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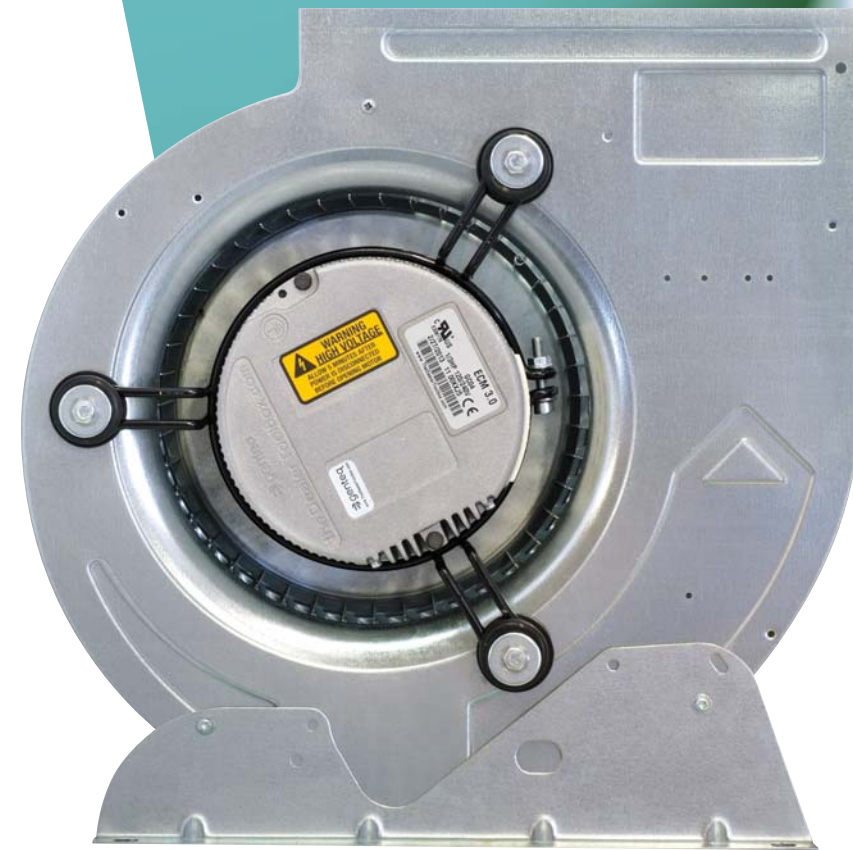
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DDe Electronic Centrifugal Blowers

A Regal Brand

REGAL

A Regal Brand

REGAL



La Società

Il Gruppo **ELCO** è uno dei pochi produttori a livello mondiale che possa vantare un'esperienza di oltre 50 anni nella produzione di gruppi ventilanti nel campo del riscaldamento, ventilazione e condizionamento (HVAC). Questa posizione di riconosciuta leadership è il risultato di uno specifico know-how nella progettazione e produzione di motori elettrici frazionari unito all'ottima competenza dell'aeraulica, nonché di un range di prodotto in grado di soddisfare tutte le richieste del mercato.

Il recente sviluppo internazionale del Gruppo, con unità produttive dislocate su tre continenti, è la migliore premessa per offrire le "soluzioni **ELCO**" ad un mercato non più domestico-europeo ma ormai "globale" sia per chi ricerca soluzioni articolate (gruppi ventilanti) sia per chi si orienta sui singoli componenti elementari.



The Company

ELCO is one of the few world-wide manufacturers with more than 50 years experience in the production of fan deck units used in the heating, refrigeration and air conditioning field (HVAC). Its acknowledged leadership is the result of a specific know-how both in the design and in the manufacturing of fractional horsepower motors combined with an excellent mastery of aeraulic techniques, as well as a range of products that satisfy all the market requirements.

The recent international development of the **ELCO** Group, with its manufacturing plants located worldwide, represents the best preliminary condition to offer "**ELCO** solutions" not only to a Domestic/European market but even and above all to a "global" market both in the research of integrated solution (e.g. fan-decks) and single basic components.



La société

Le groupe **ELCO** est l'un des producteurs dans le monde qui peuvent vanter plus de 50 ans d'expérience dans la fabrication des ventilateurs dans les domaines du chauffage, de la ventilation et dans la climatisation (HVAC). La position de leadership acquise sur le marché est le résultat de l'expertise **ELCO** dans ce secteur spécifique. La conception du produit, la fabrication des moteurs électriques, la maîtrise des problématiques aérauliques propres du marché et en fin une gamme de produits répondent à toutes les exigences du marché renforcent la leadership de **ELCO**.

Le récent développement international du Groupe avec l'ouverture des sites de production sur trois continents, c'est une condition préalable pour pouvoir offrir les «solutions **ELCO**» sur le marché "global", aussi bien pour la clientèle intéressée aux ventilateurs complets, que aux composent des mêmes.



Das Unternehmen

Die Unternehmensgruppe **ELCO** ist einer der wenigen Hersteller weltweit, der auf eine mehr als fünfzigjährige Erfahrung in der Produktion von Lüftereinheiten im Bereich Heizung, Lüftung und Klimatechnik (HLK) zurückblicken kann. Diese anerkannte Führungsposition ist das Ergebnis eines spezifischen Know-hows bei der Entwicklung und der Herstellung von FHP-Motoren und der optimalen Kenntnis und Beherrschung der Problemstellungen der Lufttechnik sowie eines Produktangebots, das allen Anforderungen des Marktes gerecht wird.

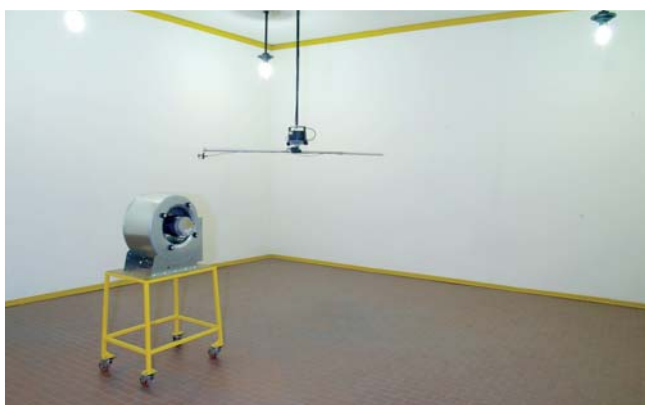
Die in den letzten Jahren erfolgte internationale Entwicklung der Gruppe mit Produktionsstandorten auf drei Kontinenten ist die beste Voraussetzung für das Angebot der "Lösungen **ELCO**" nicht mehr nur auf dem europäischen Binnenmarkt, sondern auf dem globalen Markt. Dies gilt sowohl für komplexe Lösungen (Lüftereinheiten) als auch für einzelne grundlegende Bauteile.



La Empresa

El grupo **ELCO**, es uno de los pocos productores a nivel mundial que cuenta con más de 50 años de experiencia en la fabricación de ventiladores para la calefacción, ventilación y acondicionamiento (HVAC). Esta posición de liderazgo no sólo es resultado de un know-how específico en el proyecto y fabricación de motores eléctricos, sino también del excelente dominio de la aeráulica, así como de un gran abanico de productos para cumplir con todas las exigencias del mercado.

El reciente desarrollo internacional del Grupo, que cuenta con plantas en tres continentes, contribuye a ofrecer "soluciones **ELCO**" a un mercado no sólo nacional/europeo sino sobre todo global, tanto para la búsqueda de soluciones complejas (grupos de ventilación) como de componentes elementales.



La Progettazione

La pluridecennale esperienza di progettazione per questi particolari ventilatori è raccolta oggi in una completa banca dati che permette di proporre ai clienti un ampio ventaglio di soluzioni tecniche per ottimizzare la scelta del ventilatore più idoneo per ogni singola applicazione.

Il team tecnico si avvale di sistemi CAD, di un moderno laboratorio di prove elettriche, aerauliche in accordo alle norme AMCA 210-99, di una camera riverberante per le prove di potenza sonora a norme UNI EN ISO 3741:2001, di Camere Climatiche "fredda" e "tropicale", adatte a simulare le condizioni ambientali reali in cui si trovano ad operare i ventilatori.

La speciale sezione "Ricerca e Sviluppo" è inoltre alla costante ricerca di soluzioni innovative che spesso anticipano le richieste del mercato, come per esempio nelle esigenze di regolazione, nella ottimizzazione della efficienza energetica, nella riduzione dei livelli sonori, etc.



The design

The multi decade experience in the design of these particular fans is stored in a complete database from where customers can choose, among a wide range of technical solutions, the most suitable for any single application.

The technical team is provided with 3D CAD, an advanced lab for electric and aeraulic tests in compliance with AMCA 210-99 rules, a reverberation chamber for sound power tests according to UNI EN ISO 3741:2001, "cold" and "tropical" chambers suitable for the simulation of real working environmental condition of the fans.

The "Research and Development" department is engaged in a never ending quest for innovative solutions, often ahead of market requirements, such as air volume regulation, energy efficiency improvement, noise level reduction, etc.



La conception

Des décennies d'expérience dans la conception de ces ventilateurs spécifiques aux besoins clientèle, fournissent à ELCO une vaste et unique base des données permettant de sélectionner pour chaque client une solution optimale à son application.

Le département technique est équipé des systèmes de projet CAD 3D, d'un laboratoire modern pour les tests électriques, mécaniques et aérauliques conformément à la norme AMCA 210-99. Une chambre de réverbération pour les tests de puissance acoustique est utilisée en conformité avec la norme UNI EN ISO 3741:2001, une chambre Climatique "froid" et "tropical", pour la simulation des conditions environnementales dans lesquelles les produits son supposés travailler.

Le département "R&D" est en permanence à la recherche de solutions innovantes qui misent à anticiper les demandes du marché, avec particulières attentions concernant: l'économie d'énergie, la réduction des niveaux acoustiques, les prestations aérauliques, la régulation etc.



Die Entwicklung

Die Erfahrungen, die über Jahrzehnte in der Entwicklung dieser speziellen Ventilatoren gesammelt wurden, befinden sich heute in einer einzigartigen und umfassenden Datenbank, mit der dem Kunden ein breiter Fächer an technischen Lösungen angeboten werden kann, um die Auswahl des geeigneten Ventilators für jede einzelne Anwendung zu optimieren.

Das technische Team verfügt über CAD-Systeme und geeignete Software für die Erstellung von 3D-Zeichnungen, ein modernes Labor für die elektrischen und lufttechnischen Tests in Übereinstimmung mit den Normen AMCA 210-99, eine Hallkammer für die Prüfungen der Schallleistung gemäß der Normen UNI EN ISO 3741:2001 sowie eine "kalte" und eine "tropische" Klimakammer für die Simulation der tatsächlichen Umgebungsbedingungen, in denen die Ventilatoren eingesetzt werden.

Der spezielle Bereich "Forschung und Entwicklung" sucht ständig nach innovativen Lösungen, die häufig die Anforderungen des Marktes vorwegnehmen, wie beispielsweise bei den Problemen der Regulierung, der Optimierung der Energieeffizienz, der Reduzierung der Geräuschemission usw.



El Proyecto

Gracias a la larga experiencia en el desarrollo de estos equipos, hoy día nuestros clientes pueden contar con un amplio conjunto de soluciones técnicas para elegir el ventilador más adecuado para cada aplicación.

El departamento técnico cuenta con sistemas CAD y software para la realización de dibujos tridimensionales, un moderno laboratorio para pruebas eléctricas y aeráulicas que cumplen con las directivas AMCA 210-99, una cámara reverberante para las pruebas de potencia sonora según UNI EN ISO 3741:2001, cámaras climáticas "fría" y "tropical" adecuadas para simular las condiciones medioambientales reales en que trabajan los ventiladores.

El departamento "Investigación y Desarrollo" siempre intenta encontrar soluciones innovadoras, como por ejemplo en los campos de la regulación, optimización de la eficiencia energética y reducción de los niveles de ruido.



La Produzione

La crescente domanda di soluzioni ELCO ha ispirato la completa riorganizzazione dei sistemi di produzione che si avvalgono di diverse linee di assemblaggio automatiche che, esaltando una elevata flessibilità, permettono di supportare la crescita del parco clienti.

Queste linee, armonizzate per ottenere una maggiore efficienza produttiva, sono dotate di sofisticate attrezzature e strumenti atti a garantire un prodotto finale altamente qualificabile nel rispetto delle richieste di mercato. Inoltre l'organizzazione dei processi produttivi viene svolta secondo le moderne metodologie "Lean Production" e "Six Sigma".

Apparati informatici implementati sulla linea produttiva permettono di visualizzare in tempo reale il processo produttivo e velocizzare le procedure liberando risorse per ottenere valore aggiunto sulle attività in essere.



The Production

The increasing request of ELCO solutions led to a complete reorganization of the production systems. Adopting high duty semi automatic lines able to meet the constant growth of the customers.

These production lines are equipped with sophisticated instruments fit for granting selected products, computerized devices allow to display on real time the productive process and speed up the operating procedure; furthermore the productive process is developed according to "Lean Production" and "Six Sigma" methodologies.

IT tools on the assembly line show the production process in real time increasing the efficiency of the production processes.



La production

Le succès des ventes a imposé une réorganisation complète des systèmes de production, qui emploient aujourd'hui plusieurs lignes automatiques, permettent de produire avec flexibilité et suivant la volatilité du marché.

Ces lignes, conçues pour atteindre une plus grande productivité, sont équipées d'outils sophistiqués pour assurer un contrôle en ligne à 100%, et un niveau qualitatif de plus élevé selon les exigences du marché. Les procès productifs sont conçus et misent en place en appliquant des méthodes conformes aux systèmes de contrôle «Six Sigma» et «Lean Production».

Chaque opération est surveillée par un système informatique, qui permet de vérifier le processus de production en temps réel et le rendre plus efficace. Ce contrôle permet également une utilisation optimale des ressources disponibles.



Die Produktion

Die steigenden Verkaufserfolge haben zu einer vollständigen Restrukturierung der Produktionssysteme geführt, die heute auf mehreren automatischen Anlagen basieren, mit denen Produktionsvolumina gewährleistet werden können, die weit über der derzeitigen Nachfrage des Marktes liegen, ohne dass Abstriche bei der hohen Flexibilität gemacht werden müssen.

Diese Anlagen, die für eine höhere Produktivität aufeinander abgestimmt sind, sind mit modernsten Ausrüstungen und Instrumenten ausgestattet, mit denen ein hochqualifiziertes Endprodukt entsprechend der Marktanforderungen gewährleistet werden kann. Darüber hinaus erfolgt die Organisation der Produktionsprozesse mit den modernen Methoden "Lean Production" und "Six Sigma".

Auf der Produktionsanlage implementierte Computer ermöglichen die Anzeige der Produktionsprozesse in Echtzeit sowie die Beschleunigung der Arbeitsvorgänge, und setzen damit Ressourcen für einen Mehrwert der bestehenden Tätigkeiten frei.



La Producción

Los crecientes éxitos de venta han impuesto la completa reorganización de los sistemas de producción, que hoy se sirven de varias líneas automáticas que, sin sacrificar una alta flexibilidad, permiten mantener el desarrollo de nuestros clientes.

Estas líneas, armonizadas para conseguir mayor eficiencia productiva, están equipadas de sofisticados equipos que garantizan un producto final extremadamente exigente, de acuerdo a las solicitudes del mercado. Además, la organización de los proyectos de producción se lleva a cabo según las modernas metodologías "Lean Production" y "Six Sigma".

Equipos informáticos en la línea de producción permiten visualizar en tiempo real el proceso de producción y acelerar los procedimientos soltando recursos para conseguir valor añadido en las actividades vigentes.

DDe 9/7



DDe 9/9



Il Prodotto

I ventilatori centrifughi serie DDe, con ventole pala avanti accoppiate direttamente al motore, sono la soluzione ideale per le applicazioni nel campo del riscaldamento, ventilazione e condizionamento dell'aria (HVAC). La vasta gamma di prodotti e l'accoppiamento a motori a commutazione elettronica consentono di scegliere il ventilatore più idoneo alle vostre necessità.

La parte ventilante composta da coclea compatta in lamiera zincata è stata appositamente disegnata per fornire eccellenti prestazioni aerodinamiche, mentre la ventola pala avanti in lamiera o in materiale plastico è stata progettata per ottenere efficienze aerauliche elevate.

Il motore a commutazione elettronica a magneti permanenti è stato accoppiato per fornire nel loro insieme un range di prestazioni elevate con gradi di efficienza in grado di rispettare la nuova Direttiva Europea ErP 2015.

Inoltre la disponibilità di elettronica a bordo motore consente una regolazione continua della velocità del ventilatore ottenendo quindi una vasta gamma di prestazioni



The Product

The DDe series' centrifugal blowers, with forward curved blade directly coupled with the motor, are the perfect solution to the application in the field of heating, ventilation and air conditioning (HVAC). The wide range of products and the coupling with the electronic commutation motors allow the choice of the most suitable fan blower for any need.

The ventilating part composed of compact housing made of galvanized steel plate has been specifically designed to supply excellent aerodynamics performance, whereas the forward curved blade made of plate or plastics has been designed to get high aeraulic efficiencies.

The electronic commutated motor with permanent magnet has been coupled to get, as a whole, a range of high performances with efficiency degrees able to respect the new European Rule ErP 2015.

Furthermore the electronic device on board allows a continuous control of the speed of the fans getting a wide range of performances with just only one fan deck type.

Peculiar solutions adopted for the motor



Le produit

Les ventilateurs série DDe, avec des hélices centrifuges à action, directement accouplés au moteur, sont la solution idéale pour votre application dans le domaine de la ventilation, du chauffage et de climatisation (HVAC). La large gamme dimensionnelle des ventilateurs et le couplage avec les moteurs BLDC a aimant permanent permettent de choisir pour chaque client une solution optimale et unique à son application.

La partie ventilant est composée d'une volute galvanisée compacte spécialement conçue pour offrir d'excellentes performances aérodynamiques, et d'une hélice centrifuge à action en tôle ou en matière plastique conçue pour obtenir des rendements aéraulique élevés.

Le moteur à commutation électronique à aimants permanents est utilisé pour fournir des hautes performances en conformité énergétique avec la nouvelle directive européenne ErP 2015.

Le contrôle électronique à bord, permet un réglage continu de la vitesse du ventilateur, en obtenant une large gamme de prestations avec un seul type de ventilateur.

Le fixation de la volute au moteur est étudié avec l'objectif de



Das Produkt

Die Radialventilatoren der Serie DDe mit vorwärts gekrümmten Schaufeln des Lüferrades, die direkt an den Motor angeschlossen werden, stellen eine ideale Lösung für Ihre Anwendungen im Bereich Heizung, Lüftung und Klimatechnik (HLK) dar. Das umfangreiche Produktangebot und die Kopplung mit elektronisch kommutierten Motoren ermöglichen die Auswahl des für Ihre Anforderungen optimal geeigneten Ventilators.

Das Lüfterteil besteht aus einer kompakten Schnecke aus verzinktem Blech und liefert exzellente aerodynamische Leistungen, während das Lüferrad mit vorwärts gekrümmten Schaufeln aus Blech oder Kunststoff eine hohe Lüftungseffizienz gewährleistet.

Die Kopplung mit dem elektronisch kommutierten PM-Motor stellt hohe Leistungsbereiche mit Wirkungsgraden bereit, die der neuen Europäischen Richtlinie ErP 2015 genügen.

Darüber hinaus ermöglicht die Bereitstellung der Elektronik auf dem Motor eine stufenlose Geschwindigkeitsregulierung des Ventilators für einen breiten Leistungsbereich mit nur einer einzigen Lüftereinheit.



El Producto

Los ventiladores centrifugos de la serie DDe, con hélices hacia adelante acopladas directamente al motor, constituyen la solución ideal para las aplicaciones en el campo de la calefacción, ventilación y acondicionamiento del aire (HVAC). La amplia gama de productos y el acoplamiento a motores con conmutación electrónica permiten elegir el ventilador más adecuado a sus necesidades.

La parte de ventilación, que se compone de coclea compacta de chapa zincada, se ha diseñado para conseguir excelentes prestaciones aerodinámicas, mientras la hélice hacia adelante de chapa o material plástico se ha realizado para lograr eficiencias aeraulicas notables.

El motor de conmutación electrónica a imán permanente, proporciona elevadas prestaciones con grados de eficiencia que cumplen con la nueva Directiva Europea ErP 2015.

La electrónica incorporada al motor permite una regulación continua de la velocidad el ventilador.

La fijación particular de los motores a la coclea permite reducir el nivel de vibración

DDe 10/8



DDe 10/10



Il Prodotto

con un unico tipo di gruppo ventilante.

Particolari accorgimenti nel fissaggio del motore alla coclea hanno ottenuto lo scopo di una drastica riduzione del livello di vibrazione e un conseguente basso livello sonoro. Sistema di connessione molto semplice composto da un cavo di potenza e un cavo di segnale per la regolazione della velocità del tipo PWM (o 0-10 Vdc a richiesta).

Un apposito filtro opzionale consente al gruppo ventilante il rispetto della EMC, compatibilità elettromagnetica, con drastiche riduzioni delle correnti armoniche. Questa tipologia di motori è in grado di sviluppare elevate potenze con dimensioni contenute e con prestazioni di gran lunga superiori ai motori PSC e soprattutto incontrare le richieste di mercato relative al "risparmio energetico", oltre a contribuire in modo significativo ad una drastica riduzione di CO₂ immesso nell'ambiente.

Il motore completamente chiuso in lamiera verniciata con scheda elettronica montata a bordo, disegnato per funzionare alla tensione di rete 230/115 V e frequenze 50/60 Hz,



The Product

fixing to the housing got the result of a effective reduction of vibration and consequently noise level. The junction system is very simple and is composed of a power cable and a signal cable type PWM (or 0-10 Vdc upon request) for the regulation of the speed.

A specific optional filter allows the fan deck to respect the EMC, electromagnetic compatibility, with severe reduction of the harmonic currents. In spite of its small dimension this typology of motors can develop high power output and performances far and away better than PSC motors and above all it meets the market request concerning the "energy saving" besides the contribution to a drastic CO₂ reduction of the emission in the environment.

The motor is completely closed made of varnished steel with electronic card on board, designed to work at the 230/115 V, 50/60Hz, power from 1/3 HP to 1 HP properly coupled with fans in the range from 9" to 12". This coupling allow a wide range of aeraulic performance in order to meet the most challenging request.

All motors are designed



Le produit

réduire drastiquement le niveau des vibrations et du bruit conséquent. Système de connexion très simple, composé d'un câble d'alimentation et un câble de signal pour le contrôle de vitesse de type PWM (ou 0-10 Vdc en option).

Un filtre spécial optionnel permet la mise en conformité à la réglementation européenne EMC, compatibilité électromagnétique, avec des réductions drastiques des courants harmoniques. Ce type de moteur BLDC est capable de développer puissances élevées avec des dimensions compactes et des performances bien supérieures au moteurs PSC. Il répond aux exigences du marché en ce qui concerne "l'économie d'énergie", et il contribue de manière significative à une réduction drastique des émissions de CO₂.

Le moteur est complètement fermé en acier, l'électronique montée est conçue pour fonctionner à une tension d'alimentation de 230/115 V, 50/60 Hz. Les puissances rendues par les moteurs sont entre 250 W et 750 W, et sont couplées de manière appropriés avec les ventilateurs diamètre de 9" à 12" (228mm a 304mm). Ce couplage permet une large gamme de performances aerauliques



Das Produkt

Besondere Lösungen für die Fixierung des Motors an der Schnecke führen zu einer drastischen Reduzierung der Vibrationen und damit folglich zu einem geringen Schalldruckpegel. Äußerst einfaches Anschlussystem mit einem Leistungs- und einem Signalkabel für die Geschwindigkeitsregulierung vom Typ PWM oder 0-10 Vdc.

Durch den Einsatz eines entsprechenden Filters entspricht die Lüftereinheit den Vorgaben der EMV, der Richtlinie zur elektromagnetischen Verträglichkeit, mit drastischer Verringerung des Störstroms. Dieser Motortyp kann bei kompakten Maßen hohe Leistungen und eine Performance bereitstellen, die weit über denen von PSC-Motoren liegt, und entspricht damit, neben einem signifikanten Beitrag zur drastischen Reduzierung des CO₂-Ausstoßes in die Umwelt, insbesondere den Energiesparanforderungen des Marktes.

Der Motor mit vollständig geschlossenem Gehäuse aus lackiertem Blech, mit elektronischer Karte, ausgelegt für den Betrieb bei Netzspannung 230/115 V und Frequenzen 50/60 Hz, stellt



El Producto

y por consiguiente el nivel de ruido. El sistema de conexión es muy sencillo, sólo necesita un cable de potencia y un cable de señal para la regulación de la velocidad del tipo PWM (o 0-10 Vdc bajo solicitud).

Un filtro opcional apropiado permite al grupo de ventilación cumplir con la ECM, compatibilidad electromagnética, con drásticas reducciones de las corrientes armónicas. Esta tipología de motores puede desarrollar elevadas potencias con dimensiones reducidas y prestaciones superiores a los motores PSC; además contribuyen al ahorro energético, reduciendo de forma significativa el CO₂ emitido en el medioambiente.

El motor, cerrado en chapa zincada, con circuito electrónico incorporado, para el funcionamiento a la tensión de red 230/115 V y frecuencias 50/60 Hz, presenta potencias de 1/3 HP a 1 HP, acoplados a ventiladores de 9" a 12". Este acoplamiento permite conseguir prestaciones aeraulicas que cumplen con las solicitudes más exigentes.

Todos los motores se han proyectado y construido según las Directivas de Baja Tensión

DDe 12/9



DDe 12/12



Il Prodotto

presenta potenze che vanno da 1/3 HP a 1 HP e sono accoppiate in modo opportuno ai ventilatori nel range da 9" a 12". Questo accoppiamento consente una vasta gamma di prestazioni aerauliche che coprono le richieste più esigenti.

Tutti i motori sono progettati e costruiti in ottemperanza alle Direttive di Bassa Tensione 2006/95/EC e di Compatibilità Elettromagnetica 2004/108/EC con riferimento alla EN 55014-1, EN 61000-3-2, EN 61000-3-3, così come alla Direttiva Macchine 2006/42/EC, e in accordo alle Norme Standard CENELEC EN 60335-1, EN 60335-2-24, EN 60335-2-89, EN 60529, EN 60034-1.

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The Product

and manufactured in compliance with the Low Voltage 2006/95/EC and Electromagnetic Compatibility 2004/108/EC Directives with reference to EN 55014-1, EN 61000-3-2, EN 61000-3-3, as well as the Machine Directive 2006/42/EC, and in accordance with the Standards CENELEC EN 60335-1, EN 60335-2-24, EN 60335-2-89, EN 60529, EN 60034-1.

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Le produit

qui couvrent tous les besoins.

Tous les moteurs sont conçus et produits en conformité aux Directives Basse Tension 2006/95/EC et Compatibilité Electromagnétique 2004/108/EC en référence aux EN 55014-1, EN 61000-3-2, EN 61000-3-3, et aux Directives 2006/42/EC CENELEC EN 60335-1, EN 60335-2-24, EN 60335-2-89, EN 60529, EN 60034-1.

ELCO-E-TRADE Srl se réserve le droit de modifier sans préavis les spécifications techniques indiquées dans le catalogue. L'utilisateur est responsable pour la correcte utilisation et installation des produits décrits dans le catalogue en conformité avec les normes en vigueur dans chaque pays. Les performances indiquées sont à titre uniquement indicatif et sous réserve des tolérances. Le degré de protection est garanti pour un montage avec la sortie cable vers le bas.



Das Produkt

Leistungen zwischen 1/3 PS und 1 PS bereit, und wird in geeigneter Weise mit den Ventilatoren im Bereich zwischen 9" und 12" gekoppelt. Diese Kopplung ermöglicht eine breite Palette von lufttechnischen Leistungen, die auch den anspruchsvollsten Anforderungen gerecht werden.

Alle Motoren werden in Übereinstimmung mit der Niederspannungsrichtlinie 2006/95/EG, der Richtlinie zur elektromagnetischen Verträglichkeit 2004/108/EG mit Bezug auf die Normen DIN EN 55014-1, DIN EN 61000-3-2 und DIN EN 61000-3-3, und der Maschinenrichtlinie 2006/42/EG, sowie den Standardnormen DIN EN 60335-1, DIN EN 60335-2-24, DIN EN 60335-2-89, DIN EN 60529 und DIN EN 60034-1 entwickelt und hergestellt.

Das Unternehmen ELCO-E-TRADE Srl behält sich das Recht vor, die im vorliegenden Katalog angegebenen technischen Daten jederzeit auch ohne Vorankündigung zu ändern. Der Benutzer ist für die korrekte Installation der im Katalog beschriebenen Produkte unter Einhaltung der geltenden Bestimmungen im jeweiligen Land verantwortlich. Die Leistungen sind annähernd und der Toleranz unterworfen. Schutzart IP ist für die Montage mit Kabel nach unten gewährleistet.



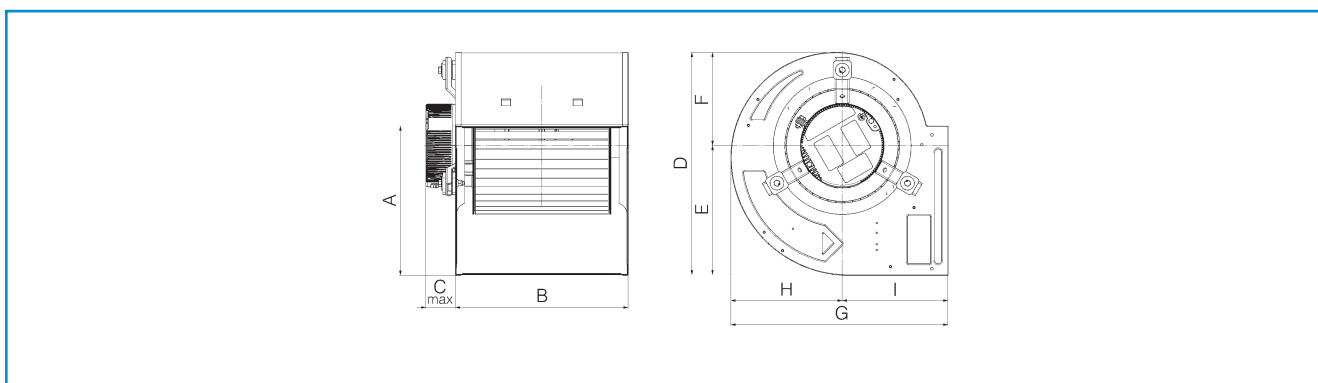
El Producto

2006/95/EC y de Compatibilidad Electromagnética 2004/108/EC con referencia a EN 55014-1, EN 61000-3-2, EN 61000-3-3, a la Directivas Máquinas 2006/42/EC y a las normas estándar CENELEC EN 60335-1, EN 60335-2-24, EN 60335-2-89, EN 60529, EN 60034-1.

La empresa ELCO-E-TRADE Srl tiene el derecho de modificar sin aviso previo las indicaciones técnicas en este catálogo. El usuario es responsable de la correcta instalación de los componentes indicados en el catálogo, cumpliendo con las normas vigentes de cada País y las limitaciones indicadas. Las prestaciones indicadas deben considerarse indicativas y sujetas a tolerancias. El grado IP se asegura con cable montado hacia abajo.

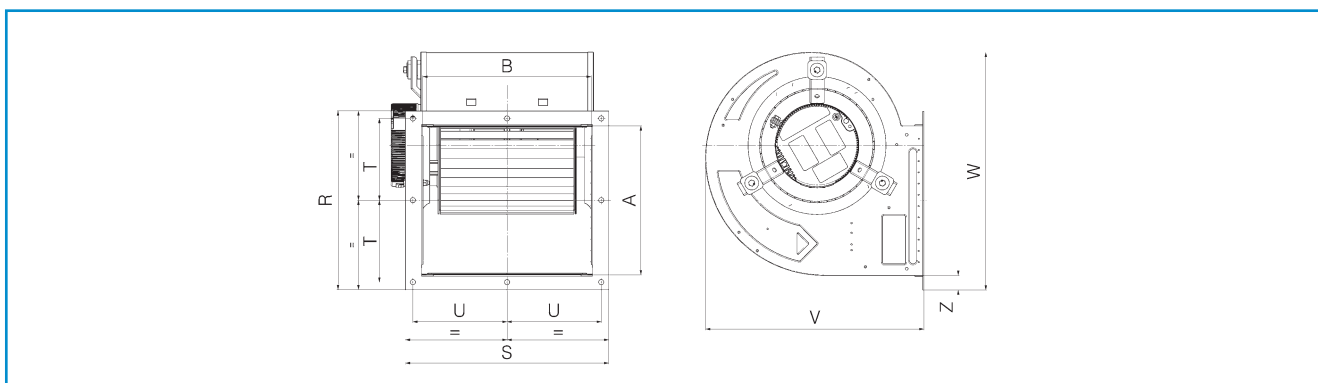
ELECTRONIC CENTRIFUGAL BLOWERS DDe

Overall Dimensions without accessories



Model	A	B	C	D	E	F	G	H	I
9/7	260	233	60	388	226	162	378	194	184
9/9	260	301	60	388	226	162	378	194	184
10/8	289.6	265	60	443	249.5	193.5	424.5	221.5	203
10/10	289.6	331	60	443	249.5	193.5	424.5	221.5	203
12/9	342	309	60	521	294.5	226.5	490.5	260.5	230
12/12	342	395	60	521	294.5	226.5	490.5	260.5	230

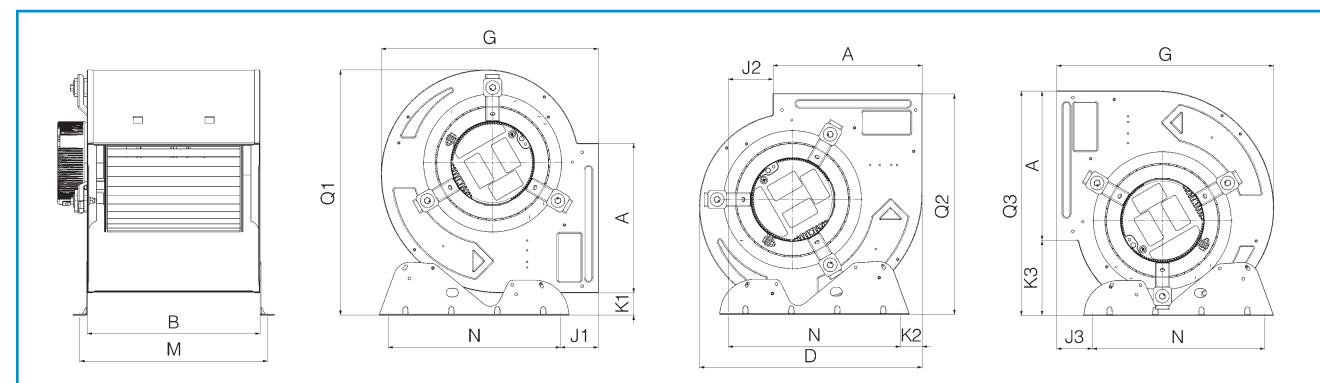
Overall Dimensions with fixing flange



Model	R	S	T	U	V	W	Z
9/7	311	288	142.5	131	380	413.5	25.5
9/9	311	354	142.5	164	380	413.5	25.5
10/8	340	321	157	147.5	427.5	427.5	25.5
10/10	340	387	157	180.5	427.5	427.5	25.5
12/9	390	365	182	169.5	493.5	545.5	24.5
12/12	390	451	182	212.5	493.5	545.5	24.5

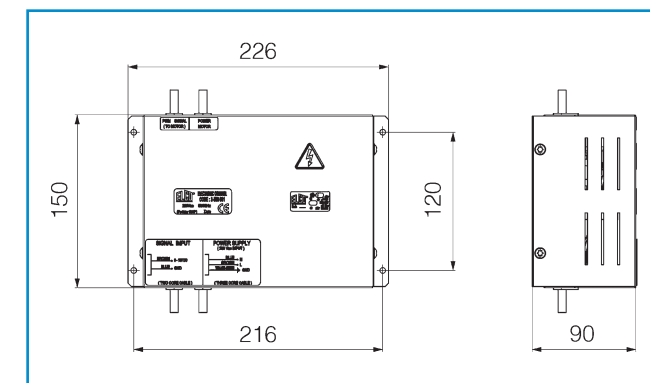
ELECTRONIC CENTRIFUGAL BLOWERS DDe

Overall Dimensions with support feet



Model	A	B	G	J1	J2	J3	K1	K2	K3	M	N	Q1	Q2	Q3
9/7	260	233	378	66	78	62	39	38	131	259	300	427	386	391
9/9	260	301	378	66	78	62	39	38	131	327	300	427	386	391
10/8	289.6	265	424.5	67	92	68	38	42	158	291	340	481	430	448
10/10	289.6	331	424.5	67	92	68	38	42	158	357	340	481	430	448
12/9	342	309	490.5	69	106	69	38	40	185	335	408	559	496	527
12/12	342	395	490.5	69	106	69	38	40	185	421	408	559	496	527

PFC+EMI Filters Box PWM - 0/10V Converter





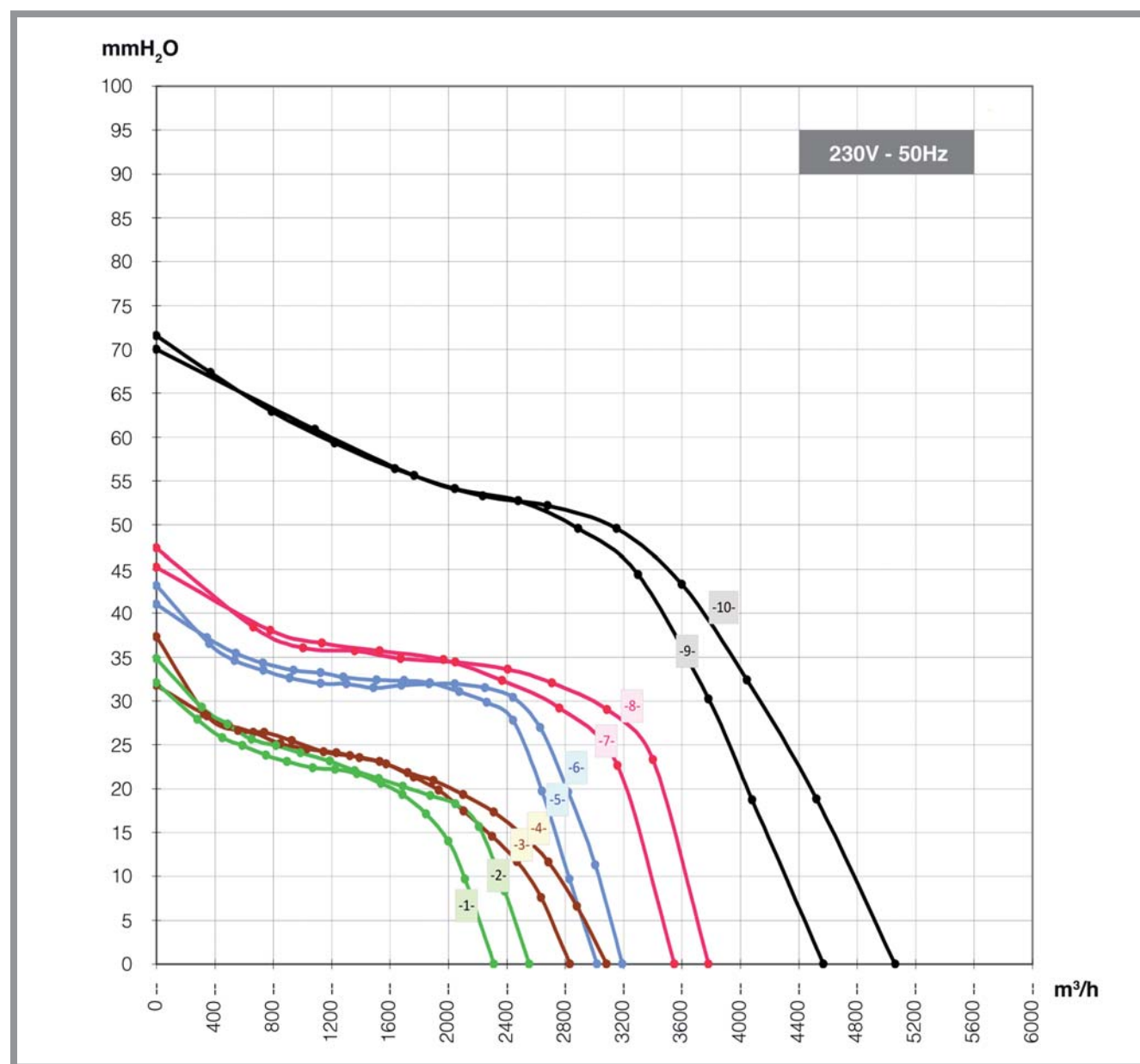
GUIDE CHARTS BLOWER'S SELECTION

N.	Model	W_nom	Air Flow m ³ /h		Pressure mmH ₂ O Max (1 Vdc)	Test	ErP
			Max (10 Vdc)	Min (1 Vdc)			
1	DDe 9/7	1/3 HP	2300	700	32	PDDe_0007	2015
2	DDe 9/9	1/3 HP	2550	750	32	PDDe_0010	2015
3	DDe 9/7	1/2 HP	2800	850	35	PDDe_0006	2015
4	DDe 9/9	1/2 HP	3050	900	37	PDDe_0004	2015
5	DDe 10/8	1/2 HP	3000	950	41	PDDe_0013	2015
6	DDe 10/10	1/2 HP	3200	1000	44	PDDe_0012	2015
7	DDe 10/8	3/4 HP	3550	1200	45	PDDe_0019	2015
8	DDe 10/10	3/4 HP	4000	1250	48	PDDe_0022	2015
9	DDe 12/9	1 HP	4550	1500	70	PDDe_0018	2015
10	DDe 12/12	1 HP	5050	1600	72	PDDe_0015	2015

LOW SPEED

ErP 2015

All following tests shown are performed with the PWM - 0/10V Converter. Refer to page 15 for details.



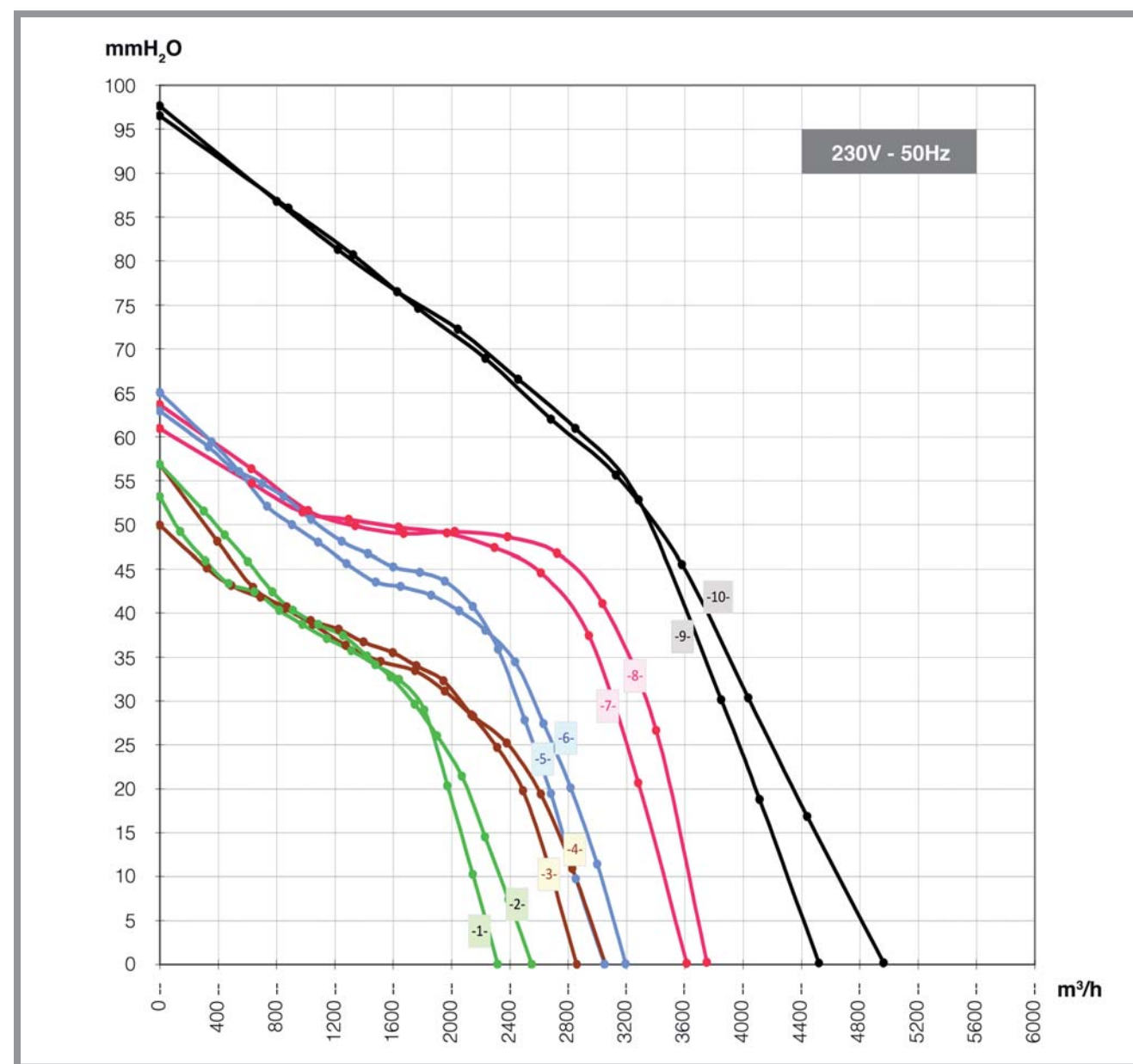
GUIDE CHARTS BLOWER'S SELECTION

N.	Model	W_nom	Air Flow m ³ /h		Pressure mmH ₂ O Max (1 Vdc)	Test	ErP
			Max (10 Vdc)	Min (1 Vdc)			
1	DDe 9/7	1/3 HP	2300	700	50	PDDe_0008	2015
2	DDe 9/9	1/3 HP	2550	750	54	PDDe_0009	2015
3	DDe 9/7	1/2 HP	2850	850	57	PDDe_0005	2015
4	DDe 9/9	1/2 HP	3050	900	57	PDDe_0003	2015
5	DDe 10/8	1/2 HP	3000	950	61	PDDe_0014	2015
6	DDe 10/10	1/2 HP	3200	1000	63	PDDe_0011	2015
7	DDe 10/8	3/4 HP	3600	1150	64	PDDe_0020	2015
8	DDe 10/10	3/4 HP	3750	1300	65	PDDe_0021	2015
9	DDe 12/9	1 HP	4500	1450	97	PDDe_0017	2015
10	DDe 12/12	1 HP	5000	1650	98	PDDe_0016	2015

HIGH SPEED

ErP 2015

All following tests shown are performed with the PWM - 0/10V Converter. Refer to page 15 for details.

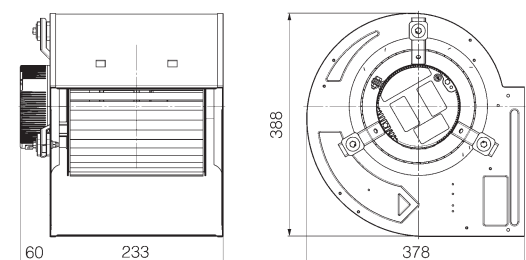




PERFORMANCE CURVES

DDe 9/7 - 1/3 HP LOW SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 1/3 HP
 Range Voltage: 200-254V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 9/7
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-007

Operating limits

Win: Min 15 - Max 400 (W)
 Ampere: Min 0.15 - Max 2.5 (A)
 Static Pressure: Min 0 - Max 35 (mmH₂O)

Measurement Category - A -

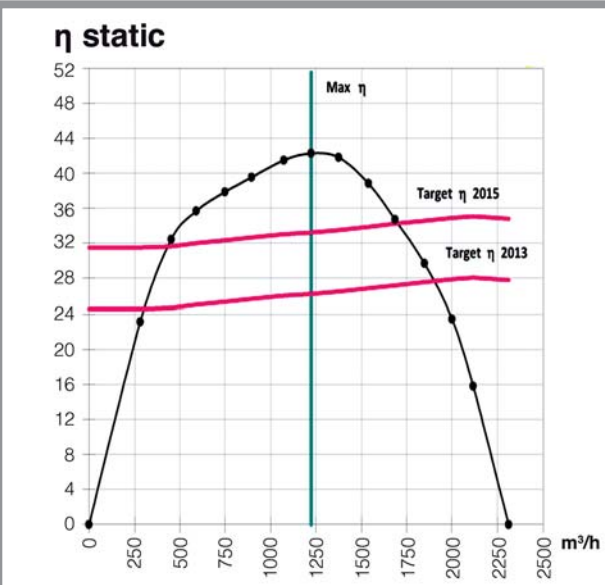
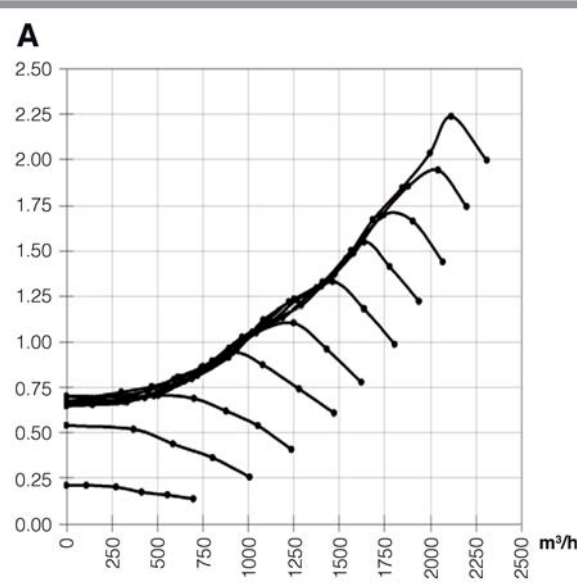
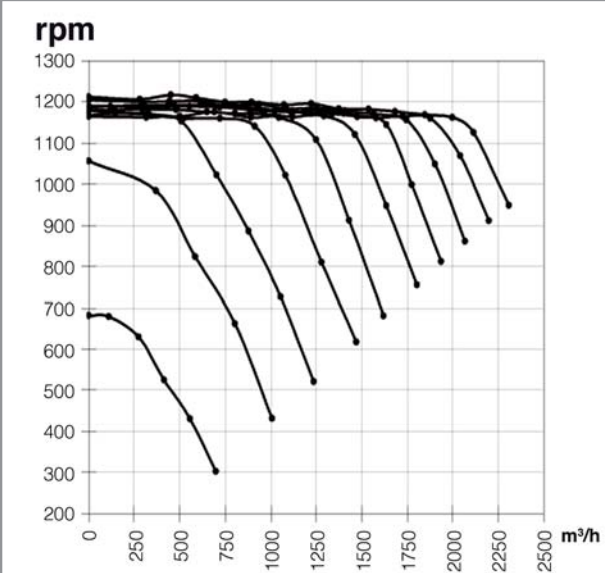
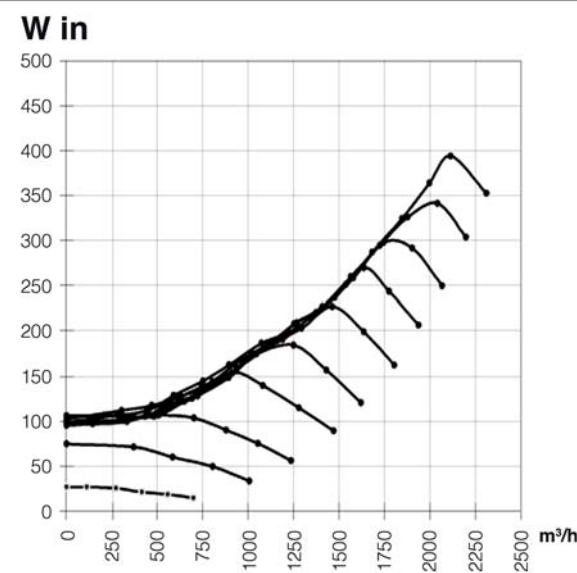
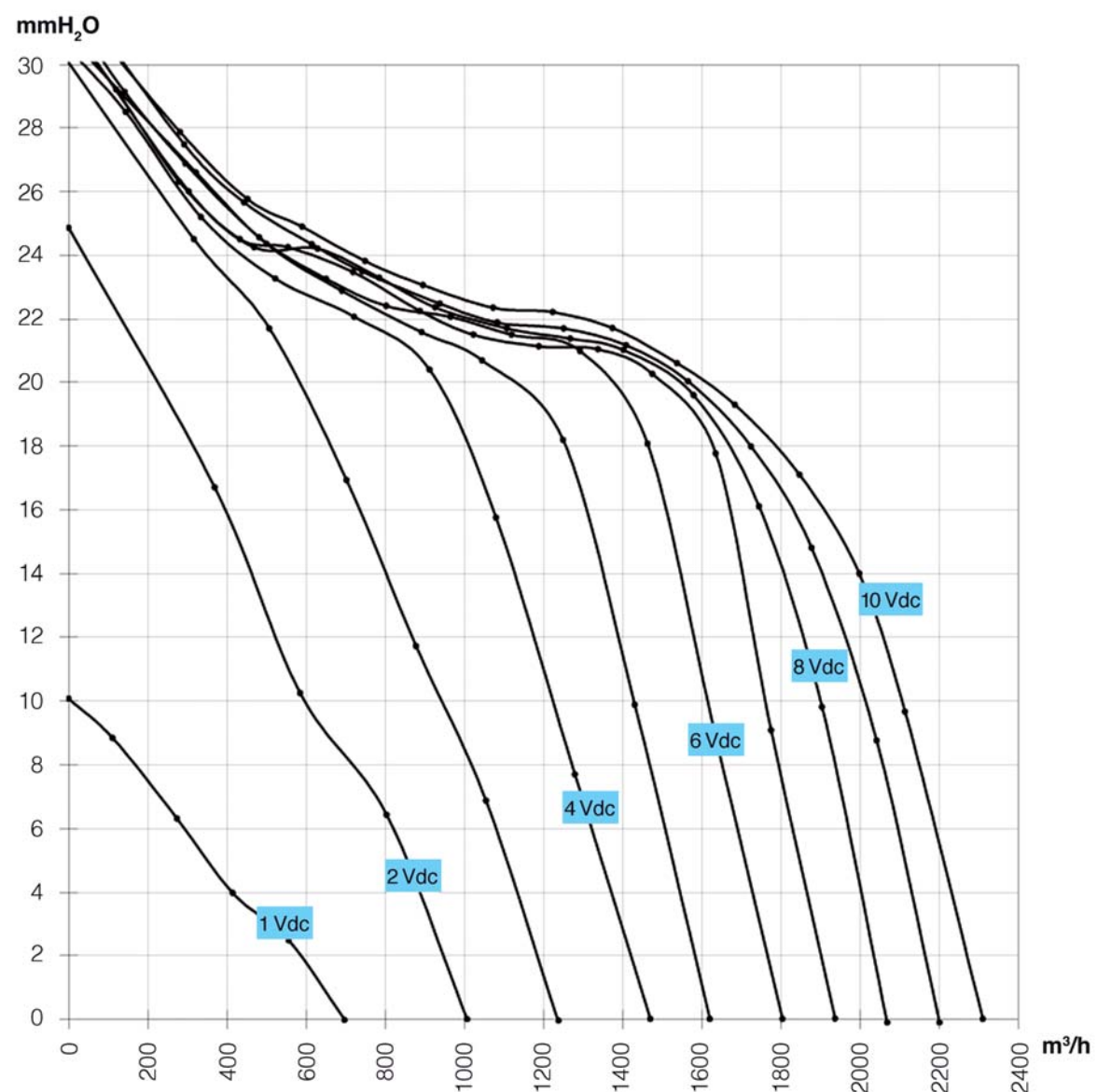
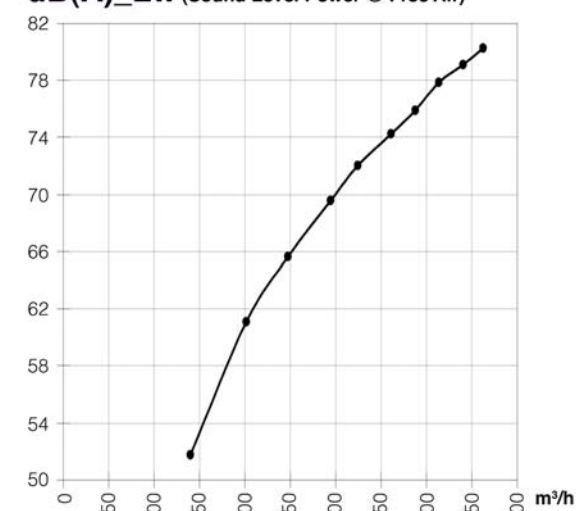
Free Inlet - Free Outlet

Value @ max. efficiency

Air Flow: 1224 (m³/h)
 Static Pressure: 22.2 (mmH₂O)
 Rpm: 1195 (min-1)
 Power Input: 199 (W)

Overall efficiency (η): 42.3
 Grade efficiency (N): 53.0

dB(A)_LW (Sound Level Power @ Free Air)

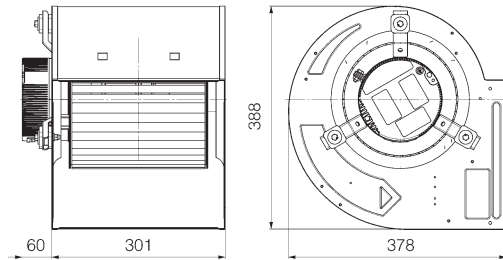




PERFORMANCE CURVES

DDe 9/9 - 1/3 HP LOW SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 1/3 HP
 Range Voltage: 200-254V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 9/9
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-010

Operating limits

Win: Min 15 - Max 400 (W)
 Ampere: Min 0.15 - Max 2.5 (A)
 Static Pressure: Min 0 - Max 35 (mmH₂O)

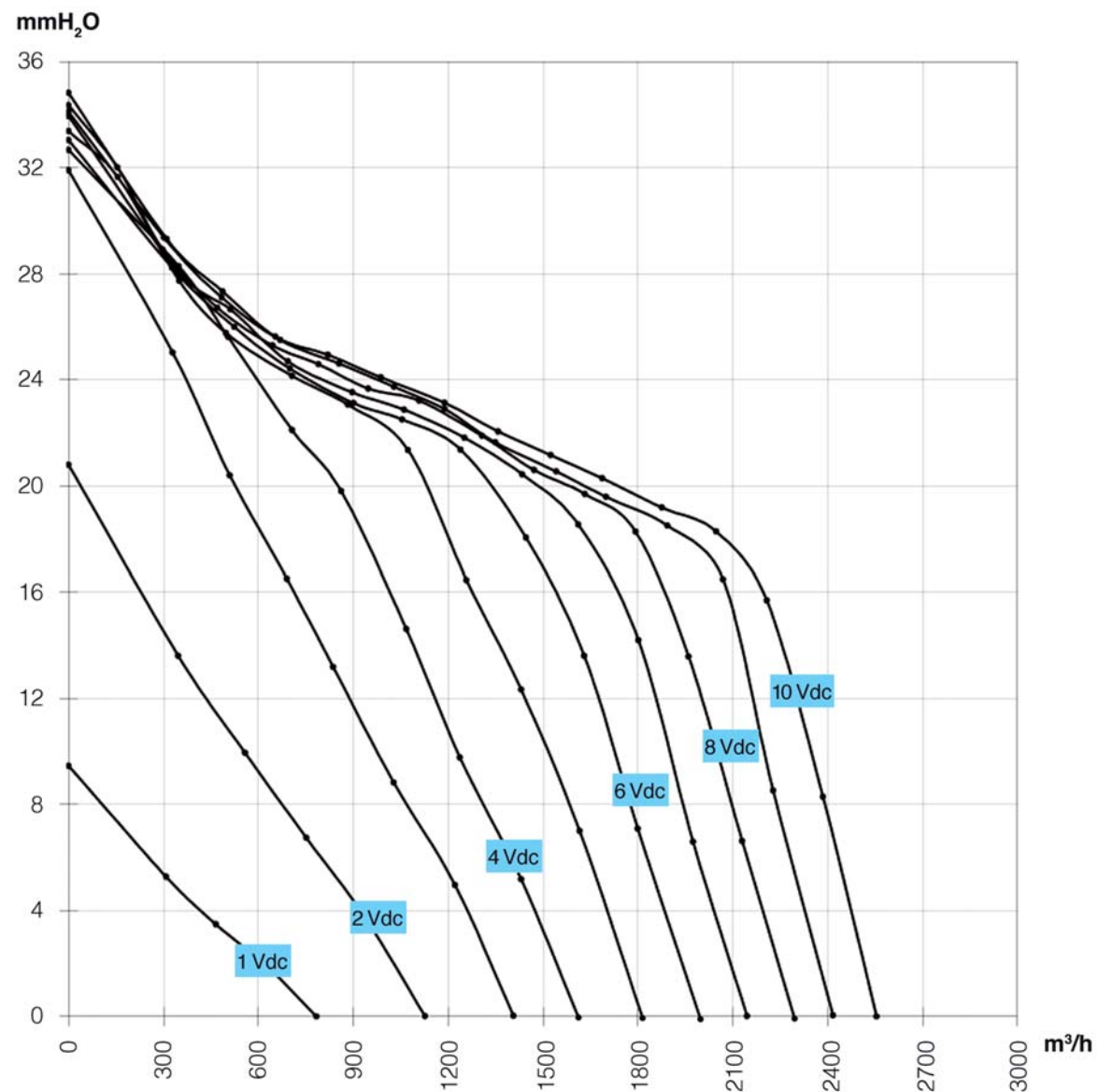
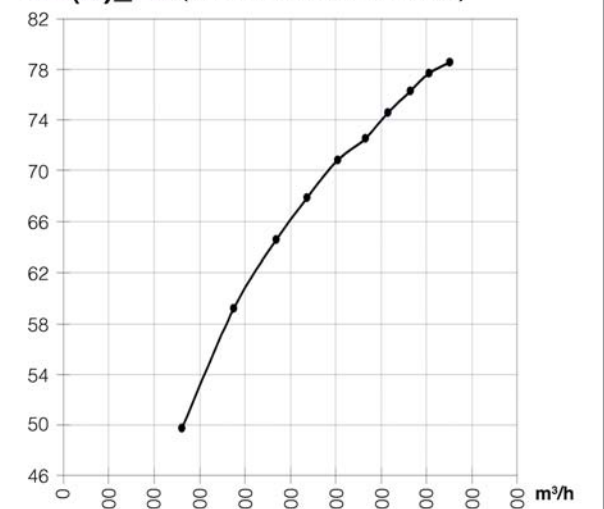
Measurement Category - A -
Free Inlet - Free Outlet

Value @ max. efficiency

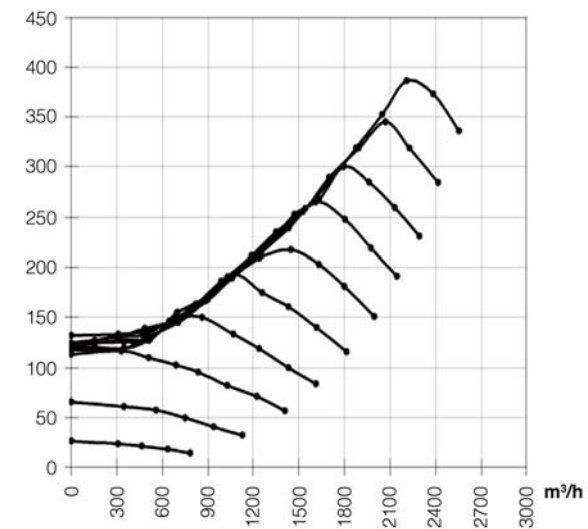
Air Flow: 1189 (m³/h)
 Static Pressure: 23.1 (mmH₂O)
 Rpm: 1193 (min⁻¹)
 Power Input: 210.2 (W)

Overall efficiency (η): 40.4
 Grade efficiency (N): 51.0

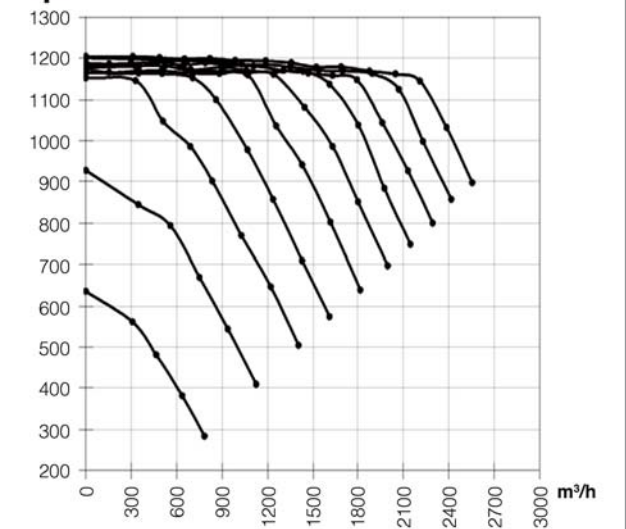
dB(A)_Lw (Sound Level Power @ Free Air)



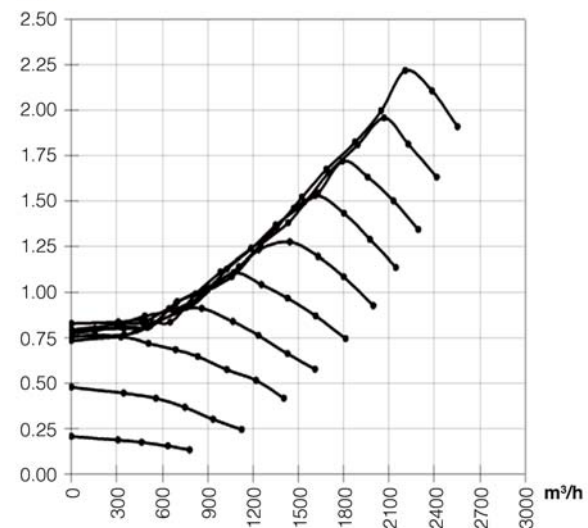
W in



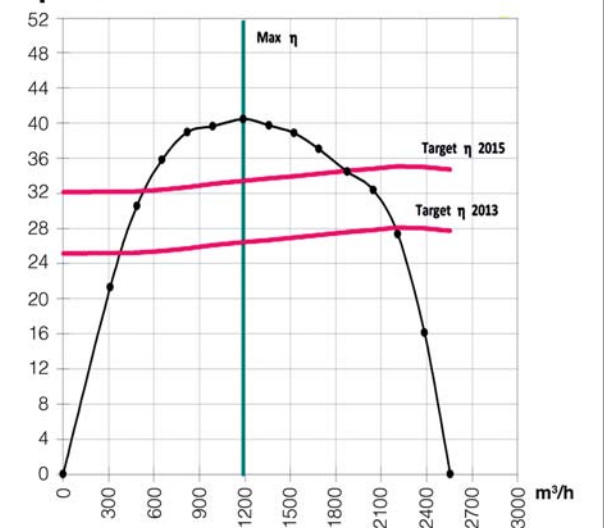
rpm



A



η static

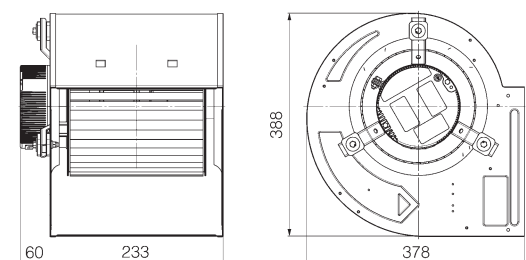




PERFORMANCE CURVES

DDe 9/7 - 1/2 HP LOW SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 1/2 HP
 Range Voltage: 200-254 V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 9/7
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-006

Operating limits

Win: Min 20 - Max 550 (W)
 Ampere: Min 0.15 - Max 3.5 (A)
 Static Pressure: Min 0 - Max 32 (mmH₂O)

Measurement Category - A -

Free Inlet - Free Outlet

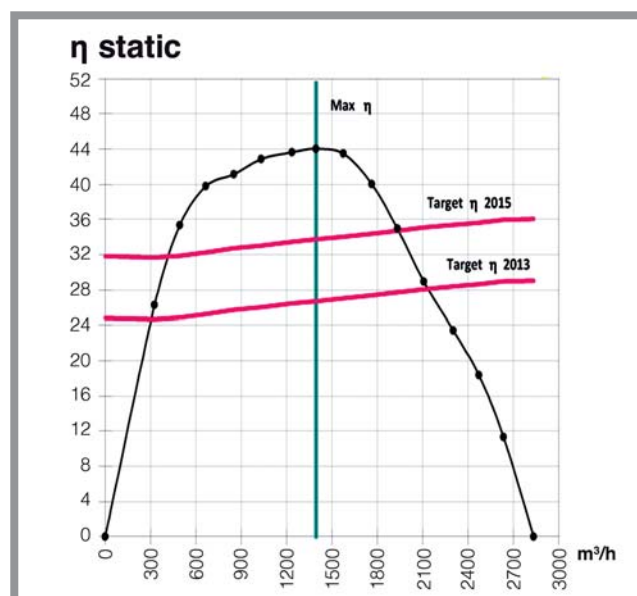
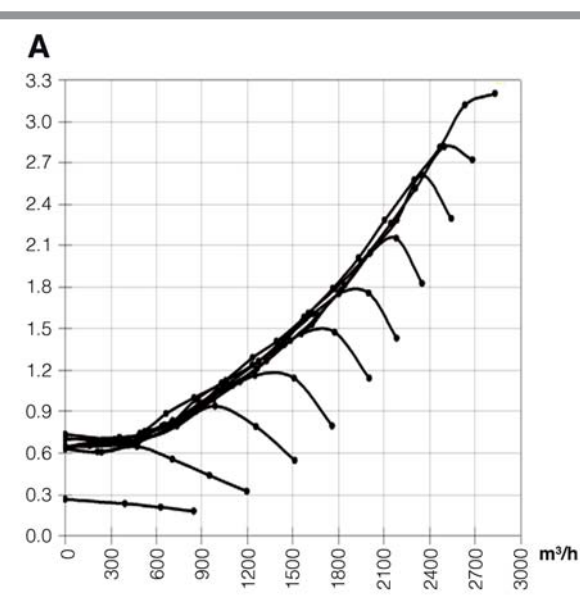
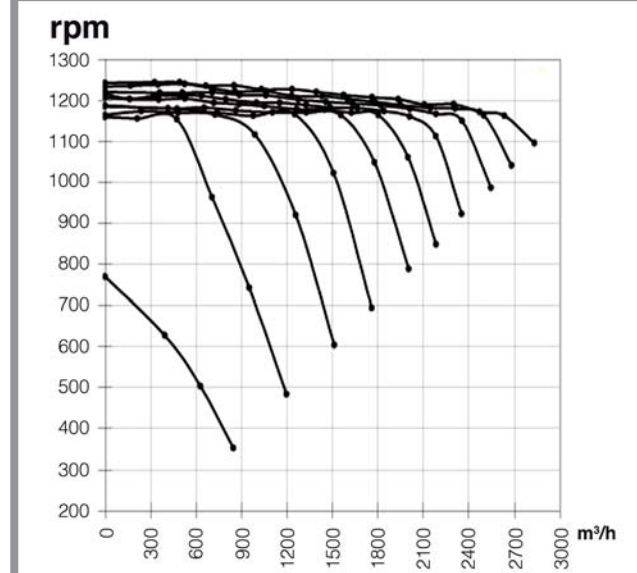
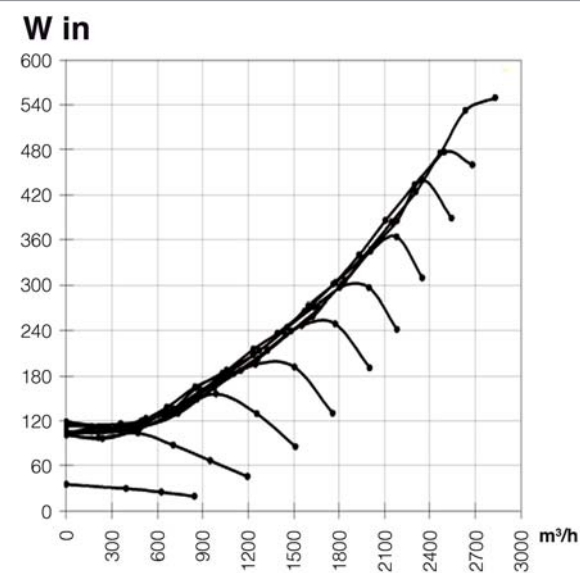
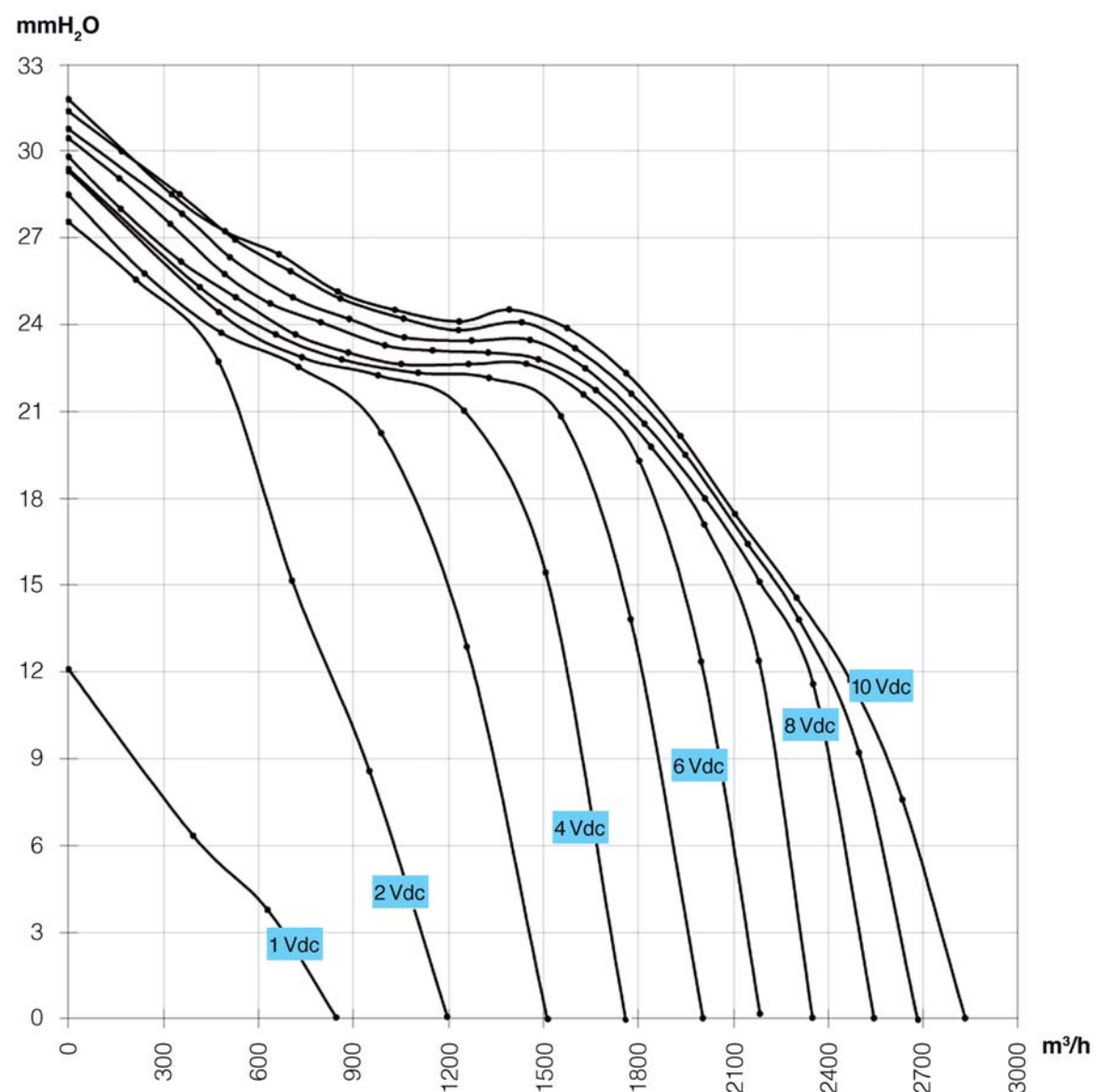
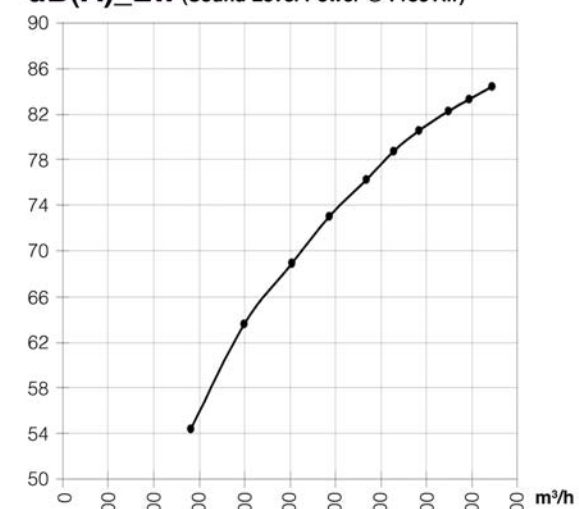
Value @ max. efficiency

Air Flow: 1393 (m³/h)
 Static Pressure: 24.7 (mmH₂O)
 Rpm: 1220 (min⁻¹)
 Power Input: 236.6 (W)

Overall efficiency (η): 44.8

Grade efficiency (N): 55.13

dB(A)_Lw (Sound Level Power @ Free Air)

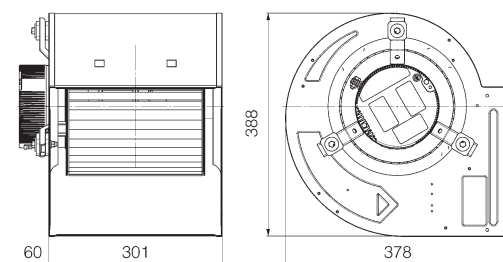




PERFORMANCE CURVES

DDe 9/9 - 1/2 HP LOW SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 1/2 HP
 Range Voltage: 200-254 V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 9/9
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-004

Operating limits

Win: Min 20 - Max 550 (W)
 Ampere: Min 0.15 - Max 3.5 (A)
 Static Pressure: Min 0 - Max 38 (mmH₂O)

Measurement Category - A -

Free Inlet - Free Outlet

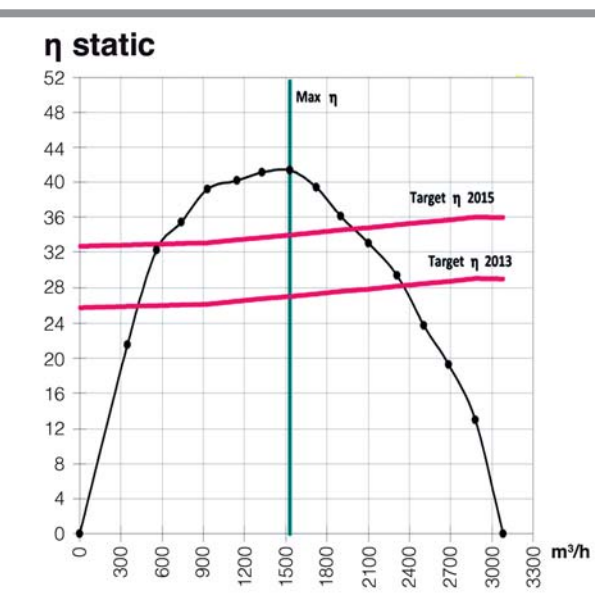
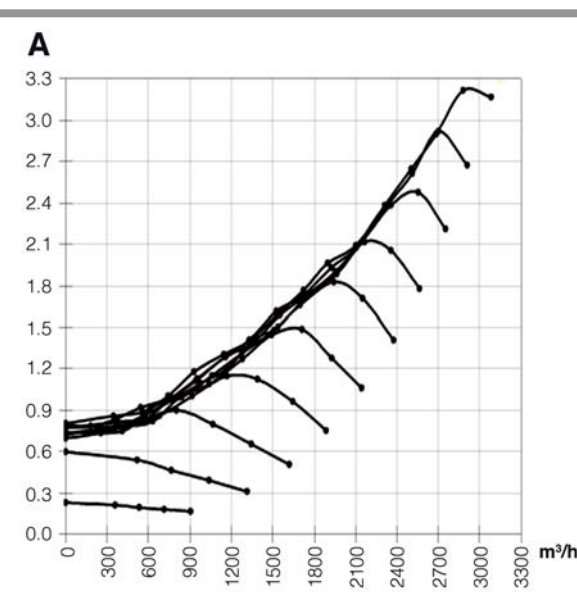
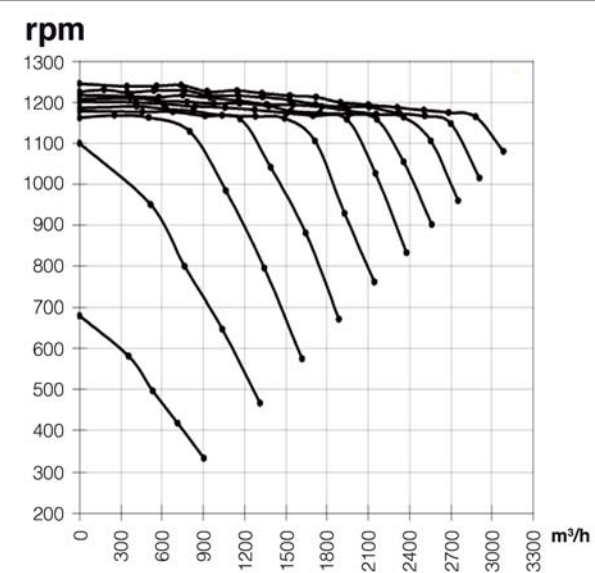
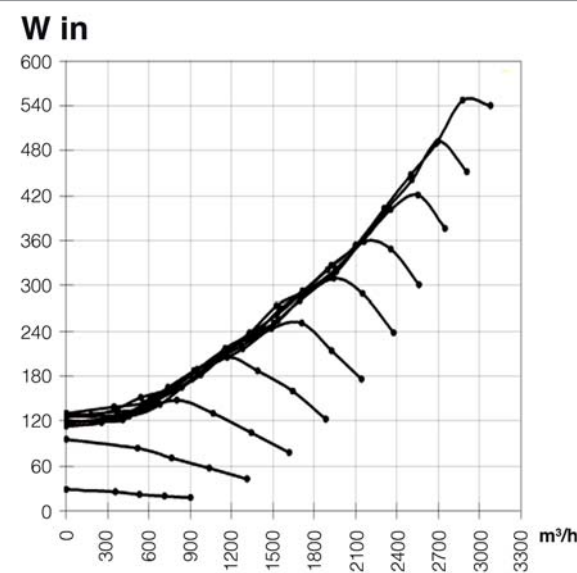
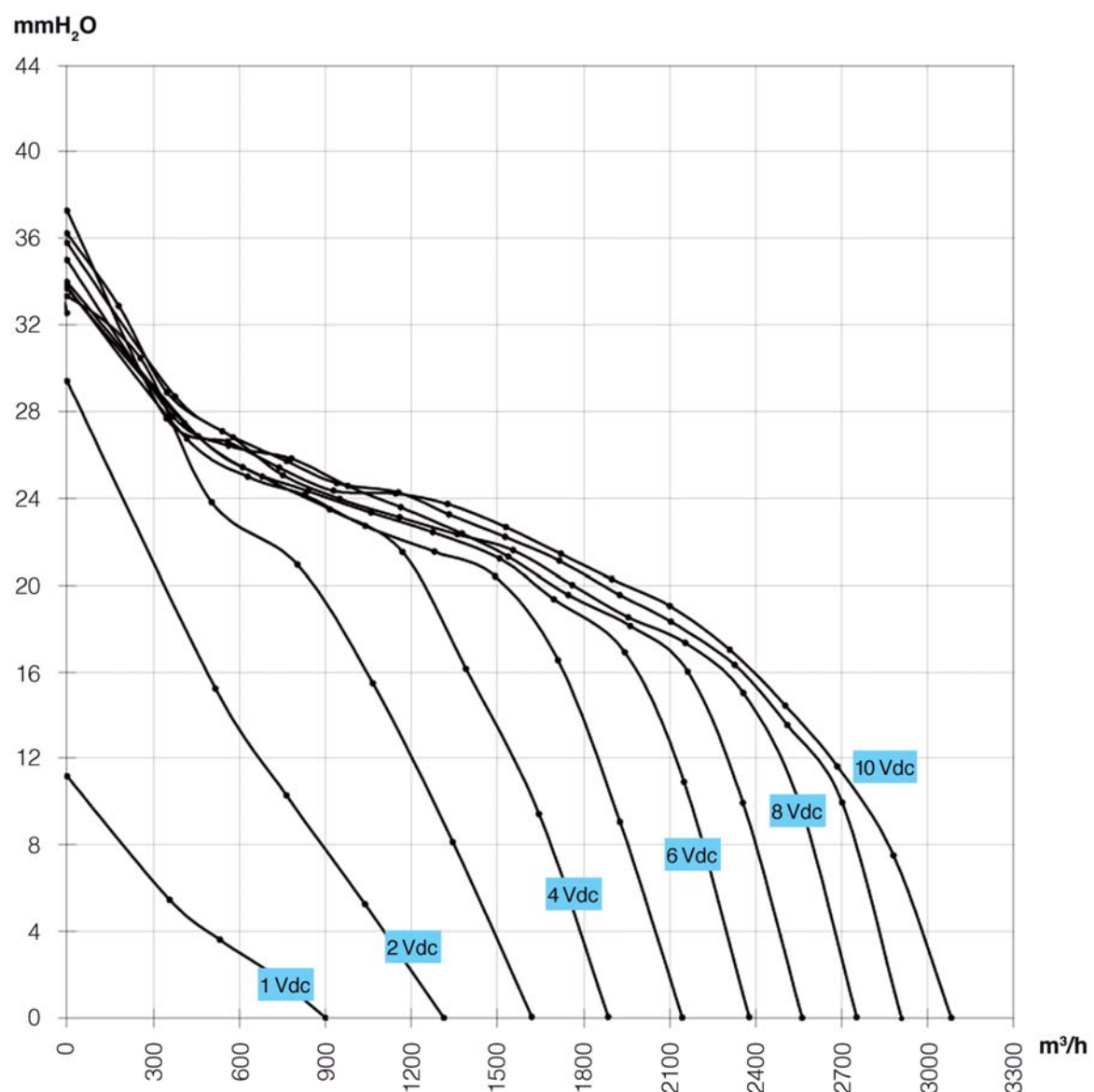
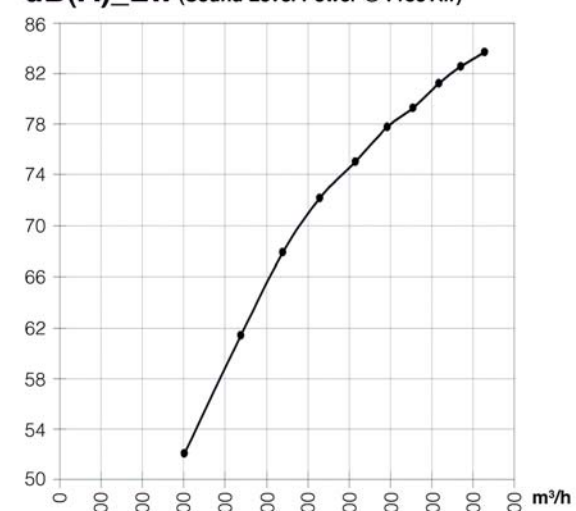
Value @ max. efficiency

Air Flow: 1530 (m³/h)
 Static Pressure: 23.1 (mmH₂O)
 Rpm: 1215 (min⁻¹)
 Power Input: 262 (W)

Overall efficiency (η): 41.4

Grade efficiency (N): 51.37

dB(A)_Lw (Sound Level Power @ Free Air)

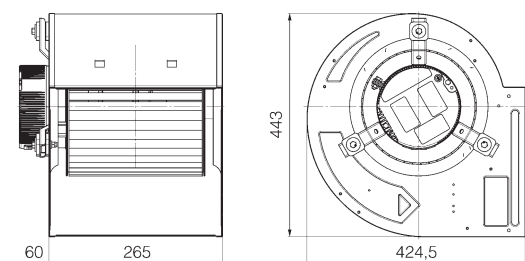




PERFORMANCE CURVES

DDe 10/8 - 1/2 HP LOW SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 1/2 HP
 Range Voltage: 200-254V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 10/8
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-013

Operating limits

Win: Min 15 - Max 580 (W)
 Ampere: Min 0.15 - Max 3.5 (A)
 Static Pressure: Min 0 - Max 40 (mmH₂O)

Measurement Category - A -

Free Inlet - Free Outlet

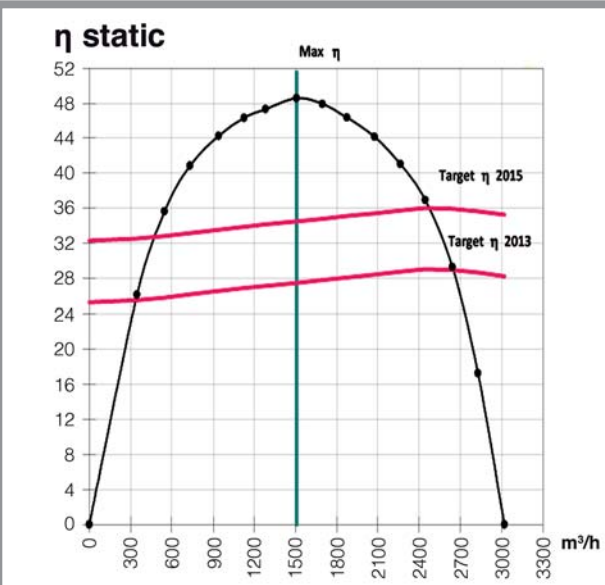
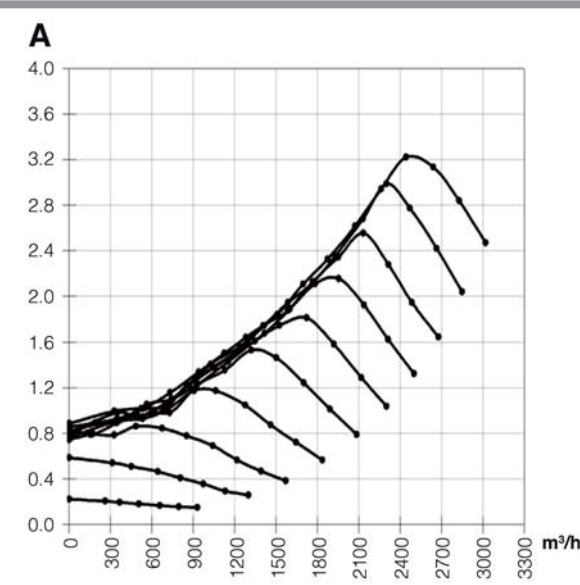
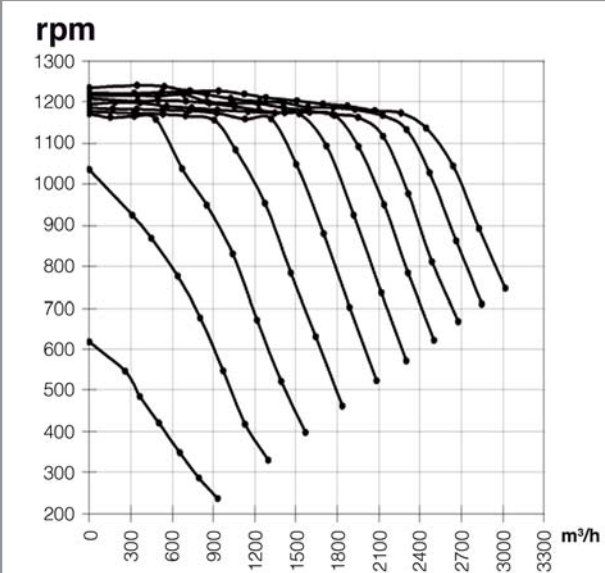
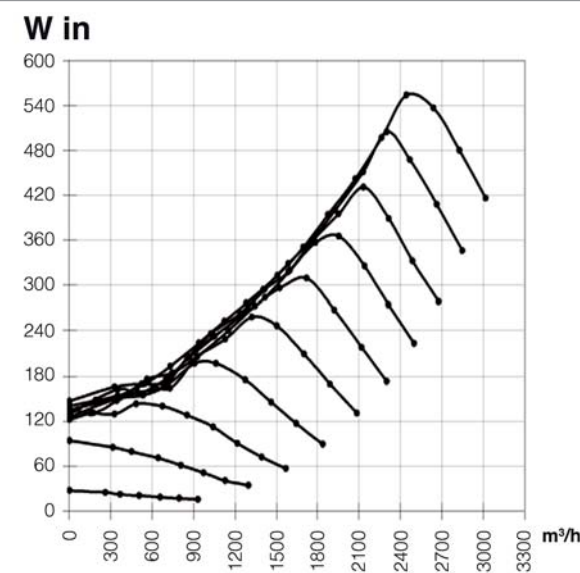
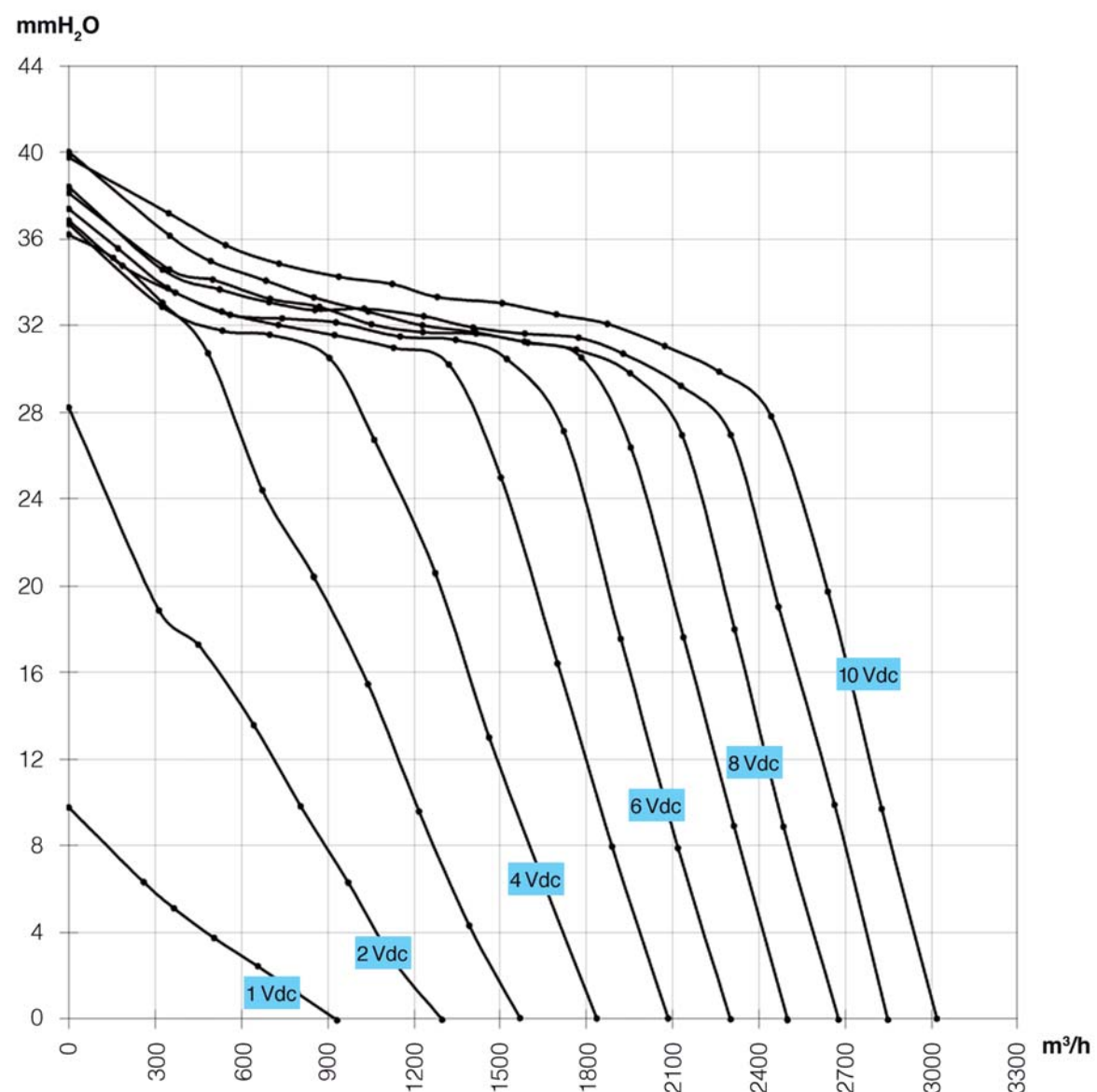
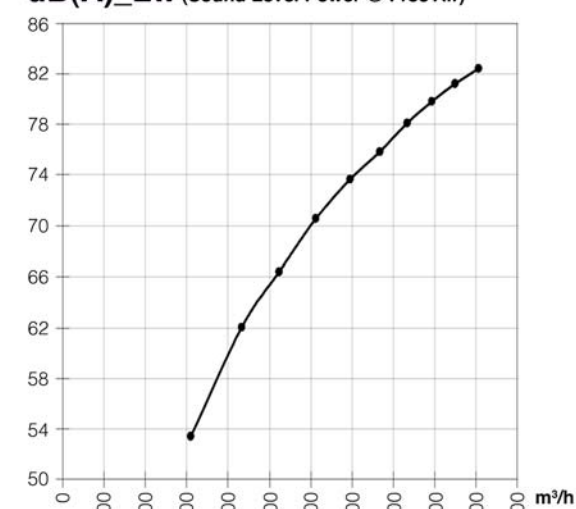
Value @ max. efficiency

Air Flow: 1508 (m³/h)
 Static Pressure: 33.0 (mmH₂O)
 Rpm: 1202 (min⁻¹)
 Power Input: 313.5 (W)

Overall efficiency (η): 48.6

Grade efficiency (N): 58.09

dB(A)_Lw (Sound Level Power @ Free Air)

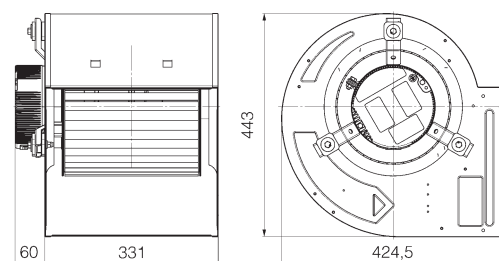




PERFORMANCE CURVES

DDe 10/10 - 1/2 HP LOW SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 1/2 HP
 Range Voltage: 200-254V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 10/10
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-012

Operating limits

Win: Min 15 - Max 580 (W)
 Ampere: Min 0.15 - Max 3.5 (A)
 Static Pressure: Min 0 - Max 44 (mmH₂O)

Measurement Category - A -

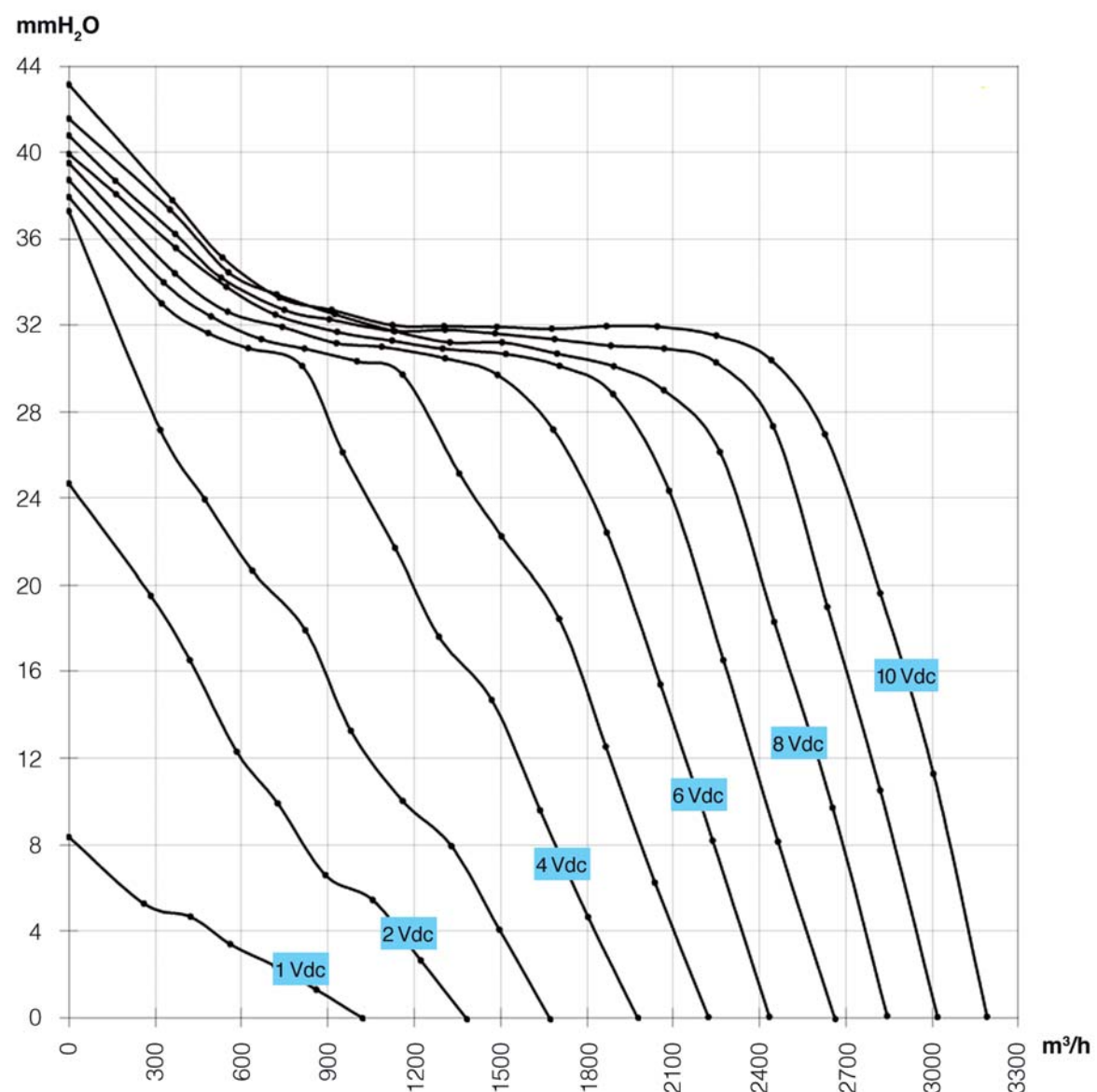
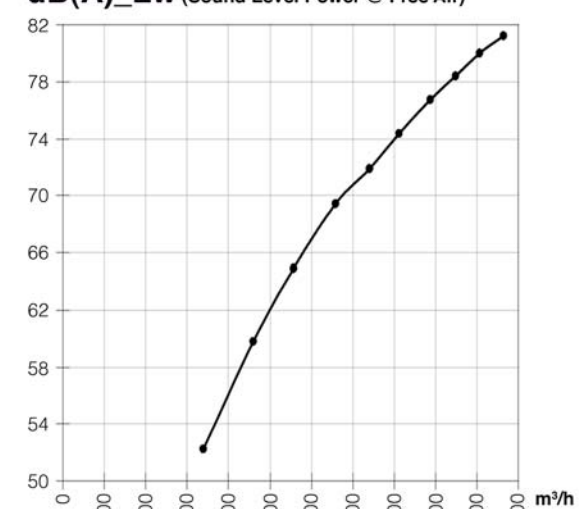
Free Inlet - Free Outlet

Value @ max. efficiency

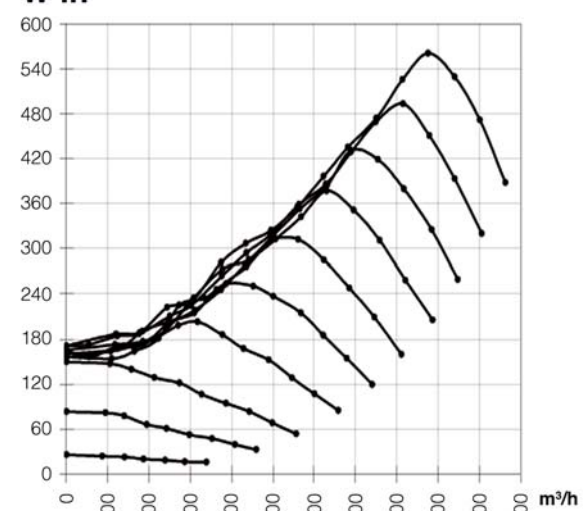
Air Flow: 1869 (m³/h)
 Static Pressure: 32.0 (mmH₂O)
 Rpm: 1191 (min⁻¹)
 Power Input: 396.2 (W)

Overall efficiency (η): 45.8
 Grade efficiency (N): 54.66

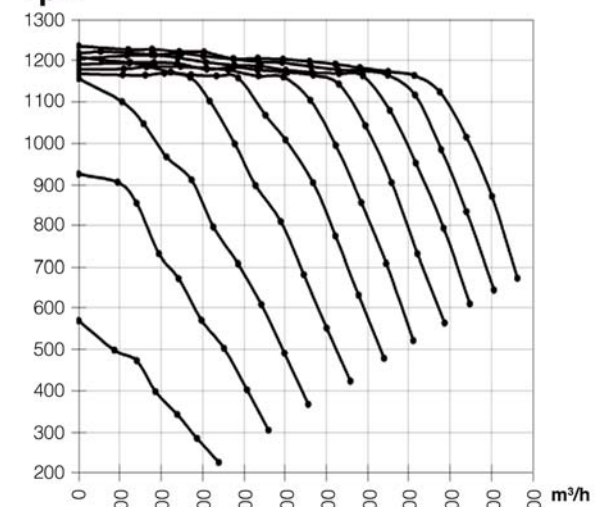
dB(A)_Lw (Sound Level Power @ Free Air)



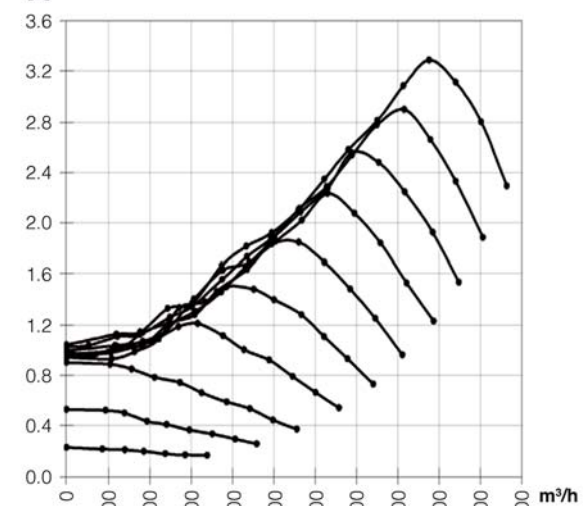
W in



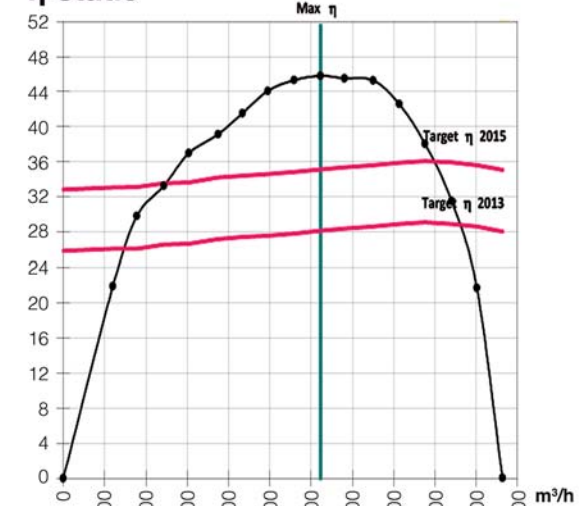
rpm



A



η static

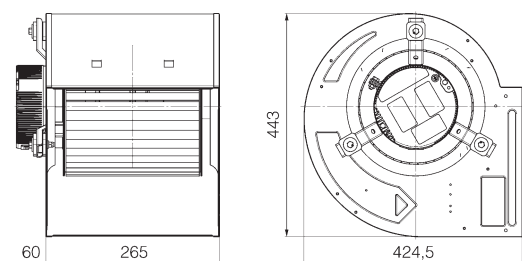




PERFORMANCE CURVES

DDe 10/8 - 3/4 HP LOW SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 3/4 HP
 Range Voltage: 200-254V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 10/8
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-019

Operating limits

Win: Min 25 - Max 800 (W)
 Ampere: Min 0.15 - Max 4.0 (A)
 Static Pressure: Min 0 - Max 45 (mmH₂O)

Measurement Category - A -

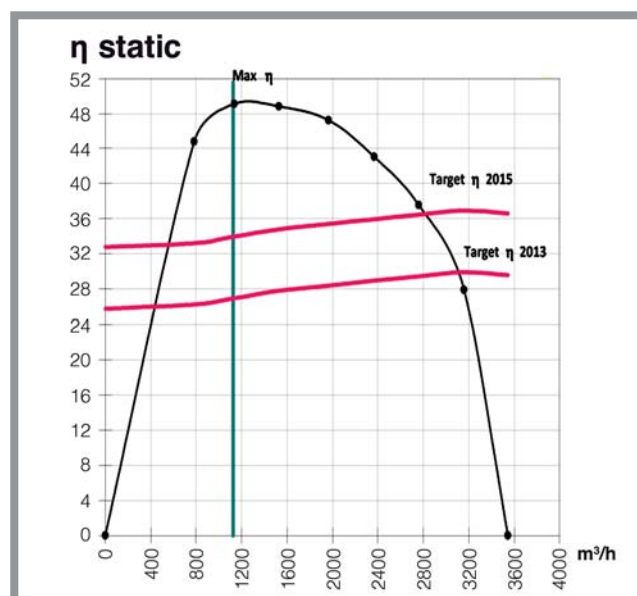
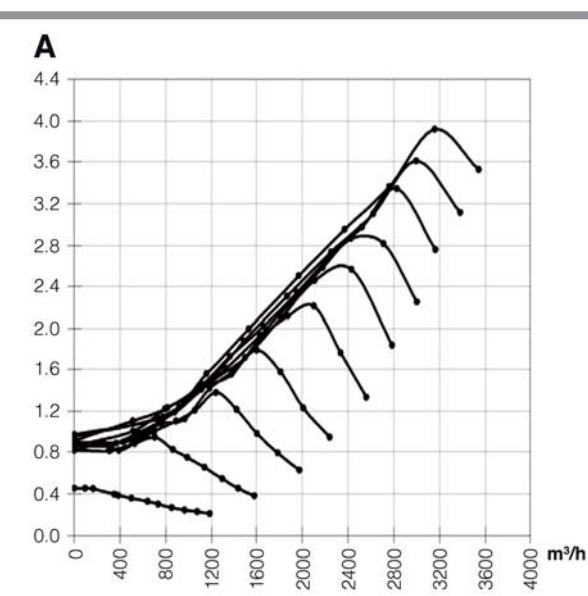
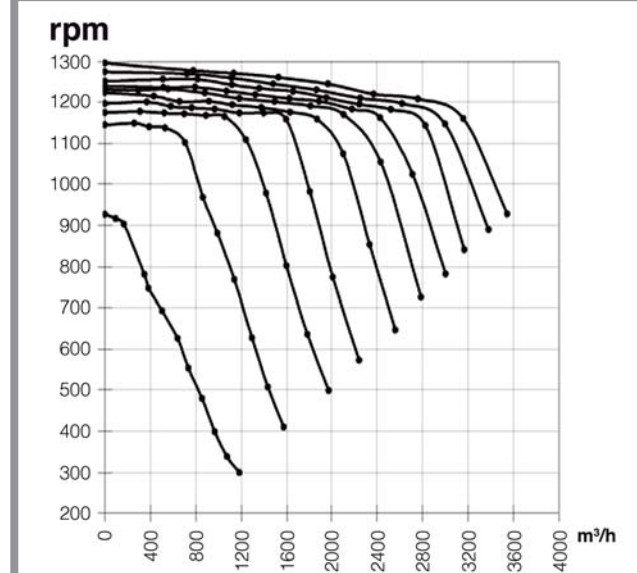
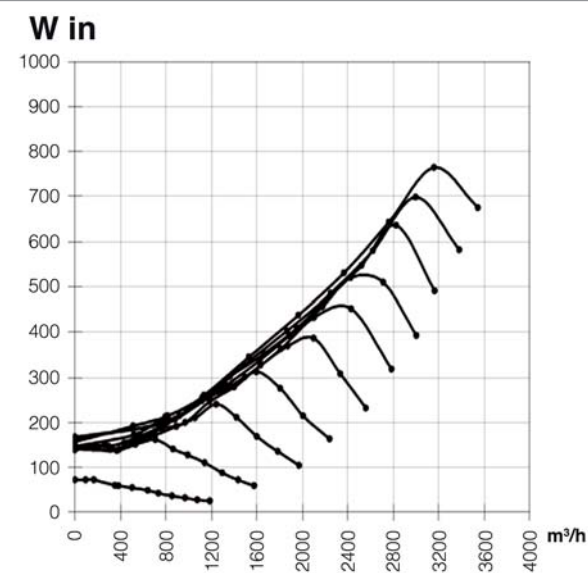
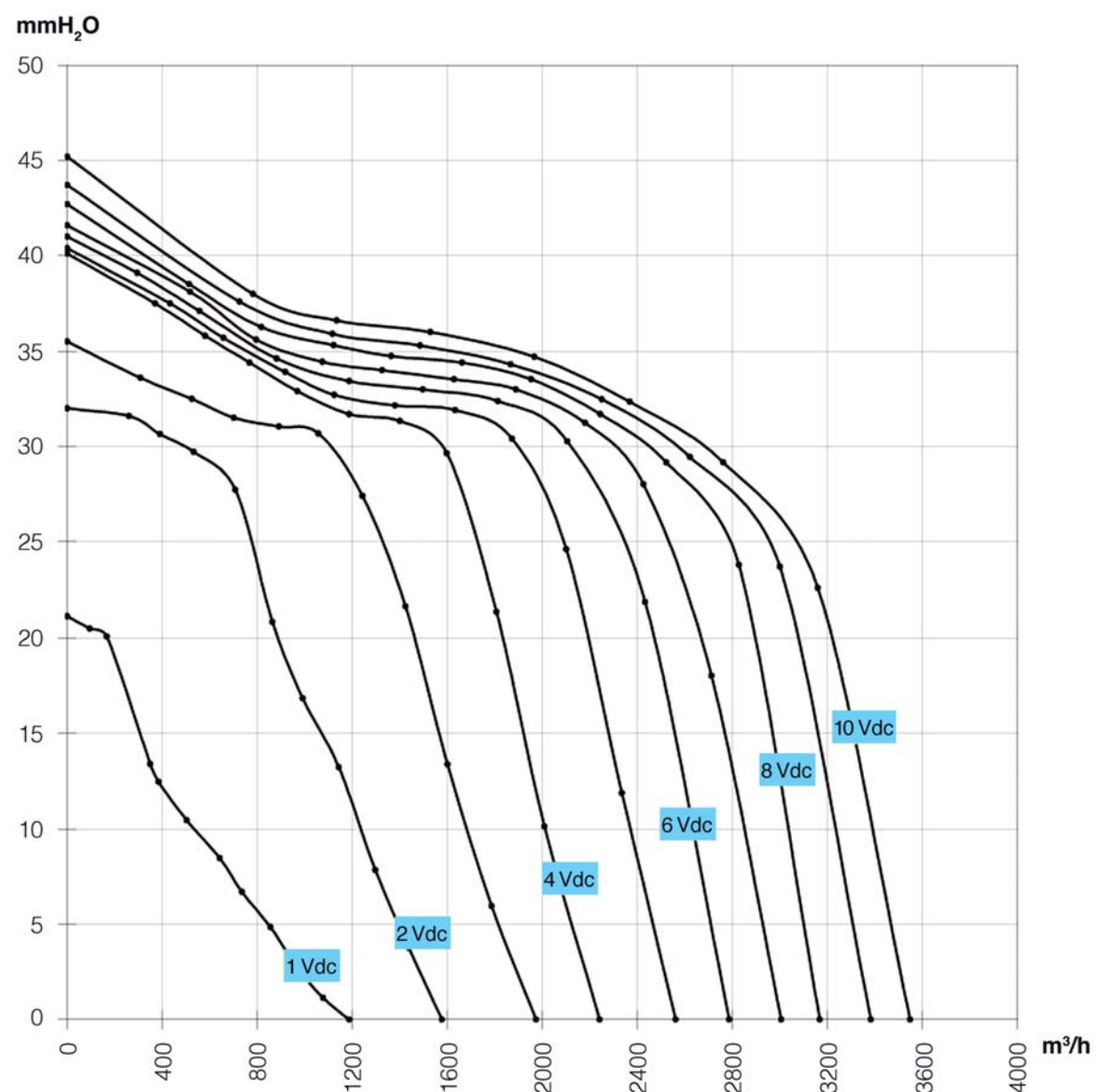
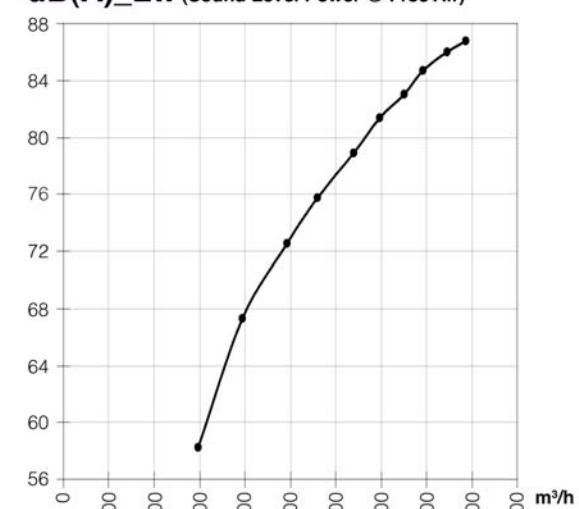
Free Inlet - Free Outlet

Value @ max. efficiency

Air Flow: 1135 (m³/h)
 Static Pressure: 36.6 (mmH₂O)
 Rpm: 1270 (min⁻¹)
 Power Input: 260 (W)

Overall efficiency (η): 49.1
 Grade efficiency (N): 59.1

dB(A)_Lw (Sound Level Power @ Free Air)

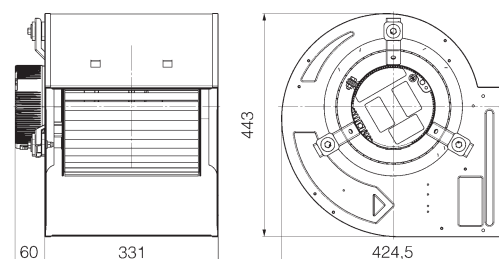




PERFORMANCE CURVES

DDe 10/10 - 3/4 HP LOW SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 3/4 HP
 Range Voltage: 200-254V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 10/10
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-022

Operating limits

Win: Min 25 - Max 800 (W)
 Ampere: Min 0.15 - Max 4.2 (A)
 Static Pressure: Min 0 - Max 48 (mmH₂O)

Measurement Category - A -

Free Inlet - Free Outlet

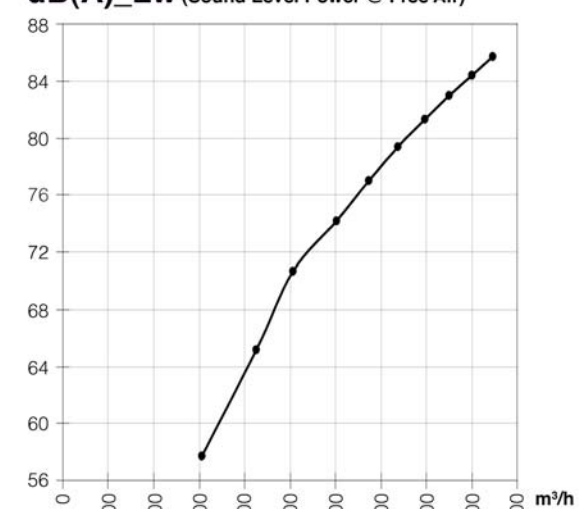
Value @ max. efficiency

Air Flow: 2049 (m³/h)
 Static Pressure: 34.4 (mmH₂O)
 Rpm: 1233 (min⁻¹)
 Power Input: 455 (W)

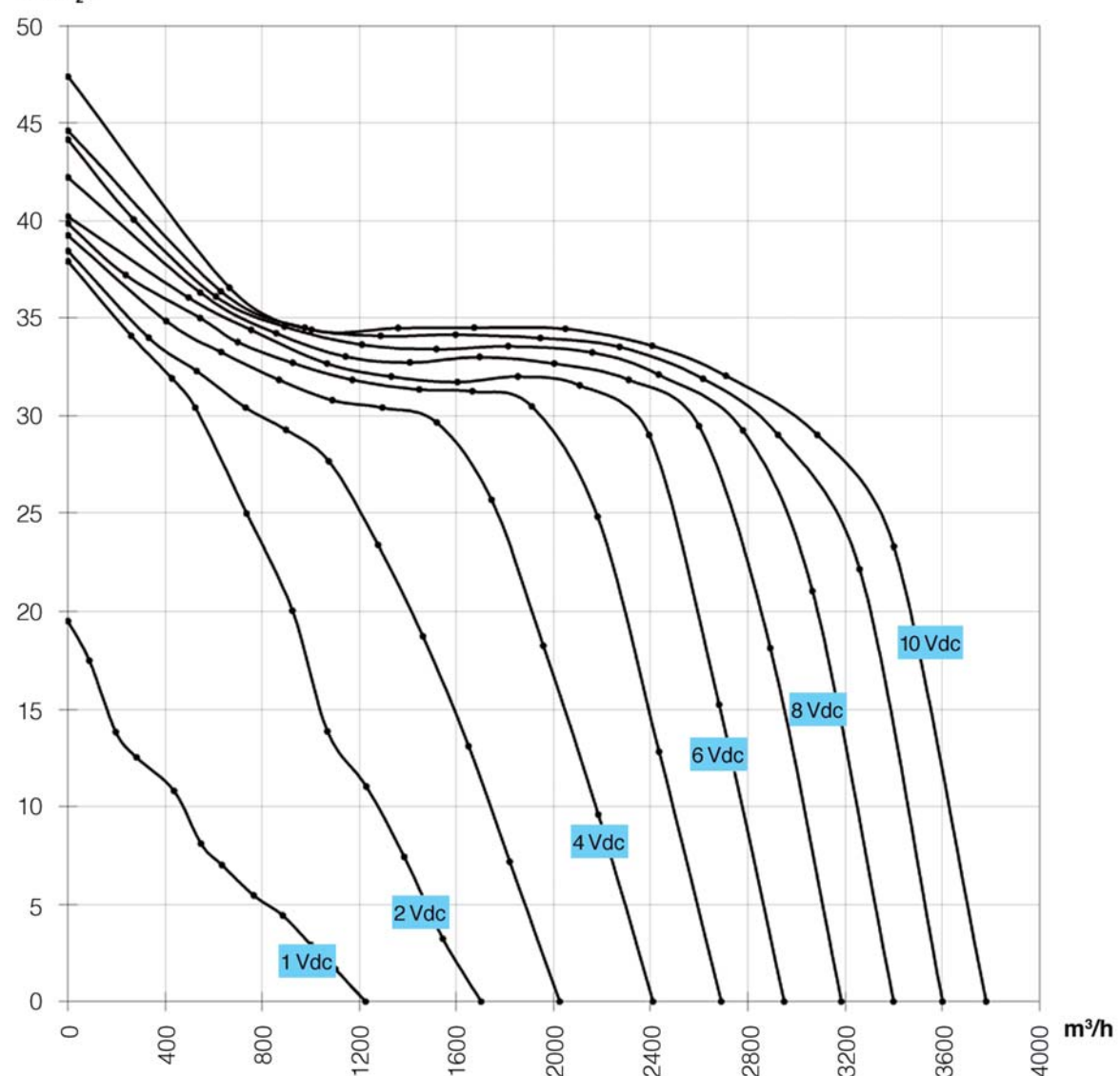
Overall efficiency (η): 47.0

Grade efficiency (N): 55.44

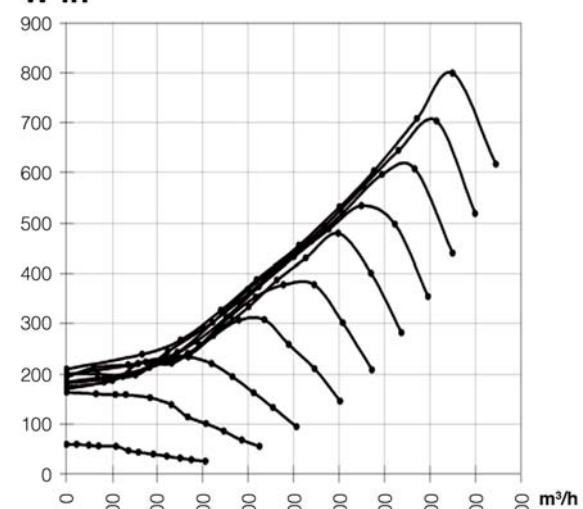
dB(A)_Lw (Sound Level Power @ Free Air)



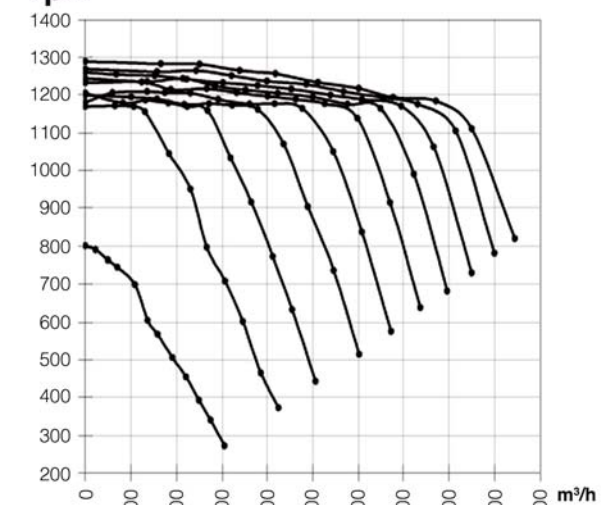
mmH₂O



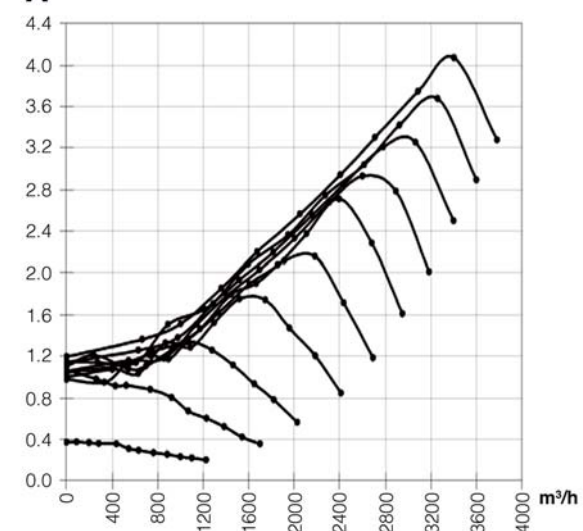
W in



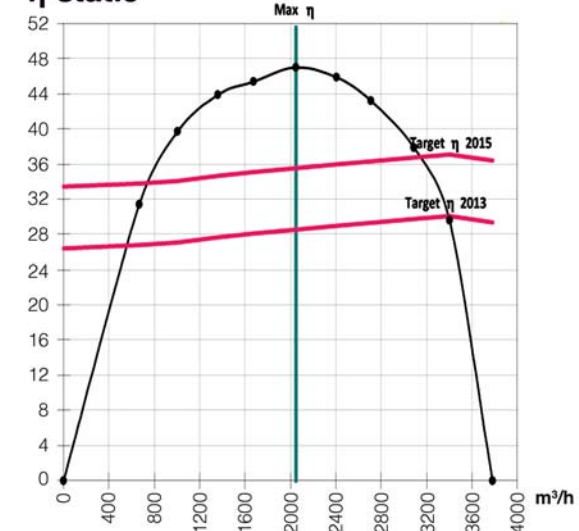
rpm



A



η static

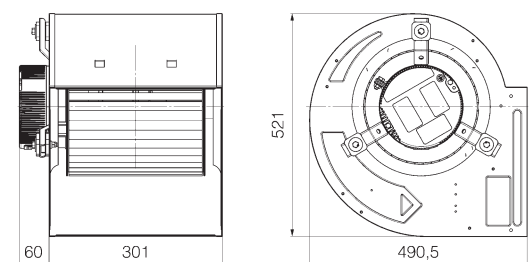




PERFORMANCE CURVES

DDe 12/9 - 1 HP LOW SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 1 HP
 Range Voltage: 200-254V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 12/9
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-018

Operating limits

Win: Min 25 - Max 1100 (W)
 Ampere: Min 0.2 - Max 5.5 (A)
 Static Pressure: Min 0 - Max 71 (mmH₂O)

Measurement Category - A -

Free Inlet - Free Outlet

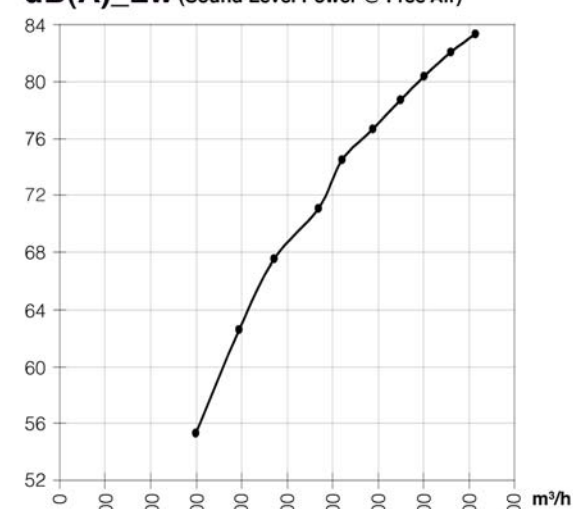
Value @ max. efficiency

Air Flow: 2044 (m³/h)
 Static Pressure: 54.1 (mmH₂O)
 Rpm: 1245 (min⁻¹)
 Power Input: 648 (W)

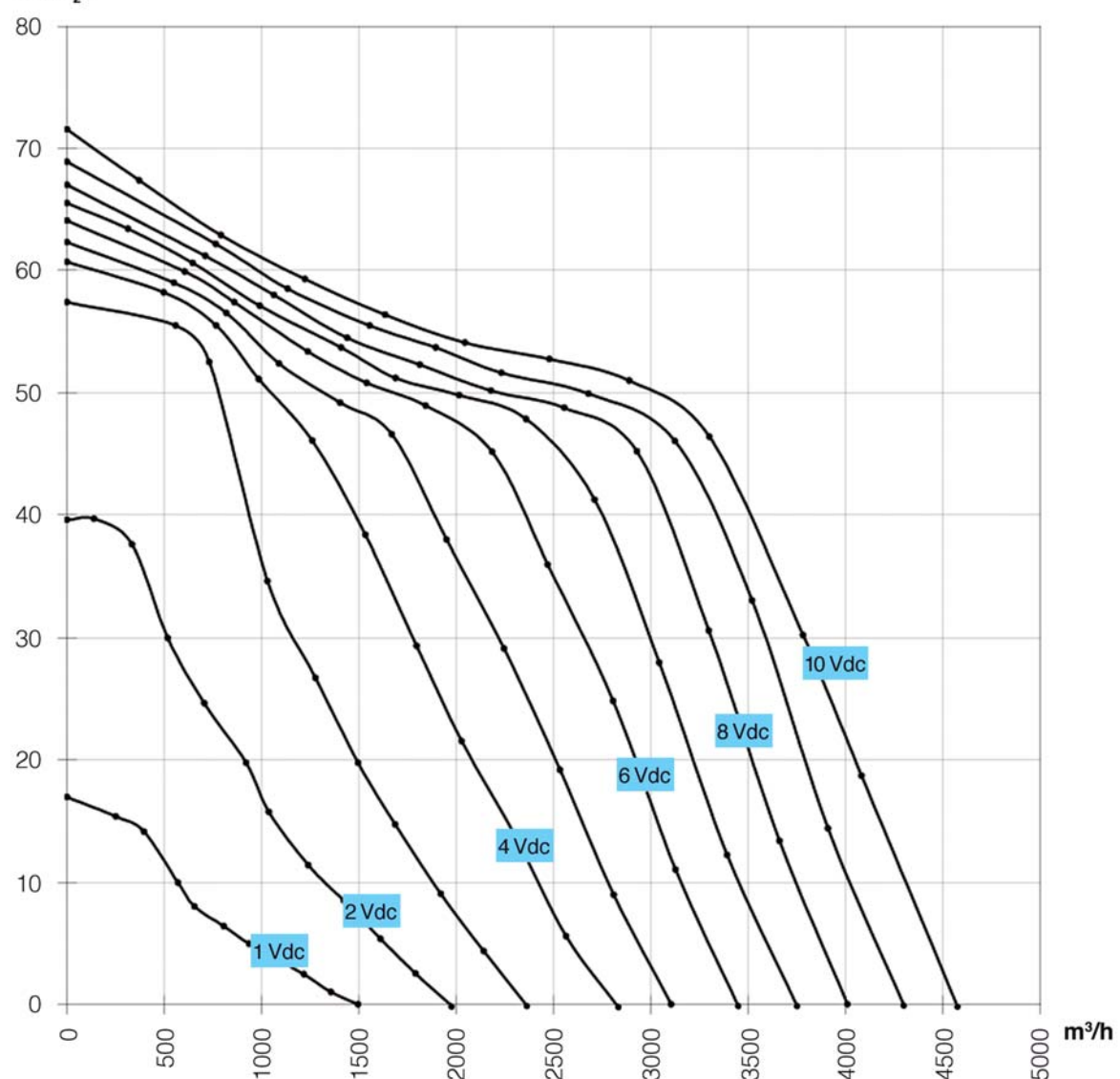
Overall efficiency (η): 51.2

Grade efficiency (N): 58.69

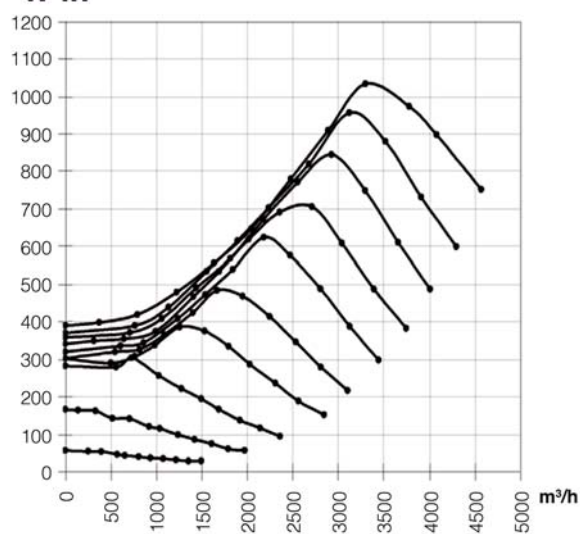
dB(A)_Lw (Sound Level Power @ Free Air)



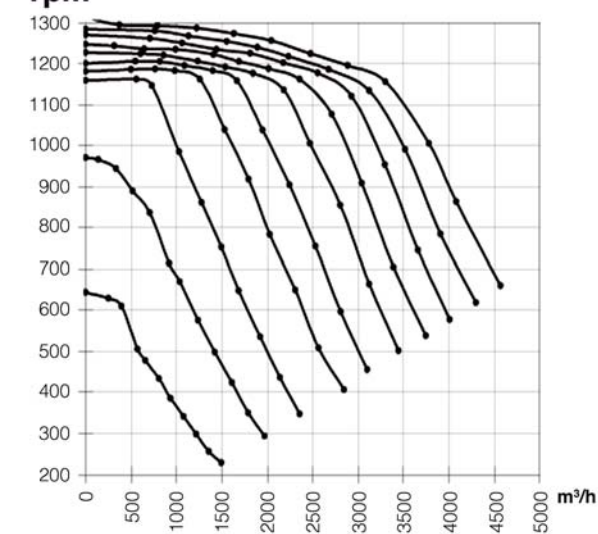
mmH₂O



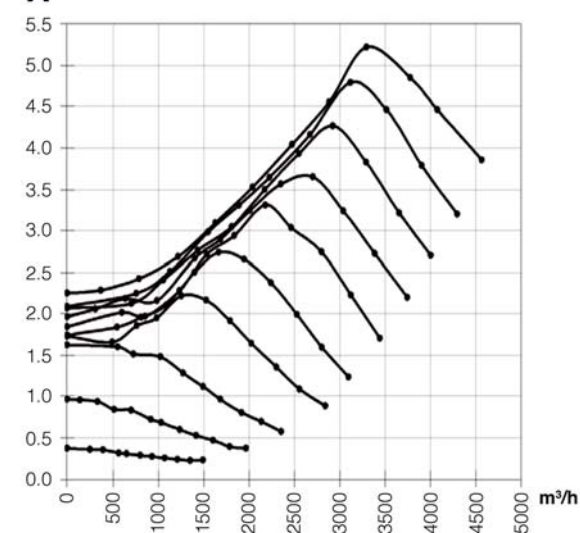
W in



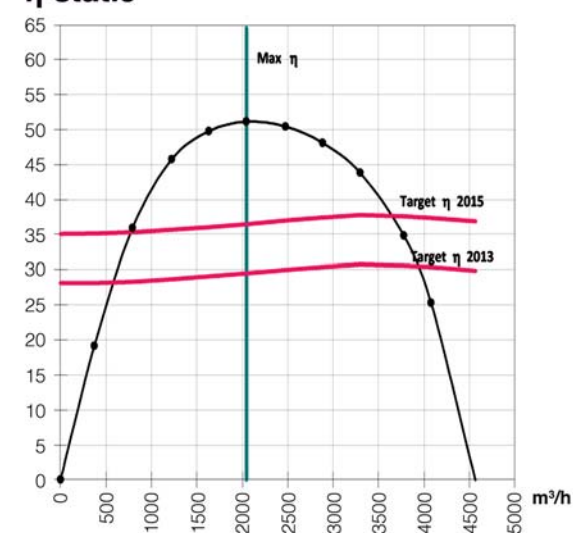
rpm



A



η static

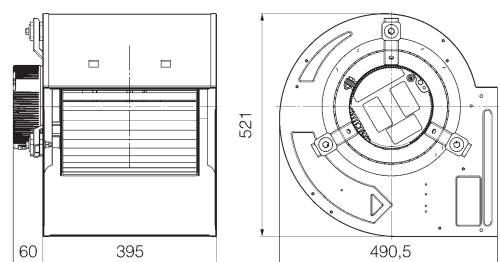




PERFORMANCE CURVES

DDe 12/12 - 1 HP LOW SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 1 HP
 Range Voltage: 200-254 V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 12/12
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-015

Operating limits

Win: Min 25 - Max 1100 (W)
 Ampere: Min 0.2 - Max 5.5 (A)
 Static Pressure: Min 0 - Max 71 (mmH₂O)

Measurement Category - A -

Free Inlet - Free Outlet

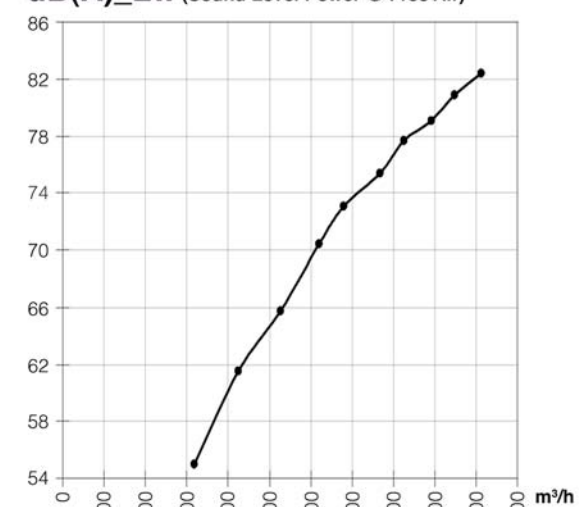
Value @ max. efficiency

Air Flow: 2519 (m³/h)
 Static Pressure: 36.1 (mmH₂O)
 Rpm: 1010 (min⁻¹)
 Power Input: 550 (W)

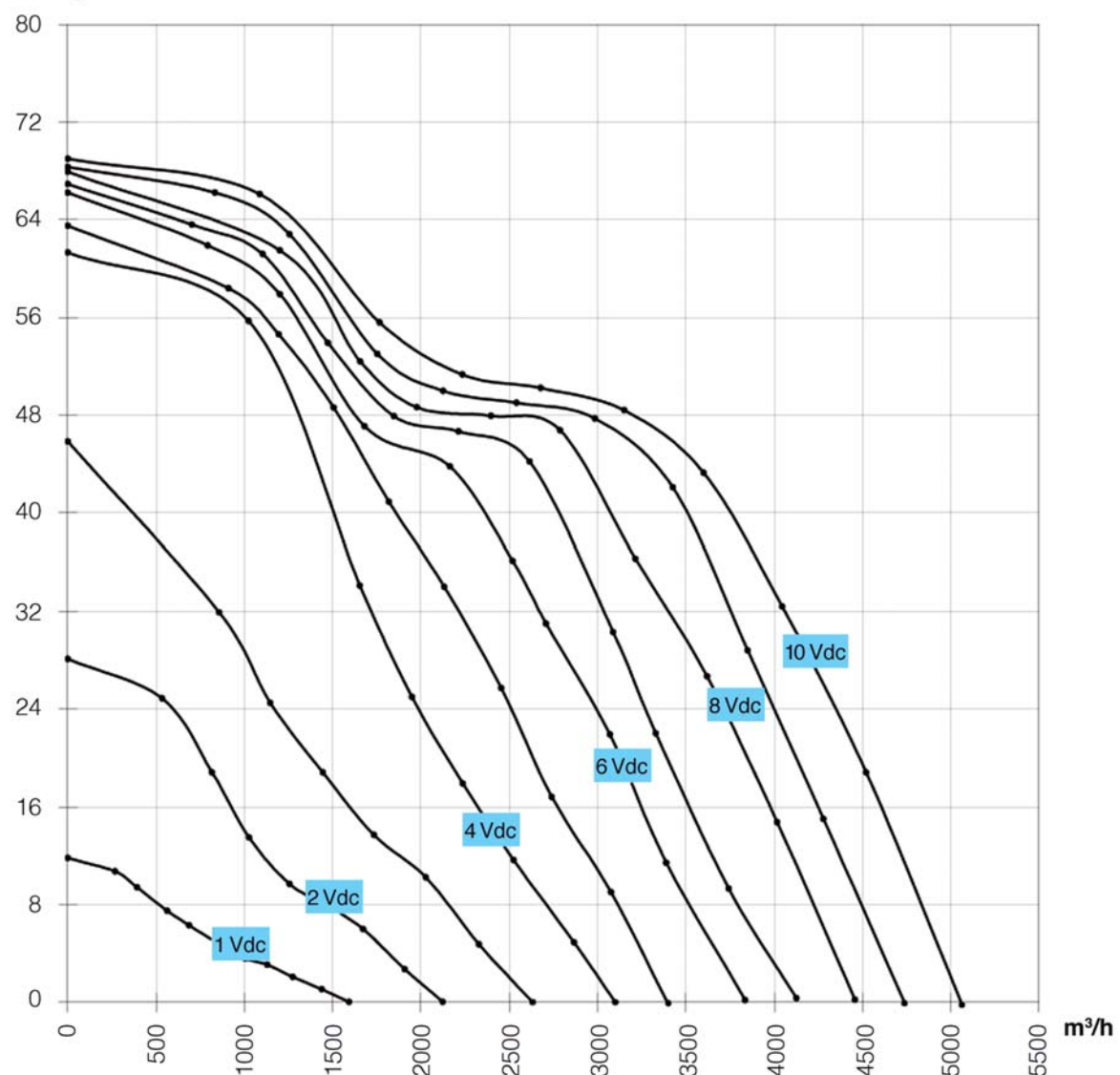
Overall efficiency (η): 49.8

Grade efficiency (N): 57.76

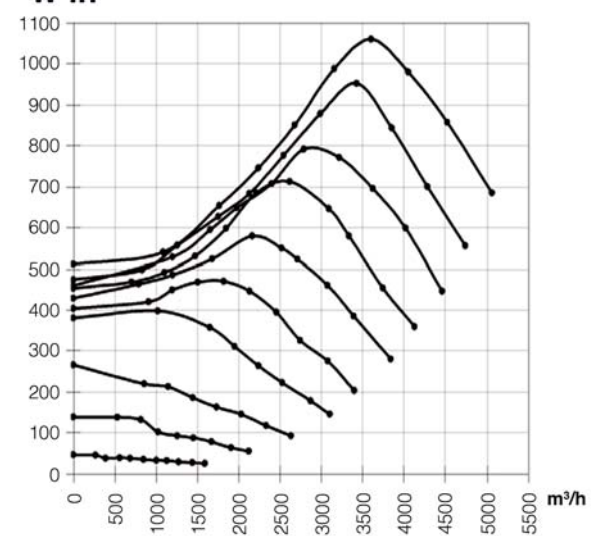
dB(A)_Lw (Sound Level Power @ Free Air)



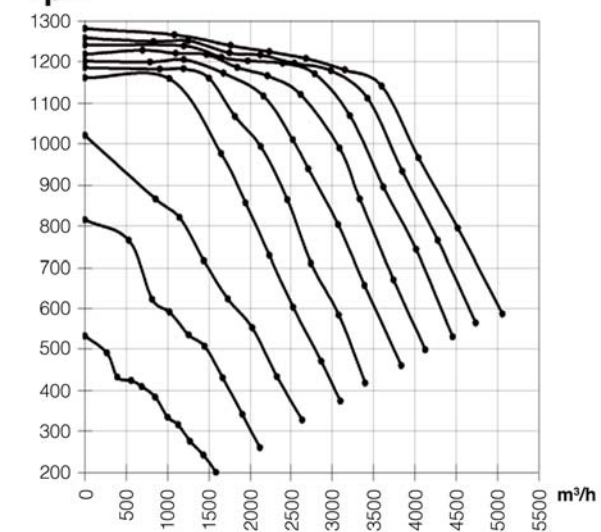
mmH₂O



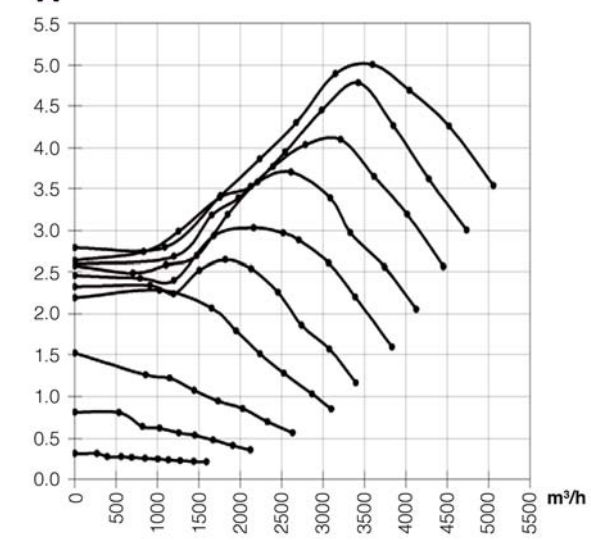
W in



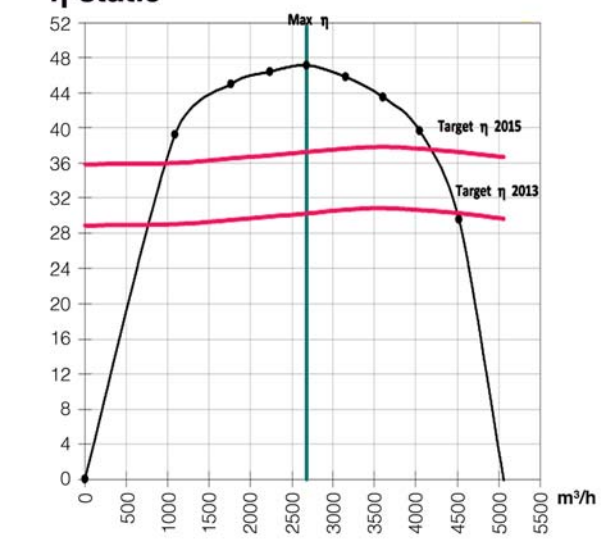
rpm



A



η static

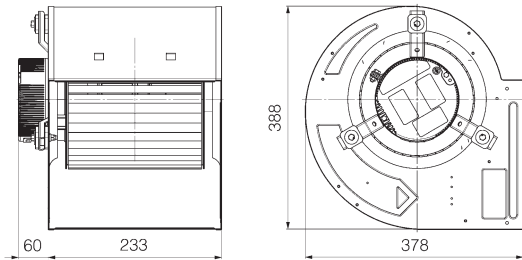




PERFORMANCE CURVES

DDe 9/7 - 1/3 HP HIGH SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 1/3 HP
 Range Voltage: 200-254V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 9/7
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-008

Operating limits

Win: Min 15 - Max 450 (W)
 Ampere: Min 0.15 - Max 2.5 (A)
 Static Pressure: Min 0 - Max 55 (mmH₂O)

Measurement Category - A -

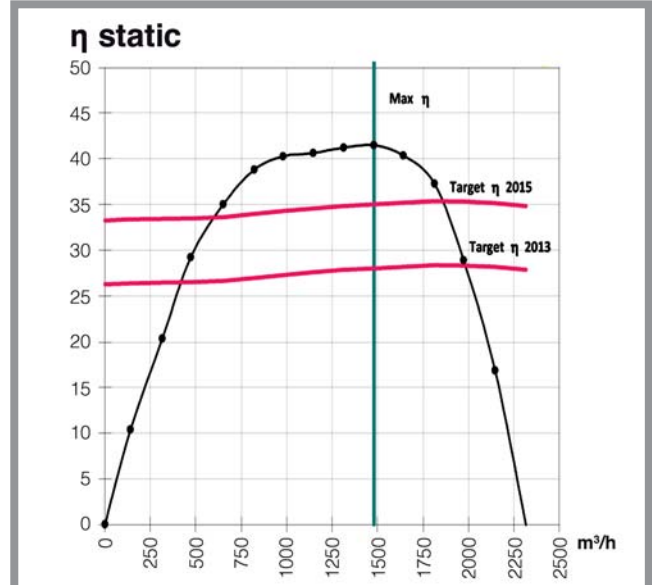
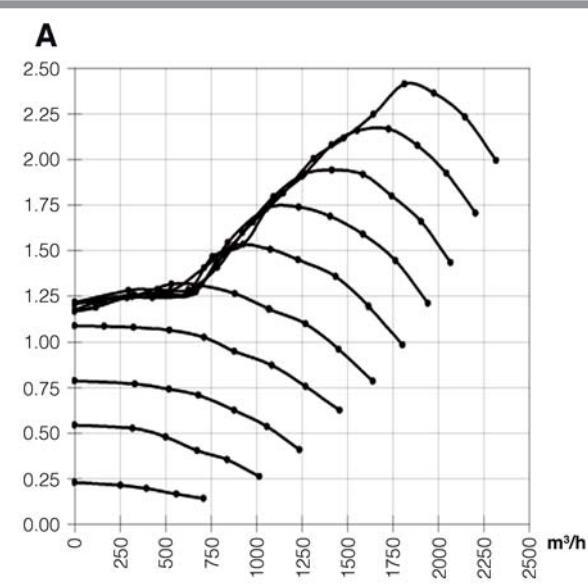
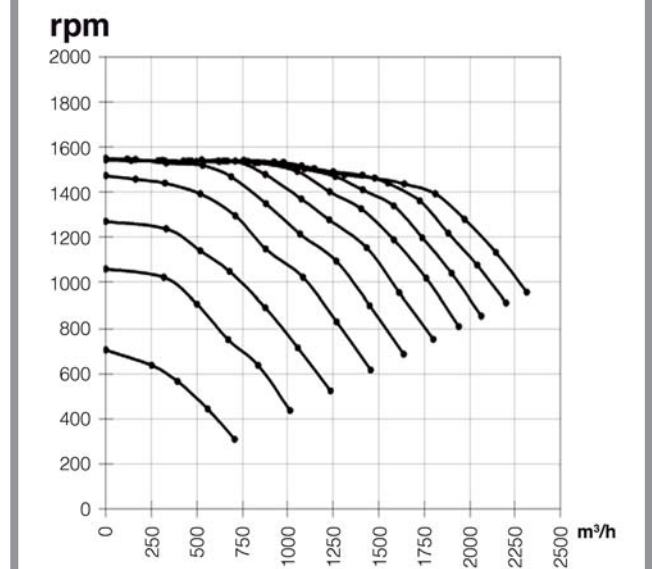
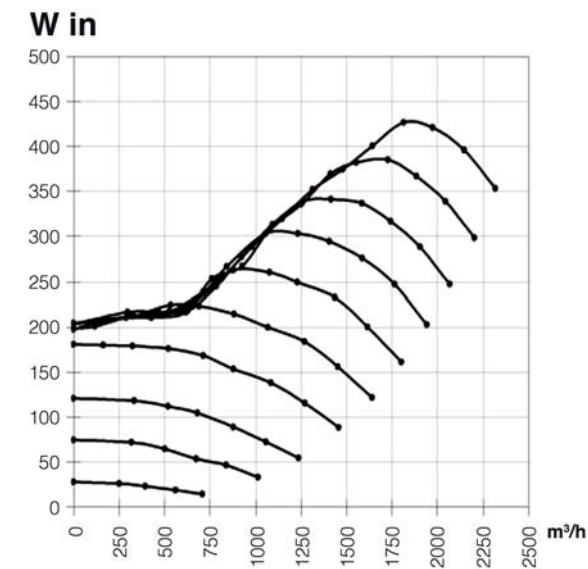
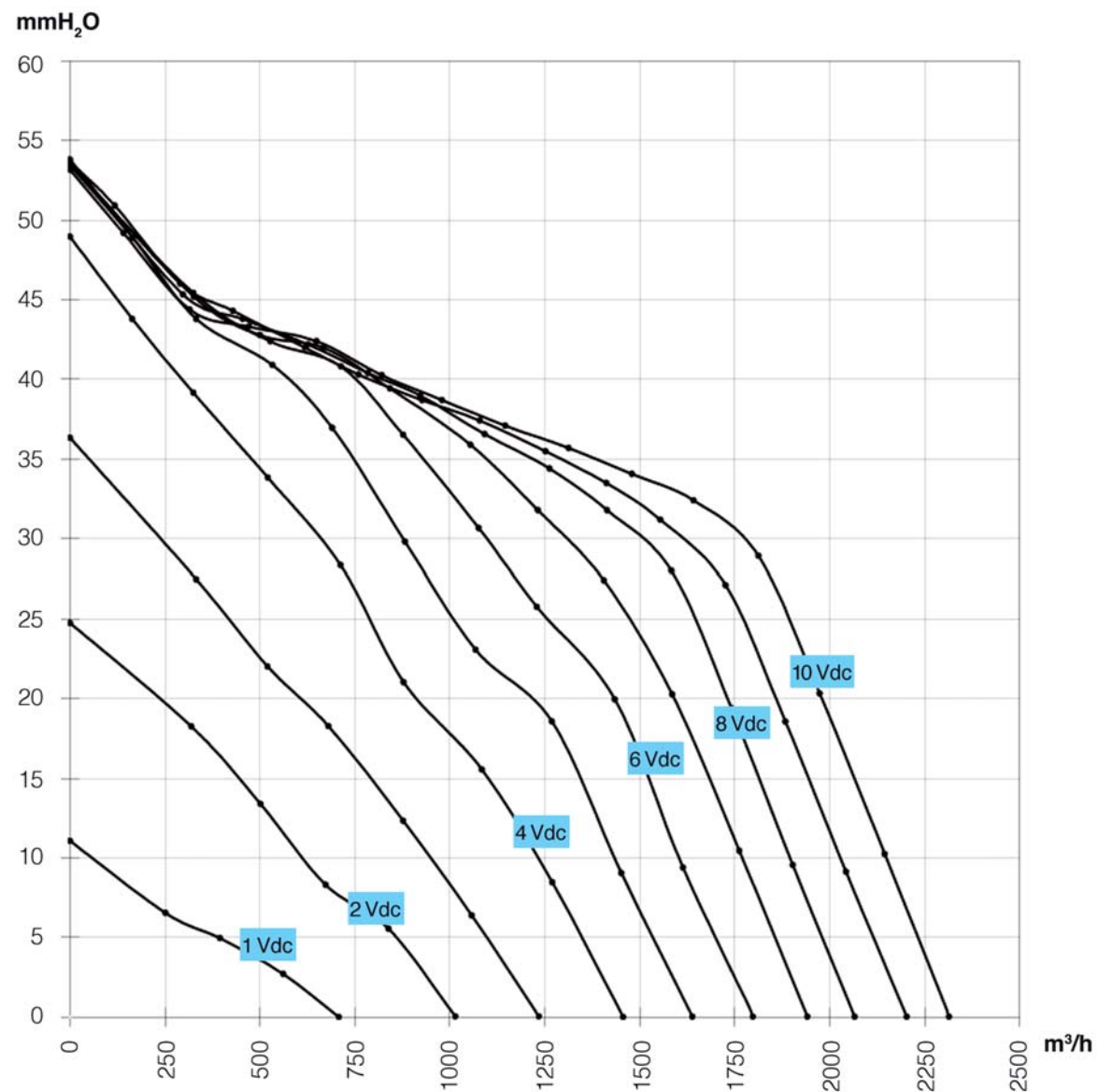
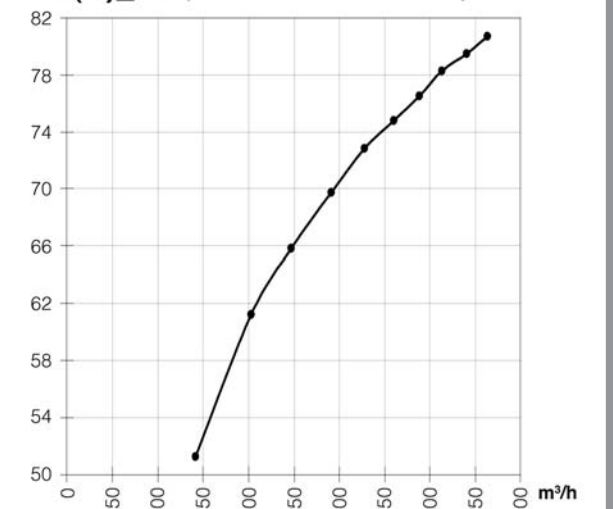
Free Inlet - Free Outlet

Value @ max. efficiency

Air Flow: 1480 (m³/h)
 Static Pressure: 34.1 (mmH₂O)
 Rpm: 1463 (min⁻¹)
 Power Input: 375 (W)

Overall efficiency (η): 40.9
 Grade efficiency (N): 49.9

dB(A)_Lw (Sound Level Power @ Free Air)

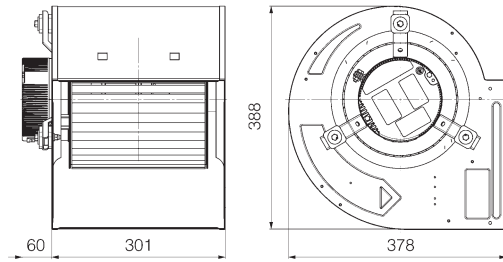




PERFORMANCE CURVES

DDe 9/9 - 1/3 HP HIGH SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 1/3 HP
 Range Voltage: 200-254V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 9/9
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-009

Operating limits

Win: Min 15 - Max 450 (W)
 Ampere: Min 0.15 - Max 2.5 (A)
 Static Pressure: Min 0 - Max 55 (mmH₂O)

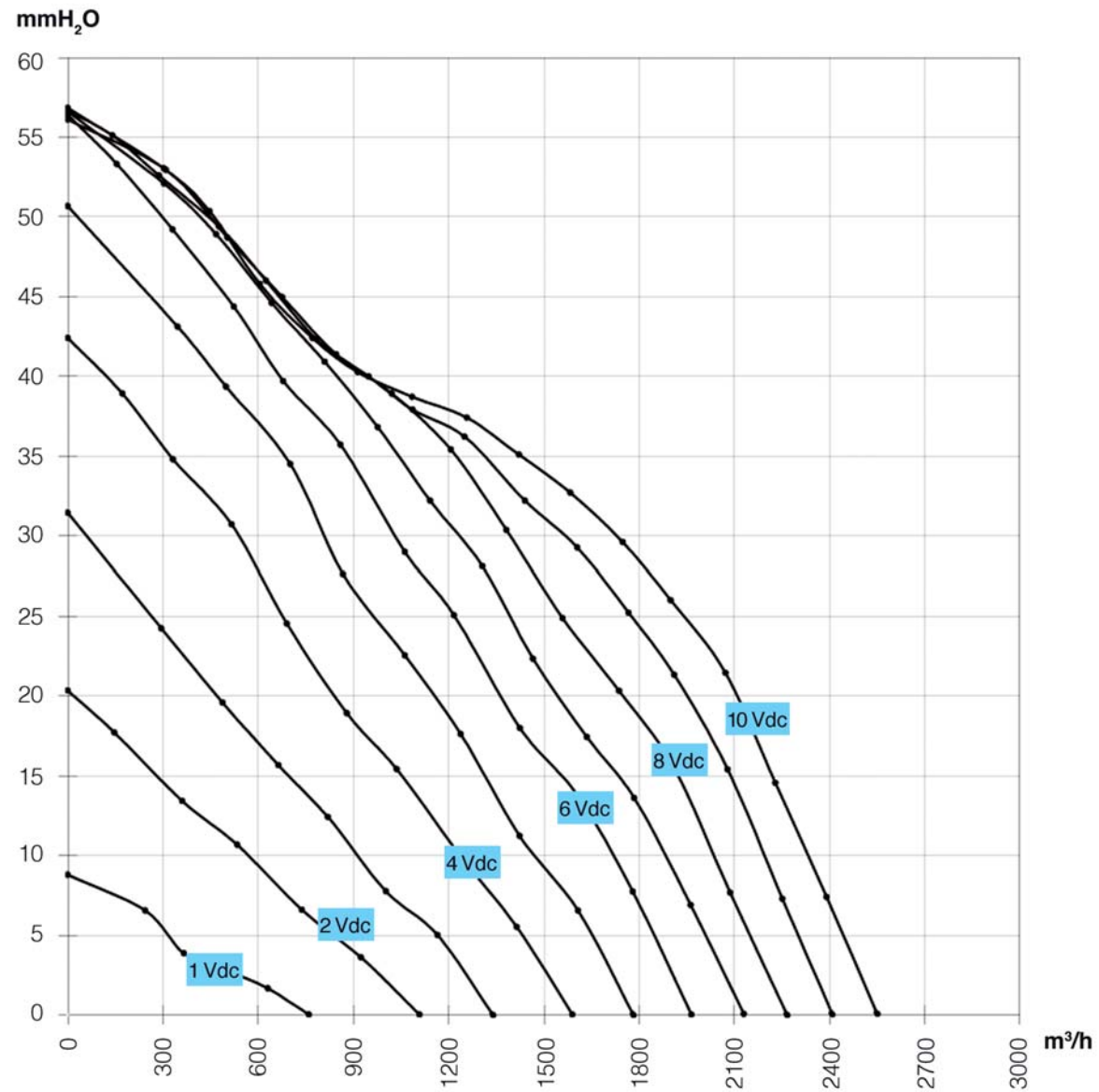
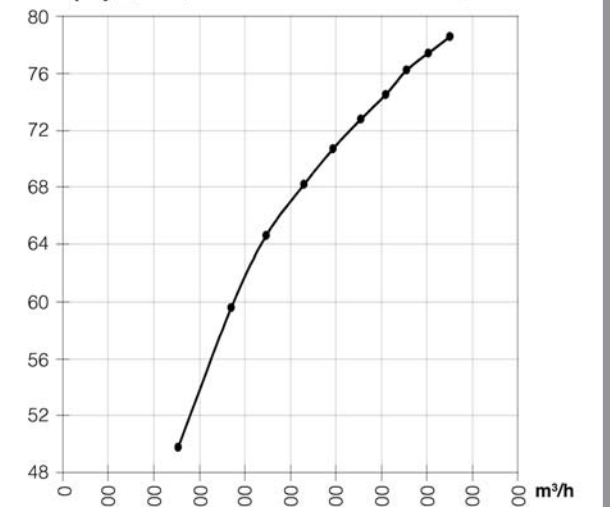
Measurement Category - A -
Free Inlet - Free Outlet

Value @ max. efficiency

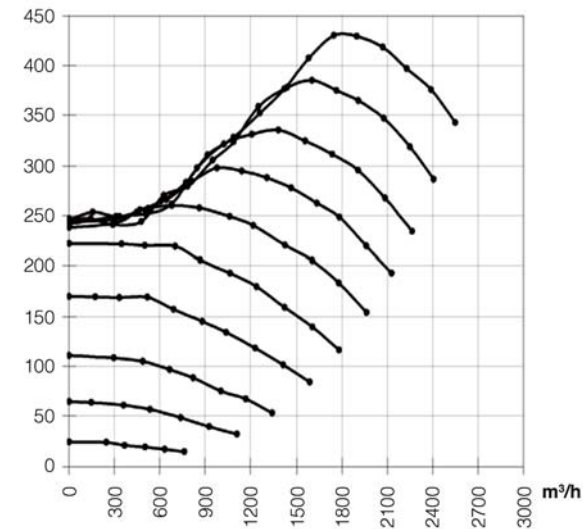
Air Flow: 1258 (m³/h)
 Static Pressure: 37.4 (mmH₂O)
 Rpm: 1472 (min⁻¹)
 Power Input: 352 (W)

Overall efficiency (η): 40.7
 Grade efficiency (N): 49.9

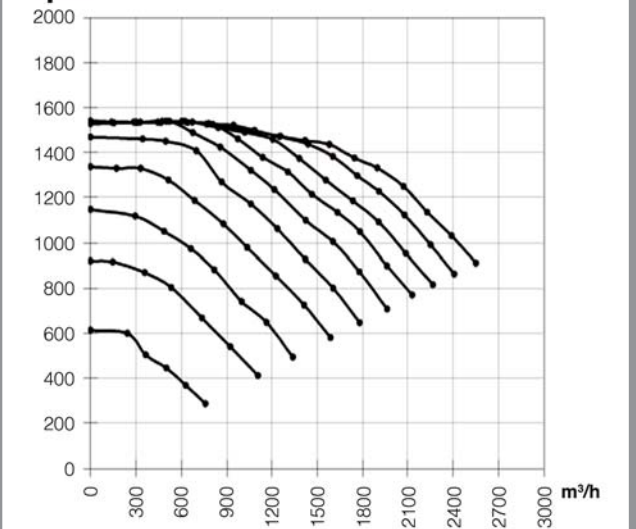
dB(A)_Lw (Sound Level Power @ Free Air)



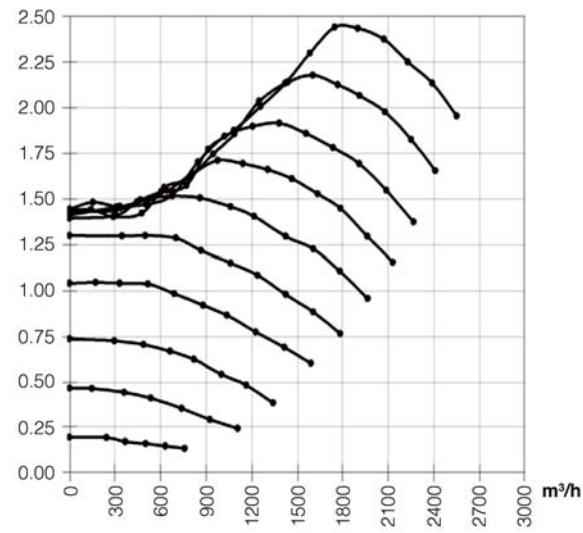
W in



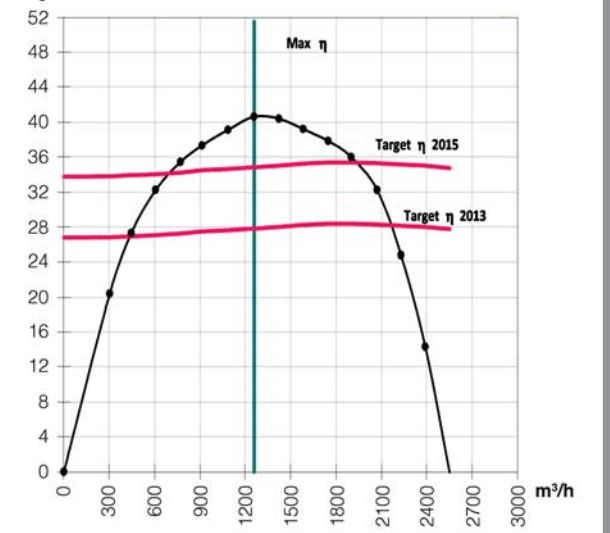
rpm



A



η static

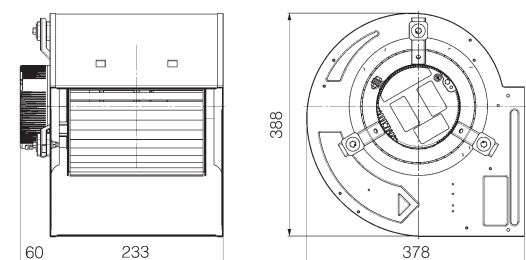




PERFORMANCE CURVES

DDe 9/7 - 1/2 HP HIGH SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 1/2 HP
 Range Voltage: 200-254V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 9/7
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-005

Operating limits

Win: Min 17 - Max 600 (W)
 Ampere: Min 0.15 - Max 3.5 (A)
 Static Pressure: Min 0 - Max 51 (mmH₂O)

Measurement Category - A -

Free Inlet - Free Outlet

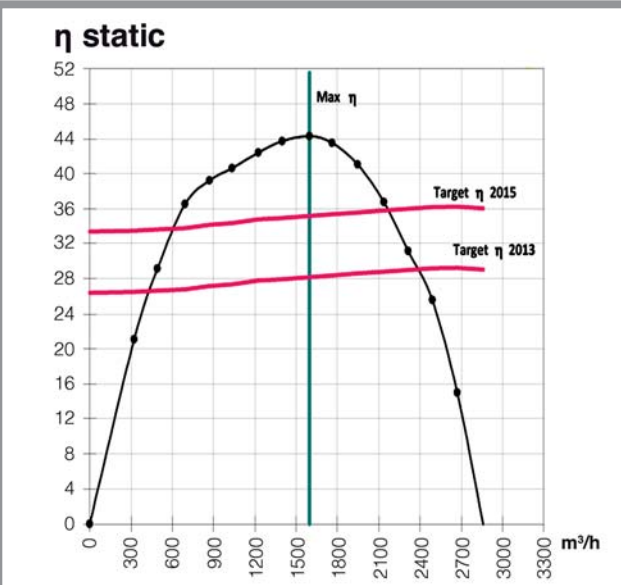
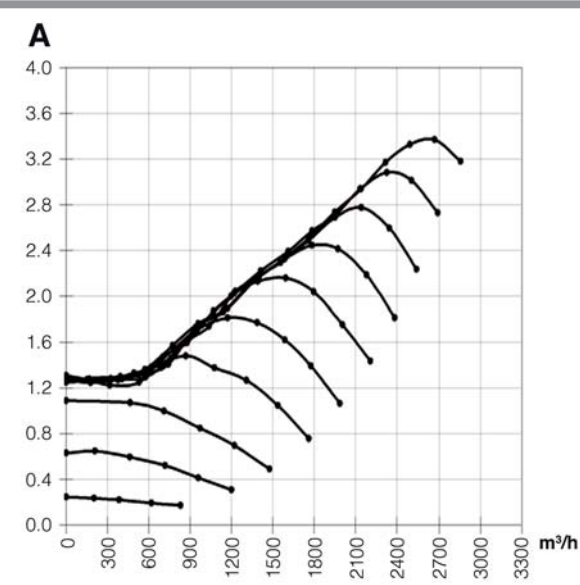
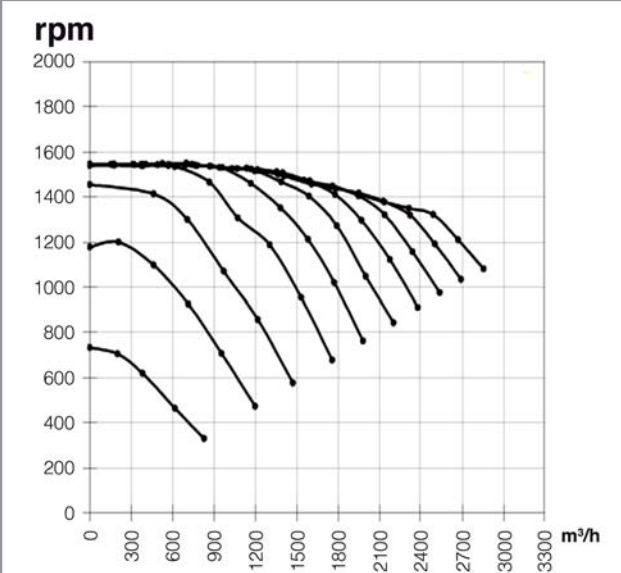
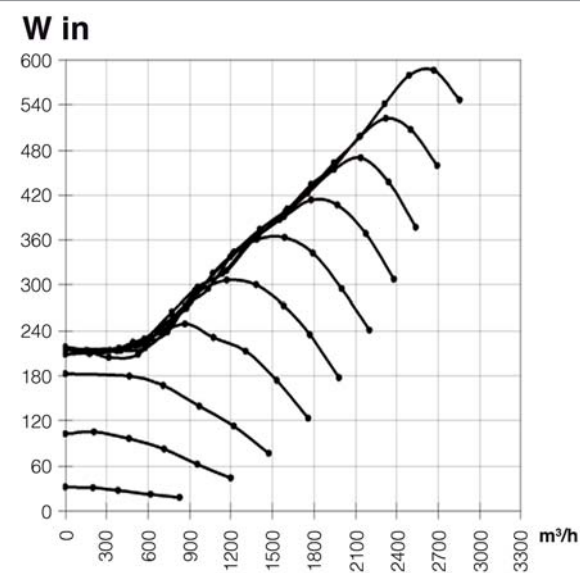
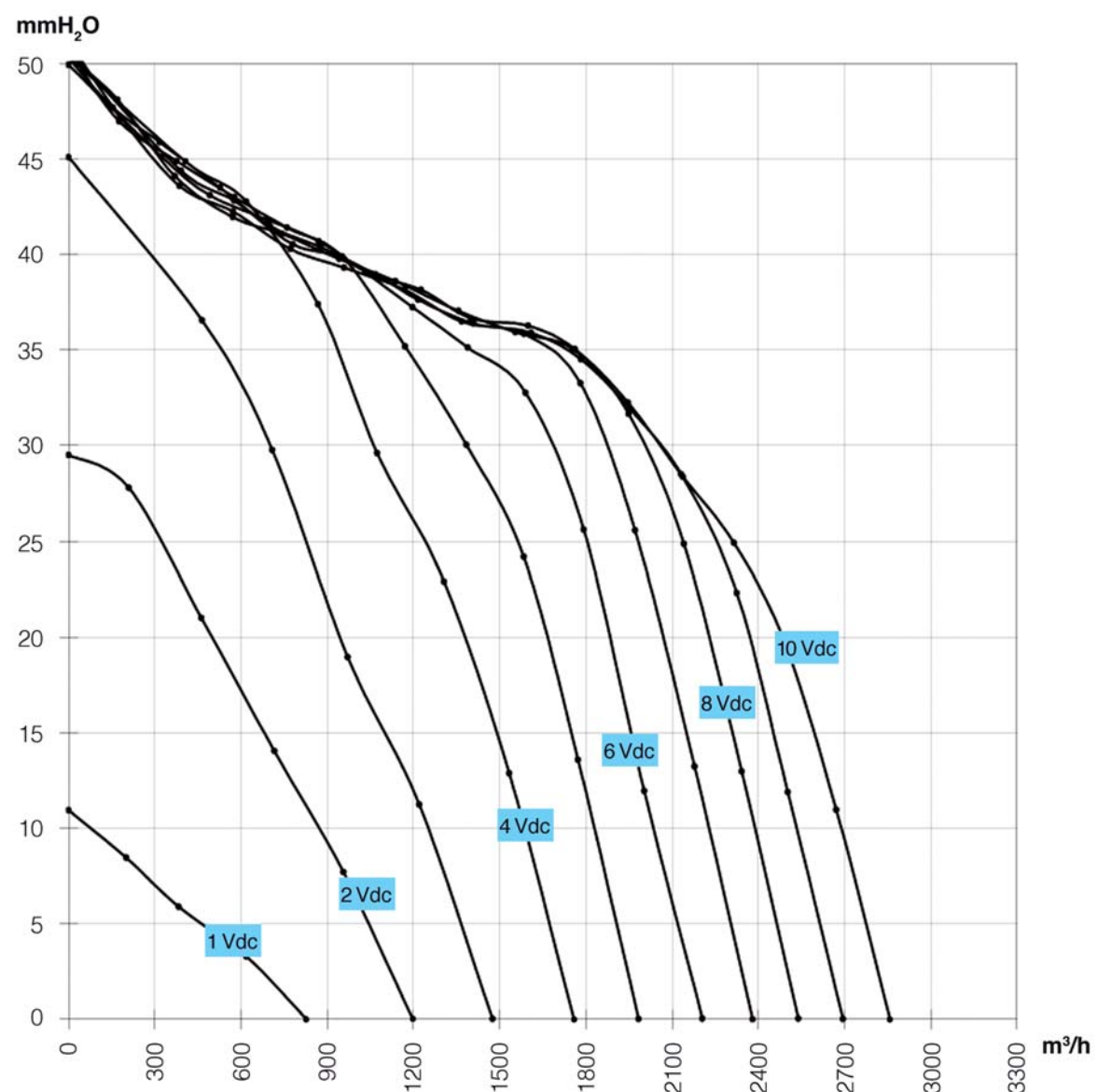
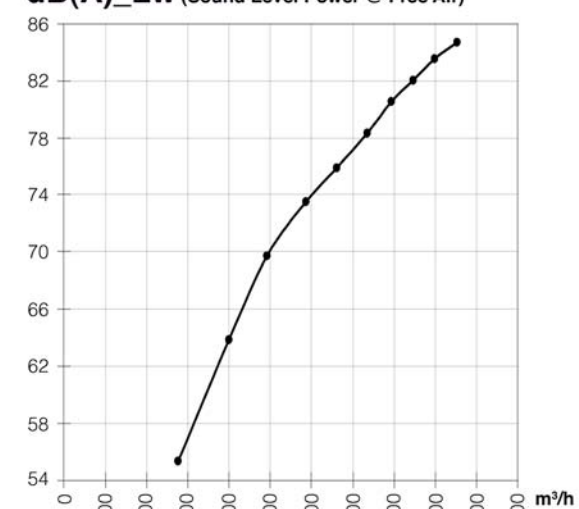
Value @ max. efficiency

Air Flow: 1598 (m³/h)
 Static Pressure: 36.3 (mmH₂O)
 Rpm: 1470 (min⁻¹)
 Power Input: 397.7 (W)

Overall efficiency (η): 44.3

Grade efficiency (N): 53.14

dB(A)_Lw (Sound Level Power @ Free Air)

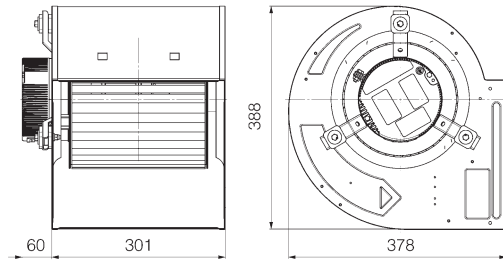




PERFORMANCE CURVES

DDe 9/9 - 1/2 HP HIGH SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 1/2 HP
 Range Voltage: 200-254V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 9/9
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-003

Operating limits

Win: Min 17 - Max 600 (W)
 Ampere: Min 0.15 - Max 3.5 (A)
 Static Pressure: Min 0 - Max 57 (mmH₂O)

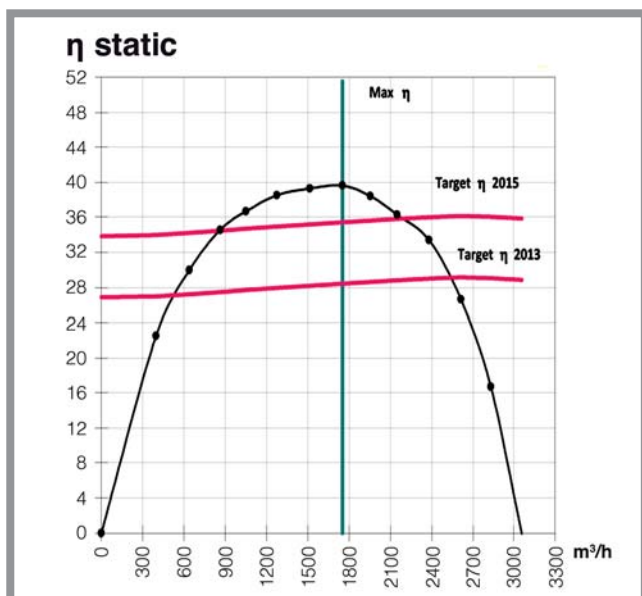
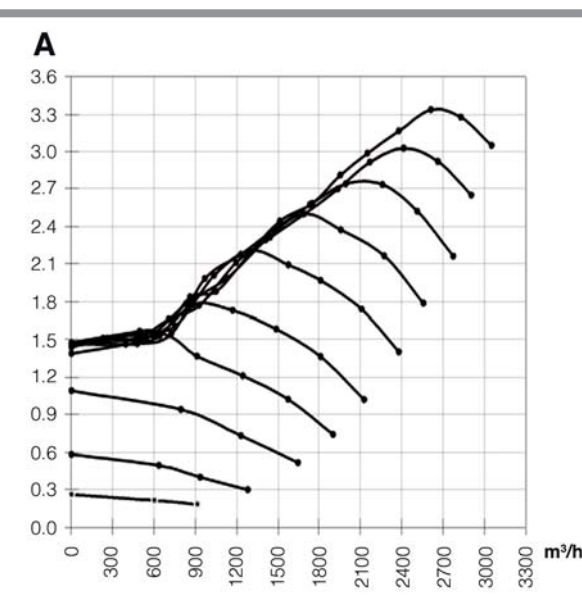
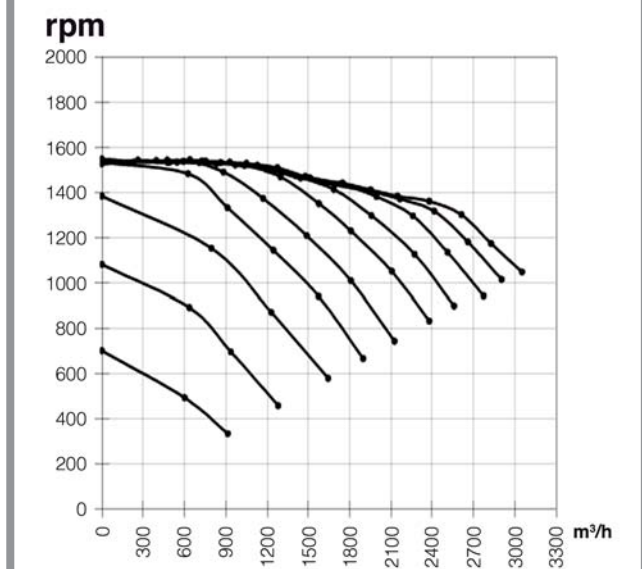
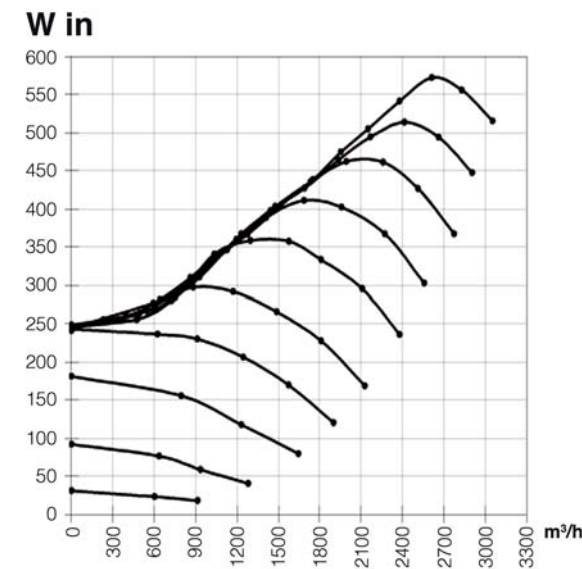
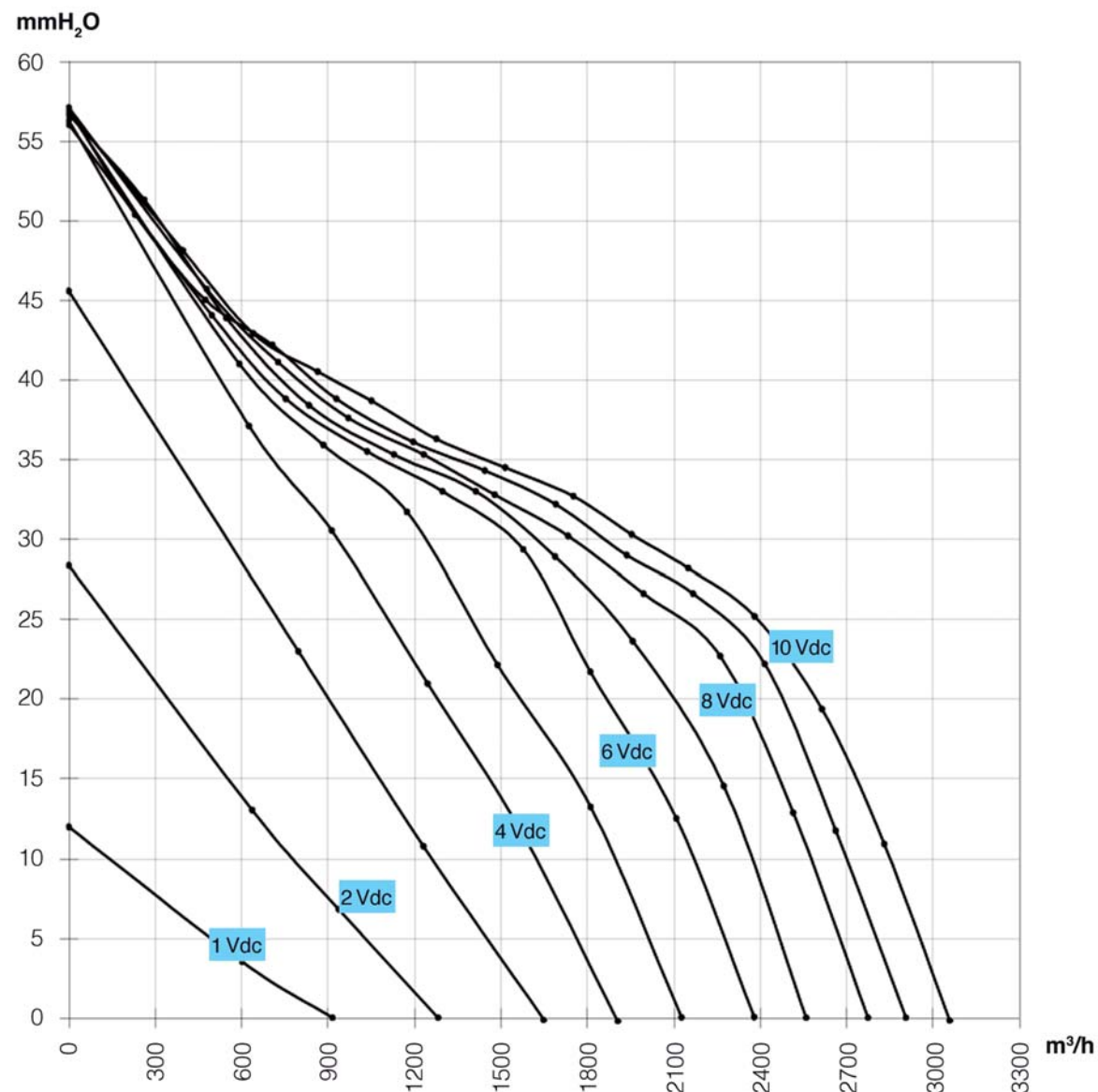
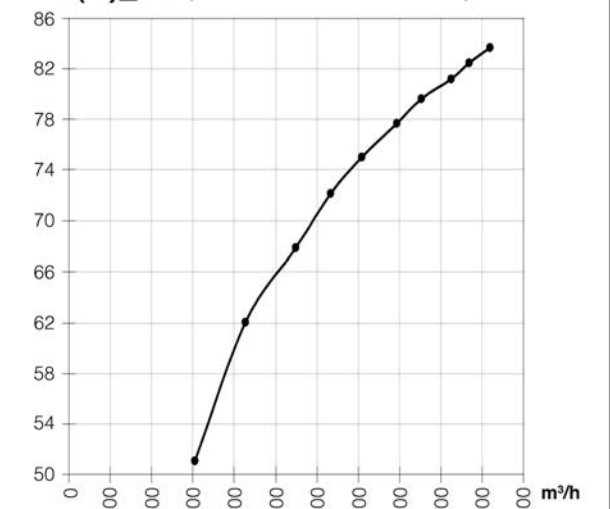
Measurement Category - A -
Free Inlet - Free Outlet

Value @ max. efficiency

Air Flow: 1752 (m³/h)
 Static Pressure: 32.7 (mmH₂O)
 Rpm: 1438 (min⁻¹)
 Power Input: 438 (W)

Overall efficiency (η): 39.6
 Grade efficiency (N): 48.23

dB(A)_Lw (Sound Level Power @ Free Air)

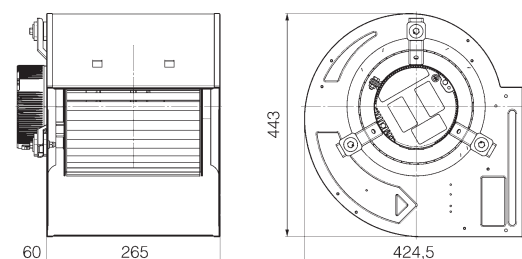




PERFORMANCE CURVES

DDe 10/8 - 1/2 HP HIGH SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 1/2 HP
 Range Voltage: 200-254 V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 10/8
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-014

Operating limits

Win: Min 15 - Max 600 (W)
 Ampere: Min 0.15 - Max 3.5 (A)
 Static Pressure: Min 0 - Max 65 (mmH₂O)

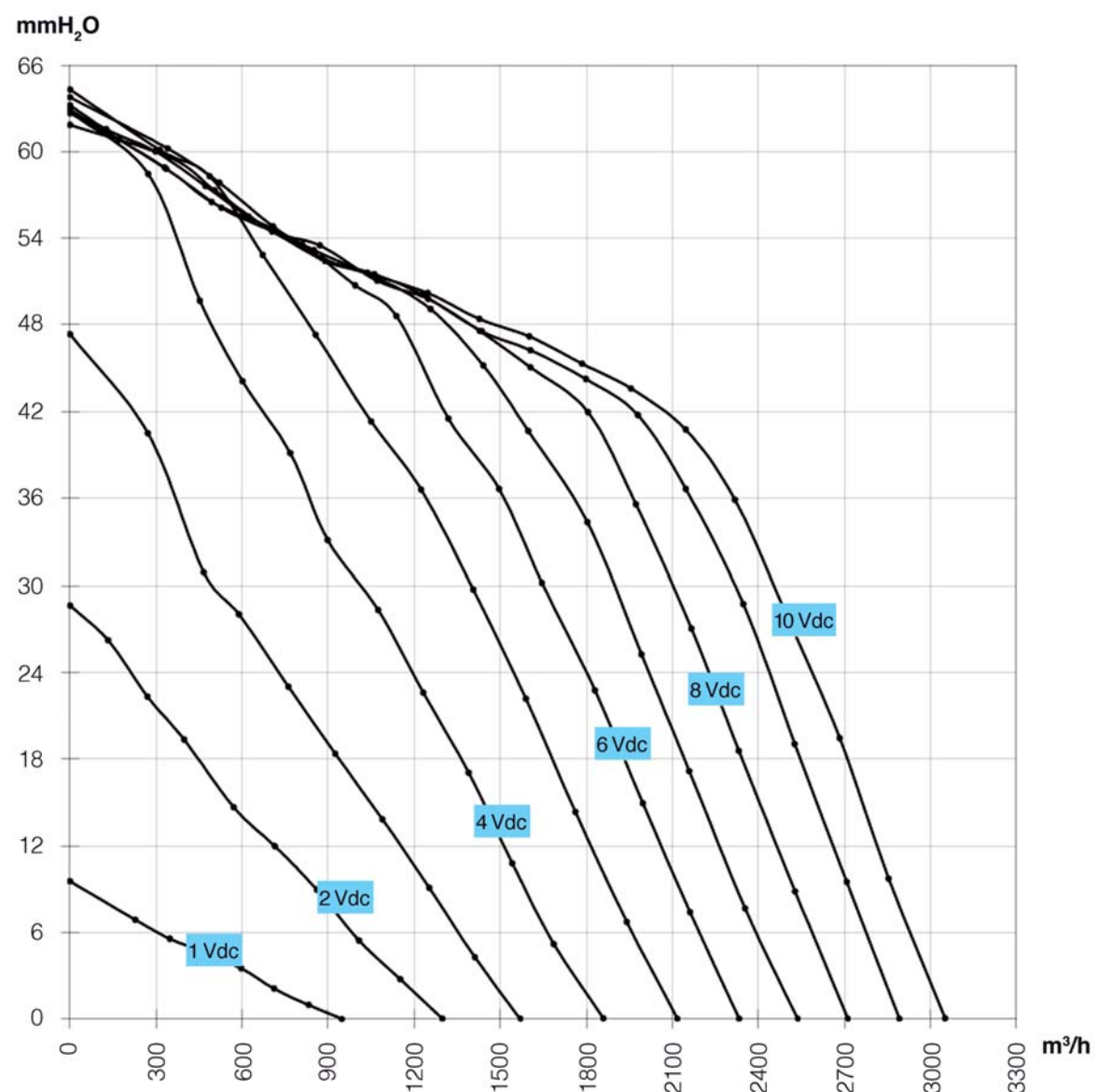
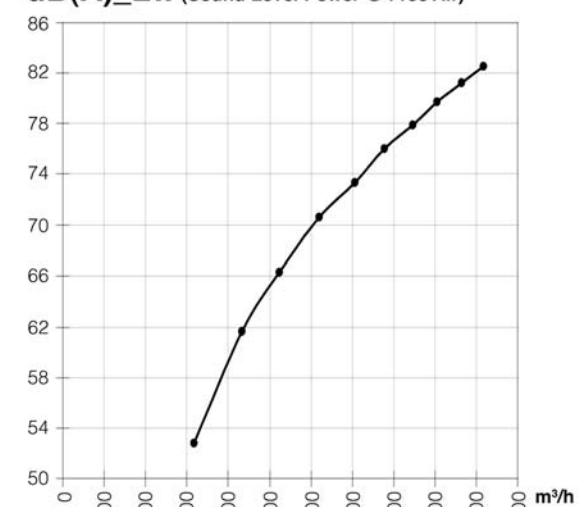
Measurement Category - A -
Free Inlet - Free Outlet

Value @ max. efficiency

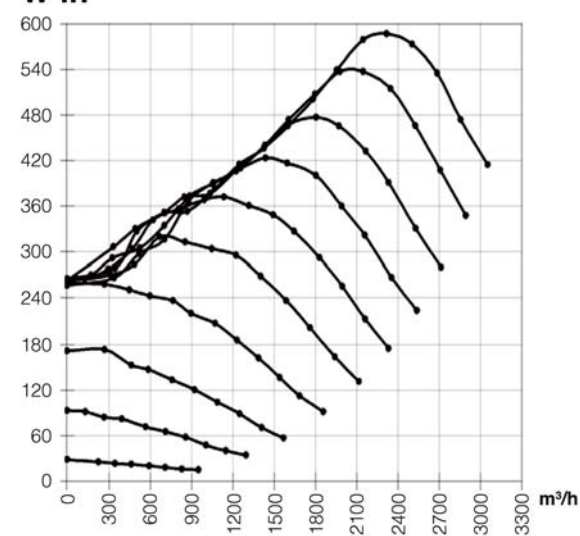
Air Flow: 1602 (m³/h)
 Static Pressure: 47.2 (mmH₂O)
 Rpm: 1404 (min⁻¹)
 Power Input: 465.1 (W)

Overall efficiency (η): 49.2
 Grade efficiency (N): 57.63

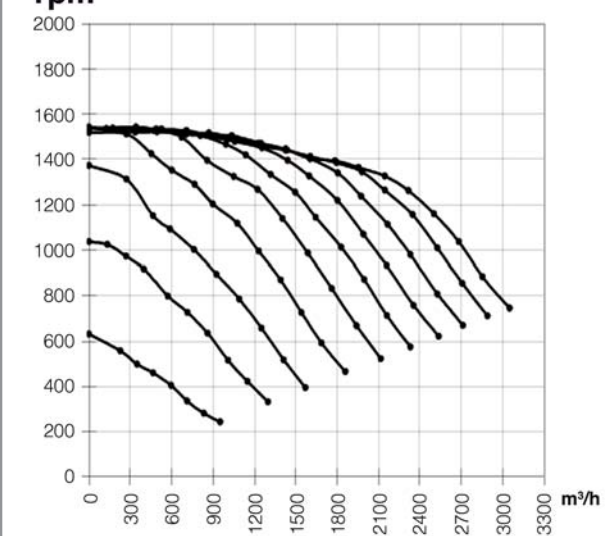
dB(A)_Lw (Sound Level Power @ Free Air)



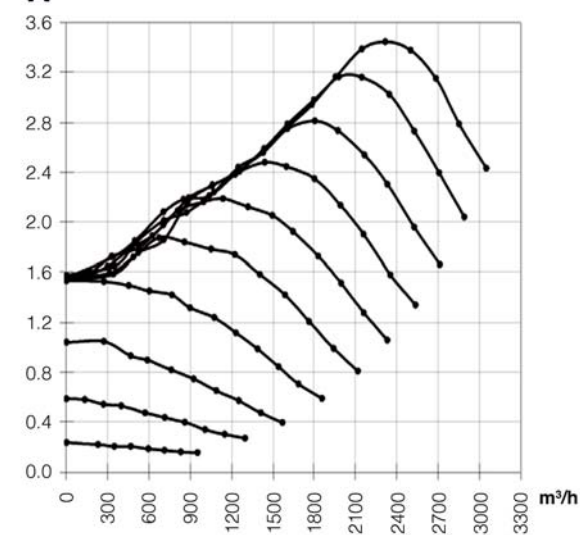
W in



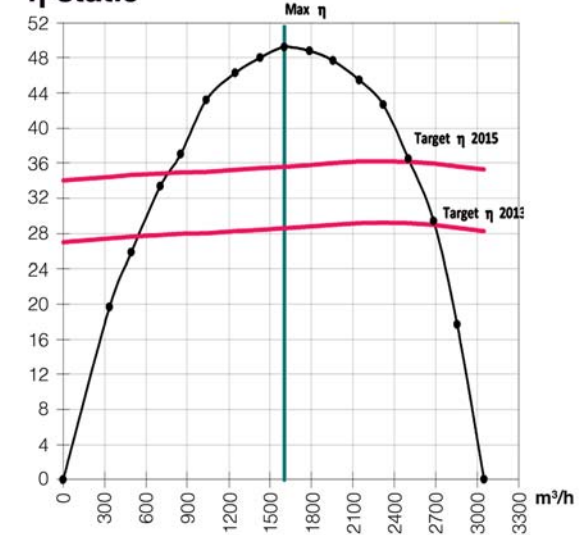
rpm



A



η static

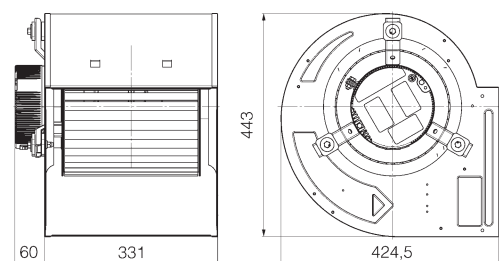




PERFORMANCE CURVES

DDe 10/10 - 1/2 HP HIGH SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 1/2 HP
 Range Voltage: 200-254V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 10/10
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-011

Operating limits

Win: Min 15 - Max 600 (W)
 Ampere: Min 0.15 - Max 3.5 (A)
 Static Pressure: Min 0 - Max 65 (mmH₂O)

Measurement Category - A -

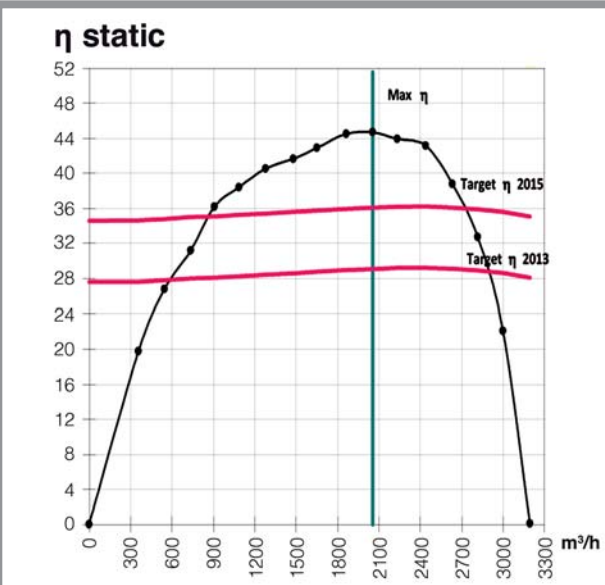
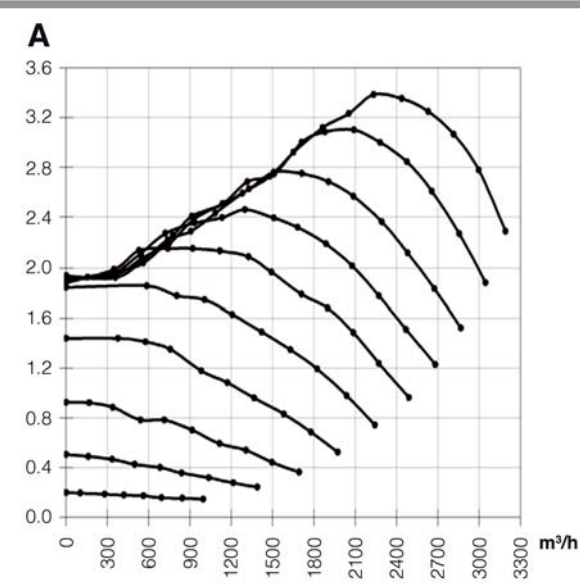
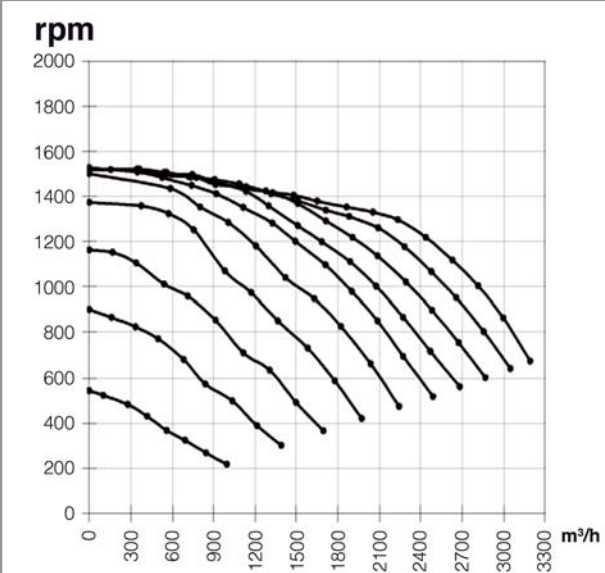
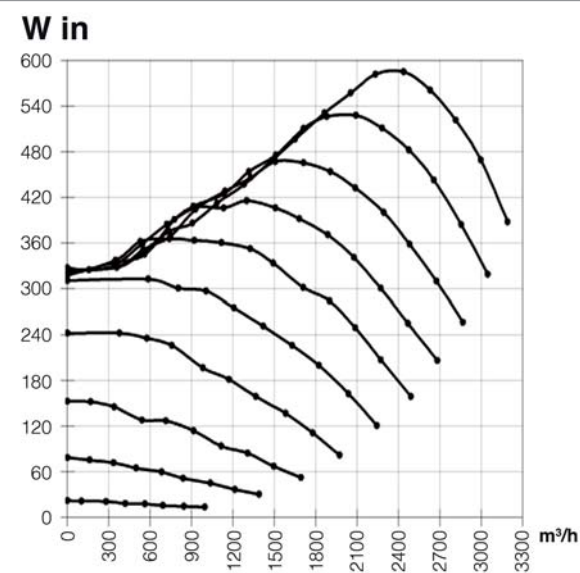
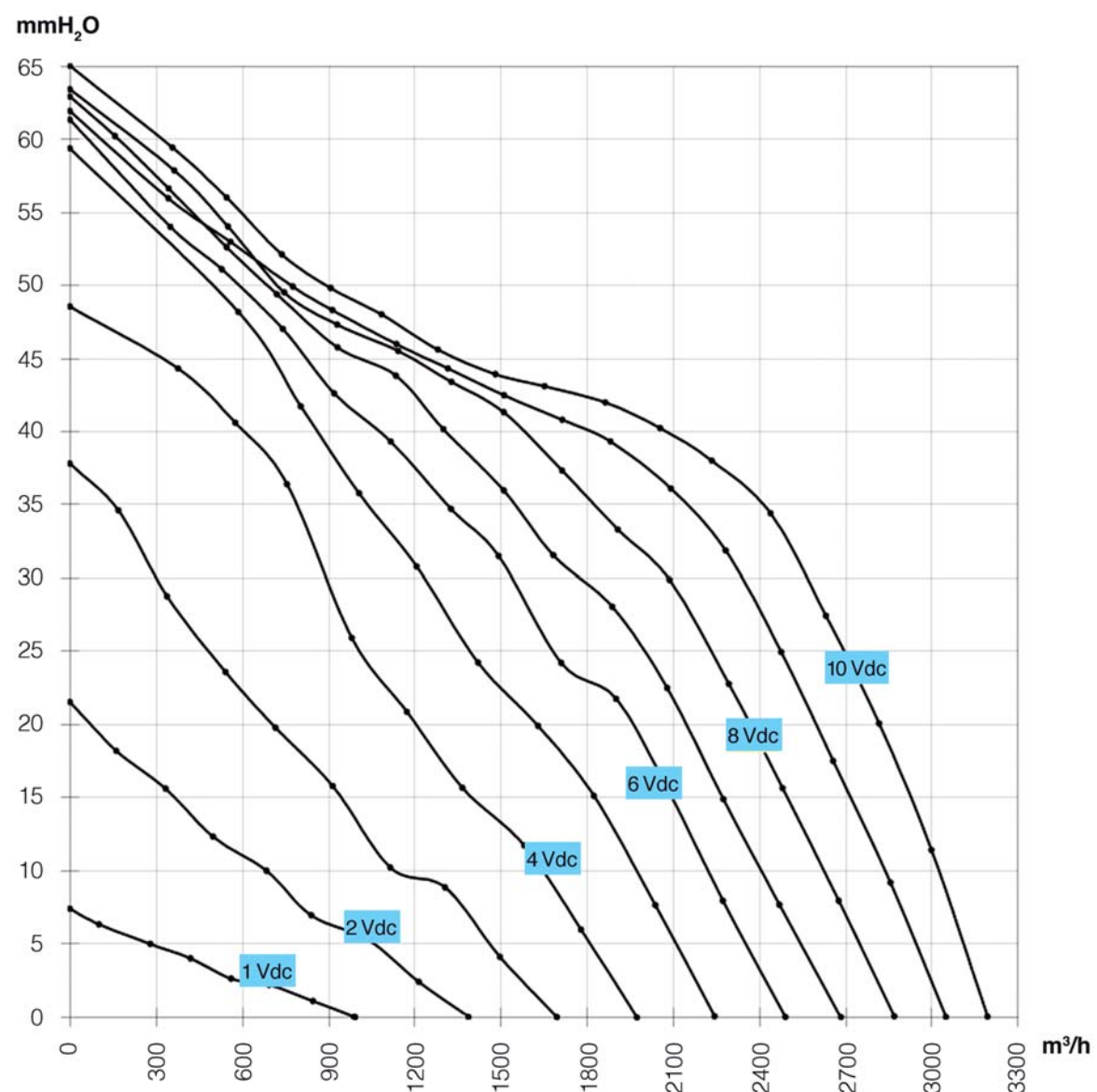
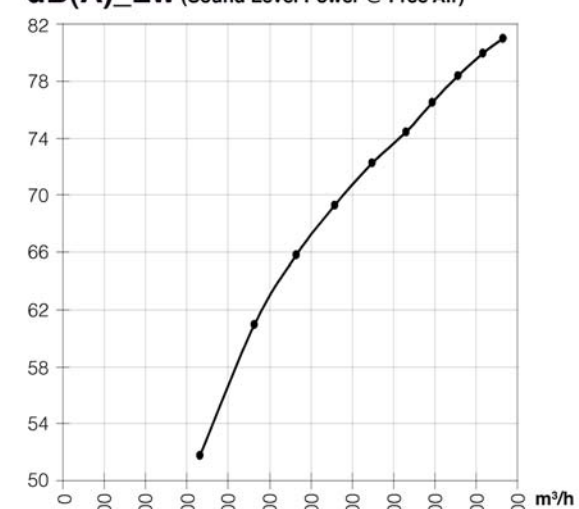
Free Inlet - Free Outlet

Value @ max. efficiency

Air Flow: 2055 (m³/h)
 Static Pressure: 40.2 (mmH₂O)
 Rpm: 1321 (min⁻¹)
 Power Input: 556.6 (W)

Overall efficiency (η): 44.7
 Grade efficiency (N): 52.64

dB(A)_Lw (Sound Level Power @ Free Air)

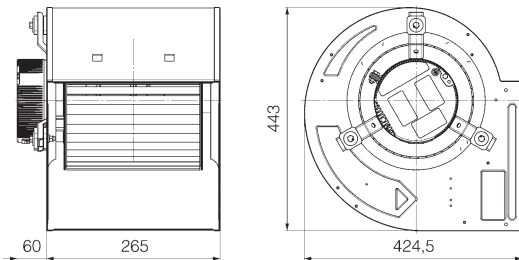




PERFORMANCE CURVES

DDe 10/8 - 3/4 HP HIGH SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 3/4 HP
 Range Voltage: 200-254V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 10/8
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-020

Operating limits

Win: Min 20 - Max 900 (W)
 Ampere: Min 0.15 - Max 4.5 (A)
 Static Pressure: Min 0 - Max 65 (mmH₂O)

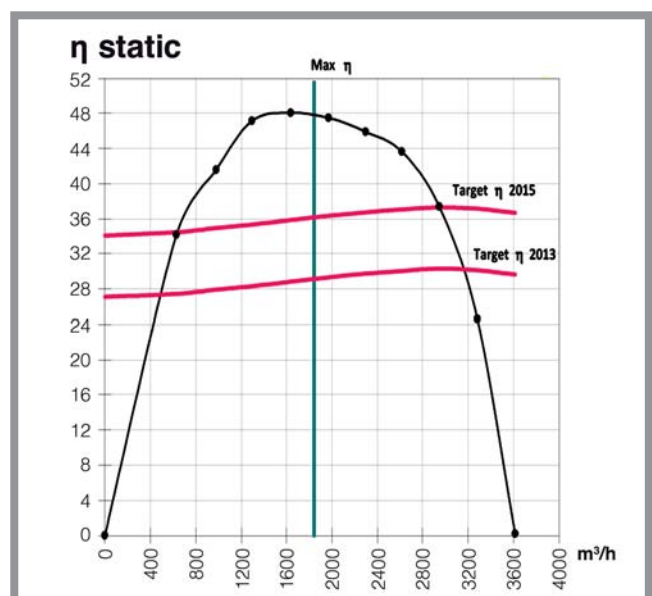
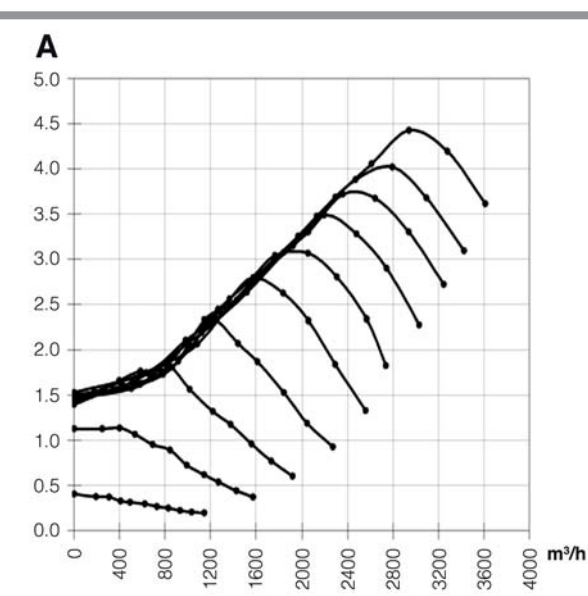
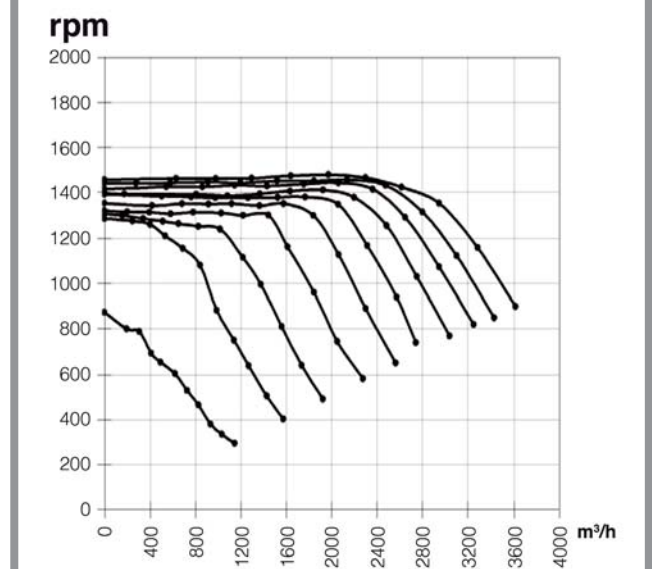
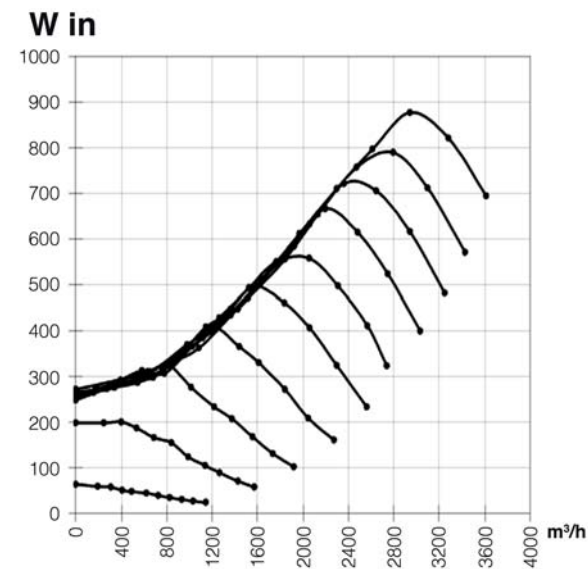
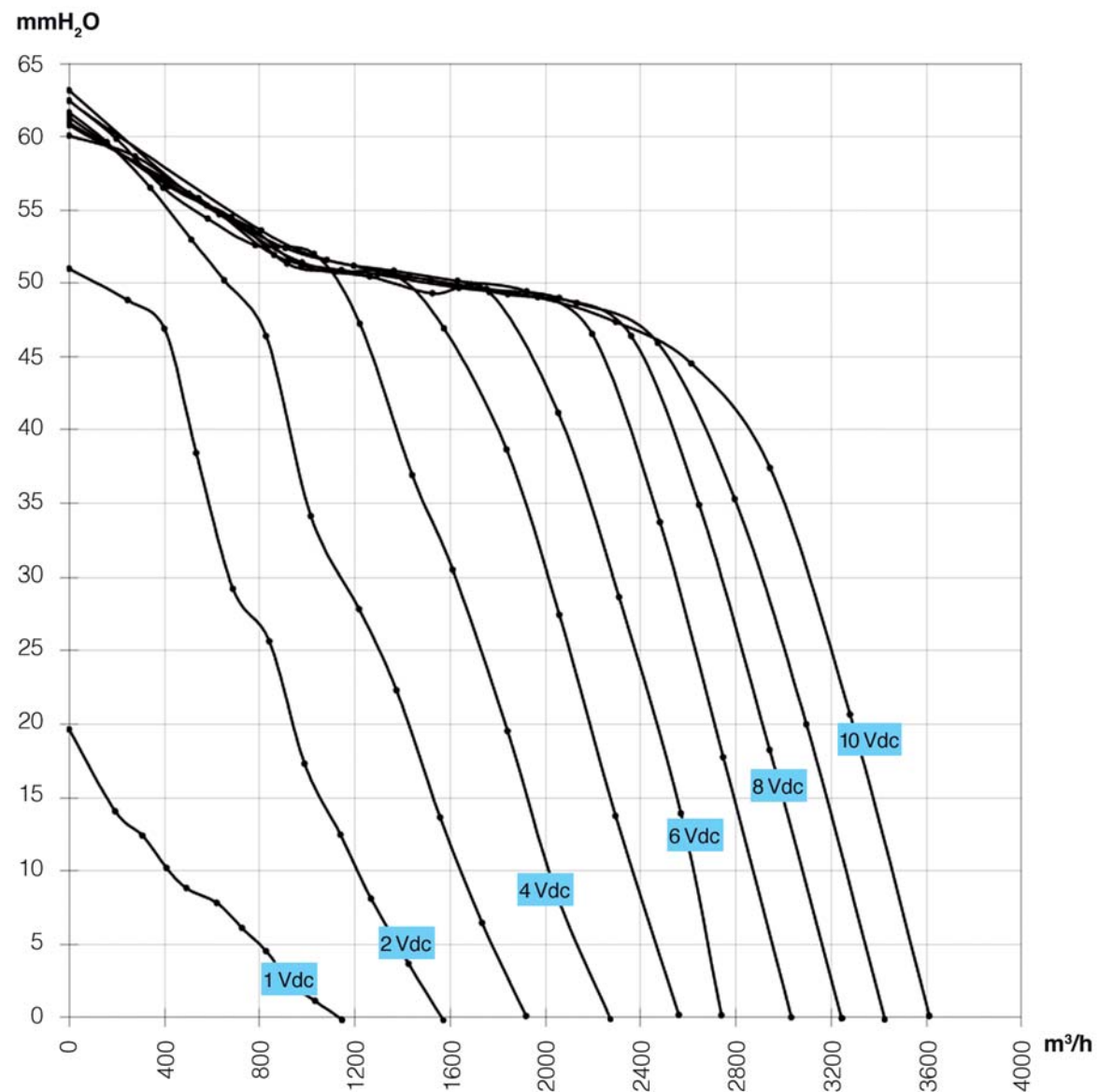
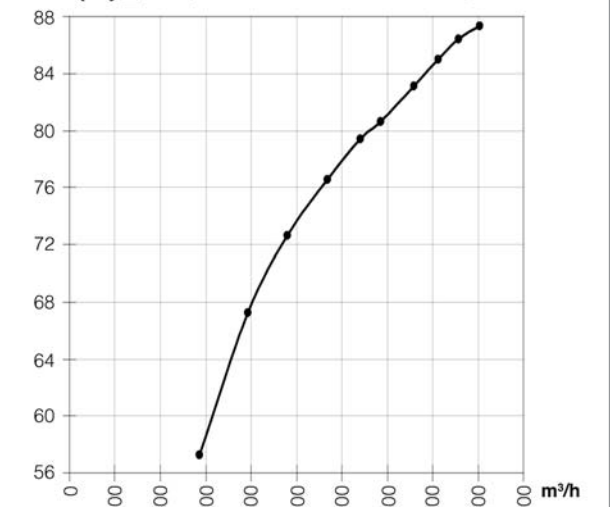
Measurement Category - A -
Free Inlet - Free Outlet

Value @ max. efficiency

Air Flow: 1843 (m³/h)
 Static Pressure: 49.2 (mmH₂O)
 Rpm: 1452 (min⁻¹)
 Power Input: 554.9 (W)

Overall efficiency (η): 49.2
 Grade efficiency (N): 57.19

dB(A)_LW (Sound Level Power @ Free Air)

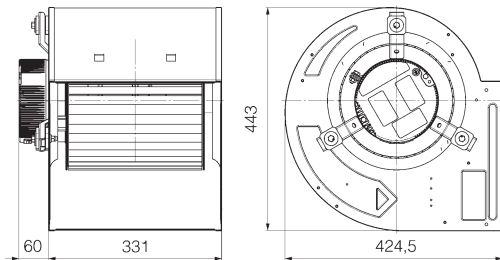




PERFORMANCE CURVES

DDe 10/10 - 3/4 HP HIGH SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 3/4 HP
 Range Voltage: 200-264V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 10/10
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-021

Operating limits

Win: Min 20 - Max 900 (W)
 Ampere: Min 0.15 - Max 4.5 (A)
 Static Pressure: Min 0 - Max 65 (mmH₂O)

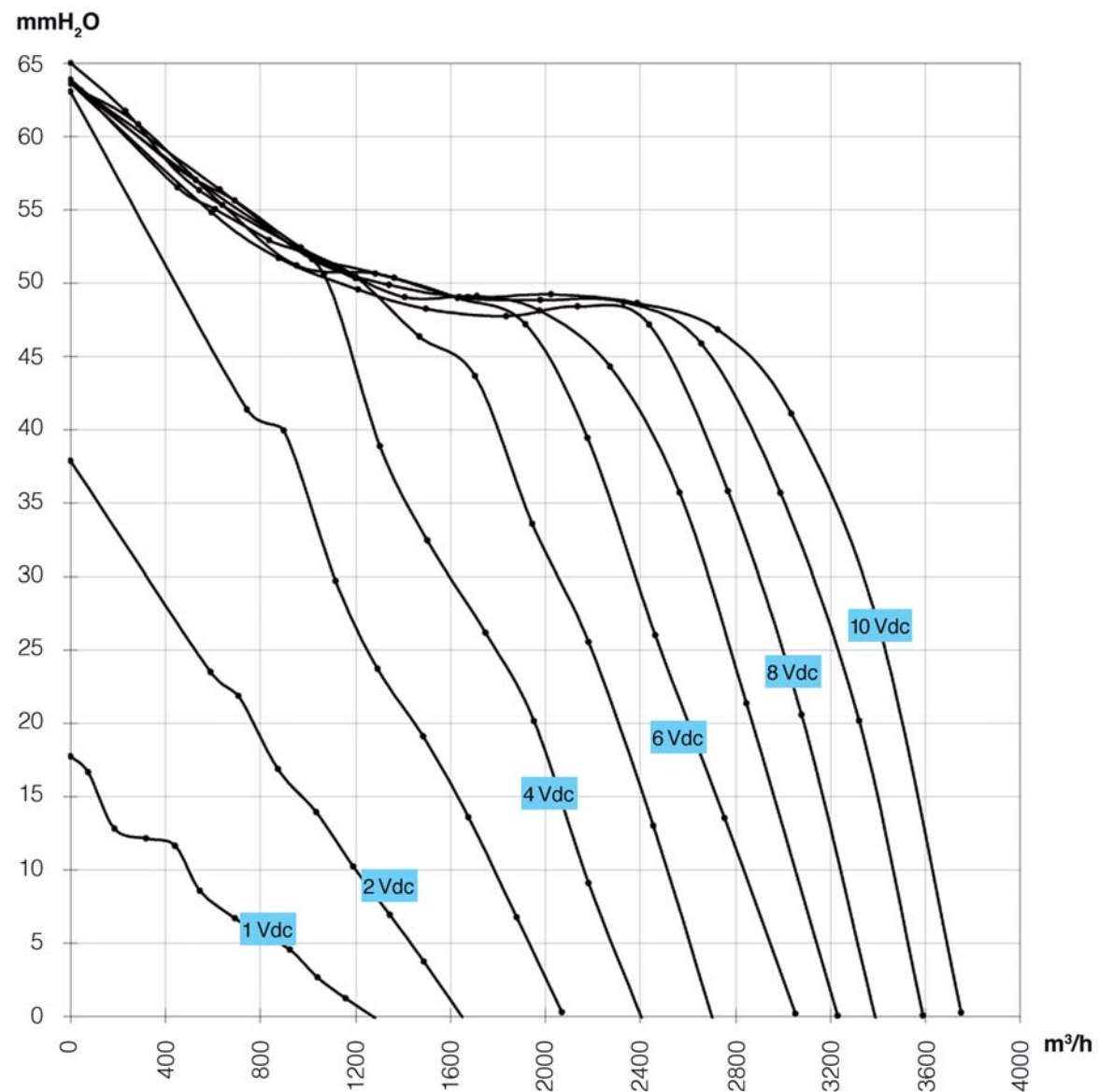
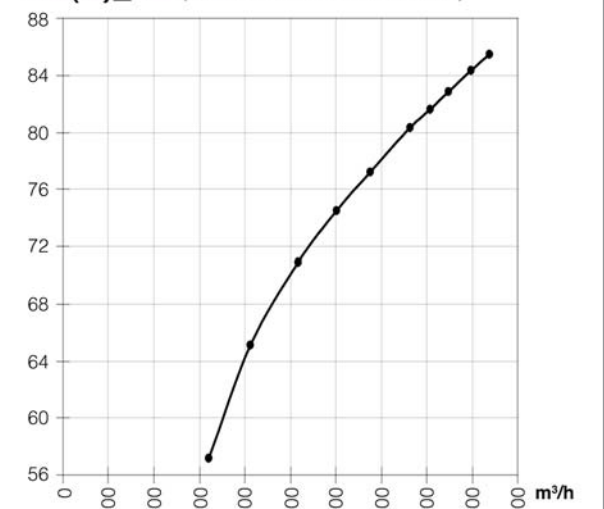
Measurement Category - A -
Free Inlet - Free Outlet

Value @ max. efficiency

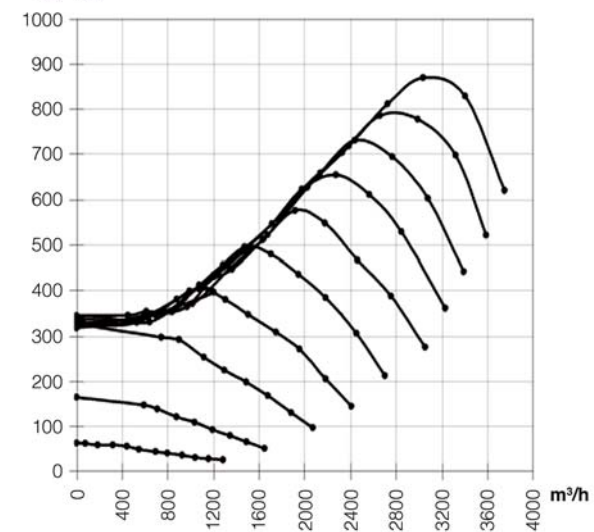
Air Flow: 2386 (m³/h)
 Static Pressure: 48.6 (mmH₂O)
 Rpm: 1452 (min⁻¹)
 Power Input: 719.2 (W)

Overall efficiency (η): 48.2
 Grade efficiency (N): 55.44

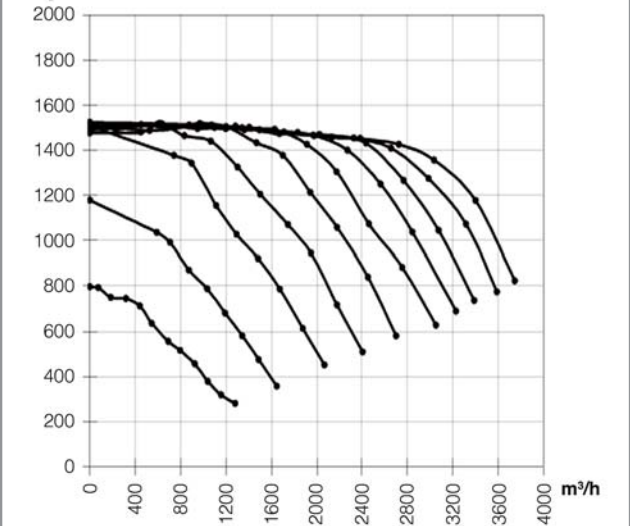
dB(A)_Lw (Sound Level Power @ Free Air)



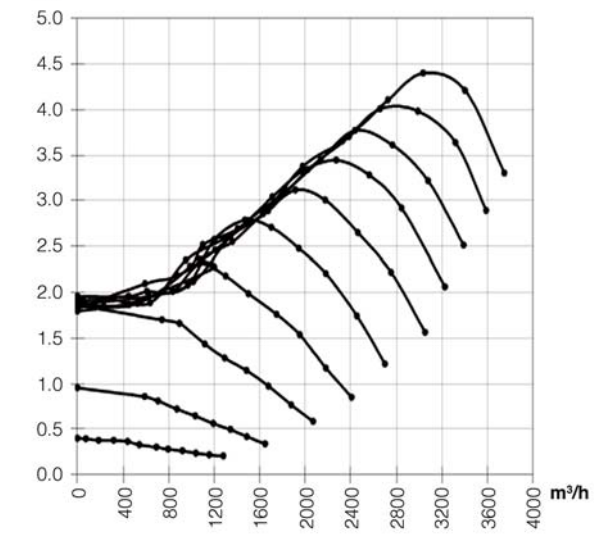
W in



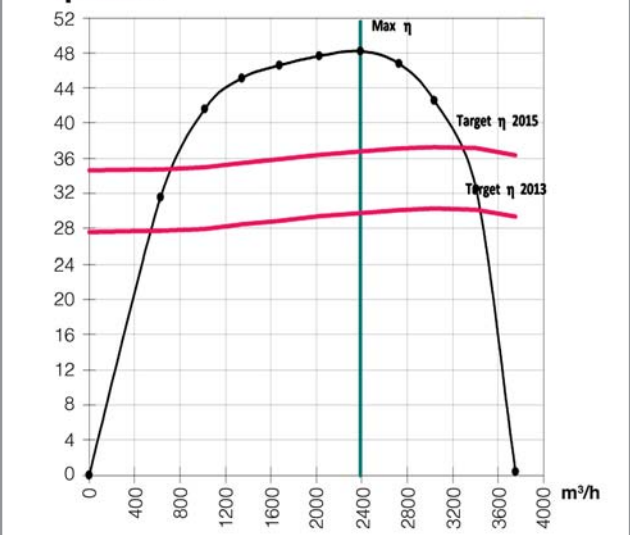
rpm



A



η static

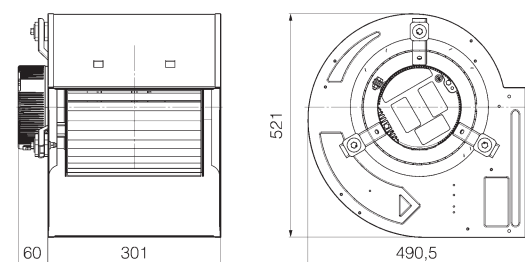




PERFORMANCE CURVES

DDe 12/9 - 1 HP HIGH SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 1 HP
 Range Voltage: 200-254 V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 12/9
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-017

Operating limits

Win: Min 25 - Max 1200 (W)
 Ampere: Min 0.2 - Max 6.0 (A)
 Static Pressure: Min 0 - Max 98 (mmH₂O)

Measurement Category - A -

Free Inlet - Free Outlet

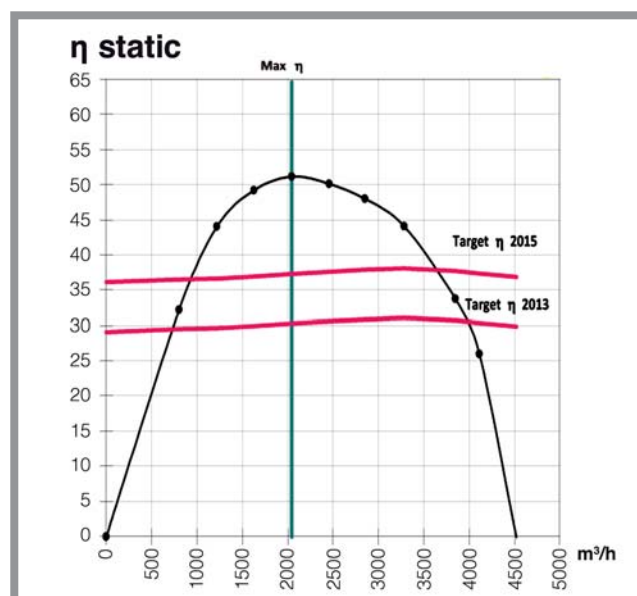
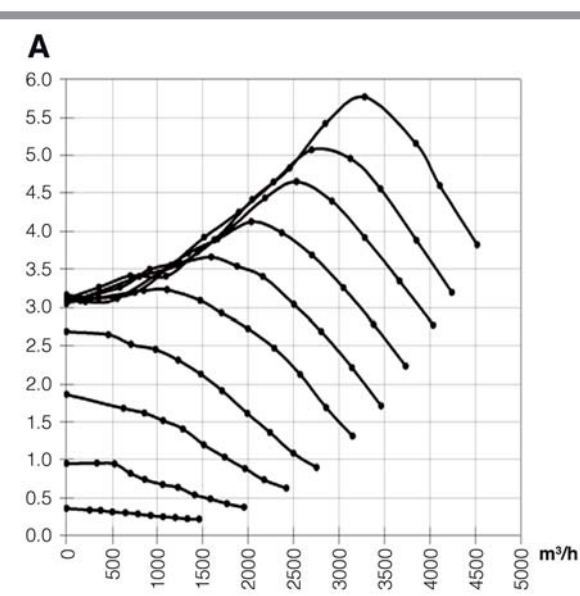
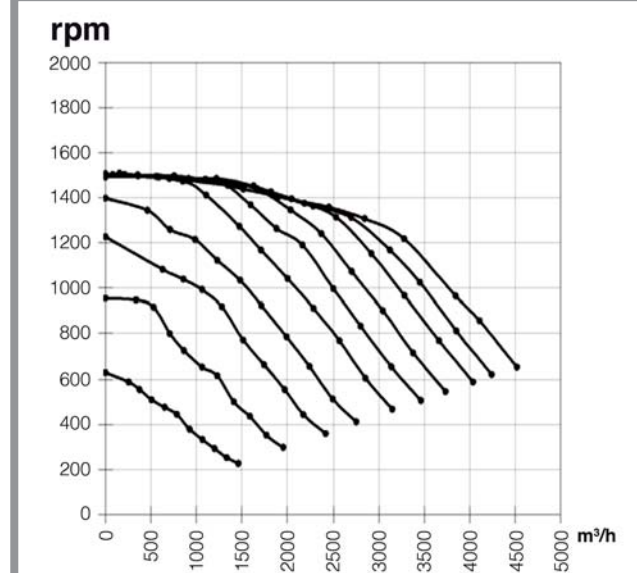
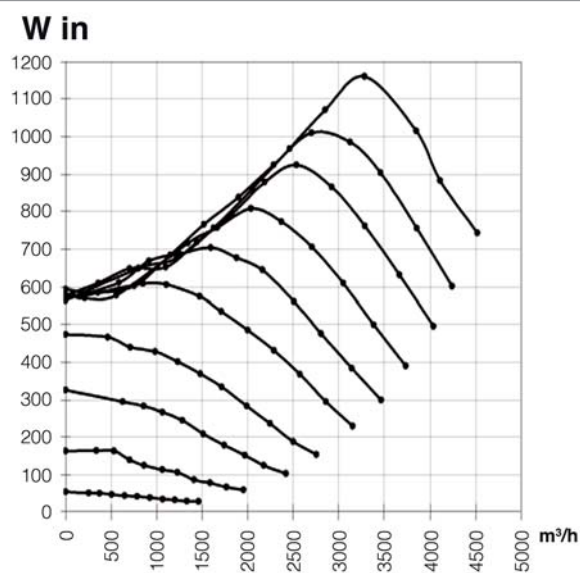
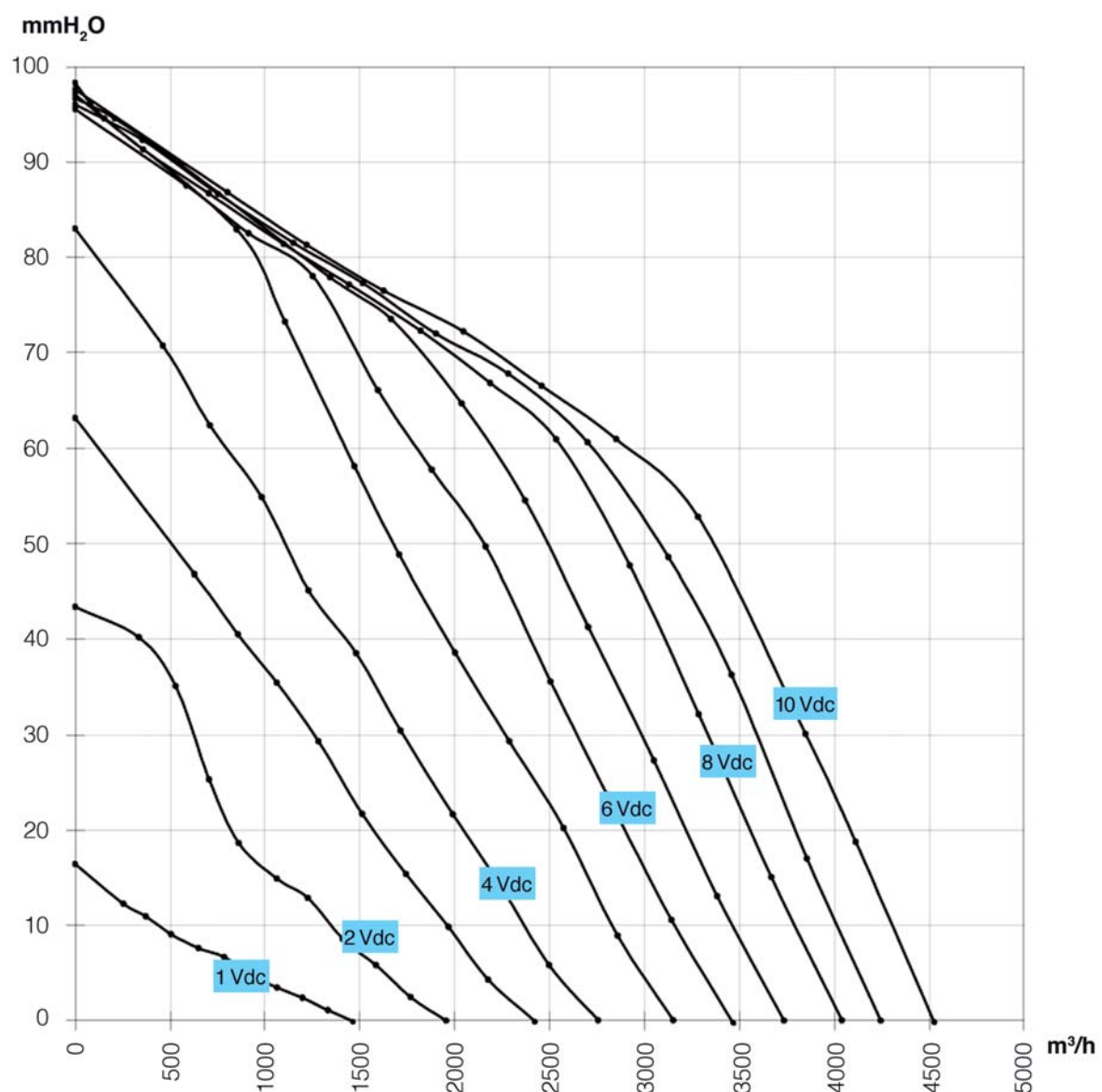
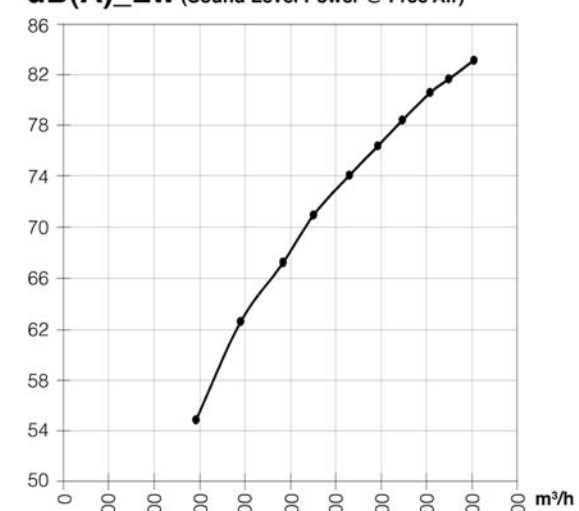
Value @ max. efficiency

Air Flow: 2046 (m³/h)
 Static Pressure: 72.2 (mmH₂O)
 Rpm: 1394 (min⁻¹)
 Power Input: 860 (W)

Overall efficiency (η): 51.1

Grade efficiency (N): 57.85

dB(A)_Lw (Sound Level Power @ Free Air)

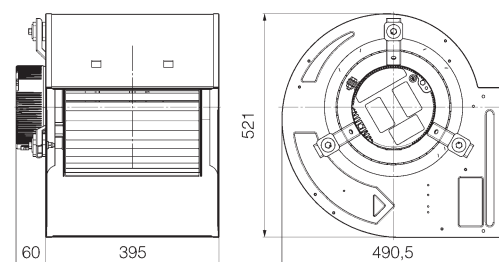




PERFORMANCE CURVES

DDe 12/12 - 1 HP HIGH SPEED

ErP 2015



Motor Type: ECM 3.0
 Nominal Voltage: 230V
 Frequency: 50-60 Hz
 Nominal Watts: 1 HP
 Range Voltage: 200-254 V
 Range Frequency: 50-60 Hz
 Input Signal: 0-10 Vdc
 Electrical Insulation Class: Cl.B (130°C)
 Protection Degree: Electronically Prot.
 Mechanical Protection: IP.20
 Motor Bearing: Ball Bearing

Ventilator Type: DDe 12/12
 Blowers Material: Metal
 Housing Material: Metal
 Motor Support Material: Metal

Test: PDDe-016

Operating limits

Win: Min 25 - Max 1200 (W)
 Ampere: Min 0.2 - Max 6.0 (A)
 Static Pressure: Min 0 - Max 96 (mmH₂O)

Measurement Category - A -

Free Inlet - Free Outlet

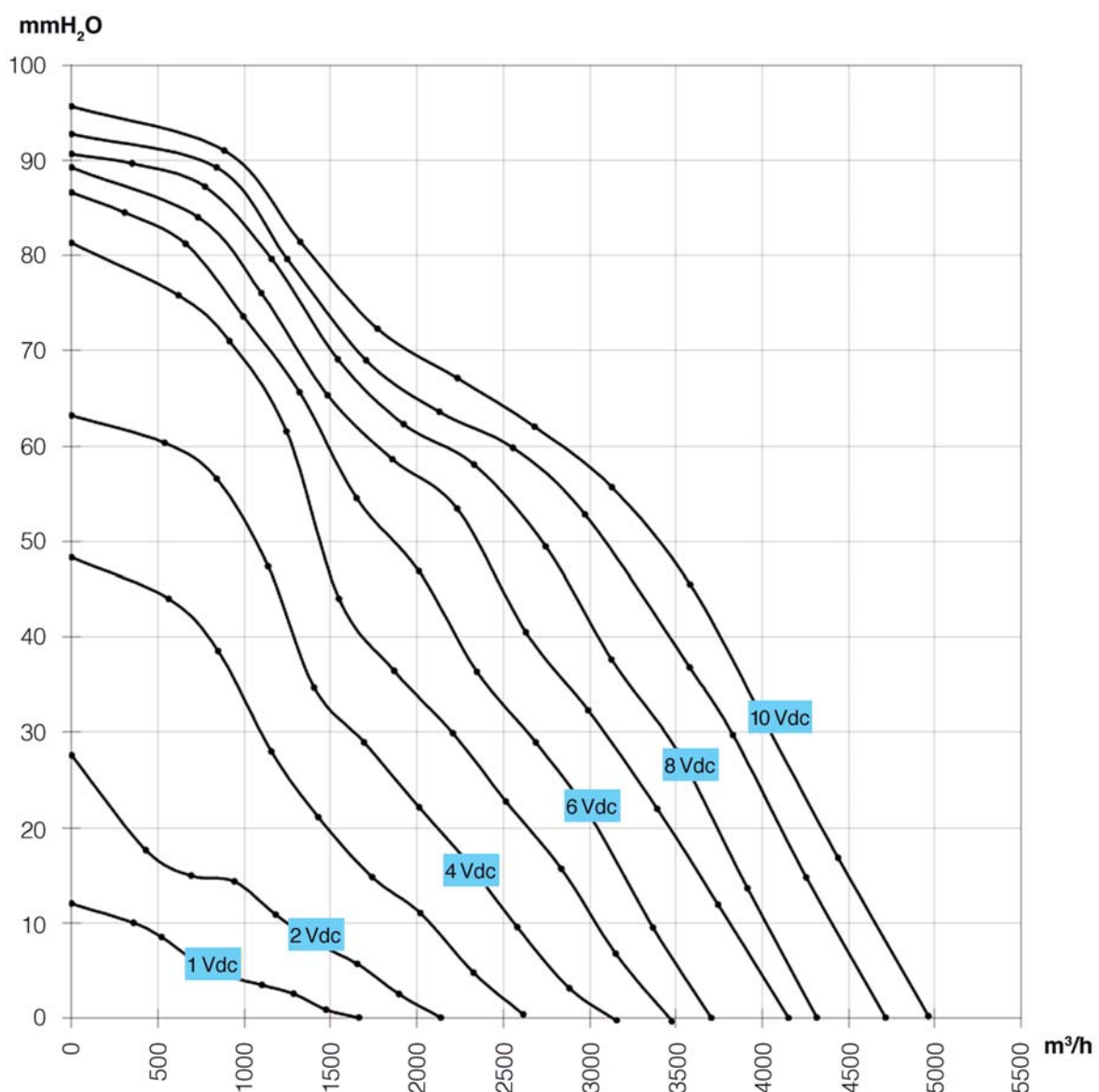
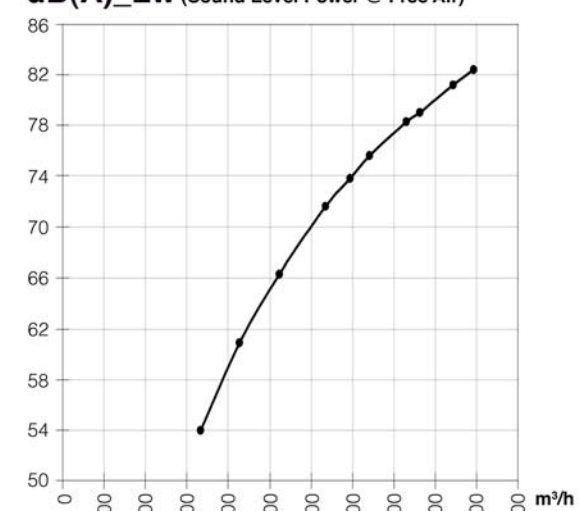
Value @ max. efficiency

Air Flow: 2683 (m³/h)
 Static Pressure: 62.0 (mmH₂O)
 Rpm: 1337 (min⁻¹)
 Power Input: 1041 (W)

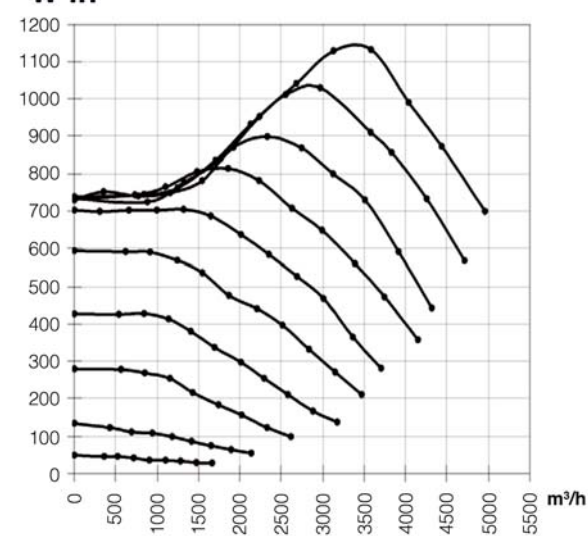
Overall efficiency (η): 47.3

Grade efficiency (N): 53.52

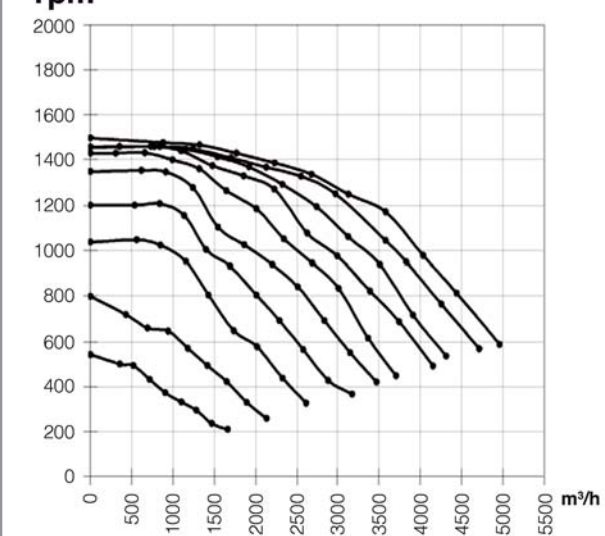
dB(A)_Lw (Sound Level Power @ Free Air)



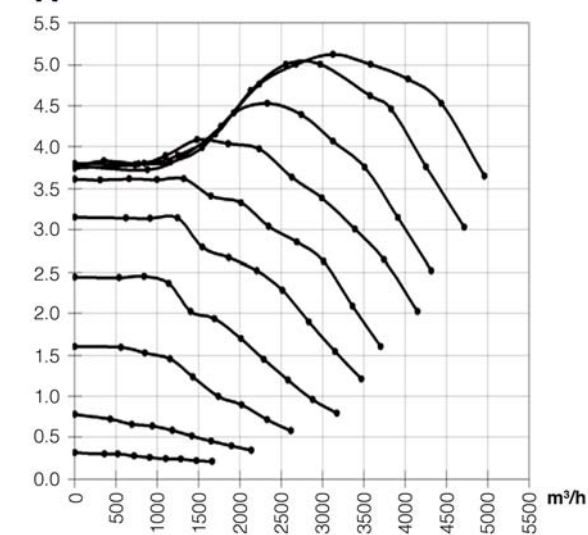
W in



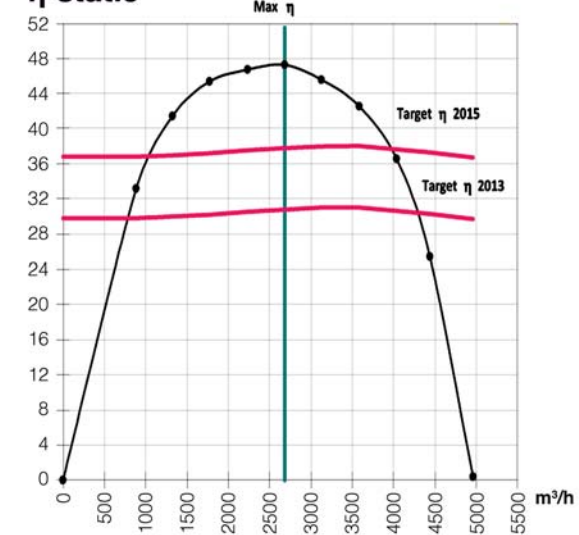
rpm



A



η static



NOTES

NOTES