MIP 6
INDEX BATCH TEMPERING

Ferrite Index Batch Tempering Takes Frozen Products from Zero to 28 Degrees in Minutes, Not Days!

Precision Tempering Control from Ferrite

Greatly reduce tempering time for frozen meat, fish, poultry, fruit or bakery products from days to minutes with Ferrite's indexing batch tempering system. Temper up to 13,000 pounds of zero degree Fahrenheit (-18 degrees Celsius) product per hour.

Microwave tempering enables precise control of product temperature for further processing, such as slicing, dicing, forming, and molding.

Simplify the Tempering Process

The MIP 6 simplifies the food tempering process. It eliminates rooms and racks, along with the resulting sanitation issues and brings precision to your food processing procedures. Microwave tempering gives you control over the production process and helps you plan both input and output on a daily, weekly or monthly basis.

Product quality and yield are improved and drip loss is minimized. Flavor and protein compounds remain in the product and are passed along to the consumer. Controlled temperature rise and predictable end temperature ensures processing flexibility.

MIP 6 Highlights

- Adds flexibility to processing by allowing tempering on demand
- Allows predictable product ending temperature
- Eliminates the need for tempering rooms or racks
- Improves quality and yield
- Allows remote system troubleshooting by Ferrite technicians via modem access to PLC controls
- Industry proven, user-friendly Ferrite system software and Allen-Bradley controls

A Complete System

The basic system consists of a 4-foot by 4-foot by 6-foot long cavity with an internal oscillating conveyor, up to two dependable microwave transmitters, a loading conveyor, and an unloading conveyor.

Precise final product temperature control is maintained with simple power on-time or transmitter power adjustments.

For applications where three or four transmitters are required, an optional 8-foot long cavity is available.

Precise Computer Control

The transmitter is controlled by a Programmable Logic Controller (PLC) processor. The PLC operates the control software for the transmitter.

The PLC processor enables constant power operation at preset power levels. It also provides a digital display of status information including actual versus set point power, and fault diagnosis.

Warranteed For Dependability

The MIP 6 is covered by a full one-year warranty. Both in- and out-of-warranty service support is provided by Ferrite Certified field technicians.

MIP 6

Specification Details

Typical Production Throughput at 75 kW from 0 Degrees Fahrenheit Starting Temperature.

Temper to F/C	90% Lean
20 degrees F/-7	11,062 lb/hr -5,017 kg/hr
22 degrees F/-6	9,375 lb/hr -4,252 kg/hr
24 degrees F/-4	7,968 lb/hr -3,615 kg/hr
26 degrees F/-3	6,187 lb/hr -2,755 kg/hr

50% Lean
13,125 lb/hr -5,955 kg/hr
11,718 lb/hr -5,318 kg/hr
10,219 lb/hr -4,635 kg/hr
8,344 lb/hr -3,784 kg/hr

Throughput amounts are estimates. Actual results may vary.

Electrical Specifications (per Transmitter):

United States:

INPUT LOAD	MICROWAVE OUTPUT
480 volts	75 kW
3 phase	915 MHz
50/60 cycles	0.9 power factor
103 KVA	

Reliable, Dependable Industrial Systems

Applications include up to 24 hours of continuous tempering operation, with a cleaning period at the end of each shift, 7 days per week.

Product Tempering Process

A 20-inch wide positive drive, articulated belt loads material onto the cavity conveyor and into the tempering cavity. After the loading step is complete, cavity doors are shut and microwave tempering automatically begins. While in the tempering mode, the cavity conveyor oscillates the product back and forth to ensure uniform heating. Once the tempering cycle is complete, doors are opened and product is unloaded onto the exit conveyor.

Sanitation

The MIP 6 cavity and conveyors are washdown safe.

Safety

Interlocking access doors on the microwave transmitters and process ovens meet applicable government safety standards including CE compliance.

Customization

System design can be customized to meet specific customer requirements.

13'-6.3" [4122]
BLUE INLET CONVEYOR BELT
STAINLESS STEEL ROLLERS
4'-6.0" [1372]
7'-2.0" [2184]
LENGTH OF INPUT TABLE ASSY

1'-1.0" [330] MAX BOX HEIGHT
8'-11.9" [2740]
2'-3.0" [685] MAX BOX WIDTH

3'-4.6" [1031] FLOOR TO TOP OF LOADING TABLE
2'-11.2" [894] FLOOR TO TOP OF UNLOADING TABLE
PRODUCT FLOW →
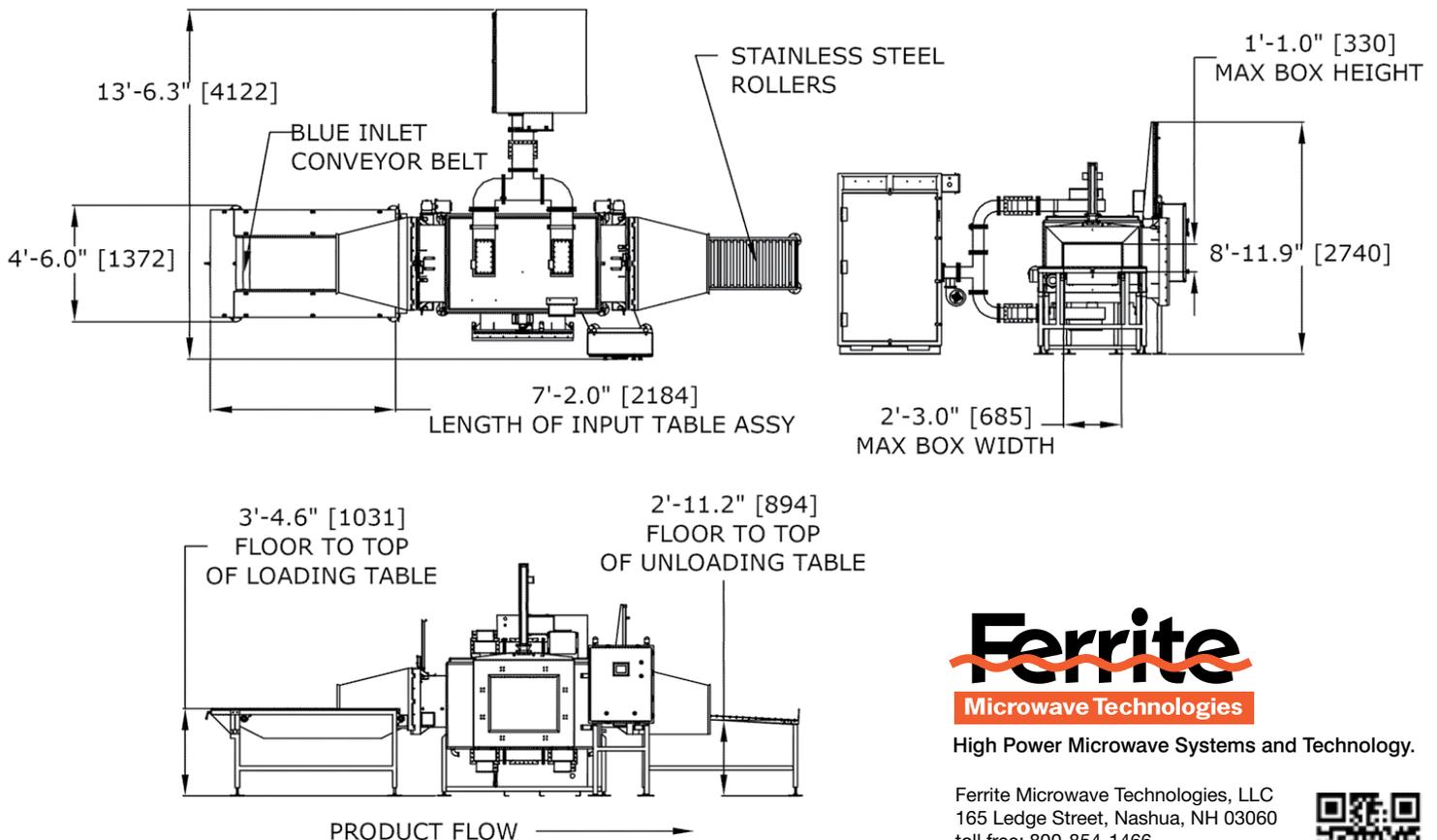
Ferrite
Microwave Technologies

High Power Microwave Systems and Technology.