



FUEL SAVINGS REPORT

for

MINNESOTA MACHINE SHOP

PROJECT HISTORY

A THERMO-CYCLER® Gas Fired Heating System consisting of one (1) Thermo-Cycler GTC-400 heating unit was chosen as the preferred heating system for the new machine shop facility. This facility also utilizes recirculating air cleaning equipment to control welding smoke. In addition to greatly improved employee comfort, the new facility has over double the area, triple the volume, but cost approximately 25% less to heat than the old facility despite a gas price increase of 7.2%. Based on fuel cost adjusted square footage, the new pre-engineered building using a Thermo-Cycler was heated for approximately **1/3 the cost** of the old facility that was heated with ceiling mounted unit heaters.

BUILDING DATA

OLD FACILITY

HEATED WITH UNIT HEATERS

TOTAL AREA: **4,800 Sq. Ft.** (80' x 60')

AVERAGE HEIGHT: **14 FT.**

OVERHEAD DOORS: 2 Overhead Doors

WALL CONSTRUCTION: Wood w/1" Foam Board

ROOF CONSTRUCTION: Metal w/ 5/16" Reflective Foil
and 1" Foam Board

BUILDING USAGE: Machine Shop

25.1¢
per
sq. ft.

NEW FACILITY

HEATED BY THERMO-CYCLER

TOTAL AREA: **10,000 Sq. Ft.** (100' x 100')

AVERAGE HEIGHT: **20 FT.**

OVERHEAD DOORS: 4 Overhead Doors

WALL CONSTRUCTION: Metal w/R-19 Insulation

ROOF CONSTRUCTION: Metal w/R-25 Insulation

BUILDING USAGE: Machine Shop

8.5¢
per
sq. ft.

Seasonal Gas Usage & Cost		
Month	Mcf Used	Cost
November	17.6	\$112.29
December	35.9	\$229.04
January	45.9	\$292.84
February	35.6	\$227.13
March	36.6	\$233.51
April	17.1	\$109.10
Annual Total	188.7 Mcf	\$1,203.91 @ \$6.38 per Mcf

Seasonal Gas Usage & Cost		
Month	Mcf Used	Cost
November	7.4	\$48.87
December	7.8	\$52.55
January	60.3	\$381.92
February	28.8	\$184.2
March	22.4	\$144.59
April	6.5	\$39.87
Annual Total	133.2Mcf	\$849.52 @ \$6.38 per Mcf

BOTTOM LINE

Energy efficient recovery of all internal sources of heat gain by the THERMO-CYCLER System resulted in a seasonal heating cost of only (\$0.085) per square foot for this machine shop...



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