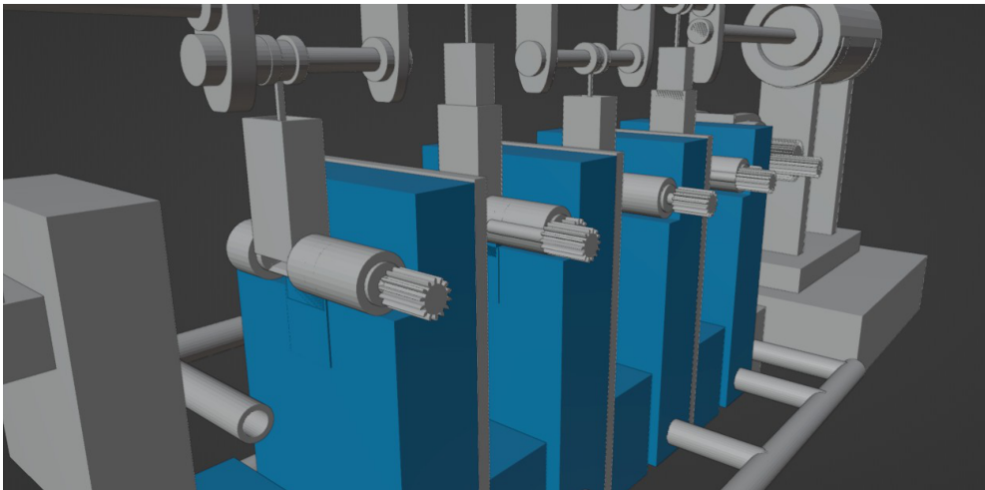
18



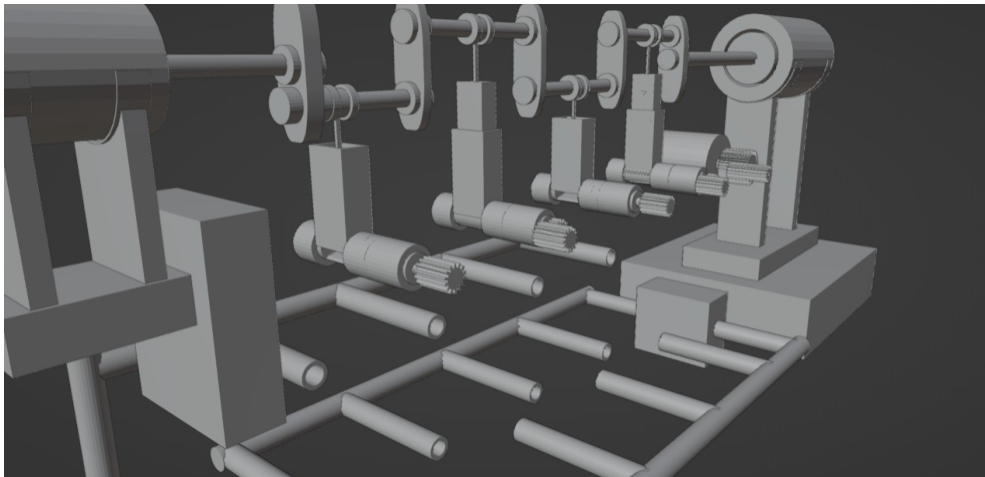
19

support used for the belt

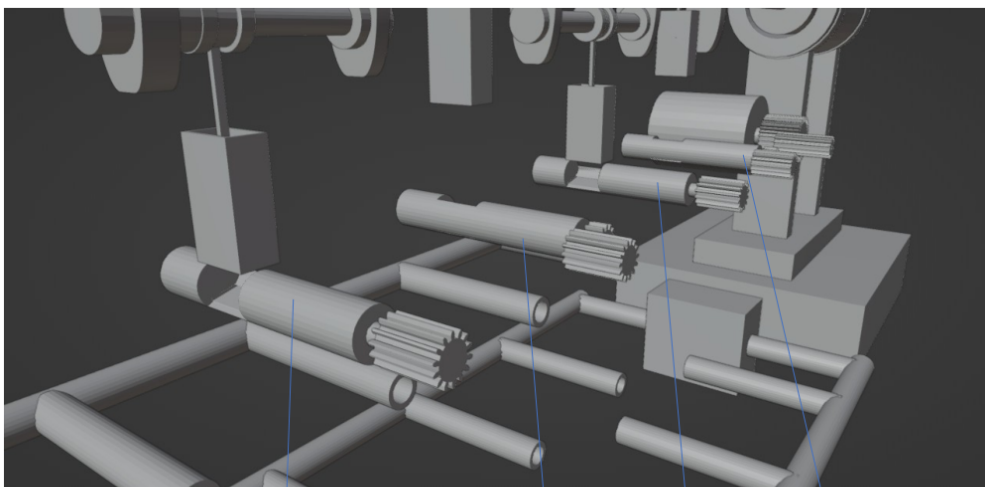
synchronous belt



20



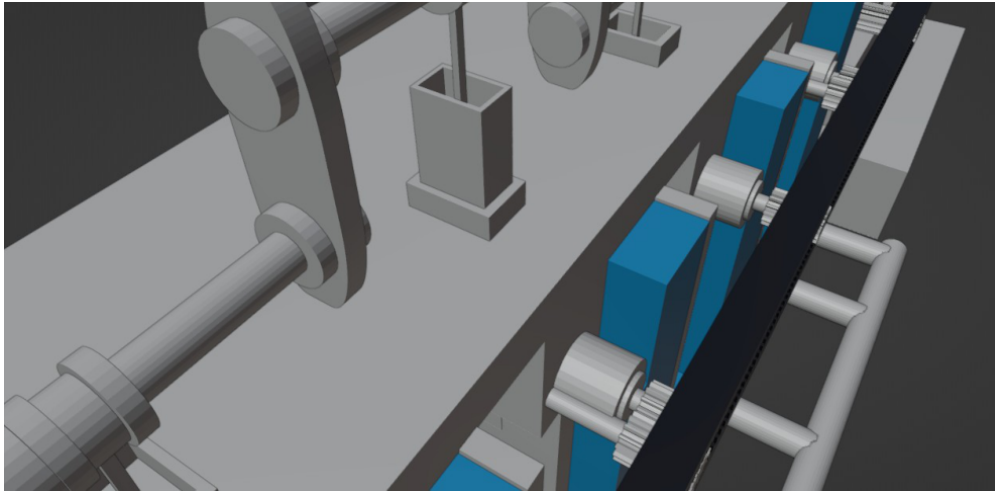
21



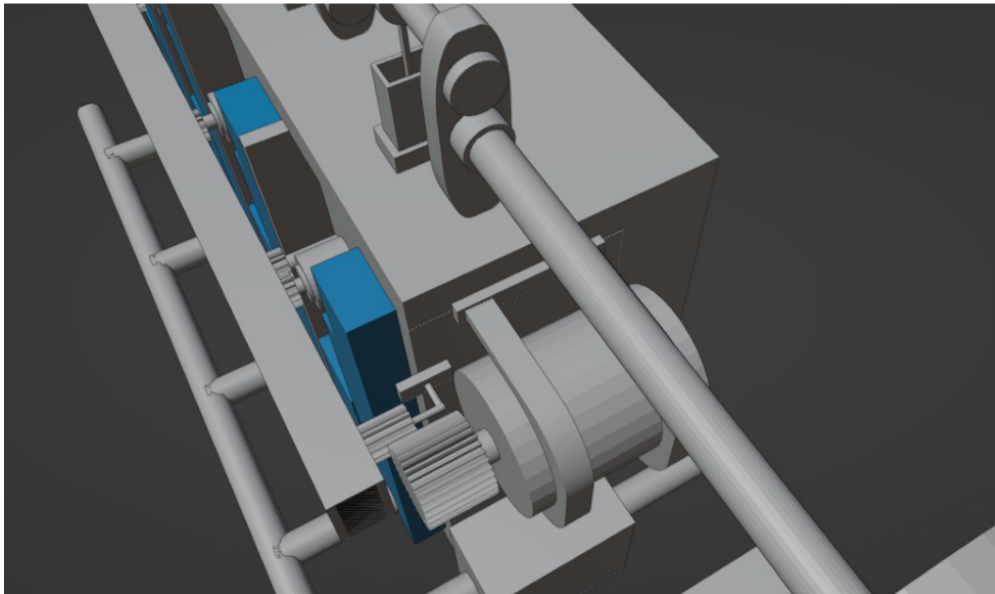
Rotation of the shaft at the base of the units when the fluid is passing through the shaft in the unit

Rotation of the shaft when the fluid is passing through the shaft into the compartment with vacuum.

22

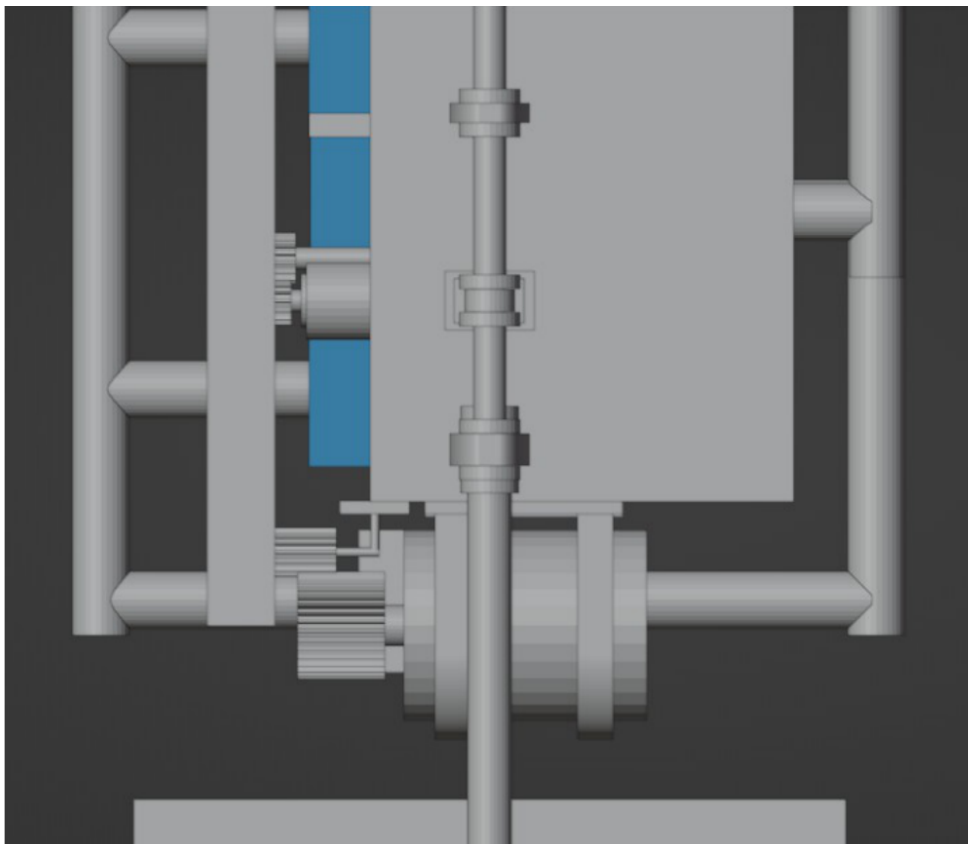


23

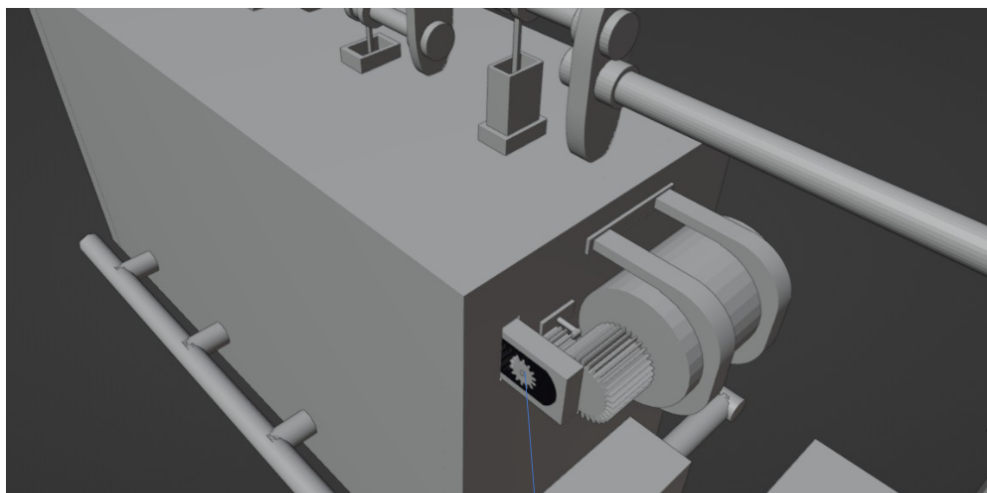


Details of motor B and its connection to the belt

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25



Gear which connects the motor to the belt

