

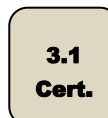
# 736-746 XS VALVE V-SHAPE CONTROL HOLE WITH ACTUATOR AP-RE

## FEATURES

736XS (steel) and 746XS (stainless steel) + AP-RE 2-way ball-valves with V-shaped control ball are designed for controlling networks of industrial fluids. These 3-piece external tie-bolt ball valves are easy to remove for servicing. This full-bore valve has an anti-static device and double sealing at the cable gland. It is EC and TA-LUFT-approved. The ISO 5211 mounting pad allows the actuator to be directly assembled. The pneumatic motorisation AP series is available in Spring-return and double-effect. The smart YT3300 positioner offers further more auto-commissioning function. **Option** : Mounting with ATEX positioner possible. (Consult us)

## AVAILABLE MODELS

1/2" to 2" diameters  
Spring-return actuator

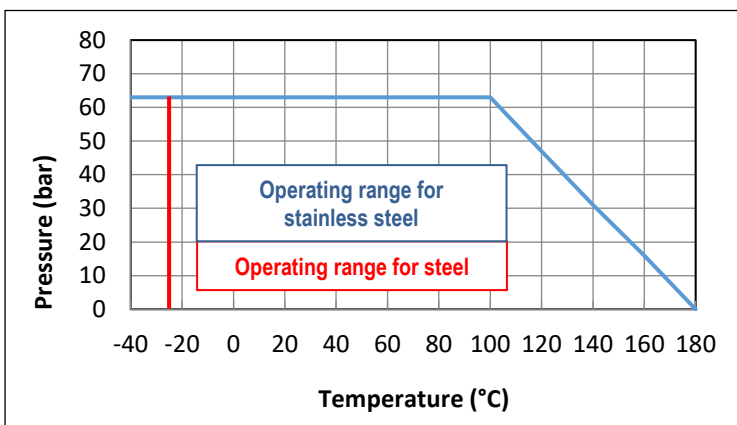


On request

| Connection      | G      | SW     | BW     |
|-----------------|--------|--------|--------|
| Carbon steel    | 736 XS | 735 XS | 734 XS |
| stainless steel | 746 XS | 743 XS | 745 XS |

## LIMITS OF USE

| Material               | steel                                                            | stainless steel |
|------------------------|------------------------------------------------------------------|-----------------|
| Fluid                  | Use on steam and gas with a speed above 10 m/s isn't recommended |                 |
| Fluid pressure: PS     | 63 bar (20°C)                                                    |                 |
| Fluid temperature: WT° | -25°C / +180°C                                                   | - 40°C / +180°C |
| Ambient temperature    | - 20°C / + 80°C                                                  |                 |
| Motor compressed air   | mini 6 bar / maxi 10 bar                                         |                 |



## DIRECTIVES AND MANUFACTURING STANDARDS

| OBJECT                                  | Standard                       | ON        | OBJECT                           | Standard     |
|-----------------------------------------|--------------------------------|-----------|----------------------------------|--------------|
| Pressure Equipment Directive 2014/68/EC | 1/4" to 1": not subject        |           | Final test                       | EN 12266     |
|                                         | 1 1/4" to 4": category III     | TÜV 0035  | Material certificate             | EN 10204     |
| Size                                    | EN 12516-1                     |           | Motorisation connection          | ISO 5211     |
| Steel grades                            | EN 1503-1                      |           | Actuator pilot connection        | NAMUR        |
| ATEX Directive                          | II 2G/D Tx zones 1,2,21 and 22 | SIRA 0518 | Switch box connection            | VDI/VDE 3845 |
|                                         | EN 13463-1 and 5               |           | SIL 3 level (the actuator alone) | EN 61508     |

Information given as an indication only, and subject to possible modifications



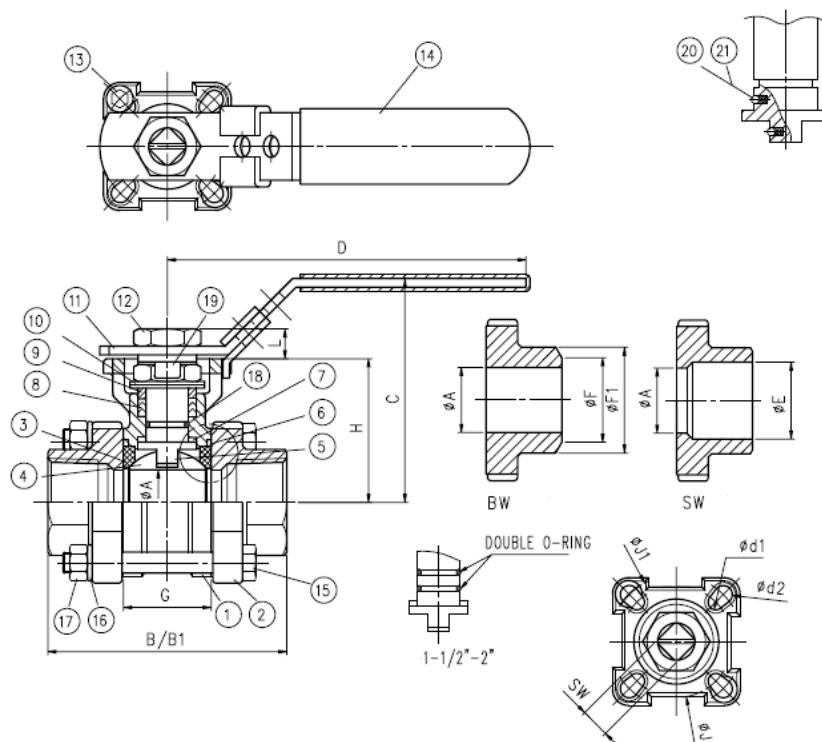
SECTORIEL S.A.  
45 rue du Ruisseau  
38290 SAINT QUENTIN-FALLAVIER – FRANCE  
Telephone: +33 4 74 94 90 70 – Fax: +33 4 74 94 13 95  
[www.sectoriel.com](http://www.sectoriel.com) / Email : [sectoriel@sectoriel.fr](mailto:sectoriel@sectoriel.fr)

|       |                      |
|-------|----------------------|
| Pages | 1/8                  |
| Ref.  | TDS746XS-VPort+AP-RE |
| Rev.  | 02                   |
| Date  | 12/2025              |

# 736-746 XS VALVE V-SHAPE CONTROL HOLE WITH ACTUATOR AP-RE

## CONSTRUCTION

| No. | Name        | Steel      | Stainless steel | No.                                     | Name        | Steel  | Stainless steel |
|-----|-------------|------------|-----------------|-----------------------------------------|-------------|--------|-----------------|
| 1   | Body        | 1.0619     | 1.4408          | 12                                      | Nut         | 304 SS | 304 SS          |
| 2   | Ends        | 1.0619     | 1.4408          | 13                                      | Stop        | 304 SS | 304 SS          |
| 3*  | Seats       | PTFE+15%GF | PTFE+15%GF      | 14                                      | Coupling    | PVC    | PVC             |
| 4   | Ball        | CF8M / 316 | CF8M / 316      | 15                                      | Tie-bolts   | 304 SS | 304 SS          |
| 5   | Stem        | 316 SS     | 316 SS          | 16                                      | Washer      | 304 SS | 304 SS          |
| 6*  | Body gasket | PTFE       | PTFE            | 17                                      | Nuts        | 304 SS | 304 SS          |
| 7*  | Washer      | PTFE+15%GF | PTFE+15%GF      | 18*                                     | O-ring      | FPM    | FPM             |
| 8*  | Gasket      | PTFE       | PTFE            | 19                                      | Tab washer  | 304 SS | 304 SS          |
| 9   | Spacer      | 304 SS     | 304 SS          | 20                                      | Anti-static | 316 SS | 316 SS          |
| 10  | B. washer   | 301 SS     | 301 SS          | 21                                      | Spring      | 304 SS | 304 SS          |
| 11  | Lever       | 304 SS     | 304 SS          | * Parts included in the maintenance kit |             |        |                 |



## DIMENSIONS (mm)

| DN     | A    | B<br>(G) | B<br>(SW) | B1<br>(BW) | C     | D   | E    | F  | F1   | G    | H    | J1 | SW |
|--------|------|----------|-----------|------------|-------|-----|------|----|------|------|------|----|----|
| 1/2"   | 16   | 75       | 75        | 75         | 70.9  | 110 | 21.9 | 17 | 22.4 | 25.2 | 42.3 | 42 | 9  |
| 3/4"   | 20   | 80       | 80        | 90         | 73.4  | 110 | 27.2 | 22 | 28.2 | 27.7 | 44.8 | 42 | 9  |
| 1"     | 24.5 | 90       | 90        | 100        | 84.1  | 135 | 34.0 | 28 | 33.7 | 33.0 | 54.0 | 50 | 11 |
| 1" 1/4 | 32   | 110      | 110       | 110        | 89.3  | 135 | 42.7 | 37 | 44.0 | 41.2 | 59.2 | 50 | 11 |
| 1" 1/2 | 38   | 120      | 120       | 125        | 109.5 | 165 | 48.8 | 43 | 50.8 | 49.3 | 73.5 | 70 | 14 |
| 2"     | 50   | 140      | 140       | 150        | 118.9 | 165 | 61.3 | 54 | 62.6 | 63.6 | 82.9 | 70 | 14 |

Information given as an indication only, and subject to possible modifications

|                                                                                     |                                                                                                                                                                                                                                             |  |       |                      |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------|----------------------|
|  | <b>SECTORIEL S.A.</b><br>45 rue du Ruisseau<br>38290 SAINT QUENTIN-FALLAVIER – FRANCE<br>Telephone: +33 4 74 94 90 70 – Fax: +33 4 74 94 13 95<br><a href="http://www.sectoriel.com">www.sectoriel.com</a> / Email : sectoriel@sectoriel.fr |  | Pages | 2/8                  |
|                                                                                     |                                                                                                                                                                                                                                             |  | Ref.  | TDS746XS-VPort+AP-RE |
|                                                                                     |                                                                                                                                                                                                                                             |  | Rev.  | 02                   |
|                                                                                     |                                                                                                                                                                                                                                             |  | Date  | 12/2025              |

# 736-746 XS VALVE V-SHAPE CONTROL HOLE WITH ACTUATOR AP-RE

## AP PNEUMATIC MOTORISATION

The ALPHAIR motorisation proposed as standard comprises:

- Spring return actuator NC.
- a safety coefficient of 1.3 minimum compared to the nominal torque of the valve.
- 6 bar air non-lubricated dry motor.
- an upstream / downstream pressure difference  $\Delta P=10$  bar max.

The actuator assembly is direct.

| DN    | Spring-return | V (litres) | Time (s)* |
|-------|---------------|------------|-----------|
| 1/2"  | RES 43/6      | 0.18       | 1         |
| 3/4"  | RES 51/6      | 0.23       | 1         |
| 1"    | RES 64/6      | 0.45       | 1         |
| 1"1/4 | RES 76/6      | 0.61       | 1         |
| 1"1/2 | RES 86/6      | 0.98       | 1         |
| 2"    | RES 101/6     | 1.80       | 2         |

For any other operating conditions, please contact us.

\* indicative time for actuator running empty

## OPTIONS

There are many options, so please contact our sales service for more information on these:

|   |                                                                                                               |
|---|---------------------------------------------------------------------------------------------------------------|
| 1 | Actuators dimensioned for a compressed air pressure of 3, 4 or 5 bar                                          |
| 2 | actuator dimensioned for an upstream / downstream pressure difference $\Delta P$ greater than 10 bar          |
| 3 | actuator with special coating, stainless steel actuator                                                       |
| 4 | Actuator for very low ( $-60^{\circ}\text{C}$ ) or very high ( $+150^{\circ}\text{C}$ ) ambient temperatures. |

## INSTALLATION IN AN ATEX ZONE

For 736-746XS+APS-RES automatic valves to be installed in ATEX 1, 2, 21 or 22 zones, this has to be specified when ordering. Our services will check of the assembly, the installation of an earthing braid, and will issue an assembly certificate. Our authorised technicians carry out these operations in the workshop. Please contact us.

The special assembly and maintenance instructions for motorised valves in the ATEX zones must be followed.

Information given as an indication only, and subject to possible modifications

|                                                                                     |                                                                                                                                                                                                                                                                                  |       |                      |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------|
|  | SECTORIEL S.A.<br>45 rue du Ruisseau<br>38290 SAINT QUENTIN-FALLAVIER – FRANCE<br>Telephone: +33 4 74 94 90 70 – Fax: +33 4 74 94 13 95<br><a href="http://www.sectoriel.com">www.sectoriel.com</a> / Email : <a href="mailto:sectoriel@sectoriel.fr">sectoriel@sectoriel.fr</a> | Pages | 3/8                  |
|                                                                                     |                                                                                                                                                                                                                                                                                  | Ref.  | TDS746XS-VPort+AP-RE |
|                                                                                     |                                                                                                                                                                                                                                                                                  | Rev.  | 02                   |
|                                                                                     |                                                                                                                                                                                                                                                                                  | Date  | 12/2025              |

# 736-746 XS VALVE V-SHAPE CONTROL HOLE WITH ACTUATOR AP-RE

## FLOW-RATE COEFFICIENT (Kv)

The Kv (m3/h) values as a function of the degree of opening, are the following:

| DN  | Ball | Kv (m3/h) per opening angle |      |      |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-----|------|-----------------------------|------|------|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|     |      | 0°                          | 5°   | 10°  | 15° | 20° | 25°  | 30°  | 35°  | 40°  | 45°  | 50°  | 55°  | 60°  | 65°  | 70°  | 75°  | 80°  | 85°  | 90°  |
| 15  | 30°  | 0                           | 0    | 0    | 0   | 0   | 0    | 0    | 0.1  | 0.1  | 0.2  | 0.4  | 0.8  | 1.1  | 1.5  | 1.8  | 2.5  | 3.1  | 4.1  | 5.1  |
|     | 60°  | 0                           | 0    | 0    | 0   | 0   | 0    | 0    | 0.2  | 0.4  | 0.6  | 0.9  | 1.4  | 1.9  | 2.6  | 3.3  | 4.6  | 5.9  | 8.0  | 10.1 |
| 20  | 30°  | 0                           | 0    | 0    | 0   | 0   | 0.1  | 0.2  | 0.4  | 0.6  | 0.9  | 1.2  | 1.6  | 1.9  | 2.5  | 3.1  | 3.8  | 4.6  | 5.7  | 6.8  |
|     | 60°  | 0                           | 0    | 0    | 0   | 0   | 0.2  | 0.3  | 0.6  | 0.9  | 1.3  | 1.8  | 2.4  | 2.9  | 4.0  | 5.0  | 6.7  | 8.4  | 11.5 | 14.5 |
| 25  | 30°  | 0                           | 0.03 | 0.04 | 0.3 | 0.5 | 0.9  | 1.2  | 1.7  | 2.2  | 2.8  | 3.4  | 4.2  | 5.0  | 6.3  | 7.5  | 8.9  | 10.2 | 11.9 | 13.7 |
|     | 60°  | 0                           | 0.03 | 0.05 | 0.4 | 0.7 | 1.1  | 1.5  | 2.0  | 2.6  | 3.2  | 3.9  | 5.1  | 6.2  | 8.0  | 9.7  | 12.6 | 15.5 | 20.0 | 24.5 |
| 40  | 30°  | 0                           | 0.01 | 0.02 | 0.4 | 0.7 | 1.3  | 2.0  | 2.7  | 3.4  | 4.7  | 5.9  | 7.4  | 8.9  | 11.3 | 13.7 | 16.3 | 18.8 | 22.1 | 25.3 |
|     | 60°  | 0                           | 0.01 | 0.02 | 0.5 | 0.9 | 1.7  | 2.4  | 3.8  | 5.2  | 6.4  | 7.6  | 10.1 | 12.6 | 15.7 | 18.8 | 24.7 | 30.6 | 39.3 | 47.9 |
| 50  | 30°  | 0                           | 0.16 | 0.32 | 1.1 | 1.9 | 2.9  | 3.9  | 5.0  | 6.1  | 7.5  | 9.0  | 11.3 | 13.6 | 17.0 | 20.4 | 24.6 | 28.8 | 33.6 | 38.4 |
|     | 60°  | 0                           | 0.22 | 0.44 | 1.3 | 2.1 | 3.4  | 4.7  | 6.7  | 8.7  | 11.2 | 13.6 | 17.9 | 22.3 | 28.6 | 34.9 | 43.7 | 52.4 | 66.9 | 81.4 |
| 80  | 30°  | 0                           | 0.30 | 0.60 | 1.7 | 2.9 | 5.1  | 7.4  | 10.4 | 13.5 | 18.2 | 22.9 | 29.0 | 35.1 | 43.4 | 51.8 | 62.6 | 73.4 | 85.4 | 97.4 |
|     | 60°  | 0                           | 0.41 | 0.82 | 2.1 | 3.4 | 6.4  | 9.3  | 14.4 | 19.5 | 26.6 | 33.8 | 45.1 | 56.3 | 73.7 | 91.0 | 114  | 137  | 176  | 216  |
| 100 | 30°  | 0                           | 0.37 | 0.74 | 2.8 | 4.8 | 8.3  | 11.8 | 17.7 | 23.5 | 31.5 | 39.5 | 50.3 | 61.2 | 75.6 | 90   | 106  | 123  | 145  | 167  |
|     | 60°  | 0                           | 0.82 | 1.6  | 3.3 | 5.0 | 10.3 | 15.5 | 24.0 | 32.5 | 44.5 | 56.5 | 75.7 | 94.9 | 123  | 151  | 194  | 236  | 297  | 358  |

Information given as an indication only, and subject to possible modifications

|                                                                                     |                                                                                                                                                                                                                                             |       |                      |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------|
|  | <b>SECTORIEL S.A.</b><br>45 rue du Ruisseau<br>38290 SAINT QUENTIN-FALLAVIER – FRANCE<br>Telephone: +33 4 74 94 90 70 – Fax: +33 4 74 94 13 95<br><a href="http://www.sectoriel.com">www.sectoriel.com</a> / Email : sectoriel@sectoriel.fr | Pages | 4/8                  |
|                                                                                     |                                                                                                                                                                                                                                             | Ref.  | TDS746XS-VPort+AP-RE |
|                                                                                     |                                                                                                                                                                                                                                             | Rev.  | 02                   |
|                                                                                     |                                                                                                                                                                                                                                             | Date  | 12/2025              |

## ASSEMBLY AND MAINTAINANCE INSTRUCTIONS

### 1 - Installation

#### 1.1 - Checks

- Check that the material of the valve body is chemically compatible with the fluid.
- Check that the pressure and service conditions are compatible with the (P, T) diagram of the valve. See § "Service limits"
- Check that the fluid is clean and free of particles. The latter could scratch the ball and damage the seats, hence causing the valve to leak. If need be, install an upstream filter.
- Check that the upstream and downstream pipes are correctly aligned and that the supports are suitable for the weight of the valve. Do not rely on the valve to compensate for pipe misalignment. For heat transfer fluids, provide for expansion compensation. All these piping defects may lead to leaks, blockages and even mechanical failure.
- Check that there is no risk of thermal expansion of the fluid, which could damage the seats. In the open position, a hole at the top of the ball balances the pressures between the body cavity and the flow of the fluid. As an option, we recommend a relief hole upstream of the valve for balancing the pressures for fluids such as ammonia, LPG, chlorine, etc.
- On a cold service, check that there is no risk of ice forming and blocking the tap spindle. If necessary, provide a spindle extension with suitable insulation or permanent spindle heating. Please consult us for a special model.
- Check that the valve is not used for flow or pressure control since it is not intended for this use and there is a risk of premature wear of the seats, in particular in the event of high pressure and/or temperature. For this special application, preferably use our "V-port" version with a V-shaped hole in the ball. Please contact us.
- Check that the valve is not used on a gas which might condense at certain times during the process. In such a case, the pressure within the body cavity could become negative, which could lead to a significant deformation of the seats. Please contact us.
- Static electricity: the valve will be supplied with a ball-stem-body internal electrical continuity tester. If the service conditions require the electrical continuity of the installation, check its earthing.
- If the valve is installed in an explosive zone, you must follow the additional "IMEVMATEX" instructions.

#### 1.2 - Storage before installation

- Follow our general "IMESTOCK" instructions for storage.
- Check that the tie-bolts of the valves were not loosen during transport.

#### 1.3 - Installation

- Before any installation, isolate the piping upstream and downstream, depressurize the piping and bring the installation to ambient temperature. Carefully clean the piping of any particle (foreign body, dust, rust, etc.) or shavings by water rinsing or air blowing.
- For valves with a size above DN50, plan to use a hoist.
- Remove the protective tips from the valve ends.
- Check the cleanliness of the internal surfaces of the valve and if need be, clean them.
- Direction of mounting: the valves do not have a preferred direction of mounting, unless a relief hole was drilled into the ball.
- Check the perfect alignment and the proper support of the pipe installation upstream and downstream of the valve. Alignment defects cause mechanical deformations which can block the valve or lead to leaks at the body gaskets.

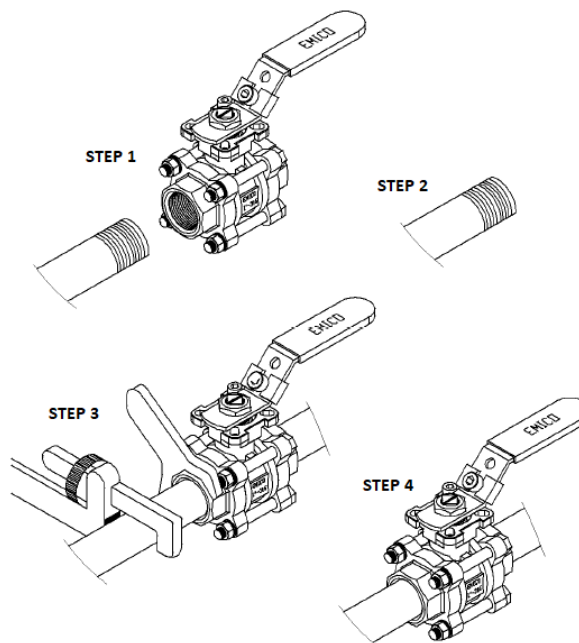
Information given as an indication only, and subject to possible modifications

|                                                                                     |                                                                                                                                                                                                                                                                                  |       |                      |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------|
|  | SECTORIEL S.A.<br>45 rue du Ruisseau<br>38290 SAINT QUENTIN-FALLAVIER – FRANCE<br>Telephone: +33 4 74 94 90 70 – Fax: +33 4 74 94 13 95<br><a href="http://www.sectoriel.com">www.sectoriel.com</a> / Email : <a href="mailto:sectoriel@sectoriel.fr">sectoriel@sectoriel.fr</a> | Pages | 5/8                  |
|                                                                                     |                                                                                                                                                                                                                                                                                  | Ref.  | TDS746XS-VPort+AP-RE |
|                                                                                     |                                                                                                                                                                                                                                                                                  | Rev.  | 02                   |
|                                                                                     |                                                                                                                                                                                                                                                                                  | Date  | 12/2025              |

## 736-746 XS VALVE V-SHAPE CONTROL HOLE WITH ACTUATOR AP-RE

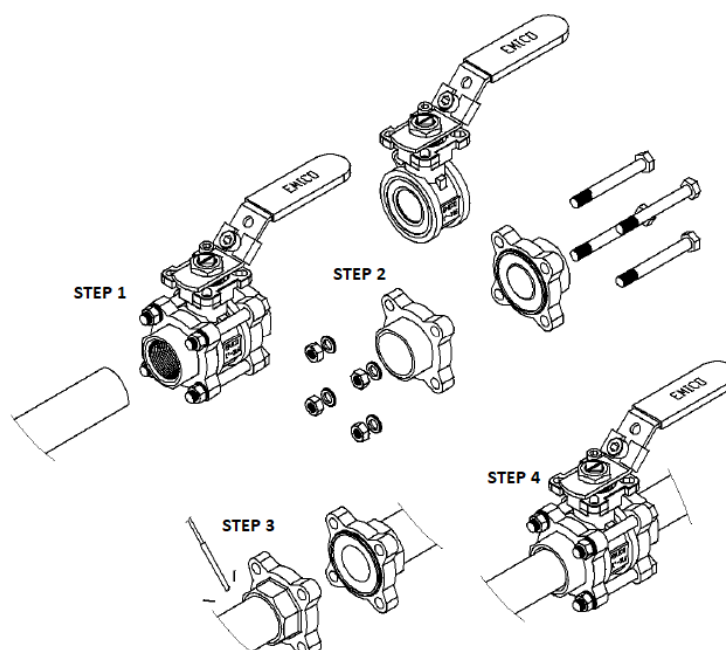
### ○ Threaded valve connection:

- Check that the standards for the valve internal thread and pipe thread are the same.
- Cover the pipe threads using a sealing material (tow, PTFE tape, sealing glue, etc.) which is suitable for the fluid.
- Screw the tube into the valve end clockwise, as shown in the diagram below.
- Check the sealing of the connection using a suitable test (hydrostatic test or leak detection spray).



### ○ Connection of weld-on valves:

- Remove the end (items 2) by unscrewing the tie-bolts, and remove the central body.
- Weld each end onto the upstream or downstream pipe, following the alignment of the tie-bolt holes.
- Cool down to the room temperature the welded ends, then put back the central body complying with the tightening torques shown in the table below.
- Check the sealing of the connection using a suitable test (hydrostatic test or leak detection spray).



Information given as an indication only, and subject to possible modifications

|                                                                                     |                                                                                                                                                                                                                                                                                  |       |                      |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------|
|  | SECTORIEL S.A.<br>45 rue du Ruisseau<br>38290 SAINT QUENTIN-FALLAVIER – FRANCE<br>Telephone: +33 4 74 94 90 70 – Fax: +33 4 74 94 13 95<br><a href="http://www.sectoriel.com">www.sectoriel.com</a> / Email : <a href="mailto:sectoriel@sectoriel.fr">sectoriel@sectoriel.fr</a> | Pages | 6/8                  |
|                                                                                     |                                                                                                                                                                                                                                                                                  | Ref.  | TDS746XS-VPort+AP-RE |
|                                                                                     |                                                                                                                                                                                                                                                                                  | Rev.  | 02                   |
|                                                                                     |                                                                                                                                                                                                                                                                                  | Date  | 12/2025              |

# 736-746 XS VALVE V-SHAPE CONTROL HOLE WITH ACTUATOR AP-RE

- Hydraulic test of the installation
  - Valves were tested at the factory at 1.5 x WP.
  - If a hydrostatic test is carried out on the installation, do not exceed the authorised pressure.

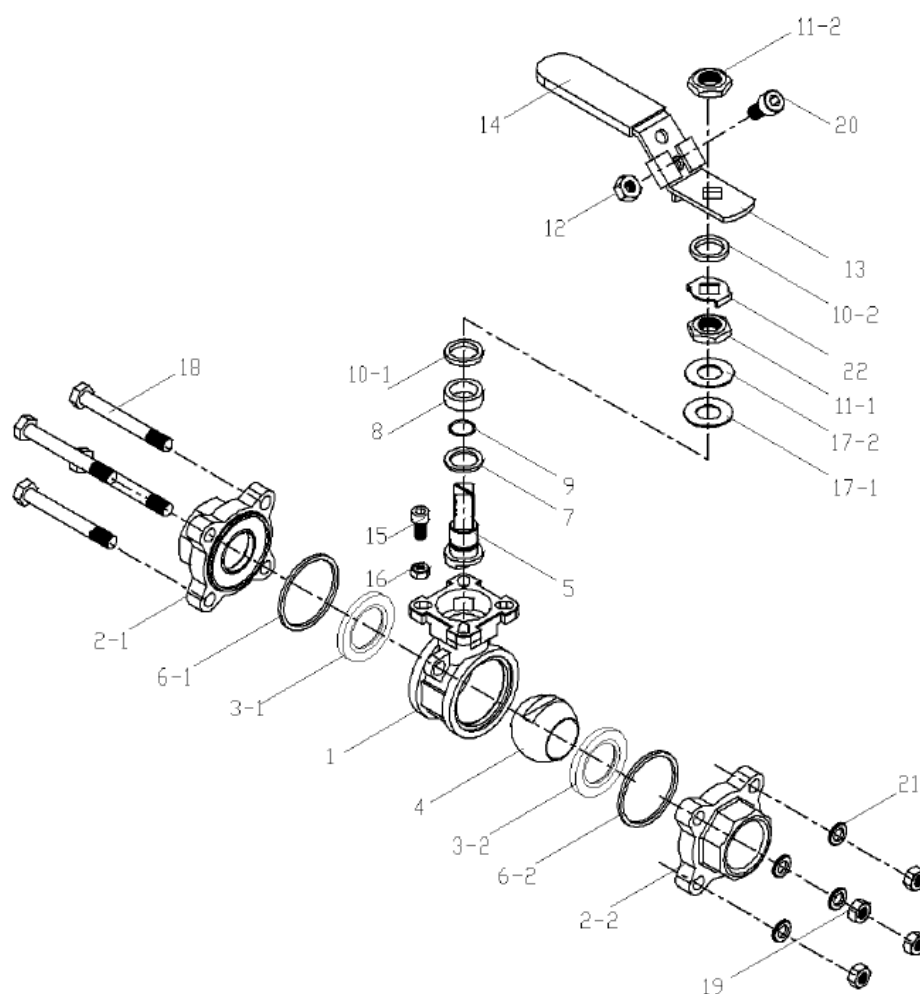
## 2 - Service

- If a hot fluid flows across the valve, do not touch the valve surface.
- Always operate the valve slowly and smoothly.
- Opening clockwise, closing anti-clockwise.

## 3 - Servicing

### 3.1 - Frequency of servicing

- The servicing frequency depends upon the use of the valve, of the type of fluid, of its velocity, of its frequency of operation, of the cycles of rise and fall in pressure and temperature.
- Before any intervention, isolate the upstream and downstream pipe installation using the valves provided for this purpose. Depressurize the pipe installation and bring it to ambient temperature.
- If the lever has to be removed, do that before disassembling the body.
- To remove the central body, unscrew the tie-bolts symmetrically. Then gently remove the central part avoiding to drop the ball.
- To remove the ball from the body, turn the stem by a quarter turn.



Information given as an indication only, and subject to possible modifications

|                                                                                     |                                                                                                                                                                                                                                                                                  |       |                      |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------|
|  | SECTORIEL S.A.<br>45 rue du Ruisseau<br>38290 SAINT QUENTIN-FALLAVIER – FRANCE<br>Telephone: +33 4 74 94 90 70 – Fax: +33 4 74 94 13 95<br><a href="http://www.sectoriel.com">www.sectoriel.com</a> / Email : <a href="mailto:sectoriel@sectoriel.fr">sectoriel@sectoriel.fr</a> | Pages | 7/8                  |
|                                                                                     |                                                                                                                                                                                                                                                                                  | Ref.  | TDS746XS-VPort+AP-RE |
|                                                                                     |                                                                                                                                                                                                                                                                                  | Rev.  | 02                   |
|                                                                                     |                                                                                                                                                                                                                                                                                  | Date  | 12/2025              |

# 736-746 XS VALVE V-SHAPE CONTROL HOLE WITH ACTUATOR AP-RE

## 3.2 - Inspecting the state of the valve and possible repair

- Check the state of the ball (Item 4): it has to be clean and unscratched. If the cleaning or polishing is not possible, replace it (see the § on spare parts).
- Check the state of the seats (3.1 and 3.2): they must not be deformed, nor scratched, nor worn, or dirty. Otherwise, replace them with parts from the gasket kit.
- Check the state of the packing gland (7.8 and 9): no leak should be found at the stem and the rings should not be excessively worn. If need be, replace the gaskets.
- Check the state of the body gaskets (6.1 and 6.2). Replace them if necessary.
- Reassemble the different parts of the valve, following the tightening torques shown in the table below.
- Check that the stem manoeuvring is smooth. Perform about ten manoeuvres.

**TABLE OF THE TIGHTENING TORQUES OF THE TIE-BOLTS AND OF THE LEVER NUT**

| DN          | Tie-bolts | Torque (Nm) | Lever nut (Nm) |
|-------------|-----------|-------------|----------------|
| 1/4" - 6    | M6        | 10          | 4              |
| 3/8" - 10   | M6        | 10          | 4              |
| 1/2" - 15   | M6        | 10          | 4              |
| 3/4" - 20   | M8        | 20          | 4              |
| 1" - 25     | M8        | 20          | 4.5            |
| 1 1/4" - 32 | M10       | 35          | 4.5            |
| 1 1/2" - 40 | M10       | 35          | 5.5            |
| 2" - 50     | M10       | 40          | 5.5            |
| 2 1/2" - 65 | M12       | 70          | 7              |
| 3" - 80     | M16       | 120         | 7              |
| 4" - 100    | M16       | 120         | 7              |

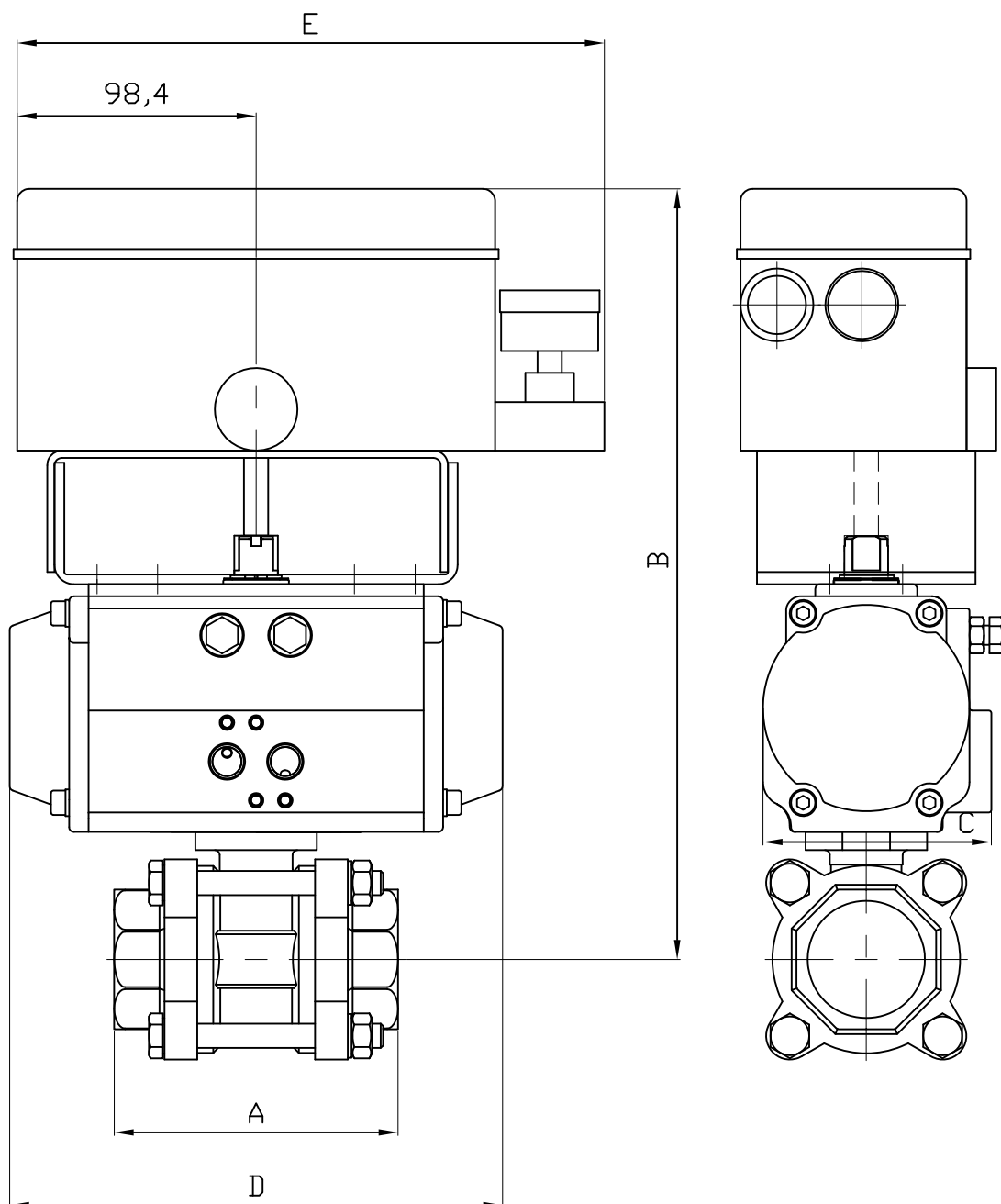
## SPARE PARTS

| DN             | Gasket kit         | Ball               | V30° ball          | V60° ball          | Tie-bolt kit       | Lever              |
|----------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Reference mark | 3-6-7-8-18         | 4                  | 4                  | 4                  | 15-16-17           | 11                 |
| 1/4" - 6       | Please contact us. | Please contact us. | Please contact us. | Please contact us. | Please contact us. | Please contact us. |
| 3/8" - 10      | Please contact us. | Please contact us. | Please contact us. | Please contact us. | Please contact us. | Please contact us. |
| 1/2" - 15      | 982852             | 980032             | 980042             | 980052             | 982832             | 982802             |
| 3/4" - 20      | 982853             | 980033             | 980043             | 980053             | 982833             | 982802             |
| 1" - 25        | 982854             | 980034             | 980044             | 980054             | 982834             | 982804             |
| 1 1/4" - 32    | 982855             | 980035             | 980045             | 980055             | 982835             | 982804             |
| 1 1/2" - 40    | 982856             | 980036             | 980046             | 980056             | 982836             | 982806             |
| 2" - 50        | 982857             | 980037             | 980047             | 980057             | 982837             | 982806             |
| 2 1/2" - 65    | 982858             | Please contact us. | Please contact us. | Please contact us. | 982838             | 982808             |
| 3" - 80        | 982859             | Please contact us. | Please contact us. | Please contact us. | Please contact us. | 982808             |
| 4" - 100       | 982860             | Please contact us. | Please contact us. | Please contact us. | Please contact us. | 982808             |

Information given as an indication only, and subject to possible modifications

|                                                                                     |                                                                                                                                                                                                                                                                                         |       |                      |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------|
|  | <b>SECTORIEL S.A.</b><br>45 rue du Ruisseau<br>38290 SAINT QUENTIN-FALLAVIER – FRANCE<br>Telephone: +33 4 74 94 90 70 – Fax: +33 4 74 94 13 95<br><a href="http://www.sectoriel.com">www.sectoriel.com</a> / Email : <a href="mailto:sectoriel@sectoriel.fr">sectoriel@sectoriel.fr</a> | Pages | 8/8                  |
|                                                                                     |                                                                                                                                                                                                                                                                                         | Ref.  | TDS746XS-VPort+AP-RE |
|                                                                                     |                                                                                                                                                                                                                                                                                         | Rev.  | 02                   |
|                                                                                     |                                                                                                                                                                                                                                                                                         | Date  | 12/2025              |





| DN      | 1/2"  | 3/4"  | 1"    | 1 1/2" | 2"     |
|---------|-------|-------|-------|--------|--------|
| ALPHAIR | RES43 | RES51 | RES64 | RES86  | RES101 |
| A       | 75    | 80    | 90    | 120    | 140    |
| B       | 276.3 | 283.8 | 312   | 357.5  | 372    |
| C       | 63.5  | 75    | 86    | 104    | 120    |
| D       | 141   | 138   | 155   | 239    | 261    |
| E       | 240   | 240   | 240   | 240    | 240    |
| KG      | 4.41  | 5.11  | 6.2   | 11.14  | 15.6   |

Informations données à titre indicatif et sous réserve de modifications éventuelles  
data subject to alteration

|                                                                                                                                              |                  |                    |                                |                   |      |      |
|----------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------|--------------------------------|-------------------|------|------|
| Ech: /                                                                                                                                       | Date :20/09/2019 | Dessiné par : E.D. | Tolérances générales : +/- 0.2 | Modifications     | Date | REV. |
| ROBINET A TOURNANT SPHERIQUE 746XS V-PORT<br>/V-PORT BALL VALVE 746XS + ACTIONNEUR ALPHAIR<br>RES+YTC/PNEUMATIC ACTUATOR RES+ POSITIONER YTC |                  |                    |                                | Matière :         |      |      |
|                                                                                                                                              |                  |                    |                                | Poids (Kg) :      |      |      |
|                                                                                                                                              |                  |                    |                                | Traitement : SANS |      |      |
|  45, Rue du Ruisseau<br>38297 SAINT QUENTIN FALLAVIER     |                  |                    |                                | Plan n° Ens 1399  |      |      |

# ROTARY ELECTROPNEUMATIC POSITIONER YTC YT3300R

## FEATURES

The YT3300R positioner is intended for proportional control of single or double-acting 1/4 turn control valves.

The 4 to 20 mA proportional control signal is compared to the valve position and the pressure in the actuator is adjusted accordingly to match the valve position proportionally to the signal, independent of the differential pressure across the valve. The electrical power supply is provided by the voltage carrying the control signal (2 wires).



The YT3300R positioner has an LCD display and self-calibration and manual adjustment functions. Different executions are available, including the HART communication protocol.

The positioners are delivered equipped with a pressure gauge block and have a manual mode.

## AVAILABLE MODELS

|                       | Standard             |
|-----------------------|----------------------|
| Control signal        | 4÷20 mA              |
| Pneumatic connections | 1/4" NPT-F           |
| Electric connections  | G1/2                 |
| Valve stroke          | 2 à 35 mm<br>> 35 mm |
| Body                  | Aluminium            |
| Cover                 | Aluminium            |



## LIMITS OF USE

|                   | Standard       | ATEX              |
|-------------------|----------------|-------------------|
| Protection rating | IP66           | Ex ia IIC T6 / T5 |
| Temperature       | -30 ... +85°C  |                   |
| Air pressure      | 1,4 à 7 bar    |                   |
| Voltage           | 8,5 ÷ 30V      |                   |
| Maximum flow      | 70 l/min       |                   |
| Impédance         | 4500 Ω @ 30VCC |                   |

## EXECUTIONS

|      | Control<br>4÷20 mA | Feedback<br>4÷20 mA | 2 limit<br>switches | 2 limit switches<br>+ 4÷20 mA feedback |
|------|--------------------|---------------------|---------------------|----------------------------------------|
| IP66 | 3267001            | 3267002             | 3267003             | 3267005                                |

Information given as an indication only, and subject to possible modifications

|                                                                                     |                                                                                                                                                                                                                                                                                 |       |             |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------|
|  | SECTORIEL S.A.<br>45 rue du Ruisseau<br>38290 SAINT QUENTIN-FALLAVIER – FRANCE<br>Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95<br><a href="http://www.sectoriel.com">www.sectoriel.com</a> / courrier : <a href="mailto:sectoriel@sectoriel.fr">sectoriel@sectoriel.fr</a> | Pages | 1/5         |
|                                                                                     |                                                                                                                                                                                                                                                                                 | Ref.  | TDS3267 ENG |
|                                                                                     |                                                                                                                                                                                                                                                                                 | Rev.  | 02          |
|                                                                                     |                                                                                                                                                                                                                                                                                 | Date  | 01/2024     |

# ROTARY ELECTROPNEUMATIC POSITIONER YTC YT3300R

## IDENTIFICATION

| Model   | Motion Type     | Acting Type     | Explosion Protection             | Lever Type        |                   | Conduit - Air Connection *2 | Communication   | Option                               | Operating Temp        |
|---------|-----------------|-----------------|----------------------------------|-------------------|-------------------|-----------------------------|-----------------|--------------------------------------|-----------------------|
| YT-3300 | <b>L</b> Linear | <b>S</b> Single | <b>N</b> Non-Explosion           | <b>0</b> 10~40mm  | <b>1</b> M6 × 34L | <b>1</b> G1/2 - PT1/4       | <b>0</b> NONE   | <b>0</b> NONE                        | <b>S</b> -30°C ~ 85°C |
| YT-3350 | <b>R</b> Rotary | <b>D</b> Double | <b>I</b> ATEX, IECEx, NEPSI, KCs | <b>1</b> 20~100mm | <b>2</b> M6 × 63L | <b>2</b> G1/2 - NPT1/4      | <b>2</b> + HART | <b>1</b> + PTM                       | <b>L</b> -40°C ~ 85°C |
|         |                 |                 | <b>A</b> CSA, FM                 | <b>2</b> 90~150mm | <b>3</b> M8 × 34L | <b>3</b> G1/2 - G1/4        |                 | <b>2</b> + L/S (Mechanical Type)     |                       |
|         |                 |                 |                                  | <b>3</b> 16~30mm  | <b>4</b> M8 × 63L | <b>4</b> M20 - NPT1/4 *3    |                 | <b>3</b> + L/S (Proximity Type)      |                       |
|         |                 |                 |                                  | <b>4</b> 16~60mm  | <b>5</b> NAMUR    | <b>5</b> NPT1/2 - NPT1/4    |                 | <b>4</b> + PTM+L/S (Mechanical Type) |                       |
|         |                 |                 |                                  | <b>5</b> 16~100mm |                   |                             |                 | <b>5</b> + PTM+L/S (Proximity Type)  |                       |
|         |                 |                 |                                  | <b>6</b> 90~150mm |                   |                             |                 |                                      |                       |

\*1 Lever 3~6 is adapter lever type.

\*2 YT-3350 is available for No.2 ONLY.

\*3 M20 adapter is attached to conduit entry

## DIRECTIVES AND MANUFACTURING STANDARDS

| Subject       | Standard                                         | Subject                  | Standard                                                          |
|---------------|--------------------------------------------------|--------------------------|-------------------------------------------------------------------|
| CE            | EN 61000-6-4:2007 + A1:2011<br>EN 61000-6-4:2005 | Protection rating        | IEC 60529:2001<br>IEC 60529:2006                                  |
| CEM Directive | 2014/30/UE                                       | ATEX 2014/34 UE (option) | II 2G Ex ia IIC T5/T6 Gb<br>II 2D Ex ia IIIC T100°C/T85°C Db IP6X |
| SIL2          | IEC 61508-1-2-4-7:2010                           | Quality assurance        | ISO 9001:2009<br>ISO 9001:2008                                    |

## CONSTRUCTION

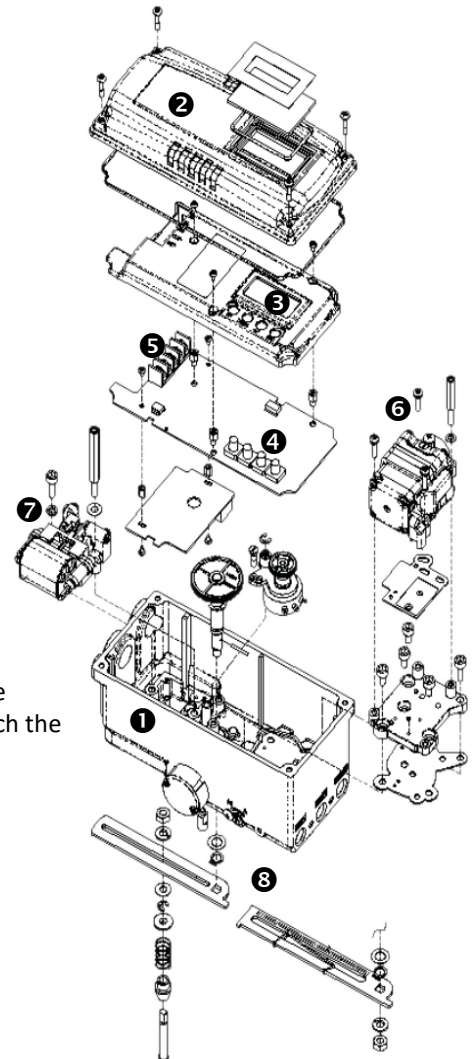
|   | Item                         |
|---|------------------------------|
| 1 | Aluminium epoxy coated body  |
| 2 | Aluminium epoxy coated cover |
| 3 | LCD display                  |
| 4 | Controls                     |
| 5 | Terminals                    |
| 6 | Pilot block                  |
| 7 | Position sensor              |
| 8 | Lever                        |

## FUNCTIONNING

The pneumatic power supply of the YT3300R positioner must be at least Class 2 or 3 (ISO8573.1)

The control signal is compared to the valve position and, depending on the result of the comparison, the air pressure in the engine is adjusted to match the position to the signal.

The LCD display shows the position in percentage of travel



Information given as an indication only, and subject to possible modifications

|                                                                                     |                                                                                                                                                                                                                                                                                 |       |             |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------|
|  | SECTORIEL S.A.<br>45 rue du Ruisseau<br>38290 SAINT QUENTIN-FALLAVIER – FRANCE<br>Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95<br><a href="http://www.sectoriel.com">www.sectoriel.com</a> / courrier : <a href="mailto:sectoriel@sectoriel.fr">sectoriel@sectoriel.fr</a> | Pages | 2/5         |
|                                                                                     |                                                                                                                                                                                                                                                                                 | Ref.  | TDS3267 ENG |
|                                                                                     |                                                                                                                                                                                                                                                                                 | Rev.  | 02          |
|                                                                                     |                                                                                                                                                                                                                                                                                 | Date  | 01/2024     |

# ROTARY ELECTROPNEUMATIC POSITIONER YTC YT3300R

## ASSEMBLY

The positioner can be adapted to all types of linear actuator, the coupling kits available are particularly intended for actuators with NAMUR yoke

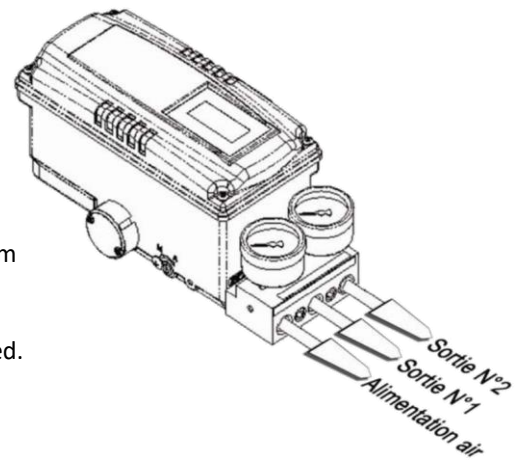
## PNEUMATIC CONNECTIONS

The supply air quality of the YT3300R positioner must be at least Class 2 or 3 (ISO8573.1), the installation of a regulator filter is recommended (30 µ).

The pneumatic supply (7 bar maximum) is connected to the left ¼"NPT port of the pressure gauge block. The recommended tube size is 6x8 mm

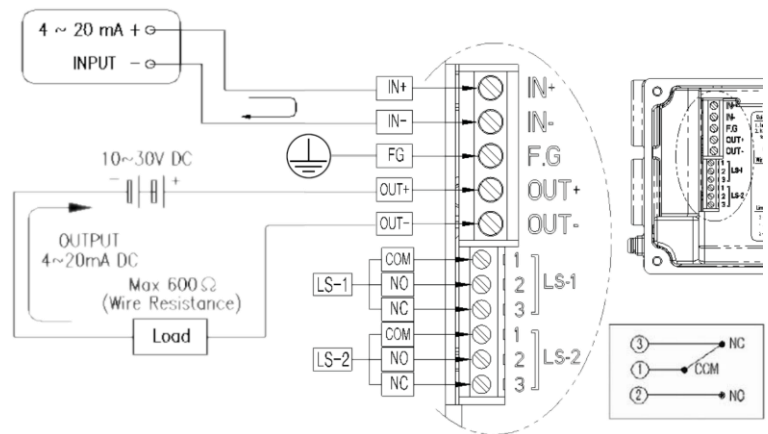
Outputs 1 and 2 correspond to direct (1) and reverse (2) output.

In the case of a single-acting actuator, the unused output must be closed.



## ELECTRICAL CONNECTIONS

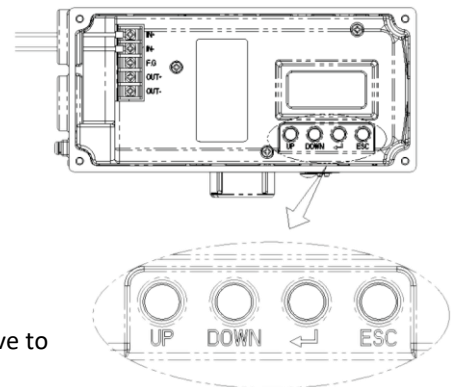
| Terminal | Description                         |
|----------|-------------------------------------|
| IN+      | + 4÷20 mA Control signal            |
| IN-      | - 4÷20 mA Control signal            |
| F.G      | Earth connection                    |
| OUT+     | + 4÷20 mA Feedback                  |
| OUT-     | - 4÷20 mA Feedback                  |
| LS-1     | 1 - COM Limit switch common N°1     |
|          | 2 - NO NO limit switch terminal N°1 |
|          | 3 - NC NC limit switch terminal N°1 |
| LS-2     | 1 - COM Limit switch common N°2     |
|          | 2 - NO NO limit switch terminal N°2 |
|          | 3 - NC NC limit switch terminal N°2 |



## SETTINGS

The YT3300 positioner has as standard an LCD display and four keys allowing you to display and configure the different settings.

|      |                                |
|------|--------------------------------|
| UP   | Menu navigation,               |
| DOWN | selection of values            |
| ↩    | Validation, access to submenus |
| ESC  | Return to previous menu        |



Numerous settings are available to the user to adapt the behavior of the valve to the characteristics of the installation.

In particular, it is possible to adjust the PID, the valve curve, the dead zone (hysteresis), the split-range mode, etc.

Optional equipment such as limit switches, position transmitter or HART communication can also be configured, if installed.

The YT3300R positioner has several self-learning modes.

Information given as an indication only, and subject to possible modifications

|  |                                                                                                                                                                                                                                                                                 |       |             |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------|
|  | SECTORIEL S.A.<br>45 rue du Ruisseau<br>38290 SAINT QUENTIN-FALLAVIER – FRANCE<br>Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95<br><a href="http://www.sectoriel.com">www.sectoriel.com</a> / courrier : <a href="mailto:sectoriel@sectoriel.fr">sectoriel@sectoriel.fr</a> | Pages | 3/5         |
|  |                                                                                                                                                                                                                                                                                 | Ref.  | TDS3267 ENG |
|  |                                                                                                                                                                                                                                                                                 | Rev.  | 02          |
|  |                                                                                                                                                                                                                                                                                 | Date  | 01/2024     |



# ROTARY ELECTROPNEUMATIC POSITIONER YTC YT3300R

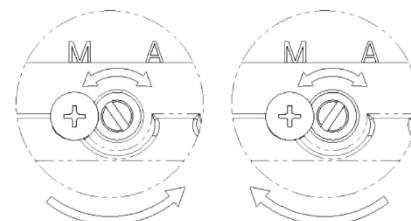
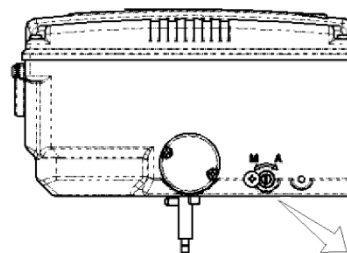
## MANUAL OPERATION

The AUTO/MANUAL (A/M) selector allows you to bypass the positioner and direct the supply pressure directly to the actuator.

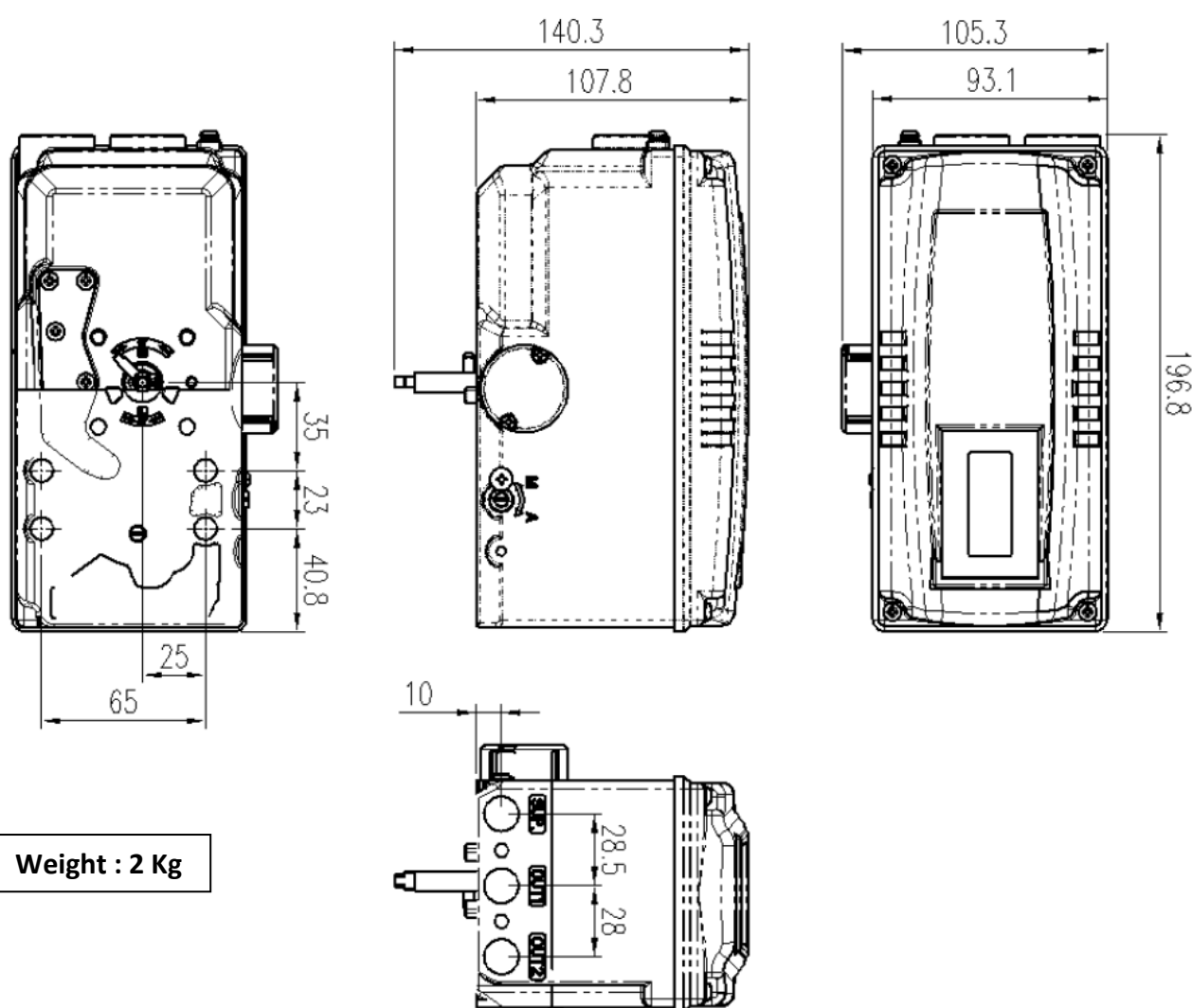
In the AUTO position, the 4÷20 mA signal controls the valve

In MANUAL mode, the valve position can be adjusted by modulating the supply pressure using the pressure regulator.

Loosen the lock using a Phillips screwdriver, orient the A/M control using a flat screwdriver.



## DIMENSIONS



Weight : 2 Kg

Information given as an indication only, and subject to possible modifications

|                                                                                     |                                                                                                                                                                                                                                                                                 |       |             |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------|
|  | SECTORIEL S.A.<br>45 rue du Ruisseau<br>38290 SAINT QUENTIN-FALLAVIER – FRANCE<br>Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95<br><a href="http://www.sectoriel.com">www.sectoriel.com</a> / courrier : <a href="mailto:sectoriel@sectoriel.fr">sectoriel@sectoriel.fr</a> | Pages | 5/5         |
|                                                                                     |                                                                                                                                                                                                                                                                                 | Ref.  | TDS3267 ENG |
|                                                                                     |                                                                                                                                                                                                                                                                                 | Rev.  | 02          |
|                                                                                     |                                                                                                                                                                                                                                                                                 | Date  | 01/2024     |