RBF800Li / RBF1200Li Bag Filler
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Overview

The all new GEA Avapac Limited Intervention (Li) bag filling technology sets a new benchmark in automated powder packing and bag handling.

Reliable bag filling and closing, combined with an automated pallet de-stacking system has resulted in the worlds first truly automatic packing system which eliminates the need for an operator inside the packing room.

Starting at the optional fully automated pallet de-stacking system, bags are delivered to the filling system and loaded onto the filling head ready for filling and closing.

Multiple independently controlled bag stations are combined into a carousel to perform bag filling, preparation and closing whilst the bag is fully held ensuring fault free operation and thereby maximising throughput of the bag packing plant.

Well proven GEA Avapac bag sealing and closing technology has been integrated into the filling system to provide a very compact operation which significantly reduces the space required for production.

An optional wireless operator panel can be used to monitor the packing process from a central location - which was previously only possible for large automated processing plants.

Ethernet connectivity enables both local and remote monitoring and data analysis using the customer SCADA system.

By adding GEA Avapac downline equipment we can provide our customers with a complete solution for fully automated bag filling, conditioning and quality checking which can be matched to any automated palletising system.

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>RBF800Li</th>
<th>RBF1200Li</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>8T per hour average</td>
<td>12T per hour average</td>
</tr>
<tr>
<td>Accuracy</td>
<td>10 gms @ 1 standard deviation</td>
<td>10 gms @ 1 standard deviation</td>
</tr>
<tr>
<td>Heads</td>
<td>4</td>
<td>8 (7 active, 1 zeroing)</td>
</tr>
<tr>
<td>Weighing System</td>
<td>Mettler Toledo</td>
<td>Mettler Toledo</td>
</tr>
<tr>
<td>Footprint</td>
<td>4475 (H) to dust extraction flange 2350 (W) 6700 (L) with H/S and C/W</td>
<td>4700 (H) to dust extraction flange 2800 (W) 7875 (L) with H/S and C/W</td>
</tr>
<tr>
<td>Residual Oxygen Level</td>
<td>&lt; 3.5% @ 7 days</td>
<td>&lt; 3.5% @ 7 days</td>
</tr>
<tr>
<td>CO₂ Usage</td>
<td>6kg / tonne @ 200 kPa</td>
<td>6kg / tonne @ 200 kPa</td>
</tr>
<tr>
<td>N₂ Usage</td>
<td>0.5m³ / tonne @ 200 kPa</td>
<td>0.5m³ / tonne @ 200 kPa</td>
</tr>
<tr>
<td>Dust Extraction</td>
<td>3300 m³/hr @ -2 kPa</td>
<td>3800 m³/hr @ -2 kPa</td>
</tr>
<tr>
<td>Electrical Load</td>
<td>Filler 3 Ph + E + intrinsic E 54 kVA connected load Estimated Peak Load 44kVA Estimated Average Load 22kVA Destacker 3 Ph N + E 5 kVA</td>
<td>Filler 3 Ph + N + E + intrinsic E 60 kVA connected load Estimated Peak Load 54kVA Estimated Average Load 28kVA Blower 3 Ph N + E 14 kVA Destacker 3 Ph N + E 5 kVA</td>
</tr>
<tr>
<td>Sampler Type</td>
<td>2 position</td>
<td>6 position rotary</td>
</tr>
<tr>
<td>Vacuum</td>
<td>100m³/hr @ -90 kPa</td>
<td>30m³/hr @ -90 kPa plus vacuum blower -700m³/hr @ -20 kPa</td>
</tr>
<tr>
<td>HMI</td>
<td>SIMATIC MP377 12” Touch</td>
<td>AB PV1250+</td>
</tr>
<tr>
<td>Comm</td>
<td>Profibus / Devicenet -Control net</td>
<td>Devicenet -Control net</td>
</tr>
<tr>
<td>PLC</td>
<td>Siemens / Allen Bradley</td>
<td>Allen Bradley</td>
</tr>
<tr>
<td>Motors and Gearboxes</td>
<td>SEW</td>
<td>SEW</td>
</tr>
<tr>
<td>Drives</td>
<td>SEW Eurodrive</td>
<td>SEW Eurodrive</td>
</tr>
<tr>
<td>Bag Range</td>
<td>700 - 1050mm / 500 - 560 wide</td>
<td>700 - 1050mm / 500 - 560 wide</td>
</tr>
<tr>
<td>Bag Type</td>
<td>Block / pinch bottom type open bags</td>
<td>Block / pinch bottom type open bags</td>
</tr>
<tr>
<td>Presenter Capacity</td>
<td>120 bags or destacker</td>
<td>120 bags or destacker</td>
</tr>
<tr>
<td>Destacker Capacity</td>
<td>3000 bags up to 900 high stack</td>
<td>3000 bags up to 900 high stack</td>
</tr>
<tr>
<td>Compressed Air</td>
<td>FAD 120 m³/hr @ 600 kPa + Destacker FAD 30m³/hr</td>
<td>FAD 300 m³/hr @ 600 kPa + Destacker FAD 30m³/hr</td>
</tr>
</tbody>
</table>
Design Objectives

- Provide fully automated bag loading, filling and closing operation
- Provide optimum level of automation with no operator intervention
- Ensure ultimate product quality and integrity of operation
- Handle a wide range of bag sizes and types
- Compliance with worldwide safety and hygiene standards
- Provide integrated and extensible control for other equipment in a bag handling plant
- Ease of operation and maintenance

Features

- Fully integrated control and operation
- Stainless steel construction of all bag and product contact parts
- Modular link plastic belt to all conveyors
- Extensible PLC control for additional line components
- Connectivity to remote SCADA systems
- Interfacing to palletising systems
- Product quality control
- Average Quantity Filling (AQS)

Standards

(a) EU Directives and their harmonized standards:
- Machinery 2006/42/EC;
- ‘ATEX’ 94/9/EC;
- Electromagnetic compatibility 2004/108/EC;
- Pressure equipment 97/23/EC;
- Hygiene EHEDG Guidelines; and compliance with 1935/2004/EC

(b) US standards covering:
- Hygiene USDA Guidelines; FDA Codes of Federal Regulations - (CFR series 21)
- Machine Safety OSHA 1910 Subparts O&S; ANSI B11.39; ANSI/PMMI B155.1; NFPA 70 & 79; ANSI/ISA 12.10.05

Equipment Options

GEA Avapac provides additional options:
- Automatic pallet de-stacking
- Powder sampling
- Integrated bag coding from operator terminal
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GEA Group is a global engineering company with multi-billion euro sales and operations in more than 50 countries. Founded in 1881, the company is one of the largest providers of innovative equipment and process technology. GEA Group is listed in the STOXX® Europe 600 Index.

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