

Ecophon Master™ Matrix

Ecophon Master Matrix is a patent pending acoustic ceiling system for larger areas where high coverage is required but a wall to wall solution not possible or wanted. The system provides quick and easy installation with highest accuracy, thanks to pre-installed fixing devices and "click-in" connection to the grid system. Each panel has a built in hatch function, and can easily be demounted. The system can either be installed with high coverage ratio, (approx. 95%), in modules of 1200 mm with a 40 mm gap between the panels giving a floating appearance (M344), or in rows of 1040 mm modules (M345), where the latter is mainly designed for TABS solutions giving a coverage ratio of approx. 60%, (at building module 1350 mm). Panels are available in different formats and sizes giving a vast range

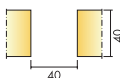
of design possibilities.

The system consists of Ecophon Master Matrix panels and Ecophon Connect grid system with an approximate weight of 5-6 kg/m². The panels are manufactured from high density 3rd generation glass wool. The visible surface of the panel has an Akutex FT coating and the back of the tile a glass tissue. Edges are straight cut and painted. The Connect grid and suspension system are manufactured from galvanized steel and aluminum.

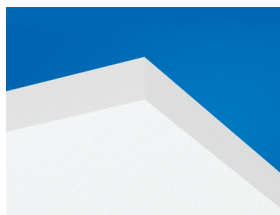


Master Matrix ,

SYSTEM RANGE



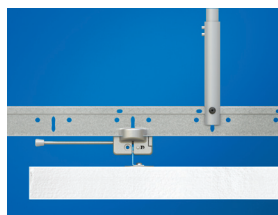
Size, mm	600x1040	600x1200	600x2400	1200x1040	1200x1200	2400x1040	2400x1200
T24	•	•	•	•	•	•	•
Thickness	40	40	40	40	40	40	40
Inst. Diag.	M345	M344	M344	M345	M344	M345	M344



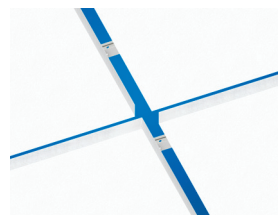
Master Matrix panel



Connect Panel cross bar on rear side of Master Matrix panel



Section of Master Matrix system



Master Matrix system



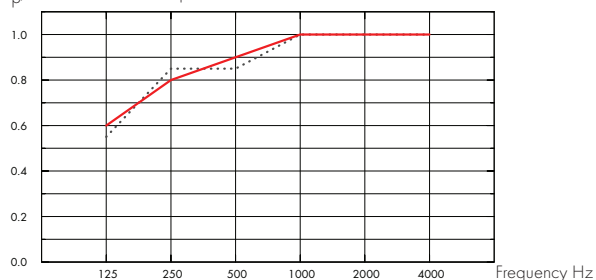
Acoustic

The first diagram refers to clusters >10 m². The second diagram to a cluster of four panels (1200x1040 mm) in a row with a distance of 40 mm. If the clusters are arranged with distances between the clusters <0,5 meters, the Aeq per cluster will be slightly reduced.

Sound Absorption:

Test results according to EN ISO 354. Classification according to EN ISO 11654.

α_p Practical sound absorption coefficient

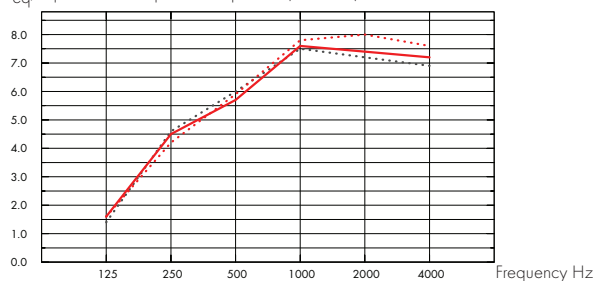


... Master Matrix 40 mm, 255 mm o.d.s.

— Master Matrix 40 mm, 300 mm o.d.s.

o.d.s = overall depth of system

A_{eq} Equivalent absorption area per unit (m² sabin)



... Master Matrix 40 mm, 255 mm o.d.s.

— Master Matrix 40 mm, 300 mm o.d.s.

... Master Matrix 40 mm, 400 mm o.d.s.

o.d.s = overall depth of system

THK mm	o.d.s. mm	α_p Practical sound absorption coefficient						α_w	Sound absorption class
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz		
40	255	0,55	0,85	0,85	1,00	1,00	1,00	0,95	A
40	300	0,60	0,80	0,90	1,00	1,00	1,00	1,00	A

THK mm	o.d.s. mm	A_{eq} Equivalent absorption area per unit (m ² sabin)					
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
40	255	1,40	4,60	6,00	7,50	7,20	6,90
40	300	1,60	4,50	5,70	7,60	7,40	7,20
40	400	1,60	4,20	5,90	7,80	8,00	7,60



Accessibility

Each panel is individually demountable from below. Panels are equipped with hatch function.



Cleanability

Daily dusting and vacuum cleaning. Weekly wet wiping.



Visual appearance

White Frost, nearest NCS colour sample S 0500-N, 85% light reflectance (of which more than 99% is diffuse reflection). Retro reflection coefficient 63 mcd/(m²lx). Gloss < 1.



Influence of climate

The tiles withstand a permanent ambient RH up to 95% at 30°C without sagging, warping or delaminating (ISO 4611).

The units should however not be installed in areas/premises where the ambient relative humidity (RH) and the temperature exceed 70% and 30°C respectively.



Indoor Climate

Certificate / Label

Europe

EN
13501-1

M1



Environmental influence

Certificate / Label

Europe

EN
13501-1



Glass wool core utilizing 3RD Technology. In combination with Master Rigid system Extra Bass is granted the Nordic Swan eco-label. Fully recyclable.



Fire safety

Country

Standard

Class

Europe

EN 13501-1

A2-s1,d0

The glass wool core of the tiles is tested and classified as non-combustible according to EN ISO 1182.



Mechanical properties

The panels can take small loads with largest aperture diameter of 100 mm. The load is restricted to maximum 250g between two Panel cross bars. For heavier loads see Installation guide.



Installation

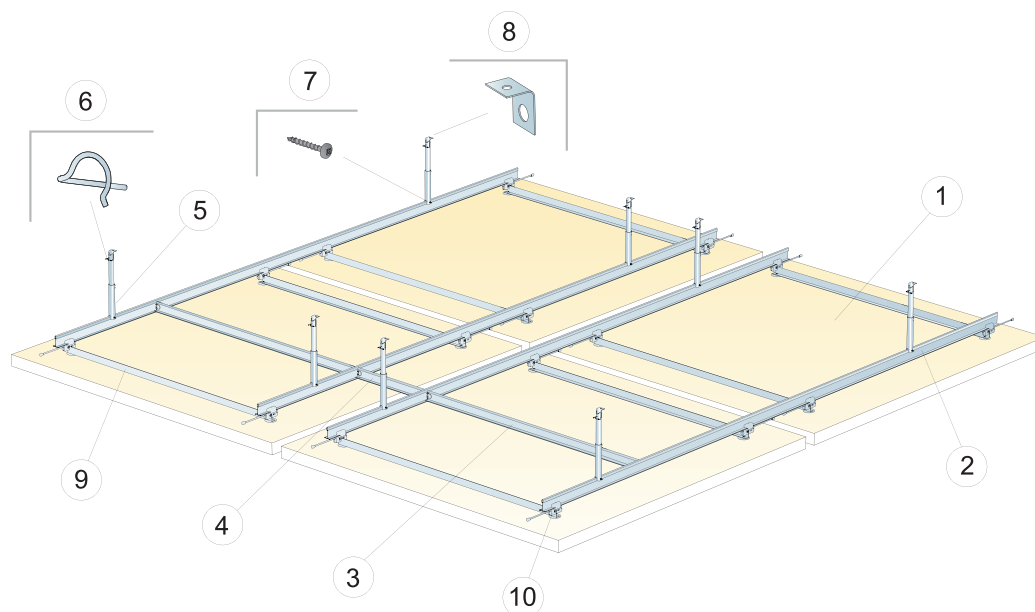
For design possibilities including installation direction and integrations, see installation guides, installation diagrams and drawing aid. For information regarding minimum overall depth of system see quantity specification.



CE

2,9 kg equivalent CO₂ / m² according to EPD

INSTALLATION DIAGRAM (M344) FOR ECOPHON MASTER MATRIX



© Ecophon Group

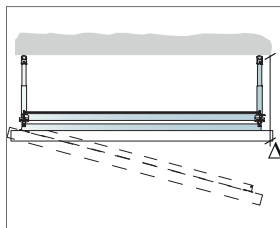
QUANTITY SPECIFICATION (EXCL. WASTAGE)

		Size, mm			
		600x1200	600x2400	1200x1200	2400x1200
1	Master Matrix	1,39/m ²	0,70/m ²	0,70/m ²	0,35/m ²
2	Connect T24 Main runner, installed with spacing 900 mm and 300 mm	1,67m/m ²	1,67m/m ²	1,67m/m ²	1,67m/m ²
3	Connect T24 Cross tee, L=900 mm, installed with spacing 1800 mm	0,42m/m ²	0,42m/m ²	0,42m/m ²	0,42m/m ²
4	Connect T24 Cross tee, L=300 mm, installed with spacing 2400 mm	0,11m/m ²	0,11m/m ²	0,11m/m ²	0,11m/m ²
5	Connect Tube hanger, installed with spacing 1800 mm	0,95/m ²	0,95/m ²	0,95/m ²	0,95/m ²
6	Pin, included in Connect Tube hanger				
7	Connect Installation screw MVL	0,95/m ²	0,95/m ²	0,95/m ²	0,95/m ²
8	Connect Fixing plate C3, installed with spacing 1800 mm	0,95/m ²	0,95/m ²	0,95/m ²	0,95/m ²
9	Connect Panel cross bar	2/panel	4/panel	2/panel	3/panel
10	Connect Panel connector	4/panel	6/panel	4/panel	6/panel

Δ Min. overall depth of system: 255 mm

Quantity specification based on 40 mm gap between all panels

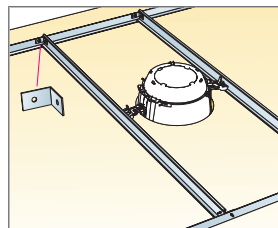
Stabilization could be required, see installation guide for more details



See Quantity specification

600x1200	560x1160
600x2400	560x2360
1200x1200	1160x1160
2400x1200	2360x1160

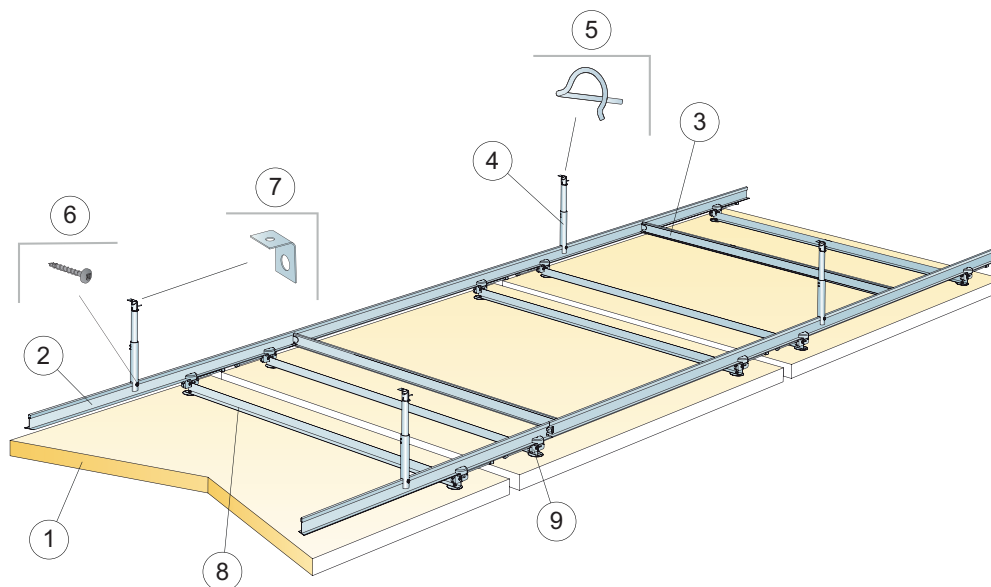
The left column shows modular sizes and the right exact panel sizes.



Size, mm	Max live load [N]	Min load bearing capacity [N]
600x1200	5	160
600x2400	5	160
1200x1200	5	160
2400x1200	5	160

Live load/load bearing capacity

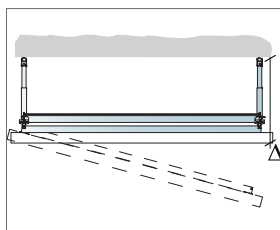
INSTALLATION DIAGRAM (M345) FOR ECOPHON MASTER MATRIX IN ROWS



© Ecophon Group

QUANTITY SPECIFICATION (EXCL. WASTAGE)

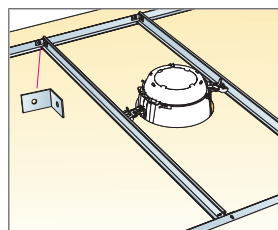
		Size, mm		
		600x1040	1200x1040	2400x1040
1	Ecophon Master Matrix in rows	1,60/m ²	0,80/m ²	0,40/m ²
2	Connect T24 Main runner, installed with spacing 900 mm	1,93m/m ²	1,93m/m ²	1,93m/m ²
3	Connect T24 Cross tee, L=900 mm, installed with spacing 1800 mm	0,49m/m ²	0,49m/m ²	0,49m/m ²
4	Connect Tube hanger, installed with spacing 1800 mm	1,07/m ²	1,07/m ²	1,07/m ²
5	Pin, included in Connect Tube hanger			
6	Connect Installation screw MVL	1,07/m ²	1,07/m ²	1,07/m ²
7	Connect Fixing plate C3, installed with spacing 1800 mm	1,07/m ²	1,07/m ²	1,07/m ²
8	Connect Panel cross bar	2/panel	2/panel	3/panel
9	Connect Panel connector	4/panel	4/panel	6/panel
Δ Min. overall depth of system: 255 mm				
Quantity specification based on 40 mm gap between panels in installation direction				
Stabilization could be required, see installation guide for more details				



See Quantity specification

600x1040	560x1000
1200x1040	1160x1000
2400x1040	2360x1000

The left column shows modular sizes and the right exact panel sizes.



Size, mm	Max live load [N]	Min load bearing capacity [N]
600x1040	5	160
1200x1040	5	160
2400x1040	5	160

Live load/load bearing capacity