

Batch system for ultra pure water with validated batch reports

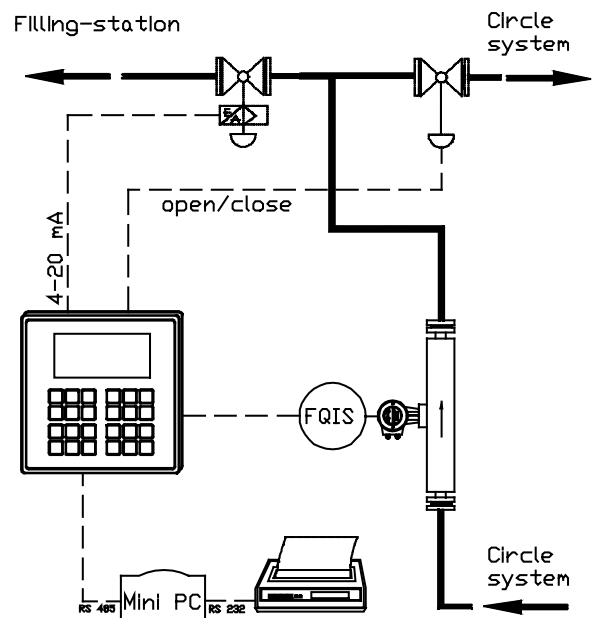
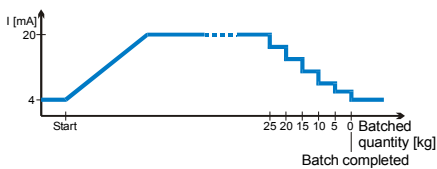


Batch system for ultra pure water using a circulatory system

In the pharmaceutical, toiletry and often the food industry, ultra pure water is used as a basic material for the production of creams lotions and syrups. A standard plant design requires the water to flow continuously to prevent the formation of germs. The supply of the whole plant with ultra pure water is done via a circulatory system.

Implementation using the Batching Master

In this application the water flows continuously through a mass flow meter and then back into the circulatory system. The valve in the return line is controlled by a digital output of the Batching Master. After the start of a batch, the return flow valve will be forced to close and a pause time initiated. This time guarantees that the flow through the mass meter is zero. At the end of the pause time, the 4 – 20 mA output to the batching shut-off valve rises and the real batch begins. The 4 – 20 mA output to the valve with a soft start ramp and a 5 – step shut down ramp, gives a precise batch every time. The Batching Master is programmed so that it only meters the flow when the real batch is running. Whilst water is flowing via the return valve back into the circulatory system the Batching Master doesn't meter the flow.



Application: Production of toothpastes



The liquid basis products are batched into the Reactor by four Batching Master 200. The flow of the water is measured by a vortex flowmeter. Three mass flowmeters measure the flow of "Sorbitol", Propylenglykol and special condiment extract. A Siemens logic controller S7 communicates with the Batching Master by digital inputs and outputs. A special dispensing software communicates with the batching Masters via a Modbus interface. The pre-selected and batched quantity are stored in the software and will be printed in batch reports.

Validation of batch data

Some processes such as those in the pharmaceutical and toiletry industries require a batch report to validate the batch data.

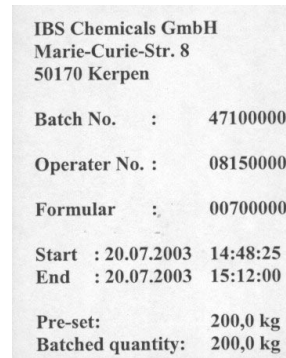
This is carried out by a mini PC and a ticket printer. Many Batching Masters can be connected to the mini PC via an RS 485 bus.

Before a batch can be started, up to 10 text strings can be entered into the Batching Master:

e.g. Operator Name
 Batch No.
 Product Name



Chargen No. :
2004004711



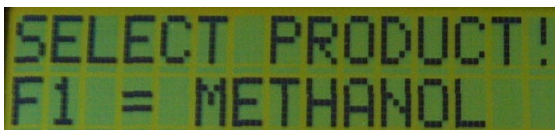
IBS Chemicals GmbH	
Marie-Curie-Str. 8	
50170 Kerpen	
Batch No. :	47100000
Operator No. :	08150000
Formular :	00700000
Start :	20.07.2003 14:48:25
End :	20.07.2003 15:12:00
Pre-set:	200,0 kg
Batched quantity:	200,0 kg

Operator prompts in the form of text can be programmed into the mini PC to aid operators to enter the correct information. At the end of a batch, the programmed text, all operator entries and the batch data will be printed on the ticket printer.

Product routing via function keys F1 - F3

Before the start of the batch, it is possible to chose a product way via the function keys.

Therefore it's possible to pre-program one question text and three texts that are dedicated to the function keys.



SELECT PRODUCT!
F1 = METHANOL

One digital output is dedicated to each function key. Via this digital outputs it is possible to activate valves, pumps or product routings.