

Application story


WANNER[™]
HYDRA-CELL[®] PRO
SEAL-LESS PUMP TECHNOLOGIES



High Pressure Coolant for Automotive Component Manufacture (1)

Location India

Hydra-Cell model G04XDBTHFEYA /
G10XKCTHFEYA /
G25XKCTHFEYA /
G03XKBTHFECA

Type of application High Pressure Coolant for
Automotive Component
Manufacture (1)

Flow rate 4 - 70 l/min (1 - 18 gpm)

Liquid Cutting Oil
Machine Tool Coolant

Pressure G04 130 bar (1890 psi) / G10 60
bar (870 psi) / G03 and G25 70
bar (1000 psi)

Application details The production plants of a global manufacturer of engineering components, at various locations in India, work 24/7, 365 days/year manufacturing components for leading vehicle builders such as Honda, Tata, Toyota, Mahindra & Mahindra and Ashok Leyland.

Coolant liquids, whether neat oils or emulsions, on the more demanding operations are delivered 'through-tool' to the cutting surface at high pressure by positive displacement pumps. Originally the types most commonly incorporated in the machining centres were gear, screw, vane and piston pumps – all of which use dynamic seals.

Over a period of time, with small particles passing through protective filters, seals would wear. Pressure loss from internal leakage reduced liquid pressure, lowering cooling performance and machining efficiency and causing other problems: short tool life, ineffective chip removal, unsatisfactory surface finish. Lower pumping efficiency also increased power consumption.

As seal-less Hydra-Cell pumps were gradually introduced in place of seal-reliant pumps, this chain of cause and effect was broken. There are now some 200off (G04, G10, G25 and G03) pumps in operation across 5 plants.

Advantages of Hydra-Cell pump on this application Seal-less design. Constant pressure irrespective of variation in flow, viscosity or coolant type. Sustained reliable performance. Easy lower-cost maintenance. Power savings.

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