

Halton Jaz Cloud Ceiling (JCC) diffuser - Installation and maintenance guide



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1 Introduction

1.1 Copyright and disclaimers

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1.2 How to use this manual

This guide provides general instructions on how to install the product(s).

1.3 Summary of changes

| Version | Date | Description |
|---------|------------|---------------|
| 1.0 | 2020-06-30 | First version |

1.4 Contact information

You can find the contact details from www.halton.com/contact.

2 Product description

2.1 Overview



This Halton Jaz diffuser is ideal for renovated buildings due to the low construction size of the product. It is also available in stainless steel which gives the product an esthetical outlook. Perforated front panel options also available. Suitable for both supply and exhaust ensuring architectural ceiling outlook.

Features

- Low construction height minimizes the installation space
- Diffuser is available for air supply and exhaust
- Installation either directly to ductwork or to balancing plenum
- Detachable front panel enables the cleaning of the diffuser and ductwork
- Deflector panels available for a selection of flow pattern in 1-4 directions

Accessories

- Deflector panel to provide control for flow pattern direction.
- Balancing plenum with measurement and adjustment functions
- Installation panel for modular ceiling

Product models

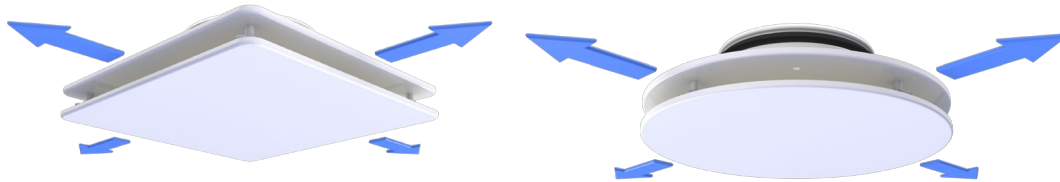
- Square, with solid or perforated front panel
- Circular, with solid or perforated front panel
- Direct installation to the standard T-bar ceiling opening
- Material alternative in stainless steel (EN1.4404/AISI316L)

2.2 Function

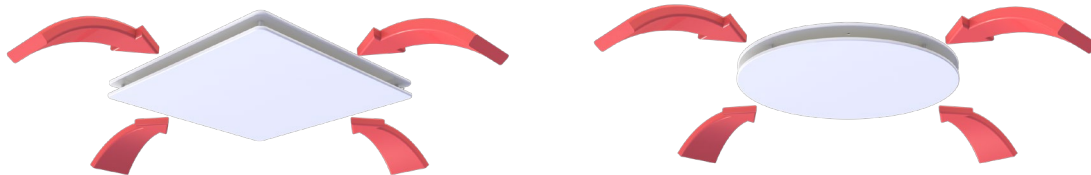
Air is supplied into the space through the side slots and mixed with the air in the room.

Recommended maximum air temperature difference between supply and room air is 10 °C.

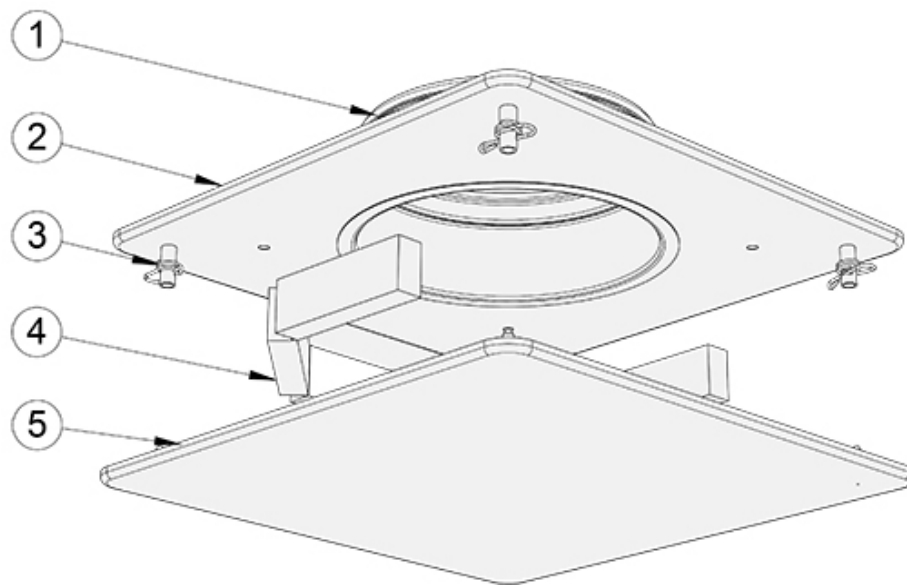
The throw pattern can be deflected in different (1, 2 and 3) directions with the deflection parts (included in delivery). Deflection part is not needed for 4 direction supply or exhaust airflow.



Suitable also for exhaust purpose ensuring architectural ceiling outlook (Deflection part is not needed for exhaust airflow).



2.3 Structure and materials



| No. | Part | Material | Colour alternatives |
|-----|------------------|---|---|
| 1 | Duct seal gasket | Rubber | - |
| 2 | Upper plate | Steel or stainless steel (EN1.4404/AISI 316L) | Powder paint, white (RAL 9003). Special colours available on request |
| 3 | Spring locks | Spring steel or stainless steel | - |
| 4 | Deflector part | Foamed plastic | - |
| 5 | Front panel | Steel or stainless steel (EN1.4404/AISI 316L) | Powder paint, white (RAL 9003). Special colours available on request |

NOTE: Same material options are available for circular and square models.

2.4 Further technical details

For Halton JCC dimensions see the [Dimensions and weight](#) chapter in the technical reference data.

3 Installation

3.1 Before you start

Perform visual inspection of the condition of the diffuser after transport and before installation.

3.1.1 Installation process

The installation of the Halton Jaz Cloud Ceiling (JCC) unit is carried out by an approved partner.

While installing the diffuser, keep the following items in mind:

- Installation should be carried out only by qualified HVAC technicians.
- Fix the unit only to load-bearing ceilings and suitable fixing screws for correct ceiling type.

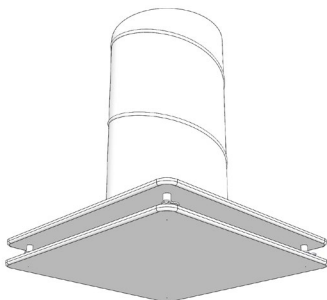
NOTE: Fixing material is not included in the delivery.

The possible diffuser installation methods are:

Installation drawings for both methods are suitable for circular and square models.

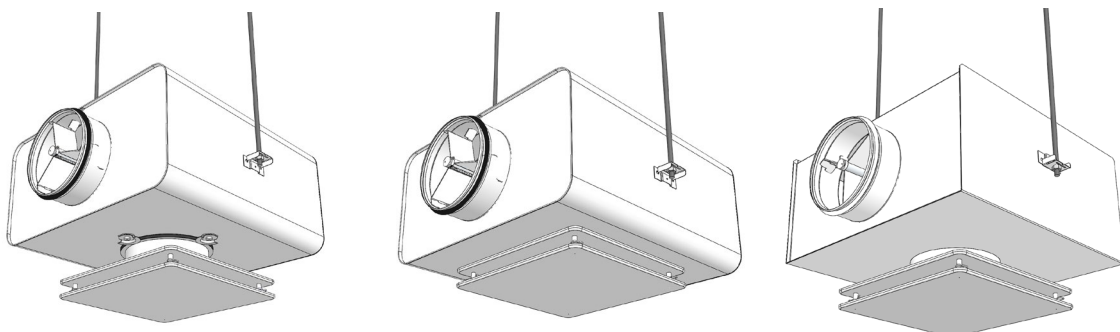
- Directly to duct

NOTE: See [Installing to the duct](#) chapter for instructions.



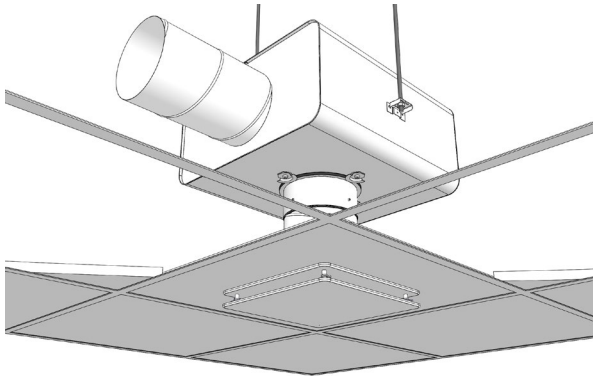
- Plenum box (Halton TRI/TRH)

NOTE: See [Installing diffuser straight to the TRI plenum box](#) for instructions.



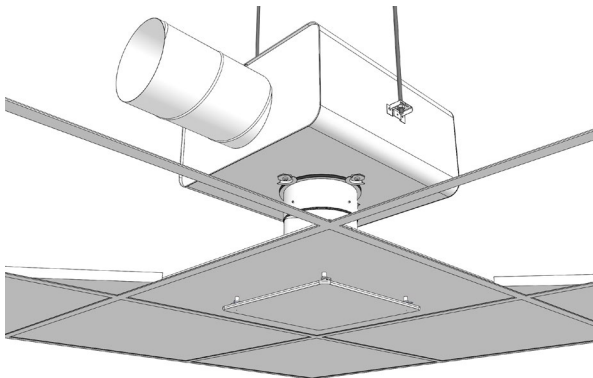
- Installation panel (PI) for standard modular ceiling

NOTE: See [Installing diffuser with PI installation panel to standard 600x600 modular ceiling](#).



- Standard T-bar ceiling (WS=T)

NOTE: See [Installing diffuser with PI installation panel to standard 600x600 modular ceiling](#).



NOTE: Installation method may vary depending on the construction situation of the site.

3.2 Step by step instructions

3.2.1 Preparing the diffuser for installation

This procedure shows how to prepare the diffuser for installation.

Procedure

1. Unpack the modules and check their condition.
2. Check that all the parts are present:
 - Upper plate
 - Front panel
 - Duct gasket
 - Deflector part

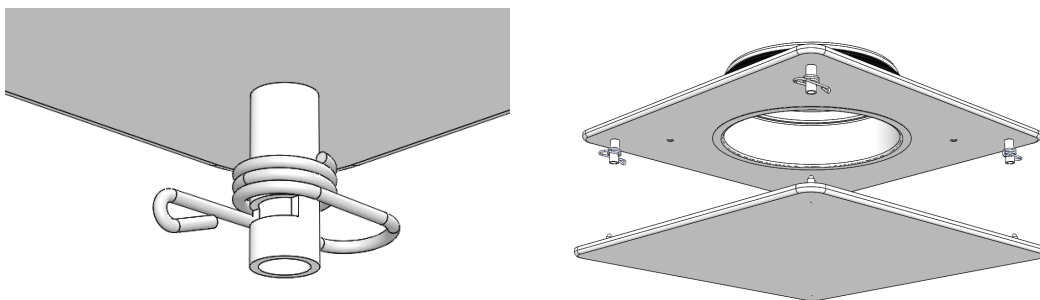
NOTE: See [Structure and materials](#) for the product structure.

3.2.2 Removing the front panel of the diffuser

This procedure shows how to install the Halton Jaz Cloud Ceiling on the ceiling.

Procedure

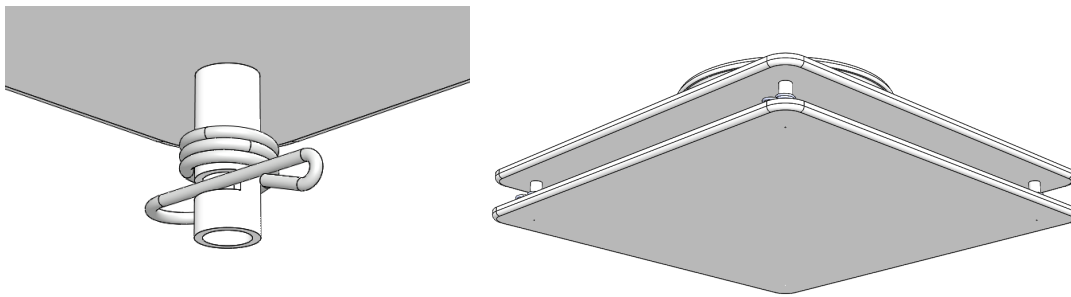
1. Remove the front panel:
 - a. Upper plate has four spring locks which keep the front panel in place.
 - b. Turn springs 90° to release the front panel



NOTE: Support the front panel during opening.

2. Mount the front panel:
 - a. Turn the upper plate spring locks clockwise.

- b. Push the front panel back until the springs will lock

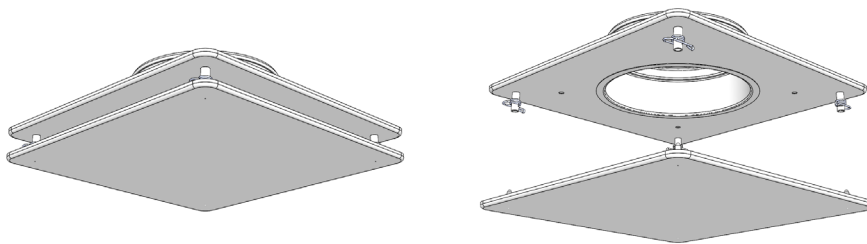


3.2.3 Installing to the duct

Procedure

1. Remove the front panel.

NOTE: See [Removing the front panel of the diffuser](#) for instructions.



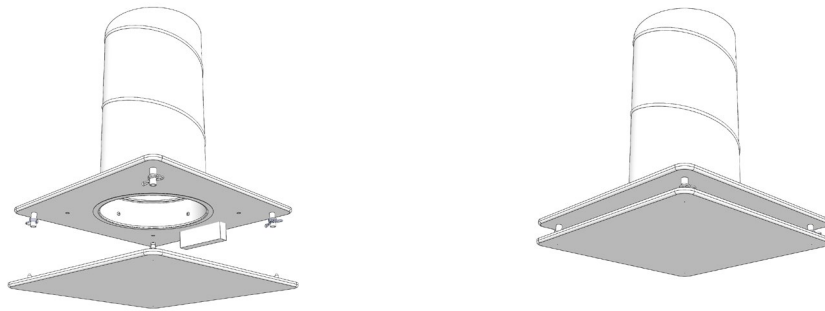
2. Connect diffuser to the duct.
 - a. Drill the holes for pop rivets.
 - b. Fix the duct part to the diffuser with pop rivets.



NOTE: To ensure connection tightness, seal the duct connection with tape to ensure tightness.

3. Install deflector part a set of panels for providing the flow pattern in 3, 2 and 1 directions (not needed for 4 directional flow). Mount the front panel on place

NOTE: See [Removing the front panel of the diffuser](#) for instructions.



NOTE: Fixing material is not included in the delivery.

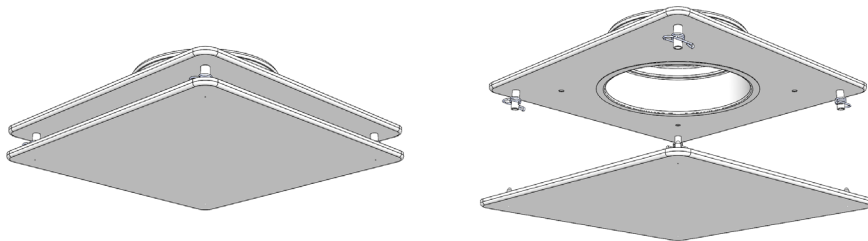
3.2.4 Installing diffuser to the duct and ceiling

The supply and installation of a ceiling system is the responsibility of the customer. If the diffuser is installed straight to the ceiling, ceiling material has to be compliant for diffuser fixing.

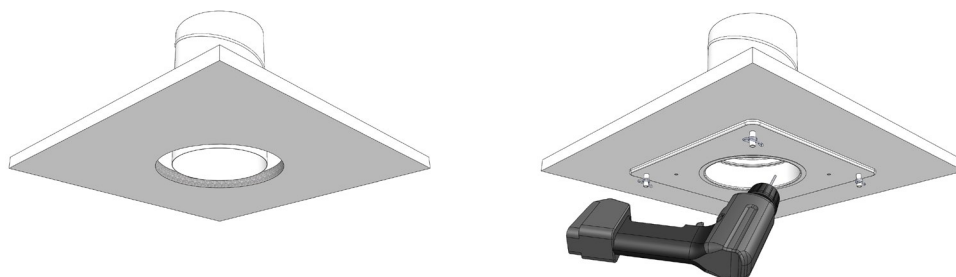
Procedure

1. Removing the front panel

NOTE: See [Removing the front panel of the diffuser](#) for instructions.

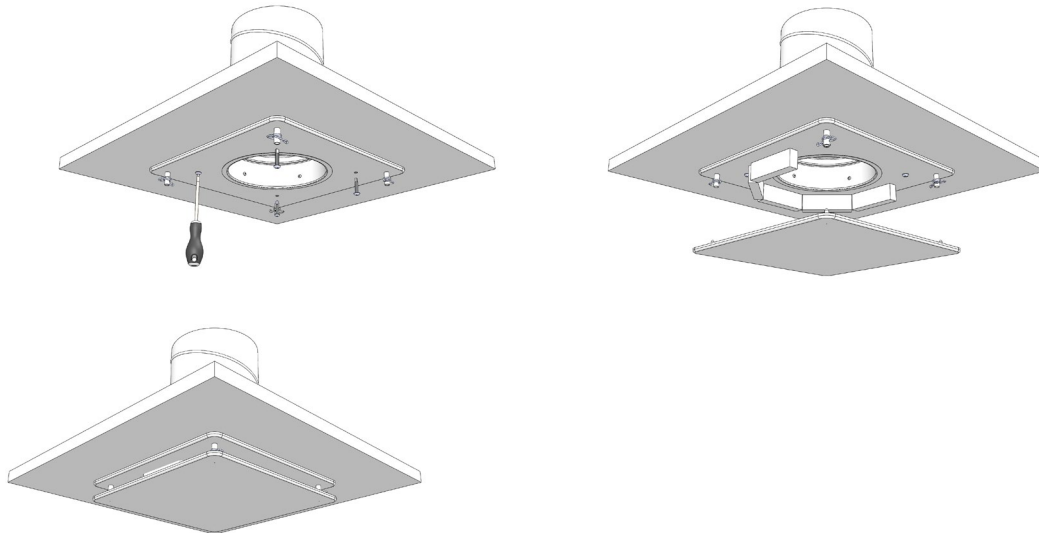


2. Connect diffuser to the ductwork and drill the holes for pop rivets. Fix the diffuser to the duct with pop rivets.



3. Install deflector part a set of panels for providing the flow pattern in 3, 2 and 1 directions (accessory not needed for 4 direction flow, see the [Adjusting the throw pattern](#)). Mount the front panel on place.

NOTE: Mounting can be found in the [Removing the front panel of the diffuser](#).



NOTE: Fixing material is not included in the delivery.

3.2.5 Mounting the balancing plenum (Halton TRI / TRH)

This installation step is optional. There are two balancing plenums compatible with Halton JCC diffuser:

- Halton TRI
- Halton TRH

Plenums are for connecting ceiling diffuser to ductwork. Installation methods are stand-alone and different suspension elements are required. Plenums can be installed using two strips or with M8 drop rods. Halton TRI and TRH are connected to the distribution ductwork with a spigot equipped with integral gasket.

Options

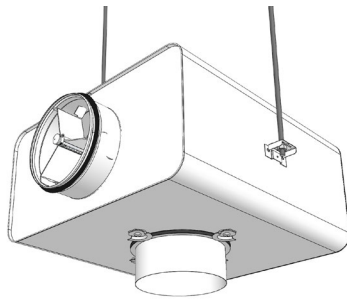


Fig. 1. The collar connected to the outside of the Halton TRI plenum box.

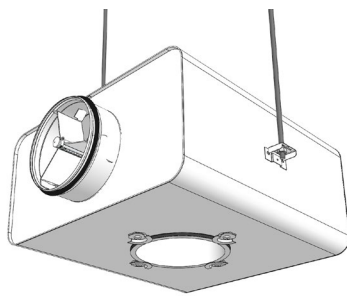


Fig. 2. The collar connected internally in the Halton TRI plenum box

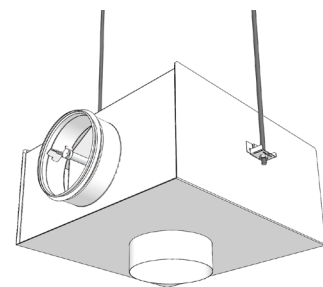


Fig. 3. The collar connected outside of the Halton TRH plenum box. Halton TRH plenum collar is fixed so this is only installation method.

NOTE: Fixing drop rods are not included in the delivery.

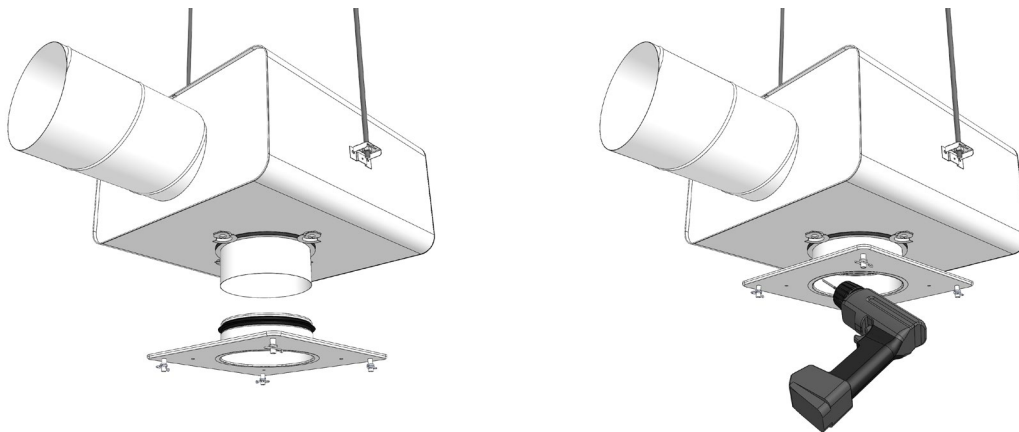
3.2.6 Installing diffuser straight to the Halton TRI plenum box (two options)

This installation step is optional.

First installation option

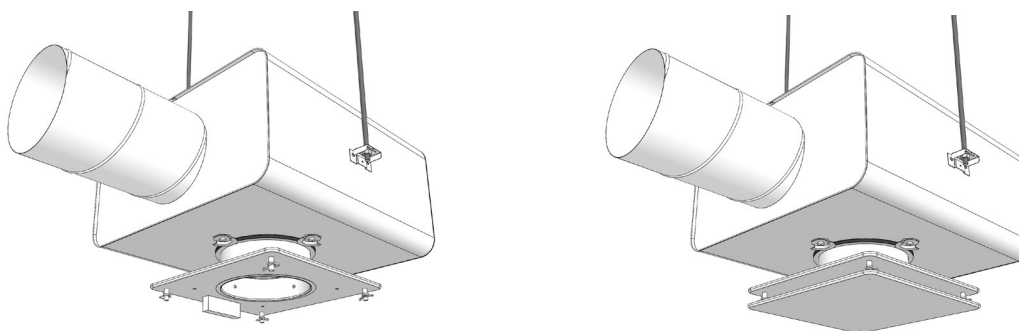
Halton TRI balancing plenum installation collar connected to the outside of the plenum box.

1. Connect diffuser to the plenum and drill the holes for pop rivets. Fix the diffuser to the plenum with pop rivets.



2. Install deflector part a set of panels for providing the flow pattern in 3, 2 and 1 directions (accessory not needed for 4 direction flow, see the [Adjusting the throw pattern](#)). Mount the front panel on place.

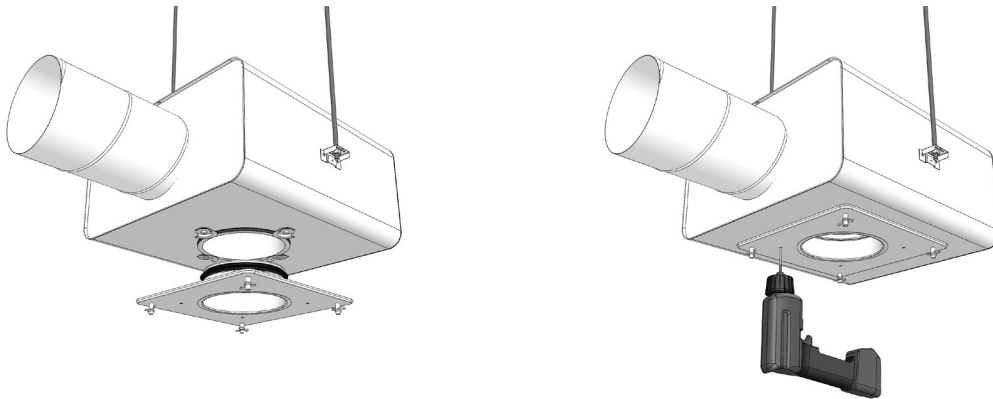
NOTE: Mounting can be found in the [Removing the front panel of the diffuser](#).



Second installation option

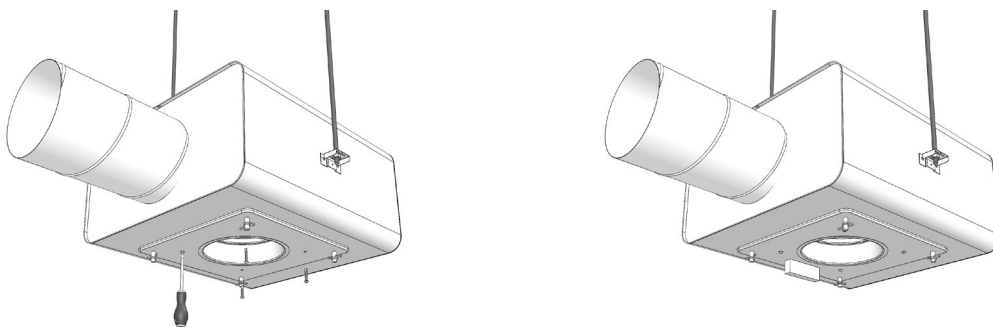
Halton TRI balancing plenum installation collar connected internally in the plenum box

1. Connect diffuser to the Halton plenum box and drill the fixing holes for the screws.

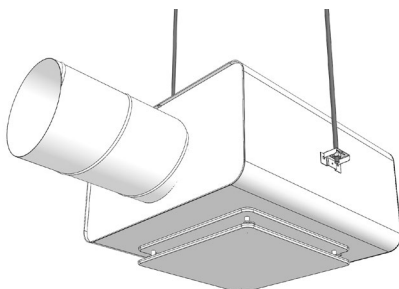


2. Fix the diffuser to the plenum with screws. Install deflector part a set of panels for providing the flow pattern in 3, 2 and 1 directions (not needed for 4 direction flow).

NOTE: See [Adjusting the throw pattern](#).



3. Mount the upper front panel on place.



NOTE: Mounting can be found in the [Removing the front panel of the diffuser](#).

NOTE: Fixing material is not included in the delivery.

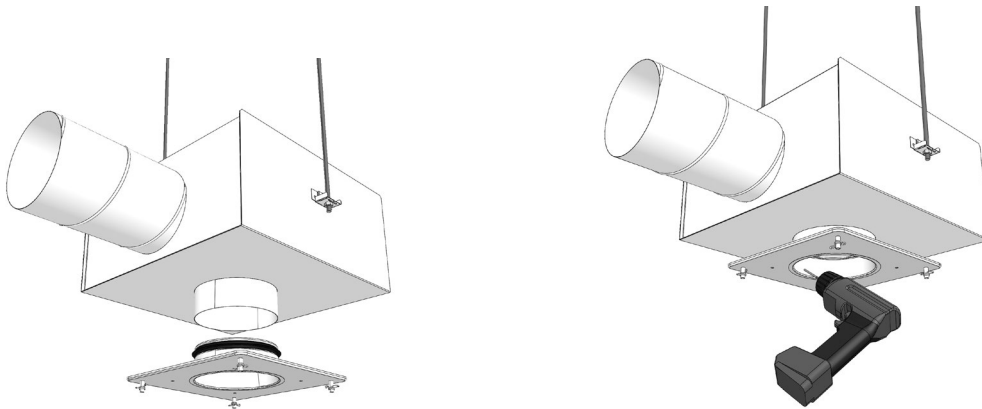
3.2.7 Installing diffuser straight to the Halton TRH plenum box

This installation step is optional.

Halton TRH balancing plenum installation collar connected to the outside of the plenum box.

Procedure

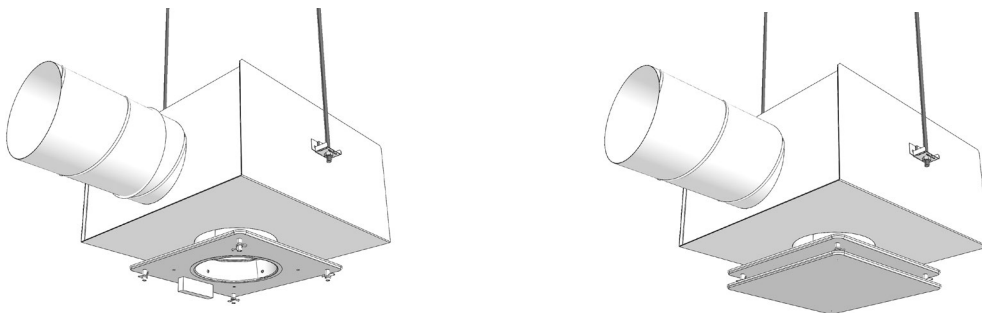
1. Connect diffuser to the plenum and drill the holes for pop rivets. Fix the diffuser to the plenum with pop rivets.



2. Install deflector part a set of panels for providing the flow pattern in 3, 2 and 1 directions (not needed for 4 direction flow). Mount the front panel on place.

NOTE: See [Adjusting the throw pattern](#).

NOTE: Mounting can be found in the [Removing the front panel of the diffuser](#).



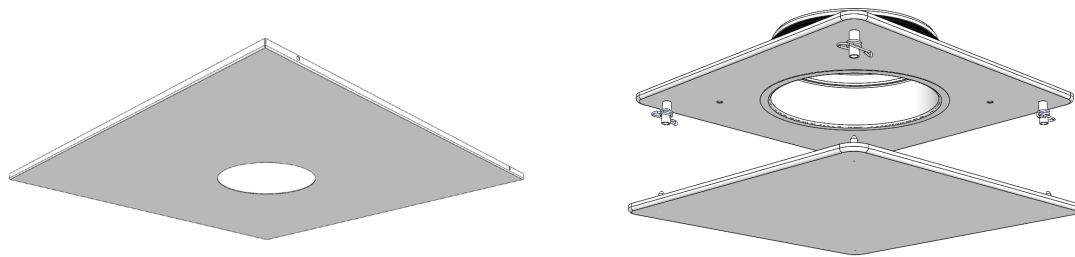
3.2.8 Installing diffuser with PI installation panel to standard 600x600 modular ceiling (two installation options)

This installation step is optional. Halton TRI balancing plenum installation with installation panel. Collar connected to the outside of the plenum box.

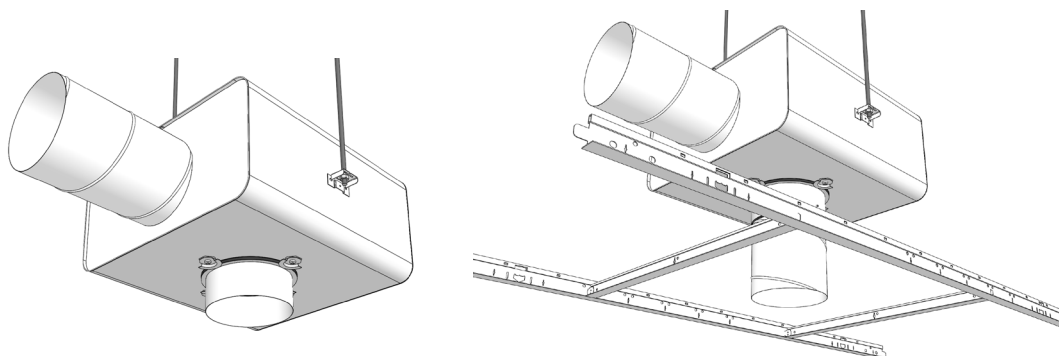
First installation option

1. Remove the front panel

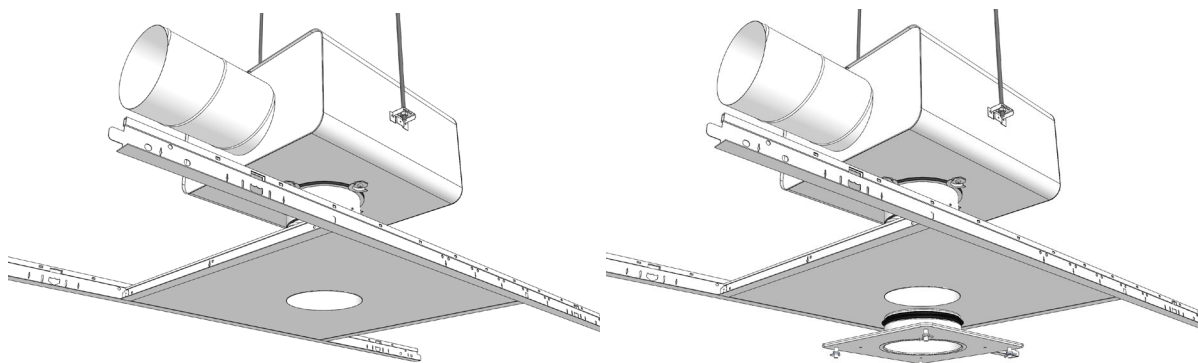
NOTE: Removing can be found in the [Removing the front panel of the diffuser](#).



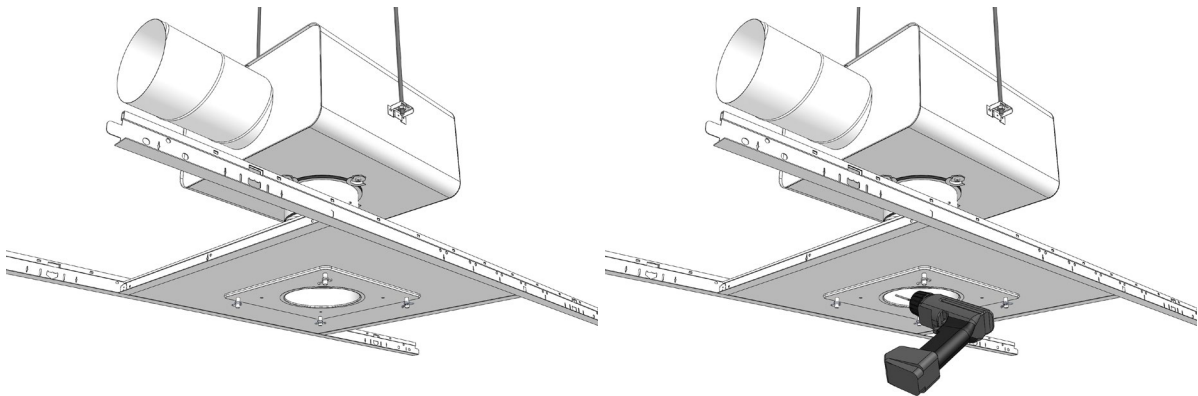
2. Connect plenum to the ductwork. Install T-bar false ceiling elements.



3. Install PI installation panel.



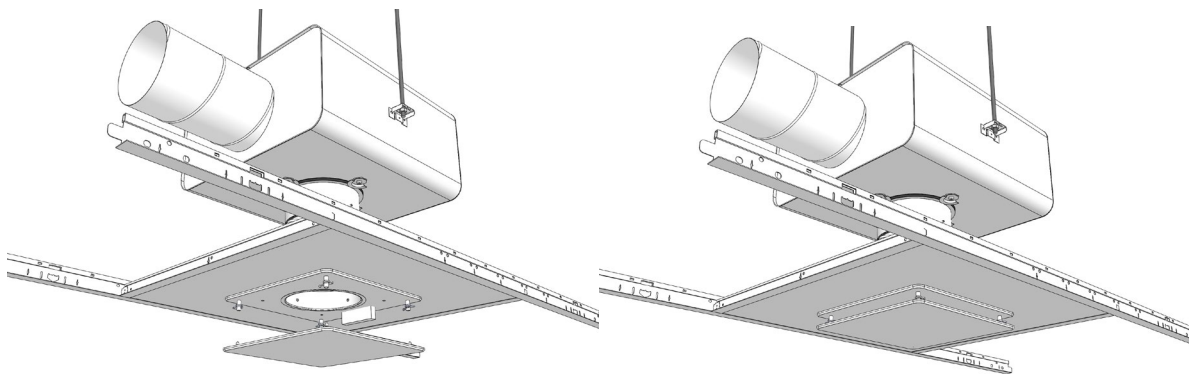
4. Connect diffuser to the Halton plenum box and drill the fixing holes for pop rivets. Fix the diffuser to the plenum with pop rivets.



Install deflector part a set of panels for providing the flow pattern in 3, 2 and 1 directions (accessory not needed for 4 direction flow). Mount the front panel on place.

NOTE: See [Adjusting the throw pattern](#).

NOTE: Mounting can be found in the [Removing the front panel of the diffuser](#).



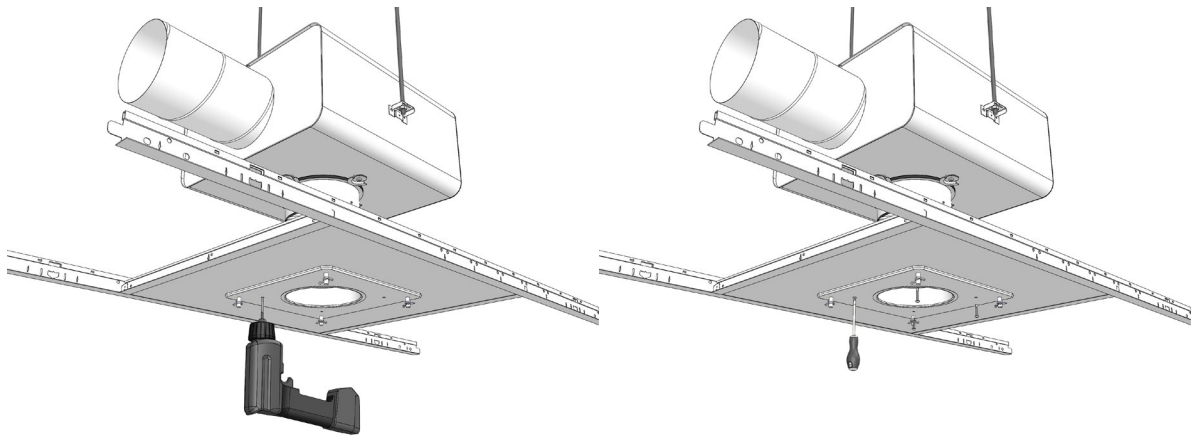
NOTE Fixing material is not included in the delivery.

NOTE: For the design of the diffuser compatible with the false ceiling system, contact Halton Sales.

NOTE: If vertical distance between plenum and diffuser is more than normal use duct connection part and right length of duct part for extension.

Second installation option:

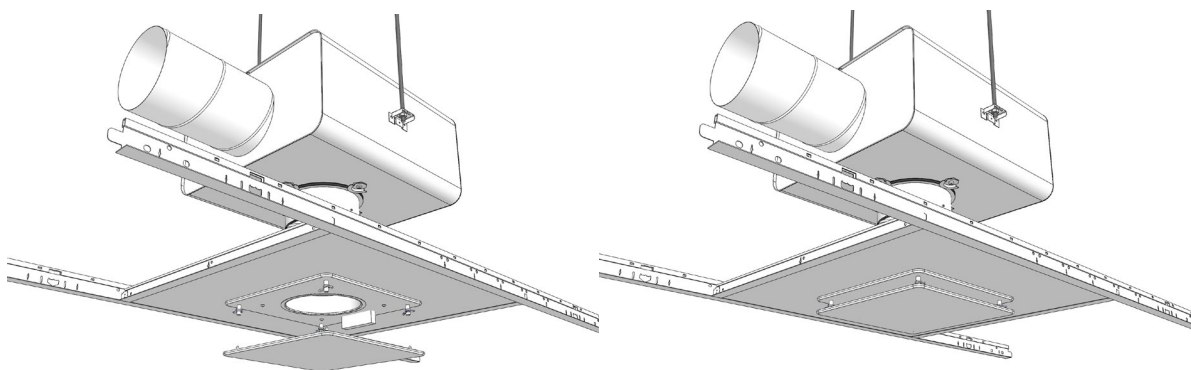
1. Install diffuser upper plate straight to the installation panel by using screws.



Install deflector part a set of panels for providing the flow pattern in 3, 2 and 1 directions (not needed for 4 direction flow). Mount the front panel on place.

NOTE: See [Adjusting the throw pattern](#).

NOTE: Mounting can be found in the [Removing the front panel of the diffuser](#).



NOTE Fixing material is not included in the delivery.

NOTE: For the design of the diffuser compatible with the false ceiling system, contact Halton Sales.

NOTE: If vertical distance between plenum and diffuser is more than normal use duct connection part and right length of duct part for extension.

**WARNING!**

Risk of product damage. Ensure the safety during installation.

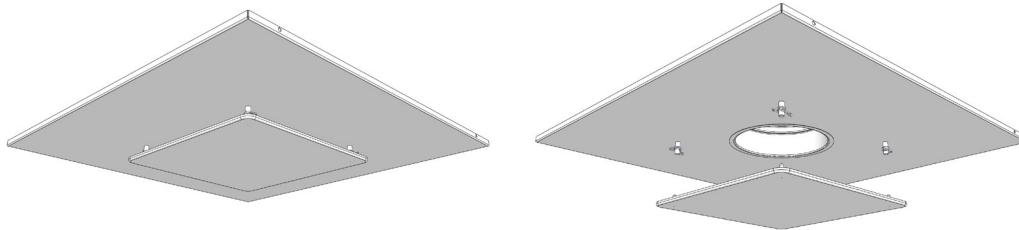
3.2.9 Installation with T-bar ceiling integration model to standard 600x600 module ceiling

This installation step is optional.

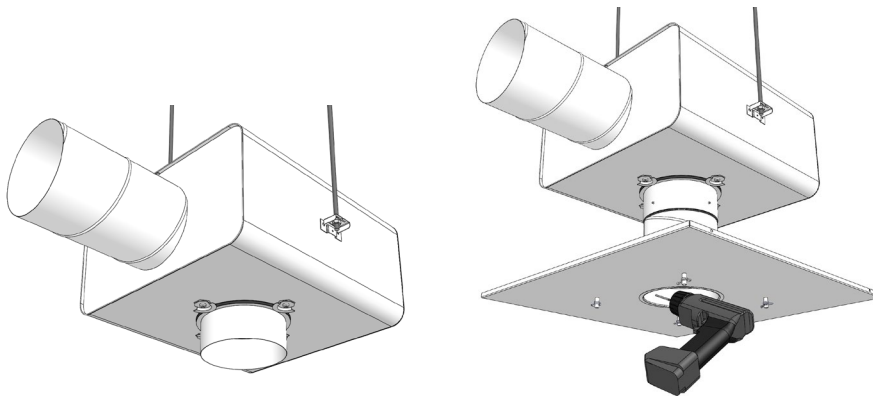
Procedure

1. Remove the front panel.

NOTE: Removing can be found in the [Removing the front panel of the diffuser](#).



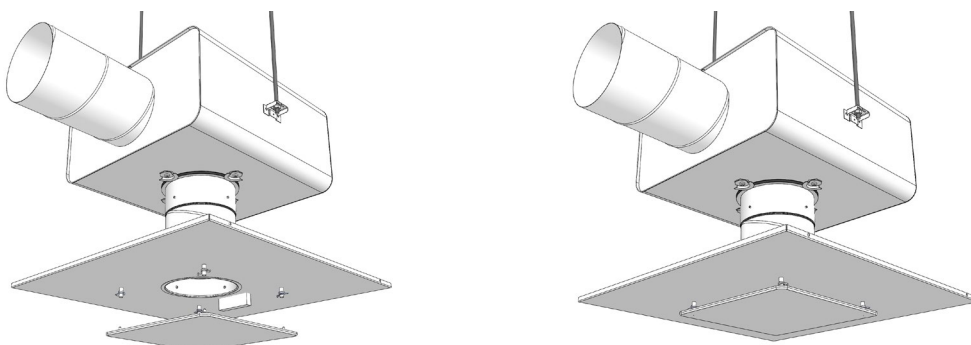
2. Connect module ceiling to the Halton plenum box and drill the fixing holes for pop rivets. Fix the module ceiling to the plenum with pop rivets.



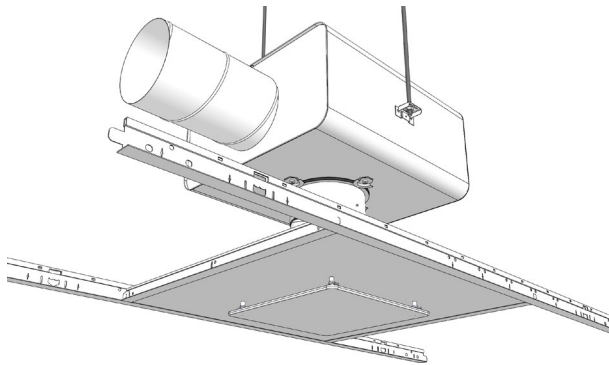
3. Install deflector part a set of panels for providing the flow pattern in 3, 2 and 1 directions (not needed for 4 direction flow). Mounting the front panel on place

NOTE: See [Adjusting the throw pattern](#).

NOTE: Mounting can be found in the [Removing the front panel of the diffuser](#).



4. Install T-bar false ceiling elements.



NOTE: Fixing material is not included in the delivery.

NOTE: If vertical distance between plenum and diffuser is more than normal use duct connection part and right length of duct part for extension.

NOTE: For the design of the diffuser compatible with the false ceiling system, contact Halton Sales.

3.2.10 Adjusting the throw pattern

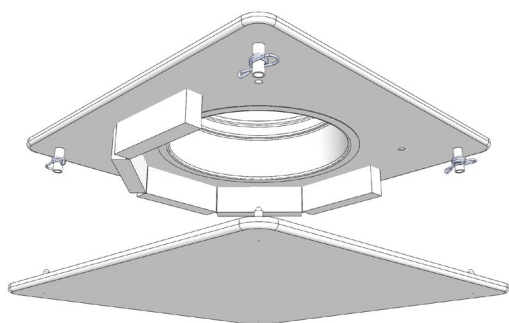
Procedure

1. Remove the front panel from the diffuser

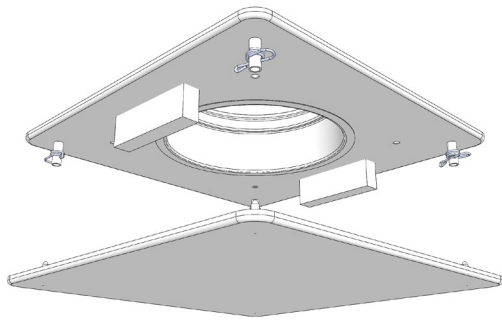
NOTE: Removing can be found in the [Removing the front panel of the diffuser](#).

2. Cut the deflection part (foamed plastic, included to the delivery) with scissors as shown in pictures below. Cutting lines are marked to the deflection part.

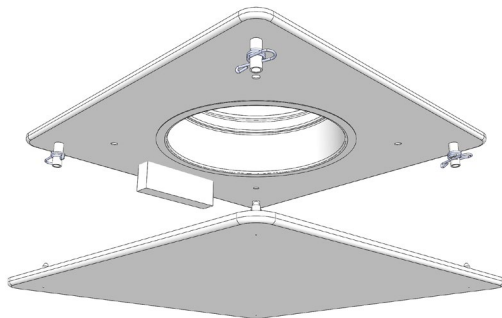
One directional airflow pattern



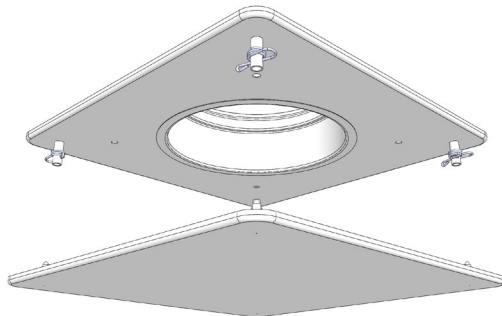
Two directional airflow patterns



Three directional airflow patterns



Four directional airflow pattern and for exhaust air purposes.



4 Maintenance

4.1 Maintenance schedule

To ensure that air quality meets the requirements. The servicing frequency depends on the air cleanliness of the supply air and room air. Some maintenance tasks, for example, cleaning and airflow adjustment require removing the diffuser's front panel.

NOTE: See [Removing the front panel of the diffuser](#) for instructions.

Procedure

1. Remove the front panel (removing can be found in the [Removing the front panel of the diffuser](#)).

NOTE: The panel can be removed by one person.

2. Place the diffuser face on a protective surface, for example, on the cardboard.

4.2 Cleaning the diffuser

Procedure

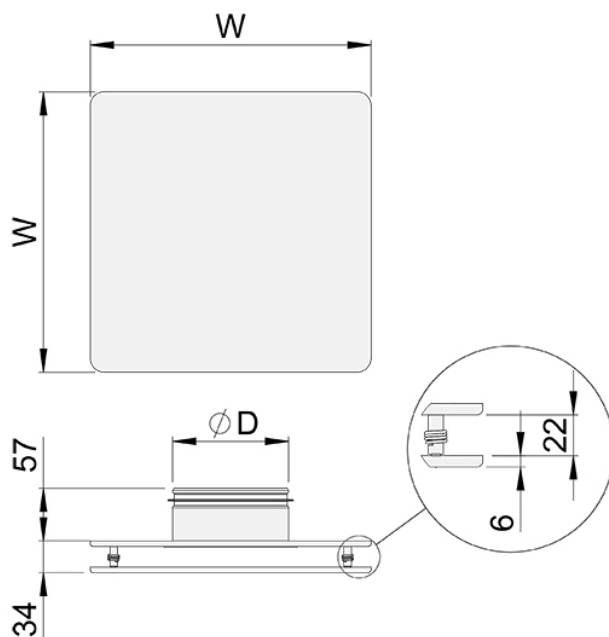
1. Remove the front panel (removing can be found in the [Removing the front panel of the diffuser](#)).
2. Wipe the diffuser casing with disinfectants.

5 Technical reference data

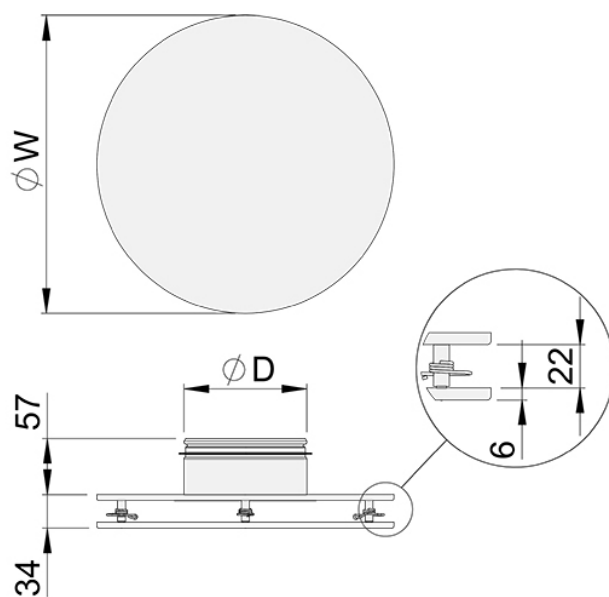
5.1 Dimensions and weight

Halton Jaz Cloud Ceiling (JCC) is available in two models (square and circular). The options of model types, duct connection sizes and weights are listed in the tables below.

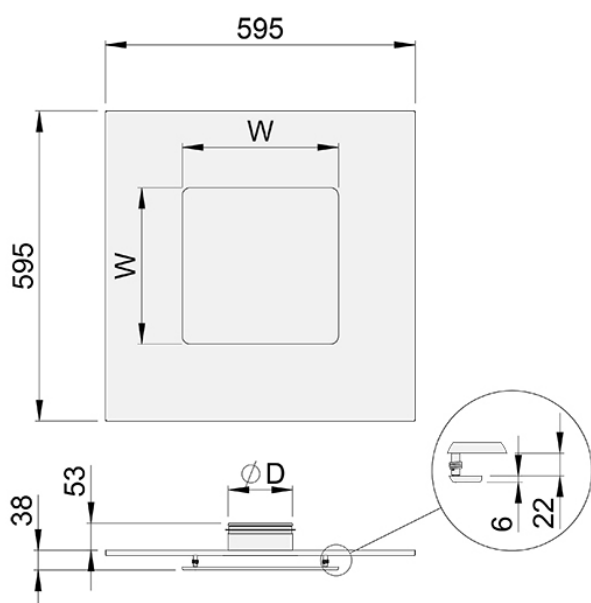
Halton Jaz Cloud Ceiling, square model (A, C)



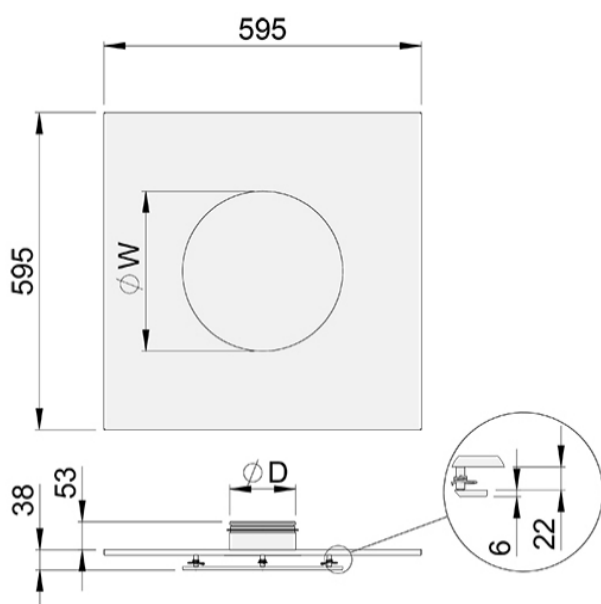
Halton Jaz Cloud Ceiling, circular model (B, D)



Halton Jaz Cloud Ceiling, square ceiling integrated (WS=T) model (A, C)

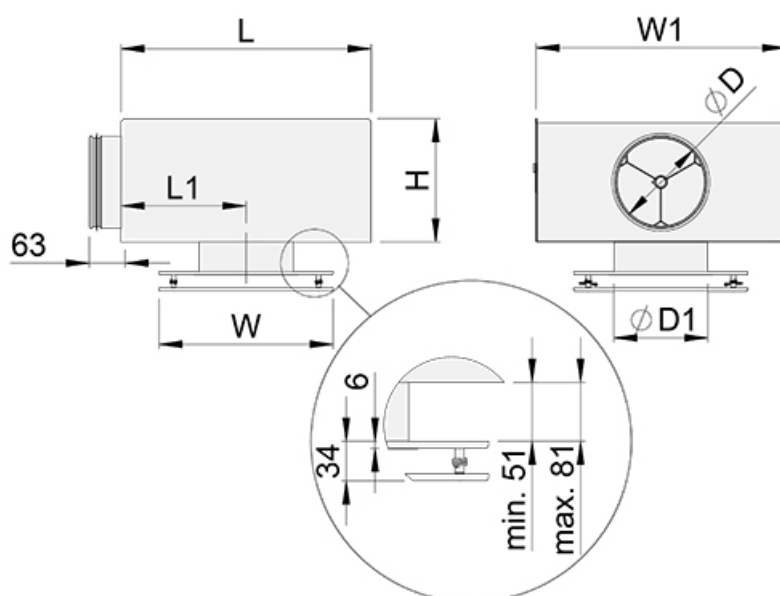


Halton Jaz Cloud Ceiling, circular ceiling integrated (WS=T) model (B, D)



| NS | W | ØD |
|-----|-----|-----|
| 100 | 300 | 99 |
| 125 | 300 | 124 |
| 160 | 300 | 159 |
| 200 | 450 | 199 |
| 250 | 450 | 249 |

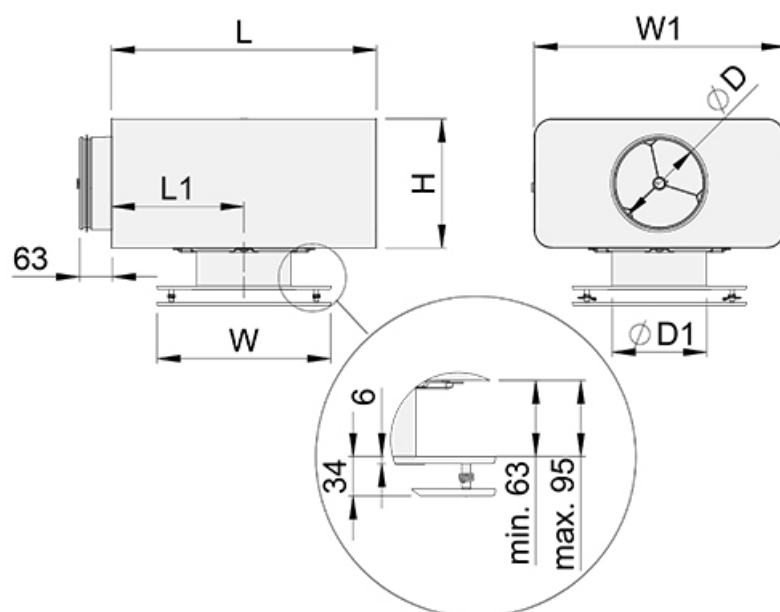
Halton Jaz Cloud Ceiling, with Halton TRH balancing plenum



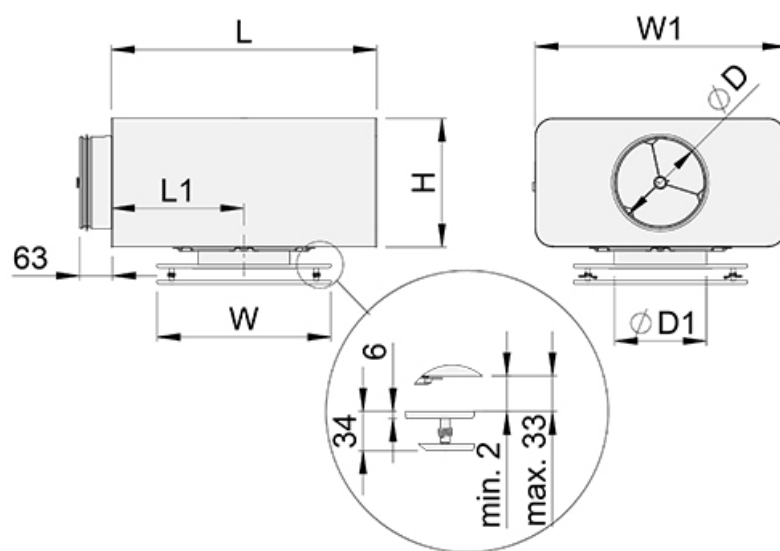
| JCC | W | TRH | ØD | ØD1 | L | W1 | H | L1 |
|-----|-----|---------|-----|-----|-----|-----|-----|-----|
| 100 | 300 | 100-100 | 99 | 102 | 281 | 281 | 152 | 141 |
| 125 | 300 | 100-125 | 99 | 127 | 281 | 281 | 152 | 141 |
| 125 | 300 | 125-125 | 124 | 127 | 431 | 431 | 180 | 216 |
| 160 | 300 | 100-160 | 99 | 162 | 281 | 281 | 152 | 141 |
| 160 | 300 | 125-160 | 124 | 162 | 431 | 431 | 180 | 216 |
| 160 | 300 | 160-160 | 159 | 162 | 431 | 431 | 212 | 216 |
| 200 | 450 | 125-200 | 124 | 202 | 431 | 431 | 180 | 216 |
| 200 | 450 | 160-200 | 159 | 202 | 431 | 431 | 212 | 216 |
| 200 | 450 | 200-200 | 199 | 202 | 550 | 400 | 245 | 355 |
| 250 | 450 | 160-250 | 159 | 252 | 431 | 431 | 212 | 216 |
| 250 | 450 | 200-250 | 199 | 252 | 550 | 400 | 245 | 355 |
| 250 | 450 | 250-250 | 249 | 252 | 600 | 450 | 295 | 378 |

Halton Jaz Cloud Ceiling with Halton TRI balancing plenum

Halton TRI collar in external position



Halton TRI collar in internal position



| JCC | W | TRI | ØD | ØD1 | L | W1 | H | L1 |
|-----|-----|---------|-----|-----|-----|-----|-----|-----|
| 100 | 300 | 100-100 | 99 | 102 | 308 | 282 | 152 | 154 |
| 125 | 300 | 100-125 | 99 | 127 | 308 | 282 | 152 | 154 |
| 125 | 300 | 125-125 | 124 | 127 | 458 | 432 | 182 | 229 |
| 160 | 300 | 100-160 | 99 | 162 | 308 | 282 | 152 | 154 |
| 160 | 300 | 125-160 | 124 | 162 | 458 | 432 | 182 | 229 |
| 160 | 300 | 160-160 | 159 | 162 | 458 | 432 | 222 | 229 |
| 200 | 450 | 125-200 | 124 | 202 | 458 | 432 | 182 | 229 |
| 200 | 450 | 160-200 | 159 | 202 | 458 | 432 | 222 | 229 |
| 200 | 450 | 200-200 | 199 | 202 | 618 | 592 | 272 | 309 |
| 250 | 450 | 160-250 | 159 | 252 | 458 | 432 | 272 | 229 |
| 250 | 450 | 200-250 | 199 | 252 | 618 | 592 | 272 | 309 |
| 250 | 450 | 250-250 | 249 | 252 | 618 | 592 | 336 | 309 |

Weight (kg)

Halton Jaz Cloud Ceiling, square

| NS | Basic model | Ceiling integrated model |
|------------|-------------|--------------------------|
| 100 | 2.5 | 4.9 |
| 125 | 2.6 | 5.0 |
| 160 | 2.8 | 5.2 |
| 200 | 4.6 | 6.3 |
| 250 | 5.1 | 6.7 |

Halton Jaz Cloud Ceiling, circular

| NS | Basic model | Ceiling integrated model |
|------------|-------------|--------------------------|
| 100 | 1.2 | 3.7 |
| 125 | 1.2 | 3.7 |
| 160 | 1.2 | 3.7 |
| 200 | 2.3 | 4.2 |
| 250 | 2.3 | 4.2 |