

NAPAF - NAPBC

**HIGH PERFORMANCE AIRFOIL NAPAF AND
BACKWARD CURVED NAPBC PLENUM FANS**



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COMEFRI USA: Manufacturing and Warehouse facilities in Hopkinsville, KY.
Total facility: 175,000 sq.ft. Producing centrifugal fans for the HVAC industry
Test facilities: laboratory



COMEFRI SpA factory at Magnano in Riviera (UD) – Italy with 156,000 sq.ft.
Manufacturing floor space, which produces radial fans for HVAC products.



COMEFRI SpA factory at Artegn (UD) – Italy with 68,000 sq.ft. manufacturing and
laboratory floor space for the production of standard and special application industrial fan.
Test facilities: laboratory accredited by AMCA.

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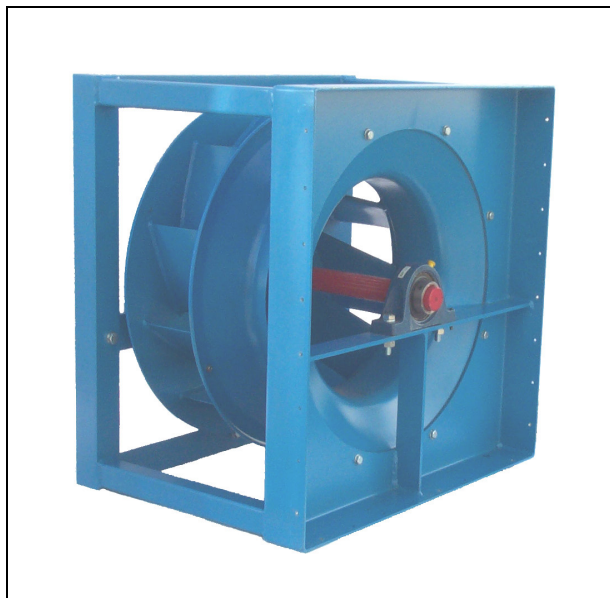


fig.1



fig.2

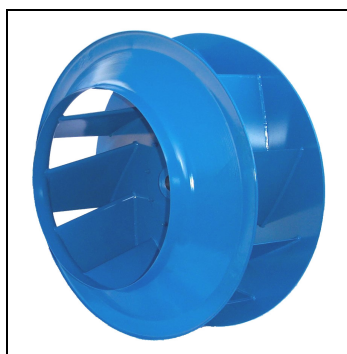


fig.3



fig.4

1. General description

The high performance Plenum Fan NAP has been designed to handle clean air. It is able to achieve optimum aerodynamic performance with smooth air flow through the impeller, when not fitted within a conventional fan housing.

2. Technical details

2.1. Structure

NAP Plenum Fans are manufactured in heavy gauge welded steel, reinforced with steel stiffeners and painted with an anticorrosive paint.

From sizes 10 to 28, the structure is provided with a removable backframe that permits the wheel to be removed from the back of the fan (see fig.1 and fig.2 for details).

From sizes 32 to 55, plenum fans are completely welded and the wheel can be removed from the top (see fig.5 and fig.6).

The inlet cone is constructed in galvanized sheet steel or in black steel and painted, bolted onto the plenum and designed for optimal airflow through the impeller.

2.2. Impeller

Plenum fans are available with a high performance airfoil wheel, NAPAF, or with high performance backward curved wheel, NAPBC.

NAPAF: The airfoil impeller is manufactured with backward curved airfoil shaped blades, which are continuously welded into position and painted finish (fig.3). The high performance Airfoil blade design is matched with the unique rotating diffuser where the air is slowed down and a static pressure regain takes place. The consequence is a very wide operational working field with high efficiencies and low noise emissions. Airfoil wheels are available in wheel diameters from 12 to 55.

APBC: Backward curved wheel has single-thickness flat type blades. The use of the rotating diffuser is guaranty of high efficiency and low noise. Wheel diameters 10 and 11 (fig.4).

All impellers are statically and dynamically balanced to a grade of $Q=2,5$ in accordance with DIN ISO 1940-1 and ANSI S2.19 - 1989.

The hub bore is precision machined and incorporates a keyway and locking screw.



fig.5



fig.6



fig.7



fig.8

2.3. Shaft

All shafts are designed with a high safety factor, and with the critical speed well in excess of the maximum fan speed. Made with hardened steel, which is precision ground and polished, and incorporates keyways for the wheel hub and sheaves.

All shafts are painted for added protection prior to shipping.

2.4. Bearings

On the drive side from size 10 T2 to 28 T2, from 12 T3 to 22 T3 and from 32 T1 to 40 T1, the bearing is self-aligning single row deep groove ball type in pillow block cast iron housings (fig.7). The drive side bearing of 25 T3 and 28 T3 and from 32 T2 to 55 T2 is a double row roller bearing in a pillow block split cast iron housings (fig.8).

For all plenum sizes the nondrive bearing is self-aligning single row deep groove ball type in pillow block cast iron housings (fig.7).

All bearings have been selected to guarantee a minimum L50 life time of 200,000 hours (as per AFBMA standards). Bearing ratings are to be based on the fan's maximum operating speed and horsepower.

These bearings are installed with a re-lubrication fitting.

Operating temperatures range from -4 °F to + 176 °F (-20 °C to + 80 °C) for all plenums.

3. Performance testing

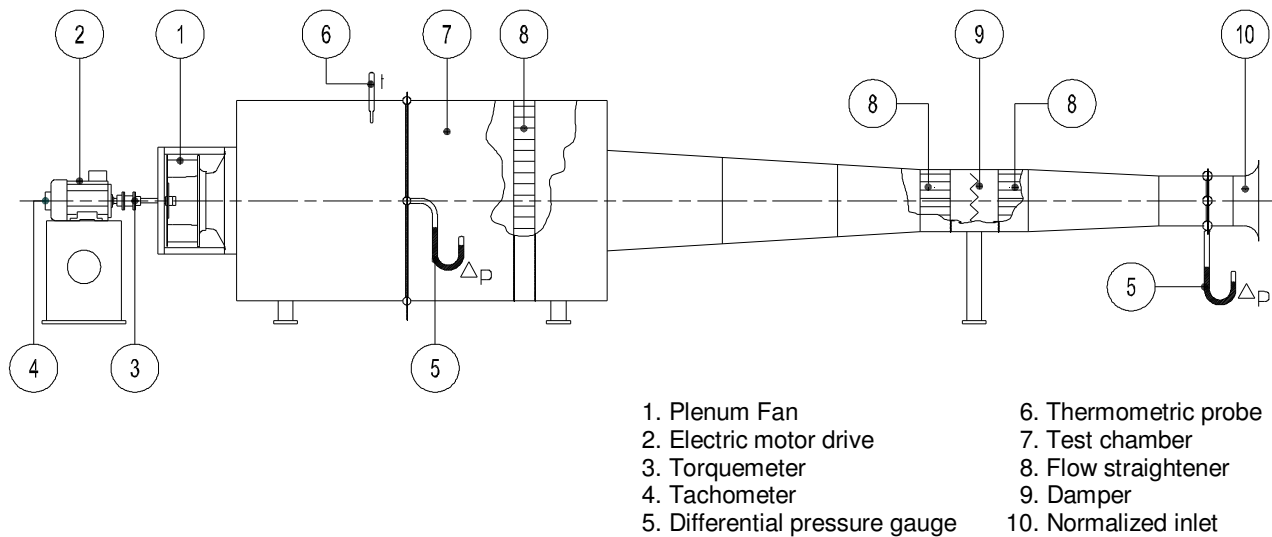
3.1 Performance Data

The NAP Plenum Fans has been tested, in Comefri's certified laboratory, in accordance with DIN 24163 / BS 848 Part.1 / ISO 5801 / AMCA 210 fig.14 (ref. to figure) and results are at a density of $\rho=0.075 \text{ lb/cu.ft.}$

Since, under test conditions, the air flows freely and uniformly, the dynamic pressure has not been taken into account. Therefore it is only possible to give exact performance data if the specific installation working conditions are provided.

N.B. Performance and Power ratings are based on Plenum Fan tests in Arrangement 3.
 Power ratings include bearing losses and does not include belt drive losses.

Performance test rig scheme according to DIN 24163 / BS 848 Part.1 / ISO 5801 / AMCA 210 fig.14



The performance curves include the following information:

Static pressure	Δp_{stat}	[In.W.G.]	inches water gauge
Volume air flow	$\dot{V}$	[CFM]	cubic feet per minute
Absorbed power on Plenum Fan shaft	P_w	[BHP]	brake horsepower
Fan speed	n	[RPM]	revolutions per minute
Static Efficiency	η_{stat}	[%]	$\frac{\Delta p_{\text{stat}} \cdot \dot{V} \cdot 100}{P_w \cdot 6356}$
Sound Power Level	L_{wA5}	[dB(A)]	decibel A



3.2 Operation area

Whenever possible, plenum selections should be made within 'Area 2' as shown on the performance curve for any given plenum size. A plenum selected within 'Area 2' will almost guarantee maximum efficiency, optimized acoustic performance and will offer smooth and trouble free operation.

Whilst plenums can be selected to operate within 'Area 1', as shown on the performance curve, it must be noted that any obstruction to the wheel inlet or outlet could result in instability in performance and could in turn lead to an increase in plenum operating noise.

3.3 Temperature and altitude correction factors

The performance charts refer to the standard air condition, i.e. $\rho = 0.075 \text{ lb/cu.ft}$, 68 °F temperature of sea level. For different operating conditions the performance data must be corrected, due to the change in air density.

Fan laws relate performance variables for any fan of a given design.

Pressure, varies directly as the ratio of the air densities, K_p

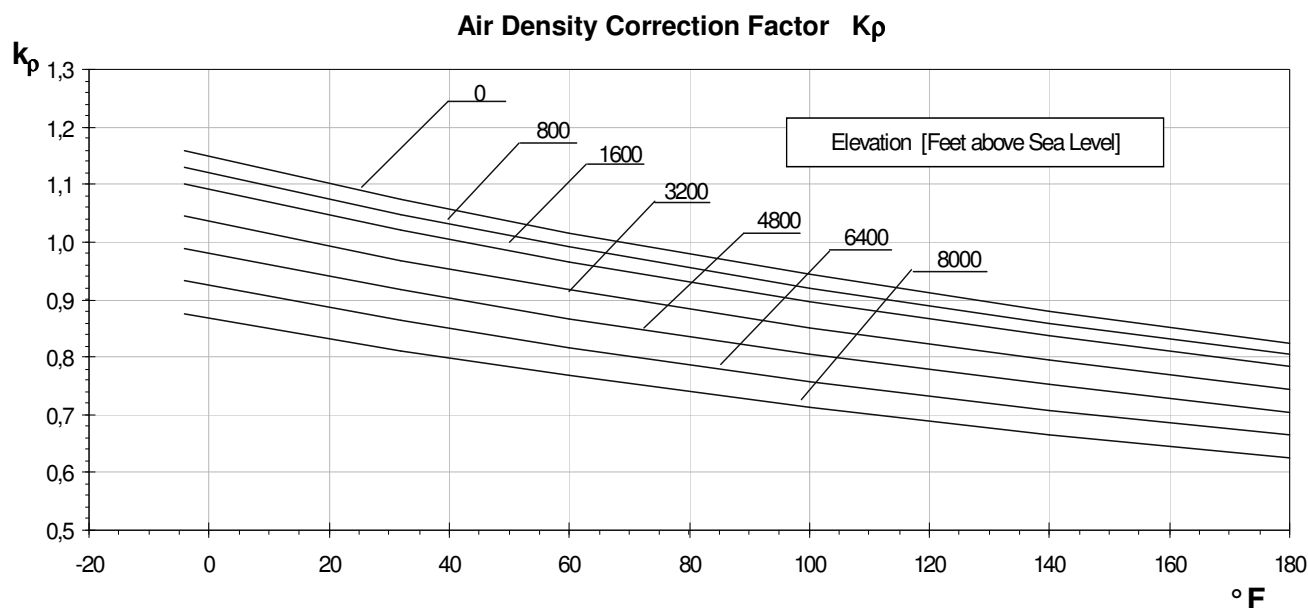
$$\Delta p_{\text{stat}2} = \Delta p_{\text{stat}1} \cdot K_p$$

Absorbed power varies directly as the ratio of the air densities, K_p

$$P_{w2} = P_{w1} \cdot K_p$$

The Graph 3.2 contains air density ratios K_p for temperatures from -5 °F to 180 °F and elevations up to 8000 feet above sea level.

Please refer to the Selection Example 5., for further details on the correct selection procedure.



Graph 3.3



3.4 Motor selection

To determine the motor rating P_n , the absorbed power on plenum fan shaft P_w must be increased by a factor f_w to accommodate for the drive losses, safety margins,.....etc.

$$P_n = P_w (1 + f_w)$$

The factor f_w can be chosen from the following figures:

$$P_w \leq 4 \text{ BHP} \dots f_w = 0.20$$

$$P_w > 4 \text{ BHP} \dots f_w = 0.15$$

When selecting the suitable motor, the ramp-up time must be considered.
The ramp-up time " t_a " can be calculated according to the following formula:

$$t_a = 0.452 \frac{J \cdot n^2}{P_n} 10^{-6}$$

where:

t_a	acceleration time	[s]
J	moment of inertia of the revolving parts	[Lb ft ²]
n	impeller revolution	[min ⁻¹]
P_n	motor rating	[HP]

If " t_a " exceed the motors' manufacturer recommendations, a larger motor or a high-torque type must be used.

4. Sound levels

The measurement of noise levels has been made in the Comefri's certified Reverberant Room according to ISO 13347-2:2004, DIN 45635-38, BS ISO 13347-2 and ANSI/AMCA 300-08, Standards.

4.1.1. Inlet Sound Power Level

The Inlet Sound Power Level L_{wA5} , referred to $W_0=10^{-12}$ watt, required for calculation and design of sound attenuation units, are marked on the performance curves.

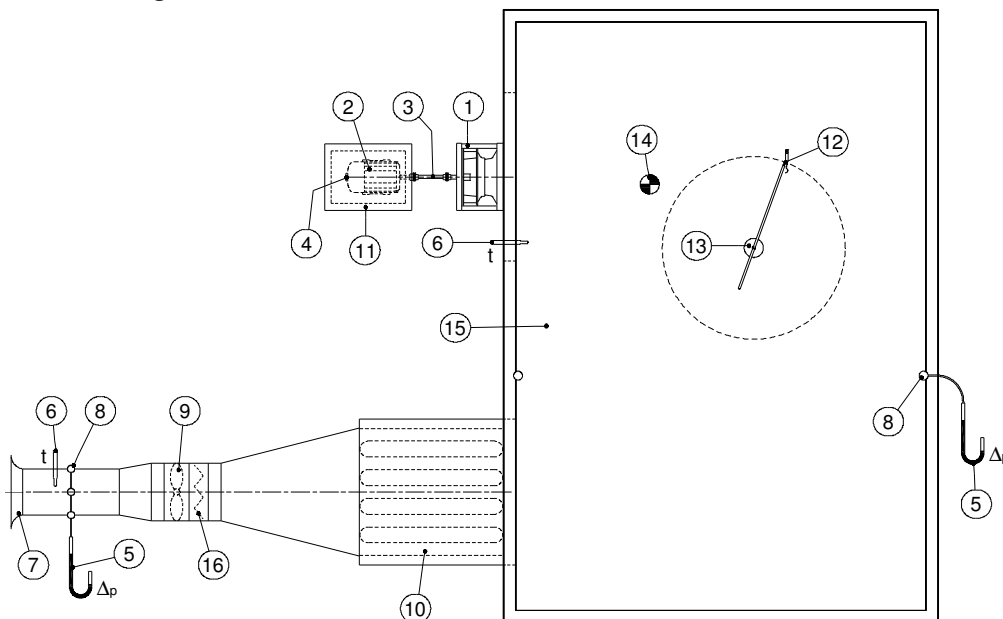
N.B. Sound ratings are based on tests on Plenum Fans in Arrangement 3.

Symbols and Formulas:

L_{wA5}	Inlet A-weighted Total Sound Power Level	[dB(A)]
L_{woct}	Inlet Sound Power Level at a specific Octave Band Mid-Frequency	[dB]
f_m	Octave Band Mid-Frequency	[Hz]
ΔL_{woct5}	Difference between the Inlet Total Sound Power Level at the corresponding Octave Band Mid-Frequency L_{woct5} and the Inlet A-weighted Total Sound Power Level L_{wA5}	[dB]
ΔL_{w5}	Difference between the Inlet Total Sound Power Level L_{w5} and the Inlet A-weighted Total Sound Power Level L_{wA5}	[dB]

Sound measurement test rig scheme according to ISO 13347-2:2004 / DIN 45635-38 / BS ISO 13347-2 / ANSI/AMCA 300-08

1. Plenum Fan
2. Electric motor drive
3. Elastic joint
4. Tachometer
5. Differential pressure gauge
6. Thermometric probe
7. Normalized inlet
8. Static pressure tapping-ups
9. Auxiliary fan
10. Silencer
11. Silenced electric motor drive
12. Microphone
13. Rotating boom
14. Reference sound source
15. Reverberant room
16. Damper



4.1.2. Fan Sound Data are determined as follows:

- 1) The Inlet A-weighted Total Sound Power Level L_{wA5} , can be read from the Performance Chart, for a given plenum performance.
- 2) The Inlet Sound Power Level L_{woct5} , at a specific Octave Band Mid-Frequency, can be determined from following formula:

$$L_{woct5} = L_{wA5} + \Delta L_{woct5}$$

- 3) The Inlet Total Sound Power Level can be determined from following formula:

$$L_{w5} = L_{wA5} + \Delta L_{w5}$$

- 4) The values for ΔL_{woct5} and ΔL_{w5} for each plenum size can be found in the SOUND DATA TABLES considering the relevant plenum operation Area and the range of plenum speed.

4.1.3. Outlet Sound Power Level

The Outlet Sound Power Level of the plenum is available from our AEOLUS PLUS selection program.

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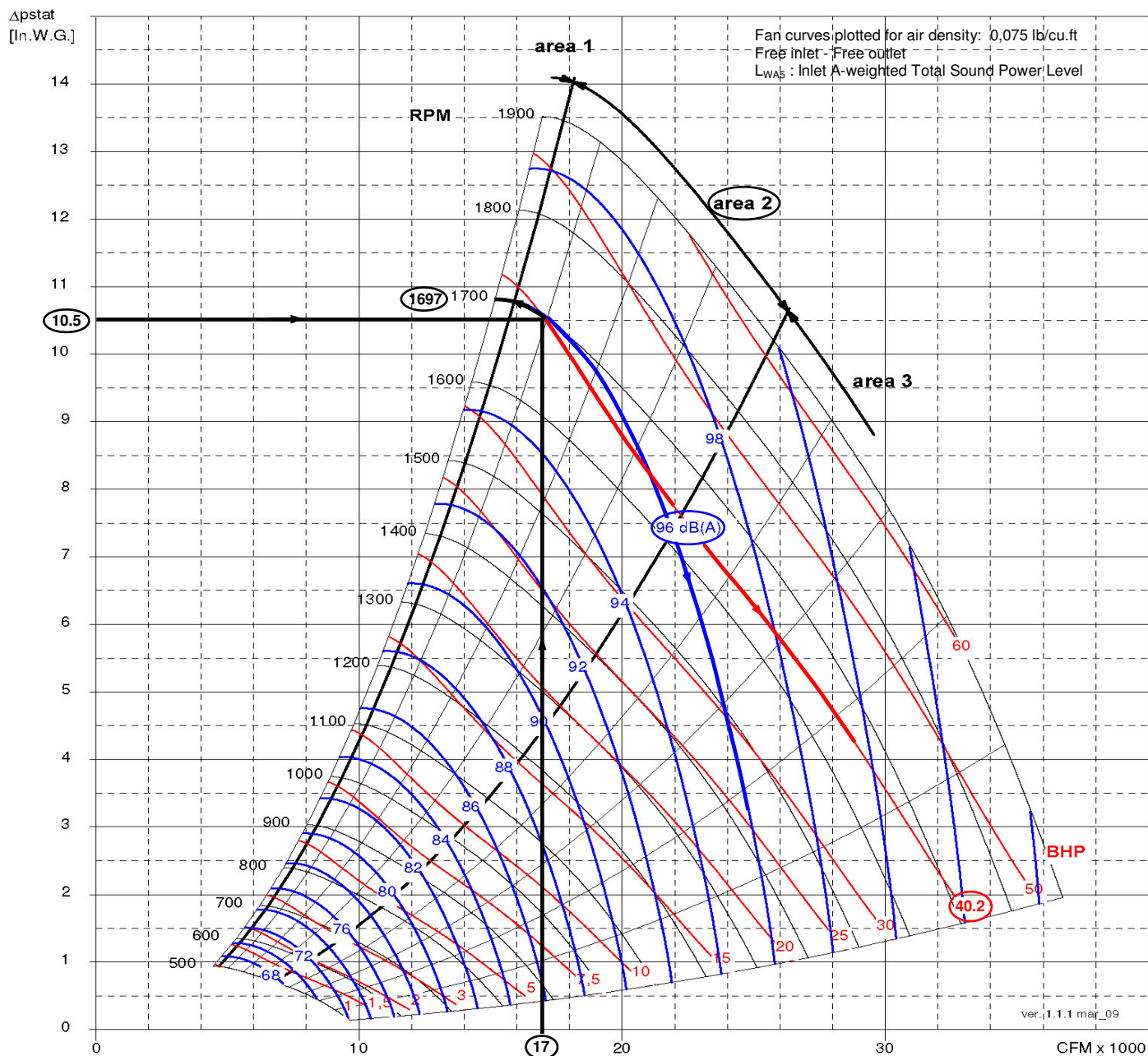
PLENUM FANS WITH AIRFOIL WHEELS - NAPAF **PLENUM FANS WITH BACKWARD CURVED WHEELS - NAPBC**

5. Selection example

Plenum Fan selection for the following operating parameters:

Air volume = 17.000 CFM
 Δp_{stat} = 10.5 In.W.G.
 Operating temperature = 68 °F

NAPAF 32	T1	T2
Plenum Fan Max RPM [min ⁻¹]	1600	1800
Plenum Fan Max BHP	28	50
Plenum Fan weight [Lb]	417	
Wheel No. Blades	10	
Wheel Moment of Inertia [Lb ft ²]	196	
Wheel weight [Lb]	160	



Selection model and size : **NAPAF 32 T2**

n = 1697 RPM
 L_{wA5} = 96 dB(A)
 BHP = 40.2 HP

**a) Sound data**

The following steps must be followed to determine the Octave Band values:

1) Read on the Sound Data Table, for NAPAF 32, each Octave Band and considering operation Area and the speed range (Area 2, $n \geq 1346$ RPM) the appropriate values for ΔL_{wOct5} :

-4 -7 +3 -4 -6 -10 -11 -15

2) Apply these corrections to $L_{wA5} = 96$ dB(A) (add the ΔL_{wOct5} values) to obtain the values of L_{wOct5} :

92 89 99 92 90 86 85 81

3) To obtain the L_{w5} Inlet Total Sound Power value, add to L_{wA5} the ΔL_{w5} value

$$L_{w5} = L_{wA5} + \Delta L_{w5} = 96 + 5.4 = 101,4 \text{ dB (rounded off to 101,4 dB)}$$

4) To obtain the A-Weighted Octave Band values, apply to each Octave-Band value the correction factor, listed here below:

Octave Band Mid-Frequency	63	125	250	500	1000	2000	4000	8000
A-Weighting	-26	-16	-9	-3	0	+1	+1	-1

(Values rounded off)

L_{wOctA5} , A-weighted values, are consequently $L_{wOctA5} = L_{wOct5} - (\text{A-weighting})$:

66 73 90 89 90 87 86 80

b) Temperature and altitude correction

If temperature and altitude at which the plenum fan will operate are not standard, the pressure value used for the selection must be corrected. Let's consider the following parameters:

Required Δp_{stat} pressure: 8.25 In.W.G. referred to the following conditions:
 Operating temperature: 100 °F
 Altitude: 4850 ft. a.s.l.
 Air volume: 17.000 CFM

From K_p Air Density Correction Factor table (Graph 3.3) the value of 0.79 is read.

The corrected pressure, to be used for the selection on the performance chart, is therefore:

$$\Delta p_{stat1} = \Delta p_{stat2} / K_p = 8.25 / 0.79 = 10.5 \text{ In.W.G.}$$

Selection should be made with a Δp_{stat1} equal to 10.5 In.W.G.

We obtain the following operating parameters:

Selected model and size: NAPAF 32 T2, $n = 1697$ RPM.

Effective absorbed power on plenum fan shaft (corrected value) at that altitude and temperature, will be:

$$P_{w2} = BHP \cdot K_p = 40.2 \text{ HP} \cdot 0.79 = 31.7 \text{ HP}$$

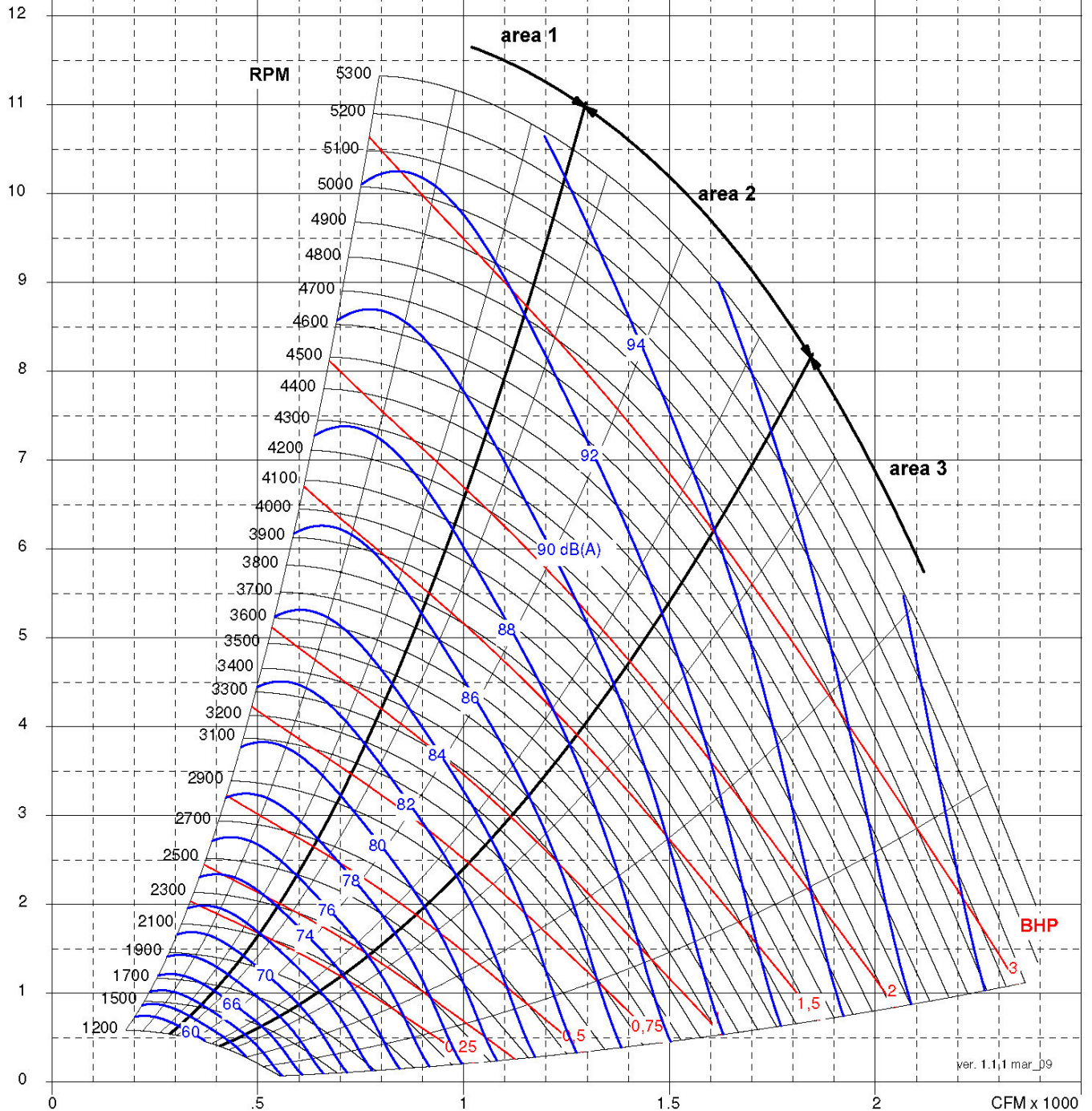


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NAPBC 10	T2
Plenum Fan Max RPM [min ⁻¹]	5200
Plenum Fan Max BHP	3.35
Plenum Fan weight [Lb]	37
Wheel No. Blades	8
Wheel Moment of Inertia [Lb ft ²]	0.93
Wheel weight [Lb]	7.4

Δp_{stat}
[In.W.G.]



**comefri****PLENUM FANS WITH BACKWARD CURVED WHEELS - NAPBC****NAPBC 10 T2**

V [CFM]	Δp_{stat} [In.W.G.]																			
	1	1,5	2	2,5	3	3,5	4	4,5	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10	10,5
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
300	1590	0,12	1931	0,19																
400	1644	0,14	1961	0,22	2240	0,3	2494	0,4												
500	1728	0,17	2020	0,25	2284	0,35	2524	0,45	2747	0,55	2956	0,66	3154	0,77						
600	1841	0,21	2105	0,3	2350	0,4	2578	0,5	2790	0,61	2990	0,73	3180	0,84						
700	1977	0,25	2212	0,35	2437	0,45	2651	0,56	2852	0,68	3044	0,8	3226	0,92	3400	1,05	3567	1,18	3727	1,32
800	2129	0,31	2340	0,41	2545	0,52	2742	0,64	2932	0,76	3114	0,88	3288	1,01	3455	1,15	3616	1,28	3772	1,42
900	2293	0,37	2484	0,48	2670	0,6	2852	0,72	3029	0,85	3200	0,98	3365	1,11	3525	1,25	3680	1,39	3830	1,54
1000	2465	0,45	2640	0,57	2810	0,69	2977	0,82	3141	0,95	3301	1,08	3457	1,22	3609	1,37	3757	1,52	3901	1,67
1050	2553	0,49	2721	0,61	2885	0,74	3045	0,87	3203	1	3357	1,14	3508	1,28	3656	1,43	3801	1,58	3942	1,73
1100	2643	0,54	2804	0,66	2961	0,79	3116	0,92	3267	1,06	3417	1,2	3563	1,35	3707	1,5	3848	1,65	3985	1,81
1150	2733	0,58	2889	0,71	3040	0,85	3189	0,98	3335	1,12	3479	1,27	3621	1,41	3761	1,56	3898	1,72	4032	1,88
1200	2825	0,63	2975	0,77	3121	0,9	3265	1,04	3406	1,19	3545	1,33	3682	1,48	3818	1,64	3951	1,8	4081	1,96
1250	2917	0,69	3063	0,83	3204	0,97	3343	1,11	3479	1,25	3613	1,4	3746	1,56	3877	1,71	4007	1,88	4134	2,04
1300	3011	0,75	3152	0,89	3288	1,03	3422	1,18	3554	1,33	3684	1,48	3813	1,64	3940	1,8	4066	1,96	4190	2,13
1350	3105	0,81	3242	0,95	3374	1,1	3504	1,25	3631	1,4	3758	1,56	3882	1,72	4006	1,88	4128	2,05	4248	2,22
1400	3199	0,87	3332	1,02	3461	1,17	3587	1,33	3710	1,48	3833	1,64	3954	1,8	4073	1,97	4192	2,14	4309	2,31
1450	3294	0,94	3424	1,09	3549	1,25	3671	1,41	3791	1,57	3910	1,73	4027	1,89	4143	2,06	4258	2,24	4373	2,41
1500	3390	1,01	3516	1,17	3638	1,33	3756	1,49	3873	1,65	3988	1,82	4102	1,99	4215	2,16	4327	2,34	4438	2,52
1550	3486	1,09	3609	1,25	3727	1,41	3843	1,58	3956	1,75	4068	1,91	4179	2,09	4289	2,26	4398	2,44	4506	2,63
1600	3582	1,17	3702	1,34	3818	1,5	3930	1,67	4041	1,84	4150	2,01	4258	2,19	4365	2,37	4471	2,55	4576	2,74
1650	3679	1,25	3796	1,42	3909	1,59	4019	1,77	4127	1,94	4233	2,12	4338	2,3	4442	2,48	4546	2,67	4648	2,86
1700	3776	1,34	3891	1,52	4001	1,69	4108	1,87	4213	2,05	4317	2,23	4419	2,41	4521	2,6	4622	2,79	4722	2,99
1750	3874	1,44	3985	1,61	4093	1,79	4198	1,97	4301	2,16	4402	2,34	4502	2,53	4601	2,72	4699	2,92	4797	3,12
1800	3971	1,53	4081	1,72	4186	1,9	4289	2,09	4389	2,27	4488	2,46	4586	2,66	4682	2,85	4778	3,05	4874	3,25
1850	4069	1,64	4176	1,82	4280	2,01	4380	2,2	4478	2,39	4575	2,59	4670	2,79	4765	2,99	4859	3,19		
1900	4168	1,75	4272	1,93	4374	2,13	4472	2,32	4568	2,52	4663	2,72	4756	2,92	4848	3,13	4940	3,34		
1950	4266	1,86	4369	2,05	4468	2,25	4564	2,45	4658	2,65	4751	2,86	4842	3,06	4933	3,27				
2000	4365	1,98	4466	2,18	4563	2,38	4657	2,58	4749	2,79	4840	3	4930	3,21						
2100	4563	2,24	4660	2,44	4753	2,65	4844	2,87	4933	3,08	5020	3,31								
2200	4761	2,52	4855	2,73	4945	2,95	5033	3,18												
2300			5051	3,05	5138	3,28														

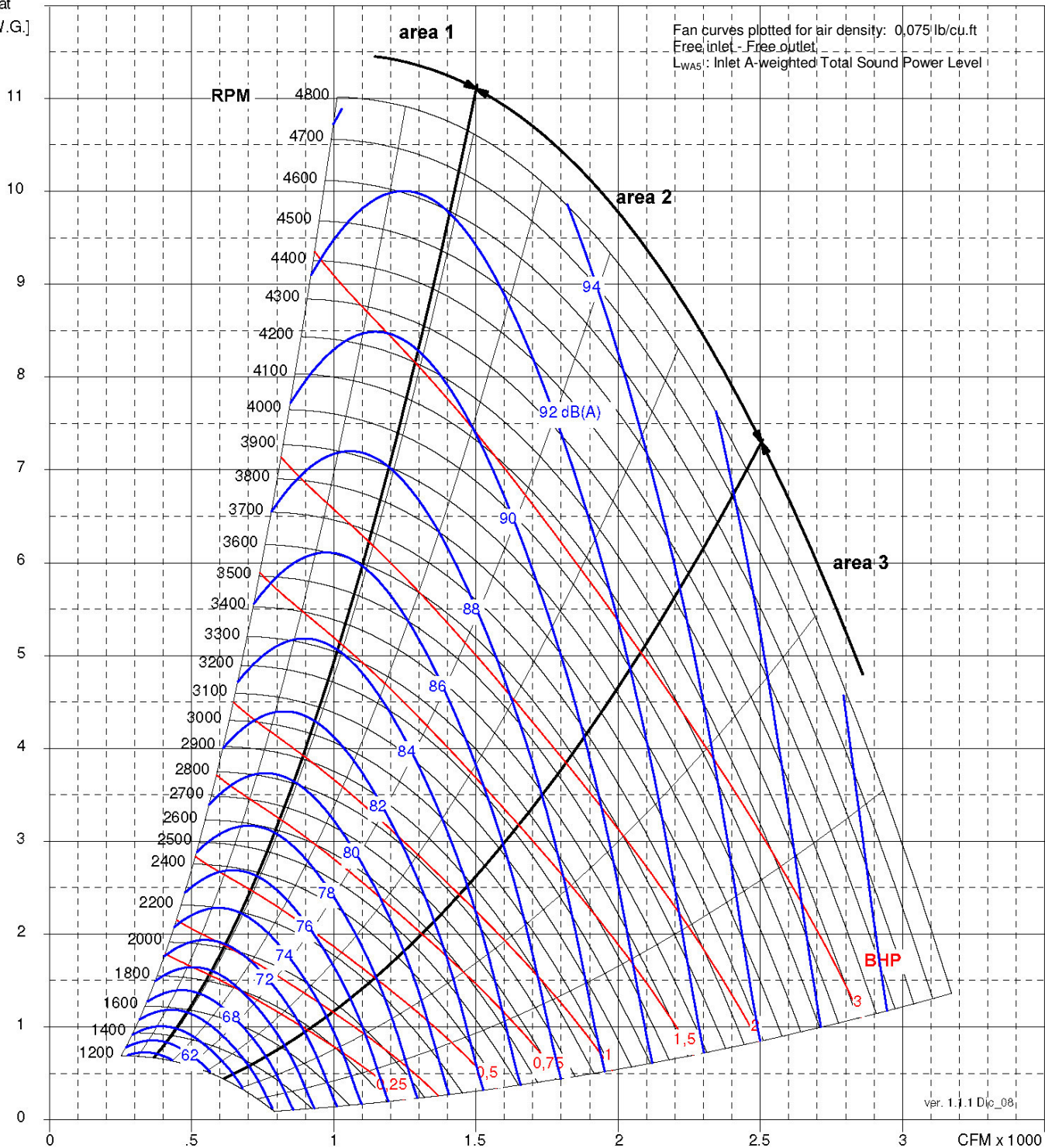
SOUND DATA TABLE

Plenum fan model and size	Volume flow range	Speed range	ΔL_{w5}	ΔL_{woc5} 63	ΔL_{woc5} 125	ΔL_{woc5} 250	ΔL_{woc5} 500	ΔL_{woc5} 1000	ΔL_{woc5} 2000	ΔL_{woc5} 4000	ΔL_{woc5} 8000
NAPBC 10	Area 1	RPM $\leq$ 2660	5,4	-4	-7	3	-4	-9	-6	-10	-17
		2661 $\leq$ RPM $\leq$ 4200	3,7	-3	-6	-7	0	-9	-10	-10	-14
		RPM $\geq$ 4201	3,6	-5	-7	-9	1	-8	-11	-9	-13
	Area 2	RPM $\leq$ 2660	4,6	-6	-9	2	-3	-6	-9	-13	-20
		2661 $\leq$ RPM $\leq$ 4200	4,0	-2	-8	-8	1	-8	-11	-13	-18
		RPM $\geq$ 4201	3,2	-7	-8	-8	1	-9	-11	-12	-16
	Area 3	RPM $\leq$ 2660	5,1	-4	-7	2	-2	-7	-9	-13	-18
		2661 $\leq$ RPM $\leq$ 4200	3,8	-3	-8	-7	1	-8	-12	-13	-17
		RPM $\geq$ 4201	3,2	-8	-8	-8	1	-8	-11	-12	-15



NAPBC 11	T2
Plenum Fan Max RPM [min^{-1}]	4735
Plenum Fan Max BHP	4
Plenum Fan weight [Lb]	41
Wheel No. Blades	8
Wheel Moment of Inertia [Lb ft^2]	1.4
Wheel weight [Lb]	9

Δp_{stat}
[In.W.G.]





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PLENUM FANS WITH BACKWARD CURVED WHEELS - NAPBC

NAPBC 11 T2

Δp _{stat} [In.W.G.]																					
V	1	1,5	2	2,5	3	3,5	4	4,5	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10	10,5	
[CFM]	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	
400	1458 0,14	1774 0,23																			
500	1491 0,16	1788 0,26	2052 0,36	2289 0,47																	
600	1543 0,19	1821 0,29	2071 0,4	2300 0,52	2511 0,64	2709 0,77															
700	1613 0,22	1870 0,32	2105 0,44	2324 0,56	2528 0,69	2719 0,83	2901 0,97	3073 1,11	3237 1,25												
800	1696 0,25	1933 0,37	2154 0,49	2361 0,61	2556 0,75	2741 0,89	2917 1,03	3085 1,18	3245 1,34	3399 1,49	3548 1,65	3691 1,82									
900	1790 0,29	2009 0,41	2216 0,54	2411 0,67	2597 0,81	2774 0,95	2944 1,1	3106 1,26	3262 1,42	3413 1,58	3558 1,75	3698 1,92	3835 2,1	3967 2,28	4095 2,46	4220 2,64					
1000	1893 0,34	2096 0,47	2289 0,6	2473 0,74	2650 0,88	2819 1,03	2981 1,18	3138 1,34	3289 1,51	3435 1,68	3577 1,85	3714 2,03	3847 2,21	3977 2,4	4103 2,59	4226 2,78	4346 2,98	4464 3,19	4578 3,39	4690 3,61	
1100	2002 0,39	2190 0,53	2371 0,67	2545 0,81	2712 0,96	2874 1,11	3029 1,27	3180 1,43	3326 1,6	3467 1,77	3605 1,95	3738 2,14	3868 2,32	3995 2,52	4119 2,71	4239 2,92	4357 3,13	4473 3,34	4586 3,56	4696 3,78	
1200	2116 0,45	2292 0,59	2462 0,74	2626 0,89	2784 1,04	2938 1,2	3087 1,36	3231 1,53	3372 1,71	3508 1,88	3641 2,06	3771 2,25	3897 2,44	4021 2,64	4141 2,85	4260 3,05	4375 3,27	4488 3,49	4599 3,72	4708 3,95	
1300	2234 0,52	2399 0,67	2559 0,82	2714 0,97	2864 1,14	3010 1,3	3153 1,47	3291 1,64	3426 1,82	3558 2	3686 2,19	3812 2,38	3934 2,58	4054 2,78	4172 2,99	4287 3,2	4400 3,42	4511 3,64	4620 3,88		
1400	2357 0,6	2511 0,75	2661 0,9	2808 1,07	2951 1,23	3090 1,41	3226 1,58	3359 1,76	3488 1,94	3615 2,13	3739 2,32	3860 2,52	3979 2,72	4096 2,92	4210 3,14	4322 3,35	4433 3,58	4541 3,81			
1500	2481 0,68	2627 0,84	2769 1	2908 1,17	3044 1,34	3177 1,52	3306 1,7	3433 1,88	3558 2,07	3680 2,27	3799 2,46	3917 2,66	4032 2,87	4145 3,08	4256 3,3	4365 3,52	4472 3,75	4578 3,99			
1600	2609 0,78	2746 0,94	2881 1,1	3012 1,28	3142 1,46	3268 1,64	3393 1,83	3514 2,02	3634 2,21	3751 2,41	3867 2,61	3980 2,82	4091 3,03	4201 3,25	4308 3,47	4414 3,7	4518 3,94				
1700	2738 0,88	2868 1,04	2996 1,22	3121 1,4	3244 1,58	3365 1,77	3484 1,97	3601 2,16	3716 2,36	3829 2,57	3940 2,78	4049 2,99	4157 3,21	4263 3,43	4367 3,66	4470 3,9					
1800	2869 0,99	2992 1,16	3114 1,34	3233 1,53	3351 1,72	3467 1,91	3580 2,11	3693 2,32	3803 2,52	3912 2,74	4019 2,95	4124 3,17	4228 3,4	4331 3,63	4432 3,86						
1900	3002 1,12	3119 1,29	3234 1,47	3348 1,66	3461 1,86	3572 2,06	3681 2,27	3789 2,48	3895 2,69	4000 2,91	4103 3,14	4205 3,36	4305 3,6	4404 3,83							
2000	3136 1,25	3247 1,43	3358 1,62	3466 1,82	3574 2,02	3680 2,23	3785 2,44	3889 2,65	3991 2,88	4092 3,1	4191 3,33	4290 3,57	4387 3,81								
2100	3271 1,4	3377 1,58	3483 1,78	3587 1,98	3690 2,19	3792 2,4	3893 2,62	3992 2,84	4091 3,07	4188 3,3	4284 3,54	4379 3,79									
2200	3407 1,56	3508 1,75	3609 1,95	3709 2,15	3808 2,37	3906 2,59	4003 2,81	4099 3,04	4194 3,28	4288 3,52	4381 3,77										
2300	3543 1,74	3641 1,93	3738 2,13	3833 2,34	3929 2,56	4023 2,79	4116 3,02	4209 3,26	4300 3,5	4391 3,75											
2400	3681 1,93	3774 2,12	3867 2,33	3959 2,55	4051 2,77	4142 3	4232 3,24	4321 3,49	4409 3,74	4497 3,99											
2500	3819 2,13	3909 2,33	3998 2,54	4087 2,76	4175 2,99	4263 3,23	4349 3,48	4435 3,73	4521 3,99												
2600	3957 2,35	4044 2,55	4130 2,77	4216 3	4301 3,24	4385 3,48	4469 3,74	4552 4													
2700	4096 2,59	4180 2,8	4263 3,02	4345 3,25	4427 3,5	4509 3,75															
2800		4316 3,06	4397 3,29	4476 3,53	4556 3,78																
2900		4454 3,34	4531 3,57	4608 3,82																	
3000		4591 3,64	4666 3,88																		
3100		4730 3,97																			

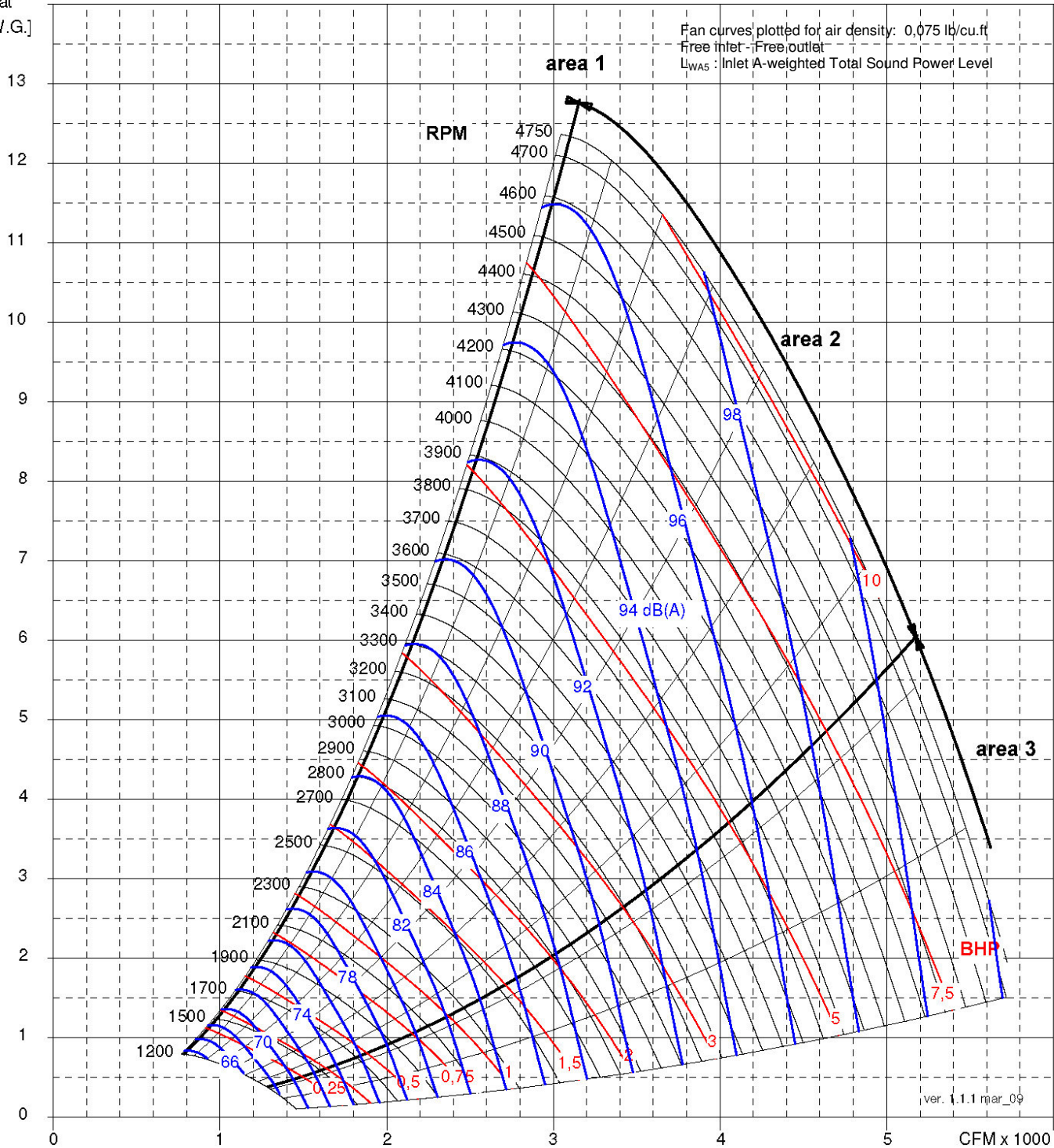
SOUND DATA TABLE

Plenum fan model and size	Volume flow range	Speed range	ΔL_{w5}	$\Delta L_{woc15} 63$	$\Delta L_{woc15} 125$	$\Delta L_{woc15} 250$	$\Delta L_{woc15} 500$	$\Delta L_{woc15} 1000$	$\Delta L_{woc15} 2000$	$\Delta L_{woc15} 4000$	$\Delta L_{woc15} 8000$
NAPBC 11	Area 1	RPM $\leq$ 2660	5,3	0	-4	0	-4	-6	-6	-8	-16
		2661 $\leq$ RPM $\leq$ 4200	7,9	6	-2	-6	-1	-8	-9	-8	-13
		RPM $\geq$ 4201	3,1	-5	-7	-8	-1	-7	-9	-8	-10
	Area 2	RPM $\leq$ 2660	4,0	-3	-6	-3	-2	-6	-6	-11	-17
		2661 $\leq$ RPM $\leq$ 4200	3,5	-4	-7	-6	0	-7	-10	-12	-15
		RPM $\geq$ 4201	3,1	-4	-7	-8	-1	-7	-9	-10	-13
	Area 3	RPM $\leq$ 2660	5,1	-2	-6	1	-2	-7	-8	-11	-17
		2661 $\leq$ RPM $\leq$ 4200	3,8	-5	-7	-6	1	-8	-10	-12	-15
		RPM $\geq$ 4201	2,5	-8	-8	-8	-1	-7	-9	-11	-10



NAPAF 12	T2	T3
Plenum Fan Max RPM [min ⁻¹]	4130	4500
Plenum Fan Max BHP	6.5	9.5
Plenum Fan weight [Lb]	56	61
Wheel No. Blades	10	
Wheel Moment of Inertia [Lb ft ²]	2.7	3
Wheel weight [Lb]	12.6	16.2

Δp_{stat}
[In.W.G.]





comefri

PLENUM FANS WITH AIRFOIL WHEELS - NAPAF

NAPAF 12 T2 - T3

Δp_{stat} [In.W.G.]																					
V	1	1,5	2	2,5	3	3,5	4	4,5	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10	10,5	11
[CFM]	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
1000	1381 0,28																				
1100	1418 0,31	1661 0,46																			
1200	1461 0,34	1684 0,5																			
1300	1507 0,38	1718 0,54	1923 0,71																		
1400	1557 0,41	1758 0,58	1949 0,76	2141 0,95																	
1500	1609 0,45	1803 0,63	1984 0,81	2160 1	2342 1,21																
1600	1663 0,5	1850 0,68	2024 0,87	2190 1,06	2356 1,27																
1700	1720 0,55	1899 0,73	2067 0,93	2227 1,13	2383 1,34	2540 1,56															
1800	1779 0,6	1951 0,79	2113 0,99	2267 1,2	2416 1,41	2563 1,63	2712 1,86														
1900	1839 0,66	2004 0,85	2162 1,06	2311 1,27	2454 1,49	2594 1,71	2733 1,95	2875 2,19													
2000	1902 0,72	2060 0,92	2212 1,13	2357 1,35	2495 1,57	2630 1,8	2763 2,04	2895 2,28	3030 2,54												
2100	1965 0,78	2117 0,99	2264 1,21	2405 1,43	2540 1,66	2670 1,89	2797 2,14	2924 2,38	3050 2,64	3179 2,91											
2200	2031 0,86	2176 1,06	2318 1,29	2455 1,52	2586 1,75	2713 1,99	2836 2,24	2957 2,49	3077 2,75	3198 3,02	3321 3,29										
2300	2097 0,93	2236 1,15	2373 1,37	2506 1,61	2634 1,85	2758 2,09	2878 2,35	2995 2,6	3110 2,87	3225 3,14	3341 3,42	3458 3,71	3579 4,01								
2400	2165 1,02	2298 1,23	2430 1,46	2559 1,7	2684 1,95	2804 2,2	2921 2,46	3035 2,72	3147 2,99	3258 3,26	3368 3,55	3479 3,84	3591 4,14	3706 4,45							
2500	2234 1,11	2361 1,32	2488 1,56	2614 1,8	2735 2,05	2853 2,31	2967 2,58	3078 2,84	3187 3,12	3294 3,4	3400 3,68	3506 3,98	3613 4,28	3720 4,6	3829 4,92						
2600	2303 1,2	2425 1,42	2548 1,66	2669 1,91	2788 2,17	2903 2,43	3015 2,7	3123 2,97	3229 3,25	3334 3,54	3437 3,83	3539 4,13	3640 4,44	3742 4,75	3845 5,08	3950 5,42	4057 5,78				
2700	2374 1,3	2491 1,53	2609 1,77	2727 2,02	2842 2,28	2954 2,55	3063 2,83	3170 3,11	3274 3,39	3375 3,68	3476 3,98	3574 4,28	3673 4,6	3771 4,92	3869 5,25	3968 5,59	4068 5,95	4171 6,33			
2800	2445 1,41	2558 1,64	2672 1,89	2785 2,14	2897 2,41	3007 2,68	3114 2,96	3218 3,25	3320 3,54	3419 3,83	3517 4,14	3613 4,45	3709 4,77	3803 5,09	3898 5,43	3993 5,77	4088 6,13	4184 6,52	4282 6,88		
2900	2517 1,53	2625 1,76	2735 2	2845 2,26	2954 2,53	3061 2,81	3165 3,1	3267 3,39	3367 3,69	3465 3,99	3560 4,3	3655 4,62	3747 4,94	3839 5,27	3931 5,61	4022 5,96	4114 6,33	4205 6,71	4298 7,08	4392 7,46	4487 7,86
3000	2589 1,65	2693 1,88	2799 2,13	2906 2,4	3011 2,67	3116 2,95	3218 3,25	3318 3,54	3416 3,85	3512 4,16	3605 4,47	3698 4,8	3789 5,13	3878 5,46	3967 5,81	4056 6,17	4144 6,56	4232 6,92	4321 7,29	4410 7,67	
3100	2662 1,78	2762 2,01	2865 2,27	2968 2,53	3070 2,81	3172 3,1	3272 3,4	3370 3,7	3466 4,01	3560 4,33	3652 4,65	3742 4,98	3831 5,32	3919 5,66	4006 6,01	4092 6,38	4178 6,77	4263 7,13	4349 7,51	4434 7,9	
3200	2735 1,91	2832 2,15	2931 2,41	3031 2,68	3130 2,96	3229 3,25	3327 3,56	3423 3,87	3517 4,18	3609 4,51	3700 4,84	3789 5,17	3876 5,52	3962 5,87	4047 6,23	4131 6,62	4215 6,99	4298 7,36	4381 7,74	4463 8,13	
3300	2809 2,05	2903 2,3	2998 2,56	3095 2,83	3191 3,12	3288 3,42	3383 3,72	3477 4,04	3569 4,36	3660 4,69	3748 5,03	3836 5,37	3922 5,72	4006 6,08	4090 6,45	4172 6,85	4254 7,22	4335 7,6	4416 7,98	4496 8,38	
3400	2883 2,2	2974 2,45	3066 2,71	3160 2,99	3253 3,28	3347 3,59	3440 3,9	3532 4,22	3622 4,55	3711 4,88	3799 5,23	3884 5,58	3969 5,94	4052 6,31	4134 6,71	4215 7,08	4295 7,46	4374 7,84	4453 8,23		
3500	2958 2,36	3045 2,61	3135 2,88	3225 3,16	3317 3,46	3408 3,76	3498 4,08	3588 4,41	3677 4,74	3764 5,09	3850 5,44	3934 5,8	4017 6,16	4099 6,57	4180 6,94	4259 7,32	4338 7,7	4416 8,09	4493 8,5		
3600	3032 2,53	3117 2,78	3204 3,05	3292 3,34	3380 3,64	3469 3,95	3557 4,27	3645 4,6	3732 4,95	3817 5,29	3902 5,65	3985 6,02	4067 6,4	4147 6,8	4226 7,18	4305 7,57	4382 7,96	4458 8,36			
3700	3107 2,7	3190 2,96	3274 3,24	3359 3,53	3445 3,83	3532 4,14	3618 4,47	3703 4,81	3788 5,16	3872 5,51	3955 5,88	4037 6,25	4117 6,67	4196 7,05	4274 7,43	4351 7,82	4427 8,22				
3800	3183 2,89	3263 3,15	3344 3,43	3427 3,72	3511 4,03	3595 4,35	3679 4,68	3762 5,02	3845 5,38	3928 5,74	4009 6,12	4089 6,5	4168 6,91	4246 7,3	4323 7,69	4399 8,09	4474 8,5				
3900	3258 3,08	3336 3,35	3415 3,63	3496 3,93	3577 4,24	3659 4,56	3741 4,9	3822 5,25	3904 5,61	3984 5,98	4064 6,36	4143 6,78	4220 7,16	4297 7,56	4373 7,96	4448 8,37					
4000	3334 3,28	3410 3,55	3487 3,84	3565 4,14	3644 4,46	3723 4,79	3803 5,13	3883 5,49	3963 5,85	4042 6,23	4120 6,65	4197 7,03	4274 7,43	4349 7,83	4424 8,24	4498 8,65					
4100	3410 3,49	3484 3,77	3559 4,06	3635 4,37	3711 4,69	3789 5,02	3867 5,37	3945 5,73	4022 6,11	4100 6,49	4176 6,91	4253 7,3	4328 7,7	4402 8,11	4476 8,53						
4200	3486 3,72	3558 4	3631 4,29	3705 4,61	3780 4,93	3855 5,27	3931 5,63	4007 5,99	4083 6,37	4159 6,79	4234 7,18	4309 7,57	4383 7,98	4456 8,4							
4300	3562 3,95	3632 4,23	3703 4,54	3775 4,85	3848 5,18	3922 5,53	3996 5,89	4070 6,25	4145 6,68	4219 7,06	4292 7,46	4366 7,86	4438 8,28								
4400	3639 4,19	3707 4,48	3776 4,79	3847 5,11	3918 5,45	3990 5,8	4062 6,17	4134 6,57	4207 6,96	4279 7,35	4352 7,75	4424 8,16	4495 8,59								
4500	3716 4,45	3782 4,74	3850 5,06	3918 5,39	3988 5,73	4057 6,09	4128 6,46	4199 6,86	4270 7,25	4341 7,65	4412 8,06	4482 8,48									
4600	3792 4,72	3857 5,02	3923 5,34	3990 5,67	4058 6,02	4126 6,39	4195 6,78	4264 7,16	4334 7,55	4403 7,96	4472 8,37										
4700		3933 5,3	3997 5,63	4062 5,97	4128 6,33	4195 6,71	4262 7,09	4330 7,47	4398 7,87	4466 8,28											
4800		4008 5,61	4071 5,94	4135 6,31	4200 6,66	4265 7,03	4330 7,41	4397 7,8	4463 8,21												
4900		4084 5,92	4146 6,28	4208 6,63	4271 6,98	4335 7,36	4399 7,74	4463 8,14													
5000		4160 6,27	4220 6,61	4281 6,96	4343 7,32	4405 7,7	4468 8,09														
5100		4236 6,6	4295 6,95	4355 7,3	4415 7,67	4476 8,06															
5200		4312 6,95	4370 7,3	4428 7,66	4487 8,04																
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5400		4465 7,69																			

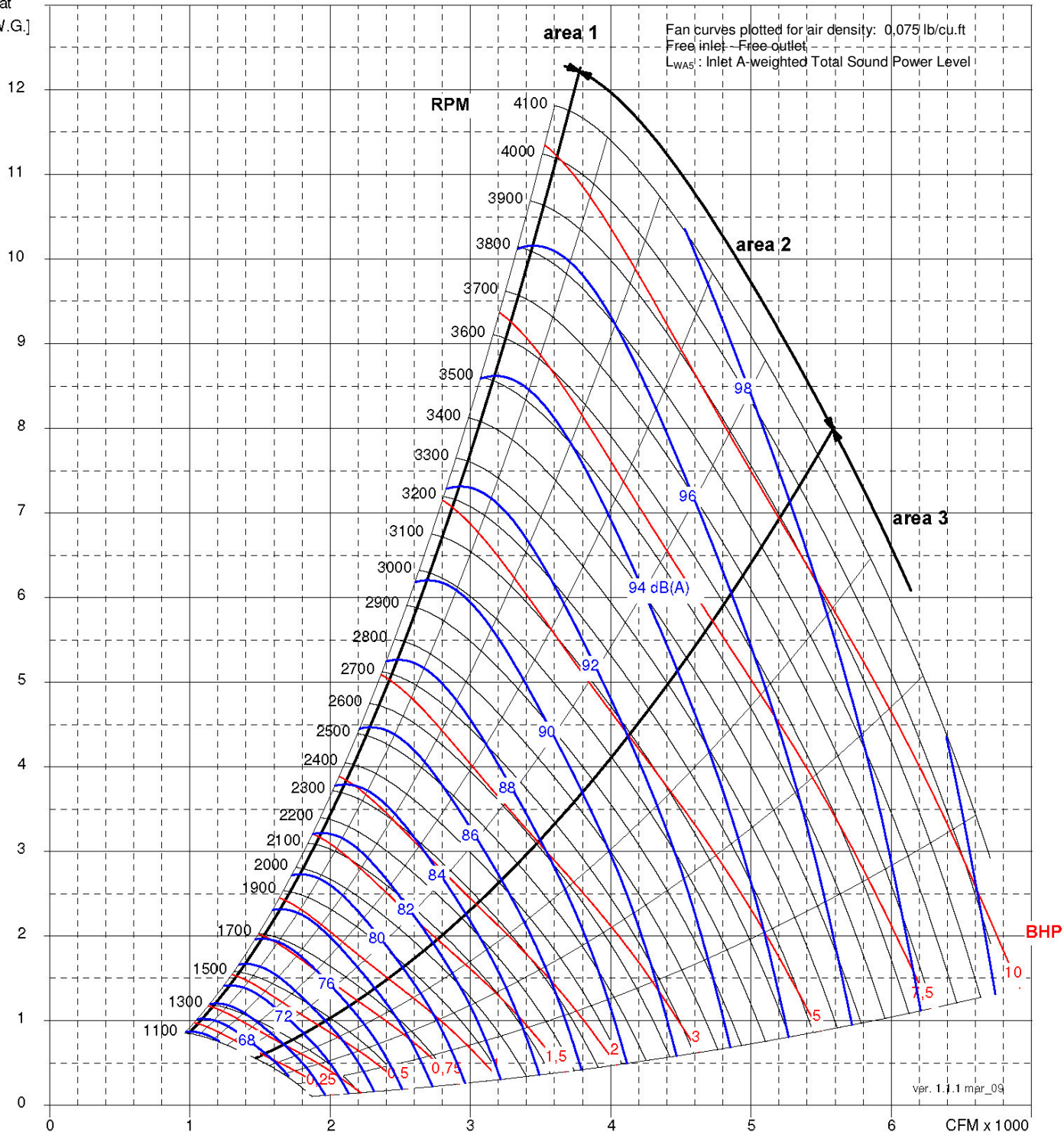
SOUND DATA TABLE

Plenum fan model and size	Volume flow range	Speed range	ΔL_{w5}	ΔL_{woct5} 63	ΔL_{woct5} 125	ΔL_{woct5} 250	ΔL_{woct5} 500	ΔL_{woct5} 1000	ΔL_{woct5} 2000	ΔL_{woct5} 4000	ΔL_{woct5} 8000
NAPAF 12	Area 1	RPM $\leq$ 2130	6,7	0	-2	3	-2	-8	-9	-11	-17
		2131 $\leq$ RPM $\leq$ 3360	3,4	-7	-5	-9	1	-10	-11	-11	-15
		RPM $\geq$ 3361	2,9	-6	-7	-6	-2	-5	-8	-10	-13
	Area 2	RPM $\leq$ 2130	6,6	0	-2	3	-2	-8	-9	-12	-18
		2131 $\leq$ RPM $\leq$ 3360	3,0	-8	-6	-9	1	-11	-13	-14	-17
		RPM $\geq$ 3361	2,7	-6	-9	-6	-2	-5	-8	-11	-13
	Area 3	RPM $\leq$ 2130	6,5	0	-3	3	-2	-9	-9	-12	-17
		2131 $\leq$ RPM $\leq$ 3360	3,7	-7	-8	-7	2	-10	-13	-16	-17
		RPM $\geq$ 3361	2,9	-6	-10	-6	-1	-5	-8	-13	-13



NAPAF 14	T2	T3
Plenum Fan Max RPM [min^{-1}]	3670	4000
Plenum Fan Max BHP	7.5	11.5
Plenum Fan weight [Lb]	66	70
Wheel No. Blades	10	
Wheel Moment of Inertia [Lb ft^2]	4.4	4.8
Wheel weight [Lb]	16.3	19.9

Δp_{stat}
[In.W.G.]



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NAPAF 14 T2 - T3

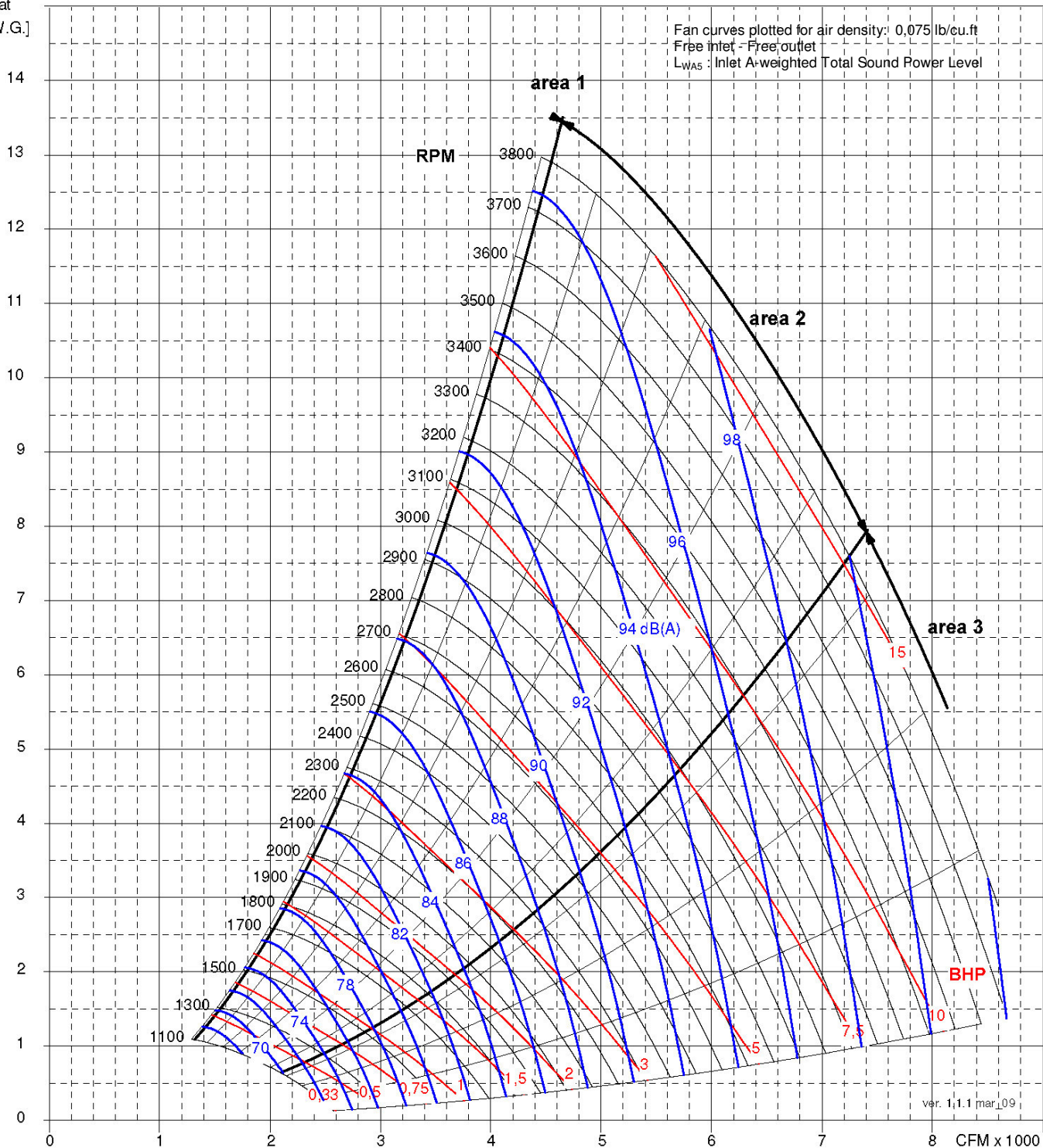
SOUND DATA TABLE

Plenum fan model and size	Volume flow range	Speed range	ΔL_{w5}	ΔL_{woct5} 63	ΔL_{woct5} 125	ΔL_{woct5} 250	ΔL_{woct5} 500	ΔL_{woct5} 1000	ΔL_{woct5} 2000	ΔL_{woct5} 4000	ΔL_{woct5} 8000
NAPAF 14	Area 1	RPM $\leq$ 2130	6,5	-2	0	3	-4	-7	-8	-12	-14
		2131 $\leq$ RPM $\leq$ 3360	3,4	-8	-3	-7	-1	-9	-10	-8	-8
		RPM $\geq$ 3361	3,8	-5	-5	-6	0	-6	-8	-12	-13
	Area 2	RPM $\leq$ 2130	6,6	-2	-3	4	-3	-7	-9	-13	-17
		2131 $\leq$ RPM $\leq$ 3360	3,5	-7	-3	-7	0	-8	-11	-12	-13
		RPM $\geq$ 3361	3,6	-6	-6	-6	0	-6	-8	-12	-13
	Area 3	RPM $\leq$ 2130	6,5	-2	-4	4	-2	-8	-10	-14	-18
		2131 $\leq$ RPM $\leq$ 3360	3,9	-5	-5	-5	1	-9	-11	-16	-18
		RPM $\geq$ 3361	3,7	-4	-7	-5	0	-7	-8	-13	-15



NAPAF 16	T2	T3
Plenum Fan Max RPM [min^{-1}]	3300	3700
Plenum Fan Max BHP	10.5	15.5
Plenum Fan weight [Lb]	92	100
Wheel No. Blades	10	
Wheel Moment of Inertia [Lb ft^2]	7.6	8.6
Wheel weight [Lb]	22.8	30.4

Δp_{stat}
[In.W.G.]





comefri

PLENUM FANS WITH AIRFOIL WHEELS - NAPAF

NAPAF 16 T2 - T3

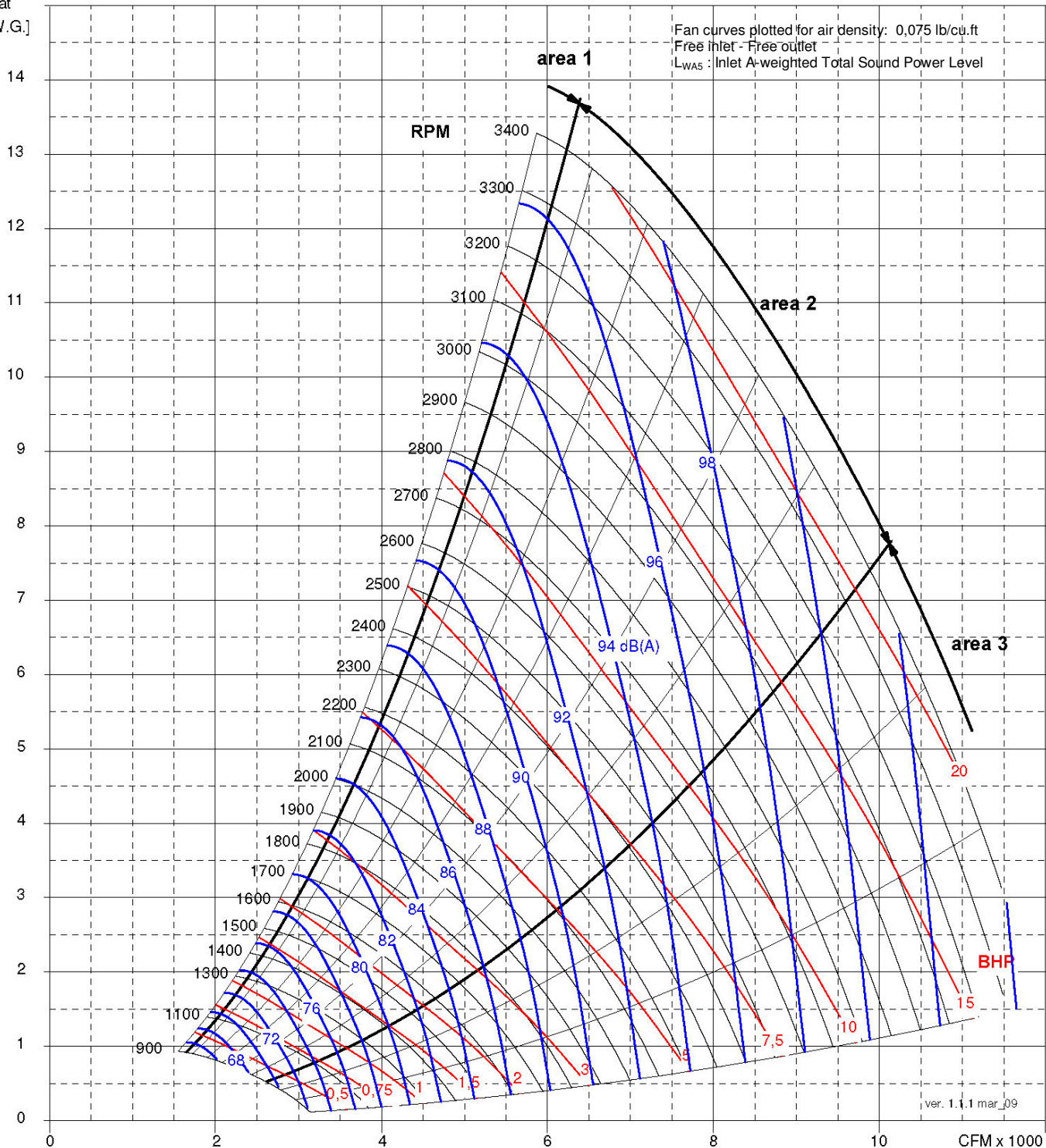
Δp_{stat} [In.W.G.]																					
V	1	2	3	3,5	4	4,5	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10	10,5	11	11,5	12
[CFM]	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
1600	1113 0,4																				
1800	1157 0,46	1499 0,91																			
2000	1205 0,52	1526 0,99																			
2200	1257 0,59	1562 1,08	1835 1,64																		
2400	1313 0,67	1603 1,19	1861 1,76	1984 2,07																	
2600	1372 0,76	1648 1,31	1895 1,9	2011 2,21	2125 2,55																
2800	1433 0,86	1697 1,43	1934 2,05	2045 2,37	2153 2,71	2260 3,06	2365 3,43														
3000	1497 0,97	1749 1,57	1977 2,21	2084 2,54	2188 2,89	2289 3,24	2388 3,62	2487 4													
3200	1563 1,09	1802 1,71	2023 2,38	2126 2,73	2226 3,08	2324 3,45	2419 3,83	2513 4,22	2605 4,62	2697 5,04											
3400	1631 1,23	1859 1,87	2071 2,56	2171 2,92	2268 3,29	2363 3,67	2454 4,05	2544 4,45	2633 4,86	2720 5,29	2807 5,72	2893 6,18									
3600	1701 1,37	1917 2,04	2122 2,76	2219 3,13	2313 3,51	2405 3,9	2494 4,3	2581 4,7	2666 5,12	2750 5,55	2833 5,99	2915 6,45	2997 6,92								
3800	1772 1,54	1977 2,22	2175 2,97	2269 3,35	2361 3,75	2449 4,15	2536 4,56	2620 4,98	2703 5,4	2784 5,84	2864 6,29	2943 6,75	3022 7,23	3100 7,72	3177 8,22						
4000	1844 1,71	2040 2,42	2230 3,19	2321 3,59	2410 4	2497 4,41	2581 4,83	2663 5,26	2743 5,7	2822 6,15	2900 6,61	2976 7,08	3052 7,56	3127 8,05	3201 8,56	3275 9,08	3348 9,65				
4200	1917 1,91	2104 2,63	2287 3,43	2375 3,84	2462 4,26	2546 4,69	2628 5,12	2708 5,57	2786 6,02	2863 6,48	2939 6,95	3013 7,42	3086 7,91	3158 8,41	3230 8,93	3301 9,5	3372 10,02	3442 10,56	3512 11,12	3582 11,69	
4400	1991 2,12	2169 2,86	2345 3,68	2431 4,1	2515 4,54	2597 4,98	2677 5,43	2755 5,89	2831 6,35	2906 6,82	2980 7,3	3052 7,79	3124 8,29	3194 8,8	3264 9,32	3333 9,89	3401 10,43	3468 10,97	3536 11,53	3603 12,1	3670 12,68
4600	2066 2,34	2236 3,11	2405 3,94	2488 4,38	2570 4,83	2649 5,29	2727 5,75	2804 6,22	2878 6,7	2952 7,18	3023 7,68	3094 8,18	3164 8,69	3232 9,21	3300 9,79	3367 10,32	3434 10,86	3499 11,41	3564 11,97	3629 12,55	3694 13,13
4800	2142 2,59	2304 3,37	2467 4,23	2547 4,68	2626 5,14	2704 5,61	2780 6,09	2854 6,57	2927 7,06	2999 7,56	3069 8,07	3138 8,59	3206 9,11	3273 9,65	3340 10,23	3405 10,77	3470 11,32	3533 11,88	3597 12,45	3660 13,03	
4900	2180 2,72	2339 3,51	2498 4,38	2577 4,83	2655 5,3	2731 5,78	2806 6,26	2880 6,75	2952 7,25	3023 7,76	3092 8,28	3161 8,8	3228 9,33	3295 9,87	3360 10,45	3425 11	3489 11,56	3552 12,12	3614 12,69	3676 13,28	
5000	2218 2,85	2374 3,65	2530 4,53	2608 4,99	2684 5,47	2760 5,95	2834 6,44	2906 6,94	2977 7,45	3048 7,96	3116 8,48	3184 9,01	3251 9,55	3316 10,14	3381 10,69	3445 11,24	3508 11,8	3571 12,37	3632 12,95	3694 13,53	
5100	2257 2,99	2409 3,8	2562 4,69	2638 5,16	2714 5,64	2788 6,13	2861 6,63	2933 7,13	3003 7,65	3073 8,17	3141 8,7	3208 9,24	3274 9,78	3339 10,37	3403 10,93	3466 11,48	3528 12,05	3590 12,62	3651 13,21		
5200	2295 3,13	2444 3,96	2595 4,86	2670 5,33	2744 5,81	2817 6,31	2889 6,81	2960 7,33	3029 7,85	3098 8,38	3165 8,92	3232 9,46	3297 10,02	3361 10,61	3425 11,17	3487 11,73	3549 12,31	3610 12,89	3671 13,47		
5300	2333 3,28	2479 4,12	2627 5,02	2701 5,5	2774 5,99	2846 6,5	2917 7,01	2987 7,53	3056 8,06	3124 8,6	3190 9,14	3256 9,69	3321 10,29	3384 10,85	3447 11,42	3509 11,99	3570 12,57	3631 13,15	3691 13,75		
5400	2372 3,43	2515 4,28	2660 5,2	2733 5,68	2805 6,18	2876 6,69	2946 7,21	3015 7,73	3083 8,27	3150 8,82	3216 9,37	3281 9,93	3345 10,53	3408 11,1	3470 11,67	3531 12,25	3592 12,83	3652 13,43			
5500	2411 3,59	2551 4,45	2694 5,38	2765 5,87	2835 6,37	2905 6,88	2975 7,41	3043 7,95	3110 8,49	3176 9,04	3242 9,6	3306 10,21	3369 10,78	3432 11,35	3493 11,93	3554 12,51	3614 13,11	3673 13,71			
5600	2450 3,75	2587 4,62	2727 5,56	2797 6,06	2867 6,57	2936 7,09	3004 7,62	3071 8,16	3138 8,71	3203 9,27	3268 9,84	3331 10,46	3394 11,03	3456 11,61	3517 12,19	3577 12,79	3637 13,38	3695 13,99			
5700	2489 3,92	2624 4,8	2761 5,75	2830 6,25	2898 6,77	2966 7,29	3033 7,83	3100 8,38	3166 8,94	3230 9,51	3294 10,09	3357 10,7	3419 11,28	3481 11,87	3541 12,46	3601 13,06	3660 13,67				
5800	2528 4,1	2660 4,99	2795 5,95	2863 6,45	2930 6,97	2997 7,51	3063 8,05	3129 8,61	3194 9,18	3258 9,75	3321 10,38	3383 10,96	3445 11,54	3506 12,14	3565 12,74	3625 13,34	3683 13,96				
5900	2567 4,27	2697 5,18	2829 6,15	2896 6,66	2962 7,19	3028 7,73	3094 8,28	3158 8,84	3222 9,42	3286 10	3348 10,63	3410 11,21	3471 11,81	3531 12,41	3590 13,02	3649 13,63					
6000	2606 4,46	2734 5,38	2864 6,36	2929 6,88	2995 7,41	3060 7,95	3124 8,51	3188 9,08	3251 9,66	3314 10,29	3376 10,88	3437 11,48	3497 12,08	3556 12,69	3615 13,3	3673 13,92					
6100	2645 4,65	2771 5,58	2899 6,57	2963 7,1	3027 7,63	3091 8,18	3155 8,75	3218 9,33	3281 9,91	3342 10,55	3403 11,14	3464 11,75	3523 12,35	3582 12,97	3641 13,59	3698 14,22					
6200	2685 4,85	2808 5,79	2934 6,8	2997 7,32	3060 7,86	3123 8,42	3186 8,99	3248 9,58	3310 10,21	3371 10,81	3432 11,41	3491 12,02	3550 12,64	3609 13,26	3666 13,89						
6300	2724 5,05	2845 6,01	2969 7,02	3031 7,55	3093 8,1	3155 8,67	3217 9,24	3279 9,84	3340 10,47	3400 11,08	3460 11,68	3519 12,3	3577 12,92	3635 13,56	3692 14,19						
6400	2764 5,26	2883 6,23	3004 7,26	3065 7,79	3127 8,35	3188 8,92	3249 9,5	3310 10,14	3370 10,74	3429 11,35	3489 11,96	3547 12,59	3605 13,22	3662 13,86							
6500	2803 5,47	2920 6,46	3040 7,5	3100 8,04	3161 8,6	3221 9,18	3281 9,77	3341 10,41	3400 11,01	3459 11,63	3517 12,25	3575 12,88	3632 13,52	3689 14,16							
6600	2843 5,69	2958 6,7	3076 7,74	3135 8,29	3194 8,86	3254 9,44	3313 10,08	3372 10,68	3431 11,29	3489 11,91	3547 12,54	3604 13,18	3660 13,82								
6700	2883 5,91	2996 6,94	3111 8	3170 8,55	3228 9,13	3287 9,71	3345 10,35	3404 10,96	3462 11,57	3519 12,2	3576 12,84	3633 13,48	3689 14,14								
6800	2922 6,15	3034 7,19	3148 8,26	3205 8,82	3263 9,4	3320 10,03	3378 10,63	3435 11,24	3493 11,87	3549 12,5	3606 13,14	3662 13,79									
6900	2962 6,39	3072 7,44	3184 8,53	3240 9,1	3297 9,68	3354 10,31	3411 10,92	3468 11,54	3524 12,16	3580 12,8	3636 13,45	3691 14,11									
7000	3002 6,63	3110 7,71	3220 8,8	3276 9,38	3332 10,01	3388 10,6	3444 11,21	3500 11,83	3556 12,47	3611 13,12	3666 13,77										
7100	3042 6,88	3148 7,96	3257 9,09	3312 9,71	3367 10,29	3422 10,9	3477 11,51	3533 12,14	3588 12,78	3642 13,43	3697 14,1										
7200	3082 7,14	3186 8,25	3293 9,38	3348 10	3402 10,59	3456 11,2	3511 11,82	3565 12,45	3620 13,1	3674 13,76											
7300	3122 7,41	3225 8,54	3330 9,72	3384 10,33	3437 10,9	3491 11,51	3545 12,14	3598 12,78	3652 13,43												
7400	3162 7,68	3263 8,83	3367 10,02	3420 10,61	3473 11,21	3526 11,83	3578 12,46	3632 13,1	3684 13,76												
7500		3302 9,17	3404 10,33	3456 10,92	3508 11,53	3560 12,15	3613 12,79	3665 13,44													
7600		3341 9,48	3441 10,64	3493 11,24	3544 11,86	3595 12,48	3647 13,13	3699 13,79													
7700		3379 9,79	3479 10,97	3529 11,57	3580 12,19	3631 12,83	3681 13,48														
7800		3418 10,11	3516 11,3	3566 11,91	3616 12,54	3666 13,18															
7900		3457 10,43	3554 11,64	3603 12,26	3652 12,89																
8000		3496 10,77	3591 11,99	3640 12,61	3688 13,25																
8100		3535 11,11	3629 12,34	3677 12,97																	
8200		3574 11,46	3667 12,71																		
8300		3613 11,82																			
8400		3652 12,18																			
8500		3691 12,56																			

SOUND



NAPAF 18	T2	T3
Plenum Fan Max RPM [min^{-1}]	3000	3300
Plenum Fan Max BHP	12	19
Plenum Fan weight [Lb]	119	128
Wheel No. Blades	10	
Wheel Moment of Inertia [Lb ft^2]	11.9	13.1
Wheel weight [Lb]	28.6	36

Δp_{stat}
[In.W.G.]





comefri

PLENUM FANS WITH AIRFOIL WHEELS - NAPAF

NAPAF 18 T2 - T3

Δp_{stat} [In.W.G.]																					
V	1	2	3	3,5	4	4,5	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10	10,5	11	11,5	12
[CFM]	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
1800	948 0,46																				
2000	970 0,5																				
2200	997 0,56																				
2400	1027 0,61	1329 1,21																			
2600	1059 0,68	1347 1,3																			
2800	1093 0,75	1369 1,39	1618 2,11																		
3000	1128 0,83	1394 1,49	1632 2,23																		
3200	1166 0,91	1423 1,6	1651 2,36	1760 2,77																	
3400	1204 1	1453 1,71	1673 2,49	1778 2,91	1879 3,35																
3600	1245 1,09	1484 1,84	1698 2,64	1799 3,07	1897 3,51	1993 3,97	2088 4,45														
3800	1286 1,2	1518 1,97	1725 2,79	1823 3,23	1918 3,68	2010 4,16	2101 4,64	2191 5,14													
4000	1329 1,31	1552 2,11	1754 2,96	1849 3,4	1941 3,87	2031 4,35	2118 4,84	2205 5,35	2291 5,87												
4200	1372 1,43	1588 2,26	1785 3,13	1877 3,59	1966 4,06	2053 4,55	2139 5,05	2222 5,57	2305 6,1	2386 6,65											
4400	1417 1,56	1625 2,42	1817 3,32	1907 3,79	1994 4,27	2078 4,76	2161 5,27	2242 5,8	2322 6,34	2401 6,9	2479 7,47										
4600	1463 1,7	1663 2,58	1850 3,51	1938 3,99	2023 4,48	2105 4,99	2186 5,51	2265 6,04	2343 6,6	2419 7,16	2495 7,74	2569 8,33	2644 8,93								
4800	1510 1,85	1702 2,76	1884 3,72	1970 4,21	2053 4,71	2134 5,23	2213 5,76	2290 6,3	2365 6,86	2440 7,43	2513 8,02	2585 8,62	2657 9,24	2729 9,87							
5000	1557 2,02	1742 2,94	1919 3,93	2003 4,44	2085 4,95	2164 5,48	2241 6,02	2316 6,57	2390 7,14	2462 7,72	2534 8,32	2604 8,93	2674 9,56	2743 10,19	2812 10,85	2880 11,51					
5200	1605 2,19	1782 3,14	1955 4,15	2037 4,68	2117 5,21	2195 5,75	2270 6,29	2344 6,86	2416 7,43	2487 8,02	2556 8,63	2625 9,25	2693 9,88	2760 10,53	2827 11,2	2894 11,87	2959 12,61				
5400	1654 2,37	1824 3,34	1992 4,39	2073 4,92	2151 5,47	2227 6,02	2301 6,58	2373 7,15	2443 7,74	2513 8,34	2581 8,95	2648 9,58	2715 10,23	2780 10,88	2845 11,56	2910 12,31	2974 13	3037 13,7	3100 14,4		
5600	1703 2,57	1867 3,56	2030 4,63	2109 5,18	2185 5,74	2260 6,31	2332 6,88	2403 7,47	2472 8,06	2540 8,67	2607 9,3	2673 9,93	2738 10,59	2802 11,25	2865 11,93	2928 12,69	2991 13,39	3052 14,1	3114 14,82	3175 15,56	3236 16,3
5800	1752 2,78	1910 3,78	2069 4,89	2146 5,45	2221 6,02	2294 6,61	2365 7,2	2434 7,79	2502 8,4	2569 9,02	2635 9,65	2699 10,3	2763 10,96	2825 11,64	2887 12,4	2949 13,09	3010 13,8	3070 14,52	3130 15,25	3190 16	3249 16,75
6000	1803 3,01	1954 4,02	2108 5,15	2183 5,73	2257 6,32	2328 6,92	2398 7,52	2467 8,13	2534 8,75	2599 9,38	2663 10,03	2727 10,68	2789 11,36	2851 12,12	2911 12,81	2971 13,51	3031 14,23	3090 14,96	3148 15,7	3207 16,45	3264 17,22
6200	1853 3,25	1999 4,28	2149 5,43	2222 6,02	2294 6,63	2364 7,24	2433 7,86	2500 8,48	2565 9,12	2630 9,76	2693 10,42	2755 11,09	2816 11,77	2877 12,53	2937 13,23	2996 13,95	3054 14,67	3111 15,41	3169 16,16	3226 16,93	3282 17,7
6400	1904 3,5	2045 4,55	2190 5,72	2261 6,33	2331 6,95	2400 7,57	2468 8,21	2534 8,85	2598 9,5	2662 10,15	2724 10,82	2785 11,5	2845 12,27	2904 12,97	2963 13,68	3021 14,4	3078 15,13	3135 15,88	3191 16,64	3247 17,41	
6600	1955 3,76	2091 4,83	2231 6,02	2301 6,64	2370 7,28	2437 7,92	2503 8,57	2568 9,22	2632 9,89	2694 10,56	2755 11,24	2816 11,94	2875 12,71	2933 13,42	2991 14,14	3048 14,87	3104 15,62	3159 16,37	3214 17,14	3269 17,92	
6800	2007 4,04	2138 5,13	2274 6,34	2342 6,97	2409 7,62	2475 8,28	2540 8,94	2604 9,61	2666 10,29	2728 10,98	2788 11,68	2847 12,46	2905 13,17	2963 13,89	3019 14,62	3075 15,36	3131 16,12	3185 16,88	3239 17,66	3293 18,45	
7000	2059 4,34	2185 5,44	2317 6,67	2383 7,32	2449 7,98	2513 8,65	2577 9,33	2640 10,02	2701 10,71	2762 11,42	2821 12,21	2879 12,92	2937 13,65	2993 14,38	3049 15,12	3104 15,87	3159 16,64	3212 17,41	3266 18,2		
7200	2111 4,65	2233 5,77	2361 7,02	2425 7,68	2489 8,35	2553 9,04	2615 9,73	2676 10,44	2737 11,15	2796 11,87	2855 12,67	2912 13,4	2969 14,14	3025 14,88	3080 15,64	3134 16,4	3187 17,17	3240 17,96	3293 18,76		
7400	2163 4,97	2281 6,11	2405 7,38	2468 8,05	2530 8,74	2592 9,44	2654 10,15	2714 10,87	2773 11,6	2832 12,41	2889 13,15	2946 13,89	3002 14,64	3057 15,4	3111 16,17	3165 16,95	3217 17,73	3270 18,53			
7600	2215 5,32	2330 6,48	2450 7,76	2511 8,44	2572 9,14	2633 9,86	2693 10,58	2752 11,32	2810 12,14	2868 12,89	2925 13,64	2980 14,4	3035 15,17	3090 15,94	3143 16,72	3196 17,51	3248 18,31				
7800	2268 5,67	2379 6,85	2495 8,16	2555 8,85	2614 9,56	2674 10,29	2732 11,03	2791 11,78	2848 12,62	2905 13,38	2960 14,15	3015 14,92	3070 15,7	3123 16,49	3176 17,29	3228 18,09	3279 18,91				
8000	2321 6,05	2428 7,25	2542 8,57	2599 9,27	2657 10	2715 10,74	2773 11,49	2830 12,34	2886 13,11	2942 13,89	2997 14,67	3051 15,46	3105 16,26	3157 17,06	3209 17,87	3261 18,69					
8200	2374 6,44	2478 7,67	2588 9,01	2644 9,72	2701 10,45	2757 11,2	2814 11,97	2870 12,83	2925 13,62	2980 14,41	3034 15,21	3087 16,02	3140 16,83	3192 17,65	3243 18,48						
8400	2427 6,85	2528 8,1	2635 9,46	2690 10,18	2745 10,92	2800 11,69	2855 12,55	2910 13,34	2964 14,14	3018 14,95	3072 15,76	3124 16,59	3176 17,42	3227 18,25							
8600	2480 7,28	2578 8,56	2682 9,93	2736 10,66	2789 11,42	2843 12,27	2897 13,06	2951 13,87	3004 14,68	3057 15,5	3110 16,34	3161 17,18	3213 18,02	3263 18,87							
8800	2533 7,73	2629 9,03	2730 10,43	2782 11,17	2834 11,93	2887 12,79	2940 13,59	2993 14,41	3045 15,24	3097 16,08	3148 16,93	3199 17,78	3250 18,64								
9000	2587 8,19	2680 9,53	2778 10,94	2829 11,69	2880 12,54	2931 13,33	2983 14,15	3035 14,97	3086 15,82	3137 16,67	3187 17,53	3238 18,4									
9200	2640 8,68	2731 10,05	2827 11,48	2876 12,31	2926 13,09	2976 13,89	3027 14,72	3077 15,56	3127 16,41	3178 17,28	3227 18,16										
9400	2694 9,18	2782 10,58	2876 12,11	2924 12,87	2972 13,66	3021 14,48	3071 15,31	3120 16,16	3169 17,03	3219 17,91	3268 18,81										
9600		2834 11,15	2925 12,69	2972 13,46	3019 14,26	3067 15,08	3115 15,92	3164 16,79	3212 17,67	3260 18,56											
9800		2886 11,73	2974 13,29	3020 14,07	3066 14,87	3113 15,71	3160 16,56	3208 17,44	3255 18,33												
10000		2938 12,4	3024 13,91	3069 14,7	3114 15,51	3160 16,36	3206 17,22	3252 18,11													
10200		2990 13,02	3074 14,55	3118 15,35	3162 16,18	3206 17,03	3252 17,91	3297 18,81													
10400		3042 13,67	3124 15,22	3167 16,03	3210 16,87	3254 17,73	3298 18,62														
10600		3094 14,34	3175 15,92	3216 16,74	3258 17,58																
10800		3147 15,03	3225 16,64	3266 17,47																	
11000		3199 15,75	3276 17,39																		
11200		3252 16,5																			
11300		3278 16,88																			

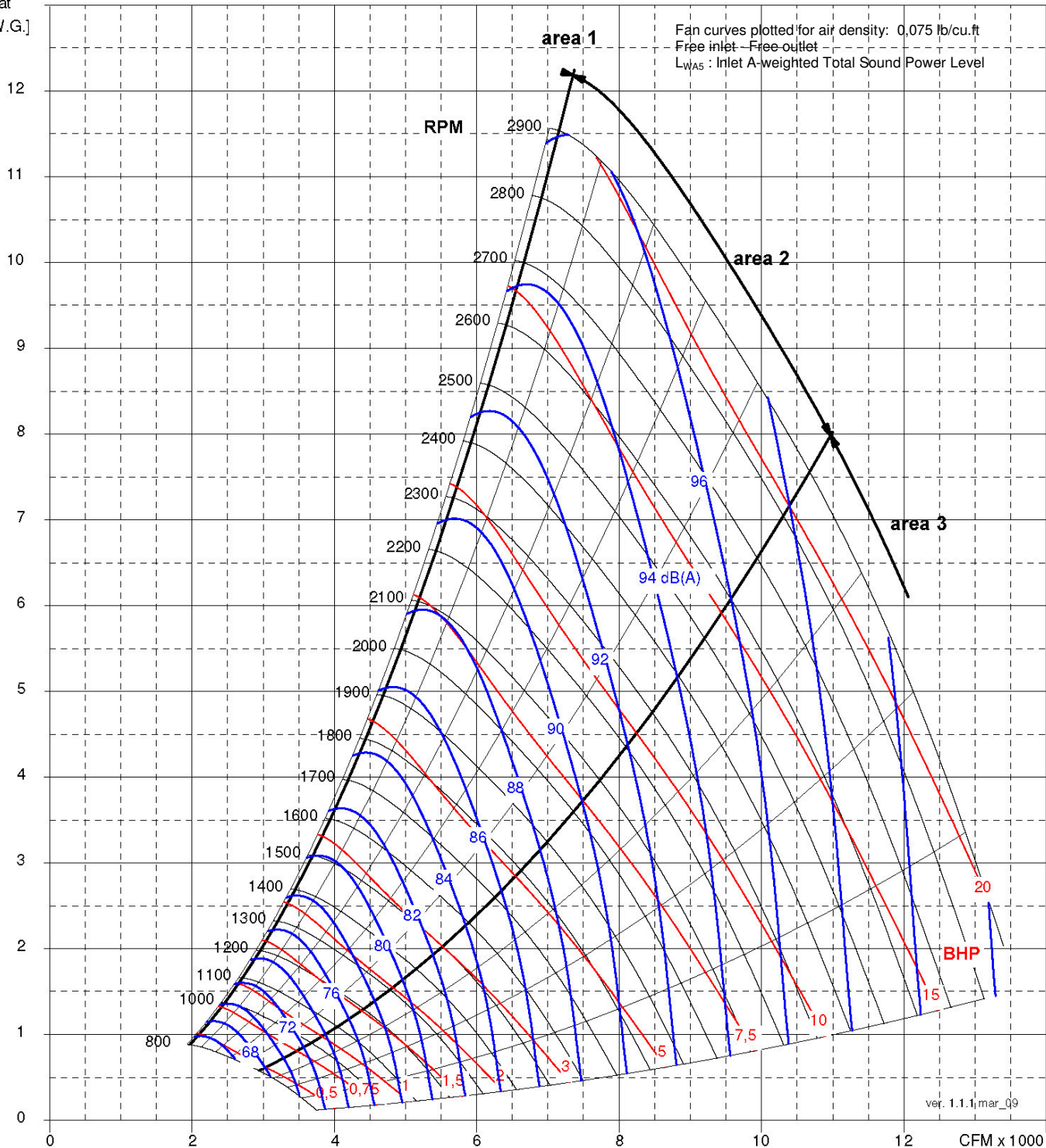
SOUND DATA TABLE

Plenum fan model and size	Volume flow range	Speed range	ΔL_{w5}	$\Delta L_{woc15 63}$	$\Delta L_{woc15 125}$	$\Delta L_{woc15 250}$	$\Delta L_{woc15 500}$	$\Delta L_{woc15 1000}$	$\Delta L_{woc15 2000}$	$\Delta L_{woc15 4000}$	$\Delta L_{woc15 8000}$
NAPAF 18	Area 1	RPM $\leq$ 2130	7,8	3	-2	4	-4	-7	-8	-11	-15
		2131 $\leq$ RPM $\leq$ 2700	4,0	-5	-7	-4	1	-8	-11	-13	-16
		RPM $\geq$ 2701	4,3	-5	-1	-5	-1	-7	-9	-10	-14
	Area 2	RPM $\leq$ 2130	6,9	2	-4	3	-3	-7	-9	-12	-17
		2131 $\leq$ RPM $\leq$ 2700	3,7	-6	-7	-5	1	-8	-11	-13	-17
		RPM $\geq$ 2701	3,8	-5	-3	-5	-1	-7	-8	-11	-14
	Area 3	RPM $\leq$ 2130	6,1	-1	-5	3	-3	-6	-9	-12	-18
		2131 $\leq$ RPM $\leq$ 2700	3,4	-6	-8	-4	0	-7	-10	-12	-15
		RPM $\geq$ 2701	3,5	-5	-6	-4	-1	-7	-8	-11	-1



NAPAF 20	T2	T3
Plenum Fan Max RPM [min^{-1}]	2650	2850
Plenum Fan Max BHP	16.5	21
Plenum Fan weight [Lb]	160	164
Wheel No. Blades	10	
Wheel Moment of Inertia [Lb ft^2]	23.9	24.3
Wheel weight [Lb]	48.7	50.4

Δp_{stat}
[In.W.G.]





NAPAF 20 T2 - T3

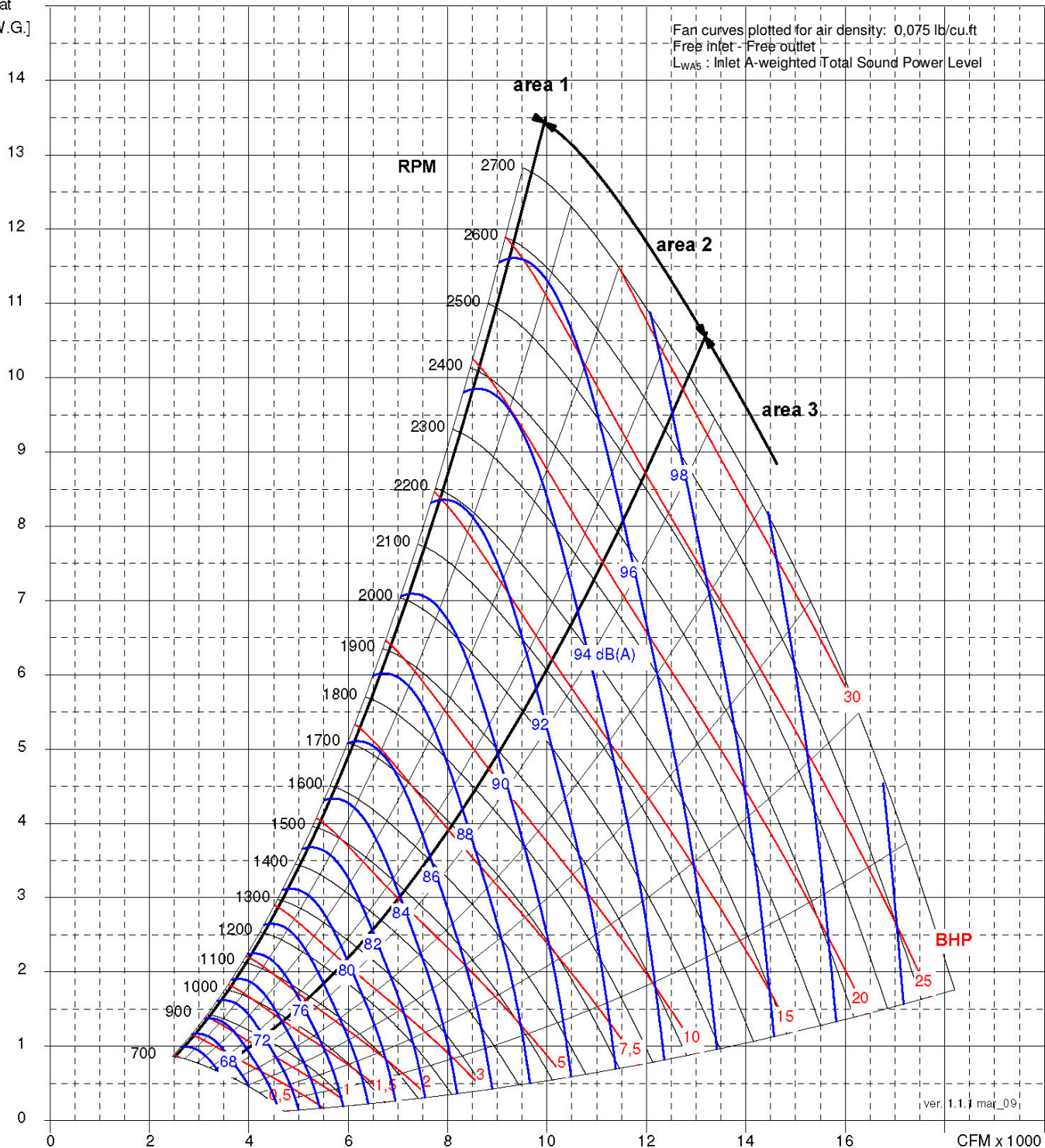
SOUND DATA TABLE

23



NAPAF 22	T2	T3
Plenum Fan Max RPM [min^{-1}]	2320	2650
Plenum Fan Max BHP	16.5	21
Plenum Fan weight [Lb]	209	215
Wheel No. Blades	10	
Wheel Moment of Inertia [Lb ft^2]	41.6	42.6
Wheel weight [Lb]	68.5	72.2

Δp_{stat}
[In.W.G.]





comefri

PLENUM FANS WITH AIRFOIL WHEELS - NAPAF

NAPAF 22 T2 - T3

Δp _{stat} [In.W.G.]																					
V	1	1,5	2	2,5	3	3,5	4	4,5	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10	10,5	
[CFM]	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	
3400	799 0.82	929 1.21																			
3600	815 0.88	939 1.28																			
4000	848 1.01	966 1.43	1076 1.88																		
4400	884 1.14	997 1.59	1100 2.06	1200 2.57																	
4800	921 1.29	1030 1.78	1129 2.27	1222 2.79	1313 3.35																
5200	960 1.46	1065 1.98	1161 2.5	1250 3.04	1335 3.61	1419 4.22															
5600	1002 1.64	1102 2.19	1195 2.75	1281 3.32	1362 3.9	1441 4.51	1519 5.16														
6000	1045 1.85	1140 2.42	1230 3.01	1314 3.61	1393 4.22	1468 4.85	1542 5.5	1614 6.19	1688 6.94												
6400	1090 2.07	1180 2.67	1266 3.29	1348 3.93	1425 4.57	1498 5.22	1569 5.89	1637 6.58	1706 7.31	1775 8.09											
6800	1137 2.32	1221 2.94	1304 3.59	1383 4.26	1458 4.93	1530 5.62	1598 6.31	1665 7.02	1730 7.75	1794 8.52	1858 9.33	1924 10.19									
7000	1161 2.45	1242 3.08	1323 3.75	1401 4.43	1475 5.12	1546 5.82	1614 6.53	1679 7.25	1743 7.99	1806 8.76	1868 9.56	1931 10.41									
7200	1184 2.59	1264 3.24	1343 3.91	1420 4.61	1493 5.32	1563 6.03	1630 6.76	1694 7.49	1757 8.24	1818 9.02	1879 9.82	1940 10.66	2001 11.54								
7400	1209 2.74	1286 3.39	1363 4.08	1438 4.79	1511 5.52	1580 6.25	1646 6.99	1710 7.74	1772 8.5	1832 9.28	1892 10.09	1951 10.92	2010 11.8	2070 12.72							
7600	1233 2.89	1309 3.56	1384 4.26	1458 4.98	1529 5.72	1597 6.47	1663 7.23	1726 7.99	1787 8.77	1846 9.56	1905 10.37	1962 11.21	2020 12.08	2078 12.99	2136 13.95						
7800	1258 3.05	1331 3.73	1405 4.44	1477 5.18	1547 5.93	1615 6.7	1680 7.47	1742 8.25	1802 9.04	1861 9.85	1919 10.67	1975 11.51	2031 12.38	2087 13.28	2144 14.23	2201 15.23					
8000	1283 3.22	1354 3.9	1426 4.63	1497 5.38	1566 6.15	1632 6.93	1697 7.72	1759 8.52	1818 9.32	1876 10.14	1933 10.97	1989 11.82	2044 12.7	2098 13.6	2153 14.54	2208 15.52	2264 16.59				
8200	1308 3.39	1377 4.09	1447 4.82	1517 5.59	1585 6.37	1650 7.17	1714 7.98	1775 8.79	1834 9.61	1892 10.44	1948 11.29	2003 12.15	2057 13.03	2110 13.93	2164 14.87	2217 15.84	2271 16.9	2325 17.95			
8400	1333 3.57	1401 4.28	1469 5.03	1537 5.8	1604 6.6	1669 7.41	1732 8.24	1792 9.07	1851 9.91	1908 10.75	1963 11.61	2017 12.48	2071 13.37	2123 14.28	2175 15.22	2227 16.19	2279 17.23	2332 18.27	2385 19.36		
8600	1358 3.76	1425 4.48	1491 5.24	1558 6.03	1623 6.84	1687 7.67	1750 8.51	1810 9.35	1868 10.21	1924 11.07	1979 11.94	2032 12.83	2085 13.73	2137 14.65	2188 15.59	2239 16.6	2289 17.59	2340 18.62	2392 19.68	2444 20.81	
8800	1384 3.96	1449 4.69	1514 5.46	1579 6.26	1643 7.08	1706 7.92	1768 8.78	1827 9.64	1885 10.51	1941 11.39	1995 12.28	2048 13.18	2100 14.09	2151 15.02	2201 15.97	2251 16.99	2301 17.97	2350 18.99	2400 20.05		
9000	1409 4.16	1473 4.9	1536 5.68	1600 6.49	1663 7.33	1725 8.19	1786 9.06	1845 9.94	1902 10.83	1957 11.72	2011 12.63	2064 13.54	2115 14.47	2165 15.41	2215 16.37	2264 17.39	2313 18.38	2361 19.39	2410 20.44		
9200	1435 4.37	1497 5.13	1559 5.92	1622 6.74	1684 7.59	1745 8.46	1805 9.35	1863 10.24	1919 11.15	1974 12.06	2028 12.98	2080 13.91	2130 14.85	2180 15.81	2229 16.82	2278 17.8	2326 18.79	2373 19.81	2421 20.86		
9400	1461 4.59	1522 5.36	1583 6.16	1644 6.99	1704 7.86	1764 8.74	1823 9.64	1881 10.56	1937 11.48	1991 12.41	2044 13.34	2096 14.29	2146 15.25	2196 16.21	2244 17.24	2292 18.23	2339 19.23	2386 20.25			
9600	1487 4.82	1548 5.6	1608 6.41	1666 7.26	1725 8.13	1784 9.03	1842 9.94	1899 10.87	1955 11.81	2009 12.76	2061 13.71	2112 14.68	2162 15.65	2211 16.68	2259 17.67	2307 18.66	2353 19.68	2399 20.71			
9800	1513 5.06	1571 5.85	1630 6.67	1688 7.53	1747 8.41	1805 9.33	1862 10.25	1918 11.2	1973 12.15	2026 13.12	2078 14.09	2129 15.07	2179 16.06	2227 17.1	2275 18.1	2322 19.11	2368 20.14				
10000	1539 5.3	1596 6.1	1653 6.94	1711 7.81	1768 8.7	1825 9.63	1881 10.57	1937 11.53	1991 12.5	2044 13.48	2096 14.47	2146 15.47	2195 16.48	2243 17.54	2291 18.55	2337 19.57	2382 20.61				
10200	1566 5.56	1622 6.37	1677 7.22	1734 8.1	1790 9	1846 9.94	1901 10.9	1956 11.87	2009 12.86	2062 13.86	2113 14.86	2163 15.88	2212 16.95	2260 17.97	2307 19	2353 20.04					
10400	1592 5.82	1647 6.64	1702 7.5	1757 8.39	1812 9.31	1867 10.26	1921 11.23	1975 12.22	2028 13.22	2080 14.24	2131 15.26	2181 16.29	2229 17.38	2276 18.42	2323 19.47	2368 20.52					
10600	1618 6.09	1672 6.93	1726 7.8	1780 8.7	1834 9.64	1888 10.6	1942 11.58	1995 12.58	2047 13.6	2099 14.63	2149 15.67	2198 16.77	2246 17.82	2293 18.88	2339 19.94						
10800	1645 6.38	1698 7.22	1750 8.1	1803 9.02	1857 9.96	1910 10.94	1962 11.93	2015 12.95	2066 13.98	2117 15.03	2167 16.08	2216 17.2	2263 18.27	2310 19.34	2356 20.42						
11200	1698 6.97	1749 7.84	1800 8.75	1851 9.68	1902 10.65	1953 11.65	2004 12.67	2055 13.71	2105 14.77	2155 15.85	2204 16.99	2252 18.09	2299 19.18	2345 20.29							
11600	1752 7.61	1801 8.5	1850 9.43	1899 10.39	1948 11.38	1996 12.4	2047 13.45	2097 14.51	2146 15.6	2194 16.77	2242 17.88	2289 19	2335 20.14								
12000	1805 8.28	1853 9.2	1900 10.15	1948 11.14	1996 12.15	2043 13.19	2091 14.26	2139 15.36	2186 16.47	2234 17.66	2280 18.8	2326 19.96									
12200	1832 8.64	1879 9.57	1926 10.53	1973 11.52	2019 12.55	2066 13.61	2113 14.69	2160 15.8	2207 16.98	2254 18.12	2300 19.28	2345 20.45									
12400	1859 9.01	1906 9.94	1951 10.92	1997 11.93	2043 12.96	2090 14.03	2136 15.13	2182 16.25	2228 17.44	2274 18.59	2320 19.77	2365 20.95									
12600	1886 9.39	1932 10.33	1977 11.32	2022 12.34	2067 13.39	2113 14.47	2158 15.58	2204 16.76	2249 17.91	2295 19.08	2340 20.26										
12800	1913 9.78	1958 10.73	2003 11.73	2047 12.76	2092 13.83	2136 14.92	2181 16.04	2226 17.23	2271 18.39	2315 19.57	2360 20.77										
13000	1940 10.18	1985 11.14	2028 12.15	2072 13.2	2116 14.28	2160 15.38	2204 16.57	2248 17.71	2293 18.89	2336 20.08											
13200	1968 10.59	2011 11.57	2054 12.59	2097 13.65	2141 14.74	2184 15.85	2227 17.05	2271 18.2	2314 19.39	2358 20.59											
13400	1995 11.02	2038 12	2080 13.04	2123 14.11	2165 15.21	2208 16.34	2251 17.54	2294 18.71	2336 19.91												
13600	2022 11.46	2064 12.45	2106 13.5	2148 14.58	2190 15.7	2232 16.88	2274 18.04	2316 19.23	2358 20.44												
13800		2091 12.91	2132 13.98	2174 15.07	2215 16.19	2256 17.39	2298 18.56	2339 19.76	2381 20.98												
14000		2118 13.39	2159 14.46	2199 15.57	2240 16.75	2281 17.91	2321 19.09	2362 20.3													
14200		2145 13.88	2185 14.96	2225 16.08	2265 17.27	2305 18.44	2345 19.64	2386 20.86													
14400		2171 14.38	2211 15.47	2251 16.65	2290 17.8	2330 18.99	2369 20.19														
14600		2198 14.89	2237 16	2276 17.18	2315 18.35	2354 19.55	2394 20.77														
14800		2225 15.42	2264 16.58	2302 17.73	2341 18.91	2379 20.12															
15000		2252 15.97	2290 17.13	2328 18.29	2366 19.48	2404 20.71															
15200		2279 16.56	2317 17.69	2354 18.87	2392 20.07																
15400		2306 17.13	2343 18.27	2380 19.46	2417 20.67																
15600		2333 17.71	2370 18.86	2407 20.06																	
15800		2360 18.3	2397 19.47	2433 20.68																	

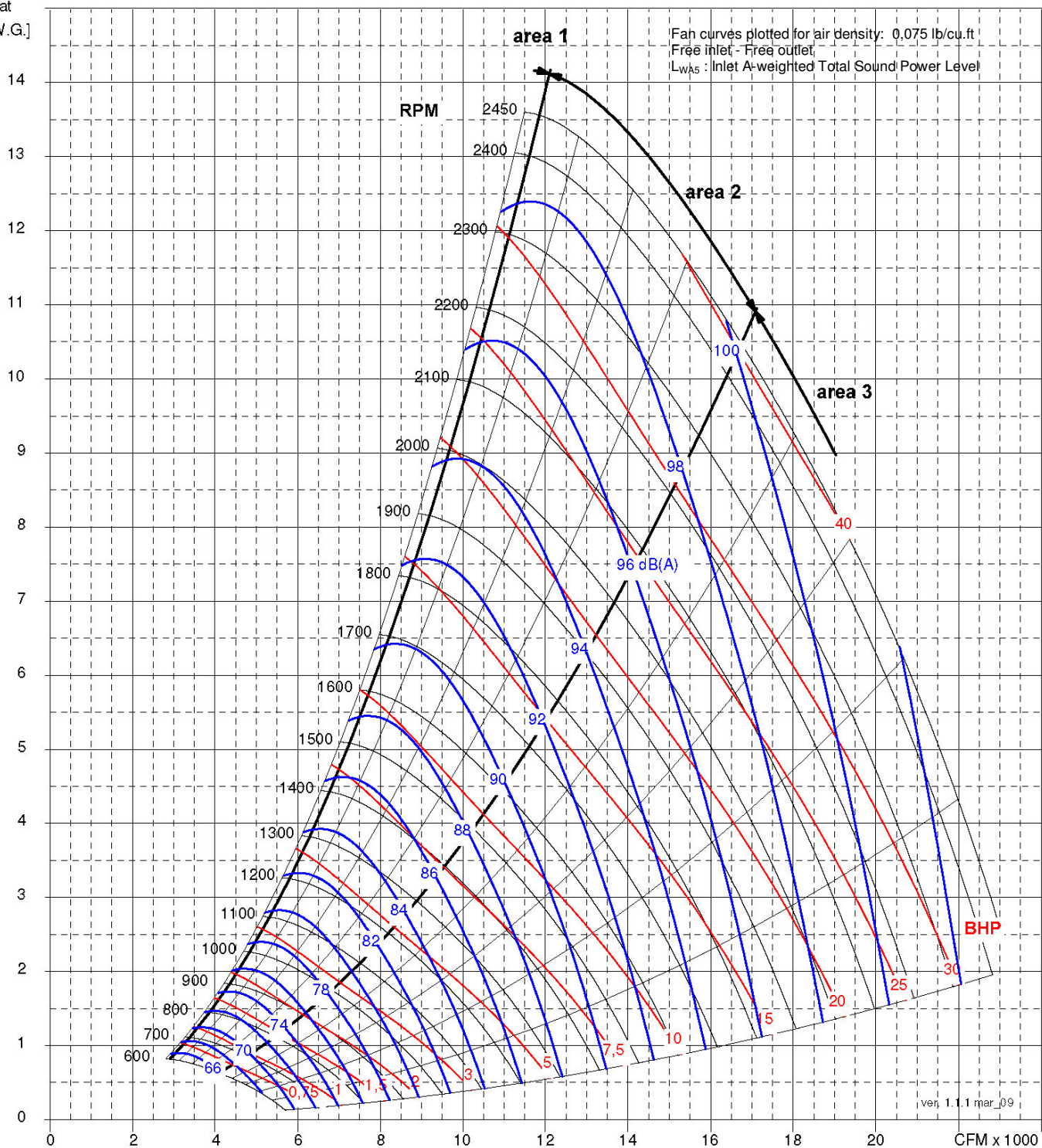
SOUND DATA TABLE

Plenum fan model and size	Volume flow range	Speed range	ΔL_{w5}	ΔL_{woc15} 63	ΔL_{woc15} 125	ΔL_{woc15} 250	ΔL_{woc15} 500	ΔL_{woc15} 1000	ΔL_{woc15} 2000	ΔL_{woc15} 4000	ΔL_{woc15} 8000
NAPAF 22	Area 1	RPM $\leq$ 1680	9,0	2	-1	7	-6	-8	-13	-16	-17
		1681 $\leq$ RPM $\leq$ 2130	7,1	0	-5	5	-4	-8	-11	-15	-16
		RPM $\geq$ 2131	4,6	-4	-5	0	-2	-5	-9	-13	-15
	Area 2	RPM $\leq$ 1680	8,3	0	-5	7	-6	-8	-14	-17	-19
		1681 $\leq$ RPM $\leq$ 2130	6,8	-2	-6	5	-4	-7	-11	-16	-17
		RPM $\geq$ 2131	3,7	-5	-6	-3	-1	-5	-10	-14	-15
	Area 3	RPM $\leq$ 1680	8,3	-1	-4	7	-5	-8	-12	-18	-21
		1681 $\leq$ RPM $\leq$ 2130	6,1	-3	-5	4	-4	-7	-11	-16	-19
		RPM $\geq$ 2131	3,6	-6	-6	-3	-1	-5	-9	-14	-16



NAPAF 25	T2	T3
Plenum Fan Max RPM [min^{-1}]	2070	2350
Plenum Fan Max BHP	20	36.5
Plenum Fan weight [Lb]	273	276
Wheel No. Blades	10	
Wheel Moment of Inertia [Lb ft^2]	64.6	
Wheel weight [Lb]	86	

Δp_{stat}
[In.W.G.]





comefri

PLENUM FANS WITH AIRFOIL WHEELS - NAPAF

NAPAF 25 T2 - T3

Δp_{stat} [In.W.G.]																					
V	1	2	3	3,5	4	4,5	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10	10,5	11	11,5	12
[CFM]	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
3500	673 0,83																				
3900	688 0,91																				
4300	708 1,01																				
4700	730 1,12	944 2,2																			
5100	753 1,24	956 2,35																			
5500	778 1,37	973 2,52	1152 3,87																		
5900	805 1,5	992 2,71	1160 4,06	1244 4,83																	
6300	832 1,65	1013 2,92	1173 4,29	1251 5,05	1330 5,87																
6700	861 1,81	1035 3,14	1190 4,55	1264 5,31	1337 6,12	1411 6,99															
7100	890 1,99	1059 3,37	1209 4,83	1279 5,6	1349 6,42	1418 7,28	1488 8,2														
7500	921 2,18	1083 3,61	1229 5,13	1297 5,92	1364 6,74	1429 7,6	1495 8,51	1561 9,48													
7900	952 2,39	1109 3,86	1250 5,44	1317 6,26	1381 7,1	1444 7,97	1506 8,88	1569 9,83	1631 10,84												
8300	985 2,61	1135 4,13	1273 5,77	1338 6,61	1401 7,47	1461 8,36	1521 9,28	1581 10,23	1640 11,23	1699 12,28	1759 13,39										
8700	1018 2,86	1162 4,42	1297 6,11	1360 6,98	1421 7,87	1480 8,78	1538 9,71	1595 10,68	1652 11,67	1708 12,72	1765 13,8	1822 14,95									
9100	1051 3,12	1190 4,72	1321 6,47	1383 7,37	1443 8,28	1501 9,22	1557 10,17	1612 11,15	1667 12,16	1721 13,2	1775 14,29	1829 15,41	1883 16,59	1938 17,83							
9500	1086 3,4	1219 5,04	1346 6,84	1407 7,77	1465 8,72	1522 9,68	1577 10,65	1631 11,65	1684 12,68	1736 13,73	1788 14,82	1839 15,94	1891 17,11	1943 18,32	1995 19,59						
9900	1120 3,71	1248 5,38	1372 7,23	1431 8,19	1489 9,17	1544 10,15	1598 11,16	1651 12,18	1702 13,23	1753 14,3	1803 15,39	1853 16,52	1903 17,69	1952 18,89	2002 20,19	2052 21,48	2102 22,81				
10300	1156 4,04	1278 5,74	1399 7,64	1457 8,63	1513 9,63	1567 10,65	1620 11,68	1672 12,73	1722 13,8	1772 14,89	1820 16	1869 17,14	1917 18,32	1964 19,52	2012 20,81	2059 22,08	2107 23,4	2156 24,76			
10700	1191 4,39	1309 6,13	1426 8,07	1483 9,09	1538 10,12	1591 11,17	1643 12,23	1693 13,3	1743 14,4	1791 15,51	1839 16,64	1886 17,8	1933 18,98	1979 20,26	2025 21,49	2070 22,76	2116 24,06	2162 25,4	2209 26,8	2255 28,24	
11100	1228 4,77	1341 6,53	1454 8,52	1509 9,56	1563 10,62	1615 11,7	1666 12,79	1716 13,9	1764 15,02	1812 16,16	1859 17,31	1905 18,49	1950 19,69	1995 20,98	2040 22,22	2084 23,49	2128 24,79	2172 26,13	2217 27,51	2261 28,93	2306 30,39
11500	1264 5,17	1373 6,97	1483 8,99	1537 10,06	1589 11,15	1640 12,26	1690 13,38	1739 14,51	1787 15,66	1834 16,83	1879 18,01	1924 19,21	1969 20,49	2013 21,73	2056 22,99	2099 24,27	2142 25,58	2185 26,92	2227 28,29	2270 29,7	2313 31,15
11900	1301 5,6	1406 7,42	1512 9,49	1564 10,58	1616 11,69	1666 12,83	1715 13,98	1763 15,15	1810 16,33	1856 17,52	1901 18,73	1945 19,96	1989 21,26	2032 22,52	2074 23,79	2116 25,09	2158 26,41	2200 27,76	2241 29,13	2282 30,54	2323 31,99
12300	1338 6,06	1439 7,91	1542 10,01	1593 11,12	1643 12,26	1692 13,43	1740 14,61	1788 15,8	1834 17,02	1879 18,24	1923 19,48	1967 20,8	2010 22,06	2052 23,34	2093 24,63	2135 25,95	2175 27,28	2216 28,64	2256 30,03	2296 31,45	2336 32,89
12700	1375 6,54	1472 8,42	1572 10,55	1622 11,69	1671 12,86	1719 14,05	1766 15,26	1813 16,49	1858 17,73	1902 18,98	1946 20,32	1989 21,59	2031 22,88	2073 24,18	2113 25,5	2154 26,84	2194 28,2	2233 29,58	2273 30,98	2312 32,4	
13100	1412 7,06	1506 8,97	1603 11,13	1652 12,29	1699 13,47	1747 14,69	1793 15,93	1838 17,19	1883 18,46	1927 19,75	1970 21,11	2012 22,41	2053 23,73	2094 25,06	2134 26,41	2174 27,77	2213 29,14	2252 30,54	2291 31,96	2329 33,4	
13500	1450 7,6	1541 9,54	1635 11,73	1682 12,91	1728 14,12	1774 15,36	1820 16,63	1864 17,92	1908 19,22	1951 20,6	1994 21,92	2035 23,26	2076 24,61	2116 25,96	2156 27,33	2195 28,72	2234 30,13	2272 31,55	2309 32,99	2347 34,45	
13900	1488 8,17	1576 10,14	1667 12,37	1712 13,56	1758 14,8	1803 16,06	1847 17,35	1891 18,67	1934 20,07	1977 21,41	2018 22,76	2059 24,13	2099 25,51	2139 26,89	2178 28,29	2217 29,71	2255 31,14	2292 32,59	2329 34,05		
14300	1526 8,78	1611 10,78	1699 13,04	1743 14,25	1788 15,5	1832 16,79	1875 18,11	1918 19,45	1961 20,87	2002 22,24	2043 23,63	2084 25,02	2123 26,43	2162 27,85	2201 29,28	2239 30,72	2276 32,18	2313 33,66			
14700	1564 9,41	1646 11,45	1732 13,74	1775 14,97	1818 16,24	1861 17,55	1904 18,89	1946 20,33	1987 21,71	2028 23,1	2069 24,51	2108 25,94	2148 27,38	2186 28,83	2224 30,29	2262 31,77	2299 33,26	2335 34,76			
15100	1602 10,09	1682 12,15	1765 14,47	1807 15,72	1849 17,01	1891 18,34	1933 19,71	1974 21,16	2015 22,57	2055 23,99	2095 25,43	2134 26,89	2173 28,36	2211 29,84	2248 31,33	2285 32,84	2321 34,36				
15500	1640 10,79	1718 12,89	1799 15,24	1840 16,51	1881 17,81	1922 19,17	1962 20,62	2003 22,02	2043 23,46	2082 24,91	2121 26,38	2160 27,86	2198 29,36	2235 30,88	2272 32,4	2309 33,94	2345 35,49				
15900	1679 11,53	1754 13,67	1833 16,05	1872 17,33	1912 18,65	1952 20,09	1992 21,49	2032 22,92	2071 24,37	2110 25,85	2148 27,35	2186 28,87	2224 30,4	2261 31,94	2297 33,5	2333 35,07					
16300	1717 12,31	1791 14,48	1867 16,9	1906 18,19	1945 19,54	1984 20,98	2022 22,4	2061 23,85	2100 25,33	2138 26,84	2176 28,36	2213 29,9	2250 31,46	2286 33,04	2322 34,63						
16700		1827 15,33	1902 17,78	1939 19,09	1977 20,51	2015 21,91	2053 23,35	2091 24,82	2129 26,32	2166 27,85	2203 29,4	2240 30,97	2276 32,56	2312 34,17	2348 35,79						
17100		1864 16,22	1936 18,7	1973 20,09	2010 21,46	2047 22,87	2084 24,33	2122 25,82	2159 27,35	2195 28,9	2232 30,48	2268 32,08	2303 33,69	2339 35,33							
17500		1901 17,15	1972 19,67	2007 21,06	2044 22,45	2080 23,88	2116 25,36	2152 26,87	2188 28,41	2224 29,98	2260 31,59	2296 33,21	2331 34,86								
17900		1938 18,12	2007 20,73	2042 22,08	2077 23,48	2113 24,93	2148 26,42	2183 27,95	2219 29,51	2254 31,11	2289 32,73	2324 34,39									
18300		1976 19,14	2043 21,77	2077 23,14	2111 24,55	2146 26,01	2180 27,52	2215 29,07	2250 30,66	2284 32,28	2319 33,93										
18700		2013 20,25	2079 22,85	2112 24,23	2145 25,67	2179 27,15	2213 28,68	2247 30,24	2281 31,85	2315 33,49	2349 35,16										
19100		2051 21,34	2115 23,98	2147 25,38	2180 26,83	2213 28,33	2246 29,87	2279 31,45	2312 33,08	2346 34,74											
19500		2089 22,48	2151 25,15	2183 26,57	2215 28,03	2247 29,55	2279 31,11	2312 32,72	2344 34,36												
19900		2127 23,67	2187 26,38	2218 27,8	2250 29,29	2281 30,82	2313 32,4	2345 34,02													
20300		2165 24,9	2224 27,64	2254 29,09	2285 30,59	2316 32,14	2347 33,73														
20500		2184 25,53	2242 28,3	2272 29,76	2303 31,27	2333 32,82															
20700		2203 26,18	2261 28,96	2290 30,43	2320 31,94																
20900		2222 26,84	2279 29,64	2308 31,11	2338 32,64																
21100		2241 27,51	2298 30,33	2327 31,81																	
21300		2260 28,19	2316 31,03	2345 32,53																	
21500		2279 28,89	2335 31,75																		
21700		2298 29,6																			
21900		2318 30,32																			
22100		2337 31,06																			

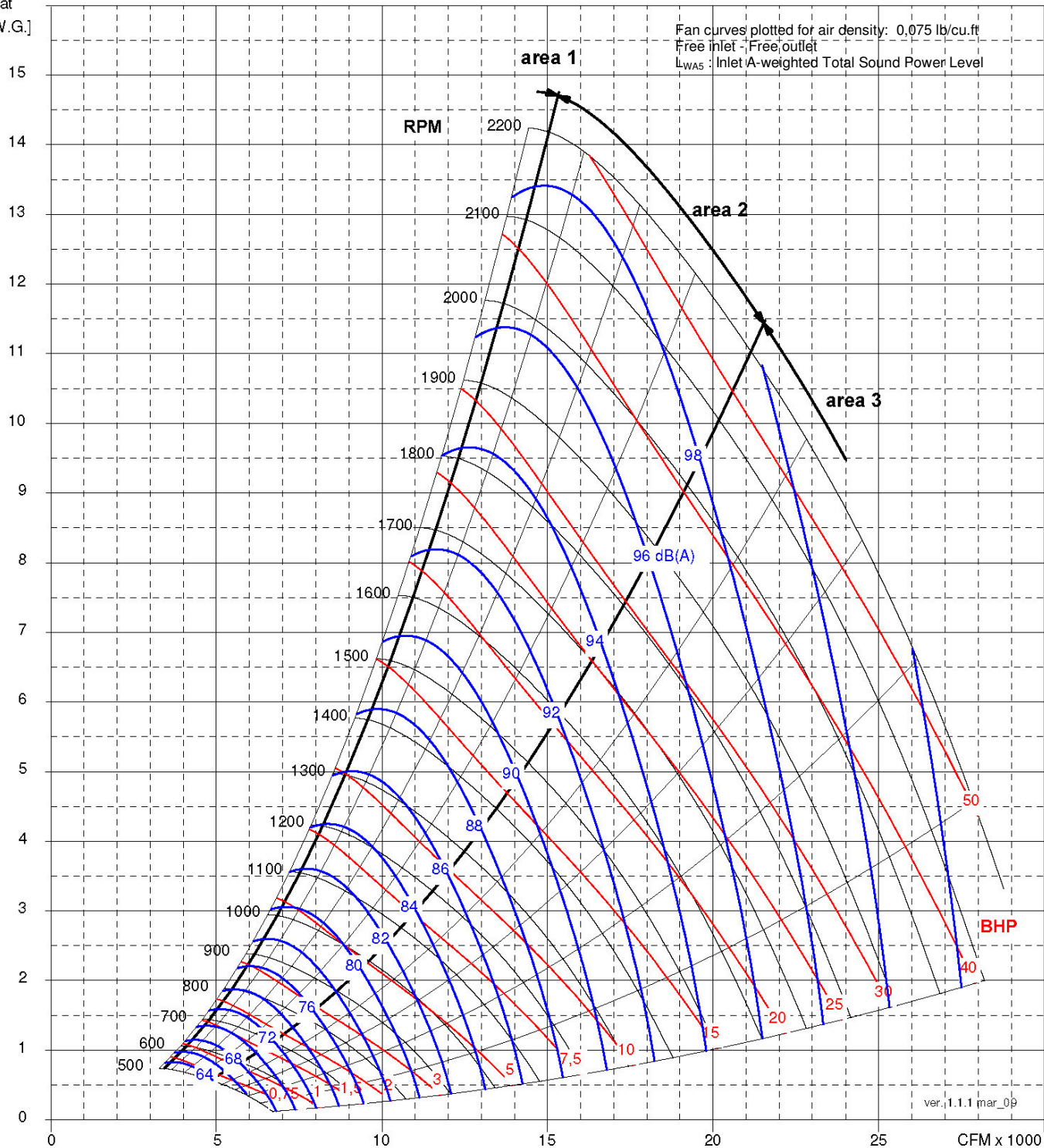
SOUND DATA TABLE

Plenum fan model and size	Volume flow range	Speed range	ΔL_{w5}	$\Delta L_{woc15\ 63}$	$\Delta L_{woc15\ 125}$	$\Delta L_{woc15\ 250}$	$\Delta L_{woc15\ 500}$	$\Delta L_{woc15\ 1000}$	$\Delta L_{woc15\ 2000}$	$\Delta L_{woc15\ 4000}$	$\Delta L_{woc15\ 8000}$
NAPAF 25	Area 1	RPM $\leq$ 1080	8,6	3	5	1	-5	-6	-9	-10	-14
		1081 $\leq$ RPM $\leq$ 1680	7,2	0	-3	5	-6	-8	-9	-13	-14
		RPM $\geq$ 1681	6,0	-1	-3	2	-3	-6	-8	-10	-13
	Area 2	RPM $\leq$ 1080	7,5	0	4	1	-5	-6	-9	-10	-14
		1081 $\leq$ RPM $\leq$ 1680	6,5	-3	-6	5	-6	-8	-10	-13	-14
		RPM $\geq$ 1681	5,4	-3	-5	2	-3	-5	-9	-12	-14
	Area 3	RPM $\leq$ 1080	9,2	2	6	3	-4	-7	-10	-11	-15
		1081 $\leq$ RPM $\leq$ 1680	7,4	-3	-4	6	-4	-8	-13	-15	-16
		RPM $\geq$ 1681	5,3	-4	-5	2	-2	-5	-10	-15	-16



NAPAF 28	T2	T3
Plenum Fan Max RPM [min^{-1}]	1850	2100
Plenum Fan Max BHP	27.5	47.5
Plenum Fan weight [Lb]	358	
Wheel No. Blades	10	
Wheel Moment of Inertia [Lb ft^2]	122.5	
Wheel weight [Lb]	124.3	

Δp_{stat}
[In.W.G.]



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PLENUM FANS WITH AIRFOIL WHEELS - NAPAF

NAPAF 28 T2 - T3

Δp_{stat} [In.W.G.]																					
V	1	2	3	4	4,5	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10	10,5	11	11,5	12	12,5
[CFM]	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
4000	584 0,96																				
4500	595 1,06																				
5000	610 1,18																				
5500	628 1,31	825 2,62																			
6000	648 1,45	832 2,79																			
6500	668 1,6	845 2,99																			
7000	690 1,77	861 3,23	1013 4,87																		
7500	713 1,95	878 3,48	1023 5,14																		
8000	738 2,14	897 3,74	1036 5,46	1169 7,38																	
8500	763 2,35	917 4,03	1052 5,8	1177 7,73	1240 8,79																
9000	790 2,59	937 4,32	1069 6,17	1190 8,12	1249 9,18	1308 10,3	1368 11,52														
9500	818 2,84	959 4,63	1087 6,56	1204 8,56	1261 9,62	1317 10,73	1372 11,91	1429 13,18													
10000	846 3,11	981 4,96	1106 6,96	1221 9,03	1275 10,11	1329 11,22	1382 12,39	1434 13,62	1488 14,93												
10500	875 3,41	1004 5,31	1126 7,38	1238 9,53	1291 10,63	1343 11,76	1394 12,93	1444 14,15	1495 15,43	1545 16,78	1597 18,23										
11000	905 3,73	1028 5,68	1147 7,82	1257 10,04	1309 11,18	1359 12,34	1408 13,52	1457 14,75	1505 16,02	1553 17,35	1601 18,74	1650 20,22									
11500	935 4,08	1053 6,08	1168 8,28	1276 10,58	1327 11,75	1376 12,94	1424 14,15	1471 15,39	1518 16,67	1564 18	1610 19,37	1656 20,81	1702 22,32	1750 23,93							
12000	966 4,45	1079 6,5	1190 8,76	1296 11,13	1346 12,34	1394 13,57	1441 14,82	1487 16,08	1532 17,38	1577 18,71	1621 20,09	1665 21,51	1709 22,99	1753 24,54	1798 26,17						
12500	997 4,85	1105 6,94	1213 9,27	1316 11,71	1365 12,96	1413 14,22	1459 15,5	1504 16,8	1548 18,13	1591 19,48	1634 20,86	1677 22,29	1719 23,75	1761 25,28	1804 26,86	1847 28,56	1890 30,28				
13000	1028 5,28	1132 7,42	1237 9,8	1337 12,31	1385 13,6	1432 14,9	1477 16,22	1522 17,55	1565 18,9	1607 20,28	1649 21,69	1691 23,13	1731 24,6	1772 26,11	1813 27,74	1854 29,34	1894 31,01	1936 32,75	1978 34,57		
13500	1060 5,74	1160 7,92	1261 10,35	1359 12,93	1406 14,26	1452 15,6	1497 16,96	1540 18,33	1583 19,71	1624 21,12	1665 22,56	1706 24,01	1746 25,5	1785 27,03	1824 28,64	1863 30,23	1903 31,88	1942 33,57	1981 35,34	2021 37,17	
14000	1092 6,22	1188 8,46	1286 10,94	1381 13,58	1427 14,94	1472 16,32	1516 17,72	1559 19,13	1601 20,56	1642 22	1682 23,46	1722 24,95	1761 26,46	1799 28,06	1837 29,62	1875 31,21	1913 32,85	1951 34,53	1989 36,26	2027 38,05	2065 39,9
14500	1125 6,74	1217 9,02	1311 11,55	1404 14,26	1449 15,65	1493 17,07	1537 18,51	1579 19,96	1620 21,42	1661 22,9	1700 24,4	1739 25,92	1777 27,46	1815 29,08	1852 30,66	1889 32,26	1926 33,9	1962 35,58	1999 37,3	2035 39,06	2072 40,88
15000	1157 7,3	1247 9,62	1337 12,2	1428 14,96	1472 16,39	1515 17,84	1558 19,32	1599 20,81	1640 22,31	1680 23,83	1719 25,37	1757 26,92	1794 28,56	1831 30,14	1868 31,74	1904 33,36	1940 35,02	1975 36,7	2011 38,43	2046 40,19	2081 41,99
15500	1190 7,88	1276 10,26	1364 12,88	1452 15,7	1495 17,15	1537 18,65	1579 20,16	1620 21,68	1660 23,23	1699 24,79	1738 26,37	1775 28,04	1812 29,63	1849 31,24	1885 32,87	1920 34,52	1955 36,2	1990 37,9	2025 39,63	2059 41,4	2093 43,2
16000	1223 8,5	1306 10,93	1391 13,59	1476 16,47	1519 17,96	1560 19,48	1601 21,03	1641 22,59	1681 24,18	1719 25,78	1757 27,39	1794 29,09	1831 30,72	1867 32,37	1902 34,03	1937 35,72	1971 37,42	2006 39,14	2039 40,89	2073 42,68	
16500	1256 9,16	1337 11,64	1419 14,35	1502 17,27	1543 18,79	1583 20,34	1623 21,92	1663 23,53	1702 25,16	1740 26,79	1777 28,53	1814 30,18	1850 31,85	1885 33,54	1920 35,23	1955 36,95	1989 38,69	2022 40,44	2055 42,22	2088 44,02	
17000	1289 9,86	1368 12,38	1447 15,14	1528 18,11	1568 19,66	1607 21,25	1646 22,86	1685 24,5	1723 26,16	1761 27,93	1797 29,61	1834 31,3	1869 33,01	1904 34,74	1939 36,47	1973 38,22	2006 39,99	2039 41,78	2072 43,59		
17500	1323 10,59	1399 13,16	1478 15,98	1554 18,99	1593 20,57	1631 22,18	1670 23,83	1708 25,5	1745 27,2	1782 29	1818 30,72	1854 32,45	1889 34,2	1924 35,97	1958 37,74	1991 39,53	2024 41,34	2057 43,16	2089 45		
18000	1356 11,36	1430 13,99	1505 16,84	1581 19,91	1619 21,51	1656 23,16	1694 24,84	1731 26,54	1768 28,26	1804 30,1	1840 31,85	1875 33,64	1910 35,42	1944 37,22	1977 39,04	2010 40,88	2043 42,72	2075 44,58			
18500	1390 12,17	1462 14,85	1534 17,76	1608 20,87	1645 22,51	1682 24,17	1718 25,88	1755 27,71	1791 29,46	1826 31,23	1861 33,03	1896 34,85	1930 36,68	1964 38,52	1997 40,37	2030 42,24	2062 44,13	2094 46,03			
19000	1424 13,03	1494 15,76	1564 18,72	1636 21,88	1672 23,54	1708 25,23	1743 26,97	1779 28,82	1814 30,61	1849 32,41	1884 34,24	1918 36,1	1952 37,96	1985 39,84	2018 41,75	2050 43,66	2082 45,59				
19500	1457 13,92	1526 16,71	1594 19,72	1664 22,93	1699 24,62	1734 26,34	1769 28,18	1804 29,96	1838 31,78	1872 33,63	1906 35,49	1940 37,38	1973 39,28	2006 41,21	2038 43,15	2070 45,11					
20000		1558 17,71	1625 20,77	1692 24,03	1727 25,74	1761 27,48	1795 29,34	1829 31,16	1863 33	1896 34,88	1929 36,78	1963 38,71	1995 40,65	2028 42,61	2059 44,59	2091 46,58					
20500		1590 18,76	1655 21,86	1721 25,18	1755 26,91	1788 28,76	1821 30,56	1854 32,4	1887 34,27	1920 36,18	1953 38,11	1986 40,07	2018 42,05	2050 44,05	2081 46,07						
21000		1623 19,85	1686 23,01	1751 26,38	1783 28,2	1815 29,99	1848 31,82	1880 33,69	1913 35,59	1945 37,53	1977 39,49	2009 41,48	2041 43,5	2072 45,53							
21500		1655 20,99	1717 24,2	1780 27,69	1812 29,46	1843 31,28	1875 33,13	1907 35,02	1939 36,95	1970 38,92	2002 40,91	2033 42,93	2064 44,99	2095 47,05							
22000		1688 22,18	1749 25,45	1810 28,98	1841 30,77	1872 32,61	1903 34,49	1934 36,41	1965 38,36	1996 40,36	2026 42,39	2057 44,44	2088 46,52								
22500		1721 23,42	1780 26,75	1840 30,32	1870 32,14	1900 34	1931 35,9	1961 37,84	1991 39,83	2022 41,85	2052 43,91	2082 45,99									
23000		1754 24,72	1812 28,16	1870 31,71	1900 33,55	1929 35,44	1959 37,36	1988 39,34	2018 41,35	2048 43,4	2077 45,48										
23500		1787 26,07	1844 29,56	1901 33,15	1930 35,03	1959 36,94	1987 38,89	2016 40,88	2046 42,93	2075 45											
24000		1821 27,48	1876 31,01	1932 34,66	1960 36,56	1988 38,5	2016 40,47	2045 42,5	2073 44,55												
24500		1854 28,98	1908 32,51	1963 36,22	1990 38,14	2018 40,1	2046 42,11	2073 44,16													
25000		1888 30,48	1941 34,08	1994 37,84	2021 39,78	2048 41,77	2075 43,81														
25500		1921 32,04	1973 35,69	2026 39,52	2052 41,49	2078 43,52															
26000		1955 33,67	2006 37,38	2057 41,26	2083 43,26																
26500		1989 35,36	2039 39,12	2089 43,07																	
27000		2022 37,11	2071 40,93																		
27500		2056 38,93																			
28000		2090 40,81																			

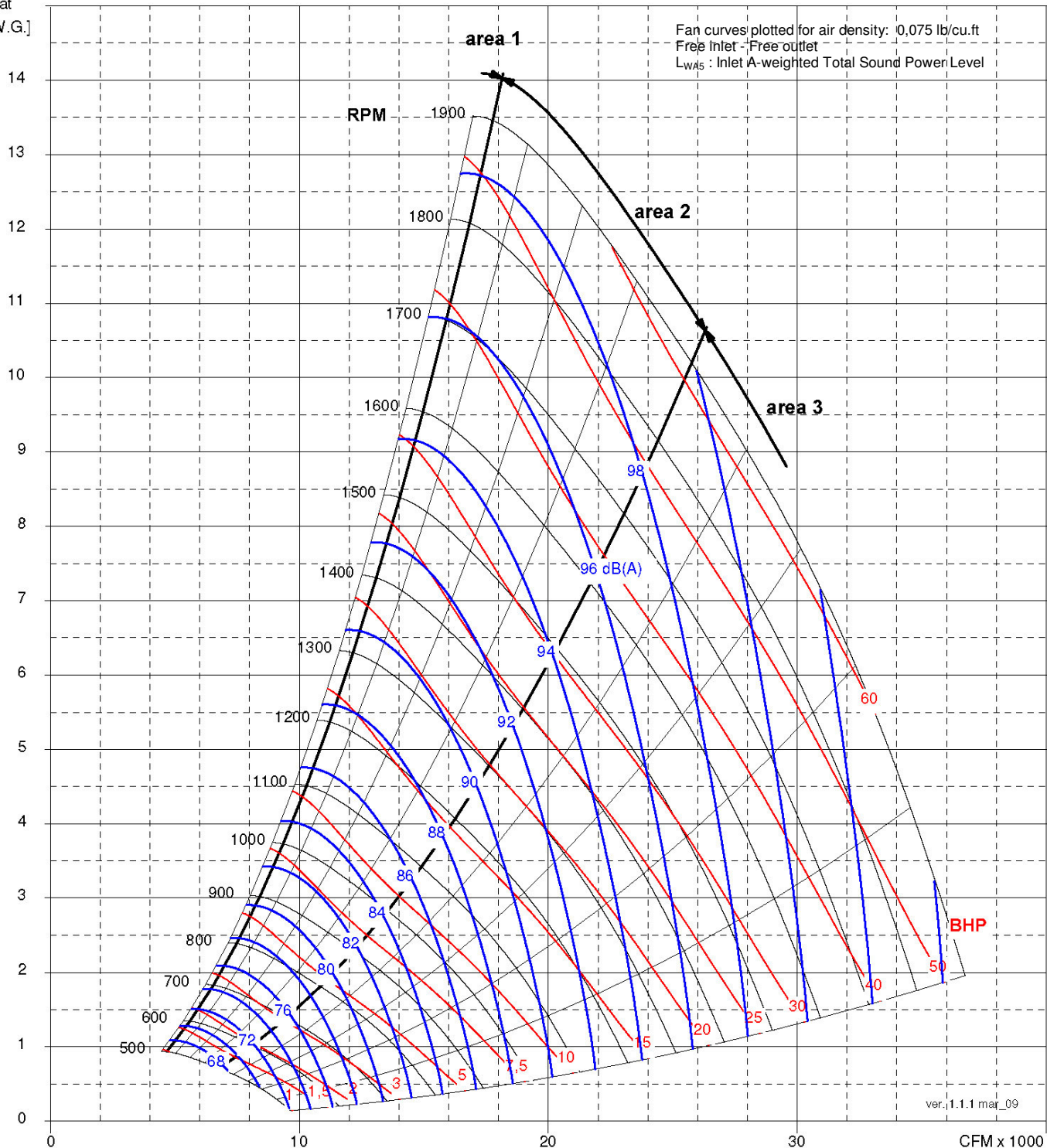
SOUND DATA TABLE

Plenum fan model and size	Volume flow range	Speed range	ΔL_{w5}	ΔL_{woc15} 63	ΔL_{woc15} 125	ΔL_{woc15} 250	ΔL_{woc15} 500	ΔL_{woc15} 1000	ΔL_{woc15} 2000	ΔL_{woc15} 4000	ΔL_{woc15} 8000
NAPAF 28	Area 1	RPM $\leq$ 1080	8,4	2	5	1	-4	-6	-8	-10	-12
		1081 $\leq$ RPM $\leq$ 1680	7,4	0	-2	5	-5	-8	-9	-13	-15
		RPM $\geq$ 1681	7,0	0	-2	4	-4	-7	-8	-11	-14
	Area 2	RPM $\leq$ 1080	7,9	-1	5	1	-4	-6	-9	-11	-13
		1081 $\leq$ RPM $\leq$ 1680	6,6	-4	-6	5	-4	-7	-10	-14	-16
		RPM $\geq$ 1681	5,4	-2	-5	2	-3	-6	-9	-12	-15
	Area 3	RPM $\leq$ 1080	9,1	1	6	3	-3	-7	-12	-14	-16
		1081 $\leq$ RPM $\leq$ 1680	6,8	-3	-4	5	-4	-7	-12	-17	-20
		RPM $\geq$ 1681	6,0	-2	-4	3	-3	-5	-10	-15	-18



NAPAF 32	T1	T2
Plenum Fan Max RPM [min^{-1}]	1600	1800
Plenum Fan Max BHP	28	50
Plenum Fan weight [Lb]	417	
Wheel No. Blades	10	
Wheel Moment of Inertia [Lb ft^2]	196	
Wheel weight [Lb]	160	

Δp_{stat}
[In.W.G.]





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PLENUM FANS WITH AIRFOIL WHEELS - NAPAF

NAPAF 32 T1 - T2

Δp_{stat} [In.W.G.]																					
V	1	2	3	3,5	4	4,5	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10	10,5	11	11,5	12
[CFM]	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
6000	539 1,37																				
7000	565 1,64	734 3,22																			
8000	593 1,93	752 3,64	895 5,68																		
9000	623 2,25	776 4,14	905 6,16	969 7,31																	
10000	655 2,61	802 4,69	925 6,83	983 7,96	1039 9,17	1097 10,52															
11000	690 3,03	830 5,27	950 7,59	1004 8,77	1057 9,99	1108 11,27	1160 12,65	1212 14,16													
12000	727 3,51	859 5,89	976 8,4	1029 9,67	1079 10,95	1128 12,25	1176 13,61	1223 15,03	1270 16,55	1318 18,18											
12500	746 3,77	874 6,21	989 8,82	1042 10,14	1091 11,46	1139 12,8	1186 14,17	1231 15,59	1277 17,07	1322 18,64	1368 20,33										
13000	766 4,06	890 6,55	1003 9,26	1055 10,62	1104 11,98	1151 13,36	1197 14,76	1241 16,19	1285 17,67	1329 19,21	1373 20,83	1417 22,57									
13500	786 4,36	906 6,9	1017 9,7	1068 11,11	1117 12,53	1164 13,94	1209 15,38	1252 16,83	1295 18,32	1337 19,85	1379 21,45	1421 23,12	1464 24,89	1507 26,78							
14000	806 4,68	922 7,27	1032 10,15	1082 11,62	1131 13,08	1177 14,55	1221 16,02	1264 17,5	1306 19,01	1347 20,55	1387 22,14	1428 23,78	1468 25,49	1509 27,3	1551 29,52						
14500	827 5,03	939 7,66	1046 10,61	1097 12,13	1144 13,65	1190 15,16	1234 16,68	1276 18,2	1317 19,73	1357 21,29	1397 22,89	1436 24,52	1475 26,2	1515 27,96	1554 30,12	1594 32,09					
15000	848 5,39	956 8,07	1061 11,09	1111 12,65	1158 14,22	1203 15,78	1247 17,34	1288 18,91	1329 20,48	1369 22,07	1408 23,68	1446 25,32	1484 26,99	1522 29,02	1560 30,84	1598 32,75	1636 34,75	1675 36,86			
15500	869 5,78	974 8,5	1077 11,58	1126 13,19	1172 14,81	1217 16,42	1260 18,03	1301 19,64	1342 21,26	1381 22,87	1419 24,5	1456 26,16	1494 27,85	1530 29,87	1567 31,67	1603 33,53	1640 35,47	1677 37,48	1715 39,6		
16000	890 6,18	992 8,95	1092 12,1	1140 13,74	1187 15,4	1231 17,06	1274 18,72	1315 20,38	1354 22,04	1393 23,7	1431 25,36	1468 27,04	1504 29,03	1540 30,79	1576 32,58	1611 34,42	1647 36,32	1682 38,28	1718 40,31	1754 42,43	1790 44,67
16500	912 6,61	1010 9,43	1108 12,62	1156 14,3	1201 16,01	1245 17,72	1287 19,43	1328 21,14	1368 22,84	1406 24,55	1443 26,24	1479 27,95	1515 29,98	1550 31,75	1585 33,55	1620 35,39	1654 37,27	1689 39,19	1723 41,18	1758 43,22	1793 45,35
17000	934 7,06	1029 9,93	1125 13,17	1171 14,89	1216 16,63	1259 18,39	1301 20,15	1342 21,9	1381 23,66	1419 25,4	1456 27,14	1492 29,17	1527 30,96	1562 32,75	1596 34,57	1630 36,42	1663 38,29	1697 40,2	1730 42,15	1764 44,16	1797 46,22
17500	956 7,54	1048 10,46	1141 13,75	1187 15,49	1231 17,28	1274 19,07	1316 20,88	1356 22,68	1394 24,48	1432 26,27	1469 28,32	1504 30,14	1539 31,96	1573 33,79	1607 35,63	1640 37,49	1673 39,38	1706 41,28	1739 43,22	1771 45,2	
18000	978 8,04	1068 11,01	1158 14,34	1203 16,12	1247 17,93	1289 19,77	1330 21,62	1370 23,48	1408 25,32	1445 27,16	1482 29,27	1517 31,13	1552 32,99	1586 34,86	1619 36,73	1652 38,61	1684 40,5	1716 42,42	1748 44,36	1780 46,33	
18500	1001 8,56	1087 11,59	1176 14,96	1219 16,76	1262 18,6	1304 20,49	1345 22,38	1384 24,28	1422 26,17	1459 28,32	1495 30,23	1530 32,14	1565 34,04	1598 35,94	1631 37,85	1663 39,76	1695 41,67	1727 43,61	1758 45,56	1789 47,52	
19000	1023 9,11	1107 12,19	1193 15,6	1236 17,43	1278 19,31	1319 21,22	1359 23,15	1399 25,1	1436 27,03	1473 29,24	1509 31,2	1544 33,16	1578 35,1	1611 37,04	1644 38,99	1676 40,94	1707 42,88	1738 44,83	1769 46,79	1799 48,77	
19500	1046 9,67	1128 12,82	1211 16,28	1253 18,12	1294 20,03	1335 21,97	1374 23,94	1413 25,93	1451 27,91	1487 30,18	1523 32,19	1557 34,18	1591 36,18	1624 38,17	1656 40,15	1688 42,13	1719 44,11	1750 46,09	1780 48,09		
20000	1069 10,27	1148 13,49	1230 16,98	1270 18,84	1311 20,77	1351 22,75	1390 24,75	1428 26,77	1465 29,07	1501 31,12	1537 33,18	1571 35,23	1605 37,28	1637 39,3	1669 41,33	1701 43,35	1732 45,36	1762 47,38	1792 49,4		
20500	1091 10,89	1169 14,17	1248 17,7	1288 19,59	1328 21,55	1367 23,54	1405 25,58	1443 27,64	1480 29,99	1516 32,09	1551 34,19	1585 36,29	1618 38,38	1651 40,45	1683 42,52	1714 44,58	1745 46,64	1775 48,68			
21000	1114 11,54	1190 14,89	1267 18,46	1306 20,37	1345 22,34	1383 24,37	1421 26,43	1458 28,78	1495 30,92	1530 33,08	1565 35,22	1599 37,36	1632 39,5	1665 41,62	1696 43,74	1727 45,84	1758 47,93				
21500	1137 12,2	1211 15,64	1286 19,25	1324 21,18	1362 23,17	1400 25,21	1437 27,31	1474 29,7	1510 31,89	1545 34,06	1580 36,26	1613 38,44	1646 40,62	1678 42,8	1710 44,95	1741 47,1	1771 49,24				
22000	1160 12,9	1232 16,41	1306 20,07	1343 22,01	1380 24,02	1417 26,09	1454 28,46	1490 30,65	1525 32,86	1560 35,09	1594 37,31	1628 39,55	1660 41,77	1692 43,98	1724 46,19	1754 48,38					
22500	1183 13,62	1254 17,22	1326 20,92	1362 22,88	1398 24,91	1434 27	1470 29,41	1506 31,62	1541 33,86	1575 36,12	1609 38,39	1642 40,66	1675 42,92	1706 45,19	1737 47,43	1768 49,67					
23000	1207 14,37	1275 18,05	1346 21,81	1381 23,78	1416 25,82	1452 27,93	1487 30,38	1522 32,61	1557 34,88	1591 37,17	1624 39,48	1657 41,79	1689 44,1	1721 46,4	1752 48,69						
23500	1230 15,15	1297 18,91	1366 22,71	1400 24,71	1435 26,77	1470 29,16	1505 31,38	1539 33,64	1573 35,94	1606 38,25	1640 40,6	1672 42,94	1704 45,29	1735 47,63	1766 49,97						
24000	1253 15,95	1319 19,8	1386 23,66	1420 25,67	1454 27,75	1488 30,17	1522 32,41	1556 34,69	1589 37,01	1622 39,36	1655 41,73	1687 44,11	1719 46,5	1750 48,88							
24500	1277 16,78	1341 20,73	1407 24,63	1440 26,66	1473 29,03	1506 31,22	1540 33,47	1573 35,78	1606 38,11	1639 40,49	1671 42,89	1703 45,31	1734 47,72								
25000	1300 17,63	1363 21,68	1427 25,64	1460 27,69	1492 30,09	1525 32,31	1558 34,57	1590 36,89	1623 39,25	1655 41,65	1687 44,08	1718 46,51	1749 48,97								
25500	1324 18,51	1386 22,67	1448 26,68	1480 29,03	1512 31,19	1544 33,41	1576 35,7	1608 38,04	1640 40,42	1671 42,83	1703 45,28	1734 47,75									
26000	1347 19,43	1408 23,68	1469 27,75	1500 30,14	1531 32,32	1563 34,56	1594 36,86	1626 39,22	1657 41,61	1688 44,06	1719 46,53	1750 49,02									
26500		1430 24,73	1490 29,14	1521 31,28	1551 33,49	1582 35,75	1613 38,06	1644 40,44	1675 42,85	1705 45,31	1736 47,8										
27000		1453 25,81	1512 30,3	1541 32,46	1572 34,69	1602 36,96	1632 39,29	1662 41,68	1692 44,11	1723 46,59	1753 49,1										
27500		1475 26,9	1533 31,48	1562 33,68	1592 35,92	1621 38,22	1651 40,57	1681 42,96	1710 45,4	1740 47,9											
28000		1498 28,32	1555 32,71	1583 34,93	1612 37,2	1641 39,5	1670 41,88	1699 44,28	1729 46,74	1758 49,25											
28500		1521 29,51	1577 33,98	1605 36,22	1633 38,5	1661 40,84	1690 43,21	1718 45,63	1747 48,12												
29000		1544 30,74	1598 35,28	1626 37,55	1654 39,85	1682 42,2	1710 44,59	1738 47,04	1766 49,51												
29500		1567 31,99	1620 36,61	1647 38,91	1675 41,23	1702 43,6	1729 46	1757 48,46													
30000		1590 33,29	1642 37,97	1669 40,29	1696 42,65	1722 45,03	1750 47,45	1777 49,92													
30500		1613 34,61	1665 39,37	1691 41,73	1717 44,1	1743 46,5	1770 48,94														
31000		1636 35,97	1687 40,81	1712 43,18	1738 45,57	1764 48,01															
31500		1659 37,35	1709 42,27	1734 44,67	1760 47,1	1785 49,54															
32000		1682 38,76	1732 43,78	1756 46,21	1781 48,65																
32500		1706 40,21	1754 45,31	1778 47,78																	
33000		1729 41,69	1776 46,87																		
33500		1752 43,19	1799 48,48																		
34000		1776 44,74																			
34500		1799 46,31																			

SOUND DATA TABLE

Plenum fan model and size

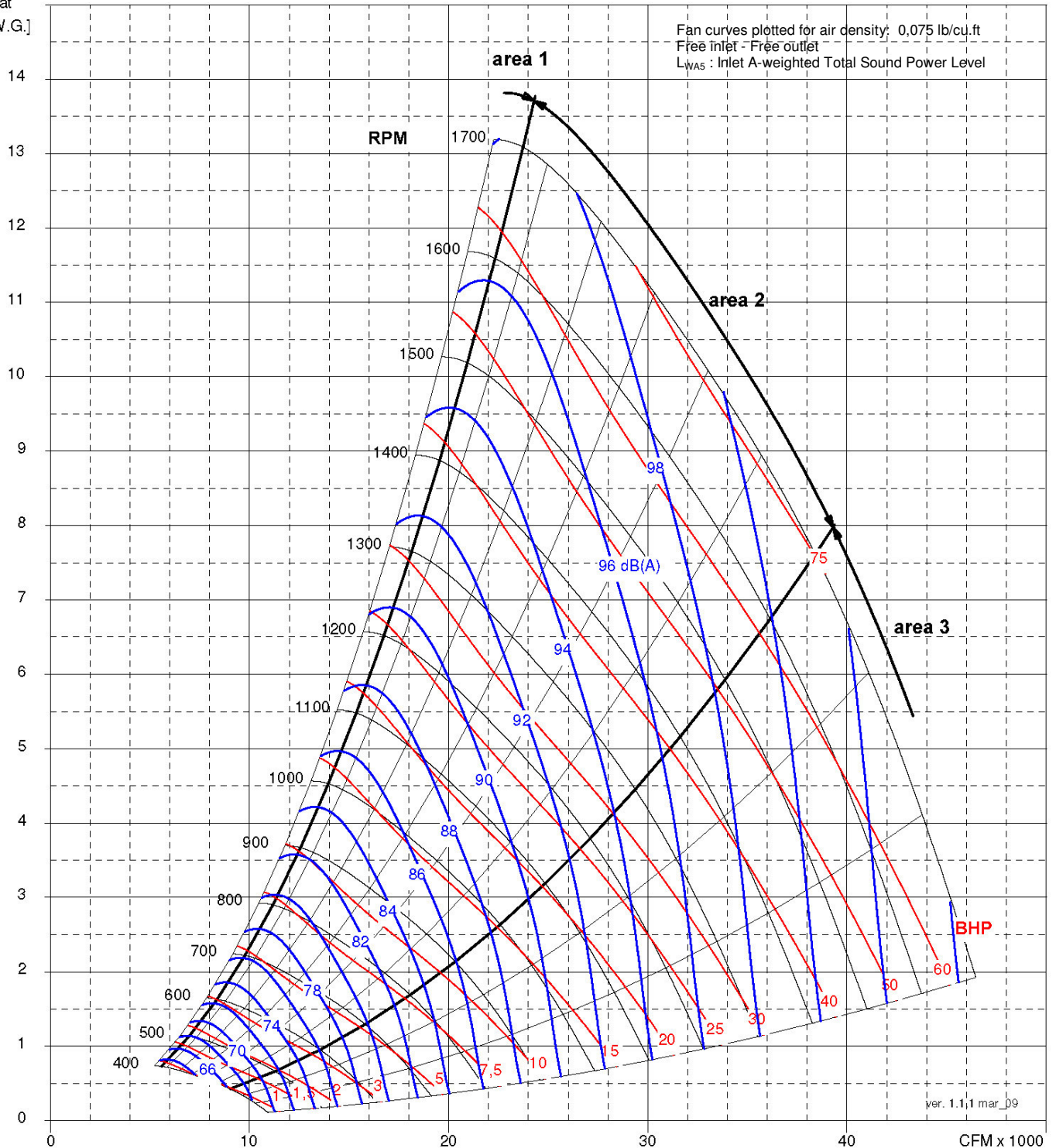


comefri



NAPAF 36	T1	T2
Plenum Fan Max RPM [min^{-1}]	1350	1600
Plenum Fan Max BHP	34	65
Plenum Fan weight [Lb]	541	
Wheel No. Blades	10	
Wheel Moment of Inertia [Lb ft^2]	322	
Wheel weight [Lb]	211	

Δp_{stat}
[In.W.G.]





comefri

PLENUM FANS WITH AIRFOIL WHEELS - NAPAF

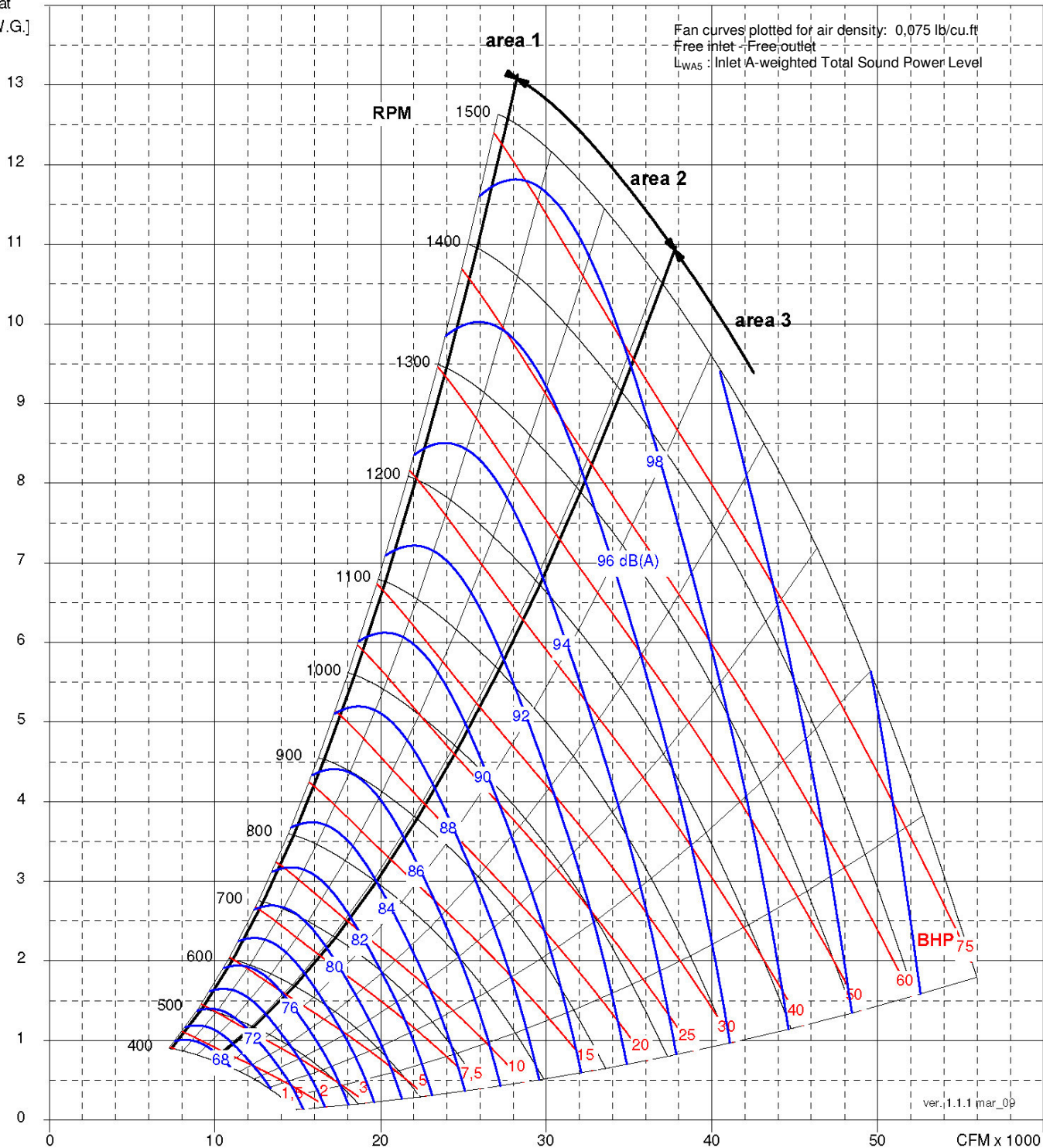
NAPAF 36 T1 - T2

Δp _{stat} [In.W.G.]																					
V	1	2	2,5	3	3,5	4	4,5	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10	10,5	11	11,5
[CFM]	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
8000	490 1,8																				
9000	508 2,06	663 4,12																			
10000	527 2,33	672 4,48	741 5,73																		
11000	548 2,63	688 4,94	750 6,17	812 7,54																	
12000	570 2,95	705 5,43	764 6,72	820 8,07	877 9,56																
13000	593 3,3	724 5,96	781 7,33	835 8,73	887 10,19	939 11,78	993 13,57														
14000	618 3,7	743 6,51	799 7,97	851 9,45	901 10,95	949 12,53	998 14,2	1047 16,04													
15000	645 4,15	763 7,08	818 8,64	869 10,21	917 11,79	964 13,41	1009 15,08	1054 16,84	1100 18,72												
16000	672 4,65	785 7,69	838 9,33	888 11	935 12,67	980 14,36	1024 16,08	1066 17,84	1108 19,67	1151 21,61	1194 23,69										
17000	700 5,2	807 8,34	858 10,06	907 11,82	953 13,59	998 15,36	1040 17,14	1081 18,95	1121 20,8	1161 22,72	1201 24,7	1241 26,8	1282 29,05								
18000	730 5,82	830 9,04	880 10,83	927 12,67	973 14,53	1016 16,4	1058 18,27	1098 20,15	1137 22,05	1175 23,98	1212 25,96	1250 28,01	1288 30,13	1326 32,37	1365 35,29						
18500	744 6,15	842 9,41	891 11,23	938 13,11	983 15,02	1026 16,93	1067 18,84	1106 20,77	1145 22,7	1182 24,66	1219 26,65	1256 28,69	1292 30,79	1329 32,98	1366 35,83	1405 38,36					
19000	759 6,49	854 9,8	902 11,64	948 13,56	993 15,5	1035 17,46	1076 19,43	1115 21,4	1153 23,37	1190 25,35	1227 27,36	1262 29,41	1298 31,5	1334 33,67	1370 36,48	1406 38,92	1443 41,51				
19500	774 6,86	867 10,21	914 12,07	959 14,01	1003 16	1045 18,01	1085 20,02	1124 22,03	1162 24,04	1199 26,07	1235 28,11	1270 30,16	1304 32,26	1339 34,91	1374 37,21	1409 39,6	1444 42,11	1481 44,75			
20000	790 7,23	880 10,62	925 12,52	970 14,49	1013 16,52	1055 18,57	1095 20,62	1134 22,68	1171 24,74	1207 26,79	1243 28,86	1277 30,95	1312 33,06	1345 35,73	1379 38,01	1413 40,36	1447 42,8	1482 45,36	1517 48,06		
20500	805 7,63	893 11,06	937 12,97	981 14,97	1024 17,04	1065 19,13	1105 21,23	1143 23,33	1180 25,43	1216 27,53	1251 29,64	1285 31,75	1319 33,88	1352 36,58	1385 38,86	1418 41,19	1451 43,61	1485 46,1	1518 48,7	1553 51,44	
21000	820 8,04	906 11,52	949 13,45	992 15,48	1035 17,57	1075 19,71	1115 21,85	1153 24	1190 26,14	1225 28,28	1260 30,42	1294 32,57	1327 35,22	1360 37,47	1392 39,75	1424 42,09	1456 44,47	1489 46,93	1521 49,47	1554 52,12	1588 54,89
21500	836 8,47	920 11,99	962 13,94	1004 15,99	1045 18,12	1086 20,29	1125 22,48	1162 24,66	1199 26,86	1234 29,04	1269 31,22	1302 33,4	1335 36,11	1367 38,38	1399 40,68	1431 43,02	1462 45,41	1494 47,84	1525 50,35	1557 52,93	1589 55,61
22000	852 8,92	933 12,48	975 14,45	1016 16,53	1057 18,68	1096 20,88	1135 23,11	1172 25,34	1209 27,58	1244 29,8	1278 32,03	1311 34,72	1344 37,01	1376 39,32	1407 41,65	1438 43,99	1469 46,38	1500 48,81	1530 51,28	1561 53,83	1592 56,45
22500	867 9,38	947 12,99	987 14,98	1028 17,08	1068 19,25	1107 21,49	1145 23,75	1182 26,03	1218 28,31	1253 30,59	1287 32,85	1320 35,61	1352 37,93	1384 40,26	1415 42,61	1446 44,99	1476 47,38	1506 49,83	1536 52,29	1566 54,82	1596 57,4
23000	883 9,87	961 13,52	1001 15,53	1040 17,64	1079 19,85	1118 22,11	1156 24,41	1193 26,73	1228 29,05	1263 31,37	1296 33,68	1329 36,49	1361 38,87	1393 41,24	1423 43,62	1454 46,02	1483 48,43	1513 50,88	1543 53,35	1572 55,86	
23500	899 10,36	975 14,07	1014 16,09	1053 18,23	1091 20,46	1129 22,75	1166 25,08	1203 27,44	1238 29,8	1273 32,16	1306 34,98	1339 37,4	1370 39,81	1401 42,22	1432 44,64	1462 47,07	1491 49,51	1520 51,96	1550 54,45	1578 56,95	
24000	915 10,89	990 14,64	1027 16,68	1065 18,83	1103 21,08	1140 23,4	1177 25,77	1213 28,16	1248 30,56	1282 32,97	1315 35,84	1348 38,3	1379 40,76	1410 43,23	1440 45,67	1470 48,14	1499 50,6	1528 53,08	1557 55,57	1585 58,09	
24500	931 11,43	1004 15,22	1041 17,29	1078 19,46	1115 21,73	1152 24,07	1188 26,46	1224 28,89	1258 31,33	1292 33,77	1325 36,72	1357 39,23	1389 41,73	1419 44,23	1449 46,72	1479 49,21	1508 51,71	1536 54,23	1565 56,74	1593 59,27	
25000	947 11,99	1019 15,83	1055 17,92	1091 20,11	1127 22,39	1163 24,75	1199 27,18	1234 29,63	1269 32,11	1302 35,05	1335 37,61	1367 40,16	1398 42,71	1429 45,25	1458 47,78	1488 50,32	1516 52,84	1545 55,39	1573 57,93		
25500	963 12,57	1033 16,46	1069 18,56	1104 20,77	1140 23,07	1175 25,46	1211 27,91	1245 30,39	1279 32,9	1313 35,91	1345 38,5	1377 41,1	1408 43,69	1438 46,27	1468 48,85	1497 51,43	1525 53,99	1553 56,56	1581 59,13		
26000	980 13,17	1048 17,11	1083 19,23	1117 21,45	1152 23,77	1187 26,18	1222 28,66	1256 31,17	1290 33,71	1323 36,77	1355 39,41	1387 42,05	1417 44,69	1448 47,32	1477 49,94	1506 52,55	1534 55,15	1562 57,76	1589 60,35		
26500	996 13,79	1063 17,78	1097 19,93	1131 22,17	1165 24,51	1200 26,93	1234 29,41	1267 31,95	1301 34,58	1333 37,64	1365 40,32	1397 43,01	1427 45,68	1457 48,36	1486 51,02	1515 53,67	1543 56,32	1571 58,96	1598 61,6		
27000	1012 14,44	1078 18,47	1111 20,64	1145 22,89	1178 25,25	1212 27,69	1246 30,2	1279 32,77	1312 35,84	1344 38,54	1376 41,25	1407 43,98	1437 46,7	1467 49,42	1496 52,12	1524 54,82	1552 57,5	1580 60,19			
27500	1028 15,1	1093 19,19	1126 21,37	1158 23,65	1191 26,02	1224 28,47	1258 31,01	1290 33,58	1323 36,72	1355 39,45	1386 42,2	1417 44,96	1447 47,73	1477 50,49	1505 53,23	1534 55,97	1562 58,69	1589 61,42			
28000	1045 15,79	1108 19,93	1140 22,13	1172 24,43	1205 26,82	1237 29,28	1270 31,83	1302 34,89	1334 37,6	1366 40,38	1397 43,16	1427 45,95	1457 48,76	1487 51,56	1515 54,34	1543 57,13	1571 59,9	1598 62,66			
28500	1061 16,49	1124 20,68	1155 22,91	1186 25,22	1218 27,62	1250 30,11	1282 32,67	1314 35,77	1345 38,52	1377 41,31	1407 44,13	1438 46,96	1467 49,8	1496 52,64	1525 55,47	1553 58,29	1581 61,11				
29000	1077 17,23	1139 21,47	1170 23,71	1201 26,04	1232 28,45	1263 30,96	1295 33,53	1326 36,69	1357 39,45	1388 42,27	1418 45,12	1448 47,99	1478 50,86	1507 53,73	1535 56,62	1563 59,48	1590 62,33				
29500	1094 17,98	1154 22,26	1185 24,54	1215 26,88	1246 29,32	1276 31,83	1307 34,89	1338 37,61	1369 40,41	1399 43,25	1429 46,13	1459 49,02	1488 51,93	1517 54,85	1545 57,76	1573 60,66					
30000	1110 18,76	1170 23,09	1200 25,38	1230 27,75	1260 30,2	1290 32,72	1320 35,83	1350 38,57	1381 41,39	1411 44,25	1440 47,14	1470 50,08	1499 53,02	1527 55,97	1555 58,91	1583 61,86					
30500	1127 19,56	1186 23,94	1215 26,24	1244 28,63	1274 31,1	1303 33,64	1333 36,78	1363 39,55	1393 42,38	1422 45,27	1452 48,19	1481 51,14	1509 54,11	1538 57,1	1565 60,09	1593 63,07					
31000	1143 20,38	1201 24,81	1230 27,14	1259 29,54	1288 32,03	1317 35,07	1346 37,78	1376 40,55	1405 43,4	1434 46,31	1463 49,25	1492 52,23	1520 55,24	1548 58,25	1576 61,27						
31500	1160 21,23	1217 25,71	1245 28,05	1274 30,48	1302 32,98	1331 36,06	1359 38,78	1388 41,58	1417 44,45	1446 47,36	1475 50,34	1503 53,34	1531 56,37	1559 59,42	1586 62,46						
32000	1177 22,1	1233 26,62	1261 29	1288 31,43	1316 33,94	1345 37,08	1373 39,82	1401 42,63	1430 45,51	1458 48,46	1486 51,44	1514 54,47	1542 57,53	1570 60,6	1597 63,67						
32500	1193 23	1248 27,56	1276 29,96	1303 32,41	1331 35,44	1359 38,12	1386 40,87	1414 43,71	1442 46,6	1470 49,57	1498 52,57	1526 55,62	1553 58,69	1581 61,79							
33000	1210 23,92	1264 28,5																			



NAPAF 40	T1	T2
Plenum Fan Max RPM [min^{-1}]	1150	1400
Plenum Fan Max BHP	35	74
Plenum Fan weight [Lb]	711	
Wheel No. Blades	10	
Wheel Moment of Inertia [Lb ft^2]	560	
Wheel weight [Lb]	290	

Δp_{stat}
[In.W.G.]





NAPAF 40 T1 - T2

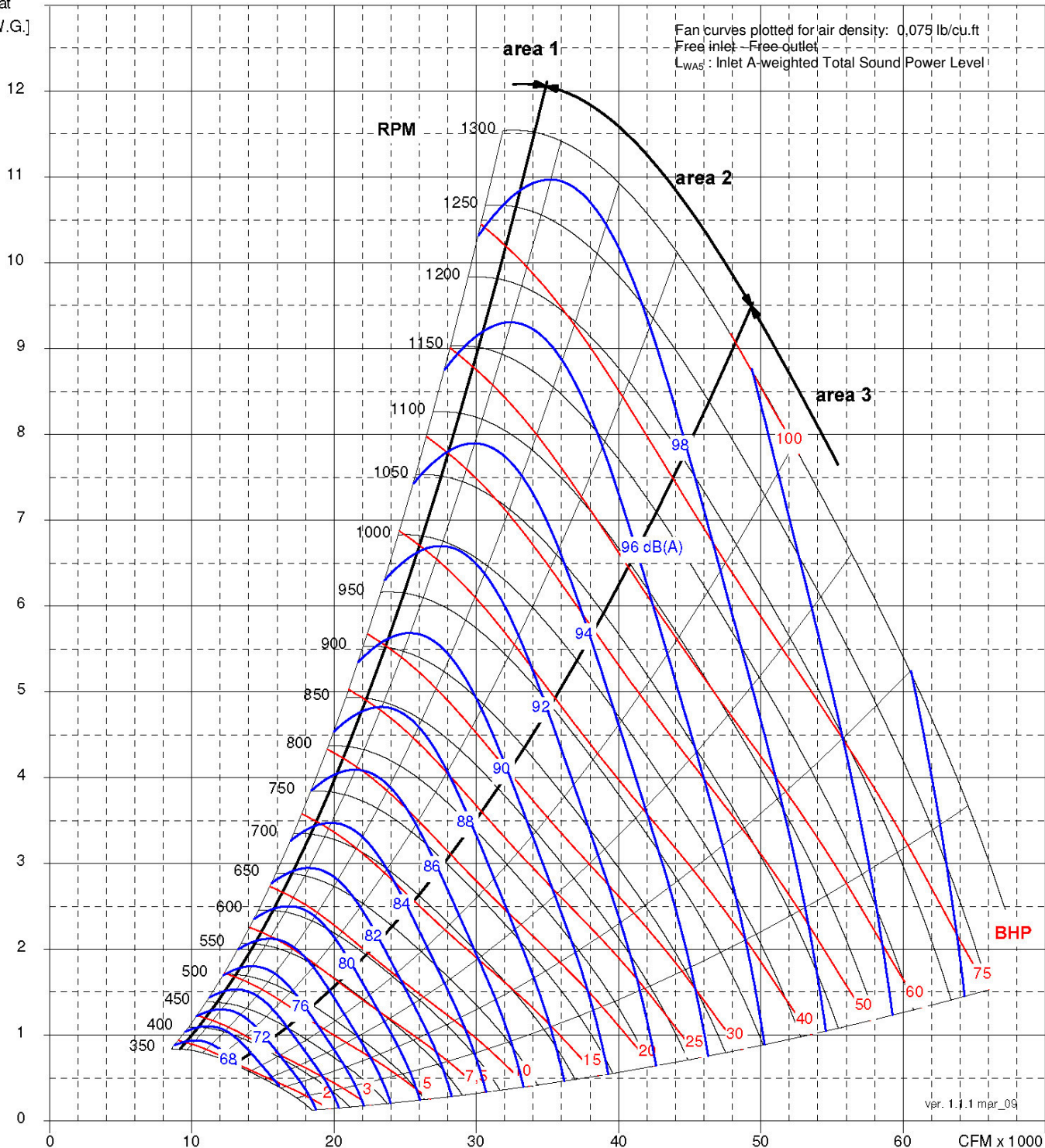
SOUND DATA TABLE

35



NAPA 44	T1	T2
Plenum Fan Max RPM [min ⁻¹]	1100	1200
Plenum Fan Max BHP	60	80
Plenum Fan weight [Lb]	915	946
Wheel No. Blades	10	
Wheel Moment of Inertia [Lb ft ²]	966	982
Wheel weight [Lb]	438	453

Δp_{stat}
[In.W.G.]





comefri

PLENUM FANS WITH AIRFOIL WHEELS - NAPAF

NAPAF 44 T1 - T2

Δp _{stat} [In.W.G.]																				
V	1	1,5	2	2,5	3	3,5	4	4,5	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5		
[CFM]	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
12000	393 2,74	469 4,32																		
13000	401 2,96	471 4,53																		
14000	410 3,21	476 4,79	542 6,66																	
15000	421 3,49	483 5,1	544 6,95	605 9,06																
16000	432 3,79	492 5,44	549 7,29	606 9,39																
17000	444 4,12	501 5,82	556 7,68	609 9,77	663 12,09															
18000	456 4,46	512 6,23	564 8,11	615 10,2	665 12,51	716 15,03														
19000	468 4,82	522 6,66	573 8,59	621 10,69	669 12,99	717 15,5	766 18,19													
20000	481 5,2	534 7,12	582 9,11	629 11,23	675 13,52	721 16,02	766 18,71	812 21,57												
21000	494 5,6	546 7,61	593 9,66	638 11,82	682 14,12	726 16,61	769 19,28	813 22,14	856 25,16											
22000	507 6,02	558 8,12	604 10,24	648 12,45	690 14,78	732 17,26	773 19,92	815 22,77	856 25,8	898 28,95										
23000	521 6,48	570 8,65	615 10,85	658 13,12	699 15,48	739 17,97	779 20,63	818 23,47	858 26,48	898 29,65	938 32,95									
24000	534 6,95	583 9,21	627 11,5	668 13,82	708 16,23	747 18,75	786 21,42	824 24,24	862 27,23	900 30,4	938 33,7	976 37,14								
25000	548 7,45	596 9,79	639 12,17	680 14,57	719 17,03	756 19,58	793 22,26	830 25,09	867 28,06	903 31,21	940 34,52	976 37,96	1013 41,53							
26000	563 7,99	609 10,4	651 12,85	691 15,33	729 17,86	766 20,46	802 23,17	837 26	873 28,98	908 32,11	943 35,4	978 38,84	1013 42,42	1049 46,13						
27000	577 8,56	622 11,03	664 13,58	703 16,13	740 18,73	776 21,39	811 24,12	845 26,98	880 29,97	913 33,1	947 36,37	981 39,79	1015 43,37	1049 47,08	1083 50,91					
28000	592 9,16	635 11,7	677 14,32	715 16,97	752 19,64	787 22,35	821 25,14	854 28,03	887 31,02	920 34,16	953 37,42	985 40,83	1018 44,4	1051 48,09	1083 51,93	1116 56,06				
29000	607 9,81	649 12,4	690 15,11	727 17,83	763 20,59	798 23,36	831 26,21	864 29,12	896 32,15	928 35,29	959 38,56	991 41,96	1022 45,51	1054 49,19	1085 53,03	1117 57,15	1149 61,21	1180 65,37		
30000	622 10,49	663 13,13	703 15,91	740 18,72	775 21,55	809 24,42	842 27,31	874 30,28	905 33,34	936 36,5	967 39,77	997 43,17	1028 46,71	1058 50,38	1089 54,2	1119 58,33	1150 62,39	1180 66,57		
31000	637 11,21	677 13,9	716 16,75	753 19,65	787 22,56	821 25,49	853 28,46	884 31,48	915 34,59	945 37,78	975 41,07	1004 44,48	1034 48,01	1063 51,68	1093 55,49	1122 59,59	1152 63,65	1181 67,83		
32000	653 11,98	691 14,7	729 17,62	765 20,6	800 23,6	832 26,61	864 29,66	895 32,75	925 35,89	954 39,11	983 42,43	1012 45,86	1041 49,4	1070 53,06	1098 56,85	1127 60,95	1155 64,98	1184 69,16		
33000	668 12,79	706 15,55	743 18,52	778 21,58	812 24,67	845 27,77	876 30,89	906 34,04	935 37,25	964 40,52	993 43,87	1021 47,31	1049 50,87	1077 54,55	1104 58,51	1132 62,42	1160 66,44	1187 70,59		
34000	684 13,65	720 16,44	757 19,47	792 22,6	825 25,78	857 28,97	887 32,16	917 35,39	946 38,65	974 41,98	1002 45,38	1030 48,85	1057 52,43	1084 56,11	1111 60,08	1138 63,98	1165 68	1192 72,13		
35000	700 14,54	735 17,38	771 20,46	805 23,67	838 26,92	869 30,18	900 33,47	929 36,77	957 40,1	985 43,49	1012 46,93	1039 50,45	1066 54,05	1093 57,76	1119 61,74	1145 65,63	1171 69,65	1197 73,77		
36000	717 15,49	750 18,37	785 21,49	818 24,76	851 28,1	882 31,45	912 34,82	941 38,2	969 41,6	996 45,04	1023 48,55	1049 52,11	1076 55,75	1102 59,69	1127 63,48	1153 67,39	1178 71,4			
37000	733 16,49	765 19,4	799 22,57	832 25,9	864 29,3	895 32,75	924 36,2	952 39,65	980 43,15	1007 46,66	1034 50,22	1060 53,83	1085 57,53	1111 61,48	1136 65,31	1161 69,24	1186 73,26			
38000	749 17,52	781 20,49	814 23,69	846 27,08	877 30,55	907 34,08	937 37,61	965 41,16	992 44,73	1019 48,31	1045 51,95	1070 55,63	1096 59,37	1121 63,36	1145 67,22	1170 71,18	1194 75,22			
39000	766 18,62	796 21,61	828 24,87	860 28,3	891 31,84	920 35,45	949 39,07	977 42,71	1004 46,35	1030 50,02	1056 53,73	1081 57,47	1106 61,45	1131 65,28	1155 69,2	1179 73,18				
40000	783 19,76	812 22,8	843 26,09	874 29,57	904 33,2	934 36,87	962 40,57	990 44,29	1016 48,03	1042 51,78	1068 55,55	1092 59,36	1117 63,41	1141 67,31	1165 71,24	1188 75,26				
41000	799 20,95	828 24,04	858 27,36	888 30,9	918 34,58	947 38,33	975 42,11	1002 45,92	1029 49,74	1054 53,57	1079 57,42	1104 61,52	1128 65,4	1152 69,37	1175 73,38	1198 77,43				
42000	816 22,18	844 25,34	873 28,7	902 32,27	932 36,01	960 39,83	988 43,7	1015 47,59	1041 51,5	1066 55,41	1091 59,35	1115 63,5	1139 67,47	1163 71,51	1186 75,55					
43000	833 23,48	860 26,7	888 30,08	917 33,7	946 37,48	974 41,38	1001 45,32	1028 49,3	1054 53,3	1079 57,3	1103 61,5	1127 65,53	1151 69,59	1174 73,68	1197 77,82					
44000	850 24,81	876 26,09	904 31,53	932 35,19	960 39,01	988 42,98	1014 46,99	1041 51,05	1066 55,12	1091 59,23	1115 63,53	1139 67,63	1162 71,77	1185 75,92						
45000	867 26,22	892 29,57	919 33,04	946 36,72	974 40,62	1001 44,63	1028 48,71	1054 52,86	1079 57,02	1104 61,39	1128 65,57	1151 69,76	1174 73,99	1197 78,22						
46000	884 27,65	909 31,08	935 34,6	961 38,34	988 42,26	1015 46,32	1041 50,49	1067 54,7	1092 58,96	1117 63,41	1140 67,67	1163 71,95	1186 76,26							
47000	902 29,16	925 32,67	950 36,23	977 40,01	1003 43,96	1029 48,08	1055 52,31	1080 56,61	1105 61,14	1129 65,46	1153 69,82	1176 74,18	1198 78,55							
48000	919 30,7	942 34,32	966 37,93	992 41,73	1018 45,74	1043 49,91	1069 54,2	1094 58,55	1118 63,16	1142 67,59	1166 72,02	1188 76,48								
49000	936 32,31	959 36,01	982 39,68	1007 43,53	1032 47,57	1058 51,8	1083 56,12	1107 60,74	1132 65,22	1155 69,74	1178 74,28									
50000	953 33,99	975 37,78	999 41,5	1023 45,38	1047 49,47	1072 53,73	1097 58,13	1121 62,82	1145 67,36	1168 71,96	1191 76,57									
51000	971 35,69	992 39,6	1015 43,39	1038 47,32	1062 51,43	1087 55,75	1111 60,4	1135 64,92	1159 69,54	1182 74,21										
52000	988 37,46	1009 41,49	1031 45,36	1054 49,32	1078 53,49	1101 58,01	1125 62,5	1149 67,1	1172 71,79	1195 76,52										
53000	1006 39,31	1026 43,46	1047 47,37	1070 51,39	1093 55,59	1116 60,14	1140 64,68	1163 69,34	1186 74,1											
54000		1043 45,48	1064 49,47	1086 53,53	1108 57,94	1131 62,35	1154 66,96	1177 71,66												
55000		1060 47,55	1080 51,62	1102 55,93	1124 60,19	1146 64,64	1169 69,26	1191 74,03												
56000		1077 49,71	1097 53,85	1118 58,2	1139 62,52	1161 67,01	1184 71,67													
57000		1094 51,92	1114 56,34	1134 60,56	1155 64,93	1177 69,44	1198 74,16													
58000		1112 54,38	1131 58,69	1150 62,98	1171 67,4	1192 71,95														
59000		1129 56,72	1148 61,16	1167 65,49	1187 69,96															
60000		1146 59,12	1164 63,66	1183 68,09																
61000		1163 61,57	1181 66,25																	
62000		1181 64,12	1198 68,91																	
63000		1198 66,73																		

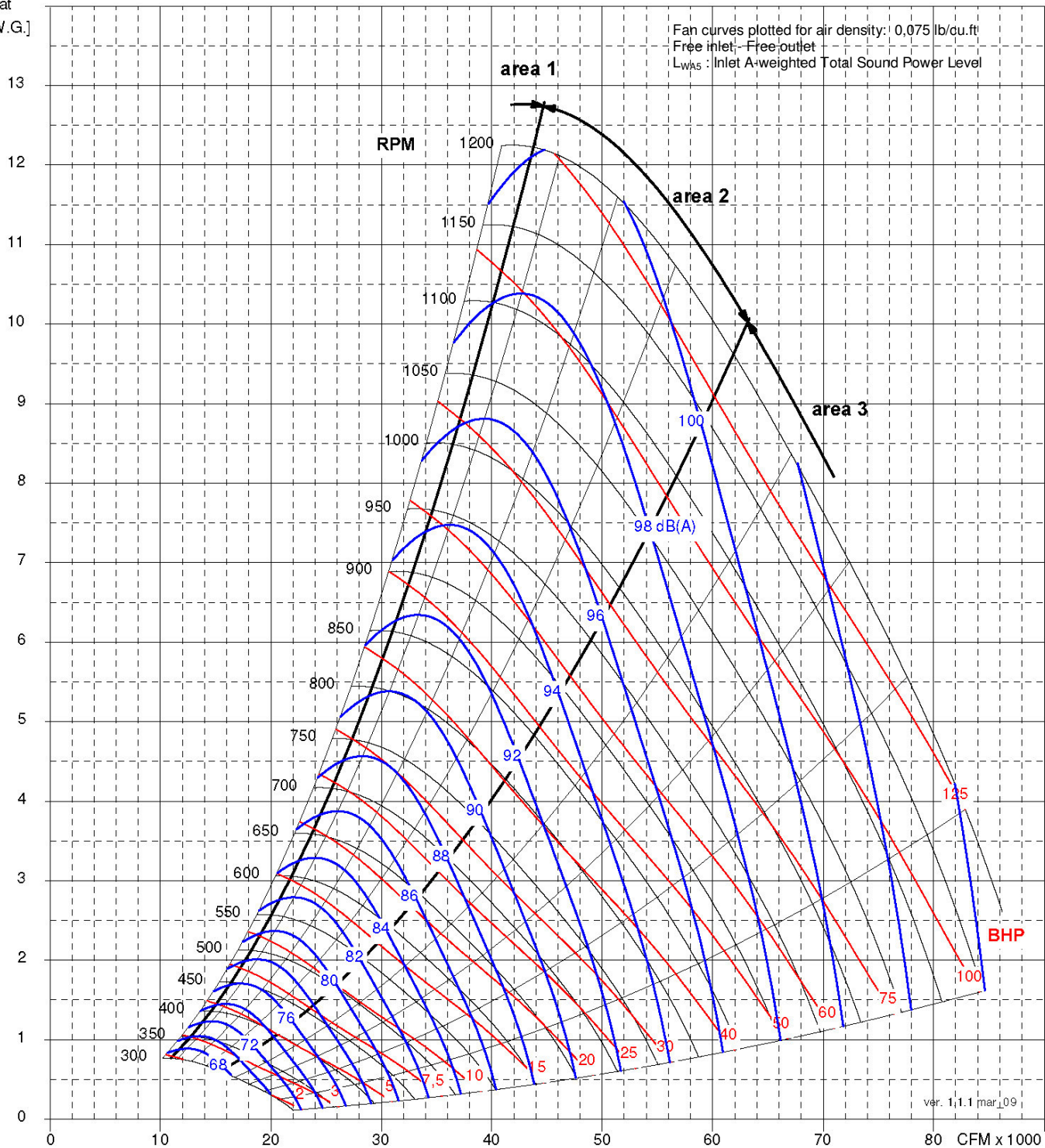
SOUND DATA TABLE

Plenum fan model and size	Volume flow range	Speed range	ΔL_{w5}	ΔL_{woct5} 63	ΔL_{woct5} 125	ΔL_{woct5} 250	ΔL_{woct5} 500	ΔL_{woct5} 1000	ΔL_{woct5} 2000	ΔL_{woct5} 4000	ΔL_{woct5} 8000
NAPAF 44	Area 1	RPM $\leq$ 540	14,0	12	9	-3	-6	-8	-9	-10	-14
		541 $\leq$ RPM $\leq$ 840	12,5	6	11	-1	-6	-8	-10	-12	-16
		RPM $\geq$ 841	9,0	2	6	2	-4	-7	-10	-12	-15
	Area 2	RPM $\leq$ 540	12,7	11	7	-2	-6	-9	-10	-11	-14
		541 $\leq$ RPM $\leq$ 840	12,2	4	11	-1	-5	-8	-11	-13	-16
		RPM $\geq$ 841	8,3	1	5	2	-4	-6	-11	-13	-16
	Area 3	RPM $\leq$ 540	13,7	12	8	-1	-5	-8	-11	-14	-16
		541 $\leq$ RPM $\leq$ 840	12,6	6	11	0	-4	-7	-12	-14	-18
		RPM $\geq$ 841	8,8	3	5	2	-3	-6	-12	-14	-18



NAPAF 49	T1	T2
Plenum Fan Max RPM [min^{-1}]	950	1100
Plenum Fan Max BHP	67.5	105
Plenum Fan weight [Lb]	1121	1128
Wheel No. Blades	10	
Wheel Moment of Inertia [Lb ft^2]	1531	
Wheel weight [Lb]	552	

Δp_{stat}
[In.W.G.]





NAPAF 49 T1 - T2

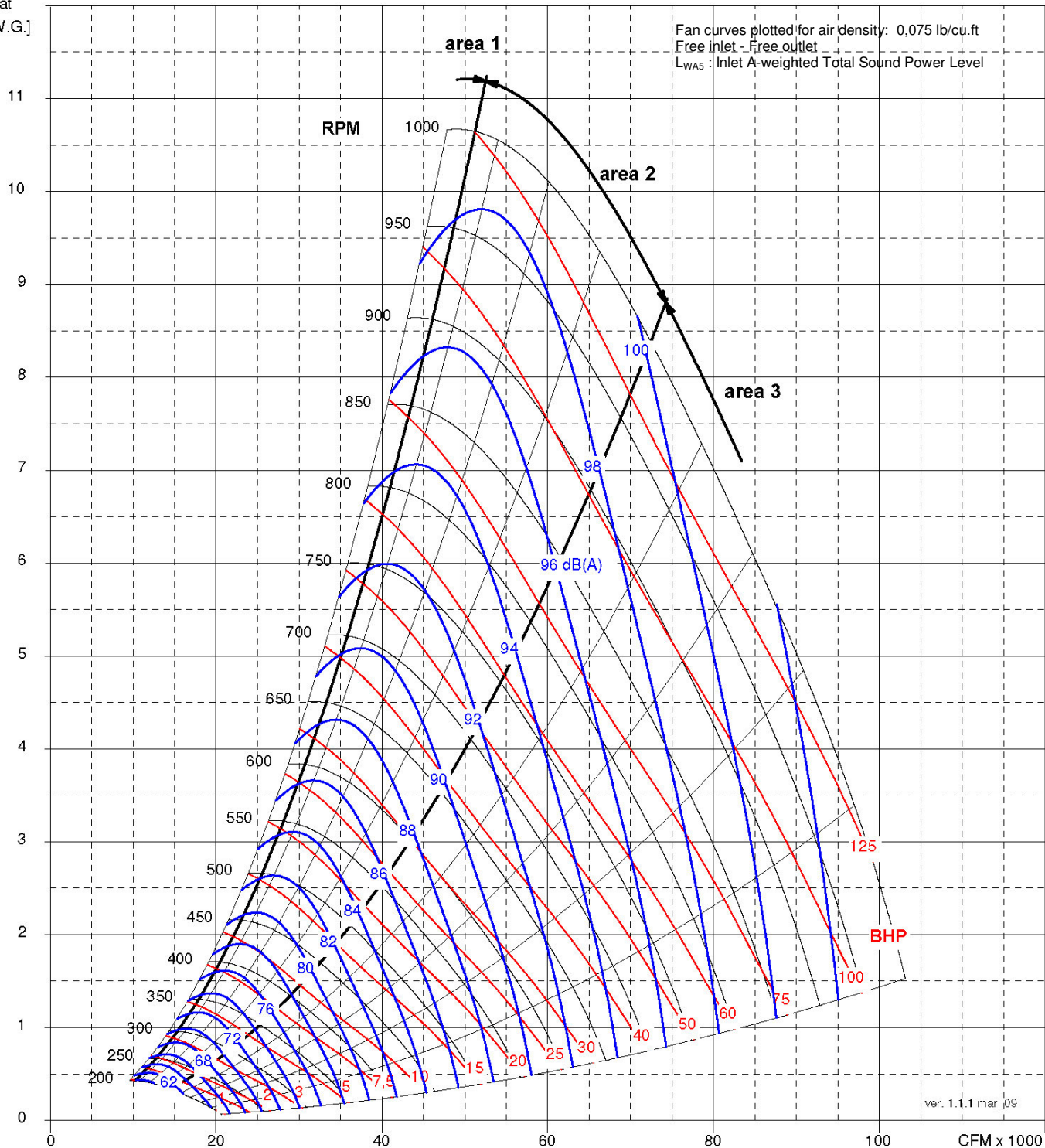
SOUND DATA TABLE

39



NAPA 55	T1	T2
Plenum Fan Max RPM [min^{-1}]	850	975
Plenum Fan Max BHP	85	125
Plenum Fan weight [Lb]	1932	1939
Wheel No. Blades	10	
Wheel Moment of Inertia [Lb ft^2]	3084	
Wheel weight [Lb]	830	

Δp_{stat}
[In.W.G.]





comefri

PLENUM FANS WITH AIRFOIL WHEELS - NAPAF

NAPAF 55 T1 - T2

Δpstat [In.W.G.]																				
V	1	1,5	2	2,5	3	3,5	4	4,5	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10	
[CFM]	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	
16000	307 3,78																			
18000	312 4,12	375 6,59																		
20000	319 4,55	377 7																		
22000	329 5,05	382 7,52	433 10,43																	
24000	340 5,62	389 8,14	437 11,03	484 14,32																
26000	352 6,24	398 8,86	443 11,76	486 15,03	531 18,65															
28000	364 6,92	408 9,66	450 12,61	491 15,86	532 19,47	573 23,4														
30000	377 7,64	420 10,54	460 13,57	498 16,85	536 20,42	574 24,34	613 28,55													
32000	390 8,41	432 11,48	470 14,63	507 17,96	543 21,55	578 25,42	614 29,62	650 34,08												
34000	403 9,24	444 12,48	481 15,77	516 19,18	550 22,8	584 26,68	618 30,84	651 35,29	685 40											
36000	417 10,14	457 13,54	493 16,98	527 20,52	559 24,2	591 28,09	623 32,24	655 36,67	687 41,36	719 46,31	750 51,45									
38000	431 11,1	469 14,66	505 18,28	538 21,94	569 25,71	600 29,66	630 33,83	660 38,24	691 42,9	721 47,82	751 52,98	781 58,37								
40000	446 12,13	483 15,84	517 19,63	549 23,45	580 27,34	610 31,36	639 35,57	667 39,99	696 44,64	725 49,52	753 54,67	782 60,05	810 65,64							
42000	460 13,25	496 17,1	530 21,05	561 25,04	591 29,06	620 33,19	648 37,47	676 41,91	703 46,56	730 51,45	757 56,55	785 61,92	812 67,49	839 73,31	866 79,71					
44000	475 14,46	510 18,43	543 22,54	574 26,69	603 30,88	631 35,13	658 39,48	685 43,99	711 48,67	737 53,56	763 58,66	789 64	815 69,55	841 75,34	867 81,77	893 87,93	919 94,24			
46000	491 15,77	524 19,85	556 24,11	586 28,43	615 32,77	642 37,17	669 41,64	694 46,22	720 50,98	745 55,88	770 60,98	795 66,3	820 71,84	844 77,58	869 84	894 90,16	919 96,49	944 103		
48000	506 17,18	539 21,35	570 25,76	599 30,24	627 34,76	654 39,3	680 43,9	705 48,6	730 53,41	754 58,39	778 63,51	802 68,84	826 74,36	850 80,54	873 86,47	897 92,6	921 98,96	945 105,5	969 112,2	
50000	522 18,7	553 22,94	583 27,49	612 32,14	640 36,83	666 41,53	691 46,28	716 51,1	740 56	763 61,04	787 66,22	810 71,57	833 77,11	856 83,27	879 89,21	901 95,31	924 101,6	947 108,1	970 114,8	
52000	538 20,33	568 24,66	597 29,32	626 34,13	653 38,98	678 43,84	703 48,74	727 53,69	751 58,72	774 63,85	796 69,11	819 74,51	841 80,08	863 86,25	885 92,17	907 98,27	929 104,5	951 111	973 117,7	
54000	555 22,07	583 26,47	612 31,24	639 36,2	666 41,21	691 46,25	715 51,31	739 56,41	762 61,58	784 66,8	806 72,17	828 77,64	850 83,71	871 89,46	892 95,37	914 101,5	935 107,7	956 114,2		
56000	571 23,94	598 28,41	626 33,28	653 38,35	679 43,54	704 48,75	728 53,98	751 59,23	773 64,55	795 69,92	817 75,36	838 80,92	859 87,07	880 92,88	901 98,83	921 104,9	942 111,2	962 117,7		
58000	588 25,91	614 30,47	641 35,42	667 40,63	692 45,97	717 51,34	740 56,74	763 62,17	785 67,62	807 73,12	828 78,7	849 84,38	869 90,59	890 96,48	910 102,5	930 108,6	949 114,9	969 121,3		
60000	605 28,02	630 32,65	655 37,68	681 42,99	706 48,48	730 54,02	753 59,6	776 65,21	798 70,83	819 76,47	839 82,18	860 88,43	880 94,3	900 100,3	919 106,3	939 112,5	958 118,8			
62000	622 30,25	646 34,97	670 40,07	695 45,5	720 51,12	744 56,82	766 62,56	788 68,32	810 74,11	831 79,92	851 86,26	871 92,19	891 98,16	910 104,2	929 110,4	948 116,6	967 123			
64000	639 32,59	662 37,43	686 42,62	710 48,11	734 53,87	757 59,72	780 65,63	801 71,57	822 77,51	843 83,51	863 90	883 96,03	902 102,2	921 108,3	940 114,6	958 121				
66000	656 35,09	678 40,03	701 45,28	725 50,89	748 56,74	771 62,71	793 68,8	814 74,91	835 81,05	855 87,66	875 93,86	895 100	914 106,3	932 112,6	951 119					
68000	673 37,69	695 42,77	717 48,1	740 53,78	762 59,72	785 65,87	806 72,07	828 78,35	848 84,68	868 91,47	888 97,81	907 104,2	925 110,6	944 117	962 123,5					
70000	691 40,45	711 45,66	733 51,07	755 56,82	777 62,88	799 69,1	820 75,5	841 81,94	861 88,89	881 95,38	900 101,9	919 108,4	937 115	956 121,5						
72000	708 43,33	728 48,7	749 54,2	770 60,03	792 66,17	813 72,52	834 79,01	854 86,08	874 92,72	894 99,39	913 106,1	932 112,8	950 119,5							
73000	717 44,82	736 50,26	757 55,83	778 61,7	799 67,88	820 74,26	841 80,85	861 88	881 94,72	901 101,4	919 108,2	938 115	956 121,8							
74000	726 46,35	745 51,88	765 57,48	786 63,4	807 69,61	827 76,06	848 82,71	868 89,89	888 96,7	907 103,6	926 110,4	944 117,3	962 124,2							
75000	735 47,93	753 53,53	773 59,19	793 65,13	814 71,37	835 77,89	855 85,05	875 91,89	895 98,75	914 105,7	932 112,6	951 119,6								
76000	744 49,51	762 55,24	781 60,94	801 66,91	822 73,2	842 79,77	862 86,98	882 93,87	901 100,8	920 107,8	939 114,8	957 121,9								
77000	753 51,16	771 56,96	790 62,71	809 68,73	829 75,08	849 82,12	869 88,93	889 95,91	908 102,9	927 110	946 117,1	964 124,2								
78000	762 52,8	779 58,73	798 64,55	817 70,61	837 76,99	857 84,1	877 90,96	896 97,97	915 105	934 112,2	952 119,4									
79000	770 54,5	788 60,54	806 66,42	825 72,53	845 78,94	864 86,07	884 93	903 100,1	922 107,2	941 114,5	959 121,8									
80000	779 56,24	796 62,38	814 68,32	833 74,47	852 81,37	872 88,1	891 95,08	910 102,2	929 109,5	947 116,8	966 124,1									
81000	788 58,05	805 64,29	823 70,29	841 76,48	860 83,39	879 90,16	898 97,18	917 104,4	936 111,7	954 119,1										
82000	797 59,84	814 66,2	831 72,26	849 78,95	868 85,48	887 92,3	906 99,35	925 106,6	943 114	961 121,4										
83000	806 61,67	822 68,17	840 74,34	857 81,06	876 87,6	894 94,46	913 101,6	932 108,8	950 116,3	968 123,8										
84000		831 70,19	848 76,41	866 83,17	884 89,8	902 96,66	921 103,8	939 111,2	957 118,7											
85000		840 72,27	856 78,96	874 85,35	892 91,99	910 98,93	928 106,1	946 113,5	964 121,1											
86000		849 74,35	865 81,16	882 87,57	900 94,25	918 101,2	935 108,4	954 115,9	971 123,5											
87000		857 76,9	873 83,35	890 89,87	908 96,55	925 103,6	943 110,9	961 118,4												
88000		866 79,08	882 85,62	898 92,16	916 98,94	933 106	951 113,3	968 120,8												
89000		875 81,3	891 87,93	907 94,53	924 101,4	941 108,4	958 115,8													
90000		884 83,55	899 90,27	915 96,94	932 103,8	949 110,9	966 118,3													
92000		901 88,22	916 95,12	932 101,9	948 108,9	965 116,1														
94000		919 93,03	934 100,2	949 107,1	964 114,2															
96000		937 97,99	951 105,4	966 112,5																
98000		955 103,2	969 110,8																	
100000		973 108,6																		

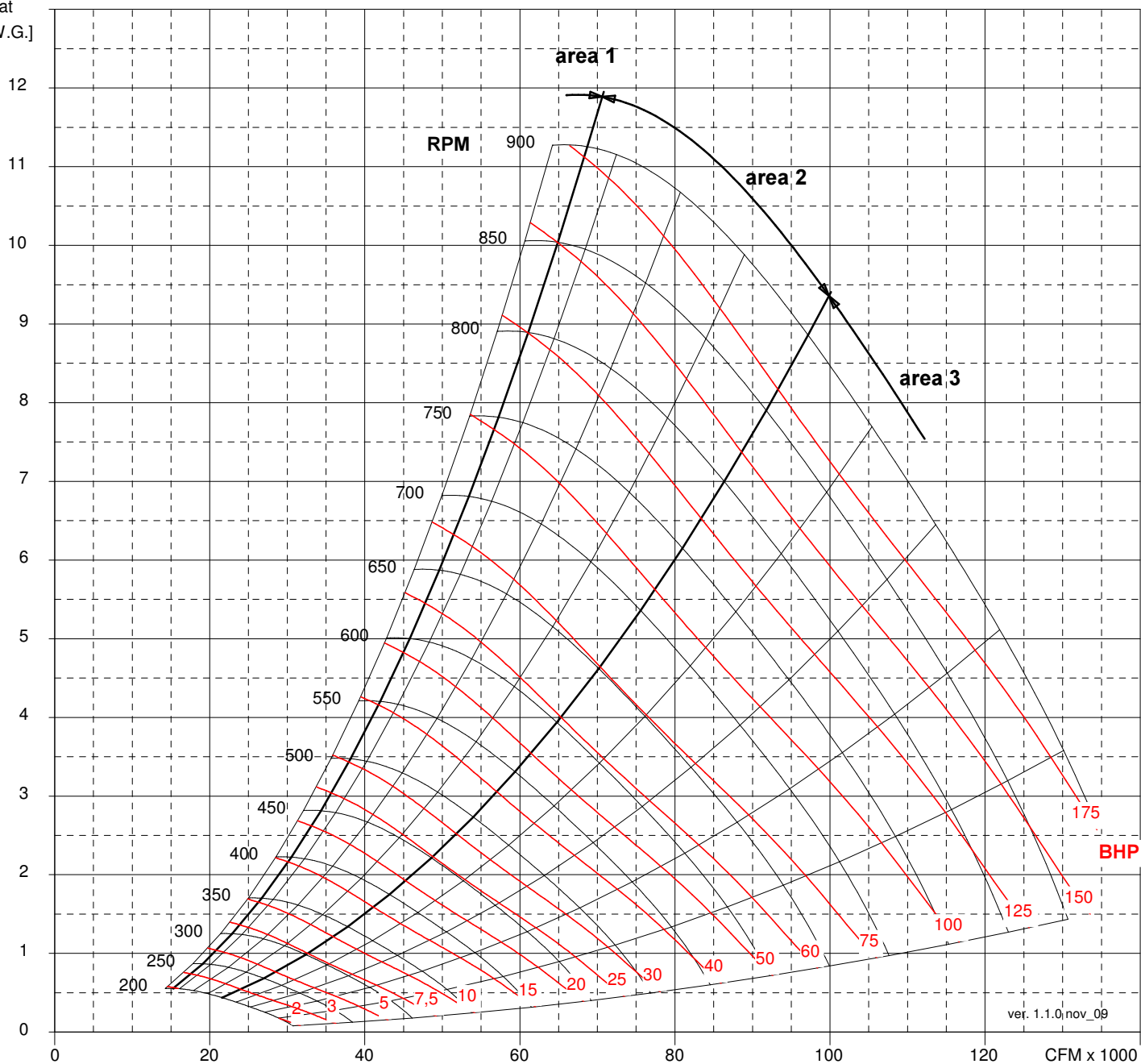
SOUND DATA TABLE

Plenum fan model and size	Volume flow range	Speed range	ΔL_{w5}	$\Delta L_{woc5} 63$	$\Delta L_{woc5} 125$	$\Delta L_{woc5} 250$	$\Delta L_{woc5} 500$	$\Delta L_{woc5} 1000$	$\Delta L_{woc5} 2000$	$\Delta L_{woc5} 4000$	$\Delta L_{woc5} 8000$
NAPAF 55	Area 1	RPM $\leq$ 540	14,0	12	9	-3	-6	-8	-9	-10	-14
		RPM $\geq$ 541	12,5	6	11	-1	-6	-8	-10	-12	-16
	Area 2	RPM $\leq$ 540	12,7	11	7	-2	-6	-9	-10	-11	-14
		RPM $\geq$ 541	12,2	4	11	-1	-5	-8	-11	-13	-16
	Area 3	RPM $\leq$ 540	13,7	12	8	-1	-5	-8	-11	-14	-16
		RPM $\geq$ 541	12,6	6	11	0	-4	-7	-12	-14	-18

Model/size: NAPA F 63
 Max fan rev.: 850 RPM
 Max. abs. power: 155,0 BHP
 Moment of inertia: 0,00 lb ft²

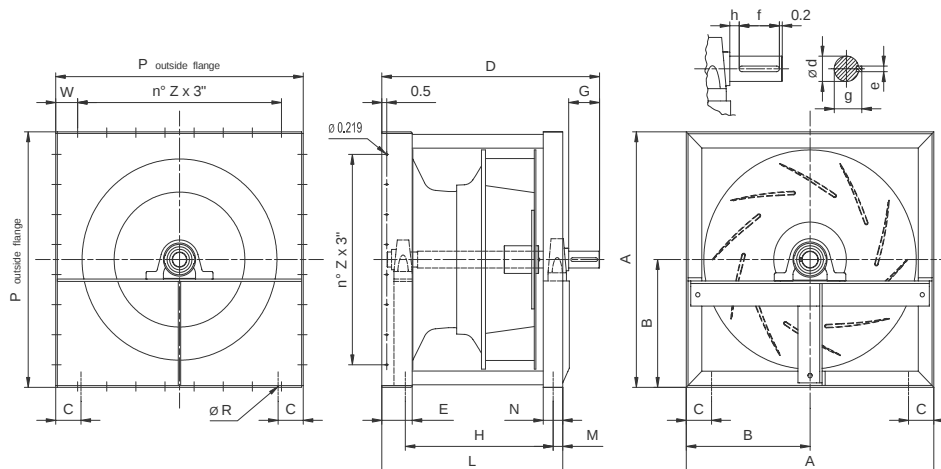
Fan curves plotted for air density : 0,075 lb/cu.ft
 Fan and plot condition: NAPA F 63 T2 Free inlet- Free outlet

Δp_{stat}
 [In.W.G.]



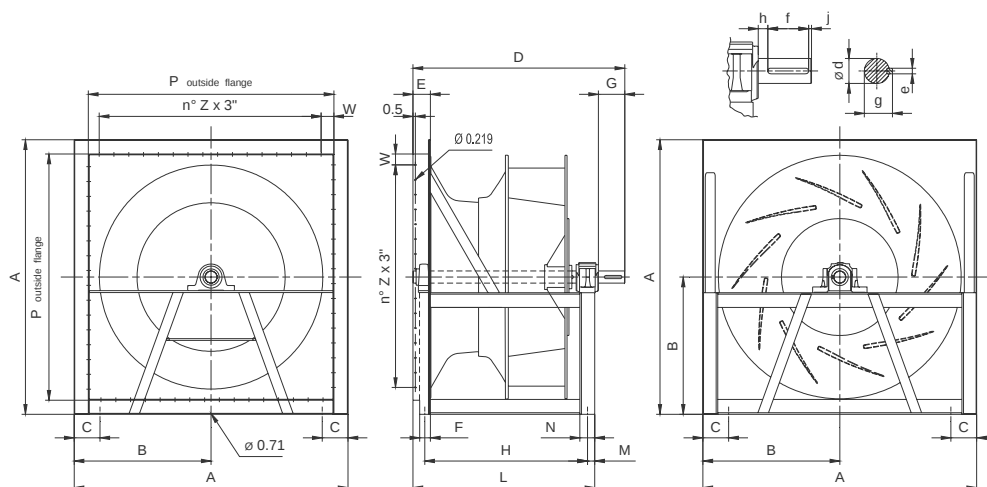
7. Plenum Fans dimensions

7.1. NAPBC 10 T2, 11 T2 - NAPAF 12 T2/T3 to 28 T2/T3 - Arr.3



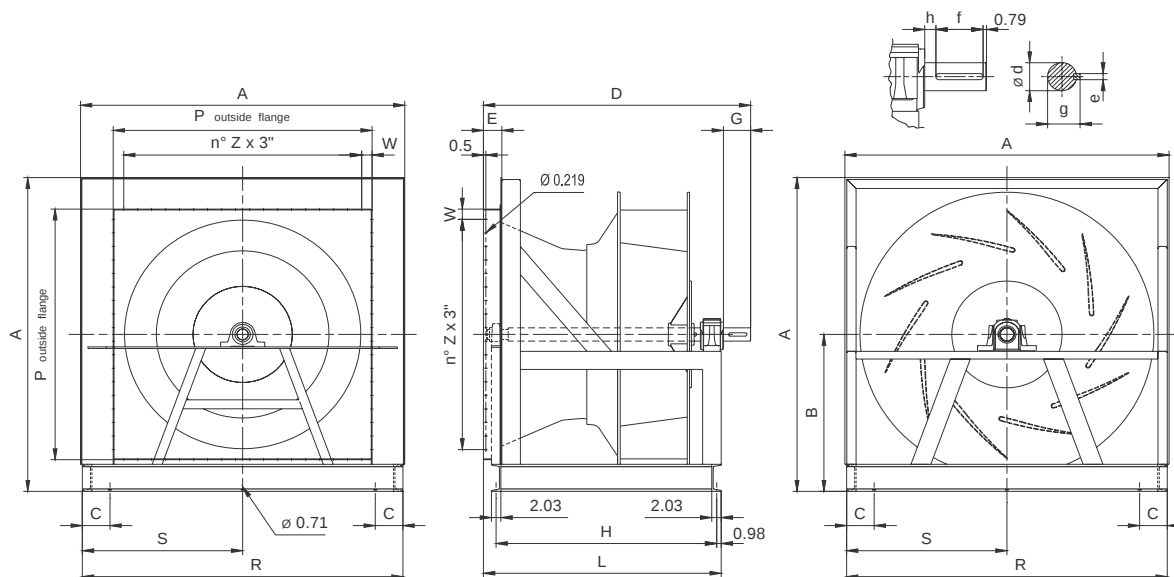
		A	B	C	D		E	G		H	L	M	N	P
					T2	T3		T2	T3					
NAPBC	10	12 ³ / ₄	6 ⁶ / ₁₆	2.13	13.37	-	2.45	2.48	-	8.11	10.39	0.47	1.25	12 ³ / ₄
	11	14 ¹ / ₄	7 ² / ₁₆		14.24			2.45		9.00	11.25			14 ¹ / ₄
NAPAF	12	16 ¹ / ₈	8 ¹ / ₁₆	1.98	15.84		2.69	2.87	2.77	10.01	12.63	0.63	1.50	16 ¹ / ₈
	14	18 ¹ / ₈	9 ¹ / ₁₆	2.32	16.83			2.72	2.65	11.14	13.75			18 ¹ / ₈
	16	20 ³ / ₈	10 ³ / ₁₆	2.78	17.46			2.54	2.41	11.76	14.61	0.89	1.75	20 ³ / ₈
	18	22 ⁷ / ₈	11 ⁷ / ₁₆	2.76	19.66	19.91	2.73	2.96	2.83	13.44	16.45	0.98	2.00	22 ⁷ / ₈
	20	25 ¹ / ₂	12 ³ / ₄	2.60	22.21	23.12	3.17	3.05	15.23	18.63	25 ¹ / ₂			
	22	28 ¹ / ₂	14 ¹ / ₄	4.09	23.76	24.45	3.13	3.13	3.01	16.61	20.00			28 ¹ / ₂
	25	32	16	4.17	26.42		3.52	3.85	3.26	19.15	22.13	1.10	2.50	32
	28	35 ³ / ₄	17 ⁷ / ₈	4.53	29.92			4.54	4.08	21.14	24.50			35 ³ / ₄

		ø R	Z	W	ø d		e		f		g		h	
					T2	T3	T2	T3	T2	T3	T2	T3	T2	T3
NAPBC	10	0.44	3	1.88	3/4"	-	3/16"	-	1.77	-	0.83	-	0.51	-
	11		4	1.13									0.48	
NAPAF	12	0.44	4	2.06	1"	13/16"	1/4"		1.77		1.11	1.30	0.90	0.80
	14		5	1.56			1/4"		1.77				0.75	0.68
	16	0.47	6	1.19	13/16"	13/8"	1/4"	5/16"	1.77	1.57	1.30	1.56	0.57	0.64
	18		6	2.44				11/2"	2.36			1.66	0.41	0.28
	20	0.47	7	2.25	11/2"	111/16"	3/8"		2.36	2.76	1.66	1.855	0.61	0.22
	22		8	2.25			2.36		2.36	0.57			0.18	
	25	0.59	9	2.5	111/16"	111/16"	3/8"		2.76	2.36	1.855	1.855	0.89	0.31
	28	0.72	11	1.3	2"		1/2"	3/8"	3.15	2.76	2.22		0.90	1.13

7.2. NAPAF 32 T1/T2 to 49 T1/T2 - Arr.3


		A	B	C	D		E	F	G		H	L	M	N
					T1	T2			T1	T2				
NAPAF	32	40 1/4	20 1/8	3.94	32.03		3.56		4.47	4.01	23.94	27.50	1.18	2.50
	36	45 1/4	22 5/8		35.72				4.96	4.36	26.57	30.13		
	40	49 3/4	24 7/8	4.72	37.89		3.60		4.89	4.29	29.09	32.68		
	44	55 1/2	27 3/4		42.20	43.00	3.56	2.17	4.59	5.34	33.00	36.85	1.46	3.00
	49	62	31	5.91	46.22	46.39			5.55	5.45	36.13	40.20	1.58	

		P	Z	W	ø d		e		f		g		j	h	
					T1	T2	T1	T2	T1	T2	T1	T2		T1	T2
NAPAF	32	40 1/4	12	2.13	2"	1 11/16"	1/2"	3/8"	3.15	2.76	2.22	1.85	0.2	1.12	1.06
	36	45 1/4	14	1.63	2 7/16"	2 3/16"	5/8"	1/2"	3.54	2.71	2.41	1.22		0.62	
	40	49 3/4	15	2.38								1.15		0.55	
	44	49.76		2.36	2 3/16"	2 7/16"	1/2"	5/8"		2.41	2.71	0.59	0.46	1.20	
	49	55.50	17	2.26									1.41	1.31	

7.3. NAPAF 55 T1/T2, 63 T1/T2 - Arr.3


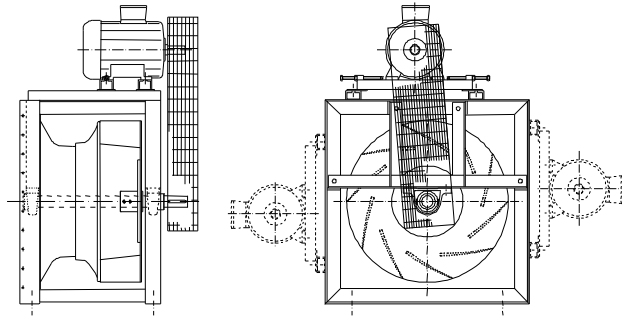
		A	B	C	D		E	G		H	L	P	R
					T1	T2		T1	T2				
NAPAF	55	69½	34¾	5.91	57.25		3.93	6.03	5.83	47.28	50.96	55.50	68.71
NAPAF	63	79½	39¾	6.69	64.53	65.44	3.93	5.38	6.11	54.9	58.58	62	78.74

		S	Z	W	Ø d		e		f		g		h	
					T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
NAPAF	55	34.36	17	2.25	2 7/16"	2 15/16"	5/8"	3/4"	3.54	3.94	2.71	3.26	1.70	1.11
NAPAF	63	39.37	19	2.50	2 15/16"	3 3/16"	3/4"	3/4"	3.94	3.94	3.27	3.52	0.65	1.38

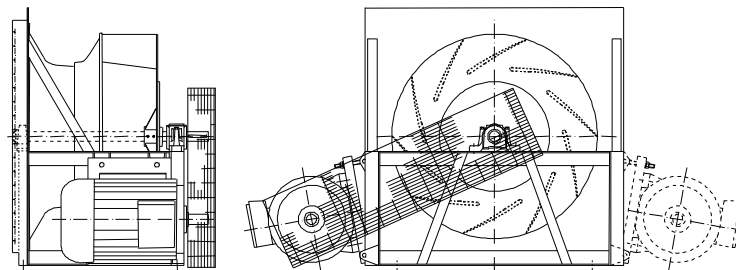
8. Plenum Fans arrangements

8.1. Arr.3P (Piggyback mounted motor)

NAPBC 10 T2, 11 T2 - NAPAF 12 T2/T3 to 28 T2/T3

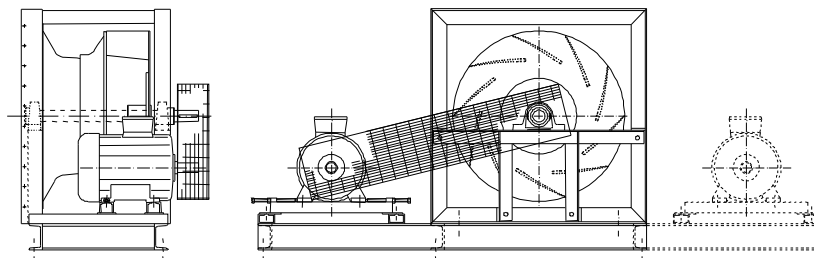


NAPAF 32 T1/T2 to 40 T1/T2 - NAPAF 44 T1/T2 to 55 T1/T2

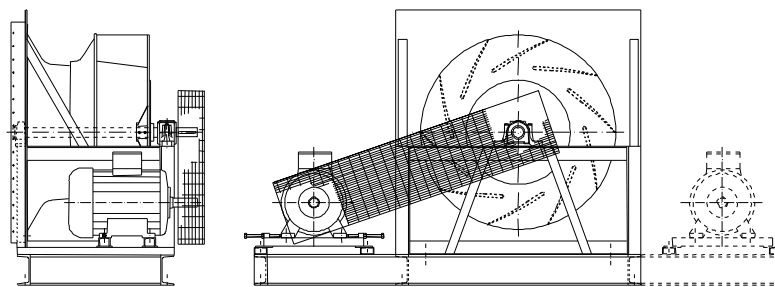


8.2. Arr.3BF (Base Frame mounted motor)

NAPBC 10 T2, 11 T2 - NAPAF 12 T2/T3 to 28 T2/T3



NAPAF 32 T1/T2 to 49 T1/T2 - NAPAF 55 T1/T2



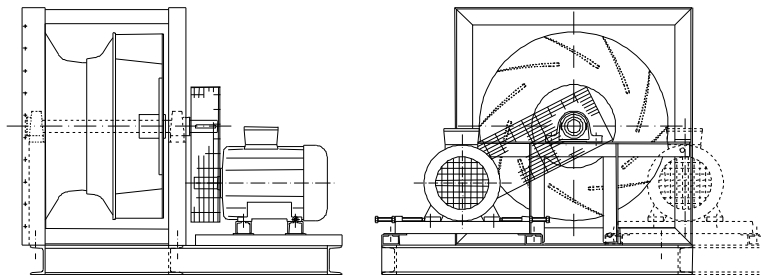


comefri

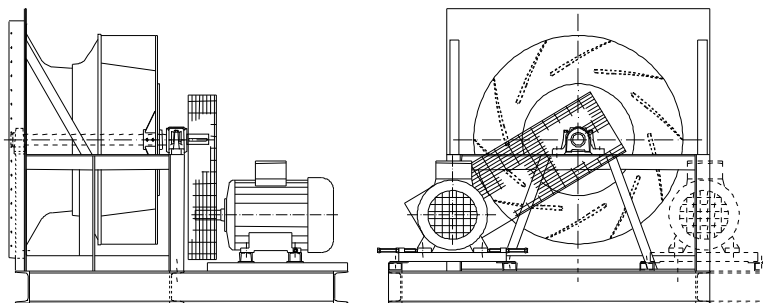
PLENUM FANS WITH AIRFOIL WHEELS - NAPAF
PLENUM FANS WITH BACKWARD CURVED WHEELS - NAPBC

8.3. Arr.3BFS (Base Frame Short mounted motor)

NAPBC 10 T2, 11 T2 - NAPAF 12 T2/T3 to 28 T2/T3



NAPAF 32 T1/T2 to 55 T1/T2

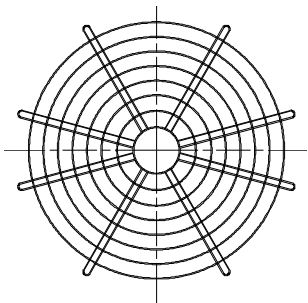




comefri

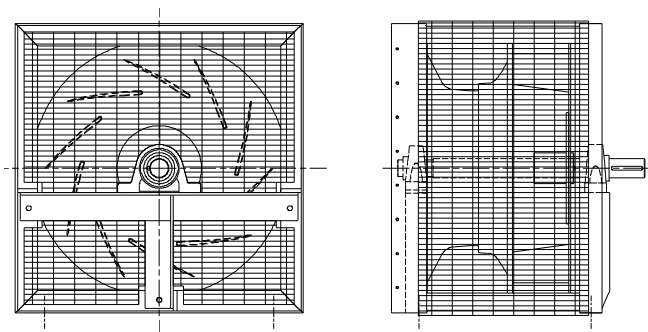
PLENUM FANS WITH AIRFOIL WHEELS - NAPAF PLENUM FANS WITH BACKWARD CURVED WHEELS - NAPBC

9. Accessories



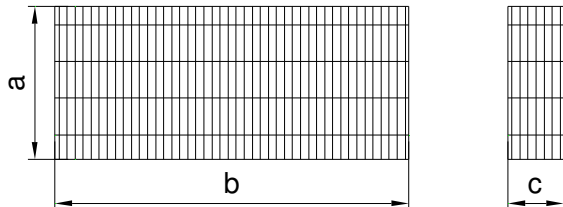
9.1. Inlet guard ..ZS

Industrial safety regulations may specify that a reliable guard must be provided for rotating machine elements. Inlet guards are available, in accordance with OSHA requirements.



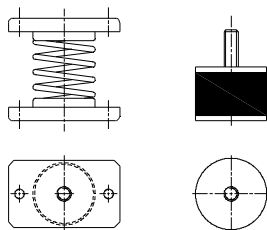
9.2. Protective enclosure

Protective enclosure is manufactured of steel wire mesh and provides protection for maintenance personnel.



9.3. Belt guard

Belt guards are manufactured in a zinc coated steel wire mesh, in accordance with OSHA requirements. Dimensions denoted with "a", "b" and "c" depend upon the corresponding sheave diameters and number of belts. Upon request, access for speed measurement can be provided.

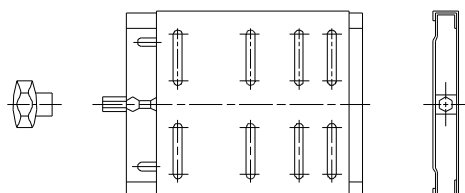


9.4. Anti-vibration mountings: type rubber and spring

The anti-vibration mountings are normally delivered separately, together with the necessary bolts and nuts to fix the mountings to the baseframes.

They are selected taking into consideration the total weight the blower, belt drive, motor and all the ordered accessories.

Spring type mountings can also be ordered and supplied.



9.5. Motor base plate

Different size of base plates are available.

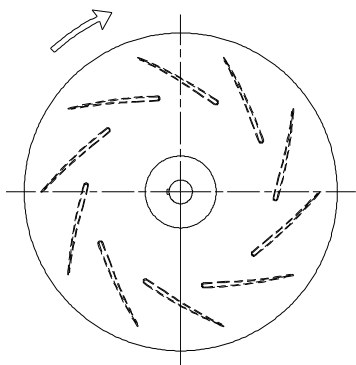


10. Rotation

The wheel direction of rotation, seen from drive side is:

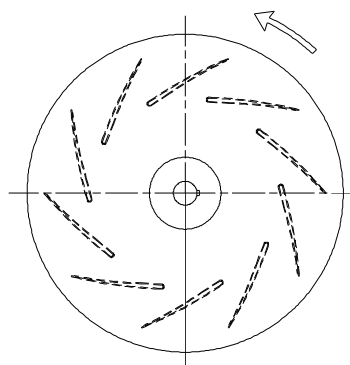
- a) clockwise, if indicated with the symbol RD, or
- b) counter-clockwise if indicated with the symbol LG

RD – CLOCKWISE



View Drive Side

LG - COUNTER CLOCKWISE



View Drive Side

11. Plenum Fan reference code / example

NAP	AF	40	RD	ZS	
					Plenum Fan type
					Wheel type
					Wheel size
					Rotation RD
					Inlet guard

[illegible]

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