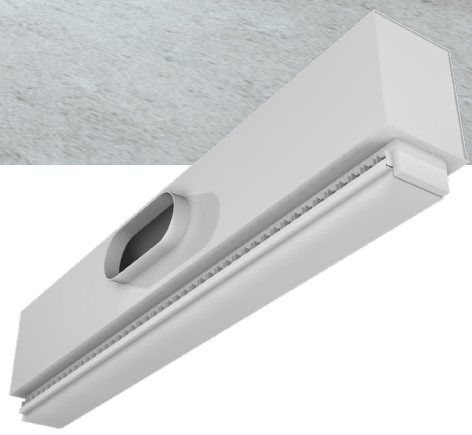
LDLT

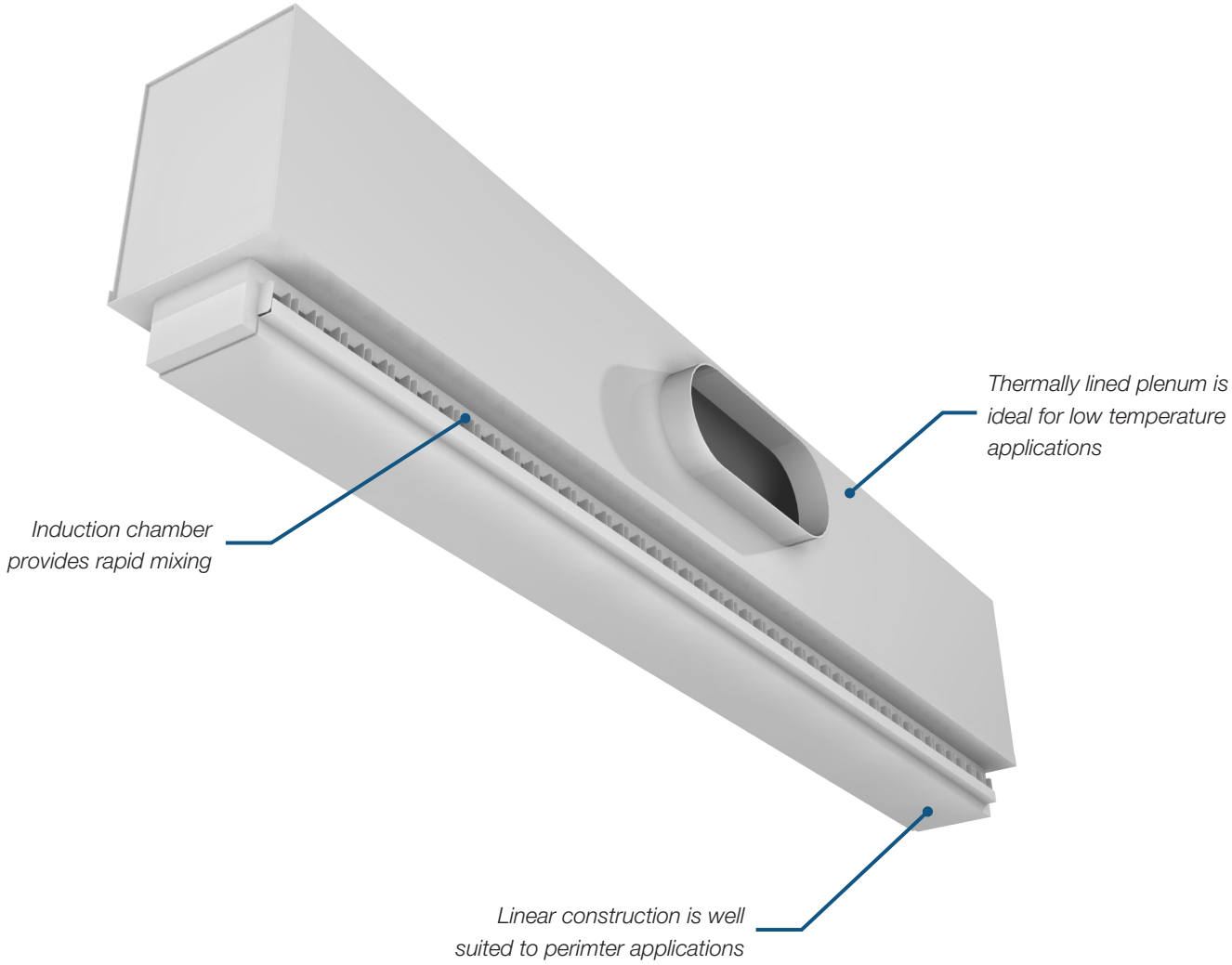
LINEAR DIFFUSER LOW TEMPERATURE



price | DIFFUSERS

LDLT
Linear Diffuser Low Temperature

The Linear Diffuser Low Temperature (LDLT) features insulated construction to prevent condensation and an engineered induction chamber with tapered air nozzles to optimize induction and reduce sound and pressure drop.



LOW TEMPERATURE CONSTRUCTION

+ The LDLT is intended for use with low temperature supply air and features a thermally lined plenum and induction chamber to prevent condensation from forming and reduce heat gain through the diffuser to maintain the low supply air temperature.

THERMAL COMFORT

+ The LDLT features an induction chamber that delivers thin, high velocity jets of air to rapidly mix low temperature supply air with room air, ensuring a draft free environment resulting in high thermal comfort.
+ The induction chamber creates a tight horizontal air pattern even at reduced flow conditions.

SYMMETRICAL APPEARANCE

+ Both the 1 and 2-way air pattern options have discharge slots on both sides of the diffuser for a symmetrical appearance. 1-way air pattern models are fitted with a black blank-off strip to deactivate the nozzles.

TYPICAL APPLICATIONS

The LDLT delivers low temperature supply air to spaces that require linear air distribution patterns such as perimeter zones and open office spaces.

CONSTRUCTION

+ Material
  - Steel (LDLT)
  - Aluminum (ALDLT)
+ Air Pattern
  - 2-way
  - 1-way
  - 1-way opposite inlet
+ Length
  - 24 in.
  - 48 in.
+ Inlet
  - Round
  - Oval

PERFORMANCE DATA

1-Way, 24 in./610 mm Length

Inlet Size 4 in.

Flow Rate (cfm)	Total Pressure (in. w.g.)	Static Pressure (in. w.g.)	Sound (NC)	Isothermal Conditions				Cooling Conditions			
				Throw (ft.)			Drop (in.)	Throw (ft.)			Drop (in.)
				150fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
20	0.01	0.01	-	1	3	12	9	1	3	10	20
30	0.03	0.02	-	3	7	19	14	3	7	13	26
40	0.06	0.05	-	6	13	25	18	6	12	15	30
50	0.09	0.07	-	9	16	32	23	9	13	18	36
60	0.12	0.09	-	13	19	38	28	12	13	19	38

Inlet Size 6 in.

Flow Rate (cfm)	Total Pressure (in. w.g.)	Static Pressure (in. w.g.)	Sound (NC)	Isothermal Conditions				Cooling Conditions			
				Throw (ft.)			Drop (in.)	Throw (ft.)			Drop (in.)
				150fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
20	0.01	0.01	-	1	3	12	9	1	3	10	20
30	0.03	0.03	-	3	7	19	14	3	7	13	26
40	0.06	0.05	-	6	13	25	18	6	12	15	30
50	0.09	0.09	-	9	16	32	23	9	13	18	36
60	0.13	0.12	-	13	19	38	28	12	13	19	38

Inlet Size 8 in.

Flow Rate (cfm)	Total Pressure (in. w.g.)	Static Pressure (in. w.g.)	Sound (NC)	Isothermal Conditions				Cooling Conditions			
				Throw (ft.)			Drop (in.)	Throw (ft.)			Drop (in.)
				150fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
20	0.01	0.01	-	1	3	12	9	1	3	10	20
30	0.02	0.02	-	3	7	19	14	3	7	13	26
40	0.04	0.04	-	6	13	25	18	6	12	15	30
50	0.07	0.07	-	9	16	32	23	9	13	18	36
60	0.10	0.10	-	13	19	38	28	12	13	19	39

1-Way, 48 in./1219 mm Length

Inlet Size 6 in.

Flow Rate (cfm)	Total Pressure (in. w.g.)	Static Pressure (in. w.g.)	Sound (NC)	Isothermal Conditions				Cooling Conditions			
				Throw (ft.)			Drop (in.)	Throw (ft.)			Drop (in.)
				150fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
40	0.02	0.02	-	1	3	12	10	1	2	5	12
60	0.04	0.03	-	3	7	22	18	3	6	9	21
80	0.08	0.07	-	5	12	30	25	4	6	15	35

Inlet Size 8 in.

Flow Rate (cfm)	Total Pressure (in. w.g.)	Static Pressure (in. w.g.)	Sound (NC)	Isothermal Conditions				Cooling Conditions			
				Throw (ft.)			Drop (in.)	Throw (ft.)			Drop (in.)
				150fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
40	0.02	0.02	-	1	3	12	10	1	2	5	12
60	0.04	0.04	-	3	7	22	18	3	6	9	21
80	0.07	0.07	-	5	12	30	25	4	6	15	35

Inlet Size 10 in.

Flow Rate (cfm)	Total Pressure (in. w.g.)	Static Pressure (in. w.g.)	Sound (NC)	Isothermal Conditions				Cooling Conditions			
				Throw (ft.)			Drop (in.)	Throw (ft.)			Drop (in.)
				150fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
40	0.02	0.02	-	1	3	12	10	1	2	5	12
60	0.04	0.03	-	3	7	22	18	3	6	9	21
80	0.07	0.07	-	5	12	30	25	4	6	15	35

For performance notes see end of section.

PERFORMANCE DATA

2-Way, 24 in./610 mm Length

Inlet Size 4 in.

Flow Rate (cfm)	Total Pressure (in. w.g.)	Static Pressure (in. w.g.)	Sound (NC)	Isothermal Conditions				Cooling Conditions			
				Throw (ft.)			Drop (in.)	Throw (ft.)			Drop (in.)
				150fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
40	0.03	0.02	-	2	4	15	12	2	4	12	26
60	0.07	0.04	-	4	8	18	14	4	8	13	29
80	0.12	0.07	15	7	12	24	19	7	11	15	33
100	0.18	0.10	20	10	15	30	24	10	12	17	37

Inlet Size 6 in.

Flow Rate (cfm)	Total Pressure (in. w.g.)	Static Pressure (in. w.g.)	Sound (NC)	Isothermal Conditions				Cooling Conditions			
				Throw (ft.)			Drop (in.)	Throw (ft.)			Drop (in.)
				150fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
40	0.02	0.02	-	2	4	15	12	2	4	12	26
60	0.05	0.04	-	4	8	18	14	4	8	13	29
80	0.08	0.07	-	7	12	24	19	7	11	15	33
100	0.13	0.11	19	10	15	30	24	10	12	17	37

Inlet Size 8 in.

Flow Rate (cfm)	Total Pressure (in. w.g.)	Static Pressure (in. w.g.)	Sound (NC)	Isothermal Conditions				Cooling Conditions			
				Throw (ft.)			Drop (in.)	Throw (ft.)			Drop (in.)
				150fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
40	0.02	0.02	-	2	4	15	12	2	4	12	26
60	0.04	0.04	-	4	8	18	14	4	8	13	29
80	0.07	0.07	-	7	12	24	19	7	11	15	33
100	0.11	0.10	18	10	15	30	24	10	12	17	37

2-Way, 48 in./1219 mm Length

Inlet Size 6 in.

Flow Rate (cfm)	Total Pressure (in. w.g.)	Static Pressure (in. w.g.)	Sound (NC)	Isothermal Conditions				Cooling Conditions			
				Throw (ft.)			Drop (in.)	Throw (ft.)			Drop (in.)
				150fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
50	0.01	0.01	-	1	2	6	7	1	2	3	9
100	0.05	0.03	-	2	4	15	17	2	3	6	18
150	0.11	0.07	19	4	10	18	20	3	5	9	27
200	0.20	0.14	26	8	15	22	24	4	6	12	36

Inlet Size 8 in.

Flow Rate (cfm)	Total Pressure (in. w.g.)	Static Pressure (in. w.g.)	Sound (NC)	Isothermal Conditions				Cooling Conditions			
				Throw (ft.)			Drop (in.)	Throw (ft.)			Drop (in.)
				150fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
50	0.01	0.01	-	1	2	6	7	1	2	3	9
100	0.04	0.03	-	2	4	15	17	2	3	6	18
150	0.09	0.08	16	4	10	18	20	3	5	9	27
200	0.16	0.14	24	8	15	22	24	4	6	12	36

Inlet Size 10 in.

Flow Rate (cfm)	Total Pressure (in. w.g.)	Static Pressure (in. w.g.)	Sound (NC)	Isothermal Conditions				Cooling Conditions			
				Throw (ft.)			Drop (in.)	Throw (ft.)			Drop (in.) in.
				150fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
50	0.01	0.01	-	1	2	6	7	1	2	3	9
100	0.04	0.04	-	2	4	15	17	2	3	6	18
150	0.08	0.08	15	4	10	18	20	3	5	9	27
200	0.14	0.13	23	8	15	22	24	4	6	12	36

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow in cubic feet per minute, cfm.
3. All pressures are in in. w.g.
   TP = Total Pressure SP = Static Pressure
4. NC values are based on a room absorption of 10 dB re 10^{-12} watts and one diffuser.
5. Isothermal conditions indicate supply air temperature is equal to room air temperature.
6. Cooling conditions are based on a supply air temperature of 40 °F and a room temperature of 75 °F.
7. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
8. Drop is in inches at a terminal velocity of 50 fpm.
9. Blanks "-" indicate NC less than 15.

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