

▶▶▶ Locking System | EPS Extended Profile System





COMFORT | ORGANISATION | SECURITY

## EVVA's Innovative Strength

Today, EVVA has a wide and varying range of patented locking systems. Locking systems can thus be selected for specific security, organisational and comfort levels in accordance with economic considerations. By means of elaborate research, EVVA has continually developed new key technologies that stand apart from the function principles previously known on the market. This is the only way to consistently accommodate the ever increasing security and organisational requirements.

## The EVVA Trinity Principle

The EVVA consultation concept is based upon the EVVA trinity principle, which takes into account the areas of organisation, comfort and security within a property. Only by incorporating these three aspects at the outset of the planning phase can a customised and cost-effect security solution be realised for your respective building, user and administrative structure.

## EPS – Experience Means Security

In the course of developing the GPI, DPI and DPX mechanical locking systems, EVVA has acquired decades of expertise. This accumulated experience has now been combined in the EPS (Extended Profile System). Equipped with up to four security levels, EPS is ideally suited to meet your various security requirements!



EVVA's mechanical systems from left to right: MCS, 3KSplus, DUAL, EPS

For us, strong key protection is a matter of honour.

## EPS Technology – patented and versatile

### Key Security

The main feature of EPS is the patented, multiple overlapping key profile. This profile with intersecting levels ensures key protection to legal standards, thereby reducing the risk of commercial replication and plagiarism.

### Operational Reliability

The authorisation features of the EPS key are verified in the lock cylinder – for as many as four security levels.

- ▶ Patented key profile system
- ▶ Solid pin tumbler elements
- ▶ Transverse-rib profile – on one or both sides

Depending on complexity of requirements, the structure of the locking system is based on the profile system, the pin tumbler elements and/or the transverse ribs.

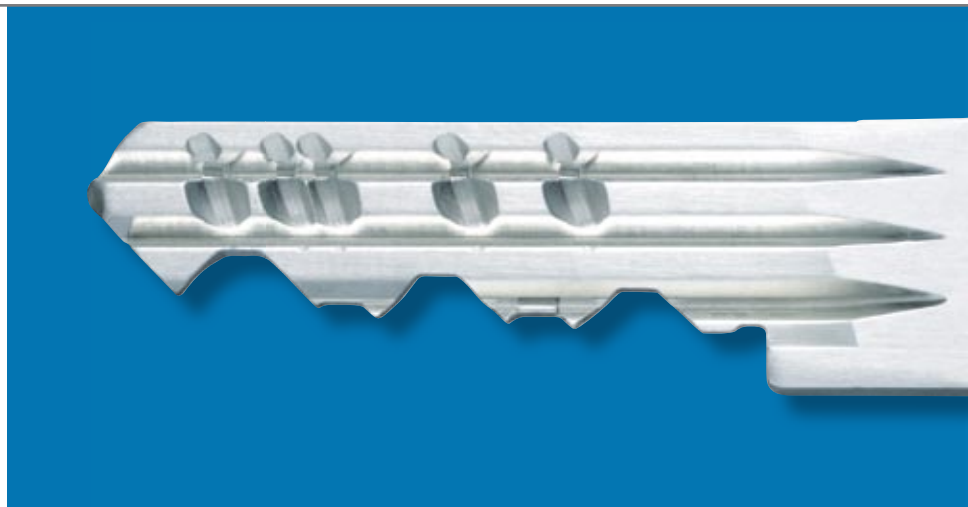
The following models are available:

#### a) Compact design

- ▶ 5 pins + up to 10 side codes
- ▶ 5 pins + up to 20 side codes
- ▶ 6 pins + up to 10 side codes
- ▶ 6 pins + up to 20 side codes

#### b) Modular design

- ▶ 5 locking pin elements  
+ up to 10 side codes
- ▶ 6 locking pin elements  
+ up to 10 side codes



### Wear Resistance

A special feature of the system is the large key cross-section. This ensures that EPS functions fault-free and is hardly prone to wear.

### Combinatorics

Thanks to a combination of various lock-query techniques, with EPS it is possible to both realise complex master key systems and to expand systems at any time. New locking functions may be added easily.

 *Details of the overlapping  
EPS profile*



Rest assured.



### Key Copying Protection

For protection against key duplication, illegal copies (“black keys”) and key manipulation, the system has three different protection mechanisms that always complement each other in their effectiveness.

#### **Organisational Key Protection**

Keys are only manufactured for authorised individuals with the appropriate proof of legitimacy (e.g. security card).

#### **Legal Key Protection**

EPS keys may be manufactured only by EVVA. EPS locking system keys exhibit a patent protection mark on the key profile. This enables EVVA to take legal steps against illegal commercial manufacturing of a duplicate key.

#### **Technical Key Protection**

The keys possess technical features only able to be produced by means of special machines and a high degree of technical expertise. Illegal manufacturing is only possible with a great deal of investment and is therefore not economically viable.



Key Copying Protection with EPS

# Well devised technology resulting in extended resistance.

## Cylinder Security

The security sector is constantly faced with new challenges. Creativity is required for developing products able to continue to withstand new burglary methods. At its own research department, EVVA continuously develops new solutions for the market in order to meet changing security requirements.

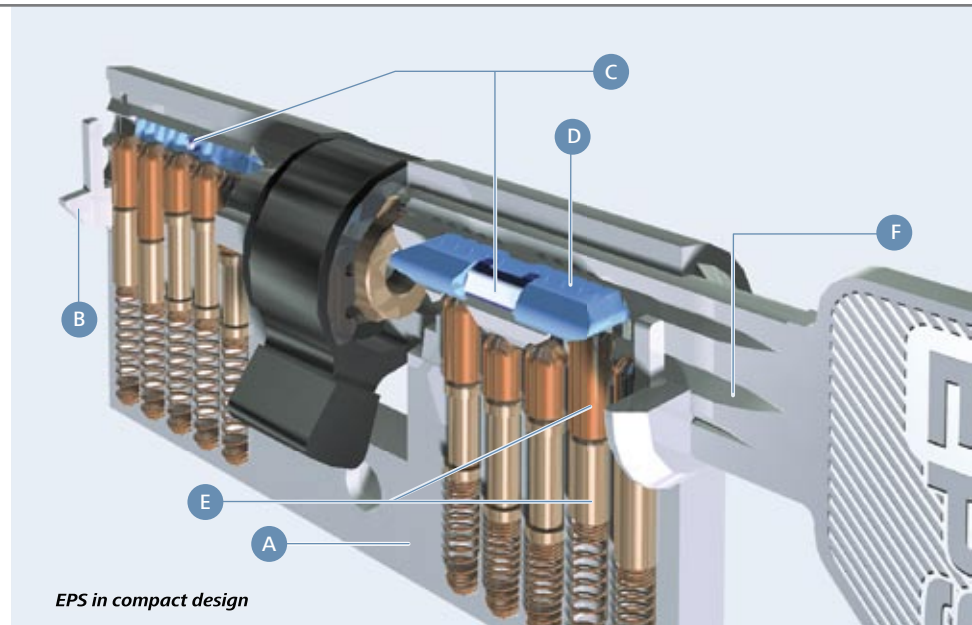
EVVA invents protection mechanisms to resist these and other opening techniques:

- ▶ Detectable opening techniques (the cylinder remains fully-functional, traces are visible): Opening using vibrating tools.
- ▶ "Intelligent" opening techniques: Opening with lock tools (e.g. a skeleton key), opening with the bump-key method etc.
- ▶ Destructive opening techniques (the cylinder is destroyed): Snapping or ripping off the cylinder; drilling into the cylinder or drilling it out; sawing open the cylinder; pulling the cylinder plug out.

The EPS system offers you a variety of technical features making it particularly difficult to break open the lock.

### Protection against Picking and Scanning

The mechanism protecting against picking prevents the locking positions in the cylinder from being aligned properly so as to allow the door to be opened. Protection against picking and scanning is designed compactly in EPS cylinders, using specially formed tumbler pins. With the modular design option, scanning



*EPS in compact design*

protection is achieved using locking pins which have hidden positions.

### Protection against Drilling and Plug-Pulling

For the EPS system, hardened steel elements are standard for protecting against drilling into or drilling open locks. On request, cylinders with enhanced protection against drilling, i.e. using carbide elements, may also be supplied. The small carbide plates withstand even special pulling tools.

## Norm Conformity

When mounted with a suitable protective fitting, standard EPS cylinders comply with locking security grade 6 and attack resistance grade 2 of EN 1303:2005. Standard models are suitable for EI 30 and E 30 fire and smoke doors.

- A** Housing
- B** Drilling protection
- C** Negative control element
- D** Side bar
- E** Locking pins
- F** Patented length profile



A



*Combination Key: the advantages of mechanical and electronic features combined in one medium*

## Mechanical & Electronic Systems

Mechanical locking systems are the foundation of building security. These used in combination with electronic security technology result in comprehensive, customised security solutions.

### Combination with Electronic Identification Technology

EPS keys can also be designed as combination keys and used as devices for contact-free identification technologies (e.g. MIFARE, LEGIC) or for technologies requiring contact (iButton). The mechanical key is thereby transformed into an electronic identification device, replacing other kinds of ID such as cards. This not only renders management of identification devices and keys much simpler and more secure, it is also a great deal more convenient for users to carry just one identification device. The mechanical key can only be removed from the electronic identification device by destroying it. (Fig. A)

### Combination with Motorised Cylinder

Without modifying the fittings, which are fully integrated in the EPS locking system, the cylinder lock can be bolted and unbolted using an electronically driven motor knob. In emergencies, the cylinder can be mechanically operated from the outside. (Fig. B)

B



C



## A true multi-talent.

### Customised Locking Systems to Order

In practice, mechanical locking systems are often employed in combination with electronic access controls for reasons of both economy and security. This enables, for example, the property entrance to be kept under electronic surveillance whilst the doors in the inner area are organised and secured with a mechanical master key system.


### Mechanical Emergency Lock for Electronic Locking Systems and Access Control Systems

There is no substitute for the robustness and stability of mechanical locking systems. For this reason, mechanical cylinder locks are preferred for backing up electronic systems in emergency situations (e.g. network or battery failure). This is generally recommended and is often prescribed as a requirement for buildings by emergency services such as the fire department. (Fig. C)



### Special Functions of Cylinder Locks

Within a locking system, a variety of special functions are required, such as building access doors, escape doors and emergency exits, office and interior doors, cellar doors, garden doors, lift barriers, window handles, mailboxes, balcony doors, safety deposit boxes and furniture locks.

 *Special External Key Override function: enables the cylinder to operate even if a key is inserted on the other side*

EPS Options	5-pin	6-pin
External Key Override (BSZ)	●	●
External Key Override Emergency and Danger Function (GEFE)	●	●
Knob and Anti-Blocking Function (SOSE)	●	●
Dust Cover (SSW)	●	●
Protection Against Seawater (SEW)	●	●
Free Wheel Cam for Anti-Panic Locks (FREI)	●	●
Cog Wheel (ZR)	●	●
Cylinder with Protection against Pulling VdS AZ	●	●
Cylinder with Protection against Pulling VdS BZ+	●	●





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For further information please visit our website [www.evva.com](http://www.evva.com).*

## EVVA references – mechanical locking systems:

Wasserstadt Spandau residential area, Berlin  
| Spreekarree office block, Berlin | Wuhlheide  
Innovation Park, Berlin | KPM Royal Porcelain  
Factory, Berlin | "Wollgarnfabrik", Kadiner Str.  
Berlin | DREWAG water works, Dresden | Max  
Planck Institute, Leipzig | Hexal Pharma, Rade-  
beul | IBIS Hotel, Dresden | Soteria Clinic, Leipzig  
| Vattenfall, Cottbus | Schmergow House,  
Schmergow | "Kaiserbahnhof" station, Pots-  
dam | DPD Depot, Hermsdorf | "Mitte" dis-  
trict employment office, Berlin | Sparda Bank,  
Brandenburg | Burg local public transport  
association | Wallstreet Park Plaza Hotel, Berlin  
| "Waldklinik" clinic, Bernburg | Sports Muse-  
um, Olympic campus, Berlin | Lutheran Church,  
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VW distribution centre, Ludwigsfelde | German  
Aerospace Centre, Stuttgart | Pro Curand nurs-  
ing home, Ingolstadt | Berlin Fire Department,  
Berlin | Country boarding school, Dülmen-  
Buldern | "Gertrudenstift" bishop's foundation,  
Rheine | Ernst von Bergmann barracks, Munich  
| Ares Tower, Vienna | Spa centre, Bad Vöslau



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