Industrial Static Eliminator Bars

Tec

This Technical Data Sheet provides complete specifications, selection criteria, and application guidance for Rowe Equipment's full line of **Industrial Static Eliminator Bars**. Our static control products neutralize damaging electrostatic charges on webs, films, sheets, and three-dimensional parts across plastics, packaging, printing, electronics, and converting industries. Products are stocked for immediate shipment in standard and custom lengths.

2" – 156"	Standard to Hazardous	Up to 36"
Available Lengths	Environment Ratings	Ionization Range

SECTION 1 · PRODUCT OVERVIEW & TECHNOLOGY

Industrial static eliminator bars (also called ionizing bars, anti-static bars, or static neutralizer bars) generate balanced fields of positive and negative ions via corona discharge to neutralize excess electrical charge on moving and stationary surfaces.

Technology Types

Technology	Ion Output Method	Max Range	Environment	Maint. Level
AC Ionizing Bars	50/60 Hz alternating ion output	Up to 7"	Standard industrial	Low
Pulsed DC Bars	Adjustable-frequency pulsed DC	Up to 36"	Standard to hazardous	Medium
24VDC Compact Bars	Built-in electronics, 24VDC input	Contact – 4"	Standard	Very Low
Passive Tinsel/Brush	Corona from static field (no power)	0" – 2"	Hazardous zones	None

SECTION 2 · PRODUCT MODELS & FULL SPECIFICATIONS

Model 400T — Ion-Edge AC Industrial Static Eliminator Bar

Medium-range AC ionizing bar with resistively coupled, stay-sharp stainless steel emitters. Designed for demanding industrial environments with moderate static charge at close-to-medium working distances.

Input Voltage	120 VAC or 230 VAC, 50/60 Hz
Ion Output	AC — alternating polarity at line frequency
Effective Range	0.5" – 7" (optimum 1" – 4")
Emitter Type	Stainless steel — resistively coupled, self-sharpening
Emitter Spacing	1" on center (standard)
Housing Material	Extruded aluminum with anodized finish
Standard Lengths	4" – 156" (any length, 1" increments)
Power Supply	Model PS-4 (included) — single bar or multi-bar
Operating Temp.	32°F – 150°F (0°C – 65°C)
Certifications	CE Marked; UL/CSA components
IP Rating	IP54 (standard); IP65 (optional with cover)

NEOS Series — Pulsed DC Long-Range Industrial Static Eliminator Bar

Extended-range pulsed DC bars with precision tungsten emitters for high-speed industrial lines requiring static elimination at distances up to 36 inches. Variable frequency control optimizes performance for specific material and speed combinations.

Input Voltage	24 VDC (via Model NPS controller)
Ion Output	Pulsed DC — adjustable frequency
Effective Range	1" – 36" (adjustable by frequency)
Emitter Type	Tungsten needle — extended service life
Emitter Spacing	1" on center (standard)
Housing Material	Extruded aluminum, anodized
Standard Lengths	4" – 120" (custom on request)
Controller	Model NPS — adjustable frequency + polarity
Max Line Speed	4,500+ FPM at optimum distance
Operating Temp.	32°F – 160°F (0°C – 71°C)
Certifications	CE; UL/CSA; ATEX (optional)
IP Rating	IP55 standard; IP66 optional

Model 3024 — 24VDC Compact Integrated Static Eliminator Bar

Self-contained ionizing bar with all electronics built in. Powered directly from 24 VDC machine control supply — no external power supply or high-voltage cable required. Ideal for tight machine-mounted installations and OEM integration.

Input Voltage	24 VDC (low-voltage input — no HV cable required)
Ion Output	Pulsed DC, internally generated
Effective Range	Contact – 4" (optimum 0.5" – 2")
Emitter Type	Tungsten needle
Housing Material	Extruded aluminum
Standard Lengths	4" – 72"
Status Indicator	LED: green = operating normally; red = fault
Fault Output	Open-collector signal for PLC integration
Operating Temp.	32°F – 140°F (0°C – 60°C)
Certifications	CE; UL listed components
IP Rating	IP54

Passive Series — Copper Tinsel & Nylon Fiber Anti-Static Bars

No-power-required static eliminators utilizing conductive tinsel or nylon fibers to dissipate static charge through the existing static field. Required for hazardous/explosive environments where powered equipment is not permitted.

Types Available	Copper tinsel bar; Nylon fiber brush bar; Combination bar
Power Required	None — completely passive operation
Effective Range	Contact – 1.5" (must be positioned close to material)
Charge Level	Low-to-moderate static charges; not for high-speed lines
Environment	All environments including ATEX/NEC Class I & II hazardous
Standard Lengths	6" – 120" (tinsel replaceable)
Housing	Stainless steel or aluminum channel
Maintenance	Replace tinsel when worn — low cost consumable

SECTION 3 · PRODUCT SELECTION GUIDE

Use the matrix below to select the correct static eliminator bar model based on your application requirements. Contact Rowe Equipment for applications not covered here.

Model	Working Distance	Charge Level	Line Speed	Environment	Best For
Model 400T (AC)	< 7"	Any	< 1,500 FPM	Standard	Best Price
NEOS DC (Pulsed)	7" – 36"	Any	> 1,500 FPM	Standard / Hazardous	Best Performance
Model 3024 (24VDC)	< 4"	Any	Any	Standard	Best Compact
Passive Tinsel	< 1.5"	Low–Moderate	Low	Hazardous Zones	No Power Zones

Sizing: Bar Length Selection

The static eliminator bar should span the **full width of the material** being processed, extending 1" – 2" beyond each edge for complete coverage. For webs wider than 120", multiple bars may be installed end-to-end. Rowe Equipment supplies bars in 1" increments from 2" to 156" — specify exact length at time of order.

SECTION 4 · INDUSTRIES SERVED & END APPLICATIONS

Plastics Processing	Film extrusion • Sheet extrusion • Thermoforming • Blow molding • Injection molding
Flexible Packaging	BOPP / CPP film winding • Lamination • Slitting & rewinding • Pouch making
Printing & Converting	Flexographic printing • Gravure printing • Digital printing • Label converting
Electronics Mfg.	PCB assembly • Component handling • Clean room processing • Wafer handling
Paper & Nonwovens	Paper converting • Tissue production • Spunbond / meltblown nonwoven lines
Automotive	Instrument panel film • Interior trim • Automotive glass film • Vinyl wrapping
Blown Film	LDPE / LLDPE / HDPE / Nylon / EVA / Barrier film production lines
Extrusion Coating	Paper extrusion coating • Foil lamination • Release liner coating

SECTION 5 · INSTALLATION, MAINTENANCE & SAFETY

Installation Guidelines

Position: Mount bar parallel to and centered over the full width of the material. Maintain the specified working distance for the model selected.

Grounding: The power supply (or bar housing for passive) must be connected to a dedicated earth ground. Use 14 AWG minimum ground wire.

HV Cable: For Model 400T and NEOS: route high-voltage cable away from control wiring and signal lines. Use supplied shielded cable only.

Air Purge: In dusty or contaminated environments, an air purge fitting (optional) should be installed to keep emitters clean.

Clearance: Maintain minimum 3" clearance from metal machine guards on all sides. Ensure bar is not obstructed by guide rolls or frame members.

Recommended Maintenance Schedule

Task	Interval	Applies To	Action
Emitter inspection	Monthly	All active bars	Check for contamination or erosion; clean with IPA wipe
Emitter replacement	Annually (or as needed)	All active bars	Replace full emitter strip — Rowe OEM parts recommended
HV cable inspection	Quarterly	400T / NEOS	Check insulation for cracks, abrasion, or corona tracking
Ground continuity	Quarterly	All models	Verify < 1 Ω resistance from bar housing to earth ground
Tinsel inspection	Monthly	Passive bars	Replace when fibers are frayed, contaminated, or missing
Power supply test	Semi-annually	All active bars	Verify output voltage per power supply test procedure

■ **SAFETY NOTICE: Active ionizing bars generate HIGH VOLTAGE (3,000 – 7,000 VAC/DC) at the emitter points. Always disconnect and lock out power before performing any maintenance, cleaning, or repositioning. Never touch emitter points during operation. Install per NEC Article 250 grounding requirements. Passive bars carry no electrical hazard.**

SECTION 6 · ORDERING INFORMATION & ACCESSORIES

Part Number Configuration

When ordering, please specify: **(1)** Model series, **(2)** Bar length in inches, **(3)** Input voltage (where applicable), **(4)** Environment rating (standard / IP65 / ATEX), and **(5)** any special mounting or connector requirements.

Part Number	Description	Length Code	Input Power	Environment
400T-XX-120	Ion-Edge AC Bar	XX = length in inches	120 VAC	Standard
400T-XX-230	Ion-Edge AC Bar	XX = length in inches	230 VAC	Standard
NEOS-XX-DC	NEOS Pulsed DC Bar	XX = length in inches	24 VDC (via NPS)	Standard
3024-XX	3024 Compact 24VDC Bar	XX = length in inches	24 VDC	Standard
TINSEL-XX-SS	SS Passive Tinsel Bar	XX = length in inches	None	All incl. hazardous
NPS-1	NEOS Controller (1 bar)	—	120/230 VAC input	—
NPS-4	NEOS Controller (4 bars)	—	120/230 VAC input	—
PS-4	Ion-Edge Power Supply	—	120/230 VAC input	—

Available Accessories

Accessory	Description
Air Purge Kit	Compressed air fitting + manifold to keep emitters clean in dusty environments
Ionized Air Nozzles	Point-source ionization for 3D parts or hard-to-reach areas
Static Meters / Fieldmeters	Handheld and continuous monitoring instruments
Replacement Emitter Strips	OEM emitter strips for all active bar models
Replacement Tinsel Roll	Replacement copper tinsel (sold per linear foot)
Mounting Brackets	Adjustable stainless steel brackets for quick positioning
HV Extension Cable	Additional shielded high-voltage cable — specify length

SECTION 7 · CONTACT ROWE EQUIPMENT

Sales & Ordering
sales@roweequipment.com (800) 648-7693

Technical Support
tech@roweequipment.com (800) 648-7693 ext. 2

Website www.roweequipment.com
Online quote & order

Specifications subject to change without notice. Custom lengths, voltages, and environmental ratings available on request. All products carry Rowe Equipment's standard warranty. *© 2025 Rowe Equipment. All rights reserved.*