Ecophon Combison™ A, dB 42

Ecophon Combison<sup>™</sup> dB is the fastest and easiest way to combine features for both sound absorption and sound insulation between rooms. Ideal for installations where the partitions do not extend all the way up to the soffit. Combison dB can also help to reduce vertical noise from floor to floor. The panel is easy to handle, install and demount and it has a visible grid system. It is made from crimped glass fibre and has an Akutex FT surface on the front.

Akutex Surface Technology by Ecophon\*



8	Size, mm	600x600	1200x600
24	T24	•	•
	Thickness	50	50
	Inst. Diagr.	M531	M531





Combison A dB 42 tile



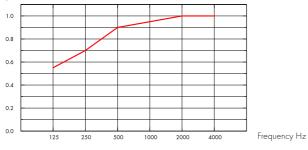


Acoustic

#### Sound Absorption:

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

 $lpha_{
m p}$ , Practical sound absorption coefficient



Combison dB 42 A/E, 200 mm o.d.s. \_

тнк	ods.mm		$lpha_{ m p'}$ Pr	actical sound	d absorption c	oefficient		α	Sound absorption class
mm	o.d.s. mm	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	€	
50	200	0.55	0.70	0.90	0.95	1.00	1.00	0.95	A

THK mm	o.d.s. mm	NRC	SAA
50	200	0.90	0.90

THK mm	Product	D <sub>nfw</sub> Weighted normalized flanking level difference, ISO 10848-2
50	-	42
	+ 1 x Barrier	+4
-	+ 2 x Barrier	+8
-	+ 2 x 1200 XR	+3



#### **Indoor Air Quality**

	Certificate / Label		ÉMISSIONS DANS L'AIR INTÉRIEUR
	French VOC	А	
	Finnish M1	•	



### Circularity

Fully recyclable.



#### Fire safety

	Country	Standard	Class	The
<	Europe	EN 13501-1	A2-s1,d0	noi

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



#### **Visual appearance**

Akutex FT: White Frost, nearest NCS colour sample S 0500-N, 85% light reflectance. Gloss < 1. For more info see Colours and surfaces.



#### Cleanability

Akutex FT: Daily dusting and vacuum cleaning. Weekly wet wiping. Advantage surface, weekly dusting and vacuum cleaning. For more info see colours and surfaces on www.ecophon.com/uk



#### Accessibility

The tiles are easily demountable. Minimum demounting depth according to installation diagrams.



#### Installation

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

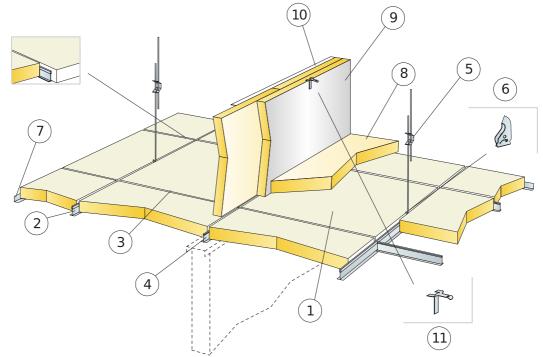


#### Mechanical properties

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

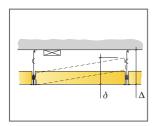
C	E
	-

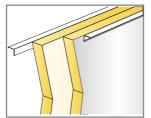
## CE



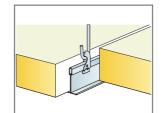
QUANTITY	Specification	WASTAGE)	١
QUARTIT	JILCHICKION.	VV/ UV/ UL/	1

		Size, mm	
		600×600	1200x600
1	Combison A, dB 42	2,8/m²	1,4/m²
2	Connect T24 Main runner, installed at 1200 mm centres (max distance from wall 300 mm)	0,9m/m²	0,9m/m²
3	Connect T24 Cross tee, L=1200 mm, installed at 600 mm centres	1,7m/m²	1,7m/m²
4	Connect T24 Cross tee, L=600 mm	0,9m/m²	-
5	Connect Adjustable Hanger, installed at 1200 mm centres (max. distance from wall 600 mm)	0,7/m²	0,7/m²
6	Connect Hanger Clip (not to be used in swimming hall environments)	0,7/m²	0,7/m²
7	Connect Angle trim, fixed at 200 mm centres	as required	as required
3	Combison XR (if required)	as required	as required
7	Combison Barrier (if required)	as required	as required
10	Connect Angle trims position upper part of Barrier panels (if required)	as required	as required
11	Connect Frieze bracket, position upper part of Barrier panels (if required)	as required	as required
	$\Delta$ Min. overall depth of system: 100 mm		-
	$\delta$ Min. demounting depth: 210 mm	-	-





When having double Barriers, the foil should be mounted outwards.



Suspension with adjustable hanger and clip

600x600	Max live load (N) 15	Min load bearing capacity (N) 160
1200x600	15	160

Live load/load bearing capacity



# Ecophon Combison<sup>™</sup> Uno A

Ecophon Combison<sup>™</sup> Uno A has an exposed grid system with demountable tiles. For use as a sound absorbing ceiling and for sound insulation between rooms if the partitions does not extend all the way up to the soffit. Also suitable for sound reduction of vertical noise.



24	Size, mm	600x600	1200x600
24	Т24	•	•
	Thickness	35	35
	Inst. Diagr.	M188	M188







Combison Uno A tile

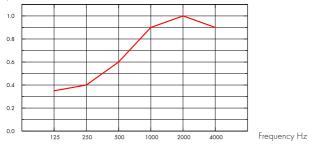


### Acoustic

#### **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.

 $lpha_{
m p}$ , Practical sound absorption coefficient



- Combison Uno A 35 mm, 200 mm o.d.s.

THK mm	o.d.s. mm		α <sub>p</sub> , Pr	actical sound	d absorption c	coefficient		α	Sound absorption class
	0.0.3. 1111	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	€.W	
35	200	0.35	0.40	0.60	0.90	1.00	0.90	0.65	С

тнк	D <sub>nfw</sub>	CAC dB
mm	Weighted normalized flanking level difference, ISO 10848-2	Ceiling Attenuation Class, ASTM 1414, ASTM E413
35	43	44



#### **Indoor Air Quality**

Certificate / Label		ÉMISSIONS DANS L'AIR INTÉRIEUR
French VOC	А	
Finnish M 1	•	



#### Circularity

Minimum post-consumer recycled content	58%
Recyclability	Fully recyclable

Fire safety

	2	Country	Standard	Class	The glass wool core of the tiles is tested and classified as
		Europe	EN 13501-1	A2-s1,d0	non-combustible according to EN ISO 1182.



#### **Humidity Resistance**

Class A, relative humidity 70% and 25°C, according to EN 13964:2014



#### Visual appearance

White Frost, nearest NCS colour sample S 0500-N, 85% light reflectance. Gloss < 1.



#### Cleanability

Daily dusting and vacuum cleaning. Weekly wet wiping.



#### Accessibility

The tiles are easily demountable. Minimum demounting depth according to installation diagrams.



#### Installation

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



#### System weight

The weight of the system (including suspension grid) should be approximately 13 kg/m<sup>2</sup>.

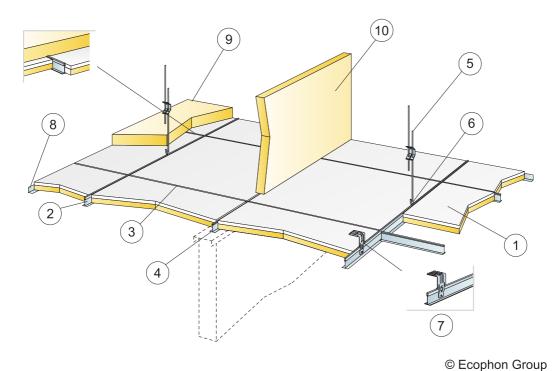


#### **Mechanical properties**

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

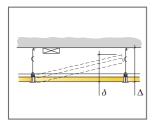


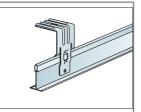
### CE



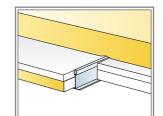
#### QUANTITY SPECIFICATION (EXCL. WASTAGE)

#### Size, mm 600x600 1200×600 2,8/m² 1,4/m² 1 Combison Uno A 2 Connect T24 Main runner, installed at 1200 mm centres (max distance from wall 300 mm) 0,9m/m² 0,9m/m<sup>2</sup> 3 Connect T24 Cross tee, L=1200 mm, installed at 600 mm centres 1,7m/m² 1,7m/m² Connect T24 Cross tee, L=600 mm 4 $0,9m/m^2$ 5 Connect Adjustable Hanger, installed at 1200 mm centres (max. distance from wall 600 mm) 0,7/m² 0,7/m² 6 Connect Hanger Clip (not to be used in swimming hall environments) $0,7/m^2$ $0,7/m^2$ 7 For direct installation: Connect Direct Bracket, installed at 1200 mm centres 0,7/m² $0,7/m^2$ 8 Connect Angle trim, fixed at 200 mm centres as required as required Combison XR (if required) 9 as required as required 10 Combison Barrier (if required) as required as required $\Delta$ Min. overall depth of system, with adjustable hanger: 100 mm, with direct bracket: 50 mm $\delta$ Min. demounting depth: 200 mm

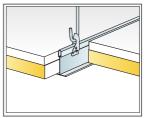




Direct bracket is secured with pop rivet or screw



Additional absorber on top of ceiling



Additional absorber on top of ceiling



# Ecophon Combison<sup>™</sup> Uno Ds

Ecophon Combison™ Uno Ds has a concealed grid, installed in a suspended grid system with demountable tiles. For use as a sound absorbing ceiling 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.



	Size, mm	600x600		
4	T24	•		
	Thickness	35		
	Inst. Diagr.	M241		



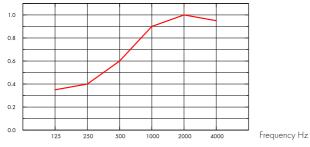


### Acoustic

#### **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.





- Combison Uno Ds 35 mm, 200 mm o.d.s.

THK mm	o.d.s. mm		α <sub>p</sub> , Pr	actical sound	d absorption c	coefficient		α	Sound absorption class
	0.0.3. 11111	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	u.,	ooling absorption class
35	200	0.35	0.40	0.60	0.90	1.00	0.95	0.65	С

ТНК	D <sub>nfw</sub>
mm	Weighted normalized flanking level difference, ISO 10848-2
30	41



#### **Indoor Air Quality**

Certificate / Label		ÉMISSIONS DANS L'AIR INTÉRIEUR
French VOC	А	
Finnish M1	•	



#### **Circularity**

Minimum post-consumer recycled content	58%
Recyclability	Fully recyclable

	Fi	re
	_	

	Fire safety			
	Country	Standard	Class	The glass wool core of the tiles is tested and classified as
$\boldsymbol{\times}$	Europe	EN 13501-1	A2-s1,d0	non-combustible according to EN ISO 1182.



#### **Humidity Resistance**

Class A, relative humidity 70% and 25°C, according to EN 13964:2014



#### Visual appearance

White Frost, nearest NCS colour sample S 0500-N, 85% light reflectance. Gloss < 1.



#### Cleanability

Daily dusting and vacuum cleaning. Weekly wet wiping.



#### Accessibility

The tiles are easily demountable. Minimum demounting depth according to installation diagrams.



#### Installation

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



#### System weight

The weight of the system (including suspension grid) should be approximately 13 kg/m<sup>2</sup>.

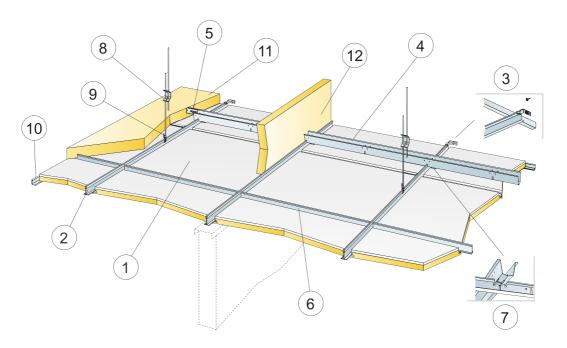


#### **Mechanical properties**

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

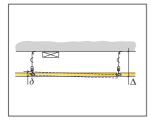


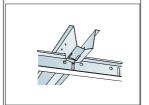
### CE



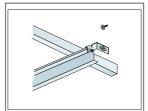
#### © Ecophon Group

	Size, mm
	600x600
1 Combison Uno Ds	2,8/m²
2 Connect T24 Main Runner HD, installed at 600 mm centres	1,7m/m²
3 Connect Wall Bracket for T-profiles	1/suspended row of Main runner
4 Connect Space Bar, installed at 1500 mm centres (max. distance from wall 300 mm)	0,7m/m²
5 Connect Wall Bracket, L=700 mm, for Connect Space Bar	1/row of Space bar
6 Connect T24 Cross Tee, L=600 mm	2/row of Main runner
Connect Space Bar Winch, installed one per joint Connect Main Runner/Connect Space Bar	1,4/m²
8 Connect Adjustable Hanger, installed at 1200 mm centres (max. distance from wall 600 mm). Main Runners resting on partition walls don't need hangers.	1,4/m²
9 Connect Hanger Clip (not to be used in swimming hall environments)	0,7/m²
10 Connect Angle trim, fixed at 200 mm centres	as required
11 Combison XR (if required)	as required
12 Combison Barrier (if required)	as required
$\Delta$ Min. overall depth of system: 115 mm	
$\delta$ Min. demounting depth: 40 mm	

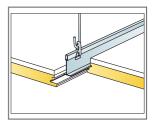




Connection between profiles with space bar winch



Connect Wall bracket for T-profiles



Suspension with adjustable hanger and clip



# Ecophon Combison<sup>™</sup> Duo A

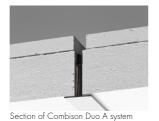
Ecophon Combison<sup>™</sup> Duo A has an exposed grid system with demountable tiles. For use as a suspended ceiling with high sound absorption and for sound insulation between rooms if the partitions do not extend all the way up to the soffit. Also suitable for sound reduction of vertical noise.



SYSTEM RANGE

N D	Size, mm	600x600
24	Т24	•
	Thickness	55
	Inst. Diagr.	M85







Combison Duo A tile

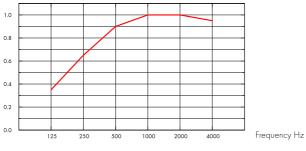


#### Acoustic

#### **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.





Combison Duo A 54 mm, 200 mm o.d.s. \_

ТНК	o.d.s. mm		α <sub>p</sub> , Pr	actical sound	d absorption c	coefficient		α	Sound absorption class	
mm	0.0.3. 1111	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	u.,		
54	200	0.35	0.65	0.90	1.00	1.00	0.95	0.90	A	



ТНК	AC(1.5)	D <sub>nfw</sub>	CAC dB
mm	Articulation Class, ASTM E1111, ASTM E1110	Weighted normalized flanking level difference, ISO 10848-2	Ceiling Attenuation Class, ASTM 1414, ASTM E413
55	190	43	44



#### **Indoor Air Quality**

Certificate / Label		ÉMISSIONS DANS L'AIR INTÉRIEUR
French VOC	А	
Finnish M1	•	



#### Circularity

Minimum post-consumer recycled content	58%
Recyclability	Fully recyclable



#### Fire safety

	-			
<b>_</b>	Country	Standard	Class	The glass wool core of t
<	Europe	EN 13501-1	A2-s1,d0	non-compusible accord

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



#### **Humidity Resistance**

Class A, relative humidity 70% and 25°C, according to EN 13964:2014



#### Visual appearance

White Frost, nearest NCS colour sample S 0500-N, 85% light reflectance. Gloss < 1.



#### Cleanability

Daily dusting and vacuum cleaning. Weekly wet wiping.



#### Accessibility

The tiles are easily demountable. Minimum demounting depth according to installation diagrams.



#### Installation

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



#### System weight

The weight of the system (including suspension grid) should be approximately  $14 \text{ kg/m}^2$ .

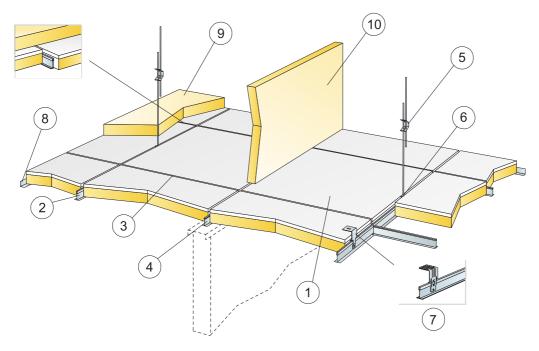


#### **Mechanical properties**

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

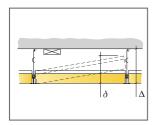


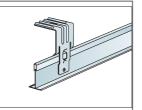
## CE



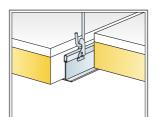
#### © Ecophon Group

		Size, mm
		600×600
1	Combison Duo A	2,8/m²
2	Connect T24 Main runner, installed at 1200 mm centres (max distance from wall 300 mm)	0,9m/m²
3	Connect T24 Cross tee, L=1200 mm, installed at 600 mm centres	1,7m/m²
4	Connect T24 Cross tee, L=600 mm	0,9m/m²
5	Connect Adjustable Hanger, installed at 1200 mm centres (max. distance from wall 600 mm)	0,7/m²
6	Connect Hanger Clip (not to be used in swimming hall environments)	0,7/m²
7	For direct installation: Connect Direct Bracket, installed at 1200 mm centres	0,7/m²
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
	$\Delta$ Min. overall depth of system, with Adjustable hanger: 100 mm, with Direct bracket: 80 mm	
	$\delta$ Min. demounting depth: 220 mm	





Direct bracket is secured with pop rivet or screw



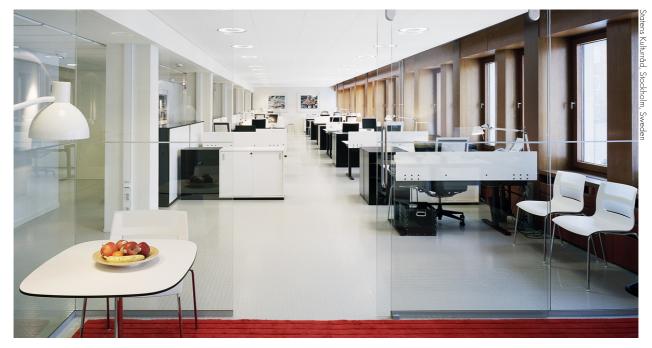
Suspension with adjustable hanger and clip

Additional absorber on top of ceiling

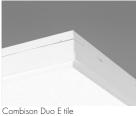


# Ecophon Combison<sup>™</sup> Duo E

Ecophon Combison<sup>™</sup> Duo E has a recessed visible grid and a tegular edge design, creating a ceiling with a shadow effect. 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.



To S	Size, mm	600x600
1	Т24	•
	Thickness	55
	Inst. Diagr.	M86









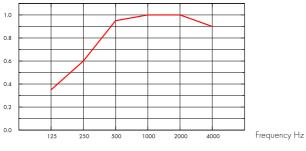


#### Acoustic

#### **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.







ТНК	o.d.s. mm	$lpha_{ m p'}$ Practical sound absorption coefficient						α	Sound absorption class
mm	0.0.5. 11111	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	₩.	oound absorption class
54	200	0.35	0.60	0.95	1.00	1.00	0.90	0.90	A



ТНК	AC(1.5)	D <sub>nfw</sub>	CAC dB
mm	Articulation Class, ASTM E1111, ASTM E1110	Weighted normalized flanking level difference, ISO 10848-2	Ceiling Attenuation Class, ASTM 1414, ASTM E413
55	190	39	44



#### **Indoor Air Quality**

Certificate / Label		ÉMISSIONS DANS L'AIR INTÉRIEUR
French VOC	А	
Finnish M1	•	



#### Circularity

Minimum post-consumer recycled content	58%
Recyclability	Fully recyclable



#### Fire safety

	-			
	Country	Standard	Class	The glass wool core of the non-combustible according the second statement of t
<	Europe	EN 13501-1	A2-s1,d0	non-compusible accordin

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



#### **Humidity Resistance**

Class A, relative humidity 70% and 25°C, according to EN 13964:2014



#### Visual appearance

White Frost, nearest NCS colour sample S 0500-N, 85% light reflectance. Gloss < 1.



#### Cleanability

Daily dusting and vacuum cleaning. Weekly wet wiping.



#### Accessibility

The tiles are easily demountable. Minimum demounting depth according to installation diagrams.



#### Installation

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



#### System weight

The weight of the system (including suspension grid) should be approximately  $14 \text{ kg/m}^2$ .

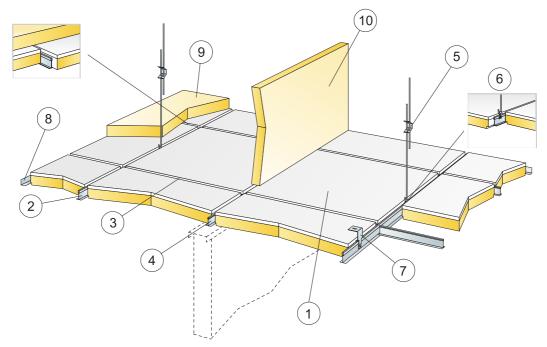


#### **Mechanical properties**

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

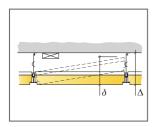


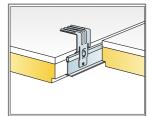
# CE



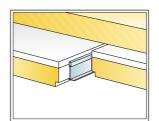
© Ecophon Group

		Size, mm	
		600×600	
1	Combison Duo E	2,8/m²	
2	Connect T24 Main runner, installed at 1200 mm centres (max distance from wall 300 mm)	0,9m/m²	
3	Connect T24 Cross tee, L=1200 mm, installed at 600 mm centres	1,7m/m²	
4	Connect T24 Cross tee, L=600 mm	0,9m/m²	
5	Connect Adjustable Hanger, installed at 1200 mm centres (max. distance from wall 600 mm)	0,7/m²	
6	Connect Hanger Clip (not to be used in swimming hall environments)	0,7/m²	
7	For direct installation: Connect Direct Bracket, installed at 1200 mm centres	0,7/m²	
8	Connect Angle trim, fixed at 200 mm centres	as required	
9	Combison XR (if required)	as required	
10	Combison Barrier (if required)		
	$\Delta$ Min. overall depth of system, with Adjustable hanger: 110 mm, with Direct bracket: 90 mm	-	
	$m{\delta}$ Min. demounting depth: 230 mm	-	





Direct bracket is secured with pop rivet or screw

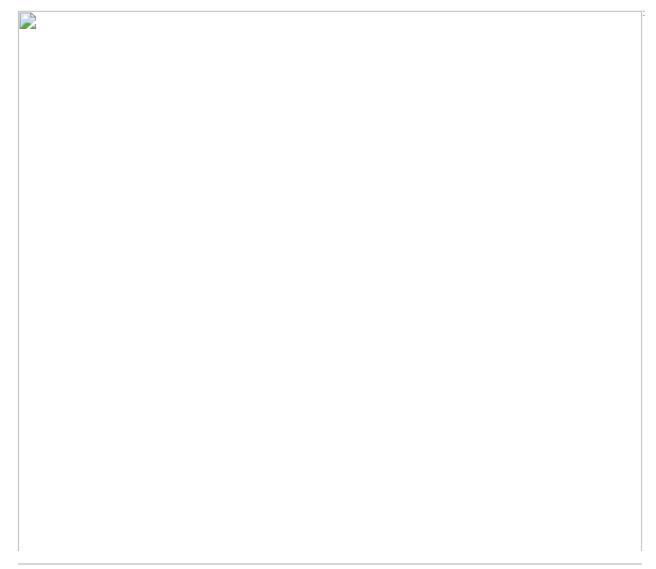


Additional absorber on top of ceiling

Suspension with adjustable hanger and clip

# Ecophon Combison<sup>™</sup> XR

Ecophon Combison<sup>™</sup> XR is a complementary product that is installed horisontally on top of the Combison ceiling tiles, to increase the sound reduction level between rooms. The product should cover as much of the ceiling surface as possible for the best acoustic performance.





Size, mm	
	1500x600
Thickness	50
Inst. Diagr.	M440





#### Acoustic

Addition of Combison XR on top of Ecophon Combison ceiling systems will give increased insulation properties. For detailed information please see corresponding systems for Combison.



#### Circularity

Fully recyclable



# Fire safety

$\langle$	Country	Standard	Class	The glass wool core of the tiles is tested and classified as non-combustible according to EN ISO 1182.
	Europe	EN 13501-1	A2-s1,d0	non-computible according to EIN ISO 1182.

	4
	$\mathbf{D}$

#### Visual appearance

Not applicable



## Cleanability

Not applicable.



#### Accessibility

The tiles are demountable.



#### Installation

Installed according to installation diagrams, installation guides and drawing aid.



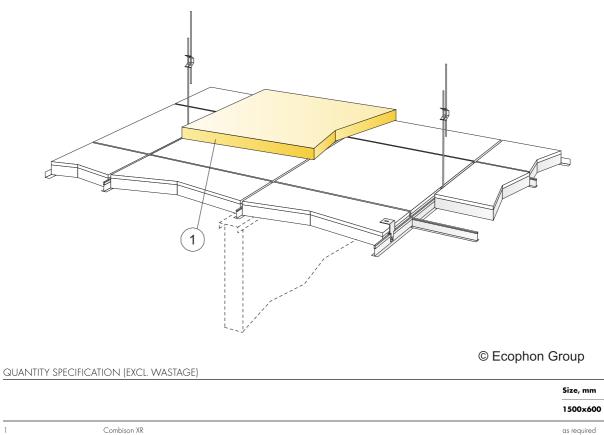
#### **Mechanical properties**

Not applicable.



# CE

INSTALLATION DIAGRAM (M440) FOR ECOPHON COMBISON XR

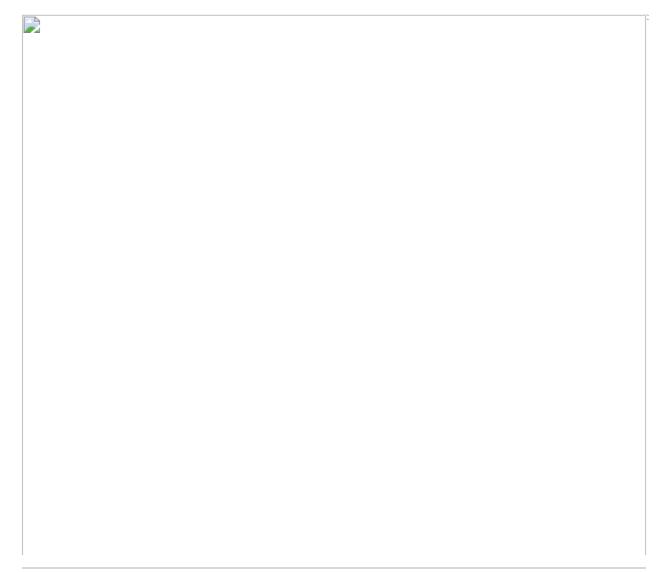


Combison XR

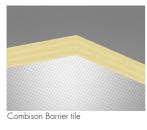
1

# Ecophon Combison<sup>™</sup> Barrier

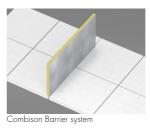
Ecophon Combison<sup>™</sup> Barrier is an acoustic panel that is vertically installed above partitions in the plenum. Creates a sound barrier to improve the room to room sound insulation. Combison Barrier should be used together with other Ecophon systems for best acoustic performance.



Size, mm	1200x600
Direct	•
Thickness	40
Inst. Diagr.	M160











#### Acoustic

For use as acoustic barrier above partitions in plenum to improve the room to room sound insulation. The Combison Barrier should be used together with other Ecophon systems.



#### Circularity

Fully recyclable



### Fire safety

Country	Standard	Class	The glass wool core of the tiles is tested and classified as
Europe	en 13501-1	A2-s1,d0	non-combustible according to EN ISO 1182.



#### Humidity Resistance

Class C, relative humidity 95% and 30°C, according to EN 13964:2014



#### Visual appearance

Not applicable. The panel has aluminium foil on one side.



### Cleanability

Not applicable.



#### Accessibility

The tiles are demountable.



#### Installation

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

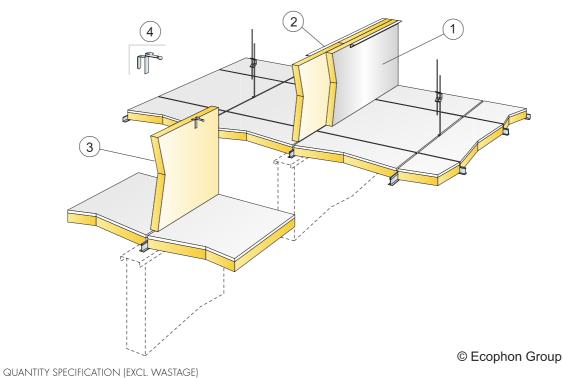


#### **Mechanical properties**

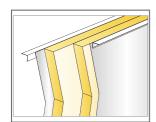
No additional live load is allowed.



CE



		Size, mm
		1200×600
1	Combison Barrier in double layers with displaced joints and exposed alufoil side	as required
2	Connect Angle trims position upper part of Barrier panels	as required
3	Combison Barrier in single layer	as required
4	Connect Frieze bracket 0043 position upper part of Barrier panels	as required



Double layers of Combison Barrier with Connect Angle trim