

# Private: Halton Jaz Rain Ceiling (JRC ) – Perforated diffuser – KEEP translations

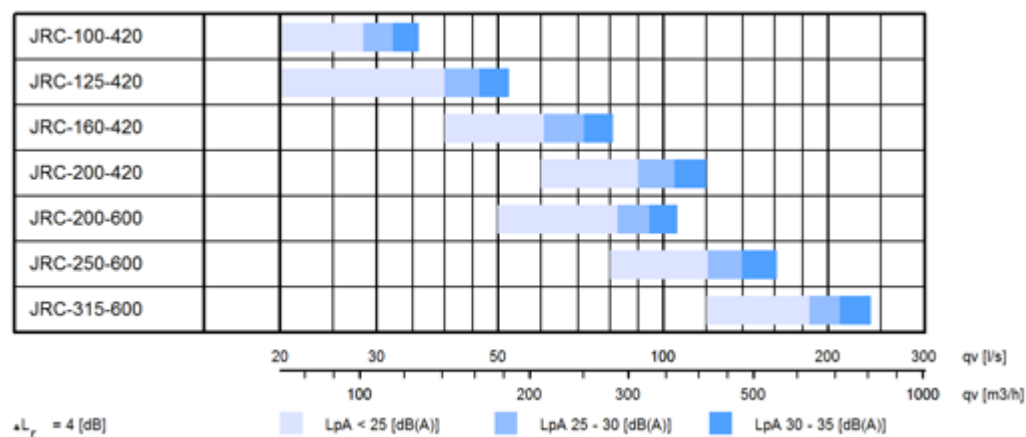
## Overview

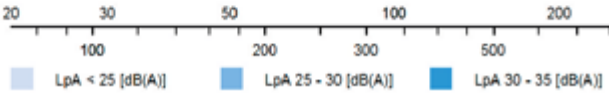
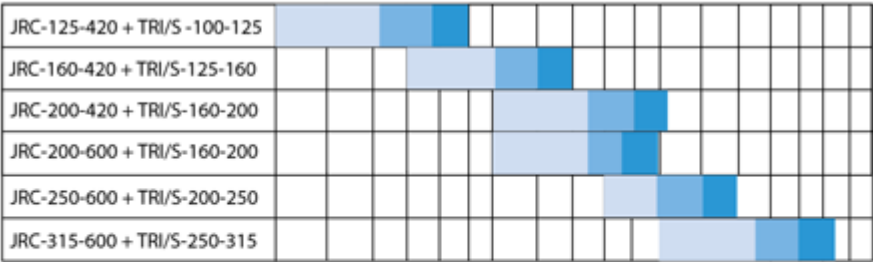
- Perforated diffuser for integrated installation with suspended T-bar ceiling
- Excellent indoor climate conditions with horizontally directed supply air and high mixing effect
- Suitable for air supply and exhaust
- Installation either directly to ductwork or to balancing plenum
- Easily openable front plate for convenient cleaning of the diffuser and ductwork
- Circular duct connection with rubber gasket

## Accessories

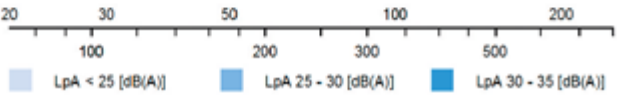
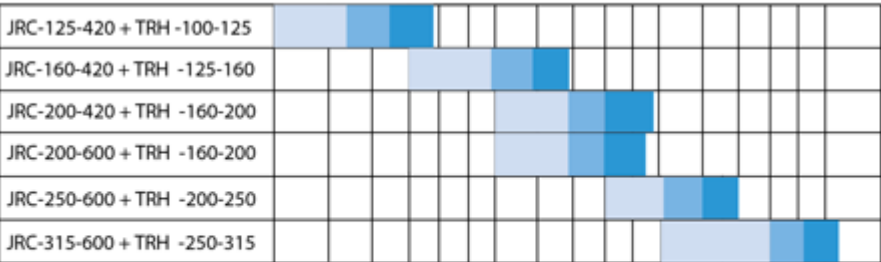
- Deflector panels for providing the flow pattern direction
- Balancing plenum with measurement and adjustment functions
- Installation panel for modular ceiling

## Quick selection



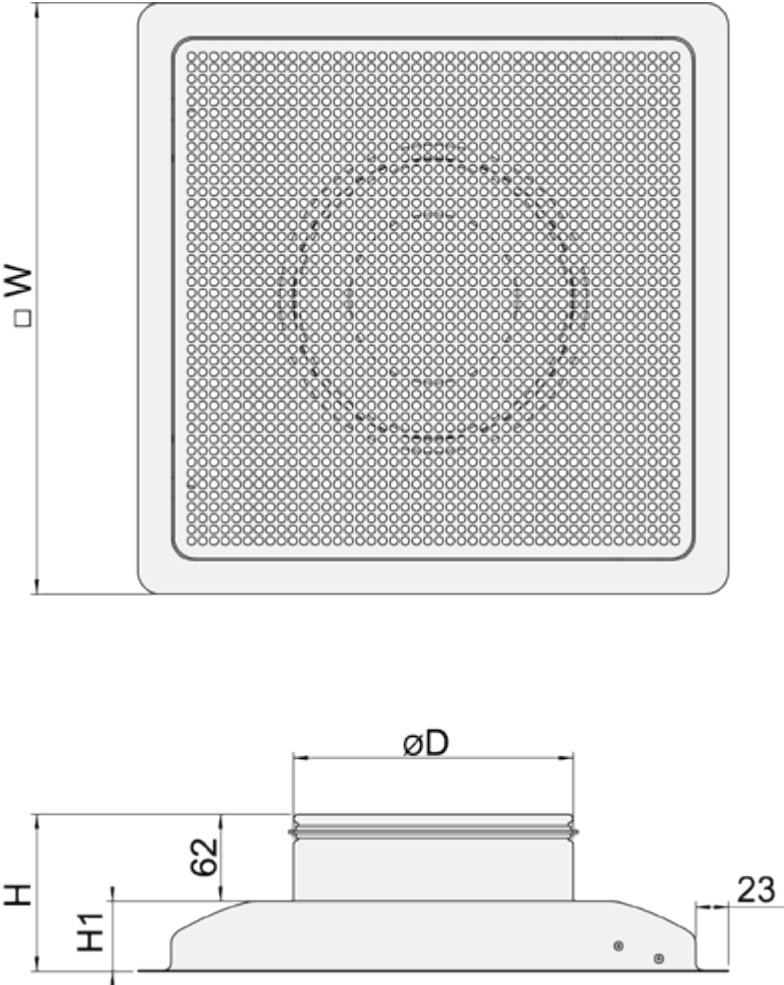


qv [l/s]  
qv [m3/h]



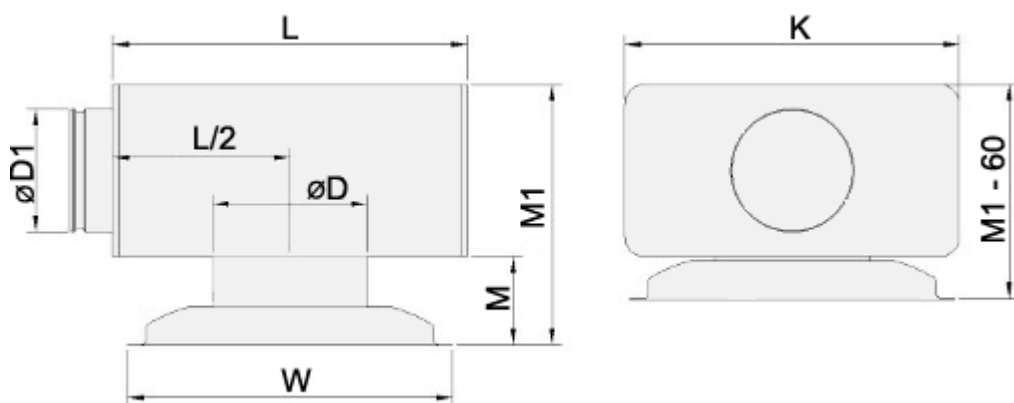
qv [l/s]  
qv [m3/h]

# Dimensions



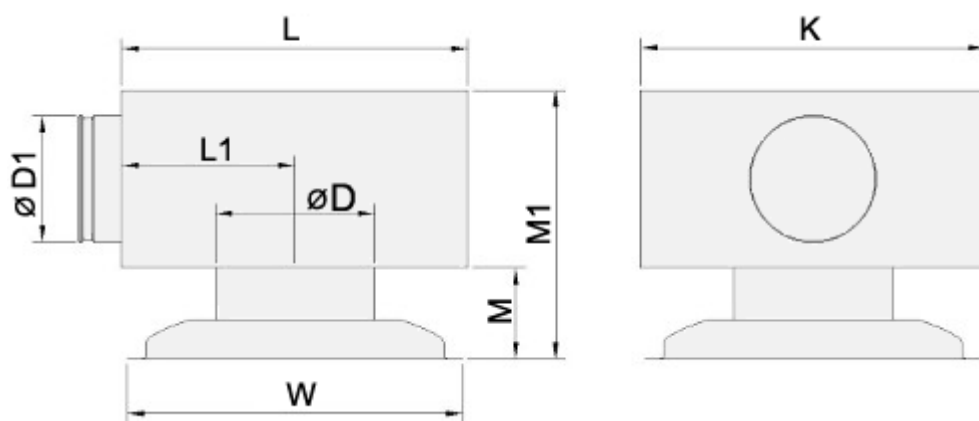
NS	ØD	W	H	H1
100-420	99	420	112	50
125-420	124	420	112	50
160-420	159	420	112	50
200-420	199	420	112	50
200-600	199	595	132	70
250-600	249	595	132	70
315-600	314	595	132	70

## Halton Jaz Rain Ceiling with Halton TRI plenum



Rain	TRI	ØD1	ØD	W	M	M1	K	L
100-420	100-100	99	100	420	118	270	282	308
125-420	100-125	99	125	420	118	270	282	308
160-420	125-160	124	160	420	118	300	432	458
200-420	160-200	159	200	420	118	300	432	458
200-600	160-200	159	200	595	138	360	432	458
250-600	200-250	199	250	595	138	410	592	618
315-600	250-315	249	315	595	138	474	592	618

## Halton Jaz Rain Ceiling with Halton TRH plenum



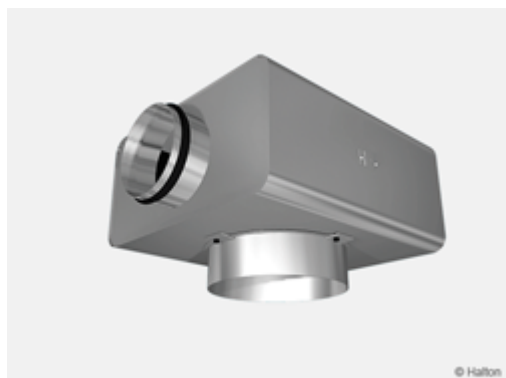
Rain	TRH	ØD1	ØD	W	M	M1	K	L	L1
125-420	100-125	99	125	420	106	258	281	281	141
160-420	125-160	124	160	420	106	286	431	431	216
200-420	160-200	159	200	420	106	318	431	431	216
200-600	160-200	159	200	595	126	338	431	431	216
250-600	200-250	199	250	595	126	371	400	550	355
315-600	250-315	249	315	595	126	421	450	600	378

# Material

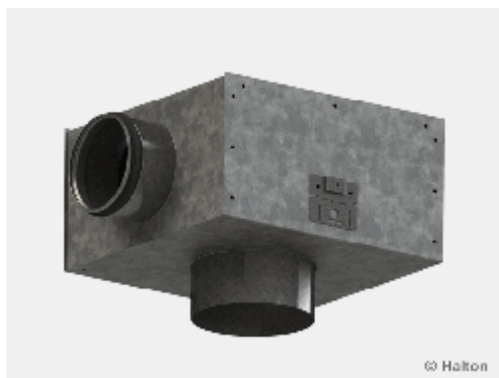
Part	Material	Note
Casing	Galvanised steel (EN 10130)	–
Front panel	Galvanised steel, perforated	–
Fixing springs	Spring steel (EN 1.4310)	–
Coupling sleeve with gasket	Galvanised steel (EN 10130)	Gasket rubber compound
Finishing	Painted with polyester powder, white (RAL 9003)	Special paintings in RAL colours available

# Accessories

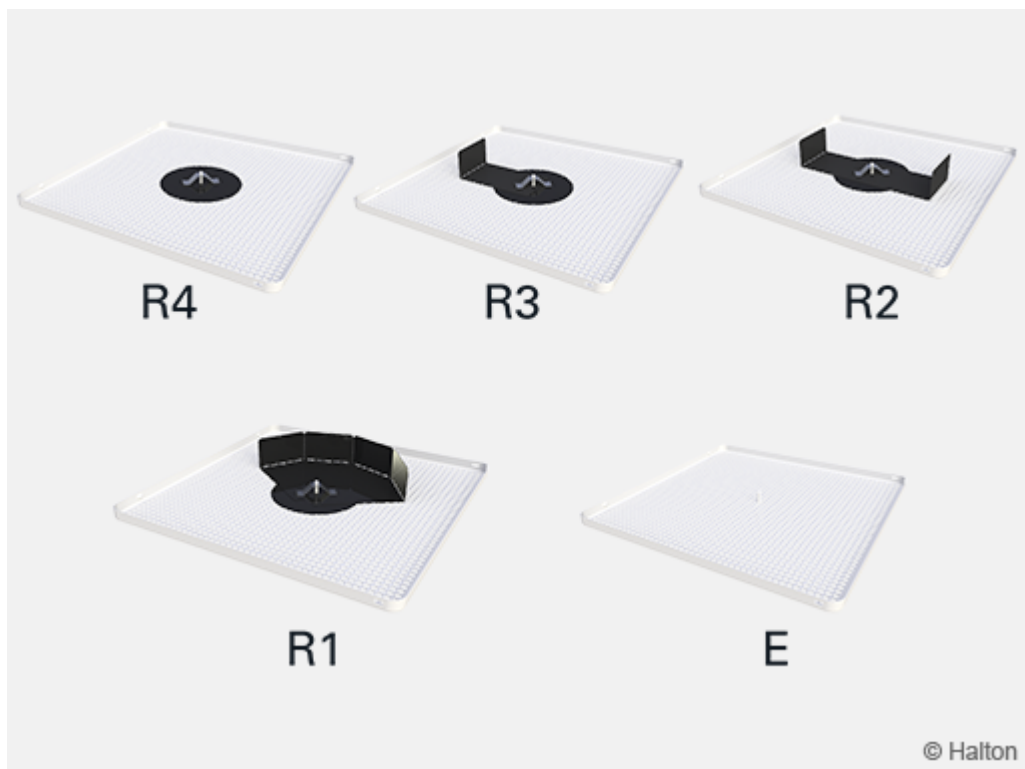
Accessory	Code	Description
Balancing plenums	TRI	Aesthetical connection plenum with airflow balancing and noise attenuation (Fig.1.)
	TRH	Basic connection plenum with airflow balancing and noise attenuation (Fig.2.)
Deflection panels	DP	Set of deflector panels for selection of flow pattern to 1,2 or 3 directions (Fig.3.)



**Fig.1.** Halton TRI

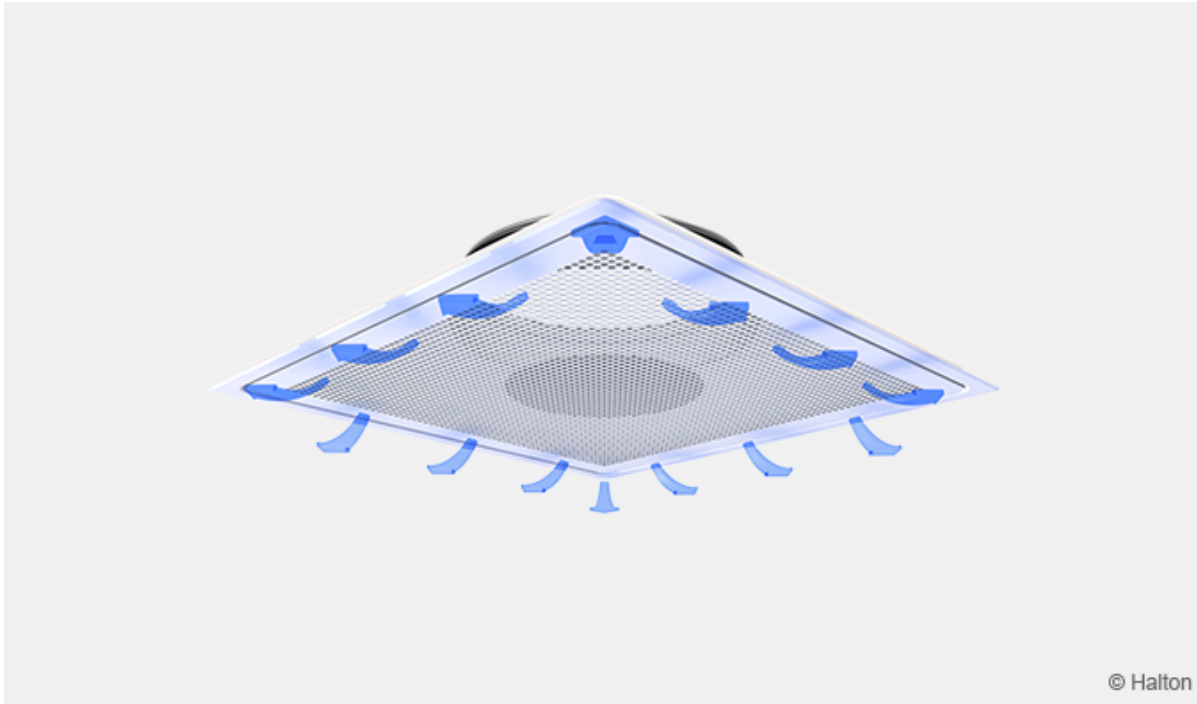


**Fig.2.** Halton TRH



**Fig.3.** Deflection panels option

# Function



The air is supplied horizontally into the space through the perforated front panel of the diffuser.

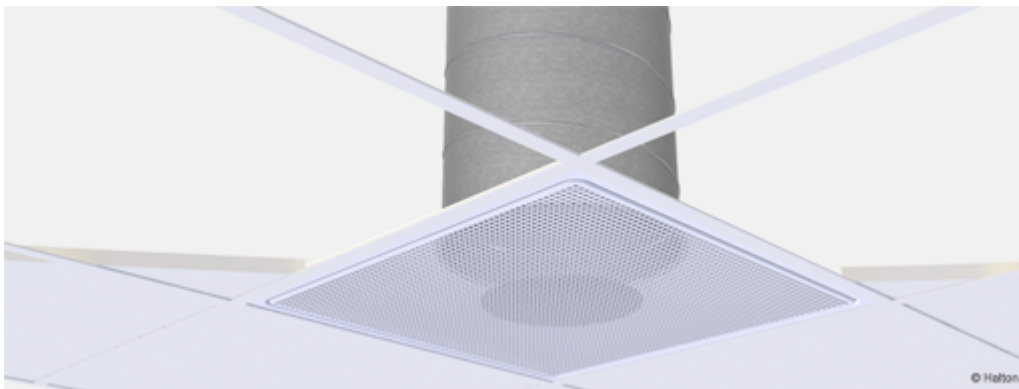
The supply air pattern can be deflected radially in the different directions desired (1, 2, 3 and 4) with separate deflector panels (delivered as accessory).

Diffuser can also be used as an exhaust unit.

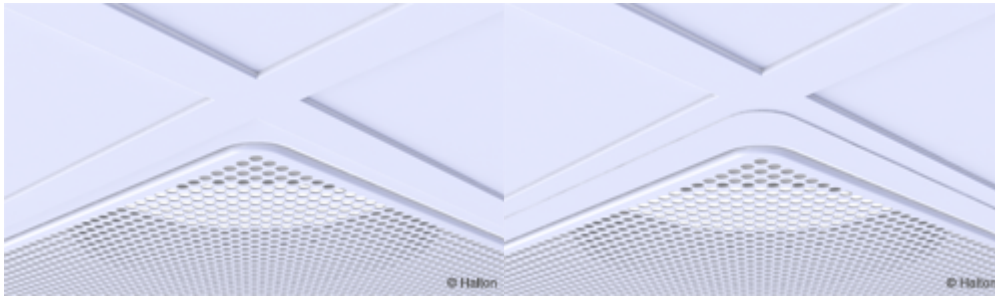
The recommended maximum temperature difference between supply and room air as follows:

- 8 °C for 4- and 3 –way air supply direction
- 6 °C for 2- and 1–way air supply direction

# Installation







**Fig.4.** Installation above list

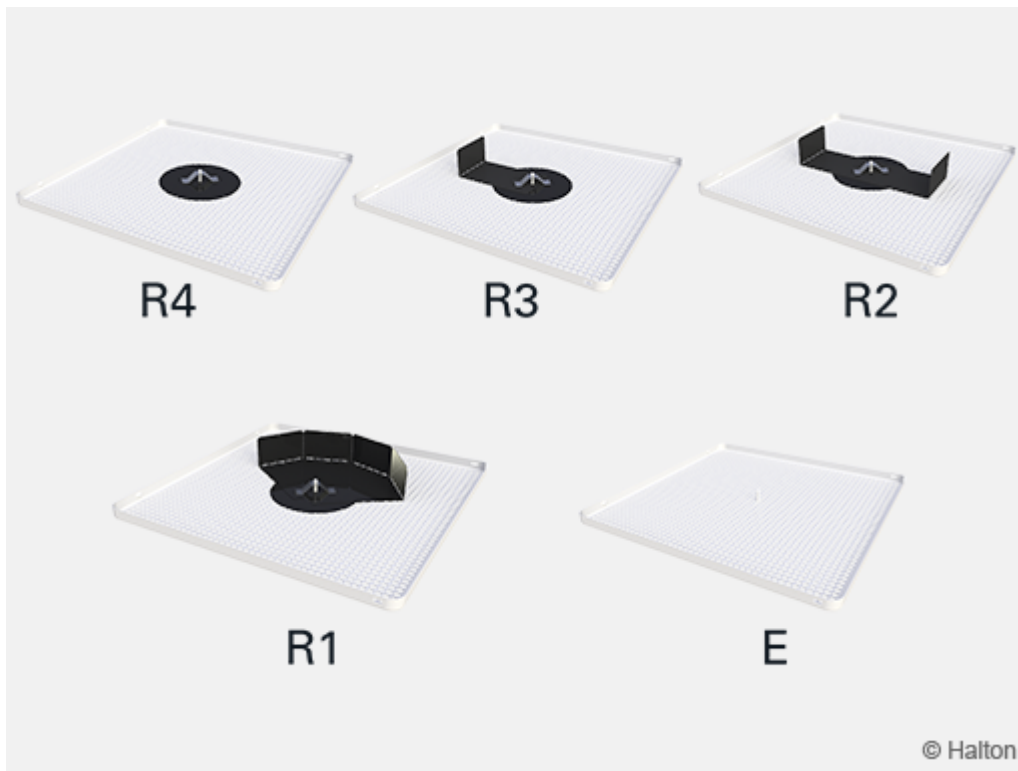
**Fig.5.** Installation under list

The diffuser is available in size 595×595 for direct installation to the modular T-bar ceiling (600×600).

Ceiling installation for standard sizes can be made above or below T-bars (Fig.4. and 5.).

The diffuser is connected either direct to the duct by screwing or riveting, alternatively to the Halton's balancing plenums Halton TRI or Halton TRH.

Direct the flow pattern in the desired directions by installing the deflector panels on the perforated front panel to meet the required specifications (4 way direction in standard delivery, see Fig.6.).



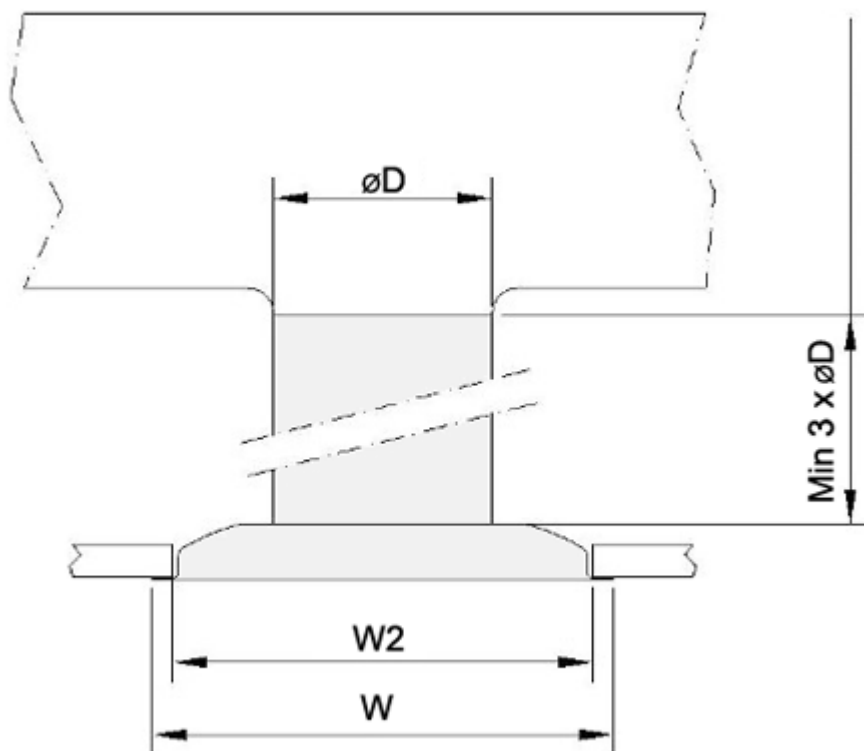
**Fig.6.** Deflection panel options

#### Key

R4	Radial jet, 4 direction
R3	Radial jet, 3 direction
R2	Radial jet, 2 direction
R1	Radial jet, 1 direction
E	Exhaust

A recommended minimum safety distance upstream of the diffuser is normally 3 x duct diameter.

## Installation in suspended ceiling



NS	ØD	W	W2
100-420	99	420	385
125-420	124	420	385
160-420	159	420	385
200-420	199	420	385
200-600	199	595	560
250-600	249	595	560
315-600	314	595	560

Recommended opening dimensions when installing to the drywall or other panel ceilings.

## Installation with plenum

The collar in Halton's TRI can be installed either internally or externally on the bottom of plenum. The height of unit is presented in the tab Dimension.

A recommended minimum safety distance upstream of the plenum is normally 3 x duct diameter.

The technical performance for the combination of Halton Jaz Rain Ceiling diffuser and Halton plenum is presented separately for different installations.



**Fig.7.** Installation with Halton TRI plenum

## Opening the diffuser

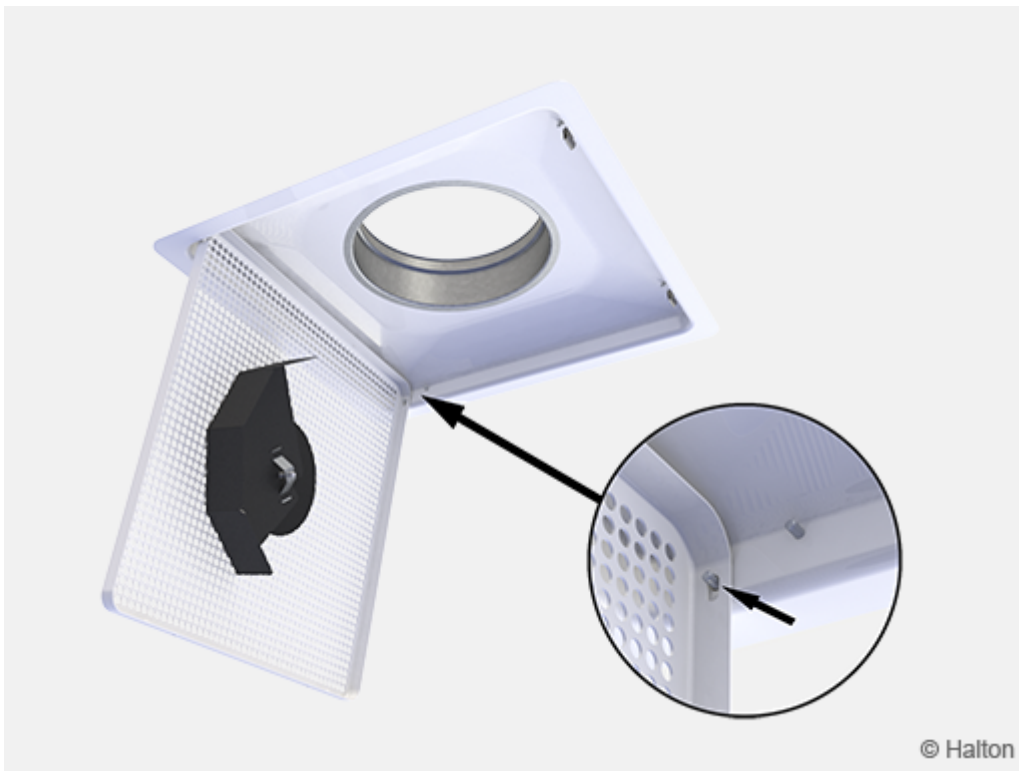
Open the front panel using some suitable thin material (like plastic sheet – Fig.8.). Push the sheet on the slot between front panel and chamber on the side where the Halton logo is located (distance about 50 mm from the corners). Pull slightly to open the front panel.

Detach the open front panel by pressing the hinge from inside (Fig.9.); reassembly it by pulling it against the hinges.

Close the front panel by pushing it until the springs lock.



**Fig.8.** *Open with thin plastic sheet*



**Fig.9.** *Press the hinge from inside*

## Adjustment

Halton Jaz Rain Ceiling diffuser does not include any separate airflow adjustment.

In order to enable the adjustment and measurement of airflow rate it will be recommended to connect the diffuser to Halton TRI or Halton TRH plenum. The supply airflow rate is determined by using the plenum's measurement and adjustment module.

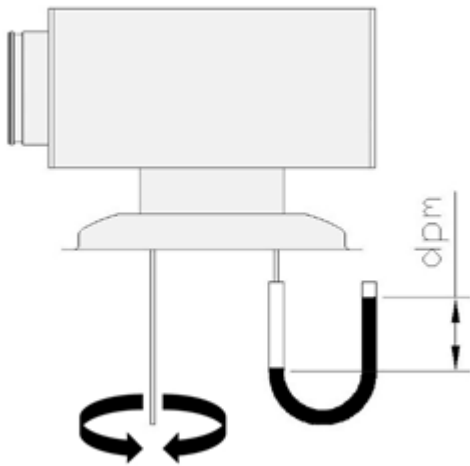
Open the diffuser's front panel and pass the tubes and control spindle through the hole in perforation. Close then the front panel.

Measure the differential pressure using a suitable manometer. The airflow rate is calculated using the formula below

$$q_v = k * \sqrt{\Delta p_m}$$

TRI	> 8xD	min. 3xD
100	6.0	7.5
125	9.9	12.6
160	16.9	21.9
200	28.3	32.0
250	47.9	51.5
315	78.6	–

TRH	> 8xD	min. 3xD
100	6.5	7.5
125	10.8	12.6
160	19.4	21.9
200	29.7	31.0
250	48.8	51.5



Adjust the airflow rate by rotating the control spindle until the desired setting is achieved. If needed lock the damper position with the screw in module.

Replace the tubes and spindle into the plenum.

## Maintenance

Detach the front panel of the diffuser and let it balance on the hinges.

Wipe the diffuser casing and front panel with damp cloth. Ensure that the deflector panels are directed as requested. After cleaning reattach the front panel.

### Option with balancing plenum

Remove the measurement and adjustment module by gently pulling from the shaft; not from the control spindle or measurement tubes. Wipe the components with damp cloth instead of immersing in water. Wipe also the inner part of the plenum; detach the attenuation material if needed.

Reassemble the module by pushing the shaft until the unit meets the stopper.

After cleaning reattach the front panel.

## Specification

The diffuser is installed flush with the ceiling surface. The diffuser is made of powder painted galvanized steel with a white standard colour (RAL 9003). Air is supplied through the perforated front panel in order to ensure efficient mixing of supply air. The front panel is equipped with direction plate for 4-way air diffusion as standard. Set of deflection panels is available as accessory for directing the throw pattern according request.

The diffuser has a detachable front panel providing access to the duct and/or plenum.

The diffuser is installed alternatively to the balancing plenum or direct to the duct. Balancing plenum has a detachable measurement and adjustment module, attenuation material and cleanable structure.

## Order code

### JRC-D-A, CO-ZT

**D = Size of duct connection (mm)**

100, 125, 160, 200, 260, 315

**A = Diffuser front panel size (mm)**

420, 600

## Other options and accessories

**CO = Colour**

SW Signal white (RAL 9003)

X Special colour (RAL xxxx)

**ZT = Tailored product**

N No

Y Yes (ETO)

## Sub products

**Balancing plenums with airflow controls and sound attenuation**

Halton TRI/S for supply air

Halton TRI/E for exhaust air

Halton TRH/S for supply air

Set of deflection panels (DP)

## Code example

JRC-125-420, CO=SW, ZT=N