



# SAFE NEWS

## FLOW SAFE, SAFETY RELIEF VALVE NEWSLETTER

DEDICATED TO APPLICATION, EDUCATION & REP COMMUNICATION

VOL. #3  
JANUARY 2008



## MESSAGE FROM THE PRESIDENT

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76 Million so-called baby boomers will turn 60 this year and many of us are now sensing the urgency to address the graying of our work force and its effects to be expected in the business world, particularly in the next five years.

This issue was put into perspective when one ponders that, by the year 2010, 30% of the U.S. workforce will be over the age of 65 and 52% will be between the ages of 55 and 64. And yes, that leaves 18% under the age of 55.

Most businesses do not realize the magnitude of this problem, the lack of young talent or the force with which it will hit business during the next five years and probably beyond. In fact, here at Flow Safe, we have already observed a lack of engineering ability. Many young engineering professionals simply do not know the details in applying safety relief valve products. This has been the result in some cases, of corporate downsizing and/or buying/selling purchase contracts written on commercial foundation only.

Flow Safe's forward thinking objective is to be the best safety relief valve support company in the business. Flow Safe has recognized the limitations in available talent and is embarking on continuous training programs in all aspects of the organization. Training has been the focus in 2007 and will continue to be the primary focus moving towards 2008. This focus directs Flow Safe to continued technical development and team building, to be the most successful supplier of safety relief valve products, moving towards the future.

Our people are and will be our most valuable resource here at Flow Safe. Our combined technical abilities have been and will continue to lead to the future as the best performing company in the safety relief valve business.

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# REP SUCCESS STORY

The space program has many facilities throughout the United States run by NASA dedicated to testing, R & D and support for the main launch center at Kennedy Space Center in Florida. Safety Relief Valves applications at these facilities can be difficult, perfect for the Flow Safe design.

A few years ago, we were approached by NASA to provide large Pilot Operated Safety Relief Valves with special instrumentation. Physical piston movement indication was requested. This signal not only tells the system operator of initial piston crack but also what percent piston travel occurred.

Flow Safe complied with this request and sold several size 12 x 16" valves with our competition only able to quote 8 x 10" valves. NASA saved money using less valves and associated installation costs.

**Thank you and good job to:  
Ken Tabellion  
The WM Wilson Co., Inc.  
OHIO**

## A SAFETY RELIEF VALVE SALESMAN'S PRAYER FOR THE DAY



*This is the beginning of a new day.  
I have been given this day to use as I will.  
I can waste it or use it for good, but what I do today is  
important.  
Because I am exchanging a day of my life for it.  
When tomorrow comes, this day will be gone forever.  
Leaving in its place something I have traded for it.  
I want it to be gain, and not loss; good, and not evil; success, and not failure  
in order that I shall not regret the price I have paid for it.*

# SALES BRIEF

## **POSITIVE DISPLACEMENT BLOWER OVERPRESSURE PROTECTION VSA - VACUUM SWING ABSORPTION VPSA - VACUUM PRESSURE SWING ABSORPTION PSA - PRESSURE SWING ABSORPTION**

The application of positive displacement (P.D.) blower overpressure protection is a difficult one. P.D. blowers compress gas, using impellers that rotate. This gas flow contains high pulsations and vibrations at relatively low operating pressures (9-12 psig). Flow however, can be large. Manufacturers such as Dresser Roots and Sutorbilt use two rotating impellers (called lobes), while Aerezen uses a tri-lobe design. The relief valve protects the blower casing (body) from overpressure. This casing has lower maximum design pressure ratings, usually less than 15 psig. Most PSA operators run as close to maximum pressure as possible, therefore requiring a relief valve with soft seats and high performance. The requirement of operating close to set point while staying bubble tight is one reason Flow Safe is specified by blower OEM's and air separation companies.

The F70PR is bubble tight up to 98% of set point. Full main valve lift (capacity) is achieved at no more than 5% overpressure. The F100 modulating pilot opens the main valve in proportion to upset pressure and reseats close to original set point. In other words, zero blowdown. In comparison, spring loaded relief valves are inaccurate at set points around 10 psig, require 10% overpressure for full lift, and have as much as 15% blowdown. Spring valves also begin leakage at 85-90% below set point. Spring or weight loaded relief valve performance would not work on PSA blower applications.

Set point verification in the field is important due to the size and weight of blower relief valves. Flow Safe suggests specifying the "Field Test Connection" accessory to accomplish this yearly requirement, so that you do not have to take the valve from your piping. A second accessory called the "Back Flow Preventer" should also be specified, as many PSA systems have a short vacuum spike during the process cycle. The "Back Flow Preventer" keeps the valve closed under vacuum.

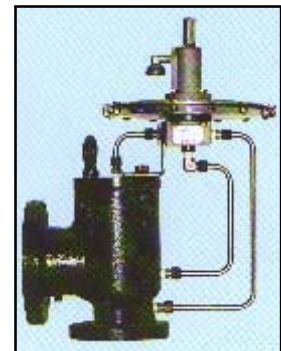
Materials of construction on our high vibration trim F70PR are C/S (WCB/LCB) body, stainless liner, and aluminum piston with slide rings for high cycle. All elastomers to include the soft seat are standard (inexpensive) o-rings. Our competition has used an all aluminum valve, (in an effort to be competitive), with large rubber diaphragms in the main valve area. The aluminum cracks and diaphragms rip in this application.

Flow Safe has applied the F70PR Series valve for Blower-PSA-VPSA-VSA and wastewater treatment for 15 years with zero problems. It is also used as an unloader valve for start-up or emergency shut down (ESD) requirements.

In conclusion, call on engineering firms involved with waste water treatment, waste water facilities, air separation OEM's, large pneumatic handling companies.

- Happy Hunting -

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## FROM THE SALES MANAGER'S DESK

With the barrel of crude oil approaching \$100.00, I can tell you that activity in the energy and related industries is booming. For the industrial salesperson, times are good. Now more than ever is when you need to spend time sitting in front of customers, selling. Do your paperwork either before 8:00 am or after 5:00 pm.

Recently, I helped my Montreal rep do a lunch and learn with a large engineering firm and afterwards, several attendees needed further questions answered relating to ongoing projects. One specific job involving large butane spheres with dual safety relief valves, had issues with yearly set point verification. By spec-ing in the F7000 with field test connection, the user avoided costly crane rental charges needed to remove conventional spring style valves. Use of FTC's on pilot ops allows set point verification in line rather than removal.

Now, go fuel up the company car this evening, delegate the paperwork, and be in your customer's lobby with shoes shined, donuts in hand, literature and order pad by 7:59 am. If you get in over your head, conference call us and we will help.

Changing water from 211 Deg F to 212 Deg. F creates steam. One Degree can drive locomotives, turbines and launch fighter aircraft. "Put in the extra degree of effort—it pays" !



## THIS ISSUE'S FEATURED PRODUCTS



Complete Stainless  
F7000 Modulation  
Pilot Op's, Air  
Separation  
Industry.



Special 3 Coat  
Epoxy Painted Pi-  
lot Op's for North  
Sea  
Platform

F84, Brass Body's,  
Oxygen Cleaning  
during  
assembly stage.



# www.flowsafe.com

**SALES**  
8:00 AM—5:00 PM EST  
(716) 662-2585 or  
(800) 828-1036

**FAX**  
24 hours a day  
(716) 662-2580

**ADDRESS**  
Flow Safe, Inc.  
S-3865 Taylor Road  
Orchard Park, NY 14127

For technical application assistance & quotes, please contact us at:

[info@flowsafe.com](mailto:info@flowsafe.com)