



Committed to Quality & Performance

# pneuCONVEYOR systems & engineers

Manufacturers of Vacuum Powder Transfer System, Pneumatic Powder Conveying system (Dense/Dilute phase), Tubular Chain Drag Conveyor, Screw Conveyor (Flexible/Fixed), Sifting, Milling, Drying, Mixing & Blending Equipments, Big bag loading/unloading, Silo Storage Systems & Weighing Batching systems



## EXPERIENCE IN MOTION

We ARE A REPUTED COMPANY SPECIALISTS IN PLANT AND PROCESS AUTOMATION SYSTEMS FOR ALL TYPES OF INGREDIENTS HANDLING, PROCESSING OF INTEGRATED AND AUTOMATED POWDER PROCESSING SYSTEM AS PER GMP NORMS FOR PHARMA/ BULK DRUG/ FOOD /CHEMICALS/ CEMENT/ PAINT / PLASTIC/ FERTILIZERS AND OTHER INDUSTRIES.



For complete customized solutions in

- # PRODUCT TRANSFER / CONVEYING / CHARGING
- # MILLING & SIFTING
- # BAG/DRUM WEIGH FILLING
- # DUST CONTROL
- # PRODUCT STORAGE
- # MIXING / BLENDED
- # WEIGHING & BATCHING SYSTEM

Applications :

- # PHARMACEUTICALS
- # FOOD
- # CEMENT
- # FERTILIZERS
- # BULK DRUG
- # CHEMICAL
- # PAINT
- # DYES

# SPECIALIST IN AUTOMATION PLANT # PROCESS AUTOMATION SYSTEM # SPECIAL PURPOSE MACHINES

## OCTAGONAL BLENDER



### Description :

pneuCONVEYOR – Octagonal Blender is a very precision machine, performing dry blending of powder or granules homogenously in only 10 to 30 minutes. This machine is utilized for mainly homogenizing, blending and also for granules lubrication as that facilitates better flowability at a tablet press while compressing this granules. Due to its octagonal shape is designed to process larger volume of material. It occupies less space compared to other similar blenders like 'V' / Double Cone. The blending takes place at low speed during operation. It is well balanced & smoother even in higher capacities. It is very useful for pharmaceutical industries wherein gentle blending of dry granules of powder is to be done.

The important feature of the machine is easy to wash in place. Octagonal blender is supplied with a bin charging system or can be designed for vacuum charging. Dust free charging system is also incorporated, which is a completely closed system for charging and discharging of powders or granules.

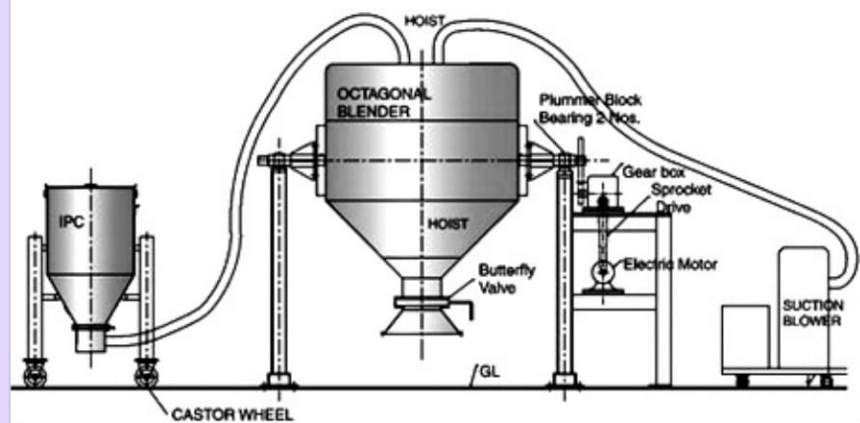
The power consumption is comparatively lower than other similar type of blenders. Basic machine consists of a blender container which is supported both ends by stub shafts which are supported on plummer block bearings. Entire assembly is placed on a structure which has drive unit consisting of electric motor, chain coupling and in case of heavy loads fluid couplings. All parts coming in contact with mix are of stainless steel 316 quality and are highly polished. Drive motors, electrical control panel and control station are supplied in non-flameproof as well as flameproof construction, as per clients requirement. In case of flameproof construction, the control panel should be located in low risk area.

There is a baffle made of ss316 pipes inside which can be removed by losing the nut between the baffles. Baffles assembly also depends upon the customer's specific requirements. Baffle ensures uneven movement of mass during tumbling and results in better homogenising. Blender has a discharge butterfly valve which if a client requires so can be operated through pneumatic actuators. Entire butterfly valve is of SS316 with seats of silicone rubber

The whole drive assembly is covered with S.S. side panel. All drives, pulleys and belt are adequately guarded. Interlock is provided for the railing so that operator does not have access to the container when it is in motion. Machine will stop automatically once the blender main railing is made to open.

The inside of Octagonal body is mirror polished and the outside surface is matt polished. The material to be mixed is charged in machine either manually from top or bin charging system or vacuum charging system and then the port is locked positively. Then blender is started to preset blending time. At the end of process, machine is stopped and the product is transferred to process containers by opening the butterfly value.

### LOADING BY VACUUM



There are three methods to load Blenders.

1. **LOADING BY CONTAINER** : Here the container brought close to the blender on special trolley having lifting arrangement. This lifting pellet ensures that the container is lifted and is aligned with the transition piece fixed with the blender outlet butterfly valve. This transition piece mouth is clamped with the outer periphery of the container using special types of clamps. Now after clamping the container(100 Lits approx) the blender is inched till the container is vertically inverted over the blender. Now once the container reaches upward inverted position, the butterfly valve is made to open by special hand wheel so that entire content of the container gets up loaded in to the blender. Once it becomes empty, the valve is closed & container is brought again downward by rotating the blender again by 180\* and another container is fixed and raised and in similar way and this way entire powder content is unloaded. By this method, material is loaded in batches of 50Kg each.
2. **LOADING BY IPC** : Here by using mobile hoist the IPC's of 220 lits are raised over the blender and through dust free connection the entire powder content is unloaded in to the blender by opening the butterfly valve. Thus material gets loaded through IPC's and also after blending the discharged material also gets unloaded in to IPC's using another dust free connection set. There is a butterfly at the discharge. For loading blender there is one opening made on the lid of the blender or lid for manhole of the blender. This way entire transfer of material is dust free.
3. **LOADING BY VACUUM** : Here by application of vacuum the entire blender is loaded using pneumatic conveying system. Blender container has two openings and through one such opening is connected to the vacuum blower and through other it is connected to the IPC's bottom portion which has a triclover arrangement. So the powder from IPC's gets transferred to the blender using vacuum conveying. This is entirely dust free but expensive method.

Pneumatic Automatic powder charging system is provided duly mounted on a swivelling davit interlocked with sensor to safeguard against blender. It is provided with a SS suction nozzle coupled to a flexible PVC food quality conveying pipe to enable for direct suction of the powder from container which will be discharged in blender and on complete charging of batch or maximum upto 70-80% by volume, filter bag of charging system may automatically be cleaned by auto reverse pulse jet mechanism thereby safeguarding against operator dependency, charging system may be swivelling on side and locked in that position which will actuate the sensor for that position, a dummy cover to be clamped on charging hole & homogeneous blending action can be initiated by starting the blender operation. After necessary blending period the material can be discharged & collected from bottom into container by manually opening the butterfly valve. The entire auto charging system is a tool free assembly.



#### Salient Features :

- Basic equipment is in vacuum rated design.
- Material handling in Octagonal Blender is through Bin charging or a Vacuum charging system.
- Due to vacuum rated design we can load the blender through vacuum transfer system with inline Milling
- Bin charging system ensures Dust free closed system for Charging and Discharging of Product.
- Slow speed Blender with Gentle blending of Dry granule.
- Optional in built in Vacuum design. No external PTS required.
- The baffles are eliminated with blending profile analysis available.
- Self positioning sensor is provided for particular discharge position
- Discharge with specially designed adaptor assembly with T C connection, in case of damage of butterfly this will safe guard the material
- cGMP design for ease of cleaning.
- Capacities available from 100L to 4000L (Higher capacity up to 10000L on demand).



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Technical specifications :

MOD EL	GROSS CAP. IN LTRS.	WORKING CAP. IN LTRS.	OVERALL DIMENSIONS L x W x H with / without BIN CHARGING		RPM	HP
OB-10	150	120	1200X2140 X2360	1200X800 X1590	10	0.5
OB-20	200	160	1200X2240 X2460	1200X900 X16 90	10	1
OB-30	300	240	1300×2340 x2560	1300×1150 x1790	8	1.5
OB-40	500	400	1450X2440 X2660	1450X1150 X1890	8	1.5
OB-50	600	480	1550×2490 x2710	1550×1150 x1940	8	2
OB-60	800	640	1650X2600 X2810	1650X1250 X2040	8	2
OB-70	1000	800	1750X2640 X2860	1750X1350 X2090	8	3
OB-80	1250	1000	1900×2800 x3010	1900×1500 x2240	6	3
OB-90	1500	1200	1950X2850 X3060	1900X1550 X2300	6	5
OB-100	2000	1600	1960X2900 X3130	1960X1700 X2360	6	5
OB-110	2500	2000	2100×3040 x3310	2100×1800 x2490	6	5
OB-120	3000	2400	2150X3090 X3410	2150X1900 X2540	6	7.5
OB-130	3500	2800	2250×3210 x3400	2250×2010 x2640	6	7.5
OB-140	4000	3200	2350X3290 X3510	2350X2100 X2740	6	10

Optional Accessories :

- Documentation
- PLC Based Colour Touch Screen Display (Optional)
- Flame Proof Construction
- Stair Case with Platform
- Pneumatically Operated Butter Fly Valve for Discharge
- Provision for Spray Ball

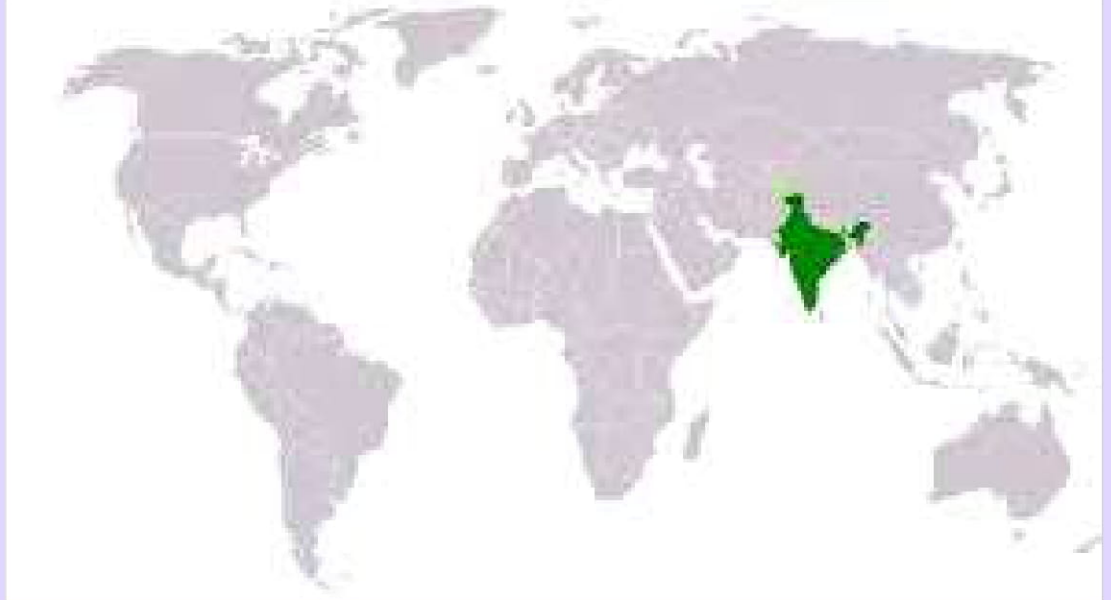




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