

HIGH POWER systems

Handheld Nutrunner HCX2



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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Alfing Montagetechnik GmbH

Auguste-Kessler-Straße 20
73433 Aalen, Germany

Fon +49 7361 501-2701

Fax +49 7361 501-2709

info@amt.alfing.de

www.alfing.de

Technical Data

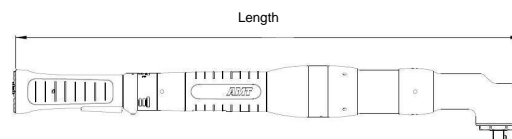
General

- 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

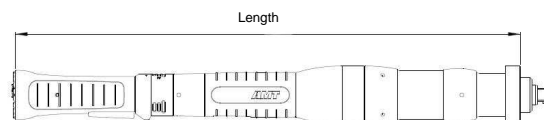
- Barcode reader
- Fastening location light
- Ultrasonic transmitter to determine position
- Adapter for flat gears
- Hold & Drive

Handheld Nutrunner HCX2



Max. torque capacity in Nm	Type	Max. idle speed rpm	Length mm	Angle head \varnothing in mm	Drive	Weight kg	Ident-No.
100	HCX2100WV12	569	542	41	1/2"	3	790 0204
152	HCX2150WV12	413	568	51	1/2"	3,3	790 0205
207	HCX2200WV34	303	578	66	3/4"	3,8	790 0206
250	HCX2250WV34	253	587	74	3/4"	4,1	790 0207

Straight Nutrunner HCX2 with Square Drive



Max. torque capacity in Nm	Type	Max. idle speed rpm	Length mm	Drive	Weight mm	Ident-No.
87	HCX2087ZV12	759	504	1/2"	2,7	790 0208
131	HCX2131ZV12	506	508	1/2"	2,7	790 0209

Straight Nutrunner HCX2 with Spring Travel

Max. torque capacity in Nm	Type	Max. idle speed rpm	Length mm	Spring Travel mm	Weight mm	Ident-No.
87	HCX2087ZF50	759	504	50	2,8	790 0210
131	HCX2131ZF50	506	508	50	2,8	790 0211