

MORGAN MKV ELECTRIC RESISTANCE BALE OUT FURNACE

FURNACE DESCRIPTION

The MK V Electric Resistance Bale Out Furnace suitable for metal temperatures up to 850°C, has been designed to have a high level of thermal efficiency, hence keeping energy costs low.

Radiation losses from the metal are minimised through the use of a well insulated, swing aside cover that can cover the crucible when no baling is needed.

The superb insulation provides excellent melting performance from the semi-embedded heater panels.

The advanced insulation materials used in the furnace lining also result in low casing temperatures, providing comfortable working conditions.

HEATER ASSEMBLIES

Twelve high alumina electric resistance heater panels surround the crucible and generally extend to the full depth of the furnace chamber. The self-supporting and interlocking design provides easy removal, should a panel require changing.



- Energy Efficient
- Good Crucible Life
- Silent Operation
- Environmentally Friendly



MKV ERBO BO 01/12. MMP reserve the right to change specs. at any time and are not responsible for typographical errors

HIGH EFFICIENCY

The combination of semi-embedded heater panels optimising radiant heat transfer and the use of advanced insulating materials, provide a melting and holding furnace of high efficiency with comfortable working conditions.

SIZE RANGE

The MK V Electric Resistance Bale Out is available in the size range 85kg - 1327kg aluminium. Other crucible patterns than those shown in the table are available to provide the capacity span indicated for each size reference.

Also Available:
Zinc applications. H.T. versions up to size 3, for brass, to 1000°C.

ELECTRIC SUPPLY

400/415/480v
3 Phase 50/60hz.

MORGAN MKV ELECTRIC RESISTANCE BALE OUT FURNACE

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KEY FEATURES

HEATER PANELS

The furnace has twelve, semi-embedded, FeCrAl wire heaters surrounding the crucible. Designed with low surface watt loadings and freely radiating coils the heaters give excellent life. Should a panel fail, it can easily be changed and, if absolutely necessary, in a hot condition without metal removal.

CONTROL PANEL

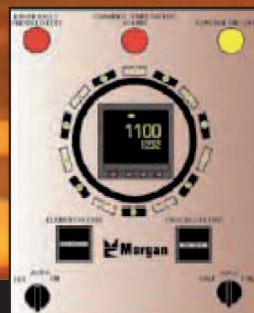
A modern high quality control panel provides the following features:

- Protective circuit breaker, door interlocked
- Heavy duty contactors or Thyristor power control*
- Programmable time clock.
- Fully proportional digital temperature controller
- Policeman lining protection pyrometry
- Crucible and heater operational hour meters
- Heater operation LED mimic display
- Temperature depression selection switch

* Optional at extra cost

OPTIONAL FEATURES AVAILABLE

- 'In range' temperature beacons
- Low temperature alarm
- Spilt metal detector
- Pneumatic crucible cover
- Kwh. meter
- Thyristor power control
- Communications
- Metal temperature overshoot control

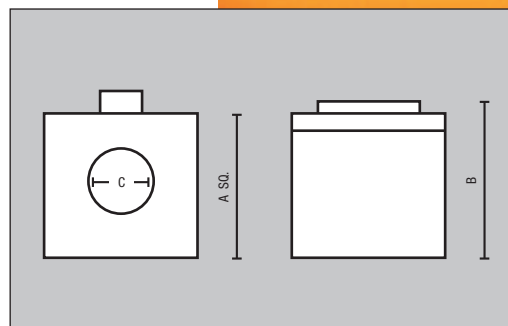


Control and Mimic Display

Data based on optimum foundry conditions and practices.

For typical foundry operations a performance factor of 90% of performance ratings should be assumed.

Data for zinc alloys available on request.



ADVANCED DESIGN

The MK V Electric Resistance Bale Out furnace is compact, of robust design and with the exception of the control panel, has no separate stand alone components. High reliability is obtained by the use of high quality components and well proven semi-embedded heater panel technology.

TEMPERATURE DEPRESSION

This energy saving and safety feature enables a lower holding temperature to be automatically selected during periods of non-use.

The control panel's real time clock can be programmed to select reduced temperature and to return to operational value when required.

The time clock can also be set to switch the furnace on and off at pre-set dates and times.

METAL TEMPERATURE CONTROL

The temperature can be sensed from a floating, fixed or crucible pyrometer. The dual display programmable digital controller maintains close control, by regulating the power input to the heaters, relative to actual metal temperature and set value.

MKV HE ELECTRIC RESISTANCE BALE OUT												
ALUMINIUM TO 720c												
MkV Furnace Size Reference	Size 1		Size 2		Size 3		Size 4		Size 5		Size 6	
Working Capacity	119	165	233	271	327	444	575	575	815	1024	762	1327
Max Power Rating	46	46	46	46	54	72	72	96	120	120	120	150
Power Consumption	2.8	2.8	4	4	4.5	6.6	7	7	10.2	11	14	15
kWh/hr Holding	7.5	7.5	9.5	9.5	10	14.5	15	15	20	22	34	35
Melt Time (Mins)												
1st Heat	144	173	216	260	252	300	380	280	330	395	310	420
Subsequent Heats	94	113	151	181	185	215	278	208	216	258	202	275
Power Requirement Kva	50	50	50	50	60	80	80	105	130	130	130	170

Typical specific energy consumption: subsequent heat, 0.55kWh/kg* Throughput melting, 0.41kWh/kg* *Variances subject to crucible pattern. Brass melting and other furnace sizes available.

		SIZE 1		SIZE 2		SIZE 3		SIZE 4		SIZE 5		SIZE 6	
Capacity by Crucible	Capacity Range Kg Al. 85 - 172 Pattern		Capacity Range Kg Al. 163 - 327 Pattern		Capacity Range Kg Al. 310 - 575 Pattern		Capacity Range Kg Al. 595 - 1135 Pattern		Capacity Range Kg Al. 762 - 1327 Pattern		Capacity Range Kg Al. 950 - 1327 Pattern		
	Kg		Kg		Kg		Kg		Kg		Kg		
	BX166/BU100	85	BX202/BU210	163	BX1264	310	BX850/BN600	595	52100	762	60815	950	
	BX167/BU125	103	BX302/BU250	233	BX847/BN500	441	BX851/BN800# 810		52330	860	60990	1200	
	BX168/BU150	119	BX401/BU300	271	BX247/BU500	444	BX852/BN1100* 930		52370	1100	61050	1327	
	BX169/BU175	144	BX402/BU350	327*	BX263/BU600	557*	BX853	1135	52770	1300			
	BX171/BU200	165											
	BX177/BU202	172											
Furnace	A	1190		1190		1420		1526		1651		1740	
Dimensions	B	900		900 - 980*		1130 - 1270*		1330# - 1520*		1125 - 1395		1280 - 1490	
(mm)	C	433		510		660		735		864		940	
Shipping (approx)		900		900		1300		2500		3000		3500	
Net Weight	Kg												
Gross Weight	Kg	1100		1100		1500		2750		3300		3800	
Volume	M3	3.7		3.7		5.35		10		7		8	

* Increased furnace height