BAESIN

High Pressure.

Pressure Boosting • High Pressure Control

Testing Equipment • Hydraulics • Pneumatics







» High pressure test equipment for valves

Pressure up to 480 bar (6,961 psi).

Manual / PLC / Computer control.

Safety Valve Test Equipment

PLC Control / Computer Control

Working principle:

The safety valve calibration bench is an offline device that simulates the working environment of a safety valve and raises the internal pressure to the point where the safety valve opens. The pressure gauge on the device displays the opening pressure of the safety valve. It can be used to adjust the set pressure, test the set pressure, test the discharge pressure, and test the reseating pressure of various safety valves to assess their pressure safety performance. It can calibrate the safety valve's opening pressure (also called the setting pressure) and sealing test pressure.

Parameters:

Pressurization Range	**0-480 bar** (Higher pressures can be customized)
Test Medium	Air, Nitrogen, Water
Test Valve Diameter	**DN10-400mm**
Pressure Control Accuracy	≤±1% F.S
Pressure Measurement Accuracy	0.4 grade pressure gauge (higher pressure rating is optional)
Clamping Method	Hydraulic Cylinder Clamping
Clamping Force Output Range	0-50 tons
Sealing Method	Sealing Ring Seal
Drive Air Source	3-8bar
Control Method	PLC Control / Computer Control

Safety Valve Test Equipment

PLC Control / Computer Control

Main components:

No.	Item	Specification	Unit	Quantity
1	Gas booster pump	BGP-2S-40	PCS	1
2	Liquid booster pump	BLG-2H-64	PCS	1
3	F.R.L combination	/	SET	3
4	Two-position three-way solenoid valve	/	PCS	8
5	Two-position five-way solenoid valve	/	PCS	5
6	Pneumatic clamping cylinder	5 tons	PCS	1
7	Manual needle valve	/	PCS	12
8	Pressure reducing valve	0-400 bar	PCS	1
9	Pneumatic ball valve	NPT1/4 SS304	PCS	5
10	Precision pressure gauge(0.4 grade)	0-10 bar/0.4 grade	PCS	2
11	Precision pressure gauge(0.4 grade)	0-60 bar/0.4 grade	PCS	2
12	Precision pressure gauge(0.4 grade)	0-250 bar/0.4 grade	SET	2
13	Precision pressure gauge(0.4 grade)	0-600 bar/0.4 grade	SET	2
14	Pressure transmitter	0-10 bar/0.5%	PCS	1
15	Pressure transmitter	0-60 bar/0.5%	PCS	1
16	Pressure transmitter	0-250 bar/0.5%	PCS	1
17	Pressure transmitter	0-600 bar/0.5%	PCS	2
18	Pressure transmitter	0-400 bar/0.5%	PCS	1

Safety Valve Test Equipment

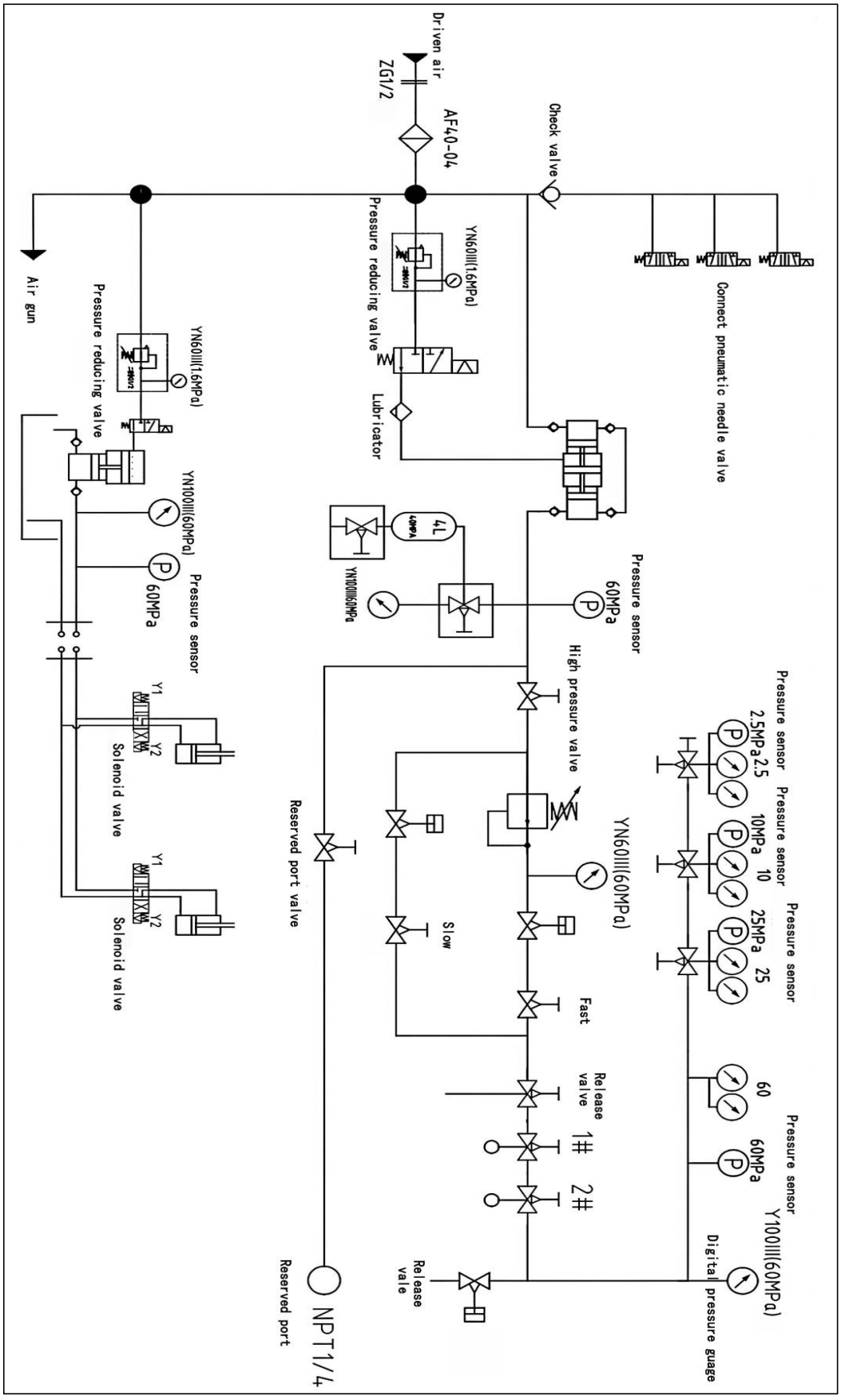
PLC Control / Computer Control

No.	Item	Specification	Unit	Quantity
19	Digital pressure gauge	0-600 bar	PCS	1
20	High pressure gauge	0-400 bar/2.5%	PCS	2
21	High pressure gauge	0-600 bar/2.5%	PCS	1
22	Acquisition card	NI	SET	1
23	Measurement control software	LabView	SET	1
24	Printer	P1007	PCS	1
25	Gas storage tank	4L	PCS	1
26	Sealing adaptor	/	SET	3
27	Silencer	/	PCS	3
28	Proportional solenoid valve	SMC	PCS	1



Pneumatic Circuit Diagram

Computer Control Type:



Safety Valve Test Equipment

Portable Type - Manual Control

Overview:

The portable safety valve testing bench conforms to the "Safety Valve Performance Test Method" GBT-12242-2005, the "Single-Waisted Direct-Loaded Safety Valve" GBT.12243-2005, and the relevant requirements of the American Petroleum Institute for safety valve performance. It is required to have functions such as safety valve set point determination, sealing performance determination, automatic data acquisition and display, etc.



Features:

- **Compact & Portable:** Compact size, lightweight, and portable.
- **Stepless Pressure Control:** Equipped with a pneumatic gas pump and a high-pressure reducing valve, offering infinitely variable pressure adjustment, a wide setting range, and smooth pressure ramping in both directions.
- **Self-Contained Operation:** Can be directly connected to a nitrogen cylinder for on- site calibration – ideal for locations without utility gas or electrical power.
- **Easy Maintenance:** Simple and robust construction for easy maintenance.

Safety Valve Test Equipment

Portable Type - Manual Control

Parameters:

Testing Diameter Range	Flanged safety valves: **DN25-DN200mm** (non-standard can be customized)
	Imperial threaded safety valves: **DN1/4-DN3** (A27W-10T type)
	Metric threaded safety valves: **M27*1.5, M30*1.5, M33*1.5**
Maximum Testing Pressure	**400 bar**, two inlets, high-pressure air source provided by the user (booster system can be added separately)
Clamping Method	Manual hydraulic clamping system Clamping force is steplessly adjustable from 1 to 20 tons
Calibration Accuracy	± 0.4%
Operating Medium	Compressed air (clean, at room temperature) Nitrogen(at room temperature)
High Pressure Gauge	Two gauges(quick-connect pressure gauge)
Dimensions	Test equipment with booster pump: 700mm * 500mm * 510mm
	Test equipment without booster pump: 700mm * 400mm * 510mm
	Test equipment with DN200 clamping unit: 600mm * 600mm * 400mm



Safety Valve Test Equipment

Portable Type - Manual Control

Main Components:

No.	Item	Specification	Unit	Quantity
1	Gas booster pump	BGP-2S-40	PCS	1
2	F.R.L combination	/	PCS	1
3	Nitrogen Pressure reducing valve	0-150 bar	PCS	1
4	High pressure reducing valve	0-200 bar	PCS	1
5	Check valve	/	PCS	2
6	Manual needle valve	/	PCS	4
7	Hand valve	/	PCS	2
8	Precision pressure gauge	0-400 bar	PCS	2
9	High pressure storage tank	400 bar	PCS	1
10	Sealing adaptor	/	PCS	7
11	High pressure gauges	/	PCS	4
12	Manual hydraulic oil pump	400 bar	PCS	1
13	Manual hydraulic oil cylinder	20 tons	PCS	1
14	Clamping seat	DN200	SET	1

Pneumatic Circuit Diagram

Portable Type - Manual Control:

