

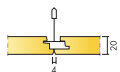
# Ecophon Hygiene Protec™ Ds

*Ecophon Hygiene Protec™ Ds has a concealed grid and are particle repellent for clean rooms, where disinfection and/or cleaning is required on a regular basis. The fully sealed absorbers have low emission levels, ensuring high indoor air quality. They are resistant to mould and bacteria growth.*

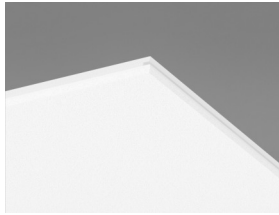


Pharma Labor-Vorbereitung, Gießen, Germany

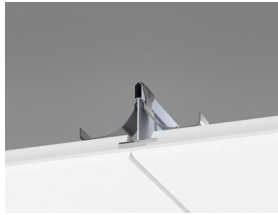
## SYSTEM RANGE



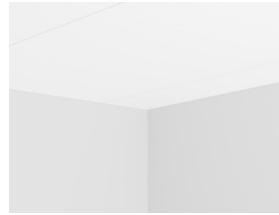
|                 |         |          |
|-----------------|---------|----------|
| Size, mm        | 600x600 | 1200x600 |
| T24             | •       | •        |
| Thickness (THK) | 20      | 20       |
| Inst. Diagr.    | M468    | M468     |



Hygiene Protec Ds tile



Hygiene Protec Ds C1 section with Connect Hold Down Clip Ds



Sealed junction with wall



Hygiene Protec Ds C1 system

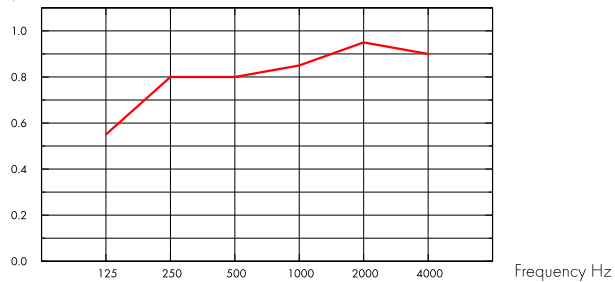


## Acoustic

### Sound Absorption:

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

$\alpha_p$ , Practical sound absorption coefficient



— Hygiene Protec Ds 20 mm, 200 mm o.d.s.

| THK<br>mm | o.d.s. mm | $\alpha_p$ , Practical sound absorption coefficient |        |        |         |         |         | $\alpha_w$ | Sound absorption class |
|-----------|-----------|---|--------|--------|---------|---------|---------|------------|------------------------|
|           |           | 125 Hz  | 250 Hz | 500 Hz | 1000 Hz | 2000 Hz | 4000 Hz |            |                        |
| 20        | 200       | 0.55  | 0.80   | 0.80   | 0.85    | 0.95    | 0.90    | 0.85       | B                      |



## Indoor Air Quality

Certificate / label

Eurofins Indoor Air Comfort®

IAC

French VOC

A

Finnish M1

•



## Environmental Footprint

Kg CO<sub>2</sub> equiv/m<sup>2</sup>: 7,1 From family EPD in conformity with ISO 14025 / EN 15804



## Circularity

Minimum post-consumer recycled content

47%

Recyclability

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.



## Humidity Resistance

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



### Visual appearance

White 500, nearest NCS colour sample S 0500-N, 84% light reflectance.



### Cleanability

Daily dusting and vacuum cleaning. Weekly wet wiping.



### Advanced Cleanability

Withstand use of hydrogen peroxide vapor.



### Surface Endurance

Product tested according to ISO 11998, and withstand 200 cycles.



### Chemical resistance/Disinfection

| Chemical    | Active Substance                                  | Concentration |
|-------------|---|---------------|
| Ethanol     | Ethanol   | 70%           |
| Chlorine    | Sodium Hypochlorite solution                      | 2,5%          |
| Virkon S    | Dipotassium peroxodisulphate;<br>Sulphamidic acid | 1%            |
| Isopropanol | Isopropyl Alcohol                                 | 70%           |

Tested according to ISO 11998 and withstand the following chemicals or disinfectants.



### Mould and Bacterial Resistance

| Standard/Method |   |
|-----------------|---|
| ISO 846 A       | 0 |
| ISO 846 C       | 0 |



### Clean Room

| Standard    | Standard/Method               | Class     |
|-------------|-------------------------------|-----------|
| ISO 14644   | Particle cleanliness class    | ISO 3     |
| NF S 90-351 | Microbiological class         | M1/area 4 |
| NF S 90-351 | Particle elimination kinetics | CP(0,5) 1 |



### Accessibility

The tiles are demountable.



### Installation

Installed according to installation diagrams, installation guides and drawing aid. Cut panels must be sealed with Connect Edge sealant.



### System weight

The weight of the system (including suspension grid) should be approximately 3-4 kg/m².



### Mechanical properties

---

See table about Max live load and Min load bearing capacity and Functional demands, Mechanical properties at [www.ecophon.com](http://www.ecophon.com).

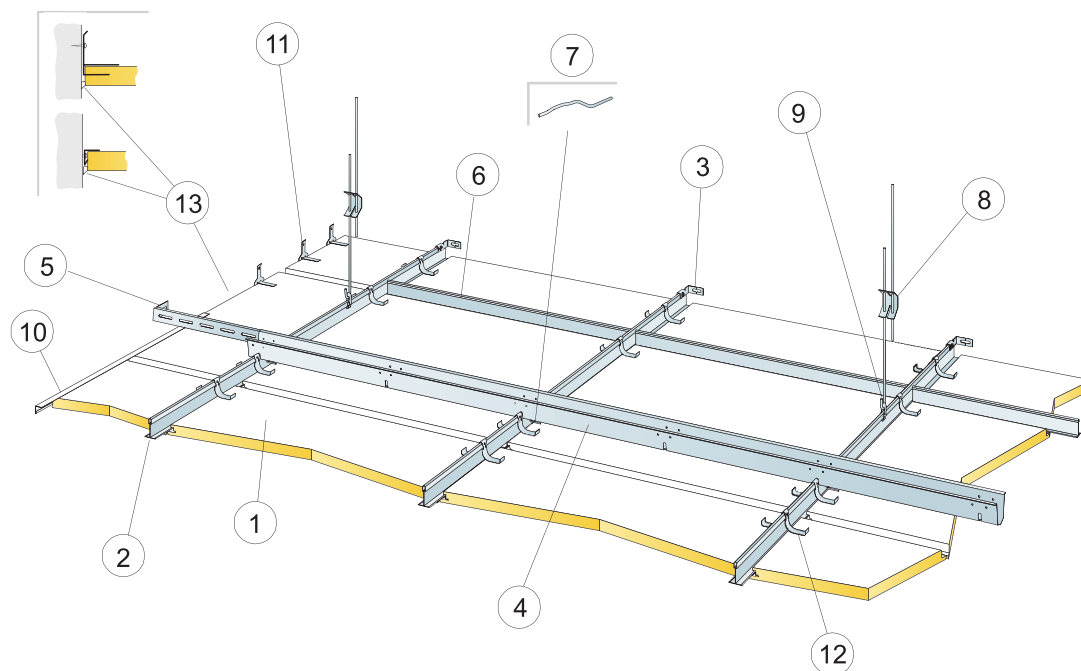


### CE

---

Ecophon ceiling systems are CE marked according to the European harmonized standard EN13964:2014. CE marked construction products are covered by a Declaration of Performance (DOP) which enables customers and users to easily compare performance of products available on the European market.

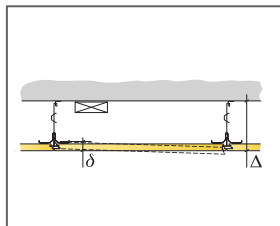
## INSTALLATION DIAGRAM (M468) FOR ECOPHON HYGIENE PROTEC™ DS



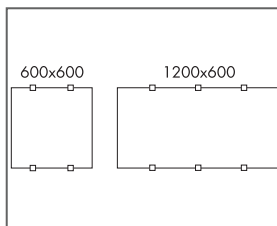
© Ecophon Group

## QUANTITY SPECIFICATION (EXCL. WASTAGE)

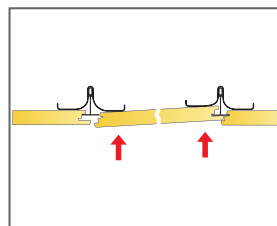
|  | Size, mm                         |                                  |
|--|----------------------------------|----------------------------------|
|  | 600x600                          | 1200x600                         |
| 1 Hygiene Protec Ds  | 2,8/m <sup>2</sup>               | 1,4/m <sup>2</sup>               |
| 2 Connect T24 Main Runner HD, installed at 600 mm centres                                    | 1,7m/m <sup>2</sup>              | 1,7m/m <sup>2</sup>              |
| 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/m <sup>2</sup>              | 0,7m/m <sup>2</sup>              |
| 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             |                                  |
| 7 Connect Space Bar Winch, installed one per joint Connect Main Runner/Connect Space Bar     | 1,4/m <sup>2</sup>               | 1,4/m <sup>2</sup>               |
| 8 Connect Adjustable Hanger, installed at 1200 mm centres (max. distance from wall 600 mm)   | 0,7/m <sup>2</sup>               | 0,7/m <sup>2</sup>               |
| 9 Connect Hanger Clip (not to be used in swimming hall environments)                         | 0,7/m <sup>2</sup>               | 0,7/m <sup>2</sup>               |
| 10 Alt. Connect Frieze Trim, fixed c300 mm   | as required                      | as required                      |
| 11 Connect Frieze Bracket, installed at 500 mm centre. Minimum free depth above tile 150 mm. | 2/cut tile with one bearing edge | 3/cut tile with one bearing edge |
| 12 Connect Hold Down Clip Ds   | 2/tile, 50-100 mm from corners   | 3/tile, 50-100 mm from corners   |
| 13 Joint sealant (not supplied by Ecophon)   | as required                      | as required                      |
| Δ Min. overall depth of system: 170 mm   | -                                | -                                |
| δ Min. demounting depth: 30 mm   | -                                | -                                |



See Quantity Specification



Arrangement of clips



Demounting of tile from below

| Size, mm | Max live load (N) | Min load bearing capacity (N) |
|----------|-------------------|-------------------------------|
| 600x600  | 50                | 160                           |
| 1200x600 | 50                | 160                           |

Live load/load bearing capacity