

Ecophon Combison™ Duo E

For use as a suspended ceiling with high sound absorption and for sound insulation between rooms if the partitions do not extend all the way up to the soffit. Also suitable for sound reduction of vertical noise, generated by ventilation, foot steps etc. Ecophon Combison Duo 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 approx. 10 mm below the grid. Each tile is demountable.

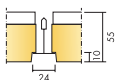
The system consists of Ecophon Combison Duo E tiles and Ecophon Connect grid systems, with an approximate weight of 14 kg/m². The tiles are manufactured from high density, 3rd generation glass wool, with a bonded gypsum board

(13 mm) on the back of the tile. The visible surface has an Akutex™ FT coating and the edges are painted. For best performance and system quality, use Ecophon Connect grid and accessories. The grid is manufactured from galvanized steel.



Statens Kulturråd, Stockholm, Sweden

SYSTEM RANGE



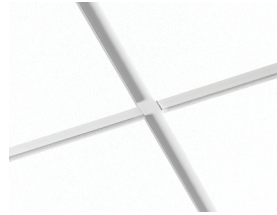
Size, mm	600x600
T24	•
Thickness (THK)	55
Inst. Diag.	M86



Combison Duo E tile



Section of Combison Duo E system



Combison Duo E system

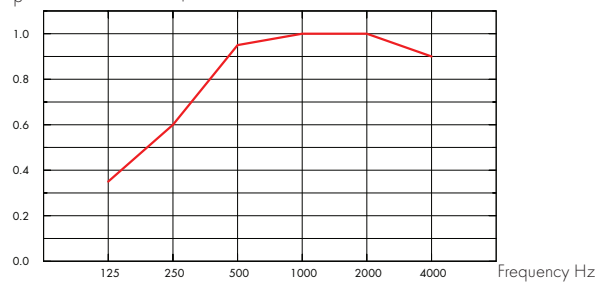


Acoustic

Sound Absorption:

Test results according to EN ISO 354. Classification according to EN ISO 11654, and the single value ratings for Noise Reduction Coefficient, NRC and Sound Absorption Average, SAA according to ASTM C 423.

α_p Practical sound absorption coefficient



— Combison Duo E 54 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		
54	200	0,35	0,60	0,95	1,00	1,00	0,90	0,90	A

THK mm	AC(1.5) Articulation Class, ASTM E1111, ASTM E1110	D_{nfw} Weighted normalized flanking level difference, ISO 10848-2	CAC dB Ceiling Attenuation Class, ASTM 1414, ASTM E413
55	190	39	44



Accessibility

The tiles are easily 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 75% at 30°C without sagging, warping or delaminating (ISO 4611).



Indoor Climate

Certificate / Label

Finish M1	•
French VOC, A+	•
Swedish Asthma and Allergy Association	•
Danish Indoor Climate Label	•
California Emission Regulation, CDPH	•



Environmental influence

Certificate / Label

The Nordic Ecolabel	•
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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. 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

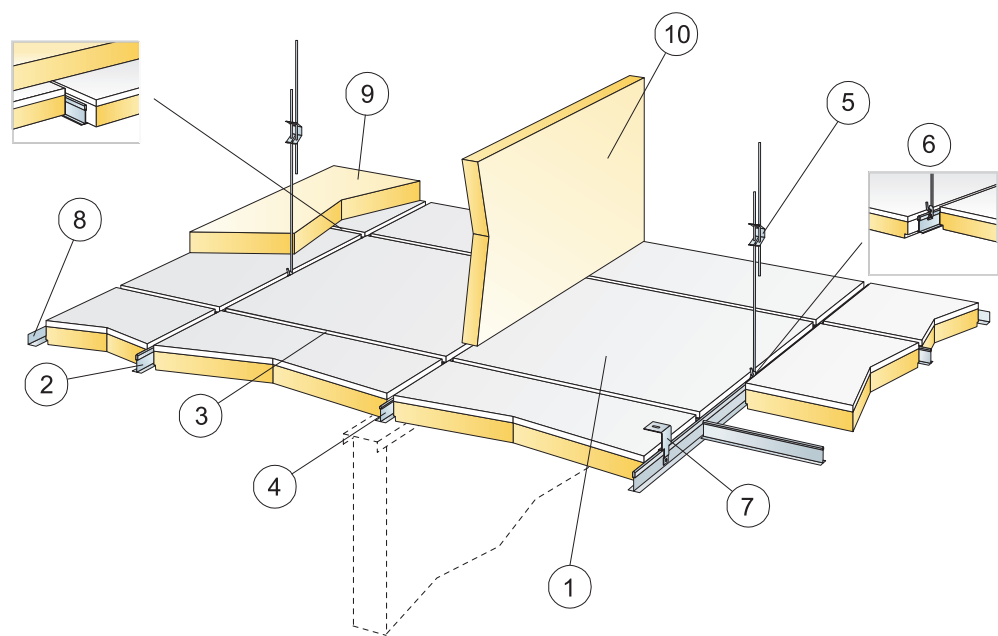
Installed according to installation diagrams, installation guides and drawing aid. For information regarding minimum overall depth of system see quantity specification.



CE

The CE marking confirms important product performance such as sound absorption, emissions, fire safety and load bearing capacity. All Ecophon ceiling products are CE marked according to European standard EN13964, and individual product performance is declared in Declaration of Performance (DoP) documents.

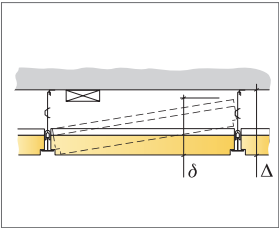
INSTALLATION DIAGRAM (M86) FOR ECOPHON COMBISON DUO E



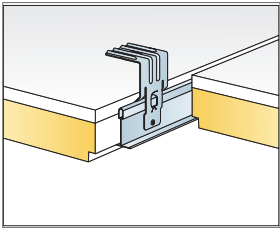
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QUANTITY SPECIFICATION (EXCL. WASTAGE)

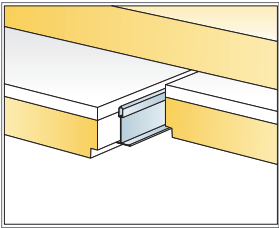
			Size, mm
			600x600
1	Combison Duo E		2,8/m ²
2	Connect T24 Main runner, installed at 1200 mm centres (max distance from wall 300 mm)		0,9m/m ²
3	Connect T24 Cross tee, L=1200 mm, installed at 600 mm centres		1,7m/m ²
4	Connect T24 Cross tee, L=600 mm		0,9m/m ²
5	Connect Adjustable hanger, installed at 1200 mm centres (max. distance from wall 600 mm)		0,7/m ²
6	Connect Hanger clip (not to be used in swimming hall environments)		0,7/m ²
7	For direct installation: Connect Direct bracket, installed at 1200 mm centres		0,7/m ²
8	Connect Angle trim, fixed at 200 mm centres		as required
9	Combison XR (if required)		as required
10	Combison Barrier (if required)		as required
Δ Min. overall depth of system, with Adjustable hanger: 110 mm, with Direct bracket: 90 mm			-
δ Min. demounting depth: 230 mm			-



See Quantity specification



Direct bracket is secured with pop rivet or screw



Additional absorber on top of ceiling

Size, mm	Max live load [N]	Min load bearing capacity [N]
600x600	0	220

Live load/load bearing capacity