

Easytork Positioner Plate IOM

General

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

Description / Intended Use

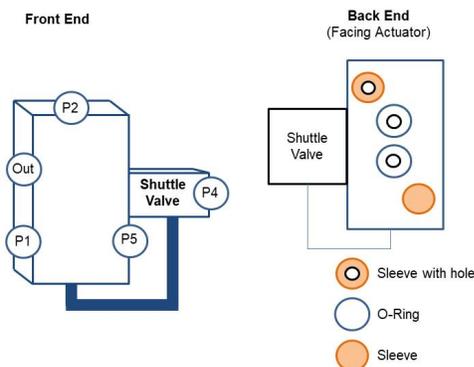
Easytork's rotary positioner valve ("ERP") in conjunction with any double-acting positioners allows the EVA to achieve fail-safe functionality.

Note: For fail-safe setup, user must use double-acting version of the positioner with ERPV and EVA actuator

The equipment can be mounted on the destined actuator with the enclosed material.

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

Design



P1 is for the main air supply. **Out** port is to be connected to the main air inlet on the positioner. **P2** and **P4** are for interface between the positioner's **Out 1** and **Out 2** (as signal increases, the supply pressure will be supplied through **Out 1**). **P5** is for exhaust port.

On the side facing the actuator "back end", there is one "Sleeve with hole" for interface with air reservoir. Two O-rings, and one sleeve, as identified in the illustration.

Air Supply

ERPV has a minimum operating pressure of 30 psi (2 bar); maximum operating pressure of 150 psi (10 bar). Refer to the manual of the EVA, and the Positioner.

Operate the ERPV 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.

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

ERPV Temperatures Limitations

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

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

Operation

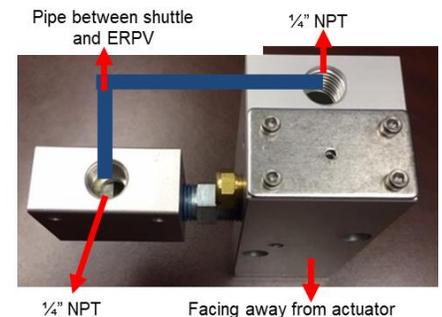
When main supply air to the ERPV is above 30 psi, air is supplied to the positioner through ERPV's **Out** port. The positioner's **Out 1** and **Out 2** is directed to either vane actuator chamber through the ERPV **P2** and **P4**. Simultaneously, supply air passes through check valve to charge reservoir. When supply air to the ERPV is below 15 psi, the ERPV shifts its spool position, quarantining positioner's air input. The ERPV then drives the actuator to its fail safe position through the air reservoir.

Installation

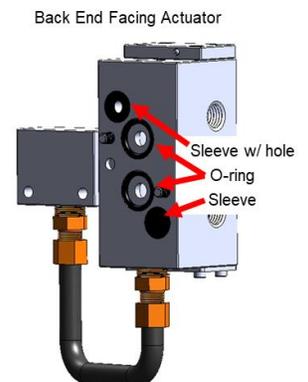
Consult with positioner manufacturer for electrical wire installation. This document will only cover the porting between the ERPV, EVA, and the positioner. **Note: To protect the ERPV, install a strainer or filter, suitable for the service involved, on the inlet side as close to the valve as possible. Clean periodically depending on service conditions**

Piping

- The following illustration demonstrates piping between shuttle valve and ERPV.



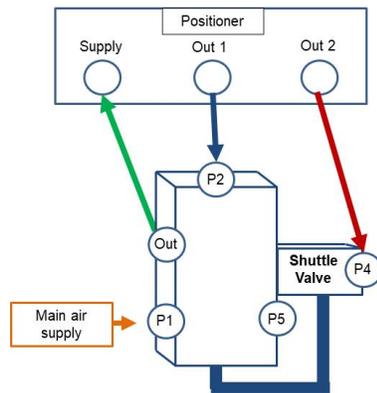
- The following illustration demonstrates the correct setup between the ERPV with the actuator. Reorient the grub screw as necessary so that the grub screw does not interfere with the orientation of the ERPV.



- The following illustration demonstrates the correct air piping necessary to connect the ERPV with the positioner. As signal increases, the supply pressure will be supplied through Out 1. Connect Out 1 to P2 and Out 2 to P4. Fail-close and fail-open is determined by the orientation of the ERPV.

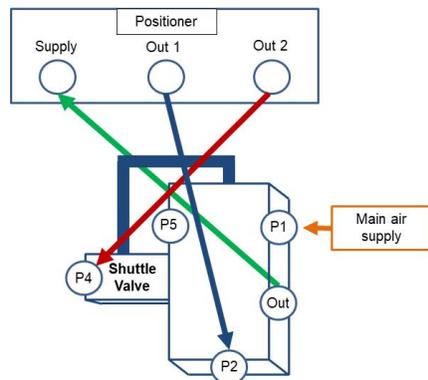
FAIL-CLOSE:

With ERPV in this orientation, with loss of air, ERPV will drive actuator fail-close. P4 of the ERPV connects to the *actuator's* P4 for fail-close.



FAIL-OPEN:

With ERPV in opposite orientation, with loss of air, ERPV will drive actuator fail-open. P4 of the ERPV connects to the *actuator's* P2 for fail-open.



Maintenance

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

Caution: To prevent the possibility of a serious injury or property damage, turn off electrical power, depressurize valve, and discard vent fluid in safe area before inspecting or servicing 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 ERPV 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: Easytork's warranty and liability of the ERPV are voided if improper protection results in dirt inside the ERPV.

High Performance Butterfly Valve

The ERPV 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 ERPV 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 Easytork's warranty.

TWO YEAR OR TWO MILLION CYCLE WARRANTY

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

EASYTORK offers a limited repair or replacement warranty on the ERPV. Simply stated, if any of Goods fails 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, EASYTORK 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 EASYTORK accept responsibility or be liable for any costs other than to repair or provide a replacement of the defective Goods. EASYTORK 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.

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

EASYTORK 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.