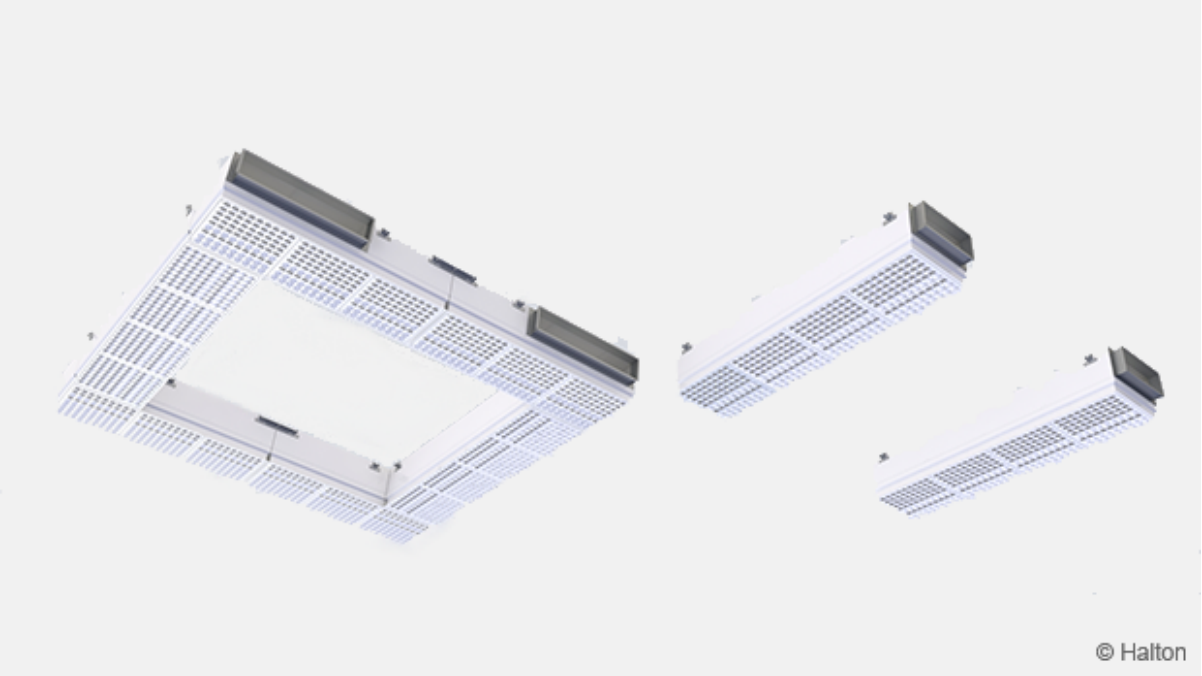
Halton Vita VSN – Supply air unit



Overview

Halton Vita VSN is a supply air unit for the Halton Vita OR Space 5 and Space 7 solutions.

Applications

Operating rooms in hospitals

- Halton Vita OR Space 5 solution
- Halton Vita OR Space 7 solution

Key features

- The airflow pattern can be adjusted by turning the supply air nozzles
- Modular structure with several size configurations
- Antimicrobial powder paint finishing
- Equipped with low-pressure-drop Halton H14 filters with a gel gasket
- Installation flush to the ceiling
- Fixing brackets for easy installation of the product
- Easy filter change and cleaning through the openable diffuser panel
- Easy access to the measurement nipple for plenum pressure measurement

Halton reserves the right to alter products without notice.

Product models

The Halton Vita VSN supply air unit is available in three models.

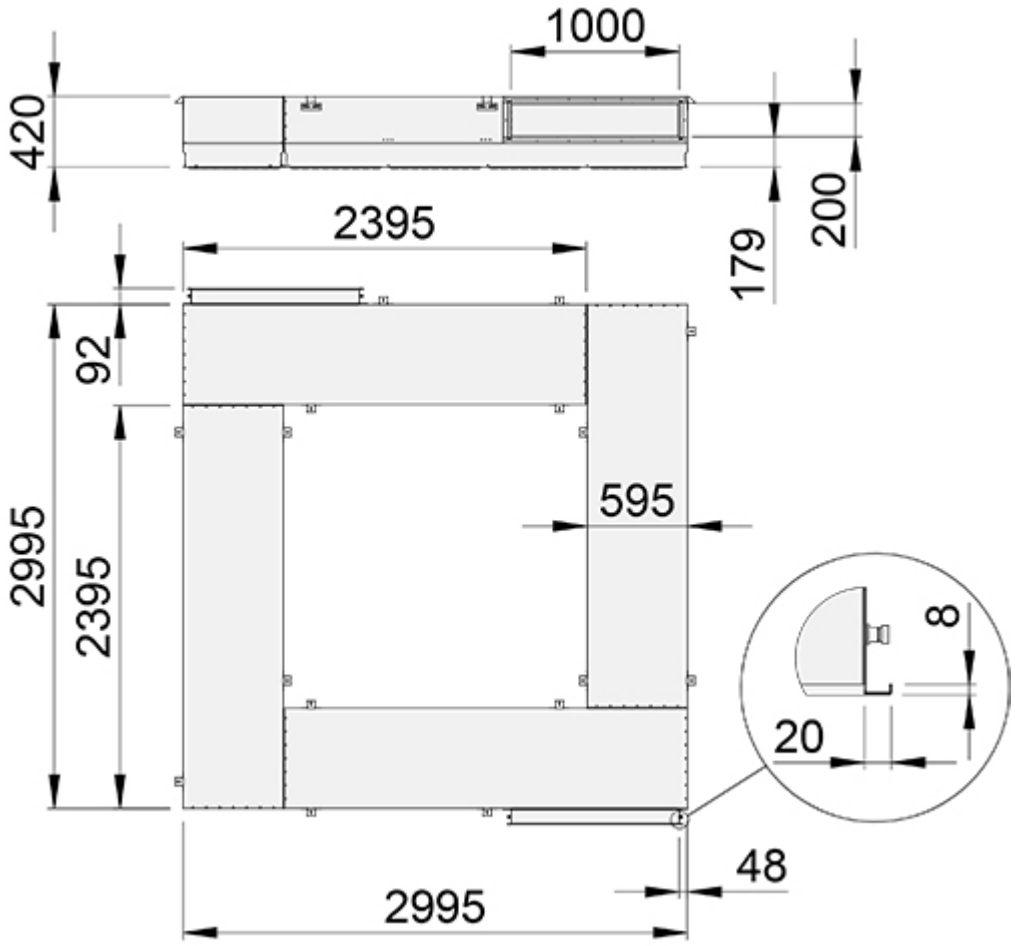
The available models are:

- Supply air unit for Halton Vita OR Space 5 which consists of 4-8 modules forming a square or rectangular ring (VSN/A)
- Supply air unit for Halton Vita OR Space 7 consisting of 2 parallel modules (VSN/B)
- Single module available in two sizes (VSN/C)

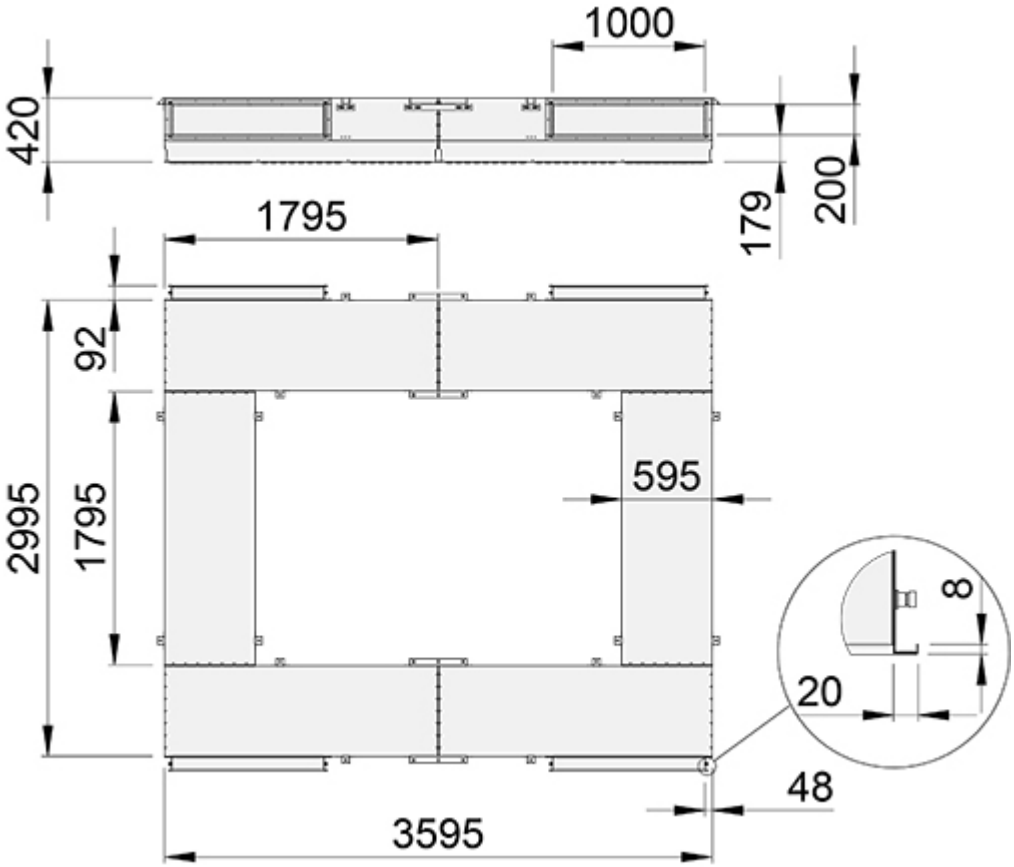
Dimensions and weight

Halton Vita VSN/A (Halton Vita OR Space 5)

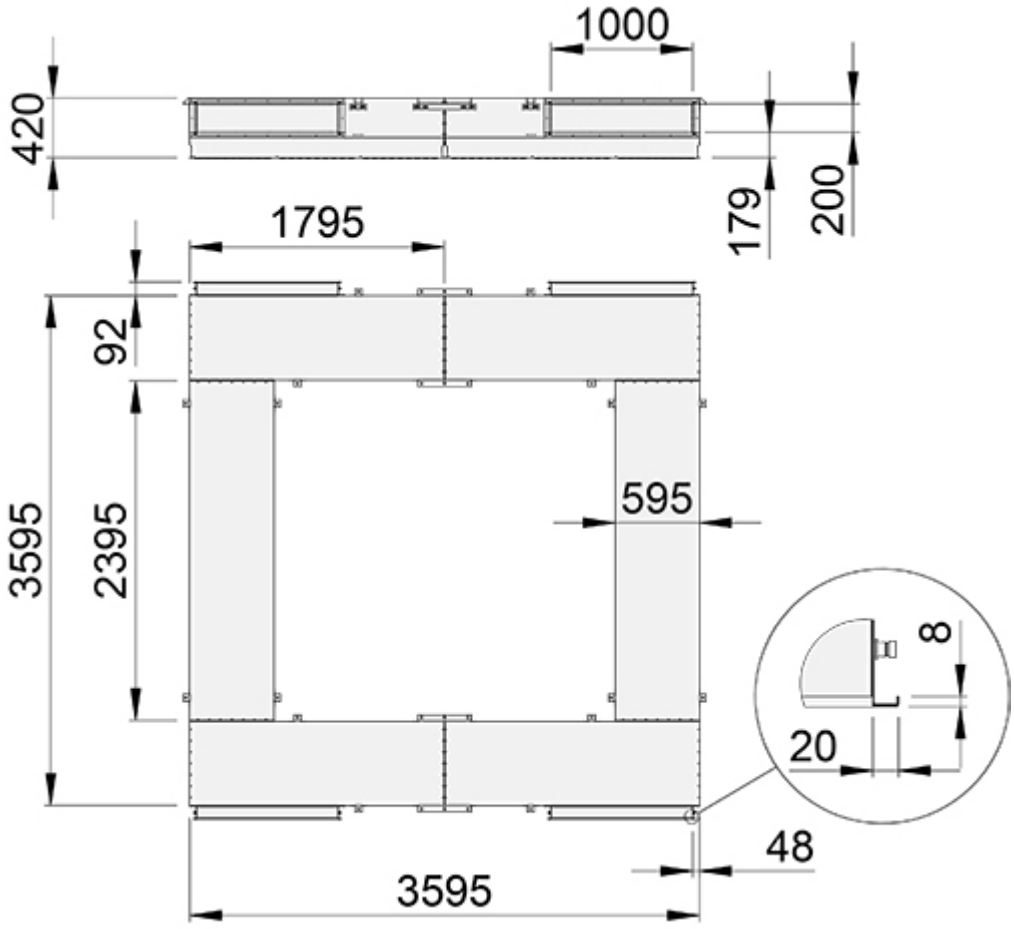
Halton Vita VSN/A for Halton Vita OR Space 5 consists of 4-8 modules forming a square or rectangular ring.



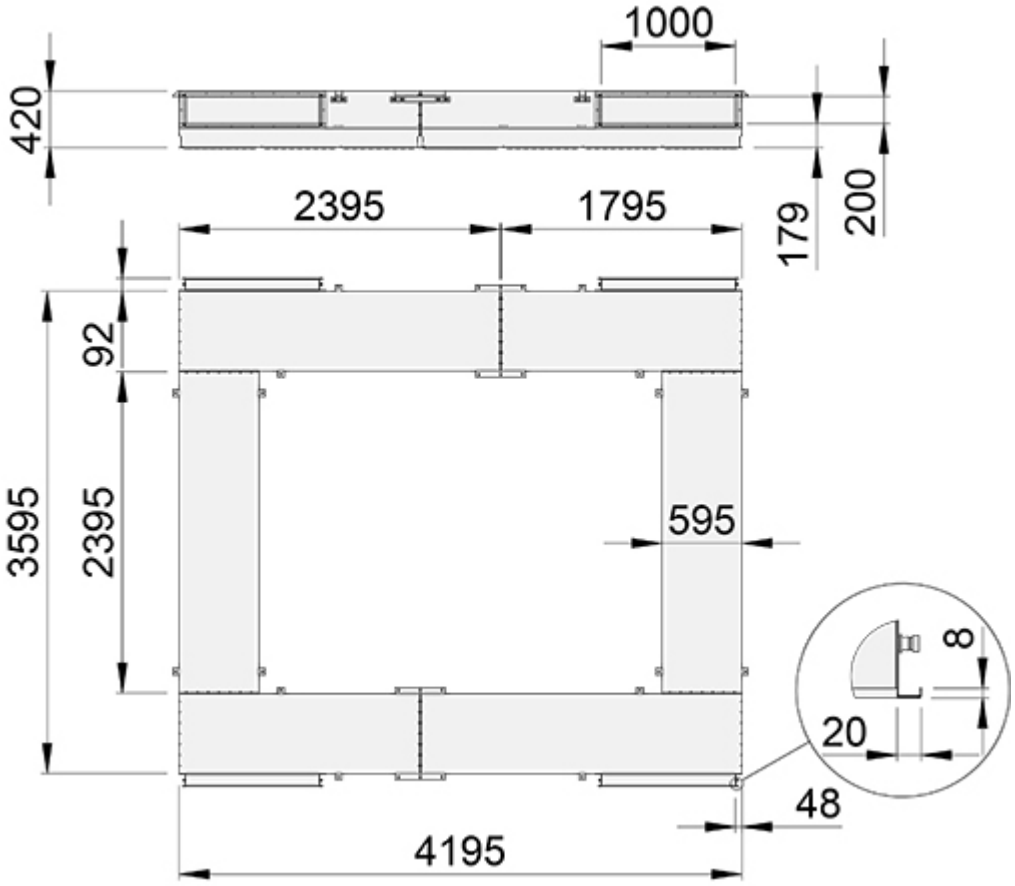
Halton Vita VSN/A, 3000×3000



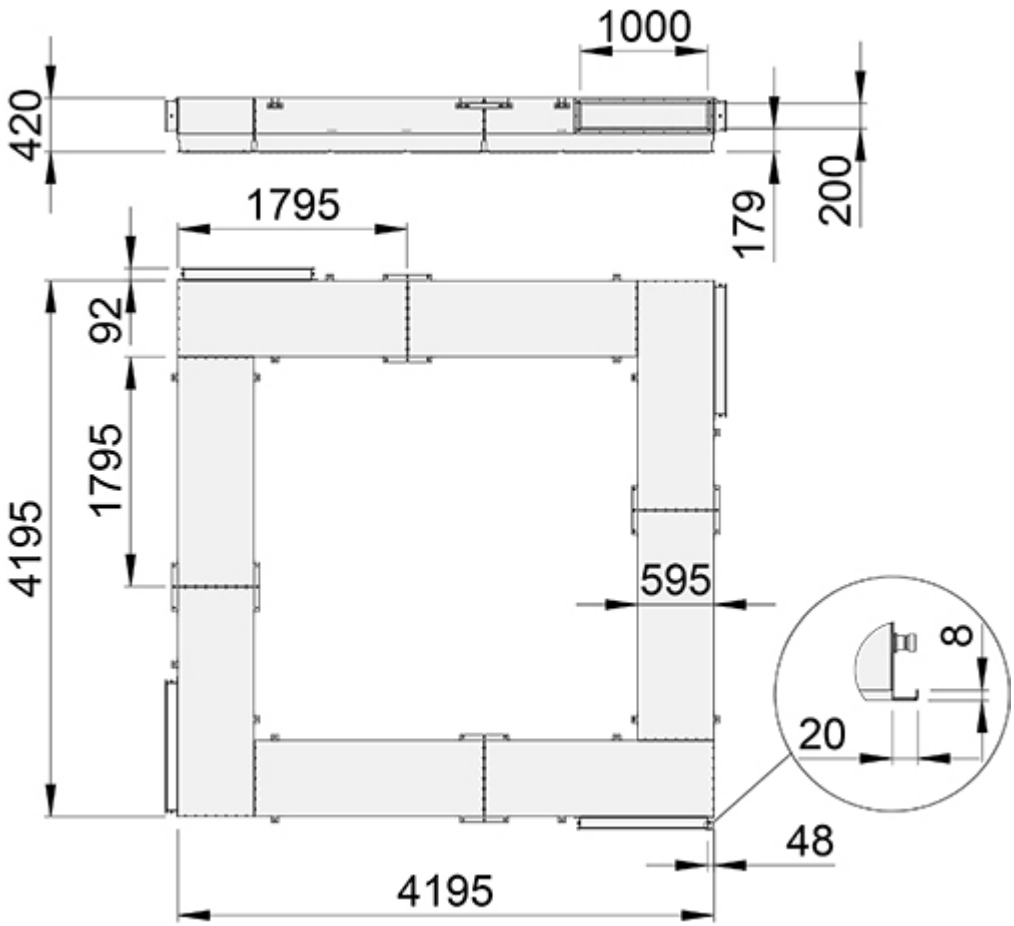
Halton Vita VSN/A, 3600×3000



Halton Vita VSN/A, 3600×3600



Halton Vita VSN/A, 4200×3600

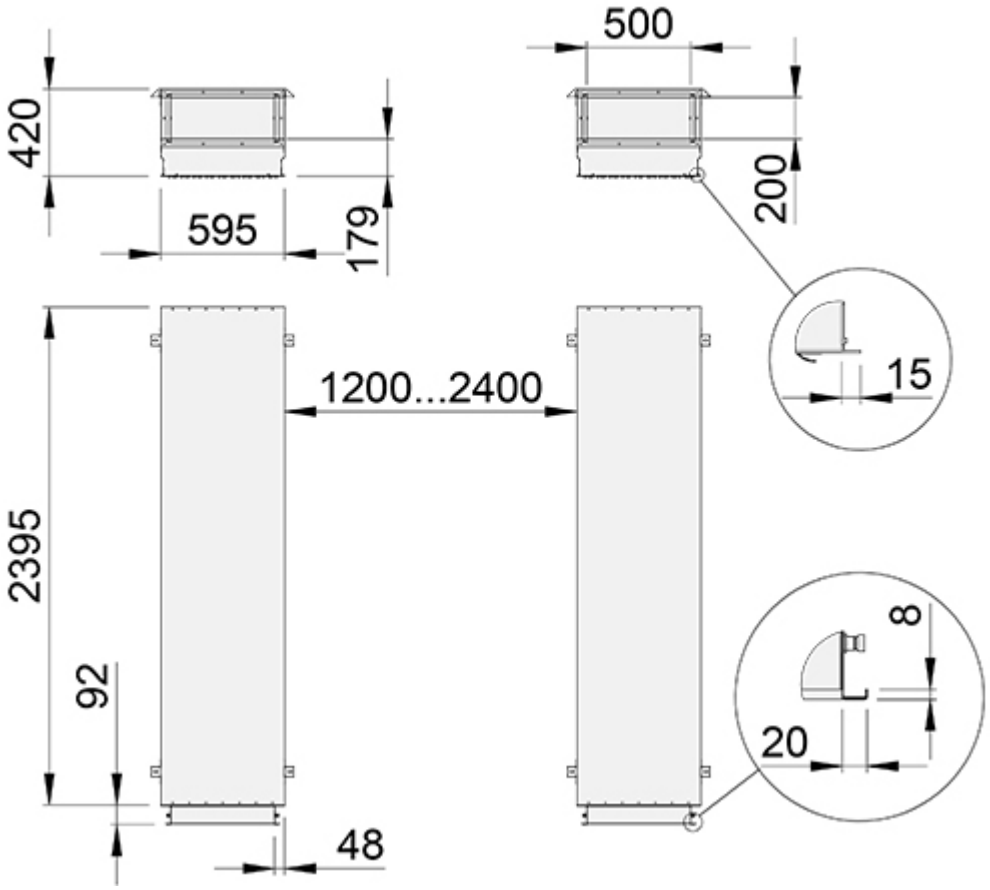


Halton Vita VSN/A, 4200×4200

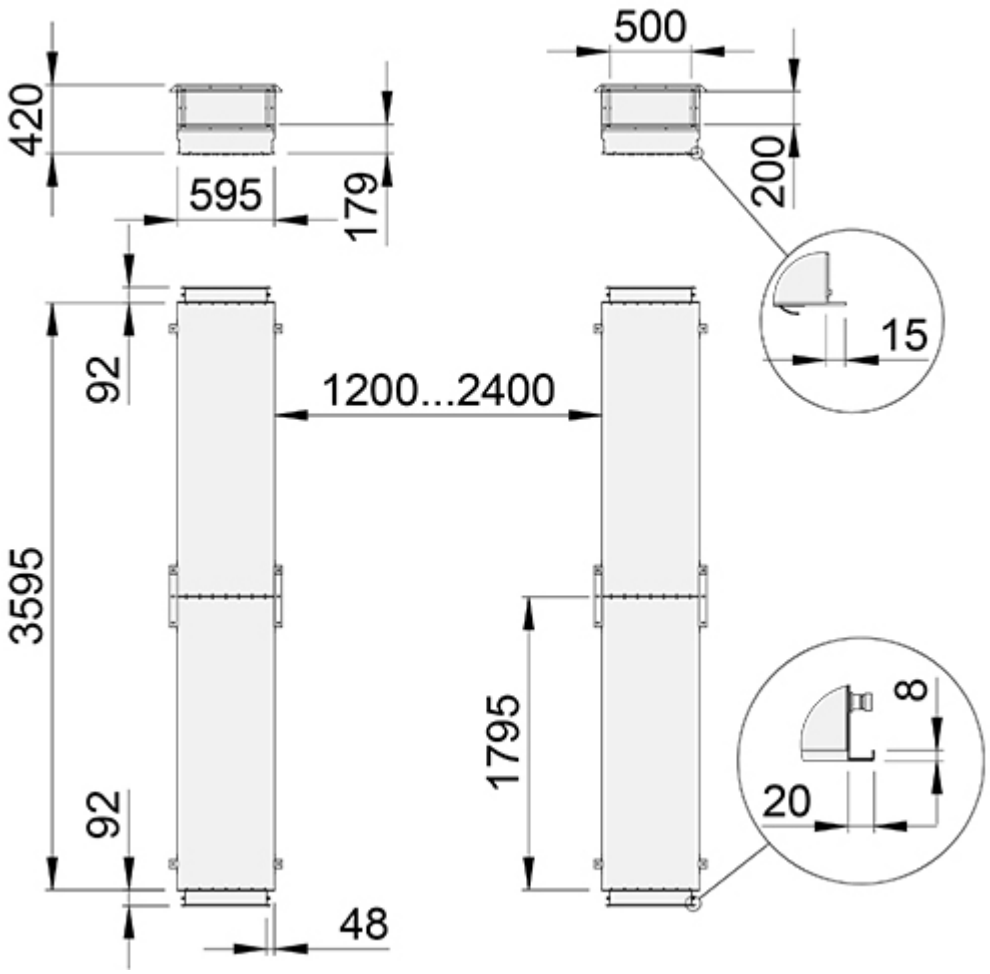
NS	Weight (kg)
3000×3000	165
3600×3000	204
3600×3600	221
4200×3600	237
4200×4200	271

Halton Vita VSN/B (Halton Vita OR Space 7)

Halton Vita VSN/B for Halton Vita OR Space 7 consists of 2 parallel units. The parallel units consist of 1 or 2 modules. The distance (S=1200...2400) between the parallel units is specified separately for each project.



Halton Vita VSN/B, 2400×600

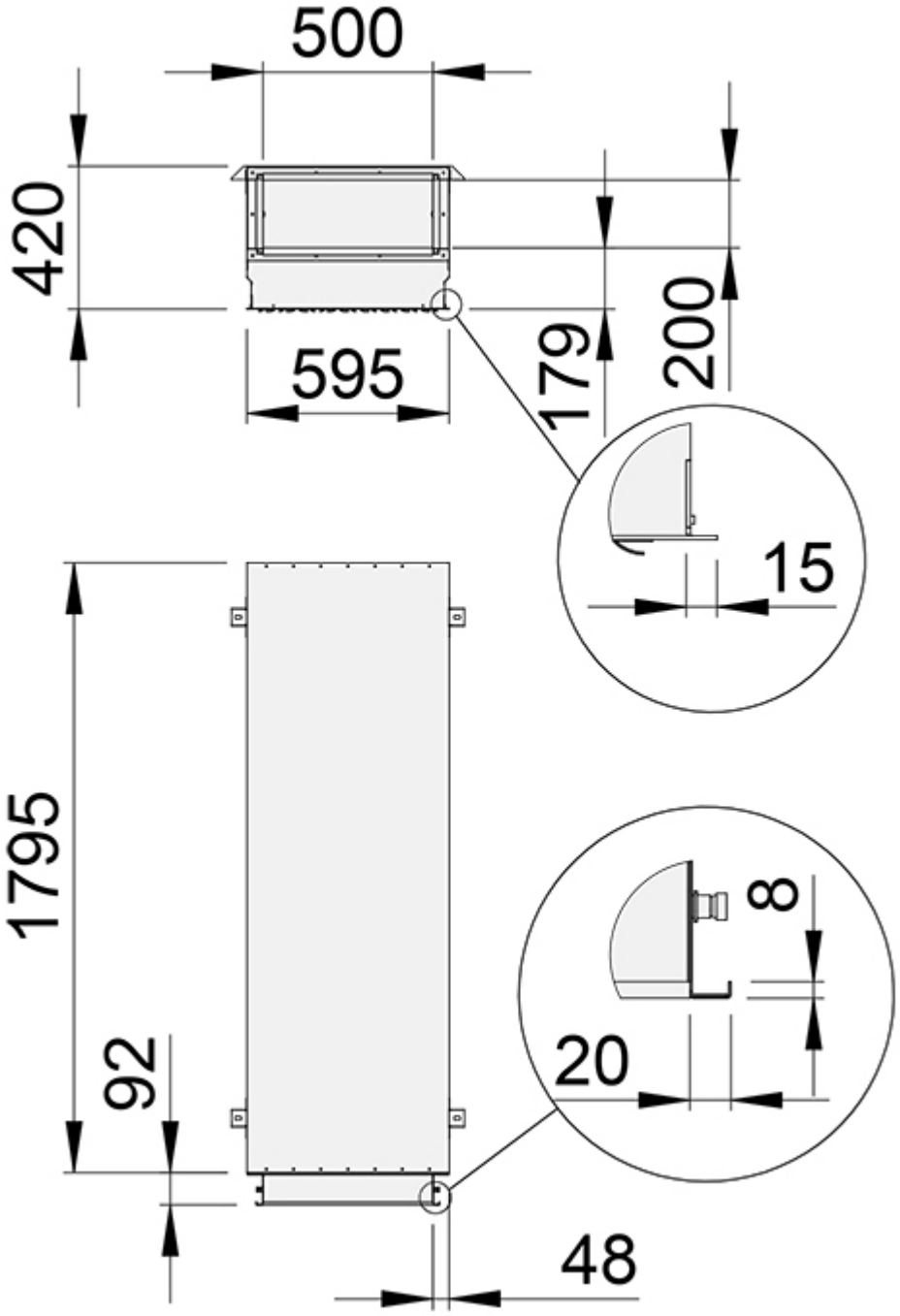


Halton Vita VSN/B, 3600×600

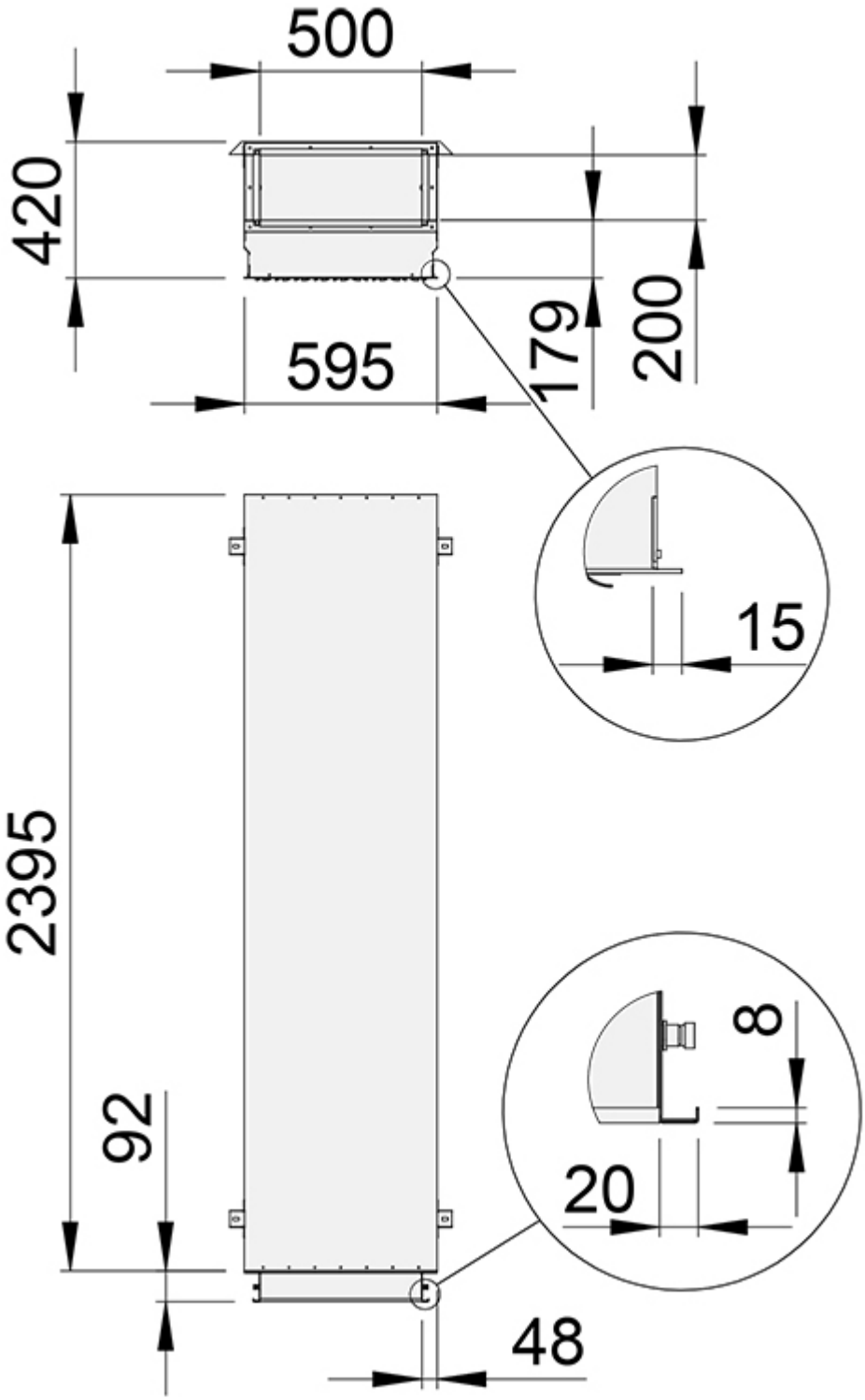
NS	Weight (kg)
2400×600	84
3600×600	130

Halton Vita VSN/C

The Halton Vita VSN supply air module is available as a spare part (VSN/C) for Halton Vita OR Space supply air units.



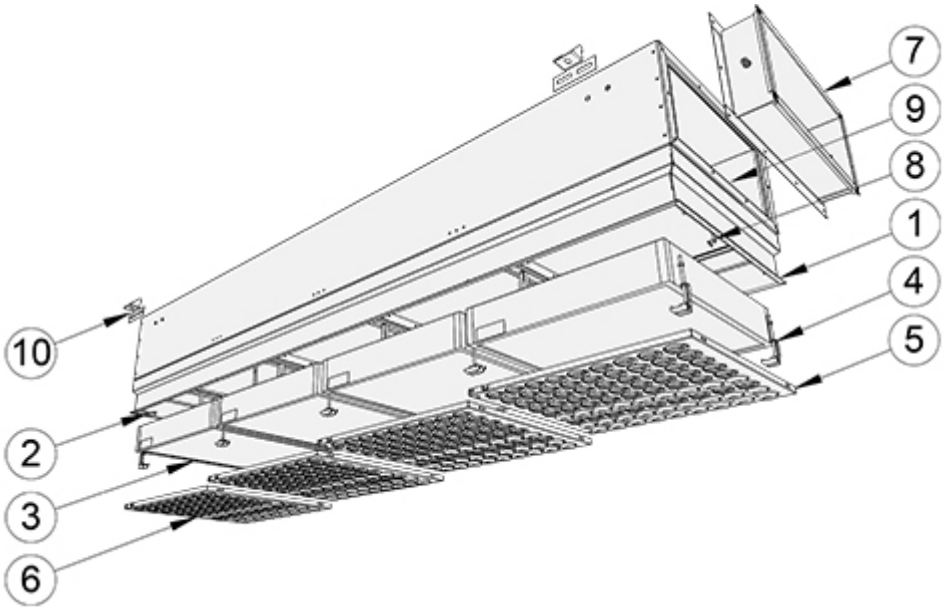
Halton Vita VSN/C, 1800×600



Halton Vita VSN/C, 2400×600

NS	Weight (kg)
1800×600	32.5
2400×600	42.0

Structure and materials



No.	Part	Material
1	Casing	Aluminium with antimicrobial epoxy-polyester powder paint finishing, white (RAL 9003)
2	Pressure measurement port	Polyurethane
3	Filters	Fibreglass paper, aluminium frame and gel gasket
4	Filter brackets	Acid proof steel
5	Front panels	Galvannealed steel with antibacterial epoxy-polyester powder paint, white (RAL 9003)
6	Nozzles	Polyacetal (POM), white (RAL 9003)
7	Duct connection	Galvanised steel
8	Filter springs	Stainless steel
9	Gasket	Cellular polyethylene foam
10	Fixing brackets	Galvanised steel

Function

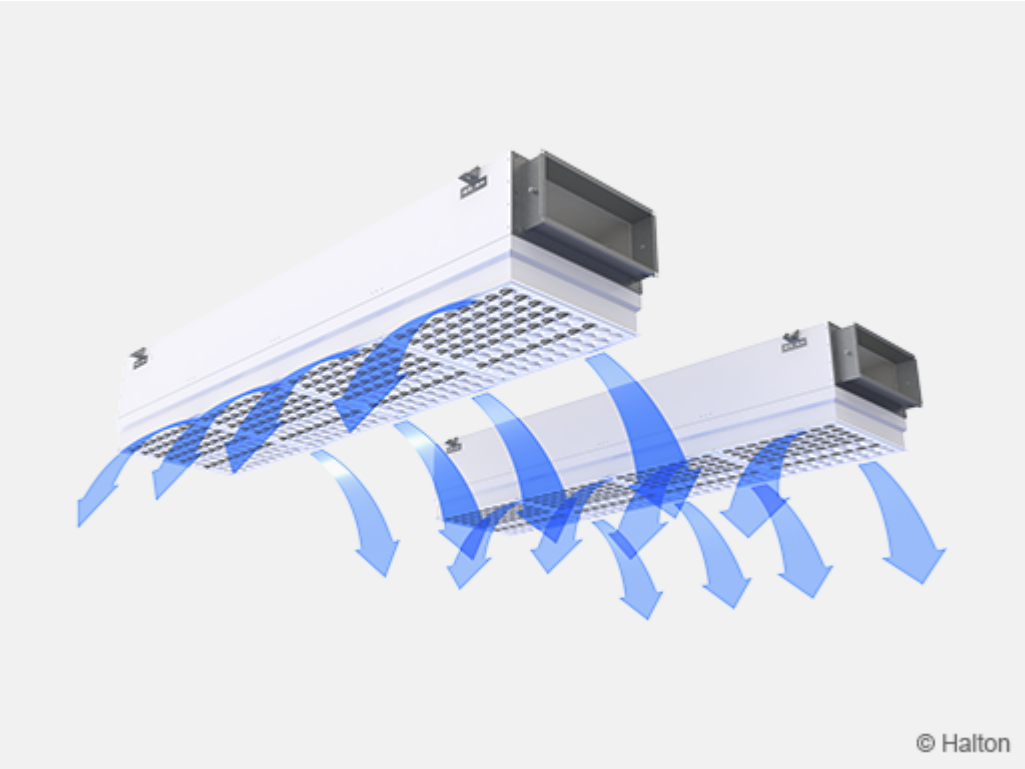
Air is filtered inside the modules by HEPA filters and supplied into space through the air nozzles located in the front panel of the unit.

The circumferential supply airflow from the supply air unit is directed partly towards the operating area and partly towards the room periphery. The inward supply airflow displaces the contamination generated in the operating area and prevents the intrusion of the outward supply airflow into the centre. The fine-tuning of the throw pattern is carried out by Halton.

The supply unit size and airflow pattern adjustment are optimised by Halton based on the end-user requirements and specifications.

Halton Vita VSN for Space 5

Halton Vita VSN for Space 7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Filters

Description

High-efficiency particulate air (HEPA) filters are widely applied in cleanrooms where high air quality standards are essential.

Performance data of HEPA filters

Filter compatible with Halton VSN is available in class H14 (*European Standard EN 1822-1:2009*) with gel gasket.

Operating range:

- Temperature max. 70 °C
- Humidity max. 90 %
- Final pressure drop max. 500 Pa

Dimensions WxHxD (mm)	Filter class	Weight (kg)	Order code
557x557x102	H14	5.3	AF-H14-AL-557*557*102-GEL

Number of filters

Size of diffuser (mm)	Number of filters	Solution
3000×3000	16	Space 5
3600×3000	18	Space 5
3600×3600	20	Space 5
4200×3600	22	Space 5
4200×4200	24	Space 5
2400	8	Space 7
3600	12	Space 7
1800	3	Single
2400	4	Single

Installation

The Halton Vita OR Space supply air units are installed onto the operating room ceiling before the installation of the false ceiling.

Hang the modules from the ceiling with M8 drop rods using fixing brackets. Bolt the modules together with M6 bolts.

CAUTION!

Do not drill any holes into the casing. If the casing has been damaged, unfiltered air may leak.

Clean the modules on the inside before the filter installation.

Filter integrity testing should be performed after filter installation.

NOTE: Step-by-step instructions on how to install Halton Vita VSN can be found in the Halton Vita VSN Installation Guide. Contact Halton sales to get the installation guide.

Adjustment

The airflow rate for each duct connection of the Halton Vita OR Space solutions should be balanced so that an equal amount of air is supplied via each connection. As a result, the airflow is distributed evenly throughout the supply air modules and no additional airflow adjustment is needed.

Adjustment of the supply airflow pattern is done by turning the nozzles.

Servicing

The required servicing tasks include filter change and cleaning the unit.

To ensure that air quality meets the requirements check the HEPA filter in short time intervals and replace the filter when necessary. The servicing frequency of a filter depends on the air cleanliness of the supply air and room air. Replace the filter immediately if:

- the final differential pressure has been reached
- the filter is damaged
- micro-organisms, fungal spores, or odours are present in the space

Clean the unit with disinfectants.

CAUTION!

Do not wet the filters. Dampening the filter media will permanently decrease the filter efficiency.

The front panel can be detached and cleaned in the pre autoclave washing machine (<95°C). Lockable nozzles, that ensure that nozzles setting is not changed during cleaning.

Order code

VSN/S-A, MA-NC-ZT

S = Model
A Space 5 (square)
B Space 7 (includes 2 parallel units)
C Single unit

A = Size

30×30	3000×3000	(Space 5)
36×30	3600×3000	(Space 5)
36×36	3600×3600	(Space 5)
42×36	4200×3600	(Space 5)
42×42	4200×4200	(Space 5)
24	2400	(Space 7)
36	3600	(Space 7)
18	1800	(Single)
24	2400	(Single)

Other options and accessories

MA = Material

AL Aluminium

NC = Number of duct connections
A 2
B 4
C 1

CS = Connection size
A 500×200 (Space 7 and Single)
B 1000×200 (Space 5)

ZT = Tailored product
N No
Y Yes (ETO)

Code example

VSN/A-3000-3000, MA=AL, NC=A, CS=B, ZT=N