

## EZ Vane Air Pilot Valve IOM

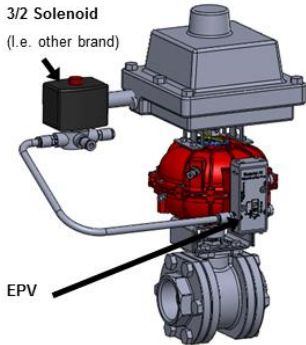
### General

This installation document is to be read in conjunction with the EZ Vane Actuator IOM.

### Description

The EZ Vane Air Pilot Valve ("EPV") series is intended for the control of the EZ Vane Actuator ("EVA") with compressed air. The equipment can be mounted on the destined actuator with the enclosed material.

### Intended Use



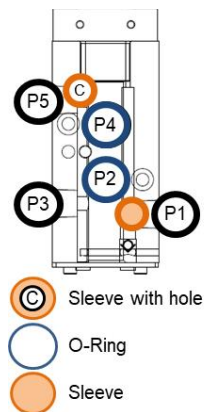
EVA can be fitted with the EPV, which is similar to a 5/2 air pilot valve. This setup allows the EVA to operate only with or without air supply.

EPV can be connected to any remotely mounted 3/2 solenoid valve (panel, built or attached to limit switch box conduit), this allows users to achieve fail-safe with a non-EZ Vane solenoid valve.

The EPV fail-safe is for catastrophic loss of air.

### Design

The EPV is a five port, four-way, two-position (5/2) valve. There are two pressure ports 2 & 4 (**P2** & **P4**), two exhaust ports 3 & 5 (**P3** & **P5**) and a common air supply port 1 (**P1**). There is one open hole (**C**) for interface with air reservoir.



**Caution:** Do not close unused ports, EPV will not be able to operate properly.

### Air Supply

EPV has a minimum operating pressure of 30 psi (2 bar); maximum operating pressure of 150 psi (10 bar).

Operate the EPV only with clean and lubricated or non-lubricated compressed air with a quality level 5 according to ISO 8573-1. Non inert gases cannot be used. In case of lubricated compressed air, users need to dissipate the

exhaust air with suitable measures. The intake may not happen from explosive atmospheres.

The EPV fail-safe and or emergency shutdown is intended for catastrophic loss of air.

In fail-safe, environment air never enters EPV through the vacuum associated with spring-return actuators.

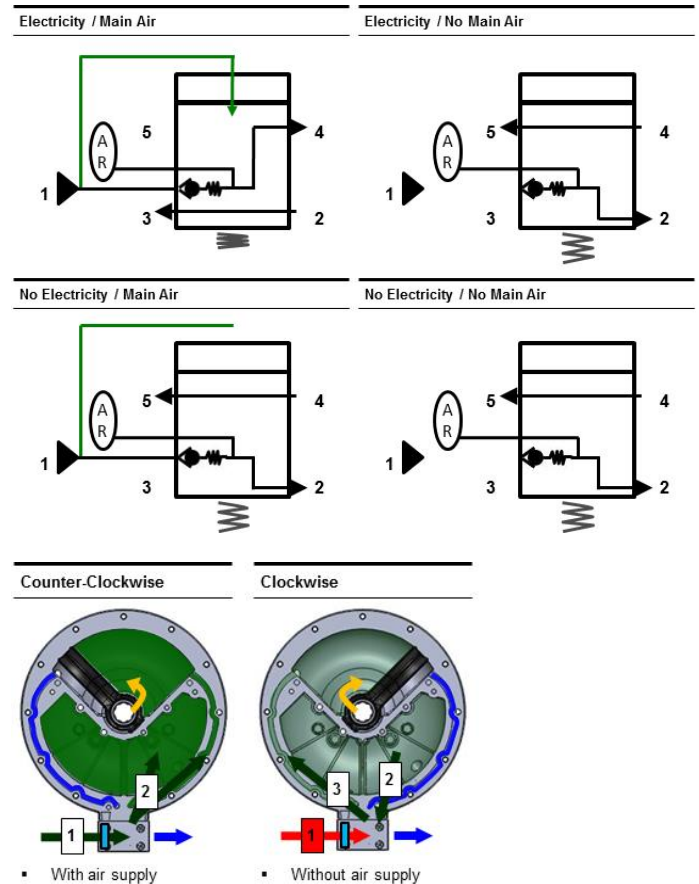
### ESV Temperatures Limitations

The standard temperature limits for the EPV are -20°C (-4°F) to +80°C (+176°F).

Always consult with a representative of EVA for suitability and recommended practice.

It is essential to use an air dryer for the air supply to avoid any moisture for use in sub-zero Celsius temperatures.

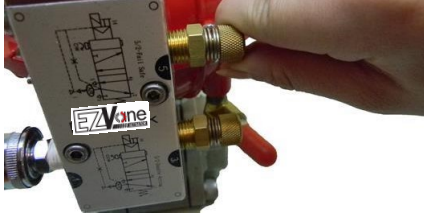
### Operation



## Installation

### Flow Reducer

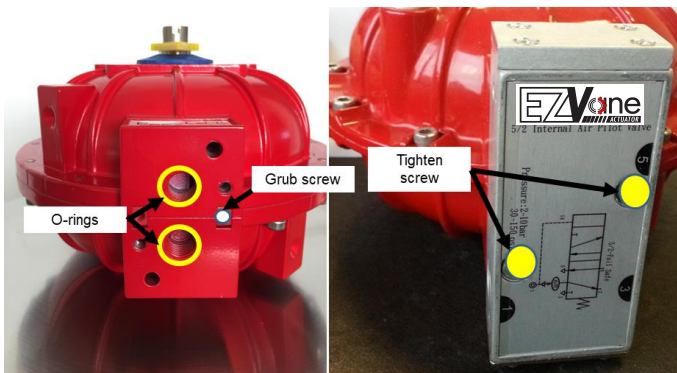
Any usage of EZ Vane actuator without speed control could void the warranty.



### Mounting to EVA

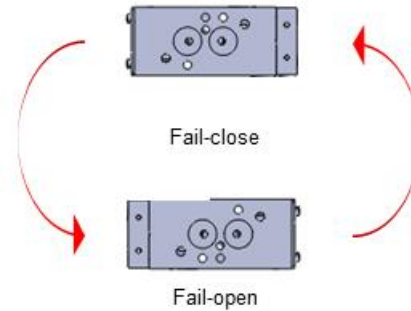
1. Install grub screw onto EVA using a 2 mm hex key wrench. This ensures the correct orientation of the solenoid if removed in the future.
2. Verify O-rings are over port 2 and port 4 to interface with the NAMUR pad on the actuator.
3. Position the EPV to the actuator. Then install two socket head cap screws, offsetting center holes on either side. Hand screw a few turns into the actuator. Then tighten the screws evenly, using a 5 mm hex key wrench.

*Note: Do not over-tighten mounting screws. This may damage the threading of the EVA.*



## Reversing Fail-Safe Position

### Convert Actuator to FC or FO



To convert from fail-safe open to close, or vice-versa, reattach the EPV to the EVA by rotating the EPV 180°. Switch orientation of grub screw to ensure non-interference with installation.

### Piping

Connect piping or tubing to valve according to markings on valve body. Refer to flow diagrams in the “operation” section. Apply pipe compound sparingly to male pipe threads only. If applied to female valve threads, the compound may enter the valve and may cause operational difficulty. EZ Vane recommends the use of flexible pneumatic tube and push-type fittings rather than hard pipe. This avoids pipe strain on the valve and provides easier and faster installation and removal. When tightening the fittings, do not use pilot assembly and coil as lever. Locate wrenches applied to valve body or fittings as close as possible to connecting point.

*Caution: To avoid damage to the valve body, do not over-tighten pipe connections. If Teflon tape, paste, spray or similar lubricant is used, use extra care when tightening due to reduced friction.*

*When Teflon tape, paste, spray or similar lubricant is used, make sure debris does not enter into the solenoid valve body as it may damage the solenoid valve.*

*Note: To protect the EPV, install a strainer or filter, suitable for the service involved, on the inlet side as close to the valve as possible. Clean periodically depending on service conditions.*

## Maintenance

Provisions should be made for performing seal leakage, external leakage, and operational tests on the valve.

## Preventive Maintenance

Prepare and follow a routine inspection schedule based on the media, environment and frequency of use.

The medium flowing through the EPV should be free from dirt and foreign material. Clean the valve strainer or filter as required to keep the valve free of contamination. In extreme cases, contamination will cause faulty valve operation and the valve may fail to shift.

While in service, the valve should be operated at least once a month to ensure proper operation.

*Note: EZ Vane's warranty and liability of the EPV are voided if improper protection results in dirt inside the EPV.*

## Service Notice

All EPV series valves are not repairable. When any performance problems are detected during routine inspection, replace valve immediately.

## High Performance Butterfly Valve

The EPV can only be used to fail-safe to close position a high performance butterfly valve when the high performance butterfly valve seat retainer is downstream. The EPV can only be used to fail-safe to open position a high performance butterfly valve when the high performance butterfly valve seat retainer is upstream. All other setup cannot be used and will void EZ Vane's warranty.

## **TWO YEAR OR TWO MILLION CYCLE WARRANTY**

*Note: EZ Vane's warranty and liability of the EPV are voided if there are damages caused by negligence, misuse, improper application, service or operation or lack of service of product.*

EZ Vane offers a limited repair or replacement warranty on all EZ Vane Actuator (EVA) Series, EZ Solenoid Valve (ESV) Series, and EZ Air Pilot Valve (EPV) Series (the "Products"). Simply stated, if any of Goods fail within two years or two million cycles, whichever comes first, of delivery by Distributor, despite being properly installed, operated in accordance with industry standard operating procedures, and properly serviced and maintained, EZ Vane will repair the product, or at our option replace the unit with another of equivalent material and design in exchange for the defective unit. This warranty only applies to failures due to defective materials, workmanship, or premature wear in the Goods.

Under no circumstances will EZ Vane accept responsibility or be liable for any costs other than to repair or provide a replacement of the defective Goods. EZ Vane shall not have any liability to any customer for the loss of product, loss of profit, loss of use, or any other indirect, incidental, special or consequential damages as a result of this express limited warranty.

The actuator is designed to continuously operate within 15% of specified air pressure in either DA or FS design.

**EZ Vane DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER IMPLIED WARRANTY IN CONNECTION WITH THE CUSTOMER'S PURCHASE OF ANY PRODUCT UNDER THIS AGREEMENT.**