



**HEATER PADS
FOR
IBC TANKS**



Class I, Div 2, Groups B, C & D
Class II, Div 2
Class III, Div 2
Tested and approved to IEEE 515
and NEC Standards.

INTRODUCTION

Intermediate Bulk Containers (IBCs) are rapidly becoming the sensible alternative to the 55-gallon drum. This innovative, low cost fluid handling and storage system is easily transported from site to site and easily maneuvered around a plant site for convenient positioning and usage.

IBCs are reusable, returnable and recyclable, providing manufacturers, suppliers, distributors and end users with a flexible, cost effective, environmentally responsible fluid storage system.

IBCs are manufactured by several companies in several different styles. Some IBCs are simply a rectangular stainless steel tank on legs and some are polyethylene bottles held within a steel or mesh frame. Standard sizes with capacities up to 400 gallons are common.

IBCs are frequently located outdoors or in unheated warehouses. Many of the products, fluids or chemicals that are stored in IBCs will freeze during cold periods. HTD Heat Trace, Inc has developed a low watt density, safe and reliable heating kit that can be fitted directly to most standard sizes of IBC. This heating kit, used in conjunction with a thermal insulating blanket, will maintain IBC temperatures at or above 40°F (4°C) in ambient temperatures down to 0°F (-18°C).

STANDARD IBC HEATING KIT

The standard IBC Heating Kit consists of

- Four (4) SP 210 SilcoPad heater pads
- Fourty five feet (45') of IAAT3 sealing tape
- One (1) temperature controller

The standard IBC Heating Kit requires a 120 vac, 7 amp, single phase power feed.

CONTROLLER / KIT SELECTION

Use the following list to select the correct temperature controller for your application.

IBC design or style	Controller/Kit Ref Unclassified Area Installation	Controller /Kit Ref Hazardous Area Installation*
All metal bin	1SPCP Kit Ref - IBC 1N	1HSPCP Kit Ref - IBC 1H
All metal bin with plastic storage liner	2SPCP Kit Ref - IBC 2N	2HSPCP Kit ref - IBC 2H
Metal mesh bin with plastic storage liner	2SPCP Kit Ref - IBC 3N	2HSPCP Kit Ref - IBC 3H
All plastic bin	2SPCP Kit Ref - IBC 2N	2HSPCP Kit ref - IBC 2H

* SilcoPad heaters and the 1HSPCP and 2HSPCP thermostats are FM approved for use in the following hazardous area classifications
 Class I, Div 2, Groups B, C & D
 Class II, Div 2
 Class III, Div 2

INSTALLATION

Installation of an IBC Heating Kit is very simple. No special tools, knowledge or experience is needed and all four SilcoPad heaters can be installed by one person in less than one hour.

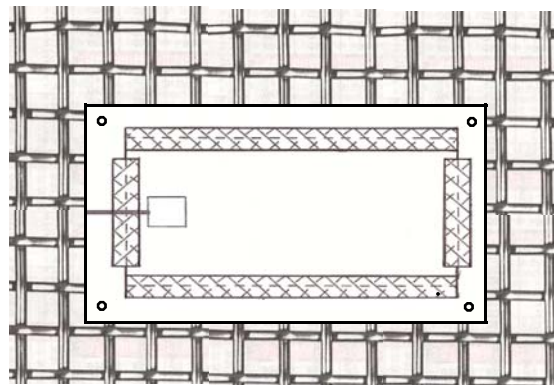
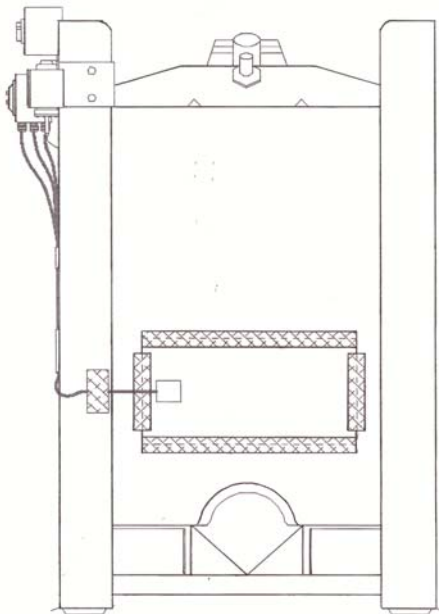
The 14 by 30 inch SilcoPad heater is supplied with adhesive backing protected by a "peel off" paper film. In the case of IBC Kits reference IBC -1N, 1H, 2N and 2H, the SilcoPad heater is positioned as shown in the Installation Instructions, the protective paper film is removed and the heater is stuck directly to the surface of the IBC bin. Strips of IAAT3 adhesive backed sealing tape are applied to all four edges of the installed pads and the heater pad cold leads are routed to location chosen for the temperature controller (see Sketch1).

When using kit references IBC 3N or 3H, which are designed for installation on IBC's with an outer structure of metal mesh, the SilcoPad heaters are supplied pre-installed on aluminum plates and installer simply bolts the aluminum plate to the mesh structure of the IBC (see Sketch 2).

The temperature controller must be securely mounted to the IBC. HTD offers several mounting bracket designs for various styles of IBC. Alternatively, many customers use Unistrut components to attach the temperature controller to the IBC. After the temperature controller enclosure is mounted, the sensing bulb (or bulbs) from the controller are positioned as shown in the Installation Instructions and secured to the IBC surface with short strips of IAAT3 tape. Heater pad cold leads are connected into the designated terminal blocks inside of the temperature controller and installation of the kit is now complete.

Before using the IBC Heating Kit, the installer must connect a 120 vac 1 ϕ power supply to the designated power terminal blocks inside of the temperature controller and the exterior of the IBC must be thermally insulated (discussed on following page).

SKETCH 1 Heater installed directly on IBC surface.



SKETCH 2. Heater pre-installed on aluminum plate for attachment to mesh structure of IBC

THERMAL INSULATION

IBC Heating Kits work in conjunction with thermal insulation. The number of heater pads used in the IBC Heating kit and the heating load applied to the tank are sized to compensate for the natural heat losses that take place through the thermal insulation from the tank surface to the surrounding ambient. Covering the IBC with an appropriate type and thickness of thermal insulation is an essential part of the heating system. Two basic approaches can be taken to thermally insulating the IBC:

- A simple and permanent method of thermally insulating the IBC is to spray the entire surfaces with polyurethane foam. A 2 inch thickness of polyurethane is ideal and this type of insulation system is normally applied by a local contractor. This is a permanent insulation system and should only be used on permanent IBC installations. Foam insulation should also not be used on IBC containers that have the mesh type support (cage) exterior.
- The most common and convenient method of insulating the IBC is to use a flexible insulation jacket. This is a factory fabricated, lightweight insulation bag system that covers the exterior of the IBC. The insulation jacket pieces are shaped to fit specific areas of the IBC and they attach to each other with Velcro straps to form one complete removable and reusable insulation system.

HTD Heat Trace, Inc manufactures several types and sizes of insulation jackets specifically designed as part of the overall IBC Heating Kit. Please discuss this with us when you are ordering the basic heating kit.



The opposite photograph shows the top and side sections of a flexible Insulation Jacket being fitted together onto a 400 gallon IBC Container. This particular insulation jacket uses a 1 inch thickness of soft fiberglass insulation combined with a flexible outer bag of industrial grade, siliconized glass cloth. Other types of insulation and bag materials are available to meet the technical, environmental and cost considerations of your specific application.

Jacket installation is a simple, one-man job.

The mating edges of each section of the Insulation Jacket are fitted with Velcro fastening strips. As shown in the photograph and insert, each section is simply placed into position on the IBC and literally "zipped" together in seconds.

Removal and replacement is just as quick and simple.

Please contact us if we can help you with your future IBC heating and thermal insulation requirements.



HTD Heat Trace, Incorporated
8 Bartles Corner Road
Unit #104, Flemington, NJ
USA 08822-5758

sales@htdheattrace.com
Voice - +1.908.788.5210
Fax - +1.908.788.5204
www.htdheattrace.com