

Ecophon Master™ Rigid E

Suitable for classrooms or other premises where strict demands are made on good acoustics and speech intelligibility, and where demountability is vital. Ecophon Master Rigid E has a recessed visible grid and a tegular edge design, creating a ceiling with a shadow effect that accentuates each tile and partially conceals the grid system. The visible surface of each tile is 10 mm below the grid. Each tile is secured in the grid by clips (patent pending), but fully demountable.

The system consists of Ecophon Master Rigid E tiles, Ecophon Extra Bass and Ecophon Connect grid system, with an approximate weight of 3,5 kg/m². The tiles are manufactured from high density, 3rd generation glass wool.

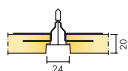
The surface is a reinforced sandwich construction. The visible surface has an Akutex™ FT coating. The product is also available with a sound reflecting surface (gamma) with the same visual appearance. The back of the tile is covered with glass tissue. The edges are painted.

Ecophon Extra Bass is used to improve sound absorption in the low frequency range, and is installed on top of the suspended ceiling. For best performance and system quality, use Ecophon Connect grid and accessories. The grid is manufactured from galvanized steel.



Kubikskolan, Helsingborg, Sweden

SYSTEM RANGE



Size, mm	600x600	1200x600	1200x1200
T24	•	•	•
Thickness	20	20	20
Inst. Diagr.	M317	M317	M317



Master Rigid E tile



Section of Master Rigid E system with Connect T24



Master Rigid E system with Connect T24

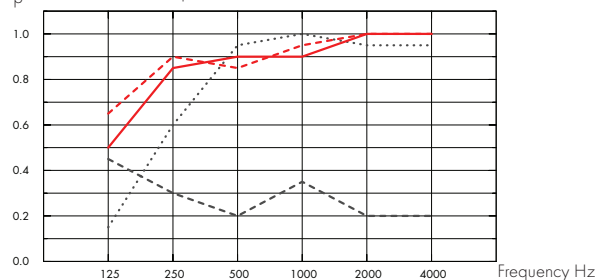


Acoustic

Sound Absorption:

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

α_p , Practical sound absorption coefficient



... Master Rigid E 20 mm, 60 mm o.d.s.

— Master Rigid E 20 mm, 200 mm o.d.s.

- - - Master Rigid E 20 mm + Extra Bass 50 mm, 200 mm o.d.s.

- - - Master Rigid E gamma 20 mm, 200 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		
	20	60	0,15	0,60	0,95	1,00	0,95	0,95	0,90	A
	20	200	0,50	0,85	0,90	0,90	1,00	1,00	0,95	A
+ Extra Bass	70	200	0,65	0,90	0,85	0,95	1,00	1,00	0,90	A
gamma	20	200	0,45	0,30	0,20	0,35	0,20	0,20	0,25	E



Accessibility

The tiles are secured in the grid, but demountable. Minimum demounting depth according to installation diagrams.



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).



Indoor Climate

Certificate / Label

Europe

EN
13501-1



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

Europe

Standard

EN 13501-1

Class

A2-s1,d0

The glass wool core of the tiles is tested and classified as non-combustible according to EN ISO 1182. The systems are classified as fire protective covering according to NT FIRE 003.



Mechanical properties

See table about Max live load and Min load bearing capacity and Functional demands, Mechanical properties at www.ecophon.com.



Installation

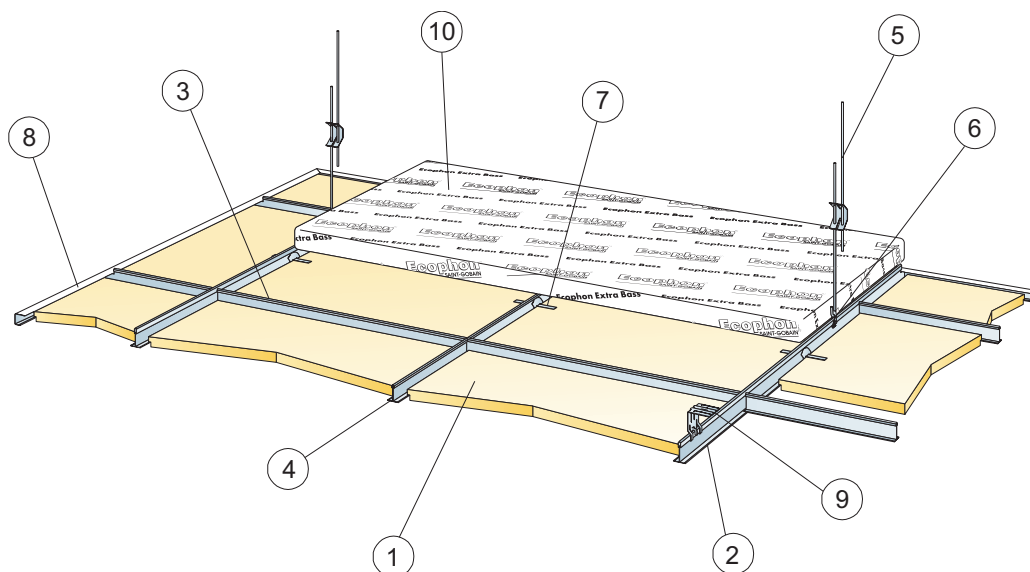
Installed according to installation diagrams, installation guides and drawing aid. For information regarding minimum overall depth of system see quantity specification.



CE

2,9 kg equivalent CO₂ / m² according to EPD

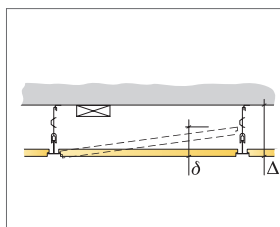
INSTALLATION DIAGRAM (M317) FOR ECOPHON MASTER RIGID E



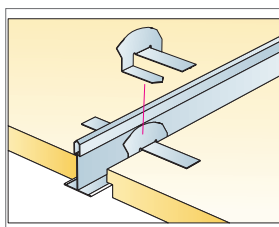
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QUANTITY SPECIFICATION (EXCL. WASTAGE)

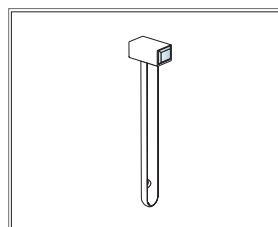
		Size, mm		
		600x600	1200x600	1200x1200
1	Master Rigid E	2,8/m ²	1,4/m ²	0,7/m ²
2	Connect T24 Main runner, installed at 1200 mm centres (max. distance from wall 600 mm, can be extended up to 1200 mm if no live load between Main runner and wall).	0,9m/m ²	0,9m/m ²	0,9m/m ²
3	Connect T24 Cross tee, L=1200 mm, installed at 600 mm centres	1,7m/m ²	1,7m/m ²	0,9m/m ²
4	Connect T24 Cross tee, L=600 mm	0,9m/m ²	-	-
5	Connect Adjustable hanger, installed at 1200 mm centres (max. distance from wall 600 mm)	0,7/m ²	0,7/m ²	0,7/m ²
6	Connect Hanger clip (not to be used in swimming hall environments)	0,7/m ²	0,7/m ²	0,7/m ²
7	Connect Hold down clip E	2pcs/panel	2pcs/panel	2pcs/panel
8	Connect Channel trim, fixed at c300 mm (1200x1200, c200 mm)	as required	as required	as required
9	For direct installation: Connect Direct bracket, installed at 1200 mm centres	0,7/m ²	0,7/m ²	0,7/m ²
10	Extra Bass (1200x600x50 mm)	0,6/m ²	0,6/m ²	0,6/m ²
Δ Min. overall depth of system: 110 mm		-	-	-
δ Min. demounting depth: 120 mm, (170 mm incl. Ecophon Extra Bass)		-	-	-



See Quantity specification



Connect Hold down clip E (patent pending)



Connect Demounting tool

Size, mm	Max live load [N]	Min load bearing capacity [N]
600x600	50	160
1200x600	50	160
1200x1200	50	160

Live load/load bearing capacity