



PEACE OF MIND, BUILT IN



Models CDP and CDPI DIRECT DRIVE PLENUM FANS

January 2026



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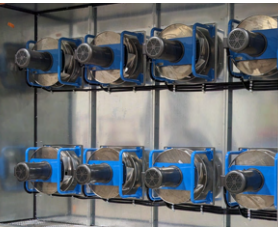
Overview

Mainstream is a U.S.-based manufacturer of commercial and industrial HVAC solutions, headquartered in Berkeley Heights, New Jersey. Founded in 1992 and family owned, we’ve spent more than three decades designing and manufacturing equipment for some of the most demanding HVAC applications in the country.

Our focus is simple: *deliver expertly engineered, heavy-duty products that perform reliably in real-world environments.*

Mainstream specializes in highly engineered projects—where space constraints, access challenges, and aging infrastructure demand something differing. We work closely with consulting engineers, contractors, and building owners to develop solutions that fit the application, the schedule, and the building.

All Mainstream products are manufactured in the United States and designed with long service life, ease of installation, and dependable performance as core requirements.



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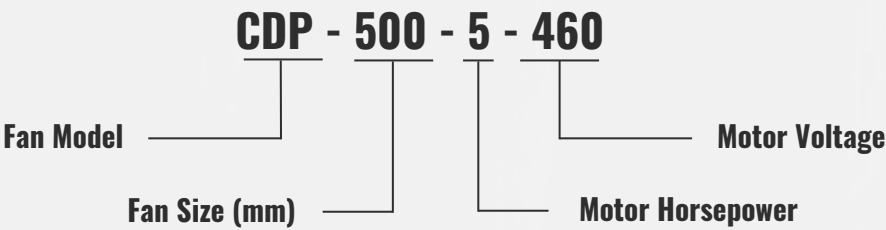


Mainstream Fluid & Air LLC certifies that the Models BDP shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.



Scan the QR code to search Mainstream Fluid & Air LLC's AMCA-certified products.

Model Number Code

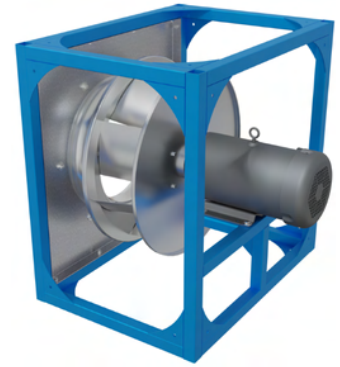


Fan Models

CDP

Cube-Mounted, Direct Drive Plenum Fan

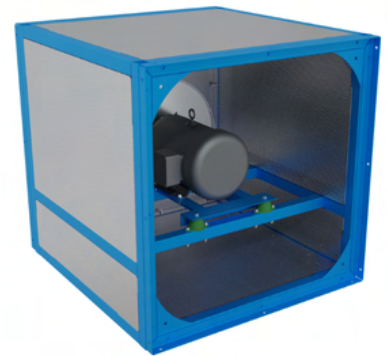
The CDP is a cube-mounted direct drive plenum fan, featuring heavy-duty welded, coated construction. The CDP is designed to be stacked and bolted together for fan array applications. The cube height and width are customizable, allowing for outstanding flexibility in design.



CDPI

Insulated Cube-Mounted, Direct Drive Plenum Fan

The CDPI is a cube-mounted direct drive plenum fan, featuring acoustically insulated panels, for improved sound performance. The CDPI is designed to be stacked and bolted together for fan array applications. The cube height and width are customizable, allowing for outstanding flexibility in design.



Options & Accessories

Fans are the heart of any air handling system. Their performance directly impacts comfort, energy use, reliability, and the operating cost of a building.

This is why delivering the *right* solution, not the *standard* solution, is critical.



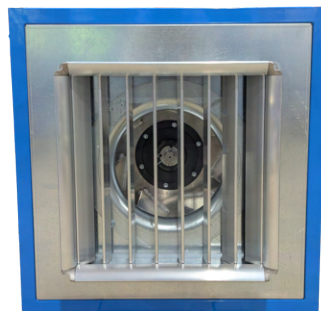
Piezo Ring

Quad-tap ring, for precise pressure measurement



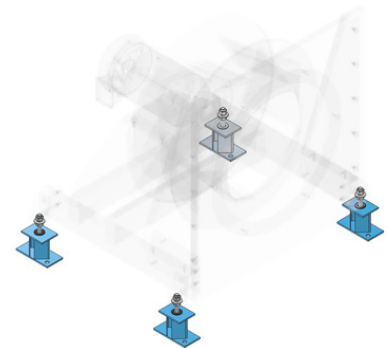
Mesh Guarding

Available on all fan models to prevent accidental contact.



Backdraft Dampers

Vertical blade, zero pressure loss dampers, for peace of mind.



Isolators

Rubber, spring and seismic isolators available.



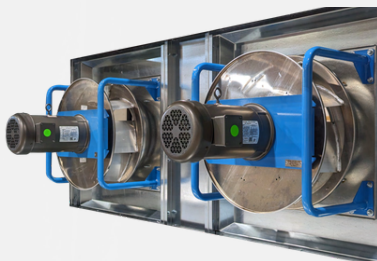
Motor Options



AC Motors

AC induction motors are the motor type most commonly used in HVAC applications. AC motors are readily available, often in stock, and the technology is proven and familiar.

- Max HP: none



PMEC Motors

PMEC motors feature permanent magnet technology, for extremely efficient operation. They are smaller and lighter than AC motors, and offer an outstanding combination of efficiency, lifespan and reliability.

- Max HP: 20 HP



ECM Motors

ECMs feature an integral VFD for simple control and high efficiency. ECMs are a great option for applications where access is very tight, and a small profile is required.

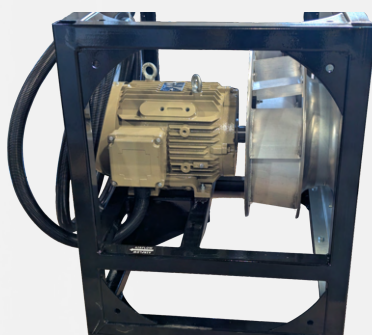
- Max HP: 15 HP

Heavy-Duty Solutions



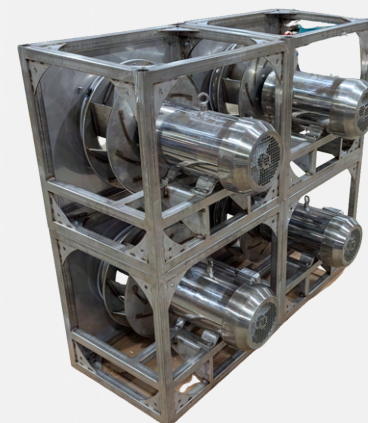
Explosion Proof Motors

For hazardous applications such as chemical plants, paint and coating facilities, or wastewater treatment plants.



Severe Duty Motors

Built to withstand harsh, industrial, and corrosive environments.



Stainless Steel Construction

For applications where corrosion, contamination, or strict hygiene requirements are critical concerns.



Control Solutions

Mainstream control panels are designed for simple operation and straightforward integration. All control panels are engineered and built-to-order, which enables significant flexibility for custom requirements and applications.

Standard Features

- **Main Disconnect:** Instantly power the entire system on or off.
- **Motor Circuit Protectors (MCPs):** Individual disconnects for each fan, simplifying maintenance.
- **Variable Frequency Drives (VFDs):** Each fan has a dedicated, preprogrammed VFD for precise motor control.
- **0–10V Speed Signal:** Synchronizes and regulates fan speeds across the array for precise speed control, either with a remote 0–10V or locally with a potentiometer.
- **Hand or Auto (HOA) Switches:** Enable and speed reference switches, offering local or remote fan control.



Premium Controls Package

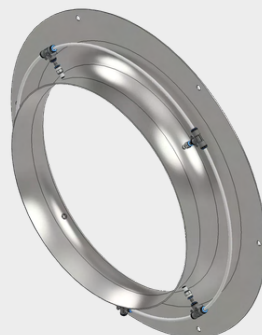
- **Touch Screen Display:** 10" display for real-time system monitoring — no BAS integration required.
- **BAS Integration:** Seamless integration for fan and panel monitoring, scheduling, trending, and alarms. System supports BACnet MS/TP, BACnet IP, or Modbus RTU protocols.
- **Airflow Monitoring with IntelliFLOW:** Total array airflow monitoring, independent of fan speed.

Options

- **Outdoor Rated:** A NEMA 3R-rated enclosure is optional for outdoor applications.
- **KAIC and SCCR Ratings:** Mainstream panels can be supplied with a 100k SCCR rating, as well as 100 kAIC fused disconnects.
- Have a custom requirement? Don't hesitate to discuss with our sales engineers. All panels are engineered and built to order, and there are few spec's we can't meet.



Color Touchscreen



Piezo Ring



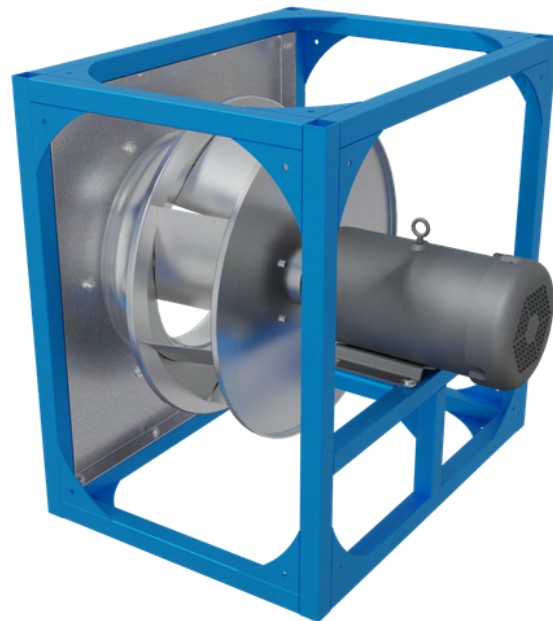
BACnet Integration



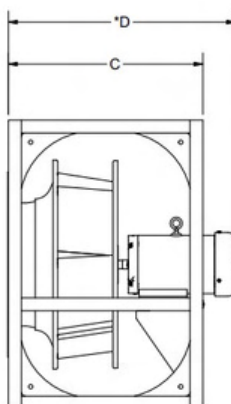
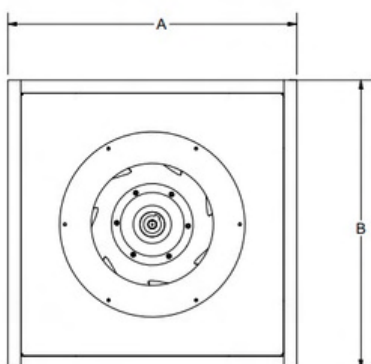
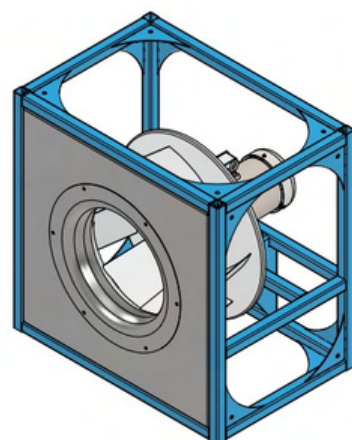
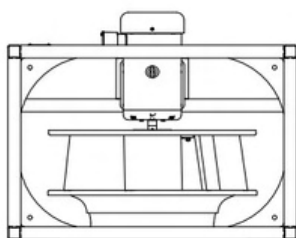
CDP

Cube-Mounted, Direct Drive Plenum Fan

The CDP is a cube-mounted direct drive plenum fan, featuring heavy-duty welded, coated construction. The CDP is designed to be stacked and bolted together for fan array applications. The cube height and width are customizable, allowing for outstanding flexibility in design.



CDP Dimensions

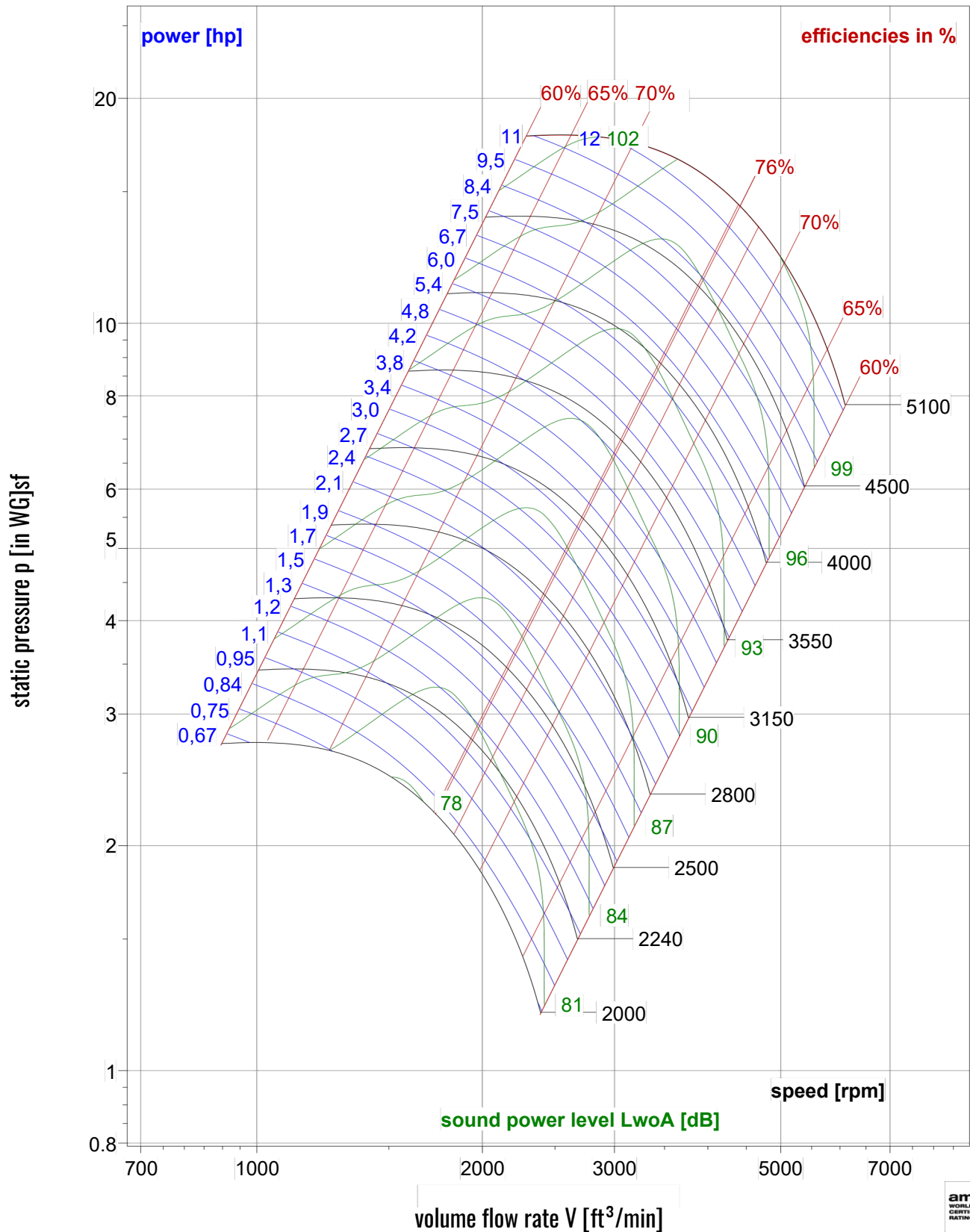


*DIMENSION D IS DEPENDENT ON SPECIFIC MOTOR AND MAY EXTEND PAST DIMENSION C

DRAWN BY	NAME	DATE	
CHECKED BY	SF	02/05/25	
APPROVED BY			
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JOB NUMBER			CITY 1
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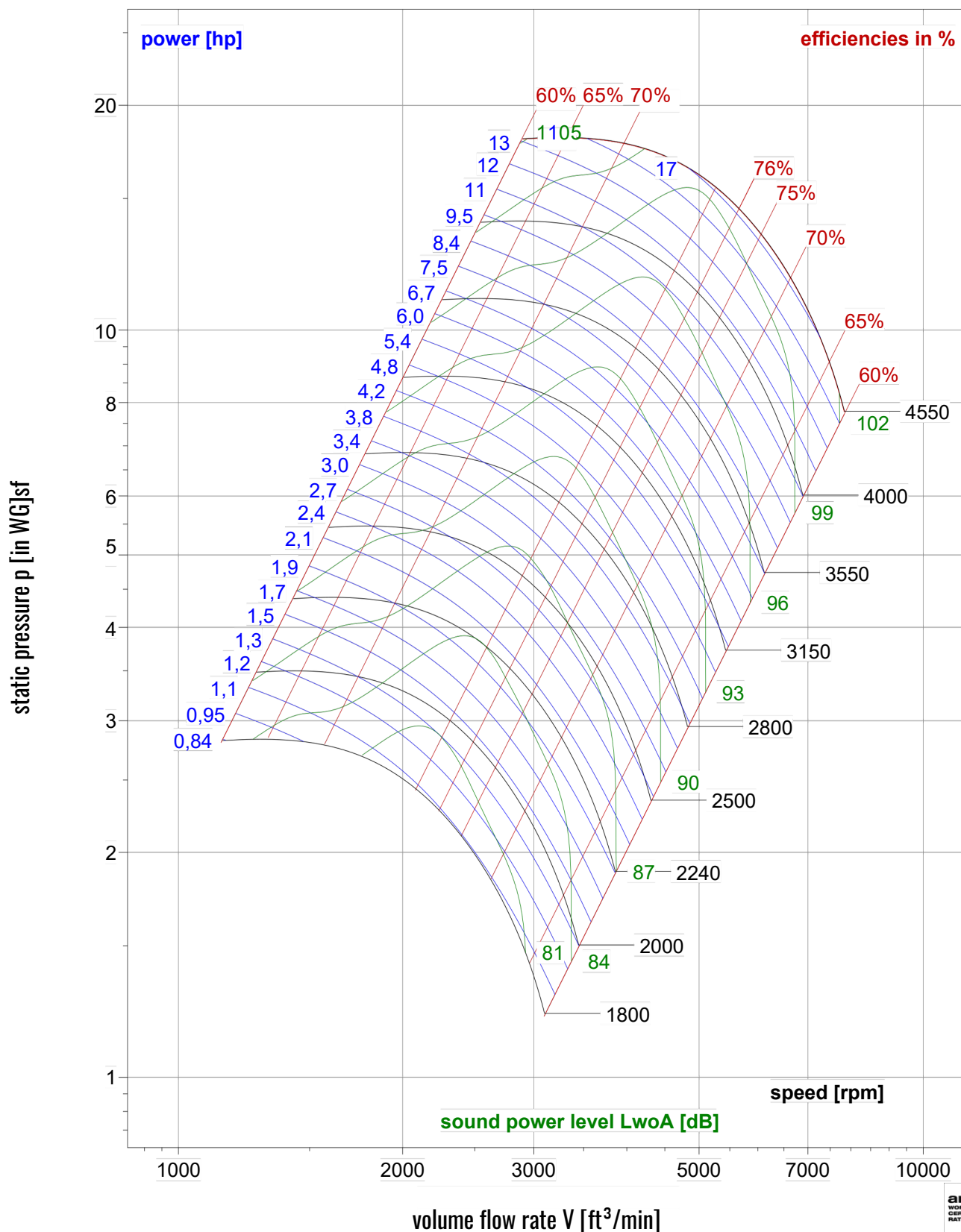
Standard Dimensions *All Values Are Customizable*									
Fan Size	Motor Size	A	B	C	Fan Size	Motor Size	A	B	C
315	143T-145T	27	27	17.625	560	143T-145T	39	39	23.5
	182T-184T			18.875		182T-184T			24.75
	213T-215T			-		213T-215T			27.25
	254T-256T			-		254T-256T			31.125
	284T-286T			-		284T-286T			32.75
355	143T-145T	30	30	18.625	630	143T-145T	42	42	25
	182T-184T			19.875		182T-184T			26.25
	213T-215T			-		213T-215T			28.75
	254T-256T			-		254T-256T			32.625
	284T-286T			-		284T-286T			34.25
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	254T-256T			-		254T-256T			34.625
	284T-286T			-		284T-286T			36.25
450	143T-145T	34	34	20.875	800	143T-145T	48	48	29
	182T-184T			22.125		182T-184T			30.25
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	284T-286T			-		284T-286T			38.25
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	182T-184T			23.125		182T-184T			32.5
	213T-215T			25.625		213T-215T			35
	254T-256T			29.5		254T-256T			38.875
	284T-286T			-		284T-286T			40.5
1000	143T-145T	53	53	33.5	1000	143T-145T	53	53	33.5
	182T-184T			34.75		182T-184T			34.75
	213T-215T			37.25		213T-215T			37.25
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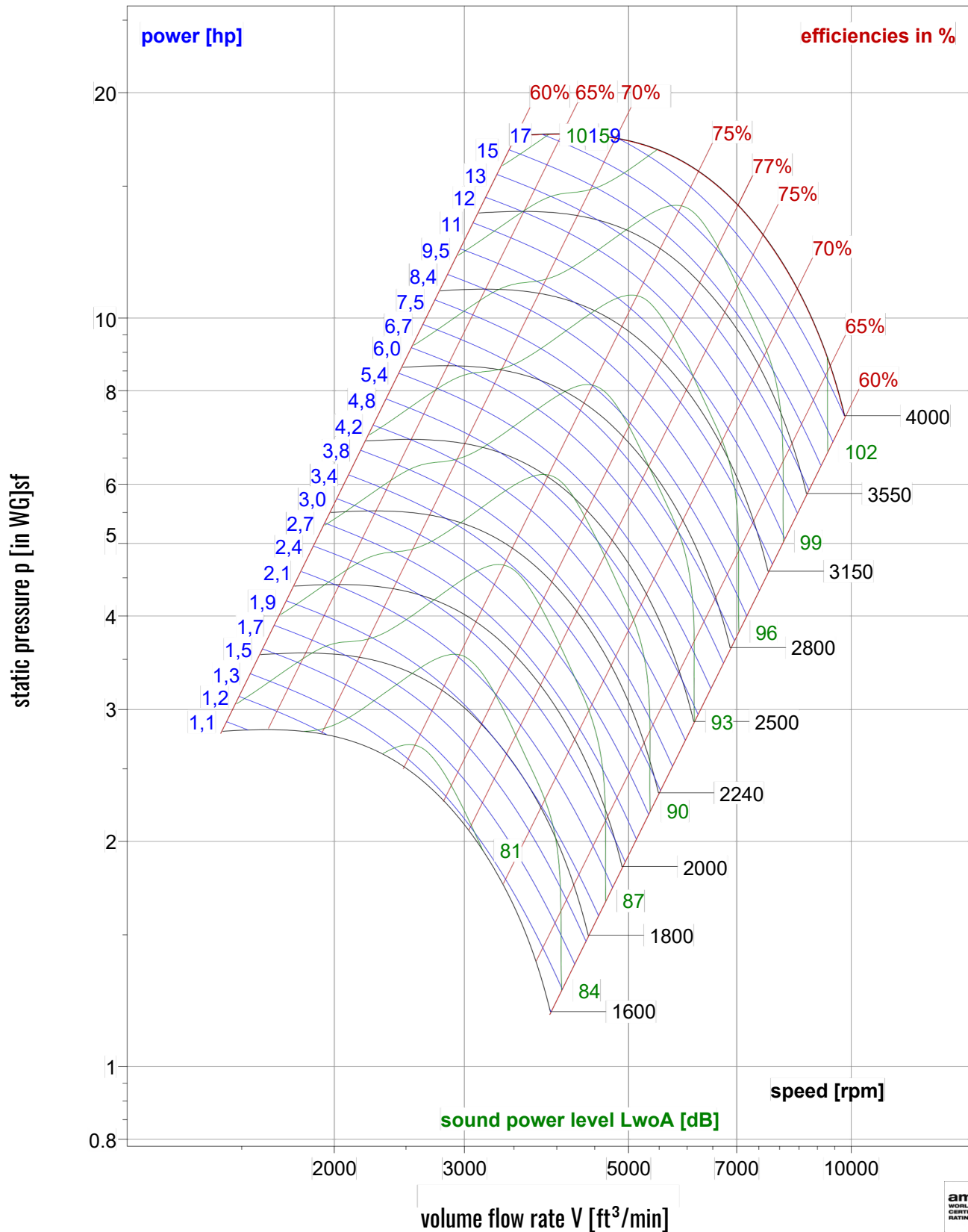
Performance certified is for installation type A: free inlet, free outlet. Power rating does not include transmission losses. Performance ratings do not include appurtenances. The sound ratings shown are L_{woA} sound power levels. The sound power level ratings shown are in decibels, referred to 10-12 watts, calculated per AMCA International Standard 301.





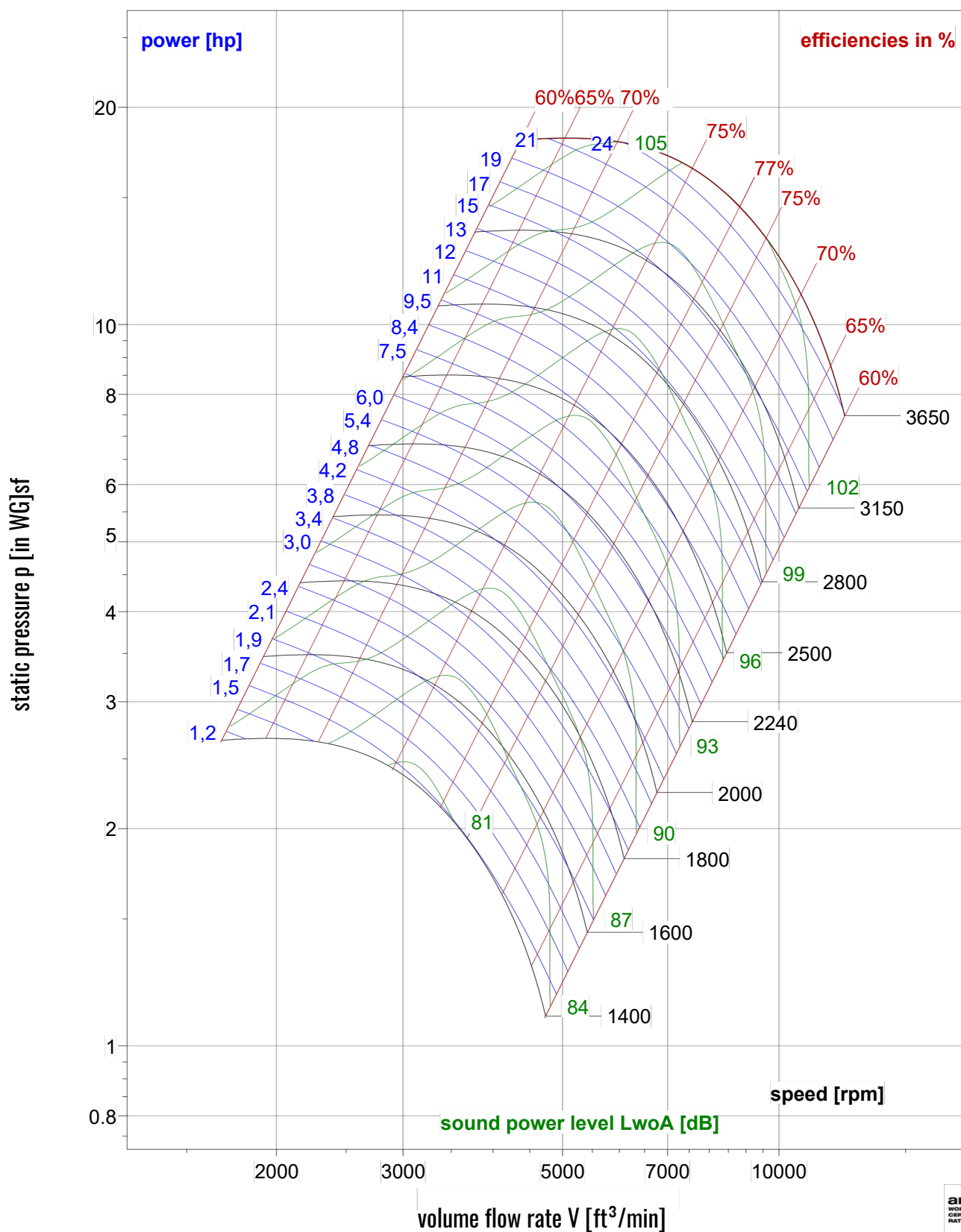
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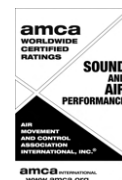


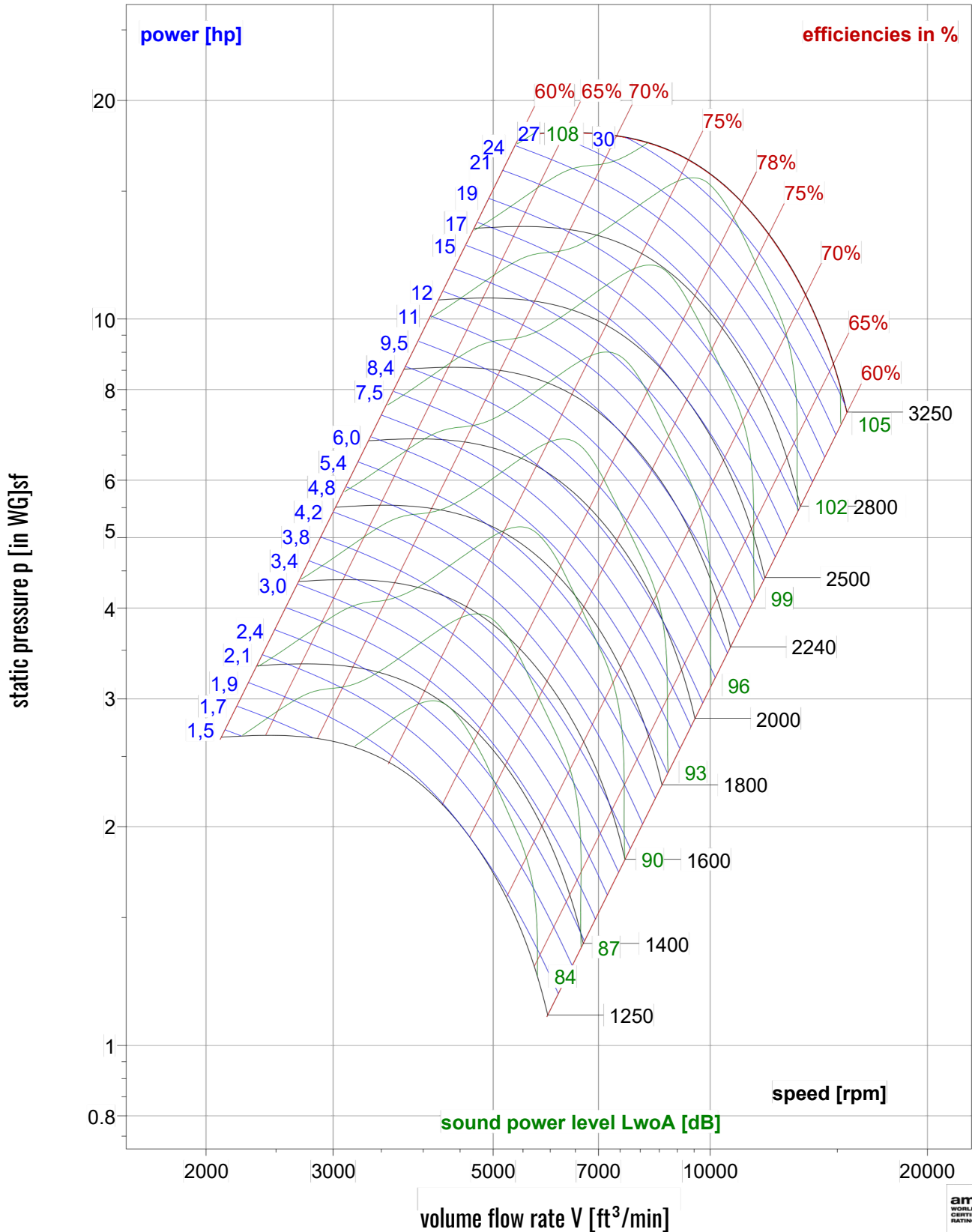
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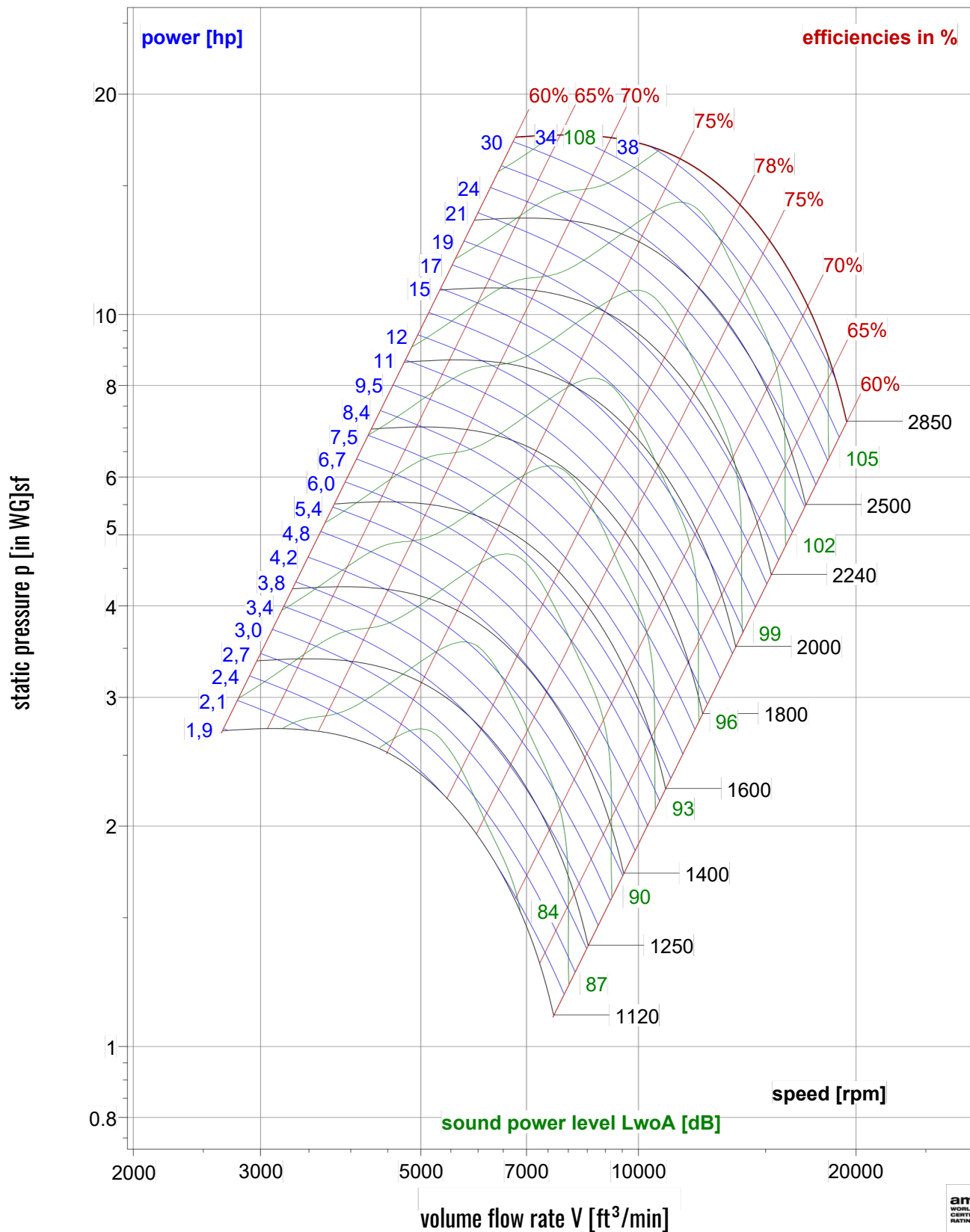
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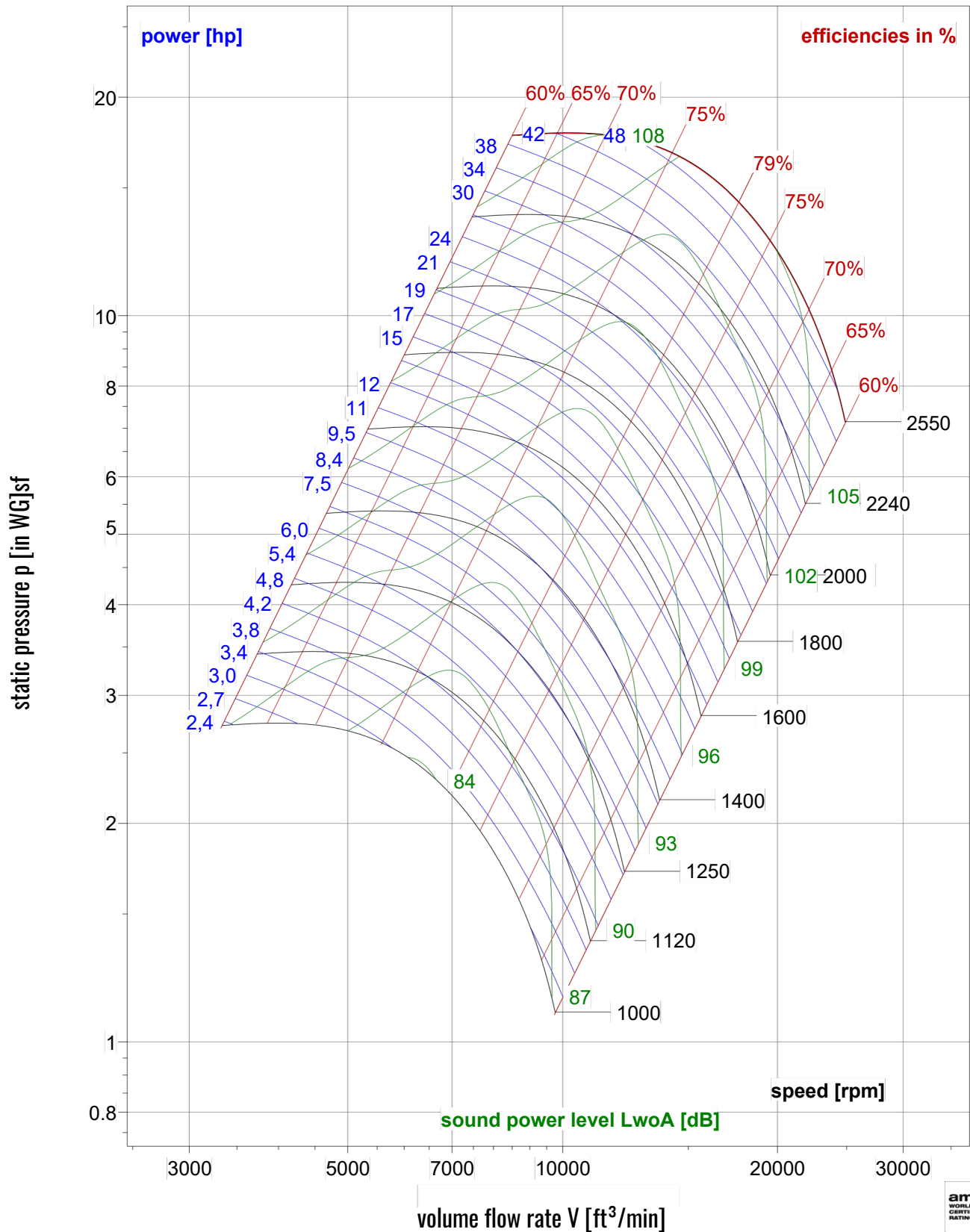
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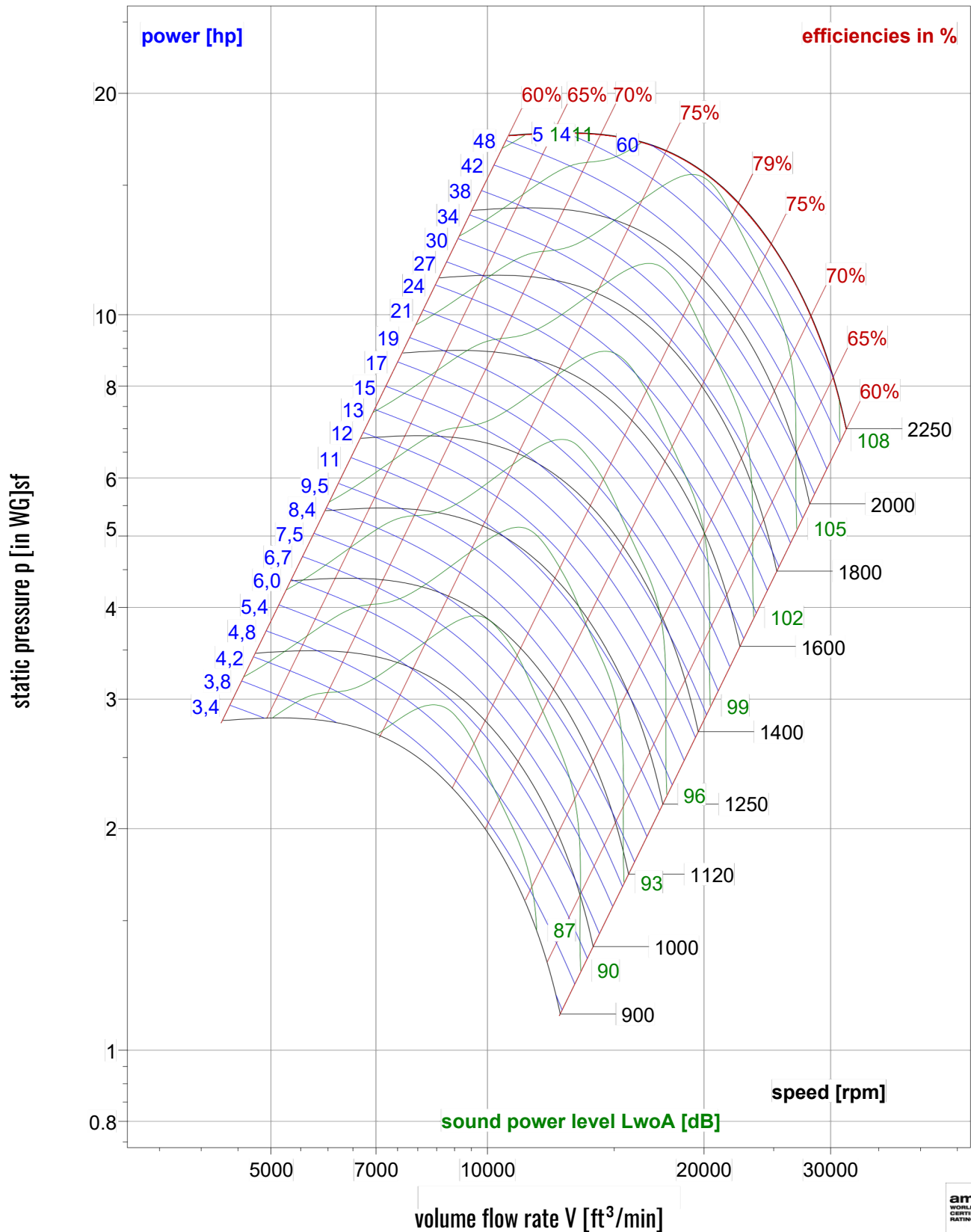
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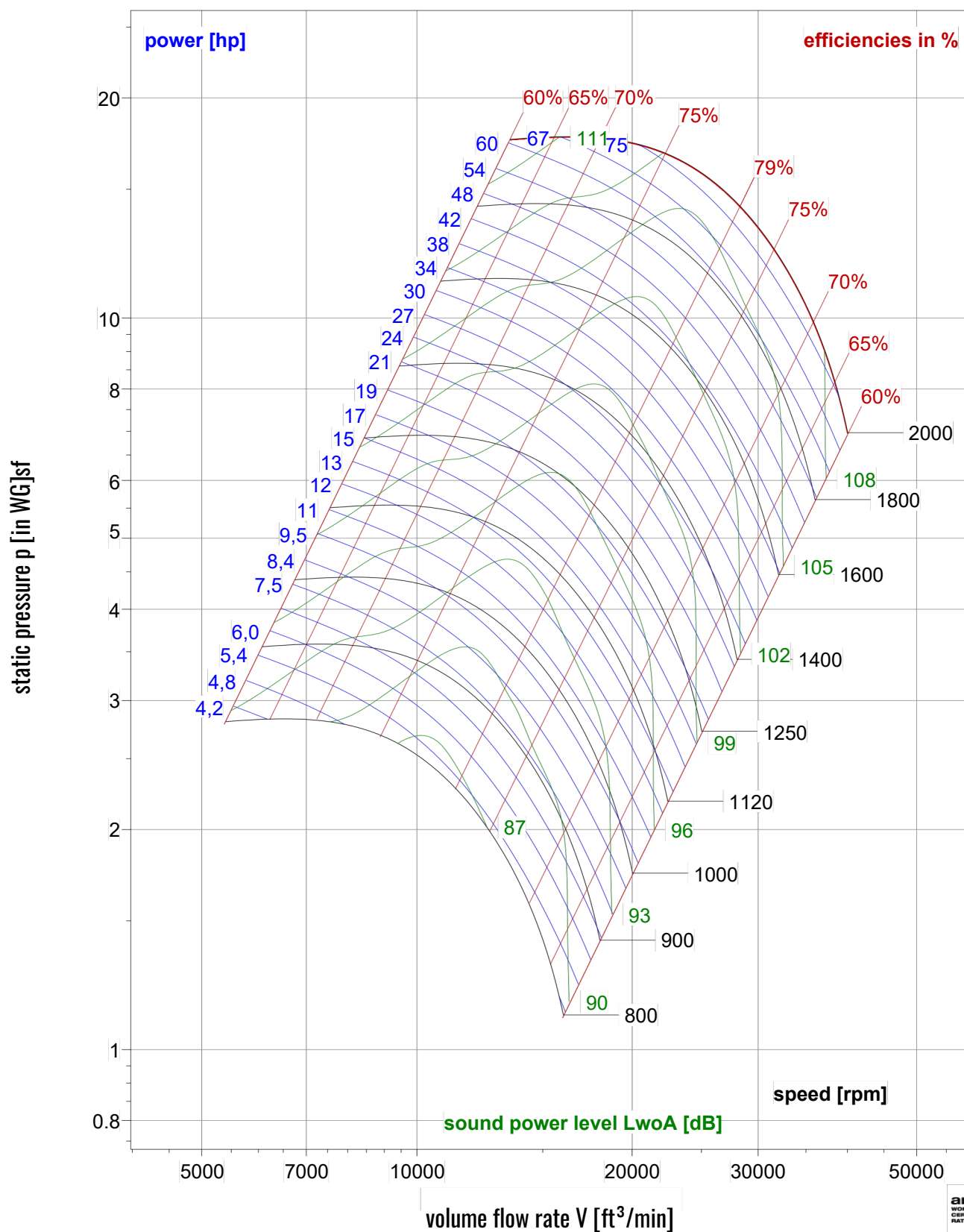
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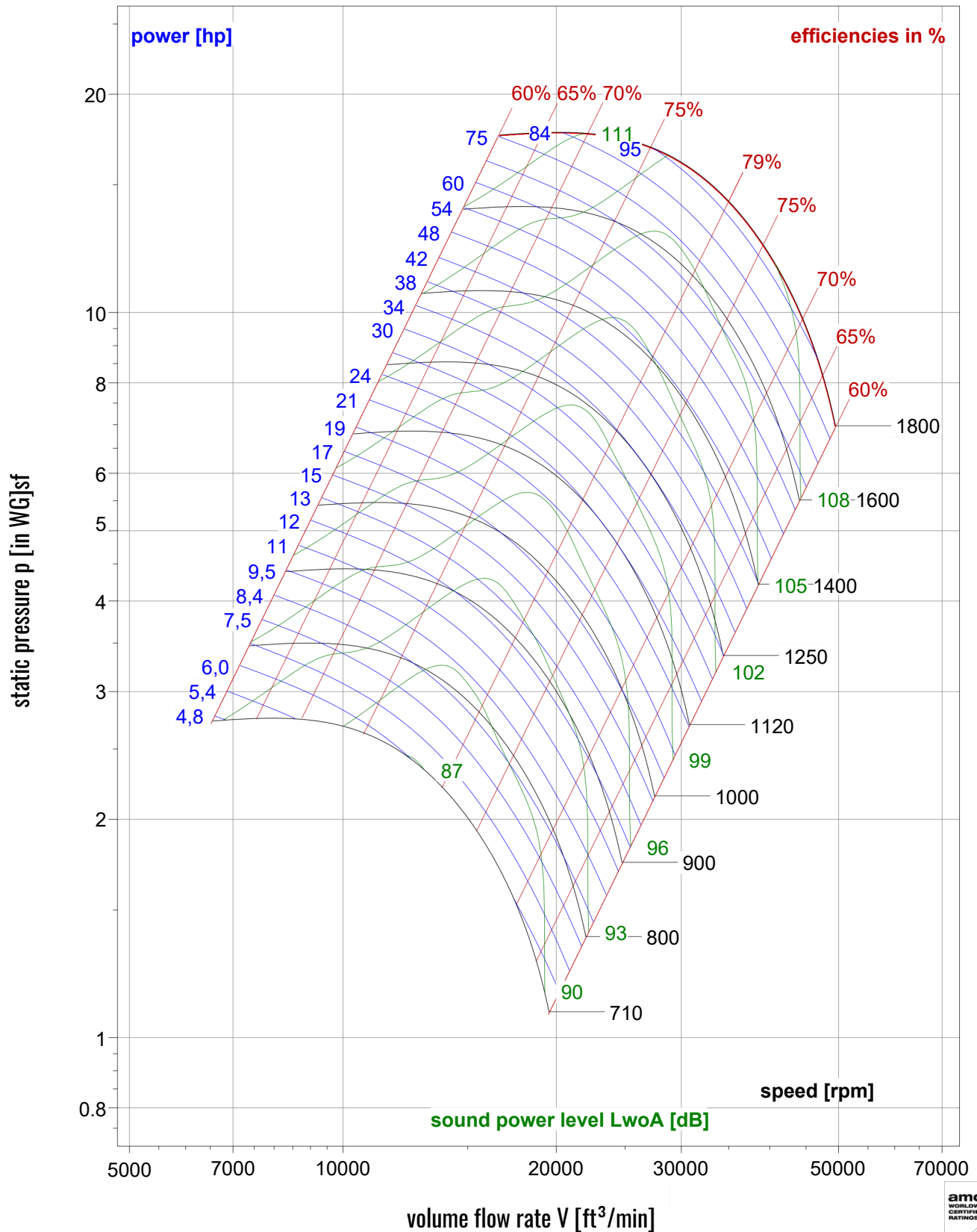
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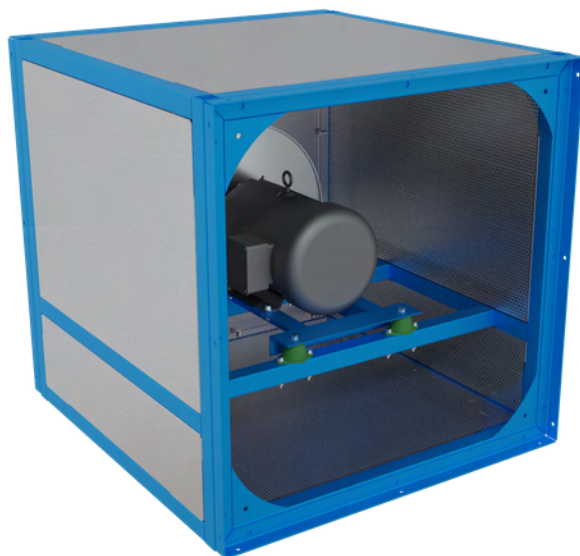
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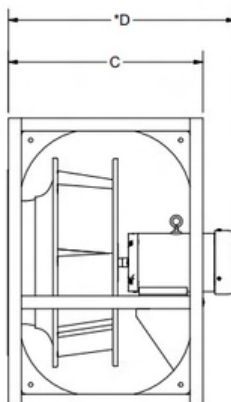
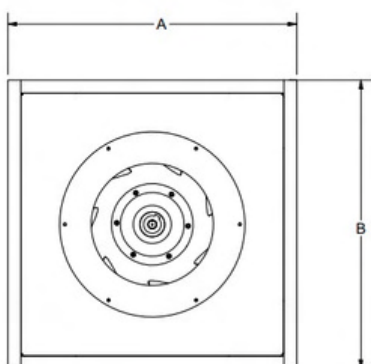
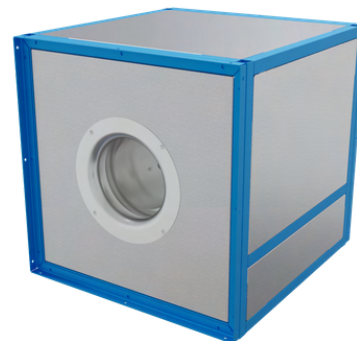
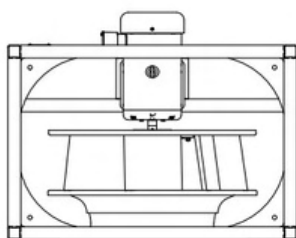
CDPI

Insulated Cube-Mounted, Direct Drive Plenum Fan

The CPDI is a cube-mounted direct drive plenum fan, featuring acoustically insulated panels, for improved sound performance. The CPDI is designed to be stacked and bolted together for fan array applications. The cube height and width are customizable, allowing for outstanding flexibility in design.



CDPI Dimensions

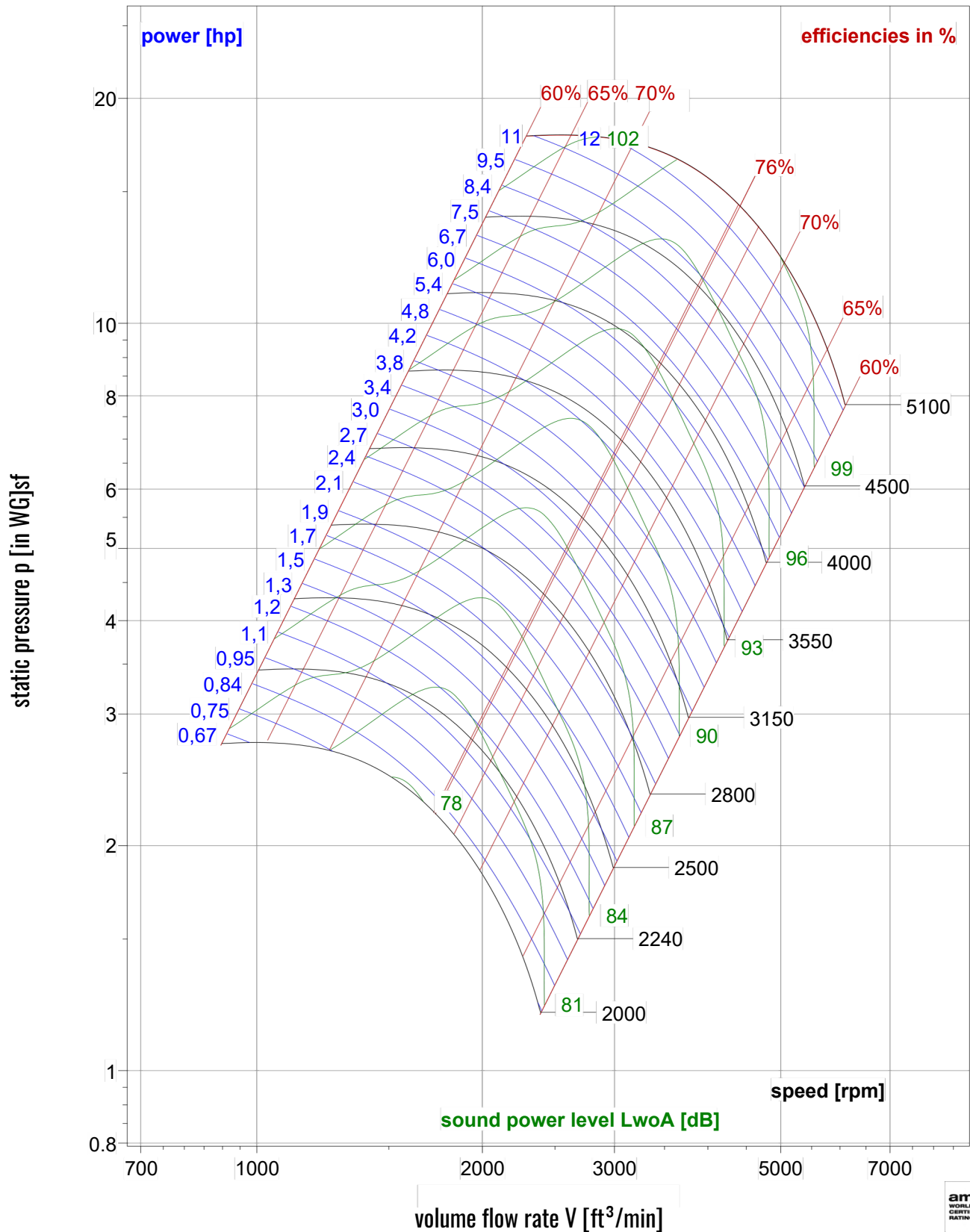


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DRAWN BY	NAME	DATE	
CHECKED BY	SF	02/05/25	
APPROVED BY			
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JOB NUMBER			CITY 1
MATERIAL			SCALE 1/2" = 1' SHEET 8 OF 1 REV 0

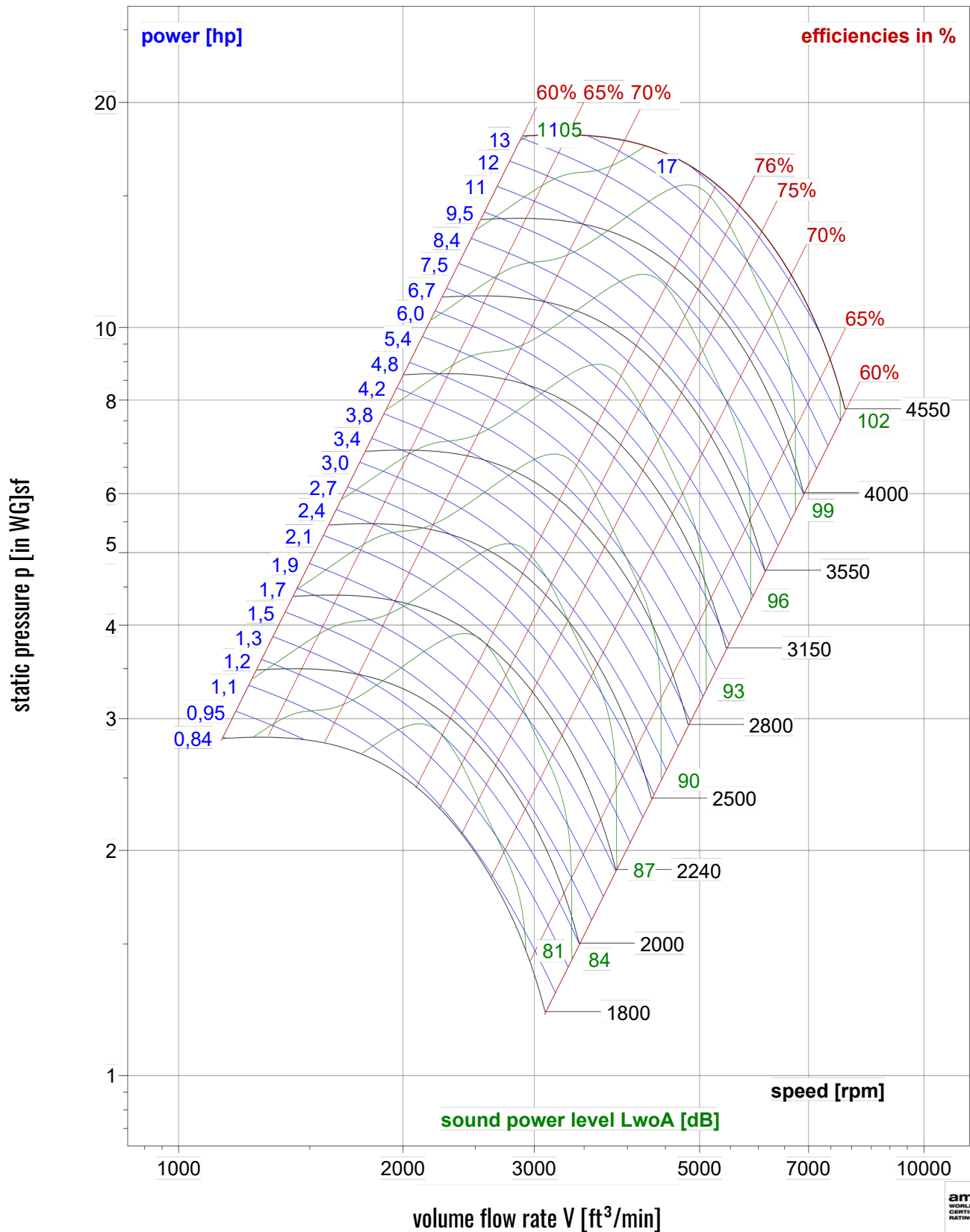
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	213T-215T			37.25		213T-215T			37.25
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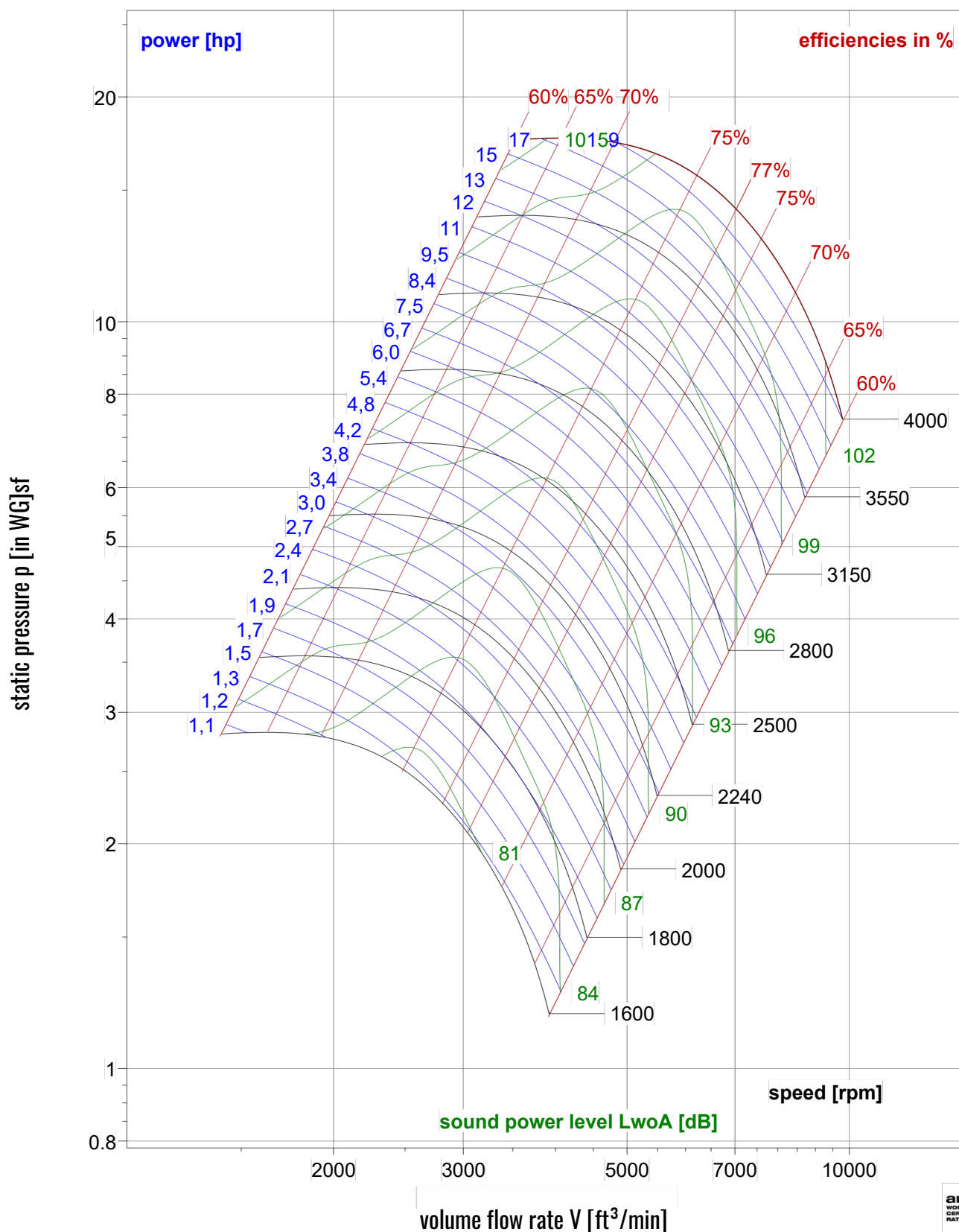
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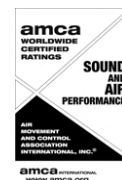


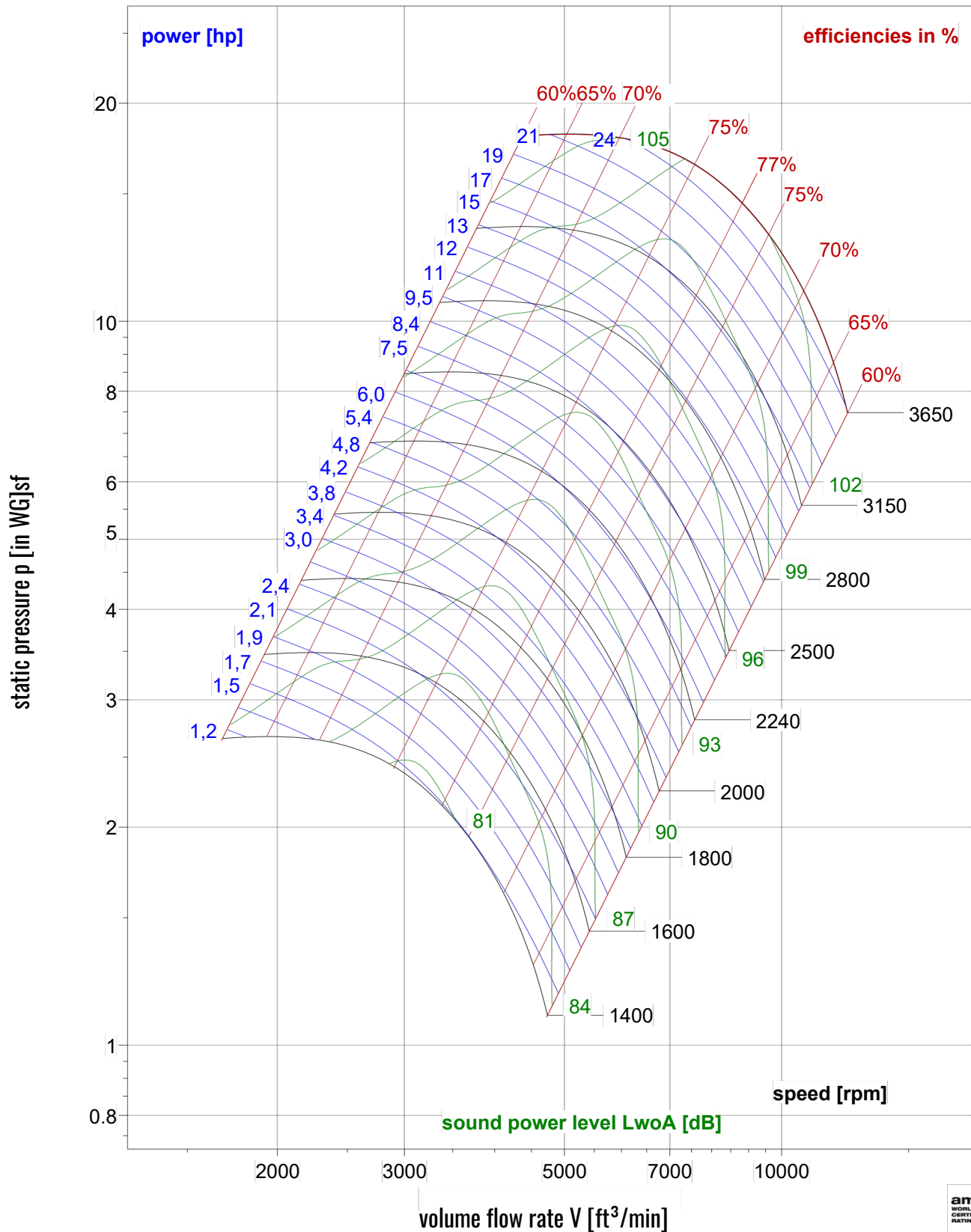
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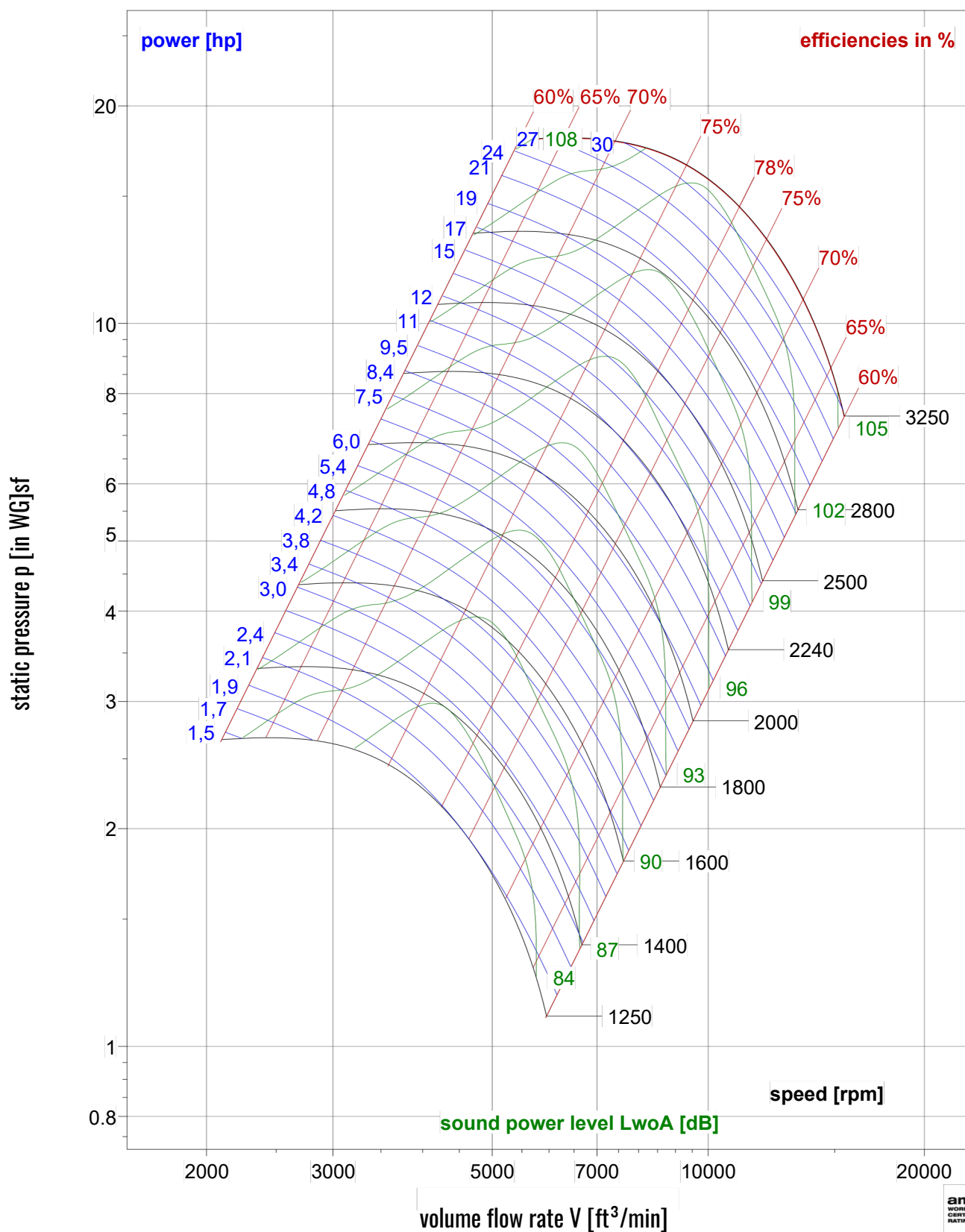
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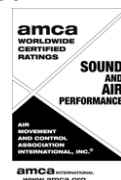


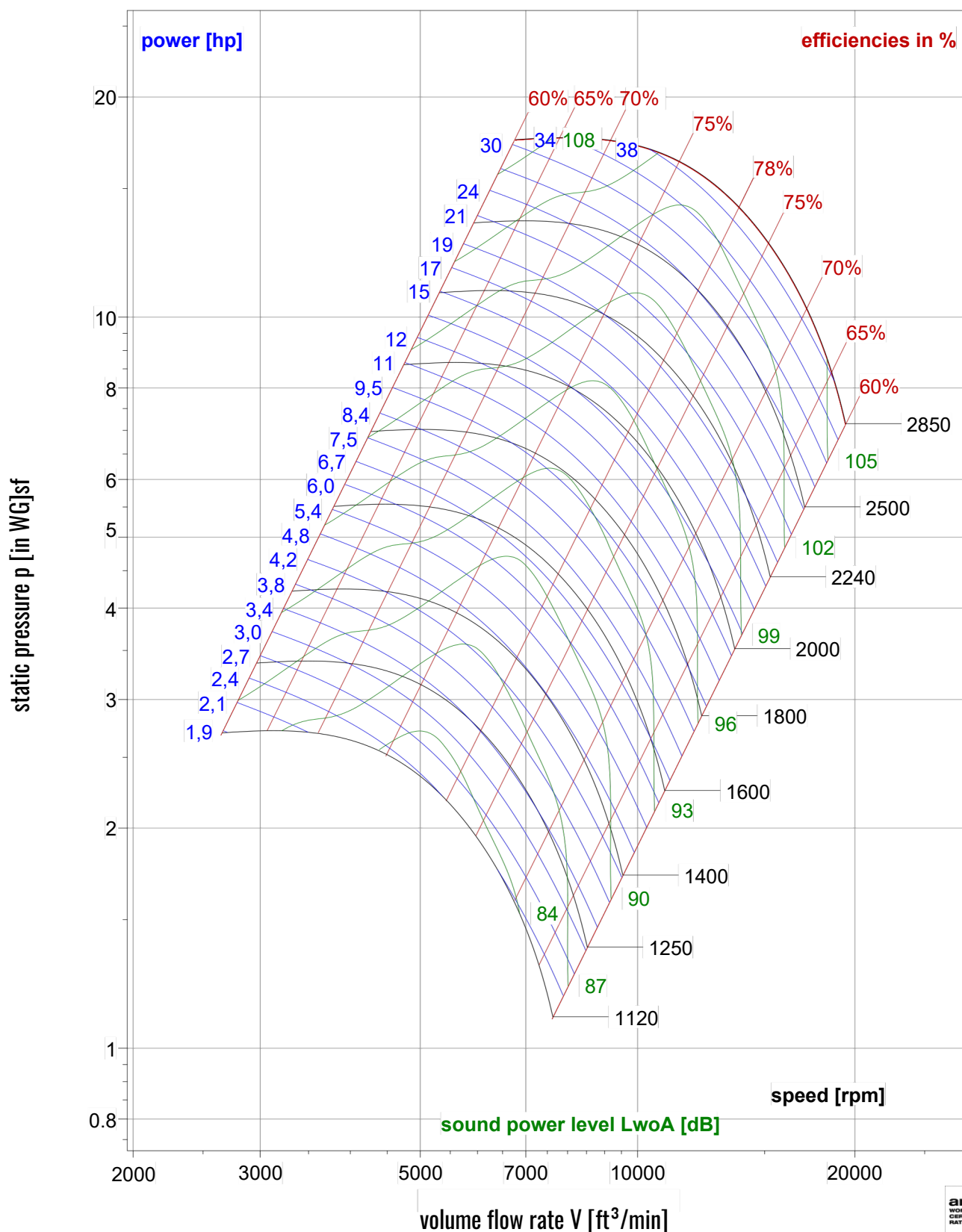
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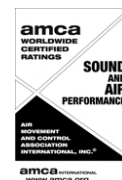


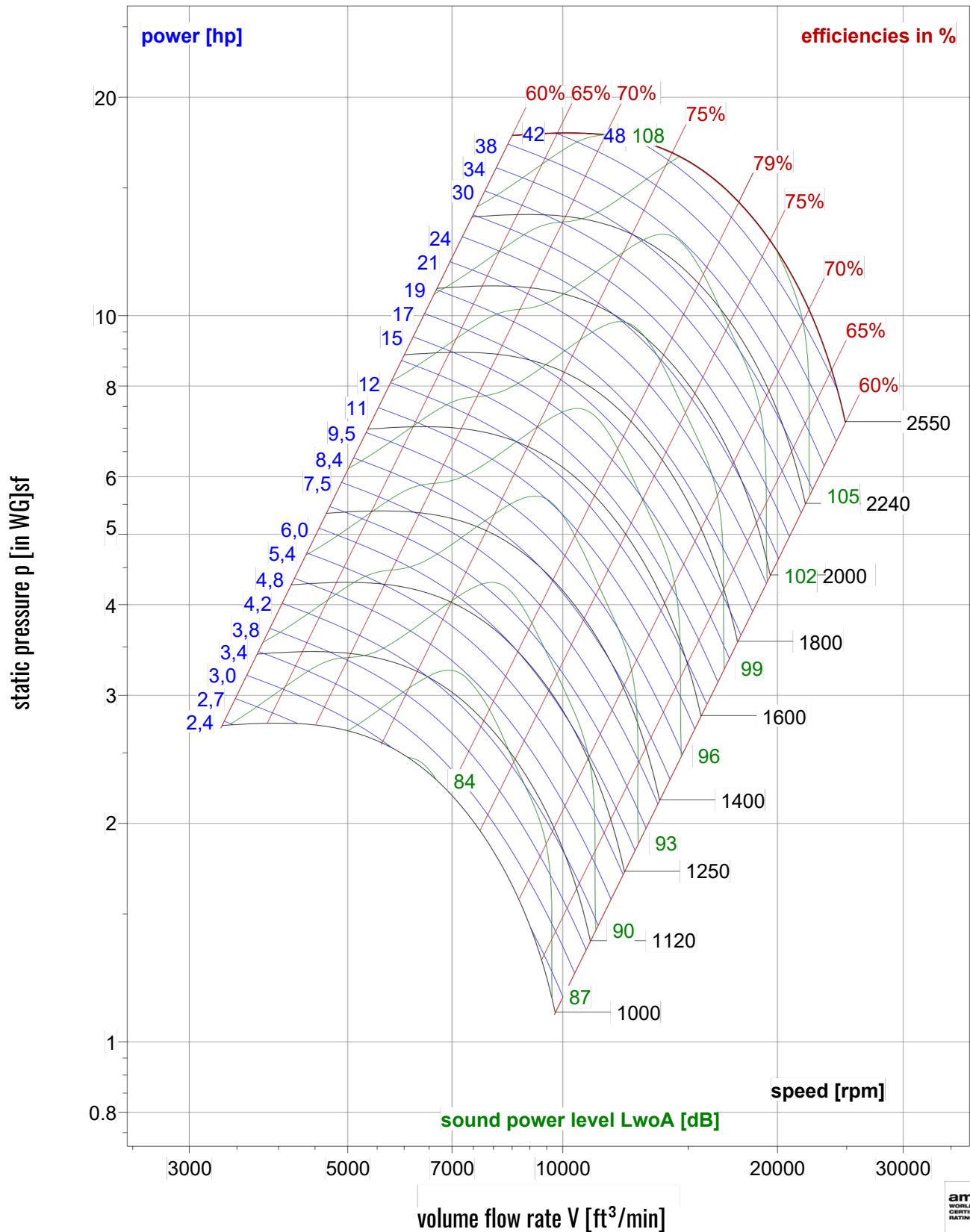
Performance certified is for installation type A: free inlet, free outlet. Power rating does not include transmission losses. Performance ratings do not include appurtenances. The sound ratings shown are LwoA sound power levels. The sound power level ratings shown are in decibels, referred to 10-12 watts, calculated per AMCA International Standard 301.





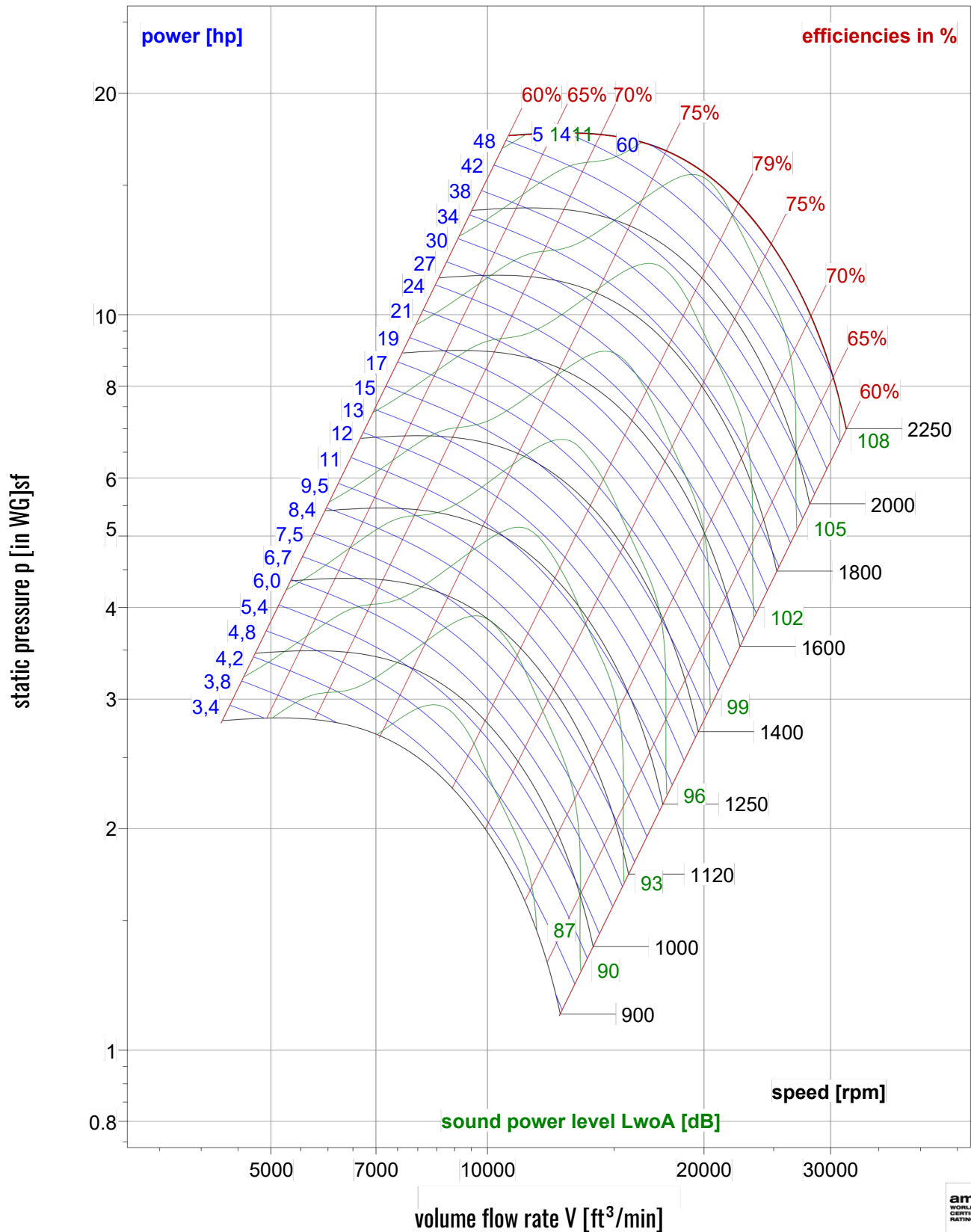
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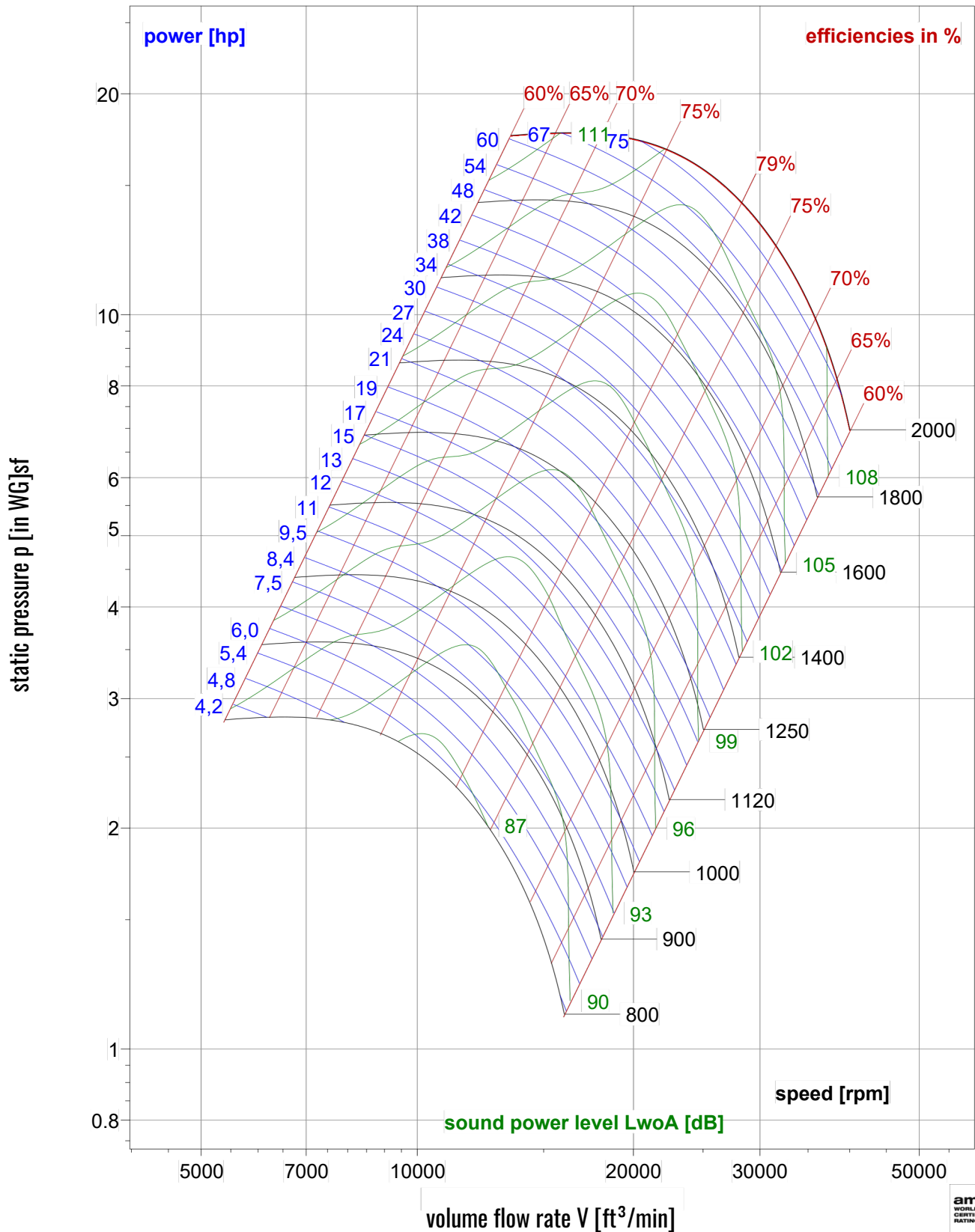
Performance certified is for installation type A: free inlet, free outlet. Power rating does not include transmission losses. Performance ratings do not include appurtenances. The sound ratings shown are L_{wA} sound power levels. The sound power level ratings shown are in decibels, referred to 10-12 watts, calculated per AMCA International Standard 301.





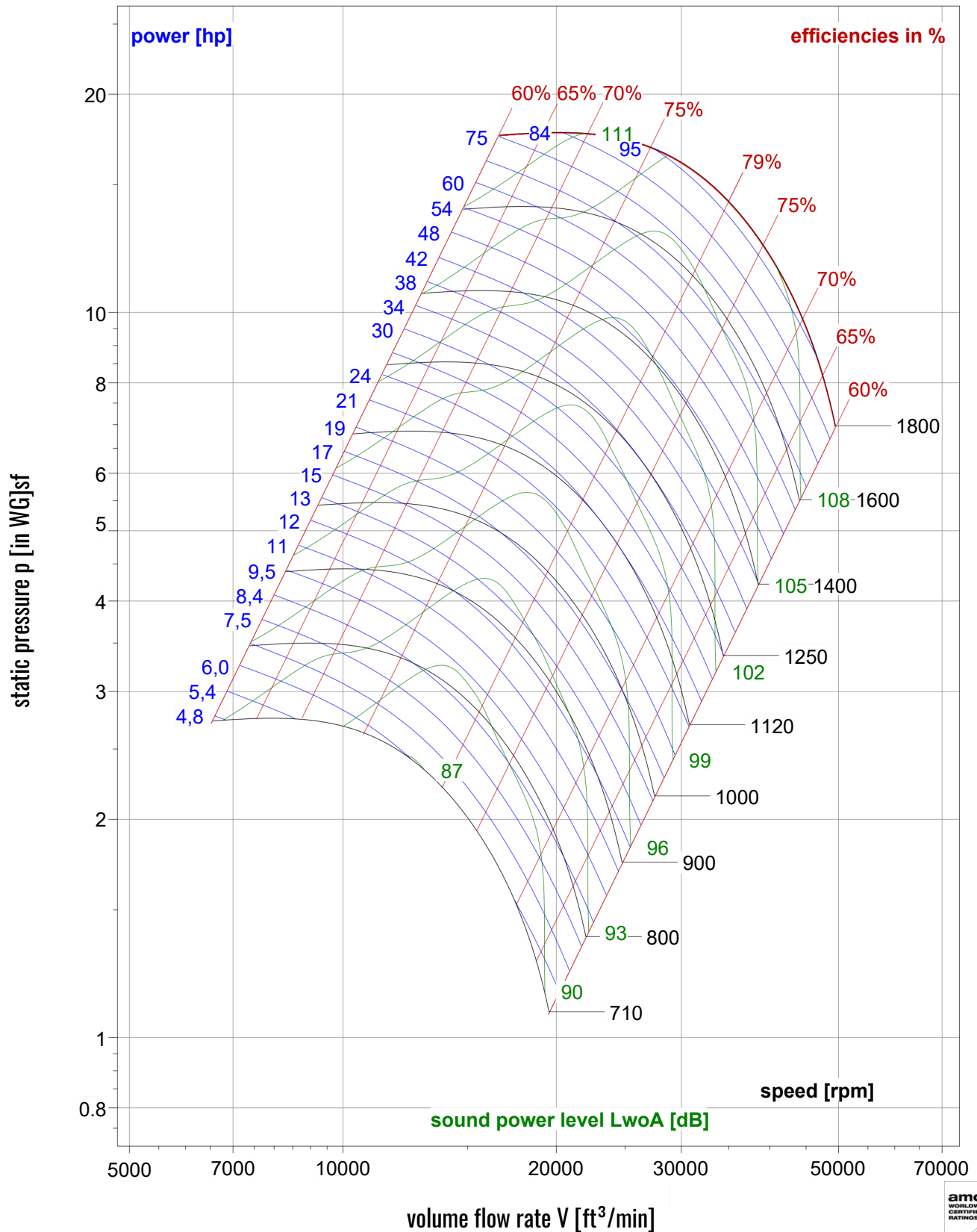
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