

Ferrous Melting Systems

SX-1
SX-2
SX-3
SX-4
SX-5
SX-6

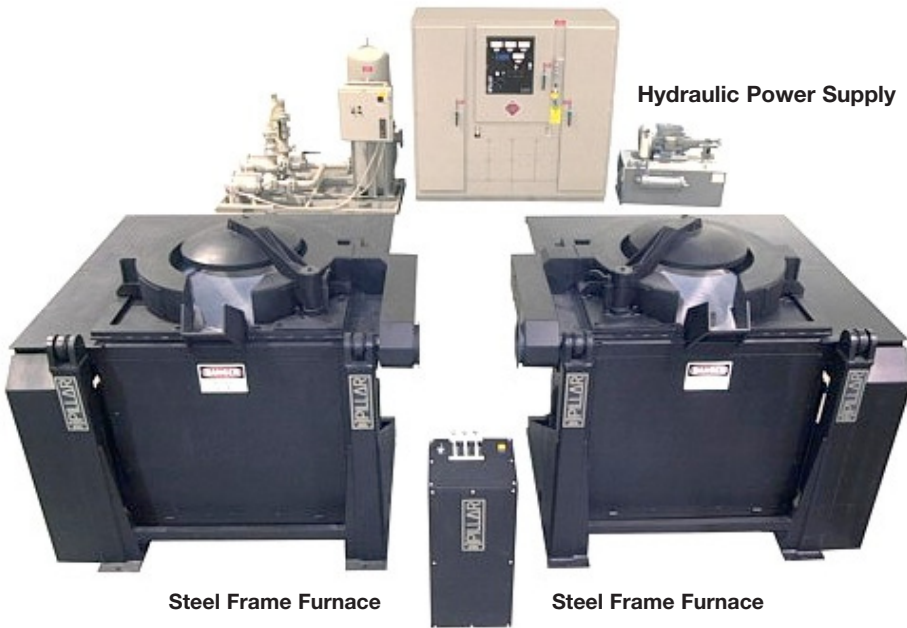
Steel Frame Furnaces (SFF)

Versatility, reliability and flexibility describe the complete system featured here, incorporating the Pillar Induction fully-shunted, steel frame furnaces (SFF). Processing steel and iron, these melting systems utilize the industry standard for power supply performance – the Pillar patented MK-8 Power Supply.

MK-8 Power Supply

Water Cooling System

Hydraulic Power Supply



Melting System Specifications:

Power Supply: Pillar MK-8
Power Range: 100 kW - 750 kW

System Includes:

- MK-8 Power Supply with (2) Furnace Selector Switches
- (2) Steel Frame Furnaces with Hydraulic Tilt Operation
- Hydraulic Power Supply
- Hydraulic Valve Pedestal
- Lead Adaptors
- Water Cooled Power Leads

Options:

- Manually Operated Furnace Lids
- Fume Collection Ring
- Isolation Water Cooling System
- Furnace Weighing Systems Available on 2,000 lb and Larger Furnaces
- Closed Pressurized Water Cooling System (Single and Dual Pump)
- Cooling System available with dry or evaporative cooler
- Melt Monitoring Systems
- Melt-Dek – Prefabricated enclosure and operating platform for the melt system

SX System #	MK-8 Power Supply Rating	Frequency Rating	Steel Frame Furnace (SFF) Size	Cooling System Type	Melt Time Steel at 3,000°F*	Melt Time Iron at 2,700°F*
1	100 kW	3,000 Hz	220 lb (100 Kg) SFF	Water to Water (Power Supply Only) or	33 minutes	29 minutes
2	300 kW	1,200 Hz	550 lb (250 Kg) SFF		Single Pump Station with Dry Cooler or	26 minutes
3	450 kW	600 Hz	1,100 lb (500 Kg) SFF	Dual Pump Station with Dry Cooler		35 minutes
4	600 kW	600 Hz	2,200 lb (1,000 Kg) SFF		Dual Pump Station with Dry Cooler	52 minutes
5	750 kW	600 Hz	2,200 lb (1,000 Kg) SFF	Dual Pump Station with Dry Cooler		41 minutes
6	750 kW	600 Hz	3,300 lb (1,500 Kg) SFF		Dual Pump Station with Dry Cooler	62 minutes

* 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 proper interconnect.

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Steel Frame Furnace (SFF) — MK-8 Power Supply



MK-8 Power Supply

Standard Features:

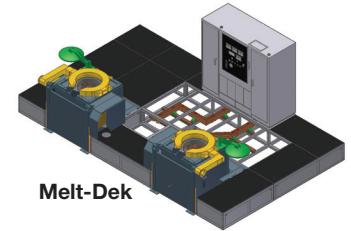
- High Efficiency design allows use of maximum inlet water temperature of 115° F.
- Full Range Power Adjustment from a single operator control.
- Load Matching Water Cooled Capacitors with pressure sensitive safety switches
- Fused disconnect switch
- Instrumentation
 - Output power (KW) meter
 - Output voltage meter
 - Operating frequency meter
 - Leakage current meter
- Self Diagnostic monitor and indicators
- Operator Controls
 - High frequency power on/off/reset
 - Power control potentiometer
 - Leakage detector test / reset push button
- Compact, Economical, Easy Access Package incorporates a design with convenient front access
- Most Efficient Coupling Method utilized to give the best matching capabilities over a wider range of operating conditions without the need for transformer tap or capacitor switching

Steel Frame Furnace (SFF)

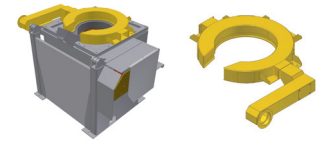


- Fully grounded structural steel frame assembly & steel column type stanchions
- Fully captive electromagnetic flux containment system
- High efficiency induction coil
- Upper & lower refractory cooling coils
- Precast solid refractory bottom
- Sectioned precast top insulation ring
- Leak detector probes
- Hydraulically tilted furnace

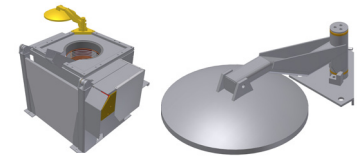
Optional Equipment



Melt-Dek



Fume Collection Ring



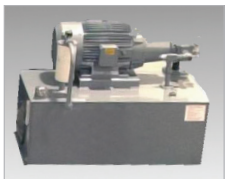
Manually Operated Furnace Lids

Furnace Selector Switches

- Safety interlocks
- Front access
- Cast aluminum handle assembly for reliable, long life



Hydraulic Power Supply



- Pump, motor, manual motor starter, start/stop buttons, reservoir & filter
- Use of a water/glycol based fluid or suitable synthetic fluid required

Closed Pressure Water Cooling System – Single Pump (Dual also available)

- Pump Station with Dry Cooler
- Closed & Pressurized System Cooling
- Air elimination system
- Expansion tank
- Structural steel frame
- Pump with motor
- Internal piping & wiring included
- Electrical & temperature control panel with alarm circuit
- Dry Cooler (liquid to air) complete with fans, coils and enclosure for outdoor mounting
- Automatic pump switchover to standby pump (Dual Pump Station Only)



Ancillary Equipment



Isolation Water Cooling System (ICER)

- Water to Water heat exchanger
- Closed & Pressurized Power Supply Cooling
- Air elimination system
- Expansion tank
- Structural steel frame
- Pump with motor
- Requires customer supplied water source



Dry Cooler

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