Valve test benches
In the past few years WIKA has successfully integrated renowned manufacturers of calibration equipment into the group. With these established brands within the calibration market, we deliver the ideal solution for each measurement task. Among these brands, Scandura enjoys a special reputation for complete calibration systems and for valve test benches. These are available in different designs and levels of automation.
Your competent partner for valve testing solutions

Industrial valves and safety valves are important elements in the process control and they play a key role in the safe operation of processes. Their task can be to block the pressure, regulate the fluid or protect the equipment. Valves are more and more exposed to increasingly demanding duties where extreme temperatures can be reached and where corrosion, erosion and vibration can reach critical values.

It is calculated that still 50 to 60% of the emissions in industrial processes is caused by leaking valves. Consequently the test, maintenance and repair of valves is critical to assure the reliability and availability of plant and equipment and compliance to environment regulations.

Safety and control valves find in WIKA / Scandura testing equipment the best solution for fully satisfying the most demanding Quality Assurance Plans.

Expertise
Our know-how in valve testing is the result of many years of experience and is highly appreciated by our customers in many countries all over the world.

Reliability
The robust design and the high quality of the installed components guarantee a reliable and long lasting performance of the valve test benches.

Customization
The proximity and close cooperation with our customers allow us to customize the benches following the precise customer requirements.
Safety valve test benches

The benches are used for the regular and periodic checks of the safety valves to maintain the functional and/or safety performances in accordance with the plant prescriptions.

In the standard configuration, the benches are suitable to test safety valves of the following sizes:

- threaded valves: from ½” to 2” NPT male and female
- flanged valves: from ½” to 14” RF

The valve tests can be carried our by means of the following fluids:

- gas up to a pressure of 200 bar (other ranges available on request)
- water up to a pressure of 420 bar (other ranges available on request)

The pneumatic test pressure can be generated by means of a compressor, a pneumatic booster or supplied from external gas bottles. The hydraulic test pressure is always generated with emulsified water contained in a tank with recirculation, filling pump and booster.

The operation of the bench requires an electrical power supply of 400 Vac - 50/60 Hz three-phase (others available on request) and a pneumatic air supply of 7 bar (others available on request).

Each bench consists of two basic sections, “clamping system” and “control panel”, which are normally supplied in monoblock execution, mounted on painted tubular steel frame with supports for lifting / positioning and levelling feet.
The two sections are always separated by a safety screen which protect the operator, limiting from accidental contact between the control panel and the pressurized section.

All benches are equipped with leak detection and bubble/dropper counter systems according to international standards such as API 527, API 526 and so on and with analog and/or digital indicators.

The test gauges may be accompanied by official calibration certificate issue by an accredited laboratory.

The version with digital instruments is provided with indicators having an RS232 interface for connection to a PC. The Software “Valve Test”, needed to record the valve test results, is available on request.

### Model coding for SVT (safety valve test)

<table>
<thead>
<tr>
<th>Model SVT</th>
<th>71</th>
<th>72</th>
<th>73</th>
<th>74</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size/rating valve</td>
<td>6” ANSI xx</td>
<td>10” ANSI xx</td>
<td>14” ANSI xx</td>
<td>≥ 16” ANSI xx</td>
</tr>
<tr>
<td>Operator’s interface</td>
<td>Analog/digital</td>
<td>Analog/digital</td>
<td>Analog/digital</td>
<td>On request</td>
</tr>
<tr>
<td>Type of test</td>
<td>Gas/Liquid</td>
<td>Gas/Liquid</td>
<td>Gas/Liquid</td>
<td>On request</td>
</tr>
<tr>
<td>Clamping system</td>
<td>Manual/Automatic</td>
<td>Manual/Automatic</td>
<td>Manual/Automatic</td>
<td>On request</td>
</tr>
</tbody>
</table>
**Clamping system**

**Manual**
The manual version consists of four clamps and provides the locking of the valve under test by means of tie rods and clamping nuts. This version is normally made for threaded and/or flanged valves with a maximum size of 6”.

The bench is usually gas operating and it is suitable to be supplied with detachable parts (clamping system and control panel) in order to be easily transported on a vehicle.

**Automatic**
The automated version is proposed with three clamps, with hydraulic thrust and torque adjustable, based on the rating of the valve under test.

The test bench is intended for use in gas and liquid and is the solution, within the WIKA offer, to calibrate valves with sizes up to 14” and beyond.

It is available in three models with clamping forces of 30, 50, and 70 tons referring to the same number of valve diameters and supports the following options:

- Automatic or semi-automatic clamping
- Vacuum and/or pressure calibration
- Breather valves calibration
- Pneumatic supply
Safety valve test benches

Control panel

The test control console

It is a solid metal structure (2 mm thick steel) finished and painted in RAL 5012. Control and indicating equipment are mounted on its aluminium mimic front panel.

Standard digital pressure gauges, class 0.1% accuracy, equipped with peak detector and RS 232 interface are provided according to the request for the valve test. Pressure gauges are properly protected by manual switch-off valves and overrange release valve.

Manual pressure regulators for air and water test, and air distribution selectors are also provided along with mains ON/OFF switch and general power OFF emergency switch.

Bench security system

Maximum attention is paid to the safety systems fitted into the calibration benches. All component under pressure during the test are displayed and identified by special lights and sound and alarm functions are handled by interlocking system.

The pressure in the test circuit will be automatically released in case of emergency and power failure conditions. Particular attention has been paid to the pneumatic-hydraulic circuitry for managing the exchange between the gas/fluid test media.

Test-point checks and hydraulic manual pump for fine pressure adjustment are available.
Control valve test benches

Control valves test benches are used to test the process control valves according to the international standards such as API 598, API6D, ANSI B16.104 and so on. They are normally present in the plant workshops and they are widely used during the maintenance activities.

The series of benches is composed by four models to test valves with size from 6” to 24” and clamping force of max. 300 tons.

The clamping system is normally composed by a screw unit and a system of pushing hydraulic cylinder with a proportional control of the closing force.

Depending from the customers’ specific requirements, the benches can be provided with leak control systems according to the classes of the tested valves and to the reference standards ANSI/FCI 70.2.

<table>
<thead>
<tr>
<th>Model CVT</th>
<th>76</th>
<th>77</th>
<th>78</th>
<th>79</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size/rating valve</td>
<td>6” ANSI xx</td>
<td>10” ANSI xx</td>
<td>14” ANSI xx</td>
<td>24” ANSI xx</td>
</tr>
<tr>
<td>Max test pressure</td>
<td>ANSI 2500</td>
<td>ANSI 1500</td>
<td>ANSI 900</td>
<td>ANSI 300</td>
</tr>
<tr>
<td>Type of test</td>
<td>Gas/Liquid</td>
<td>Gas/Liquid</td>
<td>Gas/Liquid</td>
<td>Gas/Liquid</td>
</tr>
</tbody>
</table>
In all benches the pneumatic supply (7 bar air) is taken from the workshop air circuit or can be generated by the same bench with an air compressor.

The hydraulic test pressure is always obtained with recirculating emulsified water adequately accumulated in the necessary amount to comply with the size of the valve under test. Recirculation is achieved with a filling pump and the pressurization with a pneumatic-hydraulic booster.

The operation of the bench requires an electrical power supply of 400 Vac - 50/60 Hz three-phase (others available on request) and a pneumatic air supply of 7 bar (others available on request).

Each bench consist of two basic sections, “clamping system” and “control panel”, which are normally supplied in monoblock execution, mounted on painted tubular steel frame with supports for lifting / positioning and levelling feet.
The test control console

The test control console is similar to the safety valve test benches. It is equipped with digital gauges, selector for air distribution and switches.

The clamping system

The clamping system is basically realised with screw unit and by a system able to push hydraulic cylinder with a proportional control of the closing force.
Service in detail

Assistance from the very beginning

WIKI / Scandura is your competent partner through all phases of the project: starting with planning the basic and detail engineering through the bench construction to the after-sales assistance.

Perfect logistics

Whether wooden cases or pallets, container shipment or sea-freight packaging, we will meet your delivery expectations. Our efficient distribution system is supported by both our subsidiaries and representative offices around the world. So you can be sure that the delivery will always arrive at the agreed time and at the agreed place.

Technical inspection

We offer our customers the possibility for acceptance tests and training on benches to be performed in our facilities prior to dispatch. You can therefore also count on the fact that all instruments will arrive at the installation site in an perfect condition.

Extensive documentation

Specifically for your bench, we will prepare a complete book with dimensional drawings, data sheets, operating instructions and certificates in several languages, in digital and printed form.