



Model PC70 Pressure Controller

OUTLINE

An hydraulic servo valve, an amplifier and a high-precision sensor are built in this pressure controller, various types of oil pressure based on both the manual and automatic mode can be generated. This pressure controller is appropriate for research laboratory application, pressure generation in automatic lines, calibration of pressure instruments and inspection equipment.

FEATURES

- Six types from 5 MPa to 70 MPa are provided.
- Equally divided dividers from 1 to 20 can be set.
- Sweeping and pressure holding time can be selected from 10 types (1.5 seconds to 20 minutes).
- Up to 20 points, an optional point can be set.
- Sweeping and pressure holding time between points can be set respectively, generating pressures randomly.
- A repetition up to 99 and infinite times in the automatic mode can be set. Step sending in the manual mode can be possible.
- Two types of unit changeover can be possible.
- The GP-1B type recorder output terminal is provided. (Option)

SPECIFICATION 1

Medium:

General hydraulic oil

- * If medium is applied to 316st.st. of wetted parts, other medium can be selected freely

Operating condition:

Under the normal condition, where there is no inflammable gas or liquid which cause the ignition or explosion.

Pressure control range:

1 ~ 5MPa	→	1 ~ 70MPa
10 ~ 50kgf/cm ²	→	10 ~ 700kgf/cm ²

(Unit changeover type)

- * NKS can supply another pressure controller model PC10 for low pressure range, pneumatic type.

Accuracy:

±0.2%F.S. (23°C±3°C)

Minimum set resolution:

0.01MPa or 0.1kgf/cm²

Setting function:

Unit	MPa, kgf/cm ² (Changeover type)
Number of divisions	1 ~ 20 (Equal or free point)
Sweep speed	10 kinds of 0 to 9
Retention time	Between 1.2s and 20min, 10 settings are available
Repeat times	As desired between 1 ~ 99

Operation modes:

Manual operation (UP.DOWN.HOLD), Automatic sweep

Kind of display:

Control pressure value, Setting value and operating monitor, etc.

Outside interface:

GP-1B

Pressure detecting unit material:

316st.st.

Output connection:

R1/4 (PT)

Consumption air:

Dry air Approx. 10 L/min (Normal) or less

Operating temperature:

10 ~ 40°C

Power source:

200VAC±10% 50/60Hz 1kW

Additional pressure sensor: (Option)

In addition to a standard one range, available to have another pressure setting by range changeover. Max. number of range is 4 point. (Note: During Operating time, not available to changeover.)

Autocalibration function: (Option)

By combination with exclusive dead-weight tester, autocalibration of control sensor is available. By this function, periodical calibration to maintain high accuracy is easily made in the equipment.

Analog output: (Option)

Because the output of analog voltage is equivalent to control pressure, it's available to be recorded by recorder, etc.

Weight:

Approx. 200 kgs

Dimensions:

W750 × D800 × H1100

SPECIFICATION 2

Max. indication:

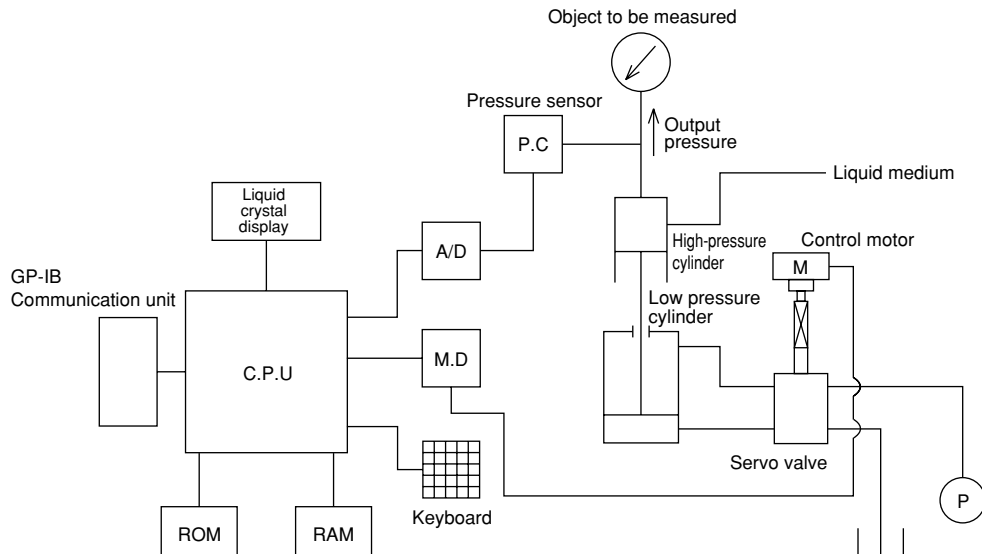
Controlled pressure range	MPa kgf/cm ²	Max. indication
1 ~ 5MPa 10 ~ 50kgf/cm ²		05.000MPa 50.000kgf/cm ²
1 ~ 10MPa 10 ~ 100kgf/cm ²		10.000MPa 100.00kgf/cm ²
1 ~ 20MPa 10 ~ 200kgf/cm ²		20.000MPa 200.00kgf/cm ²
3 ~ 35MPa 30 ~ 350kgf/cm ²		35.000MPa 350.00kgf/cm ²
3 ~ 50MPa 30 ~ 500kgf/cm ²		50.000MPa 500.00kgf/cm ²
3 ~ 70MPa 30 ~ 700kgf/cm ²		70.000MPa 700.00kgf/cm ²

Relation of accuracy and pressure range:

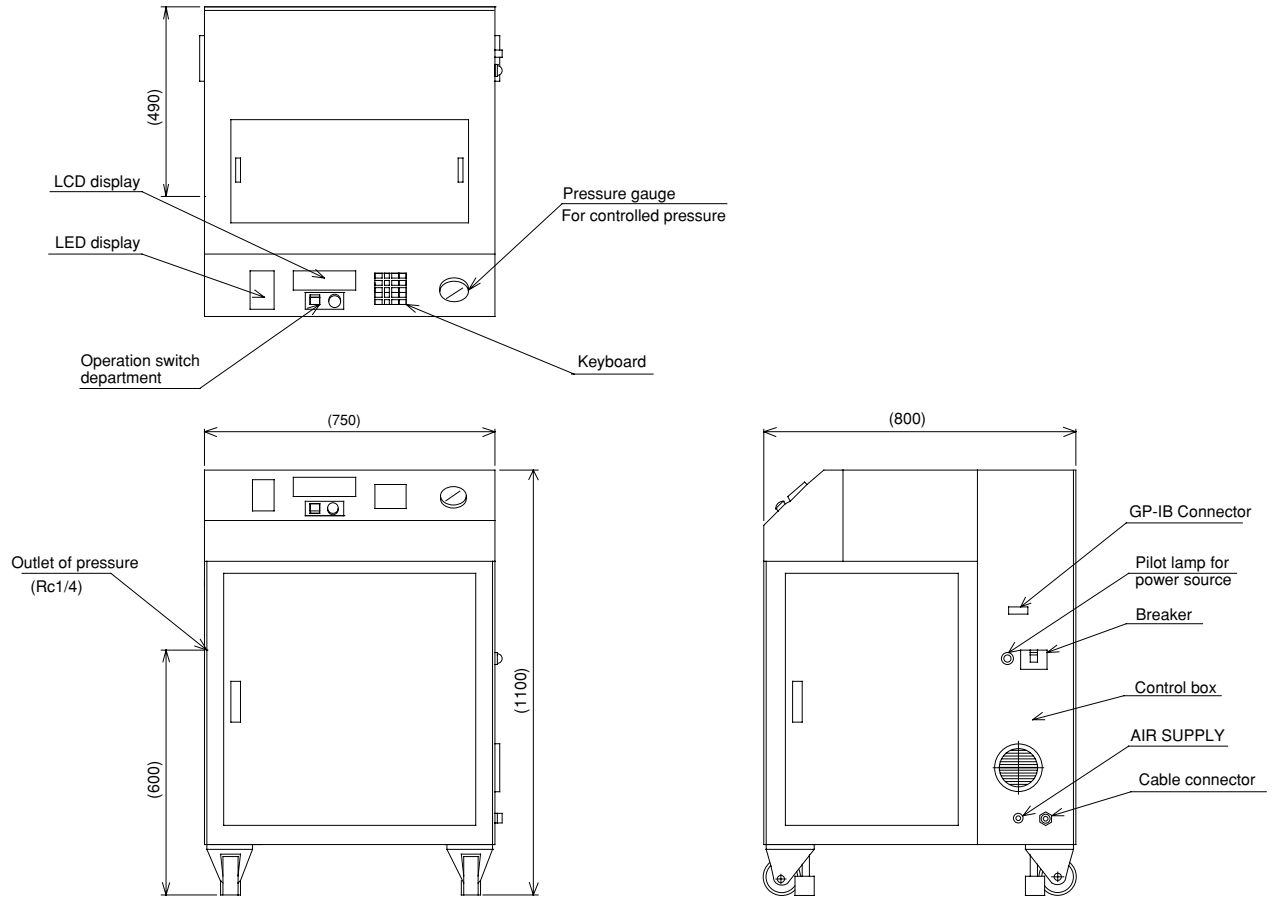
Relation of accuracy and pressure range is as follows. For example, in case of selecting 700kgf/cm² range, accuracy is 100kgf/cm² ±1.4kgf/cm² when generates pressure of 100kgf/cm². It can generate pressure of 100kgf/cm² ±0.2kgf/cm² by building one more 100kgf/cm² range as option, when required more high accuracy.

CONSTRUCTION AND A PRINCIPLE

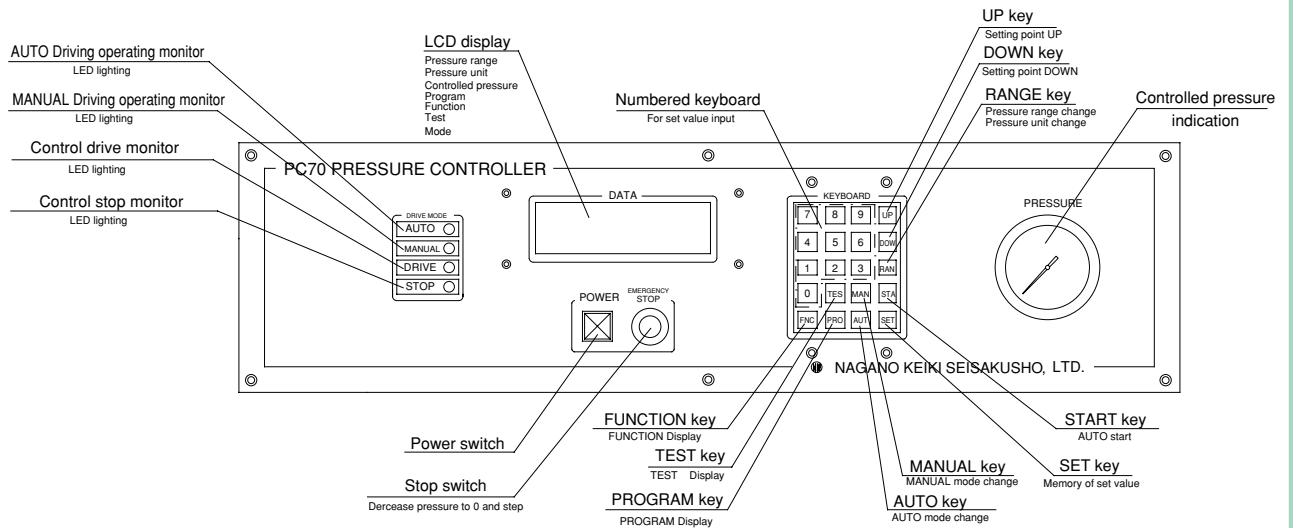
This device is composed as shown below. Max. generating pressure is determined by comparison value of diameter of high pressure cylinder/low pressure cylinder and the pressure which supplied to low pressure side. Pressure sensor signal is input to microcomputer through 12bitA/D converter. Microcomputer compares with the setting value which is input from keyboard or GP-IB and controls the control motor. The adjusting screw which links with the movement of control motor controls the servo valve and pressure generating unit operates by oil pressure which controlled by servo valve, then generates the pressure at high pressure cylinder side.



DIMENSIONS



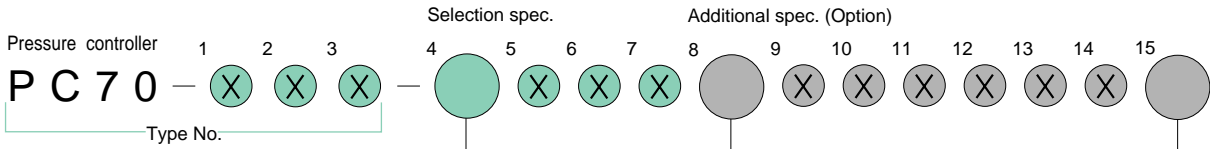
Front panel:



Type No. constitution

Please specify Type No., each specification and range when ordering.

Note: For this Model, there is no applicable item for the figures X, but please specify X when ordering.



4 Pressure range (MPa) _____
 (When ordering, please specify pressure range & unit.)

1	1 ~ 5, 1 ~ 10, 1 ~ 20, 3 ~ 35
2	3 ~ 50, 3 ~ 70

8 Other additional spec. _____

0	Nil
1	Please specify your requirement Additional pressure sensor Autocalibration function Analog output

15 Document _____

0	Nil
1	Please specify your requirement Drawing one sheet, Instruction manual, Inspection procedure, Mill sheet, Test report

The contents in the catalogue are subject to change without notice.

NAGANO KEIKI CO., LTD.



UEDA FACTORY (JQA-0794)
 MARUKO FACTORY (JQA-0789)

HEAD OFFICE & : 1-30-4, HIGASHIMAGOME OHTA-KU, TOKYO, JAPAN.
 OVERSEAS TELEPHONE : 03 (3776)5328
 SALES DEPT FAX : 03 (3776)5447
 TELEX : 2468452 NKSTKY J

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