



Design Services and Technical Support

Your partners from project
inception to completion.



Living full of energy

YOUR EXPERTS IN RADIANT AND SNOWMELT.

Roth design and technical services department offers a robust menu of radiant services from simple product technical support to design assistance to full blown project design and material list calculation.

RADIANT AND SNOWMELT DESIGNS AND LAYOUTS



- Utilizing Wrightsoft software, Roth's technical team is able to offer comprehensive design services for both new construction and retrofitted heating projects incorporating radiant heating and snowmelt as part of the HVAC system. Whether the need is for residential or commercial radiant system designs, we can help you to properly calculate your loads, accurately design and size the radiant portion of your system, produce parts takeoff lists and proposals with list pricing from our inventory of products, and provide professional design documentation and drawings – all in one program.

MANUAL J - 8TH EDITION HEAT LOAD CALCULATIONS



- Manual J 8th Edition is the national ANSI-recognized standard for producing HVAC equipment sizing loads for single-family detached homes, small multi-unit structures, condominiums, town houses, and manufactured homes. The manual provides quick supplemental details as well as supporting reference tables and appendices. A proper load calculation, performed in accordance with the Manual J 8th Edition procedure, is required by national building codes and most state and local jurisdictions.

CUSTOM LOOP LAYOUTS WRITTEN ONTO IMPORTED CAD AND PDF FILES



- Original CAD and PDF files can be imported into the Wrightsoft design program. Using these as a background file layer, project areas are traced over this layer and once the loop layouts are generated, the loop layouts, the area boundaries, and the loop notation can all be written back to the CAD file or printed as a new PDF with the plan PDF as the background and then provided to the customer. Design drawings can be supplied in landscape or portrait orientation in various sizes for viewing or printing, including letter, legal, and architectural sizes.

PHONE AND EMAIL SUPPORT



- Roth technical and support representatives are available Monday-Friday from 8am to 5pm EST to assist you with your radiant and snowmelt designs. Our design team can be reached by phone toll free 1-888-266-7684. Or email sales@roth-usa.com.

PROJECT QUOTES AND MATERIAL LIST GENERATION



- Roth's technical design team transfers the layout into a formal project quotation form including a material list with list pricing and quantities.

Snow Melting Manifold Summary

Roth Industries, Inc.

PO Box 245, Syracuse, NY 13211 Phone: 315-479-3328 Fax: 315-475-0200 Email: steveg@roth-usa.com Web: www.roth-usa.com

Project Information

For: Hospital Snowmelt

Manifold name: Manifold2
Manifold location:

	1	2
Name	SnowMelt2-A	SnowMelt2-B
Heated area (ft ²)	226	243
Tube spacing (in)	12.0	12.0
Tube type/size	3/4" BPEX	3/4" BPEX
Distance to manifold (ft)	5	5
Loop length (ft)	267	264
Temperature drop (°F)	30.0	30.0
Flow (gpm)	2.22	2.37
Head loss (ft H ₂ O)	10.0	11.8
Supply temperature (°F)	134	134
Valve turns from closed	3.0	3.5

S/R tubing 3/4" BPEX

S/R Tubing length(ft) 0

S/R Tubing head loss (ft H₂O) 0

Max loop head loss (ft H₂O) 12.68

Manifold head loss (ft H₂O) 0

Total head loss (ft H₂O) 12.68

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Syracuse, NY 13211
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www.roth-usa.com steveg@roth-usa.com

Job #: SQ05282017-2
Performed by Steve Gibbs for:
Midland Building Snowmelt
Stephens Shultz, 5th Floor

Quotation

Roth Industries, Inc.

PO Box 245, Syracuse, NY 13211 Phone: 315-479-3328 Fax: 315-475-0200 Email: steveg@roth-usa.com Web: www.roth-usa.com

For: Hospital Snowmelt Project

Job: SQ05282017-2
Date: Aug 31, 2017
By: Steve Gibbs

Notes:

Src	Part #	Description	Qty	Unit price	Extension
RTH	2382226300	Snowmelt Equipment			
RTH	2382228100	X-PERT SS Tubing 3/4", Coil of 1000'	3.00	1270.00	3810.00
RTH	2382228001	X-PERT SS Tubing 3/4", Coil of 600'	5.00	762.00	3810.00
RTH	1135003304	X-PERT SS Tubing 3/4", Coil of 300'	1.00	762.00	762.00
RTH	2350484411	Roth Plastic Ties - Bag of 100	30.0	31.00	930.00
RTH	2315005109	CM Manifold Set 1-1/2" x 9 Loop	4.00	15.00	60.00
RTH	2315005107	CM Manifold Set 1-1/2" x 7 Loop	1.00	76.00	76.00
RTH	2315005104	CM Manifold Set 1-1/2" x 4 Loop	30.0	31.00	930.00
RTH	2335001034	Fitting Assembly for 3/4" PEX, bag of 2	4.00	1787.34	7149.36
RTH	2340088001	BAS Capable Snowmelt Controller T080	1.00	1048.53	1048.53
RTH	2340051510	Sensor Socket T091	20.0	52.40	1048.00
RTH	2340046120	Snowflake Sensor T090	1.00	4750.30	4750.30
		Subtotal, Snowmelt Equipment	1.00	382.00	382.00
		Overall total	1.00	1577.80	20821.07

The ideal temperature for human comfort is 73°F/19°C at foot level and 67°F/23°C at head level. Radiant floor heating delivers the closest match to these requirements. There is no air blowing around dust and allergens which can cause discomfort and illness. Radiant heating uses relatively cooler temperature water to heat your living space allowing the use of heat pumps and solar energy to be used as a heat source thus reducing the use of fossil fuels.

The versatility and reliability of radiant heating is unsurpassed. For most projects, a radiant heating system provides the ideal solution. Radiant panels can be fitted into virtually all floor constructions and can be installed in walls and ceilings as well. Whatever the application - a comfortable home, a nice business atmosphere, a healthy day-care environment, a maintenance garage with dry floors, a snow-free emergency entry, a hangar that doesn't waste heat, a warm floor in a chilly kennel, or winter football on live turf - all can be built utilizing a radiant heating system.

• Unsurpassed Comfort

By delivering heat where the human body needs it most and creating an even ambient temperature by heating all objects in the room, radiant heat is the most comfortable heating system on the market.

• Variety of Heat Sources

The relatively lower supply temperatures needed with radiant heat allows for a number of different and energy efficient heat source options such as: condensing boilers, condensing tankless water heaters, outdoor wood boilers, geothermal heat pumps and solar.

• Multiple Zoning

The ability to create zones based on special, occasional or common usage provides for exceptional control and efficiency.

• Decorating freedom

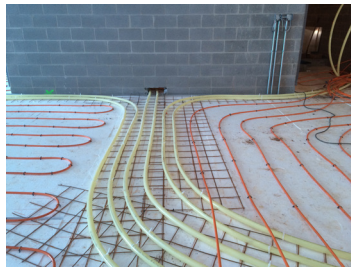
Furnishings can be placed in any location or arrangement desired.

• Peace and Quiet

A well designed radiant system will operate virtually silently. No more noises from large fans, air forced through small registers, pipe expansion and contraction or water gurgling in pipes.

• Healthy Heat

Air, along with airborne bacteria and allergens, is not circulated with a radiant system. In addition, radiant heat does not dry out the air as with other systems.



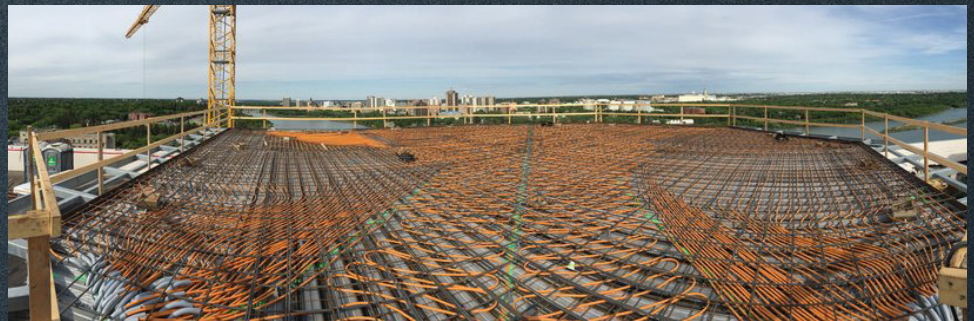
Roth offers a wide range of radiant and snowmelt products to meet the needs of any job including:

- XPERT S5® Tubing
- DuoPEX S5 Tubing
- AluLaser Tubing
- Large Diameter PEX
- Radiant Panel Systems in 1/2" and 3/8"
- Crete-Heat
- Thin Fin and Heat Transfer Plates
- Manifolds and Fittings
- Manifold Cabinets
- Uncoilers
- Hydronic Valves
- Mixing Stations
- Hydronic Tekmar Controls



Snowmelting has several benefits. Icy surfaces are no longer a concern. And facility maintenance costs are reduced because ice-melting chemicals that kill landscaping, increase building cleanup, and degrade concrete and asphalt aren't required. Labor costs fall significantly when parking lots and driveways don't have to be shoveled and plowed.

Snowmelt systems save you money! The cost of the system is more than returned with one avoided legal action. Insurers recognize the value of these systems, rewarding building owners with reduced insurance rates. Radiant Heating has become increasingly popular in North America due to the fact that it provides the highest level of comfort, contributes to a healthy living environment and is incredibly efficient thereby reducing the use of non-replenishing natural resources.



REGINA CHILDREN'S HOSPITAL HELIPAD ICE/SNOWMELT SYSTEM

Regina, Saskatchewan

- Total Ice/Snowmelt Area – 3651 Sq. Ft.
- Total Load – 1,176,768 Btu/hr. - 322.3 Btu/hr./sq. ft.
- Total Flow – 83.1gpm
- Manifolds – 4
- Circuits – 39
- Tubing – 3/4"
- Spacing – 6"
- Tubing – 3/4" PE-RT

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