

Welcome to the winter 2005 edition of CirculAire, VitalAire's medical gas systems newsletter.

The focus of this edition is CSA Z7396-1, a new CSA Standard set to replace the current document governing medical gas systems within Canadian healthcare facilities, namely CSA Z305.1-92 Non-Flammable Medical Gas Piping Systems.

Our industry has seen a number of technological advancements since Z305.1 was published in 1992. VitalAire and its primary business partners, Amico Corporation and Busch Vacuum Technics, played an integral role in the development of Z7396-1, bringing over 75 years of combined experience and dedication to patient safety to the process. We invite you to review the point form highlights below, and encourage your participation in CSA's public review process by visiting www.csa.ca.

Best regards,
VitalAire Canada Inc.

Paul Edwards
Product & Marketing Manager
Medical Gas Systems & Architectural Products

The following point form notes are derived from a comparative look at Z305.1-92 and Z7396-1 (public review edition). This list offers a quick look at some of the most substantive differences between these Standards. It does not provide comprehensive coverage of all changes, and all items listed below are subject to change through the CSA public review process. When CSA Z7396-1 is published, VitalAire will update and re-distribute this list as part of a national customer education initiative.

- Z7396-1 provides added clarity through an expanded list of definitions, including new definitions for *Anaesthetizing Location, Medical Gas Pipeline System, Pipeline Distribution System, Small, Non-Hospital Based Medical Gas Pipeline System*.
- Interconnects for non-patient care functions, such as laboratories, will no longer be permitted <4.2>.
- The "Single Fault" design concept familiar to most ISO Standards is introduced in Z7396-1, requiring supply systems to be engineered such that any one single fault shall not cause a service interruption. For example, loss of water supply to a liquid sealed air or vacuum pump would be considered a single fault condition, unless the water supply was backed-up with a secondary supply <5.1.1>.
- Manifolds will now require a temporary gas supply connection <5.3.1.2 & 5.4.1.3>.
- Medical air must be used exclusively for patient care. Use of medical air to drive surgical tools and/or operate pneumatic ceiling columns or pneumatic brakes within ceiling arms (booms) will not be permitted <5.6.1.3 & 11.1.1>.
- Any type of Oil-less or Oil-free air compressor technology may be used for medical air, provided the output meets all requirements set forth in the Standard (ie. restriction to use of "reciprocating type" oil-less and oil-free compressors removed) <5.6.3.1.4>.
- Where medical air USP is produced on-site, monitoring for carbon monoxide is required <5.6.3.1.6 & 5.6.3.1.9>.
- The arbitrary set point of 175° C (350° F) in CSA Z305.1-92 for medical air high temperature shutdown is replaced with the requirement to "alarm and shut down the compressor if any cylinder discharge temperature exceeds the manufacturer's recommended level" <5.6.3.3.1(c)>.

- Medical air dewpoint has been lowered to -5°C @ 50 psi, and the use of refrigerant type dryers is no longer permitted <5.6.3.7.1>.
- Subject to a capacity exclusion, medical vacuum systems shall comprise of three pumps minimum, or two pumps with the means to readily attach an additional pump during maintenance <5.7.1.1 & 5.7.1.3>.
- Receivers will no longer be a mandatory accessory for medical vacuum systems, however, one or more drainage traps will be required <5.7.3.1.1 & 5.7.4.1>.
- Each zone valve shall have a local emergency alarm <6.3.1.1>.
- All zone valves must have a service isolation valve installed immediately upstream and on the same floor <8.2.2>.
- All shut-off valves other than those used in zone valve box assemblies shall have handles which can be locked in either the open or closed position <8.2.4>.
- "Transparent" zone valve box windows will no longer be required <8.3.9>.
- A new section on Installer Qualifications and Responsibilities has been added <11.4>.
- Terminal units must be certified following installation of modification kits <11.5.3.7>.
- A new Table 6 is provided to specify all alarm requirements for mechanical supply systems.
- A new section entitled Annex B identifies in checklist format the medical gas system certification requirements complete with cross-references to related paragraphs of the Standard.

The Process

Creating a CSA Standard can be a lengthy process. CSA Z7396-1 has been under development for more than two years, with industry input coming from a Technical Sub Committee comprised of many stakeholders, including 7 members from VitalAire and its key business partners, Amico and Busch Vacuum. From this point forward, the evolution of Z7396-1 looks like this:

- ✓ CSA Z7396-1 is now issued for a 60 day public review, concluding March 14, 2005. The Standard may be viewed and downloaded at <https://review.csa.ca/opr/>
- ✓ The Technical Sub-Committee will review all public review comments. This review is tentatively scheduled for late March/early April 2005.
- ✓ Following TSC review the Standard will undergo pre-approval editing; a process that normally takes about 2 months.
- ✓ The Standard will be issued to the Technical Committee for approval. This process involves a 30 day ballot period.
- ✓ Following approval by the Technical Committee, the new Standard will undergo final editing and will be published by CSA, becoming effective 6 months following the date of publication.
- ✓ During the six month period it is expected the National Building Code and Provincial Building Code authorities will adopt the Standard, in whole or in part.
- ✓ Any project designed, tendered, or already in construction before the effective date may be certified to CSA Standard Z305.1-92.

2005 Trade Show Calendar

Look for us at these Trade Shows in 2005:

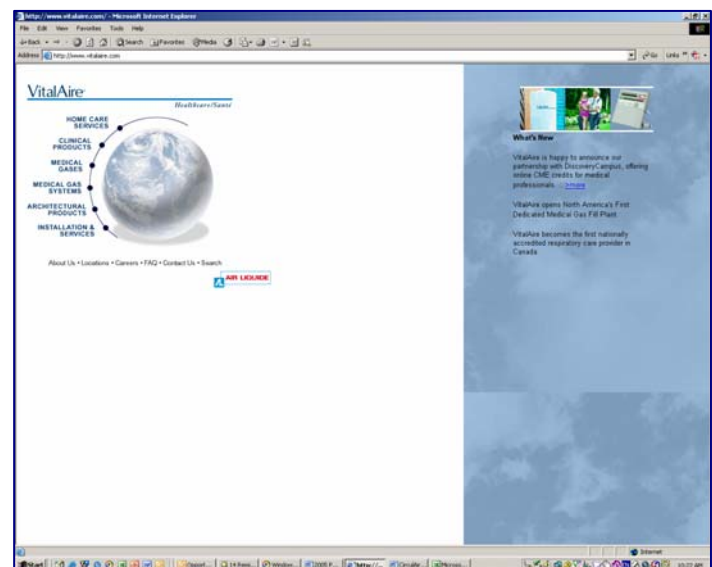
- CHES Atlantic Chapter, Charlottetown, June 1
- CHES National Meeting & Trade Show, Ottawa Congress Centre, September 11 – 13
- CACCN Dynamics, Fairmont Chateau Laurier Hotel, Ottawa, October 2 – 4
- CHES B.C. Chapter, Surrey, May 29 - 31
- Check www.vitalaire.com for additional Trade Shows attended by VitalAire's Hospital Business Unit...

www.vitalaire.com

VitalAire was Canada's first medical gas piping and headwalls firm to hit the web, and now it's time for an updated look!

Development of our new website started with the help of our valued customers and business partners. A survey of their needs is leading the way in both design and content for the update project.

Look for a fresh new look, easier navigation, and more relevant content to come on-line in February 2005!



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