

Flexible Fluid Bed
Processing

FlexStream™



FlexStream™: a multi-functional processor with drying, granulation, pellet coating and optional tablet coating in one product bowl.

FlexStream™ is a new Multi-Purpose Processor from GEA Pharma Systems – Using proven Aeromatic-Fielder fluid bed technology to achieve fluid bed granulation, drying and pellet coating (or tablet coating) in ONE processor.

Aeromatic-Fielder Technologies

FlexStream™

(Patent Pending)

Process Description

FlexStream™ consists of a fluid bed product bowl with several two-fluid atomization nozzles to distribute the granulation or coating liquid directly into the fluidized powder or pellet layer. A third low-pressure air stream comes directly from the fluid bed inlet plenum to create a particle-free area around the spray pattern of each nozzle. Using low pressure, ensures much better control of the granulation process, resulting in less fines and less agglomeration in the coating process when coating pellets – resulting in a significantly improved yield.

The fluid bed with FlexStream™ uses the patented *Non Sifting Gill Plate™* to distribute the air. Using the low pressure air stream from the inlet air plenum means that no compressed air is necessary for keeping the two-fluid nozzle spray free of particles. Another advantage is that the low pressure air comes directly from the air inlet of the fluid bed so is conditioned in the same way as the main fluidization gas.

The FlexStream™ process is suitable for aqueous- and organic-based solvents. GEA Pharma Systems - Aeromatic-Fielder offers a range of open- and closed-cycle systems for removing or recovering organic solvents. Options include condensation, adsorption and wet scrubbing.

Process & Design

- Number of nozzles and achieved spray rates for pellet coating comparable to traditional bottom-spray coating systems,
- Narrow particle size distribution for granulation,
- Simple, cost-efficient design,
- Compressed air only for atomization gas,
- Third air stream conditioned from fluid bed air inlet,
- 10 bar pressure shock resistant fluid bed processor design,
- Existing Aeromatic-Fielder fluid bed can be upgraded with the FlexStream™ process.

FlexStream Processor	500	1000	1500	3000	4500	6000	
Fluid Bed Size	(size 2)	(size 3)	(size 4)	(size 5)	(size 6)	(size 7)	
Typical batch size	kg	10-40	20-80	30-120	60-240	90-360	120-480
Typical working capacity	litre	15-62	30-124	60-186	90-372	120-372	180-744
Number of spray nozzles		1	2	3	6	9	12
Spray rate per nozzle	g/min	50-350	50-350	50-350	50-350	50-350	50-350
Atomisation gas pressure	bar	2-4	2-4	2-4	2-4	2-4	2-4
Spray rate per nozzle	m ³ /h	150-500	300-1000	450-1500	900-3000	1350-4500	1800-6000

© GEA Pharma Systems 2008 Specifications subject to change without notice All trademarks recognized

www.geapharmasystems.com

Aeromatic-Fielder

GEA Pharma Systems AG

PO Box 112, Hauptstrasse 145

CH-4416 Bubendorf, Switzerland

Tel: (CH) +41 61 936 36 36, (UK) +44 23 8026 7131

aeromatic-fielder@geapharmasystems.com



GEA Pharma Systems