Mannesmann M18145

Mannesmann M18145 Torque Spanner User Manual

Model: M18145

Introduction

This manual provides essential information for the safe and effective use of your Mannesmann M18145 Torque Spanner. Please read these instructions carefully before operating the tool and retain them for future reference. The M18145 is a precision tool designed for applying specific torque values to fasteners, ensuring proper assembly and preventing damage from over- or under-tightening.

Figure 1: The Mannesmann M18145 Torque Spanner, a precision tool for controlled fastening.

Safety Information

Always observe the following safety precautions to prevent injury and damage to the tool or workpiece.

- **Wear appropriate personal protective equipment (PPE)**, such as safety glasses, when using the torque spanner.
- **Do not exceed the maximum torque capacity** of 210 Nm. Overloading can damage the tool and lead to inaccurate readings.
- **Ensure the fastener and socket are clean and free of debris** before applying torque.
- **Do not use the torque spanner as a breaker bar** or for loosening seized fasteners. This can damage the internal calibration mechanism.
- **Keep the tool clean and dry**. Moisture and dirt can affect its performance and longevity.
- **Store the torque spanner in its protective case** when not in use to prevent damage.

Product Components

The Mannesmann M18145 Torque Spanner consists of several key parts:

1. **Drive Head:** The 1/2" square drive for attaching sockets.
2. **Main Body/Shaft:** The primary metal shaft of the spanner.
3. **Torque Scale Window:** Displays the set torque value.
4. **Adjustment Collar:** Used to rotate and set the desired torque value.
5. **Locking Mechanism:** Secures the adjustment collar to prevent accidental changes.
6. **Handle:** Provides grip for operation.

Figure 2: Detail of the handle, adjustment collar, and torque scale window.

Figure 3: The 1/2-inch square drive head for attaching sockets.

Setup

1. Unpacking and Initial Inspection

Carefully remove the torque spanner from its sturdy storage case. Inspect the tool for any signs of damage that may have occurred during shipping. Ensure all components are present and functioning correctly. The spanner should be clean and the adjustment mechanism should move smoothly.

Figure 4: The torque spanner stored securely in its protective case.

2. Preparing for Use

- Select the correct size socket for your fastener.
- Attach the socket firmly to the 1/2" square drive head.
- Ensure the fastener and mating surfaces are clean and free of oil or grease, unless specified by the manufacturer.

Operating Instructions

1. Setting the Torque Value

1. **Unlock the Handle:** Locate the locking mechanism (often a knurled ring or screw at the base of the handle) and turn it to the unlocked position.
2. **Adjust the Torque:** Rotate the handle to set the desired torque value. The main scale on the shaft indicates major increments (e.g., 40, 50, 60 Nm), and the smaller scale on the handle provides fine adjustments. Align the desired main scale value with the top edge of the handle, then rotate the handle until the fine adjustment mark aligns with the center line of the main scale. The magnifier window assists in precise reading.
3. **Lock the Handle:** Once the desired torque is set, turn the locking mechanism back to the locked position to prevent accidental changes during use.

Figure 5: The main body of the spanner showing the torque scale markings.

2. Applying Torque

- Place the socket onto the fastener.
- Apply a steady, smooth pull to the handle. Avoid jerky movements.
- Continue pulling until you feel and hear a distinct "click" or "break" in the handle. This indicates that the preset torque value has been reached.
- Immediately stop applying force once the click is felt/heard. Do not continue to tighten.
- Remove the torque spanner from the fastener.

Note: For critical applications, it is recommended to tighten fasteners in stages (e.g., 50%, 75%, 100% of the final torque) to ensure even seating and accurate torque application.

Maintenance

1. Cleaning

After each use, wipe the torque spanner clean with a soft, dry cloth. Do not use solvents or abrasive cleaners, as these can damage the finish or internal components. Ensure no dirt or debris accumulates in the adjustment mechanism or drive head.

2. Storage

When not in use, always store the torque spanner in its original protective case. This protects it from dust, moisture, and accidental impacts. It is recommended to set the torque value to its lowest setting (but not below the minimum) before storage to relieve tension on the internal spring mechanism, which can help maintain calibration accuracy over time.

Figure 6: The torque spanner securely stored in its closed protective case.

3. Calibration

Torque wrenches are precision instruments and require periodic calibration to ensure accuracy. The frequency of calibration depends on usage, but generally, it is recommended to have the tool calibrated annually or after approximately 5,000 cycles, whichever comes first. Refer to a qualified calibration service for this procedure.

Troubleshooting

Problem	Possible Cause	Solution
No audible "click" when torque is reached.	• Torque setting too low. • Tool not properly calibrated. • Fastener already tight. • Improper grip or application.	• Verify the torque setting is correct for the application. • Have the tool professionally calibrated. • Ensure the fastener is not already at or above the desired torque. • Apply steady, smooth force.
Torque value changes during use.	• Locking mechanism not engaged. • Accidental rotation of handle.	• Ensure the locking mechanism is fully engaged after setting the torque. • Maintain a firm grip on the handle, avoiding contact with the adjustment collar.
Inaccurate torque readings.	• Tool requires calibration. • Damage to internal mechanism. • Incorrect usage (e.g., using as breaker bar).	• Send the tool for professional calibration. • Discontinue use if damage is suspected and seek professional repair. • Always use the tool as intended.

Specifications

Model Number	M18145
Drive Size	1/2 inch (12.5 mm)
Torque Range	42 - 210 Nm
Length	56.5 Centimeters
Weight	1.4 Kilograms (approx. 3.08 pounds)
Material	Steel, Plastic (handle, case)
Head Style	Fixed Square
Operation Mode	Mechanical

Warranty and Support

The Mannesmann M18145 Torque Spanner comes with a**10-year warranty**, covering defects in materials and workmanship under normal use. This warranty does not cover damage resulting from misuse, abuse, alteration, or unauthorized repair.
For warranty claims, technical support, or service inquiries, please contact Mannesmann customer service through their official website or the retailer from whom the product was purchased. Please have your model number (M18145) and proof of purchase available when contacting support.
For more information, visit the official Mannesmann website:www.br-mannesmann.de