

ALLIED ENERGY SYSTEMS

The Total Concept Energy Conservation Company

Allied *Thermal~Flow* - Commercial Product Line

Allied's approach to energy conservation is to exploit the undisputed performance advantage of water-cooled air conditioning (evaporative based condensing). Allied has developed a line of Cooling Towers, Evaporative Condensers, Evaporative Fluid Coolers, Water-Cooled chillers, and the Thermal-Loop retrofit kits.

It is no accident that large commercial buildings use water-cooled air conditioning systems. Allied has taken this commercial concept and redesigned a product line for the Residential and Light Commercial applications. Water-cooled air conditioning systems enjoy a 40% to 60% efficiency advantage over conventional air-cooled systems. The most dramatic efficiency gains are in the dryer climates of the Western United States. Fortunately, the western states of California, Nevada, and Arizona have the greatest need, highest electric rates, best rebates, and the fastest growth rate in the nation. It is our plan to exploit this market on both the residential and commercial sectors.

Our commercial products include our *Thermal~Flow* fiberglass cooling towers, our new *Demand~Buster* closed-circuit cooling tower, our Commercial *Thermal~Loop* retrofit package. The complete equipment package is a perfect fit for the energy service contractors that are very active in the west. Historically, the energy service contractors have had no options with respect to the high energy cost of the air-cooled DX units in the extreme heat of the west. Now, for the first time we can offer a retrofit solution to the poor performing air-cooled DX systems in the extreme heat of the West.

Thermal~Flow Fiberglass Cooling Towers- 10 to 50 Tons

- Non- Corrosive
- Light Weight
- Modular Design
- Freeze Proof
- Light Block Air Intake
- Chemical Free Operation



The fiberglass cooling tower line can be offered in several configurations :

- Open cooling tower design for conventional applications
- Closed-Circuit design for remote condensing jobs and industrial process heat applications, geothermal heat pump loop augmentation etc.
- Evaporative Condenser designs with multiple circuits

With this product line we will list with a national manufactures representative.

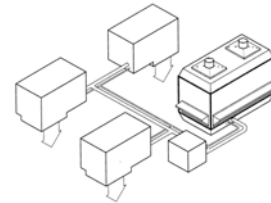
Allied Demand~Buster Line 25 to 40 Tons

- Closed Circuit Fluid Cooler
- Stainless Steel Heat Exchangers
- Patent Pending
- Chemical Free Tower
- Flex-I-Clean Design
- Drift Lock Design
- Lightweight



Durable stainless steel heat exchanger design provides for a hands off maintenance profile. Installations on any buildings do not require a maintenance staff for support. The ***Demand Buster*** is a closed circuit cooling tower designed to be used with our Thermal-Loop applications. The lightweight tower can be installed on any roof with out structural upgrades. Can be acid cleaned with out damage.

The ***Thermal-Loop*** is a retrofit concept to convert inefficient roof top units from air-cooled to water-cooled to enhance energy efficiency. Peak energy savings of 40% to 60% are possible with this very cost effective retrofit package. Allied will provide the installing contractor, a complete pre-designed package, the modular cooling tower, compressor modules, pump module, and control package. Rebates form \$350 to \$750 per peak kilowatt saved with this retrofit package. Other applications utilizing the closed circuit tower (using the condensing loop with a heat exchanger) to sub-cool the liquid refrigerant circuit on large air-cooled condensers and chillers. We also build this unit as a multi-circuit evaporative condenser.



Allied *Thermal~Flow* Packaged Water-Cooled Chiller Package

A new product for Allied is a modular packaged chiller system. The unit will utilize the Demand~Buster tower as a two circuit evaporative condenser mated with two 12.5 Scroll compressors, evaporators, pumps, and all controls in one skid mounted module. The plug and play chiller can be installed in parallel with additional units for the desired capacity. With EER's greater than 14 the system will easily outperform typical 9 EER air cooled chillers. The modular design provides unparalleled part load performance and system redundancy. The plug and play design provides for a very cost effective installation, competitive with air-cooled systems. Future variations of this design will offer a Duel-Fuel option with a natural gas fired engine driven chiller add on package that will utilize the same evaporators, and cooling tower package. The system can be timed to off set electrical load during high peak power rates with time of day metering. Significant utility rebates will drive the market for this option. This system will be ready for market in 2003.