

Pancake Mixer

Make: **Bepex**

Industry: **Food & Beverage**

Challenge

A large food manufacturer had 10 horizontal mixers that were each processing 15,000 lbs. of pancake mix every hour. Each mixer had six CO₂ lines for cooling the hot oil that enters the mixer as well as preventing the chocolate chips from melting. The mixers were fitted with contact seals that required repair kits every six months. The contact seals were not able to handle shaft articulation from the shaft-to-bore misalignment. Over a short time, wear on the seal faces caused a gap that allowed product leakage. These failures added up quickly. Three times a day, plant personnel spent 20 minutes cleaning up the leaked pancake mix that accounted for 166 lbs. of lost product per day! Every six months, a two-person team spent eight hours replacing the seal faces at a cost of \$6,000 per seal.

Solution

Split Inpro/Seal® Food Grade Air Mizer® shaft seals were installed. The Inpro/Seal Air Mizer is a non-contacting shaft seal that utilizes a positive air purge to permanently seal against product loss. Its unique design fully articulates to handle 0.250" radial movement and infinite axial movement.

Result

Between 2014 and 2016 all ten horizontal mixers were retrofitted with Inpro/Seal Air Mizer shaft seals, saving the plant over \$180,000 per year.



Before: Leaking Contact Seal



Before: Tarp installed to help catch leaking pancake mix



After: Inpro/Seal Food Grade Air Mizer shaft seal



After: Inpro/Seal Food Grade Air Mizer shaft seal