

# PRODUCT INFORMATION

## ROSOMA Defrosting Units

The ROSOMA defrosting units represent the current and future state-of-the-art technology. They comply with the current rules and regulations and the high hygiene standards of the food industry. The ROSOMA defrosting units are designed and built according to the modular construction system and have been used successfully in production many times. Depending on its use this unit can be upgraded step by step.



### Range of application

The defrosting unit is intended for gentle thawing of deep-frozen fish blocks or single fish by air flow. The ATA 4 is the basic version with four (4 pcs.) defrosting hurdle-type trucks usual in this industry and a rolling door for loading and taking out. 800-900 kg of frozen goods (depending on the dimensions of the frozen blocks) can be thawed out per each truck. This basic version can be extended by single sections (one section each for two defrosting hurdle-type trucks). Six (6) sections for 12 defrosting hurdle-type trucks should be the maximum. Larger units can also be supplied with two (2) rolling doors, ensuring that the raw products are moved by a continuous operation.

### Construction of the machine

The defrosting unit consists of one (1) defrosting cabin for four (4) defrosting hurdle-type trucks or defrosting racks, which consists of two single sections joined to one another and are mounted onto a foundation plate embedded on the site. Loading and Emptying are carried through a well sealed rolling door to the production space. Each section is provided with an axial ventilator and two (2) nozzles each for steam injection. The air space existing above the hurdle-type trucks is closed downwards with the exception of the ventilator intake in centre and the externally situated air outlets at both sides, but is accessible from the bottom through flaps. Part of the unit is the electrical switch cabinet as well as all steam fittings and pipes within the unit.



## Functional Description

The unit is charged with a particular number of hurdle-type trucks, which are loaded with deep-frozen goods, and closed afterwards. Thawing out is carried out at a maximum temperature of 27 °C with circulating air.

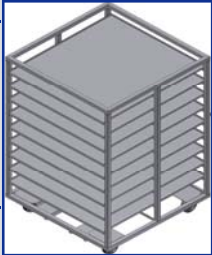
Through heavy-duty ventilators an air flow is circulated with high speed within each section. This air flow is first heated up in its circuit by steam blown in and lead through specific guide equipment in such a way that it is pressed nearly evenly through the storeys of the hurdle-type trucks.

The maximum temperature of 27 °C is determined by two sensors each and compared with the desired value set (1x air temperature, 1x core temperature).

The defrosting process is running fully automatically and can be controlled according to two versions:

- ▶ Defrosting process runs according to a time pre-set (based on experimental values) or
- ▶ Defrosting process runs until reaching a core temperature pre-set

Note: As the defrosting process runs fully automatically, it makes sense always to use a whole day. This way about 3-4 defrosting cycles are possible within 24 hours.

Technical Parameters	ATA 4	ATA 8	ATA 10	ATA 12
Goods to be defrosted	Deep-frozen single fish or fish parts as well as frozen blocks of fillet or whole fish			
Hurdle-type truck	abt. 1.5 m x 1.5 m and abt. 1.8 m high/fish content abt. 900 kg (depending on the block dimensions)			
Defrosting times of fillet	Plate thickness: 50 mm      6-7 hrs		Plate thickness: 120 mm      abt. 8 hrs	
			Plate thickness: 150-170 mm      abt. 12 hrs	
Defrosting time of fish (gutted)	4.5 hrs			
Defrosting capacity at 4 cycles/day and 900 kg/hurdle-type truck	14.4 t/day	28,8t/Tag	36 t/ Tag	43,2t/Tag
Steam supply	DN 40	DN 50	DN 65	DN 65
Steam pressure	4-6 bar			
Steam consumption	Standard value: 5 kg steam per 100 kg fish in 1 hour			
Steam fittings covered by the scope of supply	Stop valve, dirt pan, safety valve, steam pressure regulator for regulating to 2 bar, steam control valve controlled by the control system			
Electric supply: Of that: 5 or 4 axial ventilators 80 E LAT 112 M/4 K-12 Control valves and control system	380 V, 50 Hz			
Air supply for control system	abt. 6 bar			
Main dimensions	4 trucks Length: abt. 4.3 m Width: abt. 4.2 m Height: abt. 2.8 m	8 trucks Length: abt. 7.5 m Width: abt. 4.2 m Height: abt. 2.8 m	10 trucks Length: abt. 9.1 m Width: abt. 4.2 m Height: abt. 2.8 m	12 trucks Length: abt. 10.7 m Width: abt. 4.2 m Height: abt. 2.8 m
Material	High-grade steel 1.4301/ AISI 304/L			