



bürkert
FLUID CONTROL SYSTEMS

Customer testimonial: Commonwealth Games

**WITH THE WORLD LOOKING ON, BÜRKERT'S
COMMONWEALTH GAMES FISH DON'T MISS A BEAT**

"No other valve we tested could give us the fast switching time and precise flow control we required – and certainly not within budget."

Even with mechanical fish, your timing must be just right to get the biggest bite.

The eyes of more than a quarter of the world were on Melbourne, Australia, as the 2006 Commonwealth Games commenced with an Opening Ceremony incorporating a river event extravaganza centred on the city's iconic Yarra River.

The focus of the river-borne event was thirty-six pontoons, each of which featured a water creature representing the nations of the Commonwealth. The fish were centrepiece in a synchronised light, music and water-feature performance.

Mr Neville Crocker, Director of Neville Crocker Australia Pty Ltd, worked in conjunction with a team of more than thirty-five designers, artists, fabricators and engineers to construct the fish models for the Commonwealth Games.

"The visual effects of the fish were required to operate in sequence not only with one another but also with the event music. This was particularly challenging in working with the water-feature fountains, due to the complex relationship of water draw and flow, pressure, valve cycle and response time," said Mr Crocker.

"Although the build of the fish models was relatively straight-forward, the integration of lighting, music and water-feature fountains demanded thorough design and testing," he said. "We required highly accurate and precise control of the fountains, both in terms of timing and flow rates."

Mr Crocker said that his team tested and evaluated valves from numerous organisations prior to choosing work with fluid control technology expert Bürkert. "The Bürkert valves were very hardy, with extremely rapid switching times and accurate flow control – all critical to the design specification and functionality of the musical water-feature fountains on the fish," said Mr Crocker.

"No other valve we tested had the fast switching time and precise flow control required to keep the water-features synchronous with the music and lighting displays at a consistent height – and certainly not within the budget for the job."



Bürkert 2000 Series Angle Seat valves; threaded, flanged and weld-end.



**Bürkert solenoid valves
6014 and 5281**





The Commonwealth Games fish at the Opening and Closing Ceremonies of the Melbourne Commonwealth Games, 2006

All photos produced with the permission of Neville Crocker

The Commonwealth Games Fish specifications

The fish, each approximately 6m long and 4m high, were built onto pontoons. Each pontoon incorporated five water-features – a fifteen meter high candle-style fountain at the head and tail end, a 140° degree vertical central fan-style fountain and two flanking fan-style side 90° display jets at 55° to the vertical.

Bürkert's Type 2000 process valve, coupled with the Type 6014 pneumatic pilot valve, was selected to control the water flow through each of the fountains, with Bürkert's tough Type 5281 diaphragm solenoid valve installed on the river-water inflow line on each pontoon. Bürkert additionally supplied fittings and accessories for the valve system.

Each of the five fountains passed 1,000 litres of water per minute, drawing water directly from the Yarra River. With a 3mm mesh as the only water purification device, Bürkert's 2000 process valves were selected for their trouble-free and hard-wearing attributes, and ability to control impure media.

Bürkert Engineering for the Commonwealth Games Fish

Mr Crocker said that the timeline for build of the fish models and pontoons, including all integrated effects and systems, was tight; allowing only three months for completion of all pontoons.

"The sales and technical staff at Bürkert were very helpful," said Mr Crocker.

"They worked with us to find the best valve for the job. All valves were installed and commissioned easily and quickly, allowing my team to get on with the job of getting all thirty-six pontoons up and operational on time for the Games."

Bürkert Partnership

Neville Crocker is the Director of Neville Crocker Australia Pty Ltd. Mr Crocker is a water feature designer with more than 42 years experience. A CD is available of the Commonwealth Games. Contact 03 9560 5333.

Contact Bürkert to discover our complete solution package for engineers, with design and build by our dedicated projects team.

Bürkert - the Smart Choice in Fluid Control Systems

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About Bürkert's Type 2000

The on/off Type 2000 process valve is particularly robust and suited to controlling non-pure fluids, such as water from a major metropolitan river.

The valve has high flow characteristics and is designed for ease of installation and commissioning. Actuated via the Type 6014 pneumatic pilot valve, the Type 2000 offers precision control of fluid flow and high responsiveness with rapid switching periods of less than half a second.

The stainless steel or gun metal Type 2000 valve is operated with a single or double-acting piston actuator. Available with threaded or weld end body, as well as flanged, the process valve is extremely robust and offers trouble-free operation.

Engineered for smart customisation, Bürkert offers a range of accessories for the Type 2000, including electro-pneumatic position feedback devices for enhanced control of process valves.

The 2000 series has excellent sealing integrity and long cycle life, with the Angle Seat body featuring especially high flow characteristics. Operating at pressures to 16 bar, the valve carries fluids at temperatures -10°C to +180°C and is deliverable with flow direction below or above the seat.