

MMP

MOLTEN METAL PRODUCTS

MORGAN MKV GAS/OIL CENTRAL AXIS FURNACE

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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:	400v/ 415v. 3ph. 50hz. + N.

GAS/OIL CENTRAL AXIS FURNACE

FURNACE DESCRIPTION

The Morgan Central Axis Furnace can melt a wide range of metals and alloys up to iron temperatures, using TPX pour over the top crucibles.

The steel furnace casing is lined with 63% alumina brick, backed by high grade insulation. The cover of the furnace has exhaust ports around the crucible which gives further heating to the top of the crucible providing some pre heat to 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

Charge materials are loaded into the crucible and melting commenced. The brim full capacity of the crucible is significantly higher than the working liquid metal capacity, allowing near full charges to be loaded. However, additions may be required during the melting time. When ready the contents are discharged by hand-wheel tilting at the central axis, pouring over the crucible top.

SIZE RANGE

CA furnaces are available in four standard sizes to give capacities from 22kg - 95kg aluminium, 70kg - 300kg bronze.

INSTALLATION

The furnace is supplied complete with stand-alone control panel, fan and interconnecting cable harness. It requires only to be connected to the electrical and fuel services. In all cases provision should be made for a spilt metal pit.

FURNACE VERSIONS

Central Axis Furnaces are available for operation with gas or fuel oil in two versions:

- 1) For metal temperatures up to 1250°C using gas or oil.
- 2) For temperatures up to 1400°C using oil only.

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

HIGH TEMPERATURE VERSION

For metal temperatures above 1250°C only oil fired versions are offered which permit temperatures up to 1400°C and are suitable for grey cast iron melting. They are supplied with a stand-alone high pressure combustion air fans and have automatic fuel/air ratio controlling devices.

BURNER EQUIPMENT

The oil 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 for temperatures up to 1250°C the burner is a medium air pressure, nozzle mix type with a stand-alone fan.

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

TYPICAL PERFORMANCE									
METAL	ALUMINIUM 720C			BRONZE TO 1150C			IRON TO 1400C		
Furnace Size	2	3	4	2	3	4	2	3	4
Capacity Kg	35	60	95	120	200	300	80	160	240
Oil Firing First Heat (minutes)	40	45	55	70	75	95	150	160	180
Subsequent Heat (minutes)	30	35	40	45	55	70	115	125	130
Fuel Consumption, Litres, Subsequent Heat	7	12	19	16	27	38	77	95	100
Gas Firing, First Heat (minutes)	50	55	65	75	80	100	NOT APPLICABLE		
Subsequent Heat (minutes)	35	40	45	50	60	75			
Fuel Consumption Subsequent Heat .kWh	87	135	195	170	290	410			
Gas Requirement M3/Hour N.G.	15	21	27	20	29	34			
Oil Requirement Litres/Hour	15	21	29	22	30	33			

SPECIFICATIONS							
		CA2 Capacity Kg Brz		CA3 Capacity Kg Brz		CA4 Capacity Kg Brz.	
		Pattern TPX901	Kg 120	Pattern TPX904	Kg 200	Pattern TPX14	Kg 300
Furnace Dimensions (mm)	A	1700		2000		2000	
	B	940		955		990	
	C	800		850		930	
	D	1170		1385		1385	
Platform	E	-		1475		1560	
Platform	F	-		1190		1255	
Shipping (approx) Net Weight Kg		1120		1470		1680	
Gross Weight	Kg	1470		1780		1980	
Volume	M3	3.17		4.93		5.7	

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