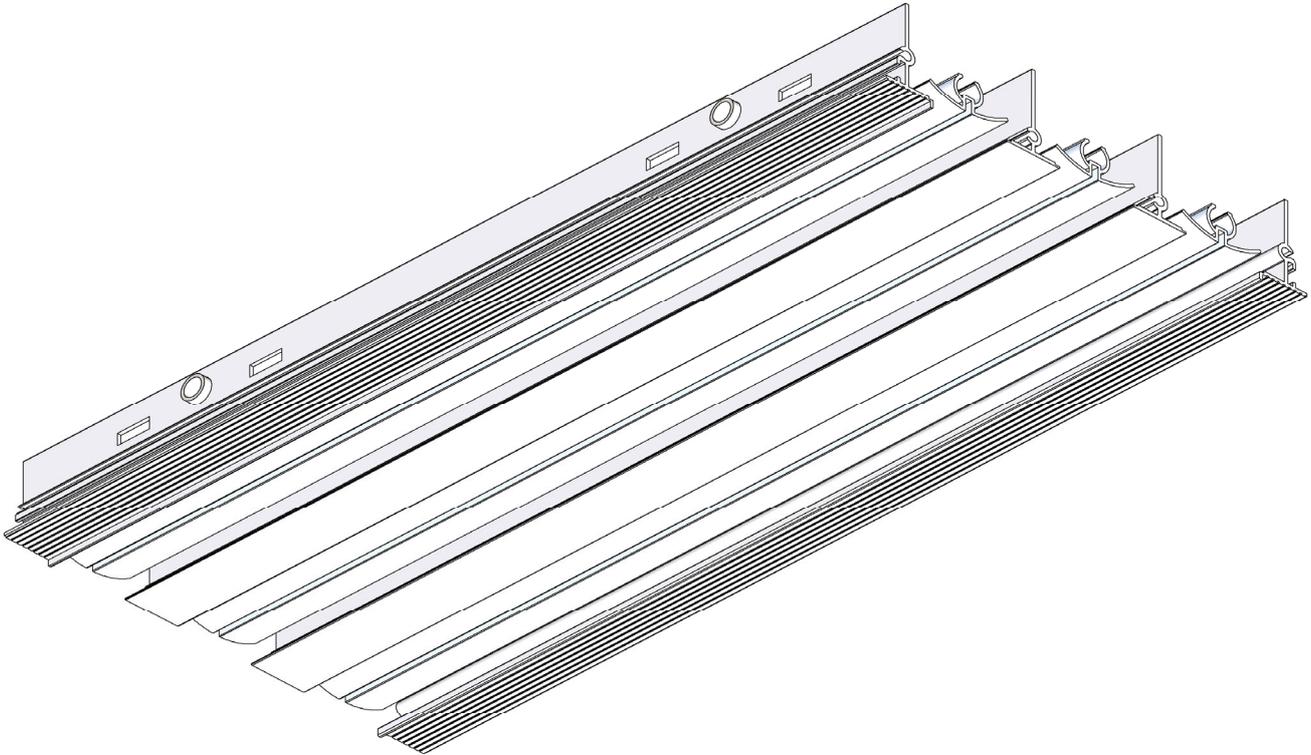




## CONCEALED DESIGN SLOT DIFFUSERS

LSD  
SERIES

### OVERVIEW



#### OVERVIEW:

The **LSD** series linear diffusers allow the management of high air flow rates with minimum values of pressure drop and sound power generated, guaranteeing excellent comfort conditions, absence of sensible currents and temperature uniformity even in large rooms. They also have a double deflector regulation system, two horizontal throw modes, the first exploits the Coandă effect, the second allows high flow rates to be diffused.

#### CHARACTERISTICS AND FUNCTIONING:

The **LSD** series diffusers consist of a body and a series of aluminium blades, the latter adjustable without removing the diffuser.

#### APPLICATIONS:

The **LSD** series diffusers are used in ventilation systems for rooms with ceiling heights of 3 to 6 metres, such as open-plan offices, shopping malls, hospital wards and hotel rooms.

#### DIFFUSER INSTALLATION:

The **LSD** series diffusers can be mounted directly on the ceiling or on special plenum by means of suspension bridges. It is possible to realise continuous lines.

#### FINISH:

The **LSD** series loudspeakers are made with:

Frame: anodised aluminium, white RAL 9010 glossy, black RAL 9005 matte.

Deflectors: anodised aluminium, white RAL 9010 glossy, white RAL 9003 matte, black RAL 9005 matte.

Special finishes of the diffuser body can be realised on request.

#### UNSUITABLE ENVIRONMENTS:

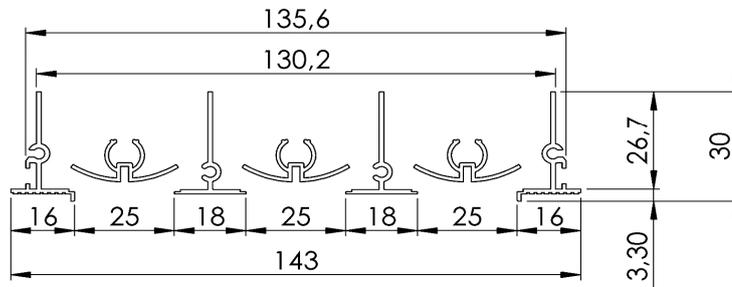
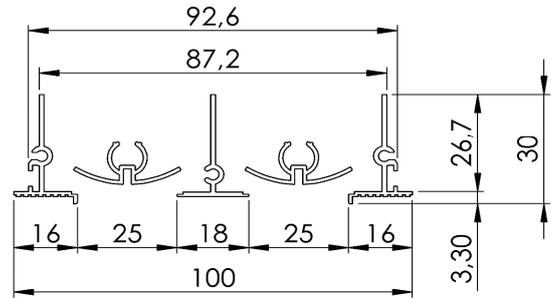
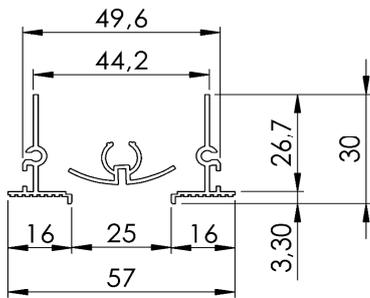
Aluminium products are not suitable for installation in environments with an atmosphere containing corrosive substances for this material and in particular containing chlorine, such as swimming pools, spas and certain types of food industries.



## CONCEALED DESIGN SLOT DIFFUSERS

LSD  
SERIES

### OVERVIEW



#### Effective section Ak [m<sup>2</sup>]

n° of slots	Length [mm]			
	500		1000	
	high Coanda effect	high air flow	high Coanda effect	high air flow
1	0,0047	0,0077	0,0094	0,0154
2	0,0094	0,0154	0,0189	0,0309
3	0,0142	0,0232	0,0283	0,0463

n° of slots	Length [mm]			
	1500		2000	
	high Coanda effect	high air flow	high Coanda effect	high air flow
1	0,0142	0,0232	0,0189	0,0309
2	0,0283	0,0463	0,0378	0,0618
3	0,0425	0,0695	0,0566	0,0926



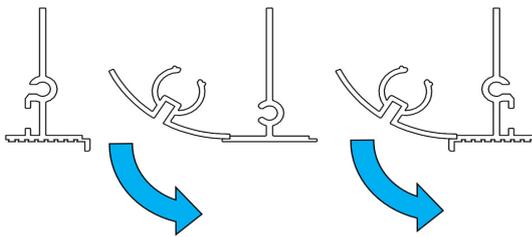
## CONCEALED DESIGN SLOT DIFFUSERS

LSD  
SERIES

### OVERVIEW

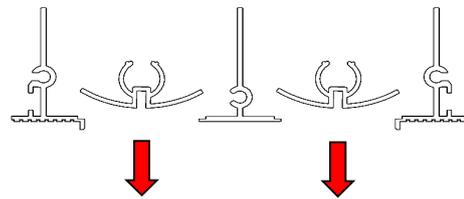
#### Adjustment for horizontal throw high Coandă effect

The throw flows along the ceiling  
guarantees the absence of sensitive air currents  
used in both cooling and heating



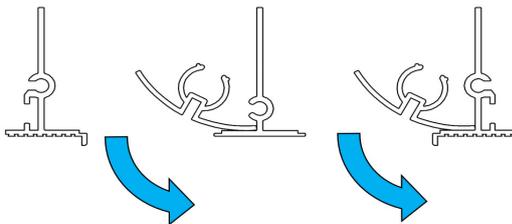
#### Adjustment for vertical throw

The launch penetrates directly into the room  
prevents the layering effect  
used in heating



#### Adjustment for horizontal throw high air flow

The throw flows along the ceiling  
guarantees the ability to deliver high flow rates  
with minimum pressure drop and sound power levels



#### CHOICE OF LAUNCH ORIENTATION :

The horizontal throw is the most common use of this type of diffuser, both in heating and cooling. The throw adheres to the ceiling and spreads horizontally within the room. This generates a vertical recall effect of the air already present in the room, guaranteeing perfect mixing without the presence of currents within the occupied zone. The vertical throw, used in heating, allows the warm air to be sent directly into the occupied zone, counteracting the tendency of warmer air to stratify, due to lower density, in the upper parts of the room.

The orientation of the throw is changed by rotating the deflector fin from inclined to horizontal and vice versa. The blade is rotated by acting from the outside of the diffuser using a lever at either end of each slot.

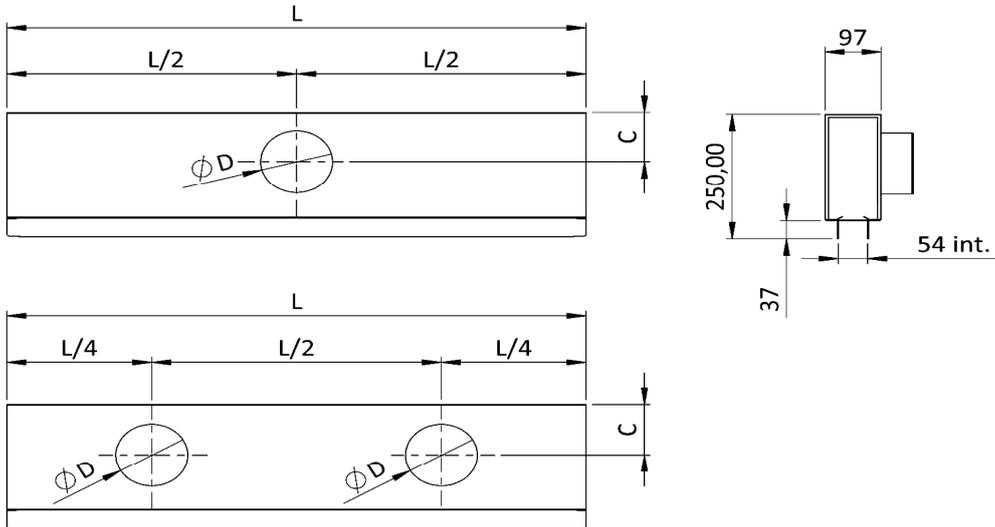


## CONCEALED DESIGN SLOT DIFFUSERS

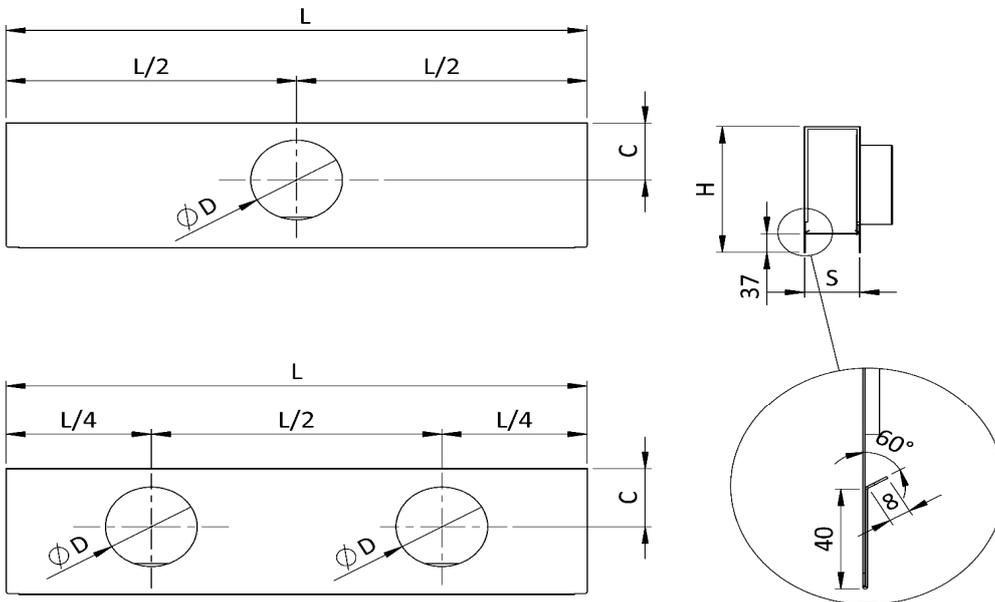
STANDARD PLENUM FOR LSD

# LSD SERIES

1 slot



2-3 slots



L Nominal diffuser length

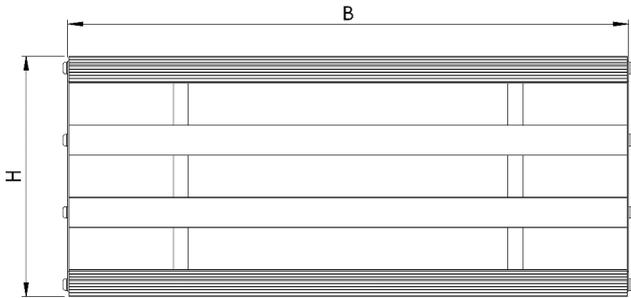
slots	H (mm)	S (mm)	C (mm)	L ≤ 1200 mm		1201 ≤ L ≤ 2000 mm		Holes in the counter ceiling
				connector qty	∅D (mm)	connector qty	∅D (mm)	
1	250	54	100	1	124	2	124	L+10 x 59
2	250	95	115	1	158	2	158	L+10 x 102
3	320	138	135	1	198	2	198	L+10 x 145



# CONCEALED DESIGN SLOT DIFFUSERS

## LSD SERIES

### DIFFUSER INSTALLATION WITHOUT PLENUM



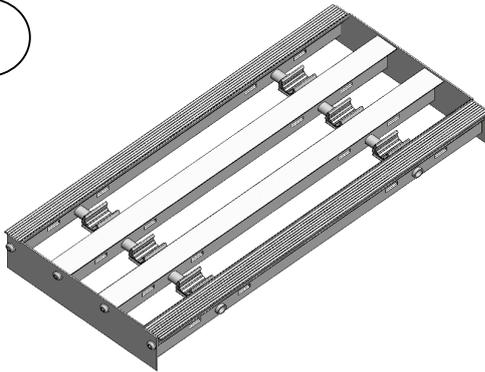
dimensions of the  
hole in the ceiling  
B+10 X H+2

1



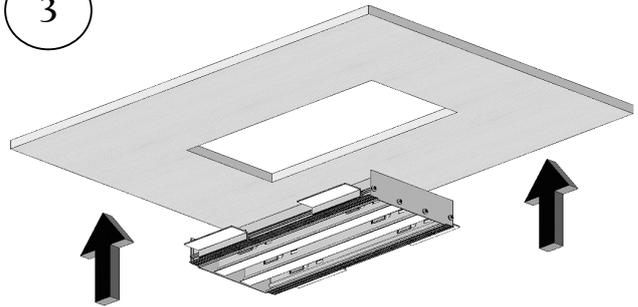
Remove the first deflector by turning and pushing it

2



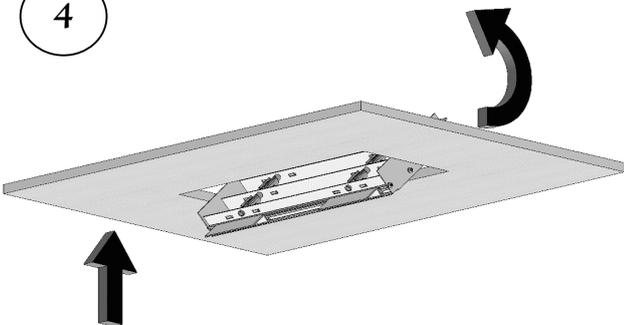
Remove all deflectors

3



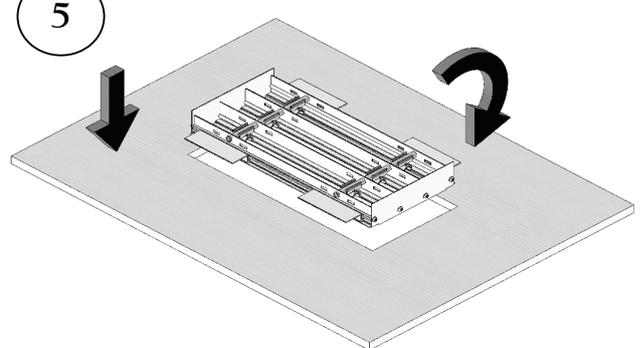
Insert the diffuser into the hole in the ceiling

4



Rotate the diffuser to facilitate entry

5



Place the diffuser inside the hole

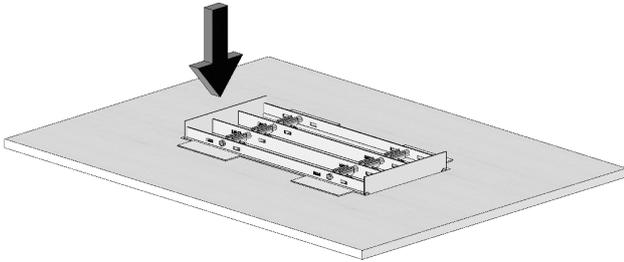


## CONCEALED DESIGN SLOT DIFFUSERS

LSD  
SERIES

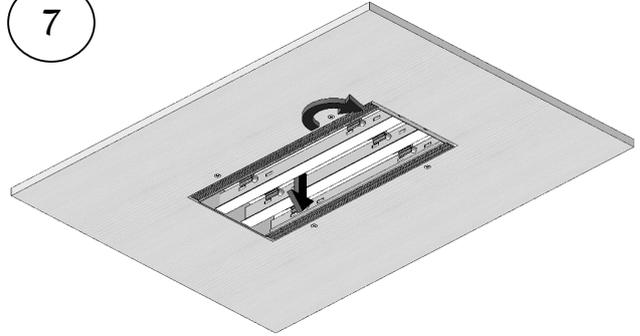
### DIFFUSER INSTALLATION WITHOUT PLENUM

6



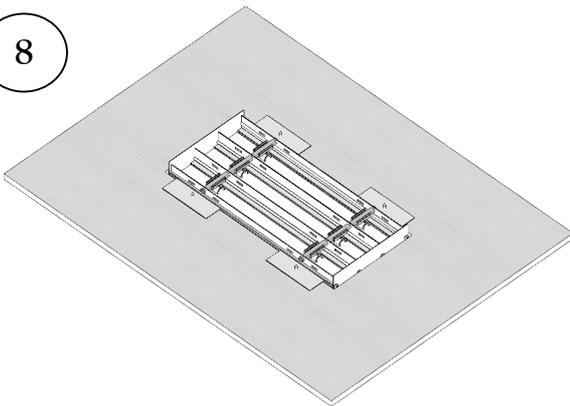
Attach the anchoring bayonets to the suspended ceiling

7

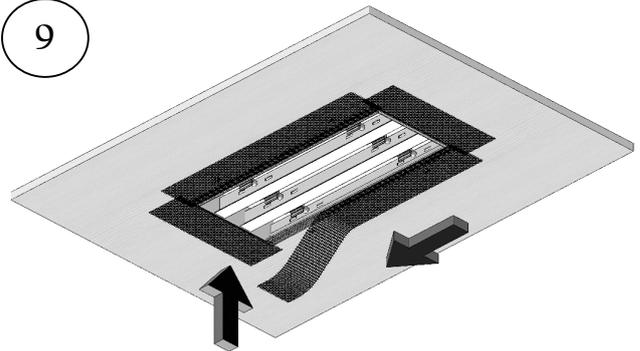


Keeping the diffuser in contact with the counter ceiling insert a self-drilling screw from bottom to top at each bayonet

8

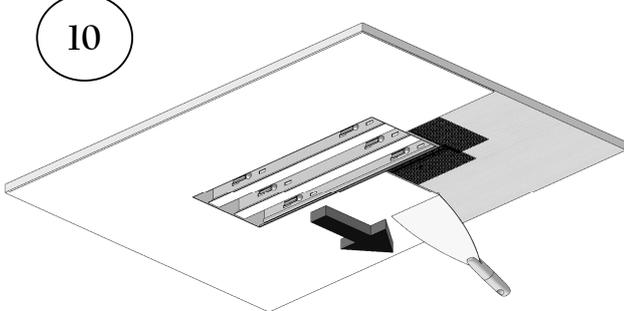


9



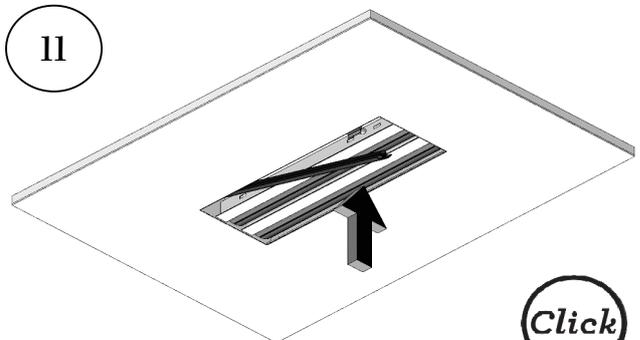
Apply plasterboard joint-covering tape

10



Apply skimming filler

11



Refit the deflectors by attaching them to the appropriate

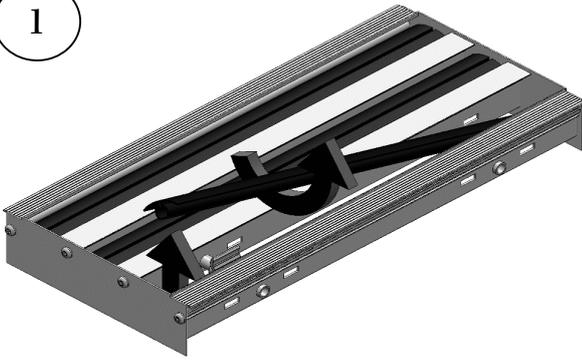


## CONCEALED DESIGN SLOT DIFFUSERS

LSD  
SERIES

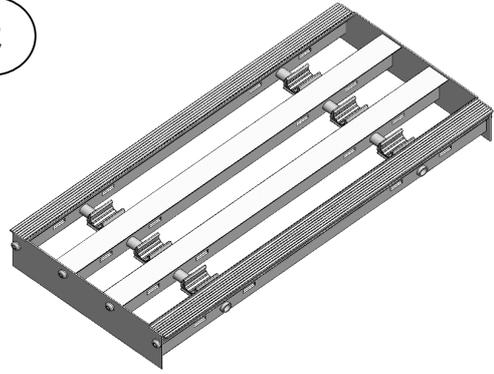
### DIFFUSER INSTALLATION WITH PLENUM AND QUICK FIXES

1



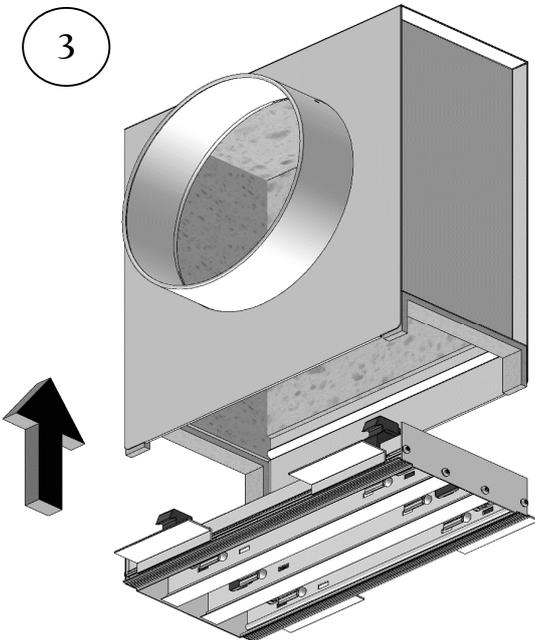
Remove the first deflector by turning and pushing it

2



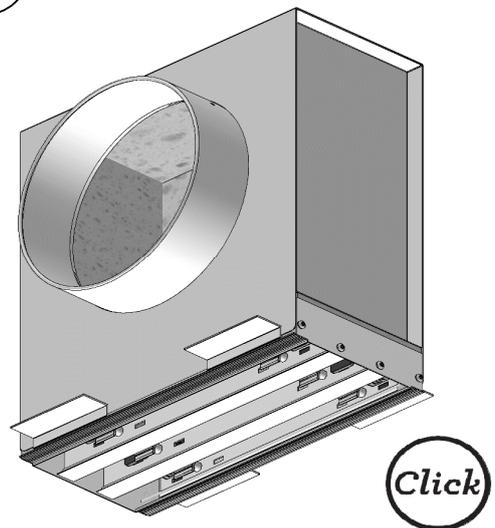
Remove all deflectors

3



Insert the diffuser inside the plenum

4



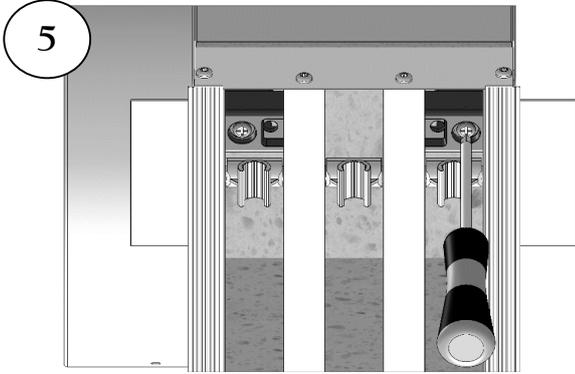
Attach the quick fixes to the plenum



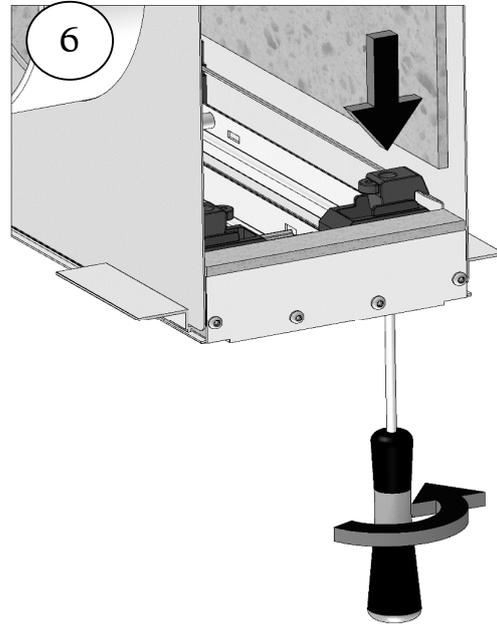
## CONCEALED DESIGN SLOT DIFFUSERS

LSD  
SERIES

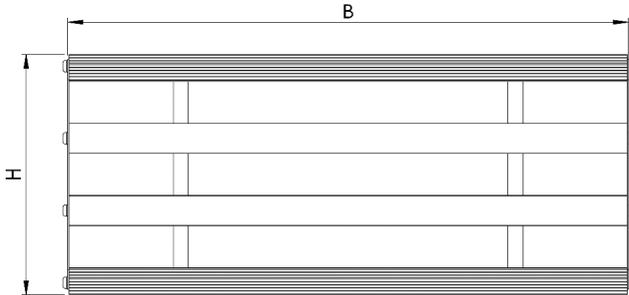
### DIFFUSER INSTALLATION WITH PLENUM AND QUICK FIXES



Insert a screwdriver

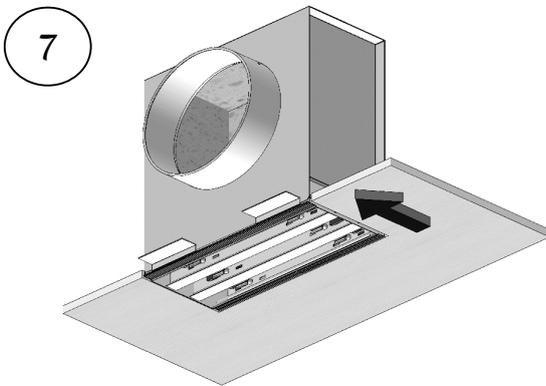


Tighten the screws of the quick fixes

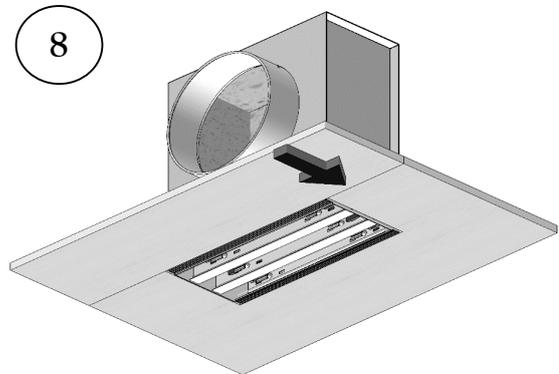


dimensions of the  
hole in the ceiling

$B+10 \times H+2$



Add the first piece of plasterboard



Add the second piece of plasterboard

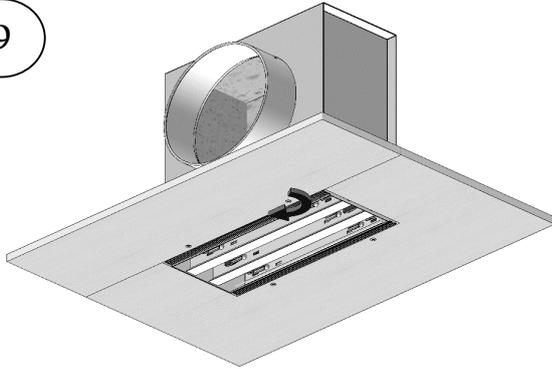


## CONCEALED DESIGN SLOT DIFFUSERS

LSD  
SERIES

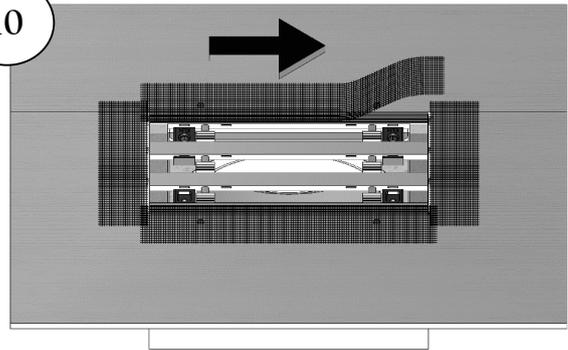
DIFFUSER INSTALLATION  
WITH PLENUM AND QUICK FIXES

9



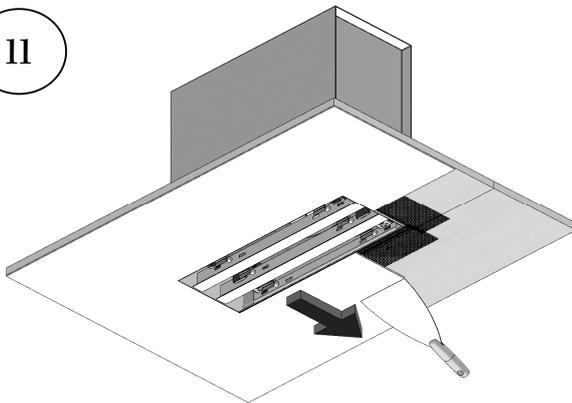
Tighten one screw per bayonet

10



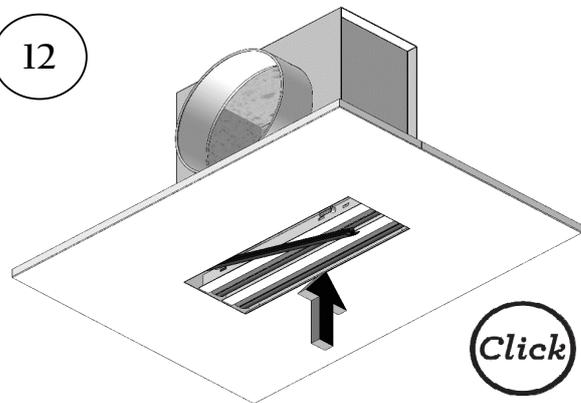
Apply plasterboard joint-covering tape

11



Apply skimming filler

12



Reinstall the deflectors by attaching them to the appropriate clips



## CONCEALED DESIGN SLOT DIFFUSERS

LSD  
SERIES

DIFFUSER INSTALLATION  
WITH PLENUM WITHOUT QUICK FIXES

1



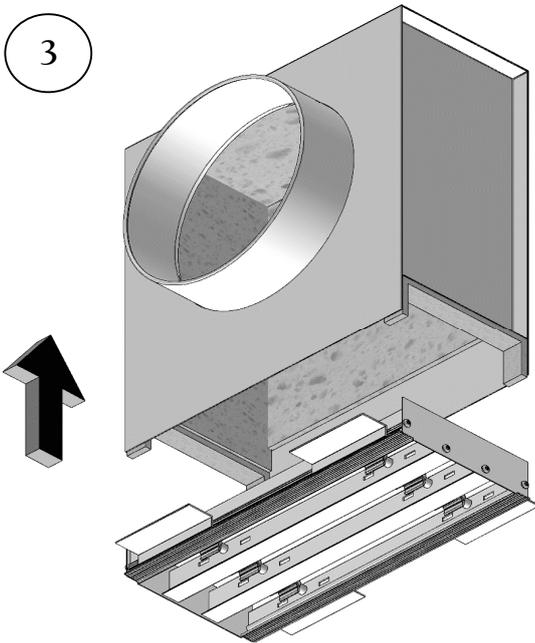
Remove the first deflector by turning and pushing it

2



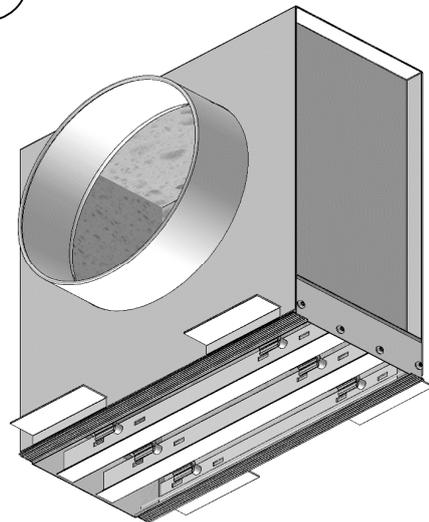
Remove all deflectors

3



Insert the diffuser inside the plenum

4



Bring the plenum to a stop on the anchorage bayonets

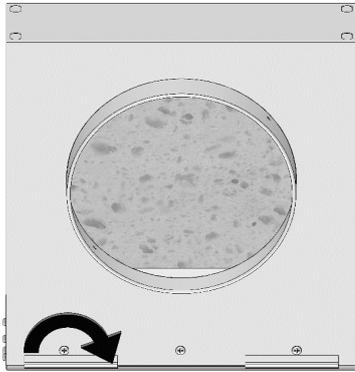


## CONCEALED DESIGN SLOT DIFFUSERS

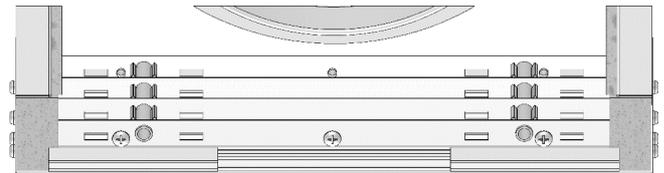
LSD  
SERIES

### DIFFUSER INSTALLATION WITH PLENUM WITHOUT QUICK FIXES

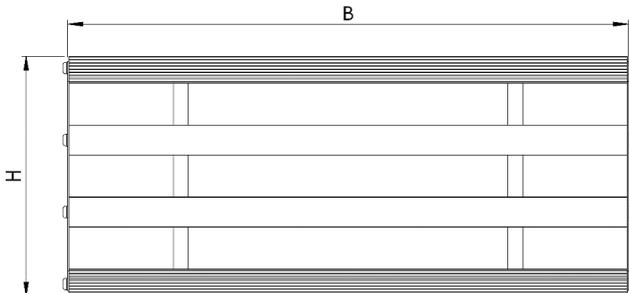
5



6

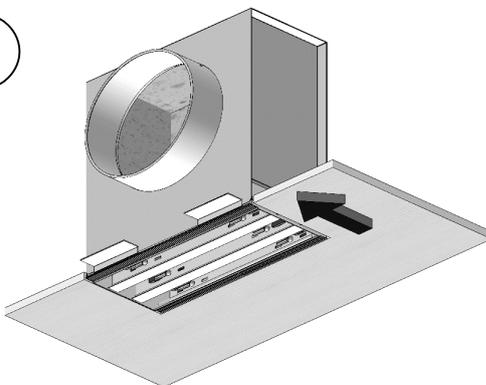


Fasten the plenum and diffuser frame with self-drilling screws. When fixing with screws, take care not to damage the diffuser.



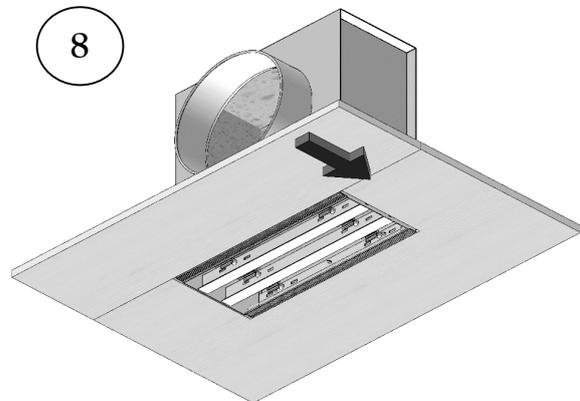
dimensions of the  
hole in the ceiling  
B+10 X H+2

7



Add the first piece of plasterboard

8



Add the second piece of plasterboard

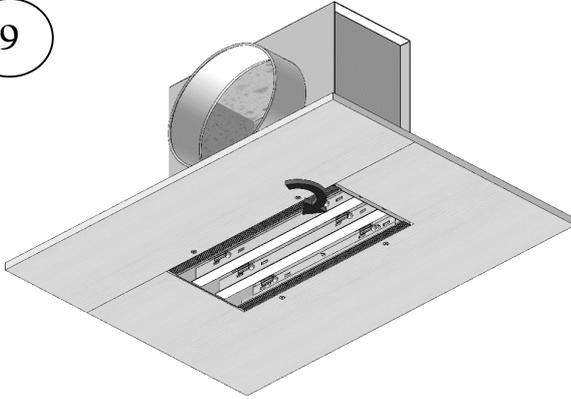


## CONCEALED DESIGN SLOT DIFFUSERS

LSD  
SERIES

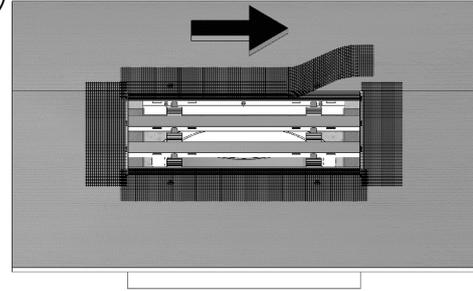
### DIFFUSER INSTALLATION WITH PLENUM WITHOUT QUICK FIXES

9



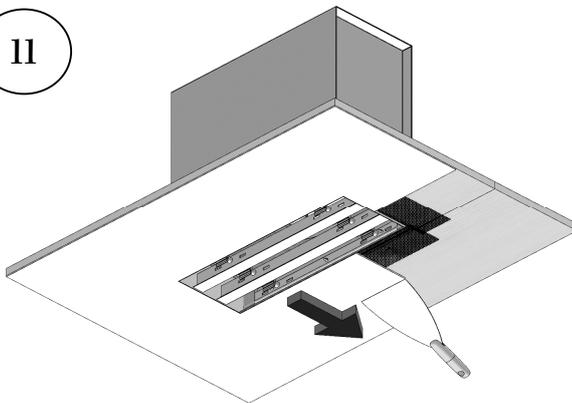
Tighten one screw per bayonet

10



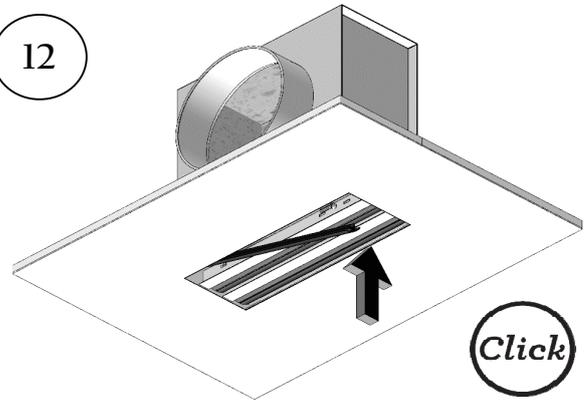
Apply plasterboard joint-covering tape

11



Apply skimming filler

12



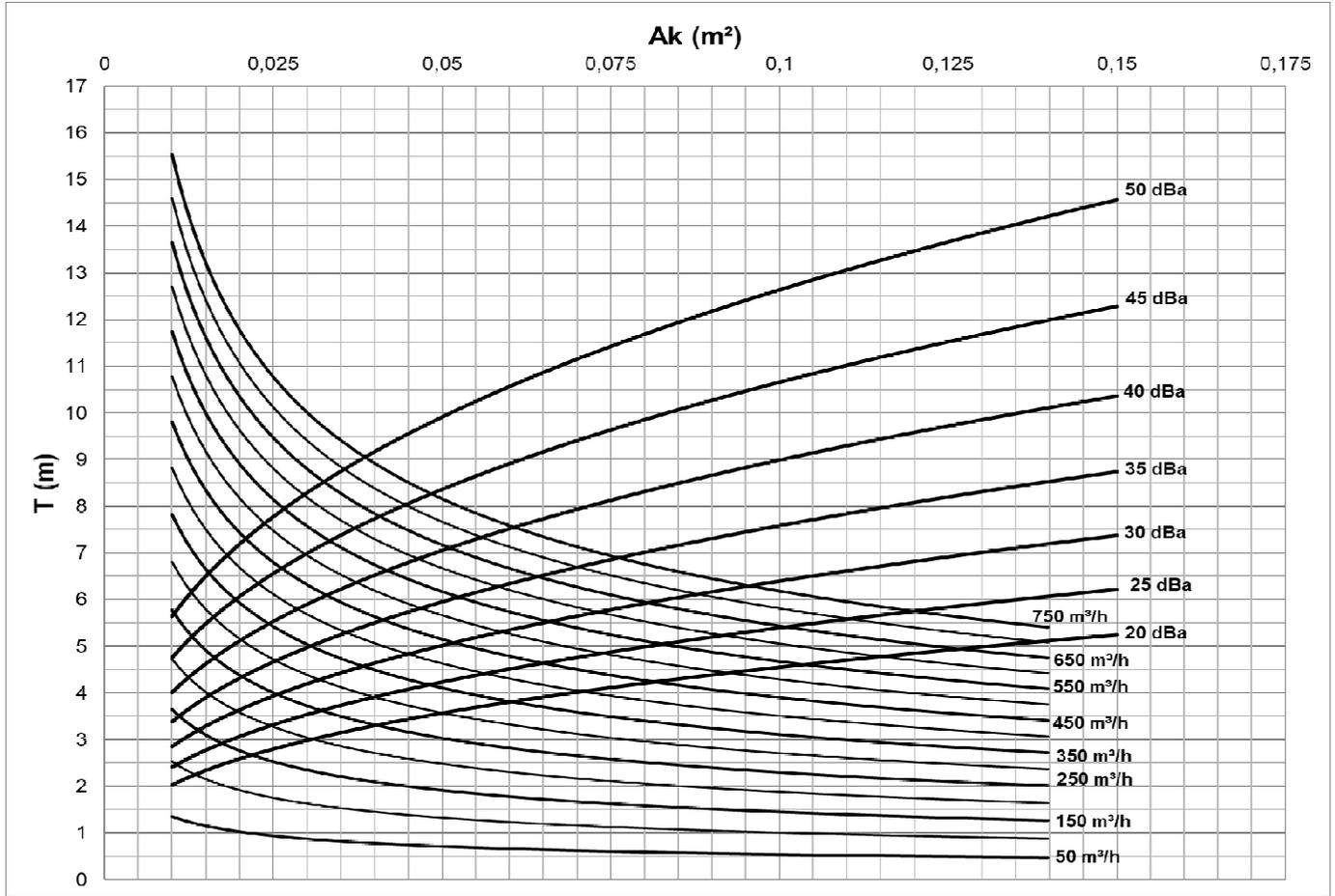
Reinstall the deflectors by attaching them to the appropriate clips



# CONCEALED DESIGN SLOT DIFFUSERS

# LSD SERIES

## PERFORMANCE



T= Launch with terminal velocity 0.2m/s

### Effective section Ak [m<sup>2</sup>]

n° of slots	Length [mm]			
	500		1000	
	high Coanda effect	high air flow	high Coanda effect	high air flow
1	0,0047	0,0077	0,0094	0,0154
2	0,0094	0,0154	0,0189	0,0309
3	0,0142	0,0232	0,0283	0,0463

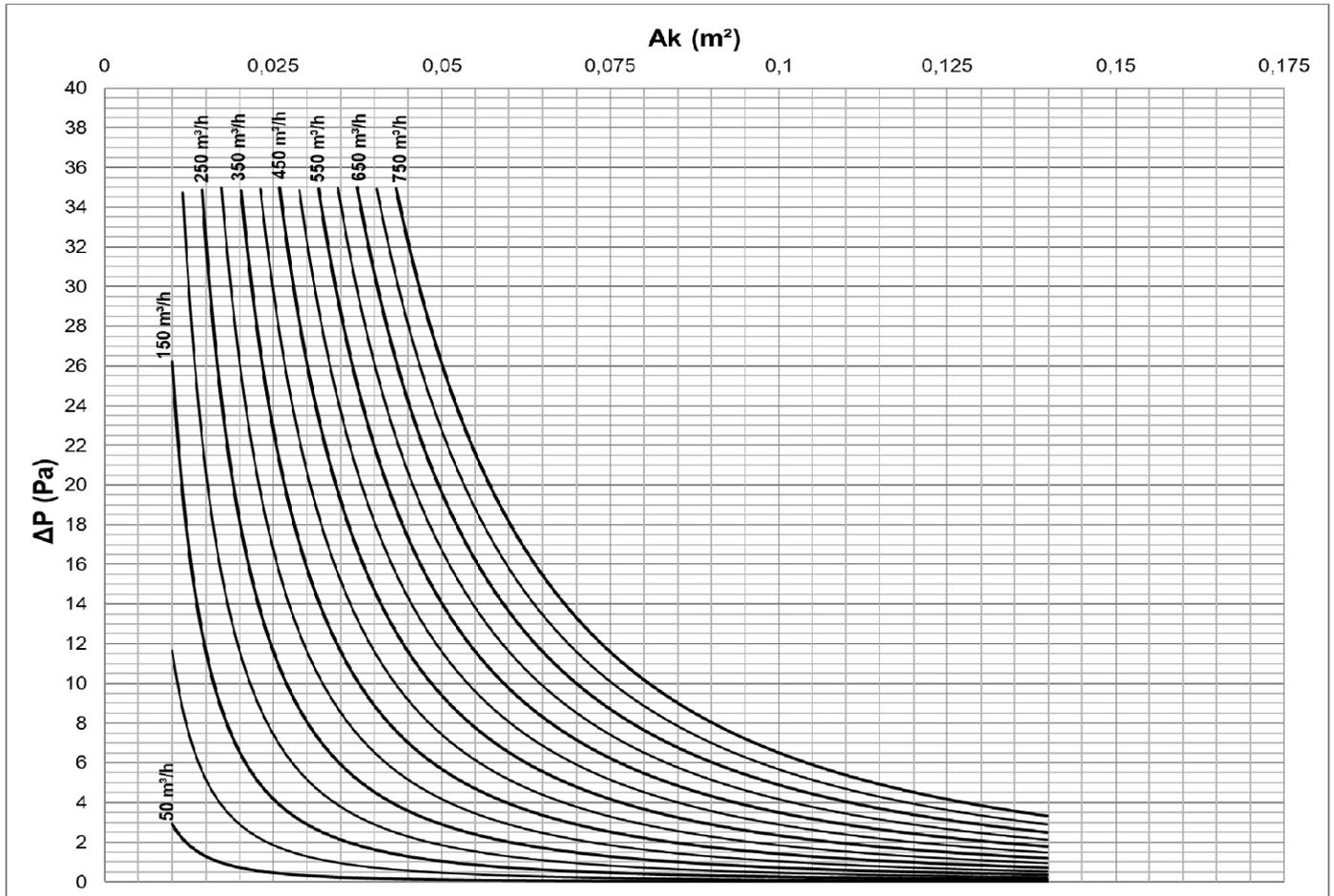
n° of slots	Length [mm]			
	1500		2000	
	high Coanda effect	high air flow	high Coanda effect	high air flow
1	0,0142	0,0232	0,0189	0,0309
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3	0,0425	0,0695	0,0566	0,0926



## CONCEALED DESIGN SLOT DIFFUSERS

LSD  
SERIES

PERFORMANCE



Effective section  $A_k$  [m<sup>2</sup>]

n° of slots	Length [mm]			
	500		1000	
	high Coanda effect	high air flow	high Coanda effect	high air flow
1	0,0047	0,0077	0,0094	0,0154
2	0,0094	0,0154	0,0189	0,0309
3	0,0142	0,0232	0,0283	0,0463

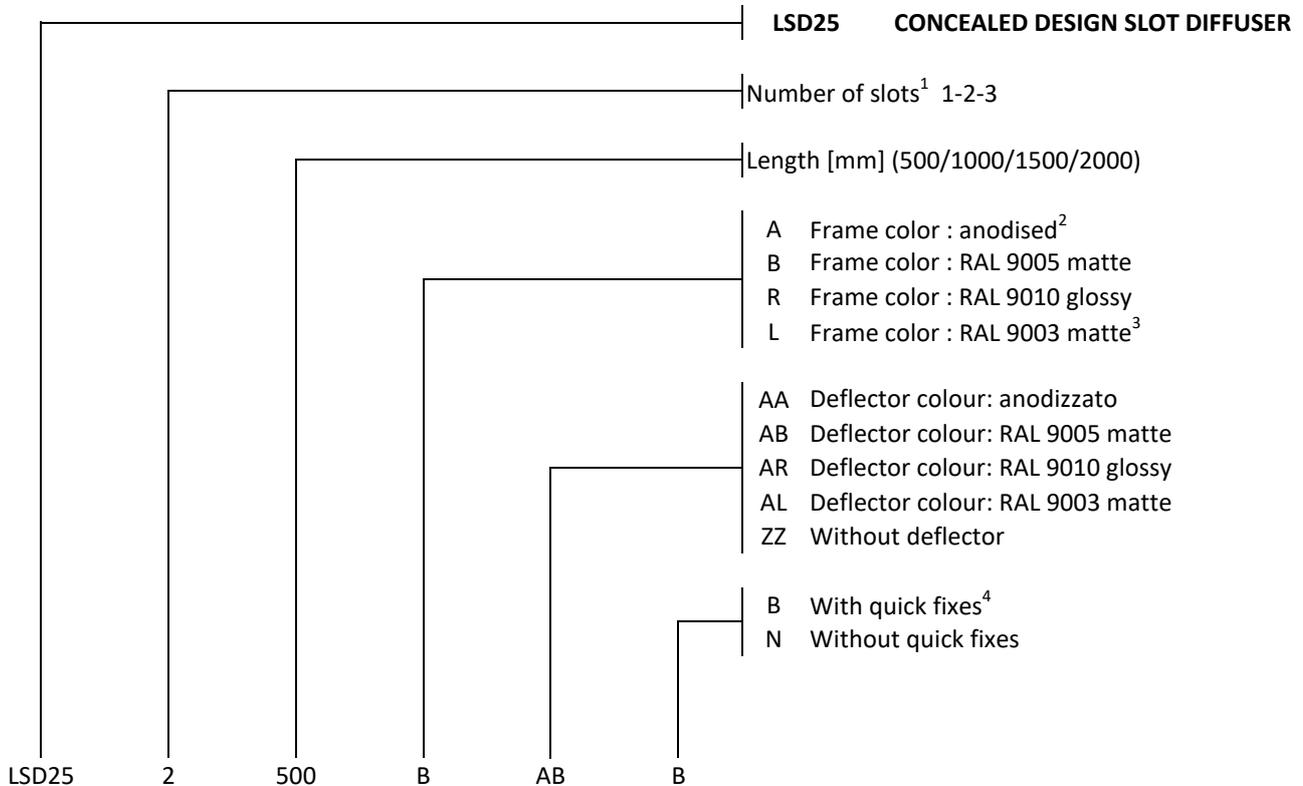
n° of slots	Length [mm]			
	1500		2000	
	high Coanda effect	high air flow	high Coanda effect	high air flow
1	0,0142	0,0232	0,0189	0,0309
2	0,0283	0,0463	0,0378	0,0618
3	0,0425	0,0695	0,0566	0,0926



## CONCEALED DESIGN SLOT DIFFUSERS

LSD  
SERIES

### HOW TO ORDER



- 1 Up to 6 slits on request
- 2 Raw aluminium side frames
- 3 Side frames in RAL 9010 glossy
- 4 Mandatory in case of diffuser with P94A Lindab plenum:

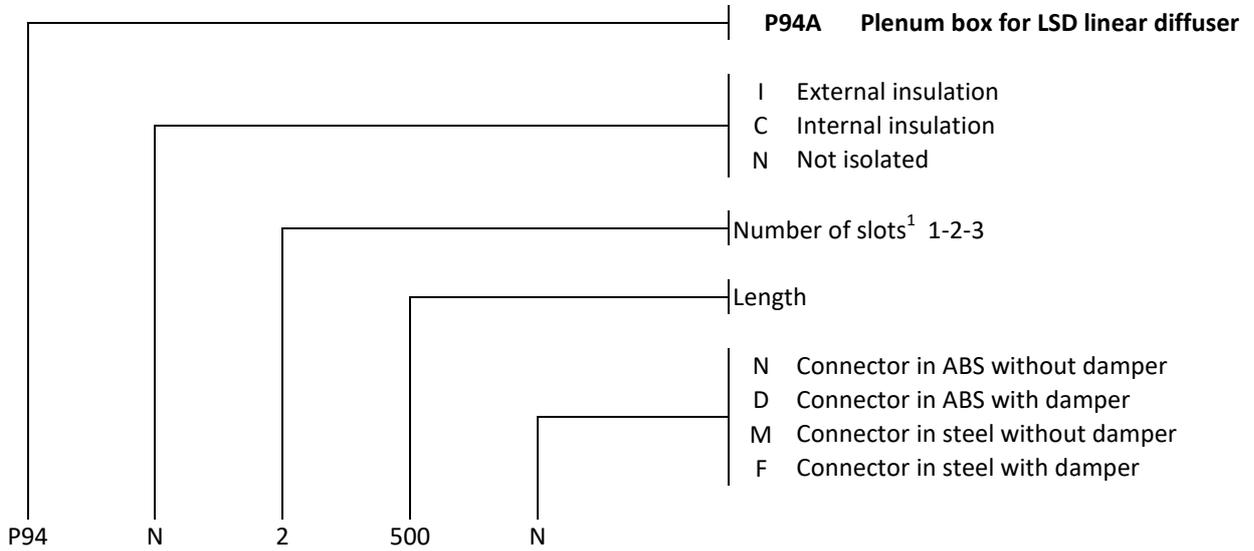
NUMBER OF PLANNED QUICK FIXES
<b>Diffuser 1 slot</b> Length up to 1500mm: 2 quick-fixes Length over 1500mm: 4 quick-fixes
<b>Diffuser 2-3 slots</b> Length up to 1500mm: 4 quick-fixes Length over 1500mm: 6 quick-fixes



## CONCEALED DESIGN SLOT DIFFUSERS

LSD  
SERIES

### HOW TO ORDER PLENUM



1 Up to 6 slots on request

As standard, plenums are supplied unmounted on the diffuser

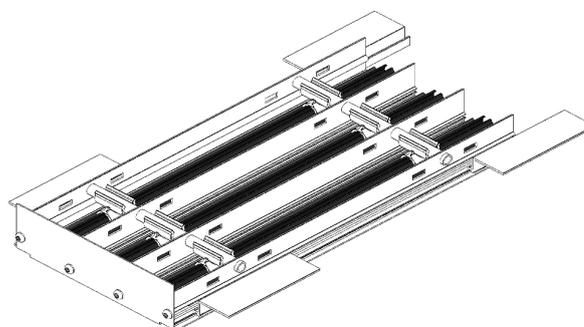
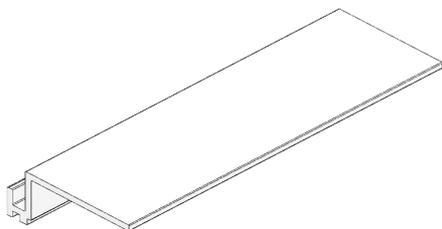


# CONCEALED DESIGN SLOT DIFFUSERS

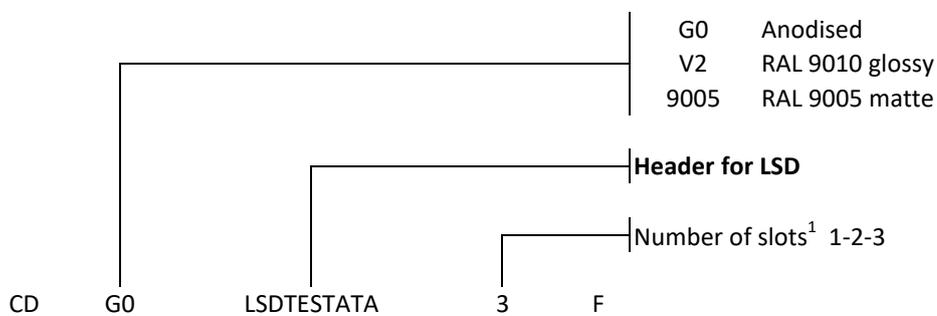
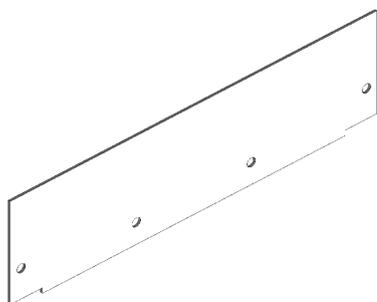
# LSD SERIES

## ACCESSORIES

**PR-G0-LSDPA**  
Bayonet for fixing the deflector

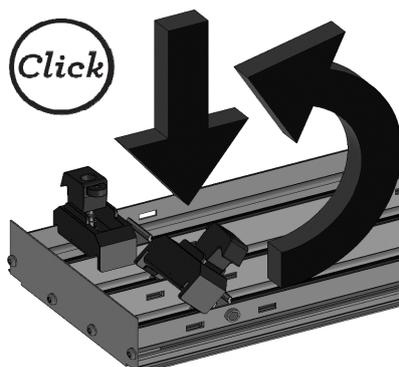
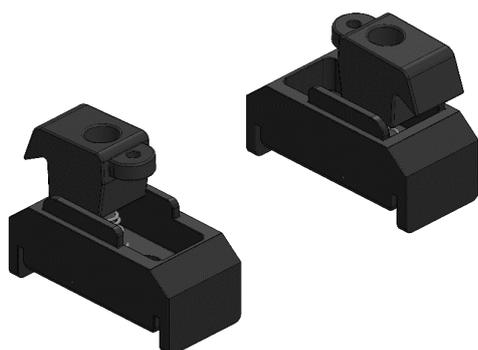


**CD-G0-LSDTESTATA-3F**  
Standard aluminium header



<sup>1</sup> Up to 6 slots, on request

**KLN-QF2**  
Pair of Quick Fix hooks



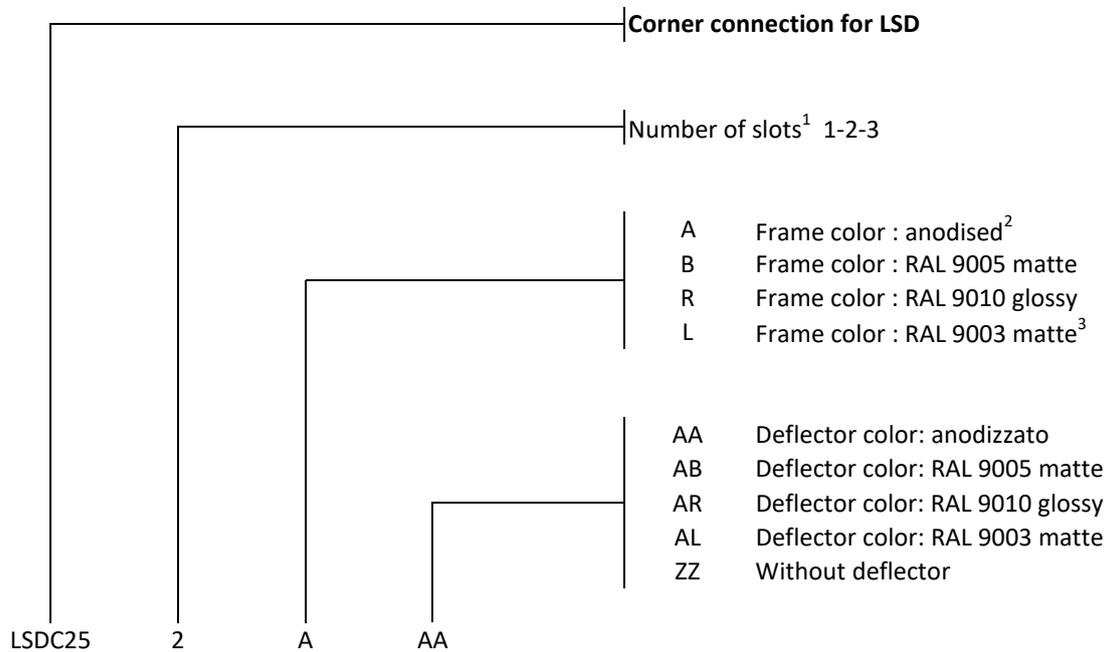
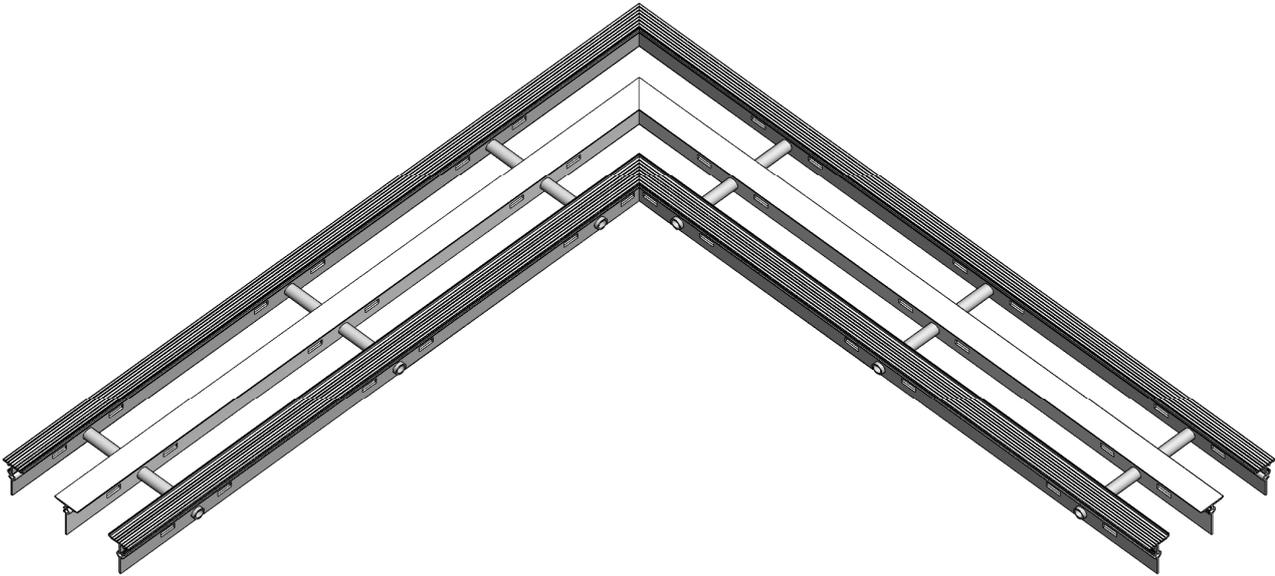


# CONCEALED DESIGN SLOT DIFFUSERS

## LSD SERIES

ACCESSORIES

LSDC Corner connection



- 1 Up to 6 slots on request
- 2 Raw aluminium side frames
- 3 Side frames in RAL 9010 glossy

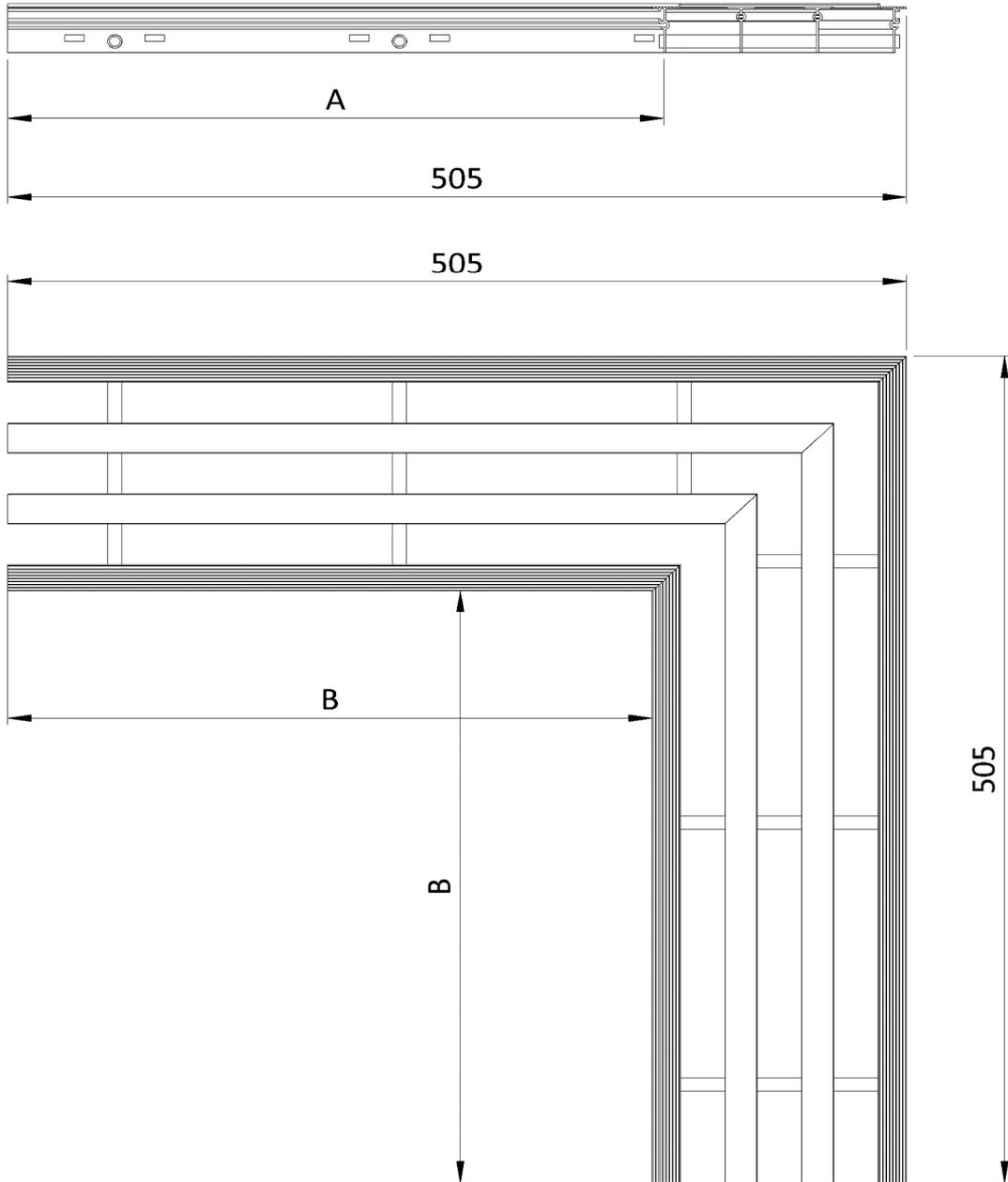


**CONCEALED DESIGN  
SLOT DIFFUSERS**

**LSD  
SERIES**

**ACCESSORIES**

**LSDC Corner connection**



number of slots	A	B
	mm	mm
1	455	448
2	412	405
3	369	362

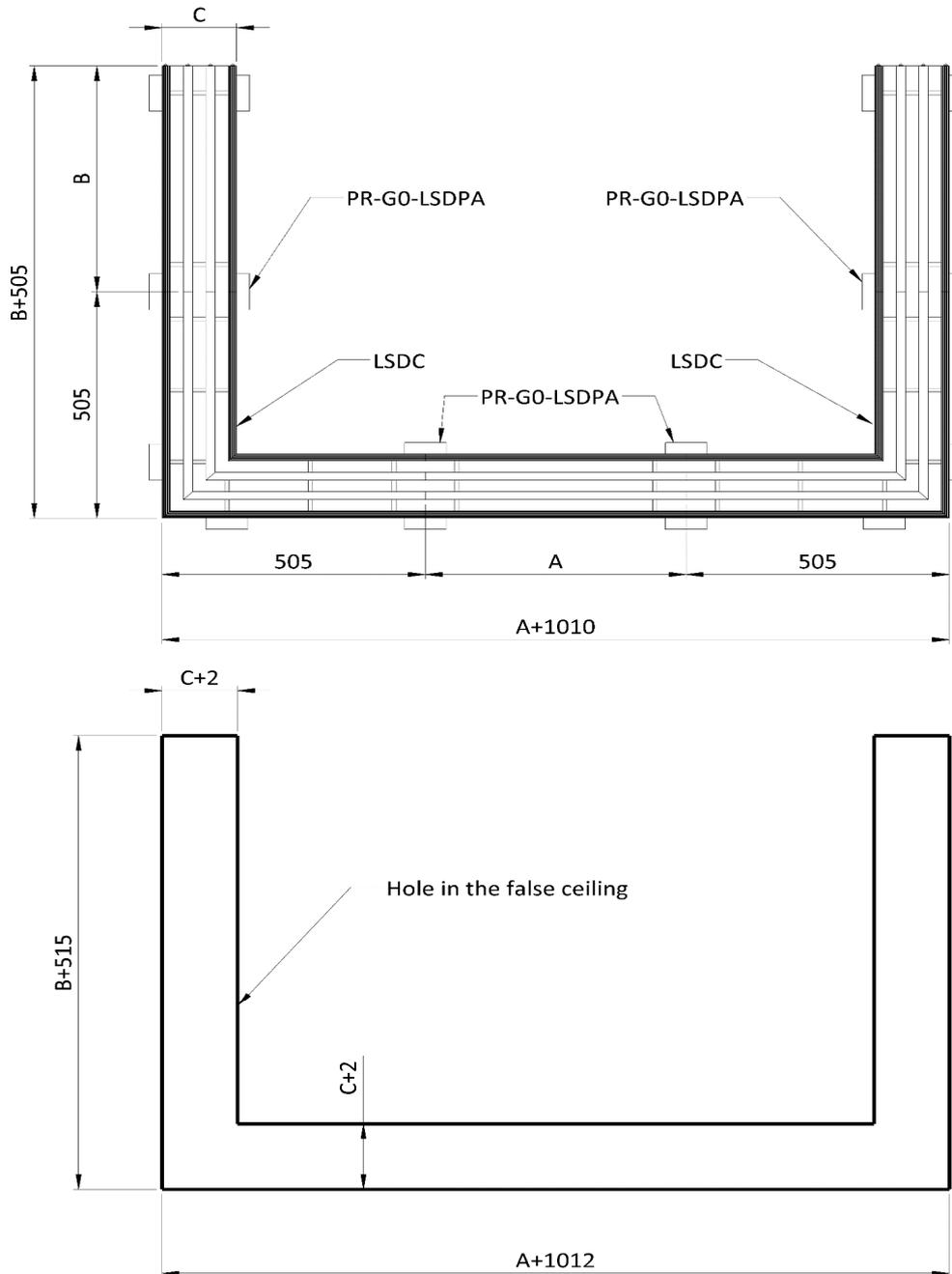


# CONCEALED DESIGN SLOT DIFFUSERS

ACCESSORIES

LSD  
SERIES

Example of continuous line installation with corners



number of slots	C (mm)
1	57
2	100
3	143

