

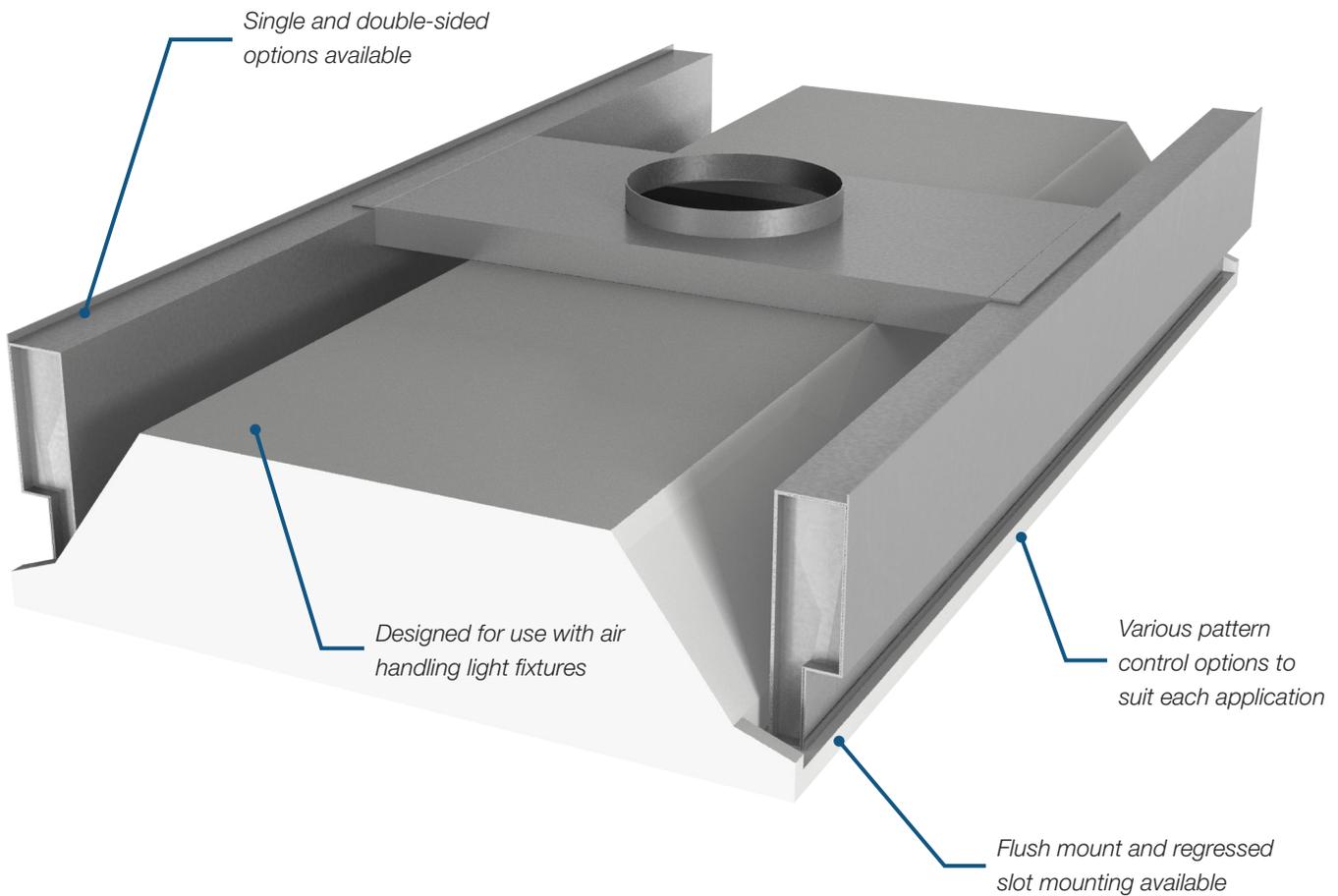
LT

LIGHT TROFFER DIFFUSERS



LT Light Troffer Diffusers

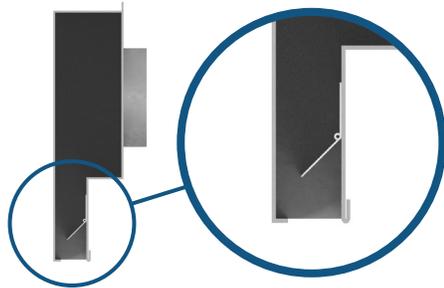
Light troffer diffusers provide exceptional comfort, frequently achieving a minimum 80% on the Air Diffusion Performance Index (ADPI). LT diffusers attach quickly and easily to most air-handling-capable light fixtures and are suitable for surface slot and regressed slot applications.



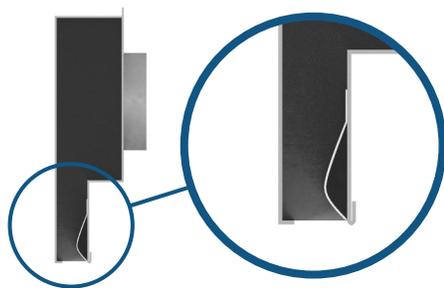
PATTERN CONTROLLERS

+ The LT diffuser is available with four pattern control options:

- **Adjustable Pattern Controllers** allow for horizontal and vertical throw to best meet field conditions, reducing the chance of drafts or ensuring heated air properly mixes in the occupied zone.



- **Fixed Pattern Controllers** provide a fixed horizontal air pattern, eliminating any need for on-site adjustment of the air pattern controller during balancing. The fixed, aerodynamically curved pattern controller provides low sound levels and a strong horizontal air pattern, even at low flow rates, making it ideal for VAV applications.



- **Light Fixture Pattern Controllers** are provided as integral components of the light fixture. The light troffer diffuser is provided without pattern controllers to prevent interference with the light fixtures airflow.
- **Return** light troffers are provided without a pattern controller. An open side plenum maximizes free area and reduces sound and pressure drop.

TYPICAL APPLICATIONS

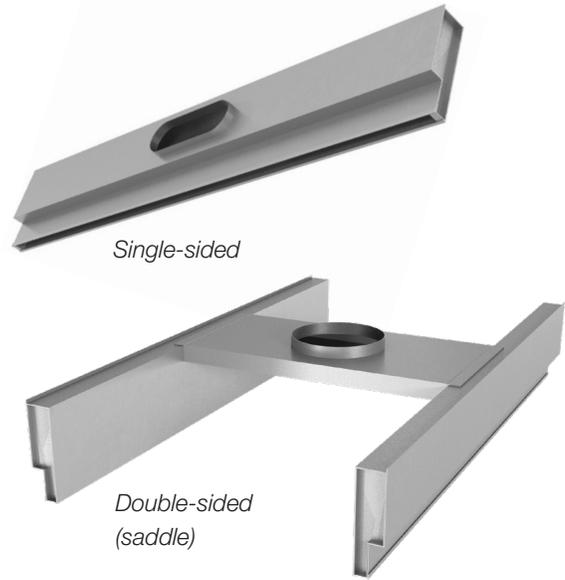
Light troffer diffusers integrate with compatible air handling light fixtures while providing superior comfort at low sound levels. The LT is suitable for surface slot and regressed slot light fixtures.

CONSTRUCTION

- + Application
 - Supply (LTA/LTF/LTN)
 - Return (LTR)
- + Pattern Control
 - Adjustable pattern controller (LTA)
 - Fixed pattern controller (LTF)
 - Light fixture pattern controller (LTN)
 - Return (LTR)
- + Configuration
 - Single sided
 - Double sided (saddle)
- + Options
 - External foil-backed insulation (AFI)
 - Knocked Down (KD) construction
 - Low profile with side inlet (LP)
 - Adjustable crossover (ADJ, low profile models only)

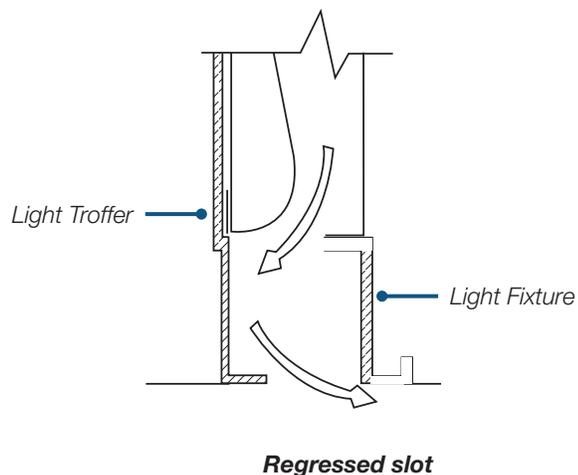
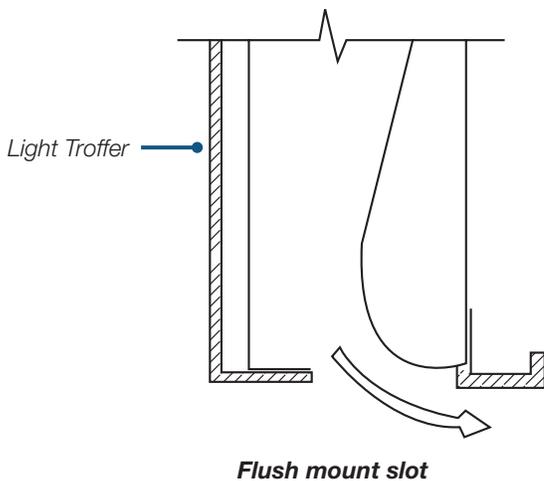
MULTIPLE CONFIGURATIONS

- + Light troffer diffusers are available in a range of standard sizes and configurations to suit most commercial air handling light fixtures, including:
 - Single-sided configuration
 - Double-sided saddle type configuration with round top inlet
 - Low profile double-sided, saddle type configuration with oval side inlet



LIGHT FIXTURE PATTERN CONFIGURATIONS

- + Light fixture manufacturers typically provide two main configurations, each of which plays an important role in the selection of a diffuser.
 - **Flush Mount Slot** is the standard configuration on most light fixtures, wherein the supply air slot is flush with the ceiling surface.
 - **Regressed Slot** configuration features a continuous reveal around the fixture lens that houses a regressed pattern controller on the light troffer diffuser to ensure a horizontal air pattern. The dimensions of the reveal vary between manufacturers, and it is recommended that a detailed dimensioned drawing and/or physical sample be sent to Price for verification of compatibility.



DIFFUSER AND LIGHT FIXTURE COMPATIBILITY

- + The LT is compatible with most standard light manufacturers' designs; however, due to the diversity of light fixture designs, we recommend that a sample is reviewed to ensure fit.

PERFORMANCE DATA

Single Sided Supply

For 48" / 1200 mm Light Fixture

Neck Size	Flow Rate (cfm)	50	60	70	80	90	100	110	120	140
	Throw (ft.)	1-2-10	2-4-14	2-5-17	3-6-19	4-8-20	4-10-21	5-12-22	6-14-24	8-17-25
5 in. Oval	Total Pressure (in. w.g.)	.053	.076	.104	.136	.171	.202	.255	.305	.415
	Sound (NC)	-	-	-	23	27	31	34	37	42
6 in. Oval	Total Pressure (in. w.g.)	.048	.070	.095	.124	.157	.194	.234	.279	.380
	Sound (NC)	-	-	-	23	27	31	34	37	42

For 36" / 900 mm Light Fixture

Neck Size	Flow Rate (cfm)	40	50	60	70	80	90	100	110	120
	Throw (ft.)	3-6-13	4-8-15	6-10-16	8-11-18	9-13-19	10-14-20	11-15-21	12-16-22	13-17-23
5 in. Oval	Total Pressure	.063	.102	.142	.192	.252	.317	.394	.476	.564
	Sound (NC)	-	22	27	31	35	39	42	45	48
6 in. Oval	Total Pressure	.061	.094	.136	.183	.240	.303	.376	.455	.538
	Sound (NC)	-	22	27	31	35	39	42	45	48

For 24" / 600 mm Light Fixture

Neck Size	Flow Rate (cfm)	30	40	50	60	70	80	90
	Throw (ft.)	2-5-11	4-7-13	6-9-15	7-11-17	8-13-18	10-13-19	11-14-20
5 in. Oval	Total Pressure (in. w.g.)	.056	.099	.157	.225	.307	.401	.507
	Sound (NC)	-	24	30	36	40	45	48
6 in. Oval	Total Pressure (in. w.g.)	.055	.097	.152	.219	.298	.389	.493
	Sound (NC)	-	24	30	36	40	45	48

Table of Velocity Pressures (in. w.g.)

cfm	20	30	40	50	60	70	80	90	100	110	120	140	160	180	200	220
5 in.	.001	.003	.005	.009	.012	.017	.022	.027	.034	.041	.049	.066	.087	.100	.135	.163
6 in.	-	-	-	.004	.006	.008	.010	.013	.016	.020	.023	.031	.041	.052	.063	.078
8 in.	-	-	-	.001	.002	.002	.003	.004	.005	.006	.007	.010	.013	.017	.021	.025

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 is in cubic feet per minute, cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum)
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10-12 watts and one diffuser.
7. Blanks "-" indicate an NC level below 15.
8. Tested without a light fixture. Light fixture may alter performance data.

Return

Model	Flow Rate (cfm)	20	30	40	50	60	70	80	90	100
LTR-4	Total Pressure (in. w.g.)	.003	.007	.012	.020	.029	.040	.051	.065	.080
	Sound (NC)	-	-	-	-	-	-	16	19	22
LTR-3	Total Pressure (in. w.g.)	.009	.021	.036	.057	.084	.112	.147	.188	.230
	Sound (NC)	-	-	-	15	20	24	28	31	34
LTR-2	Total Pressure (in. w.g.)	.021	.049	.084	.130	.196	.260	.340	.440	.530
	Sound (NC)	-	-	18	24	29	33	37	40	43

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 is in cubic feet per minute [cfm].
3. NC, sound pressure levels, based on a room absorption of 10 dB re 10⁻¹² Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:
Ptotal = Pstatic + Pvelocity

PERFORMANCE DATA

Saddle Type Supply

For 48" / 1200 mm Light Fixture

Neck Size	Flow Rate (cfm)		60	80	100	120	140	160	180	200	220
	Throw (ft.)		0-1-3	1-1-5	1-2-8	1-3-10	2-4-12	2-5-13	3-6-14	4-8-15	4-9-16
5 in. [127] Round	Total Pressure (in. w.g.)		.053	.098	.151	.217	.292	.385	.487	.598	.722
	Sound (NC)		-	-	20	26	30	34	37	41	44
6 in. [152] Round	Total Pressure (in. w.g.)		.034	.057	.090	.130	.175	.232	.294	.356	.441
	Sound (NC)		-	-	-	24	29	32	36	39	42
8 in. [203] Round	Total Pressure (in. w.g.)		.024	.043	.068	.097	.133	.173	.219	.271	.327
	Sound (NC)		-	-	-	20	25	29	32	35	38
LP-5 in. [127] Oval	Total Pressure (in. w.g.)		.035	.065	.100	.144	.193	.255	.322	.396	.478
	Sound (NC)		-	-	22	27	32	36	39	42	45
LP-6 in. [152] Oval	Total Pressure (in. w.g.)		.025	.042	.067	.097	.131	.173	.219	.265	.328
	Sound (NC)		-	-	-	23	28	32	35	38	41

For 36" / 900 mm Light Fixture

Neck Size	Flow Rate (cfm)		50	60	70	80	100	120	140	160	180
	Throw (ft.)		1-2-7	1-3-8	2-4-10	2-5-11	4-7-12	6-9-14	6-10-14	7-11-51	8-12-16
5 in. Round	Total Pressure (in. w.g.)		.036	.051	.071	.092	.144	.204	.281	.367	.460
	Sound (NC)		-	-	-	22	28	33	37	40	43
6 in. Round	Total Pressure (in. w.g.)		.031	.045	.062	.080	.126	.178	.246	.321	.402
	Sound (NC)		-	-	-	22	28	33	37	40	43
LP-5 in. [127] Oval	Total Pressure (in. w.g.)		.036	.051	.071	.092	.144	.204	.281	.367	.460
	Sound (NC)		-	-	-	22	28	33	37	40	43
LP-6 in. [152] Oval	Total Pressure (in. w.g.)		.031	.045	.062	.080	.126	.178	.246	.321	.402
	Sound (NC)		-	-	-	22	28	33	37	40	43

For 24" / 600 mm Light Fixture

Neck Size	Flow Rate (cfm)		40	50	60	70	80	90	100	110	120
	Throw (ft.)		1-3-7	2-4-8	3-5-9	3-6-10	4-7-11	5-7-11	5-8-12	6-9-12	7-9-13
5 in. Round	Total Pressure (in. w.g.)		.040	.062	.090	.124	.163	.200	.252	.304	.363
	Sound (NC)		-	-	-	23	27	31	34	37	40
6 in. Round	Total Pressure (in. w.g.)		.039	.061	.088	.118	.151	.197	.242	.302	.348
	Sound (NC)		-	-	-	23	27	31	34	37	40
LP-5 in. [127] Oval	Total Pressure (in. w.g.)		.031	.050	.072	.100	.129	.164	.199	.240	.287
	Sound (NC)		-	-	-	21	25	29	32	35	38
LP-6 in. [152] Oval	Total Pressure (in. w.g.)		.029	.044	.064	.089	.114	.144	.178	.222	.256
	Sound (NC)		-	-	-	21	25	29	32	35	38

Table of Velocity Pressures, in. w.g.

cfm	20	30	40	50	60	70	80	90	100	110	120	140	160	180	200	220
5 in.	.001	.003	.005	.009	.012	.017	.022	.027	.034	.041	.049	.066	.087	.100	.135	.163
6 in.	-	-	-	.004	.006	.008	.010	.013	.016	.020	.023	.031	.041	.052	.063	.078
8 in.	-	-	-	.001	.002	.002	.003	.004	.005	.006	.007	.010	.013	.017	.021	.025

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 is in cubic feet per minute, cfm.
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5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks "-" indicate an NC level below 15.
8. Tested without a light fixture. Light fixture may alter performance data.



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