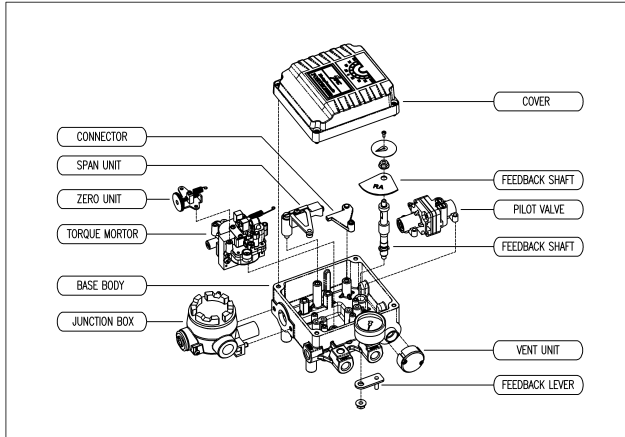


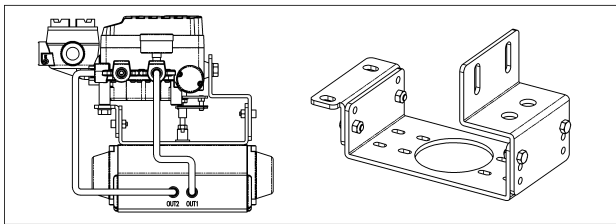
The electro-pneumatic positioner, YT-1000R, is used for operation of pneumatic rotary valve actuators by means of electrical controller or control systems with an analog output signal of DC 4 to 20mA or split ranges.

## 1. STRUCTURES

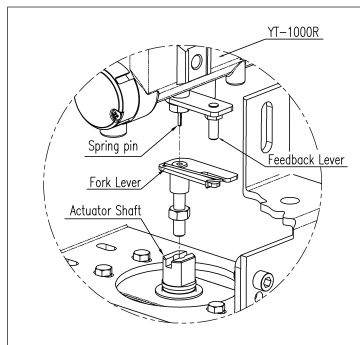


## 2. INSTALLATION

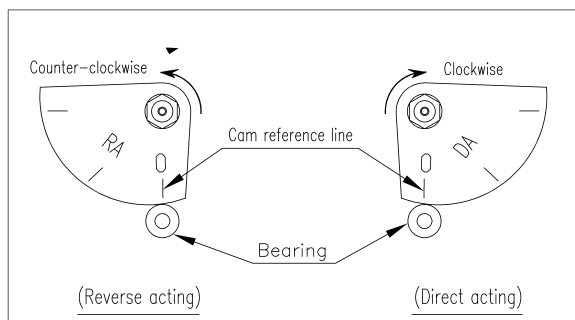
### 2-1 Mounting on Actuator



2-2 Connection with feedback shaft Find clamping pin on the main shaft's center of YT-1000R and insert connection bar into the fork lever slot, so it can be locked to the fork lever spring. This sets the alignment of the main shaft and center of the actuator stem. Bad alignment of the main shaft and the actuator stem lowers YT-1000R's durability due to the high force on the shaft.



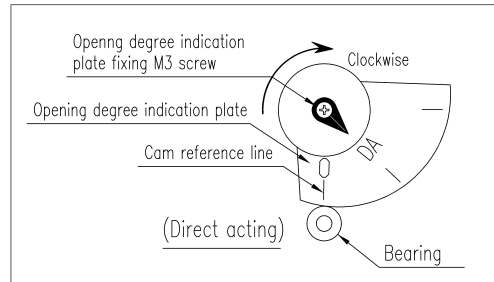
### 2-3 Cam



① Use the DA surface of cam to turn the actuator main shaft in clockwise (viewed from the positioner front cover side) at the time of input feedback

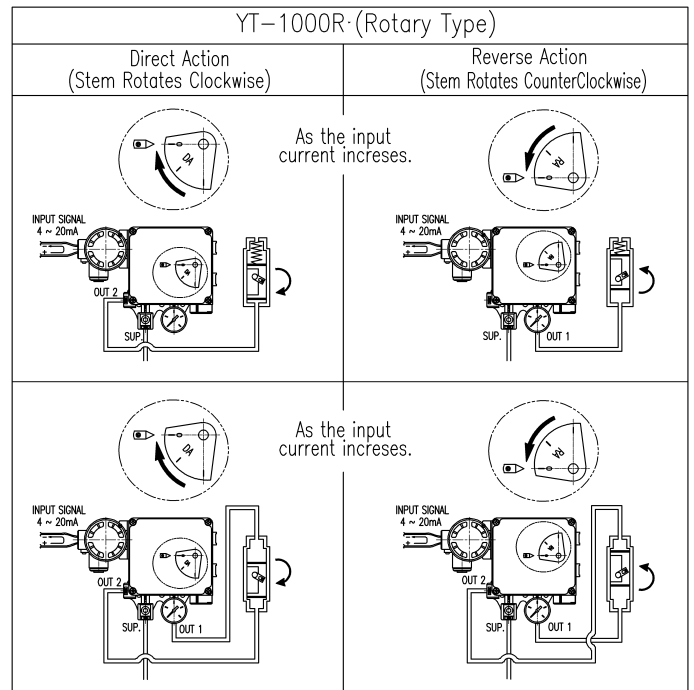
- ② Fasten the cam in the procedure of loosening the hexagonal nut with flange first, setting the using actuator to the starting position and then setting the cam reference line and the bearing contact point of span adjusting arm unit to the matching position.
- ③ Do not apply the supply pressure when attaching the cam.
- ④ When the positioner is shipped out, the cam is tightened to the shaft. Be sure to firmly lock the cam to the lock nut.(tightening torque 2.0~2.5Nm (20~25kgf/cm).

### 2-4 Attaching procedure of opening degree indication plate



- ① Lock the cam and then adjust the zero point and span. Then fix the opening degree indication plate to the shaft using the M3 screw provided. Set the opening degree indication plate to the state of attaching reference line.

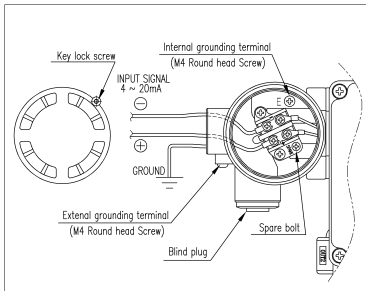
## 3. PIPING CONNECTION



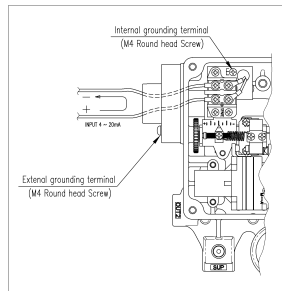
- ① Pipeline should be emptied, and supply air should be clean and dry.
- ② YT-1000 series single acting type is set to use OUT1 port. OUT1 port should be connected with supply pressure port from actuator.
- ③ YT-1000 series double acting type can be changed depends on the operation direction.

## 4. Wiring Connection

- ① Open the terminal box cover, and locate the poles and connect them respectively. Make sure to fasten the connection.
- ② For explosion-proof type positioner, make sure that the fastener bolts are securely fastened, seal tightly on the connection port, and the number of thread must be at least six and has to be water-proof.
- ③ There are spare bolts on terminal board.



Ex dm IIB T5



Ex ia IIB T6

## 5. ADJUSTMENT

Check the following prior to the adjustment.

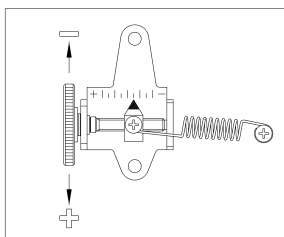
- ① The pipeline is properly connected with the pressure supply port and OUT1 and OUT2 port.
- ② The wires poles and the ground cables are correctly connected.
- ③ The actuator and positioner are tightly fastened.
- ④ Auto/Manual Set has been tightened in clockwise direction.
- ⑤ The span adjusting lever of internal feedback lever is attached to the correct (Direct or Reverse) position.
- ⑥ Check face of cam and make sure the face showing is same as user's intended use.

### 5-1 Zero Adjustment

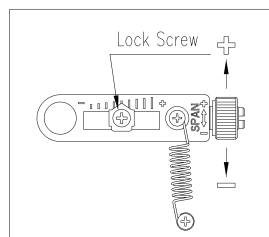
- ① Set supply signal at 4mA or 20mA and rotate adjuster clockwise or counter-clockwise.
- ② When single acting actuator with spring is used, please check if the pressure level which is indicated on the positioner is same to the supplied pressure level.

### 5-2 Span Adjustment

- ① Set supply signal at 4mA or 20mA and check the actuator's stroke. Adjust the span according to the difference.
- ② After setting, check zero setting again. After setting zero point, confirm the span point again. This step must be repeated until both points are properly set.
- ③ Tighten lock screws after the setting.



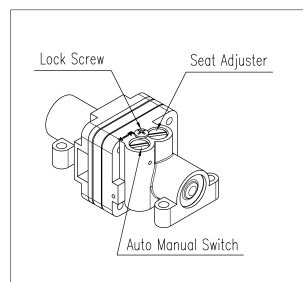
<Zero Adjustment>



<Span Adjustment>

### 5-3 Auto/Manual Switch <A/M Switch>

- ① A/M switch adjusts the valve operation to automatic or manual. When YT-1000L is produced, it is set as Auto. If user wants to set as Manual, the setting can be changed by rotating the switch counter-clockwise.
- ② If the setting is set as Manual, the air pressure will be supplied to the actuator directly. After adjusting, always set the setting back to Auto.
- ③ If OUT2 in single acting or double acting actuator is used, A/M Switch will not operate.



### 5-4 Seat Adjuster

- ① Seat Adjuster is set according to the customer's request before the positioner is delivered. Please do not adjust the Seat Adjuster unless it is absolutely necessary.
- ② Seat Adjuster is used for double acting actuator and should be adjusted when the pressure balance point must be changed.
- ③ If the sensitivity of positioner is extremely poor due to the actuator type of load condition, then turn the seat adjuster screw to clockwise. If hunting occurs, then turn the seat adjuster screw counter-clockwise.

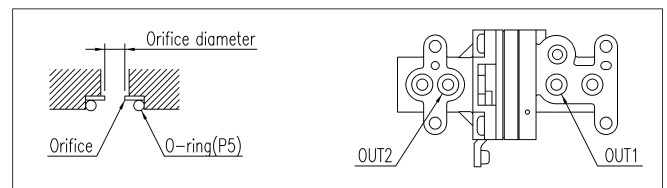
### 5-5 Pilot valve with output orifice

- ① If the size of actuator is too small relative to the flow rate, then the positioner can have hunting. In order to prevent hunting, orifice can be adjusted.

#### ② Output Orifice Types

Volume of actuator	Output orifice diameter	Ordering NO.
below 90 cm <sup>3</sup>	∅1.0	①
90 ~ 180 cm <sup>3</sup>	∅2.0	②
over 180 cm <sup>3</sup>	None	③

- ③ Remove the o-rings from OUT1 and OUT2 ports and insert appropriate orifice. After inserting orifice, place back the o-ring. Make sure that there is no substance entering into the ports.



- ④ If hunting persists after inserting the orifice, please contact YTC or its appropriate agent.

## 6. Manufacturer Warranty

- For the safety, it is imperative to follow instructions in the manual. It is not manufacturer's liability for any damages which caused by users' negligences.
- It is not manufacturer's liability for any damages or accidents which resulted by any alteration or modification of the product and parts. If alteration or modification is necessary, please contact the manufacturer directly.
- Manufacturer warrants the product from the date of original retail purchase of the product for one (1) year, except as otherwise stated.
- Manufacturer warranty will not cover the products that the product have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or removed; damages that occurs in shipment, due to act of God, failure due to power surge, and cosmetic damage. Improper or incorrectly performed maintenance or report voids this Limited Warranty.
- For detailed warranty information, please contact the corresponding local Young Tech Co., Ltd office or main office in South Korea.