challenge®

1/2” SQUARE DRIVE TORQUE WRENCH

INSTRUCTIONS
IMPORTANT: PLEASE READ BEFORE USE

Range 28 ~ 210 Newton Metres
Range 2.9 ~ 21.4 Kg.m

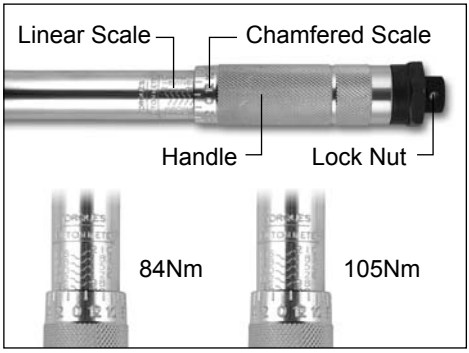
Introduction
This torque wrench has been designed and tested to meet the demands of workshop use, but it is also a precision measuring instrument and should be treated as such.

Important
Never use the wrench to undo nuts or bolts; this will result in the ratchet mechanism being damaged.
Always use the correct size socket and if necessary accessory.
Apply a steady pull to the handle of the torque wrench. When the applied torque is reached an audible click is heard and / or felt. At this point release the wrench immediately.
Do not jerk the wrench in any way to tighten the nut. Apply a steady even pressure throughout the operation.
It should be noted that the click becomes weaker with the lower torque settings.

Maintenance
The torque wrench is lubricated before leaving the factory. If the torque wrench has not been used for some time, operate it several times allowing the lubricants to re-coat the internal working parts.
After use always store the wrench at the lowest torque setting
Do not turn the handle below lowest torque setting.
Clean wrench by wiping. Never immerse in any type of cleaning fluid

Operation – Torque setting Adjustment
Example: To set the torque to 84Nm
Ensure that the locking nut is loosened, by turning anti-clockwise. Turn the knurled handle until the zero mark on the chamfered scales is in line with the graduation on the linear scale. In this case, 84Nm.

Example: To set the torque to 105Nm
Ensure that the locking nut is loosened, by turning anti-clockwise. Turn the knurled handle until the zero mark on the chamfered scales is in line with the next lowest graduation on the linear scale. In this case, 98Nm.
Continue to turn the knurled handle, 7 more graduations. (Note: 1 Graduation equals 1Nm) The wrench is now set to 105Nm.
Half a turn = 14Nm : 1 Full turn = 28Nm



Operation – Method of use
Use a light lubricating oil and ensure that the nut is free to rotate before being torque up.
Note: It is preferable not to use knuckle or universal joints, as these could result in incorrect torque settings.
Place the square driven on the socket or extension bar, perpendicular to the nut / bolt to be tightened.
Gripping the knurled handles with on hand steady the drive socket with the other and gently but firmly pull the handle, (in a clockwise direction) until a click is heard and a slight break in the handle is felt. DO NOT turn any further.

Accessories
1/2” Square drive, x 5” Extension bar
Carry case

CONVERSION TABLES

Newton Metres kgm	Foot Pounds (ft.lbf)	Kilogram Metres kgm
10	7.38	1.02
20	14.75	2.04
30	22.13	3.06
40	29.50	4.08
50	36.88	5.10
60	44.26	6.12
70	51.63	7.14
80	59.01	8.16
90	66.38	9.18
100	73.76	10.20
110	81.14	11.22
120	88.51	12.24
130	95.89	13.26
140	103.26	14.28
150	110.64	15.30
160	118.02	16.32
170	125.39	17.34
180	132.77	18.36
190	140.14	19.38
200	147.52	20.40
210	154.90	21.42
220	162.27	22.44
230	169.65	23.46
240	177.02	24.48
250	184.40	25.50
260	191.78	26.52
270	199.15	27.54
280	206.53	28.56
290	213.91	29.58
300	221.29	30.60
310	228.67	31.62
320	236.05	32.64

Kilogram Metres kgm	Newton Metres kgm	Foot Pounds (ft.lbf)
1	9.81	7.23
2	19.61	14.47
3	29.42	21.70
4	39.23	28.93
5	49.04	36.17
6	58.84	43.40
7	68.65	50.63
8	78.46	47.87
9	88.26	65.10
10	98.07	72.33
11	107.88	79.57
12	117.68	86.80
13	127.49	94.03
14	137.30	101.27
15	147.11	108.50
16	156.91	115.74
17	166.72	122.97
18	176.53	130.20
19	186.33	137.43
20	196.14	144.67
21	205.95	151.90
22	215.75	159.13
23	225.37	166.37
24	235.37	173.60
25	245.18	180.84
26	254.98	188.06
27	264.79	195.30
28	274.60	202.54
29	284.41	209.77
30	294.22	217.00
31	304.03	224.23
32	313.84	231.46

Foot Pounds (ft.lbf)	Kilogram Metres kgm	Newton Metres kgm
5	0.69	6.78
10	1.38	13.56
15	2.07	20.34
20	2.76	27.12
25	3.46	33.90
30	4.15	40.68
35	4.84	47.46
40	5.53	54.24
45	6.22	61.02
50	6.91	67.80
55	7.60	74.58
60	8.29	81.36
65	8.98	88.14
70	9.67	94.92
75	10.37	101.70
80	11.06	108.48
85	11.75	115.26
90	12.44	122.04
95	13.13	128.82
100	13.82	135.60
105	14.51	142.38
110	15.20	149.16
115	15.89	155.94
120	16.58	162.72
125	17.28	169.50
130	17.97	176.28
135	18.66	183.06
140	19.35	189.84
145	20.04	196.62
150	20.73	203.40
155	21.42	210.18
160	22.11	216.96

CONVERSION OF VARIOUS UNITS OF TORQUE					
Convert			Convert		
From	To	Multiply	From	To	Multiply
lb.in	oz.in.	16	oz.in.	lb.in.	0.063
lb.in	lb.ft	0.083	lb.ft.	lb.in.	12
lb.in	kg.cm	1.152	kg.cm.	lb.in.	0.868
lb.in	kg.m	0.012	kg.m	lb.in.	86.81
lb.in	Nm	0.133	Nm	lb.in.	8.85
lb.in	dNm	1.13	dNm	lb.in.	0.885
lb.ft.	kg.m	0.138	kg.m	lb.ft.	7.236
lb.ft.	Nm	1.356	Nm	lb.ft.	0.738
Nm	dNm	10	dNm	Nm	0.1
Nm	kg.cm	10.2	kg.cm.	Nm	0.098
Nm	kg.m	0.102	kg.m.	Nm	9.807

This product is guaranteed for domestic use for a period of 12 months against faulty manufacture or materials.
This product is not guaranteed for **HIRE** purposes. This guarantee does not affect the statutory rights of the consumer.

In the unlikely event of a defect occurring please contact our Helpline.
Office hours 9am – 5pm. Outside of office hours or during peak times you will be directed to an answer phone. Please leave your name, a brief description of your enquiry and your number. One of our operators will attempt to contact you back as soon as possible.
Telephone Number 02083 916 767
Alternatively check the Q&A on our website www.hilka.co.uk/faq.php

NOTE:
These important safeguards and instructions cannot cover all possible conditions and situations that may occur. It must be understood that common sense and caution are factors, which cannot be built into any product. These factors must be supplied by the person using this product.

Manufactured on behalf of **Home Retail Group**
489 - 499 Avebury Boulevard,
Central Milton Keynes,
MK9 2NW