



OYSTER™ FLOWMASTER VALVE

Rotary Dosing Valves for Powders

A key application for sanitary valves in Powder handling systems is to control the flow of product into or out of a machine or transport container. The traditional hygienic butterfly valve can easily, thanks to its modular design, be converted into a rotary dosing valve. The valve is designed for use with a 180° pneumatic actuator flipping over and back, each time discharging a controlled amount of product.

Valvengineering Offers a full range of solutions for Powder flow control in the Pharmaceutical, Chemical, Food & Beverage and Cosmetics Industries.

All the valves are designed to the highest cGMP standards and are offered in full Pharma specification with AISI 316L wetted parts, hand polished to a top quality mirror finish, with other finish types available on demand.



DOSING VALVE
Powder flow control



OYSTER™ FLOWMASTER VALVE

Key features of the Oyster Flowmaster valve

- Light weight, and cost effective
- Offers full sealing in closed position at either end of its travel
- Exceptionally easy to strip down, clean and re-assemble
- Range of seal materials to suit all applications
- Robust engineering to ensure long life

The valve is offered with tri-clamp connections as standard but a full range of variations are possible:

- ASME/BPE, BS4825, DIN 32676 triclamp connections
- Weld ends
- Hose connections
- Wafer
- All flanges and collars can be supplied to customised lengths where necessary

The most common solution for powering the valve is by means of 180° pneumatic actuator. A full range of automation options are available:

- 180° pneumatic actuator, either aluminium or stainless steel
- Solenoid valves
- Limit switches
- 4-20mA or 3-15psi Positioner for proportional control of rotor movement
- “Quick release” actuator mount (see photo)

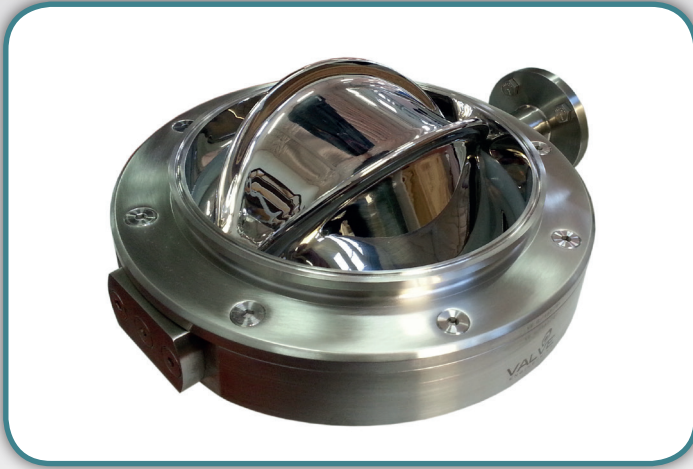
The main criteria for choosing the correct valve are:

- Chute diameter
- Required flow rate

The table below indicates approximately the quantity of material that would be discharged under typical operating conditions.

FLOWMASTER VALVE FLOW ESTIMATES					
	4"	6"	8"	10"	12"
Nominal Valve Size:	100	150	200	250	300
Num. lobes	4	6	6	6	6
Volume transferred per cycle: (6 pockets) (ml)	349	1.230	3.300	6.854	12.286
Density of product	0,50	0,50	0,50	0,50	0,50
Nominal cycles/min. (suggested MAX speed)	24	22	20	16	12
Notional Efficiency Ratio	80%	80%	80%	80%	80%
Estimated weight (Kg) per Hour:	201	650	1.584	2.632	3.538
Estimated weight per single pocket (gr.)	23	82	220	457	819

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Reduced capacity lobes can be supplied where the required flow rate is much less than the indicated rate. This is particularly useful where products are not free flowing or where the valve is being used in a situation in which there can be very large differences in flow rate between one campaign and the next.

Where the valve is to be used on a system in which the valve will be exposed to a vacuum while operating a vacuum resistant design may be needed in order to avoid the risk of the vacuum dislodging the seal. In this case we offer the VRB or the VRC type design. These valves have a specially designed body with o-rings positioned to prevent the vacuum from interfering with the seal, and are not only fully vacuum compliant but also fully cGMP compatible and designed to full sanitary specification.

Oyster docking system

For larger valves we have developed the Oyster Docking System to make fitting and removing heavier valves easier and safer.

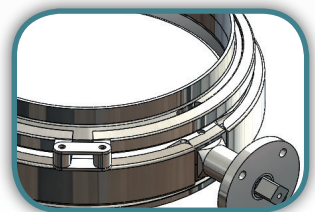
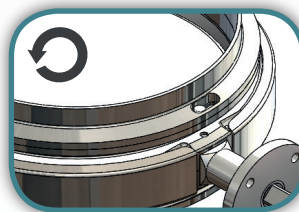
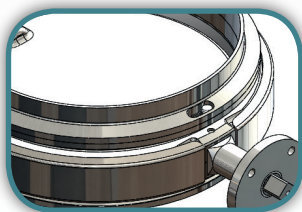
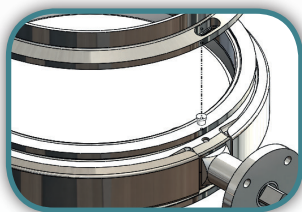
The Compact Docking Collar system consists of

- a proprietary welding ferrule with machined slots, to be welded in place on the outlet
- The valve fitted with locating pins which engage in the slots
- a clamp to secure valve to ferrule
- An O-ring to ensure tightness at the join

Using the system is simple and intuitive:

1. Place the valve face against the ferrule so that the pins engage in the slots
2. Rotate the valve a few degrees so the valve is held in place by the pins in the slots
3. Fit clamp

Removing the valve is also easier and **above all safer** as it is now a simple two stage process. The valve is held in place by the pins when the clamp is removed, and so there is **no danger of it falling and causing injury or damage.**



ATEX – all configurations of the Oyster™ Feeder valves can be supplied ATEX marked for installation in hazardous zones according to the ATEX Directive 2014/34/EU.



OYSTER™ MOTORISED FEEDER VALVES FOR POWDERS

Besides the Oyster™ Flow control valves, ValvEngineering offers a complete range of hygienic valves and dosing valves for powders, and sampling systems for both solids and liquids. All of our products include outstanding design features and superior manufacturing quality which make them ideally suited to the demanding requirements of the pharmaceutical, Food & Beverage and Chemical Industries.

On this page is a brief introduction to our key products. Please do not hesitate to contact us for further information about the products or to discuss specific applications



Oyster™ Compact Series

The Oyster™ Compact series features the patent Clamshell clamp system, widely acknowledged as the most compact, hygienic and user-friendly valve on the market.



Oyster™ Composite Valve

The ideal choice for the discharge and volumetric dosing of powders, particularly in pack-off system. The ingenious design of the valve ensures optimal filling rates and dosing accuracy. It can be easily customised to suit individual customer requirements.



Oyster™ Lumpbreaker

The Oyster™ Hygienic In-line Lumpbreaker is the ideal solution for breaking up lumps that can form in bulk powders and other solid products during storage or transport.



Oyster™ Samplmaster

The Oyster™ Samplmaster includes both intrusive and non-intrusive sampling valves for powders and granules. They are offered in both manual and automatic versions, with a vast range of mounting options and configurations.



Oyster™ Reactor Sampling System

The Oyster™ Reactor Sampling System is a safe and reliable sampling device able to meet the most demanding requirements of the pharmaceutical and chemical industry.

ValvEngineering Srl

Via di Coselli 23/25 – 55012 Capannori - LUCCA - Italy

• TEL +39 0583 378587

• P.IVA IT02090150463

WEB: www.valvengineering.com MAIL: info@valvengineering.com

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