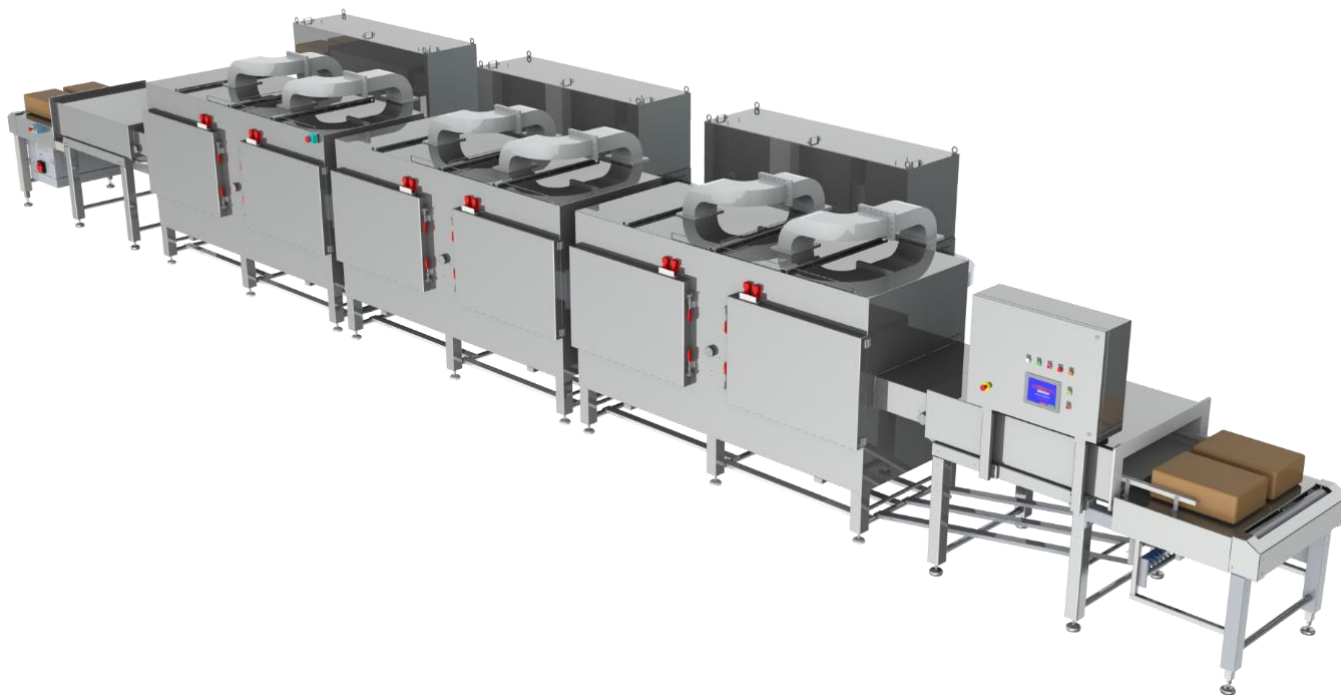


# TMW225

## MICROWAVE TEMPERING TUNNEL

The TMW225 allows deep frozen foods to be tempered or defrosted quickly. It is adapted for products like meat, poultry, fish, fruits, vegetables, cheese, butter, etc...



**The distinctive feature of the TMW 225** is the use of the microwave technology to achieve the best tempering homogeneity while maintaining a good microwave efficiency.

The large size of the cavity, the length under microwaves and the crossed coupling of microwaves above and below the blocks are a few examples of the solutions used to conciliate capacity, efficiency and homogeneity.

Possibility to choose the direction of operation and to install the generator on a platform.

### KEY BENEFITS

- **Profitable:** save money by avoiding drip losses
- **Fast:** very short time of treatment, between 5 to 15 minutes
- **User friendly:** easy loading / unloading, colour touch screen HMI, 12"
- **Homogeneous:** excellent temperature homogeneity thanks to multiple microwave inlets (above and below)
- **Reliable:** no need for regular maintenance, except daily cleaning
- **Hygienic:** no bacteriological growth, complies with all hygiene regulations and standards, keeps the organoleptic qualities
- **Flexible:** can be used for tempering packed (cardboard, plastic film ...) or unpacked food
- **Connected:** USB and ethernet connection for remote control

# TMW225

## MICROWAVE TEMPERING TUNNEL

### TEMPERING CAPACITIES

The TMW225 offers a tempering capacity between 6 t/h and 9 t/h from -18 °C to a final temperature of -4 °C / -2 °C in 95% of the block, which is the optimum temperature for processing: dicing, grinding, cutting, slicing... The capacity is calculated to temper frozen blocks with standard dimensions 600 mm x 400 mm x 200 mm and a weight of about 20 / 25 kg. If fatty products are to be processed, fat ought to be very homogeneously distributed in the block, otherwise the limit temperature for homogeneity is -4 °C.

The tempering capacity is variable and depends on the final required temperature and on the product (meat, fish, vegetables, fruits, butter, etc. Figures below show these variations.

The data in the charts are calculated for the TMW225 operating at 180 kW power, with  $t_{on}/t_{off}^1$  optimum at 95 %, for blocks with regular size and weight 25 kg (600 mm x 400 mm x 200 mm) and for a starting temperature around -20 °C / -18 °C.

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

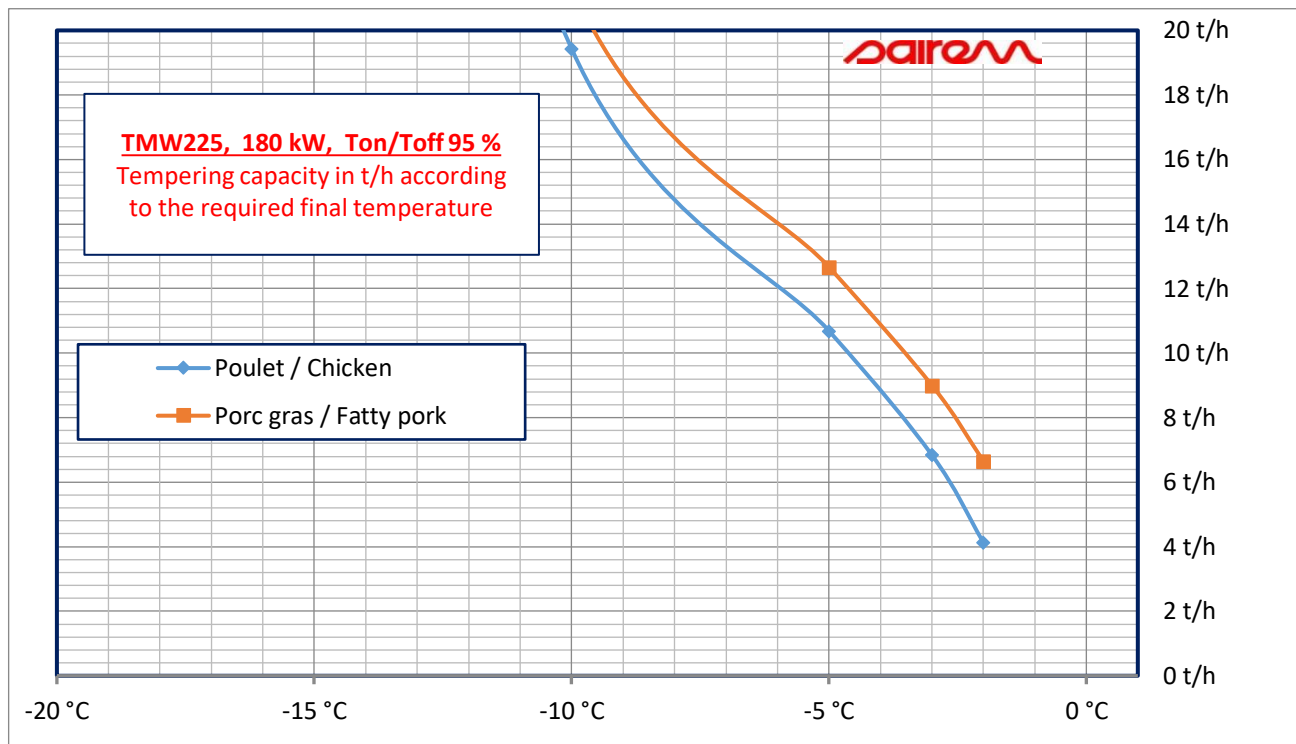


<sup>1</sup> Microwave utilization within 1 hour including loading/unloading. the optimum is 95 %.

# TMW225

## MICROWAVE TEMPERING TUNNEL

### TEMPERING CAPACITY VS. DESIRED FINAL TEMPERATURE



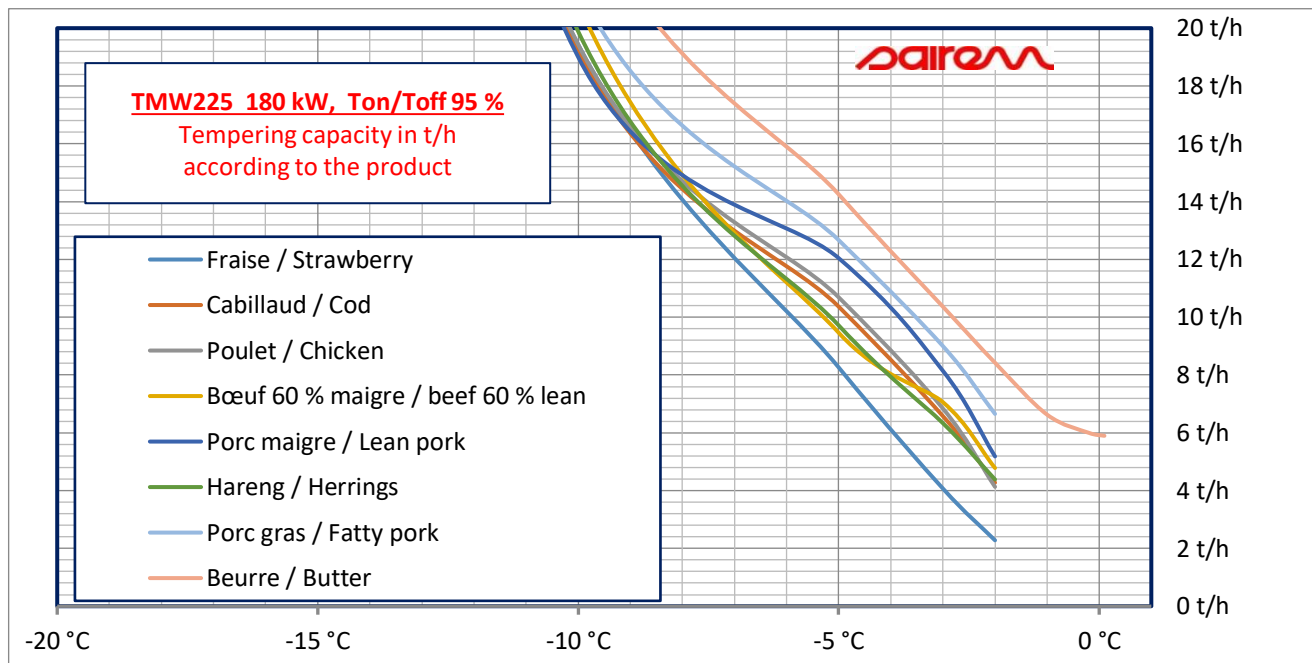
**Example:** Chicken  $\approx$  10.8 t/h from -18 °C to -5 °C or  $\approx$  6.8 t/h from -18 °C to -3 °C.

**Example:** Fatty pork  $\approx$  12.7 t/h from -18 °C to -5 °C or  $\approx$  9 t/h from -18 °C to -3 °C.

The starting temperature at -20 °C or -18 °C has almost no effect on the tunnel capacity if temperature is homogeneous in the whole product.

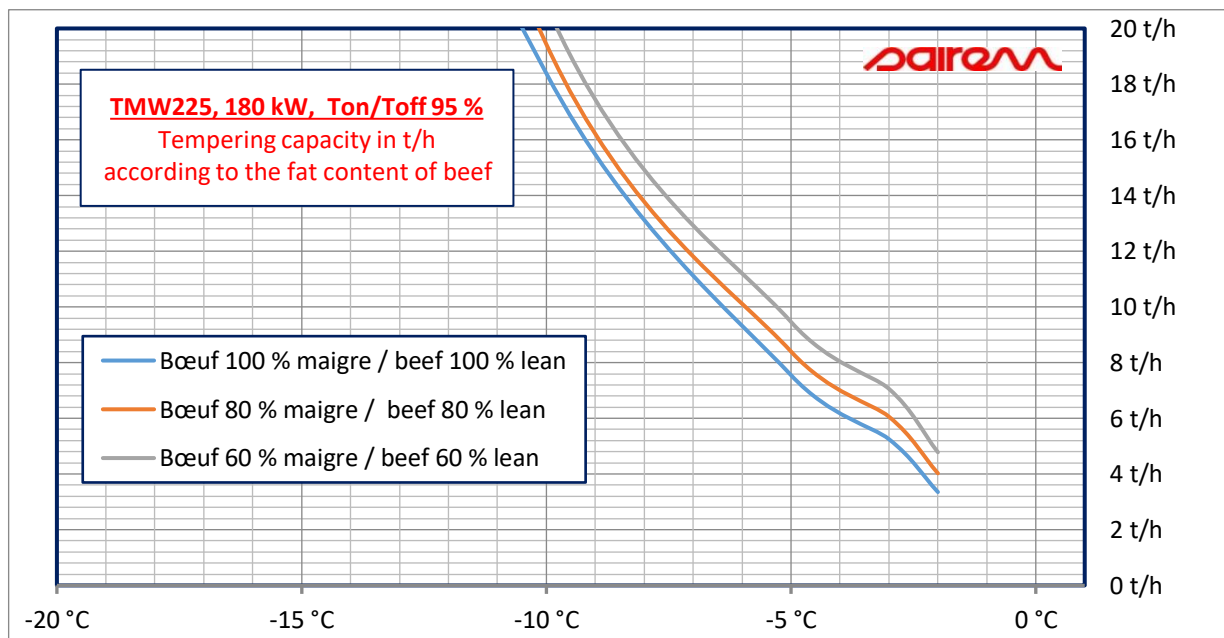
# TMW225 MICROWAVE TEMPERING TUNNEL

## TEMPERING CAPACITY VS. PRODUCT TYPE



**Examples:** butter (10.2 t/h at -3°C) or beef 60 % lean (7 t/h at -3°C) for the same final temperature.

## TEMPERING CAPACITY VS. FAT CONTENT



**Example:** capacity  $\approx$  7 t/h for beef 60 % lean, or  $\approx$  5.2 t/h for beef 100 % lean from -18 °C to -3 °C

# TMW225 MICROWAVE TEMPERING TUNNEL

## EXAMPLES OF BLOCKS PROCESSED WITH THE TMW225



### Beef

25% fat, 25 kg  
8000 kg/h from -18 °C to -4 °C/-2 °C  
Block size: 600 x 400 x 260 mm



### Pork shoulder

10 to 15 % fat, 25 kg  
6000 kg/h from -18 °C to -3 °C / -1 °C  
Block size: 600 x 400 x 260 mm



### Chicken breasts

15 kg  
5000 kg/h from -18°C to -4°C/-2°C  
Block size: 600 x 400 x 260 mm



### Strawberries

100 kg bags (10 x 10 kg)  
4000 kg/h from -18 °C to -3 °C/-1 °C



### Rhubarb

100 kg bags (10 x 10 kg)  
4000 kg/h from -18 °C to -3 °C/-1 °C



### Broccolis

100 kg bags (10 x 10 kg)  
5200 kg/h from -18 °C to -3 °C/-1 °C

Capacity is highly variable if final temperature is -7 °C or -3 °C, or if meat is lean beef or fat pork. Such variations are linked to physical laws such as for example, latent heat of fusion. Capacity varies according to the processed product (lean beef, pork...), its fat content and the final required temperature.

All the above charts are calculated for a TMW225 operating under following conditions:

- Power of microwave generator at 180 kW
- $T_{on}/T_{off}$  at 95 %
- Blocks or products with regular mass and shape
- Blocks or products regularly placed on the belt
- Starting temperature between -20 °C and -18 °C homogeneous in all the blocks or products

To get the complete data sheet :

- full specifications
- technical drawings

**CONTACT US !**

