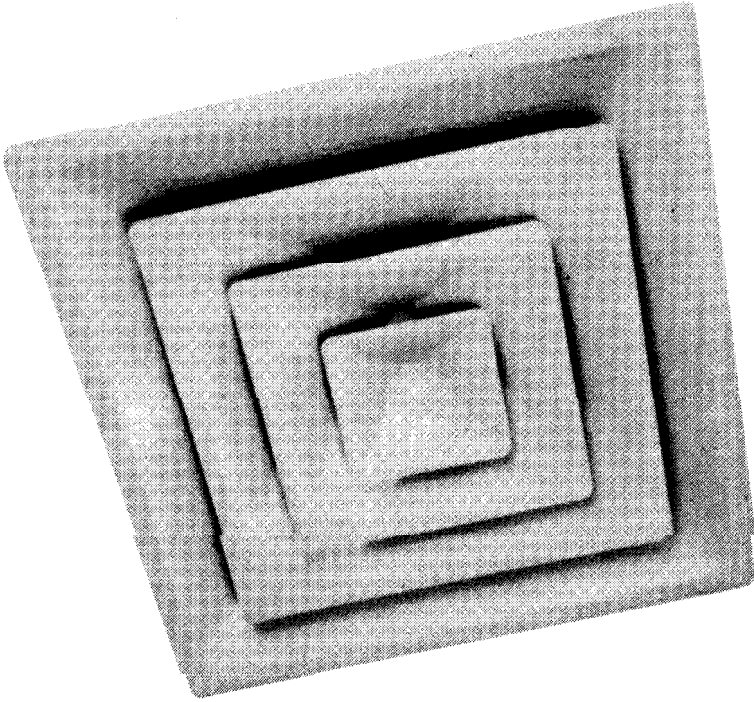
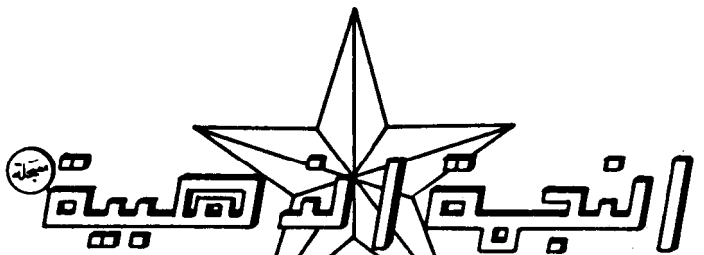


SAUDI AIR CONTROL SYSTEM  
INDUSTRIAL REGISTRATION NO. 113



CEILING DIFFUSERS

STAMPED SUPERIOR QUALITY



المصنع السعودي لفتحات وضوابط توزيع الهواء  
ترخيص صناعي رقم ١١٣/ص



SAUDI AIR CONTROL SYSTEM

## Stamped Ceiling Diffusers

### Engineered air diffusion

THE GOLDENSTAR STAMPED CEILING DIFFUSER has been especially designed to provide both unobtrusive appearance required for architectural excellence, and the 360 degree diffusion pattern at minimum N C levels required for high engineering performance. The stamped one-piece cones eliminate mitred corners and the die formed curves provide consistent quality in performance.

#### MODEL GSD-F; FIXED PATTERN

This diffuser provides stable air diffusion and mixing patterns under constant and changing load conditions and is particularly suitable for variable air volume system

Available in standard 12"X12" or 24" X 24" face and a variety of neck sizes with a choice of backed enamel finish to suit your system design.

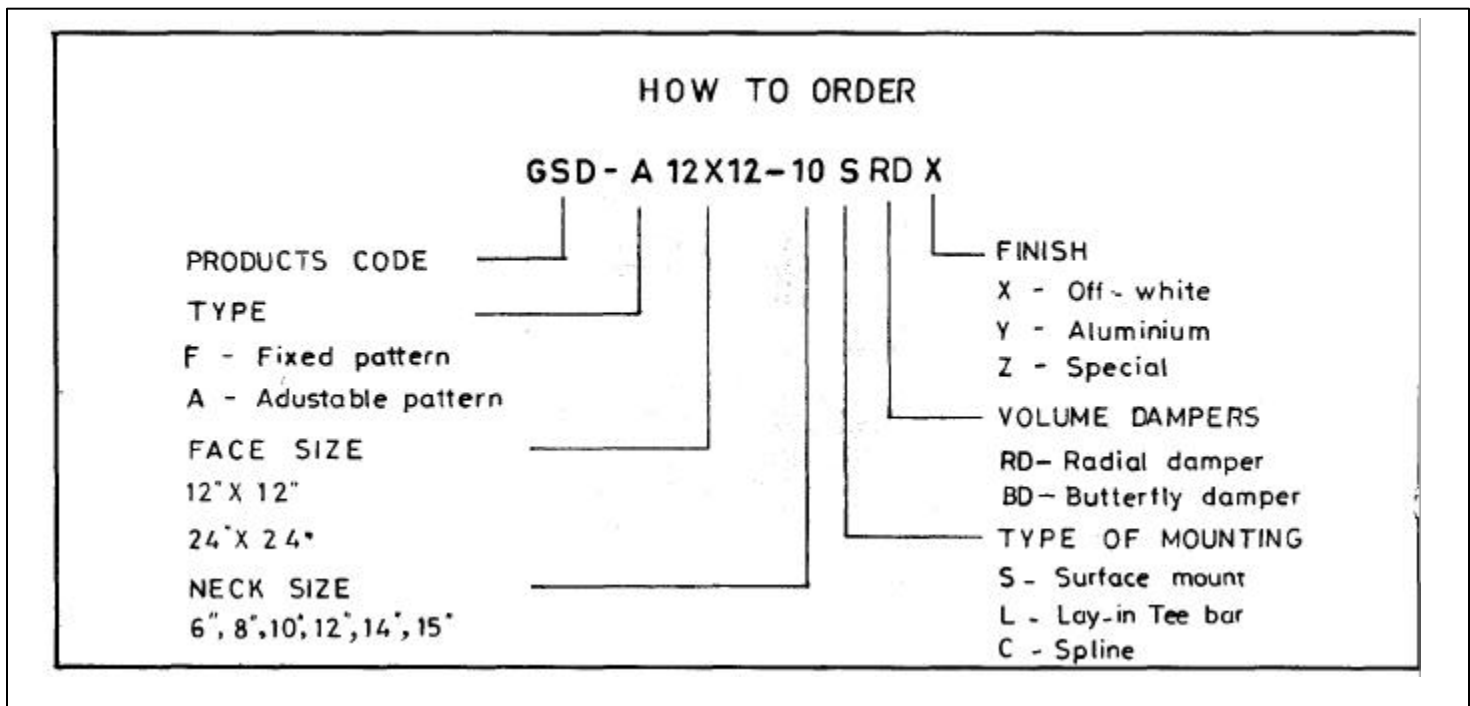
#### MODEL G S D-A ; ADJUSTABLE

##### PATTERN

This diffuser have a unique adjusting arrangement for quick and simple field adjustment of air pattern requirements. Available in standard 12"X12"or 24X24"face and a variety of neck sizes with a choice of backed enamel finish to suit your system design.

##### DESIGN FEATURES

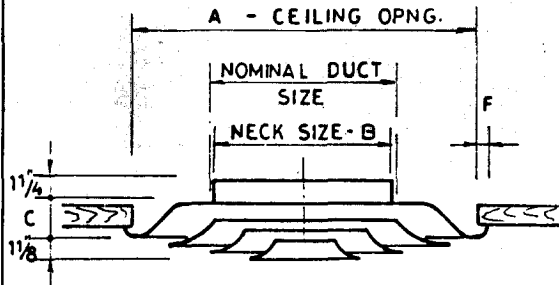
- Removable core
- Steel stamped shape for uniformity
- High neck collars for solid connection
- 360 degree air diffusion pattern
- High COANDA effect
- Backed enamel finish.





SAUDI AIR CONTROL SYSTEM

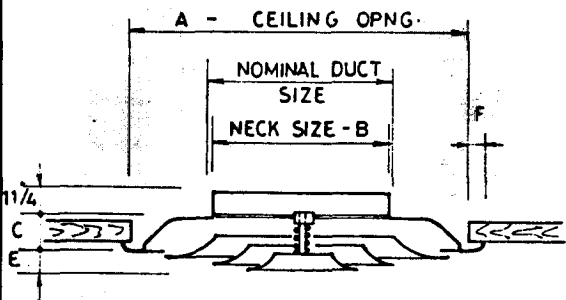
MODEL - GSD-F (Fixed Pattern)



CONSTRUCTION - Steel (standard)  
 - Galvalume or Aluminium (optional)

FACE SIZE	NECK SIZE (inches)						
	DIM.	6	8	10	12	14	15
12 X 12	A	12	12				
	B	5-7/8	7-7/8				
	C	1	1				
	F	1/2	1/2				
24 X 24	A	24	24	24	24	24	24
	B	5-7/8	7-7/8	9-7/8	11-7/8	13-7/8	14-7/8
	C	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4
	F	3/8	3/8	3/8	3/8	3/8	3/8

MODEL - GSD-A (Adjustable Pattern)



CONSTRUCTION Steel (standard)  
 Galvalume or Aluminium (optional)

FACE SIZE	NECK SIZE (inches)						
	DIM.	6	8	10	12	14	15
12 X 12	A	12	12				
	B	5 7/8	7 7/8				
	C	1 3/8	1 3/8				
	E	3/4-1 3/4	3/4-1 3/4				
	F	1/2	1/2				
24 X 24	A	24	24	24	24	24	24
	B	5 7/8	7 7/8	9 7/8	11 7/8	13 7/8	14 7/8
	C	3	3	3	3	3	3
	E	0-1 1/4	0-1 1/4	0-1 1/4	0-1 1/4	0-1 1/4	0-1 1/4
	F	3/8	3/8	3/8	3/8	3/8	3/8



SAUDI AIR CONTROL SYSTEM

Performance Data

MODEL GSD-A,GSD-F

FACE SIZE	NECK SIZE		NECK VELOCITY, fpm.									
			400	500	600	700	800	900	1000	1200	1400	1600
12 X 12	6	CFM	80	100	120	140	160	180	200	235	275	315
		TP	.018	.029	.043	.060	.079	.100	.128	.175	.250	.325
		T1	1	2	3	3	4	4	4	5	6	8
		T2	4	4	6	6	8	8	10	10	14	14
		NC	20	20	20	20	20	22	24	31	38	40
	8	CFM	140	175	210	245	280	315	350	420	490	520
		TP	.031	.047	.065	.087	.110	.140	.168	.235	.310	.395
		T1	5	5	7	8	9	11	11	13	14	14
		T2	9	11	13	14	14	16	16	20	20	20
			20	20	20	20	20	22	26	33	38	41

24 X 24	8	CFM	140	175	210	245	280	315	350	420	490	560
		TP	.021	.033	.047	.063	.082	.105	.128	.183	.245	.325
		T1	1	2	3	4	5	6	6	8	8	10
		T2	5	6	8	8	10	10	13	13	17	17
		NC	20	20	20	20	20	25	29	33	37	42
	10	CFM	220	270	330	380	435	490	545	655	765	870
		TP	.026	.039	.057	.074	.097	.123	.150	.215	.293	.372
		T1	3	4	5	6	6	7	9	10	13	13
		T2	6	9	10	13	13	15	15	15	18	18
		NC	20	20	20	20	25	29	33	37	40	44
	12	CFM	315	390	470	550	630	705	785	990	1100	1255
		TP	.028	.045	.064	.087	.112	.127	.155	.245	.310	.410
		T1	3	4	5	6	7	8	10	11	14	14
		T2	7	10	11	13	13	15	15	16	18	19
		NC	20	20	23	26	29	33	36	42	43	47
	14	CFM	425	530	635	745	850	955	1060	1270	1490	1695
		TP	.033	.054	.072	.100	.127	.163	.204	.280	.395	.500
		T1	4	5	7	7	9	11	11	13	16	16
		T2	9	11	13	16	17	18	19	21	22	27
		NC	20	20	23	26	30	35	40	43	44	47
15	CFM	490	615	735	860	985	1110	1230	1470	1720	1970	
	TP	.035	.060	.076	.105	.132	.168	.208	.297	.403	.528	
	T1	7	8	9	10	13	15	16	18	20	22	
	T2	10	12	14	17	18	19	22	27	31	33	
		20	20	24	28	36	37	41	43	49	52	

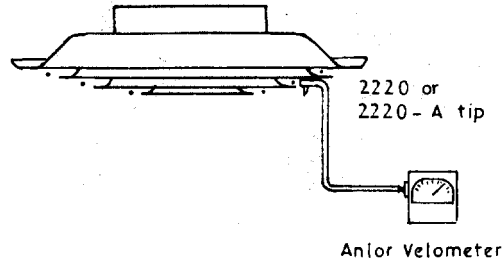


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## Balancing Procedure

### AIR FLOW MEASUREMENTS

- 1-To determine Air flow in C FM, use an Anlor Velometer with 2220 or 2220-A tip positioned as shown in figure.
- 2-Record velocity readings of the four sides of the diffuser at points shown by dots in figure and average the velocity readings
- 3-The flow rate in CFM = Average velocity X Area factor

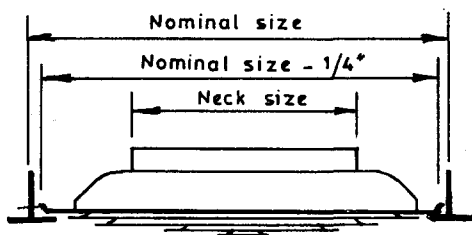


Neck Diameter inches	Nominal overall Face size	Area Factor
6	12 X 12	0.131
8	12 X 12	0.202
8	24 X 24	0.227
10	24 X 24	0.331
12	24 X 24	0.450
14	24 X 24	0.511
15	24 X 24	0.625

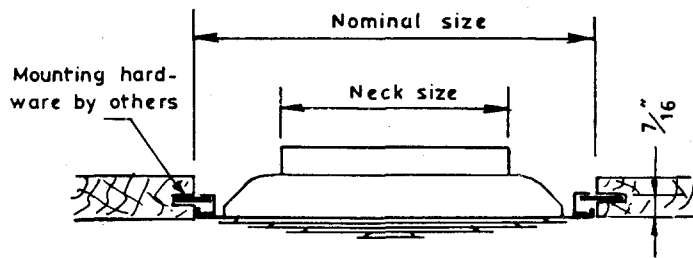
### LEGEND

CFM - Cubic feet per minute. TP - Total pressure - In.W.G. T1 - Throw in feet @ 100 fpm  
 terminal velocity T2 - Throw in feet @ 50 fpm.  
 terminal velocity NC - Noise values, based on 10 dB room absorption.

### OPTIONAL BORDER TYPES



L- LAY-IN TEE BAR MODEL



C - SPLINE MODEL



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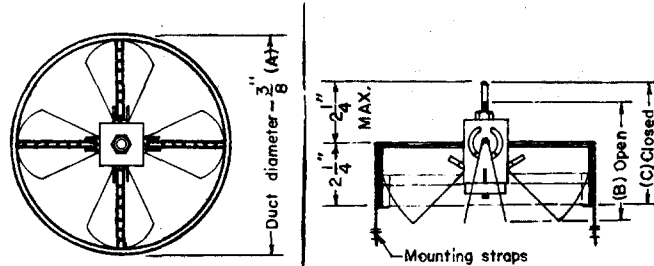
ACCESSORIES

RADIAL DAMPERS

MODEL - RD

GOLDENSTAR Radial damper is a unique method of controlling air volume through a round neck diffusers. The multi-blade perimeter design offers true radial flow at any setting.

A screw driver slot accessible thru the diffuser face to adjust from fully closed to fully open.

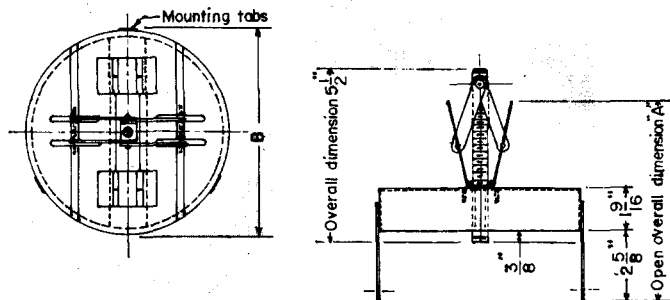


(A) DIA.	(B) OPEN	(C) CLOSED
6"	3-1/2	4-1/2
8"	4-1/4	4-1/2
10"	4-7/8	4-1/2
12"	5-5/8	4-1/2
14"	6-3/8	4-1/2
16"	7	4-1/2

BUTTERFLY DAMPERS

MODEL - BD

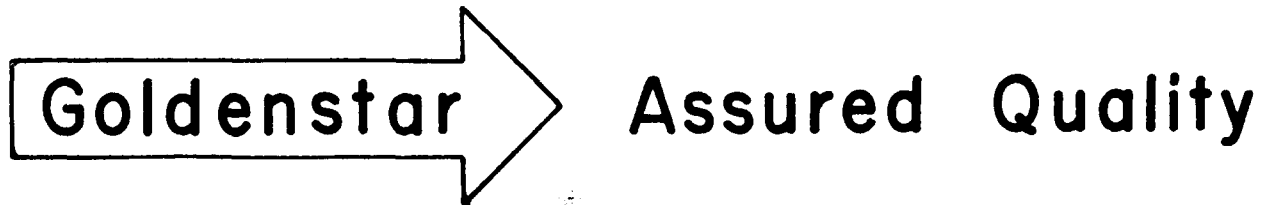
- Economical air volume control device.
- Install directly behind Series GSD stamped ceiling diffusers.
- Screw driver operated damper assembly provides full range volume control.
- Available with or without straightening grid.



NOMINAL DIMENSION	A	B
6"	4-3/4	5-7/8
8"	5-3/4	7-7/8
10"	6-3/4	9-7/8
12"	7-15/16	11-7/8
14"	8-15/16	13-7/8
16"	10	15-7/8



SAUDI AIR CONTROL SYSTEM



available:

- GRILLES AND REGISTERS
- DIFFUSERS-LIGHT TROFFERS
- VOLUME DAMPERS - LOUVERS
- FIRE DAMPERS
- FIRE / SMOKE COMBINATION DAMPERS
- ACCESS DOORS
- CABLE TRAYS
- VARIABLE/CONSTANT AIR VOLUME UNITS
- SOUND ATTENUATORS
- ACOUSTIC LOUVERS
- ACOUSTIC CELLS
- ACOUSTIC - PAK AIR HANDLERS
- ACOUSTIC FAN