

Q-AUDIT

Product Instructions

Model

Q-AUDIT 30

Q-AUDIT 150

Q-AUDIT 350

Part number

6152210400

6152210410

6152210420



Download the latest version of this document at
http://www.desouttertools.com/info/6159990120_EN

⚠ WARNING**Read all safety warnings and instructions**

Failure to follow the safety warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference

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Product Information

General Information

WARNING Risk of Property Damage or Severe Injury

Ensure that you read, understand and follow all instructions before operating the tool. Failure to follow all the instructions may result in electric shock, fire, property damage and/or severe bodily injury.

- ▶ Read all Safety Information delivered together with the different parts of the system.
- ▶ Read all Product Instructions for installation, operation and maintenance of the different parts of the system.
- ▶ Read all locally legislated safety regulations regarding the system and parts thereof.
- ▶ Save all Safety Information and instructions for future reference.

Information about spare parts

Exploded views and spare parts lists are available in Service Link at www.desouttertools.com.

Overview

Product description

Q-AUDIT is a passive wrench equipped with an electronic board, a torque transducer and a gyroscope. The connection to Delta 7D via military cable allows to display, collect and store the torque and angle measurements acquired throughout the plant.

Storage and use conditions

Indoor Use only	
Altitude	Up to 2000 m
Ambient Temperature	5 to 40°C
Maximum relative humidity 80% for temperatures up to 31 °C decreasing linearly to 50% relative humidity at 40 °C	
IP grade according to EN IEC 60529 (except connector)	IP40
Overvoltage category	II
Environmental Class	II
Pollution Degree	2
Operation to reduced specification over a temperature range of -10 °C to 60 °C	
Input power	15 V  0.3 W

Product data

Operating torque range	from 10% to 100% of the capacity
Torque static accuracy	1% of torque reading ± 1 digit (within the operating torque range)
Torque overload capacity	20% of FSD
Minimum angular speed	1,2 °/s
Angle measurement accuracy	1,2 °/s ≤ angular speed < 3 °/s → 2,5 % 3 °/s ≤ angular speed ≤ 250 °/s → 1,0 %
Maximum angular speed	250 °/s
Stability of zero offset with temperature	± 0.1% of FSD/°C
Unit of measurement supported	N·m, kgf·m, kgf·cm, lbf·ft, lbf·in, ozf·ft, ozf·in, kp·m, dN·m
VDI 2645-2 compliant	
ISO 6789:2017 compliant	

Torque range

Model	Minimum [Nm]	Maximum [Nm]	Overload [Nm]
Q-AUDIT 30	3	30	36
Q-AUDIT 150	15	150	180
Q-AUDIT 350	35	350	420

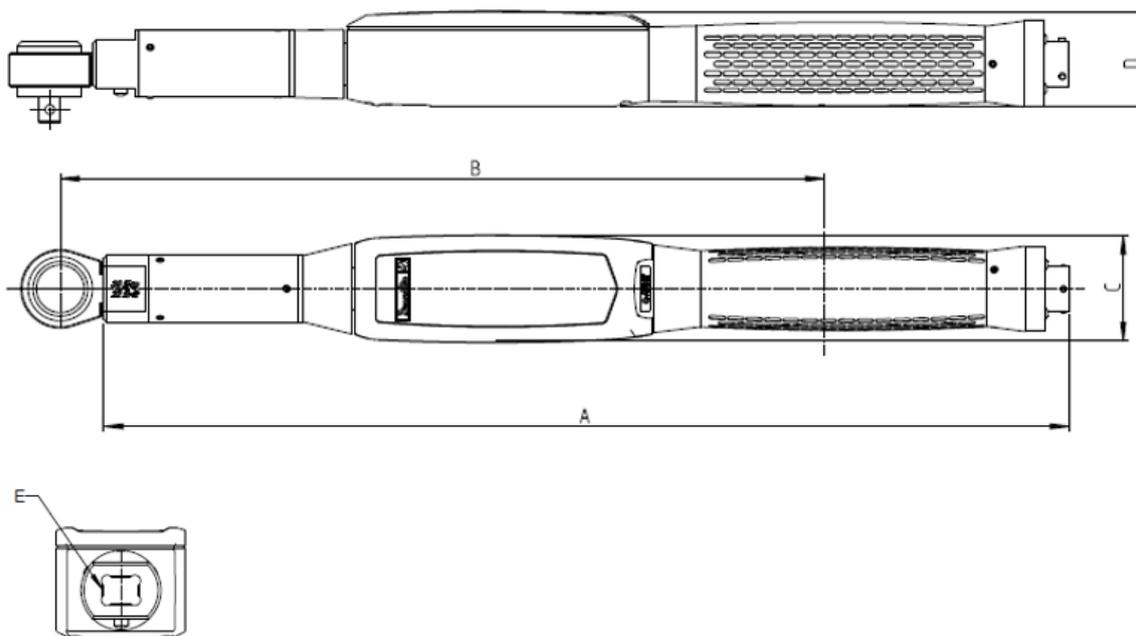
Table 1: Torque range in Nm

Model	Minimum [ft lb]	Maximum [ft lb]	Overload [ft lb]
Q-AUDIT 30	2.21	22.13	26.55
Q-AUDIT 150	11.06	110.6	132.7
Q-AUDIT 350	25.81	258.1	309.7

Table 2: Torque range in ft lb

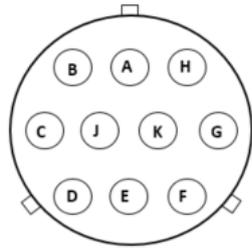
Weight

MODEL	Weight [kg]	Weight [lb]
Q-AUDIT 30	0.765	1.686
Q-AUDIT 150	1.020	2.248
Q-AUDIT 350	2.168	4.779

Dimensions

MODEL	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]
Q-AUDIT 30	405	320.3	45	38.5	9x12
Q-AUDIT 150	420.5	342.5	45	38.5	14x18
Q-AUDIT 350	697	620	45	38.5	14x18

Connector pinout



PIN	Description	PIN	Description
A	MOSI-JBX	F	NOT USED
B	CLK-JBX	G	CAL-JBX
C	#CS-MEM-JBX	H	MISO-JBX
D	#CS-ADC-JBX	J	#CS-ANG-JBX
E	+VIN	K	GND_EXT

Accessories

Cable

Description	Length	Product number
Digital 10 pins Cable	2 m	6159174300

End fittings

WARNING Crushing Hazard

Never install wrong end-fitting tools and/or extensions on the wrench. Wrong end-fitting tools and/or extensions can lead to a sudden mechanical release, which causes severe bodily injury.

- ▶ Use only end-fitting tools designed for this specific wrench.
- ▶ When using an extension, calculate the Torque Correction Coefficient and Angle Correction Coefficient (for more information on the Torque and the Angle Correction Coefficients, refer to **Delta User Guide**). A wrong Torque or Angle Correction Coefficient leads to an incorrect torque or angle reading and thus to an overload of the wrench.

End fittings

OPEN END metric OPEN END inches		RING BOX END metric RING BOX END inches	
FLARED END metric FLARED END inches		REVERSIBLE RATCHET	
BLANK END		BITS HOLDER	
FIXED SQUARE DRIVE			

The following accessory is included with Q-AUDIT 350 and can be used up to 280 Nm:

Description	Product number
Drive 14x18 Reversible ratchet 1/2"	6153972000

The following accessory can be purchased separately for Q-AUDIT 350 and be used up to 350 Nm:

Description	Product number
Drive 14x18 Reversible ratchet Hd 3/4"	6159364390

Refer to Desoutter catalogue for the complete list of end fittings with no TAG.

Wrench protection

Wrench protection

Name	Product number
Wrench Protection	6159365040

The wrench protection cover protects the Q-AUDIT electronic housing from accidental impacts during operations and from scratches in case of accidental contact.



To install the protection cover, slide the cover from the rear of the wrench.

Operation

Operating Instructions

Connecting the wrench to Delta 7D

Connect the Q-AUDIT to Delta 7D via the recommended Desoutter cable:



For information on the setup, please refer to **Delta User guide**.

References

Correction Coefficients for extensions

When the joint design or space limitations preclude the use of standard sockets / tools, it may be necessary to use special extension spanners to fit the application. In these cases, the Q-AUDIT measurements must be adequately compensated since the factory calibration is made for the standard arm, and the extension arm increases the torque measured. The angle measured is also affected by the extensions, due to its specific torsion when torque is applied.

For information on the calculation of the torque and angle correction coefficients, please refer to **Delta User guide**.

Service

Maintenance Instructions

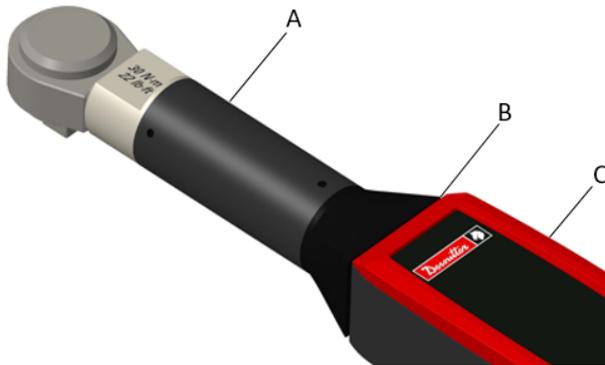
Calibration

The Q-AUDIT must be calibrated at least once a year. Contact Desoutter Service for calibration.

Cleaning

Keep the Q-AUDIT clean.

It is very important to keep clean the area between the Q-AUDIT body and transducer (see figure below). If the Q-AUDIT is not kept clean, the transducer might not operate properly, thus altering the torque reading.



A	Transducer	B	Area to clean
C	Body		

i A wrench protection (6159365040) is proposed as an optional accessory. This protection can help to avoid swarf or dust in the junction between the transducer and the body of the wrench.

After use, remove any curves of oil, grease and dust from the Q-AUDIT, especially from the connector.

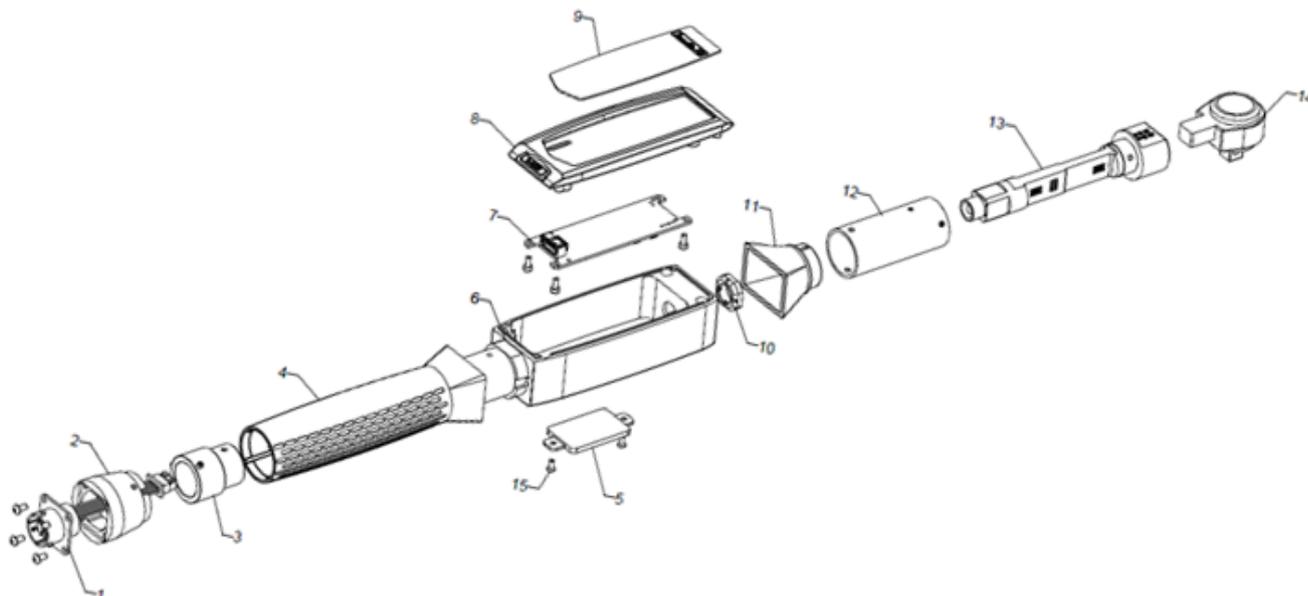
Avoid using harsh detergents to clean the Q-AUDIT.

Recycling

Environmental regulations

When a product has served its purpose it has to be recycled properly. Dismantle the product and recycle the components in accordance with local legislation.

Recycling Instructions



Position	Part	Recycle as
1	Connector	Steel + WEEE
2	Holder connector	Aluminum
3	Ring handle	Aluminum
4	Handle	Plastic
5	Module cover	Plastic
6	Body	Aluminum
7	Board	WEEE
8	Upper body	Plastic
9	Label	Plastic
10	Nut	Steel
11	Transducer cover	Aluminum
12	Transducer front cover	WEEE
13	Transducer	Steel
14	Ratchet	Steel
15	Screws, Washers and Nuts	Steel and Iron

Original instructions

Founded in 1914 and headquartered in France, Desoutter Industrial Tools is a global leader in electric and pneumatic assembly tools serving a wide range of assembly and manufacturing operations, including Aerospace, Automotive, Light and Heavy Vehicles, Off-Road, General Industry.

Desoutter offers a comprehensive range of Solutions -tools, service and projects- to meet the specific demands of local and global customers in over 170 countries.

The company designs, develops and delivers innovative quality industrial tool solutions, including Air and Electric Screwdrivers, Advanced Assembly Tools, Advanced Drilling Units, Air Motors and Torque Measurement Systems.

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