

HIGH POWER systems

Handheld Nutrunner HCX1



Ergonomic, capability, lightweight

Ergonomics, capability, and torque repeatability are demands of the automotive industry and their suppliers.

Nutrunners from the HCX series fulfill these requirements and even more!

Using a new-generation, high-dynamic motor, it is possible to increase nutrunner power by up to 30 percent. The results are faster and **more cost-efficient fastening** operations.

The appealing design was developed in consideration of trend-setting ergonomic factors:

- Ergonomically formed hand grip
- Newly designed directional ring for clockwise / counterclockwise operation with additional user-programmable switch function (e.g. NOK acknowledgement, program advance, etc.)
- Status display indicates direction of rotation via LEDs and additional LED for enhanced display functions (e.g. NOK acknowledgement, release)
- Ergonomically arranged START key of electropolished stainless steel
- 1-part, ergonomically formed angle head (can be rotated 4 x 90°)
- Lightweight design

The optimized ergonomic design and lightweight configuration reduce operator strain. This leads to an **increase in individual productivity** and, as a result, a **reduction in running production costs**.

Robust design

Handheld tools from AMT are designed for rugged industrial applications. The polyamide hand grip has a high proportion of fiberglass and the motor housing is made from high-strength polyurethane. Both motor and gearbox are configured for long-life operation. This robust design leads to an **increase in lifetime** and, as a result, a **minimum in maintenance costs**.

Integrated data chip

Nutrunners in the HCX series also feature an integrated data chip that stores all relevant spindle data. This data can be

automatically read on any AMT control, as soon as a new tool is connected to the control. Time consuming and tedious parameter definitions become a thing of the past. The data chip also stores the number of executed fastening cycles. This allows for the development of individualized service intervals, in line with preventive maintenance.

Safeguarding the fastening process

All HCX nutrunners have reaction torque sensors, in addition to gathering rotation angle data from the resolver. As a result, fastening processes are performed with maximum precision and consistent quality. While recording the rotation angle, the control monitors whether or not the specified torque is actually being applied to the fastened assembly. In addition, the tool's current consumption, equivalent to the torque, is used as a redundant control variable in all AMT controls. By doing this, all requirements for safe, reliable, and high quality fastened assemblies are met.

Integrated barcode reader (AMT patent)

Prior to fastening, part ID is frequently checked with a barcode reader. Based on the part number, the correct fastening program is then retrieved from the nutrunner control. Upon successful completion, the part number and fastening data can then be stored in a quality database. The use of a separate barcode reader to scan a barcode is, however, a time-consuming process. AMT, therefore, integrated the barcode reader into the spindle. As a result, scanning and fastening can take place in one step. The resulting reduction in cycle time leads to a reduction in assembly cost.

Integrated ultrasonic transmitter

By using an ultrasonic triangulation system, tightening data can be allocated correctly to the individual tightening points. Preset process sequences, automatic selection of tightening parameters and quality statements after processing of the complete contents result in an extended process security.

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Technical Data

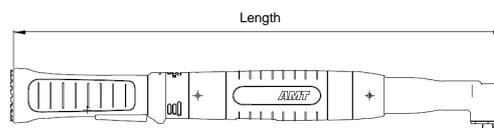
General

- Brushless drive motor with a linear Hall sensor for rotary positioning.
- Integrated data chip for
 - spindle identification
 - fastening cycle counter
- Additional function keys above the directional ring
- Status display arranged in 3 x 120°
- Reaction torque sensor
- Minimum speed: 0 rpm
- Angle accuracy: $\pm 3^\circ$; absolute
- Fastening torque tolerance: $\pm 7\%$ Cm/Cmk $\geq 1,67$

Options

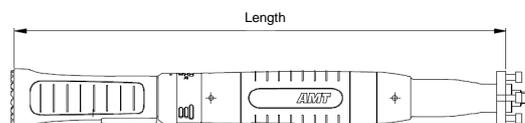
- Barcode reader
- Fastening location light
- Ultrasonic transmitter to determine position
- Adapter for flat gears
- Hold & Drive

Handheld Nutrunner HCX1



Max. torque capacity in Nm	Type	Max. idle speed rpm	Length mm	Angle head \varnothing in mm	Drive	Weight kg	Ident-No.
15	HCX1015WV14	1535	438	23	1/4"	1,3	790 0174
25	HCX1025WV38	1367	440	28	3/8"	1,4	790 0175
32	HCX1032WV38	1367	442	31	3/8"	1,4	790 0176
39	HCX1039WV38	977	445	33	3/8"	1,5	790 0177
64	HCX1064WV38	660	457	38	3/8"	1,6	790 0178

Straight Nutrunner HCX1 with Square Drive



Max. torque capacity in Nm	Type	Max. idle speed rpm	Length mm	Drive	Weight mm	Ident-No.
19	HCX1019ZV38	2388	414	3/8"	1,4	790 0179
26	HCX1026ZV38	1777	414	3/8"	1,4	790 0180
30	HCX1030ZV38	1466	414	3/8"	1,4	790 0181
40	HCX1040ZV38	1122	418	3/8"	1,5	790 0182

Straight Nutrunner HCX1 with Spring Travel

Max. torque capacity in Nm	Type	Max. idle speed rpm	Length mm	Spring Travel mm	Weight mm	Ident-No.
19	HCX1019ZF50	2388	414	50	1,5	790 0187
26	HCX1026ZF50	1777	414	50	1,5	790 0188
30	HCX1030ZF50	1466	414	50	1,5	790 0189
40	HCX1040ZF50	1122	418	50	1,5	790 0190