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Thermoform graphics

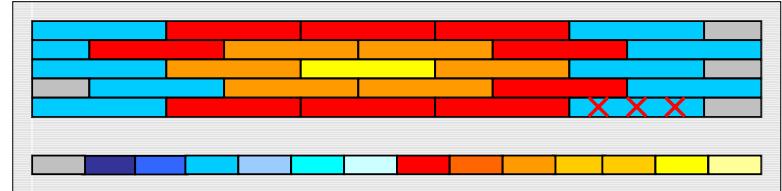
Configuration tool for fields of heating elements
under ProToolPro and WinCC



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ActiveX tool for thermoform graphics

- Compact tool for the complete configuring (graphics and data coupling) of fields of heating elements
- The integration of ActiveX - components creates a new tool object in ProToolPro and WinCC
- Individual heating elements are not configured, but instead, the complete field of heating elements
- The “run time” variables are reduced by a factor of 80:
 - without ActiveX: 400 variables
 - with ActiveX: 5 variables
- Variables are simple to handle as a result of the default settings



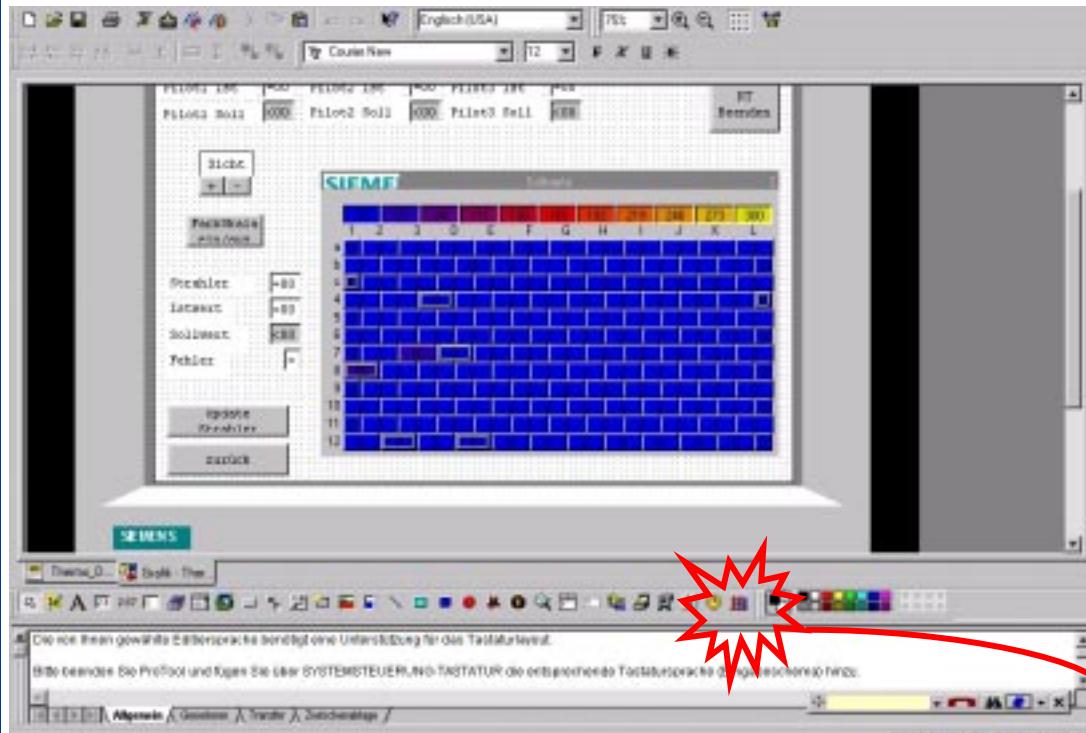
Isotherm zone assignment

Heizzonenzuordnung													
	1	2	3	D	E	F	G	H	I	J	K	L	
a	1	1	1	1	1	1	1	1	1	1	1	1	1
b	1	1	1	1	1	1	1	1	1	1	1	1	1
c	F1	4	4	4	4	4	7	7	7	7	7	1	1
4	4	4	F4	4	F7	7	7	7	7	7	7	1	1
5	4	4	4	4	4	7	7	7	7	7	1	1	
6	2	2	2	5	5	5	5	5	5	5	1	1	
7	2	F2	2	F5	5	5	5	5	5	5	1	1	
8	2	2	2	5	5	5	5	5	5	5	1	1	
9	2	2	2	2	5	5	5	5	5	5	1	1	
10	2	2	2	2	6	6	6	6	6	6	1	1	
11					6	6	6	6	6	6	1	1	
12		F3		F6	6	6	6	6	6	6	1	1	
	F1	F2	F3	F4	F5	F6	F7						

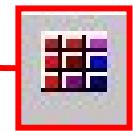


Perfectly integrated into the HMI interfaces

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1. Register OCX file
2. Call ProToIPro
3. HS-HMI thermographics is available as a new tool object

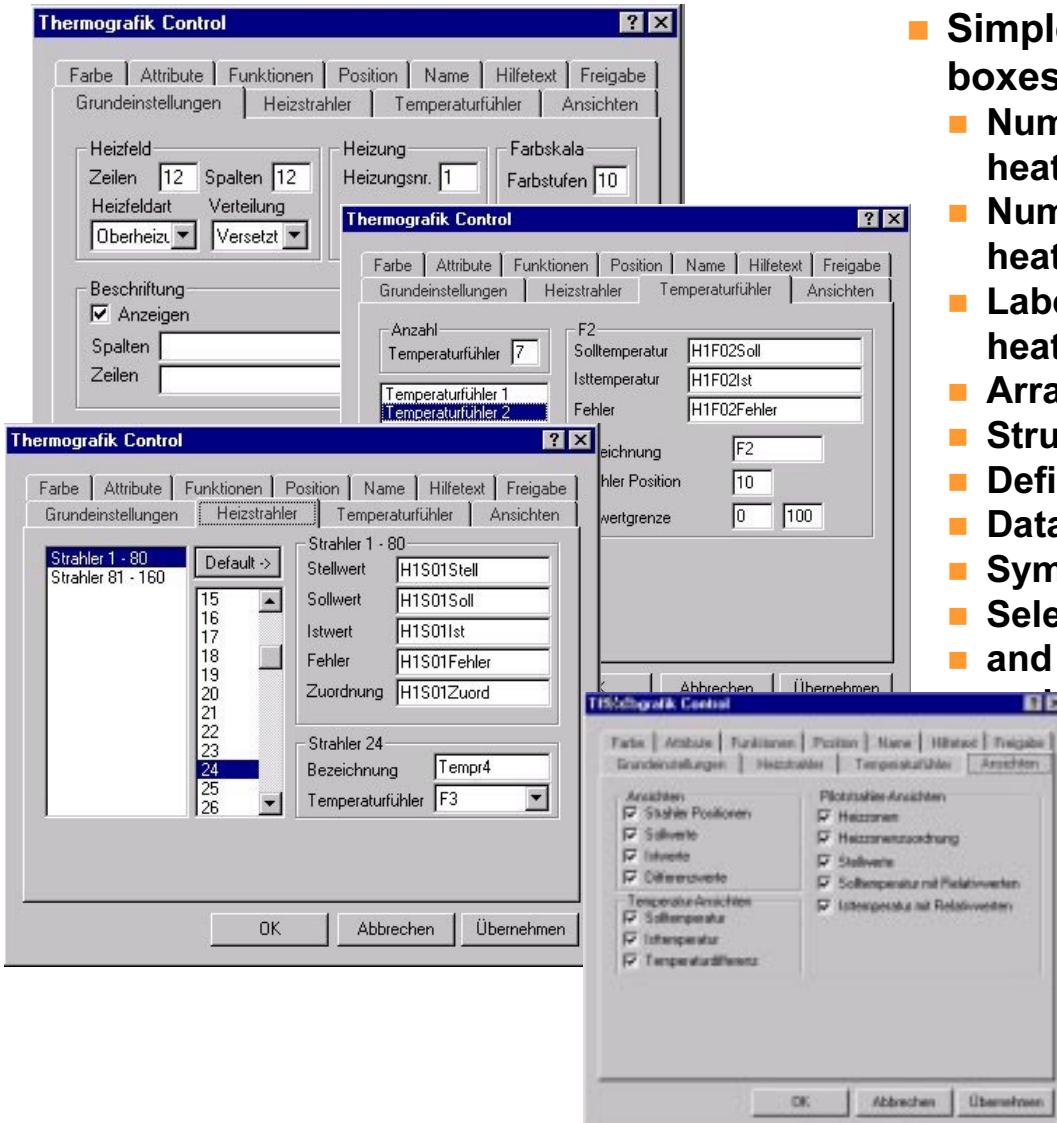


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Simple configuring ...

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- Simple configuring using dialog boxes

- Number and design of the fields of heating elements
- Number and properties of the heating elements
- Labeling and arrangement of the heating elements
- Arrangement of temperature sensors
- Structure of the temperature scale
- Defining variables
- Data coupling to the control
- Symbol system
- Selecting the views in “run time” and

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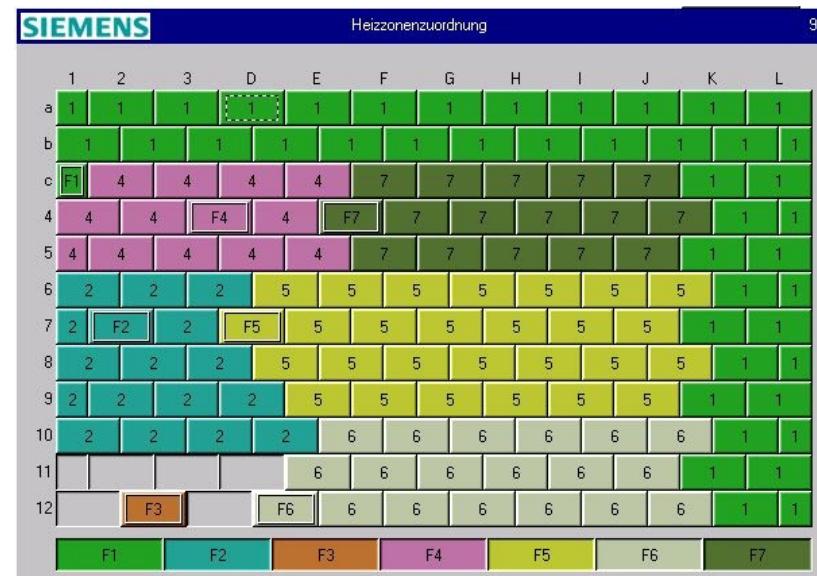
Thermographic configuring tool



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Perfect operator control at the machine

- Defining isothermal zones
- Clearly assign temperature sensors
- Clear, color representation of the temperature zones
- Temperatures are represented using colors (setpoint, actual, difference values)
- ... simply and quickly





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Possible versions

Field of heating elements (over-heating, under-heating) with individual heating elements - control (without closed-loop control)

Field of heating element (over-heating, under-heating) with temperature sensor assignment, i.e. several heating elements are combined (=isotherms) and can be together assigned to a control loop (=temperature sensor) in the following versions:

- **Field of heating elements with fixed assignment, i.e. several heating elements are combined and permanently assigned to closed-loop control circuits. The operator cannot change this assignment (=fixed isotherms)**
- **Field of heating elements with free assignment**
- **Field of heating elements with “joystick assignment”**

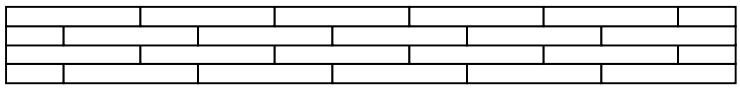


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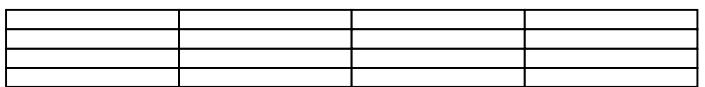
Types of fields of heating elements when configuring (CS)



- Symmetrical, starting with short heating elements



- Symmetrical, starting with long heating elements



- Regular arrangement

1	3	7	
2	4	5	6

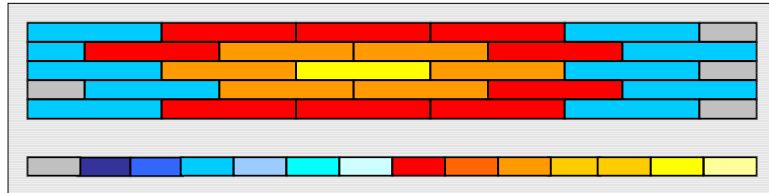
- Non-symmetrical

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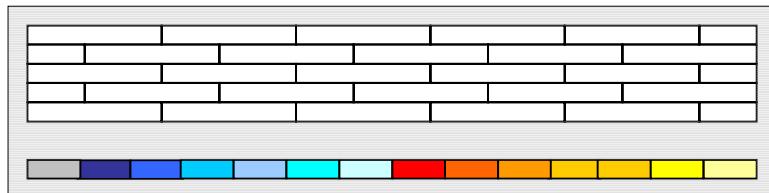


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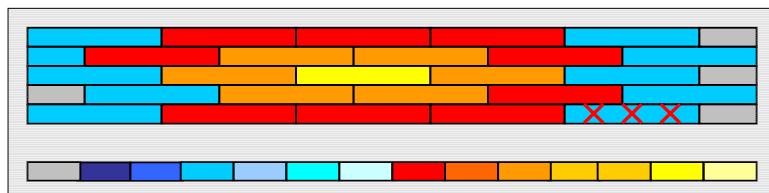
Displays during the run time (RT)



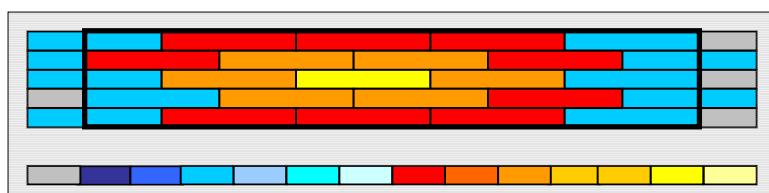
- Symmetrical, starting with short heating elements



- Symmetrical, starting with long heating elements



- Regular arrangement



- Non-symmetrical arrangement