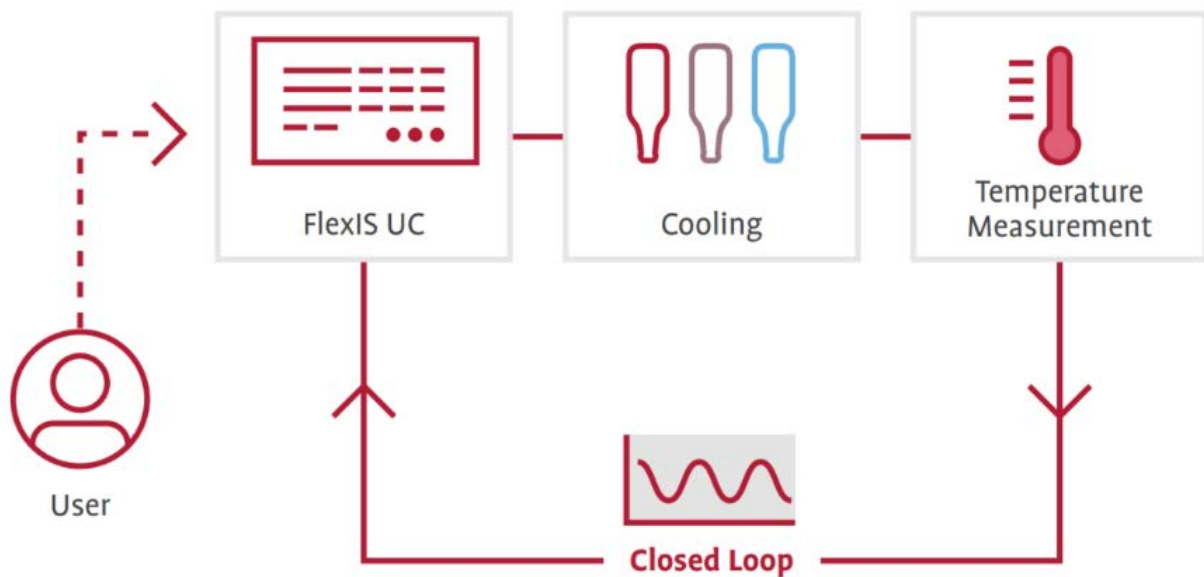


# Technical News Bulletin

Steinhausen, November 2020

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## FlexIS Blank Cooling Control

- Automatically adjusts temperatures of mold halves
- FlexIS Blank Cooling Control is fully integrated into the FlexIS controls
- TCS or BlankRadar remote access through the FlexIS remote access system

## Introduction

FlexIS Blank Cooling Control is a control loop available in the FlexIS Timing using information from the TCS (Temperature Control System) or the BlankRadar. It gets the measured temperature values of the mold surfaces and adjusts automatically the duration of the mold cooling.

Depending on the machine type and configuration, up to 72 mold halves are permanently monitored and adjusted to slow changes of surrounding parameters. This leads to more stable production runs and also prevents quality problems like leaners, for example.

## Application

FlexIS Blank Cooling Control is very beneficial for all types of production.

## Setting Description

FlexIS Blank Cooling Control is fully integrated into the FlexIS controls (FlexIS 1, 2 and 3). All settings are done on the User Console and are stored as job data. The configuration setup can be done according to the number of available cooling valves and according to the locations measured.

Settings (all per closed loop)

- FlexIS Blank Cooling Control on / off
- Setpoint value for temperature
- Upper and lower limits

Feedback to the user (all per closed loop)

- Actual (measured) temperatures
- FlexIS Blank Cooling Control on / off (status)
- Cooling duration (event OFF-ON)
- Cooling duration reached a limit (status)

Section: 3 / Blank Cooling Control Setting

| Description          | LH inner       | RH inner       | LH middle      | RH middle      | LH outer       | RH outer       | No Event       | No Event       |
|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Setpoint value [°C]  | 450.0          | 450.0          | 450.0          | 450.0          | 450.0          | 450.0          | 0.0            | 0.0            |
| Actual value [°C]    | 425.0          | 419.0          | 448.0          | 460.0          | 438.0          | 465.0          | -1             | -1             |
| Lower limit [°]      | 060.0          | 060.0          | 120.0          | 330.0          | 330.0          | 330.0          | 000.0          | 000.0          |
| ON                   | 330.0          | 169.9          | 150.0          | 330.0          | 050.0          | 330.0          | -000.0         | -000.0         |
| OFF                  | 155.0          | 170.0          | 150.0          | 155.0          | 335.4          | 155.0          | -000.0         | -000.0         |
| Upper limit [°]      | 200.0          | 150.0          | 220.0          | 150.0          | 150.0          | 150.0          | 000.0          | 000.0          |
| Cooling duration [°] | 185.0          | 000.1          | 000.0          | 185.0          | 285.4          | 185.0          | 000.0          | 000.0          |
| Take over act.       | Take over act. | Take over act. | Take over act. | Take over act. | Take over act. | Take over act. | Take over act. | Take over act. |
| on / off             | on / off       | on / off       | on / off       | on / off       | on / off       | on / off       | on / off       | on / off       |

FlexIS 1 user interface: Setpoint values and measured values with colored status indication shown in the Settings Section page (sample values).

BUCHER emhart glass

Jobname: EGRC-Job Line-NO: 64 User-ID: Developer ONLINE Speed: 113.8 bpm Jan 27, 2016 6:05:38 PM

Closed Loop Adjustment

Section 3

| Adjustment                 | left  | right |
|----------------------------|-------|-------|
| Actual value 1 [°]         | 472.0 | 479.0 |
| Setpoint value [°C]        | 470.0 | 460.0 |
| Lower adjustment limit [°] | 10.0  | 10.0  |
| ON 1 [°]                   | 0.0   | 0.0   |
| OFF 1 [°]                  | 64.6  | 150.0 |
| Cooling Duration 1 [°]     | 64.6  | 150.0 |
| Upper adjustment limit [°] | 150.0 | 150.0 |
| Automode on/off            | ON    | ON    |

Alarms: 3

Bar Chart Event Timing Overview Pusher Section Offsets HLWR Closed Loop Adjustment

FlexIS 2 and 3 user interface: Setpoint values and measured values with colored status indication shown in the Closed Loop Adjustment page (sample values).

#### Functions

- See all values per section or grouped in an overview
- Fill values to all closed loops or to all sections

#### Remote Access Extension

- Due to the communication with the FlexIS, the TCS or BlankRadar gets accessible through the FlexIS remote access system.

## Installation Requirements

FlexIS Blank Cooling Control can be ordered for any forming machine having:

- ✓ FlexIS 1 Timing Control - Software Version 1.07.03.033 or higher
- ✓ TCS Temperature Control System or BlankRadar
- ✓ Basic Closed Loop Equipment (TNB248)

#### Order Information

FlexIS Blank Cooling Control includes:

- 601-20001-4 Software License FlexIS Blank Cooling Control
- 601-217-3 Communication Kit for TCS / BlankRadar (specify cable length to FlexIS MC cabinet)
- 1 day Service engineer for installation
- 2 days Production specialist for commissioning and on site training

## Documentation

H11104\_EN is the English manual of FlexIS Blank Cooling Control for UC 1

H11108\_EN is the English manual of FlexIS Blank Cooling Control for UC 2

## Features

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Automatically adjusts temperatures of mold halves

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FlexIS Blank Cooling Control is fully integrated into the FlexIS controls

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TCS or BlankRadar remote access through the FlexIS remote access system

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## Benefits

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Keeps process steady / less variation

- over time
- between cavity halves
- less stops

Machine reaches steady state production faster after job change

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Reduced complexity / better ease of use

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Optimal addition to FlexIS remote service. Experts can support remotely auditing real time TCS/BlankRadar and the Blank Cooling closed loop

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