



## **penta reversible key system**

Greater protection and  
convenience for your  
master key system

Secure  
Convenient  
Flexible



# Do you need more security?

## Configure penta according to your requirements

The dormakaba penta reversible key system combines convenient operation and customised protection for your master key system. Its versatility makes it ideal for securing and organising access to any building – not only to family homes and residential complexes but also to public buildings and industrial properties.

### Areas of application

- Healthcare
- Office buildings
- Hotels & catering
- Airports
- Banking & insurance
- Education
- Industry & production
- Shopping & retail sector
- Privately owned housing
- Government & administration
- Sport & culture
- Transport & logistics

### Your advantages at a glance

- Long-term protection by European patent EP2890856B1\*
- High level of security through compliance with relevant standards, for example EN 1303 and DIN 18252
- Certificates according to VdS-B+ and VdS-BZ+
- Technical construction protects against the most common opening methods
- Modular system structure for economic adjustment to new requirements
- Reversible key without sharp edges can be inserted from both sides
- penta cross with additional active element for high copy protection
- Optional security elements and special functions for even higher levels of protection
- Flexible in its use with basic to highly complex master key system types
- Structured planning and organisation of complex master key systems
- Can be combined with electronic access systems from dormakaba

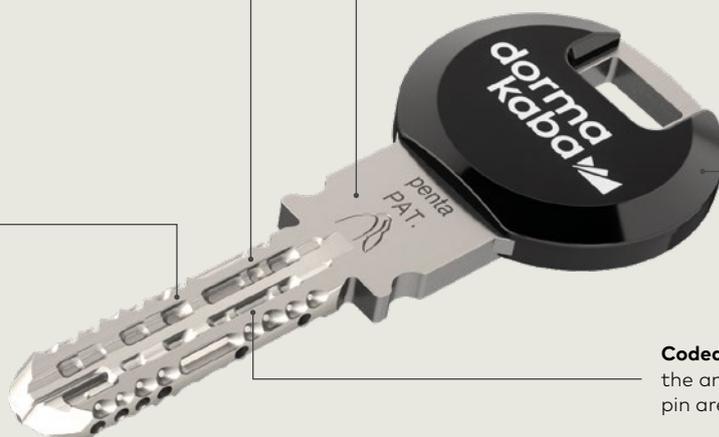
# Security combined with convenience: Reversible key and lock cylinder

**Ergonomic reversible key** –  
can be inserted  
from both sides

**No sharp corners or  
edges** – no tears in  
clothes and bags

**Robust nickel silver** –  
for a long service life

**High quality clips** –  
in 12 different colours

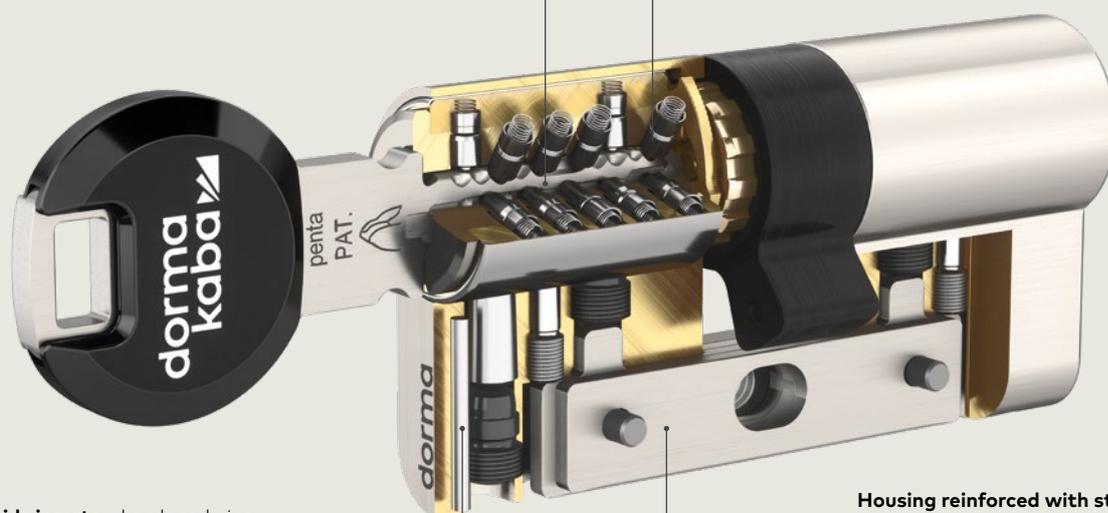


**Coded drilling pattern** –  
the anti-picking positions of the tumbler  
pin are not visible on the key

**5 radially arranged tumbler pin rows  
with up to 22 pairs of pins** – prevent  
attack using the bumping or picking  
methods



**Tumbler pins with fixed block length** – and  
geometrically different versions for high  
protection against impressing



**Carbide inserts** – hardened pins  
in the housing provide extra  
protection against drilling (optional)

**Housing reinforced with steel shims** –  
for very high protection against pulling  
(optional)

## All-round protection as standard

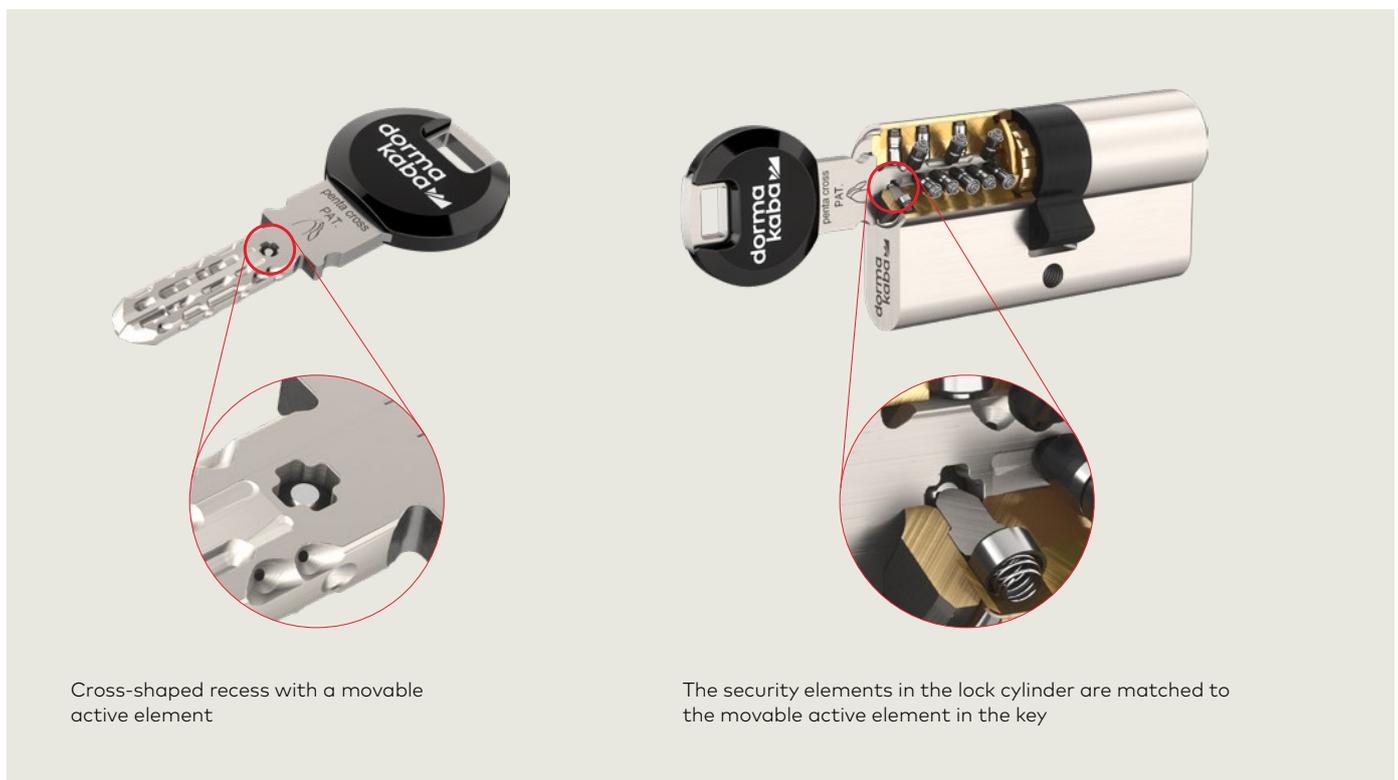
- The high number of undivided pin pairs and the hardened steel materials used protect against the most common opening methods.
- Using the bumping method (Rapido method), to open the lock cylinder is not realistic under real operating conditions.

## Even more technical features on request

- Depending on the requirements, additional security features, such as steel reinforcement shims, anti-drill or pulling protection, can be selected.
- Dust, insect or weather protection help depending on the installation.
- Different rotary knob variants offer greater convenience (e.g. design thumbturn knob) and coupling functions (e.g. key override from both sides or priority function).

## penta cross – copy protection at the highest level

In the penta cross system, there is a cross-shaped recess with a movable active element in the key. When the key is inserted, the movement of the active element is queried by matching security elements in the lock cylinder. The matching lock cylinder can only be opened and closed if the movable active element is present in the key.





#### Standards and certificates penta and penta cross

- EN 1303 Key Related Security Grade 6 and Attack Resistance Grade D for versions with steel reinforcement in the housing
- Safety standards/Certificates (expanded):
  - DIN 18252 Grade C and D
  - VdS Grade B+ and BZ+ for corresponding special design
- Fire protection: Lock cylinder tested according to EN 1634-1 and EN 1634-2

## Comprehensive security. You can rely on

#### Patent protection

penta is protected by European patent EP2890856B1\*, penta cross by EP2890856 B1\* – both valid until 2033. penta cross is registered for an international patent (PCT) – valid until 2036 if granted.

#### Brand protection

Our systems are additionally marked with a logo that is protected as a figurative mark and that makes them easy to identify. This figurative mark symbolises that this is an original key produced by dormakaba. Duplicate keys are exclusively manufactured by dormakaba.



Mountain  
Peak

#### Security card

Every new penta and penta cross master key system and every serial cylinder is supplied with a security card containing all the security information about the system. This is used to manage the master key system data and to identify the owner when ordering key copies.

\*Not valid in all countries – see [worldwide.espacenet.com](http://worldwide.espacenet.com) for details

# You design your master key system. The possibilities are endless

## Support with planning

penta and penta cross can be used freely with all master key system types – from the one-key-for-all solution for home use, to large, complex sites with different access authorisations. The basis is a key plan, according to which selected keys can open a series of specific doors. To design the key plan, we examine and evaluate our customers' requirements in detail. This means that you will have better control, save costs incurred by duplicate keys and reduce the total number of keys.

## Flexibility with dormakaba keylink

The innovative dormakaba keylink planning method means penta and penta cross locking systems are almost unlimitedly expandable while also guaranteeing a consistently high security standard in all expansion phases. The planning method dormakaba keylink is based on company organisation and access grids. Mechanical access rights can thus be individually planned and changed at any time without replacing lock cylinders in your master key system.

## Different applications require different solutions



Private homes



Residential complexes



Office buildings or company sites



Large and complex facilities or public facilities,  
e.g. universities or schools

# Types of master key systems.

## Applications and principles

### Master key systems

Application: e.g. in office buildings or schools.

There are individual closings, but also one or more parent keys (master keys) which lock all cylinders within the system.

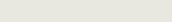
Individual keys (ES):  
only close specific doors



Lock cylinders or doors



Administration



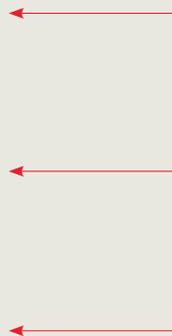
Sales



IT



Master key (HS):  
closes all doors



### Grand master key systems

Application: e.g. in large office buildings or universities.

Here, the functions of a master key system are expanded by the grand master key, additional main group keys and group keys.

Group keys (GS):  
closes a specific area



Lock cylinders or doors

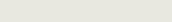


Sales 1

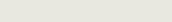
Individual keys (ES):  
only close specific doors



Sales 2



IT



Accounting



Grand master key (GHS):  
closes all doors



### Keyed-alike lock cylinders

Application: e.g. for family homes.

All or selected lock cylinders can be locked with the same key. This simplifies handling and reduces the size of the key ring.

Lock cylinders or doors



Front door



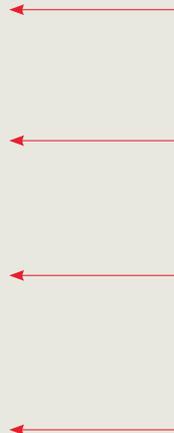
Garage



Mailbox



Padlock



Several lock cylinders with the same keying can be opened with the same key.

### Central master key systems

Application: e.g. in residential complexes.

Several different individual keys can close central lock cylinders. In addition, there are individual closings, which can each only be closed by one key.



Apartment 1



Surface mounted lock



Mailbox



Flat 2



Surface mounted lock



Mailbox



Apartment 3



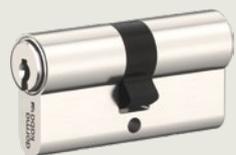
Surface mounted lock



Mailbox



- Central cylinders:
- Front door
  - Garbage room
  - Bicycle storage
  - Garage



With the special **administrator master key system**, the main areas of several properties (i.e. several locking systems) in different locations can be closed with only one key (administrator key).

# Key variety.

## clarity through colour

Select the shape and function of the key



**Default key** with black clip



**Key with Largekey clip**



**Key with nickel silver** long key bow



**Key with RFID transponder clip** for integration into electronic access control systems

## Colours as a visual aid



For the **default key**, there are SmartKey clips in 12 colours.



The **key with a Largekey clip** is available in 12 colours.



The **RFID transponder clips** have 6 coloured ring elements for easier identification.

# Free choice of lock cylinders

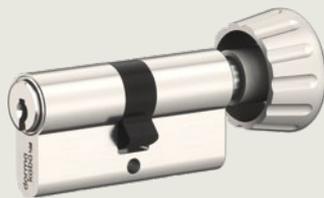
The cylinder programme features a wide variety of types to choose from. You can also integrate cylinder for cabinet locks, key-operated switches or lift controls into the

system. Choose between nine surface finishes to match your design.

## Extract Cylinder Lock Types



DZ



DKZ



HZ



VHZ



AZ



BMZ



MZ



MAS



SZ

- DZ Double cylinder
- DKZ Thumbturn cylinder
- HZ Single cylinder
- VHZ Padlocks
- AZ Rim cylinder
- BMZ Camlock
- MZ Cylinder cabinet locks
- MAS Furniture dead lock
- SZ Key Switch cylinder

## Finishes



NI



MS



NIC



CRP



CR



MP



BH



BM



BD

- NI nickel plated <sup>1)</sup>
- MS brass natural <sup>1)</sup>
- NIC chemically nickel plated
- CRP chrome polished
- CR chrome plated
- MP brass polished
- BH brown light
- BM brown medium
- BD brown dark

Cylinder surfaces (not colour-reproducible)

1) Standard surface

# Modular construction.

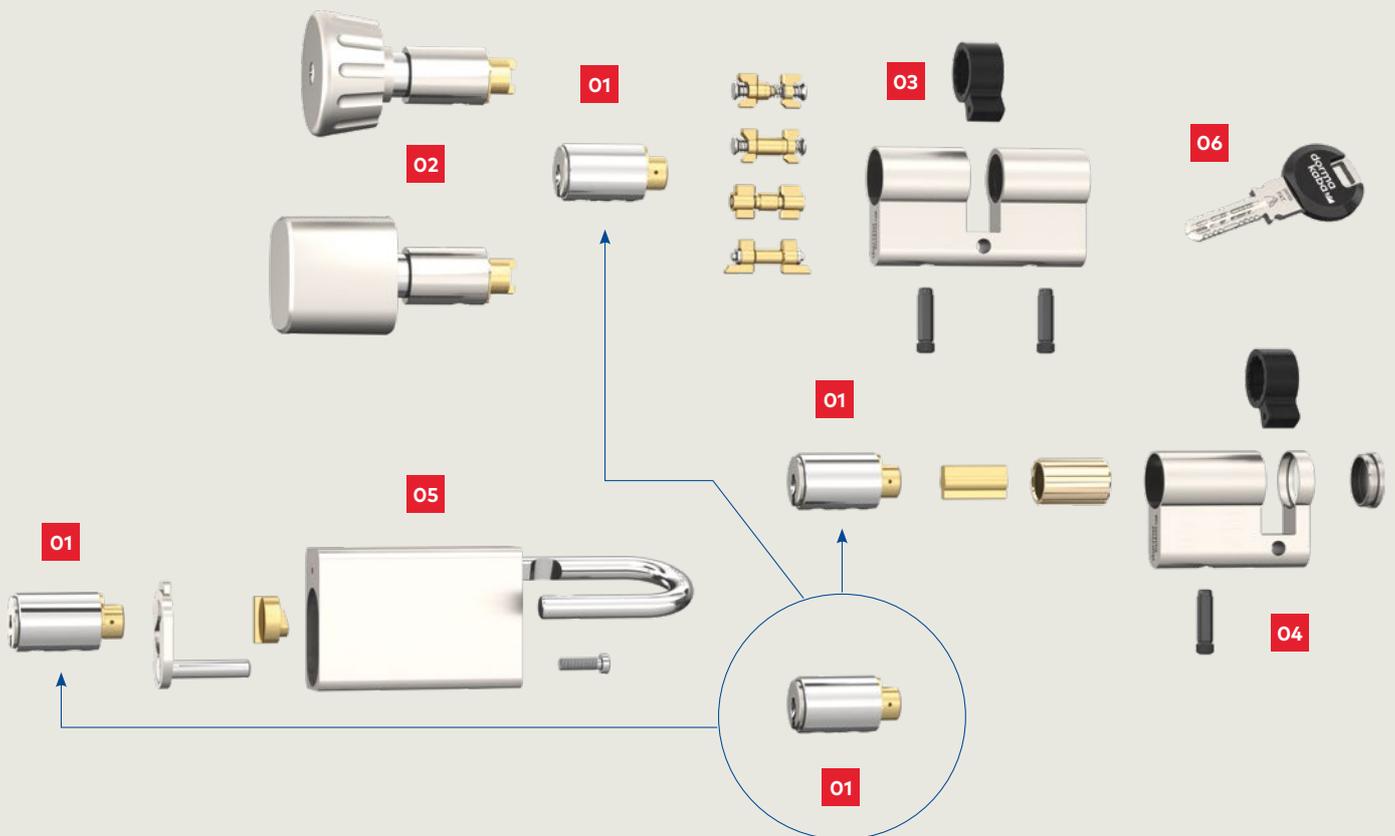
## Maximum flexibility

### Quick and inexpensive to adapt

penta and penta cross reversible key systems offer high levels of investment protection, even when requirements change over the years. A modular, upward-compatible system structure allows for quick and easy conversion of the lock cylinders to other lengths and types. The existing lock cylinder can be adapted to a new length with little effort, for example for a new entrance door, or can be fitted with an elegant thumbturn knob.

### Economically sustainable

The core of the system are modular, interchangeable inserts, which can be used without any problems in all cylinder lock types, for example single cylinders, thumbturn cylinders, rim cylinders, cylinders for cabinet locks, padlocks and camlocks. The combination of different lengths of cylinder housings (complete housings), couplings and cam hubs opens up almost unlimited possibilities for the conversion of a provided access solution.



**01**  
The modular insert contains the locking authorization for the keys and can be integrated into all reversible key cylinder types.

**02**  
A thumbturn knob can be retrofitted very easily.

**03**  
Different lengths of the double cylinder housing enable easy length conversion.

**04**  
Single cylinder with an insert.

**05**  
Padlock with an insert.

**06**  
Key with locking authorization according to the key plan.

# Added value for your master key system.

## Useful special functions

Depending on your requirements, you can supplement your individual solution with one of our numerous special functions. These offer added value in terms of functionality and benefits. For details, please refer to the **Special functions for reversible key systems** brochure.

### Dust and insect protection (SIS)



**Dust or insects? Can't get through.** The key way is closed by two shims and opened by inserting the key. This provides effective protection against the infiltration of pollution and insects. The SIS unit can be easily retrofitted. All you need to do is replace the cylinder insert.

### Construction phase function (BAZ)



**Modify access authorisation in a flash? Possible with the 3-in-1 lock cylinder.** Using the BAZ cylinder, you can withdraw the access authorization of different keys or key groups simply by means of a conversion key. So, whether you want to withdraw access rights for a particular person or have lost a key, there is no need to change the lock cylinder.

### Thermally insulated lock cylinder (TIC)



**Cold and damp outside? Everything dry inside.** The separation of the outside and inside with plastic components ensures thermal insulation. Condensation cannot form on the inside of the door, even when it is extremely cold. A foam rubber seal on the outside of the lock cylinder protects against drafts and driving rain.

### Lock cylinder with key override on both sides (BSZ)



**Key left in the lock? Not a problem!** The double cylinder makes it possible to unlock the door from the opposite side with an authorised key when a key is inserted on one side and rotated in any direction. The inserted key turns with it. This function is guaranteed to work on both sides of the double cylinder.

# Secure and convenient access. penta and penta cross in use



## Open for the future at the Universitätsklinikum St. Pölten

For over 50 years, a dormakaba master key system has provided security at the hospital. As part of modernisation works, it was replaced by 9,300 penta lock cylinders. Sliding doors also ensure convenience and barrier-free accessibility. The modular expandability and upward compatibility ensure the system is open to the requirements of tomorrow.



## Security on a grand scale for Schwabinger Tor in Munich

High levels of security for the tenants and maximum versatility for the building owner – these were the requirements for the master key system of the urban quarter in Munich-Schwabing. The solution: a penta master key system with a total of around 3,000 mechanical lock cylinders, supplemented with approx. 120 digital cylinders.



## Efficient all-round security at the St. Pölten residential complex

680 penta lock cylinders provide security for the users of 185 rented and owner-occupied apartments. For greater energy efficiency, all entrance doors to the apartments are equipped with a thermally insulated lock cylinder (TIC). An administrator locking system offers greater convenience for the property management company, which has access to the general areas in all residential buildings with only one key.

# We make access in life **smart and secure**

## Our Offering

Door Hardware  
Entrance Systems  
Electronic Access & Data  
Interior Glass Systems  
Mechanical Key Systems

Lodging Systems  
Safe Locks  
Key Systems  
Movable Walls  
Services



Consulting  
Planning  
Realization  
Operation  
Maintenance

## Our Focused Industries



Residential



Multi-Family-Housing



Government



Hospitality



Financial Industries



Utilities / Telecoms



Airports



Education



Production Facilities



Retail



Healthcare



Rail

## Our Values

### Customer first

We always focus what we do on the needs of our customers, partners and users.

### Curiosity

We constantly scout for trends as the inspiration for future-focused solutions.

### Performance

We go the extra mile to ensure customer satisfaction and set the bar high in terms of security, quality and reliability.

### Courage

We are committed to continuously developing solutions that generate genuine added value for our customers and users.

### Trust

Our core corporate value is at the heart of everything we do, so customers can rest assured that they are in good hands.

## Our Company

More than

**150**

years of experience

Around

**15.000**

employees worldwide

**130**

countries

ISO 9001  
Certificate



More than  
**2,000**  
patents



Sustainability Report  
GRI Standards



stock-listed at  
SIX Swiss Exchange (DOKA)

We call it **trusted access**



**Door  
Hardware**



**Electronic  
Access & Data**



**Mechanical  
Key Systems**



**Lodging Systems**



**Entrance  
Systems**



**Interior Glass  
Systems**



**Safe Locks**



**Service**

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