

## maxon motors for better door security.

Around 5.5 million burglaries are committed worldwide every year – more than ten per minute on average. Using secure doors significantly reduces the risk of a house being broken into. The Spanish company Ruiz López manufactures high-security door systems that make any door burglar-proof. The company relies on motors by maxon for locking and unlocking the security system.

Most burglars enter houses or apartments through the main door. This is because, besides windows, the door is usually the weakest point. To combat this weakness, the Spanish manufacturer Ruiz López has developed armored doors with a special high-security locking system. The company has been manufacturing security systems for 25 years. Its patented guillotine locking system locks a door on both sides (see video), making it significantly harder to break. Thanks to their many security features like the welded high-security hinges for doorjamb and door as well as a massive steel block, the company's safety doors offer excellent protection against break-ins. Some Ruiz López product lines offer additional security components such as a programmable keycard or fingerprint locks. An integrated sensor screen is another special feature: This screen permits all functions of the security door as well as access to the house or apartment to be monitored on video using a smartphone.

Of course, the lock is a critical component in any high-security door. Ruiz López patented high-security locks are driven by maxon motors. Since 2002, Ruiz López has been using motors by this manufacturer of high-precision drive systems with up to 500 W of power. The motors are used to lock and unlock the automatic security lock. For example, when the residents leave the apartment or house, the motor operates the locking system to lock the door without anybody having to use the key. Likewise, the door locks automatically when it is closed from the inside. To reopen the door, simply press down the handle and the door will unlock itself.

## Quality motors for high-security lock systems

The company uses one maxon motor for each of its security doors. The motor and gearhead combination used in these lock systems consists of a brushed A-max 22 DC motor with 6 Watt of power driving a GP 22 A planetary gearhead. Every motor has an operating speed of up to 6740 min<sup>-1</sup>. A-max motors are equipped with a powerful AlNiCo permanent magnet and, like all maxon motors, come with the ironless maxon winding. This motor concept has some very specific benefits, such as low interference and no magnetic cogging. Ruiz López decided to use maxon products because of their extreme reliability, high quality and long service life.



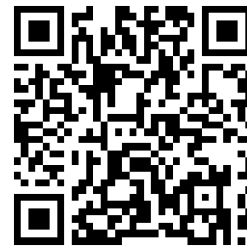
Fig. 1: A-max 22 DC motors by maxon are used for the locking system. © 2012 maxon motor ag

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Application report: 2685 characters, 516 words, 2 figures



Fig. 2: Ruiz López security doors come in different versions. © 2012 Ruiz López



Video about the Ruiz López locking system

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Source: UNODC (United Nations Office on Drugs and Crime)