

Application story



Bottle Filling Line for Abrasive Hand-Cleaner

Location	USA	Hydra-Cell model	G10EKBHFECA
Type of application	Bottle Filling Line for Abrasive Hand-Cleaner	Flow rate	1.419 l/min (0.36 gpm)
Liquid	Terpene Pumice Dust	Pressure	10 bar (145 psi)
Application details	A Hydra-Cell G10 pump with PTFE elastomers was the only pump investigated that could accurately meter an abrasive, aggressive hand cleaner into bottles on a precision filling line. Requirement was for a 4oz (118.3 ml) bottle to be filled in 5 seconds with repeatability accurate within 1%. The active ingredient is a terpene solvent. It has a strong oxidising action that swells most elastomers. Pumice is also included as an abrasive cleaning grit. Following failure of several other types of pump on this application, the OEM customer turned to Hydra-Cell. The system developed incorporated a G10 pump with PTFE elastomers and a programmable vector drive with full motor torque at zero rpm. The drive can index the shaft to an exact degree and a digital signal to the motor occurs 300 times/sec to start and stop the motor and pump instantly. To achieve exact volume, pump delivery rate was calibrated and programmed into the drive in terms of revolutions (or fraction of a revolution) needed for each dose. The relatively small displacement of the Hydra-Cell pump per diaphragm stroke, and its repeatable accuracy, were vital factors in the success of this application.		
Advantages of Hydra-Cell pump on this application	Controllability and fast response. Repeatable delivery accuracy. Ability to handle low flow. Choice of materials. Ability to handle aggressive, abrasive product.		

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