



## VANESSA - OPERATING AND SAFETY INSTRUCTIONS

VANESSA SERIES 30,000

Before installation these instructions must be fully read and understood

### SAFETY INFORMATION

This document provides all the necessary safety information related to Handling and Storage, Installation, Use and Maintenance of Vanessa Series 30,000 Triple Offset Valves.

Further information can be found in Vanessa Installation, Operation and Maintenance Manual (IOM) and other specific literature provided with the valves.

Safety statements have been purposely placed throughout this manual whenever operating or maintenance procedures, practices or conditions are considered critical to the protection of personnel (Warning) or to prevent valve damage (Notice).

### APPLICABLE PRODUCT RANGE

Vanessa Series 30,000 Triple Offset Valves (double flanged, wafer, lug, butt weld)

### 1 HANDLING AND STORAGE

#### 1.1 Valve handling

- a. The slinging and hooking of Vanessa Series 30,000 valves must be carried out using the appropriate tools (brackets, hooks, fasteners, ropes) and load balancing tools, in order to prevent valves from oscillating or falling during the lifting and handling.
- b. The lifting and handling of Vanessa Series 30,000 valves must be carried out using appropriate means, complying with the applicable safety regulation (including carrying limits), and protecting the machined surfaces as to avoid any damage.

#### 1.2 Valve storage and preservation before installation

In case valves have to be stored before installation, storage must be carried out in a controlled way, and performed in accordance to the following criteria:

- a. valves must be stocked in a clean and dry storage area.
- b. the disc must be in the closed position, and the valve end faces must be protected with plastic or wooden discs and fixed with straps. If possible, keep the original protection. For valves with "fail-open" actuators, shipped with the disc in the open position, it is important to keep the original protection.

### 2 INSTALLATION

#### 2.1 Valve inspection

- a. Carefully remove the valve from the shipping package (box or pallet) avoiding any damage to the valve, and in case of automated valves, to the electric or pneumatic/hydraulic actuator or instrumentation.
- b. Before installation, ensure the valve has not suffered any damage during the storage.
- c. Valves are shipped with ends protected with caps and a thin layer of protective grease. Before installing the valve, remove the caps and clean carefully, then de-grease both surfaces with a solvent. Clean inside the valve to ensure that there are no foreign objects inside the valve or on the valve seat.
- d. Inspect the seal ring and the seat to ensure that they have not been damaged during handling. This is especially important in case of valves with "fail-open" actuators, shipped with the disc in the open position.

- e. Ensure that the materials of construction listed on the valve nameplate (Figures 1 or 2) are appropriate for the service intended and conform to the contractual specifications/requirements.
- f. Ensure that the valve pressure/temperature limits shown on the valve nameplate (Figures 1 or 2) are suitable for the process conditions. If in doubt please contact your nearest Emerson sales office.

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### 2.2 Valve installation

- a. When solid particles are present in the fluid, Vanessa recommends the valve installation with the shaft in the horizontal plane or, at least, with the shaft at an angle so as to minimize any deposit in the lower bearing area.
- b. Vanessa Series 30,000 valves design is not symmetric. The two sides of the valve are identified as "Shaft side" and "Disc side". See Figure 3. For the correct installation direction, please refer to the specific literature provided along with the supplied valve.
- c. Unless otherwise recommended by Vanessa, the valve must be installed with the disc in the closed position, to ensure that the seal ring in the disc is not damaged during installation.
- d. If the valve has threaded tapped holes in the hub areas, Vanessa recommends to use studs to connect the valve. The depth and dimensions of the tapped holes in the bodies of all Series 30,000 valves are specified in the technical literature. Failure to use correct studs dimensions may result in damage to the valve threads.

FIGURE 1\*

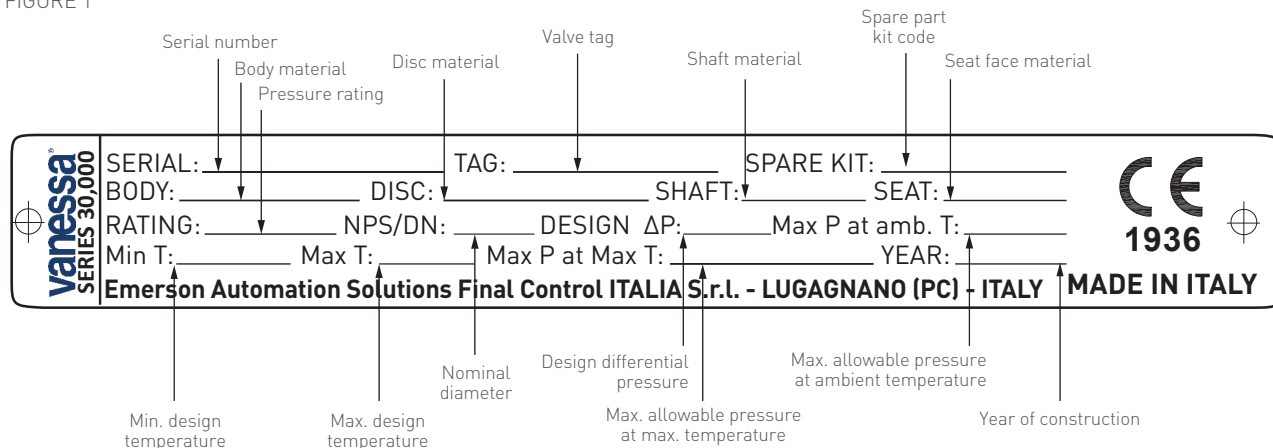
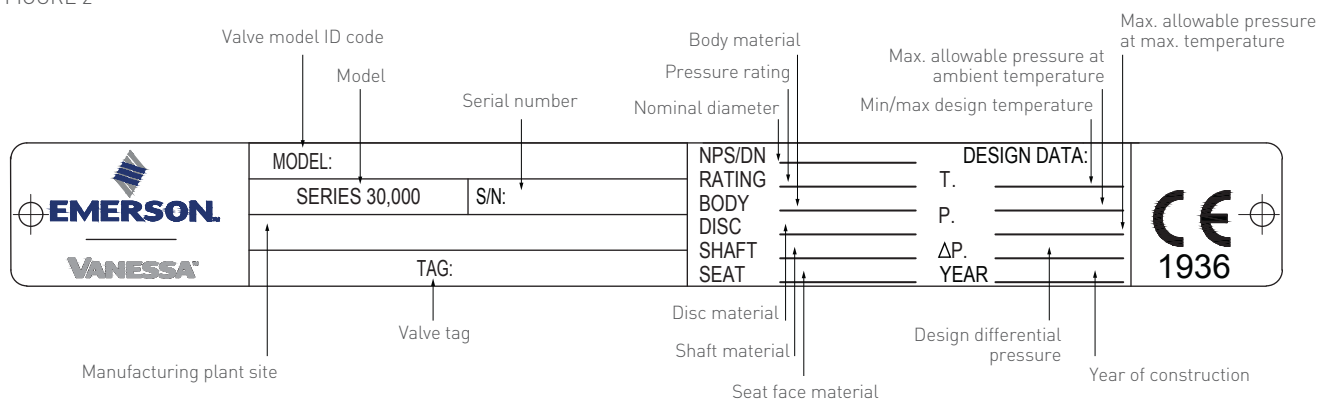


FIGURE 2\*



\* Please note that due to the implementation of a new product coding system, the valve nameplate may differ from Figure 1. The new valve nameplates will follow a different template as per Figure 2 and will progressively substitute the former version.

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- e. If the valve has weld ends, it is necessary to follow the appropriate procedures implemented on site to correctly weld the valve to the line.
- f. Handling and lifting of the valves during installation **MUST** be performed following the same criteria and instructions described in paragraph "1.1 Valve handling".
- g. Once the installation has been completed, check the operation of the valve by stroking it to "full open" and "full close". To verify the valve orientation, the disc position indicator mark on the shaft (during the normal open to close cycle) should rotate clockwise from a position in line with the pipe to a position parallel to the pipe flanges. Repeat this operation after line pressure test. See IOM for further details.
- h. Apply a film of protective oil/grease in the packing area by means of a paintbrush to avoid the ingress of dirt or moisture from the external environment in the packing gland area.

### NOTICE

- *Piping flushing is recommended before valve installation.*
- *For operating temperatures above 200°C (392°F), thermal insulation of the valve body is recommended in order to minimize the temperature difference between trim and body.*
- *As soon as the pipe is lined, the disc must not come into contact with the lining during its stroke, especially with lug and wafer body styles. Direct verification is recommended in order to avoid any damage to the valve sealing elements.*

- *Water stagnation resulting from line pressure test, can affect valve performances. It is recommended to add corrosion inhibitors in the test water used to pressurize the piping system. After line pressure test, depressurize the line, completely drain the test water and carefully dry the valve and the line. These operations are essential for valves in cryogenic and low temperature services.*

### WARNING

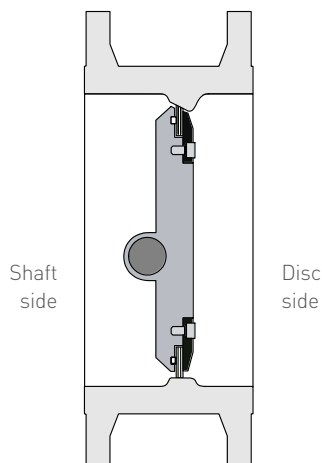
*The valve trim is designed to withstand and to seal against the design differential pressure marked on the valve nameplate (Figures 1 or 2). The valve trim shall not be used as sole protective mean against the hazard caused by the closed valve upstream pressure.*

## 3 USE AND MAINTENANCE

### 3.1 Valve use

- a. Vanessa Series 30,000 carbon steel valves are designed to have a minimum 3-millimeter corrosion allowance on the thickness of the pressure containing surfaces exposed to the action of the process media.
- b. Vanessa Series 30,000 valves do not feature any cavities where the process fluid may be trapped and isolated from the main line connection. Therefore, any overpressure is not possible as long as the system to which the valve is connected to remains protected against overpressure by a suitable device.
- c. Vanessa Series 30,000 valves do not generate hot surfaces through their own operating function. Hot or cold surfaces of the valve are generated by the process temperature of the system, where the valve is installed. Hence their protection shall follow the requirements of the system itself. The valve bracket does not need to be protected.

FIGURE 3



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### 3.2 Valve maintenance

- a. The Vanessa Series 30,000 has been designed to require minimum maintenance, which involves packing, seal ring and bottom flange. Unless otherwise recommended by Vanessa, no routine maintenance is required other than periodic inspection to ensure satisfactory operation and tightness.
- b. Starting from the first commissioning phase, packing tightness performances must be regularly checked. If leakage is observed, tighten the gland nuts slowly and evenly until the leakage stops. For maximum tightening values, refer to Vanessa Installation, Operation and Maintenance Manual (IOM). Over-tightening will decrease packing life and increase operating torque. If leakage does not stop, the packing is damaged and must be replaced.
- c. If leakage is observed through bottom flange/bonnet gasket, tighten the relevant bolts. If leakage does not stop, replacement of the sealing elements of the bottom flange /bonnet may be necessary.
- d. Use only Vanessa spare parts. Serial numbers are stamped on each valve nameplate: these numbers must be referred to in any after sales/spare parts enquiries or orders.
- e. For further details on valve use and maintenance refer to Vanessa Series 30,000 Installation, Operation and Maintenance Manual (IOM).

#### **WARNING**

*Depressurize the line before starting any maintenance. Failure to do so may cause serious personal injury and/or equipment damage.*

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