



# HM14110

Hot Melt dispensing just became a lot easier.

# More systems for your applications

## Assembly Examples

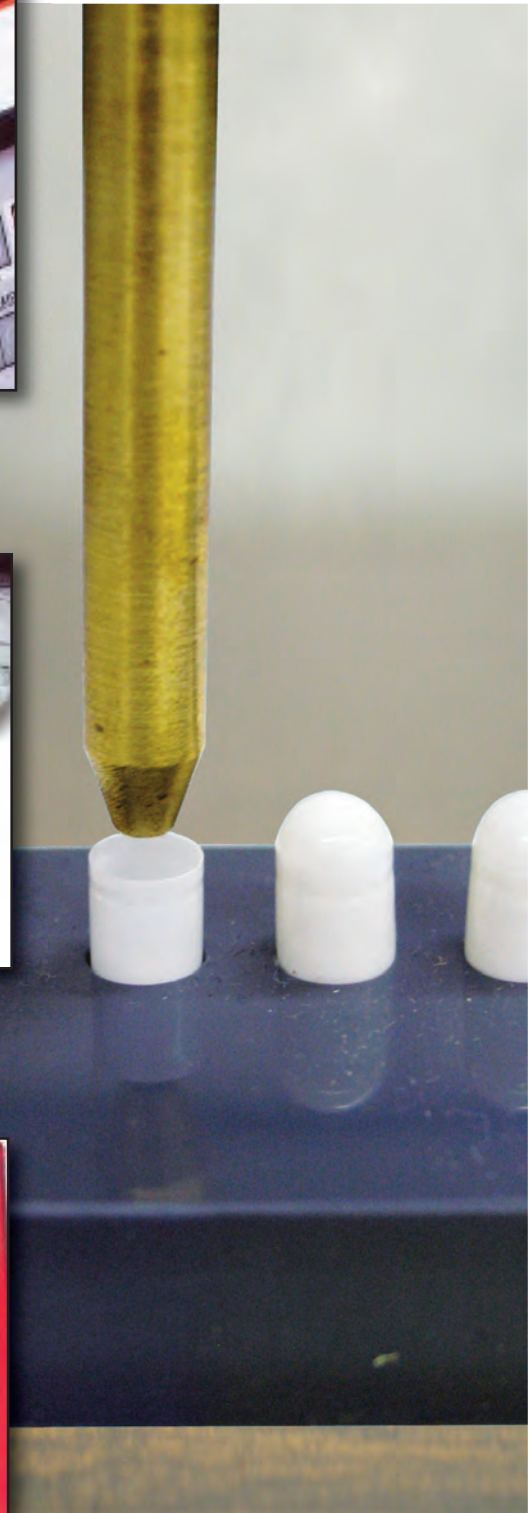
- Box, carton and case sealing
- Spot Glue
- Filling and potting
- Component staking on circuit boards
- Gasket form-in-place
- Woven and fabric bonding
- Metal assembly, sealing and bonding

## Industries

- Packaging and carton production
- Displays
- Electronic PCB assembly
- Upholstery & mattress fabrication
- Furniture assembly
- Window assembly
- Filter manufacture
- Matting and carpet fabrication
- Automotive woven product assembly
- Insulation protection
- Medical capsule production

## Typical Hot Melt Materials

- Pressure Sensitive Adhesive (PSA)
- Polyethylene (PE)
- Contact adhesive
- Wax
- Rubber
- Polyamide
- Ethylene vinyl acetate (PSA)
- Medical compounds



# Introducing THERMADOSE® Hot Melt Systems for Manual, Automated and Bulk Flow Processes

THERMADOSE® Positive-displacement, all-electric Hot Melt systems are designed to provide the ultimate in temperature controlled thermoplastic delivery and dispensing for industrial applications using pressure sensitive adhesives, contact adhesives, waxes and sealants. Machine options are available for medical processing applications that require sterile delivery. Systems are RoHS compliant and CE approved.

There are two ranges of equipment, tank controllers and pail-handling machines:

## Tank Controllers for Hot Melt Positive-Displacement Systems:

Rugged heavy-duty, bulk storage dispensing systems with gear-pump technology for use with Hot Melt solids supplied as pellet, brick or flake. Although usually described as bench units, they can also be securely mounted on an optional floor stand. Tank controllers are used either in manually operated dispensing applications with hand-guns and applicator-valves or interfaced to conveyor lines and robots for automation.

## Bulk Pail Drum 5 and 55 Gallon Pail Positive-Displacement Systems

Fully automatic floor-standing gear-pump machines with a unique pail elevator technology. Suitable for high-volume applications and used in high-production, conveyor-fed gantry automation. Constant production cross-over options provide for uninterrupted work flow.

THERMADOSE® systems include close-loop electronics and thermistor sensors throughout, ensuring reliable, close-tolerance dispensing.

## Sample forms

- Bead or gasket dispense - Precision-Nozzle
- Shot or fill dispense - Precision-Nozzle
- Swirl for larger surface cover - Swirl-Nozzle
- Spray coating - Spray-Gun





# Thermadose® Hot Melt Tank Controllers

Hot Melt tank controllers are available in three sizes of tank capacity. The selection is dependent upon material usage and frequency of operation. When coupled to a range of heavy-duty heated accessories, the tank controller becomes part of a system that can be manually configured, for example, with a hand-gun or interfaced to a robot for fully automatic operation.

Each Hot Melt tank controller consists of a heated melt tank with an integral heat grid. The tank controller is completely electric and does not require compressed air. The wide mouth design of the self-sealing tank lid will accommodate a large selection of solid adhesive forms.

Heated hoses are both electrically and mechanically attached to the unit via easy-access connectors on the front of the controller.

A fluid pressure regulator valve provides fluid pressure control via a bypass mechanism. Motor speed is adjustable for additional flow control.

## Tank Controller Floor Stand

- Suitable for all tank controllers
- Height 24" (61cm) easy access
- Mounting for optional controls
- Base floor mounting flanges

Mode I#	Description
HFS01	Floor Stand



## HM-FLUSH

- Suitable for all tanks
- Easily used for system flushing
- 4.5 gallons per case

Model #	Description
HF45	Purging compound



## Tank Controller Model HM12 12 lb (5 Liter) Capacity

Model HM12 is a single hose output system designed for low - to medium-volume dispensing up to 20,000 cps. Analog controls provide temperature settings of tank, hose, applicator-valve, motor speed and functions. A recessed adjustment selects a choice of up to seven temperature ranges for tank, hose and applicator-valve.



### Specification

- 12 lb (5 Liter) capacity deep rectangular PTFE coated tank
- 12 lb/Hr (5 Liter) melt rate, 28 lb (13 Liter) gear-pump rate
- 3 zone temperature control over 7 ranges up to 410° F ( 210° C)
- Single hose outlet - Max hose length 16ft (4.87m)
- Direct port for control devices, timers and foot switches
- Constant speed AC gear-pump
- Power source 15 amp breaker
- Dimensions - 15.5" x 10.5" x 14.0" (39.37 x 26.67 x 35.56cm)

Model #	Description
HM12-115	12 lb (5 Liter) Tank Controller 115V
HM12-115M	12 lb (5 Liter) Tank Controller 115V Medical
HM12-220	12 lb (5 Liter) Tank Controller 220V/230V <b>CE</b>
HM12-220M	12 lb (5 Liter) Tank Controller 220V/230V Medical <b>CE</b>

# Thermadose® Hot Melt Tank Controllers

## Tank Controller Model HM14 14 lb (7 Liter) Capacity

Model HM14 includes two fluid output connections and can channel material flow from either one or two supply hoses. Designed for medium - to high-volume dispensing of up to 30,000 cps. Temperature settings, controls and functions are selected using an international graphic touch-pad.

### Specification

- 14 lb (7 Liter) capacity deep rectangular wide opening PTFE coated tank
- 28 lb/Hr (13 Liter) melt rate, 70 lb (32 Liter) gear-pump rate
- 5 zone temperature control over 6 ranges up to 425°F ( 218°C)
- Two hose outlets - Max hose length 24ft (7.3m)
- Direct port for control devices, timers and foot switches
- Manual or fully automatic applications
- DC variable speed gear-pump
- Power source 20 amp breaker
- Dimensions - 20.13" x 12.12" x 23.0" (51.3 x 30.76 x 58.42cm)

### Model #

### Description

HM14-115	14 lb (7 Liter) Tank Controller 115V
HM14-115M	14 lb (7 Liter) Tank Controller 115V Medical
HM14-220	14 lb (7 Liter) Tank Controller 220V/230V CE
HM14-220M	14 lb (7 Liter) Tank Controller 220/230V Medical CE



## Tank Controller Model HM34 34 lb (16 Liter) Capacity

Model HM34 has four hose output connections and can channel material flow between one and four supply hoses. Designed for high-volume dispensing of up to 30,000 cps. Temperature settings, controls and functions are selected using an international graphic touch-pad.

### Specifications

- 34 lb (16 Liter) capacity deep rectangular wide opening PTFE coated tank
- 75 lb/Hr (34 Liter) melt rate, 100 lb (46 Liter) gear-pump rate
- 9 zone temperature control over 6 ranges up to 425°F ( 218°C)
- Four hose outlet - Max length depends on # of hoses - Up to 72ft (21.9m)
- Direct port for control devices, timers and foot switches
- Manual or fully automatic applications
- DC variable speed gear-pump
- Power source 30 amp breaker 220/230 VAC system
- Dimensions - 22.0" x 14.25" x 27.5" (55.88 x 36.19 x 69.85cm)

### Model #

### Description

HM34-220	34 lb (16 Liter) Tank Controller 115V CE
HM34-220M	34 lb (16 Liter) Tank Controller 115V Medical CE



# Selecting a Hot Melt tank Accessories for Manual

## Six Easy Start-Up Steps in Selecting a Complete System

### 1 Selecting a Tank Controller for an Automated System

Tank controllers are most popular for medium-volume production. The recommended system is the HM14 followed by the higher volume HM34. The HM12 is not recommended for automated production due to its analog controls.

### 2 Selecting a Tank Controller for a Manual System

Select the appropriate tank capacity controller, (pages 4 & 5). All systems (HM12, HM14, HM34) are suitable for manual dispensing. Select a floor-stand option if required.

### 3 Selecting a Heavy-Duty Braided Heated Hose

Select a hose diameter suitable for viscosity and flow rate. The maximum hose length possible varies per system. A hose over 16ft (4.87m) requires a 220/230V unit. Add extra length for corners, a minimum of 16" (406mm) dia. per bend. Hoses are PTFE - stainless steel braided (page 10).

### 4 Selecting an Applicator-Valve for a Manual System

Applicator-valves are available as all-electric and pneumatic options for fixed mounting or as hand-guns and vertical grip applicators. Nozzles are selected for beads, swirl and spray. Valves are operated by trigger or foot switch, (pages 10 & 11).

### 5 Selecting an Applicator-Valve for an Automated System

The applicator-valve set for a robot is usually a single head all-electric type and a nozzle for dispensing shots or beads. In box and carton manufacture, a multiple-outlet applicator-valve head is used for top and bottom sealing of folds. Swirl pattern nozzles and spray heads are employed to cover wider areas or coat surfaces (pages 10 & 11).

### 6 Selecting a Timer or an I/O

An I/O interface is a simple electronic handshake box that enables an automated line or robot to communicate with a tank controller (page 11). Timers are attached to an auxiliary connector on the tank controller and used to control either 2 or 4 event cycles that may be required in conveyor\*-fed operations, for example box and carton manufacture.





# Hot Melt Controller and System for Automatic Dispensing



# Thermadose® Bulk Application Pail Pumps

## Unique Approach

Thermadose® Hot Melt pail pump systems are available in 5 gallon and 55 gallon models. They are the culmination of many years of thermal engineering and practical experience resulting in a unique design that is functional and safe providing optimum efficiency in temperature control and pulse free thermal pump technology.

## Features

- Gear-pump for consistent, pulse-free repeatable dispensing
- Smooth & Spiral-Grid platens for optimum thermal efficiency
- Reduced material degradation
- Over-temperature safety protection
- Optimum production output
- Static seal with PTFE wipers or optional inflatable silicone seal
- Moisture protected and PUR safe
- Expensive nitrogen systems not required
- Easy pail removal
- Fully automatic
- Automated purge valve - no mess
- Elevator system automatically raises and lowers pail
- Pail, elevator and thermal system fully enclosed
- No moving parts outside of unit
- Safety interlock door switch
- Operator safe - no external rams
- LED illuminated interior
- Smaller footprint
- Cross-over system options 55/5 and 55/55 gallon
- Low - and high-level alarms
- Integrated self diagnostics



## Operation

An innovative elevator enables easy loading and removal of a pail. The pail is placed on the elevator platform and is automatically raised to engage a static or optional inflatable seal depending on material specifications. A thermal platen is heated to the programmed temperature and the material flows to the gear pump while pressure is maintained by the platen.

Once programmed, a signal actuates a gear-pump with pressure regulation that provides a consistent, pulse-free and repeatable dispense rate. Temperature of the pail contents is kept to an optimum thermal efficiency by either an easy-clean smooth-platen for high-cost materials with low flow rates, or with a spiral-grid thermal platen that increases the surface area in contact with the material and is suitable for high-flow, hard-to-melt materials.

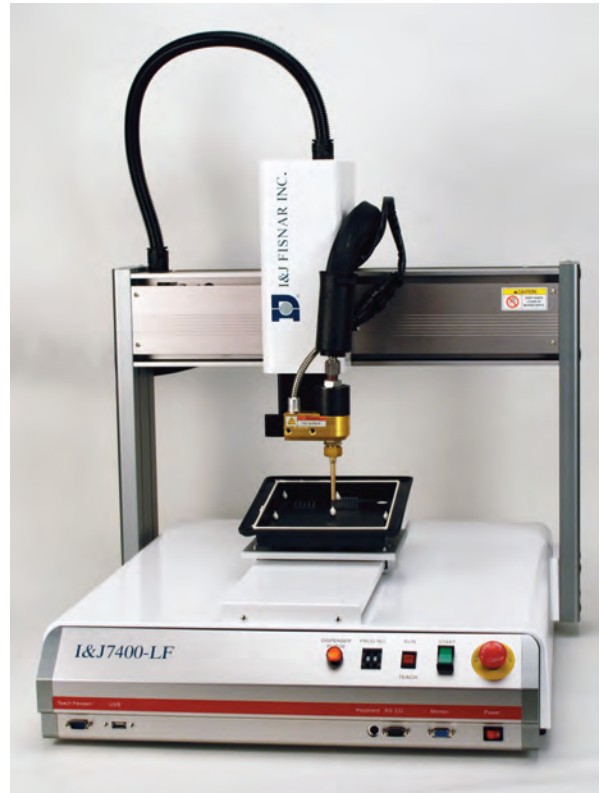
The absence of external rams results in a safe operator environment. All moving functions are fully enclosed and the enclosure is safety interlocked. Swivel-heated hose control-pods provide ergonomic handling for manual operations and dressing of hoses to automated systems.



# Thermadose® Bulk Application Pail Pumps



HM5SP - 5 Gallon Hot Melt Pump



Easy integration with robotic systems

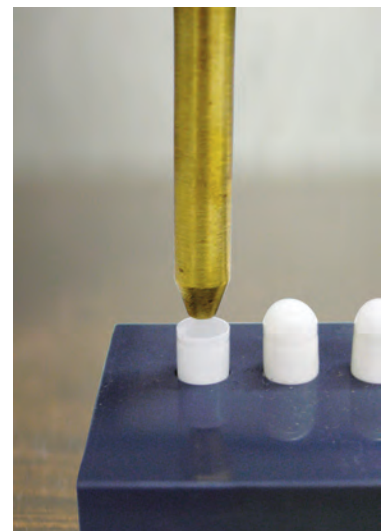
## Specifications 5 Gallon Only

- Power 200 - 240VAC 50/60 Hz - 30 amp max
- Air 65 - 90psi
- Pump type gear-pump
- Motor variable speed brushless AC
- Pump rate 195 lbs/hr (88.5Kg)
- Adhesive all types
- Melt rate 40 lbs/hr smooth platen or 58 lbs/hr Conch-Grid platen
- Hoses standard - 6 JIC - 24ft (7.3m) dual outlet cable
- Applicators manual or automatic - extrusion or swirl
- Timers direct panel connection
- Air control for spray & swirl optional - integrated in lower cabinet
- Dimensions H 52" x W 30" x D 22" (132 x 76 x 56cm)
- Weight 5 gallon - 375 lbs (170Kg)
- Standards CE & RoHS compliant

### Model #

### Description

HM5SG	5 Gallon Pail Pump Spiral Grid Platen
HM5SP	5 Gallon Pail Pump Smooth Platen
HM55SG	55 Gallon Pail Pump Spiral-Grid Platen
HM55SP	55 Gallon Pail Pump Smooth Platen
HMSSK	Swirl & Spray Air Kit



# Accessories

## Thermadose® Heated Hoses

Hoses include a PTFE core, a reinforced stainless steel braid and high temperature insulation with a durable polyester braid cover for abrasion resistance.

Hoses are designed for either extrusion (beads) (E) or swirl/spray (S) and designated with an "E" or an "S" when ordering.

They are then described by a diameter code and the length

### Diameter Code:

Code 4 = 1/4" 6.35mm  
Code 6 = 3/8" 9.52mm  
Code 8 = 1/2" 12.70mm  
Code 12 = 3/4" 19.05mm  
Code 16 = 1.0" 25.45mm

Hose Lengths are from 4ft (121.92cm) to 24ft (731.52cm)



## Order Information

Order by prefix "H" then "E" or "S" & Dia. Code and Length.

### Example

Order code HE8-8 = a hose to dispense an extruded bead 1/2" (12.70mm) dia. and length of hose x 8ft (243.84cm)

## Applicator-Valve Head Electric (No Air)

For mounted installations. Fast "Snap" function solenoid valve with precise needle-and-seat action producing a clean cut off preventing drip. A free-floating valve design with no seals to wear out. Built in thermistor sensor for accurate temperature control. Available in 24VDC, 115VAC and 220/230VAC



### Model #

HE11524  
HE22024  
HE115  
HE220  
HB015

### Description

Valve 115V w 24VDC Coil  
Valve 220V w 24VDC Coil  
Valve 115V w 115V Coil  
Valve 220V w 220V Coil  
Universal Mounting Bracket

## Hot Melt Hand Guns

Ergonomic and lightweight balanced dispensing guns with an integrated hanger for suspension hook up. A built in Thermistor sensor provides an accurate temperature control of the applicator. A separate trigger switch is provided for gear-pump and air activation for swirl/spray.

Hose swivels 360° for easy use and to avoid twisting the hose. A safety trigger lock secures the gun when not in use.



Bottom Entry Hose



Top Entry Hose

### Model #

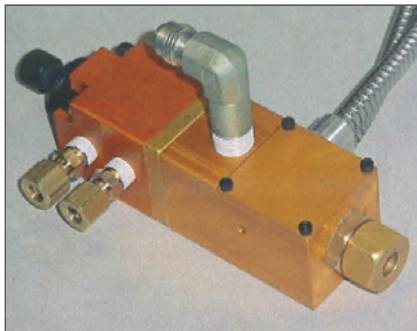
HGBE115  
HGBE220  
HGTE115  
HGTE220  
HMA90  
HMA45

### Description

Hand Gun Bottom Entry 115V  
Hand Gun Bottom Entry 220V  
Hand Gun Top Entry 115V  
Hand Gun Top Entry 220V  
90° Adapter Nozzle  
45° Adapter Nozzle

## Applicator-Valve Head Air-Operated

Air-operated tip-seal valve, suitable for high viscosity materials. An electric solenoid opens and closes the air to the air valve. Available in 24VDC, 115VAC and 230VAC models. Includes a precise needle-and-seat action producing a clean cut off preventing drip. Easy mounting hardware supplied. Built in Thermistor sensor for accurate temperature control.



### Model #

HA115  
HA220  
HA24

### Description

Valve 115V Air Operated  
Valve 220/230V Air Operated  
Valve 24VDC Air Operated





HM14110 - Hot Melt Unit



HM19110 - Hot Melt Handgun





HM08110 - Hot Melt Hose



HM98033 - Hot Melt Applicator Head



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