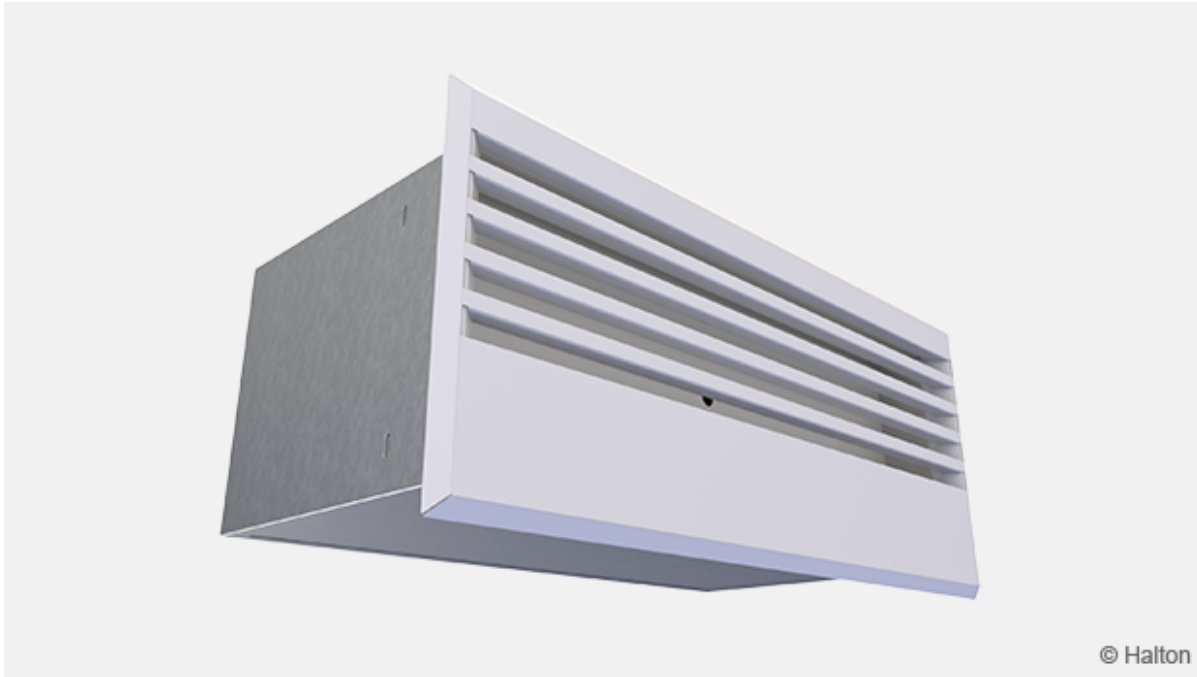


# Halton TLB – Wall diffuser unit



## Overview

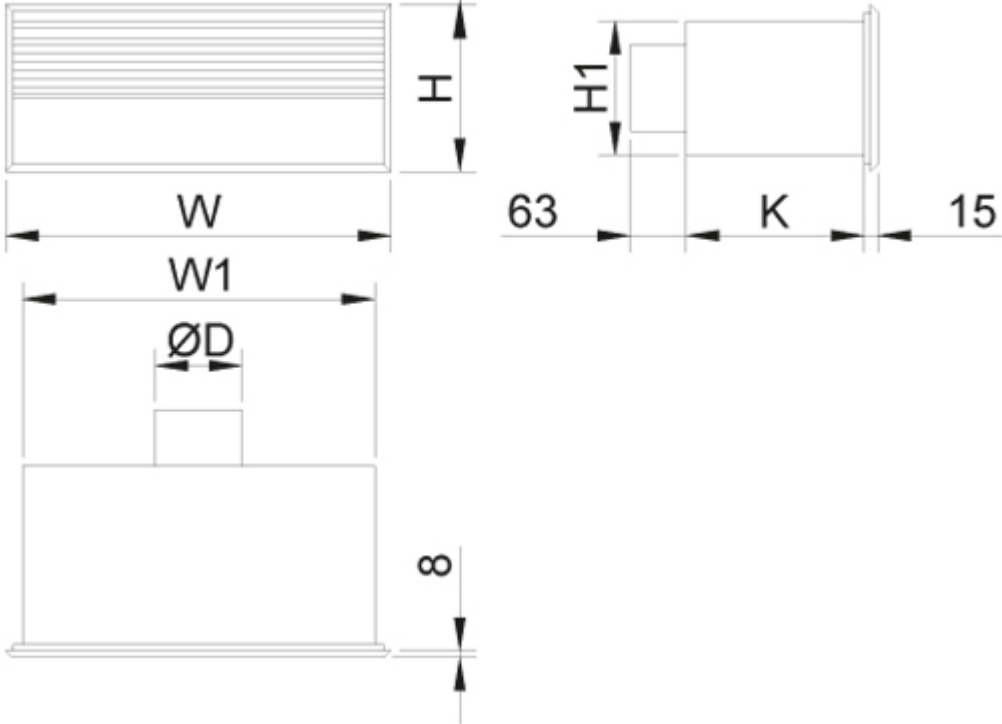
- Horizontal plane jet air supply
- Suitable for supply and exhaust
- Installation of the diffuser on the wall in the vicinity of the ceiling
- Airflow rate measurement and adjustment functions
- Circular duct connection with gasket on the back or side of the plenum
- Cleaning of the terminal unit and supply ductwork enabled by the detachable diffuser section

## Accessories

- Deflector for airflow pattern direction
- Cover sleeve for exposed installations (only for back connection)
- Pressure test plug

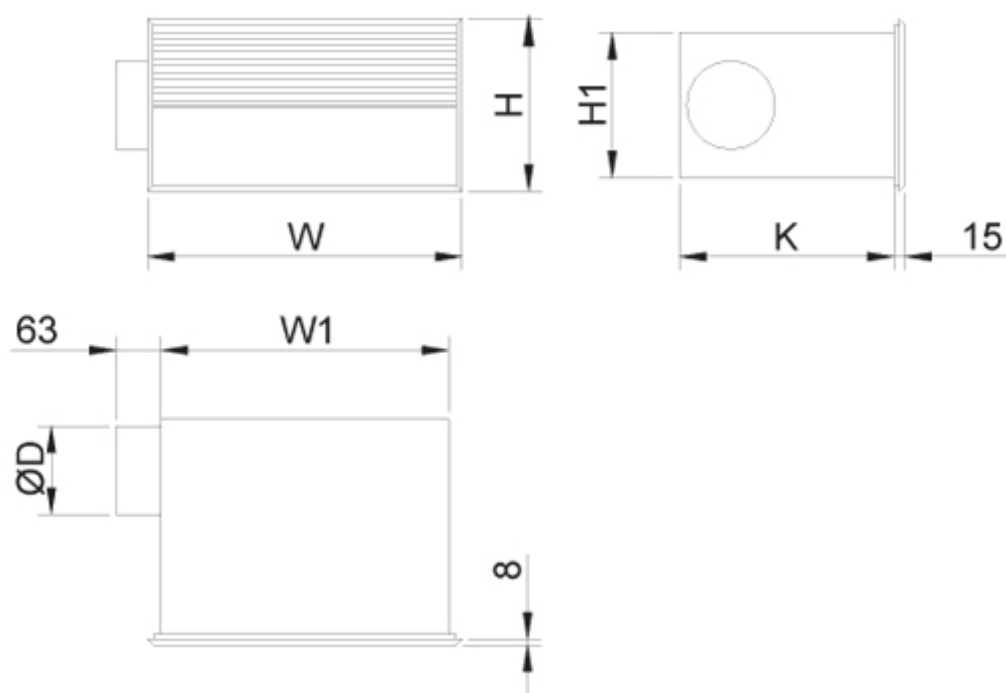
# Dimensions and weight

## Halton TLB/B, TLB/C (back connection)



NS	W	W1	H	H1	K	ØD
100	441	403	191	153	204	99
125	441	403	241	203	204	124
160	541	503	241	203	241	159
200	741	703	291	253	280	199
250	793	751	341	304	300	249

## Halton TLB/E, TLB/F (side connection)



NS	W	W1	H	H1	K	ØD
100	441	403	191	153	301	99
125	441	403	241	203	301	124
160	541	503	241	203	408	159
200	741	703	291	253	408	199

**Note!** Size 250 is not available for side connection.

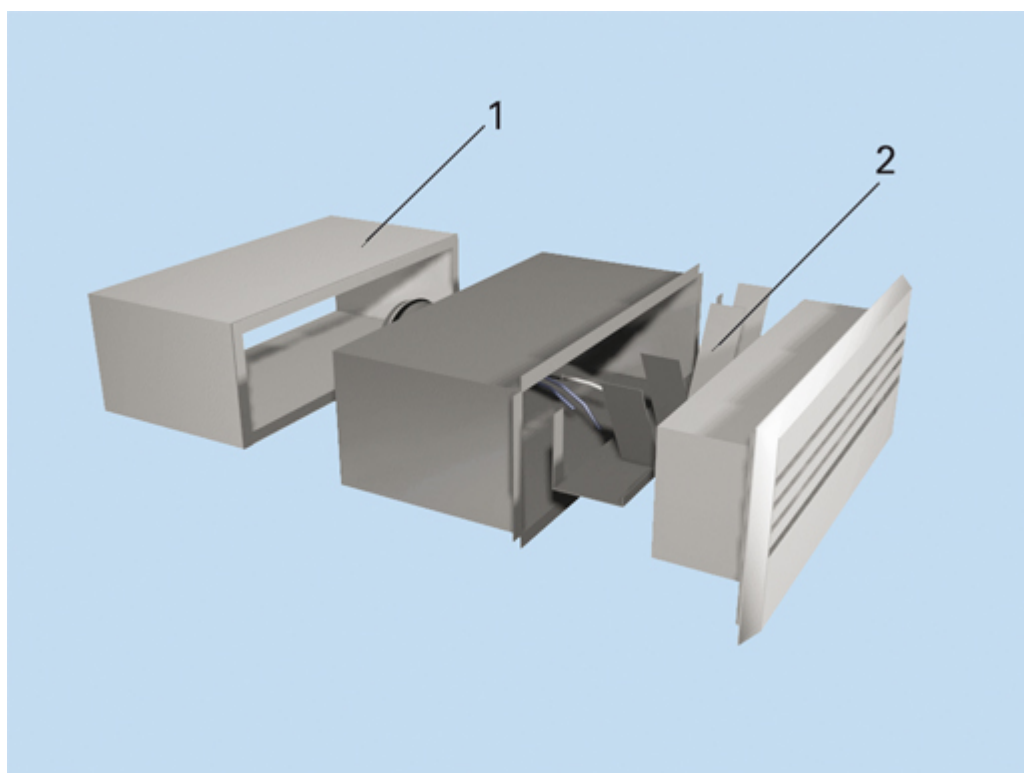
## Weight (kg)

NS	TLB/B (back connection)	TLB/E (side connection)	TLB/A (diffuser section)
100	1,9	2,8	1,7
125	2,2	3,2	2,1
160	2,9	4,5	2,1
200	4,5	6,2	4,6
250	5,1	–	5,1

# Material

Part	Material	Note
Diffuser section	Steel	–
Attenuation material	Polyester fibre	–
Plenum	Galvanised steel	–
Deflector panel	Galvanised steel	–
Cover sleeve	Galvanised steel	Painted in diffuser colour
Coupling sleeve with gasket	Galvanised steel	Gasket of rubber compound
Finishing	Painted, White (RAL 9003/30%)	Only diffuser section (TLB/A), special colours available

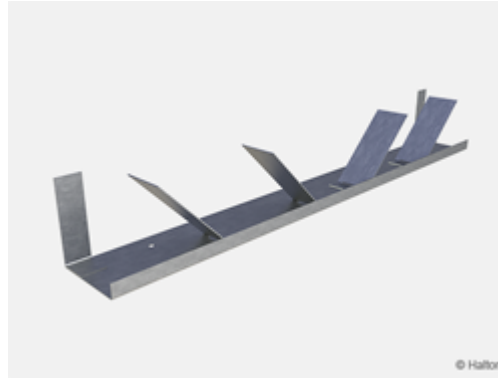
# Accessories



Accessory	Code	Description
Cover sleeve (1)	CE	Cover sleeve for exposed installation (available only for back connection; TLB/B)
Deflector panel (2)	DP	For horizontal flow pattern direction and throw length adjustment ( d L 0.2 approx. $\pm$ 20 %), increases the sound level 2...4 dB with MSM module fully open (only available for diffuser section, TLB/A)



Cover sleeve (CE)



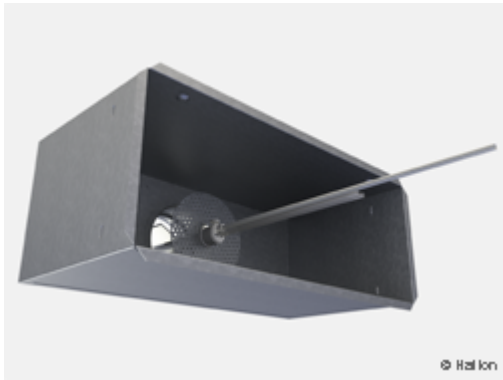
Deflector panel (DP)

## Product models

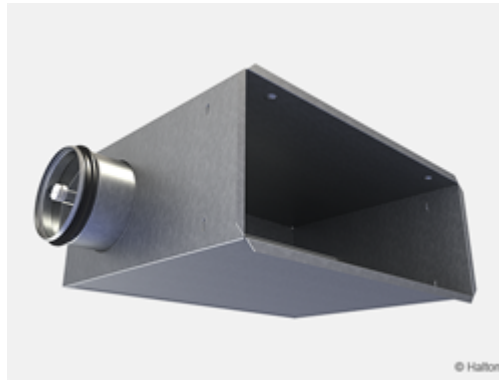
Model	Description
TLB/A	Supply air unit, front plate (needing a plenum from below)
TLB/B	Plenum with back connection, supply (with MSM-module)
TLB/C	Plenum with back connection, exhaust (with MEM-module)
TLB/E	Plenum with side connection, supply (with MSM-module)
TLB/F	Plenum with side connection, exhaust (with MEM-module)



Fig.1. TLB/A

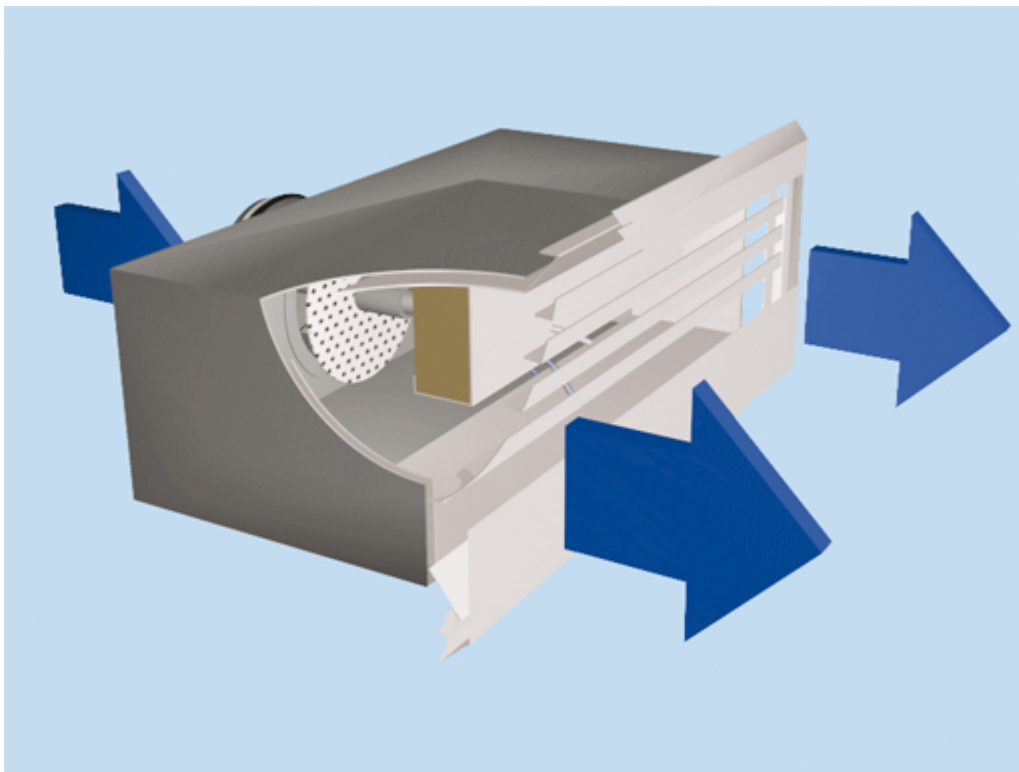


*Fig.2. TLB/B*



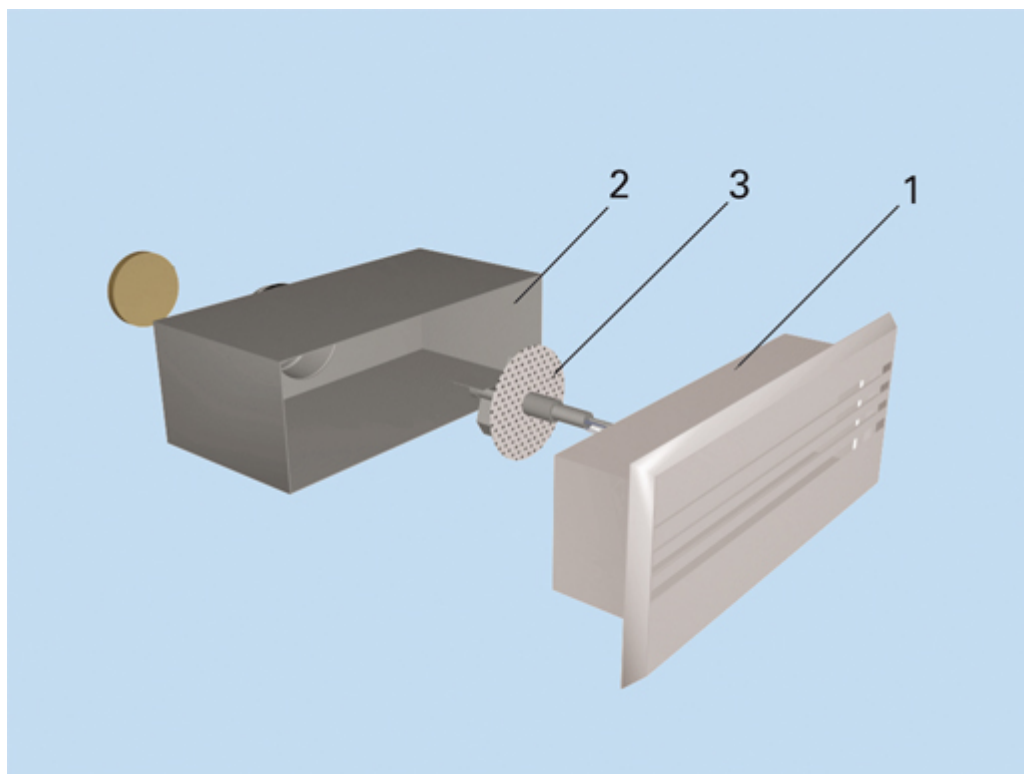
*Fig.3. TLB/E*

## Function



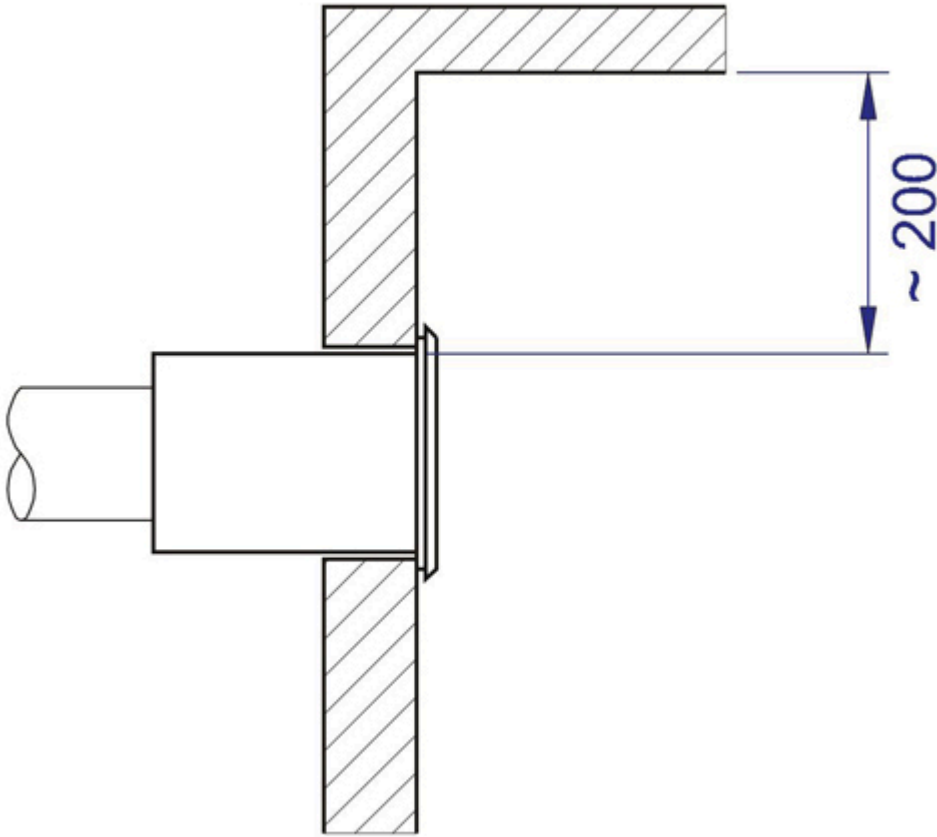
The vanes of the Halton TLB diffuser direct the airflow obliquely towards the ceiling surface. The recommended maximum temperature difference between supply and room air is 8 °C. The throw pattern size and shape can be adjusted by altering the position of the deflector panel (accessory). The unit can also be used as an exhaust unit.

# Installation



## Code description

1. Diffuser section
2. Plenum
3. Measurement and adjustment module (MSM/supply, MEM/exhaust)



The recommended installation distance below ceiling level is approx. 200 mm.

## Installation hole

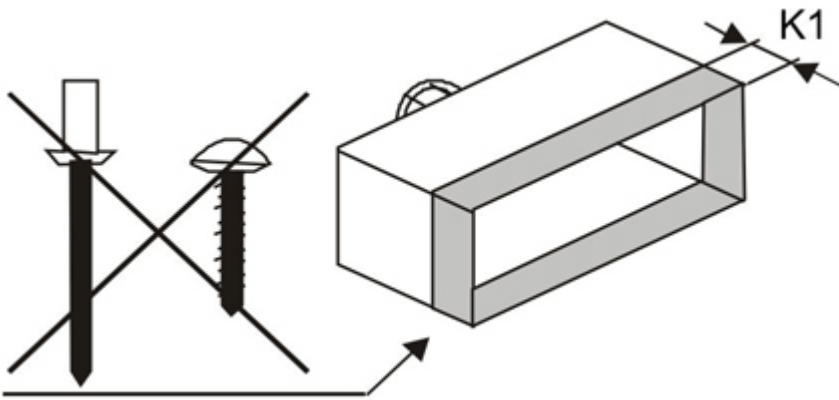




NS	W2 x H2
100	405 x 155
125	405 x 205
160	505 x 205
200	705 x 255
250 *	755 x 255

\*) Only back connection (TLB/B, TLB/C)

## Installation

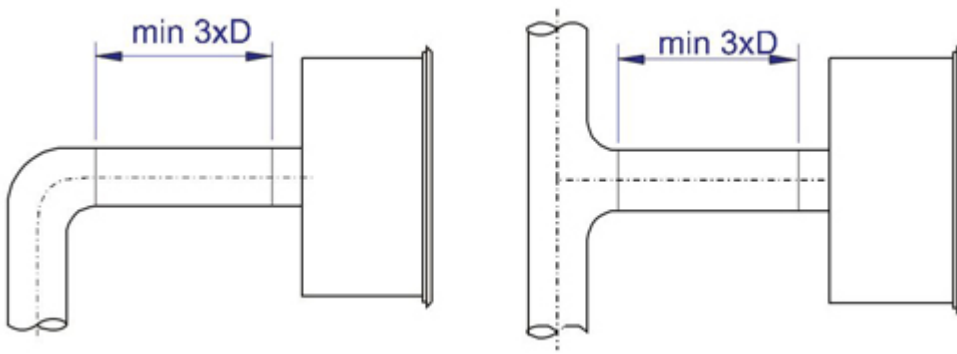


NS	K1
100	85
125	85
160	100
200	125
250 *	125

\*) Only back connection (TLB/B, TLB/C)

Do not fasten screws or rivets in the section at distance K1 from the front edge of the plenum, in order to keep the section clear for diffuser section (1) fastening.

## Safety distance



The recommended minimum safety distance before the supply unit is 3xD.

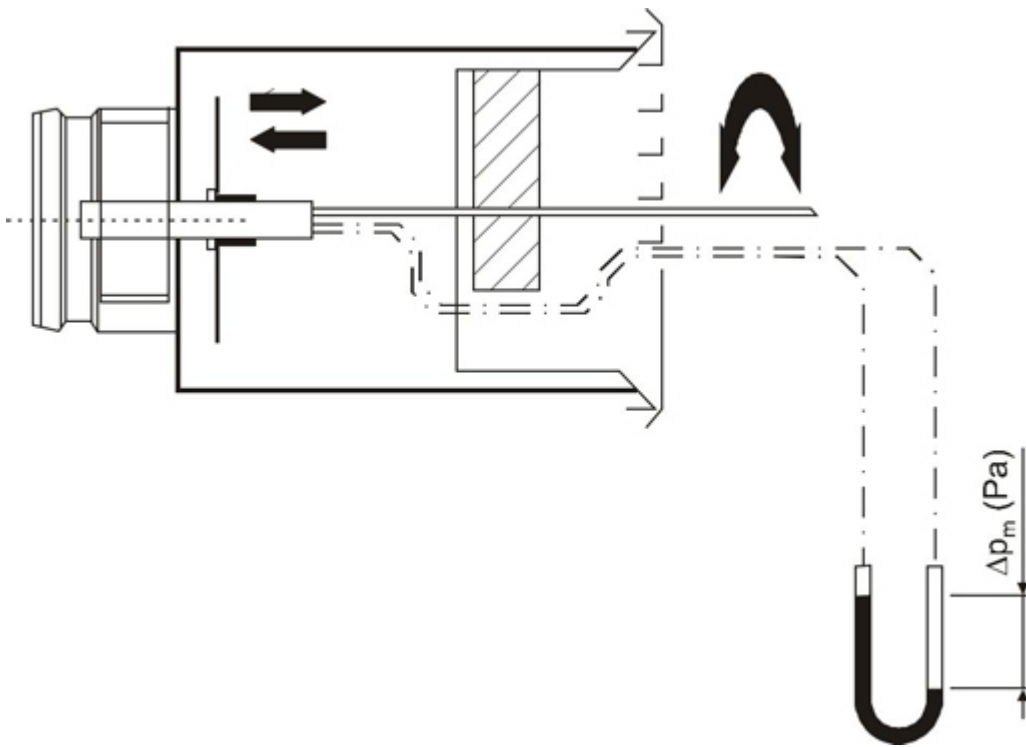
## Adjustment

The supply flow rate is determined by using measurement and adjustment module MSM. The tubes and control spindle are passed through the diffuser section, which is then replaced. Measure the differential pressure with a manometer. The flow rate is calculated using the formula below.

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

Adjust the airflow rate by rotating the control spindle until the desired setting is achieved. Lock the damper position with a screw. Replace the tubes and spindle in the diffuser section.

The exhaust flow rate is determined by using the separate measurement module located inside the plenum.



The k factor for installations with different safety distances  
(D = duct diameter)

#### Supply air

NS	> 8xD	min. 3xD
100	6.2	6.8
125	10.5	12.9
160	18.8	22.4
200	27.8	32.9
250 *)	45.7	55.5

\*) Only back connection (TLB/B, TLB/C)

#### Exhaust air

TLB	TLB/C (back connection)	TLB/F (side connection)
100	8.2	8.2
125	9.7	9.2
160	12.1	13.4
200	21.5	23.5
250	31.1	–

# Servicing

Open the Halton TLB diffuser section and remove the measurement and adjustment module by pulling gently from the shaft (not from 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 the shaft until it meets the stopper. The diffuser section is replaced by pushing it into the plenum until the springs lock.

# Specification

The wall diffuser unit shall direct the supply air pattern obliquely towards the ceiling. The ductwork connection shall be located at the back or on the side of the unit. The throw pattern's size and shape shall be adjustable by altering the position of the deflector panel.

The diffuser shall consist of a galvanised steel plenum and a detachable diffuser section made of painted steel with a white (RAL 9003) standard colour. The detachable diffuser section shall comprise a sound attenuator and be fixed to the plenum via invisible springs.

The diffuser shall provide access to the plenum and ductwork for cleaning and maintenance.

# Order code

## TLB/S-D; CO-ZT

### **S = Construction**

- A Diffuser section
- B Plenum with duct connection on back (supply with MSM module)
- C Plenum with duct connection on back (exhaust with MEM module)
- E Plenum with duct connection on side (supply with MSM module)
- F Plenum with duct connection on side (exhaust with MEM module)

### **D = Connection size (mm)**

100, 125, 160, 200, 250

# 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

CE Cover sleeve (for back connection only, TLB/B, TLB/C)

DP Deflection panel (for front diffuser only, TLB/A)

## Code example

TLB/A-100, CO=SW,ZT=N

(Diffuser section)

TLB/B-100, ZT=N

(Plenum, supply, back connection)