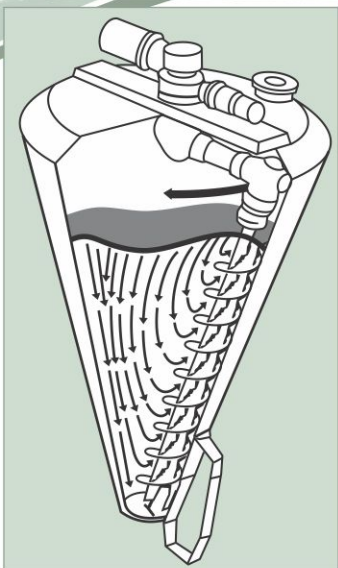




ASME "U" & "R" STAMP
AUTHORIZED MANUFACTURER

HEATING &
COOLING WITH
CONVECTIVE
MIXING
TECHNOLOGY



BEW Engineering Pvt. Ltd.
(A group company of Bifriends Engineering Works)

CONE MIXER - CUM - DRYER (NAUTA TYPE)

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PRINCIPLE :

The working principle of the cone mixer is three dimensional originated from rotating elements in combination with a conical vessel.

- The mixing screw conveys the product from bottom of the vessel to the products surface.
- The orbital arm orbits the mixing screw along the inner vessel wall causing convective mixing of particles and shear.
- The speed of particles in the downward mass flow when re-circulated by gravity in a conical vessel increases as the vessel diameter decreases. The result of these simultaneous actions is a fast and intensive mixing with low consumption of power together with high mixing accuracy.

APPLICATIONS :

- Mixing and homogenization of powders, pastes and slurries.
- Vacuum drying of pastes and slurries. ■ Addition or injection of liquids to dry solids. ■ Granulation or agglomeration of powders by the addition of binder liquid. ■ Reaction under vacuum or pressure conditions. ■ Crystallization ■ Aeration or de-aeration
- Densifying. ■ Storage and discharge of products with difficult flow properties. ■ Homogenization of colours and particle sizes.
- Cooling. ■ Heating.

Another important feature is the possibility to combine several processes in one machine giving huge savings in investment, labor and space.

ADVANTAGES :

- Gentle action on product through low power consumption.
- Fast mixing times with a high degree of mixing accuracy.
- Minimum heat generation.
- Self emptying with almost no product retention.
- De-mixing effects impossible when emptying vessel.
- Being closed unit, no contaminations, no pollution possible and machine can be combined with containment system.
- Vacuum can be employed hence drying is fast and is also accelerated due to stirring of material.
- It is used as mixer-cum-dryer. So a considerable saving in labor, handling, power and space.

SPECIALITIES :

- Available in design without bottom pintle bearing up to working capacity of 6500 Lits.
- Chopper/De-lumper can be employed for lump breaking.
- Complete automation with PLC-HMI based operation can also be provided.
- Single or Double Helix design can be provided for pilot/lab scale equipments.
- Special all drain design of screw provided for Pharma applications.
- Double screw arrangement can also be provided for accelerated mixing.
- Speed Variation of screw can be provided to suit process parameters.

Variants

1. Isolater Compatible

CMD's are available in variants compatible with barrier isolation systems at the discharge. This allows handling of Cytotoxic/ Potent products with operator safety. Additionally, these can be combined with automatic packing systems further downline. Also lab scale CMD models are available for R&D purposes.

2. Sterile Construction

Sterile application CMD models with completely automated SIP/CIP & operation cycles, sintered cartridge filter media, metal to metal seating are also available.

3. Special Quick detachable designs for top dish

a) Super 'C' Bayonet

This design is similar to a TC clamp design but hydraulic operated. This facilitates quick top dish detachment for easy & fast maintenance. This design is good for vacuum and very low pressure applications.

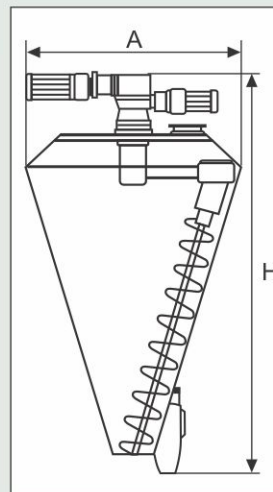
b) Teethed Bayonet

This design has teethed body flanges, which are hydraulic operated and this is a 'Positive Locking' design. This facilitates quick top dish detachment for easy & fast maintenance. This design is good for vacuum as well as high pressure applications.

Technical Data for CMD

Type	A (mm)	H (mm)	Motor (H.P.)		RPM Capacity	Total Capacity (Lits)	Working Capacity (Lits)	Empty Weight of Machine (Kgs)
			Screw	ARM				
BEW-CMD - 01	625	1850	3	0.5	60	100	60	600
BEW-CMD - 02	1140	2250	5	0.5	60	200	120	1000
BEW-CMD - 03	1250	2800	5	1	60	300	180	1000
BEW-CMD - 05	1400	3200	5	1	60	500	300	1000
BEW-CMD - 10	1650	3450	7.5	1	60	1000	600	2100
BEW-CMD - 15	1700	3600	7.5	1	60	1500	900	2500
BEW-CMD - 20	1800	4400	10	2	50	2000	1400	2800
BEW-CMD - 30	2000	5300	12.5	2	50	3000	2000	3200
BEW-CMD - 35	2050	5600	12.5	2	50	3500	2500	3400
BEW-CMD - 50	2200	6000	15	2	50	5000	3000	4000
BEW-CMD - 70	2600	6600	20	3	40	7000	5000	5000
BEW-CMD - 100	3100	7000	25	3	40	11000	7500	6000
BEW-CMD - 150	3300	7800	25	3	40	15000	11000	7500
BEW-CMD - 200	3500	8500	30	3	40	20000	15000	9000

NOTE : Design & Dimensions of above are subject to change without notice.



PILOT PLANT AVAILABLE FOR TRIAL



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