

# Wood Pellet Boiler

## École Sir John Franklin High School, Yellowknife

### System Overview:

In 2008 a single BINDER 750kW Wood Pellet Boiler was installed at Sir John Franklin High School. The system was installed and is operated by the Government of the Northwest Territories (GNWT). Fueling the boiler is a mid-sized silo that contains the wood pellets.

The 750kW Boiler was manufactured by BINDER in Austria as a complete unit within a shipping Container. The whole unit was then transported and installed at location as shown in Figure 1. The pre assembled system is quickly tied into the building and operational faster than on site assembled systems.



Commercial Pellet Boiler at Sir John Franklin

The BINDER Pellet Boiler provides both space heating and hot water to the students and faculty of the school. As a backup and supplemental heat source to the Pellet Boiler the original Oil fired Boilers are still in place.

### Performance Data:

**Boiler Rated Output:** 750 kW (2560 MBH)

**Equivalent Annual Oil Amount<sup>1</sup>:** 142,900 L

**Annual Pellet Usage<sup>2</sup>:** 280 tonnes

**Potential Annual Savings<sup>2</sup>:** \$96,000

**Annual GHG Reduction<sup>1</sup>:** 380 tonnes CO<sub>2</sub><sup>eq</sup>

The Green House Gas (GHG) emission reduction is equivalent to removing 70 midsized passenger vehicles from the road.

<sup>1</sup> GNWT Estimation

<sup>2</sup> Calculation based on GNWT estimated values