

#### INDUCTOFORGE® Modular Billet Heating System





## Overview

#### Designed to fit the flexible manufacturing requirements of today's forge shop.

The powerful combination of advanced engineering, product innovation and over 50 years experience in induction heating has helped Inductoheat become a world leader in the production of billet and bar heating equipment for the forging industry.

The Inductoforge® Modular Billet Heating System offers flexibility and efficiency with its individually controlled (500Hz - 6000Hz) power modules. The flexible modular design results in a much finer and more accurate control of the billet temperature.

The iHAZ<sup>™</sup> Temperature Profile Modeling Software enables advanced temperature control of the billet heating process. iHAZ<sup>™</sup> software allows you to customize a billet temperature profile (Induction Heat Affected Zone) to best suit your billet or bar heating application. It can also generate the optimum running parameters and set points for Standby and Cold Start which are stored as a recipe in the billet heater's PLC.

Additional Features & Benefits:

- Optimized utility costs
- Replaceable coil liners
- Optimized efficiency
- Quick release connections
- Variable in-feed drive control
- Reduced downtime & maintenance
- Compact, heavy-duty modular design
- Automatic billet purge system



## Features

#### INDUCTOFORGE®

**Infeed Systems** - Heavy duty pinch roll and tractor chain drive infeed systems push the billets through the Inductoforge® coil line at a very accurate rate controlled by a variable frequency drive. These systems automatically adjust for the diameter of the billet (for quick changeover).

HEATER

STANDBY

Hot Billet Extraction - The fast extractor equipment is manufactured to provide many years of low maintenance operation. Heavy-duty, multi-strand conveyor chain works with the gravity pinch wheel to quickly extract parts to ensure uniform heating from the front to the back of the billet (also acting as a weld breaker). The fast extractor can be configured with an infrared temperature pyrometer and accept/reject gate to allow for the quality control operation requirements of the forging cell.

Automatic Billet Feed - Heavy-duty step feeders, bowl feeders, feeder loaders and bin tippers can be added to increase the productivity of the heater by automatically feeding billets from a bin into the coil line. An optional billet weigh system rejects parts that do not meet the acceptable weight range.

Advanced Temperature Control - To assist the forge shop, all Inductoforge<sup>®</sup> Billet Heating Systems are supplied with our proprietary temperature profile modeling software, iHAZ<sup>™</sup>, a predictive numerical simulation technology that accurately forecasts temperature uniformity throughout the cross-section of the billet. By utilizing this software, you can set up ideal system recipes to delivery properly heated billets, maintain acceptable surface to core temperature uniformity, and optimize overall system efficiency.

**Productivity Enhancements** - Optional billet purge system and coil shuttles can be included. The billet push-out chain allows almost all of the billets in the line to be heated. The coil shuttle provides a quick method of switching to a different coil size or to a backup coil.









# Specs



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	Model	Max. Rate Ibs/hr (kg/hr	Input kVA (@max. kW)	Cooling Water gpm (lpm)	PHYSICAL DIMENSIONS - INCHES (MM)							Weight
					А	В	С	D	E	F	G	Weight Ibs. (kg)
1 Module	1.65 TPH	3300 (1500)	588	70 (264)	313 (7950)	116 (2930)	138 (3500)	60 (1500)	61.5 (1562)	75 (1905)	142 (3600)	3000 (1360)
2 Module	3 TPH	6000 (2700)	1160	135 (511)	373 (9475)	116 (2930)	197 (5000)	60 (1500)	61.5 (1562)	75 (1905)	142 (3600)	5000 (2270)
3 Module	5 TPH	10000 (4540)	1805	205 (776)	496 (12600)	160 (4064)	275 (7000)	60 (1500)	61.5 (1562)	85 (2159)	142 (3600)	7000 (3175)
4 Module	6.5 TPH	13200 (6000)	2330	270 (1022)	555 (14100)	160 (4064)	335 (8500)	60 (1500)	61.5 (1562)	85 (2159)	142 (3600)	9000 (4080)
5 Module	8.25 TPH	16500 (7500)	2910	345 (1305)	646 (16410)	160 (4064)	427 (10840)	60 (1500)	61.5 (1562)	85 (2159)	142 (3600)	11000 (5000)
6 Module	11 TPH	22000 (10000)	4075	420 (1590)	726 (18440)	160 (4064)	505 (12840)	60 (1500)	61.5 (1562)	85 (2159)	142 (3600)	13000 (5900)

\*Additional modules can be added as needed

Note 1 - Based on heating carbon steel from 70 to 2250°F (20 to 1230°C).

Note 2- 480 V, 3ph, 60Hz input.

Note 3- All induction heating systems must have an isolation transformer.

Note 4- Optional 12 Pulse connection is available.

Note 5-95°F (36° C) Max. inlet water temperature.

\*\*Specifications subject to change without notice.

Note 6- Output frequency- 500Hz, 1000Hz, 6000Hz, 1000/3000Hz.

Note 7- Max. single pod kW for 6000Hz is 300kW.

Note 8- Weight includes modules, coil and control/water cabinet (does not include step feeder and bin tipper). Note 9- Max. rate is dependent on part size and coil design.

Other forging capabilities from the Inductotherm Group:

• Alpha 1: induction forging coils & transformer /coil repair

• Clinton Machine: heavy duty material handling equipment

# We can help you do great things with metal.

Give us a call or send us a note. Telephone: **248-585-9393** Email: **sales@inductoheat.com** 



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