



Reducing water use in plastics manufacturing

Transpaco Flexibles
Cape Town, Western Cape

Transpaco Flexibles have reduced their water use by 85% through conversion from water-cooling to air-cooling machinery and the recycling of process water.



CaseStudy

Challenge

Transpaco Flexibles is a manufacturer, recycler and distributor of plastics products in the Western Cape. It has substantially decreased in daily water usage as part of its ongoing commitment to environmental sustainability and natural resource conservation in a resource constrained environment. Transpaco Flexibles actions have improved the organisation's operational resilience to the drought shock and possible future shock events.

Solution

Transpaco Flexibles have reduced their water usage through two plant processes. In the chiller plant, they replaced 4 evaporative cooling towers with air-cooled (dry) systems which save 10-12 kl of water per day. In the plastic recycling plant, they divert the waste water to the chiller plant for re-cooling before reuse, which saves another 60 kl per day. The company also harvests around 1kl of water per week from air compressor driers, which they reuse in the recycling plant. They have also initiated a staff water use awareness campaign.

Business benefits

Transpaco Flexibles have been able to reduce their water use from 87 kilolitres per day, to 13 kilolitres per day within a 4-month timeframe, equating to an 85% reduction in water use. The payback across all interventions was less than 1 year.

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|---------------------------------|------------------|
| Monthly water savings | 2 200 kilolitres |
| Monthly savings* | R224 220 |
| Total capital investment | R2 000 000 |

* Monthly water savings based on the City of Cape Town Level 6 water and sanitation tariffs at R57 per kilolitre (water) and R44 per kilolitre (sanitation).

Lessons learned and plans for the future

Transpaco Flexibles are committed to process optimization mechanisms to further reduce their water consumption. The company has also invested in two 5 kilolitre water collection tanks and plan to connect them to a rainwater harvesting system.

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