Pillar non-ferrous melting systems are designed to melt and pour a variety of alloys.

# Drop Coil Furnace (DCF)

The Drop Coil Furnace is designed for use with free standing crucible melting of non-ferrous metals in conductive crucibles. Features include a high efficiency coil, free standing fabricated steel furnace base, confinement area, refractory pedestal for crucible support, single hand operated lever, pneumatic cylinder and flow control valves.

# Hand Furnace (HF)

Hand Furnace complete with refractory fiber reinforced shell, top and bottom, shank plates and induction coil with terminations for use with water cooled leads.





Hand Furnace, **Manual Pour Operation** 



## **Melting System Specifications:**

Pillar MK-25 Power Supply: 30 kW - 50 kW Power Range:

# **Drop Coil Furnace System** Includes:

- MK-25, 30 kW Power Supply
- Drop Coil Furnace, 30 lb, Pneumatic Operation
- Lead Adaptors
- Water Cooled Power Leads up to 15 ft (4.5 m)

## **Hand Furnace System** Includes:

- MK-25, 50 kW Power Supply
- Hand Furnace, 50 lb Manual Pour Operation
- Lead Adaptors
- Water Cooled Power Leads up to 15 ft (4.5 m)

# **Options:**

- Water Cooling and Recirculating System to water
- Water Recirculating System Chiller

Drop Coil Furnace, **Pneumatic Operation** 

SX System #	MK-25 Power Supply Rating		Furnace / Size (Drop Coil or Hand)	Cooling System Type	Melt Time Steel at 3,000°F*	Melt Time Iron at 2,700°F*	Melt Time Brass at 2,150°F*	Melt Time Gold at 2,200°F*	Melt Time Silver at 1,900°F*
7	30 kW	10,000 Hz	30 lb (14 Kg) DCF	Water to Water	_	_	_	34 minutes	60 minutes
8	50 kW	10,000 Hz	50 lb (23 Kg) HF	Chiller	18 minutes	15 minutes	17 minutes	_	_

<sup>\*</sup> Based on nominal furnace size for a second heat utilizing a lid or blanket and a rammed lining with a 10% heel, when lining is hot, charge is dense and bus lead runs proper.



# Non-Ferrous Melting Systems

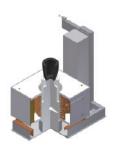


# Drop Coil Furnace (DCF) & Hand Furnace (HF) — MK-25 Power Supply



## **MK-25 Power Supply**

- IGBT transistor modules
- Electrical isolation
- Single main control board
- NEC & NFPA wiring codes
- Inlet and outlet pressure gauges with pressure differential switch
- Internal heat station
- Water inlet and outlet on top of cabinet
- Safety door interlock switch
- CE or ETL certification available
- Forklift slots under cabinet
- Precut power exit and entry locations
- Current transformer for sensing the coil current
- Control board with a choice of three feedback inputs
- Front panel diagnostics
- 95% conversion efficiency



#### **Drop Coil Furnace (DCF)**

- Single post retract mechanism for clear access to crucible
- High efficiency induction coil with
- Smooth pneumatically operated lift & lower operation
- Single hand lever or foot switch
- Flow control valves
- Free Standing structural steel base and frame
- Confinement area
- Precast refractory crucible base slotted for pour shank
- Designed for Pour Shank Clearances
- High Strength Ceramic and refractory box construction



#### **Hand Furnace (HF)**

- High efficiency induction coil with cast liner
- Refractory fiber reinforced shell, top and bottom
- Two man pour shank yoke attachments designed for use with a customer provided two man pour shank
- Hand furnace support table with heat resistant table top and structural frame. Table dimensions: 16"W x 18"H x 18"D

# **Ancillary Equipment**



#### Water Cooling and Recirculating System - WCRS-1-5

- Stainless steel storage tank
- · Latched stainless steel cover
- Sight and temperature gauge
- Bronze pump with open drip proof
- Manual pump starter and controls
- Stainless steel plate type water-towater heat exchanger
- All non-ferrous piping
- Unitized base



#### Water Recirculating System -Model 5000

- Air-cooled portable chillers
- · Local or remote condensor
- Non-ferrous construction
- Safety disconnect
- Up to 45°F ambient temperature with 65°F leaving fluid temperature
- Stainless steel pump
- Nonferrous center circuit construction
- Built-in diagnostics
- R-410A

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