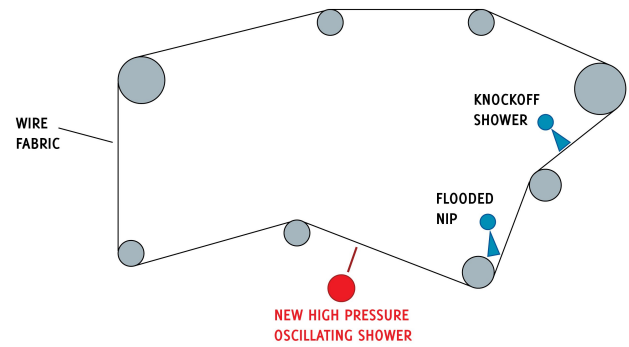


Application story



Cleaning High Pressure Paper Mill Wire/Cloth

Location	UK	Hydra-Cell model	G25XMSGHFEMB x 2
Type of application	Cleaning High Pressure Paper Mill Wire/Cloth	Flow rate	69-73 l/min (18-19 gpm)
Liquid	Water	Pressure	30 bar (435 psi)
Application details	A UK paper mill producing filter paper for tea bags reduced daily water usage by 1million litres and is saving some £25k/yr in electric pumping costs. Savings followed the addition of a high pressure oscillating shower and a Hydra-Cell G25 pump to clean wire forming fabric on each of two paper machines. As the paper sheet moves on, residual fibres are removed from the fabric to ensure proper drainage. For this task, the mill had previously relied solely on low-pressure fixed flat-fan showers fed by high flow centrifugal pumps. Cleaning impact was limited. To improve it, pump speed and flow were increased, raising pressure at the cost of higher water and energy consumption. The pumps were operating inefficiently and close to their maximum pressure. The additional showers proposed by consultants Kadant use 1mm solid-stream high-impact jets, achieving width coverage across the machine by oscillation of the header. The higher pressure required is comfortably within the operating range of the Hydra-Cell G25 pumps, chosen on grounds of previous international experience, and a record of 'good technical assistance' from Wanner. The original low-pressure flat-fan showers remain in use. Despite that, 12 months after the upgrade the mill reported that total water and energy use had been drastically reduced. A project team member explained how this was possible. "By introducing the oscillating showers we were able to reduce the pressure of water feeding the knock-off and flooded nip showers. Pressure on one machine was reduced from 12 bar to 6 bar, and on the other from 8 bar to 5 bar."		
Advantages of Hydra-Cell pump on this application	Flow rate not affected by pressure. High pumping efficiency (more than twice that of centrifugal pumps). Reliability record, including the pumping of non-lubricating liquids on continuous duty. Low maintenance.		

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