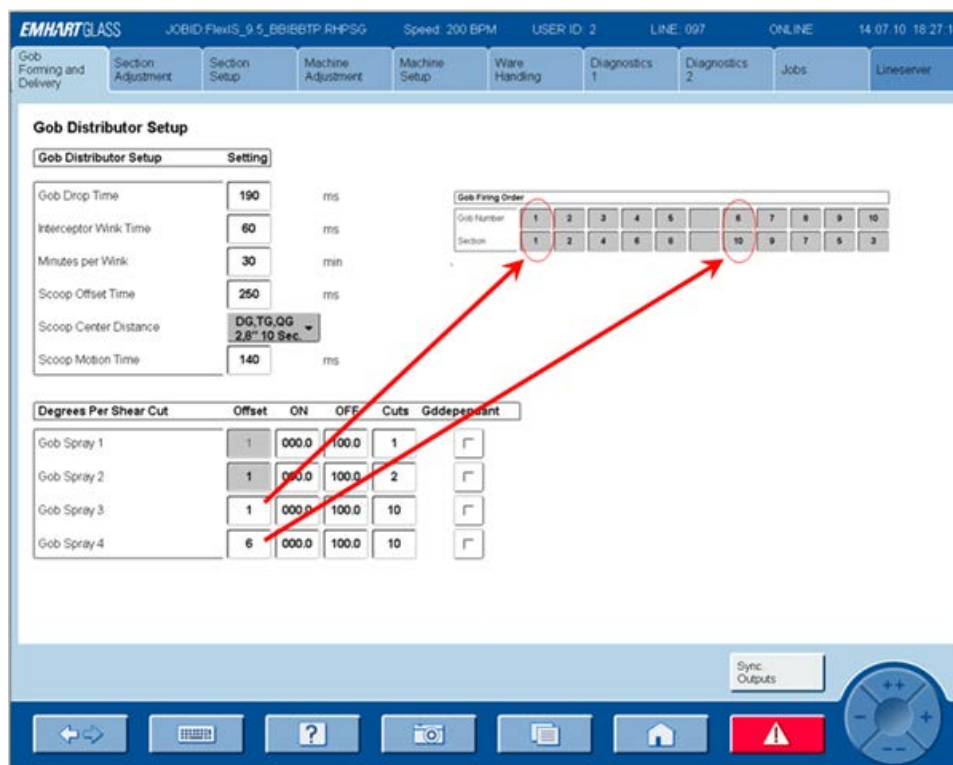


Technical News Bulletin

Steinhausen, July 2010



FlexIS Software Release V. 1.07.02.16

- New software is a major release with several new features.
- On the Gob Spray setup there is an additional column "Offset".
- Now possible to synchronize all gob spray outputs.

Introduction

FlexIS software version 1.07.02.16 has now been officially released.

The new software is a major release, 2nd of 2010, with several new features. Please contact our Technical Service Group through your local sales office for support in installing the new software.

New Features included in the 1.07.02.16 release

Gob Forming and Delivery

Gob Distributor screen:

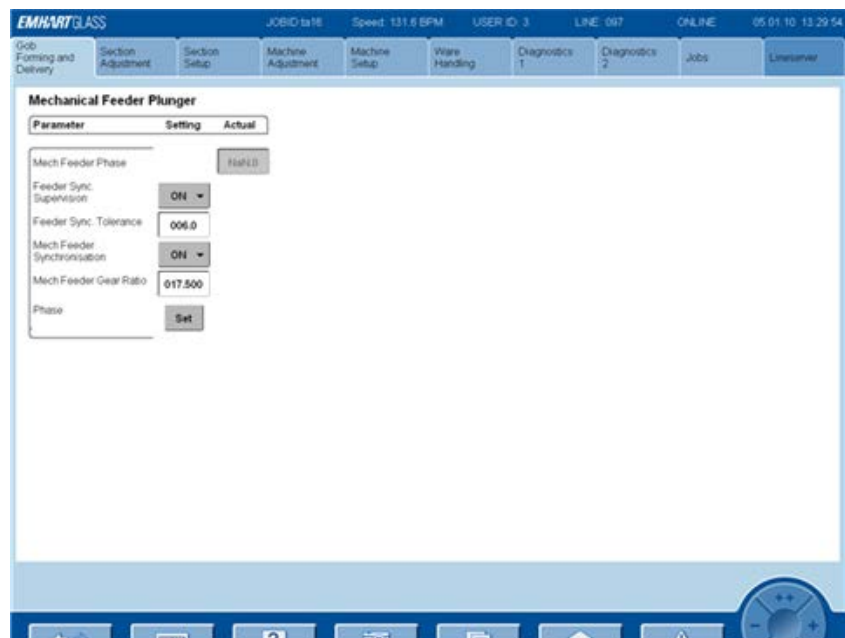
On the Gob Spray setup there is an additional column "Offset".

It is now possible to trigger to a certain section ('Offset') for the gob spray if a multiple of the number of running sections is entered in the 'cuts'-field. The picture shows that "gob spray 3" is always triggered on section 1 and "gob spray 4" always on section 10.

It is now also possible to synchronize all gob spray outputs by pressing the button on the Gob Distributor page.

Mechanical Feeder:

If the proximity switch does not deliver a valuable signal and the "Feeder Sync Supervision" is ON, the GD swings out.



Section Setup

Event Configuration:

Now the Interceptor Event can be configured like another event.

If the machine does not have an Emhart Gob Distributor (scoop or different gob distributor) the Interceptor Event must be configured “Angle-Angle” and operator can program the ON and OFF angle of the Interceptor.

The duration of the Interceptor movement will be related to the speed of the machine and it will be not necessary to change the duration (msec) on the “Dongle page”.

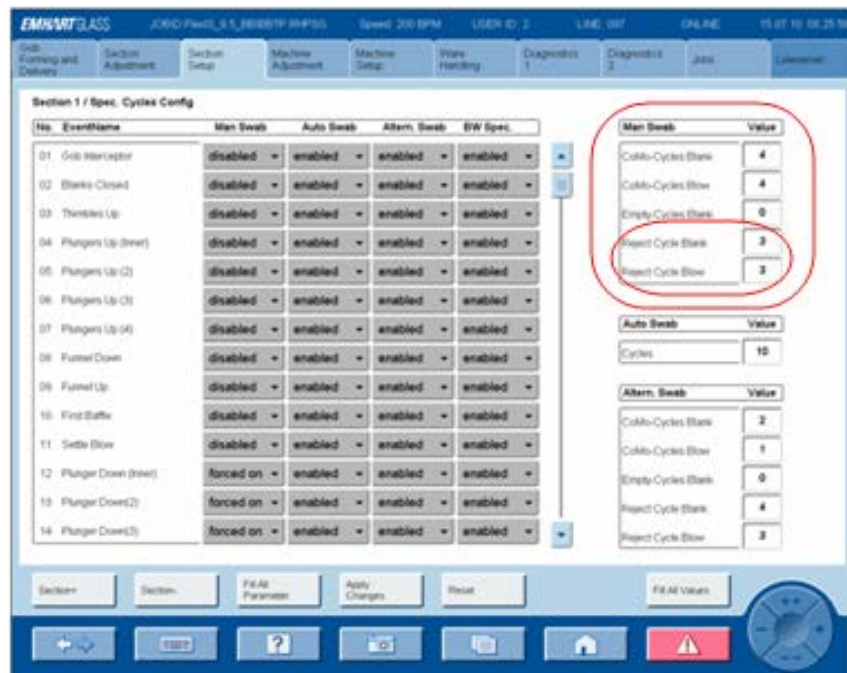
No.	Event Name	Event Type	Event Mode	State
01	Gob Interceptor		Angle-Duration	assigned
02	Blanks Closed	Output	Angle-Angle	unassigned
03	Thimbles Up	-	Event Mode(1)	undefined
04	Plungers Up (Inner)	Output	Angle-Angle	assigned
05	Plungers Up (2)	Output	Angle-Duration	assigned
06	Plungers Up (3)	-	-	undefined
07	Plungers Up (4)	-	-	undefined
08	Funnel Down	Output	Angle-Angle	unassigned
09	Funnel Up	-	-	undefined
10	First Baffle	Output	Angle-Angle	unassigned

Special Cycle Configuration:

Now, it can be selected whether the bottles should be rejected or not in the CoMo cycles after manual swab, configuring “Swab Cold Mold” in the Dongle Section Parameter (see Machine Setup / Dongle Configuration):

a) if “no reject” is configured, after Manual Swab the section controller reject the number of bottles programmed on “Reject Cycle Blank” and “Reject Cycle Blow” independently of the number of CoMo cycle.

b) if “rejected” is configured the section controller reject the highest value programmed between CoMo Cycle and reject cycle.



New “on” Section Control

Normal / Alternate stop with non-Emhart servo GD:

When stopping the section with delivery on, the section did not clear the remaining glass out of the section but just stopped with the next critical event, this has been changed.

Cold Blank/Mold Reject:

This function has been completely revised and optimized. It should no longer happen that the last good bottles before entering the swab cycle are rejected. It should also no longer happen that the bottles produced during the swab or CoMo cycles are rejected incompletely.

Version settings:

a) New DA file for the 860 pusher with Jet Move 204 (affects TS-E only) has been added, a wrong error was displayed.

b) New DA file for Servo Takeout to improve motion controller settings.

Machine Setup

Sect Controller Dongle

Swab CoMo:

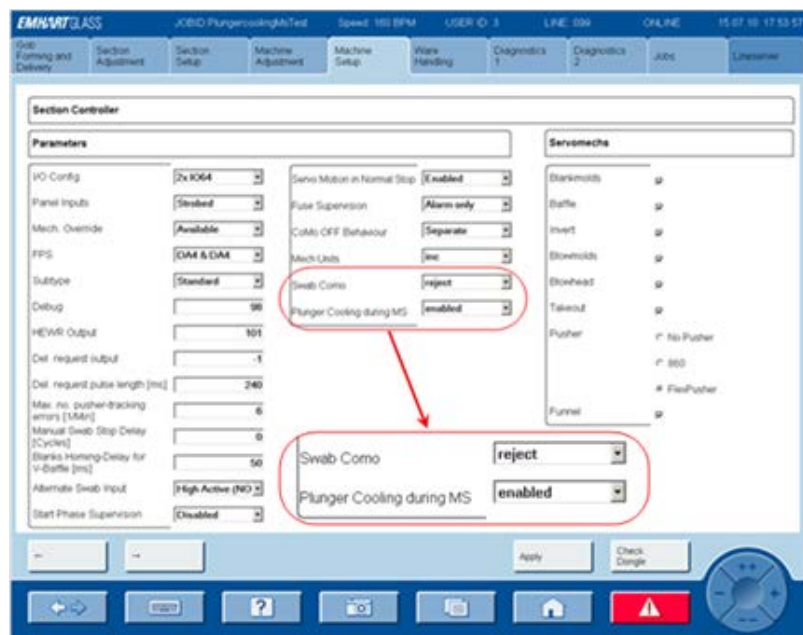
See Special Cycle above

Plunger Cooling MS:

With this parameter, it can be selected whether the plunger cooling could be activates or not in the MS cycles.

“enabled” only with section in delivery and P&B or NNPB process configured (see Job/ Process screen) pressing MS the plunger cooling event will be activated automatically and the “CoMo blue lights” on BK and BW panels will flash , operator can stop it just pressing the blue pushbutton of CoMo.

“Disabled” plunger cooling will be deactivated in MS.



WHC Dongle

Conveyor Height Adjust:

Both supported motor types can now be selected.

Encoders can also be disabled.

The screenshot displays two screens from the EMHART GLASS software interface. The top screen is the 'Warehousing Controller' (WHC) setup page, and the bottom screen is the 'FlexLine' parameter setup page.

Warehousing Controller (WHC) Setup:

- Parameters:**
 - I/O Config: 1xIO64
 - Debug: 0
 - CHA_Motor 1: CW, Type 1
 - CHA_Motor 2: CW, Type 1
- Servomechs:**
 - Machine Conveyor: ☒
 - Ware Transfer: ☒
 - Cross Conveyor: ☒
 - Stacker: ☒
- Modules:**
 - MCU: ☒
 - CHA A Enable: ☒
 - CHA B Enable: ☐
 - DownWareReject: ☒
 - Encoder: ☒
 - Encoder: ☒

FlexLine Parameter Setup:

Set-Up Value	Setting	Actual
Bottles/Cav/Minute	010.00	010.00
Starting Section	1	1
Sections in Operation	8	8
No. of Gobts	2	2
Belt Advance	21.000	10.500
Ware Xfer Finger Dist.	06.000	
Conveyor Direction	Left	
Pusher Radius	06.472	
Cross Conveyor % (Nc)	072.5	
Belt Trim Percent (Nt)	098.2	
Number of Gap	16	

The 'FlexLine' section also includes a table with columns for Section, Calc, Actual, Pusher calc. Diff, and Pusher act. Diff, showing data for 12 sections.

FlexLine & EFRA Parameter Setup

With the existing software Version, as announced with TNB 170, it is possible to load special firing orders calculated with "Firing Order Generator" but, in case of EFRA, all the parameters must be calculated and loaded manually.

With this new V 1.02.07.16 it is possible to calculate and load, also for conveyor and WT with gear ratio not standard EG, the EFRA No, Nb and Nw parameters.

Also for the very slow machine, where it is necessary to **duplicate or triplicate all the gear ratio** of the cinematic chain to increase the speed of the synchronous motors, it is possible to select this **"Slow Machine Factor"** and to calculate and load the EFRA parameters.

For Belt Advance higher than 21", on the Flexline screen, it is indicated the "Number of gap" per machine cycle (virtual bottles = (Belt Adv-21)/21 x # Sect. in operation x # of cavity) and on the EFRA Set UP screen the parameter "Total Belt Advance" indicate the real belt advance in Inch.

EMHART GLASS JOBID: PlungercoolingMsTest Speed: 160 BPM USER ID: 3 LINE: 099 ONLINE 15.07.10 18:45:40

Job Forming and Delivery Section Adjustment Section Setup Machine Adjustment Machine Setup Ware Handling Diagnostics 1 Diagnostics 2 Jobs Lineserver

EFRA Setup Options

EFRA Factors	Value
Belt Advance Factor (No)	48
Ware Transfer Factor (Nb)	96
Ware Transfer Divider (Nw)	60
Stacker Multiplier (Nstm)	2
Stacker Divider (Nstd)	20
Line Speed (Fo)	80
Belt Trm Percent (Nt)	98.2
Cross Conveyor % (Nc)	72.5

Calc EFRA Factors	Value
Belt Advance Factor (No)	48
Ware Transfer Factor (Nb)	96
Ware Transfer Divider (Nw)	60
Ware XFer Finger Dist.	06.000
Total Belt Advance	00.000
Conveyor Gear Ratio	90.000
Conveyor Travel per Revolution	63.000
Ware Transfer Gear Ratio	60.000
Ware Transfer Travel per Revolution	30.000
Slow Machine Factor	1

Calculate Load

Navigation icons: Back, Forward, Home, Search, Print, Refresh, Stop, Emergency Stop

Job

Process Type

As mentioned before “Plunger Cooling in MS” if this function needs to be active it is necessary to program on this page, for each section, the type of process that is running.

As you can see there are four options:

B&B

P&B

NNPB

Unknown

The plunger cooling MS works only with P&B and NNPB.

The screenshot shows the 'Job Setup' screen for 'JOBID: PlungercoolingMsTest'. The top status bar displays 'Speed: 160 BPM', 'USER ID: 3', 'LINE: 099', 'ONLINE', and the time '15.07.10 17:48:43'. The main menu includes 'Job Forming and Delivery', 'Section Adjustment', 'Section Setup', 'Machine Adjustment', 'Machine Setup', 'Ware Handling', 'Diagnostics 1', 'Diagnostics 2', 'Jobs', and 'Lineserver'. The 'Jobs' tab is active, showing a table of 'Process Types' for 12 sections. The table has two columns: 'Section' and 'Process Types'. The 'Process Types' column contains dropdown menus with the following values: Section 01: B & B, Section 02: P & B, Section 03: NNPB, Section 04: Unknown, Section 05: Unknown, Section 06: Unknown (highlighted), Section 07: P & B, Section 08: NNPB, Section 09: B & B, Section 10: Unknown, Section 11: Unknown, and Section 12: Unknown. At the bottom, there is a navigation bar with icons for back, forward, help, camera, print, home, and a red warning icon, along with a large circular control knob.

Section	Process Types
Section 01	B & B
Section 02	P & B
Section 03	NNPB
Section 04	Unknown
Section 05	Unknown
Section 06	Unknown
Section 07	P & B
Section 08	NNPB
Section 09	B & B
Section 10	Unknown
Section 11	Unknown
Section 12	Unknown