

Watts*Radiant*TM

Floor Heating & Snow Melting



2014 Full Line Catalog

Simply Radiant!

At Watts Radiant, comfort and efficiency have always been our primary focus. That's why we have dedicated 30+ years to offering you the best in radiant heating and cooling, and snow melting solutions designed for delivering heat more efficiently and making life more comfortable.

We're located in the heart of the U.S.



Affiliations:



Breadth of Products & Services

- Radiant & distribution piping
- Above floor radiant heating panels
- Custom and pre-built mechanical packages
- Control systems, sensors and thermostats
- Electric floor heating & snow melting solutions

World Class Design Services

What could be easier than working with trusted industry radiant and cooling experts. Watts Radiant now offers a complete suite of design services, including radiant heating design and floor cooling system calculations as well as layouts for piping and manifold design. It's simple: you give us your project details and we'll do the rest.

Call **1-800-276-2419** or email **designs@watts.com**.

Technical Support You Can Rely On

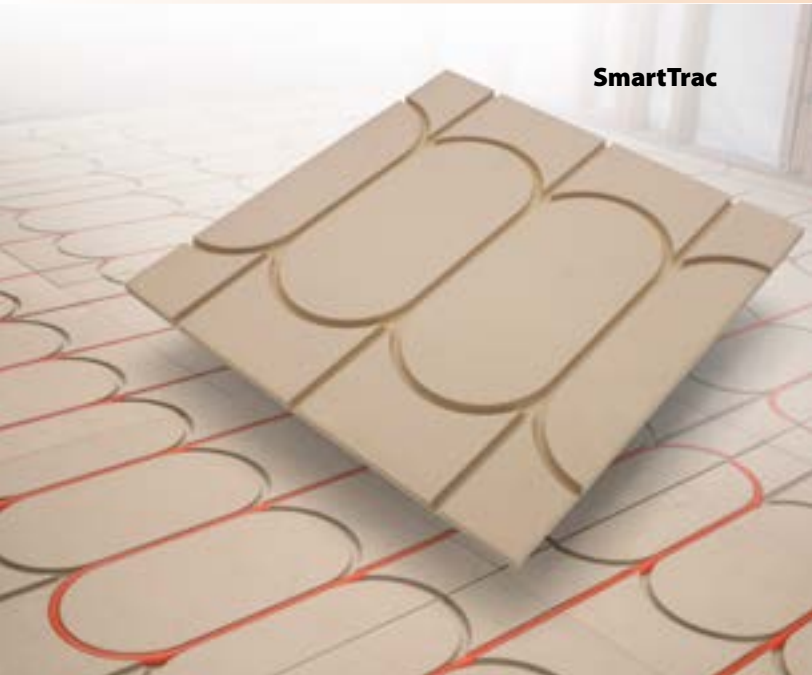
Our local representatives are knowledgeable experts in both HVAC and radiant systems. They offer assistance in design, product selection & installation support. To contact a representative in your area, visit www.wattsradiant.com or call Watts Radiant directly for technical support **1-800-276-2419**.

Trusted Systems Provider

- Complete radiant system solutions to match your application needs
- Access to industry-leading design software tools
- Solutions from dedicated & experienced radiant system experts
- A network of knowledgeable & qualified local representatives
- Training & technical tools available to support your success

For more information regarding Watts Radiant products, visit **www.wattsradiant.com**

In this catalog you'll find an expanded line of products and solutions to fulfill all of your radiant needs. We now offer these products and many more.



SmartTrac

See **NEW** RadiantPERT tubing and accessories in the RadiantPEX and SmartTrac sections.



Close-Ear CinchClamp

RadiantPERT



See **NEW** Radiant Thermostats and Snow Melting Controls in the Hydronic Controls section



Snow Melting Control 654



Radiant Thermostat 519



Mixing Control 356

See **NEW** Electric Radiant products in the HeatWeave section, including Custom TapeMat.

Custom TapeMat



TapeMat

SlabHeat

SunStat Pro II

SunStat View



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Onix Radiant Tubing Onix Clamps Onix Fittings



Onix is an EPDM-based, aramid fiber reinforced tube with an aluminum oxygen barrier. Its unmatched flexibility and durability make Onix the best tubing for underfloor radiant, cold weather installations, and snow melt.

Proven in tens of thousands of installations across North America.

Onix is easy to install at any temperature, cutting installation times by as much as 50%!

Onix does not expand or contract, and will never make any noise.

Onix has excellent UV resistance.

Onix is not damaged by kinking.

Unlike PEX, Onix does not expand and contract and it always stays in contact with the subfloor, making it ideal for Underfloor applications.

Underfloor radiant lets builders construct a home the way they normally do, without pouring concrete, double plating, or other special considerations that can stop a radiant project in its tracks.

With remodels on the rise, Onix is a great way to tap into this growing market. You can easily snake Onix through floor joists, around nails, piping, ducts and other obstacles you're sure to find in a remodel project.

Onix carries a 25-year warranty for residential and commercial heating and snowmelting applications.



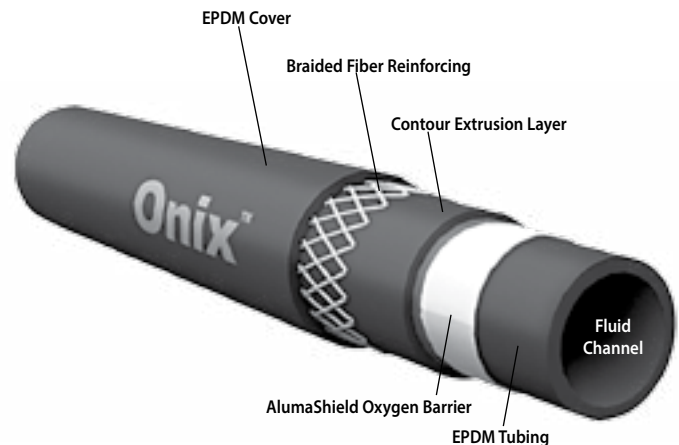
Onix™ Radiant Tubing

Standard Onix Coils — Oxygen barrier tubing for radiant heating, snow melting, and supply & return piping.

DESCRIPTION	MODEL #	ORDER #	WT. (lbs)
3/8" Onix			
3/8" Onix x 160' Coil	086061-160	81001558	29
3/8" Onix x 180' Coil	086061-180	81001559	32
3/8" Onix x 200' Coil	086061-200	81001560	36
3/8" Onix x 600' Spool	086061-600	81001565	108
1/2" Onix			
1/2" Onix x 200' Coil	086081-200	81001579	46
1/2" Onix x 250' Coil	086081-250	81001582	58
1/2" Onix x 300' Coil	086081-300	81001584	69
1/2" Onix x 400' Spool	086081-400	81001587	92
1/2" Onix x 600' Spool	086081-600	81001590	138
5/8" Onix			
5/8" Onix x 50' Coil	086101-50	81001612	13
5/8" Onix x 100' Coil	086101-100	81001600	25
5/8" Onix x 200' Coil	086101-200	81001603	50
5/8" Onix x 300' Spool	086101-300	81001605	75
5/8" Onix x 400' Spool	086101-400	81001609	100
5/8" Onix x 600' Spool	086101-600	81001616	150
3/4" Onix			
3/4" Onix x 50' Coil	086121-50	81001635	18
3/4" Onix x 100' Coil	086121-100	81001627	35
3/4" Onix x 200' Coil	086121-200	81001629	70
3/4" Onix x 300' Spool	086121-300	81001631	105
3/4" Onix x 400' Spool	086121-400	81001634	140

Onix with AlumaShield oxygen barrier is rated to 180°F at 100 psi.

Onix is tested to relevant portions of several ASTM standards and carries the UPC mark as approved by the International Association of Plumbing and Mechanical Officials (IAPMO).



For Pricing, Please See Watts Radiant Price Guide.

Onix Fittings

SelfTite™ Clamps — Pre-tensioned for easy field installation. The chrome-vanadium spring steel maintains a constant tension on the Onix under all operating conditions. SelfTites incorporate a zinc coating to guard against corrosion.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" SelfTite Clamp (19 mm)	10	663019-10	81000523	3
1/2" SelfTite Clamp (22 mm)	10	663022-10	81000526	4
5/8" SelfTite Clamp (25 mm)	10	663025-10	81000529	4
3/4" SelfTite Clamp (29 mm)	10	663029-10	81000532	5

TorqueTite™ Clamps — our best stainless steel screw clamps.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" TorqueTite Clamp (17–19 mm)	10	6641117-10	81002913	2
1/2" TorqueTite Clamp (21–23 mm)	10	6641524-10	81002916	2
5/8" TorqueTite Clamp (25–27 mm)	10	6641928-10	81002919	2
3/4" TorqueTite Clamp (29–31 mm)	10	6642232-10	81002922	2

The Onix **TorqueTite** is a rugged, stainless steel clamp capable of withstanding large pressures and temperatures while being easy to install. Do not overtighten!

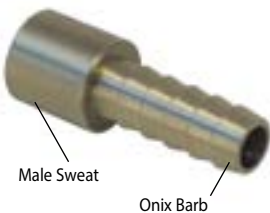
SST20 Onix Swivel Fittings — for Stainless Steel, and Custom Tubular Manifolds.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Onix x 3/4" BSP Swivel Fitting	10	689001-10	81000679	1
1/2" Onix x 3/4" BSP Swivel Fitting	10	689002-10	81000681	1
5/8" Onix x 3/4" BSP Swivel Fitting	10	689003-10	81000683	2
3/4" Onix x 3/4" BSP Swivel Fitting	10	689004-10	81000684	2

Use these female **Onix T20 Fittings** to connect Onix to our Stainless Steel, and Custom Tubular compression manifolds. Order Onix SelfTite or TorqueTite clamps separately.
 BSP threads are not compatible with NPT.

Onix Barb x Male Sweat Fittings — for transitioning Onix to sweat fittings.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Onix x 1/2" Male Sweat Adapter	10	684001-10	81000659	1
1/2" Onix x 1/2" Male Sweat Adapter	10	685001-10	81000663	1
5/8" Onix x 1/2" Male Sweat Adapter	10	686001-10	81000667	1
3/4" Onix x 3/4" Male Sweat Adapter	10	687001-10	81000671	2

Sweat **Onix Barbs** into copper tees or ball valves for easy field manifold construction

Female Sweat



Onix Sweat Elbow Fittings — for connecting Onix supply lines to baseboard, fan coils, or kick space heaters.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1/2" Onix x 3/4" Female Sweat	10	185074-10	81000116	3
5/8" Onix x 3/4" Female Sweat	10	185625-10	81000120	3
3/4" Onix x 3/4" Female Sweat	10	185075-10	81000118	3

Use these all brass **Onix Elbow Fittings** to make transitions to baseboards, radiators, or fan coils when using Onix as supply/return piping.

Onix Fittings



SelfTite™ Onix Repair Kits — preassembled kits for field repairs. Each repair kit includes two splices and four SelfTite clamps.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" SelfTite Onix Repair Kit	1 kit	660075	81000507	1
1/2" SelfTite Onix Repair Kit	1 kit	660085	81000509	1
5/8" SelfTite Onix Repair Kit	1 kit	660105	81000511	2
3/4" SelfTite Onix Repair Kit	1 kit	660125	81000513	2



TorqueTite™ Onix Repair Kits — pre-assembled kit for field repairs. Each repair kit includes two splices and four TorqueTite clamps.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" TorqueTite Repair Kit	1 kit	660076	81000508	1
1/2" TorqueTite Repair Kit	1 kit	660086	81000510	1
5/8" TorqueTite Repair Kit	1 kit	660106	81000512	2
3/4" TorqueTite Repair Kit	1 kit	660126	81000514	2

Onix Couplings — for making field repairs.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Onix Coupling	10	677062-10	81000611	1
1/2" Onix Coupling	10	677082-10	81000615	1
5/8" Onix Coupling	10	677101-10	81000618	1
3/4" Onix Coupling	10	677121-10	81000621	1

Use **Onix Couplings** to make field repairs and connections when necessary. Be sure to use Watts Radiant's TorqueTite or SelfTite clamps when making all field splice repairs and closely follow all guidelines. Order clamps separately.

Mini Ball and Balancing Valves — for circuit isolation and balancing on field-built manifolds.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Onix x 1/2" Male Sweat MBV (0.44" bore)	1	446105	81000366	3

Use **Mini Ball Valves** to isolate and/or regulate the flow of individual tubing circuits on field built manifolds.

Onix™ is fast, quiet, hassle free, and remains highly flexible in cold conditions.



RadiantPEX+™

Cross-linked Polyethylene Tubing w/EVOH Barrier

RadiantPEX+ Tubing CrimpRing Fittings CinchClamp Fittings Compression Fittings

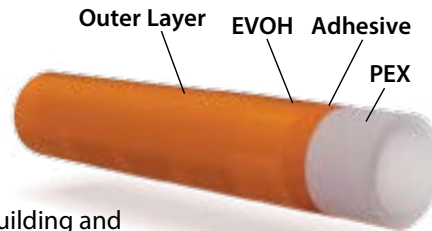
Superior Protection

All 3/8" through 1" Watts RadiantPEX+ has an **outer layer** for superior protection. This outer layer adds several benefits:

- Easier to pull through joists
- Reduces expansion noise in walls and floors
- Protects the oxygen barrier from job-site abuse
- Protects the oxygen barrier against moisture
- Improves flexibility

All of our barrier PEX offers these benefits over traditional piping systems:

- Light and easy to transport and store
- Extremely flexible
- Maintenance free
- Corrosion resistant
- Connection systems that are fast and reliable



Commercial Approvals:

Conforms to UL 263 (fire test of building and construction materials) and ASTM E-84

Silane Cross-linking is Better

Our Superior Silane technology enables higher burst strengths and higher anti-oxidant protection than other PEX manufacturing methods. Silane manufacturing is the most widely used process to manufacture PEX, and has been proven world-wide for over 30 years.



Codes, Listings and Standards

- RadiantPEX+ and RadiantPEX are manufactured to American Standard Testing Methods (ASTM F-876 and F-877) and to SDR9 dimensions. These standards include requirements and testing methods for materials, workmanship, dimensions, environmental stress cracking, sustained hydrostatic pressure strength, bend strength, and degree of cross-linking. RadiantPEX and RadiantPEX+ meet or exceed these standards.
- RadiantPEX+ and RadiantPEX are tested and listed by the National Sanitation Foundation to NSF-14 (rfh).
- RadiantPEX+ and RadiantPEX conform to ASTM E-84 (Standard Test Method for Surface Burning Characteristics of Building Materials) and UL 263 (Fire Tests of Building Construction and Materials).
- RadiantPEX+ and RadiantPEX are listed by the International Code Council Evaluation Service (ICC) to Report #ESR-1155, and PMG-1008 which give compliance to IPC, IMC, UMC, and UPC.
- All RadiantPEX+ and RadiantPEX pipe is certified to CSA Standard B137.5.
- All RadiantPEX+ and RadiantPEX carries a 25-year warranty for residential and commercial heating and snowmelting applications.



RadiantPEX+™ & RadiantPEX® Tubing

RadiantPEX+ and RadiantPEX® Coils — Oxygen Barrier PEX tubing for radiant heating, snowmelting, and supply and return piping. Use sticks up to 2" for hydronic supply and return piping



	DESCRIPTION	MODEL #	ORDER #	WT. (lbs)
4 Layer Pex	3/8" RadiantPEX+ x 600' Coil	PB032061-600	81000850	26
	1/2" RadiantPEX+ custom length coil	PB032081-1	81010820	-
	1/2" RadiantPEX+ x 100' Coil	PB032081-100	81001680	6
	1/2" RadiantPEX+ x 300' Coil	PB032081-300	81003406	17
	1/2" RadiantPEX+ x 600' Coil	PB032081-600	81001682	27
	1/2" RadiantPEX+ x 1000' Coil	PB032081-1000	81001681	55
	5/8" RadiantPEX+ custom length coil	PB032101-1	81010815	-
	5/8" RadiantPEX+ x 300' Coil	PB032101-300	81009852	27
	5/8" RadiantPEX+ x 500' Coil	PB032101-500	81009711	43
	5/8" RadiantPEX+ x 600' Coil	PB032101-600	81001684	51
	5/8" RadiantPEX+ x 1200' Coil	PB032101-1200	81001683	102
	3/4" RadiantPEX+ custom length coil	PB032121-1	81010819	-
	3/4" RadiantPEX+ x 100' Coil	PB032121-100	81001685	11
	3/4" RadiantPEX+ x 300' Coil	PB032121-300	81005303	27
	3/4" RadiantPEX+ x 500' Coil	PB032121-500	81001687	44
	3/4" RadiantPEX+ x 600' Coil	PB032121-600	81001688	53
	3/4" RadiantPEX+ x 1000' Coil	PB032121-1000	81009868	88
	3/4" RadiantPEX+ x 1200' Coil	PB032121-1200	81001686	106
	3/4" RadiantPEX+ x 20' sticks (bundle of 25)	PB32121-20	81007368	42
	1" RadiantPEX+ custom length coil	PB032161-1	81010965	-
1" RadiantPEX+ x 100' Coil	PB032161-100	81004923	18	
1" RadiantPEX+ x 300' Coil	PB032161-300	81009361	61	
1" RadiantPEX+ x 600' Coil	PB032161-600	81002954	107	
1" RadiantPEX+ x 20' sticks (bundle of 5)	PB032161-20	81007367	16	

1/2" through 1" RadiantPEX+ is available in custom lengths. Minimum 5,000 ft. order applies.

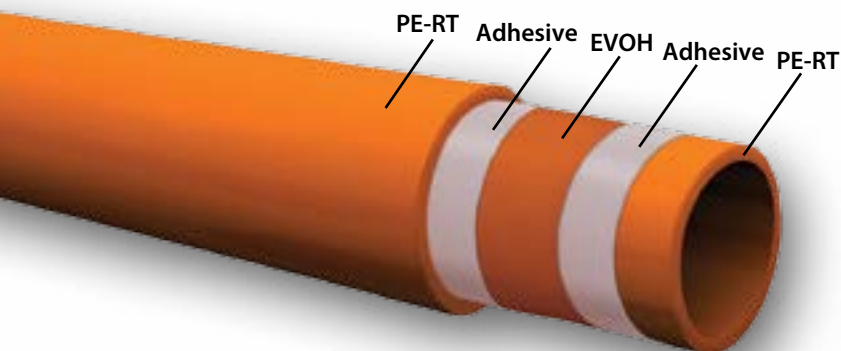
3 Layer Pex	1-1/4" RadiantPEX x 100' Coil	PB032181-100	81009109	26
	1-1/4" RadiantPEX x 300' Coil	PB032181-300	81009110	73
	1-1/4" RadiantPEX x 20' sticks (bundle of 5)	PB032181-20	81009118	24
	1-1/2" RadiantPEX x 100' Coil	PB032201-100	81009994	32
	1-1/2" RadiantPEX x 300' Coil	PB032201-300	81009995	95
	1-1/2" RadiantPEX x 20' sticks (bundle of 5)	PB032201-20	81009993	32
	2" RadiantPEX x 100' Coil	PB032221-100	81010853	43
	2" RadiantPEX x 300' Coil	PB032221-300	81010854	129
	2" RadiantPEX x 20' sticks (bundle of 5)	PB032221-20	81010855	43

RadiantPERT Tubing

NEW

RadiantPERT — Oxygen Barrier PERT tubing for radiant heating, snowmelting, and supply and return piping.

DESCRIPTION	MODEL #	ORDER #	WT. (lbs)
3/8" RadiantPERT x 600' Coil	PT032061-600	81016322	25
1/2" RadiantPERT x 300' Coil	PT-032081-300	81016323	16
1/2" RadiantPERT x 1000' Coil	PT-032081-1000	81016324	54
5/8" RadiantPERT x 500' Coil	PT032101-500	81016325	38
5/8" RadiantPERT x 1200' Coil	PT032101-1200	81016326	91
3/4" RadiantPERT x 300' Coil	PT032121-300	81016327	31
3/4" RadiantPERT x 500' Coil	PT032121-500	81016328	51
3/4" RadiantPERT x 1200' Coil	PT032121-1200	81016329	122
3/4" RadiantPERT x 20' (bundle of 25 sticks)	PT032121-20	81016357	51
1" RadiantPERT x 300' Coil	PT032161-300	81016330	50



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.



Non-Oxygen Barrier PEX Tubing

Non-barrier PEX — for heating and snow melting.

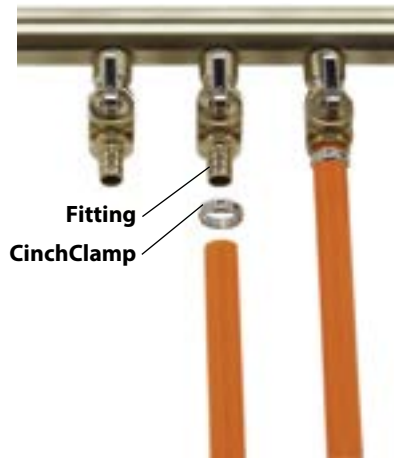
DESCRIPTION	MODEL #	ORDER #	WT. (lbs)
1/2" WaterPEX x 300' Coil, White	P022081-300W	81006282	16
1/2" WaterPEX x 1000' Coil, White	P022081-1000W	81006287	55
3/4" WaterPEX x 500' Coil, White	P022121-500W	81006288	45
3/4" WaterPEX x 1000' Coil, White	P022121-1000W	81004122	106
1" WaterPEX x 100' Coil, White	P022161-100W	81006292	18
1" WaterPEX x 500' Coil, White	P022161-500W	81004124	106
1-1/4" WaterPEX x 100' Coil, White	P022181-100W	81006293	25
1-1/4" WaterPEX x 300' Coil, White	P022181-300W	81004140	72

If using non-barrier WaterPEX for heating or snow melting systems, use a heat exchanger to isolate ferrous components or use a suitable water or glycol treatment.

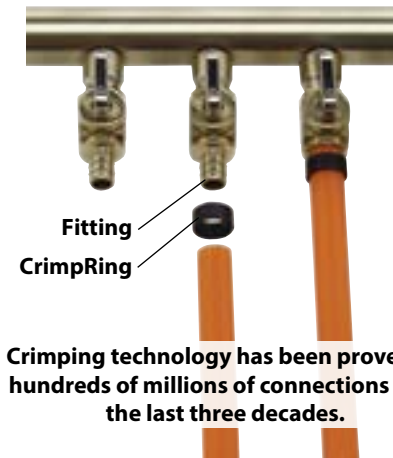


Unlike some PEX connection systems, our three choices for RadiantPEX+ and RadiantPERT connections can be quickly made and immediately pressure tested.

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

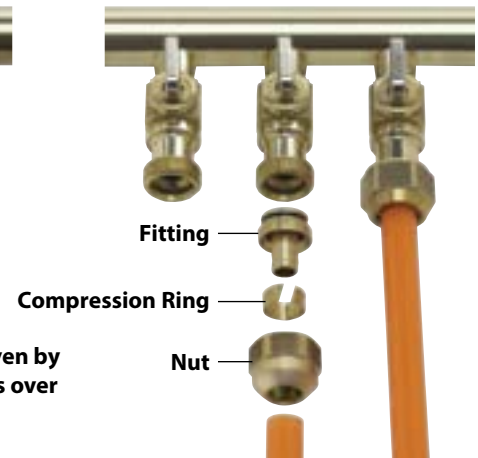


CrimpRings™ are precision-formed, ductile copper connectors. When crimped to brass crimp fittings, these connectors form a permanent seal.



Crimping technology has been proven by hundreds of millions of connections over the last three decades.

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



PEX CrimpRings & CinchClamps

Copper CrimpRings — for securing PEX to brass crimp fittings.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" CrimpRing	100	PCCR2X-100	81001071	1.0
1/2" CrimpRing	100	PCCR3X-100	81001075	1.0
5/8" CrimpRing	100	PCCR6X-100	81004508	2.0
3/4" CrimpRing	100	PCCR4X-100	81001080	2.0
1" CrimpRing	100	PCCR5X-100	81001084	3.0
1-1/4" CrimpRing	10	PCCR7X-10	81011152	3.0
1-1/2" CrimpRing	10	PCCR9X-10	81011129	1.0
2" CrimpRing	5	PCCR10X-5	81017716	3.0

Copper CrimpRings are precision-formed, ductile copper connectors. When crimped, these connections form a simple, fast, and permanent seal between PEX and CrimpRing fittings. 1-1/2" CrimpRings require a Power Crimp Tool.

Stainless Steel CinchClamps™ — for fast, easy, one-tool connections.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" CinchClamps	10	PCCC2X-10	81004993	1.0
3/8" CinchClamps	100	PCCC2X-100	81004994	1.0
1/2" CinchClamps	10	PCCC3X-10	81004995	1.0
1/2" CinchClamps	100	PCCC3X-100	81004996	1.0
5/8" CinchClamps	10	PCCC6X-10	81005114	2.0
5/8" CinchClamps	100	PCCC6X-100	81005115	3.0
3/4" CinchClamps	10	PCCC4X-10	81004997	2.0
3/4" CinchClamps	100	PCCC4X-100	81004998	3.0
1" CinchClamps	10	PCCC5X-10	81005001	2.0
1" CinchClamps	100	PCCC5X-100	81005002	3.0

CinchClamps have been proven in millions of connections.

For Pricing, Please See Watts Radiant Price Guide.

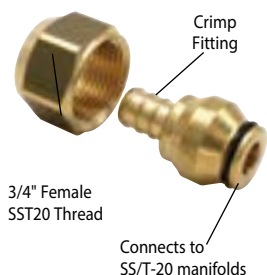
NEW


Close Ear Cinch Clamps

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1/2" Close-Ear CinchClamps	10	PCCC3XN-10	81015960	1.0
1/2" Close-Ear CinchClamps	100	PCCC3XN-100	81015961	1.0
3/4" Close-Ear CinchClamps	10	PCCC4XN-10	81015962	2.0
3/4" Close-Ear CinchClamps	100	PCCC4XN-100	81015963	3.0

The special patented close-ear CinchClamp is designed so that the cinch clamp stays in position over the PEX fitting barbs for fast, accurate placement.

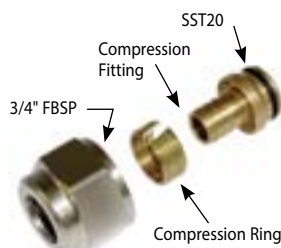
PEX SST20 Fittings



SST20 Crimp Swivel Fittings — for connecting PEX to Watts Radiant's Stainless Steel and Custom Tubular Compression manifolds. Not for potable water use.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Crimp x 3/4" SST20 Swivel BSP Fitting	10	PC690001-10	81005160	1.0
1/2" Crimp x 3/4" SST20 Swivel BSP Fitting	10	PC690002-10	81005162	1.0
5/8" Crimp x 3/4" SST20 Swivel BSP Fitting	10	PC690003-10	81005164	2.0
3/4" Crimp x 3/4" SST20 Swivel BSP Fitting	10	PC690004-10	81005395	2.0

Use these **SST20 Crimp Fittings** to connect PEX to our Stainless Steel or T20 Custom Tubular Manifolds. Order CrimpRings or CinchClamps separately. BSP Stands for British Standard Pipe (threads). These threads are not compatible with NPT (National Pipe Threads).



SST20 PEX Compression Fittings — for connecting PEX to Stainless Steel manifolds, and Custom Tubular T20 compression manifolds, or 3/4" male BSP x male sweat fittings. Not for potable water use.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" PEX Compression x 3/4" SST20 Swivel BSP	10	PX690001-10	81005166	1.0
1/2" PEX Compression x 3/4" SST20 Swivel BSP	10	PX690002-10	81005168	1.0
5/8" PEX Compression x 3/4" SST20 Swivel BSP	10	PX690003-10	81005170	2.0
3/4" PEX Compression x 3/4" SST20 Swivel BSP	10	PX690004-10	81005172	2.0
Replacement BSP O-Ring	1	PX690000	81005279	1.0

PEX Crimp Fittings

Crimp x Male Sweat Adapters — for connecting PEX to sweat fittings or manifolds.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Crimp x 1/2" LF Male Sweat Adapter	10	LFPC637X-10	81016908	0.3
1/2" Crimp x 1/2" LF Male Sweat Adapter	10	LFPC650X-10	81016909	0.5
5/8" Crimp x 1/2" LF Male Sweat Adapter	10	PC660X-10	81003685	1.0
5/8" Crimp x 3/4" LF Male Sweat Adapter	10	PC670X-10	81003427	1.0
3/4" Crimp x 3/4" LF Male Sweat Adapter	10	LFPC675X-10	81016910	0.8
1" Crimp x 1" LF Male Sweat Adapter	10	LFPC700X-10	81016911	0.8
1 1/4" Crimp x 1 1/4" LF Male Sweat Adapter	10	LFPC725X-10	81016912	0.9
NEW 1 1/2" Crimp x 1 1/2" LF Male Sweat Adapter	10	LFPC795X-10	81016913	1.0
NEW 2" Crimp x 2" LF Male Sweat Adapter	10	LFPC115X-10	81016931	3.0

1-1/2" CrimpRings require a Power Crimp Tool. 3/8" - 1" PEX fittings can be used with either Crimp or Cinch connector. 1-1/4" and larger can only be used with Crimp connectors.

PEX Crimp Fittings

Crimp x Female Sweat Adapters — for connecting PEX to sweat fittings or manifolds.



Female Sweat

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1/2" Crimp x 1/2" LF Female Sweat Adapter	10	LFPC750X-10	81016914	0.6
3/4" Crimp x 3/4" LF Female Sweat Adapter	10	LFPC775X-10	81016915	1.1
1" Crimp x 1" LF Female Sweat Adapter	10	LFPC780X-10	81016916	0.7
1 1/4" Crimp x 1 1/4" LF Female Sweat Adapter	10	LFPC785X-10	81016917	2.0
NEW 1 1/2" Crimp x 1 1/2" LF Female Sweat Adapter	10	LFPC790X-10	81016918	2.5
NEW 2" Crimp x 2" LF Female Sweat Adapter	10	LFPC110X-10	81016932	3.0

1-1/2" and 2" CrimpRings require a Power Crimp Tool.

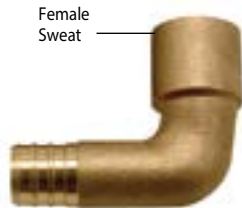
Crimp x Male NPT Adapters — for connecting PEX to female fittings and valves.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Crimp x 1/2" LF MPT Adapter	10	LFPCMC23X-10	81016919	1.0
1/2" Crimp x 1/2" LF MPT Adapter	10	LFPCMC33X-10	81016920	0.8
1/2" Crimp x 3/4" LF MPT Adapter	10	LFPCMC34X-10	81016921	1.2
5/8" Crimp x 3/4" MPT Adapter	10	PCMC64X-10	81005385	2.0
3/4" Crimp x 1/2" LF MPT Adapter	10	LFPCMC43X-10	81016922	0.8
3/4" Crimp x 3/4" LF MPT Adapter	10	LFPCMC44X-10	81016923	1.6
1" Crimp x 1" LF MPT Adapter	10	LFPCMC55X-10	81016924	0.7
1 1/4" Crimp x 1 1/4" LF MPT Adapter	10	LFPCMC78X-10	81016925	1.0
NEW 1 1/2" Crimp x 1 1/2" LF MPT Adapter	10	LFPCMC99X-10	81016926	1.3
NEW 2" Crimp x 2" LF MPT Adapter**	10	LFPCMM110K	81016927	1.5

1-1/2" and 2" CrimpRings require a Power Crimp Tool.

Crimp x Female Sweat Elbow



Female Sweat

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1/2" Crimp x 3/4" LF Female Sweat Elbow	10	LFPCE34-10	81016928	1.3
5/8" Crimp x 3/4" Female Sweat Elbow	10	PCE64-10	81004786	3.0
3/4" Crimp x 3/4" LF Female Sweat Elbow	10	LFPCE44-10	81016929	1.6

Use these **Crimp x Sweat Elbow Fittings** to speed the connection of PEX supply lines to baseboard and hydro-air units.

Crimp x Male Sweat Elbow



Male Sweat

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1/2" Crimp x 3/4" Male Sweat Elbow	10	PCE34M-10	81009374	3.0
3/4" Crimp x 3/4" Male Sweat Elbow	10	PCE44M-10	81009378	3.0

Use these **Crimp x Sweat Elbow Fittings** to speed the connection of PEX supply lines to baseboard and hydro-air units.

Crimp x Crimp Elbows (Equal Elbows)



Crimp

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1/2" Crimp LF Elbow	10	LFPCE33X-10	81016932	0.8
5/8" Crimp Elbow	10	PCE66X-10	81014904	1.0
3/4" Crimp LF Elbow	10	LFPCE44X-10	81016933	1.3
1" Crimp LF Elbow	10	LFPCE55X-10	81016934	2.1
1 1/4" Crimp LF Elbow	10	LFPCE77X-10	81016935	3.4
NEW 1 1/2" Crimp LF Elbow	10	LFPCEC99K	81016936	3.8
NEW 2" Crimp LF Elbow	10	LFPCEC110K	81016937	4.0

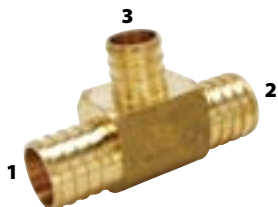
PEX Crimp Fittings

Crimp x Crimp Tees (Equal Tees)



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1/2" Crimp LF Tee	10	LFPCT333X-10	81016938	0.6
3/4" Crimp LF Tee	10	LFPCT444X-10	81016939	1.5
1" Crimp LF Tee	10	LFPCT555X-10	81016940	3.0
NEW 1-1/4" Crimp LF Tee	10	LFPCT777X-10	81017119	5.0
NEW 1-1/2" Crimp LF Tee	1	LFPCT999X-1	81017120	1.0
NEW 2" Crimp LF Tee	1	LFPCT111X-1	81017121	1.0

Crimp x Crimp Tees (Unequal Tees) — Run x Run x Branch (1x2x3)



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1/2" x 1/2" x 3/4" Crimp LF Tee	10	LFPCT334X-10	81016941	0.9
3/4" x 3/4" x 1/2" Crimp LF Tee	10	LFPCT443X-10	81016942	1.4
1" x 1" x 3/4" Crimp LF Tee	10	LFPCT554X-10	81016943	3.0

Crimp x Crimp Brass Couplings — for making field repairs or extending PEX lines.



PEX x PEX



1-1/4" PEX x 1-1/4" PEX

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Crimp LF Coupling	10	LFPCC22X-10	81016944	0.2
1/2" Crimp LF Coupling	10	LFPCC33X-10	81016945	0.3
5/8" Crimp Coupling	10	PCC66X-10	81005376	1.0
3/4" Crimp LF Coupling	10	LFPCC44X-10	81016946	0.7
1" Crimp LF Coupling	10	LFPCC55X-10	81016947	2.9
1 1/4" Crimp LF Coupling	10	LFPCC77X-10	81016948	1.4
NEW 1 1/2" Crimp LF Coupling	10	LFPCC99X-10	81016949	3.0
NEW 2" Crimp LF Coupling	10	LFPCCMP110K	81016950	3.5

Use Crimp x Crimp Brass Couplings to make field repairs and connections when necessary. Be sure to closely follow all guidelines when making field repairs or connections.

CinchClamp Repair Kits — for making PEX repairs in the field.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" LF CinchClamp Repair Kit	1	LFPCCA2K	81016951	0.1
1/2" LF CinchClamp Repair Kit	1	LFPCCA3K	81016952	0.2
5/8" CinchClamp Repair Kit	1	PCCA6K	81005326	0.3
3/4" LF CinchClamp Repair Kit	1	LFPCCA4K	81016953	0.3
1" LF CinchClamp Repair Kit	1	LFPCCA5K	81016954	0.4

Each CinchClamp Repair Kit contains two double-ended barbs and four CinchClamps, enough for two splices. Each kit includes instructions to help insure that the repair is done properly.

CrimpRing Repair Kits — for making PEX repairs in the field.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" CrimpRing Repair Kit	1	PCCA2K	81001063	1.0
1/2" CrimpRing Repair Kit	1	PCCA3K	81001064	1.0
5/8" CrimpRing Repair Kit	1	PCCA6K	81003429	1.0
3/4" CrimpRing Repair Kit	1	PCCA4K	81001065	1.0
1" CrimpRing Repair Kit	1	PCCA5K	81001066	1.0
1-1/4" CrimpRing Repair Kit	1	PCCA7K	81004450	1.0
1-1/2" CrimpRing Repair Kit	1	PCCA9K	81011155	1.0

Each CrimpRing Repair Kit contains two double-ended barbs and four CrimpRings, enough for two splices. Each kit includes instructions to help insure that the repair is done properly.

PEX Crimp Fittings



1/2" Crimp x 1/2" Male Sweat MBV



1/2" Crimp x 1/2" Male Sweat MBV-BAL

Mini Ball and Balancing Valves — for circuit isolation and balancing on field-built manifolds.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1/2" Crimp x 1/2" Female Sweat LF Mini Ball Valve	1	LFP12123PX3	81016571	0.3

Use Mini Ball Valves to isolate and/or regulate the flow of individual tubing circuits.

PEX Compression Fittings



3/4" Male BSP x
1/2" Male Sweat

SST20 3/4" Male BSP x Male Sweat Fittings — for use with SST20 Crimp or Compression fittings.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/4" Male BSP x 1/2" Male Sweat Fitting	10	PX690500-10	81001507	1.0
3/4" Male BSP x 3/4" Male Sweat Fitting	10	PX690750-10	81001510	2.0

These fittings are manufactured for use with SST20 fittings (threaded female) and are offered in two sizes to fit 1/2" or 3/4" copper fittings. Male fittings are also available pre-installed on all styles of Watts Radiant manifolds. Not for potable water use. BSP threads are not compatible with NPT (National Pipe Threads).



SST20 Compression Coupling Kits — for joining lengths of PEX.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
SST20 Comp. Coupling Kit for 3/8" PEX	1 Kit	PXCASST2K	81005174	1.0
SST20 Comp. Coupling Kit for 1/2" PEX	1 Kit	PXCASST3K	81005175	1.0
SST20 Comp. Coupling Kit for 5/8" PEX	1 Kit	PXCASST4K	81005176	1.0
SST20 Comp. Coupling Kit for 3/4" PEX	1 Kit	PXCASST5K	81005177	2.0

Compression Coupling Kits consist of two Compression Couplings and four female Compression fittings. Not for potable water use. BSP stands for British Standard Pipe (threads). These threads are not compatible with NPT (National Pipe Threads). Most building codes do not allow compression couplings in inaccessible locations. Do not bury compression fittings.

RadiantPEX-AL™

Cross-Linked Polyethylene x Aluminum x Cross-Linked Polyethylene

RadiantPEX-AL Tubing RadiantPEX-AL Fittings

The RadiantPEX-AL Advantage

RadiantPEX-AL is a proven, long lasting composite pipe engineered for radiant floor heating, snow melting, and distribution piping.

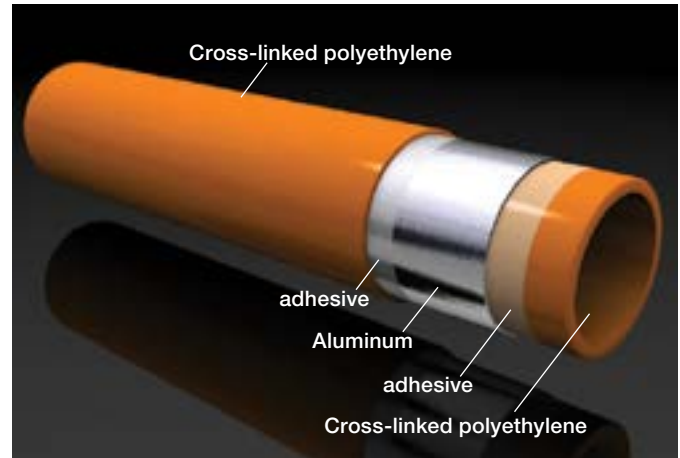
RadiantPEX-AL installs faster than PEX because it holds its shape, even with one installer.

RadiantPEX-AL has very little expansion/contraction (about 1/8 that of PEX), so it's ideal for "dry" applications or high temperature distribution piping.

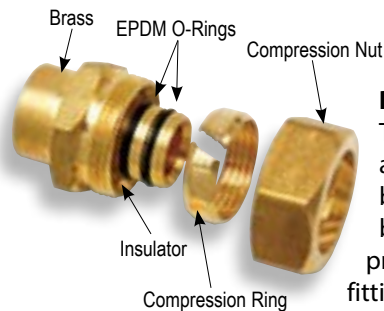
RadiantPEX-AL retains its flexibility in cold temperatures, so it can be easily installed in winter weather.

RadiantPEX-AL Is Built to Last

RadiantPEX-AL pipe and fittings are manufactured to meet or exceed ASTM requirements.



RadiantPEX-AL pipe is constructed with 5 layers, each providing strength, durability, and longevity.



RadiantPEX-AL Compression Fittings

The RadiantPEX-AL compression fitting system from Watts Radiant is as simple as it looks. All you need is a box-end wrench to tighten the nut. Made of solid brass, these fittings are made for long, trouble-free service. Double O-rings and a brass compression ring ensure a leak-proof connection. A polyethylene insulator protects against corrosion between brass and aluminum pipe layers. Compression fittings are listed by NSF to NSF-rfh.

Codes, Listings, and Standards

Tubing: RadiantPEX-AL is manufactured in accordance with American Standard Testing Methods (ASTM) F-1281-2005, is tested and listed by the National Sanitation Foundation (NSF-rfh), and carries the UPC certification mark, as approved by the International Association of Plumbing and Mechanical Officials (IAPMO).

Fittings: Compression Fittings are tested and listed by NSF (NSF-rfh).

RadiantPEX-AL Warranty

All RadiantPEX-AL Tubing carries a 25-year warranty for residential and commercial heating and snow melting applications.



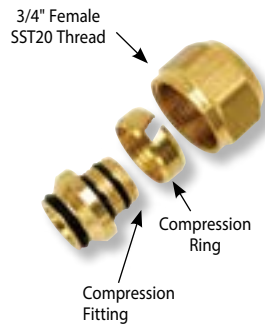
RadiantPEX-AL Tubing



RadiantPEX-AL Coils — RadiantPEX-AL can be shaped to fit any job-site condition. Use it for all floor heating and snow melting, as well as supply piping for other hydronic applications.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" x 200' (Coil), RadiantPEX-AL	1	RL06-200-OR	81011133	18
1/2" x 300' (Coil), RadiantPEX-AL	1	RL0508-300-OR	81010635	23
1/2" x 1000' (Coil), RadiantPEX-AL	1	RL0508-1000-OR	81010637	70
5/8" x 300' (Coil), RadiantPEX-AL	1	RL10-300-OR	81007605	35
5/8" x 1200' (Coil), RadiantPEX-AL	1	RL10-1200-OR	81007606	130
3/4" x 100' (Coil), RadiantPEX-AL	1	RL12-100-OR	81007607	18
3/4" x 300' (Coil), RadiantPEX-AL	1	RL12-300-OR	81007608	48
3/4" x 500' (Coil), RadiantPEX-AL	1	RL12-500-OR	81007609	73
1" x 100' (Coil), RadiantPEX-AL	1	RL16-100-OR	81007610	20
1" x 300' (Coil), RadiantPEX-AL	1	RL16-300-OR	81007611	54

RadiantPEX-AL Compression Fittings



RadiantPEX-AL SST20 Compression Fitting — for stainless steel and T20 manifolds.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Compression x 3/4" SST20 BSP, Adapter	10	RLC01B06T20-10	81011138	1
1/2" Compression x 3/4" SST20 BSP, Adapter	10	RLC0501B08T20-10	81010735	1
5/8" Compression x 3/4" SST20 BSP, Adapter	10	RLC01B10T20-10	81008088	2
3/4" Compression x 3/4" SST20 BSP, Adapter	10	RLC01B12T20-10	81007735	2

Compression nut and ring included with all compression fittings.

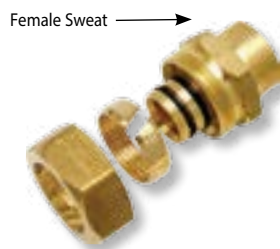
BSP threads are not compatible with NPT.



RadiantPEX-AL Adapter — Compression x Male Sweat

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Compression x 1/2" Male Sweat, Adapter	10	RLC10B0608-10	81011139	1
1/2" Compression x 1/2" Male Sweat, Adapter	10	RLC0510B0808-10	81010731	1
5/8" Compression x 1/2" Male Sweat, Adapter	10	RLC10B1008-10	81008092	1
5/8" Compression x 3/4" Male Sweat, Adapter	10	RLC10B1012-10	81008094	2
3/4" Compression x 3/4" Male Sweat, Adapter	10	RLC10B1212-10	81008096	2
1" Compression x 1" Male Sweat, Adapter	5	RLC10B1616-5	81008098	3

O-rings and Insulators are shipped loose on all sweat fittings.



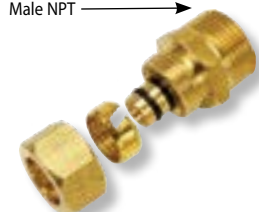
RadiantPEX-AL Adapter — Compression x Female Sweat

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Compression x 1/2" Female Sweat, Adapter	10	RLC11B0608-10	81011140	1
1/2" Compression x 1/2" Female Sweat, Adapter	10	RLC0511B0808-10	81010732	1
5/8" Compression x 3/4" Female Sweat, Adapter	10	RLC11B1012-10	81008102	2
3/4" Compression x 3/4" Female Sweat, Adapter	10	RLC11B1212-10	81008104	2
1" Compression x 1" Female Sweat, Adapter	5	RLC11B1616-5	81013675	2

O-rings and Insulators are shipped loose on all sweat fittings.

RadiantPEX-AL Compression Fittings

Male NPT →



RadiantPEX-AL Adapter — Compression x Male NPT

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1/2" Compression x 3/4" MPT, Adapter	10	RLC0512B0812-10	81010729	2
5/8" Compression x 3/4" MPT, Adapter	10	RLC12B1012-10	81008108	2
3/4" Compression x 3/4" MPT, Adapter	10	RLC12B1212-10	81008110	3
1" Compression x 1" MPT, Adapter	5	RLC12B1616-5	81008112	3

Female NPT →



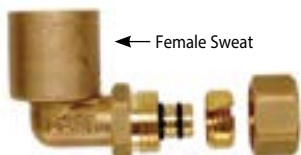
RadiantPEX-AL Adapter — Compression x Female NPT

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1" Compression x 1" FPT, Adapter	5	RLC13B1616-5	81013676	2

RadiantPEX-AL Compression Elbow — Compression x Female Sweat

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
5/8" Compression x 3/4" Female Sweat, Elbow	10	RLC41B1012-10	81008536	3
3/4" Compression x 3/4" Female Sweat, Elbow	10	RLC41B1212-10	81008538	3

← Female Sweat



O-rings and insulators are shipped loose on all sweat fittings.

RadiantPEX-AL Compression Couplings (Equal)

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Compression Coupling	10	RLC15B0606-10	81011141	1
1/2" Compression Coupling	10	RLC0515B0808-10	81010716	1
5/8" Compression Coupling	10	RLC15B1010-10	81008116	1
3/4" Compression Coupling	10	RLC15B1212-10	81008118	2
1" Compression Coupling	5	RLC15B1616-5	81008120	2



RadiantPEX-AL Compression Elbow (Equal)

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
5/8" Compression Elbow	10	RLC19B1010-10	81008122	1
3/4" Compression Elbow	10	RLC19B1212-10	81008124	2
1" Compression Elbow	5	RLC19B1616-5	81008127	2



RadiantPEX-AL Compression Tee (Equal)

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/4" Compression Tee	10	RLC18B121212-10	81008129	3
1" Compression Tee	5	RLC18B161616-5	81008131	3



RadiantPEX-AL Compression Fittings

RadiantPEX-AL Extra Insulators for Compression Fittings



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Extra Compression Fitting Insulator	10	RLC43IN06-10	81011165	.5
1/2" Extra Compression Fitting Insulator	10	RLC0543IN08-10	81010697	.5
5/8" Extra Compression Fitting Insulator	10	RLC43IN10-10	81009456	.5
3/4" Extra Compression Fitting Insulator	10	RLC43IN12-10	81009458	.5
1" Extra Compression Fitting Insulator	10	RLC43IN16-10	81009460	.5

Extra insulators are only needed if they are damaged or lost in the field.

RadiantPEX-AL Extra O-Rings for Compression Fittings



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Extra Compression Fitting O-Rings	10	RLC44OR06-10	81011167	.5
1/2" Extra Compression Fitting O-Rings	10	RLC0544OR08-10	81010652	.5
5/8" Extra Compression Fitting O-Rings	10	RLC44OR10-10	81008567	.5
3/4" Extra Compression Fitting O-Rings	10	RLC44OR12-10	81008568	.5
1" Extra Compression Fitting O-Rings	10	RLC44OR16-10	81008569	.5

Extra O-rings are only needed if they are damaged or lost in the field.

R-flex™

insulated piping systems



Insulated supply and return piping for:

- Hydronic heating
- Hydronic snow melting
- District heating
- Commercial and process piping
- Geothermal
- Agricultural piping
- Biomass heat sources
- Wood-fired boilers
- Solar
- Cooling towers & chilled water systems



A long-lasting system

R-flex is a pre-insulated, flexible, energy-saving PEX piping system with a durable, waterproof outer cover. It consists of a long-lasting PEX carrier pipe or pipes surrounded by thick insulation layers, all contained in a unique double-wall outer casing for maximum protection. The flexibility and light weight of R-flex makes it far easier to install than rigid piping systems.

Superior protection

Surrounding the inner PEX carrier pipe are several layers of cross-linked polyethylene foam with a closed cellular structure. This unique design provides R-flex with a low water vapor absorption, enhanced R-value insulation, and an excellent resistance to extreme temperatures.

Most importantly, R-flex is able to maintain these insulation properties over time. Other insulation types, such as polyurethane (PUR) foam, can crush when the pipe is bent, causing them to lose their insulative properties.

Barrier PEX offers several advantages

- High resistance to corrosion and pressure at high temperatures
- Exceptionally high abrasion resistance
- Superb chemical resistance
- Excellent longevity at high temperatures

Flexible, fast, and easy

R-flex derives a unique benefit from the use of the polyethylene foam insulation and the double-wall outer shell; increased flexibility. This feature provides an advantage when running R-flex between buildings, around trench corners, or through wall penetrations.

Simple to install

Traditional carrier pipes, such as copper or black iron, require installers to cut and install transition fittings to work around an obstacle. With R-flex, installers no longer have to cut pipe and add connecting points. R-flex bends around the obstacle.

Design it with RadiantWorks Professional®

RadiantWorks Professional allows designers to properly determine the amount of R-flex required for a project and an estimated amount of transitional heat loss. Design it once. Design it right.



R-flex Single & Dual Coils

R-flex is a flexible pre-insulated PEX with a corrugated, double-wall HDPE cover suitable for direct burial. R-flex is manufactured in accordance with DIN 16892/16893, with a DIN 4726 oxygen barrier.

R-flex ratings: 200 Deg F at 80 psi; 180 Deg F at 100 psi; 73 Deg F at 160 psi

Determining size and amount of R-flex to order

R-flex U.S. equivalents

	Metric US Equivalent	25 mm 1"	32 mm 1-1/4"	40 mm 1-1/2"	50 mm 2"
Single	160 mm			81012929	81012886
	200 mm				
Dual	125 mm	81012879	81012880		
	160 mm			81012882	
	200 mm				81012884
Approx. Max. Flow, gpm		12	17	25	40

	Metric US Equivalent	63 mm 2-1/2"	75 mm 3"	90 mm 3-1/2"	110 mm 4"
Single	160 mm	81012887			
	200 mm		81012889	81012890	81012891
Dual	125 mm				
	160 mm				
	200 mm	81012885			
Approx. Max. Flow, gpm		70	90	140	200

To calculate the total length of R-flex needed, add 5% to the straight-line distance measured. This accounts for laying R-flex in a serpentine pattern. Also be sure to account for the length of all bends. See the R-flex Design and Installation Manual for more details.

R-flex Single & Dual Coils

R-flex Single 328' Coils – Pre-insulated single oxygen barrier PEX with corrugated, double-wall HDPE cover.



DESCRIPTION	QTY.	MODEL#	ORDER#	WT.LBS.
40mm x 160mm OD Jacket, R-flex Single	1	RFS-40X160-328	81012929	517
50mm x 160mm OD Jacket, R-flex Single	1	RFS-50X160-328	81012886	552
63mm x 160mm OD Jacket, R-flex Single	1	RFS-63X160-328	81012887	618
75mm x 200mm OD Jacket, R-flex Single	1	RFS-75X200-328	81012889	922
90mm x 200mm OD Jacket, R-flex Single	1	RFS-90X200-328	81012890	1048
110mm x 200mm OD Jacket, R-flex Single	1	RFS-110X200-328	81012891	1250

R-flex Single – Custom lengths

DESCRIPTION	MODEL#	ORDER#	WT.LBS.
40mm x 160mm OD Jacket, R-flex Single	RFS-40X160-1	81012951	1.56/ft.
50mm x 160mm OD Jacket, R-flex Single	RFS-50X160-1	81012952	1.67/ft.
63mm x 160mm OD Jacket, R-flex Single	RFS-63X160-1	81012953	1.87/ft.
75mm x 200mm OD Jacket, R-flex Single	RFS-75X200-1	81012954	2.8/ft.
90mm x 200mm OD Jacket, R-flex Single	RFS-90X200-1	81012955	3.18/ft.
110mm x 200mm OD Jacket, R-flex Single	RFS-110X200-1	81012956	3.79/ft.
Cut charge 25 ft. increments (i.e. 25', 75', 100', etc.)	RF-C75	81013128	
Cut charge for non-standard increments (i.e. 80', 105', 170', etc.)	RF-C150	81013129	

R-flex Dual 328' Coils — Pre-insulated dual oxygen barrier PEX with corrugated, double-wall HDPE cover.



DESCRIPTION	QTY.	MODEL#	ORDER#	WT.LBS.
1" x 125mm OD Jacket, R-flex Dual	1	RFD-1X125-328	81012879	363
32mm x 125mm OD Jacket, R-flex Dual	1	RFD-32X125-328	81012880	407
40mm x 160mm OD Jacket, R-flex Dual	1	RFD-40X160-328	81012882	585
50mm x 200mm OD Jacket, R-flex Dual	1	RFD-50X200-328	81012884	894
63mm x 200mm OD Jacket, R-flex Dual	1	RFD-63X200-328	81012885	1028

R-flex Dual — Custom lengths

DESCRIPTION	MODEL#	ORDER#	WT.LBS.
1" x 125mm OD Jacket, R-flex Dual	RFD-1X125-1	81012957	1.09/ft.
32mm x 125mm OD Jacket, R-flex Dual	RFD-32X125-1	81012958	1.23/ft.
40mm x 160mm OD Jacket, R-flex Dual	RFD-40X160-1	81012959	1.77/ft.
50mm x 200mm OD Jacket, R-flex Dual	RFD-50X200-1	81012960	2.71/ft.
63mm x 200mm OD Jacket, R-flex Dual	RFD-63X200-1	81012961	3.12/ft.
Cut charge 25 ft. increments (i.e. 25', 75', 100', etc.)	RF-C75	81013128	
Cut charge for non-standard increments (i.e. 80', 105', 170', etc.)	RF-C150	81013129	

R-flex Dust Caps & Shrink Caps

Single Pipe Dust Caps – Non-waterproof - for interior terminations.



DESCRIPTION	QTY.	MODEL NO.	ORDER NO.	WT.LBS.
40mmx1, 160mm OD, R-flex Single Pipe Dust Cap	1	RFDC-40X1X160	81012967	0.5
50mmx1, 160mm OD, R-flex Single Pipe Dust Cap	1	RFDC-50X1X160	81012934	0.5
63mmx1, 160mm OD, R-flex Single Pipe Dust Cap	1	RFDC-63X1X160	81012935	0.5
75mmx1, 200mm OD, R-flex Single Pipe Dust Cap	1	RFDC-75X1X200	81012936	0.5
90mmx1, 200mm OD, R-flex Single Pipe Dust Cap	1	RFDC-90X1X200	81012937	0.5
110mmx1, 200mm OD, R-flex Single Pipe Dust Cap	1	RFDC-110X1X200	81012938	0.5

Dual Pipe Dust Caps – Non-waterproof - for interior terminations.



DESCRIPTION	QTY.	MODEL NO.	ORDER NO.	WT.LBS.
1" x 2, 125mm OD, R-flex Dual Pipe Dust Cap	1	RFDC-1X2X125	81012939	0.5
32mm x 2, 125mm OD, R-flex Dual Pipe Dust Cap	1	RFDC-32X2X125	81012940	0.5
40mm x 2, 160mm OD, R-flex Dual Pipe Dust Cap	1	RFDC-40X2X160	81012941	0.5
50mm x 2, 200mm OD, R-flex Dual Pipe Dust Cap	1	RFDC-50X2X200	81012942	0.5
63mm x 2, 200mm OD, R-flex Dual Pipe Dust Cap	1	RFDC-63X2X200	81012943	0.5

Single Pipe Shrink Caps – Waterproof - required for all direct burial connections in protective casings or inspection chamber.



DESCRIPTION	QTY.	MODEL NO.	ORDER NO.	WT.LBS.
40-50mm x 1, 160mm OD, R-flex Single Pipe Shrink Cap	1	RFSC-40-50X1X160	81012664	0.5
63mm x 1, 160mm OD, R-flex Single Pipe Shrink Cap	1	RFSC-63X1X160	81012540	0.5
75-110mm x 1, 200mm OD, R-flex Single Pipe Shrink Cap	1	RFSC-75-110X1X200	81012541	0.5

Dual Pipe Shrink Caps – Waterproof - required for all direct burial connections in protective casings or inspection chamber.



DESCRIPTION	QTY.	MODEL NO.	ORDER NO.	WT.LBS.
1" x 2 x 125mm OD, R-flex Dual Pipe Shrink Cap	1	RFSC-1X2X125	81012542	0.5
32mm x 2 x 125mm OD, R-flex Dual Pipe Shrink Cap	1	RFSC-32X2X125	81012543	0.5
40mm x 2 x 160mm OD, R-flex Dual Pipe Shrink Cap	1	RFSC-40X2X160	81012544	0.5
50mm x 2 x 200mm OD, R-flex Dual Pipe Shrink Cap	1	RFSC-50X2X200	81012545	0.5
63mm x 2 x 200mm OD, R-flex Dual Pipe Shrink Cap	1	RFSC-63X2X200	81012546	0.5

Debris Plugs for R-flex PEX – Use these to cap R-flex and keep jobsite debris out of the PEX tubing.



DESCRIPTION	QTY.	MODEL NO.	ORDER NO.	WT.LBS.
1", R-flex Pex Plug	1	RFPP-1"	81013021	0.5
32mm, R-flex Pex Plug	1	RFPP-32mm	81013022	0.5
40mm, R-flex Pex Plug	1	RFPP-40mm	81013023	0.5
50mm, R-flex Pex Plug	1	RFPP-50mm	81013024	0.5
63mm, R-flex Pex Plug	1	RFPP-63mm	81013025	0.5
75mm, R-flex Pex Plug	1	RFPP-75mm	81013026	0.5
90mm, R-flex Pex Plug	1	RFPP-90mm	81013027	0.5
110mm, R-flex Pex Plug	1	RFPP-110mm	81013028	0.5

R-flex Connections

Compression Adapters – PEX x MNPT, brass – for connecting R-flex to metal fittings. Included steel plate and bolt make it easy to slide collar over PEX.



DESCRIPTION	QTY.	MODEL NO.	ORDER NO.	WT.LBS.
1" x 1" MNPT, R-flex, Adapter, Comp	1	RFA-1X100MPT	81012552	1.0
32mm x 1" MNPT, R-flex, Adapter, Comp	1	RFA-32X100MPT	81012553	1.0
40mm x 1-1/4" MNPT, R-flex, Adapter, Comp	1	RFA-40X125MPT	81012554	1.5
50mm x 1-1/2" MNPT, R-flex, Adapter, Comp	1	RFA-50X150MPT	81012665	2.5
63mm x 2" MNPT, R-flex, Adapter, Comp	1	RFA-63X200MPT	81012556	3.5
75mm x 2-1/2" MNPT, R-flex, Adapter, Comp	1	RFA-75X250MPT	81012589	4.0
90mm x 3" MNPT, R-flex, Adapter, Comp	1	RFA-90X300MPT	81012558	7.5
110mm x 4" MNPT, R-flex, Adapter, Comp	1	RFA-110X400MPT	81012590	10.0

R-flex Bushings & Casings

Protective Sleeve Casing for R-flex – For waterproof sealing and insulating of straight connections. Includes 2 HDPE halves, insulation, sealer kit, and bolts. Must add shrink caps to seal ends of R-flex.



DESCRIPTION	QTY.	MODEL NO.	ORDER NO.	WT.LBS.
125-200mm pipes, R-flex Casing, Straight Sleeve	1	RFCS-125200	81012549	13.0

Protective Y Casing for R-flex – For waterproof sealing and insulating of dual to single connections. Includes 2 HDPE halves, insulation, sealer kit, and bolts. Must add shrink caps to seal ends of R-flex.



DESCRIPTION	QTY.	MODEL NO.	ORDER NO.	WT.LBS.
125-200mm pipes, R-flex Casing, Y	1	RFCY-125200	81012547	19.0

Protective Elbow Casing for R-flex – For waterproof sealing and insulating of elbow connections. Includes 2 HDPE halves, insulation, sealer kit, and bolts. Must add shrink caps to seal ends of R-flex.



DESCRIPTION	QTY.	MODEL NO.	ORDER NO.	WT.LBS.
125-200mm pipes, R-flex Casing, Elbow	1	RFCE-125200	81012548	21.0

Protective Tee Casing for R-flex – For waterproof sealing and insulating of tee connections. Includes 2 HDPE halves, insulation, sealer kit, and bolts. Must add shrink caps to seal ends of R-flex.



DESCRIPTION	QTY.	MODEL NO.	ORDER NO.	WT.LBS.
125-200mm pipes, R-flex Casing, Tee	1	RFCT-125200	81012550	26.0

R-flex Accessories

Protective Inspection Chamber for R-flex – Allows access to connections and/or valves. Includes HDPE chamber with 6 connection points, inspection lid, sealer kit and screws. Must add shrink caps to seal ends of R-flex, and jacket repair sleeves for sealing the R-flex to the chamber.



DESCRIPTION	QTY.	MODEL NO.	ORDER NO.	WT.LBS.
125-200mm pipes, R-flex Inspect Chamber	1	RFIC-125200	81012551	75.0

R-flex Jacket Repair Tape – To repair accidental damage to R-flex outer cover. Wrap the tape over damaged area and heat with heat gun.



DESCRIPTION	QTY.	MODEL NO.	ORDER NO.	WT.LBS.
3/4" x 33', R-flex Heat Shrink Repair Tape	1	RFRT-075X33	81012591	7.0

R-flex Jacket Repair Sleeve – To repair accidental damage to R-flex outer cover. Slide the sleeve over damaged area and heat with heat gun.



DESCRIPTION	QTY.	MODEL NO.	ORDER NO.	WT.LBS.
125mm, R-flex Shrink Repair Sleeve	1	RFRS-125	81012592	1.0
160mm, R-flex Shrink Repair Sleeve	1	RFRS-160	81012593	1.0
200mm, R-flex Shrink Repair Sleeve	1	RFRS-200	81012594	1.0

R-flex Caution Tape – Place in backfill along entire length of R-flex.



DESCRIPTION	QTY.	MODEL NO.	ORDER NO.	WT.LBS.
100 ft., R-flex Caution Tape	1	RFCT	81012947	1.0

R-flex Link Belt – Used when boring a hole in an existing wall. Seals wall penetrations between R-flex outer cover and wall.



DESCRIPTION	QTY.	MODEL NO.	ORDER NO.	WT.LBS.
125mm outer casing, R-flex Link Belt	1	RFLB-125	81012948	1.5
160mm outer casing, R-flex Link Belt	1	RFLB-160	81012949	5.0
200mm outer casing, R-flex Link Belt	1	RFLB-200	81012950	6.0

R-flex Specifications Chart

Specifications (conforms to DIN 16892, SDR-11)														
	Order #	Description	PEX ID	PEX OD	Jacket OD	Bend Radius	Coil Length	Coil Diameter	Coil Height	Coil Weight	Fluid Cap. /100m (328ft)	Insulation Thickness	Casing R-Value	
Single	81012929	160/40 R-flex	32.6 mm (1.28")	40 mm (1.57")	160 mm (6.30")	350 mm (13.8")	100 m** (328 ft)	2300 mm (90.6")	850 mm (33.50")	232 kg (512 lbs)	83.00 L (21.93 gal)	47.5 mm (1.88")	6.79	
	81012886	160/50 R-flex	40.8 mm (1.61")	50.0 mm (1.97")		450 mm (17.80")				248 kg (547 lbs)	131.31 L (34.69 gal)	42.5 mm (1.68")	6.07	
	81012887	160/63 R-flex	51.6 mm (2.03")	63.0 mm (2.48")		550 mm (21.7")				278 kg (613 lbs)	208.76 L (55.15 gal)	37.0 mm (1.46")	5.27	
	81012889	200/75 R-flex	61.4 mm (2.42")	75.0 mm (2.95")	200 mm (7.90")	800 mm (31.5")			1400 mm (55.20")	416 kg (917 lbs)	296.67 L (78.37 gal)	52.0 mm (2.05")	7.4	
	81012890	200/90 R-flex	73.6 mm (2.90")	90.0 mm (3.54")		1100 mm (43.4")				473 kg (1,043 lbs)	426.02 L (112.55 gal)	44.0 mm (1.74")	6.28	
	81012891	200/110 R-flex	90.0 mm (3.55")	110.0 mm (4.33")		1200 mm (47.3")				564 kg (1,244 lbs)	638.41 L (168.65 gal)	34.0 mm (1.33")	4.84	
Dual	81012879	125/2x1 R-flex*	0.863" (21.92 mm)	1.125" (28.58 mm)	4.90" (125 mm)	11.80" (300 mm)	100 m** (328 ft)	2300 mm (90.60")	82.70" (2100 m)	27.60" (700 mm)	358 lbs (162 kg)	19.94 gal (75.46 L)	1.11" (28.0 mm)	4.01
	81012880	125/2x32 R-flex	26.2 mm (1.03")	32.0 mm (1.26")	125 mm (4.90")	300 mm (11.80")			2100 mm (82.70")	700 mm (27.60")	182 kg (402 lbs)	107.48 L (28.40 gal)	22.3 mm (0.88")	3.18
	81012882	160/2x40 R-flex	32.6 mm (1.28")	40.0 mm (1.57")	160 mm (6.30")	600 mm (23.70")			850 mm (33.50")	263 kg (580 lbs)	166.00 L (43.86 gal)	34.0 mm (1.34")	4.84	
	81012884	200/2x50 R-flex	40.8 mm (1.61")	50.0 mm (1.97")	200 mm (7.90")	800 mm (31.50")			1400 mm (55.20")	403 kg (889 lbs)	262.62 L (69.38 gal)	46.0 mm (1.81")	6.57	
	81012885	200/2x63 R-flex	51.6 mm (2.03")	63.0 mm (2.48")		1200 mm (47.30")				464 kg (1,023 lbs)	417.52 L (110.30 gal)	33.0 mm (1.30")	4.69	

* Pex pipe is certified to ASTM F876, SDR-9 dimensions.

** Custom lengths are available upon request. Contact distributor for details.

Manifolds

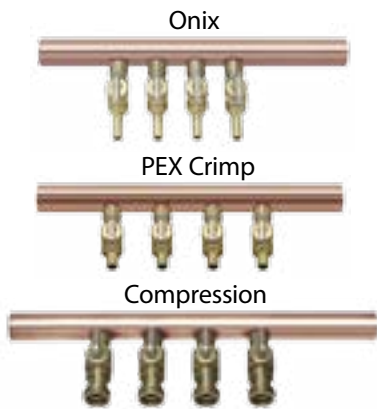
Watts Radiant offers a wide variety of stainless steel and copper manifolds. Any of these styles can be fitted with Onix, PEX Crimp, PEX Compression, RadiantPEX-AL Compression fittings.

Stainless Steel Manifolds



Stainless Steel manifolds are made of heavy-walled stainless steel. Matching fittings and accessories are made of solid brass and are heavily plated with nickel to match the appearance of the manifold trunk. Standard features included flow balancing valves, circuit isolation valves, and flow meters. Manifolds are sold in pre-mounted pairs in 1" and 1 1/2" sizes.

Custom Tubular Manifold Pairs



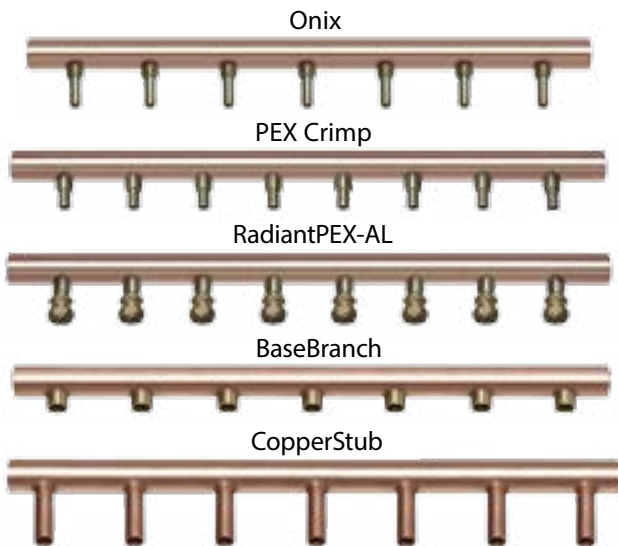
Watts Radiant **Custom Tubular manifolds** are manufactured to project specifications. All trunks are made of copper; all fittings and ball valves are brass. Every manifold is pressure tested before leaving the factory.

Custom Tubular are sold in pairs. Manifolds are available in 1"-6" ID trunk sizes.

Four configurations are possible:

- Standard** — no mini ball valves
- BVR** — mini ball valves on the return manifold
- BVSR** — mini ball valves on supply and return manifolds
- BBSR** — balance ball valves on return, mini-ball valves on supply manifold

CustomCut™ Manifolds



CustomCut manifolds are designed for flexibility for the installer. They come in 4 foot long copper sticks to be cut in the field. Sticks can be ordered with either 12 (4" spacing) or 16 (3" spacing) branches.

Sold Individually.

Three fitting styles are available for CustomCuts :

- Onix**
- PEX Crimp**
- RadiantPEX-AL Compression**

Swedged Manifolds

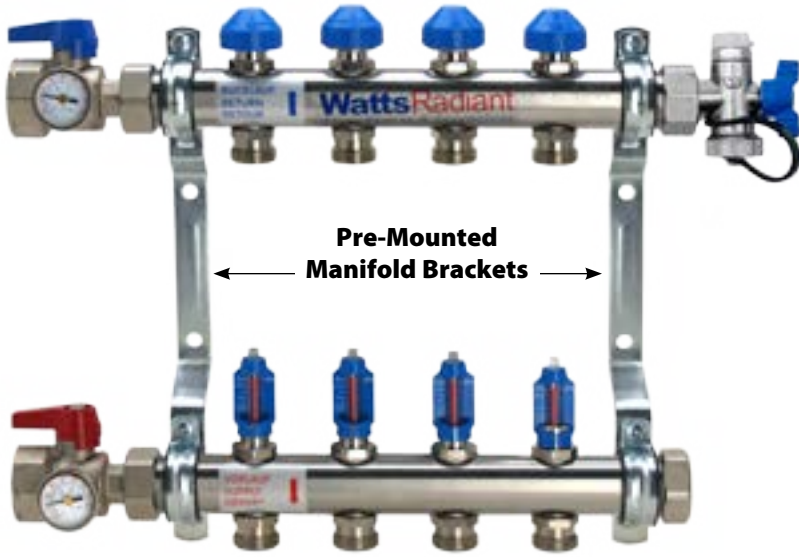


Swedged manifolds are 1" copper manifolds closed at one end and swedged at the other. Cut off the end of a 3-branch and solder it to another 3-branch to make a 6-branch manifold.

Sold Individually.

Swedged manifolds available in PEX-AL Compression only.

Stainless Steel Manifolds



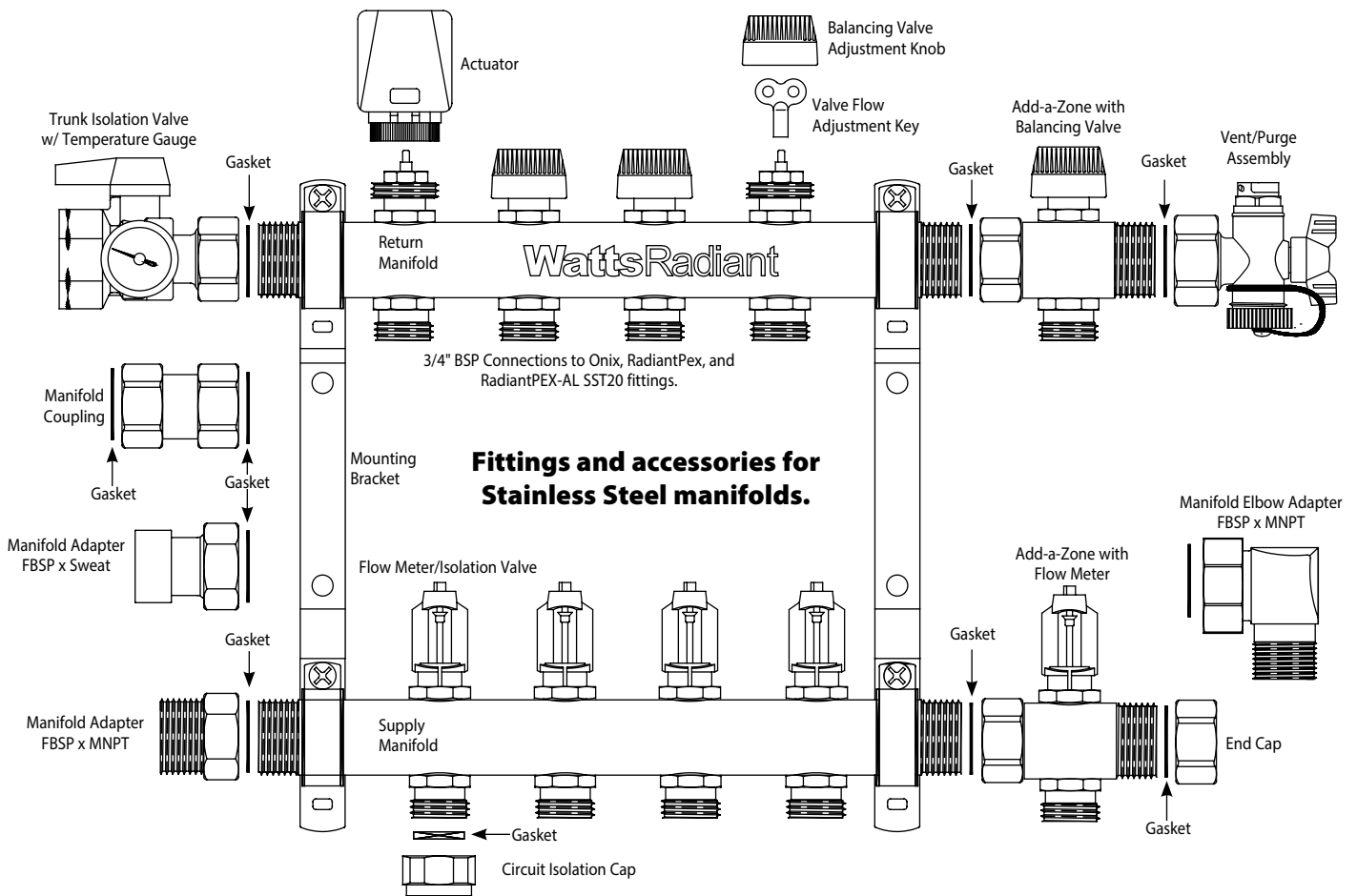
Specifications	1"	1-1/2"
Trunk Material	ANSI 304 Stainless Steel	
Nominal Trunk Size	1"	1-1/2"
Circuit Spacing	2-1/8"	
Thread/Connection Type	BSP (British Standard Pipe)	
Max. Trunk Flow Rate	12 gpm	22 gpm
Max. Circuit Flow Rate	2 gpm	4 gpm
Max. Operating Temperature	176°F	
Max. Operating Pressure	87 psi	

1" and 1-1/2" Stainless Steel Manifolds

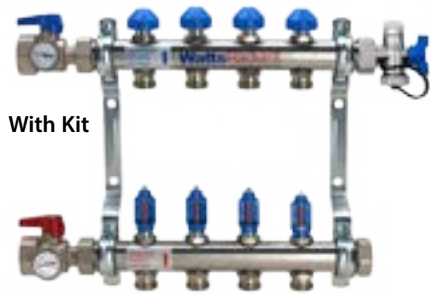
- Fast and Easy to Install
- Instant and Easy Circuit Balancing
- Vent/purge assembly allows even easier purging
- Professional Appearance
- Gaskets allow air or water pressure test.
- Flowmeter valves allow circuit isolation

Matching fittings and accessories are made of solid brass and heavily plated with nickel to match the appearance of the manifold trunk. Standard features include flow balancing valves and flow meters on each circuit. Manifolds are sold in pre-mounted pairs.

Only SST20 styles are compatible with Stainless Steel manifolds.



Stainless Steel Manifolds



With Kit



No Kit

1" Flowmeter Manifolds, Stainless Steel with trunk isolation valve kit

1" Stainless Steel Manifold Kits	QTY	MODEL #	ORDER #	WT. (lbs)
1" Flowmeter Manifold, S.S., M-2 with Trunk iso. kit*	1 Kit	D3803002SS-KIT	81013279	11
1" Flowmeter Manifold, S.S., M-3 with Trunk iso. kit*	1 Kit	D3803003SS-KIT	81013280	12
1" Flowmeter Manifold, S.S., M-4 with Trunk iso. kit*	1 Kit	D3803004SS-KIT	81013281	13
1" Flowmeter Manifold, S.S., M-5 with Trunk iso. kit*	1 Kit	D3803005SS-KIT	81013282	14
1" Flowmeter Manifold, S.S., M-6 with Trunk iso. kit*	1 Kit	D3803006SS-KIT	81013283	16
1" Flowmeter Manifold, S.S., M-7 with Trunk iso. kit*	1 Kit	D3803007SS-KIT	81013284	16
1" Flowmeter Manifold, S.S., M-8 with Trunk iso. kit*	1 Kit	D3803008SS-KIT	81013285	17
1" Flowmeter Manifold, S.S., M-9 with Trunk iso. kit*	1 Kit	D3803009SS-KIT	81013286	18
1" Flowmeter Manifold, S.S., M-10 with Trunk iso. kit*	1 Kit	D3803010SS-KIT	81013287	19
1" Flowmeter Manifold, S.S., M-11 with Trunk iso. kit*	1 Kit	D3803011SS-KIT	81013288	20
1" Flowmeter Manifold, S.S., M-12 with Trunk iso. kit*	1 Kit	D3803012SS-KIT	81013289	22

*with DK1000 Kit

Flowmeter Manifolds only (no DK1000 kit)

1" Stainless Steel Manifolds	QTY	MODEL #	ORDER #	WT. (lbs)
1" Flowmeter Manifold, Stainless Steel, M-2	1 Pair	D3803002SS	81001981	9
1" Flowmeter Manifold, Stainless Steel, M-3	1 Pair	D3803003SS	81001982	10
1" Flowmeter Manifold, Stainless Steel, M-4	1 Pair	D3803004SS	81001983	11
1" Flowmeter Manifold, Stainless Steel, M-5	1 Pair	D3803005SS	81003398	12
1" Flowmeter Manifold, Stainless Steel, M-6	1 Pair	D3803006SS	81001984	13
1" Flowmeter Manifold, Stainless Steel, M-7	1 Pair	D3803007SS	81003682	13
1" Flowmeter Manifold, Stainless Steel, M-8	1 Pair	D3803008SS	81001985	14
1" Flowmeter Manifold, Stainless Steel, M-9	1 Pair	D3803009SS	81003687	15
1" Flowmeter Manifold, Stainless Steel, M-10	1 Pair	D3803010SS	81001986	16
1" Flowmeter Manifold, Stainless Steel, M-11	1 Pair	D3803011SS	81003688	17
1" Flowmeter Manifold, Stainless Steel, M-12	1 Pair	D3803012SS	81001987	19

1-1/2" Stainless Steel Manifolds	QTY	MODEL #	ORDER #	WT. (lbs)
1-1/2" Flowmeter Manifold, Stainless Steel, M-4	1 Pair	D3807604SS	81005355	13
1-1/2" Flowmeter Manifold, Stainless Steel, M-5	1 Pair	D3807605SS	81005356	14
1-1/2" Flowmeter Manifold, Stainless Steel, M-6	1 Pair	D3807606SS	81005357	15
1-1/2" Flowmeter Manifold, Stainless Steel, M-8	1 Pair	D3807608SS	81005358	17
1-1/2" Flowmeter Manifold, Stainless Steel, M-10	1 Pair	D3807610SS	81005359	19
1-1/2" Flowmeter Manifold, Stainless Steel, M-12	1 Pair	D3807612SS	81005360	21

Stainless Steel Manifolds are sold in pairs, mounted to metal bracket as shown. Accessories such as Trunk Isolation Ball Valves, Vent/Purge Assemblies, and Actuators are purchased separately. For added convenience, several of these accessories can be purchased in kits (see next page).

Each circuit can be individually balanced by adjusting the valve located under the blue cap. Maximum flow rates are 12 gpm for 1" manifolds and 22 gpm for 1-1/2" manifolds. Individual circuit flow meters are 0-2 gpm for 1" and 0-4 gpm for 1-1/2" manifolds.

Manifolds and gauges are rated to 176°F at 87 psi pressure. Fittings are spaced at 2" on center. Order Onix, Crimp, or Compression fittings separately.

Only SST20 styles are compatible with Stainless Steel manifolds.

For Pricing, Please See Watts Radiant Price Guide.

Stainless Steel Manifold Accessories



Add-a-Zone with Balancing Valve and Gasket

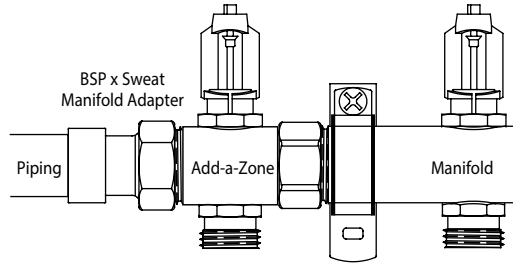


Add-a-Zone with Flow Meter and Gasket

Stainless Steel Add-a-Zone — add a branch to your manifold

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Stainless Steel Add-A-Zone set, 1"	1	D3804000SS	81002934	3

Add-a-Zones make it easy to add additional capacity to a manifold already installed. Just thread them onto the end of a manifold. Set includes balance valve and flow meter sides of manifold.



An Add-a-Zone attached to the end of a Stainless Steel supply manifold to increase capability.

Simplify manifold ordering and save money with these Manifold Accessories Kits!

Manifold kits come complete with one Vent-and-Purge Assembly, one Manifold End Cap, and a pair of Trunk Isolation Valves, BSP x NPT Manifold Adapters, or BSP x Sweat Manifold Adapters.

Note: All Manifold Accessory Kits include both neoprene and fiber gaskets.

Iso BV Kit



SS Manifold Accessories Kit with Trunk Isolation Ball Valves

Sweat Kit



SS Manifold Accessories Kit with BSP x Sweat Manifold Adapters

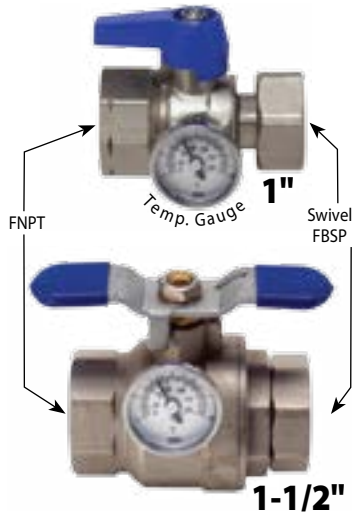
DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs.)
1" SS Accessories Kit w/ 1" FNPT Isolation Ball Valves	1 Kit	DK1000	81003736	3
1" SS Accessories Kit w/ 3/4" Sweat Manifold Adapters	1 Kit	DK7000	81005455	3
1" SS Accessories Kit w/ 1" Sweat Manifold Adapters	1 Kit	DK3000	81005369	3

1-1/2" SS Accessories Kit w/ 1-1/2" FNPT Isolation Ball Valves	1 Kit	DK4000	81005370	3
1-1/2" SS Accessories Kit w/ 1-1/2" Sweat Manifold Adapters	1 Kit	DK6000	81005372	3

Only SST20 styles are compatible with Stainless Steel manifolds.

For Pricing, Please See Watts Radiant Price Guide.

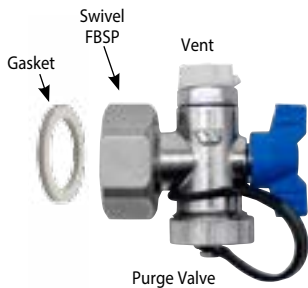
Stainless Steel Manifold Accessories



Transitional Trunk Isolation Ball Valves with Temperature Gauge — provides manifold isolation and transition to NPT threads.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1" SS Trunk Iso Valve, Red handle	1	D4201720-NR	81001995	2
1" SS Trunk Iso Valve, Blue handle	1	D4201720-NB	81001994	2
1-1/2" Trunk Iso Valve, Red handle	1	D3515930-NR	81005362	2
1-1/2" Trunk Iso Valve, Blue handle	1	D3515935-NB	81005363	2

These nickel-plated brass manifold ball valves include temperature gauges to measure supply and return temperatures for troubleshooting or system balancing. They also provide transition from MBSP manifold threads to FNPT threads.



Vent-and-Purge Assemblies — for purging air and water from the zones.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Vent-and-Purge Assembly, 1"	1	D4201715-N	81001993	1
Vent-and-Purge Assembly, 1-1/2"	1	D3515940-N	81005457	1

The **Vent-and-Purge Assembly** allows purging of the zone at the manifold location. The Vent-and-Purge Assembly consists of a 1" BSP sleeve nut for attaching to the end of the manifold, and a 3/8" manual air vent valve. Also includes a 1/2" hose fitting with a built-in ball valve to allow zone draining and filling. Nickel-plated brass.

Manifold End Caps — to cap flow at end of manifold trunk.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
SS Manifold End Cap, 1"	1	D063064-N	81001977	0.5
SS Manifold End Cap, 1-1/2"	1	D3515910-N	81005425	0.5

These **Manifold End Caps** are used to cap off the end of a Stainless Steel Manifold when a vent-and-purge assembly is not used. Nickel-plated brass.

Stainless Steel Manifold Couplings — for connecting one manifold to another.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
SS Manifold Coupling, 1"	1	D402178-N	81001988	1
SS Manifold Coupling, 1-1/2"	1	D3290010-N	81005426	1

These Manifold Couplings are used to connect two manifold pairs. For example, an M-4 can be connected to an M-3 using the coupler to make an M-7. Nickel-plated brass for corrosion resistance. Sold individually.

Transitional Swivel BSP x Female Sweat Manifold Adapters — for connecting Stainless Steel Manifolds to copper pipe.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1" SS Manifold x 3/4" Female Sweat, Adapter	1	D0504	81005366	1
1" SS Manifold x 1" Female Sweat, Adapter	1	D0505	81005367	1
1-1/2" SS Manifold x 1-1/2" Female Sweat, Adapter	1	D0708	81005480	1

BSP x Sweat Manifold Adapters connect Stainless Steel Manifolds to or copper pipe. Nickel-plated brass for corrosion resistance. These are not needed if you are using the Transitional Trunk Valves. Sold individually.

Only SST20 styles are compatible with Stainless Steel manifolds.

For Pricing, Please See Watts Radiant Price Guide.

Stainless Steel Manifold Accessories

Transitional BSP x NPT Manifold Adapters – for connecting Stainless Steel manifolds to NPT fittings.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1" SS Manifold x 1" MNPT Adapter	1	D4201480	81001989	1
1-1/2" SS Manifold x 1-1/2" MNPT Adapter	1	D3515920	81005368	1

Use **BSP x NPT Manifold Adapters** to connect Stainless Steel Manifolds to standard pipe. This fitting features female BSP threads on the manifold side and male NPT threads on the pipe side. Nickel-plated brass for corrosion resistance. These are not needed if you are using the Transitional Trunk Isolation Valves.



Transitional BSP x PEX Crimp Fitting Adapter – for connecting PEX supply and return piping to Stainless Steel manifolds.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1" SS Manifold x 3/4" Crimp Adapter	1	D5SSX4C-N	81009351	1
1" SS Manifold x 1" Crimp Adapter	1	D5SSX5C-N	81009352	1

Female Swivel BSP
(Connects to manifold)



Transitional BSP x BSP Manifold Elbows — easily install supply lines at 90° to manifold.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1" SS Manifold Elbow, Female BSP x Male BSP	1	D3517020-N	81005364	1
1-1/2" SS Manifold Elbow, Female BSP x Male BSP	1	D3515925-N	81005365	1

Use **Manifold Elbows** to connect directly to the manifold, then connect an ISO Ball Valve or other transitional fitting to the male BSP side of the Elbow. Adapter or a Trunk Isolation Ball Valve is used to transition to NPT threads.

Circuit Isolation Cap — for unused circuits in Stainless Steel manifolds.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
SS Circuit Isolation Cap	1	D4201700-S	81005479	1

Circuit Isolation Caps are used to "seal off" unused circuits on the manifolds. They can be used in conjunction with the built-in circuit isolation valves to convert an M-8 manifold into an M-7 manifold. Nickel-plated brass for corrosion resistance. Sold individually.



SST20 Circuit Sweat Adapter — for connecting 1/2" copper to stainless steel manifolds circuits.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1/2" Male Sweat x 3/4" SST20 Swivel Fitting	10	690101	81009452	1

Stainless Steel Manifold Accessories



Valve Actuator — for low wattage, individual radiant circuit control.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Valve Actuator	1	PZ656104	81001541	1

Great for multiple small radiant zones. The Valve Actuator provides on/off flow control to individual radiant circuits. Incorporates an indicator window that allows you to visually determine whether the valve is fully open or closed. Flow can be balanced prior to installing by turning the adjustment valve under the blue cap. Actuator is 24 VAC (2.5 W) with four wires to connect to the thermostat and close an end switch.

Indicator window on front of actuator valve. Window shows red when valve is closed, black when valve is open.

Fiber gaskets

Neoprene gaskets

Blue Cap

FlowMeter

Temp Gauge

Stainless Steel Manifold Replacement Parts

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1" SS Manifold fiber replacement gasket	10	390095-10	81011084	1
1-1/2" SS Manifold fiber replacement gasket	10	390090-10	81011085	1
1" SS Manifold neoprene replacement gasket	10	390096-10	81011086	1
1-1/2" SS Manifold neoprene replacement gasket	10	390097-10	81011087	1
SS Manifold replacement blue cap	1	428337	81007329	1
1" SS Manifold replacement flowmeter/valve (0-2 gpm)	1	D3151122N	81011159	2
1-1/2" SS Manifold replacement flowmeter/valve (0-4 gpm)	1	D3151190N	81011160	2
SS Manifold replacement temperature gauge	1	D6151005	81003402	1

Pressure Gauge

Schraeder Air Valve

Water Fill Valves

Stainless Steel Manifold Pressure Test Kits — specially fitted for Stainless Steel Manifolds.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1" Manifold Pressure Test Kit	1 Kit	D665161	81001996	4
1-1/2" Manifold Pressure Test Kit	1 Kit	D665261	81005373	4

Manifold Boxes — for wall or ceiling-mounted manifold systems.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Manifold Box, 16" x 29" x 4-1/2"	1	PZ162904	81001525	7
Manifold Box, 24" x 29" x 4-1/2"	1	PZ242904	81003497	15
Manifold Box, 40" x 29" x 4-1/2"	1	PZ402904	81004517	22

Manifold Boxes protect manifolds with a locking door. **Only doors and frame are powder coated.** All types of 1" – 1-1/2" Watts Radiant manifolds can be mounted in these boxes. Dimensions are width x height x depth. Depth can be expanded to 6", and box height off floor is adjustable.



- 16" box fits a SS M-3 with vent/purge and iso valve
- 24" box fits a SS M-7 with vent/purge and iso valve
- 40" box fits a SS M-12 with vent/purge and iso valve

See Zone HydroNex section for installed manifolds with pre-wired actuators.

Onix Fittings



SST20 Onix Swivel Fittings — for Stainless Steel, and Custom Tubular T20 Manifolds.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Onix x 3/4" BSP Swivel Fitting	10	689001-10	81000679	1
1/2" Onix x 3/4" BSP Swivel Fitting	10	689002-10	81000681	1
5/8" Onix x 3/4" BSP Swivel Fitting	10	689003-10	81000683	2
3/4" Onix x 3/4" BSP Swivel Fitting	10	689004-10	81000684	2

Use these female **Onix T20 Fittings** to connect Onix to our Stainless Steel, and Custom Tubular compression manifolds. Order Onix SelfTite or TorqueTite clamps separately.
 BSP threads are not compatible with NPT.

SelfTite™ Clamps — Pre-tensioned for easy field installation. The chrome-vanadium spring steel maintains a constant tension on the Onix under all operating conditions. SelfTites incorporate a zinc coating to guard against corrosion.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" SelfTite Clamp (19 mm)	10	663019-10	81000523	3
1/2" SelfTite Clamp (22 mm)	10	663022-10	81000526	4
5/8" SelfTite Clamp (25 mm)	10	663025-10	81000529	4
3/4" SelfTite Clamp (29 mm)	10	663029-10	81000532	5

Use SqueezeTite™ Pliers to install SelfTite clamps (see Fasteners and Tools section for ordering information).

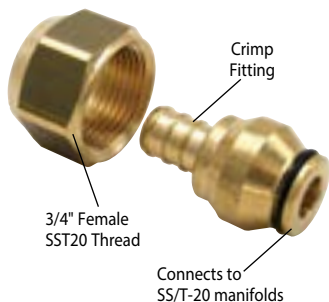
TorqueTite™ Clamps — our best stainless steel screw clamps.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" TorqueTite Clamp (17–19 mm)	10	6641117-10	81002913	2
1/2" TorqueTite Clamp (21–23 mm)	10	6641524-10	81002916	2
5/8" TorqueTite Clamp (25–27 mm)	10	6641928-10	81002919	2
3/4" TorqueTite Clamp (29–31 mm)	10	6642232-10	81002922	2

The Onix **TorqueTite** is a rugged, stainless steel clamp capable of withstanding large pressures and temperatures while being easy to install.

PEX Swivel Crimp Fittings



SST20 Crimp Swivel Fittings — for connecting PEX to Watts Radiant's Stainless Steel and Custom Tubular T20 Compression manifolds.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Crimp x 3/4" SST20 Swivel BSP Fitting	10	PC690001-10	81005160	1
1/2" Crimp x 3/4" SST20 Swivel BSP Fitting	10	PC690002-10	81005162	1
5/8" Crimp x 3/4" SST20 Swivel BSP Fitting	10	PC690003-10	81005164	2
3/4" Crimp x 3/4" SST20 Swivel BSP Fitting	10	PC690004-10	81005395	2

Use these **SST20 Crimp Fittings** to connect PEX to our Stainless Steel or T20 Custom Tubular Manifolds. Order CrimpRings or CinchClamps separately.
 BSP Stands for British Standard Pipe (threads). These threads are not compatible with NPT (National Pipe Threads).

PEX Crimp Fittings



Copper CrimpRings — for securing PEX to brass crimp fittings.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" CrimpRing	100	PCCR2X-100	81001071	1
1/2" CrimpRing	100	PCCR3X-100	81001075	1
5/8" CrimpRing	100	PCCR6X-100	81004508	2
3/4" CrimpRing	100	PCCR4X-100	81001080	2

Copper CrimpRings are precision-formed, ductile copper connectors. When crimped, these connections form a simple, fast, and permanent seal between PEX and CrimpRing fittings. See RadiantPEX section for 1" and larger CrimpRings and fittings.

Stainless Steel CinchClamps — for fast, easy, one-tool connections.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" CinchClamps	10	PCCC2X-10	81004993	1
3/8" CinchClamps	100	PCCC2X-100	81004994	1
1/2" CinchClamps	10	PCCC3X-10	81004995	1
1/2" CinchClamps	100	PCCC3X-100	81004996	1
5/8" CinchClamps	10	PCCC6X-10	81005114	2
5/8" CinchClamps	100	PCCC6X-100	81005115	3
3/4" CinchClamps	10	PCCC4X-10	81004997	2
3/4" CinchClamps	100	PCCC4X-100	81004998	3

CinchClamps have been proven in millions of connections. See RadiantPEX section for 1" CinchClamps and fittings.

Close Ear Cinch Clamps



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1/2" Close-Ear CinchClamps	10	PCCC3XN-10	81015960	1
1/2" Close-Ear CinchClamps	100	PCCC3XN-100	81015961	1
3/4" Close-Ear CinchClamps	10	PCCC4XN-10	81015962	2
3/4" Close-Ear CinchClamps	100	PCCC4XN-100	81015963	3

PEX Compression Fittings



SST20 PEX Compression Fittings — for connecting PEX to Stainless Steel manifolds, and Custom Tubular T20 compression manifolds, or 3/4" male BSP x male sweat fittings.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" PEX Compression x 3/4" SST20 Swivel BSP	10	PX690001-10	81005166	1
1/2" PEX Compression x 3/4" SST20 Swivel BSP	10	PX690002-10	81005168	1
5/8" PEX Compression x 3/4" SST20 Swivel BSP	10	PX690003-10	81005170	2
3/4" PEX Compression x 3/4" SST20 Swivel BSP	10	PX690004-10	81005172	2

RadiantPEX-AL Compression Fittings



RadiantPEX-AL SST20 Compression Fitting — for stainless steel and T20 manifolds.

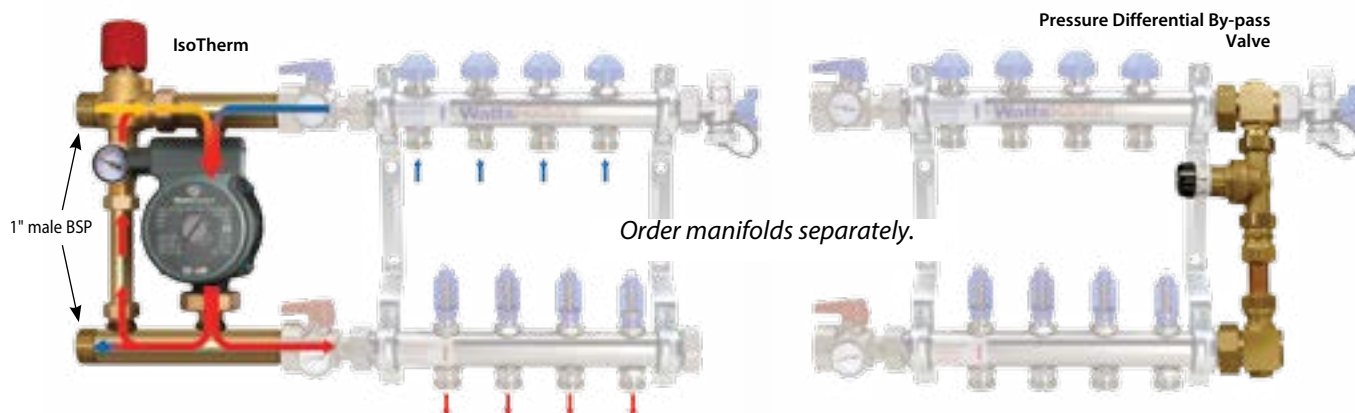
DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Compression x Adapter, 3/4" SST20 BSP	10	RLC01B06T20-10	81011138	1
1/2" Compression x Adapter, 3/4" SST20 BSP	10	RLC0501B08T20-10	81010735	1
5/8" Compression x Adapter, 3/4" SST20 BSP	10	RLC01B10T20-10	81008088	2
3/4" Compression x Adapter, 3/4" SST20 BSP	10	RLC01B12T20-10	81007735	2

Compression nut and ring included with all compression fittings.

BSP threads are not compatible with NPT.

For Pricing, Please See Watts Radiant Price Guide.

Hydronic Accessories



IsoTherm — a pre-piped, pre-wired pump and mix valve for 1" Stainless Steel Manifolds.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
IsoTherm	1	D3803995	81005361	15

Order isolation ball valves to help in purging air at start-up.

Order transitional fittings separately for transition to supply and return piping.

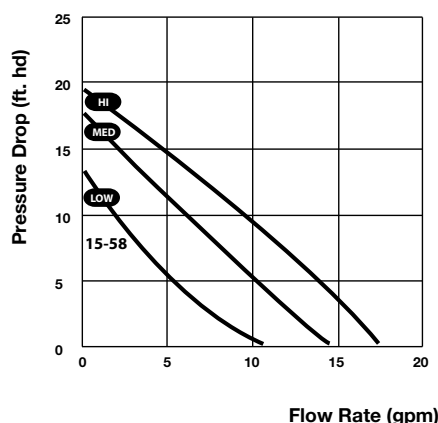
The **IsoTherm** is a compact, efficient pre-piped and pre-wired pump and mixing valve control designed to connect to Watts Radiant's 1" Stainless Steel Manifolds.

When combined with Watts Radiant's electrothermal actuators and actuator valve controls (not included), a complete trouble-free system is created, serving from 1 to 12 zones and delivering up to 50,000 BTU/h (maximum of 68,000 BTU/h with a minimum boiler temperature of 160°F).

The mixing valve has a standard temperature range of 113° to 140°F (45° to 60°C). The unit is factory set at 131°F (55°C). The valve is easily adjustable and locks in position with a "click-stop" device, preventing temperature drift.

A three-speed 1/25-HP pump comes pre-installed and pre-wired, taking the guesswork out of field installations. The Watts Radiant 1558 circulator will flow approximately 10 gpm at 10 ft. hd. This unit is ready — right out of the box!

Watts Radiant Circulator



Pressure Differential By-pass Valve — for 1" Stainless Steel Manifolds.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Pressure Differential By-pass Valve	1	D4402050	81005345	5

Order manifold End Cap and/or Vent-and-Purge Assembly separately.

The **Pressure Differential By-pass Valve** for 1" Stainless Steel manifolds eliminates possible water velocity noise and water hammer. With this valve, pumps cannot exceed the actuator close-off pressure. Pump life increases because of minimal pressure surging as actuators open and close. Correct and constant flow is always ensured regardless of the number of actuators open.

This Pressure Differential By-pass Valve installs directly on the 1" Stainless Steel manifolds. This valve adjusts from 0.7 psi (1.6 feet water) to 10.3 psi (23.8 feet water) using a graduated knob. Water by-pass capacity is 1.2 gpm to 9 gpm. The knob is set and locked with a set screw to prevent tampering.

Custom Copper Tubular Manifold Pairs

Custom Copper Tubular manifolds allow you to specify exactly what you want in a factory tested and warranted product.

All Custom Tubular manifolds are supply and return pairs.

Use the model number diagram below to order custom manifolds. Several accessories can be installed on your Custom Tubular Manifolds, including (see page 46 for details):

- Brass O-ring Unions
- Full-port Brass Trunk Isolation Ball Valves
- Vent-and-Purge Assemblies

These must be treated as separate line items when ordering.

How to order Custom Tubular manifolds

XX 15 X X XX XXXX

Balancing Options:

- Blank = no balancing
- BVR = Mini-ball valves on return manifold
- BVSR = Mini-ball valves on supply and return manifold
- BBSR = Mini-ball valves on supply manifold, balance ball valves on return

Number of Circuits:

- 01 = 1 circuit
- 02 = 2 circuits
- 03 = 3 circuits
- etc... Generally Watts Radiant recommends a maximum of 15 circuits per manifold for balancing reasons.

Barb Size:

- 2 = 3/8"
- 3 = 1/2"
- 4 = 5/8"
- 5 = 3/4"

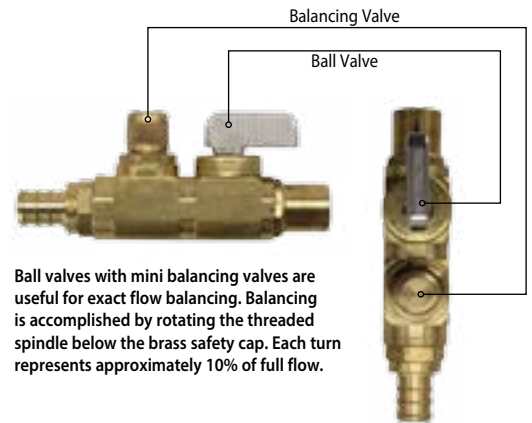
Manifold Trunk Size:

- 4 = 1" Copper Trunk
- 5 = 1 1/4" Copper Trunk
- 6 = 1 1/2" Copper Trunk
- * call for larger trunk sizes

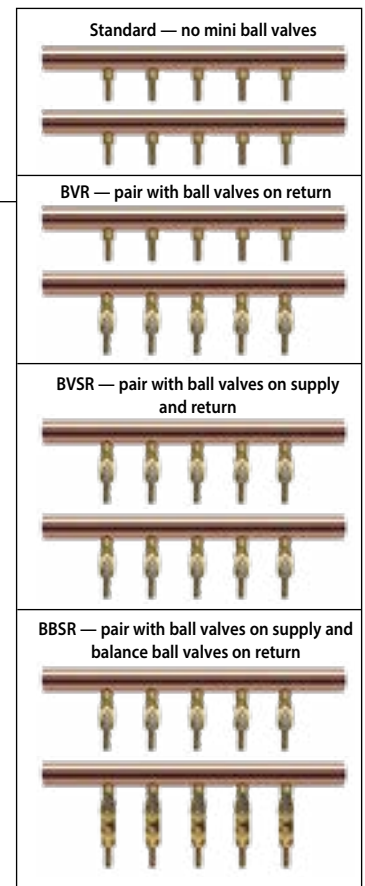
15 = Designator for Custom Manifolds

Manifold Type:

- Blank = Onix
- PC = PEX Crimp
- RLC = RadiantPEX-AL Compression (complete with compression nut and ring)



Ball valves with mini balancing valves are useful for exact flow balancing. Balancing is accomplished by rotating the threaded spindle below the brass safety cap. Each turn represents approximately 10% of full flow.



- Ordering examples:**
- PC156410BVR= 10 branch, 1-1/2" trunk, 5/8" PEX Crimp manifold with mini ball valves on return
 - 154207BBSR= 7 branch, 1" trunk, 3/8" Onix manifold with mini ball valves on supply and balance valves on return

For Pricing, Please See Watts Radiant Price Guide.

CustomCut™ Manifolds **COST EFFECTIVE**

CustomCut Manifolds are designed for flexibility at the wholesale and the installation level. They come in 4-ft.-long copper "sticks" to be cut to length in the field — cut off five branches for a 5-branch manifold, seven branches for a 7-branch manifold, and so on. You can stock just a few types and have everything you need.

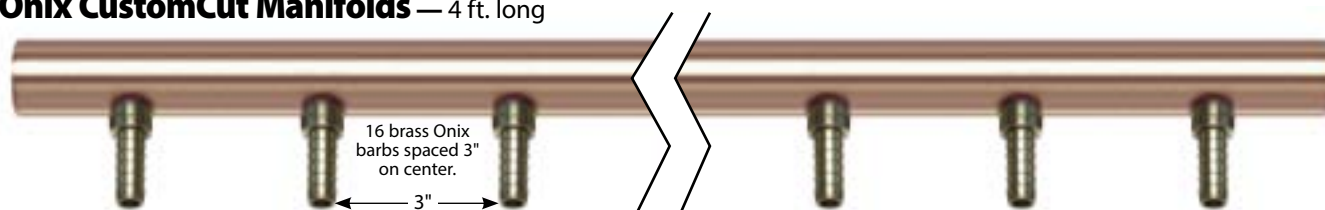
CustomCuts are made in various styles with:

- Brass fittings: Onix, PEX, and RadiantPEX-AL Compression.
- 1/2" and 3/4" Copper Stubs, for attaching standard ball valves or female copper sweat fittings in the field.
- 1/2" Brass Base Branches, for attaching Watts Radiant 1/2" male sweat fittings or Mini Ball Valves in the field.

CustomCuts are made with branches spaced at 3" (16 circuits) or 4" (12 circuits) on center, depending on the type of manifold. They are available with and without Mini Ball Valves (MBVs).

CustomCuts are sold as a single manifold, not in pairs.

Onix CustomCut Manifolds — 4 ft. long

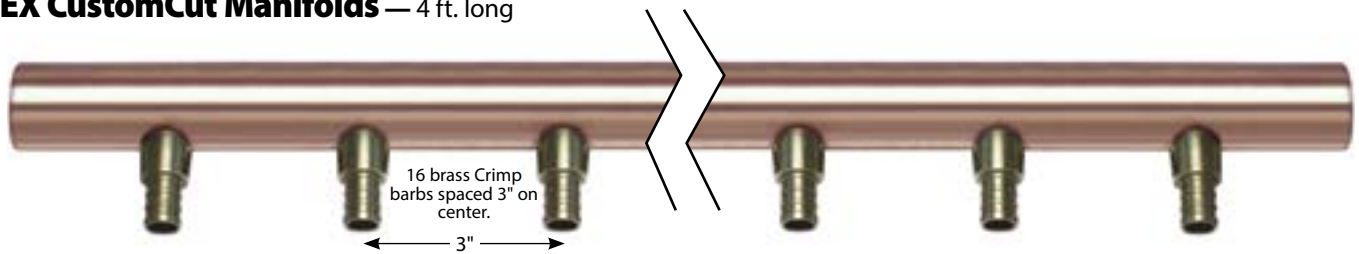


16-branch CustomCut Manifolds, 3/8" Onix Barbs

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Onix CustomCut, 16-branch, 1" Trunk (no MBVs)	1	204237	81001937	7
3/8" Onix CustomCut w/MBVs, 16-branch, 1" Trunk	1	204237BV	81001940	14

CustomCut Manifolds

PEX CustomCut Manifolds — 4 ft. long



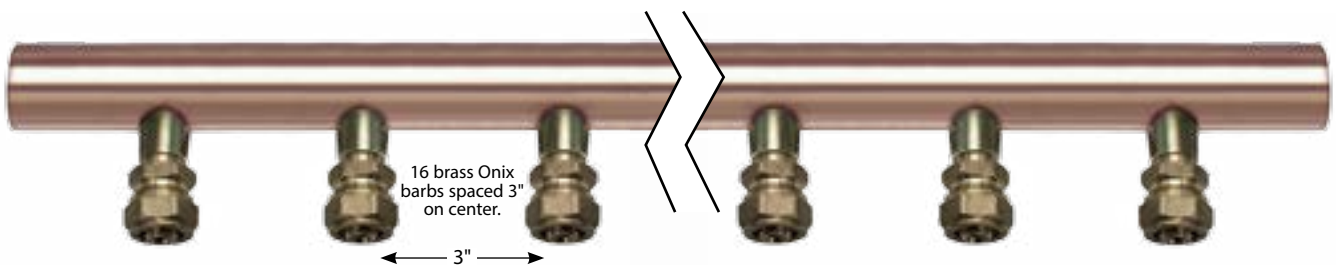
16-branch CustomCut Manifolds, 3/8" PEX Crimp Bars

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Crimp CustomCut, 16-branch, 1" Trunk	1	LFPC204237	81016961	7
3/8" Crimp CustomCut w/MBVs, 16-branch, 1" Trunk	1	LFPC204237BV	81016962	14

16-branch CustomCut Manifolds, 1/2" PEX Crimp Bars

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1/2" Crimp CustomCut, 16-branch, 1" Trunk	1	LFPC204250	81016963	7
1/2" Crimp CustomCut w/MBVs, 16-branch, 1" Trunk	1	LFPC204250BV	81016964	14

RadiantPEX-AL CustomCut Manifolds — Compression Fittings, 4 ft. long



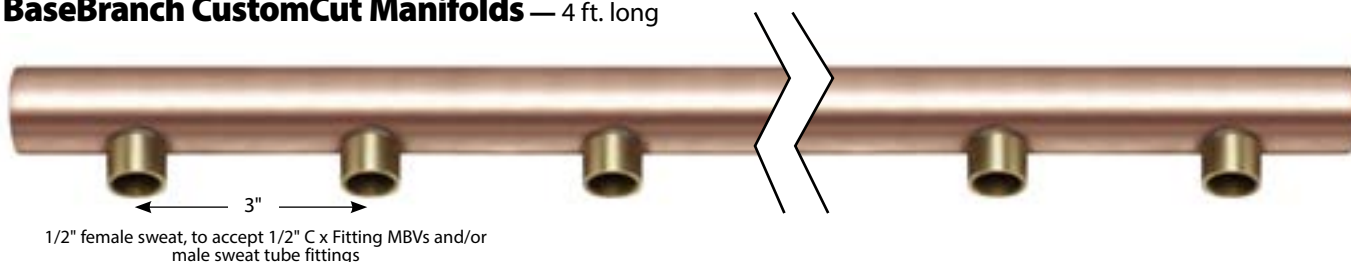
1/2" & 3/8" RadiantPEX-AL CustomCut Manifolds – Compression Fittings

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Compression, 16- branch, 1" Trunk (no MBVs)	1	RLCM-M16-06X16	81011142	6
3/8" Compression w/MBVs, 16- branch, 1" Trunk	1	RLCM-M16BV-06X16	81011143	12
1/2" Compression, 16- branch, 1" Trunk (no MBVs)	1	RLCM05-M16-08X16	81010694	7
1/2" Compression w/MBVs, 16- branch, 1" Trunk	1	RLCM05-M16BV-08X16	81010692	14

All compression manifolds are sold complete with compression fittings including nut and compression ring.

CustomCut Manifolds

BaseBranch CustomCut Manifolds — 4 ft. long



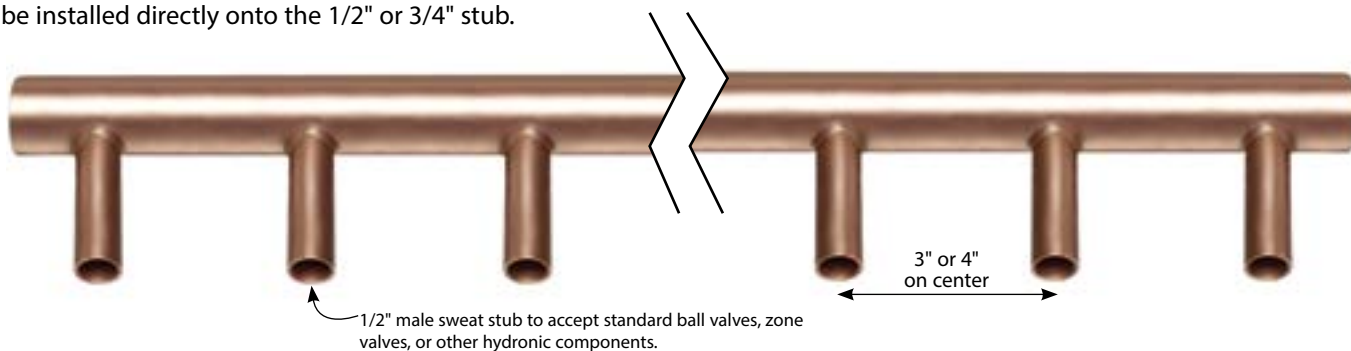
16 - Branch CustomCut Manifolds, 1/2" BaseBranch (Female Sweat)

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1/2" Brass BaseBranch, 16-branch x 1" Brass Trunk x 48" long	1	205250	81001947	7
1/2" Brass BaseBranch, 16-branch x 1-1/4" Copper Trunk x 48" long	1	205350	81002884	8

Sweat any 1/2" male sweat x barb adapters, whether Onix, Crimp, Press, or Compression. Many styles of tubing fittings fit these manifolds. For balancing, install Watts Radiant's Onix or PEX fitting ball valves.

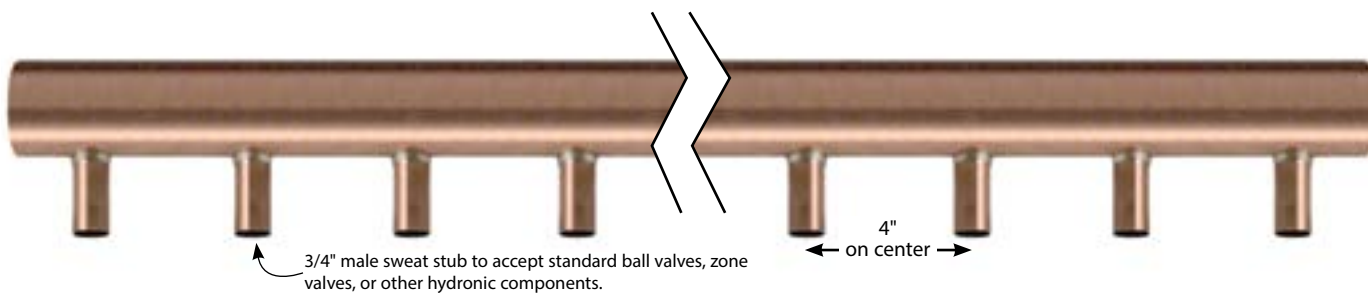
CopperStub CustomCut Manifolds

All stubs are brazed to the manifold trunk. CopperStub Manifolds are four feet long, with stubs spaced at 3" on center (16-branch) or 4" on center (12-branch). Ball valves, zone valves, female sweat fittings, or any other hydronic accessory can be installed directly onto the 1/2" or 3/4" stub.



1/2" CopperStub CustomCuts (Male Sweat)

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1/2" Stub, 16-branch x 1" Trunk x 48" long	1	205116	81001944	7



3/4" CopperStub CustomCuts with 3/4" Stubs (Male Sweat)

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/4" Stub, 12-branch x 1-1/4" Trunk x 48" long	1	205412	81001951	7

RadiantPEX-AL Swedged Manifolds *with closed ends*

Swedged Manifolds are easy to stock and easy to assemble. These 1" copper manifolds are closed at one end and swedged at the other. There is sufficient copper on the closed end to cut off and sweat to another manifold. Solder a 2-branch to a 3-branch to make a 5-branch, a 3-branch and 4-branch to make a 7-branch, etc. Swedged Manifolds are sold individually, with or without Mini Ball Valves (MBVs).

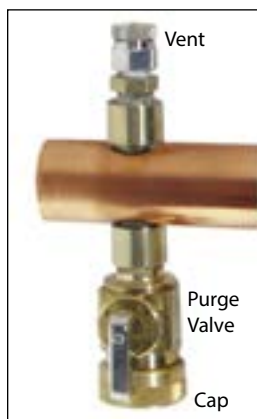


RadiantPEX-AL Compression Swedged Manifolds, 3/8" Compression fittings	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" Compression Swedged, 2-branch	1	RLCM-M2-06X16	81011144	3
3/8" Compression Swedged, 3-branch	1	RLCM-M3-06X16	81011145	3
3/8" Compression Swedged, 4-branch	1	RLCM-M4-06X16	81011146	3
3/8" Compression Swedged, 2-branch with MBVs	1	RLCM-M2BV-06X16	81011147	3
3/8" Compression Swedged, 3-branch with MBVs	1	RLCM-M3BV-06X16	81011148	3
3/8" Compression Swedged, 4-branch with MBVs	1	RLCM-M4BV-06X16	81011149	3

RadiantPEX-AL Compression Swedged Manifolds, 1/2" Compression fittings	QTY	MODEL #	ORDER #	WT. (lbs)
1/2" Compression Swedged, 2-branch	1	RLCM05-M2-08X16	81010684	2
1/2" Compression Swedged, 3-branch	1	RLCM05-M3-08X16	81010674	2
1/2" Compression Swedged, 4-branch	1	RLCM05-M4-08X16	81010662	2
1/2" Compression Swedged, 2-branch w/MBVs	1	RLCM05-M2BV-08X16	81010683	3
1/2" Compression Swedged, 3-branch w/MBVs	1	RLCM05-M3BV-08X16	81010673	3
1/2" Compression Swedged, 4-branch w/MBVs	1	RLCM05-M4BV-08X16	81010661	3

RadiantPEX-AL compression manifolds are sold complete with compression fittings including nut and compression ring. These manifolds are only compatible with RadiantPEX-AL tubing.

Tubular Manifold Accessories — Factory-installed



Vent-and-Purge Assemblies — factory-installed on Custom Tubular Manifolds.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1" Vent-and-Purge Assembly	1	160002	81000100	1
1-1/4" Vent-and-Purge Assembly	1	160003	81000101	1
1-1/2" Vent-and-Purge Assembly	1	160004	81000102	1
2" Vent-and-Purge Assembly	1	160005	81000103	1

Vent-and-Purge Assemblies allow water and air to be purged from the system at the manifold. The air vent is a "key-type" manual vent and the drain is threaded for a hose connection and comes complete with a shut-off ball valve and a cap. Available only for Custom Tubular Manifolds. Sold Individually.



Full-port Trunk Isolation Ball Valves — factory-installed on Custom Tubular Manifolds.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Trunk Isolation Ball Valve, 1"	1 pair	440101-03	81000344	1
Trunk Isolation Ball Valve, 1-1/4"	1 pair	440102-03	81003371	1
Trunk Isolation Ball Valve, 1-1/2"	1 pair	440103-03	81004854	2
Trunk Isolation Ball Valve, 2"	1 pair	440104-03	81003372	2

Trunk Isolation Ball Valves are installed to shut off the flow of water to the manifold. Sold in pairs.



Unions (for Custom Tubular Manifolds) — factory-installed on Custom Tubular Manifolds.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1" Installed Union	1 pair	464200	81000452	2
1-1/4" Installed Union	1 pair	464202	81000454	2
1-1/2" Installed Union	1 pair	464203	81000455	3
2" Installed Union	1 pair	464204	81000456	4

Unions allow manifolds to be easily pressure tested with our Pressure Test Kits. These all-brass unions feature heavy construction with EPDM o-rings to ensure leak-proof connections, even when hand-tightened. Sold in pairs.

Tubular Manifold Accessories — Field-installed



End Assemblies — for CustomCut and Swedged Manifolds.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1" End Assembly	1	000102	81003193	1
1-1/4" End Assembly	1	000103	81003194	1
1-1/2" End Assembly	1	000104	81003195	1
2" End Assembly	1	000105	81003196	1

End Assemblies are intended for use with CustomCuts and Swedged Manifolds. They allow you to purge water and air from the system at the manifold location. The air vent is a "key-type" manual vent and the drain is threaded for a hose connection and comes complete with a shut-off ball valve and a cap. Sold Individually.

Tubular Manifold Accessories



Copper Tubular Manifold Pressure Test Kits — pre-assembled to save time on the job site.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Manifold Pressure Test Kit 1"	1 kit	665161	81000550	3
Manifold Pressure Test Kit 1-1/4"	1 kit	665201	81000552	4
Manifold Pressure Test Kit 1-1/2"	1 kit	665241	81000553	5
Manifold Pressure Test Kit 2"	1 kit	665321	81000554	5

This two-part **Manifold Pressure Test Kit** enables you to test circuits and manifold connections with either air or water. They come standard with 1" brass unions to connect to Watts Radiant copper tubular manifolds or field-assembled manifolds. If you have manifolds without unions, please order loose Watts Radiant Unions to field connect with our Pressure Test Kits. Available for rental; call for prices.



Manifold Boxes — for wall or ceiling-mounted manifold systems.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Manifold Box, 16" x 29" x 4-1/2"	1	PZ162904	81001525	7
Manifold Box, 24" x 29" x 4-1/2"	1	PZ242904	81003497	15
Manifold Box, 40" x 29" x 4-1/2"	1	PZ402904	81004517	22

Manifold Boxes protect manifolds with a locking door. **Only doors and frames are powder coated.** All types of 1" – 1-1/2" Watts Radiant manifolds can be mounted in these boxes. Dimensions are width x height x depth. Depth can be expanded to 6", and box height off floor is adjustable.

- 16" box fits a custom tubular M-5 (Onix)/M-4 (PEX or PAP) with vent/purge
- 24" box fits a custom tubular M-11 (Onix)/M-8 (PEX or PAP) with vent/purge
- 40" box fits a custom tubular M-20 (Onix)/M-16 (PEX or PAP) with vent/purge

See Zone HydroNex section for installed manifolds with pre-wired actuators.



Universal Manifold Mounting Brackets —

for holding 1" to 2" Tubular Manifolds to wood frames.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Mtg. Brackets for 1"–1-1/4" Tubular Manifolds	1 Pr.	666162	81000558	1
Mtg. Brackets for 1-1/2"–2" Tubular Manifolds	1 Pr.	666163	81000559	1

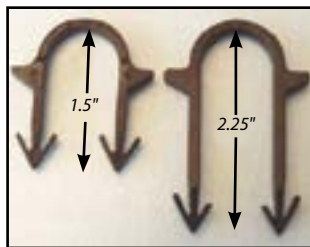
Manifold Mounting Brackets are made of a flexible, high-temperature polymer that allows you to secure the manifold to a stud, joist, or other wood framing member.

Radiant Fasteners & Tools

Foamboard Stapler — for installing radiant tubing in slab-on-grade or slab-over-slab applications.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Foamboard Stapler	1	P667425	81010025	5
Foamboard Staples, 1.5"	300	P667300-300	81000822	3
Foamboard Staples, 2.25"	300	P667350-300	81000825	3

The **Foamboard Stapler** is designed to staple 3/8" or 1/2" Onix, 3/8" to 5/8" PEX, and 3/8" to 5/8" RadiantPEX-AL to a wide variety of foam insulation boards. The stapler has been redesigned to reduce misfires and limit jams. The stapler comes fully assembled and uses both sizes of plastic staples. Use the shorter staples for 1" insulation boards, and the longer staples for 2" (or thicker) insulation boards. The Foamboard Stapler holds up to 120 staples. Reduce pipe installation time and increase productivity.



Two sizes of Foamboard staples.



RadiantPEX held fast by Foamboard staples.



FoamBoard Screw Clips

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
FoamBoard Screw Clips	100	PAC1620-100	81000848	1



Cable Ties — for tying all sizes of radiant tubing to rewire or rebar.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Cable Ties	100	667161-100	81000579	1
Cable Ties	1,000	667161-1000	81000580	4

Cable Ties are the old standby of the radiant slab installation business. Use Cable Ties wherever you want to attach Onix, PEX, or PAP to rewire or rebar. These high-strength nylon ties will not fail or pull apart like other ties.





Staple Guns

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Staple Gun Kit (Onix and PEX)	1	668555	81017130	9

A single Staple Gun Kit now includes Staple Plates for 3/8" and 1/2" Onix as well as 3/8" and 1/2" PEX. Watts Radiant **Staple Guns** are professional tools that do an excellent job stapling Onix, RadiantPEX+, RadiantPERT, and RadiantPEX-AL(PAP) in both Staple-Up and thinslab projects.

Staple Gun Accessories

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Extension Arm Kit	1	668515	81000592	4
Staple Plate Replacement (Onix)	1	668520	81005498	1
Staple Plate Replacement (PEX/PAP)	1	P668520	81005497	1

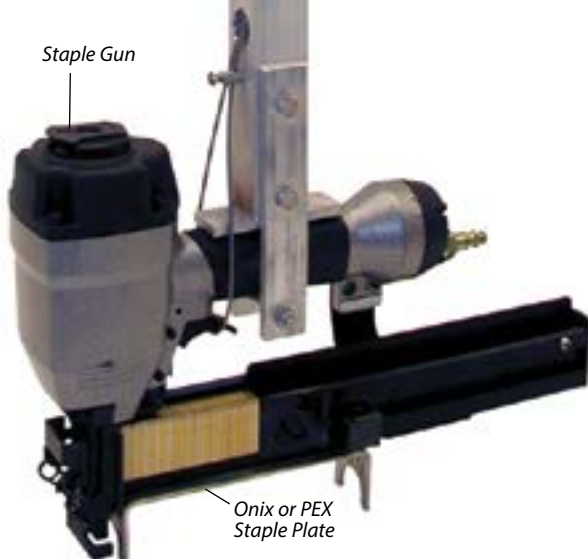
Already have one of our staple guns? Order an **Extension Arm Kit**. Also, if you damage the plate on the gun, please order from the replacement numbers above.

Staples — for Onix and PEX/PAP staple guns.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Staples for Onix and PEX/PAP	1,660	668018-1660	81004290	4

We highly recommend Watts Radiant staples, as they offer straight shooting and trouble-free usage. Save yourself trouble and use the best. These staples only work with 3/8" and 1/2" Onix, 3/8" and 1/2" RadiantPEX /RadiantPERT, or 3/8" and 1/2" RadiantPEX-AL(PAP) tubing.

Staple Gun
Extension Arm



Fasteners and Tools



Mid-run Bend Supports — for bending RadiantPEX or RadiantPEX-AL without kinking.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1/2" Mid-run Bend Supports	10	PSBM33X-10	81005399	4
3/4" Mid-run Bend Supports	10	PSBM55X-10	81005400	5

Mid-run Bend Supports help PEX make 90° turns in walls and joist cavities. These can also be used as Terminal Bend Supports. 1/2" mid-run supports can snap into stubout brackets.



Terminal Bend Supports — for transitioning and protecting radiant tubing at ends.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8", 1/2" Terminal Bend Supports	10	PSB23X-10	81005401	4
3/4" Terminal Bend Supports	10	PSB45X-10	81005402	5

Terminal Bend Supports are plastic elbows that are used near the completion of PEX circuits to help the tubing make smooth transitions out of the slab and up to the manifolds.



Triple-track Railway™ — for securing smaller sizes of radiant tubing.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Railway, 4 ft. length	10	P100500-10	81000780	10
Railway, 4 ft. length	50	P100500-50	81000781	40

The **Triple-Track Railways** securely hold several sizes of radiant tubing where rewire or rebar are not used. Use triple-tracks for: 3/8" Onix; 3/8", 1/2", and 5/8" RadiantPEX/RadiantPERT; and 3/8", 1/2" and 5/8" RadiantPEX-AL. Applications include concrete slabs, thinslabs, sand beds, and subgrade gravel layers. Triple-Track Railways are sold in 4' lengths. Triple-Track Railways allow almost any spacing you may need — 6", 9", 12", 15", or 18". Figure one railway approximately 8 square feet.

3/8" NailTite



NailTites™ — for securing Onix or PEX to subfloors using a hammer.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
NailTites (3/8" Onix; 3/8" or 1/2" PEX/PAP)	100	691060-100	81000690	1

NailTites are used to hold Onix and PEX wherever a staplegun cannot get into a tight area. These NailTites are strong and easy to use. They work for 3/8" Onix, 3/8" and 1/2" PEX, or 3/8" and 1/2" RadiantPEX-AL.

UnderFloor LockDown™ — for 3/8" and 1/2" RadiantPEX/RadiantPERT and RadiantPEX-AL underfloor applications.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
LockDown Fastener	100	P667100-100	81000818	1



Our **LockDown** fastener is designed specifically for under-floor PEX applications. Its loose hold allows PEX to move during expansion and contraction of the tubing. The LockDown won't pop open like other similar clips you may have seen or tried. Use LockDowns for attaching 3/8" or 1/2" PEX; do not use it for 5/8" PEX as it will fit too tightly. Order five LockDowns for 10' of PEX. Follow all Installation Guidelines carefully.

Fasteners and Tools



FlexPlate™ — flexible, graphite plates install 40% faster than aluminum plates, with 50% higher thermal conductivity! Better utilize high efficiency, low temperature heat sources such as condensing boilers, geothermal, or solar.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
FlexPlate , 1/2" x 4'	20	FPLT04500-20	81012401	13

These heat transfer plates are made using a patented, highly conductive graphite material. Used in underfloor, wall, ceiling, or above floor applications, FlexPlates require lower water temperatures and produce more uniform floor temperatures than extruded aluminum plates. FlexPlates are lightweight, flexible, cut easily with scissors or a utility knife, easy to staple, and don't have any sharp edges that require grinding. For 1/2" RadiantPEX+/RadiantPERT or RadiantPEX-AL. Measures 6" wide x 4' long.



Extruded Aluminum PEX Plates — plates for RadiantPEX+ or RadiantPERT underfloor and sandwich applications.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Ext. Alum. PEX Plate, 3/8" x 4'	20	P700350-20	81005039	24
Ext. Alum. PEX Plate, 1/2" x 4'	20	P700250-20	81005038	26

These plates are an extruded aluminum plate with pre-drilled holes measuring 3-1/2" wide by 4 and 8 ft. long. Tubing snaps into channel, making installation fast and easy. No silicone glue is required. The channel's tight grip eliminates annoying ticks and clicks as the PEX expands and contracts.



Stamped Aluminum PEX Plates — for underfloor and sandwich applications.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Stamped Alum. Plates for 1/2" PEX or PAP	100	P700524-100	81000843	22

These plates are a stamped aluminum plate measuring 5" x 24". You'll need about four plates per 10' of tubing. Follow our Installation Guidelines very carefully when using these plates.



Professional Tubing Cutter — ratchet-style cutter.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Professional Tubing Cutter	1	PTC200	81001393	1

This **Professional Tubing Cutter** cuts tubing to length. This cutter is made of all-metal, heavy-duty construction and is designed for the rigors of daily jobsite use. Cuts up to 1-1/2" PEX, or 1" PAP.



SqueezeTite™ Pliers — for installing SelfTite clamps on Onix.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
SqueezeTite Pliers	1	669100	81000600	1

This **SqueezeTite Pliers** are locking caliper pliers that allow worry-free handling of all sizes of our SelfTite clamps. This uniquely designed tool prevents the SelfTite clamp from accidentally sliding free, as could happen with a standard pair of pliers or channel locks. With SqueezeTite Pliers, SelfTite clamps can be locked in the open position, freeing both hands to secure the Onix to the barb.

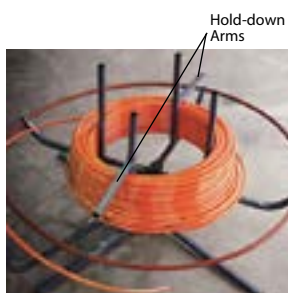
Fasteners and Tools



Onix Unwinder — for unwinding Onix tubing.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Onix Unwinder	1	669231	81000602	18

Watts Radiant's **Onix Unwinder** allows Onix coils to be quickly and easily unwound for faster hose layout on the jobsite. The center post allows the Onix coil to move around without sliding off the Unwinder. Heavy-duty ball-bearing construction means years of use and easy turning.



PEX Unwinder — for unwinding RadiantPEX, RadiantPERT, and RadiantPEX-AL.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
PEX Unwinder, Standard	1	P669231	81000838	35

Our **PEX Unwinder** handles coils up to 1" PEX. The coil sits on the tripod and is held in place as it unwinds with four guide-bars. The PEX feeds through a guide-ring on top of the unwinder. The PEX Unwinder comes complete with two hold-down arms.

RadiantPEX Tools

CrimpMaster™ Tool — for use with PEX tubing and copper Crimp Rings.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/8" CrimpMaster Tool	1	PCMT22	81001152	3
1/2" CrimpMaster Tool	1	PCMT33	81001153	3
3/4" CrimpMaster Tool	1	PCMT55	81001154	3

The CrimpMaster is a smaller, more compact crimping tool. The tool arms only need to open 6", making it easy to get into tight spaces. Buy one tool for each size of PEX fittings.

Ratcheting PEX CinchTool — squeeze CinchClamps with one hand (for PEX and PERT only).

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Ratcheting CinchTool	1	PCCCT6	81009461	4

Use this heavy-duty Ratcheting CinchTool to cinch all sizes of stainless steel CinchClamps. This is the best tool for 3/4" and 1" CinchClamps. Cinches can be done with one hand (you may need two hands for 1" clamps). Just squeeze the tool until the indicator window shows the connection is complete. Then release the quick-release knob. It's that simple. The tool comes complete with holster and adjustment tools. Meets ASTM-F2098 specifications.

PEX CinchTool™ — One simple tool installs all sizes of CinchClamps™ (for PEX and PERT only).

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
CinchTool	1	PCCCT-2	81009709	3

PEX connections take only seconds with the **CinchTool**. Great for those hard-to-reach spaces. Ratchet design releases only when the CinchClamp tab is properly pinched, thus ensuring a leak-proof connection. Meets ASTM F-2098 specifications.

RadiantPEX Tools



CrimpAll™ Tool Kit — for use with PEX or PERT tubing and copper Crimp Rings.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
15" CrimpAll Tool Kit, 3/8", 1/2", 5/8", 3/4"	1	PCCRT2346	81003038	6
19" CrimpAll Tool Kit, 1", 1-1/4"	1	PCCRT57	81009111	7

Interchangeable crimping jaws make the CrimpAll Tool Kit a great value. One tool kit allows crimping of multiple sizes of RadiantPEX+. The 15" CrimpAll Kit has four crimping jaws: 3/8", 1/2", 5/8", and 3/4". The larger 19" CrimpAll Kit gives more leverage for crimping 1" and 1-1/4" PEX and fittings. A tough plastic case helps keep all the crimping tools in one place. The kit includes the CrimpAll tool, interchangeable jaws, a Go/No-Go crimp gauge, and adjustment tools.

The jaws for the 15" tool are not interchangeable with the 19" tool. Also, the CrimpAll can only be used for fastening crimp rings over crimp fittings and PEX/PERT tubing. Do not use it for press fittings or RadiantPEX-AL tubing as the connection will leak.



Go/No-Go Gauge



Adjustment Tools

Replacement CrimpAll™ Parts

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Go/No-Go Gauge	1	PCGA234P	81001123	1
Go/No-Go Gauge for 1" PEX	1	PCGA5P	81001124	1
Adjustment Tools	1	PCCRT1001	81003717	1

RadiantPEX Crimping Power Tool Jaws for Large Diameter PEX — For crimping RadiantPEX with crimp fittings and copper crimp rings



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Rems Crimp Jaw 1-1/4" F1807	1	PCRT7	81003660	4
Rems Crimp Jaw 1-1/2" F1807	1	PCRT9	81009948	5
NEW Rems Crimp Jaw 2" F1807	1	PCRT10	81017084	5

Power Tool RadiantPEX Crimp Jaws are used for crimping PEX tubing and fittings with copper crimp rings. These jaws fit the REMS Akku-Press and PowerPress-E power tools, as well as the Ridgid 330-B power tool.

RadiantPEX-AL Tools & Accessories

RadiantPEX-AL Pipe Reamers (Plastic reamer and T-reamer)



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3-sided Reamer, 3/8", 1/2", 3/4"	1	RLR05-060812	81010841	1
3-sided Reamer, 5/8", 3/4", 1"	1	RLR-101216	81011431	1

RadiantPEX-AL Universal Bending Tool



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Universal PAP Bending Tool	1	RLUB-0616	81008486	10

This tool bends all sizes of RadiantPEX-AL.



SmartTrac™

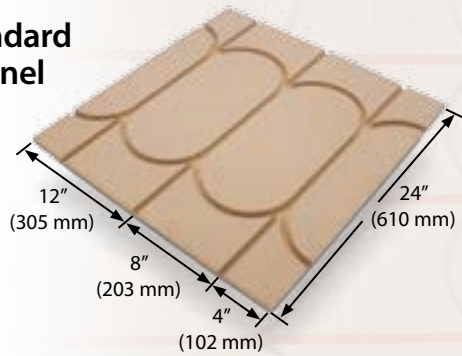
Radiant Panel Solution

Radiant, the Smart Way

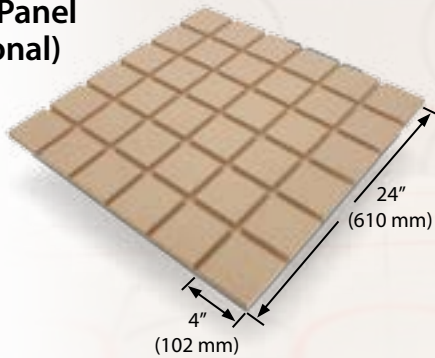
- Deliver quiet, even, comfortable heat
- Configure for any space
- Fast and easy installation
- 80% lighter than thin slab
- Works with any floor covering
- Designed for 3/8" PEX/PERT tubing

Anatomy of the SmartTrac™ system

Standard Panel

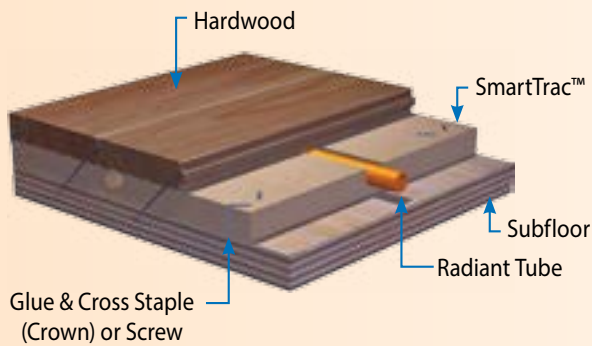


Utility Panel (optional)

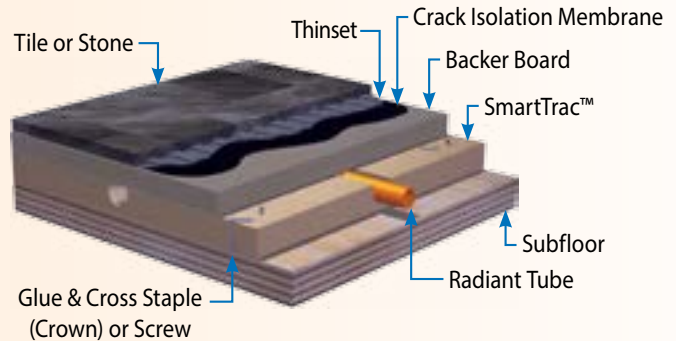


SmartTrac™ system works under:

Hardwood...



Tile...



and many other flooring choices

NEW SmartTrac Panels

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Standard Panel	132	ST-838-ONE	81016822	9 each
Utility Panel (Optional)	5	ST-838-UTILITY	81016823	9 each



Compared to other radiant installation options, **SmartTrac™** is...

SIMPLE

- One-panel solution

CLEAN

- No messy silicone required

LIGHTWEIGHT

- 2-1/2 lbs. (1 kg) per square foot

FLEXIBLE

- Configure for any space

RESPONSIVE

- Responds faster than concrete

THIN

- Ultra low profile, 5/8" (16 mm)

EASY TO INSTALL

- Significantly reduce installation time

FAST

- Eliminate schedule and curing delays

GREEN

- Minimum 92% recycled content, CARB ULEF exempt

For Pricing, Please See Watts Radiant Price Guide.

Thermostats & Controls

Designed for Radiant and Snow Melting Systems

NEW



Battery-powered or
24v-powered

RadiantThermostat 519

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Thermostat 519 Air/Floor Digital 24V stat/w sensor	1	300152	81016550	1

The Radiant Thermostat 519 accurately controls the room and/or floor temperature for a hydronic-heating zone using Pulse Width Modulation (PWM) technology. Simple up and down buttons and a display with large type makes this thermostat easy to read and use. A Floor Sensor 079 is included to measure floor temperature to protect the floor from overheating and enhance comfort. This easy to install thermostat is a direct replacement for the DualTemp Thermostats.

NEW



Floor Sensor 079

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Floor sensor 079 (extra)	1	300153	81016551	1

The Floor Sensor 079 is commonly used for floor temperature sensing in floor heating applications. The thin casing allows for retrofit installation between tile spaces if necessary. This sensor is designed to provide a thermostat with the ability to maintain a minimum slab temperature, or help to limit the maximum slab temperature.

NEW



Mixing Control 356

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Mixing control 356 Variable Speed	1	300147	81010134	2
Adapter Plate 012	1	300158	81016733	1

The Mixing Control 356 is designed to operate a mixing pump to control the temperature in a hot water heating system using Outdoor Temperature Reset. It can be used in applications ranging from in-floor radiant to commercial baseboard systems for boiler protection with full reset. This control regulates a single heating water temperature through Outdoor Temperature Reset. It provides mixing by speeding up or slowing down a single permanent capacitor (standard wet rotor) circulator.

NEW



Universal Sensor 082

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Universal Sensor 082	1	300156	81016554	1

The Universal Sensor 082 is a 10-kΩ-temperature sensor designed to be strapped onto a pipe. It is most commonly used to monitor supply and return water temperatures. This product has a brass sleeve for fast response, a wide operating range, an indent to allow pipe strap on installation, and 8 ft (2.4 m) of 2-conductor wire.

Zone Valve/Actuator Controls

Master Valve/Actuator Controls

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Valve/Actuator Control, Master, 4-zone	1	P-2329	81005192	2
Valve/Actuator Control, Master, 6-zone	1	P-2331	81005190	2
60 VA Transformer	1	P-3231	81009509	2



Our **Master Valve/Actuator Controls** are intended to control Watts Radiant Electrothermal Actuators, or any 24-VAC actuator or valve that draws 5 VA or less. The number of actuators controlled depends on the separate 24-VAC external transformer (not included, order separately) powering the system. An external 40-VA 24-VAC transformer can control 12 actuators maximum. Up to 18 actuators maximum can be controlled with a 60-VA 24-VAC transformer. Order Slave Valve/Actuator Controls separate for additional zones.

Master Controls are fused and include two end switches, each rated at 8A. Actuators are switched by triacs, for quiet, safe, reliable electronic operation. Mounting is by DIN rail or surface mount to a wall. The 60 VA transformer is surface mount.

Slave Valve/Actuator Controls —

connect to Master Controls to expand the number of zones.

4-zone Slave Valve/Actuator



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Valve/Actuator Control, Slave, 4-zone	1	P-2330	81005246	2
Valve/Actuator Control, Slave, 6-zone	1	P-2332	81005191	2

Valve/Actuator Slave Controls add extra zone capability to 4-zone or 6-zone Master Control Units. Like the Master Controls, they are intended to control Watts Radiant Electrothermal Actuators, or any 24-VAC actuator that draws 5 VA or less. The number of actuators controlled depends on the 24-VAC external transformer (not supplied) powering the system.

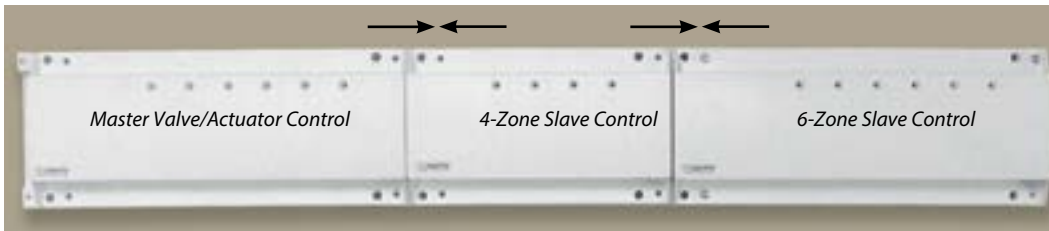
Up to two additional 4-zone or 6-zone Slave Controls can be added to a Master Control. No field wiring is required between — Masters and Slaves simply plug into each other (see below).

Each additional 40-VA 24-VAC transformer capacity can control an extra 12 actuators maximum; 18 actuators maximum with an additional 60-VA 24-VAC transformer. Actuators are switched by triacs, for safe, quiet, reliable electronic operation. Mounting is by DIN rail or surface mount to a wall.



6-zone Slave Valve/Actuator

“Plug-and-Play” Zone Valve/Actuator Controls



Master Valve/Actuator Control unit mated to 4-Zone and 6-Zone Slave Control units

Snow Melting Controls

NEW



Snow Melting Control 654

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Snow Melting Control 654	1	300154	81016552	1

The Snow Melting Control 654 is designed to operate hydronic or electric equipment to melt snow or ice from a driveway, loading dock, sidewalk, patio, helipad or car wash bay. The snow melt surface temperature is controlled using slab outdoor temperature reset to reduce operating energy costs. The 654 provides automatic start and stop when used with the Snow / Ice Sensor 090. Automatic start with a timed stop is available when used with the Snow Sensor 095. The 654 can operate a dedicated hydronic boiler or a mixing valve. Isolation relays are required to operate line voltage pumps. Electric systems require a separate GFCI and electrical relay contactor

NEW



Snow Sensor 095

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Snow Sensor (air) 095	1	300155	81016553	1

The Snow Sensor 095 is an aerial mounted sensor for use together with Snow Melting Controls to automatically detect falling snow to start the snow melting equipment. System stop is provided by the control's timer or by manual disable. Mounted to a 1/2" metal or PVC conduit or pole, the 095 is well suited to adding automatic start when retrofitting an existing snow melt system.



Snow/Ice Sensor 090

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Snow/Ice Sensor (in slab) 090 w/65 ft cable	1	300108	81005661	4

The Snow/Ice Sensor 090 is an in ground sensor used with Watts Radiant snow melting controls to automatically detect snow or ice on a driveway or walkway. The 090 has 65 ft (20 m) of wire. This product can be used in applications ranging from residential driveways to commercial building fronts such as emergency access entries. This sensor allows Watts Radiant snow melting controls to automatically operate the snow/ice melt system only when snow or ice is present, while also providing slab temperature feedback to the control.



Snow/Ice Sensor Socket 091

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Snow/Ice Sensor Socket 091	1	300111	81003753	2

The Snow/Ice Sensor Socket 091 is designed to provide a mounting solution for the Snow/Ice Sensor 090. It is installed directly into a concrete slab when the slab is poured, so that the 090 can be installed into it once dry.

NEW



Slab Sensor 072

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Slab Sensor 072	1	300141	81007203	1

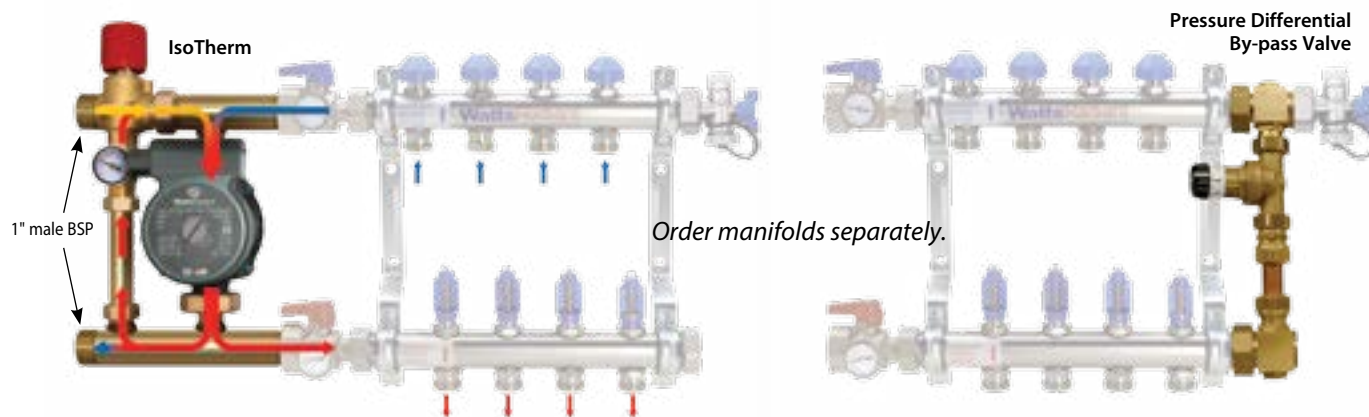
The Slab Sensor 072 is designed to measure temperature in outside snow melting slabs. It has a high-density polyethylene (HDPE) sleeve, which is designed for use in conduits, soils, or concrete, as it is suitable for direct burial. This product is supplied with 20 ft (6 m) of 2-conductor cable.



Snow Melting Plaque — Permanent plaque to indicate where a snow melting system has been installed.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Snow Melting Plaque	1	100123HW	81012651	2

Hydronic Accessories



IsoTherm — a pre-piped, pre-wired pump and mix valve for 1" Stainless Steel Manifolds.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
IsoTherm	1	D3803995	81005361	15

Order isolation ball valves to help in purging air at start-up.

Order transitional fittings separately for transition to supply and return piping.

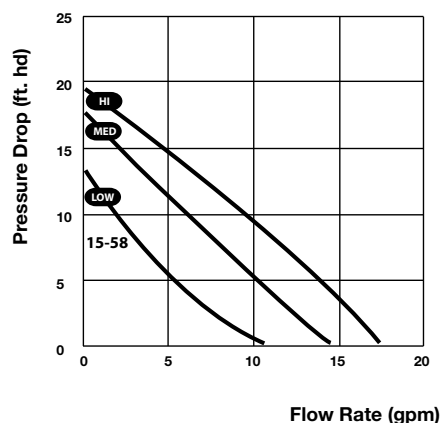
The **IsoTherm** is a compact, efficient pre-piped and pre-wired pump and mixing valve control designed to connect to Watts Radiant's 1" Stainless Steel Manifolds.

When combined with Watts Radiant's electrothermal actuators and actuator valve controls (not included), a complete trouble-free system is created, serving from 1 to 12 zones and delivering up to 50,000 BTU/h (maximum of 68,000 BTU/h with a minimum boiler temperature of 160°F).

The mixing valve has a standard temperature range of 113° to 140°F (45° to 60°C). The unit is factory set at 131°F (55°C). The valve is easily adjustable and locks in position with a "click-stop" device, preventing temperature drift.

A three-speed 1/25-HP pump comes pre-installed and pre-wired, taking the guesswork out of field installations. The Watts Radiant 1558 circulator will flow approximately 10 gpm at 10 ft. hd. This unit is ready — right out of the box!

Watts Radiant Circulator



Pressure Differential By-pass Valve — for 1" Stainless Steel Manifolds.

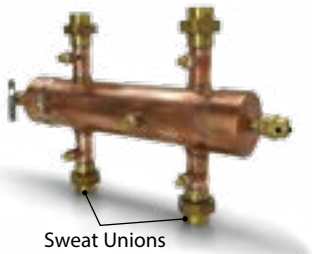
DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Pressure Differential By-pass Valve	1	D4402050	81005345	5

Order manifold End Cap and/or Vent-and-Purge Assembly separately.

The **Pressure Differential By-pass Valve** for 1" Stainless Steel manifolds eliminates possible water velocity noise and water hammer. With this valve, pumps cannot exceed the actuator close-off pressure. Pump life increases because of minimal pressure surging as actuators open and close. Correct and constant flow is always ensured regardless of the number of actuators open.

This Pressure Differential By-pass Valve installs directly on the 1" Stainless Steel manifolds. This valve adjusts from 0.7 psi (1.6 feet water) to 10.3 psi (23.8 feet water) using a graduated knob. Water by-pass capacity is 1.2 gpm to 9 gpm. The knob is set and locked with a set screw to prevent tampering.

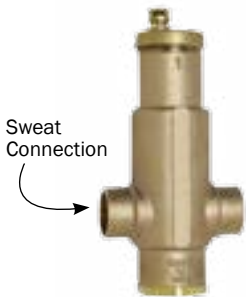
Hydronic Accessories



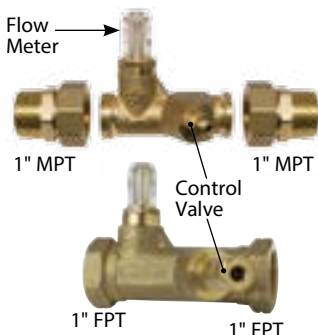
Sweat Unions



4" ANSI Flange



Sweat Connection



Flow Meter

1" MPT

1" MPT

1" FPT

1" FPT

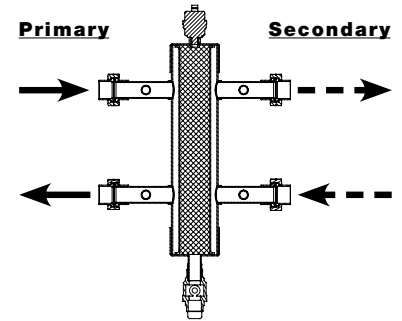
Hydraulic Separators

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1" Hydraulic Separator, Sweat Union	1	HSEP100-U	81010007	15
1-1/4" Hydraulic Separator, Sweat Union	1	HSEP125-U	81010008	20
1-1/2" Hydraulic Separator, Sweat Union	1	HSEP150-U	81010009	25
2" Hydraulic Separator, 4" ANSI Flange	1	HSEP200-F	81010010	50
2-1/2" Hydraulic Separator, 4" ANSI Flange	1	HSEP250-F	81010011	65

Watts Radiant's **Hydraulic Separator** is designed to decouple the primary loop flow from the secondary, impede particle and sediment movement through a system, and to act as a point of air removal.

Flow through the hydraulic separator is dependent on the resulting pressure differentials created by the circulators on either side. Circulators should always be arranged in a counter-flow orientation.

Commonly used to simplify piping for condensing boilers, our separators are constructed from type-L copper with a stainless steel screen and brass air vent. A 3/4" brass drain, expansion tank tapping, and 5 temperature gauge/sensor wells are standard. Rated to 210 °F at 100 psi.



Zone Valve Body & Actuator Kit

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/4" Valve Body Only	1	703022	81009858	1
3/4" Valve Body & Actuator Kit	1	PZ656104A	81011158	2

Watts Radiant's new 3/4" sweat zone valve is comprised of a brass body with stainless steel internal springs and EPDM seals, allowing for extended longevity in adverse conditions. CV=2.8

Each valve is compatible with our existing thermal actuator, which is used on the Stainless Steel manifold series.

Air Remover

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1" Sweat Air Remover	1	AS-MB-S-100-RAD	81015815	5
1-1/4" Sweat Air Remover	1	AS-MB-S-125-RAD	81015816	7

Air Removers are required in any closed-loop hydronic system to remove air from the system and keep it out after the system has been purged.

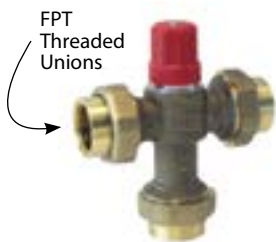
FlowGuards — circuit setters with visual readout.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
0.5–4 GPM FlowGuard, 1" MPT half unions	1	D3499375	81001979	4
1–13 GPM FlowGuard, 1" FPT ends	1	D3499480	81001980	2

FlowGuards are a commercial-quality, non-electronic flow indicator and flow setter. Made of durable, cast brass construction, these units give accurate visual flow indication in GPM. With the ability to set fluid flow, the FlowGuards allow zone-by-zone control and optimization. No special training or electronic instrumentation required.

Hydronic Accessories

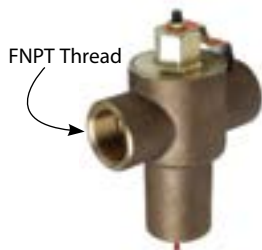
MixTemp™ 160 Valves — 100° to 160°F range.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
3/4" MixTemp 160 (Cv = 3.1)	1	LF703075	81016965	2
1" MixTemp 160 (Cv = 3.2)	1	LF703100	81016966	2

These durable, non-electric, brass-bodied **MixTemp 160 Valves** have the widest (100°–160°F) temperature ranges available in a small valve. The valve comes complete with threaded unions for ease of service. All connections are FPT threads. MixTemp valves can be used in both primary/secondary and direct piping applications with at least one pump per valve. These are not to be used for potable water applications as they are not anti-scald valves.

AllTemp™ Mixing Valve — 100° to 200°F range.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
1-1/4" All-Temp (Cv = 6.1)	1	703200	81000716	7

These simple, durable, non-electric **AllTemp Mixing Valves** feature a rugged cast-bronze body with liquid-filled copper thermostatic actuators. All connections are FPT threads. These valves are sensitive to the slightest change in mixed water temperature. These valves can be used in both primary/secondary and direct piping applications with at least one pump per valve. These are not to be used for potable water applications as they are not anti-scald valves.

Watts Combination Temp./Press. Gauge — bottom mount, 32°–248°F/0–50 PSI.



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Combination Gauge, 32°–248°F/0–50 PSI	1	705075	81004202	1

These gauges combine a graduated temperature gauge and pressure gauge in ONE unit! Features metal construction for ruggedness. An ingenious self-sealing 1/2" MPT brass well is included so minimal system fluid is lost if the gauge is ever removed from the system.

A manually-adjustable pointer can be used to track temperature or pressure changes. These gauges come in two styles: either bottom mount or back mount for mounting convenience. Install one of these gauges and monitor your system easily, efficiently, and reliably.



Watts Combination Temp./Press. Gauge — back mount, 60°–320°F/0–200 PSI.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Combination Gauge, 60°–320°F/0–200 PSI	1	705100	81003656	1

Temperature Gauge



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Temperature Gauge, 0°–200°F	1	LF704621	81016967	1

These **Temperature Gauges** are 3" in diameter. They are made with a continuously welded, stainless steel housing with a 2-1/2" long stem and 1/2" NPT threads. The black-on-white dials are marked in °F and °C, and are protected by a rugged crystal lens. Back mounted.

Brass Well for Temperature Gauge



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Brass Well for Temp. Gauge	1	850071	81000755	1

Brass Wells are used with temperature gauges to allow gauge removal or installation without draining the system. Made of solid brass with a 3/4" MNPT to transition to copper and 1/2" FNPT to accept the temperature gauge.

StickTemp™



DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
StickTemp	1	850100	81000757	1

These liquid-crystal, digital **StickTemp** thermometers are an inexpensive, quick way to take temperature readings at various points on a system. Use one at each point a temperature reading is desired. For 3/4" or larger pipe. Peel off the backing paper and apply to any clean surface. Temperature range from 100° to 200°F.



HydroNex®

Mechanical Building Blocks™



Easy to Bid, Easy to Sell, Easy to Install

Making money in today's competitive market means working smarter. HydroNex helps contractors and distributors make more money by speeding up every facet of a hydronic job, from bidding to start-up. HydroNex also helps sell more jobs by offering a factory warranted piece of equipment with a professional appearance.

Fixed costs help make bidding fast and simple.

Cut installation times by 50-75%.

No parts runs, no jobsite supervision, no cutting, fitting and soldering dozens of joints. Just hang the panels and pipe to and from the boiler and zones. And move on to the next job.

Greatly reduce wiring and start-up problems.

All panels are wired and ready to go. Simply wire to the boiler and thermostats, plug in the power cords, and run Cat5 cables from panel to panel. Every panel is factory tested so you won't spend time chasing down any problems.

A factory warranty up to 5 years.

Give yourself and your customers the peace of mind of a factory warranted product. Certified installers get a 5 year parts and 3 year labor warranty. Or get a 2 year parts and labor warranty by just filling out the HydroNex registration card.

Every panel looks great.

Present a professional appearance every time with a powder coated metal cover. End users and builders only see an "appliance" hanging on the wall, not an intimidating array of pipes and wires.

HydroNex Panels come in five varieties: Condensing • Primary • Distribution • Zone • Specialty

STAND ALONE

Condensing Boiler Panels — Stand alone panel to interface with most condensing boilers. This panel includes a 1-1/4" primary loop, air remover, optional auto fill assembly, distribution manifold with up to 8 actuators, and indirect DHW zone.

Model	Description
SCA-1 or SCM-1	Includes Zone Circulator, 1-1/2" distribution manifold
SCA-3 or SCM-3	Includes Primary, Zone, and DHW circulators, 1-1/2" distribution manifold

Primary Panels — Primary panels circulate water through the 1-1/4" primary loop, remove air, and provide essential service and monitoring capabilities. An auto-fill assembly and an indirect DHW zone are options.

Model	Description
PA-_-PO	With AutoFill assembly
PM-_-PO	With manual fill assembly
PA-_-PD	With AutoFill assembly and DHW zone circulator
PM-_-PD	With manual fill assembly and DHW zone circulator

Distribution Panels — Distribution (secondary) panels send heat to fancoils, baseboards, radiant floors, or indirect water heaters.

Model	Description
DD	1 to 5 circulator zones - No mixing device, Boiler temperature fluid
DM	1 to 3 circulator zones - Single mix valve providing fixed supply fluid temperature
DI	1 to 5 circulator zones - Outdoor reset with variable injection mixing - Single supply fluid temperature
DH	1 circulator zone for radiant or snow melt with 2 heat exchanger options

MOST POPULAR

Zone Panels — Zone panels use 1" stainless steel manifolds to distribute water to radiant circuits. Pre-installed in steel cabinets for remote "in the wall" installation. A zone pump, mix valve and pre-wired actuators are all options.

Model	Description
ZB-A or ZB-N	Zone manifold, with or without actuators - 2 to 12 circuits
ZC-A or ZC-N	Zone manifold with zone pump; with or without actuators - 2 to 7 circuits
ZM-A or ZM-N	Zone manifold with zone pump and mix valve; with or without actuators - 2 to 7 circuits

SOLAR & GEOTHERMAL FRIENDLY

Specialty Panels — These panels are designed to tie HydroNex panels into storage tanks for Ground Source Heat Pumps, Solar, Wood Boilers and other alternative heat sources.

Model	Description
SG	Cycles between 1,2, or 3 ground source heat pumps and storage tank

It's Easy to choose HydroNex Panels



1. **Select the heat source.**
 - a. Condensing boiler
 - b. Non-condensing boiler
 - c. Solar, geothermal, or wood fired heat source with boiler back up
2. **Determine the number of different supply temperatures required.**
 - a. Different radiant temperature groups (radiant slab, radiant underfloor)
 - b. High temperature zones such as baseboard, fan coils, panel radiators.
 - c. Domestic Hot Water (DHW)
3. **Select mixing options.**
 - a. Fixed temperature mix valve -----> DM
 - b. Injection mixing with outdoor reset -----> DI
 - c. Direct (no mixing) -----> DD or SC with Condensing boiler
 - d. Heat Exchanger -----> DH
 - e. Multiple/Combinations
4. **Determine number of small zones to be served with manifold actuators rather than zone circulators.**

-----> Zone Panels with Actuators

For **Condensing boilers**, choose an SC-1 or SC-3 Panel or a Primary Panel and DD Panels.

For **Non-condensing boilers**, choose a Primary, and DD, DM, DI, or DH Panel(s).

For **Geothermal with boiler back up**, choose SS Panel with a Primary Panel and DD, DM, DI, or DH Panel(s).

For **Wood fired boiler with gas or electric boiler back up**, choose SS Panel with a Primary Panel and DD, DM, DI, or DHn Panel(s).

For **Geothermal only heat source**, choose GeoThermal Panel with a Primary Panel and D Panel(s)

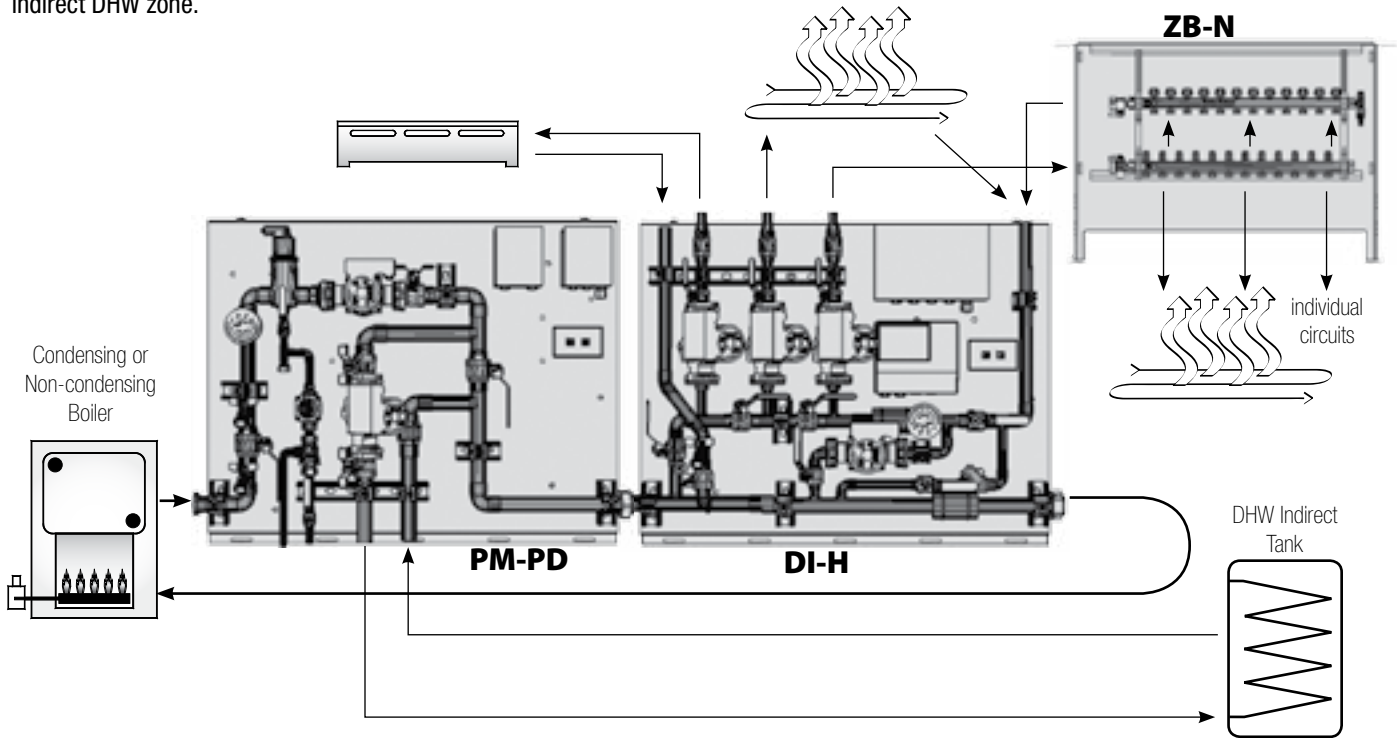
Zone Panels can be used with most HydroNex panel configurations or can be used as a stand alone unit.

A few examples of HydroNex systems - the possibilities are endless...

Primary panel with DHW, baseboard zone, and Radiant zones with outdoor reset/injection pumping

Description:

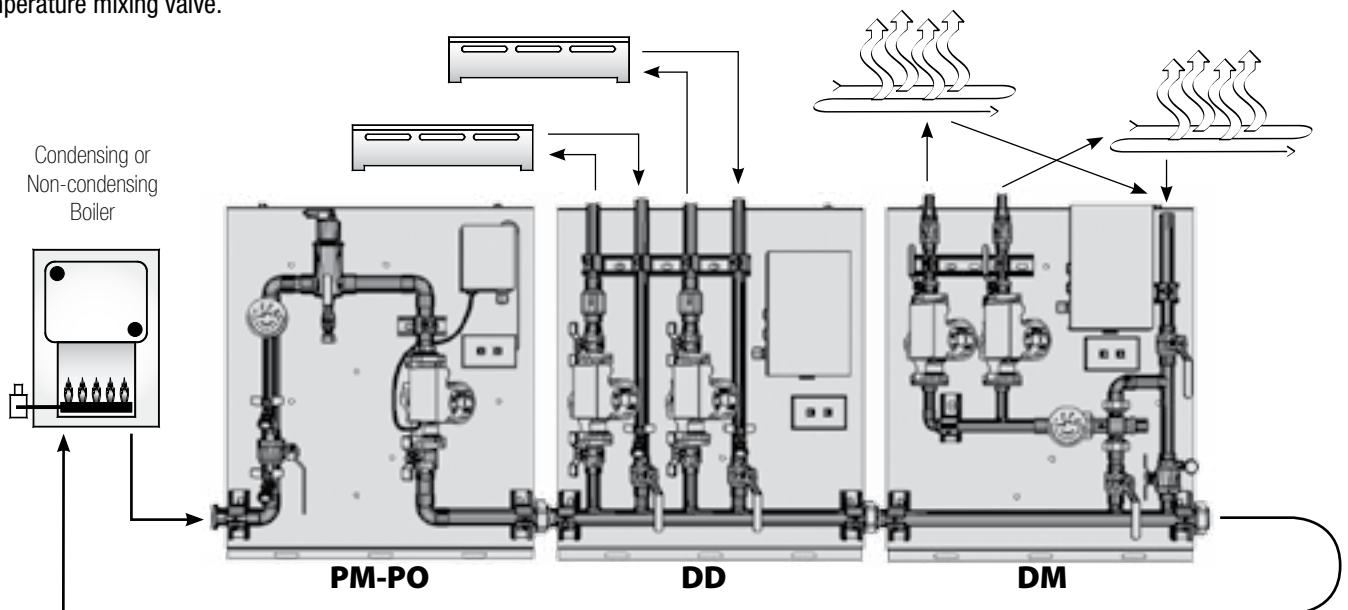
Provides a single supply temperature to radiant zones and high temperature boiler water to select zones. The DI-H panel provides modulating radiant supply temperature with outdoor reset. The Primary Panel has an automatic fill assembly and an indirect DHW zone.



Primary panel with baseboard or fan coils and radiant zones

Description:

Provides a single supply temperature to radiant zones and high temperature boiler water to baseboard zones. The DD panel provides boiler temperature water to baseboard or fan coil zones. The DM panel supplies lower temperature radiant zones through a fixed temperature mixing valve.

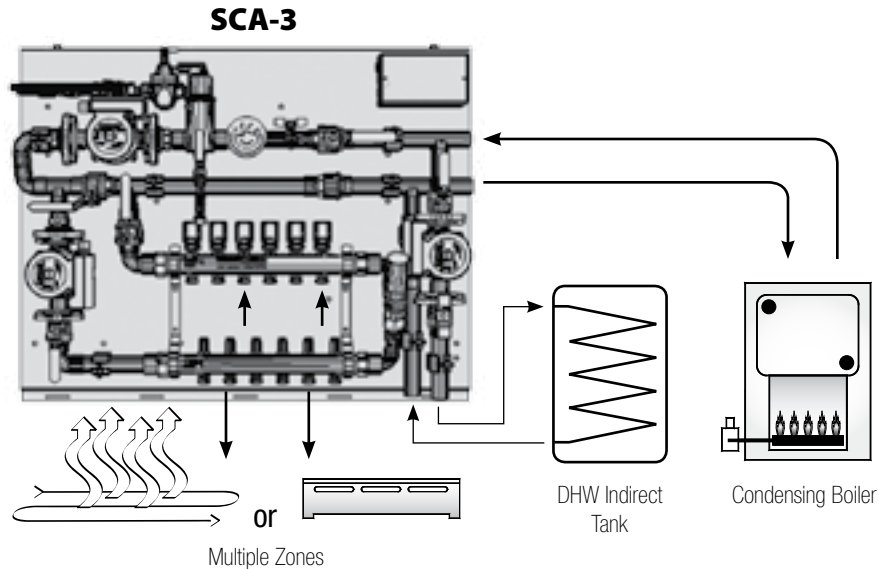


A few examples of HydroNex systems (continued)

Condensing Boiler Panel

Description:

This stand alone panel provides a single supply temperature to radiant zones and high temperature boiler water to an indirect water heater. Each panel is designed to interact directly with the condensing boiler control. Reset, domestic water priority, and other features are dependant on the boiler control.



Condensing Boiler Panels (Stand Alone)



SCA-1-6

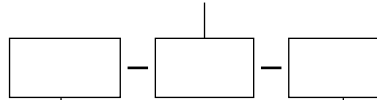


SCA-3-6

Use this model number configuration to order.

1: Type 1 (Zone Circulator only)

3: Type 3 (Primary, Zone, and DHW Circulators)



SCA: Auto Fill

SCM: Manual Fill

of circuits

options: 4, 5, 6, 8

CONDENSING PANELS

DESCRIPTION	MODEL #	WT. (lbs)	SIZE
Type 1 Zone pump only (Watts Radiant 2699) For boilers with primary circulators	SCA/SCM - 1 - 4	60-70	S
	SCA/SCM - 1 - 5	60-70	S
	SCA/SCM - 1 - 6	60-70	S
	SCA/SCM - 1 - 8	60-70	S
Type 3 Boiler, Zone, and DHW pumps (all Watts Radiant 2699s)	SCA/SCM - 3 - 4	150-160	M
	SCA/SCM - 3 - 5	150-160	M
	SCA/SCM - 3 - 6	150-160	M
	SCA/SCM - 3 - 8	150-160	L

S = 28" wide x 31.5" tall x 12" deep

M = 40" wide x 31.5" tall x 12" deep

L = 52" wide x 31.5" tall x 12" deep

Condensing Boilers

These stand alone panels work with most condensing boilers. The Type 1 panel provides only a secondary circulator, and works with condensing boilers that supply their own primary circulator. The Type 3 panel provides primary, secondary, and DHW circulators. Both panels include a 1-1/4" primary loop with air remover and expansion tank connection (no tank) as well as optional auto-fill assembly. All circulators are energy-saving 3 speed models, which enables the installer to adjust flows for optimal temperature drops. The entire panel is enclosed in a powder coated steel enclosure for a professional, appliance style appearance.

The 1-1/2" stainless steel distribution manifold is equipped with thermal actuators on each circuit, and can supply up to 4 gpm to each separate zone. Each zone has a balance valve and flow meter for precise flow balancing. A pressure differential bypass eliminates velocity noise and helps extend the life of the system components.

Standard equipment includes:

- 1-1/4" copper primary and secondary piping, 1" copper DHW piping
- Primary, secondary, and DHW circulators, pre-wired and tested (Secondary circulator only on Type 1)
- High performance 1-1/4" micro-bubble air remover with expansion tank connection (tank not included) including a 10 ft piece of 3/8" Onix for mounting tank outside of enclosure
- Isolation valves for easy servicing of circulators and easy air purging
- Spring check valves in primary loop and DHW piping
- 0-50 psi/60-320 °F gauge
- 1-1/2" stainless manifold with thermal actuators, balance valves, flow meters and pressure differential bypass
- Zone actuator control, pre-wired and tested
- 9 ft 120V power cord
- Powder coated steel enclosure
- Optional Auto-fill assembly (Watts 9-11S M3 pressure reducing valve and backflow preventer)

Manifold adapters are required to transition to the distribution piping. PEX, PAP, copper or Onix can be used for distribution from the panel to the radiant zones. **Order manifold tube adapters separately.**

The panel circulators are controlled by the boiler via field wiring. Outdoor reset, DHW priority and other features are dependent on the boiler control.

Maximum flow rate is approximately 22 gpm. Each Watts Radiant 2699 circulator is capable of providing approximately 15 gpm at 20 ft hd on high speed.

Primary Panels



PM-1-PO



PA-1-PO



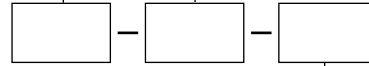
PM-1-PD



PA-1-PD

Use this model number configuration to order.

PA: Auto Fill
 PM: Manual Fill



PO: Primary Only
 PD: Primary and DHW Circulators

Circulator Options

1. Watts Radiant 1558
2. Watts Radiant 2699
3. B&G NRF 22
4. B&G PL 30
5. Taco 008
6. Taco 0011

NOTE: Primary circulator and the DHW circulator are the same brand/model

PRIMARY PANELS

DESCRIPTION	MODEL #	WT. (lbs)	SIZE
P-Panel with Manual Fill	PM - ____ - PO	55-60	S
P-Panel with Auto Fill	PA - ____ - PO	55-60	S
P-Panel with Manual Fill and DHW	PM - ____ - PD	65-70	M
P-Panel with Auto Fill and DHW	PA - ____ - PD	65-70	M

S = 28" wide x 31.5" tall x 12" deep

M = 40" wide x 31.5" tall x 12" deep

Primary Panels

This panel includes a 1-1/4" primary loop with air remover and expansion tank connection (tank not included) as well as optional auto-fill assembly and DHW zone. O-ring sealed threaded unions on the primary loop and Cat 5 wiring connections allow for fast coupling to other HydroNex panels. The entire panel is enclosed in a powder coated steel enclosure for a professional, appliance style appearance.

Standard equipment includes:

- 1-1/4" copper primary and 1" copper DHW piping
- Primary circulator, pre-wired and tested
- **Optional energy-saving 3 speed Watts Radiant circulators**
- High performance 1-1/4" micro-bubble air remover and expansion tank connection (tank not included) including a 10 ft piece of 3/8" Onix for mounting tank outside of enclosure
- Isolation valves for easy servicing of circulators and easy air purging
- Spring check valve in DHW piping
- 0-50 psi/60-320 °F gauge
- O-ring sealed threaded unions
- Cat 5 cable electrical connection for fast and easy connection to D Panels
- 9 ft 120V power cord
- Powder coated steel enclosure
- Optional auto-fill assembly (Watts 911S M3 pressure reducing valve and backflow preventer)
- Optional DHW zone with spring check valve on return, pre-wired and tested (DHW circulator is the same selection as the primary circulator)

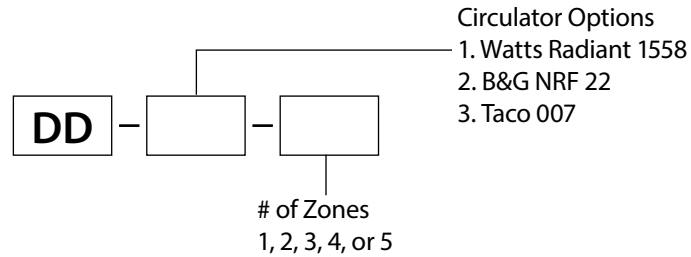
Maximum total flow rate is approximately 22 gpm.

Distribution Direct



DD-1-2

Use this model number configuration to order.



DISTRIBUTION DIRECT PANELS

DESCRIPTION	MODEL #	WT. (lbs)	SIZE
1 Zone D-Direct	DD - ____ - 1	55-60	S
2 Zone D-Direct	DD - ____ - 2	90-95	
3 Zone D-Direct	DD - ____ - 3	120-125	M
4 Zone D-Direct	DD - ____ - 4	155-160	
5 Zone D-Direct	DD - ____ - 5	185-190	L

S = 28" wide x 31.5" tall x 12" deep
M = 40" wide x 31.5" tall x 12" deep
L = 52" wide x 31.5" tall x 12" deep

Distribution Direct

These panels are ideal for any high temperature hydronic application such as fan coils, baseboards, panel radiators, or underfloor radiant. A Direct panel could also be used with a Primary panel on a condensing boiler.

Each panel is equipped with O-ring sealed threaded unions on the primary loop and Cat 5 wiring connections for fast connection to other HydroNex panels. The entire panel is enclosed in a powder coated steel enclosure for a professional, appliance style appearance.

Standard equipment includes:

- 1-1/4" copper primary and 1" secondary piping
- Zone circulators, pre-wired and tested
- **Optional energy-saving 3 speed Watts Radiant circulators**
- Isolation valves for easy servicing of circulators and easy air purging
- Spring flow check valves on each zone
- O-ring sealed threaded unions
- Cat 5 cable electrical connection for fast and easy connection to P or D Panels
- 9 ft 120V power cord
- Powder coated steel enclosure

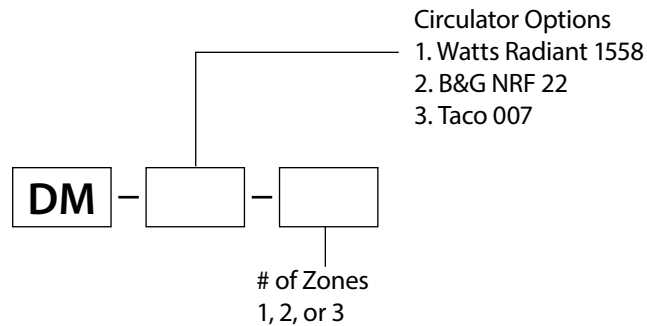
Maximum flow for entire panel is approximately 22 gpm. Maximum for each 1" secondary is approximately 8 gpm.

Distribution Mix Valve



DM-1-2

Use this model number configuration to order.



DISTRIBUTION PANELS

DESCRIPTION	MODEL #	WT. (lbs)	SIZE
1 Zone D-Mix	DM - ____ - 1	60-65	S
2 Zone D-Mix	DM - ____ - 2	80-85	M
3 Zone D-Mix	DM - ____ - 3	95-100	

S = 28" wide x 31.5" tall x 12" deep
 M = 40" wide x 31.5" tall x 12" deep

Distribution Mix Valve

These panels are used for lower temperature hydronic applications such as panel radiators, or radiant. A thermostatic, 3-way mixing valve can deliver temperatures between 100 and 160°F.

Each panel is equipped with O-ring sealed threaded unions on the primary loop and Cat 5 wiring connections for fast connection to other HydroNex panels. The entire panel is enclosed in a powder coated steel enclosure for a professional, appliance style appearance.

Standard equipment includes:

- 1-1/4" copper primary, 3/4" secondary piping, and a 1" common return
- Zone circulators, pre-wired and tested
- **Optional energy-saving 3 speed Watts Radiant circulators**
- Thermostatic, 3-way mixing valve with 0-50 psi/60-320°F gauge
- Isolation valves for easy servicing of circulators and easy air purging
- Spring flow check valves on each zone
- O-ring sealed threaded unions
- Cat 5 cable electrical connection for fast and easy connection to Primary or Distribution Panels
- 9 ft 120V power cord
- Powder coated steel enclosure

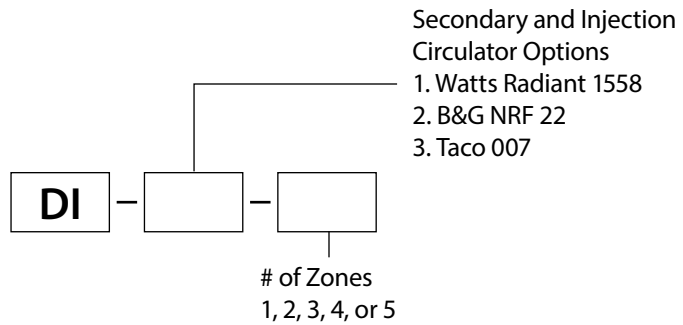
Maximum total flow rate through the mixing valve is approximately 3.5 gpm.

Distribution Injection Mix



DI-1-3

Use this model number configuration to order.



DISTRIBUTION Injection Mixing Panels

DESCRIPTION	MODEL #	WT. (lbs)	SIZE
1 Zone D Injection Mix	DI - ____ - 1	85-90	S
2 Zone D Injection Mix	DI - ____ - 2	120-125	M
3 Zone D Injection Mix	DI - ____ - 3	140-145	
4 Zone D Injection Mix	DI - ____ - 4	170-175	L
5 Zone D Injection Mix	DI - ____ - 5	200-205	

S = 28" wide x 31.5" tall x 12" deep
M = 40" wide x 31.5" tall x 12" deep
L = 52" wide x 31.5" tall x 12" deep

Distribution Injection Mix

These panels deliver automatically adjusted, weather-responsive heat to any hydronic system. The panel resets system water temperature based on outside temperatures. The tekmar® 361 control adjusts the speed of the injection pump to accurately regulate supply water temperatures, giving the ultimate in comfort and energy efficiency.

Each panel is equipped with O-ring sealed threaded unions on the primary loop and Cat 5 wiring connections for fast connection to other HydroNex panels. The entire panel is enclosed in a powder coated steel enclosure for a professional, appliance style appearance.

Standard equipment includes:

- 1-1/4" copper primary, 3/4" secondary supply and 1" common return piping
- Zone circulators and injection circulator, pre-wired and tested
- **Optional energy-saving 3 speed Watts Radiant circulators**
- tekmar 361 outdoor reset mixing control
- 0-50 psi/60-320°F gauge
- Isolation valves for easy servicing of circulators and easy air purging
- Spring flow check valves on each zone.
- O-ring sealed threaded unions
- Cat 5 cable electrical connection for fast and easy connection to P or D Panels
- 9 ft 120V power cord
- Powder coated steel enclosure

Maximum flow rate for entire panel is approximately 22 gpm. Maximum flow rate for each 3/4" secondary is approximately 5 gpm.

Distribution with Heat Exchanger



DH-S-1-1

Distribution with Heat Exchanger

Heat Exchanger panels with a tekmar 665 make it easy to add a snow melting zone to any HydroNex system. Or select the radiant option with a tekmar 361 for a glycol loop in a garage or shop that requires isolation. The tekmar 361 control adjusts the speed of the injection pump on the "A" side of the heat exchanger to accurately regulate supply water temperatures, giving the ultimate in comfort and energy efficiency. The heat exchanger options can transfer approximately 150,000 btu/hr or 250,000 btu/hr with 180°F boiler supply/130°F snow melt/radiant supply and a 30°F Delta T.

Each panel is equipped with O-ring sealed threaded unions on the primary loop and Cat 5 wiring connections for fast connection to other HydroNex panels. The entire panel is enclosed in a powder coated steel enclosure for a professional, appliance style appearance.

Standard equipment includes:

- 1-1/4" copper primary and secondary supply piping
- Circulators on A and B side of heat exchanger, pre-wired and tested
- Flat plate stainless steel heat exchanger with unions
- **Optional energy-saving 3 speed Watts Radiant circulators**
- tekmar 665 snow melt control (093 slab sensor must be ordered separately) or 361 outdoor reset mixing control
- High performance 1-1/4" micro-bubble air remover and expansion tank connection (tank not included)
- 0-50 psi/60-320°F gauge
- Isolation valves for easy servicing of circulators and easy air purging
- O-ring sealed threaded unions
- Cat 5 cable electrical connection for fast and easy connection to P or D Panels
- 9 ft 120V power cord
- Powder coated steel enclosure

Use this model number configuration to order.

Circulator Options for 150 MBH panels

1. Watts Radiant 1558 w/ 2699 secondary
2. B&G NRF 22 w/ PL30 secondary
3. Taco 007 w/ 0014 secondary



R: Radiant Heating (tekmar 361°)
 S: Snow Melting (tekmar 665°)

Heat Exchanger Size
 1: 150 MBH

DISTRIBUTION Heat Exchanger Panels (150 MBH)

DESCRIPTION	MODEL #	WT. (lbs)	SIZE
Radiant Heating (150 MBH)	DH-R-___-1	115-120	M
Snow Melting (150 MBH)	DH-S-___-1	115-120	

M = 40" wide x 31.5" high x 12" deep

Circulator Options for 250 MBH panels

1. B&G PL30 w/ PL36 secondary
2. Taco 0013 w/ 0014 secondary



R: Radiant Heating (tekmar 361)
 S: Snow Melting (tekmar 665)

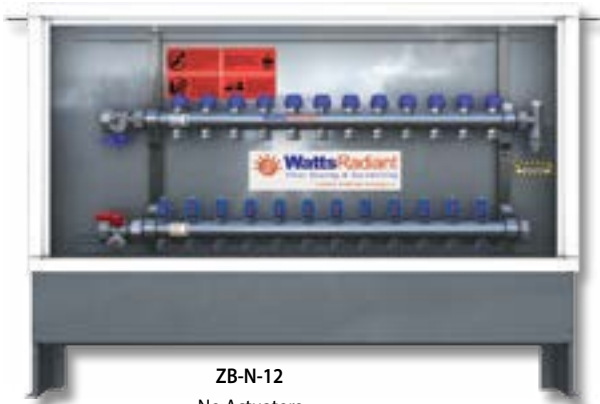
Heat Exchanger Size
 2: 250 MBH

DISTRIBUTION Heat Exchanger Panels (250 MBH)

DESCRIPTION	MODEL #	WT. (lbs)	SIZE
Radiant Heating (250 MBH)	DH-R-___-2	140-145	M
Snow Melting (250 MBH)	DH-S-___-2	140-145	

M = 40" wide x 31.5" high x 12" deep

Zone Basic (with or without actuators)



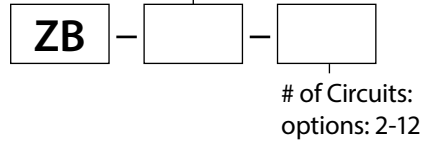
ZB-N-12
No Actuators



ZB-A-4
With Actuators

Use this model number configuration to order.

A: With Actuators
N: No Actuators



Zone Basic

DESCRIPTION	MODEL #	WT. (lbs)	SIZE
2 Circuit	ZB - ____ - ____	30-40	M
3 Circuit		30-40	
4 Circuit		30-40	
5 Circuit		50-65	L
6 Circuit		50-65	
7 Circuit		50-65	
8 Circuit		50-65	
9 Circuit		50-65	
10 Circuit		50-65	
11 Circuit		50-65	
12 Circuit		50-65	

M = 29.25" high x 25.5" wide x 4.5" deep
L = 29.25" high x 41.5" wide x 4.5" deep

Zone Panels (with or without actuators)

Zone panels with pre-wired actuators and actuator control are our most popular panel. With a professional appearance, multiple radiant tube options and the wiring already done, it's easy to see why.

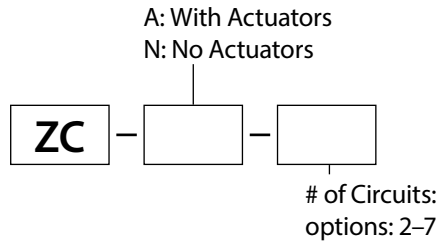
This Zone panel includes a 1" stainless steel manifold housed in a powder-coated steel enclosure with a latching door. The panel includes manifold isolation valves with temperature gauges and a vent/purge assembly. The enclosure is designed to be recessed in the wall.

Maximum flow rate for entire manifold is 12 gpm.
Individual circuit flow meters are 0-2 gpm.

Panels with actuators may require an optional pressure differential by-pass valve (ordered separately). If the by-pass valve is used, the maximum manifold size in a box is reduced by 2 circuits, and the maximum manifold is an M-10.

Zone Pump (with or without actuators)

Use this model number configuration to order.



ZONE with Zone Circulator

DESCRIPTION	MODEL #	WT. (lbs)	SIZE
2 Circuit	ZC - ____ - ____	65-70	L
3 Circuit		65-70	
4 Circuit		65-70	
5 Circuit		70-75	
6 Circuit		70-75	
7 Circuit		70-75	

L = 29.25" high x 41.5" wide x 4.5" deep



ZC-N-7
No Actuators



ZC-A-7
With Actuators

Zone Pump Panels (with or w/o actuators)

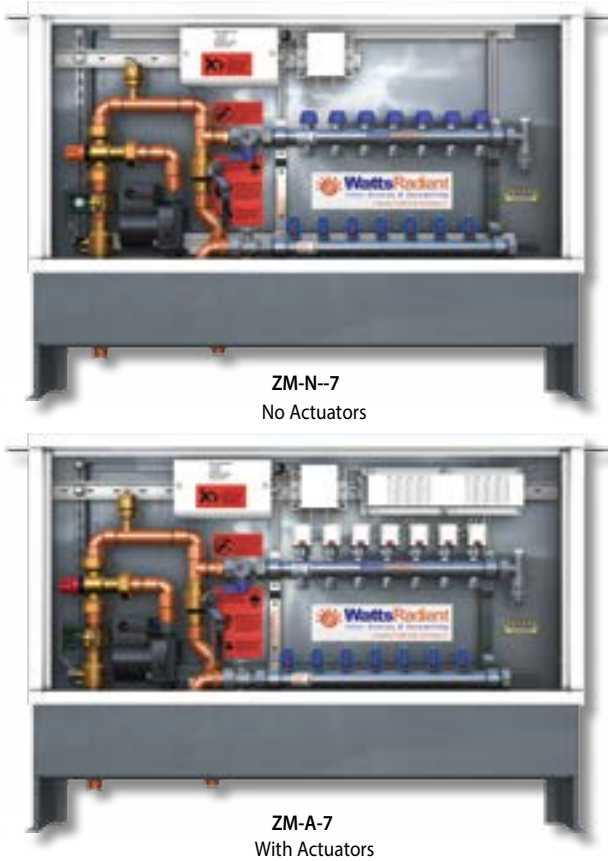
The Zone Pump panel adds a Watts Radiant 1558 circulator to a Zone Basic Panel. It is used when the radiant manifold does not have a dedicated circulator in the mechanical room (to save space, for example).

This Zone panel includes a pre-wired Watts Radiant 1558 circulator, and a 1" stainless steel manifold housed in a powder-coated steel enclosure with a latching door. The panel includes manifold isolation valves with temperature gauges and a vent/purge assembly. The enclosure is designed to be recessed in the wall. The single speed 1558 circulator produces approximately 10 gpm at 10 ft hd.

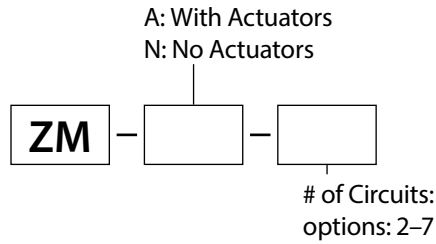
Maximum flow rate for entire panel is approximately 8 gpm. Individual circuit flow meters are 0-2 gpm.

Panels with actuators may require an optional pressure differential by-pass valve (ordered separately). If the by-pass valve is used, the maximum manifold size allowed is an M-5.

Zone Mix Pump (with or without actuators)



Use this model number configuration to order.



ZONE with Mix Valve & Zone Circulator

DESCRIPTION	MODEL #	WT. (lbs)	SIZE
2 Circuit	ZM - ____ - ____	70-75	L
3 Circuit		70-75	
4 Circuit		70-75	
5 Circuit		75-80	
6 Circuit		75-80	
7 Circuit		75-80	

L = 29.25" high x 41.5" wide x 4.5" deep

Zone Mix Pump Panels (with or w/o actuators)

The Zone Mix Pump panel adds fixed temperature mixing capability to the Zone Pump Panel. It includes a 3 way mixing valve (max flow rate approximately 3.5 gpm) a pre-wired Watts Radiant 1558 circulator, and a 1" stainless steel manifold housed in a powder-coated steel enclosure with a latching door. The panel includes manifold isolation valves with temperature gauges and a vent/purge assembly. The enclosure is designed to be recessed in the wall. The single speed 1558 circulator produces approximately 10 gpm at 10 ft hd.

Maximum flow rate for entire panel is approximately 4 gpm. Individual circuit flow meters are 0-2 gpm.

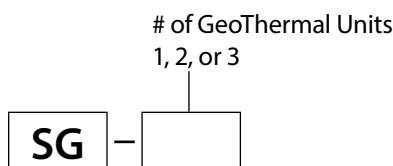
Panels with actuators may require an optional pressure differential by-pass valve (ordered separately). If the by-pass valve is used, the maximum manifold size allowed is an M-5.

SPECIALTY GeoThermal Panel



SG-2

Use this model number configuration to order.



SPECIAL GeoThermal Panels

DESCRIPTION	MODEL #	WT. (lbs)	SIZE
1 Geothermal Unit	SG-1	60-65	S
2 Geothermal Units	SG-2	80-85	M

S=28" wide x 31.5" high x 12" deep
 M=40" wide x 31.5" high x 12" deep

GeoThermal Panel

These panels tie highly efficient water/water ground source heat pumps to a radiant system. This panel comes with an outdoor reset control that adjusts the temperature of the buffer tank based on outdoor conditions. This allows the heat pump to operate at the lowest possible water outlet temperature, ensuring maximum efficiency and extending compressor life.

The hydronic system should be carefully designed, with consideration given to both the heat loss and floor coverings. Most heat pumps can supply a maximum water temperature of approximately 115 °F. This panel is designed for use with a thermal buffer tank, a Primary panel, and a Distribution panel. The SG panel is typically connected to the inlet side of any HydroNex Primary panel. Buffer tanks limit short-cycling of the compressor, maximizing compressor life.

The heat pump will only run when the temperature of the buffer tank falls below the outdoor reset control set point. If there is no call for heat from the system, the solenoid valve will remain closed, directing hot water into the buffer tank until the set point temperature is met. When the radiant system calls for heat, the solenoid valve will open, allowing hot water to flow from the tank and/or heat pump.

Standard equipment includes:


- 1-1/4" copper primary and 1" secondary supply piping
- **Energy-saving 3 speed Watts Radiant 2699 circulators, pre-wired and tested**
- tekmar® 274 staging control (includes outdoor sensor)
- 0-50 psi/60-320°F gauge
- Isolation valves for easy servicing of circulators and easy air purging
- O-ring sealed threaded unions
- System solenoid to regulate flow through buffer tank or heat pump.
- Cat 5 cable electrical connection for fast and easy connection to Primary or Distribution Panels
- 9 ft 120V power cord
- Powder coated steel enclosure

Maximum flow rate is approximately 22 gpm. Each Watts Radiant 2699 circulator is capable of providing approximately 15gpm at 20 ft hd on high speed.

HydroNex Accessories & Replacement Parts

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Replacement 504EXP Relay Box	1	334504	81003694	4
Replacement 506EXP Relay Box	1	334506	81003983	5
Replacement 501 Relay Box	1	334500	81004279	4
Replacement 4 Zone Master Valve Control Box	1	P-2329	81005192	2
Replacement 6 Zone Master Valve Control Box	1	P-2331	81005190	2
Replacement 4 Zone Slave Valve Control Box	1	P-2330	81005246	2
Replacement 6 Zone Slave Valve Control Box	1	P-2332	81005191	2
Replacement Thermal Actuator	1	PZ656104	81001541	1
Zone panel Manifold Differential By-Pass Valve (optional)	1	D4402050	81005345	5
Replacement Watts Radiant 15-58 Circulator (flange) to be used with Primary, Distribution, and Specialty panels	1	313025	81005542	10
Replacement Watts Radiant 26-99 Circulator	1	GUPS2699115	81009645	10
Replacement Watts Radiant 15-58 Circulator (thread) to be used with Zone panels	1	313026	81005553	10
Snow/ice Sensor (in slab) 090 w/65 ft cable	1	300108	81005661	4
Snow/Ice Sensor Socket 091	1	300111	81003753	2





HydroControl®

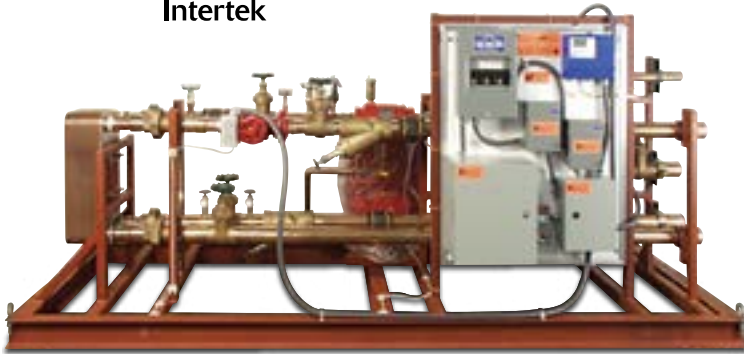
Custom HydroControl® and HydroSkid™ Mechanical Packages

Our custom mechanical packages help ensure fast, efficient, trouble-free installations in any application. Watts Radiant has been designing and building custom mechanical panels for over 25 years. We supply OEM mechanical components to many major hydronic manufacturers as well as independent contractor and mechanical installers. Put our experience to work for you.

Custom HydroControl and HydroSkid mechanical packages are manufactured exactly to your project specifications, with capabilities up to 6 inch copper. Each package is fully tested, factory warranted, and ready for installation.

HydroControls and HydroSkids feature professional-grade components from companies you trust- Watts®, Bell and Gossett, Taco®, and tekmar® to name a few. Our expertise in manufacturing and our selection of quality components ensure trouble-free operation and longevity.

Send us your project specifications and/or a RadiantWorks mechanical summary and we'll prepare a quote.

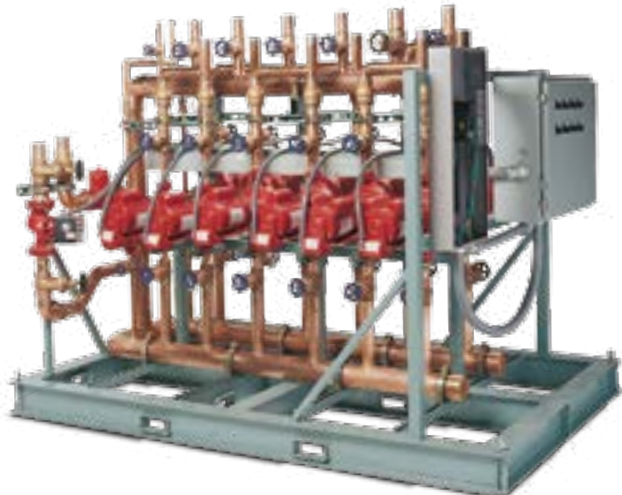


Versatile Custom Panels fill a variety of needs

Watts Radiant custom HydroControl panels fill the mechanical needs of any radiant, snow melting, turf warming, or permafrost project. From small residences to commercial spaces to industrial facilities, we have the capability to engineer the perfect solution.

Custom HydroSkids™ for Commercial and Industrial Radiant Heating or Snow Melting

Offer your commercial and industrial clients the comfort and energy saving benefits of radiant floor warming or the protection and convenience of a snow melting system. Let the design team at Watts Radiant work with you to design customized system solutions for radiant heating, snow melting, or permafrost protection.



For Pricing, Please See Watts Radiant Price Guide.

HeatWeave Electric Floor Heating & Snow Melting

TapeMat™

Roll out HeatWeave mats over the floor, shape them to fit the room and cover them with thin-set or self-leveling mortar. With the new double sided tape, the mat sticks right to the floor offering one step installation.



WarmWire® Cable

WarmWire is built with a tough, water-proof outer jacket. It has lower material cost compared to HeatWeave TapeMat and offers more flexibility in installation for non-standard room layouts.



UnderFloor™ Mats

Install UnderFloor mats between floor joists to warm the floor above. They work under any floor covering, including nail-down hardwood flooring. These mats work great for remodeling.



SlabHeat™ Cables

SlabHeat cables can be used to heat a room or an entire structure. The cables install directly in the slab before it is poured, so they work well as a primary heat source while offering the ability to control heat room by room.

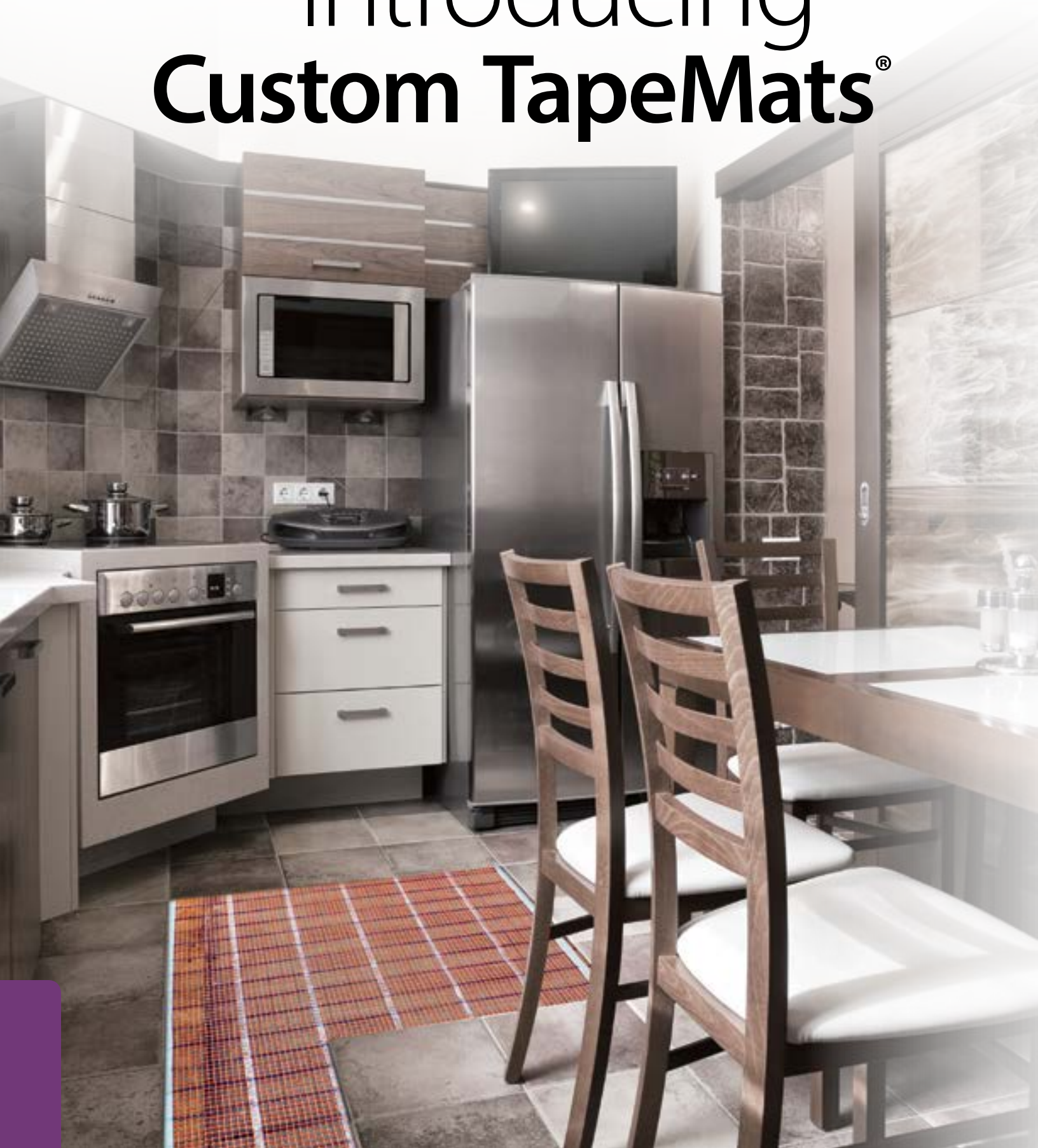


ProMelt® Cables & Mats

ProMelt snow melting mats and cables clear snow and ice to make walking and driving safer. They install in concrete, asphalt, under stone or brick, and even under exterior tiles. Melt your troubles away!

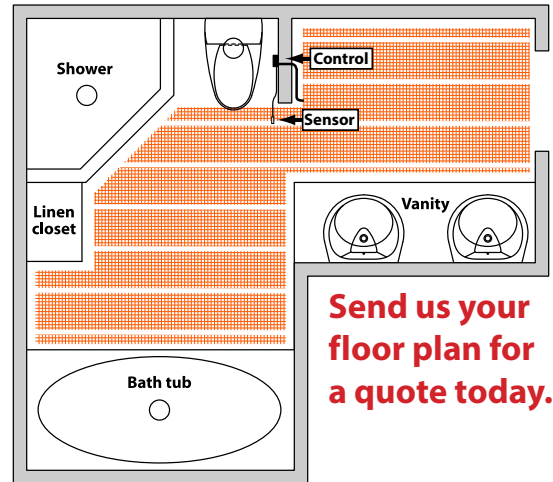
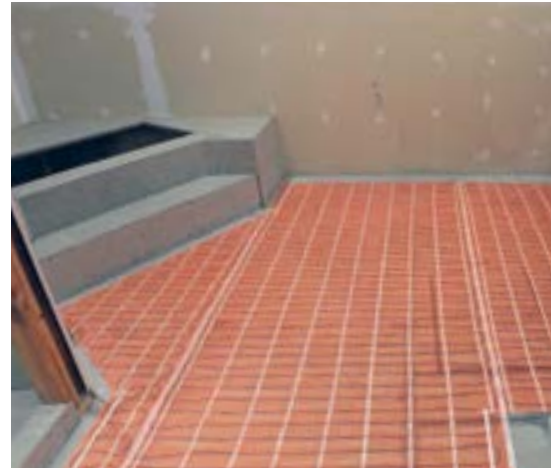


Introducing Custom TapeMats®



Watts Radiant now offers a quicker way to bring electric floor warming to all your customers. The new Custom TapeMat is the next generation in electric floor warming mats. The pre-shaped custom mats offer fast & easy installation, and the open weave design allows for 1-step application with thin-set or self-leveler.

- Quicker, simpler, easier installation – TapeMat is pre-shaped to fit any area
- TapeMat allows for a 1-step application with thin-set or self-leveler
- Easy alterations if dimension of room changes
- Simple to adjust for curves, angles, and cut-outs
- Double-sided tape adheres to subfloor for faster layouts
- UL listed at 12 Watts/square foot



NEW 120 VOLT CUSTOM TAPEMATS

Description	Order Number	Model Number	Amp Draw	Ship wt. (lb.)
10 SqFt, Custom TapeMat, 120V	81016649	C12120010HW	1.0	3
15 SqFt, Custom TapeMat, 120V	81016650	C12120015HW	1.5	4
20 SqFt, Custom TapeMat, 120V	81016651	C12120020HW	2.0	4
25 SqFt, Custom TapeMat, 120V	81016652	C12120025HW	2.5	5
30 SqFt, Custom TapeMat, 120V	81016653	C12120030HW	3.0	5
35 SqFt, Custom TapeMat, 120V	81016654	C12120035HW	3.5	6
40 SqFt, Custom TapeMat, 120V	81016590	C12120040HW	4.0	6
45 SqFt, Custom TapeMat, 120V	81016655	C12120045HW	4.5	7
50 SqFt, Custom TapeMat, 120V	81016656	C12120050HW	5.0	7
60 SqFt, Custom TapeMat, 120V	81016665	C12120060HW	6.0	9
70 SqFt, Custom TapeMat, 120V	81016657	C12120070HW	7.0	11
80 SqFt, Custom TapeMat, 120V	81016658	C12120080HW	8.0	13

NEW 240 VOLT CUSTOM TAPEMATS

Description	Order Number	Model Number	Amp Draw	Ship wt. (lb.)
20 SqFt, Custom TapeMat, 240V	81016659	C12240020HW	1.0	4
30 SqFt, Custom TapeMat, 240V	81016660	C12240030HW	1.5	5
40 SqFt, Custom TapeMat, 240V	81016661	C12240040HW	2.0	6
50 SqFt, Custom TapeMat, 240V	81016662	C12240050HW	2.5	7
60 SqFt, Custom TapeMat, 240V	81016663	C12240060HW	3.0	9
70 SqFt, Custom TapeMat, 240V	81016664	C12240070HW	3.5	11
80 SqFt, Custom TapeMat, 240V	81016665	C12240080HW	4.0	13
90 SqFt, Custom TapeMat, 240V	81016666	C12240090HW	4.5	15
100 SqFt, Custom TapeMat, 240V	81016667	C12240100HW	5.0	17
120 SqFt, Custom TapeMat, 240V	81016668	C12240120HW	6.0	19
140 SqFt, Custom TapeMat, 240V	81016669	C12240140HW	7.0	21
160 SqFt, Custom TapeMat, 240V	81016670	C12240160HW	8.0	23

TapeMat INSTALLATION Kit



**Everything you need
 for a quick and simple
 installation.**

Each kit contains:

- 2' wide HeatWeave TapeMat(s)**
- SunStat® Pro II Programmable Thermostat**
- LoudMouth™ Installation Monitor**
- Double-sided tape**
- Installation Manual**

1. **New adhesive strips** on either side of mat speed up the installation process by allowing the mat to be "stuck" to the floor.
2. **TapeMats lay out flatter** for easier troweling.
3. **The industry's first thin, open-weave construction** allows thin-set or self-leveling mortar to flow through the mat and easily bond with the underlying material in one step.
4. **The industry's first single power lead construction** makes mats easy to install and simpler to connect to the control.
5. **The industry's highest-quality heating wire** using ETFE high-temperature insulation, XLPE (PEX) jacket, and oxygen-free copper heating elements for longevity.
6. **The industry's first twisted, twin-wire construction** creates ultra-low EMF.
7. **120-VAC and 240-VAC models available** for small residential to commercial applications.
8. **The industry's first shielded and fully grounded 10-ft. power lead** provides safety and jobsite durability.

120 VOLT TAPEMAT KITS

Description	Quantity & Size of mat	Order Number	Model Number	Amp Draw	Ship wt. (lb.)
10 SqFt, HeatWeave TapeMat Kit, 120V	(1) 2' x 5'	81011201	12000524-KIT-HW	1.0	8
15 SqFt, HeatWeave TapeMat Kit, 120V	(1) 2' x 7.5'	81011202	12000724-KIT-HW	1.5	8
20 SqFt, HeatWeave TapeMat Kit, 120V	(1) 2' x 10'	81011203	12001024-KIT-HW	2.0	9
25 SqFt, HeatWeave TapeMat Kit, 120V	(1) 2' x 12.5'	81011204	12001224-KIT-HW	2.5	10
30 SqFt, HeatWeave TapeMat Kit, 120V	(1) 2' x 15'	81011205	12001524-KIT-HW	3.0	12
35 SqFt, HeatWeave TapeMat Kit, 120V	(1) 2' x 17.5'	81011206	12001724-KIT-HW	3.5	12
40 SqFt, HeatWeave TapeMat Kit, 120V	(1) 2' x 20'	81011207	12002024-KIT-HW	4.0	12
45 SqFt, HeatWeave TapeMat Kit, 120V	(1) 2' x 22.5'	81011208	12002224-KIT-HW	4.5	13
50 SqFt, HeatWeave TapeMat Kit, 120V	(1) 2' x 25'	81011209	12002524-KIT-HW	5.0	13
60 SqFt, HeatWeave TapeMat Kit, 120V	(1) 2' x 30'	81011210	12003024-KIT-HW	6.0	14
70 SqFt, HeatWeave TapeMat Kit, 120V	(1) 2' x 35'	81011211	12003524-KIT-HW	7.0	18
80 SqFt, HeatWeave TapeMat Kit, 120V	(1) 2' x 40'	81011212	12004024-KIT-HW	8.0	21
90 SqFt, HeatWeave TapeMat Kit, 120V	(2) 2' x 22.5'	81011213	12004524-KIT-HW	9.0	21
100 SqFt, HeatWeave TapeMat Kit, 120V	(2) 2' x 25'	81011214	12005024-KIT-HW	10.0	21
110 SqFt, HeatWeave TapeMat Kit, 120V	(1) 2' x 25' & (1) 2' x 30'	81011215	12005524-KIT-HW	11.0	22
120 SqFt, HeatWeave TapeMat Kit, 120V	(2) 2' x 30'	81011216	12006024-KIT-HW	12.0	23
130 SqFt, HeatWeave TapeMat Kit, 120V	(1) 2' x 30' & (1) 2' x 35'	81011217	12006524-KIT-HW	13.0	24
140 SqFt, HeatWeave TapeMat Kit, 120V	(2) 2' x 35'	81011218	12007024-KIT-HW	14.0	25
150 SqFt, HeatWeave TapeMat Kit, 120V	(1) 2' x 35' & (1) 2' x 40'	81011219	12007524-KIT-HW	15.0	27

240 VOLT TAPEMAT KITS

Description	Quantity & Size of mat	Order Number	Model Number	Amp Draw	Ship wt. (lb.)
160 SqFt, HeatWeave Mat Kit, 240V	(1) 2' x 80'	81013735	24008024-KIT-HW	8.0	31
170 SqFt, HeatWeave Mat Kit, 240V	(1) 2' x 40' & (1) 2' x 45'	81013736	24008524-KIT-HW	8.5	33
180 SqFt, HeatWeave Mat Kit, 240V	(2) 2' x 45'	81013737	24009024-KIT-HW	9.0	35
190 SqFt, HeatWeave Mat Kit, 240V	(1) 2' x 45' & (1) 2' x 50'	81013738	24009524-KIT-HW	9.5	37
200 SqFt, HeatWeave Mat Kit, 240V	(2) 2' x 50'	81013739	24010024-KIT-HW	10.0	39
220 SqFt, HeatWeave Mat Kit, 240V	(1) 2' x 50' & (1) 2' x 60'	81013740	24011024-KIT-HW	11.0	41
240 SqFt, HeatWeave Mat Kit, 240V	(2) 2' x 60'	81013741	24012024-KIT-HW	12.0	43
260 SqFt, HeatWeave Mat Kit, 240V	(1) 2' x 60' & (1) 2' x 70'	81013742	24013024-KIT-HW	13.0	45
280 SqFt, HeatWeave Mat Kit, 240V	(2) 2' x 70'	81013743	24014024-KIT-HW	14.0	47
300 SqFt, HeatWeave Mat Kit, 240V	(1) 2' x 70' & (1) 2' x 80'	81013744	24015024-KIT-HW	15.0	49

WarmWire

INSTALLATION

Kit

Now Approved for Showers

Each kit contains:

- WarmWire Spool(S)**
- SunStat Pro II Programmable Thermostat**
- CableStrap™**
- Double-sided Tape**
- LoudMouth™ Installation Monitor**
- Installation Manual**

There are 3 WarmWire spacing choices:

- **2" on center delivers 15 watts per sq. ft.**
For high heat loss areas & concrete slabs.
- **2.5" on center delivers 12 watts per sq. ft.**
For bathrooms, kitchens, or living areas.
- **3" on center delivers 10 watts per sq. ft.**
For low heat loss areas such as hallways.



120 VOLT WIRE KITS

Description	Quantity & Size of Cables	Order Number	Model Number	Sq. ft. at 2.0" o.c.	Sq. ft. at 2.5" o.c.	Sq. ft. at 3.0" o.c.	Amp Draw	Ship wt. (lb.)
10 SqFt, WarmWire Kit	(1) 10 sq. ft.	81011220	120010WD-KIT-HW	8	10	12	1.0	6
15 SqFt, WarmWire Kit	(1) 15 sq. ft.	81011221	120015WD-KIT-HW	12	15	18	1.5	7
20 SqFt, WarmWire Kit	(1) 20 sq. ft.	81011222	120020WD-KIT-HW	16	20	24	2.0	8
25 SqFt, WarmWire Kit	(1) 25 sq. ft.	81011223	120025WD-KIT-HW	20	25	30	2.5	9
30 SqFt, WarmWire Kit	(1) 30 sq. ft.	81011224	120030WD-KIT-HW	24	30	36	3.0	10
35 SqFt, WarmWire Kit	(1) 35 sq. ft.	81011225	120035WD-KIT-HW	28	35	42	3.5	11
40 SqFt, WarmWire Kit	(1) 40 sq. ft.	81011226	120040WD-KIT-HW	32	40	48	4.0	12
45 SqFt, WarmWire Kit	(1) 45 sq. ft.	81011227	120045WD-KIT-HW	36	45	54	4.5	13
50 SqFt, WarmWire Kit	(1) 50 sq. ft.	81011228	120050WD-KIT-HW	40	50	60	5.0	14
60 SqFt, WarmWire Kit	(1) 60 sq. ft.	81011229	120060WD-KIT-HW	48	60	72	6.0	15
70 SqFt, WarmWire Kit	(1) 70 sq. ft.	81011230	120070WD-KIT-HW	56	70	84	7.0	16
80 SqFt, WarmWire Kit	(1) 80 sq. ft.	81011231	120080WD-KIT-HW	64	80	96	8.0	17
90 SqFt, WarmWire Kit	(1) 90 sq. ft.	81011232	120090WD-KIT-HW	72	90	108	9.0	19
100 SqFt, WarmWire Kit	(1) 100 sq. ft.	81011233	1200100WD-KIT-HW	80	100	120	10.0	20
110 SqFt, WarmWire Kit	(1) 50 (1) 60 sq. ft.	81011234	1200110WD-KIT-HW	88	110	132	11.0	20
120 SqFt, WarmWire Kit	(2) 60 sq. ft.	81011235	1200120WD-KIT-HW	96	120	144	12.0	21
130 SqFt, WarmWire Kit	(1) 60 (1) 70 sq. ft.	81011236	1200130WD-KIT-HW	104	130	156	13.0	21
140 SqFt, WarmWire Kit	(2) 70 sq. ft.	81011237	1200140WD-KIT-HW	112	140	168	14.0	22
150 SqFt, WarmWire Kit	(1) 70 (1) 80 sq. ft.	81011238	1200150WD-KIT-HW	120	150	180	15.0	23

240 VOLT WIRE KITS **Note:** WarmWire Kits larger than 300 Sq.Ft. include a SunStat Relay II, as well as a SunStat Pro II thermostat.

Description	Quantity & Size of Cables	Order Number	Model Number	Sq. ft. at 2.0" o.c.	Sq. ft. at 2.5" o.c.	Sq. ft. at 3.0" o.c.	Amp Draw	Ship wt. (lb.)
160 SqFt, WarmWire Kit	(1) 160 sq. ft.	81011239	240160WD-KIT-HW	128	160	192	8.0	24
170 SqFt, WarmWire Kit	(1) 80 (1) 90 sq. ft.	81011240	240170WD-KIT-HW	136	170	204	8.5	25
180 SqFt, WarmWire Kit	(2) 90 sq. ft.	81011241	240180WD-KIT-HW	144	180	216	9.0	26
190 SqFt, WarmWire Kit	(1) 90 (1) 100 sq. ft.	81011242	240190WD-KIT-HW	152	190	228	9.5	28
200 SqFt, WarmWire Kit	(2) 100 sq. ft.	81011243	240200WD-KIT-HW	160	200	240	10.0	30
220 SqFt, WarmWire Kit	(1) 100 (1) 120 sq. ft.	81011244	240220WD-KIT-HW	176	220	264	11.0	32
240 SqFt, WarmWire Kit	(2) 120 sq. ft.	81011245	240240WD-KIT-HW	192	240	288	12.0	34
260 SqFt, WarmWire Kit	(1) 120 (1) 140 sq. ft.	81011246	240260WD-KIT-HW	208	260	312	13.0	37
280 SqFt, WarmWire Kit	(2) 140 sq. ft.	81011247	240280WD-KIT-HW	224	280	336	14.0	39
300 SqFt, WarmWire Kit	(1) 140 (1) 160 sq. ft.	81011248	240300WD-KIT-HW	240	300	360	15.0	42
320 SqFt, WarmWire Kit	(2) 160 sq. ft.	81011249	240320WD-KIT-HW	256	320	384	16.0	46
340 SqFt, WarmWire Kit	(1) 160 (1) 180 sq. ft.	81011250	240340WD-KIT-HW	272	340	408	17.0	48
360 SqFt, WarmWire Kit	(3) 120 sq. ft.	81011251	240360WD-KIT-HW	288	360	432	18.0	52
380 SqFt, WarmWire Kit	(2) 120 (1) 140 sq. ft.	81011252	240380WD-KIT-HW	304	380	456	19.0	54
400 SqFt, WarmWire Kit	(1) 120 (2) 140 sq. ft.	81011253	240400WD-KIT-HW	320	400	480	20.0	57
420 SqFt, WarmWire Kit	(3) 140 sq. ft.	81011254	240420WD-KIT-HW	336	420	504	21.0	59
440 SqFt, WarmWire Kit	(2) 140 (1) 160 sq. ft.	81011255	240440WD-KIT-HW	352	440	528	22.0	62
460 SqFt, WarmWire Kit	(1) 140 (2) 160 sq. ft.	81011256	240460WD-KIT-HW	368	460	552	23.0	64
480 SqFt, WarmWire Kit	(4) 120 sq. ft.	81011257	240480WD-KIT-HW	384	480	576	24.0	66
500 SqFt, WarmWire Kit	(3) 120 (1) 140 sq. ft.	81011258	240500WD-KIT-HW	400	500	600	25.0	68

TapeMats

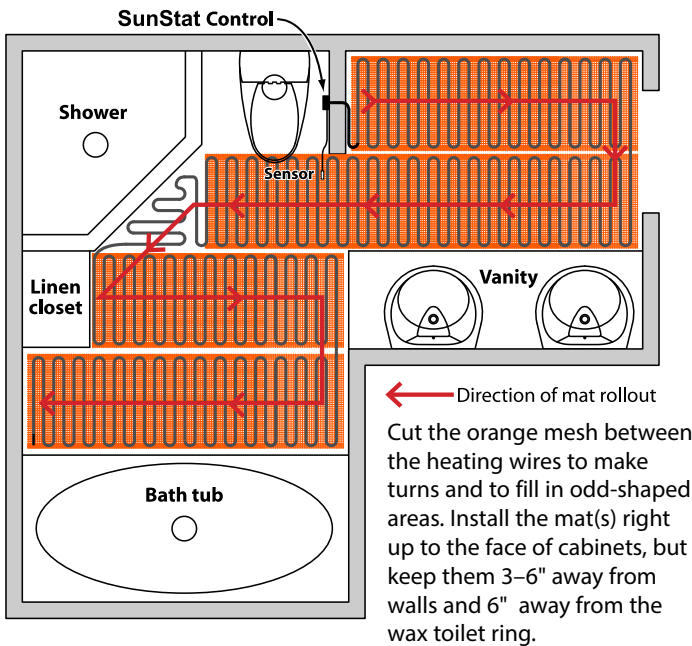


Roll out mat and secure to the floor.



Trowel thin-set and lay tile.

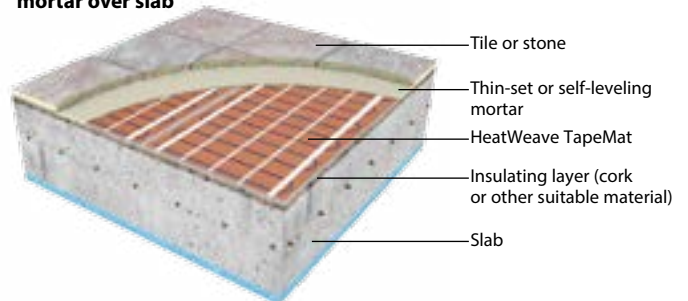
HeatWeave TapeMat Bathroom Layout Bathroom Total Area = 80 sq. ft. One Mat = 40 sq. ft. (2 ft. x 20 ft.)



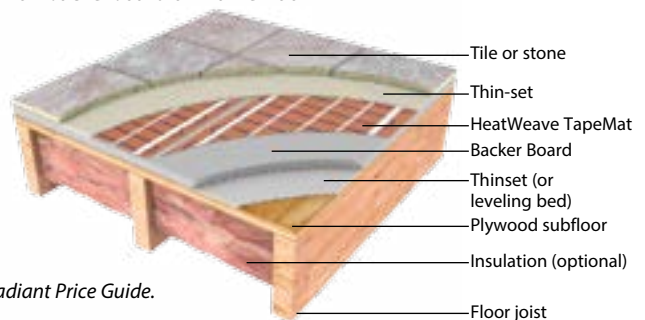
HeatWeave TapeMat is the safest and easiest-to-install heating mat in the industry. It is Listed by UL[®] for the U.S. and Canada, and tested by Tile Council of North America for all residential and moderate commercial applications. All mats have the "S-pattern" wire construction and produce 12 watts/sq. ft. HeatWeave TapeMat offers the largest selection of mats in the industry with over 36 sizes manufactured in two widths (2 ft. and 3 ft. wide) in lengths covering up to 160 sq. ft. — with one mat! Just a few benefits of HeatWeave TapeMats are:

- 1. Double sided tape strips** speed up the installation process by allowing either side of the mat to be "stuck" to the floor.
- 2. TapeMats lay out flatter** for easier troweling.
- 3. The industry's first thin, open-weave construction** allows thin-set or self-leveling mortar to flow through the mat and easily bond with the underlying material. This one-step application adds only 1/8" thickness over a normal tile installation.
- 4. The industry's first single power lead construction** makes mats easy to install and simpler to connect to the control.
- 5. The industry's highest-quality heating wire** using high-temperature insulation, tough outer jacket, and oxygen-free copper heating elements for corrosion resistance, temperature resistance, abrasion resistance, and longevity.
- 6. The industry's first twisted, twin-wire construction** creates ultra-low EMF (electromagnetic field).
- 7. 120- VAC and 240- VAC models** available for small residential to large commercial applications.
- 6. The industry's only shielded and fully grounded** 10-ft. power lead provides safety and jobsite durability. Power leads are color-coded for 120 VAC or 240 VAC.

HeatWeave TapeMat in thin-set mortar over slab



HeatWeave TapeMat in thin-set on backerboard on frame floor



For Pricing, Please See Watts Radiant Price Guide.

It's easy to design a HeatWeave floor heating system.

For fast and easy sizing, go to www.wattsradiant.com for a Product Calculator

Evaluate how many square feet of floor are to be heated. Do not put under cabinets or appliances. Leave the mat at least 4" away from the toilet wax ring and 4"-6" away from walls. Do install up to the toe-kick in front of kitchen or bath cabinets, and in front of a toilet and/or shower and tub, so toes will stay warm.

Select one mat, or a combination of mats, to fill the area. Remember, multiple mats of the same voltage can be wired together to fill larger areas.



3-ft.-wide mats 120 VAC

Coverage (Sq.Ft.)	Mat Size (W x L)	Order Number	Model Number	Amp Draw	REET Value	Ship wt. (lb.)
15	3' x 5'	81008802	12000536HW	1.5	0.13	4
20	3' x 6'-8"	81008803	12000636HW	2.0	0.13	4
25	3' x 8'-4"	81008804	12000836HW	2.5	0.10	5
30	3' x 10'	81008805	12001036HW	3.0	0.06	5
45	3' x 15'	81008806	12001536HW	4.5	0.11	7
60	3' x 20'	81008807	12002036HW	6.0	0.13	9



2-ft.-wide mats 120 VAC

Coverage (Sq.Ft.)	Mat Size (W x L)	Order Number	Model Number	Amp Draw	REET Value	Ship wt. (lb.)
10	2' x 5'	81008778	12000524HW	1.0	0.11	3
15	2' x 7'-6"	81008779	12000724HW	1.5	0.13	4
20	2' x 10'	81008780	12001024HW	2.0	0.13	4
25	2' x 12'-6"	81008781	12001224HW	2.5	0.10	5
30	2' x 15'	81008782	12001524HW	3.0	0.06	5
35	2' x 17'-6"	81008783	12001724HW	3.5	0.13	6
40	2' x 20'	81008784	12002024HW	4.0	0.10	6
45	2' x 22'-6"	81008785	12002224HW	4.5	0.11	7
50	2' x 25'	81008786	12002524HW	5.0	0.14	7
60	2' x 30'	81008787	12003024HW	6.0	0.13	9
70	2' x 35'	81008788	12003524HW	7.0	0.13	11
80	2' x 40'	81008789	12004024HW	8.0	0.19	13

* The REET values listed above are 200% below daily exposure levels of the average U.S. citizen as reported by the National Institute of Environmental Health Sciences (NIEHS). Values are average electromagnetic field in milligauss. For more information about EMF and REET testing, please visit www.wattsradiant.com.

How much HeatWeave should I order?

- 1. Calculate total wall-to-wall area of the room.** Subtract the square footage of all built-ins (tub, toilet, cabinets, etc.).
(Total area - built-ins) = (____ - ____) = ____ sq. ft.
- 2. Multiply this area by 0.90.** Round down to the nearest 5 sq. ft. This is the heated area.
____ x 0.90 = ____ sq. ft. of heated area.
- 3. Select the appropriate mat(s)** based on the square footage of heated area, from the tables below, or choose one of our HeatWeave TapeMat Kits on page 4.

3-ft.-wide mats 240 VAC

Coverage (Sq.Ft.)	Mat Size (W x L)	Order Number	Model Number	Amp Draw	REET Value	Ship wt. (lb.)
30	3' x 10'	81008808	24001036HW	1.5	0.13	5
40	3' x 13'-4"	81008809	24001336HW	2.0	0.13	6
50	3' x 16'-8"	81008810	24001636HW	2.5	0.10	7
60	3' x 20'	81008811	24002036HW	3.0	0.06	9
90	3' x 30'	81008812	24003036HW	4.5	0.11	15
120	3' x 40'	81008813	24004036HW	6.0	0.13	19

2-ft.-wide mats 240 VAC

Coverage (Sq.Ft.)	Mat Size (W x L)	Order Number	Model Number	Amp Draw	REET Value	Ship wt. (lb.)
20	2' x 10'	81008790	24001024HW	1.0	0.11	4
30	2' x 15'	81008791	24001524HW	1.5	0.13	5
40	2' x 20'	81008792	24002024HW	2.0	0.13	6
50	2' x 25'	81008793	24002524HW	2.5	0.10	7
60	2' x 30'	81008794	24003024HW	3.0	0.06	9
70	2' x 35'	81008795	24003524HW	3.5	0.13	11
80	2' x 40'	81008796	24004024HW	4.0	0.10	13
90	2' x 45'	81008797	24004524HW	4.5	0.11	15
100	2' x 50'	81008798	24005024HW	5.0	0.14	17
120	2' x 60'	81008799	24006024HW	6.0	0.13	19
140	2' x 70'	81008800	24007024HW	7.0	0.13	21
160	2' x 80'	81008801	24008024HW	8.0	0.19	23



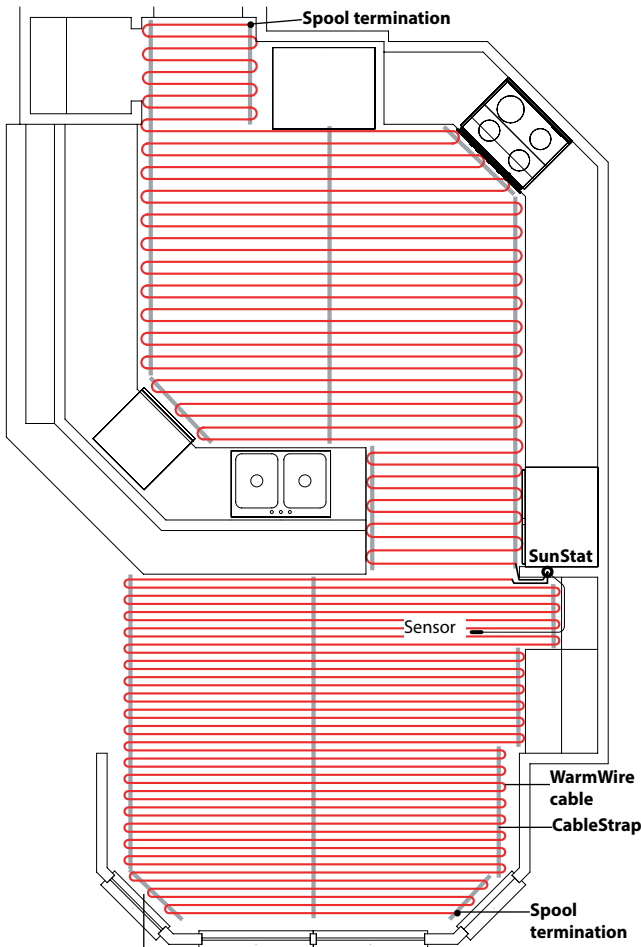
WarmWire Cable

WarmWire® is a simple, economical way to warm floors and provide years of lasting comfort. It will warm all kinds of floor coverings: ceramic & porcelain tile, stone, wood, laminates, vinyl, or carpet.

Lay out and attach the CableStraps. Fasten the WarmWire to the CableStraps as you weave it back and forth across the floor. Put down a layer of thin-set mortar and set your tile or stone. Install a layer of self-leveling cement over the cables for hardwood, laminate, vinyl, or carpeted floors. Our installation manual and DVD shows all the details.

Kitchen/Breakfast Layout

Due to differences in heat loss between the kitchen and breakfast areas, two different spacings were used: 3" on center in the kitchen, and 2" on center in the breakfast area due to the higher heat loss.



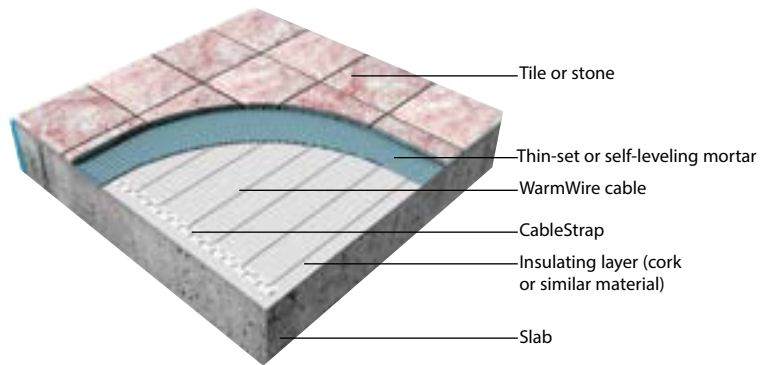
Warming unusual shapes in a floor plan, including these 45° angles, is easily accomplished with WarmWire.



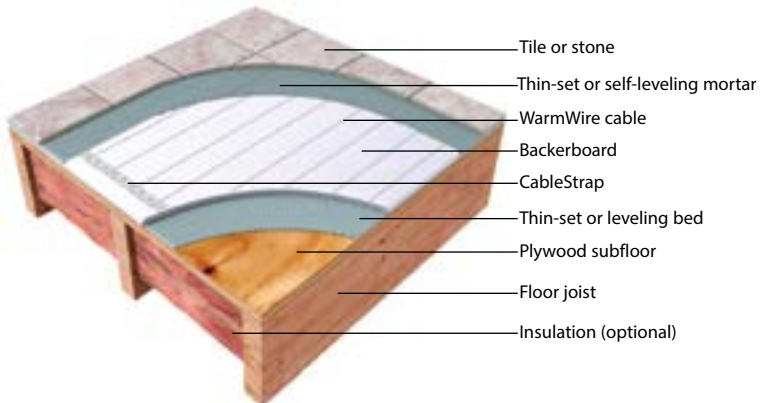
WarmWire is now UL listed for installation in shower floors and benches! See manual for details.



WarmWire in thin-set mortar over slab



WarmWire in thin-set on backer board on frame floor



WarmWire is easily sized for any project.

For fast and easy sizing, go to www.wattsradiant.com



- Evaluate how many square feet of floor to be heated. Do not put under cabinets or appliances. Generally, about 85–90% of the open areas should be heated. Leave the wire at least 6" away from the toilet wax ring and 4"–6" away from your walls. To keep toes warm, install right up to the toe-kick in front of kitchen or bath cabinets, and in front of a toilet, shower, or tub.

How much WarmWire should I order?

1. Calculate total wall-to-wall area of the room. Subtract the square footage of all built-ins (tub, toilet, cabinets, etc.).

(Total area – built-ins) = (_____ – _____) = _____ sq. ft.

2. Multiply this area by 0.90.

Round down to the nearest 5 sq. ft. This is the heated area.
_____ x 0.90 = _____ sq. ft. of heated area.

3. Select the appropriate cable(s) based on the square footage of heated area and the "spacing factor"

4. Choose a "spacing factor" of 2", 2.5", or 3" on center. Below are guidelines for application and spacing recommendations.

- **2" on center = 15 Watts/sq. ft.**
Use on concrete basement slabs, sunrooms, and in other high heat loss areas.
- **2.5" on center = 12 Watts/sq. ft.**
Use in bathrooms, kitchens, dining/living areas, etc.
- **3" on center = 10 Watts/sq. ft.**
Use in hallways, entries, low heat loss areas, etc.

2.5" on center is the most commonly used spacing. This spacing matches the heat output of HeatWeave mats.

WarmWire Spools 120VAC

Total Sq. ft. 2" on center (15 W/sq. ft.)	Total Sq. ft. 2-1/2" on center (12 W/sq. ft.)	Total Sq. ft. 3" on center (10 W/sq. ft.)	Order Number	Model Number	Wire Length (ft.)	Amp Draw	REET Value*	Ship Weight (lb.)
8	10	12	81008854	120010WDHW	47	1.0	0.16	2
12	15	18	81008855	120015WDHW	71	1.5	0.14	2.5
16	20	24	81008856	120020WDHW	94	2.0	0.16	3.0
20	25	30	81008857	120025WDHW	118	2.5	0.14	3.0
24	30	36	81008858	120030WDHW	141	3.0	0.16	3.5
28	35	42	81008859	120035WDHW	165	3.5	0.14	3.5
32	40	48	81008860	120040WDHW	188	4.0	0.14	4.0
36	45	54	81008861	120045WDHW	212	4.5	0.15	4.5
40	50	60	81008862	120050WDHW	235	5.0	0.16	5.0
48	60	72	81008863	120060WDHW	282	6.0	0.13	6.0
56	70	84	81008864	120070WDHW	329	7.0	0.14	7.0
64	80	96	81008865	120080WDHW	376	8.0	0.11	8.5
72	90	108	81008866	120090WDHW	423	9.0	0.14	9.5
80	100	120	81008867	120100WDHW	470	10.0	0.19	11

Preferred installation spacing

WarmWire Spools 240VAC

Total Sq. ft. 2" on center (15 W/sq. ft.)	Total Sq. ft. 2-1/2" on center (12 W/sq. ft.)	Total Sq. ft. 3" on center (10 W/sq. ft.)	Order Number	Model Number	Wire Length (ft.)	Amp Draw	REET Value*	Ship Weight (lb.)
16	20	24	81008868	240020WDHW	94	1.0	0.16	3.0
24	30	36	81008869	240030WDHW	142	1.5	0.14	3.0
32	40	48	81008870	240040WDHW	188	2.0	0.16	4.0
40	50	60	81008871	240050WDHW	236	2.5	0.14	5.0
48	60	72	81008872	240060WDHW	282	3.0	0.16	6.0
56	70	84	81008873	240070WDHW	330	3.5	0.14	7.0
64	80	96	81008874	240080WDHW	376	4.0	0.14	8.5
72	90	108	81008875	240090WDHW	424	4.5	0.15	9.5
80	100	120	81008876	240100WDHW	470	5.0	0.16	11.0
96	120	144	81008877	240120WDHW	564	6.0	0.13	13.0
112	140	168	81008878	240140WDHW	658	7.0	0.14	15.0
128	160	192	81008879	240160WDHW	752	8.0	0.11	17.0
144	180	216	81008880	240180WDHW	846	9.0	0.14	19.0
160	200	240	81008881	240200WDHW	940	10.0	0.19	21.0

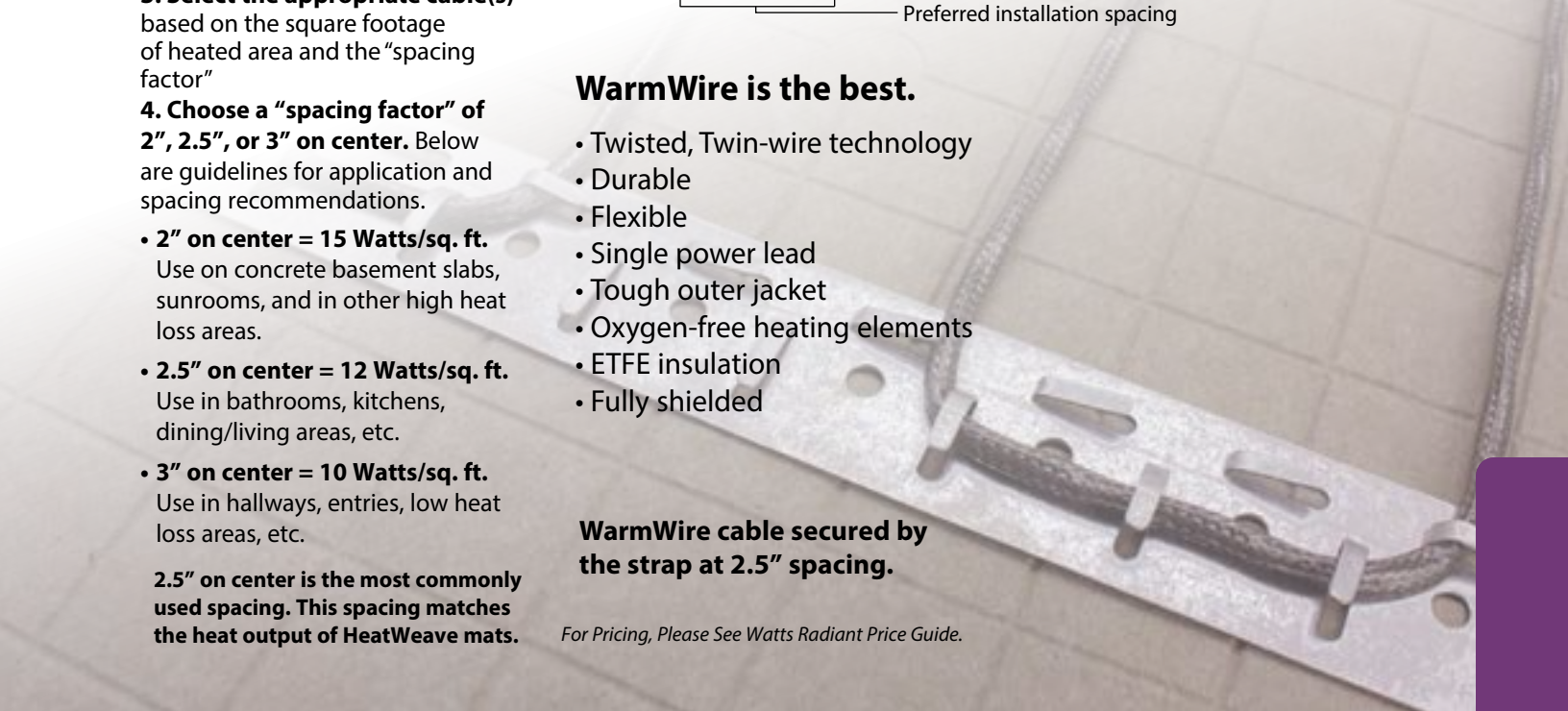
Preferred installation spacing

WarmWire is the best.

- Twisted, Twin-wire technology
- Durable
- Flexible
- Single power lead
- Tough outer jacket
- Oxygen-free heating elements
- ETFE insulation
- Fully shielded

WarmWire cable secured by the strap at 2.5" spacing.

For Pricing, Please See Watts Radiant Price Guide.



UnderFloor Mats

UnderFloor mats are the perfect solution for nearly every type of floor covering. These special mats warm existing floors without having to replace the floor coverings. If you have access under a floor, simply staple UnderFloor mats between the joists.

These effective, UL-Listed mats deliver 10 watts/sq. ft. of floor area (about 34 BTU/hr/sq. ft.).

UnderFloor mats will warm wood, vinyl, laminates, or tile floor coverings.

With UnderFloor mats, most floors can be heated up to 12° to 15°F warmer than they would be otherwise.

Carpeted floors will not warm up as much as other floor coverings due to the high insulation value of carpet and padding. You may experience a temperature rise in the floor of only 6°–10°F, which may or may not meet your satisfaction. Insulation installed below the mats is essential to complete the installation.

Consider these benefits of UnderFloor mats:

- 1. Easy staple-up installation** between floor joists.
- 2. Manufactured in nearly 20 different lengths** in 12" and 16" widths. Mats of any size (same voltage) may be combined to heat any type of room.
- 3. 120-VAC and 240-VAC models** for small to large projects.
- 4. Highest-quality heating wire** using ETFE high-temperature insulation, and oxygen-free copper alloys for corrosion-resistance, temperature-resistance, abrasion-resistance, and longevity.
- 5. Shielded and fully grounded** 10-ft. power lead for safety and jobsite durability (longer lengths available on request). Power leads are color-coded for 120 VAC and for 240 VAC.

Do not install UnderFloor mats in mortar or cement, or install them in the same control zone as HeatWeave mats or WarmWire cables. These products have different heat output, and are manufactured for different applications.



Roll out and staple mat to the floor joists.



Connect mats at junction box(es).



Install insulation.





12"-wide mats

(for joist bays spaced 12" on center)

120 VAC	Mat Size (L x W)	Order Number	Model Number	Amperage Draw	Ship Wt. (lb.)
	5.5' x 12"	81008814	1200512U2HW	0.4	3
	8' x 12"	81008815	1200812U2HW	0.6	3
	10.5' x 12"	81008816	1201012U2HW	0.9	4
	13' x 12"	81008817	1201312U2HW	1.1	4
	16' x 12"	81008819	1201612U2HW	1.3	5

19' x 12" is discontinued

240 VAC	Mat Size (L x W)	Order Number	Model Number	Amperage Draw	Ship Wt. (lb.)
	10.5' x 12"	81008821	2401012U2HW	0.4	4
	16' x 12"	81008822	2401612U2HW	0.6	5

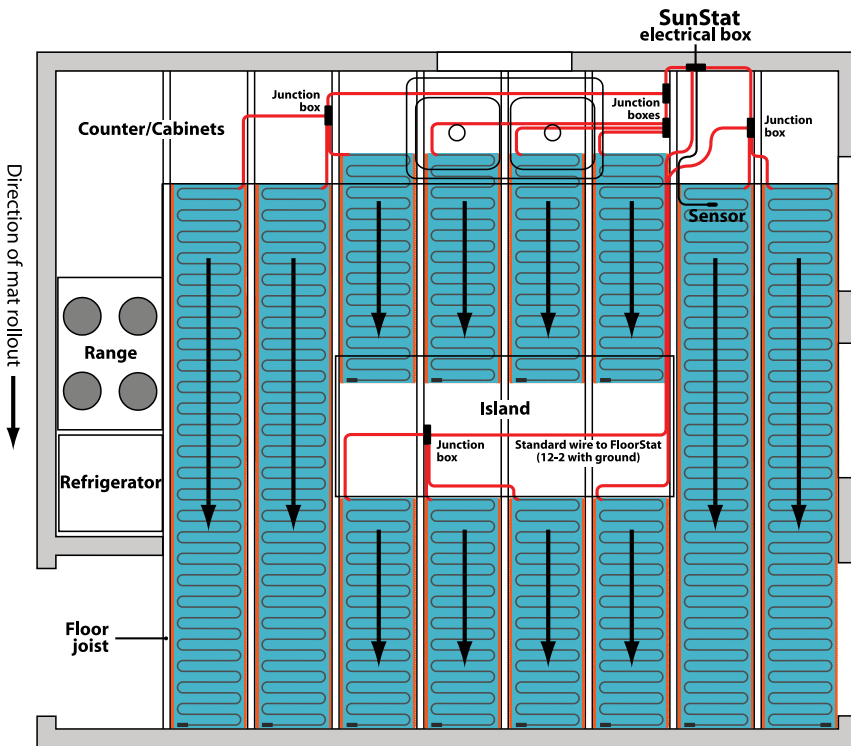


16"-wide mats

(for joist bays spaced 16" on center)

120 VAC	Mat Size (L x W)	Order Number	Model Number	Amperage Draw	Ship Wt. (lb.)
	4' x 16"	81008825	1200416U2HW	0.4	3
	6' x 16"	81008826	1200616U2HW	0.6	3
	8' x 16"	81008827	1200816U2HW	0.8	3
	9.5' x 16"	81008828	1200916U2HW	1.0	4
	12' x 16"	81008829	1201216U2HW	1.3	4
	14' x 16"	81008830	1201416U2HW	1.5	5
	16' x 16"	81008831	1201616U2HW	1.7	5
	18' x 16"	81008832	1201816U2HW	1.9	6
	19.5' x 16"	81008833	1201916U2HW	2.1	6

240 VAC	Mat Size (L x W)	Order Number	Model Number	Amperage Draw	Ship Wt. (lb.)
	8' x 16"	81008834	2400816U2HW	0.4	3
	12' x 16"	81008835	2401216U2HW	0.6	4
	16' x 16"	81008836	2401616U2HW	0.8	5
	19.5' x 16"	81008837	2401916U2HW	1.0	5



Sample Kitchen Layout Using UnderFloor Mats

Each UnderFloor mat is designed to be installed in only one joist bay. The mats cannot be cut shorter to fit a shorter joist bay or modified in any way to fill multiple joist bays. However, more than one mat may be installed in a joist bay where there are barriers such as cross bracing or blocking.

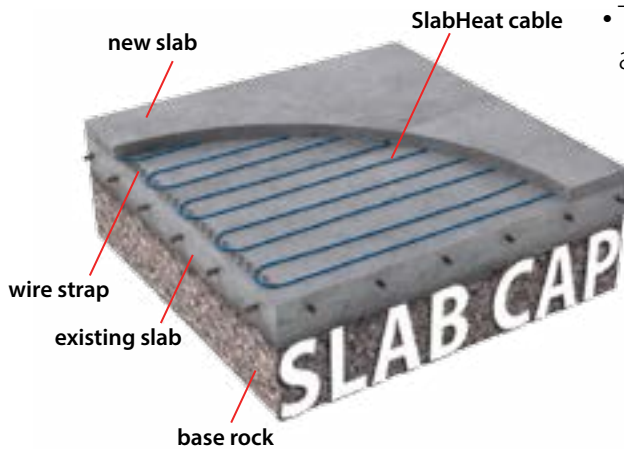
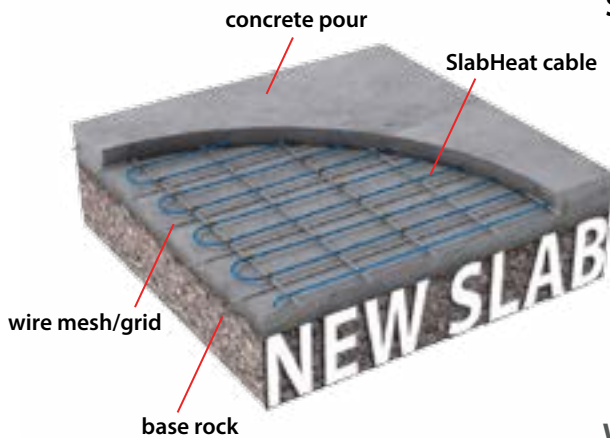
In this kitchen layout, four 9.5' x 16" and eight 4' x 16" mats are required to warm the floor area. The mats are wired together in parallel (not in series) at junction boxes below the floor, then electrical wire is fed over to the SunStat control.

Select mats for the easiest wiring possible. If all the power leads end up at one end of the room, it will be much easier to wire them together in the junction boxes. Junction boxes must be accessible after all finishing work is completed.

SlabHeat™

ELECTRIC INDOOR SLAB HEATING

Enjoy the comfort of heated concrete floors.



SlabHeat™ is engineered with the capability to produce enough BTUs to heat a slab, the space, and the surface people walk on. Regardless of size, shape, or thickness, SlabHeat is the way to provide heat to just about any environment.

Applications.

SlabHeat cable can be installed over an existing slab in a “slab cap” or in a new slab. Insulation is recommended to improve efficiency and to improve response time.

Why SlabHeat?

- Tough polyurethane outer jacket offers superior flexibility, abrasion and tear resistance, impact resistance, resiliency, and better low temperature stability than the PVC used in other products.
- Engineered by a company with decades of experience in hydronic and electric radiant heating
- Comfortable, even heat without the drying effects of forced air heating
- Reliable, durable design
- No vents or duct work
- Maintenance-free
- Efficient Radiant Heat
- 10-year limited warranty



How much SlabHeat should I order?

1. Calculate total wall-to-wall area of the room.

Subtract the square footage of all built-ins (tub, toilet, cabinets, etc.).

(Total area – built-ins) = (____ – ____) = ____ sq. ft.

2. Multiply this area by 0.90. This is the heated area.

____ x 0.90 = ____ sq. ft. of heated area.

3. Select the appropriate cable(s) based on the square footage of heated area, from the tables.

Select the cable(s) whose total sq. ft. coverage comes closest to, but does not exceed the heated area.

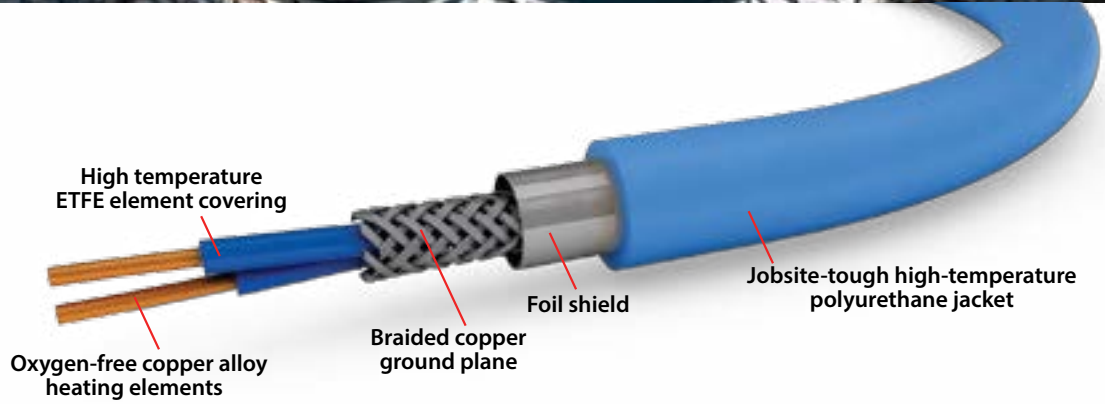
4. Remember that a SunStat will handle up to 15 amps.

Multiple cables will generally require a Relay or another SunStat control.

Call us if you need help sizing a system.



The polyurethane outer jacket offers superior flexibility, abrasion and tear resistance, impact resistance, resiliency, and better low temperature stability than the PVC used in other similar products.



Sq. Ft. Coverage @4" OC (15w/sq. ft.)	Sq. Ft. Coverage @6" OC (10w/sq. ft.)	Order Number	Model Number	Cable Length	Voltage	Amp Draw	Total Watts	Ship Wt. (lbs)
50	75	81014914	SH15120050HW	146	120V	6.3	750	4.5
66	98	81014915	SH15120066HW	193		8.3	990	5
82	122	81014916	SH15120082HW	241		10.3	1230	6
100	149	81014917	SH15120100HW	294		12.5	1500	7
114	170	81014918	SH15120114HW	336		14.3	1710	8
100	149	81014919	SH15240100HW	294	240V	6.3	1500	7
132	196	81014920	SH15240132HW	388		8.3	1980	9
164	243	81014921	SH15240164HW	483		10.3	2460	12
200	297	81014922	SH15240200HW	590		12.5	3000	14
228	339	81014923	SH15240228HW	673		14.3	3420	16

Thermostats and Controls



Touchscreen

SunStat® View - Touchscreen Control

The SunStat View incorporates an amazing variety of function and elegance into one thermostat:

- 15' floor sensor included
- Dual Voltage: 120 and 240 VAC
- Built-in 15-amp Relay
- Built-in GFCI (5 milliamp trip)
- Large Color Touchscreen Display
- Automatic Daylight Saving Time adjustment
- Adjustable display brightness
- Removable, paintable cover
- Quick-start pre-programming options
- Set-up wizard
- 7-day customizable programming
- "Masterstat" capability
- English/Spanish/French language options
- Usage monitor for energy monitoring
- Floor or air & floor temperature modes
- SmartStart Technology
- Connects directly to SunStat Relay II
- Manual temperature hold option
- Manual on/off push button
- Display in degree F or degree C
- Modifiable preset program
- Vacation override
- Temperature Range: 40-99°F (4-37°C)



Description	Qty.	Order No.	Model No.	Ship wt. (lb.)
SunStat VIEW, Programmable 120/240V	1	81014975	500750-HB	2
Extra SunStat Sensor (optional)	1	81010277	500110HW	1



Programmable

SunStat® Pro II - Programmable Control

The SunStat Pro II incorporates an amazing variety of function and elegance into one thermostat:

- 15' floor sensor included
- Dual Voltage: 120 and 240 VAC
- Built-in 15-amp Relay
- Built-in GFCI (5 milliamp trip)
- "Masterstat" capability
- Connects directly to SunStat Relay II
- SmartStart Technology
- 7-day customizable programming
- Three modifiable preset programs
- Set-up wizard
- Floor or air & floor temperature modes
- Automatic Daylight Saving Time adjustment
- Display in degree F or degree C
- Temperature Range: 40° - 99°F (4° - 37°C)
- Large Back-lit Display
- Keyboard Lockout
- Manual On/Off push button
- Manual temperature hold option
- System usage monitoring

Description	Qty.	Order No.	Model No.	Ship wt. (lb.)
SunStat Pro II, Programmable 120/240V	1	81015385	500775-HB	2
Extra SunStat Sensor (optional)	1	81010277	500110HW	1

The SunStat Non-programmable control has been discontinued.



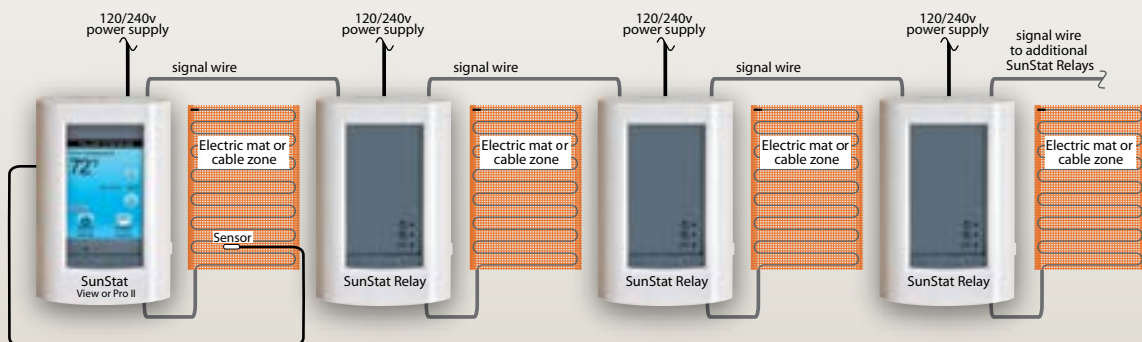
Relay

SunStat® Relay II

If a mat or cable system requires more than 15 amps, we recommend installing SunStat Relay IIs. Relay IIs connect directly to SunStat Pro II or View thermostats for simple, elegant control of larger systems. Relay IIs are dual voltage (120 VAC or 240 VAC), have a 15-amp capacity, an on/off switch, a GFCI and heating indicator. It's possible to control over 1500 sq.ft. of electric floor warming using 120 VAC and over 3,000 sq.ft. using 240 VAC floor warming mats or cables. First, find the amp draw for each HeatWeave product in the project. Then determine how many mats or cables can connect to each relay. Up to ten 15-amp Relay IIs can connect to one SunStat. Ten Relay IIs, plus the internal relay in the SunStat, provide a total capacity of 165 amps! Each Relay II should be connected to individual 20-amp maximum breakers, as shown below.

Description	Qty.	Order No.	Model No.	Ship wt. (lb.)
SunStat Relay II	1	81014983	500810-HB	2

It is possible to drive up to 10 SunStat Relays with one SunStat thermostat



Accessories



LoudMouth™ Monitor

Watts Radiant is the inventor of this handy device. It's a must for every job. The LoudMouth monitors HeatWeave, WarmWire, or UnderFloor heating elements during the entire installation process and sounds an alarm if the heating elements are cut or damaged, allowing for easy repair before the heating elements are covered with finished flooring or insulation. The LoudMouth gives you the assurance of a quality installation. Features include 9-volt battery power, on/off switch, green light to indicate operation, red light to indicate damage to heating elements, test button to verify proper operation, and a very loud alarm.

Description	Qty.	Order No.	Model No.	Ship wt. (lb.)
LoudMouth Monitor	1	81008886	423250HW	2



TapeMat Double-sided Tape

Description	Qty.	Order No.	Model No.	Ship wt. (lb.)
Extra double-sided tape, 36 yd. roll	1	81008889	423275HW	0.6/roll

Installation kit has been discontinued



CableStrap™

Cable strap is used to hold WarmWire in place at the desired spacing. All three spacings are possible with this one strap. Anchor the strap at 3–4-ft. intervals across the floor. Cut using ordinary tin snips. Order one 25-ft.-long coil per 40–50 sq. ft. of heated floor area.

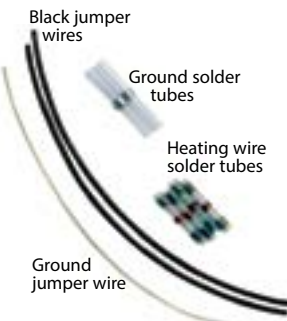
Description	Qty.	Order No.	Model No.	Ship wt. (lb.)
CableStrap, 25 ft. roll	1	81008890	321301HW	3



CableTrowel™

Most instances of damage to the heating wire occur when a metal trowel is banged onto the floor to remove excess mortar. A metal trowel can cut like a knife and either damage or totally sever the wire. The CableTrowel simply cannot damage the wire. With rounded notches that are 3/8" wide by 1/2" deep, it is perfect for applying thin-set mortar over WarmWire or HeatWeave Mats.

Description	Qty.	Order No.	Model No.	Ship wt. (lb.)
CableTrowel, 3/8" wide x 1/2" U notch	1	81008891	300400HW	1



Heating Wire Repair Kit

This simple and safe kit repairs heating elements that have been damaged during installation. It is suitable for all HeatWeave floor-warming products. Kit includes materials to make one repair: 2 black jumper wires, 1 ground jumper wire, 2 ground solder tubes, and 4 heating wire solder tubes. Detailed written instructions are included. Please call before making any type of repair.

Description	Qty.	Order No.	Model No.	Ship wt. (lb.)
Heating Wire Repair Kit, 1 repair	1	81008892	200299HW	1



Extra Power Lead

HeatWeave mats, WarmWire cables, and UnderFloor mats come standard with a 10-ft. power lead, but can be ordered with extra-long power leads up to a maximum of 50 ft. in length. When you place your order, let us know how long the leads need to be in order to reach the electrical box or control. We'll attach a custom power lead to fit your application. For 120 VAC and 240 VAC.

Description	Qty.	Order No.	Model No.	Ship wt. (lb.)
Extra power lead	per foot		Consult Factory to Order	0.25 lb./ft.

ProMelt™ Mats

ProMelt Mats melt snow and install quickly. All you need for a typical small-to-medium size project is a control and mat.

ProMelt heating elements are surrounded with high-temperature ETFE insulation and the engineered polyurethane outer jacket tolerates 300° F asphalt and the machines that roll it in place.

Each mat holds dual heating elements on 3 inch centers on a reinforced tape grid. There's a grounded power lead on one end for a fast, single-point electrical connection.

Mats come in two energy outputs:

- 120VAC mats are 38 Watts/Sq. Ft.
- 208, 240, & 277 VAC mats are 50 Watts/Sq. Ft.

ProMelt has more sizes and more options than any electric snow melting system. Standard size widths are 2 feet and 3 feet. You can order mats to cover from 9 to 112 square feet. Our catalog lists 60 standard sizes. Call us if your job requires custom sizes.



Snow melt sidewalks between buildings to reduce injury, liability and snow removal labor. Electric snow melting can be zoned and operated with automatic controls.

Follow these recommendations when selecting ProMelt Mats:

1. Determine what voltage will be used:

120V, 208V, 240V, or 277V.

2. Determine the heat output.

The climate and amount of snowfall will dictate this choice. In general, most systems will require 50 Watts/Sq.Ft. to melt snow and ice. Some residential or light commercial systems in temperate climates, may need only 38 Watts/Sq.Ft. spacing.

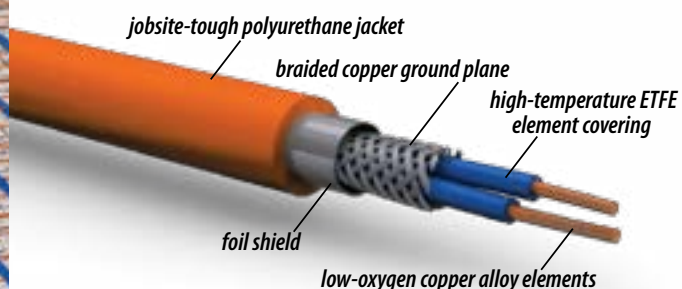
3. Determine the square footage of the area to be melted.

Do not include areas under built-ins like planters or similar obstructions. Stay 3-6" from edges of slabs and do not cross expansion joints if possible. Add up all the areas to be melted and round down the nearest mat size(s) to fill the area. Either 2'-wide or 3'-wide mats can be selected.

Alternatively, you might want to figure the total length of mat needed. This can be better for an area such as tire tracks, sidewalks or stairways. As an example, a sidewalk is 30" wide, 25' long, and has a 240V power supply. The best choice would be a 2' x 24' mat, 240V mat.

More than one mat can be used to melt an area(s). Combine mats in a manner not to exceed the capacity of the electrical control selected. If using our ContactorPro controls, each area should not exceed 50-amps, since these controls are built with 50-amp contactors. Therefore, we recommend dividing the area(s) into "sub-zones", if necessary or desired, to minimize the mat amp load connected to each contactor.

Anatomy of a world-class snow melting cable



3' wide ProMelt mats install quickly in this full coverage example.





**AMERICAN
MADE**



2-ft. wide mats 120VAC 38Watts/Sq. Ft.

Coverage (Sq.Ft.)	Dimension (L x W)	Order No.	Model No.	Amp Draw	Total Watts	Ship wt. (lb.)
10	2'W x 5'L	81011859	SM3812000524HW	3.2	380	2.0
20	2'W x 10'L	81011861	SM3812001024HW	6.3	760	3.0
30	2'W x 15'L	81011863	SM3812001524HW	9.5	1140	4.0
40	2'W x 20'L	81011866	SM3812002024HW	12.7	1520	4.5
50	2'W x 25'L	81011868	SM3812002524HW	15.8	1900	5.5
60	2'W x 30'L	81011870	SM3812003024HW	19.0	2280	6.5

2-ft. wide mats 240VAC 38Watts/Sq. Ft.

Coverage (Sq.Ft.)	Dimension (L x W)	Order No.	Model No.	Amp Draw	Total Watts	Ship wt. (lb.)
20	2'W x 10'L	81014908	SM3824001024HW	3.2	760	2.0
40	2'W x 20'L	81014909	SM3824002024HW	6.3	1520	2.5
60	2'W x 30'L	81014910	SM3824003024HW	9.5	2280	3.0
80	2'W x 40'L	81014911	SM3824004024HW	12.7	3040	3.5
100	2'W x 50'L	81014912	SM3824005024HW	15.8	3800	4.0
120	2'W x 60'L	81014913	SM3824006024HW	19.0	4560	4.5

2-ft. wide mats 208VAC 50Watts/Sq. Ft.

Coverage (Sq.Ft.)	Dimension (L x W)	Order No.	Model No.	Amp Draw	Total Watts	Ship wt. (lb.)
14	2'W x 7'L	81011892	SM5020800724HW	3.4	700	2.5
22	2'W x 11'L	81011893	SM5020801124HW	5.3	1100	3.0
28	2'W x 14'L	81011894	SM5020801424HW	6.7	1400	4.0
36	2'W x 18'L	81011895	SM5020801824HW	8.7	1800	4.5
40	2'W x 20'L	81011896	SM5020802024HW	9.6	2000	5.0
48	2'W x 24'L	81011897	SM5020802424HW	11.5	2400	5.5
56	2'W x 28'L	81011898	SM5020802824HW	13.5	2800	6.0
68	2'W x 34'L	81011900	SM5020803424HW	16.3	3400	7.0
76	2'W x 38'L	81011901	SM5020803824HW	18.3	3800	8.0
84	2'W x 42'L	81011902	SM5020804224HW	20.2	4200	9.0
96	2'W x 48'L	81011903	SM5020804824HW	23.1	4800	10.0

3-ft. wide mats 208VAC 50Watts/Sq. Ft.

Coverage (Sq.Ft.)	Dimension (L x W)	Order No.	Model No.	Amp Draw	Total Watts	Ship wt. (lb.)
15	3'W x 5'L	81011904	SM5020800536HW	3.6	750	2.5
30	3'W x 10'L	81011906	SM5020801036HW	7.2	1500	4.0
45	3'W x 15'L	81011909	SM5020801536HW	10.8	2250	5.0
60	3'W x 20'L	81011910	SM5020802036HW	14.4	3000	6.5
75	3'W x 25'L	81011911	SM5020802536HW	18.0	3750	8.0
90	3'W x 30'L	81011912	SM5020803036HW	21.6	4500	9.0

3-ft. wide mats 240VAC 50Watts/Sq. Ft.

Coverage (Sq.Ft.)	Dimension (L x W)	Order No.	Model No.	Amp Draw	Total Watts	Ship wt. (lb.)
15	3'W x 5'L	81011883	SM5024000536HW	3.1	750	2.5
30	3'W x 10'L	81011885	SM5024001036HW	6.3	1500	4.0
45	3'W x 15'L	81011887	SM5024001536HW	9.4	2250	5.0
60	3'W x 20'L	81011888	SM5024002036HW	12.5	3000	6.5
75	3'W x 25'L	81011889	SM5024002536HW	15.6	3750	8.0
90	3'W x 30'L	81011890	SM5024003036HW	18.8	4500	9.0
105	3'W x 35'L	81011891	SM5024003536HW	21.9	5250	10.5

3-ft. wide mats 277VAC 50Watts/Sq. Ft.

Coverage (Sq.Ft.)	Dimension (L x W)	Order No.	Model No.	Amp Draw	Total Watts	Ship wt. (lb.)
30	3'W x 10'L	81011926	SM5027701036HW	5.4	1500	4.0
45	3'W x 15'L	81011928	SM5027701536HW	8.1	2250	5.0
60	3'W x 20'L	81011930	SM5027702036HW	10.8	3000	6.5
75	3'W x 25'L	81011931	SM5027702536HW	13.5	3750	8.0
90	3'W x 30'L	81011932	SM5027703036HW	16.2	4500	9.0
105	3'W x 35'L	81011933	SM5027703536HW	19.0	5250	10.5

2-ft. wide mats 240VAC 50Watts/Sq. Ft.

Coverage (Sq.Ft.)	Dimension (L x W)	Order No.	Model No.	Amp Draw	Total Watts	Ship wt. (lb.)
16	2'W x 8'L	81011871	SM5024000824HW	3.3	800	2.5
24	2'W x 12'L	81011872	SM5024001224HW	5.0	1200	3.0
32	2'W x 16'L	81011873	SM5024001624HW	6.7	1600	4.0
40	2'W x 20'L	81011874	SM5024002024HW	8.3	2000	4.5
48	2'W x 24'L	81011875	SM5024002424HW	10.0	2400	5.5
56	2'W x 28'L	81011876	SM5024002824HW	11.7	2800	6.0
64	2'W x 32'L	81011877	SM5024003224HW	13.3	3200	6.0
72	2'W x 36'L	81011878	SM5024003624HW	15.0	3600	8.0
80	2'W x 40'L	81011879	SM5024004024HW	16.7	4000	8.5
88	2'W x 44'L	81011880	SM5024004424HW	18.3	4400	9.0
96	2'W x 48'L	81011881	SM5024004824HW	20.0	4800	10.0
104	2'W x 52'L	81011882	SM5024005224HW	21.7	5200	10.5

2-ft. wide mats 277VAC 50Watts/Sq. Ft.

Coverage (Sq.Ft.)	Dimension (L x W)	Order No.	Model No.	Amp Draw	Total Watts	Ship wt. (lb.)
18	2'W x 9'L	81011913	SM5027700924HW	3.2	900	3.0
28	2'W x 14'L	81011914	SM5027701424HW	5.1	1400	4.0
36	2'W x 18'L	81011915	SM5027701824HW	6.5	1800	4.5
48	2'W x 24'L	81011916	SM5027702424HW	8.7	2400	5.5
56	2'W x 28'L	81011917	SM5027702824HW	10.1	2800	6.0
64	2'W x 32'L	81011918	SM5027703224HW	11.6	3200	7.0
72	2'W x 36'L	81011919	SM5027703624HW	13.0	3600	7.5
80	2'W x 40'L	81011920	SM5027704024HW	14.4	4000	8.5
88	2'W x 44'L	81011921	SM5027704424HW	15.9	4400	9.0
96	2'W x 48'L	81011922	SM5027704824HW	17.3	4800	10.0
104	2'W x 52'L	81011923	SM5027705224HW	18.8	5200	10.5
112	2'W x 56'L	81011924	SM5027705624HW	20.2	5600	11.0



ProMelt Cable offers versatility for odd shaped areas or last minute design changes.

ProMelt™ Cables

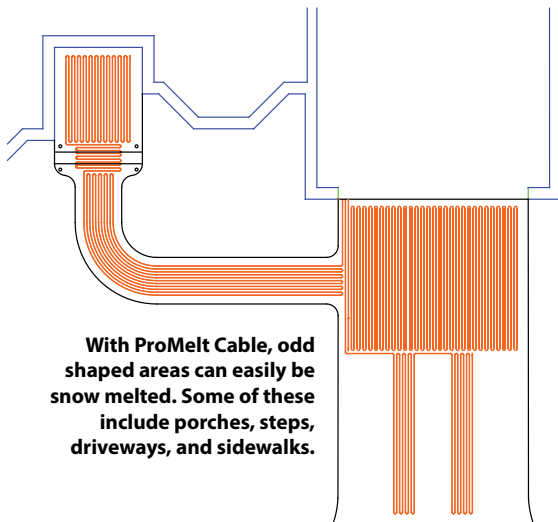
ProMelt Cables cost less than ProMelt Mats and give you more layout options.

In both products, the heating elements are surrounded with the same high-temperature ETFE and engineered polyurethane outer jacket for long life and jobsite toughness, including installation in asphalt.

ProMelt Cables are usually tied to reinforcing wire 3 or 4 inches on center. That provides either 50 or 38 Watts per square foot. ProMelt Cable can go perimeter to perimeter or fill odd-shaped areas for complete snow melting coverage.

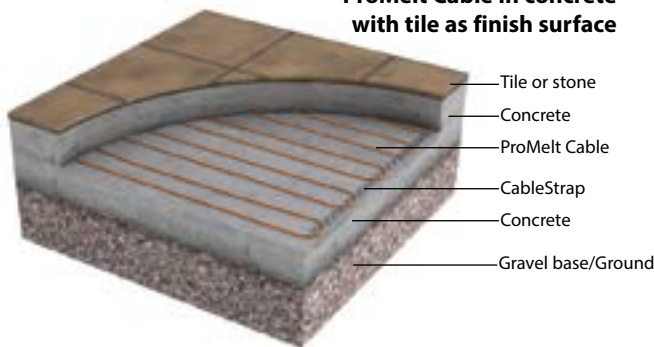
There are a lot of ProMelt Cable sizes in stock in four single-phase voltage options. All the cables terminate at one end with a power lead so you only make one connection to your electrical source.

ProMelt Cables save on material costs, give you more flexibility and carry a 10-year limited warranty.



With ProMelt Cable, odd shaped areas can easily be snow melted. Some of these include porches, steps, driveways, and sidewalks.

ProMelt Cable in concrete with tile as finish surface



Public buildings need safe and easy access. Make plans for snow melting in walkways, stairs and wheelchair ramps.





Follow these recommendations when selecting ProMelt Cables:

- 1. Determine what voltage will be used:**
120V, 208V, 240V, or 277V.
- 2. Determine the heat output.**
The climate and amount of snowfall will dictate this choice. In general, most systems will require 50 Watts/Sq.Ft. spacing (3" o.c.) to melt snow and ice. Some residential or light commercial systems in temperate climates, may need only 38 Watts/Sq.Ft. spacing (4" o.c.).

- 3. Determine the square footage to be melted.**
Do not include areas under built-ins like planters or similar obstructions. Stay 3-6" from edges of slabs and do not cross expansion joints if possible. Add up all the areas to be melted and round down to the nearest cable size(s) to fill the area.

Alternatively, you might want to figure the total length of cable needed. This can be better for an area such as tire track melting. As an example, a 24"-wide track with 3" o.c. ProMelt Cable will go back and forth eight times to fill a 24"-wide track. If the tire track is 25' long, then each track will need 8 lengths x 25 feet or a total of 200 feet of cable.

More than one cable can be used to melt an area. Combine cables in a manner not to exceed the capacity of the electrical control selected. If using our ProMelt ContactorPro controls, each area should not exceed 50-amps, since these controls are built with 50-amp contactors. Therefore, we recommend dividing the area(s) into "sub-zones", if necessary or desired, to minimize the cable amp load connected to each contactor.

120VAC Cable Spools

Total Sq. ft. 3" OC (50 W/Sq.Ft.)	Total Sq.Ft 4" OC (38 W/Sq.Ft.)	Order Number	Model Number	Wire Length (ft.)	Amp Draw	Total Watts	Ship wt. (lb.)
8	10	81011982	SC50120008HW	29	3.3	400	2.0
15	20	81011984	SC50120015HW	59	6.3	750	2.5
20	26	81011985	SC50120020HW	78	8.3	1000	3.0
30	39	81011988	SC50120030HW	118	12.5	1500	3.5
40	53	81011991	SC50120040HW	158	16.7	2000	4.5
53	69	81011993	SC50120053HW	208	22.1	2650	5.5

208VAC Cable Spools

Total Sq. ft. 3" OC (50 W/Sq.Ft.)	Total Sq.Ft 4" OC (38 W/Sq.Ft.)	Order Number	Model Number	Wire Length (ft.)	Amp Draw	Total Watts	Ship wt. (lb.)
14	19	81011946	SC50208014HW	55	3.4	700	2.5
20	26	81011947	SC50208020HW	78	4.8	1000	3.0
30	39	81011948	SC50208030HW	118	7.2	1500	3.5
35	46	81011949	SC50208035HW	138	8.4	1750	4.0
40	53	81011950	SC50208040HW	158	9.6	2000	4.5
45	59	81011951	SC50208045HW	178	10.8	2250	5.0
55	72	81011952	SC50208055HW	218	13.2	2750	5.5
60	79	81011953	SC50208060HW	238	14.4	3000	6.0
65	85	81011954	SC50208065HW	257	15.6	3250	6.5
75	98	81011955	SC50208075HW	297	18.0	3750	7.0
80	105	81011956	SC50208080HW	317	19.2	4000	7.5
90	118	81011957	SC50208090HW	357	21.6	4500	8.5

240VAC Cable Spools

Total Sq. ft. 3" OC (50 W/Sq.Ft.)	Total Sq.Ft 4" OC (38 W/Sq.Ft.)	Order Number	Model Number	Wire Length (ft.)	Amp Draw	Total Watts	Ship wt. (lb.)
15	20	81011958	SC50240015HW	59	3.1	750	2.5
25	33	81011959	SC50240025HW	98	5.2	1250	3.0
30	39	81011960	SC50240030HW	118	6.3	1500	3.5
40	53	81011961	SC50240040HW	158	8.3	2000	4.5
45	59	81011962	SC50240045HW	178	9.4	2250	5.0
55	72	81011963	SC50240055HW	218	11.5	2750	5.5
60	79	81011964	SC50240060HW	238	12.5	3000	6.0
65	85	81011965	SC50240065HW	257	13.5	3250	6.5
75	98	81011966	SC50240075HW	297	15.6	3750	7.0
80	105	81011967	SC50240080HW	317	16.7	4000	7.5
90	118	81011968	SC50240090HW	357	18.8	4500	8.5
105	137	81011969	SC50240105HW	417	21.9	5250	9.5

277VAC Cable Spools

Total Sq. ft. 3" OC (50 W/Sq.Ft.)	Total Sq.Ft 4" OC (38 W/Sq.Ft.)	Order Number	Model Number	Wire Length (ft.)	Amp Draw	Total Watts	Ship wt. (lb.)
18	24	81011970	SC50277018HW	71	3.2	900	2.5
30	39	81011971	SC50277030HW	118	5.4	1500	3.5
35	46	81011972	SC50277035HW	138	6.3	1750	4.0
45	59	81011973	SC50277045HW	178	8.1	2250	5.0
55	72	81011974	SC50277055HW	218	9.9	2750	5.5
60	79	81011975	SC50277060HW	238	10.8	3000	6.0
70	92	81011976	SC50277070HW	277	12.6	3500	7.0
75	98	81011977	SC50277075HW	297	13.5	3750	7.0
80	105	81011978	SC50277080HW	317	14.4	4000	7.5
90	118	81011979	SC50277090HW	357	16.2	4500	8.5
105	137	81011980	SC50277105HW	417	19.0	5250	9.5
115	150	81011981	SC50277115HW	456	20.8	5750	10.5



ProMelt™ Controls, Sensors, & Accessories



ProMelt Snow Sensor Controls: Pole-mount, 120/208/240V

The **PM-2B** sensor control is used to detect snowfall and low temperature to activate the ProMelt Mats or Cables. It is a "pole-mounted" control with a "fixed" moisture sensor mounted to the top. The **PM-2B** offers automatic activation, rain/snow detection, adjustable trigger temperature, and a drying cycle, as well as "manual on" operation. It operates on line voltage (120/208/240V, not 277V) and has a 30 Amp capacity. It is a stand-alone control intended for relatively small systems (up to 30 Amps). It should not be used with our ContactorPro series of ProMelt controls, as those are designed for 24V control sensors. The unit measures approximately 5" x 7" x 3".

A recommended upgrade to the PM-2B is our **PM-DP** Control Panel. This control allows convenient indoor monitoring and control of the system for manual on, automatic, and standby operation. It communicates with the PM-2B through a simple low-voltage cable.



Description	Qty.	Order No.	Model No.	Ship wt. (lb.)
ProMelt ,PM-2B, Detector, 120/208/240V	1	81012640	300600HW	3
ProMelt Display Panel, PM-DP, 24V, Optional	1	81012641	300650HW	1

ProMelt Snow Sensor Controls: Pole-mount, 24v

The **PM-224** and **PM-824** are used to detect snowfall and low temperature to activate the ProMelt Mats or Cables. The **PM-224** has a moisture sensor "fixed" to the top. The **PM-824** has a remote moisture sensor, which allows mounting the control in a more convenient location. It can be mounted on a wall or inside the building and the sensor outside exposed to the snowfall, adding convenience of operation and adjustment. Both models offer automatic activation, rain/snow detection, adjustable trigger temperature, and a drying cycle, as well as "manual on" operation. Either control will operate in conjunction with our Contactor Pro series of ProMelt controls, which should be ordered separately (see next page). The unit measures approximately 5" x 7" x 3".



Description	Qty.	Order No.	Model No.	Ship wt. (lb.)
ProMelt PM-224 Detector, 24V	1	81012642	300224HW	3
ProMelt PM-824 Detector w/ 10' cable, 24V	1	81012643	300824HW	3

Snow Sensor 095

The Snow Sensor 095 is an aerial mounted sensor for use together with Snow Melting Controls to automatically detect falling snow to start the snow melting equipment. System stop is provided by the control's timer or by manual disable. Mounted to a 1/2" metal or PVC conduit or pole, the 095 is well suited to adding automatic start when retrofitting an existing snow melt system.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Snow Sensor (air) 095	1	300155	81016553	1

Snow Melting Control 654

The Snow Melting Control 654 is designed to operate electric heating cables to melt snow or ice from any surface including driveways, walkways, patios, business entrances, parking ramps, loading docks, hospital entrances, helipads or car wash bays. The surface temperature for snow melting is controlled automatically to reduce operating energy costs. The 654 has an automatic start and stop function when used with the Snow/Ice Sensor 090 or 094. Automatic start with a timed stop is available when used with the Snow Sensor 095.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Snow Melting Control 654	1	300157	81016555	1



Snow & Ice Sensor 090

The Snow/Ice Sensor 090 is an in ground sensor used with Watts Radiant snow melting controls to automatically detect snow or ice on a driveway or walkway. The 090 has 65 ft (20 m) of wire. This product can be used in applications ranging from residential driveways to commercial building fronts such as emergency access entries. This sensor allows Watts Radiant snow melting controls to automatically operate the snow/ice melt system only when snow or ice is present, while also providing slab temperature feedback to the control.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Snow/ice Sensor (in slab) 090 w/65 ft cable	1	300108	81005661	4



Snow & Ice Sensor Socket 091

The Snow/Ice Sensor Socket 091 is designed to provide a mounting solution for the Snow/Ice Sensor 090. It is installed directly into a concrete slab when the slab is poured, so that the 090 can be installed into it once dry.

DESCRIPTION	QTY	MODEL #	ORDER #	WT. (lbs)
Snow/ice Sensor Socket 091	1	300111	81003753	2



Snow Melting Plaque

Permanent plaque to indicate where a snow melting system has been installed. These plaques are required per National Electrical Code, to identify each snow melting area.

Description	Qty.	Order No.	Model No.	Ship wt. (lb.)
Snow Melting Plaque	1	81012651	100123HW	2

ProMelt ContactorPro™

The Contactor Pro panels are complete “turn-key” solutions for activating larger systems of ProMelt Mats and Cables when used in combination with a **PM-224** or **PM-824** snow detector. They’re available in three panel sizes: 50 Amps, 100 Amps, and 200 Amps. An additional 200-amp extension panel allows coverage for even larger systems. 120V, 208V, 240V, or 270V is supplied to the panel and a 24V Class 2 transformer allows connection to the snow detector.



Each Contactor Pro panel is complete with “system on” indicator light, manual override by a 4-hr timer, simple 24V wire terminal connections to the snow detector, and outputs for connection to an extension panel. The **CP-50** has one 50-amp contactor, the **CP-100** has two 50-amp contactors, and the **CP-200** has four 50-amp contactors. Systems should be designed to connect one or more ProMelt Cables or Mats in combinations not to exceed the capacity of individual 50-amp contactors. Each panel is NEMA Type 1 for mounting indoors on a wall, has knockouts for conduit, and measures 12” x 12” x 4”.

Description	Qty.	Order No.	Model No.	Ship wt. (lb.)
ContactorPro, CP-50, 50 Amp	1	81012645	300050HW	20
ContactorPro, CP-100, 100 Amp	1	81012646	300100HW	20
ContactorPro, CP-200, 200 Amp	1	81012647	300200HW	20



Cable Ties

6 inch cable ties are used to tie ProMelt Mat and/or Cable to rewire or rebar.

Description	Qty.	Order No.	Model No.	Ship wt. (lb.)
Cable Ties	100	81012649	321400HW	1



CableStrap™

CableStrap is used to hold ProMelt Cable in place at the desired spacing in applications that don't use rebar or rewire. Anchor the strap at 3–4 ft. intervals across the surface. Cut using ordinary tin snips. Order one 25-ft.-long coil per 50–60 sq. ft. of ProMelt.

Description	Qty.	Order No.	Model No.	Ship wt. (lb.)
CableStrap	1	81008890	321301HW	3



ProMelt/SlabHeat Heating Wire Repair Kit

This simple and safe kit is used to repair heating elements that have been damaged during installation. It is suitable for all ProMelt snow melting products. Kit includes materials to make one repair: jumper wires, 1 ground jumper wire, 2 ground solder tubes, 4 heating wire solder tubes, and 1 shrink sleeve. Detailed written instructions are included. Please call before making any type of repair.

Description	Qty.	Order No.	Model No.	Ship wt. (lb.)
ProMelt/SlabHeat Heating Wire Repair Kit, 1 repair	1	81012650	200400HW	1



Extra Power Lead

ProMelt Mats and Cables come standard with a 20-ft. power lead, but can be ordered with extra-long power leads up to a maximum of 50 ft. in length. When you place your order, let us know how long the leads need to be in order to reach the electrical box or control. We'll attach a custom power lead to fit your application. Power lead is used with 120 VAC, 208 VAC, 240 VAC, and 277 VAC ProMelt Products.

Description	Qty.	Order No.	Model No.	Ship wt. (lb.)
Extra power lead	per foot		Consult Factory to Order	.25 lb/ft.





WattsRadiant™

Floor Heating & Snow Melting

A Watts Water Technologies Company

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