

At a Glance:

ROCKWELL AUTOMATION

bürkert
FLUID CONTROL SYSTEMS

ENCOMPASS

Bürkert: Experienced System Integrators

Bürkert Innovation: Encompass Partnership

As Encompass Partners of industry leader Rockwell Automation Inc, Bürkert offers a range of solutions blending Rockwell Automation products with Bürkert ingenuity and experience, to deliver complete systems ranging from stand-alone automation panels to comprehensive, multi-hectare, integrated process control solutions.

Bürkert Innovation: System integration & price competitiveness

Our solutions encompass a complete array of Bürkert's world-class instrumentation, distributed pneumatic I/O systems and process valving, which enhance Rockwell Automation product ranges and capabilities. But it is in the application of these system devices that Bürkert stands in front as leader in automation. We apply cutting-edge technologies to meet our customers' needs, reducing hardware and systems lands-

cape complexity. Combined with the economies of scale that a multinational company such as Bürkert commands, these factors introduce cost savings of up to a staggering 80%.

Bürkert Innovation: World-best best technology products & expertise

Such massive cost savings are made possible by Bürkert's range of innovative technologies with features unmatched by market competitors. For example, DeviceNet controls valves with in-built PID controllers, or Ethernet/IP pneumatic valve

banks integrate directly to the POINT I/O™ system. Our innovative, modular AirLINE valve banks (see p2 for more info) fit up to 128 double-coil (5/3) valves on a single DeviceNet node!

Bürkert excels in building remote I/O enclosures that include pneumatic controls, unlike many board builders that simply do not have the relevant expertise nor experience required to ensure a successful installation. Areas they stumble include air supply calculations, valve sizing, internal piping, mounting requirements and exhaust volume capacity. Utilising our top-quality pneumatic valves and control devices, we have been designing building valve boxes in the Pacific Region for twenty-six years, so we understand the issues and always ensure systems meet the customer's needs.

Bürkert Innovation: Customer closeness

Bürkert is experienced in carrying projects from concept through design, execution and delivery to contract consultants or commissioning. We have created panels and enclosures for many of the largest users in the region, including mining sites, water authorities, food and beverage plants, pharmaceutical plants and general process industry. Numerous large projects have been direct arrangements with electrical contractors, who have then on-supplied our product to the end-user.

Speed of delivery is a key feature of our solution and with inventory on hand at Bürkert's workshop standard I/O enclosure build typically takes days, rather the weeks other companies will take. Even our quotation phase is automated, facilitating fast turn-around from the beginning and allowing the consumer or contractor to speed up process and completion timelines.



Bürkert tradesman Nelson Chymiak, commissioning an Ethernet based remote I/O system at one of Australia's largest Wineries.



Direct Rockwell Automation Integration Saves up to 40% on Total Project Cost

Bürkert AirLINE the only Pneumatic System to Link Directly to POINT I/O™ from Rockwell Automation

Bürkert knows that if your site uses Rockwell Automation, you want all site systems to integrate to that protocol and hardware standard.

The Bürkert AirLINE series is the only pneumatic system that directly integrates to POINT I/O™ from Rockwell Automation. This means that all communications, network nodes, and I/O hardware for your automation project can be from Rockwell Automation. It also means you have total flexibility of network choice, including protocols DeviceNet, ControlNet or Ethernet/IP. You can even upgrade the network at a later date without disturbing a single I/O point.

Most importantly however, the addition of pneumatic outputs into this flexible network solution completes the last piece in the distributed system puzzle. Now you can design plant automation modules on a single network node, to your needs – without worrying about system limitations. For example, you may define the pre-filtration plant to have 6 x DI, 4 x DO, 1 x AI and 8 x Pneumatic outputs. This can be integrated onto a single network node in a single field enclosure, rather than multiple boxes and substantial cabling that all other companies will suggest.

The Bürkert AirLINE system saves customer resources – space, time and money – and all but eliminates the need for multi-core cables, trays, breakout boxes and so on. This factor drastically reduces installation costs, even on smaller projects. Moreover, AirLINE built with Rockwell Automation products is considerably less complex than other installations, for ease of use, maintenance and trouble-free operation. We even offer Hot Swap capability.

For an idea of the cost of conventional competitor systems, consider this – for a traditional system, the normal formula an installation contractor would use is twelve terminations per I/O point. Then apply \$1.10 and 0.1 man hours per termination. Considering a 1000 point I/O system (30% pneumatic) with contractors charging \$65 per hour, the termination cost alone would total \$91,200.

Now consider Bürkert's AirLINE solution with POINT I/O™. Now the average terminations per point is four for electrical, and zero for pneumatic I/O. Calculating the project again, the total termination cost is now \$21,280. Yes, the I/O hardware is a little more expensive, but the savings continue in cables, tray, mounting and other componentry.

In addition, Bürkert's AirLINE system is considerably quicker to install so concept to commissioning timelines are drastically shortened.

Rockwell Automation POINT I/O™ with directly integrated pneumatics



Özkan Mehmet is a project-based PLC and SCADA systems integrator with more than 20 years experience. With great interest in emerging technologies, Mr Mehmet has worked with most automation solutions on the market including Bürkert's AirLINE built with POINT I/O™ from Rockwell Automation.

"Over the past seven to eight years there has been a move to distributed intelligence in the manufacturing industry, using systems such as Bürkert's AirLINE using POINT I/O™ from Rockwell Automation," said Mr Mehmet.

"There is a general perception that new technologies cost more money, even if that is partially offset by productivity and efficiency gains. Using the installations I have made using Bürkert's AirLINE with POINT I/O™ as a guide, I would say that hardware savings of about 30-40% are average. Further cost-efficiencies result from faster installation due to reduced hardware needs; significantly lower incidence of downtime due to robust technologies and reduced technical oversight requirements due to centralised control.

"Features such as fault location are additional benefits of a turnkey AirLINE and POINT I/O™ installation, making

operation trouble free for the system manager. Manufactories generally do not maintain the technical staff they used to, so ease of use and wide control are highly relevant features.

"Seven years ago I was planning my first project using AirLINE with Rockwell Automation technology, for one of Australia's largest fruit juice companies. At that time other companies were still developing their automation systems, whereas Bürkert came with a comprehensive and flexible solution that answered the customers' needs as well as my own. I received the follow up and service that I needed, even down to speaking with the German engineers when I needed more information. That installation has operated 24/7 without fault for the past six years.

"Bürkert has those extra years experience in working with automation solutions, and are able to supply tested and robust-technology panels and systems quickly, allowing me to work faster and take on more jobs."

Özkan Mehmet of Ozsher Pty Ltd. To consult please contact 0419 973 711 and ozkan_mehmet@optusnet.com.au.



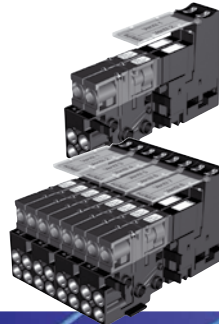


The Total Automation Solution



**Pneumatic connector modules:
Left, right or intermediate
feeding module**

- With manometer for displaying supply pressure, also without manometer
- Connections: G 1/4, NPT 1/4 plug-in coupling 10mm



2- and 8-station valve module

- Switch position indication
- Diagnosis
- Labels
- Check valves
- Connections: 1/4 OD push-in, M5 threaded port, M7 threaded port, plug-in coupling 6mm

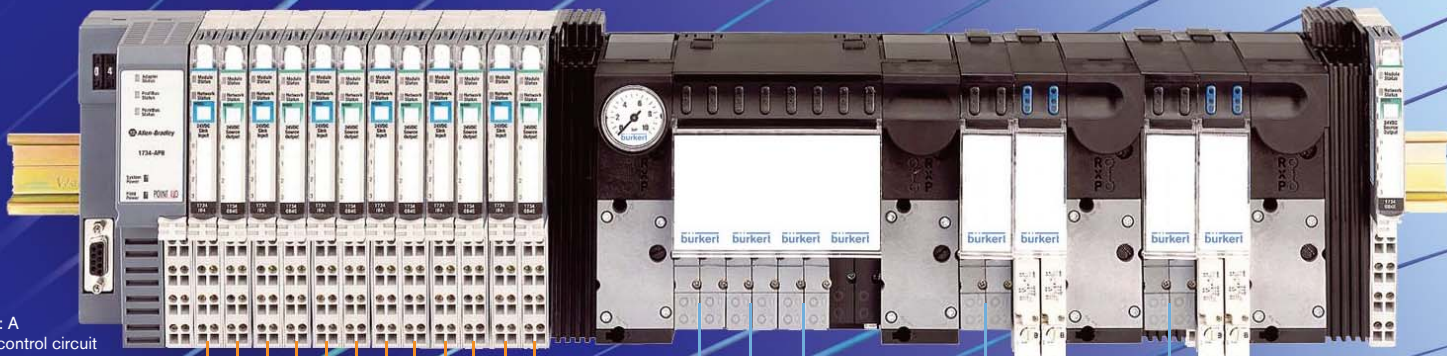
3/2-way valve Type 6524, 6526

5/2-way valve Type 6525, 6527

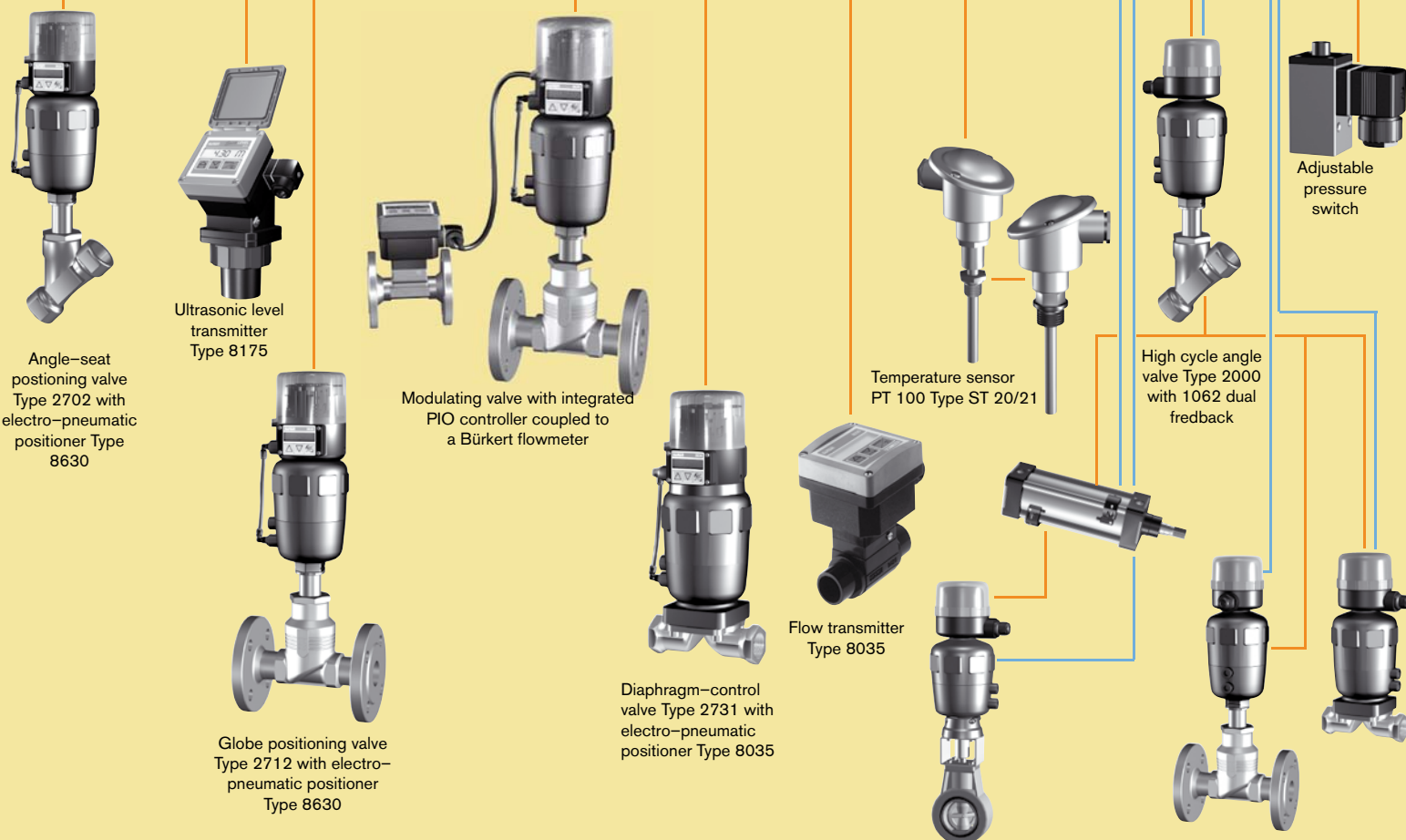
- Orifice: 4–6 mm
- QNn value: 300–700 l/m
- Pressure range: 14–140 PSI
- Supply voltage: 24V
- Power consumption: 1W
- With manual override



A field bus interface, valve outlets, digital and analog inputs and outputs, temperature inputs and numerous other I/O functions.



Quick solution: A decentralised control circuit makes use of the actuator and sensor's full speed. The set value comes through the bus.



All devices shown are from Bürkert's modular range of world-class technology components

Specific DeviceNet™ Communications

Modulating Control Valves

The Bürkert range of control valves includes Globe, Angle Pattern, Diaphragm (for hygienic or slurry applications), butterfly and ball valve systems. With our modular design, each of these devices can utilise the TopControl type 8630 integrated digital positioner. The 8630 positioner enables full modulating (position control) capabilities and is available in three specific types:



- Standard position control, which accepts a 4-20mA analogue input directly related to position control.
- With integrated PID control algorithm, which accepts a process signal (mA, RTD or Frequency) and can operate as a stand-alone system, or it can utilise a mA signal as a remote setpoint for PLC control.
- With integrated Fieldbus communications, which includes all the above options as well as the ability to bi-directionally communicate directly with the PLC bus. Available in DeviceNet and Profibus, this option eliminates the need for an analogue input, and analogue output, a PID block, valve position feedback and perhaps a process transmitter, altogether making it a very cost effective device, especially in applications that require multiple units.



Mass Flow Meters & Controllers

Bürkert has a distinguished history in gas handling applications, from micro-fluidic applications to high-volume filling and packing systems. Gas is compressible, so volumetric measurement doesn't prove accurate enough for most applications. A true measurement of Mass Flow is therefore required. Bürkert's Mass Flow range includes two types, meters and controllers.



Mass Flow Meters (MFMs) range from 20-1500 litres per min (full scale), with a lowest controllable flow rate of 0.4ml per minute. MFMs utilise the latest measurement technologies for high reliability and fast response including standard analogue signal outputs as well as RS232 and RS485 (for model 8006, 8702 and DeviceNet) interface for configuration and testing.

Mass Flow Controllers (MFCs) include all the options of the Mass Flow Meter, with the addition of a modulating valve and PID circuitry. This enables complete stand alone control capabilities. These units are mostly used with control and monitoring systems, which act to both read the process flow and send a remote set-point via analogue (4-20mA or 0-10V) signal.



Models are also available in DeviceNet and Profibus for direct connection to control systems. These prove a very cost effective option when complete system costs are considered.

Want to know more?

Contact our Sales Support Team to discuss how Bürkert enhances Rockwell technologies for a better solution, and discover why Bürkert is the Smart Choice in Fluid Control Systems.

Fax-Back to 1300 888 076 (Aust) and (09) 622 2847 (NZ)

Name _____

Company _____

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I am interested in:

- AirLINE process automation systems
- DeviceNET distributed intelligence
- Bürkert panels and enclosures
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