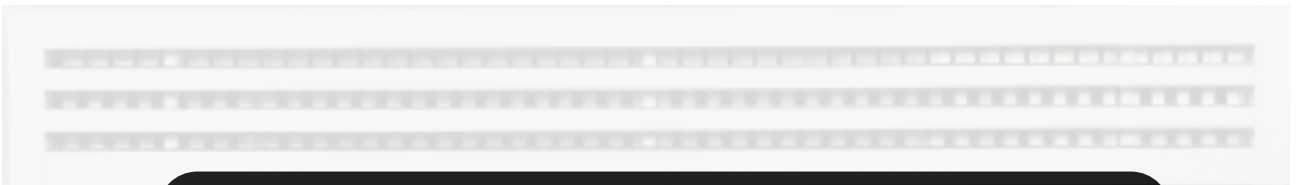




Air Outlets

Linear Slot Diffuser SLSD & RLSD



Pro-airoutlets.com

LINEAR SLOT DIFFUSER SLSD & RLSD



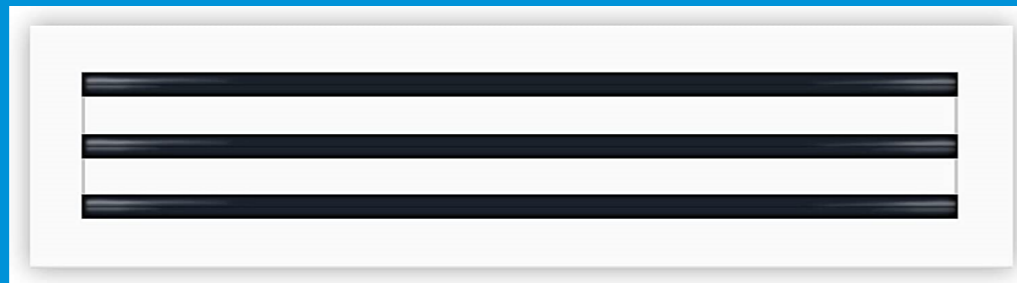
TYPES

- SLSD : Supply Linear Slot Diffuser .
- RLSD : Return Linear Slot Diffuser .

SLOT WIDTH

- 3/4", 1" AVAILABLE WIDTH.

FEATURES



MATERIALS

- Frame and intermediate section: Extruded aluminium profile .
- Deflector blades : special deflector blades to get the require pattern made from extruded aluminium profile
- The damper : are made Black steel sheet .

FINISH

- Standard finish : Anodized . or powder coated.

- Linear slot diffuser is used a ceiling or wall specially designed to provide supply or return of air in heating , air conditioning and ventilation system.
- It is an elegant and function solution for air distribution in residential buildings and commercial plants , such as stores , hotels , restaurants , conference rooms ,.....ETC.
- Size width 1 to 6 slot in 20mm or 25mm spacing.
- Vertical downward air pattern can be adjusted from all slots . A combination horizontal pattern and vertical down pattern can be effected from a two (or more) slot diffuser.
- Fine control of air by means of integral air straightener and hit and miss damper .
- On multi-slot diffuser , each slot individually adjustable.
- Series LSD diffusers are fabricated of high-quality aluminium extrusions .The pattern controller is coated dull black to accent the slot opening.
- Optional Accessories : Plenum box is made of galvanized sheet and insulated from the inside.



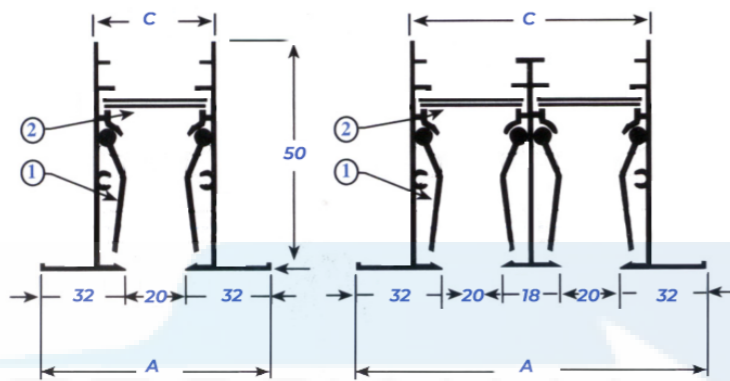
CONSTRUCTION & DIMENSIONAL

ADJUSTABLE DIRECTION OF DISCHARGE



TYPE SLD 1

TYPE SLD 2....,6



- ① Air Deflection Blade
- ② Hit And Miss Damper

| Width | 3/4" | | | | | |
|-------------|------|-----|-----|-----|-----|-----|
| No of Slots | 1 | 2 | 3 | 4 | 5 | 6 |
| C (mm) | 40 | 79 | 115 | 152 | 196 | 235 |
| A (mm) | 90 | 129 | 165 | 202 | 246 | 285 |

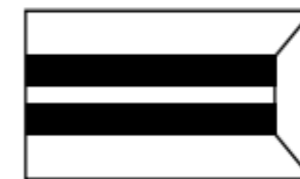
| Width | 1" | | | | | |
|-------------|----|-----|-----|-----|-----|-----|
| No of Slots | 1 | 2 | 3 | 4 | 5 | 6 |
| C (mm) | 45 | 89 | 133 | 176 | 220 | 266 |
| A (mm) | 95 | 139 | 183 | 226 | 270 | 316 |

LINEAR SLOT DIFFUSER

END CAP ARRANGEMENTS



With open ends



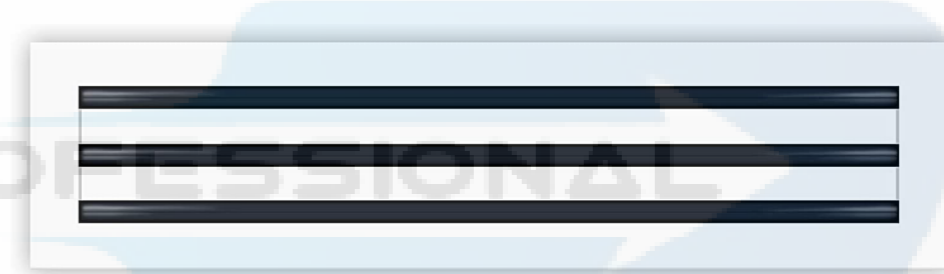
With one side flange



With both side flange

STRAIGHT LINEAR SLOT

- Slot diffusers with hit & miss damper.
- Special deflector blades to adjust the air pattern

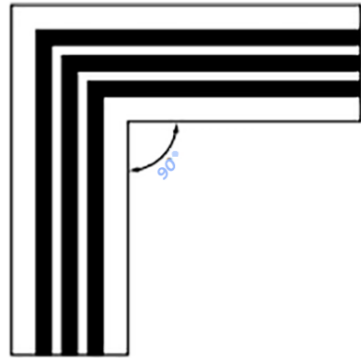


CURVED LINEAR SLOT

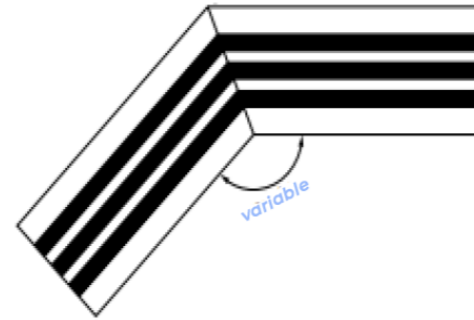


- Without hit & miss dampers & deflector blades.
- For similar appearance deflector blades or hit & miss dampers as optional.

OPTIONAL MITERED CORNERS



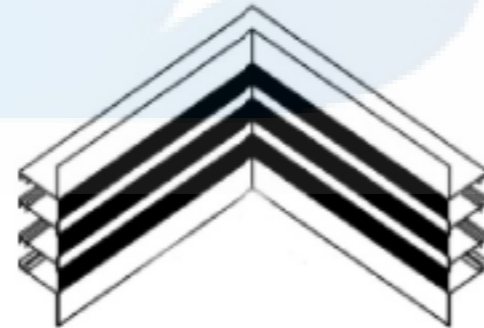
Standard 90° horizontal mitered corners available for floor, sill and ceiling applications.



Special horizontal mitered corners selection available for floor, sill and ceiling applications includes an angle greater than 90° and less than 180°.

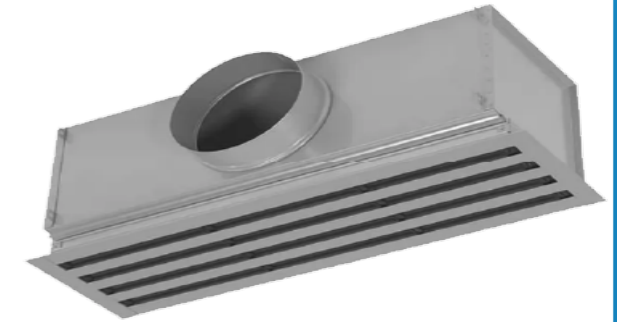
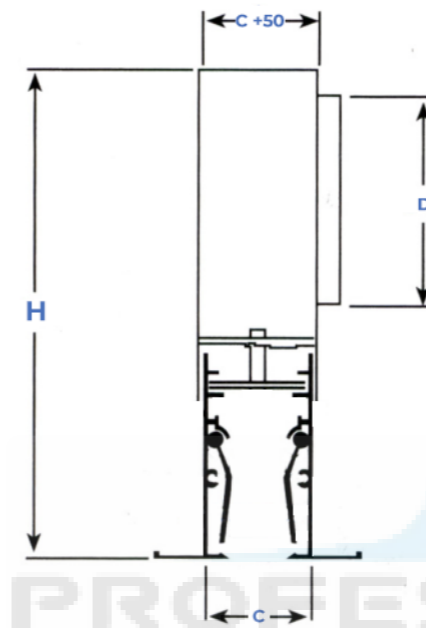


Vertical outside mitered corners are available for wall application at the junction of two outside walls with a standard angle of 90°.

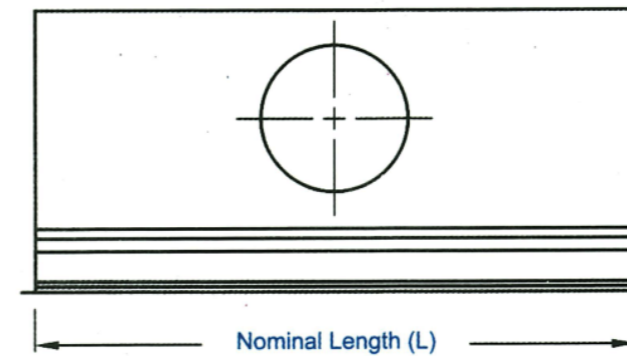


Vertical inside mitered corners are available for wall application at the junction of two inside walls with a standard angle of 90°.

DISTRIBUTION PLENUMS



| Number of slots | Length L | | | | | |
|-----------------|----------|-----|------|-----|------|-----|
| | 1000 | | 1500 | | 2000 | |
| | H | D | H | D | H | D |
| 1 | 300 | 125 | 300 | 150 | 300 | 200 |
| 2 | 300 | 150 | 300 | 200 | 350 | 250 |
| 3 | 300 | 200 | 350 | 250 | 400 | 250 |
| 4 | 350 | 250 | 400 | 250 | 500 | 315 |
| 5 | 350 | 250 | 500 | 315 | 500 | 400 |
| 6 | 500 | 315 | 500 | 400 | 500 | 400 |



PERFORMANCE DATA 3/4" SLOT WIDTH

PERFORMANCE DATA 1" SLOT WIDTH

SUPPLY PERFORMANCE DATA FOR PLENUM APPLICATIONS

SUPPLY PERFORMANCE DATA FOR PLENUM APPLICATIONS

Parallel Discharge

| No of Slots | Total Press Inches of H ₂ O | 0.009 | 0.019 | 0.032 | 0.048 | 0.068 | 0.12 | 0.18 | 0.25 |
|--------------|--|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 AK .038 | CFM / ft | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 |
| | Throw ft | 2.5 | 3.10 | 5.16 | 7.19 | 11.24 | 16.28 | 20.29 | 25.36 |
| 2 AK .076 | CFM / ft | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 120 |
| | Throw ft | 3.9 | 7.17 | 11.22 | 14.26 | 19.30 | 23.35 | 28.40 | 33.43 |
| 3 AK .114 | CFM / ft | 30 | 45 | 60 | 75 | 90 | 120 | 150 | 180 |
| | Throw ft | 3.13 | 10.20 | 16.27 | 21.32 | 23.35 | 32.42 | 32.44 | 38.49 |
| 4 AK .152 | CFM / ft | 40 | 60 | 80 | 100 | 120 | 160 | 200 | 240 |
| | Throw ft | 5.16 | 13.25 | 18.30 | 23.34 | 25.37 | 33.43 | 35.47 | 41.53 |
| 5 AK .19 | CFM / ft | 50 | 75 | 100 | 125 | 150 | 200 | 250 | 300 |
| | Throw ft | 5.17 | 14.26 | 18.31 | 24.35 | 26.37 | 34.45 | 36.48 | 41.53 |
| 6 AK .228 | CFM / ft | 60 | 90 | 120 | 150 | 180 | 240 | 300 | 360 |
| | Throw ft | 6.18 | 14.27 | 19.33 | 24.37 | 27.39 | 34.46 | 37.50 | 42.54 |
| 7 AK .266 | CFM / ft | 70 | 105 | 140 | 175 | 210 | 280 | 350 | 420 |
| | Throw ft | 8.20 | 16.30 | 21.34 | 26.38 | 28.40 | 35.48 | 37.52 | 42.55 |
| 8 AK .304 | CFM / ft | 80 | 120 | 160 | 200 | 240 | 320 | 400 | 480 |
| | Throw ft | 10.23 | 17.31 | 22.34 | 27.39 | 30.24 | 35.49 | 38.53 | 43.57 |

Perpendicular Discharge

| No of Slots | Total Press Inches of H ₂ O | 0.007 | 0.015 | 0.026 | 0.038 | 0.054 | 0.96 | 0.144 | 0.20 |
|--------------|--|-------|-------|-------|-------|-------|------|-------|------|
| 1 AK .045 | CFM / ft | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 |
| | Throw ft | 4 | 9 | 13 | 16 | 20 | 24 | 25 | 30 |
| 2 AK .09 | CFM / ft | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 120 |
| | Throw ft | 7 | 14 | 19 | 22 | 25 | 30 | 34 | 36 |
| 3 AK .135 | CFM / ft | 30 | 45 | 60 | 75 | 90 | 120 | 150 | 180 |
| | Throw ft | 11 | 17 | 23 | 27 | 29 | 35 | 37 | 41 |
| 4 AK .18 | CFM / ft | 40 | 60 | 80 | 100 | 120 | 160 | 200 | 240 |
| | Throw ft | 14 | 21 | 25 | 29 | 32 | 36 | 40 | 45 |
| 5 AK .225 | CFM / ft | 50 | 75 | 100 | 125 | 150 | 200 | 250 | 300 |
| | Throw ft | 15 | 22 | 27 | 30 | 34 | 37 | 41 | 46 |
| 6 AK .27 | CFM / ft | 60 | 90 | 120 | 150 | 180 | 240 | 300 | 360 |
| | Throw ft | 17 | 23 | 28 | 31 | 35 | 39 | 43 | 47 |
| 7 AK .315 | CFM / ft | 70 | 105 | 140 | 175 | 210 | 280 | 350 | 420 |
| | Throw ft | 19 | 25 | 30 | 33 | 37 | 40 | 45 | 49 |
| 8 AK .36 | CFM / ft | 80 | 120 | 160 | 200 | 240 | 320 | 400 | 480 |
| | Throw ft | 21 | 27 | 31 | 35 | 38 | 42 | 46 | 50 |

Parallel Discharge

| No of Slots | Total Press Inches of H ₂ O | 0.008 | 0.017 | 0.029 | 0.044 | 0.061 | 0.11 | 0.16 | 0.24 |
|--------------|--|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 AK .047 | CFM / ft | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 |
| | Throw ft | 4.7 | 6.10 | 9.14 | 11.17 | 13.20 | 17.27 | 21.34 | 25.36 |
| 2 AK .094 | CFM / ft | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 120 |
| | Throw ft | 5.9 | 7.12 | 11.17 | 13.20 | 16.24 | 20.32 | 25.40 | 33.43 |
| 3 AK .141 | CFM / ft | 30 | 45 | 60 | 75 | 90 | 120 | 150 | 180 |
| | Throw ft | 6.11 | 8.14 | 13.20 | 16.24 | 19.28 | 24.38 | 30.45 | 38.49 |
| 4 AK .188 | CFM / ft | 40 | 60 | 80 | 100 | 120 | 160 | 200 | |
| | Throw ft | 7.13 | 10.17 | 16.24 | 19.28 | 22.33 | 28.45 | 35.50 | |
| 5 AK .235 | CFM / ft | 50 | 75 | 100 | 125 | 150 | 200 | 250 | |
| | Throw ft | 9.15 | 12.20 | 19.28 | 23.33 | 26.39 | 30.50 | 40.55 | |
| 6 AK .282 | CFM / ft | 60 | 90 | 120 | 150 | 180 | 240 | 300 | |
| | Throw ft | 11.18 | 14.24 | 22.33 | 28.39 | 31.46 | 39.55 | 45.58 | |

Perpendicular Discharge

| No of Slots | Total Press Inches of H ₂ O | 0.006 | 0.013 | 0.022 | 0.033 | 0.046 | 0.038 | 0.12 | 0.18 |
|--------------|--|-------|-------|-------|-------|-------|-------|------|------|
| 1 AK .07 | CFM / ft | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 |
| | Throw ft | 5 | 7 | 9 | 12 | 14 | 19 | 23 | 28 |
| 2 AK .014 | CFM / ft | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 120 |
| | Throw ft | 6 | 8 | 10 | 14 | 16 | 22 | 27 | 33 |
| 3 AK .21 | CFM / ft | 30 | 45 | 60 | 75 | 90 | 120 | 150 | 180 |
| | Throw ft | 7 | 10 | 12 | 16 | 19 | 26 | 32 | 38 |
| 4 AK .28 | CFM / ft | 40 | 60 | 80 | 100 | 120 | 160 | 200 | |
| | Throw ft | 8 | 12 | 14 | 19 | 22 | 31 | 35 | |
| 5 AK .35 | CFM / ft | 50 | 75 | 100 | 125 | 150 | 200 | 250 | |
| | Throw ft | 10 | 14 | 16 | 22 | 26 | 37 | 38 | |
| 6 AK .42 | CFM / ft | 60 | 90 | 120 | 150 | 180 | 240 | 300 | |
| | Throw ft | 12 | 17 | 19 | 20 | 31 | 40 | 45 | |

NOTE

All performance notes are the same as published on 3/4" slot linear diffuser catalogue.

Throw data is based on all slots discharge air in the same direction. For two way pattern select through on basis of CFM / ft per number of slots blowing in each direction.

| | |
|--|---------------------------|
| | NC LEVEL LESS THAN 20 dB. |
| | NC LEVEL LESS THAN 30 dB. |
| | NC LEVEL LESS THAN 40 dB. |
| | NC LEVEL MORE THAN 40 dB. |

PERFORMANCE NOTES

THROW

The distance measured in ft. that the air travels from outlet at a given terminal velocity. The throw is based on a 6 ft. length of diffuser. For ceiling higher than 9 ft. in height, reduce the given throw by 1 ft. for every 1 ft. increase in height. It is also based on the slot where the air have been discharged in the same direction.

PARALLEL THROWS

Values based on one direction, and based on a maximum terminal velocity of 100 fpm

PERPENDICULAR THROWS

Is to a terminal velocity of 50 fpm

SOUND DATA

Noise criteria (NC), db, based on 8 db room attenuation and a 4 ft. long unit, re: 10¹² watt.

PERFORMANCE NOTES

FIELD TESTING

1. Air velocity measurements can be determined from the branch duct to calculate the CFM. If it is not Possible, air flow rate can be determined from the effective velocity measured from several readings along the slot lengths of the diffuser using a Pitot tube. Take the mean value of the effective velocity (VK).

2. Calculate CFM

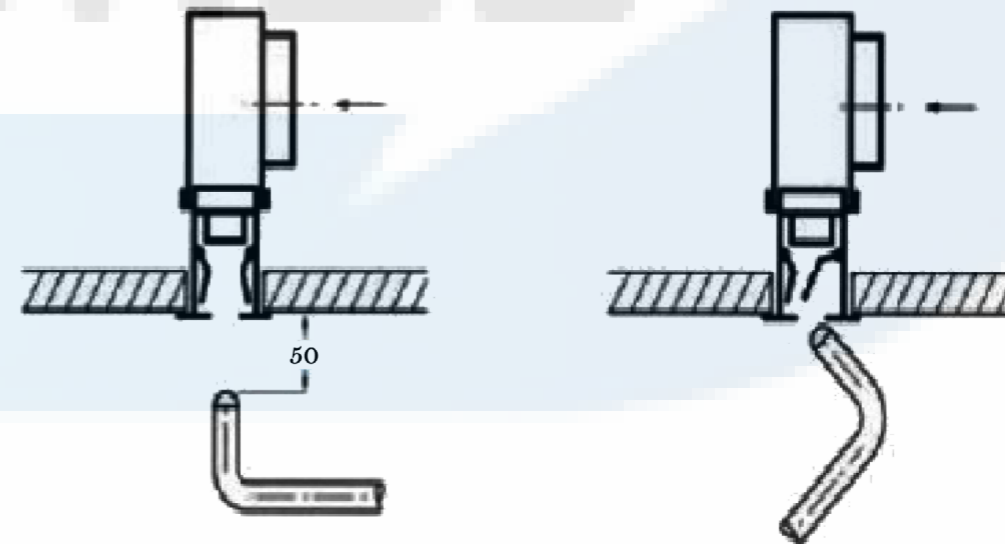
$$\text{Total CFM} = AK \times VK \times L$$

Where :

AK= effective area/ft.

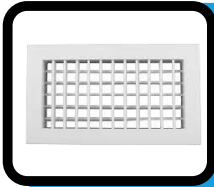
VK = effective velocity.

L = length at which the reading was taken.

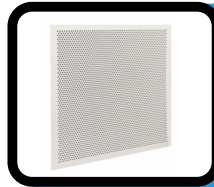


PERPENDICULAR DISCHARGE

PARALLEL DISCHARGE



GRILLES AND REGISTERS



**PERFORATED CEILING
DIFFUSERS**



**SQUARE & RECTANGULAR
& Circular CEILING
DIFFUSERS**



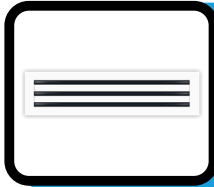
GRAVITY SHUTTERS



**LINEAR BAR
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**Linear Slot
Diffusers**



DISC VALVES



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