

## Reference Data

### Wattage Requirements

#### Kilowatt-Hours to Superheat Steam

1. Plot points on lines **P**, **Q** and **S**. **P** represents the inlet temperature (and saturation pressure) of the system.  
**Q** represents the liquid content of the water vapor.  
**S** indicates the outlet temperature minus the saturated temperature.  
**W** indicates the heat content of the water vapor.
  2. Draw a straight line from **P** through **Q** to **W**. Read **W<sub>1</sub>**.
  3. Draw a straight line from **P** through **S** to **W**. Read **W<sub>2</sub>**.
  4. Required watts = Weight (lbs) of steam/hour x (W<sub>2</sub>-W<sub>1</sub>)
- Watt density is critical. Review temperature and velocity prior to heater selection.

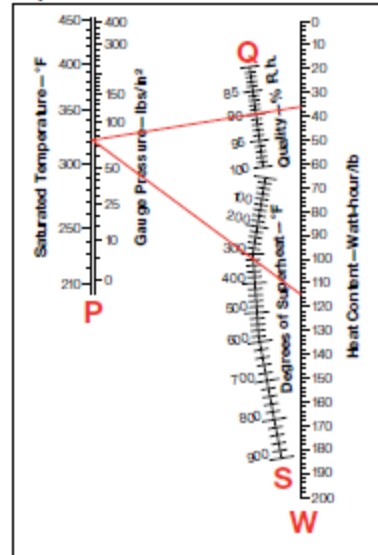
#### Example Shown:

Q = 90% quality (% R.H.)

P = 75 psig

S = 320°F

#### Superheat Steam



**Note:** Reference is based on >80% steam quality at >20 psig.