FBM Series Fluid-bed Multi-Processor

FBM Series Fluid-bed Multi-processor is added bottom spray on the base of FBG series Fluid-bed Granulator, thus can realize drying, granulating and bottom spray coating on one machine, and with function of mixing raw material, granulation, dying and coating for granules or pellets. The equipment is PLC auto controlled and well satisfies with the current GMP and the National Pharmacopoeia.

Working Principle:

The intake air is processed from the inlet AHU through filters and heated, then lead into the lower bowl. The material is blow up evenly by hot air which passes through air distribution plate of product bowl, then forms continuous fluidized state and dried evenly by hot air.
In case of top spray for fluidized granulation, use top spray movable product bowl, the binder is top sprayed through spray guns in diffuse chamber into the product bowl, and spray onto the material surface atomized by compressed air. The product granules cohere each other by the binder and get the binder bridge to form the core granules, then grow up to form required wet granules, which the binder dried evenly by hot air and finally get dry granules.
In case of bottom spray for coating, use bottom spray movable product bowl, the binder changes to spray from bottom spray guns and atomized. The granules or pellet sprayed from bottom to top inside of fluidized chamber and coated by coating solutions, then fall back along the wall of bottom spray product bowl and dried by hot air, which back to bottom are sprayed again from fluidized chamber and repeat coating process.

Features:

1. INLET AHU
The inlet AHU including three stage filters with G4, F8 and H13, dehumidifier with surface cooler, inlet air temperature controlled by cold and hot air mixing door, inlet air volume by inverter controlled which can set and adjust.
2. MAIN BODY STRUCTURE
The main body structure consists of lower bowl, top spray movable product bowl, bottom spray movable product bowl, diffuse chamber and filter chamber. The lower bowl, movable product bowl and diffuse chamber are silicon inflatable sealed with compress air inspection to assure the reliable sealing.
3. PRODUCT FILTER
The pulse anti-blow filter clean device adopt anti-static cloth filter (in case request, stainless steel anti-blow filter is available), which is silicon inflatable sealed with the filter chamber with compress air inspection to assure the reliable sealing. A dust sensor is mounted on the exhaust piping and interlocked with PLC control sys to secure the product safety during production.
4. EXHAUST AHU
The exhaust dust collection sys can be optionally designed upon request to protect environment.
5. 2 BAR & 10 BAR DUST EXPLOSION DESIGN
The 2 bar and 10 bar powder ex-proof design is selectable to ensure the operator, equipment and environment safety with reliable grounding device.
6. FLUIDZED GRANULATION
In case of fluidized granulation is requested, the binder solution tank and spray sys with peristaltic pump would be supplied. The binder sprays into product bowl through spray guns and spray onto the material surface atomized by compressed air. The product granules cohere each other by the binder and get the binder bridge to form the core granules, then grow up to form required wet granules, which the binder dried evenly by hot air and finally get dry granules.
7. BOTTOM SPRAY FOR COATING
In case of bottom spray for coating, use bottom spray movable product bowl, the binder changes to spray from bottom spray guns and atomized. The granules or pellet sprayed from bottom to top inside of fluidized chamber and coated by coating solutions, then fall back along the wall of bottom spray product bowl and dried by hot air, which back to bottom are sprayed again from fluidized chamber and repeat coating process. The height of fluidized chamber can be adjusted according to the quantity of material, and get the best fluid state. The bottom spray air distributing plate can be changed to different spray distance and flow based on material characteristics.

Technical Parameters

产品型号 Model	顶喷总容积 Top spray volume	底喷总容积 Bottom spray full volume	底喷标称容积 Bottom spray working volume	顶喷产量 Top spray capacity	底喷产量 Bottom spray capacity	切喷产量 Side spray capacity	进风温度 Inlet air temp	风机功率 Power of fan	蒸汽耗量 Steam consumption	压缩空气耗量 Compress air cons.	主机外形尺寸 Main machine overall dimension	设备总重 Weight
	L	L	L	kg / ρ=0.5	kg / ρ=0.85	kg / ρ=0.85	℃	kW	0.4-0.6MPa kg/h	0.5-0.8MPa m³/min	宽 × 高 × 直径 /m	kg
FBLM1-5	14，18	12，15	1，5	0.36~2	0.21~2	0.5~1	室温 Room Temp. ~ 90	3	电加热功率 6kW	0.3	1.5×2.3×0.9	800
FBLM3-15	21，26	19，24	3，15	0.36~5	0.21~5	0.7~2		3		0.3	1.5×2.3×0.9	850
FBLM3-25	32，40	30，37	3，25	1 ~ 9	0.8~8	1~2		4	电加热功率 12kW	0.3	1.6×2.5×1.0	950
FBLM25	48	33	20	3 ~ 10	3~9	2		4	35	0.6	0.9×2.5×0.5	950
FBM50	74	43	24	5 ~ 20	3~10	7.5		5.5	50	0.6	1.9×2.6×0.7	1850
FBM75	108	70	34	10 ~ 30	4~12	7.5		7.5	80	0.6	2.4×2.6×0.7	1950
FBM100	142	118	69	12 ~ 40	10~25	15		11	90	0.9	2.4×3.2×0.9	2100
FBM150	213	123	77	20 ~ 60	15~35	15		11	120	0.9	2.6×3.4×1.0	2300
FBM200	285	181	120	25 ~ 80	18~40	30		15	180	1.3	2.9×3.6×1.1	2700
FBM300	420	306	150	38 ~ 120	23~70	40		22	240	1.3	3.1×3.9×1.2	3000
FBM500	670	465	248	65 ~ 200	45~140	/		37	330	1.6	1.9×4.4×1.4	4150
FBM800	1025	777	380	100 ~ 300	60~180	/		45	450	2	2.1×5.3×1.6	5500