

# ABLOY PROTEC2 CLIQ

## SECURING CONTROLLED DRUGS



Access Control vs Physical Security... Why compromise?

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**Access Control vs Physical Security... Why compromise?**

# Abloy UK

## **One company, total solution.**

Abloy UK are the UK's leading experts on high quality door locking and functionality, having supplied door locking and access solutions to major organisations in the UK since 1964.

Our product range includes electric locking, key cylinders, padlocks, door operators and more. Together, our solutions offer secure, compliant and lasting solutions trusted by organisations throughout the UK, Ireland and worldwide, across a variety of industries – wherever compromise is not an option.

With more than 50 years of experience, our business is built around a depth of understanding of physical security - the problems, the solutions available, the law and emerging technology. Our dedicated and experienced field force can help with all aspects of product specification and solution, while our technical experts are always on hand for complete customer support.

We have the capability to offer a complete security solution; from initial surveys and fact finding, to assessments, problem solving and planning through to specification. You'll find all our staff friendly, fully engaged and willing to put in that extra commitment to find the correct solution to suit your needs.

## **Our Mission**

Our mission is to develop safe, aesthetic and easy-to-use locking solutions which satisfy the needs of end-users for security and ease of access.



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# **ABLOY PROTEC2 CLIQ REMOTE**

ABLOY PROTEC2 CLIQ REMOTE is the culmination of 100 year's experience in developing world leading mechanical locking products, and over a decade of research and development in the Abloy CLIQ Solution. By combining the high security patent protected ABLOY PROTEC2 mechanical locking solution with the microelectronics of Abloy CLIQ we, bridge the gap between physical security and access control.

The rotating disk locking mechanism provided by the PROTEC2 solution, boasts a comprehensive range of products all tested to conform to the relevant British & European standards.

The mechanical platform provides a high level of physical security with over 1.97 billion differs and extensive master keying possibilities.

The CLIQ microelectronics provide auditing and time scheduling of access rights, keys can be simply removed when loss occurs and audits can be accessed from anywhere in the world ensuring total control of the master key suite.

The CLIQ key contains a 10 year life lithium battery, and an integrated circuit that holds the authorization details of the key and the previous auditable activities. Using Hand Out and Hand In dates along with Key active periods, the life of the key can be restricted. Schedules defined in the Web Management software, can further restrict the access rights on the key.

Keys are also given recurring validation forcing regular visits to the remote programming devices to upload audit trails and minimise risk periods for lost or stolen keys.

The key shaft has the cuts of the mechanical disks as per the master keying schedule and a contact strip to communicate with the cylinder. The cuts in the key mean the CLIQ Key can operate a normal mechanical cylinder or padlock alongside the electro-mechanical version all within the one locking plan.

The lithium battery in the key provides the power to the cylinder or padlock once the key is inserted, this means that no battery changes or wiring are required at the door. The cylinder and padlock range encompasses a majority of the extensive Abloy mechanical range, allowing the customer to use a CLIQ cylinder to be used with almost any existing door hardware without the need to "make good" or hard wire. The Electronic Disk controller will remember all auditable access attempts including those from a foreign CLIQ system.

Keys can be stored in an electronic cabinet for easy control and for a reduction in key requirements. These key cabinets can have payroll numbers or staff IDs loaded so that you can easily hand keys in and out always knowing who has them.

The CLIQ keys can also hold an RFID chip that can be used to operate Access Control systems throughout the hospital or for use with RFID patient bedside lockers used to secure patients belongs and drugs.

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# A typical day with ABLOY PROTEC2

## CLIQ:

A nurse turns up on the ward ready to start their shift; they need a key so they approach the TRAKA Key cabinet...



After entering their unique pin code the door will open and they will be given access to a specific CLIQ key highlighted in the cabinet. After taking their CLIQ key for the day they validate the key in a Wall Programming device:

Other specific keys can be made available for Pharmacy staff and Temporary agency staff, that may have reduced access rights according to skills and competences of drug resource.



Start of Shift

When the key is validated the Audit information from the previous shift is stored in the software and the key is programmed with its daily access.

During the shift the nurse has access to whichever cabinets, fridges, cupboards or rooms that they need – all with one key.



The Administrator of the system can program new keys, change old keys and view audit trail information at anytime from anywhere.

**Access Control vs Physical Security... Why compromise?**



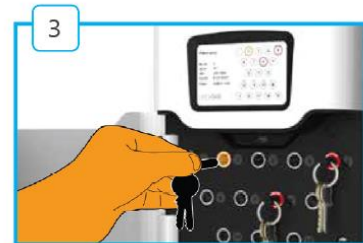
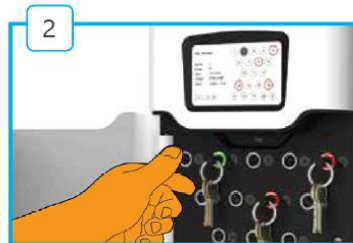
Keys can also be used to open records cabinets, drug trolleys and patient drugs lockers using the RFID technology embedded in the key.



End of Shift

At the end of the shift the key is revalidated and then put back into the TRAKA cabinet.

You will then have all data relating to whom used that key and where it was used during the shift.



# Simple. Cost Effective. Secure.

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# Legislation

## **Misuse of Drugs Act 1971**

The main purpose of this act is to prevent the misuse of controlled drugs by imposing restrictions on their possession, supply, manufacture, import and export etc... as detailed in the regulation.

*The misuse of drugs act 1971 is referenced in the 1973 misuse of drugs safe custody regulations.*

The following extracts from the Misuse of Drugs Safe Custody Regulations 1973 are pertinent to the solution:

### ***Schedule 2 Structural Requirements in relation to safes, cabinets and rooms for keeping drugs.***

*"The standard of 1963" this refers to the British Standard Specification for Thief Resistant Locks for hinged doors BS 3621.*

#### ***Safes and Cabinets***

*2 (3) each door shall be fitted with an effective lock—*

*(a) Having at least 5 differing levers or, in the case of a pin and tumbler mechanism, at least 6 pins;*

*(b) Designed to permit at least 1000 effective key-differs independent of wards or any other fixed obstruction to the movement of the key;*

The Abloy PROTEC2 CLIQ mechanism has 1.97 billion effective differs and 9 rotating disks exceeding the requirements of the above legislation.

## **Misuse of Drugs Regulation 2001**

The clinical use of controlled drugs is governed by the above standard according to the level of control they require.

## **Home Office Guidelines**

The Home Office have also issued specific guidelines within the Security Guidance for all existing or prospective Home Office Controlled Drug Licensees and/or Precursor Chemical Licensees or Registrants stating that:

*4.1 iv. A cabinet that complies with the specifications set out in the Misuse of Drugs (safe custody) regulations 1973.*

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## EN 1303 European Standard for Cylinders

The European Standard for cylinders covers the following areas:

	Grade							Grade		
	1	2	3	4	5	6		0	1	2
Minimum number of effective differs	100	300	15 000	30 000	30 000	100 000	Resistance to drilling (nett drilling time)	-	3 mins	5 mins
Minimum number of movable levers, pins, discs, etc	2	3	5	5	6	6	Resistance to chisel attack (number of defined blows)	-	30	40
Coding on key could disclose combination	Yes	Yes	No	No	No	No	Resistance to twisting attack (number of defined twists)	-	20	30
Torque resistance of plug	2.5Nm	5Nm	15Nm	15Nm	15Nm	15Nm	Resistance to plug/cylinder extraction (pull load)	-	15 kN	15 kN
							Torque resistance of plug/cylinder	-	20 Nm	30 Nm

All Abloy PROTEC2 CLIQ cylinders are BS EN 1303 Grade 6 Level 2

## EN 12209 European Standard for Locks and Latches

The European Standard for locks and Latches covers the following areas:

Increasing resistance to attack ↑	No drilling requirement		Drilling requirement		
	grade 6		grade 7		
	grade 4		grade 5		
	grade 3				
	grade 2				
grade 1					

Maximum closing force 15N 25N 50N	up to 100kg	Door mass up to 200kg	above 200kg	
	Grade 7	Grade 8	Grade 9	
	Grade 4	Grade 5	Grade 6	
	Grade 1	Grade 2	Grade 3	

Increasing side load ↑ No of operations	Grade C	Grade H	Grade M	Grade S	Grade X
	Grade B	Grade G	Grade L	Grade R	Grade W
	Grade A	Grade F			

ASSA Abloy can provide locks meeting the highest grades in EN12209

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# **Agencies and Regulators**

## **The Care Quality Commission (CQC)**

As well as regulating health and care services under the health and social care act 2008, the CQC is responsible for ensuring health and social care providers, and other regulators, maintain a safe environment for the management of controlled drugs.

After visiting a hospital using the ABLOY PROTEC2 CLIQ system the CQC had this to say:

Describing a culture of innovation within the trust:

*"An example of this was the drug key system on trial on the assessment units. It had been identified that significant nursing time is spent getting access to the drug cupboard key. This can lead to poor practice of control of the key and ineffective use of nurse time. The team had identified a system where an electronic key is released to each member of staff on duty; it is linked to them and an audit trail available. It restricts access to some staff when skills and competencies have not yet been achieved."*

## **General Pharmaceutical Council (GPhC)**

The below extracts from the GPhC registered pharmacy standards and inspection guide are relevant to the security of medicines:

Principle 3 – Managing Pharmacy Premises  
Premises are secure and safeguarded from unauthorized access

Principle 4 – Delivering Pharmacy Services  
Medicines and medical devices are:  
Stored Securely

## **Assessment and Inspection**

The hospital will be subject to inspection by both the CQC and the GPhC and meeting the requirements surrounding the safe and secure storage of controlled drugs will be part of either or both inspection.

# Achieving common objectives

In this section of the report you will find examples of how Abloy PROTEC2 CLIQ has helped achieved common objectives throughout the hospitals currently using the Abloy PROTEC2 CLIQ Remote system.

## Improving our CQC rating

One of the first hospitals in the UK to deploy the solution were shown in a CQC report to have issues with drugs cabinets being left open, following a successful implementation of the system they received the following statements for medicine storage:

Service	Comment
A&E	Medicines were stored securely including locked cupboards or fridges
Medical Care	Medicines were stored securely
Surgery	Medicines were stored correctly, in a drugs trolley which was locked at all times. Fridge temperatures were checked daily on all surgical areas
Critical Care	We checked medicines on the ITU; they were stored correctly in locked cupboards and fridges where necessary
Maternity and Family Planning	Medicines were stored correctly and appropriate checks carried out.
Services for children and young people	Medicines were stored correctly including in locked cupboards or fridges where necessary. Fridge temperatures were checked.
End of life care	n/a
Outpatients	Medicines were stored correctly, including in locked cupboards or fridges where necessary.

Also in the CQC's most recent report on University Hospital Birmingham NHS Foundation Trust Abloy PROTEC2 CLIQ was highlighted as a focal point for the culture of innovation at the trust.

Please see below an extract from the CQC report in which they received and '**outstanding**' in this particular area:

### **Innovation, improvement and sustainability**

*"An example of this was the drug key system on trial on the assessment units. It had been identified that significant nursing time is spent getting access to the drug cupboard key. This can lead to poor practice of control of the key and ineffective use of nurse time. The team had identified a system where an electronic key is released to each member of staff on duty; it is linked to them and an audit trail available. It restricts access to some staff when skills and competencies have not yet been achieved."*

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## NHS Protect

At a recent NHS Inspection at North Lincolnshire and Goole NHS Foundation Trust, the medicines safety was inspected thoroughly, and they were very impressed with the CLIQ system being used throughout the hospital.

They were awarded Green (fully compliant) in this particular area.

## Increased Security

The recurring validation in ABLOY PROTEC2 CLIQ Remote means that any lost or stolen keys simply turn themselves off, this increases the security of the drug storage whilst increasing productivity through time saving.

The solution uses a Triple DES encryption for communication and has a unique mechanical profile to the hospital that is patent protected until 2031 ensuring key duplication is impossible.

## Traceability

Each Abloy PROTEC2 CLIQ Remote key can carry up to 2000 Audit trail events stored in a central server for reviewing activities. Here are some examples of how the audit trails have been useful in Existing installations:



## Single Credential Solution



One Key for Multiple Tasks = EFECIENCY SAVINGS

## Product Compatibility



## Time Saved

Other NHS Trusts have found that on fitting an Abloy CLIQ locking system on a ward nursing staff have found to save a minimum of 40 minutes per shift of time saved. Time saved to perform other duties/tasks, along with patients receiving medication quicker.

Mike Urwin, Clinical Director of Pharmacy and Medicine Management at Scunthorpe Hospital, comments:

*“Throughout the trial of CLIQ Remote we undertook research to discover how much time was actually spent on nurses looking for keys, the results were astonishing. Typically a nurse will spend an average of 40 minutes per shift looking for keys, this equates to 250 minutes lost*

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*on a ward every day. Over a year, if this equation was used across the whole of our 51 wards, the lost time would be the equivalent of having an extra 24 nurses on duty every day across the whole Trust! My recommendation would be that the Trust should implement the use of the Abloy CLIQ Remote locking system as soon as possible to improve medicine security and increase nursing care through the time saved not looking for medicine cupboard keys. I would also recommend that all other Trusts think about implementing a trial of this system and see for themselves the benefits it can have."*

## **Responsibility**

Each nurse is responsible for their own key, and therefore the onus is on them keep their key safe and to themselves.

It will track exactly what cupboards are opened and by what key and for how long, so any discrepancies can be pinpointed down to a certain individual.

This can also mean that the nurses will be more inclined to keep the cupboards clean and tidy, and general housekeeping around the drugs will be maintained.

## **Increased Quality and Time in patient care**

Following a trial carried out at *Scunthorpe General Hospital* and an evaluation of the time taken to administer the CLIQ Remote System and the time saved by using the system.

Scunthorpe General Hospital concluded that an average of 40-45 minutes per shift could be saved equating to a total saving of 215 minutes per day when factored to allow for the time taken to administer the system.

As a result of fitting an Abloy Cliq locking system audit trail information has proved that nurses administer drugs to patients in a timelier manner.

Wasted time is then released back to the nurse giving them more quality time with the patients or time back to carry out other duties.



## Return on Investment

The use of the ABLOY Protec2 CLIQ Remote solution will provide mid - long term savings which are achieved through improved efficient working practices, which subsequently lead to improved patient care. Following initial capital expenditure, staffing costs on wards can potentially be minimised due to improved working practices achieved when utilising the CLIQ Remote system, as less staff will be required to manage the care of patients whilst actually providing an enhanced level of care. Alternatively increased efficiency will be reflected in improved patient care and the KPI's applicable.

Costs for managing keys can be reduced with existing mechanical differ systems if a key to a CD cabinet is lost or stolen there is a risk of theft of the controlled drugs stored within the cabinet, and it is therefore likely that a locksmith would have to be called in to replace the locks and restore security. Potentially this could cost up to £100 per callout. If a bunch of keys are lost, costs could be increased with multiple cabinets affected however with CLIQ Remote, the lost key would be barred from accessing the cabinets and security restored immediately without the need to call in a locksmith and no associated costs. With recurring validation of keys the risk posed by the missing key is minimised with a time limited window of opportunity.

Reduced Risk – the potential risk posed from the tampering or theft of drugs and equipment can be removed as all staff would be audited and identifiable. For Example, in June this year an agency nurse was arrested on suspicion of tampering/stealing controlled drugs at Colchester hospital! Therefore the cost of drug losses can contribute to the return on investment over time.

**Below is an example ROI calculation based on:**

**No of Wards = 10**

**Average Shift = 10 Nurses**

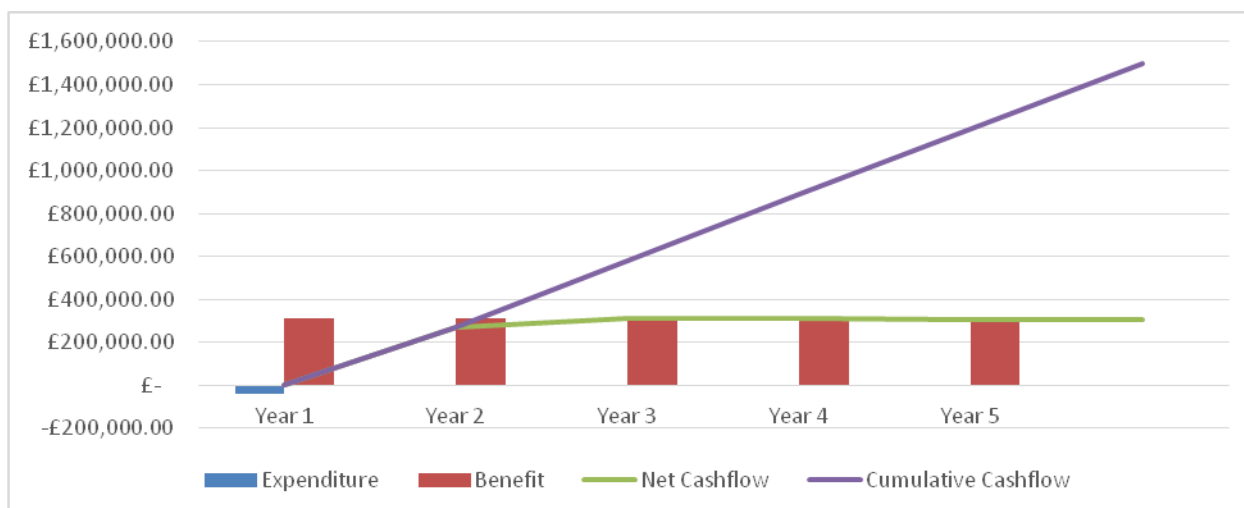
**Cabinets pr ward = 8 inc Fridges**

**Time spent looking for keys = 40 mins per shift**

**Based on the above the total cost of the solution would be: £40,058**

**Months to payback would be 2 months with a first year return on investment of: £312000 through efficiency.**

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## **Non-financial benefits**

### **Staff Morale**

Even in the busiest hospitals, simple interventions can have a big payoff in staff satisfaction. The way you deal with everyday situations can have a dramatic impact on the morale of everyone on the wards.

Having demonstrated the system in a number of trusts all over the UK, the most common issue trusts come across on a daily basis is nursing time wasted due to loss of time looking for the drug cabinet keys or the key holders. On average time studies have revealed this can amount to 40 minutes per shift.

Nowadays as nursing staff need to access the drug cabinets so often; this can be very frustrating for the individuals and therefore affecting their moral, and reducing their day to day productivity.

Abloy CLIQ solves these issues head on, as each nurse has their own key.

The nurses will feel like the trust is investing in their jobs, which equals happier nurses and an increase in productivity!

### **Future Proofing**

Over the next few years innovations in technologies such as 3D printing will introduce increased risk in areas secured by conventional key systems, a solution that utilises high level electronic security provides an investment in the future. A partnership with the ASSA Abloy group brings with it the stability and innovation of the future as the world leading manufacturer in security solutions is committed to maintaining and improving our hosted solution ensuring backward compatibility and future proofing for all its customers.

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## Infrastructure and support

Once the Abloy CLIQ system is implemented in one ward and the initial infrastructure is in place, the cost reduces as all other wards will only require locks and keys.

Abloy have a number of dedicated CLIQ specialists on hand to support each trust where the system is implemented. We have a service hotline where the trusts can call or email to get help and support regarding any issues with the system. With the hospitals permission we can remotely log in to each system and assist online straight away if required.

## Implementation

The overall system can be implemented over time gradually extending ward by ward or cabinet by cabinet. The cost for implementing can be shared between wards/departments with all wards contributing to the centralised management hardware, whilst individual wards or departments cover the cost for the locking hardware and keys needed for their ward.

Abloy Cliq can be retrofitted to most cabinets already situated in the hospitals. This means a quick and easy install, reducing any downtime on the wards. Most of the new metal drug cabinets will have a euro profile cylinder already on them, so it can be a very simple swap over to an Abloy CLIQ cylinder.

The software can be loaded on to number of designated PCs, and again this can be done swiftly and away from the busy ward environment.

It may also be possible to tap into budgets assigned for Technology & Innovation or security to enable a system to be implemented. Savings achieved from the use of the initially installed systems can then be reinvested to allow further expansion of the system.

## PR

Abloy have a fantastic dedicated CLIQ marketing team. We are currently using a PR company to promote our wide range of CLIQ applications, and that's both in print and online and also supported by ad campaigns where appropriate.

Abloy Marketing can assist hospitals where best practice is taking place due to the implementation of an Abloy CLIQ system and will promote where possible.

## Installed bases

Some example sites that currently have Abloy CLIQ system installed are listed below:

Scunthorpe Hospital	Goole and District Hospital	Diana, Princess of Wales Hospital
Lincoln County Hospital	Doncaster Royal Infirmary	Yeovil District Hospital
Bristol Southmead Hospital	Dorothy House Hospice	Queen Elizabeth Hospital B/ham
Benenden Hospital	Weston General Hospital	Medway Maritime Hospital

Bedford Hospital (trial)	London Bridge Hospital	Centre for Reproductive Genetic Health
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## **Assa Abloy**

Abloy UK are part of the ASSA ABLOY Group of companies, a multinational global security provider.

Our UK offices/factory is based centrally in the West Midlands alongside other AAUK group companies.

Abloy UK are market leaders in the manufacture and supply of High Security Products, Disk Locking mechanisms and Electro-Mechanical solutions.

Hospitals have the reassurance that they are dealing with a longstanding international company, with dedicated Cliq product managers giving online and external customer support in addition to internal and external sales support throughout the UK.

## **Awards Recognition**

Abloy Cliq – Shortlist Finalist Patient Safety Awards 2014

Abloy Cliq – Shortlist Finalist HSJ Value in Healthcare Awards 2015 –Value & Improvement in Information Technology (Final judging and Awards to take place during September in London)