



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



## **New Smart Positioner YT-2300 Series**

## Product Description

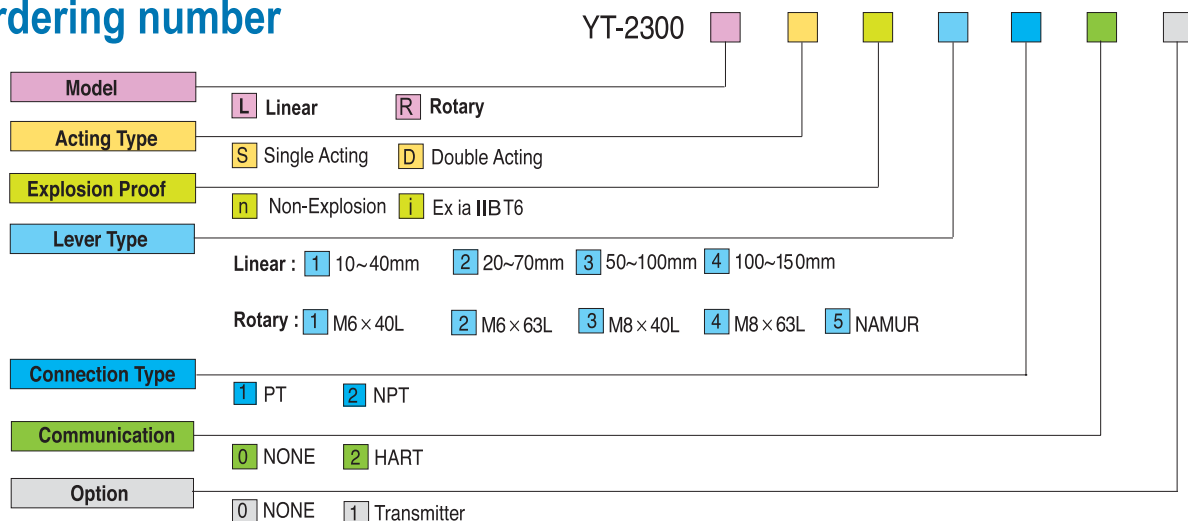
YT-2300 Smart Valve Positioner controls valve stroke accurately according to input signal of 4-20mA being input from controller. In addition, highly efficient microprocessing operator built in the product performs various and powerful functions like Auto calibration, PID control, Alarm and Hart protocol.

## 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 <sup>2</sup> ( 0.14~0.7 MPa )			
Stroke	10 - 150 mm		90°	
Impedance	Max.500 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 IIB T6			
Ambient Temperature	Operating Temp: -30~85°C, Explosion temp: -20~60°C			
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)			
LCD Temp. Condition	Storage Temp:-30~85°C, Operating Temp:-10~70°C			
Output Characteristic	Linear, Quick Open, EQ%, User Set (16 Point)			
Vibration Effect	6G			
Humidity	5-95% RH at 40°C			
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			

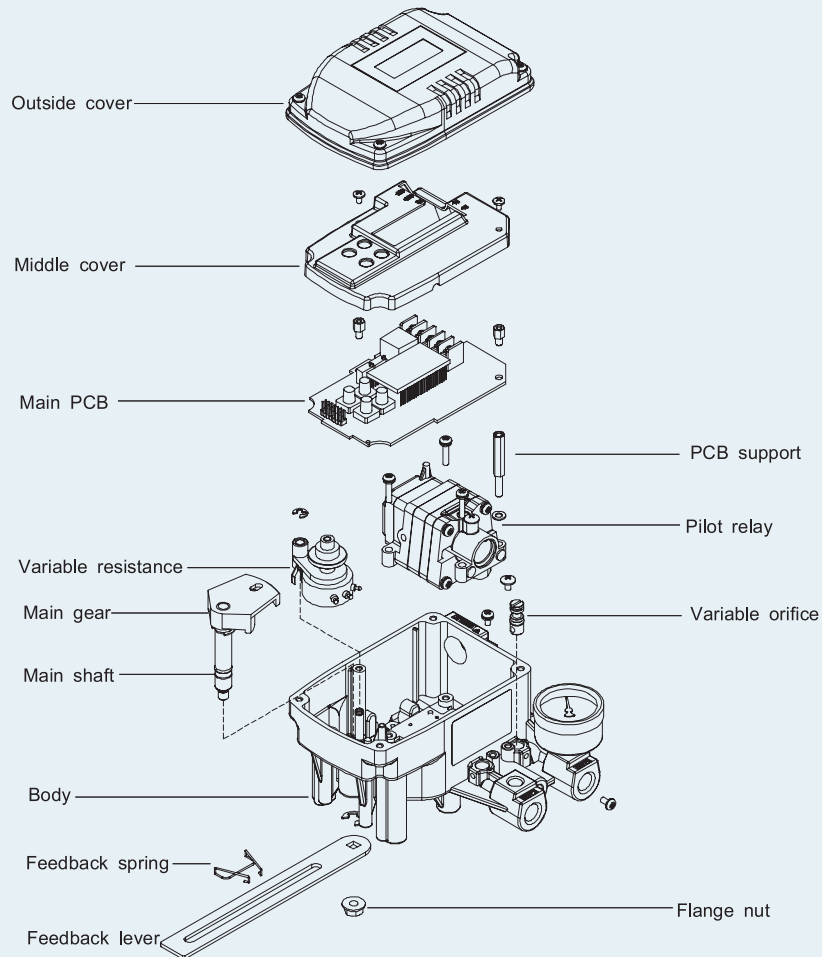
Based on temperature 20°C , absolute pressure 760mmHg and relative humidity 65%

## 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



YT-2300L (Linear Type)



YT-2300R (Rorary Type)

## 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.

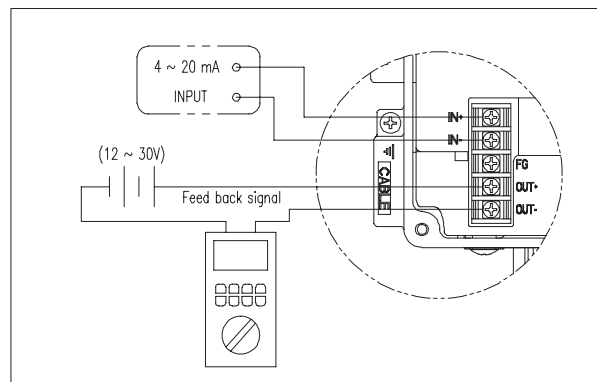
### OPTION 1

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



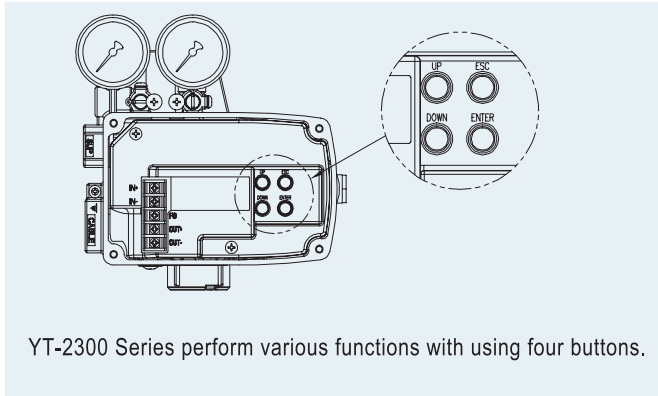
### OPTION 2

Valve system is stable by outputting analog Feedback signal.

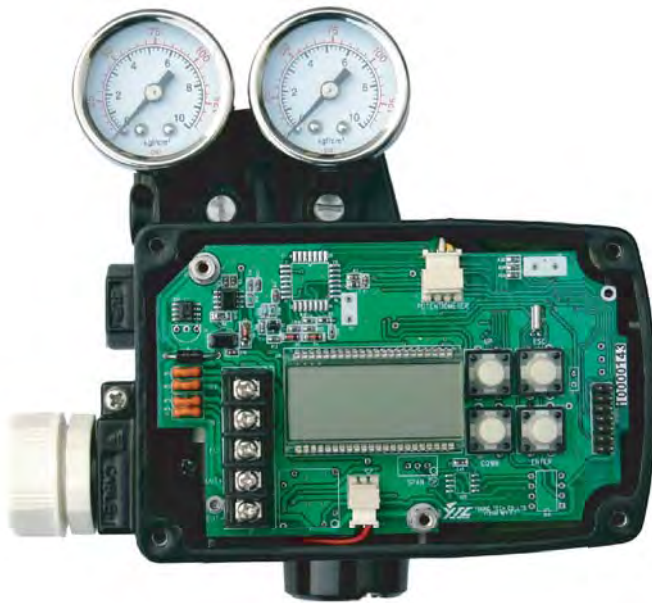
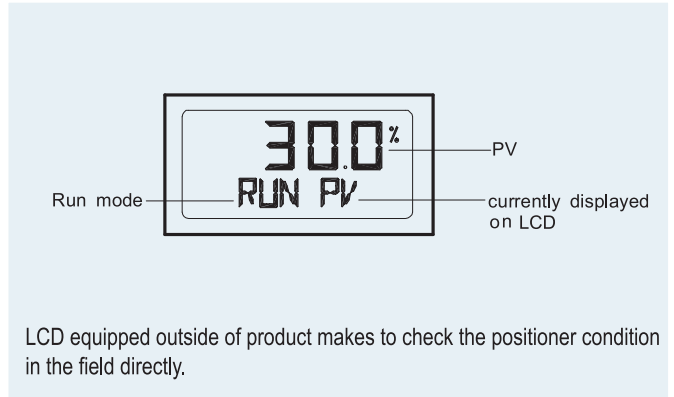


## Features and functions

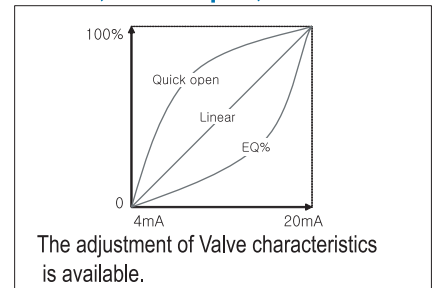
### Button



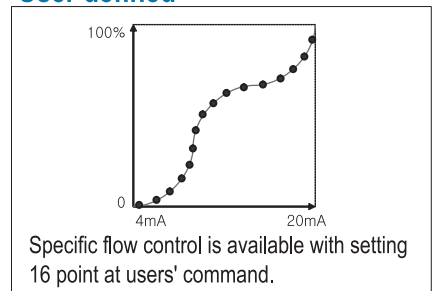
### LCD



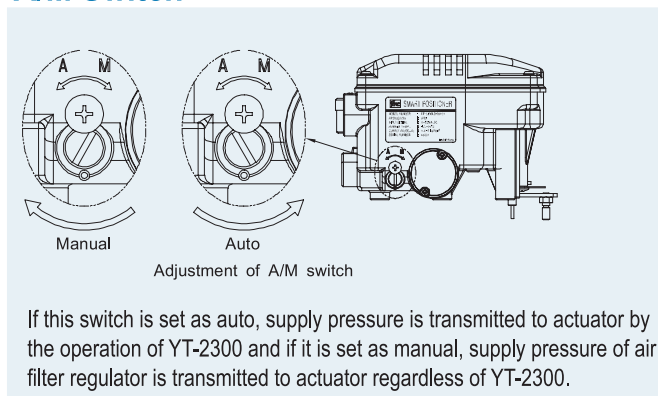
### Linear, Quick open, EQ%



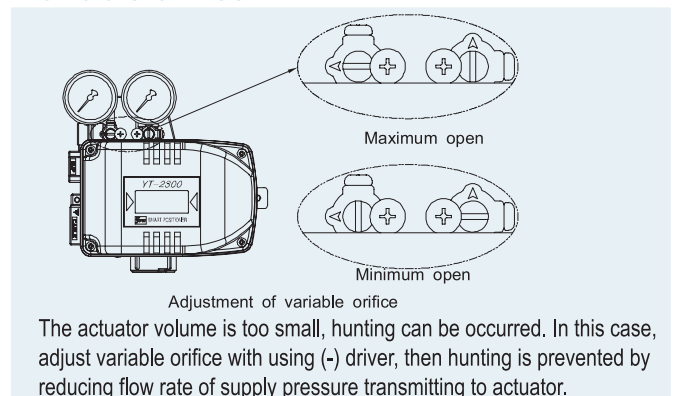
### User defined



### A/M Switch



### Variable orifice



## Auto calibration

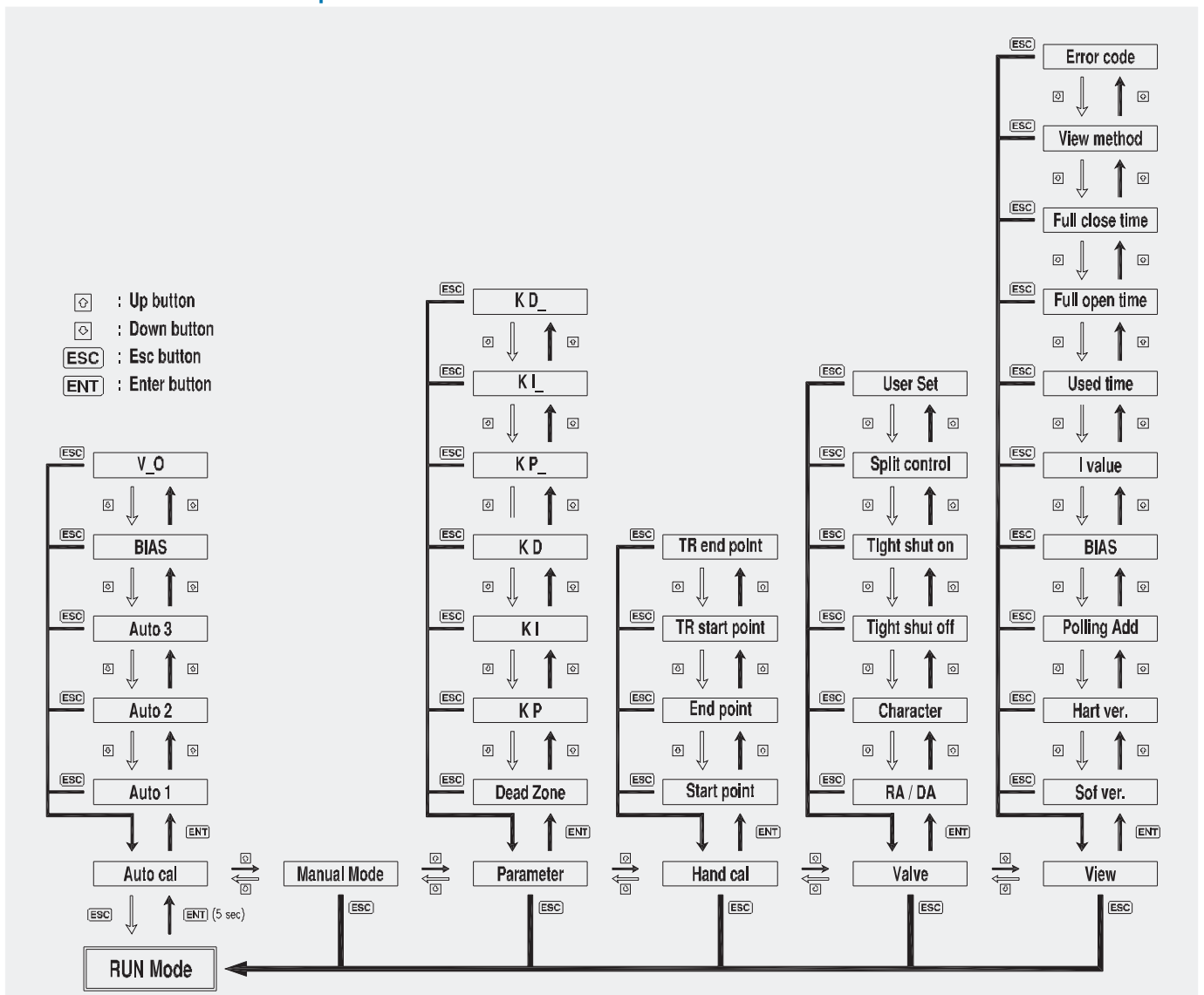
	Zero POINT	END POINT	KP, KI KD	BIAS	V_0	RA / DA
AUTO1	0	0	X	0	0	0
AUTO2	0	0	0	0	0	0
AUTO3	X	X	0	0	0	0
BIAS	X	X	X	0	X	X
V_0	X	X	X	X	0	X

Auto calibration types

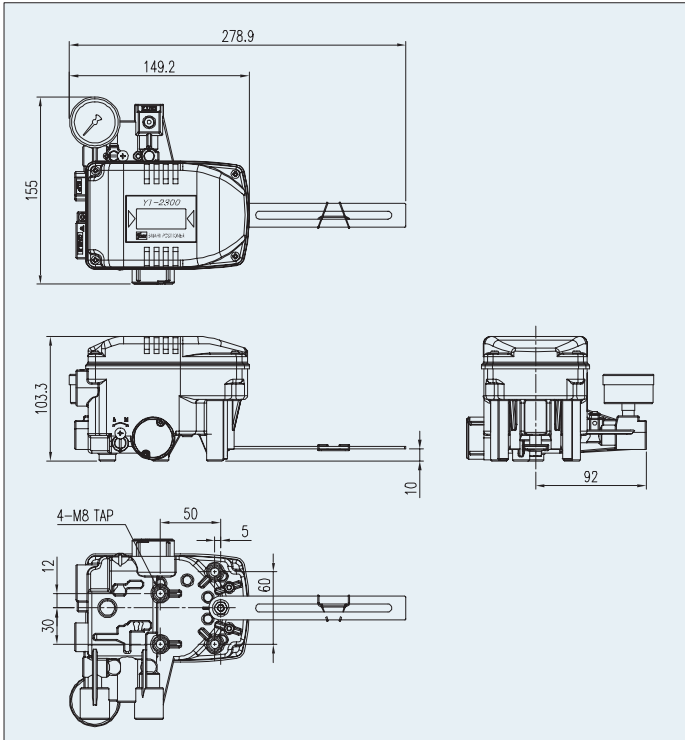
AUTO1 calibration is useful for users' in the field and AUTO2 calibration is for valve company or initial parameters setting of YT-2300.

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

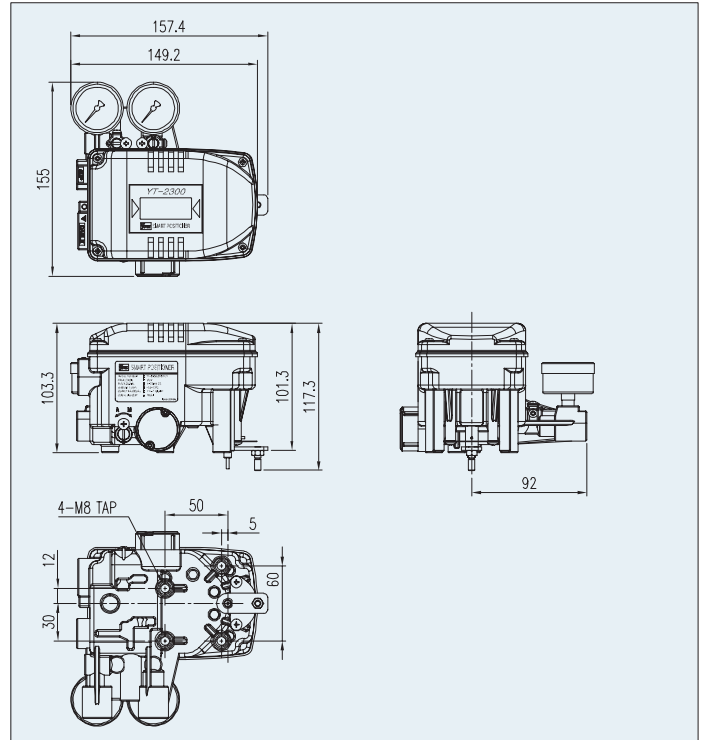
## Main software map



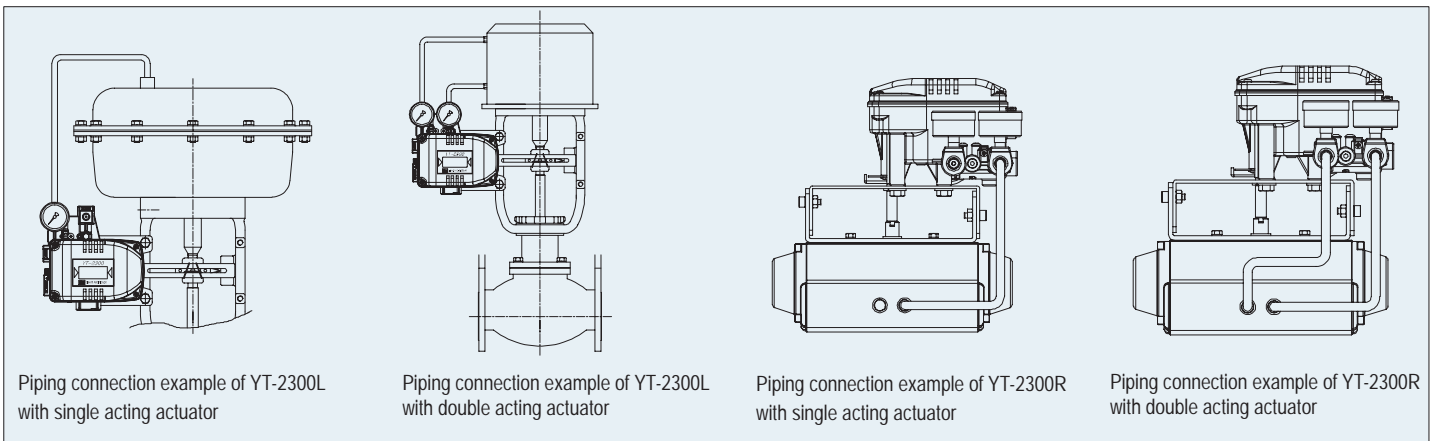
### YT-2300L drawing



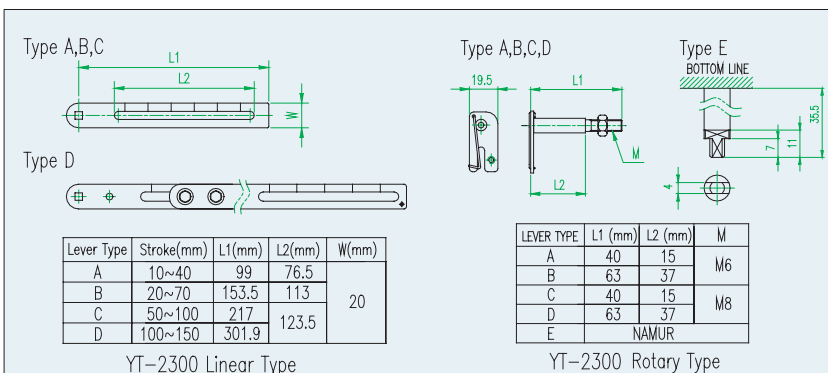
### YT-2300R drawing



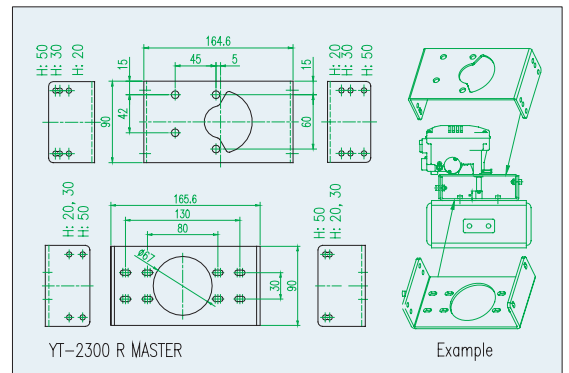
### Piping connection with actuator



### YT-2300 Lever series



### YT-2300R Bracket





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