



## Blair Weston CEM

Technical Advisor, Energy Management  
FortisBC  
on working with Trail Memorial Centre

In early 2009 the City of Trail [ Trail Memorial Arena ] approached FortisBC with a potential project. The City wanted to replace its old arena compressor with a new Mycom 150 HP (M Series) compressor. This would increase the cooling capacity [with] one compressor, allowing the rink to run more efficiently, and allow the second compressor that was frequently in use, not to run at all.



**6 cylinder M, direct drive package**

During the preliminary investigation for the retrofit, it was discovered that the curling rink was sending false signals to the ice plant causing brine to flow through the chiller even though it was not required. This was fixed by adding a backpressure valve to the chiller suction line.

After the backpressure valve was fixed, FortisBC monitored the usage of the entire ice plant panel with a PowerSight 250 data logger between February 18 and March 2, 2009. The new compressor was then installed and the ice plant was monitored a second time from March 8-16, 2010, using the same equipment.

City of Trail staff was concerned that the latter readings would show higher than normal usage due to warm weather and a large hockey tournament that week. Despite these concerns, the data still showed significant savings.

For the past two years the run time at the plant has been 240 days. The logger data was extrapolated over this time to determine the projected energy savings below:

	Days Logged	kWh	Total kWh over 240 working days
Old Ice Plant	478,971	335,806	29.90%
New Ice Plant	471,474	306,814	34.90%

Annual kWh savings = **135,491**

Annual energy savings @ \$0.06997 = **\$9,480.30**

Rebate @ 0.05 per kWh saved = **\$6,774.55**

To validate these savings, FortisBC PowerSense will install the datalogger at the same location in 2011.



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## City of Trail

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The Trail Memorial Centre which is operated by the City of Trail houses three ice surfaces of which the citizens of Trail and surrounding areas are extremely proud of. Trail is well known as a community dedicated to hockey as well as many other sports, voted recently as “BC’s #1 Sports Town.”

As the City of Trail, Parks & Recreation Foreman I was in a position to review our current engine room needs with the opportunity to upgrade one of three compressors. My focus was to find a compressor that would be energy efficient, high performance, with features such as reducing run times, compressing carbon footprint, and still providing the best in refrigeration.

Mycom has always stood out as a company that is highly innovative and who I looked forward to working with again. We were currently using older Mycom compressors and although we were happy with them it was time to update our engine room to bring it to a state-of-the-art facility.

At that time Mycom suggested the “M” series compressor which seemed to have everything we were looking for. I approached our local utility company FortisBC which offers a Power Sense program offering rebates on upgrades that reflect energy savings. Run time comparisons were done which proved a dramatic decrease in run times which resulted in a power sense rebate of close to \$6800. We also anticipate that the average yearly projected savings will be considerable. With the installation of the new “M” series compressor during this past season we were able to run solely with this compressor during non peak times whereas in the past we required two compressors running. When starting our plant this year we were able to achieve ice set points in one day using the “M” series compressor compared with previous year’s in which we required two compressors running for two days.

Overall this compressor has exceeded my expectations in performance, reducing costs, quality of ice, and a noticeable level in noise reduction. I would highly recommend this compressor to anyone looking at upgrading their facility.

I would like to thank Mathew Grady from Mycom Canada and Norman Lockerby of Norlock Refrigeration for all their help and assistance during this process.

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