

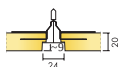
# Ecophon Master™ Rigid E

Ecophon Master™ Rigid E has a recessed visible grid and tegular edge to create a shadow effect ceiling, accentuating each tile and partially concealing the grid system. Secured by clips, each tile is fully demountable. Together with Ecophon Extra Bass optimal acoustics are achieved.



Kubiskolan, Helsingborg, Sweden

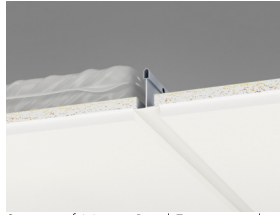
## SYSTEM RANGE



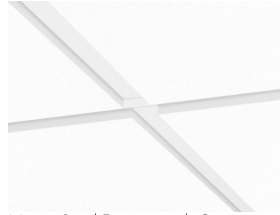
|              |         |          |           |
|--------------|---------|----------|-----------|
| Size, mm     | 600x600 | 1200x600 | 1200x1200 |
| Extra Bass   | •       | •        | •         |
| T24          | •       | •        | •         |
| Thickness    | 20      | 20       | 20        |
| Inst. Diagr. | M317EB  | M317EB   | M317EB    |



Master Rigid E tile



Section of Master Rigid E system with Connect T24



Master Rigid E system with Connect T24

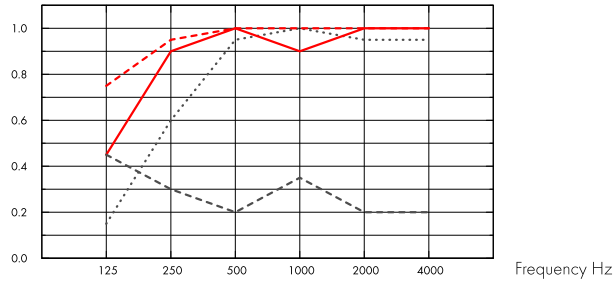
## Acoustic



### Sound Absorption:

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

$\alpha_p$ , 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 | $\alpha_p$ , Practical sound absorption coefficient |        |        |         |         |         | $\alpha_{wv}$ | 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       | 0.45  | 0.90   | 1.00   | 0.90    | 1.00    | 1.00    | 1.00          | A                      |
| + Extra Bass | 70     | 200       | 0.75  | 0.95   | 1.00   | 1.00    | 1.00    | 1.00    | 1.00          | A                      |
| gamma        | 20     | 200       | 0.45  | 0.30   | 0.20   | 0.35    | 0.20    | 0.20    | 0.25          | E                      |

## Indoor Air Quality



| Certificate / Label          | All Products |
|------------------------------|--------------|
| Eurofins Indoor Air Comfort® | IAC Gold     |
| French VOC                   | A+           |
| Finnish M1                   | •            |



## Carbon footprint



|                | kg CO <sub>2</sub> equiv/m <sup>2</sup> | Life-cycle stages A1 to C4 from EPD, in conformity with ISO 14025 / EN 15804 |
|----------------|---|--|
| Master Rigid E | 3,27                                    |  |

## Circularity



|  |                  |
|--|------------------|
| Minimum post-consumer recycled content | 45%              |
| Recyclability                          | Fully recyclable |



## Fire safety

| Country | Fire 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 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 secured in the grid, but 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

|                                      | kg/m <sup>2</sup> |
|--------------------------------------|-------------------|
| Master Rigid E                       | 1,6               |
| Master Rigid E + Connect grid system | 2,6               |

Weight information is indicative and subject to variation.



## Mechanical properties

See table regarding the min- and max- load bearing capacities and functional demands.



## Impact Resistance

| M-sketch | Classification |
|----------|----------------|
| M317     | 3A             |

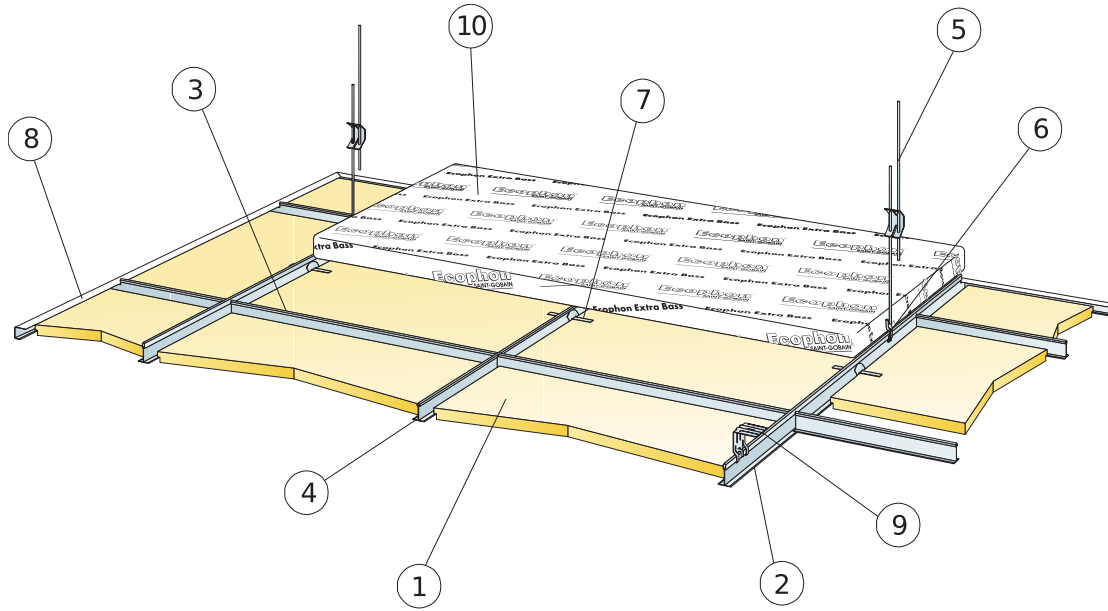
Tested and classified according to EN 13964 annex D.



## CE

Ecophon ceiling systems are CE marked according to the European harmonized standard EN 13964:2014. 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.

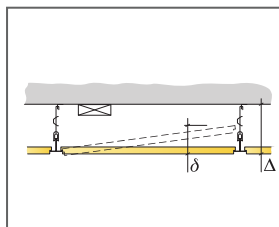
## INSTALLATION DIAGRAM (M317EB) FOR ECOPHON MASTER RIGID E



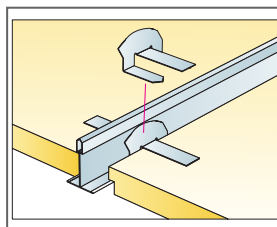
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### QUANTITY SPECIFICATION (EXCL. WASTAGE)

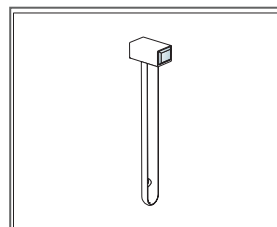
|   | Size, mm            |                     |                     |
|---|---------------------|---------------------|---------------------|
|   | 600x600             | 1200x600            | 1200x1200           |
| 1 Master Rigid E  | 2,8/m <sup>2</sup>  | 1,4/m <sup>2</sup>  | 0,7/m <sup>2</sup>  |
| 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 0,9m/m <sup>2</sup> between Main runner and wall). |                     | 0,9m/m <sup>2</sup> | 0,9m/m <sup>2</sup> |
| 3 Connect T24 Cross tee, L=1200 mm, installed at 600 mm centres   | 1,7m/m <sup>2</sup> | 1,7m/m <sup>2</sup> | 0,9m/m <sup>2</sup> |
| 4 Connect T24 Cross tee, L=600 mm   | 0,9m/m <sup>2</sup> | -                   | -                   |
| 5 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>  | 0,7/m <sup>2</sup>  |
| 6 Connect Hanger Clip (not to be used in swimming hall environments)  | 0,7/m <sup>2</sup>  | 0,7/m <sup>2</sup>  | 0,7/m <sup>2</sup>  |
| 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 <sup>2</sup>  | 0,7/m <sup>2</sup>  | 0,7/m <sup>2</sup>  |
| 10 Extra Bass (1200x600x50 mm)  | 0,7/m <sup>2</sup>  | 0,7/m <sup>2</sup>  | 0,7/m <sup>2</sup>  |
| 11 Connect Demounting tool  | -                   | -                   | -                   |
| Δ Min. overall depth of system: 110 mm  | -                   | -                   | -                   |
| δ Min. demounting depth: 120 mm (tiles without Extra Bass above)  | -                   | -                   | -                   |
| For luminaire integration in panels use Connect Bridging  | -                   | -                   | -                   |



See Quantity specification



Connect Hold down clip E (patent pending)



Connect Demounting tool

| Size, mm     | Max live load [N] | Min load bearing capacity [N] |
|--------------|-------------------|-------------------------------|
| 600x600x20   | 50                | 160                           |
| 1200x600x20  | 50                | 160                           |
| 1200x1200x20 | 50                | 160                           |

Live load/load bearing capacity