

PFB-series Closed Fluid Bed Granulation and Drying System



The PTK Fluid Bed Granulation System, including the granulation machine, is designed as a fully closed system. Powder transfer in every automated process is handled via vacuum conveyors and antistatic hoses or sanitary piping.

Fluid bed drying system

Drying is a simple and basic principle. Powder is contained in the lower vessel and heated air is passed through a fine mesh and into the container for the circulation of the targeted powder. Heated air passes through the powder, aerating it to promote rapid drying. The expelled air is then passed through an internal filter, and discharged to the outlet duct by the dust collector. Fluid bed drying guarantees short drying time.

Top Spray Granulation System

This process makes granulates by spraying various type of liquids onto powder. Spraying is done from the top, the opposite side to fluidization. The multi head nozzle makes it convenient and easy to clean. Due to variance of the volume of the product or the size of the nozzle, the height of the Spray gun is adjustable.

Bottom Spray Coating System

PFB provides multi process with a single machine. The Drying, Granulating and Coating process are possible with one machine. The coating option includes granulating. Spraying is done from the bottom, With the same method as fluidization. It is best for fine coating. The partition in the container guides the flow of product, from the center to the direction of fluidization. Conversion from top spray to bottom spray systems is possible with product container and spray change, only.

- Explosion Safety : 12 bar pressure-shock resistance, explosion isolation valve (QASV)
- Containment System (dust free) : Loading and Discharging

- WIP (Wash In Place)
- Inflatable air seal
- Separate air handling for inlet and outlet process air
- Liquid Tank (with temperature controlled jacket), Pump Rack for Binder Spray
- Bag type filters with pulsed compressed air cleaning

Technical Parameters

Model			PFB-20	PFB-30	PFB-60	PFB-90	PFB-120	PFB-150	PFB-200	PFB-300
Container Volume [ℓ]			86	125	250	375	500	625	825	1,250
Working Capacity	Drying *	[kg]	34	50	100	150	200	250	330	500
	Granulating *	[kg]	27	40	80	120	160	200	265	400
	Coating *	[kg]	20	30	60	90	120	150	200	300
Fan Unit, Air Volume [CMM]			20	30	50	65	75	85	100	130
Fan Unit, Diff Pressure [mbar]			122.6							
Fan Unit, Power [Kw]			15	15	22	30	30	37.5	45	55
Steam Consumption [kg/h]			50.6	95.6	147.1	166.8	235.4	264.8	353.1	490.5
Steam Pressure [bar]			3							
Power Supply Data			220/380/400/415/440/460Vac, 3Ph, 50/60Hz							
Control Power			24Vdc							

* Specific Gravity 0.5