

# GAS OR OIL BASIN TILTING FURNACE MK V

✓ **IMPROVES THE THERMAL EFFICIENCY OF THE MELTING PROCESS**

✓ **REDUCES FUEL CONSUMPTION**

The Morgan Basin Tilting Furnace is specially designed for efficient, rapid, bulk melting of metals for both die-casting and non-ferrous foundries. The standard furnace utilizes the supercharge preheating technique where the waste gases, being exhausted over the top of the crucible, preheat the solid charge.



## FURNACE DESCRIPTION

The steel furnace casing is lined to suit the application with either Morganite radiant panels backed by premium grade insulation or, for higher temperature applications, high alumina brick linings.

## LIP AXIS POURING

Lip axis pouring is achieved by tilting the furnace by means of twin hydraulic rams. The pouring rate is easily controlled, allowing a transfer ladle to be kept in one position. For convenience, when pouring accuracy is not required, a bolt-on spout extension is available.

## SIZE RANGE

- 213—1496 kg Aluminium
- 600—2700 kg Copper Base Alloys

## CONTROL SYSTEM

Furnaces with automatic, fully-modulating burners are supplied with a fixed pyrometer assembly, which is connected to the control system, to provide metal temperature control. Other control systems are also available.

## INSTALLATION

The furnace is supplied assembled and only requires bolting down on a suitable concrete floor and connection to fuel and electricity sources. For zinc and aluminium melting, MKV Furnaces up to BT700 Furnaces can be fitted with a spilt metal tray. Otherwise, spilt-metal pits should be provided.

## PERFORMANCE DATA†

BT SERIES		ALUMINIUM to 720°C*						
Furnace** BT MODEL #		500	700	1300	1500	1700	1800	3300
Charge	kg	213	310	530	600	700	930	1500
	lbs	470	683	1168	1323	1544	2050	3300
First Heat	Time/Mins	60	70	85	90	102	140	150
Subsequent Heat	Time/Mins	50	60	70	75	87	115	100
Gas Burner: Max Input	Kw	275	275	376	376	376	376	530
Gas Consumption during Subsequent Heat	kWh	230	275	438	470	545	720	880

Above data based on optimum foundry conditions. For normal foundry operations a performance of 90% of these ratings is typical.

Data for zinc and copper-based alloys available upon request.

\*With gas radiant panels

\*\*The performance table above relates to the super-charged preheated range of furnaces (exhausting over the top of the crucible). Performance statistics for the side channelled exhaust versions are available upon request.



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## KEY FEATURES

### BURNER EQUIPMENT

For aluminium and zinc (high temperature nozzle mix gas burners are used for copper-based alloys). Oil burners are also available.

- Fully-Modulating Burners
- Burner Tilts with Furnace
- Radiant Panels
- Crucible and Burner Hour Meters
- Seven Day Time Clock
- Proportional (PID) Control

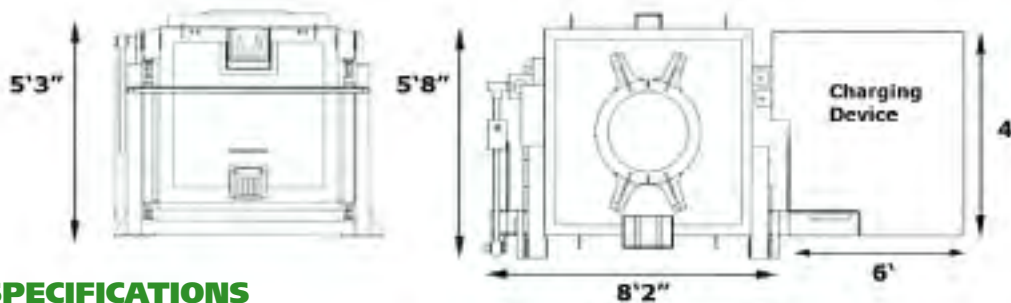
### FURNACE LININGS

*For aluminium and zinc alloy applications:* lined with a high alumina, gas radiant panel hot face, backed with a highly efficient insulation. The system is particularly beneficial in gas-fired applications, providing an effective radiating surface from the non-luminous productions of combustion.

*For copper based alloy applications:* high grade alumina brick to the hot face with graded insulation thereafter.



Gas radiant panel. ▶



### POLICEMAN CONTROL

The furnace is equipped with a "policeman" control. This feature is designed to prevent overheating of the furnace refractories and radiant panels, thus avoiding reduction of their lifespan.

### PYROMETRY

A variety of metal temperature pyrometry can be specified. This includes adjustable or fixed immersion types and thermocouples housed within the crucible for holding applications.

### OPTIONS AVAILABLE

Spilt metal detection, low metal temperature alarm, in-range indicating beacons and metal temperature overshoot control.

### BENEFITS

- Low Energy Costs
- Good Metal Temperature Control
- Very Low Casing Temperature
- Low Noise Level
- Low Holding Costs
- Simple Maintenance



Control panel. ▶

## SPECIFICATIONS

Furnace Type		BT500	BT700	BT1300	BT1500	BT1700	BT1800	BT3300
Crucible		TPX387E	TPX412E TBN412	TPX587E TBN587	TPX1600E TBN750	TPX1800E TBN690	TBN1100	BU1800ALU
Furnace Dims (mm)	A	1480	1480	1780	1780	1815	1815	2100
	B	1560	1560	1630	1630	1850	1850	225
	C	2310	2310	2500	2500	2500	2500	3000
	D	1370	1370	1410	1410	1650	1650	180
	E	1460	1460	1460	1460	1460	1460	2000
Shipping (approx)								
Nett Weight	kg	3500	3800	4200	4200	4500	4500	8000
Gross Weight	kg	3700	4000	4500	4500	480	4800	8500
Volume	m <sup>3</sup>	5.4	5.5	7.3	7.3	8	8	15



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