Evolution of Water Heating in Restaurants

Casey Hollabaugh – Vice President of Hollabaugh Bros. and Associates

Jeff Woodard – Vice President of Hollabaugh Bros. and Associates

Representing A.O. Smith family of products for over 20 years in the Pacific Northwest
Introduction

- Hot water is the backbone of all restaurants.
- It is used for sanitation, cleaning, and cooking.
- Adequate hot water has to be present at all times for allowable operation.
- Energy costs are rising at double the rate of inflation.
- Because of said costs, a multitude of strategies and improvements have altered the course of hot water in restaurants.
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According to an industry report by the EPA, 15% of the total gas consumed by commercial buildings in California is done so by commercial food service operators. Restaurants use approximately 52% of water in the kitchen and 31% of it domestically, such as in restrooms. A large amount of this can be linked back to restaurants' hot water usage, which makes up a significant portion of the facility's energy consumption.
## Evolution of Water Heating in Restaurants

### Table 1. Typical hot water system cost for restaurants.

<table>
<thead>
<tr>
<th></th>
<th>Water Use (gal/d)</th>
<th>Gas Use (therms/yr)</th>
<th>Water/Sewer Cost*</th>
<th>Gas Cost**</th>
<th>Electricity Cost***</th>
<th>Annual Utility Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quick Service</td>
<td>500</td>
<td>1400</td>
<td>$2,000</td>
<td>$1,500</td>
<td>-</td>
<td>$3,500</td>
</tr>
<tr>
<td>Full Service</td>
<td>2500</td>
<td>8800</td>
<td>$9,800</td>
<td>$9,700</td>
<td>$150</td>
<td>$19,650</td>
</tr>
</tbody>
</table>

California 2009 nominal utility rates:

* $8.00/unit for water and sewer

** $1.10/therm for natural gas

*** $0.15/kWh for electricity (recirculation pump)
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Expectations of water heating equipment for restaurant owners

- Unlimited access to hot water
- Quick delivery of hot water to all facets of building
- Minimal maintenance
- Energy Efficient Product that minimizes cost
- Conservation wherever possible
- Consistent upgrades in usable technology
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Understanding Restaurant Equipment

- Pre rinse Sprayers
  - 4.5 GPM - .64 Ultra Low Flow
- Commercial glasswashers
  - 2.5GPR - .70GPR High Efficient
- Commercial front load dishwashers
  - 10.4GPM – 5GPM
- Faucets
  - 2.2GPM - .375 Ultra Low Flow
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