

Technical News Bulletin

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Blank side Barrier enhances NIS, AIS, and IS machine safety

- Designed to enhance forming machine safety
- BsB visualizes the section "status"
- Manual override possibility to keep BsB at automatic operation temporarily down

Introduction

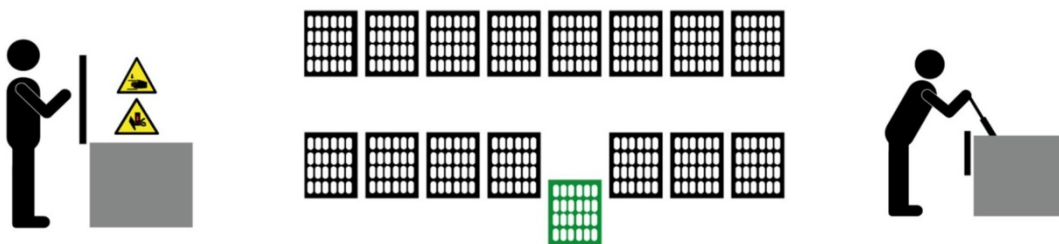
The Blank side Barrier (BsB), designed to enhance forming machine safety by protecting machine operator from unintended access to the blank side during automatic operation of the forming sections. At swab cycle, the BsB moves automatically down and gives access for the manual swab intervention as well as for the FlexRobot™. During Maintenance Stop, the BsB is in down position and indicates a safe access to the specific section.

The movable Barrier (Guard) operates by two pneumatic cylinders controlled by a valve, triggered by the section safety relay (MS) and the Swab output from the FlexIS section controller.

Each barrier cylinder, for up and down positions, is monitored by a sensor. In supervision mode, this prevents the startup of the section if the BsB is not in up position.

System Description

During automatic operation, the BsB prevents the operator from unintended access to moving blank side components.



The BsB also visualizes the section “status”.

The up position clearly indicates the section is in automatic operation. The down position indicates the section is either:

- In Maintenance Stop, allowing safe access to the section mechanisms,
- or
- In Swab Cycle: The Barrier is temporarily in the down position until Swab Cycle is deactivated.

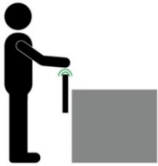


In case of electric or pneumatic shut down, the BsB stays in the UP position.

During startup after a job change, where final section settings and close observation are required, and as well as for specific needs, the BsB can be temporarily forced into the down position with the section in automatic operation.

The design of the black barrier mesh gives a good visibility through to see the section in operation.

The Barrier moves smoothly with an adequate force (EN 953:2009 movable gates).



The deflector adjusters are reachable when the Barrier is in the up position.



Specification

There is one Blank side Barrier to specify per type of forming machine.

BEG Machine Type	Part Number
AIS	
New	900-100-1
Retrofit (on-site feasibility check required)	900-100-2
AIS +65 mm packer	
New	900-100-1
Retrofit (on-site feasibility check required)	900-100-2
AIS2	
New	900-100-1
Retrofit (on-site feasibility check required)	900-100-2
NIS	
New	900-100-3
Retrofit (on-site feasibility check required)	900-100-4
IS 4 ¼ - 5	
New	900-100-7
Retrofit (on-site feasibility check required)	900-100-8
IS 5 ½ - 6 ¼	
New	900-100-9
Retrofit (on-site feasibility check required)	900-100-10

Availability / Application

Blank side Barrier is a standard equipment, which enhances safety on the forming machines. Therefore, it is always offered and quoted with any new forming machine.



IMPORTANT NOTICE

The Blank side Barrier is a movable guard designed to prevent human interaction with any moving parts while the section is in operation. Bucher Emhart Glass recommends installation of the Blank side Barriers to enhance safety and reduce the risk of hazards.

If customer decides not to equip its glass forming machine with the Blank side Barriers, then:

Customer must establish adequate safety procedures and safeguards to protect personnel from moving parts, including but not limited to adequate training of personnel.

Customer agrees to indemnify, defend and hold Bucher Emhart Glass harmless from and against any claim resulting from, or relating to customer's failure to maintain such adequate safety procedures and safeguards.



AIS with conventional Blank Bracket



AIS +65mm and AIS 2 EPVB spacer



NIS



IS large and small frame

Installation Requirements

All new Bucher Emhart Glass forming machines are prepared for the BsB installation.

Although it is generally feasible, field upgrade on an existing Emhart machine requires a technical investigation.

Features / Benefits

Features	Benefits
Barrier in up position	Protects operator of unintended access to movable blank side section parts. Indicates the section in automatic operation. ⇒ <i>enhances operator safety</i>
Swab cycle ⇒ Barrier down - up	Confirms swab cycle is activated by moving down, giving access for manual swab. ⇒ <i>enhances operator safety</i>
Up Position sensor on Pneumatic Cylinder	Prevents section start if Barrier is down. ⇒ <i>enhances operator safety</i>
Normally open valves and pneumatic check valve	Barrier remains in up position at electrical or pneumatic power loss. ⇒ <i>enhances operator safety</i>
Manual override possibility to keep Barrier at automatic operation temporarily down	For specific task of job change crew and IS machine specialist, free view to the operating section. ⇒ <i>enhances operator safety</i>
Removable Blank side Barrier	For specific maintenance tasks, Blank side Barrier can be folded down or removed from the section.