

**EXAIR-Ionizer™**  
**AIR KNIFE IONIZER**  
**IMS #104450, 104447, 104446,**  
**104445, 104455**  
**(SAN1-7206, SAN1-7212, SAN1-7218, SAN1-7224, SAN1-7230)**



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REVISIONS				
ECN#	REV	DESCRIPTION	DATE	APPROVED
	01	Reformat, review for safety wording, update part numbers	2/03	PSH, GDH



# SAFETY SUMMARY

This manual uses the following signal words to call attention to the safety sign and to designate a degree or level of hazard seriousness.

1. **DANGER:** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations.
2. **WARNING:** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
3. **CAUTION:** indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. Also used to alert against unsafe practices or property damage only accidents.
4. **NOTE:** indicates general safe practices, machine use instructions and information, property damage only hazards, temporary hazards, precautions to avoid a hazard, results of not avoiding a hazard, or any combination of these messages.
5. **SYMBOL/PICTORIAL:** conveys a message without words.
6. **SAFETY ALERT SYMBOL:** indicates a potential personal injury hazard; an exclamation point inside a triangle.

The following are examples and type of general alerts that could apply to this machine:



## SAFETY SUMMARY (continued)

### **DANGER**

LIVE ELECTRICAL PARTS could cause DEATH or SHOCK.

LOCK OUT AND TAG OUT power before working on any electrical wiring.

Only QUALIFIED ELECTRICIANS are to do electrical work.

### **WARNING**

This unit should not be used in an EXPLOSIVE or FLAMBABLE area.

The power supply, ionizing bar and mounting surface must be WELL GROUNDED.





## PRODUCT DESCRIPTION

The IMS EXAIR-Ionizer™ consists of an EXAIR-Knife™ and an electrically operated air ionizing bar. The air ionizing bar creates a field of ionized air. The charged field, consisting of both positive and negative ions, imparts a balancing charge to any material passing near it. Though positive and negative ions tend to recombine very quickly, the air knife's high velocity air stream delivers the ion cloud to the work surface before the ions have an opportunity to recombine. Thus the EXAIR-Ionizer™ can achieve effective neutralization at distances not possible before.

The high velocity air stream from the EXAIR-Knife™ also blows loose dust and dirt from the neutralized surface.

The EXAIR-Ionizer™ quickly and safely neutralizes plastic parts, eliminating shock hazards from a non-radioactive source. The EXAIR-Ionizer™ is easy to operate and can be used from up to six feet away. Simply connect clean air and power supply and then mount close to the parts.

### **WARNING**

**Do not use in or near an EXPLOSIVE, COMBUSTIBLE, or FLAMMABLE atmosphere or environment.**



# PRODUCT SPECIFICATIONS

Power Supply	.....	110/60/1
Duplex Outlet	.....	Allows Use Of Two Bar Assemblies
Grounded Power Cord with Plug	.....	6'
Ionizing Bar with Connector Cable	.....	5'
Air Supply Inlet	.....	1/4" – 18 NPT
Construction Material		
Knife:	.....	Aluminum (Stainless Steel Available As Special Order)
Ionizing Bar Cable:	.....	Will Withstand 50kV Peak For 5 Minutes
Ionizing Bar Plastic Parts:	.....	UL Rated 94V-0
Metal Parts (emitters):	.....	Stainless Steel (Bar Channel)
	.....	Yellow Chromated Aluminum
Max. Ambient Temperature	.....	167° F. (75° C.)
Certifications	.....	Ionizing Bars Are UL Component Recognized
	.....	CSA Certified
Output	.....	5 kV <sub>rms</sub> For A Sine Wave
	.....	Or 7kV <sub>peak</sub> For Other Wave Forms
	.....	Use Power Supply Limited To 5 mA Max.
Electrical Hazard	.....	Shockless
	.....	Less Than .04 mA Per Point Short Circuited
Compressed Air Consumption at 85 psi		
6" Bar Length	.....	21 CFM
12" Bar Length	.....	42 CFM
18" Bar Length	.....	63 CFM
24" Bar Length	.....	84 CFM
30" Bar Length	.....	105 CFM
Dimensions	.....	6"w x 4"l x 3" d



## COMPRESSED AIR SUPPLY

Use of a filter/separator is recommended (see Parts List on Page ). A 10 Micon Filter Element or less should be used for consistent performance. Compressed air lines should be sized to hold pressure drops to a minimum. Either end of the air knife may be used for the air supply. For a 24" or longer air knife, it is best to supply both ends.

## AIR REGULATION

A pressure regulator on the compressed air line will allow necessary control of air flow and force. The force of an air knife is constant up to a 12" distance. To neutralize at greater distances, it may be necessary to increase the air pressure at the regulator or in rare instances add shims to the air knife to create a larger gap at the air outlet.

### IMPORTANT

**The effectiveness of the ionizer diminishes as its distance from the object increases. Air consumption will also increase if shimming becomes necessary.**



## POWER SUPPLY

The power supply should be 120/50-60Hz/1. It has a ground terminal that should be connected. Connect the braided wire and fitting from the air ionizer bar to the power supply.

### IMPORTANT

**The static eliminating air knife with ionizing bar, the machine that it is mounted to, and the power supply must all be WELL GROUNDED.**

**The air knife with ionizing bar and the power supply may be grounded by attaching both to the metal frame of the machine it is mounted to or by connecting a ground wire between the power unit and the metal support of the bar.**

The anti-static bar is neutral and can be touched without injury.

### WARNING

**Do not use in or near an EXPLOSIVE, COMBUSTIBLE, or FLAMMABLE atmosphere or environment.**

## LOCATION

This static eliminating device should be located as close to the molded part or statically charged area that you are trying to neutralize. The EXAIR-Ionizer™ is ideal for irregular shaped parts as the air is delivered throughout the molded part. This device can be mounted directly to a conveyor or as close to the parts chute as possible. If the conveyor is moving at high speed or static charge is extremely high, it may be necessary to place an ionizing bar on each side of the conveyor. Longer exposure to the air curtain will more effectively neutralize static charges.





## MOUNTING

Mount the EXAIR-Ionizer™ air knife using its flange. It can be clamped, drilled and bolted, or the existing bolts can be used. If existing bolts are used, be sure to retighten for proper performance. It can also be supported by the compressed air supply pipe that you are using.

## MAINTENANCE

The ionizing bar component of your EXAIR-Ionizer™ air knife should be cleaned periodically. The emitter points may accumulate dust and dirt thus causing reduction in performance or total failure of the unit. Clean the points with a soft brush or cloth routinely.

### **WARNING**

**Metal placed across the emitter points while the bar is energized will cause the bar to fail and possibly the power supply fusing resistor to open requiring both parts to be replaced.**

**Keep metal shavings, fines, etc. away from the emitter points or ionizing bar.**



# REPLACEMENT PARTS LIST

**DESCRIPTION.....OLD IMS#.....NEW IMS#**

## **EXAIR-Ionizer™**

6" Length .....	SAN1-7206 .....	104450
12" Length .....	SAN1-7212 .....	104447
18" Length .....	SAN1-7218 .....	104446
24" Length .....	SAN1-7224 .....	104445
30" Length .....	SAN1-7230 .....	104455

## **EXAIR-Ionizer™ Air Curtain Only**

6" Length .....	SAA3-2006 .....	104468
12" Length .....	SAA3-2021 .....	104467
18" Length .....	SAA3-2018 .....	104471
24" Length .....	SAA3-2024 .....	104470
30" Length .....	SAA3-2030 .....	104469

## **Optional Filter and Regulator**

### **Filters Used On:**

104450, 104447, 104468, 104467.....	SAXX-9001 .....	104454
10446, 104445, 104455, 104471, 104470, 104469.....	SAXX-9002 .....	104452

### **Regulators Used On:**

104450, 104447, 104468, 104467.....	SAXX-9008 .....	104451
104446, 104445, 104455, 104471, 104470, 104469.....	SAXX-9009 .....	104448

## **Electrostatic Meter**

For Better Determining The Source of Statically Charged Ions

Includes Carrying Case with Belt Loop.....SAXX-ESM5000 .....104457

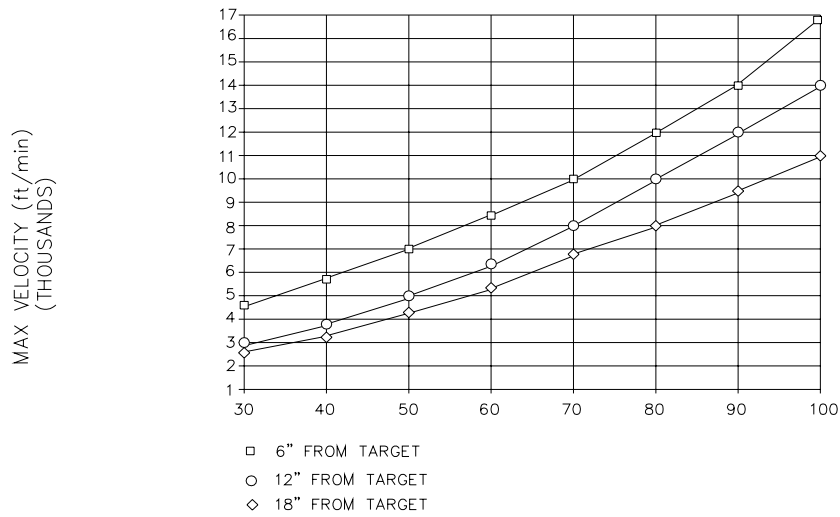
**NOTE**

**Non-Standard Lengths Up To 30" Are Available  
Through Special Order**



### EXAIR-KNIFE PERFORMANCE

#### MAX VELOCITIES vs PRESSURE



SUPPLY PRESSURE - PSIG

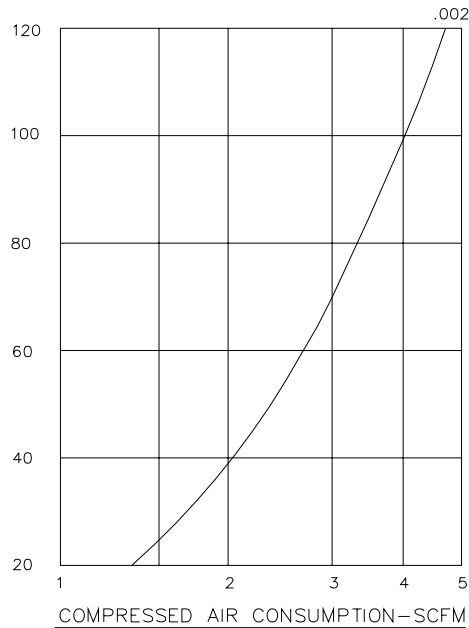


CHART ABOVE SHOWS AIR CONSUMPTION AT VARIOUS PRESSURES USING THE STANDARD .002 GAP FURNISHED WITH AIR KNIFE. TO FIND TOTAL AIR CONSUMPTION, LOCATE YOUR SHOP AIR PRESSURE AT THE CURVE ON THE CHART. AT THE BASE OF THE CHART IS THE SCFM (STANDARD CUBIC FEET PER MINUTE) PER INCH OF AIR KNIFE.  
EXAMPLE: AT 100 PSI, A 12" AIR KNIFE WILL USE 48 SCFM 12" x 4 = 48 SCFM



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# MAINTENANCE RECORDS AND NOTES