

# VM SERIES

## UNIDIRECTIONAL OR BIDIRECTIONAL WAGON TYPE PENSTOCK

### DESCRIPTION

- Gate designed for large sections with high water loads.
- Board with side wheels, to facilitate gate operation under high water loads.
- Square or rectangular penstock design.
- Option of unidirectional or bidirectional.
- Various construction materials and seals available.
- To install embedded in concrete or mounted on walls with chemical or expansion anchors.

### GENERAL APPLICATIONS

This vertical-lift gate is designed for installation in channels or in orifices in walls. The orifice can be rectangular, round or square, and this penstock can have a 3-side or 4-side seal. It is suitable to work with clean liquids or loaded with solids.

Designed for applications such as:

- Irrigation.
- Conduits.
- Hydroelectric power stations.
- Water treatment.

### SIZES

From 500 x 500 to 5000 x 5000.

*Other DN's on request.*

### WORKING PRESSURE ( $\Delta P$ )

Maximum working pressure adapts to the needs of the customer in every project. These penstocks are designed to comply with working conditions in the place of installation.

### TIGHTNESS

The tightness of **VM** vertical-lift gates complies with that set out in regulation DIN 19569, class 5 of leaks.

### FLANGES/BUILDING WORKS

Given the large dimensions of the **VM** vertical lift gate and the high hydraulic forces it have to withstand, the most common assembly system (recommended by **CMO Valves**) is with the turn points embedded in concrete. This type of assembly requires a series of gaps in the civil engineering work for the installation of the penstock. But there is also the possibility of attaching it to the wall by means of chemical or expansion anchors. It is very important that the walls of the channel where the penstock is to be located are completely flat and level.

### DIRECTIVES

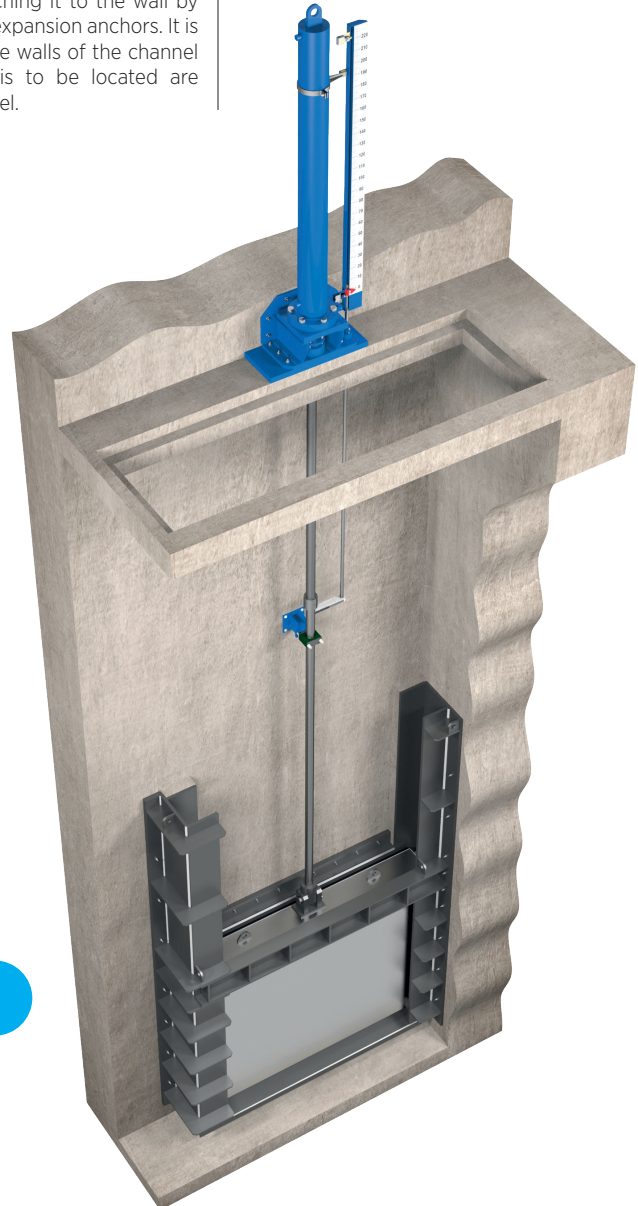
See document of directives applicable to **CMO Valves**.



For further information on categories and zones please contact **CMO Valves**, Technical-Commercial Department.

### QUALITY DOSSIER

- The tightness of the seat area is measured with gauges.
- Material and testing certificates can be supplied on request.



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