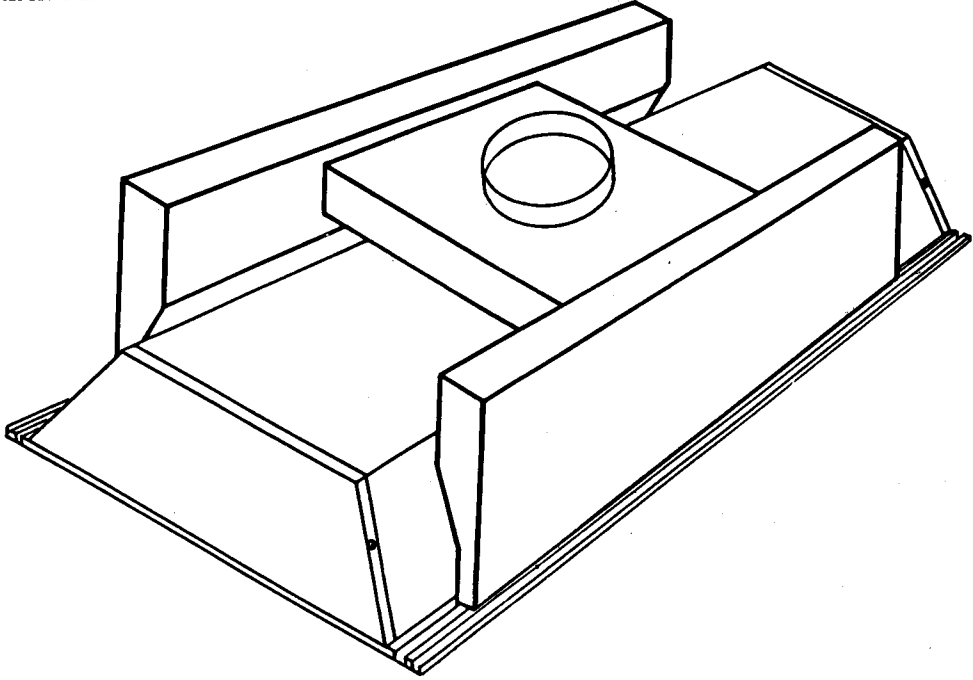
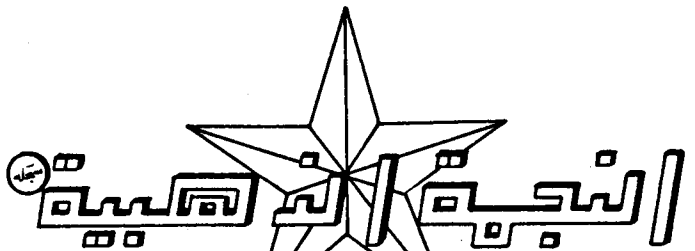




SAUDI AIR CONTROL SYSTEM  
INDUSTRIAL REGISTRATION NO.353



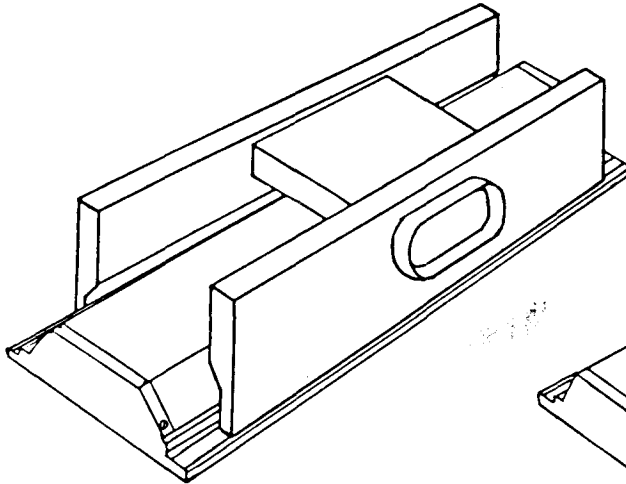
## LIGHT TROFFER AIR DIFFUSERS



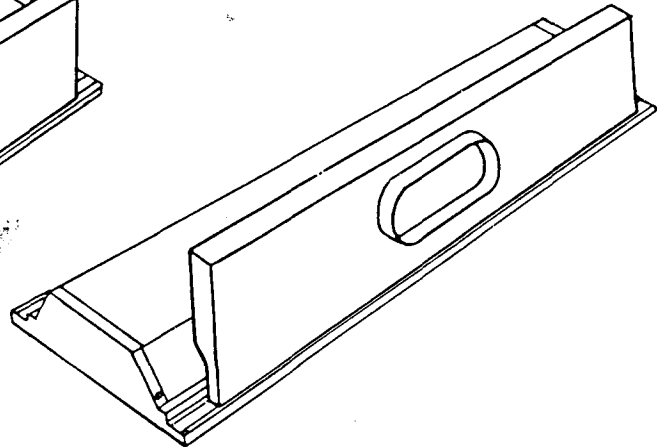
المصنع السعودي لصناعة فتحات وهوابط توزيع الهواء

ترخيص صناعي رقم ٢٥٢ / ص

**LIGHT TROFFER AIR DIFFUSERS**



**MODEL GLT**  
(DOUBLE SIDE)



**MODEL GLT**  
(SINGLE SIDE)

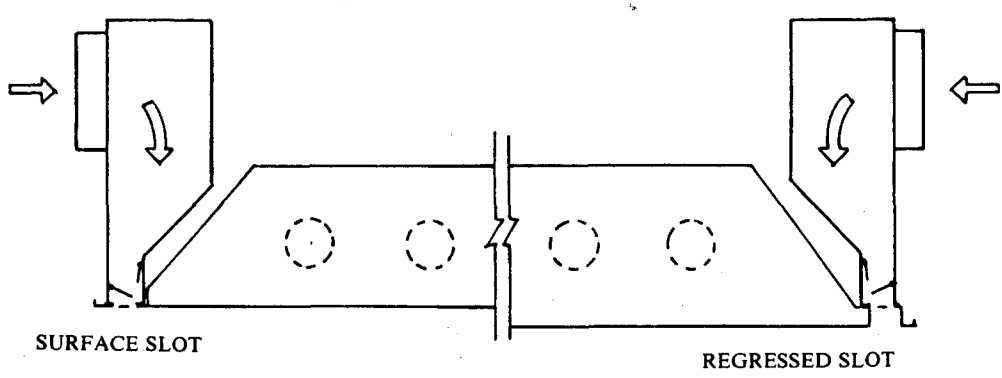
**OUTSTANDING FEATURES:**

Combining lighting and air distribution characteristics, supply air is delivered from an air booth through slot openings at the edge of the light fixture.

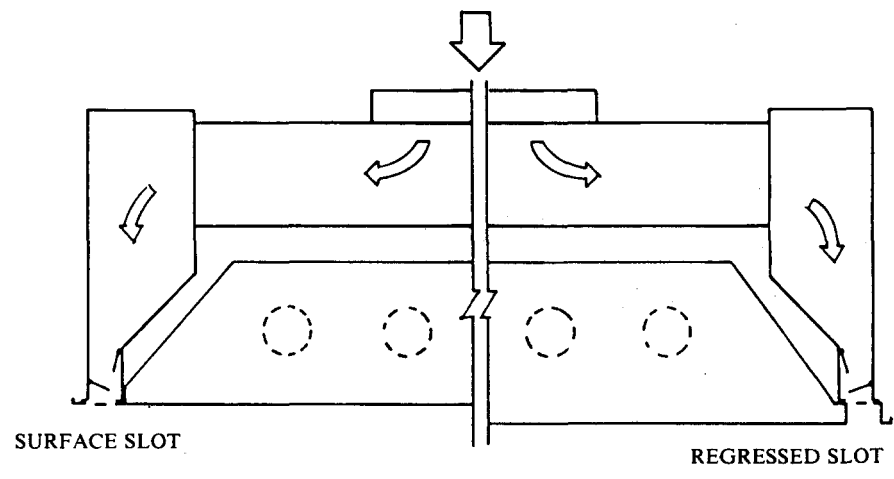
- For surface slot and regressed slot troffers.
  - Available in both single and double sided types.
  - Choice of supply air inlet position either on top inlet or side inlet for various duct sizes.
  - With individually adjustable volume and air pattern controllers in each diffusers.
  - Can be used for either supply or return.
  - Available for troffer lengths of 2, 3 and 4 feet.
  - Choice of externally insulated or uninsulated troffers.
- Standard galvanized steel construction

*AIR DIFFUSER - TROFFER COMBINATIONS*

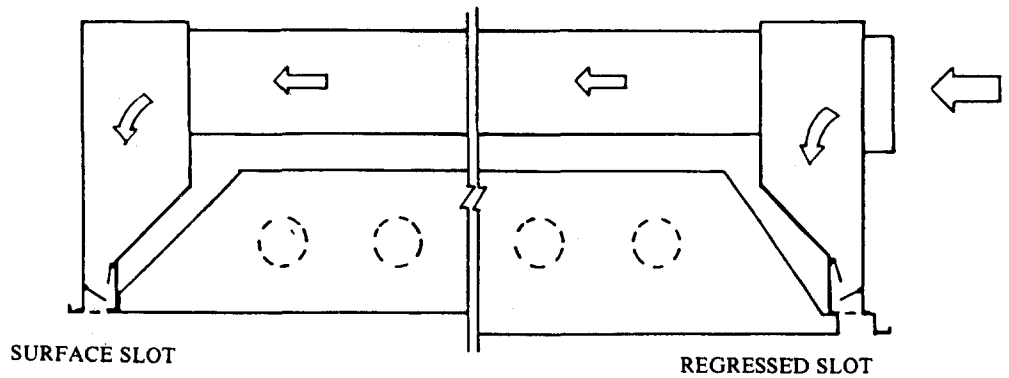
SINGLE SIDE



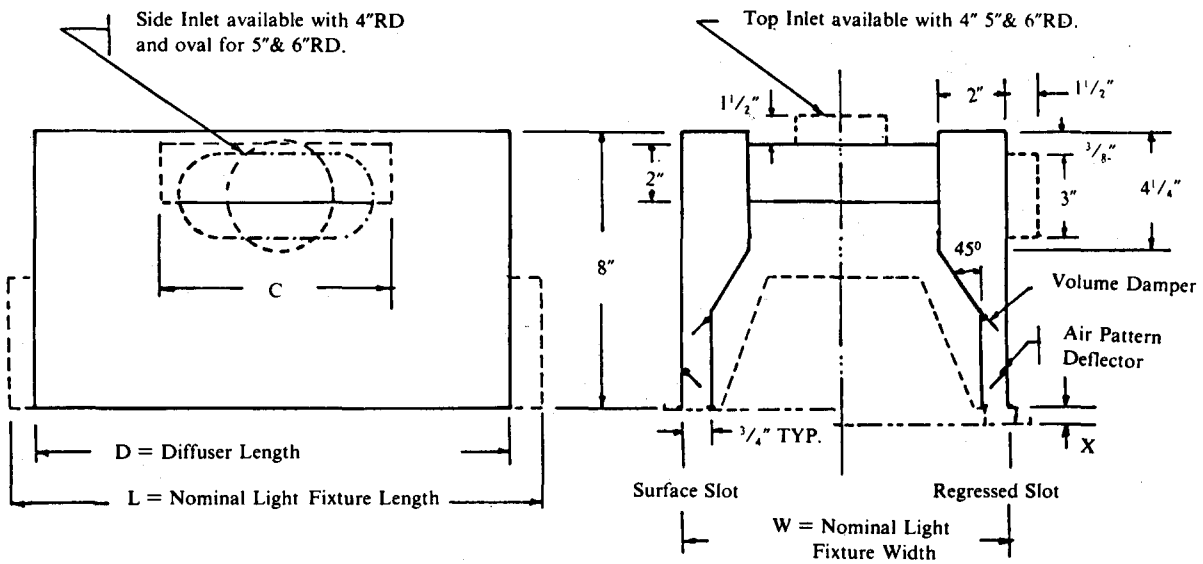
DOUBLE SIDE (TOP INLET)



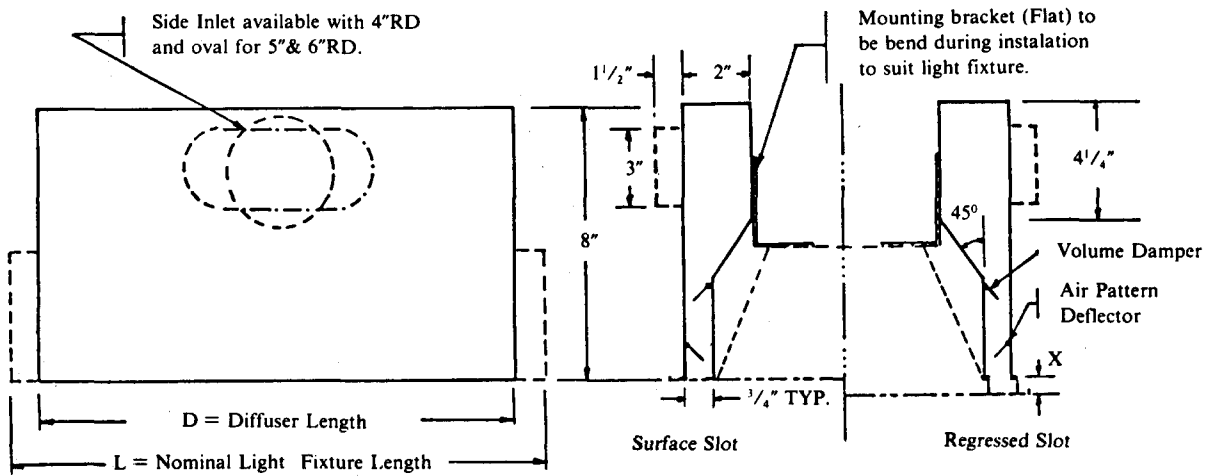
DOUBLE SIDE (SIDE INLET)



**DIMENSIONAL DATA**



**DOUBLE SIDE MODEL GLT**



**SINGLE SIDE MODEL GLT**

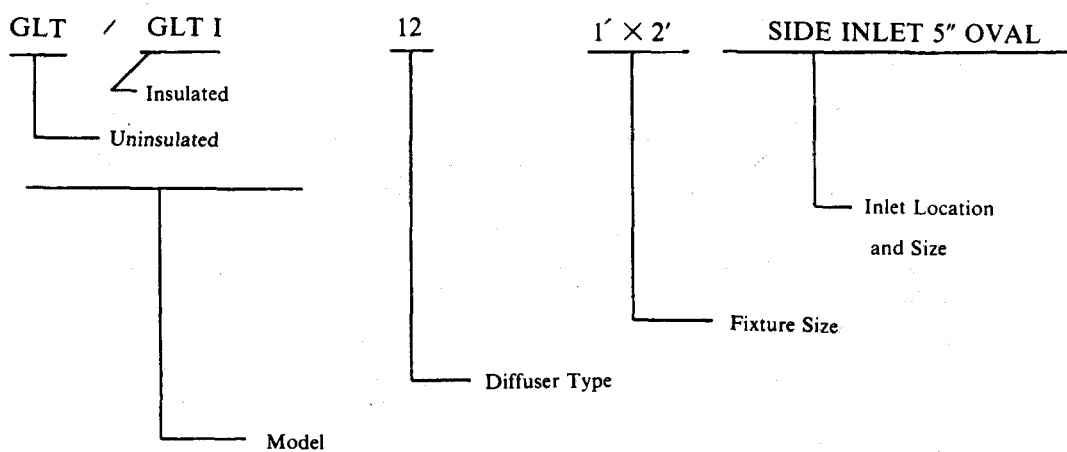
  
**GOLDEN STAR**  
 SAUDI AIR CONTROL SYSTEM

Model	Diffuser Type	Fixture Size	Dimensions				Inlet Location & Size
			W	L	D	C	
GLT & GLTI	Single side 10	4'	—	48"	41"	—	Top available with 4", 5" & 6"RD Side available with 4"RD and oval for 5" & 6"RD
	20	2'	—	24"	17"	—	
	30	3'	—	36"	29"	—	
	double side 12	1' X 2'	12"	24"	17"	12"	
	22	2' X 2'	24"	24"	17"	12"	
	13	1' X 3'	12"	36"	29"	18"	
	23	2' X 3'	24"	36"	29"	18"	
	33	3' X 3'	36"	36"	29"	18"	
	14	1' X 4'	12"	48"	41"	18"	
	24	2' X 4'	24"	48"	41"	18"	
	34	3' X 4'	36"	48"	41"	18"	
	44	4' X 4'	48"	48"	41"	18"	

**NOTE:** Above dimensions does not include insulation thickness. Dimension W & L vary with light fixture manufacturer and model no. Insulated models consist of 1/2" thick insulations.

**HOW TO SPECIFY AND ORDER**

**EXAMPLE :**



**NOTE :** When ordering, specify the light fixture manufacturer and model number for compatibility check.



**PERFORMANCE DATA**  
 SINGLE SIDE TYPE MODEL GLT 10, 20 & 30 2'  
 LIGHT FIXTURE (MODEL GLT 20)

Capacity, CFM			20	25	30	35	40	45	50	55	60	70	80
Projection, Ft.		H	4-6	5-8	5-9	6-10	7-12	8-13	9-15	9-16	10-17	12-20	14-23
		V	3-4	3-5	4-6	4-7	5-7	6-8	6-9	7-10	7-11	8-13	9-14
Inlet 4"	Total Press. "H2O	H	.037	.057	.081	.113	.147	.183	.219	.264	.314	.419	.554
		V	.031	.048	.069	.096	.125	.156	.186	.225	.267	.357	.47
Inlet 5"	Total Press. "H2O	H	.037	.057	.081	.113	.147	.183	.219	.264	.314	.419	.554
		V	.031	.048	.069	.096	.125	.156	.186	.225	.267	.357	.47
Inlet 6"	Total Press. "H2O	H	.037	.057	.081	.113	.147	.183	.219	.264	.314	.419	.554
		V	.031	.048	.069	.096	.125	.156	.186	.225	.267	.357	.47

**3' LIGHT FIXTURE (MODEL GLT 30)**

Capacity, CFM			30	35	40	45	50	60	70	80	90	100	110
Projection, Ft.		H	4-7	5-8	5-9	6-10	7-11	8-13	9-16	10-18	12-20	13-22	14-24
		V	3-5	4-5	4-6	4-7	5-7	6-9	7-10	7-11	8-13	9-14	10-15
Inlet 4"	Total Press. "H2O	H	.044	.059	.077	.099	.117	.171	.231	.30	.379	.468	.564
		V	.037	.05	.065	.084	.10	.146	.197	.255	.322	.398	.48
Inlet 5"	Total Press. "H2O	H	.035	.047	.06	.076	.093	.134	.179	.236	.294	.364	.439
		V	.029	.04	.052	.064	.079	.114	.152	.20	.25	.31	.373
Inlet 6"	Total Press. "H2O	H	.035	.047	.06	.076	.093	.134	.179	.236	.294	.364	.439
		V	.029	.04	.052	.064	.079	.114	.152	.20	.25	.31	.373

**4' LIGHT FIXTURE (MODEL GLT 10)**

Capacity, CFM			50	60	70	80	90	100	110	120	130	140	150
Projection, Ft.		H	4-6	5-7	6-8	6-9	7-11	8-12	9-13	9-14	10-15	11-16	11-17
		V	3-5	4-5	4-6	5-7	6-8	6-9	7-10	7-10	8-11	8-12	9-13
Inlet 4"	Total Press. "H2O	H	.064	.094	.127	.164	.207	.256	.309	.367	.428	.496	.569
		V	.055	.08	.108	.139	.176	.218	.262	.312	.364	.421	.483
Inlet 5"	Total Press. "H2O	H	.047	.067	.091	.117	.149	.182	.22	.261	.306	.355	.406
		V	.04	.057	.077	.10	.126	.155	.187	.222	.26	.302	.345
Inlet 6"	Total Press. "H2O	H	.04	.058	.078	.103	.128	.158	.19	.226	.265	.306	.351
		V	.035	.049	.066	.087	.109	.134	.162	.192	.225	.26	.298

**PERFORMANCE DATA**  
**DOUBLE SIDE TYPE MODEL GLT 2' LIGHT**

**FIXTURE (MODEL GLT 12 & 22)**

Capacity, CFM			35	40	45	50	60	70	80	90	100	110	120
Projection, Ft.		H	4-6	5-7	5-7	5-8	6-10	7-11	8-13	9-14	10-16	10-17	11-19
		V	3-4	3-5	4-6	4-6	5-7	5-8	6-10	7-11	7-12	8-13	9-14
Inlet 4"	Total Press. "H2O	H	.050	.064	.082	.100	.144	.195	.254	.319	.394	.490	.565
		V	.047	.060	.077	.094	.135	.183	.239	.300	.370	.460	.531
Inlet 5"	Total Press. "H2O	H	.034	.045	.056	.069	.099	.134	.174	.218	.270	.324	.386
		V	.029	.038	.048	.059	.084	.114	.148	.185	.230	.275	.328
Inlet 6"	Total Press. "H2O	H	.034	.045	.056	.069	.099	.134	.174	.218	.270	.324	.386
		V	.029	.038	.048	.059	.084	.114	.148	.185	.230	.275	.328

**3' LIGHT FIXTURE (MODEL GLT 13, 23 & 33)**

Capacity, CFM			55	60	70	80	90	100	110	120	140	160	180
Projection, Ft.		H	3-5	4-6	4-7	5-7	5-8	6-9	6-10	7-11	8-13	9-14	10-16
		V	3-4	3-4	3-5	4-5	4-6	5-6	5-7	5-7	6-9	7-10	8-11
Inlet 4"	Total Press. "H2O	H	.092	.108	.146	.189	.239	.296	.356	.423	.572	.747	.940
		V	.078	.092	.124	.161	.203	.252	.303	.360	.486	.635	.800
Inlet 5"	Total Press. "H2O	H	.051	.060	.084	.106	.134	.164	.198	.236	.320	.415	.523
		V	.047	.056	.078	.098	.124	.152	.184	.220	.300	.386	.487
Inlet 6"	Total Press. "H2O	H	.042	.050	.067	.088	.110	.137	.164	.195	.263	.342	.431
		V	.036	.043	.057	.075	.094	.116	.139	.165	.224	.290	.353

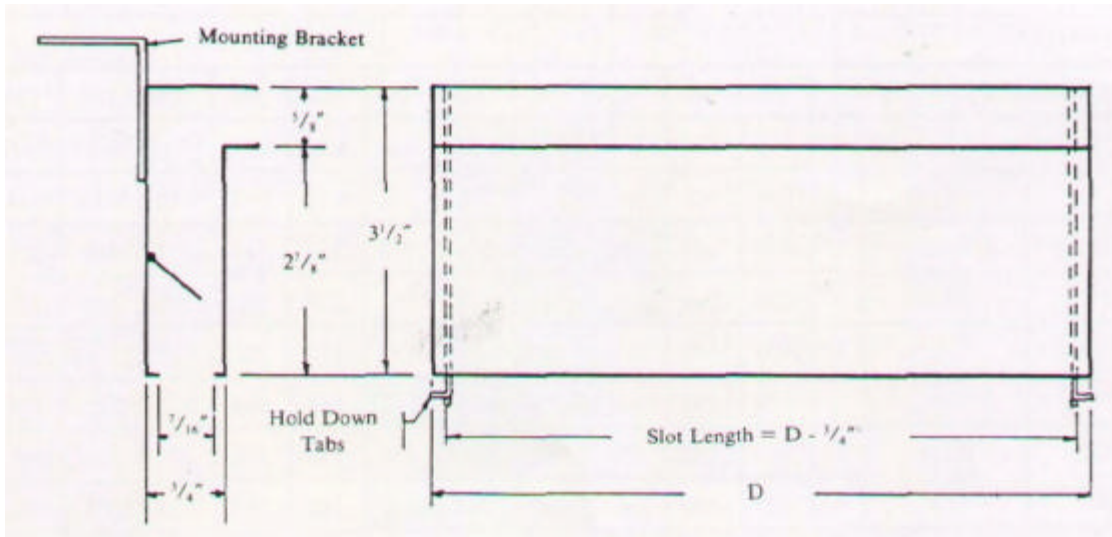
**4' LIGHT FIXTURE (MODEL GLT 14, 24, 34 & 44)**

Capacity, CFM			70	80	90	100	120	140	160	180	200	220	240
Projection, Ft.		H	3-4	3-4	4-5	4-5	5-6	5-7	6-8	7-9	7-10	8-11	9-12
		V	2-3	2-3	2-3	2-3	3-4	3-5	4-5	4-6	4-6	5-7	5-7
Inlet 4"	Total Press. "H2O	H	.134	.173	.219	.271	.388	.524	.682	.862	—	—	—
		V	.071	.092	.116	.143	.206	.280	.362	.460	—	—	—
Inlet 5"	Total Press. "H2O	H	.075	.094	.119	.146	.209	.284	.369	.465	.572	.692	.821
		V	.045	.056	.071	.087	.125	.170	.222	.279	.343	.415	.492
Inlet 6"	Total Press. "H2O	H	.054	.072	.090	.111	.158	.214	.278	.351	.432	.521	.617
		V	.034	.044	.056	.069	.098	.133	.172	.218	.268	.323	.383

***DIMENSIONAL DATA***

**MODEL GLTR (RETURN)**

**—NON-DUCTED TYPE—**



Model	Fixture Length	D
GLTR-2	2'	17"
GLTR-3	3'	29"
GLTR-4	4'	41"

***PERFORMANCE DATA***

Model	Capacity. CFM	20	30	40	50	60	70	80	90	100
GLTR-2	Static Press., "H20	.021	.048	.086	.134	.193	.264	.344	.436	.537
GLTR-3	Static Press., "H20	.009	.021	.037	.058	.084	.115	.150	.189	.234
GLTR-4	Static Press., "H20	.003	.007	.012	.019	.028	.038	.050	.063	.077

NC SOUND DATA COLOR CODE NC

LEVEL THAN 20 DB



NC LEVEL LESS THAN 30 DB



NC LEVEL LESS THAN 40 DB



NC LEVEL MORE THAN 40 DB



**PERFORMANCE NOTES**

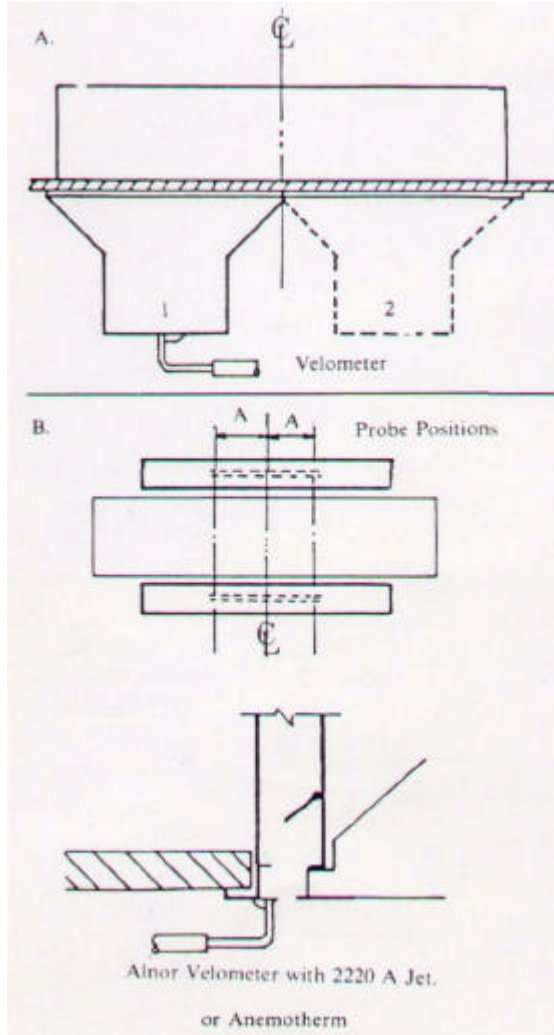
PROJECTIONS H and V —are the horizontal and vertical distances that the air stream travels from outlet at a given terminal velocity. Projections are based on maximum terminal velocity of 50 fpm and minimum terminal velocity of 100 fpm. Data are based on 9 feet mounting height.

$\Delta T$  — is based on 20°F temperature difference between supply air and average room temperature.

NC LFVFF - 'NOISE CRITERIA', db —is based on S db room attenuation; re: 10<sup>-1</sup> watts. Color codings denotes each type of NC values.

NC SOUND DATA COL OR CODE;	
NC LEVEL LESS THAN 20 DB	<div style="background-color: white; width: 20px; height: 10px; display: inline-block;"></div>
NC LEVEL LESS THAN 30 DB	<div style="background-color: green; width: 20px; height: 10px; display: inline-block;"></div>
NC LEVEL LESS THAN 40 DB	<div style="background-color: yellow; width: 20px; height: 10px; display: inline-block;"></div>
NC LEVEL MORE THAN 40 DB	<div style="background-color: magenta; width: 20px; height: 10px; display: inline-block;"></div>

**BALANCING PROCEDURE**



Using a conical or pyramid shaped hood either aluminum or cardboard cones to collect air discharge and guide the flow instruments for flow measurements. Take reading from one-half of diffuser and toother half to obtain velocity. Average the readings for the velocities and multiply by the Ak factors to obtain total air flow in CFM.

Take readings from probe positions at specified distances from the center-line of the diffuser tor air flow as shown in the figure. Average the velocity measured at the locations and multiply by the Ak factors below to obtain total air flow in CFM.

MODEL	Ak FACTORS		A
	SUPPLY		
	HOROZONTAL	VERTICAL	
GLT 20	.50	.0590	4-3/4"
GLT 30	.086	.1010	5-1/2"
GLT 10	.121	.1424	8-3/4"
GLT 14.24.34.44	.1:1	.1424	5-1/2"
GLT 12.22/13.23.33	.050/.101	.050/.101	5"