Appendix E
Supply Water Temperature Charts

Concrete — 4" Slab (12" on center)
65°F Room Setpoint Temperature

Note: Uponor’s recommended maximum fluid temperature for all concrete applications is 150°F, in accordance with the Uniform Building Code (UBC). This data assumes negligible downward loss in accordance with good insulation practices.

Concrete — 4" Slab (9" on center)
65°F Room Setpoint Temperature

Note: Uponor’s recommended maximum fluid temperature for all concrete applications is 150°F, in accordance with the Uniform Building Code (UBC). This data assumes negligible downward loss in accordance with good insulation practices.
Appendix E
Supply Water Temperature Charts

Concrete — 4" Slab (6" on center)
65°F Room Setpoint Temperature

**Note:** Uponor’s recommended maximum fluid temperature for all concrete applications is 150°F, in accordance with the UBC. This data assumes negligible downward loss in accordance with good insulation practices.

1½" Poured Floor Underlayment (12" on center)
65°F Room Setpoint Temperature

**Note:** Uponor’s recommended maximum fluid temperature for all concrete applications is 150°F, in accordance with the UBC. Consult underlayment manufacturer’s recommended temperature limitations. This data assumes negligible downward loss in accordance with good insulation practices.
Appendix E
Supply Water Temperature Charts

1½” Poured Floor Underlayment (9” on center)
65°F Room Setpoint Temperature

Note: Uponor’s recommended maximum fluid temperature for all concrete applications is 150°F, in accordance with the UBC. Consult underlayment manufacturer’s recommended temperature limitations. This data assumes negligible downward loss in accordance with good insulation practices.

1¼” Poured Floor Underlayment (6” on center)
65°F Room Setpoint Temperature

Note: Uponor’s recommended maximum fluid temperature for all concrete applications is 150°F, in accordance with the UBC. Consult underlayment manufacturer’s recommended temperature limitations. This data assumes negligible downward loss in accordance with good insulation practices.
Appendix E
Supply Water Temperature Charts

Joist Heating — No Plates (8" on center)
65°F Room Setpoint Temperature

Floor Covering R-value ($R_v$)
This temperature chart has already factored in the R-value for a ¾-inch plywood subfloor.

Note: The maximum fluid temperature for all joist applications is 180°F. Uponor’s recommended maximum design temperature is 165°F. This data assumes negligible downward loss in accordance with good insulation practices.

Joist Heating — Double-groove Aluminum Plates (8" on center)
65°F Room Setpoint Temperature

Floor Covering R-value ($R_v$)
This temperature chart has already factored in the R-value for a ¾-inch plywood subfloor.

Note: The maximum fluid temperature for all joist applications is 180°F. Uponor’s recommended maximum design temperature is 165°F. This data assumes negligible downward loss in accordance with good insulation practices.
Appendix E
Supply Water Temperature Charts

**Joist Heating — Joist Trak™ (8” on center)**

65°F Room Setpoint Temperature

This temperature chart has already factored in the R-value for a ¾-inch plywood subfloor.

**Floor Covering R-value \( (R_v) \)**

Note: The maximum fluid temperature for all joist applications is 180°F. Uponor’s recommended maximum design temperature is 165°F. This data assumes negligible downward loss in accordance with good insulation practices.

**Radiant Ceiling — Joist Trak (8” on center)**

65°F Room Setpoint Temperature

This temperature chart has already factored in the R-value for a ¾-inch plywood subfloor.

Note: The maximum fluid temperature for all joist applications is 180°F. Uponor’s recommended maximum design temperature is 165°F. This data assumes negligible downward loss in accordance with good insulation practices.
Appendix E
Supply Water Temperature Charts

**Quik Trak® Radiant Floor (7" on center)**
65°F Room Setpoint Temperature

**Floor Covering $R_v$**

- $R_v = 0.25$
- $R_v = 0.50$
- $R_v = 0.75$
- $R_v = 1.0$
- $R_v = 1.5$
- $R_v = 2.0$
- $R_v = 2.5$
- $R_v = 3.0$

**Note:** Uponor’s recommended maximum design temperature is 165°F.

**Radiant Ceiling with Joist Trak Plates (8" on center)**

- ⅝” Sheetrock

**Heat Loss per Square Foot (BTU/h/ft²)**

- 80°
- 90°
- 100°
- 110°
- 120°
- 130°
- 140°
- 150°
- 160°

**Supply Water Temperature**

- 80
- 90
- 100
- 110
- 120
- 130
- 140
- 150
- 160
- 170
- 180

**Differential Temperature 20°F**

- 5
- 10
- 15
- 20
- 25
- 30
- 35
- 40
- 45
- 50

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**Supply Water Temperature Charts**

- BTU/h/ft²
- Quik Trak® Radiant Floor (7" on center)
- Radiant Ceiling with Joist Trak Plates (8" on center)
Appendix E
Supply Water Temperature Charts

Radiant Ceiling with Single-groove Aluminum Plates (12” on center)
70°F Room Setpoint Temperature

This chart is based on installations using single-groove aluminum heat-emission plates installed at 12 inches on center with ½” gypsum sheetrock. This chart is applicable for ceiling heights up to 12 feet.

Notes:
1. Chart lines represent ½” and ¾” sheetrock.
2. Do not exceed 120°F supply water temperature under gypsum sheetrock.

Quik Trak Radiant Wall (7” on center)
70°F Room Setpoint Temperature

*Exceeds maximum supply temperature of 120°F for Uponor radiant ceiling applications.

Exceeds supply water temperature at 10°F supply/return differential temperature
Exceeds supply water temperature at 20°F supply/return differential temperature
Exceeds supply water temperature at 10°F supply/return differential temperature
Exceeds supply water temperature at 20°F supply/return differential temperature
Exceeds supply water temperature at 10°F supply/return differential temperature

Notes:
1. Chart lines represent ½” supply water temperature at 20°F supply/return differential temperature
2. Do not exceed 120°F supply water temperature under gypsum sheetrock.