

# BRINE SOLUTION HEAT EXCHANGE ANALYSIS

**Project ID: BR:8275**

## REQUIREMENTS

Building Type: Apartment

Number of rooms: 3

Area: 500.0

Temperature: 25.0

Water Body: Lake

Distance To Waterbody: 1000.0

Water Body Temperature: 30.0

Building Material: Concrete

## PIPE TRANSFER ANALYZE

Material: copper

Diameter (mm): 250.0

Length (m): 5000.0

Insulation Thickness (mm): 20.0

Pressure (Pa): 1200.0

Heat Transfer Coefficient ( $W/m^2K$ ): 220.0

## HEAT EXCHANGE ANALYZE

Q Primary: 715680.0

Q Secondary: 477120.0

## BRINE INTAKE ANALYZE

Brine Solution: Magnesium Chloride

Thermal Conductivity ( $W/(m \cdot K)$ ): 0.9

Density ( $kg/m^3$ ): 1050.0

## HEAT TESTING ANALYZE

Final Temperature: 350.0