

CP-22-100-B / PGT

PURGE SET FOR AIR PURGE LEVEL GAUGE Bubbler tube

OVERVIEW

The CP-22-100-B integrates a CP-type purge set, a filter regulator, a regulator supply pressure gauge, a purge set supply pressure gauge, and a measure/blow selector switch into a single panel. It can be used in conjunction with a PGT bubbler tube to measure liquid levels.

FEATURES

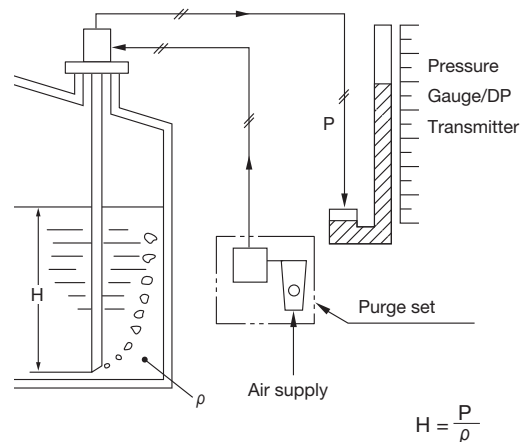
- ❑ With no moving parts, this purge set is suitable for level measurement of highly viscous liquids, liquids with large amounts of suspended solids, and more.
- ❑ The air bubble tube, the only submerged part, allows level measurement of corrosive liquids.
- ❑ Continuously pumped air prevents corrosive gases from entering the indicator or transmitter.
- ❑ The non-electric purge set allows the product to be used in hazardous area.

APPLICATIONS

- ❑ Level measurement of sludge settling pit / tank
- ❑ Level control of manhole pump pit
- ❑ Level measurement of chemicals and corrosive liquids in pH adjustment tanks for wastewater and water treatment plants



OPERATING PRINCIPLE



The liquid level in the tank is determined by the back pressure of the bubbler tube.

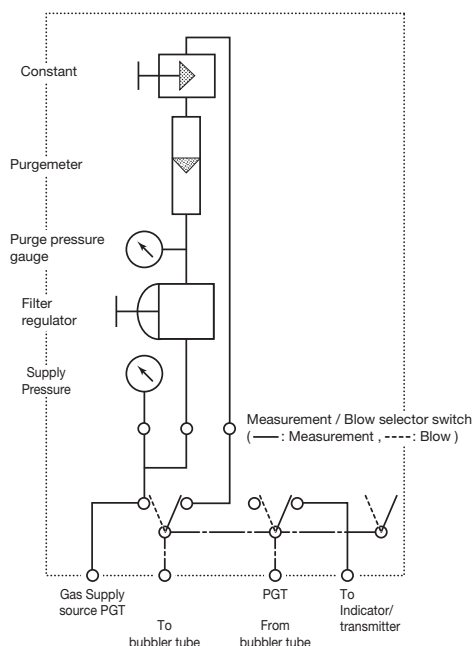
The discharge pressure at the tip of the bubbler tube in the tank bottom is proportional to the liquid level. To prevent the liquid in the tank from entering the bubbler tube, the Regulator Purge Set is used to regulate the air pressure required to force air through the air tube.

The back pressure at the tip of the bubbler tube is monitored by a differential pressure gauge or transmitted by a differential pressure transmitter. This back pressure is used to determine the liquid level.

STANDARD SPECIFICATIONS

Purge Set CP-22-100-B

● System diagram



● Standard specifications

Type	Downstream pressure (gas loading pressure) regulating type
Supply gas	: Air
Supply pressure	: 0.3 to 1 MPa
Setting pressure	: 0.2 MPa
Downstream pressure	: 0 to 0.15 MPa (for liquid levels from 0 to 15000 mm)
Standard scale range	: (Air, 20°C, 1 atm) 0.12 to 1.2 L/min (std)
Indication accuracy	: $\pm 5\%$ F.S.
Control accuracy	: $\pm 5\%$ F.S.
Gas temperature	: 45°C max (Special specifications are required for temperatures above 45°C.)
Panel color	: Munsell 7.5 BG 4/1.5

● Special specifications (Please let us know your length measurements.)

Type	Downstream pressure (gas loading pressure) regulating type
Supply gas	: Air, nitrogen, etc.
Supply pressure	: 1 MPa max
Setting pressure	: 0.5 MPa or less
Downstream pressure	: (setting pressure of -0.4 MPa) to (setting pressure of -0.06 MPa)
(Control differential pressure range)	
Gas flow range (Air, 0 MPa, 0°C)	Minimum : 0.1 to 1 L/min (nor), Maximum: 5 to 50 L/min (nor)
Indication accuracy	: $\pm 5\%$ F.S.
Control accuracy	: $\pm 5\%$ F.S.

● Model Code

Model Code												Specification
CP - 22 - 100 -	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Purge set qty.	B											Single
	2B											Dual (except box type)
Installation	No marks											Panel mount type
	U											2B pipe mount type
	Z											Box type (Mounted on 2B pipe)
Material of gas wetted parts	- C											C3604/SUS304, A6063
	- 4											SUS304, A6063 *1
	- 6											SUS316, A6063 *1
Materials of gaskets and O-rings	N											Nitrile rubber (NBR)
	F											Fluororubber
	C											Chloroprene rubber (CR)
Materials of diaphragms	F											Fluororubber
	C											Chloroprene rubber (CR)
Materials of panels	S											SPCC
	4											SUS304
	6											SUS316
	E											Epoxy resin coating *2
Process connection	- R											Rc screw
	- N											NPT female screw
Process connection size	1											1/8" (with male and female sockets)
	2											1/4"
	3											3/8" (with male and female sockets)
	4											1/2" (with male and female sockets)
Special specifications	- Z											Special

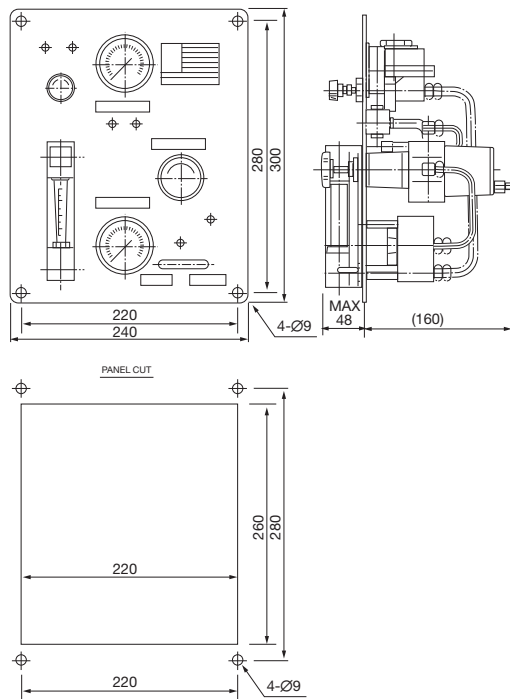
*1 The material for the pressure gauge is C3604.

*2 For epoxy resin coating, specify S/E, 4/E, or 6/E for panel material.

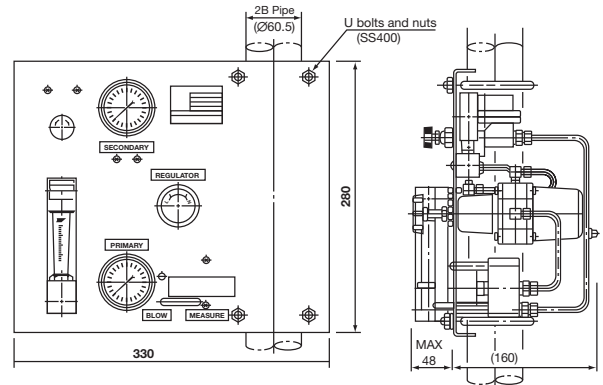
● Dimensions

(Unit: mm)

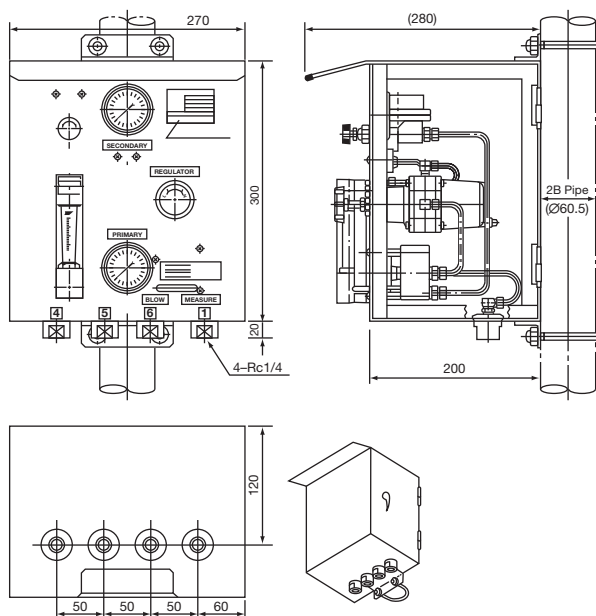
Panel mount type (CP-22-100-B)



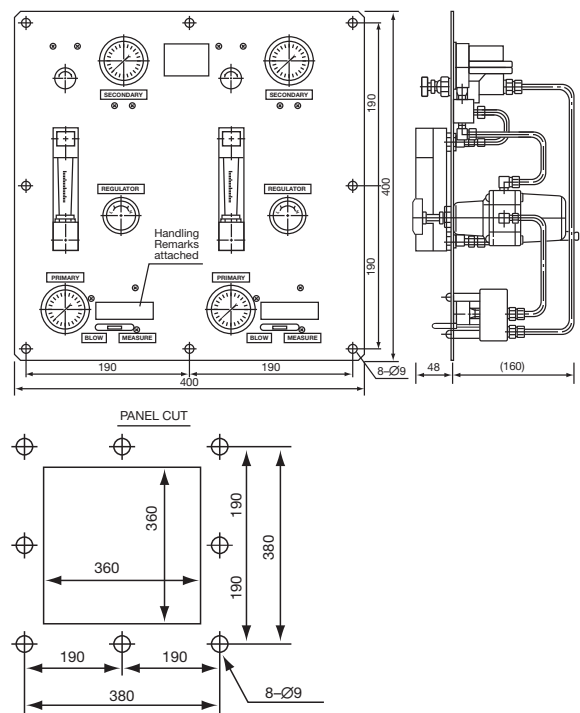
2B pipe mount type (CP-22-100-BU)



Box type (CP-22-100-BZ)



Dual type (CP-22-100-2B)



Bubbler tube PGT

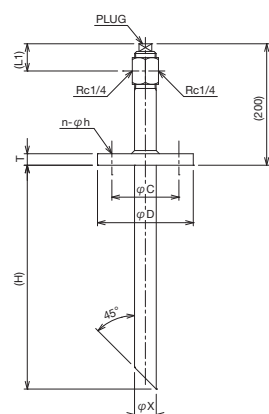
Nominal pipe size : 10A, 15A, 20A, 25A (stainless steel)
13A, 20A(PVC)
Connection for purge gas : Rc 1/4 and other thread connections

● Model code : Fixed flange (FW)

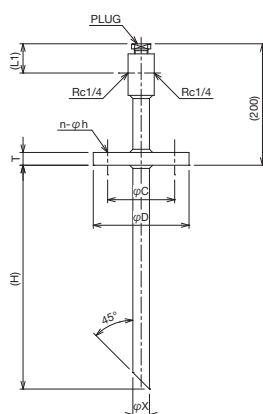
Model Code					Specification	Remark
PGT	-	☐	-	☐		
Wetted part materials	-	4			SUS304	
	-	6			SUS316	
	-	P			PVC	
	-	Z			Special	
Flange type / Flange standard	-	FW10AJIS10K			Fixed flange (FW) Stainless steel : 10A, 15A, 20A, 25A PVC : 10A, 20A	Flat-faced (FF) flanges are used in standard specifications. (For raised face (RF) flanges or other non-standard connections or diameters, contact Tokyo Keiso.)
	-	FW15AJIS10K				
	-	FW20AJIS10K				
	-	FW25AJIS10K				
Length of pipe to be immersed		-	H		Indicates the length in mm using a 5 digit number. Example: If it is 3000 mm, H is written as 03000. Fixed flange (FW): H (From under the flange to the bottom edge)	Fixed flange (FW) maximum H dimension Stainless steel: 15800 mm (For 3800 mm or longer pipes, a socket type flange is used for connection.) PVC: 3800 mm

● Dimensions

Fixed flange (FW) with stainless steel pipe



Fixed flange (FW) with PVC pipe



Fixed flanges (FW) with stainless steel pipe (mm)

Flange	Nominal pipe diameter (φ X)	L1	D	C	T	n-φ h
FW10AJIS10K	10A (17.3)	46	90	65	12	4-15
FW15AJIS10K	15A (21.7)	46	95	70	12	4-15
FW20AJIS10K	20A (27.2)	39	100	75	14	4-15
FW25AJIS10K	25A (34)	39	125	90	14	4-19

Fixed flanges (FW) with PVC pipe (mm)

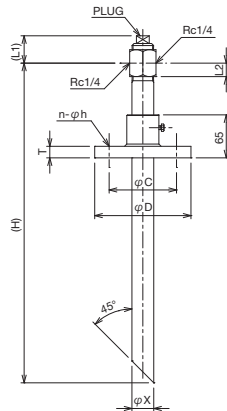
Flange	Nominal pipe diameter (φ X)	L1	D	C	T	n-φ h
FW10AJIS10K	13 (18)	46	90	65	17	4-15
FW20AJIS10K	20 (26)	45	100	75	20	4-15

● Model Code : Sliding flange (FS)

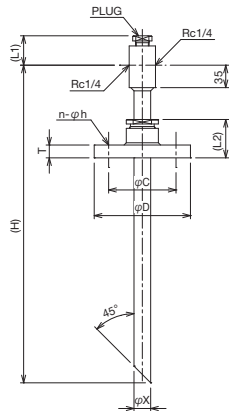
Model Code					Specification	Remark
PGT	-	☐	-	☐	☐ ☐ ☐ ☐ ☐	
Wetted part materials	-	4				SUS304
	-	6				SUS316
	-	P				PVC
	-	Z				Special
Flange type / Flange standard	-	FS15AJIS10K				Sliding flange (FS) Stainless steel : 15A, 20A, 25A, 40A PVC : 25A, 40A
	-	FS20AJIS10K				
	-	FS25AJIS10K				
	-	FS40AJIS10K				
Length of pipe to be immersed					- H	Indicates the length in mm using a 5 digit number. Example: If it is 3000 mm, H is written as 03000. Sliding flange (FS): H (from the Rc 1/4 thread connection to the bottom edge) (For 4000 mm or longer pipes, a socket type flange is used for connection.)
						Flat-faced (FF) flanges are used in standard specifications. (For raised face (RF) flanges or other non-standard connections or diameters, contact Tokyo Keiso.)
						Sliding flange (FS) maximum H dimension Stainless steel: 16000 mm PVC: 4000 mm

● Dimensions

Sliding flange (FS) with stainless steel pipe



Sliding flange (FS) with PVC pipe



Sliding flange (FS) with stainless steel pipe (mm)

Flange	Nominal pipe diameter (φX)	L1	L2	D	C	T	n-φh
FS15AJIS10K	10A (17.3)	46	32	95	70	12	4-15
FS20AJIS10K	15A (21.7)	46	32	100	75	14	4-15
FS25AJIS10K	20A (27.2)	39	24	125	90	14	4-19
FS40AJIS10K	25A (34)	39	21	140	105	16	4-19

Sliding flange (FS) with PVC pipe (mm)

Flange	Nominal pipe diameter (φX)	L1	L2	D	C	T	n-φh
FS25AJIS10K	13 (18)	46	53	125	90	14	4-19
FS40AJIS10K	20 (26)	45	55	140	105	14	4-19

* Specification is subject to change without notice.

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