Freedom³

Torque/Angle Digital Wrench

SCS Concept Group
Ph. +39 02 925 02 684
info@scsconcept.com
www.scsconcept.com

Freedom³ - Ed. 5 - EN

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Freedom³

Torque/Angle Digital Wrench

Freedom³ wrench, equipped with torque transducer and gyroscope, is an advanced tool for production tightening, joint analysis and quality control test

Production Tightening

Fastening torque driven
Fastening torque/angle
Fastening yield
Fastening yield/angle

Joint Analysis

Quality Control

Smart breakaway
Breakaway peak
Breakaway angle
Loosen/tighten
Minimum torque
Loose torque

Integrated **Barcode** Scanner

Color **Touchscreen Display**

Radio communication

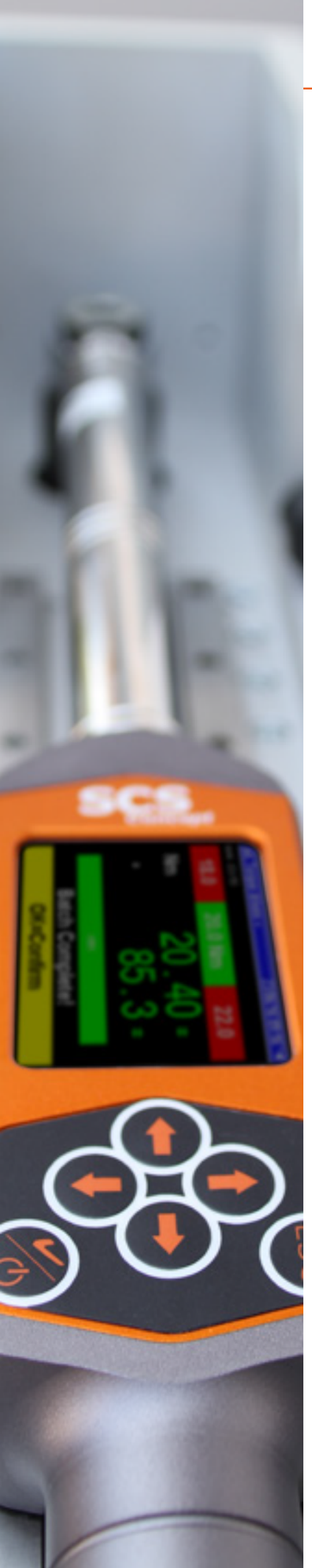
with external programs and databases

- VPG+
- SQnet+
- Custom applications

Automatic tool recognition

for tightening control and torque/angle correction

Tool number and correction coefficients



Freedom³

Torque/Angle Digital Wrench

Features

- Quality control and joint analysis
- Tightening strategies
- Remote software programming
- Wide color touchscreen display
- Optional radio (WiFi, Bluetooth or 868 MHz)
- Automatic end-fitting tool recognition
- VIN (vehicle identification number) scan
- Torque/time and torque/angle traces
- Onboard trace analysis
- Statistical Process Control (Cp-Cpk, X/R charts)
- Sequential work out horizontal or vertical
- Digital signature
- Error codes management

Benefits

- Operator guidance
- Error proofed assembly/rework procedures
- Error proofed tightening
- Operator independent
- Full traceability with 1D or 2D barcode scanner
- Three operational modes: Lab, Quality and Production
- Supports many industry protocols

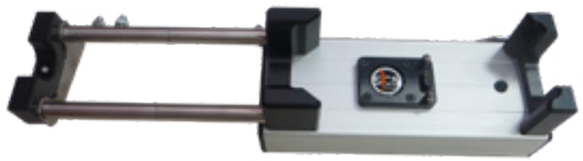
Technical Data

Torque range for Freedom³ family	1.5 N·m ÷ 1200 N·m
Torque measurment accuracy	0.5% of the reading
Angle measurement accuracy	1° over 360°
Max angular speed	300 °/s
Memory capacity	1000 tightening programs 20000 results 20000 curves
Battery endurance	9 hours

Rechargeable Battery

Battery Charger

Charging Cradle



Freedom³

Torque/Angle Digital Wrench

Code	Model	Capacity	Drive	L1	L2	Weight (without end fitting)
	mm	N·m	N·m	mm	mm	kg
113 16 0015	Freedom³ 15	15	9 x 12	375	393	0.8
113 16 0030	Freedom³ 30	30	9 x 12	375	393	0.86
113 16 0070	Freedom³ 70	70	9 x 12	476	494	0.93
113 16 0100	Freedom³ 100	100	9 x 12	476	494	0.93
113 16 0200	Freedom³ 200	200	14 x 18	604	629	1.5
113 16 0300	Freedom³ 300	300	14 x 18	754	779	1.86
113 16 0400	Freedom³ 400	400	14 x 18	854	879	1.86
113 16 0600	Freedom³ 600	600	14 x 18	1032	1057	3.65
113 16 0800	Freedom³ 800	800	Ø 20	1432	1516	5.1
113 16 1000	Freedom³ 1000	1000	Ø 20	1499	1567	6.25
113 16 1200	Freedom³ 1200	1200	Ø 30	1576	1730	7

Accessories	
197 14 0013	Tool recognition programing unit
197 14 0025	External battery charger for 1 battery with J21
197 98 0001	Case wood and aluminium for Freedom³ 15 - 100 Nm 60x26 h15 cm
197 98 0002	Case wood and aluminium for Freedom³ 200 - 400 Nm 84x26 h15 cm
197 98 0003	Case wood and aluminium for Freedom³ 600 Nm 115x26 h15 cm
197 98 0010	Case wood and aluminium for Freedom³ 800 - 1200 Nm 168x26 h15 cm
197 99 0008	USB cable
313 21 0042	Additional battery
313 11 0030	Rubber protection with display protection
323 19 0011	Rubber protection
353 31 0001	Plastic case for wrenches max 15 - 100 Nm 54x33 h11 cm
353 31 0002	Plastic case for wrenches max 200 - 300 Nm 78x25 h11 cm
353 31 0003	Plastic case for wrenches max 400 - 600 Nm 122x25 h11 cm

Optionals	
197 14 0001	Bluetooth module integrated
197 14 0002	WI FI module integrated
197 14 0003	868 MHz module integrated
197 14 0005	Barcode reader integrated
197 14 0028	2D Barcode reader integrated
197 14 0011	Automatical recognition of the inserted socket

LAB

Laboratory

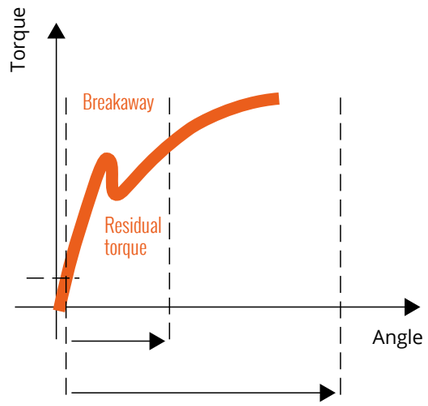
- Joint analysis
- Prototype
- Material studies
- Pre-series
- Onboard results analysis
- Onboard traces
- Results and traces analysis on PC with Explorer software

SPC

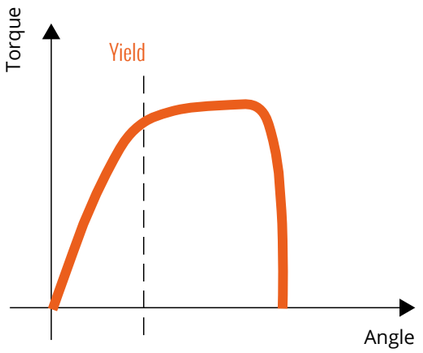
Quality Control

- Residual torque check on a production line
- Route and job management via software (SQnet+ or QS Torque)
- Wireless programming
- Data traceability
- VIN management

Smart Breakaway



Joint Analysis



Test **Strategies**

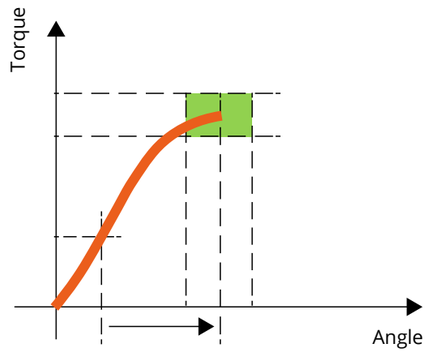
- Joint analysis (LAB only)
- Breakaway peak
- Breakaway angle
- Smart breakaway
- Loosen/tighten
- Loose torque
- Minimum torque

PRW

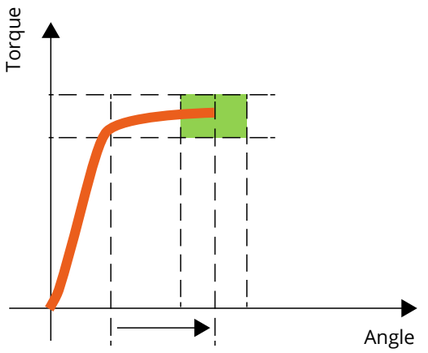
Production

- Production tightening with different strategies
- Programming via VPG+ (visual production guide)
- Wireless programming
- Data traceability
- VIN management

Tightening Torque + Angle



Tightening Yield + Angle



Tightening **strategies**

- Tightening torque
- Tightening torque and angle
- Tightening torque + angle
- Tightening to yield point
- Tightening to yield point + angle