GHA Coating

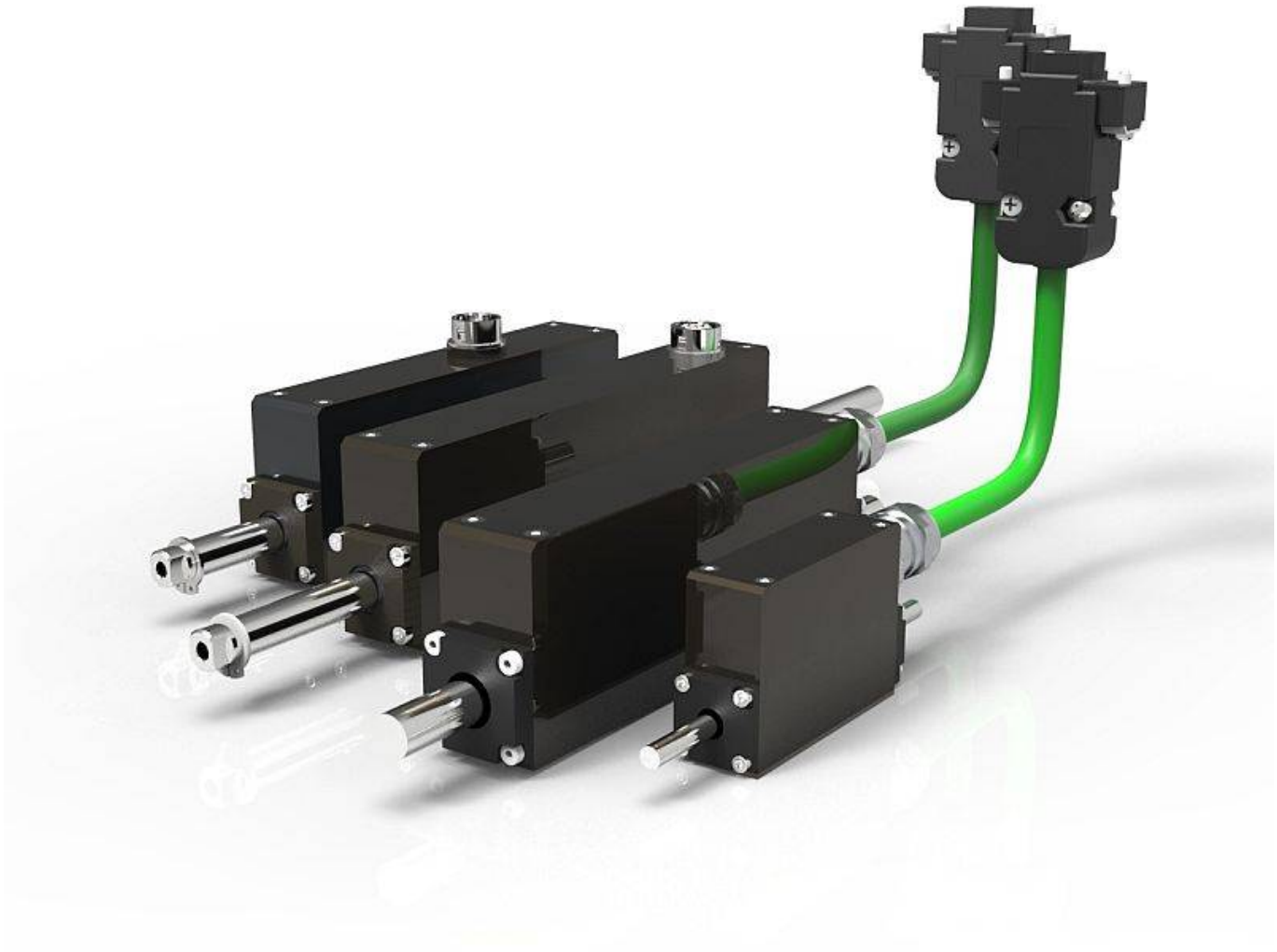
GHA FDA certification:
www.nilab.at/dokuwiki/lib/exe/fetch.php?media=miniature_motors:gha_fda_compliance_letter.pdf

GHA Antibacterial effect:
www.nilab.at/dokuwiki/lib/exe/fetch.php?media=miniature_motors:antibacterial_effect_of_gha_treatment.pdf

GHA Antivirus SARS effect:
www.nilab.at/dokuwiki/lib/exe/fetch.php?media=miniature_motors:antivirus_sars-cov2_effect_of_gha_treatment-.pdf

NILAB's **miniature tubular linear motors** are a complete solution for the pharmaceutical and medical industry, and for all kinds of automatic machines in general.

One of the advantages of the **NLH series** is its compactness: flange dimensions from 15×34 mm to 35×63 mm. The linear motor is composed of a high-performance three-phase winding, an integrated SIN/COS 1Vpp encoder, and a rod in AISI 304 stainless steel. The **NLH series**, consisting of 6 different types, offers an excellent performance-to-dimension ratio. The force range starts from 0.6 N up to 20 N of continuous force, with peak forces 6 times these values. The standard power supply of the drive is 24/48 VDC.



The difference between the NL series and the NLH series is the **G.H.A.®-coating**.

It is one of the most recent and innovative technologies applicable to the surface of all aluminium-base alloys. The surface is treated by a special **anodic oxidation**, with a thickness ranging from 10 to 200 µm, followed by the sealing of the micro-porosities through silver ions (Ag+). The anodic oxidation of aluminium-base alloys is the safest **protection treatment**, because it is unremovable.

The G.H.A.® process (**Golden Hard Anodizing**) is patented (**Patent No. EP1207220**).

The advantages of the G.H.A. process are numerous:

Item
Highest corrosion resistance
High antibacterial capacity and anti-mould (antibacterial)
Antistatic capacity
Thermal conductivity
Heat resistance
Resistance to consumption
Melting temperature: 2100 °C
Hardness: 500–600 HV
Suitable for direct contact with food

Therefore, aluminium alloys with the **G.H.A.®-coating** are considered an **excellent alternative** to expensive metals such as stainless steel or titanium alloys.

The miniature tubular linear motors of the NLH series with the innovative **G.H.A.®-coating** are specially designed for applications in the **food**, **pharma**, and **medical industries**.

Source: G.H.A. EUROPE S.R.L.

From:
https://www.nilab.at/dokuwiki/ - **NiLAB GmbH Knowledgebase**

Permanent link:
https://www.nilab.at/dokuwiki/doku.php?id=en:miniature_motors:gha_coating

Last update: **2026/09/11 07:57**