KING SIZE ELECTRIC RESISTANCE BALE OUT FURNACE

✓ THE IDEAL METAL SUPPLY SOLUTION FOR HIGH QUALITY, LARGE CASTINGS

▲ Morgan's King Size Electric Resistance Bale Out Furnace.

FURNACE DESCRIPTION

Morgan's type HE KSE furnace is constructed using the most efficient low thermal mass materials for the lining and provides the maximum economy in energy costs.

The superb insulation allows for excellent holding performance consistent with low energy costs and long element panel life.

Radiation losses are minimised by use of well-insulated covers that can be sealed when no filling is needed.

IMPROVED TEMPERATURE CONTROL

The setting of control points provides maximum accuracy of metal temperature whether melting from cold or holding.

ENHANCED POWER MANAGEMENT

When selected by the panel mounted switch, this feature will reduce power output by 50% at a preset operating temperature below the normal operating value.

Output power is therefore limited to half power during holding.

Should the temperature fall outside an acceptable limit (for example due to cold metal addition) full power is re-established to provide rapid recovery. Half and full power switch positions are also provided.

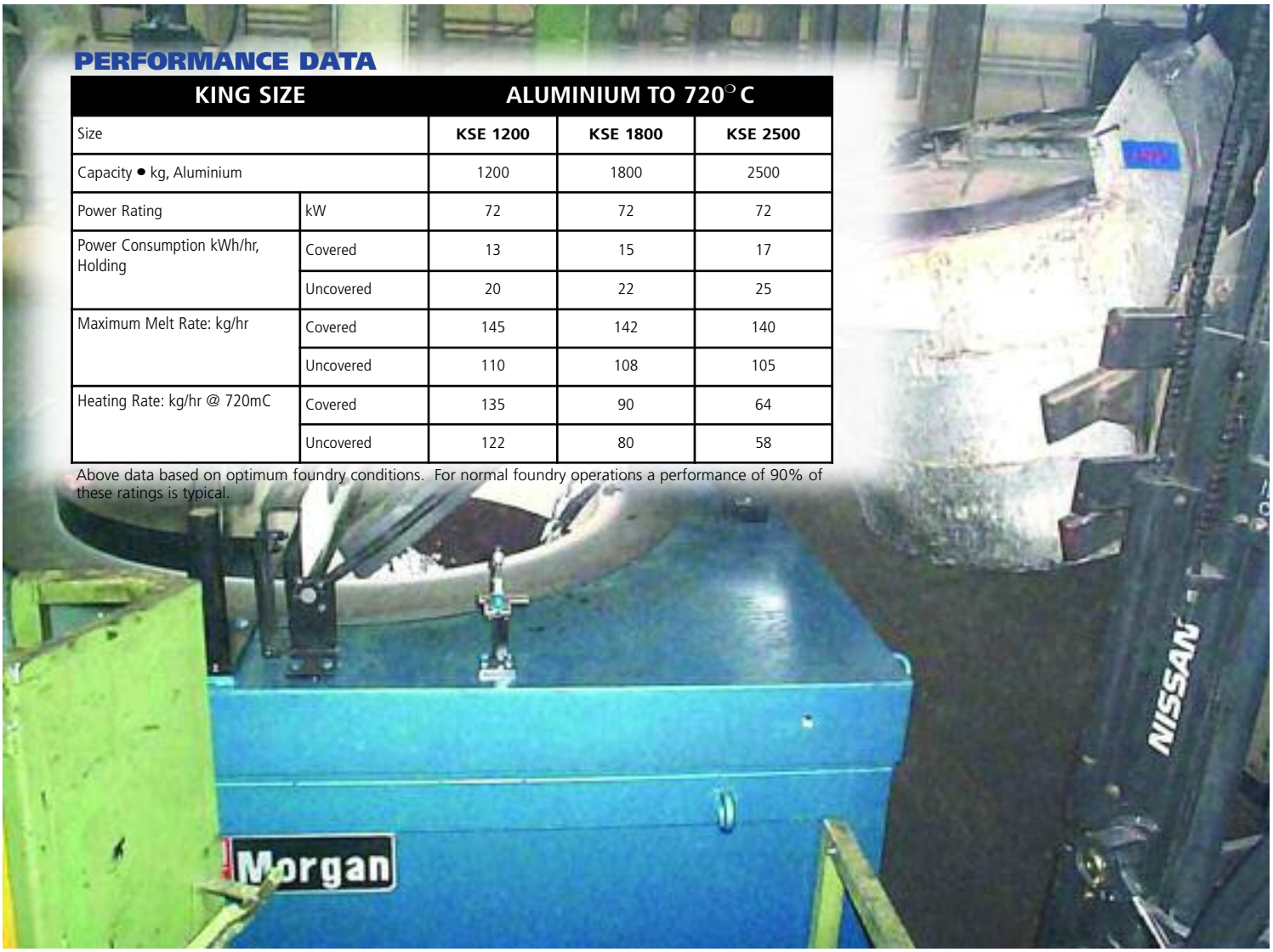
SIZE RANGE

• 1200—3000 kg Aluminium

PERFORMANCE DATA

KING SIZE		ALUMINIUM TO 720°C		
Size		KSE 1200	KSE 1800	KSE 2500
Capacity • kg, Aluminium		1200	1800	2500
Power Rating	kW	72	72	72
Power Consumption kWh/hr, Holding	Covered	13	15	17
	Uncovered	20	22	25
Maximum Melt Rate: kg/hr	Covered	145	142	140
	Uncovered	110	108	105
Heating Rate: kg/hr @ 720mC	Covered	135	90	64
	Uncovered	122	80	58

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



For additional information on Morgan MMS' products & services or to find a location nearest to you, please visit:

www.morganmms.com

Morgan Molten Metal Systems

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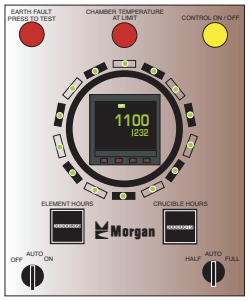
KEY FEATURES

HEATER ASSEMBLIES

Twelve refractory heater panels are arranged around the crucible and extend to the full depth of the furnace chamber. Very low power area loadings ensure a long life while the self-supporting design facilitates ease of removal. Multi-strand element tails and cool stud terminals enable element changes to be made if required in less than 10 minutes, without removing the crucible.



CONTROL PANEL

- Circuit breaker for isolation and protection
- Earth leakage detection for operational safety and personnel protection
- Crucible and heater hour meters
- Programmable time clock switching
- Mimic display for rapid diagnostics

The furnace heaters are depicted on a diagram and ultra bright LEDs are lit when any electric panel is drawing the required current. Metal temperature control may be either from a floating or fixed pyrometer.

The programmable controller will maintain the metal temperature within very close limits by automatic adjustment to heat input, whether melting or holding. The digital display shows both the required and current metal temperature.

TEMPERATURE DEPRESSION

This energy conservation feature enables a lower holding temperature to be automatically selected during periods of non use.

A dedicated real-time/date clock can be programmed to select reduced temperature and to return to operational temperature when required. Similarly, the real-time clock can be programmed to start up and shut down the furnace at preset times and dates.

OUTPUT LIMITED THERMOCOUPLE FAILURE PROTECTION

If the thermocouple sensor fails, this feature provides a programmed level of output power. Typically set to 10–30%, the time proportioning power control provides sufficient heat output power to maintain an aluminium charge within an acceptable temperature range.

IMPROVED TOP COVER INSULATION

The addition of a microporous insulation with exceptional insulating properties to the furnace cover reduces surface temperature, thereby improving working conditions, heat loss and safety.

POLICEMAN CONTROL

The furnace is equipped with a "policeman" control. This feature trips out the power to the element panels above a set temperature ensuring that under no circumstances will they over-heat, thus preventing reduction in their life span.

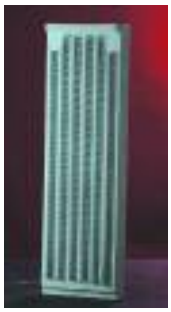
PYROMETRY

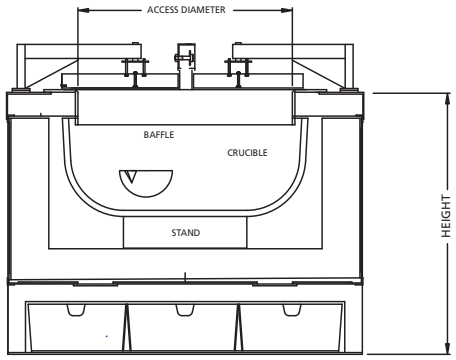
A variety of metal temperature pyrometry can be specified. This includes floating or fixed immersion types.

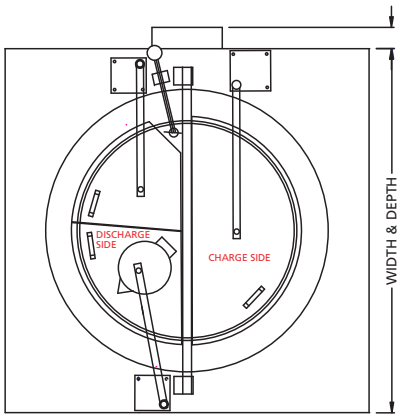
OPTIONS AVAILABLE

Spilt metal detection, low metal temperature alarm, in-range indicating beacons, thyristor power control, pneumatic swing-aside cover, metal temperature overshoot control, kilowatt hour meter, spilt metal trays and support structure.

Electric resistance radiant panel. ▶







SPECIFICATIONS

		SIZE 1200	SIZE 1800	SIZE 2500
CAPACITY BY CRUCIBLE	**PATTERN**	**B-SF: 559 X 1397**	**B-SF: 785 X 1525**	**B-SF: 785 X 1778**
FURNACE DIMENSIONS (mm)	**WIDTH & DEPTH**	2070 mm	2200 mm	2580 mm
	HEIGHT	1485 mm	1720 mm	1720 mm
	ACCESS DIAMETER	1220 mm	1350 mm	1600 mm

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