

## X-ACT Pressure test equipment



To predict the future is to invent it

## X-ACT pressure test equipment

### Features

The X-ACT pressure series is a modular airless pressure testing system. All modules are designed to fit into an elegant standard cabinet with a compact footprint. The modularity makes it easy to expand with more pressure stations according to the exact needs, making it future upgradeable.

SCITEQ unique software - online or local and controller panel provides real-time overview & intuitive control of on-going tests.

SCITEQ Online support via safe internet connection is naturally available for upload of software updates, trouble shooting as well as remote control of software and test equipment itself.

### Scope

SCITEQ X-ACT pressure series test determines the resistance (both long term and short term) to internal pressure on thermoplastic pipes, fittings and assemblies for conveyance of fluids.

The product design complies with following pipe diameter configurations:

- Up to Ø800 [mm] pipe diameter in long term test, provided the total volume expanding of the test specimen until pressure set point is reached is less than 120dm<sup>3</sup> within 1 hour from test startup (max allowed pressuring time is 1 hour according to ISO1167 and max flow rate pr SUB station is 2l/min)
- Up to Ø315 [mm] pipe diameter in short term test, provided the total volume expanding until fracture (burst) is less than 10.5dm<sup>3</sup> within 70 seconds from test startup (max allowed pressuring time is 70s according to ASTM D1599 and max flow rate in a BURST station is 9l/min)

### Features - DPCS

SCITEQ's intelligent Dynamic Pressure Control System ensures that test pressures are maintained with unparalleled accuracy no matter what size sample is connected to the system. Static, burst and cyclic testing can all be accommodated.

Flow per station: max. flow 2 l/min (max. flow 9 l/min for burst). For other valve flow and power pack flow configurations, refer to the SCITEQ HCP solutions.

# X-ACT modularity

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## X-ACT modules



### X-ACT SUB module

Provides 5 or 10 independently operating pressure stations up to max. 100 or 160bar. Semi-automatic individual pressure transmitter calibration through integrated main transmitter is optional. Built-in fast reacting valves for precise pressure control.

- ✓ Max. 100 or 160 bar regulated pressure output
- ✓ Max. flow per station: 2 l/min.

### X-ACT PowerPack module

Pressure source feed to all X-ACT SUB modules. Various models available incl./excl.output for optionally BURST modules. With built-in high pressure pump and 10 micron inlet filter.

- ✓ Max. 100 or 160 bar regulated pressure output.
- ✓ Max. 200bar unregulated output (optional)
- ✓ Max. flow: 17 l/min.

### X-ACT BURST module

Provides one linear burst pressure station up to max. 200bar within 60-70 seconds. Built-in fast reacting high flow and pressure valves for fast and precise pressure control. Requires PowerPack module with output for BURST module.

- ✓ Max. 200bar regulated pressure output
- ✓ Max. flow: 15l/min.

### X-ACT HCP3 module

Provides three independently high volume operating pressure stations up to max. 100bar regulated pressure output. Built-in fast reacting valves for precise pressure control.

- ✓ 3 individual stations
- ✓ Max. 100 bar
- ✓ Max. flow: 15 l/min.

### X-ACT Cyclic module

Provides a cyclic "saw tooth" pressure output between 5 to 10bar or 5 to 30bar. Test frequency up to 1Hz, 60 cycles per minute. Built-in high pressure pump, 10 micron inlet filter and water tank for recirculation of water.

- ✓ Cyclic pressure output between 5 to 10bar or 5 to 30bar
- ✓ Max. flow: 4 l/min.

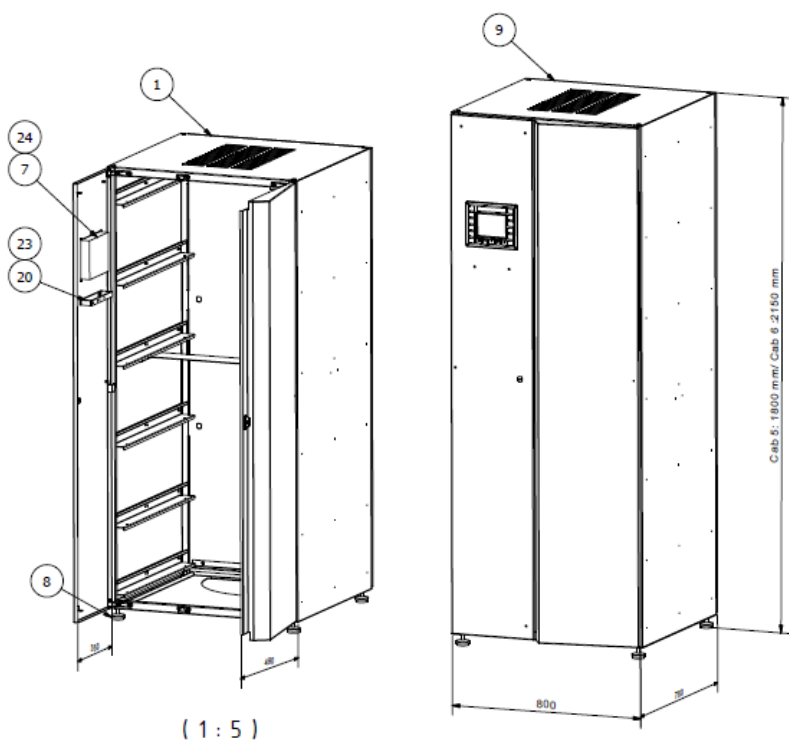
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# Dimensions

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## X-ACT Cabinets



NOTE! Please refer to table on following pages for dimensions according to above drawings.

### X-ACT CAB5

Cabinet for SCITEQ X-ACT modules. Extremely compact design allows for installation of up to 40 pressure stations and a PowerPack within a footprint of 800x800mm. External dimensions: 908x800x1805mm (LxWxH). Included is a central power supply rail for all modules and hidden column for hoses to secure a completely closed design cabinet.

### X-ACT CAB6

Cabinet for SCITEQ X-ACT modules. Extremely compact design allows for installation of up to 50 pressure stations and a PowerPack within a footprint of 800x800mm. External dimensions: 908x800x2100mm (LxWxH). Included is a central power supply rail for all modules and hidden column for hoses to secure a completely closed design cabinet.



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## X-ACT operation

### Energy consumption

SCITEQ's Dynamic Pressure Control System uses only approx. 1/3 of power compared to conventional systems.

SCITEQ is the only supplier of the DPCS system. Other systems on the market use pressure pumps that run constantly via a bypass/circulation valve, hence the power consumption will be equal to the motor size + the power consumption for the control unit. As we supply pressure with the DPCS system to a high pressure reservoir the running time of the pump is reduced by more the 90%, thereby significantly reducing the power consumption.

Our S40 controller uses an electronic power transformer to generate 24 volt power to the solenoid. This electronic power transformer regulates the output according to the specific need.

### Maintenance & service

The smart design of the X-ACT cabinet offers easy access for servicing and the pressure test can operate during service or maintenance.

The manually operated valve for each SUB module isolates each sub (optionally each block of 5 stations) making it possible to run all other stations while servicing 5 or 10. The valves are NC (normally closed), each station will keep pressure when turned off.

Drainage of pressure equipment for servicing only necessary servicing the A valve and this is very rarely necessary.

### Standards

The SCITEQ X-ACT pressure solutions complies with the below standards. Referring national, or sub standards referring to the below and others on request .

*Long term test:*      *ISO 1167-1:2006*  
                                 *ASTM D1598-02*

*Short term test:*      *ASTM D5199-99*

*Harmonized standards:*      *EN ISO 12100-1*  
   *EN ISO 12100-2*  
   *EN ISO 13849-1*  
   *EN ISO 14121-1*  
   *EN ISO 60204-1*

*Normative references:*      *Machinery Directive 2006/42/EC*  
   *EMC Directive 2004/108/EEC*  
   *Low voltage Directive 2006/95/EEC*

# Technical Specification



## X-ACT Pressure Test Equipment

	X-ACT Cab 5/6	X-ACT PowerPack module	X-ACT SUB 5 modules	X-ACT SUB 10 modules	X-ACT Burst module	X-ACT High Capacity Pressure 3 (HCP3) Module	X-ACT Power module
<b>External dimensions HxWxD [mm]</b>	CAB 5: 1800 x 800 x 780 CAB 6: 2150 x 800 x 780	730 x 637 x 255	730 x 475 x 309	730 x 475 x 309	730 x 460 x 305	730 x 760 x 305	730 x 748 x 90
<b>Shelve capacity in cabinet</b>	CAB 5: PP + 40 Stations CAB 6: PP + 50 stations	N/A	N/A	N/A	N/A	N/A	N/A
<b>Weight [kg]</b>	CAB 5: Approx 92 CAB 6: Approx 104	Approx: 62	Approx: 38	Approx: 65	Approx: 21	Approx: 29	Approx: 28 kg
<b>Colour</b>	Ral 9002/30 (White) Ral 7016/30 (Dark grey)	N/A	N/A	N/A	N/A	N/A	N/A
<b>Material: cabinet and shelves</b>	S235JR (Powder coated)	S235JR	S235JR	S235JR	S235JR	S235JR	S235JR
<b>Material: Piping and fittings</b>	AISI 304, S235JR and brass	AISI 304, S235JR and brass	AISI 304, S235JR and brass	AISI 304, S235JR and brass	AISI 304, S235JR and brass	AISI 304, S235JR and brass	AISI 304, S235JR and brass
<b>Power supply*</b>	3x 400 V+N, 50/60 HZ	3x 400 V+N, 50/60 HZ	3x 400 V+N, 50/60 HZ	3x 400 V+N, 50/60 HZ	3x 400 V+N, 50/60 HZ	3x 400 V+N, 50/60 HZ	3x 400 V+N, 50/60 HZ
<b>Max. power consumption**</b>	Approx: 3,2 KW, 5,7 A (Total for the whole system)	Approx: 3 KW, 5,3 A	Approx: 0,1 KW	Approx: 0,2 KW	Approx: 0,1 KW	Approx: 0,1 KW	N/A
<b>Recommended Fuse</b>	16 A	16 A	16 A	16 A	16 A	16 A	16 A
<b>Testing according to following standards</b>	ISO1167-1:2006 ASTM D1598-02 ASTM D1599-99	N/A	ISO1167-1:2006 ASTM D1598-02 ASTM D5199-99	ISO1167-1:2006 ASTM D1598-02 ASTM D5199-99	ASTM D1598-02 ASTM D5199-99	ISO1167-1:2006 ASTM D1598-02 ASTM D5199-99	N/A

\*Power supply can be customized .

\*\*Power consumption may variate depending on the required flow of the PowerPack and frequency of the supply grid (standard 50 Hz).





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Flow	N/A	8,5 l/m (17 l/m on request)**	2 l/m pr. station	2 l/m pr. station	8,5 l/m (15 l/m on request)**	8,5 l/m (15 l/m on request)**	N/A
Max. pressure	100/160 bar (200 bar on request)	100/160 bar (200 bar on request)	100/160 bar (200 bar on request)	100/160 bar (200 bar on request)	100/160 bar (200 bar on request)	100/160 bar (200 bar on request)	100/160 bar (200 bar on request)
Pressure rise time	N/A	N/A	Adjustable (depending on sample expansion)	Adjustable (depending on sample expansion)	Adjustable (depending on sample expansion)	Adjustable (depending on sample expansion)	Adjustable (depending on sample expansion)
Transmitter type	N/A	Trafag NAH8252 (250 bar)	Trafag NAH8252 (6,10,16,25,40,60,100,160,250 bar available)	Trafag NAH8252 (6, 10, 16, 25, 40, 60, 100, 160, 250 bar available)	Trafag NAH8252 (6,10, 16, 25, 40, 60,100, 160, 250 bar available)	Trafag NAH8252 (6, 10, 16, 25, 40, 60, 100, 160, 250 bar available)	N/A
Transmitter accuracy*	N/A	*Long term stability 1 year = +/- 0,1 % FS, NLH (BSL) = +/-0,2 % (25°C).					N/A
Control rise time	N/A	2 ms/ 10-90% nominal pressure	2 ms/ 10-90% nominal pressure	2 ms/ 10-90% nominal pressure	2 ms/ 10-90% nominal pressure	2 ms/ 10-90% nominal pressure	N/A
Control resolution	N/A	0,01 bar	0,01 bar	0,01 bar	0,01 bar	0,01 bar	N/A
Control accuracy	N/A	Better than +/- 1 % of set pressure	Better than +/- 1 % of set pressure	Better than +/- 1 % of set pressure	Better than +/- 1 % of set pressure	Better than +/- 1 % of set pressure	N/A
Supply water filter	N/A	10 My	N/A	N/A	N/A	N/A	N/A
Water supply	Normal clean tap 2-6 bar Min. flow 10 l/m (13 l/m)	Normal clean tap 2-6 bar Min. flow 10 l/m (17 l/m)	Normal clean tap 2-6 bar Min. flow 10 l/m (13 l/m)	Normal clean tap 2-6 bar Min. flow 10 l/m (13 l/m)	Normal clean tap 2-6 bar Min. flow 10 l/m (13 l/m)	Normal clean tap 2-6 bar Min. flow 10 l/m (13 l/m)	Normal clean tap 2-6 bar Min. flow 10 l/m (13 l/m)

\*0,5 % FS (25 °C ambient)

\*\* The stated value includes a safety margin.



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	X-ACT Cab 5/6	X-ACT PowerPack module	X-ACT SUB 5 modules	X-ACT SUB 10 modules	X-ACT Burst module	X-ACT High Capacity Pressure 3 (HCP3) Module	X-ACT Power module
Controller type	S40 with 5,7" colour screen	N/A	S40 black box (No screen)	S40 black box (No screen)	S40 black box (No screen)	S40 black box (No screen)	N/A
Operating and storage temperature	2-37 °C ambient (30-70% RH)	2-37 °C ambient (30-70% RH)	2-37 °C ambient (30-70% RH)	2-37 °C ambient (30-70% RH)	2-37 °C ambient (30-70% RH)	2-37 °C ambient (30-70% RH)	2-37 °C ambient (30-70% RH)
CE Approval	√	√	√	√	√	√	√
WEB SCITEQ Software availability	√	√	√	√	√	√	√
Calibration certificate	√	√	√	√	√	√	√
CE Approval	√	√	√	√	√	√	√

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## WEB SCITEQ online 24/7

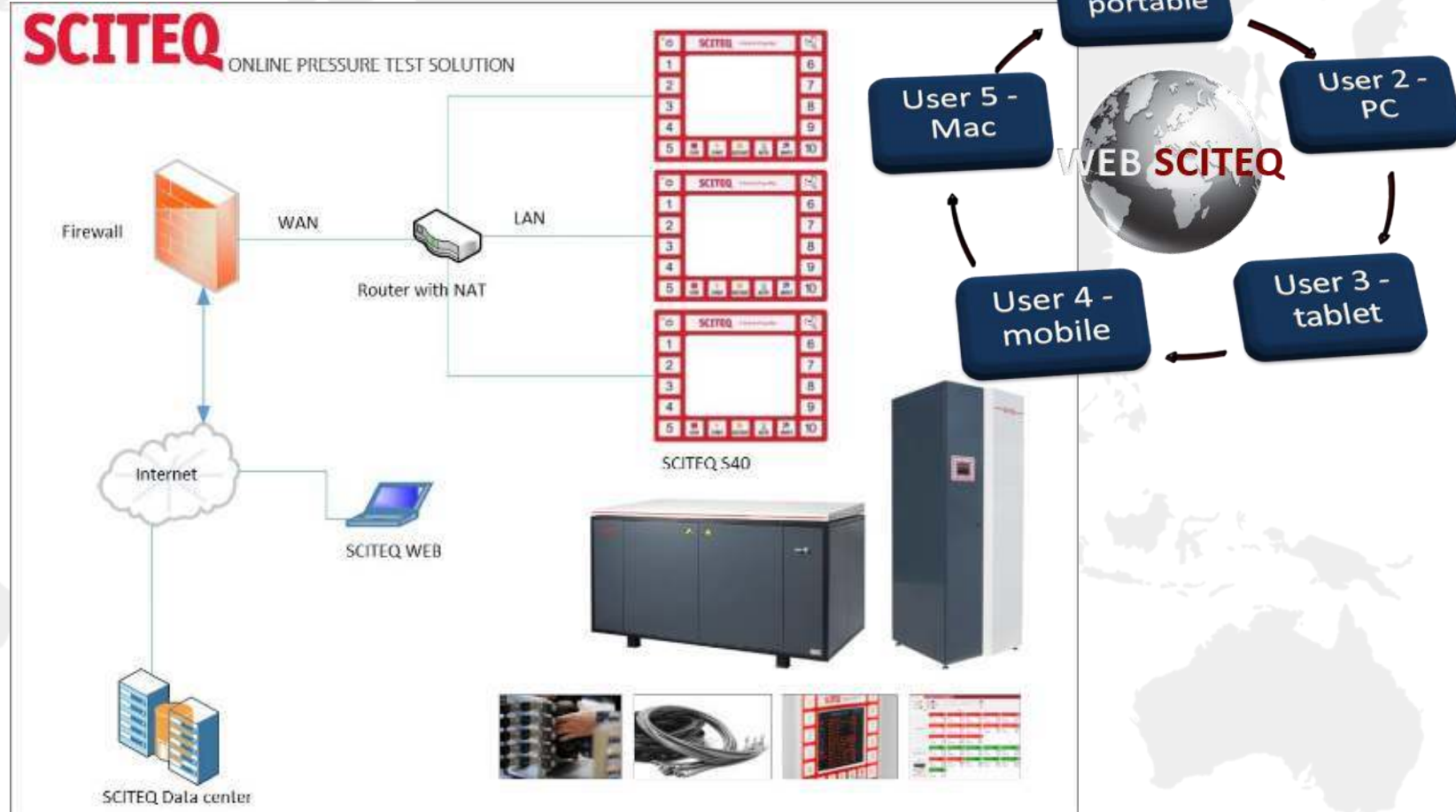
### WEB-SCITEQ hosted or local server solution

WEB-SCITEQ software is designed to control X-ACT pressure testing in accordance with International Standards. The WEB-SCITEQ Software can be installed in either hosted (external install) or Local (On-site install). The software and data is hosted on customers own server internally.

WEB SCITEQ is in both set-ups accessible from a web browser, tablets, smartphones.

### WEB-SCITEQ advantages:

- Quick indication of available stations and tanks
- Test parameter set-up can be done remote or at the stations
- Database exchange with other software programs is made easy via SQL database structure and Cloud based services
- Automatic backup.
- Data is accessible from any client, no matter what location.
- Automatic pressure test surveillance 24/7
- Automatic error reporting to users.
- On-line service access from SCITEQ.



## Essential accessories



### End closures without tie-bar

ECO Line Thermo Tank inlet/oulets can be configured in various ways. Number of quick connectors for pressure supply acc. to as many samples per station as needed.



### End closures with tie-bar

ECO Line Thermo Tank inlet/oulets can be configured in various ways. Number of quick connectors for pressure supply acc. to as many samples per station as needed.



### End closures large diameters

Patented design Air frame.



### Hoses

SCITEQ is supplier of hoses to connect pressure stations to thermo tank or to samples. Supplied in different lengths according to need.



### Stainless steel hoses

SCITEQ is supplying hoses for use inside the Tank. These are made with inner material suitable for the heat and pressure and protected with stainless outer hose.



### Couplings

X-ACT equipment standard couplings are Tema 2510 quick connectors. Other systems can be supplied to fit customer needs.

# Essential & Associated Equipment

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## Further SCITEQ equipment

### Essential Equipment



#### SCITEQ End closures

SCITEQ is supplier of various ranges of end closure suitable for almost any purpose. Within a range of Ø8-Ø1600 mm, with or without tie-bars.



#### ECO line thermo tank

The SCITEQ X-ACT Pressure Test Equipment is the obvious choice to pressure test your sample. Equipment suitable for testing within a range of 1-400 bar, 2-100 l/min.

### 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 Ø32 mm to Ø630 mm



#### SCITEQ End closure mounting & demounting machine.

For handling heavy large pipe samples and end closures up to Ø1600 mm conveniently and efficiently.

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## Service & Support around the Globe



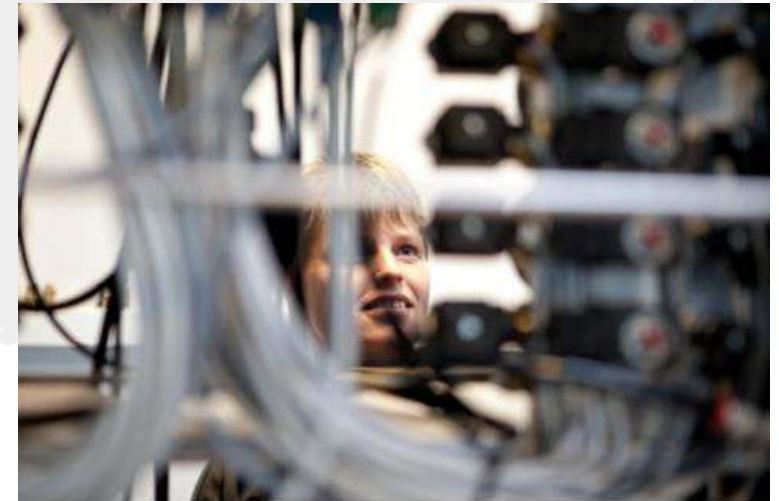
### Installation & training

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.



### Service agreements

With a SCITEQ service agreement you can rest assured your equipment will perform 100% all the time. Specialized service engineers will visit you annually to perform the best service and calibration of your equipment. You can always liaise with your SCITEQ service technician when in need of advice, looking for new solutions or trying out new equipment.



### 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](mailto:service@sciteq.com) or call us for urgent support.