

Clean & Compact

Newly designed high-precision and high-speed ionizer
applying a new technology



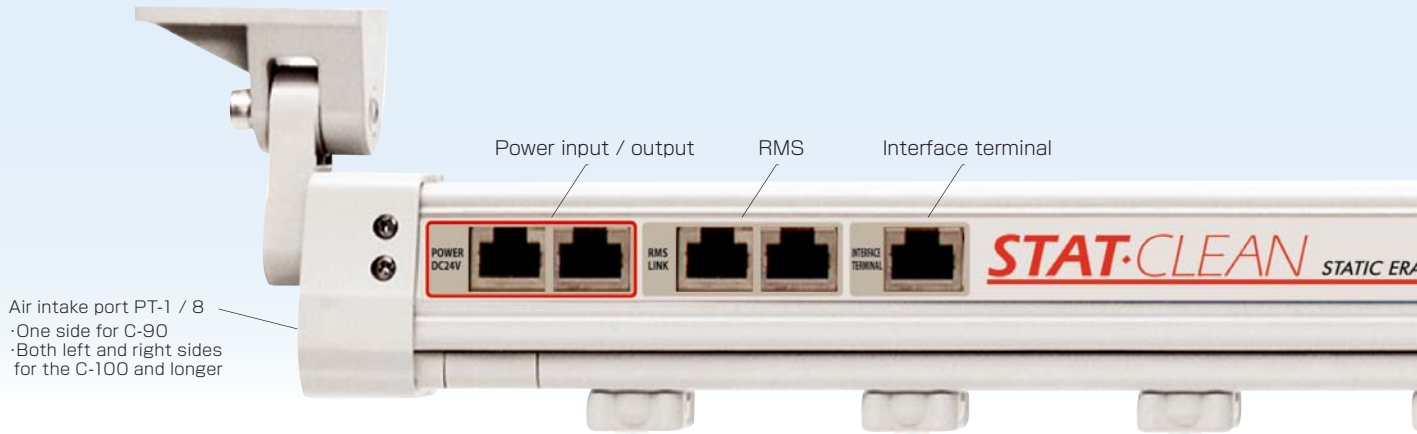
NEW

Long types
now available

STAT·CLEAN

C-series Ion Bar

AC Pulse Ionizing Clean Bar

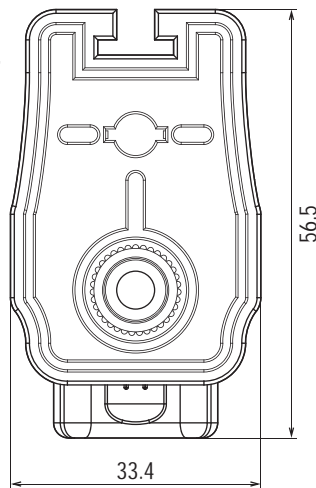


Air intake port PT-1 / 8
 ·One side for C-90
 ·Both left and right sides for the C-100 and longer

COMPACT *Super Compact Design*

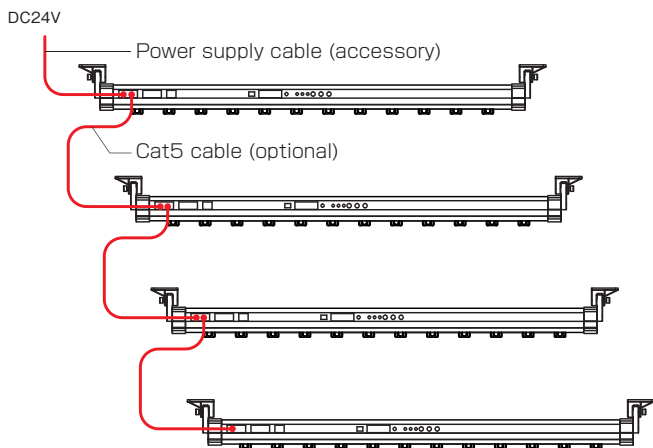
NEW *Slim & lightweight body*

Super-compact design incorporating high-voltage power supply, control circuit, and air circuit.
 (Actual size as shown on the right)



NEW *Terminals grouped on one side*

Enabling a daisy-chain connection.

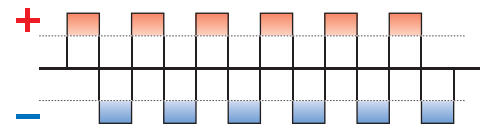


SPEED *Super Fast Static Electricity Removal*

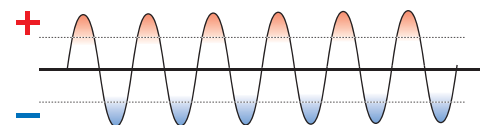
AC pulse method

This is a method of generating alternately positive ions and negative ions from each electrode. Since ions are generated maximum during each positive and negative electrode cycle, the ion volume is high and static electricity can be removed quickly.

AC pulse

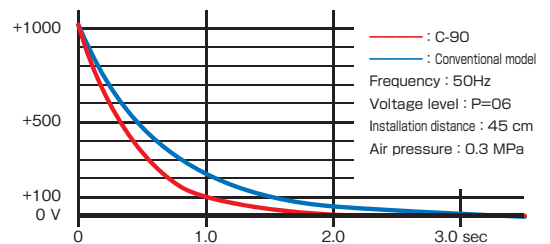


Typical alternating current

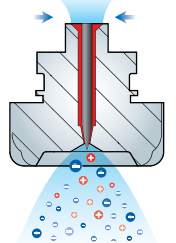


NEW *Super fast static electricity removal*

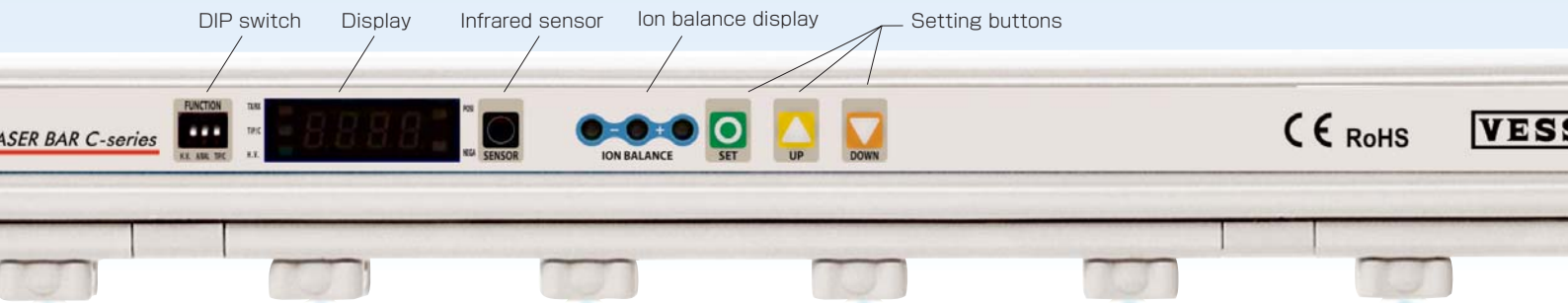
The newly developed needle electrode socket incorporates an air purging structure which has air emission ports around the needle electrode.



This structure not only prevents contamination of the electrode needle, but also feeds ions with a fast air flow to neutralize.



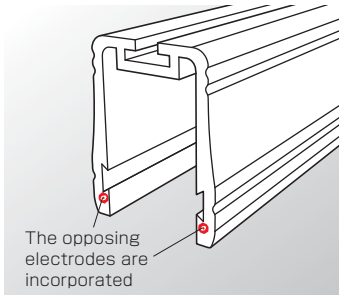
Compact bar type ionizers for high-speed neutralization with a clean design



CLEAN *Clean Design*

NEW Preventing body contamination

The opposite electrodes are incorporated in the body. This design enables to prevent particles from adhering to the outside of the body due to the induced voltage and to improve the ion generation efficiency by minimizing applied voltage losses.



One-touch needle replacement.

A socket type needle can be easily replaced.



NEW Needle cleaning timer

The timer notifies when to clean needle electrodes. The cleaning timing can be set in one-day units from 1 to 60 days. When the time elapses, the needle cleaning lamp turns ON and "AL-2" appears on the display.



MAINTENANCE

NEW High Voltage Alarm

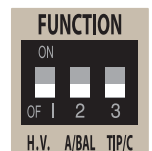
If a problem occurs at the high voltage output, the high voltage error lamp lights and "AL-1" appears on the display.



NEW DIP switch

Select following with DIP switch:

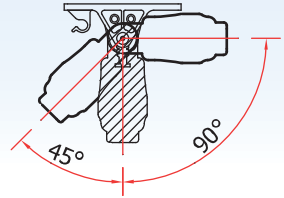
- whether to stop or continue operation, when a high voltage error occurs;
- ON or OFF state of the auto-balance mode;
- ON/OFF state of the needle cleaning timer.



NEW Interface Terminal

PhotoMOS relay can output Run/Stop state Signal, High Voltage Error Alarm Signal, and Needle Cleaning Alarm Signal. The 24VDC input can turn Remote Operation ON or OFF.

	No.	機能	出力	機能
	1	Run/Stop state	PhotoMOS relay output (non-polar)	Close:Operation Open:Stop
	2	--		--
	3	High voltage error		Close:Alarm Open:Normal
	4	Needle cleaning timer	Close:Alarm Open:Normal	
	5	Common	--	
	6	--	No connection	--
	7	Remote operation (positive ions)	+24V	DC24V
	8	Remote operation (negative ions)	0V	ON:Continue OFF:Stop

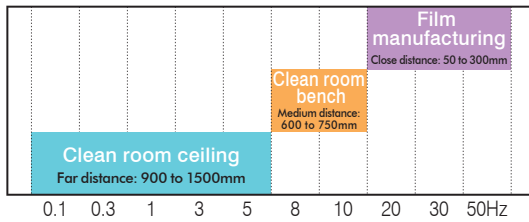


The angle can be adjusted.

SETTING *Various Settings*

Frequency

The frequency can be set in ten steps (0.1 to 50 Hz).



Pulse Ratio

The ion balance can be adjusted by changing the pulse ratio.

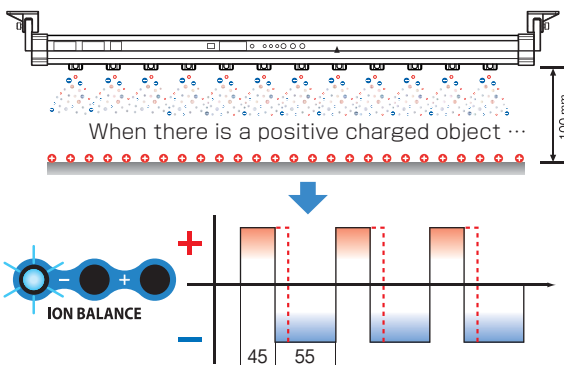
Address

When using multiple units, an address allocation (1 to 16) can be set to identify each device.

Auto Balance Mode



This C series is equipped with a mode to optimally adjust the ion balance automatically according to the polarity of the charged object. (Target distance: 50 to 100 mm)



More amount of negative ions is generated and discharged

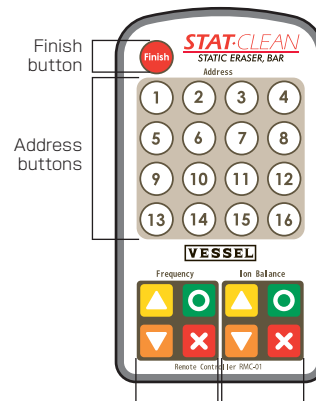
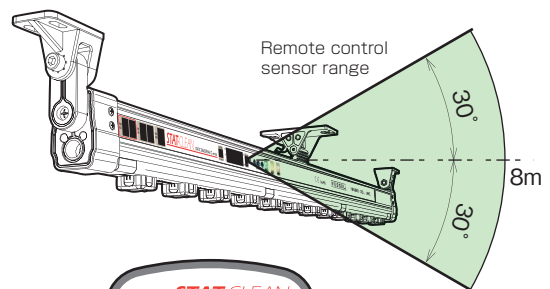
Voltage Level

The applied voltage can be changed individually for the positive and negative side. The amount of ions can be changed by different output steps. (Ten steps: 8.0 to 12.5 kVp-p)

Voltage level	1	2	3	4	5	6	7	8	9	10
Positive voltage (kV)	4	4.25	4.5	4.75	5	5.25	5.5	5.75	6	6.25
Negative voltage (kV)	4	4.25	4.5	4.75	5	5.25	5.5	5.75	6	6.25
kV p-p	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5

Card-type Remote Controller

This card-type remote controller is thin enough to fit in your pocket. The C series can be controlled from a distant location.



Press twice a button for a number allocated to the bar, and operation is temporarily suspended.

Then, the frequency and pulse ratio can be changed.

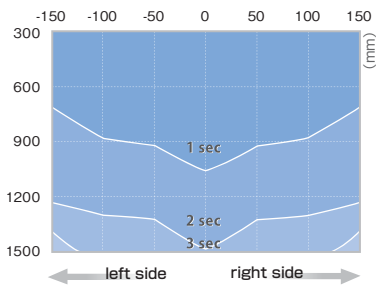
Frequency setting buttons Pulse ratio setting buttons

Static Erasing Performance (actual measured values with a sample)

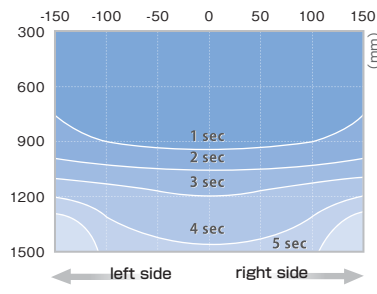
Measurement conditions

·Product:C-150 ·Voltage : 10.5kV (P-06 N-06) ·Air pressure : 0.3MPa ·Temperature : 24°C±1°C ·Humidity : 40%±2%RH ·Decay time : ±1000V→±100V ·CPM : 20pF±2pF (150x150mm)

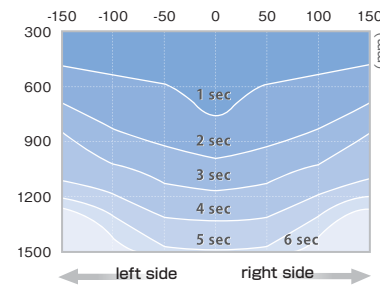
●Frequency : 0.1Hz



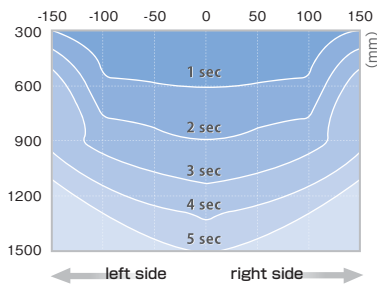
●Frequency : 0.3Hz



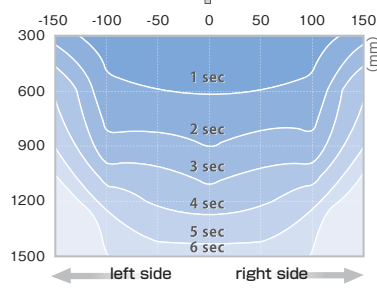
●Frequency : 1Hz



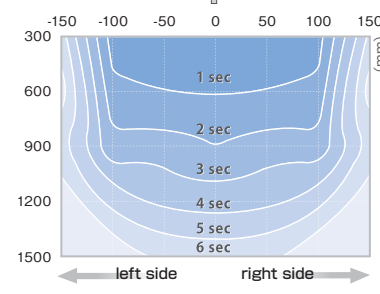
●Frequency : 3Hz



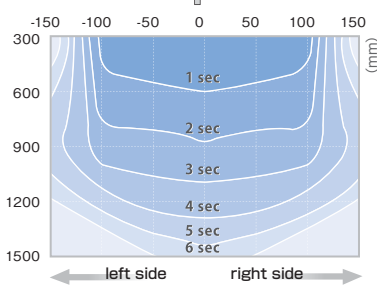
●Frequency : 5Hz



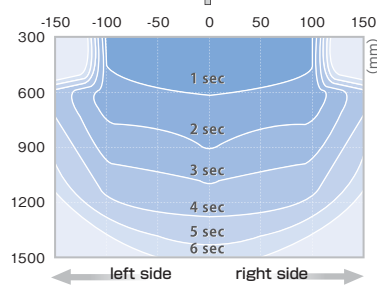
●Frequency : 8Hz



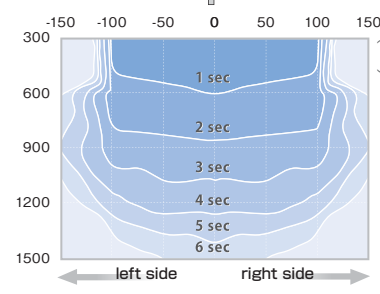
●Frequency : 10Hz



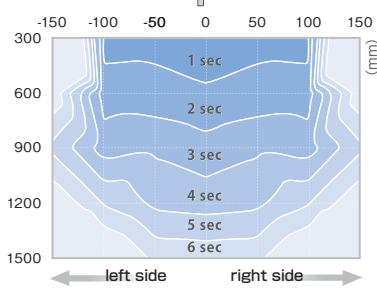
●Frequency : 20Hz



●Frequency : 30Hz



●Frequency : 50Hz



Specifications

Ionizing method	Pulse AC Corona discharge
Input power supply	24 VDC ± 5 % (connector RJ45)
Power consumption	max 14.4W
Air supply hose diameter	PT 1 / 8, Hose ø8 mm OD×ø6 mm ID
Air supply	Clean dry air or nitrogen (N ₂) (0.3 MPa or less)
Setting functions	
Applied voltage	:Max. 12.5 kVpp Each polarity can be set in ten steps from 4.00 to 6.25 kV
Frequency	:Select from ten steps 0.1, 0.3, 1, 3, 5, 8, 10, 20, 30, 50 Hz
Pulse ratio	:Positive ion 40 to 70 %, negative ion 60 to 30 %
Auto balance	:Effective when Auto Balance mode is enabled (Distance 50 to 100 mm)
Needle cleaning timer	:Effective when needle cleaning timer is enabled (One day unit from 1 to 60 days)

Replacement parts Electrode Needle Unit

Kindly confirm the serial number of the model you use, before ordering the electrode needle unit, because the applicable part is different according to the model.



C-00H ※
EDP No.:80610
※For the models Serial No.130373 and before.



C-00HR ※
EDP No.:806107
※For the models Serial No. from 130374 to 131254.



C-00HR6 ※
EDP No.:806130
※For the models Serial No. 131255 and after.

Ion balance	± 30 V (Distance 1000 mm)
Alarm output	High voltage error, Needle cleaning timer (Only when set) [Connector RJ45]
Operating temperature and humidity	0 to 50 °C, 35 to 85 %RH (With no dew condensation or freezing)
Operating distance	Approx. 50 to 2000 mm
Ozone production	0.05 ppm or less
Decay time	See illustration above (These are measured values and not guaranteed values)
Material	Body: Flame-retardant ABS resin, Needle electrode: Tungsten
Accessories	Instruction Manual, Remote controller×1, Power cable (5 m)×1, End brackets×2, Middle bracket (See back side)
NEW	
Airflow (L/min)	C-90 C-100 C-120 C-150 C-170 C-200 C-220 C-250 C-270 C-300
0.1MPa	35 40 45 55 65 80 90 100 105 110
0.2MPa	70 75 80 90 100 110 125 135 140 150
0.3MPa	90 95 100 120 135 150 165 180 190 200

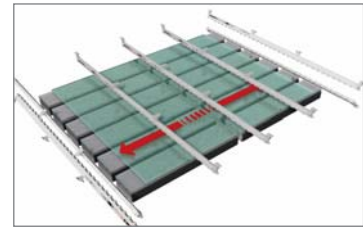
Applications



Clean room ceiling



Automobile component painting line



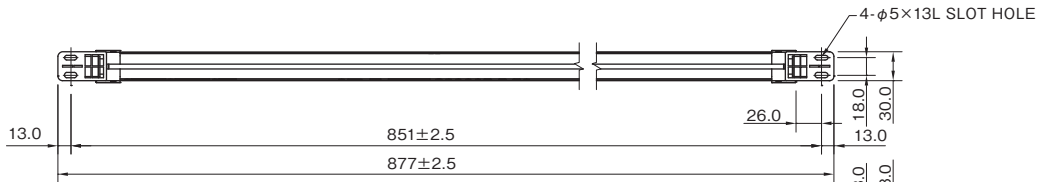
Glass substrate transfer

Ceiling in a clean room

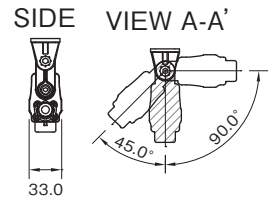
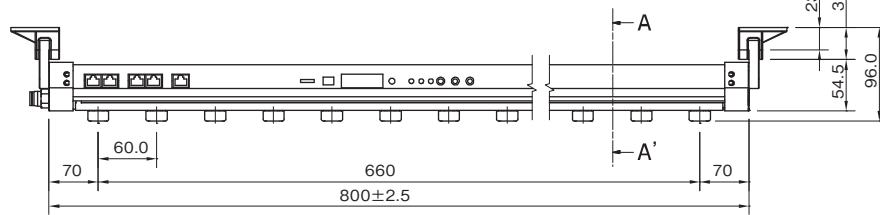
(mm)

C-90

TOP

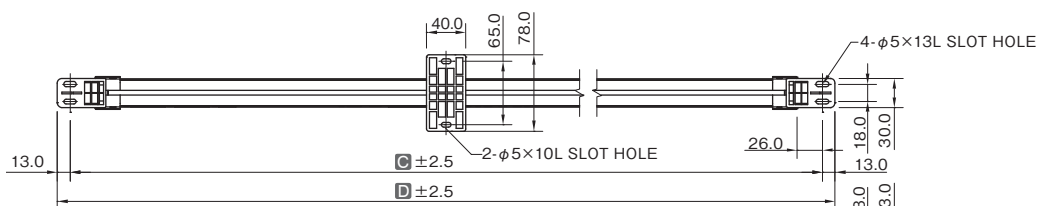


FRONT

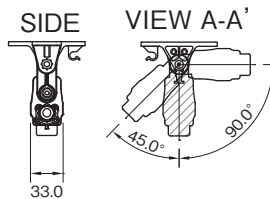
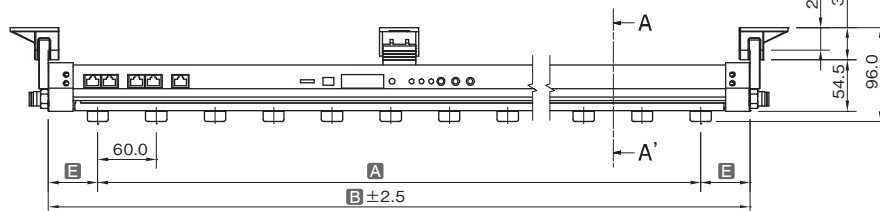


C-100, 120, 150, 170, 200, 220, 250, 270, 300

TOP



FRONT

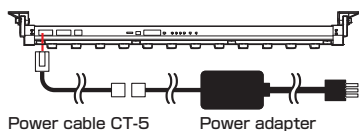


C-90	EDP No:621851	Electrode needles:12pcs / Middle bracket:- / Weight:0.9kg
C-100	EDP No:621852	Electrode needles:16pcs / Middle bracket:1pc / Weight:1.0kg
C-120	EDP No:621853	Electrode needles:20pcs / Middle bracket:1pc / Weight:1.2kg
C-150	EDP No:621854	Electrode needles:24pcs / Middle bracket:1pc / Weight:1.4kg
C-170	EDP No:621855	Electrode needles:28pcs / Middle bracket:2pc / Weight:1.6kg
C-200	EDP No:621856	Electrode needles:32pcs / Middle bracket:2pc / Weight:1.8kg
NEW C-220	EDP No:621859	Electrode needles:36pcs / Middle bracket:2pc / Weight:2.3kg
NEW C-250	EDP No:621860	Electrode needles:40pcs / Middle bracket:3pc / Weight:2.6kg
NEW C-270	EDP No:621861	Electrode needles:44pcs / Middle bracket:3pc / Weight:2.8kg
NEW C-300	EDP No:621862	Electrode needles:48pcs / Middle bracket:3pc / Weight:3.1kg

Size (mm)

Model No.	C-100	C-120	C-150	C-170	C-200	C-220	C-250	C-270	C-300
A	900	1140	1380	1620	1860	2100	2340	2580	2820
B	1001	1241	1481	1721	1961	2201	2441	2681	2921
C	1052	1292	1532	1772	2012	2252	2492	2732	2972
D	1078	1318	1558	1798	2038	2278	2518	2758	2998
E	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5

Example of power connection



Options

- Operation: 1 bar
- Operation: 2 bars
- Operation: 3 bars

AD24-IT-EX	:Power adapter (I/P:AC100V-240V O/P:DC24V 0.75A)	EDP No:806050
AD24-ITCF-EX	:Power adapter (I/P:AC100V-240V O/P:DC24V 1.5A)	EDP No:806074
AD24-IT19-EX	:Power adapter (I/P:AC100V-240V O/P:DC24V 1.9A)	EDP No:806080
CT-5	:Power cable (5m)	



- For safety purposes, read the instruction manual carefully before using the unit.
- Do not use this product in an explosion-proof area.
- A high voltage is applied on this product. Make sure that water, oil, solvents, etc., do not come in contact.
- Avoid dew condensation as it can result in electric shock or product damage.
- Keep away metal objects such as tools or needles, or body parts such as fingers, hands or face from the needle electrode because a high voltage is applied on the needle electrode.

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