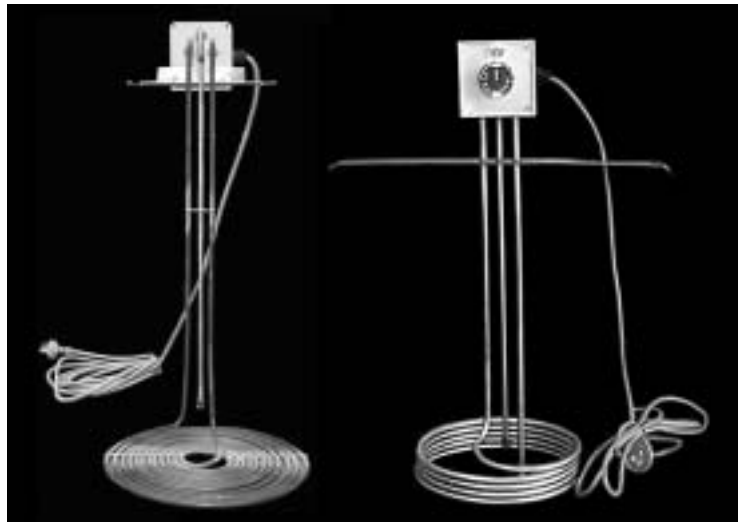




THERMAL ELECTRIC ELEMENTS  
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## Drum Heating Elements

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# 8.1

## Drum Heating Elements

### Drum Heaters

There are several types of heaters that Thermal Electric manufacture specifically for heating drums. Consult Thermal for your special requirements and we'll help with the design and manufacture of the right heater for your application.


### Base Drum Heaters

These heaters are ideal where the drum requires heating and is then moved onto the next production stage. Low watt density heating elements are clamped between two heavy metal plates and are temperature controlled. A leg height of 100mm, robust steel construction with high temperature painted finish, 2.5m x 3 core flexible lead and 10 Amp plugtop are standard for the single phase units. This type of heater is best suited for closed drum situations.

Complete stainless steel units are also available and are manufactured by Thermal and are highly recommended for use in corrosive areas. Thermal manufacture totally sealed units which are designed for hazardous applications, eg. Class 1 Zone 1, Explosion Proof and for Dust Ignition Proof classifications.

Maximum temperatures achieved are approximately 65°C - 80°C for the single phase units and 250°C - 300°C for the three phase units.

A multitude of voltages, wattages, diameters, temperature controls and programmable timers are available upon request.

Part No.	To suit drum size	Voltage	Wattage	No. of Phases	Image
TBDS20	20 litre	240	1500	Single	
TBDT20	20 litre	240	1500	Single	
TBDS205	205 litre	240	2400	Single	
TBDT205	205 litre	240	2400	Single	
TBDS20/3	20 litre	415	4800	Three	
TBDT20/3	20 litre	415	4800	Three	
TBDS205/3	205 litre	415	7200	Three	
TBDT205/3	205 litre	415	7200	Three	

\* "S" for Simmerstat control - energy regulator  
"T" for Thermostat control

## Drum Heating Elements

### Stainless Steel Clamp on Heaters

These heaters are ideal when short heat up times and high temperatures need to be achieved. A low watt density multiform heating element is used and designed to wrap around the outside of the drum, this is held on by a stainless steel band with quick release toggle fasteners. These heaters are light weight, portable and can be moved from drum to drum. If more heat is required, extra clamp on heaters can easily be fitted. Three phase heaters are also manufactured by Thermal, with greater power output and are available on request.

The clamp on heater is ideal for applications where the material or solution to heat cannot come into direct contact with the heating element and are suited for closed drum situations, eg solvents.

Clamp on heater units are manufactured with Incoloy sheathed heating elements, 110mm wide and are Simmerstat controlled. 2.5m x 3 core flexible lead and 10 Amp plugtop are standard for single phase units.

A multitude of voltages, wattages, diameters, temperature controls and programmable timers are available on request. Please consult Thermal with your special requirements.

Part No.	Drum size	Voltage	Wattage
DBH290110	20 litre	240	1200
DBH580110	205 litre	240	2400



# 8.3

## Drum Heating Elements

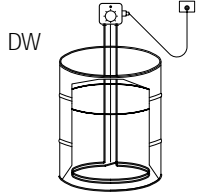
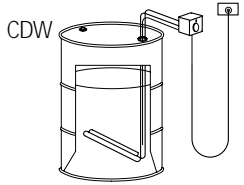
### Drum Immersion Heaters

These heaters are more efficient and economical than external heating and are used where the solution, liquid or material can be heated with the element being in direct contact. Two installation designs are available. The first is able to be inserted through the pouring hole at the top and the other fits straight into an open drum. Thermal Drum Immersion Heaters are light weight and very portable. They can be used in a variety of tank and bath applications. All Thermal Drum Immersion Heaters are thermostatically controlled and are manufactured in a wide range of materials such as Incoloy, 316SS, Titanium, etc. 2.5m x 3 core flexible lead and 10 Amp plugtop are standard with the single phase units.

Thermal also manufacture three phase units with greater power output, which greatly reduces initial heat up time and maximises heat recovery. A multitude of voltages, wattages, temperature controllers, programmable timers, sheath watt densities and element protective coatings suitable for specific solutions are available on request. Please consult Thermal with your special requirements.

#### Standard Heaters

Application: Clean Water Only - 124kW/m<sup>2</sup> (80 watts/in<sup>2</sup>)

OPEN DRUM					Diagram
Part No.	Drum size	Voltage	Wattage	Phase	
DW-1	20 litre	240	2400	Single	
DW-2	205 litre	240	2400	Single	
DW-13	20 litre	415	4800	3 phase	
DW-23	205 litre	415	7200	3 phase	
CLOSED DRUM					
Part No.	Drum size	Voltage	Wattage	Phase	
CDW-1	20 litre	240	2400	Single	
CDW-2	205 litre	240	2400	Single	
CDW-13	20 litre	415	4800	3 phase	
CDW-23	205 litre	415	7200	3 phase	

#### Explanations:

- |      |                                       |        |
|------|---------------------------------------|--------|
| DW   | - Drum Water Heater                   | Open   |
| CDW  | - Closed Drum Water Heater            | Closed |
| LWD  | - Low Watt Density Drum Heater        | Open   |
| CLWD | - Closed Low Watt Density Drum Heater | Closed |

## Drum Heating Elements

### Low Watt Density Drum Heaters

18.6kW/m<sup>2</sup> (12 watts/in<sup>2</sup>)

Low watt density heaters are suitable for mild alkali solutions, detergent, caustic soda, soluble oils, emulsions, engine oils, general lubricants, mild acid solutions, hydraulic and turbine oils, waxes, heat transfer oils, vegetable oils and tallow.

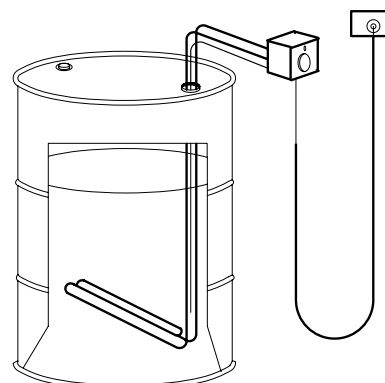
Thermal Low Watt Density Drum Heaters come in single or 3 phase units. 2.5m x 3 core flexible lead and 10 Amp plugtop are standard with single phase units.

A multitude of voltages, wattages, temperature controllers, programmable timers, lower watt densities and element protective coatings suitable for specific solutions are available on request.

OPEN DRUM				
Part No.	Drum size	Voltage	Wattage	Phase
LDW-1	20 litre	240	2400	Single
LDW-2	205 litre	240	2400	Single
LDW-13	20 litre	415	7200	3 phase
LDW-23	205 litre	415	10800	3 phase
CLOSED DRUM				
Part No.	Drum size	Voltage	Wattage	Phase
CLDW-1	20 litre	240	500	Single
CLDW-2	205 litre	240	2400	Single

Explanations:

LWD - Low Watt Density Heater                      Open  
 CLWD - Closed Low Watt Density Heater            Closed



# 8.5

## Drum Heating Elements

### Emergency Drum Heaters

A very portable, general purpose, high watt density heater. Suitable for emergency heating and **must only be used in clean water** situations.

The standard emergency drum heater is manufactured with an Incoloy sheath and has a stainless steel adjustable supporting hook. The heater is fitted with a 2.5 metre 3 core flex and 10 Amp plugtop.

We strongly advise when using this heater that it is used with an earth leakage safety system.

Part No. TDH-1



# 8.6

## Drum Heating Elements

### Heated Drum Trolley / Storage Rack

Suitable for applications where the 205 litre (44 gallon) drum is required to be mobile with its contents heated. With its heavy duty construction it is designed for loading, moving and unloading of full drums with ease.

As the drum is strapped down in the horizontal position, the contents can be easily transferred into smaller containers whilst the underside of the drum is still being heated by fully guarded low watt density multiform heating elements.

The heated drum trolley is for materials such as bitumen, tallow, waxes, fat, grease, resin, syrups and honey, etc; where heat is required to create flow.

Temperature control is achieved with the use of an energy regulator (simmerstat). The standard 'Thermal' heated drum trolley is rated at 240V 2400W and is connected via a standard 10 Amp extension lead. A range of temperature controllers, programmable timers and power ratings are available. For more information please consult with the Thermal Engineers.

Part No. TDT2400      240V 2400W 10 Amp



# 8.7

## Drum Heating Elements

### Drum Heating Ovens/Rooms

A heating oven/room can be designed and manufactured to meet your exact size and specifications. Several drums can be heated at the same time and kept thermostatically controlled between 30°C - 110°C, 24 hours a day.

Many materials require extended heating times for complete and proper meltdown; such as honey, malt extract, waxes and various pharmaceutical products. This can only be achieved efficiently in drum heater ovens or rooms.

A robust construction and high quality finish give Thermal the leading edge. Thermal drum ovens/rooms are highly efficient and fully insulated. They have electronic temperature control, a programmable timer and feature a fan forced recirculated heated air system in our standard units. Mobile units are also available.

Please call Thermal for information to solve your heating problems.

STANDARD OVENS/ROOMS						
Part No.	No. of Drums	Width	Depth	Height	Voltage	Wattage
DO1	1	850	850	1100	240V	2400W
DO2	2	1700	850	1300	240V	3600W
DO4	4	1700	1700	1300	415V	7200W
DO8	8	3400	1700	1300	415V	10kW
DO8V	8	1700	1700	2600	415V	10kW
DO16	16	3400	3400	1300	415V	15kW
DO16V	16	3400	1700	2600	415V	15kW

All dimensions in millimetres  
V = Vertically stacked

