

•• LABORATORY SCALE PROCESSING •••

HIGH SHEAR GRANULATOR

This design of granulation is for high shear wet granulation, pelletization, etc. suitable for pre-formulation development, formulation assurance, process consistency applications and academic laboratory use.



STANDARD FEATURES :

Variable speed mixer and chopper
Mixer torque %
Glass vessel for 300-700 gms/batch and / or 100-200 gms/batch
Liquid dosing system
Product temperature measurement
Recording of critical process data in 21 CFR part 11 certified software
Controls by Allen Bradley controller & 12.1" IPC by a touch panel control with trends
Report on Excel file can be exported to USB to view on computer

OPTIONAL FEATURES :

Stainless steel bowls, Jacketed vessels for melt granulation & pelletization.
Together with a fluid bed you get a complete granulation / drying and coating suite.

THROUGHPUT / OUTPUT :

Model	UHSM - 1	UHSM - 3 / 5
Capacity	150 - 800 gms/batch	1 - 5 kgs/batch

UICE LAB

A Fully integrated extruder and spherodizer for , pelletization, etc. suitable for pre-formulation development, formulation assurance, process consistency applications and academic laboratory use.



STANDARD FEATURES :

Cone extruder with feed hopper
Variable speed for extruder (20-100 rpm), spheronizer (50-1500 rpm)
Standard setup 1mm, optional size of cone meshes (0.4 / 0.5 / 0.3 / 0.8 / 1.0 / 1.2 mm)
Drum diameter standard 150mm (250 gms/batch) / Optional 75mm (25 gms/batch)
Standard chequerered plate - 3.2mm Optional (1mm, 2mm, 3.2mm, 6.5mm)
Recording of critical process data in 21 CFR part 11 certified software
Controls by 12.1" IPC by a touch panel control with trends
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OPTIONAL FEATURES :

Radial extrusion head with various mesh size (0.3 / 0.4 / 0.5 / 0.6 / 0.8 / 1.0 / 1.2 or any size)
Teflon coated drums. Various sizes of chequerered plate as indicated above.

THROUGHPUT / OUTPUT :

Model	UICE - LAB	UICE - 20 (with USPHI- 380)
Capacity	20 - 1000 gms/batch	5 - 15 kg/hr

MINI LAB

This design of bottom spray wurster coating and top spray for wet granulation, pelletization, etc. suitable for pre-formulation development, formulation assurance, process consistency applications and academic laboratory use.



STANDARD FEATURES :

Stainless steel processing bowl top spray 100 - 500 gms
Stainless steel processing bowl bottom spray 100 - 400 gms
Optional bowl for both 50 - 200 gms. (1 lit)
Process air filter & Exhaust fan.
Inlet air heater
Liquid dosing system by speed controlled peristaltic pump (volume is optional)
Recording critical process parameters like air flow, temperature, etc.
Recording of critical process data in 21 CFR part 11 certified software.
Controls by 12.1" IPC by a touch panel control with trends
Report on Excel file can be exported to USB to view on computer

OPTIONAL FEATURES :

Organic solvent processing
Rotor attachment available with selected machine models.

THROUGHPUT / OUTPUT :

Model	MINI LAB	UFBM - 1	UFBM - 3
Capacity	20 - 500 gms/batch	300 - 800 gms/batch	1 - 3 kgs/batch

MINI DRYER

A fully integrated fluid bed dryer for drying pellets, granules, powder, tablets, etc. suitable for pre-formulation development, formulation assurance, process consistency applications and academic laboratory use.



STANDARD FEATURES :

Stainless steel processing bowl top spray 20 - 500 gms, drying capacity.
Stainless steel 3 bowl attachment processing bowl for drying 20 - 50 gms. of material.
Optional bowl for both 50-200 gms. (1 lit.)
Suction blower fan.
Inlet air heater
Acrylic boor for the bowl to ensure the product material inside the acrylic chamber.
Recording critical process parameters like air flow, temperature, etc.
Recording of critical process data in 21 CFR part 11 certified software.
Controls by 12.1" IPC by a touch panel control with trends
Report on Excel file can be exported to USB to view on computer

OPTIONAL FEATURES :

Organic solvent processing
Together with a granulator you get a granulation / drying and coating suite.

THROUGHPUT / OUTPUT :

Model	MINI DRYER - 1	MINI DRYER - 3 / 5
Capacity	0.3 - 1 kg/batch	3 - 5 kgs/batch

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PAN COATER

Small Scale Pan coater, with 6" & 8" size perforated pans suitable for pre-formulation development, formulation assurance, process consistency applications and academic laboratory use.



STANDARD FEATURES :

Two drum sizes as standard with the machine 6" and 8" perforated pans.
Variable drum speed (3 - 40 rpm).
Electrical heating of inlet and 8" Pulling air fan.
Stainless steel perforated drum has a Plexi door and housing.
Product temperatures measurement & integrated peristaltic pump for coating.
Recording of critical process data in 21 CFR part 11 certified software.
Controls by Allen bradley and 12.1" IPC by a touch panel control with trends.
Report on Excel file can be exported to USB to view on computer.

OPTIONAL FEATURES :

Stainless steel Cabinet, Inlet air filtration.
Together with a fluid bed you get a complete granulation / drying and coating suite.

THROUGHPUT / OUTPUT :

Model	UPPC- 6 / 8	UPPC- 12 / 15
Capacity	50 - 500 gms/batch	1 - 3 kgs/batch

HOMOGENIZER

A Fully integrated semi-solid homogenization, gelfication and suspension equipment, suitable for pre-formulation development, formulation assurance, process consistency applications and academic laboratory use.



STANDARD FEATURES :

Variable speed high speed homogenizer (high flow and low shear).
Size reduction till 5 microns, rotation clock and anti-clockwise.
Variable speed contra-rotating mixing arms with wall scrapers.
Mixer torque (%). Jacketed glass process vessel (0.5 - 1.5 ltrs / batch).
Product temperatures measurement.
Recording of critical process data in 21 CFR part 11 certified software.
Controls by Allen bradley and 12.1" IPC by a touch panel control with trends.
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OPTIONAL FEATURES :

Powder dosing funnel with ball valve, Vacuum pump with pressure control.
Stainless steel jacketed process vessel.

THROUGHPUT / OUTPUT :

Model	UHOM - 1 / 3	UHOM - 5 / 10
Capacity	1 ltr / 3 ltrs /batch	5 ltrs / 10 ltrs /batch

MDF LAB

A Fully integrated mouth dissolvable film line, making edible / oral strips, etc. suitable for pre-formulation development, formulation assurance, process consistency applications and academic laboratory use.



STANDARD FEATURES :

Variable speed of base film, product coating by uniform doctor blade principle.
Uniform air flow throughout the machine.
Liquid dosing system.
Product temperatures measurement.
Stainless steel 316 contact parts rest stainless steel 304, mirror high quality finish.
Recording of critical process data in 21 CFR part 11 certified software.
Controls by Allen bradley and 12.1" IPC by a touch panel control with trends.
Report on Excel file can be exported to USB to view on computer.

OPTIONAL FEATURES :

Cutting line for cutting into small uniform strips & individual strip packing line.
Homogenizers and mixing tanks for integrations for a complete MDF suite.

THROUGHPUT / OUTPUT :

Model	UMDF - LAB	Homogenizer	Packing and Cuffing
Capacity	25 strips/min	1 ltr/batch	Manual machine

SPRAY DRYER

A Fully integrated spray drying unit for dryer / chiller for small and large slurry samples. suitable for pre-formulation development, formulation assurance, process consistency applications and academic laboratory use.



STANDARD FEATURES :

Electrical heating module for inlet air temperature up to 180 deg. cen.
Bi-fluid spray nozzle & unique air - flow control system.
Filtered air, can be heated for spray drying or cooled for spray chilling applications.
Glass process column and twin cyclone assembly.
Dual 10 micron cyclone can handle highly abrasive temperature sensitive materials.
Recording of critical process data in 21 CFR part 11 certified software.
Controls by Allen bradley and 12.1" IPC by a touch panel control with trends.
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OPTIONAL FEATURES :

Chiller for inlet air.
Different design of spray nozzle and organic solvent processing.

THROUGHPUT / OUTPUT :

Model	UMSD - 1	UMSD - 3
Capacity	20 - 900 ml/hr	2 - 3 ltrs/hr

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