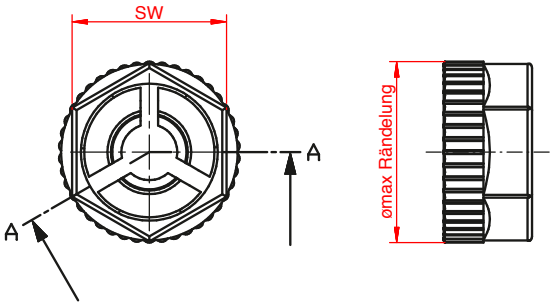
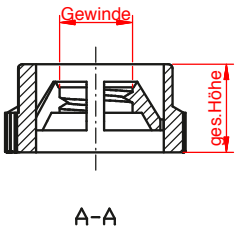
KINGNUT

Type	hexagonal
Material	Polyamide 6.6
	Standard
Unit	mm





A–A

Order No.	Thread	Hges.overall height (mm)	SW (mm)	Ø max (mm) that knurling	Fmax (N) Peeling off strength average value	Mmax (Nmm) Overtuning moment average value	Weight / 10 pcs.
8GI02VKN30	M3	4.0	7	8.2	47	5.3	0.80 g
8GI03VKN40	M4	4.7	8	9.4	141	10	1.10 g
8GI03VKN50	M5	5.8	10	11.7	233	16.5	2.80 g
8GI03VKN60	M6	7.0	13	15.2	360	24.7	5.40 g

DREMEC Befestigungselemente GmbH | Production and Sales
Gewerbestraße 15 | D-32584 Löhne | Fon: +49 (0)57 31 . 15 300 0 | Telefax: +49 (0)57 31 . 15 300 30
E-Mail: mail@dremec.de | Internet: www.dremec.de | Portal: www.dremec.net

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Mechanical Properties

The standard work material of the KINGNUT nuts is non-reinforced Type 6.6 polyamide.
The following details refer to tests over a short period conducted under normal climatic conditions.
In ac cordance with the guidelines of the general test standards for plastics, the nuts were stored at least 24 h with test conditions and before check at least 48 h after production.
23°C ambient temperature and 50 % rel. Air humidity conditioned.

Short - time Properties

	M3	M4	M5	M6
Joining force	25 N	40 N	85 N	122 N
Stripping force	160 N	310 N	500 N	800 N
Max. tightening torque	100 Nmm	180 Nmm	480 Nmm	750 Nmm

Long - time Properties

The elastic-viscous properties of the material cause the mechanical characteristic values to decrease during temporal load conditions. The above short-term values should therefore be reduced accordingly.
On special customer‘s request more detailed information for special applications can be given following simulation of the load application by FEA (Finite Element Analysis). This applies for both static (creep and relaxation tests) and dynamic considerations (load change reactions, inherent frequency).

Conductivity

The KINGNUT nut is basically an electric non-conductor.

Volume resistance: 1E15 Ohm*cm
Surface resistance: 1E13 Ohm*cm

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Influence of Temperature

The above mechanical characteristics value were determined at 23° C.
This values retain their relative validity in temperature range of -10 to +40 deg.C.
Thermal application range of the KINGNUT nut: -10 to +75 deg.C with basic material, up to 300° C with PPS. Thermal stability: 220° C.
These values can be increased significantly by use of special materials.

Behavior in Fire

UL94 Flammability Class: V-2
Flammability Class V-0 can be achieved with additives

Influence of Environmental Conditions

The KINGNUT nut is resistant against
* UV-exposure
* Corrosion
* Acids pH > 1,5 to 40 deg.C.
* Alkaline solutions up to pH 11

Special requirements can be met by selection of suitable plastics.

Life

20 years exposure to weather
10 years exposure to chemicals

Recycling

The use of non-reinforced plastic permits recycling together with other materials and material recycling.
With appropriate incineration (thermal utilization) no compounds detrimental to health are generated.

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General

Description

The KINGNUT nut is a plastic push-on spring nut.
It can quickly be pushed on to any threaded bolt and tightened. This can be done manually or with the aid of a quick-installation tool.

Applicable for:

* Manufacturing of synthetic products
* Inside panelling of railway coaches
* Manufacturing of typewriters
* Electrotechnical products
* Laboratory equipment
* Precision mechanics
* Production of precision measuring instruments
* Assembly of toys
* Electric assembly
* Air-conditioning and ventilation application
* Commercial and fair decoration
* Neon light construction
* Lift and escalators maintenance
* Lining of tunnels
* Aerospace industry
* Automobile industry interior furnishing and repair etc.
* Colors / special materials on request

Advantages

The termoplastic material of the KINGNUT nut means:

* significantly better damping in the acoustic area
* no corrosion
* non-conductive properties

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Fitting

In contrast to the conventional nuts, the KINGNUT nut is fitted by pushing on and turning by approx. 360 degrees. Compared with the conventional screw nuts this reduces the assembly time by at least 50%.
The KINGNUT nut was developed with suitability for sorting (e.g. vibrating conveyors) and positioning (exact positioning of the KINGNUT nut on threaded bolts by segment bias) in mind. This ensures problem-free automatic assembly.

Weight saving

The KINGNUT nut consists of thermoplastic material and is lighter than a steel nut. The surface pressure is significantly reduced by the larger width across flats and the knurling necessary for assembly. The components to be assembled can therefore be made lighter. Due to reduced surface pressure and better elasticity of the KINGNUT nut, reinforcement of the joining area of two plastic components is no longer necessary.

Dynamic Load

The self-locking capability of the KINGNUT nut compared with conventional steel nuts was significantly improved by the revolutionary mechanical design. This manifests itself primarily with dynamic load change reactions up to increasing vibrating loads.

Standard Deviations

The KINGNUT nut dimensions are larger. The width across flats (A/F) is that of the nearest larger standard dimension.
Table 1: Comparison of width across flats. The KINGNUT nut thred consists of a single thread divided into 3 segments.

	M3	M4	M5	M6
Standard width A / F	5.5	7	8	10
Kingnut width A / F	7	8	10	13

Material and Colours

The KINGNUT nut consists of a commercial type 6.6 polyamide as standard and, on request, is available in all colours covered. Currently, our stock consists entirely of black KINGNUT nuts. Special properties can be achieved with other thermoplastically processable plastics. Please contact us with your special requirements.

Contact

[We look forward to hearing from you]

Presented by:

DREMEC
Befestigungselemente GmbH
Production and Sales
Gewerbestraße 15
D-32584 Löhne
Fon: +49 (0)57 31 . 15 300 0
Telefax: +49 (0)57 31 . 15 300 30
E-Mail: vertrieb@dremec.de
www.dremec.de