

MMP

MOLTEN METAL PRODUCTS



MORGAN MKV GAS/OIL LIFT OUT FURNACE

FUEL TYPES & SPECIFICATIONS

The furnace is available for the following gaseous fuels:

Fuel Oils:	35 seconds Redwood No1. (1.2° Engler @ 50°C) Kerosene (to order)
Natural Gas:	9000 kcals/M ³
Propane:	22000 kcals/M ³
Butane:	28000 kcals/M ³
Dynamic Pressure:	20 - 35mbar
Note:	Pressures higher than 35mbar will require additional regulation
Standard Electrical Supply:	230v 1ph. or 400/415v 3ph. 50hz + N.

Data based on optimum foundry conditions and practices.

For typical foundry operations a performance factor of 90% of performance

GAS/OIL LIFT OUT FURNACE

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FURNACE DESCRIPTION

The Morgan lift out furnace can melt a wide range of metals and alloys up to iron temperatures, using AX or CX type crucibles inserted and taken out with tongs.

The steel furnace casing is lined with 63% alumina brick backed by high grade insulation. The swing aside cover of the furnace has a central exhaust which deflects the exhaust gasses over the top of the crucible to pre-heat the solid charge. The furnace is equipped with a drain hole assembly which will allow metal entering the furnace chamber to escape to a suitable catchment pit.

MODE OF OPERATION

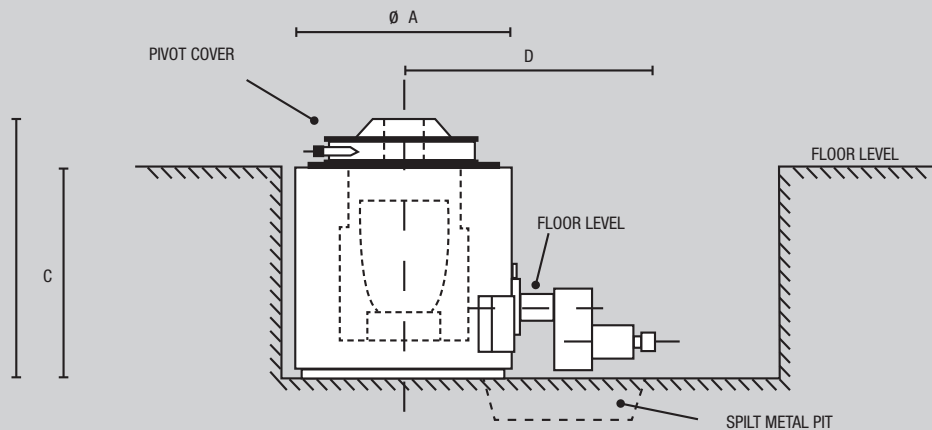
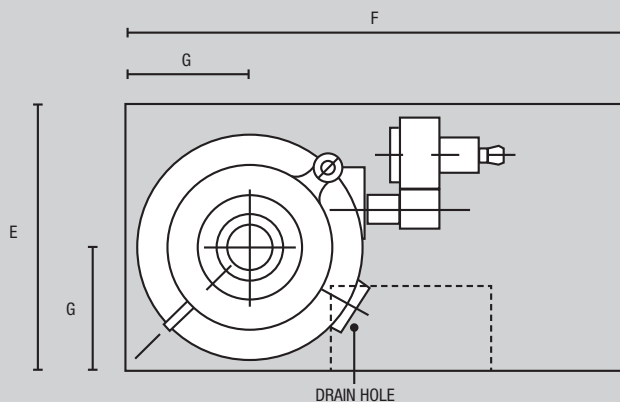
For the two smaller furnaces, LO1 and LO2, the crucible is drawn by using 'T' shaped tongs. For the larger furnaces, a hoist or crane with either straight reined or chain tongs is necessary.

TYPICAL PERFORMANCE																
METAL	ALUMINIUM 720C				BRONZE TO 1150C				COPPER TO 1200C				IRON TO 1400C			
Furnace Size	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Capacity Kg	8	20	35	60	25	60	100	150	25	60	100	150	20	50	80	135
Oil Firing First Heat (minutes)	10	13	15	20	25	30	40	45	30	43	45	50	50	60	80	90
Subsequent Heat (minutes)	8	10	12	15	20	25	30	35	25	32	36	42	45	55	65	75
Fuel Consumption. Litres, Subsequent Heat	1.5	3.5	5	8	4	8.8	12	15	5	10	14	22	10	21	29	44
Gas Firing, First Heat (minutes)	10	13	20	25	30	35	45	50	35	40	55	65	NOT APPLICABLE			
Subsequent Heat (minutes)	8	10	15	20	25	30	40	45	30	35	45	55				
Fuel Consumption Subsequent Heat .kWh	22	30	55	90	60	88	147	220	72	105	165	285				
Gas Requirement M3/Hour N.G.	16	18	22	28	16	18	22	28	16	18	22	28				
Oil Requirement Litres/Hour	12	21	25	32	12	21	25	32	12	21	25	32	14	21	27	35

SIZE RANGE

Lift out furnaces are available in four standard sizes to give capacities from 8kg - 60kg Aluminium 25kg - 150kg Bronze.

SPECIFICATIONS								
Capacity / Crucible	L01 Capacity Kg Brz		L02 Capacity Kg Brz		L03 Capacity Kg Brz		L04 Capacity Kg Brz	
	Pattern CX40. AX20	Kg 25	Pattern CX120. AX60	Kg 60	Pattern CX200. AX100	Kg 100	Pattern CX350. AX150	Kg 150
Furnace Dimensions (mm)	A	640	745	795	895			
	B	705	850	960	1220			
	C	598	706	802	905			
	D	860	913	937	990			
	E	786	896	928	1008			
	F	1660	1766	1815	1918			
	G	360	413	438	488			
Shipping (approx) Net Weight	Kg	500	710	920	1220			
Gross Weight	Kg	560	760	1020	1320			
Volume	M3	0.7	0.96	1.38	1.7			



GAS/OIL LIFT OUT FURNACE

INSTALLATION

The furnace is supplied complete with stand-alone control panel and interconnecting cable harness. It requires only to be connected to the electrical and fuel services. Sizes 1 and 2 can be floor-standing whilst with the larger sizes, it is recommended that they are installed into a pit to facilitate easy crucible lifting. In all cases provision should be made for a spilt metal pit.

FURNACE VERSIONS

Lift out furnaces are available for operation with gas or fuel oil and in three temperature versions.

- 1) For metal temperatures up to 1100°C using gas or oil.
- 2) HTG for metal temperatures up to 1250°C. using gas.
- 3) HTO for temperatures up to 1400°C using oil only.

HIGH TEMPERATURE VERSION

For metal temperatures above 1100°C the H.T. versions are supplied, which permit temperatures up to 1250°C with gas and 1400°C with oil. They are supplied with stand-alone combustion air fans and have automatic fuel/air ratio controlling devices.

BURNER EQUIPMENT

For oil firing below 1100°C the burner is of the pressure jet, integral fan, packaged type, suitable for fuel oils. The high temperature version uses a medium or high pressure air atomising burner with a stand-alone fan. A small gas supply is required for this type in order to provide an ignition source.

Gas fired furnaces are similarly divided with respect to temperature. Below 1100°C the burner is of the packaged, integral fan type. Above this temperature the burner is a medium air pressure, nozzle mix type with a stand-alone fan.

All burners are automatic, start stop, with UV flame failure detection.