

Technical News Bulletin

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FlexIS Ware Handling Supervision – WHS



Introduction

The WHS ware sensing system, fully integrated in the FlexIS timing, rejects on the hot end bad glass containers.

The unit uses a light barrier to detect the passing ware and it provides an effective means of rejecting cullet and “stuck” or “down” ware on the conveyor belt. An air reject system removes such ware from the conveyor before it can become the source of handling problems in the balance of the production line.

System description

The major assemblies of the WHS include following components:

Light- barrier (PN 182-71-1) – see above picture

The light barrier unit consists of a transmitter and a reflector module, both protected with a heat shield. The transmitter is mounted perpendicular to the IS machine conveyor and is positioned vertically so the light beam strikes the base of the container, the reflector is mounted on the opposite side of the conveyor directly across aligned square to the light.

The photoelectric sensor is mounted inside the box on a moveable plate which allows the optic to be aligned vertically and horizontally by means of adjustment screws.

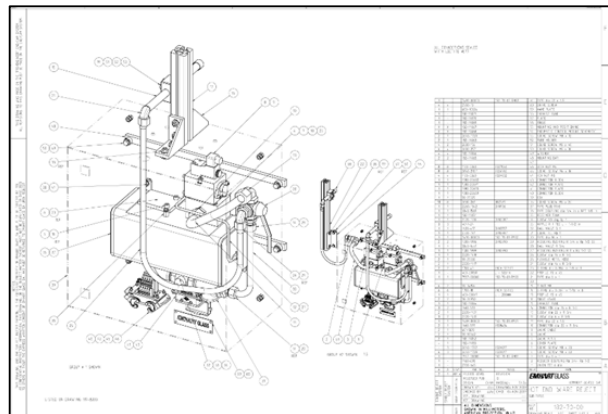
The two modules are flushed with purified compressed air to prevent dust from entering into the optical and at same time to cool the components.

Reject unit box (PN 182-70-1or 2) and the cable (PN 601-189-xx).

The hot-end distributor box establishes the electrical connection between the light barrier unit, the pneumatic reject unit and the FlexIS Control.

The design of this unit ensures that containers are rejected from the conveyor belt reliably, and protect the pneumatic installation.

The accuracy and reliability of the system allows to operate with very high speed production.



Setting & Visualization

The WHS interface is completely integrated in the FlexIS and the settings and visualization are located under the Ware Handling/ WHS.

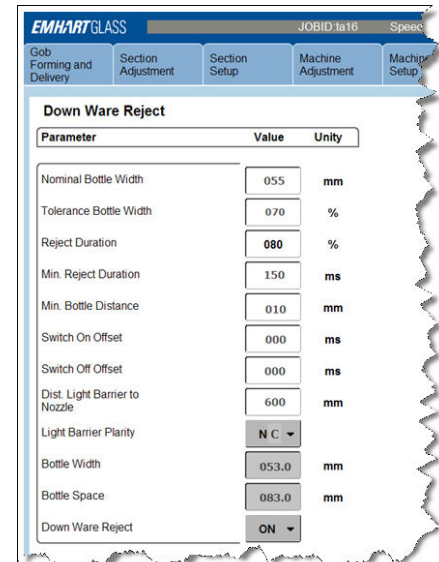
Following parameters are used:

- Nominal bottle width mm
- Tolerance bottle width mm
- Reject duration %
- Min. reject duration ms
- Min. bottle distance mm
- Switch On offset ms
- Switch Off offset ms
- Distance of light barrier from reject nozzle mm
- Light barrier polarity NC/NO

The system indicates:

- ✚ The real bottle width mm
- ✚ The real bottle space mm

It is also possible to Enable/Disable the Down Ware Reject



Availability / Application

The WHS can be installed on any IS machine controlled by FlexIS Timing equipped with **WHC – Ware Handling Controller**.

If the system is supplied on a new machine the complete assembly shall be specified:

- light- barrier PN 182-71-1)
- cable PN 601-189-xx. (xx =cable length)
- reject unit box PN 182-70-1or 2- (gr.2 has 2 pneumatics valves for a spare application).

If the system is ordered as an upgrade of an existing FlexIS, HEWR nozzle and valve are already installed, parts required are:

- light- barrier PN 182-71-1)
- cable PN 601-189-xx. (xx =cable length)

Installation Drawings

The drawings indicating the position and mounting details of the assembly on the conveyor extension are:

- ✚ 182-14090 for the positioning of the light barrier support bracket.
- ✚ 182-14067 for the positioning of the HEWR nozzle and the Reject Unit box.

Features

- ✚ The WHS helps to eliminate line jams at the hot end coating tunnel and transfer wheel by sensing and removing faulty ware before it reaches these areas
- ✚ The WHS is fully integrated in the FlexIS Timing hardware

Benefits

- ✚ The WHS will improve packed ware quality
- ✚ The number of rejected bottles is reported on the FlexIS Production Counters