



VORTEX QUANTUM SERIES ORIFICE GATE HANDLING POWDERS

- Customer: Systems Group
- Material: Polyethylene resin powder
Antioxidant powder
- Application: Utilize slide gates to batch weigh different materials.
- Challenge: The slide gates need to address material differences and customer requirements.
- Valve: Vortex Quantum Series Orifice Gate
Model GRA12-J-S4-MG-PET
Model GRA03-J-S4-MG-WS1



Results:

This systems group standardizes on Vortex valves, “Vortex has the ability to manufacture each valve to correctly fit the application where they will be used.”

For this application, two slide gates are required – one at the bottom of a gain-in-weight filter receiver, the other at the bottom of a loss-in-weight feeder. Each gate is handling different compounds that are batch weighed and conveyed into a mixer. The finished product is extruded plastic pipe for industrial and residential use.

The material in the gain-in-weight receiver is slightly sticky and the material in the loss-in-weight feeder is stickier. The gates need to be able to seal powder where differential pressure is involved. The customer also asked that all equipment be constructed of 304 stainless steel, as they wanted this facility to be a showplace.

To address the various degrees of stickiness, Vortex utilized PET pressure plates for both applications and added an electro-polished blade (-WS1) to the valve used in the antioxidant application. Valves were fabricated with a 304 stainless steel body (-J) and material contact (-S4).

The customer was very pleased with the low profile and sleek look of Vortex’s Quantum Orifice Gate design. Having valves that do not leak fine powder is also very important.

After six months of operation the customer commented that the system was working flawlessly, “We got exactly what we needed!”