

SIGMA High Pressure test



We help you perform even better

Up to 1500 bar

The SIGMA High pressure system designed for determining the resistance to high internal pressures on pipes, fittings and any other application requiring high pressure testing up to 1500 bar with an unparalleled accuracy of 0,5%.

The unique SIGMA software & valve solution enables stable and linear high pressure regulation.

50+ years of research & experience supplying high-end test equipment worldwide is brought to use in this unique & proven technology - guaranteeing you can perform high pressure testing up to 1500 bar

Modular solution

One cabinet can contain up to 15 High Pressure stations delivering a flow of max. 8,5 liters can be installed in one cabinet. SIGMA is a closed-loop airless system allowing you to seamlessly run both static, step and burst tests according to the relevant/given international standards.

- ✓ 15 individual stations
- ✓ Max. 1500bar
- ✓ Max. flow: 8,5l/min per station



Static, Burst, Step test

The system can be configured to perform both Static, Burst and Step test. The system is controlled via SIGMA software

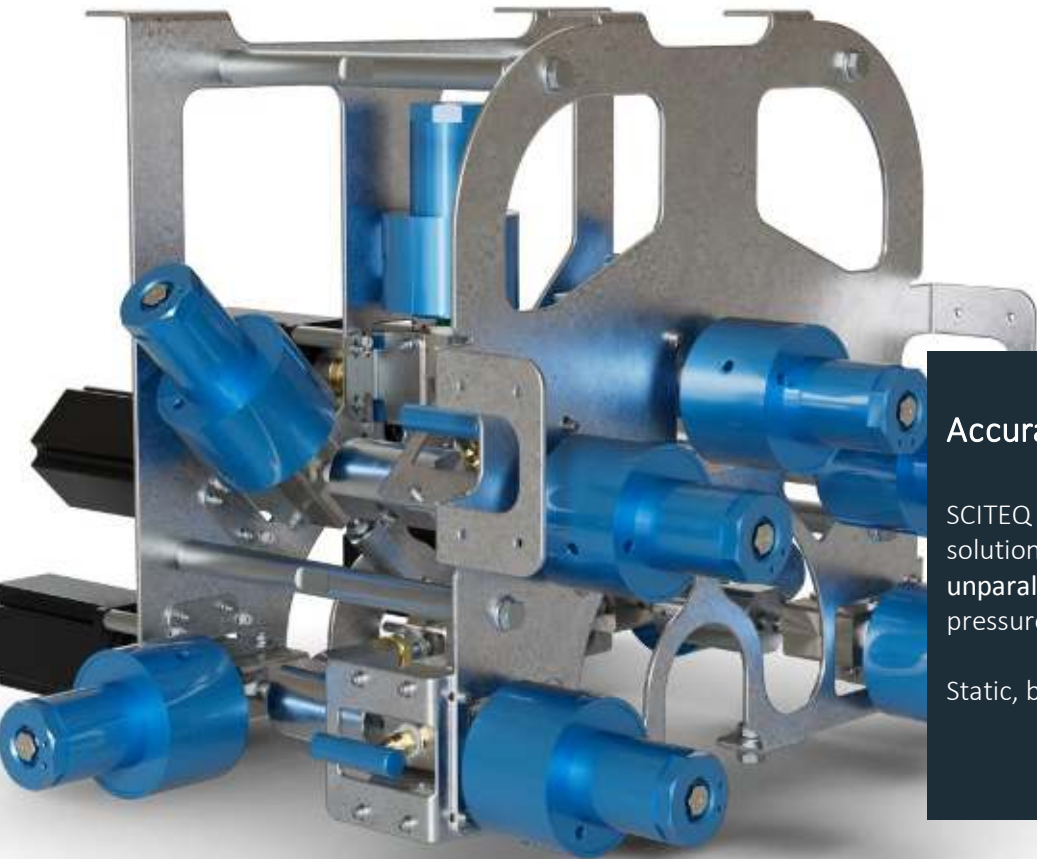
- ✓ Max. 1500 bar regulated pressure output.
- ✓ Max. flow: 8,5 l/min. per station

Up to 15 stations

From 1 to 15 independently operating pressure stations up to 1500 bar. Built-in precision valve for precise pressure control.

- ✓ Max. 1500 bar regulated pressure output
- ✓ Max. flow per station: 8,5 l/min. per station





Accuracy second-to-none

SCITEQ has developed a unique proportional valve solution ensuring high pressures are maintained with unparalleled accuracy even when testing at high pressures up to 1500 bar.

Static, burst and cyclic testing can all be accommodated.

Safe operation

The SIGMA user interface allows the operator to control and monitor the test remotely and hereby minimize the hazardous situations while testing.

Also, when in the proximity of the High pressure cabinet the built-in alarm light instantly alerts the operator visually in case of irregularities in the ongoing test.

Operation via SIGMA software

SIGMA is the new generation of pressure testing helping our customers prepare for IoT and Industry 4.0. The system consists of modular airless pressure modules designed to fit into an elegant standard cabinet with a compact footprint. The modularity enables easy configuration and expansion of existing pressure cabinets, making SIGMA the most future proof and cost efficient solution in the market.

The web based SIGMA software is the latest development in pressure testing. The browser based interface allows for easy and intuitive operation. Quick-to-setup recipes as well as optimized real time monitoring & logging enabling comprehensive analysis option.



Advantages

SCITEQ's browser-based software is accessible from any device – any time, anywhere.

- ✓ 4 different user levels
- ✓ Easy recipe set-up
- ✓ Dynamically adjusted real-time finish time
- ✓ Multiple simultaneous users
- ✓ Multiple specimen test per station
- ✓ SQL database compatible with all kind of servers
- ✓ OPC UA enabled



SIGMA data output



SCITEQ SIGMA TEST DATA

Reports

Report ID	Start time	End time	Status
2021001-0049-004	2021-09-27 07:03:15	2021-09-27 07:09:11	Complete
SCITEQ GC TEST	2021-09-08 00:04:39	2021-09-08 11:03:00	Active
Test Comment	2021-09-27 06:55:17	2021-09-27 06:51:07	Complete
TEST_3000hrs	2021-05-20 11:04:47	2021-05-01 11:59:01	Active
SHMMS	2021-02-04 24:34:17	2021-02-04 24:29:00	Complete

SCITEQ SIGMA TEST DATA

Test report generator

Units: Temperature

Report ID: 2021001-105547-004

The graph displays a pressure test over time. The x-axis represents time in minutes, starting from 00:00:00 and ending at 00:08:00. The y-axis represents pressure in bar, ranging from 0 to 100. The data points show a rapid increase in pressure from 0 bar at 00:00:00 to about 80 bar at 00:04:00, followed by a steady maintenance of 80 bar until 00:08:00.

SCITEQ Pressure Test Report

Report details

Report ID: 2021001-20515-007

Report Comment:

Test details

Test ID: 105547-004

Test type: 040

Test comments:

Operator: 1004

Station: 2

Company name:

Complied standards: ASTM

Product info

Customer: SCITEQ

Manufacturer: Pressure Tester

Batch no: batch number

Length unit: inch

Free length: 345.0

Flex stress: 2000

Pressure info

Set pressure: 2000

Max pressure: 3.1705841

Leak rate: 1000.0

Pressure unit: Max

Station test calibration date: 07/19/2021 01:00:00.00

Max pressure alarm limit: 1.0

Min pressure alarm limit: 9.0

Batch test: no

Conditioning info

Temp set temperature: 25.0

Temp air temperature: 5.0

Temp air temperature tolerance: <5.0

Temp ref: -1

Conditioning time: 7h

Conditioning name id: Tank

Options

Number of: test 123

Test approved by: Dns: 06/11/2020 10:04:14

SCITEQ Page 1 out of 2

Test Data Page

All test data from each individual test is stored in the database. Access the data on IP address from any browser.

Choose the specific test from menu, filter the data you wish to export from the menu – or include all data in the auto-generated pdf report

Zoom in/out on the graph showing the complete test.

SCITEQ SIGMA TEST DATA

Test report generator

Back Generate PDF

- Batch no
- Batch test
- Burst pressure
- Burst pressure time
- Company name
- Complied standards
- Conditioning name ID
- Conditioning time
- Customer
- End date of test
- Free length

Report-Comment

Units

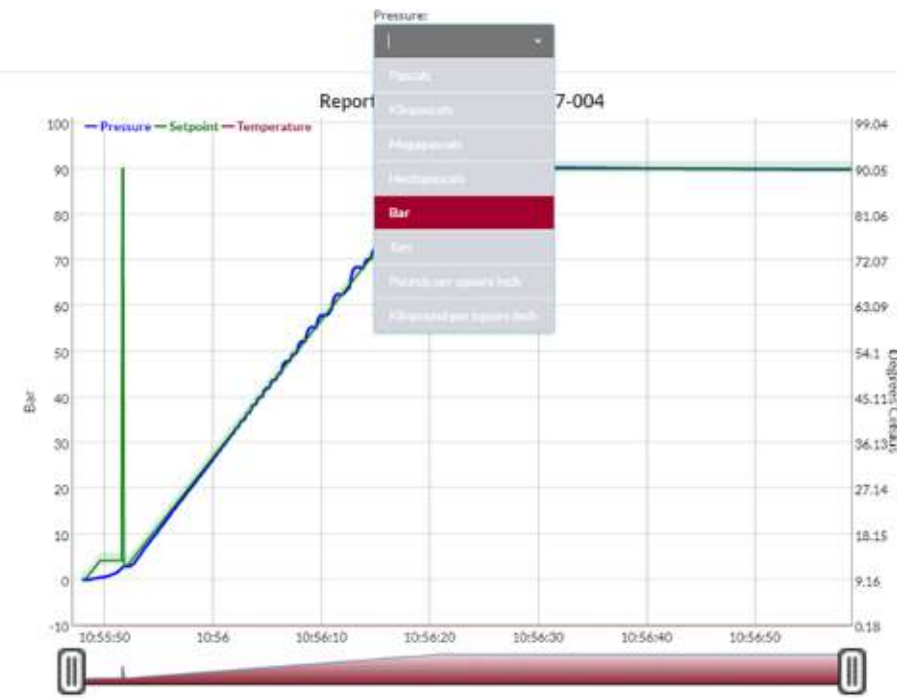
- Temperature:
- Degree Celsius
 - Degree Kelvin
 - Degree Fahrenheit
 - Degree Rankine

- Language:
- English
 - Finnish
 - Indonesian
 - French
 - Hindi
 - Spanish

- Hoop stress
- Leak Rate
- Length unit
- Material
- Max pressure
- Max pressure alarm limit
- Min pressure alarm limit
- OK time
- Operator

- Pressure unit
- Production no
- Referring standards
- Report ID
- Report-Comment
- Rise time
- Set pressure
- Start Date of test
- Station

- Tank set: temperature
- Tank set: temperature to min
- Tank set: temperature to max
- Target time
- Temperature unit
- Test ID
- Test comments
- Test type
- Total test time



Reports

Reports can be configured to include all data or selected data. Tick boxes from the top menu to choose the data you wish to include.

The Test Data can be shown in different languages and units of measure. Choose from dropdown menu

- ✓ Language
- ✓ Temperature
- ✓ Pressure
- ✓ Length

Technical specifications



	SIGMA High Pressure in individual cabinet
Controller type	SCITEQ-B&R S3100 Controller
User interface*	Chrome, Firefox or Internet Explore browser
Status indicator light build in cabinet front	√ light in cabinet
Remote accessible	√
Max. water flow	8,5 l/min
Max. pressure	1500 bar/ 21.750 psi
Control accuracy	Better than +/- 1 % of set pressure
Control resolution	0,01 bar
Pressure test types	Static, Step, Burst
Testing according to following standards	Will be configured to comply with relevant international standard

	SIGMA High Pressure in individual cabinet
Pressure rise time	Adjustable (customized for specific sample expansion)
Transmitter type**	ESI GS4200 **
Transmitter accuracy***	0,5 % FS (25 °C ambient)
Transmitter Control rise time	2 ms/ 10-90% nominal pressure
External dimensions WxDxH [mm]	1504 x 1214 x 1923
Shelve capacity in cabinet	15 individual stations
Weight [kg]	Approx. 1300 kg
Color	Ral 7016/30 (Dark grey)
Material: cabinet and shelves	S235JR (Powder coated)

	SIGMA High Pressure in individual cabinet
Material: Piping and fittings	AISI 316
Power supply	3 x 200-240 V +N, 50/60 HZ 3x 400 V+N, 50/60 HZ acc. Requirements
Max. power consumption****	Approx: 18,5kW
Recommended Fuse	40 A
Supply water filter	10 My
Water supply	Normal clean tap 2-6 bar Min. flow 13 l/m
Operating and storage temperature	2-37 °C ambient (30-70% RH)
Calibration certificate incl.	√
Land of origin	Denmark
CE, UL & CSA Approval	√

* SCITEQ recommend the use of IPAD or similar with screen resolution:2388x1668

** Transmitters are standard available in following sizes: 600, 1000 and 1600 bar. Other sizes on request.

*** Long term stability 1 year = +/- 0,1 % FS, NLH (BSL) = +/- 0,2 % (25°C).

**** Power consumption is for standard but will vary depending on the required flow and pressure and frequency of the supply grid.



End closures

End closures (pipe plugs) designed for sealing off samples subjected to high pressures are available in custom sizes, enabling you to safely test any pipe diameter.



Stainless steel hoses

High pressure hoses for use inside the test chambers such as tanks and ovens. Inner material suitable for the heat and high pressures and protected with stainless outer hose. Supplied in different lengths according to need and mounted with quick couplers certified for high pressure testing.



High Pressure hoses

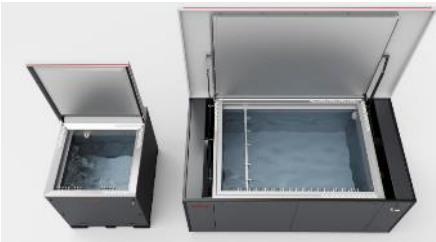
High pressure hoses to connect high pressure stations to test chambers tank and samples. Supplied in different lengths according to need and mounted with quick couplers certified for high pressure testing.

Essential Equipment



End closures

End closures (pipe plugs) designed for sealing off samples subjected to high pressures are available in custom sizes, enabling you to safely test any pipe diameter.



SIGMA thermo tank

The SIGMA thermo tank is the obvious choice to condition test samples. The tank is available in two dimensions suitable for various sample configurations at 0-95° Celsius.

Associated Equipment



SCITEQ Lab saw

For preparing plastic pipe samples by making a parallel cut and chamfering edge. Conveyor with auto feeding. Pipe diam. from $\varnothing 32$ mm to $\varnothing 630$ mm



SCITEQ End closure mounting

& demounting machine.
For handling heavy large pipe samples and end closures up to $\varnothing 1600$ mm conveniently and efficiently.



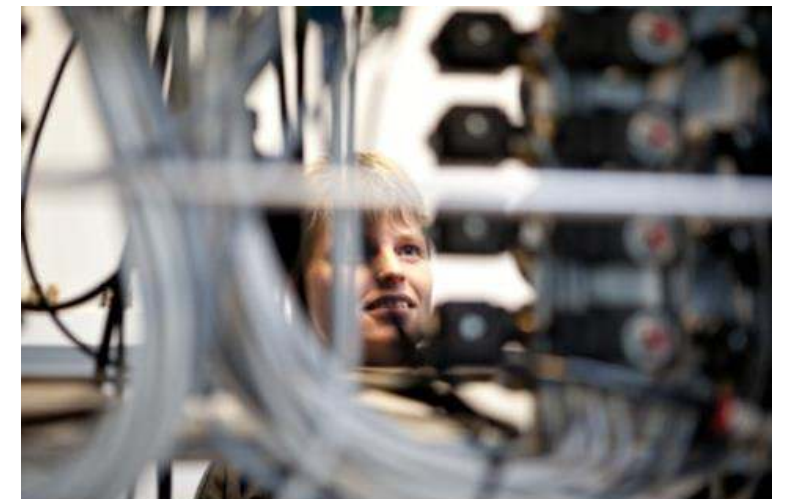
Installation & training

SCITEQ's trained service technicians perform onsite installation of your new SCITEQ equipment as well as onsite or remote training of your operating personnel who will be using the equipment.



SCITEQ Care

You will find the level of service suitable for your test setup with SCITEQ Care. SCITEQ service engineers will visit you annually to perform the best service and calibration. With SCITEQ Basic, More or All Care package you gain access to a long list of advantages, discounts and free support from SCITEQ skilled technician. [Learn more about SCITEQ Care](#)



Support online & on-site

SCITEQ offers online and on-site support on all SCITEQ products, for fast and effective problem solving, training, setup, etc. If you have an unforeseen challenge or you need advise asap, you can contact service@sciteq.com or call us for urgent support.