

## function

The **SCITEQ** box loading test (BLT) system is designed in accordance with ISO 13260 for determination of resistance to combined temperature cycling and external loading of thermoplastics piping systems. The pipes are intended for non-pressure underground drainage and sewerage. **SCITEQ**'s system may be configured to perform method A, B or both.

## highlights

high accuracy temperature control

easy access to box loader container

user-friendly operation

simple gravel handling via conveyor system

suitable for pipe sizes Ø110-510mm

excellent touch panel

version 02/2015

## features

**SCITEQ**'s box loader may perform two methods for testing pipes and fittings or joints for their resistance to deformation and leakage, when subjected to sustained external loading in conjunction with the passage of hot/cold water. A pipe/fitting sample is placed on a gravel bed and covered with gravel. A constant vertical load is applied via the gravel and temperature cycling is performed. Vertical deflection of the test piece is measured. A further feature is the optional conveyor system that eases gravel handling in terms of filling and emptying the box. The system uses tanks containing hot and cold water supplies depending on the test method.



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 box loading system comprises three main parts; the box loader itself with compression plate, adjustable sides and pipe/fitting inlet/outlet, the tank system and the control cabinet combined with a chiller (chiller only needed for method A). Additional optional parts are the gravel conveyor system and the gravel storage container.

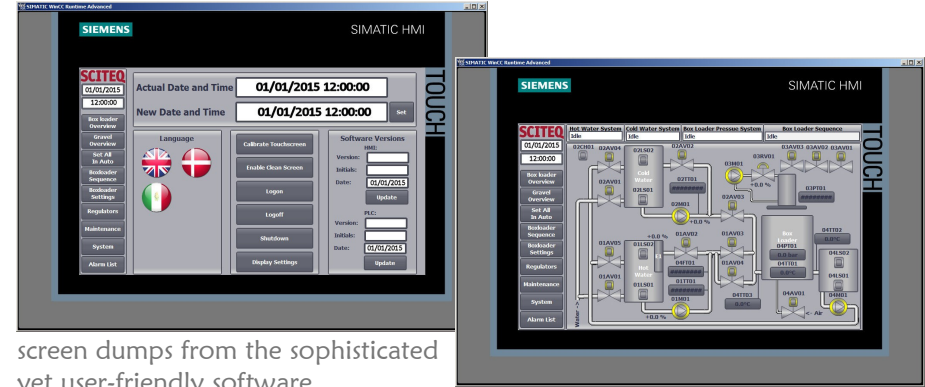
The box loader itself is heavy-duty and constructed in a way to allow a high degree of flexibility in terms of size adjustability depending on the actual pipe dimension and composition (straight pipe or assembly) to be tested. The gravel will cause severe wear of the inner box and thus the inner box has been constructed in wood which is easily replaceable. The box is accessible in more ways for instance to allow tamping of the gravel, to position the test piece, to load and unload gravel etc.

The tank system in stainless steel consists of two water tanks (depending of test method). Return water is lead back to the correct water tank thus saving energy. Continuously circulation in the tanks ensures consistent temperature.

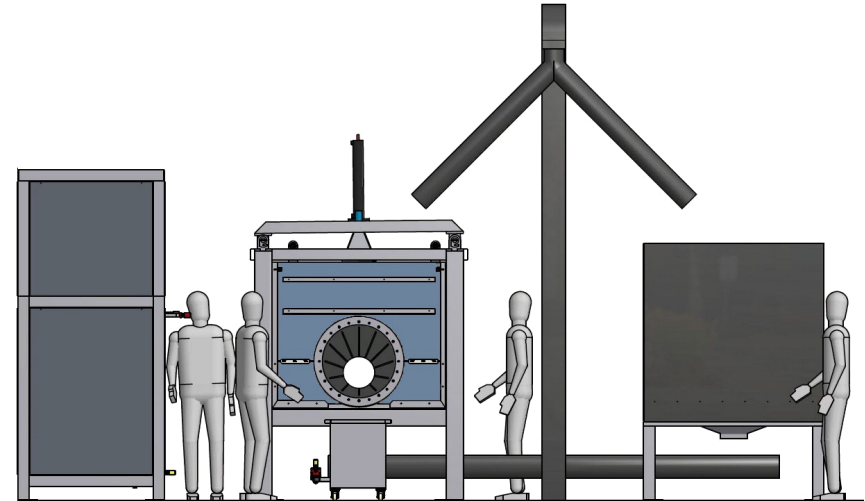
The control cabinet contains high quality components carefully chosen for their compatibility worldwide. The state-of-the art touch panel is very user-friendly and offers excellent functionality.

ISO 13260 has very strict requirements to the sand/gravel mixture to be used for testing. **SCITEQ** may be consulted for assistance.

<b>test methods</b>	methods A & B according to ISO 13260
<b>pipe sample diameter</b>	method A: Ø110 up to Ø190 mm method B: Ø190 up to Ø510 mm
<b>vertical deflection</b>	50-60 kN +/- 2 (performed by compression plate)
<b>type of pipe samples</b>	an assembly of two pipes or fittings assembled with two or more pipes.
<b>hydrostatic pressure</b>	0,35 bar (assessment of leak tightness)
<b>cold water temperature</b>	method A: 5-22 degrees C
<b>hot water temperature</b>	method A: 85 degrees C (+/-2) method B: 50 degrees C (+/-2)
<b>temperature accuracy</b>	+/- less than 1 degree C.
<b>ambient temperature</b>	for chiller max. 30 degree C.
<b>tampering tool</b>	included
<b>deflection gauge</b>	included
<b>collection tray on wheels</b>	included
<b>optional accessories</b>	gravel conveyor system gravel storage container
<b>hot and cold cycle time</b>	depending on pipe diameter
<b>test duration</b>	min. 2500 cycles
<b>electrical supply</b>	3 x 400V, 50Hz (TN-S)
<b>dimensions</b>	box loader: 4700x1650x2350 mm (LxWxH) tank systems with two tanks: 2800x1400x2200mm control cabinet and chiller: 1400x1010x195mm gravel storage container: 1900x1600x2400mm gravel conveyor system: optional
<b>weight</b>	approx. 3 tons (excluding gravel)



screen dumps from the sophisticated yet user-friendly software



box loading test system

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