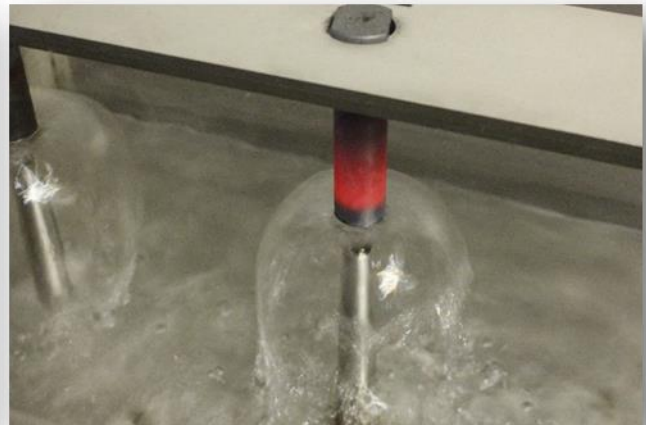


Product information

Testing machine for Jominy End-Quench Test LabTest - AQUATest 642



Machine use

AQUATest 642 is a testing machine for testing **hardenability** of testing specimens according to norm EN ISO 642. The testing equipment AQUATest 642 consists of 3 testing positions, which allow an impact of a water stream on the hardened frontal surface of test specimens. The test machine is composed of stainless steel bathtubs, where a water column is regulated continuously, with a quick tap and feedback water regulation. The entire system is controlled from a master PLC with touch LCD panel with covering IP 64, which monitors the individual flow sensors, water temperature, water level gauges and also heating of the medium.

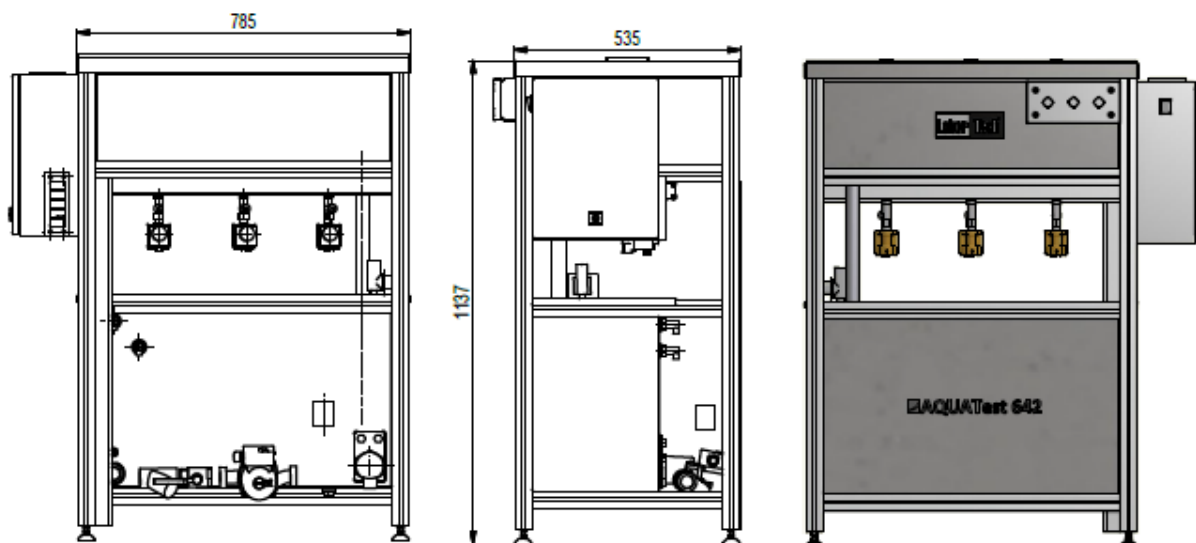
The base machine includes:

- 1 base of the machine with stainless steel bathtubs
- 3 hardenability test sets
- 3 quick-closing valves
- 1 stainless steel panel in covering IP 64
- 1 measuring and evaluation unit SIMATIC
- 1 operational touch panel
- 1 temperature sensor
- 3 controlling flow pumps
- 1 water level gauge
- 1 water filtration
- 1 indicator of water filter clogging
- 1 water rating unit
- 1 documentation in EN, CZ or RU language
- 1 drain valve
- 1 set of copper pipes

Main advantages:

- High rigidity of the machine resistant to rusting
- A pumps providing a constant supply of H₂O
- Easy and intuitive machine control
- Stainless steel design
- The highest possible precision of mechanical processing
- Welded stainless construction of the equipment from item profiles
- 3 independent quenching boxes
- All machine control is provided from the LCD touch panel
- Stable temperature sensor
- Possibility of setting the time of quenching for individual hardening sets





Technical data of the machine AQUATest 642

- Number of measuring 3 positions
- Distances between supply and hardened surface $12.5 \pm 0.5\text{mm}$
- Output height of the water flow $65 \pm 10\text{ mm}$
- Water temperature $20 \pm 5\text{ }^\circ\text{C}$
- The length of supply pipe behind the tap min. 50 mm
- Machine deployment – continuous operation
- Colour finish, stainless, elox
- Maximal noisiness $< 65\text{dB}$
- Work conditions – temperature $< 45\text{ }^\circ\text{C}$
- Work conditions – noisiness max. 85%
- Control components on one horizontal panel
- Power input 230V/50Hz
- Weight of the machine (without medium) 230 kg

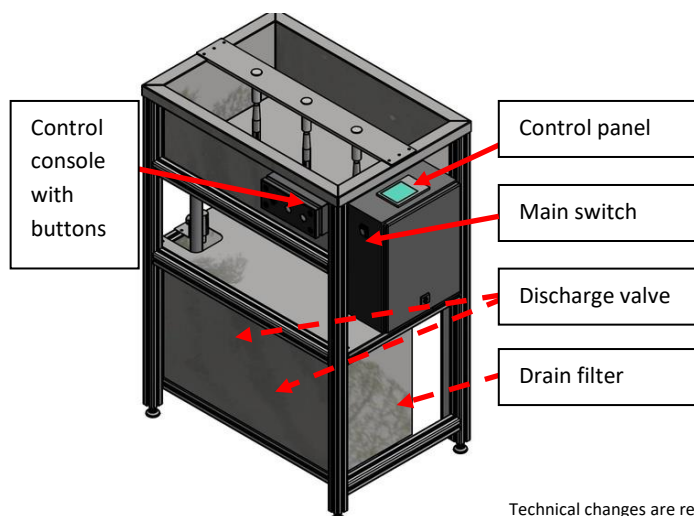
Jominy End-Quench Test

The hardenability of a ferrous alloy is measured by the Jominy test: a round metal bar of standard size is transformed to 100% austenite through heat treatment, and is then quenched on one end with room-temperature water. The cooling rate will be highest at the end being quenched, and will decrease as distance from the end increases. Subsequent to cooling a flat surface is ground on the test piece and the hardenability is then found by measuring the hardness along the bar. The farther away from the quenched end that the hardness extends, the higher the hardenability is. This information is plotted on a hardenability graph.

Expression of results

For each distance d shall be recorded as the average value of hardness measurements made at a distance d on each of the test areas and the value is rounded to 0.5 HRC or HV 10. For expression of results use one of the following methods:

- a) Drawing a curve of the hardness depth
- b) Individual points on the curve for the front test are determined



Technical changes are reserved by the manufacturer

Manufacturer:

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