



Concentrated Solar Power Generation

Proven Solutions for a Challenging Environment



Committed to Concentrated Solar Power Customers

Flowserve® valve, pump and seal divisions collaboratively work to develop and support optimally designed and fully integrated process equipment. Our combined experience dealing with molten salt, heat transfer fluids and extreme weather conditions gives Flowserve more complete system knowledge so concentrated solar power (CSP) generators can focus on their mission – harnessing the clean energy of the sun. Flowserve works with customers to improve efficiency, maximize throughput and control process quality.

Flowserve Quick Response Centers (QRC) are a key component of the company's client service program. QRCs are equipped with thousands of commonly required parts and each QRC has the manpower and equipment to expedite time-sensitive repairs – large or small – including plant shutdowns. Strategically located around the world, QRCs ensure rapid response to customers' time-critical repairs, routine maintenance and product upgrades. Whether customer needs involve on-site technical assistance, equipment upgrades or broader project planning with full turnkey solutions, Flowserve delivers professional, reliable results.

Flowserve solutions

Flowserve's engineered solutions maintain durability and precision in the often harsh environments and process conditions of CSP generation, utilizing designs that minimize leaks, function at extreme temperatures, and resist corrosion and abrasion. Our manual and check valves, control valves, actuators and accessories are all engineered to perform reliably and efficiently in some of the most demanding environments. These powerful solutions have made Flowserve one of the world's leading providers of valves and controls for the CSP industry. Flowserve has the experience, expertise and breadth of products to supply the solar power industry.

In solar power since the dawn of the industry

Flowserve's products were instrumental in the landmark Solar One project in the Mojave Desert during the early 1980s, and we have continued to be a leader in the industry in product innovation, performance and reliability in the three decades since.

Flowserve products are precisely engineered and constructed to perform in concentrated solar power generation.





VALTEK™ MARK ONE

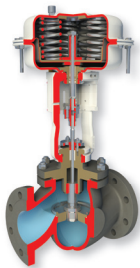
SPECIFICATIONS

Valve Type: Globe Control Valve
Size: DN 15 to DN 915; 0.5" to 36"
Pressure: PN 10 to PN 400; Class 150 to 2500
Material: Carbon Steel; Stainless Steel; Special Alloys
Temperature: -196 °C to 815 °C; -320 °F to 1500 °F

SOLUTIONS

The industry's first choice for a reliable and tough globe control valve. The Mark One is flexible, servicing a wide range of applications from molten salt to heat transfer fluids as well as severe service applications required in a solar power plant. Available with a variety of options including bellows seals to eliminate packing leakage and severe service options to eliminate cavitation and noise. The Mark One provides solid solutions to difficult applications.

For more information see document #VLENTB0001



VALTEK FLOWTOP

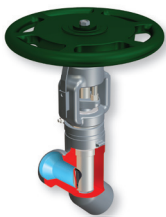
SPECIFICATIONS

Valve Type: Globe Control Valve
Size: DN 15 to DN 400; 0.5" to 16"
Pressure: PN 10 to PN 40; Class 150 to 300
Material: Carbon Steel; Stainless Steel; Special Alloys
Temperature: -196 °C to 538 °C; -320 °F to 1000 °F

SOLUTIONS

The FlowTop general service control valve offers reliable and high performing service and is available with a number of options including bellows seals to eliminate packing leakage. It also offers superior performance in steam and water applications.

For more information see document #SAEEBRV740



EDWARD™ UNIVALVE

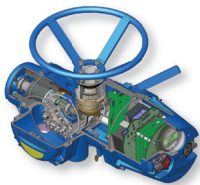
SPECIFICATIONS

Valve Type: Globe Control Valve
Size: 2.5 thru 4
Pressure Class: 600
Material: A105, F22, F91, F316, F347
Temperature: Up to 650 °C; Up to 1200 °F

SOLUTIONS

High-performance isolation valve designed for manual throttling of heat transfer fluids and molten salts.

For more information see document #EVENCT0001-04



LIMITORQUE™ MXA

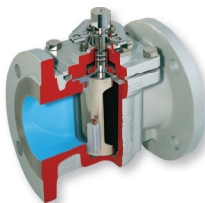
SPECIFICATIONS

Actuator Type: Non-intrusive, electronic, multi-turn
Sizes: From 55 ft. lb. – 1700 ft. lb.; 73 Nm-2300Nm
Flanges: F/FA10 – F/FA25
Temperature: -60 °C to +70 °C; -140 °F to 158 °F

SOLUTIONS

Limitorque MXA motor operated electronic actuators are able to withstand significant temperature fluctuations while also controlling and monitoring solar power processes with unparalleled reliability.

For more information see document #LMENBR2302



DURCO™ MACH 1

SPECIFICATIONS

Valve Type: Non-Lubricated Plug Valve
Size Range: .25" to 8"
Pressure: Class 150, 300, 600 (de-rated)
Material: Ductile iron; stainless steel; high alloys
Temperature: Up to 274 °C; Up to 525 °F

SOLUTIONS

The Mach 1 is a tight sealing non-lubricated plug valve that allows for adjustability and repair while valve remains installed in the pipeline. Commonly used in the production of polycrystalline silica used in solar panels.

For more information see document #DVATB0030-02

To find your local Flowserve representative or for more information visit flowserve.com

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