

We present the necessary data for the calculations:

Water consumption for irrigation:

The land of 8 farmers in the Solak community (1 hectare for each, 8 hectares in total), where autumn wheat is sown, should be irrigated through a pump that can pump water from the canal up to the height of 133 meters.

The centrifugal pump is of 60-198 marking, the power consumption is 55 kW/h, the water is taken by the pump with a pipe $d=100\text{mm}$ and driven by a pipe with a diameter $d=80\text{mm}$.

Irrigation water will be provided to the land with a 2 km long metal pipe ($d = 15.9\text{ cm}$).

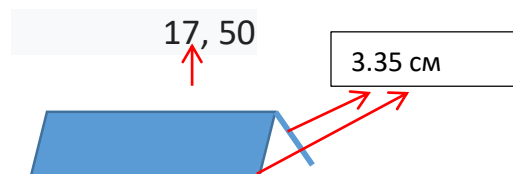
During the season, the norm of use of irrigation water for 1 hectare of wheat field is 3000 m^3

Wheat field should be watered 3 times during the season, depending on weather conditions, meaning that in order to irrigate 1 hectare of wheat 1000 m^3 of water is needed.

It is advisable to irrigate the land early in the morning or in the evening.

The duration of irrigation season is 120 days, the beginning of the irrigation season is May 15, the end is September 15.

The roof of the WUA is two-sided, the length is 17m 50cm, the width of each side is 3m 35cm, and the height of the roof is 1m.



The water intake capacity of the 60-198 centrifugal pump is $60\text{ m}^3/\text{h}$, the energy consumption is 55 kW/h, the diameter of the water intake pipe is 100mm, the diameter of the pump pipe is 80mm.

Attached you can find the technical description of the pump being used.