



AmerChill™

Performance enhancement
for Gas Turbines



BETTER AIR IS OUR BUSINESS®

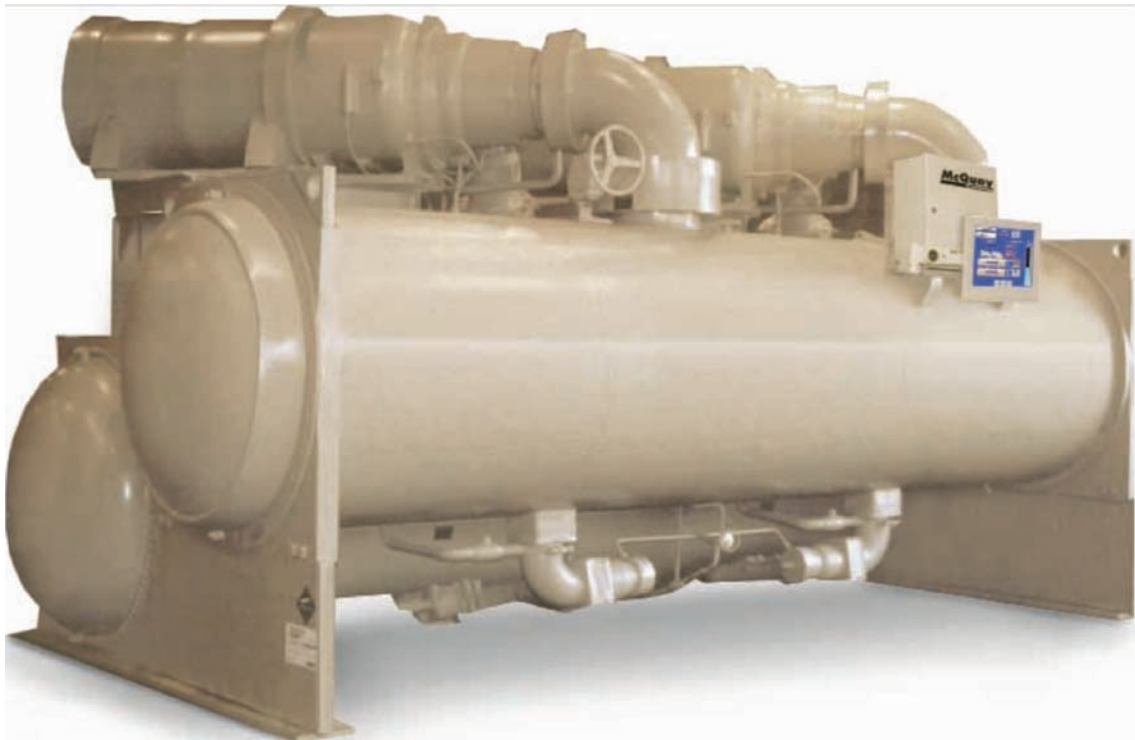


GAS TURBINE
SOLUTIONS

Best in class cooling solutions

AAF AmerChill systems help gas turbines realize greater power and lower heat rate during periods of high ambient temperature.

AAF has supplied mechanical chillers on over 75 gas turbines and chilling coil modules on over 120 gas turbines.



Economic benefits

Recover lost power

AmerChill systems consistently achieve low intake air temperatures which help recover power lost due to high ambient temperature.

Enhancing fuel efficiency

By cooling intake air, increase in heat rate is curtailed, leading to less fuel consumption.

Minimize site utility consumption

AAF design includes McQuay chillers which have excellent energy efficiency at full and partial load levels. The design can also include variable speed drives to optimize power consumption. For areas with restricted make-up water, air cooled chillers or hybrid evaporative cooling towers can be installed.



Air temperature leaving the coils can be dialed up to a pre-selected set-point.

On a hot day in Gulf Coast Countries, with ambient temperature at 49°C, and coil leaving set at 15°C, gas turbine output can be boosted by 24%.

On large gas turbines the power recovered may be as high as 60 MW.



Services

Combination with EPA

AAF is unique in providing EPACHill. Combining chilled water cooling with AAF high efficiency filters ensures that gains made by cooling are not offset by losses to fouling.

A study of a large gas turbine indicates that chilling to 15°C can achieve a net power gain of approximately 150,000 MWh per year. However, standard inlet filtration leads to annual losses to fouling of 75,000 MWh. Installation of AAF EPA filters at the same time as chilling will eliminate these losses. That is, as much as 50% of the power gained by chilling can be lost to fouling unless the filtration is upgraded.

Turnkey

AAF can provide experience Site Supervisors or a complete turnkey service, with ongoing technical support. This includes full technical representation in key market areas.

Energy Analysis

Contact AAF for a complete energy analysis

- Review climatic conditions and their effects on Gas Turbines
- Review existing filter efficiency
- Select and Optimise chilling solution
- Provide forecast of power gain, parasitic loads, prevention of fowling and minimise water consumption.

Integrated Supply

AAF is part of the Daikin Group. This makes AAF unique in the field of gas turbine intake technology by being able to combine the following in-house expertise:

- AAF engineering and fabrication expertise in GT filtration and intake ancillaries
- Daikin-McQuay R134a centrifugal, screw and scroll chillers, optimized for each application
- Daikin-McQuay coil manufacture
- J&E Hall compressors for when ammonia refrigerant is specified

Condition Monitoring

AAF's Active Filter Management reports back chiller system parameters to the AAF Data Centre, ensuring that the system is being monitored regularly.



Quality, expertise and innovation

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For further technical information and to assess your upgrade requirements & potential operational benefits please contact: AAF Evaporative Cooling Team email: GTInletCooling@aafgb.com



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AAF has a policy of continuous product research and improvement and reserves the right to change design and specifications without notice.