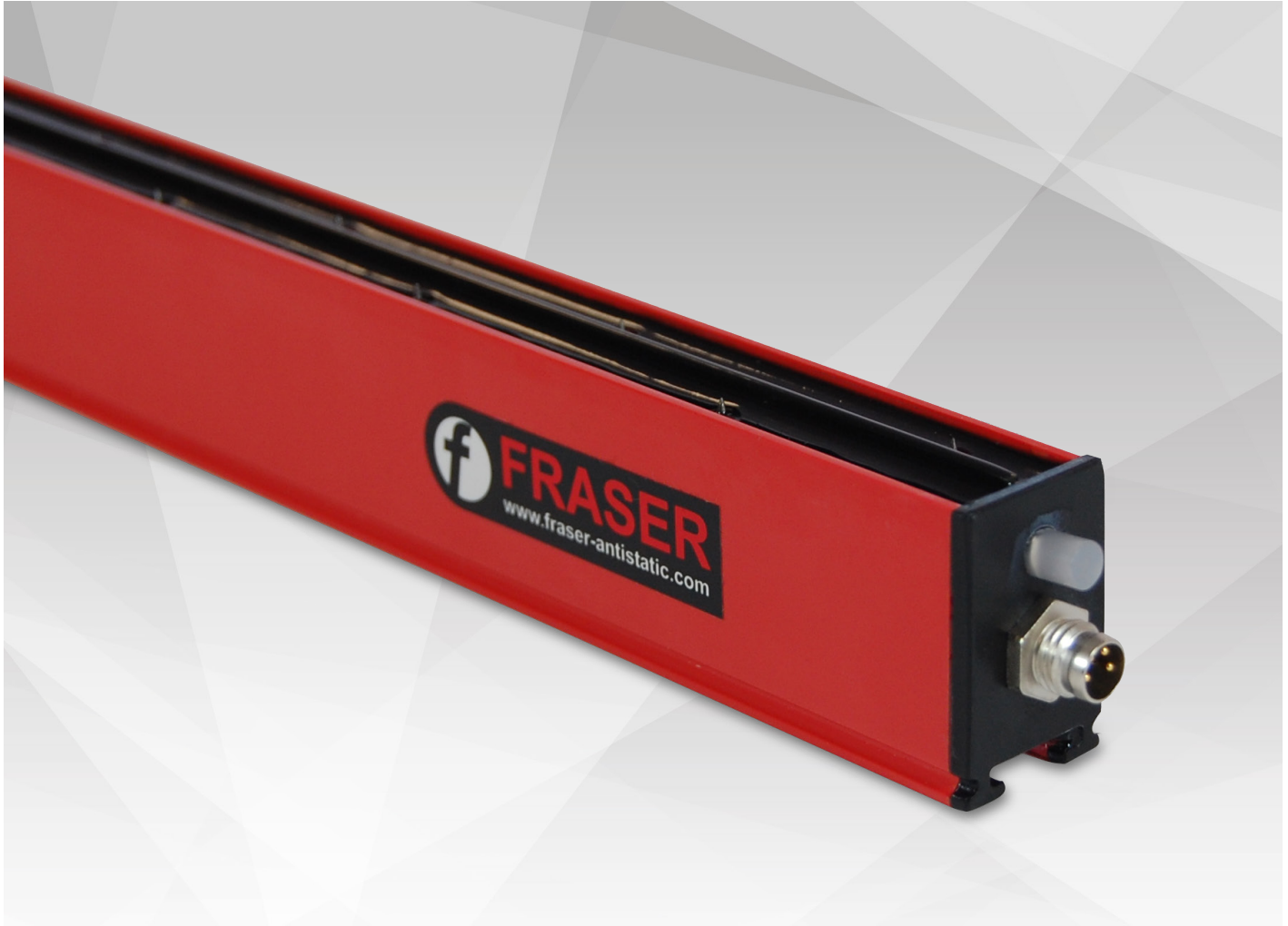


# SHORT-RANGE STATIC NEUTRALISATION



When considering short-range static neutralisation, there are two important points:

1. Short-range static elimination is easily the largest sector in the industrial static control industry - comprising over 80% of the market by volume.
2. Fraser offers the best selection of short-range anti-static Bars on the planet. As a Fraser Distributor, you have more options to offer to more customers than anyone else.

We have both AC and DC technologies available. 24V DC powered products are being adopted quickly by major OEMs due to the many advantages that they offer. End users recognise the benefits in performance that 24V DC Bars promise. This is undoubtedly the future and fast becoming the present. We also continue to offer traditional AC powered Bars for customers who are not yet ready to make the change.

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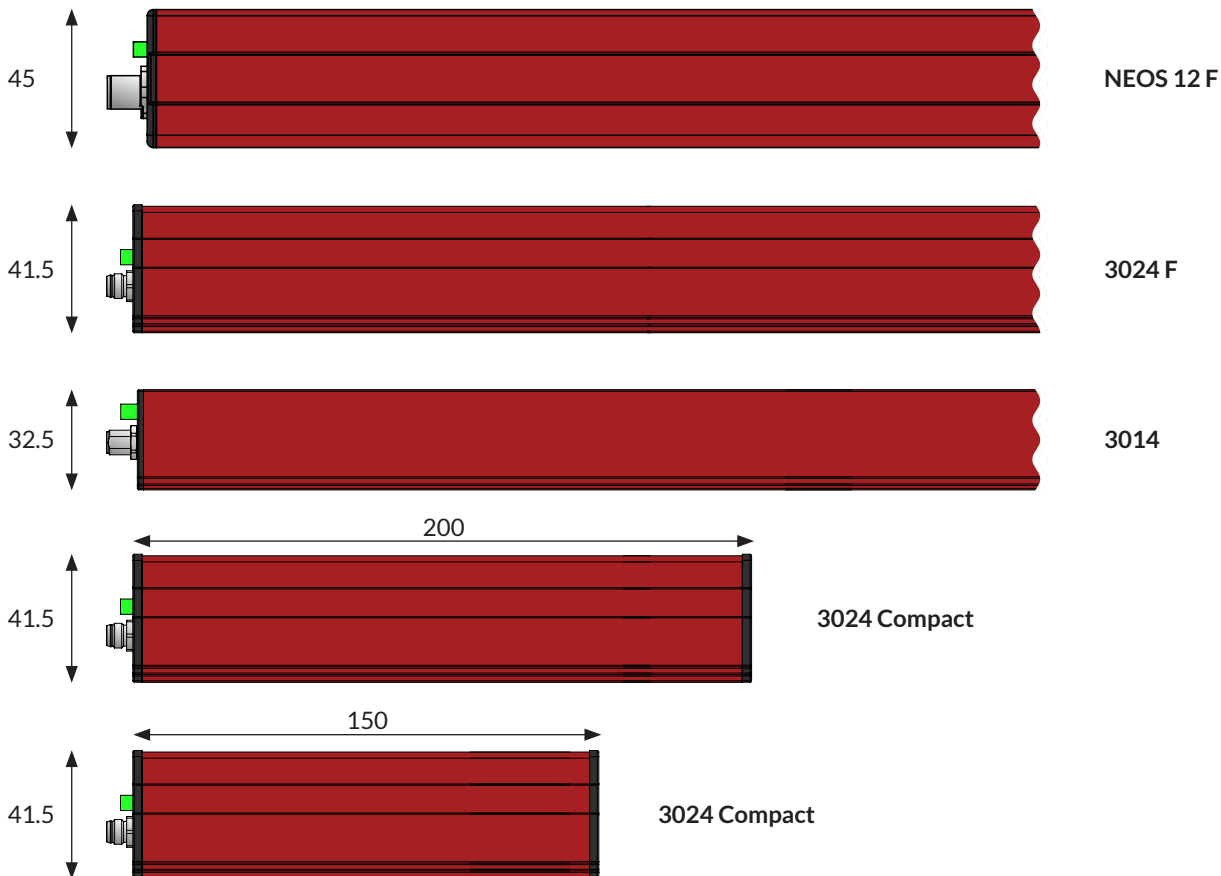


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## A summary of the range - DC Bars

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### NEOS 12 F

The most powerful short-range anti-static Bar available.

With an emitter voltage of 12kV combined with our field sensing intelligence, the NEOS 12F can deal with high charges at the fastest web speeds.

### 3024 F

The original 11kV short-range Bar.

Proven reliability from robust electronics and tungsten emitters. Even after 7 years in the market, most of our competitors are still trying to catch up.

Many customers think the 3024 is the best DC Bar available.

### 3014

The most compact 24V DC Bar with integrated electronics.

The 3014 was designed to give customers all of the benefits of DC technology at a very competitive price. It has the same cross-section as our 1250-S Bar but with higher performance, more features and a lower cost for 1 and 2 Bar installations.

### 3024 Compact

The shortest 24V DC Bar with integrated electronics.

With new 150mm and 200mm lengths, the 3024 Compact Bar allows our 24V DC technology to be used on narrower webs and in confined spaces. 3024 Compact has no direct DC competition for the many smaller applications throughout industry.

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## A summary of the range - AC Bars

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### 1250-S

Fraser's standard AC powered Bar.

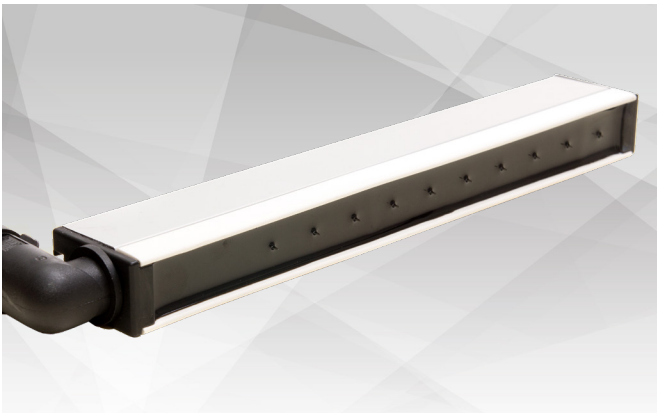
Now overtaken by our own 24V DC Bars, but still offering reliable performance, resistive technology, best HV cable. Probably the most reliable static eliminator Bar available.



### 1100-S

Our smallest AC Bars.

With a very small form factor for times when there really isn't much room.



### EX1250

The Fraser AC powered ATEX Bar.

Controlled power for safe neutralisation in Explosive Environments.

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## 24V DC Advantages – Technical and Commercial

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### Commercial Advantages

Offering 24V DC Technology allows you to differentiate your offering and make a case for better performance at a reasonable price.

When you offer an AC bar to a customer you are potentially in competition with low-cost providers with Bars manufactured in Turkey, India and China. Their products are not built to the same standards as our 1250-S bar, but they are undoubtedly cheap. This is not an easy market to operate in.

Our Fraser Shanghai office is proving to be very successful at selling 24V DC technology in a very price sensitive market. Our Chinese customers have shown, with their orders, that they recognise the additional value that 24V DC technology offers and this can be replicated in any market.

### Technical Advantages of DC Technology

#### High Performance

With emitter voltages of 7.5, 11 and 12kV across the range, all of our 24V DC Bars are more powerful than any AC Bars, and our NEOS 12F is the most powerful short-range Bar available.

#### No HT Cables

With integrated electronics and only a low-cost 24V DC supply cable, a damaged cable is easily replaced.

#### 24V DC Supply

Most modern machinery is based on 24V DC supply which removes the need to have different power supplies for different local mains voltages.

#### Compact Size with Active Length Same As Overall Length

This is a big advantage of Fraser 24V DC products. Nearly all other Bars have some sort of dead-end which means the anti-static bars must be bigger than the web/object to be neutralised. Fraser Bars do not need to be any larger than is absolutely necessary.

#### Remote and On-Bar Monitoring

In combination with the LED, the remote on-Bar monitoring allows the customer to know that a Bar is working or needs attention wherever they choose in the factory. The signal can be used to shut down a machine if static control is vital.

#### Long-life Tungsten Emitters

All Fraser 24V DC Bars have tungsten emitters. This is the best possible emitter material available for long life. It costs more than tungsten carbide and 'special alloys' that our competitors, use but we are committed to using the best materials.

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# Choosing the right Bar

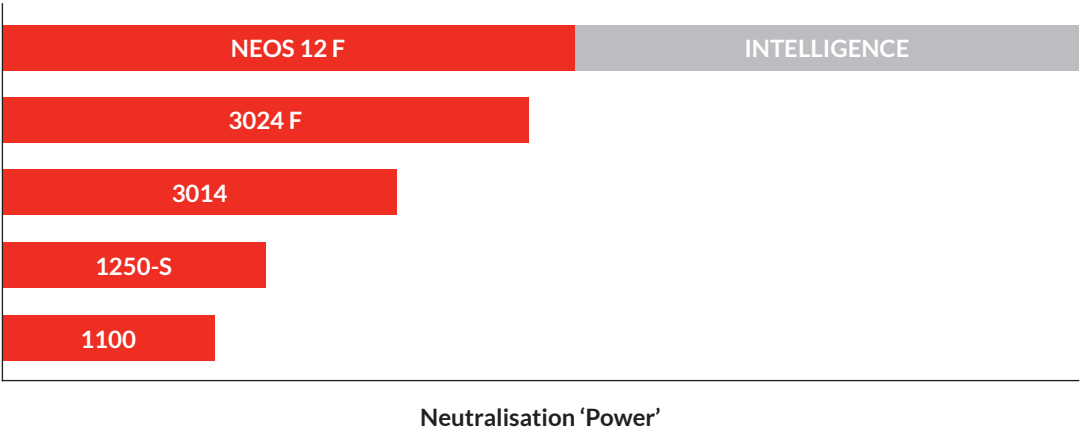
There are three factors which determine the choice of anti-static Bar. These are the Speed of the application, the Charge Level and the Distance of the Bar from the target. As each of these factors increases, you should consider using the next more powerful Bar.

A short-range Bar will always perform best when located as close as possible to the target. The Bar should not be placed closer than the minimum distance set for each Bar. At this distance it can neutralise the highest speeds and the greatest charge.

When placed at minimum distance, the NEOS 12F can neutralise high charge levels on webs with speeds of up to 1500m/min. Below that speed, the 3024F has been proven to perform up to 1000m/min, then you have the 3014 at up to 500m/min, the 1250-S at up to 300- 400m/min. We recommend the 1100 is only used in place of 1250-S when space does not allow the 1250-S to be fitted.

If you choose the example of a web moving at 800m/min then normally a 3024F would be a good choice, however if the Bar cannot be placed within 50mm, then I would recommend using the next most powerful Bar – NEOS 12F. You must also take into account the customer’s requirement or target. If they are currently using a Simco AC Bar successfully, then you will already know that any Fraser Bar will be adequate. To replace a Simco AC Bar, the 3014 is likely to be ideal.

## Relative Performance Graph:



## Applications

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Listing the possible applications for short-range bars is difficult, because there are so many. We have made a list below. In addition to these we have had some other recent successes which are worth mentioning. **Your Technical Sales Liaison will be contacting you to discuss which areas you are going to target and what plans you have for that.**

### Web-Cleaners

Although we do not make web-cleaners ourselves, we supply 6 other web-cleaner manufacturers in the UK, Denmark, Sweden, Germany, USA and Holland. All of them use our 3014 bar.

### Contact Lens Manufacturers

We supply many short-range bars to contact lens manufacturers in the UK. The contact lens manufacturing process provides many opportunities and we will provide more information on this soon.

### Laundries

Static can be a problem in laundries – especially in automatic ironing/ folding of sheets and towels after washing. We supply a number of OEMs such as Kannegiesser for their 'flatwork machines'. Recently we supplied 6 long 3014 bars to a single laundry in the UK. Due to the miss-folding of sheets they were having to re-wash a staggering 30% of their output. Every country has large laundries processing large volumes.

### Tissue Paper Converting

A Serbian OEM has purchased 20 pcs of 3014 this year. They began purchasing one or two 1250-S Bars but very quickly recognised the benefits that 24V DC technology gave them.

Most of our short range bars (3024, 3014, 3024 Compact, 1250-S) are also available in airboost or airknife versions for cleaning or extending the ionisation into restricted spaces and increasing the potential applications in which they can be used.

### General Applications

#### Plastic Film and Sheet including:

Extrusion	Printers Centre	Laminators	Bagmakers
Converting	Winders	Perforators	Signs
Tape Lines	Sheet Cutters	Embossing	

#### Plastic Mouldings including:

Blow Moulding	Thermo & Vacuum Form	Injection Moulding
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#### Packaging, Food, etc including:

Stretch Wrapping	Conveying	Ink Jet	Vertical Form Fill Seal
Closures	Wrappers	Shrink Sleeve	Tamper Evident Label Application
Plastic Bottles	Overwrappers	Cigarettes	
Canning	Checkweighers	Drying	

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## Applications

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### Paper and Printing:

Digital Printing  
Paper Mills  
Converting  
Paper Products

Tissue Paper  
Folders  
Wallpaper Presses  
Screen Printing

Pad Printing  
Flexo Presses  
Gravure Presses  
Form Presses

Label Presses  
Sheet and Web Presses

### Textile:

Carding  
Beaming  
Warping  
Sizing

Stenters  
Finishing  
Inspection Machines  
Transfer Printing

Non-wovens  
Technical Fabrics  
Creels  
Lace Machines

Narrow Fabrics

### General Industry:

Conveyors

Pneumatic

Transport and Handling

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