

Comparative features of the latest locking systems

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Lock + <i>LOCK</i>-security blocker^{*)}		Lock + <i>CLIQ</i>TM cylinder^{**))}
Preferred use : For a front door of an apartment, a garage, a kiosk, a store, an office, etc.	1	Preferred use : In access control systems (ACS), for example, for offices with a plurality of key-locked doors
Potentialities: Up to 99 users with one lock (also possible: one key for all users!)	2	Potentialities: One key for several hundred locks
Can work with virtually all cylinder locks and lever tumbler lock and even with a simple latch	3	May work with locks with a cylinder secret mechanism only
Electronics is built into the blocker installed in the cavity of the door frame.	4	Electronics is built into the lay and the cylinder mechanism of the lock
NO special requirements for the accuracy of manufacturing of mechanical parts and electronic components of the blocker, which leads to low cost and high reliability of work to a great extent.	5	Elevated requirements for the accuracy of manufacturing and assembling the mechanical parts and electronic assemblies because of their small size
Guide price: Blocker ≈ USD100 Lock + Set of keys thereto: From USD10 and above	6	Guide price: Cylinder mechanism ≈ USD400 Each key ≈ 120 y.e.
Altering/correcting the list of ordinary users with SMS commands from Principal User's/Administrator's mobile phone with the possibility of both removing and adding any user from and to the list (up to 99 users in total), as well as a remote prohibition to unlock the lock (and, therefore, access to the premises) to ordinary users.	7	Access control: The system ensures flexibility in administering users' access rights, for example, the ability to set the time of users' access to the premises.
		Remote authorization management: The system makes it possible to add or alter, in real time, key access rights through special <i>remote</i> programming devices.
		Reduced risks if keys are lost: The system allows the rights of a lost key to be revoked directly through the cylinder which it unlocked.
		A simple integration with mechanical Master Key systems.
Memory of events: In the form SMS messages that have come to the Principal User's phone and that may be stored in his/her phone for years	8	Memory of events: If necessary, it is read out by a <i>special</i> device directly from the key or lock.
The impossibility to unlock the locked lock with lock picks, bump keys and even through complete destruction of the secret/locking mechanism, since its bolt is rigidly tied to the door frame.	9	No way to open the cylinder with a pick lock.
Normal copying of mechanical keys , which does not require any additional protection, since the keys do not carry information about the electronic unblocking codes	10	Additional keys can only be made at authorized CLIQ [®] outlets if the cylinder data sheet is available.
The laboriousness of installing the blocker is comparable to the laboriousness of installing a mortise lock + the need to lay power wires to it.	11	Easy installation: No wiring is required and installation may be carried out with no special preparation

<p>At the same time the installation of the blocker is much easier in the following cases:</p> <ul style="list-style-type: none"> - Using a simple template (included in the delivery set); - Laying wires from external devices under internal cover plate of the door frame or inside its hollow section. 		
<p>Automatic selection of the blocker operation mode when it is activated, determined by the composition of the external devices selected to work therewith, which produces the unblocking commands for: a mobile phone, RFID or DS readers, a PIN code button, a hidden button to unblock the lock upon its pressure, as well as their combinations with a mobile phone.</p>	12	Unblocking and opening are performed with a programmed key only
<p>Control of the door leaf against a forced entry (e.g., tampering with an angle grinder) with sending an SMS notice "Alarm! Door break-in" to the Principal User</p>	13	No control
<p>Possibility to call for emergency help by simply pressing the remote alarm button (an SMS notice 'Urgent help needed' is sent to the Principal User)</p>	14	No possibility
<p>Possibility to connect additional external devices: a LED indicator of the current state of the locking system, an alarm button, a siren, an IR sensor, various actuators (e.g., for remote switching on lighting to simulate the presence of people in the facility)</p>	15	No possibility is provided
<p>Possibility of a remote control of blocker operation using SMS and/or DTMF commands from the Principal User's mobile phone</p>	16	The <i>CLIQ™ Connect</i> system allows employees to update <i>access changes</i> in keys made by the administrator from anywhere using their smartphone.
<p>Automatic switching to the emergency unblocking mode in case of complete de-energizing of the blocker, problems with mobile communication and/or RFID reader designed by and commercially available from TOV "VKF HAG"</p>	17	None
<p>Prompt notification to the Principal User by SMS messages of abnormal events regarding the "door + lock + blocker" security structure with their mandatory duplication by telephone call:</p> <ul style="list-style-type: none"> - in case of a forcible burglary of the door; - even in case of a small displacement of the bolt of the blocked lock in cases of its tampering by any means; - in cases of power supply undervoltage dangerous for the normal operation of the blocker; 	18	None provided for

- in case of reduction of SIM card account balance (in case of working with a GSM modem) below the programmed value <i>etc.</i>		
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*) See, for example: <https://www.hag.com.ua/index.php?p=62>

**) See, for example: <https://abloy.locksmith.com.ua>

http://www.spv.ua/upload/default/editor/file/PRODUKCIYA/ABLOY/ABLOY_PROTEC2_CLIQ_Connect-compressed.pdf

Summary

1. Since in the **lock + CLIQ™ cylinder** locking system the electronics of the cylinder mechanism are powered by a disc battery integrated in the key, the operation of the electronics in the absence of the key in the cylinder is *impossible*.
2. At the same time, the power supply of the *Lock-security* blocker is provided by an external uninterruptible power supply (UPS = an AC-DC converter with built-in battery) and, therefore, the blocker can continuously and round-the-clock monitor the current state of the locking system, monitor the door leaf, promptly respond to SMS requests from the Principal User, and process commands coming from external unblocking devices (see Section 12 above). The possibility of performing these and other very useful additional functions (see Section 15) with *a small increase in the price* of the blocker *widens considerably the capabilities and improves the effectiveness* of the locking system as a whole. Certainly, if necessary, the same (and probably even better) effect can be achieved with some additional equipment of which there is a big range in the modern market of security systems. But the cost of its implementation will be much higher than the cost of the multifunctional **virtually any lock + low-budget Lock-security blocker** locking system.

The main purpose of designing this innovative locking system was a desire **to give more opportunities to the users for less money**, because this very criterion has been and still remains the main one when assessing the demand for new products.

Let us recall at least a very recent, but very revealing example from the history of the development of cellular communication:

From simple devices, designed only for the exchange of calls and SMS messages, mobile phones have quickly progressed to smartphones, implementing numerous functions very useful for us, the users. Today, all of them are equipped with at least a built-in camera and a player. And we already take their multifunctionality not only for granted, but as a must as well.