# echna AIR WIPES

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# Air Wipes



## Effective Drying Durable Alumina Ceramic Wire Path Reduced Air Consumption

Effective removal of water or other cooling agents from extruded wire is essential to ensure proper processing, testing, inspection, printing and packaging downstream.

Our Air Wipes provide a robust, cost effective, low energy solution to the problem of drying materials.

### **How They Work**

Standard Air Wipes rely on high pressure and large volumes of air to affect drying. Techna's Air Wipes utilise a patented design matched to wire diameter that allows compressed air to rapidly expand to atmospheric pressure, in the process accelerating a thin layer of air around the wire to almost the speed of sound. This release of kinetic energy provides far more work than systems that rely on high air volumes to dry product.



The configuration of the alumina ceramic air chamber also acts to keep the wire centralised within the airflow and reduces the entrainment of ambient air within the system, which typically dilutes the energy available to dry the wire.

### **Cost Savings**

Producing compressed air is costly. With our patented design the amount of compressed air required is significantly less than that of an open line or adjustable Air Wipe. The cost to produce the compressed air for a controlled air flow Air Wipe is also much lower than that of operating a centrifugal blower.

### **Factors that affect Drying Efficiency**

Various parameters have an effect on drying. These include material size, line speed, the viscosity and type of liquid being removed, the product temperature, and the quality of the air being supplied.

Line speed is one of the most important aspects of drying. The amount of time available for a product to spend inside the Air Wipe affects the end result. Naturally, the higher the line speed the more difficult it will be to dry product. Some applications may require multiple units to produce a satisfactory result.

Clean, dry air is needed for maximum efficiency. It is also important to note that very contaminated or oily solutions can end up introducing and attracting other contaminants to the product surface.

### **Monoblock Design**

Designed for use primarily with bare wires the Monoblock model incorporates a replaceable cylindrical alumina ceramic insert pressed into a polymer mounting block and sealed with O-rings.

Monoblock models are available for use with wire up to 10.16mm (0.4") diameter.

Model - Monoblock	Maximum Product OD
Airwipe-150.XXX	10.16mm / 0.4"

XXX = Actual maximum product OD in inches

#### Airwipe 150



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### **Clamshell Design**

The Clamshell Design of our larger models is perfect for insulated wire or cable and opens to allow welds or extrusion bulges to pass through. Replaceable alumina ceramic inserts line the wire path and are surrounded by a tough polymer housing with a robust integral hinge mechanism. All standard fasteners, springs and hinge pins are stainless steel.

Units are supplied with their own air filter regulator including gauge and drain to enable easy set up and monitoring.

Clamshell models are available for use with materials up to 114.3mm (4.5") in diameter.

Model - Clamshell	Maximum Product OD
Airwipe-250.XXX	11.68mm / 0.46"
Airwipe-350.XXX	25.4mm / 1"
Airwipe-450.XXX	50.8mm / 2"
Airwipe-500.XXX	76.2mm / 3"
Airwipe-550.XXX	114.3mm / 4.5"

XXX = Actual maximum product OD in inches



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#### Airwipe 350





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#### Airwipe 500



### Options

Various optional extras and modifications are available to standard designs including:

- Acid resistant housing materials
- Contoured inserts for square, oval, rectangular etc. materials
- Titania ceramic or Delrin wire path inserts

- Quick disconnect brackets for fast changeover of Air Wipe sizes
- Custom designs for single manifold / multiple Air Wipes or multi-line systems



