

VALVE SOLUTIONS

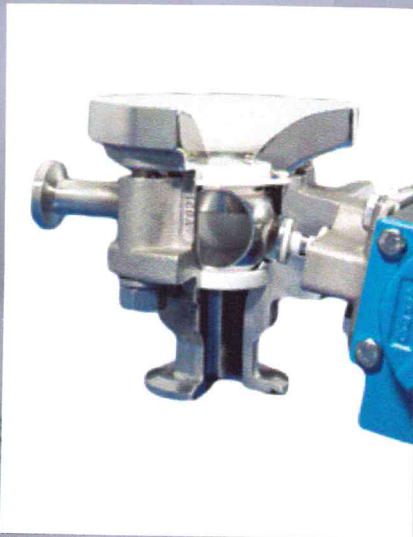
COSMETICS

PBM PROVIDES THE VALVE PRODUCTS AND SERVICES REQUIRED TO MINIMIZE CONTAMINATION, COMPLY WITH SANITARY REGULATIONS, FACILITATE CLEAN-IN-PLACE, SOLVE CLOGGING PROBLEMS, PROCESS FLAMMABLE ADDITIVES, REDUCE DOWNTIME, AND PRODUCE HIGH QUALITY COSMETICS, FRAGRANCES, NUTRITIONALS, AND OTHER PERSONAL CARE PRODUCTS.

FLUSH TANK BALL VALVE KEEPS MEDIA FLOWING SMOOTHLY

During mixing and processing, dead space between the bottom of a tank and the shutoff point of a valve can cause media to build up. This can clog the valve or cause contamination of the process. These problems can be costly and sometimes dangerous, especially when dealing with alcohol-based or other highly flammable additives.

PBM's Flush Tank and Angle Stem Flush Tank ball valves can be provided with a pad that is designed to weld flush to the inside surface of the tank. This enables the ball to be positioned in a way that virtually eliminates dead space.



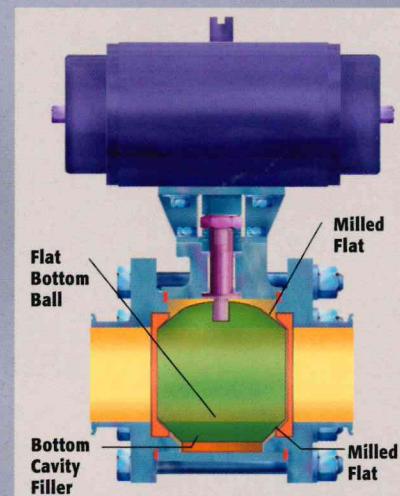
The Angle Stem Flush Tank ball valve is ideal for applications involving jacketed or insulated tanks because it allows the actuator to clear the tank and provides easy valve access. This valve also meets or exceeds API-607, Edition 4, Fire-Test design standards, making it ideal for use with highly volatile media.

2-WAY BALL VALVE IMPROVES PIGGING, CLEANING AND DRAINING

Pigging of process lines is critical in many applications. If lines are not thoroughly pigged, cleaned, rinsed, and drained after each batch, subsequent batches of products could easily be contaminated.

To aid cleaning and draining, PBM's 2-way ball valves can be provided with a flat bottom ball design, a special bottom cavity filler, and two milled flats on the downstream side of the ball in the open position.

After the process lines and the valve are pigged for maximum yield, cleaning and rinsing agents can be run through the valve to



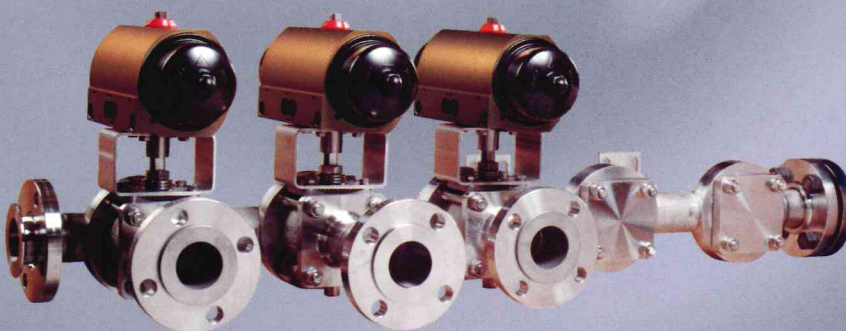
remove any remaining product. Once the valve is cleaned and rinsed, the valve and body cavity self-drain past the two milled flats. The special bottom cavity filler minimizes the amount of media that can puddle instead of draining out of the bottom of the valve.



SPACE-SAVING FABFLEX® ASSEMBLIES SOLVE MULTIPLE PROBLEMS

During batch processing, the ability to vary the additives used per batch and prevent contamination is crucial to both production time and product integrity.

PBM's Fabflex valve and manifold assembly provides an efficient way to satisfy multiple requirements at a single point in the process line. The header assembly



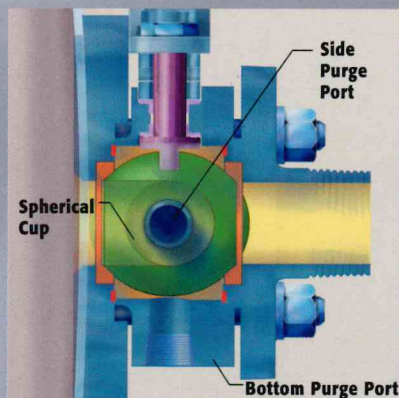
can be supplied in lengths of up to 18' and can accommodate multiple valve configurations with its unique space-saving design. Specially designed cylindrical radius end fitting pads reduce dead

space and prevent product contamination. Available in a variety of materials, including 316L Stainless Steel, the Fabflex assembly is ideal for sanitary applications.

SELF-CLEANING SPHERICAL CUP BALL VALVE MAKES SAMPLING EASY

Thick paste-like materials can often cake inside a valve and make sampling difficult. However, PBM's Self-Cleaning, Spherical Cup Flush Tank ball valve can ensure quality samples each time with ease.

Unlike most ball valves, this specially designed valve features a hole three-quarters of the way through the ball, which forms a small sampling cup. During the mixing process, the cup faces the inside of the tank and collects the paste-like



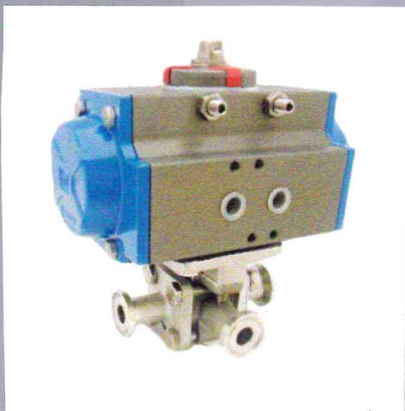
media. When the ball is rotated 180°, a sample can be extracted from the cup. When rotated 90° to face one of two purge ports, the valve can be cleaned-in-place. PBM's Adjust-O-Seal feature also

ensures that no cleaning solution or paste from the sample cup drains through the end fitting while the cup is being purged and drained.

DIVERTER PORT AND MULTI-PORT BALL VALVES ENABLE CLEAN-IN-PLACE

Thick media, complex configurations, and limited space can require creative valve solutions.

PBM's sanitary Diverter Port and Multi-Port ball valves are ideal solutions for processing thick media. When equipped with purge ports, the Clean-In-Place design enables the body cavity of the valve to be cleaned quickly and thoroughly inline. For applications in which permanent inlet and outlet connections



are not practical, portable hoses may be used.

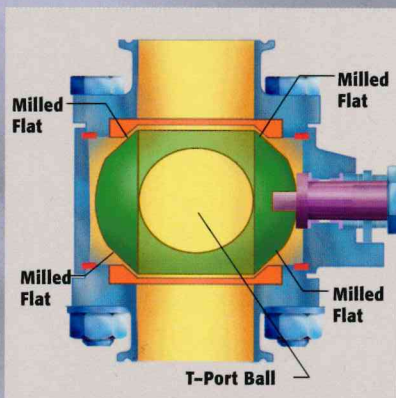
Like other PBM valves, these ball valves can be equipped with PBM's Direct Mount Actuation package, which uses the

valve stem as an integral part of the actuator drive to eliminate the need for brackets and extensions, improve alignment, and increase cycling life.

T-PORT, SELF- CLEANING BALL VALVE PREVENTS PRODUCT CONTAMINATION

Whether used to process an expensive product or a volatile additive, a well-cleaned valve can prevent costly maintenance, downtime, and contaminated products.

PBM's 2-Way, T-Port ball valve design includes two milled flats on each side of the ball in the open position to allow maximum flow to the open area of the body cavity.



When the valve is in the open position, the T-Port ball provides optimum access to the body cavity and allows cleaning and

rinsing solutions to flow past the seats and through the body cavity to effectively clean the valve inline.

PBM HAS SOLUTIONS FOR YOUR VALVE APPLICATIONS.

PBM RECOGNIZES THAT MANY VALVE APPLICATIONS ARE UNIQUE AND OFTEN HAVE SPECIAL PROBLEMS. PBM COMBINES SPECIFIC APPLICATION REQUIREMENTS WITH CREATIVE ENGINEERING AND QUALITY MANUFACTURING PRACTICES. ADD TO THAT PBM'S COMMITMENT TO QUALITY SERVICE, AND THE RESULT IS SATISFACTION FOR YOU... OUR CUSTOMER.

PBM VALVES OFFER THE CONVENIENCE OF STANDARD FEATURES WITH THE OPTION TO CUSTOMIZE A VALVE FOR A SPECIFIC APPLICATION. MOST PBM VALVES INCORPORATE PBM'S ADJUST-O-SEAL® DESIGN, AND ONLY PBM HAS THE ABILITY TO PROVIDE CLEAN-IN-PLACE/STEAM-IN-PLACE CAPABILITY WITHOUT PROCESS INTERRUPTION.

PBM HANDLES TOUGH VALVE APPLICATION PROBLEMS... JUST LIKE YOURS.



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