

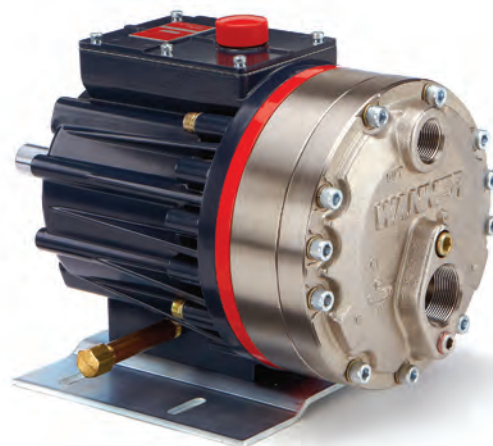
MACHINE TOOL COOLANT

Quick STUDY

Hydra-Cell
Seal-less Pumps

www.Hydra-Cell.com

Location:	Germany
Application:	Machining hard materials
Media:	• Machine tool coolant
Model No.:	H25XKCGCCECA D10XKCGCCECA
Flow Rate:	Various
Pressure:	Up to 1000 psi (69 bar)
Hydra-Cell Advantages:	• Seal-less design • Ability to handle particulates, with no need for fine filtration • High-pressure capability



Machining Hard Materials

A German manufacturer of lip drillers from very hard materials found that Hydra-Cell pumps were an ideal choice for pumping coolant at the high pressures required for successful dissipation of the high heat energy generated during machining.

The nature of the materials (Wolfram carbide stainless steel was one example) was such that the machining process formed particles of less than 10 microns - small enough to pass through the fine filters required by screw pump manufacturers as standard practice. Even with their "normal" protection screw pumps would fail.

Centrifugal type filtration could help to remove some of these particles, but some would remain in the coolant.

The seal-less design of the Hydra-Cell pump, which does not require fine filtration, avoided these problems. Various Hydra-Cell models have been successfully used in this application, including the D10 and H25.

Characteristics of Fluid Pumped:

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