

ORCINUS PROCESS TECHNOLOGIES PRIVATE LIMITED

Pusher Centrifuge



PROCESS DESIGN, ENGINEERING AND MANUFACTURING OF THE PROCESS

EQUIPMENTS IN CHEMICALS, PETROCHEMICALS AND PHARMACEUTICAL INDUSTRIES

PUSHER CENTRIFUGE

A pusher centrifuge is a type of filtration technique that offers continuous operation to de-water and wash materials such as relatively incompressible feed solids, free-draining crystalline, polymers and fibrous substances. It consists of a constant speed rotor and is fixed to one of several baskets. This assembly is applied with centrifugal force that is generated mechanically for smaller units and hydraulically for larger units to enable separation. Pusher centrifuges can be used for a variety of applications. They were typically used in inorganic industries and later, extensively in chemical industries such as organic intermediates, plastics, food processing and fuels. A suspension feed enters the process to undergo pre-acceleration and distribution. The subsequent processes involve main filtration and intermediate de-watering, after which the main filtrate is collected. Wash liquid enters the washing step and final de-watering follows. Wash filtrate is extracted from these two stages. The final step involves discharge of solids which are then collected as the finished product. These process steps take place simultaneously in different parts of the centrifuge.





Application:

ABS, Ammonium Chloride, Ammonium Sulphate, Borax, Common Salt, Cellulose Acetate, Ferrous Sulphate, Dichlorobenzene, Hydroquinone, Hexamine, Nickel Sulphate, Lithium Compound, Nitrocellulose, Potassium Carbonate, Potassium Chloride, Oxalic Acid, Potassium Carbonate, Sodium Chloride, Sodium bicarbonate, Sodium Carbonate, Sodium Chlorate, Sodium Cyanide, Urea, and in general Any Crystalline Inorganic salt.

Basis of Design:

Following parameters should be mandatory for the operation of Pusher Centrifuge.

- Product should be Crystalline.
- Minimum particle size: 80 μm
- High solid content (minimum 30% Solid Concentration) & uniform feed slurry.
- On the basis of output & capacity we have design our below mentioned model.

S.no.	Specifications	RT-1	RT-2	RT-3	RT-4	RT-5
1	Basket Dia.mm	140/180	180/230	230/300	290/360	410/500
2	Pusher Stroke mm	34	35	50	50	50
3	Max.Speed rpm	3000	3000	3000	3000	2500
4	Mechnism	Mechanical	Mechanical	Hydraulic	Hydraulic	Hydraulic
5	Operating Press.Bar	NA	NA	15	15	20
6	Motor Power Kw	1.5	2.2	7.5	7.5/11	18
7	Rotor Motor,Kw	2.2KW	3.7	11	11	22
8	Throughput,kg/hr*	400	1000	3000	6000	12500
9	Machine wt.kg	750	1000	2750	3500	4500
10	Size,mm(L X HX W)	1500 X 700 X 1000	1800 X 865 X 1250	2550 x 1350 x 1400	2600 x 1400 x 1400	3450 x 1800 x 1600

**Basis of this throughput is base on the Feed weight of 50% Salt-Water slurry. Crystalline salt (NaCl) at 3% moisture content, Bulk density at 1225 Kg/m³ & Particle Size in feed should be 100 micron or larger.*



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