



Contact AWS for more information!



Advanced Witness Systems Ltd.



sales@awstorque.co.uk



awstorque.co.uk



01295 266939

TORQUE TOOL RESOLUTIONS

A guide to interpreting scales for manual torque tools with reference to ISO 6789:2017

Non Fluctuating
DIGITAL

R = Increment Size of
Last Active Digit

0.0001 Nm

0.0002 Nm

Value is not fluctuating by 2 or more digits meaning the resolution is the value of the last active digit.

Resolution = 0.0001 Nm

Fluctuating
DIGITAL

R = Increment Size of Last Active
Digit + (1/2 x Fluctuation Range)

0.0001 Nm

0.0007 Nm

Value is fluctuating by 2 or more digits meaning the resolution is the value of the last active digit + 1/2 of the fluctuation range.

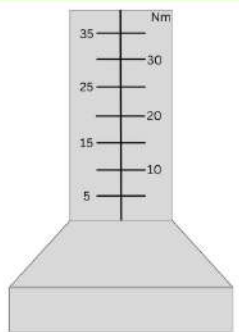
Resolution = Last Active Digit + (1/2 x Fluctuation Range)

Resolution = 0.0001 + (1/2 x (0.0007-0.0001))

Resolution = 0.0004 Nm

MICROMETER

R = 1/2 of Smallest Increment
(may be on secondary scale)

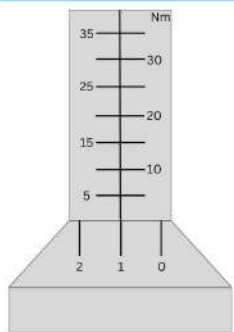


No secondary scale

Resolution = 1/2 x
Scale Increment Value

Resolution =
1/2 x (10 - 5)

**Resolution =
2.5 Nm**

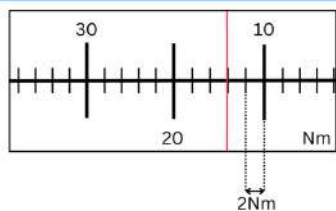


Smallest increment is on
secondary scale

Resolution = 1/2 x
Secondary Scale
Increment Value

Resolution =
1/2 x (2-1)

**Resolution =
0.5 Nm**



Tool's scale is horizontal
on the tool

Smallest increment is the
gap between two of the
smaller lines

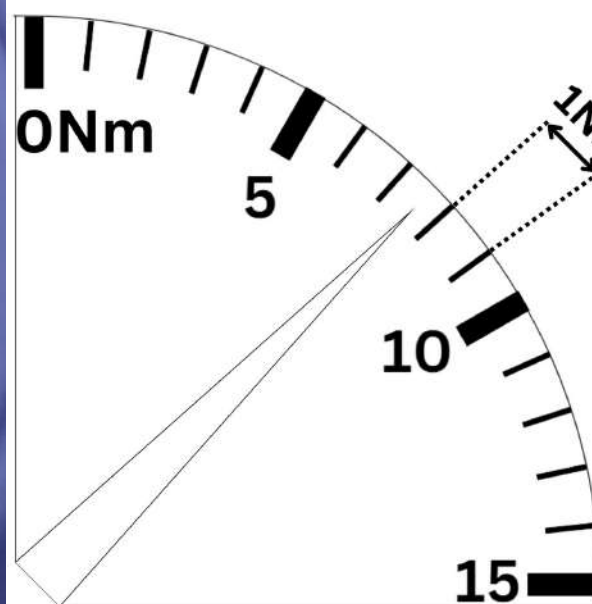
Resolution = 1/2 x
Smallest Scale Increment
Value

Resolution =
1/2 x (12-10)

**Resolution =
1 Nm**

< 1/5 of scale increment
ANALOGUE

R = 1/5 of Scale Increment



The pointer tip is less
than 1/5 of the scale
increment, meaning that
the resolution available
can be 1/5 of the scale
increment value.

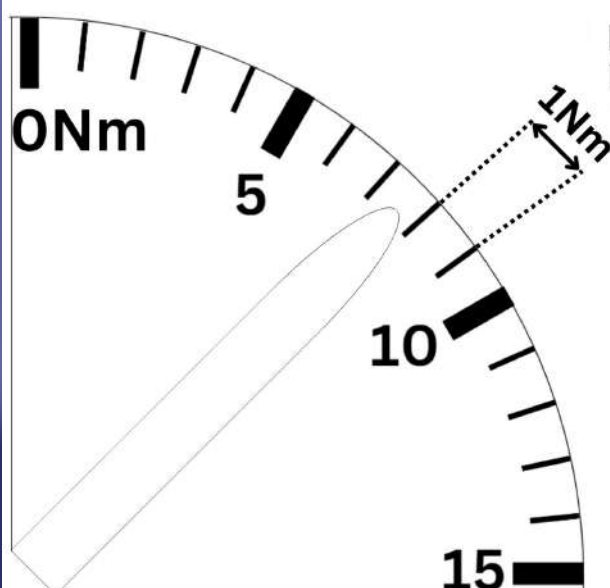
Resolution = 1/5 x Scale
Increment Value

Resolution = 1/5 x 1

**Resolution
= 0.2 Nm**

> 1/5 & < 1/2 of increment
ANALOGUE

R = 1/2 of Scale Increment



The pointer tip is equal to
or greater than 1/5, but
less than 1/2 of the scale
increment, meaning that
the resolution available
can be 1/2 of the scale
increment value.

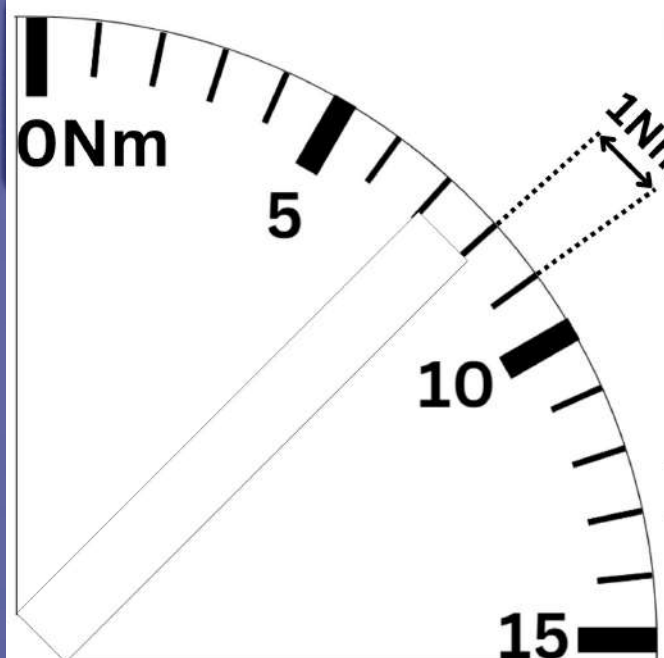
Resolution = 1/2 x Scale
Increment Value

Resolution = 1/2 x 1

**Resolution
= 0.5 Nm**

> 1/2 of scale increment
ANALOGUE

R = Scale Increment Value



The pointer tip is
greater than 1/2 of
the scale increment,
meaning that the
resolution available
can be the scale
increment value.

**Resolution
= 1 Nm**