

## LINEAR DIFFUSER



**Model: LDOW (One Way)**

**Model: LDTW (Two Way)**

### INTRODUCTION

Linear diffuser is designed to provide a continuous run of diffuser offering one or two way blow air patterns. Its high capacity makes it suitable for the modern open office areas.

Linear diffusers are designed for installation in the ceiling or high side wall and are used for supplying air to conditioned spaces both for cooling and heating. The diffusers have fixed vanes and provide a horizontal air path parallel to ceiling or wall. High diffusion rates bring about fast equalization of temperature and velocity of the mixed air mass above the occupancy zone.

COSMOS make linear ceiling diffusers feature excellent induction. Mixing of the air jets with the room air and thus the heat exchange begin in the immediate neighborhood of the diffuser. Therefore colder air can be supplied without draft effects.

COSMOS standard model LDOW is linear ceiling diffuser designed to provide one way deflection and model LDTW is for two way deflection. They are capable for high air volume. Diffuser has a standard 12mm wide flat surface flange frame with blade fixed at 45°, set on a maximum pitch of 25mm.

A choice of individual or continuous diffuser lengths can be selected. Mitered corner sections maintain a continuous appearance.

Linear diffusers are suitable for use on supply or exhaust systems. The high air volume capacity and low resistance make it ideal for use with ceiling mounted fan coil units.

The linear ceiling diffusers with removable blade grating provide easy mounting. They look very attractive and warrant for optimum discharge conditions. Diffuser can be provided with rear mounted opposed blade damper adjustable by removable of diffuser core. The integral volume control damper shall be of the opposed blade type and constructed of aluminum.

## **COSMOS LINEAR DIFFUSER MODELS**

### **LDOW Series**

**LDOW-C** = Aluminum extruded with powder coated finish. Strip line diffuser with removable louvers suitable for one way deflection.

**LDOW-F** = Aluminum extruded with powder coated finish. Strip line diffuser with removable louvers suitable for one way deflection. With flange.

**LDOW-D** = Aluminum extruded with powder coated finish. Strip line diffuser with removable louvers suitable for one way deflection. With opposed blade volume control damper.

### **LDTW Series**

**LDTW-C** = Aluminum extruded with powder coated finish. Strip line diffuser with removable louvers suitable for two way deflection.

**LDTW-F** = Aluminum extruded with powder coated finish. Strip line diffuser with removable louvers suitable for two way deflection. With flange.

**LDTW-D** = Aluminum extruded with powder coated finish. Strip line diffuser with removable louvers suitable for two way deflection. With opposed blade volume control damper.

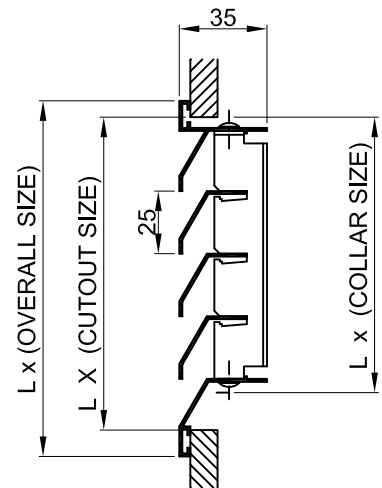
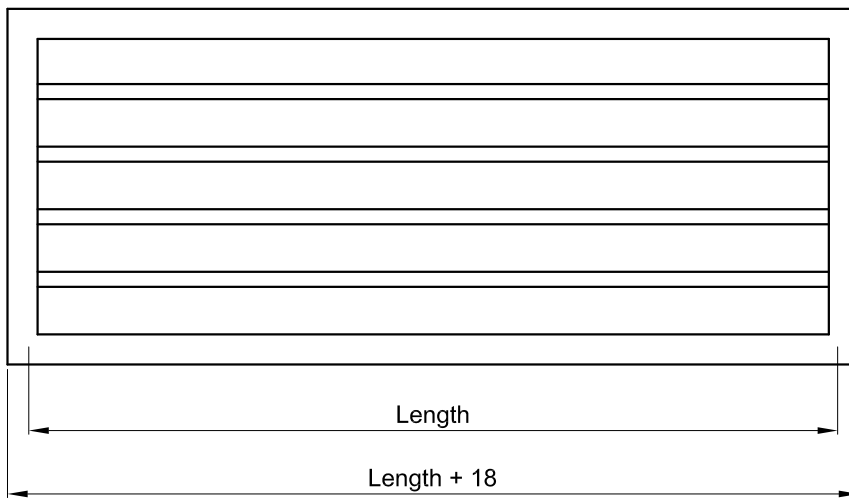
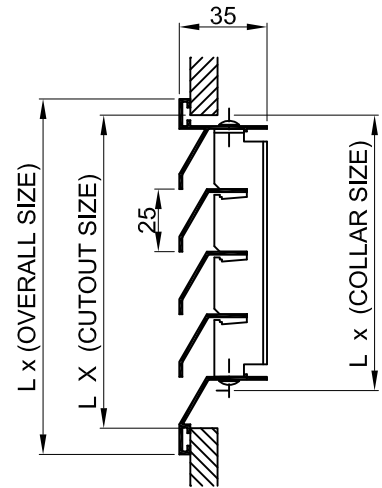
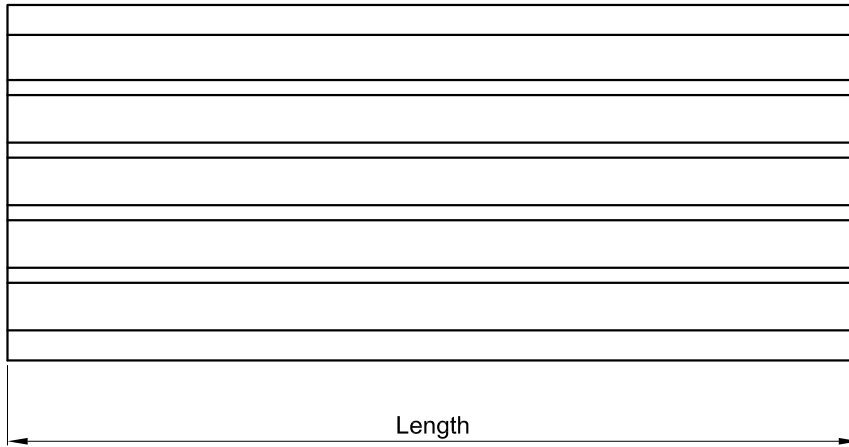
## FEATURES

- Extruded aluminum construction.
- Ideally designed for ceiling installation.
- Fixed louvers provide positive air flow.
- Removable core standard.
- High diffusion rates leading to rapid temperature and velocity equalization.
- Efficient and draft free horizontal air flow pattern.
- Choice of 1 way or 2 way deflection core styles in a variety of standard widths.
- Optional accessory as a damper and plenum box.
- Standard finish RAL 9016. Other finish available as a option.

Dimensional data

LINEAR DIFFUSER (One way)

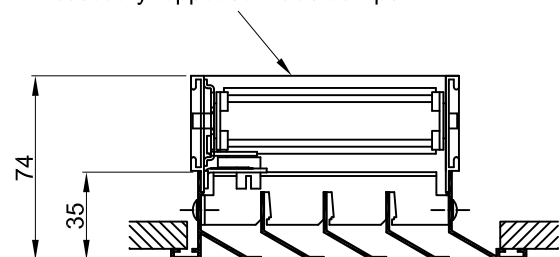
Without end flanges (Continuous type.)



All dimensions are in mm

Sr.no.	Cutout size	Collar size	Overall size
1	100	85	117
2	125	110	142
3	150	135	167
4	175	160	192
5	200	185	217

Accessory: opposed blade damper

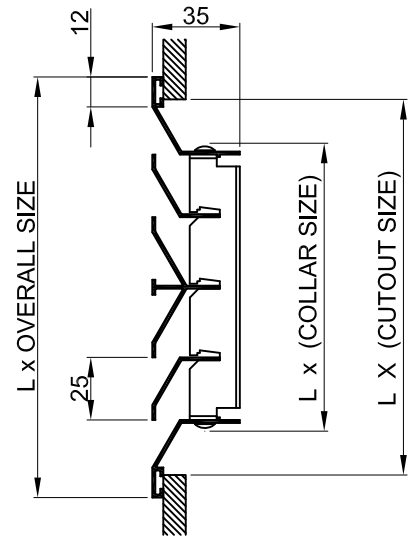
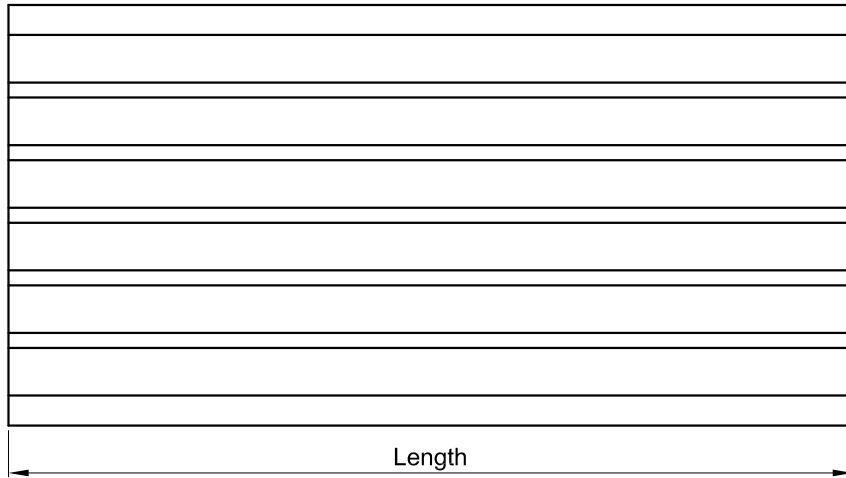


With opposed blade damper

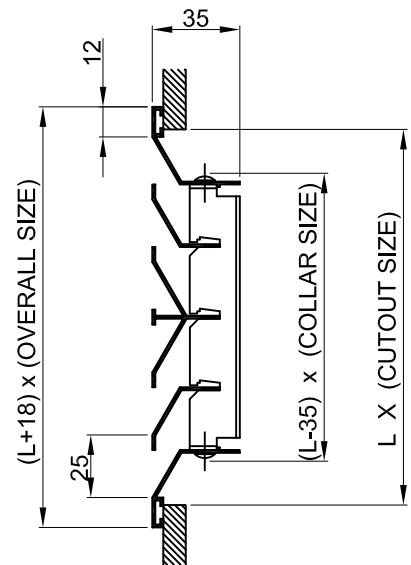
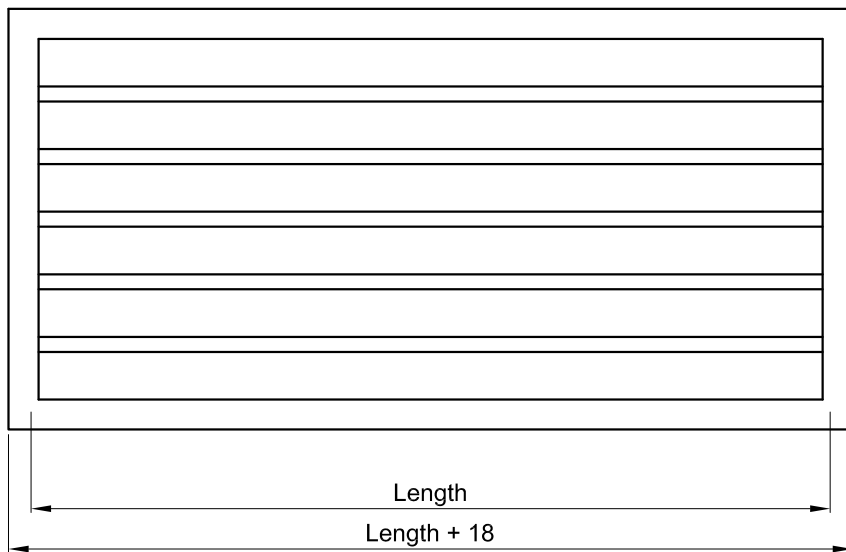
Dimensional data

LINEAR DIFFUSER (Two way)

Without end flanges (Continuous type.)

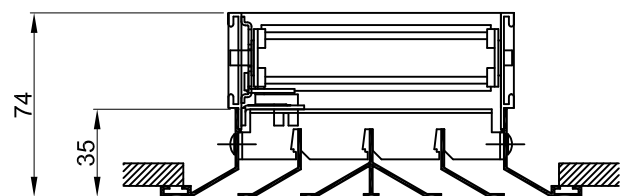


With end flanges (Frame type)



All dimensions are in mm

Sr.no.	Cutout size	Collar size	Overall size
1	100	65	118
2	150	115	168
3	200	165	218
4	250	215	268
5	300	265	318
6	325	290	348



**SELECTION DATA**

**LINEAR DIFFUSERS - MODEL LDOW (ONE - WAY DEFLECTION)  
SUPPLY AIR**

Width mm	Total Pressure Neck Velocity	.015 400	.024 600	.046 800	.065 1000	.092 1200	.126 1400	.161 1600
75	CFM per foot	28	42	56	70	84	98	112
	Throw Feet / Ceiling	8	12	14	16	18	20	22
	NC	10	16	24	30	34	39	43
100	CFM per foot	52	76	104	130	156	182	208
	Throw Feet / Ceiling	9	14	16	18	20	23	25
	NC	11	18	26	31	36	41	45
125	CFM per Foot	60	90	120	150	180	210	240
	Throw Feet / Ceiling	11	15	18	22	24	26	28
	NC	9	19	27	33	38	42	46
150	CFM per Foot	92	138	184	230	276	322	368
	Throw Feet / Ceiling	15	20	23	26	29	32	36
	NC	13	23	30	34	40	43	48
200	CFM per Foot	112	168	224	280	336	392	448
	Throw Feet / Ceiling	18	24	29	31	34	39	42
	NC	13	26	32	37	42	46	50
250	CFM per Foot	144	216	288	360	432	504	576
	Throw Feet / Ceiling	22	26	31	34	37	40	41
	NC	15	26	34	39	44	48	52
300	CFM per Foot	176	264	352	440	528	616	704
	Throw Feet / Ceiling	23	28	33	36	42	45	48
	NC	15	26	34	40	43	47	51

**LINEAR DIFFUSERS - MODEL LDTW (TWO - WAY DEFLECTION)  
SUPPLY AIR**

Width mm	Total Pressure Neck Velocity	.015 400	.024 600	.046 800	.065 1000	.092 1200	.126 1400	.161 1600
150	CFM per Foot	56	84	112	140	168	196	224
	Throw Feet / Ceiling	6	10	12	15	18	20	21
	NC	10	20	27	34	39	42	47
200	CFM per Foot	68	92	136	170	204	238	272
	Throw Feet / Ceiling	9	13	16	19	21	23	25
	NC	14	25	31	37	42	47	50
250	CFM per Foot	92	138	184	230	276	322	368
	Throw Feet / Ceiling	12	16	18	23	25	28	29
	NC	13	24	32	37	42	46	50
300	CFM per Foot	108	162	216	270	324	378	432
	Throw Feet / Ceiling	13	18	23	26	28	30	39
	NC	15	26	34	39	44	48	52

**SELECTION DATA**  
**LINEAR DIFFUSERS - MODEL LDOW (ONE - WAY DEFLECTION)**  
**RETURN AIR**

Width mm	-ve Static Pressure Velocity (FPM)	.027 400	.043 600	.082 800	.117 1000	.165 1200	.227 1400	.290 1600
75	CFM per foot	28	42	56	70	84	98	112
	NC	10	20	28	34	38	43	47
100	CFM per foot	52	76	104	130	156	182	208
	NC	12	22	30	35	41	45	49
125	CFM per Foot	60	90	120	150	180	210	240
	NC	13	23	31	37	42	46	50
150	CFM per Foot	92	138	184	230	276	322	368
	NC	16	26	34	38	44	47	52
200	CFM per Foot	112	168	224	280	336	392	448
	NC	17	28	36	41	46	50	54
250	CFM per Foot	144	216	288	360	432	504	576
	NC	19	30	38	43	48	52	56
300	CFM per Foot	176	264	352	440	528	616	704
	NC	19	30	38	44	47	51	55

**LINEAR DIFFUSERS - MODEL LDTW (TWO - WAY DEFLECTION)**  
**RETURN AIR**

Width mm	-ve Static Pressure Velocity (FPM)	.027 400	.043 600	.082 800	.117 1000	.165 1200	.227 1400	.290 1600
150	CFM per Foot	56	84	112	140	168	196	224
	NC	14	24	31	38	43	46	51
200	CFM per Foot	68	92	136	170	204	238	272
	NC	18	29	35	41	46	51	54
250	CFM per Foot	92	138	184	230	276	322	368
	NC	17	28	36	41	46	50	54
300	CFM per Foot	108	162	216	270	324	378	432
	NC	17	22	27	30	32	34	37

# The Company

Spectrum Industries began its journey in 1994 with the brand name Cosmos. Today, 17 years hence, Cosmos has delivered promise growing vertically and horizontally. The company has diversified into 3 brands :

- ✍ Spectrum Industries (Air Distribution Products Manufacturing )
- ✍ Space HVAC Systems Pvt. Ltd. (H.V.A.C.system design / planning / Execution and after sales)
- ✍ Savitru Aircon Pvt.Ltd. ( Indian partner for various international brands)

## Spectrum Industries

Spectrum Industries manufacture "Cosmos Air Distribution Products". Cosmos enjoys being a leading brand in India. It has a wide product range of Air Distribution Products. It is one of the most preferred air distribution products by HVAC consultants across India and is recommended for various projects.

### Highlights

- ✍ 2 modern factories with a total area of 35000 sq.ft.
- ✍ One manufacturing facility is for Aluminum products
- ✍ The other for sheet metal products
- ✍ Both the factories are equipped with modern machines like CNC Turret punching presses, Press Breaks, Clinching machines and Welding (CMT) Robot
- ✍ The assembly shop is equipped with pneumatically operated tools.
- ✍ A third manufacturing facility is under construction with a total area of 25000 sq.ft.
- ✍ Sound reverberation room for noise testing is under construction. It is supported by Indian Institute of Science, Bengaluru
- ✍ The factory has a special wind tunnel for VAV calibration & testing. It is the only company in India to supply dynamically calibrated VAVs
- ✍ Team strength : 100 +
- ✍ The sales are handled by Head Office in Mumbai
- ✍ Clients are from across India and world.

CNC Turret punching



CNC Press Break



Clinching Machine welding Robot



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