

# GEARWRENCH

*FORGE AHEAD*



## Torque Products for Industry



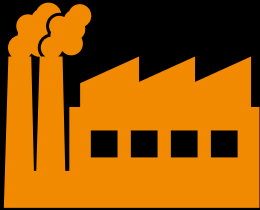
# Torque Products for Industry

Regardless of industry, when there is a requirement for the precise application of torque, GEARWRENCH has the right tool for the job. From structural steel framing to concrete anchor bolts to electrical clamps, GEARWRENCH torque wrenches are up to the task, meeting or exceeding ASME requirements for a wide range of fastener applications.



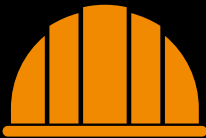
## AUTOMOTIVE

- 120XP Micrometer Torque Wrenches
- 120XP Electronic with Angle Torque Wrenches



## PLANT MAINTENANCE

- "E-Spec" Torque Wrenches
- 3/4" and 1" Drive Mechanical and Electronic Torque Wrenches
- Torque Testers
- Service and Calibration Program



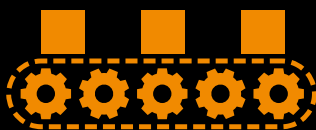
## CONSTRUCTION

- 3/4" and 1" Drive Mechanical and Electronic Torque Wrenches
- Torque Conversion Charts for Concrete Anchor Applications



## ELECTRICAL

- Torque Screwdrivers
- 20pc. Electrical Service Kit
- Torque Conversion Charts for Terminal Connections



## ASSEMBLY

- "E-Spec" Torque Wrenches
- Preset Torque Wrenches
- Interchangeable Head Torque Wrenches
- Torque Screwdrivers



# **GEARWRENCH**

GEARWRENCH has been an innovator in the manufacture of torque wrenches since early in its history. Our promise is to meet the demanding needs of professional users by supplying high quality products and expert support. With design innovations on everything from micrometer "click" wrenches to full featured electronic torque wrenches, we continue to provide an expanding selection of high performance torque products. This guide covers the full line of GEARWRENCH torque wrenches and related products, including recent additions of proven designs in new product categories.

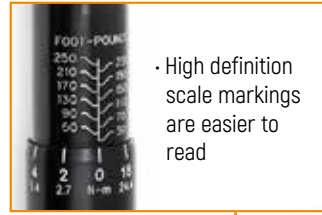
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# 120XP Micrometer Torque Wrenches



- Accurate in clockwise direction +/- 3% from 20% to 100% of full scale
- Meets or exceeds ASME B107.300
- Enclosed head design for extreme resistance to dirt infiltration
- Teardrop low profile head and flush mounted on/off switch allow better access in tight spaces
- Pull back locking collar



• High definition scale markings are easier to read

• Dual Scales, Metric and SAE

- Injection molded cases with removable lids for convenient storage



• 120 positions, 3 degree ratcheting arc

• Pull back locking collar



• Knurled aluminum grip  
• Midpoint marked for accuracy

- Two double-stacked 60-tooth pawls for exceptional strength that exceeds ASME specifications

85181  
1/2" Drive

**PRECISION FOR**  
**+/- 3%**  
**TORQUE ACCURACY**

**3° SWING ARC**  
**FOR TIGHTER TURNS**

**LOW PROFILE HEAD**  
**FLUSH REVERSING LEVER**

**FLEX HEAD**  
**FOR ACCESS**

**THIN PROFILE**  
**FOR ACCESS**

| Cat. No. | Certified Model No. | Drive Size | Head Style | Primary Scale Range | Primary Scale Increments | Alt. Scale Range | Alt Scale Increments | Tooth Count  | Head Thickness (in) | Head Width (in) | Overall Length (in) | Product Weight (lbs) |
|----------|---------------------|------------|------------|---------------------|--------------------------|------------------|----------------------|--------------|---------------------|-----------------|---------------------|----------------------|
| 85171    | 85171CERT           | 1/4"       | Standard   | 30-200 in-lbs       | 1 in-lbs                 | 4 - 23 Nm        | 0.1 Nm               | 60T/120 Pos. | 0.4                 | 1.0             | 11.0                | 0.9                  |
| 85176    | 85176CERT           | 3/8"       | Standard   | 10-100 ft-lbs       | 1 ft-lbs                 | 20 - 142 Nm      | 14 Nm                | 60T/120 Pos. | 0.6                 | 1.3             | 18.4                | 2.6                  |
| 85181    | 85181CERT           | 1/2"       | Standard   | 30-250 ft-lbs       | 2 ft-lbs                 | 54 - 353 Nm      | 2.7 Nm               | 60T/120 Pos. | 0.8                 | 1.8             | 24.9                | 3.7                  |
| 85174    | 85174CERT           | 3/8"       | Standard   | 30 - 250 in-lbs     | 1 in-lbs                 | 4 - 23 Nm        | 0.1 Nm               | 60T/120 Pos. | 0.6                 | 1.3             | 18.3                | 2.6                  |
| 85180    | 85180CERT           | 1/2"       | Standard   | 20 - 150 ft-lbs     | 1 ft-lbs                 | 27 - 203 Nm      | 14 Nm                | 60T/120 Pos. | 0.8                 | 1.8             | 24.9                | 3.7                  |
| 85188    | 85188CERT           | 3/8"       | Flex       | 5-75 ft-lbs         | 1 ft-lbs                 | 7 - 136 Nm       | 14 Nm                | 60T/120 Pos. | 0.6                 | 1.3             | 18.5                | 2.6                  |
| 85189    | 85189CERT           | 1/2"       | Flex       | 30-250 ft-lbs       | 2 ft-lbs                 | 54 - 353 Nm      | 2.7 Nm               | 60T/120 Pos. | 0.8                 | 1.8             | 26.0                | 4.0                  |

# Micrometer Torque Wrenches

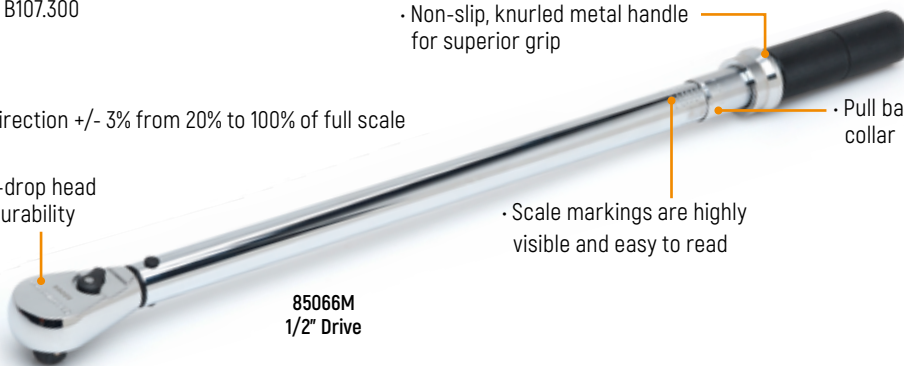


- Meets or exceeds ASME B107.300
- Accurate in clockwise direction +/- 3% from 20% to 100% of full scale
- Thin profile, sealed tear-drop head design for access and durability

• Non-slip, knurled metal handle for superior grip

• Pull back locking collar

• Scale markings are highly visible and easy to read



85066M  
1/2" Drive

**PRECISION FOR**  
**+/- 3%**  
**TORQUE ACCURACY**

**LOW PROFILE HEAD**  
**FLUSH REVERSING LEVER**

**FLEX HEAD**  
**FOR ACCESS**

| Cat. No. | Certified Model No. | Drive Size | Head Style | Primary Scale Range | Primary Scale Increments | Alt. Scale Range | Alt. Scale Increments | Tooth Count | Head Thickness (in) | Head Width (in) | Overall Length (in) | Product Weight (lbs) |
|----------|---------------------|------------|------------|---------------------|--------------------------|------------------|-----------------------|-------------|---------------------|-----------------|---------------------|----------------------|
| 85060M   | 85060MCERT          | 1/4"       | Standard   | 30 - 200 in-lbs     | 1 in-lbs                 | 4 - 23 Nm        | 0.1 Nm                | 22          | 0.5                 | 1.1             | 10.5                | 0.8                  |
| 85061M   | 85061MCERT          | 3/8"       | Standard   | 20 - 250 in-lbs     | 1 in-lbs                 | 5 - 29 Nm        | 0.2 Nm                | 30          | 0.7                 | 1.4             | 14.0                | 2.0                  |
| 85062M   | 85062MCERT          | 3/8"       | Standard   | 10 - 100 ft-lbs     | 1 ft-lbs                 | 20 - 142 Nm      | 1.0 Nm                | 30          | 0.7                 | 1.4             | 18.0                | 2.5                  |
| 85063M   | 85063MCERT          | 1/2"       | Standard   | 20 - 150 ft-lbs     | 1 ft-lbs                 | 34 - 210 Nm      | 1.0 Nm                | 32          | 0.8                 | 1.75            | 21.9                | 3.1                  |
| 85066M   | 85066MCERT          | 1/2"       | Standard   | 30 - 250 ft-lbs     | 2 ft-lbs                 | 54 - 353 Nm      | 3.0 Nm                | 32          | 0.8                 | 1.75            | 24.3                | 3.5                  |
| 85086M   | 85086MCERT          | 3/8"       | Flex       | 5 - 75 ft-lbs       | 0.5 ft-lbs               | 10 - 105 Nm      | 1.0 Nm                | 30          | 0.7                 | 1.4             | 17.7                | 2.4                  |
| 85087M   | 85087MCERT          | 1/2"       | Flex       | 30 - 250 ft-lbs     | 2 ft-lbs                 | 54 - 353 Nm      | 3.0 Nm                | 36          | 0.9                 | 1.75            | 25.3                | 3.8                  |

# 3/4" & 1" Micrometer Torque Wrenches



- Meets or exceeds ASME B107.300
- Accurate in clockwise direction +/- 3% from 20% to 100% of full scale
- Easy lock and adjustment design

· Scale markings are highly visible and easy to read

· Knurled steel for durability and grip



PRECISION FOR  
**+/- 3%**  
TORQUE ACCURACY

**FIXED HEAD**

| Cat. No. | Certified Model No. | Drive Size | Head Style | Primary Scale Range | Primary Scale Increments | Alt. Scale Range | Alt Scale Increments | Tooth Count | Head Thickness (in) | Head Width (in) | Overall Length (in) | Product Weight (lbs) |
|----------|---------------------|------------|------------|---------------------|--------------------------|------------------|----------------------|-------------|---------------------|-----------------|---------------------|----------------------|
| 85065M   | 85065MCERT          | 3/4"       | Standard   | 100 - 600 ft-lbs    | 2.5 ft-lbs               | 153 - 831 Nm     | 4.0 Nm               | 36          | 1.1                 | 2.6             | 42.4                | 15.8                 |
| 85067    |                     | 1"         | Standard   | 150 - 750 ft-lbs    | 5 ft-lbs                 | 237 - 983 Nm     | 5.0 Nm               | 24          | 1.3                 | 2.8             | 48.8                | 14.1                 |
| 85068    |                     | 1"         | Standard   | 200 - 1000 ft-lbs   | 5 ft-lbs                 | 305 - 1322 Nm    | 5.0 Nm               | 24          | 1.3                 | 2.8             | 73.0                | 23.3                 |

# Tire Shop Micrometer Torque Wrench



· Used for tightening wheel lug nuts to manufacturer's recommended torque

· Pull adjustment collar for easy and quick torque setting changes

· Scale markings are highly visible and easy to read

· Tough "Tire Tread" rubber cover on head, lock ring and handle provides cushioning effect to reduce fatigue and tool damage

· Accurate in clockwise direction +/- 3% from 20% to 100% of full scale



PRECISION FOR  
**+/- 3%**  
TORQUE ACCURACY

| Cat. No. | Certified Model No. | Drive Size | Head Style                 | Primary Scale Range | Primary Scale Increments | Alt. Scale Range | Alt Scale Increments | Tooth Count | Head Thickness (in) | Head Width (in) | Overall Length (in) | Product Weight (lbs) |
|----------|---------------------|------------|----------------------------|---------------------|--------------------------|------------------|----------------------|-------------|---------------------|-----------------|---------------------|----------------------|
| 85088M   | 85088MCERT          | 1/2"       | Standard - Protective Boot | 30 - 250 ft-lbs     | 2 ft-lbs                 | 54.2 - 352.6 Nm  | 2.7 Nm               | 32          | 1.0                 | 2.2             | 24.9                | 3.5                  |

# Beam Torque Wrenches



· Pointer moves clockwise or counter-clockwise to measure torque in standard or metric scales

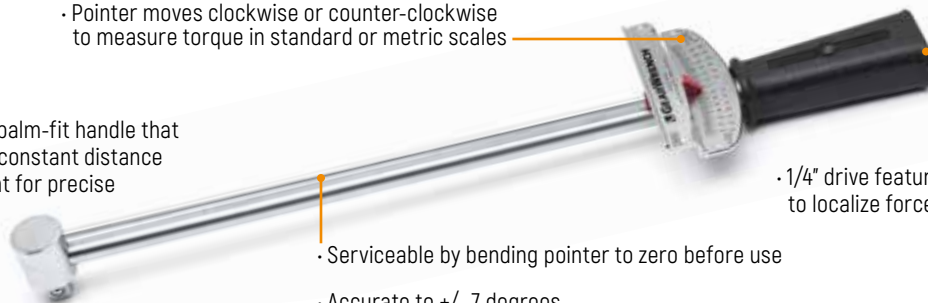
· Palm-fit handle

· 3/8" and 1/2" drives feature palm-fit handle that pivots on beam to maintain constant distance from drive point to load point for precise measurement

· 1/4" drive features ball-type handle to localize force, ensuring accuracy

· Serviceable by bending pointer to zero before use

· Accurate to +/- 7 degrees



| Cat. No. | Drive Size | Primary Scale Range | Primary Scale Increments | Alt. Scale Range | Alt Scale Increments | Head Thickness (in) | Head Width (in) | Overall Length (in) | Product Weight (lbs) |
|----------|------------|---------------------|--------------------------|------------------|----------------------|---------------------|-----------------|---------------------|----------------------|
| 2955N    | 1/4"       | 0 - 80 in-lbs       | 2.5 in-lbs               | 0-9 Nm           | 0.3 Nm               | 1.3                 | 0.8             | 11.3                | 0.8                  |
| 2956N    | 3/8"       | 0 - 800 in-lbs      | 50 in-lbs                | 0-90 Nm          | 12 Nm                | 1.3                 | 0.8             | 16.0                | 1.0                  |
| 2957N    | 1/2"       | 0 - 150 ft-lbs      | 5 ft-lbs                 | 0-190 Nm         | 27 Nm                | 1.3                 | 1.1             | 20.0                | 2.5                  |

# 120XP Electronic Flex Head Torque Wrenches with Angle

## Maximum Access and Accuracy

- "Target Torque Alert" and "Target Angle Alert" gives a warning as the target torque or target angle is approached to prevent over torquing of the fastener
- Angle Accuracy of +/-1% of reading at angular velocity >10 degree/sec and <180 degree/sec
- Ten torque setting presets for frequently repeated applications
- Accurate in clockwise direction +/- 2% from 20% to 100% of full scale



- Two double-stacked 60-tooth pawls for exceptional strength that exceeds ASME specifications

- Handle vibrates, buzzer sounds and LCD screen alerts when the target torque is reached



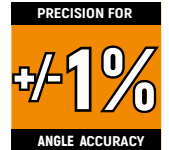
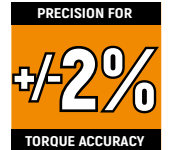
85196  
1/2" Drive

- Five torque measurement units available: Nm, ft-lbs, in-lbs, kgf-m, kgf-cm

- Meets or exceeds ASME B107.300

- 15 degree flex head for improved access

- Requires (2) AA batteries



| Cat. No. | Drive Size | Primary Scale Range | Primary Scale Increments | Alt. Scale Range | Alt. Scale Increments | Tooth Count | Head Thickness (in) | Head Width (in) | Overall Length (in) | Weight (lbs) |
|----------|------------|---------------------|--------------------------|------------------|-----------------------|-------------|---------------------|-----------------|---------------------|--------------|
| 85194    | 1/4"       | 2.0 – 20 ft-lbs     | 0.1 ft-lbs               | 2.7 – 27 Nm      | 0.1 Nm                | 120         | 0.4                 | 1.0             | 15.5                | 1.6          |
| 85195    | 3/8"       | 10 – 100 ft-lbs     | 0.1 ft-lbs               | 13.5 – 135 Nm    | 0.1 Nm                | 120         | 0.6                 | 1.3             | 15.9                | 1.9          |
| 85196    | 1/2"       | 25 – 250 ft-lbs     | 0.1 ft-lbs               | 34 – 340 Nm      | 0.1 Nm                | 120         | 0.7                 | 1.8             | 24.3                | 3.0          |

# Electronic Torque Wrenches

- "Target Torque Alert" and "Target Angle Alert" gives a warning as the target torque or target angle is approached to prevent over torquing of the fastener

- Angle Accuracy of +/-1% of reading between angular velocity of 10 degree/sec and 180 degree/sec

- Ten torque setting presets for frequently repeated applications

- Accurate in clockwise direction +/- 2% from 20% to 100% of full scale

- 15 degree flex head for improved access

- Handle vibrates, buzzer sounds and LCD screen alerts when the target torque is reached

- Handle and housing are oil and solvent resistant



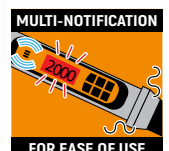
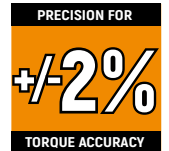
85079  
1/2" Drive

85082  
3/4" Drive

- All steel design

- Five torque measurement units are available: Nm, ft-lbs, in-lbs, kgf-m, kgf-cm

- Meets or exceeds ASME B107.300



| Cat. No. | Drive Size | Head Style | Primary Scale Range | Primary Scale Increments | Alt. Scale Range | Alt. Scale Increments | Tooth Count | Head Thickness (in) | Head Width (in) | Overall Length (in) | Weight (lbs) | Torque Angle Feature |
|----------|------------|------------|---------------------|--------------------------|------------------|-----------------------|-------------|---------------------|-----------------|---------------------|--------------|----------------------|
| 85076    | 3/8"       | Standard   | 10 – 100 ft-lbs     | 0.1 ft-lbs               | 10 - 135 Nm      | 0.1 ft-lb             | 72          | 0.7                 | 1.3             | 15.8                | 1.9          | No                   |
| 85077    | 1/2"       | Standard   | 25 – 250 ft-lbs     | 0.1 ft-lbs               | 34 - 340 Nm      | 0.1 ft-lb             | 72          | 0.9                 | 1.6             | 25.8                | 2.9          | No                   |
| 85078    | 3/8"       | Flex       | 10 - 100 ft-lbs     | 0.1 ft-lbs               | 10 - 135 Nm      | 0.1 ft-lb             | 72          | 0.7                 | 1.3             | 16.8                | 2.1          | Yes                  |
| 85079    | 1/2"       | Flex       | 25 - 250 ft-lbs     | 0.1 ft-lbs               | 34 - 340 Nm      | 0.1 ft-lb             | 72          | 0.9                 | 1.6             | 25.0                | 3.1          | Yes                  |
| 85082    | 3/4"       | Standard   | 75 – 750 ft-lbs     | 0.1 ft-lbs               | 100 - 1000 Nm    | 0.1 ft-lb             | 24          | 2.2                 | 2.4             | 49.1                | 13.1         | No                   |
| 85085    | 1"         | Standard   | 100 – 1100 ft-lbs   | 0.1 ft-lbs               | 150 - 1500 Nm    | 0.1 ft-lb             | 24          | 2.3                 | 2.4             | 49.1                | 13.1         | No                   |



Introducing E-Spec, a connected electronic torque wrench designed specifically for production environments where a high level of precision is required. With +/- 1.5% torque accuracy and +/- 1% angle accuracy, E-Spec is a high-tech workhorse. E-Spec software allows users to set torque parameters and download torque process data via standard text format. All E-spec wrenches incorporate 120XP™ technology that turns fasteners in a 3° swing arc for tight areas. E-Spec is the new standard for premium industrial torque application.

## Connected Torque Wrench for Assembly and Production

### Ease of Use:

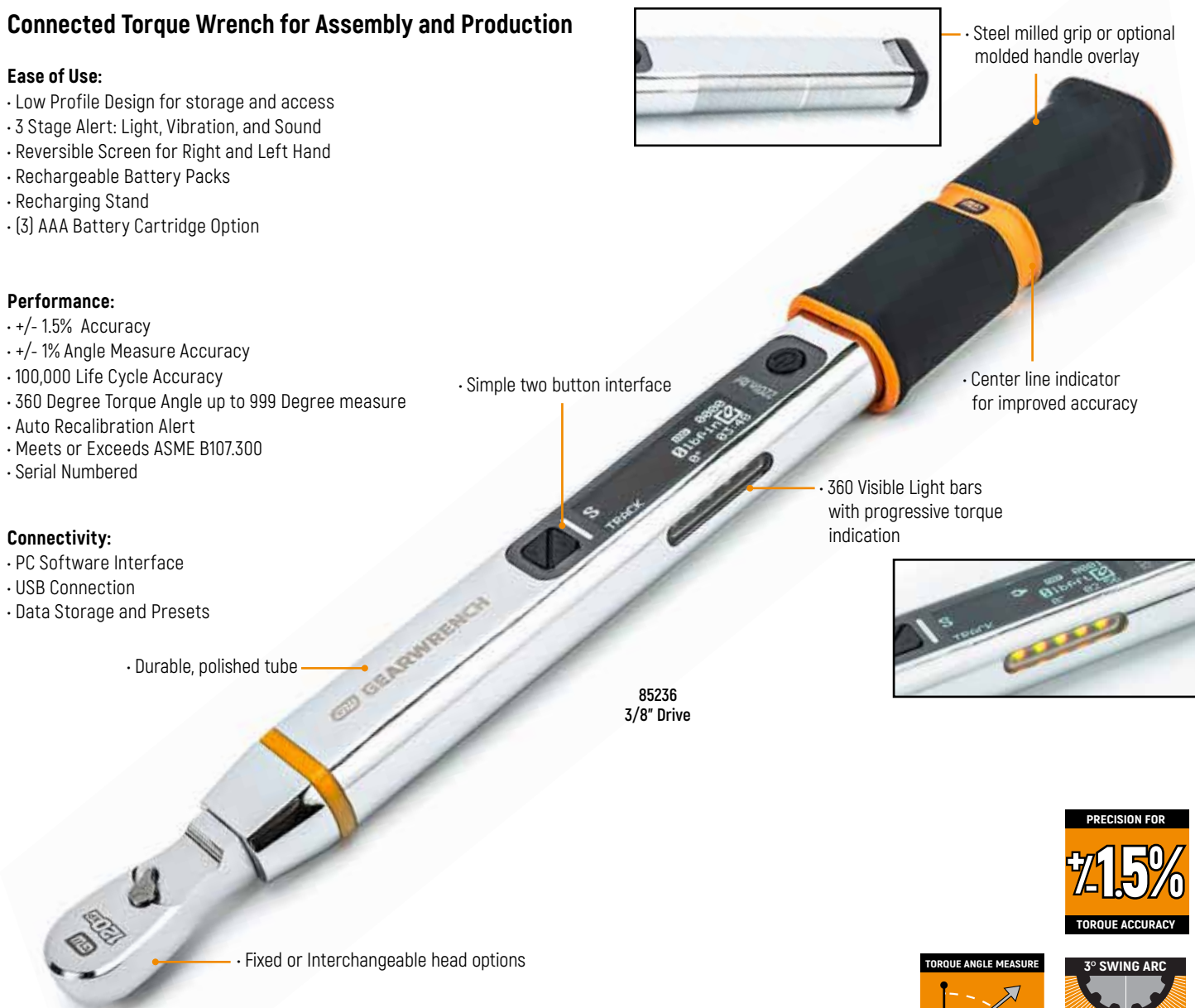
- Low Profile Design for storage and access
- 3 Stage Alert: Light, Vibration, and Sound
- Reversible Screen for Right and Left Hand
- Rechargeable Battery Packs
- Recharging Stand
- (3) AAA Battery Cartridge Option

### Performance:

- +/- 1.5% Accuracy
- +/- 1% Angle Measure Accuracy
- 100,000 Life Cycle Accuracy
- 360 Degree Torque Angle up to 999 Degree measure
- Auto Recalibration Alert
- Meets or Exceeds ASME B107.300
- Serial Numbered

### Connectivity:

- PC Software Interface
- USB Connection
- Data Storage and Presets



85236  
3/8" Drive

· Fixed or Interchangeable head options

## 120XP™



· Two Double-stacked 60-tooth pawls for exceptional strength, exceeding ASME specifications



· EVA and Injection box Storage

PRECISION FOR

**+/-1.5%**

TORQUE ACCURACY

TORQUE ANGLE MEASURE

FOR PRECISION

3° SWING ARC

FOR TIGHTER TURNS

THIN PROFILE

FOR ACCESS

FLEX HEAD

FOR ACCESS

**FIXED HEAD**

**INTERCHANGEABLE HEAD**



| Cat. No. | Drive Size | Head Style           | Scale Range     | Scale Increments | Scale Range       | Scale Increments | Scale Range | Scale Increments | Adapter Size | Tooth Count  | Head Thickness (in) | Head Width (in) | Overall Length (in) | Product Weight (lbs) |
|----------|------------|----------------------|-----------------|------------------|-------------------|------------------|-------------|------------------|--------------|--------------|---------------------|-----------------|---------------------|----------------------|
| 85235    | 1/4"       | Fixed Head Standard  | 4 - 18 ft-lbs   | 0.1 ft-lbs       | 44 - 220 in-lbs   | 0.1 in-lbs       | 5-25 Nm     | 0.1 Nm           | -            | 60T/120 Pos. | 0.9                 | 1.0             | 22.0                | 4.2                  |
| 85236    | 3/8"       | Fixed Head Standard  | 1 - 20 ft-lbs   | 0.1 ft-lbs       | 12 - 240 in-lbs   | 0.1 in-lbs       | 14-28 Nm    | 0.1 Nm           | -            | 60T/120 Pos. | 1.1                 | 1.3             | 22.0                | 4.4                  |
| 85237    | 3/8"       | Fixed Head Standard  | 15 - 74 ft-lbs  | 0.1 ft-lbs       | 177 - 885 in-lbs  | 0.1 in-lbs       | 20-100 Nm   | 0.1 Nm           | -            | 60T/120 Pos. | 1.1                 | 1.3             | 22.0                | 4.4                  |
| 85238    | 1/2"       | Fixed Head Standard  | 50 - 255 ft-lbs | 0.1 ft-lbs       | 600 - 3010 in-lbs | 0.1 in-lbs       | 68-340 Nm   | 0.1 Nm           | -            | 60T/120 Pos. | 1.5                 | 1.7             | 31.5                | 6.9                  |
| 85243    | 1/4"       | Interchangeable Head | 4 - 18 ft-lbs   | 0.1 ft-lbs       | 44 - 220 in-lbs   | 0.1 in-lbs       | 5-25 Nm     | 0.1 Nm           | 9 x 12mm     | 60T/120 Pos. | -                   | -               | 19.5                | 4.6                  |
| 85244    | 3/8"       | Interchangeable Head | 1 - 20 ft-lbs   | 0.1 ft-lbs       | 12 - 240 in-lbs   | 0.1 in-lbs       | 14-28 Nm    | 0.1 Nm           | 9 x 12mm     | 60T/120 Pos. | -                   | -               | 19.5                | 4.9                  |
| 85245    | 3/8"       | Interchangeable Head | 15 - 74 ft-lbs  | 0.1 ft-lbs       | 177 - 885 in-lbs  | 0.1 in-lbs       | 20-100 Nm   | 0.1 Nm           | 9 x 12mm     | 60T/120 Pos. | -                   | -               | 19.5                | 4.5                  |
| 85246    | 1/2"       | Interchangeable Head | 50 - 255 ft-lbs | 0.1 ft-lbs       | 600 - 3010 in-lbs | 0.1 in-lbs       | 68-340 Nm   | 0.1 Nm           | 14 x 18mm    | 60T/120 Pos. | -                   | -               | 29.0                | 7.8                  |

### Wrench Only

| Cat. No. | Drive Size | Wrench Only         |
|----------|------------|---------------------|
| 85235-01 | 1/4"       | Fixed Head Standard |
| 85236-01 | 3/8"       | Fixed Head Standard |
| 85237-01 | 3/8"       | Fixed Head Standard |
| 85238-01 | 1/2"       | Fixed Head Standard |
| 85243-01 | 1/4"       | Interchangeable     |
| 85244-01 | 3/8"       | Interchangeable     |
| 85245-01 | 3/8"       | Interchangeable     |
| 85246-01 | 1/2"       | Interchangeable     |

### Replacement Parts

| Cat. No. | Part  |   |
|----------|---|---|
| 85250-01 | Replacement Lithium Ion Battery for E-Spec Torque Wrench            |  |
| 85250-02 | Replacement (3) AAA Battery Cartridge only for E-Spec Torque Wrench |  |
| 85250-03 | Replacement Charging stand for E-Spec Torque Wrench                 |  |
| 85250-04 | Replacement AC Adapter for E-Spec Torque Wrench                     |  |
| 85250-05 | Replacement USB Stick with instructions for E-Spec Torque Wrench    |  |
| 85250-06 | Replacement Case for 1/4" E-Spec Torque Wrench                      |  |
| 85250-07 | Replacement Case for 1/2" E-Spec Torque Wrench                      |  |
| 85250-08 | Replacement Handle for E-Spec Torque Wrench                         |  |





|   | 1/4" Drive  | 3/8" Drive  |   | 1/2" Drive  |
|---|---|---|---|---|
| E-Spec Fixed Head                                 | 85235   | 85236   | 85237   | 85238   |
| E-Spec Interchangeable Head                       | 85243   | 85244   | 85245   | 85246   |
| Interchangeable Adapter                           | 9 x 12mm  | 9 x 12mm  | 9 x 12mm  | 14 x 18mm   |
| Drive   | 1/4"  | 3/8"  | 3/8"  | 1/2"  |
| Torque Range, in lb.                              | 44-220  | 12-240  | 177-885   | 600-3010  |
| Torque Range, ft. lb.                             | 4-18  | 1-20  | 15-74   | 50-255  |
| Torque Range, Nm                                  | 5-25  | 14-28   | 20-100  | 68-340  |
| Torque Range, Display                             | 0.5% - 130% Full Scale  | 0.5% - 130% Full Scale  | 0.5% - 130% Full Scale  | 0.5% - 130% Full Scale  |
| Torque Accuracy CW                                | +/-1.5% of reading  | +/-1.5% of reading  | +/-1.5% of reading  | +/-1.5% of reading  |
| Torque Accuracy CCW                               | +/-2.5% + of reading  | +/-2.5% + of reading  | +/-2.5% + of reading  | +/-2.5% + of reading  |
| Angle Accuracy                                    | +/- 1% of reading and +/- 1 degree                                    | +/- 1% of reading and +/- 1 degree                                    | +/- 1% of reading and +/- 1 degree                                    | +/- 1% of reading and +/- 1 degree                                    |
| Angle Range                                       | 0-999.9 Degrees   | 0-999.9 Degrees   | 0-999.9 Degrees   | 0-999.9 Degrees   |
| Ratchet Style                                     | 120XP   | 120XP   | 120XP   | 120XP   |
| Head Depth  | 0.86"   | 1.05"   | 1.05"   | 1.46"   |
| Head Width  | 1"  | 1.26"   | 1.26"   | 1.73"   |
| Swing Arc   | 3 degree  | 3 degree  | 3 degree  | 3 degree  |
| Storage Capacity                                  | Simple mode: 2000 Production Mode: 6000                               | Simple mode: 2000 Production Mode: 6000                               | Simple mode: 2000 Production Mode: 6000                               | Simple mode: 2000 Production Mode: 6000                               |
| Number of Presets                                 | 100 Preset (P00-P99)<br>999 pcs for each (0-999)                      | 100 Preset (P00-P99)<br>999 pcs for each (0-999)                      | 100 Preset (P00-P99)<br>999 pcs for each (0-999)                      | 100 Preset (P00-P99)<br>999 pcs for each (0-999)                      |
| Data management +                                 | USB+Software  | USB+Software  | USB+Software  | USB+Software  |
| Rechargeable                                      | Yes   | Yes   | Yes   | Yes   |
| Batteries Included                                | Li-ion battery pack, 2000mAh<br>Rechargeable - Type C DATA/Charging   | Li-ion battery pack, 2000mAh<br>Rechargeable - Type C DATA/Charging   | Li-ion battery pack, 2000mAh<br>Rechargeable - Type C DATA/Charging   | Li-ion battery pack, 2000mAh<br>Rechargeable - Type C DATA/Charging   |
| Alkaline Battery cartridge option                 | Yes (3 AAA)   | Yes (3 AAA)   | Yes (3 AAA)   | Yes (3 AAA)   |
| Progressive Lights                                | Yes - 30%, 50%, 70%, 90%, 98%   | Yes - 30%, 50%, 70%, 90%, 98%   | Yes - 30%, 50%, 70%, 90%, 98%   | Yes - 30%, 50%, 70%, 90%, 98%   |
| Buzzer  | Yes - Off/Low/Mid/High  | Yes - Off/Low/Mid/High  | Yes - Off/Low/Mid/High  | Yes - Off/Low/Mid/High  |
| Decible Level                                     | Variable - 40 to 70db   | Variable - 40 to 70db   | Variable - 40 to 70db   | Variable - 40 to 70db   |
| Vibration   | Yes - Off/Low/Mid/High  | Yes - Off/Low/Mid/High  | Yes - Off/Low/Mid/High  | Yes - Off/Low/Mid/High  |
| LCD backlight                                     | OLED, 5% to 100%  | OLED, 5% to 100%  | OLED, 5% to 100%  | OLED, 5% to 100%  |
| Approbation                                       | CE for product, UL for rechargeable<br>battery pack and power adapter | CE for product, UL for rechargeable<br>battery pack and power adapter | CE for product, UL for rechargeable<br>battery pack and power adapter | CE for product, UL for rechargeable<br>battery pack and power adapter |
| USB Access Location                               | Type C on the end   | Type C on the end   | Type C on the end   | Type C on the end   |
| Calibration and Settings on Tool                  | Yes   | Yes   | Yes   | Yes   |
| Odometer of Torque Cycles                         | Yes   | Yes   | Yes   | Yes   |
| Adjustable Calibration/<br>Cert. Time Warning     | Yes - Yes   | Yes - Yes   | Yes - Yes   | Yes - Yes   |
| All Steel Body                                    | Yes   | Yes   | Yes   | Yes   |
| Methyl Propyl Ketone<br>resistant display/buttons | Yes   | Yes   | Yes   | Yes   |
| Length  | 22"   | 22"   | 22"   | 31.5"   |
| Weight  | 4.2 lbs   | 4.4 lbs   | 4.4 lbs   | 6.9 lbs   |
| Storage Case Included                             | Yes   | Yes   | Yes   | Yes   |

# Interchangeable Torque Wrenches



• Torque accuracy of +/- 3% CW between 20% and 100% of full scale

• Pull adjustment collar for easy and quick torque setting changes

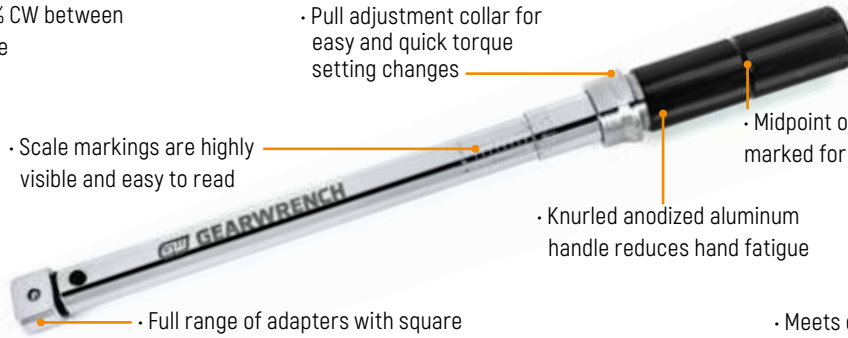
• Scale markings are highly visible and easy to read

• Midpoint on handle clearly marked for accuracy

• Knurled anodized aluminum handle reduces hand fatigue

• Full range of adapters with square style 9x12 and 14x18 drive tang

• Meets or exceeds ASME B107.300



| Cat. No. | Adapter Size | Primary Scale Range | Increments | Alt. Scale Range  | Scale Increments | Scale Range     | Scale Increments | Tube Diameter (in) | Handle Diameter (in) | Head Width (in) | Overall Length (in) | Product Weight (lbs) |
|----------|--------------|---------------------|------------|-------------------|------------------|-----------------|------------------|--------------------|----------------------|-----------------|---------------------|----------------------|
| 89470    | 9 x 12mm     | 1 - 5 Nm            | 0.1 Nm     | 9 - 44 in-lbs     | 0.9 in-lbs       | 1 - 4 ft-lbs    | 0.1 ft-lbs       | 0.6                | 1.8                  | 1.0             | 8.3                 | 1.3                  |
| 89471    | 9 x 12mm     | 5 - 25 Nm           | 0.1 Nm     | 44 - 221 in-lbs   | 0.9 in-lbs       | 4 - 18 ft-lbs   | 0.1 ft-lbs       | 0.6                | 2.0                  | 1.3             | 9.8                 | 1.8                  |
| 89472    | 9 x 12mm     | 20 - 100 Nm         | 0.5 Nm     | 177 - 885 in-lbs  | 4.8 in-lbs       | 15 - 74 ft-lbs  | 0.4 ft-lbs       | 0.9                | 2.0                  | 1.3             | 16.6                | 3.8                  |
| 89473    | 14 x 18mm    | 40 - 200 Nm         | 1 Nm       | 354 - 1770 in-lbs | 8.9 in-lbs       | 30 - 148 ft-lbs | 0.7 ft-lbs       | 0.9                | 2.8                  | 1.6             | 20.7                | 3.9                  |
| 89474    | 14 x 18mm    | 68 - 340 Nm         | 2 Nm       | 602 - 3009 in-lbs | 17.7 in-lbs      | 50 - 251 ft-lbs | 1.5 ft-lbs       | 0.9                | 2.8                  | 1.6             | 23.2                | 4.5                  |

# Interchangeable Torque Wrench Sets



• Available in SAE and Metric

• 5-25Nm

• 20-100Nm



**89450**  
1/4" Drive



**89452**  
3/8" Drive

| Cat. No. | Description  | Set Range      | Adapter Size | Ratchet Head Adapter Drive Size | Case Length (in) | Case Width (in) | Case Height (in) | Product Weight (lbs) |
|----------|--|----------------|--------------|---------------------------------|------------------|-----------------|------------------|----------------------|
| 89450    | 12pc SAE Interchangeable Torque Wrench 5-25Nm      | 5/16" - 13/16" | 9 x 12mm     | 1/4"                            | 11.4             | 7.3             | 2.0              | 2.9                  |
| 89451    | 12pc Metric Interchangeable Torque Wrench 5-25Nm   | 8mm - 17mm     | 9 x 12mm     | 1/4"                            | 11.4             | 7.3             | 2.0              | 2.9                  |
| 89452    | 12pc SAE Interchangeable Torque Wrench 20-100Nm    | 5/16" - 13/16" | 9 x 12mm     | 3/8"                            | 18.5             | 10.6            | 2.4              | 4.4                  |
| 89453    | 12pc Metric Interchangeable Torque Wrench 20-100Nm | 8mm - 17mm     | 9 x 12mm     | 3/8"                            | 18.5             | 10.6            | 2.4              | 4.4                  |

| Cat. No. | Style    | Size   | Adapter Size | 89450 | 89451 | 89452 | 89453 | Cat. No. | Style                         | Size      | Adapter Size | 89450 | 89451 | 89452 | 89453 |
|----------|----------|--------|--------------|-------|-------|-------|-------|----------|-------------------------------|-----------|--------------|-------|-------|-------|-------|
| 89512    | Open End | 5/16"  | 9x12         | X     |       | X     |       | 89493    | Open End                      | 10 mm     | 9x12         |       | X     |       | X     |
| 89513    | Open End | 11/32" | 9x12         | X     |       | X     |       | 89494    | Open End                      | 11 mm     | 9x12         |       | X     |       | X     |
| 89514    | Open End | 3/8"   | 9x12         | X     |       | X     |       | 89495    | Open End                      | 12 mm     | 9x12         |       | X     |       | X     |
| 89515    | Open End | 7/16"  | 9x12         | X     |       | X     |       | 89496    | Open End                      | 13 mm     | 9x12         |       | X     |       | X     |
| 89516    | Open End | 1/2"   | 9x12         | X     |       | X     |       | 89497    | Open End                      | 14 mm     | 9x12         |       | X     |       | X     |
| 89517    | Open End | 9/16"  | 9x12         | X     |       | X     |       | 89498    | Open End                      | 15 mm     | 9x12         |       | X     |       | X     |
| 89518    | Open End | 5/8"   | 9x12         | X     |       | X     |       | 89499    | Open End                      | 16 mm     | 9x12         |       | X     |       | X     |
| 89519    | Open End | 11/16" | 9x12         | X     |       | X     |       | 89500    | Open End                      | 17 mm     | 9x12         |       | X     |       | X     |
| 89520    | Open End | 3/4"   | 9x12         | X     |       | X     |       | 89471    | Interchangeable Torque Wrench | 5 - 25 Nm | 9x12         | X     | X     |       |       |
| 89521    | Open End | 13/16" | 9x12         | X     |       | X     |       | 89480    | Ratchet Adapter               | 1/4"      | 9x12         | X     | X     |       |       |
| 89491    | Open End | 8 mm   | 9x12         |       | X     |       | X     | 89472    | Interchangeable Torque Wrench | 20-100 Nm | 9x12         |       |       | X     | X     |
| 89492    | Open End | 9 mm   | 9x12         |       | X     |       | X     | 89482    | Ratchet Adapter               | 3/8"      | 9x12         |       |       | X     | X     |

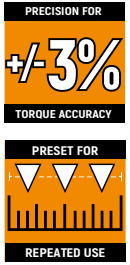
# Preset Torque Wrenches

- Meets or exceeds ASME B107.300
- Accurate in clockwise direction +/- 3% from 20% to 100% of full scale

- Fixed Ratchet head or Square Drive receiver - 9x12mm and 14x18mm
- Matte chrome finish



- Solid Comfort grip handle
- Adjustment access at base of grip



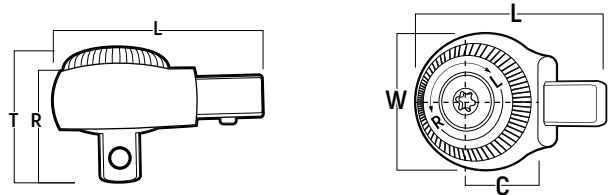
| Cat. No. | Drive Size | Range     | Range             | Range           | Tooth Count | Head Thickness (in) | Head Width (in) | Overall Length (in) | Product Weight (lbs) |
|----------|------------|-----------|-------------------|-----------------|-------------|---------------------|-----------------|---------------------|----------------------|
| 85160    | 1/4"       | 1-5 Nm    | 9 - 44 in-lbs     | 1 - 4 ft-lbs    | 36          | 0.8                 | 1.0             | 7.5                 | 0.4                  |
| 85161    | 3/8"       | 5-25 Nm   | 44 - 221 in-lbs   | 4 - 18 ft-lbs   | 36          | 1.0                 | 1.0             | 8.5                 | 0.5                  |
| 85162    | 3/8"       | 10-50 Nm  | 89 - 442 in-lbs   | 7 - 37 ft-lbs   | 36          | 1.0                 | 1.0             | 9.3                 | 0.8                  |
| 85163    | 1/2"       | 20-100 Nm | 177 - 885 in-lbs  | 15 - 74 ft-lbs  | 36          | 1.3                 | 1.3             | 12.4                | 1.4                  |
| 85164    | 1/2"       | 40-200 Nm | 354 - 1770 in-lbs | 30 - 148 ft-lbs | 36          | 1.3                 | 1.3             | 18.2                | 2.7                  |



| Cat. No. | Adapter Size | Range     | Range             | Range          | (C) Overall Length (mm) | Product Weight (lbs) |
|----------|--------------|-----------|-------------------|----------------|-------------------------|----------------------|
| 89460    | 9x12mm       | 1-5 Nm    | 9 - 44 in-lbs     | 1 - 4 ft-lb    | 164                     | 0.39                 |
| 89461    | 9x12mm       | 5-25 Nm   | 44 - 221 in-lbs   | 4 - 18 ft-lb   | 189                     | 0.44                 |
| 89462    | 9x12mm       | 10-50 Nm  | 89 - 442 in-lbs   | 7 - 37 ft-lb   | 209                     | 0.74                 |
| 89463    | 9x12mm       | 20-100 Nm | 177 - 885 in-lbs  | 15 - 74 ft-lb  | 289                     | 1.23                 |
| 89464    | 14 x18mm     | 40-200 Nm | 354 - 1770 in-lbs | 30 - 148 ft-lb | 437                     | 2.46                 |

## Ratchet Heads

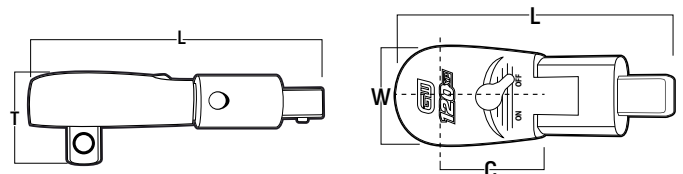
- Round Head Design
- 52 tooth 7-Degree Swing arc



| Cat. No. | Adapter Type    | Drive Size | Adapter Size | Center of Ratchet (in) | Tooth Count | Ratchet Thickness (in) | Head Thickness (in) | Head Width (mm) | (L) Overall Length (mm) | Product Weight (lbs) |
|----------|-----------------|------------|--------------|------------------------|-------------|------------------------|---------------------|-----------------|-------------------------|----------------------|
| 89480    | Ratcheting Head | 1/4"       | 9x12mm       | 0.7                    | 52          | 0.8                    | 1.0                 | 1.0             | 46                      | 0.15                 |
| 89482    | Ratcheting Head | 3/8"       | 9x12mm       | 0.7                    | 52          | 1.3                    | 1.1                 | 14              | 51                      | 0.31                 |
| 89484    | Ratcheting Head | 1/2"       | 9x1mm        | 0.7                    | 52          | 1.5                    | 14                  | 1.5             | 52                      | 0.34                 |
| 89485    | Ratcheting Head | 1/2"       | 14x18mm      | 1.0                    | 52          | 1.7                    | 1.6                 | 1.6             | 72                      | 0.66                 |

## 120XP Ratchet Heads

- 120 position, 60-tooth double-pawl design delivers 3 degrees of swing arc
- Tear Drop Low profile head
- Flip Lever for quick forward and reverse

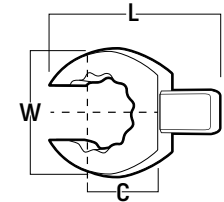
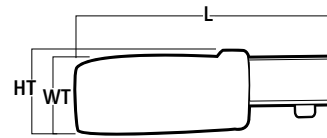


| Cat. No. | Adapter Type               | Drive Size | Adapter Size | Center of Ratchet (in) | Tooth Count  | Head Thickness (in) | Head Width (mm) | Overall Length (in) | Product Weight (lbs) |
|----------|----------------------------|------------|--------------|------------------------|--------------|---------------------|-----------------|---------------------|----------------------|
| 89614    | 120XP Ratcheting Head      | 1/4"       | 9x12mm       | 1.5                    | 60T/120 Pos. | 0.9                 | 1.0             | 2.6                 | 0.2                  |
| 89615    | 120XP Ratcheting Head      | 3/8"       | 9x12mm       | 1.5                    | 60T/120 Pos. | 1.1                 | 1.3             | 2.8                 | 0.4                  |
| 89616    | 120XP Ratcheting Head      | 1/2"       | 14x18mm      | 2.0                    | 60T/120 Pos. | 1.5                 | 1.7             | 3.8                 | 0.9                  |
| 89617    | 120XP Flex Ratcheting Head | 1/4"       | 9x12mm       | 2.4                    | 60T/120 Pos. | 0.9                 | 1.0             | 3.5                 | 0.3                  |
| 89618    | 120XP Flex Ratcheting Head | 3/8"       | 9x12mm       | 2.4                    | 60T/120 Pos. | 1.1                 | 1.3             | 3.6                 | 0.5                  |
| 89619    | 120XP Flex Ratcheting Head | 1/2"       | 14x18mm      | 3.1                    | 60T/120 Pos. | 1.5                 | 1.7             | 4.9                 | 1.2                  |

# Flare Nut Adapters



- Open Box Flare Nut
- 12pt configuration
- Chrome Plated

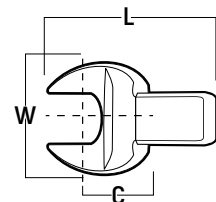
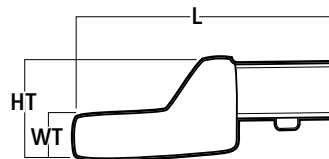


| Cat. No. | Adapter Type | Size   | Adapter Size | Center of Wrench (mm) | (WT) Wrench Thickness (mm) | Head Thickness (mm) | Head Width (mm) | Overall Length (mm) | Product Weight (lbs) |
|----------|--------------|--------|--------------|-----------------------|----------------------------|---------------------|-----------------|---------------------|----------------------|
| 89590    | Flare Nut    | 10mm   | 9x12         | 17.5                  | 12                         | 14.5                | 21.2            | 42.3                | 0.1                  |
| 89591    | Flare Nut    | 11mm   | 9x12         | 17.5                  | 12                         | 14.5                | 22.6            | 42.8                | 0.1                  |
| 89592    | Flare Nut    | 12mm   | 9x12         | 17.5                  | 12                         | 14.5                | 24.1            | 43.4                | 0.1                  |
| 89593    | Flare Nut    | 13mm   | 9x12         | 17.5                  | 12                         | 14.5                | 25.2            | 43.7                | 0.1                  |
| 89594    | Flare Nut    | 14mm   | 9x12         | 17.5                  | 13                         | 14.5                | 27.3            | 44.5                | 0.1                  |
| 89595    | Flare Nut    | 16mm   | 9x12         | 17.5                  | 13                         | 14.5                | 30.1            | 45.4                | 0.1                  |
| 89596    | Flare Nut    | 17mm   | 9x12         | 17.5                  | 13                         | 14.5                | 31.6            | 45.9                | 0.1                  |
| 89597    | Flare Nut    | 18mm   | 9x12         | 17.5                  | 15                         | 15                  | 33.3            | 46.1                | 0.2                  |
| 89598    | Flare Nut    | 19mm   | 9x12         | 17.5                  | 15                         | 15                  | 34.6            | 46.8                | 0.2                  |
| 89599    | Flare Nut    | 21mm   | 9x12         | 17.5                  | 15                         | 15                  | 37.7            | 48                  | 0.2                  |
| 89600    | Flare Nut    | 22mm   | 9x12         | 17.5                  | 15                         | 15                  | 39.3            | 48.8                | 0.2                  |
| 89601    | Flare Nut    | 11/32" | 9x12         | 17.5                  | 8                          | 14.7                | 17.6            | 42.5                | 0.1                  |
| 89602    | Flare Nut    | 3/8"   | 9x12         | 17.5                  | 12                         | 14.5                | 21.2            | 42.3                | 0.1                  |
| 89603    | Flare Nut    | 7/16"  | 9x12         | 17.5                  | 12                         | 14.5                | 22.6            | 42.8                | 0.1                  |
| 89604    | Flare Nut    | 1/2"   | 9x12         | 17.5                  | 12                         | 14.5                | 25.2            | 43.7                | 0.1                  |
| 89605    | Flare Nut    | 9/16"  | 9x12         | 17.5                  | 13                         | 14.5                | 27.3            | 44.5                | 0.1                  |
| 89606    | Flare Nut    | 5/8"   | 9x12         | 17.5                  | 13                         | 14.5                | 30.1            | 45.4                | 0.1                  |
| 89607    | Flare Nut    | 11/16" | 9x12         | 17.5                  | 15                         | 15                  | 33.3            | 46.1                | 0.2                  |
| 89608    | Flare Nut    | 3/4"   | 9x12         | 17.5                  | 15                         | 15                  | 34.6            | 46.8                | 0.2                  |
| 89609    | Flare Nut    | 13/16" | 9x12         | 17.5                  | 15                         | 15                  | 37.7            | 48                  | 0.2                  |
| 89610    | Flare Nut    | 7/8"   | 9x12         | 17.5                  | 15                         | 15                  | 39.3            | 48.8                | 0.2                  |
| 89611    | Flare Nut    | 15/16" | 9x12         | 25                    | 15                         | 21.5                | 38              | 60                  | 0.2                  |
| 89612    | Flare Nut    | 1"     | 9x12         | 31                    | 17.5                       | 21.5                | 42              | 68                  | 0.4                  |

# Open End Adapters



- Open end wrench style
- Chrome plated



| Cat. No. | Adapter Type | Size | Adapter Size | Center of Wrench (mm) | Wrench Thickness (mm) | Head Thickness (mm) | Head Width (mm) | Overall Length (mm) | Product Weight (lbs) |
|----------|--------------|------|--------------|-----------------------|-----------------------|---------------------|-----------------|---------------------|----------------------|
| 89490    | Open End     | 7mm  | 9x12         | 17.5                  | 5.7                   | 14.7                | 20.7            | 37.5                | 0.1                  |
| 89491    | Open End     | 8mm  | 9x12         | 17.5                  | 5.7                   | 14.7                | 22              | 37.9                | 0.1                  |
| 89492    | Open End     | 9mm  | 9x12         | 17.5                  | 5.7                   | 14.7                | 23.5            | 37.9                | 0.1                  |
| 89493    | Open End     | 10mm | 9x12         | 17.5                  | 5.7                   | 14.7                | 24.8            | 39.9                | 0.1                  |
| 89494    | Open End     | 11mm | 9x12         | 17.5                  | 5.7                   | 14.7                | 26              | 39.1                | 0.1                  |
| 89495    | Open End     | 12mm | 9x12         | 17.5                  | 5.7                   | 14.7                | 27.5            | 38.8                | 0.1                  |
| 89496    | Open End     | 13mm | 9x12         | 17.5                  | 5.7                   | 14.7                | 28.8            | 40                  | 0.1                  |
| 89497    | Open End     | 14mm | 9x12         | 20.0                  | 7.7                   | 14.7                | 31.5            | 43                  | 0.1                  |
| 89498    | Open End     | 15mm | 9x12         | 20.0                  | 7.7                   | 14.7                | 33.5            | 43.5                | 0.1                  |
| 89499    | Open End     | 16mm | 9x12         | 20.0                  | 7.7                   | 14.7                | 36              | 44                  | 0.1                  |
| 89500    | Open End     | 17mm | 9x12         | 20.0                  | 7.7                   | 14.7                | 37.7            | 44                  | 0.1                  |
| 89501    | Open End     | 18mm | 9x12         | 20.0                  | 7.7                   | 14.7                | 39              | 45                  | 0.2                  |
| 89502    | Open End     | 19mm | 9x12         | 20                    | 7.7                   | 14.7                | 41.6            | 46                  | 0.2                  |

# Open End Adapters continued

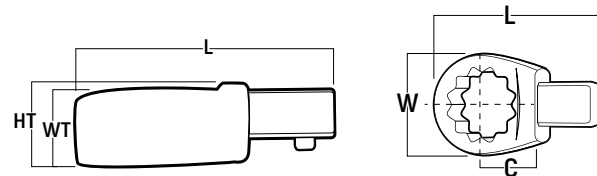


| Cat. No. | Adapter Type | Size    | Adapter Size | Center of Wrench (mm) | Wrench Thickness (mm) | Head Thickness (mm) | Head Width (mm) | Overall Length (mm) | Product Weight (lbs) |
|----------|--------------|---------|--------------|-----------------------|-----------------------|---------------------|-----------------|---------------------|----------------------|
| 89503    | Open End     | 17 mm   | 14x18        | 25                    | 9                     | 21.5                | 37.0            | 59.5                | 0.3                  |
| 89504    | Open End     | 18 mm   | 14x18        | 25                    | 9                     | 21.5                | 38.6            | 60.0                | 0.3                  |
| 89505    | Open End     | 19 mm   | 14x18        | 25                    | 9                     | 21.5                | 40.6            | 60.5                | 0.3                  |
| 89506    | Open End     | 21 mm   | 14x18        | 25                    | 11                    | 21.5                | 45.2            | 61.0                | 0.4                  |
| 89507    | Open End     | 22 mm   | 14x18        | 25                    | 11                    | 21.5                | 47.3            | 62.0                | 0.4                  |
| 89508    | Open End     | 24 mm   | 14x18        | 25                    | 11                    | 21.5                | 50.8            | 63.1                | 0.4                  |
| 89509    | Open End     | 27 mm   | 14x18        | 32.5                  | 13.5                  | 21.5                | 58.7            | 69.0                | 0.5                  |
| 89510    | Open End     | 30 mm   | 14x18        | 32.5                  | 13.5                  | 21.5                | 62.7            | 70.6                | 0.5                  |
| 89511    | Open End     | 32 mm   | 14x18        | 32.5                  | 13.5                  | 21.5                | 65.2            | 72.1                | 0.5                  |
| 89512    | Open End     | 5/16"   | 9x12         | 17.5                  | 5.70                  | 14.7                | 22.0            | 37.9                | 0.1                  |
| 89513    | Open End     | 11/32"  | 9x12         | 17.5                  | 5.70                  | 14.7                | 23.5            | 37.9                | 0.1                  |
| 89514    | Open End     | 3/8"    | 9x12         | 17.5                  | 5.70                  | 14.7                | 24.8            | 39.9                | 0.1                  |
| 89515    | Open End     | 7/16"   | 9x12         | 17.5                  | 5.7                   | 14.7                | 26.0            | 39.1                | 0.1                  |
| 89516    | Open End     | 1/2"    | 9x12         | 17.5                  | 5.7                   | 14.7                | 28.8            | 40.0                | 0.1                  |
| 89517    | Open End     | 9/16"   | 9x12         | 20                    | 7.7                   | 14.7                | 31.5            | 43.0                | 0.1                  |
| 89518    | Open End     | 5/8"    | 9x12         | 20                    | 7.7                   | 14.7                | 36.0            | 44.0                | 0.1                  |
| 89519    | Open End     | 11/16"  | 9x12         | 20                    | 7.7                   | 14.7                | 39.0            | 45.0                | 0.2                  |
| 89520    | Open End     | 3/4"    | 9x12         | 20                    | 7.7                   | 14.7                | 41.6            | 46.0                | 0.2                  |
| 89521    | Open End     | 13/16"  | 9x12         | 25                    | 11                    | 21.5                | 45.2            | 52.0                | 0.3                  |
| 89522    | Open End     | 7/8"    | 9x12         | 25                    | 11                    | 21.5                | 47.3            | 53.0                | 0.3                  |
| 89523    | Open End     | 15/16"  | 9x12         | 25                    | 11                    | 21.5                | 50.8            | 54.0                | 0.3                  |
| 89524    | Open End     | 11/16"  | 14x18        | 25                    | 9                     | 21.5                | 38.6            | 60.0                | 0.3                  |
| 89525    | Open End     | 3/4"    | 14x18        | 25                    | 9                     | 21.5                | 40.6            | 60.5                | 0.3                  |
| 89526    | Open End     | 13/16"  | 14x18        | 25                    | 11                    | 21.5                | 45.2            | 61.0                | 0.4                  |
| 89527    | Open End     | 7/8"    | 14x18        | 25                    | 11                    | 21.5                | 47.3            | 62.0                | 0.4                  |
| 89528    | Open End     | 15/16"  | 14x18        | 25                    | 11                    | 21.5                | 50.8            | 63.1                | 0.4                  |
| 89529    | Open End     | 1"      | 14x18        | 32.5                  | 13.5                  | 21.5                | 58.7            | 69.0                | 0.5                  |
| 89530    | Open End     | 1-1/6"  | 14x18        | 32.5                  | 13.5                  | 21.5                | 58.7            | 69.0                | 0.5                  |
| 89531    | Open End     | 1-1/8"  | 14x18        | 32.5                  | 13.5                  | 21.5                | 62.7            | 70.6                | 0.5                  |
| 89532    | Open End     | 1-3/16" | 14x18        | 32.5                  | 13.5                  | 21.5                | 62.7            | 70.6                | 0.5                  |
| 89533    | Open End     | 1-1/4"  | 14x18        | 32.5                  | 13.5                  | 21.5                | 65.2            | 72.1                | 0.5                  |

# Box End Adapters



- Box End Style
- 12pt Configuration
- Chrome Plated



| Cat. No. | Adapter Type | Size | Adapter Size | Center of Wrench (mm) | Wrench Thickness (mm) | Head Thickness (mm) | Head Width (mm) | Overall Length (mm) | Product Weight (lbs) |
|----------|--------------|------|--------------|-----------------------|-----------------------|---------------------|-----------------|---------------------|----------------------|
| 89540    | 12pt Box End | 7mm  | 9x12         | 17.5                  | 8.0                   | 14.7                | 13.1            | 40.3                | 0.1                  |
| 89541    | 12pt Box End | 8mm  | 9x12         | 17.5                  | 8.0                   | 14.7                | 13.1            | 40.3                | 0.1                  |
| 89542    | 12pt Box End | 9mm  | 9x12         | 17.5                  | 8.0                   | 14.7                | 17.6            | 42.5                | 0.1                  |
| 89543    | 12pt Box End | 10mm | 9x12         | 17.5                  | 8.0                   | 14.7                | 17.6            | 42.5                | 0.1                  |
| 89544    | 12pt Box End | 11mm | 9x12         | 17.5                  | 8.0                   | 14.7                | 19              | 43.5                | 0.1                  |
| 89545    | 12pt Box End | 12mm | 9x12         | 17.5                  | 12.2                  | 14.7                | 20.3            | 44.0                | 0.1                  |
| 89546    | 12pt Box End | 13mm | 9x12         | 17.5                  | 12.2                  | 14.7                | 21.1            | 44.5                | 0.1                  |

# Box End Adapters continued



| Cat. No. | Adapter Type | Size    | Adapter Size | Center of Wrench (mm) | (WT) Wrench Thickness (mm) | (HT) Head Thickness (mm) | Head Width (mm) | Overall Length (mm) | Product Weight (lbs) |
|----------|--------------|---------|--------------|-----------------------|----------------------------|--------------------------|-----------------|---------------------|----------------------|
| 89547    | 12pt Box End | 14 mm   | 9x12         | 17.5                  | 12.2                       | 14.7                     | 234             | 45.5                | 0.1                  |
| 89548    | 12pt Box End | 15 mm   | 9x12         | 17.5                  | 12.2                       | 14.7                     | 244             | 48.0                | 0.1                  |
| 89549    | 12pt Box End | 16 mm   | 9x12         | 17.5                  | 13.2                       | 14.7                     | 264             | 47.0                | 0.1                  |
| 89550    | 12pt Box End | 17 mm   | 9x12         | 17.5                  | 13.2                       | 14.7                     | 274             | 48.0                | 0.1                  |
| 89551    | 12pt Box End | 18 mm   | 9x12         | 17.5                  | 13.2                       | 14.7                     | 28.9            | 48.3                | 0.1                  |
| 89552    | 12pt Box End | 19 mm   | 9x12         | 17.5                  | 13.2                       | 14.7                     | 31.0            | 49.5                | 0.1                  |
| 89553    | 12pt Box End | 21 mm   | 9x12         | 17.5                  | 14.7                       | 14.7                     | 334             | 50.5                | 0.2                  |
| 89554    | 12pt Box End | 22 mm   | 9x12         | 17.5                  | 14.7                       | 14.7                     | 35.0            | 51.5                | 0.2                  |
| 89555    | 12pt Box End | 17 mm   | 14x18        | 25.0                  | 12.5                       | 21.5                     | 275             | 64.0                | 0.3                  |
| 89556    | 12pt Box End | 18 mm   | 14x18        | 25.0                  | 12.5                       | 21.5                     | 29.5            | 64.5                | 0.3                  |
| 89557    | 12pt Box End | 19 mm   | 14x18        | 25.0                  | 12.5                       | 21.5                     | 31.0            | 66.0                | 0.3                  |
| 89558    | 12pt Box End | 21 mm   | 14x18        | 25.0                  | 15.0                       | 21.5                     | 33.0            | 67.1                | 0.3                  |
| 89559    | 12pt Box End | 22 mm   | 14x18        | 25.0                  | 15.0                       | 21.5                     | 35.0            | 68.1                | 0.3                  |
| 89560    | 12pt Box End | 24 mm   | 14x18        | 25.0                  | 15.0                       | 21.5                     | 38.0            | 69.1                | 0.3                  |
| 89561    | 12pt Box End | 27 mm   | 14x18        | 31.0                  | 17.5                       | 21.5                     | 42.0            | 77.3                | 0.4                  |
| 89562    | 12pt Box End | 30 mm   | 14x18        | 31.0                  | 17.5                       | 21.5                     | 45.1            | 78.7                | 0.4                  |
| 89563    | 12pt Box End | 32 mm   | 14x18        | 31.0                  | 17.5                       | 21.5                     | 48.0            | 79.8                | 0.4                  |
| 89564    | 12pt Box End | 5/16"   | 9x12         | 17.5                  | 8.0                        | 14.7                     | 13.1            | 40.3                | 0.1                  |
| 89565    | 12pt Box End | 11/32"  | 9x12         | 17.5                  | 8.0                        | 14.7                     | 17.6            | 42.5                | 0.1                  |
| 89566    | 12pt Box End | 3/8"    | 9x12         | 17.5                  | 8.0                        | 14.7                     | 17.6            | 42.5                | 0.1                  |
| 89567    | 12pt Box End | 7/16"   | 9x12         | 17.5                  | 8.0                        | 14.7                     | 19.0            | 43.5                | 0.1                  |
| 89568    | 12pt Box End | 1/2"    | 9x12         | 17.5                  | 12.2                       | 14.7                     | 21.1            | 44.5                | 0.12                 |
| 89569    | 12pt Box End | 9/16"   | 9x12         | 17.5                  | 12.2                       | 14.7                     | 234             | 45.5                | 0.11                 |
| 89570    | 12pt Box End | 5/8"    | 9x12         | 17.5                  | 13.2                       | 14.7                     | 264             | 47.0                | 0.1                  |
| 89571    | 12pt Box End | 11/16"  | 9x12         | 17.5                  | 13.2                       | 14.7                     | 28.9            | 48.3                | 0.1                  |
| 89572    | 12pt Box End | 3/4"    | 9x12         | 17.5                  | 13.2                       | 14.7                     | 31.0            | 49.5                | 0.1                  |
| 89573    | 12pt Box End | 13/16"  | 9x12         | 17.5                  | 14.7                       | 14.7                     | 334             | 50.5                | 0.2                  |
| 89574    | 12pt Box End | 7/8"    | 9x12         | 17.5                  | 14.7                       | 14.7                     | 35.0            | 51.5                | 0.2                  |
| 89575    | 12pt Box End | 15/16"  | 9x12         | 25                    | 15.0                       | 21.5                     | 38.0            | 60.0                | 0.3                  |
| 89576    | 12pt Box End | 1"      | 9x12         | 31.0                  | 21.5                       | 21.5                     | 42.0            | 68.0                | 0.4                  |
| 89577    | 12pt Box End | 1-1/16" | 9x12         | 31.0                  | 21.5                       | 21.5                     | 42.0            | 68.0                | 0.4                  |
| 89578    | 12pt Box End | 1-1/8"  | 9x12         | 31.0                  | 21.5                       | 21.5                     | 45.1            | 69.5                | 0.4                  |
| 89579    | 12pt Box End | 11/16"  | 14x18        | 25.0                  | 21.5                       | 21.5                     | 29.5            | 64.5                | 0.3                  |
| 89580    | 12pt Box End | 3/4"    | 14x18        | 25                    | 21.5                       | 21.5                     | 31              | 66.0                | 0.3                  |
| 89581    | 12pt Box End | 13/16"  | 14x18        | 25.0                  | 21.5                       | 21.5                     | 33              | 67.1                | 0.3                  |
| 89582    | 12pt Box End | 7/8"    | 14x18        | 25.0                  | 21.5                       | 21.5                     | 35              | 68.1                | 0.3                  |
| 89583    | 12pt Box End | 15/16"  | 14x18        | 25.0                  | 21.5                       | 21.5                     | 38              | 69.1                | 0.3                  |
| 89584    | 12pt Box End | 1"      | 14x18        | 31.0                  | 21.5                       | 21.5                     | 42.0            | 77.3                | 0.4                  |
| 89585    | 12pt Box End | 1-1/16" | 14x18        | 31.0                  | 17.5                       | 21.5                     | 42.0            | 77.2                | 0.4                  |
| 89586    | 12pt Box End | 1-1/8"  | 14x18        | 31.0                  | 17.5                       | 21.5                     | 45.1            | 78.7                | 0.4                  |
| 89587    | 12pt Box End | 1-3/18" | 14x18        | 31.0                  | 17.5                       | 21.5                     | 45.1            | 78.7                | 0.4                  |
| 89588    | 12pt Box End | 1-1/4"  | 14x18        | 31.0                  | 17.5                       | 21.5                     | 48.0            | 79.8                | 0.4                  |

# Torque Screwdrivers



89624  
Torque  
Screwdriver

· Comfort grip, high torque handle

PRECISION FOR  
**+/-6%**  
TORQUE ACCURACY

· Accuracy to +/- 6%



· Meets or exceeds ASME B107.300

· Drive quick release adapter

· Locking sleeve device

89625  
Mini Torque  
Screwdriver



| Cat. No. | Description                     | Range           | Increments | Accuracy | Handle Thickness (mm) | Handle Length (mm) | Overall Length (mm) | Product Weight (lbs) |
|----------|---------------------------------|-----------------|------------|----------|-----------------------|--------------------|---------------------|----------------------|
| 89621    | Torque Screwdriver (1/4")       | 1 - 6 Nm        | 0.1        | +/- 6%   | 37.0                  | 95.0               | 195.0               | 0.8                  |
| 89622    | Torque Screwdriver (1/4")       | 21 -165 in-oz   | 0.01       | +/- 6%   | 37.0                  | 95.0               | 180.0               | 0.8                  |
| 89623    | Torque Screwdriver (1/4")       | 5 - 25 in-lbs   | 0.5        | +/- 6%   | 37.0                  | 95.0               | 195.0               | 0.8                  |
| 89624    | Torque Screwdriver (1/4")       | 10 to 50 in-lbs | 1.0        | +/- 6%   | 37.0                  | 95.0               | 195.0               | 0.8                  |
| 89625    | Mini Torque Screwdriver (5/32") | 5-60 cNm        | 0.5        | +/- 6%   | 26.0                  | 25.0               | 100.0               | 0.2                  |

# Torque Screwdriver Set



- Designed for electrical service and assembly applications
- Popular 10-50 in/lb torque driver
- Includes 1/4" quick release chuck
- Comes with 19 special length adapters as shown
- Meets or exceeds ASME B107.300
- Storage case included

PRECISION FOR  
**+/-6%**  
TORQUE ACCURACY

**WARNING: This is not an insulated tool. Grip is for comfort only and will not protect against electrical shock.**



89620  
Screwdriver Set



## 20 Piece Screwdriver Set Contents

| Cat. No.   | Type                      | Size           | Overall Length (in) | Cat. No.   | Type       | Size  | Overall Length (in) |
|------------|---------------------------|----------------|---------------------|------------|------------|-------|---------------------|
| 89624      | Torque Screwdriver (1/4") | 10 - 50 in-lbs | 195.0               | 89020 - 06 | Square     | #2    | 3.5                 |
| 89020 - 01 | Phillips                  | #1             | 3.5                 | 89020 - 11 | Square     | #1    | 6.0                 |
| 89020 - 02 | Phillips                  | #2             | 3.5                 | 89020 - 12 | Square     | #2    | 6.0                 |
| 89020 - 07 | Phillips                  | #1             | 6.0                 | 89020 - 13 | Nut Driver | 3/16  | 6.0                 |
| 89020 - 08 | Phillips                  | #2             | 6.0                 | 89020 - 14 | Nut Driver | 1/4   | 6.0                 |
| 89020 - 03 | Slotted                   | 3/16           | 3.5                 | 89020 - 15 | Nut Driver | 5/16  | 6.0                 |
| 89020 - 04 | Slotted                   | 1/4            | 3.5                 | 89020 - 16 | Nut Driver | 11/32 | 6.0                 |
| 89020 - 09 | Slotted                   | 3/16           | 6.0                 | 89020 - 17 | Nut Driver | 3/8   | 6.0                 |
| 89020 - 10 | Slotted                   | 1/4            | 6.0                 | 89020 - 18 | Nut Driver | 7/16  | 6.0                 |
| 89020 - 05 | Square                    | #1             | 3.5                 | 89020 - 19 | Nut Driver | 1/2   | 6.0                 |

## Torque Multipliers



Internal planetary gear system provides strength and durability



64-832G  
Torque Multiplier

Designed for high torque applications.

Input and output rotation directions are the same (if input is clockwise, output is clockwise).

Low input torque is required and can be applied easily by one person

| Cat. No. | Input Drive | Output Drive | Max Input (ft-lbs) | Max Output (ft-lbs) | Gear Ratio | Torque Ratio | Torque Multiplier Type | Head Thickness [in] | Head Width [in] | Overall Length [in] | Product Weight [lbs] | Replacement Square Drive |
|----------|-------------|--------------|--------------------|---------------------|------------|--------------|------------------------|---------------------|-----------------|---------------------|----------------------|--------------------------|
| 64-830G  | 1/2"        | 3/4"         | 227                | 750                 | 4.0:1      | 3.3:1        | Reaction Bar           | 3.3                 | 2.8             | 8.5                 | 4.7                  | -                        |
| 64-832G  | 1/2"        | 3/4"         | 200                | 1200                | 6.3:1      | 6.0:1        | Reaction Bar           | 4.0                 | 3.9             | 14.1                | 9.1                  | 64-850G                  |
| 64-833G  | 3/4"        | 1"           | 500                | 2000                | 4.7:1      | 3.5:1        | Reaction Bar           | 4.5                 | 3.8             | 19.5                | 14.0                 | -                        |
| 64-834G  | 1/2"        | 1"           | 162                | 2200                | 15.0:1     | 13.6:1       | Reaction Bar           | 5.7                 | 4.0             | 20.0                | 20.6                 | 64-851G                  |
| 64-836G  | 1/2"        | 1"           | 173                | 3200                | 20.2:1     | 18.5:1       | Reaction Bar           | 6.5                 | 4.0             | 20.0                | 22.1                 | 64-852G                  |

## Bench Top Torque Testers



Designed for inspection of torque wrenches in production workshop

Accuracy: +/-1%

Three modes: Track, Peak, First Peak

ft-lb, in-lb, Nm, and kg-cm

Backlit display for dark conditions

Four screw bolts that can be fixed on the workbench or other base plate

Includes rechargeable lithium battery and AC/DC adapter

Provides percentage error between the measured value and set value; no calculations needed

1500 data storage

Data upload through the USB interface

Auto shut-off after 10 minutes of inactivity

Audible and visual alarm



89633  
1/2" drive

| Cat. No. | Drive Size | Primary Range                       | Accuracy | Height (in) | Width (in) | Depth (in) | Product Weight (lbs) |
|----------|------------|-------------------------------------|----------|-------------|------------|------------|----------------------|
| 89631    | 1/4"       | 10 - 100 in-lbs (11 - 11.3 Nm)      | +/- 1%   | 3.4         | 5.4        | 5.3        | 4.8                  |
| 89632    | 3/8"       | 3 - 30 ft-lbs (4.1 - 40.7 Nm)       | +/- 1%   | 3.4         | 5.4        | 5.3        | 5.7                  |
| 89633    | 1/2"       | 10 - 100 ft-lbs (13.6 - 135.6 Nm)   | +/- 1%   | 3.4         | 5.4        | 5.3        | 6.4                  |
| 89634    | 1/2"       | 25 - 250 ft-lbs (33.9 - 339.0 Nm)   | +/- 1%   | 3.4         | 5.4        | 5.3        | 6.8                  |
| 89635    | 3/4"       | 75 - 750 ft-lbs (101.7 - 1016.9 Nm) | +/- 1%   | 3.4         | 5.4        | 5.3        | 7.5                  |

## Touch Screen and Transducer



+/-0.5% accuracy within 10-100% of full load

7" color touch screen

Three Modes: Track, Peak, First peak

Three Interfaces: Regular, Preset, Curve

Nm, cNm, kg-m, ck-gm, lb-ft, lb-in, oz-in

Easy menu operation mode

Upload data through the USB interface

Compatible with 89640 Torque Testing Stand

Automatically stores up to 15 test readings

Stores 100 preset parameters

Stores 5000 data points



89639  
1/2" drive

| Cat. No. | Drive Size | Primary Range                     | Accuracy | (A) Height (in) | (B) Width (in) | Depth (in) | Product Weight (lbs) |
|----------|------------|-----------------------------------|----------|-----------------|----------------|------------|----------------------|
| 89636    | 1/4"       | 10 - 100 In-lbs (11 - 11.3 Nm)    | +/- .5%  | 3.0             | 4.0            | 4.0        | 4.6                  |
| 89637    | 3/8"       | 3.0 - 30 ft-lbs (4.1 - 40.7 Nm)   | +/- .5%  | 3.0             | 4.0            | 4.0        | 5.1                  |
| 89638    | 1/2"       | 10 - 100 ft-lbs (13.6 - 135.6 Nm) | +/- .5%  | 3.0             | 4.0            | 4.0        | 5.4                  |
| 89639    | 1/2"       | 30 - 300 ft-lbs (40.7 - 406.7 Nm) | +/- .5%  | 3.0             | 4.0            | 4.0        | 5.6                  |



# Torque Testing Stand and Fixture



- Large diameter wheel for easy and smooth application
- Instrument rack tray is adjustable for ease of use
- Adjustable to accommodate different wrench lengths
- Torque tester not included



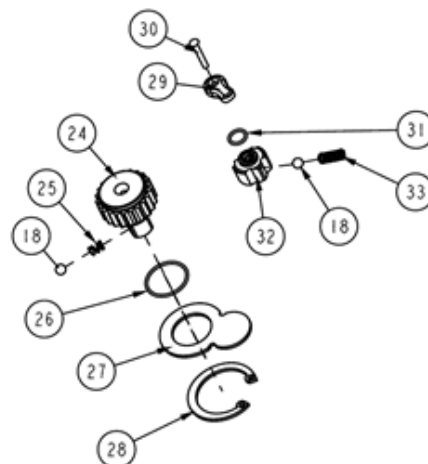
| Cat. No. | Drive Size | Primary Range                     |
|----------|------------|-----------------------------------|
| 89636    | 1/4"       | 10 - 100 In-lbs (1.1-11.3 Nm)     |
| 89637    | 3/8"       | 3.0 - 30 ft-lbs (4.1 - 40.7Nm)    |
| 89638    | 1/2"       | 10 - 100 ft-lbs (13.6 - 135.6 Nm) |
| 89639    | 1/2"       | 30 - 300 ft-lbs (40.7 - 406.7 Nm) |

| Cat. No. | Drive Size        | Height (in) | Width (in) | Length (in) | Product Weight (lbs) |
|----------|-------------------|-------------|------------|-------------|----------------------|
| 89640    | 1/4", 3/8" & 1/2" | 23.2        | 11.4       | 33.9        | 71.7                 |

## Torque Wrench Replacement Parts

| Wrench No.                             | Description                                  | Kit Cat. No. |
|--|--|--------------|
| <b>120XP Torque Wrench Repair Kits</b> |  |              |
| 85171                                  | WR TRQ Micro 1/4" DR. 30-200 in/lb 120XP     | 81099P       |
| 85176                                  | WR TRQ Micro 3/8" DR. 10-100FT/LB 120XP      | 81227P       |
| 85181                                  | WR TRQ Micro 1/2" DR. 30-250FT/LB 120XP      | 81339P       |
| 85174                                  | WR TRQ Micro 3/8" DR. 30-250 IN 120XP        | 81227P       |
| 85180                                  | WR TRQ Micro 1/2" DR. 20-150 FT 120XP        | 81339P       |
| 85188                                  | TRQ WR Flex Head 3/8" DR. 10-100 FT-LB 120XP | 81227P       |
| 85189                                  | TRQ WR Flex Head 1/2" DR. 30-250FT-LB 120XP  | 81339P       |
| <b>Standard Torque Wrenches</b>        |  |              |
| 85060                                  | WR TRQ Micro 1/4" DR. 30-200 IN/LB           | 89224        |
| 85061                                  | WR TRQ Micro 3/8" DR. 30-250FT/LB            | 89225        |
| 85062                                  | WR TRQ Micro 3/8" DR. 10-100FT/LB            | 89225        |
| 85063                                  | WR TRQ Micro 1/2" DR. 20-150 FT              | 89226        |
| 85066                                  | WR TRQ Micro 1/2" DR. 30-250 FT              | 89226        |
| 85086                                  | TRQ WR FLEX HEAD 3/8" DR. 5-75 FT-LB         | 89225        |
| 85087                                  | TRQ WR FLEX HEAD 1/2" DR. 30-250 FT-LB       | 89228        |
| 85088                                  | TRQ WR TIRE SHOP 1/2" DR. 30-250 FT-LB       | 89226        |
| 85065                                  | TRQ WR Micro 3/4" DR. 100-600 FT LB          | 89227        |

| Wrench No.                           | Description  | Kit Cat. No. |
|--------------------------------------|--|--------------|
| <b>E-Spec Torque Wrenches</b>        |  |              |
| 85235                                | 1/4" DR. 5-25NM FIXED HEAD E-SPEC ETW              | 81099P       |
| 85236                                | 3/8" DR. 14 - 27.2 NM FIXED HEAD E-SPEC ETW        | 81227P       |
| 85237                                | 3/8" DR. 20-100NM FIXED HEAD E-SPEC ETW            | 81339P       |
| 85238                                | 1/2" DR. 68-340 NM FIXED HEAD E-SPEC ETW           | 81227P       |
| 85235-01                             | 1/4" DR. 5-25NM FIXED HEAD E-SPEC ETW - ONLY       | 81099P       |
| 85236-01                             | 3/8" DR. 14 - 27.2 NM FIXED HEAD E-SPEC ETW - ONLY | 81227P       |
| 85237-01                             | 3/8" DR. 20-100NM FIXED HEAD E-SPEC ETW - ONLY     | 81339P       |
| 85238-01                             | 1/2" DR. 68-340 NM FIXED HEAD E-SPEC ETW - ONLY    | 81227P       |
| <b>Interchangeable Ratchet Heads</b> |  |              |
| 89614                                | 120XP RATCHETING HEAD 1/4" DR. 9X12                | 81099P       |
| 89615                                | 120XP RATCHETING HEAD 3/8" DR. 9X12                | 81227P       |
| 89616                                | 120XP RATCHETING HEAD 1/2" DR. 14X8                | 81339P       |
| 89617                                | 120XP FLEX RATCHETING HEAD 1/4" DR. 9X12           | 81099P       |
| 89618                                | 120XP FLEX RATCHETING HEAD 3/8" DR. 9X12           | 81227P       |
| 89619                                | 120XP FLEX RATCHETING HEAD 1/2" DR. 14X18          | 81339P       |



# Torque Conversion Charts

In the International Metric System, there is a term for "force" called the "Newton," which is defined as "the force necessary to move one kilogram one meter per second." Therefore, with torque being "Force X Length," the International Metric System measure torque in "Newton metres" (N m).

|       |        | From ft lb to N m |        |        |        |        |        |        |        |        |     |
|-------|--------|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|-----|
| ft lb | 0      | 1                 | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      |     |
| N m   | N m    | N m               | N m    | N m    | N m    | N m    | N m    | N m    | N m    | N m    | N m |
| 0     | 0      | 1.36              | 2.71   | 4.07   | 5.42   | 6.78   | 8.13   | 9.49   | 10.84  | 12.20  |     |
| 10    | 13.56  | 14.91             | 16.27  | 17.62  | 18.98  | 20.33  | 21.69  | 23.05  | 24.40  | 25.76  |     |
| 20    | 27.11  | 28.47             | 29.83  | 31.18  | 32.54  | 33.89  | 35.25  | 36.61  | 37.97  | 39.32  |     |
| 30    | 40.67  | 42.02             | 43.38  | 44.73  | 46.09  | 47.45  | 48.80  | 50.16  | 51.51  | 52.87  |     |
| 40    | 54.22  | 55.58             | 56.94  | 58.29  | 59.65  | 61.00  | 62.36  | 63.71  | 65.07  | 66.42  |     |
| 50    | 67.78  | 69.14             | 70.49  | 71.85  | 73.20  | 74.56  | 75.91  | 77.27  | 78.62  | 79.98  |     |
| 60    | 81.33  | 82.69             | 84.05  | 85.40  | 86.76  | 88.11  | 89.47  | 90.83  | 92.18  | 93.54  |     |
| 70    | 94.89  | 96.25             | 97.60  | 98.96  | 100.31 | 101.67 | 103.03 | 104.38 | 105.74 | 107.09 |     |
| 80    | 108.45 | 109.80            | 111.16 | 112.51 | 113.87 | 115.23 | 116.58 | 117.94 | 119.29 | 120.65 |     |
| 90    | 122.00 | 123.36            | 124.72 | 126.07 | 127.43 | 128.78 | 130.14 | 131.49 | 132.85 | 134.20 |     |
| 100   | 135.56 |                   |        |        |        |        |        |        |        |        |     |

ft lb X 1.3558 = N m

|       |       | From N m to ft lb |       |       |       |       |       |       |       |       |       |
|-------|-------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| N m   | 0     | 1                 | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     |       |
| ft lb | ft lb | ft lb             | ft lb | ft lb | ft lb | ft lb | ft lb | ft lb | ft lb | ft lb | ft lb |
| 0     | 0     | .74               | 1.48  | 2.21  | 2.95  | 3.69  | 4.43  | 5.16  | 5.90  | 6.64  |       |
| 10    | 7.38  | 8.11              | 8.85  | 9.59  | 10.33 | 11.06 | 11.80 | 12.54 | 13.28 | 14.01 |       |
| 20    | 14.75 | 15.49             | 16.23 | 16.96 | 17.70 | 18.44 | 19.18 | 19.91 | 20.65 | 21.39 |       |
| 30    | 22.13 | 22.86             | 23.60 | 24.34 | 25.08 | 25.81 | 26.55 | 27.29 | 28.03 | 28.76 |       |
| 40    | 29.50 | 30.24             | 30.98 | 31.72 | 32.45 | 33.19 | 33.93 | 34.67 | 35.40 | 36.14 |       |
| 50    | 36.88 | 37.62             | 38.35 | 39.09 | 39.83 | 40.57 | 41.30 | 42.04 | 42.78 | 43.52 |       |
| 60    | 44.25 | 44.99             | 45.73 | 46.47 | 47.20 | 47.94 | 48.68 | 49.42 | 50.15 | 50.89 |       |
| 70    | 51.63 | 52.37             | 53.10 | 53.84 | 54.58 | 55.32 | 56.05 | 56.79 | 57.53 | 58.27 |       |
| 80    | 59.00 | 59.74             | 60.48 | 61.22 | 61.96 | 62.69 | 63.43 | 64.17 | 64.91 | 65.64 |       |
| 90    | 66.38 | 67.12             | 67.86 | 68.59 | 69.33 | 70.07 | 70.81 | 71.54 | 72.28 | 73.02 |       |
| 100   |       |                   |       |       |       | 73.76 |       |       |       |       |       |

1 N m = 0.73756 ft lb

|       |       | From in lb to N m |       |       |       |       |       |       |       |       |     |
|-------|-------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| in lb | 0     | 1                 | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     |     |
| N m   | N m   | N m               | N m   | N m   | N m   | N m   | N m   | N m   | N m   | N m   | N m |
| 0     | 0     | .113              | .226  | .339  | .452  | .565  | .678  | .791  | .904  | 1.02  |     |
| 10    | 1.13  | 1.24              | 1.36  | 1.47  | 1.58  | 1.70  | 1.81  | 1.92  | 2.03  | 2.15  |     |
| 20    | 2.26  | 2.37              | 2.49  | 2.60  | 2.71  | 2.83  | 2.94  | 3.05  | 3.16  | 3.28  |     |
| 30    | 3.39  | 3.50              | 3.62  | 3.73  | 3.84  | 3.96  | 4.07  | 4.18  | 4.29  | 4.41  |     |
| 40    | 4.52  | 4.63              | 4.75  | 4.86  | 4.97  | 5.09  | 5.20  | 5.31  | 5.42  | 5.54  |     |
| 50    | 5.65  | 5.76              | 5.88  | 5.99  | 6.10  | 6.22  | 6.33  | 6.44  | 6.55  | 6.67  |     |
| 60    | 6.78  | 6.89              | 7.01  | 7.12  | 7.23  | 7.35  | 7.46  | 7.57  | 7.68  | 7.80  |     |
| 70    | 7.91  | 8.02              | 8.14  | 8.25  | 8.36  | 8.48  | 8.59  | 8.70  | 8.81  | 8.93  |     |
| 80    | 9.04  | 9.15              | 9.27  | 9.38  | 9.49  | 9.61  | 9.72  | 9.83  | 9.94  | 10.06 |     |
| 90    | 10.17 | 10.28             | 10.40 | 10.51 | 10.62 | 10.74 | 10.85 | 10.96 | 11.07 | 11.19 |     |
| 100   |       |                   |       |       |       |       | 11.30 |       |       |       |     |

in lb X .1130 = N m

|       |        | From N m to in lb |        |        |        |        |        |        |        |        |       |
|-------|--------|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| N m   | 0      | 1                 | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      |       |
| in lb | in lb  | in lb             | in lb  | in lb  | in lb  | in lb  | in lb  | in lb  | in lb  | in lb  | in lb |
| 0     | 0      | 8.85              | 17.70  | 26.55  | 35.40  | 44.25  | 53.10  | 61.95  | 70.81  | 79.66  |       |
| 10    | 88.51  | 97.36             | 106.21 | 115.06 | 123.91 | 132.76 | 141.61 | 150.46 | 159.31 | 168.16 |       |
| 20    | 177.01 | 185.86            | 194.72 | 203.57 | 212.42 | 221.27 | 230.12 | 238.98 | 247.82 | 256.67 |       |
| 30    | 265.52 | 274.38            | 283.22 | 292.07 | 300.92 | 309.77 | 318.62 | 327.48 | 336.33 | 345.18 |       |
| 40    | 354.03 | 362.88            | 371.73 | 380.58 | 389.43 | 398.28 | 407.13 | 415.98 | 424.83 | 433.68 |       |
| 50    | 442.53 | 451.38            | 460.24 | 469.09 | 477.94 | 486.79 | 495.64 | 504.49 | 513.34 | 522.19 |       |
| 60    | 531.04 | 539.89            | 548.74 | 557.59 | 566.44 | 575.30 | 584.15 | 592.10 | 601.85 | 610.70 |       |
| 70    | 619.55 | 628.40            | 637.25 | 646.10 | 654.95 | 663.80 | 672.65 | 681.50 | 690.35 | 699.20 |       |
| 80    | 708.06 | 716.91            | 725.76 | 734.61 | 743.46 | 752.31 | 761.16 | 770.01 | 778.86 | 787.71 |       |
| 90    | 796.56 | 805.41            | 814.26 | 823.12 | 831.97 | 840.82 | 849.67 | 858.52 | 867.37 | 876.22 |       |
| 100   |        |                   |        |        |        |        |        | 885.07 |        |        |       |

N m X 8.8507 = in lb

|       |      | From in oz to N m |      |      |      |      |      |      |      |      |     |
|-------|------|-------------------|------|------|------|------|------|------|------|------|-----|
| in oz | 0    | 1                 | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    |     |
| N m   | N m  | N m               | N m  | N m  | N m  | N m  | N m  | N m  | N m  | N m  | N m |
| 0     | 0    | .007              | .014 | .021 | .028 | .035 | .042 | .049 | .056 | .064 |     |
| 10    | .071 | .078              | .085 | .092 | .098 | .106 | .113 | .120 | .127 | .134 |     |
| 20    | .141 | .148              | .155 | .162 | .169 | .177 | .184 | .191 | .198 | .205 |     |
| 30    | .212 | .219              | .226 | .232 | .240 | .247 | .254 | .261 | .268 | .275 |     |
| 40    | .282 | .289              | .297 | .304 | .312 | .318 | .325 | .332 | .339 | .346 |     |
| 50    | .353 | .360              | .367 | .374 | .381 | .388 | .395 | .402 | .409 | .417 |     |
| 60    | .424 | .431              | .438 | .445 | .452 | .459 | .466 | .473 | .480 | .487 |     |
| 70    | .494 | .501              | .508 | .515 | .522 | .530 | .537 | .544 | .551 | .558 |     |
| 80    | .565 | .572              | .579 | .586 | .593 | .600 | .607 | .624 | .621 | .628 |     |
| 90    | .635 | .642              | .650 | .657 | .664 | .671 | .678 | .685 | .692 | .699 |     |
| 100   |      |                   |      |      |      |      | .706 |      |      |      |     |

in oz X .00706 = N m

|       |        | From N m to in oz |        |        |        |        |        |        |        |        |       |
|-------|--------|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| N m   | 0      | 1                 | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      |       |
| in oz | in oz  | in oz             | in oz  | in oz  | in oz  | in oz  | in oz  | in oz  | in oz  | in oz  | in oz |
| 0     | 0      | 1.42              | 2.83   | 4.25   | 5.66   | 7.08   | 8.50   | 9.91   | 11.33  | 12.74  |       |
| .1    | 14.16  | 15.58             | 16.99  | 18.41  | 19.83  | 21.24  | 22.66  | 24.07  | 25.49  | 26.91  |       |
| .2    | 28.32  | 29.74             | 31.15  | 32.57  | 33.99  | 35.40  | 36.82  | 38.23  | 39.65  | 41.07  |       |
| .3    | 42.48  | 43.90             | 45.32  | 46.73  | 48.15  | 49.56  | 50.98  | 52.40  | 53.81  | 55.23  |       |
| .4    | 56.64  | 58.06             | 59.48  | 60.89  | 62.31  | 63.72  | 65.14  | 66.56  | 67.97  | 69.39  |       |
| .5    | 70.81  | 72.22             | 73.64  | 75.05  | 76.47  | 77.89  | 79.30  | 80.72  | 82.13  | 83.55  |       |
| .6    | 84.97  | 86.39             | 87.80  | 89.21  | 90.63  | 92.05  | 93.46  | 94.88  | 96.30  | 97.71  |       |
| .7    | 99.13  | 100.54            | 101.96 | 103.38 | 104.79 | 106.21 | 107.62 | 109.04 | 110.46 | 111.87 |       |
| .8    | 113.29 | 114.70            | 116.12 | 117.54 | 118.95 | 120.37 | 121.79 | 123.20 | 124.62 | 126.03 |       |
| .9    | 127.45 | 128.87            | 130.28 | 131.70 | 133.11 | 134.53 | 135.95 | 137.36 | 138.78 | 140.19 |       |
| 1.0   |        |                   |        |        |        | 141.61 |        |        |        |        |       |

.01 N m X 141.6112 = .01 in oz

|      |        | From m kg to N m |        |        |        |        |        |        |        |        |     |
|------|--------|------------------|--------|--------|--------|--------|--------|--------|--------|--------|-----|
| m kg | 0      | 1                | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      |     |
| N m  | N m    | N m              | N m    | N m    | N m    | N m    | N m    | N m    | N m    | N m    | N m |
| 0    | 0      | 9.81             | 19.61  | 29.42  | 39.23  | 49.03  | 58.84  | 68.65  | 78.45  | 88.26  |     |
| 10   | 98.07  | 107.87           | 117.68 | 127.49 | 137.30 | 147.10 | 156.90 | 166.71 | 176.52 | 186.33 |     |
| 20   | 196.13 | 205.94           | 215.75 | 225.55 | 235.36 | 245.17 | 254.98 | 264.78 | 274.59 | 284.40 |     |
| 30   | 294.20 | 304.00           | 313.81 | 323.62 | 333.43 | 343.23 | 353.04 | 362.85 | 372.65 | 382.46 |     |
| 40   | 392.27 | 402.07           | 411.88 | 421.69 | 431.49 | 441.30 | 451.11 | 460.91 | 470.72 | 480.53 |     |
| 50   | 490.33 | 500.14           | 509.95 | 519.75 | 529.56 | 539.37 | 549.17 | 558.98 | 568.79 | 578.60 |     |
| 60   | 588.40 | 598.21           | 608.01 | 617.82 | 627.63 | 637.43 | 647.24 | 657.05 | 666.86 | 676.66 |     |
| 70   | 686.47 | 696.27           | 706.08 | 715.89 | 725.70 | 735.50 | 745.30 | 755.11 | 764.92 | 774.73 |     |
| 80   | 784.53 | 794.34           | 804.15 | 813.95 | 823.76 | 833.57 | 843.37 | 853.18 | 862.99 | 872.79 |     |
| 90   | 882.60 | 892.41           | 902.21 | 912.02 | 921.83 | 931.63 | 941.44 | 951.25 | 961.05 | 970.86 |     |
| 100  |        |                  |        |        |        |        | 980.67 |        |        |        |     |

m kg (or m kp) = 9.80665 N m

|      |        | From N m to m kg |       |       |       |       |       |       |       |        |      |
|------|--------|------------------|-------|-------|-------|-------|-------|-------|-------|--------|------|
| N m  | 0      | 1                | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9      |      |
| m kg | m kg   | m kg             | m kg  | m kg  | m kg  | m kg  | m kg  | m kg  | m kg  | m kg   | m kg |
| 0    | 0      | .102             | .204  | .306  | .408  | .510  | .611  | .714  | .816  | .918   |      |
| 10   | 1.020  | 1.122            | 1.224 | 1.326 | 1.428 | 1.530 | 1.632 | 1.733 | 1.835 | 1.937  |      |
| 20   | 2.039  | 2.141            | 2.243 | 2.345 | 2.447 | 2.549 | 2.651 | 2.753 | 2.855 | 2.957  |      |
| 30   | 3.059  | 3.161            | 3.263 | 3.365 | 3.467 | 3.569 | 3.671 | 3.773 | 3.875 | 3.977  |      |
| 40   | 4.079  | 4.181            | 4.283 | 4.385 | 4.487 | 4.589 | 4.691 | 4.793 | 4.895 | 4.997  |      |
| 50   | 5.099  | 5.200            | 5.302 | 5.404 | 5.506 | 5.608 | 5.710 | 5.812 | 5.914 | 6.016  |      |
| 60   | 6.118  | 6.220            | 6.322 | 6.424 | 6.526 | 6.628 | 6.730 | 6.832 | 6.934 | 7.036  |      |
| 70   | 7.138  | 7.240            | 7.342 | 7.444 | 7.546 | 7.648 | 7.750 | 7.852 | 7.954 | 8.056  |      |
| 80   | 8.158  | 8.260            | 8.362 | 8.464 | 8.566 | 8.667 | 8.769 | 8.871 | 8.973 | 9.075  |      |
| 90   | 9.177  | 9.279            | 9.381 | 9.483 | 9.585 | 9.687 | 9.789 | 9.891 | 9.993 | 10.095 |      |
| 100  | 10.197 |                  |       |       |       |       |       |       |       |        |      |

N m X .10197 = m kg (or m kp)

# Torque Conversion Charts

NOTE: A meter kilogram is equal to a meter kilopond. (1m kg = 1m kp)

### From in lb to in oz

|       | 0     | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| in lb | in oz | in oz | in oz | in oz | in oz | in oz | in oz | in oz | in oz | in oz |
| 0     | 0     | 16    | 32    | 48    | 64    | 80    | 96    | 112   | 128   | 144   |
| 10    | 160   | 176   | 192   | 208   | 224   | 240   | 256   | 272   | 288   | 304   |
| 20    | 320   | 336   | 352   | 368   | 384   | 400   | 416   | 432   | 448   | 464   |
| 30    | 480   | 496   | 512   | 528   | 544   | 560   | 576   | 592   | 608   | 624   |
| 40    | 640   | 656   | 672   | 688   | 704   | 720   | 736   | 752   | 768   | 784   |
| 50    | 800   | 816   | 832   | 848   | 864   | 880   | 896   | 912   | 928   | 944   |
| 60    | 960   | 976   | 992   | 1008  | 1024  | 1040  | 1056  | 1072  | 1088  | 1104  |
| 70    | 1120  | 1236  | 1152  | 1168  | 1184  | 1200  | 1216  | 1232  | 1248  | 1264  |
| 80    | 1280  | 1296  | 1312  | 1328  | 1344  | 1360  | 1376  | 1392  | 1408  | 1424  |
| 90    | 1440  | 1456  | 1472  | 1488  | 1504  | 1520  | 1536  | 1552  | 1568  | 1584  |
| 100   | 1600  |       |       |       |       |       |       |       |       |       |

in lb X 16 = in oz

### From in oz to in lb

|       | 0     | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| in oz | in lb | in lb | in lb | in lb | in lb | in lb | in lb | in lb | in lb | in lb |
| 0     | 0     | .063  | .125  | .188  | .250  | .313  | .375  | .438  | .500  | .563  |
| 10    | .625  | .688  | .750  | .813  | .875  | .938  | 1.000 | 1.063 | 1.125 | 1.188 |
| 20    | 1.250 | 1.313 | 1.375 | 1.438 | 1.500 | 1.563 | 1.625 | 1.688 | 1.750 | 1.813 |
| 30    | 1.875 | 1.938 | 2.000 | 2.063 | 2.125 | 2.188 | 2.250 | 2.313 | 2.375 | 2.438 |
| 40    | 2.500 | 2.563 | 2.625 | 2.688 | 2.750 | 2.813 | 2.875 | 2.938 | 3.000 | 3.063 |
| 50    | 3.125 | 3.188 | 3.250 | 3.313 | 3.375 | 3.438 | 3.500 | 3.563 | 3.625 | 3.688 |
| 60    | 3.750 | 3.813 | 3.875 | 3.938 | 4.000 | 4.063 | 4.125 | 4.188 | 4.250 | 4.313 |
| 70    | 4.375 | 4.438 | 4.500 | 4.563 | 4.625 | 4.688 | 4.750 | 4.813 | 4.875 | 4.938 |
| 80    | 5.000 | 5.063 | 5.125 | 5.188 | 5.250 | 5.313 | 5.375 | 5.438 | 5.500 | 5.563 |
| 90    | 5.625 | 5.688 | 5.750 | 5.813 | 5.875 | 5.938 | 6.000 | 6.063 | 6.125 | 6.188 |
| 100   |       |       |       |       |       | 6.250 |       |       |       |       |

in oz ÷ 16 = in lb

### From ft lb to in lb

|       | 0     | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| ft lb | in lb | in lb | in lb | in lb | in lb | in lb | in lb | in lb | in lb | in lb |
| 0     | 0     | 12    | 24    | 36    | 48    | 60    | 72    | 84    | 96    | 108   |
| 10    | 120   | 132   | 144   | 156   | 168   | 180   | 192   | 204   | 216   | 228   |
| 20    | 240   | 252   | 264   | 276   | 288   | 300   | 312   | 324   | 336   | 348   |
| 30    | 360   | 372   | 384   | 396   | 408   | 420   | 432   | 444   | 456   | 468   |
| 40    | 480   | 492   | 504   | 516   | 528   | 540   | 552   | 564   | 576   | 588   |
| 50    | 600   | 612   | 624   | 636   | 648   | 660   | 672   | 684   | 696   | 708   |
| 60    | 720   | 732   | 744   | 756   | 768   | 780   | 792   | 804   | 816   | 828   |
| 70    | 840   | 852   | 864   | 876   | 888   | 900   | 912   | 924   | 936   | 948   |
| 80    | 960   | 972   | 984   | 996   | 1008  | 1020  | 1032  | 1044  | 1056  | 1068  |
| 90    | 1080  | 1092  | 1104  | 1116  | 1128  | 1140  | 1152  | 1164  | 1176  | 1188  |
| 100   |       |       |       |       |       | 1200  |       |       |       |       |

ft lb X 12 = in lb

### From in lb to ft lb

|       | 0     | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| in lb | ft lb | ft lb | ft lb | ft lb | ft lb | ft lb | ft lb | ft lb | ft lb | ft lb |
| 0     | 0     | .083  | .167  | .250  | .333  | .417  | .500  | .583  | .667  | .750  |
| 10    | .833  | .917  | 1.000 | 1.083 | 1.167 | 1.250 | 1.333 | 1.417 | 1.500 | 1.583 |
| 20    | 1.667 | 1.750 | 1.833 | 1.917 | 2.000 | 2.083 | 2.167 | 2.250 | 2.333 | 2.417 |
| 30    | 2.500 | 2.583 | 2.667 | 2.750 | 2.833 | 2.917 | 3.000 | 3.083 | 3.167 | 3.250 |
| 40    | 3.333 | 3.417 | 3.500 | 3.583 | 3.667 | 3.750 | 3.833 | 3.917 | 4.000 | 4.083 |
| 50    | 4.167 | 4.250 | 4.333 | 4.417 | 4.500 | 4.583 | 4.667 | 4.750 | 4.833 | 4.917 |
| 60    | 5.000 | 5.083 | 5.167 | 5.250 | 5.333 | 5.417 | 5.500 | 5.583 | 5.667 | 5.750 |
| 70    | 5.833 | 5.917 | 6.000 | 6.083 | 6.167 | 6.250 | 6.333 | 6.417 | 6.500 | 6.583 |
| 80    | 6.667 | 6.750 | 6.833 | 6.917 | 7.000 | 7.083 | 7.167 | 7.250 | 7.333 | 7.417 |
| 90    | 7.500 | 7.583 | 7.667 | 7.750 | 7.833 | 7.917 | 8.000 | 8.083 | 8.167 | 8.250 |
| 100   |       |       |       |       |       | 8.333 |       |       |       |       |

in lb ÷ 12 = ft lb

### From in lb to cm kg

|       | 0     | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| in lb | cm kg | cm kg | cm kg | cm kg | cm kg | cm kg | cm kg | cm kg | cm kg | cm kg |
| 0     | 0     | 1.52  | 2.304 | 3.456 | 4.608 | 5.760 | 6.912 | 8.064 | 9.217 | 10.36 |
| 10    | 11.52 | 12.67 | 13.83 | 14.97 | 16.13 | 17.28 | 18.43 | 19.59 | 20.74 | 21.89 |
| 20    | 23.04 | 24.19 | 25.35 | 26.49 | 27.65 | 28.80 | 29.96 | 31.07 | 32.26 | 33.41 |
| 30    | 34.56 | 35.71 | 36.87 | 38.02 | 39.17 | 40.32 | 41.47 | 42.62 | 43.77 | 44.93 |
| 40    | 46.09 | 47.23 | 48.39 | 49.54 | 50.69 | 51.85 | 52.99 | 54.14 | 55.29 | 56.45 |
| 50    | 57.61 | 58.75 | 59.90 | 61.06 | 62.21 | 63.37 | 64.51 | 65.66 | 66.81 | 67.96 |
| 60    | 69.13 | 70.27 | 71.42 | 72.57 | 73.73 | 74.89 | 76.03 | 77.18 | 78.33 | 79.49 |
| 70    | 80.65 | 81.79 | 82.94 | 84.05 | 85.21 | 86.41 | 87.58 | 88.75 | 89.91 | 91.00 |
| 80    | 92.17 | 93.32 | 94.49 | 95.66 | 96.83 | 97.93 | 99.08 | 100.2 | 101.4 | 102.6 |
| 90    | 103.7 | 104.9 | 106.1 | 107.2 | 108.3 | 109.5 | 110.7 | 111.8 | 112.9 | 114.1 |
| 100   |       |       |       |       |       | 115.2 |       |       |       |       |

in lb X 1.152 = cm kg

### From cm kg to in lb

|       | 0      | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| cm kg | in lb  | in lb  | in lb  | in lb  | in lb  | in lb  | in lb  | in lb  | in lb  | in lb  |
| 0     | 0      | .868   | 1.735  | 2.603  | 3.471  | 4.339  | 5.206  | 6.074  | 6.942  | 7.809  |
| 10    | 8.677  | 9.545  | 10.412 | 11.280 | 12.148 | 13.016 | 13.883 | 14.751 | 15.619 | 16.486 |
| 20    | 17.354 | 18.222 | 19.089 | 19.957 | 20.825 | 21.693 | 22.560 | 23.428 | 24.296 | 25.163 |
| 30    | 26.031 | 26.899 | 27.766 | 28.634 | 29.502 | 30.370 | 31.237 | 32.105 | 32.973 | 33.840 |
| 40    | 34.708 | 35.576 | 36.443 | 37.311 | 38.179 | 39.047 | 39.914 | 40.782 | 41.650 | 42.517 |
| 50    | 43.385 | 44.253 | 45.120 | 45.988 | 46.856 | 47.724 | 48.591 | 49.459 | 50.327 | 51.194 |
| 60    | 52.062 | 52.930 | 53.797 | 54.665 | 55.533 | 56.401 | 57.268 | 58.136 | 59.004 | 59.871 |
| 70    | 60.739 | 61.607 | 62.474 | 63.342 | 64.010 | 65.078 | 65.945 | 66.813 | 67.681 | 68.548 |
| 80    | 69.416 | 70.284 | 71.151 | 72.019 | 72.887 | 73.754 | 74.622 | 75.490 | 76.358 | 77.225 |
| 90    | 78.093 | 78.961 | 79.828 | 80.670 | 81.564 | 82.432 | 83.299 | 84.167 | 85.035 | 85.902 |
| 100   |        |        |        |        |        | 86.770 |        |        |        |        |

cm kg X .8677 = in lb

### From ft lb to m kg

|       | 0     | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| ft lb | m kg  | m kg  | m kg  | m kg  | m kg  | m kg  | m kg  | m kg  | m kg  | m kg  |
| 0     | 0     | .138  | .276  | .415  | .553  | .691  | .830  | .968  | 1.106 | 1.245 |
| 10    | 1.383 | 1.521 | 1.660 | 1.798 | 1.936 | 2.074 | 2.212 | 2.351 | 2.489 | 2.628 |
| 20    | 2.766 | 2.904 | 3.043 | 3.181 | 3.319 | 3.457 | 3.596 | 3.734 | 3.872 | 4.011 |
| 30    | 4.149 | 4.287 | 4.426 | 4.564 | 4.702 | 4.840 | 4.979 | 5.117 | 5.255 | 5.394 |
| 40    | 5.532 | 5.670 | 5.809 | 5.947 | 6.085 | 6.223 | 6.362 | 6.500 | 6.638 | 6.777 |
| 50    | 6.915 | 7.053 | 7.191 | 7.330 | 7.468 | 7.606 | 7.745 | 7.883 | 8.021 | 8.159 |
| 60    | 8.298 | 8.436 | 8.574 | 8.713 | 8.851 | 8.989 | 9.128 | 9.266 | 9.404 | 9.543 |
| 70    | 9.681 | 9.819 | 9.957 | 10.09 | 10.23 | 10.37 | 10.51 | 10.65 | 10.79 | 10.92 |
| 80    | 11.06 | 11.20 | 11.34 | 11.48 | 11.62 | 11.75 | 11.89 | 12.03 | 12.17 | 12.31 |
| 90    | 12.45 | 12.59 | 12.73 | 12.86 | 13.00 | 13.14 | 13.28 | 13.42 | 13.55 | 13.69 |
| 100   |       |       |       |       |       | 13.83 |       |       |       |       |

ft lb X .1383 = m kg

### From m kg to ft lb

|      | 0     | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| m kg | ft lb | ft lb | ft lb | ft lb | ft lb | ft lb | ft lb | ft lb | ft lb | ft lb |
| 0    | 0     | 7.23  | 14.47 | 21.70 | 28.93 | 36.17 | 43.40 | 50.63 | 57.86 | 65.10 |
| 10   | 72.4  | 79.6  | 86.8  | 94.0  | 101.3 | 108.5 | 115.7 | 123.0 | 130.2 | 137.4 |
| 20   | 144.7 | 151.9 | 159.1 | 166.4 | 173.6 | 180.8 | 188.1 | 195.3 | 202.5 | 209.8 |
| 30   | 217.0 | 224.2 | 231.5 | 238.7 | 245.9 | 253.2 | 260.4 | 267.6 | 274.9 | 282.1 |
| 40   | 289.3 | 296.6 | 303.9 | 311.0 | 318.3 | 325.5 | 332.7 | 340.0 | 347.2 | 354.4 |
| 50   | 361.7 | 368.9 | 376.1 | 383.3 | 390.6 | 397.8 | 405.0 | 412.3 | 419.5 | 426.7 |
| 60   | 434.0 | 441.2 | 448.4 | 455.7 | 462.9 | 470.1 | 477.4 | 484.6 | 491.8 | 499.1 |
| 70   | 506.3 | 513.5 | 520.8 | 528.0 | 535.2 | 542.5 | 549.7 | 556.9 | 564.2 | 571.4 |
| 80   | 578.6 | 585.9 | 593.1 | 600.3 | 607.6 | 614.8 | 622.0 | 629.3 | 636.5 | 643.7 |
| 90   | 651.0 | 658.2 | 665.4 | 672.7 | 679.9 | 687.1 | 694.4 | 701.6 | 708.8 | 716.1 |
| 100  | 723.3 |       |       |       |       |       |       |       |       |       |

m kg X 7.233 = ft lb

# Warranty Information

GEARWRENCH branded torque wrenches have a one year limited part warranty. Accuracy standards for calibration are warranted for 90 days from the date of the buyer delivery.

Apex Tool Group offers a comprehensive warranty and service plan with exclusive torque wrench repair partners for all GEARWRENCH and previously Apex Tool Group manufactured torque wrenches.

Repair, Service, and Warranty Repair Partners are listed on GEARWRENCH.com

Warranty within warranty period: [1 year part warranty]

Repair Center will determine if wrench can be repaired. If wrench is determined to be unrepairable or parts are no longer available, a new wrench at same or equivalent value will be provided. Wrenches found to be misused or abused are not covered under this warranty.

Repair outside of warranty:

Repair Center will determine if wrench can be repaired. If not, Customers will be offered the opportunity to purchase a new GEARWRENCH branded Torque Wrench of equal value at a special replacement price. Any current or previously Apex Manufactured Torque Wrenches are covered under this plan. Repair Center will determine and advise of eligibility.

Wrenches found to be misused or abused are not covered under this warranty. Transactions for the purchase or repair of new Torque Wrenches are between the Customer and Repair Center.

Recalibration:

Apex Tool Group, will continue to offer a recalibration service through our exclusive Repair centers below. Wrenches found to be outside of calibration within 90 days from date of the buyer delivery will be recalibrated at no charge. Service Centers offer recalibration at cost outside of warranty.

For all warranty, calibration, and repair information, please visit GEARWRENCH.com.



Apex Tool Group provides additional Calibration Service and Certificate. When placing order, see SKU's with the suffix "CERT".

TORQUE LANDING PAGE



SCAN ME

GW LANDING PAGE



SCAN ME