



- *Compact design*
- *Convenient & Powerful function*
- *Enhanced reliability*



New Smart Positioner YT-2300 Series

Product Description

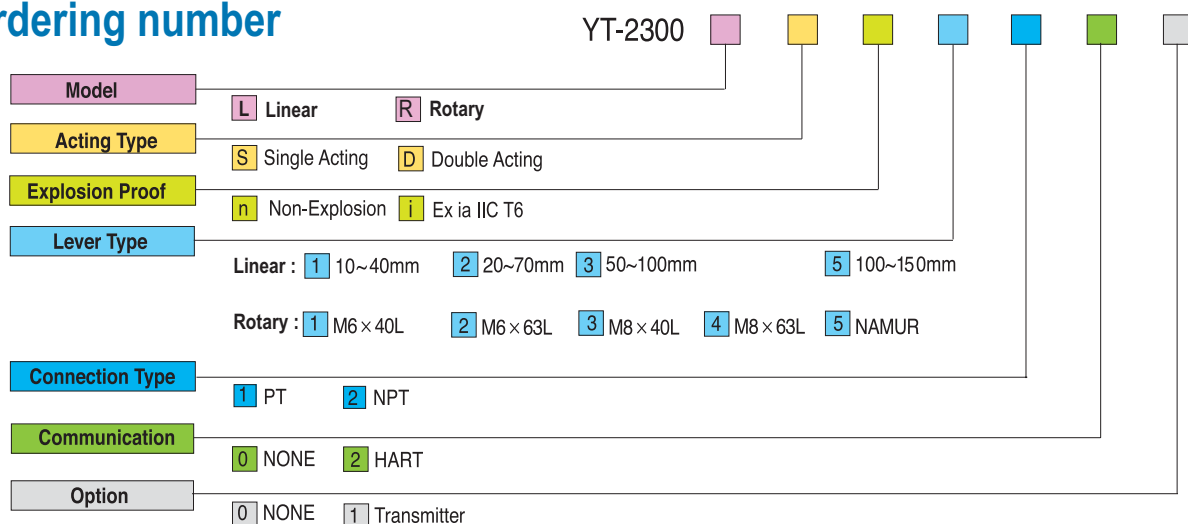
YT-2300 Smart Valve Positioner controls valve stroke accurately according to input signal of 4-20mA being input from controller. In addition, highly efficient microprocessing operator built in the product performs various and powerful functions like Auto calibration, PID control, Alarm and Hart protocol.

Specification

| Model | YT-2300L | | YT-2300R | |
|--------------------------|---|--------|----------|--------|
| | Single | Double | Single | Double |
| Acting Type | | | | |
| Input Signal | 4~20 mA DC | | | |
| Minimum Current Signal | 3.2mA(Standard), 3.8mA(Hart Included) | | | |
| Supply Pressure | 1.4~7kgf/cm ² (0.14~0.7 MPa) | | | |
| Stroke | 10 - 150 mm | | 0 - 90° | |
| Impedance | Max.460 Ohm/20mA DC | | | |
| Air Connection | PT 1/4, NPT 1/4 | | | |
| Gauge Connection | PT 1/8, NPT 1/8 | | | |
| Conduit Entry | PF 1/2(Standard), NPT1/2(OPTION) | | | |
| Protection | IP66 | | | |
| Explosion Proof | Ex ia IIC T6 | | | |
| Ambient Temperature | Operating Temp. : -40~85°C , Explosion Temp. : -40~60°C (T5)/-40~40°C(T6) | | | |
| Linearity | ± 0.5% F.S. | | | |
| Hysteresis | ± 0.5% F.S. | | | |
| Sensitivity | 0.2% F.S. | | | |
| Repeatability | 0.3% F.S. | | | |
| Flow Capacity | 70 LPM | | | |
| Air Consumption | Below 2 LPM (sup=1.4K), Below 3 LPM (sup.=7K) | | | |
| Output Characteristic | Linear, Quick Open, EQ%, User Set (16 Point) | | | |
| Vibration Effect | 6G | | | |
| Humidity | 5-95% RH at 40 | | | |
| Communication (Option) | HART Communication | | | |
| Feedback Signal (Option) | 4-20mA (DC 10 - 30V) | | | |
| Material | Aluminum Diecasting | | | |
| Weight | 1.5 kg (3.3 lb) | | | |
| Painting | Epoxy Polyester Powder Coating | | | |
| Color | Blue or Black | | | |

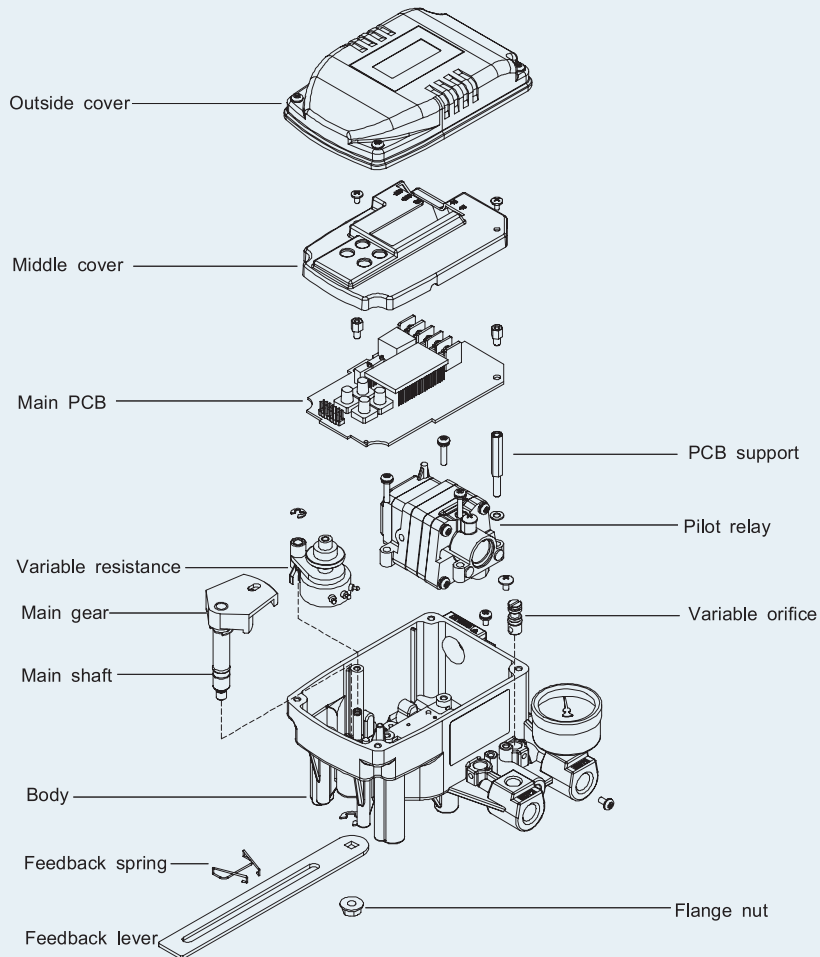
Based on temperature 20°C , absolute pressure 760mmHg and relative humidity 65%

Ordering number



Structure

Because of simple and modulized inner structure, maintenance is very easy.
 The structure of YT-2300L is as follows. That of YT-2300R is as same as linear type except feedback lever.



YT-2300 Structure



Features and functions

1. LCD equipped outside of product makes to check the positioner condition in the field directly.
2. It endures severe vibration.
3. It is operated normally regardless of change of supply pressure during operation.
4. Auto calibration method is very simple.
5. It is easily equipped on small actuator because of its small size.
6. Air consumption is so small that operating cost in huge plants is decreased.
7. Because it can be used in low voltage (8.5V), there is no limitation in controller.
8. Variable orifice is applied and so in case of small actuator the hunting is controlled to the optimum condition during operation.
9. The adjustment of Valve characteristics (Linear, Quick open, Equal percentage) is available.
10. Specific flow control is available with setting 16 point at users' command.
11. Tight Shut-Close and Shut-Open can be set voluntarily.
12. PID parameters can easily adjusted in the field without additional communicator.
13. The pressure of Air filter regulator is sent to Actuator directly with using A/M switch.
14. Split range such as 4-12mA, 12-20mA is available.
15. Setting Zero and Span as partial section is available by Hand Calibration function.
16. The valve defect is easily checked because the valve can be operated voluntarily.
17. It has IP 66 protection grade.
18. Air filter regulator can be attached with the product with only one linear nipple without extra piping.
19. Because of Epoxy polyester powder coating, it can be used for long period of time in corrosive air.
20. Because of simple and modulized inner structure, maintenance is very easy.

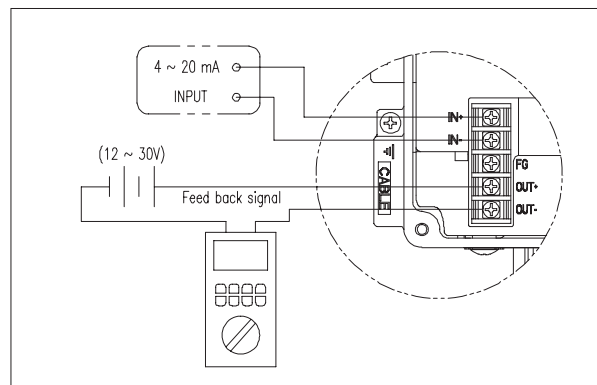
OPTION 1

Hart communication makes to process various information of valve and positioner.



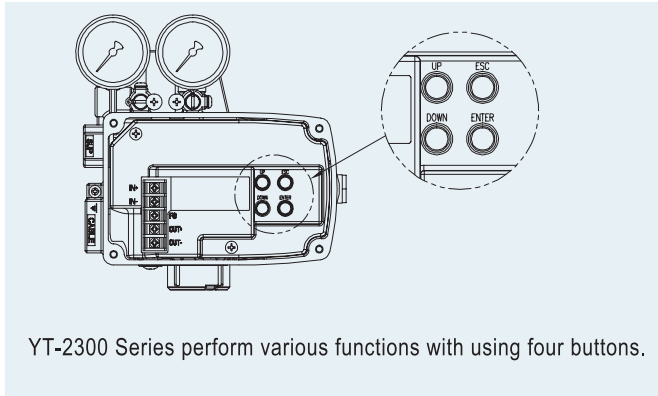
OPTION 2

Valve system is stable by outputting analog Feedback signal.

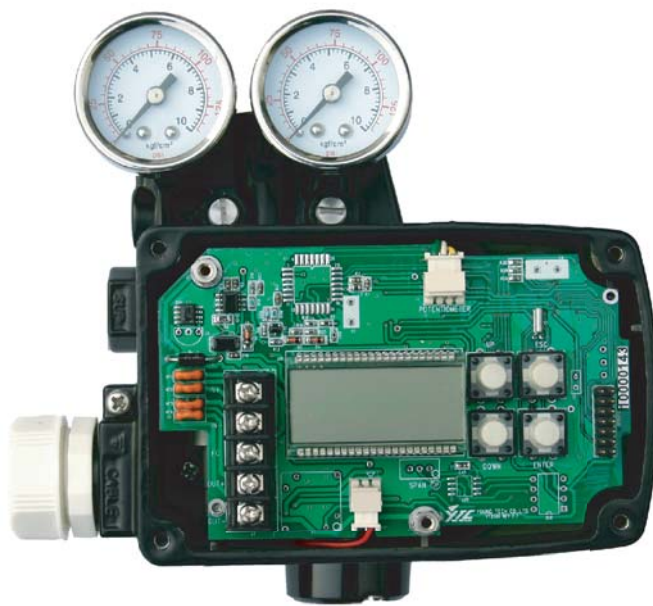
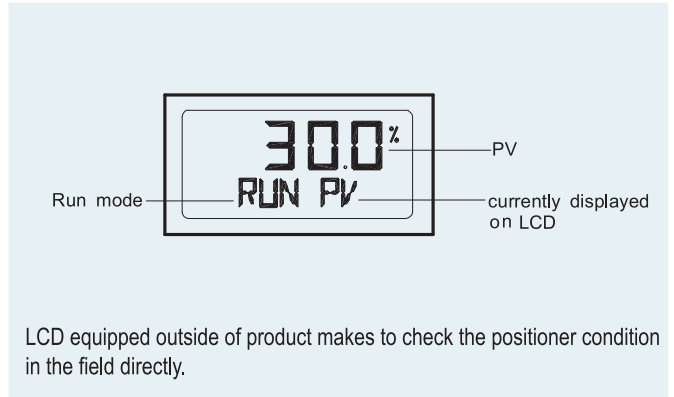


Features and functions

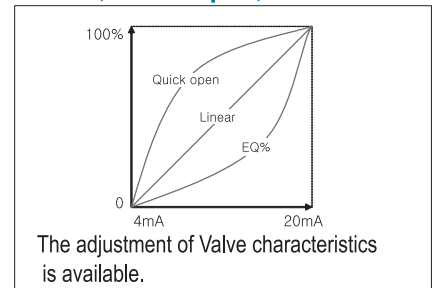
Button



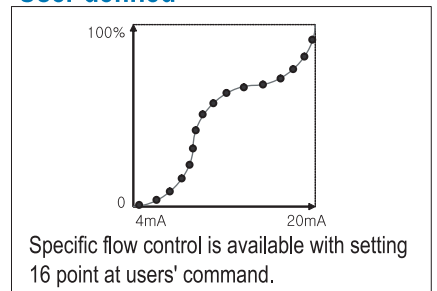
LCD



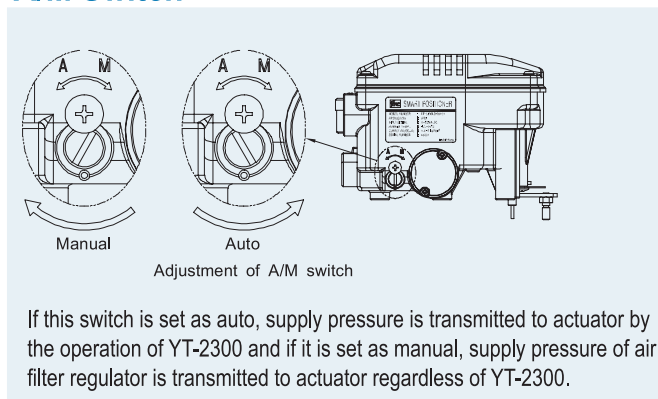
Linear, Quick open, EQ%



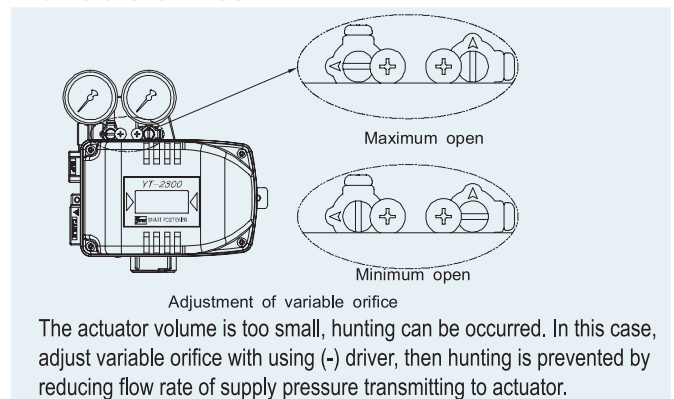
User defined



A/M Switch



Variable orifice



Auto calibration

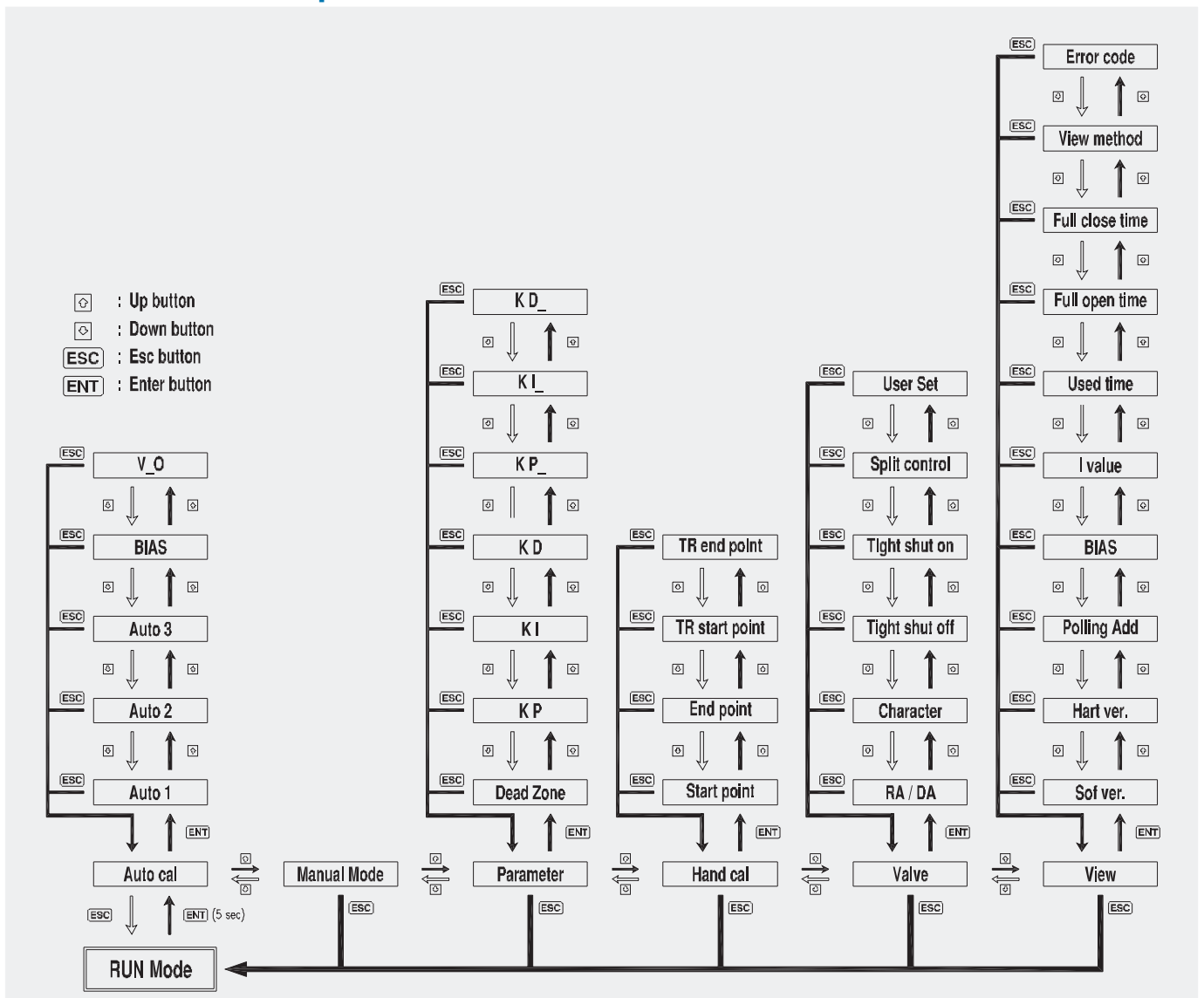
| | Zero POINT | END POINT | KP, KI KD | BIAS | V_0 | RA / DA |
|-------|------------|-----------|-----------|------|-----|---------|
| AUTO1 | O | O | X | O | O | O |
| AUTO2 | O | O | O | O | O | O |
| AUTO3 | X | X | O | O | O | O |
| BIAS | X | X | X | O | X | X |
| V_0 | X | X | X | X | O | X |

Auto calibration types

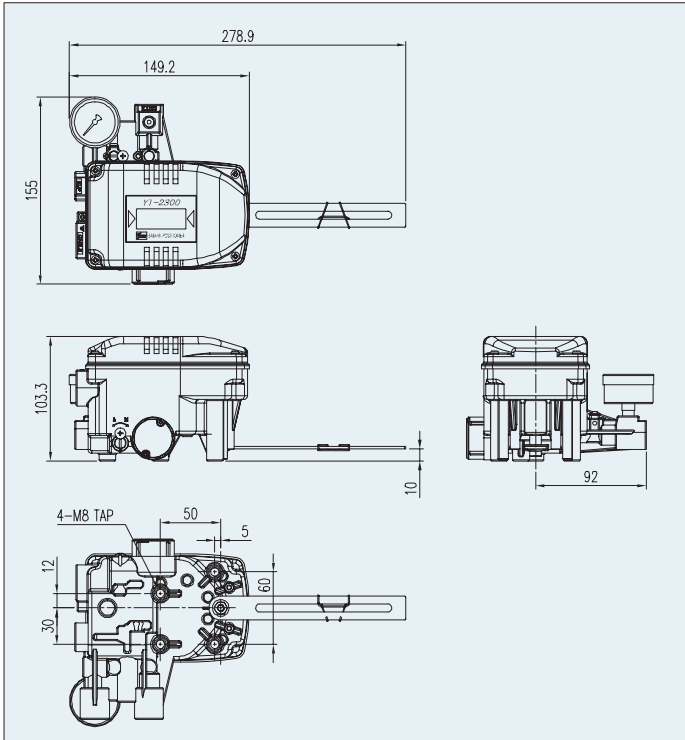
AUTO1 calibration is useful for users' in the field and AUTO2 calibration is for valve company or initial parameters setting of YT-2300.

It takes about 2-3 minutes for auto calibration and it can be different by actuator's volume. AUTO1, AUTO2 and AUTO3 calibration set RADA automatically.

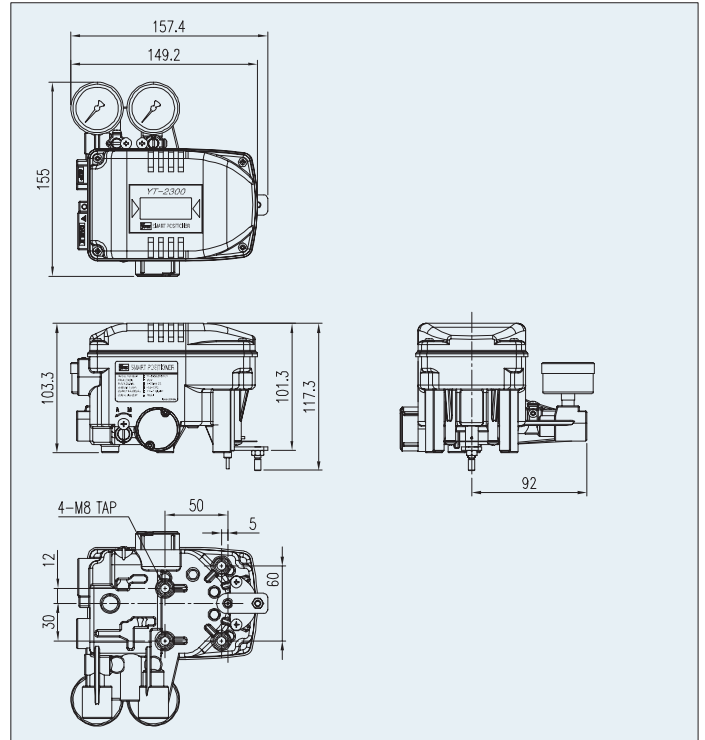
Main software map



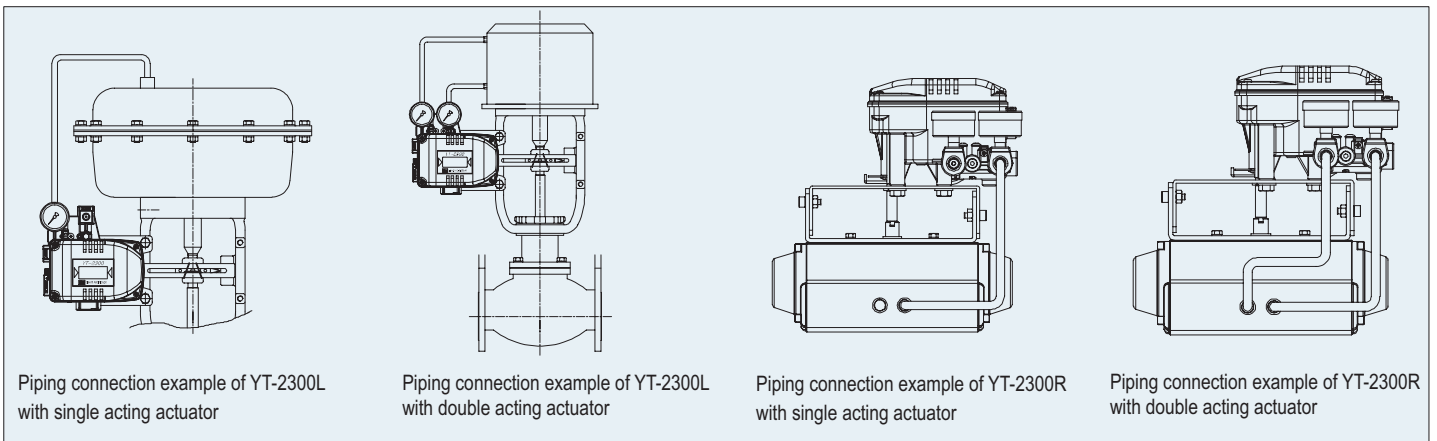
YT-2300L drawing



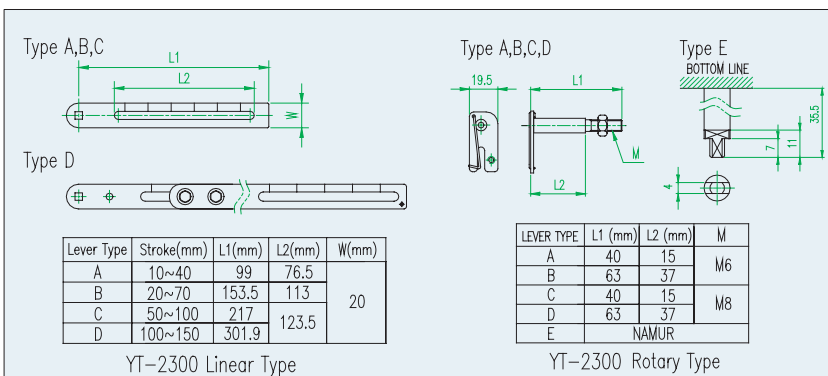
YT-2300R drawing



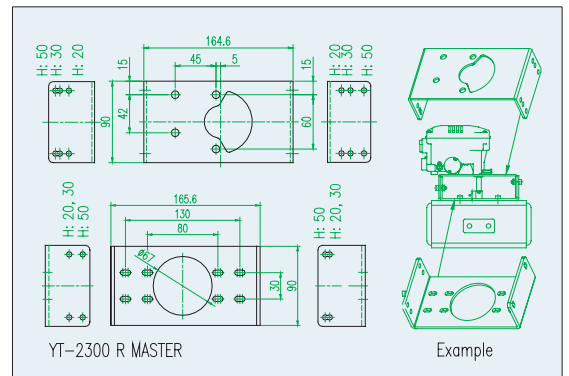
Piping connection with actuator



YT-2300 Lever series



YT-2300R Bracket





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