

## For Residential or Commercial Radiant Heating, Cooling, and Snow Melt Applications

Job Name \_\_\_\_\_

Contractor \_\_\_\_\_

Job Location \_\_\_\_\_

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor's P.O. No. \_\_\_\_\_

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# RadiantPERT™ Tubing

Sizes: 3/8" (9.5 mm)  
1/2" (12.7 mm)  
5/8" (15.9 mm)  
3/4" (19.1 mm)  
1" (25.4 mm)

Watts Radiant's RadiantPERT is a 5-layer PE-RT (polyethylene raised temperature) tubing used for radiant heating, cooling, snow melting, and distribution piping. RadiantPERT is manufactured with an integral ethylene vinyl alcohol (EVOH) DIN Standard O2 barrier that limits oxygen diffusion through the walls of the tubing to less than 0.10g/m3/day at 104°F (40°C) water temperature. 5 layer RadiantPERT offers a protective PE-RT layer to the EVOH.

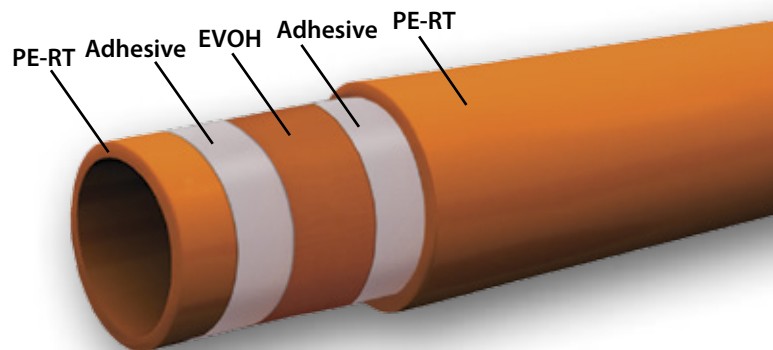
## Specifications

Operating Temperature & Pressure	
Max. Temperature	Max. Pressure
180°F (82.2°C)	80 psi (5.5 bar)
73.4°F (22.7°C)	160 psi (11.0 bar)

System shall be installed using Watts Radiant RadiantPERT tubing. All connections shall be made using Watts Radiant's CinchClamp, CrimpRing, or Compression fittings of corresponding size and in accordance with all corresponding installation guidelines.

## Installation

RadiantPERT must be installed in accordance with all Watts Radiant installation procedures, including information provided in Watts Radiant's RadiantPEX®, RadiantPERT & RadiantPEX-AL™ Installation Manual.



## Codes Listings and Standards

- RadiantPERT is certified to ASTM F2623 for Polyethylene of Raised Temperature (PE-RT) SDR 9 Tubing by NSF and CSA
- RadiantPERT is PPI TR-4 listed at 73°F and 180°F
- RadiantPERT is tested and listed to Standard NSF-14(rfh)
- RadiantPERT is certified to the Uniform Mechanical Code by NSF



RadiantPERT Tubing Specifications							
Qty	Model #	Description in. (mm)	Nominal I.D. in. (mm)	Nominal O.D. in. (mm)	Stick and Coil Lengths ft. (m)	Min. Bend Radius in. (mm)	Fluid Capacity (Gal/100')
	PTO32061	3/8 (9.5) RadiantPERT	0.35 (8.89)	.5 (12.7)	600 (182.9)	2.5 (63.5)	0.53 (2.4 l)
	PTO32081	1/2 (12.7) RadiantPERT	0.475 (12.06)	.625 (15.87)	300 (91.4) / 1000 (304.8)	3.125 (79.37)	0.96 (4.4 l)
	PTO32101	5/8 (15.9) RadiantPERT	0.574 (14.57)	.750 (19.04)	500 (152.4) / 1200 (362.8)	3.75 (95.25)	1.39 (6.3 l)
	PTO32121	3/4 (19.1) RadiantPERT	0.671 (17.04)	.875 (22.22)	20 (6.09) / 300 (91.4) / 500 (152.4) / 1200 (362.8)	4.375 (111.12)	1.89 (8.6 l)
	PTO32161	1 (25.4) RadiantPERT	0.863 (21.92)	1.125 (28.57)	20 (6.09) / 300 (91.4)	5.625 (142.87)	3.12 (14.2 l)

## CAUTION

This Engineering Sheet is not intended to provide full installation instructions and safety information. In order to avoid property damage or injury, please refer to the complete installation manual and product safety information provided with the product.

**WattsRadiant™**  
Floor Heating & Snow Melting

A Watts Water Technologies Company

Watts Radiant product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Radiant Technical Service. Watts Radiant reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts Radiant products previously or subsequently sold.



USA: Springfield, MO • Tel. (800) 276-2419 • Fax: (417) 864-8161 • [www.wattsradiant.com](http://www.wattsradiant.com)

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# RadiantPERT™

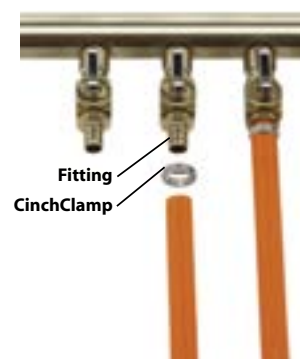
Polyethylene Raised Temperature Tubing with Oxygen Barrier

Make the Advanced Choice  
for hydronic heating, cooling, snow melting and distribution piping

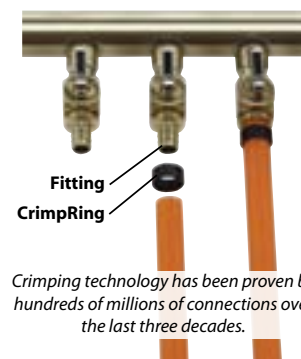
- Greater Flexibility
- Proven Performance
- 30 year track record
- Rated to 180°F at 80 psi

RadiantPERT uses the same fast and reliable Watts Radiant connection systems that have been used with PEX for years.

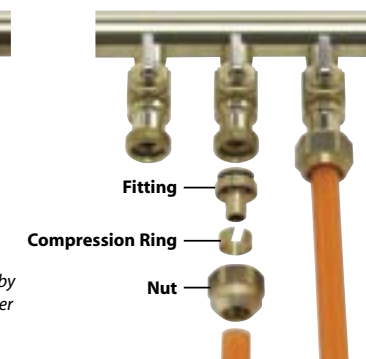
**CinchClamps™** unique stainless steel design allows for easier connections in tight, hard-to-reach spaces.



**CrimpRings™** are precision-formed, ductile copper connectors. When crimped to brass crimp fittings, these connectors form a permanent seal.



**T-20 Compression** fittings do not require any special tools. A simple crescent wrench is all that is needed.



## Tools



The CinchTool will cinch all sizes of stainless steel CinchClamps and makes connections in tight spaces a "cinch".



Crimp tools are available for 3/8" through 1" RadiantPERT.

## Manifolds



CustomCut™ copper manifolds from 1" to 2" diameter.

## HydroNex® Mechanical Panels



HydroNex panels are manufactured "building block" mechanical room solutions. Select from a wide range of panel modules, mount, and go.

- RadiantPERT is certified to ASTM F2623 for Polyethylene of Raised Temperature (PE-RT) SDR 9 Tubing by NSF and CSA. This standard includes requirements and testing methods for materials, workmanship, dimensions, sustained hydrostatic pressure strength, and bend strength. RadiantPERT meets or exceeds these standards.
- RadiantPERT is tested and listed to NSF-14 (rfh).
- Maximum operating temperature and pressure:
  - 160 psi at 73°F
  - 80 psi at 180°F
- PPI TR-4 listing at 73°F and 180°F
- RadiantPERT is certified to the Uniform Mechanical Code by NSF.

Description	Model #	Nominal I.D. (inches)	Nominal O.D. (inches)	Standard Length(s) (feet)	Bend Radius (inches)
3/8" RadiantPERT	PTO32061	0.35	1/2	600	2.5
1/2" RadiantPERT	PTO32081	0.475	5/8	300 / 1,000	3.125
5/8" RadiantPERT	PTO32101	0.574	3/4	500 / 1,200	3.75
3/4" RadiantPERT	PTO32121	0.671	7/8	20 / 300 / 500 / 1200	4.375
1" RadiantPERT	PTO32161	0.863	1-1/8	20 / 300	5.625



**In USA:**  
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4500 E. Progress Place  
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Burlington, ON L7L 5H7  
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Watts Radiant is an ISO9001:2008 approved facility.

**WattsRadiant™**  
Floor Heating & Snow Melting

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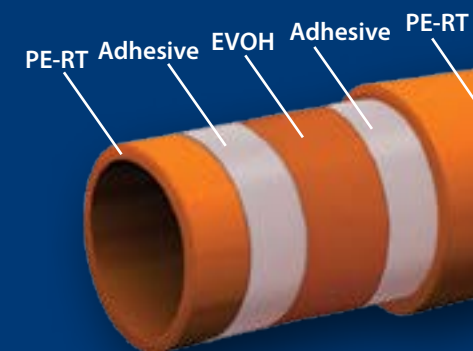


# RadiantPERT™

Polyethylene Raised Temperature Tubing with Oxygen Barrier

## What is RadiantPERT?

PE-RT stands for Polyethylene Raised Temperature. RadiantPERT is manufactured with Dowlex™ 2344, which offers high strength, high temperature resistance, and long life without cross-linking. PE-RT has been used successfully for nearly 30 years in radiant heating applications, and now commands about 25% market share in western Europe.

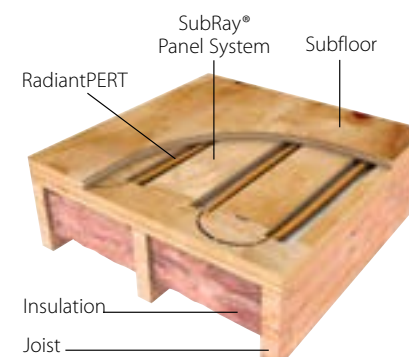


## 5 layer RadiantPERT offers several benefits over other piping materials:

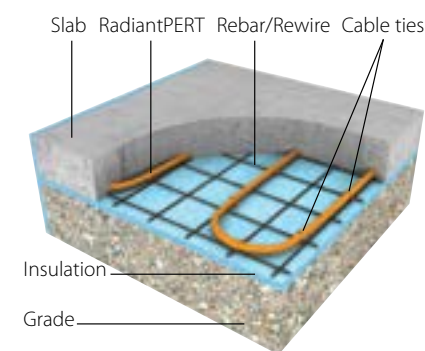
- Greater flexibility
- The outer PE-RT layer protects the oxygen barrier from job-site abuse and moisture
- Easier to pull through joists and confined spaces
- Recyclable material

*Backed by a comprehensive 25 year warranty from Watts Radiant*

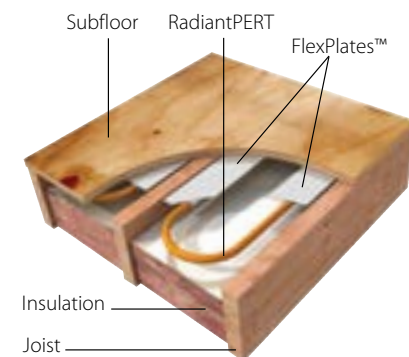
## RadiantPERT applications



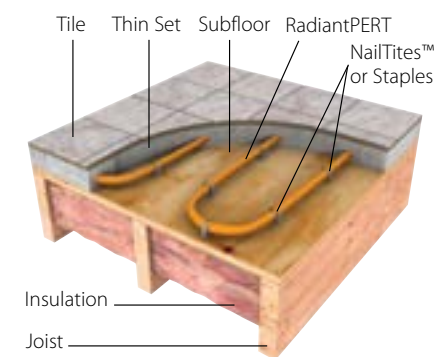
Install RadiantPERT in "dry-panel systems" using Watts Radiant's SubRay® system. It works great for walls and ceilings, too.



Install RadiantPERT in slab systems for radiant floor heating applications.



Install RadiantPERT for underfloor radiant systems using Watts Radiant heat transfer plates.



Install RadiantPERT in thin-slab systems using Watts Radiant's SnapClips, RailWays®, or staples.



Commercial Heating



Commercial Snow melting



Residential Heating

## Use RadiantPERT as distribution piping for:

- Radiant heating/cooling systems
- Snow melting systems
- Radiators
- Baseboard
- Fan coils or kickspace heaters

