

Spiroflow Provides Bulk Material Handling Equipment for Recycling Plastic Window Frames & Other PVC-U Products

Customer Requirements

Dekura, formerly Polypro Ltd, based in Telford, Shropshire, is the UK's leading PVC-U recycler, collecting waste from more than 1,000 window and door fabricators nationwide. They are not only able to recycle waste generated in the fabrication process but also post-consumer waste generated from old early generation PVC-U windows, doors, roof line and rainwater goods.

Waste is processed in size reduction equipment. Once broken down, powerful magnets remove ferrous metals. Further manual inspection removes other less magnetic materials and non-ferrous materials. Then, shakers help to sort material sizes for reprocessing. More refined processing removes any remaining debris, for example tiny fragments of metal or rubber, and then the materials are color sorted. This completes the process and the material is ready to be compounded into pellets or pulverized into a powder ready for use in a new generation of advanced products.

Because of the demand for their services, Dekura needed to increase the capacity of their Telford plant. The original plant at Telford uses a combination of positive pressure pneumatic and vacuum conveying systems to move material between processes.

Spiroflow Solution

Spiroflow supplied 2 Bulk Bag Dischargers, 2 Rigid Bin Dischargers, 3 Bulk Bag Fillers, a Fountain Blender and ten Flexible Screw Conveyors. As Dekura's Environment and Development Manager, Sean Heath, comments, "We are pleased with the design of the equipment and the quality of the workmanship. Our operators like the plant - it looks after itself." All of the controls for this equipment were designed and manufactured by Spiroflow so they could be integrated into the PLC systems that control the new Pulverizing and Compounding lines. One of the Bulk Bag Dischargers is furnished with massagers so that it can deal with difficult bags that have become compacted during transportation or contain non-free flowing chopped material.

When asked why they selected Flexible Screw Conveyors to move material between processes in the new plant, Heath advises, "The original plant is more expensive to run, it is fairly noisy and of course we have to have a filtration system to remove the dust from the exhaust air. I know of Flexible Screw Conveyors from a previous life; they are quiet in operation, have low running costs, do not require any filtration and have the added advantage that they continually re-mix as they convey - very important for blended materials."



Bulk Bag Dischargers on pulverizing line



Bulk Bag Dischargers on compounding line



Flexible Screw Conveyors leading from the Rigid Bin Dischargers on the compounding line