

# PM26·43

## Liquid Column Manometers



### Features

- A model with a high precision scale for calibration of high-pressure pressure gauges is also available.
- A vernier type which allows pressure reading up to 1/20 scale is also available (Vernier type has a high accuracy pressure scale.)
- Thicker inside diameter of the glass tube (from 6mm dia. to 8mm dia.) has improved the accuracy of liquid level reading.
- The PM43 pressure controller has a built-in manual pump for fine adjustment which ensures better pressure control than conventional products.
- An electrically driven vacuum unit is available. Contact NKS if required. (Model No.: XJ26-111)
- Pressure standard inspection ·JCSS Calibration Certification
- General test report available (PM26 only)

### Specifications

#### PM26 Liquid Column Manometers

Measurement range kPa						L (Height) mm	Approximate mass (kg)
Water			Mercury				
Pressure	Vacuum	Dual use	Pressure	Vacuum	Dual use		
0 to 8	- 8 to 0	- 8 to 8	0 to 100	-100 to 0	-100 to 100	1,170	30
0 to 10	-10 to 0	-10 to 10	0 to 130	————	-100 to 130	1,370	32
0 to 15	-15 to 0	-15 to 15	0 to 200	————	-100 to 200	1,880	37
0 to 20	-20 to 0	-20 to 20	————	————	————	2,390	42

Scale	Liquid	Accuracy		Minimum scale	Model number
Standard	Water	Pressure	±(0.2 % of reading or 20Pa whichever is greater)	0.02kPa	PM26-31 □
		Vacuum			
	Mercury	Pressure	±0.5kPa	0.5kPa	PM26-32 □
		Vacuum			
High accuracy	Water	Pressure	±(0.1 % of reading or 10Pa whichever is greater)	0.01kPa	PM26-41 □
		Vacuum			
	Mercury	Pressure	±0.2kPa	0.2kPa	PM26-42 □
		Vacuum			

Note-1 Accuracy is assured under 20°C±3°C after gravitational acceleration compensation.

Note-2 % of reading

Note-3 -90kPa is maximum vacuum pressure for vacuum side inspection and calibration.

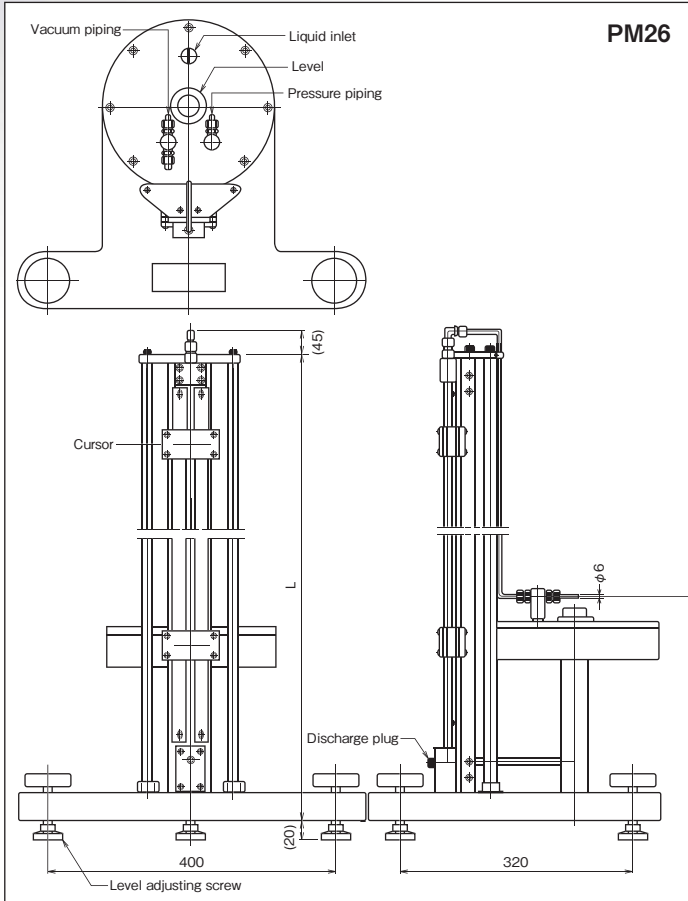
Note-4 Minimum scale becomes accuracy for pressure standard.

Note-5 Vacuum pressure side is not covered by pressure standard or JCSS pressure calibration.

#### PM43 Pressure controller

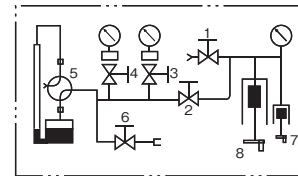
Model number: PM43-000, Body color: Pearl light green, Weight: Approx. 20kg

## Dimensions

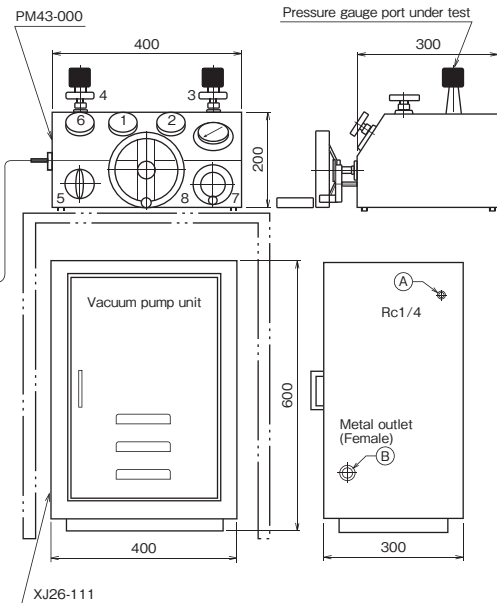


PM26

PM43



Piping diagram



Part (A): Vacuum pressure pump connection

Ensure one of A connecting to manometer with another non-used A at other side remain closed.

Part (B): Metal outlet

Ensure one of B connecting to power source with another B at other side connecting to manometer.

## ACCESSORIES & OPTIONS

Model	Mounting base		Spare parts, tools, accessories						
	Connection	Connecting method	Adapter				O-ring and gasket	Piston Gasket	Wrench and other tools
			G1/4	G3/8	G1/2	G3/4			
PM43	Adapter	Quick fastening nut	1	1	1	—	P4-5 P7-5 S34-1 # 40-1	P25-2 P63-2	Complete set

### PM26 Vernier



A vernier type which allows pressure reading up to 1/20 high accuracy is available for scale calibration and measurement.

### XJ26 Vacuum pump unit

PM43 dedicated vacuum pressure pump unit (XJ26-111)  
Vacuum pump specification (Ability)

Discharge speed: 18 l/min (Under atmospheric 60Hz pressure)  
15 l/min (Under atmospheric 50Hz pressure)

Ultimate pressure: 6.7Pa abs.

Power source: 100/110V AC (50/60Hz)

Dimensions: Length 400mm x Width 300mm x Height 600mm

Weight: Approx. 36kg

Standard accessories

Power cable 3m, Wiring cable 3m, Piping tube 1.5m

\*Specify when required.

# PM26·43

## Liquid Column Manometers

**Model number configuration** Please specify the model number, each specs and the range for ordering.

Model

**P M 2 6** — [ ] [ ] [ ] — [ ] [X] [X] [X] [ ] [ ] [X] [X] [X] [X] [X] [ ]

Liquid Column Manometers ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮

Model number		Product specifications	Additional specifications (Optional)
① Accuracy	3	Standard pressure scale: Water Pressure · Vacuum: $\pm(0.2\%$ of reading or 20Pa whichever is greater) : Mercury Pressure · Vacuum: $\pm 0.5\text{kPa}$	
	4	High pressure scale: Water Pressure: $\pm(0.1\%$ of reading or 10Pa whichever is greater) : Water Vacuum: $\pm(0.2\%$ of reading or 20Pa whichever is greater) : Mercury Pressure · Vacuum: $\pm 0.2\text{kPa}$	
② Liquid	1	Water	
	2	Mercury *1	
③ Vernier	1	Without vernier	
	2	With 1/20 vernier (High accuracy scale only)	
④ Measurement range (kPa)	Standard pressure scale (①Accuracy: 3)		
		Water	Mercury
	1	0 to 8, -8 to 0, -8 to 8	0 to 100, -100 to 0, -100 to 100
	2	0 to 10, -10 to 0, -10 to 10	0 to 130, -100 to 130
	3	0 to 15, -15 to 0, -15 to 15	0 to 200, -100 to 200
	4	0 to 20, -20 to 0, -20 to 20	—
	High pressure scale (①Accuracy: 4)		
		Water	Mercury
5	0 to 8, -8 to 0, -8 to 8	0 to 100, -100 to 0, -100 to 100	
6	0 to 10, -10 to 0, -10 to 10	0 to 130, -100 to 130	
7	0 to 15, -15 to 0, -15 to 15	0 to 200, -100 to 200	
8	0 to 20, -20 to 0, -20 to 20	—	
⑧ Pressure standard inspection/ Calibration	1	Pressure standard inspection (Standard pressure scale) *2	
	3	JCSS certificate of calibration	
	4	General pressure standard (With uncertainty)	
⑨ Other additional spec.	0	Not required	
	1	Required (Specify required additional specs below) Water (By 500ml)	
⑮ Documents	0	Not required	
	1	Required (Documents available upon request) Datasheet (Drawing / Specifications) Instruction manual Inspection procedure Attending inspection	

\* 1 Mercury is NOT filled when the manometer is shipped. Mercury needs to be prepared by customer. (Inspection before shipment is conducted using mercury filled in factory discharged after the inspection.)

\* 2 Minimum scale becomes the accuracy for pressure standard.

Note-1) Vacuum pressure side is not covered by pressure standard or JCSS pressure calibration.

Note-2) -90kPa is maximum vacuum pressure for vacuum side inspection and calibration.

Note-3) Calibration test report comes for JCSS calibration and general pressure calibration requirement.

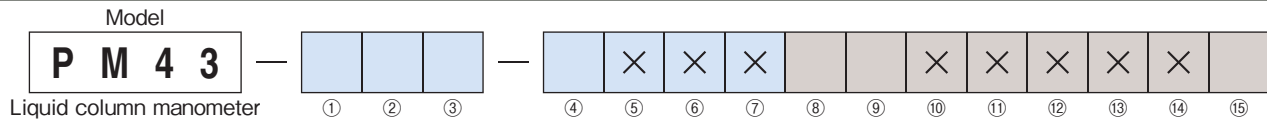
\* Specify code "X" to refer N/A

### OPERATING INSTRUCTIONS

- Avoid installation in places exposed to places that excessive vibration, dirt, dust, corrosive atmosphere, and direct sunlight are present.
- Make sure to install liquid column manometer vertically. No pressure indication is accurate with being on a tilt.
- Avoid sudden increase/decrease of pressure generating cause of used liquid blowdown or counter flow (Operate valve opening and closing gently).
- Applying a pressure over the maximum allowable pressure on PD13 is not only dangerous but possibly damage the tester.
- Pressure gauge under test should be oil free or water free in principle.
- Conduct periodical calibration to ensure accurate pressure indication caused by used liquid oxidization or dirt on tube.
- Make sure that used liquid in manometer is pure and clean. Water column manometer uses purification water (500ml), Mercury filled manometer uses 99.5 purity level, special grade chemical (Approx. 4kg).

## Model number configuration

Please specify the model number, each specs and the range for ordering.



Model number		Product specifications	Additional specifications (Optional)
① Accuracy	0	PM43 PM43 Pressure controller	
	3	Standard pressure scale: Water Pressure · Vacuum: ±(0.2 % of reading or 20Pa whichever is greater) : Mercury Pressure · Vacuum: ±0.5kPa	
	4	High pressure scale: Water Pressure: ±(0.1 % of reading or 10Pa whichever is greater) : Water Vacuum: ±(0.2 % of reading or 20Pa whichever is greater) : Mercury Pressure · Vacuum: ±0.2kPa	
② Liquid	0	PM43 Pressure controller	
	1	Water	
	2	Mercury *1	
③ Vernier	0	PM43 Pressure controller	
	1	Without vernier	
	2	With 1/20 vernier (High accuracy scale only)	
④ Measurement range (kPa)	Standard pressure scale (①Accuracy: 3)		
		Water	Mercury
	1	0 to 8, -8 to 0, -8 to 8	0 to 100, -100 to 0, -100 to 100
	2	0 to 10, -10 to 0, -10 to 10	0 to 130, -100 to 130
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	4	0 to 20, -20 to 0, -20 to 20	—
	High pressure scale (①Accuracy: 4)		
		Water	Mercury
	5	0 to 8, -8 to 0, -8 to 8	0 to 100, -100 to 0, -100 to 100
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Note-3) Calibration test report comes for JCSS calibration and general pressure calibration requirement.

\* Specify code "X" to refer N/A

⑧ Pressure standard inspection/Calibration (PM26 only)	1	Pressure standard inspection (Standard pressure scale)*2
	3	JCSS certificate of calibration
	4	General pressure standard (With uncertainty)
⑨ Other additional spec.	0	Not required
	1	Required (Specify required additional specs below) Water (By 500ml)
⑮ Documents	0	Not required
	1	Required (Documents available upon request) Datasheet (Drawing / Specifications) Instruction manual Inspection procedure Attending inspection

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- Avoid installation in places exposed to places that excessive vibration, dirt, dust, corrosive atmosphere, and direct sunlight are present.
- Make sure to install liquid column manometer vertically. No pressure indication is accurate with being on a tilt.
- Avoid sudden increase/decrease of pressure (Operate valve opening and closing gently). Do not operate pressure/vacuum pressure switching cock under the pressurization. It could be cause of generating used liquid blowdown or counter flow.
- Applying a pressure over the maximum allowable pressure on PD13 is not only dangerous but possibly damage the tester.
- Pressure gauge under test should be oil free or water free in principle.
- Conduct periodical calibration to ensure accurate pressure indication caused by used liquid oxidization or dirt on tube.
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