

Pusher furnaces can be designed for preheat, dewax and curing operations. This style furnace can replace existing batch furnaces, increasing efficiency and continuity in your foundry.



Internal chamber of 2-row pusher furnace with integral incineration

A pusher type furnace for dewax operation can incorporate integral incineration, utilizing the furnace chamber to effectively and efficiently burn out all wax materials, eliminating the need for an afterburner. (See DIAGRAM **A**)

A pusher type furnace for a preheat operation can be designed to utilize load recuperation to improve fuel efficiency. (See DIAGRAM **B**)



Two-row pusher furnace with integral incineration feeding two separate casters

A pusher type furnace offers many benefits:

- Minimizes handling of molds
- Fits seamlessly into automated production lines
- One-, two- and three-row furnaces are common
- Each row can operate independently and can feed separate casters
- $\pm 25^{\circ}\text{F}$ temperature uniformity from 1700°F to 2250°F standard, with optional $\pm 15^{\circ}\text{F}$ uniformity
- Trays can be automatically cycled into the furnace to accommodate furnace demand
- Optional bar code recipe management system
- Manual or automated tray handling conveyor
- In-Situ oxygen monitoring and/or control optional
- Optional recuperative combustion system (See Bulletin ACFS-109)
- Optional 1400°F bypass control
- Allen-Bradley CompactLogix PLC system standard with customer preferences easily integrated (Siemens, Honeywell, Eurotherm, Automation Direct, etc.)
- Optional network integration using Allen-Bradley FactoryTalk, Wonderware, Intellutions and SpecView, etc.
- Type N, R or S thermocouples available

PUSHER TYPE FURNACES

Multiple-Row Pusher Furnaces

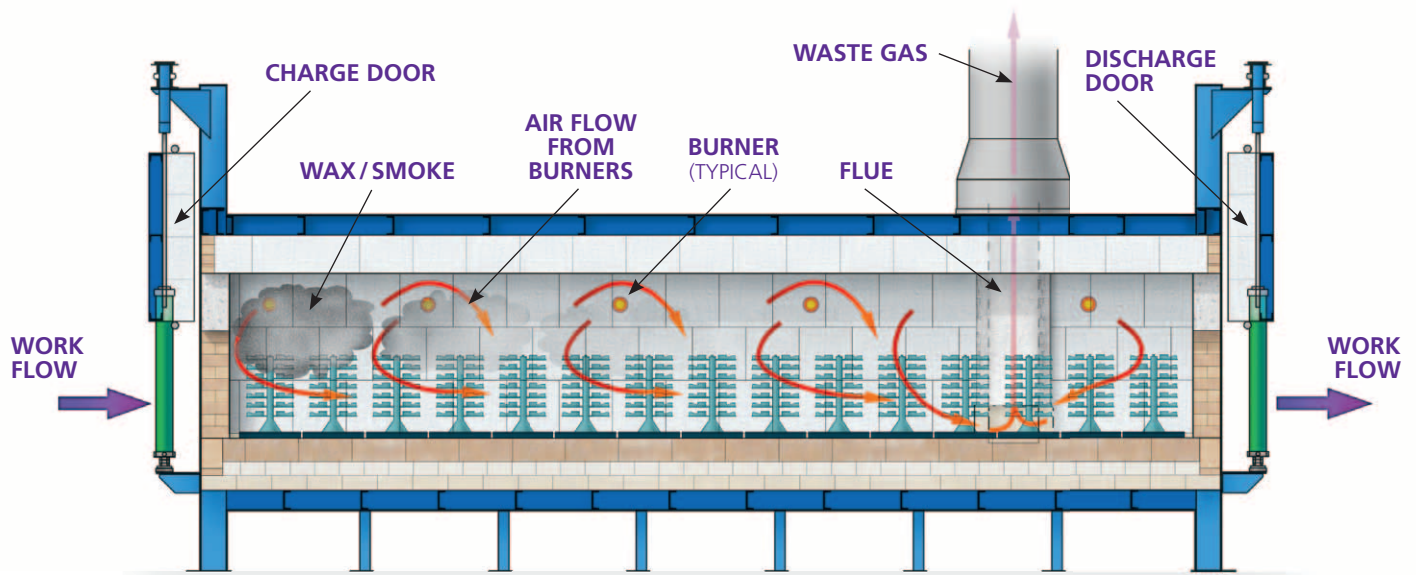


DIAGRAM A: Self-Incinerating Burnout Pusher Style Furnace — “Integral Incineration”

Molds with wax enter the furnace where burners provide the heat, turbulence and oxygen for the wax to burn. The resulting smoke travels downstream towards the flues and is incinerated within the furnace chamber. The wax is completely incinerated by the time it exits the flues, eliminating the need for an afterburner and resulting in a low maintenance compact system.

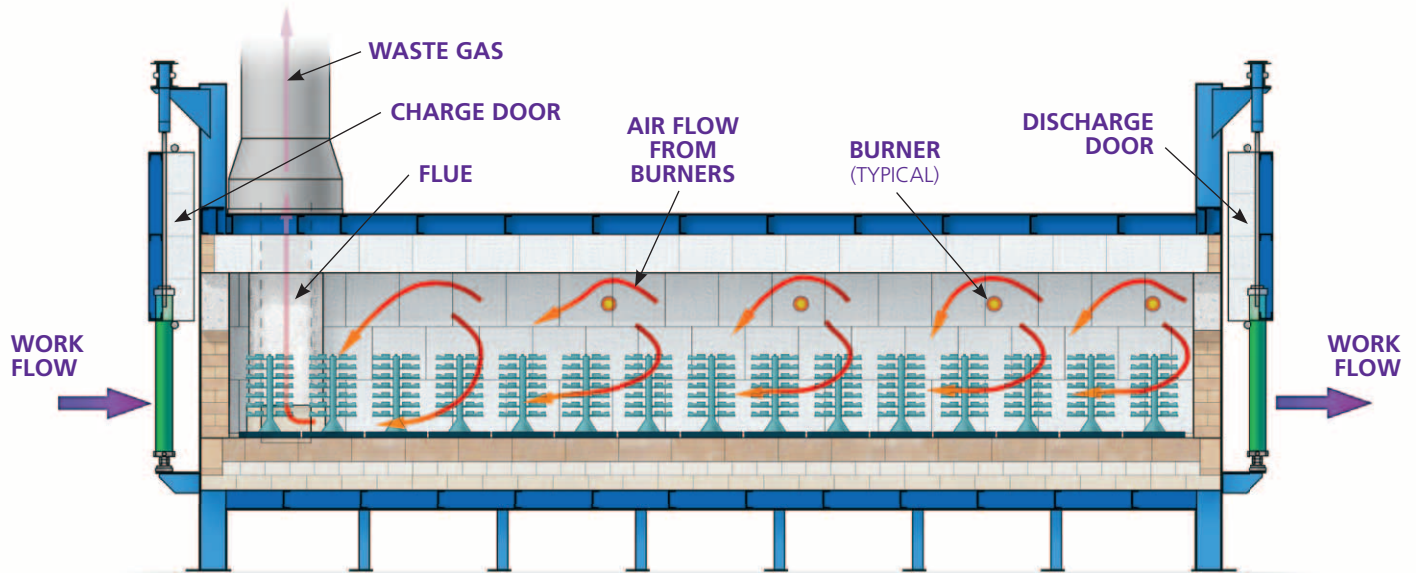


DIAGRAM B: Preheat Pusher Style Furnace — “Load Recuperation”

Flues are located at the charge end of the furnace and the burners are located in the last $\frac{2}{3}$ of the furnace. The flues draw the hot gases past the cold molds, which absorb heat from the waste gases. This reduces the flue gas temperature and provides more efficient use of the available heat.



Armil/CFS, Inc.

15660 La Salle Street, South Holland, IL 60473

708-339-6810 office • 708-339-0517 fax

email: info@armilcfs.com

www.armilcfs.com

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