

dewatering
well drilling
enviro-engineering



Vacuum Deep Wells



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Vacuum deep wells are utilised for underground water drainage and site decontamination with low permeable grade soils and low lying aquifers.

Vacuum deep wells are effective for operations with soil permeability values [k] between 1×10^{-5} m/s and 1×10^{-7} m/s.

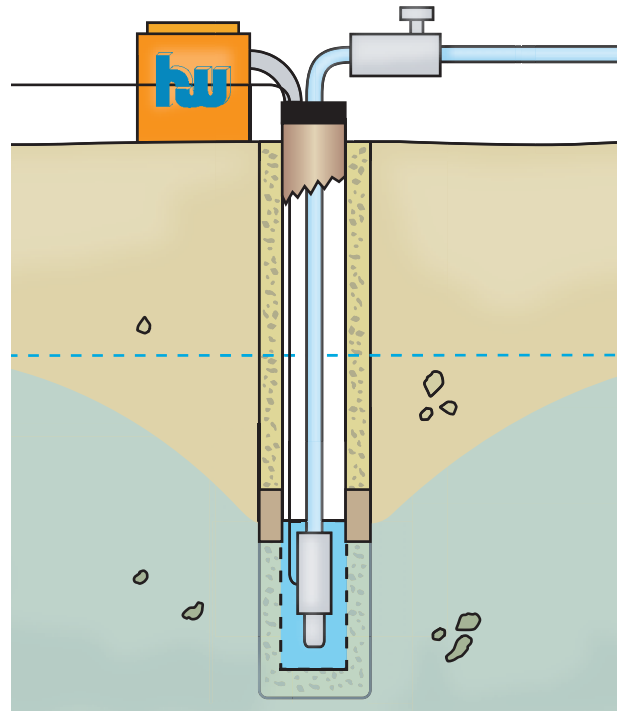
They are created by drilling a well with a diameter of 324 mm to 700 mm at a depth of up to 50 meters. The borehole is produced using the casing drilling method or the Rotary drilling method in accordance with the diameter, the geology and the depth.

After the borehole is drilled the well is equipped with a filter screen and the surrounding space is refilled with filter gravel. In addition, the surrounding space is sealed up to the top with clay blocker.

The completed well is equipped with a multistage underwater pump for pumping the underground water. The pump, pumps the water into a runoff ditch thereby lowering the underground water level to the required depth.

Vacuum deep wells are also placed under additional vacuum pressure from the top of the well. The vacuum is produced with a vacuum air aggregate. The vacuum that is created may be as high as 0.9 bar.

The vacuum provides quick and more extensive drainage for low permeable grade soils and also stabilizes the other surrounding layers of soil.



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