



TEST SYSTEMS DUST & WATER



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ABOUT US

iTS GmbH is an innovative family business in its second generation. We are specialised in the development and manufacture of systems for environmental simulation and IP testing. Our iTS systems are used to test products all over the world - wherever dust and water resistance are essential.

You benefit from our flexible modular system, which enables us to customise test equipment precisely to your specific requirements. Whether individual devices such as swivelling tubes for IPX3/4 tests or complex chamber and room solutions - we supply the right solution for every test challenge:

- ✓ Planning and production of new systems
- ✓ Maintenance and calibration of iTS test systems
- ✓ Expansions and retrofits of existing test systems

We are continuously developing our test systems - a constant process to offer you the best: Optimised processes, simple operation and automatic documentation.

Since 2021, we have been producing in a state-of-the-art building complex. This investment underlines our commitment to quality and innovation. The first-class equipment in our production facility allows us to optimally support our employees while achieving outstanding results for our customers.

At iTS, we combine family tradition with technological excellence. We are your partner in environmental simulation and IP testing.





Connection for vacuum device



Windshield wiper in test chamber door



Dust injection



Test chamber SK 1000



Plant room

ITS DUST TEST CHAMBER SK

Dust-protected and dust-tight are the most important classifications to ensure that your products also perform perfectly under real conditions after an environmental simulation. ITS dust chambers from the SK series are used worldwide for these IP tests or other dust-tightness tests.

Our SK dust test chambers provide reproducible and reliable test results. We achieve this through optimally harmonised mechanics, sensors and control technology. Sensors with optional calibration - ITS factory calibration or by a DAkkS partner - including the corresponding certificates also support your quality management.

The dust test chamber SK can be operated from a user-friendly interface on the touch panel. You can either start preset standard tests automatically or realise tests according to your own specifications. The easy-to-understand

ITS Companion app records and documents all relevant data. You can also customise the test report according to your requirements.

Our base SK series starting with the SK 500 for small test specimens to the flexible SK 2000 right to the walk-in XL chamber, which can be customised to your specific space and test situation.

The innovative SK series from ITS is available in 4 basic sizes:

SK Series	Test room size W x D x H [mm]
SK 500	500 x 500 x 1000
SK 1000	1000 x 1000 x 1000
SK 2000	2000 x 1000 x 1000
SK XL	2600 x 2250 x 2000



FUNCTIONS

- ✓ Dust circulation via fan
- ✓ Return transport of the test dust to the fan using pneumatic knockers or sliders (for SK XL)
- ✓ Fully automatic vacuum device incl. electronic vacuum and flow measurement
- ✓ Integration of up to 4 vacuum devices possible
- ✓ Dust chamber easy to position in the room on castors

SENSOR CALIBRATION

- ✓ Factory or DAkkS calibration incl. certificate for sensors
- ✓ Sensor adjustment to optimum operating point

CONTROL PANEL

- ✓ 7" touch panel for easy operation via PLC control
- ✓ Manual and automatic mode and display of all values during the test
- ✓ Data recording and evaluation via ITS Companion App

SK 500 / SK 1000

- ✓ Compact test systems for dust tests of small test specimens
- ✓ Efficient operation with a small footprint
- ✓ Test specimen weight: up to 50 / 100 kg

SK 2000

- ✓ Transverse or longitudinal chamber design (SK 2000 Q / SK 2000 L)
- ✓ SK 2000 D as double chamber (2x test chamber with 1000 x 1000 x 1000 mm each)
- ✓ SK 2000 QD with removable partition wall: Use as a double chamber but also as a large single chamber
- ✓ Test specimen weight: up to 100 kg

SK XL

- ✓ Fixed chamber installation on site
- ✓ Chamber depth can be extended in the size grid (750 mm)
- ✓ For very large test specimens such as battery packs for electric vehicles (EVs)
- ✓ Test specimen weight: up to 800 kg





IP X5



Electronics



IP X3/4



IP X9K



IP X6



WATER TEST CHAMBER SPK

The ITS water test chambers of the SPK series are used for IP tests and other tests that check your products for water ingress protection. From dripping water, spray water, splash water and jet water as well as hot high-pressure water: everything is possible in ONE water test chamber SPK from ITS.

With our flexible module system, you can configure the water test chamber SPK to suit your individual requirements. And you can upgrade it at any time if your testing demands increase.

The basis is a high-quality stainless-steel chamber. The large test chamber door allows user-friendly access to your DUT, which are positioned on the integrated turntable. Pumps, sensors, pipework and control technology are cleverly installed. Depending on the expansion stage, additional modules are required, such as the tunnel with water jets for IP X5/6/6K tests.

The SPK is operated comfortably via a large touch panel. Via an intuitive user interface, you can control the water test chamber. Stored standard tests can be started automatically or tests can be performed according to your own test settings. All data is recorded and documented with the user-friendly ITS Companion app. The test protocol can be individually configured.

The innovative SPK system is currently available in 4 different sizes. You will find suitable test equipment for larger DUT in our modular room solutions.

SPK series	Test chamber size W x D x H [mm]
SPK R200	960 x 960 x 900
SPK R400	1180 x 1180 x 1500
SPK R600	1500 x 1500 x 1500
SPK R800	2000 x 2000 x 2000



iP X1/X2 DRIPPING WATER

- ✓ Stainless steel dripping water box for hanging in the SPK
- ✓ 4 dripping water box sizes from 400 x 300 mm to 1000 x 1000 mm
- ✓ V2A dripping tube with bayonet catch for easy replacement
- ✓ Setting via flow rate
- ✓ Automatic tilting table for IP X2 tests available

iP X3/X4/X4K SPRAY/ SPLASH WATER

- ✓ Swivel tube sizes depending on test chamber and DUT size
- ✓ Swivelling via gear motor with position measurement
- ✓ Nozzles Ø 0.4/0.8 mm can be individually aligned
- ✓ Automatic control via flow rate and water pressure sensors

iP X5/X6/X6K WATER JETS

- ✓ Add-on tunnel with water jets
- ✓ Water supply from the SPK
- ✓ Automatic control via flow rate and water pressure sensors

iP X9/X9K HIGH-PRESSURE WATER

- ✓ 4 fixed lances or 1 swivelling lance in the SPK
- ✓ Hot water system and pump system in the SPK
- ✓ Automatic control via water temperature, flow rate and water pressure sensors

TURNTABLE

- ✓ Driven turntable for holding of DUT with position measurement
- ✓ Reversing operation for DUT with cable connection
- ✓ Height-adjustable for easy alignment of DUT

SENSOR CALIBRATION

- ✓ Factory or DAkkS calibration incl. certificate for sensors
- ✓ Sensor adjustment to optimum operating point

CONTROL PANEL

- ✓ 15" touch panel for easy operation via PLC control
- ✓ Manual and automatic mode and display of all values during the test
- ✓ Data recording and evaluation via ITS Companion app





ROOM SOLUTIONS

The ITS Room Solutions are ideal for water tests with DUTs that are too large or too heavy for a water test chamber. Or you already have a wet room available that can be equipped with ITS modules.

Each system is individually configured based on single components. This starts with manually adjustable water test systems and ends with a system consisting of components integrated into a control system, including water supply, calibrated sensors and analysis and logging functions via the ITS Companion app.

We customise your ITS test system according to your criteria - optimally adapted to the DUTs and the available facilities.

Modul	Functional range
Dripping device TG (IPX1/2)	Wall or ceiling installation Stand-alone
Swivel tube system SRA (IPX3/4/4K)	R200 to R1600
Water jet nozzles SW (IPX5/6/6K - UL/NEMA4)	Manual operation floor stand
Dip Tank TS/TT (IPX7/8)	Dip tank (round) for small DUT Dip tank (rectangular) with motorised lift
4 lance-system HDT (IPX9K)	Floor or wall installation
Splash water nozzle (ISO 16750-4)	Floor stand with nozzle
Turntable DT	Height-adjustable for small DUT Heavy duty design for large DUT
Water supply unit	Tank and pump systems Heating and cooling systems



 SPLASH WATER CHAMBER SWK

The ITS splash water chambers of the SWK series simulate situations such as driving through a puddle for the automotive industry. Intensive product tests as tough as the reality: The combination of a test chamber with a temperature of up to 160°C and the maximum 4°C cold water splash, which abruptly cools the DUT in recurring cycles, is what makes the difference. In addition, Arizona dust can be added to the splash medium to create even more authentic test conditions.

The SWK can be equipped with up to 4 standard-compliant, coolable nozzles in the test chamber. These can either be fixed in the side wall or flexibly aligned to achieve the optimum coverage of different DUT sizes. The splash water tank is located in a pull-out drawer for easy access. Cooling is provided by an air-cooled refrigeration system to ensure

that an ice-cold splash medium is always available. The splash function is realised by a controlled water pump, which ensures precise and effective water distribution.

The large 15" touch panel on the SWK allows you to set up the tests intuitively and monitor the test process. Together with the ITS Companion app, data is reliably recorded and documented.

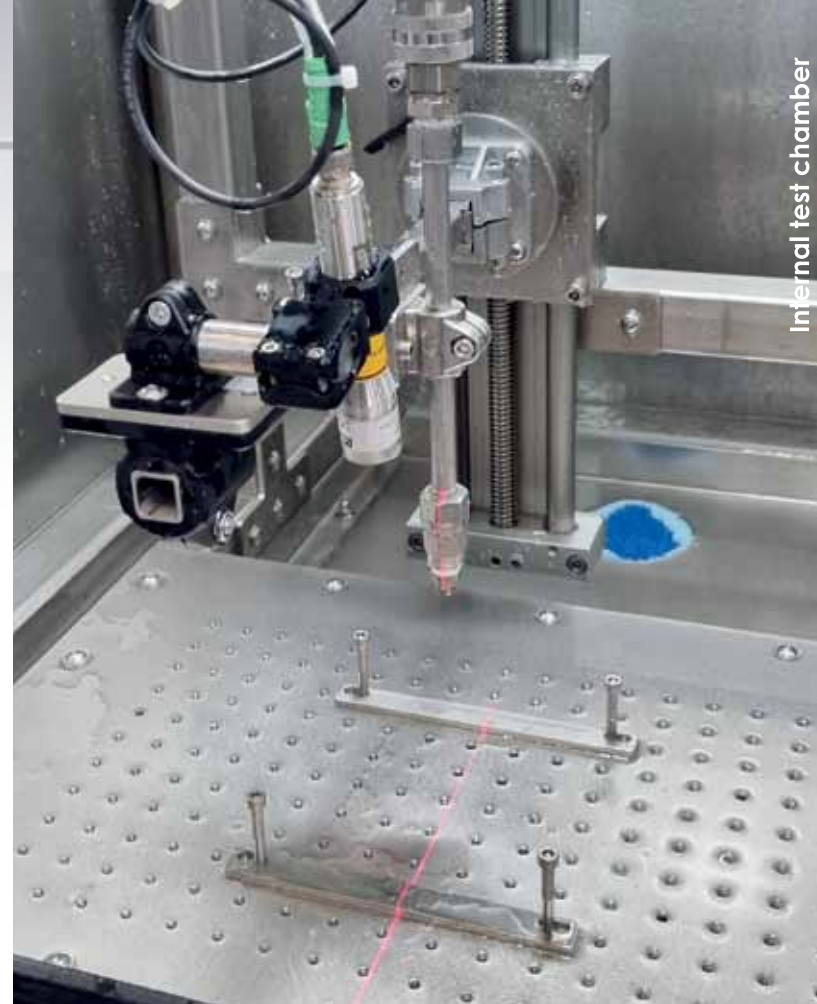
The SWK series is available in the following sizes:

Splash Water Chamber	Test chamber size W x D x H [mm]
SWK 100-100-75	1000 x 1000 x 750
SWK 125-100-75	1250 x 1000 x 750
SWK 125-125-125	1250 x 1250 x 1250
SWK 200-150-100	2000 x 1500 x 1000
SWK XL	3000 x 3600 x 2000

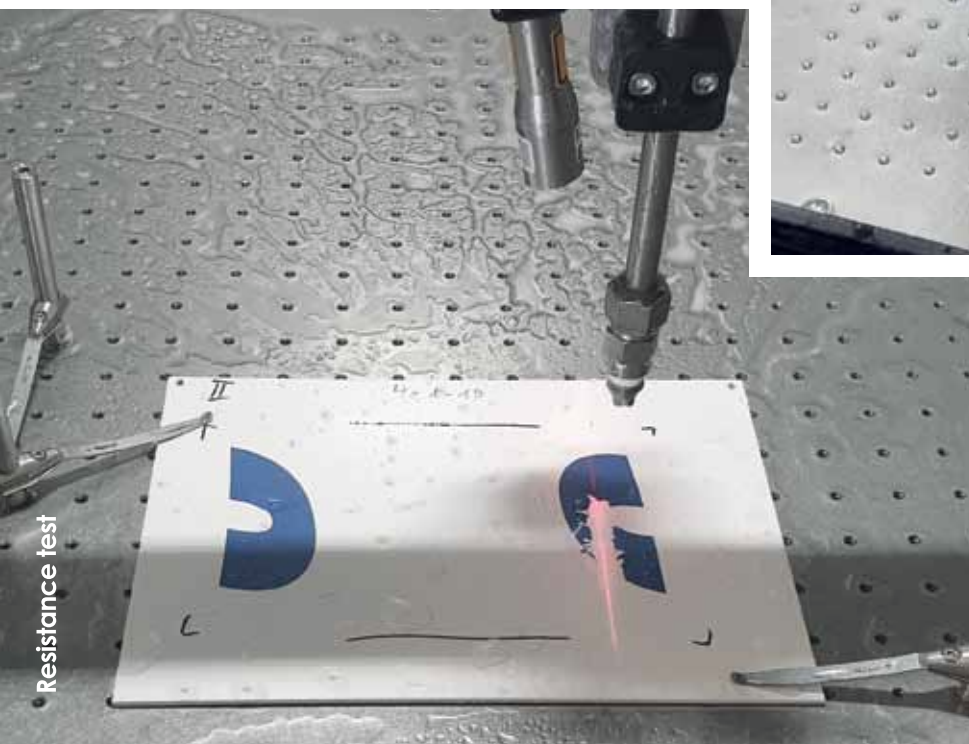




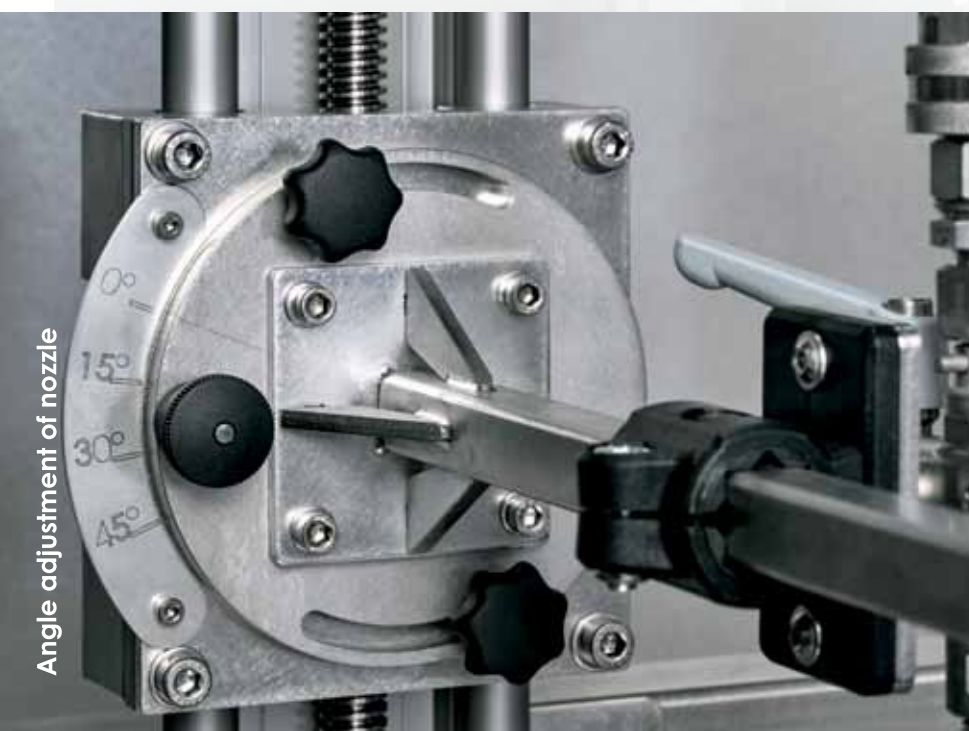
Power units



Internal test chamber



Resistance test



Angle adjustment of nozzle



Impression nozzle jet pattern



ITS STEAM JET TESTER DWT

The ITS steam jet testers of the DWT series are used for testing the coating quality of test specimens or small test pieces using a defined pressurised water jet. The test lance with the flat jet nozzle is aligned by a line laser. From the measured flat jet nozzle, water at a temperature of up to 85°C and a maximum pressure of 120 bar is applied to the scribed sample.

After preparing the sample, you intuitively set up the tests with the DWT using the large touch panel. All test values and parameters are displayed while running the test. With the ITS Companion App, the data is recorded, analysed and then documented as you wish.

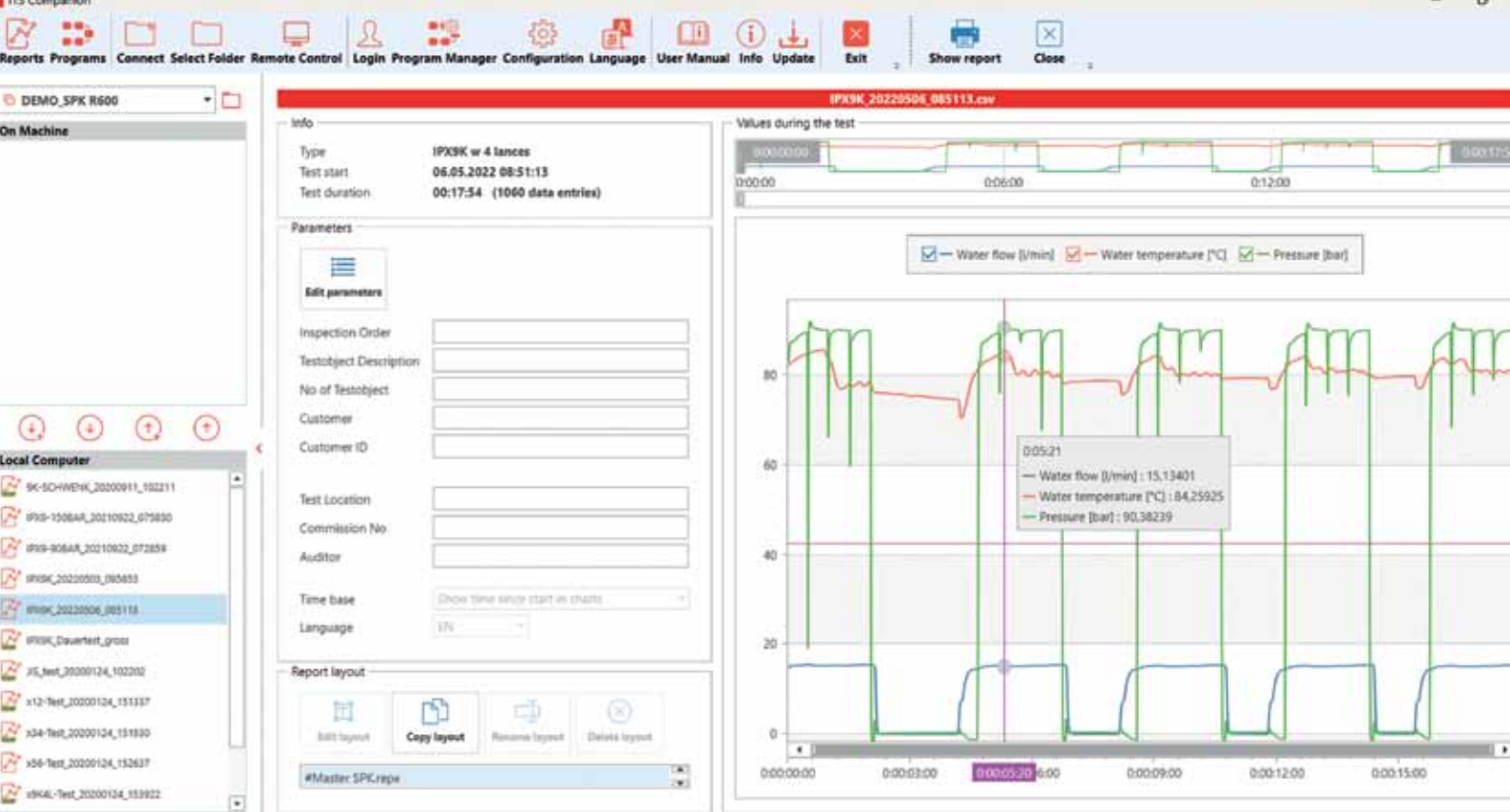
With the DWT, tests can be carried out in ac-

cordance with international standards as well as specifications from the automotive industry. Many standards are already stored in the control system. It is also easy to add your own test specifications.

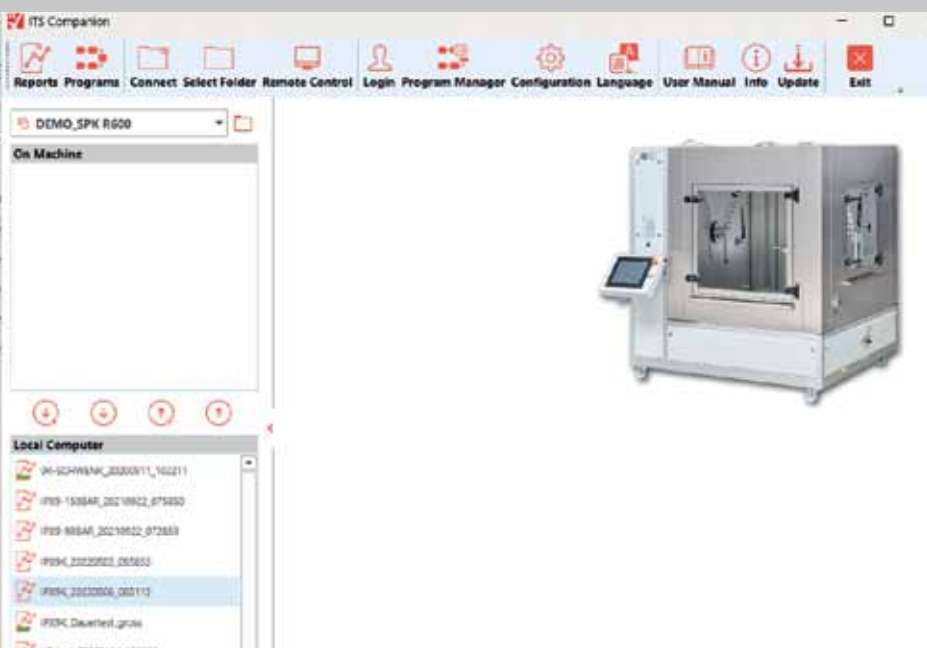
The quality of coatings is a key factor in the automotive industry. They not only protect the surfaces, but also the functions of the components. An attractive and durable appearance is just as important. For this reason, pressurised water jet testing is an essential part of quality assurance.

The DWT series is available in 2 test chamber sizes:

Steam Jet Tester DWT	Test Chamber Size W x D x H [mm]
DWT 500	900 x 900 x 1000
DWT 1000	1180 x 1180 x 1500



ITS Companion



ITS COMPANION APP

The ITS Companion App is more than the reliable control system with the stored test programs and many configuration settings for ITS test systems. The Companion App offers a powerful solution for analysing and documenting test data that can be easily integrated into your quality management system.

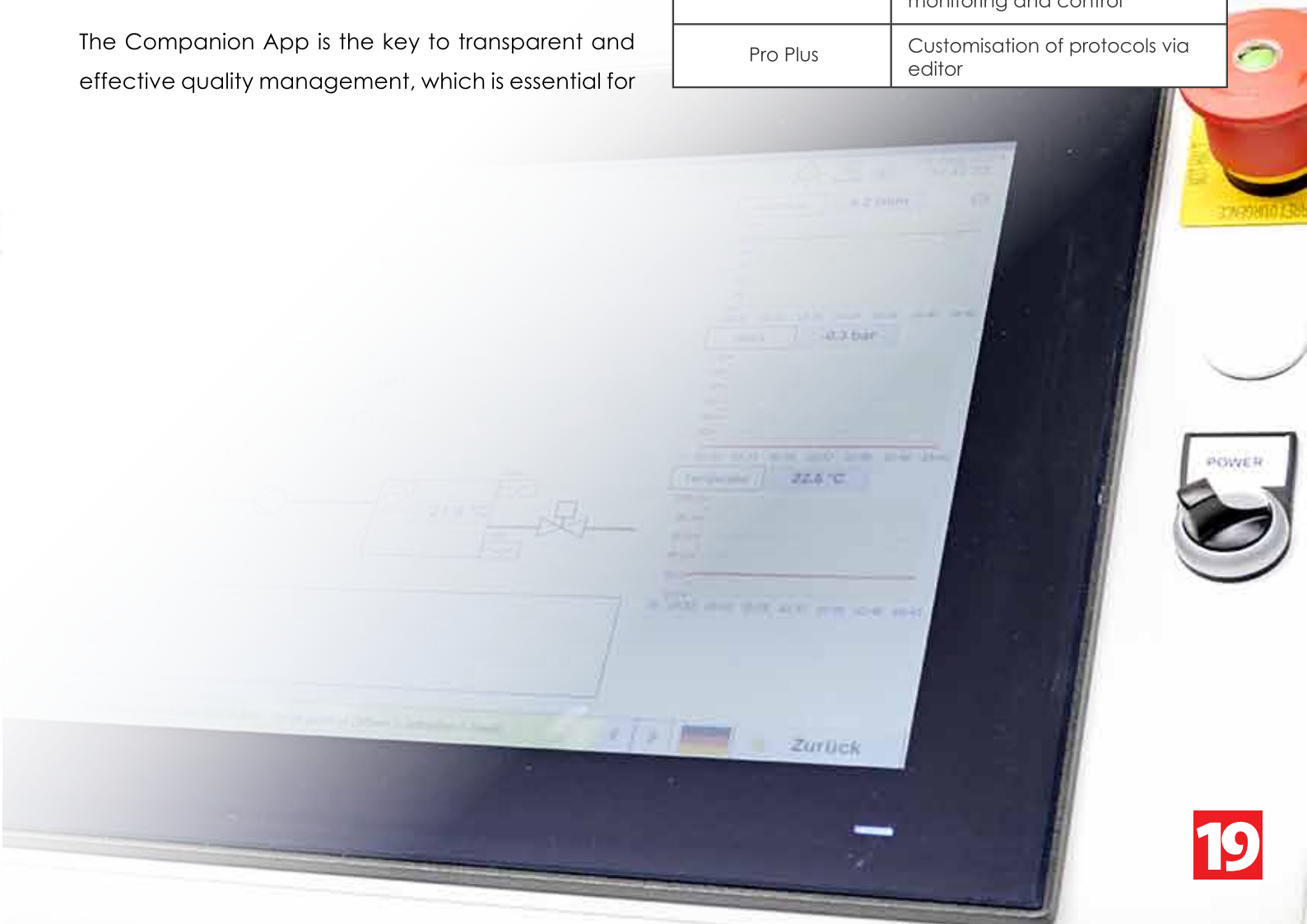
The Companion App allows you to record and analyse all relevant testing data. This includes zooming into the graphical evaluation, highlighting areas and complete recording of the testing process.

The Companion App is the key to transparent and effective quality management, which is essential for

audits and certifications. And for a sustainable improvement in your product quality.

The ITS Companion App is available in 3 versions - available for all ITS systems:

ITS Companion App	Functions
Basic	Analysis & automatic test report via CSV data
Pro	Ethernet interface for integration into the customer network Remote connection via VNC for monitoring and control
Pro Plus	Customisation of protocols via editor





**INNOVATIVE
TEST &
MEASUREMENT
SYSTEMS**

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innovative test
and measurement
systems

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