

TurboChyll HyperChyll

Compound Capacity Control

Refrigeration system capacities are rated in tonnage per hour at an established industry standard-ARI. This "rated capacity" is often referred to as the "full load" or "design load" and is reflective as a worst case scenario that might be presented as an overall obligation to the cooling demand of the facility or building. Although these premium demands are statistically infrequent, the requirement for the cooling capacity and the realization to afford the same must be encumbered at time of chiller selection. What is seldom recognized however is the ability for this same chiller **to offer more refrigeration tonnage or capacity** than the design rating when conditions are less than worst case-perhaps even 30-60% more? This means a 1200 ton rated chiller at design load may conveniently exhibit sustained capacities of 1500-1600 tons or more when less than design load's are presented.

While affording condenser head relief (reduced entering tower water) and de-rating the driver through the use of **Variable Speed Turbine and Optimized Compressor PreSwirl** devices are dramatically effective approaches to energy savings-such strategies limit the total available off design capacities. In the case of a multi-chiller installation, compounding the refrigeration effect of one chiller can actually help avoid putting a second chiller on line-while maintaining and solidifying the favorable optimization of compressor PreSwirl!

HyperChyll Compound Capacity Control logic affords just this. When off design head relief becomes available at anytime, or to any extent our proven **TurboChyll VST-OCP Logic** quickly and efficiently derates the turbine capacity introducing the highly efficient preswirl effect desired for energy savings. However should the building demand ever increase by more than a single Degree Fahrenheit (leaving fluid) -**HyperChyll Compound Capacity Control** will activate into the control system. **Essentially- an "incremental capacity rerating" of the turbine and compressor shall commence.** This logic will aggressively yet conservatively pursue the leaving fluid-while only introducing intently modest power increases of 5 or 10 RPMs to achieve desired targets without any compromise or hunt to optimized compressor preswirl features.

Once building demands are recognized within one half of one degree-derating to less than design tonnage seamlessly resumes! **HyperChyll, Compound Capacity Control and TurboChyll, Variable Speed Turbine and Optimized Compressor PreSwirl** are the learest choice for brilliantly simple OEM and Aftermarket Chiller controls.

