

TYPES OF BOILERS - COMPARISON CHART

- Right or Perfect or Best Selection
- ◆ Good or Average Selection
- Poor or Avoid Selection

		Flexible Water-Tube	Firetube	Coil-Type	Electric (elements)	Electric (electrode)
Costs						
Initial Capital Costs		◆	●	◆	●	●
Installation Costs		◆	◆	●	●	●
Energy Costs	Burner technology, efficiency, number of gas pass, motor horsepower, energy input	●	◆	◆	◆	◆
Operator Cost	Regulations on stationary Engineers	●	◆	●	●	◆
Cycling Costs	Rapid steam capability, Thermal inertia, turndown	●	◆	●	●	●
Load Variation Costs	Pressure losses during peak demands	◆	●	■	●	●
Maintenance Costs	Easy to maintain, easy to repair, parts easy to source	●	●	◆	●	●
Total Costs of Ownership		●	◆	◆	●	●
Durability						
Thermal Shocks Sustainability	Flexible design, presence of refractory	●	■	●	●	●
Life Expectancy		◆	●	◆	●	●
Applications						
Cold Start-up		●	■	●	●	●
Response to Load Change		◆	●	◆	●	●
High Pressure Steam Capabilities	Higher than 250 psig of steam	●	■	●	◆	●
Thermal Oil Application	Flexible boiler add the capability of remixing the oil between passes	●	■	●	◆	■
Hot Water Application		●	◆	◆	●	■
Steam Reserve		◆	●	■	■	◆
Steam Quality		●	◆	◆	●	●
Maintenance						
Minimized Downtime	Easy tube replacement, easy to repair, standard parts	●	◆	◆	●	●
Water Treatment Requirements	Higher the heating surface area, the less prone to failure from poor treatment	●	●	◆	●	◆
Required Clearance		●	◆	◆	●	●
Standard Controls	No special controls are required	●	●	◆	●	◆
Combustion						
Burner Technology	Turndown, emissions, O2 trim	●	●	◆	N/A	N/A
Heavy Oil Firing Capability		■	●	■	N/A	N/A
Heat Release	Larger water cooled furnace reduces heat release	●	◆	■	N/A	N/A
Radiation Loss	Water cooled furnace and insulation design	●	●	◆	●	●
Installation						
Foot Print Required		◆	◆	●	●	●
Field Erected Capabilities		●	■	◆	N/A	N/A
Integrated Economizer		●	●	◆	N/A	N/A