

Case Study – Dexter School

Location: Brookline, MA
School: Founded in 1926
Equipment: (4) SSB1000TL w/Low Loss Header, (1) SSB1000 SA w/ four SST450-119 Storage Tanks
Completion Date: September 2021

1. Project Background

Dexter Southfield is a prestigious college-preparatory day school located on a world-class campus just five miles from downtown Boston. In May 2021, Bosch Thermotechnology was pleased to join Granite Group and Elge Plumbing in a project to replace the heating system for the main campus.

Several buildings were experiencing intermittent heating issues due to the school's existing cast iron installation. Because the boilers were running inefficiently, the school was also receiving high utility bills due to oversized capacity. Turn-down ability was also impacted. Combined, these factors rationalized the need for a new installation.

The Bosch team was asked to determine the correct heating load required for the school, as well as supply boilers that would provide efficient, reliable heating during the winter season to reduce the number of service calls.

2. Installation Summary

Based on the analysis conducted by the Bosch Engineering Applications team, it was determined that the school could half the installed capacity to fulfill the design day conditions while still meeting the N+1 criteria.

Four Bosch SSB1000TL and one SSB Low Loss Header were installed in the basement of Dexter Southfield. Additionally, one SSB1000SA with four SST450-119 indirect water heater tanks were installed to provide the domestic water solution for the school. Boilers and ancillary equipment were easily moved in to the basement through the 8 feet x 3 feet door.

The Bosch solution minimized capital spend by eliminating structural demolition, halving the labor required to install the hydronic manifolds and minimizing the cost of the boiler package. As a result the school saved time, money, and the inconvenience of managing multiple vendors.

3. Conclusion

Bosch successfully provided a simple, efficient, and space-saving solution. The boilers ran through the winter season with minimal shut downs. Now, the facility manager is able to turn down the modulation down to as low as 100,000 BTU/HR during shoulder days and still be able to meet the heating demand for the building.



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