



PRODUCT SPECIFICATIONS

# HeetSheet-X® Heavy Gage

## VESSEL HEATING/COOLING SYSTEM

### APPLICATION

HeetSheet-X Heavy Gage tank heating units are comprised of two sheets of 20-gage, type 304 stainless steel, conforming to ASTM A240. The stainless steel sheets are continuously seamwelded together along an outer continuous perimeter with interrupted seam welds arranged inside the perimeter. The welded unit provides multiple flow paths reducing the risks of internal blockage possible with single-flow designs.

For operating temperatures up to 375°F (191°C), a factory applied non-hardening heat transfer compound is applied to the surface of the HeetSheet unit that contacts the tank wall to eliminate air gaps and optimize heat transfer.

For temperatures above 375°F (191°C), T-75 heat transfer compound<sup>1</sup> may be applied to the HeetSheet units in the field just prior to the units being attached to the tank wall.

HeetSheet units are available in multiple sizes and are pre-rolled to conform to the radius of the tank. Stainless steel tubing inlet and outlet nozzles are provided for steam or other heating or cooling media. A simple tubing union compression type fitting is used to attach the inlet and outlet tubes to ThermoTube® pre-insulated leads (supply tubing) and tails (return tubing), which is purchased separately.

### INSPECTION/CERTIFICATION

International "Pressure Equipment Directives" (PED) apply to vessels where pressure x volume > 50 bar-liters. No HeetSheet units approach these bar-liter levels, so are governed by "Standard Engineering Practice" and cannot carry a CE (European Conformity) stamp.

Similarly, ASME does not require units of small internal volume and pressure rating to be certified. Specifically, the maximum stored energy in a HeetSheet unit falls well below the limits set by the Code for certification as defined by the following three volume and pressure points:

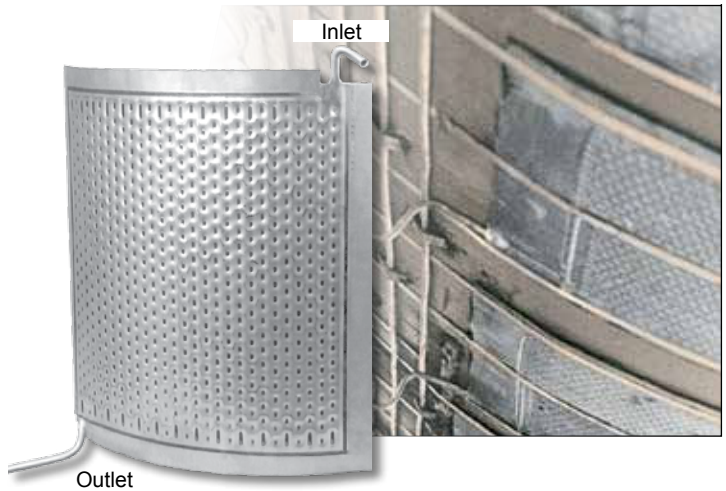
- 5.0 ft<sup>3</sup> and 250 psi (0.14 m<sup>3</sup> and 1720 kPa)
- 3.0 ft<sup>3</sup> and 350 psi (0.08 m<sup>3</sup> and 2410 kPa)
- 1.5 ft<sup>3</sup> and 600 psi (0.04 m<sup>3</sup> and 4140 kPa)

No HeetSheet units approach these volumes. (See Product Configuration table on reverse side for internal volume of standard HeetSheet units.)

HeetSheet units are designed and fabricated in accordance with the requirements of ASME Section VIII Div 1 Boiler and Pressure Vessel Code but are not inspected nor stamped.

#### Notes

1. Information for design and performance is based upon the use of Thermon heat transfer compounds.

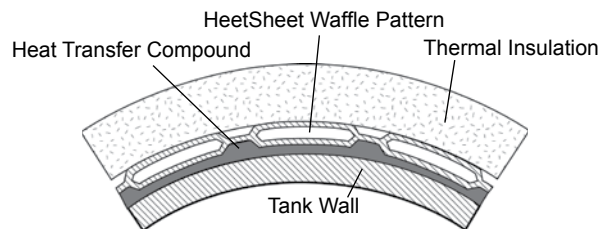


### CONSTRUCTION

- Type 304 stainless steel waffle pattern panel
- 1/2" (or 12 mm) O.D. stainless tubing for inlet and outlet connections
- Thermon heat transfer compound (see Typical Cross Section illustration)

### RATINGS

Max. operating temperature .....	500°F (260°C)
Minimum operating temperature.....	-320°F (-196°C)
Max. operating pressure.....	250 psig (1,136 kPa g)
Maximum field test pressure.....	375 psig (1,700 kPa g)
Heat transfer coefficient <sup>1</sup> .....	HeetSheet unit to tank wall 20-40 Btu/hr-°F-ft <sup>2</sup> (114-227 W/m <sup>2</sup> -°C)



Typical Cross Section

### BENEFITS

- Each design is based on known and predictable heat transfer coefficients.
- Thermon heat transfer compounds provide high heat transfer rates.
- Requires only 1/2 to 1/3 the heating surface area of plate-type coils for like applications.
- Pre-rolled units assure quick installation.
- Used for both heating or cooling applications.
- No possibility for cross contamination of heating media and tank/vessel contents is possible.

**THERMON The Heat Tracing Specialists®**

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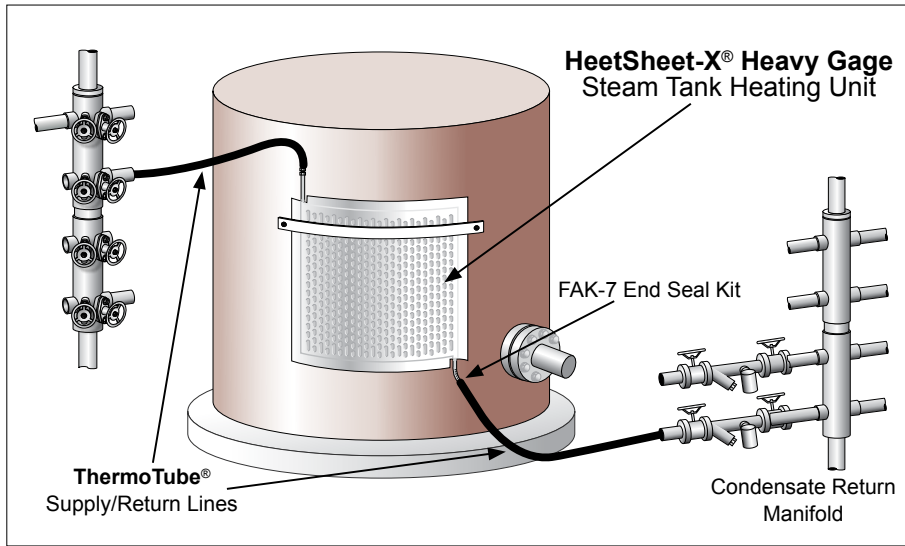


PRODUCT SPECIFICATIONS

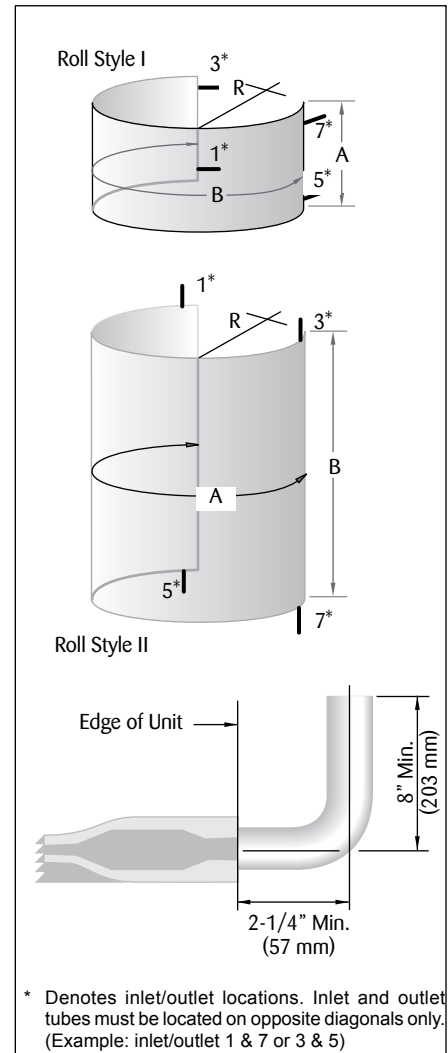
# HeetSheet-X® Heavy Gage

VESSEL HEATING/COOLING SYSTEM

## TYPICAL TANK HEATING SYSTEM



## INLET & OUTLET CONFIGURATIONS



## PRODUCT PROPERTIES<sup>2</sup>

Catalog Number <sup>3</sup>	External Dimensions A x B in (mm)	Nominal Heated Area ft <sup>2</sup> (m <sup>2</sup> )	Internal Volume ft <sup>3</sup> (cm <sup>3</sup> )	Approx. Weight Without Compound lbs (kgs)	Approx. Weight With Compound lbs (kgs)
HS-2X	24 x 24 (610 x 610)	4 (0.37)	0.018 (500)	11.5 (5.2)	13.5 (6.1)
HS-4X	24 x 48 (610 x 1220)	8 (0.74)	0.036 (1000)	23.0 (10.5)	27.0 (12.3)
HS-8X	24 x 96 (610 x 2440)	16 (1.49)	0.072 (2000)	46.0 (20.9)	54.0 (24.5)

### Notes

- Connections between the steam and condensate headers and the HeetSheet may be accomplished with ThermoTube pre-insulated tubing. ThermoTube is available in a variety of sizes to meet the requirements of the application. For information on ThermoTube pre-insulated tubing, refer to Form TSP0009.
- For sizes or product configurations other than those listed, contact Thermon.
- The letter "X" in the Catalog Number represents the 20 guage Heavy Gage HeetSheet units.
- When ordering HeetSheet units without heat transfer compound, use the NC designation at the end of the catalog number. Example HS-2X-NC.

## BASIC ACCESSORIES



**T3SSB** stainless steel banding (.50" x .030") used to secure HeetSheet to tank.

**C001** banding tool for applying tension to stainless steel banding.

**T34PB-CR** crimp seals for fastening tensioned banding.

**1950A** . . . crimping tool for T34PB-CR seals.



**ThermoTube** pre-insulated tubing used for steam supply and condensate return on steam heating circuits. (ThermoTube can also be utilized to transport other heating or cooling media.)



**FAK-7** contains a roll of self-vulcanizing silicone rubber tape and RTV sealant to complete approximately six ThermoTube® end seals.



**T-75** is a specialty heat transfer compound formulated for its exceptional bond strength and smooth texture for surface heating applications. Can also be used with other manufacturers' plate-type coil units.