



# Downline Equipment



# Downline Equipment

## Overview

GEA Avapac downline equipment includes solutions to meet the varied needs of powder packing facilities.

Once the filled bag is closed, it is passed to the downline equipment for processing and quality checks before being palletised. The downline equipment can be specified and configured to meet customer requirements, or to suit existing packing facilities.

A line control MCC is connected to the GEA Avapac filler and provides distributed control for downline equipment.

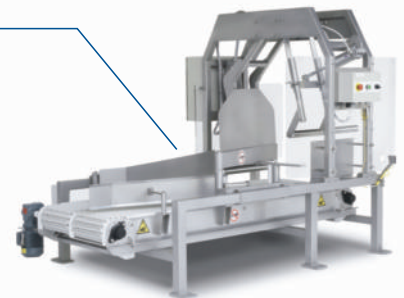
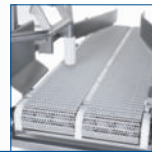
This connectivity enables the operator to monitor and control all downline equipment from a single operator interface thereby providing ease of use.

Optional connectivity of the check-weighing and bag coding equipment enables both local and remote monitoring and data analysis using the customer SCADA system.

For customers wishing to pack their products into boxes or drums, AVAPAC can supply a range of downline equipment specifically designed to handle this type of packaging media.



Bag Reject Unit, integrated with the Metal Detector and/or the Check Weigher, to push rejected bags off the line.



The Bag Turner gently changes the bag position from vertical to horizontal position with the selected orientation (top or bottom first).



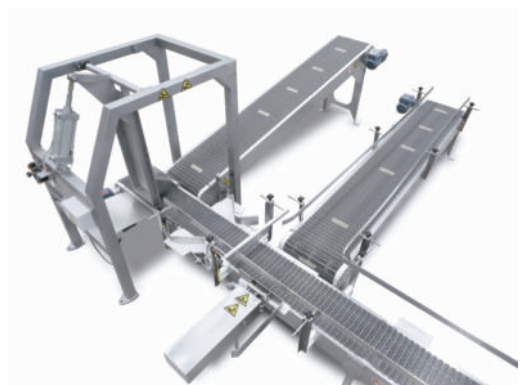
Metal Detector, adjustable, for detecting metal fragments in the powder.



The Bag Flattener, mounted above the bag conveyor, prepares the bag for stable palletising by means of powered rollers.



Check Weigher for monitoring and recording the actual weight of the sealed bags. Adjustable acceptance criteria.



Bag or box re-direction. This unit can re-direct the direction of either a box or a bag. Set at 90°.

# Downline Equipment

## Design Objectives

- To be integrated in fully automated bag packing lines or, alternatively to work as a stand-alone unit as part of an existing downline system
- Provide flexible line configuration options
- Provide optimum level of automation
- Ensure controlled processing of bags in halt or E-stop conditions
- Handle the widest range of bag sizes and types
- Compliance with hygiene standards
- Provide integrated and extensible control for other equipment in a bag handling plant
- Ease of operation and maintenance

## Standards

(a) EU Directives and their harmonized standards:

- Machine Safety 98/37/EC;
- Noise 2003/10/EC;
- Electromagnetic compatibility 2004/108/EC;
- Pressure equipment 97/23/EC;
- Hygiene EHEDG Guidelines; and compliance with

(b) US standards covering:

- Hygiene USDA Guidelines; FDA Codes of Federal Regulations – (CFR series 21)
- Machine Safety OSHA 1910 Subparts O&S; ANSI B11.19; ANSI/PMMA B155.1; NFPA 70 & 79; ANSI/ISA 12.10.05

## Features

- Fully integrated control and operation
- Stainless steel construction
- Modular link plastic belt to all conveyors
- Extensible PLC control for additional line components
- Optional connectivity to remote SCADA systems
- Interfacing to palletising systems
- Product quality control

## Equipment Options

GEA Avapac provides additional options:

- Bag orientation from vertical to lay-flat state
- Bag conditioning to ensure uniform size and shape
- Metal detection
- Check-weighing
- Bag rejecting
- Bag coding
- Bag labeling
- Box or drum handling



## Process Engineering

### GEA Avapac Ltd.

12-18 Foreman Road, PO Box 10266, Te Rapa, Hamilton 3241, New Zealand  
Tel. +64 7 849 3414, Fax +64 7 849 3494  
info@avapac.com

### GEA Colby Powder Systems Pty. Ltd.

328 High Street, Chatswood, Sydney, NSW 2067, Australia  
Tel. +61 2 9932 2800, Fax +61 2 9932 2801  
sales@colbypowder.com

### GEA Process Engineering B.V.

Postbus 2064, 7420 AB, Deventer, Netherlands  
Tel. +31 570 663 366, Fax +31 570 663 377  
info@gea-pen.nl

### GEA Process Engineering Inc.

1600 O'Keefe Road, Hudson, Wisconsin 54016, USA  
Tel. +1 715 386 9371, Fax +1 715 386 9376  
info@niroinc.com