

POWERING DOWN ON DRYING ENERGY COSTS

WITH **ULTRA DRYERS**

How have the **ULTRA Dryers** been helping customers save huge costs on drying polymers, improving product quality, and reducing machine downtime? We spoke with Moulded Packaging Solutions to find out...



BACKGROUND

Being an independent business in a sector dominated by large corporates, **Moulded Packaging Solutions (MPS)**, has built its packaging business on process efficiencies and cost savings to maintain competitiveness. This focus has never been greater with the impact shock that the current energy crisis has placed on their manufacturing plant.

With industrial power costs doubling and more, MPS are striving to negate these costs through investment. By switching to Maguire ULTRA dryers, they have proven energy savings of 58% on their PET drying costs. Their drive to reduce cost is impressive in itself but there is a pride and commitment in constantly reducing their carbon footprint which this investment satisfies.

MPS founded in 2006 by Alan Charlton and Iain McLeod, provides diverse plastic packaging solutions for Food, Pharma VMS, and Confectionary producers. Charlton and McLeod both previously worked in the plastics packaging and moulding industry, gaining over 60 years of knowledge and experience in plastic packaging manufacturing between them.

In line with MPS's continuous investment and improvement philosophy, MPS has continually invested in energy efficient drying systems for PET. Previously MPS invested in state-of-the-art Desiccant Wheel energy efficient dryers, and most recently has invested in Maguire ULTRA dryers, where the company has seen 3 major benefits for their ISBM production compared to prior drying systems:

BENEFITS

Greater Energy Savings & Efficiency

Previously MPS had invested in leading desiccant wheel dryers which when compared to the classic twin tower desiccant dryer, offered considerable energy savings. However, when drying PET with the Maguire ULTRA dryer, using the unique vacuum drying process, MPS were able to realise further savings that averaged close to 60% over the desiccant wheel systems.

Dramatically reduced drying times resulting in considerable production gains

With conventional dryers typical drying time for PET is 4 hours, but with the ULTRA dryer, which doesn't rely on desiccant dried hot air slowly releasing moisture from the material but instead uses the science of vacuum, moisture is released more rapidly, at a mere 1 hour. This reduction allows for a significant boost in productivity and machine

Reduced maintenance requirements allowing maximum production times

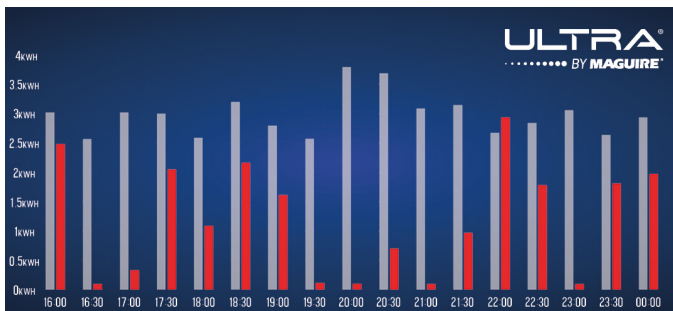
MPS has a strong focus on investment and flexibility in their production process, and a key issue to maintaining this edge in production is maximum up time, avoiding the unplanned stoppages and minimising scheduled maintenance.

With the Maguire ULTRA Dryer maintenance is significantly reduced compared to conventional dryers, due to no process filters, no chilled water requirements and no desiccant wheels or towers to monitor and replace periodically. This saves huge amounts of time and ensures a consistent and stable drying process, versus having to monitor and check dew points and downtime for cleaning of the filters and replacing desiccant.

WHAT DOES THIS MEAN?

These benefits have led to a fast return on investment and the ULTRA dryers have continued to perform really well in their process. When compared to their other dryer onsite, the ULTRA dryers performed using 58% less energy, with further energy still to be saved with the use of the energy saver limit.

As an illustration in what that means in running costs of a dryer – if for example on one ISBM machine energy usage at an average price of £0.12/kWh – with Desiccant dryers running costs over a 5-year period could amount to over £30,100 just for energy – with the ULTRA dryer costs are more around £12,600. With energy costs increasing this is only greater, meaning the ULTRA pays for itself more rapidly and is simpler for start-ups and maintenance.



In a trial performed internally by MPS, the ULTRA Dryer recorded a rate of 0.108 kWh per kg versus 0.258 kWh per kg from an alternative model. Over an 8-hour time frame, on near consecutive days, they noted noticeable variations in energy usage with the Maguire ULTRA dryer (shown in red) drastically outperforming the other model (shown in grey). Between 16:00 and 00:00, the ULTRA dryer used a total of 20.42 kWh costing a mere £1.96 versus the alternate model using over 50 kWh, costing over £5.05.



“By investing in the Maguire ULTRA’s we’ve been able to achieve very real savings in energy costs, especially in view of energy costs rocketing in the last 12 months,” said Iain McLeod. “This helps in every sense in running our independent business in keeping our costs under control”.

Iain McLeod

Manufacturing Director, Moulded Packaging Solutions Limited

“The service and guidance provided by Summit Systems and their recommendation of the Maguire ULTRA dryers has made great savings and we’re happy to report such positive energy reductions since introducing the vacuum dryer to our processes. We would highly recommend Summit Systems and the Maguire ULTRA dryer to anyone in the industry looking to invest in energy-efficient plastics drying equipment”.

Iain McLeod