

Birzeit University
Mechanical & Mechatronics Engineering Department
Thermal fluid engineering ENMC4411

Homework 5
Chapter 5 Pumps-Fans -Compressors

Instructors: Dr. Afif Akel

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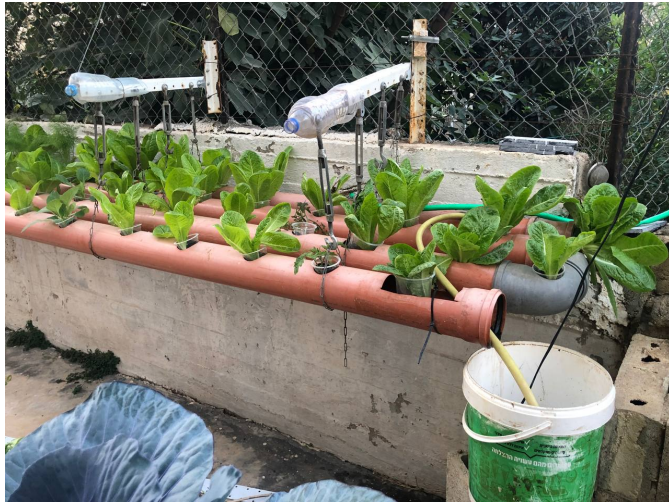
Assignment Name : pumps in hydroponics

Case study

My grandfather has a garden, and he uses hydroponics in his garden, and to flow the water in the pipes, he uses pumps.



The pipes are large and the water doesn't fit all of it. He puts the pipes in a certain degree horizontally so the water flows by gravity, and talking about pumps, he uses it in the exit of the pipe to take the water to the entrance.



This pump is a very small one, and I couldn't know anything about it because there are no words written on it.

There is another pump that grandfather use, it is a little bit bigger,



I will write the details about the second one

Technical information

Brand : Pentax

Type : CM50/00

Made in ITALY

Power : (0.5Hp) -- (0.37kw to 0.59kw)

Efficiency : 40% when $42\text{m}^2/h$

Flow rates : (20-90 L/min)

Price : 143 \$

Characteristics curves

