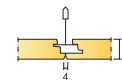
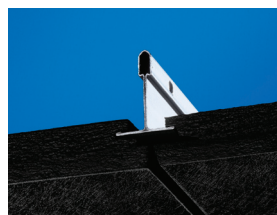


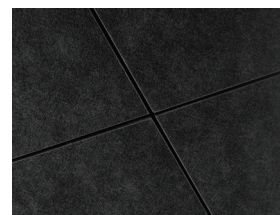
# ECOPHON SOMBRA™ DS



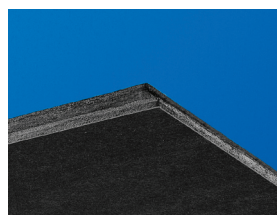
For applications requiring a dark ceiling having low light reflection and a concealed grid, but where individual tiles must be demountable. Ecophon Sombra Ds is installed in a suspended grid system, creating a ceiling with a smooth appearance. The bevelled edges create a narrow groove between each tile. The tiles are easily demountable. The system consists of Ecophon Sombra Ds tiles and Ecophon Connect grid systems, with an approximate weight of 4 kg/m<sup>2</sup> (7 kg/m<sup>2</sup> with X-bass). The tiles are manufactured from high density glass wool. The visible surface is a matt black batch painted glass tissue and the back of the tile is covered with glass tissue. The edges are painted. For special applications i.e. cinemas, tiles with a sound reflecting surface, Sombra Ds/gamma, is available. To improve absorption in the low frequency range, Sombra X-bass can be installed on top of the suspended ceiling. For more information see application "Ecophon in Cinemas". For best performance and system quality, use Ecophon Connect grid and accessories. The grid is manufactured from galvanized steel.



Section of Sombra Ds system



Sombra Ds system



Sombra Ds tile

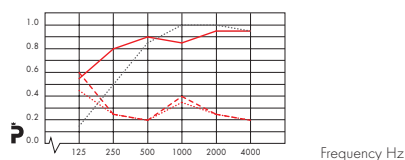
## SYSTEM RANGE

Size, mm	600	1200
	x	x
	600	600
T24	•	•
Thickness	20	20
Inst. Diagr.	M227	M227

## TECHNICAL PROPERTIES

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

$\alpha_p$  Practical sound absorption coefficient



- Ecophon Sombra Ds 200 mm o.d.s.
- .... Ecophon Sombra Ds/gamma 200 mm o.d.s.
- - - Ecophon Sombra Ds/gamma + Sombra X-bass 200 mm o.d.s.
- ... Ecophon Sombra Ds 50 mm o.d.s.

o.d.s = overall depth of system

Product	Sombra Ds		Sombra Ds Gamma		Sombra Ds Gamma + X-Bass		
	50	200	400	50	200	200	400
o.d.s mm	50	200	400	50	200	200	400
absorption class	B	A		E	E	E	
NRC	0,85	-	0,85	-	-	-	0,3
SAA	0,84	-	0,84	-	-	-	0,29
$\alpha_w$							

Sound Insulation Not applicable.

Sound Privacy Not applicable

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

**CLEANABILITY** Weekly dusting and vacuum cleaning.

**VISUAL APPEARANCE** Black 997, nearest NCS colour sample S 9000-N, 3-4% light reflectance.

**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** Certified by the Indoor Climate Labelling and recommended by the Swedish Asthma and Allergy Association.

**ENVIRONMENTAL INFLUENCE** Granted the Nordic Swan eco-label. Fully recyclable.

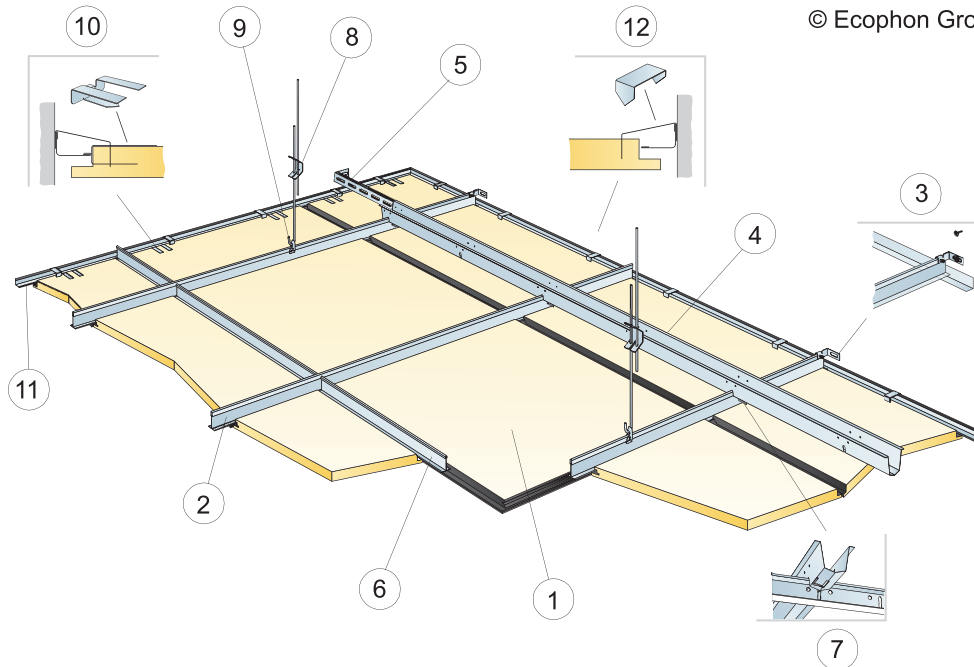
**FIRE SAFETY** The glass wool core of the tiles is tested and classified as non-combustible according to EN ISO 1182. The systems are classified as fire protective covering according to NT FIRE 003. See Functional demands, Fire safety.

Reaction-to-fire classification

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

**MECHANICAL PROPERTIES** For information regarding live load and requirements for load bearing capacity, see installation diagrams. Conditions: See Functional demands, Mechanical properties.

**INSTALLATION** Installed according to system range. (The tiles have to be installed according to the arrows on the back of the tile.)

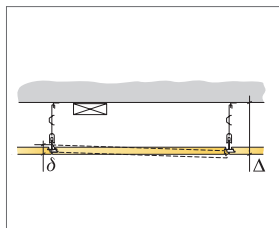


### QUANTITY SPECIFICATION (EXCL. WASTAGE)

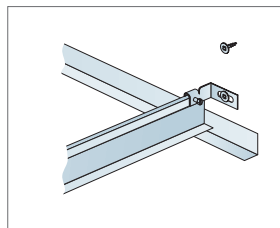
		Size, mm	
		600x600	1200x600
1	Sombra Ds	2,8/m <sup>2</sup>	1,4/m <sup>2</sup>
2	null	1,7m/m <sup>2</sup>	1,7m/m <sup>2</sup>
3	Connect Wall bracket for T-profiles	1for every row of suspended Main runner HD	
4	Connect Space bar, installed at 1500 mm centres (max. distance from wall 300 mm)	0,7m/m <sup>2</sup>	0,7m/m <sup>2</sup>
5	Connect Wall bracket, L=700 mm, for Space bar	1 for every row of Space bar	
6	null	2for every row of Main runner HD	
7	Connect Space bar winch, installed one per joint Main runner/Space bar	1,4/m <sup>2</sup>	1,4/m <sup>2</sup>
8	Connect T24 Cross tee, L=1200 mm, installed at 600 mm centres	0,7/m <sup>2</sup>	0,7/m <sup>2</sup>
9	Connect Hanger clip	0,7/m <sup>2</sup>	0,7/m <sup>2</sup>
10	Connect Support clip DG20 0547	1 /300-400mm on any cut edge	
11	Connect Angle trim black, fixed at 300 mm centres	as required	as required
12	Connect Perimeter tile clip	1 /300-400mm on any cut edge	

Δ Min. overall depth of system: 105 mm

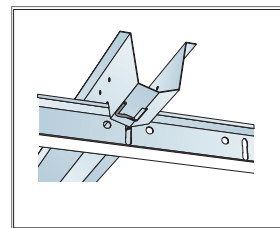
δ Min. demounting depth: 30 mm



See Quantity specification



Connection between profiles with split pin



Connection between profiles with space bar winch

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

Live load/load bearing capacity