

UMANG PHARMATECH PVT.LTD.

Engineering Division

Complete Solution in Solid Dosage Processing

www.umangpharmatech.com



Product Catalogue 2005-2006



More than Twenty Five Years - Quality through Experience

SCREW EXTRUDER

The basic principle of operation of low pressure or short path extruders is the conversion of wetted powder into uniform size extrudates (400-3000) micron size with the addition of binders. Our wide range of extruder designs are listed below.



Specifications :

Model	USSE - 60	UTSE-60/70	UTSE-100/110	UTSE-130/140	UTSE-170/180
Batch Cap./Kgs.	3-4	5-30	10-100	25-300	100-700
Motor (H.P.)	1	2	7.5	12.5	25



SPHER'OIDIZER

The Spher'oidizer consists of a round disc mounted on a vertical shaft spinning at high speed at the bottom of a cylindrical chamber or drum. The cylindrical drum is called the bowl and the spinning disc is called the chequered plate. The chequered plate has a grooved pattern to increase the friction with the product and to break the extrudates to length. When the extrudates are charged into the Spher'oidizer, they are thrown the edge of the spinning plate by centrifugal forces. By contact with the plate the extrudates are cut into short cylindrical segments which are rounded by collisions with the drum wall, plate and each other. The fines generated during the process of Spher'oidization are compressed into the surfaces of the spheres. After the particles have obtained the desired spherical shape they are discharged via centrifugal force through an opening in the bowl wall.

Specifications :

Model	USPH-75	USPH-150	USPH-250	USPH-380	USPH-500	USPH-700	USPH-900	USPH-700 (T)	USPH-900 (T)
Batch Cap./Kgs.	0.05	0.05-0.25	0.2-1	0.5-3.2	3-10	5-20	15-50	10-40	30-100
Motor (H.P.)	0.25	0.5	1	2	5	5	10	10	20

FLUID BED ROTOR UFBR-700

Fluid bed rotor process by principle is essentially a horizontal wurster process, because it fully utilizes the 3 main features below.

1. Concurrent spraying takes place below the product bed without premature droplet evaporation.
2. High centrifugal energy is created inside the product bed by the rotating disc. The process air which enters the process chamber vertically at the periphery of the rotating disc reinforces the product's helical motion, so that practically every particle is permanently rolling around its own axis.
3. Regular, statistical reproducible exposure of the particles to the spray nozzle by means of a defined disc rotation speed.

Analysis have shown that the rotor induced centrifugal forces move the entire product bed creating a denser film deposition. i.e. To obtain a wurster identical drug release profile, one would have to apply a little less coating agent with the rotor.

Our Rotor is not limited to film coating only, but permits a number of processing options.

Rotor granulation can be accomplished by spraying a suitable binder suspension on powders. Both granulate production and spheroidization is completed by the spherical rope motion of the formulation. The final stage drying can be rapidly achieved as the large free area around the rotor disc allows the throughput of large air volumes.

Pelletization, such as the production of non-pareils, is accomplished by rapid powder and binder addition onto dummy seals through a single, combined bottom spray nozzle (in this case tangential spray). This process allows weight gain of approximately 250% per hour.



Specifications :

UFBR	Unit	380	500	700	900	1100
Batch Capacity	ltrs.	7	20	70	130	200
Power	H.P.	5	10	20	30	40

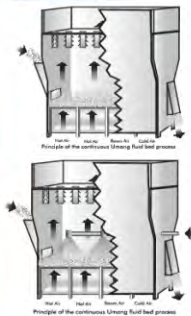
Note : All specifications in this catalogue are subject to change without notice for further development.

DIE ROLLER EXTRUDER (UDRE-65E)

MINI FLUID BED DRYER

MINI SPRAY DRYER

CONTINUOUS FLUID BED



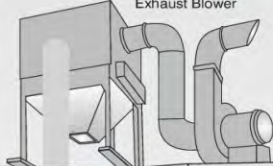


FLUID BED BOTTOM SPRAY COATER - UFBM-60

Fully integrated processing systems with matching accessories, designed and manufactured by **Ung Pharmatech**

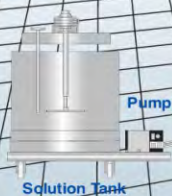
Explosion
Outlet
↑

Process Air
Exhaust Blower



Ung Pharmatech, as a developer of innovative fluid bed processing and control technology, is able to provide all the professional disciplines necessary to design, test, manufacture and install the Fluid Bed system you require.

Ung process engineers, system-analysis and processing program specialists, work with your development team to optimize all aspects of the system with process trial at our Indian site



SAMPLING PORT



BOWL LOCKING



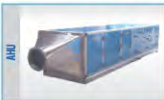
LIGHT



DISTRIBUTION PLATE



WURSTER NOZZLES



AIR



PRODUCT BOWL



CIP NOZZLE



PUMP

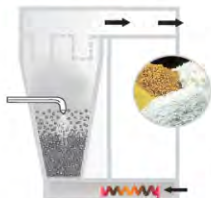


CARTRIDGE FILTERS

1 LITRE FLUID BED BOTTOM & TOP SPRAY

MINI LAB

Mini - Lab is a table-top fluid bed for laboratory use, sized for product volumes from 100 ml to 700ml. It is ideal for handling fine powders, pellets, granules, crystals and also tablets.



A suitable binding agent is sprayed from the top into the fluidized product causing controlled agglomeration. The agglomerates formed are subsequently dried.



A suitable liquid is sprayed from the bottom (tablets, Pellets, etc) ensuring uniform coating. Multiple air distributors, wurster & different spray nozzles are available as key features enabling various product applications.



2 LITRE FLUID BED BOTTOM, TOP SPRAY & ROTOR

UFBM-1



The Umang Fluid Bed Multiple (UFBM) has been developed to meet the pharmaceutical industry's requirements for flexibility in unit operations and is based on the principle that one basic unit can be used for numerous processes simply by interchanging a module.



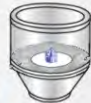
DRYER



WURSTER



TOP SPRAY GRANULATOR



ROTOR

6 LITRE FLUID BED BOTTOM, TOP SPRAY & ROTOR

UFBM-3



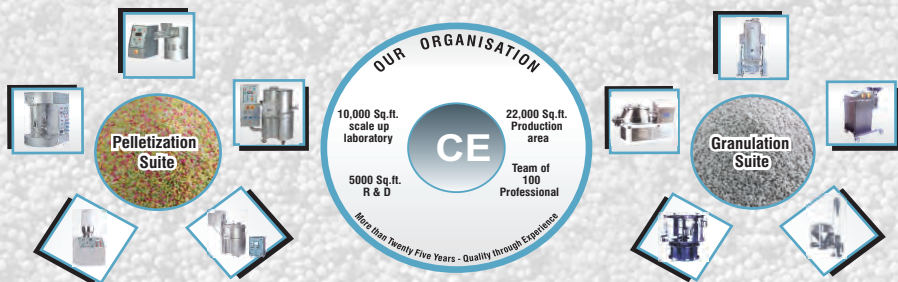
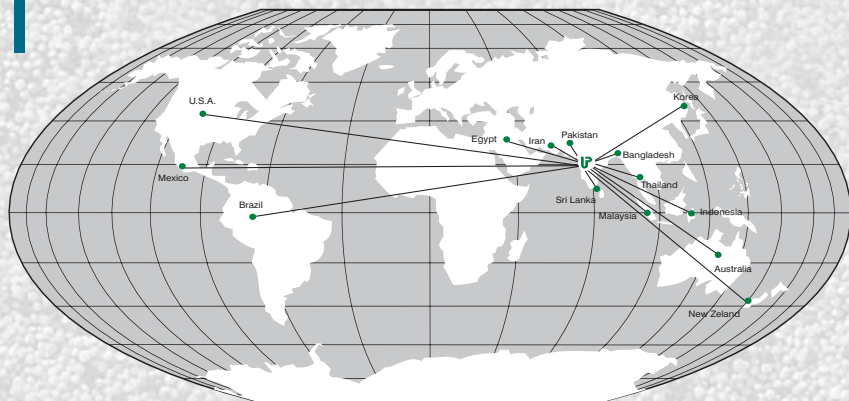
Processes :

- DRYING : Top Spray.
- PARTICLE COATING : Bottom Spray (>50 microns).
- GRANULATING : Top Spray, Rotor Granulating.
- PELLETIZING : Top Spray, Bottom Spray, Rotor Processing.
- COATING : Top Spray, Bottom Spray, Rotor Coating.

Specifications :

UFBM Specification	Model No.	Unit	Micro Mini	Mini	1	3	5	15	30	60	120	200	300	500
Maximum Working	Top Spray	litrs.	—	1.2	4	16	16	79 46	100	154 (T)	540 230	510	1025	1320
Volume of Standard	Wurster	litrs.	50 ml.	0.6	1.5	5	19 8	39 19	70	132 (T)	413 132	413	826	1140
Product Container	Rotor	litrs.	—	—	1.8(250)	7(380)	7(380)	7(380)	22(500)	70(700)	200(1100)	200(1100)	430(1400)	640(1600)
Exhaust	Capacity	H.P.	0.25	0.5	1	2	3	10	15	25	40	50	60	75

Umang on the world map



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