

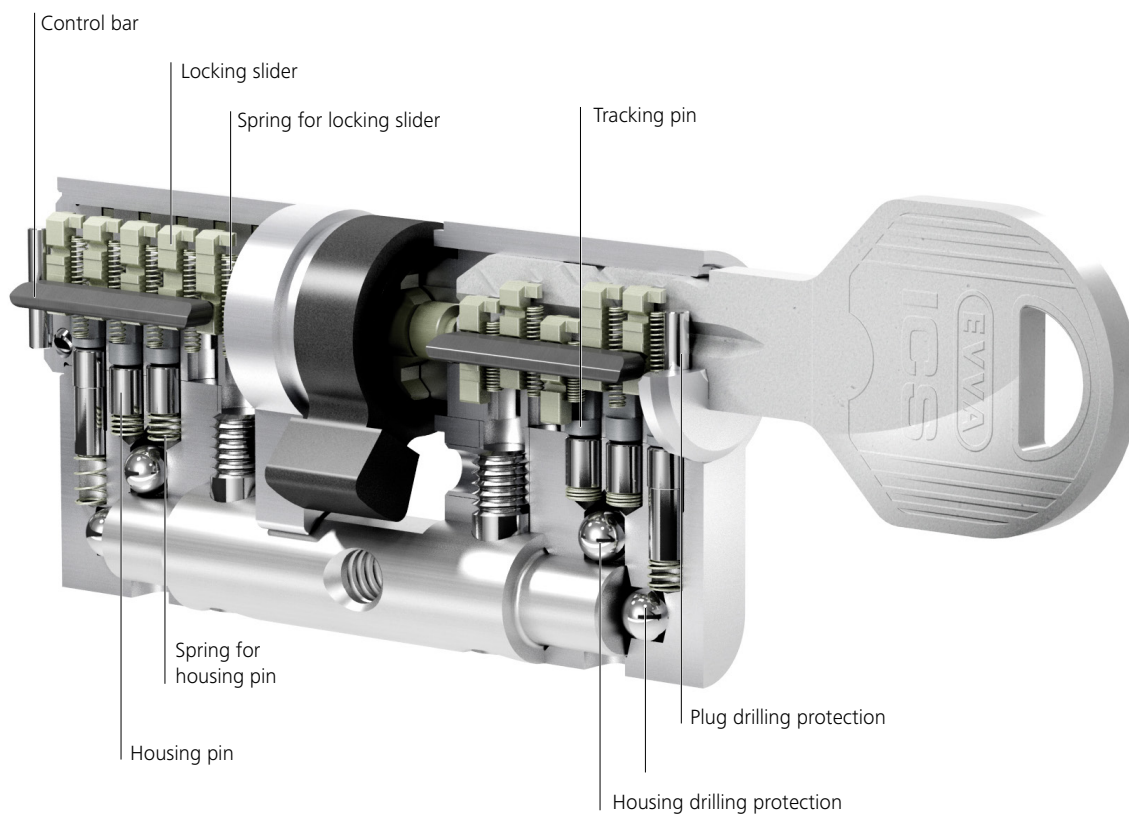


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for your logo.

# ICS<sup>XP</sup>

Your assembly manual





## ICS<sup>xp</sup> technology in detail

### System characteristics

The reversible key system ICS<sup>xp</sup> offers effective protection thanks to the unique combination of length profile, curve system with sliders, track system with pins and concealed internal recesses on the ICS<sup>xp</sup> key. ICS<sup>xp</sup> is ideally suited for demanding requirements on design and comfort.

### Key copying protection

- Added security with the EVVA security card
- Legal protection through long patent protection
  - Optimal technical key protection

### Lock cylinder security

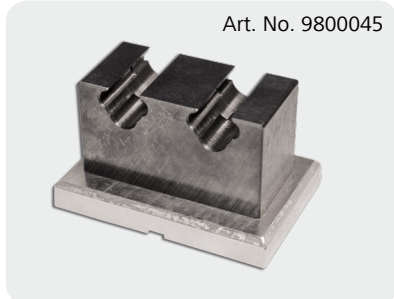
- Picking protection
- Drilling and plug pulling protection
- Snapping protection
- Bump key protection

### Benefits for you:

- Optimum key copying protection
- For business-oriented master-key systems
- Combination of three locking technologies
- Timeless design
- Reversible keys
- Short cylinder lengths (27/27)
- Highest level of wear resistance
- Modular design (SYMO)

# Assembly manual

Professional EVVA assembly devices to make assembly easier.



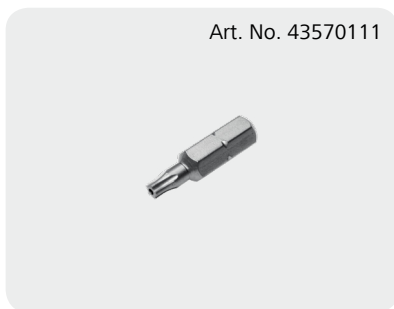
Assembly block for plug pinning (optional)



Assembly bar



Deburring tool for plug spring chambers (optional)



ResisTORX bit for Torx screw



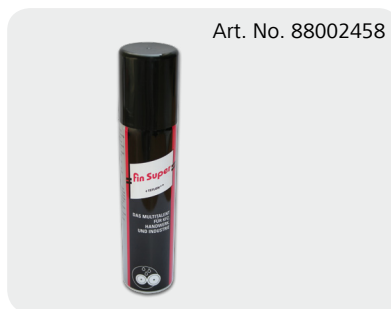
Assembly block for housing (optional)



Assembly tool for circlip



Disassembly tool for circlip



EVVA cylinder Spray FIN super (Please consider local shipping restrictions)

## Assembly kit

Coupling	20
Coupling adapter ICS	20
Coupling elongation 5 mm	15
Coupling elongation 10 mm	10
Coupling elongation 15 mm	5
Coupling elongation 20 mm	5
Cam, standard	20
Cylinder screw M5 x 80	10
Circlip AF width 12	80
Screw for 36 mm - side	20
Screw for 41 mm - side	10
Screw for 46 mm - side	5
Screw for 51 mm - side	5
Screw for 56 mm - side	5
Screw for BKS	40
Plug elongation 5 mm BKS MS	15
Plug elongation 10 mm	10
Plug elongation 15 mm	5
Plug elongation 20 mm	5
Housing elongation 5 mm	15
Housing elongation 10 mm	10
Housing elongation 15 mm	5
Housing elongation 20 mm	5
Connecting rod 31/31	4
Connecting rod 31/36	4
Connecting rod 31/41	8
Connecting rod 36/36	4
Connecting rod 31/46	2
Connecting rod 31/51	2
Connecting rod 36/46	2
Connecting rod 41/41	2
Connecting rod 41/51	2
Connecting rod 36/41	2
Connecting rod 41/56	2

## Assembly case supplement

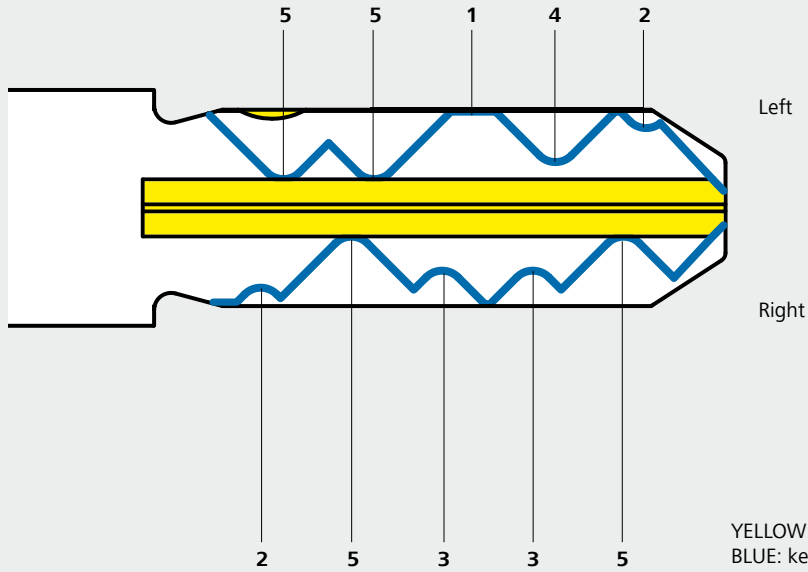
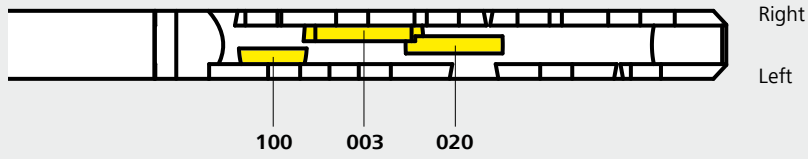
Connecting rod HZ32	5
Connecting rod HZ37	2
Connecting rod HZ42	2
Springs for thumb turn coupling	7
Thumb turn coupling	7
Cam BSZ 31/31	5
Cam BSZ	5
Cam KDZ	10
Cam HZ	10
Retaining pin HZ	10
Plug end HZ	10
Spring HZ	4
Thumb turn module NI	2
Thumb turn AKN NI	2
Thumb turn KKN NI	4
Cogwheel cam WG BKS	4
Disc for ZR DZ	4
Disc for ZR KDZ	4
Disc complete for ZR BSZ	2
Cogwheel cam GBZ BKS	2
Blind modules	2
Cam for blind on one side	
Inserts (empty)	

The tools mentioned in this chapter are required for the assembly of Euro profile cylinders. Other cylinders types might require additional tools. Please contact EVVA for further information regarding an specific cylinder type

## Assembly kit

Please contact EVVA for our complete range of assembly kits

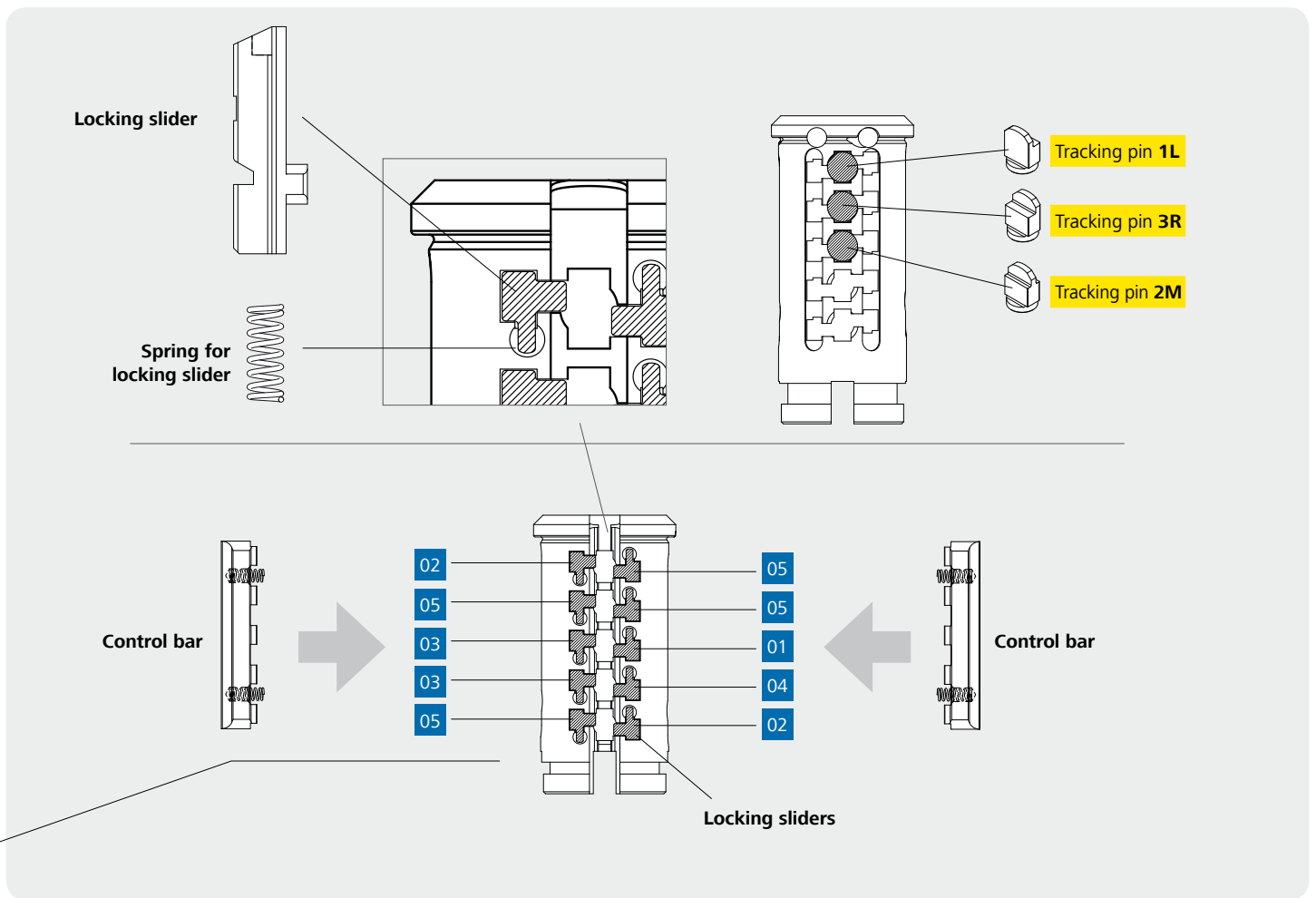




YELLOW: Length profile and inner coding = ICSxp  
BLUE: key coding according to code list

### Example sample code list

0 0 1 I E		ICS-2 / 100 003 020 000 000					1L 3R 2M 0 0			0 0 1 I E	
0001	5 5 1 4 2 2 5 3 3 5	05 05 01 04 02 02 05 03 03 05	0026	1 3 4 5 3 4 4 5 4 5	01 03 04 05 03 04 04 05 04 05						
0002	1 1 2 4 5 4 4 5 4 5	01 01 02 04 05 04 04 05 04 05	0027	1 3 5 3 4 4 4 5 4 5	01 03 05 03 04 04 04 05 04 05						
0003	1 1 3 1 4 4 4 5 4 5	01 01 03 01 04 04 04 05 04 05	0028	1 3 5 5 2 4 4 5 4 5	01 03 05 05 02 04 04 05 04 05						
0004	1 1 3 5 1 4 4 5 4 5	01 01 03 05 01 04 04 05 04 05	0029	1 3 5 3 5 4 4 5 4 5	01 03 05 03 05 04 04 05 04 05						
0005	1 1 4 1 5 4 4 5 4 5	01 01 04 01 05 04 04 05 04 05	0030	1 4 1 1 2 4 4 5 4 5	01 04 01 01 02 04 04 05 04 05						
0006	1 1 4 5 2 4 4 5 4 5	01 01 04 05 02 04 04 05 04 05	0031	1 4 1 5 2 4 4 5 4 5	01 04 01 05 02 04 04 05 04 05						
0007	1 1 5 1 5 4 4 5 4 5	01 01 05 01 05 04 04 05 04 05	0032	1 4 2 3 5 4 4 5 4 5	01 04 02 03 05 04 04 05 04 05						
0008	1 1 5 4 2 4 4 5 4 5	01 01 05 04 02 04 04 05 04 05	0033	1 4 2 5 5 4 4 5 4 5	01 04 02 05 05 04 04 05 04 05						
0009	1 1 5 5 5 4 4 5 4 5	01 01 05 05 05 04 04 05 04 05	0034	1 4 3 4 4 4 4 5 4 5	01 04 03 04 04 04 04 05 04 05						
0010	1 2 1 4 5 4 4 5 4 5	01 02 01 04 05 04 04 05 04 05	0035	1 4 4 1 3 4 4 5 4 5	01 04 04 01 03 04 04 05 04 05						

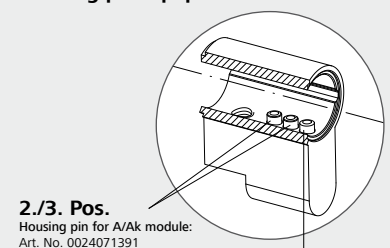


## ICS<sup>XP</sup> plug pinning

- Carefully remove the plug from the housing using the disassembly key. Hold both lateral control bars and simultaneously make sure the tracking pins do not fall out of the bottom of the plug.  
**Caution:** The housing pins and springs already preassembled in the cylinder housing are pushed out of the holes during disassembly (by the spring force). Once again insert these parts in the correct position prior to assembly with the completely encoded plug.
- Insert plug into assembly block Article No. 9800045 (including control bar and tracking pins), remove disassembly tool. Insert the locking slider springs and fit the plug with the locking sliders (in code list).
- Turn the plug in the assembly block by approximately 180° using a key that is authorised to lock. As a result, the tracking pin can no longer fall out from the assembly block when pulling out the plug (with the key).

**Note:** The encoding is simultaneously checked by turning the plug by 180° using the key authorised to lock the component. If a locking slider is filled incorrectly, the plug cannot be turned.

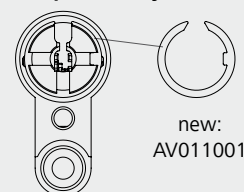
### Housing pin equipment



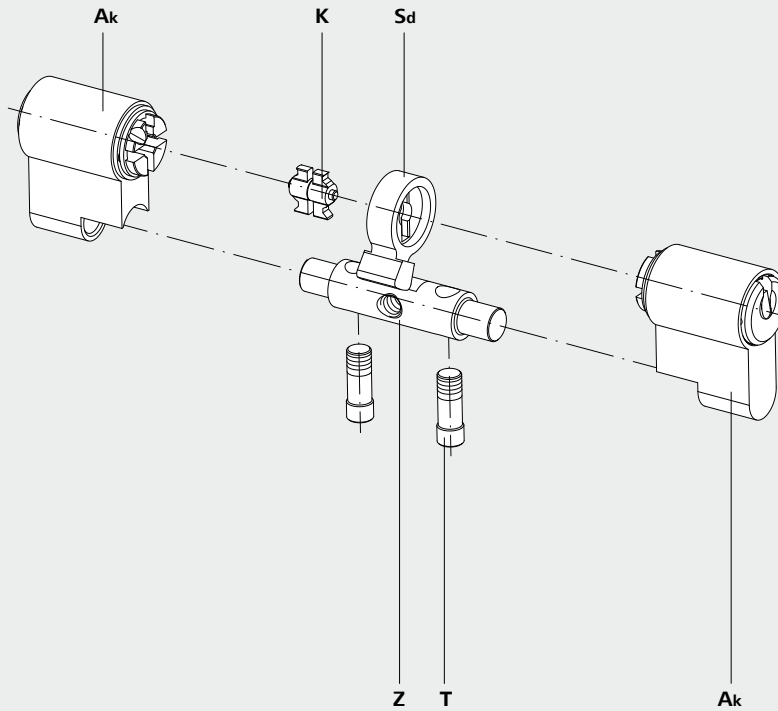
**2./3. Pos.**  
Housing pin for A/Ak module:  
Art. No. 0024071391

**1. Pos.**  
Housing pin for A module: Art. No. 0043507893  
Housing pin for Ak module: Art. No. 0043507895

### Circlip assembly AF width



new:  
AV011001



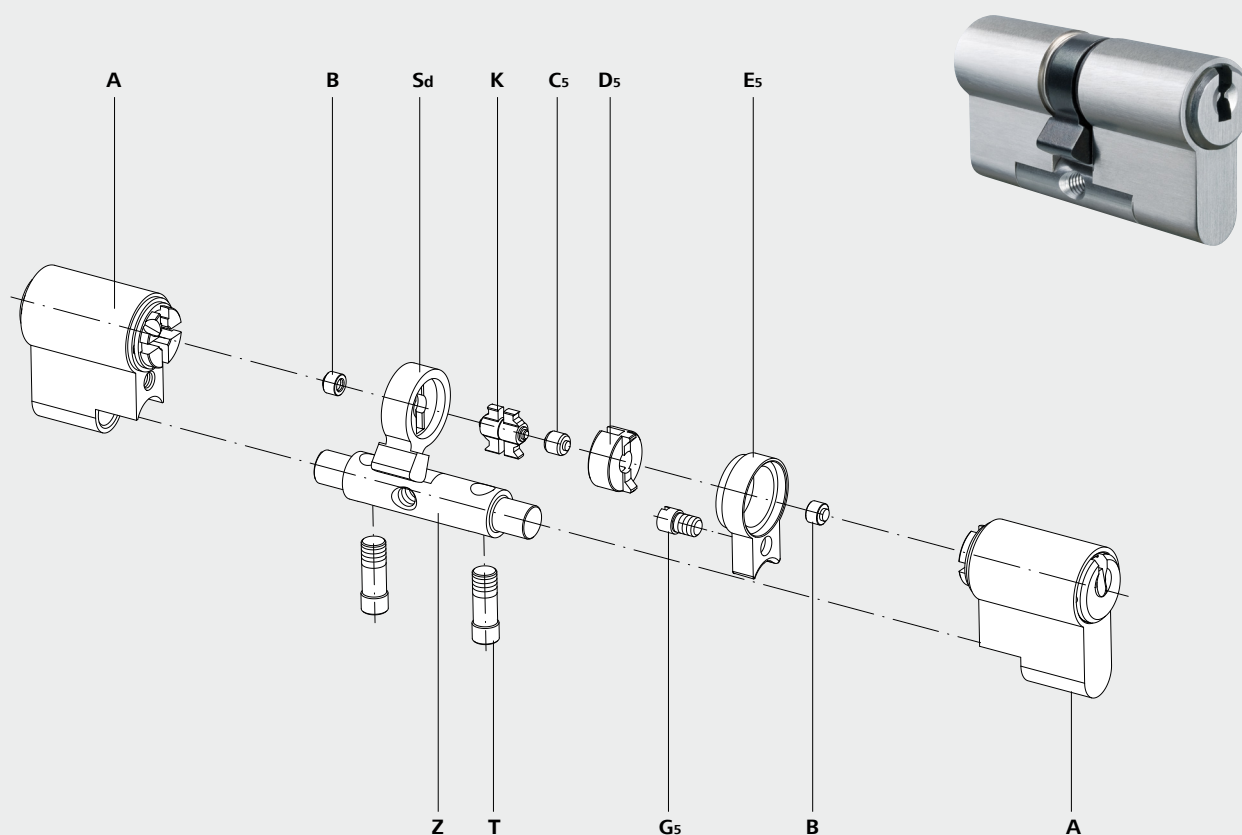
Short module Ak  
cannot be elongated.

## Short cylinder 27/27

1. Insert connecting rod **Z** into a short module **Ak** with the longer side and fasten with connecting screw **T (5,5 Nm)**.
2. Insert the coupling for DZ **K** and cam for DZ **Sd** (correct position) into short module **A**.
3. Assemble both short modules **Ak** together horizontally and firmly fasten connecting screw **T (5,5 Nm)** through connecting rod **Z**.
4. Execute functional test.

**Ak** Short module  
**K** Coupling for DZ  
**Sd** Cam DZ  
**T** Connecting screw  
**Z** Connecting rod

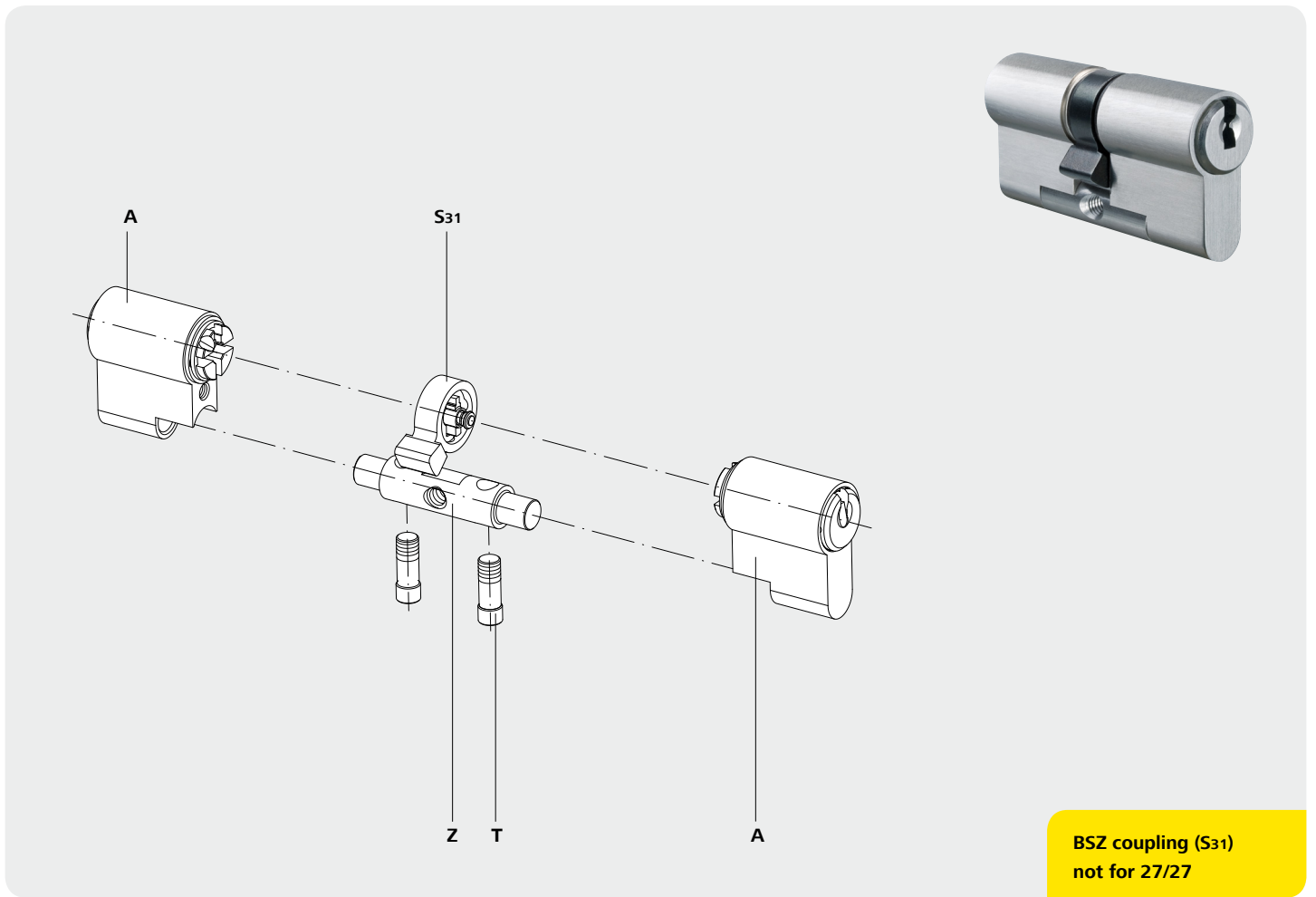




## Double cylinder 31/36

1. Insert connecting rod **Z** with the longer side into module **A** and fasten with connecting screw **T** (**5,5 Nm**). Attach the respective housing elongation **E5** and fasten using the screw for the housing elongation **G5** (**2,3 Nm**).
2. Insert coupling adapter **B**, the relevant plug elongations **D5** and coupling elongation **C5** in the elongated module.
3. Insert the coupling for DZ **K** and cam for DZ **Sd** (correct position) in module **A**.
4. Insert coupling adapter **B** into second module **A**. Bring both modules together horizontally and fasten with connecting screw **T** (**5,5 Nm**) through connecting rod **Z**.
5. Execute functional test.

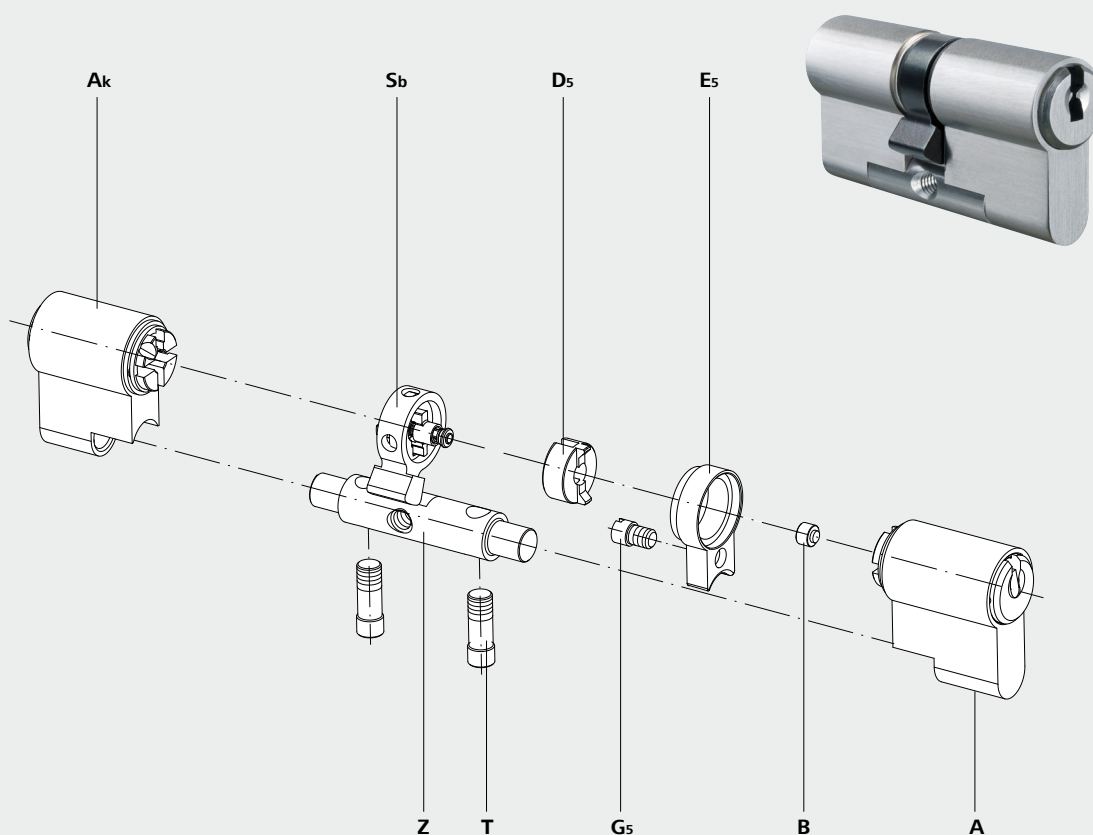
- A** Module
- B** Coupling adapter
- C5** Coupling elongation 5 mm (10, 15 or 20 mm)
- D5** Plug elongation 5 mm (10, 15 or 20 mm)
- E5** Housing elongation 5 mm (10, 15 or 20 mm)
- G5** Screw for housing elongation
- K** Coupling for DZ
- Sd** Cam DZ
- T** Connecting screw
- Z** Connecting rod



## Double cylinder 31/31 BSZ (external key override)

1. Insert connecting rod **Z** with one side into module **A** and fasten with the connecting screw **T (5,5 Nm)**.
2. Insert BSZ (external key override) coupling incl. cam **S31** into module **A**.  
(Caution: One coupling side must be fitted horizontally and the other side laterally).
3. Bring both modules together horizontally and screw in place with connecting screw **T (5,5 Nm)** through the connecting rod **Z**.
4. Execute functional test.

- A** Module  
**S31** BSZ coupling including cam  
**T** Connecting screw  
**Z** Connecting rod

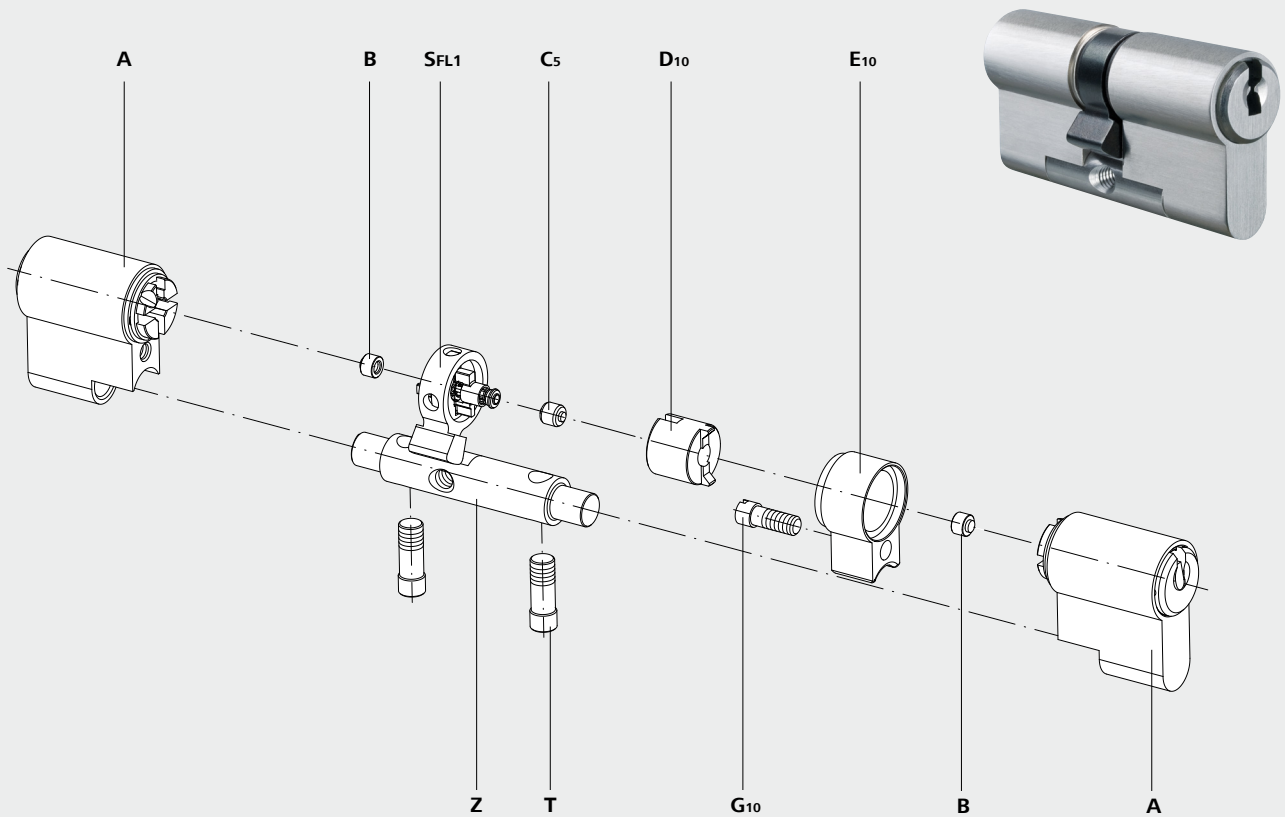


**No coupling elongation!  
One coupling adapter only!**

## Double cylinder 27/36 BSZ (external key override)

1. Insert connecting rod **Z** with the longer side into module **A** and fasten with connecting screw **T (5,5 Nm)**. Attach the respective housing elongation **E<sub>s</sub>** and fasten using the screw for the housing elongation **G<sub>s</sub> (2,3 Nm)**. Insert the coupling adapter **B**, the respective plug elongations **D<sub>s</sub>** into the elongated module.
2. Insert BSZ (external key override) coupling incl. cam **S<sub>b</sub>** with the long side into module **A** (longer cylinder side). (Caution: the short coupling side must be installed in the correct horizontal position).
3. Bring the module **A** and the short module **A<sub>k</sub>** together horizontally and screw in place with the connecting screw **T (5,5 Nm)** through the connecting rod **Z**.
4. Execute functional test.

- A** Module
- A<sub>k</sub>** Short module
- B** Coupling adapter
- D<sub>s</sub>** Plug elongation 5 mm (10, 15 or 20 mm)
- E<sub>s</sub>** Housing elongation 5 mm (10, 15 or 20 mm)
- G<sub>s</sub>** Screw for housing elongation
- S<sub>b</sub>** BSZ (external key override) coupling incl. cam
- T** Connecting screw
- Z** Connecting rod

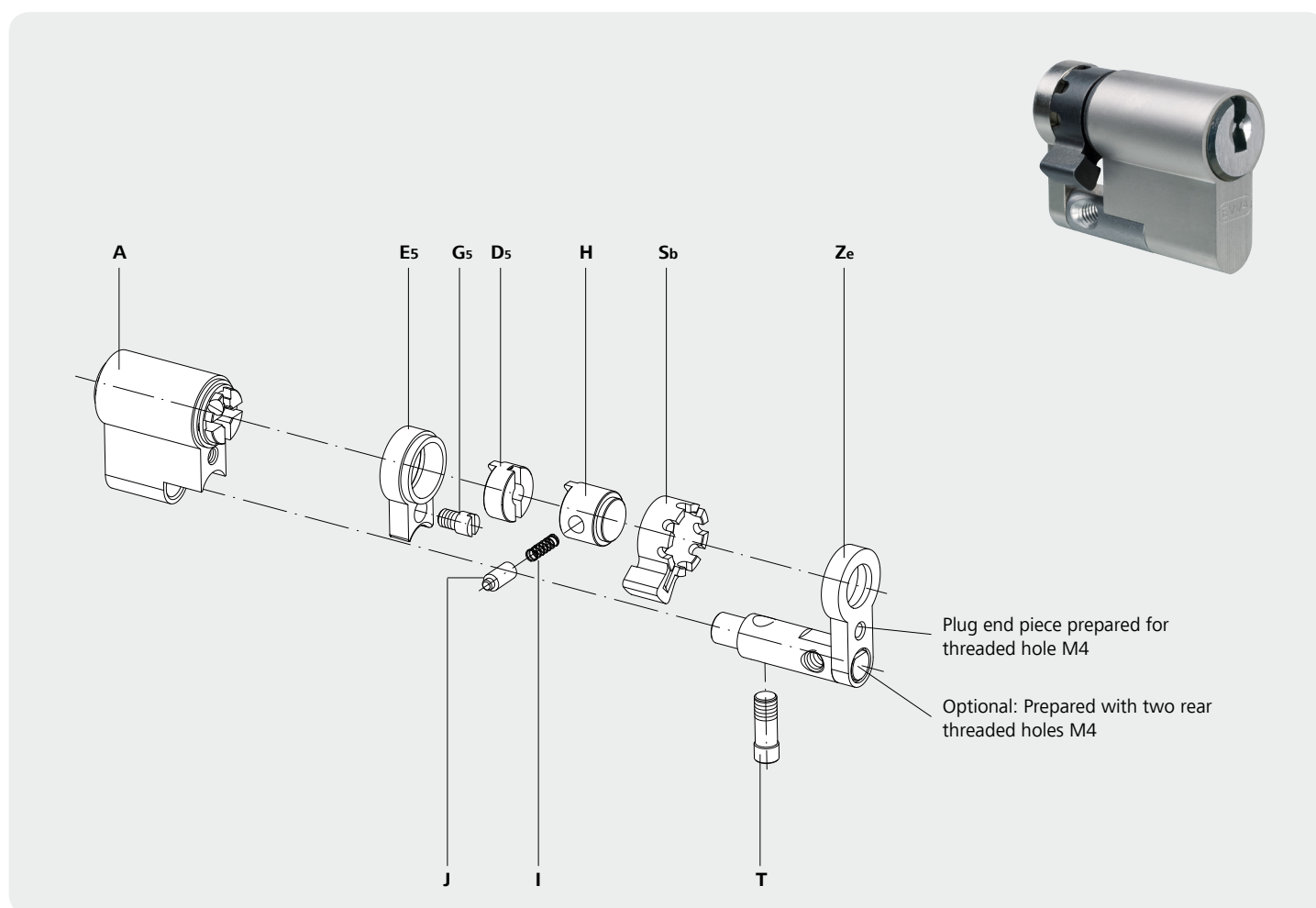


Possible from a minimum length of 31/36 mm!

## Double Cylinder 31/41 FL1

1. Insert connecting rod **Z** with the longer side into the module **A** and fasten with connecting screw **T** (**5,5 Nm**). Attach the respective housing elongation **E10** and fasten using the screw for housing elongation **G10** (**2,3 Nm**). Insert coupling adapter **B**, the respective plug elongation **D10** (caution: vertical slot for plug elongation) and the coupling elongation **C5** into the elongated module A. (caution: coupling elongation reduced by 5 mm!)
2. Insert FL1 coupling incl. cam **SFL1** with the long side into module **A** (longer cylinder side).
3. Insert coupling adapter **B** into the second module **A** (Caution: the short coupling side must be installed in the correct horizontal position). Fit both modules together horizontally and fasten connecting screw **T** (**5,5 Nm**) through connecting rod **Z**.
4. Execute functional test.

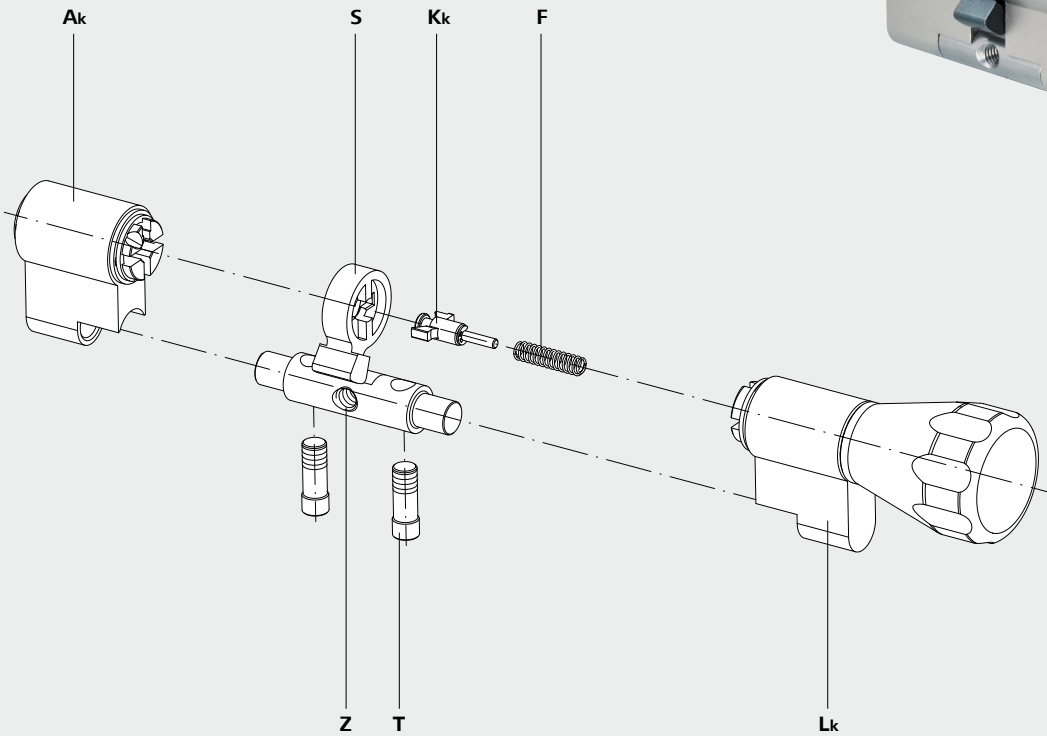
- A** Module
- B** Coupling adapter
- C5** Coupling elongation 5 mm (10, 15 or 20 mm)
- D10** Plug elongation 10 mm (5, 15 or 20 mm)
- E10** Housing elongation 10 mm (5, 15 or 20 mm)
- G10** Screw for housing elongation
- SFL1** FL1 coupling incl. cam
- T** Connecting screw
- Z** Connecting rod



## Half cylinder HZ/37

1. Insert connecting rod for half cylinder **Ze** rotated by approx. 180° into module **A**, attach the respective housing elongations **E5** and fasten with the screw for housing elongation **G5** (**2,3 Nm**), then pull out the connecting rod for half cylinder **Ze** again.
2. Slide the respective plug elongation **D5** into elongated module **A**.
3. Insert the plug end piece for half cylinder **H** including catch spring **I** and retaining pin **J** (correct position) into the cam for half cylinder **Sh** (pre-assembled).
4. Insert the pre-assembled cam with connecting rod for half cylinder **Ze** into the module **A** and fasten with connecting screw **T** (**5,5 Nm**).
5. Execute functional test.

- A** Module
- D5** Plug elongation 5 mm (10, 15 or 20 mm)
- E5** Housing elongation 5 mm (10, 15 or 20 mm)
- G5** Screw for housing elongation
- H** Plug end for half cylinder
- I** Catch spring
- J** Retaining pin
- Sh** Cam for half cylinder
- T** Connecting screw
- Ze** Connecting rod for half cylinder

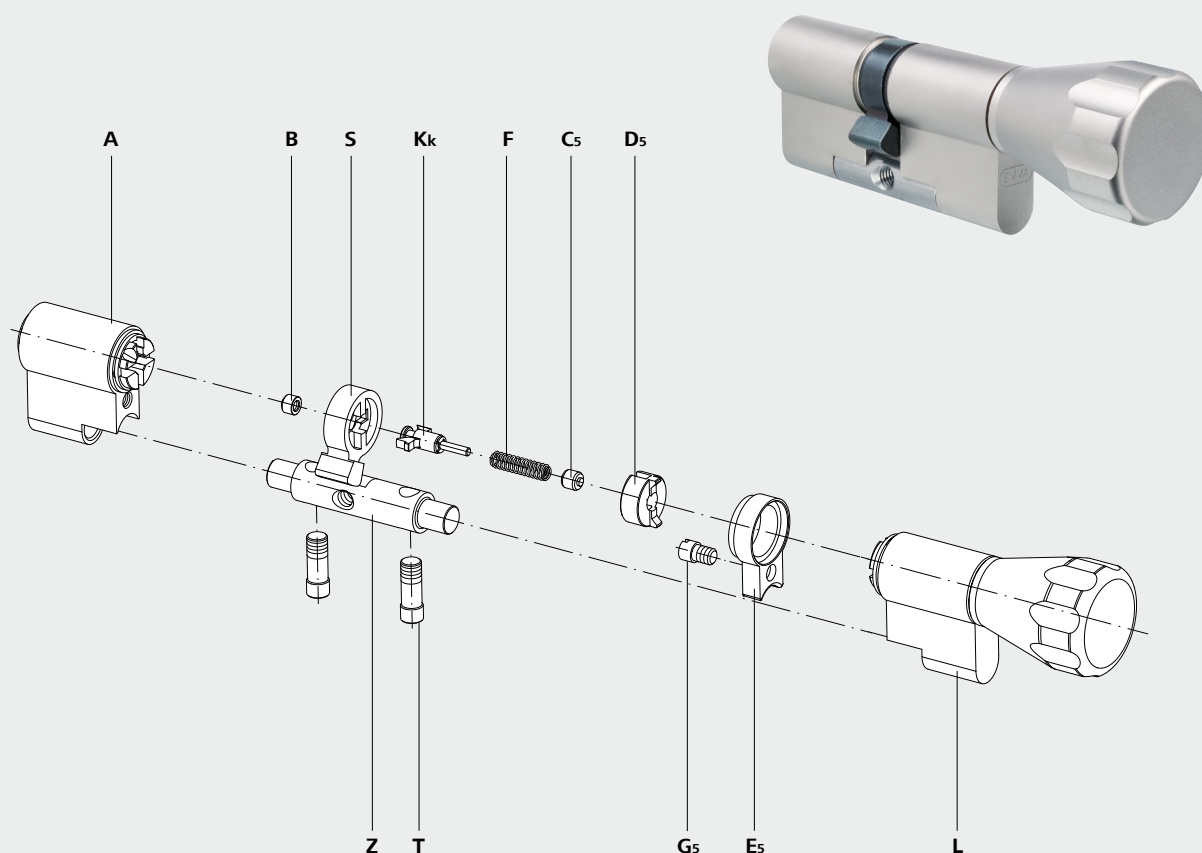


Short modules Ak/Lk  
cannot be elongated!

## Short thumb turn cylinder 27/K27

1. Insert connecting rod **Z** with one side into the short thumb turn module **Lk** and fasten with connecting screw **T** (**5,5 Nm**).
2. Insert spring for thumb turn coupling **F** and coupling for thumb turn cylinder **Kk** (Caution: position correctly horizontally) in the short thumb turn module **Lk** according to illustration.
3. Insert the cam for the thumb turn cylinder **S** (all in the correct position) in short thumb turn module **Lk** according to illustration.
4. Fit short module **Ak** and the short thumb turn module **Lk** together horizontally and firmly fasten with connecting screw **T** (**5,5 Nm**) through the connecting rod **Z**.
5. Execute functional test.

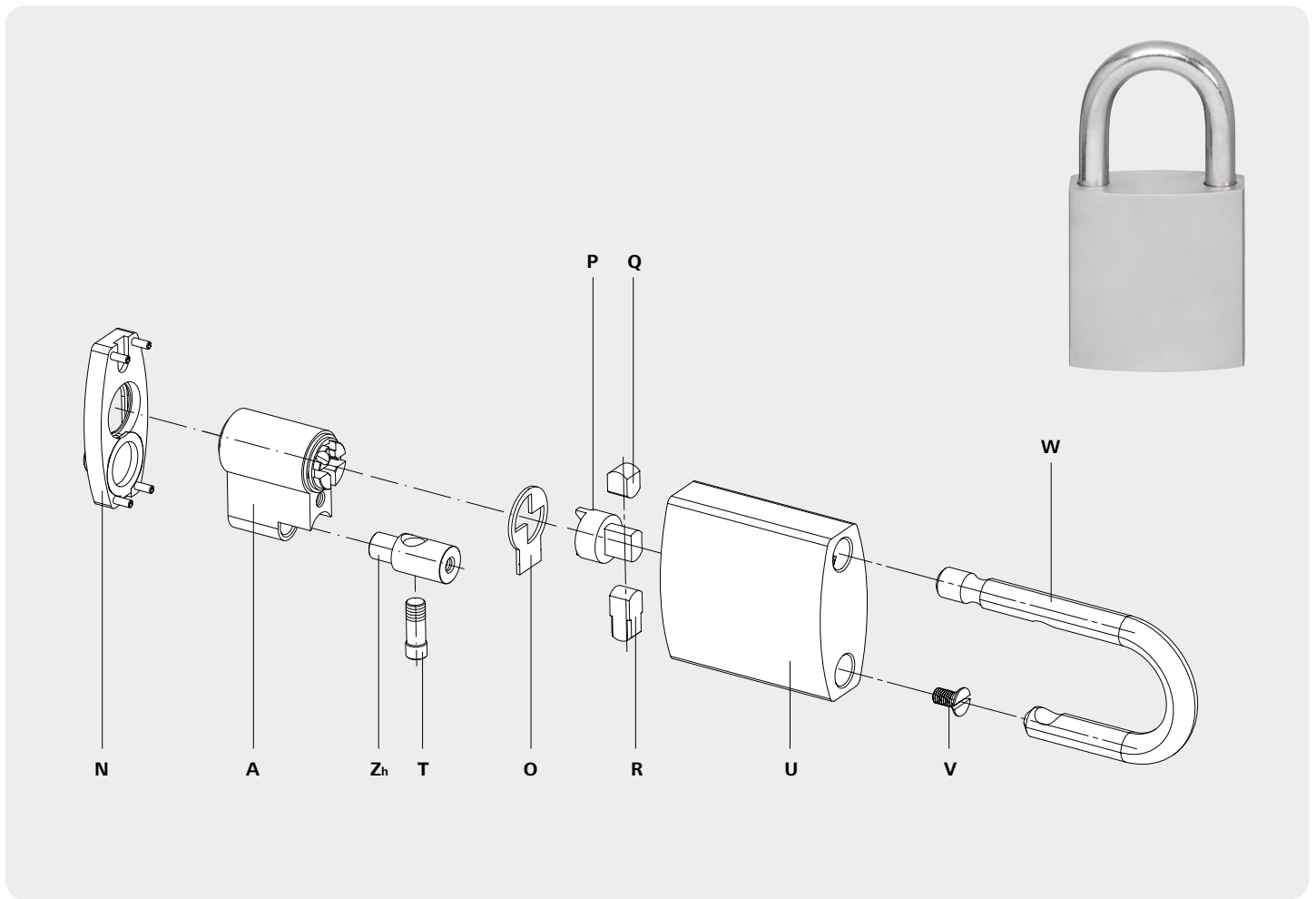
- Ak** Short module (incl. cam)
- F** Spring for thumb turn coupling
- Kk** Coupling for thumb turn cylinder
- Lk** Short thumb turn module with KKN (KKN: conical thumb turn)
- S** Cam for thumb turn cylinder
- T** Connecting screw
- Z** Connecting rod



## Thumb turn cylinder 31/K36

1. Insert connecting rod **Z** with the longer side into thumb turn module **L**, attach the respective housing elongation **E<sub>5</sub>** and fasten with screw for housing elongation **G<sub>5</sub>** (**2,3 Nm**), then pull connecting rod **Z** in place with connecting screw **T** (**5,5 Nm**).
2. Insert the plug elongation **D<sub>5</sub>**. Insert the coupling elongation **C<sub>5</sub>** in the hole for the thumb turn sleeve. Insert the spring for the thumb turn coupling **F**, the coupling for thumb turn cylinder **K<sub>k</sub>** (Caution: positioned horizontally in the correct position) and the cam for the thumb turn cylinder **S** (all in the correct position) in the thumb turn module **L** according to illustration.
3. With module **A** insert coupling adapter **B**.
4. Bring the module **A** and the thumb turn module **L** together horizontally and fasten with connecting screw **T** (**5,5 Nm**) through connecting rod **Z**.
5. Execute functional test.

- A** Module
- B** Coupling adapter
- C<sub>5</sub>** Coupling elongation 5 mm (10, 15 or 20 mm)
- D<sub>5</sub>** Plug elongation 5 mm (10, 15 or 20 mm)
- E<sub>5</sub>** Housing elongation 5 mm (10, 15 or 20 mm)
- F** Spring for thumb turn coupling
- G<sub>5</sub>** Screw for housing elongation
- K<sub>k</sub>** Coupling for thumb turn cylinder
- S** Cam for thumb turn cylinder
- L** Thumb turn module with KKN (KKN conical thumb turn)
- T** Connecting screw
- Z** Connecting rod

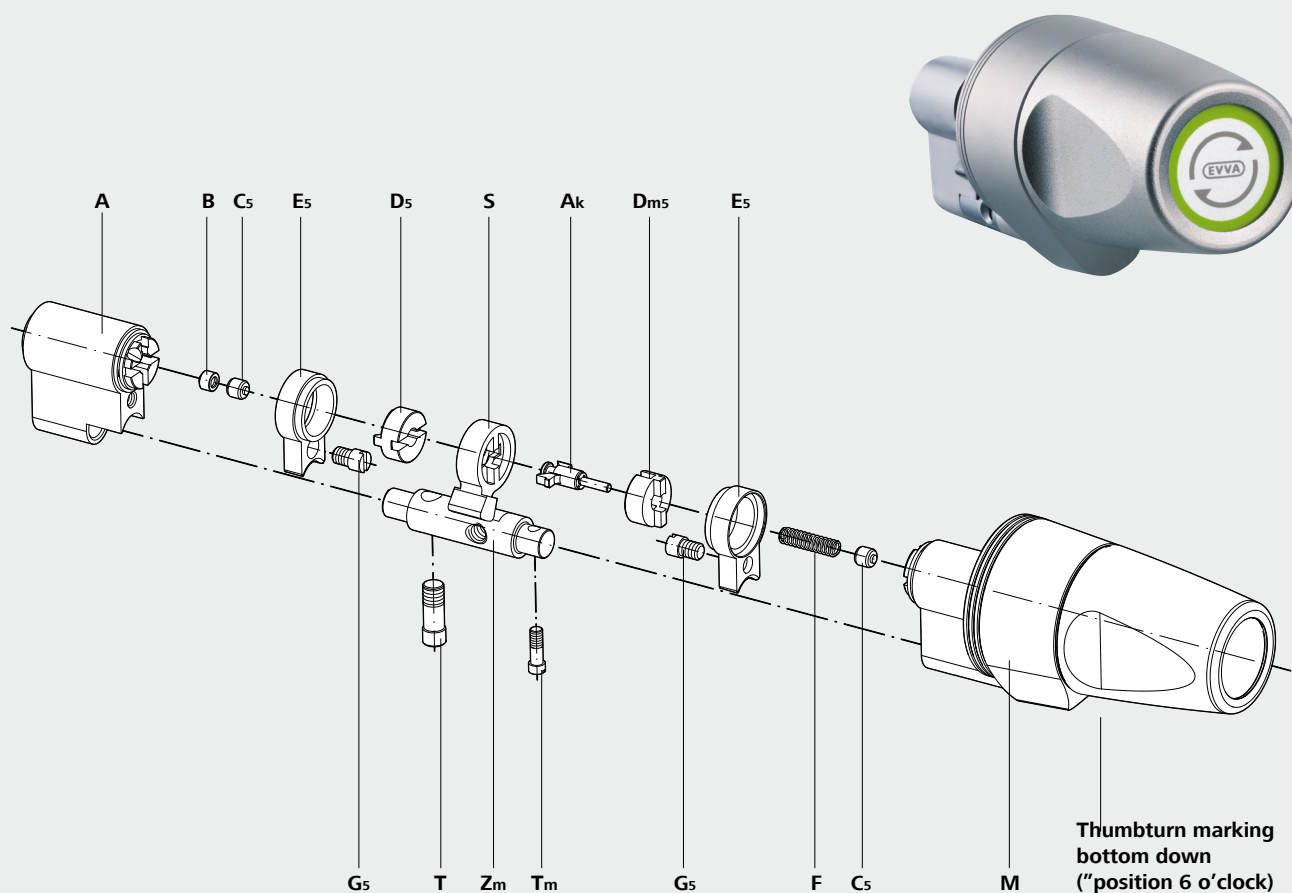


## Padlock HPM with optional dust cover (SSW)

1. Insert connecting rod **Zh** into module **A** and firmly fasten with connecting screw **T** (5,5 Nm).
2. Plug shackle **W** with both ends into housing **U**.
3. Insert locking bolt **R** and locking ball **Q** to designated cross holes in housing **U**, insert locking bolt **P** in correct position, attach guide slot **O** on top and secure by applying pressure.
4. Insert module **A** incl. secured connecting rod **Zh** to the housing **U**.
5. Insert key and turn it through 90°, release shackle **W** and use housing screw **V** to fasten it to connecting rod **Zh**.
6. Attach dust protection cover **N** to housing (optional).
7. Execute functional test.

- A** Module
- N** Dust protection cover (optional)
- O** Guide slot
- P** Latching bolt
- Q** Locking ball
- R** Locking bolt
- T** Connecting screw
- U** Housing
- V** Housing screw
- W** Shackle
- Zh** Connecting rod





## EMZY 36/K36

1. Insert connecting rod **Z<sub>m</sub>** into motor thumb turn module **M**, attach respective housing elongation **E<sub>5</sub>** and fasten with housing elongation screw **G<sub>5</sub>** (**2,3 Nm**), then firmly fasten connecting rod **Z<sub>m</sub>** with connecting screw **T<sub>m</sub>**.

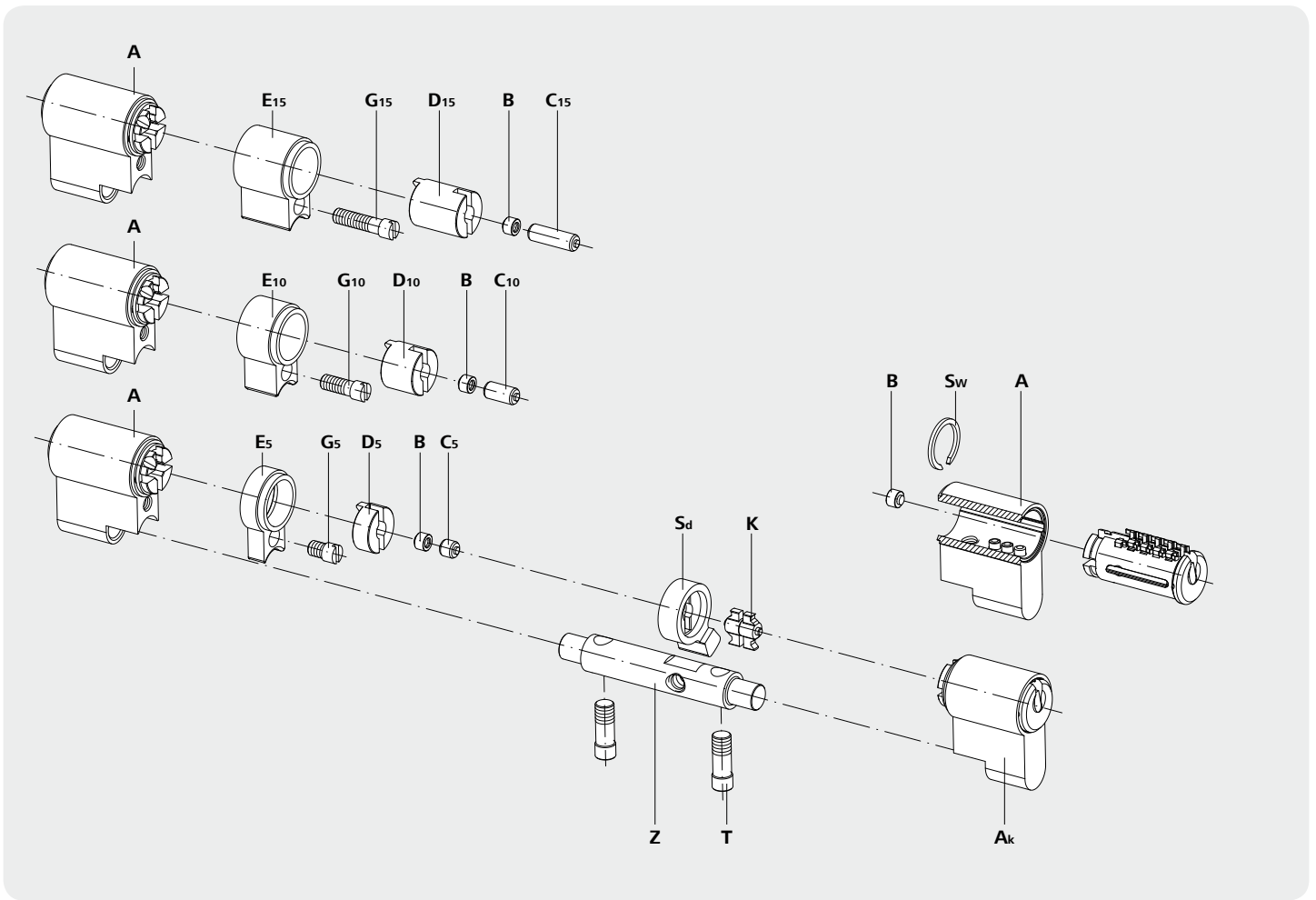
**Important:** For the assembly the marking (drill hole) of the turnable thumbturn must be aligned downward ("position 6 o'clock).

2. Insert plug elongation **D<sub>5</sub>**. Insert coupling elongation **C<sub>5</sub>** in the drilled hole for the thumb turn cylinder. Insert spring for thumb turn coupling **F**, the

coupling for thumb turn cylinder **K<sub>k</sub>** and the cam for the thumb turn cylinder **S** (all in the correct position) in the motor thumb turn module **M** according to the illustration.

3. Elongate module **A** with housing elongation **E<sub>5</sub>** and fasten with the screw for housing elongation **G<sub>5</sub>** (**2,3 Nm**), insert coupling adapter **B**, insert plug elongation **D<sub>5</sub>** and coupling elongation **C<sub>5</sub>**.
4. Join module **A** and motor thumb turn module **M** and firmly fasten with connecting screw **T<sub>m</sub>** through connecting rod **Z<sub>m</sub>**.
5. Execute functional test.

- A** Module
- B** Coupling adapter
- C<sub>5</sub>** Coupling elongation 5 mm (10, 15 or 20 mm)
- D<sub>5</sub>** Plug elongation 5 mm (10, 15 or 20 mm)
- D<sub>m5</sub>** Plug elongation brass 5 mm (10, 15 or 20 mm)
- E<sub>5</sub>** Housing elongation 5 mm (10, 15 or 20 mm)
- F** Spring for thumb turn coupling
- G<sub>5</sub>** Screws for housing elongation
- K<sub>k</sub>** Coupling for thumb turn cylinder
- M** Motor thumb turn module
- S** Cam for thumb turn cylinder
- T** Connecting screw
- T<sub>m</sub>** Connecting screw motor
- Z<sub>m</sub>** Connecting rod for motor



## Modular design overview

Exploded view of cylinder elongation

**Caution:** Coupling adapter is to be fitted starting with 31mm

**Note:** Spray the cylinder with an EVVA special spray on the keyway. This considerably increases the service life of the cylinder.

- A** Module
- Ak** Short module
- B** Coupling adapter
- C5** Coupling elongation 5 mm (10, 15 or 20 mm)
- D5** Plug elongation 5 mm (10, 15 or 20 mm)
- E5** Housing elongation 5 mm (10, 15 or 20 mm)
- G5** Screws for housing elongation
- C** Coupling for DZ
- Sd** Cam DZ
- Sw** Circlip AF width 12
- T** Connecting screw
- Z** Connecting rod

### Dedicated components for versions with BSZ and FL1

Cylinder lengths	Coupling adapter B	Coupling elongation C	BSZ coupling	FL1 coupling
31/31	●/●	●/●	Special	not possible
27/36	○/●	●/●	Standard	Standard
31/36	●/●	●/●	Standard	Standard
31/41	●/●	○/●	Standard	Standard

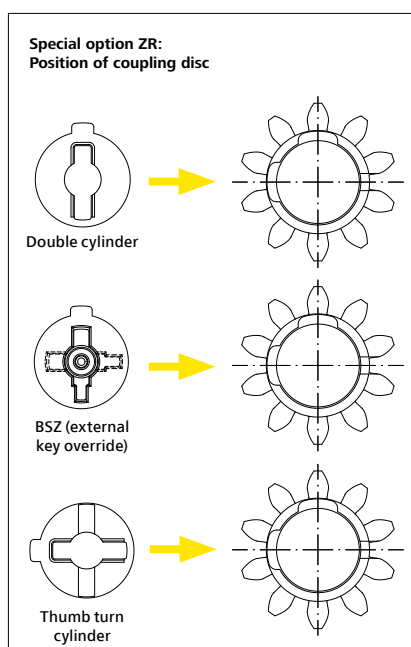
○ excluding  
● including





Half cylinder	for Size in mm												Article number	Designation		
		HZ 27	HZ 32	HZ 37	HZ 42	HZ 47	HZ 52	HZ/57*	HZ 62	HZ 67	HZ 72	HZ 77				
Housing module complete																
Housing module short		1														
Housing elongation	5			1				1						0043535056	Housing elongation 5 mm BKS	
Housing elongation	10				1				1				1	0043535064	Housing elongation 10 mm BKS	
Housing elongation	15					1				1			1	0043535072	Housing elongation 15mm BKS	
Housing elongation	20						1	1	1	1	2	1		0043535080	Housing elongation 20mm BKS	
Plug elongation	5			1				1						0043535009	Plug elongation 5 mm BKS MS	
Plug elongation	10				1				1				1	0043535013	Plug elongation 10mm BKS VZN	
Plug elongation	15					1				1			1	0043535021	Plug elongation 15mm BKS VZN	
Plug elongation	20						1	1	1	1	2	1		0043535048	Plug elongation 20mm BKS VZN	
Plug end for half cylinder (HZ)		1	1	1	1	1	1	1	1	1	1	1	1	0043535102	Plug end for BKS	
Spring for half cylinder (HZ)		1	1	1	1	1	1	1	1	1	1	1	1	0045063186	Spring retaining pin/EHZ	
Retaining pin for half cylinder (HZ)		1	1	1	1	1	1	1	1	1	1	1	1	0043506250	EHZ retaining pin	
Cam for half cylinder (HZ)		1	1	1	1	1	1	1	1	1	1	1	1	0043151509	EHZ 3KS BKS cam	
Connecting screw		1	1	1	1	1	1	1	1	1	1	1	1	0043353681	BKS M5 TORX screw	
Screw for 36 mm - side				1										0043353608	Screw for BKS S.X 5 (36)	
Screw for 41 mm - side					1									0043353616	Screw for BKS S.X 10 (41)	
Screw for 46 mm - side						1								0043353624	Screw for BKS S.X 15 (46)	
Screw for 51 mm - side							1							0043353632	Screw for BKS S.X 20 (51)	
Screw for 56 mm - side								1						0043353640	Screw for BKS S.X 25 (56)	
Screw for 61 mm - side									1					0043353659	Screw for BKS S.X 30 (61)	
Screw for 66 mm - side										1				0043353667	Screw for BKS S.X 35 (66)	
Screw for 71 mm - side											1			0043353675	Screw for BKS S.X 40 (71)	
Screw for 76 mm - side												1				
Cylinder screw	70	1	1	1	1	1	1	1	1	1	1	1	1	0043350137	Senkko M5X70 M.S.	
Connecting rod compl. f. HZ 52 (HZ/32)	41	1	1											0029000409	Connecting rod Complete BKS 3KS EHZ+32	
Connecting rod compl. f. HZ 53 (HZ/37)	46			1										0029000417	Connecting rod Complete BKS 3KS EHZ+37	
Connecting rod compl. f. HZ 54 (HZ/42)	51				1									0029000425	Connecting rod Complete BKS 3KS EHZ+42	
Connecting rod compl. f. HZ 55 (HZ/47)	56					1								0029000433	Connecting rod Complete BKS 3KS EHZ+47	
Connecting rod compl. f. HZ 56 (HZ/52)	61						1							0029000441	Connecting rod Complete BKS 3KS EHZ+52	
Connecting rod compl. f. HZ 56A (HZ/57)	66							1						0029000468	Connecting rod Complete BKS 3KS EHZ+57	
Connecting rod compl. f. HZ 56B (HZ/62)	71								1					0029000476	Connecting rod Complete BKS 3KS EHZ+62	
Connecting rod compl. f. HZ 57 (HZ/67)	76									1				0029000484	Connecting rod Complete BKS 3KS EHZ+67	
Connecting rod compl. f. HZ 57A (HZ/72)	81										1			0029000500	Connecting rod Complete BKS 3KS EHZ+72	
Connecting rod compl. f. HZ 58 (HZ/77)	86											1		0029000492	Connecting rod Complete BKS 3KS EHZ+77	

\* Alternative equipment available, to prevent 5 mm







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