



# Controllers / Instruments

## Batch Dosing Controllers (Pulse to Time Converters)

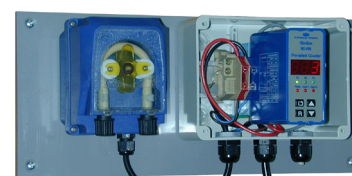
Ordering Code	Description
SC700-WP1	1 Channel Batch dosing controller - pulse count from water meter converted to dose time, which repeats (Internal terminals for connection to optional dosing pump)
SC700-WP1/1S	1 Channel Batch dosing controller - pulse count from water meter converted to dose time, which repeats (Flush mount GPO for plugging in optional dosing pump)
SC700-WP1-PE-1.3	1 Channel Batch dosing controller - pulse count from water meter converted to dose time, which repeats (Includes SEKO PE-1.3 peristaltic pump, 1.3l/hr, 3 bar)
SC700-WP1-PE-5.0	1 Channel Batch dosing controller - pulse count from water meter converted to dose time, which repeats (Includes SEKO PE-5.0 peristaltic pump, 5.0l/hr, 1.5 bar)
SC700-WP1/1S-FCO 10 2.2 EP	SC700-WP1/1S with EMEC FCO 10 2.2 EP pump (2.2 l/hr @ 10 bar) suitable for Caustic



SC700-WP1



SC700-WP1/1S



SC700-WP1-PE-1.3

## Description

Batch dosing controllers are designed to achieve dosing proportional to the amount of water flowing through a water flow meter. The most common application is the dosing of chemical proportional to make-up in a cooling tower or boiler. Pulses from the water meter, which translate to volume, are counted by the SC700 controller. Once a pre-set value is reached, the pump is activated to dose for a set time period and the pulse count is reset. The SC700 units are 1 channel, ie. 1 water meter activates 1 pump.

## Features & Benefits

- SC700 display shows pulse count
- A number of pumps can be daisy chained together for multiple dose rates and chemicals
- Easy to program
- Adjustment of pulse count and dose time on controller achieves greater flexibility than a pump controlled directly from a water meter
- Weatherproof

## Operation

Mounted on a vertical surface at eye level, the batch dosing controller performs its control functions to give complete peace-of-mind water treatment.

### SC700 units:

The SC700 controllers are designed to control the dosage of chemical proportional to water flow, to achieve a desired concentration of chemical (ppm).

The SC700-WP1-PE-1.3 or -PE-5 units are supplied with dosing pumps. However, the other SC700 units are designed to be interfaced with optional pumps or to be retrofitted to pumps on-site.

Proportional dosing is achieved by way of dosing in batches, ie. the SC700 doses a known amount of chemical every time a known volume of make-up water flows into the cooling tower or boiler.

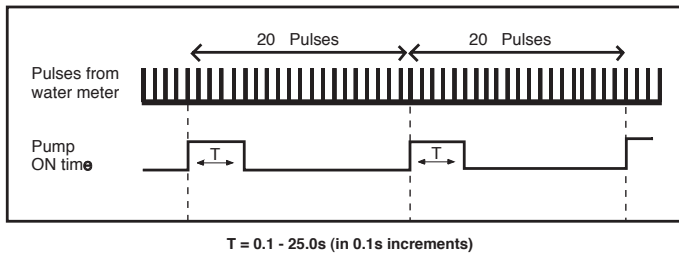
The known amount of chemical is calculated based on 2 factors:

1. the time that the pump is programmed to operate (0.1 up to 25.0 sec) every batch, and
2. the dose rate of the pump (ie l/hr).

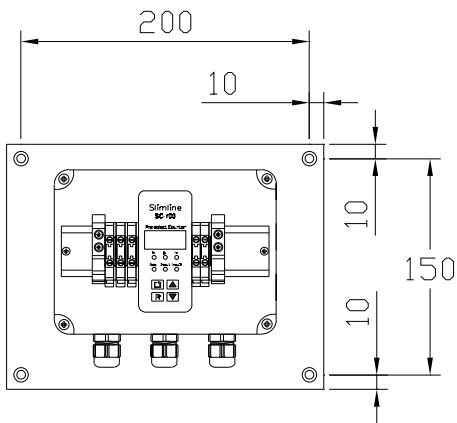
The known volume of make-up water is based on the number of pulses counted from an optional water meter fitted in the make-up line.

The diagram that follows illustrates the operation:

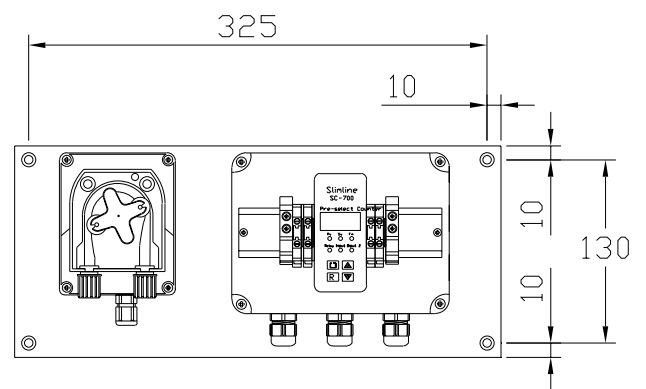
**SC700 Operational Diagram**



## Dimensional Drawings



SC700-WP1 & SC700/1S



SC700-WP1-PE-1.3,  
SC700-WP1-PE-5.0

## Specifications

	SC700-WP1	SC700-WP1/1S	SC700-WP1-PE-1.3/5.0	SC700-WP1/1S-FCO 10 2.2 EP
Controller Function				
Variable Measured	Number of Water Meter Pulses Counted			
Range	Pulse count: 1 - 999 pulses			
Resolution	1 pulse			
Control Function	Batch dosing proportional to flow			
Device Controlled	Switches 240VAC internally to wire in optional dosing pump	Switches 240VAC GPO for optional dosing pump	Activates Peristaltic pump (-PE-1.3: 1.3l/hr, 3bar) (-PE-5.0: 5.0l/hr, 1.5bar)	Switches 240VAC GPO to activate FCO dosing pump
Control Algorithm	Repeated cycle: Activates output for 0.1 - 25 secs, every time pulse count is reached			
Programmable Dose Time Resolution	0.1sec			
Controller Alarms				
Activation	-			
Contact	-			
Electrical				
Power Supply	220-240 VAC, 50/60Hz (110VAC available on request)			
Control Relay Output	240VAC switched			
Relay Rating	10A/250VAC, resistive load			
Physical				
Protection	IP55 (weatherproof)			
Panel Dimensions	170 (h) x 220 (w) mm		150 (h) x 345 (w) mm	
Packaged dimensions	350mm (l) x 350mm (w) x 200mm (h)			
Packaged weight	3 kg		5 kg	7 kg