



# Ventil

## PreVenTest LTC

Online test system for Safety Valves

Pressure safety valves are installed on process equipment to release excess pressure due to faulty process operations, external fires and other hazards. Or simply said; the safety valve serves to protect life and property. Failure of pressure safety valves to function properly could result in the serious damage of vessels, exchangers, boilers, or other equipment. It is essential to maintain pressure safety valves and relief valves in good condition. periodic testing is one of the most important elements to ensure that the safety valves will provide this important protection.



## PREVENTEST In-Situ Testing



light weight &  
battery operated

### IN-SITU TESTING

Obviously, the most desirable type of test is one that subjects the pressure relief valve to the full operating conditions that it is to endure in practice. The PreVenTest LTC system enables the testing of spring operated safety valves on site without interrupting the process operation. With this so called 'hot testing' the safety valve stays on-line and no dismantling of the valve or plant shut-down is required.

- ✓ No plant shut-down
- ✓ No dismantling of the valve
- ✓ No loss of productivity!
- ✓ No loss of profitability!

VENTIL, INNOVATORS IN VALVE TESTING

Ventil Test Equipment B.V.  
The Netherlands

Polakweg 6  
2288 GE Rijswijk

T: + 31 (0) 70 320 93 27  
F: + 31 (0) 70 320 37 37

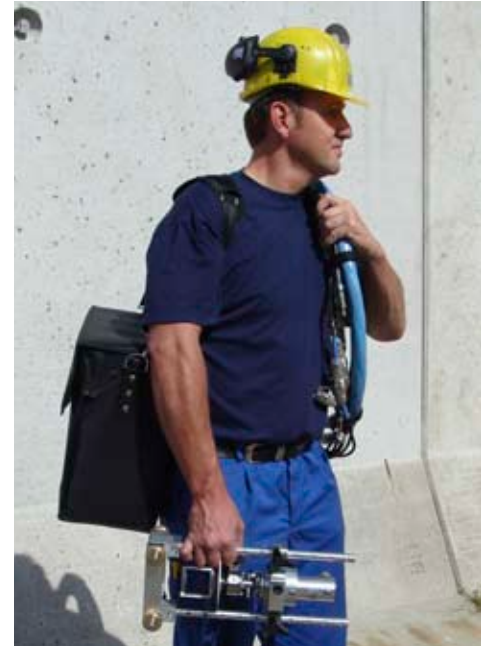
E: info@ventil.nl  
I: www.ventil.nl

#### HOW DOES IT WORK..?

The PreVenTest system is a robust, but ingeniously build test system, comprising of a universal test bracket and intelligent hardware & software. The light weight 'airplane' Aluminium test bracket is easily adapted to the valve size and is quickly positioned and connected to the valve. After you have entered or selected the valve and process circumstances, the program automatically selects and recommends the correct and most accurate configuration of the bracket and sensors.

The valve data can be manually entered new or taken from the valve management database. The individual valve records are efficiently organized by customer, plant or unit and are quickly and intuitively located by the valve tag number, manufacturer serial number or by a user-defined number. The valve management system enables the operator to enter details, comments and even include a (digital) picture of each valve.

After positioning the bracket on the gas, liquid or steam safety valve, the test bracket is safely controlled from a distance. The operator controlled hand pump is used to generate a proportional force to raise the spindle to the 'cracking' point (lift from the nozzle). The moment that the disc commences to lift, the force is quickly released and the disc reseats again. During the test a combination of accurate, calibrated sensors measure the force, lift, acoustics and (if possible) the process pressure. The easy operated Ventil PreVenTest program directly shows the found test data in a clear combination of graphics and values. The information enables the operator to accurately identify the settings of the tested safety valve.



One man operation



#### DATA REGISTRATION

From the information recorded during testing the following information can be obtained;

- Valve set pressure
- Spring adjustment
- Displacement of the valve
- Re-seat pressure\*
- The effect of the nozzle ring\*
- The effect of the guide ring\*

\* Indication only

Ventil has branch offices in:  
Virginia USA • Moscow Russia



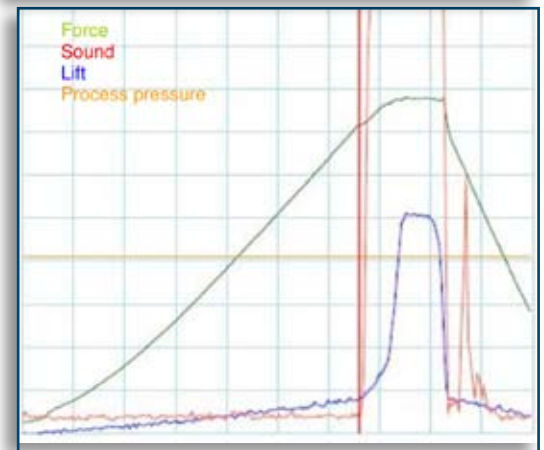
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### GRAPH ANALYSES

After the valve disc has re-seated, the PreVenTest system automatically prompts the test results in clear figures and graphics. The easy operated program enables you to zoom in to graphs and carefully analyse the found values and determine the critical points. After the test the found test results are automatically stored in the database and are available for future reference. The PreVenTest program enables the operator to execute a series of 3 tests to ensure the consequent and reliable performance of the valve and accuracy of the test results. Finally the results of each individual test and the average of the 3 are shown. The tolerance, based on the min. and max. dimensions of the seat and disc, is given with the results. Finally a full size test certificate can be printed to provide you and your customer with the important proof and problem solving information. The test certificate can be previewed and printed in the Windows structure. The 'report generator' enables you to design and prepare the design and lay-out of the certificate.



### LIFT RESTRICTION

The standard supplied mechanical 'lift restrictor' can be used to set a minimum lift and prevent an extended discharge of the process medium.

### EMERGENCY SHUT DOWN / FORCE CLOSING

In case a dangerous or unexpected situation occurs, the operator can convert from pulling to pushing and close the valve.



### ADVANTAGES

- Testing all common, spring operated safety valves online, no dismantling of the safety valve required.
- Reducing, or even preventing plant shut-down.
- Compact, light weight, battery driven and portable system.
- Prevent uncontrolled lift by lift restrictor.
- Emergency shut-down of the Safety valve.
- Latest software & hardware technology, easily connected to your Windows XP LAN / network.
- 'No Nonsense tool' very easy to install and operate.

### LIGHT WEIGHT & PORTABLE

The Ventil PreVenTest LTC is supplied in robust transport packing; Carrying bag: Control system and transport facility for the industrial laptop computer and battery charger. Carrying case / trolley: Bracket, tools & accessories.

Optional: PreVenTest ATEX - Intrinsically safe version



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