

Precision Aneroid Manometers

OUTLINE

Based on the Nagano's is Traceability System, this is a high precision pressure gauge, manufactured by comparing calibration.

This gauge can be used as a standard gauge for the application of pressure gauge inspection and calibration, and as a pressure indicator for a standard pressure generator.

FEATURES

- The pressure indicating portion is large in size and easy to read.
- This is a precision type manometer by minimizing an error due to the friction in the magnifying mechanism.
- Zero adjustment is easily performed, making stable measuring possible.

* When a pressure gauge is selected, check to confirm that the prescribed material of the liquid contacting portion conforms to measuring gas and liquid.

W&T type precision aneroid manometers

This is a high-precision manometer of which errors due to temperature variation and hysteresis have been minimized by applying Ni-Span-C to the pressure element.

Accuracy: $\pm 0.1\%$ F.S.

- * Wallace & Tiernan is one of the most famous manufacturers of precision pressure instruments in the USA delivering their products to every field of industry including aircraft and military articles from the assembling plants distributed in European countries. We are in technical cooperation with Wallace & Tiernan since 1963 in manufacturing, sale and servicing of W & T products. Besides, we have developed various high precision aneroid manometers with our own techniques.



NKS type precision aneroid manometers

The NKS type is a high-reliable, high-precision manometer in which a Bourdon tube or a bellows has been applied to the pressure element and a miniature bearing has been applied to the magnifying mechanism.

Accuracy: $\pm 0.15\%$ F.S. or $\pm 0.25\%$ F.S.



PN type pneumatic portable calibration

This is a portable type tester compactly composed of a high precision pressure gauge (W & T type or NKS type), an adjustment and inspection can be easily performed.



W&T type precision aneroid manometers

SPECIFICATION

<p>Fluid: Gas</p> <p>Mounting: GP15: 62-075 series 1500 Pressure measurement, differential pressure measurement GP16: 62-050 series 1500 Pressure measurement, vacuum measurement GP17: 61-075 series 1500 Absolute pressure measurement, atmospheric pressure measurement</p> <p>Connection: 1/8NPT female, 1/4NPT female, (Model GP16 In case of 2, 3.5MPa only)</p> <p>Gas contact part: Bourdon tube Ni-Span-C Socket C3604BD</p>	<p>Pressure range: GP15: 0 ~ 0.1 → 0 ~ 1MPa GP16: -0.1 ~ 0, 0 ~ 2, 3.5MPa GP17: 0 ~ 0.1, 0.3MPa abs., 0 ~ 1060 mb abs.</p> <p>Case proo-pressure: 0.25MPa</p> <p>Accuracy: ± 0.1%F.S.</p> <p>Case material • finishing: Aluminium alloy casting (AC7A) • Black</p> <p>Treatment: (Option) Use no oil & water ••• Produce it not to remain oil or water in wetted parts</p> <p>Dial scale: (Option) Capacity scale, printed words, colored circle</p>
---	--

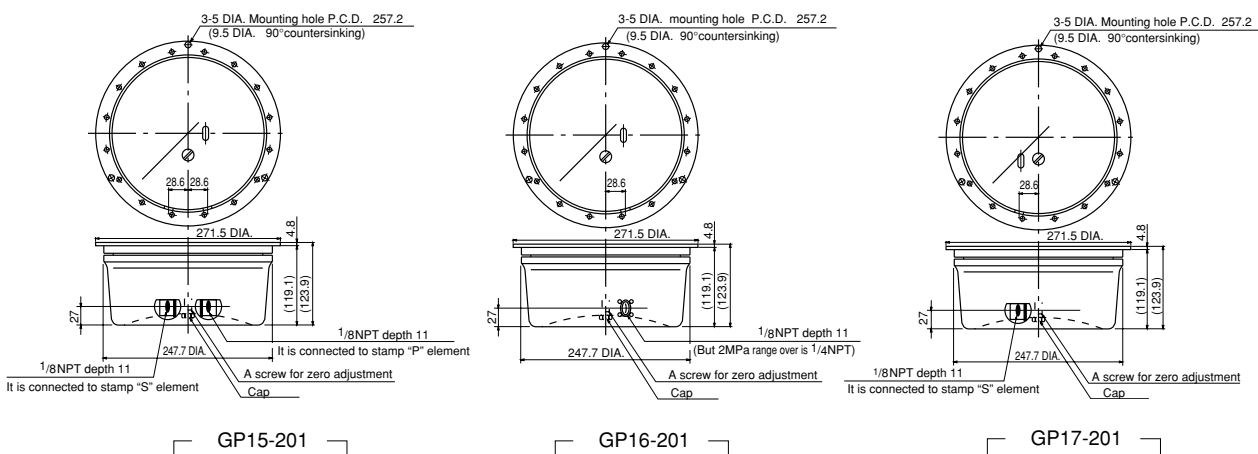
MINIMUM GRADUATION • VARIOUS CHARACTERISTICS

Type No.	Type	Pressure range MPa	Minimum graduation MPa	Connection	Hysteresis %F.S.	Sensitivity %F.S.	Max. temperature error	Capacity ml	The material that the measurement health is contacted with
GP15-201	62-075 Series 1500	0 ~ 0.1	0.0001	1/8NPT female	0.1	0.01	0.1	7	Element side: Ni-Span-C, Solder, Brass, Stainless steel, Silver solder Case side: Ni-Span-C, Brass, Stainless steel, Phosphor bronze, Beryllium copper, Magnesium, Aluminum, Nylon, ELGILOY, Solder, Silver solder, HYPALON
		0 ~ 0.2	0.0002						
		0 ~ 0.4	0.0005						
		0 ~ 1	0.001						
GP16-201	62-050 Series 1500	-0.1 ~ 0	0.0001	1/8NPT female	0.1	0.0125	0.1	7	-0.1MPa range: Ni-Span-C, Brass, Stainless steel, Solder, Silver solder, 2MPa range: Ni-Span-C, Stainless steel, Nylon, Silver solder,
		0 ~ 2	0.002	1/4NPT female					
		0 ~ 3.5	0.005						
GP17-201	** 61-050 Series 1500	0 ~ 0.1 (abs.) 0 ~ 0.3 (abs.) 1060 (mb abs.)	0.0001 0.0005 1 (mb abs.)	1/8NPT female	0.15	0.01	0.019	3070 (Case side)	Ni-Span-C, Brass, Phosphor bronze, Solder, Beryllium copper, Magnesium, Aluminum, Nylon, Stainless steel, ELGILOY, Silver solder, HYPALON

* The maximum temperatures error is a percentage of the full span.
%F.S./10deg at 20g

** GP17-201 is leakage of case 1.04×10^{-4} Pa·m³/s (1.03×10^{-3} atm cc/s) or less.

DIMENSIONS

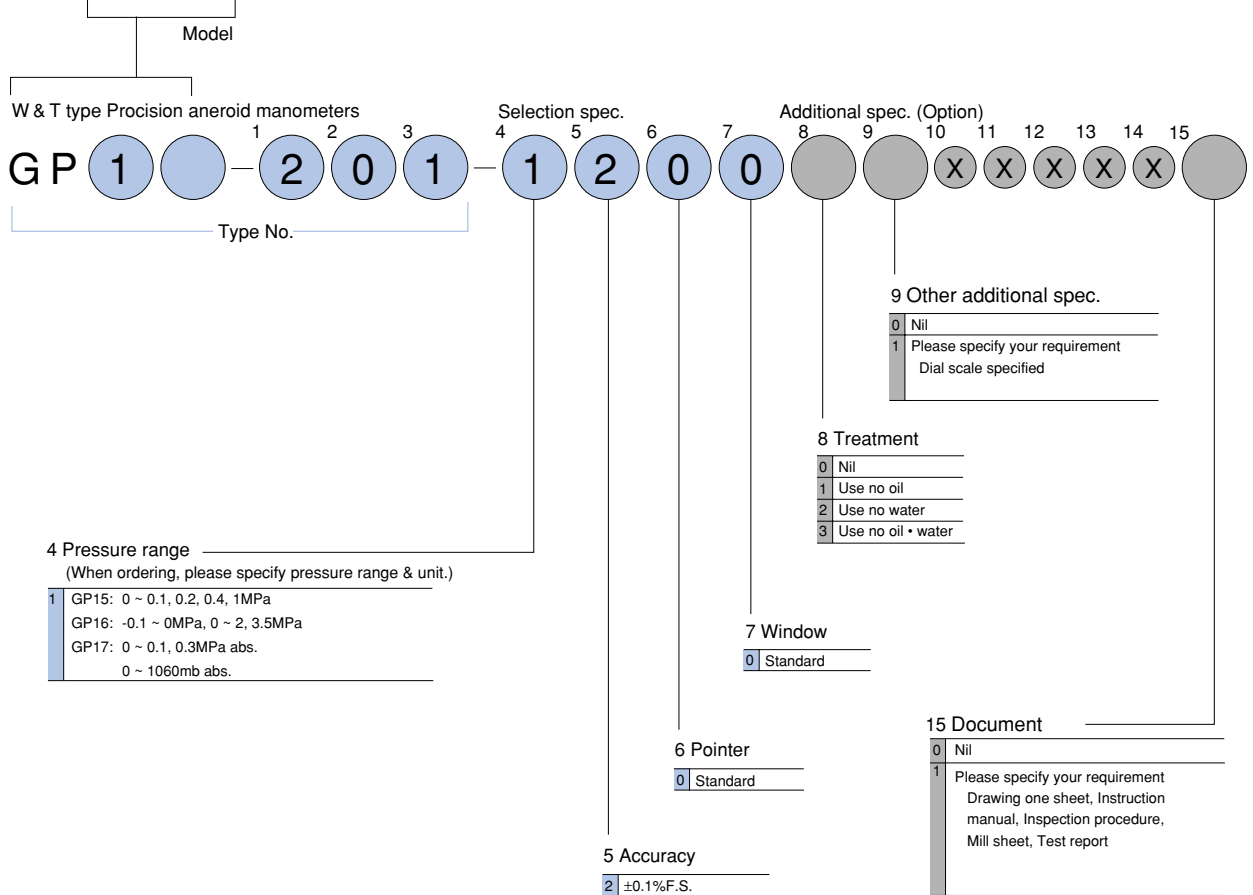


Type No. constitution

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.

Type				Application	
G	P	1	5	62-075 Series 1500	Pressure • differential pressure use
G	P	1	6	62-050 Series 1500	Pressure • vacuum use
G	P	1	7	61-050 Series 1500	Absolute pressure • atmospheric pressure use



● NKS type precision aneroid manometers ●

SPECIFICATION

Fluid:
Gas or liquid

Mounting:
Surface mounting (Type B) Panel (Type D)
* With handshake stands is available by Type D contact NKS for details. (Model: GP43)

Size:
200 DIA. (Model: GP2□)
300 DIA. (Model: GP35)

Connection:
G1/2B (PF)
* For the range 100MPa over with GP35, connection to be G1/2.

Wetted parts material:
C5212R, C3604BD, 316st.st.
or high tensile steel (Depending on range)

Pressure range:
0 ~ 0.1 → 0 ~ 700MPa
-0.1 ~ 0 → -0.1 ~ 2.5MPa

Accuracy:
± 0.25%F.S. (Model: GP2□)
± 0.15%F.S. (Model: GP35)
But, 500MPa range over is ± 0.5%F.S.

Case material • finishing:
Aluminium alloy casting (AC7A) • Black

Treatment: (Option)
Use no oil & wate **** Produce it not to remain oil or water in wetted parts

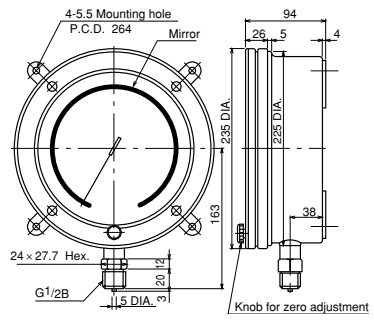
Dial scale: (Option)
Capacity scale, dual scale, printed words, colored circle

MINIMUM GRADUATION • WETTED PARTS MATERIAL

Pressure range MPa	Minimum graduation MPa		Wetted parts material		Element Socket			
	200 DIA.	300 DIA.	200 DIA.	300 DIA.				
0 ~ 0.1	0.0005	0.0002	C5212R YBsC3	C5212R C3604BD	High tensile steel 316st.st.			
0 ~ 0.2	0.001	0.0005						
0 ~ 0.3	0.001	—						
0 ~ 0.4	0.002	0.001						
0 ~ 0.6	0.002	0.001						
0 ~ 1	0.005	0.002						
0 ~ 1.5	0.005	—						
0 ~ 2	0.01	0.005						
0 ~ 2.5	0.01	—						
0 ~ 3.5	0.01	0.005						
0 ~ 5	0.02	0.01	316st.st. YBsC3	316st.st. YBsC3	High tensile steel 316st.st.			
0 ~ 7	0.05	—						
0 ~ 10	0.05	0.02						
0 ~ 15	0.05	—						
0 ~ 20	0.1	—						
0 ~ 25	0.1	0.05						
0 ~ 35	—	0.05						
0 ~ 50	—	0.1				C5212R C3604BD	C5212R C3604BD	High tensile steel 316st.st.
0 ~ 70	—	0.1						
0 ~ 100	—	0.2						
0 ~ 200	—	0.5						
0 ~ 350	—	0.5						
0 ~ 500	—	0.1						
0 ~ 700	—	0.1						
-0.1 ~ 0	0.0005	0.0002						
-0.1 ~ 0.1	0.001	0.0005						
-0.1 ~ 0.2	0.001	—						
-0.1 ~ 0.3	0.002	0.001	316st.st. YBsC3	316st.st. YBsC3	High tensile steel 316st.st.			
-0.1 ~ 0.4	0.002	—						
-0.1 ~ 0.6	0.002	—						
-0.1 ~ 1	0.005	0.002						
-0.1 ~ 1.5	0.005	—						
-0.1 ~ 2	0.01	0.005						
-0.1 ~ 2.5	0.01	—						

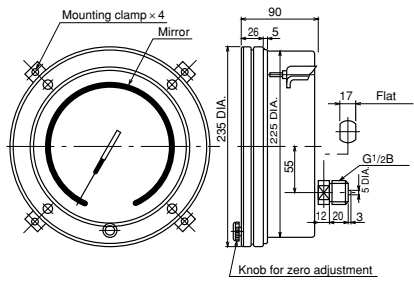
DIMENSIONS

200 DIA. Type B



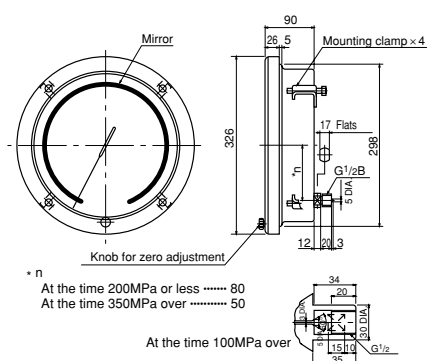
GP20-241

200 DIA. Type D



GP25-141

300 DIA. Type D



GP35-141

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.

size	200	G	P	2	0	2	Type B
		G	P	2	5	1	Type D (Mounting clamp)
300	G	P	3	5	1	Type D (Mounting clamp)	

Model 1 Type

NKS type aneroid manometers

Type No. **GP** 1 2 3 **4** 5 6 7 8 9 10 11 12 13 14 15

3 Wetted parts material (element)

1	0.4MPa range or less: C5212R 35MPa range over: High tensile steel (GP35 only)
3	0.6MPa range over: 316 st.st. (GP20 • 25) 0.6MPa range over 3.5MPa r ange or less: 316 st.st. (GP35)

4 Pressure range (MPa) In case of GP20 • 25

(When ordering, please specify pressure range & unit.)

1	-0.1 ~ 0.1, 0.2, 0.3, 0.4 -0.1 ~ 0.6, 1, 1.5, 2, 2.5
2	-0.1 ~ 0 0 ~ 0.1, 0.2, 0.3 0 ~ 0.4, 0.6, 1, 1.5, 2, 2.5, 3.5
3	0 ~ 5, 7, 10, 15, 25

4 Pressure range (MPa) In case of GP35

(When ordering, please specify pressure range & unit.)

1	-0.1 ~ 0.1, 0.2, 0.3, 0.4 -0.1 ~ 0.6, 1, 1.5, 2, 2.5
2	-0.1 ~ 0 0 ~ 0.1, 0.2 0 ~ 0.4, 0.6, 1, 2, 3.5
3	0 ~ 5, 7, 10, 25
4	0 ~ 35, 50, 70, 100
5	0 ~ 200, 350
6	0 ~ 500, 700

Selection spec.

6 Pointer

0	Standard
---	----------

5 Accuracy In case of GP20 • 25

3	±0.25%F.S.
---	------------

5 Accuracy In case of GP35

0	Standard ±0.15%F.S. or ±0.5%F.S. (Depending on range)
---	--

7 Window

0	Standard
---	----------

8 Treatment

0	Nil
1	Use no oil
2	Use no water
3	Use no oil • water

9 Other additional spec.

0	Nil
1	Please specify your requirement Dial scale specified

15 Document

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

● PN type pneumatic portable calibrator ●

SPECIFICATION

Fluid:

Gas

Application:

Pressure measurement, differential pressure measurement
(GP42 only)

Indicator:

GP41 NKS type 300 DIA. (GP35)

GP42 W&T type (GP15)

Connection:

GP41 Rc1/4 (PT female)

GP42 Rc1/8 (PT female)

Pressure range:

GP41 0 ~ 0.1 → 0 ~ 35MPa

GP42 0 ~ 0.1 → 0 ~ 0.4MPa

Accuracy:

GP41 ± 0.15%F.S.

GP42 ± 0.1%F.S.

Finishing:

Black leather tension

Treatment: (Option)

Use no oil • water •••• Produce it not to remain oil or
water in wetted parts

Dial scale: (Option)

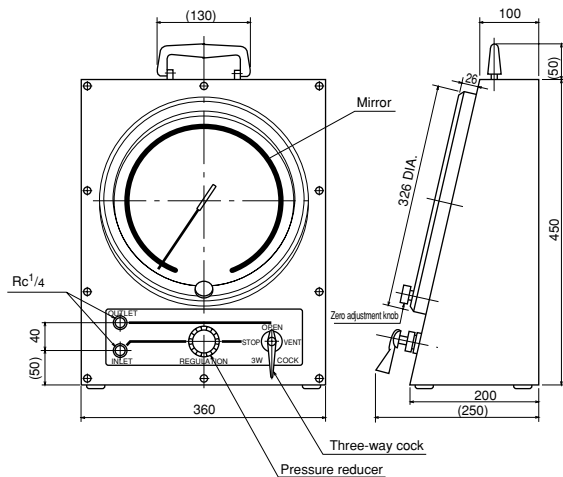
Capacity scale, dual scale (GP41 only) printed words

MINIMUM GRADUATION

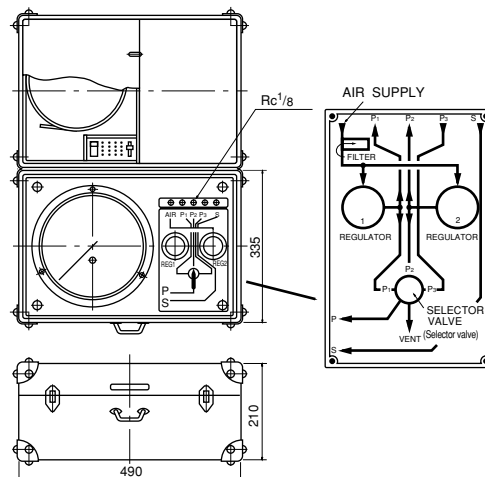
Pressure range MPa	Minimum graduation MPa	
	GP41	GP42
0 ~ 0.1	0.002	0.0001
0 ~ 0.2	0.005	0.0001
0 ~ 0.4	0.001	0.0005
0 ~ 0.6	0.001	—
0 ~ 1	0.002	—
0 ~ 1.5	—	—
0 ~ 2	0.005	—

Pressure range MPa	Minimum graduation MPa	
	GP41	GP42
0 ~ 2.5	—	—
0 ~ 3.5	0.005	—
0 ~ 5	0.01	—
0 ~ 10	0.02	—
0 ~ 15	—	—
0 ~ 25	0.05	—
0 ~ 35	0.05	—

DIMENSIONS



GP41-101



GP42-101

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.

