Radiant Linear Extruded Panels—Standard

Energy Efficient
Comfortable
Clean
Quiet
### WATER PRESSURE DROP FOR RADIANT LINEAR EXTRUDED PANELS

<table>
<thead>
<tr>
<th>Water Flow Rate (GPM)</th>
<th>Head Loss in Feet of Water Per 100 Feet of .505 ID Tube</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5</td>
<td>17.90</td>
</tr>
<tr>
<td>2.4</td>
<td>16.50</td>
</tr>
<tr>
<td>2.3</td>
<td>15.30</td>
</tr>
<tr>
<td>2.2</td>
<td>14.10</td>
</tr>
<tr>
<td>2.1</td>
<td>12.90</td>
</tr>
<tr>
<td>2.0</td>
<td>11.90</td>
</tr>
<tr>
<td>1.9</td>
<td>10.70</td>
</tr>
<tr>
<td>1.8</td>
<td>9.60</td>
</tr>
<tr>
<td>1.7</td>
<td>8.70</td>
</tr>
<tr>
<td>1.6</td>
<td>7.80</td>
</tr>
<tr>
<td>1.5</td>
<td>7.00</td>
</tr>
<tr>
<td>1.4</td>
<td>6.30</td>
</tr>
<tr>
<td>1.3</td>
<td>5.70</td>
</tr>
<tr>
<td>1.2</td>
<td>5.10</td>
</tr>
<tr>
<td>1.1</td>
<td>4.60</td>
</tr>
<tr>
<td>1.0</td>
<td>4.10</td>
</tr>
<tr>
<td>0.9</td>
<td>3.10</td>
</tr>
<tr>
<td>0.8</td>
<td>2.40</td>
</tr>
<tr>
<td>0.7</td>
<td>1.90</td>
</tr>
<tr>
<td>0.6</td>
<td>1.50</td>
</tr>
<tr>
<td>0.5</td>
<td>1.10</td>
</tr>
</tbody>
</table>

To ensure proper system performance, design flow rates below 0.5 US gallons per minute are not recommended.

### HEATING PERFORMANCE FOR RADIANT LINEAR EXTRUDED PANELS

<table>
<thead>
<tr>
<th>MWT (Deg. F)</th>
<th>Perimeter BTU/Hr Lineal Foot</th>
<th>Interior BTU/Hr Square Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6&quot; Wd</td>
<td>8&quot; Wd</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 Tube</td>
<td>2 Tube</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Flow Rate (GPM)</th>
<th>6&quot; Wd</th>
<th>8&quot; Wd</th>
<th>9&quot; Wd</th>
<th>12&quot; Wd</th>
<th>16&quot; Wd</th>
<th>18&quot; Wd</th>
<th>24&quot; Wd</th>
<th>30&quot; Wd</th>
<th>36&quot; Wd</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5</td>
<td>120</td>
<td>47</td>
<td>62</td>
<td>69</td>
<td>90</td>
<td>117</td>
<td>129</td>
<td>164</td>
<td>195</td>
</tr>
<tr>
<td>2.4</td>
<td>125</td>
<td>53</td>
<td>70</td>
<td>78</td>
<td>102</td>
<td>131</td>
<td>145</td>
<td>183</td>
<td>219</td>
</tr>
<tr>
<td>2.3</td>
<td>130</td>
<td>60</td>
<td>78</td>
<td>87</td>
<td>113</td>
<td>145</td>
<td>161</td>
<td>202</td>
<td>243</td>
</tr>
<tr>
<td>2.2</td>
<td>135</td>
<td>66</td>
<td>86</td>
<td>96</td>
<td>125</td>
<td>161</td>
<td>178</td>
<td>225</td>
<td>269</td>
</tr>
<tr>
<td>2.1</td>
<td>140</td>
<td>72</td>
<td>94</td>
<td>105</td>
<td>137</td>
<td>177</td>
<td>196</td>
<td>248</td>
<td>295</td>
</tr>
<tr>
<td>2.0</td>
<td>145</td>
<td>78</td>
<td>103</td>
<td>115</td>
<td>149</td>
<td>192</td>
<td>213</td>
<td>269</td>
<td>320</td>
</tr>
<tr>
<td>1.9</td>
<td>150</td>
<td>84</td>
<td>111</td>
<td>124</td>
<td>161</td>
<td>207</td>
<td>229</td>
<td>290</td>
<td>345</td>
</tr>
<tr>
<td>1.8</td>
<td>155</td>
<td>91</td>
<td>120</td>
<td>134</td>
<td>174</td>
<td>224</td>
<td>247</td>
<td>312</td>
<td>369</td>
</tr>
<tr>
<td>1.7</td>
<td>160</td>
<td>98</td>
<td>129</td>
<td>144</td>
<td>187</td>
<td>240</td>
<td>265</td>
<td>334</td>
<td>393</td>
</tr>
<tr>
<td>1.6</td>
<td>165</td>
<td>104</td>
<td>137</td>
<td>153</td>
<td>199</td>
<td>256</td>
<td>283</td>
<td>357</td>
<td>421</td>
</tr>
<tr>
<td>1.5</td>
<td>170</td>
<td>111</td>
<td>145</td>
<td>162</td>
<td>211</td>
<td>272</td>
<td>301</td>
<td>380</td>
<td>450</td>
</tr>
<tr>
<td>1.4</td>
<td>175</td>
<td>118</td>
<td>155</td>
<td>173</td>
<td>225</td>
<td>290</td>
<td>321</td>
<td>405</td>
<td>479</td>
</tr>
<tr>
<td>1.3</td>
<td>180</td>
<td>126</td>
<td>165</td>
<td>184</td>
<td>239</td>
<td>308</td>
<td>341</td>
<td>430</td>
<td>508</td>
</tr>
<tr>
<td>1.2</td>
<td>185</td>
<td>133</td>
<td>175</td>
<td>195</td>
<td>253</td>
<td>326</td>
<td>361</td>
<td>455</td>
<td>538</td>
</tr>
<tr>
<td>1.1</td>
<td>190</td>
<td>141</td>
<td>184</td>
<td>206</td>
<td>267</td>
<td>344</td>
<td>381</td>
<td>480</td>
<td>568</td>
</tr>
<tr>
<td>1.0</td>
<td>195</td>
<td>148</td>
<td>194</td>
<td>216</td>
<td>280</td>
<td>361</td>
<td>399</td>
<td>502</td>
<td>591</td>
</tr>
<tr>
<td>0.9</td>
<td>200</td>
<td>155</td>
<td>203</td>
<td>226</td>
<td>294</td>
<td>377</td>
<td>417</td>
<td>524</td>
<td>615</td>
</tr>
<tr>
<td>0.8</td>
<td>205</td>
<td>162</td>
<td>213</td>
<td>237</td>
<td>308</td>
<td>396</td>
<td>437</td>
<td>550</td>
<td>645</td>
</tr>
<tr>
<td>0.7</td>
<td>210</td>
<td>170</td>
<td>223</td>
<td>249</td>
<td>323</td>
<td>415</td>
<td>458</td>
<td>576</td>
<td>675</td>
</tr>
<tr>
<td>0.6</td>
<td>215</td>
<td>177</td>
<td>232</td>
<td>259</td>
<td>337</td>
<td>433</td>
<td>478</td>
<td>601</td>
<td>706</td>
</tr>
<tr>
<td>0.5</td>
<td>220</td>
<td>185</td>
<td>242</td>
<td>270</td>
<td>351</td>
<td>451</td>
<td>498</td>
<td>626</td>
<td>738</td>
</tr>
</tbody>
</table>

*Use these performance values directly in standard ASHRAE heat loss calculations. Performance values are from certified data based on 70 degree AUST (Average Unheated Surface Temperature), natural convection, and 1 inch, 3/4 Pounds/Cubic Foot insulation on top of panel.*
CONCEPT OF RADIANT HEATING

Radiant heat transfer works much like sunlight: heat moves from the warm panel to the cooler objects in the room being heated until a temperature equilibrium is reached. Aero Tech Radiant Ceiling Systems function on the basis of providing a comfortable environment by controlling surface temperature and minimizing excess air motion and temperature within the conditioned space.

Like the light energy from a lighting fixture illuminates the room, a radiant ceiling panel emits thermal energy which is absorbed and re-radiated by all elements in the room.

Radiant heat transfer results in an energy-efficient, cost-effective way to heat almost any kind of building

AXO PANEL CONSTRUCTION

AXO ceiling panels are constructed of 6", 8", or 9" wide extruded aluminum strips of approximately .080" overall thickness. Active strips have a .505 ID copper tube inserted into a "U" shaped channel on the back of the extrusion. This channel is formed more than half-way around the copper tube for increased thermal conduction and to eliminate any separation of the copper tube and the aluminum strip. Tube ends will accept a 3/8" Type "L" soft copper tube without the need for fittings.

Standard panel maximum length is 12’ (lengths up to 16’ can be fabricated on special request only, and after review for additional cost due to handling the extended lengths). Panels can be constructed in any width utilizing any combination of 6", 8" and 9" wide extruded aluminum strips

Matching, non-radiant (inactive) panels can be provided on request.

AXO Panels are factory assembled and finished, in a large variety of standard or custom options. Including the ability to curve the panel along the length (Please contact Aero Tech regarding curving guide lines).

SPECIFICATION FOR AERO TECH RADIANT PANELS

MANUFACTURER QUALIFICATIONS

This specification is based on the Radiant Ceiling employing Radiant Panels, and matching Non-Radiant Panels (as required) manufactured by AERO TECH MANUFACTURING INC. 395 West 1100 North, North Salt Lake, Utah 84054

Published performance data and dimensional specifications are included in this booklet, provided by the manufacturer. Performance and capacity data is to be based on testing performed by the manufacturer or confirmed by a testing laboratory recognized in the industry.

The manufacturer shall demonstrate his capability in engineering, manufacturing and financial resources to the satisfaction of the Architect and Engineer, and shall have continuously been in the business of manufacturing radiant panels for a minimum of five (5) years

RADIANT PANEL PERFORMANCE REQUIREMENTS

The Radiant Panel will have a minimum heating output of ________ BTU/HR LN FT for ____" wide panel at ________ degree F mean water temperature when the room temperature is 70 degrees F, the roof is of medium insulation value and natural convection prevails in the room.

CONTRACTORS QUALIFICATIONS

Installation of the Radiant and Non-Radiant Panels will be performed by a qualified contractor, and installed as recommended by the manufacturer. The contractor must be experienced in the installation of radiant ceilings and is to provide all labor, materials, tools, service and supervision for a complete functional system as shown on the mechanical and architectural plans. Materials furnished by the contractor shall include all components required for the ceiling as specified on the room finish schedule.

CONTRACTOR RESPONSIBILITIES

Install the Radiant and Non-Radiant Panels complete in accordance with the manufacturer’s recommendations and to the satisfaction of the Architect and Engineer. Approximate wet weight of panels is 2.8 pounds per square foot.

Contractor shall abide by the architectural and mechanical drawings, room finish schedule and architectural details for correct placement of all panels. Shop drawings at 1/8” scale may be submitted by the contractor showing layouts and details of all areas where Radiant and Non-Radiant Panels are indicated. Aero Tech will create shop drawings that include the Mechanical plan and Architectural Reflected Ceiling plan.

Please contact our local Sales Rep for cost involved. In order to create the most accurate shop drawings, Aero Tech needs high quality PDFs (no scans), or CAD files showing the mechanical piping and reflected ceiling plans.

Radiant Panel shop drawings should show a complete pre-engineered, designed and tested system, including Aero Tech Radiant and Non-Radiant Panels, suspension components, interconnecting piping, edge moldings, soffits, fascia, trim and all other details and materials (as required).

Radiant Panels

Radiant Panels shall be Aero Tech extruded aluminum with copper tube inserted into "U" shaped channel on back of extrusion. Finished as specified.

Non-Radiant Panels (as required)

Non-Radiant Panels shall be Aero Tech extruded aluminum. Finish to match Radiant Panels.

Insulation

Insulation on top of panels should be minimum of 1” thick 3/4 Pound/Cubic Foot, glass fiber pad.
Chart 1:
Width Opening Between Panel Supports

<table>
<thead>
<tr>
<th>Panel Width</th>
<th>Opening Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panels Utilizing Any Combination Of Stock Extrusion</td>
<td>See Chart Below</td>
</tr>
</tbody>
</table>

1.) Panel widths can be fabricated from 6", 8" or 9"; or any combination of 6", 8" and 9" strip (see extrusion drawings for types and styles available)

Chart 2:
Panel Length

<table>
<thead>
<tr>
<th>Scheduled Length</th>
<th>Panel Finished Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>1'-0&quot; to 8'-0&quot; Scheduled Lgt</td>
<td>Minus 1/4&quot; From Scheduled Lgt</td>
</tr>
<tr>
<td>8'-1&quot; to 12'-0&quot; Scheduled Lgt</td>
<td>Minus 3/8&quot; From Scheduled Lgt</td>
</tr>
<tr>
<td>12'-1&quot; to 16'-0&quot; Scheduled Lgt</td>
<td>Minus 1/2&quot; From Scheduled Lgt</td>
</tr>
</tbody>
</table>

2.) Panels are fabricated to a standard length rounded up to the nearest 6" or 12" as appropriate. *Upon request* panels will be fabricated to an actual length of scheduled length minus the appropriate expansion allowance indicated in the “Panel Finished Length” column above.

3.) Standard panel maximum length is 12'-0". Panel runs longer than 12'-0" will be split into multiple panels (lengths up to 16'-0" can be fabricated on *special request only*, and after review for additional cost due to handling the extended lengths).
RADIANT LINEAR EXTRUDED PANEL (AXO)

7" minimum above panel face
at supply/return and U-bends
5" minimum above panel face

Lay interconnecting loops horizontally approximately
3" above panel face

Interconnecting loop; 30" (+/-) length of
3/8" type "L" (1/2" OD) soft copper tube

Connection to supply
(even number passes, same ends)

Panel length
Width opening

RETURN BENDS AS REQUIRED

7" minimum above panel face
at supply/return and U-bends
5" minimum above panel face

Lay interconnecting loops horizontally approximately
3" above panel face

Interconnecting loop; 30" (+/-) length of
3/8" type "L" (1/2" OD) soft copper tube

Connection to supply
(odd number passes, opposite ends)

Panel length
Width opening

Example of interconnecting loop

Example of crossover

CLEARANCE AND SIZES

- For width opening, see Chart 1; for panel length, see Chart 2 -
- Standard maximum single panel length 12'-0" (up to 16'-0" on special request) -
- All miters, notches and cuts to be performed in field by installer -
- Grooved edge of panel assembly to be toward wall -

Aero Tech
RADIANT LINEAR EXTRUDED PANEL (AXO)

9" FLUTED (2 TUBE)
8-7/8" FACE WIDTH

8" FLUTED (2 TUBES)
7-15/16" FACE WIDTH

6" FLUTED (1 TUBE)
5-15/16" FACE WIDTH

STOCK EXTRUSIONS

AERO TECH
RADIANT LINEAR EXTRUDED PANEL (AX0)

9" SMOOTH (2 TUBE)
8-7/8" FACE WIDTH

8" SMOOTH (2 TUBES)
7-15/16" FACE WIDTH

6" SMOOTH (1 TUBE)
5-15/16" FACE WIDTH

OPTIONAL EXTRUSIONS
RADIANT LINEAR EXTRUDED PANEL (AX0)

6" FLUTED (1 TUBE)
5-15/16" FACE WIDTH

DRAPERY RECESS EXTRUSIONS
MINIMUM QUANTITY ORDER REQUIRED
(LONGER LEAD TIMES MAY APPLY)

WALL ANGLE
CPEX-0006
10’ LENGTHS

RECESS MOUNT FRAME
CPEX-0004
10’ LENGTHS

SURFACE MOUNT FRAME
CPEX-0001
12’ LENGTHS
RADIANT LINEAR EXTRUDED PANEL

- For width opening, see Chart 1 - For panel length, see Chart 2 - Face style as selected -

AEROTECH
RADIANT LINEAR EXTRUDED PANEL

12 GA GALVANIZED HANGER WIRE, 6" O.C. MAXIMUM
(FOR PANELS 24" WIDE AND WIDER)

WALL CHANNEL
BY GENERAL CONTRACTOR
CHICAGO METALLIC 55.18.065
OR EQUIVALENT

FIBERGLASS INSULATION

15/16" MINIMUM

PANEL ASSEMBLY STIFFENER
(NOT UTILIZED ON SINGLE
STRIP PANELS)

PANEL ASSEMBLY CLIP
(NOT UTILIZED ON SINGLE STRIP PANELS)

.505 ID COPPER TUBE
CRIMPED INTO PANEL

AERO TECH MFG INC
RADIANT PANEL ASSEMBLY

RECESS MOUNT FRAME CPEX-0004

GWB CEILING

RECESS MOUNT FRAME CPEX-0004

GWB CEILING APPLICATION

GWB CEILING

RECESS MOUNT FRAME, CPEX-0004

AERO TECH MFG INC, RADIANT PANEL ASSEMBLY

RECESS FRAME DETAIL

A FOR WIDTH OPENING, SEE CHART 1
B FOR PANEL LENGTH, SEE CHART 2
- FACE STYLE AS SELECTED -

AERO TECH
RADIANT LINEAR EXTRUDED PANEL

12 GA GALVANIZED HANGER WIRE, 6" O.C. MAXIMUM (FOR PANELS 24" WIDE AND WIDER)

FIBERGLASS INSULATION

PANEL ASSEMBLY STIFFENER (NOT UTILIZED ON SINGLE STRIP PANELS)

PANEL ASSEMBLY CLIP (NOT UTILIZED ON SINGLE STRIP PANELS)

.505 ID COPPER TUBE CRIMPED INTO PANEL

GWB CEILING

SURFACE MOUNT FRAME CPEX-0001

AERO TECH MFG INC RADIANT PANEL ASSEMBLY

SURFACE MOUNT APPLICATION A

12 GA GALVANIZED HANGER WIRE, 6" O.C. MAXIMUM (FOR PANELS 24" WIDE AND WIDER)

PANEL ASSEMBLY STIFFENER (NOT UTILIZED ON SINGLE STRIP PANELS)

FIBERGLASS INSULATION

PANEL ASSEMBLY CLIP (NOT UTILIZED ON SINGLE STRIP PANELS)

.505 ID COPPER TUBE CRIMPED INTO PANEL

FRAME SUSPENSION

AERO TECH MFG INC RADIANT PANEL ASSEMBLY

SURFACE MOUNT FRAME CPEX-0001

SUSPENDED MOUNT APPLICATION B

- FOR WIDTH OPENING, SEE CHART 1
- FOR PANEL LENGTH, SEE CHART 2
- FACE STYLE AS SELECTED
RADIANT LINEAR EXTRUDED PANEL

12 GA GALVANIZED HANGER WIRE, 6" O.C. MAXIMUM
(FOR PANELS 24" WIDE AND WIDER)

PANEL ASSEMBLY CUP
(NOT UTILIZED ON SINGLE STRIP PANELS)

FIBERGLASS INSULATION

WALL CHANNEL
BY GENERAL CONTRACTOR
CHICAGO METALLIC 55.18.065
OR EQUIVALENT (BOTH SIDES)

AERO TECH MFG INC
RADIANT PANEL ASSEMBLY

.505 ID COPPER TUBE
CRIMPED INTO PANEL

SOFFIT BULKHEAD

15/16" MINIMUM

SOFFIT APPLICATION

PANEL ASSEMBLY STIFFENER
(NOT UTILIZED ON SINGLE STRIP PANELS)

12 GA GALVANIZED HANGER WIRE, 6" O.C. MAXIMUM
(FOR PANELS 24" WIDE AND WIDER)

PANEL ASSEMBLY CUP
(NOT UTILIZED ON SINGLE STRIP PANELS)

.505 ID COPPER TUBE
CRIMPED INTO PANEL

CUSTOM ANGLED WALL MOULDING

AERO TECH MFG INC
RADIANT PANEL ASSEMBLY

CUSTOM ANGLED MOULDING,
ATTACHED TO CEILING T-BAR

ACOUSTIC CEILING PANEL

CEILING T-BAR
(MAIN AND BUTT CUT CROSS)

ANGLED MOUNT AND CUSTOM APPLICATION

PANEL CAN BE MOUNTED IN A VARIETY OF CUSTOM
WAYS INCLUDING, VERTICAL WALL MOUNTED
AND INVERTED MOUNTING

FOR WIDTH OPENING, SEE CHART 1
FOR PANEL LENGTH, SEE CHART 2
FACE STYLE AS SELECTED

AERO TECH
INTERCONNECTING LOOP; 30” (+/-) LENGTH OF 3/8” TYPE "L" (1/2" OD) SOFT COPPER TUBE, LAY HORIZONTALLY APPROXIMATELY 3” ABOVE PANEL FACE; BY INSTALLER

AERO TECH MFG INC RADIANT PANEL ASSEMBLY

"T" SUPPORT

AERO TECH MFG INC RADIANT PANEL ASSEMBLY

INTERCONNECTING LOOP; 30” (+/-) LENGTH OF 3/8” TYPE "L" (1/2" OD) SOFT COPPER TUBE, LAY HORIZONTALLY APPROXIMATELY 3” ABOVE PANEL FACE; BY INSTALLER

AERO TECH MFG INC RADIANT PANEL ASSEMBLY

1/16” THICK METAL STRIP FASTENED ON BOTH SIDES OF JOINT AT VERTICAL LEGS OF PANEL, TO SECURELY HOLD JOINT TIGHT. (ALLOW FOR EXPANSION, FOR TOTAL LENGTH OF ASSEMBLY, AT ENDS). ONLY RECOMMENDED FOR INDUSTRIAL APPLICATIONS.

AERO TECH
RADIANT LINEAR EXTRUDED PANEL

SUPPLY/RETURN CONNECTION 3/8" TYPE "L" (1/2" OD) SOFT COPPER TUBE; BY INSTALLER (EVEN NUMBER OF PASSES, SAME ENDS)

RETURN BEND, TYPICAL (SHIPPED LOOSE FOR FIELD INSTALL, OR FACTORY INSTALLED AS REQUESTED)

INTERCONNECT 30° +/- LENGTH 3/8" TYPE "L" (1/2" OD) SOFT COPPER TUBE; BY INSTALLER

SUPPLY/RETURN CONNECTION 3/8" TYPE "L" (1/2" OD) SOFT COPPER TUBE; BY INSTALLER (EVEN NUMBER OF PASSES, SAME ENDS)

SUPPLY/RETURN CONNECTION 3/8" TYPE "L" (1/2" OD) SOFT COPPER TUBE; BY INSTALLER (ODD NUMBER OF PASSES, OPPOSITE ENDS)

HEADERED SUPPLY/RETURN CONNECTION FOR LONG RUN CIRCUITS; BY INSTALLER 2 PASS HEADER; RECOMMENDED 3/4" OD COPPER TUBE 3 PASS OR MORE HEADERS; RECOMMENDED 1" OD COPPER TUBE

SINGLE PANEL CIRCUIT

MULTIPLE PANEL CIRCUIT

LONG RUN PANEL CIRCUIT

-- STANDARD MAXIMUM SINGLE PANEL LENGTH 12'-0" (UP TO 16'-0" ON SPECIAL REQUEST) --
-- ALL MITERS, NOTCHES AND CUTS TO BE PERFORMED IN FIELD BY INSTALLER --
-- GROOVED EDGE OF PANEL ASSEMBLY TO BE TOWARD WALL --
INSTALLATION

In a typical installation, the suspension system should consist of 3/4" wide wall molding and 15/16" wide main tees and butt cut cross tees. Other suspension systems may be used provided there is sufficient and uniform support around the periphery of the panel. The panel should lie on supports uniformly.

Cut panel to required length (panel standard maximum length is 12'-0", however lengths up to 16'-0" are provided upon special request), using a blade designed for non-ferrous metals (recommended, for circular saw use carbide tip blade with approximately 40 teeth on 7 1/4" diameter, for reciprocating saws use blade with 8 to 12 teeth per inch). Cut panels from face side, protecting the face from damage in all cases. Cut lengths allowing for expansion; panels up to 8'-0" should be 1/4" shorter than opening, panels 8'-1" to 12'-0" should be 3/8" shorter than opening (12'-1" to 16'-0" should be 1/2" shorter than opening).

Mark and cut any other features, miters, notches, etc. as required. Tubes that may be cut through can be lifted free from channel by carefully prying back the channel around the tube approximately 4 to 6 inches (do not puncture tubing).

Panels are supplied completely assembled, return bends shipped loose (unless specified otherwise) fabricated from 3/8" type “L” soft copper tubing.

Lift tube ends from channel, being careful not to kink tube, prior to placing panel in position.

Place panel in ceiling suspension system with grooved edge toward wall.

For all panel assemblies opening should be panel face width plus 3/8" (for example: an 18" wide panel made from three, 6" strips = opening of 18-1/8").

Aero Tech recommends the use of soft cotton gloves when handling panels.

A 12 gauge, hanger wire should be attached to stiffeners on the back of panels 24 inches in width or wider at 6'-0" O.C. maximum or every other stiffener (minimum two per panel). Panels over 40 inches in width should have two hanger wires on stiffeners at each end of the panel.

Connect panel to supply and return run outs using 3/8" type “L” soft copper tubing. Because Aero Tech panels utilize a .505 ID panel tubing, the 3/8" type “L” tubing can be soldered directly inside without the need for fittings or flaring.

Panels connected in series are connected with approximately 30" of 3/8" type “L” tubing formed into and over bent horseshoe configuration. Make connection with interconnecting loop laying horizontally approximately 3" above panel face. Install a ceiling Tee at panel joints to allow for expansion and cover cut edges. Make any other connection as required again using 3/8" type “L” soft copper tubing.

With panel in installed; place insulation on back of panel, as specified.

OPERATION

Start-up

Once boilers are operating and circulators are functioning, set control valves to the full flow position and gradually allow the system to come up to design temperature. Design temperature drop will only be achieved at the design load.

Balancing

Balancing for heating is most effectively done on a cloudy winter day.

Start at the farthest panel from the zone supply and establish the mean water temperature with a surface pyrometer. Adjust all other radiant panels to the same mean water temperature by adjusting the balancing valves.

Place automatic control valves in operation, calibrate room thermostat and set at design point. Check function of all valves.

Note: If any panel must be removed or repositioned during balancing, this should be done only by a qualified individual to prevent damage to panels and connections.

MAINTENANCE

Since there are no moving parts to the Aero Tech Radiant Ceiling System, there is normally no maintenance other than periodic cleaning. Aero Tech Panels have a wear-resistant, long-lasting baked enamel finish, which can be easily cleaned. They may be washed with a mild detergent cleaner applied with a sponge or other soft object. Avoid excessive moisture that can be trapped in joints. If dusty, a soft brush or vacuum should first be used. Rinse with a damp sponge using clean water. DO NOT use abrasives of any kind on the baked enamel finish.

Note: All Aero Tech products are packaged for interior storage only. Aero Tech ceiling products have an interior finish. Exercise care to protect panels from moisture and extremes in environmental conditions.
Benefits of Radiant Linear Extruded Aluminum (AXO) Panel

Since 1982 Aero Tech has developed and manufactured more than a million square feet of ceiling panels, which have been successfully installed in schools, universities, hospitals, laboratories, aircraft hangers, athletic facilities, office buildings and many other sites throughout the country.

Whether in original construction or modernization/remodeling, there are good reasons to choose Aero Tech radiant ceiling panels:

Compatibility
Aero Tech panels are available in a variety of combinations, allowing them to blend beautifully into virtually any architectural style.

Cost-Effective
Centrally located equipment simplifies and reduces maintenance and operating costs. Minimized air requirements for ventilation and dehumidification reduce costs for ductwork, fans and filters.

Ease of Construction
Mechanical equipment is not required at the outside walls. Mechanical equipment need not be located within the occupied space.

Permanence
Metal ceiling panels will last for the life of the building in which they are installed. There is no need to replace panels over the years.

Easy Maintenance
Aero Tech ceiling panels retain their original beauty with just an occasional cleaning.

Appearance
Aero Tech’s top quality, baked-on finishes resist fading and discoloration.

Incombustibility
Aero Tech’s aluminum panels are non-combustible.

- All Aero Tech Radiant Ceiling Panels are manufactured in a certified ISO9001:2008 facility.
- All Aero Tech Radiant Ceiling Panels are made and assembled in North Salt Lake, Utah, USA.
- All raw components are of US or NAFTA origin.
- All panel components are 100% recyclable.

Hydronic Radiant Panel Performance Certification

Aero Tech certifies that its Radiant Panels will perform equivalent to or exceed that of other hydronic radiant panels, under identical conditions.

Aero Tech has performed extensive testing of competitive panels in its permanent on site test room (1 of 2 in the country and the only one with temperature control of walls and floors to provide a constant average unheated surface temperature [AUST]). All panels were tested under identical conditions with regards to room, insulation, temperature control and instrumentation.

Performance values are intended for use directly in standard heat loss calculations and are from certified data based on 70 degrees F. AUST, natural convection and 1”, 3/4 PCF insulation on top of panel. Due to actual conditions, stated performance values can vary plus or minus 3%.