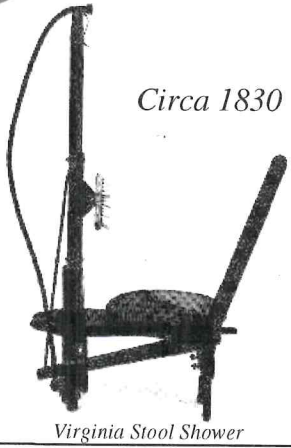




SHOWERS through time



Circa 1830

Virginia Stool Shower

The need to be clean hasn't always been as pressing as it is today. In fact, the United States is one of the few nations of the world where a daily shower is a must for most citizens. Indeed, most Americans take showers rather than a bath. A bath has become a way to relax - not something you do before work in the morning.

The desire to speed up the cleaning process isn't new. Our ancestors started the showering craze using waterfalls as a natural shower. The next variation was more traditional, but did little to improve the user's comfort level. After soaping up, a bucket of cold water was used to rinse the residue away. The process was effective, but utilitarian.

One of the earliest and most elaborate showers is the English Regency Shower, developed around 1810. The shower consisted of a basin with a drain on the bottom and a hidden tank at the top. A pump arrangement on the lower basin forced water up to the top basin through a pipe and then down over the bather's head. The only drawback was that the same water was re-circulated and used over and over.

The plumbers of the new world got into the act in the early 1800's. One of the earliest models on this side of the Atlantic was called the American Virginia Stool Shower. Developed in the 1830's, the all wood unit included a revolving seat, much like a piano stool. The machine was placed in a tub, and a hand-operated lever pumped water up to the bather's head and shoulders.

The Russian and Turkish bath houses were likely the first place most early Americans saw a shower. There were communal hot tubs, steam rooms and cold baths. The showers were used before and after a bather enjoyed all the other pleasures of the facility.

The norm for showers ultimately became the single-head shower of today. Changes in the basic shower did not materialize again until the 1980's, when multi-headed showers made their debut.

Just The FACTS M'am

- Most elephants weigh less than the tongue of the blue whale.
- Due to the rotation of the earth, an object can be thrown farther if it is thrown west.
- Caesar salad has nothing to do with any of the Caesars. It was first concocted in a bar in Tijuana, Mexico, in the 1920's.
- In the United States, a pound of potato chips costs two hundred times more than a pound of potatoes.
- Tibetans, Mongolians, and people in parts of western China put salt in their tea instead of sugar.
- Ninety percent of all species that have become extinct have been birds.
- At any given time, there are 1,800 thunderstorms in progress over the earth's atmosphere.
- One-fourth of the world's population lives on less than \$200 a year. Ninety million people survive on less than \$75 a year.
- Mosquitoes are attracted to the color blue twice as much as to any other color.
- It is impossible to sneeze and keep one's eyes open at the same time.



Understanding Air Filter Ratings

Air filter manufacturers rate their products according to standards established by the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE), which uses two different methods for describing filtration efficiency

Standard 52.2-1999: This system quantifies air filtration efficiency against particle size ranges: 3 to 10 • m (micrometers or microns), 1 to 3 • m, and 0.3 to 1 • m. Particle size efficiency is further expressed based on a Minimum Efficiency Reporting Value (MERV) between 1 and 16. A higher MERV indicates greater filter efficiency and one that is more effective against smaller particles.

Standard 52.1-1992: This system quantifies air filter efficiency in terms of mass of particles removed or 'arrestance'. The 52-1 method is also called a weight-arrestance test. Weight-arrestance tests are misleading because they tell only how well a filter will remove relatively large particles but not the smaller particles typically found in dust.

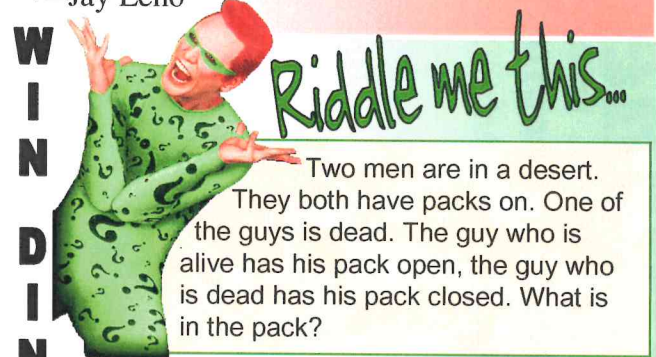
Although most old timers remember the earlier 52.1 standard where the percent efficiency ratings were used. We readily knew the difference between a 20% filter vs. a 60% efficiency. The 52.2 standard takes that a step further. A simple way to categorize the new ratings is to remember that MERV 1-4 are for minimum residential and commercial filtration. MERV 5-8 are for medium residential, commercial filtration, whereas MERV 9-12 ratings provide exceptional residential and superior commercial and industrial filtration. MERV 13 -16 are typically used in medical applications and for exceptional commercial filtration. MERV 17-20 are limited to clean rooms, operating rooms and hazardous materials filtration units.

TAX TIME HUMOR

"Today the IRS gave some guidelines on how to avoid getting audited. Number one, don't list deductions that will raise a red flag. Number two, make sure you file on time. Number three, don't make any stupid anti-war speech at the Academy Awards."

"Technically, you're not paying taxes. According to the Bush administration, your bank account is being liberated."

—Jay Leno



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Two men are in a desert. They both have packs on. One of the guys is dead. The guy who is alive has his pack open, the guy who is dead has his pack closed. What is in the pack?

e-mail or FAX your answer to our office. If more than one correct entry is received, a winner will be selected at random.

If you submit your answer by e-mail, you **must** write "Newsletter Contest" in the subject line of the message to avoid our SPAM mail filter.

No Winners... first time ever!

The answer to the word jumble from last time was **CHRISTOPHER COLUMBUS AVE**
There were no correct responses received.

The changing trends in mechanical work.

There are five major aspects that will change the way mechanical contracting is done from you in the future.

Workforce 2020

As "Baby Boomers" shuffle off to retirement, Hispanics will be the single largest population group in the prospective labor pool for the construction industry. More and more craftsmen will come from this pool.

The Evolving Value Chain

The increasing trend of reverse auctions and direct equipment purchasing by end-users takes the contractors out of the equipment specification process. True value will come from a contractor who can be a single source provider, who strives to satisfy all the customer's needs. Truly "one stop shopping".

Era of Rebuilding

During the next 10 years renovation of public buildings and infrastructures that were built during the 1960's building boom, will comprise the largest portion of the new commercial construction market.

Sensor Technology

By 2015, many new mechanical systems will be able to self-diagnose system problems, forewarn of potential failures, and, in some cases, fix the problem.

Materials Science

New innovative materials are being introduced to the construction industry every day. Current materials of today will most certainly make way for a whole new generation of building materials and techniques.

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"Only those who risk going too far can possibly find out how far one can go."
T.S. Elliott