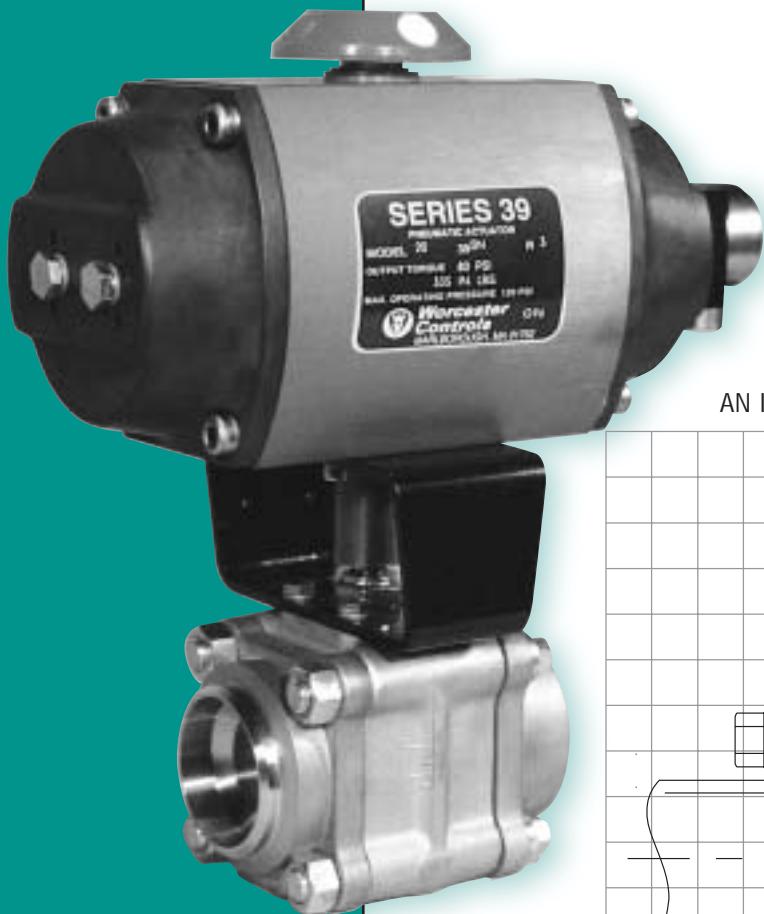


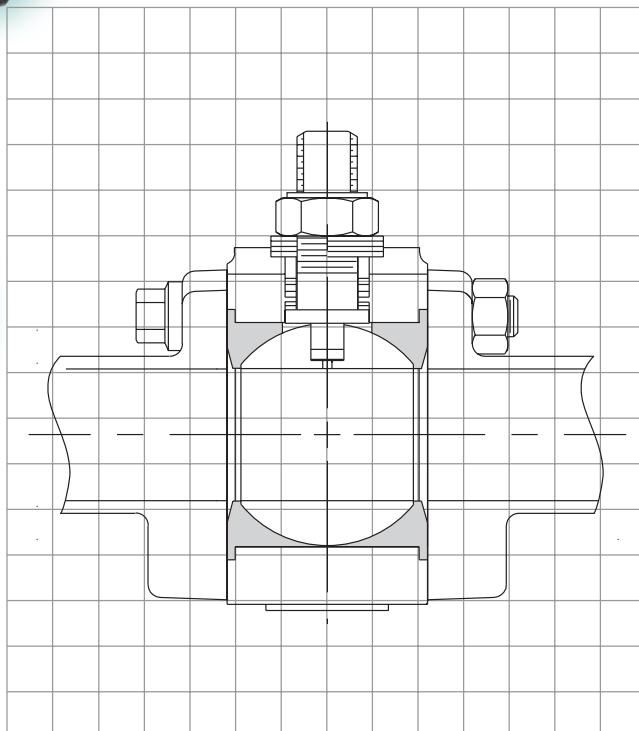


Worcester Controls

PB CF-3



AN ISO 9001 REGISTERED COMPANY



Cavity Filled Valves

Worcester® Ball Valves
with total enclosure seats

Valves For Stick-Free Operation on Rubber Polymers Monomers, Styrene, Butadiene, Slurries

Worcester Controls offers the quality solution to sticking valve problems, cavity filled ball valves. Some of the roughest process control problems involve those in butadiene and styrene services. These and other fluids such as rubber polymers can polymerize in place. That means they can polymerize inside valve body cavities effectively immobilizing the valves.

In applications where product can polymerize FEP seats are available to reduce "popcorning" which can occur in TFE or Reinforced TFE seats.

A unique seat design using TFE, Polyfill® or FEP eliminates most of the volume between the ball, stem and body. This reduces area for product build up associated with conventional ball valves.

Worcester cavity-filled valves offer excellent performances in control of pharmaceuticals, food products, sticky and viscous fluids and slurries. They are available in Worcester's Series 44 3-piece (sizes 1/4" - 2"; see bulletin PB 401), Series 59 3-piece full port (sizes 1/4" - 1-1/2"; see brochure PR 451), Series 51/52 flanged (sizes 3"-8"; see brochure SB 51) and Series 818/828 flanged full port valves (sizes 2"-6"; see brochure PB 800). Diverter body cavity filler valves are available in sizes 1/2" - 2".



How to Order

To order a cavity filled valve, simply order the basic valve using the appropriate bulletin. At the end of the model designation, state "Valve to have cavity filler seats."

Worcester® is a registered trademark of Worcester Controls. • Polyfill® is a registered trademark of Worcester Controls. • Grafoil® is a registered trademark of Union Carbide Corporation.

Flowserve Corporation has established industry leadership in the design and manufacture of its products. When properly selected, this Flowserve product is designed to perform its intended function safely during its useful life. However, the purchaser or user of Flowserve products should be aware that Flowserve products might be used in numerous applications under a wide variety of industrial service conditions. Although Flowserve can (and often does) provide general guidelines, it cannot provide specific data and warnings for all possible applications. The purchaser/user must therefore assume the ultimate responsibility for the proper sizing and selection, installation, operation, and maintenance of Flowserve products. The purchaser/user should read and understand the Installation Operation Maintenance (IOM) instructions included with the product, and train its employees and contractors in the safe use of Flowserve products in connection with the specific application.

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Facsimile: 931 432 5518

Automation

Cavity-filled valves may be completely automated with Worcester's Series 39 pneumatic or 75 electric actuators. Both actuators can be optionally equipped with process monitoring equipment and/or positioners for modulating applications. Special automation packages available for PLC/computer controlled systems.

Fire-Safety

Worcester offers a fire-rated version of the cavity-filled valve. FEP cavity filler seats are qualified per API 607. Grafoil® stem seals and body seals (suitable for butadiene processes) are used on fire-rated valves.

Applications:

Styrene	Fermentation Process
Monomers	Food Process
Butadiene	Pharmaceuticals
Detergent Slurry	Fire Safe Applications

