



EMPOWERED PERFORMANCE

## Additional safety instructions for the use of PNEUMATIC AXIAL VALVES VIP in potentially explosive atmospheres.



### GENERAL INFORMATION

- 1) The maker carefully checks the integrity and functionality of every single product. Just a few simple precautions will keep it working for a long time.
- 2) Read the User's Manual supplied with the product and the instructions below for the use of ball valves in potentially explosive atmospheres before proceeding in any way.
- 3) Make sure the product supplied matches the application requirements perfectly.
- 4) Upon receipt of the product, make sure the packaging is still in perfect condition and does not show any sign of damage due to transportation.
- 5) If a valve needs to be stored for extended periods of time, we suggest keeping it in its original packaging. Store the valve in a clean, not excessively humid area at temperatures between -10 and +60° C.

### MARKINGS AND CLASSIFICATION

- 1) On the valve body are marked the manufacturers name and address, the product type, information about the DN, PN (or Maximum Allowable Pressure) and temperature limits.
- 2) An additional label lists all valve specifications and information about the Classification of the product suitable for being used in potentially explosive atmospheres.

### LEGEND

- 1: Manufacturer trademark and address (responsible for the placing on the EU market);
- 2: Marking (Reg. CE 765/2008 Annex II);
- 3: Manufacturer type identification;
- 4: Lot number or series number (if any);
- 5: Production date (yy/mm);
- 6: The Symbol (84/47/EEC Directive - Annex II);
- 7: The group of equipment (I,II, III) and the letter G (GAS) or D (DUST) for explosive atmosphere for which it is intended;
- 8: The equipment category (1,2,3).

NOTE(1): If there is not enough space for marking, the following reduced marking is applied according to point 11.4 of the EN ISO 80079-36:

II 2 GD Ex h X.

NOTE(2): The registration number, serial number/year together generate another number which identifies a homogenous lot of products and makes it possible to trace back the records of all ATEX conformity tests.

The Information about the max temperature of the intercepted fluid and max Ambient temperature are displayed on the ATEX label or are found on the body of the device or in the technical documents provided for the user /safety instructions.).

- 3) The surface temperature class is determined as per **TABLE A**.

**TABLE A - Relation between fluid temperature and ambient temperature, temperature class and max surface temperature.**

Fluid Temp. and Ambient Temp.	Temperature class	Max surface temperature
-20°C ≤ T ≤ 60°C	T6	T85°C
60°C < T ≤ 75°C	T5	T100°C
75°C < T ≤ 110°C	T4	T135°C
110°C < T ≤ 150°C	T3	T175°C

No information about room temperature and intercepted fluid maximum temperature is provided in the ATEX label as it is already marked on the valve body or listed in the technical documents supplied to the User/Safety instructions.

VIP version with gasket in NBR - 20°C +80°C  
 VIP version with gasket in FKM - 20°C +150°C  
 VIP version with gasket in EPDM - 20°C +150°C

- 4) The symbol X indicates the following special conditions for safe use:
  - The maximum surface temperature of the equipment has been determined at the frequency of use of 1Hz, higher frequencies could cause an increase in this value.
  - The temperature range indicated on the valve is valid both for the ambient temperature and the fluid temperature.
  - The use of the equipment at temperature lower than the maximum value marked on the valve case (TABLE A), can vary the Temperature.
- 5) The pneumatic valve are in compliance to ATEX Directive 2014/34/EU as devices in Group II, Category 2 G D, Type of protection Ex h (with constructional safety "c") with temperature class T6..T3 / 85°C..175°C (for specific Temperature Class see par. 9 - Table A of this technical file) and are suitable to be installed and used in classified areas of GAS group IIB or IIC (zone 1-2) and Dust group IIIC (zone 21-22), EPL Gb (for GAS) Db (for Dust).

**TABLE B - Relations between hazardous zones, substances, category and EPL.**

HAZARDOUS ZONE	CATEGORY ACCORDING TO DIRECTIVE 2014/34/EU	EPL	
Gases, vapours or mists	Zone 0	1G	Ga
Gases, vapours or mists	Zone 1	2G or 1G	Ga or Gb
Gases, vapours or mists	Zone 2	3G, 2G or 1G	Gc, Gb or Ga
Dusts	Zone 20	1D	Da
Dusts	Zone 21	2D or 1D	Da or Db
Dusts	Zone 22	3D, 2D or 1D	Dc, Db or Da

### PREVENTION AND SAFETY

- 1) VIP axial valves with the above-mentioned markings are suitable for being used in ATEX classified atmospheres.  
 VIP VALVES ARE NOT SUITABLE FOR INTERCEPTING POTENTIALLY EXPLOSIVE MIXTURES. We must specify that when we speak of the inside of a valve, we only refer to the part containing the operating fluid. In fact the actuator part of a valve is designed to contain only and exclusively neutral fluids, not dangerous and not flammable. The control fluid shall be exhausted in SAFE AREA. In Spring Return Actuators (SR), the fluid in the spring packet shall be exhausted in SAFE AREA. We suggest using control valves provided with ETS functions (Exhaust To Spring) or keeping the spring packets pressurized (at 0.2-0.3 bar) to prevent the actuator part from absorbing the surrounding air.

IT IS THE USER'S TASK AND RESPONSIBILITY TO PROVIDE THE RIGHT CIRCUIT AND PREVENT EXPLOSIVE MIXTURES FROM FORMING INSIDE THE ACTUATOR.

- 2) Always operate under safe conditions during all installation and/or maintenance procedures.

- 3) Always comply with general safety regulations in the different working environments; wear proper personal protections, if required.
- 4) Always respect general safety regulations when you install, use and service the valves following the instructions provided with the product.
- 5) Before installing a valve, make sure its components have no chemical incompatibility with the intercepted fluid; if necessary, please call OMAL SpA Technical-Sales.
- 6) It is essential to prevent the ignition by electrical sources such as random currents or potential differences among the devices on the equipment. Make sure there is good electric conduction between the valve body and the equipment equipotential line (in compliance with EN 12266-2 Standard). The efficiency and reliability of such conduction must be verified and, if necessary, restored during every periodical preventive maintenance operation whose frequency will depend on the conditions of the equipment.
- 7) The valve surface temperature depends on the room temperature and/or temperature of the intercepted fluid. If such temperatures generate surface temperatures higher than the nominal temperature, the User must provide specific heat protections around the valve body.
- 8) Do not alter or tamper with the valve in any way.
- 9) Use only original spare parts supplied by the manufacturer.
- 10) Before installing a valve on an earthquake fault line or under extreme weather conditions, please contact OMAL SpA Technical-Sales Department.
- 11) If a valve is used under extreme weather conditions (either very high or very low temperatures) make sure there are suitable protections
- 12) Install a valve carefully and properly to avoid the formation of abnormal linear, torsional or flexional stresses (see Valve Instruction Manual)
- 13) Use a valve only and exclusively within its normal operating parameters (either in terms of environment or performance) and follow the specifications provided by the manufacturer
- 14) By using proper devices, protect the valve from any pressure surge which could be generated by the use of instable gases or overheating (e.g. a fire)
- 15) A valve is not a safety device. It shall be monitored and controlled by other devices specifically manufactured and homologated for that purpose.

WARNINGS: Any Change or modification not expressly approved by OMAL SpA applied to the product after its placing on the market causes the loss of presumption of conformity to the Directive 2014/34/EU.

The data and specifications in this Manual can be changed at any time and with no notice to improve the quality of the product. Therefore, they cannot be considered binding for the supply.

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