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Service manual

ComfoClima 24 ComfoClima 36 ComfoClima Q



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IMPORTANT!

Carefully read this manual before use.

This manual provides all the information required for safe and optimal installation and maintenance of the ComfoClima 24 or ComfoClima 36. It is also intended as a reference for servicing, so that this can be carried out in a responsible manner. The unit is subject to continuous development and improvement. As a result, the ComfoClima 24 or ComfoClima 36 may slightly differ from the descriptions.



NOTE : this manual has been compiled with the utmost care. However, no rights can be derived from it. In addition, we at all times reserve the right to change the contents of this manual, without prior notice.

The following pictograms are used in this document:

Symbol	Meaning
	Consult the manual before using/operate the equipment.
	Point of attention / important informations.
	Risk of compromised performance or damage to the ventilation system / risk of personal injury.
	Caution electrical hazard!

1 Introduction

Zehnder ComfoClima unit can be configured as left or right version, via software, during the commissioning of the system.

2 ComfoClima unit internal access

2.1 Access to the LEFT front coil

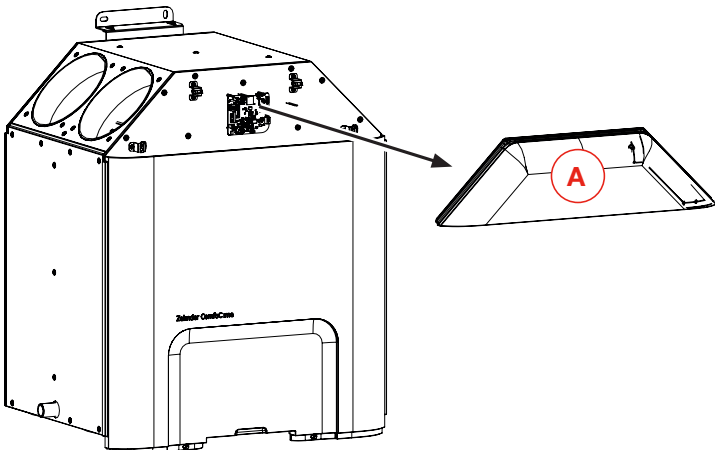
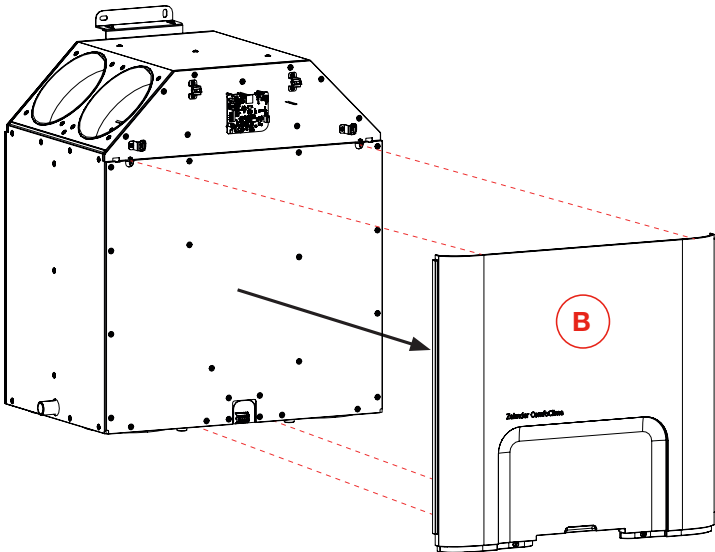
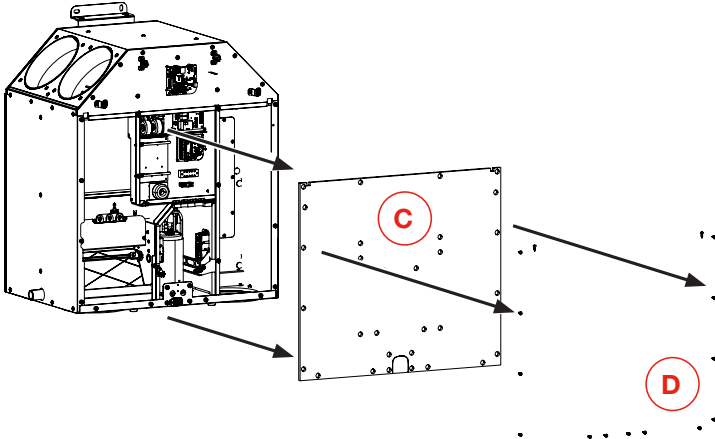


Always comply with the safety regulations, warnings, comments and instructions given in this document. Failure to comply with the safety regulations, instructions, warnings and comments may lead to personal injury or damage to the unit.

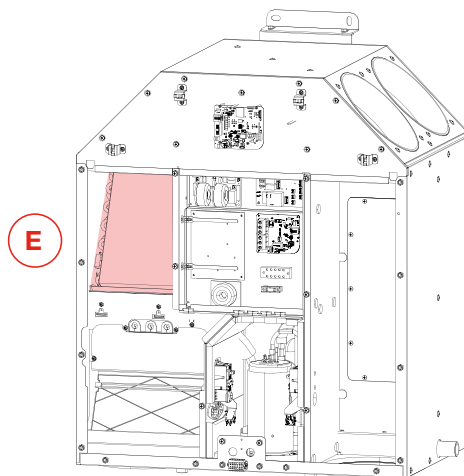


Before starting any operation, disconnect the main plug from the power supply and make sure that the unit is voltage free.

In order to proceed with access to the LEFT front coil, follow the steps as described below:

Step	Action
1	Remove the ComfoClima black top cover A by pulling the cover and unfastening the 4 hooks. During this operation be careful not to damage the electronic board placed behind the cover. 
2	Unscrew the two screws on the top and the two on the bottom of the front of the unit and remove the white frontal panel B of the ComfoClima, lifting it a little then extracting the lower side. 
3	Remove the front metal sheet C by unscrewing all the screws D. 

Step	Action
4	The coil E is visible on the left side (highlighted in red); it is possible to clean it using a vacuum cleaner, a compressor taking care of closing the below intake of the ComfoAir Q to avoid dirt falling down into the ComfoAir Q (see after for access to condensation tray). During maintenance operations, check for gas leakages and do a visual inspection of the components.



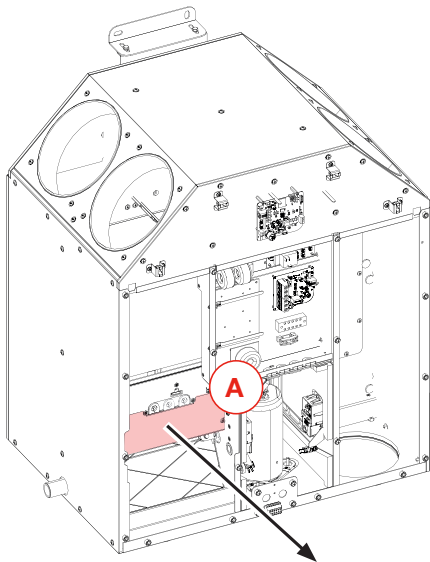
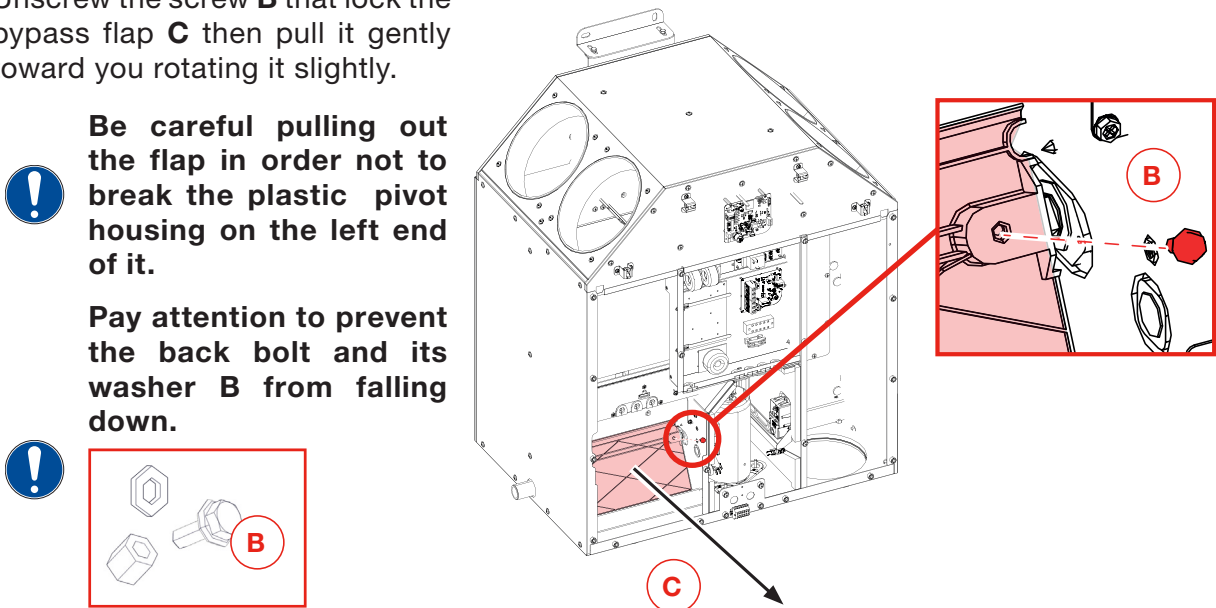
CAUTION!



The supplier shall not be held liable for any damage, to things or people, caused by accidents due to a failure to comply with the instructions provided in this manual and in the following chapters.

2.2 Access to the LEFT front part

In order to proceed with access to the LEFT front condensation tray, follow the steps as described below:

Step	Action
1	Please follow the previous sequence described in the " Paragraph 2.1 - Step 1 to 3 ", to get access to the internal components.
2	Remove the metallic plate A by unscrewing the two frontal screws in order to see the bottom of the condensation tray. 
3	Unscrew the screw B that lock the bypass flap C then pull it gently toward you rotating it slightly. Be careful pulling out the flap in order not to break the plastic pivot housing on the left end of it. Pay attention to prevent the back bolt and its washer B from falling down. 
4	It is possible to replace the internal siphon extracting gently the rubber hose ends.

CAUTION!

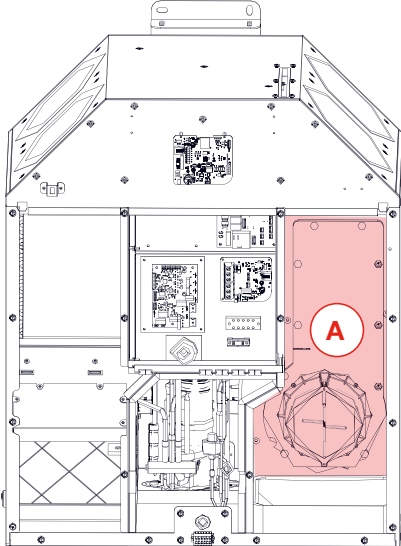
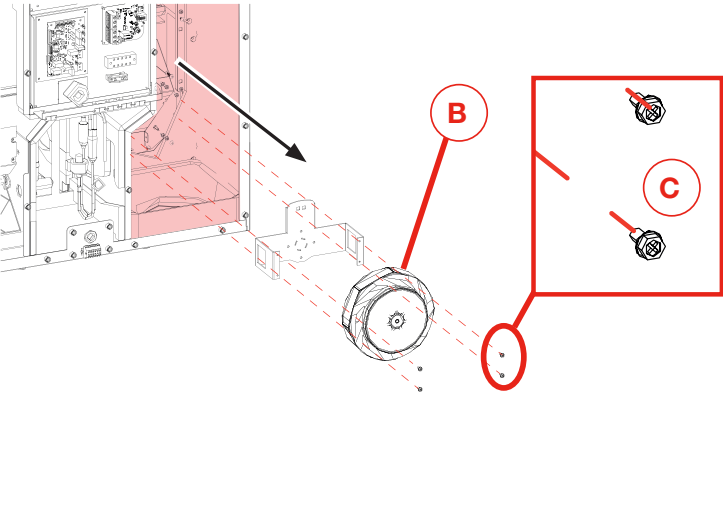


The supplier shall not be held liable for any damage, to things or people, caused by accidents due to a failure to comply with the instructions provided in this manual and in the following chapters.

2.3 Access to the ComfoClima Q fan

2.3.1 Left machine configuration

In order to proceed with access to the fan housing on the ComfoClima Q in the LEFT machine configuration, follow the steps as described below:

Step	Action
1	Please follow the previous sequence described in the " Paragraph 2.2 - Step 1 to 3 ", to get access to the internal components.
2	Once the flap has been removed, the fan housing A is visible from his back. 
3	To remove the fan B with his frame, unscrew the four screws C placed at the four corners. Be careful pulling out the fan with his frame in order not to break any components. Pay attention to prevent the back bolt and its washer C from falling down. 
4	Replace the fan unscrewing it from its housing and disconnecting the power connectors.

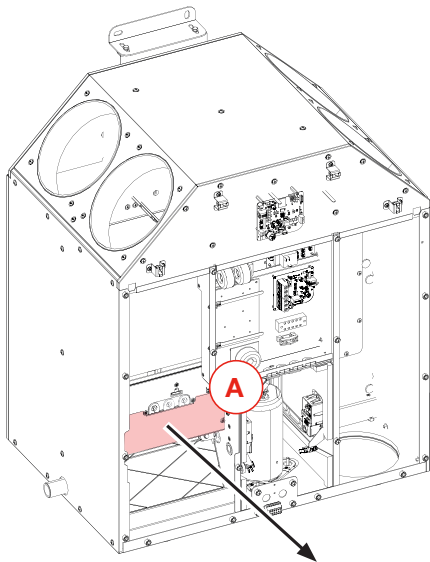
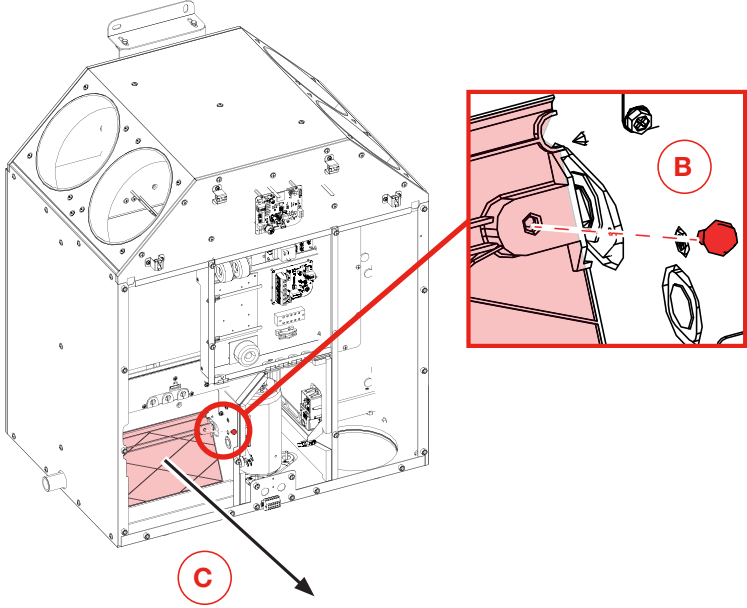
CAUTION!

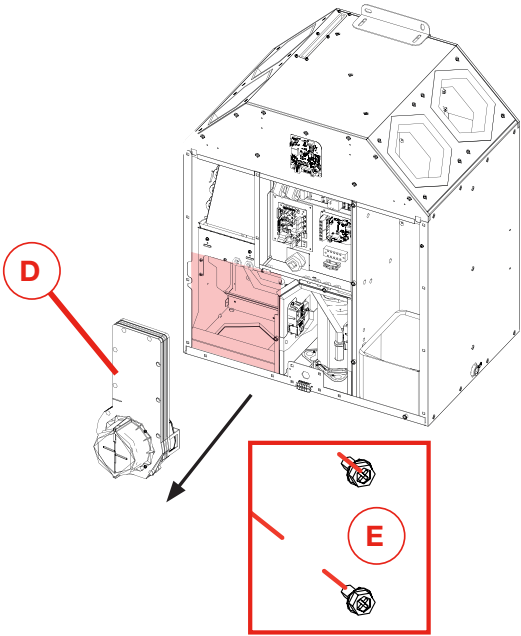
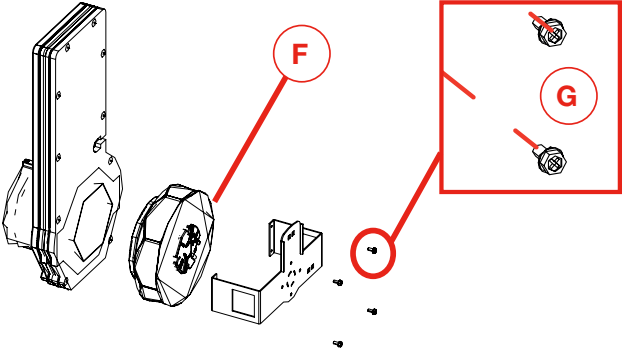


The supplier shall not be held liable for any damage, to things or people, caused by accidents due to a failure to comply with the instructions provided in this manual and in the following chapters.

2.3.2 Right machine configuration

In order to proceed with access to the fan housing on the ComfoClima Q in the RIGHT machine configuration, follow the steps as described below:

Step	Action
1	Please follow the previous sequence described in the " Paragraph 2.2 - Step 1 to 3 ", to get access to the internal components.
2	Remove the metallic plate A by unscrewing the two frontal screws in order to see the bottom of the condensation tray. 
3	Unscrew the screw B that lock the bypass flap C then pull it gently toward you rotating it slightly. Be careful pulling out the flap in order not to break the plastic pivot housing on the left end of it. Pay attention to prevent the back bolt and its washer B from falling down. 

Step	Action
4	To remove the fan unit D with his frame, unscrew the fixing screws E placed at the corners on the fan unit plate and extract the fan unit from the front side. Be careful pulling out the fan with his frame in order not to break any components. Pay attention to prevent the back bolt and its washer E from falling down. 
5	To remove the fan F unscrew the four screws G on the fixing plate. Be careful pulling out the fan with his frame in order not to break any components. Pay attention to prevent the back bolt and its washer E from falling down. 
6	Replace the fan unscrewing it from its housing and disconnecting the power connectors.

CAUTION!



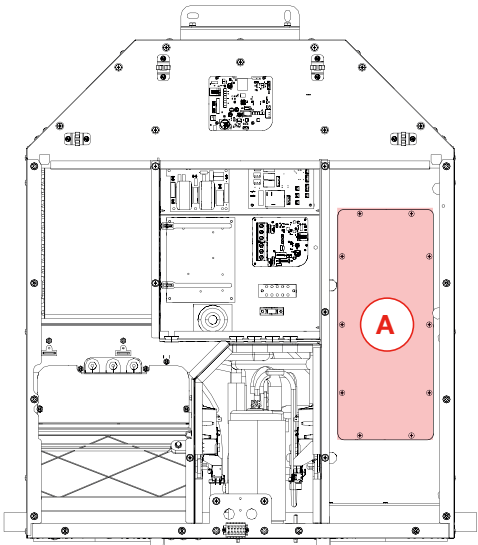
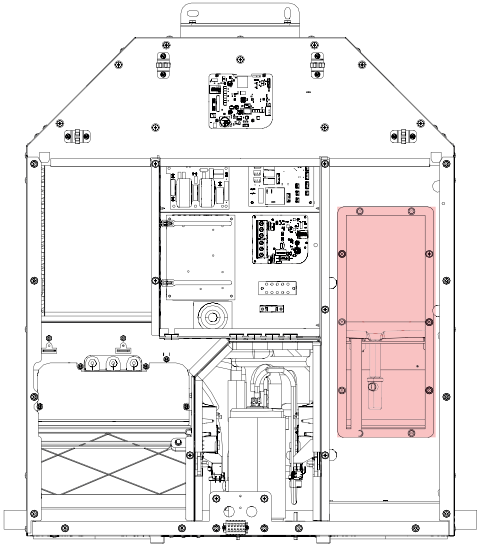
The supplier shall not be held liable for any damage, to things or people, caused by accidents due to a failure to comply with the instructions provided in this manual and in the following chapters.

2.4 Access to the RIGHT back part (siphon and condensation tray)



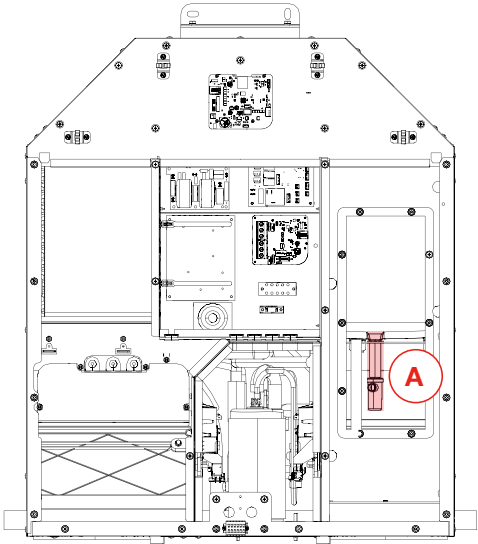
Always comply with the safety regulations, warnings, comments and instructions given in this document. Failure to comply with the safety regulations, instructions, warnings and comments may lead to personal injury or damage to the unit.

In order to proceed with access to the RIGHT back coil (siphon and condensation tray), follow the steps as described below:

Step	Action
1	Please follow the previous sequence described in the "Paragraph 2.1 - Step 1 to 3" , to get access to the internal components.
2	The coil is not visible because it is behind the metallic wall on the right side of the unit. To get access to the right back coil, please unscrew the metallic panel A. 
3	The coil and the condensation tray are visible and it's possible to clean the coil with a vacuum cleaner, or a brush taking care of closing the below intake of the ComfoAir Q to avoid the dirt falling down into the ComfoAir Q. 

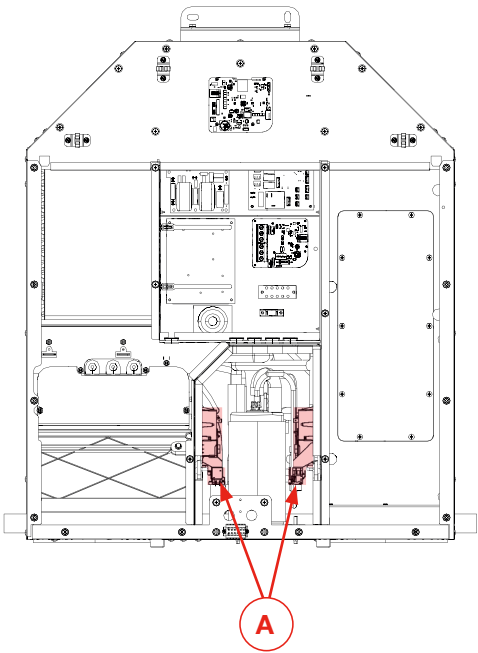
2.5 Access to the RIGHT back condensation tray

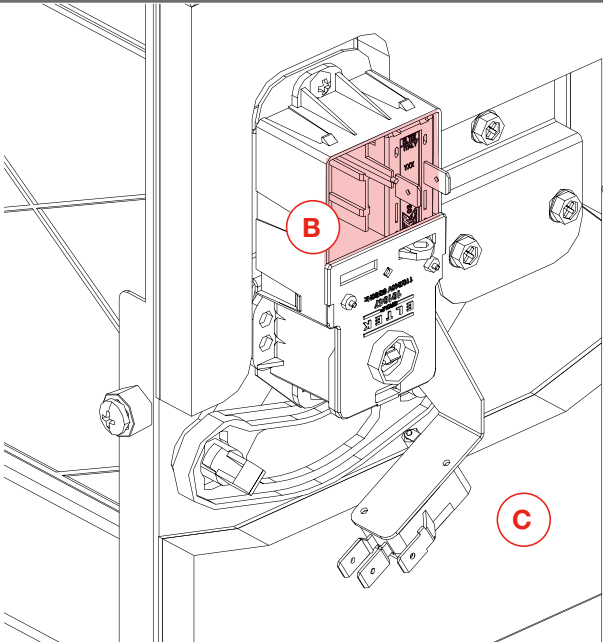
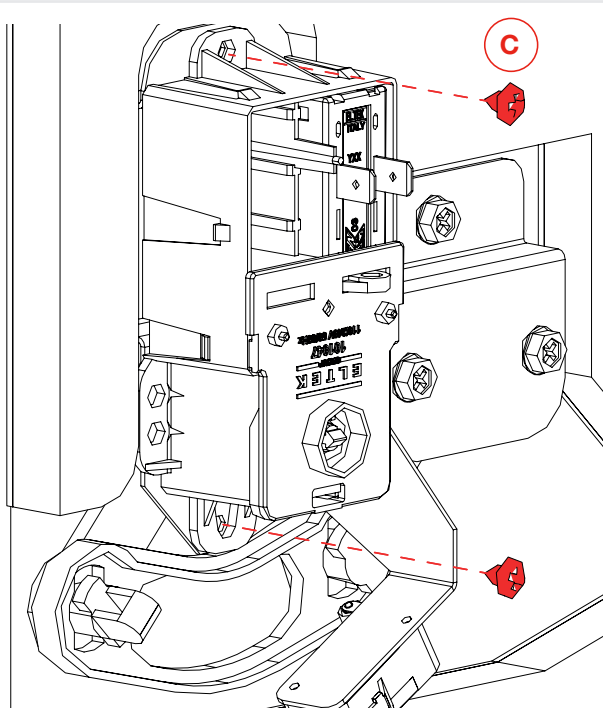
In order to proceed with access to the RIGHT back condensation tray, follow the steps as described below:

Step	Action
1	Please follow the previous sequence described in the " Paragraph 2.1 - Step 1 to 3 ", to get access to the internal components.
2	Please follow the previous sequence described in the " Paragraph 2.3 - Step 1 to 3 ", to get access to the internal components.
3	It is possible to replace the internal siphon extracting gently the rubber hose ends A. 

2.6 Replacement of the actuators

In order to proceed with the replacement of the actuators, follow the steps as described below:

Step	Action
1	Please follow the previous sequence described in the " Paragraph 2.1 - Step 1 to 3 ", to get access to the internal components.
2	Identify the actuators A placed in the central bottom area, before the compressor.  The actuator on the left controls the flap on the left ; the one on the right commands the flap on the right through a leverage. 

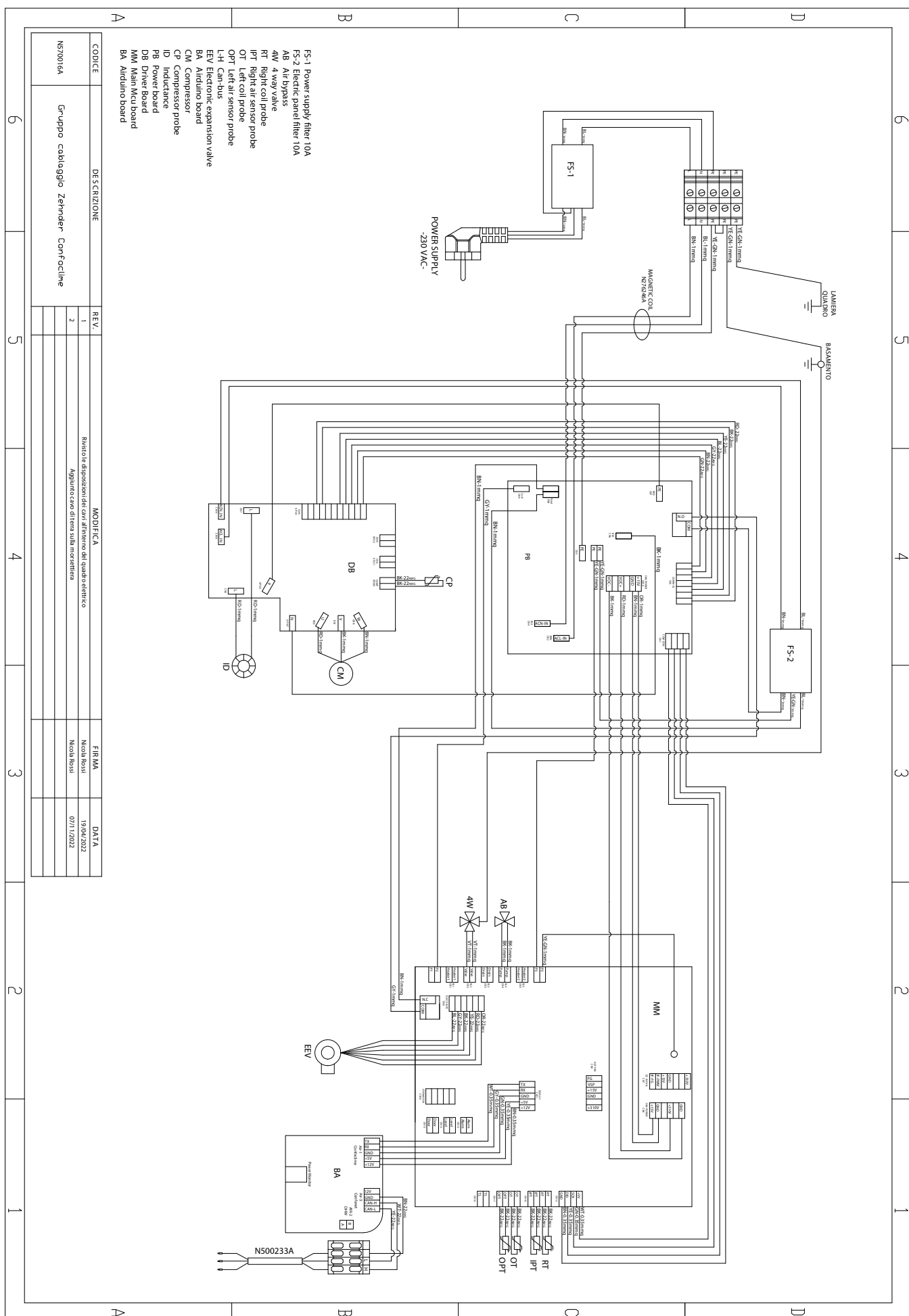
Step	Action
3	Unplug the two connectors B from the upper part of the actuator. 
4	Unscrew the two screws C that hold it attached to the frame and gently pull it out paying attention not to loose parts of it. 

CAUTION!



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2.7 Wiring diagram ComfoClima



3 Logistics & Distribution

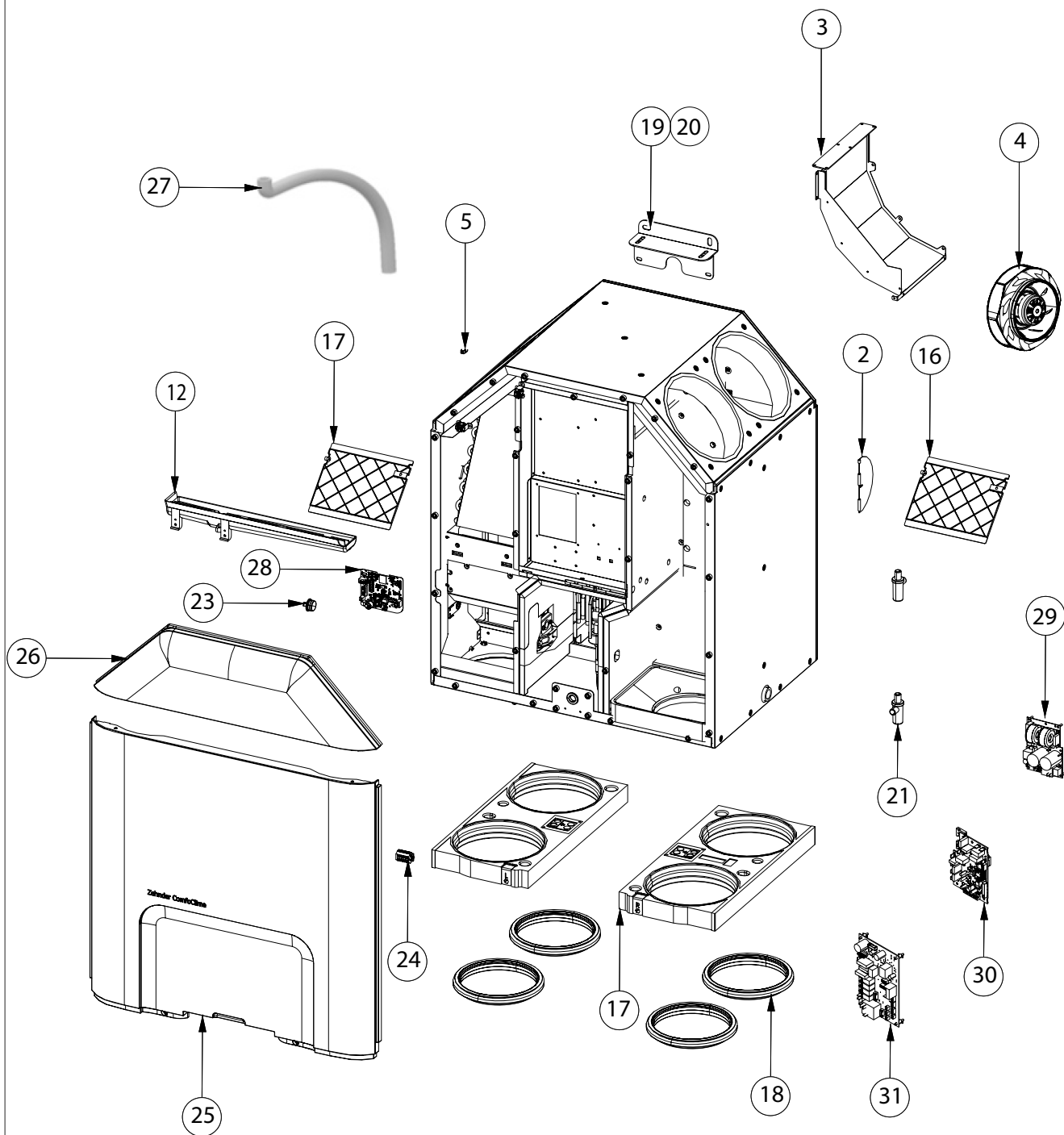
3.1 Part numbers ComfoClima

Article numbers	
Climatic ventilation unit	Product number
ComfoClima 24 - EU	471420020
ComfoClima 36 - EU	471420010
ComfoClima 24 - UK	471420070
ComfoClima 36 - UK	471420080
ComfoClima 24 - CH	471420090
ComfoClima 36 - CH	471420100

3.2 Part numbers spare parts

Mechanical Component		
POS	Part number	Name
1	471429171	COMFOCLIME BY-PASS ACTUATOR
2	471429172	COMFOCLIME Q BY-PASS DAMPER
3	471429173	COMFOCLIME Q FILTER
4	471429174	COMFOCLIME Q FAN
5	471429175	COMFOCLIME PLASTIC BUSHING
6	471429178	COMFOCLIME SHORT DAMPER
7	471429179	COMFOCLIME LONG DAMPER
8	471429180	SHUTTER BUSH
9	471429181	RETURN SHUTTER
10	471429182	SHORT TIE ROD
11	471429183	LONG TIE ROD
12	471429184	CONDENSATION TRAY
13	471429185	FIXED ACTUATOR BUSH
14	471429186	ACTUATOR TRANSFER
15	471429187	LONG SHUTTER
16	471429188	SHORT SHUTTER
17	471429189	EPP ADAPTER
18	471429190	RUBBER GASKETS
19	471429191	ANTI-TIPPING KIT
20	471429192	WALL BRACKET
21	471429193	CONDENSATE DRAIN TRAP
22	471429194	TEMPERATURE SENSOR
23	471429195	RUBBER CAP FOR CONDENSATE DRAIN
24	471429196	TERMINAL BLOCK
25	471429197	FRONT PANEL
26	471429198	AESTHETICS SUP. FRONT
27	471429203	SHORT RUBBER HOSE INTERNAL SYPHON
-	471429201	LONG TUBE CONDENSATION CONNECTION
-	471429203	SHORT TUBE CONDENSATION CONNECTION
-	471429200	TRAY HEATER
-	471429217 471429199 471429216	WIRING GROUP (cables)

Electronics		
POS	Part number	Name
28	610000004	COMFOCLIME PCBA ELECTRONIC BOARD
29	610000005	POWER BOARD
30	471429177	COMPRESSOR DRIVER BOARD
31	471429213	COMFOCLIME 24 HP MAIN BOARD
	471429202	COMFOCLIME 36 HP MAIN BOARD
	471429214	COMFOCLIME Q HP MAIN BOARD
-	471429176	POWER BOARD



4 Error and alarm messages

In this page it is possible to read the messages coming from the unit: errors, alarms, alert, advice. Each of them is related to the interested device.

The following table lists the error codes that could appear in this page:

Code	Component	Description	Solution
1	ComfoClima PCBA	The rotary encoder is set to a forbidden value.	Call Zehnder Service
21	CAQ	ComfoAirQ communication error. CAQ not visible on ComfoNet.	Check that the green LED on CAQ and Clime is fixed lit. Try rebooting all the system. Check that all the firmwares are up to date. If not fixed call Zehnder Service
22	CAQ	Failed to synchronize CAQ comfort temperature profile	Same as 21
23	CAQ	Failed to synchronize CAQ comfort temperature value	Same as 21
24	CAQ	Failed to set CAQ comfort temperature mode	Same as 21
25	CAQ	Failed to synchronize CAQ cooling limit	Same as 21
26	CAQ	Failed to synchronize CAQ heating limit	Same as 21
27	CAQ	Failed to get ComfoAirQ orientation	Same as 21
28	CAQ	ComfoAirQ not commissioned	Do the commissioning procedure on the CAQ
31	HP board	Heatpump board communication error	Tryt rebooting the system or, if not sorted out, Call Zehnder Service
32	HP board	Clime supply temperature probe failed	Call Zehnder Service
33	HP board	Clime incoil temperature probe failed	Call Zehnder Service
34	HP board	Clime mixed air temperature probe failed	In ComfoClima36 this could be due to error 38
35	HP board	Clime outcoil temperature probe failed	Call Zehnder Service
36	HP board	Clime fan error	Call Zehnder Service
37	HP board	Clime Compressor driver communication error	Call Zehnder Service
38	HP board	Clime HP data timeout	Call Zehnder Service
39 - 47	HP board	Reserved for future use	
48	Inverter	Inverter phase current limit error	Call Zehnder Service
49	Inverter	Inverter current limit error	Call Zehnder Service
50	Inverter	Inverter power limit error	Call Zehnder Service
51	Inverter	gas discharge temperature probe failed	Call Zehnder Service
52	Inverter	compressor case temperature sensor error	Call Zehnder Service
53	Inverter	compressor driver PFC error	Call Zehnder Service
54-63	Inverter	Reserved for future use	-
81	Power Monitor*	Power monitor communication error	Call Zehnder Service

* only for ComfoClima Q

5 Maintenance and cleaning

It's strongly recommended to perform a proper maintenance and cleaning, following the messages appearing in the CAQ display (filters replacement); an accurate overall cleaning must be performed at least every 2 years by Zehnder service personnel.



It's mandatory that only authorized personnel can operate on the internal components of the unit.

6 Sales and technical support

6.1 Communication & Documentation

- User's quick guide
- Installer manual
- Service manual
- User manual
- BIM files

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6.2 Contacts

For support please contact the local Zehnder Service Team.

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