



WarmlyYours

Radiant Heating Systems

Experts Since 1999

The Complete Guide to Electric Radiant Heat Under Wood Floors

For Homeowners & Flooring Professionals

Comfort engineered beneath every step.

Trusted by Professionals. Loved by Homeowners.

Since 1999, WarmlyYours has been North America's most trusted name in electric radiant heating — combining engineering precision with unmatched customer care.

26 Yrs

Of Expertise

Leading the radiant heating industry since 1999, constantly innovating and refining our solutions.

300K+

Installations
Worldwide

Our heating systems bring comfort to homes and businesses across the globe.

96.8%

Customer
Satisfaction

Our commitment to quality and service ensures happy customers worldwide.

24/7

Technical Support

Dedicated US-based team ready to assist whenever you need it.

25 Yrs

Warranty Coverage

We stand by our products with industry-leading warranties for your peace of mind.

Inside This Guide

A comprehensive resource covering everything from material selection to system commissioning — designed for both first-time homeowners and seasoned flooring professionals.

Why Radiant
Heat Works
Under Wood
Floors

Choosing the
Right Wood
Species & Cut

Selecting the
Right Heating
System

Step-by-Step Installation
Techniques

Temperature Controls &
Sensors

Why Radiant Heat Belongs Under Your Wood Floors

Smarter, healthier, and more efficient — here's why radiant is the preferred choice of top professionals.

01

Energy Efficiency Benefits

Even, whole-floor warmth with no cold spots — and up to 30% lower heating costs than forced-air systems.

02

Health & Comfort Advantages

No circulating dust or allergens — just silent, clean warmth rising gently from the ground up.

03

Increased Home Value

A feature buyers notice and pay for — radiant heating consistently drives stronger resale values.



Built to the Highest Standards

Our Industry Partners

NWFA (National Wood
Flooring Assoc.)

NALFA (North American
Laminate Flooring Assoc.)

RPA (Radiant
Professionals Alliance)

Launstein Hardwood
Floors (Testing Partner
since 2004)

Why Standards Matter

These standards protect clients, installations, and your professional reputation.



Protects your warranty and your client's investment



Shields you from professional liability and costly disputes



Builds lasting client confidence and long-term trust

Electric vs. Hydronic Systems



Electric Advantages

- Uniform heating with no hot/cold spots
- Maintenance-free operation
- Minimal floor height impact (as thin as 1/8")
- Precise temperature control
- Fast response time with proper controls
- Simpler installation process



Hydronic Considerations

- Risk of temperature fluctuations
- Potential for leaks and water damage
- Requires balancing and maintenance
- Higher installation complexity
- Longer heating cycle
- Greater floor height requirements

① For wood floor installations, electric systems offer significant advantages in precision temperature control—critical for maintaining wood stability and preventing damage from temperature fluctuations.

Choosing the Right Wood

Gold Standard Species (Launstein Tested)

- **White Oak:** Excellent stability, widely available, versatile appearance
- **American Cherry:** Beautiful grain pattern, naturally stable performance
- **Walnut:** Premium appearance with rich coloration, good thermal stability
- **Mesquite:** Extremely stable with unique character and grain patterns
- **Black Cherry:** Consistent performance with elegant aging characteristics

Use With Caution — Engineered Alternatives Recommended

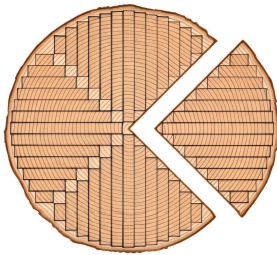
- **Hickory:** High movement potential, use narrower boards only ($\leq 3"$)
- **Maple:** Requires careful moisture control and monitoring
- **Beech:** Highly sensitive to humidity changes, prone to movement
- **Brazilian Cherry:** Extreme hardness with significant movement issues



Cut & Width — The Details That Matter

Preferred Cuts for Stability

Quarter-sawn



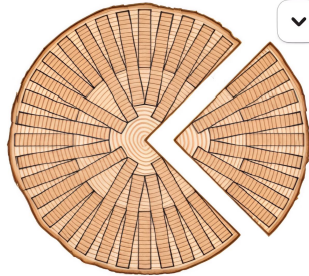
Quartersawn

Although some boards show quartersawn grain, most boards show only rift-sawn grain.

Most stable option, allows wider boards (up to 7" possible)

Growth rings perpendicular to board face for minimal expansion

Rift-sawn



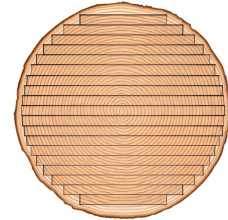
Rift-sawn

Every board shows all quartersawn grain, with no rift-sawn grain at all.

Good stability with consistent grain appearance

Growth rings at 30–60° angle to board face

Plain-sawn



Plain-sawn

Boards vary by position, yielding a mixed bag of plain-sawn, quartersawn, and rift-sawn grain.

Use with caution — limit to narrow widths only ($\leq 3"$)

Most common cut but least stable with radiant heat

Width Recommendations

- 1 Solid Wood: 3" or less for maximum stability
- 2 Engineered: Up to 5" acceptable with proper installation
- 3 Quarter-sawn: Up to 7" possible due to superior stability
- 4 Consider beveled edges to help disguise any minor gapping

i The narrower the board, the more stable it will be with temperature changes from radiant heat systems.



Solid vs. Engineered Wood

Solid Hardwood

- Traditional choice with classic appeal
- Requires stable species selection
- Strict temperature limits ($\leq 80^{\circ}\text{F}$, ideally 75°F)
- 7-day minimum acclimation required
- Greater expansion/contraction potential

Engineered Wood

- Superior dimensional stability with radiant heat
- More species options available
- Easier installation with fewer constraints
- Better heat transfer properties
- Can handle slightly higher temperatures ($\leq 85^{\circ}\text{F}$)

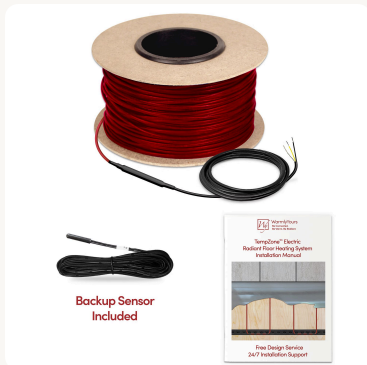
Thickness Considerations

- Solid Wood: $\frac{3}{4}$ " maximum thickness
- Engineered: $\frac{1}{2}$ " to $\frac{5}{8}$ " ideal for heat transfer
- Laminate: 8mm to 12mm recommended
- Lower R-value = better heat transfer

- ① For radiant heat applications, engineered wood generally outperforms solid hardwood due to its cross-ply construction that restricts movement while maintaining the authentic look of real wood. Confirm max temperatures, setback rules, and nail rate for nail-down applications.

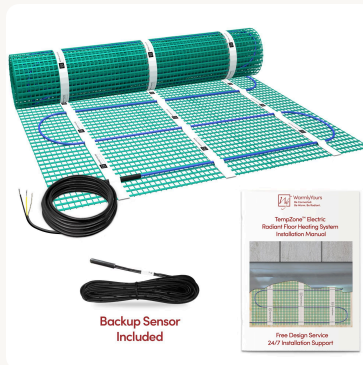
Floor Heating Product Overview

TempZone Cable



Fully customizable layouts for nailed-down solid hardwood — precision where it matters most.

TempZone Mats



Pre-spaced for fast, consistent coverage in glued-down and embedded installations.

Environ Mats



Ultra-thin mats designed for floating floors — the simplest path to radiant comfort.

All Systems Include:

1

Back-up Sensor

2

24/7 support

3

Installation planning assistance

The Right System for Every Floor

TempZone Cable (Sleeper Method)

Best for: Nailed-down solid hardwood installations

Cables secured between wooden sleepers and embedded in self-leveling cement.

Professional Advantages:

- Traditional installation method
- Works with any nailable hardwood
- Precise cable placement control

TempZone Mats (Embedded Method)

Best for: Glued-down engineered wood installations

Heating system embedded in SLC with wood flooring glued on top.

Key Considerations:

- Adhesive must be radiant-compatible
- Complete SLC curing is essential
- Faster installation than cable systems

Environ Mats (Floating Method)

Best for: Floating laminate & engineered wood floors

Ultra-thin mats placed under floating flooring for the simplest install.

NALFA Guidelines:

- Surface temperature $\leq 85^{\circ}\text{F}$
- 48-hour acclimation minimum
- Radiant-compatible underlayment — ThermalSheet

Installation, Done Right

Every WarmlyYours system is engineered for precision. Follow these five steps to ensure a flawless installation that performs beautifully for decades.

01

Proper Subfloor Preparation

A flawless installation begins beneath the surface. Clean and degrease thoroughly, then conduct NWFA moisture testing — concrete ≤ 3 lbs/1000 sq ft, plywood $\leq 12\%$, OSB $\leq 10\%$ — and verify level and structural integrity before proceeding.

03

Sensor Placement

Accurate sensing is what makes the system intelligent. Install primary and backup floor sensors 6–8" into open loops between heating wires, positioned away from direct sunlight for reliable readings.

05

Flooring Installation

The finish deserves the same care as the foundation. Allow SLC to cure fully, then use radiant-compatible adhesive for glue-down, run nailed floors perpendicular to sleepers, and maintain proper expansion gaps for floating floors.

02

Cable & Mat Installation

Precision placement defines performance. Secure cable between sleepers for the sleeper method, prevent cable float with tape for embedded applications, or lay Environ mats cable-side down for floating floors.

04

Self-Leveling Cement Application

This step sets the foundation for everything above it. Prime per manufacturer specs, mix SLC to exact instructions, and pour carefully — standard SLC tools can damage heating elements, so use the right technique every time.



Temperature Control

Solid Hardwood
Max 80°F / Ideal
75°F

Engineered
Wood
Max 85°F

Laminate
Max 85°F

Thermostat Requirements

Floor Sensor
Required for wood floors

Temp Limiting
Prevents overheating

Gradual Change
Non-programmable or
smart

GFCI Protection
For electrical safety



System Commissioning

1 Start at Room Temp

Begin at ambient
temperature (min 65°F)

2 Gradual Increase

Raise 2–3°F per day max

3 Reach Target Temp

Monitor for floor
movement

4 Seasonal Adjustments

Make gradual changes
between seasons

Key Guidelines at a Glance

The details that separate a good installation from a great one. Keep these benchmarks in mind at every stage of your project.

1

Choose Materials Wisely

- Select stable wood species (White Oak, American Cherry, Walnut)
- Consider engineered wood for superior stability
- Opt for narrower boards ($\leq 3"$ for solid, $\leq 5"$ for engineered)
- Quarter-sawn cuts provide maximum stability

2

Installation Best Practices

- Match system to installation method (TempZone for embedded, Environ for floating)
- Thoroughly test moisture levels before installation
- Install dual floor sensors for redundancy
- Ensure proper acclimation (7+ days for hardwood, 48+ hours for laminate)

3

System Management

- Use floor-sensing thermostats with temperature limiting
- Never exceed recommended temperature limits (80°F for solid, 85°F for engineered)
- Maintain consistent humidity between 30–50% year-round
- Make gradual temperature changes (2–3°F per day maximum)

Begin Your Project with Confidence.

Whether you're a homeowner envisioning your dream floor or a professional specifying your next installation — WarmlyYours is ready to help.



Request a Custom Quote

Our online quote tool delivers a tailored heating plan and precise cost estimate for your specific project — at no cost and no obligation.



Speak with a Specialist

Our US-based technical team is available 24/7 to guide you through product selection, system design, and installation support.



Access Our Resource Library

Download installation manuals, specification sheets, and step-by-step video guides at [warmlyyours.com](https://www.warmlyyours.com).



WarmlyYours

Radiant Heating Systems. Expertly Engineered Since 1999.

(800) 875-5285

info@WarmlyYours.com

warmlyyours.com

Available to homeowners and professionals across North America.