Anti-static Bars

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1 Anti-static Bars

Anti-static Bars

1.1 Overview

Anti-static bars generate an electrical field to neutralize static charge.

1.2 Benefits

SIMCO anti-static bars are also available for applications requiring long range neutralization. These anti-static bars are shockless; each point is coupled capacitively to the high voltage.

1.3 Applications

SIMCO anti-static bars generate an electrical field which causes the air molecules in the vicinity of the bar to break down into positive and negative ions. Because opposite charges attract, any charged material passing near the bar will attract ions until the charge on the material is neutralized. The materials will no longer be attracted to each other or to the machine parts. Attraction of dust, explosion or fire hazards and electrical shocks to personnel caused by static discharge are avoided. offers a very wide range of antistatic bars in shockless and non-shockless versions. The anti-static bars consist of a series of ionizing emitter points powered by a remote high voltage power unit.

2 Models

2.1 Anti-static Bars (Electric shockproof, non shockproof)

SIMCO anti-static bars generate an electrical field which causes the air molecules in the vicinity of the bar to break down into positive and negative ions. Because opposite charges attract, any charged material passing near the bar will attract ions until the charge on the material is neutralized. The materials will no longer be attracted to each other or to the machine parts. Attraction of dust, explosion or fire hazards and electrical shocks to personnel caused by static discharge are avoided. offers a very wide range of antistatic bars in shockproof and non-shockproof versions. The anti-static bars consist of a series of ionizing emitter points powered by a remote highvoltage power unit.

MEB: Ionizing Anti-static Bar

MEB anti-static bars are often used on production machines were short range ionisation is possible and where no moving machine parts are interfering the ionisation. Each individual emitter point of this rectangular anti-static bar is coupled capacitively to the high voltage. You will there fore not get an electrical shock when the point is accidentally touched. Another advantage is that the bar continues to function properly when a number of points are short-circuited, for instance due to heavy fouling.

Model	MEB
Working distance	30 mm
Housing material	anodised aluminum
Inner bar matarial	PVC
Ionisation point	special alloy
Cable	metal shielded
Weight	0,56 kg/m
Ambient temperature	0 - 55°
Use circumstances	industrial
Operating voltage	7 kV AC
Suitable power unit	A2A7S/MPM
Options	right angle cable exit
Approval	UL

MEJ: Ionizing Anti-static Bar

MEJ anti-static bars are often used on production machines were short range ionisation is possible and where no moving machine parts are interfering the ionisation.The properties of this SIMCO antistatic bar are the same as those of type MEB, except that the MEJ type is round. Therefore mounting this antistatic bar via holes in the machine frame is possible.

Model	MEJ
Working distance	30 mm
Housing material	Anodised aluminum
Inner bar matarial	PVC
Ionisation point	Special alloy
Cable	Metal shielded
Weight	0,56 kg/m
Ambient temperature	0 - 55°
Use circumstances	Industrial
Operating voltage	7 kV AC
Suitable power unit	A2A7S/MPM
Options	right angle cable exit
Approval	-

1/2" SS: Ionizing Anti-static Bar

The emitter pins of the Super Service anti-static bars are directly coupled to the high voltage so that maximum ionising current is reached. These bars can be cleaned easily and therefore they are suited for being installed in places which may be subject to heavy fouling. Touching an emitter pin will cause an unpleasant electrical shock. These bars are usually installed in such a manner that the emitter pins cannot be touched by personnel.

Model	1/2" SS
Working distance	30 mm
Housing material	Anodised aluminum
Inner bar material	PTFE
Ionisation point	Special alloy
Cable	High voltage cable
Weight	0,56 kg/m
Ambient temperature	150° with special cable
Use circumstances	Industrial
Operating voltage	4 kV AC
Suitable power unit	A2A4S/MPM
Options	Right angle cable exit
Approval	UL

MaxION: Ionizing Anti-static Bar

Each individual emitter pin of the MaxION anti-static bar is coupled capacitively to the high voltage. You will therefore not get an electrical shock when the emitter pin is accidentally touched. The rugged MaxION static neutralising bar has a reinforced profile that minimises damage due to accidental bending. The ground reference is embedded in the reinforced profile. The slide slot on the backside of the MaxION enables the user to position the mounting bolts as required, allowing greater mounting flexibility. After cleaning the precision emitter pins with a brush you can sweep the contaminants out of each light-angled end of the bar easily.

Model	MaxION
Working distance	400 mm
Housing material	Reinforced plastic
Inner bar material	-
Ionisation point	Special alloy
Cable	Metal shielded
Weight	0,6 kg/m
Ambient temperature	0 - 70°
Use circumstances	Industrial
Operating voltage	5 kV AC
Suitable power unit	A2A5S/MPM
Options	-
Approval	-

2.2 Anti-static Bars (Long range, explosion-proof)

SIMCO anti-static bars are also available for applications requiring remote neutralization and/or for being used in explosionhazardous zones. These anti-static bars are shockproof; every point is coupled capacitively to the high voltage. The antistatic bar for explosion-hazardous areas is equipped with an integral power unit, so there is no need for a high-voltage cable.

EP-Sh-N: Anti-static Bar

Each individual emitter pin of this anti-static bar is coupled capacitively to the high voltage. You will therefore not get an electrical shock when the emitter pin is accidentally touched. Another advantage is that the bar continues to function properly when a number of emitter pins are short-circuited, for instance due to heavy fouling. Under certain conditions the EP-Sh-N bar is capable of neutralizing the electrostatically charged material from a maximum distance of 150 mm.

Model	EP-Sh-N
Working distance	150 mm
Housing material	Anodised aluminum
Inner bar matarial	PVC
Ionisation point	Special alloy
Cable	Metal shielded
High voltage indication	-
Weight	0,5 kg/m
Ambient temperature	0 - 55°
Use circumstances	Industrial
Operating voltage	7 kV AC
U primary	-
Power consumption	-
Options	Right angle cable exit
Suitable power unit	A2A7S/MPM
Approval	UL
ATEX category	-
ATEX certificate	-

P-Sh-N: Anti-static Bar

This type of anti-static bar, a more powerful version of the EP-Sh-N is highly effective and, with its long range, ideal for neutralization of static electricity on materials when the distance varies. Under certain conditions the maximum distance may even be as large as 600 mm. The construction of the bar is so rigid that bending of long bars is only minimal. The optional double cable connection (type P-Sh-N2) enables this bar to be connected to a twophase (type LB) power unit, so that it will eliminate static electricity even on very fast moving webs.

Model	P-Sh-N
Working distance	600 mm
Housing material	Anodised aluminum
Inner bar matarial	PVC
Ionisation point	Special alloy
Cable	Metal shielded
High voltage indication	-
Weight	1kg/m
Ambient temperature	0 - 55°
Use circumstances	Industrial
Operating voltage	7 kV AC
U primary	-
Power consumption	-
Options	Right angle cable exit
Suitable power unit	A2A7S/MPM
Approval	UL
ATEX category	-
ATEX certificate	-

P-Sh-N-Ex: Anti-static Bar

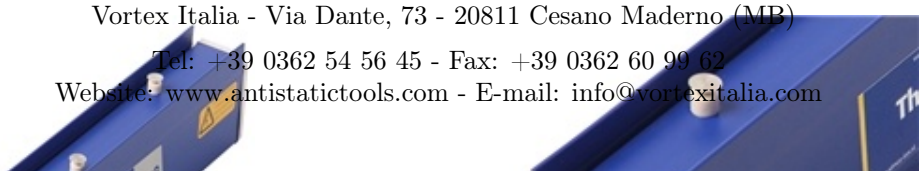
This anti-static bar has the same properties as the P-Sh-N. but is equipped with an integrated power unit, you do not need a high-voltage cable. This anti-static bar has been approved for use in certain hazardous environments. The 5m long primary cable shall be connected to the mains voltage. A neon lamp can indicate that high voltage is present. Under certain conditions the P-Sh-N-Ex bar is capable of neutralizing the materials from a maximum distance of 200 mm.

Model	P-Sh-N-Ex
Working distance	200 mm
Housing material	Aluminum / steel
Inner bar material	PVC
Ionisation point	Special alloy
Cable	5 m (Neoprene)
High voltage indication	-
Weight	Base 2 kg + 0,8 kg/m
Ambient temperature	0 - 40°
Use circumstances	Industrial
Operating voltage	-
U primary	230 V, 50 Hz
Power consumption	30 Watt
Options	Neon lamp, external
Suitable power unit	Integrated
Approval	UL, ATEX
ATEX category	II 2 GD
ATEX certificate	BAS00ATEX2162X

ThunderION: Anti-static Bar

With certain production processes its necessary to ionize at such a long distance where classical AC anti-static bars aren't sufficient enough, for example winding and rewinding of webs where the diameter of the re-windingsection changes continuously. Also with bagmaking machines type Wicketer it's necessary to ionize from a long distance as moving machine parts hinder short range ionizing. With the ThunderION a new technique is being used were long range ionisation is possible without air support, as transportmedium for the ions. The ThunderION is a revolutionary development in both design and functionality. It offers long distance static elimination even up to one meter. The robust design of the reinforced extruded profile allows the use in industrial environment up to even 4 m length. The slide slot on the backside of the ThunderION enables the user to position the mounting screws as required, allowing greater mounting fl exibility. The disc shaped emitters differ from the conventional emitters. They produce a high and balanced ion output. When accidentally damaged they can easily be replaced. The ThunderION has an integrated high voltage power supply and requires only a low voltage input of 24V DC. The new concept for long range ionisation is achieved with a combination of pulsed DC and a low frequency. These features are the main difference with classical AC ionizers. Two LED's visualise bar ON or bar FAULT. An incorporated overload detection will temporarily switch off the high voltage in the event a short circuit may occur. Optional is the Control Module, the ThunderION Control Module provides the power and the control for up to four ThunderION anti-static bars.

Model	ThunderION
Working distance	1000 mm
Housing material	reinforced plastic
Inner bar material	-
Ionisation point	special alloy
Cable	low voltage cable
High voltage indication	LED
Weight	base 0,8 kg + 1,5 kg/m
Ambient temperature	0 - 55°
Use circumstances	industrial
Operating voltage	30 kV DC
U primary	-
Power consumption	-
Options	-
Suitable power unit	integrated or Control Module
Approval	UL
ATEX category	-
ATEX certificate	-



3 Technical data

Anti-static Bars (Electric shockproof, non shockproof)

Model	Working distance	Housing material	Inner bar material	Ionisation point	Cable	Weight
MEB	30 mm	anodised aluminum	PVC	special alloy	metal shielded	0,56 kg/m
MEJ	30 mm	Anodised aluminum	PVC	Special alloy	Metal shielded	0,56 kg/m
1/2" SS	30 mm	Anodised aluminum	PTFE	Special alloy	High voltage cable	0,56 kg/m
MaxION	400 mm	Reinforced plastic	-	Special alloy	Metal shielded	0,6 kg/m

Model	Ambient temperature	Use circumstances	Operating voltage	Suitable power unit
MEB	0 - 55°	industrial	7 kV AC	A2A7S/MPM
MEJ	0 - 55°	Industrial	7 kV AC	A2A7S/MPM
1/2" SS	150° with special cable	Industrial	4 kV AC	A2A4S/MPM
MaxION	0 - 70°	Industrial	5 kV AC	A2A5S/MPM

Model	Options	Approval
MEB	right angle cable exit	UL
MEJ	right angle cable exit	-
1/2" SS	Right angle cable exit	UL
MaxION	-	-

Anti-static Bars (Long range, explosion-proof)

Model	Working distance	Housing material	Inner bar material	Ionisation point	Cable	High voltage indication	Weight
EP-Sh-N	150 mm	Anodised aluminum	PVC	Special alloy	Metal shielded	-	0,5 kg/m
P-Sh-N	600 mm	Anodised aluminum	PVC	Special alloy	Metal shielded	-	1kg/m
P-Sh-N-Ex	200 mm	Aluminum / steel	PVC	Special alloy	5 m (Neoprene)	-	Base 2 kg + 0,8 kg/m
ThunderION	1000 mm	reinforced plastic	-	special alloy	low voltage cable	LED	base 0,8 kg + 1,5 kg/m

Model	Ambient temperature	Use circumstances	Operating voltage	U primary	Power consumption	Options
EP-Sh-N	0 - 55°	Industrial	7 kV AC	-	-	Right angle cable exit
P-Sh-N	0 - 55°	Industrial	7 kV AC	-	-	Right angle cable exit
P-Sh-N-Ex	0 - 40°	Industrial	-	230 V, 50 Hz	30 Watt	Neon lamp, external
ThunderION	0 - 55°	industrial	30 kV DC	-	-	-

Model	Suitable power unit	Approval	ATEX category	ATEX certificate
EP-Sh-N	A2A7S/MPM	UL	-	-
P-Sh-N	A2A7S/MPM	UL	-	-
P-Sh-N-Ex	Integrated	UL, ATEX	II 2 GD	BAS00ATEX2162X
ThunderION	integrated or Control Module	UL	-	-