



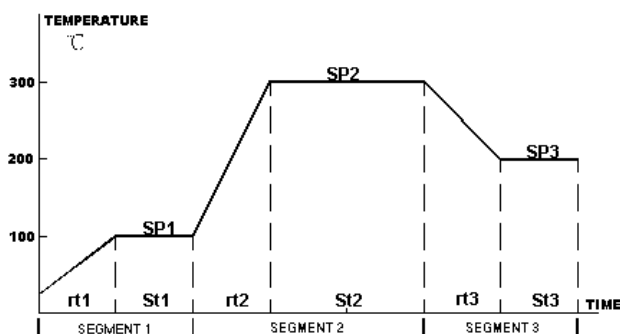
DID YOU KNOW #7

Glass Annealing using our VERTEX VT30 Series Profile Controllers

When manufacturing glass and glass products the glass may acquire permanent stress on cooling which may result in subsequent breakage. To release this stress the glass must be heated and held at a controlled temperature for a defined period of time and then carefully cooled under controlled conditions to ensure that no additional stresses are introduced by the cooling.

Our VT30 series controller is a “Pattern Profile” controller that allows the user to program your own “profile” for this heating, soaking and cooling process. Here is an example of what can be done and how easy it is to program and use this controller.

This is an example to explain how to set up the program pattern as show in the figure.



Segment	Set point	Ramp time	Soak time
1	100°C	30min.	30min
2	300°C	30min.	1hour
3	200°C	30min	30min
4	-	End	-

This example uses three segments in pattern 1 as shown. The process value will rise up from the current value to 100°C with the ramp time of 30 minutes and stay at 100°C for 30 minutes. It then rises up to 300°C with a ramp time of 30 minutes and stays at 300°C for one hour. After the one hour soak time is up the process will cool down to 200°C with the ramp time of 30 minutes and stay at 200°C for 30 minutes.

The programming procedure is as follow.

Press the “SET” + “BACK” key for more than 4 seconds to enter the program level (ProG). Now press the set key to reach the pattern level. *Pt_n* will be shown on the PV display.

- 5.1. Use the “UP” and “DOWN” key to select “Ptn1” where we will program the profile.
- 5.2. Press “SET” key once to get “bAnd” parameter and adjust the value as required. If don’t know, set the band value to zero.
- 5.3. Press “SET” key once to get “SP1”. Set the value to 100 by pressing “UP” and “DOWN” key.
- 5.4. Press “SET” key once and set the “rt1” to 0.30 by pressing “UP” and “DOWN” key.
- 5.5. Press “SET” key once and set the “St1” to 0.30 by pressing “UP” and “DOWN” key.
- 5.6. Press “SET” key once and set the “SP2” to 300 by pressing “UP” and “DOWN” key.
- 5.7. Press “SET” key once and set the “rt2” to 0.30 by pressing “UP” and “DOWN” key.
- 5.8. Press “SET” key once and set the “St2” to 1.00 by pressing “UP” and “DOWN” key.

- 5.9. Press "SET" key once and set the "SP3" to 200 by pressing "UP" and "DOWN" key.
- 5.10. Press "SET" key once and set the "rt3" to 0.30 by pressing "UP" and "DOWN" key.
- 5.11. Press "SET" key once and set the "St3" to 0.30 by pressing "UP" and "DOWN" key.
- 5.12. To terminate the pattern 1, Press "SET" key twice and set the "rt4" to "end" by using the "down" key.

It's as simple as that. The controller comes in various sizes to most popular being the 96 x 96 size which has a series of LED's indicating in which segment of the program you are or in the compact 48 x 48 size. For more information about this product please visit our web site at

http://www.qis-uk.co.uk/Body_Pages/vt30/vt30_series.html or have a look at the manual to be found at http://www.qis-uk.co.uk/Manuals/VT30_Manual.pdf

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