sisco

Air Leak Tester

SISCO-YD-T01

Product Overview

YD-T01 is a cost-effective air leak tester with high precision, test function, data communication function, test data storage function, etc. **YD-T01** is widely used in the sealing detection of product parts with its simple structure, convenient operation, economical and practical. The application example is as follows:

Medical equipment

Gas

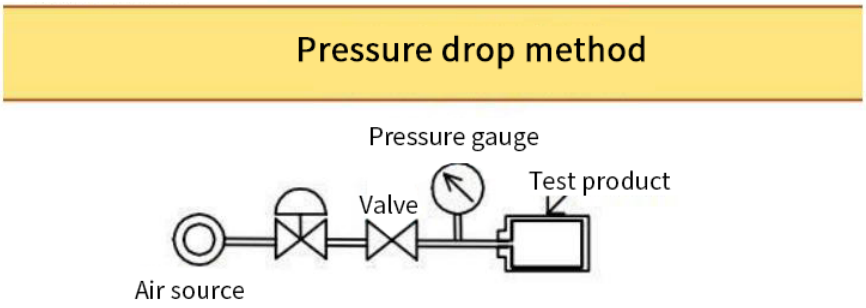
Electronic devices

Valves

Detection Principle

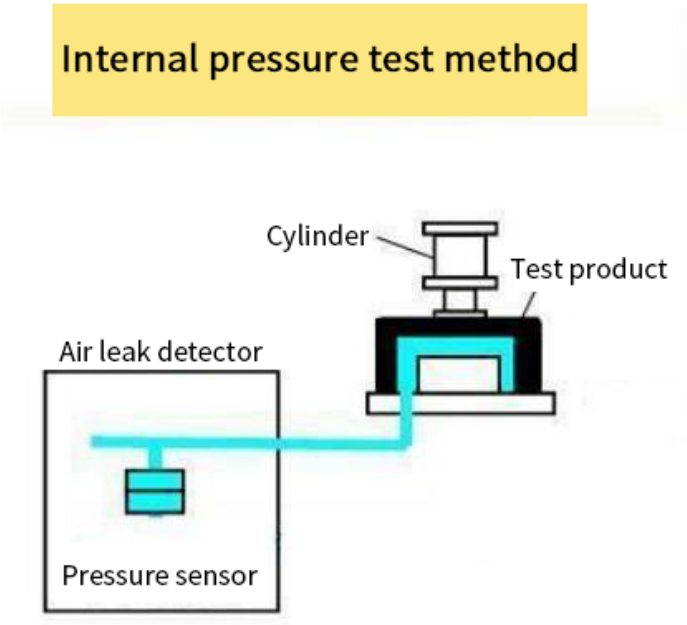
The air leak tester inputs compressed air with precise control pressure into the container to be tested, and then cuts off the inflation circuit. If there is a leak in the container to be tested, the pressure inside the container will decrease. When the pressure is lower than the set value, the instrument will alarm.

The schematic diagram is as follows:



Detection Method

Internal pressure test method: Applicable to all open and inflatable containers for leak detection. The workpiece is sealed by an external fixture to form an independent sealed inner cavity, and then compressed air is filled into the workpiece or vacuum is drawn. The pressure change inside the workpiece is detected to determine whether the workpiece is qualified.



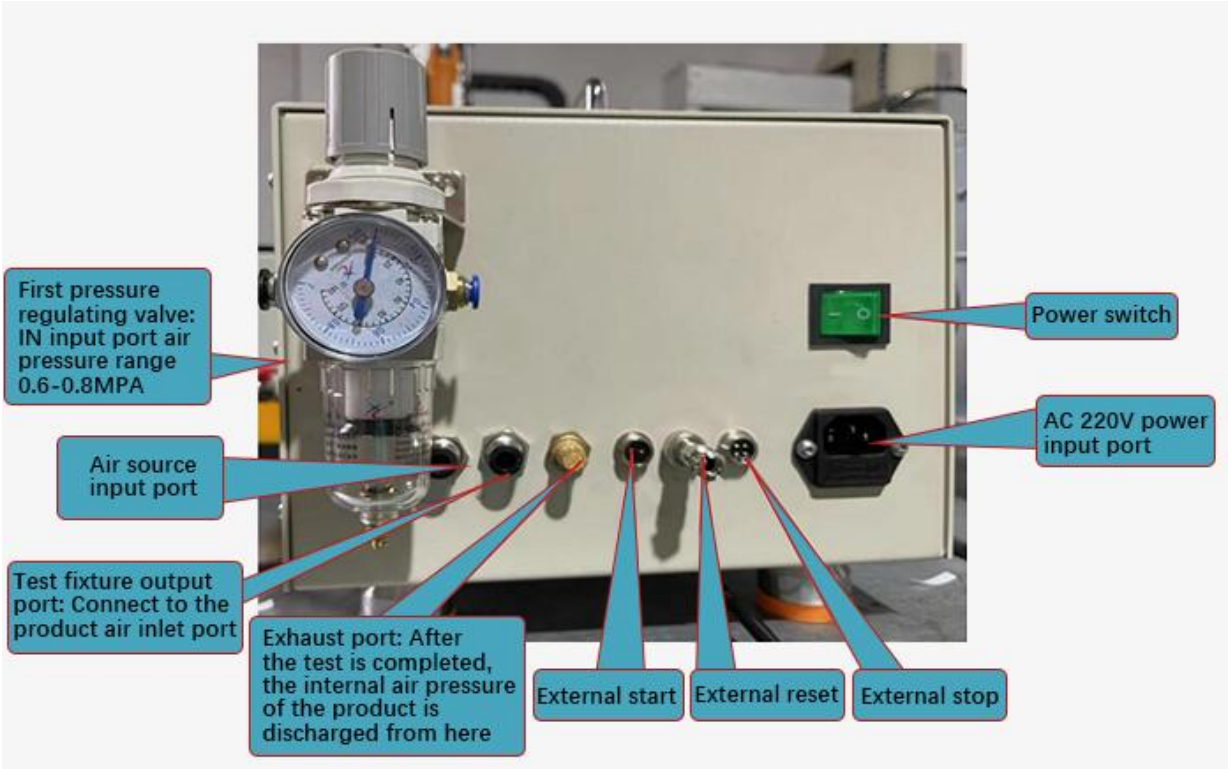
Parameters

Model (YD-T01)		Standard	
Detection pressure range		1kpa～800Kpa (optional)	
Pressure sensor range		1Kap～800Kpa	
		Resolution 1~200pa	
Detection mode		Positive pressure test	
Accuracy		0.25%	
Number of test channels		Single Channel	
I0 Interface		Input signal 2 / output signal 5	
Show		3.5 inch touch screen display	
Unit		kpa (other units available)	
Curve		Graph from inflation to exhaust	
Time	Tour name	Minimum value (S)	Maximum value (H)
	Filling/ inhaling	0.1	9999.9
	Holding pressure	0.1	9999.9
Size		360*230*260 (mm) Length*Width*Height	
Weight		About 15kg	
Power supply		AC220V ±10%, 50/60HZ, Power consumption: 35W - 50W	
Test the air source		Use a clean air source with large flow and high pressure, and connect it to a stable air pressure source adjusted by a regulating valve. pressure	
Ambient temperature		The operating temperature is 5℃~40℃, the storage temperature is-20℃~50℃; Below 80%RH, but without condensation.	

How to use the air tightness tester

1. Plug in the power supply, turn on the switch, and the first test interface will appear. Click the button to enter.
2. Introduction to the function page: parameter setting, test monitoring, data recording.
3. Set parameters directly on the touch screen according to your requirements, and then save the data.
4. Observe the data of the test product to determine whether the product is qualified.
5. View the historical data of the test.

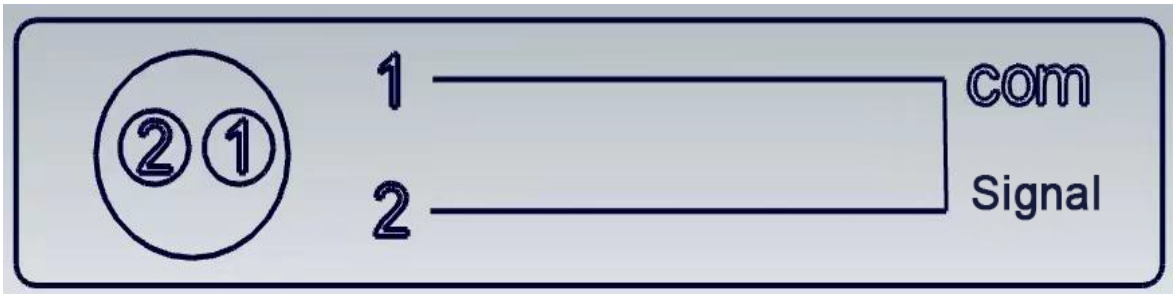
Instrument Display



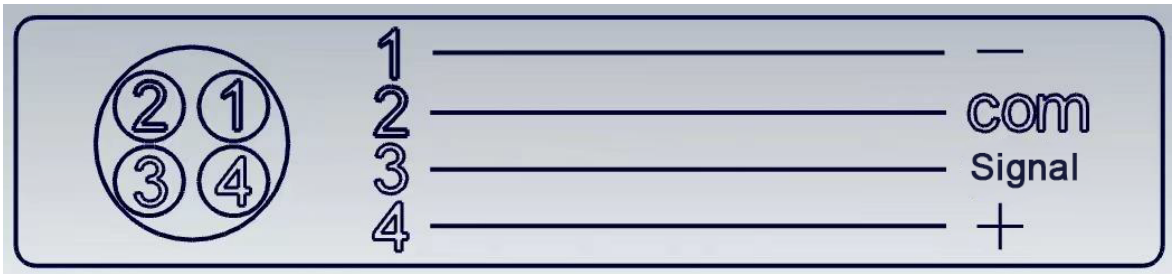
External Input Connection:

Startup Connection: 1 point for common, 2 points for input.

Reset Connection: common terminal 1 point, input terminal 2 points.



Grating Connection: 24V to 4 points, 0V to 1 point, common to 2 points, input to 3 points.



Main Power Usage: Use AC220V 50Hz

1. First connect the air source inlet to 0.4Mpa~0.8Mpa compressed air.
2. Connect the power inlet to AC 220V power and turn on the power switch.
3. Rotate the pressure regulating valve to make the test pressure pointer point to the desired pressure position (pressure gauge unit: kgf/cm2).
4. Enter the dialog box in "Parameter Setting" to set the parameters. After setting, press and hold "Parameter Save" for 3 seconds to automatically save. Exit the "Parameter Setting" interface.
5. Fold the "Test Output Port" air pipe with your hand, press the "Start Button" to inflate the instrument. After the inflation is completed, check whether the "Pressure Value" on the "Display Main Interface" is the pressure you want. If it is, press the "Reset Button"; if it is not the pressure you want, fine-tune the "Pressure Regulator" until it reaches the pressure you want.
6. Connect the "Test Output Port" air pipe to the product.
7. Press the "Start Button" to start testing the product until the test is completed.
8. When testing the next product, just press the "Start Button".
9. If you want to stop the test during the test, just press the "Reset Button".

Precautions

Problem	Reason		Handling
Test product failed many times	Reason of test product	Leakage (continuous failure judgment caused by leakage due to internal defects of test product)	Use soapy water or water bubble to visually check for leakage
		Deformation or change of internal sealing volume	Change the detection time and adjust the inflation pressure
		Temperature change	Keep the test product at a constant temperature
	Reason of sealing fixture, piping, etc.	Leakage caused by aging of sealing rubber	Check whether the sealing rubber is worn or foreign matter is embedded.
		Leakage in piping and valve	Check for leakage with soapy water.
		Difference caused by temperature change of fixture after water test	Blow off the water and control the water temperature
	Reason of leak detector itself	Internal leakage, water, oil or dust mixed into the leak detector	Seal the test outlet for startup test to see if there is internal leakage
		Inappropriate setting of time, test pressure, etc.	Use qualified test product for no leakage test and change the setting time

Pressure Unit Conversion Table

unit	bar	mbar	kPa	psi	mmHg	in • Hg	in • H_2O	ftH_2O	mWS	kp/cm^2	atm
1bar	1	1000	100	14.5038	750.064	29.53	402.463	33.4553	10.1972	1.01972	0.98692
1mbar	0.001	1	0.1	0.0145	0.75006	0.02953	0.40146	0.03346	0.0102	0.00102	0.00099
1kPa	0.01	10	1	0.14504	7.50064	0.2953	4.01468	0.33455	0.10197	0.0102	0.00987
1psi	0.06895	68.9476	6.89476	1	51.7151	2.03602	27.6799	2.30566	0.70307	0.07031	0.06805
1mmHg	0.00133	1.33322	0.13332	0.01934	1	0.03937	0.53524	0.0446	0.0136	0.00136	0.00132
1in • Hg	0.03386	33.8639	3.38639	0.49115	25.4	1	13.5951	1.13293	0.34532	0.03453	0.03342
1in • H_2O	0.00249	2.49089	0.24909	0.03623	1.86833	0.07356	1	0.08333	0.0254	0.00254	0.00246
1ftH_2O	0.02989	29.8907	2.989079	0.43353	22.4199	0.88267	12	1	0.3048	0.03048	0.0295
1mWS	0.09807	98.0665	9.80665	1.42233	73.5561	2.8959	39.3701	3.28084	1	0.1	0.096784
1kg/cm^3	0.98067	980.0665	98.0665	14.2233	735.561	28.959	393.701	32.8084	10	1	0.96784
1atm	1.01325	1013.25	101.325	14.696	760	29.9213	406.782	33.8985	10.3323	1.03323	1

unit	bar	mbar	Pa	kPa	MPa
1bar	1	10^3	10^5	100	0.1
1mbar	10^{-3}	1	100	0.1	0.1×10^{-3}
1Pa	10^{-5}	0.01	1	10^{-3}	10^{-6}
1kPa	0.01	10	10^3	1	10^{-3}
1MPa	10	10×10^3	10^6	10	1

1Pa=1N/M² 1bPa=1mbar

Pa	bar	mmHg	ftH_20
kPa	mbar	in · Hg	atm
MPa	psi	in · H_2O	

1bar=10^5pa=l00kPa=latm =0.1MPa

1kgf/cm²=0.0980665MPa=lat

1psi=6.8947kPa=0.068947bar=0.0068947MPa

1kPa=0.14504psi=0.01bar

1MPa=10^3kPa=$10^3 \times 10^3$Pa

1MPa=10bar=145.04psi