

ROUSTAN REFRIGERATION



TURBOCHILLER™

CONCLUSION OF ENGINEERING EVALUATION: KWH USAGE – LESS DEMAND CHARGES

Single Rink Complex Energy Analysis

PROJECTED KW CONSUMPTION PER YEAR BASED UPON A 37.5 TON ICE SHEET LOAD

		ESTIMATED YEARLY COST LESS DEMAND	
		Total Yearly KWH Use	.10
BASE SYSTEM			
Competitive 2-100 HP System	at 37.5 ton load	621,008	\$ 62,100.80
Evaporative Condenser	at 50 ton load	848,160	\$ 84,816.00
	at 60 ton load	1,017,792	\$ 101,779.20
ROUSTAN REFRIGERATION TURBOCHILLER 22-200			
Evaporative Condenser	at 37.5 ton load	312,940	\$ 31,294.00
Pumpstat Variable Flow	at 50 ton load	417,253	\$ 41,725.30
Variable Speed Condenser	at 60 ton load	500,704	\$ 50,070.40
Active Sub-Cooling Loops			
LPA Floating Head Pressure Design			
POTENTIAL YEARLY SAVINGS (highest to lowest) WITH TURBOCHILLER			
	at 37.5 tons average heat load		\$ 30,806.80
	at 50 tons average heat load		\$ 43,090.70
	at 60 tons average heat load		\$ 51,708.80
PROJECTED 10 YEAR SAVINGS WITH TURBOCHILLER			
	at 37.5 tons average heat load		\$ 308,068.00
	at 50 tons average heat load		\$ 430,907.00
	at 60 tons average heat load		\$ 517,088.00

These figures represent the consumption of the ice rink chiller system only, including all circulation pumps, fans and electrical devices required for the total refrigeration system for the assumed load used in this calculation. These calculations were based upon actual manufacturers published performance data for the equipment referenced. These figures DO NOT include dehumidification, lighting, or any assorted general building use which can easily represent half of a complexes total electric billing nor are any provisions made for electrical demand charges typically billed to a complex. This information is offered for the evaluation of the specific chiller performances based upon the assumed conditions noted.