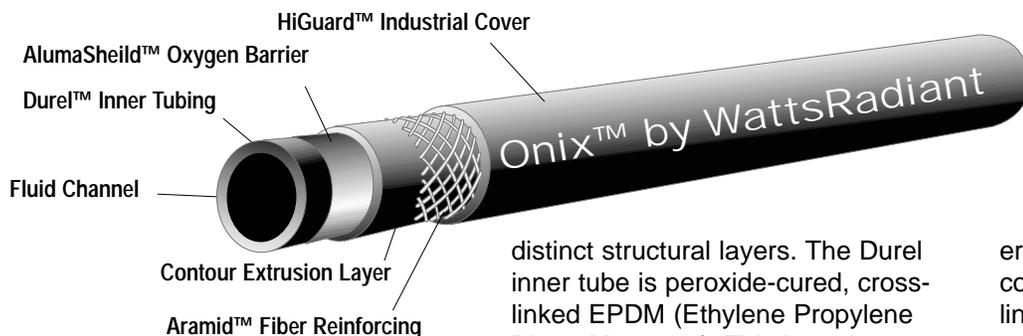


Onix Connections

For Baseboards, Fan Coils and Manifolds

3131 W. Chestnut Expressway
Springfield, MO 65802
ph: 417.864.6108
fax: 417.864.8161
web: www.wattsradiant.com



PRODUCT DESCRIPTION

Onix is a polymer-rich, multi-layer, industrial-grade radiant hose used for hydronic heating and snowmelting applications. It contains five

distinct structural layers. The Durel inner tube is peroxide-cured, cross-linked EPDM (Ethylene Propylene Diene Monomer). This layer is wrapped with a ductile 00 grade aluminum oxygen barrier, called AlumaShield. A contour layer of Durel (EPDM) is extruded over the AlumaShield. Spiral reinforcing cords of Aramid fibers are applied over the contour layer. This reinforcing is cov-

ered with the outer HiGuard cover composed of sulfur-cured, cross-linked EPDM.

OPERATING TEMPERATURE AND PRESSURE

Onix has a maximum working temperature of 180°F at 100 psi. Burst pressure is greater than 800 psi at 70°F; greater than 600 psi at 180°F.

ONIX FOR SUPPLY AND RETURN PIPING

Watts Radiant's Onix tubing offers a unique solution to a common problem associated with baseboard and fan coil systems. Running supply and return lines to these units can be a challenge, especially in renovation projects.

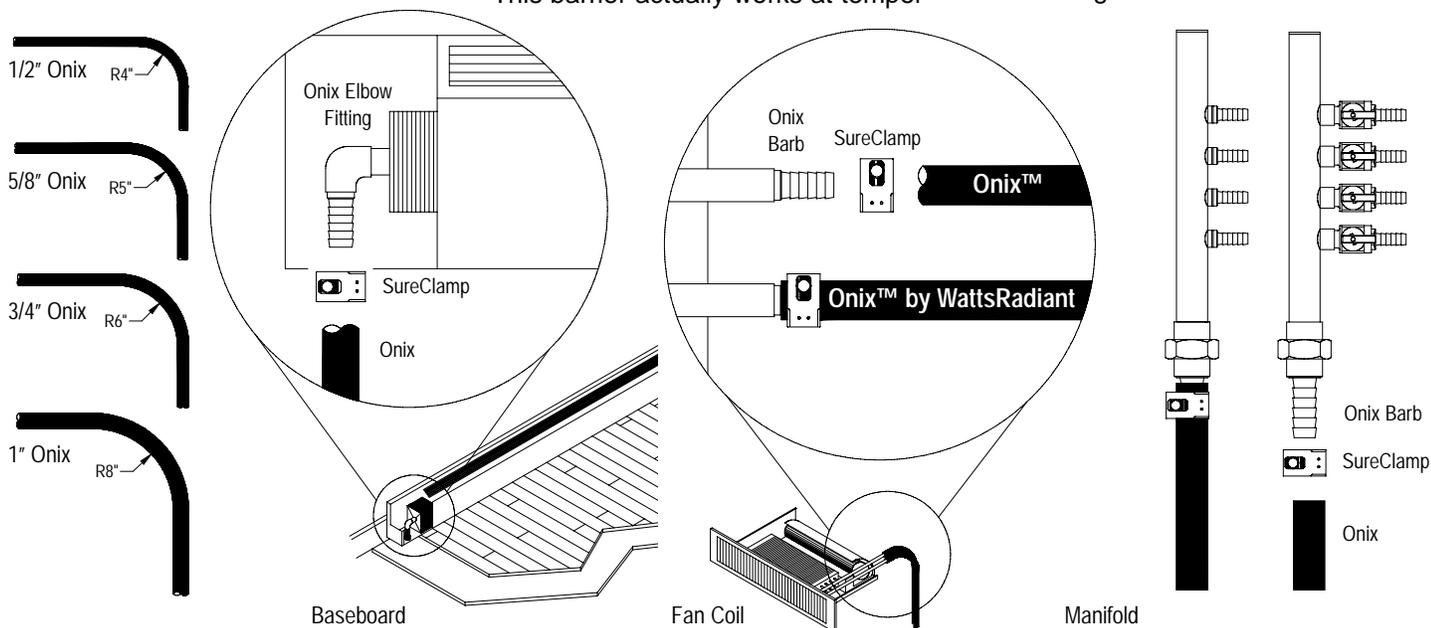
Onix is the only synthetic tubing in the radiant heating industry to offer an

extended high temperature warranty of 210°F at 12 to 25 psi working pressure. This higher temperature limit allows for more flexibility in design and post-installation adjustments.

In addition to the higher temperature range, Onix offers improved resistance to oxygen permeation with its 00 grade AlumaShield oxygen barrier. This barrier actually works at temper-

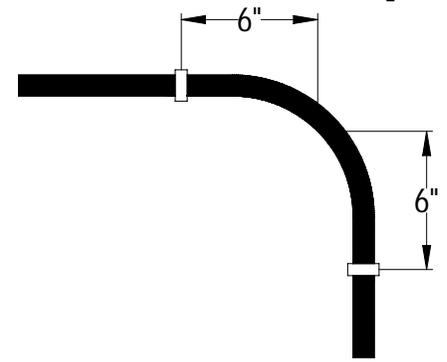
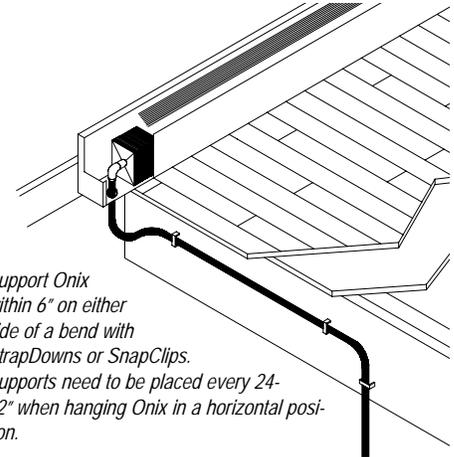
atures above 140°F, unlike most EVOH barriers found on PEX piping.

Different techniques are used to connect Onix to baseboard, fan coils or manifolds. It is important to prevent Onix from exceeding its minimum allowable bend radius. If this radius can not be maintained, a copper elbow should be hard piped to the unit prior to the installation of the Onix Barb fitting.



CONNECTION DETAILS

1. Choose the correct Onix size for the design flow rate (see below).
 2. Choose the corresponding Onix Barb or Elbow and clamp (SureClamp or SelfTite).
 3. Solder the Onix Barb, or Onix Elbow, onto the baseboard, fan coil unit, or manifold. If an elbow is required, install this prior to installing the barb.
 4. Slide the clamp over the Onix and then the Onix over the entire barb.
 - 5a. SureClamp: tighten to 25-30 in-lbs. If a torque wrench is not available, tighten the clamps to snug and then one additional quarter turn.
 - 5b. SelfTite: open with a pair of SqueezeTite pliers, making sure not to over expand the clamp.
- Follow additional installation instructions included with the Onix fittings and clamps.

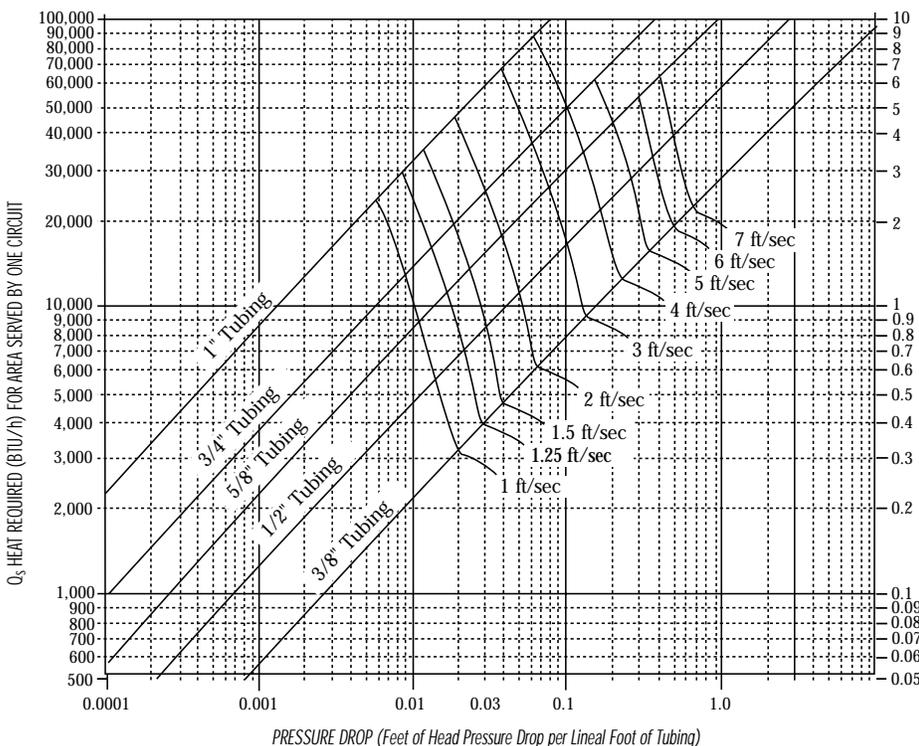


ONIX BARBS AND SURECLAMPS

ONIX SIZE (id)	ONIX BARB	ONIX ELBOW	SURECLAMP	SELF TITE CLAMP
1/2"	# 086081	# 185074	# 6642123	# 663022
5/8"	# 086101	# 185625	# 6642527	# 663024
3/4"	# 086121	# 185075	# 6642931	# 663029
1"	# 086161X	N/A	# 6643740	N/A

TYPICAL FLOW RATES AND PRESSURE DROPS

Watts Radiant™ PRESSURE DROP CHART FOR Onix™ Pure Water



BASEBOARD - BTU/FT (estimated maximum output)

	3/4"	1"	1-1/4"
160°F	520	560	610
170°F	600	650	700
180°F	680	730	790
190°F	760	830	900

FAN COILS - BTU (estimated maximum output)

	1 gpm	3 gpm	5 gpm
160°F	6500	7100	7300
170°F	7400	8000	8200
180°F	8000	8600	8950
190°F	8400	9000	9400