

CLEANING & WASHING

Quick

STUDY

Hydra-Cell®

Seal-less Pumps

www.Hydra-Cell.com

Location:	Netherlands
Application:	Automated chalking of greenhouses
Media:	• Chalk
Model No.:	D10XKBGHNEMA
Flow Rate:	4 - 8 gpm (15-30 l/min)
Pressure:	725 psi (50 bar)
Hydra-Cell Advantages:	• High-pressure capability • Seal-less design • Able to handle abrasive particles • Can run dry without damage • Low maintenance • Reliability



Fully Automated Mixing System for Chalking Greenhouses

The Hydra-Cell pump distributor, collaborating with a specialist in greenhouse cleaning, 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.

Since 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 becoming the preferred method.

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 the Hydra-Cell distributor 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 D10 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 key 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 waste. 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.



Characteristics of Fluid Pumped:

- Contains Abrasives
- Corrosive
- Solids in Suspension
- High-temp. (>158°F/70°C)
- Non-lubricating
- High-viscosity (>500 cPs)