915 MHz MICROWAVE BATCH MACHINE
Turn table / MW inlet by topside & downside

TEMPERING OF FROZEN BLOCKS

Ref. AMW200 & AMW200 Dual

Capacity: 250 to 400 kg/h from -20 °C to -4/-2 °C



AMW 200



AMW 200 DUAL

Advantages of SAIREM microwave batch machines:

- ✓ **FAST**: **very short** time of treatment, high production flexibility;
- ✓ **ECONOMIC**: **product gain** from 5 to 10 %, working on a just in time basis, **minimum floor space**, fast return of investment;
- ✓ **HOMOGENEOUS**: **915 MHz** microwave frequency and use of a **turn table**;
- ✓ **RELIABLE**: very good control of **final temperature**;
- ✓ **HEALTHY**: no **bacteriological** growth, complies with all hygiene regulations and standards, keep taste and texture **qualities**;
- ✓ **FLEXIBLE**: tempering of meat, fish, vegetables, **packed** (carton without metallic staple or plastic film) **or not packed.**

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Batch machines AMW200 & AMW200 DUAL





AMW200 **AMW200 DUAL**

The distinctive feature of Sairem's AMW200 is the use of a sliding table & door making easier loading and unloading of 2 blocs simultaneously, and its microwave coupling system by two ways.

The **AMW200 DUAL** with double sliding tables makes possible to increase hourly capacity between 5 and 10 % by simply loading two blocks to be tempered while two blocks are being tempered (i.e. 2 blocks in stand-by and two blocks under treatment).

I. TEMPERING CAPACITIES

The AMW 200 offers a tempering capacity between 250 and 400 kg per hour from -20°C to -4/-2°C.

This capacity is variable and depends up on the final required temperature and up on the product (meat, fish, vegetables, fruits, butter etc.). The charts in the following pages show these variations.

Note: at -4/-2°C the blocks are cold enough to be processed: dicing, grinding, slicing…

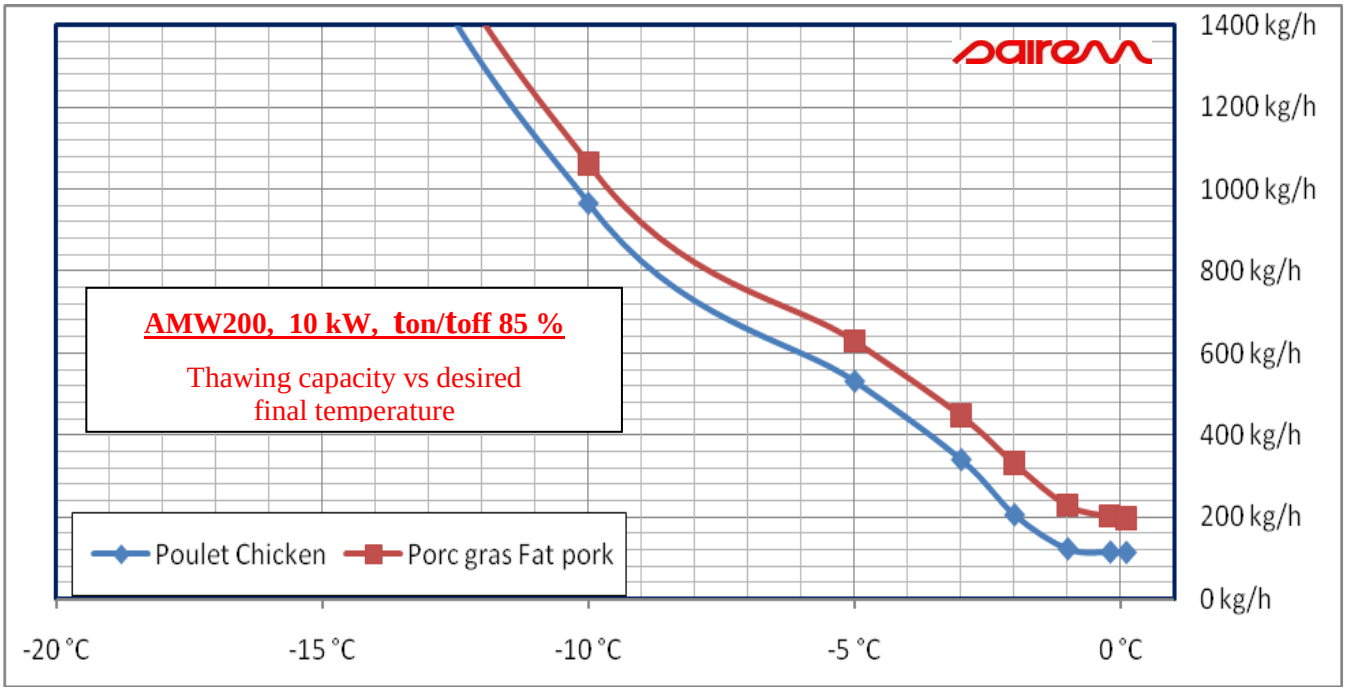
The data in the charts below are calculated for Sairem's AMW 200 with a 10 kW microwave power (maximum)with t_{on}/t_{off} optimum, for blocks with regular size and weight (25 kg, 600 mm x 400 mm x 150 mm) and for a starting temperature around -18^{0}C/-20°C**.**

t_{on}/t_{off} is the microwave utilization within 1 hour including loading/unloading and door opening/closing. The optimum is 85 %.

AMW200 DUAL improves the results indicated below by 5 %.

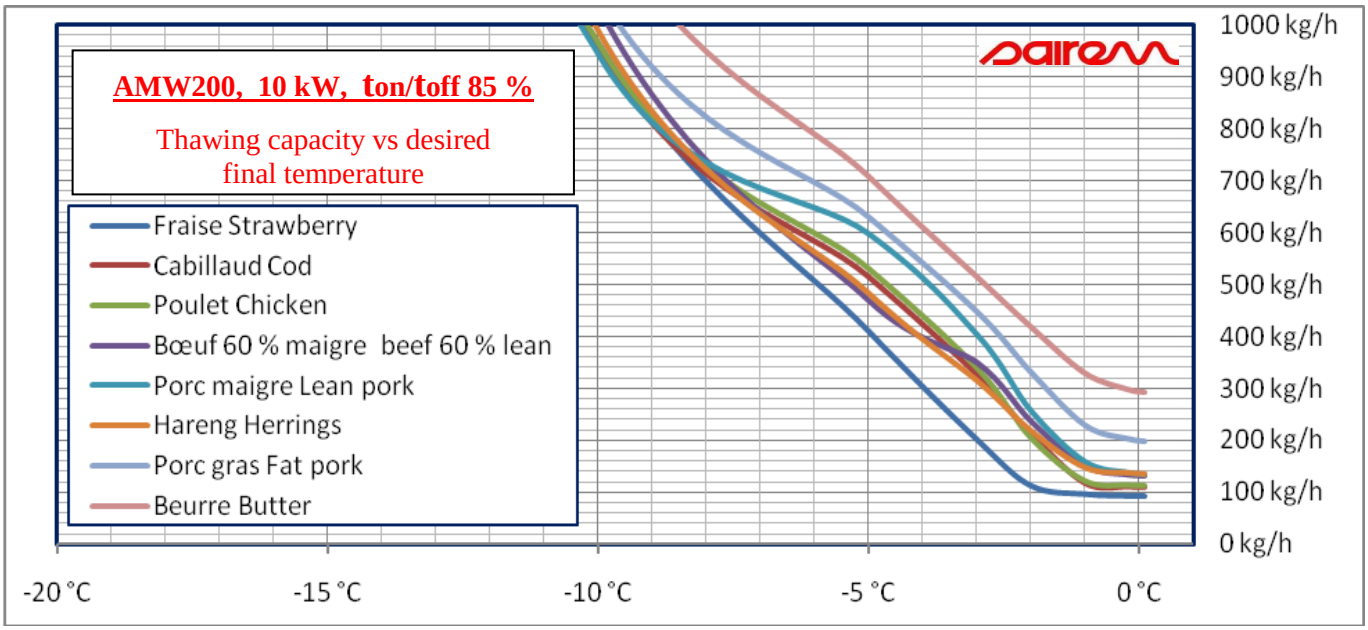
Note: if fatty products are to be processed, fat ought to be homogeneously distributed in the block.

I.1. Thawing capacity vs. to the final required temperature



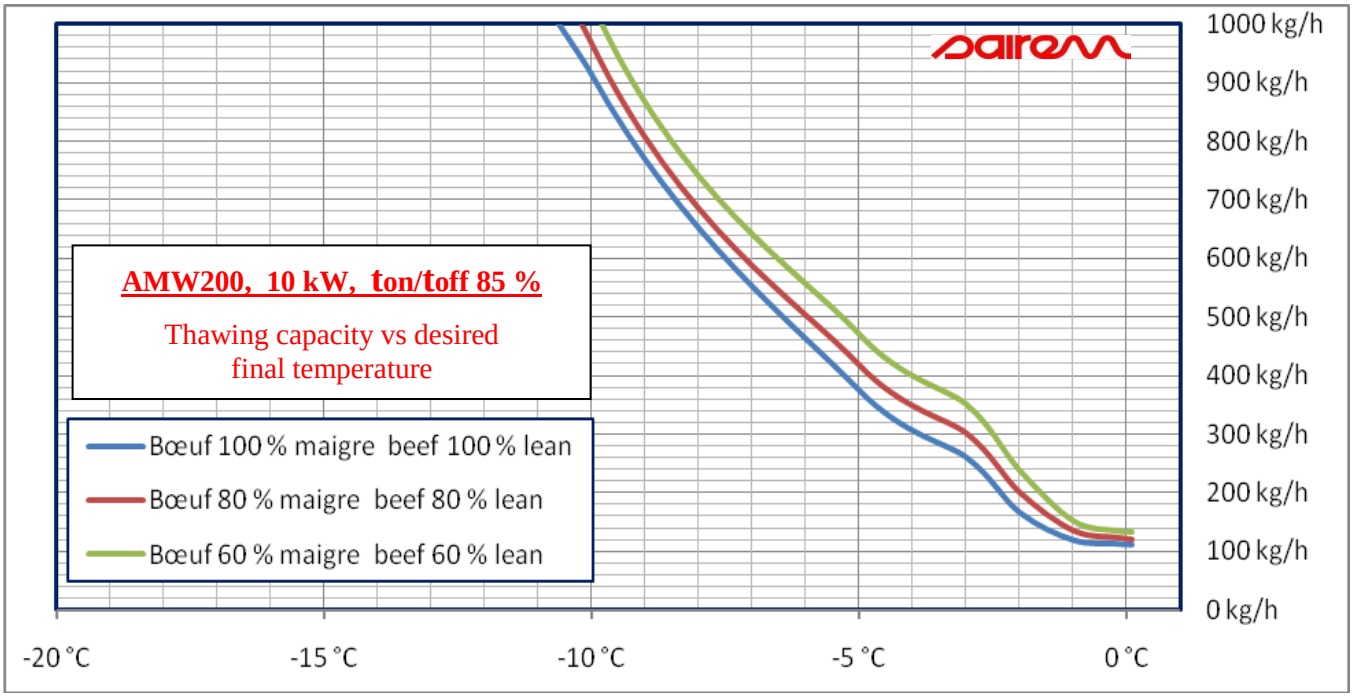
Example: chicken: 570 kg/h from -18 °C to -5 °C or 370 kg/h from -18 °C to -3 °C

I.2. Thawing capacity vs. product type



Examples (at -4 °C): fatty pork: 540 kg/h or beef (60 % lean): 400 kg/h

I.3. Thawing capacity vs. fat content



Examples (at -3 °C): beef (60 % lean): 350 kg/h, beef (100 % lean): 260 kg/h

Some examples of blocks processed with the AMW 200



Beef 25 % fat, 50 kg (2 x 25 kg)
380 - 420 kg/h capacity for a final temperature between -6 °C and -4 °C



Turkey filets, 40 kg (2 x 20 kg)
320 - 360 kg/h capacity for a final temperature between -4 °C and -2 °C
or 250 - 290 kg/h capacity for a final temperature between -3 °C and -1.5 °C



Pork shoulder, 10 to 15 % fat, 50 kg (2 x 25 kg)
250 - 290 kg/h capacity for a final temperature between -3 °C and -1 °C

MORE EXAMPLES:

- **poultry filets, 40 kg (2 x 20 kg), 500 - 540 kg/h capacity for a final temperature between -6 ^{0}C and -4 °C, 280 - 320 kg/h capacity for a final temperature between -4 ^{o}C and -2 °C;**
- **game (doe), 40 kg (2 x 20 kg), 320 - 360 kg/h capacity for a final temperature between -4 ^{o}C and -2°C, 250 - 290 kg/h capacity for a final temperature between -3 ^{o}C and -1.5 °C .**

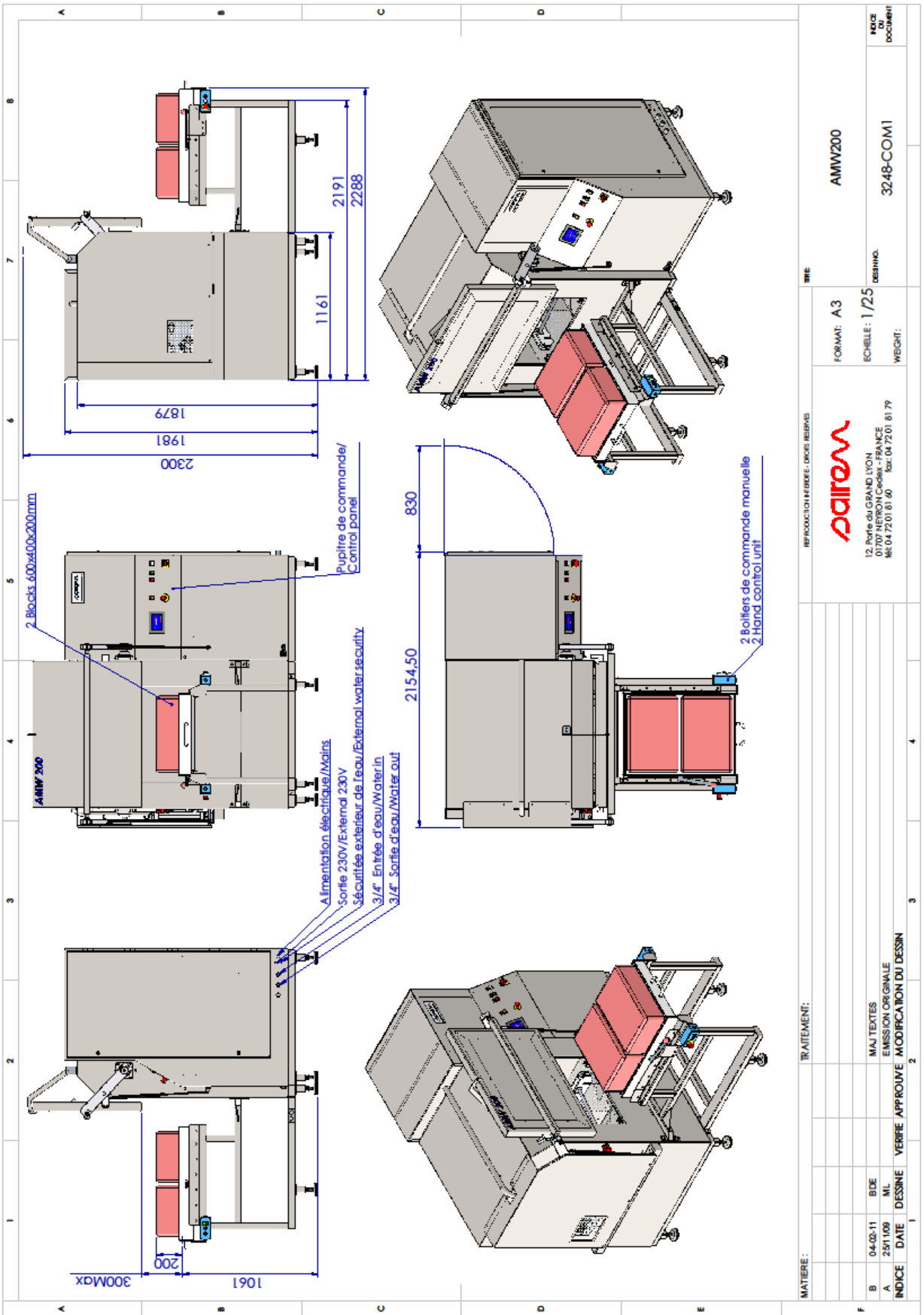
II. TECHNICAL CHARACTERISTICS

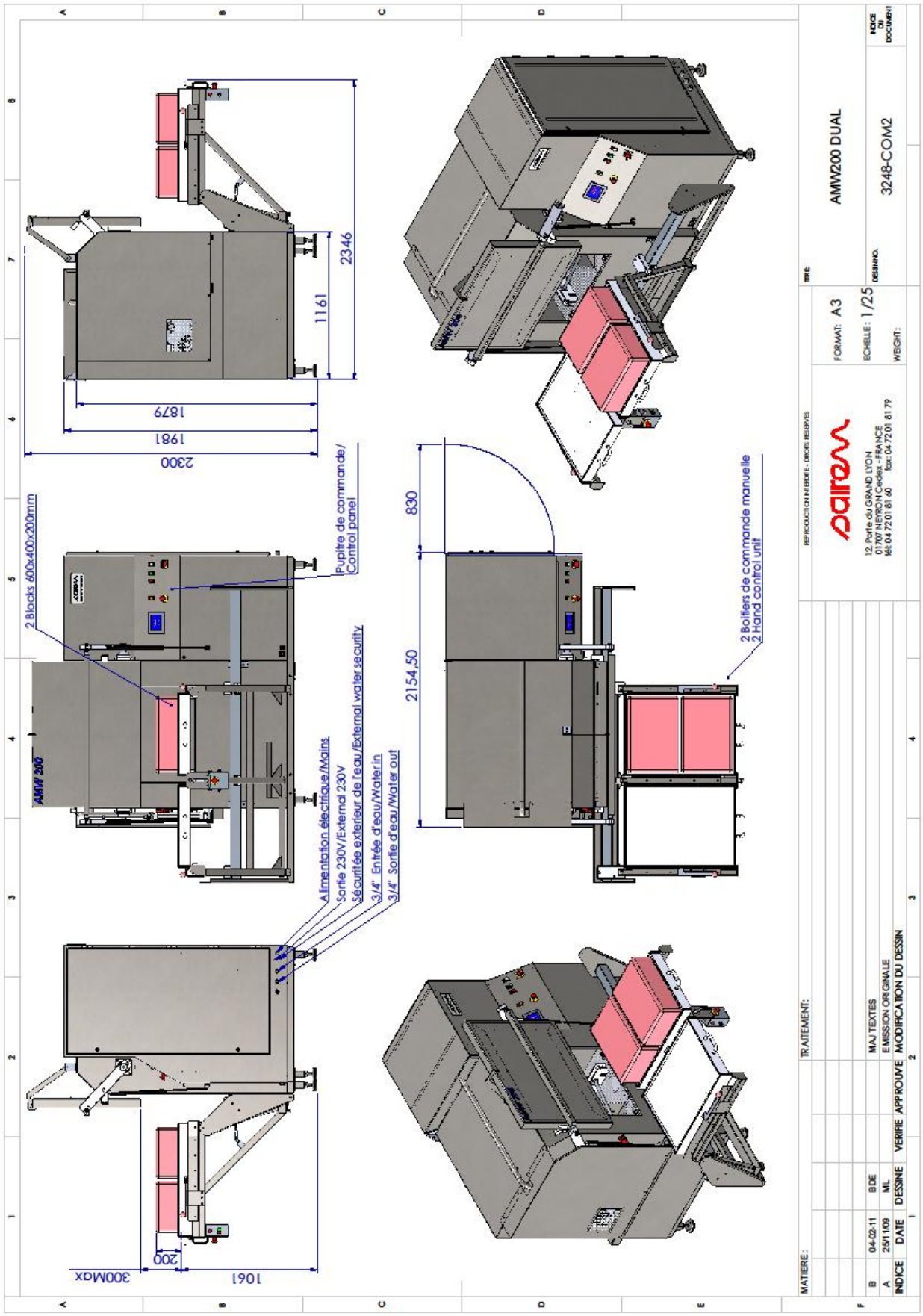
Reference	**AMW 200 or AMW 200 DUAL**
Construction	Batch, 304 L stainless steel, microwave door with ¼ λ choke, sliding door pneumatically driven, turn table with automatic stop, water-proof IP64 on side electrical cabinet, interchangeable microwave power supplies with quick connectors for easy maintenance
Thawing capacity	According to final temperature, product, fat content
Sliding table(s)	1 off in version AMW200, 2 off in version AMW200DUAL, polyethylene, with usable surface 840 x 620 mm, sliding mechanism consists of rollers with position locking
Maximum size of blocks	600 x 400 x 250 (height) mm, 30 kg maximum per block
Microwave frequency	915 MHz. On request 922 MHz (Australia, New Zealand) or 896 MHz (United Kingdom).
Microwave power	10 kW maximum, adjustable from 1 kW to 10 kW; 2 x 5 kW generators
HMI (Human Machine interface)	6.5" digital touch screen, control of microwave power and time, 20 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.
Mains	3 x 400 V + earth, no neutral, 50/60 Hz, 18 kVA at max. power
Cooling water	Consumption min. 12 L/min, max. input pressure 4 bar (min. differential pressure 3 bar), temperature 18 – 22 °C, power to dissipate 4 kW ; ½" GF. Optional: air/water chiller unit.
Compressed air	Min. 6 bar, consumption 20 L/min during 10 s (pneumatic mechanism for door opening/closing). Average 0.7 L/min
Cleaning	Pressurized water inside the oven, evacuation under the oven
EC standards	89/392, 91/368, 73/23, 89/336, 92/31, 519-6 CEE/EWG EN55011 (specific)
Size, weight	See drawings below, weight 1250 kg





Examples of HMI screens


2191
2288
1161
1879
1981
2300
2 Blocks 600x400x200mm
Pupitre de commande/
Control panel
830
2154,50
2 Boîtiers de commande manuelle
2 Hand control unit
Alimentation électrique/Mains
Sortie 230V/External 230V
Sécurité extérieur de l'eau/External water security
3/4" Entrée d'eau/Water in
3/4" Sortie d'eau/Water out
300Max
200
1061
AMW200
3248-COM1
FORMAT: A3
ECHELLE: 1/25
WEIGHT:
12, Porte du GRAND LYON
01707 NEYRON Cedex - FRANCE
Tél: 04 72 01 81 60 fax: 04 72 01 81 79
REPRODUCTION INTERDITE - DROITS RESERVES
MATIERE:
TRAITEMENT:
INDICE DATE DESSINE VERIFIE APPROUVE MODIFICATION DU DESSIN
B 04-02-11 BDE MAJ TEXTES
A 25/11/09 ML EMISSION ORIGINALE


2346
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1879
1981
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Pupitre de commande/
Control panel
Alimentation électrique/Mains
Sortie 230V/External 230V
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