

▶▶▶ Locking System | 3KS_{plus} 3 Curve System



3KS_{plus}:
patent validity
until 2025



COMFORT | ORGANISATION | SECURITY

EVVA's Innovative Strength

Today, EVVA has a multitude of patented key systems at its disposal. Thus, key systems can 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 differentiate from the function principles previously known on the market. Only in this way can the continually growing security and organisational requirements be accommodated.

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 the most appropriate and cost-effective security solution be realised for the respective building, user and administrative structure.

3KSplus – Design With Function

With its rounded contours, the distinctive 3KSplus key shape makes it easy to handle when the key is turned several times. A smooth insertion of the key in the channel of the cylinder lock is made possible by the two rounded key tips and milled curves. The key is symmetrically designed to be reversible.



EVVA's mechanical systems from left to right: GPI, MCS, DPI and 3KSplus

We Are Big On Curves.

3K*Sp*lus Technology – Springless Function Principle

Key Security

On both sides of the 3K*Sp*lus flat key, three curves are milled in accordance with the locking authorisation. They control freely movable locking elements and thus lead to a locking authorisation. From the curve milling on the key, no conclusion can be drawn about the order in the locking hierarchy.

Operational Reliability

Contrary to conventional locking systems, in the 3K*Sp*lus cylinder the movable locking elements – 6 per side – are raised above the key's curve milling and not pushed against a spring force. By means of an authorised key, the locking elements release the lateral control bar and enable the plug to be rotated. During the locking action, the 3K*Sp*lus key is checked a total of 4 times – this is three times more than with conventional systems.

Wear Resistance

Both the key and the plug of the cylinder are made out of wear resistant nickel silver. With the additional surface finish of the locking elements and the springless function principle, the highest degree of wear resistance is guaranteed in daily use.

Combinatorics

A multitude of different locking elements are available for each locking pin position. Thus, the system is suited for most complex master key systems with crossing hierarchies. No two are alike! Locking elements are located on 12 positions – 6 per side – that engage with different control pins in the key curves and can thereby be checked by the key in a combinatory way. The back of the key is additionally checked by a springless locking bar.



Stay on the safe side with us!



*The highest technical
key copying protection for 3KSplus*

Key copying protection

To protect against key duplication, illegal copies and key manipulation, the 3KSplus system has three different protective mechanisms that always complement each other in their effectiveness.

Organisational protection

Keys are fabricated by EVVA or EVVA dealers only for authorised persons having appropriate proof of legitimacy (e.g. security card).

Legal protection

The commercial fabrication of keys is done exclusively by EVVA and in EVVA-authorized specialty companies. EVVA affords additional protection against unauthorised fabrication of 3KSpluskeys through patented features on the key. This enables EVVA to take legal action against unauthorised commercial fabrication of a duplicate key.

Technical protection

These keys possess technical features which require special machines and a great deal of expertise to fabricate. Illegal fabrication is only possible with extensive overhead and is therefore not economically viable.

Thinking security – throughout.

Lock cylinder security

Staying ahead of illegal opening methods with new functional principles is a continuous race against time. Only truly innovative technology is able to provide sustained protection against known and future lock-cracking methods. All of the technical measures employed have one goal, to make lock-cracking difficult.

This is why we counteract the following opening methods:

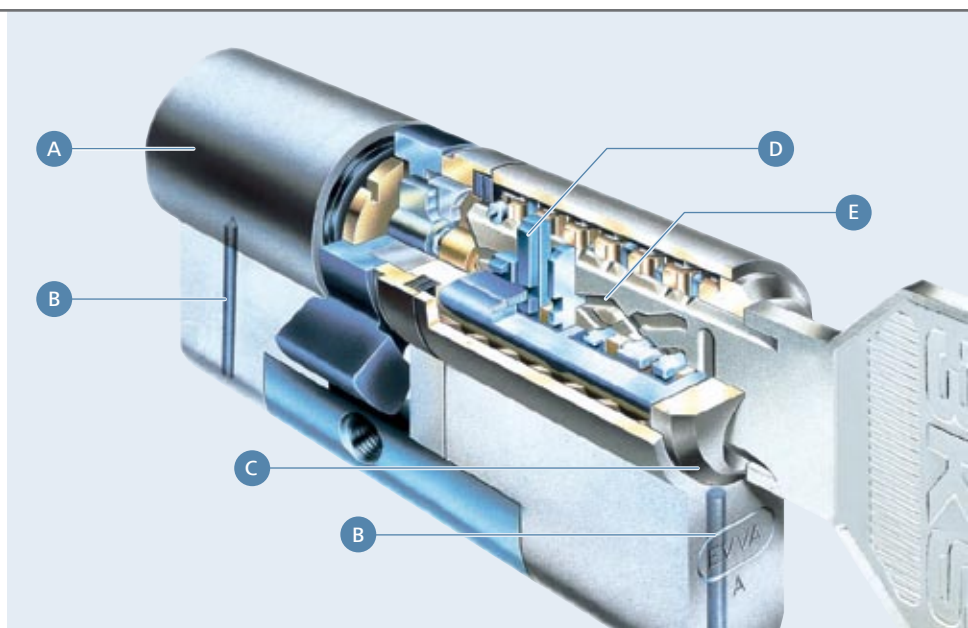
- ▶ Destructive opening methods (the lock cylinder is destroyed): breaking off, ripping out, drilling-out/into or sawing the cylinder open, pulling out the cylinder plug.
- ▶ Detectable opening techniques (the cylinder remains functional, traces are visible): opening with vibrating tools.
- ▶ Undetectable opening techniques: opening with lock tools (e.g. skeleton key, bump-key, etc.)

Picking and scanning protection

The lock cylinder is equipped with multiple locking pins to conceal just which locking pin works in which case. Because of the freely moving lock elements in the plug, it is virtually impossible to scan for a mill image to make a copy key. Due to its spring-free operating principle, the 3K*Split* is also protected against impact picking.

Drilling protection

Hard metal elements in the cylinder protect it from destruction and opening by drilling.



Plug-pulling protection

Hard metal elements protect against drilling out or into the cylinder plug. This also keeps plug extracting tools from being attached. Thus the plug cannot be pulled out of its cylinder housing.

Conformity to standards

3K*Split* lock cylinders conform to EN 1303:2005 lock security class 6 and attack resistance class 2. They are suitable as standard fittings for EI 30 and E 30 fire and smoke doors.

- A Housing
- B Hard metal elements
- C Plug with locking bar
- D Locking elements
- E Key curves



A



Combi-key: The advantages of mechanics and electronics combined in one medium

Integration of Electronic Identification Technologies (fig. A)

Mechanical keys can be designed as a Combi-key. This can be employed as a carrier for non-touch (e.g. MIFARE, LEGIC) or touch-sensitive (iButton) identification technologies. The mechanical key is thereby transformed into an electronic identification medium and replaces additional identification medium e.g. cards. Not only is the administration of the identification medium and keys much simpler, it is also a great deal more comfortable to have just one medium. The mechanical key can only be removed from the electronic identification medium by being destroyed.

3KSplus Integration Capacity

Mechanical locking systems form the foundation for organisational building security. In combination with electronically controlled security technology, all-encompassing security solutions are generated.

3KSplus Integration with Motor Cylinder

Without modification of the fittings, fully integrated in the locking system, the cylinder lock can be locked and unlocked using an electronic motor knob. In emergencies, the outer area of the cylinder can be mechanically operated. (fig. B)

B



C



We Are A Perfect Fit.

Combination of Mechanical and Electronic Locking Systems

In practice, mechanical locking systems are often employed in combination with electronic access controls for reasons of both economics and security. This enables the property entrance to be kept under 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 (fig. C)

The robustness and stability of mechanical locking systems are irreplaceable. For this reason, the employment of mechanical cylinder locks are favoured for emergencies in electronic systems (e.g. network or battery failure). This is recommended as a basic principle and is often mandatory for the buildings of emergency services e.g. fire brigade.



Special Functions Of Cylinder Locks

Different special functions are necessary within a locking system, e.g. access doors to properties, escape doors and emergency exits, office and interior doors, cellar doors, garden doors, lift barriers, window handles, household mailbox systems, balcony doors, safety deposit boxes or furniture locks. International certification enables the employment of cylinders throughout Europe.

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

3KSplus Special Functions

External Key Override (BSZ)	•
External Key Override Emergency and Danger Function (GEFE)	•
Knob and Anti-Blocking Function (SOSE)	•
Contruction Keys	•
Dust Cover (SSW)	•
Protection Against Sea Water (SEW)	•
Free Wheel Cam for Anti-Panic Locks (FREI)	•
Cog Wheel (ZR)	•
VdS B	•





Reference Projects:

Austrocontrol Flight Surveillance, Vienna | Pro 7, Munich | CCI Potsdam | DomAquaree, Berlin | Royal Library, Copenhagen | Siemens AG, Prague | Ministry of Defence, Paris | BAWAG-PSK Group Austria | Hypo Vereins Bank Head Office, Budapest | Medical University Innsbruck | Exhibition Centre Vienna | Erste Gemeinnützige Wohnungsges.m.b.H., Vienna | Casinos of Saxony, Leipzig | VAE, Zeltweg | Leipzig Airport | DaimlerChrysler Potsdamer Platz, Berlin | Teatro Comunale, Treviso | Magna Racino, Ebreichsdorf | IBM Austria, Vienna | State Hospital Vöcklabruck | Caritas Archdiocese Vienna | Tyrolean State Police, Innsbruck | University of Udine | Columbus Centre, Vienna | Mobilkom Austria, Vienna | Citroën Austria Ges.m.b.H., Vienna | Accident Hospital, Linz | Geinberg Spa | Commerz Bank Brandenburg | Littenstraße County Court, Berlin | Holland Casino, Utrecht, Schiphol, Scheveningen, Valkenburg | Mercedes Benz, Budapest | IKEA, Dietlikon | Hotel Adlon, Berlin | Munich Airport