

Fully Automatic Capsule Filling Machines



DCF-Series



Dumra Machines' DCF series is a Fully Automatic Capsule Filling Machines for filling powders, pellets and tablets in hard gelatin capsules. Other combination such as powder+pellets, pellets+pellets, powder+tablets, pellets+powder+pellets can also be offered under customised machines.

A large variety of powder formulation can be filled into hard gelatin capsules. This machine uses a **Tamping Process** to form a slug that is inserted into the empty capsule. Pellet filling and tablet filling devices are available as an optional attachment.

The process of capsule filling ensures automatic capsule alignment, separation, filling, capsule closing, ejection of unseparated capsule and discharge of filled capsules. These versatile machines with several outstanding features can fill the entire range of hard gelatin capsules sizes from '00' to '4' with high filling accuracy.

The machines are designed to give an output of 25000 capsules [DCF 25k], 40000 capsules [DCF 40k] and 90000 capsules [DCF 90k] per hour. The actual output depends on the quality of capsules, characteristic of the filling material and ambient temperature condition.

The machine control is by PLC with users friendly HMI. The machines fulfills cGMP standards with various safety features and minimal cleaning.

Salient Features:

- cGMP compliance model.
- Simple to operate and easy to maintain.
- Easy and simplified changeover of Capsule.
- Size and powder with Special purpose gauges.
- High accurate Filling by Tamping Process.
- Fine adjustment of gap between Dosing Disc and Tamping Plate ensures minimum spillage of powder.
- Auto shut off for any malfunction.
- High yield due to higher filling accuracy and less powder wastage.
- Fills powder/pellets/tablets/micro-tablets.
- Level sensor in powder tub ensure continuous flow of powder.
- VFD for main motor for speed adjustment
- PLC with user friendly HMI enables Audio visual Message display of the operating parameters Auto shut off for any malfunction.

FILLING POSSIBILITIES AND COMBINATION



Technical Specification:

Model	DCF - 25K	DCF - 40K	DCF - 90K
Max. Output	25000/hour	40000/hour	90000/hour
Power Supply	415 V, 3 Phase, +N +E, 50 Hz AC [or according to Customer Specification]		
Main Motor	1.1 KW[1.5 HP]	1.5 KW[2.0 HP]	1.5 KW[2.0 HP]
Powder feed Motor	0.18 KW[0.25HP]	0.18 KW[0.25HP]	0.18 KW[0.25HP]
Vacuum for Capsule Separation	1000 LPM of 18"Hg	1000 LPM of 18"Hg	1100 LPM of 18"Hg
ADU for cleaning	2800 LPM at 4" of Hg	2800 LPM at 4" of Hg	2800 LPM at 4" of Hg
Compressed Air	225 LPM at 6 kg/cm2	225 LPM at 6 kg/cm2	300 LPM at 6 kg/cm2
Connected Load Machine:	approx 1.5 KW [2.0 HP]	approx 2.0 KW [3.0 HP]	approx 2.0 KW[3.0 HP]
Machine+Vacuum pump+ADU:	approx 7.5 KW[10.0 HP]	approx 8.0 KW [11.0 HP]	approx 8.0 KW[11.0 HP]
Dimension [LxBxH] in mm	1000 x 900 x1900	1210 x 955 x1900	1560 x 1290 x2050

Environment: Humidity and room temperature are very important parameters to ensure proper flow of capsules and product powder. Failure to control this parameter can result in the malfunction of the orientation system leading to jamming of the capsules.

Room Temperature :20°C to 25°C

Relative Humidity:40 to 50 % RH

Automatic Capsule Filling Machine with online equipments.



1. Empty capsule sorter elevator DSE- 100
2. Automatic capsule filling machine DCF- 40k
3. Air displacement unit ADU -200
4. Metal Detector
5. Auto sampling check weigher
6. Polishing machine DCP-100
7. Mini Capsule sorter DCS-100
8. Unfilled Capsule Separator DUCS-100
9. Capsule ready for blister packing (Drum)

Dumra MACHINES

Parshva Industrial Park, Plot No. 25, S. No. 89/1, Near Weener Empire, New GIDC, Umbergaon - 396170, Gujarat, India.
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Automatic Tablet Coater



Ideal for automated Tablet Coating mainly used in Pharmaceutical and Food Industries confirming to the requirement of cGMP. It is a energy saving, safe and clean equipment for Film and Sugar Coating of Tablets, Pills and Candies with Organic Film, Aqueous Coating and Sugar Film etc.



Process :

The unique perforated pan design utilizes a totally enclosed, highly efficient air flow system for maximum drying uniformity and minimum process time. The tablet to be coated make continuous complicated orbital motion the closed rotating pan under the action of a streamline of Baffles. During the motion coating medium automatically sprays according to the technological process parameters, at the same time hot filtered air supplied under a negative pressure. The hot air penetrates through the tablets core layers and is discharged from the bottom of the layers, so that the coating medium sprayed on the surface of the tablet cores will dry rapidly and evenly, thus forming a solid and smooth surface film on tablet. The whole process is finished automatic by PLC Controls with touch screen Interface.



Salient Features:

- cGMP model, with all contact parts AISI 316 & non contact parts AISI 304.
- Fully automatic coating process by PLC Controls with HMI Touch Screen.
- Minimum batch time & Power consumption.
- Excellent mixing and tumbling by special design pan.
- Atomized spray gun, adjustable spray gun arm, high precise flow peristaltic pump, solution holding tank with stirrer.
- Inlet air and exhaust air flow controls through AC frequency drive of both blower.
- Tablet discharging facility through the special diverter assembly.

Optional Features:

- Solid Pan for confectionery products.
- Wet Scrubber.
- Solution holding tank insulated with heating.
- De-humidifier.
- Inlet HEPA filters with differential pressure gauge.
- SCADA connectivity.

Technical Specification:

Model	DAC-36	DAC-48	DAC-60
Pan Diameter	900 mm	1200 mm	1500 mm
Approx Working Capacity	75	150	300
Pan Speed RPM	2 to 10	2 to 10	2 to 10
Main Drive Motor HP/kW	2.0/1.5	3.0/2.2	5.0/3.7
Inlet Air Blower Motor HP/kW	5.0/3.7	5.0/3.7	10.0/7.5
Inlet air cfm	1700	2000	4200
Exhaust Air Blower Motor HP/kW	5.0/3.7	7.5/5.6	25.0/18.6
Exhaust air cfm	2000	2600	7000
Electrical heaters kW	40	54	84
Minimum Steam Pressure	4 Kg/cm ²		
Compressed Air Pressure	6 Kg/cm ²		

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BlissPak



Blister Packing Machine

Ideal Thermoforming Machine for
Capsules, Tablets and Caplets

Automatic Blister Packing Machines are machines for the pharmaceutical industry for the packing of capsules, tablets and caplets. Special design of machine ensures total synchronization of timings between sealing of Aluminum foil and PVC base web. The machine works on rotary forming & rotary sealing principle for delivering higher outputs.



Salient Features:

- cGMP model
- Simplicity in Operation
- Quick Changeover: All change over parts accessible from FRONT SIDE
- Easy Maintenance: Easy accessibility of all components for servicing and maintenance
- AC variable frequency drive for speed control

Optional Features:

- Batch code print / Embossing attachment.
- Printing registration control unit.
- No fill detection system
- Cross Perforation
- PLC Control Panel

Technical Specifications:

Model	BlissPak-240	BlissPak-150
PVC base film	Max 210 mm	Max 124 mm
PVC film thickness	0.25 to 0.35	0.25 to 0.35
Sealing foil width	Max 206 mm	Max 120 mm
Sealing foil thickness	0.02/ 0.03 mm	0.02/ 0.03 mm
Pack length	204 mm	116 mm
Pack width	115 mm	115 mm
Forming depth	15 mm	15 mm
Output	Max 300 packs/min*	Max 150 packs/min*

*Depends upon pack size & product type/dimensions

Packaging Materials:

Base Material : PVC, PVC/PVDC.

Lidding Material : HSL coated ALU/ Glassine Foil

Utilities Requirement:

Compressed Air : 350 lpm dry air having minimum pressure 6 kgs/cm.sq.

Water Chiller : 120 Litrs/Hour. Temp. 15° to 20° C

Electrical Power : 7.5 KW, 380-415 AC, 50 hz, 3 Phase +N+E

(** IT IS RECOMMENDED THAT THE MACHINE IS INSTALLED IN AIR CONDITIONED PREMISES HAVING ROOM TEMPERATURE OF 22° to 26° C TO ENSURE EFFICIENT WORKING.)

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Coating Pan



Ideal for Pharmaceutical, Confectionery, Food and others. Also used for rolling and heating beans and edible nuts or seeds.



Process :

Coating Pan are suitable for sugar coating, film coating and coloring of tablets, pills, etc for a variety of industries.

The product is filled inside the coating pan. During the rotation motion, coating material is sprayed by spraying system according to the technological process. So process materials (product) are coated due to rotating pan. The coating round pan is rotated at the same time hot air is supplied through inbuilt Hot air blower system which dries rapidly (heating or cooling) and evenly thus forming a solid and smooth surface.



Salient Features:

- cGMP model - with all contact parts AISI 316/304 & non contact parts AISI 304.
- Fabricated structure fitted with SS enclosure which makes simple, cleanable outside covering.
- Conventional coating system for manual film coating and sugar coating.
- Closed powerful pan drive with reduction gearbox and motor by step pulley.
- Hot air blower with electric heater.
- Easy to replace polishing pan and other size coating pan.

Optional Features:

- Fixed type baffles.
- Interchange different size Pan & Polishing Pan.
- Spraying Unit with Gun, Peristaltic Pump and Solution tank with Stirrer.
- Pressurized vessel with spray gun.
- Flame Proof Electrical.
- A.C. Frequency Drive for pan.
- Fume Exhaust Blower

Technical Specification:

Model	DCP-12	DCP-24	DCP-36	DCP-48	DCP-60
Pan Size	300 mm	600 mm	900 mm	1200 mm	1500 mm
Loading Capacity in Kg	0.5 to 3	5 to 20	25 to 60	60 to 120	120 to 200
Pan RPM	Step Pulley / Variable Speed				
Pan motor HP/kW	0.25/0.17	0.5/0.37	1.0/0.75	2.0/1.5	3.0/2.2
Input Blower Motor Capacity HP/kW	0.25/0.17	1.0/0.75	1.0/0.75	2.0/1.5	3.0/2.2
Blower Capacity CFM	150	550	550	1000	1300
Heater Capacity in kW	1.5	6	9	12	15

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Double Cone Blender



Ideal for mixing, lubricating and blending in Pharmaceutical, Nutraceutical, Food, Chemical, Cosmetics, Ceramics, Pesticide, Plastics and other Allied Industries



Process :

Double cone blender is an efficient and versatile machine for mixing of dry powers and granule homogeneously.

The Double Cone Blenders have conical shape at both ends to enable uniform mixing and easy discharge. It can perform homogeneously dry mixing of free flowing powders, granules requiring low shearing force, Mixing and Blending of particles with rapid intermixing of particles irrespective of varying specific gravities. The material is loaded into the double cone blender drum. The double cone blender tumbles the material in the container and spread out.



Salient Features:

- cGMP model with all product contact parts AISI 316 & non contact parts AISI 304.
- Double Cone shape product container is Ideal for dry mixing, lubrication of granules and homogenization mixing of multiple batches in to single batch.
- Enclosed rigid drive with reduction gear box and motor.
- Product container having discharge with butterfly valve and man hole.
- Safety railing is provided for rotating area of product container.
- Fixed baffles provided for lumps braking.

Optional Features:

- Charging Option:
 1. Loading & Unloading by Product container with Jacking trolley.
 2. Vacuum conveying system.
 3. Bin loading by hydraulic hoist.
- AC Frequency variable drive for product container.
- PLC Controls with HMI touch screen,
- Flame proof Electricals.
- Loading / cleaning platform.

Safety Features:

- Safety railing with limit switch, Overload protection and emergency stop.

Model	DCB-30	DCB-150	DCB-300	DCB-500	DCB-1K	DCB-1.5K	DCB-2K	DCB-2.5K	DCB-3K	DCB-4K
Gross Capacity	30	150	300	500	1000	1500	2000	2500	3000	4000
Working Capacity in Litres	20	100	200	350	750	1000	1400	1750	2100	2800
RPM	20	20	20	20	20	15	15	10	10	8
HP/kW	0.5/0.37	1.0/0.75	1.5/1.25	2.0/1.5	5.0/3.75	7.5/5.62	10/7.5	15/11.25	15/11.25	20/15

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Fluid Bed Dryer



It is ideal for heat sensitive and non heat sensitive products in Pharmaceuticals, Chemicals and Biochemical, Food and Dairy Industries.

Dumra's Fluid Bed Dryer Process involves fast drying and cooling. The Fluid Bed Dryer have a bed of solid particles which are fluidized by passing flow of air upward through a specially designed double woven screen. The upward velocity of air is so maintained so as to slightly lift the solid particles and set them in motion. This motion can be utilized to bring forward movement of the solids particles. The air is heated and the process hot air evaporates the fluid and dries the solids. The uniform drying is achieved by exposing the full surface of every particles of the solid mass to the incoming high velocity hot air.



Salient Features:

- cGMP model with all contact parts AISI 316 & non contact parts AISI 304.
- Pneumatic Sealing of filter Bag and product container by inflatable silicon gasket.
- Inlet AHU with pre Air filter and heat exchanger steam or electric.
- Auto pneumatic filter bag shacking system.

Optional Features :

- Additional Product container.
- Advance PLC controls with touch screen
- Exhaust AHU with Silencer and scrubber.
- HEPA Filter with Differential Pressure gauge
- Flame proof electricals
- Solid flow detection System.

Safety Features:

- Safe earthing system for static current.
- Product Bowl interlocking mechanism.
- Explosion flap ensure at retarding chamber.

Technical Specification:

Model	DFBD30	DFBD60	DFBD120	DFBD200	DFBD250	DFBD350	DFBD500
Capacity in Kgs	30	60	120	200	250	350	500
Vol. of Product container in Ltrs.	90	180	360	600	750	1050	1500
Blower Motor HP/kW	5.0/3.7	10.0/7.5	15.0/11.0	25.0/18.6	30.0/22.3	40.0/29.8	50.0/37.3
Steam Kg./Hr.	76	138	194	264	322	410	520
Heat Load Kcal/Hr.	39000	72000	99000	135000	165000	210000	267000
Electric Heaters kW	18	33	54	90	120	N.A.	N.A.
Min. Steam Pressure	4 Kgs./Cm ²						
Compressed Air Pressure	6 Kgs./Cm ²						
CFM	1300	2300	3300	4500	5500	7000	8900

Note:- Temp. 20°C - 80°C

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Mass Mixer



Ideal for Pharmaceuticals, Food & Herbals Powders,
Agro Chemicals & Chemicals.



Process :

The **Mass Mixer** is designed for efficient and homogenous mixing of dry and wet material and especially suitable for powder of Pharmaceuticals, Food, Herbals, Agro Chemicals & Chemicals. The mass mixer consists of a rigid fabricated structure motor, gear box, mixing drum, paddle type blades and tilting device. Specially designed sealing arrangement is provided to ensure that no black particle enters into the mixing drum. The material under mixing process can be monitoring through dust cover and its controls dusting and contaminations. The tilting device is provided to make easy the unloading of the material and easy cleaning of the mixing drum.



Salient Features:

- cGMP model - with all contact parts AISI 316 & non contact parts AISI 304.
- Mounted on strong structural frame for sturdy operation.
- Uniform Mixing with paddle blade stirrer.
- Sealing arrangement to avoid black particles.
- Tilting device for easy unloading and cleaning.

Optional Features:

- Flame proof electricals.
- Motorised Tilting.
- Variable Speed Drive.
- Paste Spray System.
- Ribbon type Blades for dry powder.

Safety Features:

- Fully enclosed drive transmission system.
- Limit switch installed in the top lid to stop running of blades as soon as the lid is opened.

Technical Specification:

Model	DMM-30	DMM-60	DMM-120	DMM-150	DMM-200
Capacity in Kg	30	60	120	150	200
Drum Volume in Litre.	75	140	290	360	480
Working Volume in Litre.	60	120	240	300	400
Mixing Shaft RPM	30	30	30	30	30
Electric Motor HP / kW	2.0 / 1.5	3.0 / 2.2	5.0 / 3.75	7.5 / 5.6	10 / 7.5

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Multi Mill (Direct Drive)



Pharmaceuticals, Chemicals, Cosmetics, Ceramics, Colours, Dyestuff, Food products etc. It also finds application in Pesticides, Fertilizers, Spices, Detergents, Insecticides, Plastics and Resins industries



Process :

Multi Mill is used for high speed granulation, pulverization, milling, shredding, chopping, size reduction of wide range of materials without any special attachment. As compared to four principals of size reduction i.e. grinding, compression, impact and shearing which often do not produce controlled size reduction this machine utilizes the principal of variable force swing hammer blades having both knife and impact edges rotating with carefully selected screen to control the size reduction.

Flow path of materials is streamlined during comminuting material entering the chamber travels to the periphery and passes through the screen tangentially and radially avoiding choking and temperature rise.

Salient Features:

- cGMP model - with all contact parts AISI 316 & non contact parts AISI 304.
- High speed milling, granulating, pulverizing, mixing and size reduction of wet & dry material.
- High out put with process uniformity
- Easy removable contact parts for cleaning & inspection.
- Variable force by swing better having knife & impact edges are rotating within screen.
- Direction of beaters can be changed by forward-reversible switch.
- Various combinations of perforated sieves & wire mesh.

Optional Features:

- Inline milling process with HSMG and Sifter
- Flame proof electricals.

Technical Specification:

Model	DMMD 1HP	DMMD 3HP	DMMD 5HP
Output in kgs / hr	5 to 50	25 to 200	50 to 500
Screen size mm	150 - ID x 95Ht.	260 - ID x 140Ht.	300 - ID x 160Ht
Charging height mm.	1070	1550	1600
Discharging height mm.	500	750	800
Electric Motor HP / kW	1.0 / 0.75	3.0 / 2.2	5.0 / 3.7

*Depends on mesh size and product characteristics.

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Multi Mill (Belt Drive)



Ideal for Pharmaceuticals, Chemicals, Cosmetics, Ceramics, Colours, Dyestuff, Food products etc. It also finds application in Pesticides, Fertilizers, Spices, Detergents, Insecticides, Plastics and Resins industries



Process :

Multi Mill is used for high speed granulation, pulverization, milling, shredding, chopping, size reduction of wide range of materials without any special attachment. As compared to four principals of size reduction i.e. grinding, compression, impact and shearing which often do not produce controlled size reduction this machine utilizes the principal of variable force swing hammer blades having both knife and impact edges rotating with carefully selected screen to control the size reduction.

Flow path of materials is streamlined during comminuting material entering the chamber travels to the periphery and passes though the screen tangentially and radially avoiding choking and temperature rise.



Salient Features:

- cGMP model - with all contact parts AISI 316 & non contact parts AISI 304.
- High speed milling, granulating, pulverizing, mixing and size reduction of wet & dry material.
- High out put with process uniformity
- Easy removable contact parts for cleaning & inspection.
- Variable force by swing beater having knives & impact edges are rotating within screen.
- Direction of beaters can be changed by forward-reversible switch.
- Various combinations of perforated sieves & wire mesh.

Optional Features:

- Inline milling process with HSMG and Sifter
- A/c frequency drive for variable speed
- Flame proof electricals.

Technical Specification:

Model	DMMB 1HP	DMMB 3HP
Output in kgs / hr	5 to 50	25 to 200
Screen size mm	150 - ID x 95Ht.	260 - ID x 140Ht.
Charging height mm.	1070	1550
Discharging height mm.	500	750
Rotor Speed RPM	750/1500/2300/3000	
Electric Motor HP / kW	1.0/0.75	3.0/2.2

*Depends on mesh size and product characteristics.

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Octagonal Blender



Ideal for mixing, lubricating and blending in
Pharmaceutical, Nutraceutical, Food, Chemical,
Cosmetics, Ceramics, Pesticide, Plastics and other
Allied Industries



Process :

The unique shape of Octagonal blender, a combination of octagonal and "V" shape provide to process larger volume in less space compared to similar blender like "V" and double cone blender. It can perform homogenously dry mixing of free flowing powders, granules requiring low shearing force, Mixing and Blending of particles with rapid intermixing of particles irrespective of varying specific gravities. The material is loaded into the blender drum. The octagonal blender is tumbles the material in the container and spread out. The mixing is achieved in 5 to 30 minutes with better homogeneity depending on type of material.



Salient Features:

- cGMP model, all the contact parts from SS 316 and non contact SS 304.
- Octagonal shape product container for Ideal dry mixer for lubrication of granules and homogenization mixing of multiple batches in to single batch.
- Enclosed rigid drive with reduction gear box and motor.
- Product container having discharge with butterfly valve and man hole.
- Safety reeling provided for rotating area of product container.
- Fixed baffles provided for lumps braking.
- Electric controls panel with cycle time.

Optional Features:

- **Charging Option:**
 1. Loading & Unloading by Product container with Jacking trolley.
 2. Vacuum conveying system.
 3. Bin loading by hydraulic hoist.
- Variable speed for product container by VFD.
- PLC Controls with HMI touch screen,
- Flame proof motor and Push Button station.
- Loading / cleaning platform.

Technical Specification:

Model	DOB-250	DOB-500	DOB-750	DOB-1k	DOB-1.5k	DOB-2k	DOB-3k	DOB-4k
Gross Cap in Litres	250	500	750	1,000	1,500	2,000	3,000	4,000
Working Cap in Litres	175	350	500	750	1000	1400	2100	2800
RPM	15	15	15	10	10	10	8	8
HP/kW	2.0/1.5	3.0/2.25	5.0/3.75	5.0/3.75	7.5/5.62	10/7.5	10/7.5	15/11.25

For Specific & Higher Capacity please contact us for details.

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Oscillating Granulator



Dry Granulation, Wet Granulation, Screening, Crushing, Breaking.

Ideal for gentle homogenization, size reduction, grading and sieving of dry, sensitive powders and granules in pharmaceutical, chemical and food industries.



Process :

Oscillating Granulator has one rotor with five edges, which oscillate on horizontal axis. There is one half round sieve mounted at the bottom of the rotor. Product is charged from the top through in-feed hopper and material falls on the rotor blades. The particles are broken by a set of oscillating bars arranged in cylindrical form over a screen of suitable mesh. Due to the sharp edges on rotor, the downsizing of particle takes place and through sieve material gets pushed outward from the bottom opening.

The oscillating motion of the rotor improves the granulating process. The important feature of the oscillating granulator is the continuous force and speed applied to the material. The back and forth motion of the rotor results in an even distribution of the material.



Salient Features:

- cGMP model with all product contact parts AISI 316 & non contact parts AISI 304.
- Uniformly granulation generates less fines.
- Easy to operate; move, clean, convenient to install in Production line

Sieve/ Perforated screen:

- Dumra offers a variety of sieves available in the market today. It includes fine sieves and perforated screen to meet the most demanding customers requirements.
- Range: 0.5 mm to 10 mm.

Optional Features:

- Flame proof electricals.
- Variable speed by VFD

Technical Specification:

Model	DOSG -200
Output	Up to 200 Kg /Hour
Oscillating Speed	48 per minute
Screen Size	440 x 600 (mm)
Hopper Capacity	35 Ltrs
Motor HP/kW	1.0/0.75

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Paste Kettle



Ideal for paste / binder preparation for RMG
Mixing Process.



Process :

The paste kettle is designed for preparing paste/starch/binder solution for tableting formulation and granulation. The kettle has a small cylindrical top shell with a spout for pouring out binder mass. It is provided with Anchor type beater for paste mixing.



Salient Features:

- cGMP model, all the contact parts from SS 316 and non contact SS 304.
- Top drive with Standard make Gear box.
- Temperature controller with sensor.
- Anchor stirrer.
- Product bowl with inbuilt heating element Jacket.

Optional Features:

- Heating option [1] Steam Heated [2] Electric Heating with thermic fluid [3] Pressurized hot water.
- Flame Proof Construction.
- Main drive with VFD for fine control of Impeller speed.
- Tilting unit for unloading.

Technical Specification:

Model	DPK - 25	DPK - 50	DPK - 100	DPK - 150
Capacity in Litres	25	50	100	150
Heater kW	3	6	9	12
Motor HP	0.25	0.25	0.5	0.75

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High Shear Mixer Granulator



Ideal for Pharmaceutical, Chemical, Cosmetic,
Food, Plastic, General Mixing Industries.



Process :

The High Shear Mixer Granulator-HSMG is used for process of fast dry & wet mixing, homogenizing, and granulating of the powder in Pharmaceutical and Chemical Industries. As the name suggests this machines performs two operations mixing and granulating after mixing of dry powders/granules, subsequent wet granulation occurs.

The mixing is achieved by special three arm of the mixing impeller. The impeller blades are angled in a way that sets the entire mixture in a whirling-rising-tumbling motion ensuring a quick and even distribution of all dry products which leads to an even wetting of every granule. The mixing process runs without varying pressure zone in the volume of mixing product. Separately driven chopper can effectively intensify the mixing result in particular when liquid or paste components are added. During humidifying and granulating process of the products the chopper controls and regulates the granular structure.



Salient Features:

- cGMP model -with all product contact parts AISI 316 & non contact parts AISI 304.
- High speed mixing & granulating with Short Batch Time.
- Unique design with three arm mixing impeller with blade angle to pushing product upward.
- Chopper blade designed to cuts lumps and make granules.
- Dual speed mixing impeller for mixing and intensify chopper for granulating.
- Flush fitting discharge plug is electro pneumatically operated.

Optional Features:

- PLC Controls with HMI touch screen.
- Flame Proof Electricals.
- Inline Milling at discharge
- Variable speed drive for main impeller and chopper.
- Bowl Jacketing for heating/ cooling mixing process.
- Binder adding by spraying system.
- Material charging.

Safety Features:

- Fully enclosed drive transmission system, Interlocked top lid, interlocked air pressure & air purging and interlocked discharge gate.

Technical Specification:

Model	DRMG 100	DRMG 150	DRMG 250	DRMG 450	DRMG 600	DRMG 1000	DRMG 1200
Over Flow capacity In Litre	100	150	300	400	600	1000	1200
Working capacity In Litre	80	120	200	350	480	800	950
Loading Capacity In Kg. Min/Max	20/40	30/60	50/120	100/200	150/300	200/400	250/500
Mixing Impeller Motor HP-Dual (750/1500 RPM)	7.5/10.0	10.0/15.0	20.0/30.0	30.0/40.0	40.0/50.0	63.0/85.0	80.0/100.0
Chopper Motor HP-Dual (1500/2800 RPM)	2.0/3.0		3.0/5.0	5.0/7.5		10.0/15.0	

Dumra MACHINES

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HIGH SPEED DOUBLE ROTARY -SUMA PRESS (In-built Pre-Compression & Force Feeding System)



Salient Features:

- Complete mechanical press (no hydraulics or pneumatics).
- Inbuilt self adjusting pre-compression system.
- Force feeding system with VFD.
- VFD on main motor.
- Onboard control of tablet parameters like weight & hardness.
- Pressure gauges.
- Automatic lubricating system.
- Interlocking guards.
- Fully detachable electronic control panel.
- Quick change over.



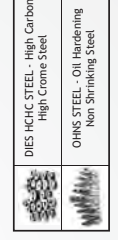
TECHNICAL SPECIFICATION		HIGH SPEED DOUBLE ROTARY- SUMO PRESS					
		DRT 37 D	DRT 45 DB	DRT 275400	DRT 345 B	DRT 55 BB	DRT 336600
Tablet output		226440	275400	275400	275400	336600	336600
Tablet Size (Max)	Round	mm	mm	mm	mm	mm	mm
	Capsule	mm	mm	mm	mm	mm	mm
Max. Depth of Filling		22 x10	21 x9	19 x9	15 x9	15 x9	15 x9
Max. Thickness of Tablet		2400	2976	3360	3552	3552	3552
Max. Turret Speed		20	20	17.5	17.5	17.5	17.5
Max. Force Feeder Speed		51	51	51	51	51	51
Max. Operating Pressure (Final Compression)		200	200	200	200	200	200
Max. Operating Pressure (Pre Compression)		10	10	6.5	6.5	6.5	6.5
Main Motor		1	1	1	1	1	1
Force Feed Motor		3Ph/415-460 V/50-60 Hz	7.5 HP/1500 RPM				
Machine Dimension in cm (LxBxH)		3Ph/415-460 V/50-60 Hz	0.5 HP / 1500 RPM				
Net Weight/Gross Weight-Kg (Approx)		150 x 140 x 180	2500 / 3250				

TYPES OF TOOLING



TYPE	PUNCH DIAMETER	DIA DIAMETER	DIAMETER
VEIL	1.750 44.45	2.125 53.98	1.187 30.15
SLUG	1.250 31.75	2.000 50.80	0.938 23.83
D	1.000 25.40	1.500 38.10	0.938 23.83
B	0.750 19.05	1.187 30.15	0.875 22.22
BB	0.750 19.05	0.945 24.00	0.875 22.22

MATERIAL OF CONSTRUCTION AND SHAPES



DIES HCHC STEEL - High Carbon High Chrome Steel	OHMS STEEL - Oil Hardening Non Shrinking Steel
ROUND	ROUND
TRIANGLE	TRIANGLE
HEXAGON	HEXAGON
OVAL	OVAL
RECHARGE	RECHARGE
DECHARGE	DECHARGE
CAPSULE	CAPSULE
PROTON	PROTON
DETON	DETON
SQUARE	SQUARE
HEART	HEART
ALMOND	ALMOND

Dumra Machines

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Rotary Tablet Press

Ideal for production of simple and precise tablets from powder in Pharmaceutical and relevant Industries.

DUMRA'S DRT Series offers a variety of Single Rotary and Double Rotary Tablet Press for small volumes to large volumes. This Tablet Punching Press meets cGMP requirement and ensure the most economical and efficient tablet production. This machines are easy to operate, easy to fast changeover, easy to clean with minimum down time.

Single Rotary Tablet Press



TECHNICAL SPECIFICATION		HEAVY DUTY ROTARY TABLET PRESS			SIGLE ROTARY TABLET PRESS		
		DRT 8H	DRT 10H	DRT 12H	DRT 16H	DRT 20D	DRT 23DB
Tablet output	Per Hour	6720-16800	8400-2100	10800-25200	13440-33600	19200-40320	24000-57960
Tablet Size (Max)	Round	mm	mm	mm	mm	mm	mm
	Capsule	mm	mm	mm	mm	mm	mm
Max. Depth of Filling		25 or 40	25 or 40	20	20	20	20
Max. Thickness of Tablet		15 or 22	15 or 22	12	12	12	12
Max. Operating Pressure		13	13	13	15	10	10
Motor	3Ph/415-460 V/50-60 Hz	3HP or 5HP / 1000 RPM	3HP / 1000 RPM	3HP / 1000 RPM	3HP / 1000 RPM	3HP / 1000 RPM	3HP / 1000 RPM
Machine Dimension in cm (LxBxH)		85 x 95 x 175	85 x 95 x 175	85 x 95 x 175	85 x 95 x 175	85 x 95 x 175	85 x 95 x 175
Net Weight/Gross Weight-Kg (Approx)		1100 / 1400	1100 / 1400	1100 / 1400	1100 / 1400	1100 / 1400	1100 / 1400



DOUBLE ROTARY TABLET PRESS



XTRA HEAVY DUTY DOUBLE ROTARY TABLET PRESS



DOUBLE ROTARY TABLET PRESS



TECHNICAL SPECIFICATION	XTRA HEAVY DUTY DOUBLE ROTARY TABLET PRESS		DOUBLE ROTARY TABLET PRESS				
	DRT	DRT	DRT	DRT	DRT	DRT	DRT
Tablet output	11XHD	13XHD	15XHD	25 D	31 DB	35 B	37 BB
	15840	18720	21600	66000	81840-	92400-	97680-
	264	312	360	14400	178560	201600	213120
Tablet Size (Max)	Round	mm	mm	1100-	1364-	1540-	1628-
	Capsule	mm	mm	2400	2976	3360	3552
Max. Depth of Filling		55 x 25		23	20	18	12.5
Max. Thickness of Tablet		32		20	20	17.5	17.5
Max. Operating Pressure		20		12	12	10	10
Motor		18		10	10	6.5	6.5
Force	3Ph/415-460 V/50-60 Hz	10HP/1000 RPM					
Machine Dimension in cm (LxBxH)	0.5 HP / 1500 RPM		NA				
Net Weight/Gross Weight-Kg (Approx)	175 x 160 x 225	2500 / 3500	90 x 105 x 175				

V PRESS

V2 PRESS



- Salient Features:**
- AC Inverter Drive with Vector Control on Main Motor.
 - Pressure Roller with Bearings.
 - Lower Punch Powder Seal.
 - Interlocking Guards.

Optional Features:

- Bi Layer Attachment.
- Upper Punch Penetration.

V3 PRESS



- Salient Features:**
- AC Inverter Drive with Vector Control on Main Motor.
 - Pressure Roller with Bearings.
 - Lower Punch Powder Seal.
 - Auto Lubrication.
 - Interlocking Guards.

Optional Features:

- Roller with Bearings.
- Timing Belt & Pulley.

TECHNICAL SPECIFICATION	V2 PRESS				V3 PRESS			
	DRT	DRT	DRT	DRT	DRT	DRT	DRT	DRT
Tablet output	27 D	31 DB	35 B	37 BB	25/27 D	31 DB	35 B	37 BB
	71280-	81840-	92400-	97680-	14400-	178560-	201600-	213120-
	15520	178560	201600	213120	155520	178560	201600	213120
Tablet Size (Max)	Round	mm	mm	mm	Round	mm	mm	mm
	Capsule	mm	mm	mm	Capsule	mm	mm	mm
Max. Depth of Filling		20	20	17.5		20	20	17.5
Max. Thickness of Tablet		12	12	10		12	12	10
Max. Operating Pressure		10	10	6.5		10	10	6.5
Motor								
Force	3Ph/415-460 V/50-60 Hz	5 HP/1000 RPM			5 HP/1000 RPM			
Machine Dimension in cm (LxBxH)								
Net Weight/Gross Weight-Kg (Approx)								

Roto Cube Blender



Ideal for mixing, lubricating and blending in Pharmaceutical, Nutraceutical, Food, Chemical, Cosmetics, Ceramics, Pesticide, Plastics and other Allied Industries



Process :

The shape of Roto Cube blender, process larger volume in less space compared to similar blender like “V” and double cone blender. It can perform homogenously dry mixing of free flowing powders, granules requiring low shearing force, mixing and blending of particles with rapid intermixing of particles irrespective of varying specific gravities. The material is loaded into the blender drum. The roto cube blender tumbles the material in the container and spread out. The mixing is achieved in 5 to 30 minutes with better homogeneity depending on type of material.



Salient Features:

- cGMP model.
- Enclosed rigid drive with reduction gear box and motor.
- Product container having discharge with butterfly valve and man hole.
- Safety railing provided for rotating area of product container.
- Fixed baffles provided for lumps braking.
- Electric controls panel with cycle time.

Optional Features:

- Charging Option:
 1. Loading & Unloading by Product container with Jacking trolley.
 2. Vacuum conveying system.
 3. Bin loading by hydraulic hoist.
- Variable speed for product container by VFD.
- PLC Controls with HMI touch screen, Flame proof motor and Push Button station.
- Loading / cleaning platform.

Technical Specification:

Model	DRCB-250	DRCB-500	DRCB-750	DRCB-1k	DRCB-1.5k	DRCB-2k	DRCB-3k	DRCB-4k
Gross Cap in Litres	250	500	750	1,000	1,500	2,000	3,000	4,000
Working Cap in Litres	175	350	500	750	1000	1400	2100	2800
RPM	15	15	15	10	10	10	8	8
HP/ kW	2.0 / 1.5	3.0 / 2.2	5.0 / 3.7	5.0 / 3.7	7.5 / 5.5	10 / 7.5	10 / 7.5	15 / 11.2

For Specific & Higher Capacity please contact us for details.

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Semi Automatic Capsule Filling Machine



Ideal for filling Capsules,



DUMRA semi automatic capsule filling machines are user friendly and are available in two models - Single Head and Double Head with advanced features. They are designed for precision manufacturing requirements of latest pharmaceutical procedures and also ensure cleanliness and product integrity. The machine provides a high degree of automation with higher levels of filling weight accuracy. These machines are suitable for filling capsule of all size with powder, pellets and granules.

Salient Features:

- cGMP model.
- Capsule holding dish MOC aluminum or light weight Magnesium Alloy
- Large volume capsule hopper
- Automatic declutching of loader when loading ring is full.
- Minimizes operator attention and ensures maximum production.
- Speed control of filling table and augur through VFD which reduce weight variation and improve productivity.
- Simple structure and low malfunction easy to maintain.

Technical Specification:

Model	Single Head Machine DSHM	Double Head Machine DDHM
Output capsule per/hour	20,000 to 30,000	30,000 to 50,000
Connected load Hp/kW	6.5 / 4.9	6.5 / 4.9
Vacuum	500 mm (20) of Hg at 1000 Ltrs. per min (30 cfm)	500 mm (20) of Hg at 1000 Ltrs. per min (30 cfm)
Compressed Air	200 Ltrs./min (8 cfm) at 100 psi	200 Ltrs./min (8 cfm) at 100 psi

Environment: Humidity and room temperature are very important parameters to ensure proper flow of capsules and product powder. Failure to control this parameter can result in the malfunction of the orientation system leading to jamming of the capsules.

Room Temperature :20°C to25°C

Relative Humidity: 40 to 50 % RH

Semi Automatic Capsule Filling Machine with online equipments.



- Semiutomatic capsule filling machine DSHM
- Air displacement unit ADU -200
- Polishing machine DCP-100
- Mini Capsule sorter DCS-100
- Unfilled Capsule Separator DUCS-100
- Capsule ready for blister packing (box)

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Strip Packing Machine



Ideal for packing of Tablets, Capsules, Caplets & any regular shape products.



Process :

DUMRA strip packing machine is suitable for packing tablets and capsules in its own hermetically sealed pockets. This offers better protection to packaged products and improves its self life. Strip packing machine is a double web laminated foil packing machine. Alu-Poly and Glassine-Poly foils [0.3 or 0.4 mm thick] are commonly used for packing of pharmaceuticals. Other laminated foils can also be used to pack different products.

The **SEALING ROLLERS** are made from toughened alloy steel so that knurling remain sharp for longer period which ensures air tight sealing. The rollers can be supplied with different types and sizes of knurling and cavities to suit particular products. The rollers are interchangeable easily. Automatic Product feeding system consists of Bulk hopper for product storage, feeder box/feed bowl and feed channel.



Salient Features:

- cGMP model, Suitable for different heat sealable packing material.
- Available in 2, 4 & 6 Tracks.
- Controls panel with Digital temperature controller.
- A/c Variable Drive.
- Batch Code Printing.

Optional Features:

- Pre Forming Rollers
- Emboss Type Batch Printing
- Conveyor belt
- Disc Feeding
- Perforation

Technical Specification:

Model	DSTP- 2T	DSTP- 4T	DSTP- 6T
Output [Tablets/min]*	400-600	800-1200	1200-1800
Max.Foil Width	70 mm	140 mm	210 mm
Heating Load W	500x2	750x2	1000x2

* Output depends on nature of product and pack size

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Tray Dryer



Tray Drying by highly effective Hot Air Re-circulation System.

Ideal for drying of pharmaceutical powders, granules, Pigments, Food, Bakery, Electrodes, Chemical, and Plastic etc in an effective and economical way by hot air re-circulation.



Process :

Tray dryer is an enclosed insulated chamber in which trays are placed on top of each other. Heat transfer is done by circulation of hot air by electric heaters or any other heating media. Blower fans are installed inside to ensure proper circulation and transfer of heat.

A highly effective recirculating air system is provided. The heated air is recirculated with fresh air in selected portions for optimum drying. The system is designed such that the materials at the top & bottom dry simultaneously.

Salient Features:

- cGMP model with all product contact parts AISI 316 & non contact parts AISI 304.
- Available in 24, 48, & 96 Trays.
- Highly effective uniform air re-circulating system by low speed fan.
- Inlet air filter and damper at inlet and exhaust air damper for air flow controls.
- Control panel with Digital temperature controller and process timer controller.
- Mobile trolleys are provided which are used to load and unload the trays into the dryer.

Optional Features:

- Heating system Electrical / Steam.
- Separate Inlet AHU with HEPA Filtration.
- Perforated tray.
- PLC with HMI.

Safety Features:

- Automatic Temperature & Process cycle controls.
- Overload relay Protection and Emergency stop button.

Technical Specification:

Model	DTD - 24	DTD - 48	DTD - 96
Number of Trays	24	48	96
Loading capacity	60 kg.	120 kg.	240 kg.
Blower motor HP	1	1	1 x 2 Nos.
Electrical Heating Load for 100°C	6kW	9 kW	18 kW
No. of Trolleys	Rack System	1	2
Tray Size in cm	80 X 40 X 3	80 X 40 X 3	80 X 40 X 3

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Vibro Sifter



Pharmaceutical, Chemicals, Cosmetics, plastics, paints, minerals, metal powders, detergents, pesticides and fertilizers, dyestuff and pigments.



Process:

Vibro Sifter is used for screening, sieving, grading for solid separation, process to separate the desired elements and the undesired elements from the combination of solid to solid (where two solids are generally having different properties) and solid to liquid material.

Vibro sifter consists of a screen placed on the base plate attached centrally to specially designed gyratory motor. The material fed through the inlet on the top is dropped on the screen. The particles smaller than the mesh size passes from the screen and the larger sized particles are released through an outlet. The combination of vibratory motor and the weights placed on top and bottom of screen gives the desired filtration or separation of the material. Total assembly is mounted on suitable springs so that it becomes an independent body which vibrates without parting any vibrations to the base body.

Salient Features:

- cGMP model with All contact parts AISI 316 & non contact parts AISI 304.
- “V” type clamp bottom bowl ,shell and charging hopper.
- Powerful vibration by gyratory motion by special Vibro motor.
- Vibration can be adjusted by reset of vibration block.
- Easy to clean & move.
- Lead free and Silicon seal sieve.

Optional Features:

- Double or triple deck sifting system.
- Inline loading/Milling process and transfer to bin/Blender by Vacuum transfer system.
- Flame Proof Electricals.

Technical Specification:

Model	DVS-20	DVS-30	DVS-36	DVS-48
Output in kg / hour	25 to 200	40 to 300	60 to 400	90 to 500
Screen Diameter mm	550	750	900	1220
Charging Ht. mm	1040	1200	1200	1200
Discharging Ht. mm.	650	750	750	750
Electric Power HP / kW	0.25/0.18	0.5/037	0.5/037	1.5/1.1

*Depends on mesh size and product characteristics.

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