



Intelligent thinking. Clever design

Datasheet

Copyright protected

Introduction

Imperial Thermal Engineering's OPM series is a quantum leap forward in the heating and preparation of pitch products, for use in lap polishing machines.

This equipment has been developed to provide the operator with a safe and secure product, free of the risk of fire and one that eradicates the use of propane gas in the process.

The OPM is zero emissions at the point of use leaving no carbon footprint.

The OPM has been developed with production in mind with fast heat up and melting times and powered by clean three phase electricity. With climate change at the forefront of its development, gas-fired versions will quickly become obsolete as they are deemed to be a significant risk.

Current risks associated with gas fired pots include:

- Presence of naked flames and risks of fires
- Compound exceeding maximum manufacturers specified temperatures
- Poor regulation of heat often exceeds the flash-point of the compound
- Significant safety hazards such as splash back to operators when loading
- Very high external temperature of the boiler body creating burn risks
- Site specific controls associated with naked flames and hot works
- Large CO2 footprint from inefficient LPG fired boilers
- Site space issues through associated storage requirements for gas and gas pots

The OPM has been designed and developed to address all of these issues offering unrivalled safety.



Product description

Designed and built in the UK, the OPM can be built in a number of size combinations from 30ltr up to 150Ltrs capacity. Using a 230-240v for the small machines, or 415v, 3-phase 32amp supplies for the larger machines. With a simple 'plug and play' logic system, the equipment melts the compound quickly and efficiently to the desired temperature as it enters the main vessel body. The control software maintains the pre-determined temperature throughout the operation using accurate temperature controls maintained through RTD sensor loops. The control systems ensure the equipment operates at the temperature set by the operator and this eliminates the risk of 'flash' and vapour ignition fires. The burn risk to operatives is almost eradicated with the introduction of 'cool side' technology and the primary melting/ loading chamber at a comfortable height. Open the lightweight lid and place the compound onto the 'super-heated' melting tubes. Close the lid and the material will simply melt away. Within minutes, once melted away, re-load and repeat the process.

The OPM has been developed with the incorporating an agitator system. Once the temperature sensors permit, the agitation process will commence automatically, mixing and maintaining the integrity of the compound. The OPM has a self-clean, non-stick lining which was developed for the aerospace industry. This advance in pot design now prevents the build-up of carbon which consequently slows the performance of the pot. All internal surfaces are coated with this allowing the compound to melt and stay fluid inside the main storage chamber. The OPM is highly manoeuvrable on its 4 castors which are braked, the OPM will rise to the desired height for discharge into a lap bed to remove the risk of cross contamination and spillage by using a bucket.

Key/ Safety features

- Electrical heated vessel for melting pitch blended compounds used in Lap bed equipment
- Computer controlled to ensure the compound is heated at a constant and even temperature, to the operators specification, thereby delivering a quality assured product
- Clear red LED indicator displaying the current compound temperature aiding the operator as to when the compound is ideal for use
- Electrical technology eliminates the risk of flash

and vapour ignition fires

- Get working quickly: Unique two-stage design delivers compound from solid block to working temperature in a ultra-fast time
- Primary melting chamber eliminating the risk of 'splash back' during charging
- Multi-level heating array, controlling each zone to +/-2 deg C
- Self-contained hydraulic elevation system for raising the equipment to working height, controlled by a lock-out key switch, simple up and down momentary switching and red flashing warning light during operation.
- Cool sides to all external surfaces of the equipment using super-efficient insulation
- Silent running
- Single cable connection using steel braided reinforced cables
- Optional longer cable available
- Lockable pouring spout
- Touch screen control pad
- Three stage heating program ensuring material quality remains consistent throughout the process
- Safety warning neon indicator lamps during use to warn others that the equipment is in use
- Hibernation feature to reduce the temperature of the pot for long periods when compound is not required i.e. Overnight mode
- All aluminium vessel non-stick construction incorporating a steel frame chassis with robust braked castors
- Even when empty the Epot series cannot overheat.w
- Fully heated discharge pipe, configured to suit the customers requirements, knife edge 'Banjo' valve
- Fully automated twin track, offset paddle mixer, tracking within 5mm of the outer wall to ensure all material is mixed within the vessel spectrum. Automatic start triggered by the 'pot ready' signal, no human inaction required.



Control panel

User Friendly

The Epot series is simple to operate and manage, requires no specialist knowledge and very little training. It is not possible to tamper with the factory pre-set heat profile setting thereby removing the possibility of over-heating the compound. A constant temperature display clearly identifies the temperature of the compound inside the pot.

Digital Screen display

The digital screen display provides the Engineer with a valuable insight into the performance of the equipment. Provided with a unique access code the Engineer can change the heat settings up or down but never to a point where the compound would be in danger of igniting.

Plug and play

Simply plug the Epot into the site mains supply, unlock the screen and press the ON button. The bright LED readout displays temperature and status.

Cables, power requirements & consumption

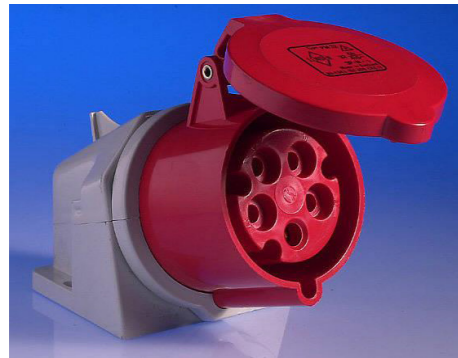
415V, 3-phase, 32Amp or 63Amp

Phase lines 1-3 + neutral + earth required (5 pin plug)

Epot has a 5 pole 32A on the control panel.

Power consumption:

Epot 100- 32KVA (24 KW)



All Epots are supplied with a 20m cable as standard. To reach longer distances to power sources a range of extension cables at 30m and 40m is available.

Specification and servicing

Manoeuvring

• Solid rubber wheels mounted on castors to all corners to allow the OPM to be manoeuvred easily by two persons.

Dimensions

• Height: Epot 100 – 1400mm

Height Elevated – 1900mm

• Width: Epot 100 - 670mm

• Length: Epot 100 – 1330mm

Unloaded weight

• Epot 100 – 150Kg

Spout

• 50mm throat diameter with an all-steel knife action 'Banjo'.

• 520mm ground clearance to the bottom of the spout.

Cleaning and care

• As with any electrical equipment regular cleaning should take place in order to maintain the efficiency of the unit

• It is essential that the machine is emptied at the end of each pour. The melting plates should be cleaned of all material using a wooden spatula gently prising any contaminates should this be necessary, depending on the material being used when at working temperature

• Remove all spilt compound from around the lid area when at temperature using a wooden spatula ensuring the lid cannot get stuck when cold

• Do not use metal tools to clean as this will damage the non-stick lining \

Onsite training

• Full training will be given when the machine is delivered to the customer

Servicing & warranty

• The Epot series is covered by a 1-year manufacturer's warranty (conditions apply)

• The warranty remains valid for that period on the condition that service conditions are adhered to

• Servicing/electrical testing is required once every six months or 1000 hours whichever comes sooner. Care plan available on request

Warning - Epots OPM's are only for use with Pitch or Bitumen based compounds. These models will not be suitable for Asphalt or Tarmac



Tel no 01376 330 582
Fax no 01376 347 875
www.imperialthermal.co.uk

Head Office
Bridge Hall Barn, Hollies Road,
Bradwell, Braintree, Essex,
CM77 8DZ, UK

Co reg no 5928544
Data sheet rev: 002 28.07.2021