LoadMatch® System

Real world hydronic system technology for Green Building design.

will rogers elementary school

RETROFIT PROJECT, HOBBS, NM

systems made **easy**

will rogers elementary school

LoadMatch® System

Project Snapshot: Children at the Will Rogers Elementary school in Hobbs, New Mexico, situated close by the Texas border in the southeastern part of the Land of Enchantment state, are enjoying a new heating and cooling system thanks to a Taco Load-Match® hydronic system installed, at a record pace during the summer recess.

Will Rogers Elementary School Project:

Mechanical Engineering:
Alegro Engineering

Mechanical Contractor:
Honeywell

The Building:

The Will Rogers School, named for the cowboy humorist and actor, was built in the late 1930s and is considered a historical building in the city of Hobbs, a community of almost 29,000 residents. When an addition to the original building was added in the 1970s, air conditioning was installed to offset the 100° F daytime summer temperatures. Except for the addition of the chilled water system and routine maintenance over the years, the school's original HVAC system functioned until the change-out.

LoadMatch® & HSS:

For the Will Rogers project, like similar LoadMatch projects in recent years, engineers and contractors encountered the proprietary LoadMatch® system for the first time. In this case the LoadMatch® system was introduced to Alegro Engineering of El Paso, Texas, the consulting engineering firm on the project, by Taco's local sales representative firm of Massey Johnson, also of El Paso. Robert Johnson, a partner at Massey Johnson, has installed a LoadMatch® system in his new home so he knew the system and its benefits firsthand. He brought the LoadMatch® system concept and its attendant Hydronic System Solutions (HSS) software system design program to the attention of Rolando Legarreta, a project manager at Alegro Engineering.

Alegro liked the HSS system, especially its graphic interface with AutoCad, and went on to purchase a license to use it. "Once you get the hang of it," says Legarreta, "it makes total system design so much easier." Engineers like HSS because it allows them to design LoadMatch-equipped commercial systems in less time and with a higher degree of accuracy. With its system design accounting ability, HSS automatically performs engineering calculations and design tasks that engineers previously labored over manually, like head loss and static pressure calculations.

Alegro Engineering brought the LoadMatch® system design for the Will Rogers school retrofit to Israel Franco, part of the contractor team, for review. Franco and his group were skeptical at first of the Loadmatch® single pipe concept, and knew that school department officials had asked for a conventional four-pipe system for the project. Franco also knew that municipal clients tended to shy away from proprietary systems like LoadMatch®.

Though they had their reservations, Franco's team took a close look at the LoadMatch® system, reviewing it top to bottom for functionality and reliability. "We studied the concept and its applications, and we looked at some other LoadMatch® installations," says Israel Franco. "We keep an open mind regarding new technology."

The Taco LoadMatch® Solution:

Key to the final selection of the LoadMatch® system was its ability to meet design and budget requirements. The contractor was convinced that a LoadMatch® system, attached to IEC fan coils, could meet its budget and serve as a best first-cost option.

With the LoadMatch® design approved, work on the school's HVAC retrofit began just as soon as school let out for the summer. A typical retrofit of this size can take from eight to twelve months but in the case of the Will Rogers School the job had to be completed by mid August. August 15th, in fact, was the project's so called "D-Day," when the fan coils and chillers had to demo'd. Although a challenge time-wise, the installation went smoothly and was completed on time.

The cooling side of the HVAC system was commissioned first, in mid-August, just prior to the start of the new school year, and the heat side got its start-up in November. On the day of the air conditioning start-up the outside temperature was 100° with about 50 percent humidity, according to Robert Johnson, forcing the cooling equipment through a good initial workout.

You'll be more comfortable.

LoadMatch® provides better comfort than all air-systems, as well as conventional hydronic systems. LoadMatch® is a self balancing system and assures the required flow to all heating and cooling units at all times. Your heating and air conditioning system will deliver BTU's where they're needed, and when they're needed.

You'll save energy.

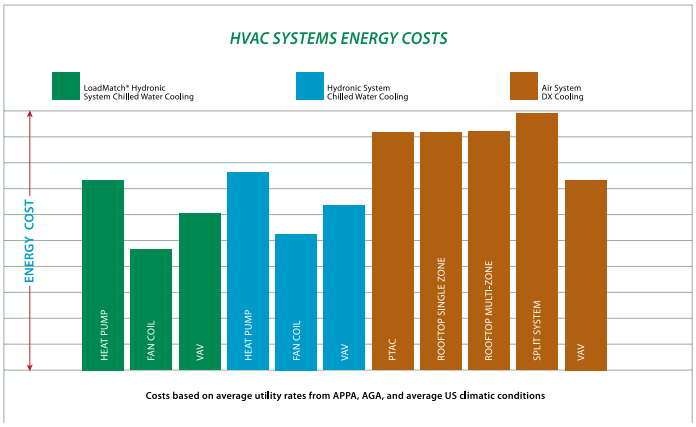
With less pipe and the elimination of control valves and most balancing valves, lower pump head and less power is required to move the water.

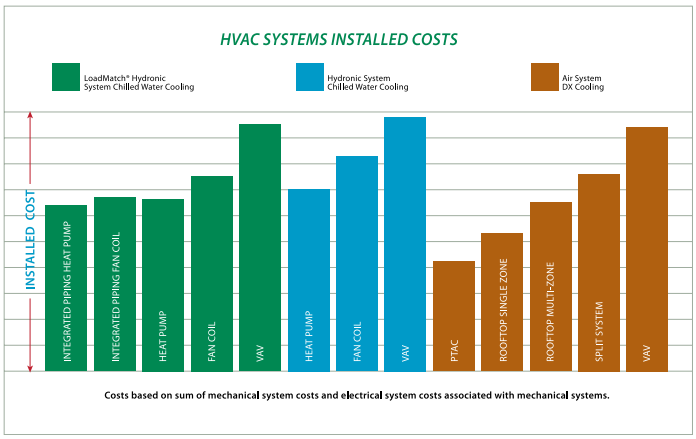
You'll save money.

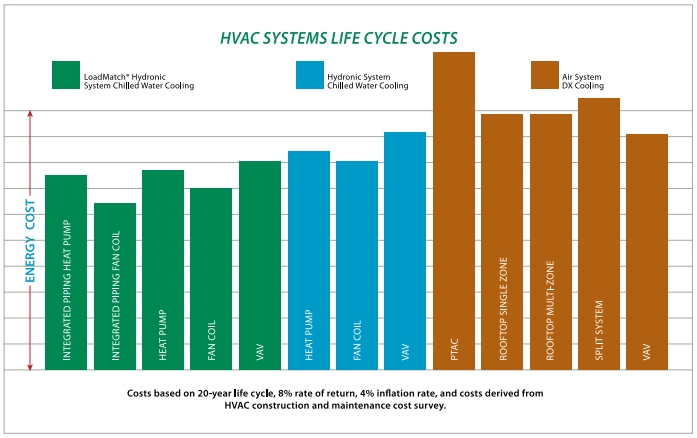
Fewer parts, about 40% less pipe and fittings, no control valves and almost no balancing valves reduce first costs. Lower pump head and operation of pumps to match the load reduce operating and maintenance costs. All this adds up to big savings on the system, typically up to 30% of life cycle costs.

Contact Us

Taco engineers are at the forefront of Green Building hydronics, designing components and systems to help you meet the challenges of environmentally sensitive – and budget conscious – design and build. Visit our web site at **taco-hvac.com** or e-mail **greenteam@taco-hvac** for more information or to talk to a Taco Green Building professional.







Taco®
systems made easy
www.taco-hvac.com

Taco, Inc., 1160 Cranston Street, Cranston, RI 02920 (401) 942-8000 / Fax (401) 942-2360
Taco (Canada) Ltd. 6180 Ordan Drive, Mississauga, Ontario L5T 2B3 (905) 564-9422 / Fax (905) 564-9436