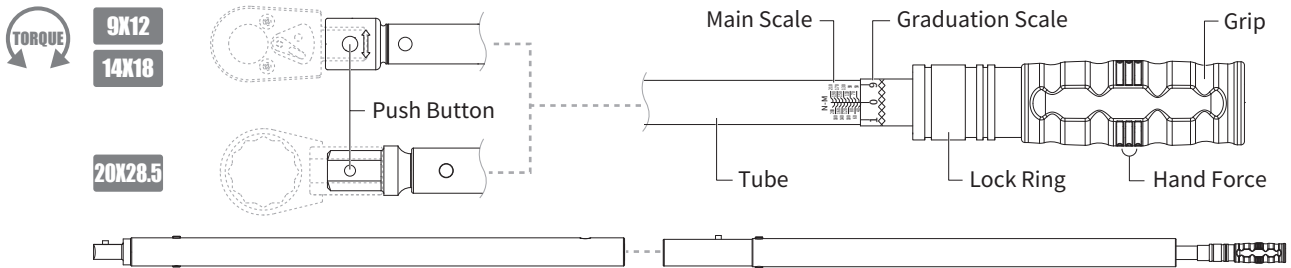


Interchangeable Head Adjustable Torque Handle OPERATION MANUAL

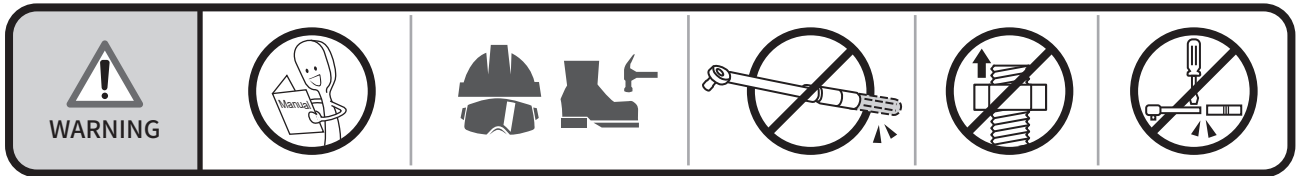
Models covered

IPR



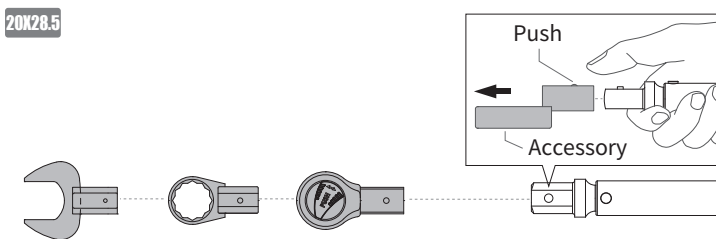
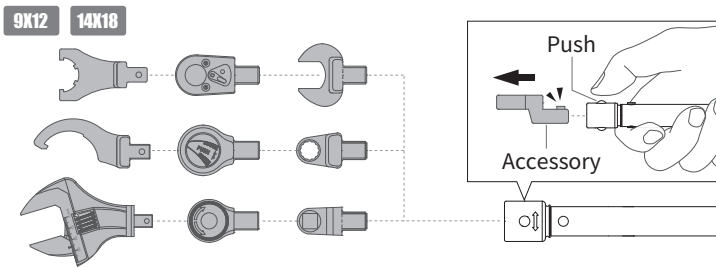
BEFORE STARTING

1. Study this instruction before use.
2. This torque wrench is calibrated and tested before leaving the factory, it is certified to meet the current standard specification and has an accuracy of C.W. $\pm 4\%$ / C.C.W. $\pm 6\%$.
3. **THIS TOOL IS A PRECISION MEASUREMENT AND DESIGNED FOR MANUAL TIGHTENING FASTENERS ONLY. DO NOT USE IT AS A NUT BREAKER OR FOR ANY OTHER PURPOSE.**
4. Do not over torquing the fastener, or it will cause tool's damage and serious injury.
5. Do not use this tool near rotating machinery.
6. Disassemble this tool or make any adjustments will result in the loss of accuracy and invalidating the warranty.
7. Do not continuously apply force after hearing the clicking sound or feel shock.
8. Do not use any kind of extension on the handle of the tool. This will not only damage the tool, also affect the accuracy.
9. Do not immerse grease inside ratchet head. It may cause unexpected damage.
10. Use special care at minimum torque setting.
11. Please wear gloves and goggles when working.



HOW TO USE

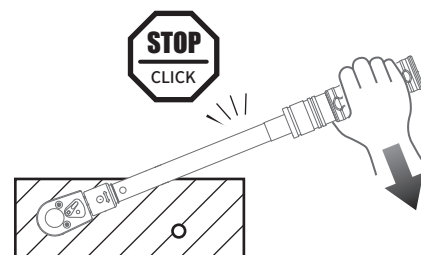
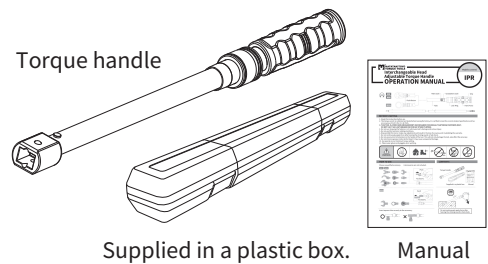
Choose a qualified accessory. ※Accessories are not included.



Insert square drive securely to the accessory.



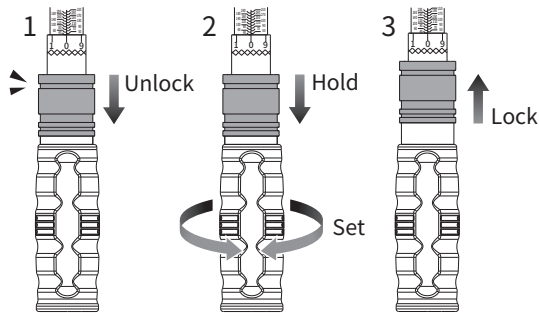
CONTENTS



Do not continuously apply force after hearing the clicking sound or feel shock.

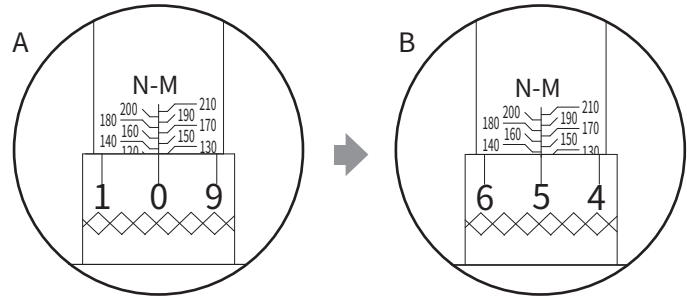
HOW TO SET TORQUE VALUE

1. Pull the lock ring to unlocked.
2. Turn the adjustable handle clockwise or counter-clockwise (Right or left) to set the desired torque.
3. Push the lock ring to set finished.



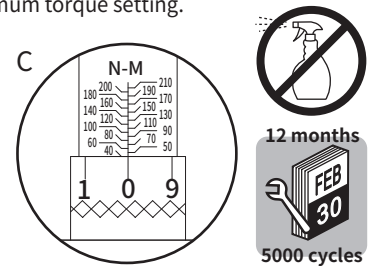
For example : ITEM NO. IPR-210N

To set torque to 135 Nm. Firstly pull and hold the lock ring and turn the handle until the upper edge to 130 Nm (see A) and the reading "5" on the long tube must align with the center line of scale vertically so as to acquire $130+5=135$ Nm. (see B)



MAINTENANCE AND STORAGE

1. Please return torque value to the lowest reading when not in use. (see C) Do not turn below the lowest reading.
2. If this tool has not been used for a period of time, it shall be preloaded several times at its maximum torque setting. This will allow internal lubricant to recoat.
3. Clean this tool by wiping with a clean cloth after operation and storage in a dry environment. Do not dip any type of liquid in this tool. This may damage the internal of this tool.
4. This tool should be recalibrated a period of 12 months, or 5,000 cycles, whichever occurs first. To contact with local vendor or an authorized repair center for supporting.

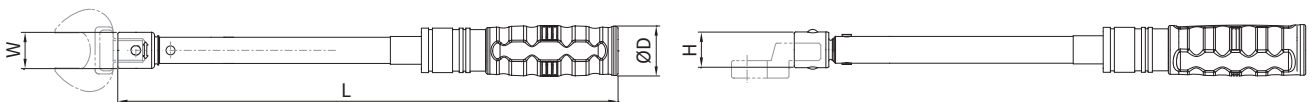


TORQUE CONVERSION FACTORS

| Units to be converted | Corresponding unit | | | | | | | | |
|-----------------------|--------------------|-------|--------|---------|---------|---------|--------|-----------------|---------------|
| | =mN-m | =cN-m | =N-m | =ozf-in | =lbf-in | =lbf-ft | =gf-cm | =kgf-cm (kp-cm) | =kgf-m (kp-m) |
| 1 mN-m | 1 | 0.1 | 0.001 | 0.142 | 0.009 | 0.0007 | 10.2 | 0.01 | 0.0001 |
| 1 cN-m | 10 | 1 | 0.01 | 1.416 | 0.088 | 0.007 | 102 | 0.102 | 0.001 |
| 1 N-m | 1000 | 100 | 1 | 141.6 | 8.851 | 0.738 | 10197 | 10.2 | 0.102 |
| 1 ozf-in | 7.062 | 0.706 | 0.007 | 1 | 0.0625 | 0.005 | 72 | 0.072 | 0.0007 |
| 1 lbf-in | 113 | 11.3 | 0.113 | 16 | 1 | 0.083 | 1152.1 | 1.152 | 0.0115 |
| 1 lbf-ft | 1356 | 135.6 | 1.356 | 192 | 12 | 1 | 13826 | 13.83 | 0.138 |
| 1 gf-cm | 0.098 | 0.01 | 0.0001 | 0.014 | 0.0009 | 0.00007 | 1 | 0.001 | 0.00001 |
| 1 kgf-cm(kp-cm) | 98.07 | 9.807 | 0.098 | 13.89 | 0.868 | 0.072 | 1000 | 1 | 0.01 |
| 1 kgf-m(kp-m) | 9807 | 980.7 | 0.9807 | 1389 | 86.8 | 0.7233 | 100000 | 100 | 1 |

Conversion-formula :
Units to be converted \times Factor = Corresponding unit
Example : Convert 5 lbf-ft into cN-m
Solution : $5 \times 135.6 = 678$ cN-m

SPECIFICATION



Metric # Matt finish

| ITEM NO. | Range | W | H | L | Ø | KG |
|-----------|---------------------|------|------|------|------|------|
| IPR-5N | 9x12 1-5 Nm | 22.0 | 21.3 | 190 | 30.2 | 0.33 |
| IPR-30N | 9x12 6-30 Nm | 22.0 | 21.3 | 217 | 30.2 | 0.36 |
| IPR-110N | 9x12 20-110 Nm | 22.0 | 21.3 | 405 | 38.0 | 0.97 |
| IPR-110NS | 14x18 20-110 Nm | 32.0 | 25.1 | 414 | 38.0 | 0.97 |
| IPR-210N | 14x18 40-210 Nm | 32.0 | 25.1 | 455 | 38.0 | 1.26 |
| IPR-350N | 14x18 70-350 Nm | 32.0 | 25.1 | 526 | 38.0 | 1.44 |
| IPR-450N | 14x18 75-450 Nm | 33.1 | 30.5 | 758 | 38.0 | 2.97 |
| IPR-800N | 20x28.5 100-800 Nm | 28.0 | 24.0 | 961 | 38.0 | 5.75 |
| IPR-1500N | 20x28.5 300-1500 Nm | 28.0 | 24.0 | 1600 | 38.0 | 5.97 |

SAE # Shiny finish

Accuracy : C.W. $\pm 4\%$ / C.C.W. $\pm 6\%$

| ITEM NO. | Range | W | H | L | Ø | KG |
|-----------|------------------------|------|------|------|------|------|
| IPR-50i | 9x12 10-50 in.lb | 22.0 | 21.3 | 190 | 30.2 | 0.33 |
| IPR-200i | 9x12 40-200 in.lb | 22.0 | 21.3 | 217 | 30.2 | 0.36 |
| IPR-100F | 9x12 10-100 ft.lb | 22.0 | 21.3 | 405 | 38.0 | 0.97 |
| IPR-100FS | 14x18 10-100 ft.lb | 32.0 | 25.1 | 414 | 38.0 | 0.97 |
| IPR-150F | 14x18 30-150 ft.lb | 32.0 | 25.1 | 455 | 38.0 | 1.26 |
| IPR-250F | 14x18 30-250 ft.lb | 32.0 | 25.1 | 526 | 38.0 | 1.44 |
| IPR-300F | 14x18 50-300 ft.lb | 33.1 | 30.5 | 758 | 38.0 | 2.97 |
| IPR-600F | 20x28.5 100-600 ft.lb | 28.0 | 24.0 | 961 | 38.0 | 5.75 |
| IPR-1000F | 20x28.5 200-1000 ft.lb | 28.0 | 24.0 | 1600 | 38.0 | 5.97 |

Unit : mm

Version 03

Jun. 2023



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TORQUE TOOLS
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