

TAKING ON A CHALLENGE. STARTING WITH A PUMP.

A COMMERCIAL
HVAC INSTALLATION

Installed and tuned to match the output of the original pump, the new Tango pump is producing the same flow, but using 40% less energy. Annual savings are estimated to be \$2200.

“It exceeds expectations. You deliver a product that’s reliable, serviceable and has low operating costs. And now, on top of that you throw in analytics. It’s great.”

Pawel Szewczuk
Director of Engineering,
Delta Hotels

Delta Hotel Generation 5 upgrade

The Design Envelope Tango pump is a pipe-mounted, 2-pump solution with integrated intelligent controls. With 2 complete rotating units sharing one casing, Tango pumps are capable of parallel-pumping or full duty/standby operation.

Located in downtown Toronto, the Delta hotel on Lower Simcoe Street, near the waterfront, is one of the largest and most luxurious in Canada. Sustainability is an important part of operations for the entire Delta organization, and the Delta is rated as one of the top sustainable hotels in Canada. But the hotel managers also maintain a careful focus on customer satisfaction and comfort and that has a direct effect on the HVAC system, as temperatures in the guest rooms and meeting spaces are maintained within a narrow band. With over 565 guest rooms, and a 6,500 Sq ft ballroom with floor-to-ceiling windows, that’s no small challenge.

But the organization is accustomed to these types of challenges. As Pawel Szewczuk explained, “Marriott has set some very aggressive sustainability goals. All our properties will be reducing our CO2 emission by 30% by 2025 with a baseline of 2016. Lots of properties have already completed retrofit projects for lighting and other low-hanging fruit. Now we’ll have to dig deeper.”

With this sustainability challenge in mind, managers at the Delta hotel were pleased when they received an offer from Armstrong to upgrade one of their existing dualArm pumps to a new Tango pump. Even though the original pump was only 3.5 years old, Armstrong was confident that with a new design, new control algorithms and new performance management features the Tango pump would be even more efficient.

Armstrong’s Pump Manager software was included, to provide Performance Management capabilities such as alarms, alerts, analytics and reporting. Managers at the Delta hotel are understandably pleased at the results. Discussions are underway for further retrofits to pumps throughout the hotel.

Table 6: Estimated Energy Saving

Base Case	Annualized kWh	56,594
	Annualized Op. Cost(\$)	\$5,659
Replacement Case	Annualized kWh	33,638
	Annualized Op. Cost(\$)	\$3,659
Annual Saving	kWh Saving	22,957
	Dollar Saving	\$2,296
Percent Saving		40%

Solutions Installed

Tango 4322, 2x2x5 with 10HP DE motors

Details of the retrofit project are as follows:

Application - Heating atrium and banquet halls, operating year round

Baseline: Dualarm 4302, 3x3x6 with two 10HP motors	Replacement: Tango 4322, 2x2x5 with two 10HP permanent magnet DE motors
Flow: 184 gpm	Flow: 184 gpm
Head: 107 ft	Head: 107 ft

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