

APTech

GAS CONTROL NEWS

QUALITY – RELIABILITY – SAFETY

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IN THIS ISSUE:

Source Pressure. . . .	2
Tech Brief Update. . .	2

4 Series Under Increased Pressure

The 4 series valves have stepped up into the world of high pressure. Previously all 4 series valves were limited to 250 psig (17 bar) operating pressure. The AP, AZ and AK 4600, 4625, 4650 and 4657 are now available with an HR option that increases the operating pressure rating to 3,000 psig (207 bar). The new AP, AZ and AK 4000 series valves compliment the manual valves with a NC pneumatic offering. The 4000 has the same operating pressure as the HR option. The flow capacity is slightly lower for the 4000 at 0.35 Cv compared to 0.5 Cv for the manual valves. This is no different than the 3000 compared to manual valves, Cv 0.23 to 0.29 respectfully. This leap in pressure rating comes at a nominal price. ❖

Note: The 4652 is not available with HR option

New Calculating Tool!

A flow calculator has just been added to our web site. It enables one to easily solve for Cv, flow or pressure drop for a wide variety of gases. The calculator is based upon SEMI F 32 and includes Xt which differentiates it from other such calculators available today. The calculator will help one make appropriate valve choices while seeing the impact of varying parameters. One also has a choice of pressure and temperature units. This will be an adjunct to the 208 selection guide and is *not* recommended for choosing pressure regulators as a caution note clearly states. The 208 guide and flow curves are the preferred path to proper regulator selection.

For a test drive, access the calculator with a button in the lower left corner of the home page. ❖

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Source Pressure Squeezes Upward

Gas cylinder pressures keep slowly increasing as gas suppliers squeeze in more molecules per cylinder refill. The bar in Europe is now set at 310 bar (4,500 psig). To answer this challenge, the AP, AZ and AK 1500 and AP and AK 1700 series are now available with an HR option – 4,500 psig (310 bar) source pressure rating. AP and AZ series are limited to 1/4 inch face seal and tube stubs and AK series are not available in brass. There are no other changes in specifications.

We will soon release the AP, AZ and AK 3007 NC pneumatic and 3627 ¼ turn manual valves rated to 4,500 psig (310 bar). These two valves compliment the just released 1500 and 1700 HR pressure regulators. The new valves are available with a choice of PEEK (PK) or Polyimide (VS) seat materials. The manual valve has a T style handle due to required torque at rated pressure. The data sheet will include the AP, AZ and AK 3004, 3604 and 3624 valves rated to 3,700 psig (256 bar) which have been available upon request for some time.

So if you are under high pressure, turn to AP Tech for your valve and regulator needs. ❖

A not so brief Tech Brief update

The Tech Briefs section of the web site continues to grow and evolve. The following outlines some of the latest changes:

PN 403 Supply Pressure Effect (SPE) was revised to only explain SPE without further concepts beyond the basics.

PN 426 Supply Pressure Effects Concerns was revised to outline the potential headaches related to SPE. This is the more advanced paper for those already familiar with the how and why of SPE.

PN 417 Flow Coefficient (Cv) explains SEMI's elusive concept of Xt.

PN 427 High temperature valves presents our product offering for higher temperatures than our standard for PCTFE of 160° F (71° C). Many of these options were developed for specific requests and have been available for years, though documented only in an engineering drawing.

PN 428 Gas data presents a basic table of source pressure, molecular weight and conversion factors for a variety of gases. The real goal was to list conversion factors. These multipliers enable one to easily convert from a given gas to equivalent flow in N2 and the opposite, from N2 to given gas equivalent flow.

PN 429 Trademark is a reference for our generic term equivalents to the trademarks we've used for years. All the data sheets have been revised to replace trademarks with these generic terms. The only change is in how we describe materials - no change in the products themselves nor model numbers.

PA 538 European RoHS has been revised to state quite simply, all AP Tech products comply. There are no longer any exclusions, such as formerly existed with switches.

Installation and operating instructions are constantly being updated. The instructions include other product information that does not blend well into a data sheet. If you are looking for some information, such as indicating switch wiring information, click to the Tech Briefs section for a look. ❖
