

# Aasted tempering



Perfecting the art of  
chocolate tempering  
since 1946



Welcome to our world



## Continuously innovating tempering

With 100 years of experience, our tempering machines are embedded with unique know-how from dedicated and passionate engineers and chocolate specialists.

We are proud to introduce you to the future of tempering technology, which not only enhances the quality of your chocolate but also provides significant energy savings.



## AMC SuperNova

The AMC SuperNova covers any tempering purpose, handling high and low viscosity masses at any scale. Continuously developed to match our customers' desires and market demands.



## SuperNova ENERGY

The SuperNova Energy provides significant energy savings whilst enhancing the total quality of your chocolate. The by-pass concept allows longer crystallization, which is one of the many benefits of the SuperNova Energy.



## Lab equipment

Our small scale tempering machine is easy to use with a capacity of 50 kg. A mobile unit which allows creativity. The small scale tempering machine is suitable for laboratory production.

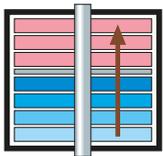
# AMC SuperNova

The AMC SuperNova is based on a continuous development of perfecting the quality of tempered chocolate since 1917. High-quality materials and easy maintenance give you a low cost operating tempering machine. With our AMC SuperNova program, you have the possibility of handling any tempering purpose at any scale.

- Different versions for different purposes
- Easy to clean and maintain
- High-quality performing tempering
- Suitable for any moulding or enrobing line.



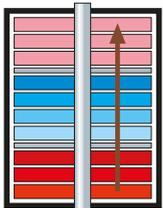
## Basic



The Basic module covers anything from straight heat exchanging of any pumpable mass to highly precise creation of Beta V crystals in high-quality chocolate mass.

- Low maintenance costs
- Basic and high-quality tempering
- Constant crystal content

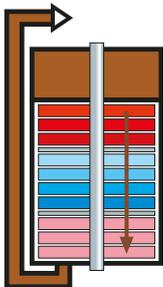
## PreTreat



The unique PreTreat module ensures that you are working with the correct temperature and stability. The mass is then free of any undesirable crystals.

- Minimizes fat-bloom
- Prolongs shelf life and quality of your products
- Stabilizes and corrects mass temperature

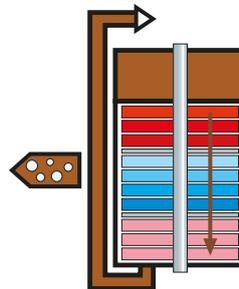
## CTS



The CTS features a built-in compact tempering system with a tank and pump for recirculation of excess mass. It offers you complete flexibility to re-circulate mass from an enrober or to perform an inline production shift of mass to a depositor or an extruder.

- Re-circulation of mass to temper
- Quick and easy in-line production shifts
- Space saving. No external tank or pump

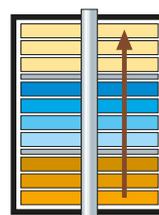
## Aeration



The Aeration version will supply any kind of aerated mass to your production line. The gas is supplied directly into the chocolate outlet. In this way the tempering and crystallization process is not disturbed by the gas mixing.

- Operates for any tempering purpose without aeration
- De-aeration possible
- Optional color and flavor mixing

## HeavyDuty

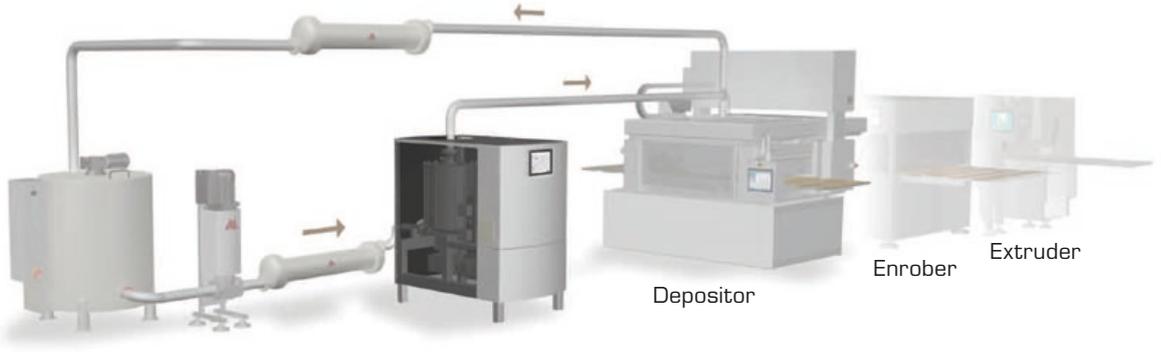


Heavy masses and fillings, e.g. nougat, require special attention to the toughness and strength of the tempering machine. In the HeavyDuty version especially mechanical parts such as gear, shaft, and stirring elements are chosen to meet the challenges of heavy mass.

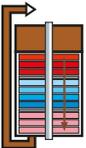
- Tempers high viscosity masses
- Strong mechanical parts for high-pressure tempering
- Suitable for large scale production
- User-friendly interface



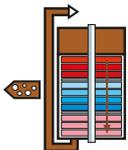
Configuration with AMC SuperNova Basic



Configuration with AMC SuperNova PreTreat



Configuration with AMC SuperNova CTS



Configuration with AMC SuperNova Aeration



Configuration with AMC SuperNova HeavyDuty



# The inside story

The Basic version is designed to deliver high performance and low operating costs throughout its service life. High-quality materials and engineering, together with easy access to the few components requiring maintenance, mean consistently high uptime and performance.



Unique innovative features, such as SuperResponse process control of the crystallization area with adaptive, dynamic K-Zone and I-Plate technology, ensure the best available all around performance and versatility on the market.

## Easy access to all connections

(open temper machine for inside look)



## Process control with touch screen display

The operator has a clear overview of all process parameters on the colour display. The touch screen enables straightforward operation and is simple to clean with a damp cloth.

## Modular, turbulent flow water system

A turbulent flow water system employing CIP water filters enables rapid heat transfer and cooling via the large surface areas of the tempering elements. This ensures even temperature distribution and complete temperature control of each zone.

## Gear motor

The basic location of the gear motor eliminates any risk of oil entering the temperer. A simple disconnection enables the removal of the gear motor for maintenance.

## Water heat exchanger and circulation pump

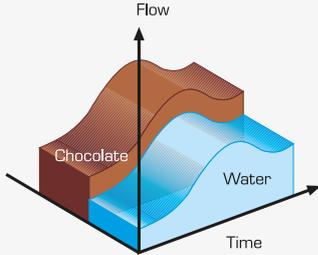
When you require a closed water system to avoid corrosion and sediment build-up, we supply optional heat exchanger and circulation pump.

**I-Plate insulation between stages**

The insulation efficiency provided by the I-Plate enables unique temperature control by minimizing heat transfer between cooling and heating stages



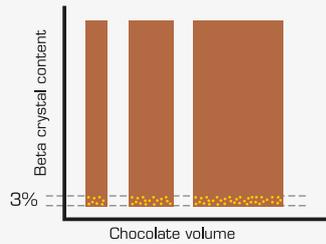
**SuperResponse**



**SuperResponse**

The innovative SuperResponse circuit instantly adapts the cooling water flow to the requirements dictated by chocolate temperature and flow.

**Constant recipe**



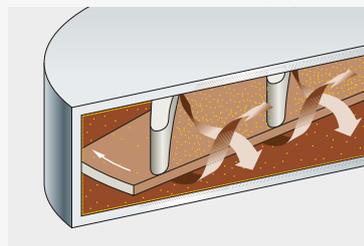
**Constant recipe**

Dynamic K-Zone technology ensures a constant percentage of Beta crystals.



**Highly effective chocolate mixing**

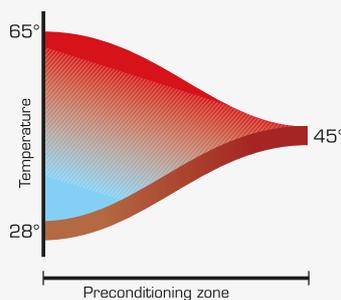
Multiple-winged SuperShear scrapers with a special flow-optimized profile design for



combined horizontal and vertical mixing ensure effective mixing and homogenous distribution of the crystals created in the mass.

**PreTreat conditioning for stable supply of decrystallized mass**

The PreTreat conditioning module sets temperatures between 28°C and 65°C, for example at a constant preset of 45°C.

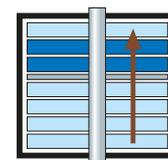


# SuperNova ENERGY

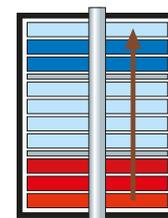
In 2011 we introduced the world's first energy saving tempering machine – a green solution that revolutionizes your production. The SuperNova Energy consists of same high quality elements as the AMC SuperNova, but with a new and patented tempering method. The SuperNova Energy gives you the highest quality possible giving your products the best consistency, look and break. Besides of significantly enhancing the quality of your production, you will discover substantial energy savings – making your production more efficient than ever before.

The SuperNova Energy is available in a Basic, PreTreat, and CTS module – giving you various options to choose from – depending on your needs and current production setup.

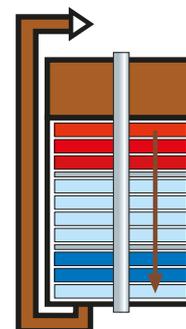
- Dense crystal structure with only Beta V crystals
- Faster solidification for higher throughput
- Slower fat migration
- Lower viscosity for potential cocoa butter savings
- Longer shelf-life, better gloss and crispy break
- Up to 2 degree higher output temperature
- The total energy consumption is up to 30% lower than a traditional tempering machine.



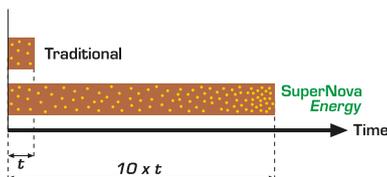
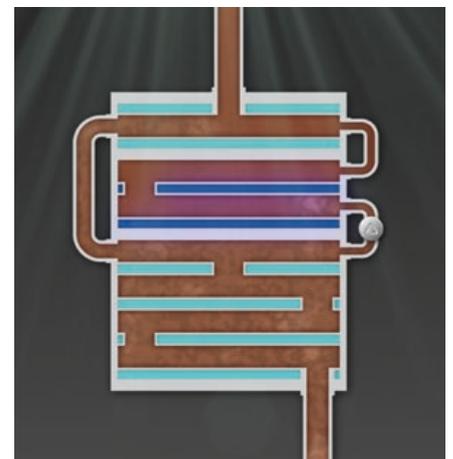
Basic



PreTreat



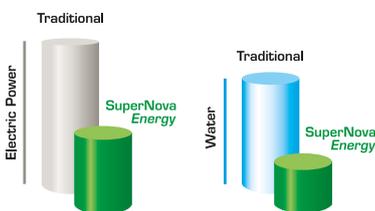
CTS



In the new tempering process only 1/3 of the mass is crystallized, which makes the crystallization time up to 10 times longer than in a traditional tempering machine. Delivers smaller Beta 5 crystals with a much high melting point due to the 5-10 times longer high sheer crystal zones compared to normal industrial standard tempered machinery.

### Substantial savings

The result is a far more stable, easier controllable and much more powerful crystallization process than with the traditional machines. As an extra benefit, the total energy consumption of the SuperNova Energy tempering machine is up to 30% lower than a traditional tempering machine.

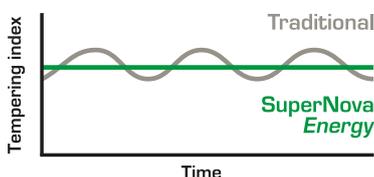


### Energy crystallization technology inside

The new groundbreaking by-pass concept inside the SuperNova Energy is the secret to your future savings. The considerably longer time that the mass stays in the crystallization zone, the use of our unique scraper wings and a precise temperature control contribute to making the SuperNova Energy an ingenious solution.

### Bonus in quality raise

When you start testing the output of your new SuperNova Energy you will discover an extra bonus. The tempering index is "constant" and non-fluctuating. Crystals in the mass are stable Beta V only. The amount is constant over time. The quality of your products will be severely improved having the longest possible shelf life.



# The world's smallest tempering machine with a capacity of 50 kg/h

The tempering system, type AMC SuperNova 50, supplies uniformly treated chocolate, tempered to manufacture high-quality products with regard to gloss, shelf-life, crisp break and contraction.

The AMC SuperNova 50 is perfectly suitable for small moulding or enrobing lines, or for decoration as well as laboratory purposes.

The portable AMC SuperNova 50 has a 3-zone tempering system that is fully adjustable for tempering any chocolate recipe to the highest quality.

- Holding tank, complete with stirrer etc. that scrapes the tank sides
- Chocolate pump driven from the same variable gear motor that also drives the stirrer
- Detempering section to ensure that the mass in the tank is detempered before reaching the tempering section
- Stainless steel portable table, including necessary control cabinet and water circulation system



## Test your ideas!

The AMC SuperNova 50 is the optimal solution for test of new recipes or ideas in your laboratory or test facilities.

You are most welcome to visit the Aasted Technology Center.

	Width	Length	Height	Tankvol.	Capacity
<b>AMC SuperNova 50</b>	600 mm	1040 mm	1200 mm	15 Kg	50 kg/hour

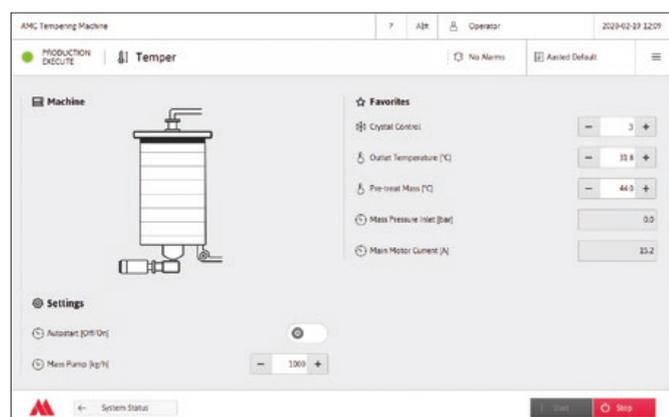
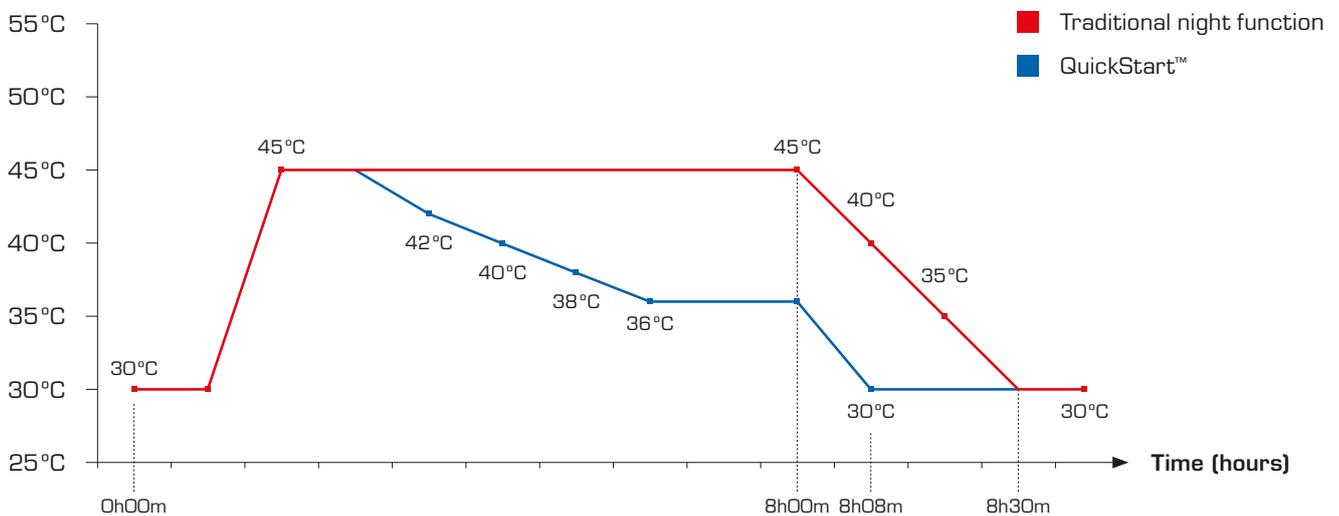
# Tempering software

## QuickStart

Our patented QuickStart software allows our tempering machines to get ready for production in just 8 minutes. By lowering the temperature during the night you are not only getting ready for production faster, you are also saving money.

- Annual savings on a SuperNova AMC 2000 P – 12.000 kW/year.
- The machines are ready for production in less time. On an yearly basis our customers will be able to save approximately 120 hours.

### Temperature



## EasyStart

### 100 years of experience – in just one click

With our EasyStart software anyone can add new recipes and start tempering perfectly right away. Simply choose your mass type and fat percentage and let our algorithms do the rest. Almost one hundred years experience of exceptional tempering in just one click.

- Easy operation and control of Aasted machines
- Easy application of new recipes
- Ensure higher output temperature





“

The 20 years of working with Aasted, they have always been supporting our production and a very helpful partner. ”

Mr. R. Rune Forsberg,  
Hval Sjokoladefabrikk ASA



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