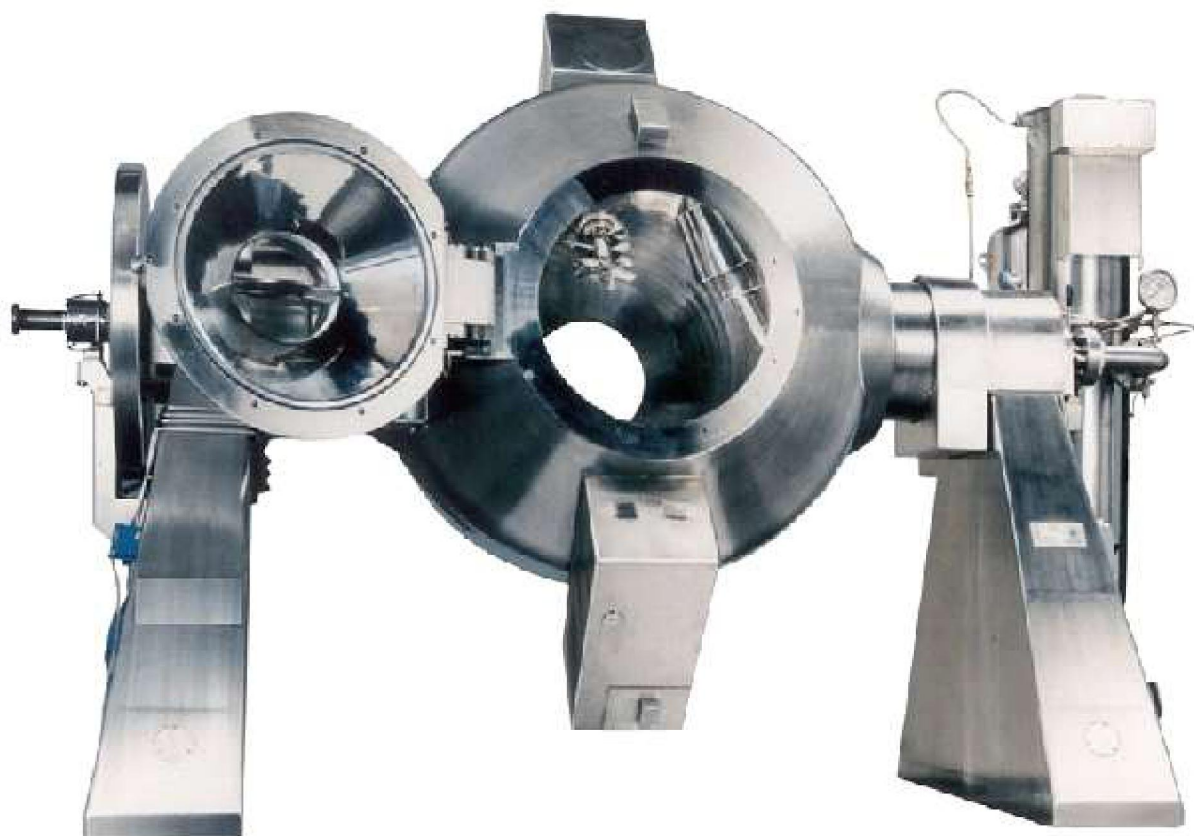


## ROTOCONE VACUUM DRYER :



Most suitable for drying of materials which cannot resist high temperature, material which are easily oxidised, volatile materials which should be retrieved, materials strong irritant and poisonous in nature. The rotocone dryer with improved technology integrates during operation under vacuum. The Dryer rotates at a very low speed (5 – 12 rpm) and thus has very low wear and tear and requires very little maintenance. This machine is ideal for crystalline products, granules used in chemical, pharmaceutical and food industries. Recovery of Loss of material is effectively collected by a specially designed pilot filter fitted on the vacuum side, Solvent recovery is through condenser & receiver. The capacity of the machine ranges from 15 liters to 5000 liters.

The rotocone dryer is working under vacuum, facilitates enhanced drying efficiency, low temperature operation and economy of process by total solvent recovery. Due to vacuum, the drying is enhanced resulting in fast drying, cutting the process time, which saves heat energy and electric energy.

### SALIENT FEATURES :

- Totally sealed and protected from contamination
- Provision of sampling nozzle without breaking vacuum.
- Cyclone separator provided for recovery of any solid particle escape.
- Suitable size condenser & receiver provided for solvent.
- Mechanical seals for vacuum & hot water connection.
- Variable speed drive is provided for fine adjustment of the speed.

### ADVATAGES :

- Reduces drying time
- Uniform material shuffling over the heated contact surface of the cone.
- Handling and exposure of final product is avoided.
- Eliminates need for re-drying of lumps.
- System can process crystalline or amorphous powders which are prone for lumps
- Optimum & continuous vacuum during process.

#### OPTIONALS :

Cantilever (One side base) construction for small models only.

VFD for Drive Motor with RPM indicator.

Condenser and Receiver in SS316 instead of SS304.

Lump breakers with FLP motor, Mechanical seals and electrical slip-ring joint.

Auto Bin loading mechanism with accessories.

Vacuum pump with FLP motor.



#### SALIENT FEATURES – GMP Model :

- Inner shell/Cone and contact parts in SS 316.
- Steam/HW water Jacket in SS 304.
- Insulation with jacket in SS 304.
- Cyclone separator in SS316.
- Condenser (shell & tube type) and Receiver ( cylindrical & cone type) in SS304
- Digital Temperature Indicators (FLP) at Hot Water inlet and outlet.
- Digital Temperature Indicator (FLP) and Dial Vacuum Gauge in vapor line.
- Digital Temperature Controller (FLP) with Pneumatic Valve at Hot water inlet.
- Butterfly valve (SS316) at discharge port with dummy and hand wheel.
- Stand and Structure in SS 304 / MS with SS304 cladding.
- Drive unit enclosed with SS304 Covers
- Dry Mechanical Seal for vacuum side.
- Dry Mechanical Seal for Waterside.
- FLP Motor & FLP Control panel enclosed in SS304 panel
- Provision for Nitrogen purging/Vacuum release with interlocking to isolation valve.
- Temperature and Vacuum Gauges (Dial Type) on Cone.
- Safety Guard/railing telescopic type with limit switch (FLP) with interlocking.
- Drain plug and safety valve on Hot Water / Steam Jacket.
- Pulse jet type dust filter is provided inside the cone.
- Positioning wheel /inching button for cone
- DRIVE SYSTEM: Gear Box & Motor Direct Coupled and Gear Box to Cone Drive shaft Bull Gear-Pinion Gear Drive.
- Extended shaft (drive side) so that drive unit can be kept in service zone(if required)
- Vacuum loading system of wet material into the Cone.
- PHARMA FINISH : Internal 320 Grit Mirror Polish and Outer 180 Grit Mat Finish.

Design Temp: 200°C, Testing : Vacuum side Full vacuum upto 750 mm of Hg & Steam / Hot water jacket side 5Kgs/cm2 pressure test.

**NOTE:** Loading per batch in kg. of wet material based on 0.5 – 0.6 bulk density & 60% container volume.



### TECHNICAL SPECIFICATIONS :

MODEL	RV-RCVD-15	RV-RCVD-100	RV-RCVD-200	RV-RCVD-300	RV-RCVD-500	RV-RCVD-750	RV-RCVD-1000	RV-RCVD-1500	RV-RCVD-2000	RV-RCVD-3000	RV-RCVD-5000
Total Vol. in Ltrs.	15	100	200	300	500	750	1000	1500	2000	3000	5000
Working Vol. in Ltrs.	9	60	120	180	300	450	600	900	1200	1800	3000
Capacity in Kg. (max)	5	30	75	100	175	250	350	500	700	1050	1750
RPM	6	6	6	6	6	6	6	6	6	6	4
Heat Transfer area in M2	0.5	3.5	4.2	5	6	7	8	9.5	11	15	24
Cyclone Separator in Ltrs.	1	5	7	10	15	20	25	30	40	60	100
Condenser in M2	0.1	0.5	0.75	1	1.5	2	2.5	3	4	6	8
Receiver in Ltrs.	3	20	40	50	75	100	150	200	250	350	500
Charging Ht. in mm	700	13500	1500	1650	1800	2000	2300	2500	2650	2850	3350
Discharge Ht. in mm	320	625	660	660	710	660	710	710	710	710	760
Gear Box	2"	2.5"	3"	3"	4"	4"	5"	6"	6"	8"	10"
Main Drive Motor	0.5HP	2HP	3HP	3HP	5HP	5HP	7.5HP	10HP	10HP	15HP	25HP
Lump Breaker Motor	---	---	---	0.5HP	0.75HP	0.75HP	1HP	1HP	2HP	3HP	5HP
Charging dia. in mm	150	250	300	300	350	400	400	450	500	600	600
Discharge dia. in mm	75	125	150	150	150	200	200	250	250	300	350

### OVERALL DIMENSIONS (APPROX.) :

Length in mm (with Cyclone)	870	1675	1900	2100	2300	2750	3100	3300	3550	3850	4750
Length in mm (with Cyclone, Condenser & Receiver)	1150	2080	2300	2550	2850	3320	3750	4150	4450	4850	5650
Width in mm (with Safety Guards)	580	1250	1350	1500	1650	1780	2080	2320	2575	2800	3450
Height in mm	760	1625	1800	1950	2050	2380	2650	2840	3025	3250	3550
Weight in Kg. (Approx.)	415	850	950	1050	1250	1580	1950	2480	3250	3450	4200

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