

Halton Jaz JTH – Swirl diffuser



Overview

- Swirl diffuser completed with black adjustable plastic air control blades and plenum with perforated equalizing plate.
- Blades can be manually adjusted to give either horizontal or vertical discharge.
- Therefore discharge direction can be easily matched with changing building layouts.
- Installation using balancing plenum with side connection. Connection box made of galvanized sheet metal.
- The unit is perfectly suited for installations with variable air flow.
- Cooperates particularly well with fan-coil units operating at various speed (variable flow from 25% to 100% depending on the settings).
- Horizontal or vertical air supply. Therefore discharge direction can be easily matched with changing building layouts.
- Suitable for supply and exhaust.
- Ceiling integration installation.
- Supply air jet velocity is effectively reduced due to high mixing effect.
- Suited for installation in a modular or monolith ceilings.
- Circular duct connection with rubber gasket.

Product models and accessories

- Model with sound attenuation material (mineral wool or polyester fibre)
- Measurement and airflow rate adjustment module (MSM)
- Different front plate patterns.

Quick selection

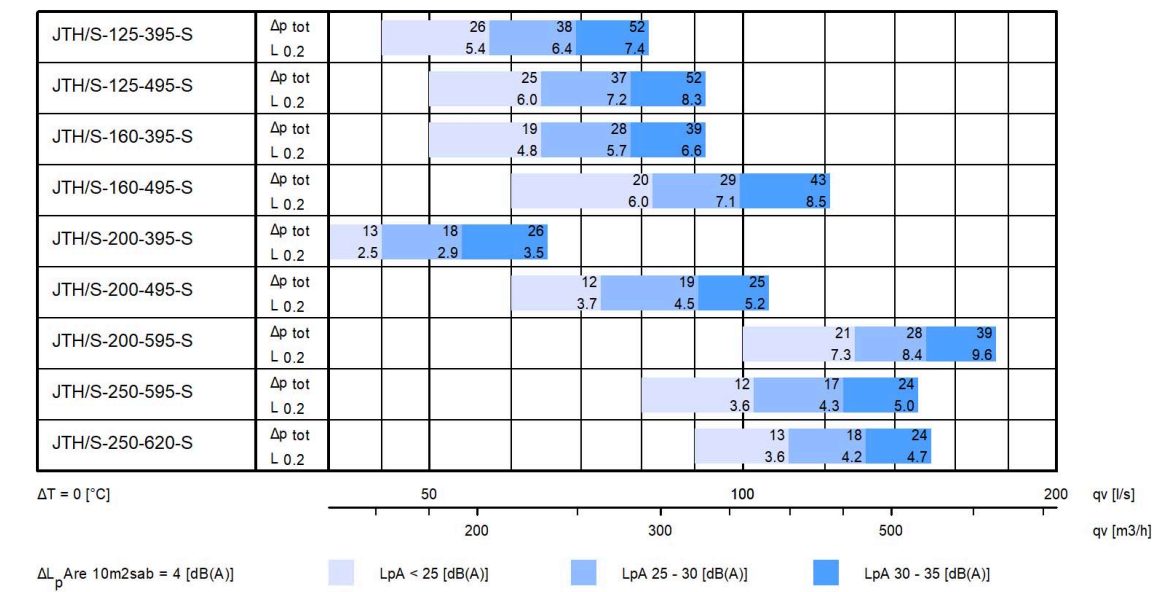


Fig.1. Halton Jaz

JTH with star front panel pattern, supply

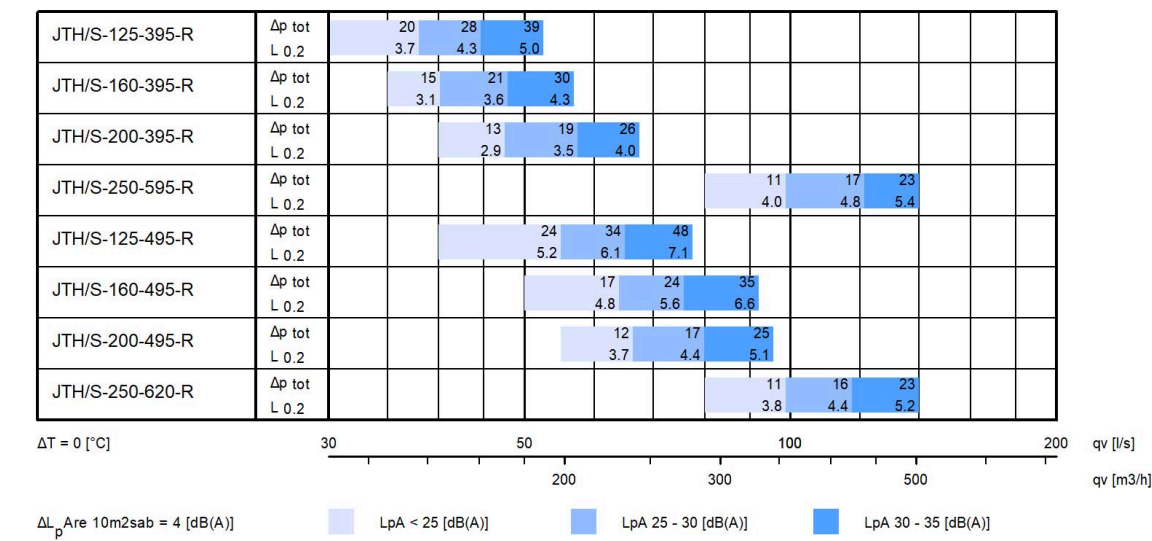


Fig.2. Halton Jaz

JTH with round front panel pattern, supply

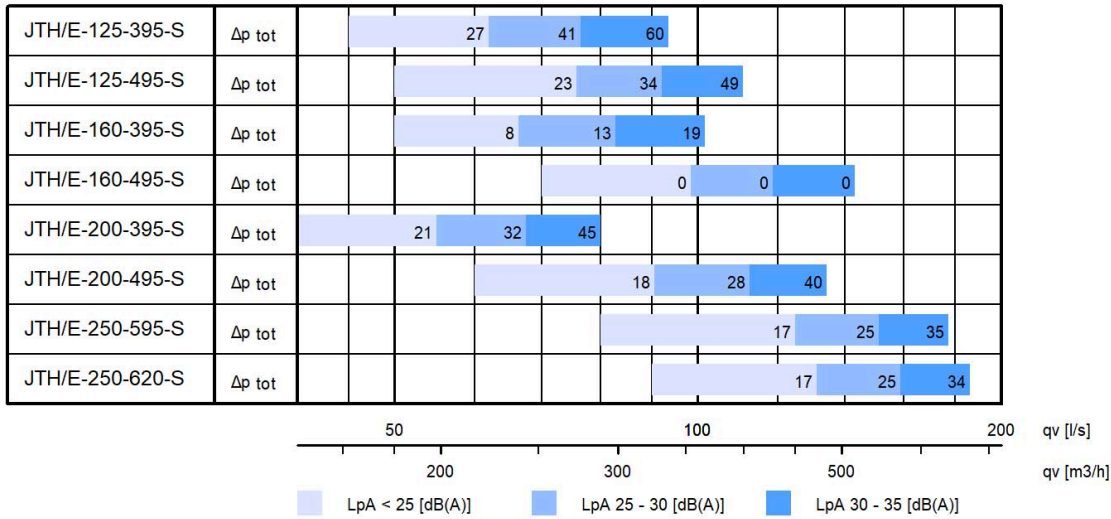


Fig.3. Halton Jaz

JTH with star front panel pattern, exhaust

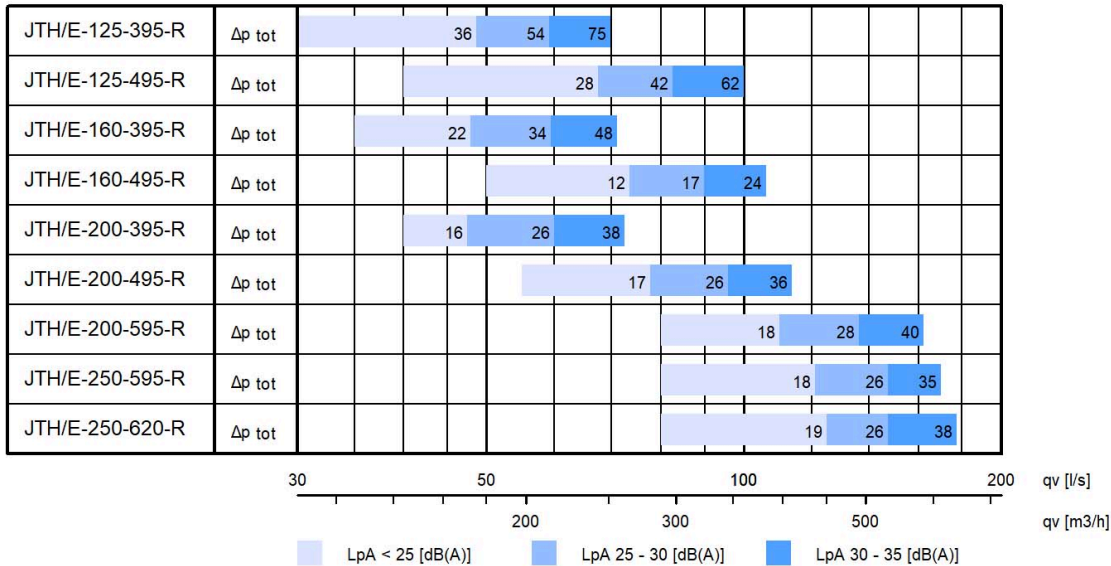
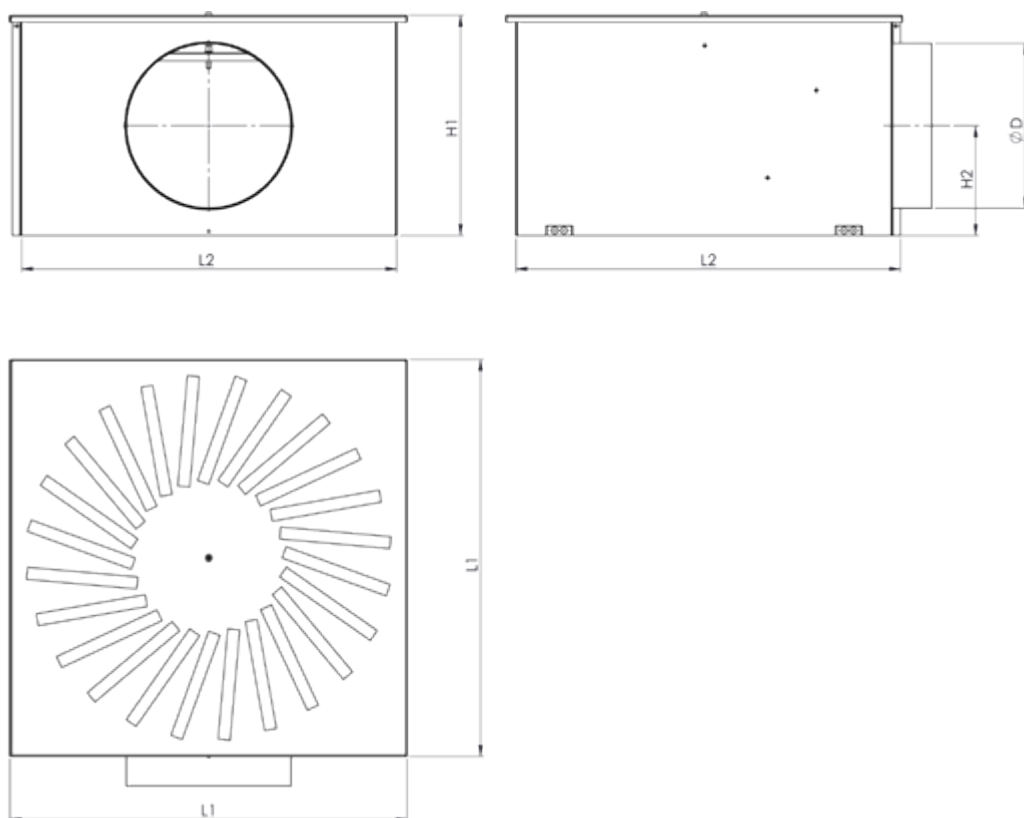


Fig.3. Halton Jaz

JTH with round front panel pattern, exhaust

Dimensions



L1	L2	H1	H2	ØD
395	367	270	135	124
495	467	270	135	159
595	577	330	165	199
620	587	376	188	249

Material

Part	Material	Note
Casing	Galvanised steel	—
Front panel	Steel with plastic vanes	—
Attenuation	Mineral wool or polyester fibre	—
Coupling sleeve	Galvanised steel	—
Duct gasket	Rubber compound	—
Finishing	Epoxy-painted, white (RAL 9003/30%)	Special colours available

Accessories

Accessory	Code	Description
Airflow measurement and adjustment unit	YS	Adjustment and measurement module for supply airflow rate
Airflow adjustment unit	YE	Adjustment module for exhaust airflow rate
Sides of sound attenuation	IN	3 sides or 5 sides

Product models

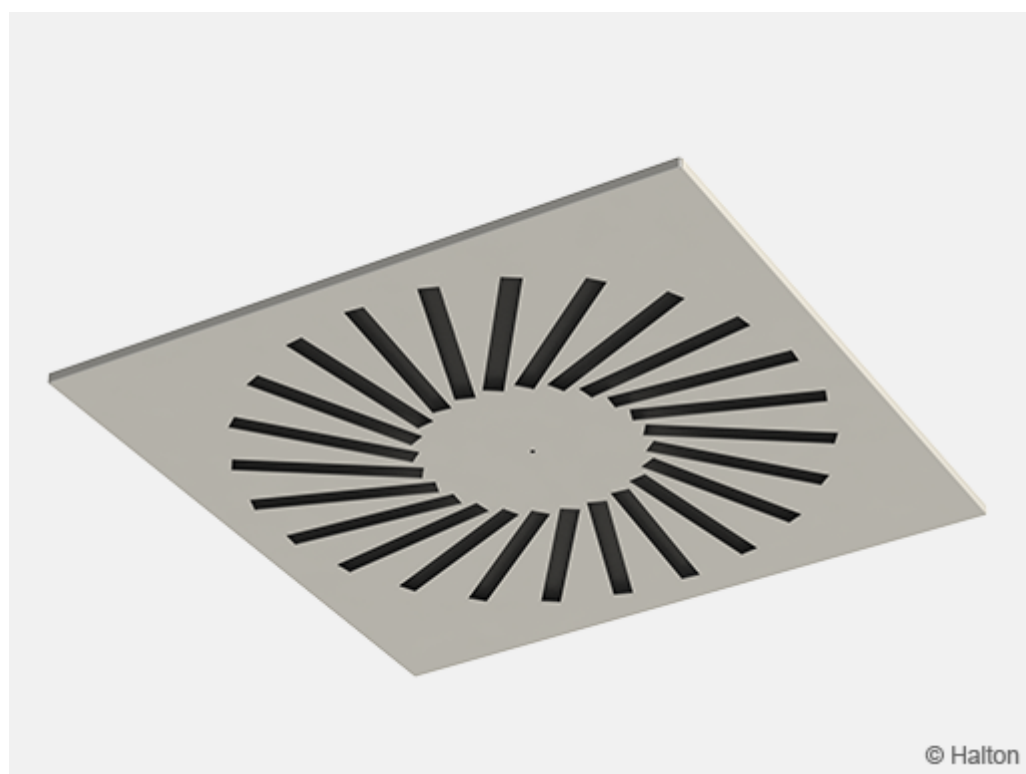


Fig.1. Front panel size 595×595 mm, round pattern (P=R)

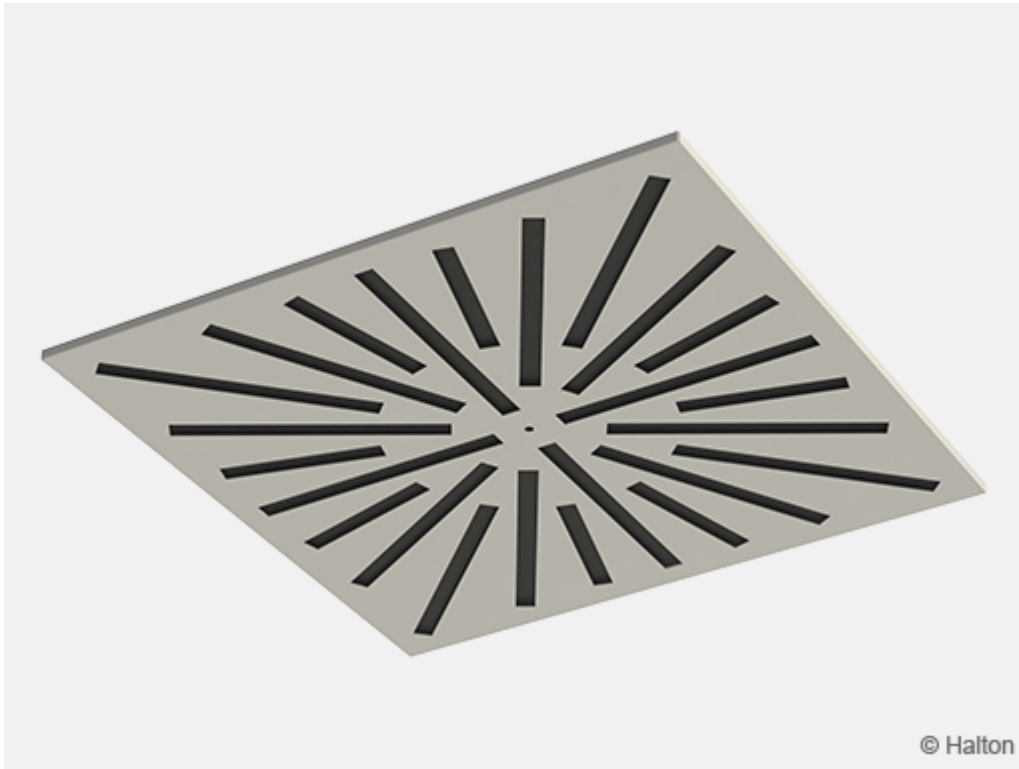
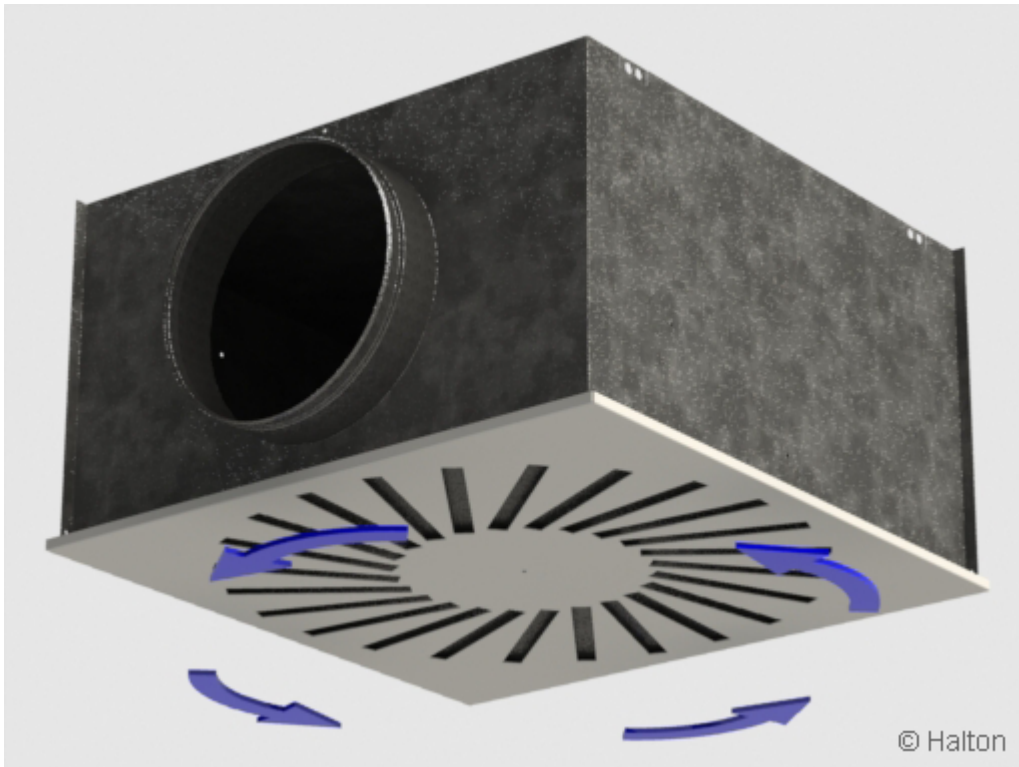


Fig.2. Front panel size 595×595 mm, star pattern (P=S)

Function

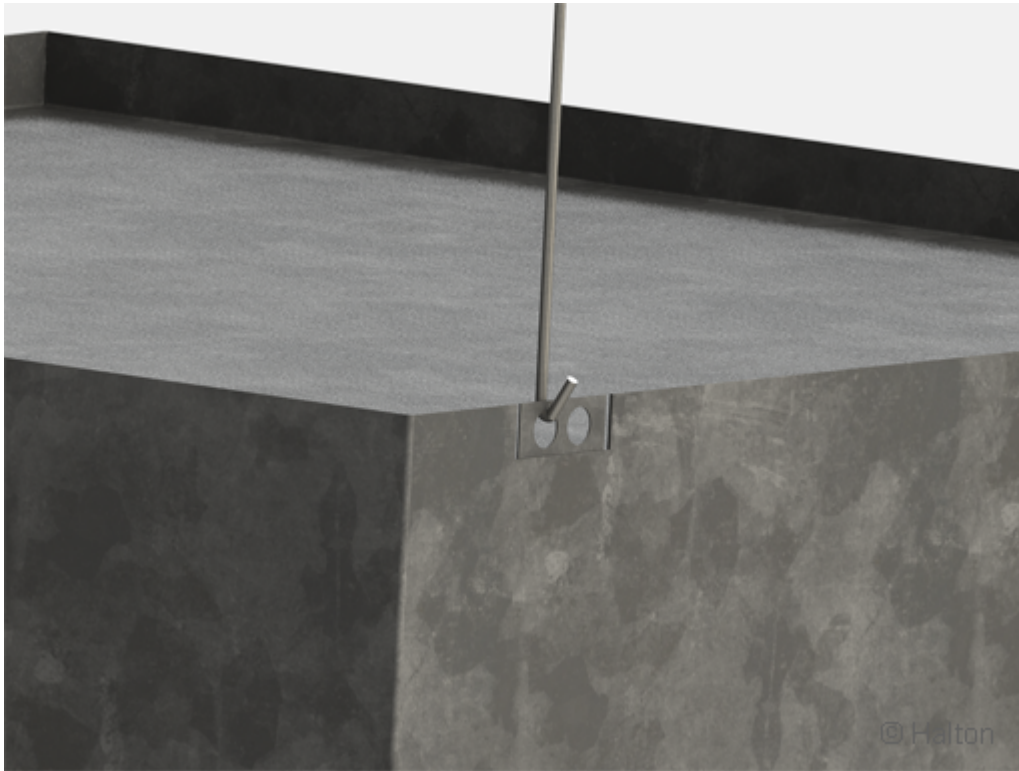


- The highly efficient mixing of the swirl jet produced by the diffuser reduces the end velocity of the jet, as well as the temperature differences very quickly. This allows the air to be blown into the room free from draughts even under extreme conditions (high air exchange or

temperature differences.)

- The free cross-section is the same in all vane positions, so that pressure loss and volume level do not change when the throw pattern is adjusted.
- Ensures a high level of airflow volume and rapid air temperature change while maintaining low noise levels.
- Appropriate for air supplier differences up to 10 °C degrees.

Installation



We recommend installing the plenum part into the suspended ceiling with metal hangers (not supplied in the delivery) and connected to the ductwork with the spigot equipped with an integral rubber gasket.

Adjustment

The supply volume flow rate is determined using the measurement and adjustment module MSM.

Open the front panel and equalisation plate, pass the tubes and control spindle through the equalisation plate and side slot of the diffuser.

Replace the front panel.

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

Adjust the airflow rate by rotating the control spindle until the desired setting is achieved.

Lock the damper position with a screw.

Reassemble the tubes and spindle into the plenum and replace the diffuser front panel.

The exhaust flow rate is determined by using the separate measurement module located in the equalisation plate.

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

The k factor for installations with different safety distances
(distance of other items from the MSM):

Spigot (ØD)	Safety distance	
	> 8 x D	min 3 x D
125	9,9	12,6
160	16,9	21,9
200	28,3	32,0
250	47,9	51,5

Servicing

Detach the front panel of the diffuser by removing the central bolt and pulling it down.

Wipe the parts with a damp cloth.

Push the front panel back into place and fasten the central bolt.

Option with balancing plenum

Detach the front panel of the diffuser by removing the central bolt and pulling it down. Remove the measurement and adjustment module by gently pulling out the shaft (Not the control spindle or measurement tubes!).

Wipe the parts with a damp cloth instead of immersing in water.

Remount the measurement and adjustment module by pushing in the shaft until the module meets the stopper.

Push the front panel back into place and fasten the central bolt.

Specification

Halton Jaz JTH is a swirl type ceiling diffuser with a square-shaped powder-coated frontplate and

a galvanized plenum with perforated balancing plate.

The individually adjustable plastic vanes generate high induction swirl jet which ensures effective mixing of the supply air with air present in the room, as well as enables fast temperature decrease resulting in low air velocities in the comfort zone.

Since the plastic vanes can be adjusted individually, it is allowing users to set the throw pattern according to the room specification.

Order code

JTH/S-D-F-P; CO-AT-IN-OM-ZT

S = Model

S Supply
E Exhaust

D = Diameter of duct connection (mm)

125, 160, 200, 250

F = Front panel size

395 395×395
495 495×495
595 595×595
620 620×620

P = Front panel pattern

R Round
S Star

Other options and accessories

CO = Colour

SW Signal white (RAL 9003)
X Special colour (RAL xxxx)

AT = Sound attenuation material

W Mineral wool
D Polyester fibre
N No attenuation material

IN = Sides of sound attenuation

3 Sound attenuation on 3 sides
5 Sound attenuation on 5 sides
N No sound attenuation

OM = Measurement and adjustment module

YS MSM (supply)

YE MEM (exhaust)

NA No measurement or adjustment module

ZT = Tailored product

N No

Y Yes (ETO)

Code example

JTH/S-200-495-R, CO=SW, AT=W, IN=3, OM=YS, ZT=N