ASSEMBLY GUIDEBOOK

EVOLUS

GB

EVOLUS AUTOMATED EQUIPMENT ASSEMBLY GUIDEBOOK

LABEL

"EVOLUS" ASSEMBLY GUIDEBOOK - GB - Rel.1.2- 03/2010 - CD0500ITA_GI

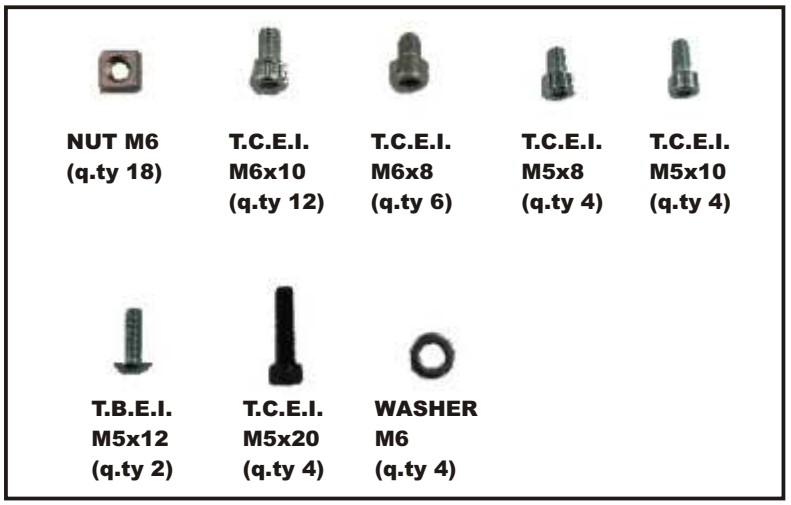
1) WARNINGS

This assembly manual is addressed to professionally specialized personnel only.
Read carefully all the instructions before product assembly, as a wrong assembly could be a source of danger.
Before assembling the product, always check its integrity.
Keep packaging materials out of children's reach, as they might be a source of danger.

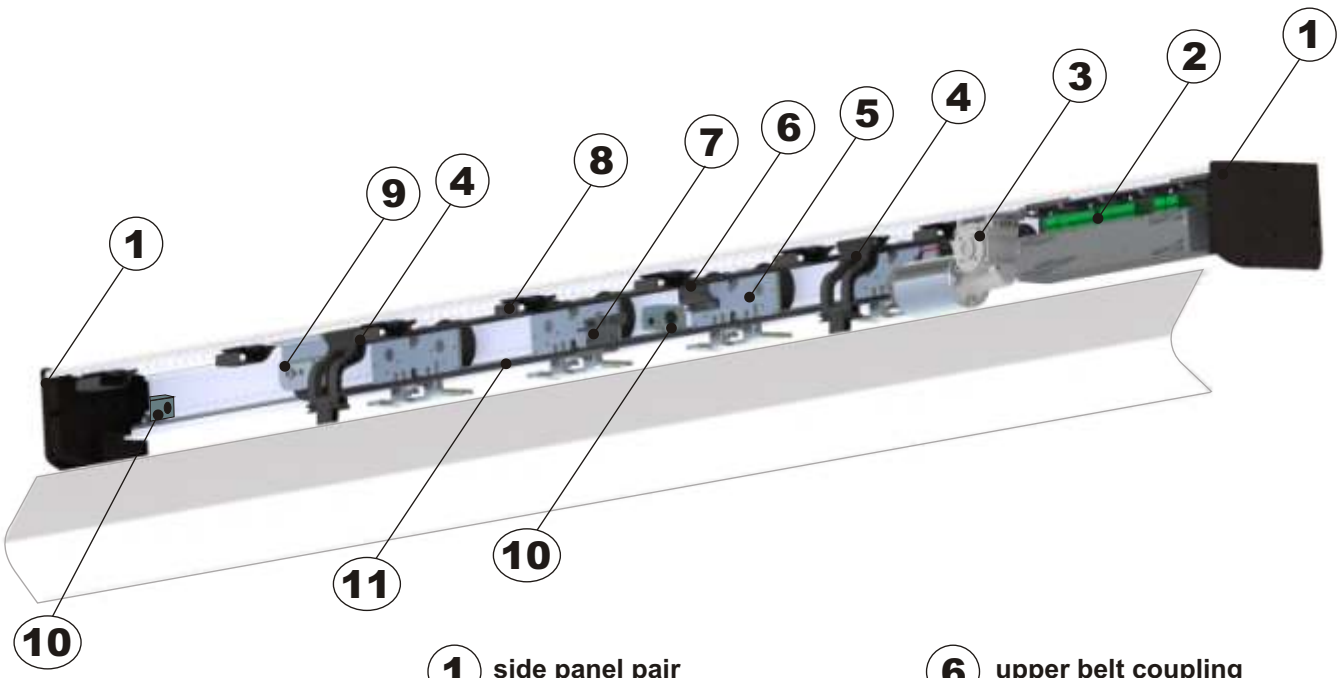
KIT CONTENT

1. SIDE PANEL PAIR
2. ELECTRONIC CONTROL UNIT
3. MOTOR ASSEMBLY WITH ENCODER
4. COVER LINKS
5. CARRIAGE WITH DOUBLE WHEEL AND THIRD ANTI-DERAILMENT WHEEL
6. UPPER BELT COUPLING
7. LOWER BELT COUPLING
8. CABLE GLAND
9. IDLE PULLEY
10. MECHANICAL LIMIT SWITCH

KIT OF SCREWS

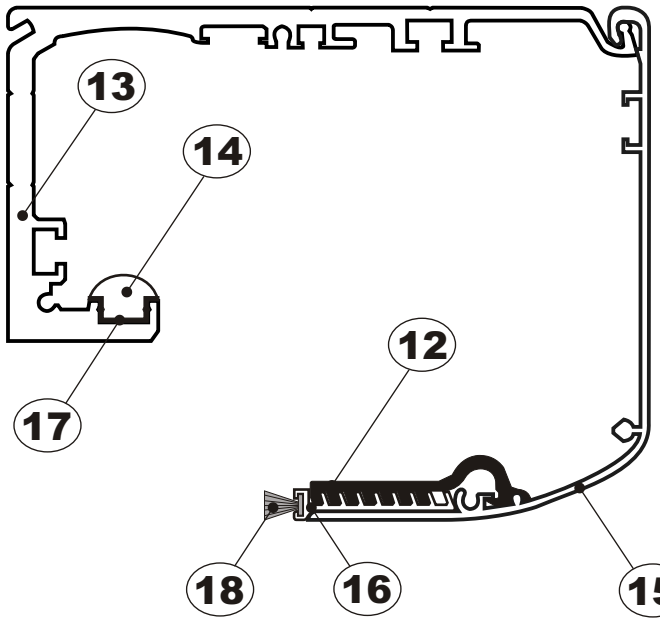


2)COMPONENT ARRANGEMENT



1 side panel pair
2 electronic control unit
3 motor assembly with encoder
4 cover links
5 carriage with double wheel and third anti-derailment wheel
6 upper belt coupling
7 lower belt coupling
8 cable gland
9 idle pulley
10 mechanical limit switch
11 driving belt

FIG.1

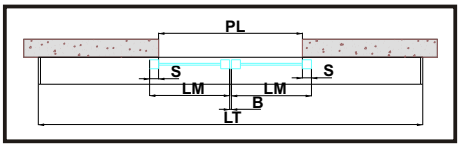


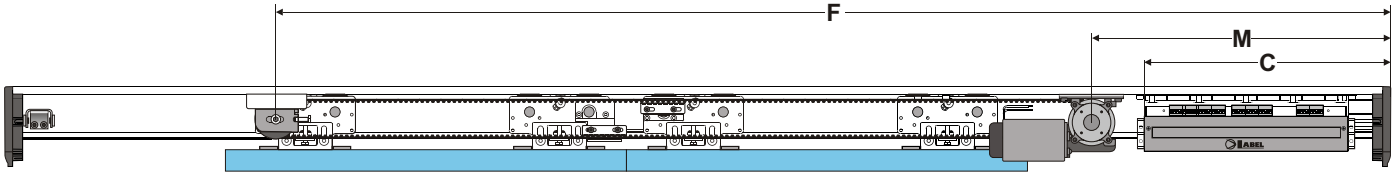
12 clip
13 transom
14 sliding rail
15 casing
16 casing compensating profile
17 rail gasket
18 brush

FIG.2

DOUBLE DOOR LEAF WITHOUT ELECTRIC LOCK

FIG.3

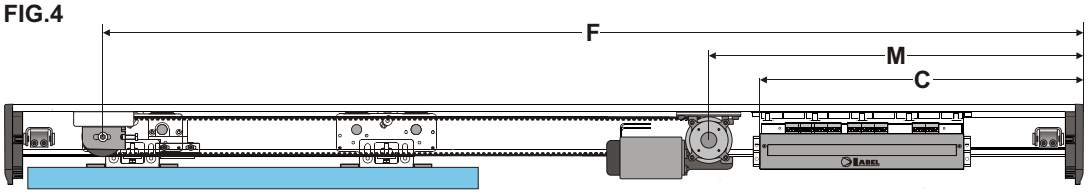


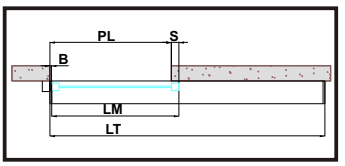


TRANSOM LENGTH LT LT=2PL-B+2S+24	FREE PASSAGE PL PL=(LT+B)/2-S-6	LEAF WIDTH LM LM=(LT-B)/4+S/2-6	IDLE PULLEY F LT*3/4+75	MOTOR M	CONTROL UNIT C
2000	949	516,5	1575	400	345
2500	1199	641,5	1950	400	345
3000	1449	766,5	2325	400	345
3500	1699	891,5	2700	400	345
4000	1949	1016,5	3075	400	345
4500	2199	1141,5	3450	400	345
5000	2449	1266,5	3825	400	345
5500	2699	1391,5	4200	400	345
6000	2949	1516,5	4575	400	345
6500	3199	1641,5	4950	400	345

SINGLE DOOR RH LEAF
WITHOUT ELECTRIC LOCK

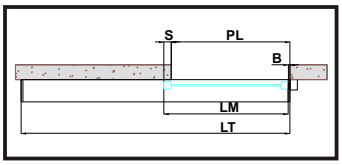
FIG.4





TRANSOM LENGTH LT LT=2PL-B+S+24	FREE PASSAGE PL PL=(LT+B-S)/2-12	LEAF WIDTH LM LM=(LT-B+S)/2-12	IDLE PULLEY F LT-87	MOTOR M LT-LM-342	CONTROL UNIT C LT-LM-397
2000	968	1008	1913	650	595
2500	1218	1258	2413	900	845
3000	1468	1508	2913	1150	1095
3500	1718	1758	3413	1400	1345
4000	1968	2008	3913	1650	1595
4500	2218	2258	4413	1900	1845
5000	2468	2508	4913	2150	2095
5500	2718	2758	5413	2400	2345
6000	2968	3008	5913	2650	2595
6500	3218	3258	6413	2900	2845

SINGLE DOOR LH LEAF
WITHOUT ELECTRIC LOCK



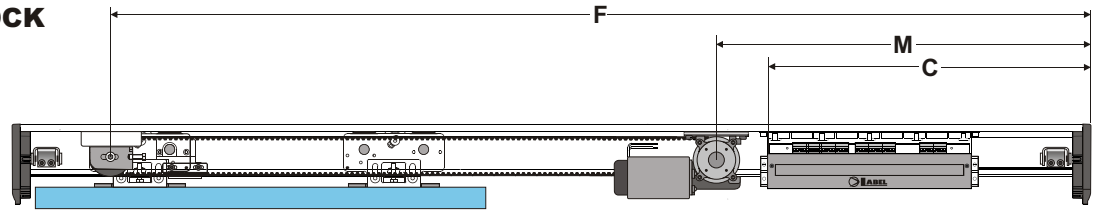
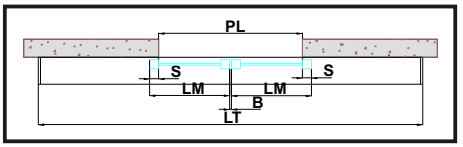


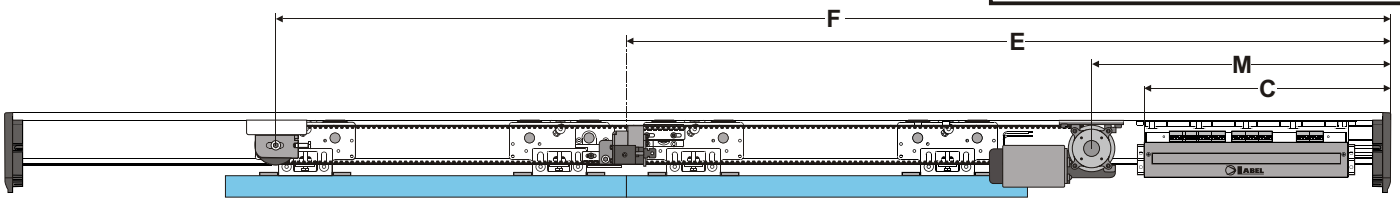
FIG.5

TRANSOM LENGTH LT LT=2PL-B+S+24	FREE PASSAGE PL PL=(LT+B-S)/2-12	LEAF WIDTH LM LM=(LT-B+S)/2-12	IDLE PULLEY F LT-87	MOTOR M LT-LM-342	CONTROL UNIT C LT-LM-397
2000	968	1008	1913	650	595
2500	1218	1258	2413	900	845
3000	1468	1508	2913	1150	1095
3500	1718	1758	3413	1400	1345
4000	1968	2008	3913	1650	1595
4500	2218	2258	4413	1900	1845
5000	2468	2508	4913	2150	2095
5500	2718	2758	5413	2400	2345
6000	2968	3008	5913	2650	2595
6500	3218	3258	6413	2900	2845

DOUBLE DOOR LEAF WITH SLIM ELECTRIC LOCK

FIG.3-E

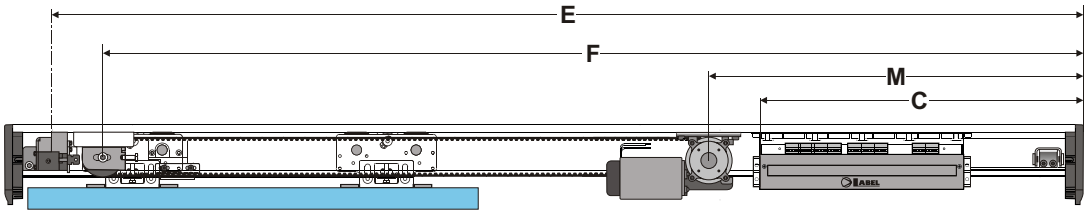


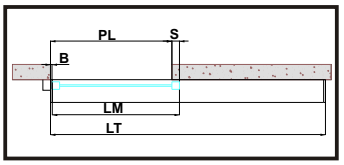


TRANSOM LENGTH LT LT=2PL-B+2S+12	FREE PASSAGE PL PL=(LT+B)/2-S-6	LEAF WIDTH LM LM=(LT-B)/4+S/2-6	IDLE PULLEY F T*3/4+100	MOTOR M	CONTROL UNIT C	ELECTRIC LOCK E T/2 + 5
2000	943	516,5	1575	400	345	1000
2500	1193	641,5	1950	400	345	1250
3000	1443	766,5	2325	400	345	1500
3500	1693	891,5	2700	400	345	1750
4000	1943	1016,5	3075	400	345	2000
4500	2193	1141,5	3450	400	345	2250
5000	2443	1266,5	3825	400	345	2500
5500	2693	1391,5	4200	400	345	2750
6000	2943	1516,5	4575	400	345	3000
6500	3193	1641,5	4950	400	345	3250

SINGLE DOOR RH LEAF WITH SLIM ELECTRIC LOCK

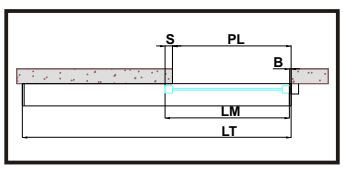
FIG.4-E





TRANSOM LENGTH LT LT=2PL-B+S+24	FREE PASSAGE PL PL=(LT+B-S)/2-12	LEAF WIDTH LM LM=(LT-B+S)/2-12	IDLE PULLEY F LT-212	MOTOR M LT-LM-467	CONTROL UNIT C LT-LM-522	ELECTRIC LOCK E LT - 62
2000	968	1008	2188	525	470	1903
2500	1218	1258	2688	775	720	2403
3000	1468	1508	3188	1025	970	2903
3500	1718	1758	3688	1275	1220	3403
4000	1968	2008	4188	1525	1470	3903
4500	2218	2258	4688	1775	1720	4403
5000	2468	2508	5188	2025	1970	4903
5500	2718	2758	5688	2275	2220	5403
6000	2968	3008	6188	2525	2470	5903
6500	3218	3258	6688	2775	2720	6403

SINGLE DOOR LH LEAF WITH SLIM ELECTRIC LOCK



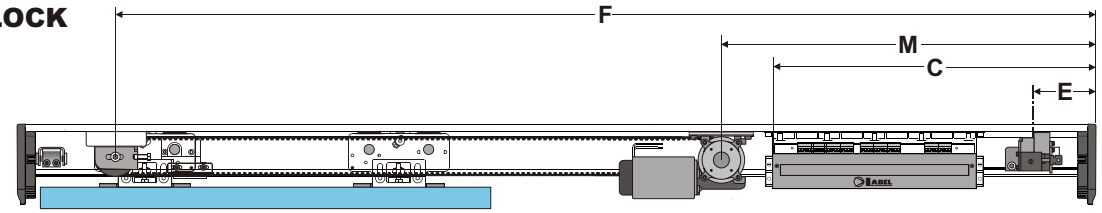
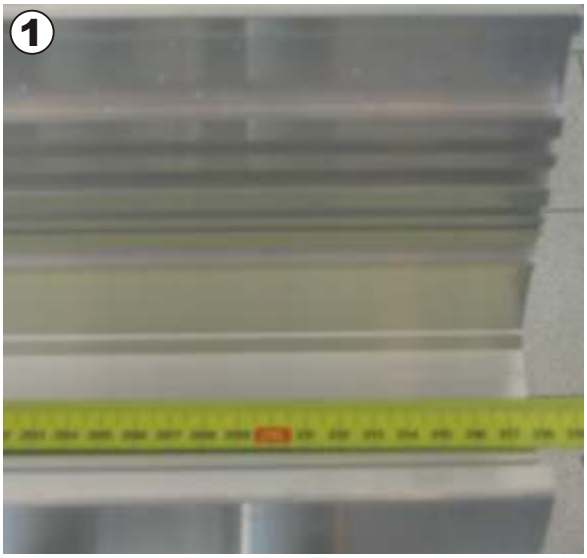


FIG.5-E

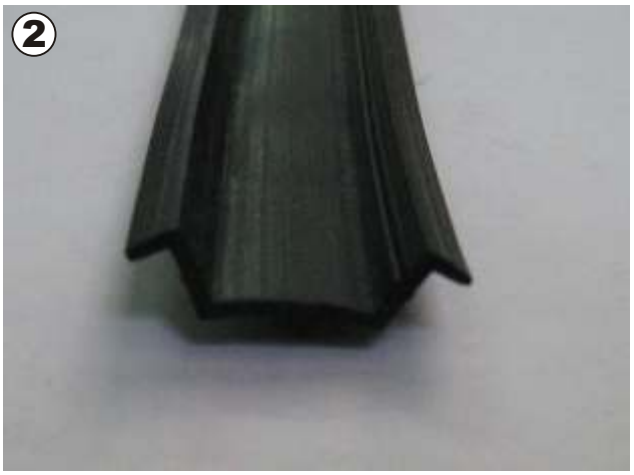
TRANSOM LENGTH LT LT=2PL-B+S+24	FREE PASSAGE PL PL=(LT+B-S)/2-12	LEAF WIDTH LM LM=(LT-B+S)/2-12	IDLE PULLEY F LT-87	MOTOR M LT-LM-342	CONTROL UNIT C LT-LM-397	ELECTRIC LOCK E 75
2000	968	1008	1913	650	595	85
2500	1218	1258	2413	900	845	85
3000	1468	1508	2913	1150	1095	85
3500	1718	1758	3413	1400	1345	85
4000	1968	2008	3913	1650	1595	85
4500	2218	2258	4413	1900	1845	85
5000	2468	2508	4913	2150	2095	85
5500	2718	2758	5413	2400	2345	85
6000	2968	3008	5913	2650	2595	85
6500	3218	3258	6413	2900	2845	85

6) ASSEMBLY OF PARTS

① Cut the transom (13) 24mm shorter with respect to the total length LT



② Cut the rail gasket (17) 24mm shorter with respect to the total length LT

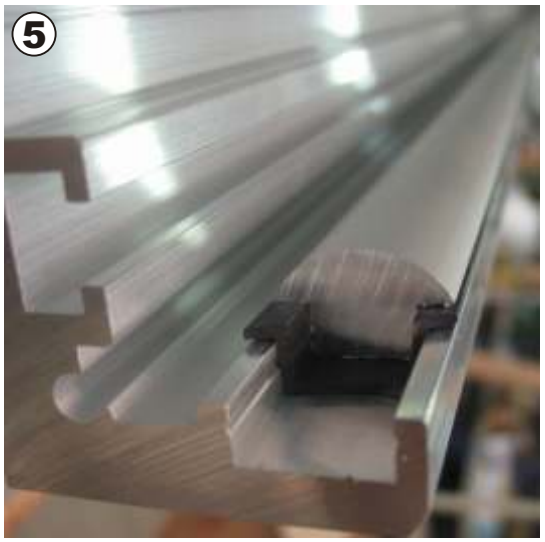


③ Cut the sliding rail (14) 60mm shorter with respect to the total length LT

④ Cut the covering guard (15) 24mm shorter with respect to the total length LT

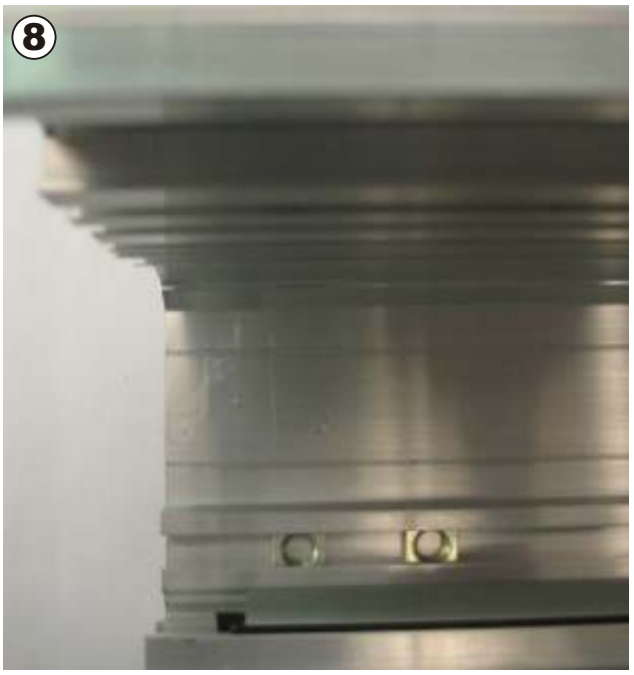
⑤ Insert the rail gasket (17) in the lower slot of the transom making it adhere completely for the whole length and then insert the sliding rail (14) on the rail gasket.

⑥ In order to facilitate the insertion, it is advisable to use a carriage with two lower wheels leaning on the sliding rail and the central wheel adhering to the upper guide of the transom, and then to make it slide all along the rail easing the rail positioning on the gasket.

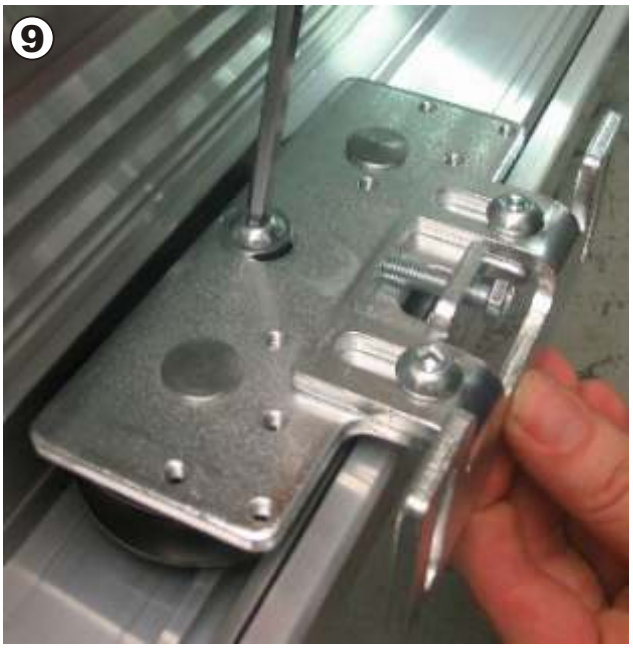


⑦ Insert No. 10 nuts M6 in the upper slot of the transom which will be used to fix the motor, the control unit,the idle pulley and the two cover links. In case three cover links are used (for transoms longer than 4500mm.), insert No. 12 nuts M6.

⑧ Insert No. 4 nuts M6 in the lower slot of the transom which will be used to fix the opening mechanical limit switch and the closing mechanical limit switch or the electric lock, if any and if required.



⑨ Insert the carriage (5) in the transom and vertically adjust the central wheel by operating on the adjustment screw, and by keeping the two side wheels leaning on the lower sliding guide.
The central wheel must only skim the upper part of the transom without pressing, so that the carriage can slide freely.



Now, take care that the carriage cannot get out of its seat and that the central wheel performs its duty of anti-derailment.
Insert two carriages for each leaf in the transom. In case of double leaf, there are 4 carriages, the two internal carriages have a belt coupling and the two external carriages are free.
In case of single leaf, there are 2 carriages, the carriage on the left has a belt coupling and the carriage on the right is free, regardless of the opening direction.

⑩ Assemble the electric lock coupling bracket in the first carriage on the left with respect to the electric lock, if any, using No. 2 screws M5 X 8.

(11) Assemble the electric lock coupling bracket in the first carriage on the right with respect to the electric lock, if any, using No. 2 screws M5 X 8.

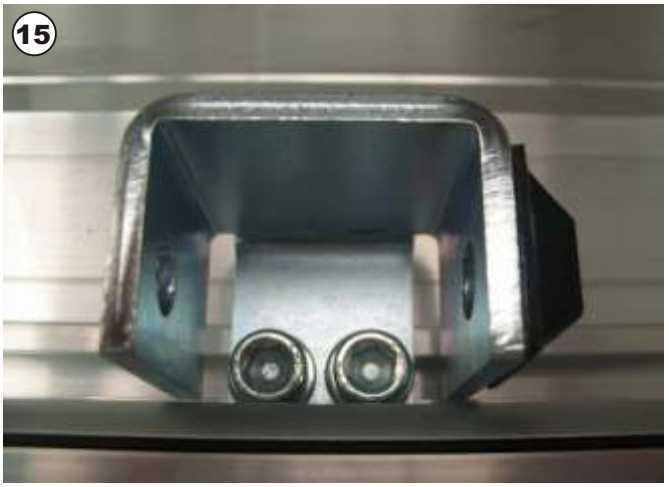
(12) Assemble the lower belt coupling in the left carriage, in case of single leaf, or in the internal carriage of the left leaf, in case of double leaf, by using No. 2 screws M5 X 8.
Then assemble the belt block on the belt coupling by using No. 2 screws M5 X 10.

(13) Assemble the upper belt coupling in the internal carriage of the right leaf, in case of double leaf, by using No. 2 screws M5 X 8.

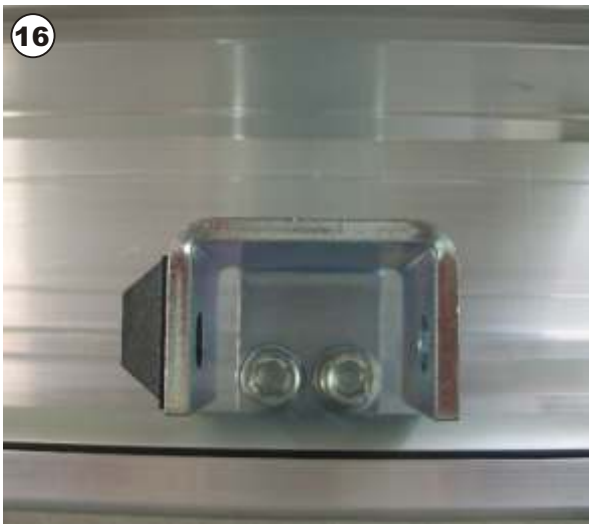
Lower belt coupling

Upper belt coupling

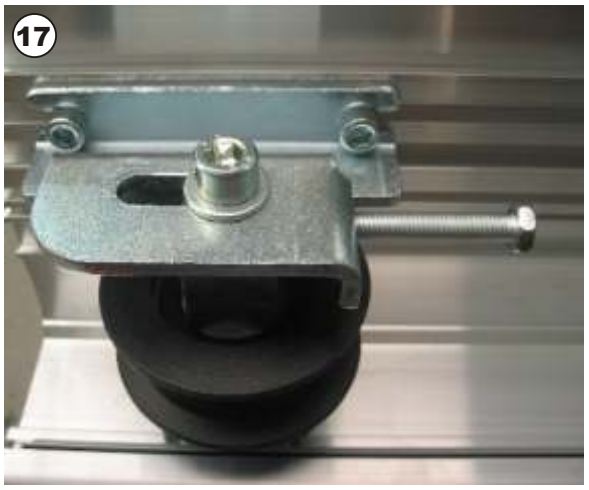
(14) Fix the mechanical limit switch (10) to the left side of the transom, as per fig. 3, 4, 5 using screws M6 x 10 with washers M6.
(15) Apply the rubber buffer on the outer rh border of the limit switch.
This mechanical limit switch corresponds to the opening limit switch in case of double leaf door or single leaf door with leftward opening, and to the closing limit switch in case of single leaf door with rightward opening without electric lock.



16 Fix the second mechanical limit switch (10) in the centre of the transom in case of double leaf and only if the electric lock is not present, as per fig. 3, using screws M6 x 10 with washers M6.
Apply the rubber buffer on the outer lh border of the limit switch.
This mechanical limit switch corresponds to the closing limit switch in case of double leaf door.
In case of single leaf door, fasten the mechanical limit switch to the right side of the transom, as per fig. 4 and 5.
This mechanical limit switch corresponds to the opening limit switch in case of single leaf door with rightward opening, and to the closing limit switch in case of single leaf door with leftward opening without electric lock.



17 Fix the idle pulley (9) to the right side of the transom, as per fig. 3, 4, 5 using screws M6x10.

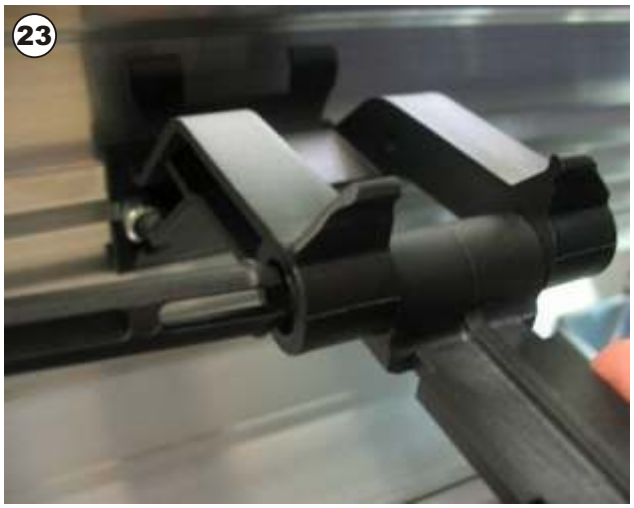


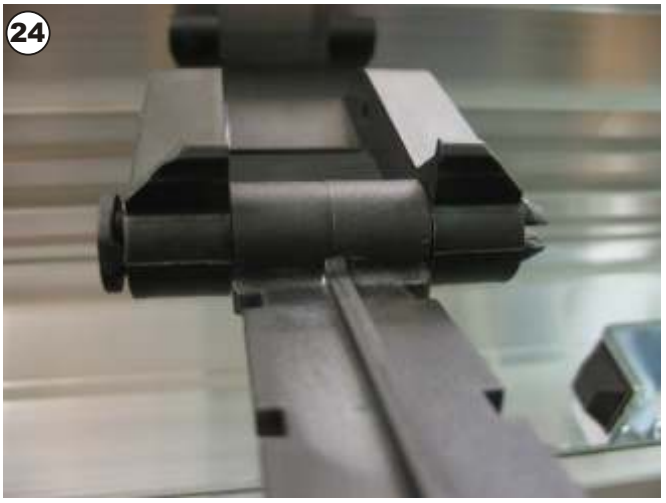
18 Fix the motor assembly with encoder (3) to the right side of the transom as per fig. 3, 4, 5 using screws M6x10.

19 If required, fix the battery plate under the electronic control unit container, by fastening it with No. 2 t.c.c. screws 3.9 x 6.5 and place the emergency battery on it.
20

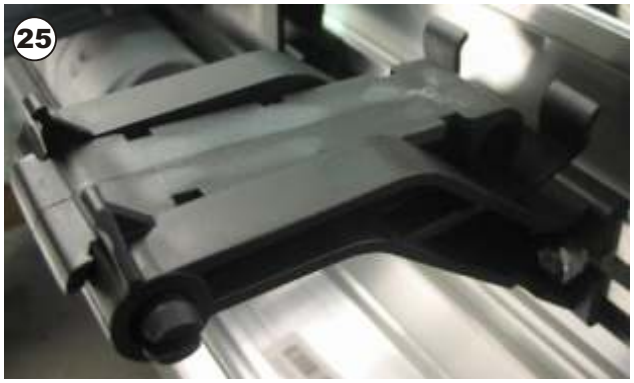
21 Fix the electronic control unit (2) to the right side of the transom, as per fig. 3, 4, 5 using screws M6x8.
Connect, to the electronic control unit, the motor cable, the encoder cable and the negative pole of the battery; the positive pole will be connected after the automated equipment start-up.
22 The Battery charger board shall be inserted in the connector J1 of the electronic control unit.

23 Fix No. 2 support links of the cover (4) to the transom by using No. 2 screws M6x10 for each link and connect the
24 articulation by inserting the plastic pin.
In case of automated equipment longer than 4500mm. provide No. 3 support links, one of which must be exactly in the centre of the transom.
The central link can be useful, in case of double leaf door, to support the motion radar connecting cable.
Should the third link be required to support the radar connecting cable, regardless of the transom length, it is possible to order it separately.





25 Then, turn the articulation upwards towards the link, in order to close it.



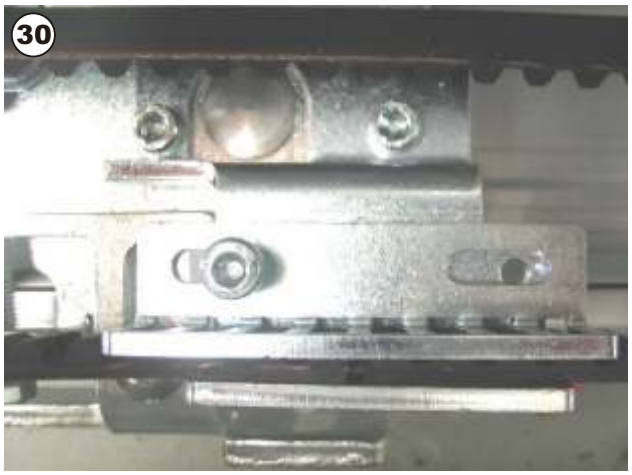
26 Install the driving belt (11) rolling it up around the idle pulley; the belt tensioning screw of the pulley shall be loosened.

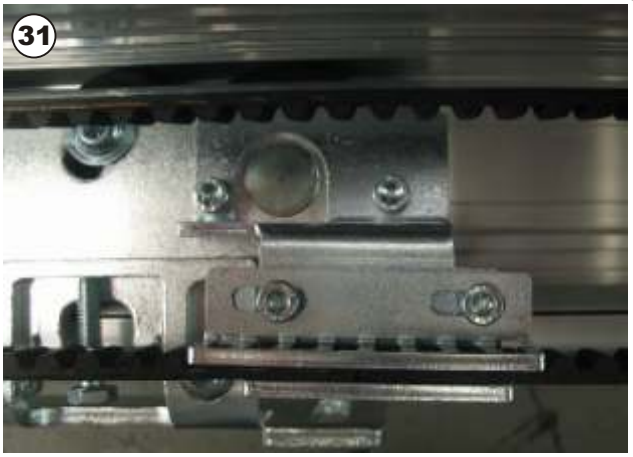
27 Insert the driving belt in the bracket of the lower belt coupling taking care to make it adhere thoroughly to the eyelets provided in the bracket and lock it by tightening the screw slightly.

28 Pull manually the belt from the upper side of the pulley towards the inside of the transom and insert it in the upper belt coupling bracket (only for double leaf doors).
Take care to place the carriages with belt coupling next to the closing mechanical limit switch or next to the electric lock bracket, if any, before tightening the belt block screws.

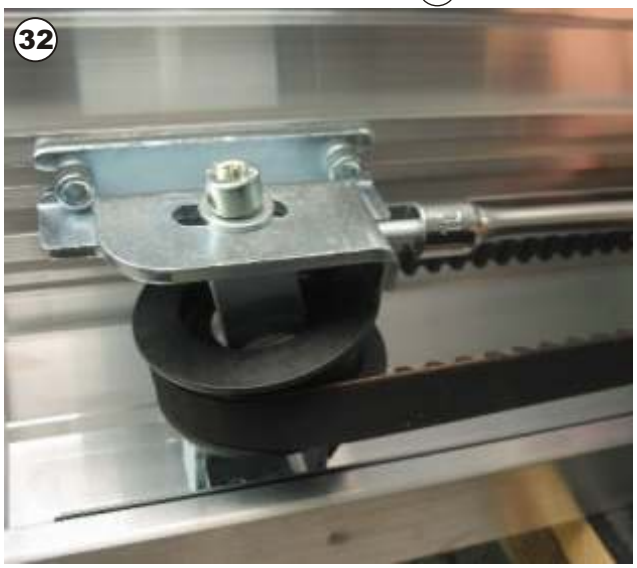
29 Roll the belt up around the motor pulley and pull it

30 Finally, cut the driving belt, insert it in the lower belt coupling bracket, and lock it by tightening the screws. 31





32 Adjust the belt tensioning by screwing the side screw of the idle pulley and, once the required tension has been reached, tighten the front screw. 33

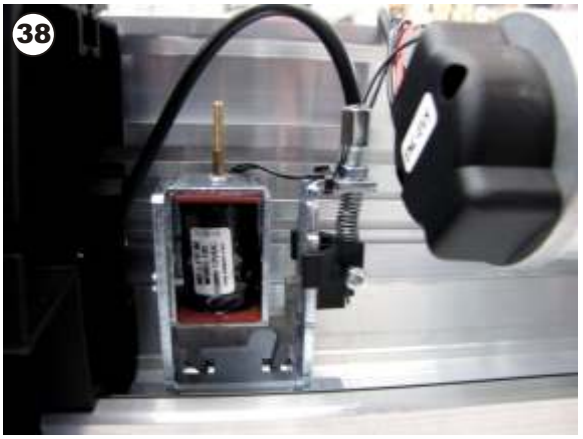


34 Apply, in the upper part of transom No. 10, the black plastic cable glands (8) inserting them as per figure, and place them at regular spacings along the whole length of the transom.

35 Install the plastic side panels (1), right and left, on the transom sides and fasten them by using two TCEI screws 5 x 20. 36

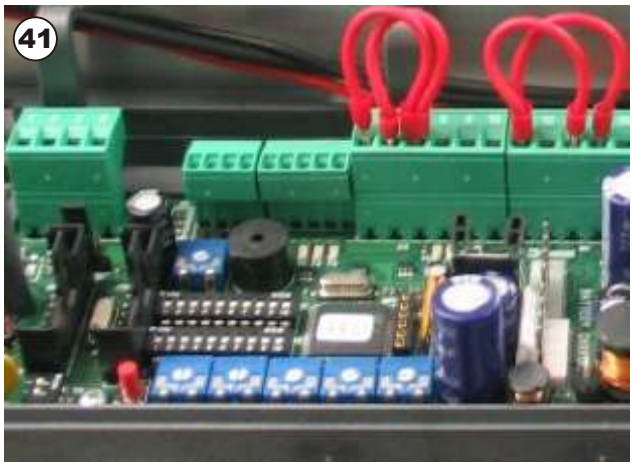
37 If the electric lock is required, place it in the centre of the transom in case of double leaf door, or on the right side of the transom in case of single leaf door with leftward opening or to the left side of the transom in case of single leaf door with rightward opening.

38 The electric lock lever shall hitch to the bracket provided on the carriage.
Comply with the fastening dimensions on fig.3-E, 4-E, 5-E and fasten the electric lock by using screws M6 x 10.



39 Roll the electric lock connecting cable up around the cable gland so that it cannot get entangled in the moving
40 devices, then connect it to the electric lock cabling by using two terminals and insert the connector of the electric lock in the LOCK 1 connector of the electronic control unit.

41 Operation test

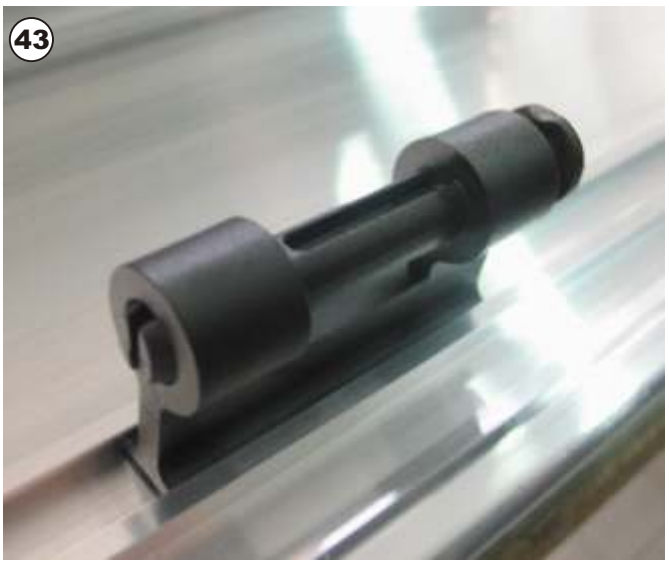


1. If the automated equipment is a single leaf door with rightward opening, set the dip 5 of S1 ON, if the automated equipment is double leaf or single leaf door with leftward opening, set the dip 5 of S1 OFF.
2. If the automated equipment is an EVOLUS 90, set the dip 9 of S2 OFF; if it is an EVOLUS 150 set the dip 9 of S2 ON.
3. If the electric lock model FAIL-SAFE is present, set the dip 9 of S1 ON; if the electric lock model FAIL-SECURE is present, set the 9 of S1 OFF.
4. Supply power to the control unit with 230Vac, that will emit an initial beep and a short series of close beeps.
5. Press and hold the PS2 SET-UP button as long as the control unit buzzer emits the fast beeps, then release it when the control unit emits the 4 final beeps preceding motor starting.
6. The electric lock, if any, will free the hooking bracket on the carriage and the motor will run slowly in the closing direction until when the carriages with belt coupling shall arrive at the end of stroke, afterwards, the motor will run slowly in the opening direction.
   After a small distance of opening stroke, turn off the control unit.

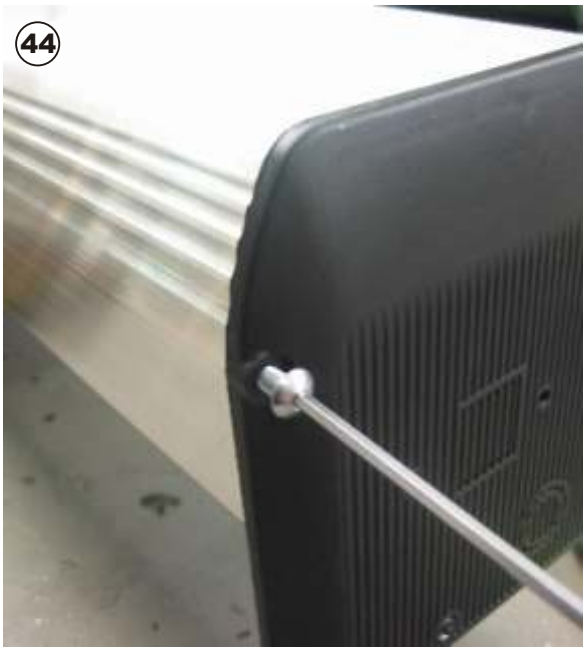
42 Close the container of the control unit with the cover by screwing it with the two screws provided.

43 Insert the articulation of the link provided with pin under the covering guard.

· Then, this articulation shall be coupled with the link which had been fastened to the transom, in order to guarantee the support of the guard when the automated equipment is open.



(44) Place the covering guard on the transom and fasten it with a TBEI screw 5 X 20.



(45) Finally, apply the label with the logo Label on the lower right side of the guard.

ASSEMBLY GUIDEBOOK

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