## Coil Selection Table

<table>
<thead>
<tr>
<th>Coil Type</th>
<th>Application</th>
<th>Fin Type</th>
<th>Fin Material</th>
<th>Header</th>
<th>Connection Side</th>
<th>Standard Tubing</th>
<th>Tub OD</th>
<th>Max Temp</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>Fluid</td>
<td>Flat</td>
<td>Al, Cu, Stl, or Stn Stl</td>
<td>Carbon or Stn Stl</td>
<td>Same End</td>
<td>Copper</td>
<td>5/8&quot;</td>
<td>600°F</td>
</tr>
<tr>
<td>SPD</td>
<td>Fluid</td>
<td>Flat</td>
<td>Al, Cu, Stl, or Stn Stl</td>
<td>Carbon or Stn Stl</td>
<td>Same End</td>
<td>Copper</td>
<td>5/8&quot;</td>
<td>600°F</td>
</tr>
<tr>
<td>WP</td>
<td>Fluid</td>
<td>Wavy</td>
<td>Al or Cu</td>
<td>Carbon or Stn Stl</td>
<td>Same End</td>
<td>Copper</td>
<td>5/8&quot;</td>
<td>600°F</td>
</tr>
<tr>
<td>WPD</td>
<td>Fluid</td>
<td>Wavy</td>
<td>Al or Cu</td>
<td>Carbon or Stn Stl</td>
<td>Same End</td>
<td>Copper</td>
<td>5/8&quot;</td>
<td>600°F</td>
</tr>
<tr>
<td>K</td>
<td>Fluid</td>
<td>Wavy</td>
<td>Al or Cu</td>
<td>Cast Iron</td>
<td>Same End</td>
<td>90-10 CuNi</td>
<td>5/8&quot;</td>
<td>220°F</td>
</tr>
<tr>
<td>KWF</td>
<td>Fluid</td>
<td>Wavy</td>
<td>Al or Cu</td>
<td>Cast Iron</td>
<td>Same End</td>
<td>Red Brass</td>
<td>5/8&quot;</td>
<td>220°F</td>
</tr>
<tr>
<td>HHW</td>
<td>Fluid</td>
<td>Wavy</td>
<td>Al or Cu</td>
<td>Carbon or Stn Stl</td>
<td>Same End</td>
<td>Red Brass</td>
<td>5/8&quot;</td>
<td>400°F</td>
</tr>
<tr>
<td>W</td>
<td>Fluid</td>
<td>Wavy</td>
<td>Al or Cu</td>
<td>Cast Iron</td>
<td>Same End</td>
<td>90-10 CuNi</td>
<td>5/8&quot;</td>
<td>220°F</td>
</tr>
<tr>
<td>WTP</td>
<td>Fluid</td>
<td>Wavy</td>
<td>Al or Cu</td>
<td>Carbon or Stn Stl</td>
<td>Same End</td>
<td>Copper</td>
<td>5/8&quot;</td>
<td>220°F</td>
</tr>
<tr>
<td>WTS</td>
<td>Fluid</td>
<td>Wavy</td>
<td>Al or Cu</td>
<td>Carbon or Stn Stl</td>
<td>Same End</td>
<td>Copper</td>
<td>5/8&quot;</td>
<td>220°F</td>
</tr>
<tr>
<td>N</td>
<td>Steam</td>
<td>Wavy</td>
<td>Al or Cu</td>
<td>Cast Iron</td>
<td>Same End</td>
<td>90-10 CuNi</td>
<td>1&quot;</td>
<td>400°F</td>
</tr>
<tr>
<td>NS</td>
<td>Steam</td>
<td>Wavy</td>
<td>Al or Cu</td>
<td>Cast Iron</td>
<td>Same End</td>
<td>90-10 CuNi</td>
<td>1&quot;</td>
<td>400°F</td>
</tr>
<tr>
<td>HPSD-O</td>
<td>Steam</td>
<td>Wavy</td>
<td>Al or Cu</td>
<td>Carbon or Stn Stl</td>
<td>Opposite Ends</td>
<td>90-10 CuNi</td>
<td>1&quot;</td>
<td>600°F</td>
</tr>
<tr>
<td>E</td>
<td>Steam</td>
<td>Flat</td>
<td>Al, Cu, Stl, or Stn Stl</td>
<td>Cast Iron</td>
<td>Same or Opposite Ends</td>
<td>Red Brass</td>
<td>5/8&quot;</td>
<td>400°F</td>
</tr>
<tr>
<td>EB</td>
<td>Steam</td>
<td>Flat</td>
<td>Al, Cu, Stl, or Stn Stl</td>
<td>Fabricated Steel</td>
<td>Same or Opposite Ends</td>
<td>Red Brass</td>
<td>5/8&quot;</td>
<td>400°F</td>
</tr>
<tr>
<td>HPS</td>
<td>Steam</td>
<td>Wavy</td>
<td>Al or Cu</td>
<td>Carbon or Stn Stl</td>
<td>Same or Opposite Ends</td>
<td>90-10 CuNi</td>
<td>5/8&quot;</td>
<td>600°F</td>
</tr>
<tr>
<td>WH</td>
<td>Steam</td>
<td>Flat</td>
<td>Al, Cu, Stl, or Stn Stl</td>
<td>Carbon or Stn Stl</td>
<td>Same End</td>
<td>Red Brass</td>
<td>5/8&quot;</td>
<td>425°F</td>
</tr>
<tr>
<td>A</td>
<td>Steam</td>
<td>Wavy</td>
<td>Al or Cu</td>
<td>Cast Iron</td>
<td>Same End</td>
<td>Red Brass</td>
<td>5/8&quot;</td>
<td>400°F</td>
</tr>
<tr>
<td>AW</td>
<td>Steam</td>
<td>Wavy</td>
<td>Al or Cu</td>
<td>Cast Iron</td>
<td>Same End</td>
<td>Red Brass</td>
<td>5/8&quot;</td>
<td>400°F</td>
</tr>
</tbody>
</table>

Any coil design outside of these conditions can easily be done with one of IHT’s custom designed coils. Custom designs can be very high temperature and pressure, and almost any material and design.
For Demanding Industrial Environments
IHT’s heavy duty industrial cooling and heating coils offer the reliability, performance, durability, and quality construction necessary to meet demanding industrial environments. Properly specified IHT industrial coils provide many years of dependable operation at original performance levels.

State of the Art Design for Industrial Conditions
IHT’s selection, design, and manufacturing experience includes pioneering specifications for the toughest industrial conditions. Additional benefits include single source engineering responsibility as well as full service back-up.

Quality Control
IHT’s engineering design and factory production standards assure rigorous quality control in meeting dimensional tolerances and material specifications. Our manufacturing capabilities provide the highest degree of standards compliance. CNC machines assure exacting adherence to design requirements.

IHT Advantages

Durable Formed Casings
Coil casing are de formed for high structural strength and rigidity. Carbon steel, galvanized steel, and stainless steel are standard casing materials of construction. Other alloys are available to meet customer specifications. Industrial wide flange casings for full perimeter bolting are standard on IHT flat-fin coils.

Permanent Mechanical Fin Tube Bonds
A permanent fin tube bond and high heat transfer efficiency is ensured by hydrostatically driving an oversized metal ball through the coil tubes. The ball expands the tubes to the exact fin collar diameter providing a mechanical bond designed to last the life of the coil.

Rugged Headers
Tough close-grained cast iron headers on coils up to 33” wide provide maximum strength, compactness, and superior resistance to corrosion. Threaded plugs in each header allow access to the tube ends for field inspection. Extra heavy steel pipe headers are used on coils with higher operating pressures and temperatures.

Permanent Tube-Header Joints and High Pressure U-Bends
Work hardened tubes are rolled or bushed into the header or tube sheet. All coils with pipe headers have silver brazed joints or full welds. U-bends are designed for a permanent union and are die formed to provide a generous brazing collar. A special high temperature brazing alloy is used to withstand high pressures.

Directional Kinetic Orifices Extend Coil Life
IHT’s steam distributing (non-freeze) coils are manufactured with a unique Directional Kinetic Orifice in the distributing tubes. This feature creates a directional flow that meters steam evenly and equally throughout the length of the tube to assure maximum heat transfer efficiency with uniform leaving air temperature over the entire face of the coil. These orifices are oriented to enhance condensate removal which reduces the problems of steam impingement, condensate holdup, and tube erosion failure caused by pierced holes with no directional flow. Directional Kinetic Orifices also help resist condensate freezing by eliminating cold spots.

Turbulators
IHT’s fluid coils can be provided with optional bronze spring or twisted ribbon turbulators inside the tubes. These heat transfer enhancement devices provide an alternative to multi passing the fluid in order to produce a suitable liquid velocity in the tubes. Turbulators trigger increased heat transfer at low velocities by increasing fluid turbulence and mixing.

Removable Air Tight Casing
Removable air tight casing for up to 15 psig can be used to keep fin side gases safely inside a fully contained area. Construction allows the coil to expand and contract without additional aids. The airtight casing housing permits the coil removal without disconnecting duct work.
Applications
Water coil for high performance using medium to high temperature water.

Tubes (5/8” O.D.)
- Copper with 0.024” wall - Standard
- 90-10 Cupro-Nickel with 0.049” wall - Optional
- 304 Stainless Steel with 0.049” wall - Optional

U-Bends
When required are 5/8” OD, machine die-formed on each end to provide an accurate fit for brazed joints.

Fins
Low pressure drop, flat plate-type fins of standard aluminum or optional copper. Fins are positioned continuously across coil width and die-formed with full fin collars for maximum fin-to-tube contact, accurate tube fit, and accurate fin spacing. Fins are mechanically bonded to the tubes for lasting reliability.

Headers
Schedule 80 carbon steel pipe headers with 1.25” NPT (EXT) supply and return connections for single row coils. Multi-row coils use 2.00” NPT (EXT) return connections. Headering provides for same end connections.

Tube-Header Joints
Silver brazed joints with copper tubes. TIG welded joints with carbon or stainless steel tubes.

Casing
16-gauge galvanized steel casing, end supports, and center supports. One or more center supports on finned lengths over 42”.

Turbulators (Optional)
Bronze, spring type turbulators wound tightly in tubes.

Rating
- Tubing Rating
  - 0.024” Copper: 0.25 gpa @ 425°F
  - 90-10 Cupro-Nickel: 0.49 gpa @ 425°F
  - 304 Stainless Steel: 0.49 gpa @ 600°F
- Maximum of 200°F water temperature change through the coil.

Testing
All coils are proof tested at 1.5 times the maximum working pressure, then leak tested at the maximum working pressure. Coil testing process is water-submerged at bubble leak testing.

Applications
Water coil for high performance using medium to high temperature water.

Tubes (5/8” O.D.)
- Copper with 0.024” wall - Standard
- 90-10 Cupro-Nickel with 0.049” wall - Optional
- 304 Stainless Steel with 0.049” wall - Optional

U-Bends
When required are 5/8” OD, machine die-formed on each end to provide an accurate fit for brazed joints.

Fins
Low pressure drop, flat plate-type fins of standard aluminum or optional copper. Fins are positioned continuously across coil width and die-formed with full fin collars for maximum fin-to-tube contact, accurate tube fit, and accurate fin spacing. Fins are mechanically bonded to the tubes for lasting reliability.

Headers
Fabricated headers allow for dual row feed and constructed to match tube material. Connections are 3.00” NPT (EXT) for supply and return. Headering provides for same end connections.

Tube-Header Joints
TIG welded joints with carbon or stainless steel.

Casing
16-gauge galvanized steel casing, end supports, and center supports. One or more center supports on finned lengths over 42”.

Turbulators (Optional)
Bronze, spring type turbulators wound tightly in tubes.

Rating
- Tubing Rating
  - 0.024” Copper: 100 gpa @ 425°F
  - 90-10 Cupro-Nickel: 100 gpa @ 425°F
  - 304 Stainless Steel: 100 gpa @ 600°F
- Maximum of 200°F water temperature change through the coil.

Testing
All coils are proof tested at 1.5 times the maximum working pressure, then leak tested at the maximum working pressure. The coil testing process is water-submerged at bubble leak testing.
Applications
Water coil for high performance using medium to high temperature water. Drainable when installed level.

Tubes (5/8” O.D.)
Copper with 0.024” wall - Standard
90-10 Cupro-Nickel with 0.049” wall - Optional
304 Stainless Steel with 0.049” wall - Optional

U-Bends
When required are 5/8” O/D, machine die-formed on each end to provide an accurate fit for brazed joints.

Fins
High capacity, configurated plate-type fins of standard aluminum or optional copper. Fins are positioned continuously across coil width and die-formed with full fin collars for maximum fin-to-tube contact, accurate tube fit, and accurate fin spacing. Fins are mechanically bonded to the tubes for lasting reliability.

Headers
Schedule 80 carbon steel pipe headers with 1.25” NPT (EXT) supply and return connections for single row coils. Multi-row coils use 2.00” NPT (EXT) return connections. Headering provides for end connections.

Tube-Header Joints
Silver brazed joints with copper tubes. TIG welded joints with carbon or stainless steel tubes.

Casing
16-gauge galvanized steel casing, end supports, and center supports. One or more center supports on finned lengths over 42”.

Turbulators (Optional)
Bronze, spring type turbulators wound tightly in tubes.

Rating
Tubing Rating
0.024” Copper 350 psi @ 400°F
0.024” Red Brass 350 psi @ 400°F
0.049” Stainless Steel 450 psi @ 400°F

*Maximum of 200°F water temperature change through the coil.

Testing
All coils are proof tested at 1.5 times the maximum working pressure, then leak tested at the maximum working pressure. The coil testing process is water-submerged at bubble leak testing.

Finned Width C # of Rows D
12 13.50 2 6.50
15 16.50 4 9.50
18 19.50 6 12.50
21 22.50 8 15.50
24 25.50
27 28.50
30 31.50
33 34.50
36 37.50

Applications
Water coil for high performance using medium to high temperature water. Drainable when installed level.

Tubes (5/8” O.D.)
Copper with 0.024” wall - Standard
90-10 Cupro-Nickel with 0.049” wall - Optional
304 Stainless Steel with 0.049” wall - Optional

U-Bends
When required are 5/8” O/D, machine die-formed on each end to provide an accurate fit for brazed joints.

Fins
High capacity, configurated plate-type fins of standard aluminum or optional copper. Fins are positioned continuously across coil width and die-formed with full fin collars for maximum fin-to-tube contact, accurate tube fit, and accurate fin spacing. Fins are mechanically bonded to the tubes for lasting reliability.

Headers
Fabricated headers allow for dual row feed and constructed to match tube material. Connections are 2.00” NPT (EXT) for supply and return. Headering provides for same end connections.

Tube-Header Joints
Silver brazed joints with copper tubes. TIG welded joints with carbon or stainless steel tubes.

Casing
16-gauge galvanized steel casing, end supports, and center supports. One or more center supports on finned lengths over 42”.

Turbulators (Optional)
Bronze, spring type turbulators wound tightly in tubes.

Rating
Tubing Rating
0.049” Copper 100 psig @ 425°F
0.049” Red Brass 100 psig @ 425°F
0.049” Stainless Steel 100 psig @ 600°F

*Maximum of 200°F water temperature change through the coil.
**Applications**
Water coil for high performance using low to medium temperature water. Cleanable and drainable. Every tube is readily accessible without piping disconnect. Extended casing flanges allow for ease of installation and durable construction.

**Tubes (5/8”) O.D.**
90-10 Cupro-Nickel with 0.049” wall

**Fins**
High capacity, configurated plate-type fins of standard aluminum or optional copper. Fins are positioned continuously across coil width and die-formed with full-fin collars for maximum fin-to-tube contact, accurate tube fit, and accurate fin spacing. Fins are mechanically bonded to the tubes for lasting reliability.

**Headers**
Gray cast iron supply, return, and intermediate headers with 1.25” NPT (INT) supply and return connections on 12” coil finned widths. 2.50” NPT (INT) supply and return connections on 18”, 24”, 30”, and 33” coil finned widths. Removable intermediate headers gasketed and bolted to tubesheets at both ends of the coil for periodic cleaning of the tubes and drainability. Heading provides for same end connections.

**Tubesheets**
Tubesheets are flat steel plates.

**Tube-Header and Tubesheet Joints**
Each tube is rolled into the headers and tubesheets, and then work hardened to provide a strong, permanent joint.

**Casing**
16-gauge galvanized steel casing, end supports, and center supports. One or more center supports on finned lengths over 42”.

**Turbulators (Optional)**
Bronze, spring type turbulators wound tightly in tubes.

**Rating**

<table>
<thead>
<tr>
<th>Finned Width</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>19.50</td>
<td>8.25</td>
<td>4 9.50</td>
</tr>
<tr>
<td>24</td>
<td>25.50</td>
<td>11.25</td>
<td>6 12.50</td>
</tr>
<tr>
<td>30</td>
<td>31.50</td>
<td>14.25</td>
<td>8 15.50</td>
</tr>
<tr>
<td>33</td>
<td>34.50</td>
<td>15.75</td>
<td>10 18.50</td>
</tr>
<tr>
<td>49.50</td>
<td>12.50</td>
<td>15.50</td>
<td>12 21.50</td>
</tr>
</tbody>
</table>

**Testing**
All coils are proof tested at 1.5 times the maximum working pressure, then leak tested at the maximum working pressure. The coil testing process is water-submerged air bubble leak testing.

**Applications**
Water coil for high performance using low to medium temperature water. Cleanable and drainable. Every tube is readily accessible without piping disconnect. Extended casing flanges allow for ease of installation and durable construction.

**Tubes (5/8”) O.D.**
90-10 Cupro-Nickel with 0.049” wall

**Fins**
High capacity, configurated plate-type fins of standard aluminum or optional copper. Fins are positioned continuously across coil width and die-formed with full-fin collars for maximum fin-to-tube contact, accurate tube fit, and accurate fin spacing. Fins are mechanically bonded to the tubes for lasting reliability.

**Headers**
Gray cast iron supply, return, and intermediate headers with 1.25” NPT (INT) supply and return connections on 12” coil finned widths. 2.50” NPT (INT) supply and return connections on 18”, 24”, 30”, and 33” coil finned widths. Removable intermediate headers gasketed and bolted to tubesheets at both ends of the coil for periodic cleaning of the tubes and drainability. Heading provides for same end connections.

**Tubesheets**
Tubesheets are flat steel plates.

**Tube-Header and Tubesheet Joints**
Each tube is rolled into the headers and tubesheets, and then work hardened to provide a strong, permanent joint.

**Casing**
16-gauge galvanized steel casing, end supports, and center supports. One or more center supports on finned lengths over 42”.

**Turbulators (Optional)**
Bronze, spring type turbulators wound tightly in tubes.

**Rating**

<table>
<thead>
<tr>
<th>Finned Width</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>21.75</td>
<td>9.38</td>
<td>4 9.50</td>
</tr>
<tr>
<td>24</td>
<td>27.75</td>
<td>12.38</td>
<td>6 12.50</td>
</tr>
<tr>
<td>30</td>
<td>33.75</td>
<td>15.38</td>
<td>8 15.50</td>
</tr>
<tr>
<td>33</td>
<td>36.75</td>
<td>16.88</td>
<td>8 15.50</td>
</tr>
</tbody>
</table>

**Testing**
All coils are proof tested at 1.5 times the maximum working pressure, then leak tested at the maximum working pressure. The coil testing process is water-submerged air bubble leak testing.
**Applications**

Water coil for high performance using medium to high temperature water.

Draintable when installed level.

**Tubes (5/8” O.D.)**

Red Brass with 0.035” wall - Standard

Red Brass with 0.049” wall - Optional

**U-Bends**

When required are 5/8” OD, machine-die formed on each end to provide an accurate fit for brazed joints.

**Fins**

High capacity, configurated plate-type fins of standard aluminum or optional copper. Fins are positioned continuously across coil width and die-formed with full fin collars for maximum fin-to-tube contact, accurate tube fit, and accurate fin spacing. Fins are mechanically bonded to the tubes for lasting reliability.

**Headers**

Schedule 80 carbon steel pipe headers with 1.25” NPT (EXT) supply and return connections for single row coils. Multi-row coils use 2.00” NPT (EXT) return connections. Headering provides for same end connections.

**Tube-Header Joints**

Silver brazed joints with red brass tubes.

**Casing**

16-gauge galvanized steel casing, end supports, and center supports. One or more center supports on finned lengths over 42”.

**Turbulators (Optional)**

Bronze, spring type turbulators wound tightly in tubes.

**Air Tight Casing (Optional)**

Designed for air pressures up to and including 15 psig. Construction allows the coil to expand and contract without additional aids. The airtight casing housing permits the coil removal without disconnecting duct work. The 10-gauge painted steel casing is die-formed for strength.

**Rating**

<table>
<thead>
<tr>
<th>Tubing</th>
<th>Rating</th>
<th>350 psig @ 400°F</th>
<th>350 psig @ 400°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.035” Red Brass</td>
<td>18.50</td>
<td>19.50</td>
<td>8.25</td>
</tr>
<tr>
<td>0.049” Red Brass</td>
<td>21.50</td>
<td>22.50</td>
<td>11.25</td>
</tr>
<tr>
<td>0.049” 90-10 Cupro-Nickel</td>
<td>25.50</td>
<td>26.50</td>
<td>14.25</td>
</tr>
<tr>
<td>0.049” 90-10 Cupro-Nickel</td>
<td>28.50</td>
<td>29.50</td>
<td>17.25</td>
</tr>
<tr>
<td>0.049” 90-10 Cupro-Nickel</td>
<td>31.50</td>
<td>32.50</td>
<td>20.25</td>
</tr>
<tr>
<td>0.049” 90-10 Cupro-Nickel</td>
<td>34.50</td>
<td>35.50</td>
<td>23.25</td>
</tr>
</tbody>
</table>

**Testing**

All coils are proof tested at 1.5 times the maximum working pressure, then leak tested at the maximum working pressure. The coil testing process is water-submerged air bubble leak testing.

---

**Applications**

Water coil for high performance using low to medium temperature water.

Drainable when installed level.

**Tubes (5/8” O.D.)**

Red Brass with 0.035” wall - Standard

Red Brass with 0.049” wall - Optional

**U-Bends**

When required are 5/8” OD, machine-die formed on each end to provide an accurate fit for brazed joints.

**Fins**

High capacity, configurated plate-type fins of standard aluminum or optional copper. Fins are positioned continuously across coil width and die-formed with full fin collars for maximum fin-to-tube contact, accurate tube fit, and accurate fin spacing. Fins are mechanically bonded to the tubes for lasting reliability.

**Headers**

Gray cast iron supply, return, and intermediate headers with 1.25” NPT (INT) supply and return connections on 12” coil finned widths. 2.50” NPT (INT) supply and return connections on 18”, 24”, 30”, and 33” coil finned widths. Headering provides for same end connections.

**Tube-Header Joints**

Silver brazed joints with red brass tubes.

**Casing**

16-gauge galvanized steel casing, end supports, and center supports. One or more center supports on finned lengths over 42”.

**Turbulators (Optional)**

Bronze, spring type turbulators wound tightly in tubes.

**Air Tight Casing (Optional)**

Designed for air pressures up to and including 15 psig. Construction allows the coil to expand and contract without additional aids. The airtight casing housing permits the coil removal without disconnecting duct work. The 10-gauge painted steel casing is die-formed for strength.

**Rating**

<table>
<thead>
<tr>
<th>Tubing</th>
<th>Rating</th>
<th>200 psig @ 220°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.049” 90-10 Cupro-Nickel</td>
<td>18.50</td>
<td>19.50</td>
</tr>
<tr>
<td>0.049” 90-10 Cupro-Nickel</td>
<td>21.50</td>
<td>22.50</td>
</tr>
</tbody>
</table>

**Testing**

All coils are proof tested at 1.5 times the maximum working pressure, then leak tested at the maximum working pressure. The coil testing process is water-submerged air bubble leak testing.
**Applications**

Water coil for high performance using medium to high temperature water. Drainable when installed level.

**Tubes (5/8” O.D.)**
- Copper with 0.049” wall - Standard
- 90-10 Cupro-Nickel with 0.049” wall - Optional
- 304 Stainless Steel with 0.035” wall - Optional

**U-Bends**
When required are 5/8” OD, machine die formed on each end to provide an accurate fit for brazed joints.

**Fins**
High capacity, configurated plate-type fins of standard aluminum or optional copper. Fins are positioned continuously across coil width and die-formed with full fin collars for maximum fin-to-tube contact, accurate tube fit, and accurate fin spacing. Fins are mechanically bonded to the tubes for lasting reliability.

**Headers**
Schedule 80 carbon steel pipe headers with 1.25” NPT (EXT) supply and return connections for single row coils. Multi-row coils use 3.00” NPT (EXT) return connections. Headering provides for same end connections.

**Tube-Header Joints**
Silver brazed joints with copper tubes. TIG welded joints with carbon or stainless steel tubes.

**Casing**
16-gauge galvanized steel casing, end supports, and center supports. One or more center supports on finned lengths over 42”.

**Turbulators (Optional)**
Bronze, spring type turbulators wound tightly in tubes.

**Rating**
- Tubing Rating
  - 0.049” Copper: 150 psig @ 220°F
  - 0.049” Red Brass: 200 psig @ 220°F
  - 0.035” Stainless Steel: 350 psig @ 220°F
- *Maximum of 60°F water temperature change through the coil.

**Testing**
All coils are proof tested at 1.5 times the maximum working pressure, then leak tested at the maximum working pressure. The coil testing process is water-submerged air bubble leak testing.

---

**Table: Finned Width**

<table>
<thead>
<tr>
<th>Finned Width</th>
<th>C</th>
<th>D</th>
<th># of Rows</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>13.50</td>
<td>3.75</td>
<td>2</td>
<td>8.00</td>
</tr>
<tr>
<td>15</td>
<td>16.50</td>
<td>5.25</td>
<td>4</td>
<td>9.50</td>
</tr>
<tr>
<td>18</td>
<td>19.50</td>
<td>6.75</td>
<td>6</td>
<td>12.50</td>
</tr>
<tr>
<td>21</td>
<td>22.50</td>
<td>8.25</td>
<td>8</td>
<td>15.00</td>
</tr>
<tr>
<td>24</td>
<td>25.50</td>
<td>9.75</td>
<td>10</td>
<td>18.00</td>
</tr>
<tr>
<td>27</td>
<td>28.50</td>
<td>11.25</td>
<td>12</td>
<td>21.00</td>
</tr>
<tr>
<td>30</td>
<td>31.50</td>
<td>12.75</td>
<td>14</td>
<td>24.00</td>
</tr>
<tr>
<td>33</td>
<td>34.50</td>
<td>14.25</td>
<td>16</td>
<td>27.00</td>
</tr>
</tbody>
</table>

---

**Diagram of Fluid Coils**

- **WTP** Fluid Coils
- **WTS** Fluid Coils
Applications
Steam distributing coils for steam modulation and maximum freeze protection. Coils for high-performance using low to medium pressure steam. Tube-within-a-tube design for optimum steam distribution. Inner steam distributing tubes located concentrically within the outer condensing tubes by corrosion resistant support clips. Inner tubes with die-formed Directional Kinetic Orifices to discharge steam into the outer tubes in the direction of condensate flow.

Tubes-Outer (1") O.D.
90-10 Cupro-Nickel with 0.049" wall

Tubes -Inner(11/16") O.D.
Copper with 0.014" wall - Standard
316 Stainless Steel with 0.014" wall - Optional

Fins
High capacity, configurated plate-type fins of standard aluminum or optional copper. Fins are positioned continuously across coil width and die-formed with full fin collars for maximum fin to tube contact, accurate tube fit, and accurate fin spacing. Fins are mechanically bonded to the tubes for lasting reliability.

Headers
Gray cast iron headers with threaded internal connections. Headering provides for opposite end connections. Steam deflectors are provided opposite supply connection to prevent tube erosion from steam impingement in the connection area.

Tube-Header Joints
Tubes are rolled and work hardened into headers to form a permanent, pressure tight joint.

Casing
16-gauge galvanized steel casing, end supports, and center supports. One or more center supports on finned lengths over 42".

Rating
Tubing Rating
0.049" 90-10 CuNi 125 psig @ 400°F

Testing
All coils are proof tested at 1.5 times the maximum working pressure, then leak tested at the maximum working pressure. The coil testing process is water-submerged air bubble leak testing.

Finned Width C D E F G H J K L
12 13.50 5.25 2.25 2.75 1.69 5.56 1.00 1.50
18 19.00 6.25 2.75 3.26 1.69 5.56 1.00 2.00
24 22.50 7.75 2.75 3.26 2.19 6.10 1.25 2.50
30 31.50 14.25 2.75 2.50 2.31 6.44 1.25 3.00
33 34.50 17.25 2.75 2.50 2.31 6.44 1.25 3.00

Applications
Steam distributing coils for steam modulation and maximum freeze protection. Coils for high-performance using low to medium pressure steam. Tube-within-a-tube design for optimum steam distribution. Inner steam distributing tubes located concentrically within the outer condensing tubes by corrosion resistant support clips. Inner tubes with die-formed Directional Kinetic Orifices to discharge steam into the outer tubes in the direction of condensate flow.

Tubes-Outer (1") O.D.
90-10 Cupro-Nickel with 0.049" wall

Tubes -Inner(11/16") O.D.
Copper with 0.014" wall - Standard
316 Stainless Steel with 0.014" wall - Optional

Fins
High capacity, configurated plate-type fins of standard aluminum or optional copper. Fins are positioned continuously across coil width and die-formed with full fin collars for maximum fin to tube contact, accurate tube fit, and accurate fin spacing. Fins are mechanically bonded to the tubes for lasting reliability.

Headers
Gray cast iron headers with threaded internal connections. Headering provides for same end connections. Steam deflectors are provided opposite supply connection to prevent tube erosion from steam impingement in the connection area.

Tube-Header Joints
Tubes are rolled and work hardened into headers to form a permanent, pressure tight joint.

Casing
16-gauge galvanized steel casing, end supports, and center supports. One or more center supports on finned lengths over 42".

Rating
Tubing Rating
0.049" 90-10 CuNi 200 psig @ 400°F

Testing
All coils are proof tested at 1.5 times the maximum working pressure, then leak tested at the maximum working pressure. The coil testing process is water-submerged air bubble leak testing.

Finned Width C D E F G H J K L
12 13.50 5.25 1.81 1.31 2.75 2.50 3.88 1.00 1.50
18 19.00 6.25 1.81 1.31 2.75 2.50 3.88 1.00 2.00
24 22.50 7.75 1.50 1.25 2.50 2.88 4.25 1.25 2.50
30 31.50 14.25 1.50 1.25 2.50 3.38 4.75 1.25 3.00
33 34.50 17.25 1.50 1.25 2.50 3.38 4.75 1.25 3.00
HPSD-O Steam Coils

Applications
Steam distributing coils for steam modulation and maximum freeze protection. Coils for high-performance using medium to high pressure steam. Tube-Within-a-Tube design for optimum steam distribution. Inner steam distributing tubes located concentrically within the outer condensing tubes by corrosion resistant support clips. Inner tubes with die-formed Directional Kinetic Orifices to discharge steam into the outer tubes in the direction of condensate flow.

Tube-Header Joints
Fabricated rectangular steel tube headers provide for same end connections and 1.50" NPT (EXT) return connections. Headering provides accurate tube fit, and accurate fin spacing. Fins are mechanically bonded to the tubes for lasting reliability.

Casing
16-gauge galvanized steel casing, end supports, and center supports. One or more center supports on finned lengths over 42".

Air Tight Casing (Optional)
Designed for air pressures up to and including 15 psig. Construction allows the coil to expand and contract without additional aids. The air tight casing housing permits the coil removal without disconnecting duct work. The 10-gauge painted steel casing is die-formed for strength.

Testing
All coils are proof tested at 1.5 times the maximum working pressure, then leak tested at the maximum working pressure. The coil testing process is water-submerged at bubble leak testing. Optional testing of the air tight casing can be provided at the specified working pressure.

<table>
<thead>
<tr>
<th>Width</th>
<th>C</th>
<th>D</th>
<th>Depth</th>
<th>4.00</th>
<th>2.00</th>
<th>3.00</th>
<th>7.00</th>
<th>8.00</th>
<th>9.00</th>
<th>10.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>42</td>
<td>22.94</td>
<td>11.50</td>
<td>6.94</td>
<td>19.69</td>
<td>12.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>34.94</td>
<td>17.50</td>
<td>6.94</td>
<td>37.69</td>
<td>18.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>40.94</td>
<td>19.00</td>
<td>6.94</td>
<td>43.69</td>
<td>21.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>28.94</td>
<td>14.50</td>
<td>6.94</td>
<td>31.69</td>
<td>15.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>16.94</td>
<td>8.50</td>
<td>6.94</td>
<td>19.69</td>
<td>9.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>12.00</td>
<td>6.00</td>
<td>6.94</td>
<td>15.69</td>
<td>5.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

HPSD-S Steam Coils

Applications
Steam distributing coils for steam modulation and maximum freeze protection. Coils for high-performance using medium to high pressure steam. Tube-Within-a-Tube design for optimum steam distribution. Inner steam distributing tubes located concentrically within the outer condensing tubes by corrosion resistant support clips. Inner tubes with die-formed Directional Kinetic Orifices to discharge steam into the outer tubes in the direction of condensate flow.

Testing
All coils are proof tested at 1.5 times the maximum working pressure, then leak tested at the maximum working pressure. The coil testing process is water-submerged at bubble leak testing. Optional testing of the air tight casing can be provided at the specified working pressure.

<table>
<thead>
<tr>
<th>Width</th>
<th>C</th>
<th>D</th>
<th>Depth</th>
<th>4.00</th>
<th>2.00</th>
<th>3.00</th>
<th>7.00</th>
<th>8.00</th>
<th>9.00</th>
<th>10.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>52.94</td>
<td>23.50</td>
<td>6.94</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>46.94</td>
<td>20.50</td>
<td>6.94</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>40.94</td>
<td>19.00</td>
<td>6.94</td>
<td>43.69</td>
<td>21.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>34.94</td>
<td>17.50</td>
<td>6.94</td>
<td>37.69</td>
<td>18.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>28.94</td>
<td>14.50</td>
<td>6.94</td>
<td>31.69</td>
<td>15.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>22.94</td>
<td>11.50</td>
<td>6.94</td>
<td>25.69</td>
<td>12.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>16.94</td>
<td>8.50</td>
<td>6.94</td>
<td>19.69</td>
<td>9.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tubing Rating
- 0.049" 316 Stainless Steel with 0.014" wall - Optional
- 0.049" Copper with 0.014" wall - Standard
- 0.049" 90-10 CuNi with 0.049" wall - Standard
- 0.049" Carbon Steel with 0.049" wall - Optional
- 0.049" Red Brass with 0.035" wall or 0.049" wall - Optional

Coil Only
Finned Width Coiled C D
12 16.94 8.50 6.94 19.69 9.75
18 22.94 11.50 6.94 25.69 12.75
24 28.94 14.50 6.94 31.69 15.75
30 34.94 17.50 6.94 37.69 18.75
36 40.94 19.00 6.94 43.69 21.75
42 46.94 20.50 6.94
48 52.94 23.50 6.94

Coil Only With Air Tight Case
Finned Width C D
12 16.94 8.50 6.94 19.69 9.75
18 22.94 11.50 6.94 25.69 12.75
24 28.94 14.50 6.94 31.69 15.75
30 34.94 17.50 6.94 37.69 18.75
36 40.94 19.00 6.94 43.69 21.75
42 46.94 20.50 6.94
48 52.94 23.50 6.94
Applications
Low to medium pressure steam coil for low air side pressure drop. Wide fin spacings and flat continuous plate type fins for reduced fin surface fouling.

Tubes (5/8") O.D.
Red Brass with 0.035" wall - Standard
Red Brass with 0.049" wall - Optional

Fins
Low pressure drop, flat plate-type fins of standard aluminum or optional copper. Fins are positioned continuously across coil width and die-formed with full fin collars for maximum fin-to-tube contact, accurate tube fit, and accurate fin spacing. Fins are mechanically bonded to the tubes for lasting reliability.

Headers
Gray cast iron headers with threaded connections. Heading provides for opposite end connections.

Tube-Header Joints
Each tube is rolled into the headers and then bushed with a tapered brass bushing to provide a strong, permanent joint and proper steam distribution through the header to each tube.

Casing
16-gauge galvanized steel casing, end supports, and center supports. One or more center supports on finned lengths over 42".

Rating
Tubing
0.035" Red Brass
0.049" Red Brass
200 psig @ 400°F

Testing
All coils are proof tested at 1.5 times the maximum working pressure, then leak tested at the maximum working pressure. The coil testing process is water-submerged air bubble leak testing.
HPS Steam Coils

Applications
Steam coils for high performance using medium to high pressure steam.

Tubes-Outer (5/8”) O.D.
90-10 Cupro-Nickel with 0.049” wall - Standard
Red Brass with 0.035” wall or 0.049” wall - Optional

U-Bends
Machine die formed on each end to provide an accurate fit for brazed joints. U-Bend thickness is 0.049” wall in all cases with material matching the tubes.

Fins
High capacity, configured plate-type fins of standard aluminum or optional copper. Fins are positioned continuously across coil width and die-formed with full fin collars for maximum fin-to-tube contact, accurate tube fit, and accurate fin spacing. Fins are mechanically bonded to the tubes for lasting reliability.

Headers
Schedule 80 carbon steel pipe headers with 2.50” NPT (EXT) supply connections and 1.25” NPT (EXT) return connections. Headering on 1 row design provides for same end connections. Headering on 2 row design provides for either same or opposite end connections.

Tube-Header Joints
Each tube is silver brazed to the header.

Casing
16-gauge galvanized steel casing, end supports, and center supports. One or more center supports on finned lengths over 42”.

Air Tight Casing (Optional)
Designed for air pressures up to and including 15 psig. Construction allows the coil to expand and contract without additional aids. The air-tight casing housing permits the coil removal without disconnecting duct work. The 10-gauge painted steel casing is die-formed for strength.

Testing
All coils are proof tested at 1.5 times the maximum working pressure, then leak tested at the maximum working pressure. The coil testing process is water-submerged air bubble leak testing. Optional testing of the air tight casing can be provided at the specified working pressure.

<table>
<thead>
<tr>
<th>Finned Width</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>13.50</td>
<td>6.75</td>
</tr>
<tr>
<td>15</td>
<td>16.50</td>
<td>8.25</td>
</tr>
<tr>
<td>18</td>
<td>19.50</td>
<td>9.75</td>
</tr>
<tr>
<td>21</td>
<td>22.50</td>
<td>11.25</td>
</tr>
<tr>
<td>24</td>
<td>25.50</td>
<td>12.75</td>
</tr>
<tr>
<td>27</td>
<td>28.50</td>
<td>14.25</td>
</tr>
<tr>
<td>30</td>
<td>31.50</td>
<td>15.75</td>
</tr>
<tr>
<td>33</td>
<td>34.50</td>
<td>17.25</td>
</tr>
<tr>
<td>36</td>
<td>37.50</td>
<td>18.75</td>
</tr>
</tbody>
</table>

WH Steam Coils

Applications
Low to medium pressure steam coil for low air side pressure drop. Wide fin spacings and flat continuous plate type fins for reduced fin surface fouling.

Tubes (5/8”) O.D.
Red Brass with 0.035” wall - Standard
Red Brass with 0.049” wall - Optional

U-Bends
When required are 5/8” O.D. machine die-formed on each end to provide an accurate fit for brazed joints.

Fins
Low pressure drop, flat plate-type fins of standard aluminum or optional copper. Fins are positioned continuously across coil width and die-formed with full fin collars for maximum fin-to-tube contact, accurate tube fit, and accurate fin spacing. Fins are mechanically bonded to the tubes for lasting reliability.

Headers
Schedule 80 carbon steel pipe headers with 1.25” NPT (EXT) supply and return connections. Headering provides for same end connections.

Tube-Header Joints
Each tube is silver brazed to the header.

Casing
16-gauge galvanized steel casing, end supports, and center supports. One or more center supports on finned lengths over 42”.

Rating
Tubing Rating
0.035” Red Brass 250 psig @ 425°F
0.049” Red Brass 250 psig @ 425°F

Testing
All coils are proof tested at 1.5 times the maximum working pressure, then leak tested at the maximum working pressure. The coil testing process is water-submerged air bubble leak testing.

<table>
<thead>
<tr>
<th>Finned Width</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>16.50</td>
<td>7.88</td>
</tr>
<tr>
<td>15</td>
<td>19.50</td>
<td>9.38</td>
</tr>
<tr>
<td>18</td>
<td>22.50</td>
<td>10.88</td>
</tr>
<tr>
<td>21</td>
<td>25.50</td>
<td>12.38</td>
</tr>
<tr>
<td>24</td>
<td>28.50</td>
<td>13.88</td>
</tr>
<tr>
<td>27</td>
<td>31.50</td>
<td>15.38</td>
</tr>
<tr>
<td>30</td>
<td>34.50</td>
<td>16.88</td>
</tr>
<tr>
<td>33</td>
<td>37.50</td>
<td>18.38</td>
</tr>
<tr>
<td>36</td>
<td>40.50</td>
<td>19.88</td>
</tr>
</tbody>
</table>
Applications
Low to medium pressure steam coil for low air side pressure drop. Can be mounted with any flow direction.

Tubes (5/8” O.D.)
- Red Brass with 0.035” wall - Standard
- Red Brass with 0.049” wall - Optional

Fins
- High capacity, configured plate-type fins of standard aluminum or optional copper. Fins are positioned continuously across coil width and die-formed with full fin collars for maximum fin-to-tube contact, accurate tube fit, and accurate fin spacing. Fins are mechanically bonded to the tubes for lasting reliability.

Headers
- Gray cast iron headers with threaded connections. Headering provides for opposite end connections.

Tube-Header Joints
Each tube is rolled into the headers and then bushed with a tapered brass bushing to provide a strong, permanent joint and proper steam distribution through the header to each tube.

Casing
16-gauge galvanized steel casing, end supports, and center supports. One or more center supports on finned lengths over 42”.

Rating
- Tubing Rating
  - 0.035” Red Brass
    - 200 psig @ 400°F
  - 0.049” Red Brass
    - 200 psig @ 400°F
- Testing
  All coils are proof tested at 1.5 times the maximum working pressure, then leak tested at the maximum working pressure. The coil testing process is water-submerged air bubble leak testing.