

Eclipse Butterfly Valves

Series: BVM, BVM-A, BVM-R, BVM-AR, BVM-HD BVM-AHD

Sizes: Rc 1/2" up to and including Rc 3"



**Manual Butterfly
Valve type BVM, BVM-R, BVM-HD**



**Automatic Butterfly
Valve type BVM-A, BVM-AR, BVM-AHD
(Shown with Optional Crank Arm /
Actuator Not Shown)**

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1.0 Design Conditions* Eclipse Butterfly Valves

Inlet pressure	_____	350 mbar maximum
Pressure difference	_____	210 mbar maximum
Ambient temperature	_____	60°C maximum / 0°C minimum
Gas temperature	_____	60°C maximum
Gas types	_____	Air, Natural gas, Propane, Butane
Gas flow	_____	In both directions
Mechanical strength	_____	Group 2

**For other conditions contact Eclipse*

2.0 Materials of Construction

- 2.1 Valve body – Cast iron
- 2.2 Internal valve disc – Carbon steel
- 2.3 Valve shaft – Zinc plated steel
- 2.4 Shaft seal – Nitrile (Buna-N)
- 2.5 Manual adjuster – Zinc - Aluminum alloy (Zn/Al/Mg)

3.0 Installation

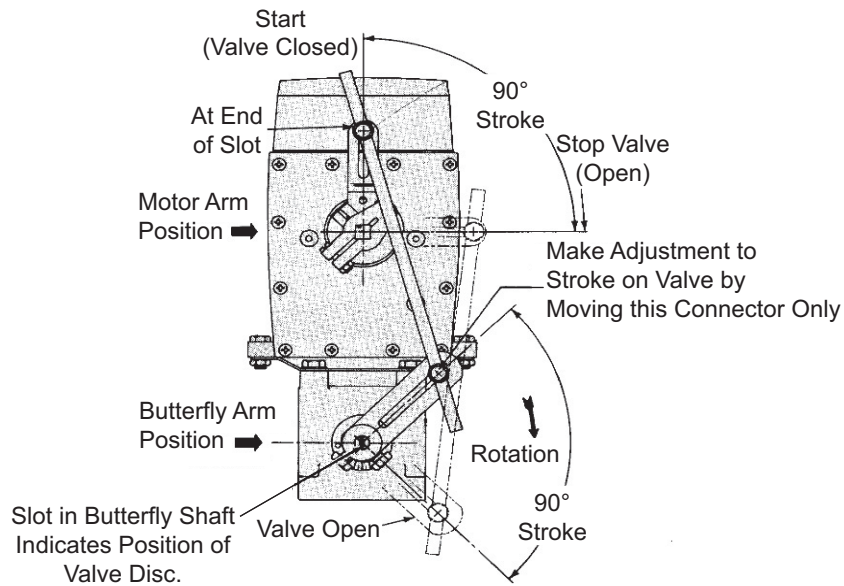
- 3.1 A manual shut-off valve should be installed upstream of the butterfly valve to assure positive shut-off when maintenance is required. The butterfly valve does NOT provide a tight shut-off.
- 3.2 Before installing the valve, remove pipe scale and foreign matter that may have accumulated in the connecting pipes.
- 3.3 Ambient temperature at the location of the valve should not exceed 60°C.
- 3.4 Flow of the gas to the valve can be in both the directions, temperature of the gas should not exceed 60°C.
- 3.5 Care should be taken during installation to see that stress is not placed on the valve body due to improper support of adjacent piping.
- 3.6 Butterfly valves can be used with any clean, commercially available fuel gas. For corrosive gases such as coke oven or digester gas, valve internals must be coated with a suitable corrosion resistant material at the Eclipse factory. Be sure your valve(s) are ordered to suit your application.
- 3.7 Eclipse “BV” valves can be mounted in any position.
- 3.8 Put standard sealing material approved by local gas authorities on the threads of valve body.
- 3.9 Always install the butterfly valve in such a way that if the linkage connection is disconnected, the valve will move to its closed position through the weight of the lever construction.

4.0 Maintenance

- 4.1 Monthly – Remove debris and clean exterior of the valve, motor, and linkage assembly; inspect tightness of couplings and linkage; and verify adjustments and smooth operation of the valve through its stroke range.
- 4.2 Yearly – Check for gas leakage at the threads and shaft using procedures described by the local gas authorities.

5.0 Adjust Motorized Valves BVM-A, BVM-AR and BVM-AHD

- 5.1 Crank arm on actuator motor is vertical for start of stroke.
- 5.2 Make all adjustments to linkage with actuator in low fire position. Never adjust linkage when motor is in any other position. Care must be taken to prevent the linkage from binding and stalling the actuator.
- 5.3 Swivel connector should be near end of actuator arm on initial adjustment. Change stroke on valve arm connector only.
- 5.4 Slot on Butterfly Valve shaft indicates position of disk.
- 5.5 Adjust Butterfly Valve to be closed at the beginning of stroke. Customer must adjust the minimum opening of butterfly at job site for the required low flow condition.
- 5.6 Stroke of butterfly crank arm shall be adjusted to provide 85° normal full opening to a maximum of 90° opening of butterfly valve. 85° opening is preferred to prevent binding of the linkage. The last 5° of rotation produces very little change of flow.
- 5.7 DO NOT exceed 90° stroke on butterfly valve as it begins closing again as the rotation exceeds 90° stroke.
- 5.8 90° stroke drive actuators must be used on all butterfly valves.
- 5.9 When supplied from the Eclipse factory mounted to the butterfly valve, the motor actuator is adjusted to 90° stroke. When supplied separately, or from the manufacturer, motors must be checked by the customer and adjusted, if necessary, for 90° stroke.



6.0 Adjust Manual Valves BVM, BVM-R and BVM-HD

- 6.1 The indicator plate comes aligned and installed on the valve from the Eclipse factory.
- 6.2 If the indicator requires replacement and alignment, first loosen the adjusting screw on the front and the two set-screws on the side of the indicator.
- 6.3 Remove the indicator and turn the valve shaft to the closed position.
- 6.4 Carefully slide the indicator onto the shaft in the proper orientation.
- 6.5 Tighten the set screws while taking care that the position does not shift.
- 6.6 Refer to Operation 7.2 for setting the flow adjustment.

7.0 Operation

- 7.1 Maximum operating pressure differential is not to exceed 210 mbar.
- 7.2 For manual control of Eclipse Butterfly Valves, loosen the adjusting knob on the top of the butterfly valve and move the adjusting cover to the desired position and fasten it again.
- 7.3 Valve disc position is indicated by the pointer on the cover and the slot in the end of the shaft.

8.0 Type Explanation

- BVM Hand operated fullport butterfly valve
- BVM-A Automatic operated fullport butterfly valve
- BVM-R Hand operated reduced port butterfly valve
- BVM-AR Automatic operated reduced port butterfly valve
- BVM-HD Hand operated high-drop butterfly valve
- BVM-AHD Automatic operated high-drop butterfly valve

9.0 Flow Table

Refer to Data 720 for flow capacity table, available on request.

