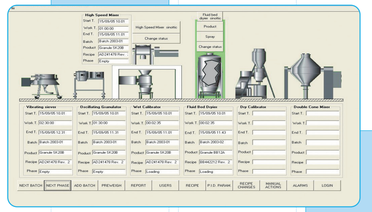
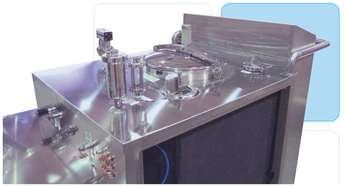
COMPUTER INTEGRATED MANAGEMENT

FA - CIM FLEXIBLE AUTOMATION AND COMPUTER INTEGRATED MANAGEMENT

Focuses on automated manufacturing and materials handling using computers to design and manufacture products in process and quality control. FA-CIM takes individual islands of manufacturing automation and link them together to achieve the ultimate efficiency of an organization manufacturing resource. FA-CIM supervise all Granulation Line: from dispensing to coaters. A Closed-Loop Feed back system where process manufacturing phases are integrated, rationalized and coordinated to deal effectively and efficiently with real-time analysis, planning and monitor of the whole process. FA-CIM improves the product quality, repeatability, the flexibility and it reduces the process time, flow time, lead time and production cost. A bar code system allows to check materials flow track. A full batch report can be printed.





WIP CIP SYSTEM

An Universal Movable Skid is designed to clean efficiently and rapidly all machinery and components in the granulation line. Stainless steel framework on wheels including: connection clamps, piping, sanitary valves, filters, high sanitary pressure pump, heated tank for purified water, detergent and emptying pump. Drying unit. Two motorized washing arm with 4 ways direction orbital washing nozzle to be fitted inside all machinery of granulation guarantee a perfect cleaning. PLC System to memorize and control up to 20 different washing recipes. Manual or automatic washing and drying System for IBC Nicobin.

LAB SERVICES - DOCUMENTATION - VALIDATION

Nicomac have a very modern LAB equipped with all modern machinery for research, formulation development and process trials. Experienced, professional personnel are available to support you to get the best process performances. In a Nicomac Clean Room Lab, a complete Nicomac Granulation Line with the most modern technology is available: 10 kg. Batch High speed Mixer - FDB processor - Universal blender - 10 and 50 litres capacity Solid wall Coating pan - Tablet press - Capsule Filling Machine.

Nicomac can supply the validation service for the entire line starting from Dispensing System. With Log book with calibrated weight. IQ OQ PQ documentation with performed test for each single machine of the granulation line. Process and formulation consultancy at customer's site to develop, improve and set formulation.

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PHD - Process Handling Design

GRANULATION LINE

NICOMAC

QUALITY WITHOUT COMPROMISE

A lot of of reliable, state of the art technology machinery are working in FDA approved pharma industries. First Class durable quality components, quality assurance procedures for incoming and outgoing materials as per ISO 9001 SOP.
Nicomac Highly Qualified, personnel for start-up, validation operation and after sales services.

PHD - Process Handling Design

One supplier for a fully integrated powder handling and processing line to supply a result: the best quality product, your product. Nicomac has a strong commitment to continuous technology innovation and excellence to be your expert for solid dosage departments. Each product has different characteristics, each project has different requirements and Nicomac will design for you a customized lay-out and the suitable machinery on the basis of your product, your needs and your production plans.

Nicomac supplies a complete system and an integrated concept to fit your requirements.

Nicomac will be your partner for turnkey projects where the goal is quality, efficiency, performance, output on the basis of your company requirements and your needs.
A complete integrated production line can be designed following Total Containment System Standards. Flame proof design on request. All product contact parts are made in stainless steel SS 316 other materials and outer surfaces are made in Stainless Steel SS 304.

Turnkey project - Process development - Material handling and product flow concept consulting with high performance machinery, First Class CleanRoom Materials, High quality, cGMP compliant, High functionality, Ergonomic customized designs, efficient high performance material flow. Easy to validate efficient cleaning process for the entire line.

Pneumatic conveying system, different product flow can be chosen on the basis of features and the number of products to be handled.

HORIZONTAL PROCESS LAYOUT

Horizontal process lay-out on one level

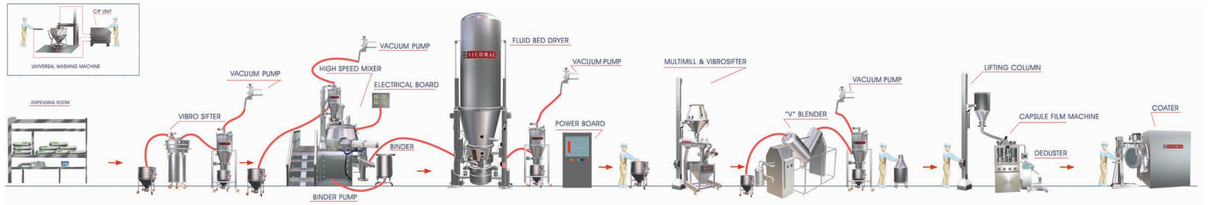
Manual or gravity system can be used for product flow. Pneumatic conveying system as well as mobile and stationery lifting and discharging system can be used. Solid dosage form lay-out may have different philosophy and/or configuration depending on how the link between the main process steps and product handling operations.

DISPENSING

Dispensing room: stainless steel or Nicomac Unique high pressure laminate phenolic impregnated panels structure with laminar flow to protect the operator and the product. User friendly system to manage up to 100 recipes, each one with15 different components. Summary of weighing sequence. Different Scales from milligrams to 150 kg weighing. Bar code reader system. Printer with batch documentation and tracking system.

SIEVING - MILLING & CALIBRATION

Crushing, Separation, Classifying, Sizing of dry and wet powder and granules.
Oscillating Reducer - Vibro Sifter - Multi\Cone Mill Calibrator - Compact design, safe seal, easy dismantling and cleaning.



HIGH SPEED MIXER - HIGH SHEAR MIXING - RAPID MIXER

Homogeneous mixing of dry & wet powders, deaglomeration of wet mass and fast dispersion of binding agent. Dust free, high free flowing dosing properties, high uniformity of granule size. AC frequency control for bottom driven Impeller Mixer with 3 or 4 blades with exclusive scrape side design and Chopper positioned to help the product discharge. Steam Jacketed Bowl. The cleaning validation of Impeller is ensured by a simple lifting operation - Binder pump - Automatic discharge in MultiCone-MillCalibrator - End point control of wet mass by Torque Value to achieve better repeatability and accuracy of the process. Integrated WIP CIP system.
PLC control with 100 Automatic recipes - Real time batch data monitoring and records. RS-232 communication port provided.

PNEUMATIC CONVEYING SYSTEM

Vacuum transport of powders, granules and other free flowing solids in a gentle, safe, closed system. Sequential time based air blasted filter cleaning system. Washable filter. Filter Assembly and Fine Collection port are with toggle clamp, which reduces the cleaning changeover time. Silencer at suction and discharge port to reduce the noise level. Vacuum source is equipped with a suction air filter to prevent the contamination with external particles. Vacuum Safety Valve. Vacuum Gauge and isolator valve on the Vacuum power source for ease of maintenance. Control Panel will be manufactured in stainless steel 304 having dust proof construction. Control panel is sequential time based having automatic operation cycle. AC drive.

FDB NICOBED

FDB NICOBED FLUID BED DRYER AND PROCESSOR

Dust free, fast, gentle, uniform, effective drying. A special effective air flow during fluidizations allows to pass through the entire surface of every single particle.
Great drying efficiency for a perfect and uniform granule.
NicoBed dryer/granulator series are manufactured for overpressure integrity using a unique sealing system for operator safety and product containment.
FDB PROCESSOR an automatic and accurate spraying system is available for TOP and BOTTOM spray: chamber has a port to insert spray arm, solution vessel, stainless steel anticlogging gun and peristaltic pump.
Filter locking and lifting system for easy cleaning and dismantling. Solid flow meter. Sensor monitoring the powder content passing through the filter. Compression seals are used among the components of the machine tower to completely seal the system. PLC Control system with touch screen Monitor. 100 Automatic recipes.

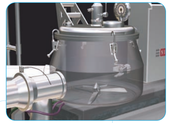
VERTICAL PROCESS LAYOUT

LIFTING - DISCHARGING - TRANSPORT SYSTEM

Stationery lifting and discharging device. Rotating Tilting Lifting stainless steel column. The Nicobin IBC can be moved by a manual pallet truck forklift, or by a battery powered stainless steel forklift.

WEIGHING SYSTEM

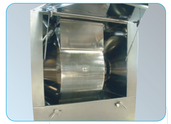
Nicomac are able to offer manual or automatic weighing station.



HIGH SPEED MIXER

TABLET PRESS

High tech, high reliable and high capacity tablet press can be supplied by Nicomac. From 8 to 81 stations, motorized control for auto operation of tablet parameter such as depth of fill setting pre-compression and main compression, force sensing for main compression, pre - compression and ejection setting, SCADA 15" Touch screen Industrial PC - PLC control system, Auto Weight Checker, force feeder, cleanness and cleanability, cGMP CE standard, fast and easy change over parts, stainless steel turret, metal detector, deduster and all options for single, double, triple layer tablets.



PERFORATED DRUM COATER

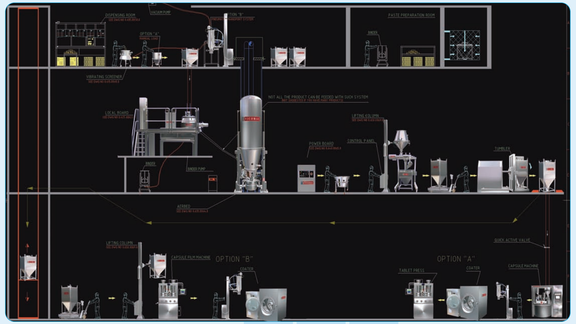
Nicomac can also supply a wide range of high tech perforated drum coating equipment with PC-PLC control system.

BLENDER

IBC Tumbler - Double Cone - V type - Octagonal type - Drum Blender. Nicomac can supply the best blender for any type of product and any type of process. All Nicomac blenders can be easily integrated into the process line. Dry Blending of free uniform flowing powders/ granules to achieve homogeneity in a shortest time process and easy cleaning. All systems are safe with variable speed, for a perfect, uniform and gentle mixing. IBC Blender is the most efficient and best method of handling, blending, and transferring any less-than-3000-liter batch powder product. The products are blended by continuously rotating the bin. The cage blender has a powered clamping cage which assures the operator safety. Different inclination can be set for an asymmetric flow of powder or granules in the bin during tumbling. Universal clamping for different size and shape IBC.

VERTICAL process lay-out on different levels

Product flowing mainly downwards through several levels driven by gravity. The single process steps are either directly linked together or are interconnected by the use of a NicoBin IBC with docking station.



DOCKING SYSTEM

Low dust, bridge free, safe, reliable, high quality manual and automatic docking system for charging and discharging powder and granules. Active valve with pneumatic actuators.
Systems to prevent segregation and product breakage during discharge and to ensure even flow of sticky product. Connecting product chutes designed according to room and equipment lay-out.

IBC INTERMEDIATE BULK CONTAINER

NicoBin, practical, flexible , high finishing container can be supplied in different shape: round, rectangular and square, in different sizes. Track identification using barcode system.

COATERS NCS

Nicomatic Coating System is the most advanced, flexible and sophisticated coating equipment for the Pharmaceutical industry all over the world. A solid wall drum for high yield, top quality final product, easy cleaning, fast process for any kind of core and any type of process. World leader Coaters, for pellets and powder dosing system. Nicomac developed many patented system such as thermojacket, magnetic unloading system, 3D baffles, powder dosing system, no clogging spray guns. Useful capacity from 10 to 2300 litres! High flexibility and high technology. Perforated drum Coating pans are also available on request.

CAPSULE FILLING MACHINE

High Speed Automatic Capsule Filling Machine from 3000 to 90.000 capsules/hour The control panel of the machine is supplied with Programmable Logic Control (PLC) system. All powder contact parts are in stainless steel 316
- The designed output of the machine depends upon fill weight, powder characteristic and capsule size. The main body of the machine is fabricated in stainless steel 304 quality plate and frame. cGMP. High quality with high finishing and High output. Empty Capsule Sorter with Elevator - Filled Capsule Sorter -Capsule Polishing Machine - Unfilled Capsule Separator