# GHIBLI

FLUID BED PROCESSOR



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Precise process control and premium quality engineering are the key features of IMA Active division's fluid bed processor. Simplified processing concepts based on smart design together with GMP-compliance for maximum efficiency and to fully respond to current industry requirements. Easily integrated with other granulation equipment, GHIBLI fits seamlessly into solid-dose processing lines.

- INTELLIGENT DESIGN
- PRECISE MAINTENANCE AND CLEANING
- COMPLETE ACCESSIBILITY TO PRODUCT FILTERS
- SAFE USE OF SOLVENTS
- ACCURATE DETECTION OF PROCESS END-POINT
- HIGH CONTAINMENT PROCESSING
- EASY PRODUCT DISCHARGE





### **EXPANSION CHAMBER ROTATION**

The chamber can be lowered and rotated by means of a patented system: all movements are controlled by HMI. Filter change and positioning are carried out without any need fort

lifts or platforms: the operator always stands at floor level. Set of filters made of various materials: PE bag filters, PE pleated

cartridges and metallic cartridges.

Filters are flushed with compressed air during the process with no need to interrupt product fluidisation.



### SPRAYING TECHNOLOGY

IMA can recommend the most appropriate double fluid nozzles either for the granulation or coating process. Spraying accuracy is achieved by the continuous control of liquid flow, volume and pressure.

### **PRODUCT BOWL**

Product bowls can have air distributor screens designed to achieve maximum product yield. The air distributor can be easily washed in-place and removed for inspection.

# **GHIBLI** PROCESS TECHNIQUES



processing or cleaning can be edited and managed to ensure maximum efficiency and consistent results in compliance with current directives and guidelines (ANSI/ ISA-88, FDA CFR 21 part 11, GAMP®, MHRA GMP Data Integrity).



### **PROCESS GOALS**

**OPTIMISATION OF PARTICLE SIZE DISTRIBUTION** INCREASED COMPRESSION ABILITY IMPROVED API BIOAVAILABILITY SUITABLE FOR PROCESSING CONTROLLED RELEASE FORMS **EXCELLENT COATING OF SMALL CORES** 



MAX allows to easily achieve process end-point. In addition, it can work with control instruments required for PAT approach, such as NIR or to determine moisture content, content uniformity and particle size.



# GHIBLI

# TECHNICAL DATA



### **INTEGRATED DESIGN**

IMA provides customized solutions to comply with current health, environmental and safety regulations to protect the operators, the plant, and to preserve the products.

GHIBLI DESIGN FEATURES ALL KINDS OF PROTECTIONS FOR:

- CONTAINED AND SAFE SOLUTIONS FOR PRODUCT LOADING AND DISCHARGING: PNEUMATIC TRANSFER, VERTICAL PRODUCT FLOW, INTEGRATED MILLING STEP.
- EXPLOSION PROOF:
  3 BAR OR 12 BAR PRESSURE SHOCK RESISTANCE,
  QUICK-ACTION SAFETY VALVES, CONTROL OF
  STATIC CHARGES, ATEX COMPLIANCE.
- CONTROL OF EMISSIONS:
  POWDER DEDUSTING, ABSOLUTE FILTRATION, SOLVENT RECOVERY.





Model	25	50	100	150	200	300	400	700	1000
Recommended batch size (I)	66	116	320	442	480	668	770	1,173	1,400
ROTO MIX inline (I)	60	120	300	600	600	900	900	1,200	1,500
A (Ø mm)	600	700	900	1,250		1,515		1,820	
B (mm)	555	665	770	970	1,060	1,245	1,250	1,465	1,780
C (mm)	2,200	2,500	2,900	3,165	3,465	3,850	4,150	4,980	5,680
D (mm)	1,170	1,295	1,415	1,425	1,480	1,650	1,800	2,290	2,335
E (mm)	1,460		1,585	2,530		2,785		3,270	
F vertical rupture disc (mm)	2,535	2,840	3,300	3,600	3,900	4,370	4,680	5,780	6,480
G horizontal rupture disc (mm)	2,660	2,960	3,420	3,765	4,065	4,540	4,890	5,890	6,600

#### MYLAB

MYLAB is laboratory scale equipment for R&D purposes, suitable for the granulation or coating process.

The fluid bed processor has interchangeable product containers for top or bottom spray process which can run batches from 2 to 6 litres.

The expansion chamber fits PE cartridges which have an automatic cleaning system by means of compressed air.



- 1) Binder tank
- 2) Dosing pump
- 3) Spraying nozzles
- 4) Filters
- 5) Control system
- 6) IMILL for dry milling
- 7) AHU inlet
- 8) AHU outlet
- 9) Washing skid





