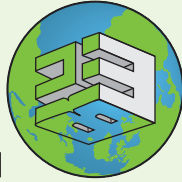


# Elenco Building Controls, Inc.



## ENERGY COST - COOLING

UNIT	ENERGY RATE	ENERGY COSTS	COST PER 1000 TON HOURS
CENTRIFUGAL	.56 KW/TON	\$ .11/KWH	\$ 61.05
ABSORPTION #2 OIL	191lbs. 5TM/TON HOUR	\$ 2.25/GAL	\$ 407.15
ABSORPTION NATURAL GAS	191lbs. 5TM/TON HOUR	\$ 1.50/THERM	\$ 359.34
25TG. ABS #2 OIL	11.5lbs. 5TM/TON HOUR	\$ 2.25/GAL	\$ 246.53
25TG. ABS NATURAL GAS	11.5lbs. 5TM/TON HOUR	\$ 1.50/THERM	\$ 217.50
CW + CHW PUMP + TOWER FAN	0.2 KW/TON	\$ .11/KWH	\$ 22.00
WATER COOLED RECIP.	0.9 KW/TON	\$ .11/KWH	\$ 99.00
AIR COOLED RECIP.	1.2 KW/TON	\$ .11/KWH	\$ 132.00
INCREMENTAL UNIT	1.3 KW/TON	\$ .11/KWH	\$ 143.00

## ENERGY COST - HEATING

ENERGY SOURCE	UNIT PRICE	HEATING VALUE	EFFICIENCY	HEAT COST per 100,000 BTU
ELECTRICITY	\$0.11/KWH	3,413 BTU/KWH	100%	\$3.21
HEAT PUMP	\$0.11/KWH	3,413 BTU/KWH	1.75 cop	\$1.84
#2 FUEL OIL	\$2.25/GAL	140,000 BTU/GAL	75%	\$2.14
NATURAL GAS	\$1.50/THERM	100,000 BTU/THERM	80%	\$1.88
PROPANE	\$2.00/GAL	92,000 BTU/GAL	80%	\$2.22

## USEFUL ELECTRICAL FORMULAE

$$\begin{aligned}
 1 \text{ KW} &= 3413 \text{ BTUs} \\
 1 \text{ KW} &= .746 \text{ KW} \\
 \text{Input of Motor in KW} &= \frac{\text{HP} \times .746}{\text{efficiency}} \\
 \text{KW} &= \text{KVA} \times \text{Power Factor} \\
 \text{Real Power of Single-Phase} &= \frac{\text{Volts} \times \text{Amps} \times \text{Power Factor}}{1000} \\
 \text{Circuit in KW} &= \frac{\text{Real Power of Three-Phase}}{1000} \\
 \text{Real Power of Three-Phase} &= \frac{\text{KVA} \times 1000}{1000} \\
 \text{Circuit in KW} &= \frac{\text{KVA} \times 1000}{1000} \\
 \text{Current Input of Single-Phase Motor} &= \frac{\text{Volts}}{\text{Efficiency} \times \text{Power Factor} \times \text{Volts}} \\
 \text{Current Input of Three-Phase Motor} &= \frac{\text{KVA} \times 1000}{\text{Efficiency} \times \text{Power Factor} \times 1.73 \times \text{Volts}} \\
 \text{Current Input of Three-Phase Motor} &= \frac{\text{KVA} \times 1000}{\text{Efficiency} \times \text{Power Factor} \times 1.73 \times \text{Volts}}
 \end{aligned}$$