

CLIMAJet® AT



DEFROSTING – QUICKLY AND SAFELY

Frozen meat is a very sensitive product. Germs and bacteria can develop extremely quickly during the thawing process. That holds true both on a small scale for private households as well as for the meat-processing industry, which needs large amounts of frozen meat to produce its meat and sausage products. Schröter has developed innovative thawing systems to gently thaw frozen foods without any loss of quality.

Before processing, meat needs to be thawed from -24 degrees Celsius to about 1 degree Celsius, and this process must be carried out in a manner that saves as much time as possible in order to keep microbial growth to a minimum. To achieve this, up until now products were always thawed in a water bath. The drawback: An extremely large amount of water is required and the quality of the meat can be negatively affected due to leaching.

SIGNIFICANT POTENTIAL FOR ENERGY SAVINGS

Thanks to an innovative thawing process using steam, systems from Schröter not only reduce losses from thawing, but also reduce the amount of energy required by 90%. For example, thawing six ton of pork using the conventional method in water baths requires 90 cubic meters of water. The energy used in this case has a value of 225 euros. In contrast, Schröter's thawing system uses 800 kilos of steam at a price of only 20 euros.

In the new process, instead of being placed in a water bath the frozen blocks of meat are stored in several layers on mobile racks. Steam which is blown in heats the thawing system to the predefined target temperature, and thanks to the high humidity, ensures that the heat is distributed throughout the system evenly. Fans positioned both horizontally and vertically guarantee that the air reaches all products safely. During this process, probes inserted directly under or on the meat's surface constantly track the products' threshold temperature. Thus, the temperature always remains in the ideal range and overheating and microbial growth in the thawed product can be safely avoided.



Frozen blocks of meat before being processed.

DIMENSIONAL SKETCH

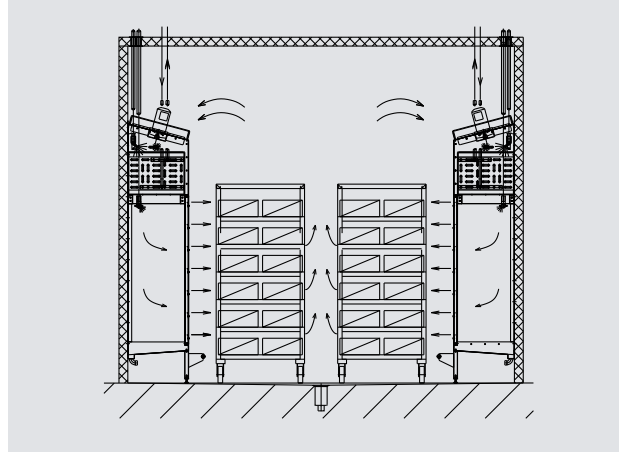
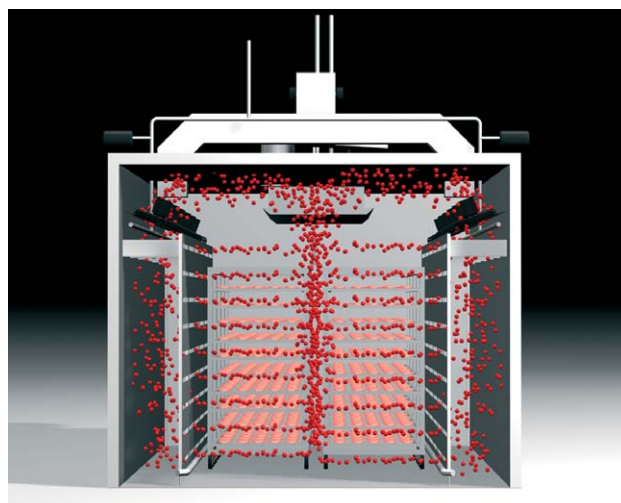


Diagram of an energy-saving thawing system.



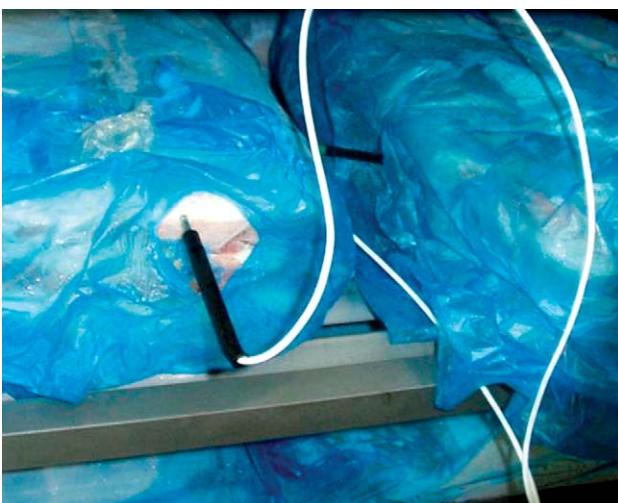
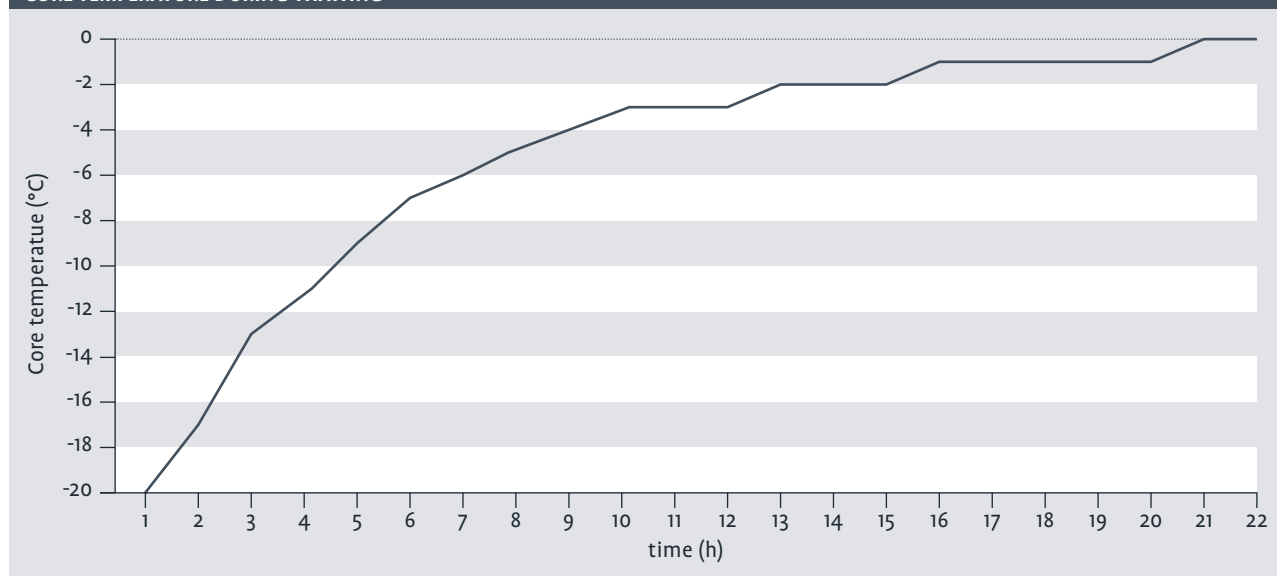
AN IDEAL PROGRAM FOR EVERY TYPE OF MEAT

100 different thawing programs with up to 30 different program steps optimize the system for many different types of meat. In addition, the user can also set the length of thawing time or the surface or core temperature including minimum/maximum time monitoring. The latter ensures that even if the probes are not inserted into or placed onto the meat correctly, the meat will still thaw safely. Once the preset surface or core temperature is reached and the thawing process is complete, the system switches over to cooling. The meat is held at a refrigerator temperature

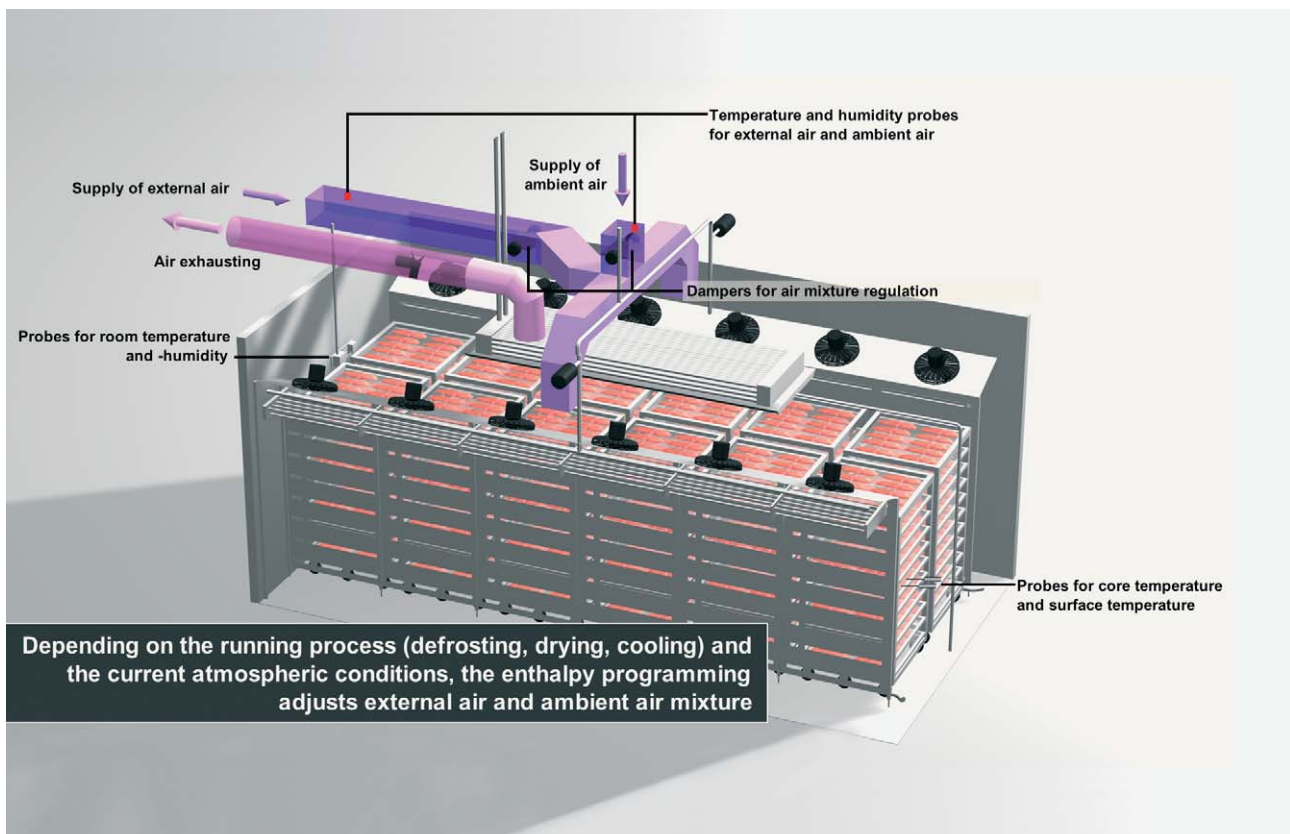
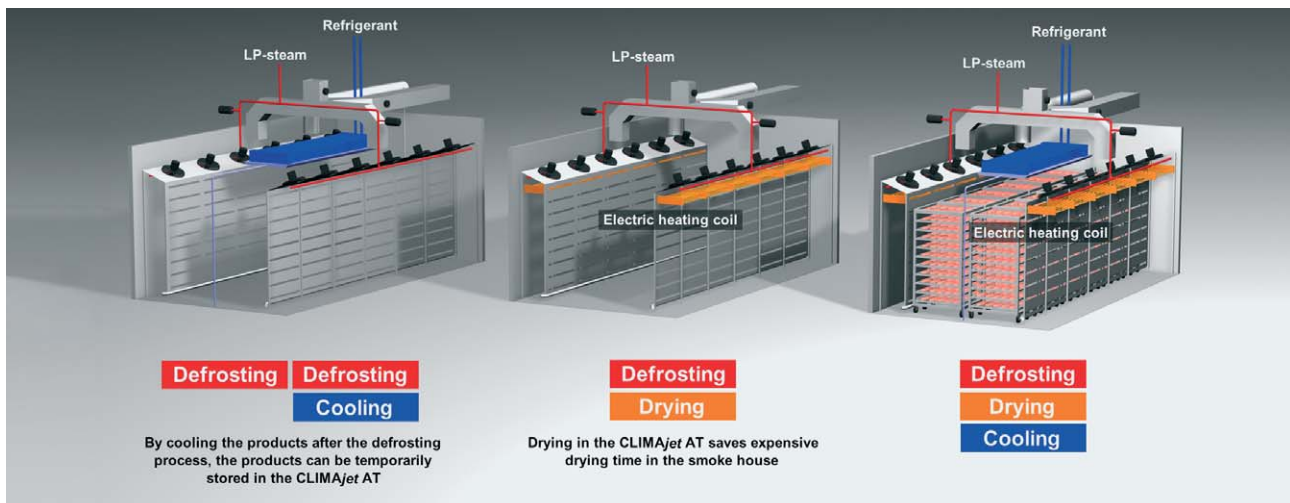
of 2–6 degrees Celsius until it is ready to be processed – which means the system can also be used for production preparation as an interim storage space.

One characteristic which must be particularly highlighted is the extremely low weight loss which results from thawing when using this method. While thawing in a water bath results in losses of approx. 6–8%, losses in Schröter's thawing system total approx. 0.5–1.5%.

CORE TEMPERATURE DURING THAWING



WITH THE CLIMAJet AT, SCHRÖTER OFFERS A MODULAR, CUSTOM-FIT SOLUTION FOR YOUR SPECIFIC NEEDS.



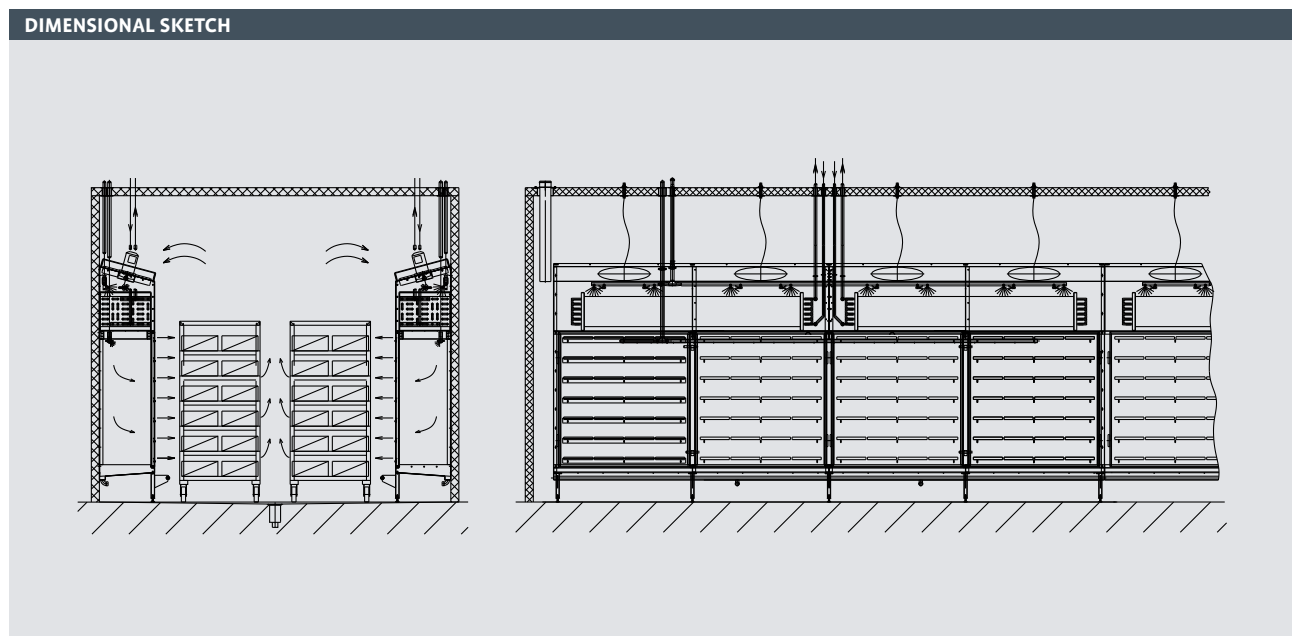
SAMPLE APPLICATIONS



CLIMAJet® AT THAWING SYSTEMS: MEASUREMENTS UND CONNECTED LOAD VALUES

CLIMAJet AT THAWING SYSTEMS			
	CONNECTED LOAD VALUES		
Room Size m ²	Electricity kW	Heating kW	Cooling kW
20	2	5	7
40	3	10	14
60	3	14	20
80	4	18	25
100	6	20	30
125	8	28	40
150	9	32	45
175	11	40	55
200	15	45	60
250	15	55	75
300	19	65	90
350	22	75	105
400	30	85	120
450	37	95	135
500	37	105	150
550	45	115	165
600	45	125	180
700	55	145	210
800	55	170	240

TECHNICAL DETAILS



Two-level defrosting systems and special sizes available upon request.



SCHRÖTER'S COMPACT CONCEPT: **CLIMAJet® AT**

STRUCTURAL CHARACTERISTICS

- > Chassis and all relevant components are built to be structurally gas and steam tight
- > All components, such as insulation, motors, fans, and ducts, have the ideal dimensions

CUSTOMER BENEFITS

- > Speed
- > Homogeneity
- > Energy savings
- > Minimal weight loss
- > Quickly reach target value + accurately maintain target value
- > Consistent results
- > Accurately repeat a predefined result
- > Ideal temperature and humidity
- > Products are handled in an absolutely gentle and uniform manner



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