

Fluid bed systems

F B E PRO

FBE PRO

DRYING

GRANULATING

COATING



We set the standard

FBE PRO Fluid Bed Systems

Value for money combined with excellent safety features

As the largest global supplier of fluid bed systems, the FBE PRO series from Glatt provides an efficient and cost-effective system concept for standard applications - now with 12 bar pressure-shock rating! The FBE PRO is highly versatile for drying, granulation and film coating applications using the 'top spray' technique. Without the spray attachment, it can be used as a dryer, in connection with a wet granulator. And of course you can still expect all the typical advantages of Glatt products in the FBE series: conformity to all applicable global safety standards, highest product quality and, not least, the renowned Glatt support service.

Machine Tower

Glatt uses a shake-down textile filter as a standard filter. This system provides maximum flexibility. The filter bags combine a maximum surface area with a choice of different filter materials to easily allow even problematic processes such as wet products. These filters are also extremely simple to clean, remove, wash and refit.

- Pneumatically sealed product container
- Stainless steel trolley for product container
- The large surface area of the filter bags guarantees maximum product retention in a wide range of processes; fine dust is returned to process automatically by the shaking cylinder
- A combined spray / filter housing to accommodate the spray arm and the exhaust air filter
- Exhaust air modulating flap for adjusting to the desired state of fluidisation
- There are bullseye windows in the product containers, in the spray zone (optional) and in the filter housing for visual monitoring of the processes
- WIP cleaning nozzles (optional)

Processes

Glatt FBE PRO fluid bed processors are highly versatile in a wide range of processes:

Granulation and agglomeration of powder products

Top spray film coating

Drying of moist substances, e.g. wet / high shear mix granulates



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Inlet Air Handling

Process air handling uses the following components: separate, horizontal inlet air handler with prefilter, steam-heated heat exchanger (face and bypass) and final filter.

Options:

- Dehumidifying
- Additional HEPA filter

Outlet Air Handling

- By separate high-performance fan
- Impeller made of a special long-lasting lightweight alloy

Options:

- Single or twin-stage static police filter
- Silencer

Material Flow

The conical product container can be moved out or into the fluid bed dryer on a trolley, for charging or emptying.

Options:

- Ports for gravity charging
- Ports for vacuum charging
- Material container with integrated side discharge
- Separate lifting column for discharging of product container

Pneumatic Clamping System

A pneumatic clamping system provides optimum safety during the process.

Cleaning

Glatt FBE PRO is designed to guarantee simple manual cleaning. The construction details are the result of years of experience. They conform in full to GMP standards.

- WIP cleaning (optional)

Safety Concept

The PRO concept from Glatt sets new standards in safety: with a full 12 bar pressure shock resistance in contained systems. In addition, quick action stop valves are incorporated in the inlet and outlet air ducts, which protect components which are not pressure-shock resistant in the unlikely event of an explosion.

Spraying System

Glatt FBE PRO uses the proven Glatt single-arm spray nozzle. The design guarantees optimum spray parameters, makes it easy to handle and extremely simple to clean.

- A peristaltic pump for delivering the spray medium to the nozzle
- Gear, piston or diaphragm pumps (optional)

Process Control

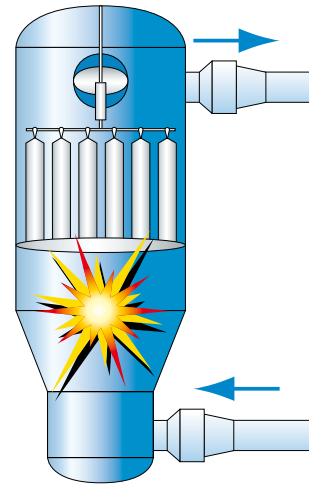
The control systems were developed to comply with GAMP guidelines. All systems with "Electronic Records" and "Electronic Signatures" comply with the requirements of "FDA CFR 21 Part 11". All control systems are also available in an Ex-proof version.

EcoView

The basic EcoView is a PLC-based control system. Its main advantages are the user-friendly process control and the attractive price / performance ratio.

MegaView

MegaView (optional) is PC-based and provides all the options you expect of a modern control system: e.g. process visualisation, recipe management and interface to network systems.



12 bar system without pressure relief. Quick action stop valves in the inlet and outlet air ducts.



Glatt single-arm spray nozzle



Operating panel EcoView



Technical Data / Addresses

Fluid Bed Design Standards

FBE PRO type	Dim.	60	125	250	500	800	1200	1700
Product container volume	dm ³	65	145	290	525	800	1200	1700
Fan								
Air volume	m ³ / h	1250	2000	3000	4500	6000	8000	10000
Differential pressure	mbar	120	120	120	120	120	120	120
Heating*								
Temperature range**	°C	-10 to +80	-10 to +80	-10 to +80	-10 to +80	-10 to +80	-10 to +80	-10 to +80
Heating capacity	kW	46	74	110	166	221	296	370
Utility requirements								
Steam pressure (saturated)	bar (g)	3	3	3	3	3	3	3
Steam consumption	kg / h	78	125	188	282	376	501	626
Compressed air pressure	bar (g)	6	6	6	6	6	6	6
Compressed air consumption	m ³ / h	40	40	40	120	120	120	240
Total power consumption	kW	20	28	28	37	44	53	64
WIP*								
Power consumption pumps	kW	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Compressed air consumption	m ³ / h	120	120	120	120	120	120	120
WIP solution	m ³ / h	max. 6	max. 6	max. 6	max. 6	max. 6	max. 6	max. 6
Weights								
Machine tower	kg	600	800	1000	1360	1500	1800	2200
Separate inlet air handler unit	kg	225	225	300	300	375	450	550
Separate fan	kg	550	630	650	750	740	1010	1300
Dimensions								
A	mm	3130	3350	3650	4100	4450	4760	5350
B	mm	600	800	1000	1200	1400	1600	1800
C	mm	1100	1300	1500	1700	1900	2200	2400
D	mm	450	500	600	700	800	850	900
E	mm	930	1080	1285	1435	1690	1840	2090
DN	mm	200	200	300	300	400	400	500
Nozzles mounting ports	Quantity	2	3	3	3	3	3	3

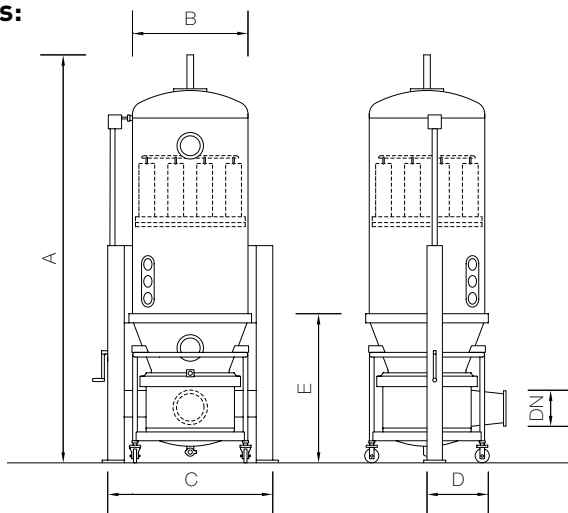
(Technical data subject to change)

* Different heating capacities and energies on request

** For max. temperature, insulated inlet air ducts between machine tower and air handler unit are necessary if length exceeds 5 meters

The FBE systems are designed for use in the following areas:

- Pharmaceuticals industry
- Chemicals industry
- Food industry
- Feedstuffs industry



Glatt GmbH Process Technology

Werner-Glatt-Straße 1
79589 Binzen / Germany
Phone: +49 7621 6 64 0
Fax: +49 7621 6 47 23
eMail: info@glatt.com

Glatt Maschinen- & Apparatebau AG

Kraftwerkstrasse 6
4133 Pratteln / Switzerland
Phone: +41 61 8 26 47 47
Fax: +41 61 8 26 48 48
eMail: info@glatt-ag.com

Glatt Ingenieurtechnik GmbH

Nordstraße 12
99427 Weimar / Germany
Phone: +49 3643 47 0
Fax: +49 3643 47 12 31
eMail: info@glatt-weimar.de

Glatt Air Techniques Inc.

20 Spear Road
Ramsey, NJ 07446 / USA
Phone: +1 201 8 25 87 00
Fax: +1 201 8 25 03 89
eMail: info@glattair.com

Glatt Norden ApS.

Skøjtevej 27 - 31
2770 Kastrup / Denmark
Phone: +45 48 14 22 44
Fax: +45 48 14 22 55
eMail: info@glattnorden.dk

Glatt Pharmatech SASU

Parc Technologique
6, rue Louis Néel
21000 Dijon / France
Phone: +33 3 80 74 32 64
Fax: +33 3 80 74 43 95
eMail: info@glatt-pharmatech.fr

Glatt Protech Ltd.

Swannington Road
Cottage Lane Ind. Est.
Broughton Astley
Leicester LE9 6TU / Great Britain
Phone: +44 1455 28 58 58
Fax: +44 1455 28 55 10
eMail: info@glatt-protech.co.uk

www.glatt.com



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