

CASE STUDY RECYCLING



CompAir cleans up with Briers Recycling

Briers Recycling, based in Tamworth, is a third generation, family-run business that has been working in the recycling and waste management industry since 1939.

Thanks to a new, high-efficiency L75RS compressor from CompAir, installed in November 2011, the company is meeting 100% of its 'zero to landfill' policy; ensuring that no recyclable materials are thrown away, whilst at the same time, minimising the energy consumed by the process.

Overview

▶ Client

Briers

▶ Location

Tamworth, UK

▶ Application

Assisting auto-sorter in recycling plant

▶ Products

L75RS Refrigerated dryer and filtration

▶ Customer Benefits

Energy efficient operation with 12-18 month payback period

Application Details

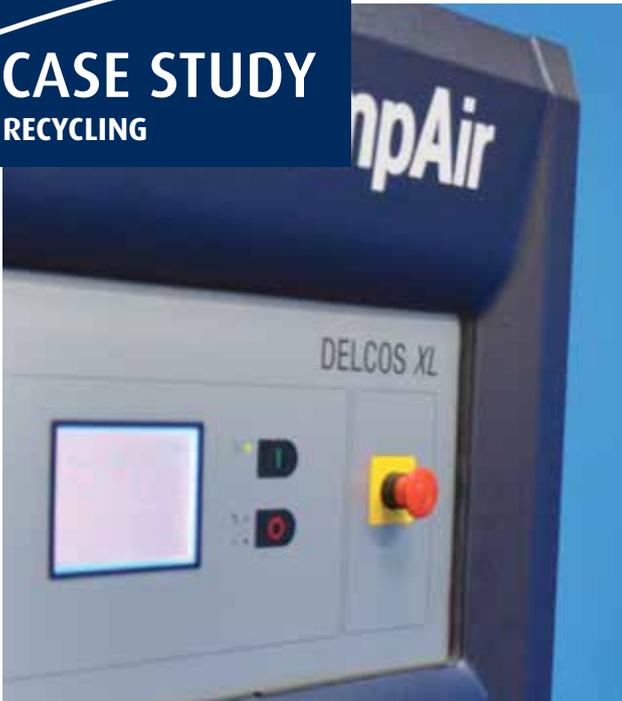
The compressor is used to provide air to the company's recently-installed Near Infrared (NIR) auto-sorter machine. 120 air nozzles are able to eject specified materials by using the latest infrared technology. The robust design of the compressor enables it to work consistently and effectively in the harsh environment of a waste and metal recycling plant.

Simon Rooke, operations manager for Briers explains, "It was a considerable capital outlay to purchase the new NIR

technology so we knew that installing a reliable and cost-effective compressor was vital to help protect our investment. "We have previously used one of the group's compressors for a less intensive application and its reliability was proven. That's why we looked to CompAir for a solution, as we already knew we could rely on the company to provide the latest and most reliable technology.

"The NIR auto-sorter analyses the waste using a spectrometer. The required material's spectrum of colours is programmed into the system and then a light is shone onto the conveyor belt. The light reflected back from the refuse is then analysed,

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Benefits at a glance

- ▶ 12-18 month payback period - fast return on investment Heat recovery system reduces natural gas consumption by 15%
- ▶ Energy efficient - helping to minimise power consumption
- ▶ Clean, dry air - avoiding equipment downtime
- ▶ Regulated speed technology - customer control of energy usage
- ▶ High reliability - robust design for challenging environment

enabling the system to identify the material type and eject it via the air nozzles. This allows us to select what kind of material we want to retrieve, and even the specific colour.”

Ensuring Energy Efficiency

To provide the correct pressure, the L75RS is run between four and six bar and is used continuously throughout the seven am till five pm production hours. As a result, the compressor’s energy consumption needed to be carefully assessed to ensure the highest efficiency over prolonged periods.

CompAir provided a regulated speed compressor, which automatically increases or decreases air supply according to site requirements. This helps to save energy by allowing the company to tailor its air usage so that the compressor only consumes the precise amount of energy required by the process. The CompAir compressor is already delivering the predicted energy savings and is expected to deliver payback within 12 to 18 months.

Managing air quality

The L75RS was installed with a water and oil separator and dryer to ensure that the airborne dust in the plant does not come into contact with excessive amounts of moisture in the air. If not monitored correctly, the dust can congeal and cause health and safety problems as well as jeopardising the performance of the machinery used within the plant.

CompAir’s Assure six-year warranty was made available with the purchase of the L75RS to give peace of mind to Briers, as production can cease entirely if the compressor fails to operate. With no redundancy available, reliability is critical, but to further ensure system integrity, CompAir also made provision for a second unit to be installed in the event of any compressor downtime during routine maintenance.

Simon comments, “We have been impressed with how well the L75RS has integrated with our new NIR machine and is ensuring that we maintain the productivity levels necessary to cope with every-increasing demand. “The compressor has already proven its robustness and suitability in a challenging environment and, together with the brand’s proven reliability we are confident that we have made a sound investment.”

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