

High Pressure Coolant for Large Piston Machining

Location	USA	Hydra-Cell model	G15EABTHFECA
Type of application	High Pressure Coolant for Large Piston Machining	Flow rate	57 l/min (15 gpm)
Liquid	Machine Tool Coolant	Pressure	Up to 100 bar (1500 psi)
Application details	A US plant, part of an engineering group specialising in automotive engine technology (and one of the world's largest companies), operates a plant in Wisconsin devoted to the production of large-bore pistons. Pistons with diameters up to 640mm are manufactured here. Materials used are aluminium, steel and graphite iron. To pump coolant at high pressure in the grinding process the plant was using piston pumps. Life expectation was low. On some operations they would wear out and have to be replaced after less than 30 days service. A machine technician at the plant happened to be familiar with Hydra-Cell pumps and how they perform in heavy-duty applications. He contacted the local distributor.		
	A single Hydra-Cell G15 pump running at 1750 rpm supplies coolant to 2 grinding machines via T connection. The main relief valve is set at 100 bar. Each machine circuit has its own relief and the circuits are solenoid controlled. Used coolant passes through a paper cloth gravity filter, then pumped through two bag filters before returning to the clean tank which feeds the <i>G15</i> .		
Advantages of Hydra-Cell pump on this application	Seal-less design. Ability to pump at high	pressure and handle rec	overed coolant with abrasive fines.

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