

PROTHERM

High Velocity Galvanizing Furnaces

The PROTHERM High Velocity System

Advantages of High Velocity Firing:

- **Optimum heat transfer**
Heat transferred to both side and end walls over full height of kettle walls
- **High recirculation of furnace gases**
Ensures even heating to kettle walls
- **Extended kettle life**
Uniform heating coupled with full utilisation of available kettle wall area for heat transfer
- **Minimum number of burners**
High reliability
Low maintenance
Minimum spares requirement
- **Fast response to load changes**
- **Fast simple site installation**
- **Equally suited to LARGE or SMALL kettles**



Illustrations

Furnace for 3.5 x 1.8 x 3m deep kettle & furnace
Throughput: 7,000 kg/h
880kw thermal rating - natural gas
U frame kettle support system



The PROTHERM Furnace

- **Computer aided design**
Extensive use of computer aided design techniques to optimise size of firing lanes and burner positions
- **Lightweight ceramic fibre insulation**
Long life, high energy efficiency, fast response to load changes, speedy kettle changes
- **Robust top plates**
Top plates seal against kettle to prevent ingress of zinc and ash inside furnace
- **Compression seal against kettle walls**
Insulation designed to achieve flexible seal around top of kettle - no wear on wash line
- **Kettle support system**
Kettle walls fully supported by spun cast alloy tube for maximum strength
- **Multi - fuel**
Burners suitable for Oil, Natural gas, LPG etc.

Service

Full Field Service Worldwide

Installations supervised by member of full time Protherm staff.

Protherm service engineers available for periodic maintenance, preventative maintenance & pump outs for kettle inspections

Technical support available 24 hours per day

Engineering and Design

Furnaces tailored to client's individual requirements

Wide range of kettle support system designs available

Dimensioned foundation drawings

Full technical support on services and ancillary equipment

Installations

Over 100 High Velocity Furnaces supplied worldwide

Furnaces for kettles up to 16 x 2 x 3.6m deep internally

Locations USA
Saudi Arabia
UAE
Qatar
Bahrain
Syria
Iran
India
France
Czech Republic
UK
Eire

Shipping

Furnaces are normally shipped complete with thermal insulation, burners, combustion controls and pipework ready for immediate installation

Furnaces for kettles up to 12.5m in length have been shipped complete with the kettle as a single unit weighing over 50 tonnes

GENERAL PRODUCT RANGE

HIGH TEMPERATURE CERAMIC GALVANIZING BATHS

Surface heated ceramic baths for galvanizing up to 560°C

WHITE FUME AND SPLASH CONTROL

Fixed enclosures for monorail hoist systems
Crane mounted enclosures for cross shop layouts
Lip extraction systems

DRYING OVENS

Fan assisted fully forced air circulating type heated by furnace exhaust gases

AIR HEATERS

Flue stack recuperator for generating hot air supply to drying oven for enhanced drying from furnace exhaust gases

WASTE HEAT RECOVERY SYSTEMS

Heat exchanger systems for generating hot water supplies from furnace exhaust gases for process tank heating

ZINC PUMPS

CENTRIFUGE MACHINES

Floor mounted for high quality centrifuge galvanizing of small parts

Semi automatic basket discharge and water quench machine also available

DESIGN AND CONSULTANCY

Complete plant design
Project management and plant procurement

- All the above equipment is designed 'in house'
- All equipment is manufactured under the close supervision of our full time staff
- All equipment is subject to rigorous inspection before final despatch



For more information please contact us at:

Protherm Engineering (Walsall) Ltd.
Unit 33, Birchbrook Industrial Estate, Lynn Lane, Shenstone, Lichfield WS14 0DJ

T +44 (0)1543 481143 F +44 (0)1543 480330 E info@prothermengineering.co.uk