



Bell & Gossett Pumps H.V.A.C. and Water Supply for New Mile High Stadium

In the city of Denver, Colorado, a new sports stadium is rising to replace the venerable "Mile High" Stadium, which has been host of the National Football League's Denver Broncos. Providing the water supply and H.V.A.C. needs of this huge edifice - including a heating system for the playing field - are pumps and ancillary products from ITT Industries' Bell & Gossett unit.

The new Mile High stadium happens to include 1.7 million square feet of space - approximately twice that of the old stadium - with amenities such as wider concourses, wider seats (and two more seats than the old stadium), more than 400 points-of-sale for concessions and merchandising, elevators and escalators and full accommodations for people with disabilities.

Massive Toilet Flush Test

The stadium also has more toilets. And to the relief of every woman who has ever attended an event at Mile High, the architects have doubled the number of stalls in women's restrooms.

And that brings up an interesting point...Have you ever wondered what would happen if everybody in town all flushed their toilets at the same time? Maybe not. But if you had, you would have something in common with Lou Mitchell, vice president at McNevin, an ITT Bell & Gossett pump distributor.

You see, Mitchell was involved in the design and specification of the entire water supply and H.V.A.C. pumping system that courses through the new stadium. So, if you've ever wondered what would happen when 860 toilets and 320 urinals flush all at once, you can soon ask Lou. He will be there for the big test before the stadium opens this August.

Mitchell notes that with the Bell & Gossett booster packages that were specified for the domestic water applications in the stadium, he doesn't anticipate any problems with the



Seen here is an artist rendering of the new Mile High Stadium in Denver.

test. Other uses for pumping domestic water through the stadium include supplying water to all of the luxury boxes at the top of the stadium as well as all of the concession stands and restaurants throughout the facility as well as the club level.

Because of the extremes of temperature in Denver, Bell & Gossett pumping systems were also required to move heating water and chilled water for the player's facilities, offices, restaurants, luxury boxes and the club level.

In addition to the various pumps for the domestic water, heating water and chilled water applications, Bell & Gossett also supplied valves, heat exchangers, and air separators for a total systems package.

A Return to Natural Turf

The Denver Broncos will not only be playing in a new stadium, but they will be playing on a new field of real grass as well. A hydronic turf conditioning system was installed to warm the natural grass field the team will play on.

According to Chris Bils, president of McNevin, "We've got a semi-arid climate here in Denver and it gets very cold - conditions that are not great for growing turf. In the old days, many of the cold weather stadiums had artificial turf, which caused a lot of ankle and knee injuries to players. To have natural turf here, you have to have a field heating system." Lou Mitchell added that, "The field heating is an in-ground

heating system with tubing and we are pushing the water through those tubes. The system keeps the field warm and the grass green."

The hot water for the field heat is provided by Bell & Gossett 1510 base-mounted pumps, triple duty valves, air separators, and plate and frame heat exchangers.

Specifying for Rapid Construction

Bils recalls that the process of constructing the stadium moved very rapidly. "This project was fast track", he noted. They really had the shell going before they knew what they were going to do in the internals. As fast as we could turn the computer on and get the selections out was as fast as the builders wanted the information on what pump systems we were specifying for the job. Naturally, we used Bell & Gossett's ESP program very heavily on this job, especially because of the rapid turn-around needed on revisions." Bell & Gossett's ESP, available on-line or on a CD, allows the contractor to put in all the parameters of the job and select the product. It then gives many options, including pump curves, and can generate CAD drawings. Bils noted that, "the ESP specifying program was very helpful in communication with the plumbing engineer as far as the performance of what we were supplying."

With the roar of the crowd anticipated for this Autumn's debut season - along with the roar of flushing toilets at half time - the comfort of the players, workers and fans will be assured due to the reliable domestic water and H.V.A.C. system pumping provided throughout new Mile High Stadium by Bell & Gossett.



Behind the scene, Bell & Gossett pumps, heat exchangers and control systems are found throughout the new stadium's H.V.A.C. and water supply system.