

# AMW400

## MICROWAVE TEMPERING OVEN

The AMW200 allows deep frozen foods such as meat, poultry, fish, fruits, vegetables, cheese, butter, etc... to be tempered or defrosted (butter) quickly.

The AMW400 is equipped with two sliding tables, making it possible to minimise unloading/reloading time, and a yield increase of roughly 15%.

The optimal distribution of the microwaves in the cavity, thanks to the multiple microwave power inlets and the turntable, allows perfect homogeneity of the final temperature throughout the product.



### KEY BENEFITS

- **PROFITABLE:** save money by avoiding drip losses
- **FAST:** very short time of treatment, less than 10 minutes, high production flexibility
- **USER FRIENDLY:** rolling tray for loading / unloading, pneumatic door movement, HMI with 12" colour touch screen
- **HOMOGENEOUS:** excellent temperature homogeneity thanks to turn table, microwave power inlets above and under the product
- **RELIABLE:** no need for regular maintenance, except daily cleaning
- **HYGIENIC:** no bacteriological growth, complies with all hygiene regulations and standards,
- **FLEXIBLE:** can be used for tempering packed (cardboard or plastic film) or unpacked food
- **COMPACT:** small footprint
- **CONNECTED:** USB and ethernet connection for remote control



# AMW400

## MICROWAVE TEMPERING OVEN

### TEMPERING CAPACITIES

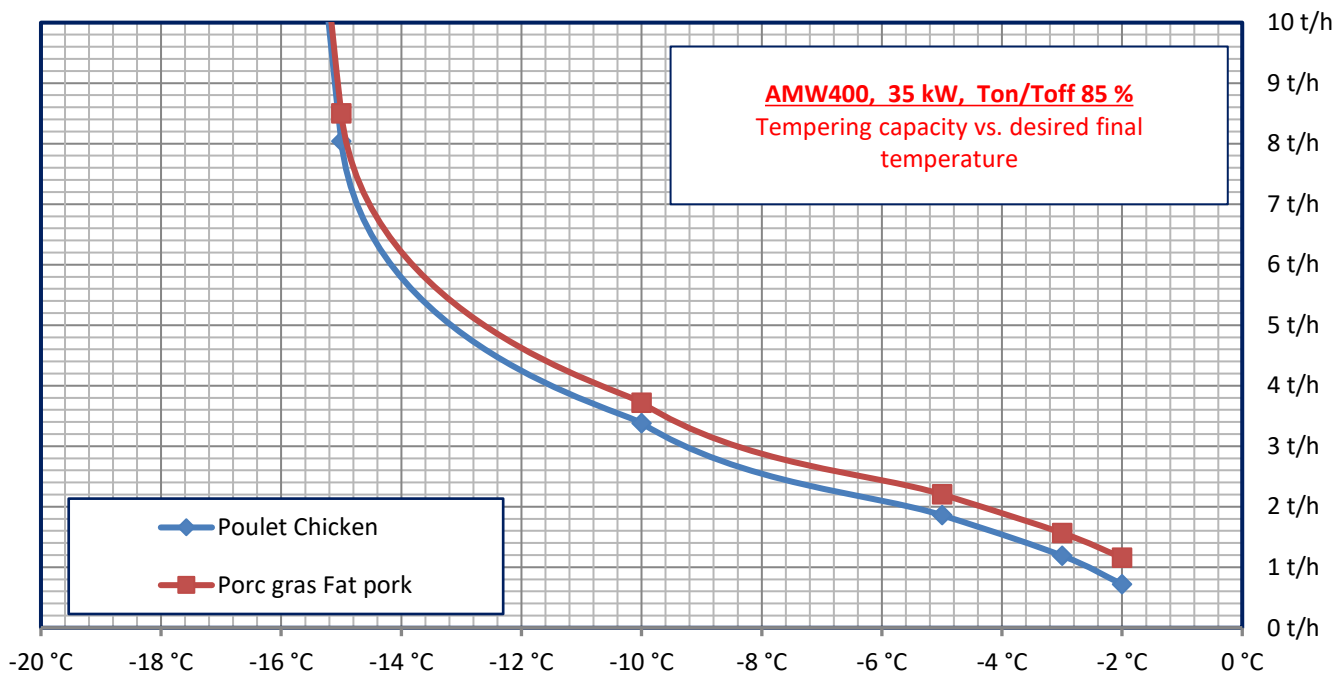
The AMW400 has a tempering capacity between 700 kg/h and 1200 kg/h from -18 °C to final temperature of -4 °C / -2 °C, which is the optimum temperature for processing: dicing, grinding, cutting, slicing...

This capacity is variable and depends: on the final required temperature, on the product type (meat, fish, vegetables, fruits, butter etc.), its shape and its fat concentration. If fatty products are to be processed, fat ought to be very homogeneously distributed in the block, otherwise the final temperature for good tempering homogeneity is limited at -4 °C;

The data in the charts below are calculated operating the AMW 400 with a 35 kW microwave power (60 kW maximum) with optimal  $t_{on}/t_{off}^1$ , for blocks with regular size and weight (25 kg, 600 mm x 400 mm x 150 mm) and for an initial temperature around -18 °C.

The maximum microwave power which can be used in tempering is limited by the products and not by the AMW. Recipes power vs. time must be chosen according to the compromise between capacity and homogeneity of heating.

### TEMPERING CAPACITY VS. DESIRED FINAL TEMPERATURE



**Example:** Chicken: 1.9 t/h from -18 °C to -5 °C or  $\approx$  1.2 t/h from -18 °C to -3 °C

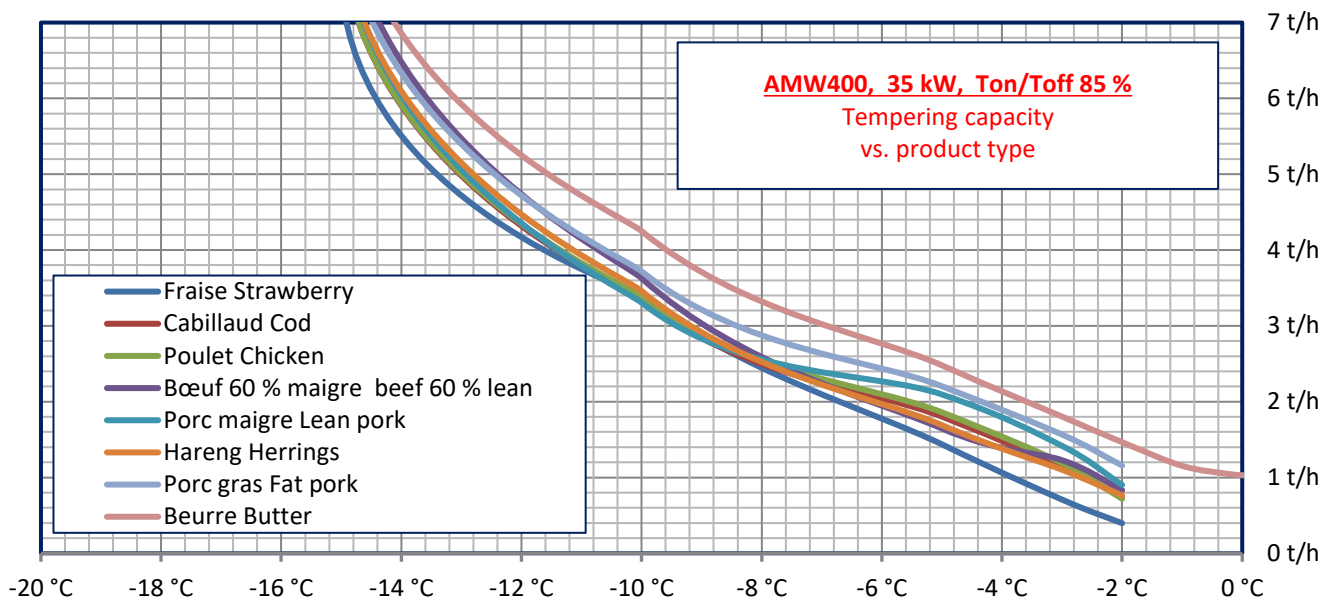
**Example:** Fatty pork  $\approx$  2,2 t/h from -18 °C to -5 °C or  $\approx$  1,5 t/h from -18 °C to -3 °C

<sup>1</sup>Microwave utilization within 1 hour including loading/unloading and door opening/closing. The optimum is 85 %.

# AMW400

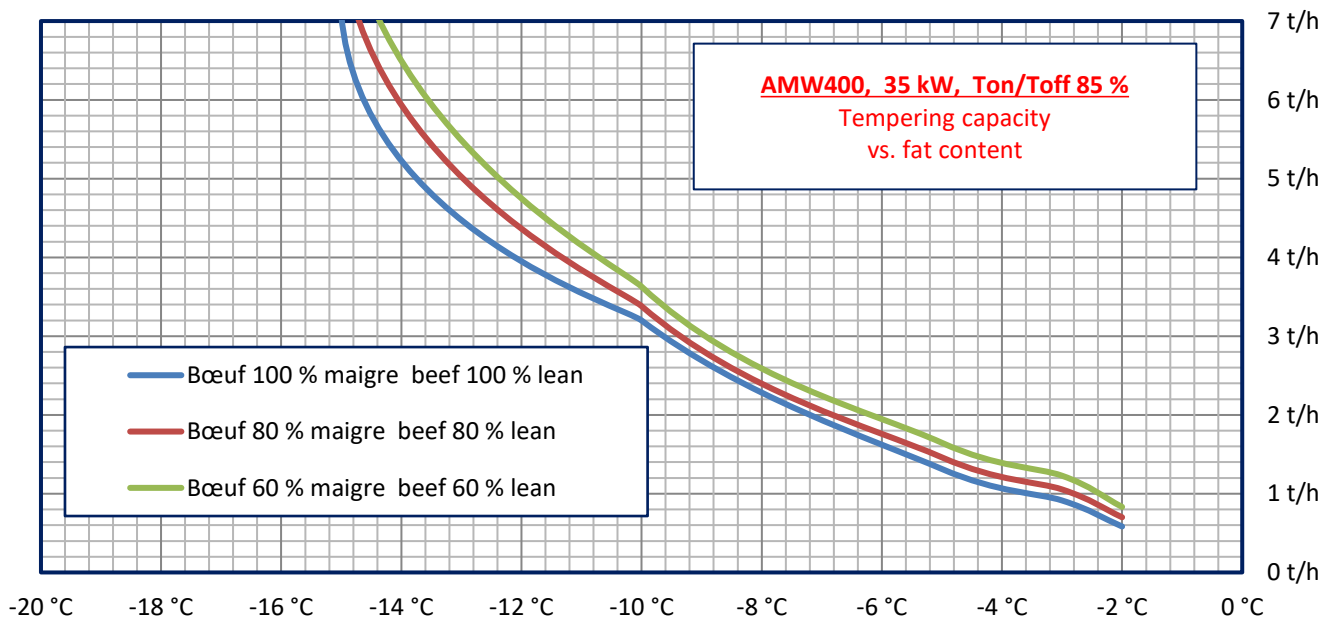
## MICROWAVE TEMPERING OVEN

### TEMPERING CAPACITY VS. PRODUCT TYPE



**Example:** Fatty pork  $\approx$  1.9t/h at  $-4^{\circ}\text{C}$  or beef 60 % lean  $\approx$  1,4t/h at  $-4^{\circ}\text{C}$ .

### TEMPERING CAPACITY VS. FAT CONTENT



**Example:** from  $-18^{\circ}\text{C}$  to  $-3^{\circ}\text{C}$ , capacity  $\approx$  900 kg/h for beef 60 % lean or 1100 kg/h for beef 100 % lean

# AMW400

## MICROWAVE TEMPERING OVEN

### EXAMPLES OF PROCESSED BLOCKS



#### Ham

80 kg (4 x 20 kg)

1100 kg/h from -18 °C to -4 °C / -2 °C



#### Pork shoulder without bones

10 à 15 % fat, 100 kg (4 x 25 kg)

1000 kg/h from -18 °C to -4 °C / -3 °C



#### Beef

25 % fat - 100 kg (4 x 25 kg)

1600 kg/h from -18 °C to -4 °C / -2 °C

Other examples:

- **Poultry filets - 80 kg (4 x 20 kg)**
  - 1400 kg/h from -18 °C to -6 °C / -4 °C
  - 900 kg/h from -18 °C to -4 °C / -2 °C
- **Game (doe) - 80 kg (4 x 20 kg)**
  - 1000 kg/h from -18 °C to -4 °C / -2 °C
  - 750 kg/h from -18 °C to -3 °C / -1,5 °C

# AMW400

## MICROWAVE TEMPERING OVEN

### KEY SPECIFICATIONS

| Reference              | AMW400  |
|------------------------|---|
| Construction           | <ul style="list-style-type: none"><li>• <b>Cavity:</b> 304 L stainless steel, microwave door with <math>\frac{1}{4}</math> <math>\lambda</math> choke, pneumatically driven sliding door, turn table with automatic stop, MW distribution above and below</li><li>• <b>Microwave generator:</b> integrated, IP54, interchangeable microwave power supply with quick connectors for easy maintenance, high reliability</li></ul> |
| Tempering capacity     | <ul style="list-style-type: none"><li>• Depends on final temperature, product, fat content</li></ul>  |
| Sliding table(s)       | <ul style="list-style-type: none"><li>• 2 sliding tables, polyethylene, with usable surface 1030 x 1030 mm, sliding mechanism consists of rollers with position locking</li><li>• Load per sliding table: 4 blocks</li><li>• Max block size 600 x 400 x 250 (height) mm, 30 kg maximum per block</li></ul>  |
| Microwave frequency    | <ul style="list-style-type: none"><li>• 915 MHz (other frequencies available according to regulations of each country)</li></ul>  |
| Microwave power        | <ul style="list-style-type: none"><li>• 60 kW maximum, adjustable from 10 kW to 60 kW</li></ul>   |
| HMI and PLC            | <ul style="list-style-type: none"><li>• 7" digital touch screen, multi lingual, control of microwave power and time, 50 programmable recipes, oven status, faults history etc. Microwave start, door opening/closing push buttons installed on each side of the sliding table, emergency stop etc...</li></ul>  |
| Safety                 | <ul style="list-style-type: none"><li>• Microwave leakage detector and emergency stop</li></ul>   |
| Power                  | <ul style="list-style-type: none"><li>• 400 V, 3-phase, no neutral + earth 50/60 Hz, 90 kVA at full power</li></ul>   |
| Cooling water          | <ul style="list-style-type: none"><li>• Recirculated water, flow min. 50 l/min with differential pressure min. 3 bar, inlet temperature 18 °C to 22 °C, max power to dissipate 20 kW; 1" GF.<br/><b>Optional:</b> air/water chiller</li></ul>   |
| Compressed air         | <ul style="list-style-type: none"><li>• Min. 6 bar, consumption 30 l/min during 10 s (for door opening/closing). Average 0.7 l/min</li></ul>  |
| Cleaning               | <ul style="list-style-type: none"><li>• With low pressured water jet for cleaning inside the oven</li><li>• Evacuation under the cavity</li></ul>   |
| EC standards           | <ul style="list-style-type: none"><li>• 89/392, 91/368, 73/23, 89/336, 92/31, 519-6 CEE/EWG EN55011 (specific)</li></ul>  |
| Dimensions (W x H x D) | <ul style="list-style-type: none"><li>• 2921 x 2286 x 2986 mm</li></ul>   |
| Weight                 | <ul style="list-style-type: none"><li>• 2200 kg</li></ul>   |

# AMW400

## MICROWAVE TEMPERING OVEN

### MAIN DIMENSIONS

