Test Benches

FTY
Power Tool and Wrench Dynamic Tester

AWT
Automatic Wrench Tester

FMS Multistation
Online Rework, Backup,
Pilot/Beta Build, Repair Station

MSB
Wrench and Tool Static Tester

FTA
Automatic Torque/Angle Dynamic Wrench Tester

FTY

Power Tool and Wrench Dynamic Tester

Test Benches

Features

- Tool test: wrenches (electronic/digital, click), pneumatic, electric and battery tools, pulse tools (except impact wrenches)
- Statistical Process Control: Measurement of machine capability (Cm, Cmk) and X, R charts
- Test according to ISO 6789 and ISO 5393
- Fast and easy setup
- Click point auto detection feature for click wrenches
- Comparative test capability
- Mechanical wrench loader for torque wrenches
- External transducer connectivity for special tests
- Standalone programming or program with SQnet+ quality management software
- Joint editor for non-linear joints "multistep simulation"

"First test bench able to simulate the fastener in all conditions"

FTY

Power Tool and Wrench Dynamic Tester

Benefits

- Enter the test parameters & run 40% faster than any other comparable bench on the market, today
- FTY reproduces real joint behavior
- Easy to service – "plug and play" brakes
- Fully customized in hardware, transducers configuration, statistical reports
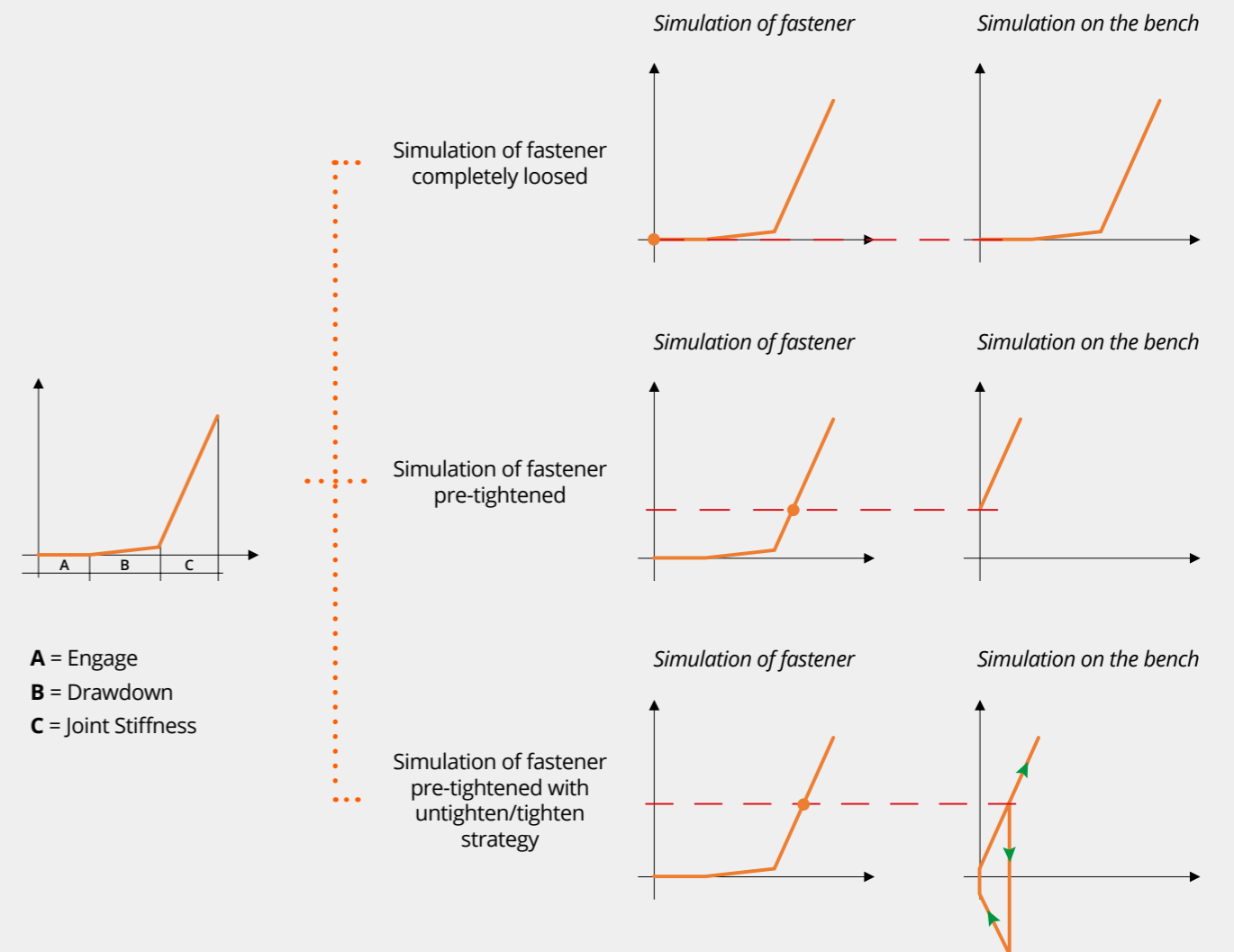- Robust design with minor maintenance compared to competitors

Technical Data

|	
Torque range	0.2 N·m ÷ 2000 N·m maximum (the range depends from the transducers configuration)
Torque measurement accuracy	0.5% of the reading
Meets the requirements of DKD-R 3-7, class 1	
Max tool speed	1100 rpm
Angle measurement accuracy	1° over 360°
Joint simulation range	15° to 360° (angle measured from 50% to 100% of the target torque)

❯ Mechanical Wrench Loader

Example of parametrization of a fastener to be simulated

A = Engage
B = Drawdown
C = Joint Stiffness

Simulation of fastener   *Simulation on the bench*

Simulation of fastener completely loosed

Simulation of fastener pre-tightened

Simulation of fastener pre-tightened with untighten/tighten strategy

Compared test:

Bench results are compared with tool results. Automatic communication or manual results entry.
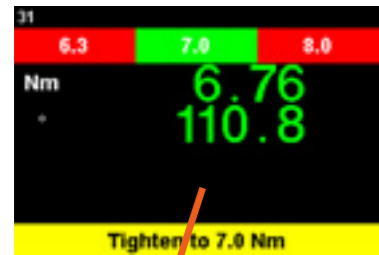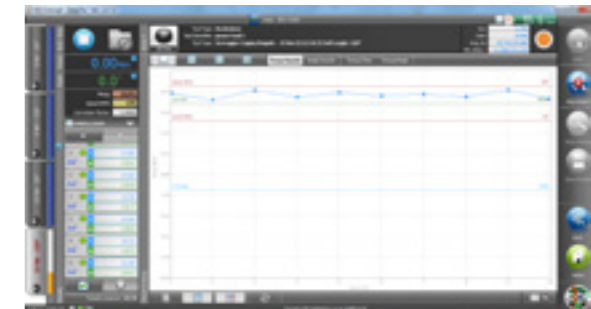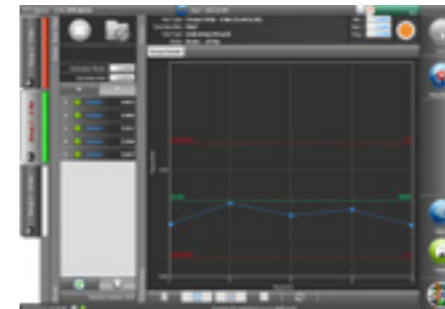

Tool result

SCS app

Compared results

ISO 6789 test (torque wrench) and **ISO 5393** (power tools) for and extended test on the whole range of the tool under test.

Prevailing **torque simulation**

Statistical process control (Cm-Cmk and control charts) with **SQnet+ software**.

FTY

Power Tool and Wrench Dynamic Tester

❯ Tilt

❯ Up/down spindle support

❯ Motorized wheel

### ❯ External brake

MSB

Wrench and Tool Static Tester

Test Benches

Features

- Test, pulse tools and direct driven rotary power tools with mechanical joint simulator. Torque wrenches (electronic/digital, click)
- Statistical Process Control: Measurement of machine capability (Cm, Cmk) and X, R charts
- Test according to ISO 6789
- Automatic detection of the click point of click wrenches
- Comparative test capability
- Mechanical wrench loader for torque wrenches
- External transducers connectivity for special tests
- Standalone programming or program with SQnet+ quality management software
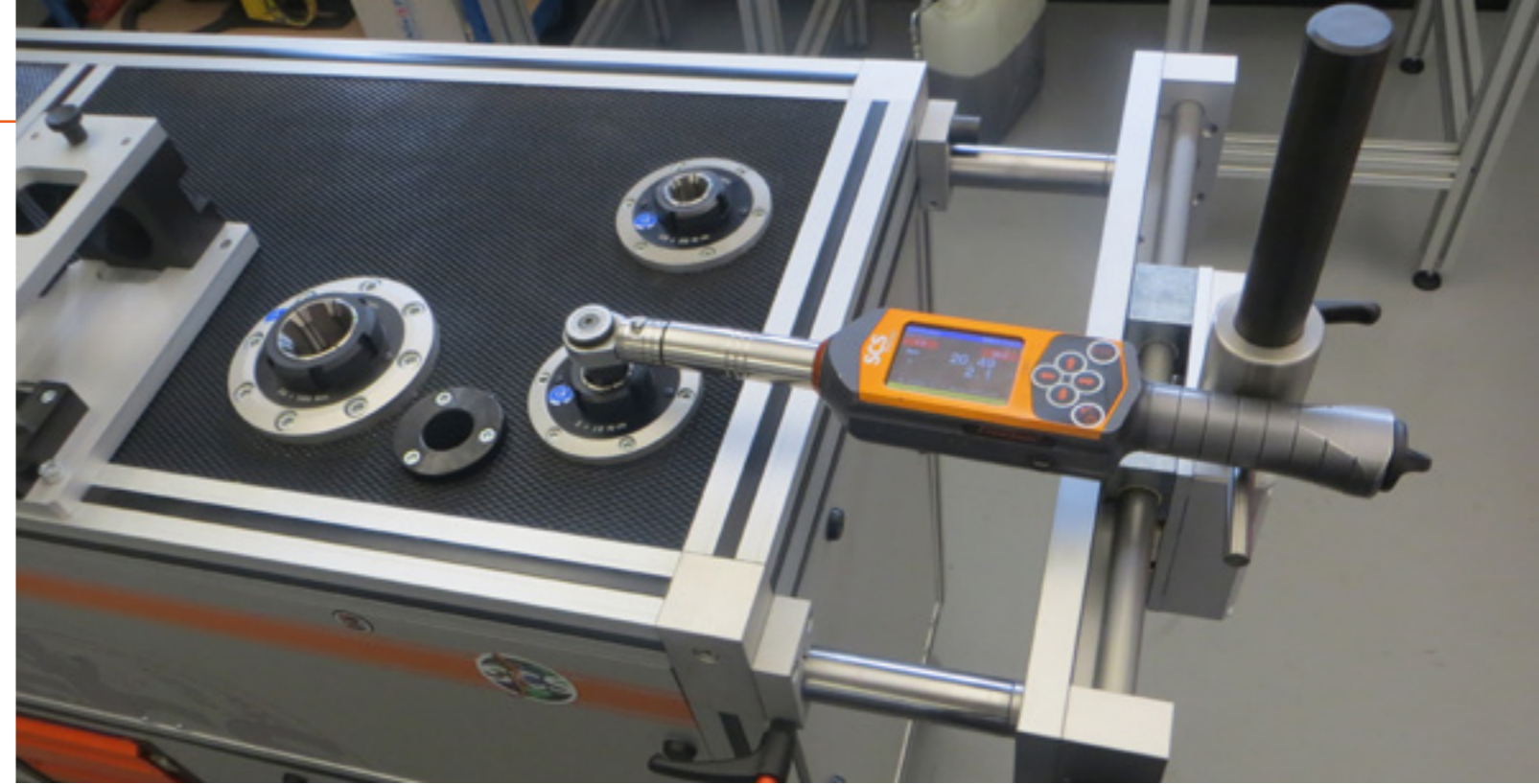
Benefits

- Easy test setup
- Easy to service – "plug & play" transducers
- Fully customized in hardware, transducers configuration, statistical reports
- Robust design with minor maintenance compared to competitors

Technical Data

Torque range	0.2 N·m ÷ 2500 N·m maximum (the range depends from the transducers configuration)
Torque measurement accuracy	0.5% of the reading

Meets the requirements of DKD-R 3-7, class 1

Test Benches
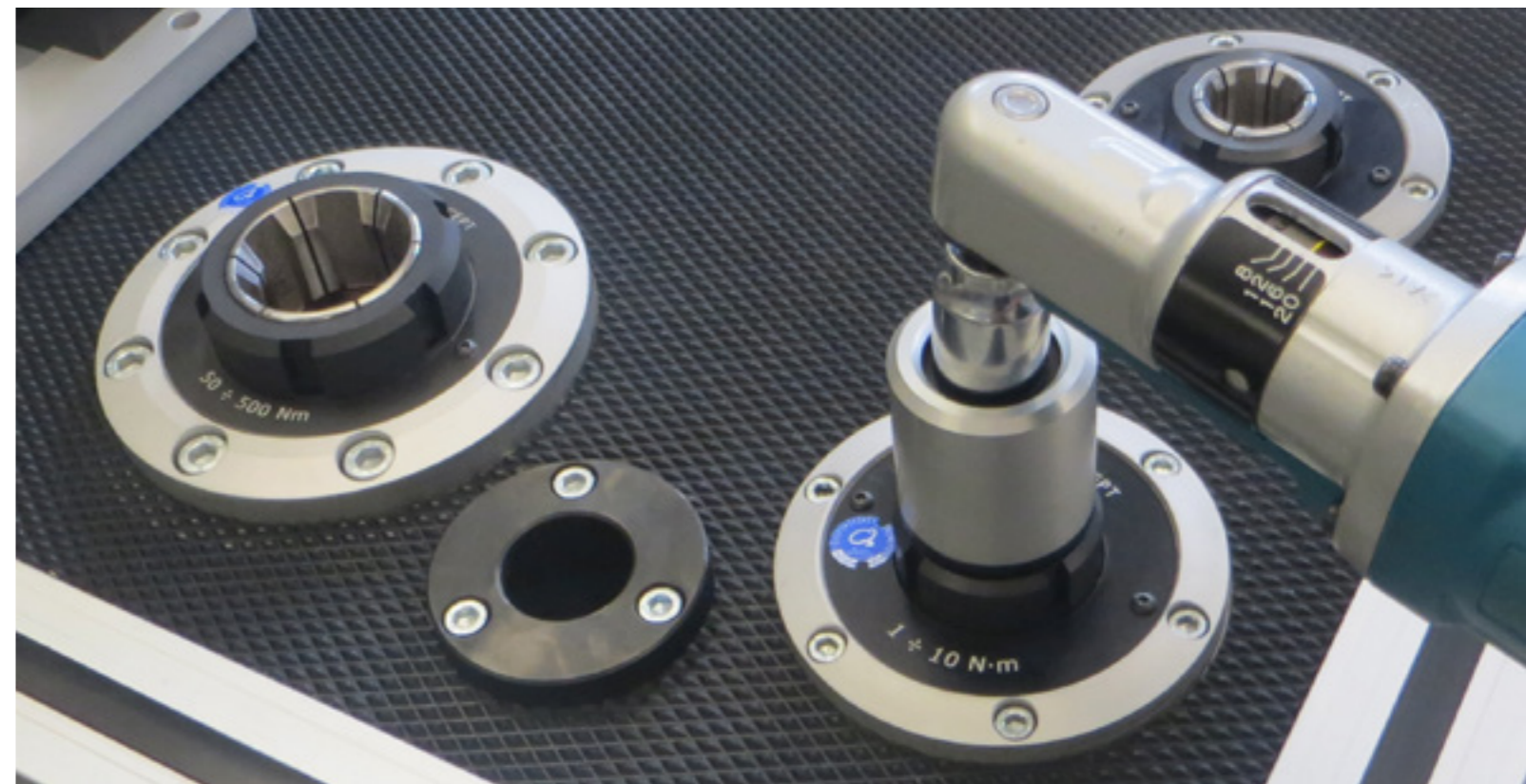
AWT

Automatic torque wrench test according to ISO 6789

Features

- Dynamically driven transducer for automated wrench testing
- Test according to ISO 6789
- Automatic detection of the click point of click wrenches
- Comparative test capability
- Clockwise and counterclockwise test
- Standalone programming or program with SQnet+ quality management software

Benefits

- Lower total cost of ownership (TCO)
- Eliminate operator influence
- Productive, high thru put of wrenches
- Robust design with minor maintenance

Technical Data

Torque range	0.3 N·m ÷ 1600 N·m maximum (the range depends from the transducers configuration)
Torque measurement accuracy	0.5% of the reading
Meets the requirements of DKD-R 3-7, class 1	
Angle measurement accuracy	1° over 360°
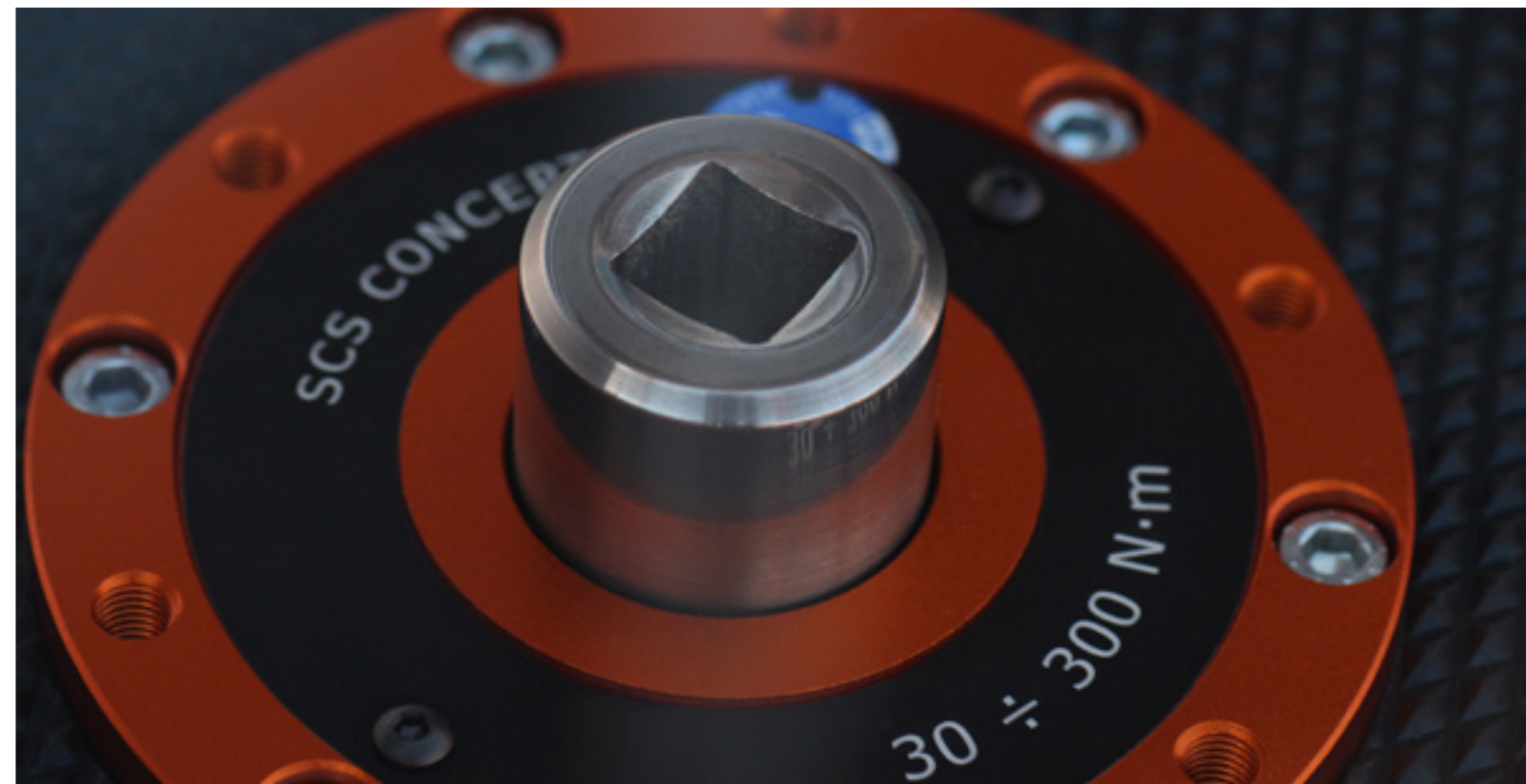
Compared test:
Bench results are compared with tool results. Automatic communication or manual results entry.
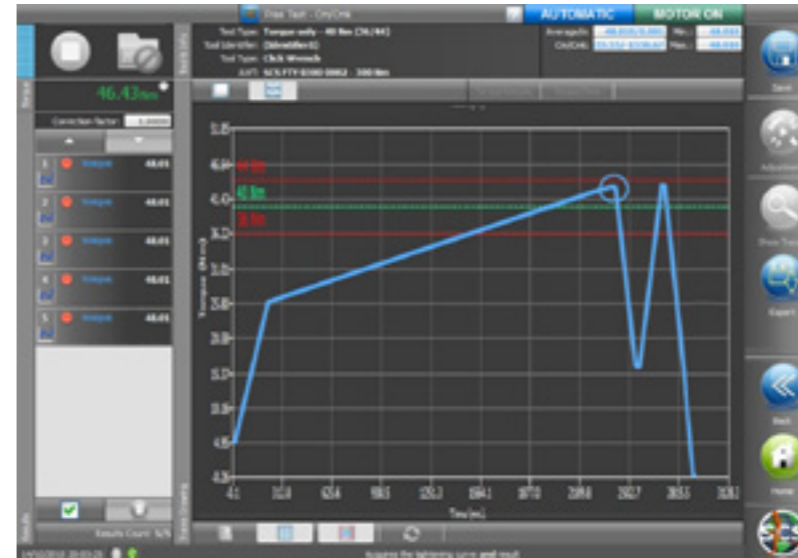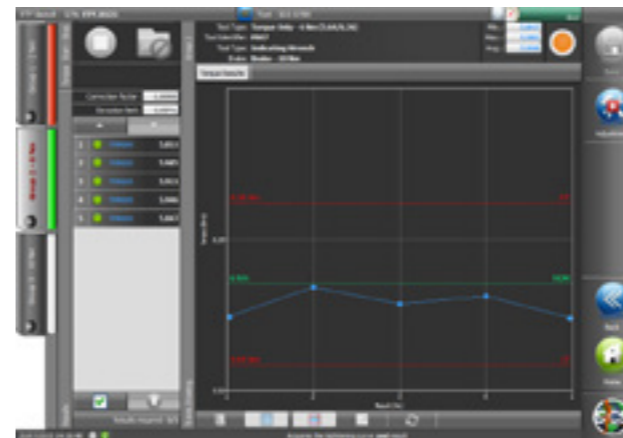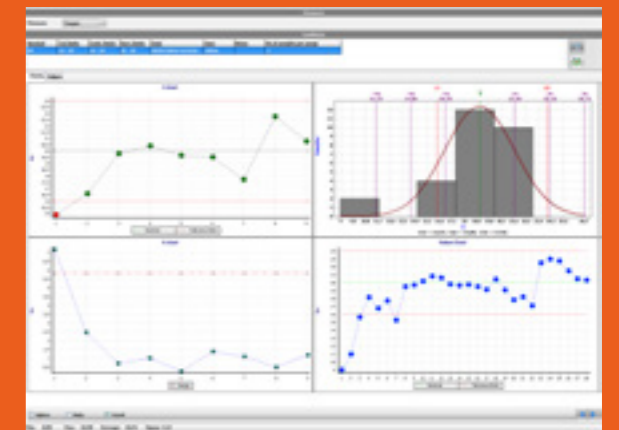

❯ Tool result

❯ SCS app

❯ Compared results

Automatic recognition of the wrench click.

ISO 6789 test for an extended test on the whole range of the torque wrench.

Statistical process control (Cm-Cmk and control charts) with **SQnet+ software**.

FTA

Automatic Torque/Angle Wrench test according to VDI/VDE 2645 and 2647

Features

- Automatic test of digital wrenches according to VDI/VDE 2645 part 2 and VDI/VDE 2647
- Comparative test capability
- Test wrenches with extension
- Clockwise or counter clockwise test
- Automatic detection of the click point of click wrenches
- Standalone programming or program with SQnet+ quality management software
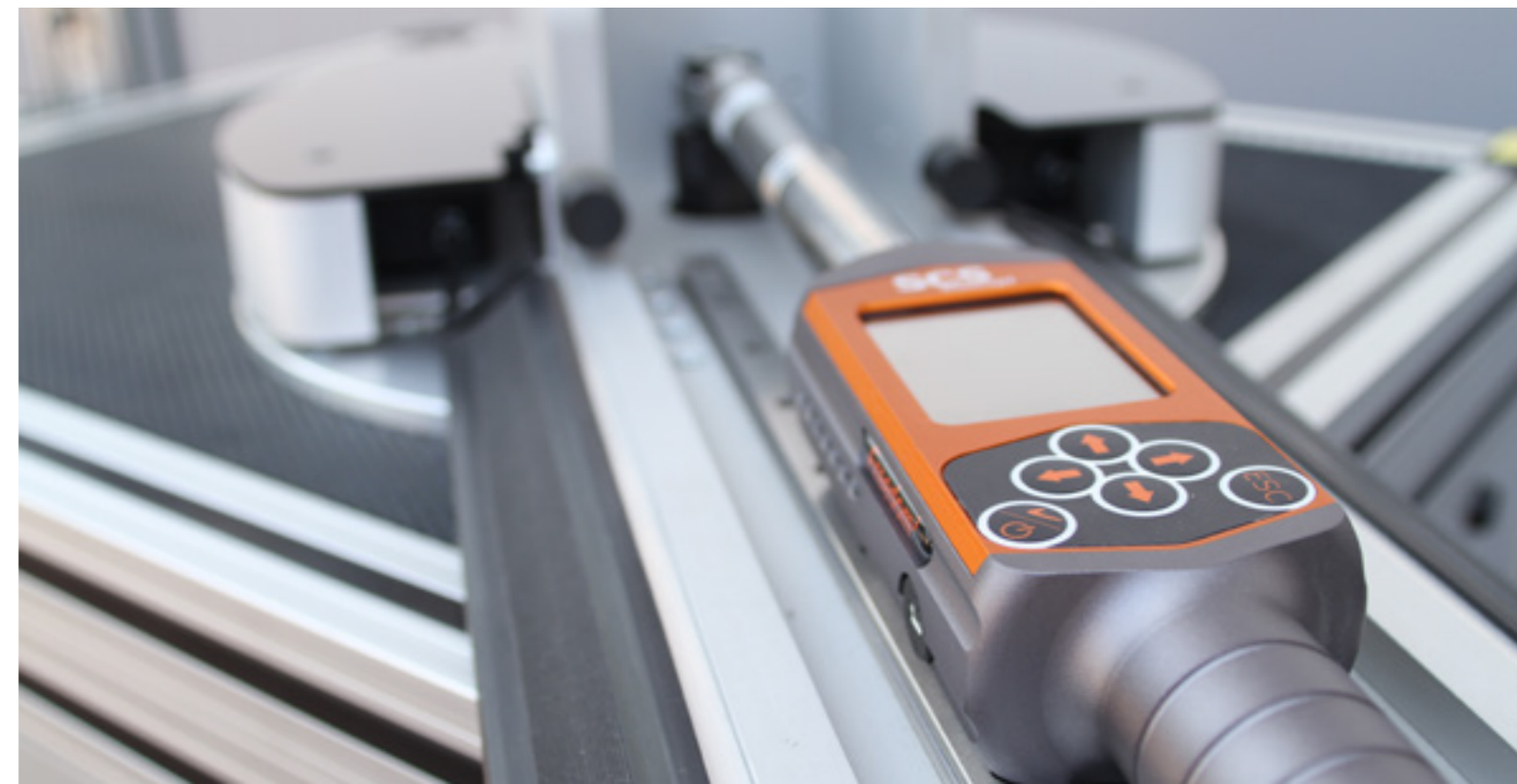
Test Benches

Benefits

- Conforms to VDI/VDE norms and exceeds
- Lower total cost of ownership (TCO)
- Eliminate operator influence
- Productive, high thru put of wrenches
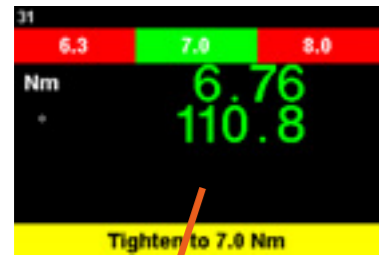- Robust design with minor maintenance

Technical Data

Torque range	1.5 N·m ÷ 1200 N·m
Torque measurement accuracy	0.5% of the reading
Meets the requirements of DKD-R 3-7, class 1	
Angle measurement accuracy	1° over 360°

Compared test:
Bench results are compared with tool results. Automatic communication or manual results entry.
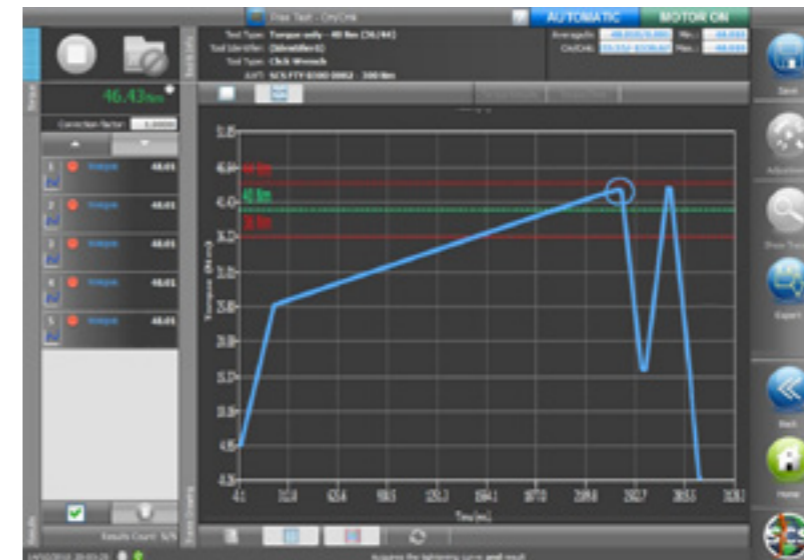

❯ Tool result

❯ SCS app

❯ Compared results

**Test of torque wrenches with extensions:**
The **FTA** transducer can be lowered turning the wheel.
This makes possible to test the wrench with its extensions, evaluating how the extension bending affects the angle measurement.

Test of dial wrenches, click wrenches with automatic recognition of the click point.

ISO 6789 test for an extended test on the whole range of the torque wrench.
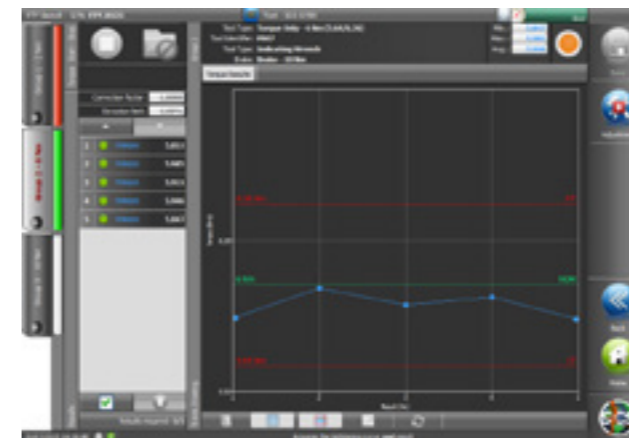
Statistical process control (Cm-Cmk and control charts) with **SQnet+ software**.

FMS Multistation

Online Rework, Backup, Pilot/Beta Build, Repair Station

Features

- Flexible and modular production system
- Error-proofed procedures to work parts along the production line
- Temporary replacement of a failed power tool, minimizing downtime
- Operates with SCS Freedom³ wrenches and third party DC power tools controllers
- Custom plugins communication capabilities
- Ability to work with multiple tools in parallel
- Several types of operations supported: tightening (torque and torque/angle), logical, barcode, generic
- VIN scannning
- Reports and statistics
- AC Power Supply with PC backup unit
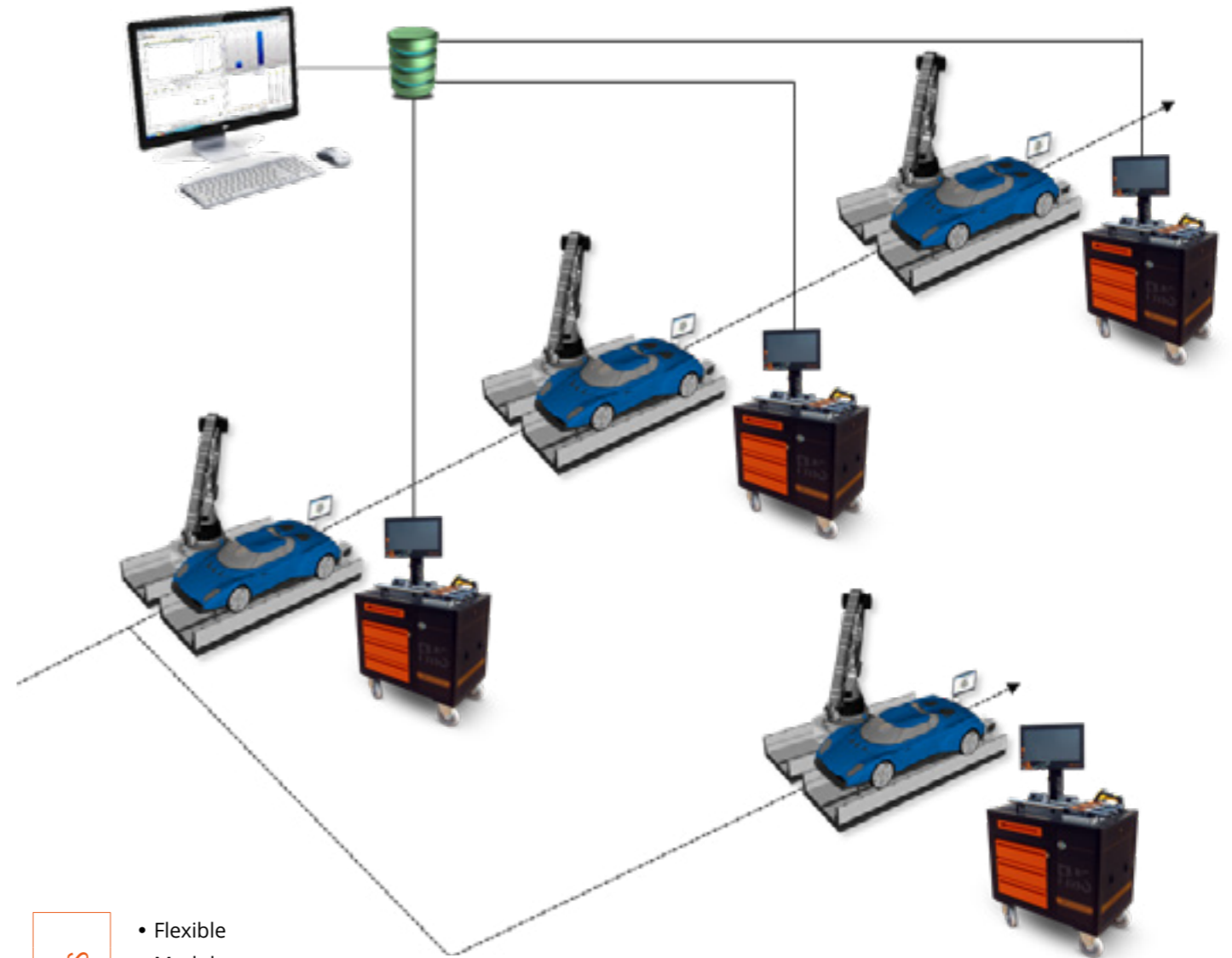
Benefits

- Flexible
- Modular
- Efficient
- Error proofing capabilities
- Economic

Back-up tool

FMS can be used as a back up for tools used on the production line. Due to its flexibility, FMS can be easily moved along the production line and substitute the whole defecting unit, with a very short stop of the production.

Beta pilot (pre-series)
or small production

FMS is a perfect instrument for small production or for pre-series, where the tightening tools are not yet defined. It can store all the assembly operations of the production station.

Barcode scanner for part recognition and traceability

Repair

FMS can reproduce and production station. In case of a repair of a production item, FMS guides the operator in each phase of the rework procedure, with same quality and data traceability of the production line.

Connection to power tools

FMS, with VPG+ software, can communicate directly with SCS Concept wrenches and most of the power tools controllers on the marked, using the industrial protocols.