



ACR CHILLER RENT FISH FARMING PILOT PROJECT

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Quickly available rental cooling for an innovative pilot project

In the test phase of a fish farming pilot project, a rental cooling solution of acr chiller rent provided, during the summer months 2014 and 2015, a constant water temperature. The low electrical power needs and noise emissions of air cooled chillers ACR-M-255/P-type were decisive for acr in addition to the quick and competent consultation.

The industries in which a temporary additional capacity is essential, ranging from the chocolates manufacturer up to the high tech chip factory. The targeted and needs-based use of rental cooling now served over a wider range of application as a compelling solution: A pilot project realised with the help of acr chiller rent – technology showed the extensive possibilities of species appropriate

and sustainable Aquafarming and made it, above all clear, the critical role that a reliable supply of cooling takes.

The steadily increasing demand for fish by consumers can no longer be adequately satisfied with traditional methods, i.e. by catching wild fish. Fish farms although can cover the needs, but have intrinsic ecological problems.

Aquaculture, conceived as a sustainable, closed circulatory system is a contemporary answer to classic fish farming in the marine environment including their harmful effects on the environment. Also on land, temperature compensation must be secured as closely to the natural conditions of the open waters.

Each simulation of the natural living environment of fish is dependent on a precisely controlled and autonomous water temperature control that is available all year round, and is conducive to the sensitive fish. In winter, the on land hatchery is therefore heated by district heating. The cooling of the artificial habitat is also essential for successful fish farming in the on land hatchery during the rest of the year.

An increased need for cooling is not only due to seasonally higher ambient temperatures. The metabolic processes of fish – especially when stocking pools are full – generate additional heat energy.

Also, heat is emitted by the high-performance pumps used for the filter processes and water transport. A steady and reliable supply of cooling, therefore, is a critical factor for the profitability of the operation.



During the test phase of such an innovative fish farming plant on land, a rental cooling solution of



the Munich-based acr chiller rent GmbH, during the exceptionally warm summer periods of the past two years provided a constant cooling of the water in the breeding pool of approx. 28 to 24° Celsius. The water exchange rate in the four 1,700 cubic meters basins has a minimal value of only one percent of the total volume. However, a constant water temperature must be guaranteed so as not to endanger the productivity of fish farming. A total 10,000 cubic meters of water are cooled via special heat exchangers at the

species-appropriate temperature level. Due to its low power consumption of 85kW, a robust rental chiller with a cooling capacity of 250kW takes over this task. The ACR-M-255/P is an air-cooled chiller with integrated pump and a smooth running screw compressor. With this technology, the power regulation is step less. In this way the system can be precisely adjusted according to current demand. Particularly low sound pressure levels are achieved in the special rental version: At 5 meters, this value is 65 dB(A). Quiet in the vicinity of the pool is essential for productive fish farming.

The cooling unit designed for rental use has a reinforced structure and is made of corrosion-resistant, galvanized steel sheet. A Siemens MicroTech III controller takes over the control of the machine.



Why rent?

Machines and accessories can be hired immediately and at acr chiller rent from a period as short as only one week. Temporary demand peaks or the failure of on-site cold generation make

rental solutions cost-effective for various reasons: The production of a plant can be secured by rental cooling even under difficult conditions. At the same time, the financial flexibility and liquidity reserves will be protected. Also fixed

rental rates and predictable payment processes guarantee full planning security. And last but not least, a machine park modernized with rental equipment increases competitiveness and productivity.

About acr chiller rent

The acr chiller rent GmbH from Munich rents chillers and accessories throughout Germany as well as in Switzerland, Austria and Hungary. The leader in this market segment has leased machines up to 4.5 MW nominal cooling capacity and can provide the right solution for every specific requirement of the industry. In the modern range of machines from acr

chiller rent there is air/ water cooled water chillers, heat pumps, coolers, recirculation coolers, cooling towers, deep chilling units and installation accessories. In consulting, installation and commissioning, the constantly trained acr team supports customers during the entire rental period without interruption.

For more information about acr chiller rent GmbH and the topic of rental cooling can be found on our Internet site at www.acr-rent.de