



Industrial Centrifugal Fans with High Efficiency

Table of contents

	Page
Opening Notes	3
Fan Features	4
Appendage	5
Versions and appendage	6
Preliminary assessment for a prompt deter. of the ideal series	7 - 8
Housing positions / Drives	9 - 10
Control of Inlet Vanes	11
Explosion protection	12
Vibration/ Acoustic/Measuring technology	12 - 13
Flanges	14
Application of sheets with characteristic curves	15 - 16
Choice example	17
Sheets with dimensions and characteristic curves	
Low pressure fans	VR1LP 18 - 22
	VR2LP 23 - 28
	VR3LPD 29 - 33
Average pressure fans	VR1MPD 34 - 38
	VR2MPD 39 - 43
High pressure fans	VR1HPD 44 - 48
	VR2HPD 49 - 53
	VR1EHP 54 - 56
	VR2EHP 57 - 59
	VR3EHP 60 - 62

Dear Esteemed Customer,

Thank you for your interest in our company and our products. We are delighted to present an overview of Ventila and its range of fans in the opening page of our catalogue.

We manufacture welded centrifugal fans tailored to meet the needs of customers' various industrial applications. Specializing in customized, small-batch production, we take your requirements from design to finished product with precision and efficiency.

Our clients value our flexibility and expertise, which enable us to provide swift and tailored solutions to your projects.

The cornerstone of our product line is comprised of radial fans, offering airflow volumes ranging from 1,000 m³/h to 100,000 m³/h across low, medium, and high-pressure ranges. Should you not find the specific model you require in this catalogue, please do not hesitate to contact us for further information.

In addition to our radial fans range, we also offer axial fans, kindly contact us for further details for our industrial axial fan products which are available with three-phase, single-phase, or petrol-driven motors in various sizes.

We look forward to the opportunity to serve you and address your ventilation needs with our quality products and expertise.

Sincerely,
Ventila Team.

Ventila, High Efficiency Industrial Centrifugal Fans:

At Ventila, we specialize in providing high-efficiency industrial centrifugal fans tailored to meet a diverse range of demands. Our fan spectrum encompasses solutions for various applications, from handling dust-laden mediums with extreme abrasion resistance using flame-sprayed armored blades to pressure-proof and comparative fan designs.

To cater to your specific needs;

- Hot gas fans up to 600°C,
either with or without spiral housing
- Noise-Reduced Fans with a significant
reduction in sound pressure levels.

- Fans made of special metal types, such as PP, aluminium or stainless steel.

Additionally, we provide a range of accessories shown in attachment to optimize the performance of your fan system.

If you're ready to explore our offerings further, don't hesitate to reach out. Our dedicated sales department is always available to assist you.

We look forward to the opportunity to demonstrate our capabilities and serve your industrial fan needs effectively. Contact us today!

Fan Features

Our high-efficiency radial fans are engineered to meet the following specifications, making them versatile for various ventilating and industrial applications:

- ☐ Single Inlet Radial Fan: Constructed with a shaft made of S355J0 or specialized material, including a feather key and stud for impeller, hub, and pulley. The fan is equipped with fully mounted and lubricated rolling bearings in plummer blocks or block bearing housings on welded pedestals. For belt-driven motors, installation can be on concrete beds, welded supports, or base frames.
- ☐ Fan Housing: Fabricated with a heavy, welded steel design using S235JRG2 or specialized material, featuring additional stud bracings and profiles for enhanced durability and stability.
- ☐ Impeller with backwards bended blades statically and dynamically levered according to VDI 2056 smaller Q 6,3; dependent on size and loading steel- or casting hub with groove or TaperLock hub
- ☐ Impeller: Designed with backwards bent blades, statically and dynamically levered according to VDI 2056 smaller Q 6,3; dependent on size and loading steel- or casting hub with groove or TaperLock hub.

Extent of supply:

The equipment mentioned above normally is completed by:

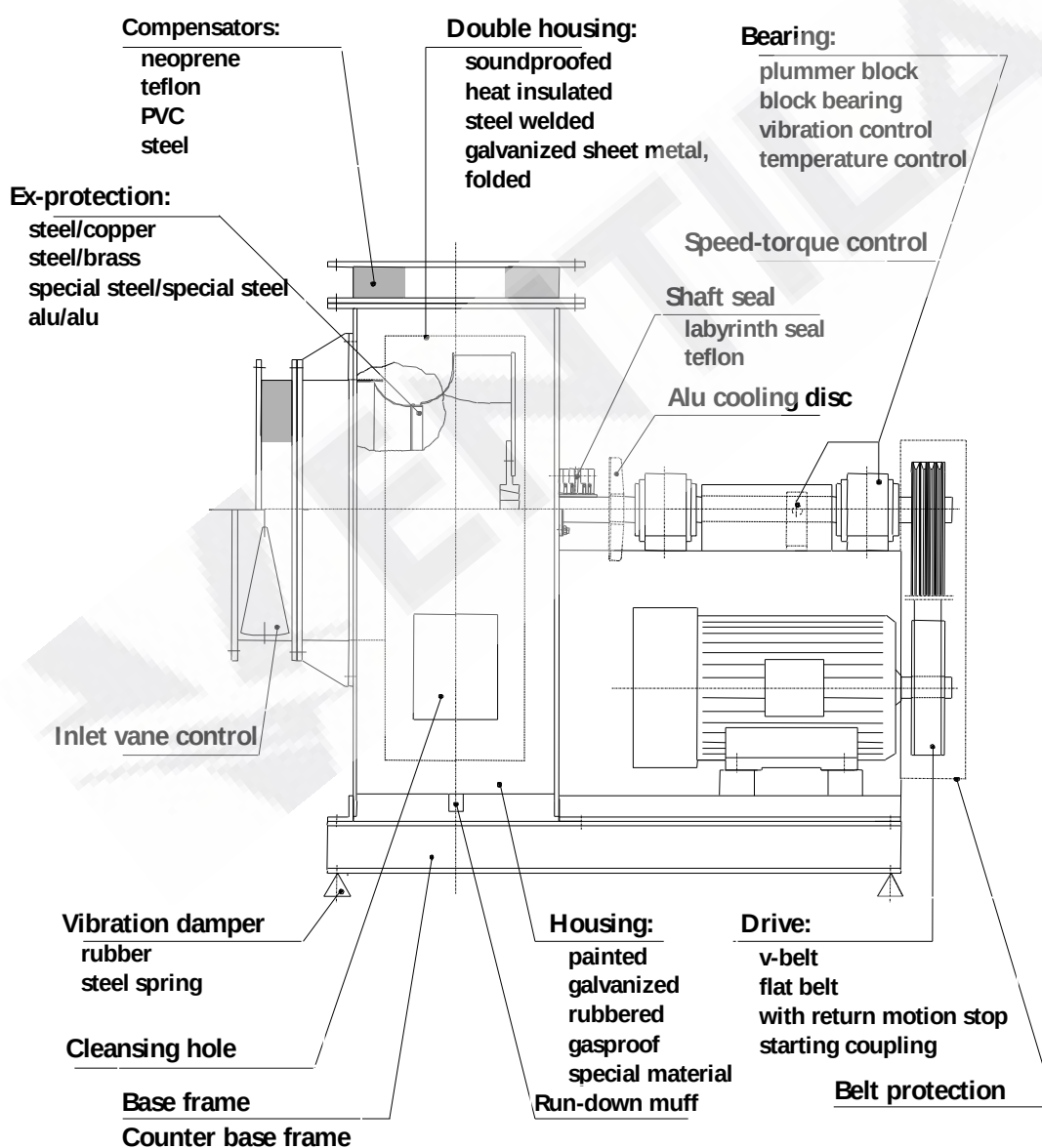
- ☐ Slide rails, if belt-driven
- ☐ Belt drive with belt guard devided 1/3 to 2/3t
- ☐ Protective grating on suction side, if connection type is E

Appendage:

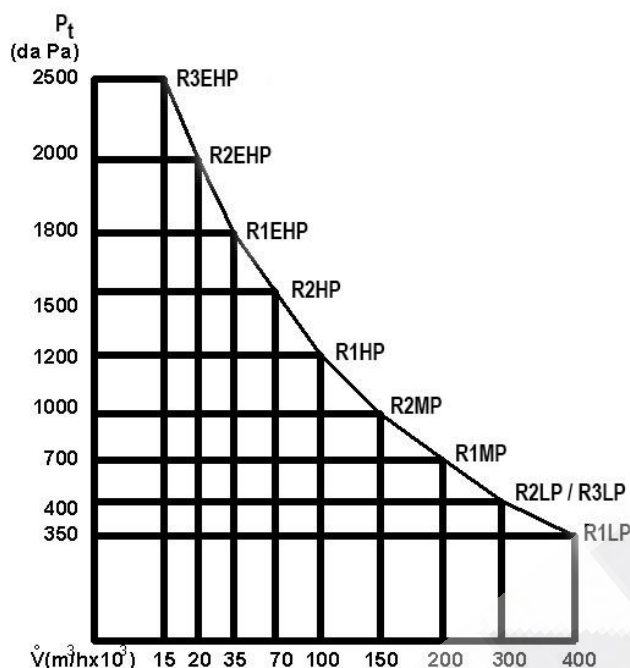
On the following page a big number of attachment is presented. Furthermore the following special versions and efforts are deliverable:

- Double inlet low pressure version for higher air flow rates
- Rectifier to stabilize the air flow on suction side
- Compensators with or without guarding sheets
- Protective gratings for both sides
- Multiple divided housing
- Galvanization or spraying alitaton, special painting
- Impeller with hollow blades, interdisc or skeleton blades made of special materials
- Abrasionproof coated impeller blades
- Impeller statically and dynamically levered according to VDI 2056 smaller Q 2,5
- Different drives: V-belt-drive, flat-belt-drive, gear transmission with or without cardan, link-motion, direct drive with elastic coupling
- Cooling air tubes to cool the bearings
- Lubricating conductions
- Special motors
- Motor-addition by the customer
- Frequency converter
- Return motion stop
- Mounting and start-up
- Maintenance contract

Versions and appendage



Preliminary assessment for a prompt determination of the ideal series



With the following schedule you can realize the great variety of our radial fans:

Series	type	areas of application			
		pure gas	medium with dust part dry	circulating air	material transport
low pressure	VR1LP			U-R1LP	
	VR2LP		VR3LPD	U-R2LP U-R3LPD	
average pressure	VR1MPD		VR1MPD	U-R1MPD	VR1MPFF
	VR2MPD		VR2MPD	U-R2MPD	VR2MPFF
high pressure	VR1HPD		VR1HPD		VR1HPFF
	VR2HPD		VR2HPD		VR2HPFF
	VR1EHP				
	VR2EHP				
	VR3EHP				

standards designation: z.B.: VR3LP a ex 500 M LG0

1 2 3 4 5 6

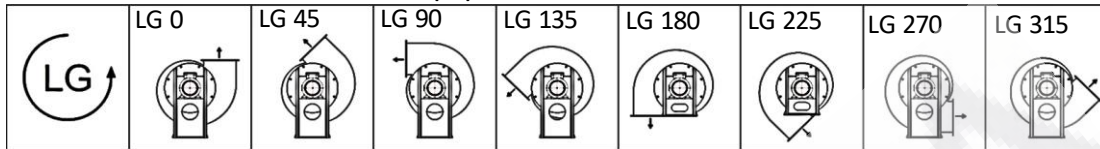
- 1 = type designation (U-...: circulator without spiral housing / R = radial with single inlet / LP = Low Pressure / D=Dust)
- 2 = abnormal impeller: z.B. intermediate blades, $b < \text{normal}$, $D_2 < \text{or} > \text{normal}$
- 3 = ex-protection

4	=	suction size		
5	=	drive:	MF	= direct drive with flange motor
			M	= direct drive with B3-motor on welded support
			K	= direct drive by means of an elastic coupling
			R	= belt drive, motor on base frame
6	=	housing position:	RD = right-handed, LG = left-handed	

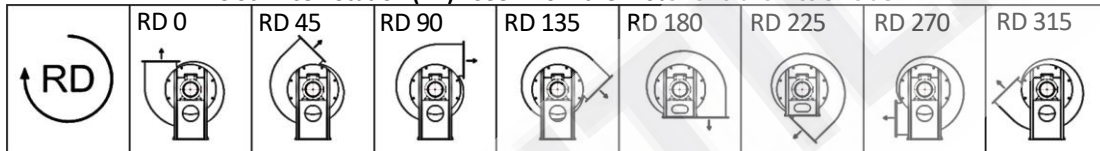
RADIAL VENTILATORS HOUSING POSITIONS (According to ISO)

The centrifugal fans are mounted 16 orientation positions according to ISO.(8 RD and 8 LG).

Anticlockwise Rotation (LG) - Seen from the motor or transmission side.

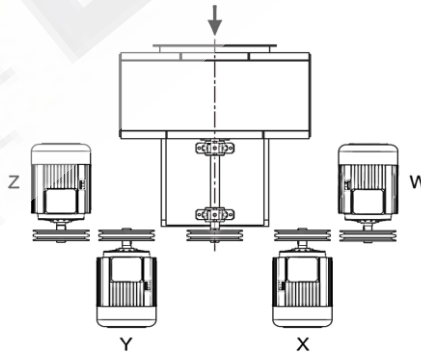


Clockwise Rotation (RD) - Seen from the motor or transmission side.



RD, LG 180 and 225 are only possible with appropriate constructive adjustments.

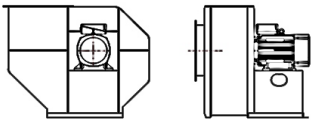
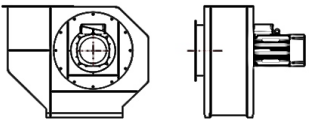
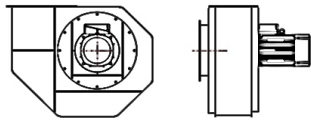
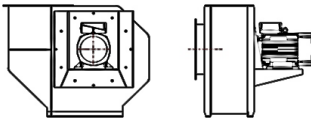
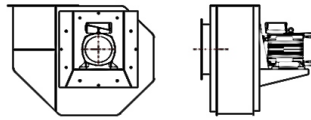
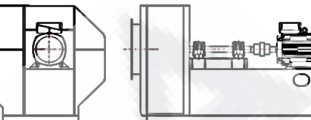
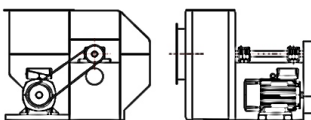
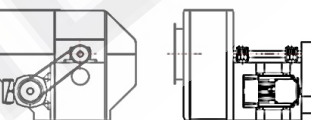
MOTOR POSITIONS FOR THE BELT DRIVE CENTRIFUGAL VENTILATORS (According to ISO)



OUR STANDARD MOTOR POSITIONS FOR THE BELT DRIVE TYPES

	LG0	LG45	LG90	LG135	LG180	LG225	LG270	LG315
	POS. Z	POS. W	POS. W	POS. W	POS. W	POS. W	POS. Z	POS. Z
	RD0	RD45	RD90	RD135	RD180	RD225	RD270	RD315
	POS. W	POS. Z	POS. Z	POS. Z	POS. Z	POS. Z	POS. W	POS. W

DRIVE POSITIONS

M 	MF 	MFS 
MB 	MBS 	K 
R 	Rs-1 	Rs-2 

Control of Inlet Vanes

In various applications of radial fans, achieving infinitely variable performance regulation is often desired. In addition to electronically controlled frequency converters, inlet vane control stands out as a cost-effective and functional alternative.

Purpose:

Prior to reaching the impeller, the airflow passing through the fan undergoes a pre-torsion due to adjustable guide blades. Consequently, the airflow is enveloped by a rotating stream, causing individual air particles to follow helical paths towards the impeller.

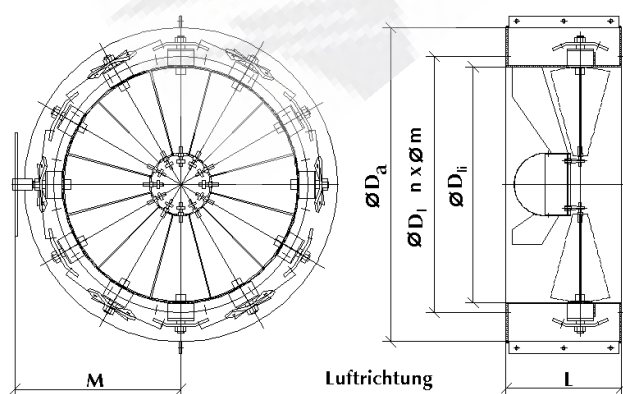
Possibilities of regulation:

The guide blades of the inlet vane control can be shifted on three different ways

1. Directly by hand
2. By an actuator and a differential pressure controller
3. By an actuator controlled by pressure transducer, temperature transducer, etc

Advantages:

- By the changeable guide blades of the inlet vane control the fan's performance can be regulated in a broad area, if the fan's revolutions are constant.
- For this reason we are able to apply robust three phase current motors.
- Radial fans with inlet vane control offer in opposite to throttle regulation remarkable performance savings.



nominal size	Ø D _{fl}	Ø D _a	L	M	Ø D _L	n	Ø m
355	358	600	250	315	405	8	12
400	404	650	250	340	448	12	12
450	454	700	250	365	497	12	12
500	504	760	300	400	551	12	12
560	564	780	300	410	629	16	14
630	534	860	300	450	698	16	14
710	714	950	350	500	775	16	14
800	804	1100	350	575	861	24	14
900	904	1200	400	620	958	24	14
1000	1005	1325	400	680	1067	24	14
1120	1125	1450	450	750	1200	32	18
1250	1255	1600	500	820	1337	32	18
1400	1405	1750	550	900	1457	32	18
1600	1605	2000	650	1000	1675	40	18
1800	1805	2200	700	1125	1875	40	18

Explosion protection according to VDMA 24169 part 1

The fans contained in this catalogue can be delivered corresponding to that recommendations with the type designation „ex“. However a small power loss, which must be compensated with a bit more revolutions and so a little increased power consumption, can't be avoided because of the provided bigger impeller tip clearance. Nevertheless the sheets with characteristic curves can be used to choose the desired nominal size. To get the exact data referring to power consumption and revolutions please ask us.

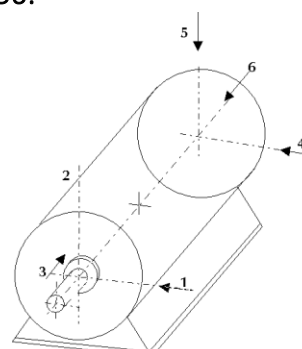
suction from zone *	2	2	1	0	0
installation within zone	>= 2	1	>=1	>= 1m if possible >= 2	0
construction permission	-	-		provided!	not per- mit- ted
material combination (rotating against stationary	-	<u>on no account</u> steel with light metal, steel with steel permitted!		Steel with bronze, brass, copper	
bearing	-	only rolling bearings, fatigue durability <u>at least 40.000h</u>			
impeller	-	must be protected on the shaft against torsion and displacement!			
Tip clearance (radial + axial)	-	axial fan from the impeller's outside diameter >=1%			

Vibration technology

Vibration designates the change of a physical quantity, which is regularly repeated to a certain extent. In ventilator production the driving motor as well as the rotor form a system in which vibration is possible.

To be able to judge a machine's vibration reaction, the vibration severity must be determined according to the VDI-recommendation 2056. For the permitted remaining unbalanced mass of rotors the VDI-recommendations 2060 are taken as the basis. Venttek balances all rotors according to the quality grade $Q = 6,3$. If it is

needed, the rotors can also be balanced according to the quality grade $Q = 2,5$. Recommended measuring points according to VDI 2056:



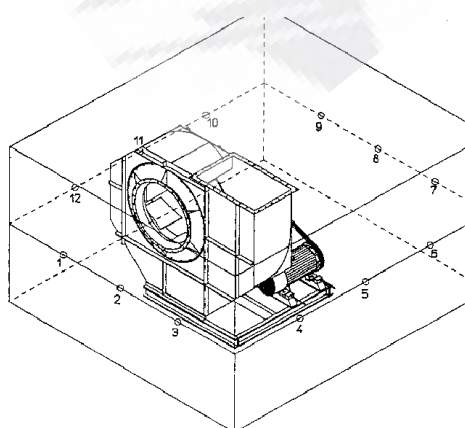
Acoustic technology

The knowledge about the acoustic power, emitted by a machine (fan) has particular importance with respect to the linked noise

pollution of people within the housing and working domain and the connected laws. Apart from theoretical reflections - to determine acoustic values with operation parameter as a basis - noise mensurations are necessary to be able to give exact information. The basis of noise mensurations with fans is the control system:

DIN 45635 - noise mensuration with machines , airborne noise emission and in this case the enveloping surface method particularly for fans DIN 45635, part 1

This measuring method is a noise measuring procedure in order to determine the acoustic power, emitted by a machine into the surrounding air (airborne noise emission), with the help of acoustic pressure level mensurations on the enveloping surface, which surrounds the machine and which is penetrated by the emitted acoustic power. This actually means, that the acoustic level is registrated at single, quite few measuring points. The resulting values are used to calculate the average, to which the measuring surface dimension, a logarithmic quantity, is added. With the help



of this procedure the acoustic capacity can be determined. The human ear feels deep frequencies much softer than high ones, that means its sensitivness depends on the frequencies. To consider this effect a defined conversion of the physical acoustic pressure level into the human ear's

sensitivness, the A-valuation, was introduced.

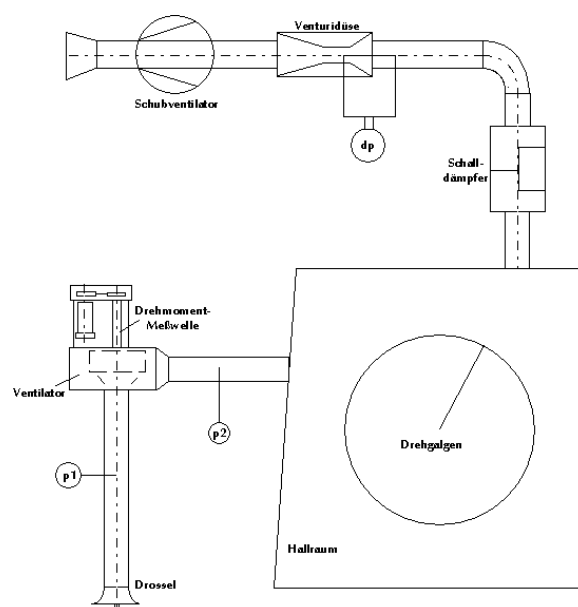
The A-acoustic capacity LPA can be figured out with the measuring surface's acoustic pressure level L_A and the measuring surface dimension L_S according to DIN 45635 sheet 1. It is held $LPA = L_A + L_S$.

Example for enveloping surface method related to a reflecting surface plane

measuring points (1-12)
measuring path
reference right parallelepiped (fan)
reflecting surface plane

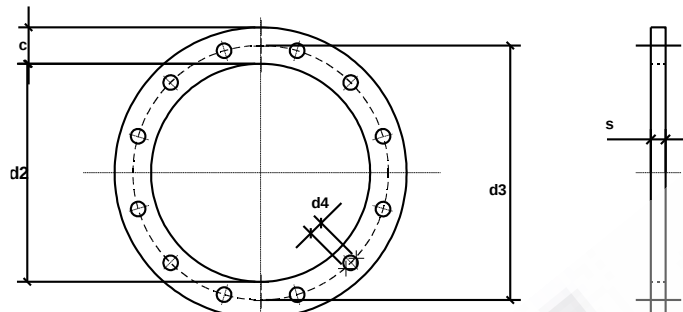
Measuring technology

All characteristic curves contained in this catalogue were drawn up with the help of the MEISSNER + WURST test bench according to DIN 24163. The following illustration shows the construction of the test bench.



Flanges

All suction-sided flanges correspond to DIN 24154, part 2, row 2 and are made according to the dimensions comprised in the following schedule. If a series also has a round outlet on the pressure side, the following dimensions can be taken for the pressure-sided flanges, too. If there is a rectangular outlet, you will find the corresponding flange dimensions under the respective series within the sheets with dimensions and characteristic curves.



nominal size	inside-Ø d2		breadth x thickness c x s	hole circle-Ø d3 + 0,5	hole-Ø d4 + 0,5	number of holes	screws		
		maximal deviation							
71	73	+1 0	30 x 6	110	10	4	M8		
80	82			118					
90	92			128					
100	102			139					
112	114			151					
125	127			165					
140	142	+1,5 0	35 x 6	182	12	8	M10		
160	162			200					
180	182			219					
200	203			241					
224	227			265					
250	253			292					
280	283		40 x 6	332		12		12	
315	318			366					
355	358			405					
400	404			448					
450	454			497					
500	504			551					
560	564	50 x 8	629	14	16		M12		
630	634		698						
710	714		775						
800	804		861		24				
900	904		958						
1000	1005		1067						
1120	1125	+2 0	60 x 10	1200	18,5	32	M16		
1250	1255			1337					
1400	1405			1457					
1600	1605			1675		40			
1800	1805			1875					
2000	2005			2037					

s and d4 deviate from DIN.

All information in mm!

Application of sheets with characteristic curves

The sheets with characteristic curves contain the fan characteristic curves for standard revolutions, from which the engines' really existing revolutions can be taken out coincidentally. If it is necessary, intermediate values can be interpolated.

The sheets with characteristic curves show the following data:

In the diagram section at the bottom

on the left ordinate the air flow volume V in m^3/s

on the absciss the air speed c within the inlet and outlet

on the right ordinate the fan's nominal size

In the left upper diagram section

on the left ordinate the total pressure difference in D_{pt} in daPa

on the isodynamic lines the efficiency η in %.

In the right upper diagram section

on the right ordinate the peripheral speed u_2 in m/s

on the absciss below the fan's number of revolutions n in $1/\text{s}$

on the absciss above A-estimation correction value $db(korr) = (L(w) - L(w_a))$ in dB(A) .

the unevaluated acoustic capacity $L(w)$ in dB(A) is directly put down on the characteristic curves

if total pressure difference is given and air flow volume is known, the revolutions, acoustic values etc. can be determined by the following procedure (the example shows it for a fan with a nominal size of 500)

1. Starting from the ordinate in the diagram section at the bottom a horizontal line from the air flow volume value to the

isodynamic line for the nominal size of 500 must be drawn

2. From this point a vertical line has to be drawn to the upper diagram section now
3. After that pace an also horizontal line from the total pressure difference value must be put down. The point of intersection with the line from 2. marks the operation point for the fan. The corresponding efficiency can be read along the isodynamic line on the upper absciss. If you follow the interrupted line in left direction, you can determine the uncorrected acoustic capacity at the line's end.
4. Afterwards you follow the fan characteristic curve in right direction down to the last isodynamic line. From this point of intersection a horizontal line to the isodynamic line of nominal size 500 has to be drawn. This isodynamic line finally leads to the A-estimation correction value. A vertical line to the absciss below shows at last the fan's revolutions.
5. The dynamic pressure part can be determined by the following pace: Starting from the point of intersection of the line resulting in 2. with the isodynamic line „p(dyn)“, you turn horizontally to the left ordinate. By doing so you will get the value you search for.

If you intend to find out the nominal size, the corresponding procedure will be nearly identical. However, you start with 3. and draw the line to that characteristic curve section within which the optimal efficiency lies (always within the decreasing characteristic curve section). From this point you must turn vertically down and search

the point of intersection between air flow volume and nominal size.

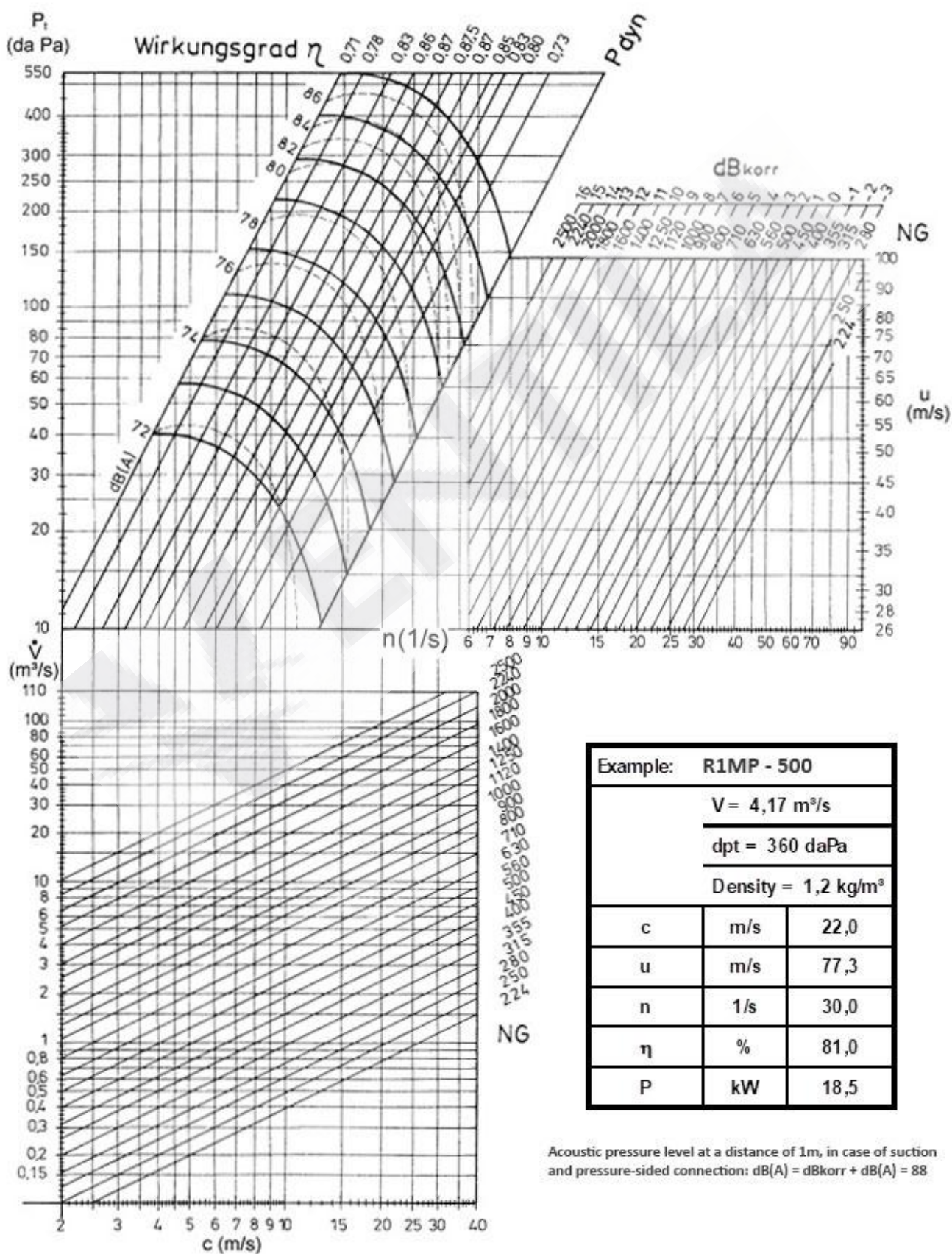
If you desire the exact need of performance for the corresponding operation point, you can use the following formula.

$$P(w) \text{ (kW)} = \frac{V(m^3/s) \cdot \Delta p(t) \text{ (daPa)}}{\eta \text{ (\%)}}$$

to get it. For the choice of the drive engines the maximal need of performance is substantial. The engine's nominal performance should be with directly driven fans respectively with fans with coupling about 10% higher and with belt driven fans about 20% higher.

*) 1 daPa = 10 Pa = 0,1 mbar = 1 kp/m² = ca. 1 mmWS

Choice example



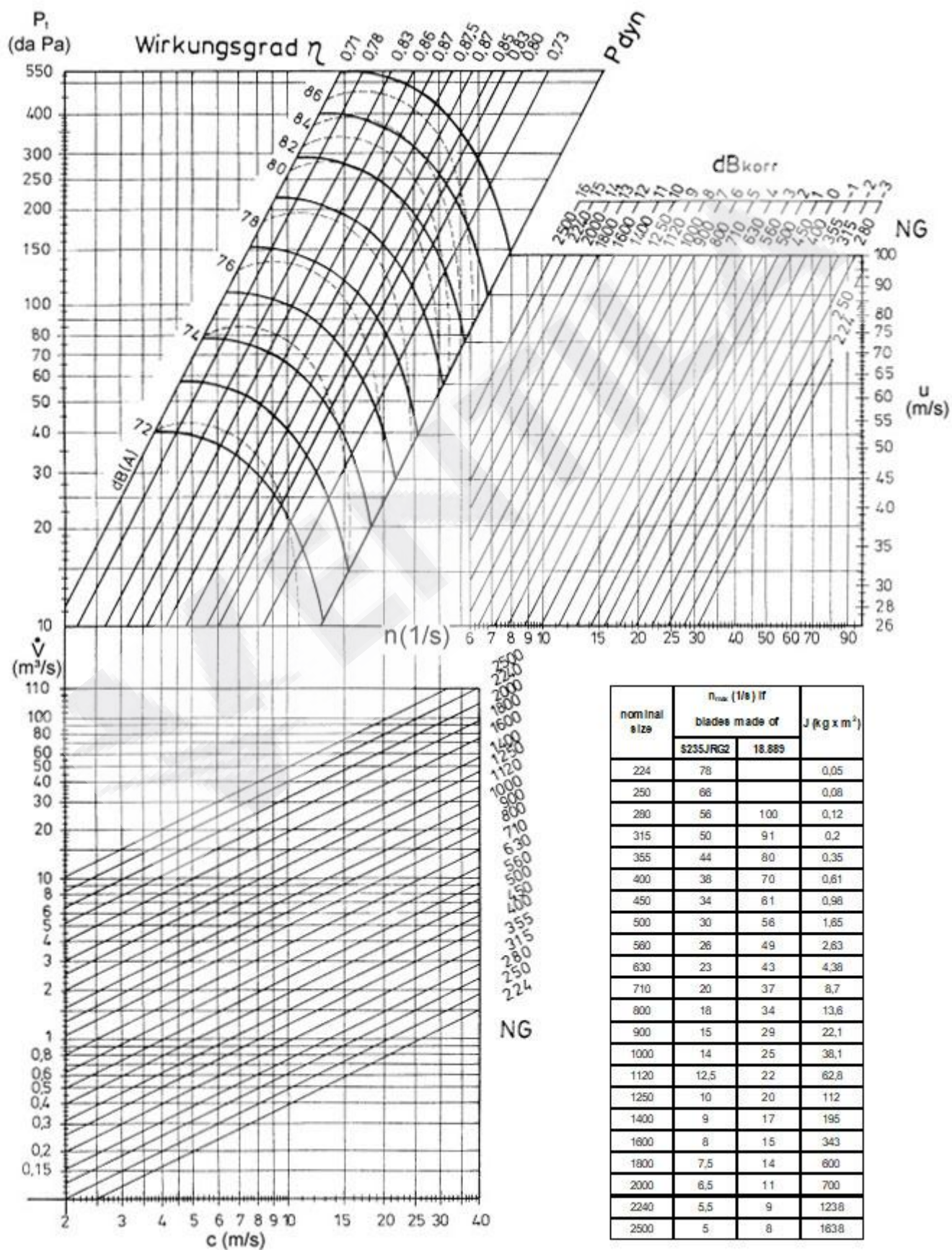
Industrial Centrifugal Fans with High Efficiency by



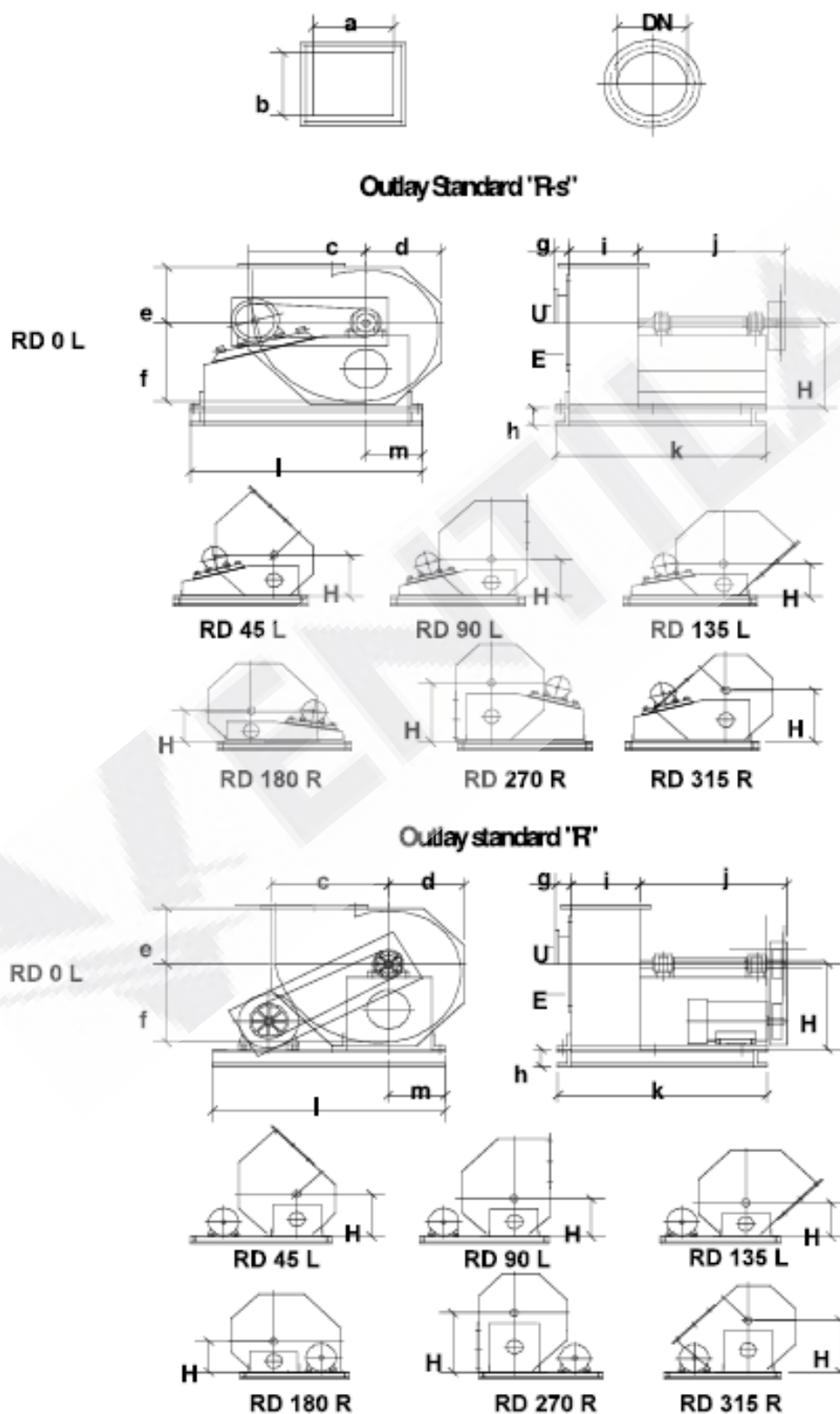
Series

VR1LP

Series VR1LP - characteristic curve NS 224 - 2500

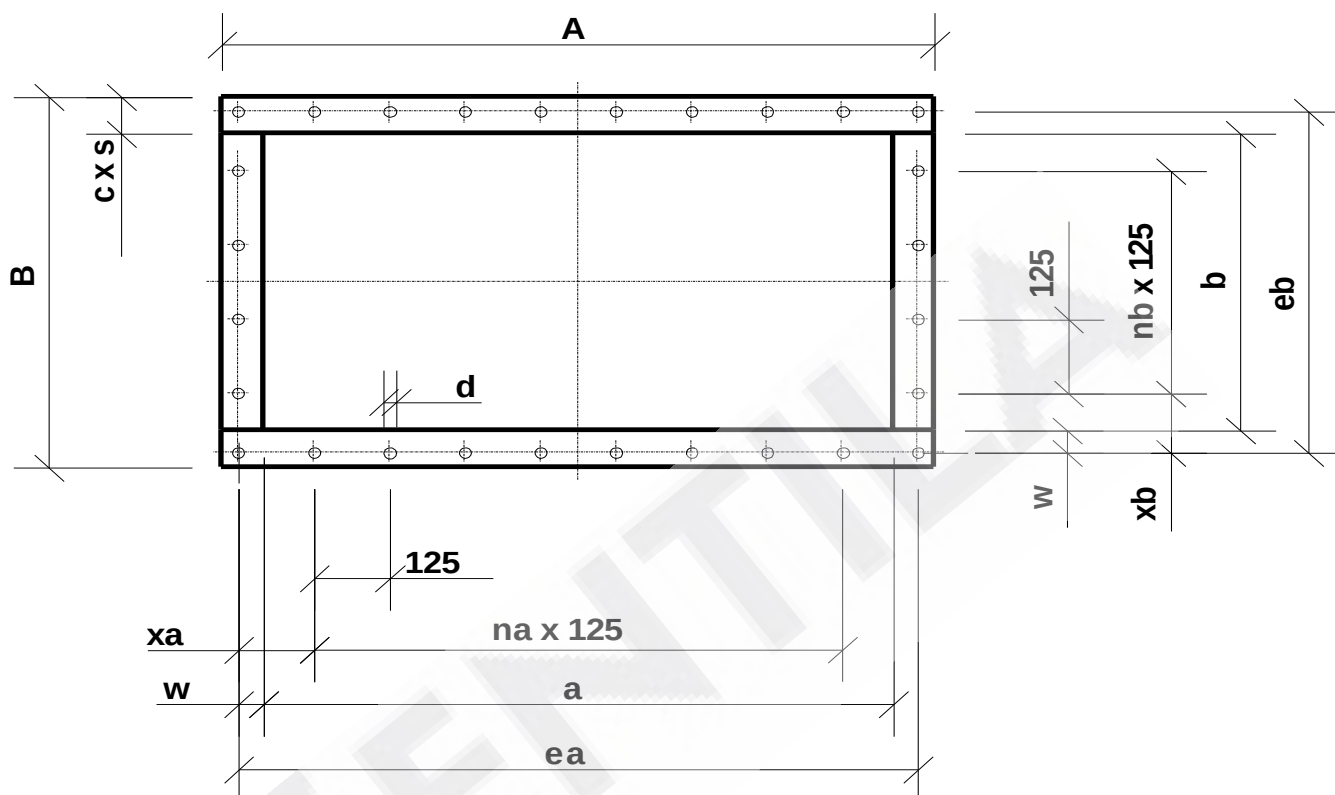


Spiral housing positions and dimensions



nominal size NS		224	250	280	315	355	400	450	500	560	630	710
height dimension dependent on housing position	45°	250	280	310	345	390	435	490	550	610	680	770
	90°	225	250	280	310	350	390	440	490	545	605	685
	135°	205	225	250	280	315	350	390	435	485	540	615
	180°	210	230	250	270	290	320	360	400	445	495	560
	270°	370	410	455	505	565	625	725	805	890	985	1110
	315°	305	340	380	425	475	530	595	670	740	830	940
	360°	275	305	340	380	430	480	535	605	670	745	845
nominal inlet Ø		224	250	280	315	355	400	450	500	560	630	710
outlet dimensions	a	226	252	282	317	357	402	452	502	562	632	712
	b	182	202	226	252	282	317	357	402	452	502	562
spiral housing dimensions	c	338	377	421	470	532	593	667	750	832	930	1054
	d	222	247	274	306	346	386	433	485	538	602	682
	e	205	220	240	260	280	312	350	392	434	486	550
	f	270	300	335	375	425	475	530	600	665	740	840
	g	60	60	60	60	60	60	60	60	100	100	100
	h	65	65	65	80	80	80	80	100	100	100	100
	i	180	200	224	250	280	315	355	400	450	500	560
	j	440	440	505	555	555	650	650	730	730	800	800
	k	570	590	664	745	775	900	940	1060	1110	1210	1270
	l	675	760	760	725	725	900	900	1170	1170	1260	1260
	m	165	165	165	190	190	230	230	280	280	280	280
max. motor size.		100L	112M	112M	132S	132S	160M	160M	180M	180M	180L	180L
j = approximate dimensions, from NS1250 on "R"-version, flanges DIN 24154 part2 row2 from NS1250 on horizontal divided, pressure frame DIN 24193 part3 row3 from NS1250 on spiral housing												
nominal size NS		800	900	1000	1120	1250	1400	1600	1800	2000	2240	2500
height dimension dependent on housing position	45°	860	965	1080	1200	1385	1550	1740	1970	2210	2455	2755
	90°	765	860	965	1075	1255	1390	1560	1770	1985	2200	2470
	135°	685	770	860	955	1110	1240	1390	1575	1775	1965	2210
	180°	625	700	785	870	960	1070	1200	1370	1540	1710	1910
	270°	1235	1380	1545	1720	1920	2135	2380	2720	3045	3380	3770
	315°	1045	1175	1320	1465	1680	1880	2100	2400	2690	2985	3345
	360°	945	1060	1190	1320	1530	1700	1910	2170	2430	2695	3020
nominal inlet Ø		800	900	1000	1120	1250	1400	1600	1800	2000	2240	2500
outlet dimensions	a	802	902	1002	1122	1252	1402	1602	1802	2002	2242	2502
	b	632	712	802	902	1002	1122	1252	1402	1602	1802	2002
spiral housing dimensions	c	1176	1324	1490	1653	1840	2055	2300	2630	2955	3286	3670
	d	762	856	962	1068	1185	1320	1480	1690	1905	2116	2370
	e	614	690	775	860	950	1060	1190	1360	1530	1700	1900
	f	940	1055	1185	1315	1460	1700	1910	2170	2350	2612	2920
	g	100	100	150	150	150	150	150	150	150	150	150
	h	120	120	120	120	200	200	220	240	240	240	240
	i	630	710	800	900	1000	1120	1250	1400	1600	1800	2000
	j	960	960	1080	1080	1210	1225	1295	1440	1550	1650	1750
	k	1490	1570	1760	1850	2070	2200	2420	2650	2905	3200	3400
	l	1410	1410	1760	1760	2700	3000	3400	3800	4300	4800	5300
	m	310	310	360	360	850	940	1050	1170	1310	1440	1630
max. motor size		225M	225M	250M	250M	250M	250M	250M	280M	280M	280M	315S

Sheet with flange dimension for pressure side of VR1LP fans DIN 24293 part 3 Row 3



size	edge length								num. of divisions		num. of holes				Profil				
	A	B	a	b	ea	eb	xa	xb	na	nb	nea	neb	w	d					
200	262	222	202	162	236	196	118	98	1		3	3	17	10	30x6				
224	286	242	226	182	260	216	130	108											
250	312	262	252	202	286	236	143	118											
280	342	286	282	226	316	260	158	130			4	4							
315	377	312	317	252	351	286	113	143											
355	417	342	357	282	391	316	133	158	3	1	6	4	30	14	50x6				
400	462	377	402	317	436	351	155,5	113											
450	552	457	452	357	512	417	68,5	146		3		6							
500	602	502	502	402	562	462	93,5	168,5		3	6								
560	662	552	562	452	622	512	123,5	68,5											
630	732	602	632	502	692	562	158,5	93,5	5	3	8	6	30	14	50x6				
710	812	662	712	562	772	622	73,5	123,5											
800	902	732	802	632	862	692	118,5	158,5		8	6								
900	1002	812	902	712	962	772	168,5	73,5											
1000	1102	902	1002	802	1062	862	93,5	118,5	7	5	10	8	35	18,5	60x6				
1120	1242	1022	1122	902	1192	972	158,5	138,5	9	7	12	10							
1250	1372	1122	1252	1002	1322	1072	98,5	98,5											
1400	1522	1242	1402	1122	1472	1192	173,5	158,5	11	9	14	12	45	24	80x10				
1600	1762	1412	1602	1252	1692	1342	158,5	108,5											
1800	1962	1562	1802	1402	1892	1492	133,5	183,5			13	16				14			
2000	2162	1762	2002	1602	2092	1692	108,5	158,5			15								
2240	2422	1982	2242	1802	2342	1902	108,5	138,5	17	13	20	16	50		90x10				
2500	2702	2202	2502	2002	2612	2112	118,5	108,5	19	15	22	18	55		100x15				

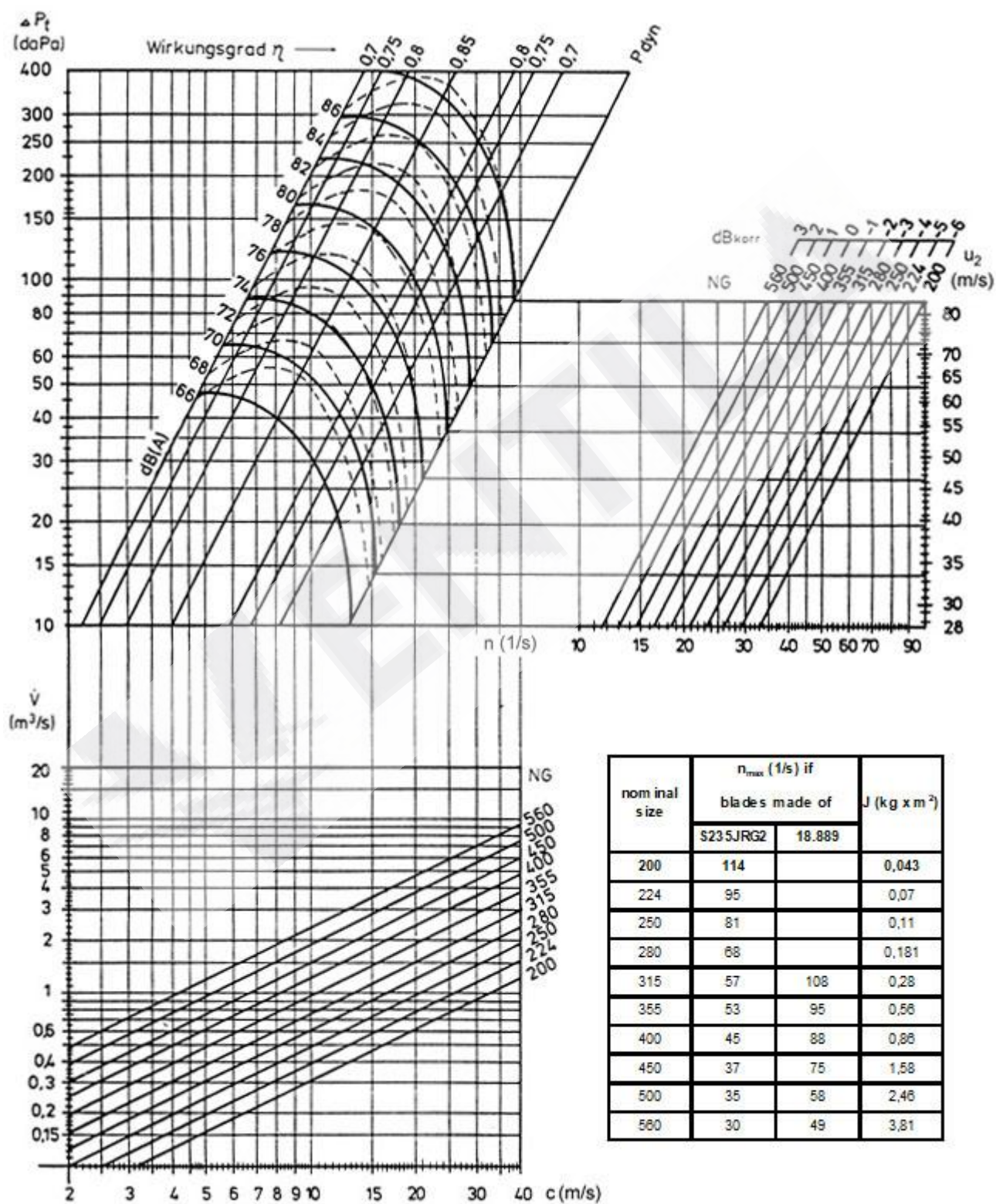
Industrial Centrifugal Fans with High Efficiency by



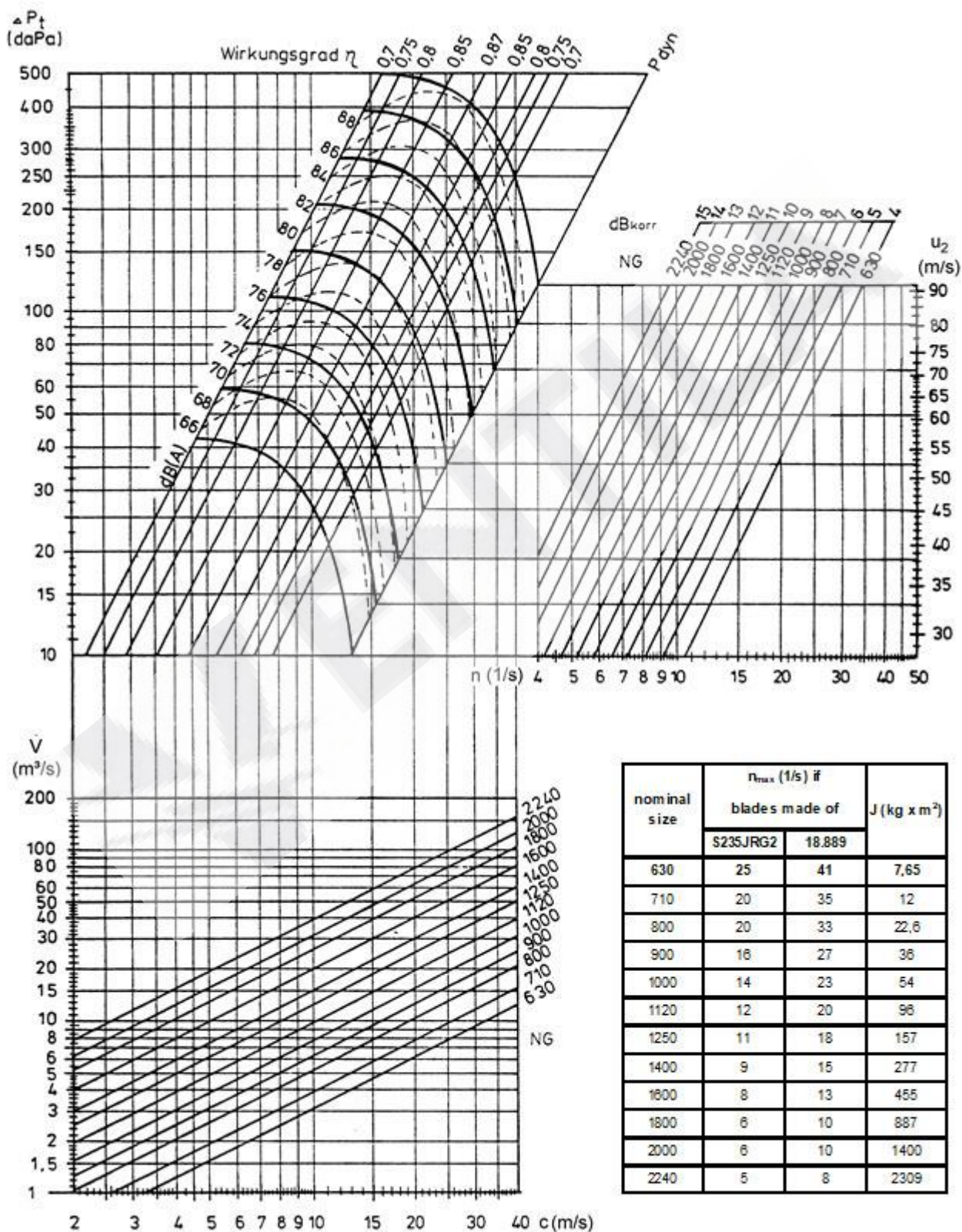
Series

VR2LP

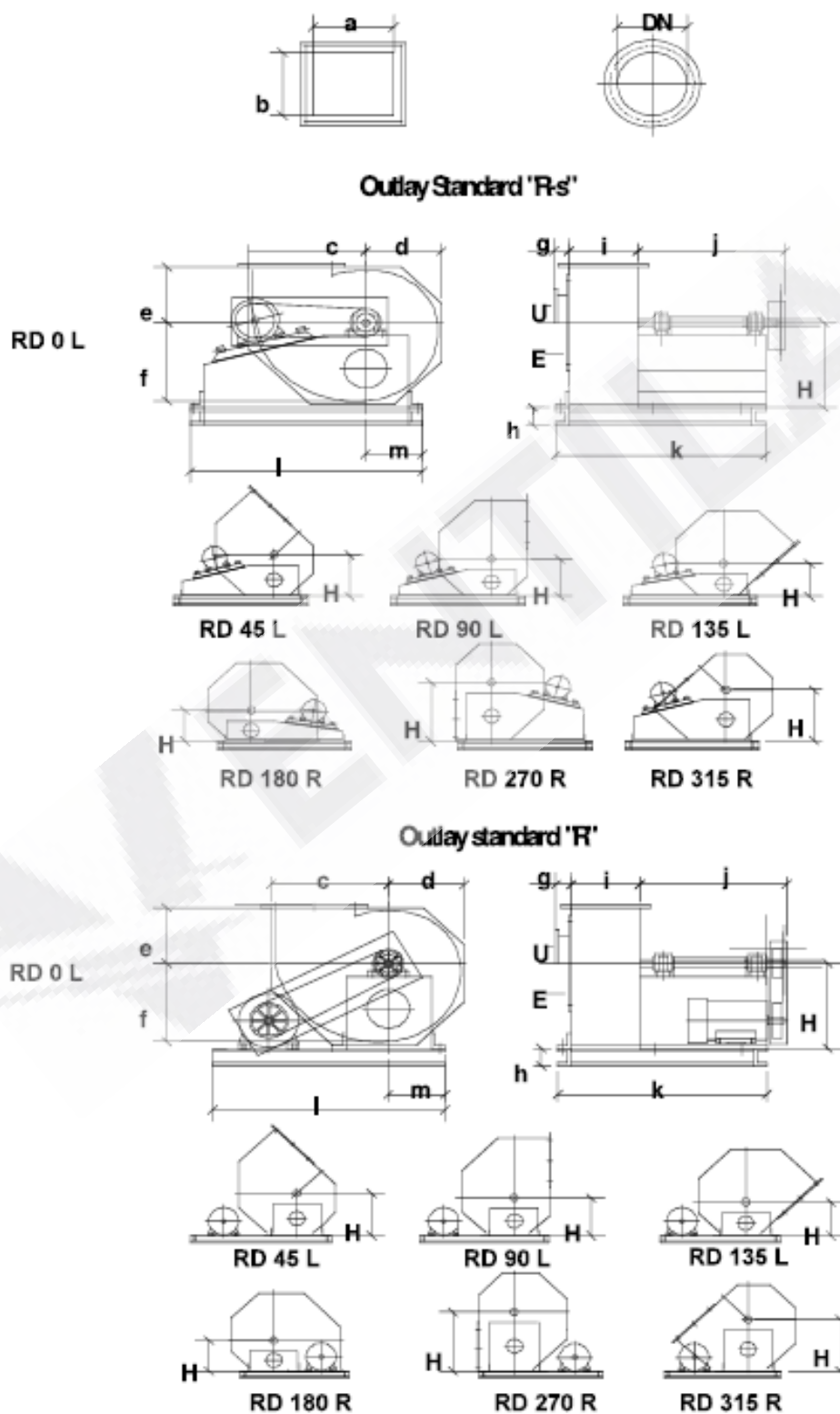
Series VR2LP - characteristic curve NS 200 - 560



Series VR2LP - characteristic curve NS 630 - 2240

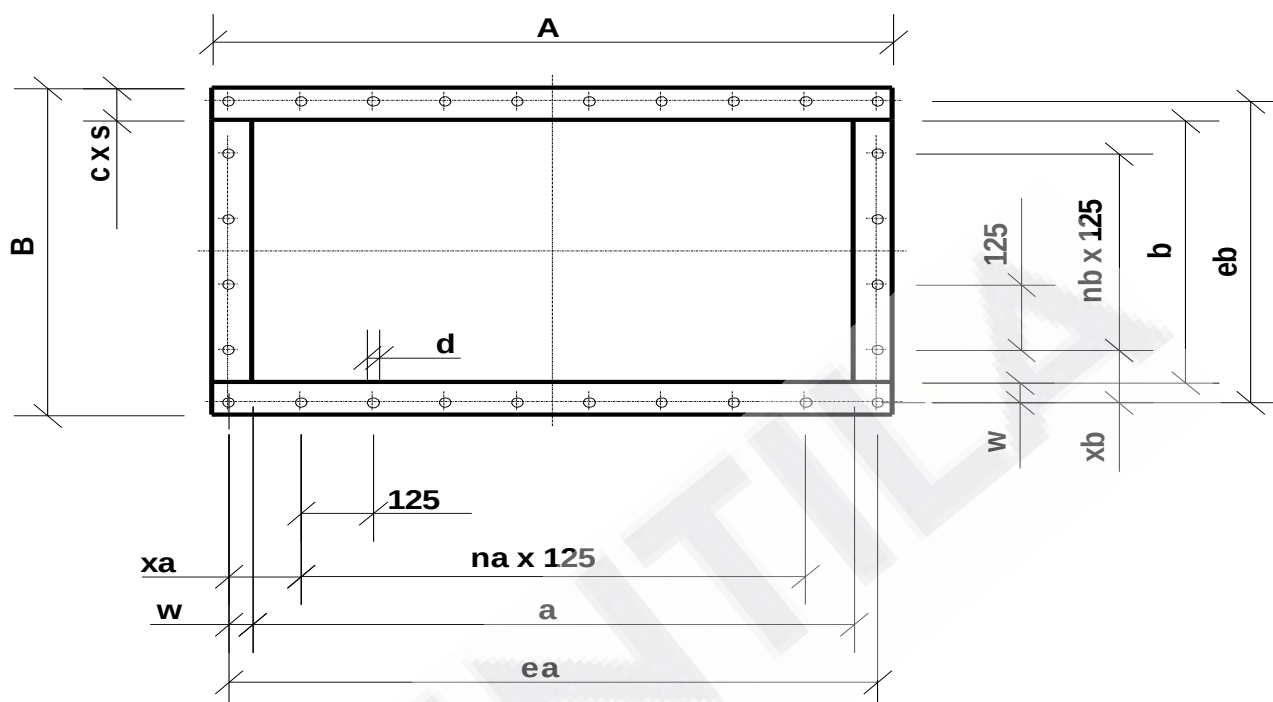


Spiral housing positions and dimensions



nominal size NS		200	224	250	280	315	355	400	450	500	560	630
height dimension dependent on housing position	45°	250	280	310	345	390	435	490	550	610	680	770
	90°	225	250	280	310	350	390	440	490	545	605	685
	135°	205	225	250	280	315	350	390	435	485	540	615
	180°	210	230	250	270	290	320	360	400	445	495	560
	270°	370	410	455	505	565	625	725	805	890	985	1110
	315°	305	340	380	425	475	530	595	670	740	830	940
	360°	275	305	340	380	430	480	535	605	670	745	845
nominal inlet Ø		200	224	250	280	315	355	400	450	500	560	630
outlet dimensions	a	226	252	282	317	357	402	452	502	562	632	712
	b	152	162	182	202	226	252	282	317	357	402	452
spiral housing dimensions	c	338	377	421	470	532	593	667	750	832	930	1054
	d	222	247	274	306	346	386	433	485	538	602	682
	e	205	220	240	260	280	312	350	392	434	486	550
	f	270	300	335	375	425	475	530	600	665	740	840
	g	60	60	60	60	60	60	60	60	100	100	100
	h	65	65	65	80	80	80	80	100	100	100	100
	i	180	200	224	250	280	315	355	400	450	500	560
	j	440	440	505	555	555	650	650	730	730	800	800
	k	570	590	664	745	775	900	940	1060	1110	1210	1270
	l	675	760	760	725	725	900	900	1170	1170	1260	1260
	m	165	165	165	190	190	230	230	280	280	280	280
max. motor size		100L	112M	112M	132S	132S	160M	160M	180M	180M	180L	180L
j = approximate dimensions, flanges DIN 24154 part2 row2 from NS1120 on horizontal divided, pressure frame DIN 24193 p.3 r.3 from NS1120 on spiral housing and "R"-version												
nominal size NS		710	800	900	1000	1120	1250	1400	1600	1800	2000	2240
height dimension dependent on housing position	45°	860	965	1080	1200	1385	1550	1740	1970	2210	2455	2755
	90°	765	860	965	1075	1255	1390	1560	1770	1985	2200	2470
	135°	685	770	860	955	1110	1240	1390	1575	1775	1965	2210
	180°	625	700	785	870	960	1070	1200	1370	1540	1710	1910
	270°	1235	1380	1545	1720	1920	2135	2380	2720	3045	3380	3770
	315°	1045	1175	1320	1465	1680	1880	2100	2400	2690	2985	3345
	360°	945	1060	1190	1320	1530	1700	1910	2170	2430	2695	3020
nominal inlet A110Ø		710	800	900	1000	1120	1250	1400	1600	1800	2000	2240
outlet dimensions	a	802	902	1002	1122	1252	1402	1602	1802	2002	2242	2502
	b	502	562	632	712	802	902	1002	1122	1252	1402	1602
spiral housing dimensions	c	1176	1324	1490	1653	1840	2055	2300	2630	2955	3286	3670
	d	762	856	962	1068	1185	1320	1480	1690	1905	2116	2370
	e	614	690	775	860	950	1060	1190	1360	1530	1700	1900
	f	940	1055	1185	1315	1460	1700	1910	2170	2350	2612	2920
	g	100	100	150	150	150	150	150	150	150	150	150
	h	120	120	120	120	200	200	220	240	240	240	240
	i	630	710	800	900	1000	1120	1250	1400	1600	1800	2000
	j	960	960	1080	1080	1210	1225	1295	1440	1550	1650	1750
	k	1490	1570	1760	1850	2070	2200	2420	2650	2905	3200	3400
	l	1410	1410	1760	1760	2700	3000	3400	3800	4300	4800	5300
	m	310	310	360	360	850	940	1050	1170	1310	1440	1630
max. motor size		225M	225M	250M	250M	250M	250M	250M	280S	280M	280M	315S

Sheet with flange dimensions for pressure side of VR2LP fans DIN 24293 part 3 row 3



size	edge length								num. of divisions		num. of holes				profile			
	A	B	a	b	ea	eb	xa	xb	na	nb	nea	neb	w	d	cxs*			
180	262	194	202	134	236	168	118	84	1		3	3	17	10	30x6			
200	286	212	226	152	260	186	130	93										
224	312	222	252	162	286	196	143	98										
250	342	242	282	182	316	216	158	108										
280	377	262	317	202	351	236	113	118										
315	417	286	357	226	391	260	133	130										
355	462	312	402	252	436	286	155,5	143										
400	552	382	452	282	512	342	68,5	171	3	1	6	4	30	14	50x6			
450	602	417	502	317	562	377	93,5	126										
500	662	457	562	357	622	417	123,5	146										
560	732	500	632	402	692	462	158,5	168,5										
630	812	552	712	452	772	512	73,5	68,5										
710	902	602	802	502	862	562	118,5	93,5	5	3	8	6	30	14	50x6			
800	1002	662	902	562	962	622	168,5	123,5										
900	1102	732	1002	632	1062	692	93,5	158,5										
1000	1242	832	1122	712	1192	782	158,5	78,5	7		10	8				30	14	50x6
1120	1372	922	1252	802	1322	872	98,5	123,5										
1250	1522	1022	1402	902	1472	972	173,5	173,5	9	5	12		8	35	18,5			
1400	1762	1192	1602	1002	1692	1158	158,5	108,5										
1600	1962	1282	1802	1122	1892	1212	133,5	168,5	11	7	14	10						
1800	2162	1412	2002	1252	2092	1342	108,5	108,5	13									
									15	9	18		12					

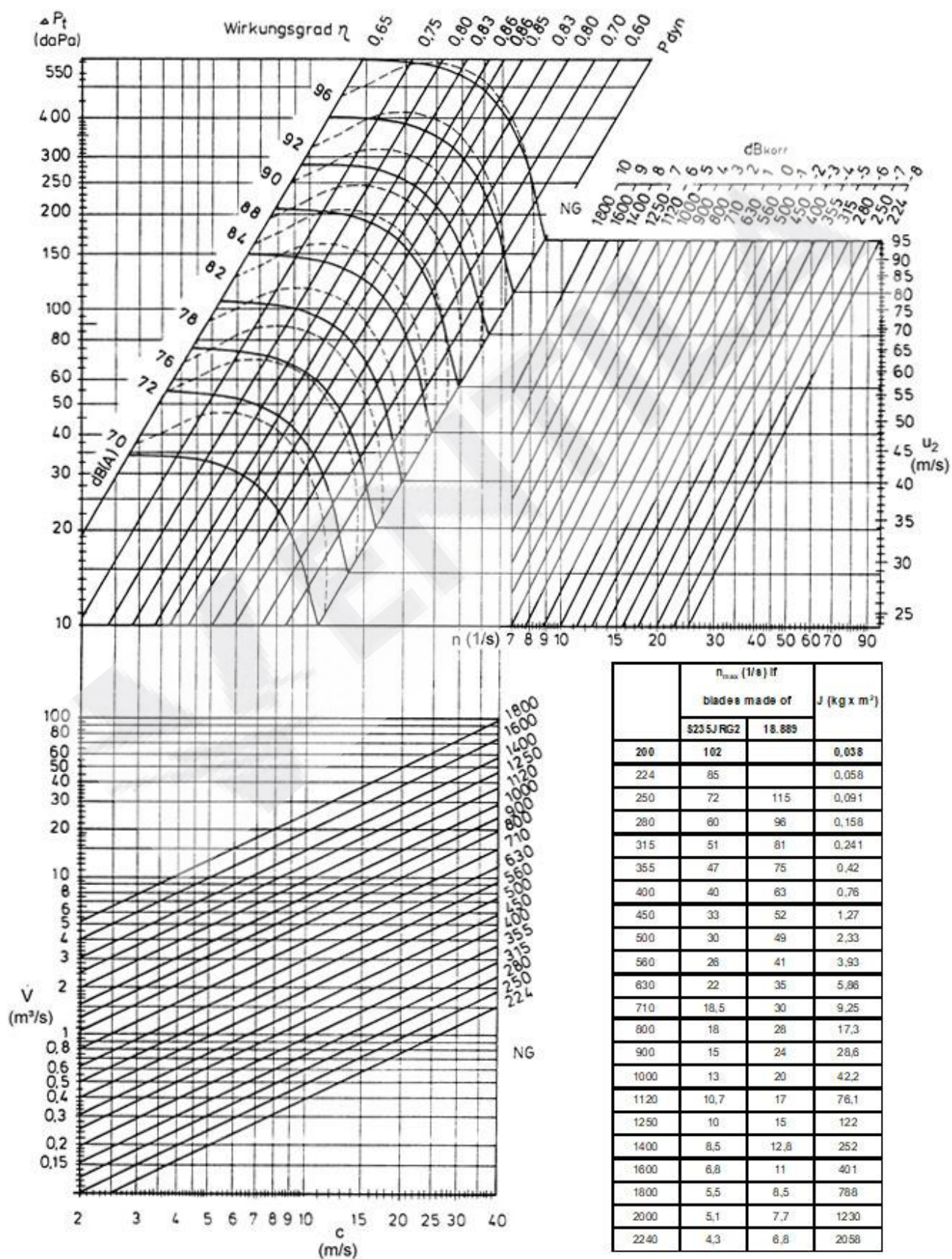
Industrial Centrifugal Fans with High Efficiency by



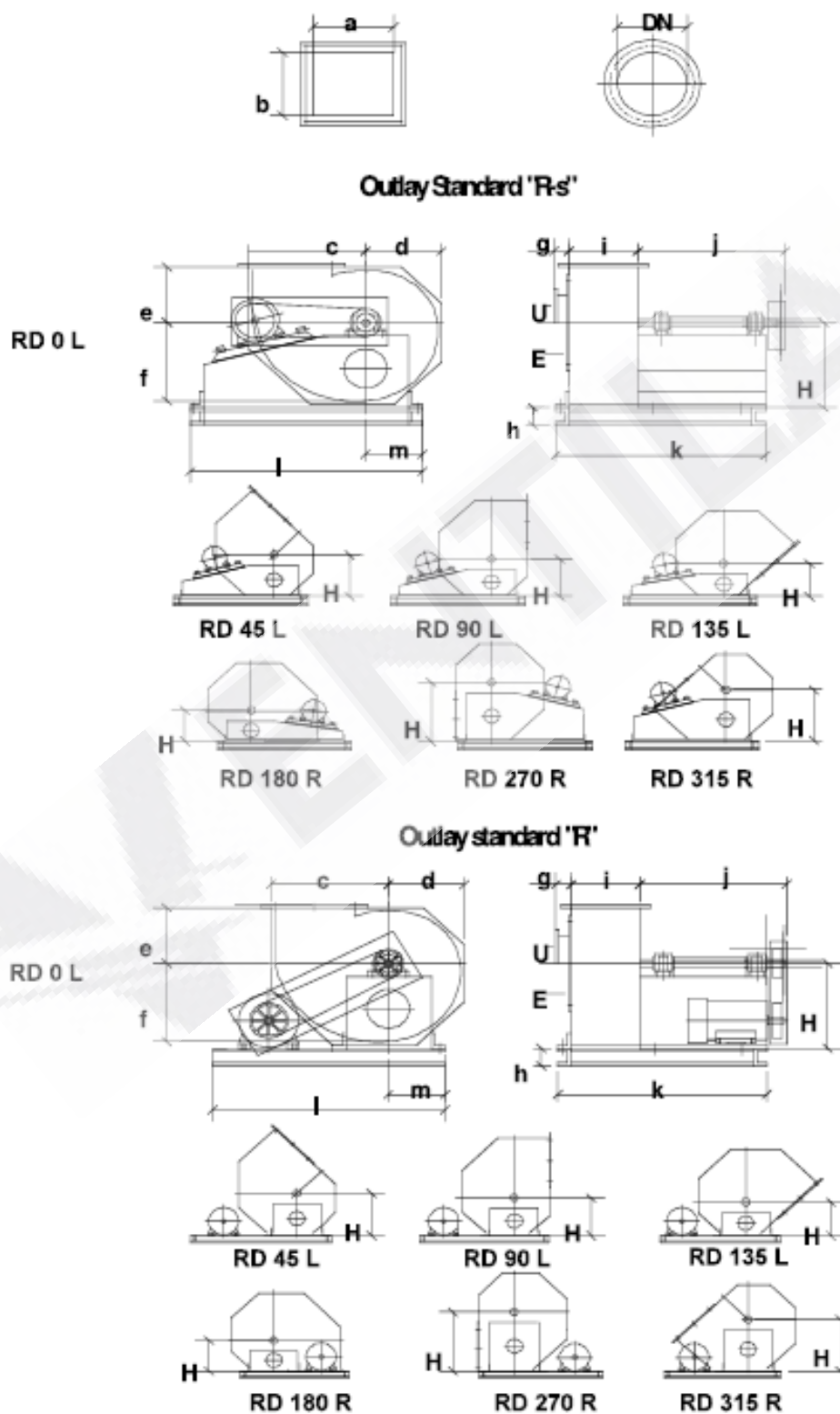
Series

VR3LPD

Series VR3LPD - characteristic curve NS 200 - 1800

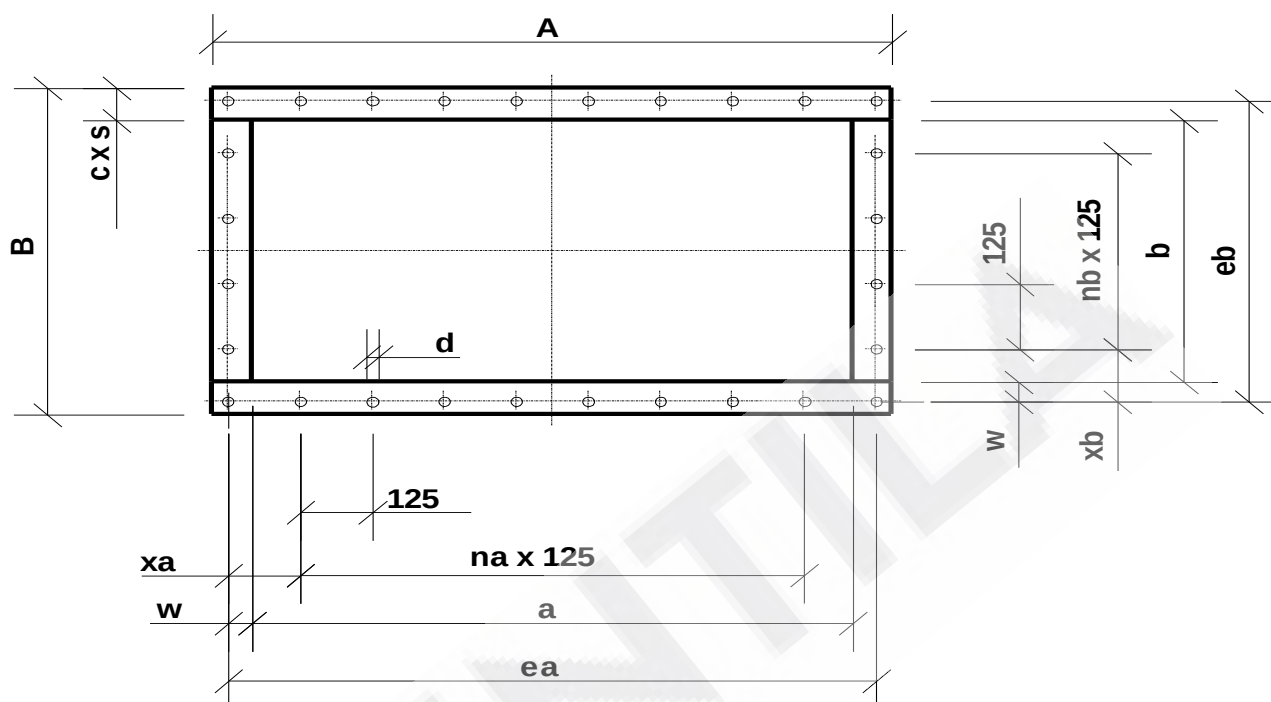


Spiral housing positions and dimensions



nominal size NS		224	250	280	315	355	400	450	500	560	630	710
height dimension dependent on housing position	45°	250	280	310	345	390	435	490	550	610	680	770
	90°	225	250	280	310	350	390	440	490	545	605	685
	135°	205	225	250	280	315	350	390	435	485	540	615
	180°	210	230	250	270	290	320	360	400	445	495	560
	270°	370	410	455	505	565	625	725	805	890	985	1110
	315°	305	340	380	425	475	530	595	670	740	830	940
	360°	275	305	340	380	430	480	535	605	670	745	845
nominal inlet Ø		224	250	280	315	355	400	450	500	560	630	710
outlet dimensions	a	226	252	282	317	357	402	452	502	562	632	712
	b	182	202	226	252	282	317	357	402	452	502	562
spiral housing dimensions	c	338	377	421	470	532	593	667	750	832	930	1054
	d	222	247	274	306	346	386	433	485	538	602	682
	e	205	220	240	260	280	312	350	392	434	486	550
	f	270	300	335	375	425	475	530	600	665	740	840
	g	60	60	60	60	60	60	60	60	100	100	100
	h	65	65	65	80	80	80	80	100	100	100	100
	i	180	200	224	250	280	315	355	400	450	500	560
	j	440	440	505	555	555	650	650	730	730	800	800
	k	570	590	664	745	775	900	940	1060	1110	1210	1270
	l	675	760	760	725	725	900	900	1170	1170	1260	1260
	m	165	165	165	190	190	230	230	280	280	280	280
max. motor size		100L	112M	112M	132S	132S	160M	160M	180M	180M	180L	180L
j = approximate dimensions, from NS1250 on "R"-version, flanges DIN 24154 part2 row2 from NS1250 on horizontal devided, pressure frame DIN 24193 part3 row3 from NS1250 on spiral housing												
nominal size NS		800	900	1000	1120	1250	1400	1600	1800	2000	2240	2500
height dimension dependent on housing position	45°	860	965	1080	1200	1385	1550	1740	1970	2210	2455	2755
	90°	765	860	965	1075	1255	1390	1560	1770	1985	2200	2470
	135°	685	770	860	955	1110	1240	1390	1575	1775	1965	2210
	180°	625	700	785	870	960	1070	1200	1370	1540	1710	1910
	270°	1235	1380	1545	1720	1920	2135	2380	2720	3045	3380	3770
	315°	1045	1175	1320	1465	1680	1880	2100	2400	2690	2985	3345
	360°	945	1060	1190	1320	1530	1700	1910	2170	2430	2695	3020
nominal inlet Ø		800	900	1000	1120	1250	1400	1600	1800	2000	2240	2500
outlet dimensions	a	802	902	1002	1122	1252	1402	1602	1802	2002	2242	2502
	b	632	712	802	902	1002	1122	1252	1402	1602	1802	2002
spiral housing dimensions	c	1176	1324	1490	1653	1840	2055	2300	2630	2955	3286	3670
	d	762	856	962	1068	1185	1320	1480	1690	1905	2116	2370
	e	614	690	775	860	950	1060	1190	1360	1530	1700	1900
	f	940	1055	1185	1315	1460	1700	1910	2170	2350	2612	2920
	g	100	100	150	150	150	150	150	150	150	150	150
	h	120	120	120	120	200	200	220	240	240	240	240
	i	630	710	800	900	1000	1120	1250	1400	1600	1800	2000
	j	960	960	1080	1080	1210	1225	1295	1440	1550	1650	1750
	k	1490	1570	1760	1850	2070	2200	2420	2650	2905	3200	3400
	l	1410	1410	1760	1760	2700	3000	3400	3800	4300	4800	5300
	m	310	310	360	360	850	940	1050	1170	1310	1440	1630
max. motor size		225M	225M	250M	250M	250M	250M	250M	280M	280M	280M	315S

Sheets with flange dimensions for pressure side of VR3LPD fans DIN 24293 part 3 row 3



size	edge length								num. of divisions		num. of holes		profile		
	A	B	a	b	ea	eb	xa	xb	na	nb	nea	neb	w	d	cxs*
200	262	222	202	162	236	196	118	98	1	3	3	3	17	10	30x6
224	286	242	226	182	260	216	130	108							
250	312	262	252	202	286	236	143	118							
280	342	286	282	226	316	260	158	130							
315	377	312	317	252	351	286	113	143	3	1	6	4	30	14	50x6
355	417	342	357	282	391	316	133	158							
400	462	377	402	317	436	351	155,5	113							
450	552	457	452	357	512	417	68,5	146							
500	602	502	502	402	562	462	93,5	168,5	5	3	8	6	35	18,5	60x6
560	662	552	562	452	622	512	123,5	68,5							
630	732	602	632	502	692	562	158,5	93,5							
710	812	662	712	562	772	622	73,5	123,5							
800	902	732	802	632	862	692	118,5	158,5	7	5	10	8	45	24	80x10
900	1002	812	902	712	962	772	168,5	73,5							
1000	1102	902	1002	802	1062	862	93,5	118,5							
1120	1242	1022	1122	902	1192	972	158,5	138,5							
1250	1372	1122	1252	1002	1322	1072	98,5	98,5	9	7	12	10	50	24	90x10
1400	1522	1242	1402	1122	1472	1192	173,5	158,5							
1600	1762	1412	1602	1252	1692	1342	158,5	108,5							
1800	1962	1562	1802	1402	1892	1492	133,5	183,5							
2000	2162	1762	2002	1602	2092	1692	108,5	158,5	11	9	14	12	55	24	100x15
2240	2422	1982	2242	1802	2342	1902	108,5	138,5							
2500	2702	2202	2502	2002	2612	2112	118,5	108,5							

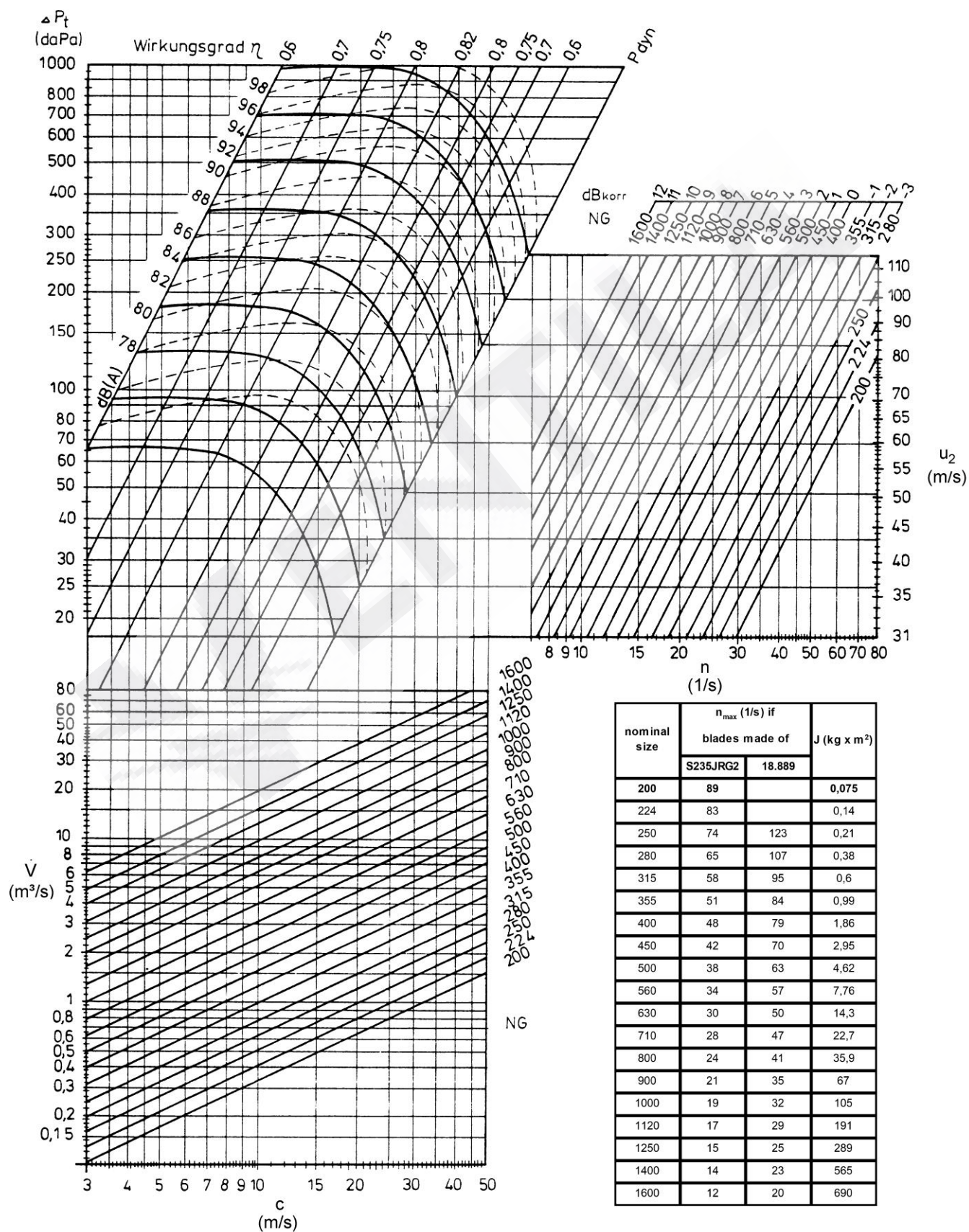
Industrial Centrifugal Fans with High Efficiency by



Series

VR1MPD

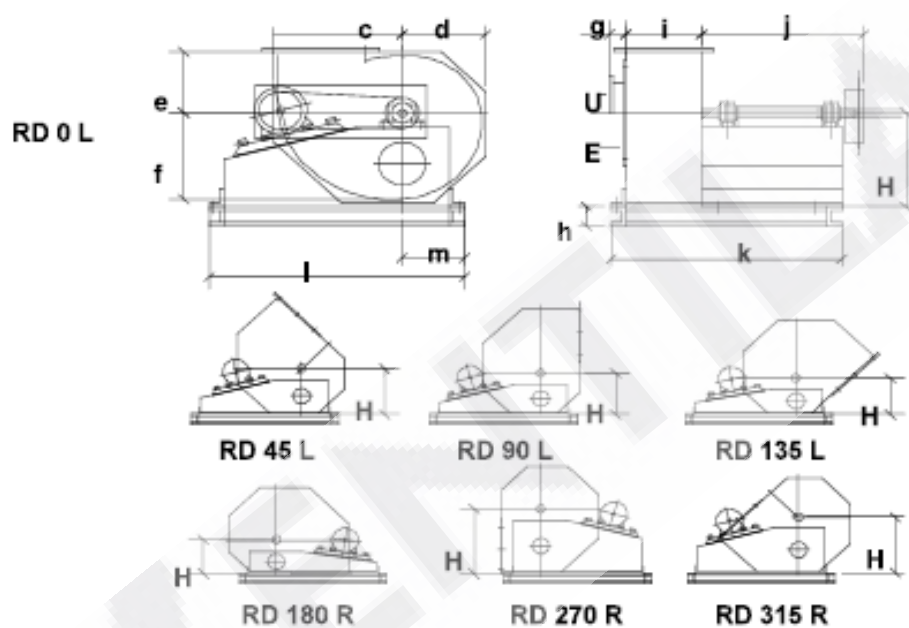
Series VR1MPD - characteristic curve NS 200 - 1600



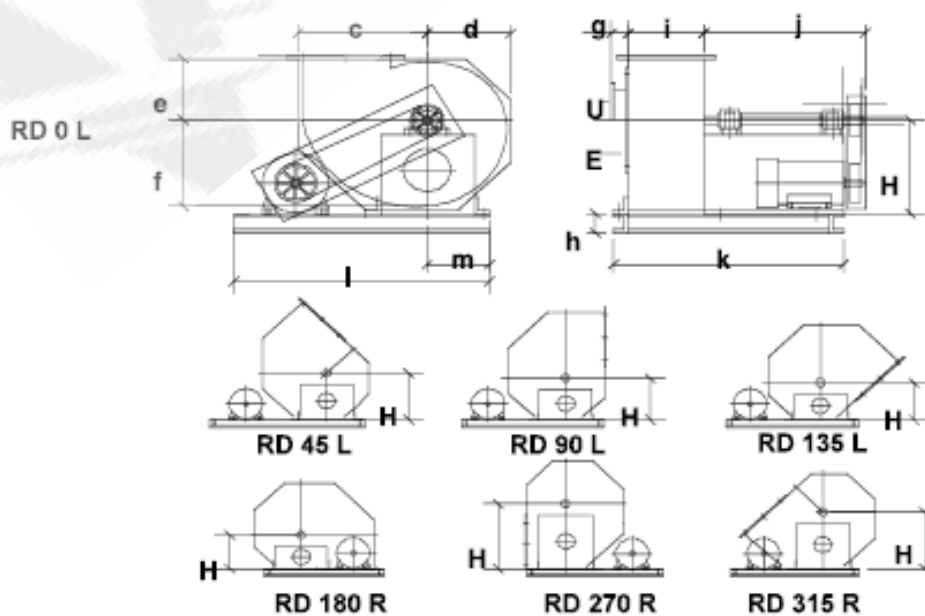
Spiral housing positions and dimensions



Outlay Standard 'R-s'

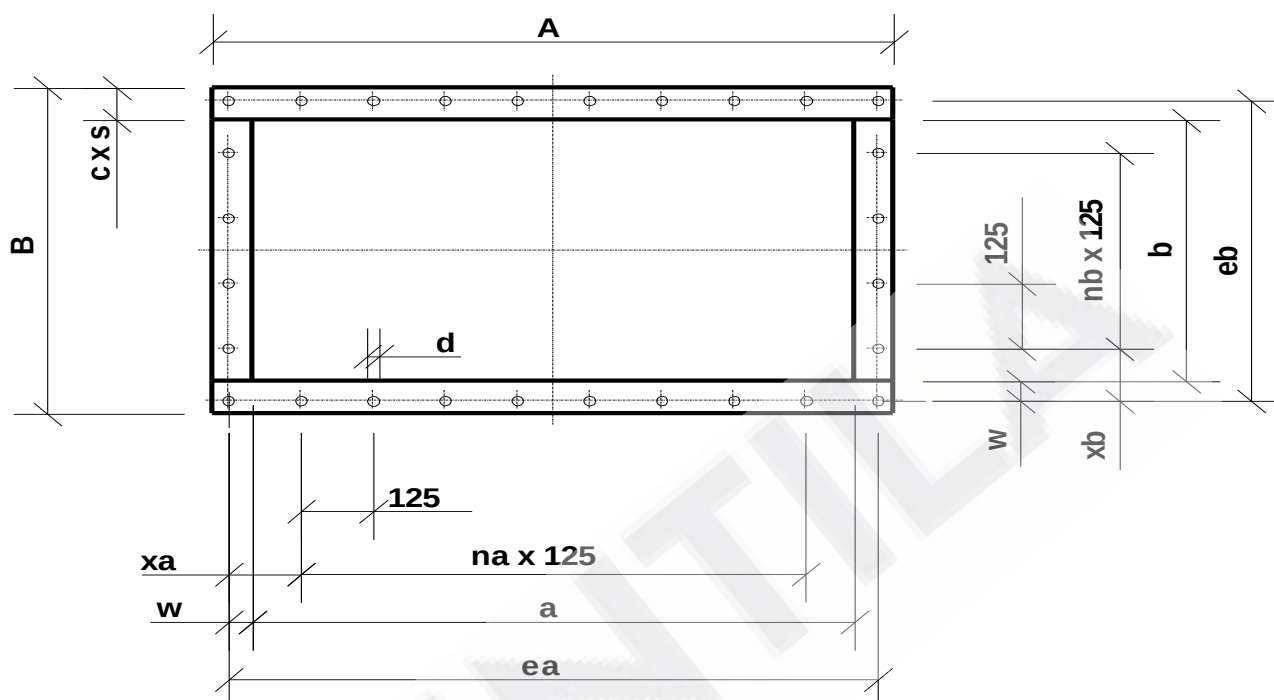


Outlay standard 'R'



nominal size NS		200	224	250	280	315	355	400	450	500	560	630
height dimension dependent on housing position	45°	310	345	390	435	490	550	610	680	770	860	965
	90°	280	310	350	390	440	490	545	605	685	765	860
	135°	250	280	315	350	390	435	485	540	615	685	770
	180°	250	270	290	320	360	400	445	495	560	625	700
	270°	455	505	565	625	725	805	890	985	1110	1235	1380
	315°	380	425	475	530	595	670	740	830	940	1045	1175
	360°	340	380	430	480	535	605	670	745	845	945	1060
nominal inlet Ø		200	224	250	280	315	355	400	450	500	560	630
outlet dimensions	a	282	317	357	402	452	502	562	632	712	802	902
	b	120	134	152	162	182	202	226	252	282	317	357
spiral housing dimensions	c	421	470	532	593	667	750	832	930	1054	1176	1324
	d	274	306	346	386	433	485	538	602	682	762	856
	e	240	260	280	312	350	392	434	486	550	614	690
	f	335	375	425	475	530	600	665	740	840	940	1055
	g	60	60	60	60	60	60	100	100	100	100	100
	h	65	80	80	80	80	100	100	100	100	120	120
	i	118	132	150	160	180	200	224	250	280	315	355
	j	640	690	820	850	910	980	1050	1150	1200	1250	1400
	k	660	700	860	880	980	1060	1100	1200	1280	1420	1550
	l	900	900	1100	1160	1250	1430	1470	1440	1640	2100	2100
	m	165	190	190	230	230	280	280	280	280	310	310
max. motor size		132S	132M	160M	160L	180L	200L	225S	225M	250M	280S	280M
j = approx. dim., from NS560 on "R"-vers., flanges DIN 24154 p.2 r.2 from NS900 on horizontal divided, pressure frame DIN 24193 p.3 r.3 from NS900 on spiral housing												
nominal size NS		710	800	900	1000	1120	1250	1400	1600			
height dimension dependent on housing position	45°	1080	1200	1385	1550	1740	1970	2210	2455			
	90°	965	1075	1255	1390	1560	1770	1985	2200			
	135°	860	955	1110	1240	1390	1575	1775	1965			
	180°	785	870	960	1070	1200	1370	1540	1710			
	270°	1545	1720	1920	2135	2380	2720	3045	3380			
	315°	1320	1465	1680	1880	2100	2400	2690	2985			
	360°	1190	1320	1530	1700	1910	2170	2430	2695			
nominal inlet Ø		710	800	900	1000	1120	1250	1400	1600			
outlet dimensions	a	1002	1122	1252	1402	1602	1802	2002	2242			
	b	402	452	502	562	632	712	802	902			
spiral housing dimensions	c	1490	1653	1840	2055	2300	2630	2955	3286			
	d	962	1068	1185	1320	1480	1690	1905	2116			
	e	775	860	950	1060	1190	1360	1530	1700			
	f	1185	1315	1530	1700	1830	2090	2350	2612			
	g	100	150	150	150	150	150	150	150			
	h	120	120	160	160	200	200	200	200			
	i	400	450	500	560	630	712	800	900			
	j	1580	1750	1900	2100	2100	2100	2100	2150			
	k	1750	1900	2000	2200	2400	2500	2600	2700			
	l	2400	2400	3000	3300	3500	3650	2820	4100			
	m	360	360	850	940	1050	1170	1310	1440			
max. motor size		315S	315M	315L	355L	355L	355L	355L	355L			

Sheet with flange dimensions for pressure side of VR1MPD fans DIN 24293 part 3 row 3



size	edge length								num. of divisions		num. o				profile			
	A	B	a	b	ea	eb	xa	xb	na	nb	nea	neb	w	d	cxS*			
180	312	174	252	114	286	148	143	74	1		3	2	17	10	30x6			
200	342	180	282	120	316	154	158	77										
224	377	194	317	134	351	168	113	84										
250	417	202	357	152	391	186	133	93										
280	462	222	402	162	436	196	155,5	98										
315	552	282	452	182	512	242	68,5	121	3			3	30	14	50x6			
355	602	302	502	202	562	262	93,5	131										
400	662	326	562	226	622	286	123,5	143										
450	732	352	632	252	692	312	158,5	156										
500	812	382	712	282	772	342	73,5	108,5	5									
560	902	417	802	317	862	377	118,5	126		1	8	4						
630	1002	457	902	357	962	417	168,5	146										
710	1102	502	1002	402	1062	462	93,5	168,5	7		10							
800	1242	572	1122	452	1192	522	158,5	73,5	9	3		6				35	18,5	60x6
900	1372	622	1252	502	1322	572	98,5	98,5										
1000	1522	682	1402	562	1472	632	173,5	128,5										
1120	1762	792	1602	632	1692	722	158,5	173,5	11		14							
1250	1962	872	1802	712	1892	802	133,5	88,5	13	5	16	8	45	24	80x10			
1400	2162	962	2002	802	2092	892	108,5	133,5	15		18							
1600	2422	1082	2242	902	2322	1002	108,5	188,5	17		20				50	90x10		

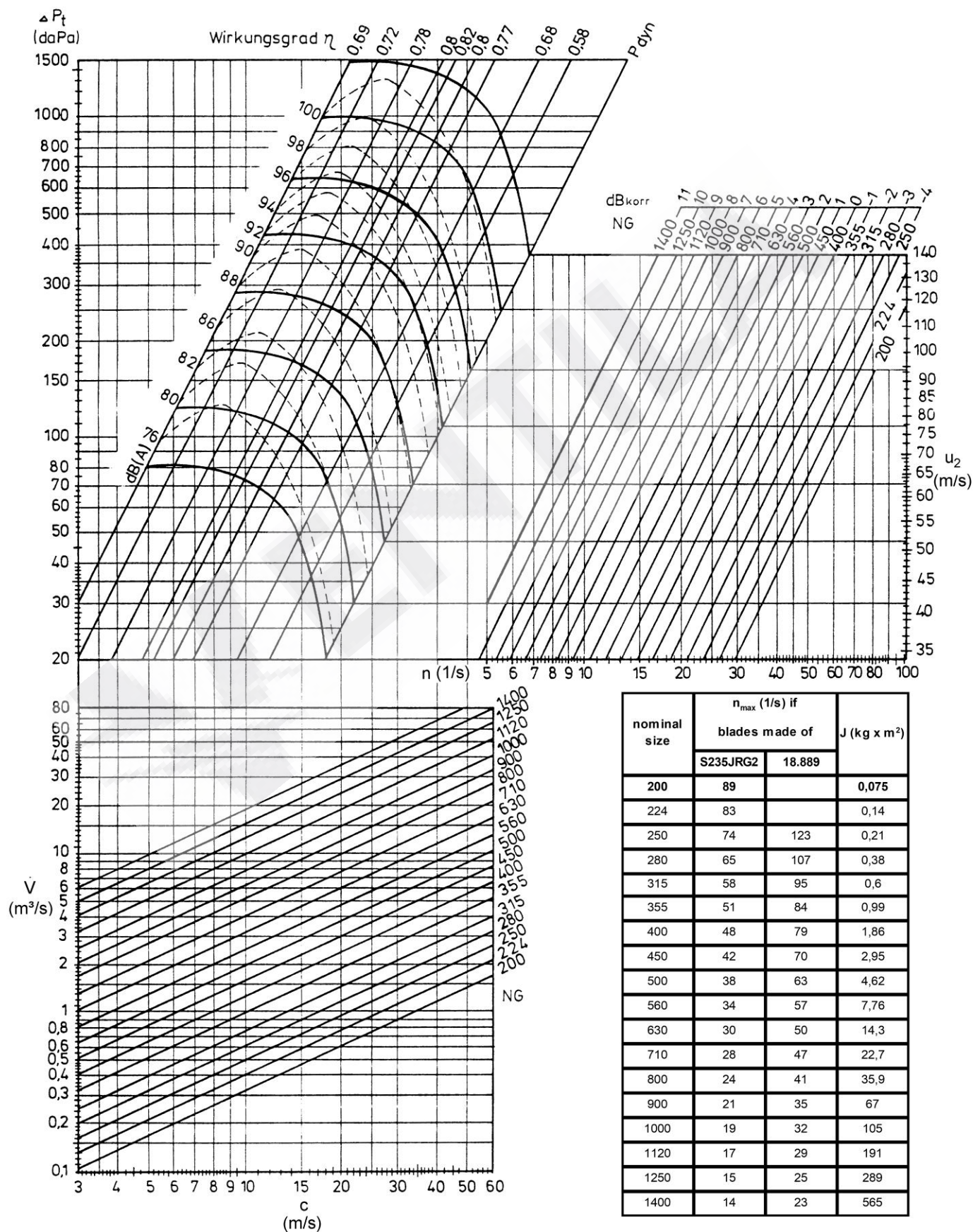
Industrial Centrifugal Fans with High Efficiency by



Series

VR2MPD

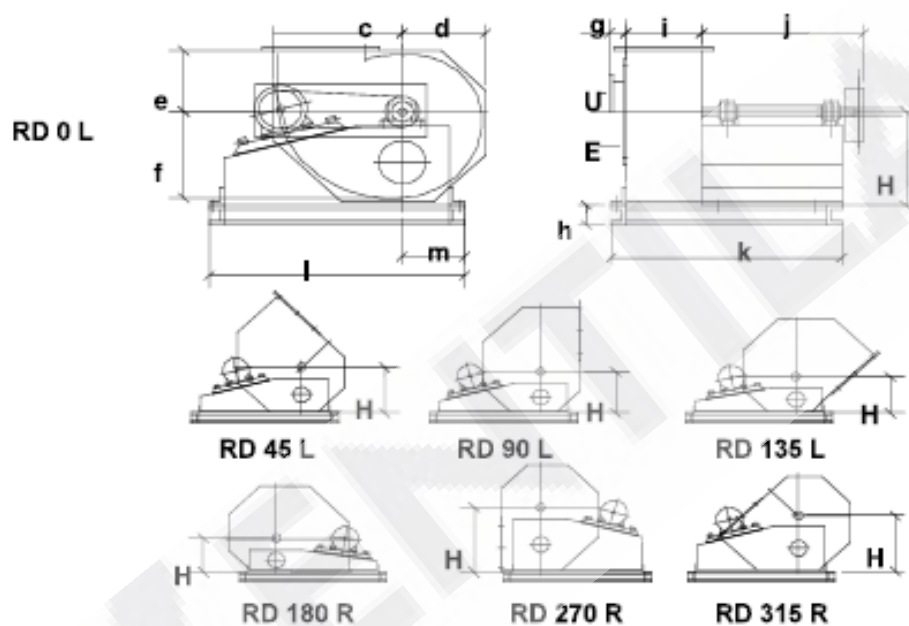
Series VR2MPD - characteristic curve NS 200 - 1400



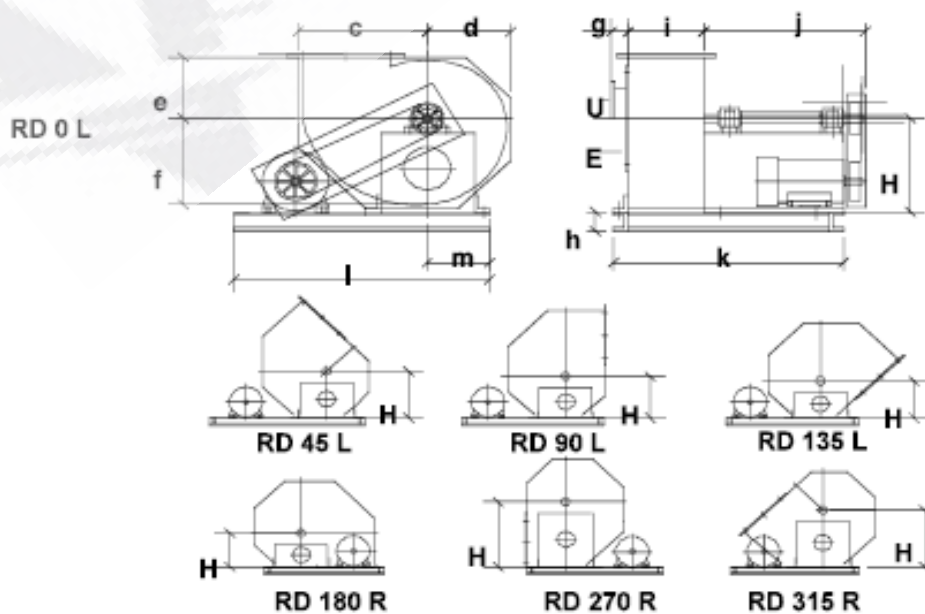
Spiral housing positions and dimensions



Outlay Standard 'R-s'

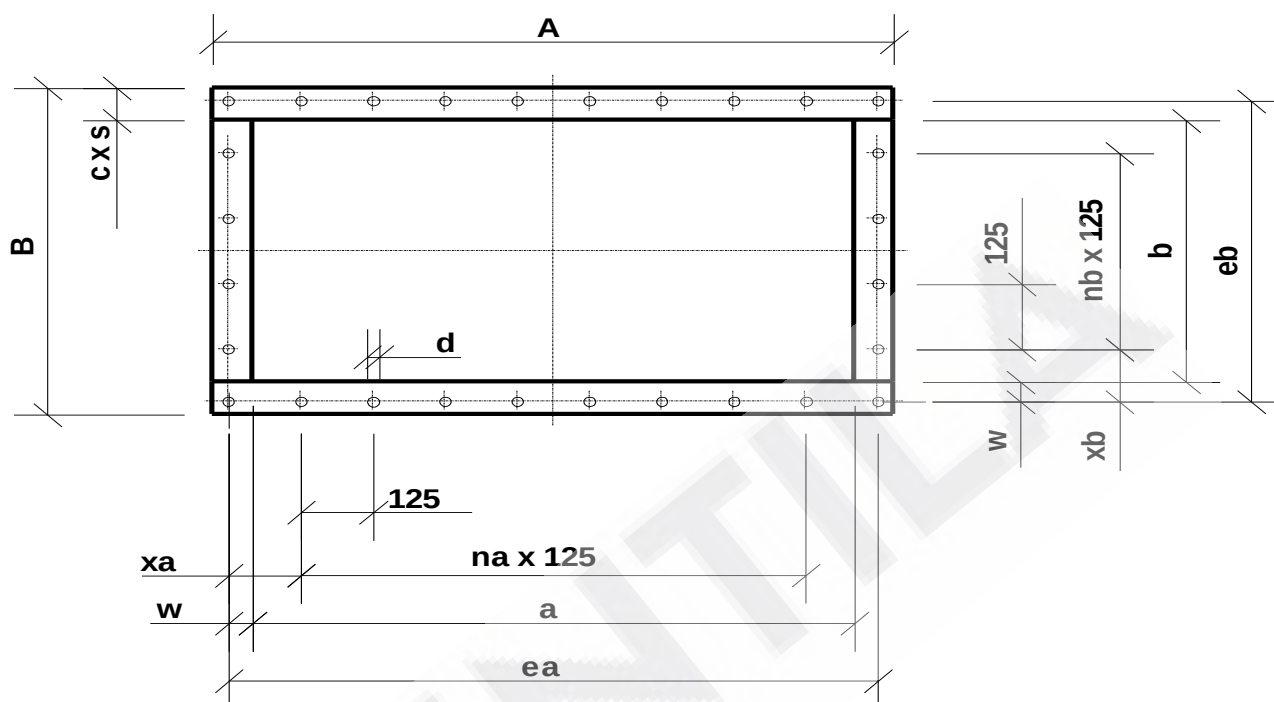


Outlay standard 'R'



nominal size NS		200	224	250	280	315	355	400	450	500	560	630
height dimension dependent on housing position	45°	345	390	435	490	550	610	680	770	860	965	1080
	90°	310	350	390	440	490	545	605	685	765	860	965
	135°	280	315	350	390	435	485	540	615	685	770	860
	180°	270	290	320	360	400	445	495	560	625	700	785
	270°	505	565	625	725	805	890	985	1110	1235	1380	1545
	315°	425	475	530	595	670	740	830	940	1045	1175	1320
	360°	380	430	480	535	605	670	745	845	945	1060	1190
nominal inlet Ø		200	224	250	280	315	355	400	450	500	560	630
outlet dimensions	a	317	357	402	452	502	562	632	712	802	902	1002
	b	120	134	152	182	182	202	226	252	282	317	357
spiral housing dimensions	c	470	532	593	667	750	832	930	1054	1176	1324	1490
	d	306	346	386	433	485	538	602	682	762	856	962
	e	260	280	312	350	392	434	486	550	614	690	775
	f	375	425	475	530	600	665	740	840	940	1055	1185
	g	60	60	60	60	60	60	100	100	100	100	100
	h	80	80	80	80	100	100	100	100	120	120	120
	i	118	132	150	160	180	200	224	250	280	315	355
	j	640	690	820	850	910	980	1150	1150	1220	1320	1400
	k	660	700	860	880	980	1060	1100	1200	1300	1420	1550
	l	900	900	1150	1150	1250	1400	1440	1440	1720	2000	2100
	m	190	190	230	230	280	280	280	280	310	310	360
max. motor size		132S	132M	160M	160L	180L	200L	225S	225M	250M	280S	280M
j = approx. dim., from NS560 on "R"-vers., flanges DIN 24154 p.2 r.2 from NS 800 on horizontal divided, pressure frame DIN 24193 p.3 r.3												
nominal size NS		710	800	900	1000	1120	1250	1400	1600			
height dimension dependent on housing position	45°	1200	1385	1550	1740	1970	2210	2455	2755			
	90°	1075	1255	1390	1560	1770	1985	2200	2470			
	135°	955	1110	1240	1390	1575	1775	1965	2210			
	180°	870	960	1070	1200	1370	1540	1710	1910			
	270°	1720	1920	2135	2380	2720	3045	3380	3770			
	315°	1465	1680	1880	2100	2400	2690	2985	3345			
	360°	1320	1530	1700	1910	2170	2430	2695	3020			
nominal inlet Ø		710	800	900	1000	1120	1250	1400	1600			
outlet dimensions	a	1122	1252	1402	1602	1802	2002	2242	2502			
	b	402	452	502	562	632	712	802	902			
spiral housing dimensions	c	1653	1840	2055	2300	2630	2955	3286	3670			
	d	1068	1185	1320	1480	1690	1905	2116	2370			
	e	860	950	1060	1190	1360	1530	1700	1900			
	f	1315	1460	1635	1830	2090	2350	2612	2920			
	g	150	150	150	150	150	150	150	150			
	h	120	160	160	200	200	200	240	240			
	i	400	450	500	560	630	710	800	900			
	j	1580	1750	1800	1900	2100	2100	2100	2150			
	k	1750	1950	2100	2200	2400	2500	2600	2750			
	l	2100	2700	2900	3100	3400	3650	3800	4100			
	m	360	850	940	1050	1170	1310	1440	1630			
max. motor size		315S	315M	315L	315L	355L	355L	355L	355L			

Sheet with flange dimensions for pressure side of VR2MPD fans DIN 24293 part 3 row 3



Größe	Kantenlänge								Teilungszahl		Lochanzahl				Profil
	A	B	a	b	ea	eb	xa	xb	na	nb	nea	neb	w	d	
200	377	180	317	120	351	154	113	77	1		4		17	10	30x6
224	417	194	357	134	391	168	133	84							
250	462	202	402	152	436	186	155,5	93							
280	552	222	452	162	512	222	68,5	111	3		6	3	30	14	50x6
315	602	282	502	182	562	242	93,5	121							
355	662	302	562	202	622	262	123,5	131							
400	732	326	632	226	692	286	158,5	143	5		8				
450	812	352	712	252	772	312	73,5	156							
500	902	382	802	282	862	342	118,5	171							
560	1002	417	902	317	962	377	168,5	126	7	1	10	4			
630	1102	457	1002	357	1062	417	93,5	146							
710	1242	502	1122	402	1192	472	158,5	173,5							
800	1372	572	1252	452	1322	522	98,5	73,5	9	3	12	6	35	18,5	60x6
900	1522	622	1402	502	1472	572	173,5	98,5							
1000	1762	682	1602	562	1692	652	158,5	138,5							
1120	1962	792	1802	632	1892	722	133,5	173,5	11	5	14	8	45	24	80x10
1250	2162	872	2002	712	2092	802	108,5	88,5	13						
1400	2422	962	2242	802	2342	902	108,5	138,5	15						
1600	2702	1082	2502	902	2612	1012	118,5	193,5	17	5	20	8	50		90x10
									19						
											22		55		100x15

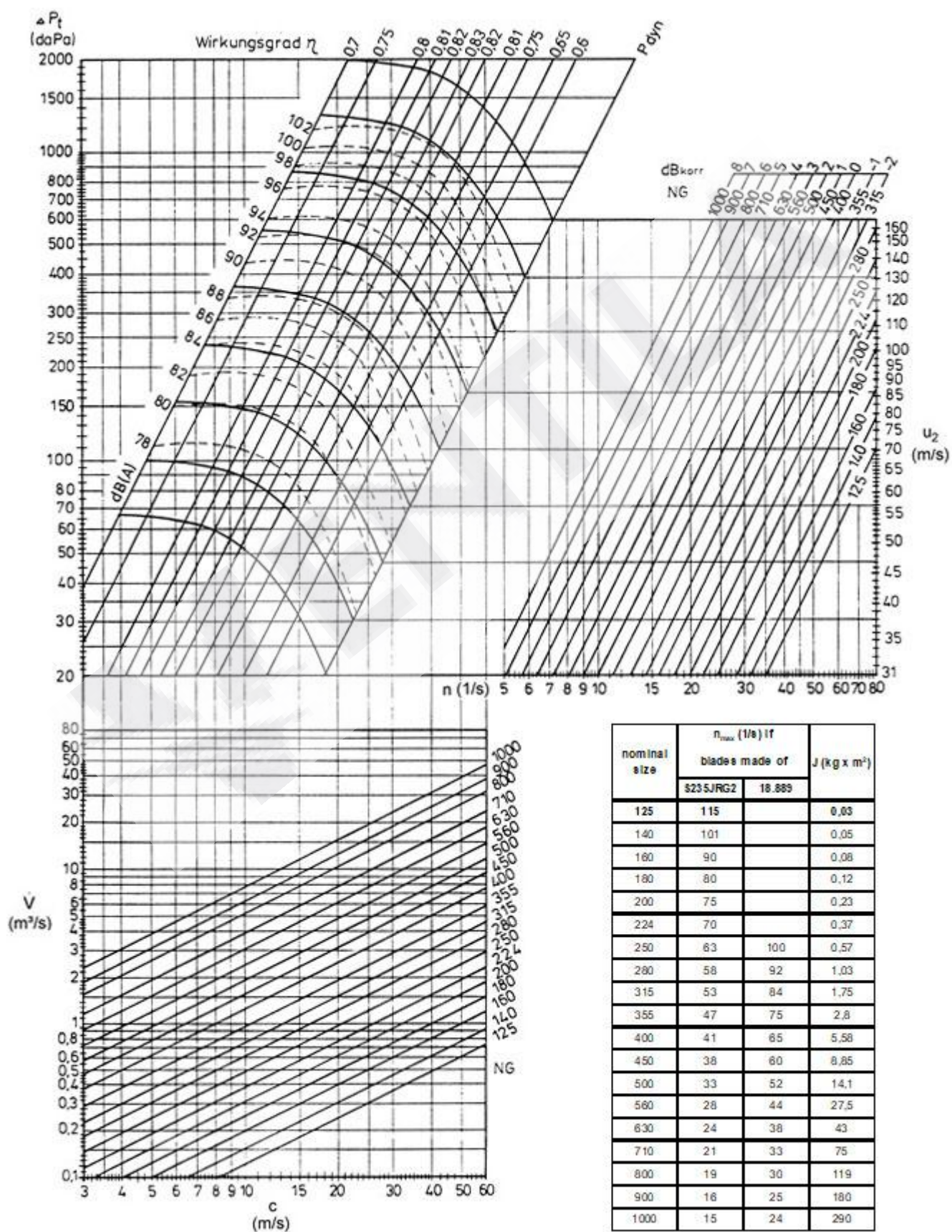
Industrial Centrifugal Fans with High Efficiency by



Series

VR1HPD

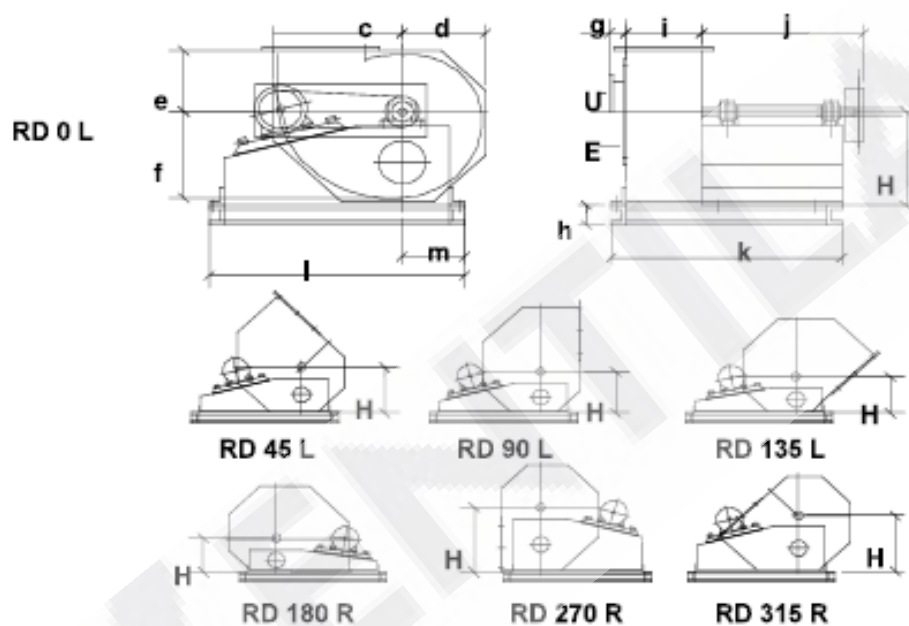
Series VR1HPD - characteristic curve NS 125 - 1000



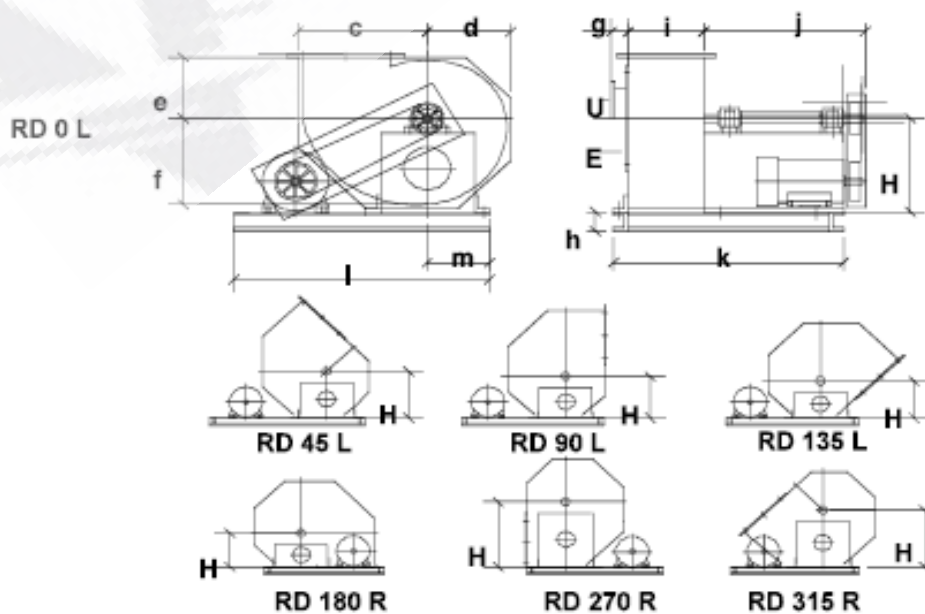
Spiral housing positions and dimensions



Outlay Standard 'R-s'

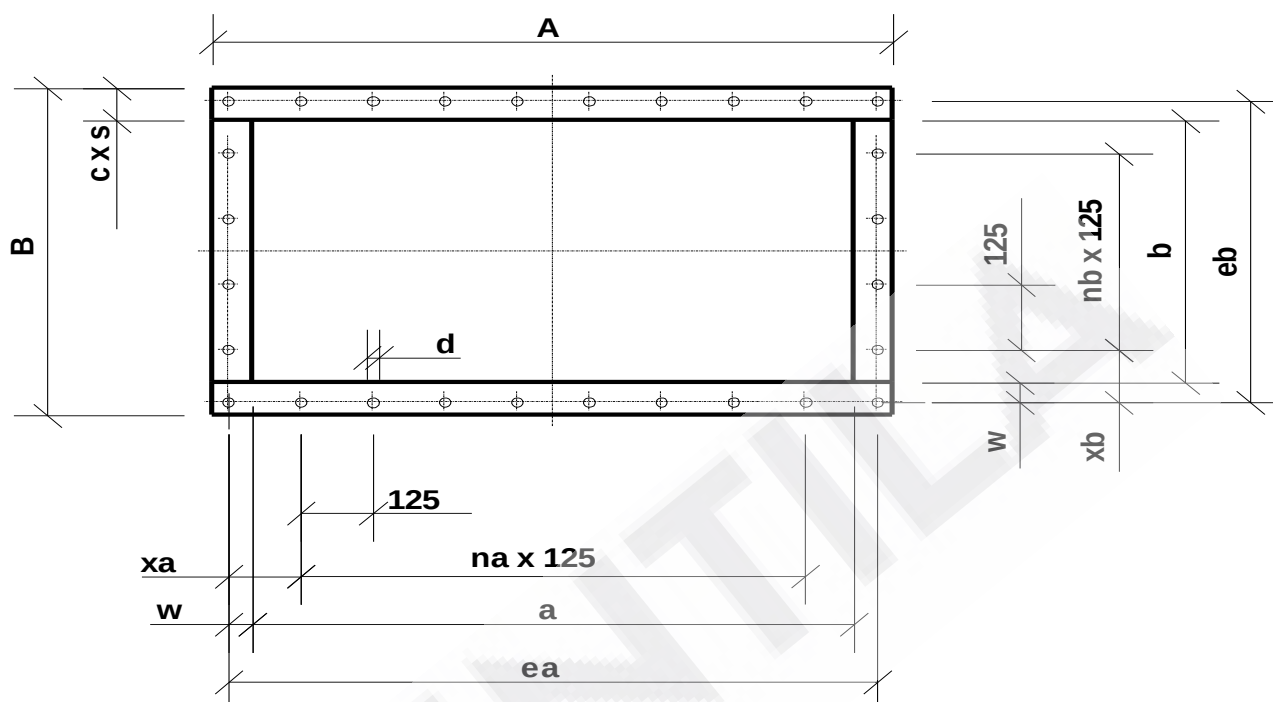


Outlay standard 'R'



nominal size NS		125	140	160	180	200	224	250	280	315	355	400
height dimension dependent on housing position	45°	200	220	255	285	315	350	390	430	485	545	615
	90°	200	210	245	270	300	330	370	410	460	520	585
	135°	180	220	235	260	285	315	350	395	440	495	555
	180°	175	200	230	255	280	310	340	380	425	480	540
	270°	255	285	320	350	385	430	470	525	585	660	745
	315°	220	250	285	315	350	385	430	480	540	605	680
	360°	210	235	270	300	330	370	410	455	510	575	640
nominal inlet Ø		125	140	160	180	200	224	250	280	315	355	400
outlet dimensions	a	142	162	182	202	226	252	282	317	357	402	452
	b	92	108	120	134	142	162	182	202	226	252	282
spiral housing dimensions	c	222	253	291	325	360	400	445	500	560	630	710
	d	182	205	238	265	295	325	365	405	455	515	580
	e	165	188	220	245	270	300	330	370	415	470	530
	f	197	223	254	284	316	354	395	442	497	561	632
	g	60	60	60	60	60	60	60	60	60	60	60
	h	80	80	80	80	100	100	120	120	160	160	200
	i	90	106	118	132	140	160	180	200	224	250	280
	j	510	510	530	530	560	60	930	1000	1150	1300	1300
	k	530	560	600	600	640	760	1000	1100	1200	1400	1400
	l	800	800	950	950	1000	1000	1200	1500	1550	2300	2300
	m	170	170	170	170	190	190	230	280	310	400	400
max. motor size		90S	90L	100L	100L	112M	132M	160L	200L	225M	280S	280M
j = approx. dim., from NS 355 on "R"-vers., flanges DIN 24154 p.2 r.2 from NS 800 on horizontal divided, pressure frame DIN 24193 p.3 r.3												
nominal size NS		450	500	560	630	710	800	900	1000			
height dimension dependent on housing position	45°	690	765	855	965	1085	1225	1370	1525			
	90°	565	725	815	915	1035	1165	1305	1445			
	135°	625	695	785	875	985	1105	1245	1385			
	180°	605	670	750	840	950	1070	1200	1330			
	270°	830	915	1020	1140	1285	1440	1610	1800			
	315°	760	845	955	1075	1205	1355	1525	1685			
	360°	725	805	905	1015	1145	1285	1445	1605			
nominal inlet Ø		450	500	560	630	710	800	900	1000			
outlet dimensions	a	502	562	632	712	802	902	1002	1122			
	b	317	357	402	452	502	562	632	712			
spiral housing dimensions	c	795	880	1000	1120	1260	1420	1590	1760			
	d	650	720	810	910	1030	1160	1300	1440			
	e	595	660	740	830	940	1060	1190	1320			
	f	711	790	884	994	1122	1264	1422	1580			
	g	60	100	100	100	100	100	100	150			
	h	200	200	200	240	240	240	240	300			
	i	315	355	400	450	500	560	630	710			
	j	1460	1460	1480	1630	1680	1770	2080	2200			
	k	1600	1600	1700	1900	2000	2150	2500	2700			
	l	2700	2700	2700	2700	2800	2900	2900	3000			
	m	500	500	500	500	550	550	600	600			
max. motor size		315S	315M	315M	315L	355M	355L	400M	450S			

Sheet with flange dimensions for pressure side of VR1HPD fans DIN 24293 part 3 row 3



size	edge length								num. of divisions		num. of holes				profile
	A	B	a	b	ea	eb	xa	xb	na	nb	nea	neb	w	d	cxs*
125	202	152	142	92	176	126	88		1		3	2	17	10	30x6
140	222	168	162	108	196	142	98								
160	242	180	182	120	216	154	108	77							
180	262	194	202	134	236	168	118	84							
200	286	202	226	142	260	176	130	88							
224	312	222	252	162	286	196	143	98							
250	342	242	282	182	316	216	158	108							
280	377	262	317	202	351	236	113	118							
315	417	286	357	226	391	260	133	130							
355	462	312	402	252	436	286	155,5	143	3	1	6	4	30	14	50x6
400	562	382	452	282	512	342	68,5	158							
450	602	417	502	317	562	377	93,5	113							
500	662	457	562	357	622	417	123,5	133							
560	732	502	632	402	692	462	158,5	155,5	5	3	8	6	35	18,5	60x6
630	812	552	712	452	772	512	73,5	68,5							
710	902	602	802	502	862	562	118,5	93,5							
800	1002	662	902	562	962	622	168,5	123,5							
900	1102	732	1002	632	1062	692	93,5	158,5	7	5	10	8	35	18,5	60x6
1000	1242	832	1122	712	1192	782	158,5	73,5							

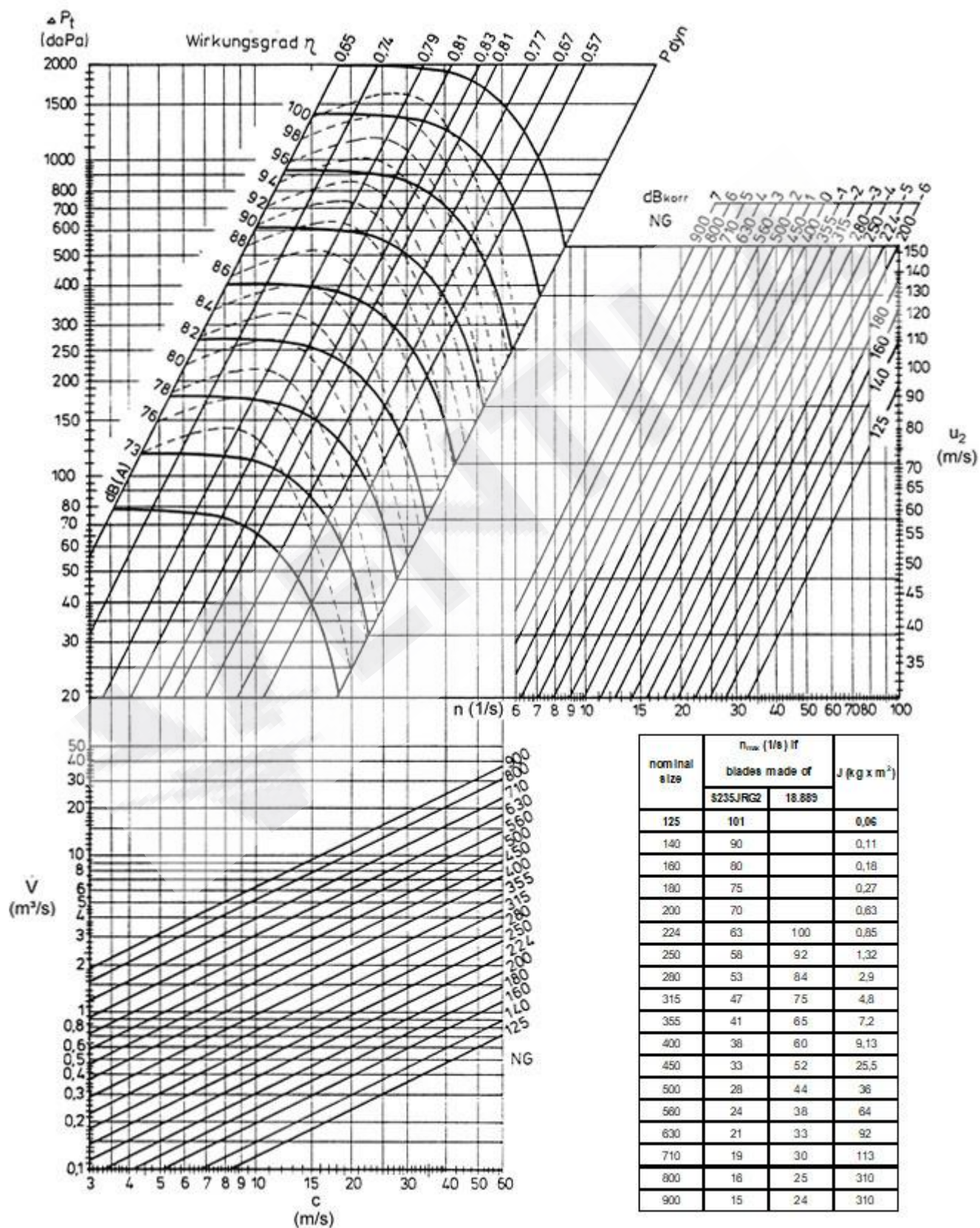
Industrial Centrifugal Fans with High Efficiency by



Series

VR2HPD

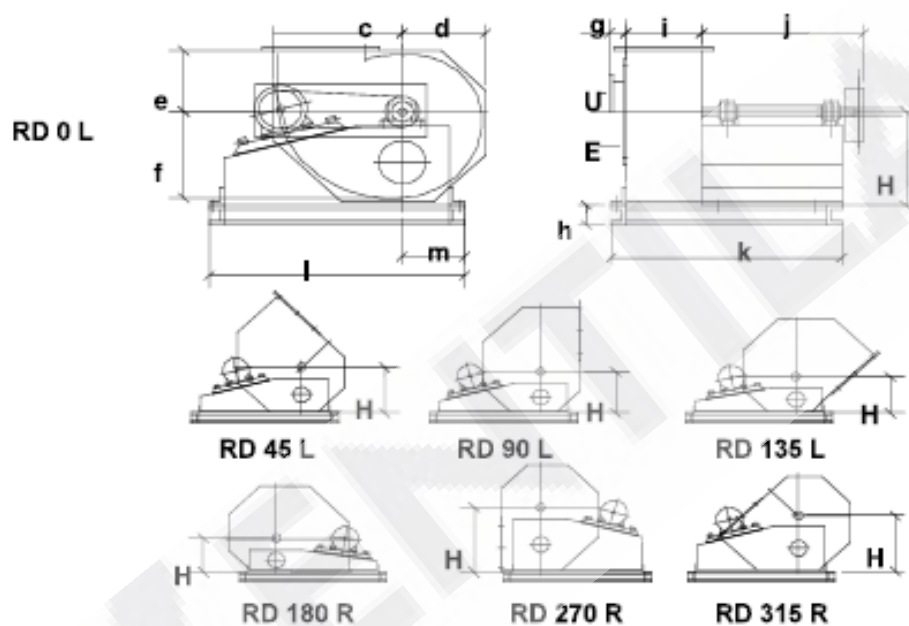
Series VR2HPD - characteristic curve NS 125 - 900



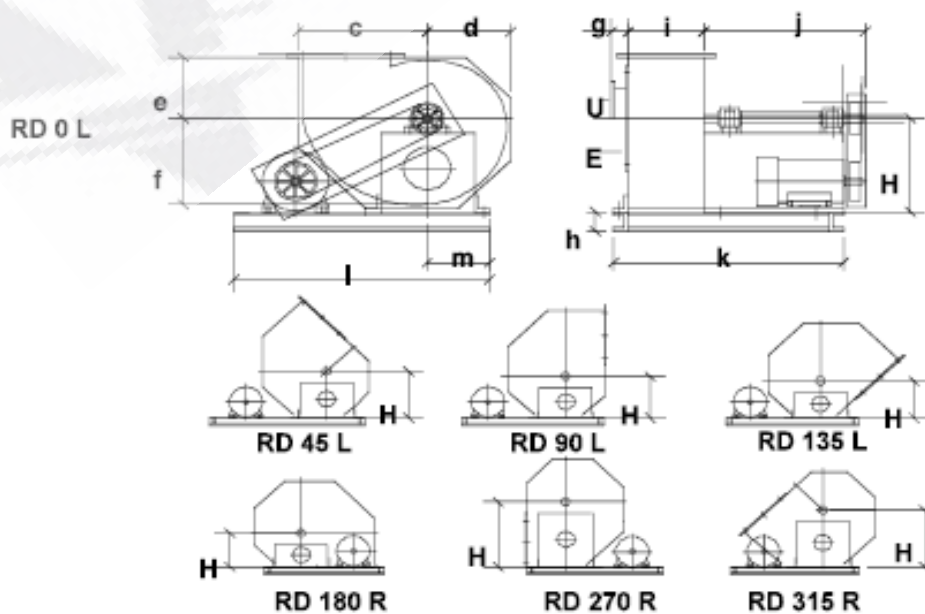
Spiral housing positions and dimensions



Outlay Standard 'R-s'

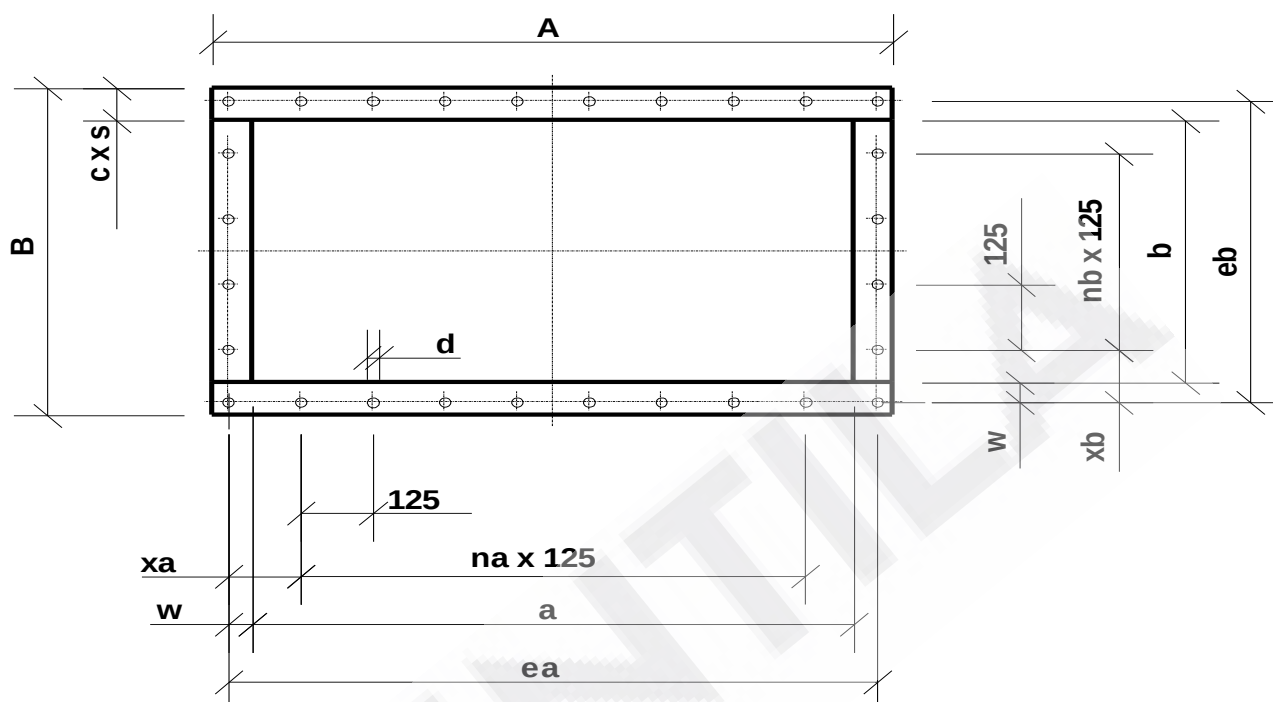


Outlay standard 'R'



nominal size NS		125	140	160	180	200	224	250	280	315	355	400
height dimension dependent on housing position	45°	220	255	285	315	350	390	430	485	545	615	690
	90°	210	245	270	300	330	370	410	460	520	585	655
	135°	220	235	260	285	315	350	395	440	495	555	625
	180°	200	230	255	280	310	340	380	425	480	540	605
	270°	285	320	350	385	430	470	525	585	660	745	830
	315°	250	285	315	350	385	430	480	540	605	680	760
	360°	235	270	300	330	370	410	455	510	575	640	725
nominal inlet Ø		125	140	160	180	200	224	250	280	315	355	400
outlet dimensions	a	162	182	202	226	252	282	317	357	402	452	502
	b	92	108	120	134	142	162	182	202	226	252	282
spiral housing dimensions	c	253	291	325	360	400	445	500	560	630	710	795
	d	205	238	265	295	325	365	405	455	515	580	650
	e	188	220	245	270	300	330	370	415	470	530	595
	f	223	254	284	316	354	395	442	497	561	632	711
	g	60	60	60	60	60	60	60	60	60	60	60
	h	80	80	80	100	100	120	120	160	160	200	200
	i	90	106	118	132	140	160	180	200	224	250	280
	j	510	530	530	560	60	930	1000	1150	1300	1300	1300
	k	560	600	600	640	760	1000	1100	1200	1400	1400	1400
	l	800	950	950	1000	1000	1200	1500	1550	2300	2300	2300
	m	170	170	170	170	190	190	230	280	310	400	400
max. motor size		90S	90L	100L	100L	112M	132M	160L	200L	225M	280S	280M
j = approx. dim., from NS355 on "R"-vers., flanges DIN 24154 p.2 r.2 from NS800 on horizontal divided, pressure frame DIN 24193 p.3 r.3												
nominal size NS		450	500	560	630	710	800	900				
height dimension dependent on housing position	45°	765	855	965	1085	1225	1370	1525				
	90°	725	815	915	1035	1165	1305	1445				
	135°	695	785	875	985	1105	1245	1385				
	180°	670	750	840	950	1070	1200	1330				
	270°	915	1020	1140	1285	1440	1610	1800				
	315°	845	955	1075	1205	1355	1525	1685				
	360°	805	905	1015	1145	1285	1445	1605				
nominal inlet Ø		450	500	560	630	710	800	900				
outlet dimensions	a	562	632	712	802	902	1002	1122				
	b	317	357	402	452	502	562	632				
spiral housing dimensions	c	880	1000	1120	1260	1420	1590	1760				
	d	720	810	910	1030	1160	1300	1440				
	e	660	740	830	940	1060	1190	1320				
	f	790	884	994	1122	1264	1422	1580				
	g	100	100	100	100	100	100	150				
	h	200	200	240	240	240	240	280				
	i	315	355	400	450	500	560	630				
	j	1460	1460	1480	1630	1680	1770	2080				
	k	1600	1600	1700	1900	2000	2150	2500				
	l	2700	2700	2700	2700	2800	2900	2900				
	m	500	500	500	500	550	550	600				
max. motor size		315S	315M	315M	315L	355M	355L	400M				

Sheet with flange dimensions for pressure side of VR2HPD fans DIN 24293 part 3 row 3



size	edge length				ea	eb	xa	xb	num. of divisions		num. of holes				profile			
	A	B	a	b					na	nb	nea	neb	w	d	cxs*			
125	222	152	162	92	196	126	98		1		3	2	17	10	30x6			
140	242	168	182	108	216	142	108											
160	262	180	202	120	236	154	118	77										
180	286	194	226	134	260	168	130	84										
200	312	202	252	142	286	176	143	88										
224	342	222	282	162	316	196	158	98										
250	377	242	317	182	351	216	113	108			3							
280	417	262	357	202	391	236	133	118										
315	462	286	402	226	436	260	155,5	130										
355	562	312	452	252	512	286	68,5	143										
400	602	382	502	282	562	342	93,5	158										
450	662	417	562	317	622	377	123,5	113	3	1	6	4	30	14	50x6			
500	732	457	632	357	692	417	158,5	133										
560	812	502	712	402	772	462	73,5	155,5										
630	902	552	802	452	862	512	118,5	68,5	5	3	8	6						
710	1002	602	902	502	962	562	168,5	93,5										
800	1102	662	1002	562	1062	622	93,5	123,5										
900	1242	732	1122	632	1192	692	158,5	158,5	7		10					35	18,5	60x6

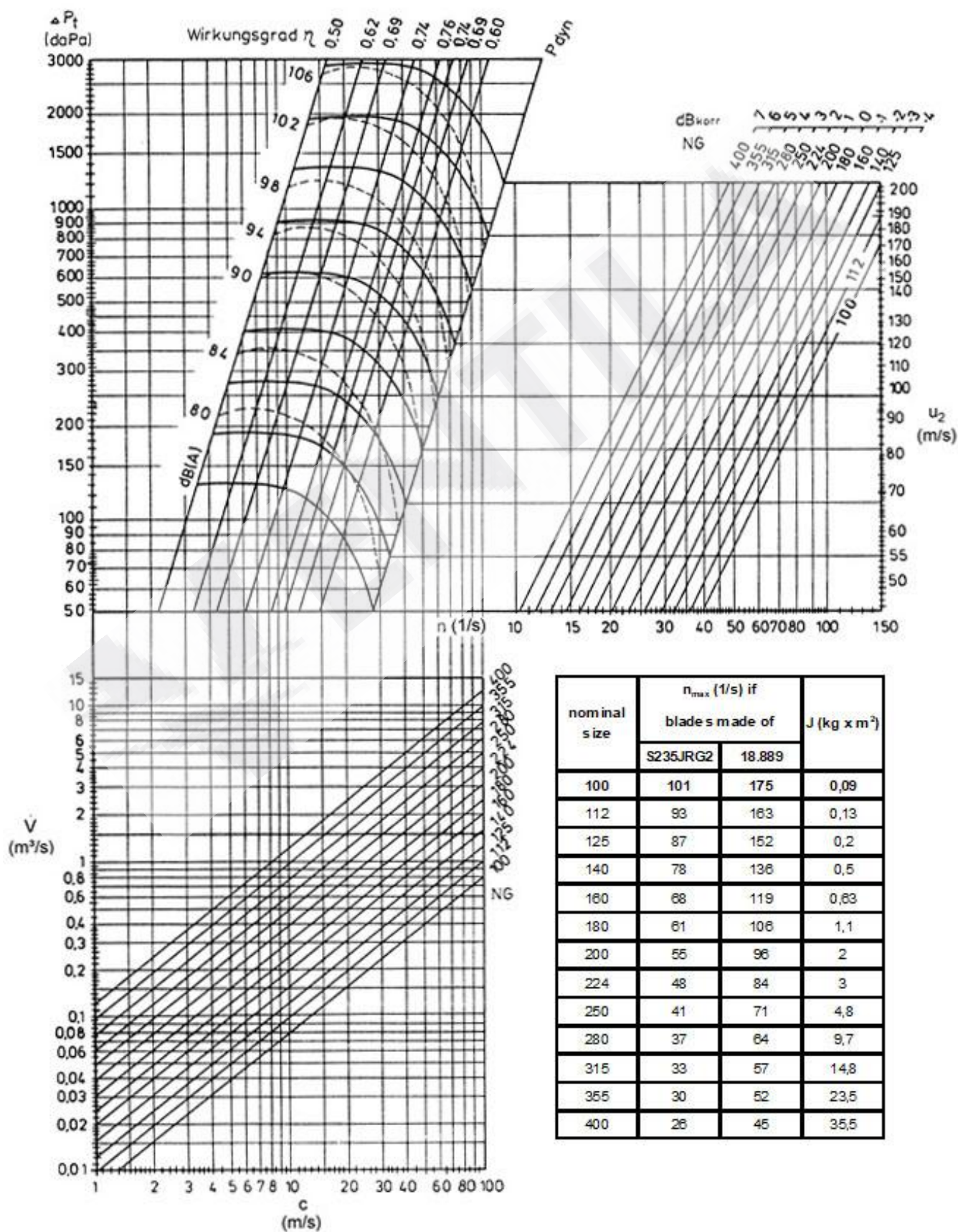
Industrial Centrifugal Fans with High Efficiency by



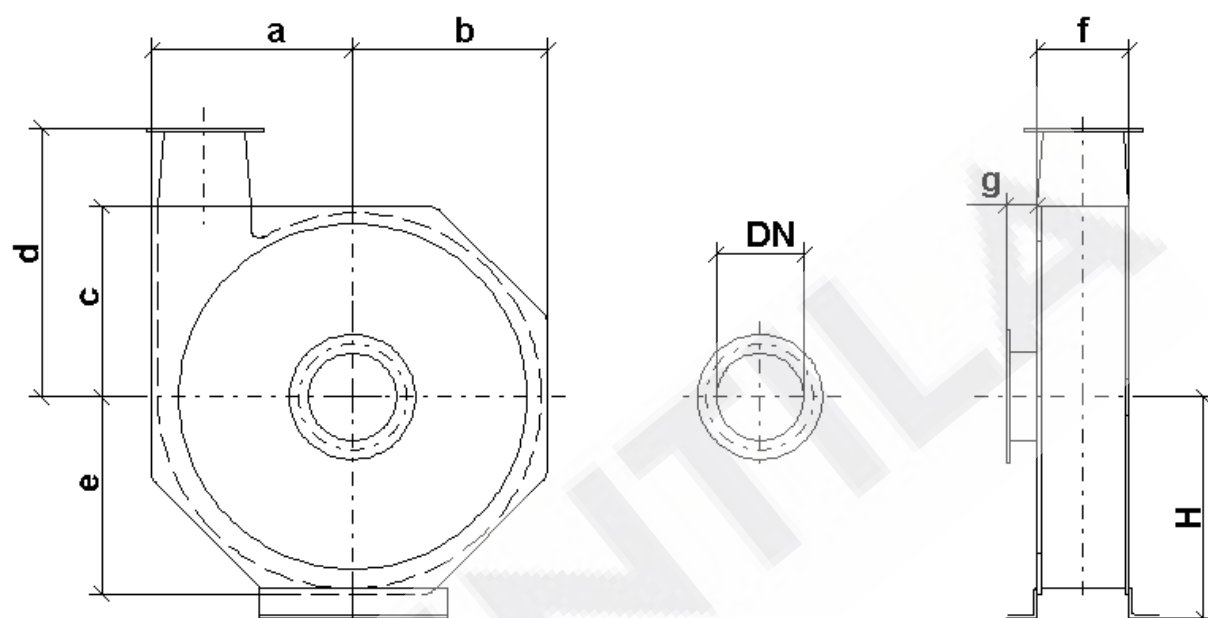
Series

VR1EHP

Series VR1EHP - characteristic curve NS 100 - 400



Spiral housing positions and dimensions



nominal size NS		100	112	125	140	160	180	200	224	250	280	315
housing position	45°	245	290	320	355	400	445	490	540	600	670	730
	90°	245	290	320	355	400	445	490	540	600	670	730
	135°	245	290	320	355	400	445	490	540	600	670	730
	180°	245	290	320	355	400	445	490	540	600	670	730
	270°	245	290	320	355	400	445	490	540	600	670	730
	315°	245	290	320	355	400	445	490	540	600	670	730
	360°	245	290	320	355	400	445	490	540	600	670	730
nominal inlet Ø		100	112	125	140	160	180	200	224	250	280	315
nominal outletØ		90	100	112	125	140	160	180	200	224	250	280
spiral housing dimensions	a	228	254	285	320	365	410	455	505	565	630	715
	b	220	245	275	310	350	390	435	485	545	610	690
	c	216	241	270	305	340	385	425	475	535	560	680
	d	340	365	395	430	465	510	550	600	660	685	810
	e	224	250	280	315	355	400	445	495	555	620	700
	f	105	117	131	146	164	183	205	229	256	288	322
	g	50	50	50	50	50	50	50	50	50	50	50

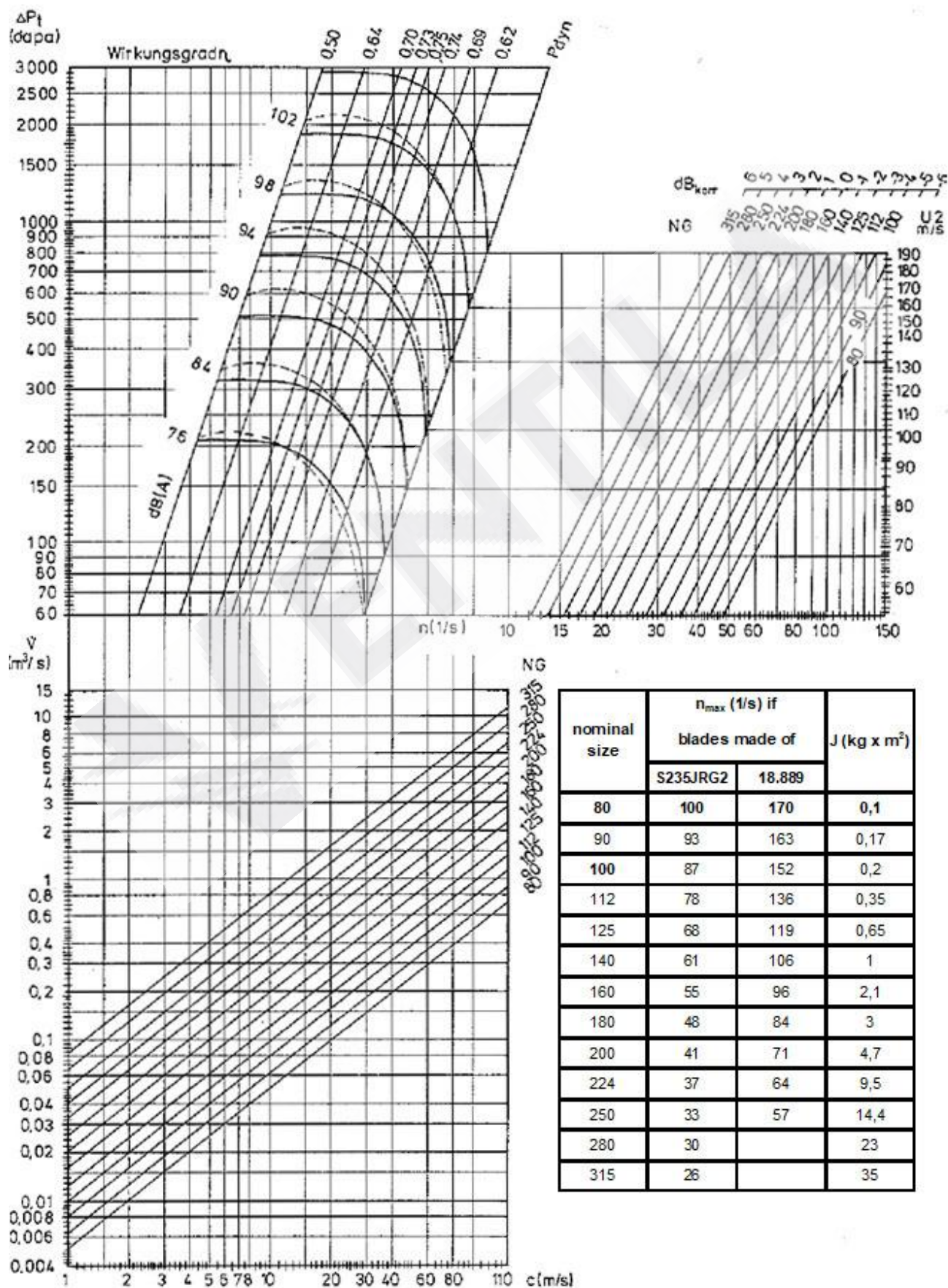
Industrial Centrifugal Fans with High Efficiency by



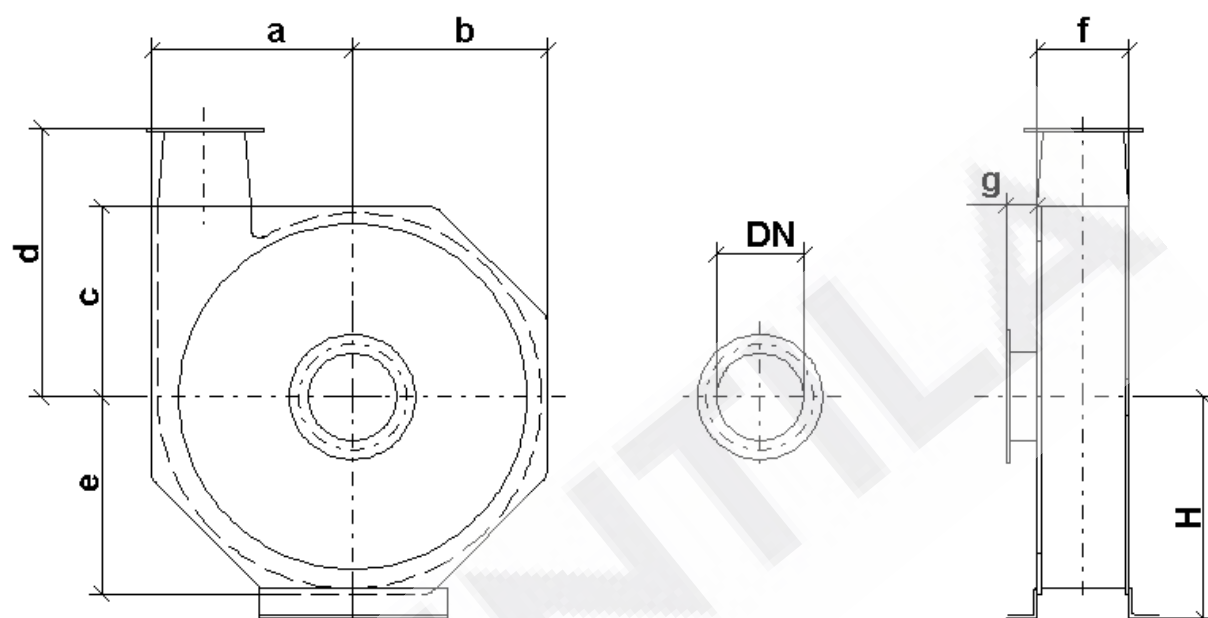
Series

VR2EHP

Series VR2EHP - characteristic curve NS 80 – 315



Spiral housing positions and dimensions



nominal size NS		80	90	100	112	125	140	160	180	200	224	250
housing position	45°	245	290	320	355	400	445	490	540	600	670	730
	90°	245	290	320	355	400	445	490	540	600	670	730
	135°	245	290	320	355	400	445	490	540	600	670	730
	180°	245	290	320	355	400	445	490	540	600	670	730
	270°	245	290	320	355	400	445	490	540	600	670	730
	315°	245	290	320	355	400	445	490	540	600	670	730
	360°	245	290	320	355	400	445	490	540	600	670	730
nominal inlet Ø		80	90	100	112	125	140	160	180	200	224	250
nominal outletØ		63	71	80	90	100	112	125	140	160	180	200
spiral housing dimensions	a	225	260	285	320	365	410	455	505	565	630	715
	b	215	250	275	310	350	390	435	485	545	610	690
	c	210	240	270	305	340	385	425	475	535	600	680
	d	335	365	400	430	465	510	550	600	660	730	810
	e	220	255	280	315	355	400	445	495	555	620	700
	f	76	84	94	105	117	131	146	164	183	205	229
	g	50	50	50	50	50	50	50	50	50	50	50

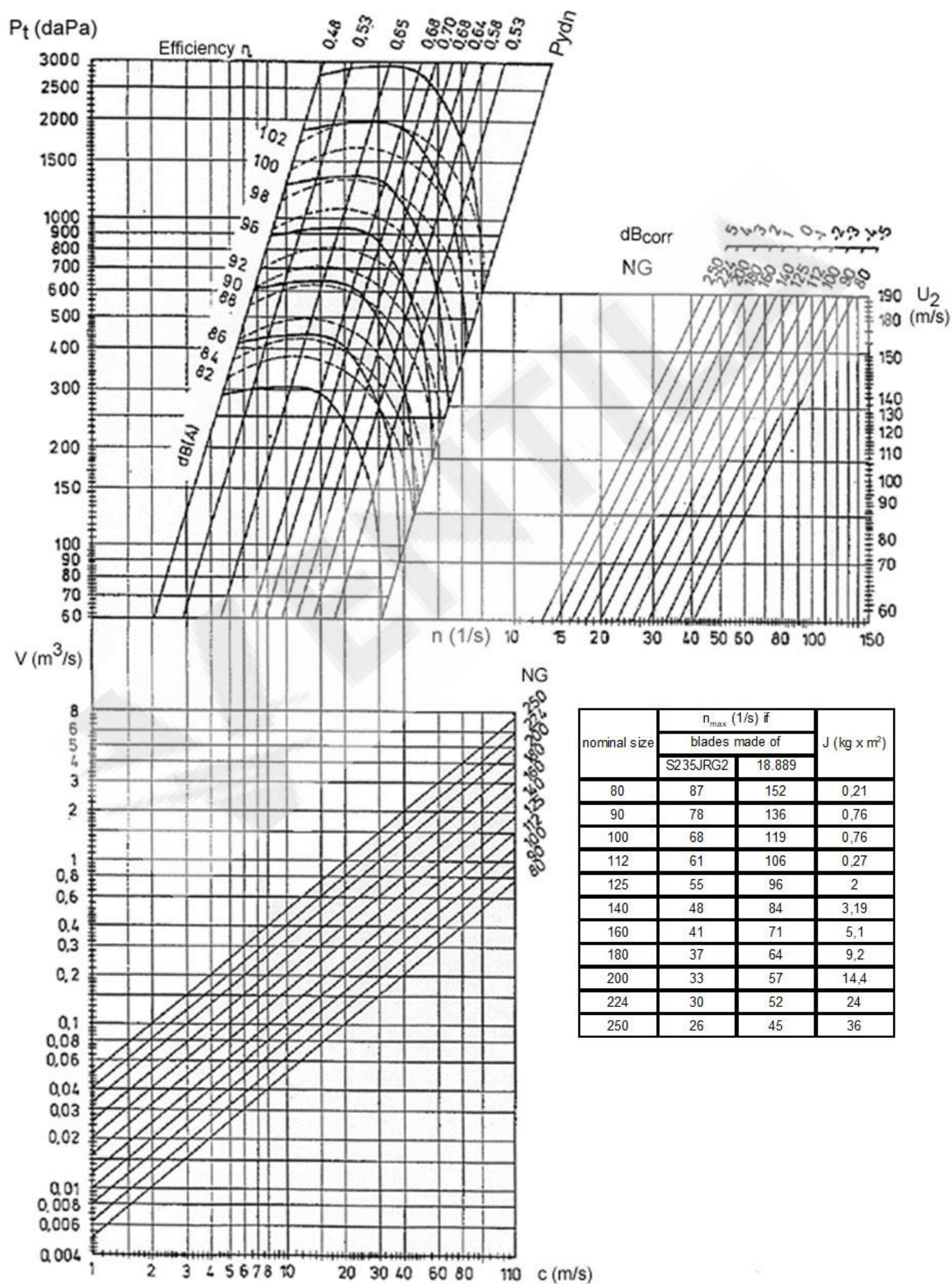
Industrial Centrifugal Fans with High Efficiency by



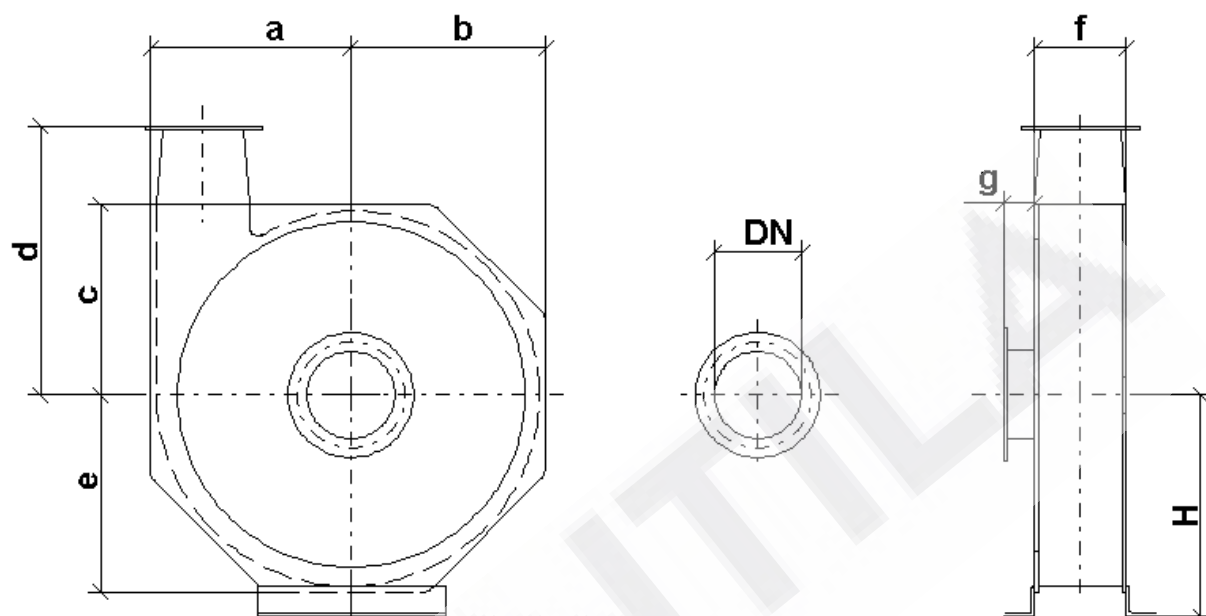
Series

VR3EHP

Series VR3EHP - characteristic curve NS 80 - 250



Spiral housing positions and dimensions



nominal size NS		80	90	100	112	125	140	160	180	200	224	250
housing position	45°	320	355	400	445	490	540	600	670	730	850	930
	90°	320	355	400	445	490	540	600	670	730	850	930
	135°	320	355	400	445	490	540	600	670	730	850	930
	180°	320	355	400	445	490	540	600	670	730	850	930
	270°	320	355	400	445	490	540	600	670	730	850	930
	315°	320	355	400	445	490	540	600	670	730	850	930
	360°	320	355	400	445	490	540	600	670	730	850	930
nominal inlet Ø		80	90	100	112	125	140	160	180	200	224	250
nominal outlet Ø		56	63	71	80	90	100	112	125	140	160	180
spiral housing dimensions	a	285	320	285	410	455	505	565	630	715	810	900
	b	275	310	275	390	435	485	545	610	690	780	870
	c	270	305	270	385	425	475	535	600	680	770	850
	d	395	430	400	515	550	600	660	730	810	900	980
	e	280	315	280	400	445	495	555	620	700	800	880
	f	68	76	94	94	105	117	131	146	164	183	205
	g	50	50	50	50	50	50	50	50	50	50	50

Program furthermore contains:

Industrial fans in radial construction

Smoke gas fans

Multiple stage fans

Pressure and shock resistant fans

High pressure fans

Hot gas fans

Built-in fans without casing

Portable fans in radial and axial design in explosion proof construction
for zone I and II



e-Mail : info@ventila.com.tr
www.ventila.com.tr