

RCP – Rapid Crack Propagation



We help you perform even better



The Test

Rapid crack propagation (RCP) is a fast fracture type of failure. Cracks are thought to initiate at internal defects on an impact of impulse event and can travel long distances quickly. RCP occurs in pressurized systems with enough stored energy to drive cracks faster than energy is released. Cracks tend to have a smooth fracture surface. RCP is affected by temperature, energy driving force, material, pipe size and processing efforts.

The SCITEQ RCP is for determining arrest or propagation of a crack initiated in a thermoplastic pipe intended for the supply of gases or liquids at a specific temperature and internal pressure according to ISO 13 477.

We take the use of RCP in R&D to a new level

State-of-the-art technology in the SCITEQ drive ensures stable and accurate speeds from 10 to 15,0 m/sec. as well as unparalleled accuracy of +/- 0,1 m/sec. The fully automatic conveyor system offers precise and easy loading of a wide range of sample dimensions while also ensuring optimal safety.

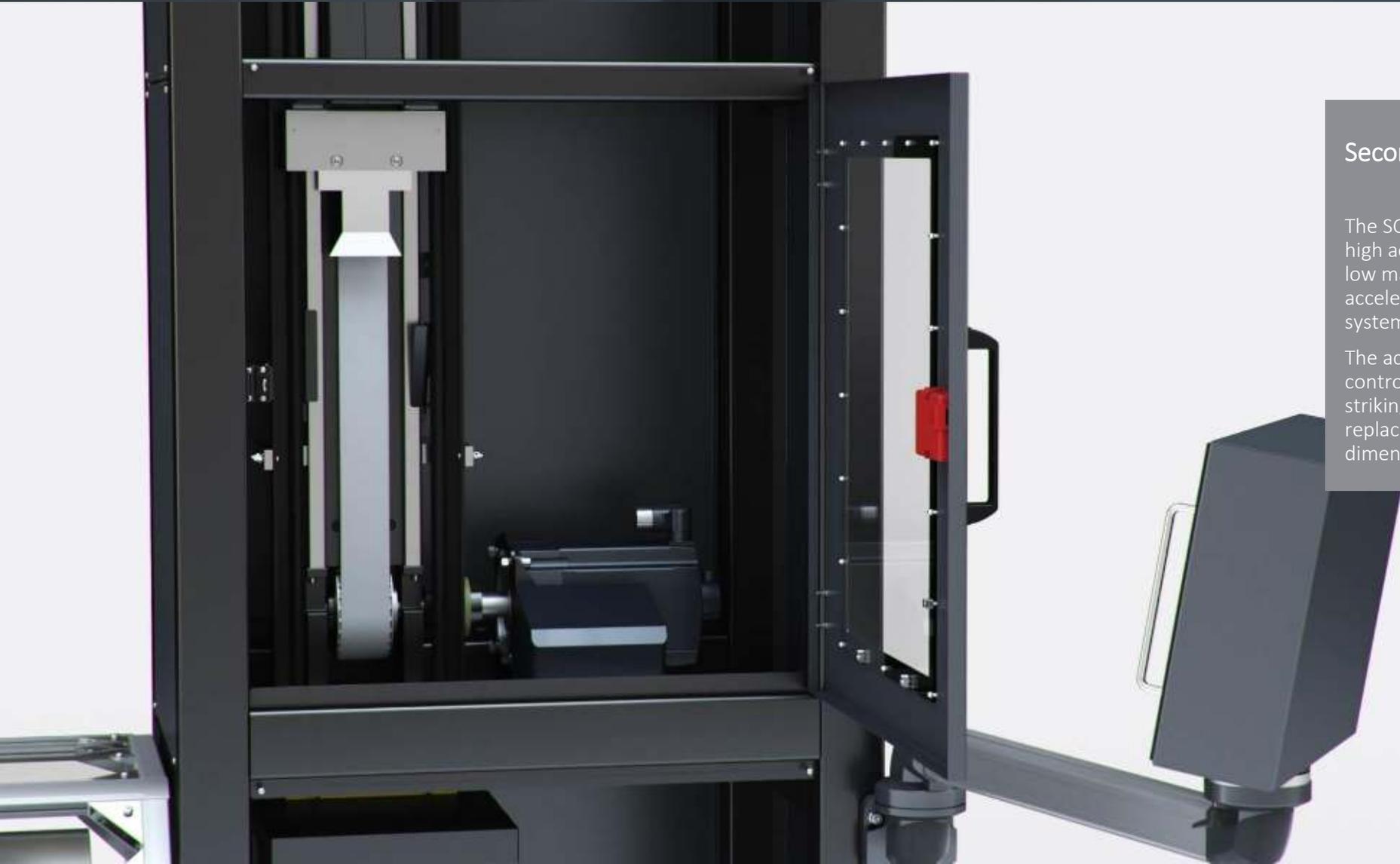
About RCP-Rapid Crack Propagation

SCITEQ

Second-to-none precision & safety

The SCITEQ Rapid Crack Propagation is designed for high accuracy impact, easy and safe operation and low maintenance need. The machine consist of a acceleration tower and a automatic pipe conveyor system.

The acceleration tower consist of a drive which controls the correct movement of the striker while striking into the pipe. It also enables easy and safe replacement of the striker, when changing sample dimension.



About RCP-Rapid Crack Propagation

SCITEQ



Unique SCITEQ engineered drive

RCP striker easy to change



The most accurate RCP in the world

The SCITEQ RCP is the only RCP in the market with guaranteed speed accuracy of 0,1 m/sec. with the unique SCITEQ engineered drive. Select velocity speed between 10-15 m/sec. The RCP easy to operate from the main touch panel, placed on a moveable flex arm. The fully automatic conveyer enables easy and precise test procedures. Complete and valid test is done in under 2 minutes.

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Automatic conveyor

The automatic pipe conveyor system gives the necessary flexibility to enable testing on a large range of pipe dimensions and in the same time making it fast, simple and secure. Lift sample by crane or hand onto the conveyor. The flexibility of the conveyor platform allows you to test a wide range of sample dimensions. Diameters are clearly marked on the conveyor, thus making it easy to identify where to place the brackets holding the test unit. Before impact, the sensor detects correct positioning of sample, allowing the test to be initiated. automatic positioned in the acceleration tower just with a few click's on the operation panel.

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Safety first

Automatic safety features and remote control ensures safe and secure tests, while also eliminating any risk of faulty tests.

The automatic conveyor system comes with an extra safety cover as well as an included control panel, enabling you to operate the machine remotely.

In addition to this, the doors lock automatically, when the machine goes into test mode. The striker knife is only activated when the sample is correctly positioned, preventing inaccuracy and unsafe impacts.

Furthermore, the doors can only be opened after the test is completed, with the striker knife safely positioned on the brake pad or at striker lock



External dimensions, LxWxH [mm]	3019 x 1450 x 2481
Weight, tower only [kg]	Approx: 1220
Weight, all included, vacuum suction, extra tool plate, etc. [kg]	Approx: 1510
Pipe Outer dimension range (OD) [mm]*	DN90-DN315
Wall thickness range [mm]	SDR 9-22
Sample length [mm]	$L_t = 7,5 d_n \pm 2 \text{ mm}$
Striker speed range	10-15,5 m/s
Resolution of striker speed adjustment	0,5 m/s
Accuracy of speed measurement	$\pm 0,1 \text{ m/s}$
Recorded time it takes to do impact from sample is conditioned and stored in conditioning chamber**	Approx: 50 sek.
Automatic lid and hatch interlock system for safe operation	√
Complied standard	ISO13477:2008
Units available	Imperial and Metric (Inches and mm)
Language available***	English
Data storage	USB memory card
Complied standard	ISO13477:2008

*Additional tool kits is necessary for each dimension and SDR class.

**Testing done with DN4" pipe and conditioning room located approx. 5 mtr. from the RCP.

*** Other languages available on request.



Power supply*	3x 400/480 V (No neutral), 50/60 HZ (AC/DC protection relay required, due to servo drive)
Maximum power consumption	Approx: 25 kW, 30 A
Recommended fuse	63 A, (earth leakage circuit breaker (ELCB) must be AC/DC prepared)
Air supply [Bar]	4-7
Operating temperature [°C]	20-25
Storage temperature [°C]	(-10)-40
CE approval**	√
Operation panel	Siemens TP900, 9 inch touch panel

* Other power supply available at request

** Machines can on request be produced with CSA and/or UL approved parts



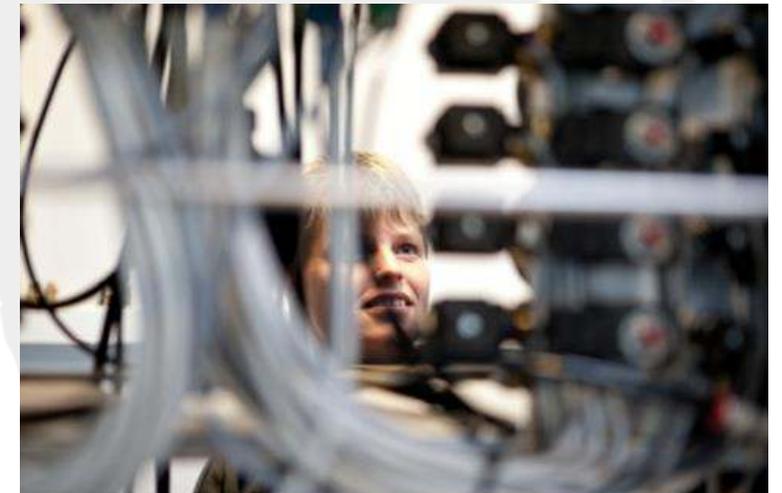
Installation & training

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 or call us for urgent support.