Catalogue
2017

More information about Kaso security solutions.
Please contact sales@kaso.fi or visit www.kasosafes.com.

Physical security is still needed in a digital world

– Lets say that you have protected your business or home with a state-of-the-art electronic alarm system and it goes off in the middle of the night. How long does it take until a guard, firemen or police comes to investigate? Jari Bachmann, Kaso's Managing Director, asks.

In urban areas reaction time may be 15 minutes and even up to several hours in less densely populated areas. Even most advanced electronic and digital systems do not ensure safety alone. Physical security in the form of security doors, safes, strongrooms and other secure storage units are still very much needed whether it's burglary, fire and other threats you are dealing with. Here, Kaso operates on the policy of not leaving anything to chance.

Technology for business and private use

Building on long-standing expertise yet looking to the future, Kaso has always striven to be in the forefront of development. The forward-thinking attitude of Kaso has produced several breakthroughs in technological solutions as well as design.

In the past, sheer material volume was used to ensure resistance against different burglary methods and tools. Now, Kaso's advanced multi-layer BFP® construction ensures safety with substantial weight savings.

– Earlier our heaviest safe weighed in at 3 tonnes, but thanks to our development, we have been able to shave 2 tonnes out of it, says Bachmann.

Even private homes can benefit from safe ways of storing easy to lose valuables such as PIN codes, passwords, computers and hard drives containing confidential information. The award-winning KEEPS® range combines bank-class protection with a modern, aesthetically pleasing form which won't ruin a carefully designed home decoration.

– Our products can be placed where they're most needed, where the authorised people can easily access them. Because they're light, secure and stylish, they don't have to be stuck in a basement or hidden away. And thanks to digital locking systems, they are even easier to use than before.

Evidence of safety

Kaso products are type tested and verified according to the latest and most advanced European Standards in the most demanding testing facilities. – We're not just saying they are safe and reliable – we can also show evidence.

When ensuring complete physical security, details such as tested and appropriate security solutions, alarm systems, locking systems, lead time, available extras and services – and eventually, price – make a world of difference.

– Kaso products are built to last and most of the supplied safes still in active use. We are committed to maintaining them throughout their life cycle. This brings down the total cost of ownership and improves sustainability, with less raw material used and less waste produced.
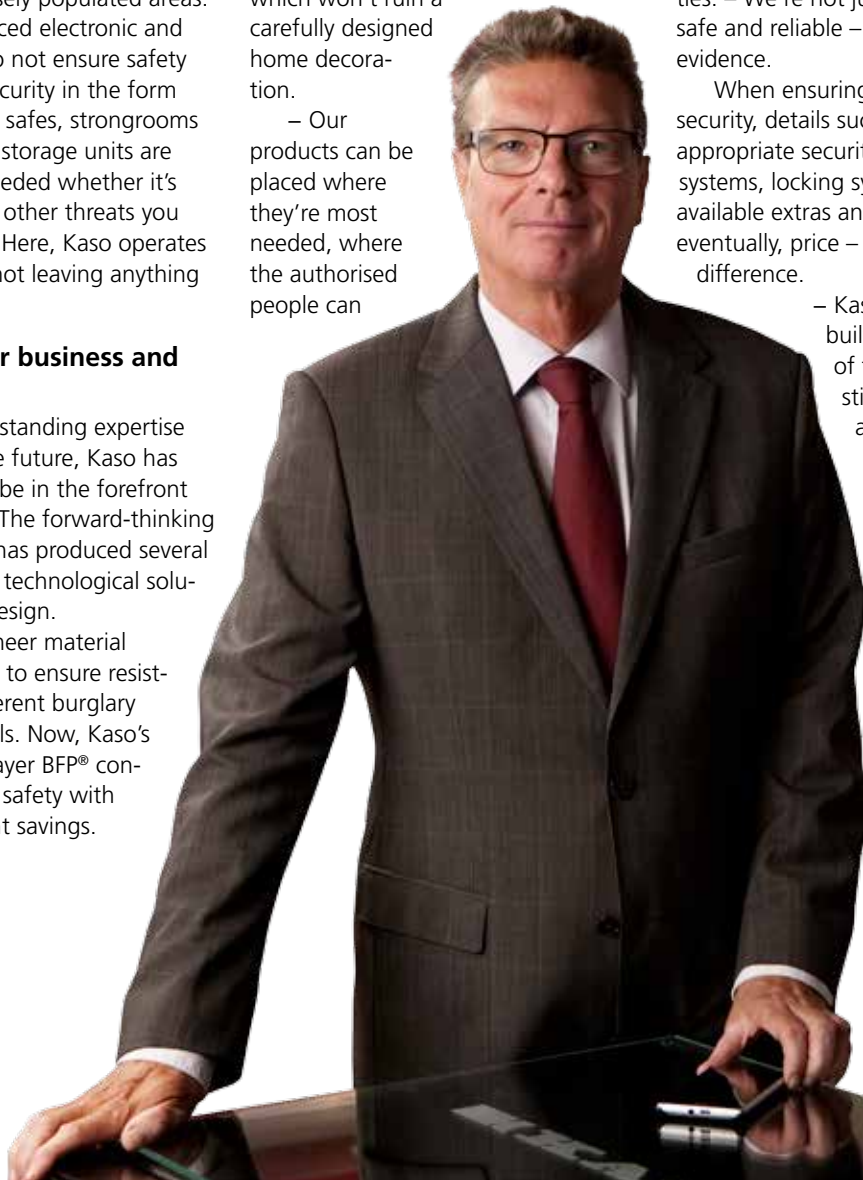
Continuously building on a rich tradition, Kaso today is the only manufacturer in its field in Scandinavia.

Leading-edge security for more than a century

Trust is essential in the business of protecting invaluable property and information. As an evidence of customer satisfaction, Kaso has been manufacturing and supplying physical security solutions for more than a century.

– I think one of the reasons we have customer relationships of more than 50 years is that Kaso is a family company, where people have pride in their work.

Entrepreneurship is about belief in your own success but also taking responsibility for your customers and employees, Bachmann concludes.

"Our customers appreciate comprehensive service"

A high-quality security unit, expertly designed and manufactured, offers excellent protection against burglary, fire and other threats. However, it first needs to be delivered and correctly placed, balanced and anchored.

– Our personnel inspects the location before delivery to determine issues such as how much weight the floor can bear and what the best route is. Then we install the safe, train the users and provide product manuals that are actually helpful. Our customer satisfaction surveys show that this kind of comprehensive service is much appreciated, Kaso's Sales Director **Jussi Lehtonen** says.

Kaso's professionals, with their experience and know-how, can also help customers make the right decisions when planning how to protect their valuables. For example, Jussi Lehtonen has a good tip on how to avoid having to upgrade your purchase in a few years.

– The size does not affect the price of a safe nearly as much as the resistance grade. That is why it makes sense to consider spending just a little bit more on a safe with some room for growth in anticipation of future needs. As the difference is in height, a bigger safe doesn't even take up more floor space.

5

"ECB•S certification according to European standards is a proof of quality"

Dr. Heering, could you please introduce the European Certification Body?

European Certification Body (ECB) is a neutral and accredited certification body for physical security products like e.g. safes, high security locks and strongrooms. It issues the international recognized ECB•S certificate. ECB has almost 50 years experience in the field of testing and assessing security products. It was emanated from the international security association ESSA.

On which standards the ECB•S certification is based on and how they are working?

The ECB•S certification is based on European standards. The EN requirements are based on identifying a security product's weakest point, and the stresses that point can withstand then sets the product's overall security level. European standards describe how the tests are carried out and which requirements apply for various security levels. A standard only defining a specific construction would not be that flexible. If the products fulfill the high requirements of the ECB, the manufacturer can label them with the ECB•S certification mark.

Who is the author of the European standards?

The European standards are developed by a technical committee consisting of experts from the security industry from the different member countries. Manufacturers, scientists, users and laboratories come regularly together to advance the standards and make them fitting to new requirements of the market. Every 4 years the standards are checked completely. This is a very transparent process and ensures that the standard lives up to its promise.

Why there is a need for such standards in the market?

The advantage of the European standardization is that it is continuously worked on. Therefore new burglary methods and new tools can be integrated into the standard and the standard is state of the art. There are other standards in the market that have not been changed for decades.

Do you think that it was a good decision to establish European Standards?

The European standards, existing almost 20 years, are a great success. Before establishing them the market was dominated by many national standards. This was a very unclear situation, because it was not easy to compare the different standards to each other. Today the ECB•S certification according to European standards is not only recognized in Europe, but also far beyond the European borders. And the positive trend is still going on.

What are important requirements of the ECB•S certification?

As the first step the product is tested by a laboratory. On the basis of this test and the assessment, the ECB issues the ECB•S certificate. The certificate holders must have a quality management system. Besides the ECB carries out regularly quality surveillance audits at the manufacturing plants of the certificate holders to ensure a constantly high quality level of the production.

Which benefit offers the ECB•S certification?

The ECB•S certification is a proof of quality for banks and other customers. It gives orientation as it is recognized in the global security market. The ECB•S certification formulates an important basis for the risk calculating of insurance companies. The higher the security level of the ECB•S certified security product, the higher is the worth that may be stored in it.

Profile /
Dr. Markus Heering

Managing Director of European Certification Body

Education

Doctorate in process engineering at RWTH Aachen University

Professional Background

Junior researcher at the Department of Ferrous Metallurgy (IEHK), Engineer and project leader at the environmental protection technology specialist Herhof before joining the VDMA (Geraman association of machine manufacturing companies).

Managing Director of the VDMA association Printing and Paper Technology and Security Systems since January 2008.

Managing Director of the European Security Systems Association (ESSA).

Acceptance of certified security solutions developed well in emerging markets

"Customers are getting aware of the importance of certification. Earlier, no-one was asking for it. But now it' becoming a real competitive advantage."

Tarek Noureldin, the managing director of Techno Egypt Integrated Solutions (TEIS), is an experienced security professional. Having worked with Kaso since 1990, he has had an unique vantage point to see how the Egypt market have evolved. Earlier, the market was dominated with untested and uncertified products, but times have luckily changed.

Uncertified products losing ground

In the Egyptian banking sector, there are typically three stakeholders in the buying process. Engineers, hired consultants and the purchasing department all need to be convinced.

"But whatever their position in the process may be, people are always astonished to see real-life pictures of uncertified vault doors, safety doors or safety deposit boxes, all of which have been broken in with ease," Noureldin says. "The photos really open up their eyes."

TEIS has supplied Kaso vault doors for many leading banks across Egypt. As a sign of trust, nowadays many security consultants ask Noureldin and TEIS for advice on how to make a good request for tender.

"By choosing ECB-S certified products, our customers always know exactly what they are paying for. There are no hidden surprises in the construction of the vault doors or other items as might be the case with uncertified products," Tarek Noureldin claims. "The Egyptian market is on the rise as there are not enough bank branches in relation to population. And we have had two revolutions in near past, so there is no question whether security is an issue or not."

According to Noureldin, the cooperation with Kaso has been very flexible. "Kaso has offered us excellent support with a swift response, whether it's a technical or a pricing-related question. And what's most important, they have also been able to fine tune the products to meet the customers' exact needs."

Focus on educating the customers

For the businesses considering of becoming a Kaso dealer, Noureldin has a sound piece of advice.

"You need to be willing educate your potential customers on the value of the European standards and testing procedures. You really have to make sure that they understand the difference between a certified and uncertified products. Once the common understanding and mutual trust is gained, business will be so much easier."

Specializing in physical security solutions

TEIS is a privately owned business specializing in physical security solutions for the banking and IT sector. Around half of the TEIS business comes from Kaso vault doors, safety doors and safety deposit boxes. TEIS was the first company in the Egypt market to offer products that have been certified by the neutral European Certification Body (ECB). ECB-S certification mark guarantees that the product has been tested according to the strict European standards.

"By choosing ECB-S certified products, our customers always know exactly what they are paying for."

Kaso products are always put through the toughest, most demanding tests available

How do you know if a safe will actually stand up to a burglary attempt or a fire? The easiest way to find out is to look for a blue label with "ECB-S" on it.

A certification by ECB-S (European Certification Board – Security Systems) means that the product has passed a resistance test according to the European Standards, which are widely recognised around the world and approved by insurance companies.

– In a way, the ECB-S certification label is the most important part of the product. The certification guarantees a comparable and universal level of protection, Kaso's R&D Director **Risto Palkama** says.

Kaso products are type tested and certified by ECB-S. What's more, the tests are only performed by the industry's leading testing laboratories in Germany, Sweden and Finland. These are established high-class facilities that can ensure testing in true accordance with the latest European Standards.

– Kaso products are always put through the toughest, most demanding tests available. We don't take any shortcuts or easy options to get certifications, Risto Palkama assures.

Burglary resistance testing

A safe has to pass attack tests by highly-trained professionals using the latest and most effective burglary tools to receive a burglary resistance grade, which run from EURO 0 to EURO V.

Before the test, the testing laboratory is supplied with complete technical drawings to help it plan in advance how to break into the safe. In the actual burglary testing procedure, pre-selected tools and methods are used in order to find the easiest access into the safe being tested. This is because the resistance grade level is based on the easiest access point – all other points are at least equally resistant.

Insurance companies recommend the maximum value for the content stored in the safe according to the certified burglary resistance grade. Certification by ECB-S guarantees insurance coverage and more favourable premiums.

Fire resistance testing (NT Fire 017)

Kaso fire safes have been type tested and certified for fire resistance according to the Nordic NT Fire 017 standard in the fire laboratories of VTT Technical Research Centre of Finland or SP Technical Research Institute of Sweden.

The safe is placed inside a furnace, where all the vertical sides and the top are exposed to fire. For a safe to pass the test for the protection of paper material, the maximum temperature inside the safe must not increase by more than 150 °C. In the Diskette test for the protection of data material, the temperature increase limit is 30 °C.

The different protection classes signify the material and the length of time the safe offers protection for it. The NT Fire 017–120 Paper classification, for example, means that the safe has fulfilled the requirements of the test for 120 minutes for paper.

Fire resistance testing (DIS)

In the NT Fire 017 tests, the recording of temperatures inside the safe is terminated at the same time as the test, whereas safes carrying the S 120 DIS certification provide the highest class of fire protection.

In the DIS test (EN 1047–1), the safe is not only placed in a + 1090 °C furnace but left there for the duration of the cooling period, with the inside temperature reaching its highest level several hours after the fire has been switched off. This means DIS-certified safes can actually protect the contents for up to ten hours.

"Kaso products are type tested and certified by ECB-S"

Risto Palkama, R&D Director, Kaso

1.

The test also includes dropping the safe from the height of 9.15 m to a hard surface after it has been heated to the maximum temperature. This is to simulate floors or other structural units collapsing in a burning building. After the drop test, the product is returned to the furnace for further fire testing.

Kaso product development

Kaso R&D new product development was very productive and launched several new products.

Development work with Kaso next generation safe series begun to pay dividends. New Kaso safe series E-500 was launched in the Security Essen exhibition. Initially the E-500 series includes three small safes in grades II and III (EN 1143-1).

Eurosafe series E4-300 was complemented by fire classification according to EN 15659.

Also a new clothes cabinets product family with sound absorption doors was launched.

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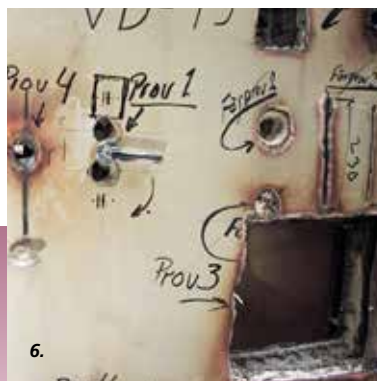

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4.

5.

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7.

Photos

1. Fire testing at Kaso Factory
2. Vault door after explosion test
3. Fire testing at over 1000 °C
4. Thermal lance 3000 °C
5. Hammering
6. Burglary testing
7. Flame cutting 1500 °C

Modern design
meets certified safety

Openness towards all that is new is written down as one of Kaso's values. Over the years this principle has led the company to boldly question some of the traditions of the industry it operates in.

For example: do safes really have to be heavy and ugly?

Innovative technological solutions and design sensibility have enabled Kaso to reduce the weight of safes without compromising security and to introduce products that are easy to use but also easy on the eye.

– Our R&D efforts are based on the feedback we get from customers. We also seek input from international security associations, security testing laboratories, law enforcement agencies, insurance companies and financial institutions, technological institutes and top design companies, Kaso's R&D Director Risto Palkama says.

As a member of the EUROSAFE association and ESSA (European Security Systems Association) Kaso stays among the frontrunners of the industry. The company's active participation in the latest developments of the field drives the ongoing product development.

– Even though we pay a lot of attention to how our products look, the protection they offer is the number one priority. That is why we are closely involved in the continuous updating of security standards. If the bad guys come up with new tricks, we have to keep up with them.

BFP® construction – light weight, heavy security

Kaso was the first to crack the age-old problem with safes: their prohibitive weight. The company developed its own multi-layer BFP® construction, which makes it possible to reach the security level of a three-ton concrete safe with only a third of the weight.

The lighter weight means that customers can now place safes where they couldn't before, such as buildings with floors capable of handling only a limited load. As it requires less raw material and reduces waste, a safe with BFP® construction is also a sustainable choice.

KEEPS® – modern design meets certified safety

With the KEEPS® product range, Kaso brought domestic safes into plain sight. Designed to blend in with modern home interiors, the KEEPS® safes combine stylish looks with certified protection against burglary and fire. KEEPS® enables people to keep their valuables close and organise personal items such as passports, PIN codes and spare keys.

Kaso accessories are designed for enabling flexible and convenient use of the safes for various storage requirements

All Kaso safes have one thing in common: they have been designed to protect their contents. However, their interiors can be totally customised and fine-tuned with inside fittings for any kinds of valuables the users might want to store.

Kaso's wide range of inside fittings includes adjustable shelves, pull-out elements – such as shelves, different key storage solutions and suspension file frames – and lockable inner boxes for data and other materials. The fittings are easy to install without tools and compatible with any Kaso safe regardless of size or model.

    – With inside fittings, the space in the safe can be optimally utilised and organised. They also make work easier, safer and more efficient. For example, you don't need to take materials away from the safe when you inspect them on a pull-out worktop, Kaso's Sales Director Jussi Lehtonen says.

Individual security with compartments

When several persons need individually secured storage space, purchasing a whole row of safes is not the only option. Kaso safes can be tailored so that each authorised user has their own lockable compartment that only he or she can access.

    – A safe can even be equipped with an electronic access control system. Having a digital record of who has accessed the safe and when improves security and also protects the users in possible dispute situations, Jussi Lehtonen points out.

Protecting and safekeeping:

- Bookkeeping
- CDs, DVDs and other
- Certificates
- Business records and plans
- Credit cards
- Drawings
- Firearms
- Insurance documents
- Jewellery and watches
- Laptops
- Legal agreements
- Money
- Ownership certificates
- Passports and IDs
- PIN and security codes
- Spare keys
- Tax reports
- Tickets
- Valuables

Kaso safe protected valuables in a church arson

The church of Ylivieska was completely destroyed in an arson during Easter 2016. The Kaso safe performed just as it was designed to do.

The arsonist broke into the empty church and started a fire a couple of hours before the traditional Easter Vigil. Even though the fire brigade was at scene quickly, nothing could be done to save the 1786 vintage wooden church as the flammable liquids used resulted in a violent and quick-spreading fire.

Half of the silver communion supplies were already placed on the altar for the Easter sermon and were subsequently lost. The other half of the supplies were stored in a Kaso AKK-240 safe produced in the eighties. The safe was found in the smouldering ruins later with few hopes of finding anything saved inside as the temperatures were almost 1000° Celsius during the fire.

"It was stained and buckled, but astonishingly enough, we were able the open it with a key," Pentti Haikola, the financial director of Ylivieska parish says.

The temperature had been kept under 100° C inside the 30-year-old safe – a survivable temperature for paper and noble metals. 155 silver chalices, a couple of bottles of sacramental wine and church collections from the previous sermons were saved.

"It was incredible. We thought there would be only molten metal and ash inside. But all the contents were unharmed," recalls Haikola.

Kaso received the fire-surviving safe for closer inspection and donated the Ylivieska parish a new Kaso safe in return.

"We are extremely satisfied with the performance of the safe and will trust Kaso products also in future," Pentti Haikola adds.

The cornerstones of Kaso production – top quality and customer satisfaction

Keeping the customer satisfaction high is a prerequisite for success in any business. And it's even more so, when the business is all about trust and security.

"We have fine-tuned our production processes to ensure that every customer gets exactly what he needs and when we have agreed to deliver," production manager Pekka Wilkman says. "At the moment over 95% of our orders are delivered right on time," adds Wilkman.

Using top-notch machinery, most of the 2000 different components needed for the Kaso products are made in-house in the 12 000m2 factory in Finland. The bar code system allows Kaso to follow the production status of each order.

The bulk of the products are made to order as there are a lot of variations in terms of protection level, colours and lock technologies and many product families such as safes, vault doors and safety deposit boxes. "It has never been a problem as our typical lead time is as short as two to three weeks. We stock only a few products," Wilkman explains.

Kaso works according the principles of cellular manufacturing. The teams are based on the production phases, but most of the Kaso craftsmen are multi-talented and can effortlessly move between roles and cells – a definite advantage for the times of high order load. Each self-guided production team has flexible workhours and workers themselves have the responsibility to meet both the production times and quality criteria. Their wages also have a component that is tied to the performance of production.

"In addition to our own highly skilled labour, we use several select subcontractors, who meet our high requirements," says Wilkman.

Documentation vital for quality

Third party organisations inspect the operations several times a year. With an ISO 9001:2008 certified production and constant development in terms of quality, defects are rare.

"Every order is accompanied with a production sheet, which gets signed for a proof of quality after a task has been completed. If there is a defect, the documentation helps us to pinpoint where the error has been made – whether it's a question of materials or quality of work. What's most important however, is that we aim to make sure that such mistakes won't happen again," Wilkman points out.

Pekka Wilkman has been with Kaso since 1985. "It's a great place to work and as a clear evidence, most of my colleagues have been here for a long time, too. We are proud of what we do and also have a heritage to treasure."

With over 100 years of experience, Kaso is investing on continuous development in order to be a trustworthy partner also in future.

Pasi Vuori, Loomis:
In our business,
trust is everything.

"Our customers are buying security and it's our job to make everything we can to deliver. Choosing the right partner is a vital part of the process."

Loomis manages and handles cash flow in over 5 000 customer locations all around Finland. The majority of the customers are chain stores or other lines of business that need cash for their daily operations. The safe is a critical component in the overall cash flow security.

"It's extremely important to have a secure place to store the cash until it is picked up by our drivers. That's why we usually offer a safe as a part of our service agreement," says Pasi Vuori, the sales director of Loomis Finland.

As the ability to design, produce, deliver and install a tailored product is a must for Loomis' business, Kaso is their partner of choice.

"Many of our customers are large, international corporations. They have their own requirements for security – all of which have to be accommodated. Most of the Kaso safes we use are tailored to meet those exacting customer needs. It's not just a bulk product we offer," Vuori says.

Keeping the delivery schedule essential

"If the safe is missing, a new shop location cannot be opened without taking an unnecessary risk. A delay in the delivery of a safe could ruin the whole time-table," Pasi Vuori adds.

Care must also be taken to ensure the legal rights of the customers'

and Loomis' personnel. This includes making sure that everyone has access only to those sections of the safe that they absolutely need to. To meet that need, Kaso has come up with a solution that allows the user to drop the cash to the safe without opening the safe. If the safe is used to store other valuables, the sections can be separated.

"During our 20-year cooperation, we have supplied thousands of safes to our demanding Finnish customers. The safe is a very concrete part of our service and as such, we need to make sure that the quality is top-notch. The reason for such a long-term relationship is simple. It's trust," Pasi Vuori concludes.

We are responsible for exceptionally confidential materials

– I believe our archiving practices are among the most strictly controlled in Finland. They must be consistent with both domestic archiving laws and international standards as we also manage plenty of classified EU and NATO material, says Ministry of Defence's Head Attendant **Paavo Halonen**.

In order to make the work process as smooth as possible, the officials also have their own fire and burglary protected safes for the documents related to ongoing projects and investigations. When the materials are no longer needed, they are returned to the archive.

– Three of our attendants have rights to handle classified material.

Their responsibility is to know where the documents taken out of the archive are and to what purpose they are used. Even one misplaced paper is enough to cause at least an image problem.

Although all Ministry of Defence materials are required to be archived on paper, digital archiving is gaining ground. Accordingly, the strict operating guidelines cover more than just paper documents. Devices such as memory sticks and portable computers are always stored in classified safes when not in use.

Kaso has delivered a comprehensive archiving solution for Finland's Ministry of Defence with clear instructions for the handling of documents.

Kaso products protect your confidential information against fire and burglary

Our service portfolio related to safe and systematic storage includes:
- Security design services
- Security audits and consultations
- Delivery and installation services
- Maintenance and 24-hour telephone service
- Kaso Rent financing services

"*Even one misplaced paper is enough to cause at least an image problem.*"

Paavo Halonen, Head Attendant, Ministry of Defence

PUOLUSTUSMINISTERIÖ
FÖRSVARSMINISTERIET

Fire protection for documents

Good filing and storage can improve productivity and comfort at work as well as the quality of service for customers and shareholders. As for safety, adequate measures to protect documentation against hazards ensure ease of mind.

Filing cabinets

Kaso FC filing cabinets, tested NT Fire 017 according to 60 Paper, protect your files against fire at the office. Featuring adjustable filing rail width, the cabinets are suitable for most of the common office paper formats such as A4, legal, letter, foolscap folio etc. The central key lock on the top drawer enables easy locking for all drawers at once.

Burglary- and fireproof filing

The PK-400 four-way locking mechanism consists of sliding locking bolts on three sides and a fixed full-length back bolt on the back panel of the door. The series provides 120 minutes fire protection for paper and can be customised with a wide array of optional fittings and locking options.

Fireproof filing
FC filing cabinets

NT Fire 017 – 60 Paper

FC-40E with four drawers, with panel

FC-40C, compact, with four drawers, without panel

Key features

- Modern design
- Lightweight filing series
- Fire protection 60 minutes (NT Fire 017 – 60 Paper)
- Two to four drawers
- Adjustable filing rail width

Design

- Adjustable filing rail width – suitable for A4, legal, letter, foolscap folio paper sizes
- Supplied with one central keylock on the top drawer – all drawers can be locked and opened with a single lock
- Colour light grey, RAL 7035
- Two series available:
    – FC E series with wooden drawer panels
    – FC C series with traditional painted drawers

Lockable media insert
NT Fire 017 – 60 Diskette
(option)

Specifications			
Model	FC-20E FC-20C	FC-30E FC-30C	FC-40E FC-40C
Height (mm)	785	1125	1470
Width (mm)	530	530	530
Depth (mm)	700	700	700
Weight (kg) E	150	210	270
Weight (kg) C	146	202	260
Number of drawers	2	3	4

Burglaryproof fire safes
PK-400 fire safes

EN 14450 Grade S1 (ECB-S)
NT Fire 017 – 120 Paper

Key features

- Over half a century of experience in tested fire security products
- Lightweight and modern fireproof storage solution for offices
- Modern design and wide range of models for a variety of storage needs
- 120 minutes fire protection according to NT Fire 017
  – 120 Paper (120 minutes of fire testing at temperatures over 1045 °C)
- Burglary protection S1 according to European Standard EN 14450 (ECB-S)
- Security locking system against burglary, theft and unauthorised access

Locking and security

- Four-way locking mechanism consists of sliding locking bolts on three sides and a locking frame structure on the back panel of the door
- PK-400 fire safes are supplied with ECB-S certified Mauer keylock as standard – also available with various electronic code or combination lock models
- Option for two locks
- Floor anchoring

Optional fittings

- Adjustable shelves
- Adjustable shelves with filing rails
- Lockable compartments – external height 150 mm or 350 mm
- Pull-out multipurpose drawers and filing rails
- Data Media Box MI-400
- Gun accessories

Burglaryproof fire safes
PK-400 fire safes

EN 14450 Grade S1 (ECB-S)
NT Fire 017 – 120 Paper
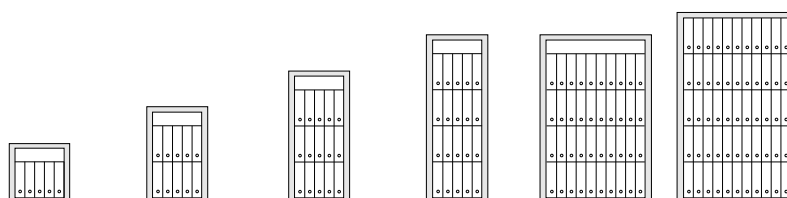
Specifications						
Model	**PK-410**	**PK-420**	**PK-430**	**PK-440**	**PK-480**	**PK-490**
External						
Height (mm)	680	1030	1380	1730	1730	1980
Width (mm)	670	670	670	670	1160	1220
Depth (mm)	580	580	580	580	580	580
Internal						
Height (mm)	490	840	1190	1540	1540	1790
Width (mm)	485	485	485	485	970	1040
Depth (mm)	360	360	360	360	360	360
Volume (l)	87	149	211	273	546	679
Weight (kg)	150	205	260	315	495	565
A4 file capacity (pcs)	6–9	12–18	18–27	24–36	48–76	65–100

Fire protection for data and media

Organisations across businesses as well as the public sector need to protect valuable data against fire, unauthorised access and other hazards. With more than half a century of experience in fire security for data and media records Kaso can offer several tested solutions to meet these needs effectively, efficiently – and stylishly.

Fireproof data protection for homes and small offices

The Kaso PK-45 media safe series for protection of data material has been designed for homes and small offices. The safes provide a compact, fireproof storage solution for documents, small items and data media. Safes can be placed on tables or shelves, or hidden inside other furniture.

Fireproof data protection for organisations

Suitable for larger organisations, the six safe sizes in the Kaso PK-400 Media Fire Safe series cover a wide range of needs for data and media storage, with tested fire protection for 120 minutes at temperatures of over 1045 °C. Four-way locking and a fixed back bolt bank protect the contents from unauthorised access and ensure tight closure for fire protection.

Data safes offering the best protection for your data records in the market

The Kaso DS-4000 series has the highest possible fire protection classification for data protection. Additionally, the data safes offer tested protection against humidity, water, magnetism and explosions. The doors are locked by solid steel bolt mechanisms and supplied with unpickable

key locks as standard. A wide array of optional features and inside fittings for the safes is available.

A fire could paralyse a company

Despite prevention by modern alarm systems, nobody can fully avert this danger.

The economic loss of data destroyed by flames could represent enormous capital value.

Their loss could ruin a company, not only a big industrial company, but also trading and craft enterprises and service providers.

Also know-how, customer data, figures and facts cannot be replaced or reproduced so easily and could be very expensive and take long time to recover.

IT security is also an operational risk. Production stops, development stagnates, sales and marketing personnel are unable to work. Business interruption insurance covers all current costs and lost sales at the beginning – but how many customers will wait for the end of an extended interruption without going to a competitor?

Qualified staff, as well, will look for new chances quickly.

Another problem is the retention period fixed by law for files, documents and data media.

Insurance coverage may be also at risk if no preventive measures have been taken.

Highest possible fire protection for data

Two (2) hour successful burning test at around +1090 °C when the development of the temperature and air humidity inside the product is monitored continuously. A fire generates enormous heat which destroys data quickly. While paper catches fire at about 170 °C, diskettes are rendered unreadable as soon as the temperature exceeds 50 °C.

The test specimen must stay in the closed furnace until the temperatures in the interior of the product have passed their peak. The minimum is twelve hours after the flame exposure has been ended. Always the maximum inside temperature level is achieved over ten (10) hours after the flame exposure has been ended. During the burning and also during the cooling period, the inside temperature of the data safe is not allowed to increase over 50 °C.

For the type test of data cabinets, the data safes have passed two test specimens – one for the fire resistance test and one for the fire shock and impact test. The fire shock and impact test is an authentic simulation of the real dangers in the event of fire, i.e., structural components falling down or a cabinet that drops from one floor to another when the building collapses. In the test the data safes are dropped from 9.15 meters to solid concrete floor. No degradation is allowed to the fire, heat and humidity resistance of the data safe.

The quality of components and manufacturing of the Kaso DS 4000 data safes are monitored and analysed regularly by the European certification board ECB-S.

With constant quality control and management the fire protection of the data safes is not compromised.

Quality management of Kaso DS 4000 data safes is also certified according to ISO 9001:2008.

Ultimate protection for your data and media records

Kaso DS 4000 data safes have been designed against multiple threats for protecting your data and media records. In addition to S 120 DIS fire testing of the Kaso DS 4000 data safes, following additional tests have been performed to demonstrate the non-compromised security of Kaso DS 4000 data safes.

Water submersion test for models DS 4200 / DS 4300 and DS 4400. Kaso data safes are tested against water and humidity at the Technical Research Centre in Finland. During the tests the safes were sunk for four (4) hours into a depth of three meters. The sealing of the data safes offers also protection against water from fire sprinklers and water beams for example in case of fire.

Magnetic shielding test. Magnetic shielding tests were successfully carried out by Technical research Centre in Finland. Magnetic shielding provides protection for the contents of the data safe against external radiation.

Explosion test. Explosion test for models DS 4200 / DS 4300 and DS 4400 at the Finnish Army base. In the test 400 g of dynamite exploded against the data safes.

Even the explosion was not enough to damage the contents of the safe. The data safes are also offering protection against possible explosions caused by the fire.

Images from a Central Bank building fire

Burglary proof media fire safes
PK-400 media fire safes

EN 14450 Grade S1 (ECB-S)
NT Fire 017 – 120 Diskette

Locking and security

- Four-way locking mechanism consists of sliding locking bolts on three sides and a locking frame structure on the back panel of the door
- PK-400 media fire safes are supplied with ECB-S certified Mauer keylock as standard
  – also available with various other electronic code or combination lock models
- Option for two locks
- Floor anchoring

Tested protection

- Fire protection for data and media records according to NT Fire 017 – 120 Diskette (fire protection for 120 minutes at temperatures of over 1045 °C), (PK-410 Media Fire Safe NT Fire 017 – 90 Diskette)
- Burglary protection S1 according to European Standard EN 14450 (ECB-S)
- Manufactured in accordance with the ISO 9001:2000 quality management system

Design

- Wide range of models and flexible adjustment of the inside fittings allows a variety of uses
- Sealed double door structure for maximum security against fire, heat, magnetism and water
- Standard colour light grey, RAL 7035

Optional inside fittings

- Adjustable shelves
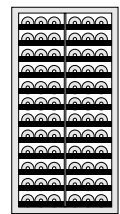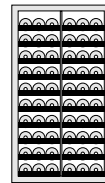- Pull-out multi-purpose drawers with dividers

Internal dimensions of a multipurpose pull-out shelf:
PK-490 media fire safe 377 mm x 251 mm x 60 mm.
Other models 344 mm x 251 mm x 60 mm.

30

Burglary proof media fire safes
PK-400 media fire safes

EN 14450 Grade S1 (ECB-S)
NT Fire 017 – 120 Diskette

Specifications

Model	PK-410 MEDIA	PK-420 MEDIA	PK-430 MEDIA	PK-440 MEDIA	PK-480 MEDIA	PK-490 MEDIA
External						
Height (mm)	680	1030	1380	1730	1730	1980
Width (mm)	670	670	670	670	1160	1220
Depth (mm)	580	580	580	580	580	580
Internal						
Height (mm)	390	740	1090	1440	1440	1690
Width (mm)	375	375	375	375	755	815
Depth (mm)	260	260	260	260	260	260
Volume (l)	39	73	108	142	284	361
Weight (kg)	170	230	300	380	625	725
Capacity (estimate), discs						
5.25" magneto-optical disc	95	185	280	415	830	920
CD/DVD	160	315	470	705	1405	1640
Zip drives	190	380	570	760	1515	2355
3.5" magneto-optical disc	390	905	1290	1810	3615	5505
Capacity (estimate), cartridges						
DLT	90	180	270	360	720	900
LTO, LTO Ultruim	110	220	325	435	865	1345
Exabyte 8 mm, Travan TR-4	195	390	585	780	1560	1820
AIT	310	615	920	1225	2450	3025
DAT	310	715	1020	1430	2860	3810
DDS	435	1010	1440	2020	4035	4995

Pull-out multipurpose drawer inner dimensions (mm): width 340 x depth 250 (models PK-410 – PK-480), width 375 x depth 250 (model PK-490).

Media fire safe capacity estimates are assuming adjustable shelves as internal accessories.

31

Data safes
DS-4000

EN 1047-1 Grade S 120 DIS (ECB-S)

DS 4200/4300/4400

Standard
- unpickable Mauer keylock with 2 pcs changeable keys
- without inside fittings
- colour RAL 7035

Optional
- mechanical combination lock or electronic code lock (DS 4200 / 4300 / 4400)
- two locks (DS 4300 / 4400)
- multipurpose pull-out shelf
- pull-out filing rails
- adjustable plain shelf
- lockable box 200 mm

Highest fire protection for data media
- Fire and endurance test – 120 minutes heating and subsequent cooling period including drop test from over 9 meters
- Water submersion test for 4 hours at the depth of 3 meters
- Explosion test demonstrating premium security against dynamite explosion
- Magnetic shielding test for proof against high external magnetic radiation

Data safes
DS-4000

EN 1047-1 Grade S 120 DIS (ECB-S)

DS 4400

DS 4300

DS 4200

Specifications

Model	DS 4200	DS 4300	DS 4400
External			
Height (mm)	965	1155	1535
Width (mm)	745	745	745
Depth (mm)	720	720	720
Internal			
Height (mm)	560	750	1130
Width (mm)	465	465	465
Depth (mm)	420	420	420
Volume (l)	109	146	221
Weight (kg)	320	380	490
Capacity (estimate), Discs			
Jaz drives	175	285	400
5.25" MO Disc.	325	435	650
CD/DVD	370	495	865
Zip drives	530	795	1 190
3.5" MO Disc.	1 360	1 905	2 720
Capacity (estimate), Cartridges			
DLT	195	290	435
LTO	290	435	650
Exabyte 8 mm	420	630	945
AIT	810	975	1 620
DAT	1 180	1 570	2 355
DDS	1 640	2 185	3 280

Pull-out multipurpose drawer inner dimensions (mm): width 400 x depth 395

Data safe capacity estimates are assuming adjustable shelves as internal accessories.

Burglary protection

More and more mobile employees, temporary personnel and visitors pass through office environments and shops. The increase in traffic calls for improved document protection.

Eurosafes

The multi-layer BFP® construction, developed by Kaso, provides invaluable benefits for the construction of safes. Thanks to the innovation, the Kaso E-400 Eurosafe series offers significant weight savings without compromising the security level. The locking mechanism of the E-400 series safes consists of sliding locking bolts on three sides and a locking frame structure on the back panel of the door. The safes are supplied with a floor-anchoring hole and bolt as standard to prevent easy removal of the safe.

Fire- and burglaryproof Eurosafes

The Kaso E-300 series provides strong burglary protection and tested fire protection for 60 minutes. The variety of safe sizes, with container volumes ranging from 87 to 635 litres, ensures a precise match for customer-specific needs. Door panel, colouring and inside fitting options further add to the versatility of the series.

Office safes

Kaso office safes of the PTK-300 series are available in six sizes. The light and slender construction allows for flexible placement in the office – the smallest of the series can even be placed under a desk. Sliding bolts on all four sides of the door protect the contents against unauthorised access and keep the door tightly closed against fire. All safes in the series can be floor-anchored and equipped with a variety of locking options and inside fittings.

Eurosafes
E-100 Series

EN 1143-1 Grade I (ECB-S)

ECB-S certified and practical Eurosafe for small shops, restaurants, kiosks, offices and homes.

Standard options

- Unpickable keylock,
  EN 1300 Class A (2 keys)
- Standard colour Dusty Grey,
  RAL 7037
- Back wall and floor anchoring
  (1 anchoring bolt)
- Adjustable shelf

Locking options

- Digital codelock

Specifications				
Model	**E1-102**	**E1-103**	**E1-104**	**E1-106**
External				
Height (mm)	280	280	395	565
Width (mm)	400	450	450	450
Depth (mm)	312	442	442	442
Internal				
Height (mm)	230	230	345	515
Width (mm)	350	400	400	400
Depth (mm)	180	310	310	310
Volume (l)	14	29	43	64
Weight (kg)	60	85	100	130

Eurosafes
E-400

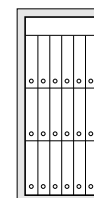EN 1143-1 Grades I to II (ECB-S)

Key features

- Burglary protection according to EN 1143-1 Grade I and II (ECB-S)
- Modern design and lightweight
- Multi-layer BFP® construction
- Low weight-to-security-level ratio
- Sliding locking bolts on three sides and locking frame structure on the back panel of the door
- Floor-anchoring hole and bolt as standard
- Colour light grey, RAL 7035

Options and fittings

- Keylock, electronic codelock or combination lock
- Option for two locks
- Optional lockable compartment alternatives: external height 150 mm or 350 mm (suitable for A4 file)
- Right- or left-handed opening

Specifications			
Model	**E1-410** **E2-410**	**E1-420** **E2-420**	**E1-430** **E2-430**
External			
Height (mm)	595	945	1295
Width (mm)	585	585	585
Depth (mm)	530	530	530
Internal			
Height (mm)	493	843	1193
Width (mm)	486	486	486
Depth (mm)	364	364	364
Volume (l)	87	149	211
A4 file capacity (pcs)	6–9	12–18	18–27
Weight (kg) E1	150	180	210
Weight (kg) E2	180	230	280

Eurosafes
PTK E-300

EN 1143-1 Grade 0 to IV (ECB-S)
NT Fire 017 – 60 Paper (Grade 0 to III)
EN 15659 – LFS 30 P (Grade IV)

Key features

- Designed for offices
- Burglary tested and certified according to Euronorm EN 1143-1 Grade 0 to IV (ECB-S)
- Fire protection for 60 minutes according to NT Fire 017 – 60 Paper (Grade 0 to III)
- Fire protection for 30 minutes according to EN 15659 – LFS 30 P (Grade IV)
- Unpickable keylock with two changeable keys as standard (E4 grade with two locks)
- Wide range of locking options and accessories
- Standard colour light grey, RAL 7035
- Easily installed – the smallest size can even be placed under a desk
- Sliding bolts on all four sides of the door protect against burglary attack and keep the door tightly closed in case of fire
- Floor anchoring as standard
- Internal fittings adjustable at 25 mm pitch
- Light weight, all under 1000 kg

Options and fittings

- Combination lock or electronic codelock
- Option for two locks
- Adjustable plain shelf
- Pull-out multi-purpose shelf
- Pull-out suspension file frame
- Pull-out worktop
- Lockable inner box
- Lockable Data Media Box MI-400
- Pull-out keyrack
- Pull-out key compartment shelf
- Pull-out key shelf
- Full RAL range available for colouring
- Right or left handed opening
- Safety deposit lockers

Eurosafes
PTK E-300

EN 1143-1 Grade 0 to IV (ECB-S)
NT Fire 017 – 60 Paper (Grade 0 to III)
EN 15659 – LFS 30 P (Grade IV)
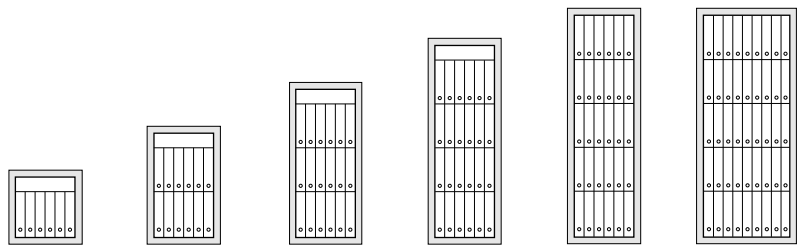
Specifications						
Model	**E-310**	**E-320**	**E-330**	**E-340**	**E-350**	**E-370**
PTK-SERIES	**E1-310**	**E1-320**	**E1-330**	**E1-340**	**E1-350**	**E1-370**
	E2-310	**E2-320**	**E2-330**	**E2-340**	**E2-350**	**E2-370**
	E3-310	**E3-320**	**E3-330**	**E3-340**	**E3-350**	**E3-370**
	E4-310	**E4-320**	**E4-330**	**E4-340**	**E4-350**	**E4-370**
External						
Height (mm)	612	962	1312	1662	1912	1912
Width (mm)	634	634	634	634	634	848
Depth (mm)	550	550	550	550	550	692
Internal						
Height (mm)	493	843	1193	1543	1793	1793
Width (mm)	486	486	486	486	486	700
Depth (mm)	364	364	364	364	364	506
Volume (l)	87	149	211	273	317	635
A4 file capacity (pcs)	6–9	12–18	18–27	24–36	30–45	40–70
Weight (kg) E/E1	180	260	340	420	470	650
Weight (kg) E2	220	300	390	470	500	750
Weight (kg) E3	250	340	430	530	580	850
Weight (kg) E4	280	380	490	610	670	970

Eurosafes
PTK E-300

EN 1143-1 Grade II to III (ECB-S)
NT Fire 017 – 60 Paper

Key features

- Burglary tested and certified according to Euronorm EN 1143-1 Grade II to III (ECB-S)
- Fire protection for 60 minutes according to NT FIRE 017 – 60 Paper
- Wide range of locking options and accessories
- Standard colour light grey, RAL 7035

Options and fittings

- Combination lock or electronic lock
- Two locks
- Adjustable plain shelf
- Pull-out multi-purpose shelf
- Pull-out suspension file frame, size A4
- Lockable inner box
- Other RAL colours

Specifications		
Model	**E2-308**	**E2-309**
PTK-SERIES	**E3-308**	**E3-309**
External		
Height (mm)	612	789
Width (mm)	570	570
Depth (mm)	500	500
Internal		
Height (mm)	493	670
Width (mm)	444	444
Depth (mm)	344	344
Volume (l)	75	102
A4 file capacity (pcs)	5–8	10–16
Weight (kg) E2	190	260
Weight (kg) E3	210	290

Eurosafes
E-300

EN 1143-1 Grade II to III (ECB-S)
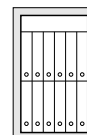NT Fire 017 – 60 Paper

Key features

- Burglary tested and certified according to Euronorm EN 1143-1 Grade II to III (ECB-S)
- Fire protection for 60 minutes according to NT FIRE 017 – 60 Paper
- Wide range of locking options and accessories
- Standard colour light grey, RAL 7035

Options and fittings

- Combination lock or electronic lock
- Two locks
- Adjustable plain shelf
- Pull-out multi-purpose shelf
- Pull-out suspension file frame, size A4
- Lockable inner box
- Other RAL colours

Specifications		
Model	**E2-308**	**E2-309**
E-300-SERIES	**E3-308**	**E3-309**
External		
Height (mm)	612	789
Width (mm)	554	554
Depth (mm)	560	560
Internal		
Height (mm)	493	670
Width (mm)	444	444
Depth (mm)	344	344
Volume (l)	75	102
A4 file capacity (pcs)	5–8	10–16
Weight (kg) E2	200	270
Weight (kg) E3	220	300

Eurosafes
E-300

EN 1143-1 Grade 0 to IV (ECB-S)
NT Fire 017 – 60 Paper (Grade 0 to III)
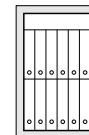EN 15659 – LFS 30 P (Grade IV)

Key features

- Burglary tested and certified
  according to Euronorm EN 1143-1
  Grade 0 to IV (ECB-S)
- Fire protection for 60 minutes
  according to NT Fire 017
  – 60 Paper (Grade 0 to III)
- Fire protection for 30 minutes
  according to EN 15659 – LFS 30 P
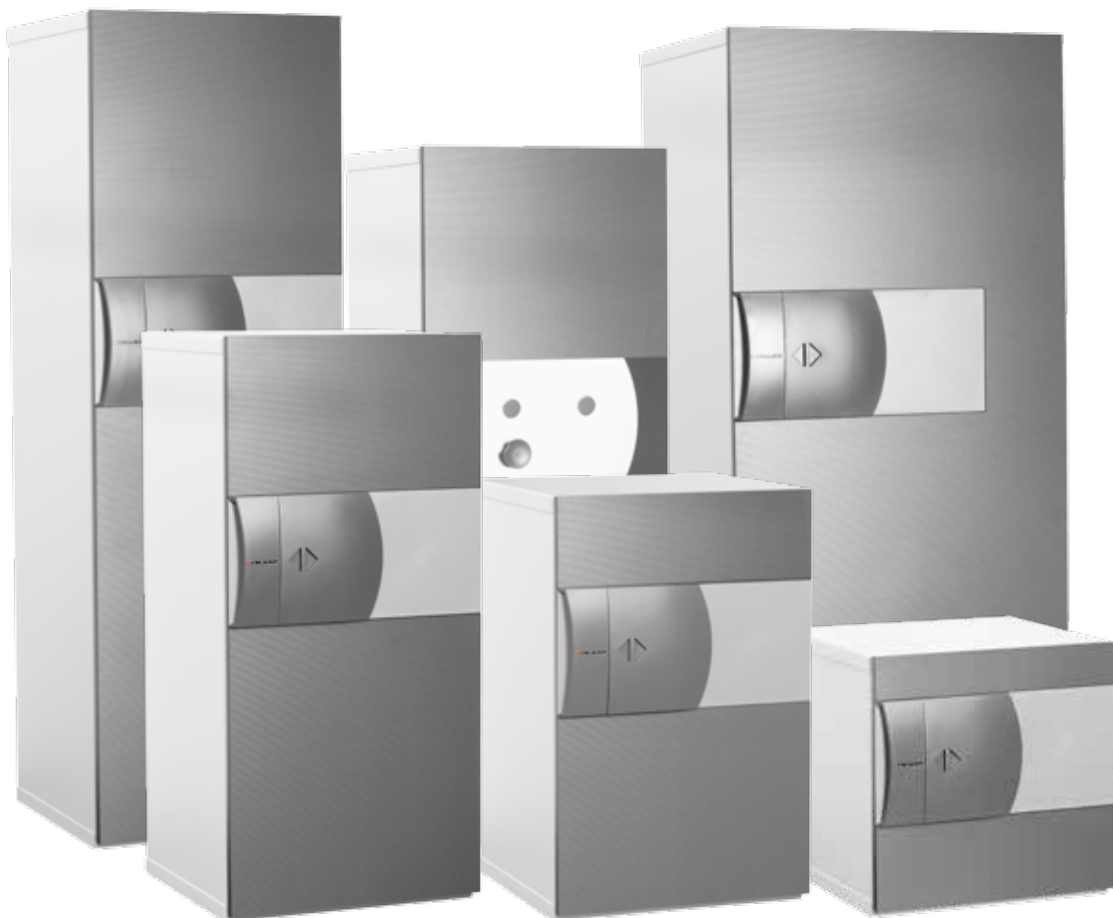 (Grade IV)
- Standard colour light grey,
  RAL 7035

Eurosafes
E-300

EN 1143-1 Grade 0 to IV (ECB-S)
NT Fire 017 – 60 Paper (Grade 0 to III)
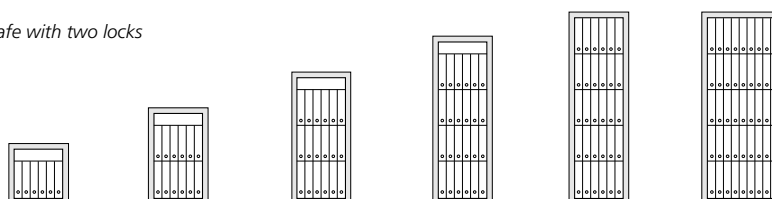EN 15659 – LFS 30 P (Grade IV)

Options and fittings

- Mauer keylock with changeable keys
- Electronic codelock
- Mechanical combination lock
- Panel options and special colours
- Adjustable plain shelves
- Pull-out multi-purpose shelves
- Pull-out worktop
- Lockable inner boxes
- Data Media Box MI-400
- Pull-out keyrack
- Pull-out key compartment shelf
- Pull-out key shelf
- Pull-out suspension file frame
- Tested deposit solution
- Safety deposit lockers

E-300 Eurosafe with one lock

E-300 Eurosafe with two locks

Specifications

| Model E-300-SERIES	E-310 E1-310 E2-310 E3-310 E4-310	E-320 E1-320 E2-320 E3-320 E4-320	E-330 E1-330 E2-330 E3-330 E4-330	E-340 E1-340 E2-340 E3-340 E4-340	E-350 E1-350 E2-350 E3-350 E4-350	E-370 E1-370 E2-370 E3-370 E4-370
External						
Height (mm)	612	962	1312	1662	1912	1912
Width (mm)	634	634	634	634	634	848
Depth (mm)	610	610	610	610	610	752
Internal						
Height (mm)	493	843	1193	1543	1793	1793
Width (mm)	486	486	486	486	486	700
Depth (mm)	364	364	364	364	364	506
Volume (l)	87	149	211	273	317	635
A4 file capacity (pcs)	6–9	12–18	18–27	24–36	30–45	40–70
Weight (kg) E0/E1	190	270	360	440	490	680
Weight (kg) E2	230	310	400	480	520	780
Weight (kg) E3	260	350	450	550	600	880
Weight (kg) E4	290	390	510	630	690	1000

Eurosafes
E5-300

EN 1143-1 Grade V (ECB-S)
NT Fire 017 – 60 Paper

Key features

- Certified according to Euronorm EN 1143-1 Grade V (ECB-S)
- Fire protection for 60 minutes according to NT Fire 017 – 60 Paper
- Equipped with two Class B (ECB-S) Mauer keylocks as standard
- Wide range of locking options and accessories
- Standard colour light grey, RAL 7035

Options and fittings

- Adjustable plain shelf
- Pull-out multi-purpose shelf
- Pull-out worktop
- Lockable inner boxes
- Pull-out keyrack
- Pull-out key shelf
- Pull-out suspension file frame
- Safety deposit lockers
- Right- or left-handed opening
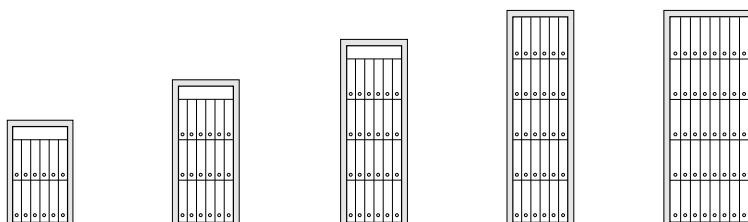
Specifications

Model	E5-320	E5-330	E5-340	E5-350	E5-370
External					
Height (mm)	1017	1367	1717	1970	1970
Width (mm)	710	710	710	710	920
Depth (mm)	630	630	630	630	770
Internal					
Height (mm)	840	1190	1540	1790	1790
Width (mm)	486	486	486	486	700
Depth (mm)	364	364	364	364	506
Volume (l)	149	211	273	317	635
A4 file capacity (pcs)	12–18	18–27	24–36	30–45	40–70
Weight (kg)	650	850	1040	1200	1440

Adjustable shelf

Pull-out multipurpose drawer

Pull-out worktop

MI-400 media insert

Key rack for 500 keys

Pull-out key compartment shelf

Pull-out key shelf

Pull-out filing frame

Gun accessories

Tested deposit system

Lockable inner compartment

Key storage solutions

Large volumes of notes, coins and receipts as well as other valuable assets such as keys are handled in shops, service points, offices and banks every day. Securing their safety calls for robust yet functional transit and storage applications.

Key management is required to be thoroughly planned when multiple keys are being stored in a single location, for example at car dealers, car rentals, and real estate management and maintenance companies.

The keys are stored in lockable compartments and are coded so that they cannot be linked to particular addresses and are only accessed by people with proper access rights.

Depending on the type of the key usage and quantity of the keys, a right type of storage solution is being selected. Separate alarm and security systems could be also needed.

Following are recommendations by Federation of Finnish Financial Services for security levels required for key storage units.

Key cabinet
PK-20

Kaso PK-20 serie Key Cabinets

Metal key cabinets are recommended for storage of keys for 1 to 50 doors. Key cabinets are suitable for various size keys and types.

- Two models, PK-21 with 64 and PK-23 with 200 pcs key hooks
- Pre-installed key management bars
- User-friendly electronic locking
- Wall anchoring

Specifications

Model	PK-21	PK-23
Height (mm)	365	560
Width (mm)	345	430
Depth (mm)	120	180
Weight (kg)	11	20
Capacity, keys	64	200

Key cabinet
PK-400

EN 14450 Grade S1 (ECB-S)
NT Fire 017 – 120 Paper

Kaso PK-400 Key Cabinets

EN 14450 certified key cabinets are recommended for storage of keys for up to 500 doors.

- Burglary protection Grade S1 according to European Standard EN 14450 (ECB-S)
- Five models with volumes from 87 to 546 liters
- Key cabinets are supplied with certified security locks
- Key safes are available with wide range of locking options and accessories like adjustable shelves, lockable compartments, pull-out multipurpose drawers, pull-out filing rails, data and key inserts.

350 mm key insert for over 500 keys

Safes for keys
Eurosafes

EN 1143-1 Grade 0 to IV (ECB-S)
NT Fire 017 – 60 Paper (Grade 0 to III)

Kaso Eurosafes

Grade I or higher EN 1143-1 certified Eurosafes are recommended for storage of keys for more than 500 doors.

- Burglary protection Grade I to IV according to Euro norm EN 1143-1 (ECB-S)
- Six models with volumes from 87 to 635 liters
- Wide range of locking options and accessories

Kaso safes can be equipped with various key storage interior fittings. The safes can be also finished with shelves, lockable boxes and other interior fitting options enabling multiple use of the safe, even for multiple users. Accessories for keys are available also for other Kaso safe models.

Accessories for keys

700 mm key insert for over 1.000 keys

Key insert

Pull-out key shelf

Pull-out lockable Plexiglass key shelf

Pull-out multipurpose shelf

Pull-out key compartment shelf
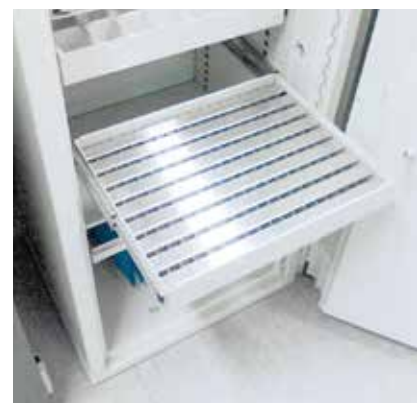
Pull-out stainless steel key shelf

Cash handling solutions

Large volumes of notes, coins and receipts as well as other valuable assets such as keys are handled in shops, service points, offices and banks every day. Securing their safety calls for robust yet functional transit and storage applications.

Temporary cash storage

For cash handling and temporary storage, Kaso KLE-40 cashier boxes offer a convenient yet secure solution. The handles make it easy to move the box into a storage safe when not in use. Alternatively, it can be securely anchored on a desk.

Drop and deposit safes

Adjustable for a range of deposit requirements, Kaso E-400 series drop safes offer a flexible deposit solution for shops, restaurants, banks and cash-service companies. The solution allows for multiple-size deposit packages and variable security levels. A number of locking, compartment and internal fittings are available for customisation according to customer-specific needs.

Kaso PTK-E300 deposit safes are specially designed for use in retail outlets and other environments where money should be stored at all times in a tested safe. With Kaso PTK-E300, the amount of cash at cashier's desks and service points can be kept to a minimum, which significantly lowers the risks for robbery or hold-ups. The system is designed so that service personnel will not need keys or codes using the deposit. The solution offers a variety of optional features and inside fittings.

Kaso Cinema, a tailor-made surveillance and alarm system, is available for drop and deposit safe solutions for usage monitoring and documentation. The success of the drop is verified by cameras recording every step of the deposit.

Cashier Lockers
PKL Series

Standard options

- 8, 12 or 16 pcs 100 mm lockers, (inc. bottom plate 200 mm and top plate 35 mm)
- Wall thickness 1.5 mm
- Abloy Sentry keylocks
- Locker numbering
- Colour light grey, RAL 7035

Available options

- Lockable rear-door
- Special locker sizes
- Special finishing of the lockers

Specifications			
Model	PKL-8	PKL-12	PKL-816
Height (mm)	1035	1435	1835
Width (mm)	453	453	453
Depth (mm)	450	450	450

Cash Deposit Locker
TD-300

Cash Deposit Locker TD-300

- For temporary cash, credit card, cheque and document storage
- Top drawer with a plastic cash tray for coins and notes
- Multipurpose drawer
- Deposit drawer with four insertions for deposits. The width of individual deposit slots is 85 mm

Specifications	
Model	TD-300
Height (mm)	602
Width (mm)	500
Depth (mm)	525
Weight (kg)	68

Cashier deposit box
VL-180

Cashier Deposit Box VL-180

- For temporary surplus cash deposit
- Fishing prevention
- Keylock or electronic codelock with time-delay
- Guiding plate
- Installation plate

Specifications	
Model	VL-180
Height (mm)	300
Width (mm)	180
Depth (mm)	310
Weight (kg)	8.5

Deposit cabinet
S2-450

Key features

- Burglary protection S2 according to European Standard EN 14450 (ECB-S).
- Security locking system and floor anchoring against burglary, theft and unauthorized access.
- Electronic codelock, EN 1300 Class A
- Lockable deposit compartment
- Standard colour light grey, RAL 7035
- Floor anchoring

Specifications	
Model	**S2-450**
Height (mm)	450
Width (mm)	445
Depth (mm)	400
Weight (kg)	40

Drop safes
E-400

Key features

- Adjustable security solution for shops, restaurants, banks and cash service companies
- Manufactured according to European Standard EN 1143-1 to Grades I and II
- Adjustable deposit slot size: 0–70 mm (H) x 350 mm (W) x 400 mm (D)
- Safes are equipped with unpickable keylocks including two keys
- Manipulation prevention mechanism
- Lightweight – easy to install
- Floor-anchoring
- Standard colour light grey, RAL 7035
- Right- or left-handed opening

Options and fittings

- Combination lock or electronic codelock
- Option for two locks
- Lockable deposit gate
- Lockable compartments
- Shelves and other internal fittings

Specifications			
Model	**E1-410, E2-410**	**E1-420, E2-420**	**E1-430, E2-430**
External			
Height (mm)	595	945	1295
Width (mm)	585	585	585
Depth (mm)	530	530	530
Internal			
Height (mm)	493	843	1193
Width (mm)	486	486	486
Depth (mm)	364	364	364
Volume (l)	87	149	211
Weight (kg) E1	150	180	210
Weight (kg) E2	180	230	280

Deposit safes
E-400

EN 1143-2 Grades D-I and D-II

Key features

- Designed for daily cash depositing
- Certified according to European Standard EN 1143-2 to Grades D-I and D-II
- Specially designed against manipulation
- Floor anchoring for additional security against removal of the safe
- Limited access to contents of the safe – deposit customers have no access into the safe
- Supplied with Mauer keylocks
- Standard colour light grey, RAL 7035
- Maximum deposit bag size 45 (H) x 235 (W) x 155 (D)
- Rear- or front-facing drawer
- Right- or left-handed opening

Options and fittings

- The safes can be equipped with electronic code locks or combination locks – option for two locks
- Deposit drawer keylock
- Kaso Cinema, camera monitoring solution for user and deposit process verification
- Lockable compartments, shelves and other internal fittings
- Seismic detectors, micro switches and other security solutions
- Connections to external alarm systems

Specifications			
Model	**E2-410 DP**	**E2-420 DP**	**E2-430 DP**
External			
Height (mm)	915	1265	1615
Width (mm)	585	585	585
Depth (mm)	530	530	530
Internal			
Height (mm)	493	843	1193
Width (mm)	486	486	486
Depth (mm)	364	364	364
Volume (l)	87	149	211
Weight (kg) Euro D-II	410	460	510
Deposit drawer height (from bottom)	762	1112	1462

Deposit safes

EN 1143-2 Grade III

Key features

- Designed to provide high-security deposit safety in retail outlets and service points
- Certified according to European Standard EN 1143-2 to Grade III
- Specially designed against manipulation
- Floor-anchoring for additional security against removal of the safe
- Limited access to contents of the safe – deposit customers have no access into the safe
- Standard colour light grey, RAL 7035
- Maximum deposit bag size: 45 mm (H) x 235 mm (W) x 155 mm (D)
- Right- or left-handed opening
- Rear- or front-facing deposit

Options and fittings

- The safes can be equipped with electronic code locks or combination locks
- Option for two locks
- Deposit drawer keylock
- Kaso Cinema, camera-monitoring solution for user and deposit process verification
- Lockable compartments, shelves and other internal fittings

Specifications			
Model	PTK E3-310 DP	PTK E3-320 DP	PTK E3-330 DP
External			
Height (mm)	912	1262	1612
Width (mm)	634	634	634
Depth (mm)	550	550	550
Internal			
Height (mm)	493	843	1193
Width (mm)	486	486	486
Depth (mm)	364	364	364
Volume (l)	87	149	211
Weight (kg) Grade III	490	580	670
Deposit drawer height (from bottom)	762	1112	1462

Night Deposit Safes
PTK E-300 night deposit safes

EN 1143-2 to Grade N-IV (ECB-S)
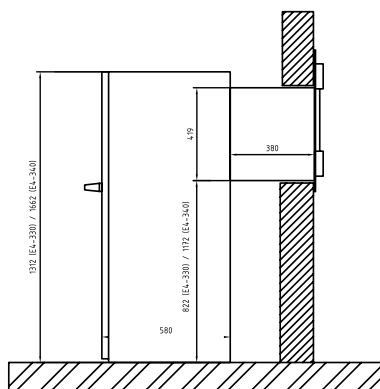
Key features

- Specially designed for banks
- 24-hour surplus cash depositing
- Night deposit safes are tested according to European Standard EN 1143-2 to Grade N-IV (ECB-S)
- Also security grade V available
- The safe has two Mauer keylocks
- Floor-anchoring
- Armoured installation frame for easy mounting, wall thickness up to 350 mm
- Lightweight solution thanks to Kaso's BFP® construction
- Easy and fast assembly to the outside wall with stainless steel faceplate
- Stainless steel faceplate
- Deposit cover lock Abloy Classic with 10 keys for deposit customers
- Anti-fishing mechanism
- Standard colour, RAL 7035
- Deposit trap
  70 mm (H) x 180 mm (W) x 100 mm (D)

Options and fittings

- The safes can be equipped with electronic codelocks, combination locks or keylocks
- Special grill gate for explosion protection
- Kaso Cinema, camera-monitoring solution for user and deposit process verification
- Optional solutions for deposit verification and security
- Lockable compartments
- Internal fittings and accessories

Specifications			
Model	**E4-320N**	**E4-330N**	**E4-340N**
External			
Height (mm)	962	1312	1662
Width (mm)	634	634	634
Depth (mm)	550	550	550
Internal			
Height (mm)	843	1193	1543
Width (mm)	486	486	486
Depth (mm)	364	364	364
Volume (l)	149	211	273
Weight (kg)	500	610	730
Deposit trap height mm (from bottom)	720	1070	1420

Strongrooms and vaults

Demand for secure storage and archiving of documents, data, and valuables is on the rise due to new legislation as well as distributed and more sophisticated archiving needs. Not only financial institutions but also other organisations and businesses are increasingly required to store material securely – sometimes for days, sometimes for decades.

Archive and vault doors

Kaso archive and vault doors can be installed to a wall of reinforced concrete construction or as part of a prefabricated strongroom. They protect valuable assets against a wide variety of hazards including fire, unauthorised access and forced attacks. The range covers doors tested for varying grades of protection and provides an array of options in terms of emergency exits, locking, alarm sensors and exterior design.

Strongroom elements

Officially tested prefabricated strongrooms have replaced traditional concrete vaults in many banks, companies and institutions. Prefabricated strongrooms are also used in private panic room installations. The increase in their popularity is based on high security, consistent quality and certified burglary resistance. The strongroom scope of supply can also be customised to meet individual project requirements.

Safety deposit lockers

Kaso offers the widest range of standard safety deposit boxes in the market, with two series, SLK-70 and SLK-90, of which the latter has passed tests by the Bankers Association. Both series offer several standard width options and standard lockers. Thanks to a variety of locking options, design alternatives and additional monitoring and deposit management solutions, the deposit locker solution can be fully customised to meet specific needs.

Security rooms
EH-series

EN 1143-1 Grades I and II
EI 60 Fire Resistance

Prefabricated light weight security and archive rooms are modern physical security solutions especially designed to office and public building installations. Light weight security panels are easily assembled by welding or bolting the elements for example if welding is not allowed. The loadbearing capacities of the building floors are also better utilized leaving more storing capacity to the security room. Prefabricated security and archive rooms are suitable for banks, companies and institutions. Prefabricated security rooms are even popular for private panic room installations.

Light weight security room panels are available with break-in resistance Grade I and II according to EN 1143-1 by ECB-S. The fire protection classification of the security room panels is 60 minutes. The fire protection level could be optionally increased with additional fire protection panels. Security rooms can be supplied with element floors or the elements could be also installed directly on top of existing floor. Surface finishing like painting or installation of decorative panels can be finalized by local contractors enabling the integration of the security room to the surroundings.

Security rooms are customized according to individual project requirements including for example:
- alarm, CCTV and access control systems
- mobile and fixed shelving systems
- additional fire insulation panels
- fire prevention and fighting systems
- bulletproof windows, elements or doors

Strongroom elements
EH-series

EN 1143-1 Grades I to XII

Supply options

Strongroom scope of supply is customised for meeting individual project requirements including for example:
- internal steel support structures for large/high or two-floor strongrooms
- alarm, CCTV and entrance control solutions
- safe deposit lockers
- emergency doors
- mobile and fixed shelves
- surface finishing options
- fire protection panels
- fire prevention and fire alarm solutions

Planning service

Kaso offers through international distributor network following services to customers, engineering offices and contractors:
- on-site estimates of prefabricated strongroom installation possibilities
- estimates of structural load bearing capacities
- strongroom planning assistance
- strongroom weight estimates
- cost estimates

The exterior measurements of Kaso prefabricatedstrongrooms can be entirely adjusted according to the customer and installation site requirements.

Installation

The prefabricated strongroom elements are delivered to the installation site where they are quickly assembled for immediate use. It is also possible to relocate a prefabri-cated strongroom if needed. In addition, the strongroom can be expanded and the vault door position can be moved.

Kaso strongroom advantages

The reason for high success for Kaso prefabricatedstrongrooms is based on:
- tested, comparable and certified burglary resistance
- high, stabile and monitored quality
- relocation possibility of the strongroom
- quality steel finishing on all sides of the elements
- flexible dimensioning
- possibility for reinforcing of existing security rooms
- quick and easy installation
- over 40 years experience with over 1000 strongrooms supplied internationally

Prefabricated strongroom elements

Officially tested prefabricated strongrooms have replaced traditional concrete vaults in many banks, companies and institutions. Prefabricated strongrooms are even popular for private panic rooms installations. The reason for high success for prefabricated strongrooms is based on high security, stabile quality and evaluated burglary resistance proofed by the certification.

Kaso offers wide range of prefabricated strongrooms and archive rooms tested and certified according to European Standard EN 1143-1.

Prefabricated elements are finished with high quality steel panels constituting of different barrier materials depending on the grade of burglary protection and optional explosion or fire protection resistance. Prefabricated elements are attached with indentations, making it extremely difficult to break the structure. The panels are secured by welding or by bolting where welding is not possible nor allowed. Strongrooms can be supplied with prefabricated element or steel plate floors. Surface finishing likepainting orcladding can be finalised by local contractors.

Specifications										
	Prefabricated strongroom elements with fire protection				Prefabricated high security strong-room elements with fire protection		Prefabricated high-security strongroom elements			
Model	EH-1L	EH-2L	EH-20L	EH-30L	EH-50L	EH-60L	EH-70L	EH-90L	EH-100L	EH-120L
Grade EN 1143-1	I	II	II	III	V	VI EX	VII EX	IX EX CD	X EX CD	XII EX CD
Fire protection	EI60	EI60	EI120	EI60	EI60	EI60	-	-	-	-
Thickness (mm)	76	76	120	120	120	120	120	125	150	250
Weight (kg/m²)	90	120	185	335	345	350	360	405	480	780

Strongroom elements
EH-series

EN 1143-1 Grades I to XII

Safe or panic rooms

A safe room or panic room is a fortified security room usually installed in private residences and business or public administration buildings.

The main object for security rooms is protecting the people of the premises against break in, home invasion and other threats.

Security room includes minimum prefabricated walls and door against break in, fire and even explosions. Optionally safety rooms could additionally include prefabricated ceiling and floor. Kaso safety room elements are available to break in classes I to XII according to European Standard EN 1143-1.

Security rooms can be hidden behind many household features, such as mirrors, wardrobes, bookcases, sliding bookcases.

Very often break in resistance of the building is simultaneously complemented with tested security doors (EN 1627) visually matching usual outside and entrance doors.

Security rooms usually contain communications equipment for emergency situations. Some safe rooms may also have externally vented ventilation systems.

There may also be able to monitor external security cameras and alarm systems. In basic safe rooms, a peephole in the door may be used for a similar purpose.

Safe rooms are typically equipped with basic emergency and survival items such as a flashlight, blankets, a first-aid kit, water, packaged food, self-defense tools, a gas mask, and a simple portable toilet.

Room view with entrance to the panic room behind the mirror

Panic room integration into the apartment.

Vault doors

EN 1143-1 Grades I and II
EI 60 Fire Resistance

Security room doors

Break-in classification of standard security room doors is I or II according to EN 1143-1 by ECB-S. Fire classification of standard security room doors is 60 minutes.

Kaso security room doors are offering premium break-in resistance compared to standard industrial fire doors – four sided security construction including locking bolts on four sides and a dedicated, composite security barrier against multiple and modern forms of attack.

Security room doors are also supplied with high security locking mechanism including burglary certified high security locks. Security room doors are available with various locking and accessory options for specific security and operational requirements.

Optionally the security rooms could be supplied with standard industrial fire doors or bulletproof doors. Private panic rooms could be also supplied with decorated, conventional security doors enabling integration of the security room to the surroundings

Kaso Archive Doors

VD-A is an archive door with 120 minutes fire protection (EI 120 fire rating). VD-A archive door offers premium burglary resistance compared to standard industrial fire doors – four sided security construction including locking bolts on three sides and fixed back bolt bank. Archive doors are also supplied with high security locking mechanisms including burglary certified locks. VD-A archive door is intended to be used with EH-20L and EH-30L archive rooms. Due to modern design, the archive door can be also installed to modern office environment.

Archive and Vault, strongroom door options

- lock-, bolt-, door micro switches
- preparation for alarm connection
- motor lock for entrance control
- electronic Paxos compact locking system
- mechanical combination or electronic code lock
- day gate
- door stopper
- seismic detector
- re-locking solution
- stainless steel design

Vault doors

EN 1143-1 Grades II to XII
EI 120/ EI 60 Fire Resistance
(EH-20L to EH-60L models)

Kaso Vault Doors

Kaso vault doors are burglary certified to gradesIII, V, VI, IX, X and XII according to European Standard EN 1143-1. Vault doors VD-3, VD-5 and VD-6 are also offering 120 minutes fire protection according to EI 120.

The doors can be used on their own, installed to the concrete wall or as part of prefabricated strongrooms. Vault doors can be also installed to offices where the look of a fire door does not match the rest of furnishings. Wide range of options are also available for Kaso vault doors for meeting the specific design and security requirements of the installations.

Standard equipment									
Model	VD-A	VD-2	VD-3	VD-5	VD-6	VD-7	VD-9	VD-10	VD-12
Number of movable locking bolts	7	8	7	7	7	7	12	5 (large)	6 (large)
Fixed back bolt bank	yes	-	yes	yes	yes	yes	yes	yes	yes
Number of keylocks (Class)	1 (A)	1 (A)	1 (B)	2 (B)	2 (C)	2 (C)	2 (C)	2 (C)	3 (C)
Maximum number of locks	3	3	3	3	3	3	3	3	3
Burglary resistance	-	II	III	V	VI EX	VII EX	IX EX CD	X EX CD	XII EX CD
Fire resistance (min)	120	60	120	120	120	-	-	-	-
Barrier/door thickness (mm)	120/193	62/124	120/193	120/193	120/193	120/193	154/224	220/285	300/365
Entrance W x H (mm)	898x1940	900x1940	898x1940	898x1940	898x1940	898x1940	910x1960	910x1960	910x1960
Installation clearance W x H (mm)	1200x2150	1200x2150	1200x2150	1200x2150	1200x2150	1200x2150	1310x2170	1430x2220	1430x2220
Weight (kg)	320	320	450	700	800	850	1400	2000	2800
Colour light grey, RAL 7035	yes	yes	yes	yes	yes	yes	yes	yes	yes

Vault doors with
Emergency doors

EN 1143-1 Grades III to VII

Kaso Emergency Doors

Emergency doors are installed as a secondary entrance to the vault. The emergency door enables strongroom access in case of operating failure of the main vault door and the vault operation can be continued until the main vault door has been repaired. Emergency Doors are manufactured to Grades III, V, VI and IX according to European Standard EN 1143-1 and are offering comparable security level as the main vault doors. Emergency door could be supplied with similar options as the vault doors for conveniency of operation.

The emergency doors can be used on their own, installed to concrete wall or as part of prefabricated strong-rooms as a secondary access. They can be also integrated to the main vault door for optimising the installation area of the door on the walls and then maximising the storage capacity inside the vault. The outside entrance is also more conveniently arranged. The vault doors with integrated emergency doors are manufactured according to EN 1143-1. The external dimensions and passage/clearance of the vault doors with integrated emergency doors are the same as the standard vault doors without emergency doors.

VD-3 Vault Door with Integrated Emergency Door

Standard equipment				
Model	VD-3E	VD-5E	VD-6E	VD-7E
Movable locking bolts (pcs)	7	7	7	7
Fixed back bolt bank	yes	yes	yes	yes
Number of keylocks (pcs) (Class)	1+1 (B)	2+2 (B)	2+2 (C)	2+2 (C)
Maximum number of locks (pcs)	3	3	3	3
Manufactured to EN1143-1	Grade III	Grade V	Grade VI EX	Grade VII EX
Barrier/door thickness (mm)	120/193	120/193	120/193	120/193
Entrance W x H (mm)	898x1940	898x1940	898x1940	898x1940
Installation clearance W x H (mm)	1200x2150	1200x2150	1200x2150	1200x2150
Weight (kg)	450	700	800	850
Colour light grey, RAL 7035	yes	yes	yes	yes

Emergency doors

EN 1143-1 Grades II to VIII

Kaso emergency doors

- supplied with certified high security bank level locks and locking systems
- protection against latest and most advanced testing methods and tools
- specific protection for critical parts of the doors, locks and locking systems

Standard equipment

Model	E2E-320	E3E-320	E5E-320	VDE-6	VDE-7	VDE-8
Movable locking bolts (pcs)	8	8	8	7	7	6
Fixed back bolt bank	-	-	-	yes	yes	yes
Number of keylocks (pcs) (Class)	1 (A)	1 (B)	2 (B)	2 (C)	2 (C)	2 (C)
Maximum number of locks (pcs)	3	3	3	3	3	3
Manufactured to EN1143-1	Grade II	Grade III	Grade V	Grade VI EX	Grade VII EX	Grade VIII CD
Barrier/door thickness (mm)	62/125	62/125	94/156	120/193	120/193	155/225
Entrance W x H (mm)	502x852	502x852	502x852	600x1040	600x1040	660x1100
Installation clearance W x H (mm)	850x1090	850x1090	850x1090	910x1210	910x1210	1060x1310
Weight (kg)	120	120	170	340	340	700
Colour light grey, RAL 7035	yes	yes	yes	yes	yes	yes

Safety Deposit Lockers
SLK series

Safety Deposit Lockers
SLK series

Widest range of standard safety deposit lockers

- Two safety deposit locker models SLK-70 and SLK-90
- Three standard widths are available in both models
- Wide selection of standard locker heights
- Available with mechanical keylocks or electronic locking

Flexible customer specific solutions

- Special locker and column sizes
- Special colours and finishing

Quality and security

- Manufactured in accordance with ISO 9001:2000 in Helsinki, Finland
- SLK-90 Safety Deposit Lockers tested by Bankers Association

Electronic locking

- All doors supplied with an electronic lock and a mechanical Abloy Sentry keylock
- Operation of the lockers either by self-service mode or by traditional bank assisted opening
- Identification with PIN, ID cards or biometric readers
- Deposit management with audit trail

Safety deposit lockers
SLK series

Key features

- Abloy Sentry keylocks
- Designded for individual storage of personal valuables
- Available in three standard widths
- Wide selection of standard lockers
- SLK-90 Safety Deposit Lockers tested by Bankers Association
- Total door thickness
  – SLK 70 series 11 mm
  – SLK 90 series 16 mm

Options and fittings

- A variety of locking options
- Options for camera-monitoring (CCTV) and deposit management solutions
- Electronic deposit management solution
- Inner boxes for SLK-70 and SLK-90 models
- Padlocks for inner boxes
- Pull-out trays for SLK-70 and SLK-90 lockers
- Stainless steel-plate doors
- Customer-specific locker and column sizes
- Customer-specific colours and finishing

| Standard equipment			
Model	**SLK-70**	**SLK-75**	**SLK-79**
	SLK-90	**SLK-95**	**SLK-99**
External			
Height, mm	2000	2000	2000
Width, mm (Mechanical keylocks)	303	453	603
Width, mm (Electronic locking)	330	480	630
Depth, mm	460	460	460

Residential security

Your home is your castle – the place where you store invaluable items and memorabilia. It is not comfortable to think about the consequences of unauthorised access or fire to our valuables. The good news is that Kaso has developed high-quality security solutions for private homes to ensure our peace of mind.

Home fire safes

Kaso PK-40 series fire safes are designed for daily use in both small offices and homes. The safes come in easy-to-handle sizes and store small items as well as A4-sized files. Thanks to their light weight and modern design, the PK-40 safes can be placed almost anywhere – you can keep them on your desk or install them into other furniture.

KEEPS® E- and S-series fire- and burglary-tested safes

The KEEPS® series has been burglary- and fire-tested in Europe's leading security test facilities. It is at your disposal 24 hours a day – also outside the business hours and during your holidays. Light in weight, KEEPS® also fits seamlessly into a variety of home interiors thanks to its stylish looks. KEEPS® models are very user-friendly, as the programmable electronic locking mechanism allows several key code alternatives and even individual codes for every family member. The series also features other locking systems and several exterior designs as options.
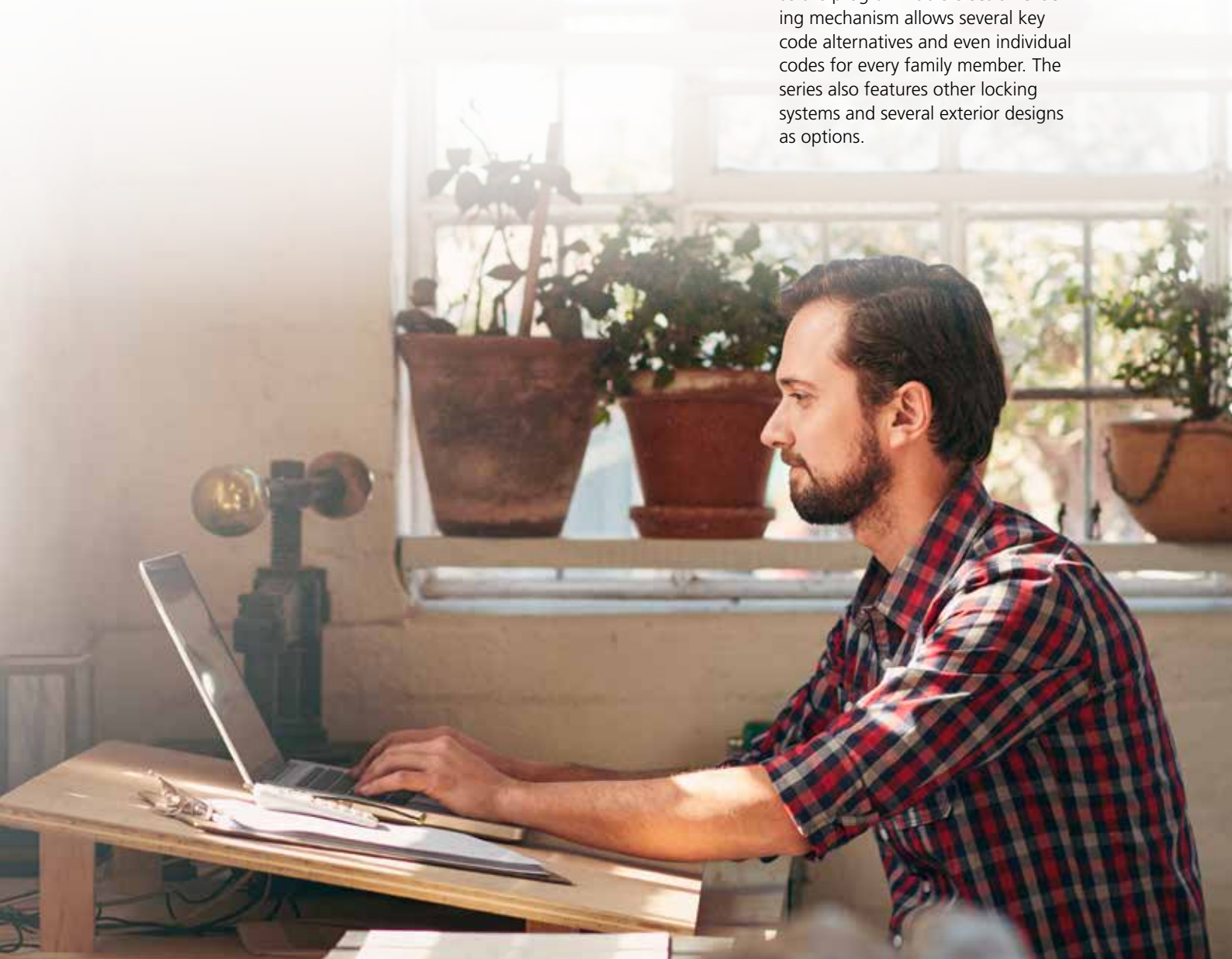
Fire Safes
PK-40 Series

NT Fire 017 – 60 Paper/60 Diskette

Key features

- Fire resistance grade 60 Paper/60 Diskette (NT Fire 017)
- Reliable and easy-to-use electronic KASO codelock
- Light weight and compact PK-40 safes can be placed on tables and furniture, easy to use at home
- Bolting option
- Can be hidden inside furniture
- Four key hooks on the door

Specifications

Model	PK-43 E	PK-44 E	PK-45 E	PK-45 MEDIA
Weight (kg)	31	36	55	65
Volume	19 l	25 l	36 l	e.g. 53 CD disks
Standard equipment	1 pull-out tray	1 pull-out tray 1 shelf	1 pull-out tray 1 shelf	1 shelf
External				
Height (mm)	360	420	520	520
Width (mm)	415	350	405	405
Depth (mm)	365	435	440	440
Internal				
Height (mm)	260	320	410	315
Width (mm)	320	260	300	200
Depth (mm)	235	305	300	200
Fire protection NT Fire 017	60 Paper	60 Paper	60 Paper	60 Diskette

Keeps
E-series

EN 1143-1 Grade I (ECB-S)
NT Fire 017 – 60 Paper

Key features

- Burglary-tested according to European norm EN 1143-1 (ECB-S) to grade EURO I
- Fire tested according to NT Fire 017 – 60 Paper for 60 minutes for paper
- Lightweight construction
- Programmable, electronic locking mechanism allows several user code alternatives
- Individual codes for family members

Birch   Mahogany   Cherry   Graphite grey

Technical details	KEEPS® E-series						
Model	E-80	E-90	E-100	E-200	E-300	E-400	E-500
Height, mm	610	790	610	960	1310	1660	1910
Width, mm	555	555	635	635	635	635	635
Depth, mm	560	560	610	610	610	610	610
Volume, litres	75	102	87	149	211	273	317
Weight, kilograms	200	270	190	270	360	440	490
Body colour	black						
Door panel colour	graphite grey, mahogany, cherry and birch						
Electronic lock or optional key lock	■	■	■	■	■	■	■
Lockable inner box (150 mm)	■	■	■	■	■	■	■
Data security box	–	–	□	□	□	□	■
Lockable inner box (350 mm)	□	□	□	□	□	□	□
Adjustable pull-out multipurpose shelves	□	□	□	□	□	□	□
Adjustable metal or glass shelf	1	1	1	2	3	4	4

■ *standard*   □ *optional*   *– not available*

Keeps
E-series

EN 1143-1 Grade I (ECB-S)
NT Fire 017 – 60 Paper

Options and fittings

- Mechanical keylock
- Standard door panel colours
  (graphite grey, mahogany, cherry
  and birch)
- Lockable inner box
- Data security box
- Other RAL colours

71

Keeps
S-series

EN 1143-1 Grade III (ECB-S)
Fire protection 60 minutes
NT Fire 017 – 60 Paper

Key features

- Multilayer high-security technology with award-winning design
- Burglary tested according to European norm EN 1143-1 to grade EURO III (ECB-S)
- Fire protection for 60 minutes according to NT Fire 017 – 60 Paper
- High gloss painted
- Wooden door panel
- Fully customisable interior and exterior design
- Electronic code lock
- Vault-grade door, body and locking mechanism

Options and fittings

- Special colours and tailor-made custom interiors
- Wide range of locking options

Technical details	KEEPS® S-series						
Model	S-80	S-90	S-100	S-200	S-300	S-400	S-500
External							
height, mm	610	790	615	965	1315	1665	1915
width, mm	555	555	620	620	620	620	620
depth, mm	560	560	610	610	610	610	610
Volume, litres	75	102	85	145	210	270	315
Weight, kilograms	220	300	260	350	450	550	600
Standard options							
Safe colour Kaso Midnight Black* (high-gloss painting)	■	■	■	■	■	■	■
Electronic lock or optional key lock	■	■	■	■	■	■	■
Lockable inner box (150 mm)	■	■	■	■	■	■	■
Adjustable metal or glass shelf	1	1	1	1	1	1	1
Adjustable pull-out multipurpose shelves	1	1	1	2	3	4	4
Lockable inner box (350 mm)	□	□	□	□	□	□	□

■ *standard* □ *optional*

Security doors

KasoGuard security doors are designed for private houses, apartments and offices. They are designed for entrance and inside installations and are suitable both for renovation and new buildings.

The look of KasoGuard security doors is similar to other entrance and inside doors, the inside of the door is what makes it unique.

KasoGuard security doors and frames are steel reinforced offering real protection for what and whom you are valuing the most. The security doors are burglary tested and certified to class 3 (EN1627/ SSF-Sweden). They are also offering protection against fire (class EI45). Additionally the security doors provide tested sound and temperature insulation for additional comfort.

KasoGuard security doors are made to order. The doors can be also tailor made to meet specific size, furnishing, locking and surface requirements.

KasoGuard security doors are often recommended by insurance companies.

Security doors
KasoGuard

Burglary protection ENV 1627 Grade 3
Fire protection EI45

AGAINST BURGLARY AND FIRE
Helsinki housing co-operative chose security doors

Security doors are gaining popularity in apartments, but also in detached houses. In Skandinavia, 70% of the new buildings are equipped with security doors.

Emilia Larke, the chairman of Pyynikintie 1 housing co-operative in Helsinki, is more than happy with their decision. In addition to safety, the new doors also raise the comfort of living. "Security doors are now in," she says.

Built in 1975, the house has 91 apartments which originally had wooden doors. In many cases, the doors were in poor shape and approximately 20 doors required instant attention.

"Doors were twisted and difficult to close. Especially the corners were so deformed that you could see through them. We had changed already a couple of doors and some had been temporarily fixed," Emilia Larke says.

However, the biggest concern was safety.

"Renewal of doors was first discussed a couple of years ago. Because there were so many doors to repair, we concluded that it's better to change all the doors in one go, rather than fix them one at a time. In the annual general meeting 2014 we decided to change all the old doors to security doors," Larke says.

During the process, many options were considered. Ordinary wooden doors were one of them, although it was quickly evident that they didn't meet the needs of tenants. The benefits of security doors were what they were looking for.

"The process opened up our eyes on what could have happened. The feeling of safety has increased," Larke adds.

Luckily there haven't been burglaries in Pyynikintie 1 so far.

"An ordinary wooden door with a safety lock can be breaked with a crow bar in less than 30 seconds. The Kaso steel frame and door leaf are tested according to EN-1627 standard," Kaso sales manager Teija Paakkari claims. Thanks to its structure and locking, crow bars are useless against a Kaso security door.

The feedback has been positive. One of the tenants said that she now feels safe. And another can stay at his summer cottage for a longer period of time without worry.

The chairman Larke considers that the price difference between an ordinary door and a security door is only modest. "They are totally different doors. You really get what you pay for."

Enhanced fire safety

Thanks to fire seals, fire certified security doors offer better protection when compared to ordinary wooden doors.

"Our security doors resist fire for 45 minutes, while the minimum requirement is 30 minutes," Paakkari argues.

Also the 35 year old locks were changed.

"The keys were from the last century and we had lost track on who has them," Emilia Larke says.

The new doors are equipped with mechanical locks, while electronic locking systems are also available.

Strong steel frame and bolts

Insulated with rock wool, the frame of the door and door leaf are steel reinforced. In addition to steel frame, the door is protected against burglary with bolts on all four sides of the door. Door panels fine-tune the appearance.

According to Teija Paakkari, a security door can be installed into an old door opening, even though a reinforcement might be needed. And if there are separate frames for inner and outer doors, the old inner door can be left in place. However, with a security door there is no need for inner door.

Better sound insulation

Emilia Larke says that although the doors are robust, they are easy to use.

"From users' point of view, it's just like an ordinary wooden door. The sounds from the stairway are effectively muted. Because the inside of the door is light coloured, it lightens up the hallway. The colour also fits perfectly to most decoration styles," Larke says.

Interest is on the rise

According to Teija Paakkari, security doors have been gaining popularity not only in apartments, but also in detached houses.

"There is a lot of interest and it's just a matter of time when we'll see a breakthrough," Paakkari says.

In Skandinavia, security doors are a standard solution and 70% of new buildings are equipped with one.

*"Thanks to its structure and locking,
crow bars are useless against
a Kaso security door."*

Security doors

Burglary protection EN 1627 Grade 3
Fire protection EI45

Key features

- Private houses, apartments and offices
- Inside and entrance installations
- New and renovation buildings
- Steel reinforced door and frame
- Outwards or inwards opening ("push" or "pull")
- Right or left handed opening
- Bolting on four sides
- Integral locking system with drill protection
- Standard locking options Mottura and Abloy

Options and fittings

- Door bell
- Letter box
- Viewing spot
- Access control
- Electronic locking
- Integrated door opening limiter
- Colour, panel and furnishing options
- Tailor made size and design options

Fixed rear bolting

Mottura keylock

Classifications

Certified burglary protection	Grade 3 (EN 1627)
Fire protection	EI 45
Sound insulation	41dB
Resistance to wind load	Class C3
Air permeability	Class 3
Water tightness	Class 2A

Security doors

Burglary protection EN 1627 Grade 3
Fire protection EI45

Watch the video about security doors at www.kasosafes.com

Top locking bolt

Stainless steel threshold

Specifications

Size	9x21	10x21
Installation clearing W x H (mm)	910x2110	1010x2110
Frame W x H (mm)	890x2095	990x2095
Entrance W x H (mm)	780x2005	880x2005
Weight (kg)	90	95
Burglary resistance class (EN 1627)	3	3

Clothes and
locker cabinets

Clothes cabinets can be used anywhere where lockable storage space is needed. They are suitable, for example, for industrial facilities, companies, shops, bureaus, hospitals, schools, gyms, sports halls, swim halls and health clubs. Kaso has manufactured clothes cabinets for over 50 years.

Kaso clothes cabinets

Durable and good-looking, Kaso clothes cabinets combine ease of use with safety and stylish design.
The cabinets are available with a flat or sloping roof. Air-conditioning and double doors are available on request.

Choose your design

- **Pro**
  Economical and robust steel Pro doors are stronger and more bending-resistant than traditional flat steel doors.
- **Classic**
  Durable and solid steel doors equipped with a three-point locking system (top, bottom and side).
- **Green**
  MDF doors available with various colours and a one-point locking system.
- **Trend**
  Laminated door with a choice of colours and a one-point locking system.
- **Solid**
  Prestige doors made of massive Karelian pine boards with lacquered, stained or painted surface.

Model Z clothes cabinets

Kaso Model Z clothes cabinets are a space-saving solution for locations where limited space prevents the installation of regular-sized cabinets. A wide selection of door materials, including steel plate and laminate, is available as well as several options for customisation.

Locker cabinets

Locker cabinets are suitable for shops, schools and other spaces, where personal items such as laptops, mobile phones and purchases need to be safely stored for a while.
As an example about locker cabinets, the Kaso Laptop locker with eight lockers, features recharging for devices such as mobile phones, personal computers and cameras in individual lockers.

Lockers
Kaso clothes cabinets

Key features

- ISO 9001:2008 certificate
- SFS 5340 standard
- Awarded design
- Designed to be used anywhere where lockable storage space is needed

All compartments of Kaso clothes cabinets include

- Hat shelf
- Clothes rail with three movable hooks
- Two towel hooks on the steel door
- Ventilation
- Padlock mechanism for users' personal locks, or a permanent lock

Options and fittings

- Wall mounting for the cabinet and the bench
- Abloy serial lock
- Eurolock serial lock
- Deposit/coin-operated lock
- Master key
- Bench constructed from laminated board, steel or lacquered pine boards
- Removable spacing plate
- Ventilation duct
- Sloping roof
- Adjustable feet

Accessories

- Mirror
- Accessory pocket
- Frame for a name plate
- Key diecutting for department numbering
- Shoe rack

Specifications				
Cabinets	**1**	**2**	**3**	**4**
Cabinet depth (mm)	525	525	525	525
Cabinet height (mm)	1900/2050	1900/2050	1900/2050	1900/2050
Unit width (mm)	300	600	900	1200
Number of doors/users				
Clothes cabinets	1	2	3	4
Z cabinets	2	4	6	8
Locker cabinets	2–8	4–16	6–24	8–32
Unit width (mm)	400	800	1200	-
Number of doors/users				
Clothes cabinets	1	2	3	-
Z cabinets	2	4	6	-
Locker cabinets	2–8	4–16	6–24	-

Improve the security of your safe with an electronic locking system

Locking system is one of the most important choices you will make regarding your safe – an electronic locking system will remarkably lower the possibility for misuse.

If there is only one user, a locking system can be simple. And in most cases, just one opening code will be sufficient. But with more locations and users, you will need more features to safeguard your valuables.

Basic locking systems for one user

A basic locking system is suitable for trade shops, small business and private use – in other words, it's great when there is only one location. Typically, there is also only one user and no need to record locking activities to lock memory. And thanks to the electronic lock, you don't have to hide the key or to keep it on your person.

Enhanced locking systems for multiple users in one location

When there is one location and multiple users, enhanced level of security is called for.

All users will get personal codes and most recent safe openings will be stored in the memory of the system. This not only improves security, but also legal protection of the users. You can also define that two users are required to open the safe. An opening delay will further improve safety.

Security or armoured transports can also use the system with their own codes and electronic identification keys. As an option you can choose an optional extension unit, which let's you remotely control the use of the safe – for example, you can see if the lock is open or closed.

High level locking systems for multiple users in multiple locations

A high level electronic locking system is the answer to the needs of retail chains, banks, large companies and security transports. The system may entail a number of locations and hundreds of users.

The administrators can add new users and remove those with expired access rights. The timed functions are also admin's responsibility.

All users have personal codes, which are changed at least once a year or even on a monthly basis if needed.

Time locks will prevent opening the safe outside the office hours. You can also make an exception to the rule for example for the security transport, even if the regular users cannot access the safe at a given time. In addition to the opening code, the security transport may also have an electronic identification key or one time codes (OTC) which will expire after opening the safe.

Optional easy to use management software can be used to remotely control the user rights or timed functions. Extra safety can be built in the system with opening delays and silent alarms.

The locking system can be controlled through your access control or alarm system. When the alarm is active, the locking system will not open until the alarm is deactivated There is no need to change batteries as the system will get its power from the alarm system or from AC power supply.

An access control system lets you control the use of the safe and see whether the lock is open or closed.

All high level locking systems have a display integrated to the keypads for extra ease of use.

Components and terminology

1

2

3

Keypad (1)

Keypad is the user interface of the locking system. You either type in a 6 to 8 digit code or enter it with a rotating dial. The batteries are usually inside the keypad. In the enhanced and high level locking systems there is also a LCD display to help the users.

Lock (2)

The part of the system behind the security barriers that bolts the vault or safe. When closed, the lock in inaccessible from the outside and manipulation of the system is impossible as the code information and memory are inside the lock.

Extension unit (3)

An extension unit with additional features for everyday use and safety.

Locking system

A locking system consists of a keypad, lock and an extension unit.

Alarm and access control system

Used for controlling electronic locking systems. Fixed alarm and access control systems are located in the client's premises.

USERS

Administrator (4)

The Administrator's responsibility is to control the locking system and to update time-related functions such as delays and timed functions. Administrator has no access to the safe.

Manager

Manager can open the safe with his own code. He can also add and remove users.

User

A user can open the safe and change his personal code.

Dual user

Two codes are needed in order to open the system. A single user cannot open it.

Override (OVR) user

Typically an OVR user is a security transport crew, who do not need to wait for the delay before opening.

One time code (OTC) user

An OTC user is often a security transport crew who uses disposable opening codes. The code expires after use and a new code is needed for re-opening.

User code and electronic key

In addition to the code, a user needs an electronic key to open the safe. There is a dedicated reader for the electronic key.

User groups

You can define different level of opening rights for each user group. For example, a representative from two user groups may be needed in order to open the safe. A user may also have a predetermined pair from another user group for opening the system.

High level locking systems have a dedicated ID number for each user. Leaving an audit trail of the event, the ID is always entered in simultaneously with the opening code.

Memory

Depending on the model, a trace is left of each opening (100 to 10,000). High level locking systems will also store the date and time.

84

TIMED FUNCTIONS

Opening delay and opening time after delay

Opening delay means a pre-programmed time after which the safe can be opened. You can choose whether to show the time left until the safe can be opened, or the elapsed time after starting the delay. Only an OVR user can pass the delay. You can also specify for how long time the safe can be opened after the delay.

Variable delay

A delay of varying length can be set for different times of day. For example, the delay can be longer in mornings and evenings.

Delay after entering a wrong code

If you try to open the system for four times with a wrong code, you will need to wait for 5 to 20 minutes (depending on the model) before next try.

Expiry of code

The system forces you to change the codes periodically, typically between 1 to 12 months.

ALARM, CONTROL AND EXTRA FUNCTIONS

Status report of the system

When your electronic locking system is integrated to the alarm or access control system, you will know whether the locks are open or closed. If the locking system or the safe door is open, the alarm cannot be activated. When the safe is in the count room, the system can be configured so that the count room door cannot be opened when the safe is open.

Preventing opening

The opening of the system can be prevented with an alarm or access control system. When the alarm is active, the safe cannot be opened.

External power supply

Power is supplied to the extension unit from the alarm system or from an AC power supply.

Silent alarm

In case of robbery, a silent alarm can be activated when opening the safe door. An extra opening delay can be specified with this function.

Remote use

Every locking system has its own IP address, which allows for using the system remotely over the net. The system is integrated to your own safe network. Note that the system cannot be opened remotely.

One time code (OTC)

The OTC function is designed for the use of security transports. The code expires every time it is used. The transport crew will get the new code from the system administrator, who can be placed for example in the count centre.

Please note

Even if the batteries run out, lock settings and locking details are retained undamaged in lock memory.

Locks recommended by Kaso

Mechanical combination locks

Sargent and Greenleaf Model 6730
- Three combination wheels
- Standard opening
- EN 1300 Class A (ECB-S), VdS Class 1

Sargent and Greenleaf Model 6630
- Three combination wheels
- Standard opening
- EN 1300 Class B (ECB-S), VdS Class 2

Sargent and Greenleaf Model 6643
- Four combination wheels
- Push-pull opening
- EN 1300 Class C (ECB-S),
  VdS Class 3

S&G mechanical combination lock

Electronic combination locks

LaGard Basic
- One administrator code, one user code
- EN 1300 Class A, B (ECB-S),
  VdS Class 1, 2

EM series
- 1 manager, 9 user codes
- Time delay 1-99 minutes
- Time delay override (User #9)
- Open window 1 – 19 minutes
- 6 or 7 digits ode
- Dual mode
- Lock configuration possible through E-Key
- Audit possible: last 100 events without
  Time & Date
- EN 1300 Class B, VdS Class 2

LaGard electronic codelock

Pulse keypad for EM series

Locks recommended by Kaso

Keypad for Techmaster

Paxos compact with keypad

Paxos compact with dialling knob

Techmaster
- Master, manager & override manager, users & override users
- Time delay and open window
- Variable time delay
- Codes expiry
- Dual mode
- Time lock
- Immediate & temporary time lock
- Special events and opening periods
- Audit (900 events)
- Dynamic codes
- Alarm interface (silent alarm and remote disable input)
- Input/output interface option with TCP/IP module

Paxos Compact
- Electric components of all-redundant design
- Motor lock
- One administrator code, up to 26 further user codes
- Opening by means of 1-, 2- or 3-person control
- Opening duress delay
- Logging of most recent 850 operating events
- EN 1300 Class B, C, D (ECB-S), VdS Class 2, 3, 4

KASO®

Kaso is made in Finland. We offer internationally certified products and services for property and information protection. For over a century private citizens, banks, institutions and companies around the world have relied on the high Kaso-quality products and services. We combine our professional knowledge in security products with new and innovative technological solutions and modern designs.

EcoStart

ECB•S
MEMBER OF ESSA

ISO 9001
DNV
CERTIFIED
ORGANISATION