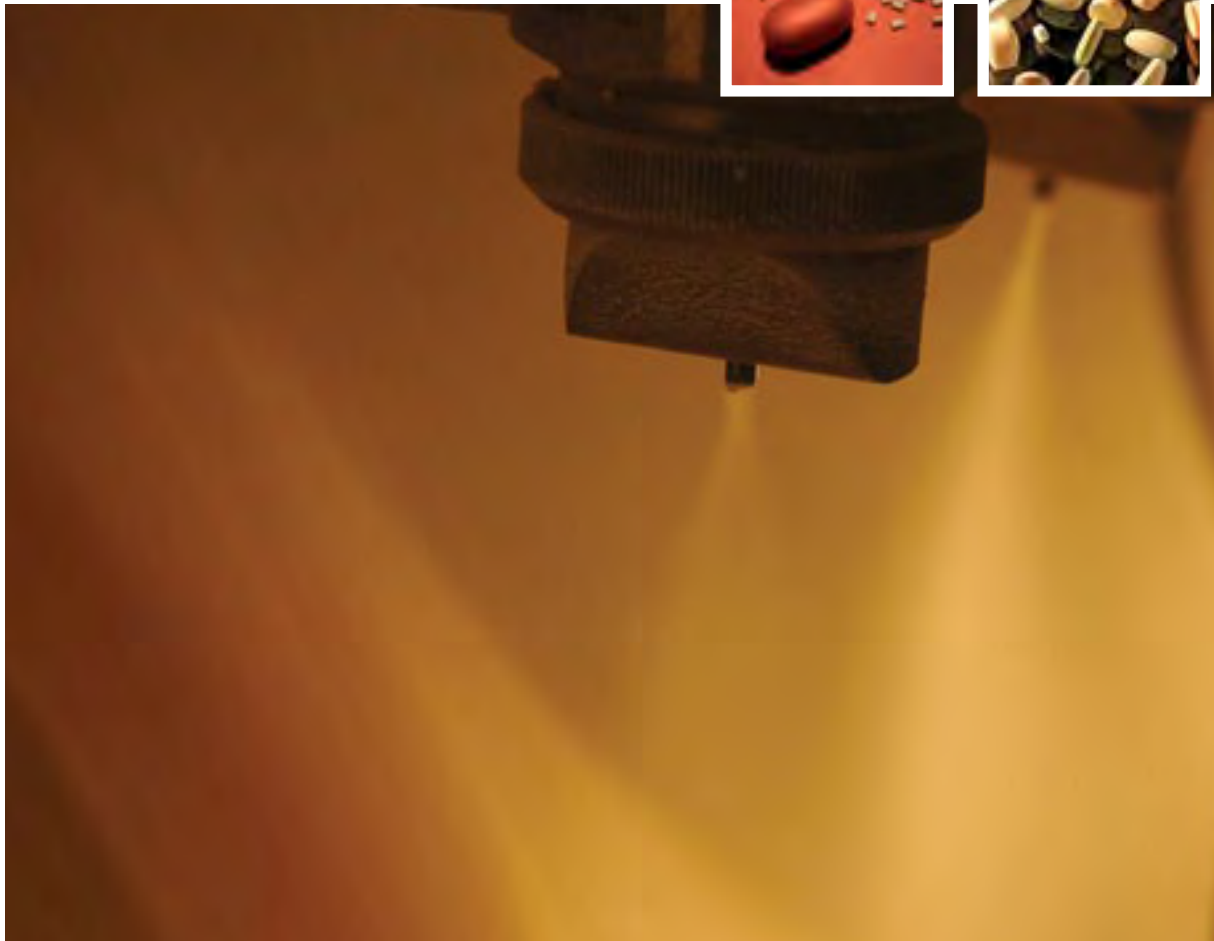




NCS Nicomac Coating System



THE MOST ADVANCED COATING SYSTEM IN THE WORLD

WIDE RANGE OF MODELS

- From 1kg. to 2 tons batch size.

CONTINUOUS INNOVATION

- Nicomac is constantly "one step ahead"
- Eight Patent pending/patented devices
- Trade marks: Shark fin baffles™, Blow Master™ and Twister™
- Several technical unique novelties
- Blow Master: the drying system able to move the coating process into a new era
- LEI- Low Environmental Impact design

EXTENSIVE COATER TECHNOLOGY

- Unique Solid wall coater for processing tablets and pellets Mod. Elite
- Unique Perforated drum coater Mod. Elite
- Highly Competitive Perforated Coater Mod Classic
- Full Containment Coater

LEADER IN PELLET TECHNOLOGY IN SOLID WALL COATER

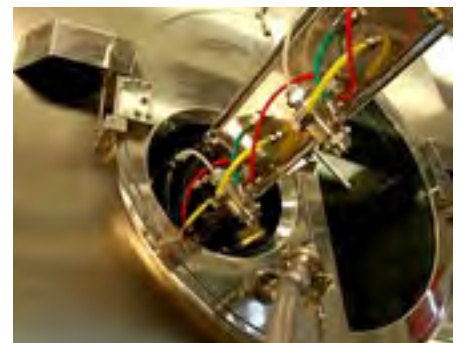
- Unique powder layering system
- From Sugar crystal to final product in one step coater

FLEXIBILITY

- Nicomac Elite coaters have the ability to work at 15% of the maximum batch capacity in the same drum without any modification
- Aqueous and organic solvent film coating
- Enteric coating
- Modified release drug delivery
- Sugar coating
- Nicomac coaters can handle any size, shape of product, any process in solid dosage form

CUSTOMER SERVICE AND DOCUMENTATION

- Fast, efficient and professional service
- Detailed documentation for qualification activities and operator support





HIGH VOLUME COATERS

The biggest coater in the Pharmaceutical industry:

- 2 tons batch size for pellets
- 1 ton batch size for tablets.
 - > Less QC costs
 - > Less Validation costs
 - > Less Space required
 - > Less Operators needed
 - > Less Maintenance costs
 - > Easier Logistic



FULLY CONTAINED COATER FOR HIGH POTENCY PRODUCTS

NICOMAC developed, designed and supplied specific coaters for high potency product under isolator for many years. We believe that for this kind of products, only a solid wall coater, without perforation, is able to guarantee a perfect tight system. Machine body, including maintenance area, is completely closed and tight to avoid any possible operator exposure. A special washing system inside the drum and in the maintenance area is able to guarantee a perfect and fully contained cleaning process.



SOLID WALL COATER MOD. SWC ELITE

Solid wall coater design combined with unique Blow Master™ System (it. Patent MI 2002A002542) has unsurpassed coating process performance for tablets and pellets.

SHORT PROCESS TIME

- Blow Master™ (it. Patent MI 2002A002542) is able to drive, in a very balanced and controlled way, the drying air close to the core's bed with high drying efficiency. Blow Master™ can automatically be oriented to the core's bed according to batch size and process phase.
- Blow Master™ allows 50% utilities saving compared with traditional system. The outlet funnel is positioned in opposite angle at 120° guaranteeing a fast controlled drying without turbulence near the spraying area with minimizing product loss.

EASY – FAST- REALIABLE CLEANING

- No perforations in the drum guarantee easy cleaning with any kind of process avoiding any risk of cross contamination.

PERFECT MIXING

- 3D Shark fin baffles™ combines the highest mixing efficiency with very gentle product handling guaranteeing an even distribution of spraying solution and high drying efficiency. Nicomac baffles are suitable for all type of product and batch size. No spare baffles are required.

VERSATILITY

- Thanks to Blow Master™ and 3D baffles™, Nicomac SWC Elite coaters have the ability to work at 15% of the maximum batch capacity in the same drum without any modification.

SPRAYING SYSTEM

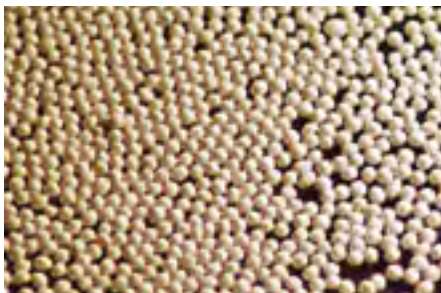
- Spraying system is designed with an easy removable folded gun supporting arm to the front window. Guns can be positioned closer to the tablet bed by means of a pantograph design exclusive device. Spray angle and pattern can be automatically adjusted by the control system.





PELLET COATER TECHNOLOGY

NICOMAC IS THE WORLDWIDE LEADER FOR PELLETS PRODUCTION



- Fast aqueous and organic film coating process
- Unique powder dosing system for accurate powder layering
- No change over from tablets to pellets
- From sugar crystal to finished product in the same machine, without product handling
- High quality
- High capacity
- High yield, uniform size
- Many years of experience on pellet process optimization

AUTOMATIC POWDER DOSING SYSTEM - APDS IT. PATENT N° MI 2006A000406

APDS is performed with a combination of pressure and mechanical systems. APDS is a patented closed system that avoids any powder clogging.

APDS is a reliable, efficient, fast and a PLC controlled system for any kind of powder. APDS is a fully contained system for high potency products.



PERFORATED SUPER COATER MOD. PSC ELITE

THE PERFORATED
SUPER COATER COMBINES
THE UNIQUE DESIGN WITH
UNMATCHED COATING
PERFORMANCE.

PSC IS A HIGH INNOVATIVE
TECHNOLOGY WITH
A NEW CONCEPT DESIGN
ABLE TO MOVE THE COATING
PROCESS IN A NEW ERA.

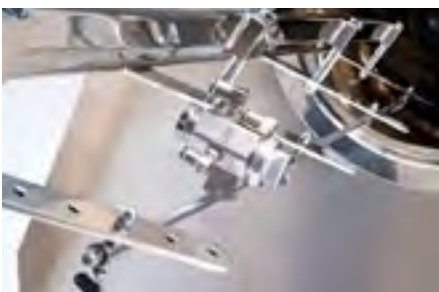


SHORT PROCESS TIME-BLOW MASTER

- Blow Master™ (it. patent pending device N° MI 2009A001281) is able to change completely the concept of blowing inlet air in a perforated drum. Blow Master™ air diffuser is able to force 100% of the tightly controlled heating inlet air through the product bed itself just after the spraying area. Air dispersion through the perforations not covered by the tablets, typical of conventional perforated coaters, is completely eliminated. Blow Master™ angle can be adjusted allowing air flow direction according to the tablets bed position, batch size, process phase.

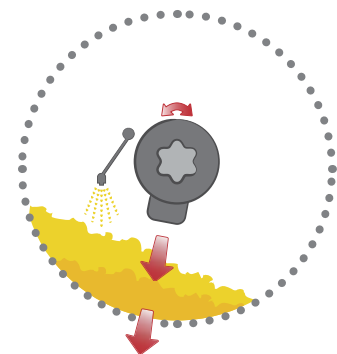
Blow Master™ advantages:

- Short process time,
- Reduction of a minimum of 50% of utilities consumption compared with conventional perforated coaters
- High yield, less than 2% of product loss.



PERFECT MIXING

- “3D Shark fin baffles” combine the highest mixing efficiency with very gentle product handling guaranteeing an even distribution of spraying solution and high drying efficiency. Nicomac baffles are suitable for any kind of product and batch size. No spare baffles are required.



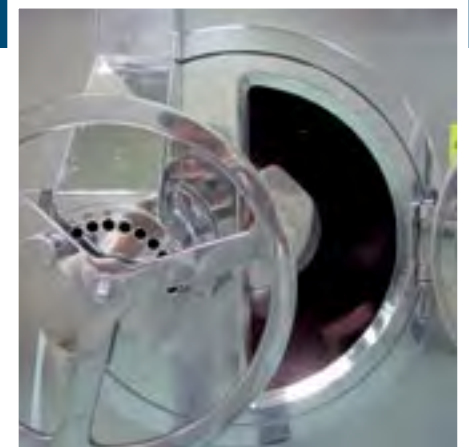


SPRAYING SYSTEM

- Spraying system is supported by a sliding arm through the front window that can be moved to the site of the coater for maintenance and rest position. Guns can be positioned closer to the tablets bed by means of a pantograph exclusive device. Guns spray angle and pattern can be automatically adjusted by the control system.

VERSATILITY

- Thanks to Blow Master™ and 3D baffles™, Nicomac SWC Elite coaters have the ability to work at 15% of the maximum batch capacity in the same drum without any modification. AC Frequency control for differential pressure control and drum speed.



NCS NICOMAC COATING SYSTEM		
SWC ELITE	PSC ELITE	PC CLASSIC
lab 9.9	lab 10	lab 1-3-5
lab 15	lab 30	20
lab 30	lab 50	75
lab 50	100	150
100	150	350
150	250	
200	400	
350		
450		
650		
800		
1000		
1200		
1500		
2300		



COMPARISON TABLE			
	SWC ELITE	PSC ELITE	PC CLASSIC
TYPE	Solid	Perforated	Perforated
MINIMUM BATCH CAPACITY	15%	15%	60%
CONTROL SYSTEM	PLC-PC	PLC-PC	Operator Panel
DRYING SYSTEM	Blow Master	Blow Master	Conventional
MIXING BAFFLES	Shark fin 3D	Shark fin 3D	Conventional
UNLOADING SYSTEM	Welded chute	Welded chute	Chute to be fixed
DUST COLLECTOR	Cartridges	Cartridges	Filter bags - Cartridges
ATEX	yes	yes	no
GUNS	Schlick® Nicomac	Schlick® Nicomac	Schlick® Nicomac
PRODUCT	tablets-pellets	tablets	tablets

BOTH FOR SOLID WALL SWC AND PERFORATED DRUM COATER PSC ELITE CONFIGURATION

PLC-PC CONTROL SYSTEM

Nicomac designed a user friendly PLC based control system to ensure process repeatability. HMI (Human Machine interface) via industrial PC for flawless data acquisition and storage. The Microlac software stores up to 40 different working recipes with up to 99 discrete phases. Microlac software is 21 CFR Part 11 compliant.

LOADING-UNLOADING SYSTEM

Loading can be provided by Bin with lifter. Nicomac unloading system is easy, gentle, fast and reliable. It can be supplied with Magnetic Chute or Welded Chutes, It allows the unloading of the tablets just reversing the drum rotation without the use of any tools or device. *"Up to the last one tablet"* without any damage. And up to the last drop with Nicomac cleaning water discharge.

HVAC

The air heating, ventilation and conditioning system is included in the basic machine.

DUST COLLECTOR

Nicomac provides for Elite configuration High performance cartridges system with cleaning system by compressed and explosion vent disc.

TANK

Nicomac can provide different kind of mixing and preparation tanks with or without jacket.

ATEX

If required, Nicomac can supply Elite configuration with 94/9/CE_ ATEX Certification according to: **CE Ex II 2GD T5 T100°C 1-21 or 2-22**





PERFORATED COATER MOD. PC CLASSIC

Nicomac quality for an highly reliable conventional perforated drum coater: the latest technology features at a competitive price.

- Minimum Batch size 60% Max 100%
- HMI Simatic Multipanel Touch
- Screw on or welded traditional baffles
- Filter Bag Dust Collector
- WM type peristaltic pump
- Magnelic differential pressure control
- Spraying guns by Schlick®
- Unloading system by front connecting chute



WIP-CIP SYSTEM

All NICOMAC equipment can be provided with an automatic movable WIP CIP System or a semiautomatic system.

Three types of washing or rinsing fluid can be selected separately:

- Hot softened water
- Cold softened water

Washing fluids can be mixed for the cleaning cycle and for its repetition for the first rinsing.

Purified or demineralized water will be used for the final rinsing only.

Detergent can be added to the washing fluids by means of a metering pump. The equipment is complete with a variable number, according to the model, of washing arms, fixed or movable, for the washing of the drum or the ducts of the coating system.

The washing arms can be equipped with nozzles or spraying balls.

The washing or rinsing fluids are delivered by a high pressure pump.

The discharge of these fluids takes place, depending on the equipment type, using a vacuum pump coupled to a diaphragm pump, or through diaphragm pump directly to the drain.



Hot air of coater and cooling system is used for drum drying.

The differences between the equipment and consequently the management of the washing cycle are given by the equipment type which can be:

- solid drum
- perforated drum.

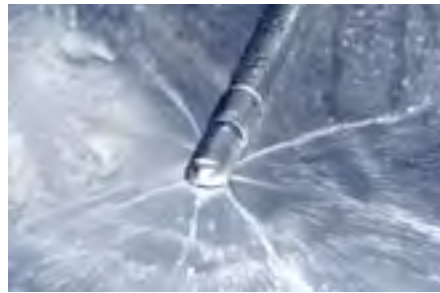
SWC Coating System WIP CIP System can be equipped with:

- 2 removable washing arms (lances) to access different areas in the pan with spraying ball for internal washing which inlets are positioned in the flange of back closure.
- 1 clamp connection on unloading vessel for waste water.
- Skid for washing including:
 - > detergent pump
 - > pressure pump 18 bars
 - > diaphragm pump for discharge/recycle.

PSC Perforated Super Coater will be also supplied with:

- 3 washing arms with many nozzles for the external washing of the drum: the inlets are positioned on the back of the pan in the closing panel with clamp connections.





DOCUMENTATION

Customer User Requirements evaluation report

Certificate ISO EN UNI 9001

Video pages functional specification

Functional Specification

Signal list

Operating Manual

Spare Parts List

Installation Drawing

P & I D

Pneumatic diagram

WIP machine layout Drawing

P & ID WIP

Electrical diagram Coating System

Electrical diagram preheating cabinet

Declarations of Conformity Collection

Instruments Calibration Test

Data Sheets Collection

Pre requisite Protocol

Installation Qualification Protocol

Operational Qualification Protocol

Alarm List

Password Access List

Component List coating system



SERVICE

OUR CLIENTS ARE OUR PARTNERS

NICOMAC EUROPE supplies only top class service with qualified and professional specialists with extensive experience. We are able to provide full process consulting for any kind of formulation and we are able to improve and optimize existing working recipe and process. Fast, qualified and prompt after sales service.

Our mission is to serve our clients with:

- Kindness
- Promptness
- Professional attitude

Customer satisfaction in the industry for 35 years in more than 40 countries all over the world.

Try our 400 m² of Certified Clean Room laboratory! We can run batches from 1kg to 350 kg.



*Nicomac reserves the right to change the submitted technical data.
Data in this catalogue is not binding. 06.2011*



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