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Waterproofing an Electric Floor Heating Install: Curbless Shower

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Why Curbless?

- Easy entry and exit
- Compliant with Universal Design
- Easy to clean
- Provides a seamless look
- Some spaces lend themselves to a barrier-free installation

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Why Waterproof?

- Eliminates the need for the entire floor to slope toward the drain.
- Prevents water flowing into spaces below the bathroom.
- Provides a margin of safety if drain gets plugged.

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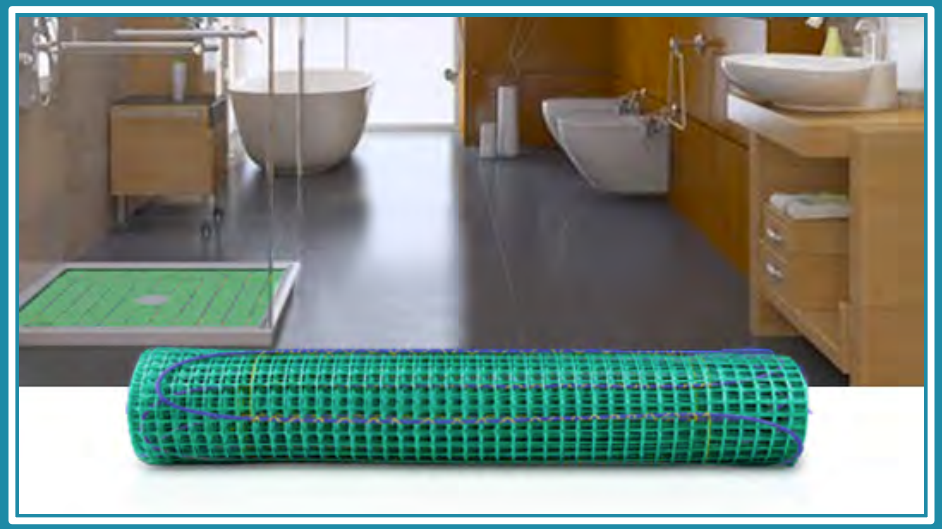
Why Radiant Heat?

- Hot water won't heat an entire shower floor.
- Stone and marble shower benches can be too cold to use.
- Radiant heating will heat all shower surfaces (floor, walls, door, and even you).
- GFCI protection supplied by the thermostat



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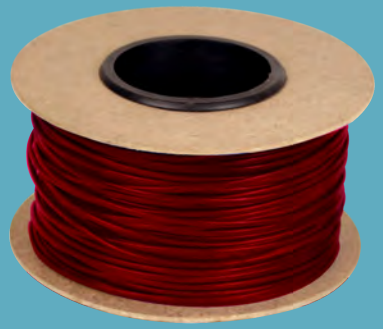
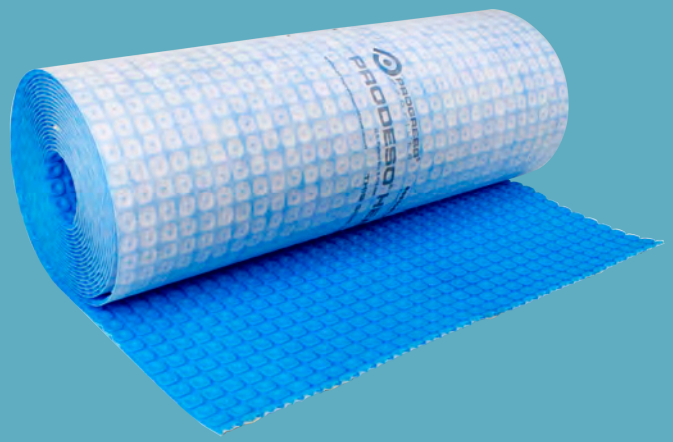
Materials Required for Waterproof Floor Heating

TempZone™ Heating Cable	Prodeso Membrane	ProBand
		

Our TempZone™ Floor Heating Cable has cULus approvals for installations in wet locations.

Note: The installation method outlined here is applicable to both remodeling or new construction projects.

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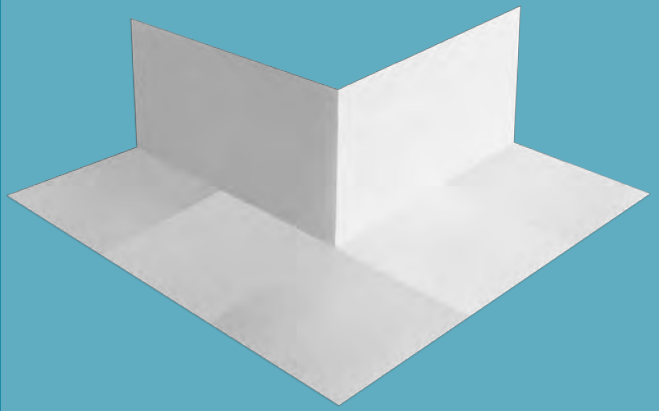
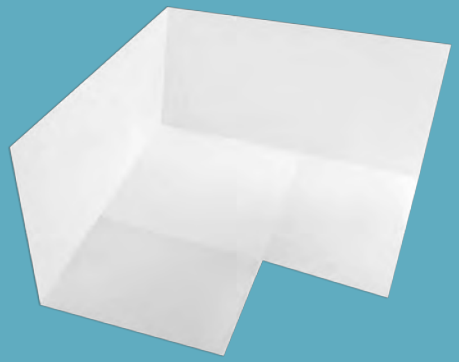
Required Products

ProBand Roll	Outside Corner	Inside Corner
		

Note: All items are installed using un-modified thinset.

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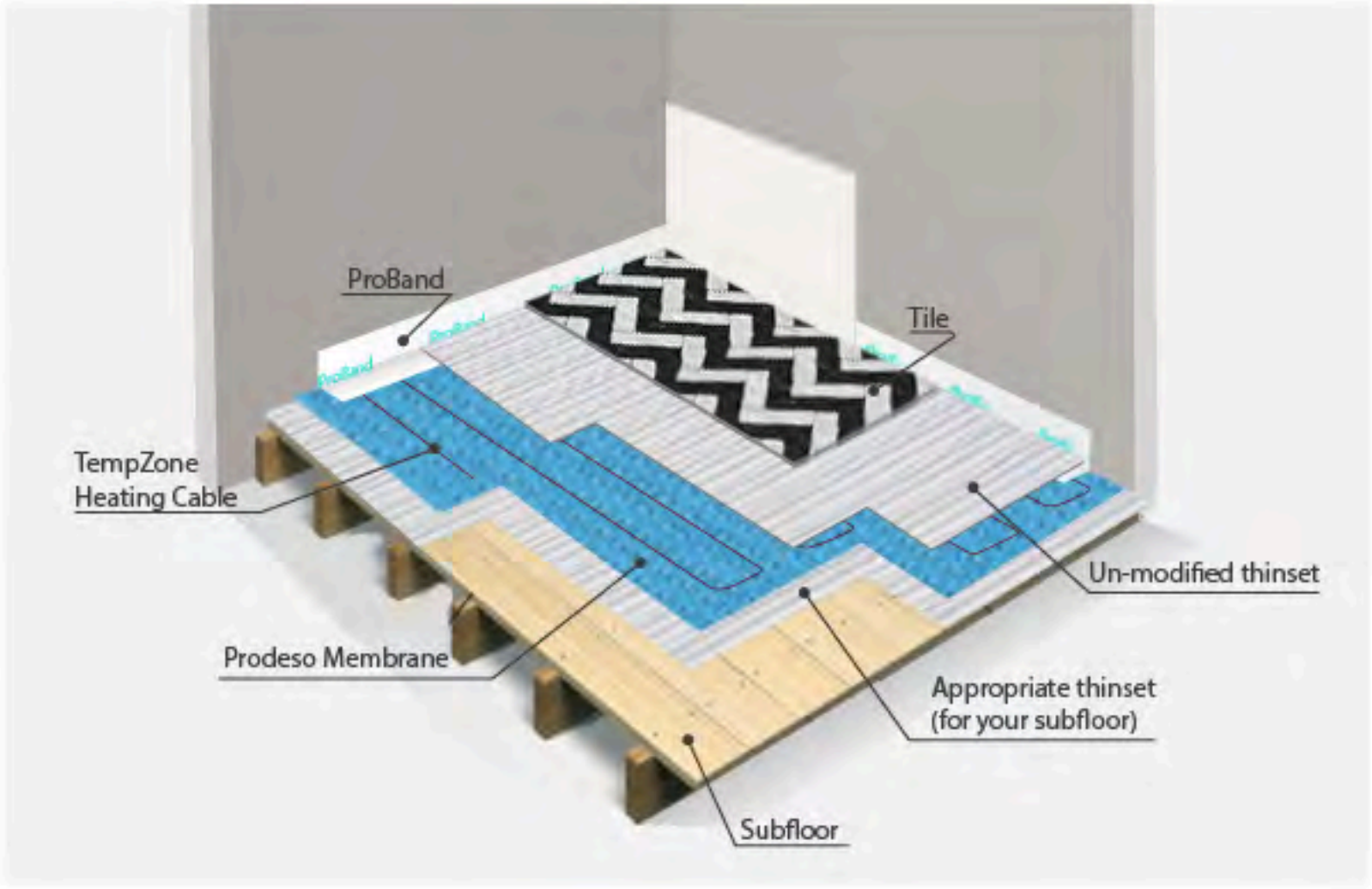
System Cross-section



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Project Overview

Room/Floor Dimensions

Entire Room: 60 sq. ft.
Prodeso: 55 sq. ft. of Prodeso
Total heated area: 50 sq. ft. of heated area
Bathroom: Approx. 38 sq. ft. heated area
Shower: 12 sq. ft.

Power Requirements

Heating System: TempZone Cable
Total Wattage: 592
Total Amperage: 5
Required Breakers: (1) 15 amp non-GFCI Breaker

System Electrical Consumption

Operating cost for this system is approximately $0.05 per hour.

Calculation is based on the national average of $0.08 per kWh.
Consumption may vary based on individual conditions.

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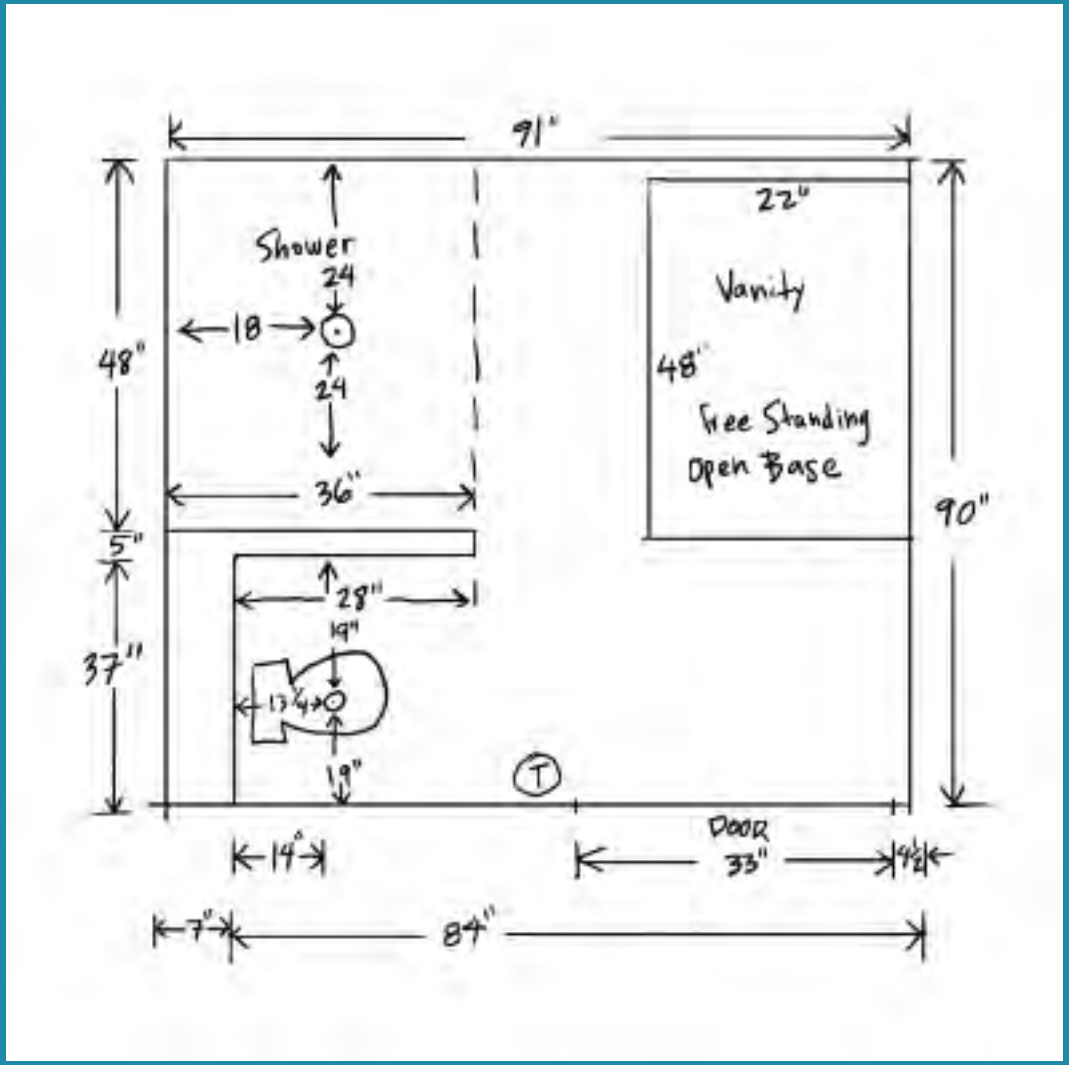
Project Overview

- Dimensions
- Location of power for the thermostat
- Drain location
- Permanent fixture locations
- Toilet location
- Door location
- Any air vents



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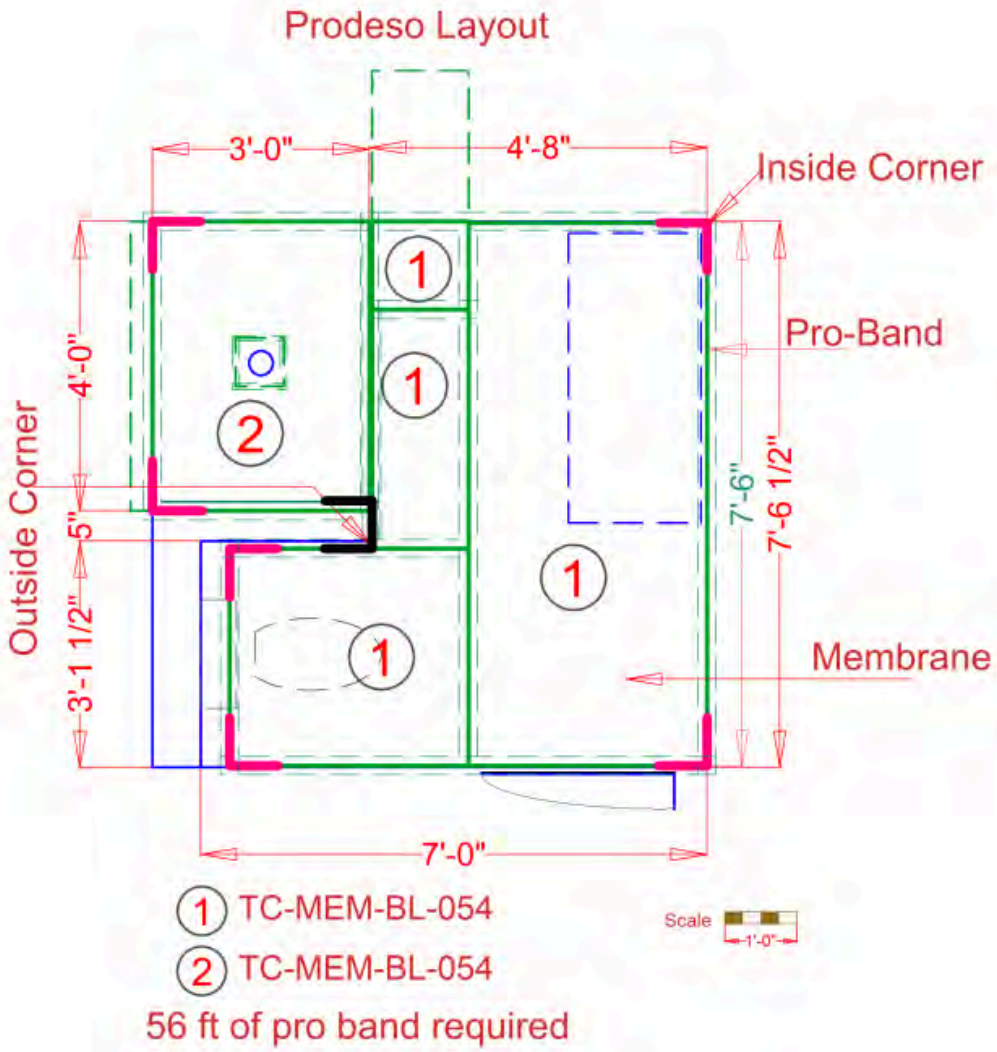
SmartPlan - Prodeso



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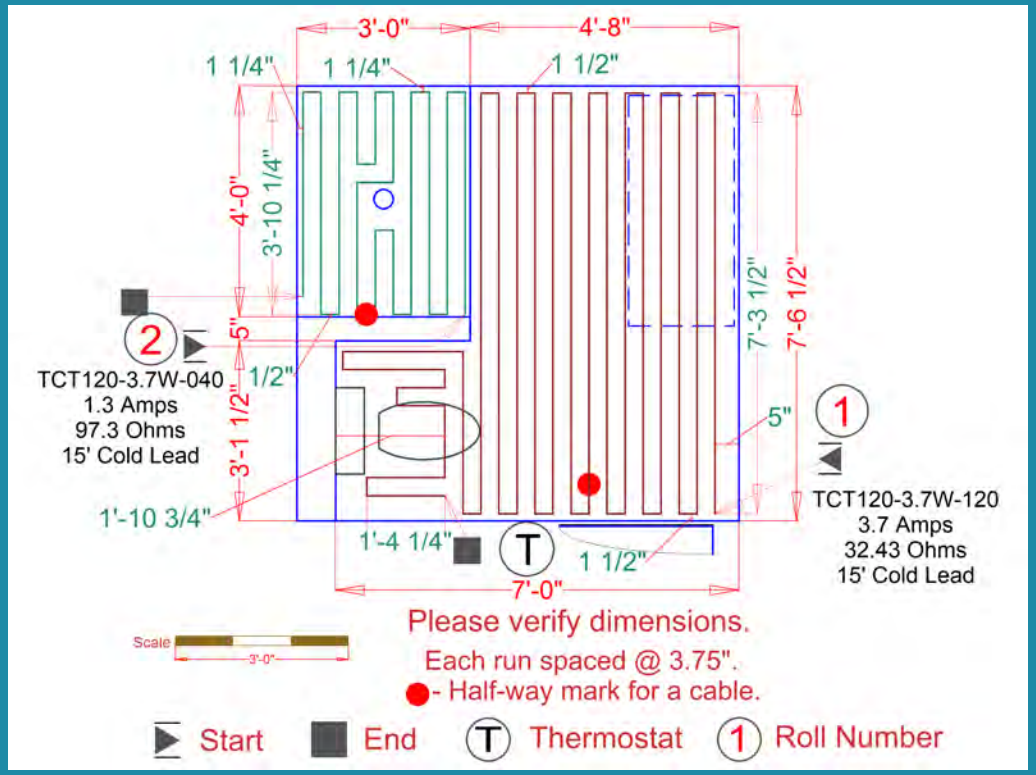
SmartPlan - Cable

- SmartPlan includes an installation plan, an electrical plan, and an itemized quote.
- Location of red DOTS on plan correspond with the halfway point of the wire on the spool.
- Use the dot on the plan and the marking on the cable to verify proper cable usage.



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Test Your System

- Testing the floor heating system with an ohmmeter at every stage of installation will allow you to be certain that the heating element is functioning properly.

- The Circuit Check is a troubleshooting device for installation that will alert you if the wire is damaged.

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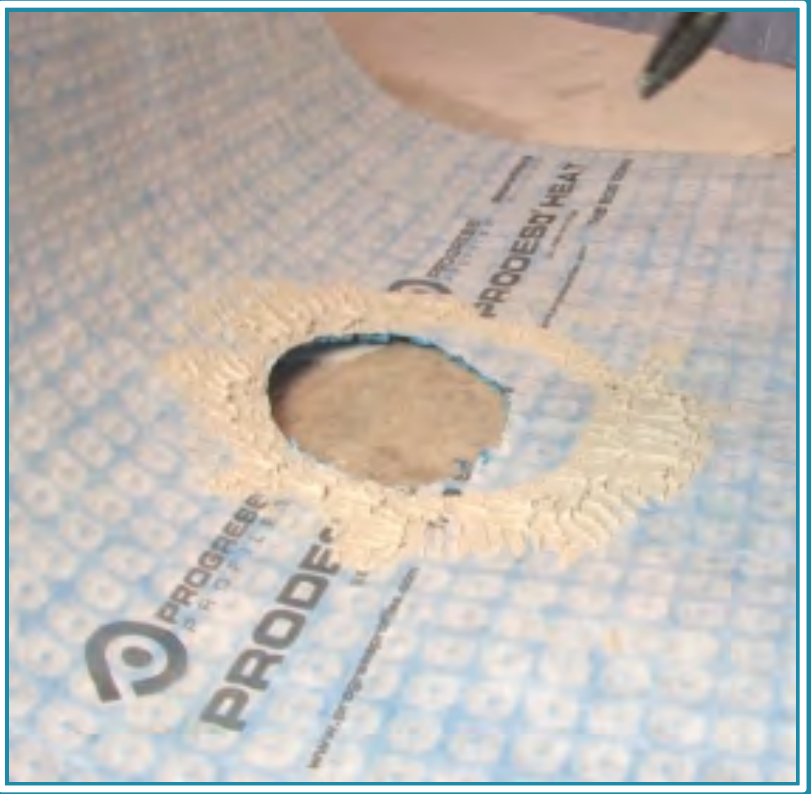
Shaping the Prodeso

Measure twice, cut once.



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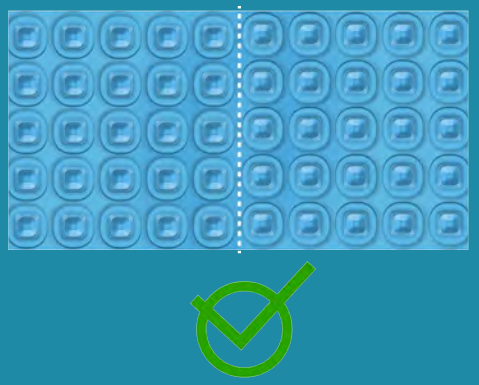
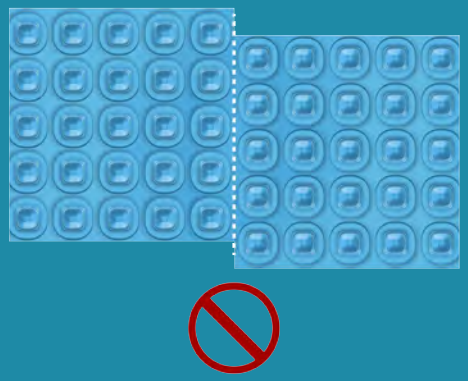
Dry Fitting the Membrane

- Once the area is measured and the Prodeso is cut, it's time to dry fit the membrane on the floor.
- Use the WarmlyYours SmartPlan to help make the process as smooth, and as accurate, as possible.
- Ensure that you have the right amount of membrane before installation.
- Make sure the studs of the different sections of membrane line up correctly.





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Thinset by Subfloor Type

- Plywood or Cement Based: Latex Modified Portland Cement Mortar (thinset) ANSI A118.11
- Gypsum/Anhydrite Based: Unmodified thinset Mortar ANSI A118.1
- Existing Vinyl Flooring: Fast Setting Latex Modified Portland Cement Mortar (thinset) ANSI A118.4 – A118.15
- The vapor management properties of Prodeso will also help keep any moisture from your subfloor in check.

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Cable Installation

- This can be installed over pitched mud-beds or pre-fabricated shower bases.
- A separate cable for the shower is optional but recommended.
- All cable connections terminate at the thermostat.
- Do not attach multiple cables together in a “daisy chain.”

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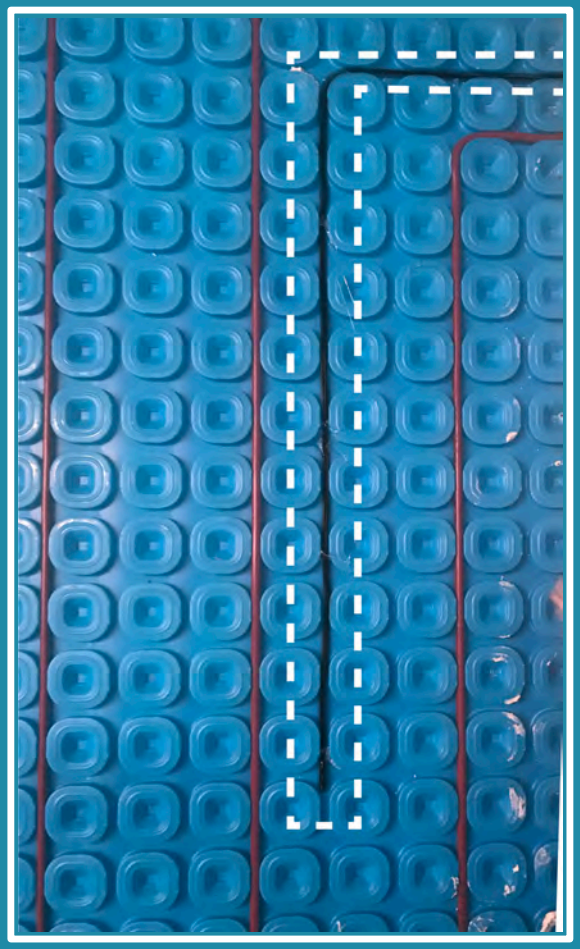
Floor Sensor

- Sensor located in thermostat box.
- Test sensor with ohmmeter.
- Install sensor at least 6” into open loop.
- Never run sensor wire in same conduit as cold leads.
- Never contact a heating wire.



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Waterproofing With ProBand

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Shower Flooring Material

The minimum size for tiles installed with Prodeso is 2” X 2”.

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Mechanical Levelers

PRO Tip: install tile using mechanical levelers to prevent lippage.

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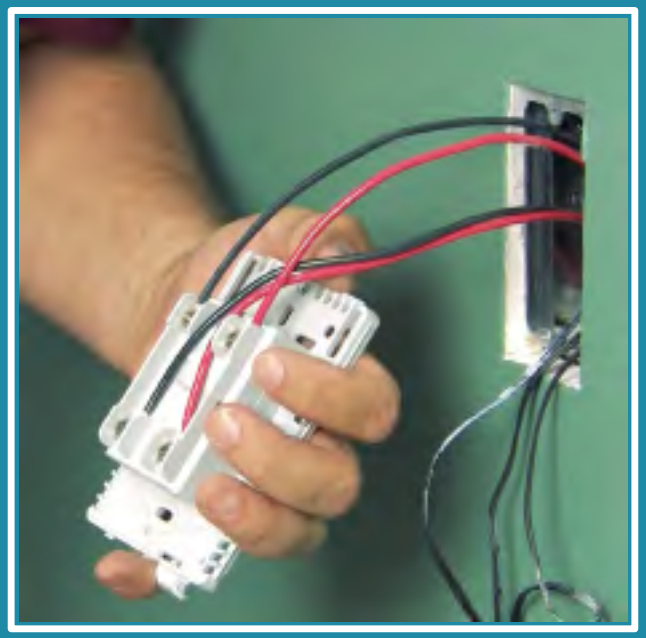
Install Thermostat

- Install wiring per local electrical/building codes.
- Local code may require that this is done by a licensed electrician.



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Finished Shower

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Waterproofing Bathroom Completed

Common Questions

Q: When can I turn on the heating system?

A: When the thinset embedding the cable and adhering the tile has cured.

Q: When will it be cured?

A: Always defer to the instructions provided by the manufacturer (typically on the bag).

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Project Costs

Heating Cables	Qty.	MSRP
Heating cables (TCT120-3.7W-040< TCT120-3.7W-120)	2	$400
Control		
Thermostat	1	$199
Accessories		
ProBand Outside Corner	2	$18
ProBand Inside Corner	6	$54
ProBand Roll	4	$116
Prodeso 54 sq.ft. Membrane	2	$318
Circuit Check	2	$30
	Total:	$1,135

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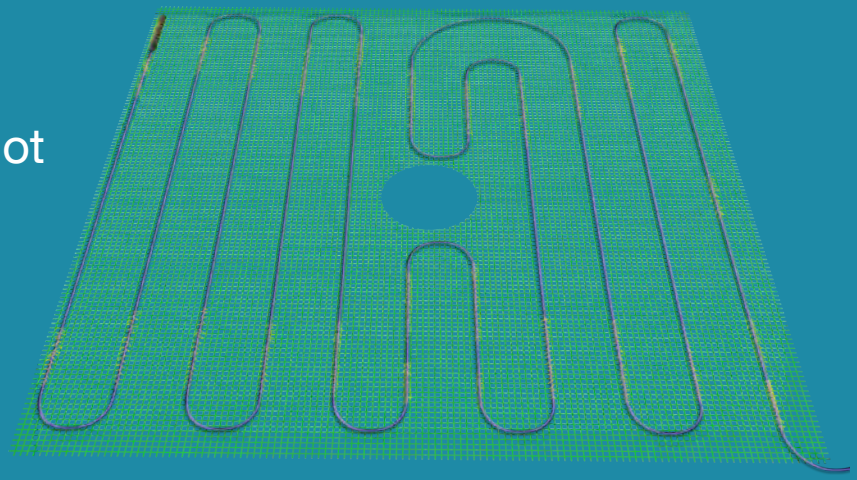
For Non-Waterproof Floor

TempZone™ Shower and Bench Mats are an additional floor heating option for showers.

- Approved for wet areas but typically not used for waterproof installations
- Pre-made hole for shower drain
- 15 watts per sq. ft.



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Specs for TempZone Shower and Bench Mats

120V TempZone™ SHOWER BENCH Mats (TWIN)

For Tile, Stone and engineered hardwood floor warming applications

ITEM#	WIDTH	LENGTH	SQ. FT	WATTAGE	AMPERAGE	MSRP	
TRT120-1.0x2.7	11.5”	32”	2.6	39	0.33	$51.00 USD	$61.00 CAD
TRT120-1.3x2.7	16.0”	32”	3.6	54	0.45	$71.00 USD	$85.00 CAD

120V TempZone™ SHOWER BENCH Mats (TWIN)

For Tile, Stone and engineered hardwood floor warming applications

ITEM#	WIDTH	LENGTH	SQ. FT	WATTAGE	AMPERAGE	MSRP	
TRT120-1.0x2.7	32”	32”	7.1	107	0.89	$135.00 USD	$162.00 CAD
TRT120-1.3x5.0	32”	60”	13.3	200	1.67	$226.00 USD	$271.00 CAD
TRT120-4.0x4.0	48”	48”	16.0	240	2.00	$256.00 USD	$307.00 CAD

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Additional Resources

North Carolina State University Curbless Showers Installation Guide: https://goo.gl/q1zh6q

North Carolina State University QAP Bathroom Tech Sheet https://goo.gl/xiF2Jw

John Bridge Tile Forum: https://goo.gl/Bhm1uF

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