

Diffusion Nozzle for Nozzle Type Ionizer

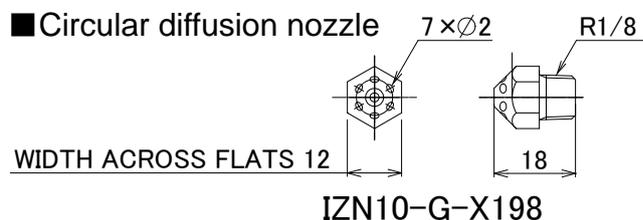
IZN10-G-X198 (Circular diffusion nozzle)

IZN10-G-X199 (Flat diffusion nozzle)

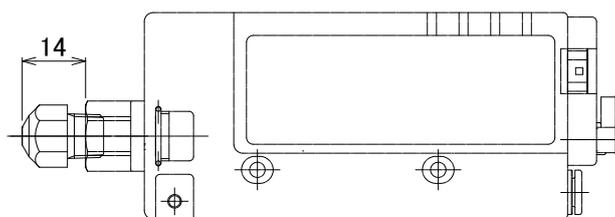
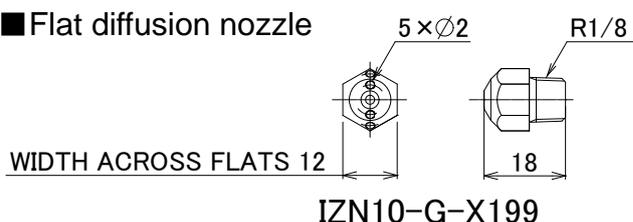
SMC CORPORATION
4-14-1, SOTO-KANDA, CHIYODA-KU,
TOKYO 101-0021, JAPAN
URL: <http://www.smcworld.com>

Feature1: Nozzle options for air purge and diffusion according to applications

■ Circular diffusion nozzle



■ Flat diffusion nozzle



Reference drawing for mounting
[Ionizer body: Female thread for piping Rc1/8]
*1) Order the ionizer separately.

Specifications

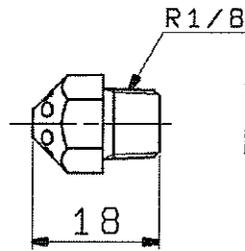
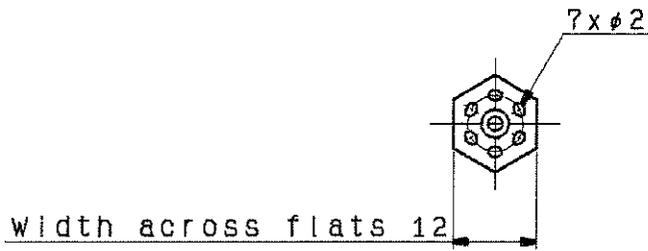
Model	IZN10-G-X198	IZN10-G-X199
Nozzle type	Circular diffusion nozzle	Flat diffusion nozzle
Fluid	Air (Clean dry air)	
Operating pressure	0.05 to 0.7MPa	
Ambient and fluid temperature	0 to 55°C (Use the nozzle according to specifications and operating environment of IZN10 Series)	
Effective discharge distance *2)	1000mm	500mm
	(Refer to the separate technical data for details of static elimination performance and effectiveness)	
Port size	R1/8	
Material	SUS303	
Weight	12g	12g

*2) For combination with IZN10-11 Series.

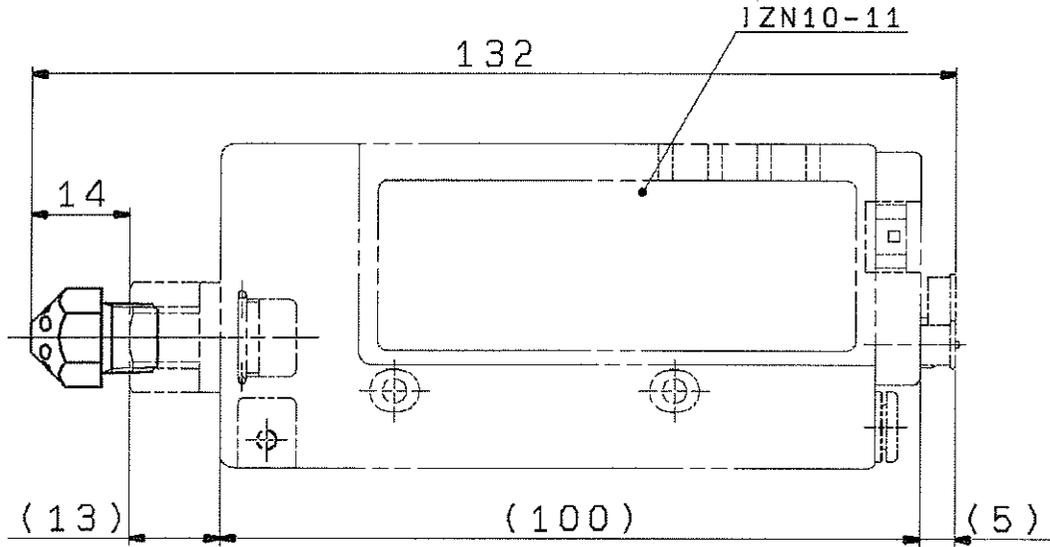
Dimensions: mm (Refer to the drawing attached to the last page)

⚠ Caution To ensure the safest possible operation of this product, please be sure to read thoroughly the "Safety Instructions" in our "Best Pneumatics" catalog before use.

▽ 861X-G-01NZ1 © ON 9MO



提出用



Reference drawing for mounting

Note

This is an optional nozzle to be mounted to IZN10-11 series products.

FINISH: 表面処理/PAIN: 塗料/PACKING: 包装/MATERIAL: 材質/MATERIAL SIZE: 材料寸法

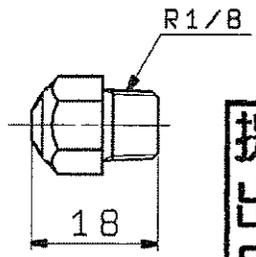
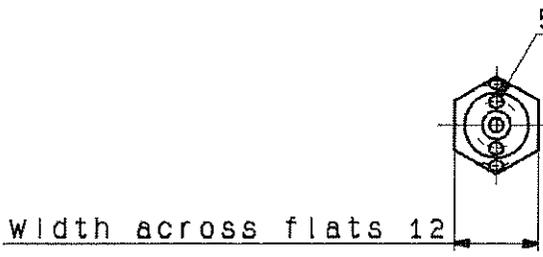
				FINISH			
				PAINT			
				PACKING			
				MATERIAL		IZN10 1	
				MATERIAL SIZE		MODEL QTY	
				SUS303			
				THIRD ANGLE		☉	
TOLERANCES JIS B 0405		DRAWN		SCALE		DWG NAME	
GRADE		DATE		1 : 1		Nozzle for toroidal diffusion	
RANGE (mm)		DESIGNED		DWG NO		REVISION	
GRADE		Y. Seo		© IZN10-G-X198		△ G	
± ± ±		DATE 2007-12-26					
0.5 ≤ D ≤ 3		CHECKED					
3 < D ≤ 6		T. Sato					
6 < D ≤ 30		DATE 2007-12-27					
30 < D ≤ 120		APPROVED					
120 < D ≤ 400		N. Fujiwara					
400 < D ≤ 1000		DATE 2007-12-27					
1000 < D ≤ 2000							

DWG REC

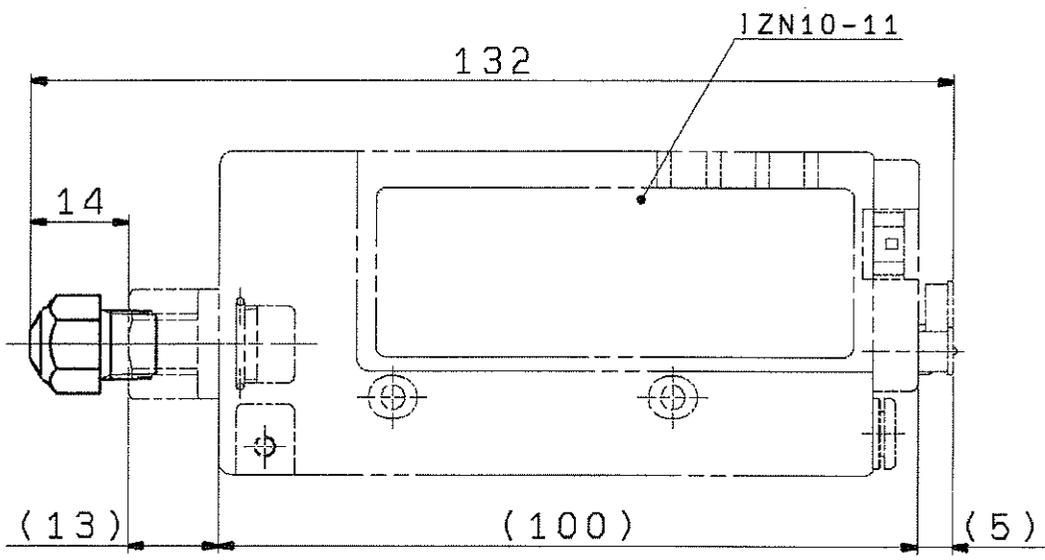
DWG ID BA14126400

SMC Corporation

▽ 66TX-G-01NZ1 © ON 9A0



提出用



Reference drawing for mounting

Note

This is an optional nozzle to be mounted to IZN10-11 series products.

FINISH: 表面処理/PAIN: 塗装/PACKING: 包装区分/MATERIAL: 材質/MATERIAL SIZE: 材料寸法

				FINISH			
				PAINT			
				PACKING		IZN10 1	
				MATERIAL		SUS303	
				MATERIAL SIZE		THIRD ANGLE	
REV QTY		DESCRIPTION		DATE PREPARED		REV NO	
TOLERANCES JIS B 0405				DRAWN		SCALE	
GRADE				DATE		1 : 1	
RANGE (mm)				DESIGNED		DWG NAME	
0.5 $\leq D \leq 3$				Y. Seo		Nozzle for flat diffusion	
3 <math>< D \leq 6</math>				DATE		2007-12-26	
6 <math>< D \leq 30</math>				CHECKED		DWG NO	
30 <math>< D \leq 120</math>				T. Sato		© IZN10-G-X199	
120 <math>< D \leq 400</math>				DATE		REVISION	
400 <math>< D \leq 1000</math>				2007-12-27		△ G	
1000 <math>< D \leq 2000</math>				APPROVED			
				N. Fujiwara			
				DATE			
				2007-12-27			
DWG REC				DWG ID		BA14127500	
						SMC Corporation	

Technical Information

Measurement of Discharge time of IZN10 diffusion
nozzles

·IZN10-11

·Annularly distributed diffusion nozzle/IZN10-G-X198

·Linearly arranged diffusion nozzle/IZN10-G-X199

Subject	Measurement of Discharge time of IZN10 diffusion nozzles		Date	Jan.15.2008
PD Div	3	Model	IZN10	Doc.No
				IZ*-TDL0060

1. Test pieces

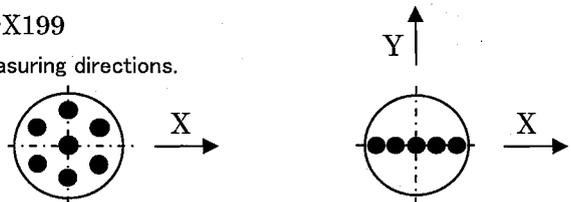
The test pieces used for this measurement are shown below. The configurations of the nozzles are shown in Figure 1.

Description: Nozzle type ionizer

Test pieces: IZN10-11 + annularly distributed diffusion nozzle/IZN 10-G-X198

Linearly arranged diffusion nozzle/IZN10-G-X199

※X and Y mean measuring directions.



2. Test conditions

- Installation location: General environment (laboratory)
- Installation distance: L = 50~1,000 [mm]
- Supply pressure: 0.05/0.1/0.2/0.3 [MPa]
- Measurement tools: Electricity-removing time and ion-balance measurement equipment: TREK's charge-plate monitor (model 158) + TREK's charge-plate
- Flow meter: PF2A7***-***-M with a measuring range of 1 to 500 [L/min]
- Pressure gauge: DPI145 pressure indicator

Fig.1:Configurations of nozzle ends

3. Test procedure

The test piece and measurement equipment are arranged as shown in Figure 2 below. The procedure of each test is shown below.

(1) Discharge time /flow-rate characteristic: Discharge Time, ion balance, and flow rate are measured with the installed distance being changed to 50, 100, 200, 300, 400, 500, 700, and 1,000 [mm] and the pressure being set at 0.05, 0.1, 0.2, and 0.3 [MPa] at each distance.

(2) Discharge area: Install the charge plate at the L = 300 [mm] from the end of the nozzle, and move the charge plate in the X and Y directions to a certain point, and measure the electricity-removed area. The annularly distributed diffusion nozzle is only moved in the X direction, and the linearly arranged diffusion nozzle is moved in both the X and Y directions.

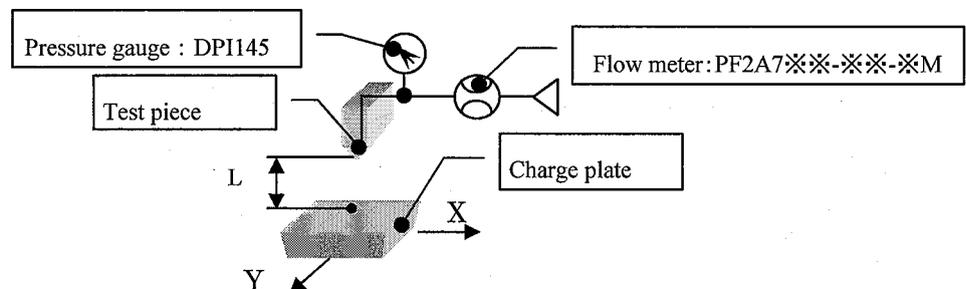


Fig.2:Arrangement for measurement.

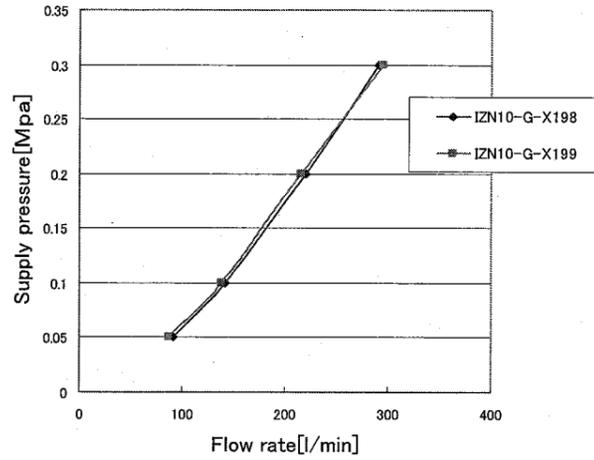
Related Document		Comment	

Subject	Measurement of Discharge time of IZN10 diffusion nozzles			Date	Jan.15.2008
PD Div	3	Model	IZN10	Doc.No	IZ*-TDL0060

4. Test results

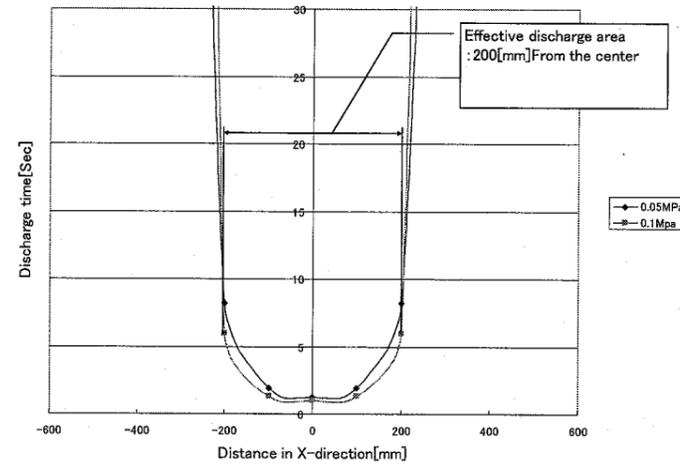
(1) Flow-rate characteristics

A graph of flow-rate characteristics of the nozzles is shown below.

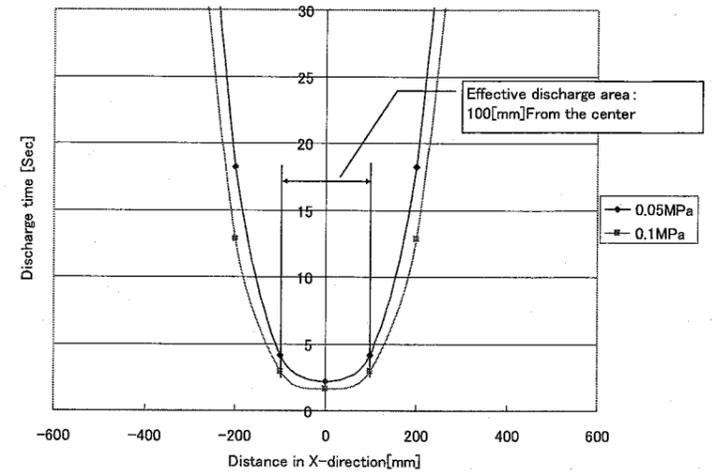


(c) Discharge area

Installation distance: L = 300



Installation distance: L = 500



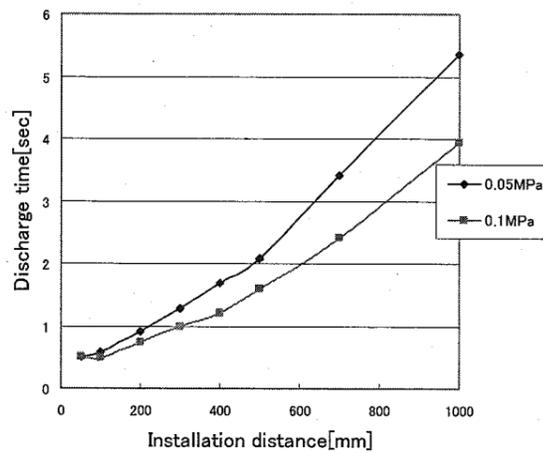
(2) Removal of electricity

(1) Annularly distributed diffusion nozzle/ IZN10-G-X198

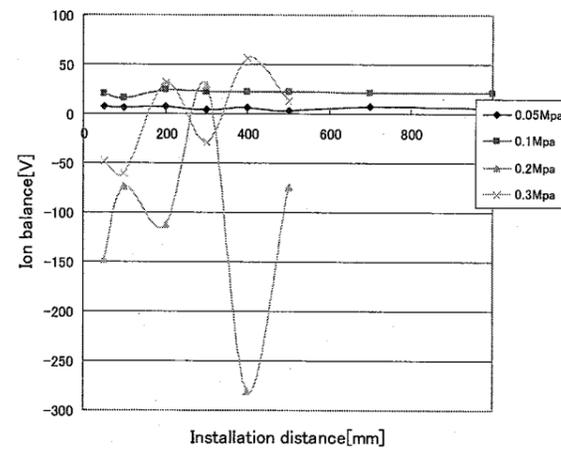
The measurement results are shown below.

(a) Discharge Time

(+1000V→+100V)---Installed distance

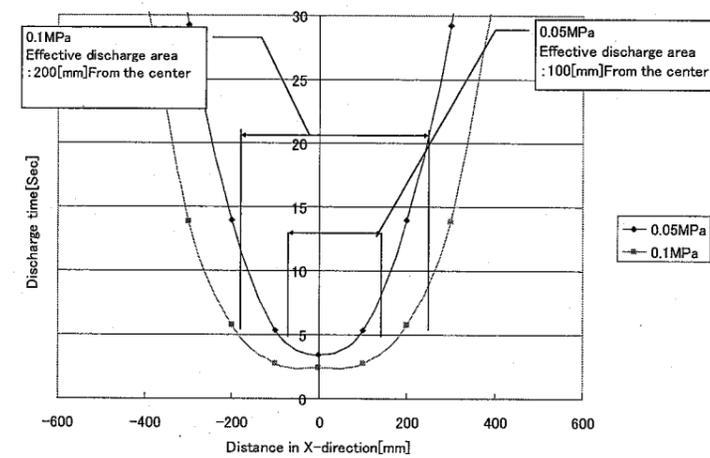


(b) Ion balance--- Installation distance

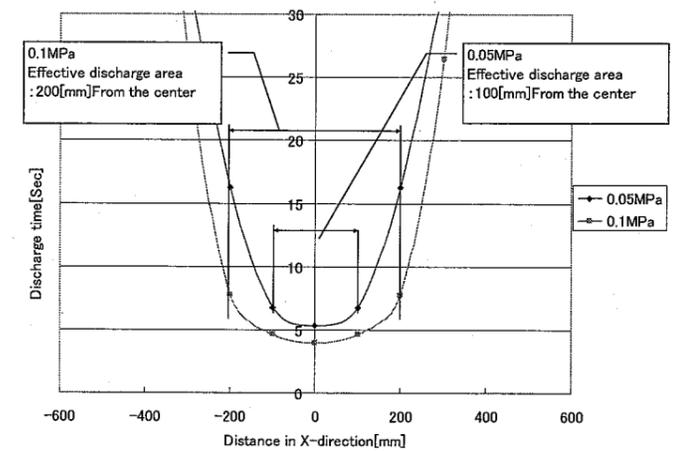


*The ion balance waves with 0.2 and 0.3 MPa are fluctuated widely, so they cannot be used practically.

Installation distance: L=700



Installation distance: L=1000



Related Document		Comment	

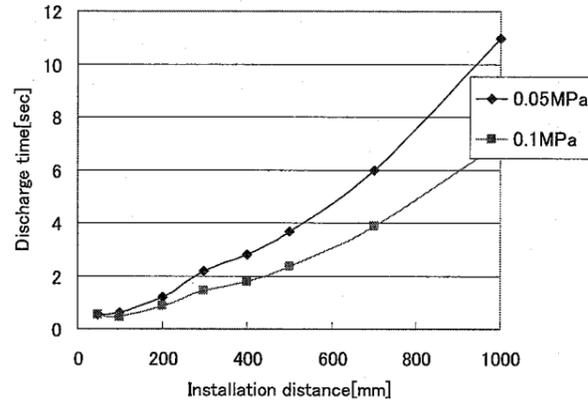
Subject	Measurement of Discharge time of IZN10 diffusion nozzles			Date	Jan.15.2008
PD Div	3	Model	IZN10	Doc.No	IZ*-TDL0060

(2) Linearly-arranged diffusion nozzle/ IZN10-G-X199

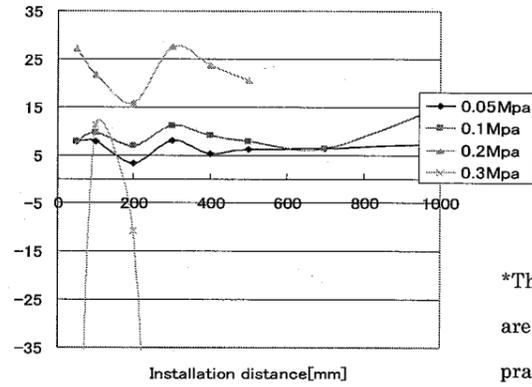
The measurement results are shown below.

(a) Discharge time

(+1000V→+100V)---Installation distance



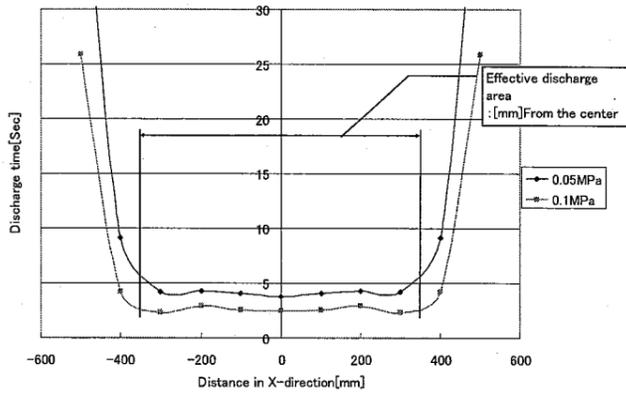
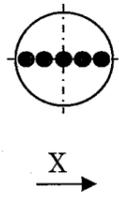
(b) Ion balance--- Installation distance



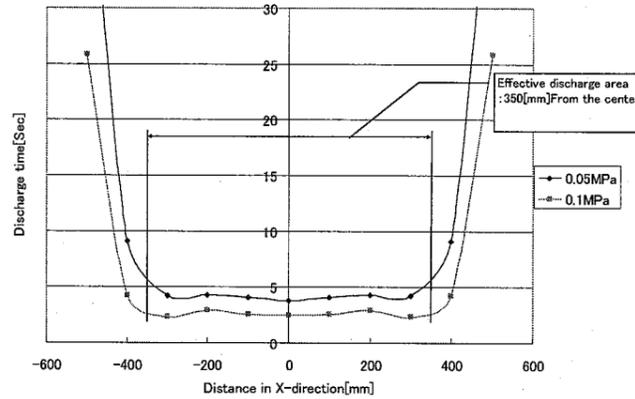
*The ion balance waves with 0.2 and 0.3 MPa are fluctuated widely, so they cannot be used practically.

(C) Discharge area

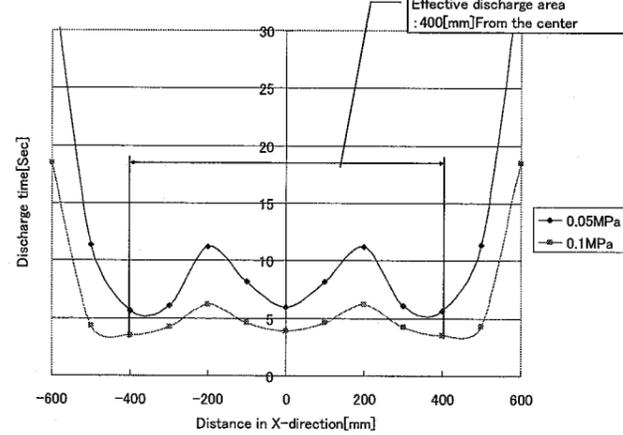
(Discharge area in X-direction)
Installation distance: L = 300



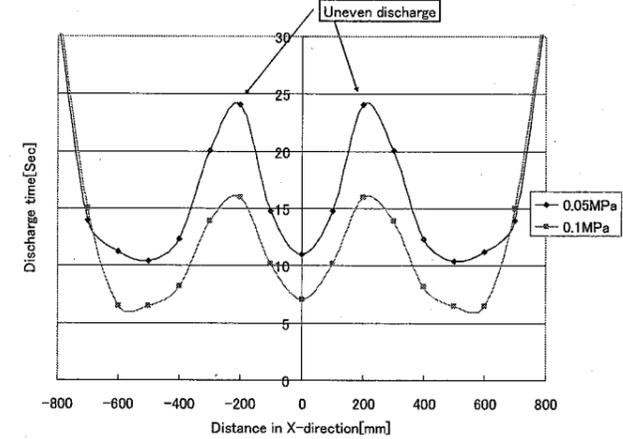
Installation distance: L = 500



Installation distance: L = 700

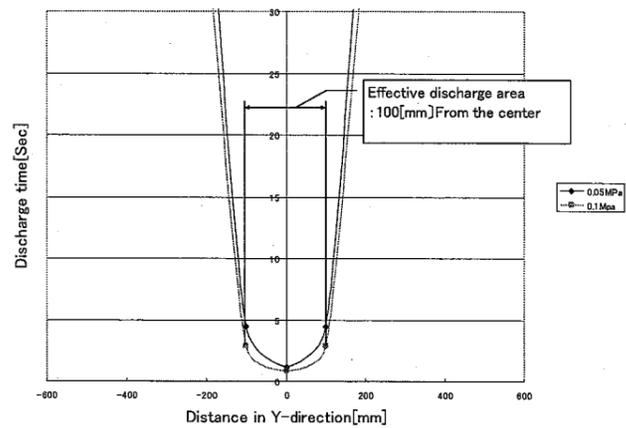
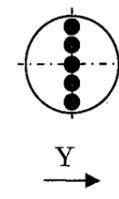


Installation distance: L = 1000

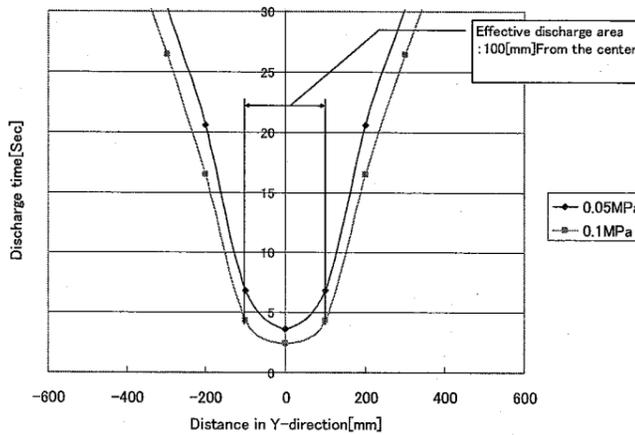


(C) Discharge area

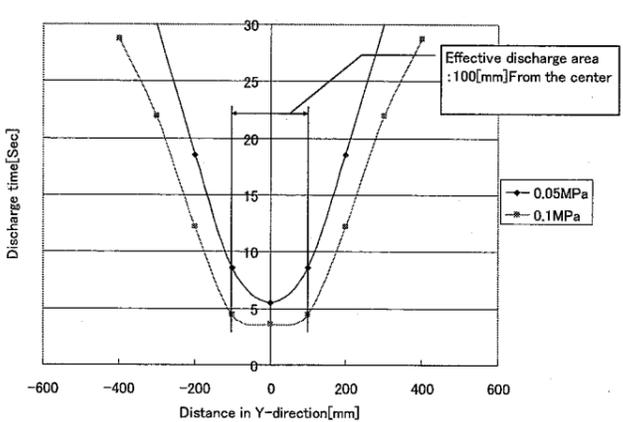
(Discharge area in Y-direction)
Installation distance: L = 300



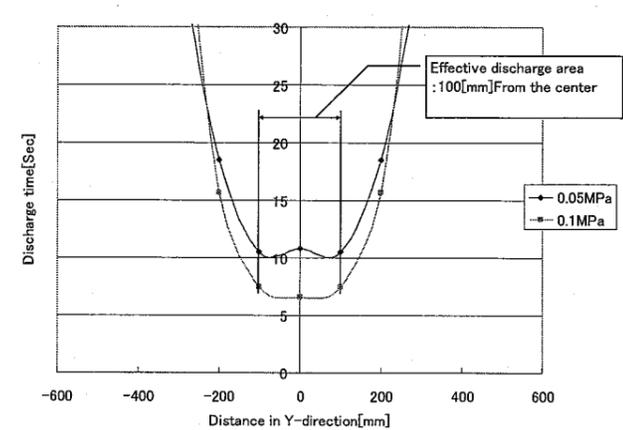
Installation distance: L = 500



Installation distance: L = 700



Installation distance: L = 1000



Related Document

Comment