



# Air Performance

Fan Serial No.

Midwest Engineering Ltd.

1369 Erin Street, Winnipeg, Manitoba, R3E 2S7,

Telephone: 204 989-3636

Telefax: 204 633-0496

TO: Wesman Mechanical

DATE February 18, 2004

Att: Marc

PROJECT Centennial Library Millenium Project

Fax: 774-4176

TAG F-1 4th Floor Return

SUBMITTED BY Kerri Zimmerman

Design	7410	Static Efficiency	37.1 %
Nominal Fan Size	3300	Class at 70.00 F	NC
Width	VANEAXIAL	Max Speed	1621 RPM
Percent Width	%		
Volume Flow Rate	18,000. CFM	Wheel Diameter	33.00 in
Pressure	.750 inWG	Peak SP	1.94 inWG
Outlet Velocity	2020 fpm	Inlet Pressure	0.0 inWG
Fan Speed	1052 RPM	Inlet Velocity	3,028.8 fpm
Power	5.72 BHP	VP	0.255 inWG
Temperature	70.0 F	Outlet Area	8.91 sq.ft
Altitude	0 ft	Inlet Area	5.94 sq.ft
Inlet Air Density	.0750 lb/cu.ft	SP/VP	2.94
Tip Speed	9086 fpm		

### Selection Point

38.7 % of Max Static Press.

Peak Static Pressure is at 46.0 % of max Volume Flow

84.4 % of max Volume Flow

Max Volume 21327 CFM

97.1 % of max Power

Max Power 5.890 BHP

66.8 % of Max Static Eff.

Max Static Eff. is 55.5 % at 64.0 % of max Volume Flow

54.1 % Speed-Up Available

Test ID 74-E1-1.13 With Cone 25-Apr-84

### Performance Table

<u>Volume CFM</u>	<u>S.P. inWG</u>	<u>VP/SP</u>	<u>Power BHP</u>	<u>Static Efficiency %</u>
0	2.663	0.00	5.08	0.0
800	2.531	0.00	4.95	6.4
1700	2.408	0.00	4.84	13.3
2500	2.305	0.00	4.77	19.0
3400	2.221	0.00	4.75	25.0
4200	2.120	0.01	4.70	29.8
5100	1.954	0.01	4.56	34.4
5900	1.707	0.02	4.28	37.0
6800	1.489	0.02	4.07	39.1
7600	1.445	0.03	4.16	41.5
8500	1.654	0.03	4.70	47.0
9300	1.895	0.04	5.32	52.0
10200	1.927	0.04	5.62	54.9
11100	1.811	0.05	5.69	55.5
11900	1.680	0.07	5.71	55.0
12800	1.591	0.08	5.78	55.3
13600	1.516	0.10	5.85	55.3
14500	1.414	0.12	5.88	54.7
15300	1.280	0.14	5.86	52.5
16200	1.119	0.18	5.81	49.0
17000	.948	0.24	5.76	43.9
17900	.766	0.33	5.72	37.6
18700	.582	0.47	5.69	30.0
19600	.390	0.77	5.67	21.2
20400	.198	1.65	5.65	11.2
21300	.001	397.35	5.64	0.1



FAN SERIAL NO. : \_\_\_\_\_

DRAWN : 2/18/2004 Kerri Zimmerman

SALES OFFICE : Midwest Engineering Ltd.

CUSTOMER : Wesman Mechanical P.O. No. : \_\_\_\_\_

PROJECT : Centennial Library Millenium Project

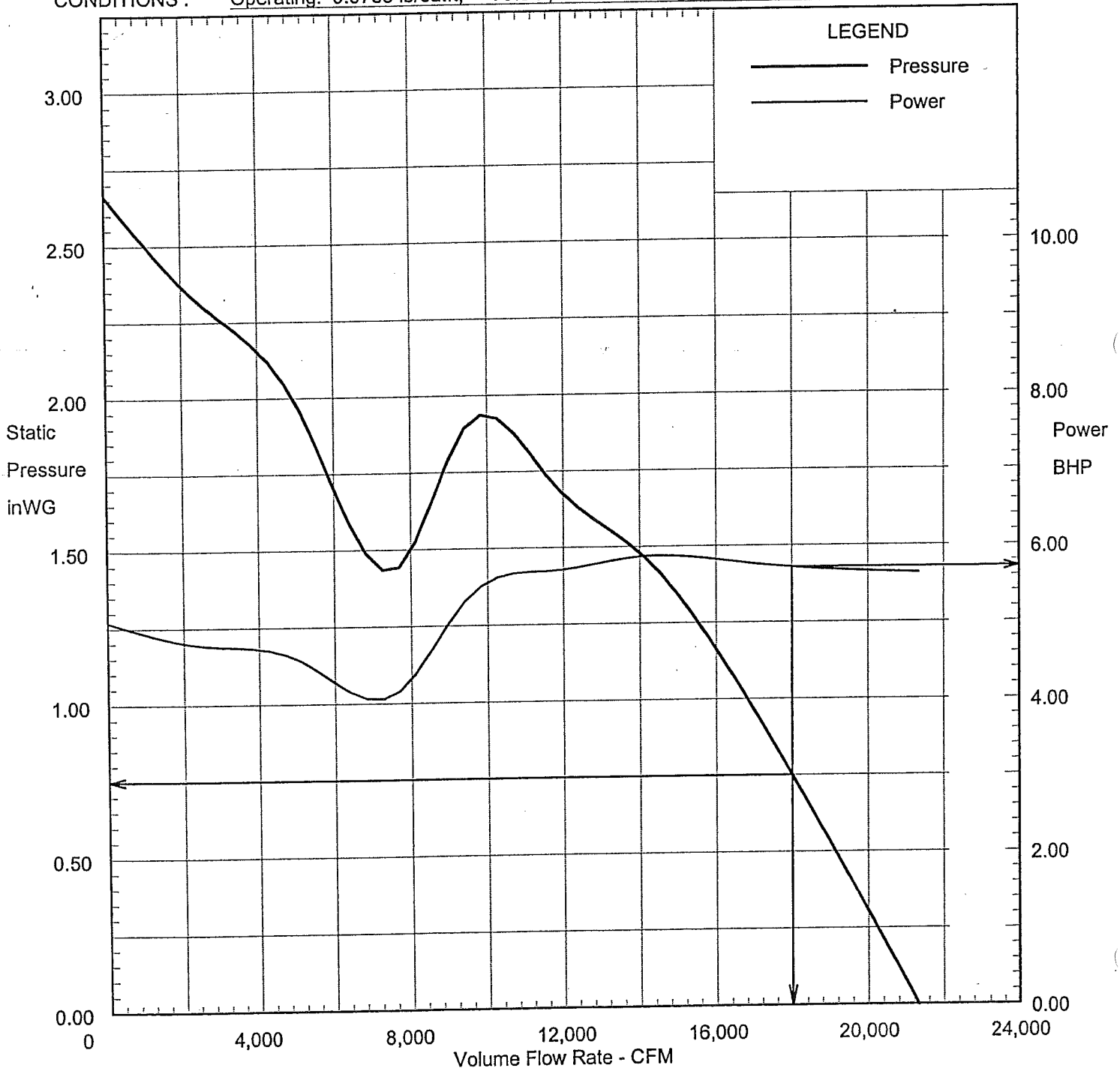
ENGINEER : SMS ENGINEERING LTD.

TAG : F-1 4th Floor Return

FAN - DESCRIPTION : Design No. 7410 Size 3300 Axial

SELECTION : 18,000 CFM, 0.750 inWG SP, 5.72 BHP

CONDITIONS : Operating: 0.0750 lb/cu.ft, 70.0 F, 1052 RPM [74-E1-1.13 With Cone 25-Apr-84]





# Sound Performance

Fan Serial No. :  
Date : February 18, 2004

Midwest Engineering Ltd.  
1369 Erin Street, Winnipeg, Manitoba, R3E 2S7, Telephone: 204 989-3636 · Telefax: 204 633-0496

CUSTOMER : Wesman Mechanical P.O. NO.  
TAG : F-1 4th Floor Return

PROJECT Centennial Library Millenium Project  
SUBMITTED BY Kerri Zimmerman ENGINEER SMS ENGINEERING LTD.

Design	7410	Inlet Pressure	0.0
Width	VANEAXIAL	Temperature	70.0
Percent Width	%	Fan Speed	1052 RPM
Volume Flow Rate	18000	Altitude	0
Pressure	.750	Inlet Air Density	.075
		Power	5.72 BHP
Nominal Fan Size	3300		
Wheel Diameter	33.00 in		
Duct Diameter	33.000 in		

### Sound Data

#### Octave Band

	1	2	3	4	5	6	7	8
Center Frequency	63	125	250	500	1000	2000	4000	8000
Power Level dB	84	90	93	93	89	84	79	75
Pressure Level dB re 20 µPa at 5.00 feet	73	78	81	81	77	73	68	63
Attenuator Correction	0	0	0	0	0	0	0	0
Pressure Level dBA	47	63	73	78	77	74	69	62
Total Log Sum dBA	83							

The Sound Power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts.

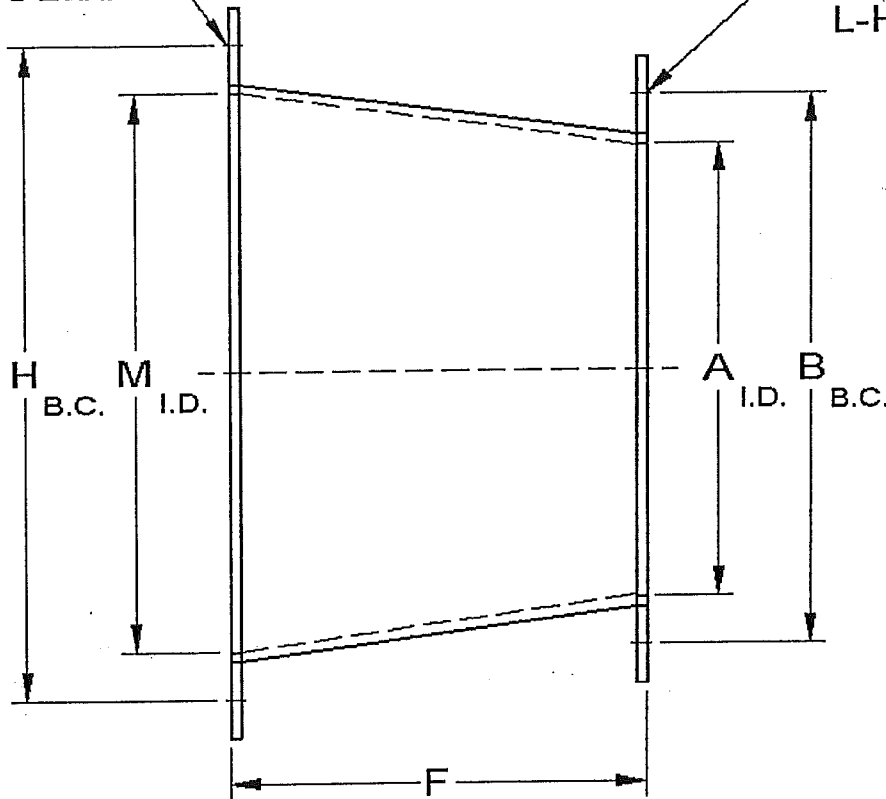
Values shown for Sound Power levels are for :

- Installation Type B: Free inlet, Ducted outlet. Ratings include the effects of end reflections.

The sound level of fan equipment outside the laboratory may vary widely from those levels stated above.

R-DIA.  
S-HOLES

R-DIA.  
L-HOLES



LTR	REVISION	BY	DATE
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Dims noted with \* are not as cataloged.

DIMENSIONS - INCHES

A	B	F	H	L	M	R	S						
33	35	28	42-1/2	24	40-3/8	7/16	24						

CUSTOMER: Wesman Mechanical  
 CUSTOMER P.O.#:  
 PROJECT: Centennial Library

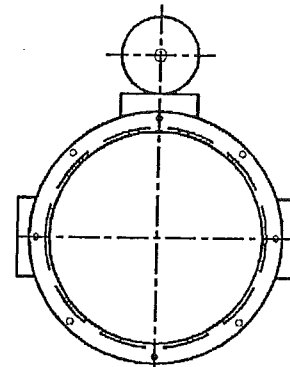
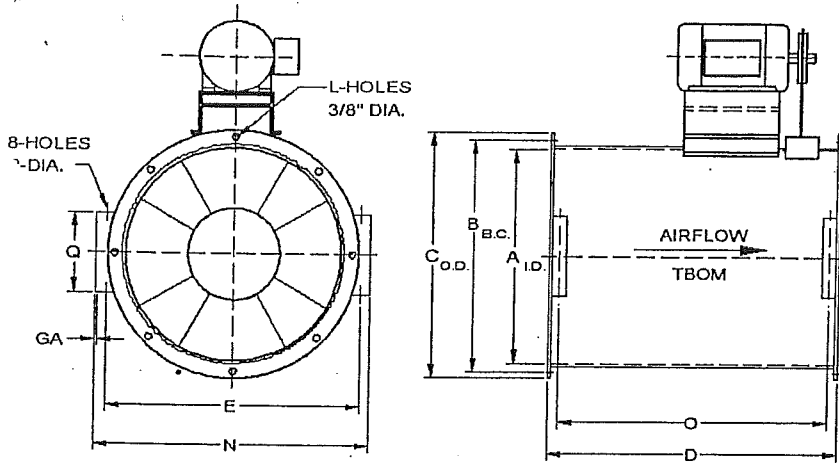
SALES OFFICE: Midwest Engineering Ltd.  
 TAG: F-1 4th Floor Return  
 ENGINEER: SMS ENGINEERING LTD.



DESIGN 7410  
 SIZE 3300  
 ARR. 9 CLASS N/A  
 Horizontal Mounting Lugs  
 Motor Top

Inlet / Outlet Cones  
 Tolerance ± 1/8"  
 Scale: NTS  
 REQUIRES APPROVAL, NOT CERTIFIED FOR CONSTRUCTION.  
 By: \_\_\_\_\_ Date: \_\_\_\_\_

S.O.#/ DWG. #  
 Millenium-1



MOTOR TOP AS VIEWED FROM DISCHARGE

*clw  
ISOLATION*

DIMENSIONS - INCHES Dims noted with \* are not as cataloged.

Shaft Dia	Keyway Size	A	B	C	D	E	L	N	O	P	Q	Hsg Ga	Lug Ga
1-11/16	3/8 X 3/16	33	35	36	40	34	24	37-1/2	37-3/4	11/16	12-3/4	10	3/8

PERFORMANCE								
CONDITION	Volume	S.P.	O.V.	Speed	Power	TEMP.	ALT.	TYPE:
	18000	.8	2020	1052	5.72	70F	0	.075

- FEATURES**
1. Belt Guard
  2. Inlet Cone, See Dwg Millenium-1-1
  3. Outlet Cone, See Dwg Millenium-1-2
  4. Flush Access Door, See Dwg Millenium-1-3
  5. Extended Grease Lines
  6. IRD Test:

Motor							
SUPP. BY:	MTD. BY:	MTR. POS.	HP	RPM	CURRENT	FRAME	ENCL
		Top	10	1800	575/3		TEFC

DRIVE:		TYPE:			
SUPP. BY:	MTD. BY:	MOTOR SHEAVE	FAN SHEAVE	BELTS	CENTER DIST.

QTY.	MAX FAN SPEED	FAN WEIGHT WITH MOTOR
	1,621.00	1000 LB

CUSTOMER: **Wesman Mechanical**

CUSTOMER P.O.#:

PROJECT: **Centennial Library**

ENGINEER: **SMS ENGINEERING LTD.**

SALES OFFICE: **Midwest Engineering Ltd.**

TAG: **F-1 4th Floor Return**

LTR	REVISION	BY	DATE
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**NORTHERN BLOWER®**

901 Regent Ave. West, Winnipeg, Manitoba, Canada, R2C 2Z8  
Telephone: (204) 222-4216, Telefax: (204) 222-7601

DESIGN 7410  
SIZE 3300  
ARR. 9 CLASS N/A  
Horizontal Mounting Lugs  
Motor Top

Vaneaxial Fan

REQUIRES APPROVAL, NOT CERTIFIED FOR CONSTRUCTION.

By: \_\_\_\_\_ Date: \_\_\_\_\_

Tolerance ± 1/8"  
Scale: NTS

S.O.#/ DWG.#  
**Millenium-1**