

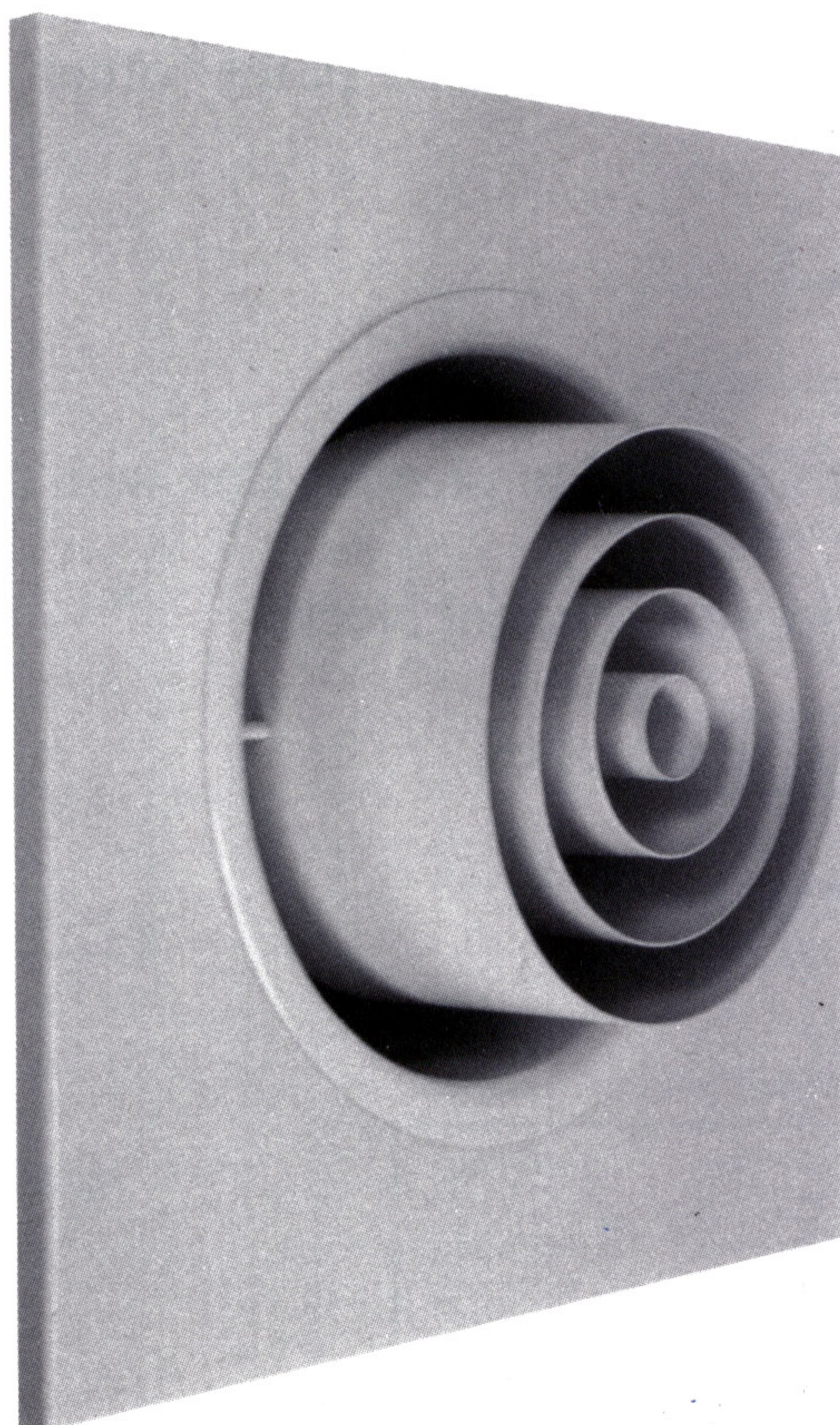


Air Quality Products

Zamzam

Engineering Industries

JET DIFFUSER MODEL JD





JET DIFFUSER MODEL JD

Jet diffuser Is Used For Long-Throw With large air volumes air distribution. It is ideal for high ceilings applications such as (Industrial, Exhibition, Reception, Sport Halls & Air port Terminals, Museumsetc) Eliminating Extensive Duct work.

- Directional control enables air to be directed horizontally or vertically with A 60° arc and the 360° rotation of mounting plate enables, Fully directional of air flow.
- Four sizes 8, 10, 12, and 14 diameter for versatility in selection and power sound levels at higher capacities.
- One, Two, Three, or Four unit assemblies (JD1, JD2, JD3, JD4) are available to meet a wide rang of air requirements on each project.
- Side wall or ceiling installation permits large area or spot air distribution.
- Aluminum construction light weight fore easier installation & adjustment.
- Standard square aluminum face flat plate with $\approx \frac{3}{8}$ upward 90° bended lips (option square aluminum plate with extruded aluminum flange).
- Standard electrostatic white RAL 9010 paint (other colours available on request).

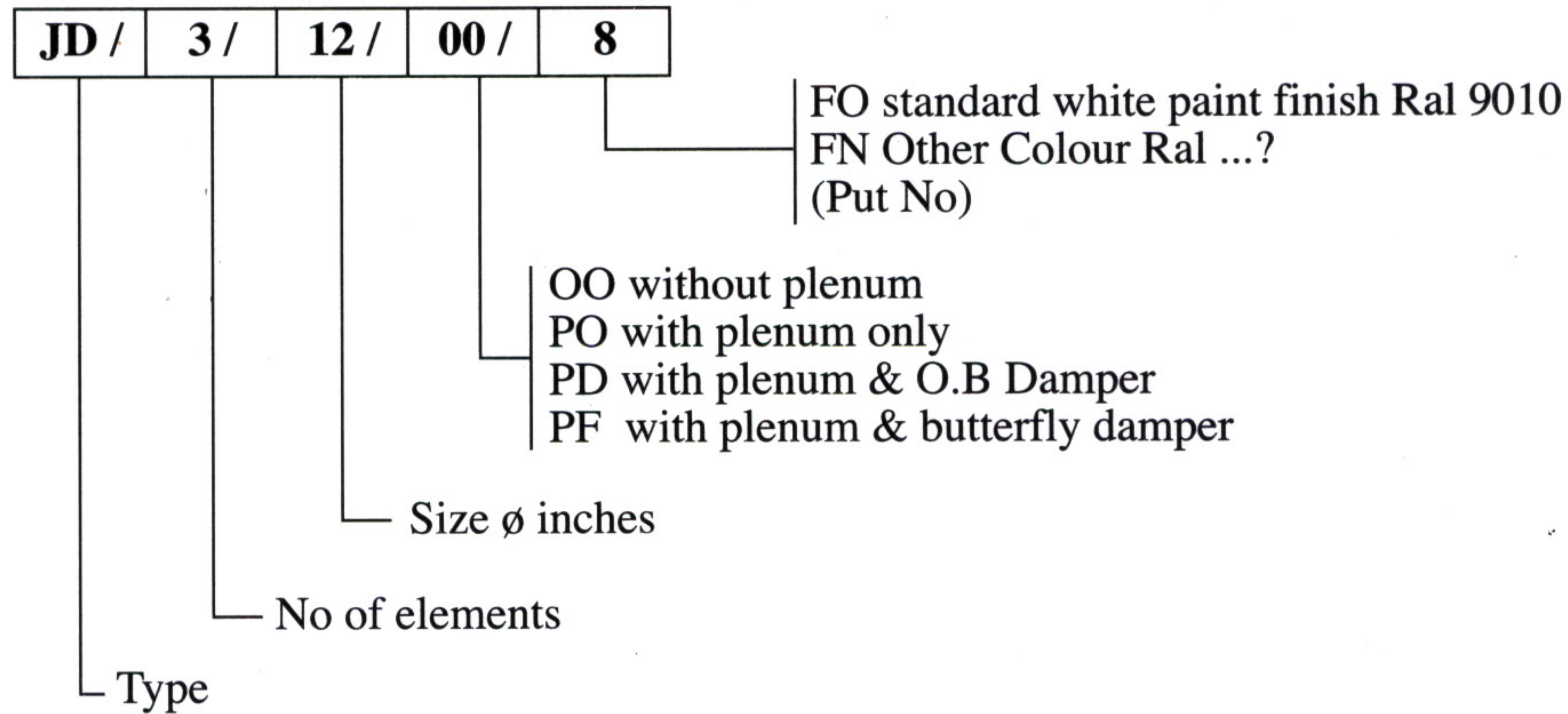
ACCESSORIES:

- Rectangular O.B damper mounted in plenum Box with no of elements equal to no of jet.
- Butterfly round damper mounted on jet Neck.
- G. steel G 90 plenum Box assemblies.

*** All Dimensions In Inch.**

JD Engineering Data

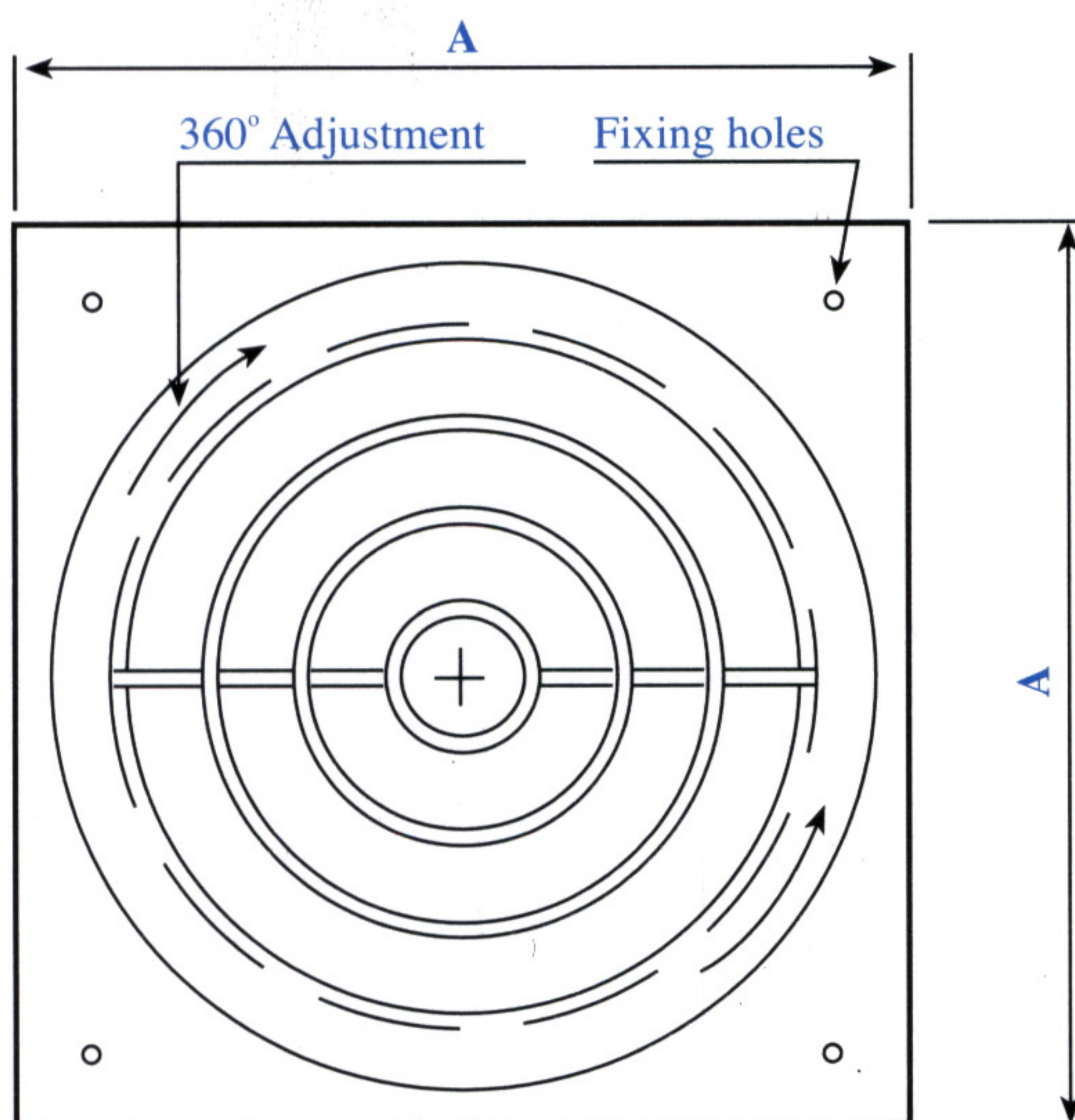
HOW TO SPECIFY



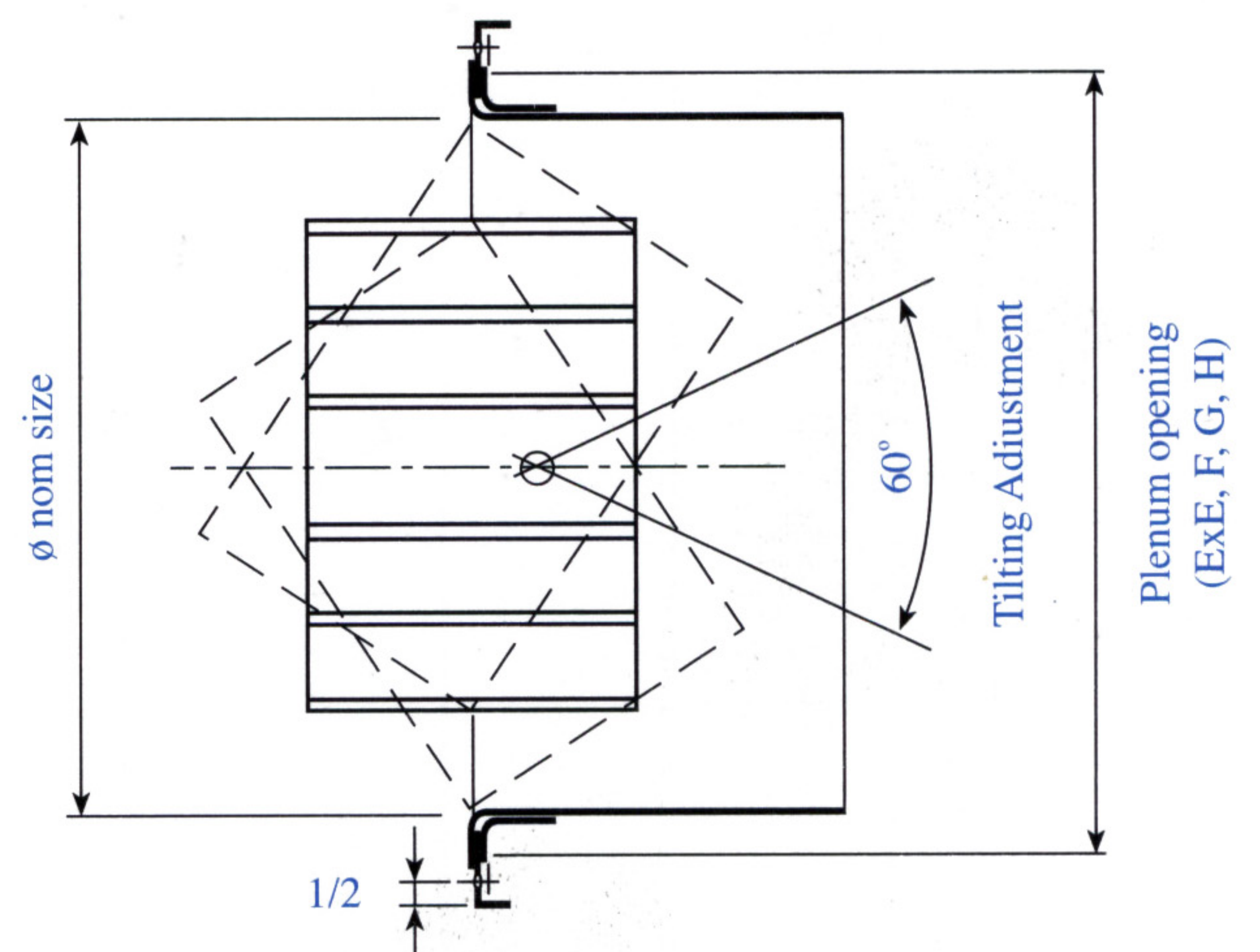
DIMENSIONS :

Size	JD 1		JD 2		JD 3		JD 4	
	Jet Size	Plenum Opening	Jet Size	Plenum Opening	Jet Size	Plenum Opening	Jet Size	Plenum Opening
Nom Diam.	A x A	E x E	A x B	E x F	A x C	E x G	A x D	E x H
8	14x14	12x12	14x26	12x24	14x38	12x36	14x50	12x48
10	16x16	14x14	16x30	14x28	16x44	14x42	14x58	14x56
12	18x18	16x16	18x34	16x32	18x50	16x48	16x66	16x64
14	20x20	18x18	20x38	18x36	20x56	18x54	20x74	18x72

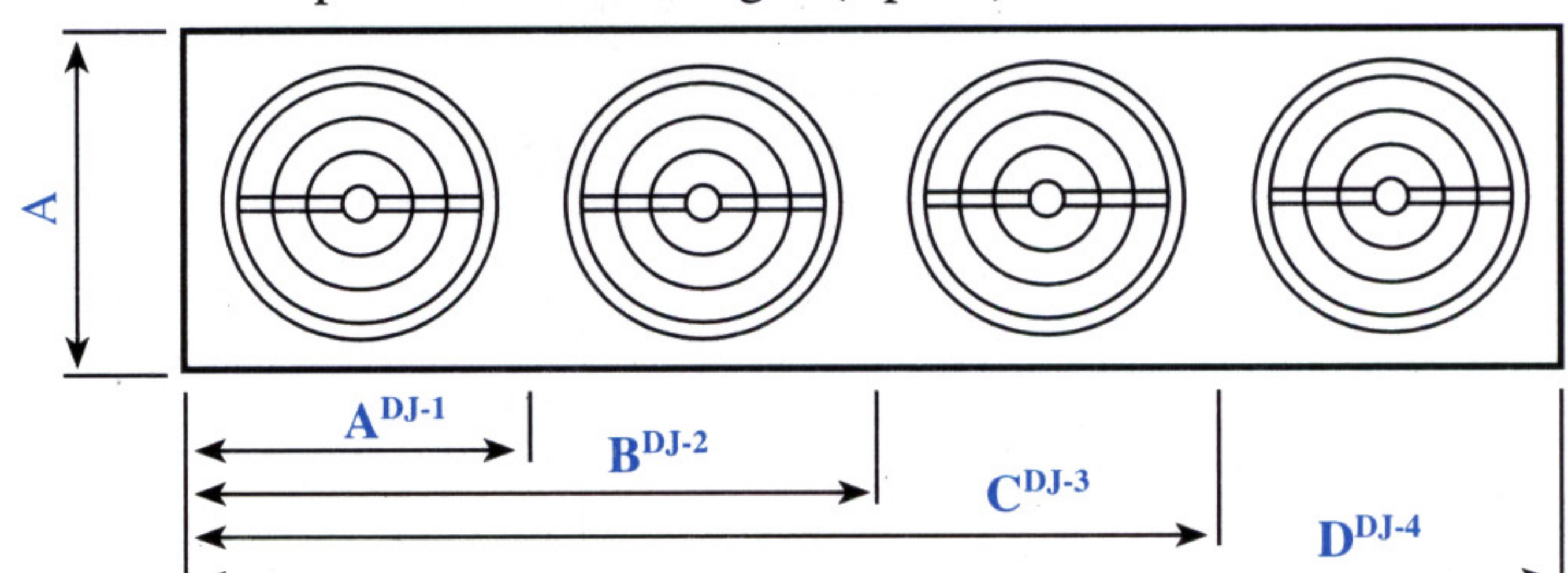
Minimum plenum length in air direction = nominal jet diameter + 6



Type JD
 Standard / with squar face plate
 Option. squar face plate with ext.alu.flange



Multiple Assemblies Flanged (Option)



JD Engineering Data

■ Size 8

CFM	JD	SP	NC	THROW (T)	Projection (L max)	
	UNITS			JET	H	C
100	1	.02	--	20	19	23
200	1	.06	25	28	26	32
300	1	.13	33	32	30	37
	2	.04	23	28	26	32
400	1	.24	42	40	38	46
	2	.06	28	27	25	31
500	1	.37	51	50	48	58
	2	.10	35	30	29	35
	3	.04	24	26	25	30
600	2	.13	36	38	36	44
	3	.06	29	30	29	35
	4	.04	26	26	25	30
700	2	.18	42	40	38	46
	3	.09	34	35	33	40
	4	.05	29	29	27	33
800	2	.24	45	46	44	53
	3	.10	36	38	36	44
	4	.06	31	32	30	37
900	2	.30	48	50	48	58
	3	.13	37	40	38	46
	4	.08	35	35	33	40
1000	3	.16	41	48	46	55
	4	.10	38	37	35	43
1200	3	.24	48	50	48	58
	4	.13	39	42	40	48
1400	3	.31	50	58	56	67
	4	.18	45	48	46	55
1600	4	.24	48	54	52	62
1800	4	.30	51	60	58	69

CFM - Cubic feet per minute.

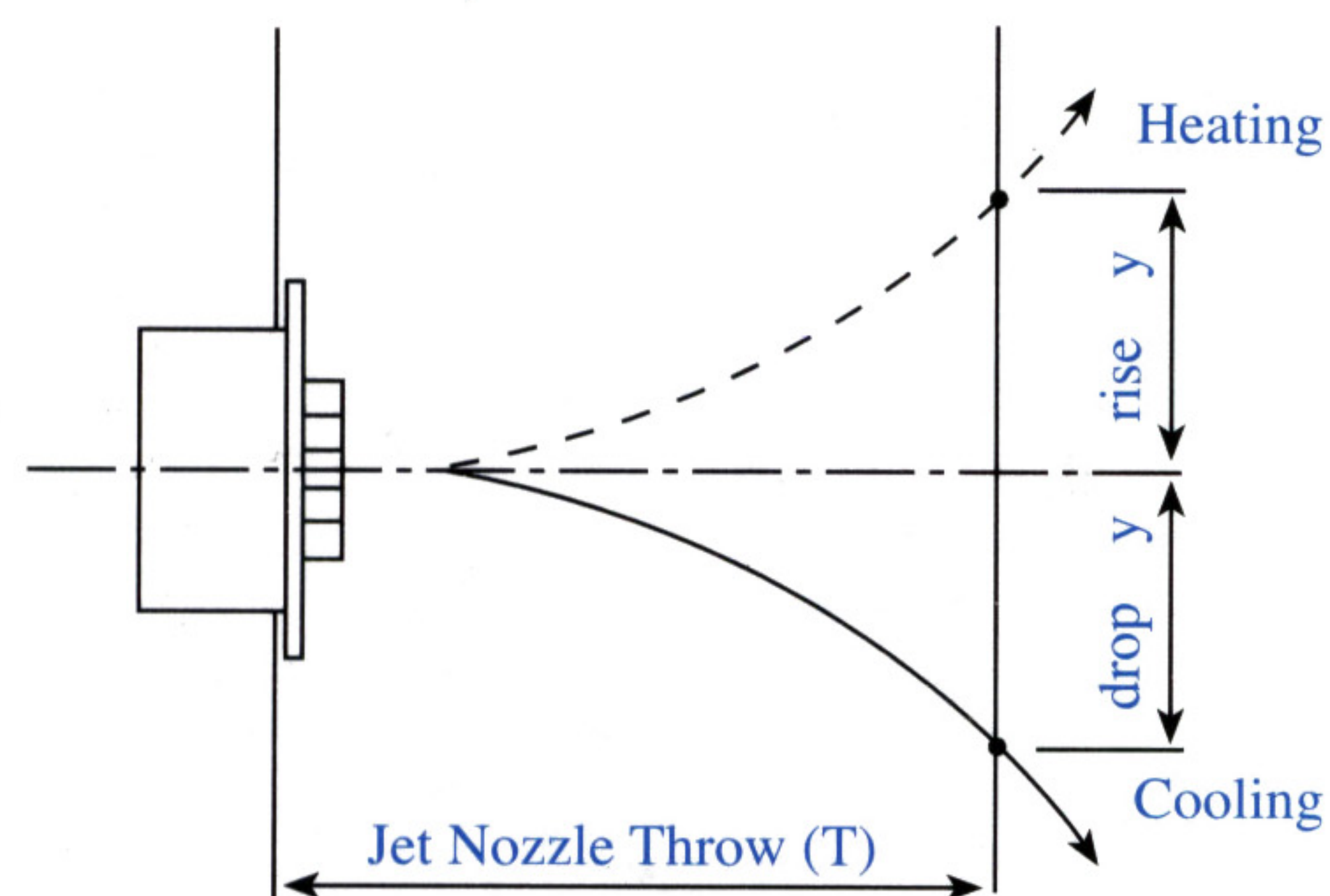
NC - sound pressure level based on 8db room absorption for L_w re 10^{-12} watt.

UNITS - number of diffusers in single panel.

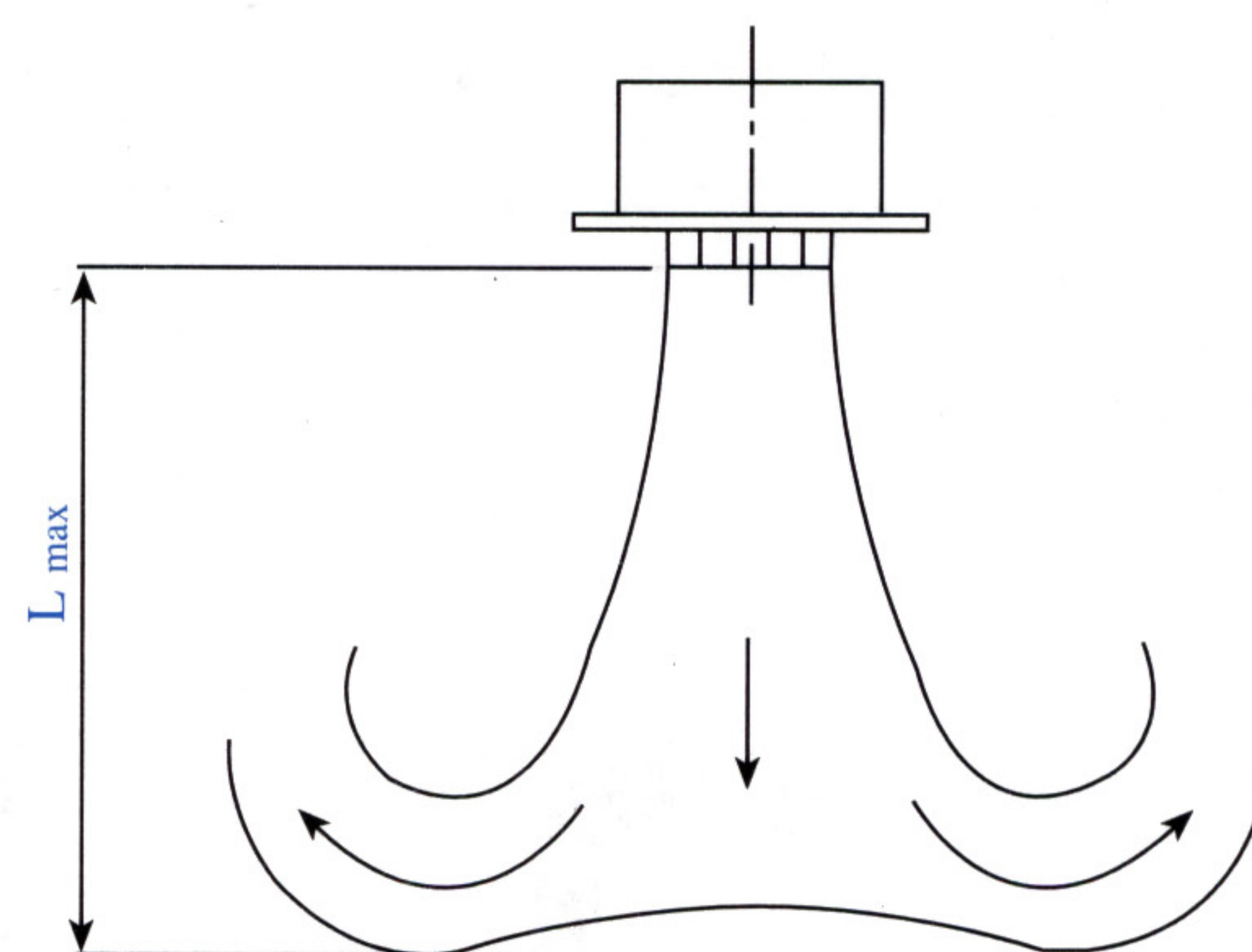
THROW - distance length of discharge pattern-feet @ $\Delta t = 20^\circ\text{F}$ & $V_t = 50\text{ Ft/min}$

SP - static pressure inches of water (jet Pattern). JET SPREAD = $0.25 \times \text{Jet Throw}$.

JET - jet air pattern.



Drop and rise directly proportional to Δt



L_{max} vertical projection @ $\Delta t = 20^\circ\text{F}$

(H) heating mode

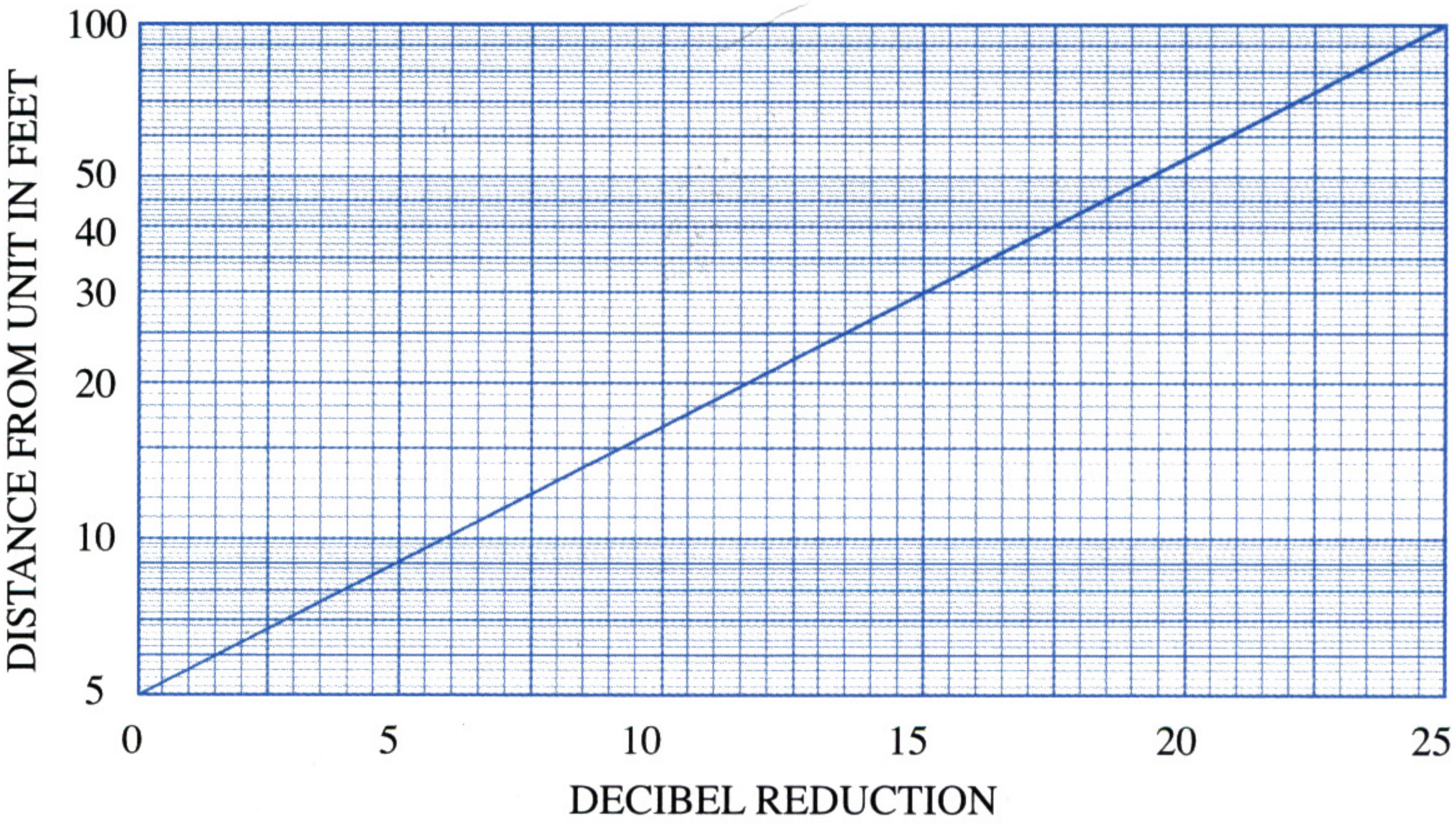
(C) cooling mode

JD Engineering Data

■ Size 10

CFM	JD	SP	NC	THROW (T)	Projection (L max)	
	UNITS			JET	H	C
300	1	.03	18	24	23	28
400	1	.06	26	33	31	38
500	1	.09	32	40	38	46
600	1	.13	36	50	48	58
700	2	.03	21	26	25	30
	1	.18	41	57	54	65
800	2	.05	26	33	31	38
	1	.24	44	60	58	69
900	2	.06	29	37	35	42
	1	.30	47	70	67	80
1000	2	.08	32	40	38	46
	1	.36	49	80	77	92
1200	2	.09	34	47	45	54
	3	.04	26	33	31	38
	1	.52	54	90	86	103
1400	2	.13	39	52	50	60
	3	.06	31	40	38	46
	1	.72	58	100	96	115
1600	2	.18	44	60	57	69
	3	.08	34	46	44	53
	4	.05	29	40	38	46
	2	.24	47	70	67	80
1800	3	.11	41	83	79	95
	4	.06	32	40	38	46
	2	.30	50	80	77	92
	3	.13	39	57	54	65
2000	4	.08	35	47	45	54
	2	.36	52	93	89	107
	3	.16	44	60	57	69
	4	.09	37	50	48	58
2200	2	.44	55	97	93	111
	3	.20	47	70	67	80
	4	.11	40	57	54	65
2400	3	.23	49	77	73	88
	4	.13	42	60	57	69
	3	.27	50	80	77	92
2600	4	.16	44	60	57	69
	3	.32	52	83	79	95
	4	.18	46	67	64	77
3000	3	.37	54	93	89	107
	4	.21	48	70	67	80
3500	4	.28	52	80	77	92
4000	4	.37	55	97	93	112

DECIBEL CORRECTION
N_c = N_c from table - Decibel
Reduction from chart



JD Engineering Data

■ Size 12

CFM	JD	SP	NC	THROW (T)	Projection (L max)	
	UNITS			JET	H	C
500	1	.04	28	37	35	42
600	1	.06	28	47	45	54
700	1	.08	32	50	48	58
800	1	.10	35	57	54	65
900	1	.13	38	60	57	69
1000	1	.16	40	70	67	80
	2	.04	26	40	38	46
1200	1	.23	45	80	77	92
	2	.06	31	47	45	54
1400	1	.32	49	93	88	106
	2	.08	35	50	48	58
1600	1	.41	52	110	104	125
	2	.10	38	60	57	69
	3	.05	29	47	45	54
1800	2	.13	41	70	67	80
	3	.06	32	50	48	58
2000	2	.16	43	80	77	92
	3	.07	34	57	54	65
	4	.04	29	44	42	50
2200	2	.19	45	86	82	98
	3	.09	37	60	57	69
	4	.05	31	47	45	54
2400	2	.23	48	93	88	106
	3	.10	39	67	64	77
	4	.06	34	50	48	64
2600	2	.27	50	97	92	110
	3	.12	41	70	67	80
	4	.07	36	57	54	65
2800	2	.32	52	100	96	115
	3	.14	43	77	73	88
	4	.08	38	60	57	69
3000	2	.36	53	112	107	128
	3	.16	44	80	77	92
	4	.09	39	67	64	77
3500	3	.22	48	93	88	106
	4	.12	43	70	67	80
4000	3	.28	51	106	100	120
	4	.16	46	87	83	100
4500	3	.36	54	115	108	130
	4	.20	49	93	88	106
5000	4	.25	52	106	100	120
6000	4	.36	56	124	118	142

CFM - Cubic feet per minute.

UNITS - number of diffusers in single panel.

SP - static pressure inches of water (jet Pattern).

JET - jet air pattern.

NC - sound pressure level based on 8db room absorption for L_w re 10^{-12} watt.

THROW - distance length of discharge pattern-feet @ $\Delta t = 20^\circ\text{F}$ & $V_t = 50\text{ Ft/min}$

JET SPREAD = $0.25 \times \text{Jet Throw}$.

JD Engineering Data

■ Size 14

CFM	JD	SP	NC	THROW (T)	Projection (L max)	
	UNITS			JET	H	C
700	1	0.06	23	40	38	46
800	1	0.08	26	47	45	54
900	1	0.10	29	50	48	58
1000	1	0.12	33	57	54	65
1200	1	0.18	37	67	64	77
1400	1	0.24	41	80	77	92
	2	0.06	26	47	45	54
1600	1	0.32	43	93	88	106
	2	0.08	29	50	48	58
1800	1	0.46	46	100	96	115
	2	0.10	32	60	58	69
2000	1	0.50	48	112	107	128
	2	0.12	35	67	64	77
2200	1	0.60	51	123	117	140
	2	0.16	36	70	67	80
	3	0.08	27	50	48	58
2400	1	0.70	53	130	125	150
	2	0.18	39	80	77	92
	3	0.08	29	57	54	65
2600	1	0.80	55	140	133	160
	2	0.22	40	87	83	100
	3	0.10	31	60	58	69
2800	1	0.90	56	155	145	175
	2	0.26	42	93	88	106
	3	0.12	33	67	64	77
3000	1	1.00	60	160	153	184
	2	0.28	46	100	96	115
	3	0.12	37	70	67	80
	4	0.08	32	57	54	65
3500	2	0.40	49	110	104	125
	3	0.18	40	80	77	92
	4	1.00	35	60	57	69
4000	2	0.50	52	115	108	130
	3	0.22	43	80	77	92
	4	0.12	38	70	67	80
4500	2	0.62	55	132	125	150
	3	0.24	46	106	99	120
	4	0.16	41	80	77	92
5000	2	0.74	59	155	145	175
	3	0.32	50	115	108	130
	4	0.20	45	93	88	106
6000	2	1.00	63	190	178	215
	3	0.50	54	136	130	156
	4	0.28	49	106	99	120
7000	3	0.66	56	165	158	190
	4	0.38	52	125	116	140
8000	3	0.84	60	185	174	210
	4	0.50	55	145	137	165