

VTech e-news

#4

TRADE SHOW

Visit VTech at AHR Show in Chicago Booth #1030



This year's AHR Expo in Chicago (January 23-25, 2006) will be the premiere trade show event for the Refrigeration and Air Conditioning industry. VTech will display its VTech 202 PD Dual Filler Refrigerant Charging machine with Pressure Decay test built in, as well as the VTech 75 Automatic Pressure Decay Leak Test machine with Hydrogen Tracer gas sniffer Leak locator.

The charging machine will be operational, so visitors can see how the unit's PLC controlled user interface makes the machine easy to use and offers advanced process control. With a newly-designed slope top enclosure and sturdy compact design, the VTech 202 PD offers speed and reliability in one powerful package.



VTech 202 PD

The VTech 75 Leak test machine will be fully functional, demonstrating leak detection of refrigeration coils from Pressure Decay Leak Test utilizing our own special Compare feature, to charging with Hydrogen Tracer gas and determining leak locations with the sniffer probe. We will be performing live demonstrations throughout the event. We invite you to visit us at booth #1030 and look forward to seeing you in Chicago.

VTech's engineers are available to analyze your specific leak detection requirements and suggest the most suitable equipment within your budget.



VTech 75 Teesting Coils

To receive the extended version of VTech's technical paper about Leak Detection Technology, providing a detailed analysis and comparison of various leak detection techniques, please contact your nearest VTech facility.

Adapting to change: Equipment for Alternative Refrigerants

VTech is developing technical solutions to support the refrigeration industry as it moves towards increased usage of alternative refrigerants. Since the discovery of the Ozone Depletion effect of CFC gases, refrigerant substitution has been an issue. Major concerns are now emerging for HFCs as well. In fact their high GWP (Global Warming Potential) values make them subject to regulations under the Kyoto Protocol. European Governments are planning the progressive phase out of synthetic refrigerants; Norway, Austria, Denmark and Switzerland have already implemented regulations to reduce the usage of HFC's, and a proposal for a European Directive in this sense is already under discussion in the European Commission.

Reminiscent of the early stages of mechanical refrigeration, natural fluids such as CO2 and hydrocarbons are now being reconsidered. Hydrocarbons have been successfully used in domestic appliances and currently constitute at least 90% of the European market. Carbon dioxide, or R744, is being revisited as an environmentally friendly and safe refrigerant. Intense investigation for potential applications is underway in many research establishments in Europe, Japan and North America, and CO2 circuits are state-of-the-art in heat pump water heaters and in the low temperature stage of cascade systems.

To meet these needs, VTech has developed the VTech 200 HC (charging machine for flammable refrigerants). Also under development is a charging machine for CO2. Both systems are designed to incorporate multiple filling heads, so that traditional refrigerants can be used alongside the "new" ones in the transition period. Naturally, these machines are made with safety as the primary concern in compliance with all required regulations. For more details, please contact us at info@vtechonline.com



Trade Show Report → VTech at IKK trade show in Hannover



VTech participated in the IKK trade show in Hanover, Germany last November. We received enquiries from companies in more than 30 different countries. The applications for which our machines gained attention spanned from standard domestic refrigeration and air conditioning to more niche applications such as leak detection of pipes and compressor maintenance.

VTech will also be in Hall 24 at the Mostra Convegno Expocomfort in Milan from February 28th to March 4th 2006. Please contact us for more detailed information and for your free entry pass.

OUTSIDE IS BETTER

When it comes to in-line detection of leaks in refrigeration components and circuits, Helium mass-spectrometry has unique advantages over other technologies. However, it has a major drawback: a mass-spectrometer can only work under vacuum. The consequence is that units have to be tested in a vacuum chamber, with high maintenance and investment costs, and long test cycle times. Furthermore, vacuum chambers disrupt the production line and often create the bottleneck of the whole process. In fact, in case of a major leak, helium contaminates the vacuum chamber and long purging cycles and calibration procedures are necessary before the testing can further proceed. For all these reasons, underwater bubble testing of components is still employed in the refrigeration industry, and represents the only solution for large coils.

Why not, then, use the natural tendency of Helium to contaminate the environment as an advantage? Outside-In mass-spectrometry has been widely used in vacuum technology, but it has seldom been employed in the field of refrigeration. The principle is that the units to be tested are placed under vacuum in line with the spectrometer and Helium is sprayed outside and sucked in and detected through leaks. The VTech MasSpec features a special Helium containment chamber where the units are tested. Thanks to the special design, which includes sensors and helium supply circuits, and to the highly sensitive mass spectrometer, the VTech MasSpec ensures a minimum consumption of Helium, with no requirement of expensive recovery systems.

In the VTech CombiTester a U.L. Burst pressure decay test is performed prior to the evacuation, for a complete quality assessment of the units. Since the Helium containment chamber does not require vacuum, it can be easily implemented in the production line. Several companies worldwide have already taken advantage of the VTech MasSpec and VTech CombiTester. Please contact us to find out more.



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