1 INTEGRATED CLOSING SEQUENCE REGULATOR ETS 42 + ETS 42-R SRI

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1.1 General remarks

The present Option instructions are only applicable in conjunction with the:
Mounting and operating instructions ETS 42 0549-990/52
Mounting and operating instructions ETS 42-R 0549-990/62
Before carrying out the first work step, these documents must be entirely read and understood.

1.2 Function

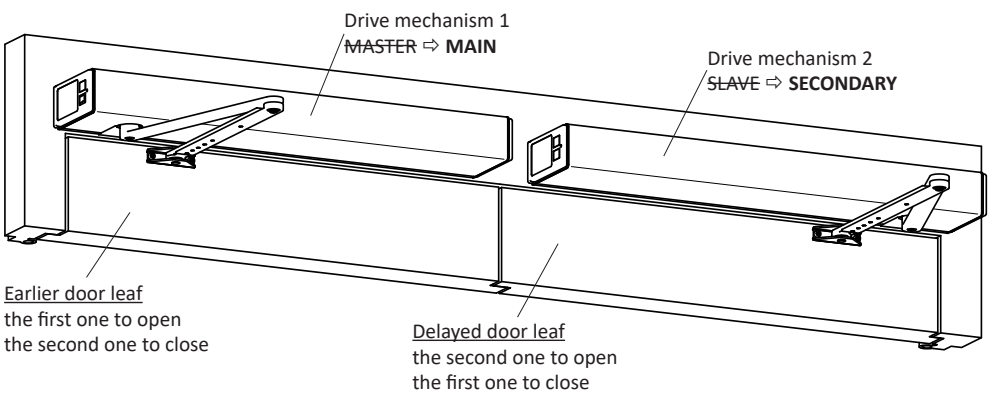
If 2 leaves installations are operated with mechanical or automatic swing door drive mechanisms, a closing sequence control must be provided.
2 leaves swing doors usually have an overlapping leaf rebate, which is why they must be closed in the correct sequence. This function is performed by the integrated closing sequence regulator.

1.3 Requirements

Note:
The integrated closing sequence regulator cannot be retrofitted with the existing drive mechanisms (0549-030 and 031, 0549-032 and 033) but must be ordered as a closing sequence regulator set from the factory.

Warning:
Risk of electric shock! Before working on any live elements, pull out the mains plug respectively switch off the main installation switch!

Note:
For the purpose of the present instructions, the designation of the drive mechanisms for the earlier and delayed door leaves has been changed from **MASTER** and **SLAVE** to **Main** and **SECONDARY**.



2 MOUNTING

2.1 Drive mechanism

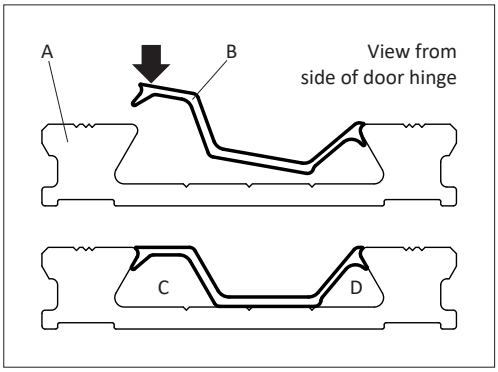
Material:

1	Set ETS 42 SRI	0549-036	Drive mechanism covering Aluminium
	Set ETS 42 SRI	0549-037	Drive mechanism covering Stainless steel
	Set ETS 42-R SRI	0549-038	Drive mechanism covering Aluminium
	Set ETS 42-R SRI	0549-039	Drive mechanism covering Stainless steel

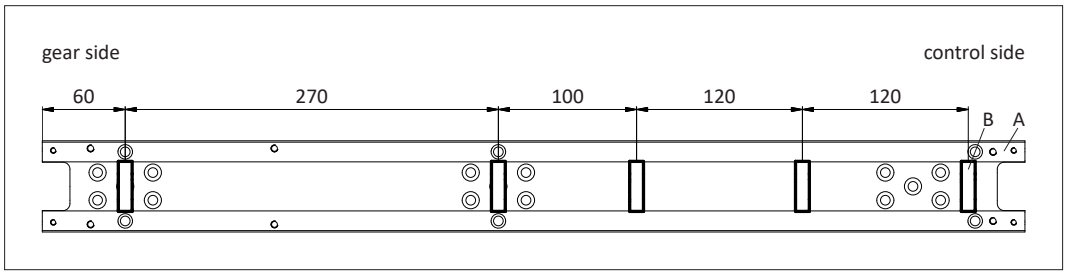
Procedure:

1. Mount the chassis profiles (A) for the MAIN and SECONDARY drive mechanisms according to the mounting and operating instructions.

2. Snap the cable holders (B) into the chassis profiles (A).

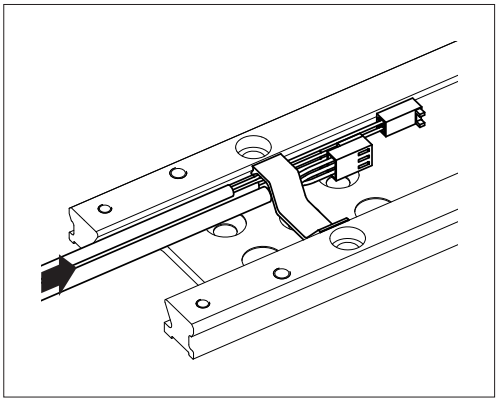


Attention:
For mounting versions with pushing function (STD-PH and SLI-PH), it is important to make sure that the alignment of the cable holders (B) is correct!
The large cable duct (C) must be located on the same side as the closing spring.



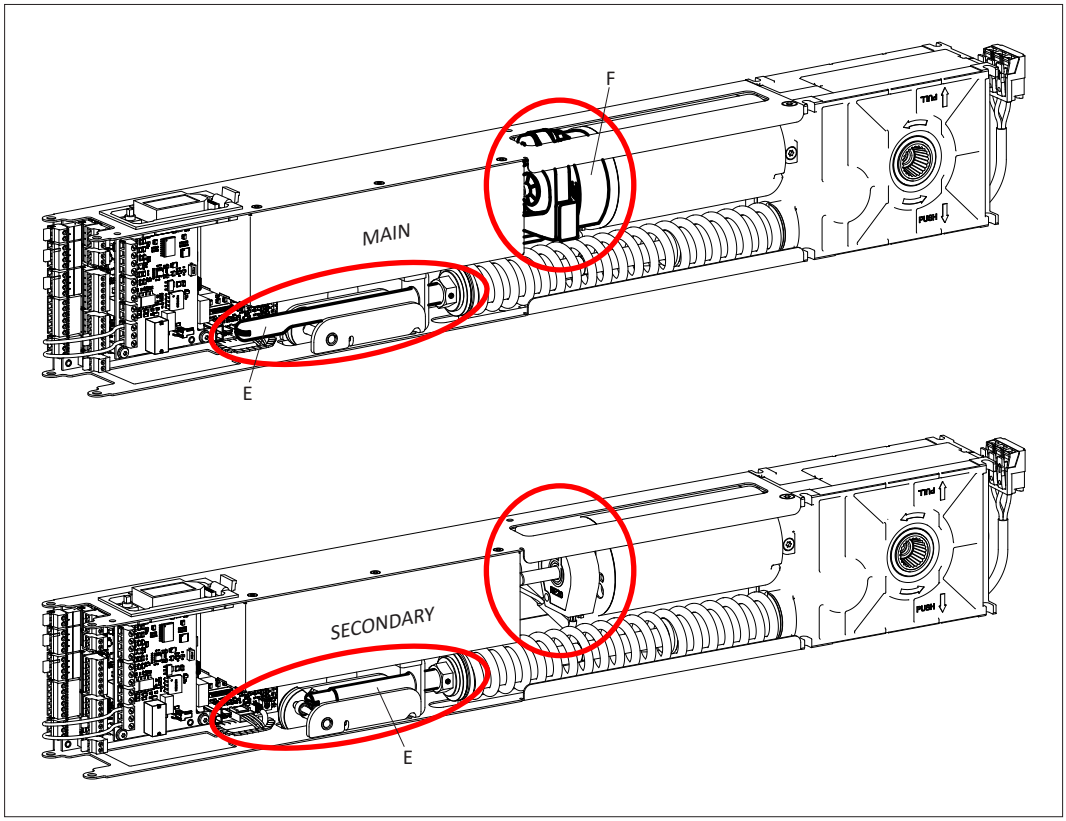
3. Mount the drive-inherent cables (for fire protection additionally: LED, Reset switch) to the side cover with the program selector switch.

4. Starting from the gear side, route the drive-inherent cables through the large cable duct (C).



5. Route the external cables trough the two cable ducts.
The large cable duct (C) offers sufficient space for installing up to two additional external cables.
The smaller cable duct (D) can only be used with the SECONDARY drive mechanism and it also offers enough space for up to two additional cables.

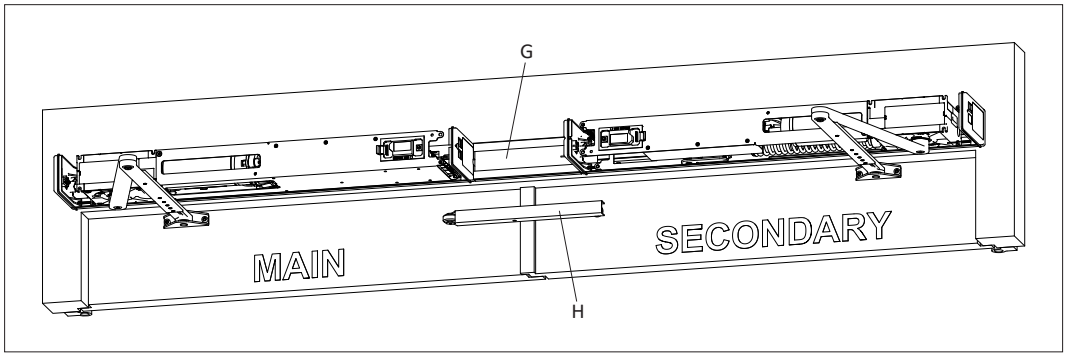
6. Mount the swing door drive mechanisms (MAIN and SECONDARY) and the rods assemblies onto the earlier door leaf and delayed door leaf (without steel cord), according to the mounting and operating instructions.
   MAIN and SECONDARY can be distinguished by the brake (F) on the motor, as well as the positioning bar (E).



7. If existing: Mount the intermediate profile (G) to the lintel.

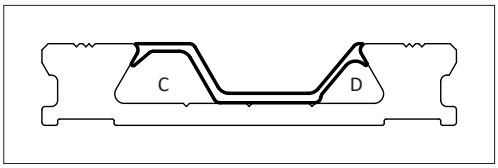
8. Mount the driver flap (H).

9. Mount and wire the side cover with the program selector switch (for fire protection additionally: LED, Reset switch) ⇨ according to the wiring diagram (in appendix of mounting and operating instructions).



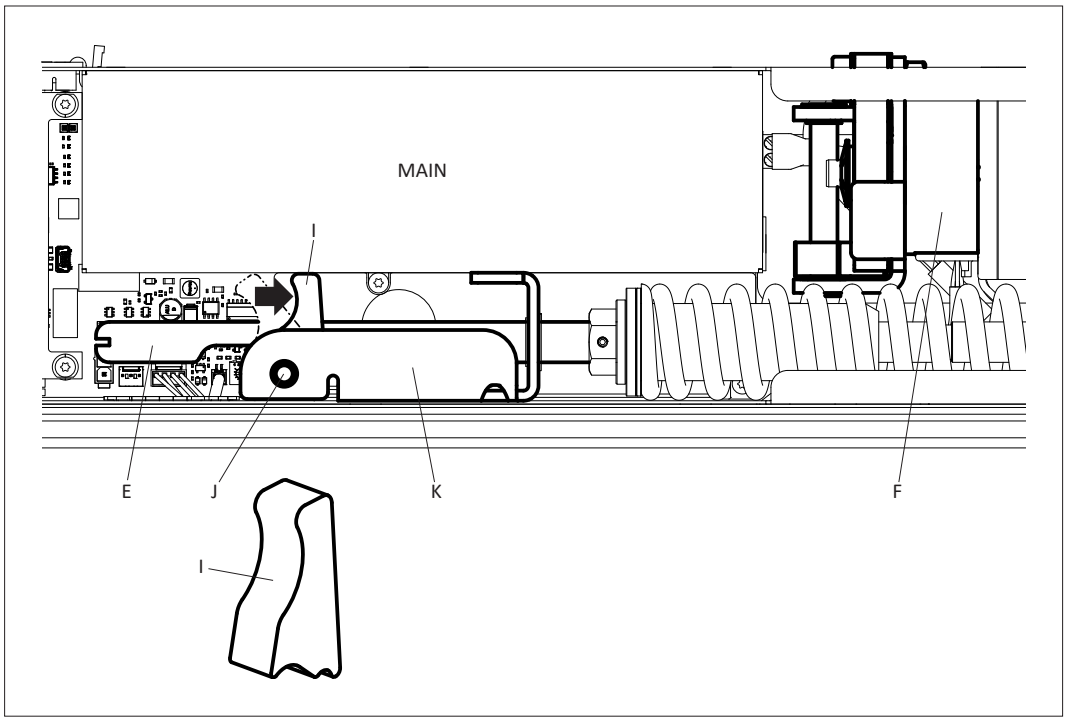
10. Mount the accessories elements (such as e.g. opening elements, safety detectors, fire detectors etc.) and connect them according to the wiring diagram.

Attention:
On the lower side of the drive mechanisms (in the chassis profile) the cables can only be installed in the cable ducts (C/D). Any additional cable must be positioned beneath the covering or outside of the drive mechanism.



11. Use the mounting aide (I) for the MAIN drive mechanism in order to release the brake (F) and to relieve the positioning bar (E). To this end, position the mounting aide (I) on the shaft (J) of the support sheet (K) and turn in clockwise until the shaft (J) is wedged against the control housing.

Note:
The mounting aide (I) should remain in place until the positioning bar (E) has been correctly remounted on the MAIN drive mechanism.



2.2 Adjusting the pre-stressing of the closing spring

Procedure:

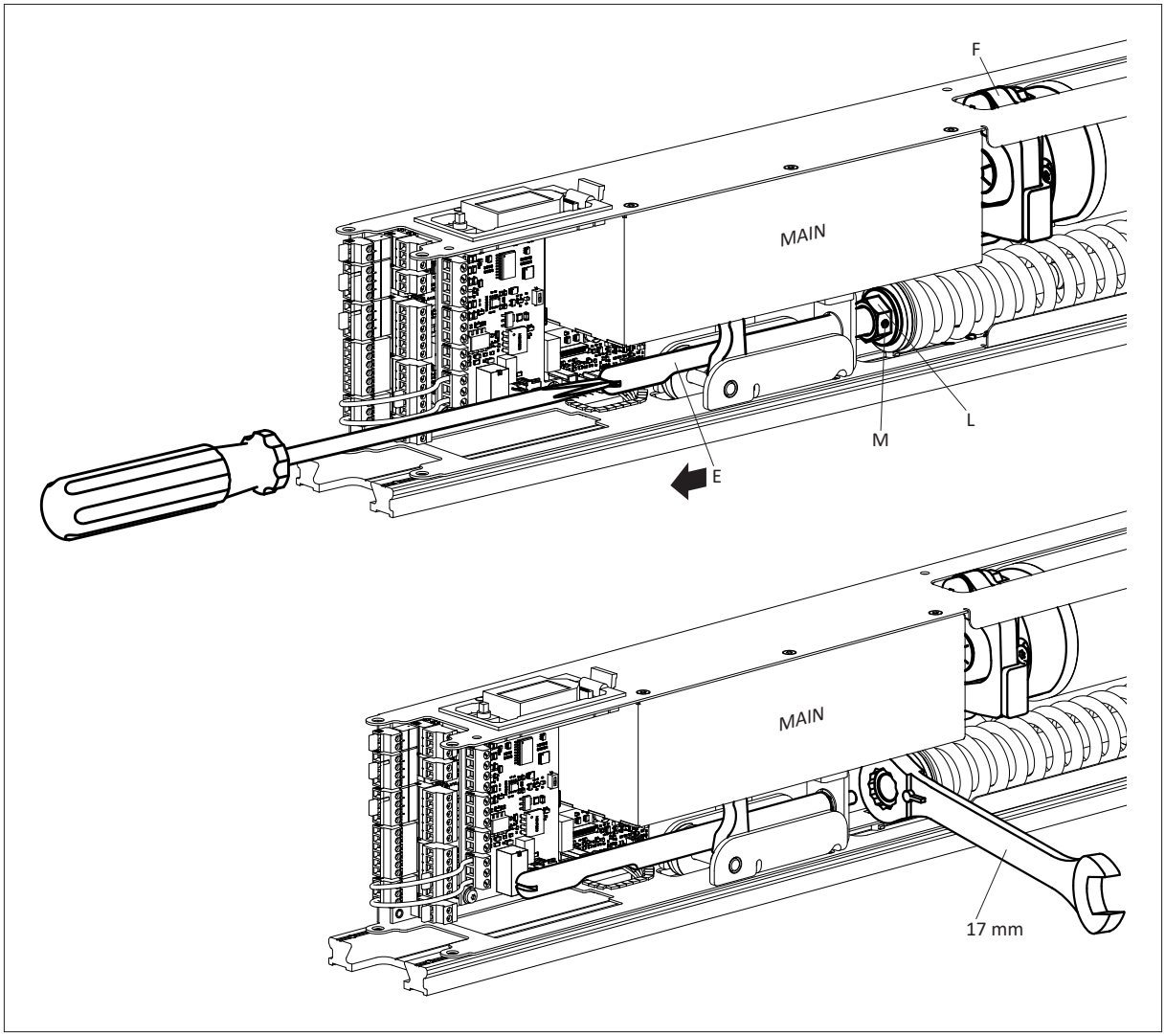
1. According to the chapter "Adjusting the pre-stressing of the closing spring" of the mounting and operating instructions, check whether the spring has been correctly adjusted.
   If the closing spring is already correctly adjusted ⇨ continue with chapter 2.5.

2. Loosen the positioning bar (E) of MAIN and SECONDARY drive mechanism by means of a slotted screw driver and pull out until a ring fork wrench (17 mm) can be introduced and the adjusting nut (L) be correctly adjusted.

   Note:
   We recommend using a ring fork wrench with ratchet function, due to the limited available space.

3. Adjust the pre-stressing of the closing spring to the correct door closer size (according to the mounting and operating instructions ⇨ chapter "Adjusting the pre-stressing of the closing spring").

4. Align the adjusting nut (L) on the MAIN and SECONDARY drive mechanism so that the set screw (M) is accessible (as this is used to fasten the positioning bar (E)).

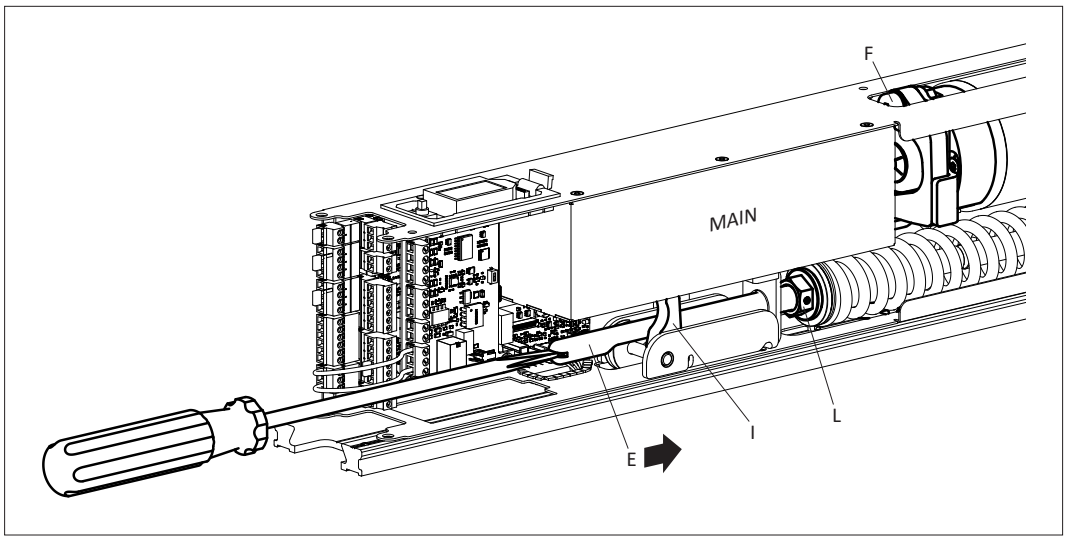


2.3 Mount the positioning bar on the MAIN drive mechanism

Note:
Before mounting the positioning bar (E), check whether the mounting aid (I) is inserted and thus the brake (F) is released.

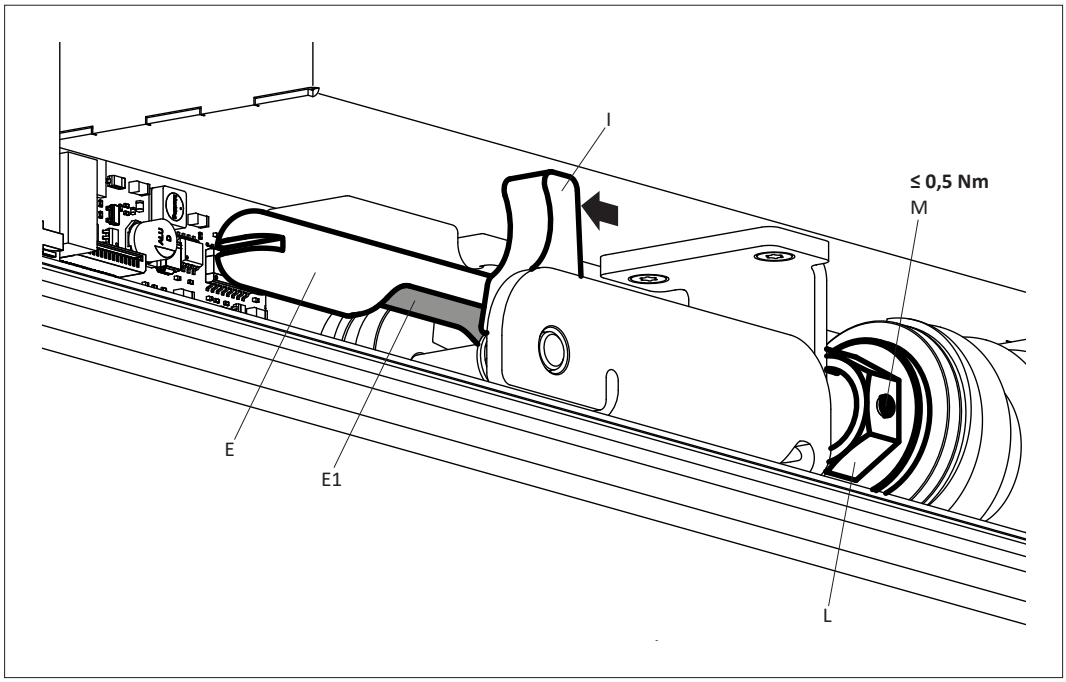
Procedure:

1. Reinsert the positioning bar (E) into the adjusting nut (L) of the closing spring and screw it in all the way up to the end stop, by means of a slotted screwdriver.



2. Turn the positioning bar (E) back until the milled surface (E1) points downwards (towards the rotary disk and ball-bearing). Then remove the mounting aid (I) by turning it counter-clockwise.

3. Fasten the positioning bar (E) to the adjusting nut (L) by means of the set screw (M) ⇨ Tightening moment max. 0,5 Nm.

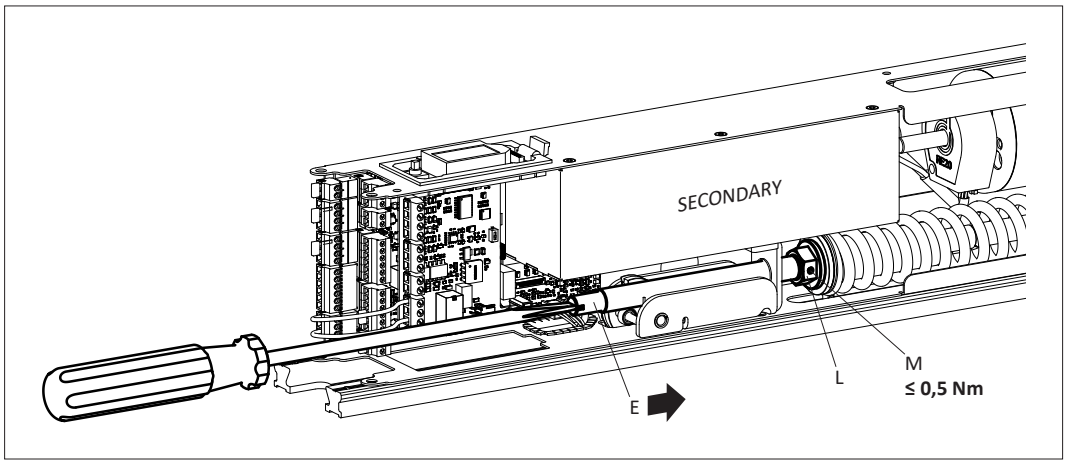


2.4 Mount the positioning bar on the SECONDARY drive mechanism

Procedure:

1. Reinsert the positioning bar (E) into the adjusting nut (L) of the closing spring and screw it in all the way up to the end stop, by means of a slotted screwdriver.

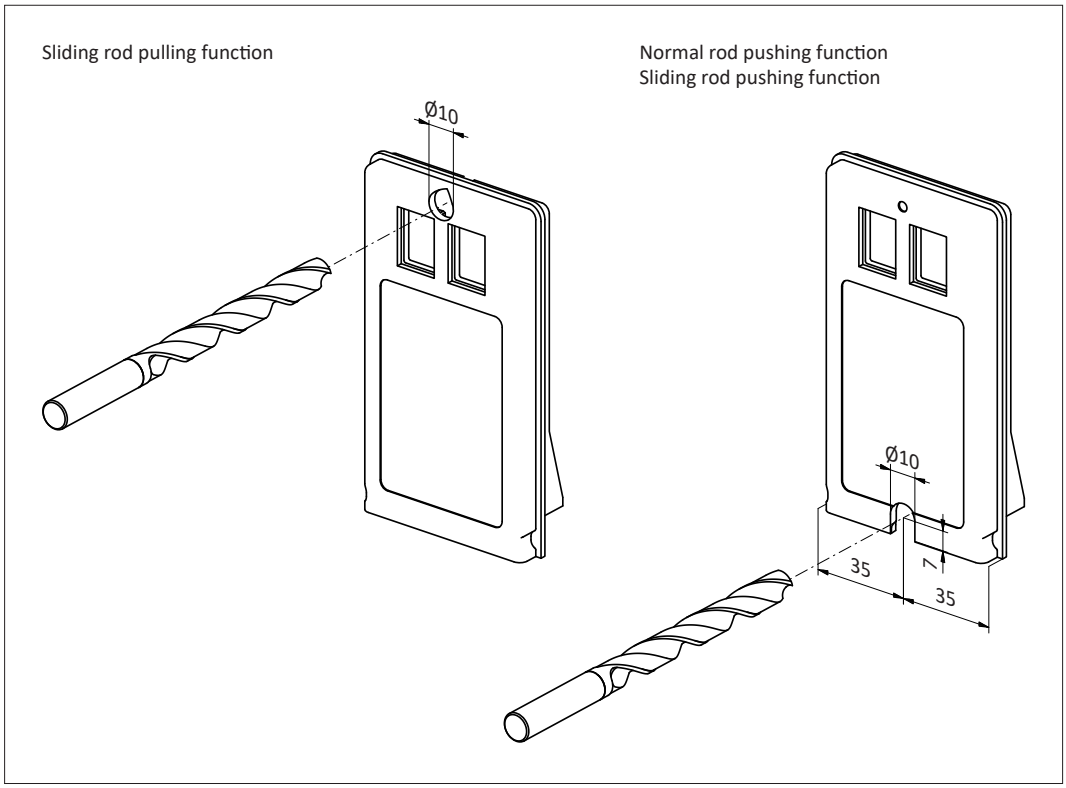
2. Fasten the positioning bar (E) to the adjusting nut (L) by means of the set screw (M) ⇨ Tightening moment max. 0,5 Nm.



2.5 Side covers

Procedure:

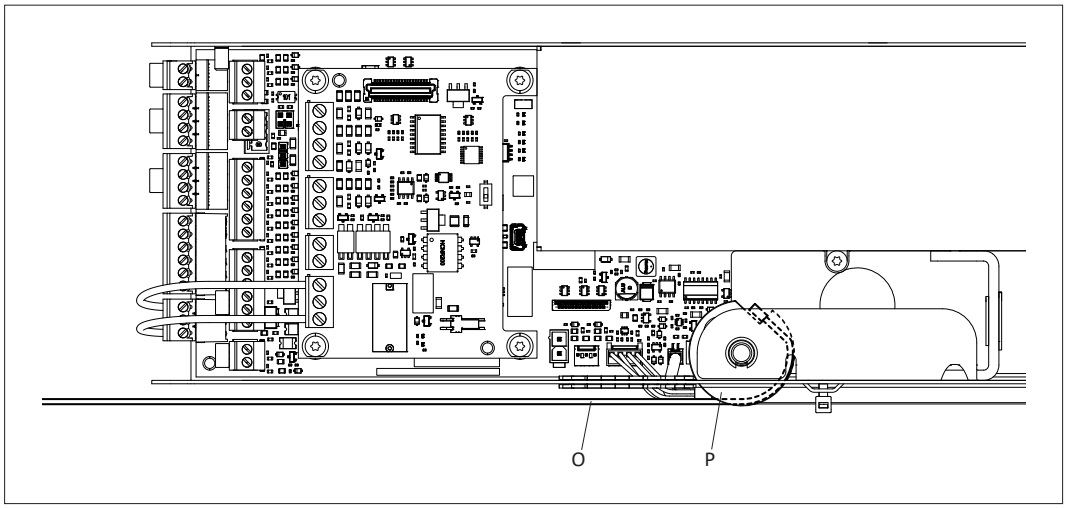
1. In function of the mounting version, pre-drill both side covers resp. make the cutouts.



2.6 Connect the steel cables

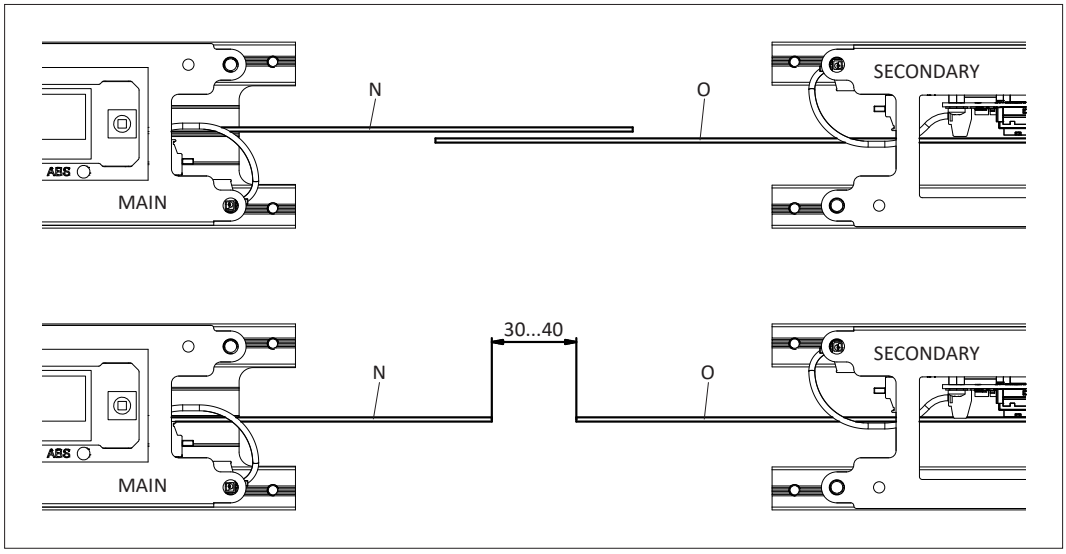
Procedure:

Note:
Both door leaves must be in the closed position.
Please make sure that the steel cable (O) of the SECONDARY drive mechanism is correctly guided into the groove of the rotary disk (P).



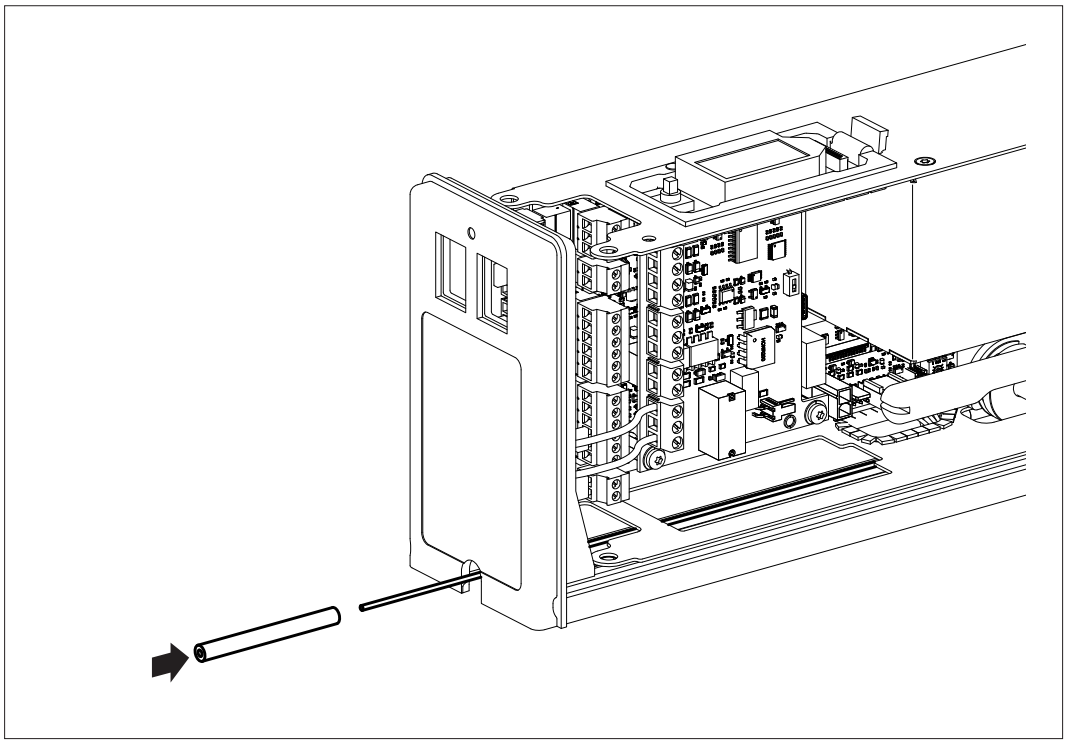
1. Tighten both steel cables (N/O) towards each other and overlap them.

2. Using a side cutter, shorten the steel cables in the middle of the two drive mechanisms so that there is a distance of approx. 30...40 mm between the cable extremities.



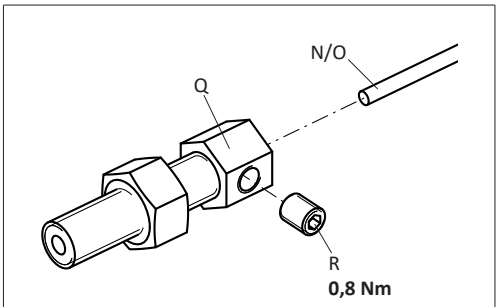
3. Push the Bowden cable sheathings over the steel cables. If required, shorten the Bowden cable sheathings using a side cutter.

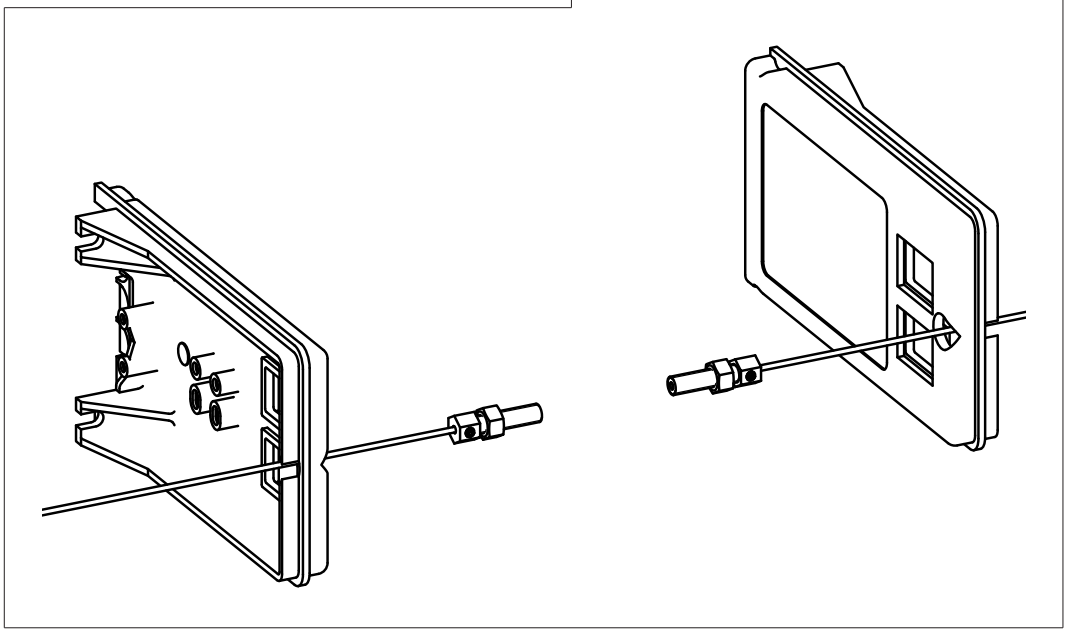
Note:
With the assembly type Sliding rod pulling function, the steel cable ends must be guided through both side covers prior to connecting them!
With the assembly type Sliding rod pulling function, the Bowden cable sheathing must be positioned above the respective control unit (display and joystick) in order to avoid a direct contact with the steel cable!



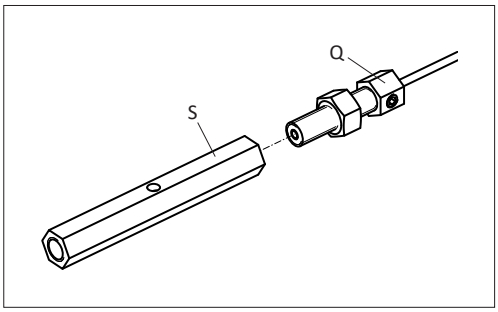
4. Insert the loose end of both steel cables (N/O) each, into one of the steel cable clamps (Q) till they are flush with the thread in front.

5. Fasten the steel cables with a set screw (R) to the steel cable clamps ⇨ Tightening moment 0,8 Nm.





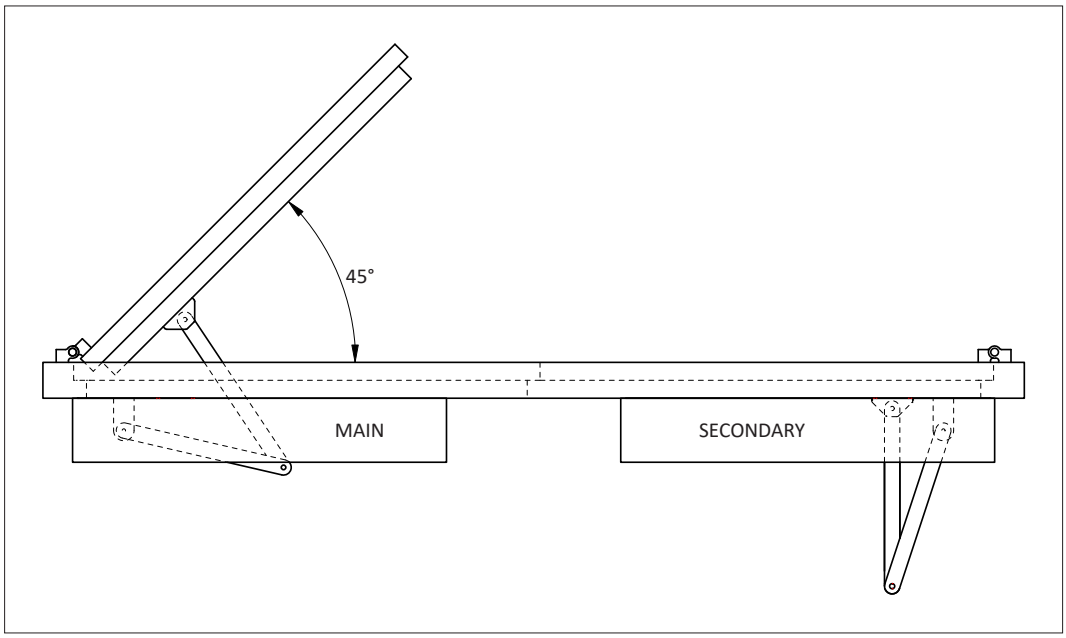
6. Screw one of the steel cable clamps (Q) slightly into the turnbuckle nut (S) = (3...4 rotations), then repeat the procedure with the second cable clamp at the other end of the turnbuckle nut (S).



2.7 Tighten the steel cables

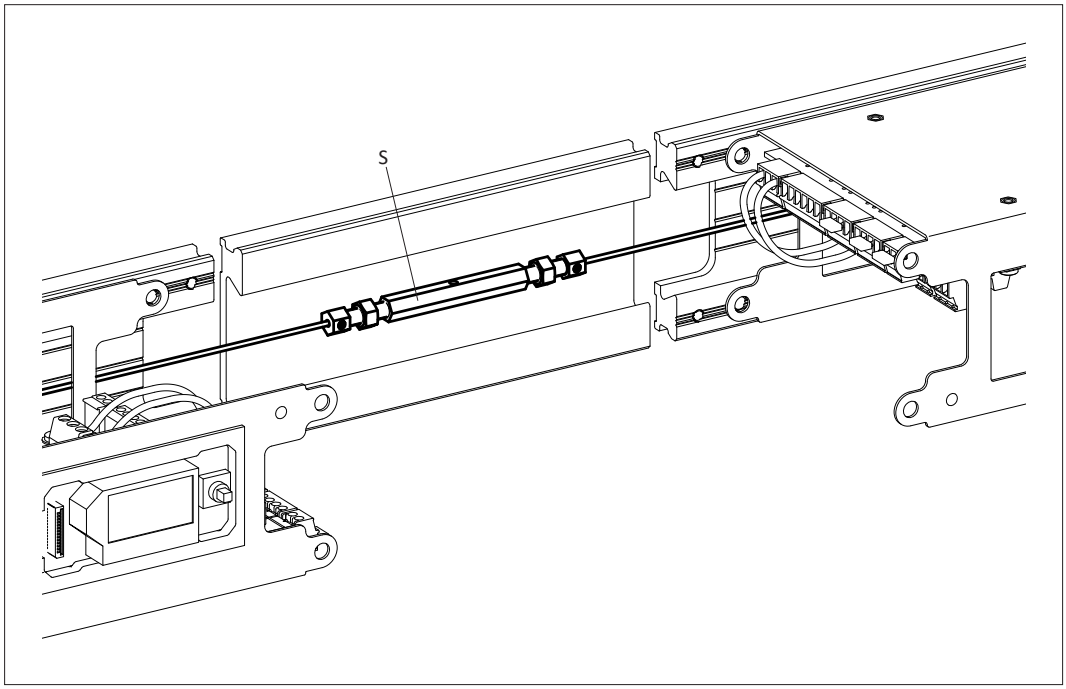
Procedure:

1. Open the earlier door leaf by approx. 45° and release it. The brake on the MAIN drive mechansim hinders the earlier door leaf to close. This door leaf remains in the half-open position.

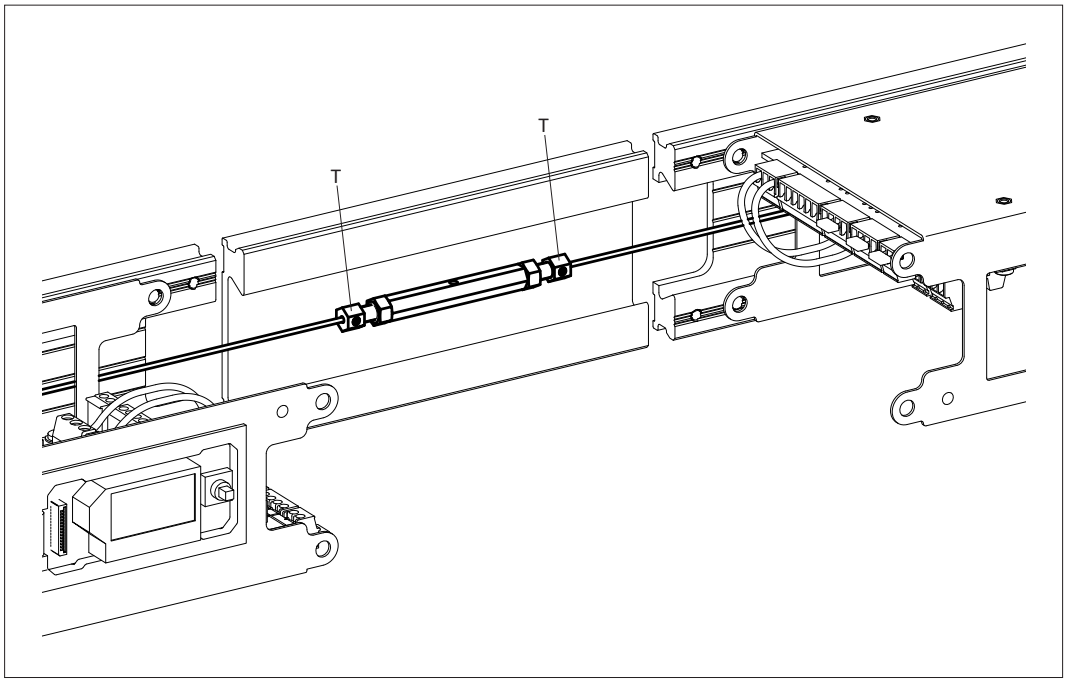


2. Tighten the steel cables by turning the turnbuckle nut (S) till the earlier door leaf has properly closed.

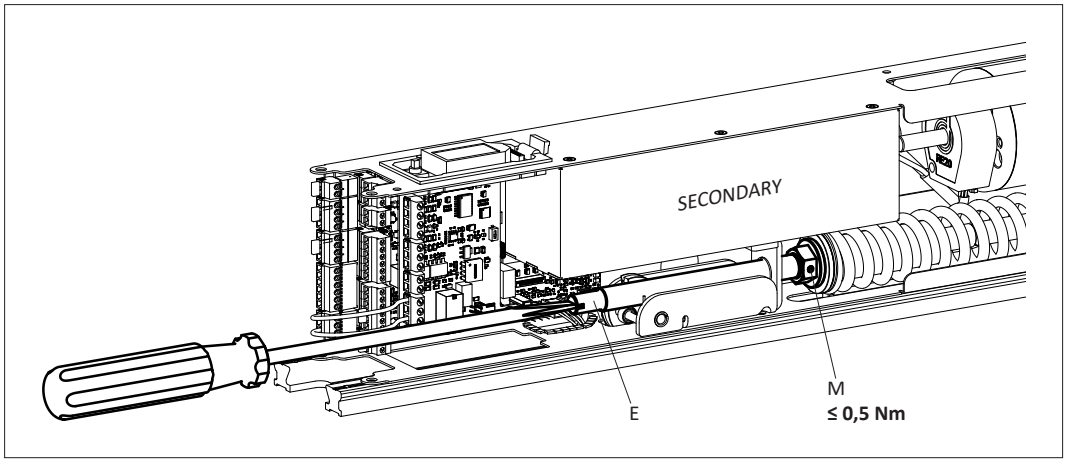
Note:
The steel cables should be sufficiently tightened to make sure that the brake on the MAIN drive mechanism releases completely and no noise can be heard from the brake during the closing process.



3. As soon as the setting of the cable connection is terminated, the position is secured with the two securing nuts (T).



4. By screwing out the positioning bar (E) of the SECONDARY drive mechanism, a re-tensioning of the steel cable is also possible. To this effect, slightly loosen the set screw (M) and turn out the positioning bar (E) either by hand or using a slotted screwdriver. Then retighten the set screw (M) ⇨ Tightening moment max. 0,5 Nm.



3 COMMISSIONING

Procedure:

1. Teaching the MAIN drive mechansim as a 1 door leaf installation (Teach) ⇨ according to the respective mounting and operating instructions.

   Note:
   The delayed door leaf must be closed, in order that Teach can be carried out at the earlier door leaf (MAIN drive mechanism).

2. On the side cover, switch the MAIN drive mechanism to the operating mode OPEN ⇨ the earlier door leaf opens and remains in the open position.

3. Teaching the Secondary drive mechanism (Teach) ⇨ according to the respective mounting and operating instructions.

4. On the side cover, switch the MAIN drive mechanism again to the operating mode AUTOMATIC ⇨ the earlier door leaf closes.

5. In the menu DOUBLEDOOR of the MAIN drive mechanism ⇨ carry out the following settings:

   Note:
   The closing sequence delay angle AcSeq of the MAIN drive mechanism must be set to at least the selected opening angle Ao or bigger ⇨ this ensures that the earlier door leaf does not initiate the closing sequence before the delayed door leaf is completely closed.

6. In the menu DOUBLEDOOR of the SECONDARY drive mechanism ⇨ carry out the following settings:

   Note:
   We recommend an opening sequence delay angle AoSeq of at least 20°.

7. Reset the fire alarm (if necessary). Give then an opening command KEY/OEI/OEO and observe the automatic driving process. If necessary, proceed to the required adaptations.

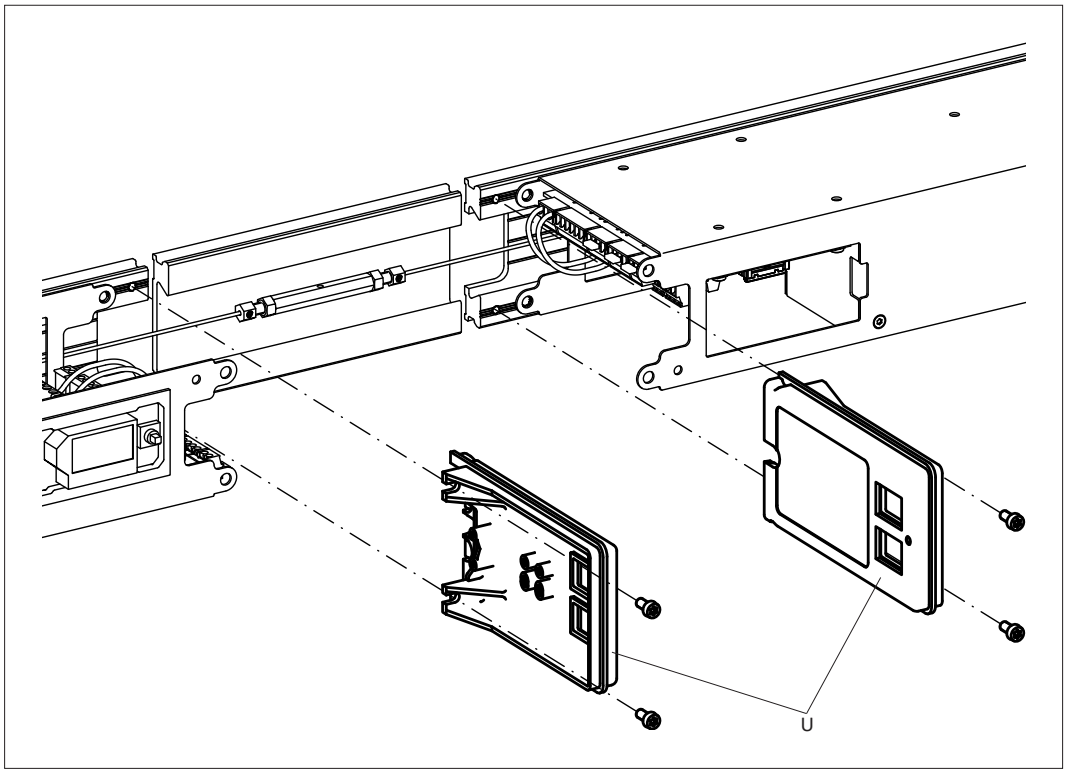
8. Select operating mode OPEN on one of the two side covers.

9. As soon as both door leaves are open, select the operating mode MANUAL on one of the two side covers.
   Check if both door leaves close in the correct sequence (first the delayed door leaf, then the earlier door leaf).

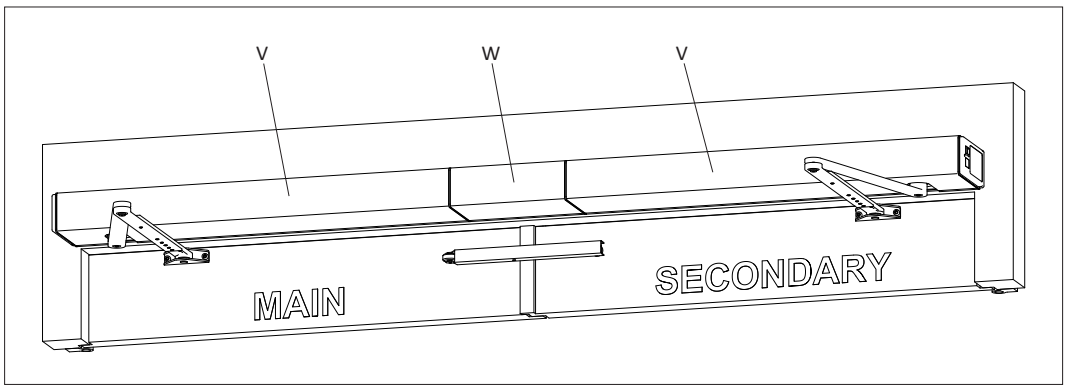
4 FINAL WORKS

Procedure:

1. Mount both side covers (U) between the drive mechanisms, if not already mounted (sliding rod with pulling function).



2. Mount the drive mechanism covering (V) of both drive mechanisms.
3. Mount the intermediate covering (W).
4. On both side covers, set the operating mode again to AUTOMATIC.



5 SPARE PARTS

Art. no.	Description	Remark
0549-126	Drive module SRI MAIN ETS 42	Standard
0549-127	Drive module SRI SECONDARY ETS 42	Standard
0549-128	Drive module SRI MAIN ETS 42-R	Fire protection
0549-129	Drive module SRI SECONDARY ETS 42-R	Fire protection
0549-131	Replacement set SRI ETS 42-R	Steel cables + accessories