

## CASE STUDY: STERILIZED FILLING SYSTEMS

**Solution:** Embedded solutions  
**Country:** Denmark  
**Company:** Flexicon  
**Summary:** Flexicon uses Anybus CompactCom inside their product MC100 to communicate with DeviceNet and Profibus.



### The effects

- ✓ One development project enables connectivity to all major networks.
- ✓ Faster time to market.
- ✓ Less power consumed.

## Flexibility for Flexicon

**Flexicon is a world leader in sterilized filling systems. For their new generation of closed loop peristaltic pump controller, the MC100, they have chosen to implement a standardized communication solution, the Anybus Compact-Com. This new solution enables data collection from all functions on the entire the filling line and it allows traceability - one of the key issues of the CFR 21 - 11 and GAMP pharmaceutical standards.**

### Flexicon's line of business

Flexicon ([www.wmflexicon.dk](http://www.wmflexicon.dk)) was founded in 1986 and has since then specialized in aseptic peristaltic filling systems for pharmaceutical, biotech and diagnostic applications. In February 2008 Flexicon joined Watson-Marlow to become a part of the world's largest group of companies specializing in peristaltic filling and pumping technology. Flexicon is the world leader in filling machines in sterile environments. Watson-Marlow Flexicon is located in Denmark.

A peristaltic pump is a type of positive displacement pump. The fluid is contained within a flexible tube fitted inside a circular pump casing. Since the only part of the pump in contact with the fluid is the interior of the tube, it is easy to sterilize and clean the inside surfaces of the pump. That makes this kind of pump an excellent solution for the pharmaceutical industry. Furthermore, their lack of valves, seals and glands makes them comparatively inexpensive to maintain and peristaltic pumps also have the advantage of minimizing damage to the fluid.

### Open communication

In order to remain in the forefront Flexicon took a decision to upgrad its range of controllers. With todays solution the MC100 communicates with PLC/HMI via an industrial field bus (DeviceNet or Profibus). Users can easily adjust filling parameters or programs via an existing PLC / HMI. It enables data collection from all processes/ functions on the entire the filling lineand offers therefore Watson-Marlow Flexicon's customers a solution that is following the key issues of the CFR 21-11 and GAMP pharmaceutical standards.

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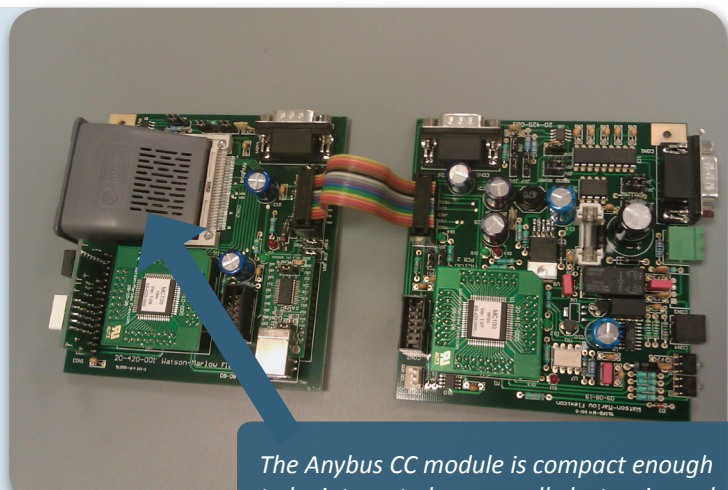
MC100 handles a closed loop system. Filling weight signals for automatic recalibration of individual fillers can be sent via an existing PLC.

The MC100 is a pump control module capable of controlling up to 16 Watson-Marlow Flexicon Pumps.

Start commands for the individual pump are sent via fieldbus to the MC100 which will convey the start command to the pump. Status signals, warnings and alarms from each pump are available for the filling line control system via the fieldbus integrated in the MC100.

“We have studied the offers of several vendors on the market, but we realized that if we had to change from a communication standard to another, it wouldn’t be so easy. Other solutions were involved but would result in more programming. We would say that HMS is a much more elegant solution. HMS enables us to standardize our interfaces”, states Watson-Marlow Flexicon.

Peter Greenfort, from Beta Technic APS, the HMS distributor in Denmark, explains: “Anybus CompactCom (Anybus-CC) module is intended for OEMs. It provides instant connectivity to all leading fieldbus, industrial Ethernet protocols, serial, USB and wireless networks without the need for any hardware and software changes to your automation device. Anybus-CC is built on latest Anybus ASIC technology. Developed in conjunction with and powered by the “Anybus NP30” network communication processor, Anybus-CC combines high performance and functionality with low power consumption. The high level of



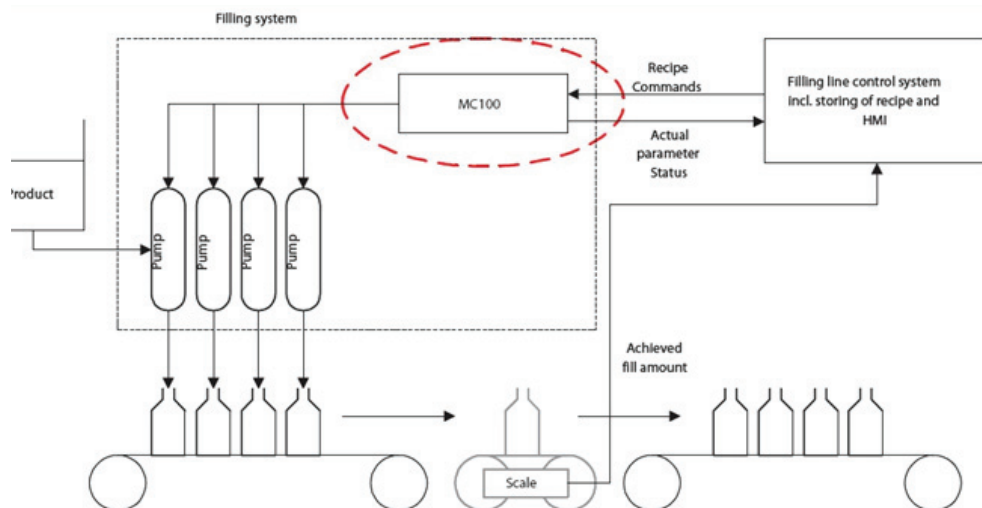
*The Anybus CC module is compact enough to be integrated on a small electronic card. It will have the same dimensions and the same internal interface whatever the communication standard.*

integration allows for a smaller size, and extremely competitive pricing.

Thus we are adding significant value not only on cost perspective but in terms of shorter time to market as well as increased competitiveness and production flexibility.

Automation devices with an integrated Anybus-CC slot can use any Anybus-CC module. For example, you can simply exchange an Anybus-CC Profibus module with an Anybus-CC EtherNet/IP module and be instantly connected to that network without the need for hardware and software changes in your automation device.

## Learn more on [www.anybus.com](http://www.anybus.com) or [www.wmflexicon.dk](http://www.wmflexicon.dk)



*MC100 is a closed loop peristaltic pump controller capable of managing up to 16 Watson-Marlow Flexicon Pumps. The filled quantity is checked in real time by a scale.*