Product Specification

PSV Test Unit – VC7.5-Xtreme

Range: ½ - 4” / DN15 – 100 mm

Ventil - NL
Polakweg 6 - 2288 GE
Rijswijk - The Netherlands
T.: +31 88 1130900
E.: info@ventil.nl

Ventil USA Inc.
906 Gemini Street
Houston TX 77058 - USA
T.: +1 281 2800141
E.: info@ventil-usa.com

Ventil Middle East FZC
SAIF Zone, Unit Q4-267
Sharjah, United Arab Emirates
T.: +971 506260955
E.: info@ventil-me.com

Ventil Russia
ул. Врубеля 8, офис 2
125080 МОСКВА
T.: +7 499 728 1550
E.: info@ventil-rus.ru

Description

VC7.5-Xtreme

The Ventil VC7.5-Xtreme is an universal and versatile test unit for pressure testing and setting of pressure relief valves. The system can operate 'off the grid' as no electricity or shop air is required. The complete system is packed in a watertight and crushproof trolley suitcase, enabling use in the harshest environments. The design and configuration is based on many years of experience in safety valve testing and repair. The test unit is fully built in-house and only first class components and materials are used. The VC7.5-Xtreme is delivered ready for use.

Control Panel

Clear, ergonomically designed control panel for operating the clamping system and controlling the test systems. The control panel is provided with tag plates to identify all operation parts / devices and equipment.

Test Station

The VC7.5-Xtreme clamping station is developed for quick and safe clamping of all conceivable types of safety (relief) valves. It is designed for gas and (optional) liquid testing of safety (relief) valves. The robust constructed clamping device operates with three vertical moving clamping claws that apply a sealing force onto the flange of the safety valve. During clamp procedures the inlet flange is compressed against the fixed clamping table with O-ring gasket.

Test Systems

- ⊕ Gas Test System 0 – 200 bar / 2,900 psi
- ⊕ Seat tightness test system (API 527) Full Range

Maximum Set Pressure

VALVE SIZE		MAXIMUM SET PRESSURE
inch	mm	
½ - 2	15 – 50	200 bar / 2,900 psi
3	75	100 bar / 1,450 psi
4	100	60 bar / 870 psi

Accessories

All standard accessories (a.o. O-ring plates, O-rings, Pressure Gauge, Bubble Counter, Outlet Adapter set) can be securely stored in the lid of the suitcase.

Safety Measures

The VC7.5-Xtreme is designed and build according to high safety standards. To ensure safe operations, the test unit is standard completed with the following features:

Safety Screen

Whenever testing under high pressures, safety precautions are very important to guarantee absolute safety for the operator and the area surrounding the test unit. The test unit is completed with a standard installed safety screen to protect the test unit operator. The safety screen consist of a strong window frame completed with 12mm / ½" thick LEXAN (polycarbonate) screen.

Safety Interlock at Clamping System

This automatic safety system blocks the clamping force when the test object is being tested. This ensures that the clamping force can only be released when the test pressure is fully released.

General

Test Unit Maintenance.

The VC7.5-Xtreme requires minimum maintenance. Generally the test unit only has to be kept clean to ensure a safe and reliable performance. Periodical maintenance, testing and calibration instructions are described in the test unit manual

Certification

At Ventil we only use first class instruments to ensure that the best possible and reliable test results are achieved. The following documents are included to ensure the machine meets the highest levels of accuracy and compliance;

- Test- and calibration certificates for all installed test pressure gauges, sensors and flow meters (if applicable).
- Factory acceptance test (FAT) report and a test-and safety report of acceptance according to EN 10204:2004 and Directive 2006/42/EC for test units.

Testing and inspection

Testing will be done according our QC plan against a project related inspection plan and inspection procedure. Following tests are foreseen:

- Performance and functional tests at our works.
- NDE test at maximum working pressure.
- Visual inspection.
- Drawing and documents verification.

Optional Systems.

The test unit will work without any of the following offered options but depending to application these systems could increase the performance and efficiency of the test unit.

Option 48 – Computer Registration System.

The Ventil Computer Registration System (CRS) exist of a laptop computer, an accurate pressure transducer, A/D conversion unit and in house developed PSV test software. The Complete system is battery driven and in packed in a separate watertight and crushproof suitcase, enabling use in the harshest environments. The main purposes are:

- ⊕ Digital reading of test pressure, test time etc.
- ⊕ Verifying found test results against test standards (ASME. API) or other (client) programmed tolerance.
- ⊕ Storing and printing customized test report of test certificate.

Working in Native Language

The CRS is can be set in a variety of languages. If a language is not standard installed, a translation function can be used to adapt the program text.

Support and Trouble shooting

Need help, an upgrade or additional function, the Ventil IT service department is available for answering questions. The remote access over internet allows efficient and quick service anytime, anywhere.

Customized Test Report / Certificate

The Ventil CRS is completed with report generator function to design a customized certificate lay-out. This includes add texts, adapting the language and placing company logo and other details at the report.

System Configuration

- ⊕ State of the art Computer system (windows 7 pro.)
- ⊕ PSV test software, ready for use.
- ⊕ Laser controlled bubble counter.
- ⊕ Pressure transmitter
- ⊕ A/D converter.

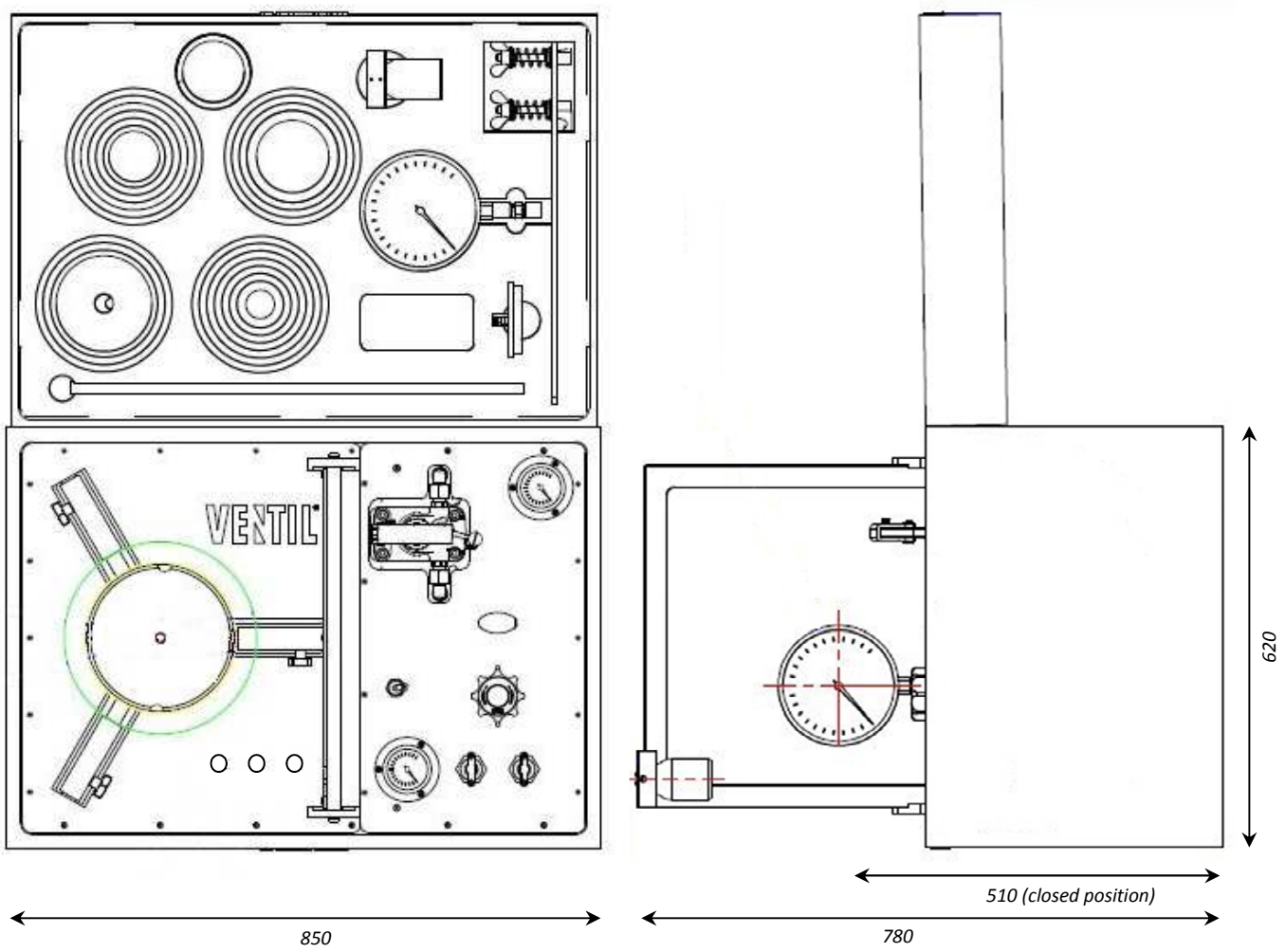
Option 49 – Spare Parts and Consumables set.

Set of spare parts and consumable items for 2 years normal use.

The package includes:

- ⊕ 2 Block / release needle valves.
- ⊕ 4 Sets of high pressure seals for valves up to 4”.

Datasheet

Range	½ – 4" / DN15 – 100 mm.
Test Station Operation.	Hydraulic operated (hand operated).
Gas / Air Test System.	200 bar / 2,900 psi.
Liquid Test System.	On request
System	Accurate Regulator with two SS Needle Valves
Pressure Reading	Pressure Gauge: 0 – 250 bar / 3,625 psi cl 1.0
	Other gauges available on request
Bubble counter	0-50 bubbles per minute
CRS Test Software (with option 48 only)	CRS, Ventil PSV test software
CRS Hardware (with option 48 only)	Rugged Laptop computer, Windows 7 PRO operated
Digital Pressure Measurement (with option 48 only)	Pressure Transmitter: 0 – 250 bar / 3,625 psi 0.3% F.S.
	Other Pressure transmitters available on request
Laser Bubble counter (with option 48 only)	0-50 bubbles per minute (connected to CRS)
Test Procedures according to common test standards.	Set Pressure Testing with Gas
	Seat tightness testing according to API 527
O-ring sealing plates	RF connection (DIN/ANSI) up to maximum pressure level.
Universal sealing plate	Vulcolan up to max 25 bar / 360 psi
Clamping Force (maximum).	7.5 Metric tons.
Height under the Claws (min-max)	10 - 59 mm. / 0 – 5".
Flange outline Diameter (min-max)	Ø 20 mm. – 255 mm. / 0.8 – 10".
Clamping Table Diameter.	Ø 195 mm. / 7.7".
Clamping Table Material.	Stainless Steel.
Safety features (standard)	Safety Screen.
	Safety interlock embedded in the operating system.
Approx. Dimensions / weight (excluding options)	850 x 620 x 510 mm. 70 kg / 33.5 x 24.4 x 10.1 Inch – 155 lbs.
Required connections	Nitrogen / compressed air source: max 200 bar / 2,900 psi.
Delivery	Ready for use (see optional features).

General Arrangement Drawings