



In professional hands  
since 1886.

## Electronic Torque Wrenches

**IZO-D/DM**

**IZO-DF/DFM**



**SEE**

+



**HEAR**

+



**FEEL**

=

**Controlled  
Torquing  
Operations**



[www.bahco.com](http://www.bahco.com)

MS7053ENG



## Versatile

You will find the BAHCO IZO-D/DF and IZO-DM/DFM electronic torque wrenches spread throughout industry e.g. Automotive and support industry, Aviation and support industry and Assembly lines for any product. These products will be found everywhere, where quality has no compromise.

Patent pending

## Simple



### No need for more controls

The new IZO-DM/DFM wrench has only six control keys and is fast, simple and comfortable to operate. Accidental programming of the wrench cannot occur.

## Robust

### Quality at it's best.

Long life, no moving or wearing parts, robust design, reliable and durable. The tool body is made from quality stainless steel. Two component handle, made from glass filled nylon incorporating a santoprene soft grip. The hole is designed for convenient tool storage.

## Award Winning Design

### Product design: winner 2003

The award "red dot" for high design quality, expressing innovation in form and function in an exemplary manner, is presented to: Electronic Torque Wrench IZO-D-135

The red dot design award is one of the most prestigious international design competitions. Since 1955, expert juries have made awards annually in the competition for outstanding design achievements which set new standards in the relevant product categories. The red dot has thus become one of the most highly prized and globally recognised seals of quality.



red dot award

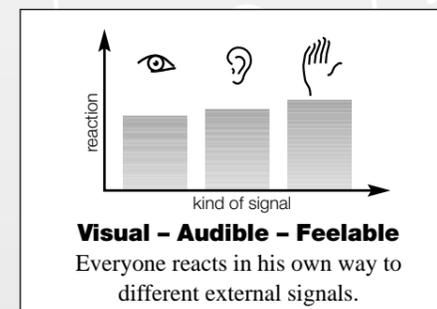
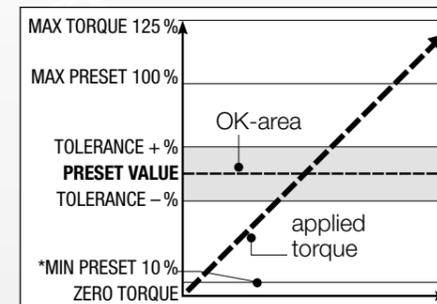
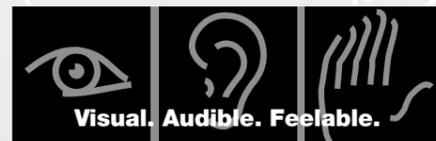
## Tolerance

### Torquing and measuring.

Like any indicating or dial wrenches the BAHCO IZO-D/DF, -DM/DFM has a "Track, Peak hold" digital display mode of the actual applied torque.

### Programmable set values and torquing.

For repeating torque values, the required torque value together with a  $\pm$  tolerance can easily be programmed, and is secure against accidental change. This allows the user to torque and to control his work within his own set of specifications. Once a fastener is torqued to within the OK band, the BAHCO IZO-D/DF, -DM/DFM generates identifiable signals.

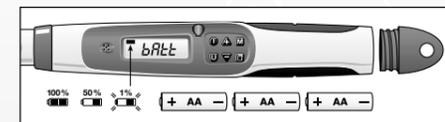


## Precision

**$\pm 2\%$  Perfect accuracy is guaranteed.**

The IZO-D/DF, -DM/DFM wrench fulfills all modern requirements such as safety and security of operation, economy, reliability and high durability. The IZO-D/DF, -DM/DFM wrench is easy to set and very comfortable to operate. The BAHCO IZO-D/DF, -DM/DFM wrenches take accuracy seriously:  $\pm 2\%$ ,  $\pm 1$  digit

## Battery Quick Change



The IZO-D/DF and IZO-DM/DFM wrenches allow up to 100 hours of continuous operation, depending on the chosen battery's capacity. The alkaline batteries themselves can be easily changed within a few seconds. No data will be lost during battery change.

## Deciding Advantages

### No need to be afraid of electronics.

The new IZO-D/DF and IZO-DM/DFM Torque Wrenches from BAHCO combine the simplicity of use and speed of conventional mechanical tools with the accuracy of modern electronic hand tools. Save time and be in complete control of your work.



## Sealed

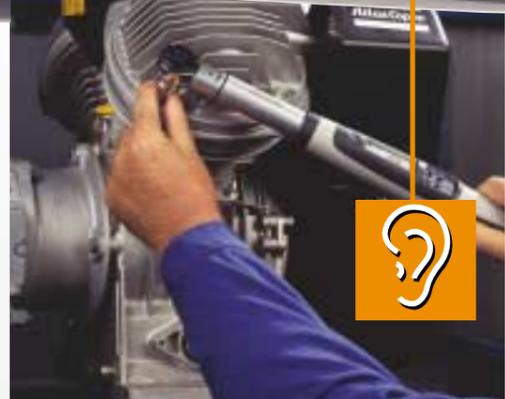
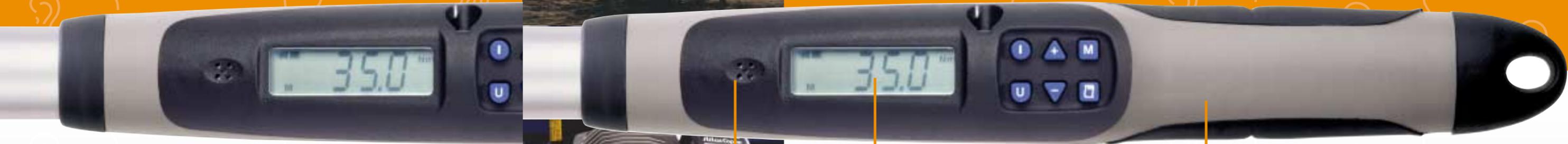
If your torque operations are carried out in moist or dusty conditions it is good to know that the BAHCO IZO-D/DF, -DM/DFM wrench is both dust and splashproof. This provides for safe and reliable torquing in difficult conditions.

## At Optimum

This is the way for a torque tool to fit into your hand. Perfectly designed handle, safe, convenient and comfortable.

## In Any Position

The FEELBACK feature of the IZO-D/DF and IZO-DM/DFM wrenches ensures that you will always feel your correct torque, regardless whether you work under noisy conditions, in poor light or in difficult to access areas.



# FEELBACK

## Feelback: Visual. Audible. Feelable.



This modern torque tool generates automatically three different signal levels for fast and reliable action when the OK band is reached. **Visual. Audible. Feelable.**

The large display is almost always "in view". The actual applied torque is displayed.



An audible signal indicates that you have reached the OK band.



The BAHCO IZO-D/DF, -DM/DFM is the only electronic torque tools which combines accuracy and ease of operation of modern electronic torque tools with a feelable signal when the set torque range is reached. This provides a modern and precise alternative to conventional mechanical torque tools. Feedback by feeling – FEELBACK

The correct torque value is sensed by your hand – you can rely on what you feel.

Tool insert change is easy and versatile. Choose your inserts from the 9 x 12 or 14 x 18 system.



### Reversible ratchet

Product code

**6852-1** - 1/4"

**7452-1** - 3/8"

**7852-1** - 1/2"

**8952-1** - 3/4"

### Open ended insert

□ 9 x 12 mm Product code **7452-7-**

7 mm 10 mm 13 mm 16 mm 19 mm

8 mm 11 mm 14 mm 17 mm

9 mm 12 mm 15 mm 18 mm

□ 14 x 18 mm Product code **7852-7-**

13 mm 17 mm 22 mm 30 mm

14 mm 18 mm 24 mm 32 mm

15 mm 19 mm 27 mm

### Ring insert

□ 9 x 12 mm Product code **7452-8-**

7 mm 10 mm 12 mm 14 mm 17 mm

8 mm 11 mm 13 mm 15 mm 19 mm

□ 14 x 18 mm Product code **7852-8-**

13 mm 15 mm 19 mm 24 mm 30 mm

14 mm 17 mm 22 mm 27 mm 32 mm

### Flare insert

□ 9 x 12 mm Product code **7452-9-**

10 mm 12 mm 14 mm 18 mm

11 mm 13 mm 17 mm 19 mm

## Memory

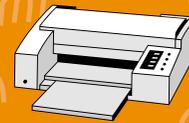
The IZO-DM/DFM series has extended functions and features to meet the highest standards and requirements within any application.

These allow the user to further simplify his operation and to provide applied torque data documentation for full analysis and process control at any time.

## ISO 9000

The BAHCO IZO-DM/DFM allows the user to document and analyse his torque data in line with ISO-9000 requirements. In many areas of industrial assembly processes, the control of torque is increasingly considered to be one of the most critical parts of such an operation. It has direct impacts on quality, safety and competitiveness of processes and products.

## Data Transmission



Direct Printout  
via cable



Later Printout  
from memory



## Storing Data

Pushing one key is enough to store the actual applied torque. Up to 1000 values together with unit of measurement, fastener No. (in sequence) can be stored in the on-board memory.

## Printouts

The IZO-DM/DFM can be connected directly to a printer for real time download, listing in sequence the applied torque values along with the unit of measurement.

## Download

To achieve date and time of Torque, the wrench must be connected via a cable at all times. The IZO-DM/DFM wrench contains a cable and a software package which can convert the data into a Microsoft Excel template.



M



M



## Memory Recall

This feature allows recalling the current batch from the on-board memory for quick and fast checking or verification of work in progress. The display gives prompts to make programming easier.

```
-11:1 8 Nm
-11:4 4 Nm
-11:4 6 Nm
-11:4 6 Nm
11:1 4 Nm
11:4 4 Nm
-1118 4 l-h
1119 1 l-h
-1115 4 h
1117 4 h
```

Direct Printout

+ indicates clockwise CW  
- indicates counter clockwise CCW

```
0001 -027 6 Nm
0002 -026 7 Nm
0003 -025 5 Nm
0004 -025 6 Nm
0005 -024 6 Nm
0006 -014 6 Nm
0007 -017 5 ftlh
0008 -018 8 ftlh
0009 -0213 1nlh
0010 -0267 1nlh
```

Later Printout



Examples of Excel Templates



## IZO-D/DF

Tool body made from quality stainless steel with shatter proof display cover

Ranges programmable in Nm, Lbf.ft, Lbf.in

2 scroll keys for fast and easy operation

Security against accidental programme changes

Programmable torque value with +/- tolerance

Accuracy +/- 2%, +/- 1 digit

Quick battery change

Power save feature

Dust and splash proof protection

Low battery warning

Auto zero check on power up

Data and set value retention during battery exchange

Operating temperature range: 5°C to 42°C

Storage temperature range: -10°C to 50°C



### Calculation of the compensating torque when using an extension

A torque wrench is typically adjusted and calibrated by applying a known force at the center of the handle at a distance L1 from the center of the driving square.

In some applications it is necessary to add an extension to the wrench, especially when some work has to be carried out in confined areas.

In such cases it is necessary to compensate for this extension by reducing the programmed set torque on the wrench according to following formula:

$$C = \frac{L1 \times T}{L1 + B}$$

L1 = Distance from above table

B = Length of extension

T = Required torque

C = Compensated torque

L1 = 335 mm

B = 40 mm

T = 20Nm

C = ?

$$C = \frac{0.335 \times 20}{0.335 + 0.040} = \frac{6.7}{0.375} = 17.86$$

**C = 17.86 Nm (18 Nm)**

## IZO-DM/DFM

Additional features "Memory"

Memory capacity of up to 1000 values

Storage of fastener No., unit of measurement

Memory recall of stored data with fastener No.

PC software (Excel format)

RS 232 serial link

Dimensions mm	L	L1	L2
<b>IZO-D-30</b>	405	300	370
<b>IZO-DM-30</b>	405	300	370
<b>IZO-DF-30</b>	390	295	360
<b>IZO-DFM-30</b>	390	295	360

Dimensions mm	L	L1	L2
<b>IZO-D-135</b>	450	345	410
<b>IZO-DM-135</b>	450	345	410
<b>IZO-DF-135</b>	445	345	395
<b>IZO-DFM-135</b>	445	345	395

Dimensions mm	L	L1	L2
<b>IZO-D-200</b>	535	430	495
<b>IZO-DM-200</b>	535	430	495
<b>IZO-DF-200</b>	560	450	495
<b>IZO-DFM-200</b>	560	450	495

Dimensions mm	L	L1	L2
<b>IZO-D-340</b>	650	540	605
<b>IZO-DM-340</b>	650	540	605
<b>IZO-DF-340</b>	670	565	605
<b>IZO-DFM-340</b>	670	565	605

Dimensions mm	L	L1	L2
<b>IZO-DR-810</b>	1230	1130	1126
<b>IZO-DRM-810</b>	1230	1130	1126

## CE

The new IZO-D/DF and IZO-DM/DFM Torque Wrenches from Bahco comply with all relevant standards such as DIN/ISO 6789, EN 26789 and US B107.14M.

They also comply with the EMC guideline 89/336/EU and are approved to carry the CE mark.



## Product Range

### IZO-D/DM

With interchangeable ratchet head



Product code	EAN code 731415+	 Drive square	Nm	Torque lbf.ft	lbf.in	Length mm	 Ratchet insert	Insert mm
<b>IZO-D-30</b> <b>IZO-DM-30</b>	1846824 1846909	1 1/4"	3-30	2.21-22.13	26.6-265.5	405	930	6852-1 9x12
<b>IZO-D-135</b> <b>IZO-DM-135</b>	1845827 1848200	1 3/8"	7-135	5.16-99.57	62-1195	450	1000	7452-1 9x12
<b>IZO-D-200</b> <b>IZO-DM-200</b>	1846831 1846916	1 1/2"	20-200	14.75-147.50	177-1770	535	1345	7852-1 14x18
<b>IZO-D-340</b> <b>IZO-DM-340</b>	1846848 1846923	1 1/2"	34-340	25.07-250.80	301-3009	650	1525	7852-1 14x18

### IZO-DF/DFM

With fixed flex head ratchet



Product code	EAN code 731415+	 Drive square	Nm	Torque lbf.ft	lbf.in	Length mm	 Drive	
<b>IZO-DF-30</b> <b>IZO-DFM-30</b>	1846787 1846862	1 1/4"	3-30	2.21-22.13	26.6-265.5	390	775 36 teeth, 10° action	
<b>IZO-DF-135</b> <b>IZO-DFM-135</b>	1845834 1848217	1 3/8"	7-135	5.16-99.57	62-1195	445	1000 36 teeth, 10° action	
<b>IZO-DF-200</b> <b>IZO-DFM-200</b>	1846794 1846879	1 1/2"	20-200	14.75-147.50	177-1770	560	1500 36 teeth, 10° action	
<b>IZO-DF-340</b> <b>IZO-DFM-340</b>	1846800 1846886	1 1/2"	34-340	25.07-250.80	301-3009	670	1665 36 teeth, 10° action	
With fixed ratchet head								
<b>IZO-DR-810</b> <b>IZO-DRM-810</b>	1846817 1846893	1 3/4"	81-810	59.74-5974.2	716.9-7169	1230	4535 32 teeth, 11.25° action	

