

Application story



Automated Chalking of Greenhouses

Location	Netherlands	Hydra-Cell model	G10XKBGHNEMA
Type of application	Fully Automated Mixing System for Chalking Greenhouses	Flow rate	15-30 l/min (4-8 gpm)
Liquid	Chalk	Pressure	50 bar (725 psi)
Application details	PromoTec, the Hydra-Cell pump distributor in Holland, collaborating with a specialist in greenhouse cleaning, has designed a fully automated mixing and delivery system for feeding a water/chalk mix to an automatic rail-mounted spray applicator unit on the greenhouse roof. Because not all crops grow well in full sunshine, greenhouses are regularly sprayed with a layer of chalk to reduce heat and light. It can be sprayed by hand, but automated chalking is booming. The chalk mix is complex and expensive, sometimes containing small particles of glass. Mixing proportions must vary according to the required layer thickness determined by the grower. The system designed and built by PromoTec is automatically adjustable in pressure and flow capacity, allowing any desired ratio of chalk mixture and water. A key element in a system which also includes pumps for water-fill, for dosing chalk, and for continuous recirculation of the mix in the reservoir, is the Hydra-Cell G10 seal-less pump that primes the chalk mixture from the tank and pumps it at high pressure through long tubes to the spray nozzles. Easily controlled, able to handle the pressures and the distances involved, the Hydra-Cell pump is compact, can run dry without damage and needs little maintenance. Long-term reliability is a feature. By contrast, the service life of alternative high-pressure pumps in this application (e.g. diaphragm and piston-plunger type pumps) is restricted by the abrasive nature of the chalk mixture, causing premature wear. For greenhouse coaters the system offers optimum spray results and minimal wastage. And the same installation can be used to clean interior walls with acid, removing green slime. The OEM customer is able to offer a massively improved greenhouse spraying process in terms of time, costs and safety.		
Advantages of Hydra-Cell pump on this application	High pressure capability. Seal-less design, able to handle abrasive particles. Dry running. Low maintenance. Reliability.		

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