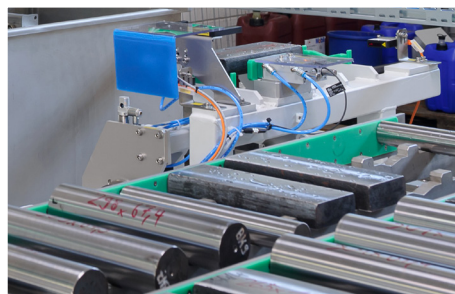# Loading Portal
for
Immersion Tank Testing System USTB 600/5-1C

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Loading Portal for
Immersion Tank Testing System USTB 600/5-1C

Brief description

The loading portal is the perfect addition to the well-established USTB 600/5-1C immersion tank testing system – particularly in case of high volume testing. The automatic loading and unloading process enables a high throughput of samples with minimal staff deployment. Depending on its features, the portal is able to operate completely independently for up to two shifts, taking a major strain off the testing staff. An integrated turning station also enables round and flat samples to be tested in mixed assembly and random sequences. Additionally, the integrated laser measurement function ensures maximum test reliability and protection against mix-ups. A high- performance integrated PLC control manages the entire test process,

monitors the individual systems, and, in combination with the "safety inverters" and safety doors, ensures maximum staff safety – without hindering their work.

The centrepiece is the immersion tank testing system (USTB 600/5-1C), which is primarily distinguished by its versatility and high degree of precision. It offers users a number of ways to accurately and efficiently test all kinds of test specimens in varying shapes. In addition to several other areas of application, it has for many years particularly been used very successfully to test the quality and purity of steel samples in accordance with various standards and regulations (e.g. SEP 1927).

Loading Portal for
Immersion Tank Testing System USTB 600/5-1C

Features

- Fully automatic controlling of the motion sequence
- Automatic detection of occupied positions in the sample trolley
- Laser measurement of sample shapes
- Heavy sample weights
- Maximum staff safety with semi-automatic in-feed
- Independent operations for up to two shifts
- Connection to ERP systems
- Integration into the company network
- Remote diagnosis and offline analysis functions

Immersion tank testing system

- Fully integrated industrial PC platform
- Windows 10/64 bit operating system
- High-performance operating and analysis software
- Various of data-analysis algorithms
- Three access hierarchies (each password-protected)
- Test results displayed on a 24"-TFT monitor
- Fully integrated ultrasound testing system
- High-speed USB connection
- Low power consumption
- Short connection to probe
- High signal/noise ratio
- Distance Amplitude Correction (DAC) (showing the curve graphically)

Probe frequency	0,5 MHz…20 MHz
Bandwidth	30 MHz
Filter	HP, TP
Configurable dynamics	96 dB (analogue)
Digitalisation	100 / 200 MS/s at 12 Bit
Pulser voltage	Approx. 250 V/ to 50 Ω neg. pulse
Rise time	≤ 4ns

Control system

- Fully integrated NC/SPS-based control and drive system
- Automatic controlling of the test process
- Extremely low noise AC servo drives
- Minimal interference with the testing technology
- Efficient user guide through the control panel
- Integrated process visualisation

Automation and mechanics

- Steel welded construction frame, fixed base and adjustable foundation plates
- Precision linear guide systems
- Gripper with positioning aid for round and square samples
- Turning facility for flat samples
- Integrated laser measuring function for samples
- Safety doors and safety inverters

Sample length	300 mm…600 mm
Sample diameter (round)	20 mm…200 mm
Sample dimensions (flat, L x W)	500 mm x 150 mm
Sample weight	130 kg max.
Laser measurement	± 2,0 mm (typ.)
Repeat accuray of gripper position	± 1,0 mm
Path resolution	± 0,05 mm min.
Maximum drive speed	500 mm/s
Two sample trolleys	Carrying 20 samples each
Total dimensions (L x W x D)	4,2 m x 3 m x 3,2 m
Portal unit weight (without testing system)	Approx. 1300 kg

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