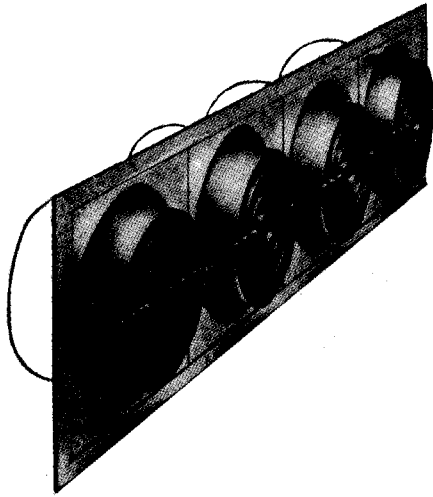




SAUDI AIR CONTROL SYSTEM  
INDUSTRIAL REGISTRATION NO. 113



ANNULAR - JET DIFFUSER





SAUDI AIR CONTROL SYSTEM

**ANNULAR -JET DIFFUSER**

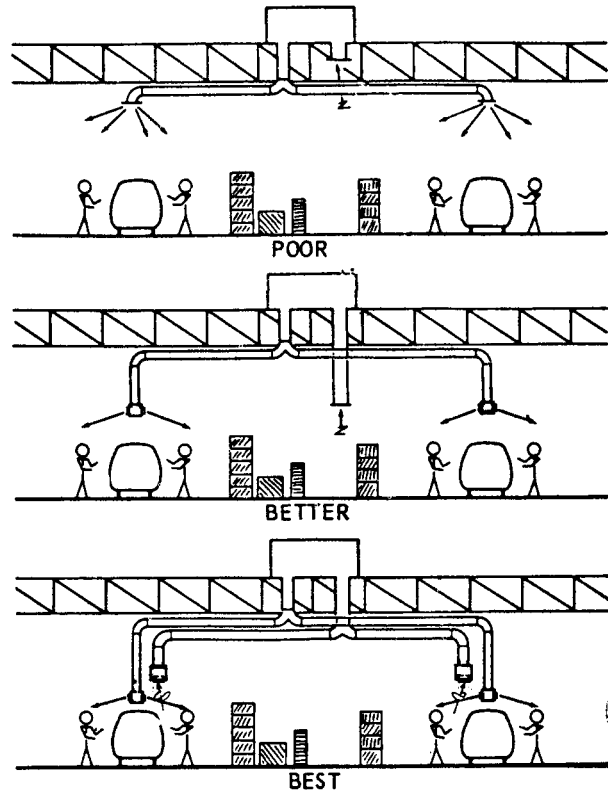
**A NEW APPROACH TO SPOT COOLING**

Reduced absenteeism plus the obvious production efficiency advantages from air conditioned factories are dictating that more and more industrial space being air conditioned. This places an increasing demand on energy resources at a time tends uneconomical . There-fore, today HVAC designers prefer spot or localized cooling rather than cooling of entire-factory by which efficiency can be improved and reduce operating costs.

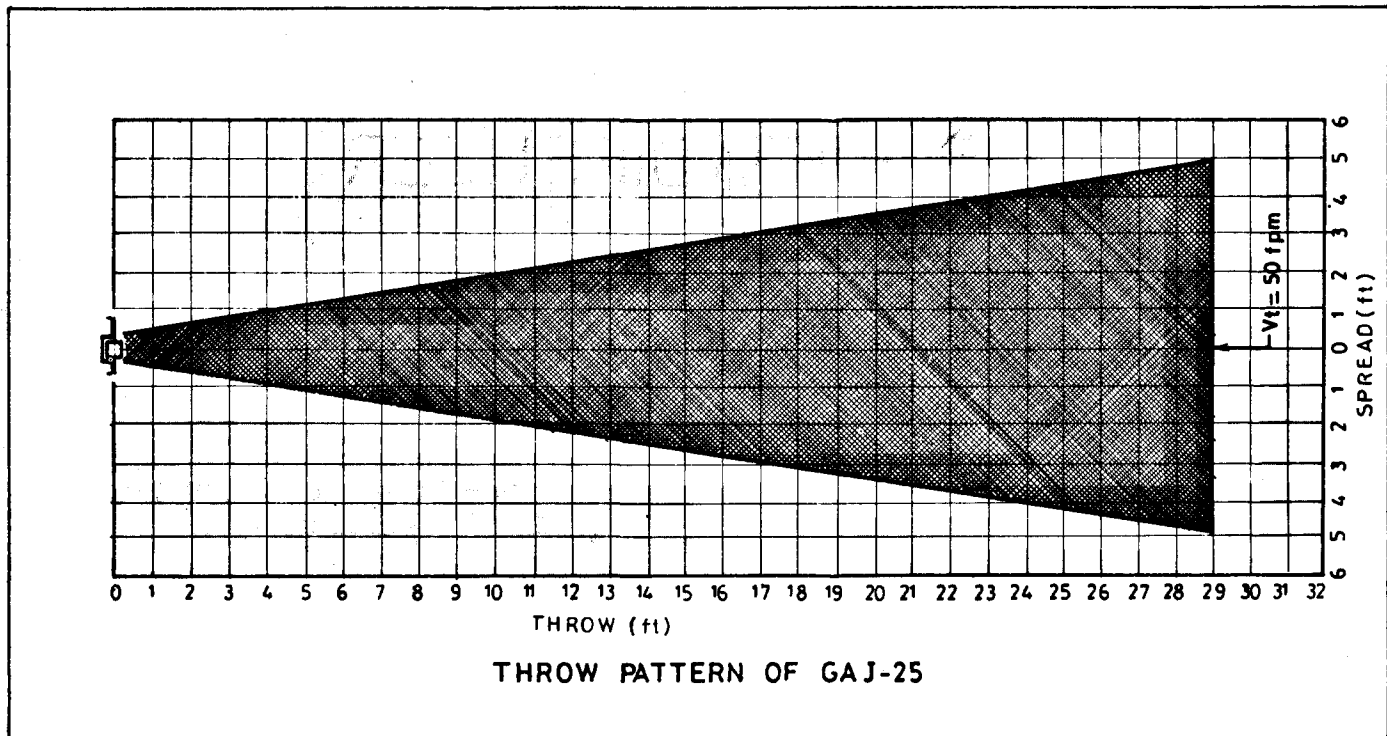
The 'heart' of this approach is the spot cooling type air outlets. So thanks to Golden- star ANNULAR - JET diffuser.

ANNULAR-JET also suitable for horizontal discharge applications involving Auditoriums

Arenas and vertical discharge applications such as Entrance ways, Gymnasiums,Swimming pools etc.



The objective in plant air conditioning is to provide satisfactory comfort for the workers with minimum installed tonnage The prime consideration is to cool the workers, not the plant.





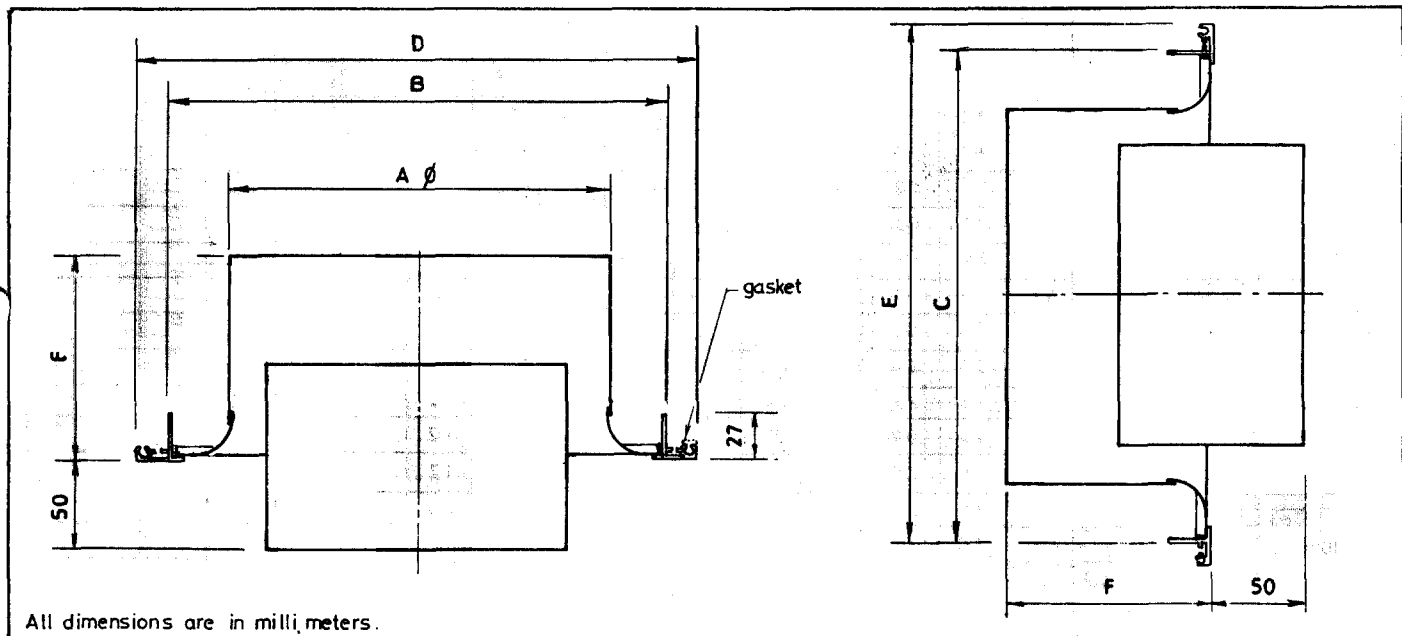
SAUDI AIR CONTROL SYSTEM

## ANNULAR JET DIFFUSER

MODELS GAJ-20/GAJ-25/GAJ-30, GAJ-35

### STD. CONSTRUCTION FEATURES

- Aluminium construction with extruded aluminium frame.
- Available 1 through 4 diffuser elements per single ass'bly
- Adjustable core provide air discharge up to 30 from the mid position in any plane
- Individual pattern adjustment from front or back of diffuser.
- Elements available with adapter (steel) and opp. blade damper, suffix 'P' to standard models.
- Single element provide direct connection to round duct system.
- Individual element locking device available (option)
- Backed white/Aluminum paint as standard, other colors available on request



All dimensions are in millimeters.

MODELS	NO.OF ELEMENTS	A COLLAR SIZE( Dia)	B NOMINAL WIDTH	C NOMINAL HEIGHT	D	E	F	NO OF CORE
GAJ -20	1	203	28 3	283	324	324	126	3
	2	2 03	561	283	602	324	125	
	3	203	891	283	934	324	125	
	4	2 03	11 17	283	1158	324	125	
GAJ-25	1	2 54	333	333	374	374	140	3
	2	2 54	662	333	703	374	140	
	3	254	991	333	1032	374	140	
	4	254	13 20	333	1361	374	140	
GAJ-30	1	305	384	384	425	425	150	4
	2	305	764	384	805	425	150	
	3	305	1144	384	1185	425	150	
	4	305	1524	384	1565	425	150	
GAJ -35	1	355	434	434	475	475	160	4
	2	3 55	864	434	905	475	160	
	3	3 55	1294	434	1335	475	160	
	4	355	1724	434	1765	475	160	



SAUDI AIR CONTROL SYSTEM

ANNULAR-JET DIFFUSER

Performance data

MODEL		GAJ - 20				GAJ - 25				GAJ - 30				GAJ - 35			
CFM	No. of Elements	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
100	Throw (ft)	9															
	Δ Ps	.02															
	NC	—															
200	Throw (ft)	19	11			15											
	Δ Ps	.07	.02			.02											
	NC	23	—			—											
300	Throw (ft)	28	14	11		22				18							
	Δ Ps	.14	.04	.02		.05				.02							
	NC	31	20	—		22				—							
400	Throw (ft)	37	23	12	11	29	18			24				22			
	Δ Ps	.24	.07	.03	.02	.08	.02			.04				.02			
	NC	37	26	19	15	27	15			21				15			
500	Throw (ft)	46	28	19	14	37	22			29				27			
	Δ Ps	.36	.10	.05	.03	.12	.03			.06				.03			
	NC	41	30	24	20	32	20			26				20			
600	Throw (ft)	55	34	23	17	44	26	18		36	22			33			
	Δ Ps	.50	.14	.07	.04	.17	.05	.02		.08	.02			.04			
	NC	45	34	28	23	35	25	17		29	17			23			
700	Throw (ft)		39	26	20	51	31	21		42	25			38			
	Δ Ps		.19	.09	.05	.22	.06	.03		.11	.03			.05			
	NC		37	31	25	38	27	21		32	21			25			
800	Throw (ft)		44	30	23	59	35	23	18	48	29			44	26		
	Δ Ps		.24	.12	.07	.29	.08	.04	.02	.14	.04			.06	.02		
	NC		40	34	29	41	30	24	18	35	24			28	18		
900	Throw (ft)		50	34	25	66	40	26	20	54	33	22		49	30		
	Δ Ps		.30	.14	.08	.35	.10	.05	.03	.17	.05	.02		.07	.02		
	NC		42	35	31	43	33	27	22	37	27	19		29	19		
1000	Throw (ft)		55	37	28	73	44	29	22	61	35	24		55	32		
	Δ Ps		.36	.17	.10	.43	.12	.06	.03	.21	.06	.03		.09	.03		
	NC		44	38	33	46	35	29	24	39	29	23		32	23		
1200	Throw (ft)		66	44	33		53	35	26	73	43	29	22	66	40	26	
	Δ Ps		.50	.24	.14		.17	.08	.05	.29	.08	.04	.02	.12	.04	.02	
	NC		48	41	37		38	32	28	43	32	26	20	35	26	20	
1400	Throw (ft)			52	39		61	41	31	85	50	34	25	77	46	31	
	Δ Ps			.32	.19		.22	.11	.06	.38	.11	.05	.03	.16	.05	.02	
	NC			45	40		41	35	30	46	35	28	24	39	28	21	
1600	Throw (ft)			59	44		71	47	35		58	39	29	88	53	35	26
	Δ Ps			.41	.24		.29	.14	.08		.14	.07	.04	.21	.06	.03	.02
	NC			47	43		44	38	33		38	32	27	41	31	25	21
1800	Throw (ft)			66	50		79	53	40		65	43	33	99	59	40	30
	Δ Ps			.50	.30		.35	.17	.10		.17	.08	.05	.26	.07	.04	.02
	NC			49	45		46	40	36		40	34	30	44	32	28	22



SAUDI AIR CONTROL SYSTEM

ANNULAR-JET DIFFUSER

Performance data

MODEL		GAJ - 20				GAJ - 25				GAJ - 30				GAJ - 35			
CFM	No.of Elements	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
2000	Throw (ft)				55		88	58	44		73	48	35	110	66	44	32
	Δ Ps				36		43	21	12		21	10	06	31	09	04	03
	NC				47		49	42	38		42	36	32	46	35	28	24
2200	Throw (ft)				61		66	48			80	53	40		73	48	36
	Δ Ps				42		24	15			25	11	07		11	05	03
	NC				48		44	40			44	37	33		37	30	26
2400	Throw (ft)				66		70	53			88	58	43		79	53	40
	Δ Ps				50		29	17			29	14	08		12	06	04
	NC				51		46	41			46	40	35		38	32	28
2600	Throw (ft)						76	57			94	63	47		86	57	43
	Δ Ps						33	20			34	16	10		14	07	04
	NC						48	43			48	41	37		40	34	29
2800	Throw (ft)						82	61			102	68	50		92	62	46
	Δ Ps						38	22			38	18	11		16	08	05
	NC						49	44			49	43	38		42	36	31
3000	Throw (ft)						87	66			73	54			99	66	49
	Δ Ps						43	25			21	12			19	09	05
	NC						50	46			44	39			43	37	32
3500	Throw (ft)							77			85	63			115	77	58
	Δ Ps							34			28	16			25	12	07
	NC							49			47	43			46	40	35
4000	Throw (ft)							88			97	73			132	88	66
	Δ Ps							43			35	21			31	15	09
	NC							52			50	45			49	43	38
4500	Throw (ft)										109	82				99	77
	Δ Ps										44	26				19	11
	NC										52	48				45	40
5000	Throw (ft)											91				109	82
	Δ Ps											31				23	13
	NC											50				47	42
5500	Throw (ft)											99				120	91
	Δ Ps											37				27	16
	NC											52				49	45
6000	Throw (ft)															132	99
	Δ Ps															31	19
	NC															51	46
6500	Throw (ft)																107
	Δ Ps																22
	NC																48
7000	Throw (ft)																115
	Δ Ps																25
	NC																49



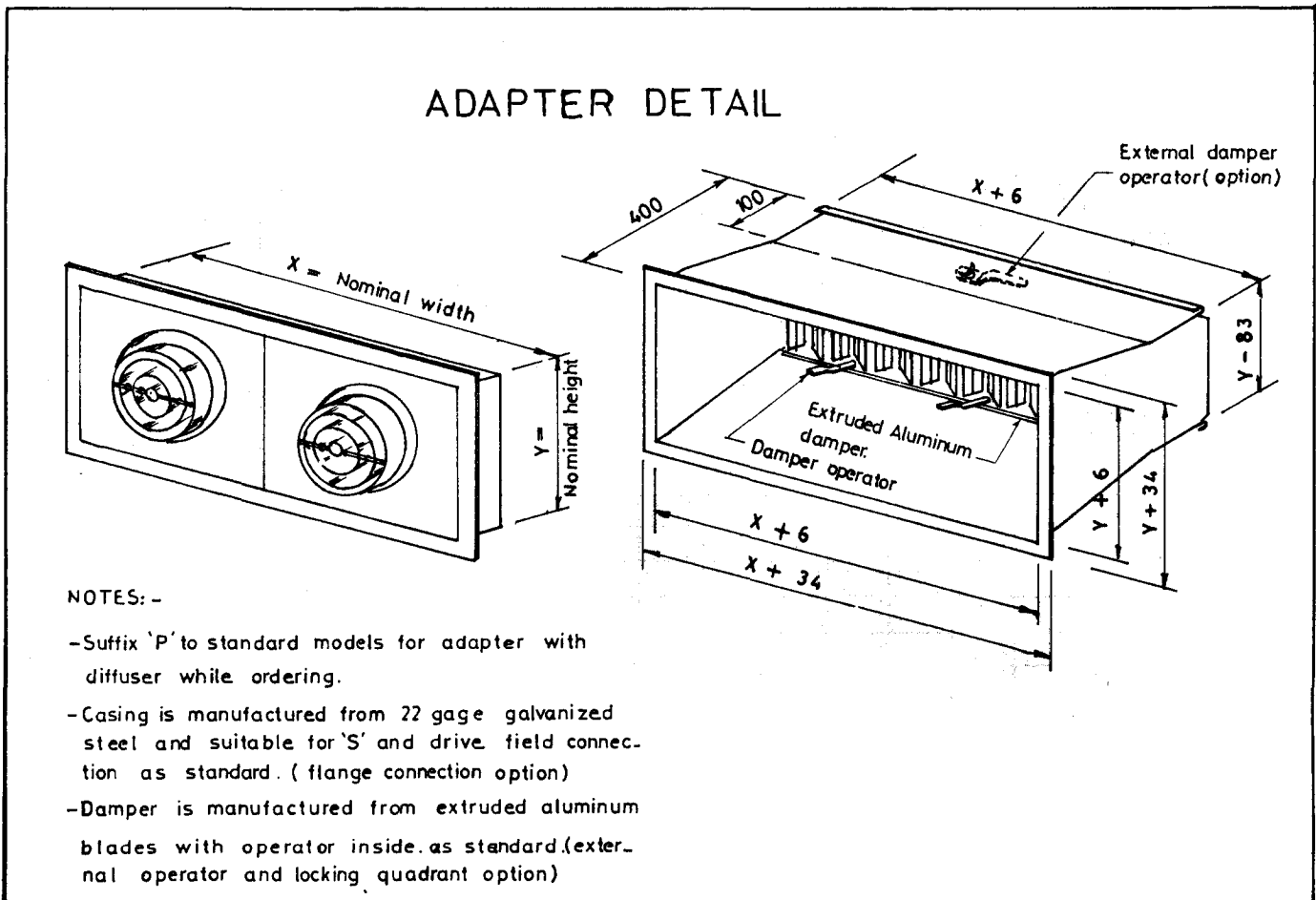
SAUDI AIR CONTROL SYSTEM

ANNULAR-JET DIFFUSER

Performance Notes:-

- Data on the performance tables are based on 20°F temperature difference between supply air and average room temperature.
- Throw- is the distance measured in feet that the air stream travels from outlets at 50 Fpm. terminal velocity.
- If the air stream from diffuser happens to travel close to any surface such as obstructions/walls/ceiling etc. then that part of the throw will increase by a factor of 1.4 (Coanda effect)
- Throw and pressure drop of multi elements are based on all elements being set to give parallel discharge with total volume distributed equally to individual element.

- The individual element flow can be adjusted to any desired spread pattern where the throw will be reduced to the single unit value. When adjusted to full 30° pattern, the pressure drop will increase by 40% and sound level by 5 dB.
- NC ratings are based on control damper positioned 100 % open and microphone located 10 feet at 45° from the face of the diffuser in a room having 8dB attenuation (re. 10 watts). Deduct 4 dB for 20 feet and 6 dB for 30 feet. If damper is at 50 % open position, then the noise increase to 5 dB.



Goldenstar → Assured Quality

Also 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 AIRHANDLERS
- ACOUSTIC FAN