

MACHINE TOOL COOLANT

Quick STUDY

Hydra-Cell
Seal-less Pumps

www.Hydra-Cell.com

Location:	Hungary
Application:	Filter press pump - recycling electrolyte on spark erosion machine
Media:	• Recycled water
Model No.:	D10XKSGHFECB x 10
Flow Rate:	2.2 - 4.4 gpm (10 - 20 l/min)
Pressure:	44 - 73 psi (3-5 bar)
Hydra-Cell Advantages:	• Energy savings • Ability to pump alkaline water-based (low viscosity, non-lubricating) liquid carrying abrasive solid particles



EDM Machining - Energy Saved on Filter Presses

An automotive component manufacturer in Hungary improved efficiency and saved energy when the air-operated diaphragm (AOD) pumps originally installed on filter presses were replaced with Hydra-Cell D10 pumps. The filter presses are used in the recycling of water-based electrolytes in a spark machining process. The liquid is thin, non-lubricating and carries 0.2% abrasive solids - up to 100 microns in size.

The filter presses, previously used in Japan, had been shipped to the Hungarian plant with 1-inch AOD pumps already fitted. In their new plant these pumps “gave many problems”, but in this case it was high energy consumption that prompted engineers to find a more efficient alternative - acting under a strong Save Energy directive from Japanese management.

Following a plant visit in 2008, the Hydra-Cell distributor was able to present the manager with an energy cost calculation in which energy costs of the AOD pump was compared with that of the Hydra-Cell D10.

The difference was very clear. There are now ten D10 Hydra-Cell pumps installed at the plant.



Characteristics of Fluid Pumped:

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