# function

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The **SCITEQ** thermal cycling STC open loop series is mainly used to determine the leakage status of composite pipes and fittings when subjected to specified cycling times under specified internal pressure load. The system complies with EN 12293, EN ISO 15875-5, DVGW W 534, and BS 7291.

# features

The **SCITEQ** thermal cycling system may have up to six pipe sample strings connected at one time, these being dependant on the sample diameter. The system uses tanks containing the hot and cold water supplies.



## construction

The thermal cycling system is constructed in a way that allows easy access to all sample strings from three sides.

The pressure in the sample strings is generated from a high quality Grundfoss pump. Further, the system has an automatic water filling feature that ensures full tank capacity at any time.

Testing results are easily transferred to for instance Microsoft Excel for further processing.

The system enables calibration of pressure and temperature during testing meaning that the system may continue running during calibration. The determination of leakage status of pipes/fittings is accurate and reliable.

An automatic energy saving system controlled by the SCITEQ control touch panel PC delays hot water flow to the cold water tank and visa versa during hot and cold water cycle changeover.

The complete TC system is operated from a user-friendly control touch panel PC. The apparatus is foreseen with several emergency shut-down systems to fulfil legal requirements and make the machine safe to use. Further, all doors are locked electronically once the pressure pump is running as a safety feature.

## associated | equipment

essential equipment

thermo tank

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# scited | TC open loop

# Three models

Three main models are available:

**STC63-OL:** 1 test chamber with up to max. 2 sample strings Ø63mm, 6 stations totally

**STC75-OL:** 1 test chamber with max. 1 sample string Ø75mm, 6 stations totally

**STC110-OL:** 1 test chamber with max. 1 sample string Ø110mm, 6 stations totally

## standards

	BS 7291-2010		
	ISO 10508 first edition		
	ASTM D1599-99		
	DVGW 534		
Set up of equip- ment	ISO 12293		
CE Approval	73/23/EEC (LOW VOLTAGE)		
	89/655/EEC (WORK EQUIP- MENT)		
	89/392/EEC (MACHINES)		
	89/336/EEC (ELECTRONAGNETIC COMPAT- ABILITY)		
	89/656/EEC (PROTECTION EQUIPMENT)		



thermo tank

essential equipment



TCA test chamber with pipe samples



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# technical specifications

Capacity	TCA 63 – 2 samples up to Ø63 mm TCA 75 – 2 samples up to Ø75mm TCA 110 – 1 sample up to Ø110mm In total 6 test samples can be connected, depending on diameter.			
	Maximum capacity = 17m3 /h @ Ø110 mm			
Tank capacities	Heater tank 1500 l. Heater inside tank dimension 1750 x 100 x 875 mm Chiller 1500 l. Chiller inside tank dimension 1750 x 100 x 875 mm			
Temperature	Min. temperature 15° Celsius ±2° Celsius Max. temperature 93° Celsius ±2° Celsius			
Max. pressure	17bar, hot or cold			
Flowrate	Required flowrate is 17,5 m3/h			
Heater power	6 x 9 kW			
Heat up time	From 2 hours depending on ambient temperature			
Change over time	60 sec. From hot to cold and cold to hot			
Cyclic time	600—1200 sec. A cold cycle is 10 min. /600 sec A hot cycle is 20 min./1200 sec.			
Pressure cycles	30 cycles/min. A pressure cycle is 1-9-1 bar and must be completed 10000 times			
Insulation	80 mm			
ank & pipe material	Stainless steel AISI 304			
tional temperature	10°-35° Celsius			
Air humidity	30-80% non-condensing			
Electrical supply	3 phase 400VAC V+N+PE 50Hz, Amp. depending on tank size (heating elements) Other voltages on			
Air connection	min. 2bar and max. 6bar air supply			
Water supply	Normal tap water. Built in automatic water level control as standard			
Dimensions	L5400xW3909xH2320mm—Weight approx. 5000 kg			

Main Menu						13-09-23	3 16:32:25 🗙	
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#3		0.0	0.0			0	0 Reset	
#4		0.0	0.0			0	0 Reset	um
#5		0.0	0.0			0	0 Reset	
#6		0.0	0.0			0	0 Reset	
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Main Menu Specification Cycle (Hot/Cc Pressure: Flow: Temperature Program Setup	Cold Water: Hot Water: General Sensors Valves Regulate Alarm Touchscreen Clock	Setpoi STANDAF 2 / 11 50 22 75 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Int RD 60 sec. 2.0 bar 5.0 C 5.0 C 5.0 C 7.0 C	Process 0 sec. 0 bar 0.0 l/m 0.0 C 0.0 C 0.0 C Standard DIL012	Current	13-09-2 2 2 2 13-09-2 2 2 2 2 2 2 2 2 2 2 2 2 2	Counter 0 Reset 0 Reset 0 Reset 0 Reset	h
Main Menu Specification Cycle (Hot/Cc Pressure: Flow: Temperature Program Setup	Cold Water: Hot Water: General Sensors Valves Regulate Alarm Touchscreen Clock Service	Setool STANDAF 0 /	Int RD 60 sec. 2.0 bar 5.0 C 5.0 C 5.0 C 5.0 C 7.0 C 7	Process 0 Sec. 0,0 bar 0,0 l/m 0,0 C 0,0 C Standard DIL012	Color Cooler Status: Cold_ds	13-09-2 Off Off Sys Sys Cycle 0 0 0 0 0 0 0 0 0 0 0 0 0	Cycle Start/Stop Start/Stop Stem Stopped	h

Interj	Interface of the SCITEQ TCA					
Other voltages on request	SCITEQ A/S					

Menu

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SCITEQ Project no.: 12 HW V1.00 SW V1

# technical specifications | TC open loop

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