ST Series Smart Transducer
Digital Torque Tester
User Manual

ASG, Division of Jergens, Inc.

15700 S. Waterloo Road | Cleveland, OH 44110-3898
Phone: (888) 486-6163 | Fax: (216) 481-4519
Email: asginfo@asg-jergens.com | Web: www.asg-jergens.com

Table of Contents

Basic Description and Guidelines

The ASG Digital Torque Tester is a state of the art device suitable for torque testing and torque calibration. As a precision tool, it is highly accurate as well as highly repeatable. For product portfolio cohesion, the digital wrench uses the same organic LED display, membrane keypad, user interface and PC based data management software as other standard products within this range of electronic torque tools. Additionally, training time is kept to a minimum due to the ease of use of the tool itself.

Our products are demonstrated to have an accuracy of 0.5% or better, and are both simple to set and calibrate as well as coming with a fully traceable ISO 6789-2003 Certification.

The ASG Digital Torque Tester has both visual and audible alarms that signal good or bad torque. Furthermore, there is a visual battery life indicator, alarms for pre-set value approach, fastener overload, range overload and maximum mechanical overload.
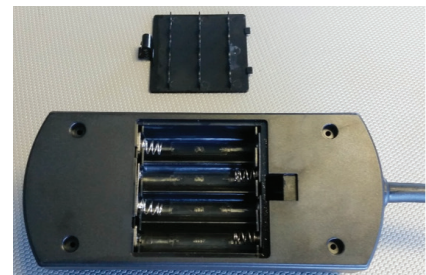
Recommended Use

The ASG Digital Torque Tester is specifically designed for use in all industrial settings and applications where high accuracy and repeatability combined with a complete torque data management and control system are required.

General Characteristics

Accuracy	Right hand side torque = 0.5% of actual reading Left hand side torque = 0.5% of actual reading
Resolution	0.01 to 50 N.m 0.1 to 1000 N.m
Alarms	Pre-Set Value Approach, Range Overload, Mechanical Overload, Low Battery, Memory Full
Memory Capacity	2094 Values

Installing the Batteries

1. Remove the battery door

2. Install 4 standard AA or 4 rechargeable AA batteries in the orientation outlined

3. Replace battery door

4. Turn on the tester and check that the device powers up

ASG, Division of Jergens, Inc.

15700 S. Waterloo Road | Cleveland, OH 44110-3898 | Phone: (888) 486-6163 | Fax: (216) 481-4519 | Email: asginfo@asg-jergens.com | Web: www.asg-jergens.com
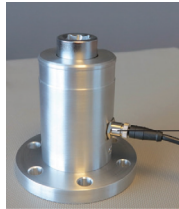
Page 3 of 12

Basic Description and Guidelines

Transducer Guidelines

- Store in a dry location
- Do not exceed specified torques
- Do not use external forces on (i.e. a hammer)
- Apply torque perpendicularly to transducer

Guidelines for Interchanging a Transducer

Unscrew cable connector and replace with desired transducer

It is possible to interchange transducers with different torque ranges using the same Smart Control Box (SCB – ASG Number 65200).

Instructions:

- Let the SCB power down
- Unscrew the cable connector from the smart transducer
- Replace with cable connector from the desired smart transducer
- Power on the SCB
- The device is now ready to operate

Guidelines

The following are a set of general guidelines for using and storing the tester that should be adhered to at all times.

- All torque tools are precision instruments and should be handled with care
- Do not subject the tool to torque loads in excess of the model range
- Using non-linear extensions may affect the accuracy of the readings
- Do not operate the tool unless it has been powered on and the display screen can be read clearly
- Do not drop the tool or subject it to heavy impact blows
- Ensure the tool is stored in a cool, dry location to protect from damage

ASG, Division of Jergens, Inc.

15700 S. Waterloo Road | Cleveland, OH 44110-3898 | Phone: (888) 486-6163 | Fax: (216) 481-4519 | Email: asginfo@asg-jergens.com | Web: www.asg-jergens.com

Page 4 of 12

Modes of Operation

Torque reading starts at 5% of maximum capacity with an accuracy of 1% beginning at 10% of maximum capacity (threshold to maximum span).

The following are the different modes available with the ASG Digital Torque Tester:

- Language Mode
- Unit Mode
- Date Mode
- Track Mode
- Peak Mode
- Click-Torque Mode
- Dynamic Peak Mode
- Set Mode
- Pre-Set Mode
- Recall Mode
- Upload Mode
- Comms Mode
- Clear Mode

Language Mode
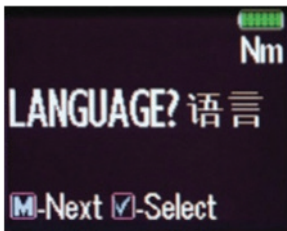
The languages of operation available to the user are: English, Chinese, French, German, Italian, Polish, Portuguese, Russian, Spanish

Step 1: Press [M] to scroll to the Language Menu

Step 2: Press [✓] to enter Language Menu

Step 3: Press [↑] [↓] to scroll to the language required

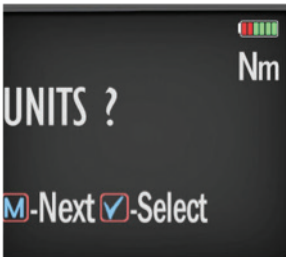**Step 4:** Press [✓] to confirm operation in this language

ASG, Division of Jergens, Inc.

15700 S. Waterloo Road | Cleveland, OH 44110-3898 | Phone: (888) 486-6163 | Fax: (216) 481-4519 | Email: asginfo@asg-jergens.com | Web: www.asg-jergens.com

Page 5 of 12

Modes of Operation

Unit Mode – Keypad Function

The following units of measurement are available: kgf.cm, kgf.m, cN.m, N.m, ozf.in, lbf.in, lbf.ft

Step 1: Press [M] to scroll to the Units Menu

Step 2: Press [✓] to enter Units Menu

Step 3: Press [↑] [↓] to scroll to the units required

Step 4: Press [✓] to confirm selected units

Date Mode – Keypad Function

Step 1: Press [M] to scroll to the Date Menu

Step 2: Press [✓] to enter Date Menu

Step 3: Press [↑] [↓] to scroll to set the minute and hour

Step 4: Press [✓] to confirm

Step 5: Repeat steps 3 and 4 to set the month, date and year
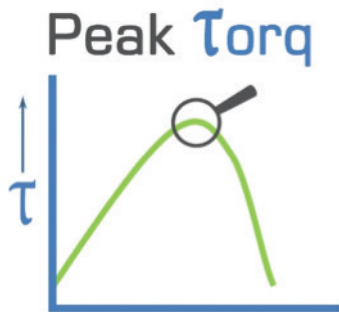
Track Mode

As torque is applied, the driver will actively display the applied torque reading from 5% up to the maximum span of the device. Upon removal of the load, the display will return to zero.

Step 1: Press [M] to scroll to Track Mode

Step 2: Press [✓] to operate in Track Mode

ASG, Division of Jergens, Inc.

15700 S. Waterloo Road | Cleveland, OH 44110-3898 | Phone: (888) 486-6163 | Fax: (216) 481-4519 | Email: asginfo@asg-jergens.com | Web: www.asg-jergens.com

Modes of Operation

Peak Mode

In Peak mode, the maximum torque reading will remain on the OLED display when the load is removed as long as the torque loaded is above the 10% of maximum capacity threshold. The user has the option to store the reading in memory. If storage of the reading is not required, the user may continue to the next measuring task.

Step 1: Press **M** to scroll to Peak Mode

Step 2: Press ✓ to operate in Peak Mode

Step 3: Press ✓ to store the peak value if required

Click-Torque Mode

In Click-Torque mode, the first peak reading will remain on the OLED display when the load is removed as long as the torque loaded is above the 10% of maximum capacity threshold. This mode is used in conjunction with mechanical clicker type wrenches. The wrenches are generally calibrated to the click-torque value. The user has the option to store the reading in memory. If storage of the reading is not required, the user may continue to the next measuring task.

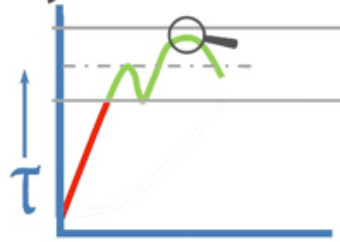**Step 1:** Press **M** to scroll to Click-Torque Mode

Step 2: Press ✓ to operate in Click-Torque Mode

Step 3: Press ✓ to store the first peak value recorded if required

ASG, Division of Jergens, Inc.

15700 S. Waterloo Road | Cleveland, OH 44110-3898 | Phone: (888) 486-6163 | Fax: (216) 481-4519 | Email: asginfo@asg-jergens.com | Web: www.asg-jergens.com

Page 7 of 12

Modes of Operation

Dynamic Peak Mode

In Dynamic Peak mode, the final peak value will remain on the OLED display when the load is removed as long as the torque loaded is above the 10% of maximum capacity threshold. This mode is used in conjunction with mechanical clicker type wrenches to capture the final installed torque, with slipping tools such as slipping wrenches or screwdrivers to capture the installed torque and also together with a joint simulator to capture the peak torque of suitable rotary tools. Suitable tools operate under 1200 RPM and do not include impact or many pulse tools. On selecting Dynamic Peak mode, the operator can choose from the list of test parameters which have been pre-configured within Set Mode.

The user has the option to store the reading in memory. If storage of the reading is not required, the user may continue to the next measuring task.

Step 1: Press **M** to scroll to the Dynamic Peak mode

Step 2: Press **✓** to operate in Dynamic Peak mode

Step 3: Press **⬆** **⬇** to select your preferred pre-set Number (i.e. 1 to 99)

Step 4: Press **✓** operate within this pre-set parameter

Step 5: Press **✓** store the maximum peak value recorded if required

Modes of Operation

Set Mode

This mode allows the user to set limits for the torque applied or measured. The operator can choose to set torque values by % or tolerance. During operation the OLED display will be green when approaching the preset tolerance and will change to red if exceeded.

Step 1: Press 【M】 to scroll to Set Mode

Step 2: Press 【✓】 to select Set Mode

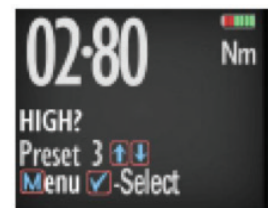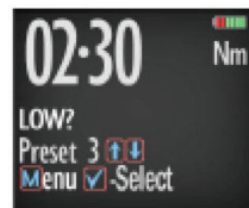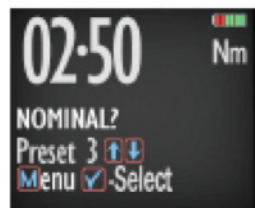**Step 3:** Press 【⬆】【⬇】 to scroll to set by % or set by tolerance

Step 4: Press 【⬆】【⬇】 to scroll to required pre-set number (i.e. 1 to 99)

Step 5: Press 【✓】 to confirm pre-set number selected

Step 6: Press 【⬆】【⬇】 to set nominal value and 【✓】 to confirm

Step 7: Press 【⬆】【⬇】 to set your low value and 【✓】 to confirm

Step 8: Press 【⬆】【⬇】 to set your high value and 【✓】 to confirm
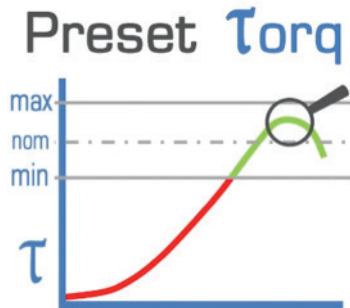

Step 9: Once the parameters have been confirmed the operator can find the task within Pre-Set Mode. Use 【M】 to select Pre-Set Mode from the main menu to find the task

ASG, Division of Jergens, Inc.

15700 S. Waterloo Road | Cleveland, OH 44110-3898 | Phone: (888) 486-6163 | Fax: (216) 481-4519 | Email: asginfo@asg-jergens.com | Web: www.asg-jergens.com

Page 9 of 12

Modes of Operation

Pre-Set Mode

In Pre-Set mode, the maximum torque reading will remain on the OLED display when the load is removed as long as the torque loaded is above the 10% of maximum capacity threshold.

- **Passing Minimum Value**: the green LED on the keypad will flash and the buzzer will sound intermittently. The OLED display will change to orange

- **Passing Nominal Value**: the green LED on the keypad will turn on and the buzzer will sound continuously. The OLED display will change to green

- **Passing Maximum Value**: The red LED will flash continuously and the buzzer will sound continuously. The OLED will change to red

Step 1: Press [M] to scroll to Pre-Set Mode

Step 2: Press [✓] to enter Pre-Set Mode

Step 3: Press [↑] [↓] to select your preferred pre-set number (1 to 99)

Step 4: Press [✓] to operate within this pre-set parameter

Step 5: Press [✓] to store the applied torque (torque and angle) if required

Recall Mode

This mode allows the user to view the stored torque and angle data. Only locations containing data will be displayed. Note that as data is stored the locations are populated sequentially from 01 to 2094.

Step 1: Press [M] to scroll to Recall Mode

Step 2: Press [✓] to enter and view memory locations, results and functions

Step 3: Press [↑] [↓] to scroll through locations that contain data

ASG, Division of Jergens, Inc.

15700 S. Waterloo Road | Cleveland, OH 44110-3898 | Phone: (888) 486-6163 | Fax: (216) 481-4519 | Email: asginfo@asg-jergens.com | Web: www.asg-jergens.com

Page 10 of 12

Modes of Operation

Upload Mode

This mode allows the user to upload stored torque data. In Upload Mode, the device must be connected to a PC running the PC Front-End Software (PCFE) via the USB port on the Receiver and the PC.

Step 1: Press **M** to scroll to Upload Mode

Step 2: Press **✓** to enter Upload Mode

Step 3: Press **✓** to select "From" and **⬆** **⬇** for end location to be uploaded

Step 4: Press **✓** to confirm "From" location

Step 5: Press **✓** to select "To" and **⬆** **⬇** for end location to be uploaded

Step 6: Press **✓** to confirm. You are asked if you are sure, press **✓** to confirm

Comms Mode

This mode allows the user to select the method of communication. The standard factory model allows communication by standard USB cable to the included software. For communication by ASCII or BINARY, the WCBR will need physical modifications in advance.

Step 1: Press **M** to scroll to Comms Mode

Step 2: Press **✓** to enter Comms Mode

Step 3: Press **⬆** **⬇** to select the method of communication and **✓** to confirm

Note: For standard communication to the included software program, select 'PCFE'

ASG, Division of Jergens, Inc.

15700 S. Waterloo Road | Cleveland, OH 44110-3898 | Phone: (888) 486-6163 | Fax: (216) 481-4519 | Email: asginfo@asg-jergens.com | Web: www.asg-jergens.com

Page 11 of 12

Modes of Operation

Clear Mode

This mode allows the user to clear the stored data from an individual range of locations. Before clearing the selected range and as a safety precaution, the user will be asked are they sure they wish to clear selected data. This can be done by pressing the confirm button.

Step 1: Press [M] to scroll to Clear Mode
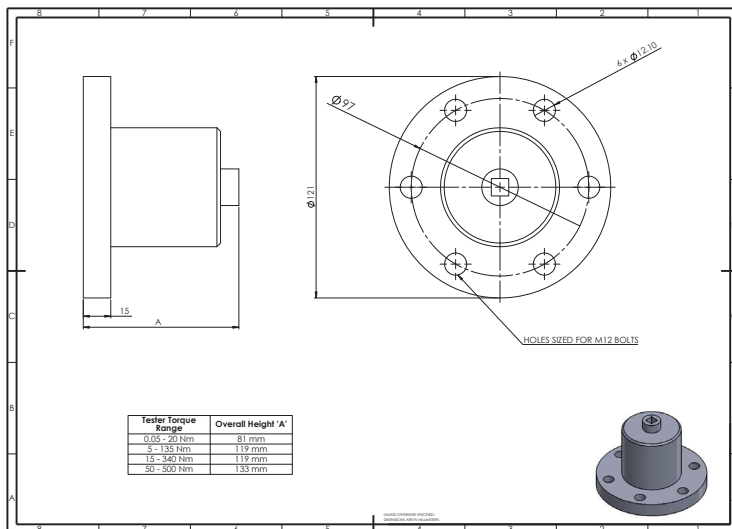
Step 2: Press [✓] to enter Clear Mode

Step 3: Press [⬆] [⬇] to select "From" range to be cleared and press [✓] to confirm

Step 4: Press [⬆] [⬇] to confirm "To" range to be cleared and press [✓] to confirm

Step 5: Press [✓] to confirm and you will be asked if you are sure

Step 6: Press [✓] to confirm and that the range of the data is cleared from the wrench memory

Transducer Flange

Tester Torque Range	Overall Height 'A'
0.05 - 20 Nm	81 mm
5 - 135 Nm	119 mm
15 - 340 Nm	119 mm
50 - 500 Nm	133 mm

Ø 97
Ø 121
6 x Ø 12.10
HOLES SIZED FOR M12 BOLTS
15
A

ASG, Division of Jergens, Inc.

15700 S. Waterloo Road | Cleveland, OH 44110-3898 | Phone: (888) 486-6163 | Fax: (216) 481-4519 | Email: asginfo@asg-jergens.com | Web: www.asg-jergens.com

Page 12 of 12