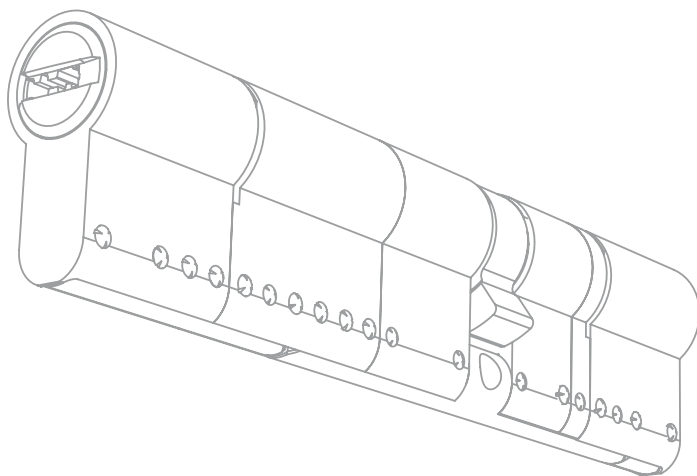


TESA

ASSA ABLOY



INSTRUCTION MANUAL **MODULAR CYLINDER**

Experience a safer
and more open world



ASSA ABLOY

INTRODUCTION

Years of experience strengthens the quality that TESA® provides to their clients. On this occasion TESA® is giving you the opportunity with a new product to obtain the length of the cylinder that best fits your needs in a short period of time.

Modular cylinders first appeared as an answer to those situations where due to circumstances or special features it was necessary to give a fast and effective response to the client, as well as being safe and practical.

The guide-book has been constructed in a way that can best assist you in assembling the cylinder in a fast and effective manner.

In order to assist the understanding, the instructions come with corresponding illustrations

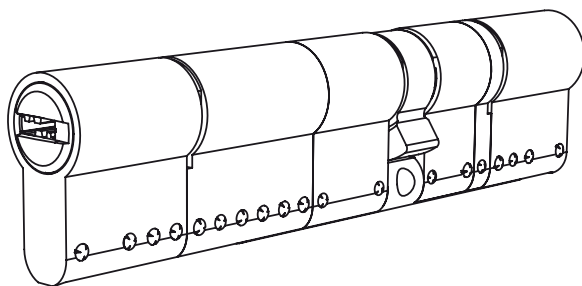
TESA® has divided the necessary material to work with the modular system into three parts:

1.-PRIMARY MODULES

2.-MODULAR KIT

3.-SPARE PARTS KIT

Although there are many ways to assembling a cylinder, TESA recommends following the instructions.





ASSA ABLOY

INDEX

DESCRIPTION OF THE MODULAR CYLINDER

1. LOADING MODULES	1
2. MODULAR KIT	2
3. SPARE PARTS KIT	6

ASSEMBLY INSTRUCTIONS

DOUBLE CYLINDER	11
HALF CYLINDER	19
KNOB CYLINDER	27

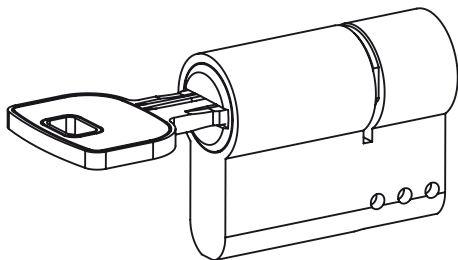
ANNEXES

I - ASSEMBLY BASED ON 30mm MODULES.	33
II - ASSEMBLY BASED ON 45mm MODULES.	40
III - ASSEMBLY BASED ON KNOB MODULES.	46
IV - ASSEMBLY OF HALF CYLINDERS	52

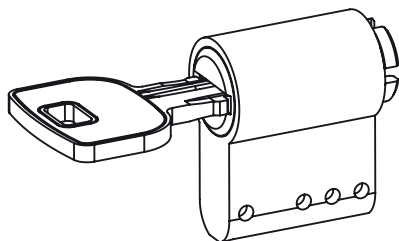


ASSA ABLOY

1. LOADING MODULES



45mm loading module



30mm loading module

LOADING MODULES

It is the part of the cylinder that includes pins and rotor. There are different types of systems depending on the level of security required, T60, T80, TX80... These primary modules are not replaced by the modular carrying case. There are two different sizes of loading modules:

- 30 mm loading module.
- 45 mm loading module.

The use depends on the size of the cylinder.

For assemblies of 45mm or greater, it's recommended to use a 45mm module.

For sides less than 45mm, use the 30mm module.

In case the 45mm modules are not available, the assemblies can always be done by using 30mm modules.

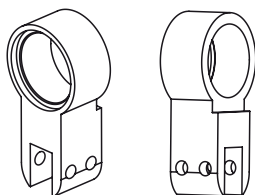
MODULAR KIT. Components included

The modular kit is the first of two carrying cases needed to work with the modular cylinders. It includes all the components required to extend the cylinder's body. The following pages include a brief description of the elements included in this first carrying case.

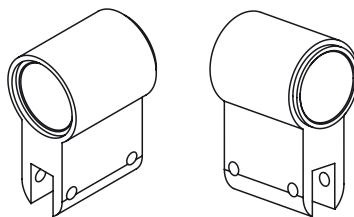
BODY EXTENSIONS

With these pieces the desired can be achieved. There are two different types; body extension with slot and body extension without slot.

The slotted model is used to free the back side of the primary module.



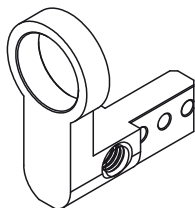
Body extension with slot



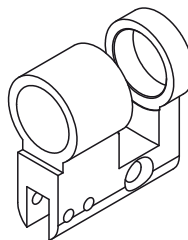
Body extension without slot

HALF CYLINDER BODY EXTENSIONS

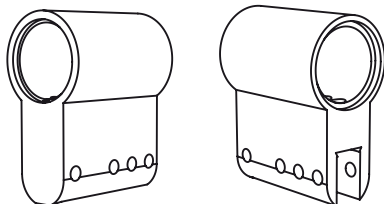
These are the parts that are used to make up the bridge assembly (the area where the M5 thread is) in the half cylinders. There are 2 types: the one used for measurements between 30 and 40 and the one used for measurements above 45.



Extension from 30 to 40



Extension above 45



KNOB MODULE

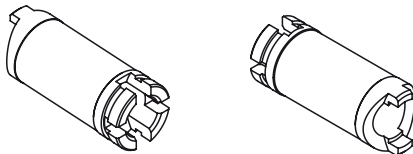
It is the body extension that is situated in the final part of the cylinder (next to the knob).

There are two different finishes: Brass and Nickel (Ref. MDCNO30LT y MDCNO30NM).

ROTOR EXTENSIONS

They are hollow, cylindrical pieces whose function is to transmit the rotating movement of the rotor along the cylinder onto the cam.

They have different shapes at each end, so that one end can join and allow placements of more extensions.

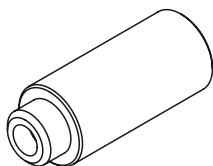


CLUTCH EXTENSIONS

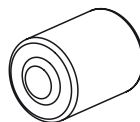
They are rock solid cylindrical, strengthens with different lengths.

The function is to displace the clutch so that the key can power the cam from one side or from another side. In DS models, these extensions have a different diameter at each extreme. The extreme with the smaller diameter is the one that has to be in contact with the clutch.

There is a symmetrical model that must be used in certain assemblies.



DS model

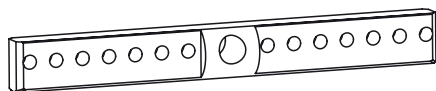


Symmetrical model

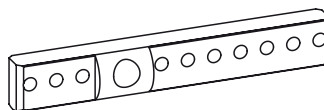
UNION BARS

They are easily recognisable by the threaded hole. This threaded hole is the part that allows fixing the cylinder to the lock through a fixing screw that is delivered with the primary modules.

The union bars are identified by the number of holes they have on each side.



Union bar 7x7



Union bar 3x7

BAR EXTENSIONS

These bars allow the union of different body extensions. They do not have threaded holes.

There are different measures and they are identified according to their length. There are extensions of 10, 30, 40 and 50mm.



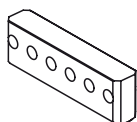
Extension bar 10



Extension bar 15



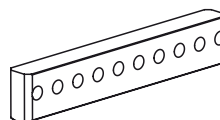
Extension bar 25



Extension bar 30



Extension bar 40



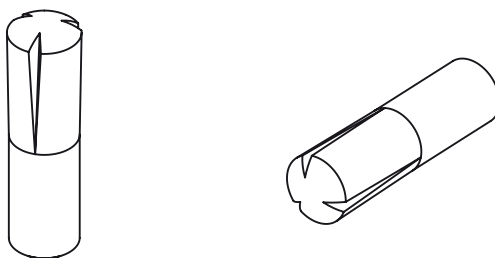
Extension bar 50



PINS

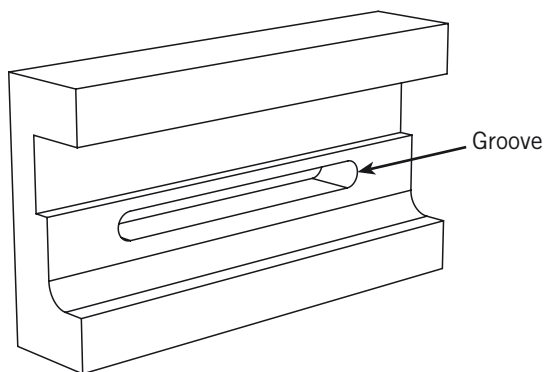
Their function is to fix the body extensions to the bars.

They have different diameters at each end, and on one of their heads there is a reference notch. This is the pin head.



ASSEMBLING TOOL

The function of this piece is to make the assembly of the cylinders easier, being used as a guide and a support. Moreover it has one groove designed to make the expulsion of the pins easier in case of necessity.



3. SPARE PARTS KIT

We call spare parts kit the second of the carrying cases needed to work with the modular cylinders.

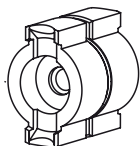
It includes the components related to the internal performance of the cylinders. In the following pages is brief description of the elements included in this second carrying case.

CLUTCHES

Their function is to allow the turning of the cam, transmitted by the rotor or rotor extensions.

There are 3 different types of clutches:

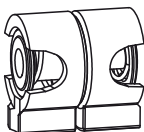
1. Standard
2. Double security (DS)
3. For knob cylinder.



STANDARD CLUTCH 30x30

(Ref. EMBRAG3030).

This is the model that is used with all non-patented security systems (FLAT KEY).



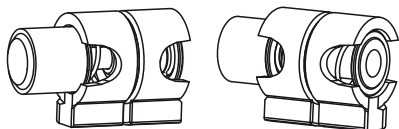
DS CLUTCH 30x30

(Ref. EMBRAGUTK30301P)

This type of double security clutch is ideal for flat keys and cylinder which measure is 30, 40 and longer sizes.

Do not use it if one side is 35mm.

This clutch model has the advantage of being able to open with key from the outside with having an additional key inside.



DS CLUTCH 30x35

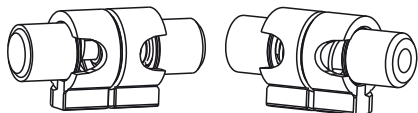
(Ref. EMBRAGUTK30351P)

Double security clutch appropriate for flat keys. It differs from the previous one in the fact that it is designed to be mounted in a cylinder with one side of 35mm.



ASSA ABLOY

DESCRIPTION OF THE MODULAR CYLINDER

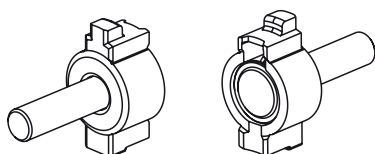


DS CLUTCH 35x35

(Ref. EMBRAGUTK35351P)

It's a double security clutch for flat keys.

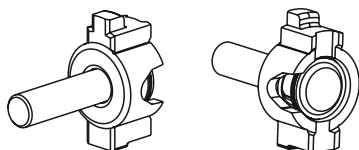
It is only to be used with sizes of 35x35 mm.



CLUTCH FOR KNOB IPS/30

(Ref. EMBRABOTIPS30)

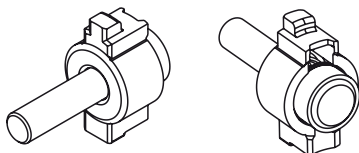
Its use is aimed for sawn keys systems.



CLUTCH FOR KNOB T80/30

(Ref. EMBRABOTT80)

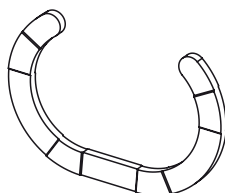
This type of clutch is used in knob cylinders with flat keys.



CLUTCH FOR KNOB T80/35

(Ref. EMBRABOT35)

This type of clutch is used in any of TESA® systems where the key side of the cylinder is 35mm.



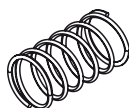
CLIPS (Ref. CLIPEURO)

They fix the cylinder in a functional way. To place it correctly it is necessary to use special pliers.



ADJUSTABLE WASHER CLIP (Ref. ARANREP1)

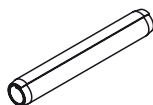
Their function is to maintain together all the pieces that form the assembly. They differ from the traditional clips in that the material is harder and more elastic, which provides an easy and fast placement.



THUMB TURN CLUTCH SPRING

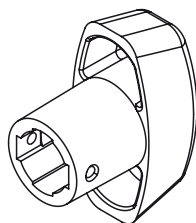
(Ref. MUELEJBOT)

It returns the knob clutch to the initial position. Its part number is "MUELEJBOT".



PIN DIN 7343 2x16

This elastic pin fixes the knob to the spindle knob.



KNOBS

Through them we perform the turning of the spindle knob, and also to the cam.

There are two different finishes:

- Polished brass (PB)
- Satin nickel (SN)

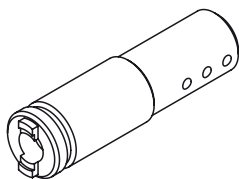


ASSA ABLOY

DESCRIPTION OF THE MODULAR CYLINDER

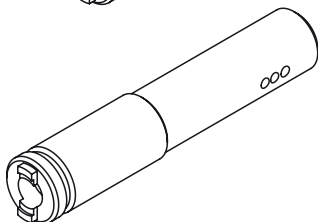
SPINDLE KNOBS

The function is to connect the knob with the cam, therefore transmitting the movement. There are 4 different spindle knobs of different lengths.



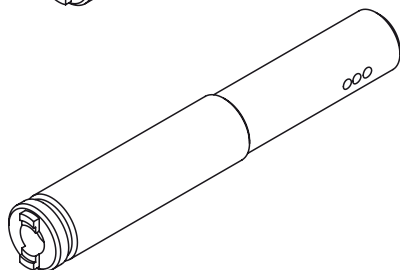
SPINDLE KNOB 27/37 TALA.LT L30,4

For mounting knob cylinders when the knob side is 30 or 35mm.



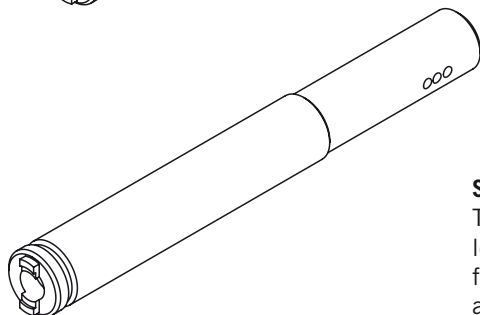
SPINDLE KNOB 40/60 TALA.LT L40,4

For mounting knob cylinders when the knob side is 40 or 60mm.



SPINDLE KNOB 65/85 TALA.LT L65,4

This spindle has a length for sizes between 65 and 85mm in the side of the knob.



SPINDLE KNOB 90/110 TALA.LT L90,4

The longest spindle knob version, for lengths of the knob side requiring these features. Its range of use is between 90 and 110mm.

CAMS

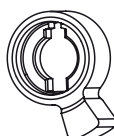
The function is to lock. In this carrying case two different types can be found; for half cylinders. Some are designed for narrowed styles while others are designed for wooden doors.



CAM 2200 0°

Ref. EXCR13D0)

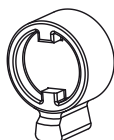
Designed to be used in narrowed styles (double cylinder).



CAM R15 DOUBLE CYLINDER 25° E250

(Ref. EXCR15D5)

Its unique angle of 25° gives more security to the cylinder. This model is designed for wooden doors.



CAM 2219 0° HALF CYLINDER

(Ref. EXCR13M0)

Single cylinder cam to be used in metallic doors.



CAM 2030 25° HALF CYLINDER

(Ref. EXCR15M5)

Single cylinder cam to be used in wooden doors.



EXC R13 CIL.DOB.25° 1PIC

(Ref. EXCR13D51PICO)

Designed for use in double cylinders whose final installation will be in metal doors, and which also require a double safety clutch (EMBRAGUTK30301P, EMBRAGUTK30351P and EMBRAGUTK35351P). The angle of eccentricity of 25° provides the cylinder with greater security.



EXC R15 CIL.DOB.25° 1PIC

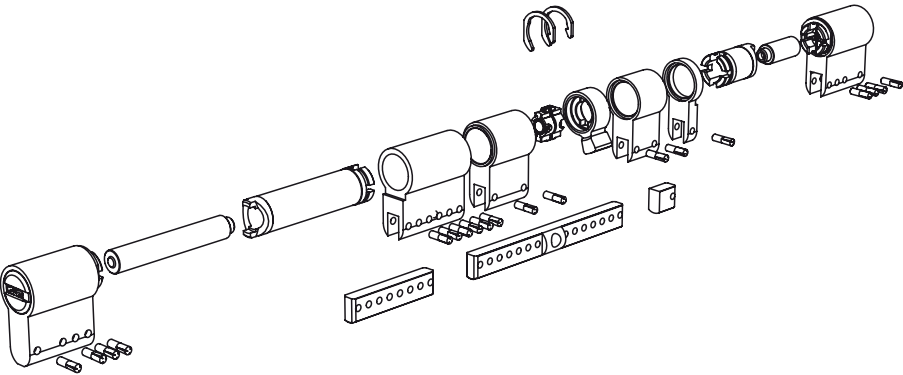
Designed for mounting on double cylinders that require a double safety clutch and whose final installation is on wooden doors rather than on metal doors. The clutch references with which it can be assembled are as follows:

EMBRAGUTK30301P, EMBRAGUTK30351P and EMBRAGUTK35351P. The angle of eccentricity of 25° provides the cylinder with greater security.



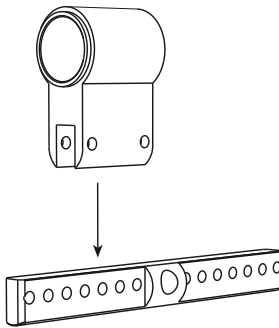
ASSA ABLOY

DOUBLE CYLINDER ASSEMBLY INSTRUCTIONS



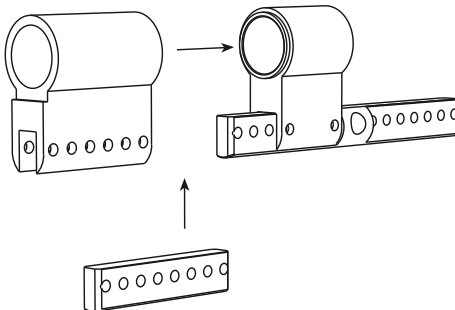
First you must locate the elements required to mount the requested cylinder in the configurations of the annexes. The example is the assembly for an 80x50 cylinder. In the “annex 1” on page 29 are the components needed. In this case, it will be done by using 30mm primary modules. The procedure for different lengths is the same.

1



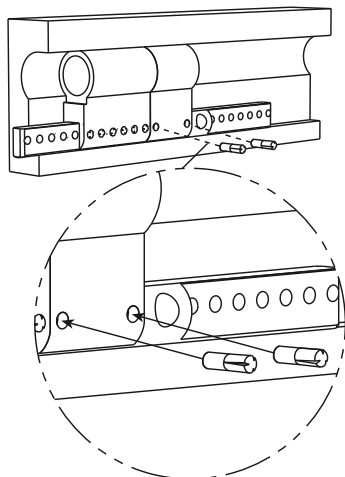
Start the assembly of the longest side of the cylinder. Start from the central union bar, the one that has the threaded hole, placing the male end of the body extension as shown in the image. In this case it is a body extension of 20mm and a union bar of 7x7.

2



Now place a slotted body extension of 30mm (Part No. MDSUPLE30R) and the extension bar of 40mm (Part.No.MDALARG40) as shown in the illustration.

3

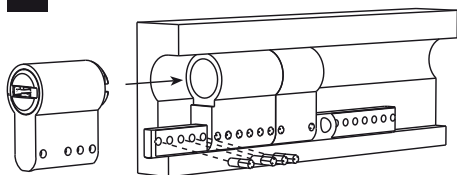


Fix the body extensions to the bars using the pins.
These pieces have some notches on one side. This is the end to be struck. In case of a mistake the assembling tool comes provided with a slot that makes the removal of the pins easier. Simply, knock the pins with an awl from the opposite side of the notches. Making them drop through the groove of this assembling tool.



IN ORDER TO AVOID INJURIES USE
THE HAMMER WITH CAUTION

4

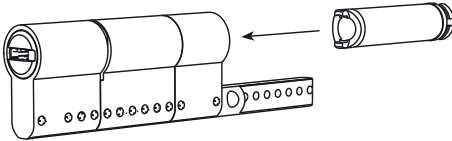


Now place the primary module and fix the parts with the pins.



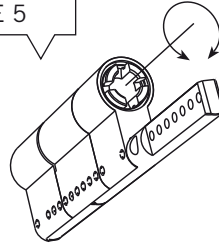
IN ORDER TO AVOID INJURIES USE
THE HAMMER WITH CAUTION

5



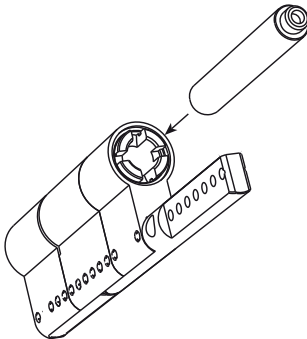
Insert the corresponding rotor extension and make sure to put it in the correct position. See the image. In this case we need a piece of 50mm (Part No. SUPLEXTST8050).

ADVICE 5



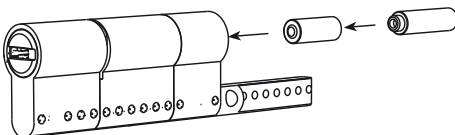
To place it correctly, turn the extension until you notice that it has found the right position.

6



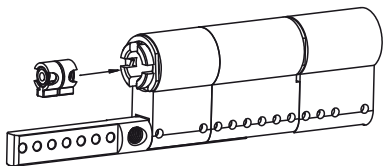
Now is time to introduce the corresponding clutch extensions. Make sure to put them into the right position. In this case, if we need a double security clutch we will use a clutch extension DS of 50mm. This is the part number SUPLINTE80DS. The side with the smaller diameter has to point towards the clutch (See the drawing).

6.1



If the clutch is standard, the extensions needed are two. One of length 20mm and symmetric (Part No. SUPLINTE50) and the other DS of 30mm (Part No. SUPLINTE60DS). These pieces will be inserted as shown in the image.

7

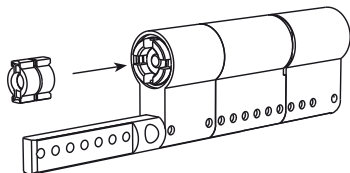


Place the clutch inside the rotor. If it is double security (Part No. EMBRAGUEDS) make sure you do it in the right position. For that, take into account the following explanation:

1- Place the two parts of the clutch according to the photo. (Cotter alike lined)

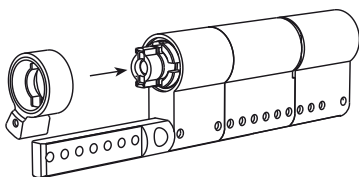
2- Put the clutch into the rotor extension with the cotters pointing up (See the image).

7.1



The standard clutch can be placed in every position.

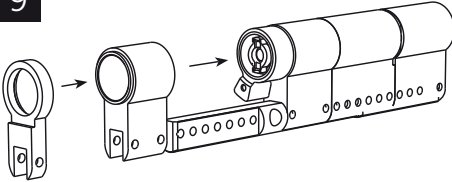
8



Place the cam according to the illustration and take into account that some locks (narrowed styles) work with the part number EXCR13D0

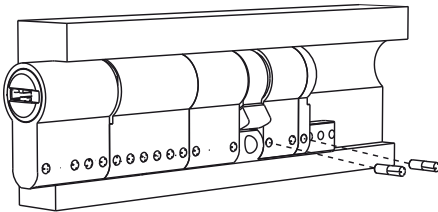
At this point we have finished the first part of the assembling and we will complete the process with the other part of the cylinder.

9



Put the body extensions needed to assemble the measurement requested (See the annex to locate the parts). In this case, for a side of 50mm, we will need a body extension of 15mm without slot (Part No. MDSUPLE15N) and another of 5mm with slot in this case. (Part No. MDSUPLE05R). Make sure to point the pieces correctly (See the drawings).

10

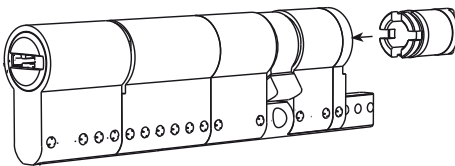


After checking that both components are correctly placed, fix them with the pins. As done in the point 3.



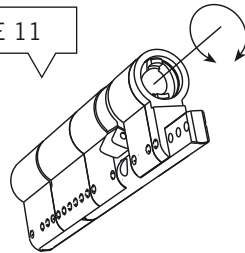
IN ORDER TO AVOID INJURIES USE THE HAMMER WITH CAUTION

11



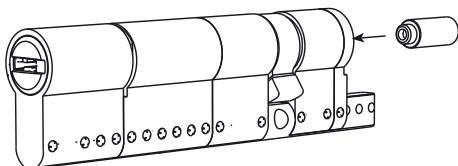
Now insert the corresponding rotor extension, taking into account that the first, if there were more than one, has to connect with the clutch. Do it as shown in the image. In this case we have used an only extension of 20mm (Part no. SUPLEXTST5020).

ADVICE 11



To place it correctly, turn the extension until you notice that it has found the right position. The placing for the second extension, if there were more than one, meets a similar process, with the only difference of connecting with the other extension instead of the clutch.

12

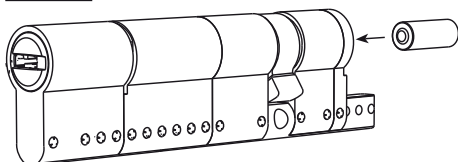


Now introduce the clutch extensions in the right position.

In this case, if we use a double security clutch, we will introduce a clutch extension DS of 20mm (Part No. SUPLINTE50DS)

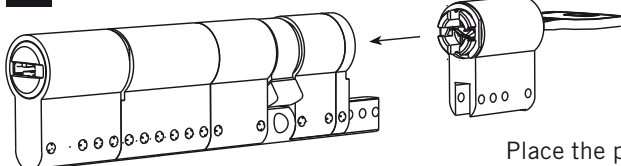
The side with the smaller diameter has to point towards the clutch (See the drawing).

12.1



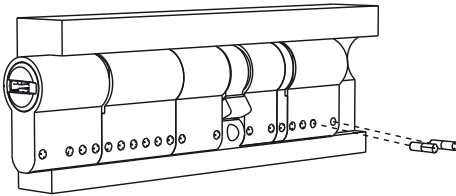
In case of using a standard clutch, place a symmetric extension of 20mm (Part No. SUPLINTE50)

13



Place the primary module. Use the key to ensure the correct position of the part.

14

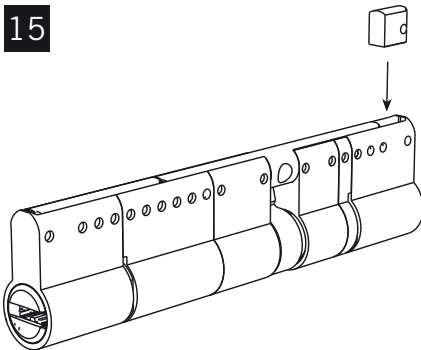


Once the function has been checked, fix the primary module using the pins as done in the 3rd step.



IN ORDER TO AVOID INJURIES USE
THE HAMMER WITH CAUTION

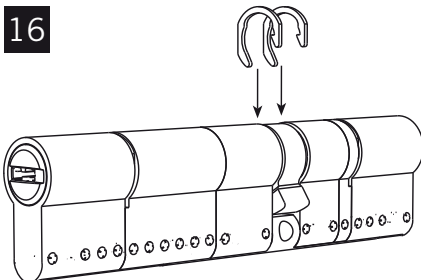
15



To complete some assemblies, we will need EXTENSIONS to fill up the gaps left by the union bar. There are of 10, 20mm, etc... This aspect is purely cosmetic and it does not affect to the quality of the assembly.

In the case shown, we need an extension of 10mm (Part No. MDALARG10). Take into account that both holes of the extension and primary module overlap and fix them.

16



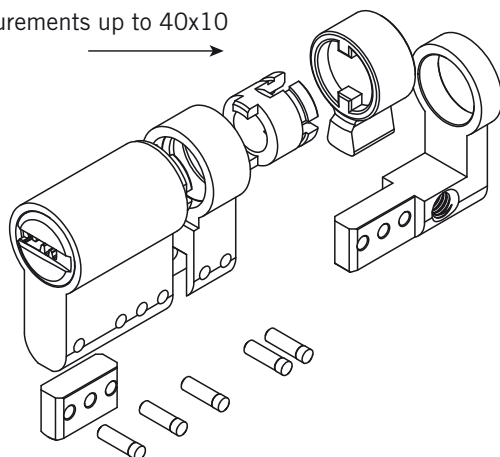
Finally place the self washer clips in the gaps located between the cam and the body extensions. These washer clips are designed to perform an instant fit when pressed down. They are located in the spare parts kit. (Part.No. ARANREP1)



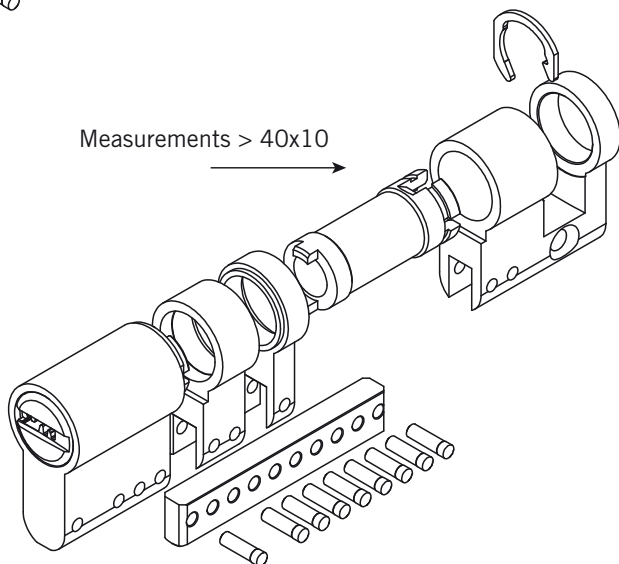
ASSA ABLOY

HALF CYLINDER ASSEMBLY INSTRUCTIONS

Measurements up to 40x10



Measurements > 40x10

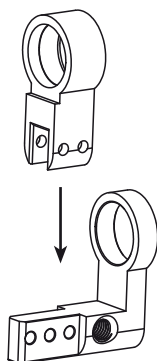


MEASURES FROM 30X10 TO 40X10

First you must locate the elements required to mount the requested cylinder in the configurations of the annexes.

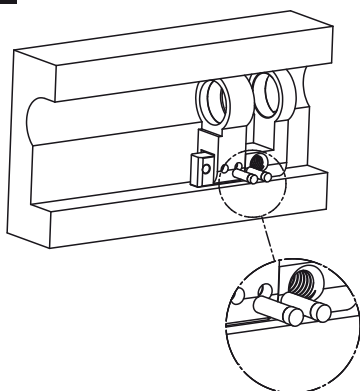
This illustration is an example of the assembly of a 40x10 half cylinder. The procedure for different lengths are the same.

1



Start with the $\frac{1}{2}$ modular body by fitting the body extension as shown in the figure. That is, with the projection pointing outwards. The example in the figure shows assembly of a 10R body extension.

2



Place the assembled part in the tool that comes with the KIT.

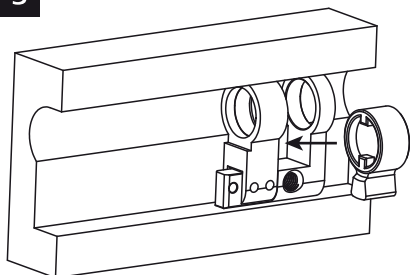
Attach the body extension to the modular $\frac{1}{2}$ body using the pins.

These pins have notches in a part of the head. This is the part that you have to hit with the hammer. In the event that a mistake is made, the assembly tool is provided with a slot that facilitates the extraction of the pins. To remove them, hit the pins on the opposite side of the notches with a punch, making these fall through the groove of the assembly tool.



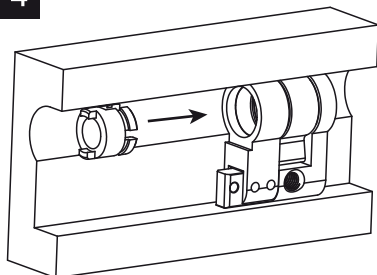
TO AVOID INJURIES, USE
THE HAMMER WITH CAUTION

3



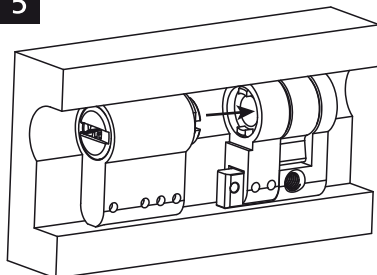
Position the half-cylinder cam, which is included in the component kit, as shown in the picture.

4



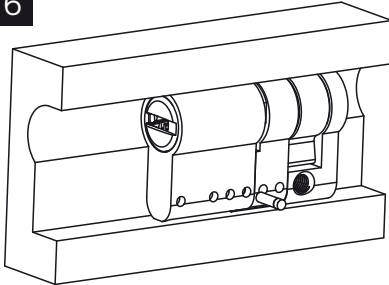
Insert the corresponding rotor extension in the correct position as shown in the figure and make sure it slots in with the cam, so that if you rotate the rotor extension the cam will also rotate.
In this case it is a rotor extension of 10 mm.

5



Fit the primary module.
Use the key to ensure the correct position of the assembly.

6

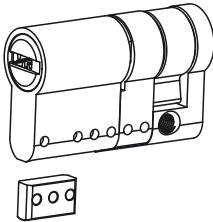


Once it is verified that it is working correctly, fix the primary module using the pin, as in step 2.



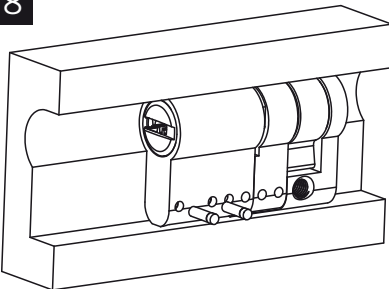
TO AVOID INJURIES, USE
THE HAMMER WITH CAUTION

7



Fit the bar extension, as shown in the figure. In this example the extension is 15 mm.

8

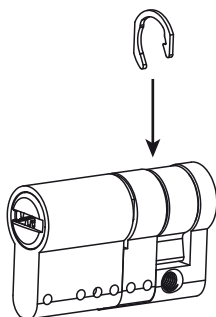


Attach the 15 mm extension with the primary module using the pins.



TO AVOID INJURIES, USE
THE HAMMER WITH CAUTION

9



Fit the replacement washer clip, as shown in the figure, in the slot that is left between the cam and the body extension.

This washer clip is designed so that it couples immediately by exerting downward pressure.

The washer clip is in the kit of components.

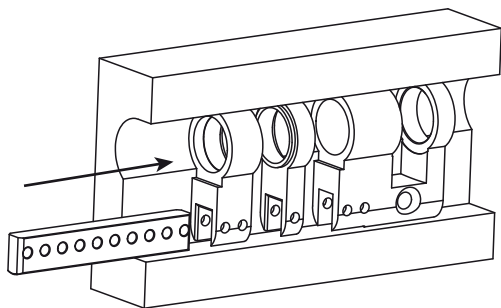
MEASUREMENTS > 40X10

First locate the necessary items to assemble the desired cylinder in the configurations in the annexes.

The example shown illustrates the assembly of a 60x10 half cylinder.

The procedure for working with other sizes is the same.

1



Place the assembled part in the tool that comes with the KIT.

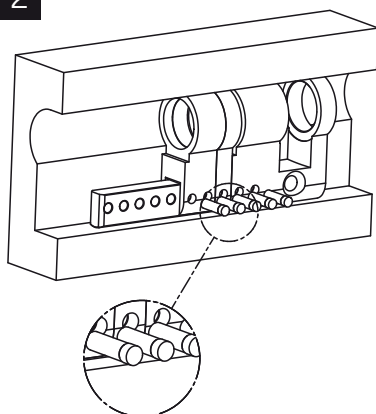
Position and slide the body extensions and the extension bar as shown in the figure.

The groove of the body extension must point outwards.

In this case, body extensions 5 and 10R are used with an extension bar of 50 mm.

Make sure that the holes of the body extensions coincide with the holes of the extension bar.

2



Place the assembled part in the tool that comes with the KIT.

Attach the body extensions to the $\frac{1}{2}$ + 15 mm modular body using the pins.

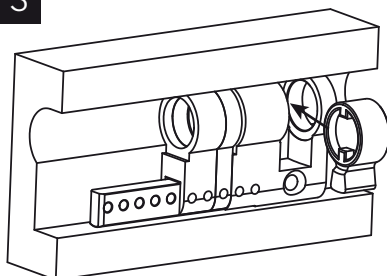
These pins have notches in a part of the head. This is the part that you have to hit with the hammer.

In the event that a mistake is made, the assembly tool is provided with a slot that facilitates the extraction of the pins. To remove them, hit the pins with a punch on the opposite side of the notches, making these fall through the groove of the assembly tool.



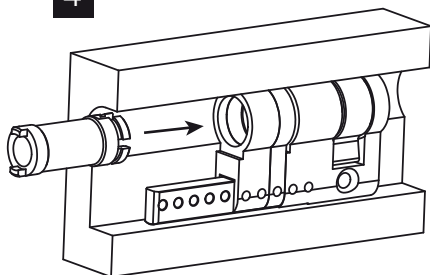
TO AVOID INJURIES, USE
THE HAMMER WITH CAUTION

3



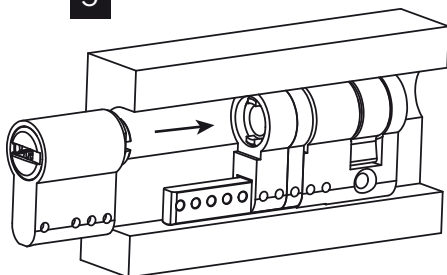
Position the half-cylinder cam, which is included in the component kit, as shown in the picture.

4



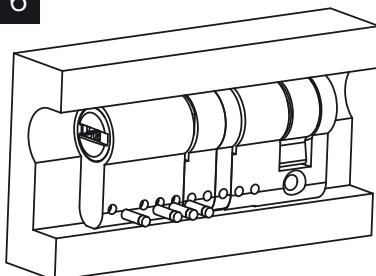
Insert the corresponding rotor extension in the correct position as shown in the figure and make sure it slots in with the cam, so that if you rotate the rotor extension the cam will also rotate.
In this case it is a rotor extension of 30 mm.

5



Fit the primary module.
Use the key to ensure the correct position of the assembly.

6

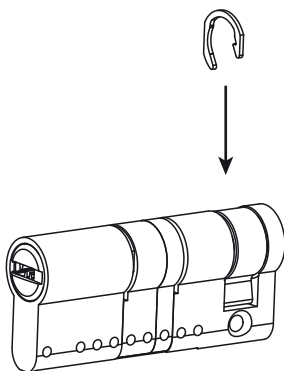


Once it is verified that it is working correctly, fix the primary module using the pins, as in step 2.



TO AVOID INJURIES, USE
THE HAMMER WITH CAUTION

7



Fit the replacement washer clip, as shown in the figure.

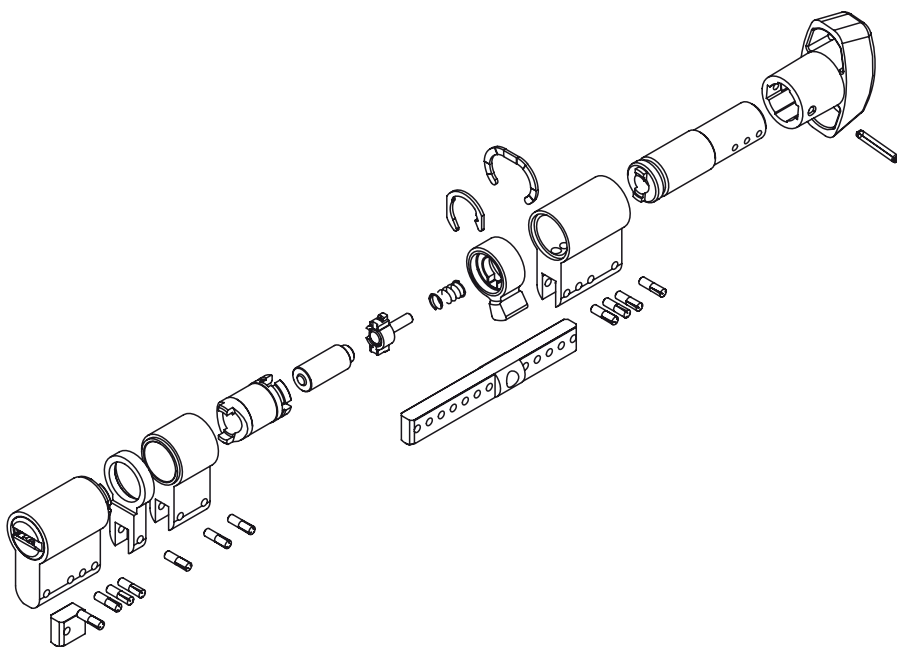
This washer clip is designed so that it couples immediately by exerting downward pressure.

The washer clip is in the kit of components.



ASSA ABLOY

KNOB CYLINDER ASSEMBLY INSTRUCTIONS

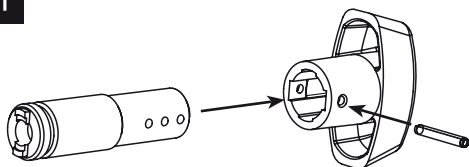


First you must locate the elements required to mount the requested cylinders in the configurations of the annexes.

This illustration is an example of the assembly of a 30x50 cylinder with the knob on the 30mm side.

The procedure for other lengths are the same.

1



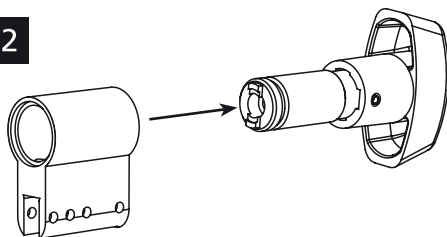
Slide the spindle, which is included in the spare parts kit, and fix it to the knob using the pins as shown in the image.

In this case this is a spindle 27-37.



IN ORDER TO AVOID INJURIES USE THE HAMMER WITH CAUTION

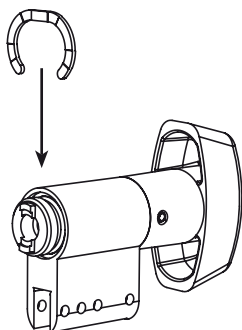
2



Place the knob module into the spindle knob (MDCNO30LT and MDCNO30NM).

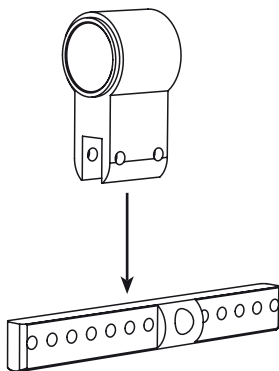
This knob module is not included within the modular kit. Supplied separately.

3



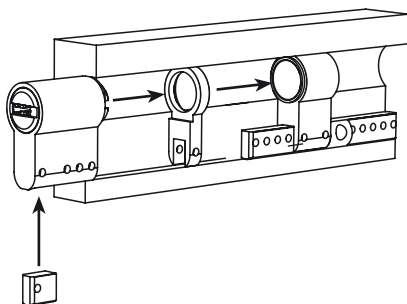
Fix the standard clip with special pliers. Once this operation is finished continue with the assembly of the other side of the cylinder.

4



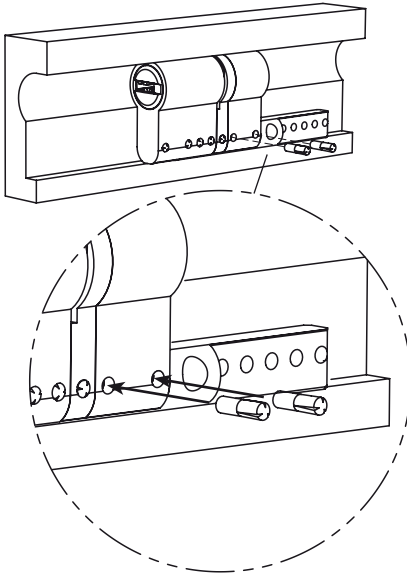
Now use the central union bar, the one that has the threaded hole, placing the body extension as shown in the image with the male end as shown in the image. In this case it's a bar of 7x5 and a body extension of 15 mm.

5



Place the mounted piece into the assembling guide that comes with the kit. Place and slide a new body extension, if necessary. In the example it is a 5R. The slotted side must be pointing out. As in this case there are no other body extensions to mount, place the primary module along with the extension bar as shown in the image. Make sure that the holes align.

6



ix the body extensions to the bars using the pins.

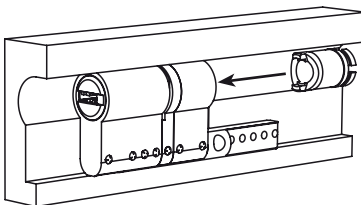
These pins have some notches on one side; this is the end to be struck.

In case of a mistake the assembling guide has a slot that makes the removal of the pins easier. Simply knock the pins with an awl from the opposite side of the notches, making them drop through the groove of the assembling guide.



IN ORDER TO AVOID INJURIES USE THE HAMMER WITH CAUTION

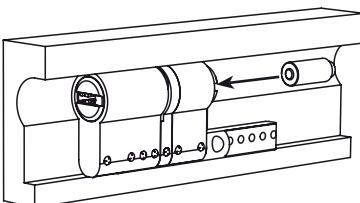
7



Place the corresponding rotor extension in the right position as shown in the image.

In the example of the image a rotor extension of 20mm is used.

8

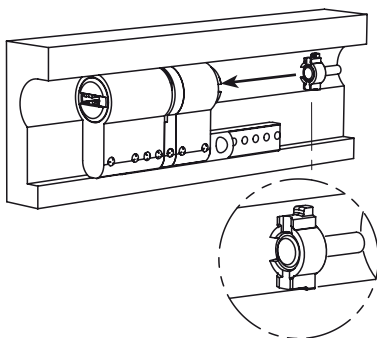


Insert the corresponding clutch extension.

Make sure to insert the clutch extension in the correct position; the side of the smaller diameter must be pointing to the clutch.

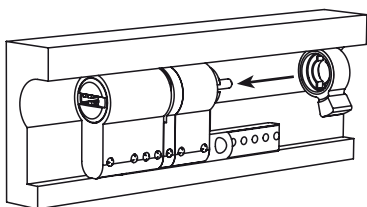
In this case this is a 20mm clutch extension.

9



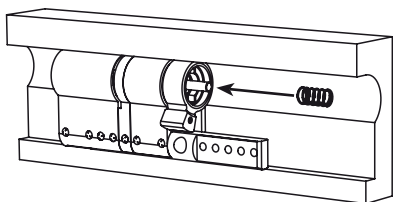
Insert the clutch in the correct position.

10



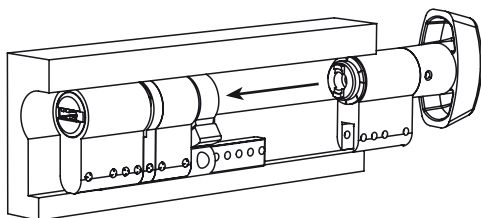
Insert the cam as shown in the image.

11



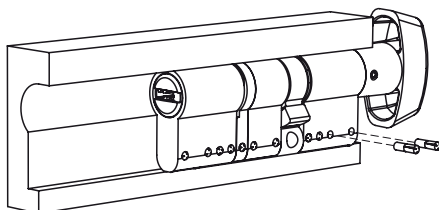
Insert the spring on the spindle of the clutch.

12



Connect the two parts of the cylinders sliding the knob module using the union bar.

13

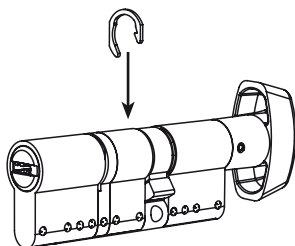


Fix the knob module to the bar using the pins as shown in the image, as in the 6th step.



IN ORDER TO AVOID INJURIES USE
THE HAMMER WITH CAUTION

14



Finally place the self washer clip in the gaps that are left between the cam and the body extensions.

This adjustable washer clip is designed to perform an instant fit when pressed down. This adjustable washer clip is located in the spare parts kit.

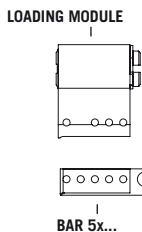


ASSA ABLOY

ANNEX I ASSEMBLIES OF MODULES (from 30mm and upwards.)

In the following pages you will find the information about the elements and necessary pieces for different lengths of cylinders, for loading modules **from 30 mm and upwards**. The information concerning the union bar will be completed according to the other side of the cylinder.

30x...



35x...

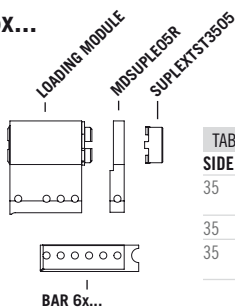
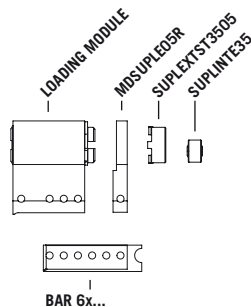


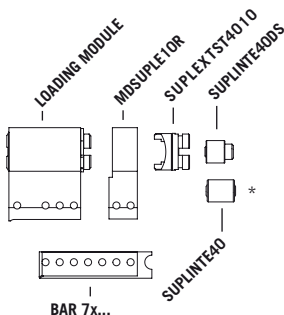
TABLE OF CLUTCHES		
SIDE A	SIDE B	Part NO
35	All except 35mm	EMBRADS3035
35	35	EMBRADS3535
35	Knob any reasement	EMBRABOT35

Configuration for DS 35 / KNOB 35



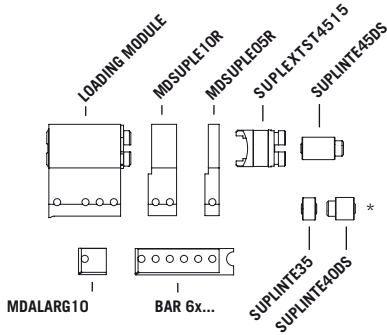
Standard configuration double cylinder

40x...

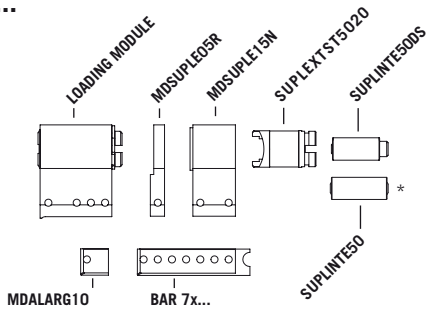


In case of assembling half cylinders, clutch extensions are not necessaryes
*In case of using a standard clutch use this disposition.

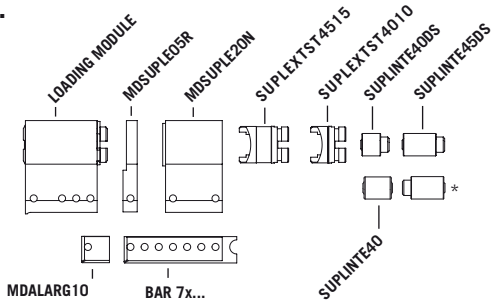
45x...



50x...



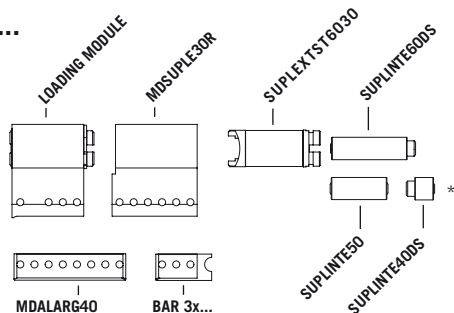
55x...



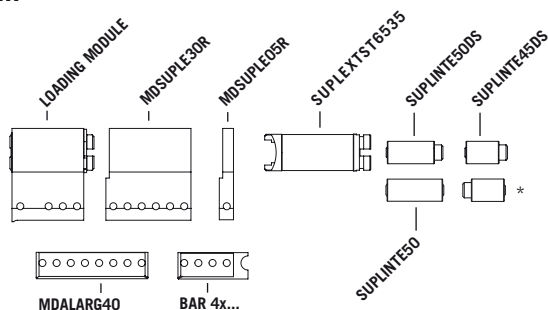
In case of assembling half cylinders, clutch extensions are not necessary

*In case of using a standard clutch use this disposition.

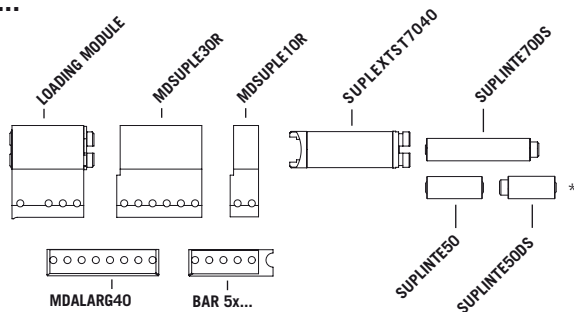
60x...



65x...



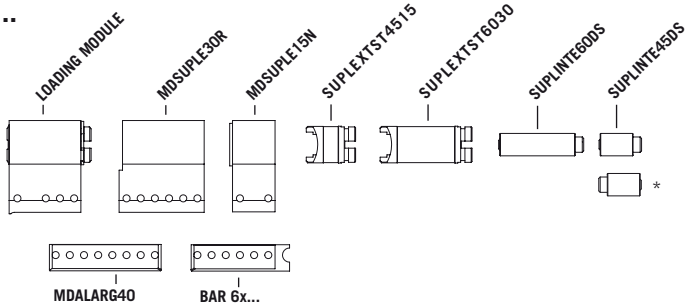
70x...



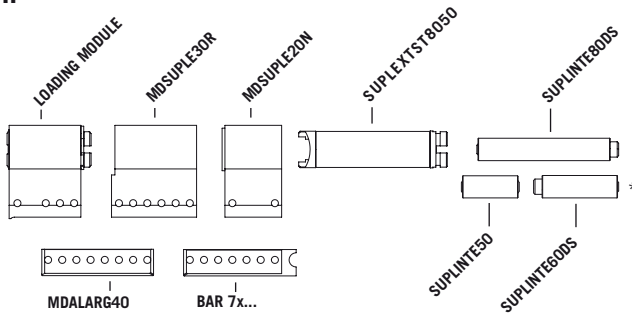
In case of assembling half cylinders, clutch extensions are not necessary

*In case of using a standard clutch use this disposition.

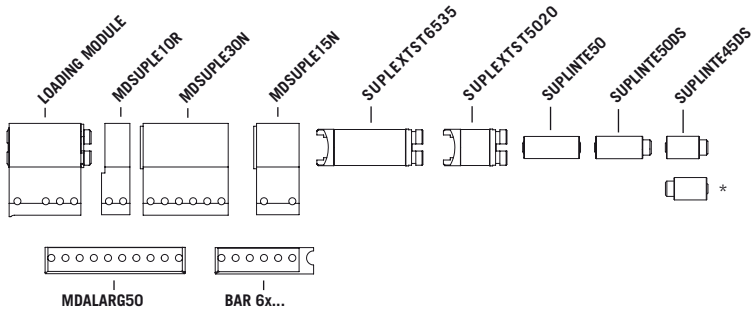
75x...



80x...



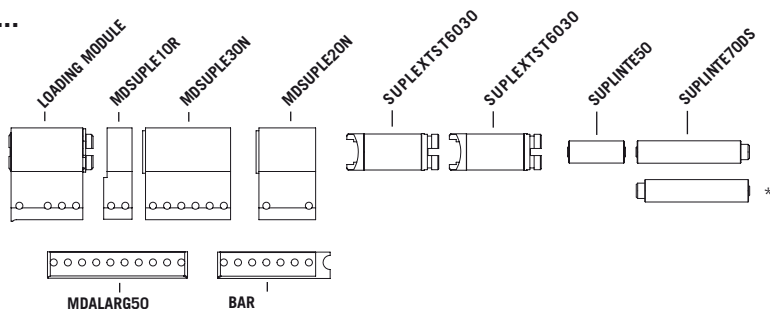
85x...



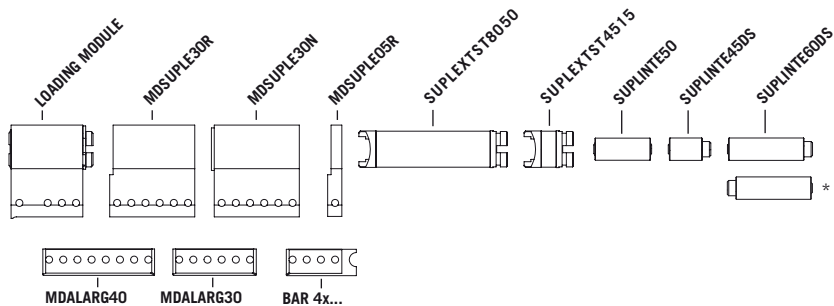
In case of assembling half cylinders, clutch extensions are not necessary

* In case of using a standard clutch use this disposition.

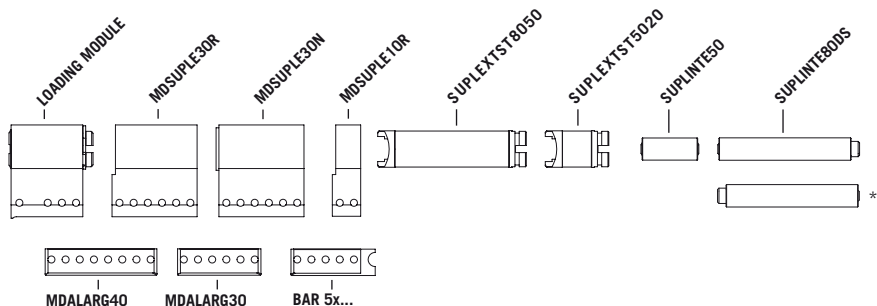
90x...



95x...



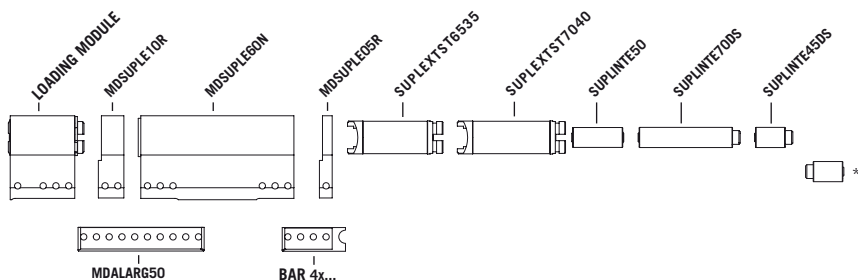
100x...



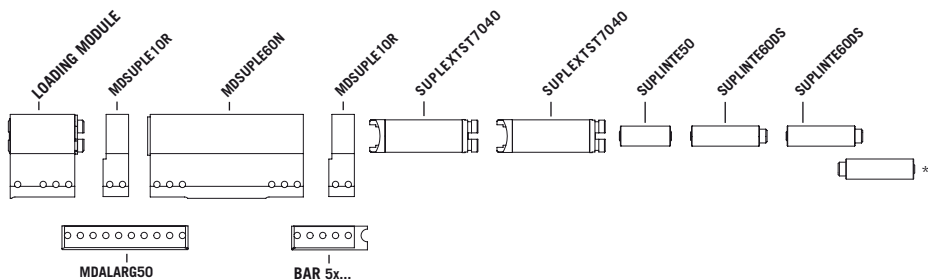
In case of assembling half cylinders, clutch extensions are not necessary

*In case of using a standard clutch use this disposition.

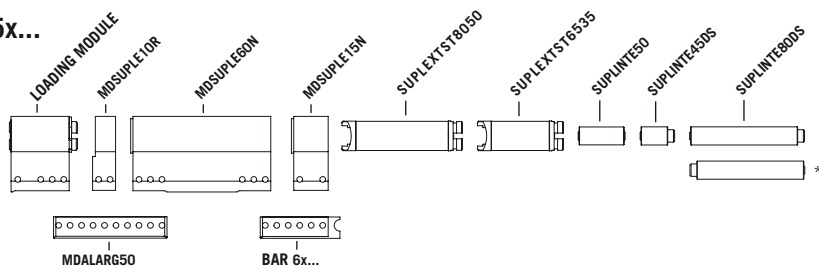
105x...



110x...



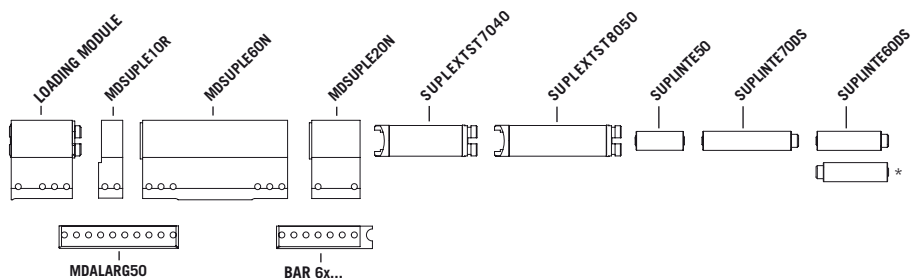
115x...



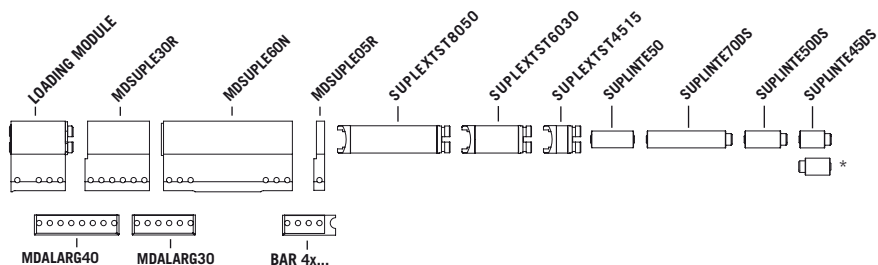
In case of assembling half cylinders, clutch extensions are not necessary

*In case of using a standard clutch use this disposition.

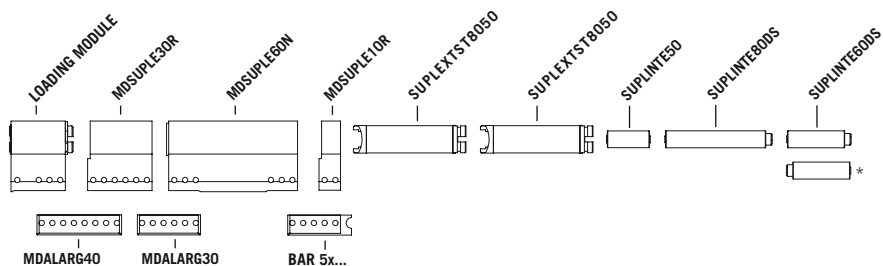
120x...



125x...



130x...



In case of assembling half cylinders, clutch extensions are not necessary

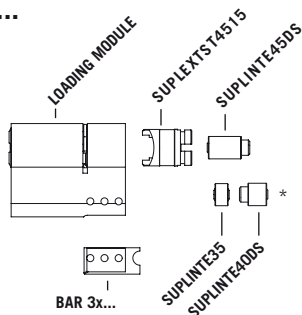
*In case of using a standard clutch use this disposition.

For lengths higher than 130x...please ask

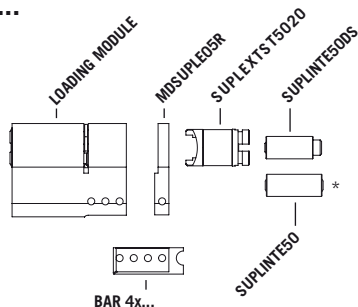
ANNEX II ASSEMBLIES OF MODULES from 45 mm and upwards.

In the following pages you will find the necessary information about the required elements and pieces for different lengths of cylinders, for **loading modules from 45 mm** and upwards. The information concerning the union bar will be completed according to the other side of the cylinder.

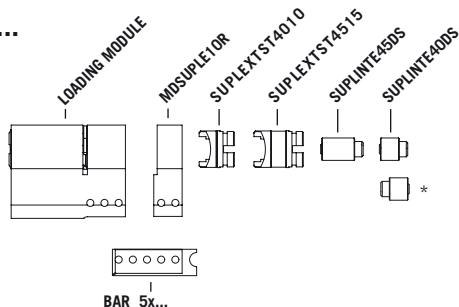
45x...



50x...



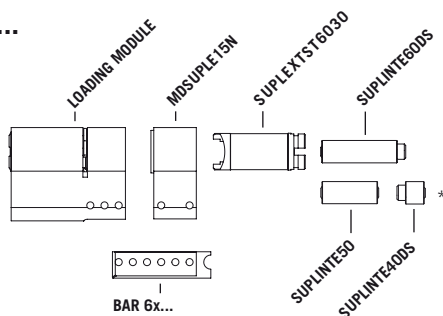
55x...



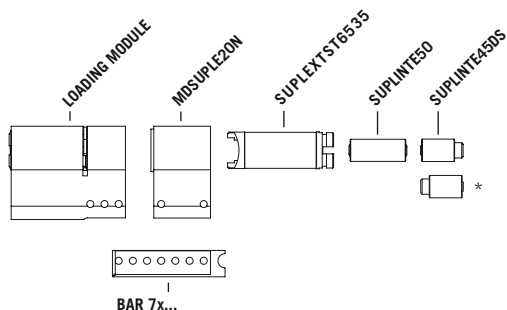
In case of assembling half cylinders, clutch extensions are not necessary

*In case of using a standard clutch use this disposition.

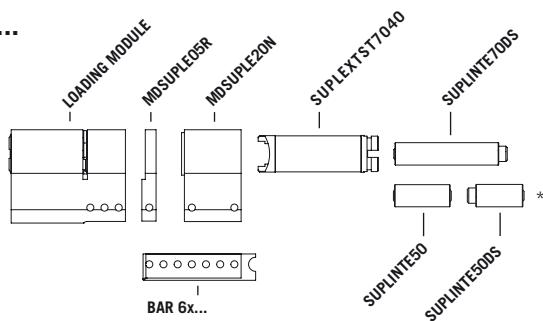
60x...



65x...



70x...

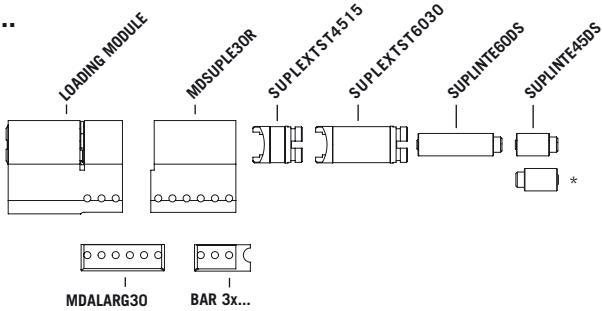


In case of assembling half cylinders, clutch extensions are not necessary

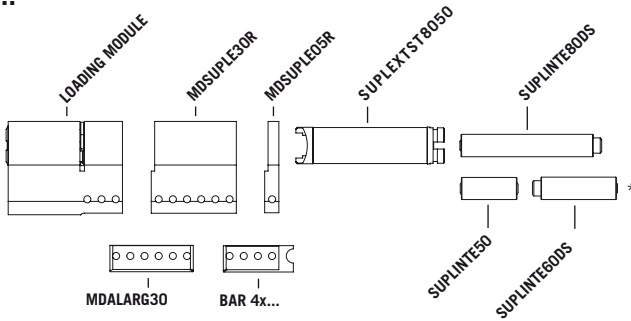
*In case of using a standard clutch use this disposition.

ANNEX II ASSEMBLIES OF MODULES FROM 45 mm and upwards

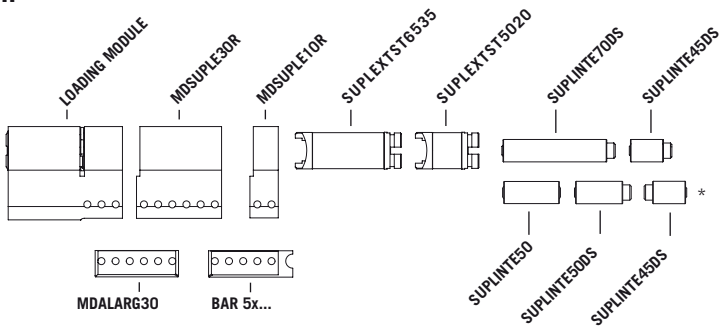
75x...



80x...



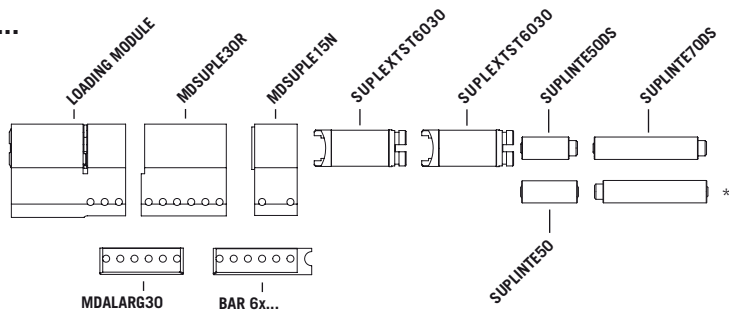
85x...



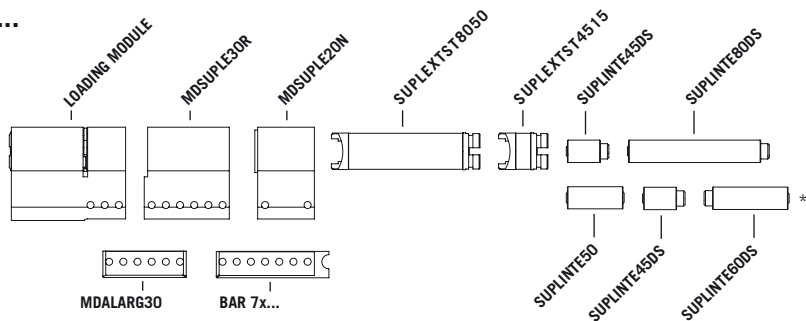
n case of assembling half cylinders, clutch extensions are not necessary

*In case of using a standard clutch use this disposition.

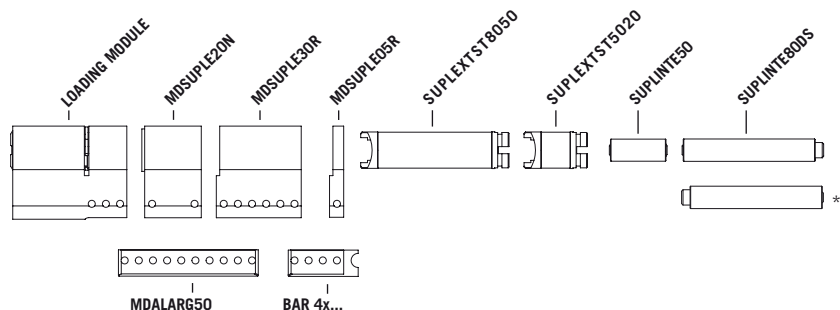
90x...



95x...



100x...

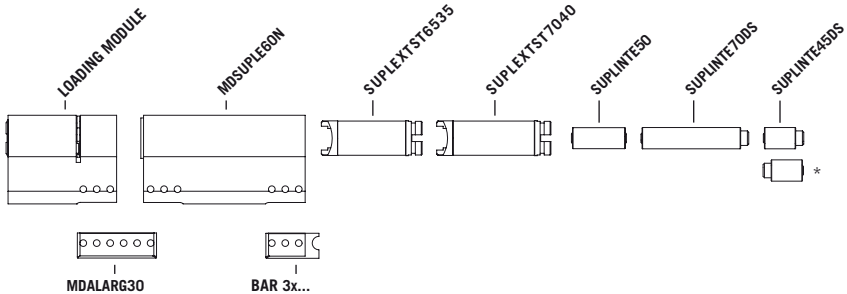


In case of assembling half cylinders, clutch extensions are not necessary

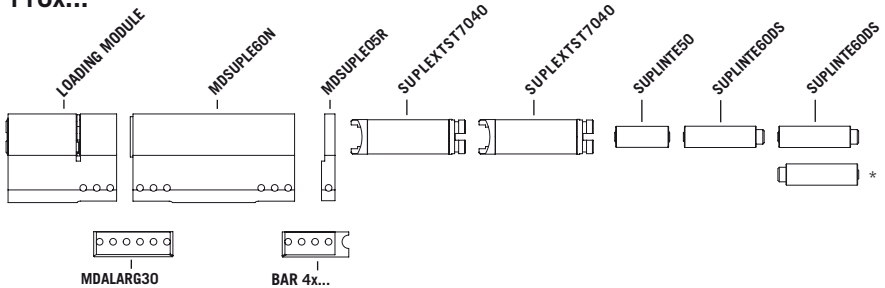
*In case of using a standard clutch use this disposition.

ANNEX II ASSEMBLIES OF MODULES FROM 45 mm and upwards

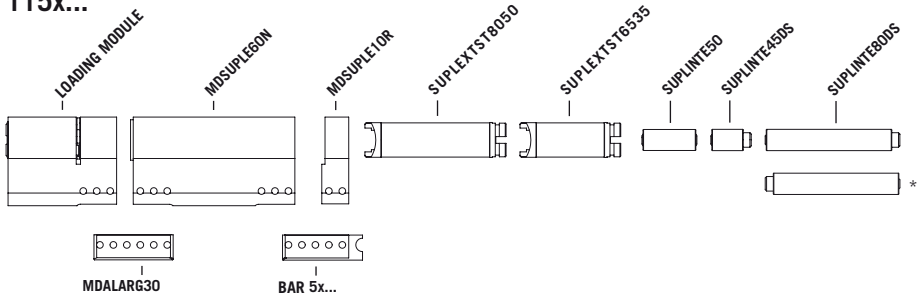
105x...



110x...



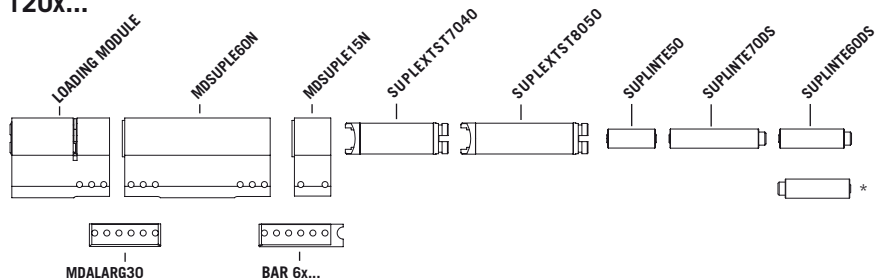
115x...



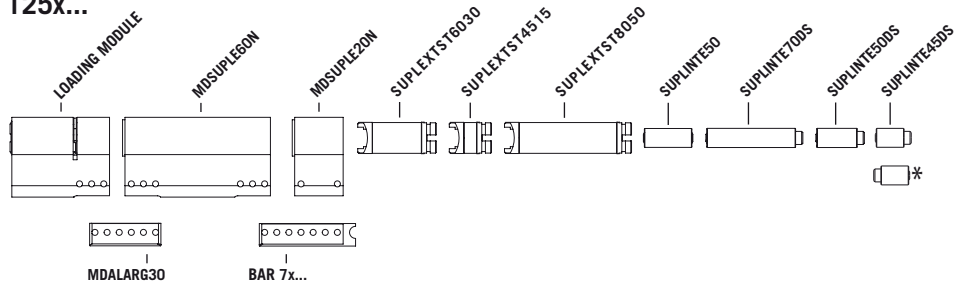
In case of assembling half cylinders, clutch extensions are not necessary

*In case of using a standard clutch use this disposition.

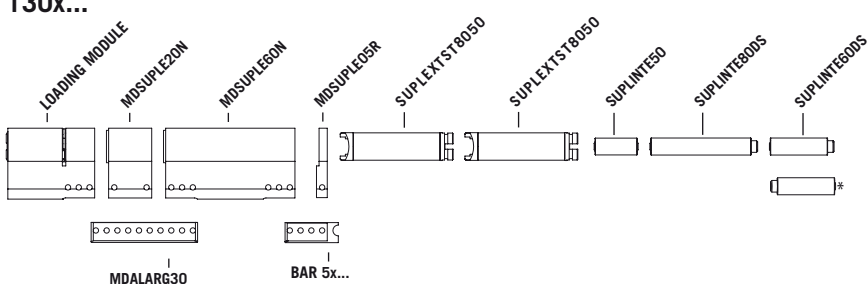
120x...



125x...



130x...

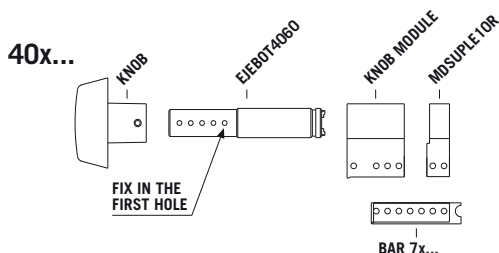
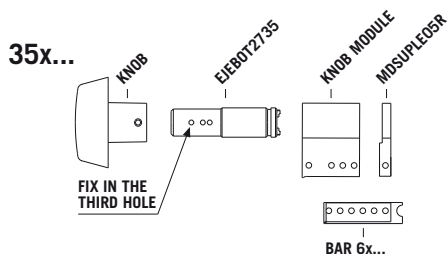
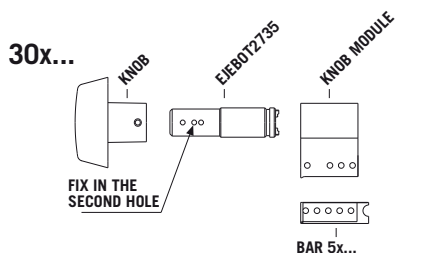


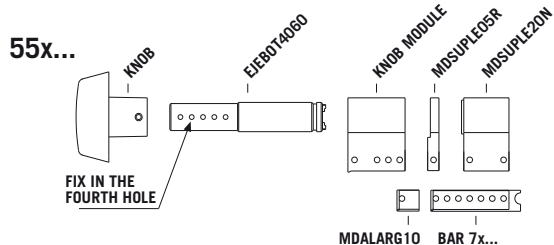
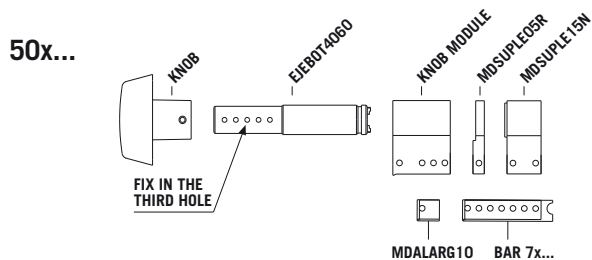
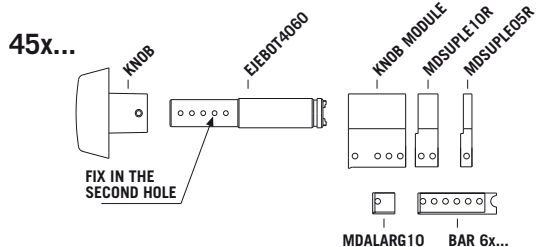
For lengths higher than 130x... please ask.
In case of assembling half cylinders, clutch extensions are not necessary.
*In case of using a standard clutch use this disposition.

ANNEX III ASSEMBLIES OF SIDES WITH KNOB (from 30mm and upwards)

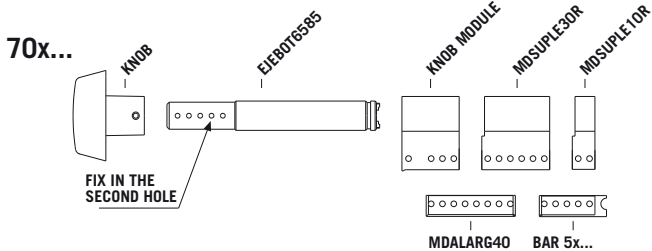
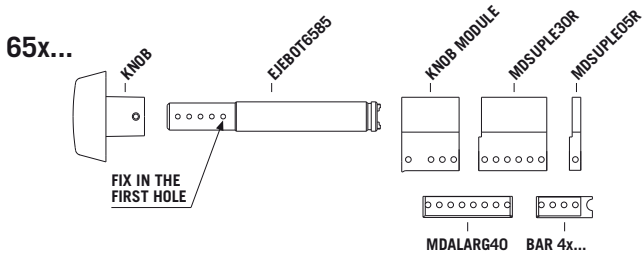
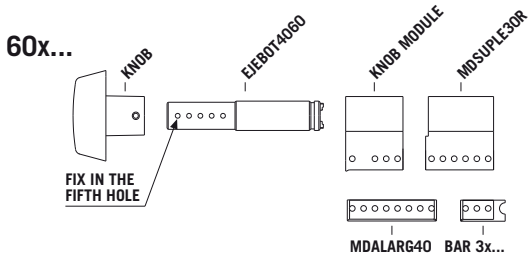
In the following pages you will find the necessary information about the elements and necessary pieces for different lengths of cylinders with knob, from 30mm and upwards. In this case, the loading modules are replaced by knob modules (see page 1).

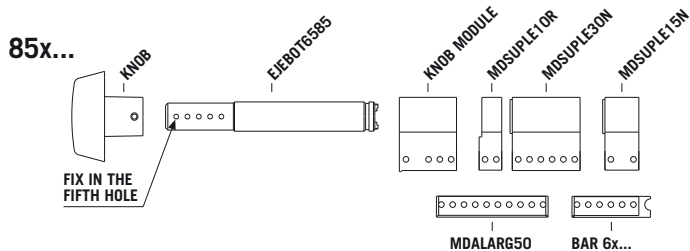
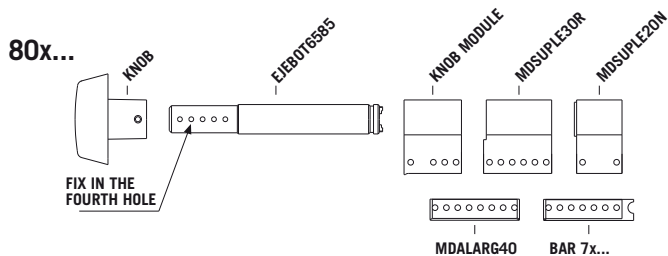
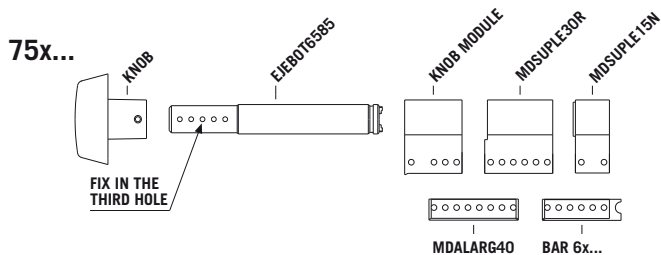
The information concerning the union bar will be completed according to the other side of the cylinder. Clutches will be based on the measurement of the opposite side (key side) and type of key (flat or sawn). See details on page 7.



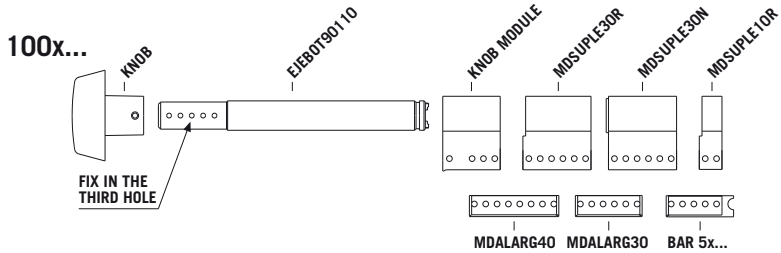
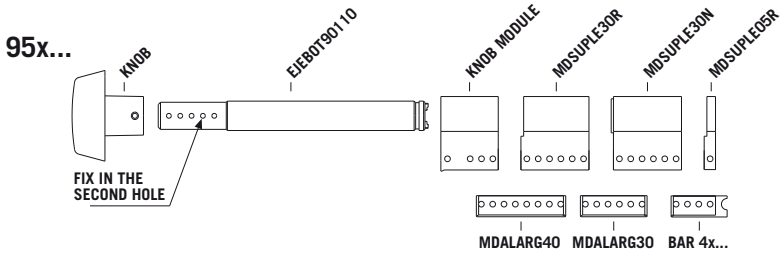
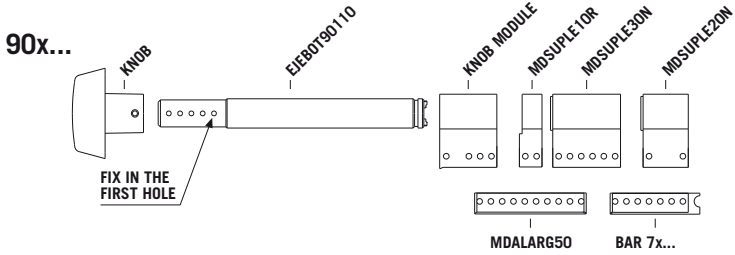


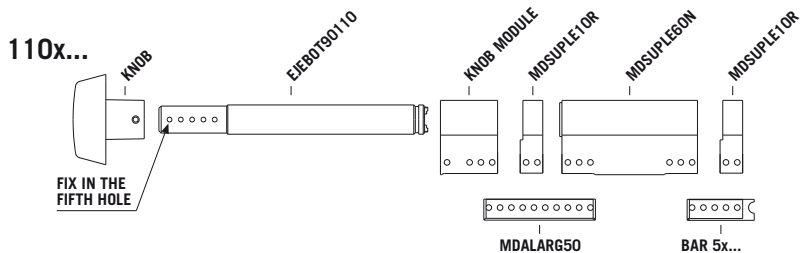
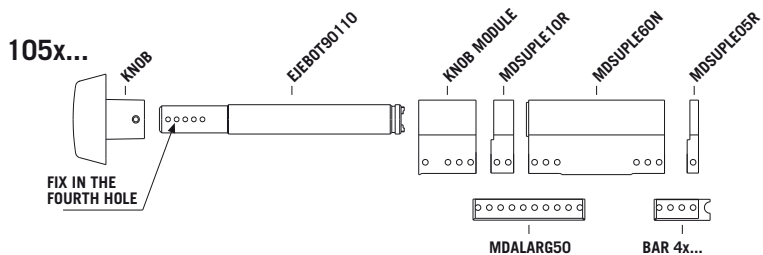
ANNEX III ASSEMBLIES OF SIDES WITH KNOB (from 30mm and upwards)





ANNEX III ASSEMBLIES OF SIDES WITH KNOB (from 30mm and upwards)

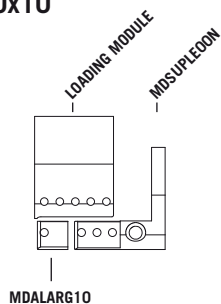




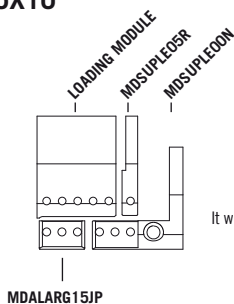
ANNEX IV ASSEMBLY OF HALF CYLINDERS

In the following pages you will find the necessary information about the tools and parts needed to assemble **half cylinders**.

30x10

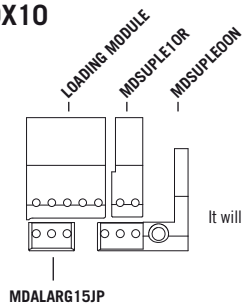


35X10



It will have rotor extension:
SUPLEXTST3505.

40X10



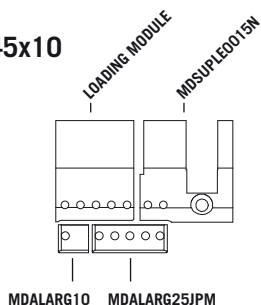
It will have rotor extension:
SUPLEXTST3505.



ASSA ABLOY

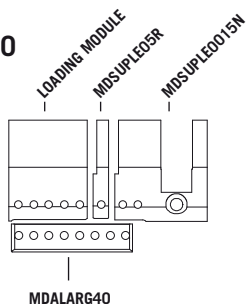
ANNEX IV ASSEMBLY OF HALF CYLINDERS

45x10



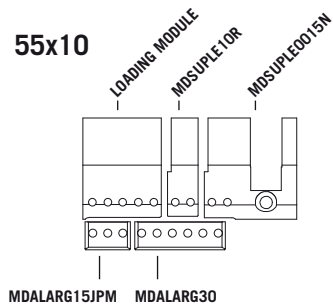
It will have rotor extension:
SUPLEXTST4515

50x10



It will have rotor extension:
SUPLEXTST5020

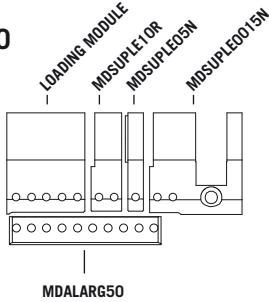
55x10



It will have rotor extension:
SUPLEXTST4515 y
SUPLEXTST4010

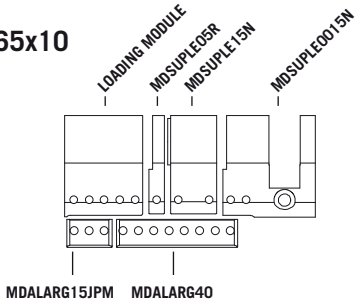
ANNEX IV ASSEMBLY OF HALF CYLINDERS

60x10



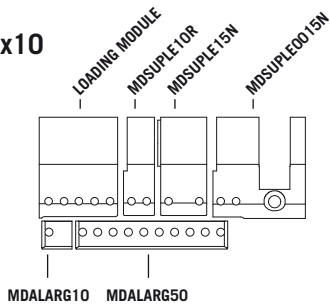
It will have rotor extension:
SUPLEXTST6030

65x10



It will have rotor extension:
SUPLEXTST6535

70x10



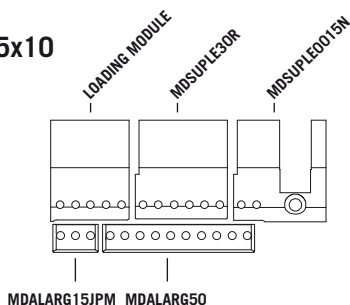
It will have rotor extension:
SUPLEXTST7040



ASSA ABLOY

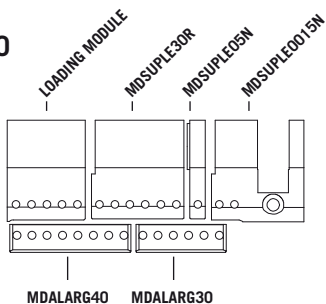
ANNEX IV ASSEMBLY OF HALF CYLINDERS

75x10



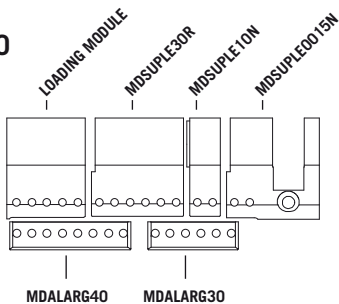
It will have rotor extensions:
SUPLEXTST4515 &
SUPLEXTST6030

80x10



It will have rotor extension:
SUPLEXTST8050

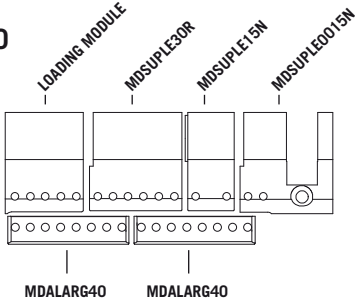
85x10



It will have rotor extensions:
SUPLEXTST6535
& SUPLEXTST5020

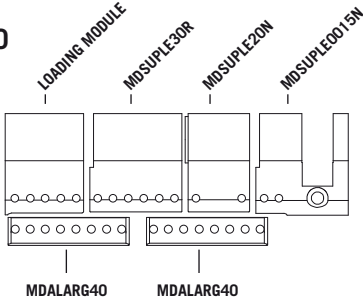
ANNEX IV ASSEMBLY OF HALF CYLINDERS

90x10



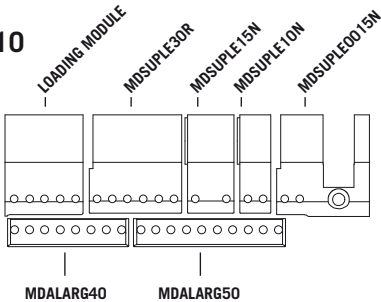
It will have 2 rotor extensions:
SUPLEXTST6030

95x10



It will have rotor extensions:
SUPLEXTST8050 &
SUPLEXTST4515

100x10



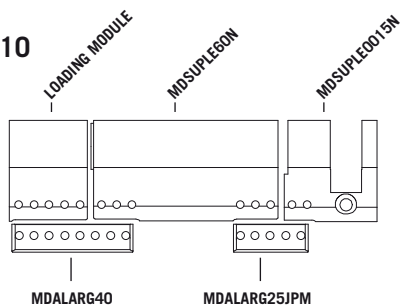
It will have rotor extensions:
SUPLEXTST8050
& SUPLEXTST5020



ASSA ABLOY

ANNEX IV ASSEMBLY OF HALF CYLINDERS

105x10



It will have rotor extensions:
SUPLEXTST6535
& SUPLEXTST7040

**ASSA ABLOY**

NOTES



Experience a safer
and more open world