



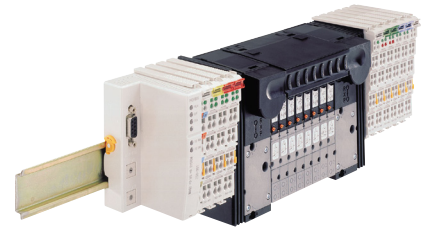
**burkert**  
FLUID CONTROL SYSTEMS

## Customer Testimonial – GEA Pharma Systems

### **Burkert pneumatics control pharmaceutical tablet production**

Buck Systems, part of GEA Pharma Systems based in Birmingham UK is using Burkert to sub-contract supply pneumatic control systems for it's leading edge powder processing plant equipment used in one of the world's largest and most advanced tablet manufacturing plants in the Far East.

Burkert Fluid Control Systems has designed and manufactured a complete pneumatic control system for vibrating pharmaceutical powder mixing and delivery systems. The control system is built around Burkert's innovative AirLINE pneumatic valve islands that allow a variety of digital and analogue I/O signals to be combined with Profibus DPV1 connection and external vendor PLCs. The complete panel systems are supplied fully built in stainless steel cabinets, tested and with a certificate of conformity.



Also supplied for this project Burkert Side Control, electro-pneumatic positioners are used to control patented double seated hygienic Buck butterfly valves used to control the flow of powder from large hoppers. The control units are mounted remotely from the process valve bodies and provide the rotary actuators with precise positional control signals, using an integral process controller (PID) and an external position sensor. They also provide a digital status display and manual programming override controls from an integral keypad.

The hoppers are vibrated to ensure a smooth powder flow and no 'sticking' to the sides, the control cabinets are isolated from the majority of the vibration equipment, but are exposed to some continuous vibration, and had to be designed to cope with this tough operating environment. The electro-pneumatic control panels contain a variety of ancillary equipment: filter regulators, pressure switches, and various DIN rail mounted terminals and Wago I/O blocks, all of which had to be firmly attached and tested. Weighing equipment and HMIs from Mettler Toledo were also integrated into the control cabinets along with Siemens PLC's.

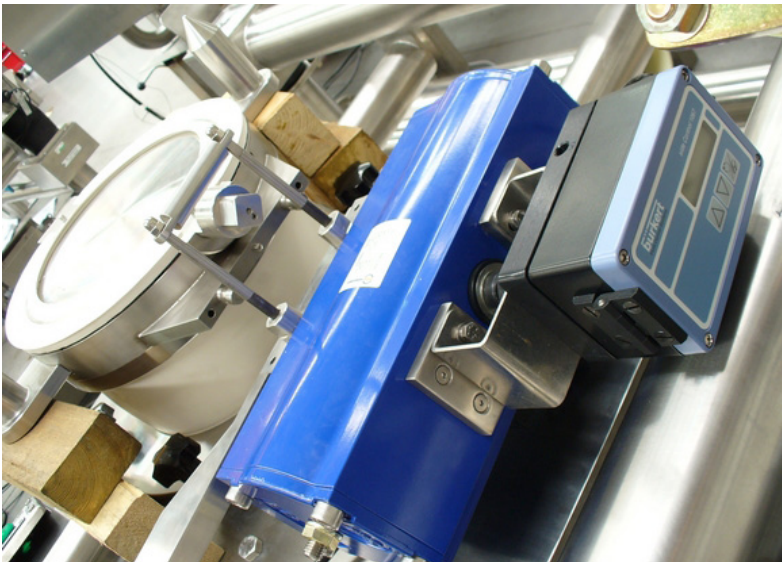
Neil Saunders, who oversaw the project from Burkert UK comments, "We were given a precise working requirement for the control systems and were able to go away and design a complete solution, I believe this was the overriding factor in Burkert being selected to complete this project. Hygienic processing is a market space that Burkert is very comfortable in and represents a large part of our turnover globally. Both GEA Pharma Systems and its customer are corporate accounts of Burkert, and it was vital to the end customer that comprehensive engineering and technical support was available locally; this didn't pose a problem for us as we have a substantial sales and support business in the Far East."

The control cabinet layout is extremely neat and rationalised, thanks mainly to the flexibility of the AirLINE valve island system. All the typical benefits of using a fieldbus system, DeviceNet in this instance, are gained by using AirLINE, it plugs directly into I/O modules, Wago in this case, and DIN rail mounted PLCs from the main vendors. This cuts down on wiring massively and ensures that we can talk to a wide variety of sensors, positional control feedback, HMIs and other equipment producing a variety of digital and analogue signals that can be brought into one place and integrated with the latest pneumatic valves. The islands also allowed for the control of air for actuation and piloting for the lower pressure, higher flow rate valves used to control the air that carries the powders around the system.

The AirLINE 8644 system overcomes plant standardisation and communication protocol issues by integrating Burkert high performance solenoid valves with analogue and digital I/O modules and fieldbus communications from all market-leading PLC vendors, including Siemens, Rockwell, WAGO, GE Fanuc, Bosch-Rexroth, Beckhoff, Phoenix Contact, WAGO and Hitachi.

Calculated to save up to 40% on total system costs through the engineering efficiencies achieved, the series 8644 provides users with a remote field I/O network which is compact, reliable and not exclusive to any specific communication protocol.

The remote process actuation and control system combines digital I/O, including a full complement of solenoid pilot valve outputs, digital and analogue I/O, including direct RTDs and T/Cs, and speciality signals (RS232, high speed counters, etc) into a single node. The system enables pneumatic solenoid valves to be electrically connected directly to a remote I/O module, without any individual coil wiring, numbering or termination required; each valve is simply a digital output addressed by the network. Depending upon the application, the system can incorporate up to 13 modules (2x and 8x module types), with a maximum of 64 valves accepted.



This GEA Pharma Systems - Buck Systems project has been an ongoing one, the very first control cabinet units in this project were installed over two years ago and have performed "perfectly" from the outset. Strong evidence as to why the pharmaceutical industry trusts Burkert hygienic processing products and the systems it designs around them.

*Burkert would like to thank GEA Pharma Systems for their kind permission to develop and reproduce this customer testimonial.*

*This is just one example of how we are redefining process systems and equipment. To learn more about what Burkert can do to help you, go to [www.burkert.co.uk](http://www.burkert.co.uk) or contact your local representative.*

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