

function

SCITEQ's valve endurance tester (VET) is a sophisticated piece of equipment designed to establish whether single taps, combination taps or ball valves are able to resist the stress and impact they are subjected to through time. Testing of mechanical endurance occurs in accordance with EN 200:2008 section 12.1 and EN 13828 section 7.6.

highlights

verification of mechanical endurance

visibility of test in progress

user-friendly operation

testing of taps // ball valves

water recycling

easy-to-use touch panel PLC

high flexibility gripping tools

features

The complex yet user-friendly VET accurately performs verification of mechanical endurance by testing the behaviour of the operating mechanism through a number of opening and closing operations with water at specified pressure/temperature/dwell time.

By means of this tester it is possible to perform independent testing and obtain traceability on the endurance of the taps and ball valves in question. This will be a valuable tool in the required Quality Control documentation process.



We wish to give our partners the tools to produce to the highest standard, while helping them to produce as cost-effectively as possible with Q.C. tools throughout the factory.

construction

The VET is an automatic test rig consisting of integrated hot and cold water tanks with pumps, flow meter and optional chiller. From the built-in control cabinet, the tester is operated via a state-of-the-art touch panel PLC.

The system has an incorporated water recycling mechanism in that return water is lead back to the correct water tank after testing thus saving energy.

The VET test fixture consists of an adjustable rotating tool which grips the valve handle. The tool may be replaced by other optional customised gripping tools to fit the valve/tap to be tested.

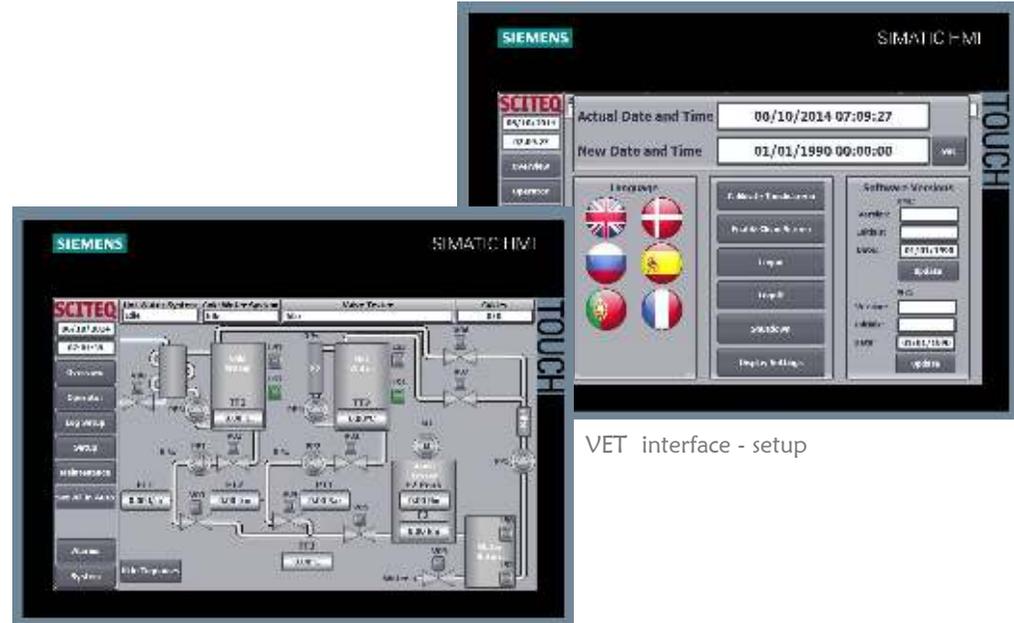
The control cabinet contains high quality components carefully chosen for their compatibility worldwide. The touch panel PLC is very user-friendly and offers excellent functionality. Data is logged onto a memory stick and can be easily exported to Excel making data available for analysis and further processing.

The tester is able to perform up to 200.000 cycles and the hot and cold cycle time may be entered according to test requirement.

The VET has been designed with two detachable inspection windows enabling monitoring of the test in progress.

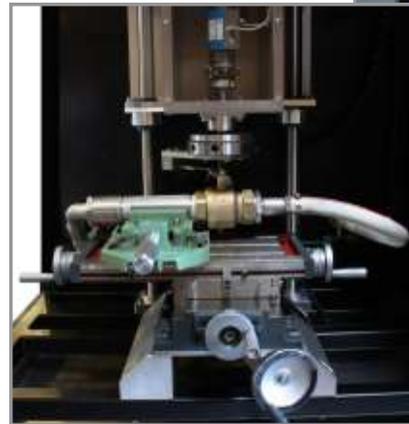
Further, a convenient storage room is available below the front test window for tools, grips etc.

test sample size	taps: ½” and ¾” ball valves: up to 2½”
high pressure pumps	2-6 bar, 2-10 l/min.
cold water temperature	≤30 degrees C
hot water temperature	65 (+/-2) degrees C Optional up to 93 degrees C
cold water tank volume	100l
hot water tank volume	100l
hot and cold cycle time	to be entered
cycle changeover time	max. 1 min.
test duration	up to 200.000 cycles
servomotor max. torque	35 Nm
heating element	9 kW
plate heat exchanger	4 kW at 0 degree C (inlet)
electrical supply	3x400Vac + N + PE, 50 Hz
water supply	mains water supply, 2-6 bar
compressed air	7-10 bar
drain	gravity fed waste water
dimensions	2400x1750x2600mm (LxWxH)
weight	1600 kg



VET interface - setup

VET interface - overview



VET test fixture



VET tank system

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