

HIGH SHEAR GRANULATOR



UICE - LAB



HOT MELT EXTRUDER



SOLID DRUG LAYERING



MINI LAB



TRU SPHERE



FILM CASTING MACHINE



Laboratory & Pilot Scale Machine

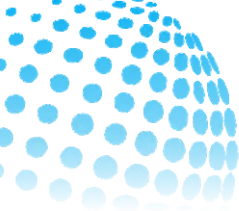
Film Casting Line



100% Customer delight at all touch points

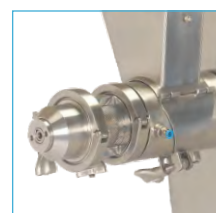
Umang Pharmatech Pvt Ltd.

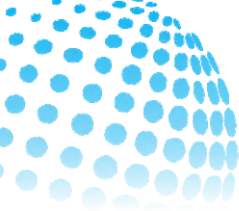
Survey No. 146 H.No.1 (PT), Vasai Phata Highway Junction, Nh8, Pelhar, Vasai (E)-401 208, Maharashtra, India
Tel: +91-9152014793/94/96/97/98/99. E-mail: - umang@umangpharmatech.com, Website: www.umangpharmatech.com | www.umangengineering.com



PRODUCTS

■ High Shear Granulator	3
■ Extruder - Radial, Axial & Cone	4
■ Die Roller Extruder	5
■ Hot Melt Extruder	6
■ Extruder - Basket Extruder	7
■ Spheronizer	8
■ Integrated Extruder & Spheronizer	9
■ Mixer cum Extruder	10
■ Combined Extruder & Spheronizer UICE	11
■ Solid Drug Layering	12
■ Tru Sifter	13
■ Tru Sphere	14
■ Mini Dryer	15
■ Mini Lab	16
■ UFBM - 1, 3, 5	17
■ UFBM - 30	18
■ Spray Dryer	19
■ Pan Coater	20
■ Homogenizer	21
■ Pell - Drop Mini	22
■ Vacuum Drying	23
■ Roll Compactor	24
■ Solution Preparation Tank	25
■ MDF Lab	26
■ Film Casting Machine	27
■ Film Slitting Machine	28
■ Film Packing Line	29





HIGH SHEAR GRANULATOR

Brief Description and Main Properties

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. The outstanding feature of the high shear granulator range is the integration. Connections, cabling and supplies are completely integrated, covered and sealed so the outside of the machine is smooth and very easy to clean. The innovative discharge valve design and optimized seals inside the bowl allow for CIP. As a result of this the our High shear granulator is highly flexible, quick product changeover increases productivity and cost effectiveness. The High Shear Granulator ranges from 1 - 5 liters featuring through the wall design and movable head, allowing operation with platform and dust - free discharging via a linked mill directly into an IBC. The HIGH SHEAR GRANULATOR can be stand - alone or linked to a fluid bed to form an integrated system.

Standard Features

- Glass process vessel.
- 1 Ltr processing bowl.
- PLC Automated touch screen controls.
- Siemens / Allen Bradley based automated controls.
- Mixing / Pellet processing efficiencies ensure highest level of product performance.
- Efficient product processing for nearly 100% product recovery.
- CE marking.

Advantage & Benefits

- Variable speed mixer and chopper.
- Mixer torque (%). Glass process vessel for 300 - 700 gms./batch and /or vessel set for 100 - 200 gms/batch
- Touch screen controls with traceability.
- Easy Cleaning & Maintenance Switch from one product to another with minimal downtime, reducing the costs of labor and tooling replacements.
- Liquid dosing system. Product temperature measurement.
- Critical process data : mixer torque (%), product temperature and chopper speed, liquid dosing, speed / volume.

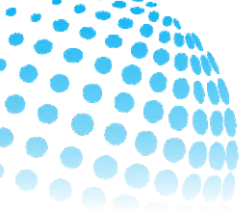
Optional Features

- Process vessel stainless steel 316 construction contact parts rest Stainless steel 304.
- 21CFR controls.
- Process vessel jacketing.
- 3 Ltrs / 5 Ltrs processing bowl.
- UL certification.



Throughput/Output:

Model	UTCE - 1/2
Capacity	250 - 50gms / batch



EXTRUDER - RADIAL, AXIAL & CONE

Brief Description and Main Properties

UICE is an integrated machine for the uninterrupted process for making granules, the innovative technology is the outcome of 35 years of know how experience in pelletization machinery. The integrated Extruder - Sphero-dizer is designed to suit the pharmaceutical application of producing spherical pellets. The machine fully complies with cGMP norms and easy to use. It is suitable for scale-up studies. The machine is delivered with an Cone Extruder (UTCE - 110) & Single Sphero-dizer (USPH - 900). The porosity of the mesh is as per customer requirement and it a format part. The size of the spheres is mainly depended on the diameter of extrudes and the cross hatched disc grove on the chequered plate of the Sphero-dizer. In this machine, Extruder output to be collected in bucket & load into Sphero-dizer.

Standard Features

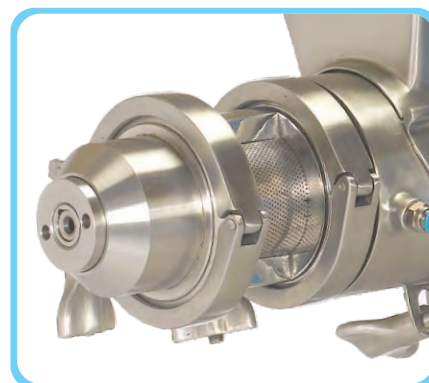
- Stainless steel 316 construction contact parts rest Stainless steel 304.
- PLC Automated touch screen controls.
- Siemens / Allen Bradley based automated controls.
- Pellet processing efficiencies ensure highest level of product performance.
- Efficient product processing for nearly 100% product recovery.
- CE marking control panel.
- Radial - Cone - Axial - Dome.

Advantage & Benefits

- Cone mesh with pressing cams and screws with feed hopper.
- Variable speed of extruder (40-100 rpm). Touch screen controls with traceability.
- Easy Cleaning & Maintenance Switch from one product to another with minimal downtime, reducing the costs of labor and tooling replacements.
- Minimal Capital Investment Single platform with interchangeable extrusion design heads permits selection of the optimal pellet processing technology.
- Low fine generation.

Optional Features

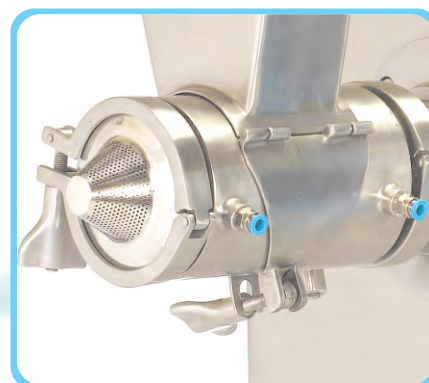
- Stainless steel 316 L construction contact parts rest Stainless steel 304.
- 21 CFR part II
- Interchangeable extrusion design attachments for Axial & Radial mesh.
- Meshes 0.4, 0.5, 0.6, 0.8, 1.0, 1.2 mm
- Chequered plate 1.0 mm, 2.0 mm & 6.5 mm



Radial Extruder



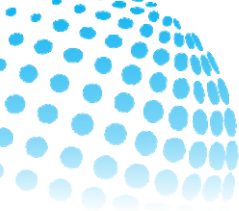
Axial Extruder



Cone Extruder

Throughput/Output:

Model	UICE - LAB	USSE - 60
Capacity	50gms - 1kgs / hr	250gms - 6kgs / hr



DIE ROLLER EXTRUDER

Brief Description and Main Properties

Die Roller Extruder has two rollers one is perforated and the second is knurling roller both are horizontally placed with minimum gap of 0.3mm. Material is charged in the hopper manually, hopper consist of drum and blade provision attached to the motor it rotates and drives the material into the feeding hopper in between the rollers and due to the pressing nature material comes out from the perforation and we get extrudes.

Die Roller Extruder has minimum 1000 microns (1.00 mm) Perforated roller & maximum is 3000 microns (3.00 mm) Perforation.

Die Roller Extruder is designed to provide better compaction and output, designed as per cGMP requirements with assembling and disassembling on nuts and bolts for quick cleaning and installation. It is an ideal equipment for R & D to Production scale batches (as high as 600 kgs/hr) for efficient and smooth performance.

Standard Features

- Stainless steel 316 construction contact parts rest Stainless steel 304.
- PLC Automated touch screen controls.
- Siemens / Allen Bradley based automated controls.
- Pellet processing efficiencies ensure highest level of product performance.
- Efficient product processing for nearly 100% product recovery.
- Standard Die Rollers 1.0mm.
- Low fine generation.
- Dense extrusion & light pressure extrusion both possible.
- CE marking.

Advantage & Benefits

- Variable speed of extruder (20-100 rpm). Touch screen controls with traceability.
- Easy Cleaning & Maintenance Switch from one product to another with minimal downtime, reducing the costs of labor and tooling replacements.
- DQ / IQ / OQ / PQ

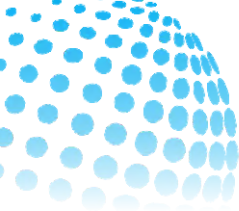
Optional Features

- Stainless steel 316 L construction contact parts rest Stainless steel 304.
- 21 CFR part II
- Different Die Rollers (0.8, 1.0, 1.2, 1.5, 2, 3mm).
- UL certification.



Throughput/Output:

Model	UDRE - 65
Capacity	100gms - 15kgs / hr



HOT MELT EXTRUDER

Brief Description and Main Properties

Hot Melt Extrusion is the upgraded version of Twin screw Extruder with heating as an element, the whole process involves hopper for feeding the raw material along with waxes which is pre mixed in solid form. The outstanding feature of the Hot Melt Extrusion range is the the twin screw segmented barrel and twin screw feeders attached to it for uniform and continuous product feeding. Connections, cabling and supplies are completely integrated, covered and sealed so the outside of the machine is smooth and very easy to clean. Our system Melt extruder is a result of high level of engineering expertise and product technology knowledge, quick product changeover increases productivity and cost effectiveness. The Hot Melt Extrusion capacity ranges from few 100 gms. to 150 kgs / hr featuring through the wall design and movable head, allowing operation In this continuous production process, polymers are mixed with binding materials, carrier materials and active pharmaceutical ingredients. This innovative, flexibly applicable process has recently become increasingly important.

Standard Features

- Contact part hardened steel SS440, SS316, non contact part Ss304.
- PLC Automated touch screen controls.
- Siemens / Allen Bradley based automated controls.
- Efficient product processing for nearly 100% product recovery.
- Heating & cooling zones.
- CE marking.

Advantage & Benefits

- Elements.Zone.
- Temp. control.
- DQ / IQ / OQ / PQ
- Split bowl.
- Feeder twin screw cutter assembly.

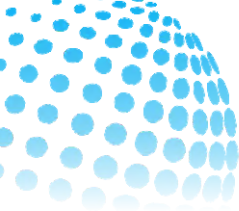
Optional Features

- Stainless steel 316 L construction contact parts rest Stainless steel 304.
- 21CFR part II.
- Different Diameter of extrusion heads (1, 2, 3 and 5mm).
- UL Certification.



Throughput/Output:

Model	UMSE - 16	UMSE - 25
Capacity	50gms - 1kgs/ hr	200gms - 2kgs/ hr



EXTRUDER - BASKET EXTRUDER

Brief Description and Main Properties

For less compaction and large output **basket extruder** is the best option. Mostly used in agro chemical industries. For large scale production in pharmaceutical industries this equipment can be adapted since umang make is of gmp design and can be validated. Extrusion take place centrifugally, and the mesh is of basket type in vertical position, hence called basket extruder. This extruder range is of proven umang technology. In basket extruder, wet mass to charge manually in to the top cone hopper. Low pressure extrusion.

Standard Features

- Modular, Compact, Cost efficient & GMP design.
- Continuous operation.
- All the m/c components are precisely processed in CNC, hence interchangeability is assured.
- Shaft assemblies are being provided with thrust and radial bearings.
- VFD Driven motor for infinite variable speed of extruder (20-100 rpm) .
- Various mesh configuration with different perforation / area / thickness for product suitability.
- Fully integrated with Standard HMI / VFD controls , there by consistent Extrudes.
- Fully integrated with Standard (AB / SIEMENS) PLC / IPC controls.
- 7" touch screen
- CE marking.

Advantage & Benefits

- Zero black particle generation.
- HMI Touch screen operation.
- Built in Electrical controls.
- Proven design for effective operation.
- Pressing Roll with simple Radial construction.
- Low pressure extrusion for heat sensitive products.
- Ease of cleaning, and access to process components.
- Mass production.
- DQ / IQ / OQ / PQ

Optional Features

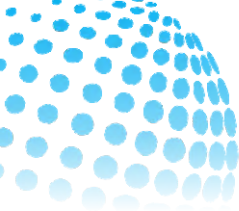
- Stainless steel 316 L construction contact parts.
- 21CFR controls.
- Different mesh sizes of (1mm , 1.2mm, 1.5mm).
- 12" touch screen assembly for auto discharge.
- UL certification.



Throughput/Output:

Pilot

Model	UBRE - 150
Capacity	1 - 10 kgs / hr



SPHERONIZER

Brief Description and Main Properties

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. The outstanding feature of the high shear granulator range is the integration. Connections, cabling and supplies are completely integrated, covered and sealed so the outside of the machine is smooth and very easy to clean. The innovative discharge valve design and optimized seals inside the bowl allow for CIP. As a result of this the our High shear granulator is highly flexible, quick product changeover increases productivity and cost effectiveness. The High Shear Granulator ranges from 1 - 5 liters featuring through the wall design and movable head, allowing operation with platform and dust - free discharging via a linked mill directly into an IBC. The HIGH SHEAR GRANULATOR can be stand - alone or linked to a fluid bed to form an integrated system.

Standard Features

- Modular, Compact, Cost efficient & GMP design.
- Continuous operation.
- All the m/c components are precisely processed in CNC, hence interchangeability is assured.
- Shaft assembly is being provided with thrust and radial bearings.
- VFD Driven motor for infinite variable speed for Checkered Plate.
- Fully integrated with Standard HMI / VFD controls, there by consistent spheroids.
- Fully integrated with Standard (AB / SIEMENS) PLC / IPC controls.
- Fully qualified and documented.
- 7" touch screen
- CE marking.

Advantage & Benefits

- Batch Process.
- Zero black particle generation.
- Air purging from below to avoid material falling down.
- Built in Electrical controls.
- DQ / IQ / OQ / PQ

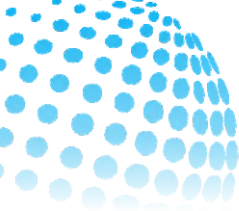
Optional Features

- Stainless steel 316 L construction contact parts rest Stainless steel 304.
- 21 CFR Part 11 compliance.
- Cooling / Heating jacket for heat sensitive product.
- Various pitched (1 mm, 2 mm, 3.2 mm, 5 mm, 6.5 mm) Checkered Plate for product suitability.
- UL certification.



Throughput/Output:

Model	USPH - 75	USPH - 150	USPH - 250	USPH - 380
Batch Cap./Kgs.	25gms/batch	50gms/batch	250-500gms/batch	500gms-2kgs/batch



INTEGRATED EXTRUDER & SPHERONIZER

Brief Description and Main Properties

UICE is an integrated machine for the uninterrupted process for making granules, the innovative technology is the outcome of 35 years of know how experience in pelletization machinery. The integrated Extruder - Spheronizer is designed to suit the pharmaceutical application of producing spherical pellets. The machine fully complies with cGMP norms and easy to use. It is suitable for scale-up studies. The machine is delivered with an Cone Extruder (UTCE - 110) & Single Spheronizer (USPH - 900). The porosity of the mesh is as per customer requirement and it a format part. The size of the spheres is mainly depended on the diameter of extrudes and the cross hatched disc grove on the chequered plate of the Spheronizer. In this machine, Extruder output to be collected in bucket & load into Spheronizer.

Standard Features

- Stainless steel 316 construction contact parts rest Stainless steel 304.
- Compact design and GMP Suites for continuous pellet production 25-50 gms processing.
- System components easily accessible for cleaning and maintenance.
- Fully integrated with Allen Bradley PLC controls.
- Stainless steel 316 GMP design with high polish finish.
- Standard 1mm cone mesh extruder with feed hopper.
- Variable speed for extruder (20-100 rpm), twin Spheronizer (50-1500 rpm).
- Standard chequered plate 3.2mm.
- Recording of critical process data in software.
- Report can be transferred to USB to view on computer.
- CE marked machine.

Advantage & Benefits

- Fully Qualified & Documented.
- All the m/c components are precisely machined by CNC, hence interchangeability is assured..
- Complete scalable model to large scale pellet production.

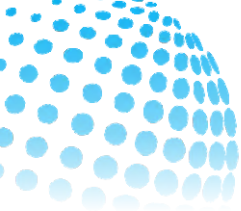
Optional Features

- Stainless steel 316 L construction contact parts rest Stainless steel 304.
- 21 CFR part II
- Interchangeable extruder attachments for Axial & Radial mesh.
- Cone meshes 0.3, 0.4, 0.5, 0.6, 0.8, 1.0, 1.2, 1.5, 2.0 mm
- Chequered plate 1.0 mm, 2.0 mm & 6.5 mm.
- UL approved controls.



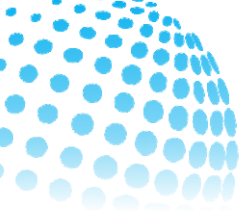
Throughput/Output:

Model	UICE - LAB	UICE - 21 (USSE-60+SPH-380)	UICE - 41 (UTCE-70+Twin SPH-500)
Capacity	50-1000 gms/hr	0.5-10 kgs/hr	5-50 kgs/hr



MIXER CUM EXTRUDER





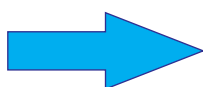
COMBINED EXTRUDER & SPHERONIZER UICE

Brief Description and Main Properties

Continuous Technology –



Extruder



Process



Spheronizer

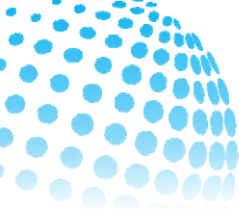
UICE is an integrated machine for the uninterrupted process for making granules, the innovative technology is the outcome of 35 years of know how experience in pelletization machinery , and being one of the largest supplier of Extruders & Spheronizer we provide best technology solutions to our customers.

The integrated Extruder - Spheronizer is designed to suit the pharmaceutical application of producing spherical pellets. The machine fully complies with cGMP norms and easy to use. It is suitable for large scale production of spheres from the wet mass. It is also suitable for scale-up studies. The porosity of the mesh is as per customer requirement and the size of the spheres is mainly depended on the diameter of extrudes and the cross hatched disc grove on the chequered plate of the Spheronizer. In this machine, Extruder output to be collected in bucket & load into Spheronizer.



Throughput/Output:

Model	UICE - 22	UICE - 41	UICE - 70	UICE - 101	UICE - 250
Batch Capacity	10 - 30kgs / hr	30 - 40kgs / hr	40 - 50kgs / hr	150 - 160kgs / hr	80 - 150kgs / hr



SOLID DRUG LAYERING

Brief Description and Main Properties

It is a centrifugal processing of single unit operation. The process involves the deposition of successive layers of an active compound onto nonpareil seeds resulting in the formation of uniform size pellets. The operation is carried out using a Drug layering rotating plate, Dry powder dusted on nonpareils adheres seeds, increasing their size and forming larger pellets. As per requirements. Growth occurs by a process of blending of powder / liquid binding and consolidation. After liquid addition and layering of active creates the correct diameter pellets & with formation of rope movement uniform pellet size happens. The requirements of process validation or Good Manufacturing practices (GMP) are simplified as the complete spheroid production process is restricted to a single processor, min. size possible 500 microns.

Standard Features

- Stainless steel 316 construction contact parts rest Stainless steel 304.
- PLC Automated touch screen controls.
- Siemens / Allen Bradley based automated controls.
- Pellet processing efficiencies ensure highest level of product performance.
- Efficient product processing for nearly 98% product recovery.
- Low fine generation.
- CE marking.

Advantage & Benefits

- Batch Process.
- Uniform distribution of air through mesh.
- HMI & PLC operation.
- Unique plate with zero crushing arrangement for starter cores and hot air flow arrangement in the equipment.
- Spray gun with peristaltic pump and ml/min. flow rate controls. Loss in weight powder feeder controls.
- Variable speed of rotating plate (50-300 rpm). Touch screen controls with traceability.
- Easy Cleaning & Maintenance Switch from one product to another with minimal downtime, reducing the costs of labor and tooling replacements.
- Minimal Capital Investment Single platform permits optimal pellet processing technology.
- DQ / IQ / OQ / PQ

Optional Features

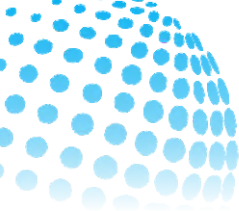
- Stainless steel 316 L construction contact parts.
- Different mesh available, 12" touch screen.
- Different plate options available for optimum efficiency.
- Various nozzle sizes are available .
- Powder Feeder on load cell ensures uniform powder layering with loss on weight concept.
- Water jacket on drum assembly.
- UL certification.



Throughput/Output:

Model	USDL 220	USDL 400	USDL 700	USDL 900	USDL 1100
Capacity	200 - 600 gms/batch	1000 - 3000 gms/batch			

#13/2019



TRU SIFTER

Brief Description and Main Properties

A good concept in sifting which is not vibrating but rotating on its own axis with 03 different zones with their particular meshes for getting undersize, desired size & over size of granules for further packing & re processing. Continuous sifter is a round perforated drum with different sizes of perforation as per requirement. The entire perforated drum is fixed to an axis attached to gear & motor for control or RPM, below perforation there are separations that release the material for packing and reprocessing.

Standard Features

- Stainless steel 316 construction contact parts rest Stainless steel 304.
- Continuous operation.
- CE marking.

Advantage & Benefits

- DQ / IQ / OQ / PQ
- Zero pellet crushing.

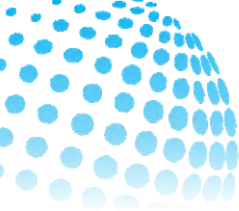
Optional Features

- Various sieves size
- UL certification
- Stainless steel 316 L construction contact parts.
- Different mesh type possible.



Throughput/Output:

Model	UTS - 100
Capacity	1 - 10kgs / hr



TRU SPHERE

Brief Description and Main Properties

TS Technology is a new innovation of UPPL it is the solution for the critical problems faced by companies because of the difference of variation in spheres / pellets size for optimization and standardization of spheronisation time. The technology can be transferred to higher capacity for standardize the actual production module. On other side the equipment is device for addition of value to the quality delivery of micro spheres to industry which is transferred at moderate vibration to a heavy sorting methodology of segregation of non-spherical spheres from oblong size of pellets. The benefit to the user is the ability to get absolute size of pellets / spheres for further processing and its application.

Umang's TS consists of a device with very minimum batch to a substantial high volume of process requirement. The vibrating assembly of sorting tray and feeder extends from vertically to one corner of the tray. The complete assembly is mounted on a platform with different sphere collecting chamber of its own nature with complete assembly on front side. The equipment is equipped with a sorting tray and pellet feeder as a standard with the machine and additional would be optional supply.

The system is suitable for pelletization process primarily focused in optimum and uniform pellet size which leads to subsequent coating thereby causing accurate dissolution and disintegration in a respective media. The device is advantageous for pelletization, formulation development, formulation assurance, process consistency.

Standard Features

- Stainless steel 316 construction contact parts rest Stainless steel 304.
- Compact design & easy to scale up.
- Sorting Tray and feeder.
- Touch screen control.
- CE marking.

Advantage & Benefits

- Easy to dismantle and clean.
- Vibration can be regulated through for different degree of agitation during sorting process.
- Negligible product hold-up due to separate collecting chambers for spherical spheres or oblong spheres.
- DQ / IQ / OQ / PQ

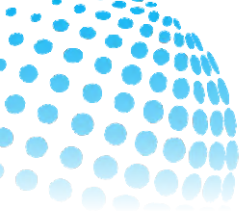
Optional Features

- 21 CFR compliant with batch records on pen drive.
- UL certification.



Throughput/Output:

Model	UTS - 1	UTS - 5
Capacity	1 - 3 kg/hr	5 - 10 kg/hr



MINI DRYER

Brief Description and Main Properties

The Mini dryer consists of an Inlet chamber, Product chamber & filter bag. The material is charged into the product chamber. As per the material to be charged different meshes options are available. Air current is induced inside the chamber by means of a blower. This air is heated by cartridge heater.

The hot air stream passes through the bed of the material and gets fluidized the product particles by creating the turbulence in the product chamber. This turbulence inside the bed assists in the transportation of the material over the length of the dryer. Due to fluidization, the particles get surrounded by hot air, which leads quick & uniform heating and drying.

Standard Features

- Modular, Compact, Cost efficient & GMP design.
- Batch operation.
- VFD Driven motor for infinite variable speed.
- Fully Qualified and documented.
- 2 Ltr bowl attachment for 100gms drying of product.

Advantage & Benefits

- Batch Process.
- Uniform distribution of air through mesh.
- HMI & PLC operation.
- DQ / IQ / OQ / PQ

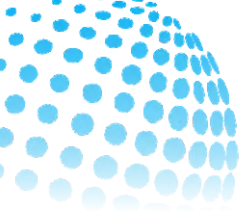
Optional Features

- Stainless steel 316 L construction contact parts
- Different mesh available.
- 21 Cfr.
- UL certification.



Throughput/Output:

Model	Mini Dryer - 1	Mini Dryer - 3/5
Capacity	0.3 - 1 kg/batch	3 - 5 kg/batch



MINI LAB

Brief Description and Main Properties

Small Compact Fluid Bed Multi Processor for bottom spray coating, top spray granulation & drying, Mini Lab It is ideal for handling fine powders, pellets, granules, crystals. A suitable binding agent is sprayed from the top into the fluidized product causing controlled agglomeration. The agglomerates formed are subsequently dried The Umang Mini Lab Bottom top spray 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.

Process :

- Drying.
- Top spray granulation.
- Bottom spray wurster coating.
- Mini Lab Bottom spray is the new FAST COATING WURSTER range that builds on the proven Umang technology
- Reversed air purging filters ensures inline cleaning at regular interval on automatic basis thereby ensuring
- Non choking of filters This unique design of the distribution plate and nozzles make it ideal machine for the fast and uniform coating application on Pellets, Micro Pellets and granules.

Standard Features

- Stainless steel 316 construction contact parts rest Stainless steel 304.
- PLC Automated touch screen controls.
- Siemens / Allen Bradley based automated controls.
- Pellet processing efficiencies ensure highest level of product performance.
- Efficient product processing for nearly 100% product recovery.
- Low noise level. Liquid dosing speed / volume.
- CE marking.

Advantage & Benefits

- Process air filter for inlet air. Variable speed for exhaust blower (0-3000 rpm.).
- Touch screen controls with traceability. Easy Cleaning & Maintenance Switch from one product to another with minimal downtime, reducing the costs of labor and tooling replacements.
- 300 - 500 gms. batch capacity for wurster coating.
- 250 - 600 gms. batch capacity for top spray granulation.
- Anti-static filter bag assembly.
- DQ / IQ / OQ / PQ

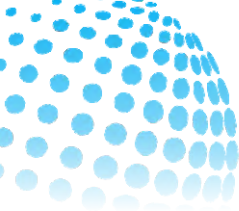
Optional Features

- Stainless steel 316 L construction contact parts
- 21CFR controls possible on options..
- UL certification



Throughput/Output:

Model	MINI LAB	UFBM - 1	UFBM - 3	UFBM - 5	UFBM - 15
Capacity	200 - 500gms/batch	300 -1000gms/batch	1 - 3 kgs/batch		

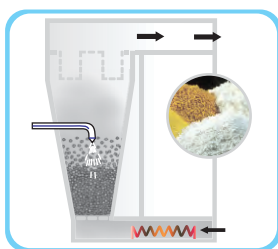


UFBM - 1, 3, 5

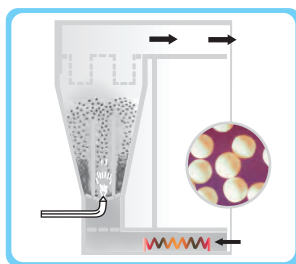
1 Litre Fluid Bed Bottom & Top Spray (Mini Lab)

Mini - Lab is a table-top fluid bed for laboratory use, sized for product volumes from 200 ml to 500ml. 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 (Pellets) ensuring uniform coating. Multiple air distributors, wurster & different spray nozzles are available as key features enabling various product applications.



Layering

Starting product (inert cores, crystals, etc) is filled into the plane plate and set in motion. In the layering from liquids process, Pellets are formed by spraying the active substance onto the cores as solution or suspension, and simultaneously drying the pellets. In the layering form powders and is bound to the spraying on a liquid binder. The pellets are then dried.

Coating

Pellets are coated by spraying a liquid onto core material. Perforated plate is to be used for this operation. Several layers of coating can be applied using either the same or different coating liquids.

Pelletization

The ROTOR can be utilized as a medium - shear granulator. The process is equivalent to the first phase of wet granulation pelletizing 75-250 microns pellets can be produced by this method.

Spheronization of Extrudates

Moist extrudates are fed into the ROTOR where they are rounded and compacted by the chequered plate afterwards the pellets are dried coated as appropriate.



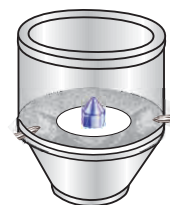
DRYER



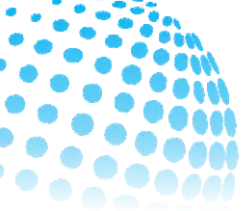
WURSTER



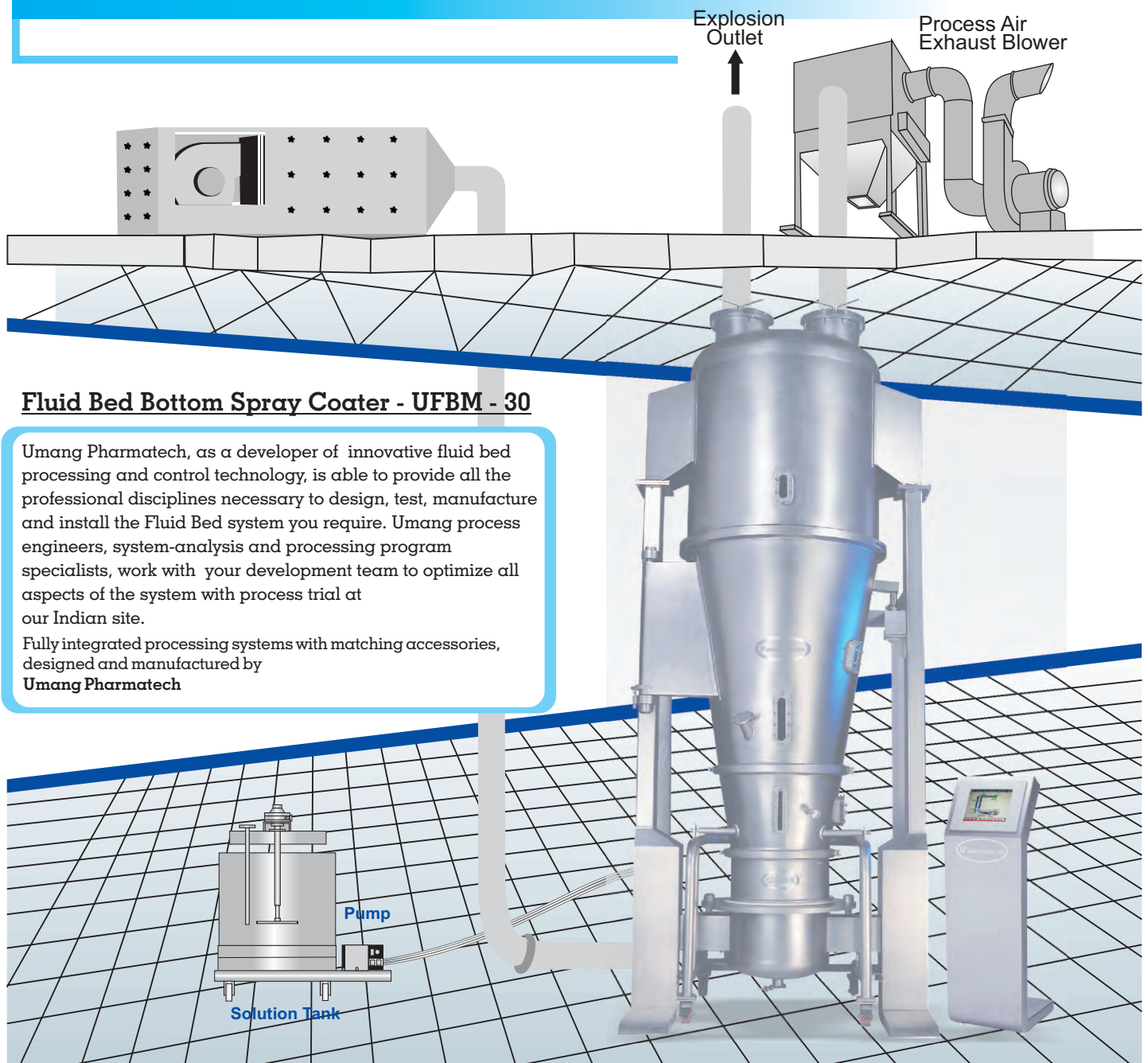
TOP SPRAY
GRANULATOR



ROTOR



UFBM - 30



Fluid Bed Bottom Spray Coater - UFBM - 30

Umang 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. Umang 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.

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



SAMPLING PORT



BOWL LOCKING



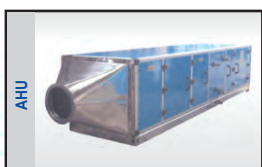
LIGHT



DISTRIBUTION PLATE



WURSTER NOZZLES



AHU



PRODUCT BOWL



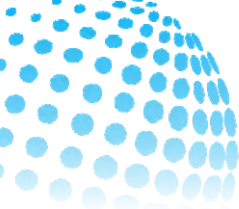
CIP NOZZLE



PUMP



REVERSE AIR PURGING MESH FILTER



SPRAY DRYER

Brief Description and Main Properties

This proposal provides you with the flexibility to use a Umang spray drying system tailored to your specific process requirements. The proposal presents a Spray dryer along with options that maybe selected to configure the system to meet your particular process and installation requirements. The Spray dryer is designed and constructed to facilitate efficient and effective cleaning to assist the customer in his conformance with Current Good Manufacturing Practice

Standard Features

- Stainless steel 316 construction contact parts rest Stainless steel 304.
- Glassware for drying chamber fixed with collection bottle.
- Spray nozzle with automatic de-blocking attachment. (One number)
- Spray gun would be Teflon coated.
- 1Ltr bowl.
- CE marking.

Advantage & Benefits

- DQ / IQ / OQ / PQ

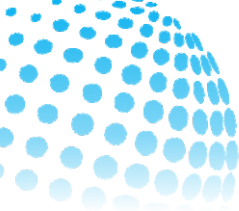
Optional Features

- UL certification.
- 3 Ltrs attachments.

Throughput/Output:

Model	UMSD - 1	UMSD - 3
Capacity	100 - 1000ml / hr	2 - 3 Ltrs / hr





PAN COATER

Brief Description and Main Properties

The Tablet coater consists of a 6" & 8" pan coater, the 6" pan works with 50–150 gms. (120–350 ml) Of tablets and 8" pan works with 150–500 gms. (350–1000 ml) of tablets. The spray nozzle extends from the center of the pan. The complete assembly is mounted inside a acrylic box. 3mm perforation on a pan is standard with high perforation area, smaller perforations can be given for pellet coating. The machine does various types of coating like enteric, seal coating.

Standard Features

- Stainless steel 316 construction contact parts rest Stainless steel 304.
- Easy to dismantle and clean.
- Hinged door. Negligible product hold-up.
- Touch screen control Industrial PC
- 8" touch screen panel.
- CE marking.

Advantage & Benefits

- The system operates in "under pressure": the air goes through the electrical heater, through the perforated drum and then through the fan. Working in under-pressure gives us the advantage that we use the same concept as is used in production: particles can not leak into the environment, and the motor or fan can not contaminate the process
- DQ / IQ / OQ / PQ

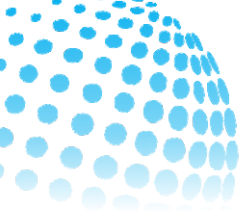
Optional Features

- Stainless steel 316 L construction contact parts rest Stainless steel 304.
- 6" Pan.
- 21 CFR part II.
- UL certification.



Throughput/Output:

Model	UHPC - 6 / 8	UHPC - 12 / 15
Capacity	150 - 500 gms/batch	1 - 3 kgs/batch



HOMOGENIZER

Brief Description and Main Properties

The high-speed homogeniser and the contra-rotating mixing arms are "top-driven" through the lid of the process vessel. This set-up offers easy changeover for cleaning and product change. Two other openings are provided for product dosing and temperature measurement. The standard Homogeniser vessel is cylindrical shaped in boro-silicate with flat bottom and curved angels and has a glass jacket with connections for in and outlet of heating/cooling media.

The system is designed for lab scale semi-solid processing.

Standard Features

- Stainless steel 316 construction contact parts rest Stainless steel 304.
- Compact design, jacketed glass process vessel, torque read out, product temperature.
- Homogeniser speed contra-rotating mixing arm 20,000 rpm.
- CE marking.

Advantage & Benefits

- Visual contact with process and interlocked front door as a safety guard.
- Process pressure (if optional vacuum pump ordered).
- Accurate process endpoint detection studies.
- The contra-rotating mixing arms have wall scrapers to create an ideal mixing and energy transfer through the glass jacket.
- Quick turnover time: emptying, cleaning and loading.
- DQ / IQ / OQ / PQ

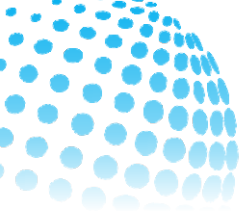
Optional Features

- Stainless steel 316 L construction contact parts.
- Vacuum Pump with Pressure Control.
- Heating and cooling units.
- Batch Reports.
- UL certification.



Throughput/Output:

Model	UHOM - 1/3 Ltr	UHOM - 5/10 Ltr
Capacity	1 Ltr / 3 Ltrs / batch	5 Ltrs / 10 Ltrs / batch



PELL - DROP MINI

Brief Description and Main Properties

The Pell-Drop Mini can be used for in-house optimization of process parameters before going into large-scale production. It also allows the production of sample quantities. The system is equipped with an exchangeable single-hole die so that meaningful test runs may be made with just three liters of material. Pell-Drop Mini is functionally equivalent to a full-scale Pell-Drop production line.

Standard Features

- Die head for one die nozzle.
- Storage vessel (approx.3 litres).
- IR heating elements.
- Oscillator controlled by amplifier and frequency generator.
- Stroboscope (monitoring the droplets after escaping from the die head).
- Set of nozzles.
- Pressure regulator with gauge.
- Water cooling unit with vessel, pump and trough.
- CE marking.

Advantage & Benefits

- DQ / IQ / OQ / PQ

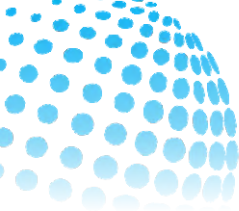
Optional Features

- Various nozzle size chilled oil.
- UL certification.

Throughput/Output:

Model	UPD - 1
Capacity	1kgs / hr output (wet)





VACUUM DRYING

Brief Description and Main Properties

Vacuum drying can be applied in a range of processes in several industries, including chemical, pharmaceutical, food, plastics, and metal powders.

Standard Features

- Stainless steel 316 construction contact parts rest Stainless steel 304.
- Hollow pad type heating shelves.
- Remote installation with condensor and condensate reciever.
- Fully welded skirt on vacuum dryer body for flush mounting through the wall.
- External insulation of dryer with protective panels.
- Validation ports and nitrogen purge nozzles.
- CE marking.

Advantage & Benefits

- Dedicated fluid heating and circulating systems.
- DQ / IQ / OQ / PQ

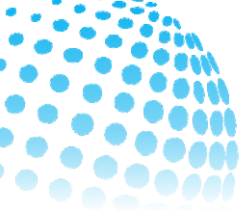
Optional Features

- Steam or electrical heaters.
- Fluid heating systems are available for water as well as thermic fluid (for temperature requirements above 95 degree centigrade).
- Can be designed to customers specific requirements
- Steam sterilisable models available
- Double door loading available for larger models
- Through wall design available.
- UL certification.



Throughput/Output:

Model	UVTD - 6	UVTD - 12	UVTD - 24	UVTD - 48	UVTD - 96
Capacity in Trays	6	12	24	48	96
No of Shelves	6	6	8	16	16
Dummy Shelf	1	1	1	1	1
Trays Per Shelf	1	2	3	3	6



ROLL COMPACTOR

Brief Description and Main Properties

Roll Compaction is a dry granulation process used to make coarse granules prior to final compression. Typical excipients used in Roller compaction are lactose, Micro-crystalline Cellulose & Magnesium Stearate etc. as the lubricant.

Standard Features

- Stainless steel 316 construction contact parts rest Stainless steel 304.
- Roller diameter 100mm, variable speed (20 - 150 rpm).
- Hydraulic cylinders with pressure of 130kg/cm²
- Power pack motors with 1HP capacity.
- CE marking.

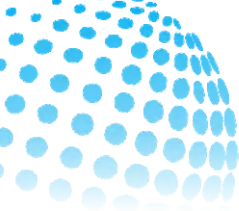
Advantage & Benefits

- Fully automatic. Manual mode and Recipe mode operations with "Umang Process -Lite" control interface software.
- Gravity feeding to feed funnel and then pressed in to compacting roller by pressing screw.
- DQ / IQ / OQ / PQ

Optional Features

- Stainless steel 316 L construction contact parts.
- 21 CFR part 11.
- Various mesh size milling merge.
- UL certification.





SOLUTION PREPARATION TANK

Brief Description and Main Properties

Over the recent few decades, many groups of formulation scientists are concentrating on rapid release dosage forms in oral cavity. Among all fast release dosage forms, oral dispersible films are successful to attract pharmaceutical industry due to ease of formulation and extension patent life. Films are popular in patients too because of quick onset and user friendliness of dosage form. The production of MDF involves following 4 essential steps.

SOLUTION PREPARATION → FILM CASTING → FILM SLITTING → STRIP PACKING.

Input material to be loaded. Connect the drum with lid. Activate the machine. A.C driven agitator blade will shear & mix the ingredients at required temperature which can be set-tered by PID Control on cartridge heater witch heats the Thermic fluid inside the jacket. Charging Port provided on the lid can be used for addition of any small ingredient. Ball valve provided at bottom can be opened for discharge after pre determined time required.

Standard Features

- Stainless steel 316 construction contact parts rest Stainless steel 304.
- The production of MDF involves following 4 essential steps.
- Main Stationary fabricated body with electrical panel and ON /OFF , PID Controls Switches.
- Jacketed & insulated solution tank on castor wheel.
- Stirrer Blade , for mixing the solution
- Top lid with reduction drive and ports.
- Lid lifting arrangements with balanced weights.
- Cartridge Heaters
- CE marking.

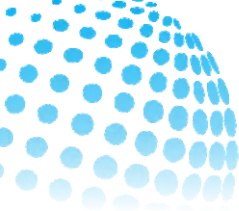
Advantage & Benefits

- Modular, Compact & GMP design.
- The tank is equipped with Thermic Fluid Heating jacket, Insulation, discharge valve & moving on castor wheel.
- Standard agitator assembled on lid which can be lifted manually with balanced counter weight.
- DQ / IQ / OQ / PQ

Optional Features

- Stainless steel 316 L construction contact parts rest Stainless steel 304.
- 21 CFR part 11.
- UL certification.





MDF LAB

Brief Description and Main Properties

Continuous Film Casting machine is designed to produce Pharmaceutical grade 'Mouth Dissolving film' in Lab Scale , Pilot Scale and Production scale with variable thickness from 40 to 80 microns. It consist of a set of roller arrangement for holding and smooth movement of substrate and caste films. Set of heaters inside drying chamber to heat air flow system which dries the film. Coating assembly to coat continuously on a substrate film with solutions or dispersions in variable thickness with accuracy 500-900 microns Thickness adjusting mechanism by viewing a built in thickness indicating micrometer dial. Lets Understand the process :- The substrate film will be released from the unwinding roll towards winding roll, the solution is coated on a substrate film at coating station in predetermined manner. The laminated wet solution film moves through drying zones. The temperature at drying zone is being sensed and set as required. A dried layer of product over the substrate film will be coming from the drying zone continuously and wound on a winding roll . The machine is equipped with web aligner , force sensor and full automation

Standard Features

- Contact parts Stainless steel 316 construction & non contact parts Ss304.
- Precise closed coating system & High efficient drying zones with double skin.
- Shaft assemblies are being provided with deep groove ball bearings.
- Cantilever type design for winding and unwinding rolls.
- RTD sensors and temperature controls for individual zones.
- VFD Driven motor for infinite variable speed.
- Linear speed sensors, Automatic web aligner.
- Automatic Web tension through Force sensor.
- Fully integrated Controls with Standard PLC, OIT, VFD, SCADA.
- Fully qualified and documented.
- Mannual Strip Packing.
- CE marking.

Advantage & Benefits

- Continues Process.
- Built in Electrical controls.
- High Coating accuracy.
- Uniform air flow throughout the machine.
- Liquid dosing system there by minimal human interference.
- Recording of critical process data in 21 CFR part 11 certified software.
- Report on Excel file can be exported to USB.
- Cantilever type design for winding and unwinding, hence substrate and product rolls can be simply inserted from front.
- Drying chambers jacketed for insulation there by energy saving.

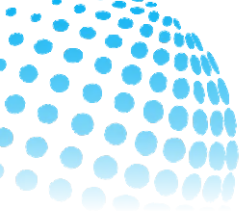
Optional Features

- Stainless steel 316 L construction contact parts rest Stainless steel 304.
- Cutting line for cutting into small uniform strips & individual strip packing line.
- Drying tunnel length can be varied.
- Homogenizers and mixing tanks for integrations for a complete MDF suite.
- Humidity control for the drying chamber.
- UL certification.



Throughput/Output:

Model	UMDF - LAB	UMDF - 25	UMDF - 50	UMDF - 100	UMDF - 200
Capacity	2500 strips/day	25,000 strips/day	50,000 strips/day	100,000 strips/day	200,000 strips/day



FILM CASTING MACHINE

Brief Description and Main Properties

Continuous Film Casting machine is designed to produce Pharmaceutical grade 'Mouth Dissolving film' in Lab Scale , Pilot Scale and Production scale with variable thickness from 40 to 80 microns. It consist of a set of roller arrangement for holding and smooth movement of substrate and caste films. Set of heaters inside drying chamber to heat air flow system which dries the film. Coating assembly to coat continuously on a substrate film with solutions or dispersions in variable thickness with accuracy 500-900 microns Thickness adjusting mechanism by viewing a built in thickness indicating micrometer dial.

Lets Understand the process :- The substrate film will be released from the unwinding roll towards winding roll, the solution is coated on a substrate film at coating station in predetermined manner. The laminated wet solution film moves through drying zones. The temperature at drying zone is being sensed and set as required. A dried layer of product over the substrate film will be coming from the drying zone continuously and wound on a winding roll . The machine is equipped with web aligner , force sensor and full automation

Standard Features

- Contact parts Stainless steel 316 construction & non contact parts Ss304.
- Precise closed coating system & High efficient drying zones with double skin.
- Shaft assemblies are being provided with deep groove ball bearings.
- Cantilever type design for winding and unwinding rolls.
- RTD sensors and temperature controls for individual zones.
- VFD Driven motor for infinite variable speed.
- Linear speed sensors, Automatic web aligner.
- Automatic Web tension through Force sensor.
- Fully integrated Controls with Standard PLC, OIT, VFD, SCADA.
- Fully qualified and documented.

Advantage & Benefits

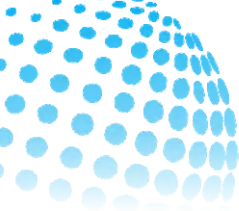
- Continues Process.
- Built in Electrical controls.
- High Coating accuracy.
- Uniform air flow throughout the machine.
- Liquid dosing system there by minimal human interference.
- Recording of critical process data in 21 CFR part 11 certified software.
- Report on Excel file can be exported to USB.
- Cantilever type design for winding and unwinding, hence substrate and product rolls can be simply inserted from front.
- Drying chambers jacketed for insulation there by energy saving.

Optional Features

- Stainless steel 316 L construction contact parts

Throughput/Output:

Model	UMDF- LAB	UMDF - 25	UMDF - 50	UMDF - 100	UMDF - 200
Batch Cap./Kgs.	2500 Strips/day	25,000 Strips/day	50,000 Strips/day	100,000 Strips/day	200,000 Strips/day



FILM SLITTING MACHINE

Brief Description and Main Properties

It is un economical to make small width film. Hence commercial size to be made and it is to be cut to required width. Slitting machine converts the mother product reel to several small width child reels as required for further process.

It consist of : Unwinding Station for mother reel, Winding station of slit child reel. Slitting Station, Drive Arrangement.

Lets understand the process : 305 / 610 mm width Mother reel will be loaded on the Unwinding shaft, 3/6 Slitting blade will size the width to 105 mm X 2 / 4 Nos. with trim at each ends and mid and then rolled on the child reel. Then 105 mm width Child reel can be directly loaded on to the strip packing machine, there it get further slit to 20 mm, striped to 30 mm + / - and packed.

Standard Features

- Stainless steel 316 construction contact parts rest Stainless steel 304.
- Continuous operation.
- Shaft assemblies are being provided with deep groove ball bearings.
- Cantilever type design for winding and unwinding rolls.
- Fully integrated Controls with Standard HMI / VFD.
- Fully qualified and documented.
- Built in Electrical controls
- CE marking.

Advantage & Benefits

- DQ / IQ / OQ / PQ

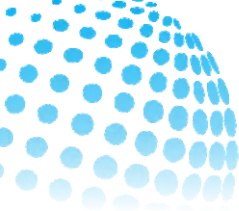
Optional Features

- 21 CFR part 11.
- UL certification.



Throughput/Output:

Model	USLT- LAB	USLT - 25	USLT - 50	USLT - 100	USLT - 200
Batch Cap./Kgs.	2500 Strips/day	25,000 Strips/day	50,000 Strips/day	100,000 Strips/day	200,000 Strips/day



FILM PACKING LINE

Brief Description and Main Properties

Umang Pharmatech Pvt. Ltd.'s USTP-50 K is a Four Track Automatic Strip Packing machine. The entire Assembly is visible from outside. It ensures that, there is no place for hidden debris and product contamination. Tool-less change over and film loading is possible in this machine. Laminated film unwinding roll & Packing foil unwinding rolls can be loaded/unloaded from the front side by simply sliding on to respective roll shafts. The speed of all the rollers are controlled by PLC and Dancing roll Sensors. The Human Interface is a touch screen. The machine is controlled locally, without interlocking with down-line machines.

Standard Features

- Stainless steel 316 construction contact parts rest Stainless steel 304.
- Slitting Mechanism with high shear blades.
- Stripping station with high shear blade to strip the film into required length.
- Sealing is designed with unsealed holding area at sides.
- Servo motor driven Linear-indexing station to enable digital advance setting through HMI & Servo Drive.
- Blanking station to blank the strips to designed shape.
- Printing station to print batch no , code no , MRP, dates etc
- Trim winding shafted roll with geared AC motor drive for scrap trims of packing foil.
- Conveyer with geared AC motor drive for conveying packed strip to it's container.
- Electrical / Pneumatic control panel. OIT panel.
- CE marking.

Advantage & Benefits

- Sealing is designed with unsealed holding area at sides.
- Strip can be designed with Tear-Notch.
- DQ / IQ / OQ / PQ
- Pick & place robotic attachments.

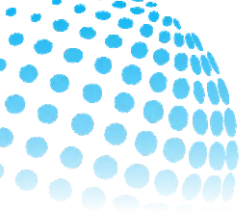
Optional Features

- UL certification.
- 21 CFR
- Stainless steel 316 L construction contact parts



Throughput/Output:

Model	USTP- LAB	USTP - 25	USTP - 50	USTP - 100	USTP - 200
Batch Cap./Kgs.	2500 Strips/day	25,000 Strips/day	50,000 Strips/day	100,000 Strips/day	200,000 Strips/day



GLOBAL PRESENCE



Connect With Us

Umang Pharmatech Pvt. Ltd.

Survey No. 146, H. No.1 (PT),
Vasai Phata Highway Junction, Pelhar,
NH8, Vasai (E) - 401 208, Maharashtra (India).

Tel. : +91-9152014793/94/96/97/98/99

E-mail : marketing@umangpharmatech.com

Website : www.umangpharmatech.com | www.umangengineering.com

