



QX Series

The temperature rating for the battery and tool is 0 - 45° C.

The specification for combined linearity, hysteresis and repeatability of the internal torque sensor used is $\pm 1.0^\circ$ /o of full scale.

The QX series is calibrated on a medium joint, precision, low inertia, Belleville washer test joint of approximately 100° .

The QX series tools are calibrated from the factory at maximum torque.

Factory calibration is done with test equipment that has a minimum Test Accuracy Ratio (TAR) of 4.

The QX tools are tested and reported on the certificate with a Capability value. Testing is performed in accordance with the principles of ISO 5393. Capability is defined as $(6\sigma)/\text{mean}$. The pass criteria are defined in the table below. For metrology purposes, equivalent 2σ accuracy information is also shown at 30-49%, 50-79%, and 80-100% torque ranges. Accuracy is defined as a percent of full scale without recalibration. Accuracy listed will be of indicated reading if tool is recalibrated to target torque by adjusting TR value. Ingersoll Rand recommends calibrating the tool at the target torque of the application to achieve the best accuracy.

* Based on historical data, 85% of angle tools shipped with max torque accuracy better than $\pm 5\%$

Note: Accuracy is equivalent in clockwise (cw) or counter clockwise (ccw) direction.

Configuration	Torque Model	Capability Max Torque	$\pm 2\sigma$ Accuracy 30-49%	$\pm 2\sigma$ Accuracy 50-79%	$\pm 2\sigma$ Accuracy 80-100%
QX Pistol	4 Nm	15 %	$\pm 5.7\%$	$\pm 5.3\%$	$\pm 5\%$
	8 Nm	10 %	$\pm 4.0\%$	$\pm 3.7\%$	$\pm 3.3\%$
	12 Nm	8.4 %	$\pm 3.4\%$	$\pm 3.1\%$	$\pm 2.8\%$
	18 nm	8.4 %	$\pm 3.4\%$	$\pm 3.1\%$	$\pm 2.8\%$
QX Angle	5,10,15,18,27 Nm 20,30,35,40,60,80 Nm	20 %	$\pm 7.33\%$	$\pm 7.0\%$	$\pm 6.7\%^*$