



# Munters euroemme



# MUNTERS

**SPARE PARTS LIST AND  
ASSEMBLING GUIDELINE  
FOR**

## **EM 50 FAN**

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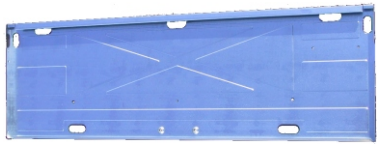


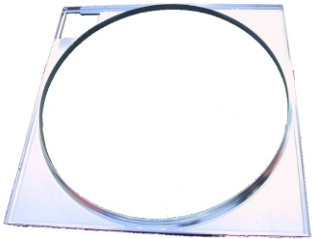



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- The contents of this manual are subject to change without notice.
- The quantities indicated refer to one fan.
- Components marked with \* are delivered assembled as complete pieces. They are also available loose for purchase as spare parts.

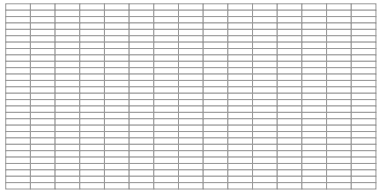






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VERSION 1.0







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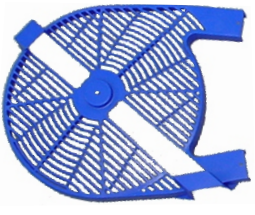

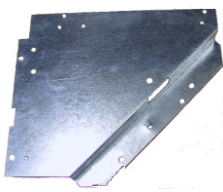


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REF.	PHOTOS	DESCRIPTION		QTY	CODE
1		Bottom panel.		1	2433800
2		Side panel.		2	2435200
3		Top panel.		1	2434900
4		Venturi.		1	2443700
5			Stainless steel	1	2515500
			Pre-coated	1	2515800
			Galvanized	1	2514200
6/ A		Shutter blade 6/10.		9	2439100
6/ B		Central shutter blade 12/10 with Holes.		1	239600

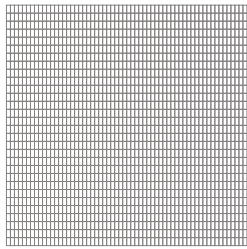
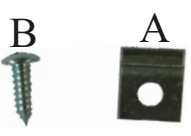
REF.	PHOTOS	DESCRIPTION		QTY	CODE
7		Safety mesh guard.		2	2252300
8		Centrifugal system (available as as- sembled part only).	For multispeed motor	1	2510800
			For singlespeed motor	1	2511100
8/ A		Connecting rod.		*	2264800
9		Complete electric motor (assembled only).		1	See table 6.1 page 23
9/ A		Electric motor (not assembled).		*	See table 6.2 page 23
9/ B		Motor pulley.		*	See table 6.3 Page 23
9/ C		Motor slide.		*	2441700

REF.	PHOTOS	DESCRIPTION	QTY	CODE
10/ A		Central pulley.	1	2472700
10/ B		Hub.	1	2511600
10/ C			1	2246500
11		Pvc tie-rod with 10 holes.	2	2455300
12		Propeller central support.	1	2473700
13		Cover plates.	2	2431200
14/ A		Right shutter bearings.	9	2524100

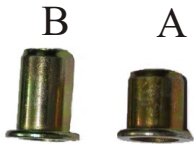
REF.	PHOTOS	DESCRIPTION	QTY	CODE
14/ B		Left shutter bearings.	9	2524300
14/ C		Right shutter bearings with spring.	1	2524500
14/ D		Left shutter bearings with spring.	1	2524700
15/ A		Cockade sticker.	1	2262400
15/ B		Short warning sticker.	1	2262600
15/ C		Long warning stickers.	2	2262500

REF.	PHOTOS	DESCRIPTION	QTY	CODE
16/ A		Plastic safety protection for central pulley.	1	2267300
16/ B		Plastic safety protection for belt .	2	2267400
16/ C		Metal safety protection for motor pulley.	1	2454300
16/ D		Fixing metal clip.	1	2454400
16/ E		Self tapping hex screw Ø 6.3 x 19 mm.	4	2278800

## 2.1 SPARE PARTS LIST FOR PYRAMIDAL SHAPE MESH FOR CE PROTECTION (OPTION)

17/ A		Pyramidal safety mesh.	2	2474900
17/ B		A: metal clips to fix pyramidal safety mesh B: self tapping hex screw Ø 6.3 X 19 mm.	6 6	2448600 2278800

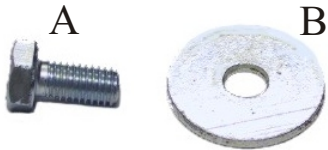
19



A: threaded bushes M 8 short. Purpose : to insert on the top panel.

B: threaded bushes M 8 long. Purpose : to insert on the housing.


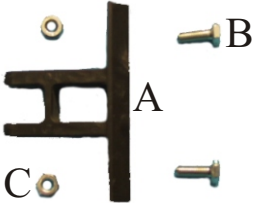
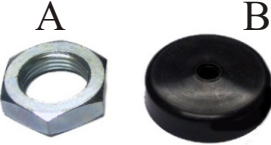





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A: bolts M 8 x 16 mm.

B: washer  $\text{\O} 8 \times 32$  mm.

Purpose : to fix motor to the top panel.

REF.	PHOTOS	DESCRIPTION	QTY	CODE
26		Waterproof distance piece Ø ( ID 40 / OD 52 ) x 15 mm.  Purpose : to distance the hub from the propeller central support.	1	2472000
27		A: central shutter blade fork. B: bolts M 6 x 16 mm. C: nuts M 6 x 5 mm. Purpose : to fix the central shutter blade fork to the central shutter blade.	1 2 2	2264900 2279100 2270700
28		A: nut M 25 x 10 mm. B: cap cover nut ( only w/o CE kit ).  Purpose : to fix the hub to the propeller Central support.	1 1	2273600 2264500
29		A: bolts M 6 x 30 mm. B: nuts M 6 x 6 mm. Purpose : to fix the two springs of Central shutter blade to the side panel.	2 4	2279500 2273400
30		Knurled axle Ø 6 x 30 mm.  Purpose : to fix the tie-rod to the central shutter blade fork (ref. 27/a).	1	2430600
31		Stop collars Ø 7 mm.  Purpose : to fix the two pvc tie-rod with ten holes to left and right shutter blade Fork.	20	2268400
32		A: self tapping hex screws Ø 6.3 x 19 mm. B: washer Ø 6 x 24 mm.  Purpose : for cover plate and wire meshes assembling.	19 1	2278800 2276300
33		Central clips for meshes.  Purpose : to fix the safety meshes guard to the housing.	2	2449100

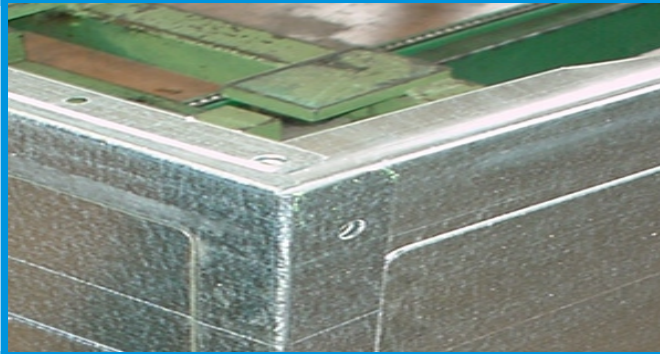
REF.	PHOTOS	DESCRIPTION	QTY	CODE
34		Riveting machine rac 165.	1	2284300
35		Inserting machine kj 40.	1	2284200
36		Pneumatic screw-driver.	1	
36/ A		17 mm spanner.	1	
36/ B		10 mm long spanner.	1	
36/ C		13 mm long spanner.	1	
36/ D		6 mm long allen spanner.	1	

REF.	PHOTOS	DESCRIPTION	QTY	CODE
36/ E		36 mm spanner.	1	
36/ F		Philips screw head adaptor. Ratchet drive.	1 1	
37		13 mm spanner.	1	
38		Small hammer.	1	
39		10 mm spanners.	2	
40		Screw driver.	1	
41		Ratchet drive extension.	1	

## 5.1 HOUSING ASSEMBLING



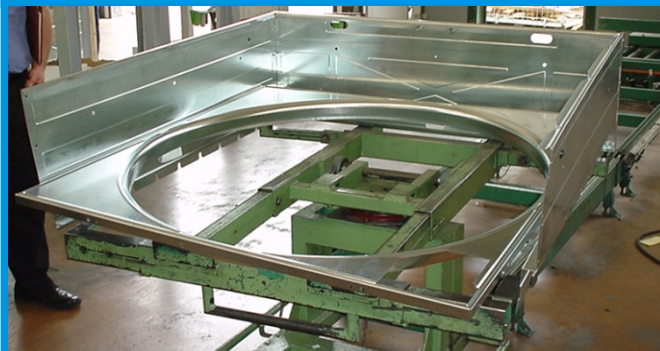
Take the bottom panel (ref. 1), the side panels (ref. 2) and place these taking care that slot for the plastic bearing is downward.



Before fixing the bottom and the side panels make sure that these pieces are in the right position as in the picture.



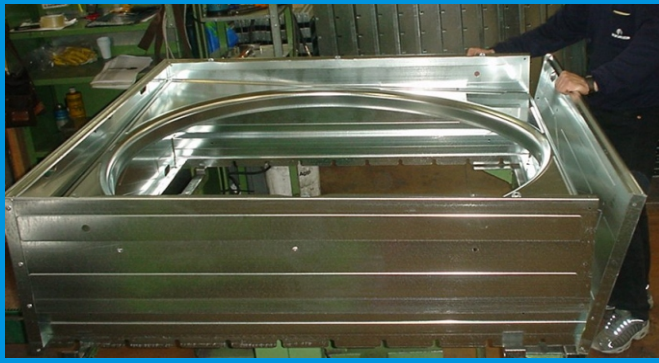
Join bottom panel to side panels and fix qty. 4 pop rivets (ref. 18) for each edge by using riveting machine (ref. 34).



Insert Venturi (ref. 4) into the housing on the right side as in the picture.



Fix Venturi to bottom panel and then to side panels with qty. 1 pop rivets for side.



Place the top panel (ref. 3) with motor support in correspondence with motor slot on the Venturi. Then fix it to side panels with qty. 4 pop rivet for side and to Venturi with qty. 1 pop rivet.



Place the qty. 2 short threaded bushes (ref. 19) on the top panel by using inserting machine (ref. 35).



Place long threaded bushes (ref. 19) in correspondence of proper holes around the housing. Qty. 2 long threaded bushes for each panel.



Make sure that Venturi and each panel are joined by the long threaded bushes.



Place the rubber grommet (ref. 22) For electric cable protection on the side panel in correspondence with the motor slot.



The propeller central support (ref. 12) shall be fixed to housing by means of qty. 4 bolts (ref. 21), qty.4 washes (ref. 21), qty. 4 nuts (ref.21) and qty. 2 oval plates (ref. 21).



Place the oval plates between propeller central support and panels.



Place the oval plate over support frame and then start to screw the nuts.



Tighten the nuts with pneumatic screw-driver (ref. 36/a) in order to fix the propeller central support to the top and bottom panels.



For mounting of electric motor (ref. 9) insert this into its slot taking care to fix it over proper track fixed on the top side.



Fix motor slide to top panel by means qty. 2 bolts (ref. 20) and qty. 2 washers (ref. 20). Tighten bolts by using 13 mm spanner (ref. 37).

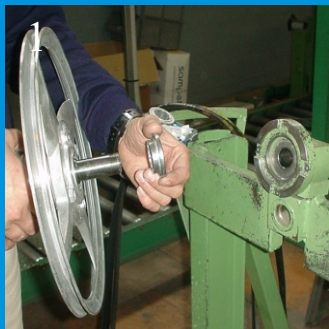
## 5.2 CENTRIFUGAL SYSTEM AND PULLEY TO PROPELLER ASSEMBLING



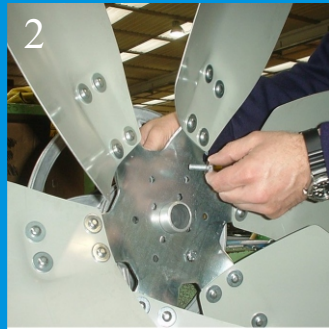
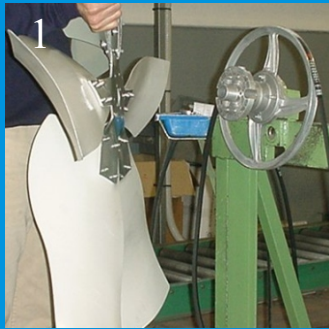
Take the pulley (ref. 10/a) and insert the bolts (ref. 23) from the external side of it. Turn the pulley up side down and place the hub (ref. 10/b) on it.



Insert the washers (ref. 23) and fix the nuts (ref. 23) over the bolts. Tighten the nuts by using pneumatic screw-driver (ref.36/b).



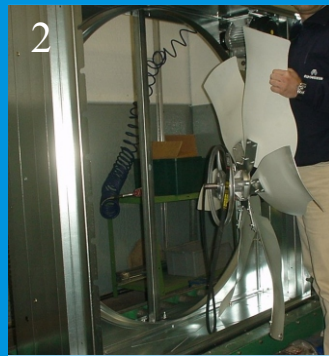
Place the waterproof distance piece (ref. 24) on the axle and then place the axle on a support. After that place the v-belt (ref. 10/c) on the central pulley.



Place the propeller (ref. 5) on the central pulley assembly. Fix the bolts (ref. 24), the washers (ref. 24) and nuts (ref. 24) in order to fix the propeller.



Tighten the nuts by using pneumatic screw-driver (ref. 36/c). Place bolts (ref. 25) on the centrifugal system (ref. 8) and then place it on the propeller.



Tighten bolts , washers (ref. 25) and nuts (ref. 25) in order to fix the centrifugal system to the propeller by using pneumatic screw-driver (ref.36/ d). Place the complete assembly you have obtained on the fan, inserting the axle trough the central supportole.



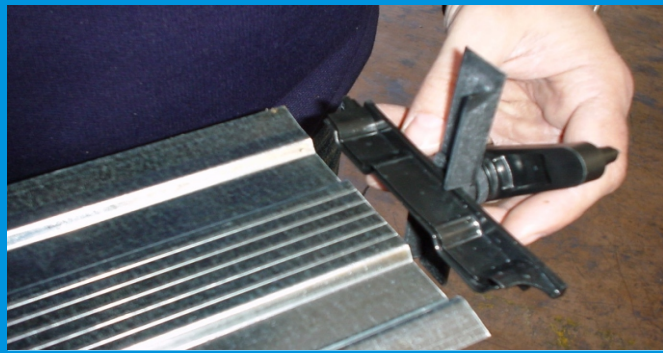
Place M 25 nut (ref. 28) on the axle and then tighten it by mean of pneumatic screw-driver (ref. 36/e).



Put cap cover nut (ref. 28) over M 25 nut ( only for fan without CE kit ). Place v-belt on the pulley and then rotate the propeller clock-wise in order to tighten the v-belt on the pulley.

**CHECK TENSIONING :**  
right tensioning is obtained when maximum deflexion on one side only ( half-way from motor and central pulley ) is about 15 mm.

### 5.3 SHUTTER BLADES ASSEMBLING



Insert plastic bearings (ref. 14/a , 14/ b) without spring on shutter blades (ref.6/a). Plastic bearings marked with“SX” are for left side, plastic bearings with “DX” are for right side.



Insert plastic bearing with spring (ref. 14/c , 14/d) on central shutter blade (ref.6/b).”SX” is for left side, “DX” is for right side. Fix the plastic fork (ref. 27) with qty. 2 bolt (ref. 27) on the central shutter blade.



Fit central shutter blade on the central slot on the housing. Insert knurled axle (ref. 30) by the smooth side on the plastic fork, then take plastic shutter rod on the centrifugal system and fix them together by using a small hammer (ref. 38).

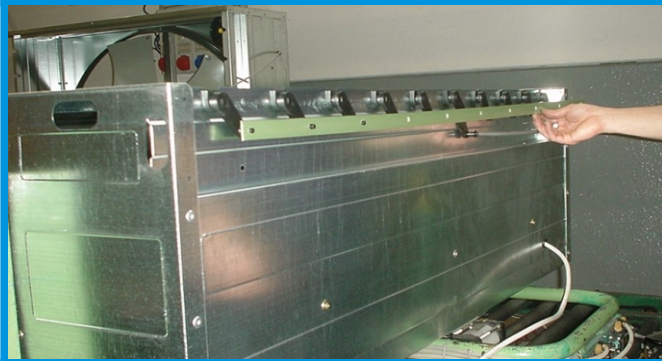


Insert free looped-end of spring on bolt (ref. 29), then place a nut (ref.29)and leave about 10 mm of space between the nut and the bolt head.

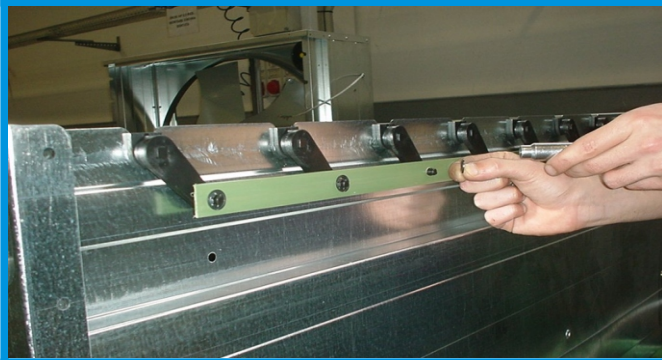
Insert the bolt into hole of the side panel and then fix it by means of a second nut (ref. 29). Tighten the nuts by using two 10 mm spanners (ref. 39). Repeat this operation for the other side.



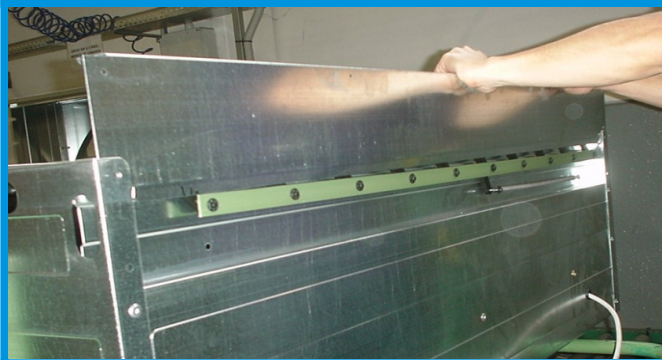
Insert all the shutter blades (qty. 9 normal + qty. 1 central) on the fan housing and then place the fan horizontally.



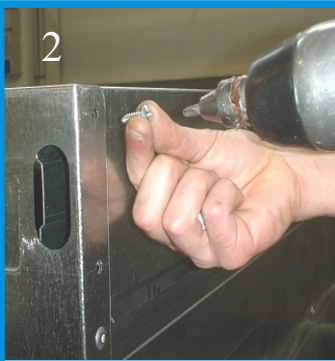
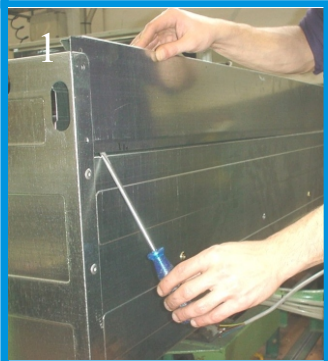
Place the pvc tie-rod (ref.11) on plastic bearing pivots.



Insert all stop collars (ref. 31) on plastic pivots.



Put cover plate (ref. 13) over the plastic bearing mechanism.



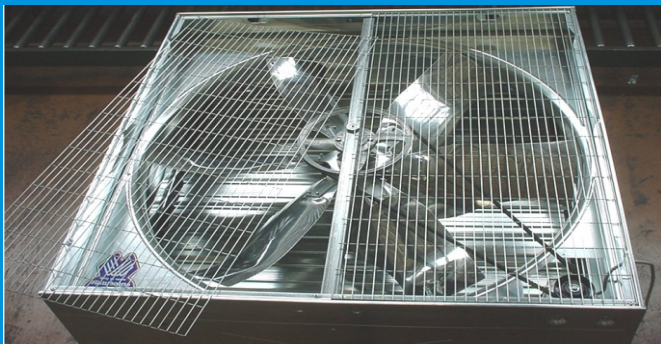
By means of a screw-driver (ref. 40) insert cover plate over the fan housing. Fix the cover plate on each side by using the screws (ref. 32) with pneumatic screw-driver (ref. 36/f).

## 5.4 SAFETY MESHES GUARD ASSEMBLING

(BEFORE THIS STEP IT'S NECESSARY TO MOUNT CE KIT ONLY IF REQUIRED)



Turn the fan up side down and insert the electric cable into the proper hole placed on the side panel.



Put the qty. 2 safety meshes guard (ref. 7) on the inlet side of the fan.



Fix the qty. 6 screws (ref.32) on the fan side (qty. 3 for each are required).

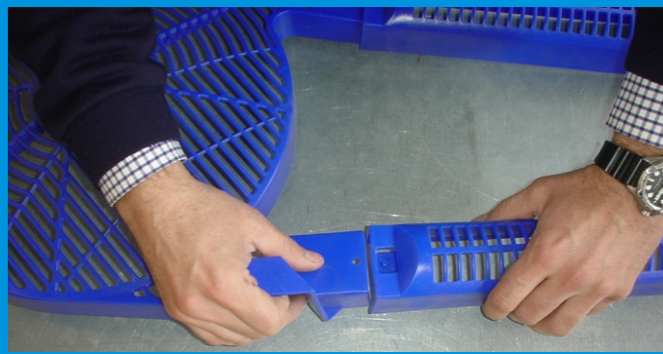


Fix the screws (ref. 32) with the central clips (ref.33) in correspondence of the propeller central support on the top panel and the bottom panel.



Fix the screw (ref. 32) with the washer (ref. 32) into the central pulley axle. Fix all the components by using the pneumatic screw-driver (Ref. 36/f).

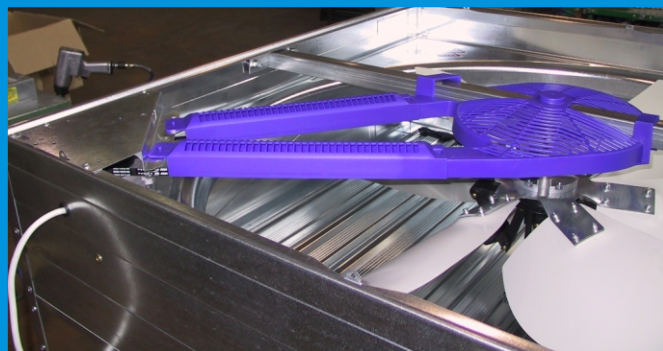
## 5.5 CE KIT ASSEMBLING



Before assembling the safety meshes complete the CE kit. Join the plastic safety protection for central pulley (ref. 16/a) with plastic safety protection for the v-belt (ref.16/b).



Fix by qty. 3 screws (ref. 16/e) the metal safety protection for the motor pulley (ref. 16/c). Qty. 2 on top panel, qty.1 on side panel. Fix it by using a pneumatic screw-driver (ref. 36/f).



Put the assembled CE plastic kit protection as in the picture (on the metal safety protection for the motor pulley).

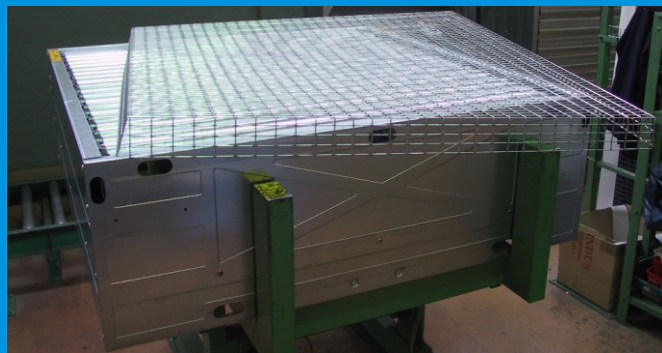


Put the metal clip (ref. 16/d) on the CE plastic kit in the correct position as shown in the picture and fix it by qty.1 screw (ref. 16/e). SEE THE YELLOW POINTS



Fix it by means a pneumatic screw-driver. After that follow the safety meshes guard assembling.

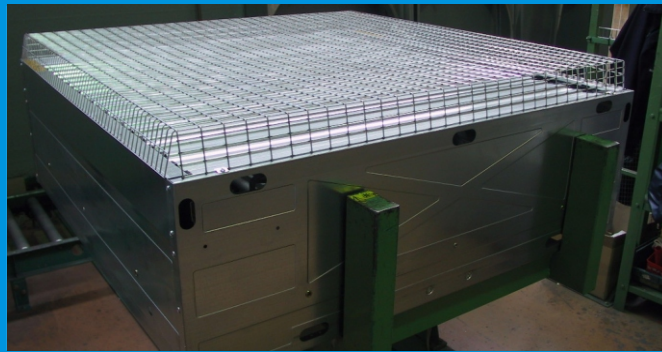
## 5.6 PYRAMIDAL SHAPE MESH ASSEMBLING



Put the pyramidal shape mesh (ref. 17/a) on the fan as in the picture. The rectangular holes must be positioned horizontally.



Fix it to the bottom and top panels by mean of qty. 6 metal clips (ref. 17/b) and qty. 6 screw (ref. 17/b). The metal clips must be fixed in the position as in the picture.



Fix it by using a pneumatic screwdriver (ref. 41).

## 6.1 ASSEMBLED MOTORS CODES TABLE

<u>Nominal Power</u>		Type phases	Speed	Frequency [Hz]	Voltage [V]	Current [A]	Rpm	Motor code
[W]	[hp]							
735	1,0	1	single	50	230	5	1380	<b>2525700</b>
735	1,0	1	multi	50	230	5	1380	<b>2523700</b>
735	1,0	1	single	60	220-240	5,7	1700	<b>2523800</b>
735	1,0	3	single	50	230/400	3,5/2	1400	<b>2523200</b>
735	1,0	3	single	60	230/400	3,5/2	1700	<b>2522700</b>
880	1,2	3	multi	50	230/400	4,3/2,5	1380	<b>2523300</b>
880	1,2	3	multi	60	230/400	4,3/2,5	1600	<b>2523302</b>
1100	1,5	1	single	50	230	7,3	1400	<b>2523900</b>
1100	1,5	1	single	60	220-240	7,3	1700	<b>2524000</b>
1100	1,5	3	single	50	230/400	5,2/3	1400	<b>2523500</b>
1100	1,5	3	multi	50	230/400	5,2/3	1380	<b>2522900</b>
1100	1,5	3	single	60	230/400	5,2/3	1700	<b>2523400</b>
1100	1,5	3	multi	60	230/400	5,2/3	1670	<b>2523401</b>

## 6.2 MOTORS CODES TABLE

<u>Nominal Power</u>		Type phases	Speed	Frequency [Hz]	Voltage [V]	Current [A]	Rpm	Motor code
[W]	[hp]							
735	1,0	1	single	50	230	5	1380	<b>2202800</b>
735	1,0	1	multi	50	230	5	1380	<b>2202800</b>
735	1,0	1	single	60	220-240	5,7	1700	<b>2202900</b>
735	1,0	3	single	50/60	230/400	3,5/2	1400	<b>2206100</b>
880	1,2	3	multi	50/60	230/400	4,3/2,5	1380	<b>2203000</b>
1100	1,5	1	single	50	230	7,3	1400	<b>2203500</b>
1100	1,5	1	single	60	220-240	7,3	1700	<b>2203700</b>
1100	1,5	3	single	50/60	230/400	5,2/3	1400	<b>2206800</b>
1100	1,5	3	multi	50/60	230/400	5,2/3	1380	<b>2203900</b>

## 6.1 PULLEY CODES TABLE

<u>Nominal Power</u>		Frequency [hz]	Type phases	Speed	Pulley description	Pulley code
[W]	[hp]					
735 or 880	1 or 1,2	50	3 or 1	single or multi	DP85 M43 F19 C6	<b>2247000</b>
735 or 880	1 or 1,2	60	3 or 1	single or multi	DP70 M43 F19 C6	<b>2248000</b>
1100	1,5	50	3 or 1	single or multi	DP100 M51 F24 C8	<b>2249000</b>
1100	1,5	50	3 or 1	single or multi	DP80 M51 F24 C8	<b>2248900</b>