Industrial Microwave Equipment

AMTek who we are
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Test Lab facility
Service and support
Spare parts
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Sonic air knife blowers
Conveyors
Thermal imaging system

Red Arrow flavor spray system
Quickdraft exhaust system
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Product cooling fans
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Retrofit oven doors
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AMTek MICROWAVES

Revised 5-8-22

Who we are

Tim Scheurs - owner and co-founder

“When you choose AMTek microwaves, you get an expert partner through the entire microwave project, taking your entire process from product testing, concept to reality”

AMTek microwaves is a privately held company located in the heart of the United States. We support a complete team of professionals that have been designing, manufacturing, and supporting hundreds of industrial microwave systems worldwide over the past two and a half decades. Our team brings you the experience and expertise in developing microwave equipment for applications in the industrial marketplace for pasteurizing, drying, cooking and tempering a very extensive array of products.

The AMTek team consists of a staff of more than 55 people, doing all functions relating to the production of these high powered systems. Our team designs, fabricates and assembles these high quality microwave systems, custom for each application and facility. Once the systems are installed, AMTek continues in the role to fully support the service of these systems, wherever located in the world.

Discover our capabilities

4amtek.com

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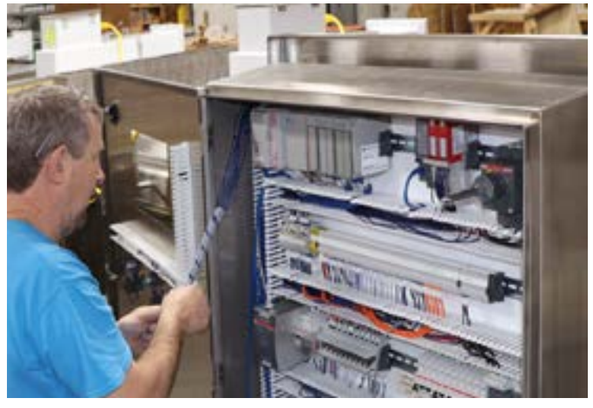
Our process

We pride ourselves in that we develop, design, manufacture and test all of our equipment in-house. AMTek has a dedicated engineering team that provide detailed drawings of our equipment to match a customer's facility. From there, we have all the equipment and machinery necessary to make the system from stock sheet metal to the final product.

Product Testing

Fabrication

Assembly



Installation & Support

Engineering Design

Welding

Controls

Parts Inventory

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Our microwave products

AMTek designs, fabricates and assembles these high-quality, high-powered microwave systems, custom-designed for each application and facility. Once the systems are installed, AMTek continues in the role to fully support the service of these systems, wherever located in the world.

Tempering

Cooking & Drying

Bacon

Batch Ovens

Vessels

Transmitters

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Features and options

AMTek provides complete solutions for your microwave systems. We offer complete packages including items like metal detector systems, chiller systems, fire suppression solutions and custom designed conveyors. We can offer the entire solution to your processing needs.

Belt Washers

Controls 4X Enclosures

Infrared Monitoring

Conveyors

Metal Detection

Product Cooling Fans

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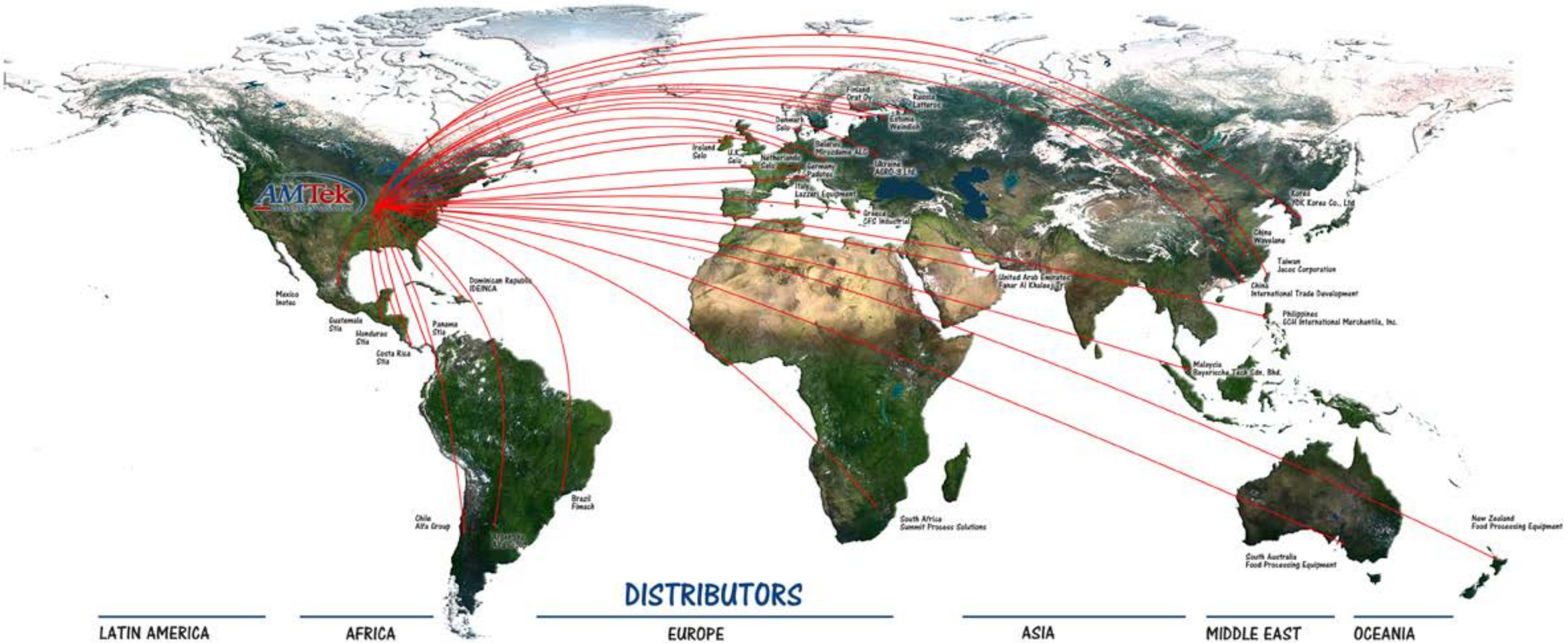
Global presence



DISTRIBUTORS

LATIN AMERICA

- Argentina — Alfa Group
- Brazil — Fimach
- Chile — Alfa Group
- Dominican Republic — IDEINCA
- Mexico — Inotec
- Costa Rica — Stia
- Guatemala — Stia
- Honduras — Stia
- Panama — Stia

AFRICA

- South Africa — Summit Process Solutions

EUROPE

- Belarus — Mirozdanie ALC
- England — Selo UK Ltd.
- Finland — Orat Oy
- Germany — Padotec
- Greece — CFS Industrial
- Italy — Lazzari Equipment
- Russia — Latteros
- Ukraine — AGRO-3 Ltd.
- Denmark — Selo - Nordic
- Ireland — Selo UK Ltd.
- Netherlands — Selo
- Sweden — Selo - Nordic
- Czech Republic — Weindich
- Estonia — Weindich
- Hungary — Weindich
- Latvia — Weindich
- Poland — Weindich

ASIA

- China — International Trade Development
- China — Wavelane
- Korea — YDK Korea Co., Ltd
- Malaysia — Bayerische Tech Sdn. Bhd.
- Philippines — GCH International Merchantile, Inc.
- Taiwan — Jacos Corporation

MIDDLE EAST

- United Arab Emirates — Fanar Al Khaleej Tr.

OCEANIA

- New Zealand — Food Processing Equipment
- South Australia — Food Processing Equipment

Concept Design Development

AMTek Microwave Engineers and Sales personel work together to completely understand the requirements of your microwave process. Development begins with product testing in our test lab gathering critical data to help us design a custom microwave system to meet your output requirements. Microwave systems are expandable for your future production needs.

Our Engineers use 3D Autodesk Inventor modeling software that is fully integrated to our CNC maching and shape cutting centers.

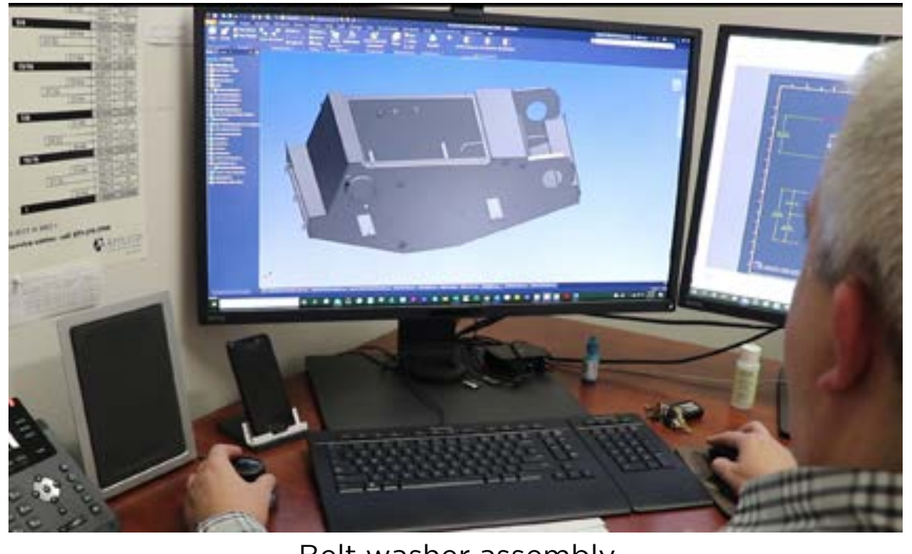
Microwave tempering system

CUSTOM SYSTEM SOFTWARE

- Autodesk Inventor 3D
- AutoCad 2D
- “Job Shop” MRP
- Inventor CAM machining software
- Cincinnati CL900 CAM
- Enroute (router) Software

PROJECT DETAILS

- Complete facility layouts provided
- Detailed operator manuals
- Comprehensive drawings of all assemblies



Belt washer assembly

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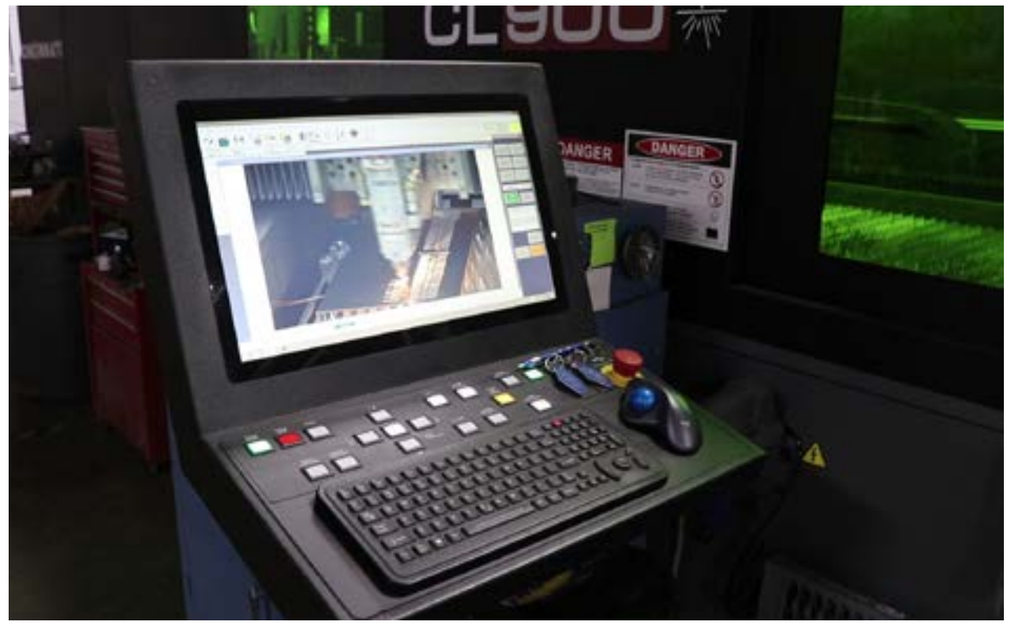
CL-900 Series Fiber Laser System

The Cincinnati CL-900 Series Fiber Laser Cutting System shortens fabrication lead times and improves quality of industrial microwave products.

The CL-900 Series Fiber Laser System offers high speed cutting of materials and lower operating costs. The Human Machine Interface (HMI) is intuitive and enables our operators to produce the highest quality parts. The cutting system is a great asset In AMTek's arsenal of fabrication and machining equipment. It allows us to have a work environment where operators often switch from machine to machine. The CINCINNATI HMI has a touch screen display and a web cam for monitoring of the cutting process.



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Cutting Edge Microwave Test Laboratory

It's not just an industrial microwave oven.

It's the "expertise" that comes with it.

Lab conference room

AMTek offers a state-of-the-art test laboratory for customers and potential customers to determine if a microwave system offers a solution that can benefit your company. We offer the ability to test well beyond food applications.

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Microwave Test Lab

State-of-the-art Microwave Lab for Testing Your Products

Baking and drying

Tempering

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Integrated Microwave Oven Exhaust and Grease Filtration System

Quickdraft lab system

Quickdraft Conveying/Exhaust Systems

Venturi Exhausters

- Eliminate fan maintenance
- Remove moving components from the exhaust stream
- Prevent build-up of oil/ice/etc. on an impeller
- Variable frequency drive control
- Exhaust volumes to 40,000 CFM
- Consistent, dependable lifelong exhaust

Demister Filtration System

To eliminate oil or grease buildup on your roof, the Demister System uses a three-stage process for exhaust filtration including velocity reduction and centrifugal separation, water spray scrubbing and demister pad filtration.

Water Recirculation Tank

Located next to the Demister System, the tank recirculates spray scrubbing water reducing water consumption and operating costs.

CIP 24” Rotary Belt Washing System

Automated Rotary Hi-pressure Belt Washing and Sanitizing System

- Complete stainless steel housing construction
- Stainless steel rotating high pressure spray bars with nozzles clean both sides of belt
- Solenoid valves supplied
- PLC controlled by a sequential timer program

Sequence/steps of the belt wash cycle

1) City water purge (clear the system)
2) Low pressure city water presoak
3) Foam grease and residue release
4) High pressure city water rinse removes foam and sonic blower dries belt
5) Sanitizer applied - end of belt cleaning

Service and support

AMTek microwave service and training

Our experienced service team offers hands-on and remote microwave system support, repair and maintenance services. We are capable of servicing, upgrading and repairing any industrial microwave system to meet your requirements and process needs. Our extensive knowledge of industrial microwaves dates back to the begining of AMTek.

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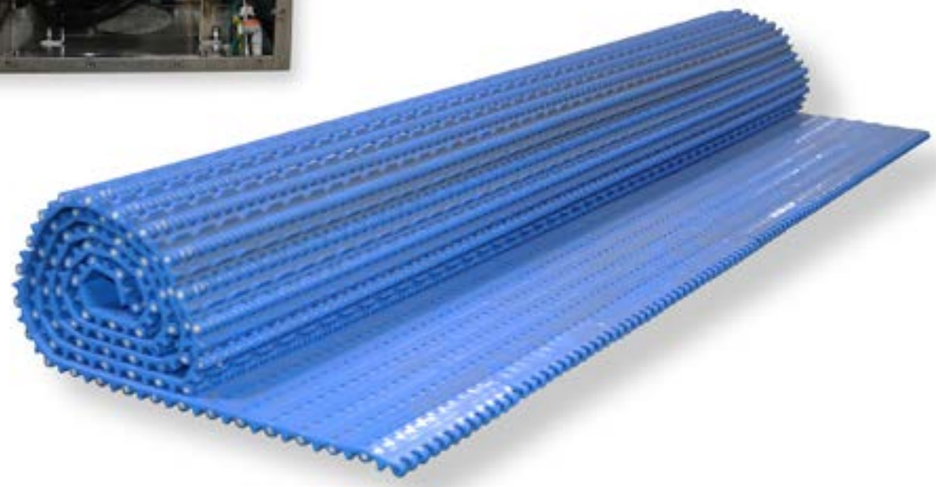
Microwave Service Parts

Microwave Heating & Tempering Systems

Spare Replacement Parts

We know how important it is for your line to be up and running at full capacity at all times. To meet your systems' demands, AMTek carries a full line of spare parts for all of your microwave system needs. Call us today if you need a part to get up and running. You'll find we're relentless in providing our customers with the parts they need and the attention they deserve.



- Blowers
- Circuit Board Assemblies
- Conveyor Belts
- Antenna Flanges & Covers
- Feed Components
- High Voltage Rectifiers
- Magnetrons
- Microwave Circulators
- Microwave Leakage Monitors
- Oven Doors/Lids
- Heat Exchangers
- Sensors
- Transformers
- Waveguide
- Relays/Contactors

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Microwave Heating & Tempering Systems

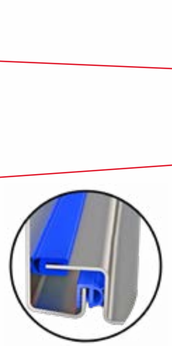
Microwave transmitter either 896 MHz, 915 MHz or 922 MHz and generate 75 or 100 kilowatts of microwave power. Our microwave transmitters can be used in virtually any application requiring microwave power.

Interlocking access doors
on the transmitters, process ovens, and passive microwave suppression tunnels meet applicable government safety standards for operation.

Rotary feed assembly
provides randomly dispersed microwave energy into the oven chamber(s) using rotating aluminum antenna assemblies.

Cooled exit suppression tunnel
with suppression flaps minimize microwave energy emissions.

Leak detector
At entrance and exit tunnel.



4X Panel Enclosures
Double Seal electrical enclosures for sanitary and extreme indoor and outdoor locations.
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Conveyor belt
A 24 inch wide positive drive, articulated belt of microwave transparent material moves continuously through the oven.

Microwave modular chamber
where the microwave process takes place. Multiple chambers can be used for greater control over final results.

Emergency stop switches
E-stop switches will cause an immediate system shutdown, and will identify the condition on all of the ovens control assemblies.

4000 Series Microwave Oven

Waveguides transport the microwave energy to the modular chamber.

Touch controls
PLC controls provide accurate process with recipe storage for numerous products.

PLC Control package
The main control assembly houses all of the hardware of the systems control system. The Ethernet or the optional DH+ based PLC system monitors and controls all features of the entire system. The Nema 4 enclosure protects the entire assembly from the wash down process. The process screen offers the operator all of the information needed to operator and identify the system status. This screen is identified by the system layout showing the oven and installed transmitters.

Leak detector at entrance and exit tunnel.
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Cooled entrance suppression tunnel with suppression flaps minimize microwave energy emissions.

Suppression tunnel cooling system provide a continuous flow of a glycol / water solution to each of the systems polypropylene suppression tunnels.

Features

Transmitter
AMTek's microwave transmitters provide dependable power to your industrial microwave systems. They are manufactured using the latest Allen-Bradley controls hardware which enables flexible design and construction. Your microwave transmitter can operate at a frequency of either 896 MHz, 915 MHz or 922 MHz and generate 75 or 100 kilowatts of microwave power. We build our transmitters using transformers designed for the voltage available in the destination country. Our microwave transmitters can be used in virtually any application requiring microwave power.
The transmitter enclosure is constructed of stainless steel with an open interior design for easy access for your maintenance personnel.
Finger-safe ferruled construction for all wire terminations and dual disconnect breakers ensure the highest level of operator safety.

Belt System
A 24 inch wide positive drive, articulated belt of microwave transparent material moves continuously through the oven.

Sanitation
The entire oven is constructed of stainless steel and rated for full washdown.

Safety
Interlocking access doors
on the transmitters, process ovens, and passive microwave suppression tunnels meet applicable government safety standards for operation.

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4000 Series Microwave Tempering Systems

Microwave Tempering

Temper your product in minutes instead of days.

- Eliminate tempering rooms and multiple handling sequences.
- Improve the quality, maximize yields and minimize drip loss.
- Precise control of product temperatures, ensuring they are within the required limits for subsequent slicing, grinding, forming, or molding.
- Customized to meet your specific requirements and facility layout.
- Multiple chamber layout allows for even greater control of results.

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Automated Rotary Hi-pressure Belt Washing and Sanitizing System

Hi-pressure Rotary Belt Washer

Constructed of 304 stainless material. Has a PLC controlled automated wash cycle with water flow solenoid valves. Belt drying is performed with a High Velocity stainless steel air knife. A stainless drain sump collects wash and rinse water.

- Complete stainless steel housing construction
- Stainless steel rotating high pressure spray bars with nozzles clean both sides of belt
- Solenoid valves supplied
- PLC controlled by a sequential timer program

Sequence/steps of the belt wash cycle

1) City water purge (clear the system)
2) Low pressure city water presoak
3) Foam grease and residue release
4) High pressure city water rinse removes foam and sonic blower dries belt
5) Sanitizer applied - end of belt cleaning

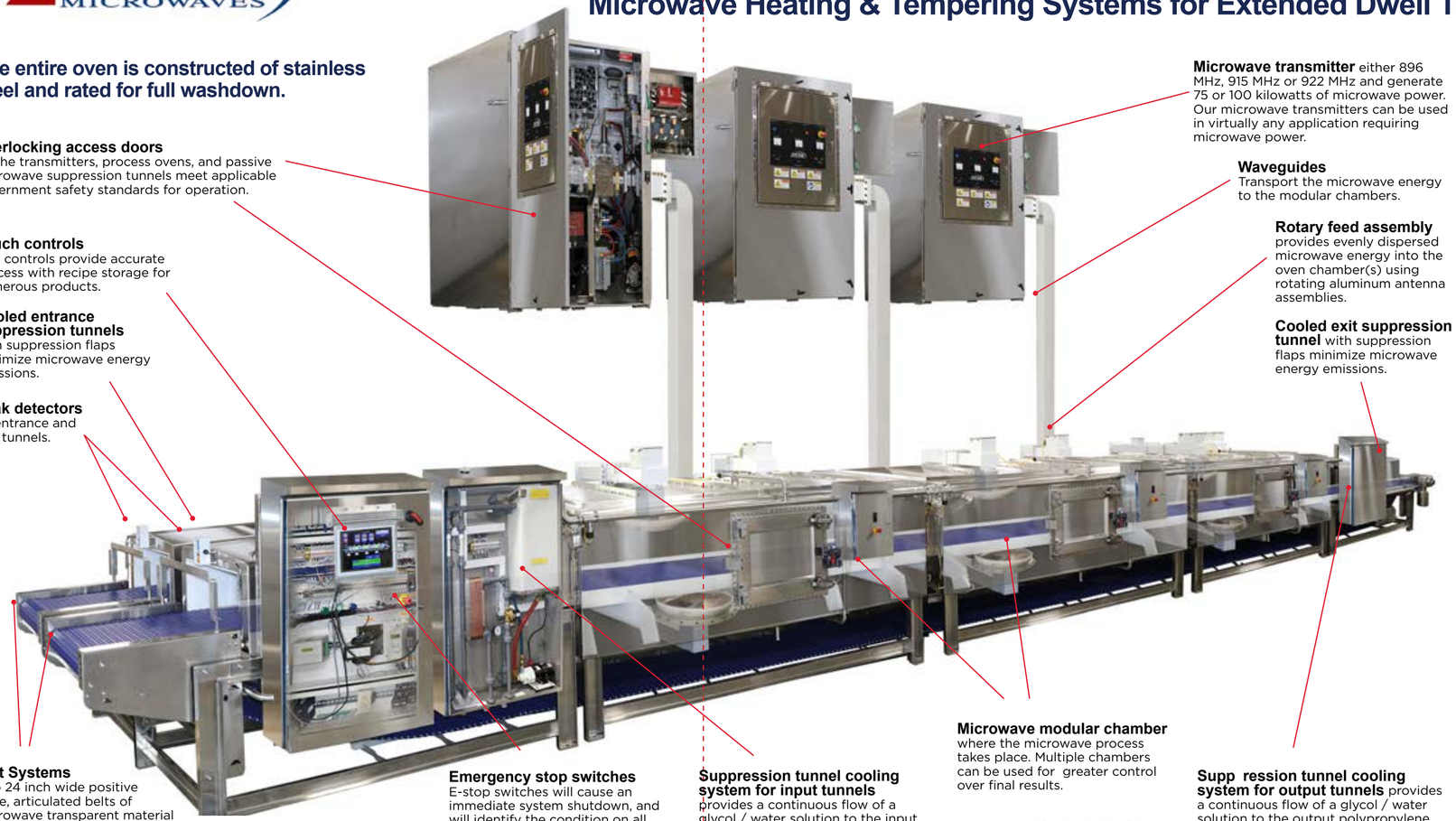
AMTek custom conveyors complete your tempering system.

Custom conveyors
Constructed of 304 stainless steel and rated for full washdown. E-stops and guarding meet applicable government safety standards for operation. Many conveyor lengths and widths available.

Extended Dwell Microwave Tempering System

Microwave Heating & Tempering Systems for Extended Dwell Time

The entire oven is constructed of stainless steel and rated for full washdown.



Interlocking access doors
on the transmitters, process ovens, and passive microwave suppression tunnels meet applicable government safety standards for operation.

Touch controls
PLC controls provide accurate process with recipe storage for numerous products.

Cooled entrance suppression tunnels
with suppression flaps minimize microwave energy emissions.

Leak detectors
At entrance and exit tunnels.

Belt Systems
Two 24 inch wide positive drive, articulated belts of microwave transparent material moves continuously through the oven.

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Emergency stop switches
E-stop switches will cause an immediate system shutdown, and will identify the condition on all of the ovens control assemblies.

Suppression tunnel cooling system for input tunnels
provides a continuous flow of a glycol / water solution to the input polypropylene suppression tunnels.

Microwave modular chamber
where the microwave process takes place. Multiple chambers can be used for greater control over final results.

Supp ression tunnel cooling system for output tunnels provides a continuous flow of a glycol / water solution to the output polypropylene suppression tunnels.

Microwave transmitter either 896 MHz, 915 MHz or 922 MHz and generate 75 or 100 kilowatts of microwave power. Our microwave transmitters can be used in virtually any application requiring microwave power.

Waveguides
Transport the microwave energy to the modular chambers.

Rotary feed assembly
provides evenly dispersed microwave energy into the oven chamber(s) using rotating aluminum antenna assemblies.

Cooled exit suppression tunnel with suppression flaps minimize microwave energy emissions.

Transmitter

AMTek's microwave transmitters provide dependable power to your industrial microwave systems. They are manufactured using the latest Allen-Bradley controls hardware which enables flexible design and construction. Your microwave transmitter can operate at a frequency of either 896 MHz, 915 MHz or 922 MHz and generate 75 or 100 kilowatts of microwave power. We build our transmitters using transformers designed for the voltage available in the destination country. Our microwave transmitters can be used in virtually any application requiring microwave power.
The transmitter enclosure is constructed of stainless steel with an open interior design for easy access for your maintenance personnel.
Finger-safe ferruled construction for all wire terminations and dual disconnect breakers ensure the highest level of mainenance personnel safety.

Belt Systems

Two 24 inch wide positive drive, articulated belts of microwave transparent material moves continuously through the oven.

Sanitation

The entire oven is constructed of stainless steel and rated for full washdown.

Safety

Interlocking access doors
on the transmitters, process ovens, and passive microwave suppression tunnels meet applicable government safety standards for operation.

Microwave Tempering Systems for Extended Dwell Time

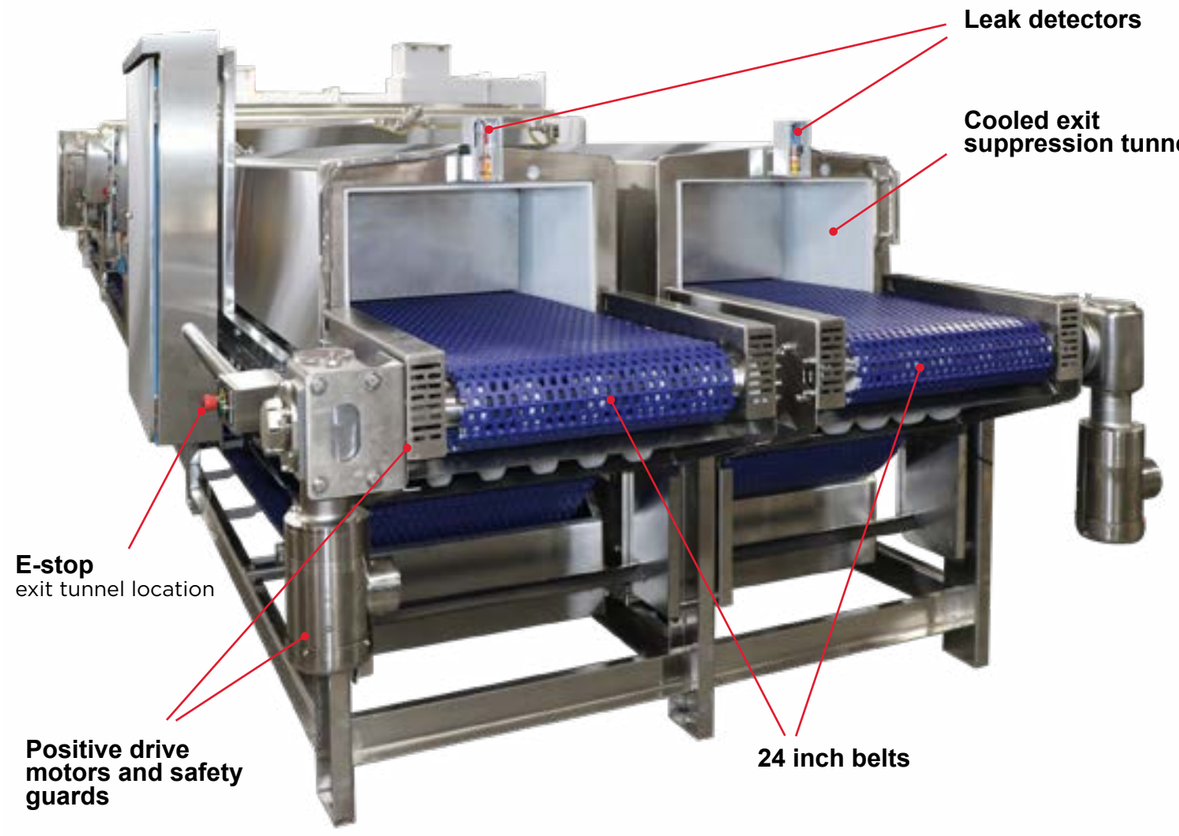
Extended Dwell

Higher throughput and extended dwell time for precise control of tempering process.

Touch Controls

PLC Control package
The main control assembly houses all of the hardware of the systems control system. The PLC system monitors and controls all features of the entire system. The Nema 4 enclosure protects the entire assembly from the wash down process. The process screen offers the operator all of the information needed to operator and identify the system status. This screen is identified by the system layout showing the oven and installed transmitters.

Discharge End of Extended Dwell Microwave



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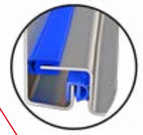
Microwave Cooking and Drying

The entire oven is constructed of stainless steel and rated for full washdown.

Interlocking access doors
on the transmitters, process ovens, and passive microwave suppression tunnels meet applicable government safety standards for operation.

Suppression tunnels
Stainless steel pin choke design minimizes leakage.



4X Panel Enclosures
Double Seal electrical enclosures for sanitary and extreme indoor and outdoor locations.

Microwave modular chamber where the microwave process takes place. Multiple chambers can be used for greater control over final results.

Emergency stop switches
E-stop switches will cause an immediate system shutdown, and will identify the condition on all of the ovens control assemblies.

MWO Series Pin Choke Oven

Microwave transmitter
Either 896 MHz, 915 MHz or 922 MHz and generate 75 or 100 kilowatts of microwave power. Our microwave transmitters can be used in virtually any application requiring microwave power.

Waveguides
Transports the microwave energy to the modular chamber.

Suppression tunnels
Stainless steel pin choke design minimizes leakage.

Conveyor belt
A 24 inch wide positive drive, articulated belt of microwave transparent material moves continuously through the oven.

Transmitter

AMTek's microwave transmitters provide dependable power to your industrial microwave systems. They are manufactured using the latest Allen-Bradley controls hardware which enables flexible design and construction. Your microwave transmitter can operate at a frequency of either 896 MHz, 915 MHz or 922 MHz and generate 75 or 100 kilowatts of microwave power. We build our transmitters using transformers designed for the voltage available in the destination country. Our microwave transmitters can be used in virtually any application requiring microwave power.
The transmitter enclosure is constructed of stainless steel with an open interior design for easy access for your maintenance personnel.
Finger-safe ferruled construction for all wire terminations and dual disconnect breakers ensure the highest level of operator safety.

Touch controls

PLC controls provide accurate process with recipe storage for numerous products.

Safety

Interlocking access doors on the transmitters, process ovens, and passive microwave suppression tunnels meet applicable government safety standards for operation.

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Microwave Cooking and Drying Systems
MWO Series Pin Choke Oven

Cooking & Drying

Cook or Dry Your Products in Minutes

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Automated Rotary Hi-pressure Belt Washing and Sanitizing System

Hi-pressure Rotary Belt Washer

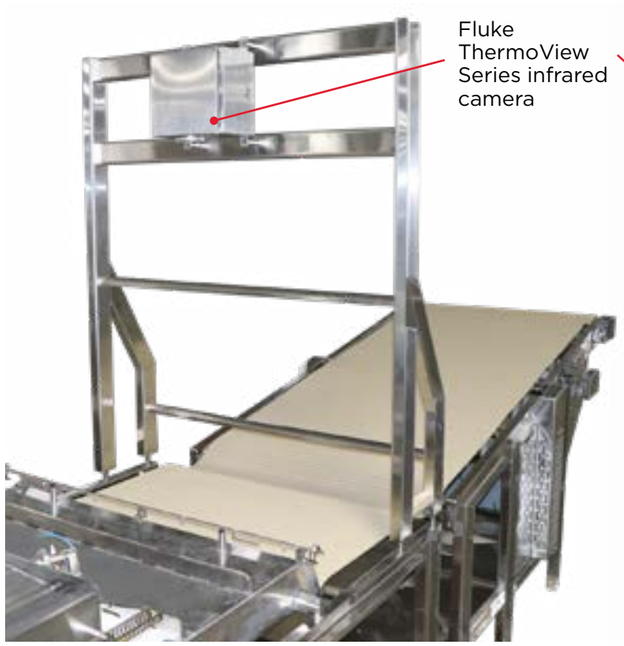
Constructed of 304 stainless material. Has a PLC controlled automated wash cycle with water flow solenoid valves. Belt drying is performed with a High Velocity stainless steel air knife. A stainless drain sump collects wash and rinse water.

- Complete stainless steel housing construction
- Stainless steel rotating high pressure spray bars with nozzles clean both sides of belt
- Solenoid valves supplied
- PLC controlled by a sequential timer program

Sequence/steps of the belt wash cycle

1) City water purge (clear the system)
2) Low pressure city water presoak
3) Foam grease and residue release
4) High pressure city water rinse removes foam and sonic blower dries belt
5) Sanitizer applied - end of belt cleaning

Thermal Imaging System for Continuous Temperature Control



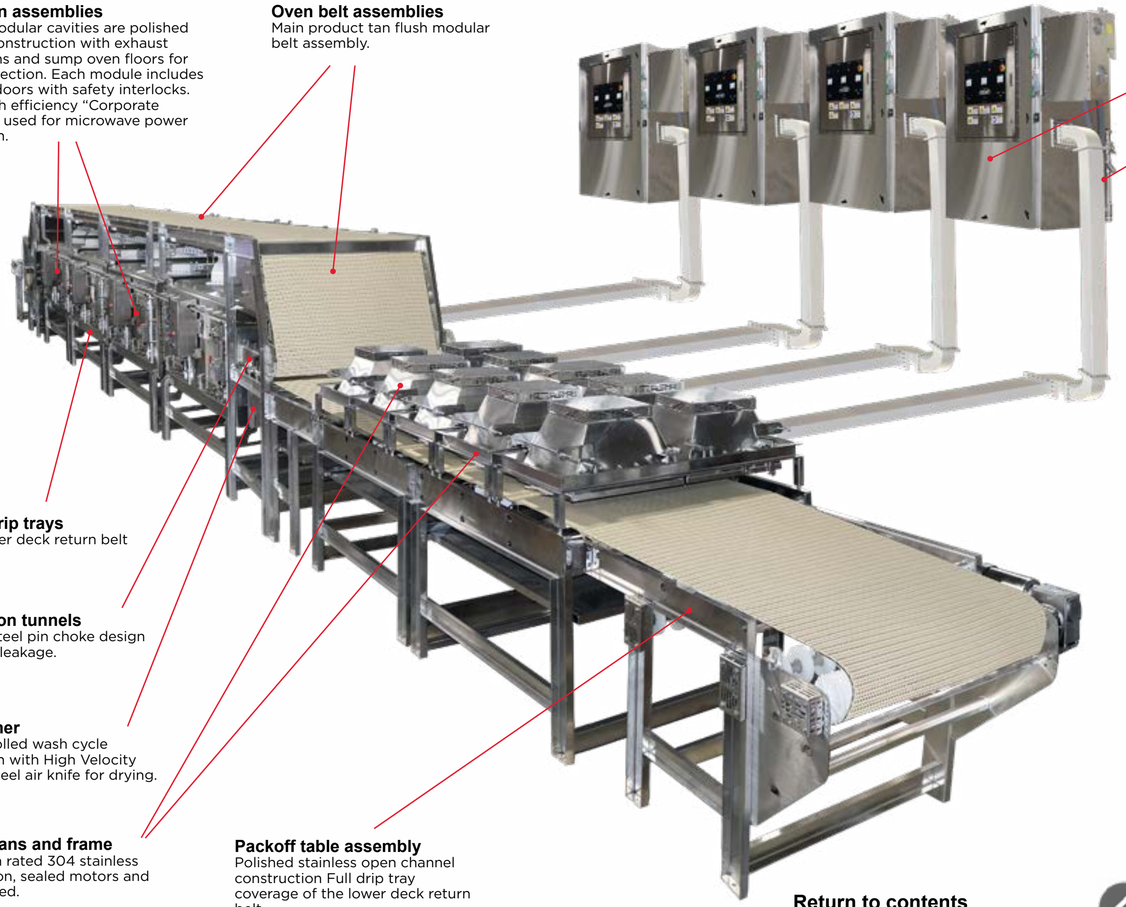
Thermal Imaging System - Option

The AMTek Thermal Image system for continuous monitoring of the cooked product exiting the cooking process, for temperature validation. The system includes a 15” integrated display and computer assembly for continuous visual display of the temperature profiles across the entire belt.

Microwave Bacon Cooking System

Main oven assemblies
Multiple modular cavities are polished stainless construction with exhaust connections and sump oven floors for grease collection. Each module includes two oven doors with safety interlocks. AMTek high efficiency "Corporate Feeds" are used for microwave power distribution.

Oven belt assemblies
Main product tan flush modular belt assembly.



Grease drip trays
on the lower deck return belt assembly.

Supression tunnels
Stainless steel pin choke design eliminates leakage.

Belt washer
PLC controlled wash cycle automation with High Velocity stainless steel air knife for drying.

Cooling fans and frame
Washdown rated 304 stainless construction, sealed motors and safe guarded.

Packoff table assembly
Polished stainless open channel construction Full drip tray coverage of the lower deck return belt.

Microwave transmitter either 896 MHz, 915 MHz or 922 MHz and generate 75 or 100 kilowatts of microwave power. Our microwave transmitters can be used in virtually any application requiring microwave power.

Waveguides
Transports the microwave energy to the modular chamber.

4X Panel Enclosures
Double Seal electrical enclosures for sanitary and extreme indoor and outdoor locations.

Main PLC Control assembly Panelview 1900 HMI color touch-screen operates on Allen Bradley 1734-AENTR Point I/O Network.

Transmitter

AMTek's microwave transmitters provide dependable power to your industrial microwave systems. They are manufactured using the latest Allen-Bradley controls hardware which enables flexible design and construction. Your microwave transmitter can operate at a frequency of either 896 MHz, 915 MHz or 922 MHz and generate 75 or 100 kilowatts of microwave power. We build our transmitters using transformers designed for the voltage available in the destination country. Our microwave transmitters can be used in virtually any application requiring microwave power.
The transmitter enclosure is constructed of stainless steel with an open interior design for easy access for your maintenance personnel.
Finger-safe ferruled construction for all wire terminations and dual disconnect breakers ensure the highest level of operator safety.

Product cooling fans
Each fan assembly is washdown rated 304 stainless welded construction. Each fan assembly is a hinged tipping design with lock-up lever for cleaning and maintenance. The encapsulated motor assemblies are wash-down rated. The blower fans are guarded with stainless steel finger-safe guards. The stainless steel air diffuser plates are removable for easy cleaning.

Cooling fan support frame
The cooling fan support frame is all stainless steel construction with open design. The frame is custom built to hold variable numbers of fan assemblies. Modular conveyor belt is included as needed.

Safety

Interlocking access doors
on the transmitters, process ovens, and passive microwave suppression tunnels meet applicable government safety standards for operation.

Sanitation

The entire oven is constructed of stainless steel and rated for full washdown.

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Continuous Microwave Bacon Cooking Systems

Continuous flow of Pre-cooked Bacon in Minutes

Bacon Cooking

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Automated Rotary Hi-pressure Belt Washing and Sanitizing System

Hi-pressure Rotary Belt Washer

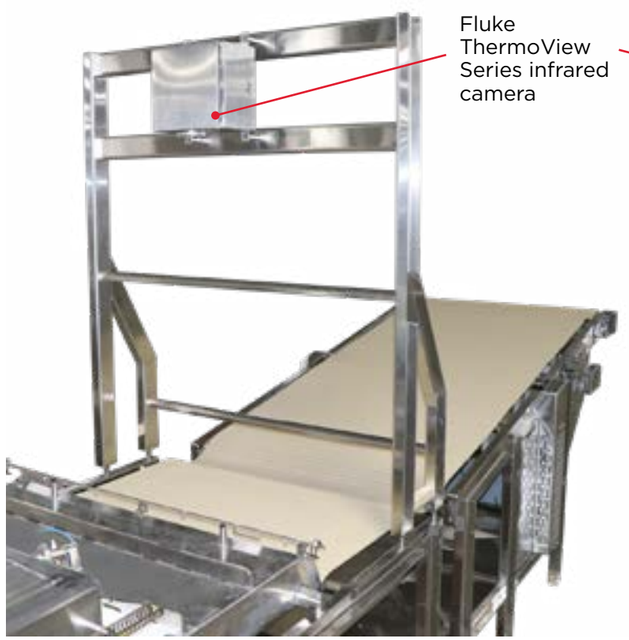
Constructed of 304 stainless material. Has a PLC controlled automated wash cycle with water flow solenoid valves. Belt drying is performed with a High Velocity stainless steel air knife. A stainless drain sump collects wash and rinse water.

- Complete stainless steel housing construction
- Stainless steel rotating high pressure spray bars with nozzles clean both sides of belt
- Solenoid valves supplied
- PLC controlled by a sequential timer program

Sequence/steps of the belt wash cycle

1) City water purge (clear the system)
2) Low pressure city water presoak
3) Foam grease and residue release
4) High pressure city water rinse removes foam and sonic blower dries belt
5) Sanitizer applied - end of belt cleaning

Thermal Imaging System for Continuous Temperature Control



Thermal Imaging System - Option

The AMTek Thermal Image system for continuous monitoring of the cooked product exiting the cooking process, for temperature validation.
The system includes a 15” integrated display and computer assembly for continuous visual display of the temperature profiles across the entire belt.

Single Cavity Bacon Cooking System

Main oven assembly
The cavity is polished stainless construction with exhaust connections and a sump oven floor for grease collection. Includes two oven doors with safety interlocks. AMTek high efficiency "Corporate Feeds" are used for microwave power distribution.

Belt system
A positive drive, articulated belt of microwave transparent material moves continuously through the oven.

Microwave transmitter either 896 MHz, 915 MHz or 922 MHz and generate 75 or 100 kilowatts of microwave power. Our microwave transmitters can be used in virtually any application requiring microwave power.

Waveguides
Transports the microwave energy to the modular chamber.

Main PLC Control assembly
Panelview 1900 HMI color touch-screen operates on Allen Bradley 1734-AENTR Point I/O Network.

Suppression tunnels
Stainless steel pin choke design minimizes leakage.

Upper and Lower belt washer
PLC controlled wash cycle automation with High Velocity stainless steel air knife for drying.

Cooling fans and frame
Washdown rated 304 stainless construction, sealed motors and safe guarded.

Grease drip trays
on the lower deck return belt assembly.

Packoff table assembly
Polished stainless open channel construction with full drip tray coverage of the lower deck return belt.

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Transmitter
AMTek's microwave transmitters provide dependable power to your industrial microwave systems. They are manufactured using the latest Allen-Bradley controls hardware which enables flexible design and construction. Your microwave transmitter can operate at a frequency of either 896 MHz, 915 MHz or 922 MHz and generate 75 or 100 kilowatts of microwave power. We build our transmitters using transformers designed for the voltage available in the destination country. Our microwave transmitters can be used in virtually any application requiring microwave power.
The transmitter enclosure is constructed of stainless steel with an open interior design for easy access for your maintenance personnel.
Finger-safe ferruled construction for all wire terminations and dual disconnect breakers ensure the highest level of operator safety.

Product cooling fans
Each fan assembly is washdown rated 304 stainless welded construction. Each fan assembly is a hinged tipping design with lock-up lever for cleaning and maintenance. The encapsulated motor assemblies are wash-down rated. The blower fans are guarded with stainless steel finger-safe guards. The stainless steel air diffuser plates are removable for easy cleaning.

Cooling fan support frame
The cooling fan support frame is all stainless steel construction with open design. The frame is custom built to hold variable numbers of fan assemblies. Modular conveyor belt is included as needed.

Safety
Interlocking access doors
on the transmitters, process ovens, and passive microwave suppression tunnels meet applicable government safety standards for operation.

Sanitation
The entire oven is constructed of stainless steel and rated for full washdown.

Continuous Microwave Bacon Single Cavity Cooking Systems

Bacon Cooking System

Continuous flow of Pre-cooked Bacon in Minutes

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Automated Rotary Hi-pressure Belt Washing and Sanitizing System

Hi-pressure Rotary Belt Washer

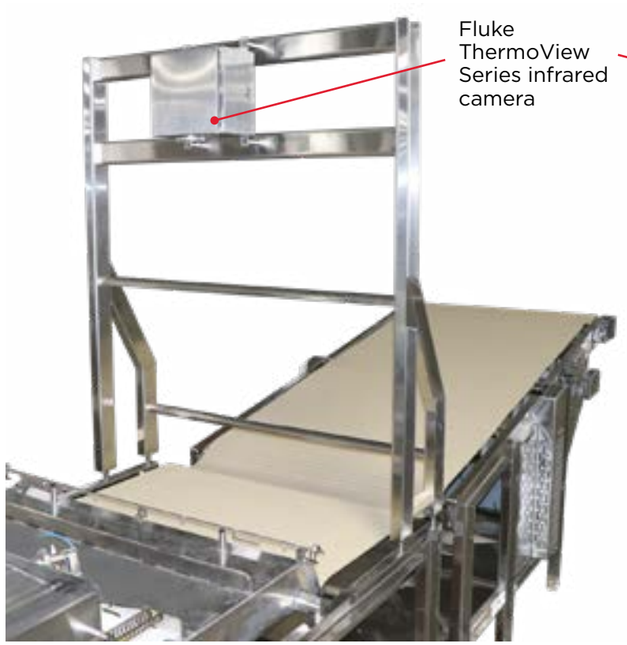
Constructed of 304 stainless material. Has a PLC controlled automated wash cycle with water flow solenoid valves. Belt drying is performed with a High Velocity stainless steel air knife. A stainless drain sump collects wash and rinse water.

- Complete stainless steel housing construction
- Stainless steel rotating high pressure spray bars
  with nozzles clean both sides of belt
- Solenoid valves supplied
- PLC controlled by a sequential timer program

Sequence/steps of the belt wash cycle

1) City water purge (clear the system)
2) Low pressure city water presoak
3) Foam grease and residue release
4) High pressure city water rinse removes foam and sonic blower dries belt
5) Sanitizer applied - end of belt cleaning

Thermal Imaging System for Continuous Temperature Control



Thermal Imaging System - Option

The AMTek Thermal Image system for continuous monitoring of the cooked product exiting the cooking process, for temperature validation.
The system includes a 15” integrated display and computer assembly for continuous visual display of the temperature profiles across the entire belt.

MWB2260 Series Batch Oven

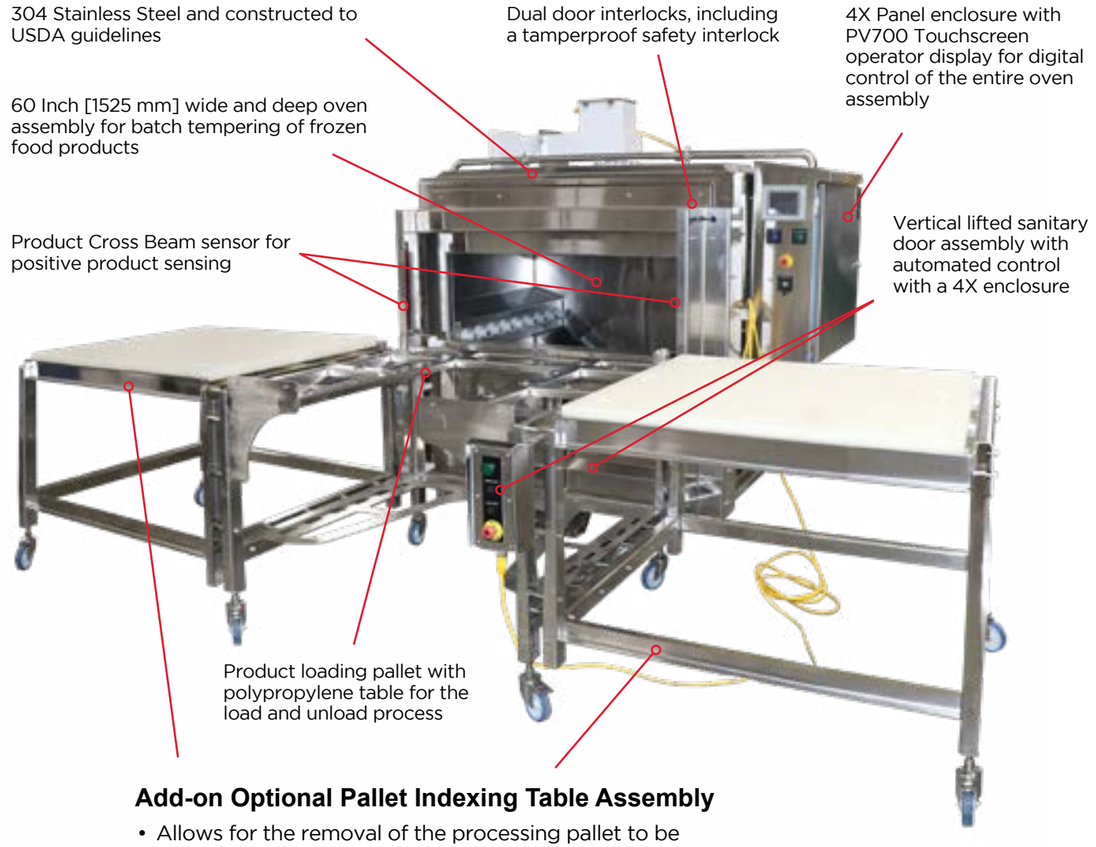
Microwave Heating & Tempering Systems

MWB2260 Series Batch

- 304 Stainless Steel and constructed to USDA guidelines.
- 60 Inch [1525 MM] wide oven assembly for batch tempering of frozen food products.
- Product loading pallet with polypropylene table for the load and unload process.
- Microwave Safe oven door assembly.
- Dual door interlocks, including a tamperproof safety interlock.
- Direct drive motorized feed.
- 4X Sanitary enclosures with complete Allen Bradley Compact Logix PLC Controls.
- PV700 Touchscreen display.
- Product Cross Beam sensor.
- Complete software package.

Batch Ovens

AMTek's batch microwave systems are perfect for small, medium, or large scale operations. They offer the speed, power, efficiency, and potential for customization that a continuous belt system offers, without the larger equipment footprint and price tag. When used for tempering, a batch system can provide the opportunity to improve the quality of your product and maximize yields by minimizing drip loss. Aside from tempering, AMTek's batch systems are being used in a diverse range of applications, from cooking and drying, to high temperature melting and glue setting. The control software is customizable to your process to produce precise results every time.



Add-on Optional Pallet Indexing Table Assembly

- Allows for the removal of the processing pallet to be shifted to the left or right staging area, for loading while the oven is processing a second pallet.
- When the processing cycle is complete, the pallet is removed from the oven and shifted to the open table area, and the new pallet is moved into the oven and the process is repeated.
- Designed to improve the oven operation efficiency.

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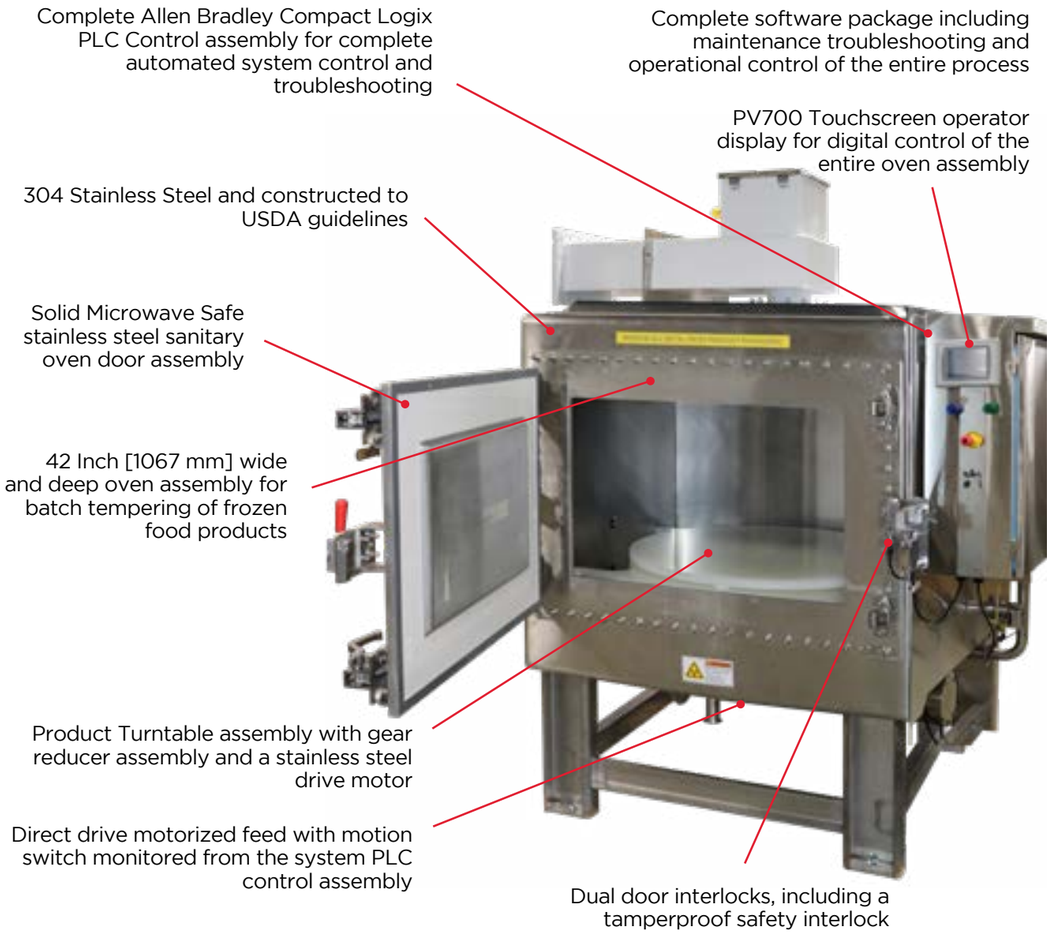
MWB2142 Series Batch Oven

Microwave Heating & Tempering Systems

MWB2142 Series Batch

- **304 Stainless Steel and constructed to USDA guidelines.**
- **42 Inch [1067 mm] wide and deep oven.**
- **Product Turntable assembly with Drive motor.**
- **Solid Microwave Safe sanitary oven door assembly.**
- **Dual door interlocks.**
- **Direct drive motorized feed.**
- **Complete Allen Bradley Compact Logix PLC Controls.**
- **PV700 Touchscreen display.**
- **Product Cross Beam sensor.**
- **Complete software package.**



Batch Ovens

AMTek's batch microwave systems are perfect for small, medium, or large scale operations. They offer the speed, power, efficiency, and potential for customization that a continuous belt system offers, without the larger equipment footprint and price tag. When used for tempering, a batch system can provide the opportunity to improve the quality of your product and maximize yields by minimizing drip loss. Aside from tempering, AMTek's batch systems are being used in a diverse range of applications, from cooking and drying, to high temperature melting and glue setting. The control software is customizable to your process to produce precise results every time.

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AMT Series Microwave Transmitters

AMT Transmitters

THE LEADING CHOICE FOR RELIABLE MICROWAVE POWER

AMTek's microwave transmitters provide dependable power to your industrial microwave systems. They are manufactured using the latest Allen-Bradley controls hardware which enables flexible design and construction. Your microwave transmitter can operate at a frequency of either 896 MHz, 915 MHz or 922 MHz and generate 75 or 100 kilowatts of microwave power. We build our transmitters using transformers designed for the voltage available in the destination country. Our microwave transmitters can be used in virtually any application requiring microwave power.

High-Power Microwave Generators

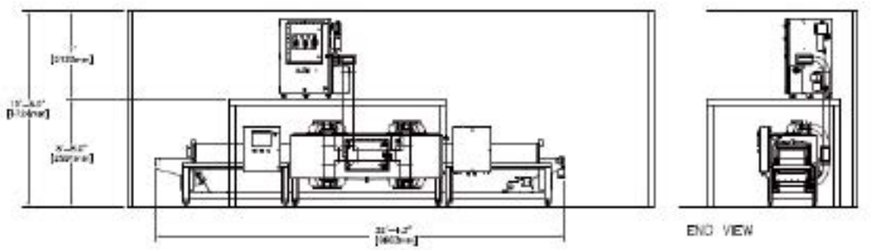
Design

The transmitter enclosure is constructed of stainless steel with an open interior design for easy access for your maintenance personnel.

Safety

Finger-safe ferruled construction for all wire terminations and dual disconnect breakers ensure the highest level of operator safety.

AMTek takes your installation requirements and provides a complete system layout, detailing oven location, utility requirements, and location within your facility. We can integrate optional add-on equipment into your design and layout as well.



We know how important it is for your system to be up and running at all times. For that very reason, AMTek carries a full line of spare parts for all your microwave system needs. You will find that we are determined to provide you with the parts you need, when you need them.

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Microwave Vessel Heating & Drying System

Vertical Vessels

Agitation
- Uniform heating of entire batch reducing waste and overheating
- Reduces waste
- Eliminates overheating

Controls
- Pinpoint time and temperature accuracy
- Complete and accurate PLC based recipe control
- Instant process on/off feature allows for 3 minute total warm-up time
- Reduces process time over conventional kettles by up to 66%

Vessel
- Eliminates surface scalding and the need for scrapers
- Totally self-contained
- No conventional heating sources required
- Optional insulated vessel
- Available in virtually any vessel size

Pumping
- Positive sanitary displacement pump

Sanitation
- System constructed of stainless steel
- Rated for full wash-down

Return to contents

Transmitter

AMTek's microwave transmitters provide dependable power to your industrial microwave systems. They are manufactured using the latest Allen-Bradley controls hardware which enables flexible design and construction. Your microwave transmitter can operate at a frequency of either 896 MHz, 915 MHz or 922 MHz and generate 75 or 100 kilowatts of microwave power. We build our transmitters using transformers designed for the voltage available in the destination country. Our microwave transmitters can be used in virtually any application requiring microwave power.
The transmitter enclosure is constructed of stainless steel with an open interior design for easy access for your maintenance personnel.
Finger-safe ferruled construction for all wire terminations and dual disconnect breakers ensure the highest level of operator safety.

Agitation
- Uniform heating of entire batch reducing waste and overheating
- Reduces waste
- Eliminates overheating

Your Product
- When combined with our PLC controls package, you can define the heating profile required to achieve outstanding results batch after batch.

Vessel
- Eliminates surface scalding and the need for scrapers
- Totally self-contained
- No conventional heating sources required
- Optional insulated vessel
- Available in virtually any vessel size

Controls
- Pinpoint time and temperature accuracy
- Complete and accurate PLC based recipe control
- Instant process on/off feature allows for 3 minute total warm-up time
- Reduces process time over conventional kettles by up to 66%

Pumping
- Positive sanitary displacement pump

Sanitation
- System constructed of stainless steel
- Rated for full washdown

Vertical Vessels

Microwave Vessel Heating & Drying System

MWV SERIES
Vertical Vessel

Heating and blending of

- **Vegetable oil**
- **Salsa**
- **Soups**
- **Purees**

Microwave Vessel

Using microwave energy as the heat source, the AMTek Microwave Heated Vessel System utilizes volumetric heating, which heats all of your product at the same time. Volumetric heating eliminates surface overheating and burning associated with conductive heating methods. This innovative system provides fast, efficient, uniform heating of products. It is ideal for heating everything from vegetable oil to salsa, soups to purees. When combined with our PLC controls package, you can define the heating profile required to achieve outstanding results batch after batch.

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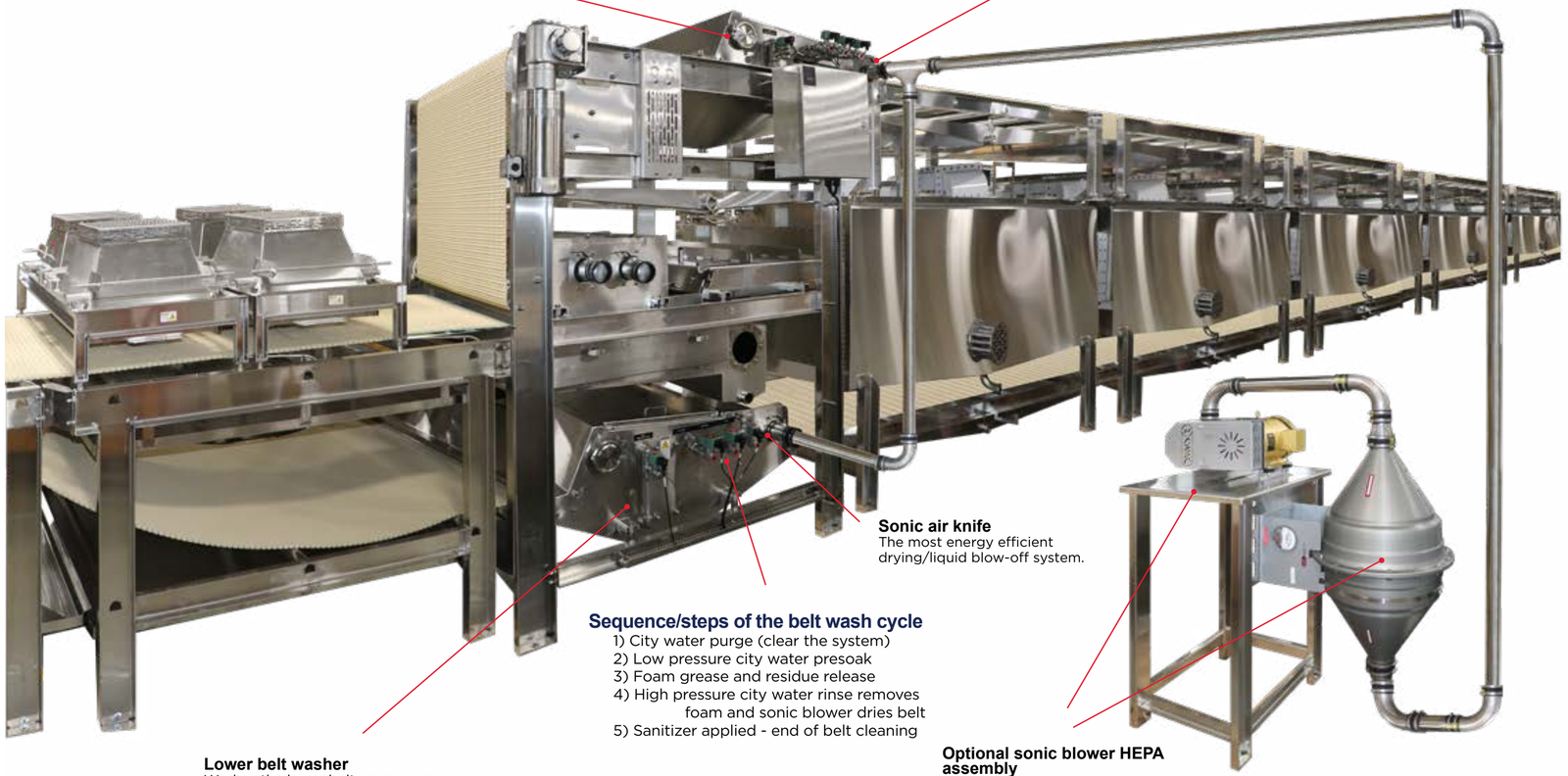
CIP Rotary Belt Washing Systems

Upper belt washer
Washes the upper belt on process system.

Sonic air knife
The most energy efficient drying/ liquid blow-off system.



Sonic air knife
The most energy efficient drying/liquid blow-off system.

Sequence/steps of the belt wash cycle

1) City water purge (clear the system)
2) Low pressure city water presoak
3) Foam grease and residue release
4) High pressure city water rinse removes foam and sonic blower dries belt
5) Sanitizer applied - end of belt cleaning

Lower belt washer
Washes the lower belt on process system.

Optional sonic blower HEPA assembly
Provides clean filtered air to the washed belt.

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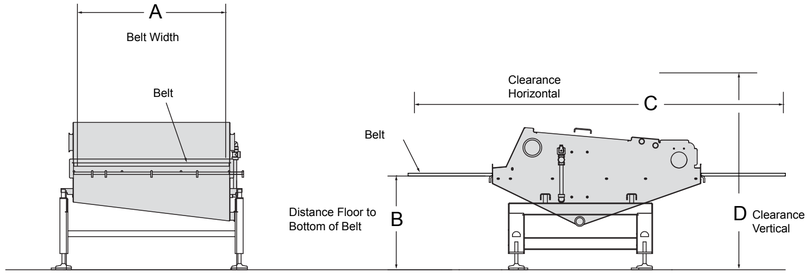
Custom Retrofit Rotary Belt Washer System for Your Process Belt

If your end-of-day routine includes a manual washdown sanitizing process consider the advantages of an AMTek automated belt washing system. This automated hi-pressure accessory can be programed to perform belt cleaning with a push of a button or a manual control sequence. The self contained washer is all-welded stainless steel with a drain outlet.

Sequence/steps of the belt wash cycle

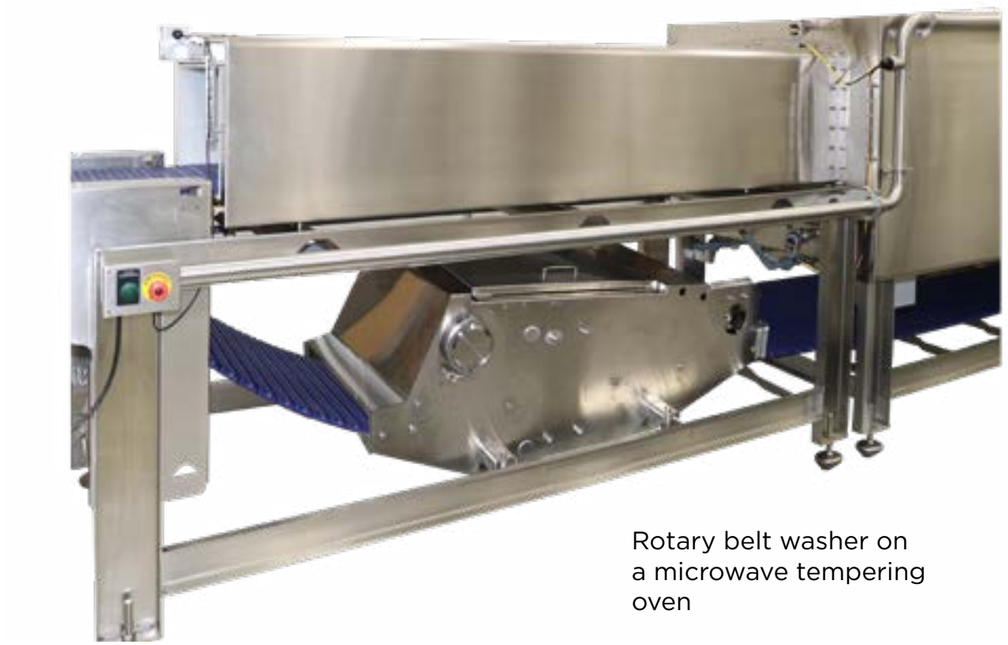
1) City water purge (clear the system)
2) Low pressure city water presoak
3) Foam grease and residue release
4) High pressure city water rinse removes foam and sonic blower dries belt
5) Sanitizer applied - end of belt cleaning

Contact AMTek for more information about a belt washing system for your process.



CIP Rotary Belt Washer

CIP Rotary Belt Washing Systems



Rotary belt washer on a microwave tempering oven

Automated CIP belt washing system saves hours of hand pressure washing

Sequence/steps of the belt wash cycle

1) City water purge (clear the system)
2) Low pressure city water presoak
3) Foam grease and residue release
4) High pressure city water rinse removes foam and sonic blower dries belt
5) Sanitizer applied - end of belt cleaning

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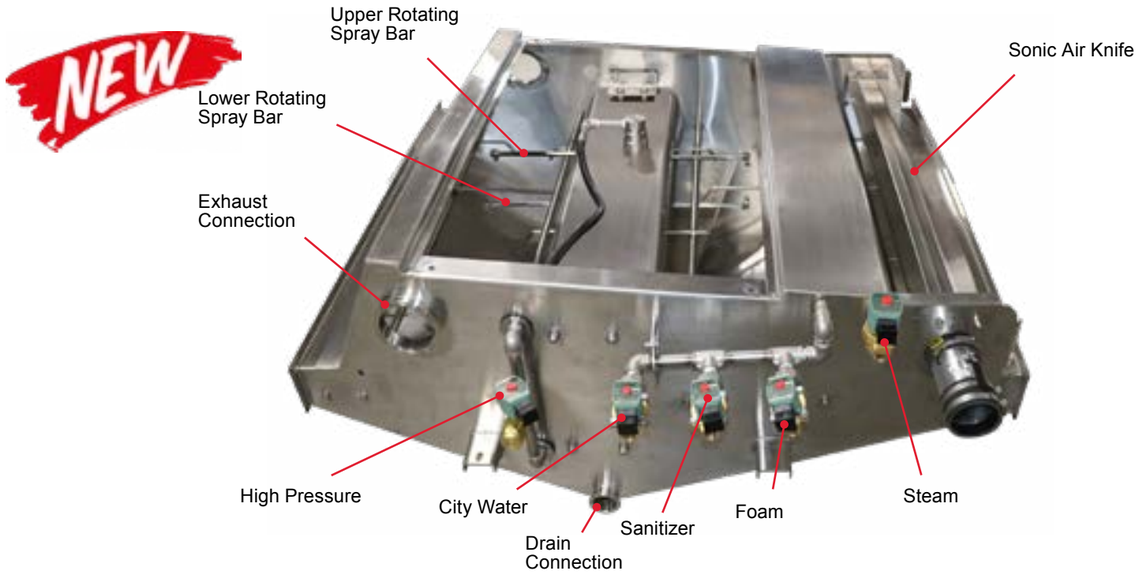
Automated Rotary Hi-pressure Belt Washing and Sanitizing System



Hi-pressure Rotary Belt Washer

Constructed of 304 stainless material. Has a PLC controlled automated wash cycle with water flow solenoid valves. Belt drying is performed with a High Velocity stainless steel air knife. A stainless drain sump collects wash and rinse water.

- Complete stainless steel housing construction
- Stainless steel rotating high pressure spray bars with nozzles clean both sides of belt
- Solenoid valves supplied
- PLC controlled by a sequential timer program

High Pressure Pump Assembly

- TEFC drive motor
- Tempering 1000 PSI (68 bar) pump
- For cooking lines 1000-1200 PSI (68-82 bar) is recommended
- Pressure guage
- Assembly mounted on stainless skid

Sonic Air Knife Drying Systems

Microwave Belt Washer Air Knife Blowers and HEPA Filters

Sonic air knife systems ensure effective belt drying on our AMTek microwave ovens. Optional HEPA filters provide clean filtered air to the air knife keeping your process sanitary. Foreign particles introduced onto the product are as much to do with the air quality entering the Sonic blower as they are the-albeit minute-contamination that the blower could produce. The Sonic In-Line HEPA Filter solves all of that. Sonic HEPA ensures the integrity of the HEPA requirement by not allowing any potential contamination from the blower as well as the inlet air environment.

- Huge energy savings over compressed air blow-off methods
- No air pressure fluctuations
- Natural heat of compression assists in the drying process
- Optional HEPA filter integration
- Easily integrated with existing conveyor lines
- Can be locate on mezzanine away from process area

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Conveyors for Microwave Process Systems

Custom Conveyors

The entire conveyor is constructed of stainless steel and rated for full washdown.

Integrated Controls
Conveyor control screen displays components, conveyor speeds and all sensor locations.

Optional metal detector
Metal detectors are able to detect all metal contaminants including ferrous, non-ferrous and the normally difficult to find non-magnetic stainless steels.

Belt System
A positive drive belt of microwave transparent material moves continuously.

E-stop
E-stops and guarding meet applicable government safety standards for operation.

Allen Bradley controls
Complete Allen Bradley Compact Logix PLC Control assembly

Stainless steel construction
304 Stainless Steel and constructed to USDA guidelines

Variable speed
Variable conveyor belt speed

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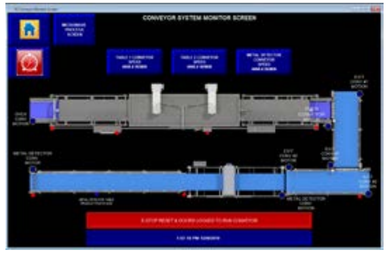
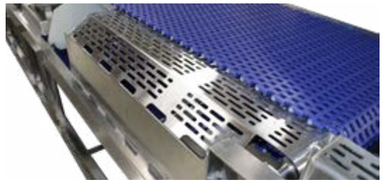
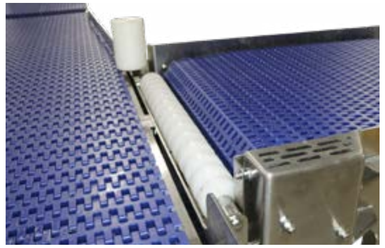


Integrated Controls
Conveyor control screen displays components, conveyor speeds and all sensor locations.

Belt System
A positive drive belt of microwave transparent material moves continuously.



Safety
E-stops and guarding meet applicable government safety standards for operation.



Transitions
Adjustable transition rollers guide the product through corners for less jamming. Transition and guide rollers ensure smooth material flow between conveyors.

Microwave System Conveyors

Conveyors for Microwave Process Systems

Add versatility to your microwave system with integrated conveyors by AMTek.

- Custom conveyor lengths and widths
- Stainless sanitary construction
- Wash-down rated
- Variable conveyor belt speed
- Safety E-stop
- Guarding meets safety requirements
- Integrated conveyor controls

Conveyors

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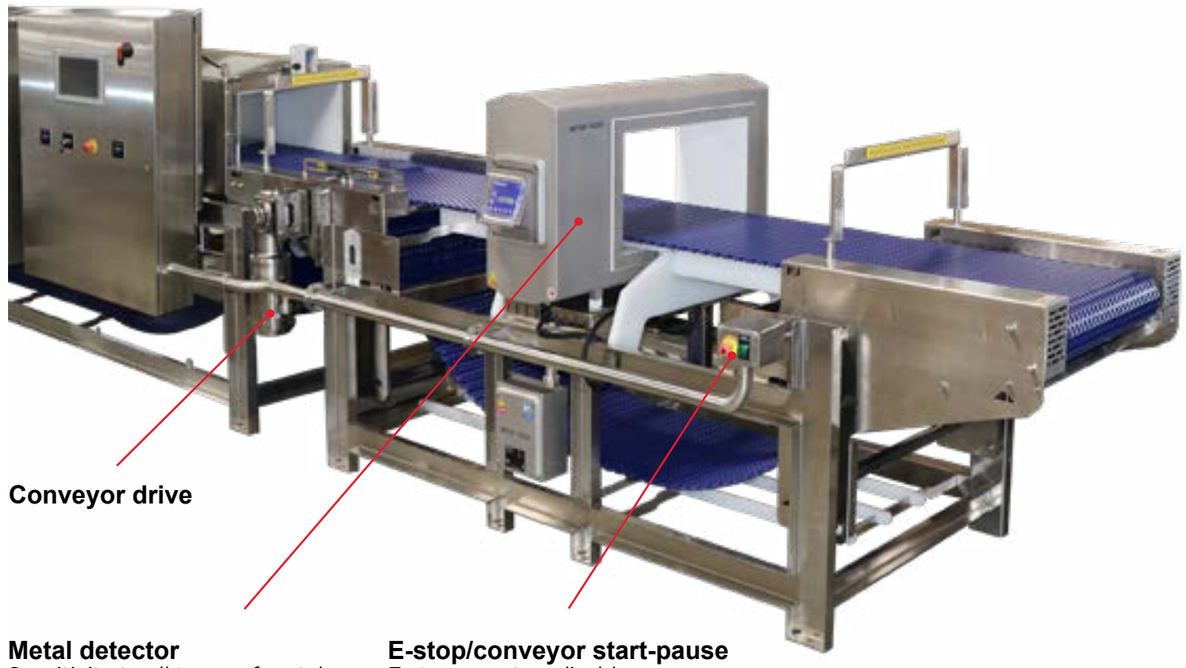
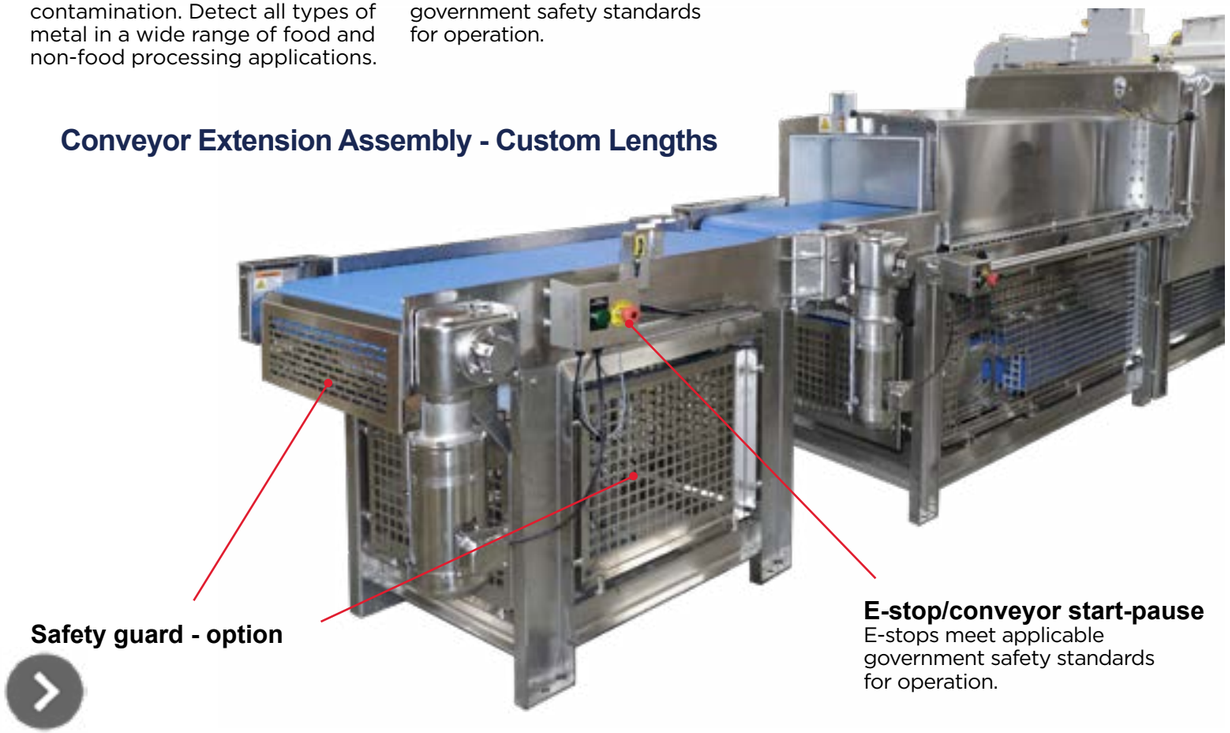
Infeed Conveyor Assembly



Metal detector
Sensitivity to all types of metal contamination. Detect all types of metal in a wide range of food and non-food processing applications.

E-stop/conveyor start-pause
E-stops meet applicable government safety standards for operation.

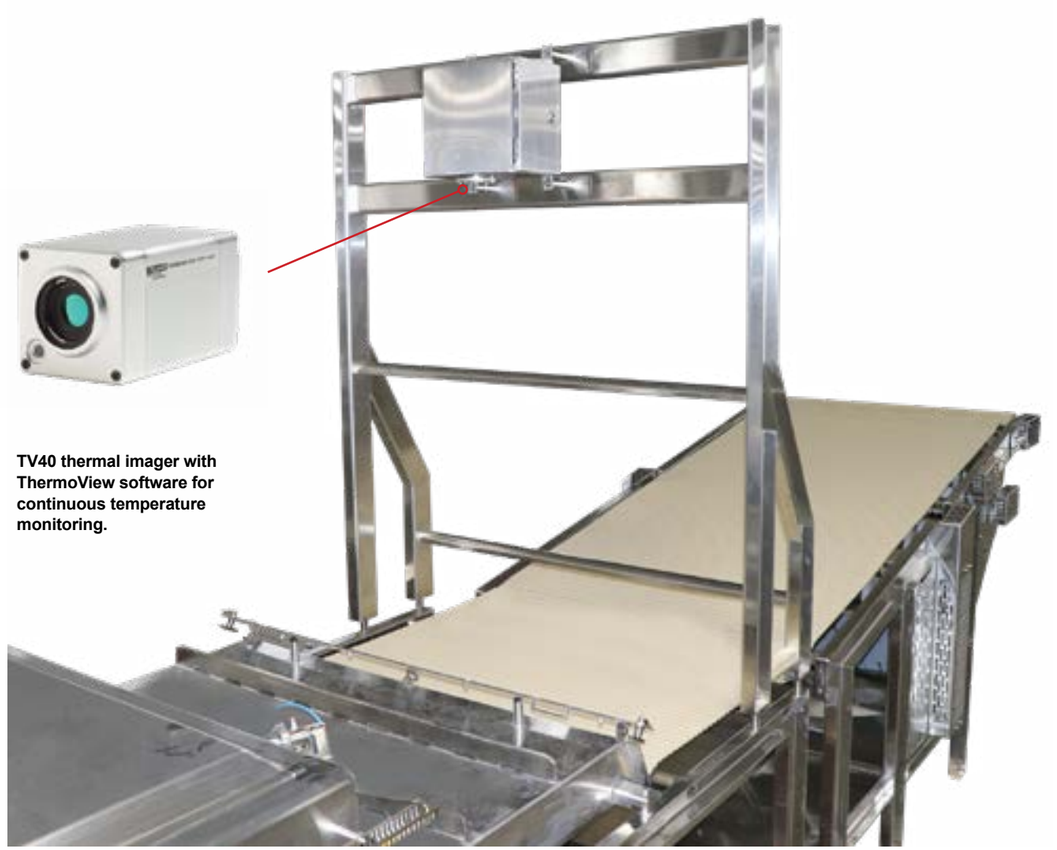
Conveyor Extension Assembly - Custom Lengths



E-stop/conveyor start-pause
E-stops meet applicable government safety standards for operation.

Microwave Thermal Imaging System

Thermal Imaging System



TV40 thermal imager with ThermoView software for continuous temperature monitoring.

The AMTek Thermal Image system for continuous monitoring of the heated product exiting the heating process, for temperature validation. The system includes a 15” integrated display and computer assembly for continuous visual display of the temperature profiles across the entire belt.

- Continuous monitoring of the heated product
- Monitors temperature profiles across the entire belt
- Alarm triggers when out of target range
- Includes a 15” integrated display and computer assembly
- Stainless Steel display bezel
- Temperature Range of -10 to 1200°c
- Thermal imager with ThermoView software package

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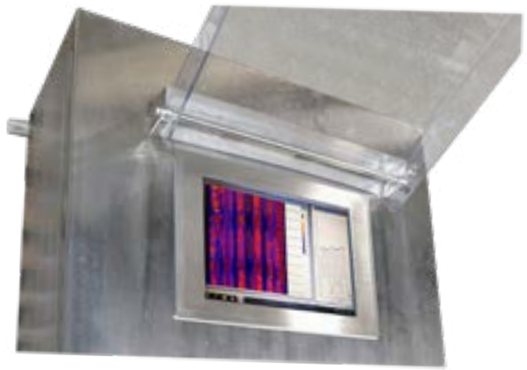
Microwave Thermal Imaging System

Thermoview TV40 Thermal Imager

- Model #TV-43L-TV-0 standard resolution Thermal Imager.
- Temperature Range of -10 to 1200°c
- 320 x 240 Infrared Resolution.
- LAN/Ethernet with PoE communication.
- PoE Industrial Injector.
- Includes Ethernet IP ThermoView Software package.

Allen-Bradley® 6177R Industrial computer

- Windows 10 IoT Enterprise (64 bit)
- Stainless Steel display bezel
- Dual and quad core Intel 2nd Generation Core Processors
- Stunning Intel HD 2000 graphics
- Fast DDR3 RAM and high capacity hard disk drives



Allen-Bradley® 6186M Integrated Display

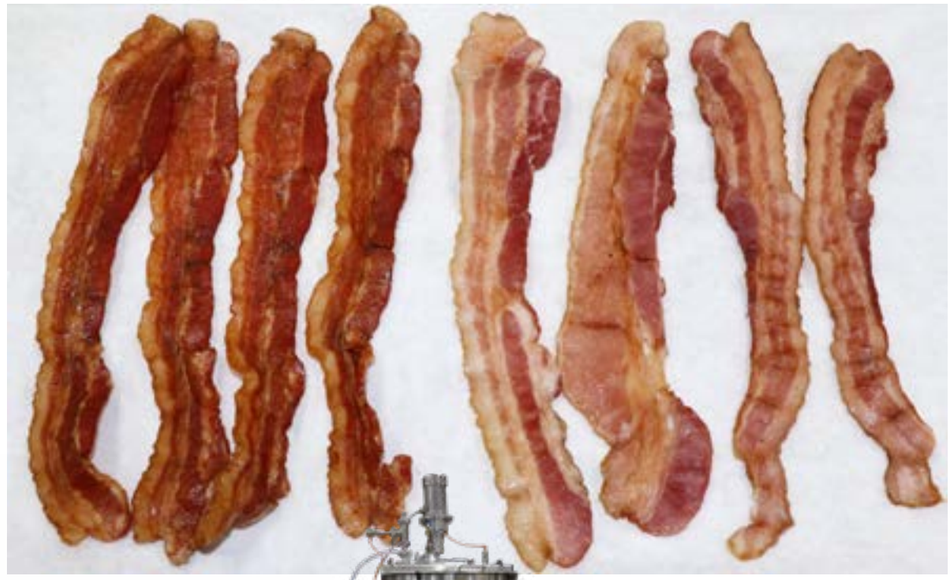
The 6186M performance monitors are rated Class 1 Division 2 for hazardous locations to withstand extreme conditions. These monitors are best suited for special purpose environments like the food and beverage industries, since they provide excellent protection against heat, shock, and vibration.

Red Arrow Spray System

Integrated Microwave Smoke Application

Bacon Spray System

Smoke Bacon **Bacon**



"We cooked the bacon slices under the same processing conditions utilizing an Amtek industrial microwave oven. The bacon on the left utilized Red Arrow smoke applied just prior to microwave."

- Enhanced consistency in smoked appearance and flavor
- Improve yield:
  - Reduce slice grade outs due to color variability
  - Increase weight yield by eliminating over-cooking
- Create value through marketing claims: apple wood, cherry wood, hickory, double-smoked, etc.
- Application followed by heat means no label changes
  - USDA PM 058-A
- Compact footprint - skid package with PLC controls
- Precise control with finger-tip adjustments
- Spray bars with hoods mounted to the conveyor
- Sanitary design with C-I-P features

Stainless Mix Tank Assembly

- Stainless mix tank is sealed allowing overnight storage of unused smoke solution
- Touch screen controls, with multiple recipe program slots
- Precision positive displacement recirculation system; only use the amount of solution that is required
- Hands free auto refill feature ensures clean smoke
- solution is always available
- Solution concentration control (Mag Flow) ensures manufacture and end user of

Mix Tank Line Controls

- Independent line controls for each microwave (multiple lines)
- Optimized usage: spray turns ON/OFF automatically with motion of belt

Stainless Conveyor Spray Hoods

- Fits over complete width of belt
- Adjustable spray pattern to ensure coverage
- Spray bar rated at 12 gph for typical (4) lane belt
- Hood doors slide open for nozzle maintenance
- ¼-turn nozzles for ease of cleaning and replacement
- Spray bars mounted on tri-clamp connection

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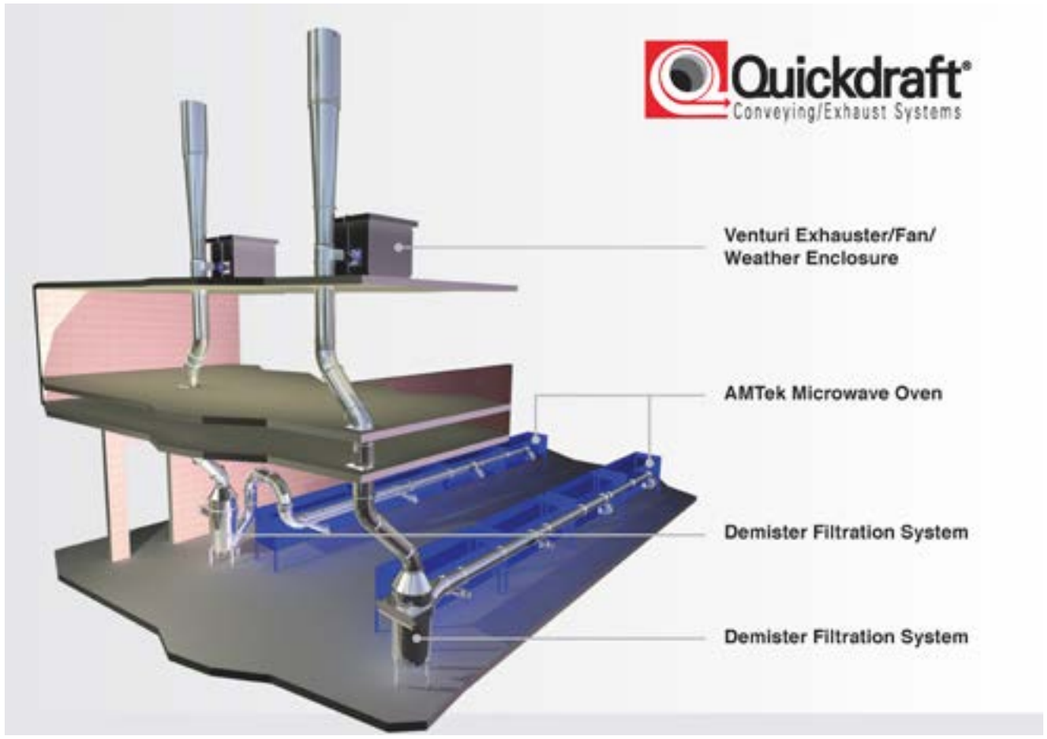
Microwave Exhaust System

Integrated Microwave Oven Exhaust and Grease Filtration System

Integrated Exhaust System



Properly balanced, consistent exhaust has been proven to INCREASE PRODUCTION

BEFORE: A traditional exhaust with an inline fan leaves the roof covered in extremely messy grease and shortens the fan life.

AFTER: Quickdraft solves the problem

Venturi Exhausters

- Eliminate fan maintenance
- Remove moving components from the exhaust stream
- Prevent build-up of oil/ice/etc. on an impeller
- Variable frequency drive control
- Exhaust volumes to 40,000 CFM
- Consistent, dependable lifelong exhaust

Demister Filtration System

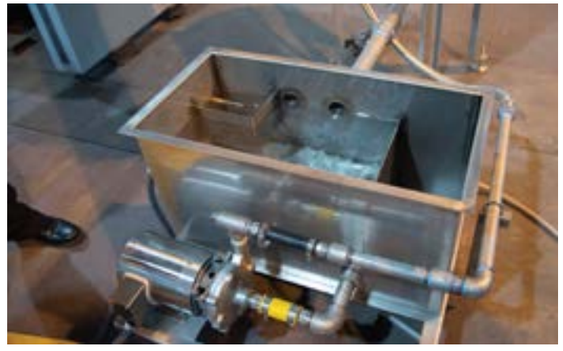
To eliminate oil or grease buildup on your roof, the Demister System uses a three-stage process for exhaust filtration including velocity reduction and centrifugal separation, water spray scrubbing and demister pad filtration.

- Prevents roof damage and extends life
- Protects other roof mounted equipment
- Eliminates the time, cost and expense of roof cleaning
- Reduces problems from pests and birds
- 99% efficient at 10 micron, 85% efficient at 2-3 micron
- Filter is re-usable and easy to maintain
- Carbon Filter option is available for odor removal

Water Recirculation Tank

Located next to the Demister System, the tank recirculates spray scrubbing water reducing water consumption and operating costs.

- Provides the required spray flow for maximum filtration efficiency
- Interval and duration timers “purge” tank to separate grease
- All stainless construction with washdown motor



Optimize Demister System Operation

- All exhaust system ducting and components are comprised of 304 grade stainless steel
- Exhaust ducting is available with access doors, dampers, and CIP spray nozzle fitting
- Inverter-capable motors with variable frequency drive available for precise exhaust control
- Blower weather housings available
- Exhaust discharge storm shields or rain caps available
- 3D system installation drawings available
- Exhaust stack routing available
- Start-up assistance and installation supervision available

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Translyft Lifting Tables

Translyft Lifting Tables

Stainless Steel Adjustable Tables for Microwave Systems

Translyft stainless steel lifting tables are all produced from high quality materials.

Platform, base frame and scissors:
Made from stainless steel AISI 304, a nickel chromium quality steel with excellent high corrosion resistance properties. Exceptionally well suited to the food and pharmaceutical industries.

Axles, wheels and bolts:
Made from stainless steel AISI 303, a ductile quality steel with good corrosion resistance.

Fittings & tubes:
Standard electro-galvanised quality.

Wheels:
Stainless steel/polyurethane.

Cylinders are available in 3 different qualities to suit various industrial applications:

Standard cylinder:
Hard chrome plated piston rod.
Piston tube: 2 x primer and 2 x two component polyurethane paint.

Cylinder with special coating:
Stainless steel AISI 304 quality piston rod and joint bed.
Piston tube: Sandblasted to SA 2.5, zinc metallised to 20 µ, 2 x two component primer to 60 µ and 2 x two component polyurethane paint to 40 µ.

Stainless steel cylinder:
Stainless steel piston rod, hard chrome plated.
Stainless steel AISI 304 quality joint bed and piston tube.

- **Helps operators use correct ergonomic posture.**
- **Reduces the risk of injuries and stress on arms, shoulders and backs.**
- **Ruduces absenteeism due to injuries.**
- **Improve efficiency and production in the workplace.**
- **Suitable for use in facilities where standards of hygiene is important.**
- **Can be easily moved for cleaning.**

TECHNICAL SPECIFICATIONS

Stainless steel lifting tables are often used in wet environments as a consequence of manufacturing processes or due to cleaning procedures. In these conditions we recommend that the power unit is placed in a protected area, for example a nearby wall. This may prevent future breakdowns.

All Translyft lifting tables are equipped as standard with:

- adjustable return valve.
- pressure compensating lowering valve.
- emergency stop valve on all cylinders.
- safety trip bar on all sides.
- maintenance safety bars for service.

Power supply	1 x11 OV / 50-60Hz
Control voltage	24 V DC on all functions, including solenoid valve
Electric box	IP 65
Filter system	Filter on oil tank and on oil return side
Noise level	50-52 dB

Translyft lifting tables are CE marked and conform to BS 5323. The tables also conform to European EN 1570 safety demands for lifting tables.

Translyft has a large range of single and double scissor lifting tables as well as superlow tables in painted or hot galvanised finish.

Type/Capacity	Travel	Collapsed Height	Length	Width	Lift sec	kW	Weight
TL 2000 F	33"	7"	51"	39"	18	0,75	396
TL 4000 F	32"	8"	51"	39"	27	0,75	528
TCB 2000 F	28"	3"	59"	39"	12	0,75	605
TUB 2000	28"	3"	57"	43"	12	0,75	517

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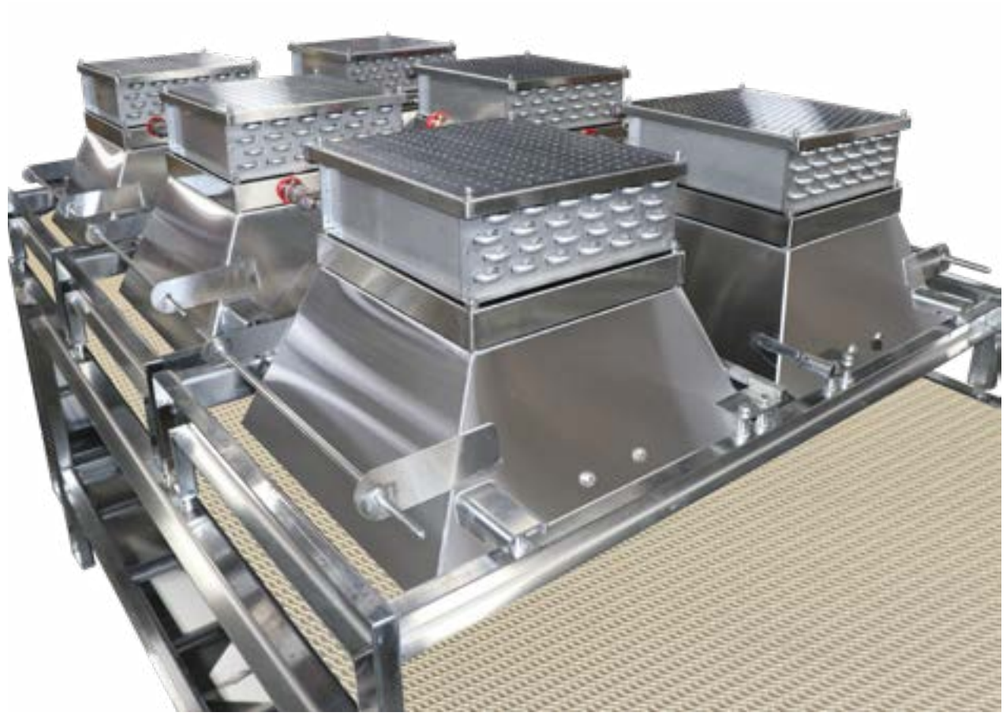
Cooling Fan Option

Product Cooling Fans

Product Cooling Assemblies for Microwave Systems

AMTek product cooling fan assemblies supply either ambient room air or optional chilled air down onto the product to significantly reduce the products temperature after the cooking oven assembly.

- Complete Stainless steel construction
- Polypropylene diffuser plate with removal handle
- Nema 4x wash-down rated 56c 3ø motor assembly
- Turck 7/8” Minifast® WKM Series Nema 4/IP67 cable assembly
- Stainless steel finger-safe guard over the fan blade assembly
- Can be controlled by the Main PLC Control Panel
- Optional coil assembly for additional cooling



Fan chiller option

The cooling coil assemblies lower air temperature for faster product cooling.

Sanitation

The cooling assembly is constructed of stainless steel and hinged for ease of cleaning.

Impingement Plate

The plate has an array of ports for even distribution of air to product for cool down.

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Revised 7-16-21

4X Panel Enclosures

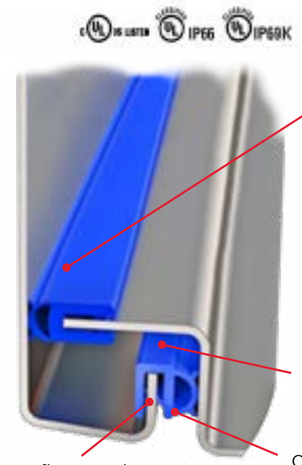
For sanitary and extreme indoor and outdoor locations!

Custom Stainless Enclosures has developed this revolutionary Double Seal electrical enclosure for all industries which includes the following advantages:

- Single “Hygienic” Quarter Turn with 3 Point Interlocking capabilities for all enclosure sizes.
- Foreign Material Inspectable - Blue EPDM - Field Replacable Gasket System.
- Our Ultra Clean - Free Draining Design for your ready to eat locations.
- Our Innovative Double Stud® Mounting Technology eliminates gaskets and reduces overall installation time.
- With our world class 3D modeling software, we lead the industry with giving our customers the flexibility to create the enclosure they want for their applications.

Double Seal Enclosures

U.S. PATENT # 9,745,794
UL Listed Types: 4X, 4, 3R, 3

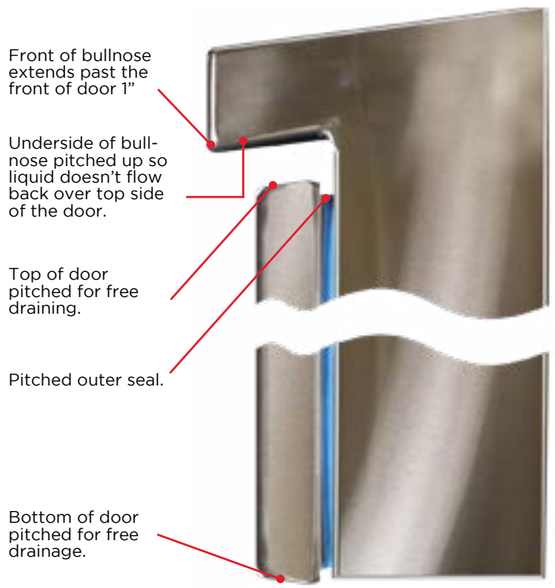


Single Hygenic Quarter Turn For All Enclosure Sizes!

Reduces risk of doors not being closed properly!

- A properly closed door reduces the risk of water in your enclosure which will:
  - Reduce premature electrical failures
  - Increase plant production
  - Increase plant revenue
  - Reduce overall cost of equipment ownership!

Ultra Clean Free Draining Design



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Sanitary Oven Doors

Replacement Microwave Oven Doors

AMTek replacement sanitary microwave oven doors are designed to fit or retrofit your oven cavity. We match the bolt pattern of AMTek, Amana, Ferrite and other brands of microwave ovens to make your door upgrade easier. It also reduces your inventory by needing to stock one style door assembly if you have multiple brands of ovens. Safety switches are supplied with retrofit doors. The door assemblies are in-stock for fast delivery.

- Stainless steel sanitary construction
- Mounting bracket matches bolt pattern
- Can be used on other brands of ovens
- Works with magnetic, push-button and lever actuated safety switches
- Retrofits include bracket, hardware, safety switches and latches
- In-stock for fast delivery

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Contact AMTek Microwaves

AMTek provides all of the resources needed to support industrial microwave processing equipment and systems. We provide the food processing industry with specialized technical knowledge and services.

4115 Thomas Drive SW Cedar Rapids, Iowa 52404

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(877) 365-2008

sales@4amtek.com

www.4amtek.com

AMTek business hours (CST)

Monday	7:00am - 3:30pm
Tuesday	7:00am - 3:30pm
Wednesday	7:00am - 3:30pm
Thursday	7:00am - 3:30pm
Friday	7:00am - 3:30pm
Saturday	CLOSED
Sunday	CLOSED

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