MINILAB / MIDILAB

Powerful and versatile for rapid product and process development.

DIOSNA
LINXIS GROUP

MINILAB and MIDILAB

For many years DIOSNA Fluid Bed Equipment has been highly regarded around the world. As part of the ongoing process of design refinement we have developed two new laboratory processors to optimise R & D work: The MINILAB and MIDILAB. Whether you are interested in drying, spray or melt granulating, spray cooling, powder coating, Wurster processing or instantising on a laboratory scale, the MINILAB and MIDILAB can help.

- Top-, Bottom- or Tangential-Spray-Processes
- Scale-up and simulation of production plants
- Versatility in the process design
- Plug & play: comfortable handling, easy cleaning
- Containment, PAT etc.

MINILAB XP

- Table top unit for rapid product and process development
- Glass bowls for excellent process observation or alternatively stainless steel bowls
- 3 interchangeable bowls – sizes 3 l / 5 l / 7 l
- Simple operation using a fully graphical display

MIDILAB XP

- Covers all requirements from laboratory to small pilot scales
- 4 interchangeable bowls – sizes 7 l / 12 l / 16 l / 20 l
- Individual designs tailored to customer's particular requirements
- WIP - function

MIDILAB XP

The MIDILAB processor is a mobile, highly flexible laboratory fluid bed system with an extremely wide range of applications to perfect a wide range of processes quickly, comfortably and professionally. 4 interchangeable bowls for 7 l, 12 l, 16 l and 20 l allow the production of sample batches from 1 kg to 10 kg.

Numerous options are available for solvent operation, automatic feeding and discharging or air conditioning. They ensure that the unit replicates the function and design of production plants. This provides the basis for a rapid transfer of laboratory results to pilot and production scale.

All components of the MIDILAB XP such as air handling unit, heater and fan are within the stainless steel housing. The MIDILAB is designed for "plug & play" operation and immediately ready for operation after connecting compressed air and power supply.

Simple to operate.

Open or closed product discharge (option).

The bowl is swivelled into the processing column and locked by inflatable gaskets. For discharging the open bowl could be turned by 180°.

Operation of the MIDILAB is carried out using a touch screen. The MIDILAB offers a generous worktop for other equipment such as laboratory scales or granulation liquid bowls. A power socket in the machine casing provides a convenient power supply. Underneath the inlet air plenum a storage compartment is provided which can be used for storing accessories.

Even in the basic version the plant is prepared for semi-automated cleaning. An optional cleaning nozzle can be mounted above the filter plate and in the filter housing for the wet cleaning of the complete internal processing area. The waste water is released by a manually operated valve.

All technical components are accessible from the rear side of the casing. Process air filters and exhaust air filter can be dismantled through a side opening.

Drying, Granulating, Coating with the Fluid Bed System

Numerous options extend the machine's performance.

- Movable laboratory fluid bed processing plant with four interchangeable product bowls 7 l / 12 l / 16 l / 20 l
- Top-Spray- / Bottom-Spray-Processes / Tangential-Spray / Wurster-Coating – can all be retrofitted
- Two Top-Spray-Positions
- Bottom-Spray- and Tangential-Spray-Nozzle can be dismantled during processing
- Swivelling and tiltable product bowl
- Cartridge filter system with blow back cleaning
- Sight glass in material bowl and filter housing
- Socket for PAT-equipment
- Process chamber illumination
- Integrated power socket for power supply of agitators etc.
- Exhaust air filter removable from the side

- Waste water drain and WIP-preparation as standard
- Integrated peristaltic pump
- Storage compartment underneath plenum
- Air bypass with booster-function (for releasing blocked product bed)
- Pre-conditioning of process air (bypass operation)
- Containment

MIDILAB XP

MINILAB XP

Wurster-Bottom-Spray:
Coating in the MINILAB.

Rapid, comfortable and flexible processes are an important requirement for product development in the laboratory. The MINILAB XP is a highly flexible laboratory fluid bed plant to perfect numerous processes quickly, comfortably and above all professionally. The device is designed for plug & play operation and offers the facility to carry out all known fluid bed technology processes.

The ability to use of three different sizes of bowl on one base allows the processing of a wide range of batch sizes from 200 g to 3.5 kg. This allows precise simulation of the process situation in production plants and provides the conditions for exact scale-up.

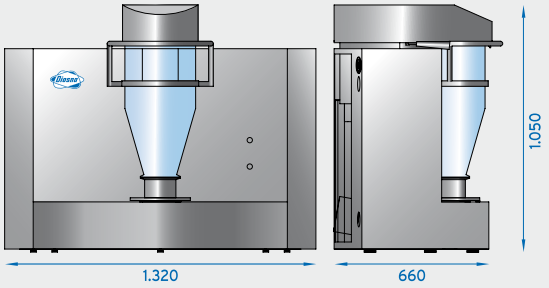
The bowls are made from either stainless steel or glass which has the advantage of providing the ability to follow the process visually. The machine has been designed to allow ease of assembly and cleaning and also to ensure good accessibility for maintenance.

Graphical touch panel for
comfortable operation.

Various granulating or coating processes can be carried out by top spraying, bottom spraying or tangential spraying. The machine is operated via a fully graphical touch panel at the front side.

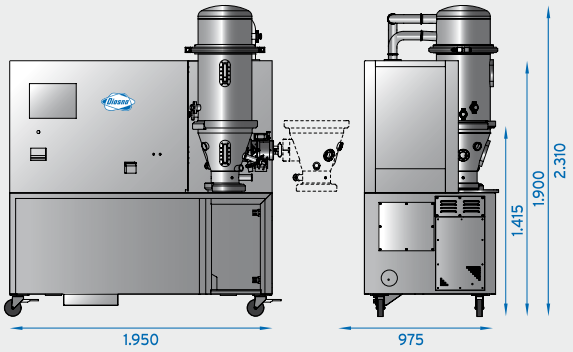
Of course the MINILAB XP laboratory fluid bed processor can be tested with individual products in the laboratory at DIOSNA. It is also possible to rent the machine for tests at the customer's site.

MINILAB XP



Technical Data	MINILAB XP
Volume material bowl (l)	3 / 5 / 7
Diameter air distributor plate (mm)	80 / 120 / 160
Diameter filter housing (mm)	290
Inlet air temperature max.[1] (°C)	100
Air volume flow max. (m³/h)	150
Electrical power supply (kW)	7,5

MIDILAB XP



Technical Data	MIDILAB XP
Volume material bowl (l)	7 / 12 / 16 / 20
Diameter air distributor plate (mm)	160 / 180 / 200 / 220
Diameter filter housing (mm)	390
Inlet air temperature max.[1] (°C)	100
Air volume flow max. (m³/h)	250
Electrical power supply (kW)	22

[1] Increase of temperature ranges as option

Data are valid for basic design. We reserve the right to change the technical data, design and specifications.

Tradition, Experience, Innovation worldwide

Processing plants for the pharmaceutical industry

In the DIOSNA Laboratory we have created a facility for use by customers and academic institutions. This we believe is the essence of a development partnership. New techniques from DIOSNA can be tested for incorporation into production processes.

The DIOSNA Laboratory is designed to meet the high requirements of research and development in the pharmaceutical industry and provides a valuable pilot scale for process developments. From granulating to tablet coating all of the DIOSNA range of equipment are available. Product evaluation can also take place on site, the trial results can be extrapolated to production scale processing.

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