

High Performance Centrifugal Impeller

Issue 1.0 EN
June 2012

RLO⁵¹
RLO^{E1}



NICOTRA | **Gebhardt**
fan|tastic solutions

Ready for the next generation

The plus factors of the new Generation

Nicotra Gebhardt – the professionals in profiling

Nicotra Gebhardt is the first port of call for profiled impeller blades. We brought the first hollow section airfoil blades onto the market in 1975. Since then we have been achieving the absolutely best efficiencies in our fans in every application. Our engineers and technicians use the latest simulation programmes to develop and test new designs. You can rely on the knowledge and experience of specialists.

► **Innovative blade and impeller shaped for highest efficiencies**

The entire shape of the impeller was optimised using a real turbulence profile for the blades. This ensures that the impeller reaches as yet unparalleled high efficiency and takes the top position in aerodynamics.

► **Optimal pressure and turbulence conditions**

The re-designed impeller shape makes optimal pressure and minimised turbulence conditions in the impeller possible. The inclined leading edge of the blade builds pressure more evenly minimising entry and exit losses.

► **Much quieter**

Thanks to their new design the blades and the impeller run with less noise. The entire fan is thus much quieter.

The evolutionary elements

► **The perfect profile**

At the heart of the Evo series are the six blades with rounded inclined leading edges and re-designed hollow profile.

They ensure minimised turbulence conditions in the impeller thus enabling the extraordinary high efficiency of the fan.

Due to their special shape, the blades build up pressure evenly at all sections. The result: Air circulates around the blades better and the turbulence tends to dissipate.

This increases not only efficiency but also causes significantly lower noise.

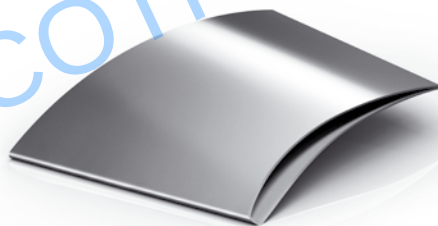
► **The innovative high performance impeller**

The re-designed high performance impeller makes the Evo series unbeatable in matters of efficiency. To ensure this we optimised the entire shape.

The special shape of the cover disc alone greatly improves turbulence. The width and diameter of the impeller are in an ideal ratio to each other.

The new hollow profile of the blades ensured that the weight of the impeller could be markedly reduced and that, at the same time, a high degree of stability could be reached. Pressure losses on entry were greatly decreased.

And at the exit, where losses had been sustained before, the new impeller shape ensures additional available static pressure.



Simple and reliable fan selection

proSELECTA II is a technical selection program that allows you to configure your own individually designed fan. It provides you with the opportunity to choose from the entire range of fan types and their associated options.



Simple and reliable selection

The result from proSELECTA II is the provision of all the technical data for your fan, including sound level data, dimension specifications and accessories. Apart from that, as a registered user, your purchase prices are provided. Additionally fully dimensioned drawings in dxf format are available, which can be downloaded and transferred straight into your CAD system.

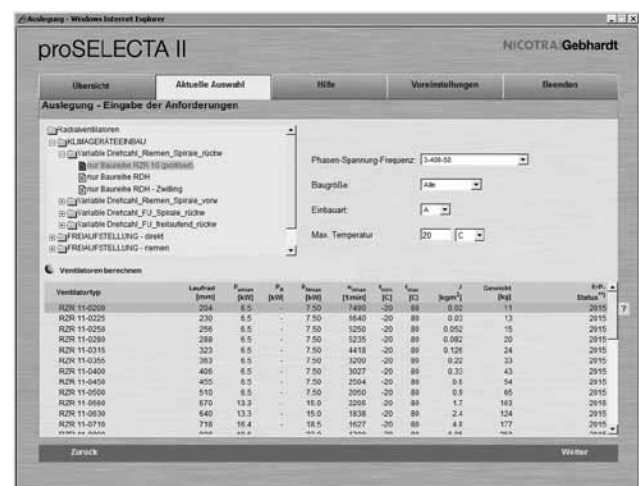
So that you can be sure. Models and options that are technically not permissible, are automatically excluded in proSELECTA II. So there is no chance that you will configure a "wrong" device option.

During the fan selection process, you can choose any of the standardised ATEX options.

Free registration and many advantages

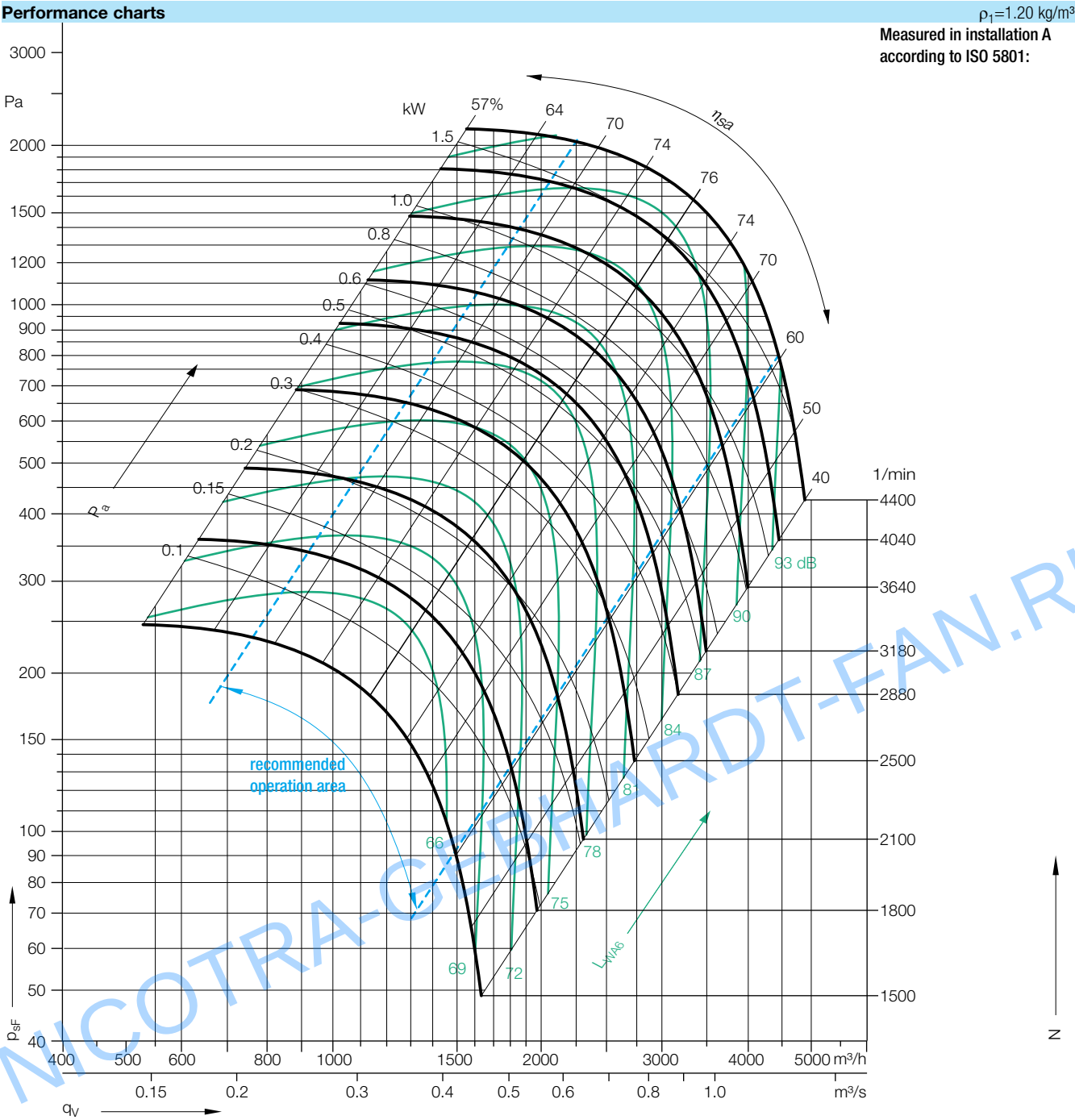
You can register as a proSELECTA II user with us, which enables us to offer you faster order processing. What this means for you is:

- ▶ The complete configuration of your fan with its associated system accessories and belt drive layout.
- ▶ The possibility to produce fans that operate via a frequency inverter.
- ▶ The option of saving your own fan configuration on our server.
- ▶ The opportunity to modify your saved configuration, even over the phone to your Nicotra Gebhardt representative.

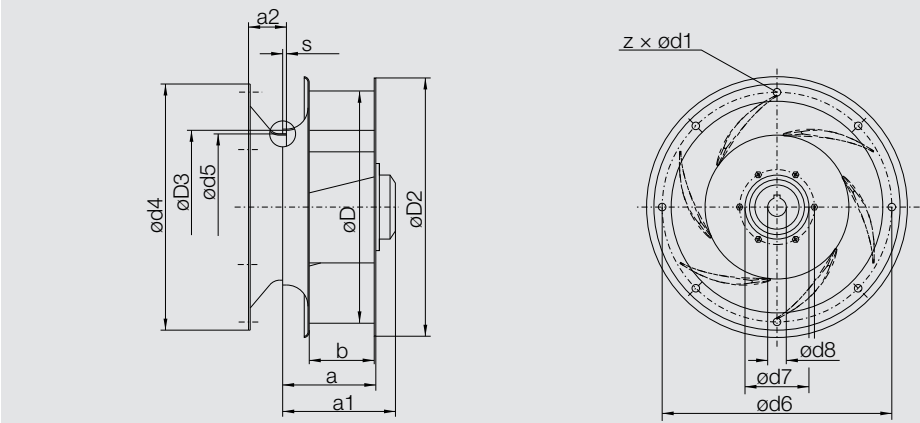


RLO E1-2528-D.. with Taper Lock Bushes

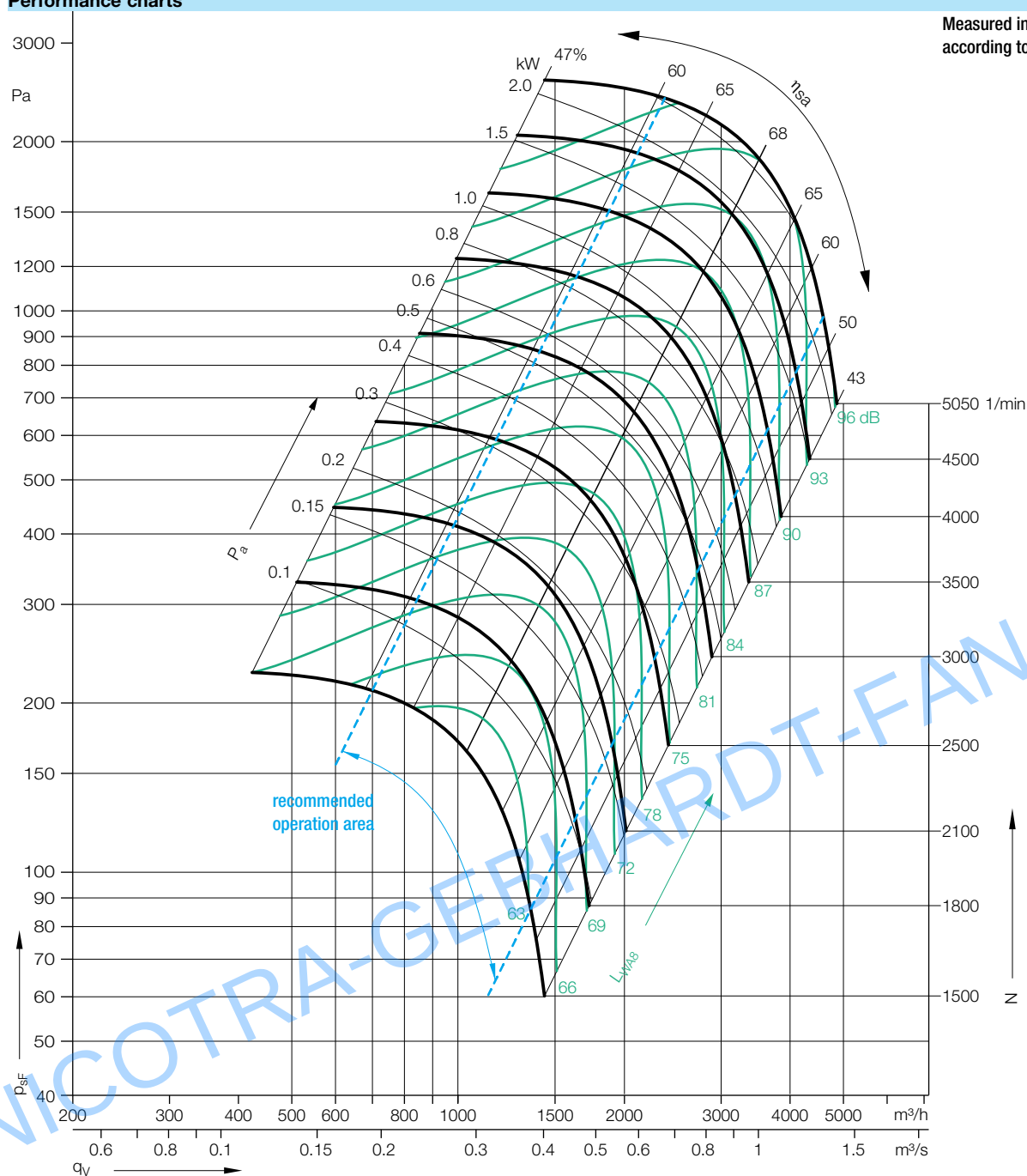
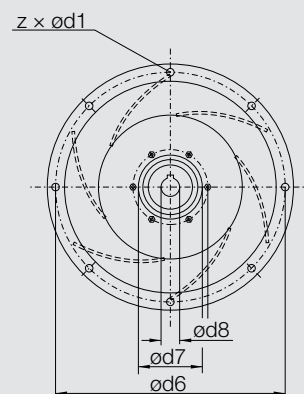
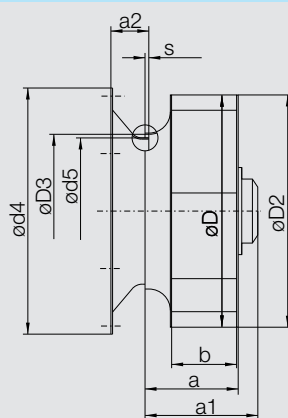
Performance charts



Dimensions in mm, subject to change.



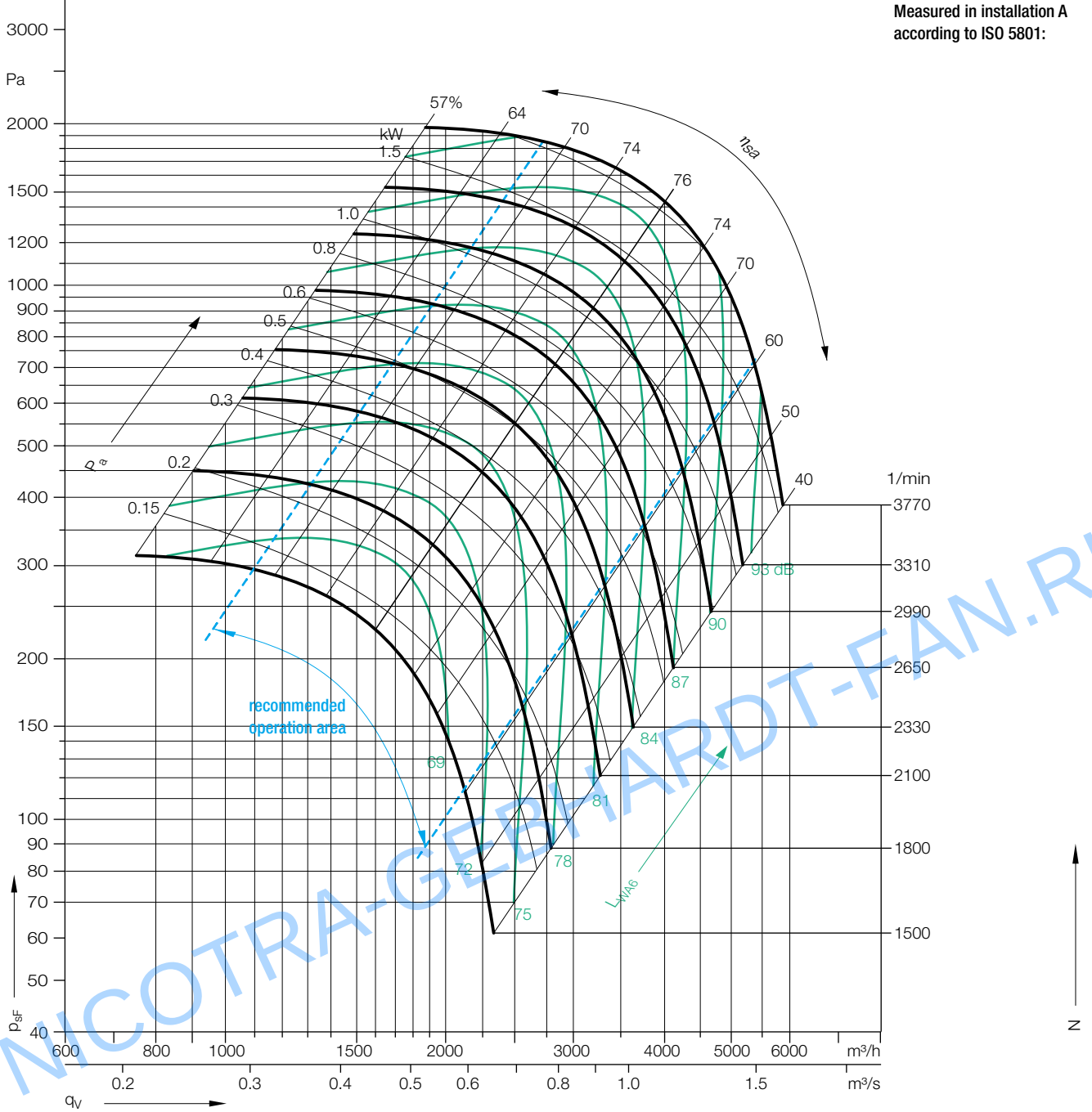
RLO E1-	a	a1	a2	b	øD	z × ød1	øD2	øD3	øD4	øD5	øD6	øD7	øD8	s (min/max)
2528-D28	115.9	141.4	47	80.9	288	6 × ø7	323	191	306	183.5	286	82	28	2.0/4.0
2528-D24	115.9	141.4	47	80.9	288	6 × ø7	323	191	306	183.5	286	82	24	2.0/4.0
2528-D19	115.9	141.4	47	80.9	288	6 × ø7	323	191	306	183.5	286	82	19	2.0/4.0
2528-D14	115.9	141.4	47	80.9	288	6 × ø7	323	191	306	183.5	286	82	14	2.0/4.0

RLO 51-2528-D..**with Taper Lock Bushes****Performance charts** $\rho_1 = 1.20 \text{ kg/m}^3$ Measured in installation A
according to ISO 5801:**Dimensions** in mm, subject to change.

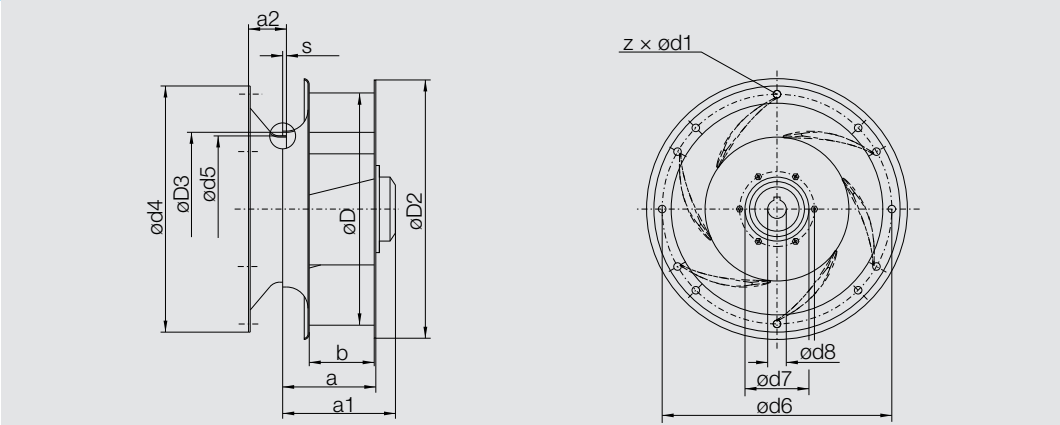
RLO 51-	a	a1	a2	b	ØD	z x ØD1	ØD2	ØD3	ØD4	ØD5	ØD6	ØD7	ØD8	s (min/max)
2528-D28	115.9	141.4	47	80.9	288	6 x Ø7	288	191	306	183.5	286	82	28	2.0/4.0
2528-D24	115.9	141.4	47	80.9	288	6 x Ø7	288	191	306	183.5	286	82	24	2.0/4.0
2528-D19	115.9	141.4	47	80.9	288	6 x Ø7	288	191	306	183.5	286	82	19	2.0/4.0
2528-D14	115.9	141.4	47	80.9	288	6 x Ø7	288	191	306	183.5	286	82	14	2.0/4.0

RLO E1-2831-D.. with Taper Lock Bushes

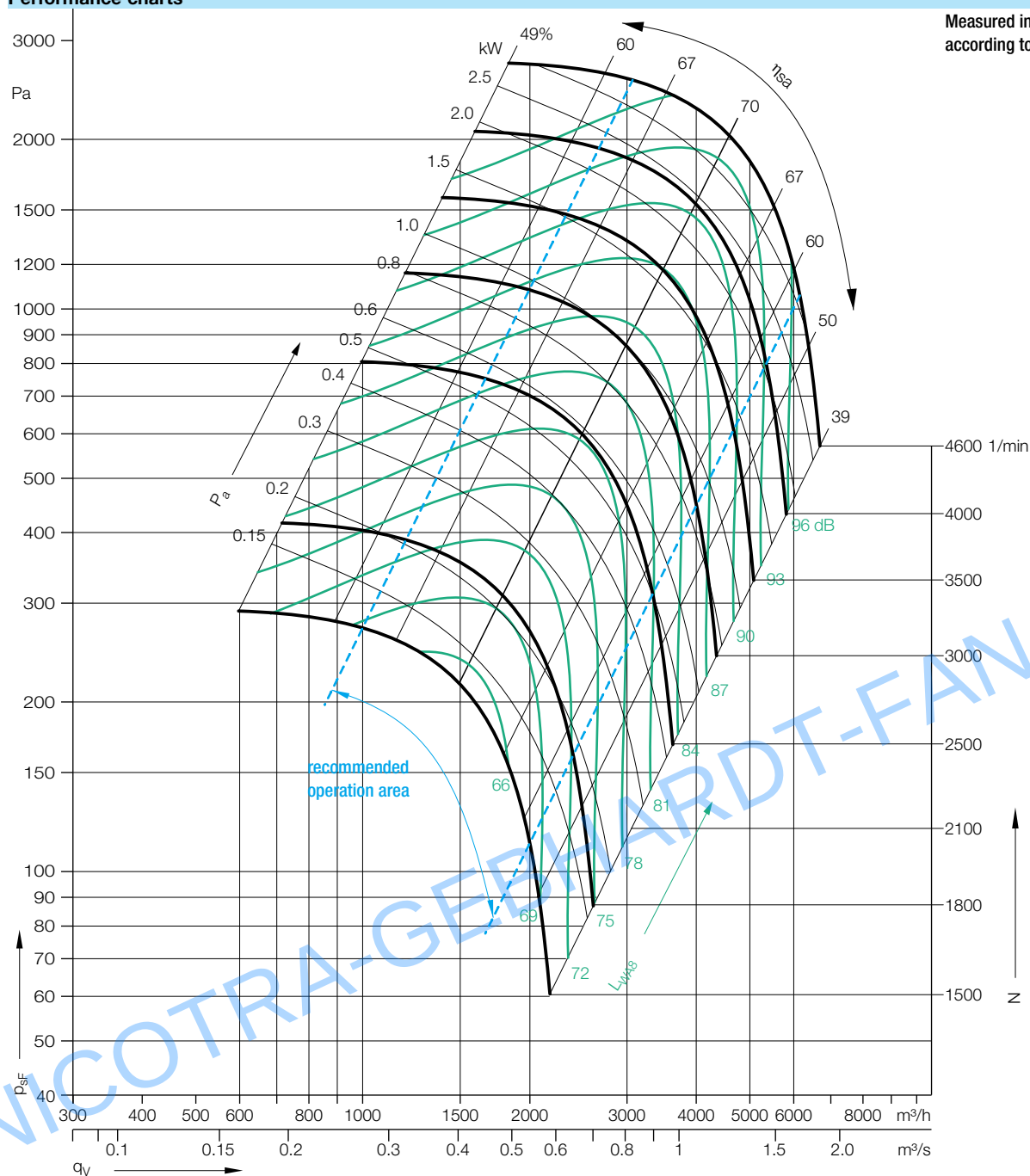
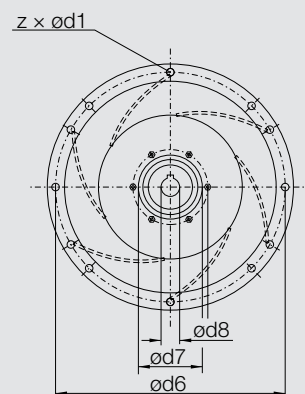
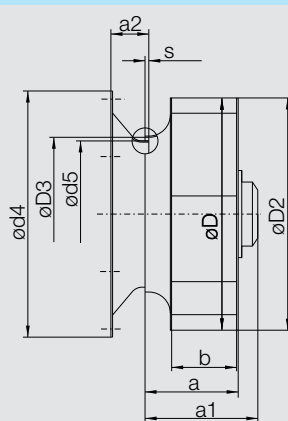
Performance charts



Dimensions in mm, subject to change.



RLO E1-	a	a1	a2	b	øD	z x ød1	øD2	øD3	øD4	øD5	øD6	øD7	øD8	s (min/max)
2831-D24	129.3	154.8	54	90.8	323	8 x ø9.5	363	216	348	207.7	322	82.4	24	2.2/5.4
2831-D19	129.3	154.8	54	90.8	323	8 x ø9.5	363	216	348	207.7	322	82.4	19	2.2/5.4

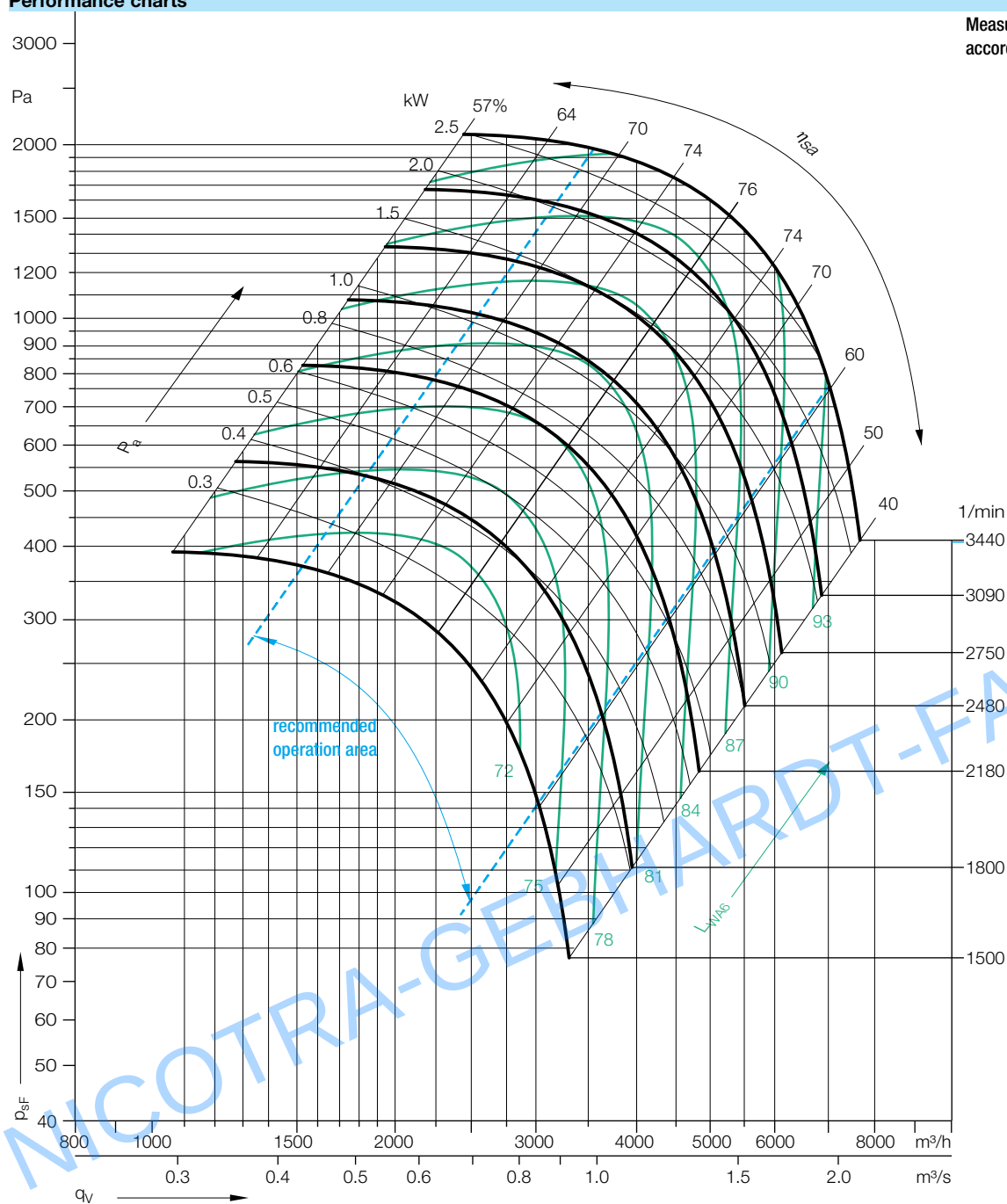
RLO 51-2831-D..**with Taper Lock Bushes****Performance charts** $\rho_1 = 1.20 \text{ kg/m}^3$ Measured in installation A
according to ISO 5801:**Dimensions** in mm, subject to change.

RLO 51-	a	a1	a2	b	ØD	z x ØD1	ØD2	ØD3	ØD4	ØD5	ØD6	ØD7	ØD8	s (min/max)
2831-D38	129.3	154.8	54	90.8	323	8 x Ø9.5	323	216	348	207.7	322	82	38	2.0/4.0
2831-D28	129.3	154.8	54	90.8	323	8 x Ø9.5	323	216	348	207.7	322	82	28	2.0/4.0
2831-D24	129.3	154.8	54	90.8	323	8 x Ø9.5	323	216	348	207.7	322	82	24	2.0/4.0
2831-D19	129.3	154.8	54	90.8	323	8 x Ø9.5	323	216	348	207.7	322	82	19	2.0/4.0

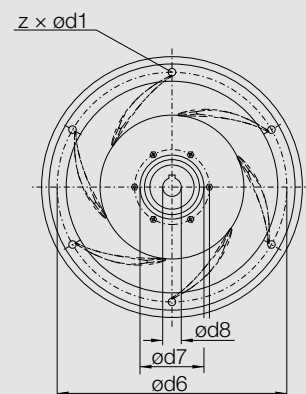
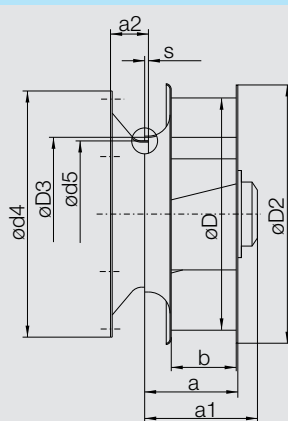
RLO E1-3135-D..

with Taper Lock Bushes

Performance charts

 $\rho_1 = 1.20 \text{ kg/m}^3$ Measured in installation A
according to ISO 5801:

Dimensions in mm, subject to change.



RLO E1-	a	a1	a2	b	øD	z x ød1	øD2	øD3	øD4	øD5	øD6	øD7	øD8	s (min/max)
3135-D28	145.5	171	58	102	363	8 x ø9.5	406	241	382	235	356	82.4	28	2.4/6.0
3135-D24	145.5	171	58	102	363	8 x ø9.5	406	241	382	235	356	82.4	24	2.4/6.0
3135-D19	145.5	171	58	102	363	8 x ø9.5	406	241	382	235	356	82.4	19	2.4/6.0

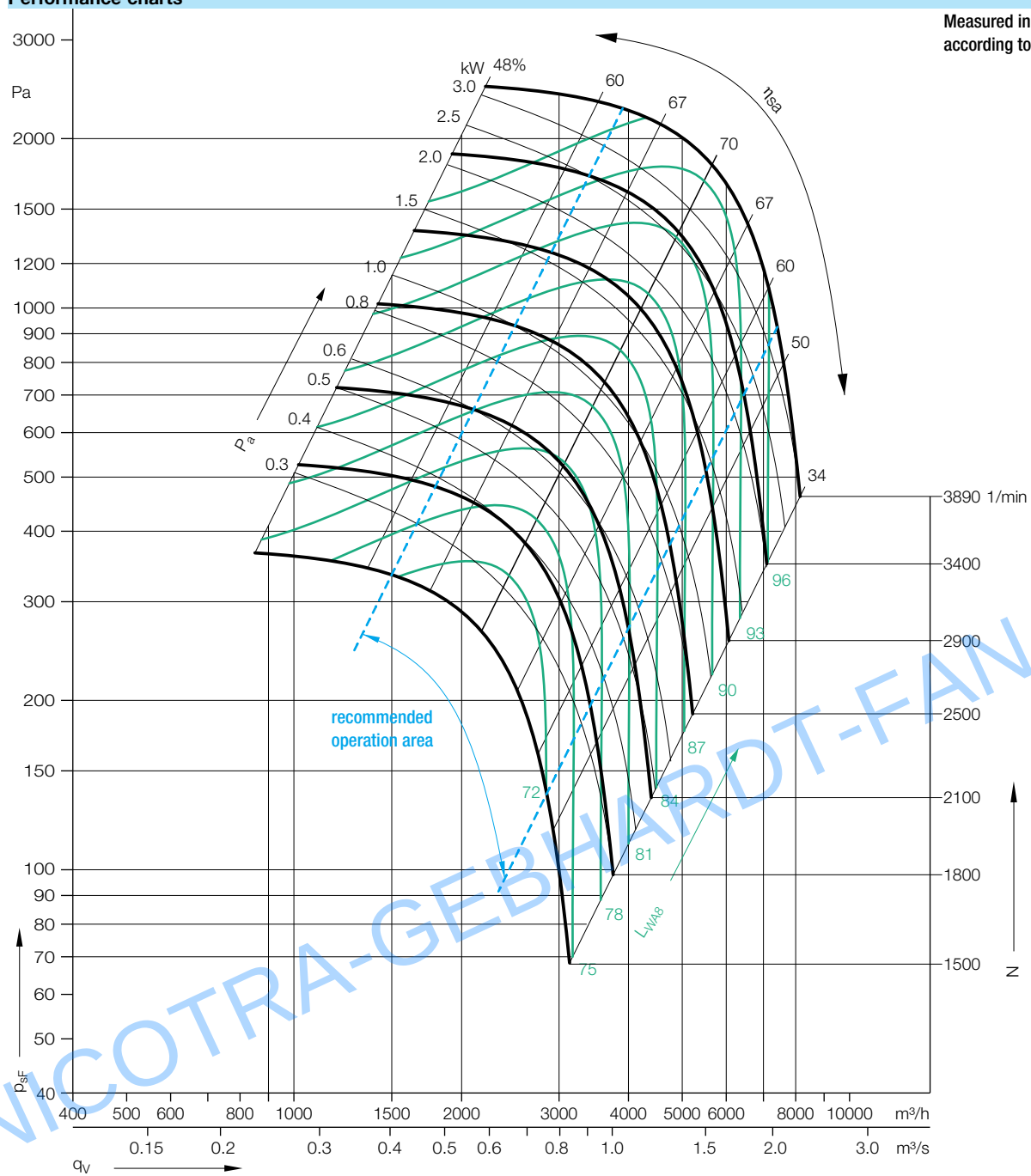
RLO 51-3135-D..

with Taper Lock Bushes

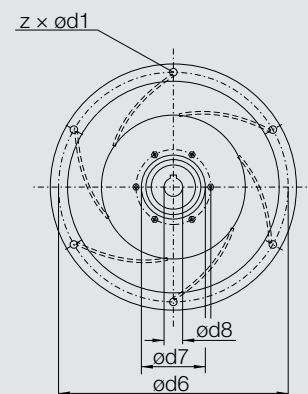
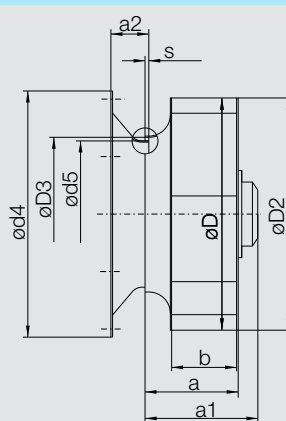
Performance charts

 $\rho_1 = 1.20 \text{ kg/m}^3$

Measured in installation A
according to ISO 5801:



Dimensions in mm, subject to change.

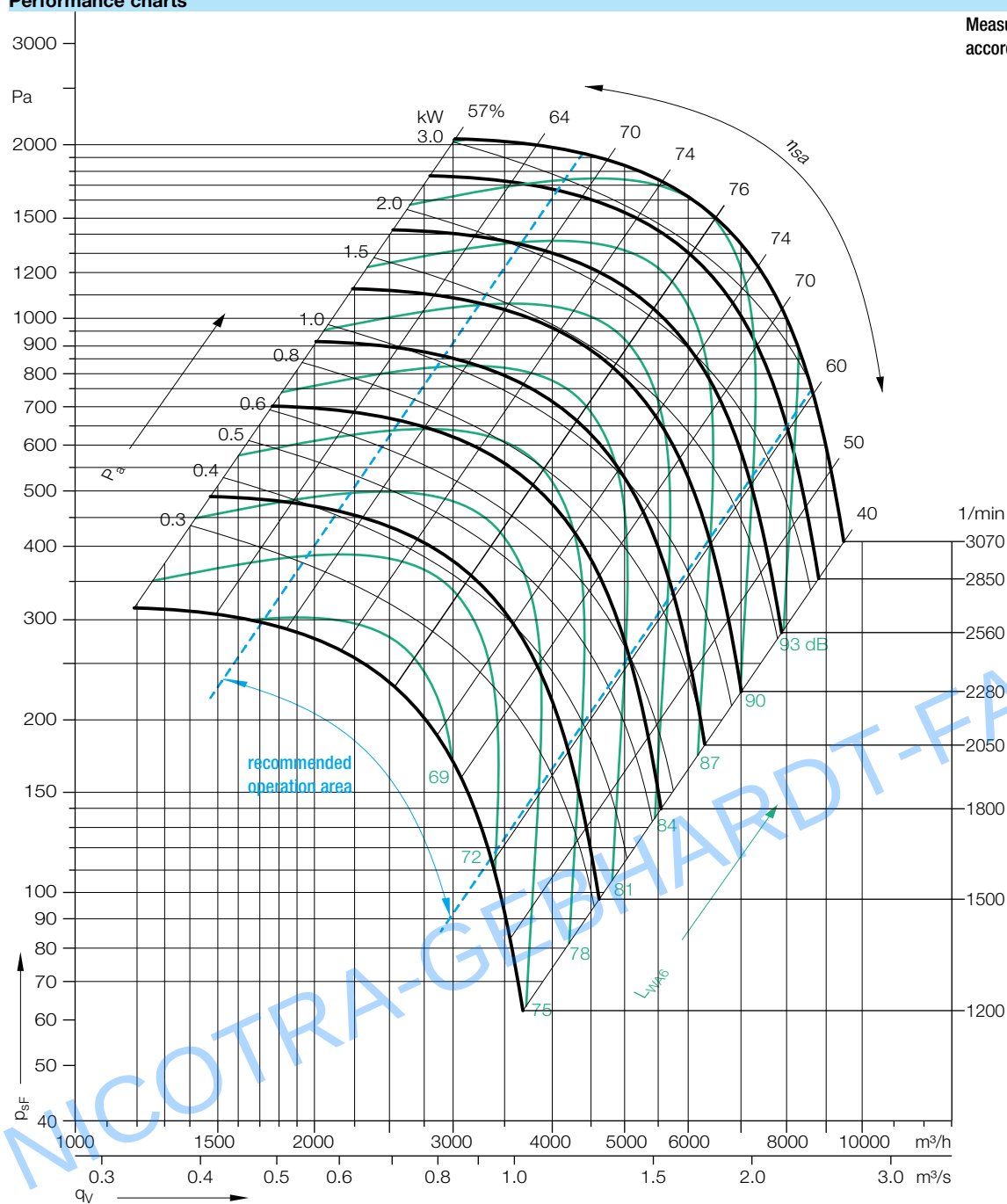


RLO 51-	a	a1	a2	b	ØD	z x ØD1	ØD2	ØD3	ØD4	ØD5	ØD6	ØD7	ØD8	s (min/max)
3135-D38	145.5	171	58	102	363	8 x Ø9.5	363	241	382	235.1	356	82	38	2.0/4.0
3135-D28	145.5	171	58	102	363	8 x Ø9.5	363	241	382	235.1	356	82	28	2.0/4.0
3135-D24	145.5	171	58	102	363	8 x Ø9.5	363	241	382	235.1	356	82	24	2.0/4.0
3135-D19	145.5	171	58	102	363	8 x Ø9.5	363	241	382	235.1	356	82	19	2.0/4.0
3135-D14	145.5	171	58	102	363	8 x Ø9.5	363	241	382	235.1	356	82	14	2.0/4.0

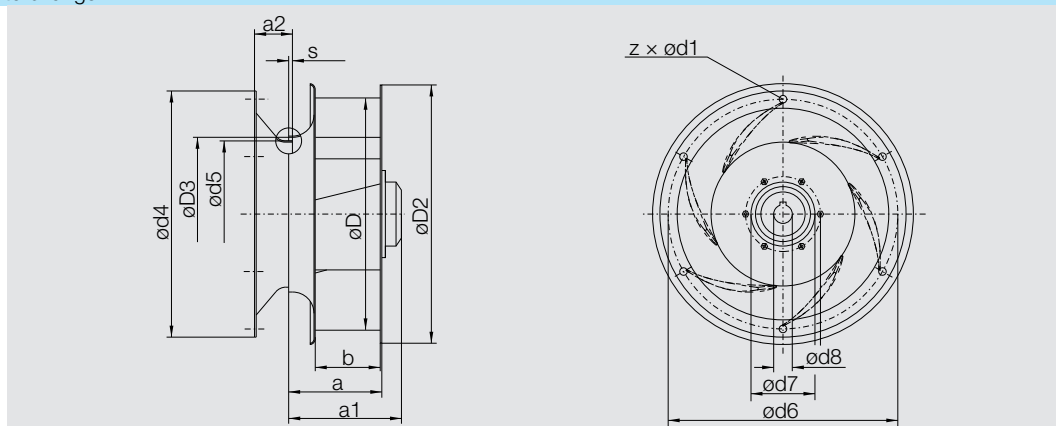
RLO E1-3540-D..

with Taper Lock Bushes

Performance charts

 $\rho_1 = 1.20 \text{ kg/m}^3$ Measured in installation A
according to ISO 5801:

Dimensions in mm, subject to change.

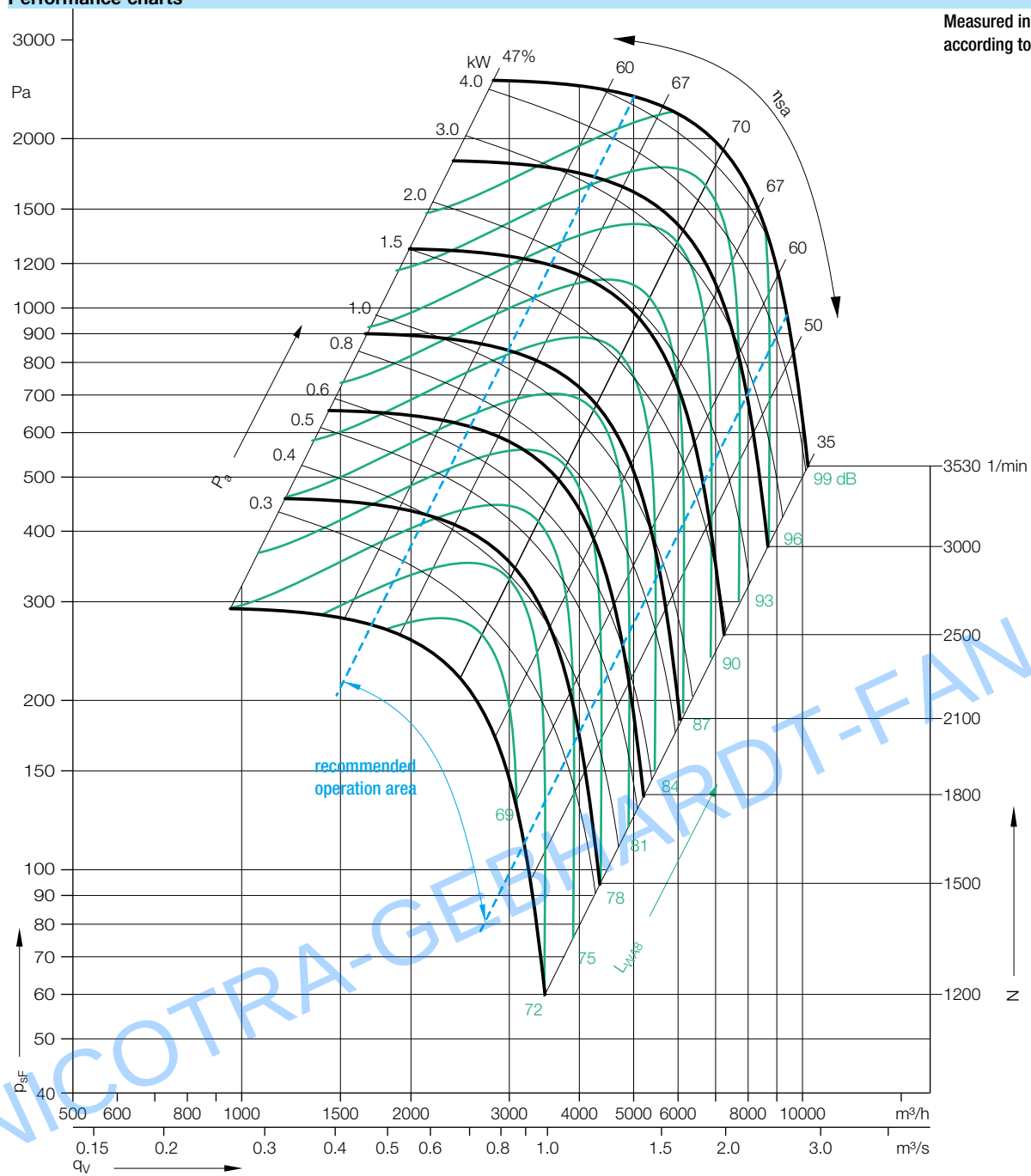


RLO E1-	a	a1	a2	b	øD	z x øD1	øD2	øD3	øD4	øD5	øD6	øD7	øD8	s (min/max)
3540-D28	162.5	187.5	69	114	406	8 x ø9.5	455	271	422	265	395	130	28	2.7/6.8
3540-D24	162.5	187.5	69	114	406	8 x ø9.5	455	271	422	265	395	130	24	2.7/6.8
3540-D19	162.5	187.5	69	114	406	8 x ø9.5	455	271	422	265	395	130	19	2.7/6.8

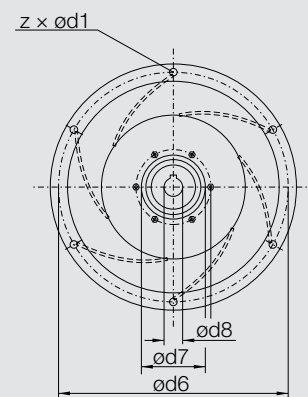
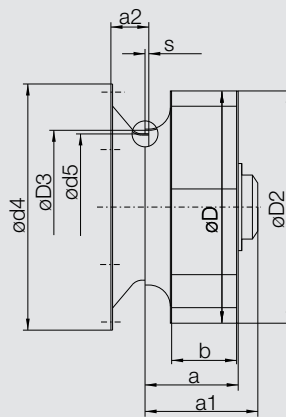
RLO 51-3540-D..

with Taper Lock Bushes

Performance charts

 $\rho_1 = 1.20 \text{ kg/m}^3$ Measured in installation A
according to ISO 5801:

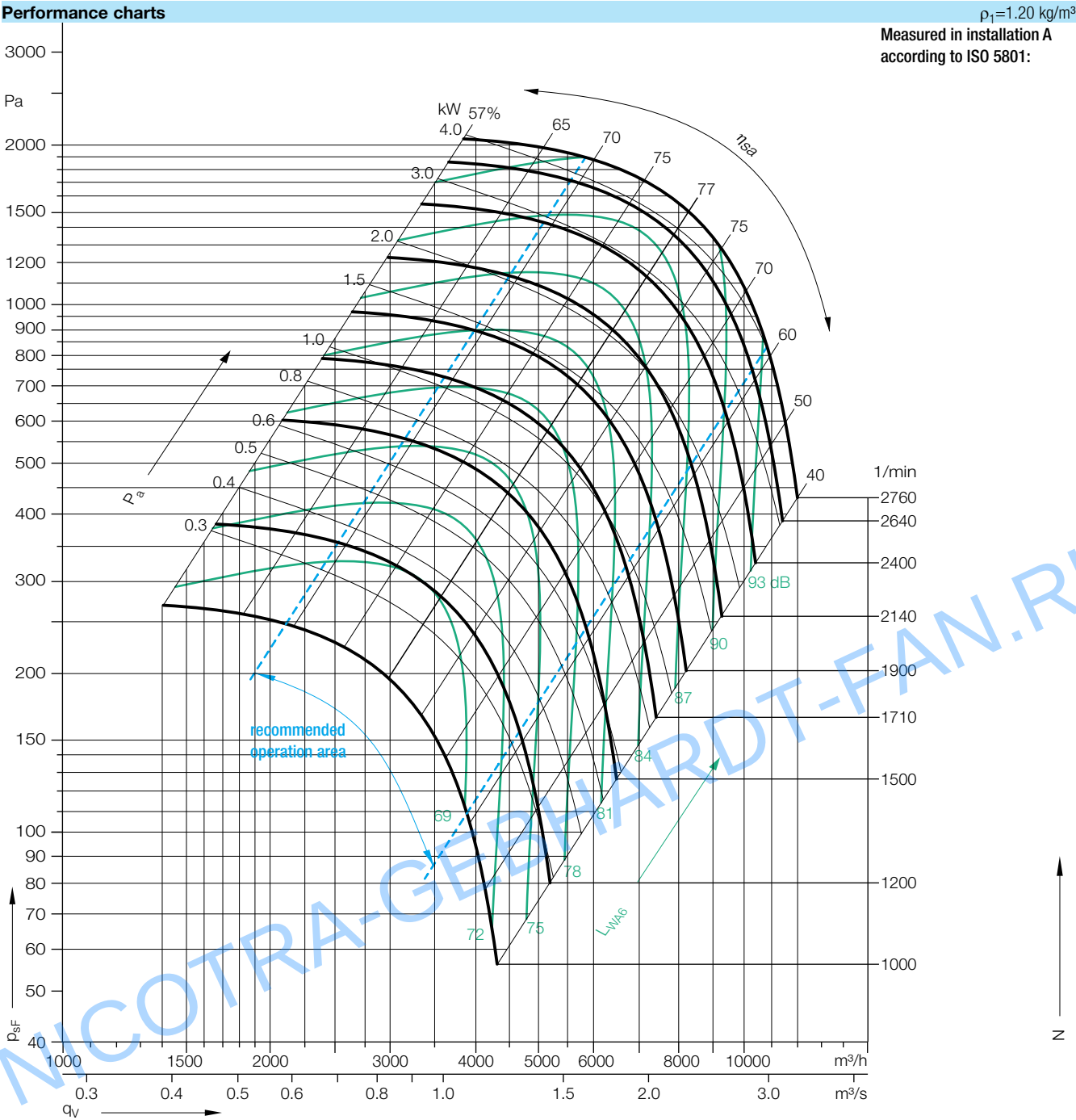
Dimensions in mm, subject to change.



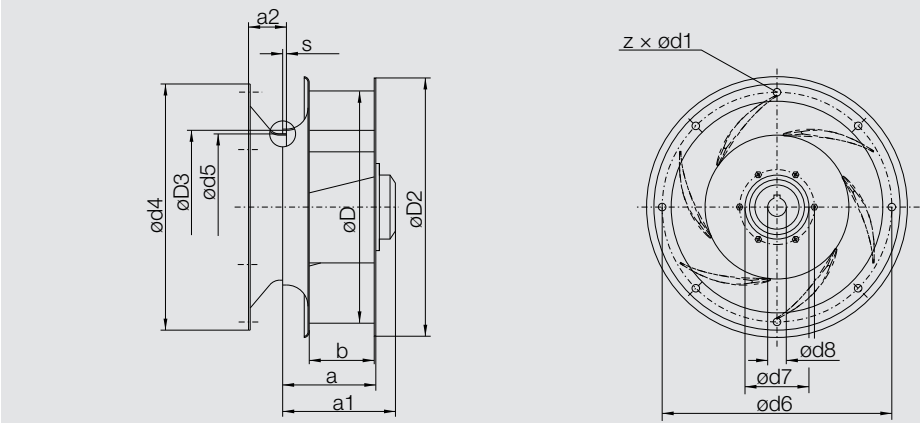
RLO 51-	a	a1	a2	b	ØD	z x ØD1	ØD2	ØD3	ØD4	ØD5	ØD6	ØD7	ØD8	s (min/max)
3540-D38	162.5	188	70	114	406	8 x Ø9.5	406	271	422	265	395	82	38	2.0/5.0
3540-D28	162.5	188	70	114	406	8 x Ø9.5	406	271	422	265	395	82	28	2.0/5.0
3540-D24	162.5	188	70	114	406	8 x Ø9.5	406	271	422	265	395	82	24	2.0/5.0
3540-D19	162.5	188	70	114	406	8 x Ø9.5	406	271	422	265	395	82	19	2.0/5.0

RLO E1-4045-D.. with Taper Lock Bushes

Performance charts



Dimensions in mm, subject to change.

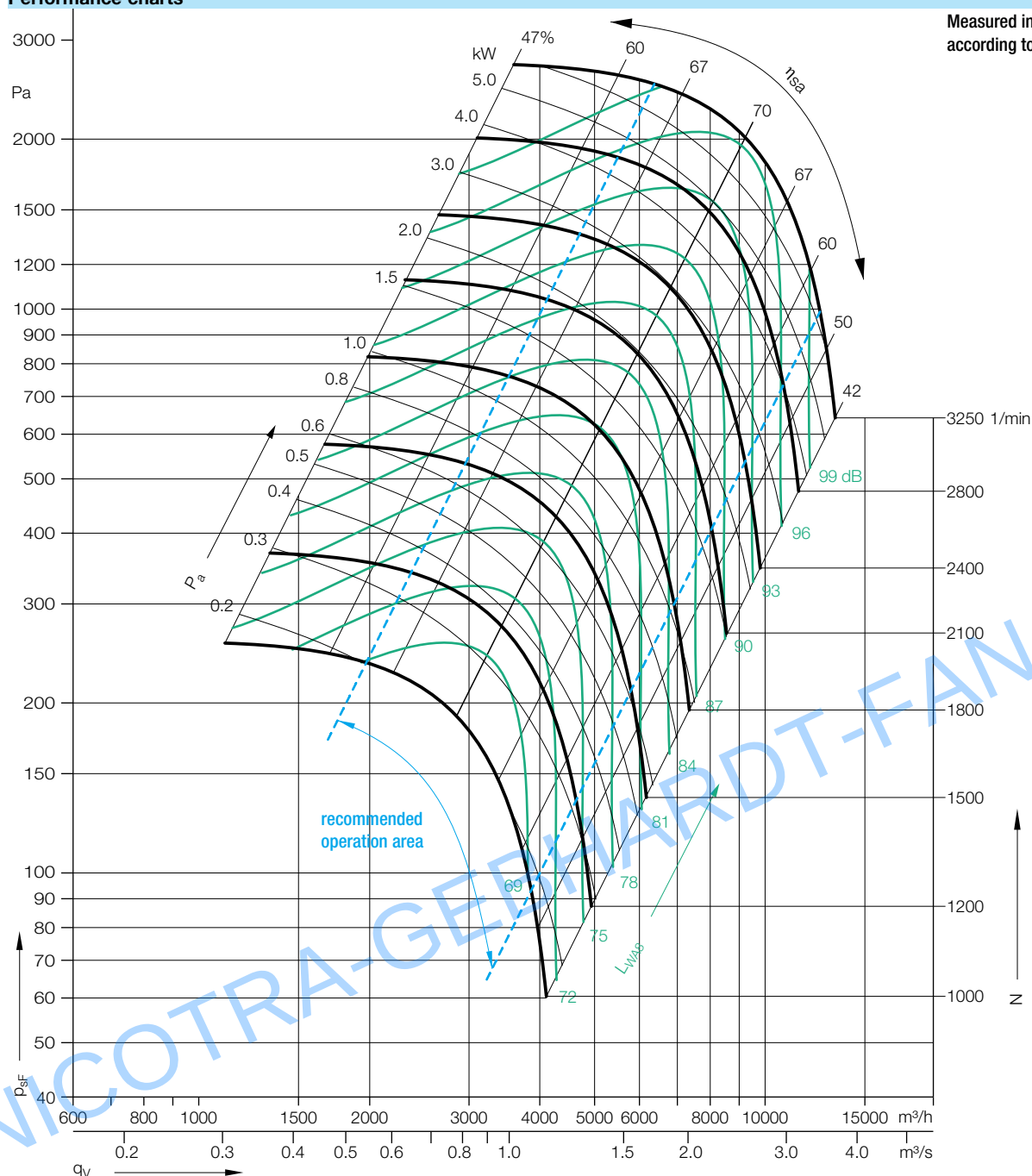


RLO E1-	a	a1	a2	b	øD	z × ød1	øD2	øD3	øD4	øD5	øD6	øD7	øD8	s (min/max)
4045-D38	180	205	76	128	455	6 × ø9.5	510	303	464	295	438	130	38	3.0/7.6
4045-D28	180	205	76	128	455	6 × ø9.5	510	303	464	295	438	130	28	3.0/7.6
4045-D24	180	205	76	128	455	6 × ø9.5	510	303	464	295	438	130	24	3.0/7.6

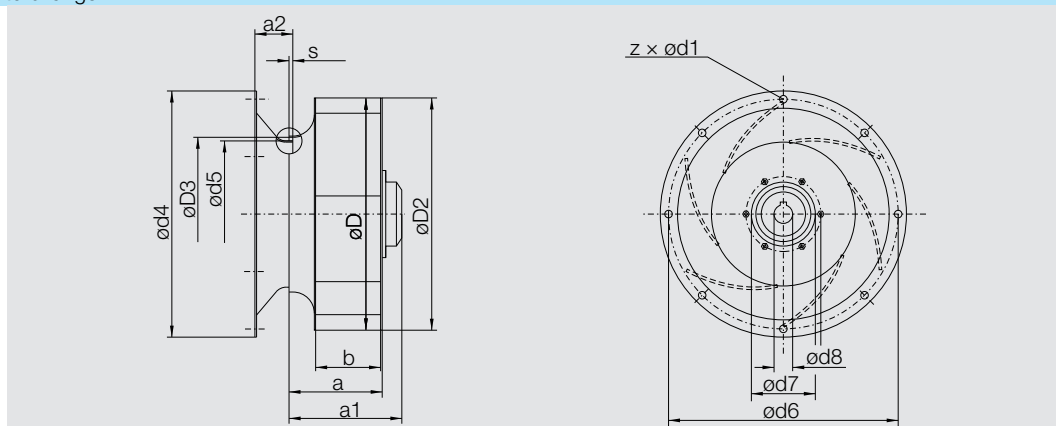
RLO 51-4045-D..

with Taper Lock Bushes

Performance charts

 $\rho_1 = 1.20 \text{ kg/m}^3$ Measured in installation A
according to ISO 5801:

Dimensions in mm, subject to change.

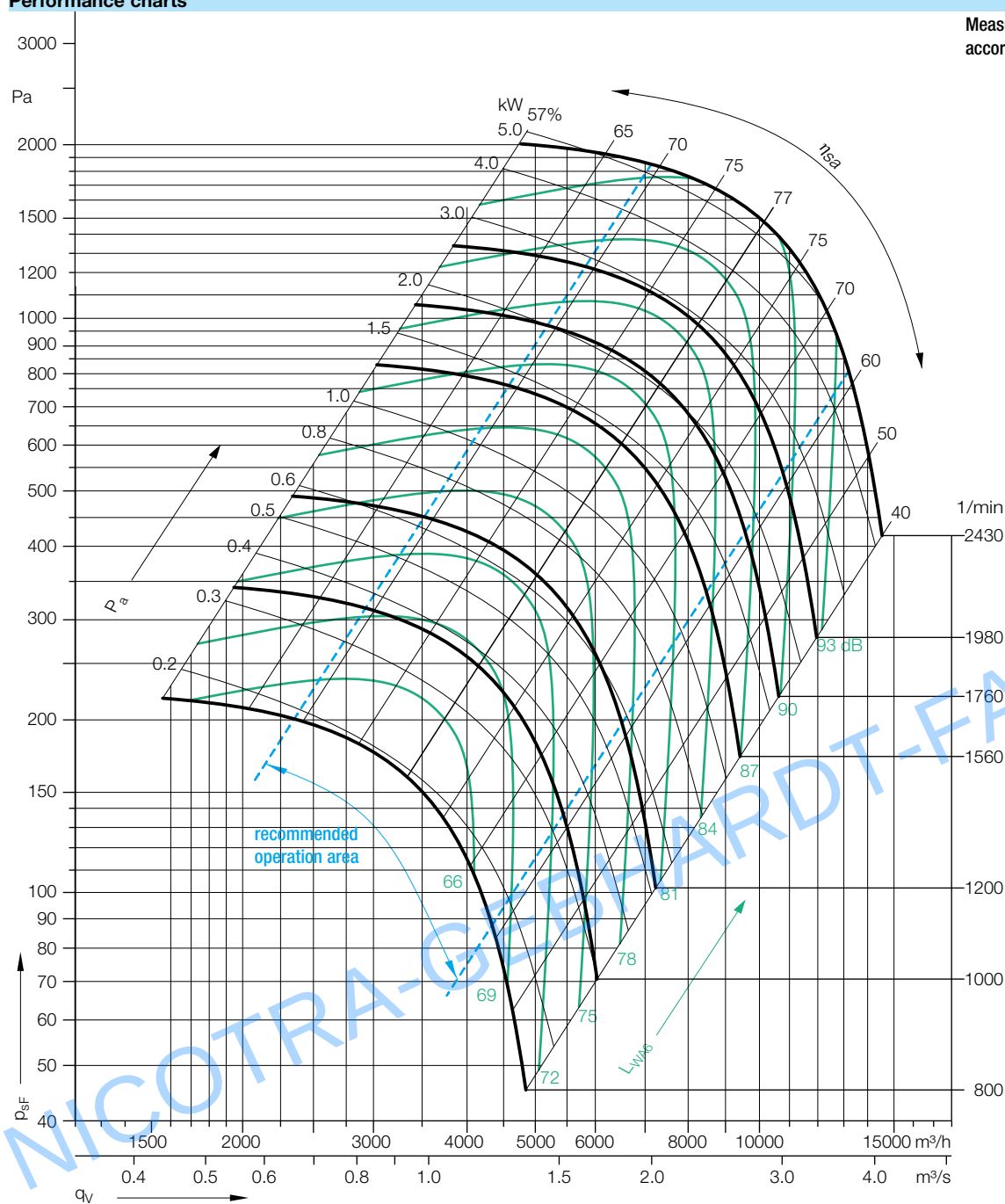


RLO E1-	a	a1	a2	b	$\varnothing D$	$z \times \varnothing d_1$	$\varnothing D_2$	$\varnothing D_3$	$\varnothing D_4$	$\varnothing D_5$	$\varnothing D_6$	$\varnothing D_7$	$\varnothing D_8$	s (min/max)
4045-D42	180.9	206.4	76.5	127.9	455	$6 \times \varnothing 9.5$	455	303	464	295.2	438	82	42	2.0/5.0
4045-D38	180.9	206.4	76.5	127.9	455	$6 \times \varnothing 9.5$	455	303	464	295.2	438	82	38	2.0/5.0
4045-D28	180.9	206.4	76.5	127.9	455	$6 \times \varnothing 9.5$	455	303	464	295.2	438	82	28	2.0/5.0
4045-D24	180.9	206.4	76.5	127.9	455	$6 \times \varnothing 9.5$	455	303	464	295.2	438	82	24	2.0/5.0
4045-D19	180.9	206.4	76.5	127.9	455	$6 \times \varnothing 9.5$	455	303	464	295.2	438	82	19	2.0/5.0

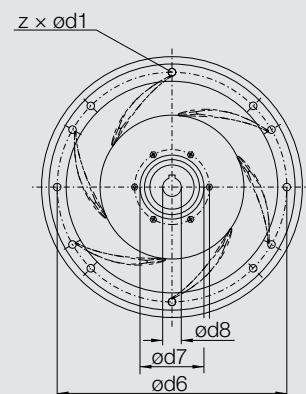
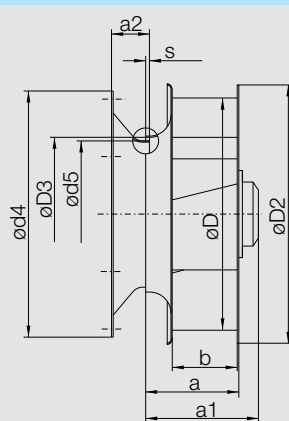
RLO E1-4550-D..

with Taper Lock Bushes

Performance charts

 $\rho_1 = 1.20 \text{ kg/m}^3$ Measured in installation A
according to ISO 5801:

Dimensions in mm, subject to change.

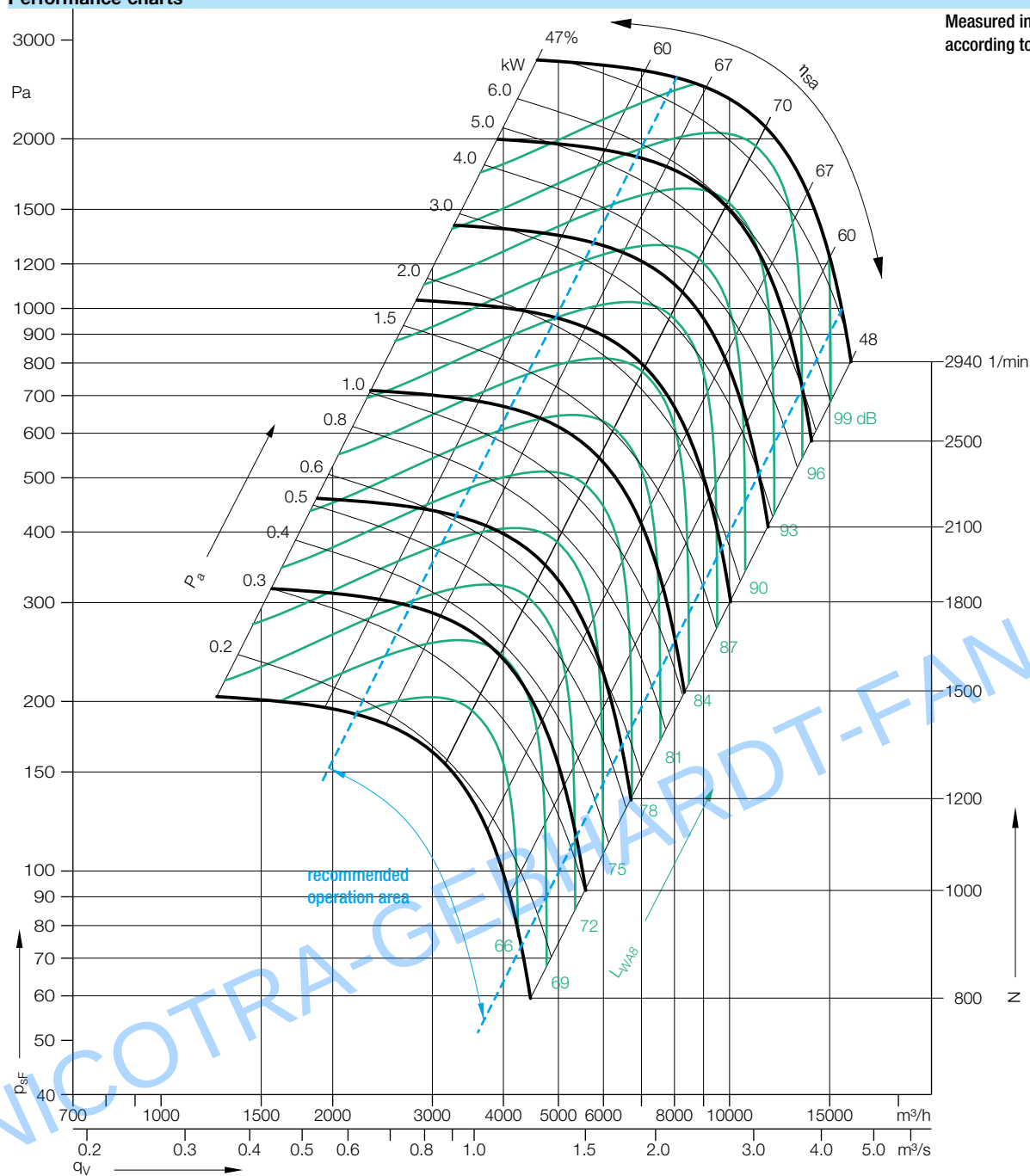


RLO E1-	a	a1	a2	b	øD	z x ød1	øD2	øD3	øD4	øD5	øD6	øD7	øD8	s (min/max)
4550-D38	202	227	84	143	510	8 x ø9.5	570	340	515	332	487	130	38	3.4/8.5
4550-D28	202	227	84	143	510	8 x ø9.5	570	340	515	332	487	130	28	3.4/8.5
4550-D24	202	227	84	143	510	8 x ø9.5	570	340	515	332	487	130	24	3.4/8.5

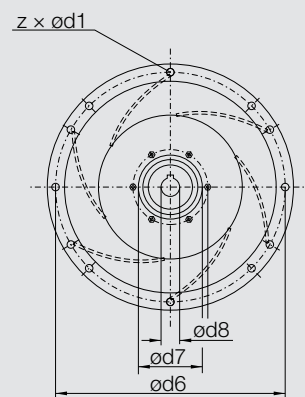
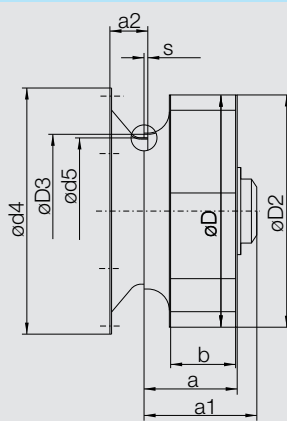
RLO 51-4550-D..

with Taper Lock Bushes

Performance charts

 $\rho_1 = 1.20 \text{ kg/m}^3$ Measured in installation A
according to ISO 5801:

Dimensions in mm, subject to change.

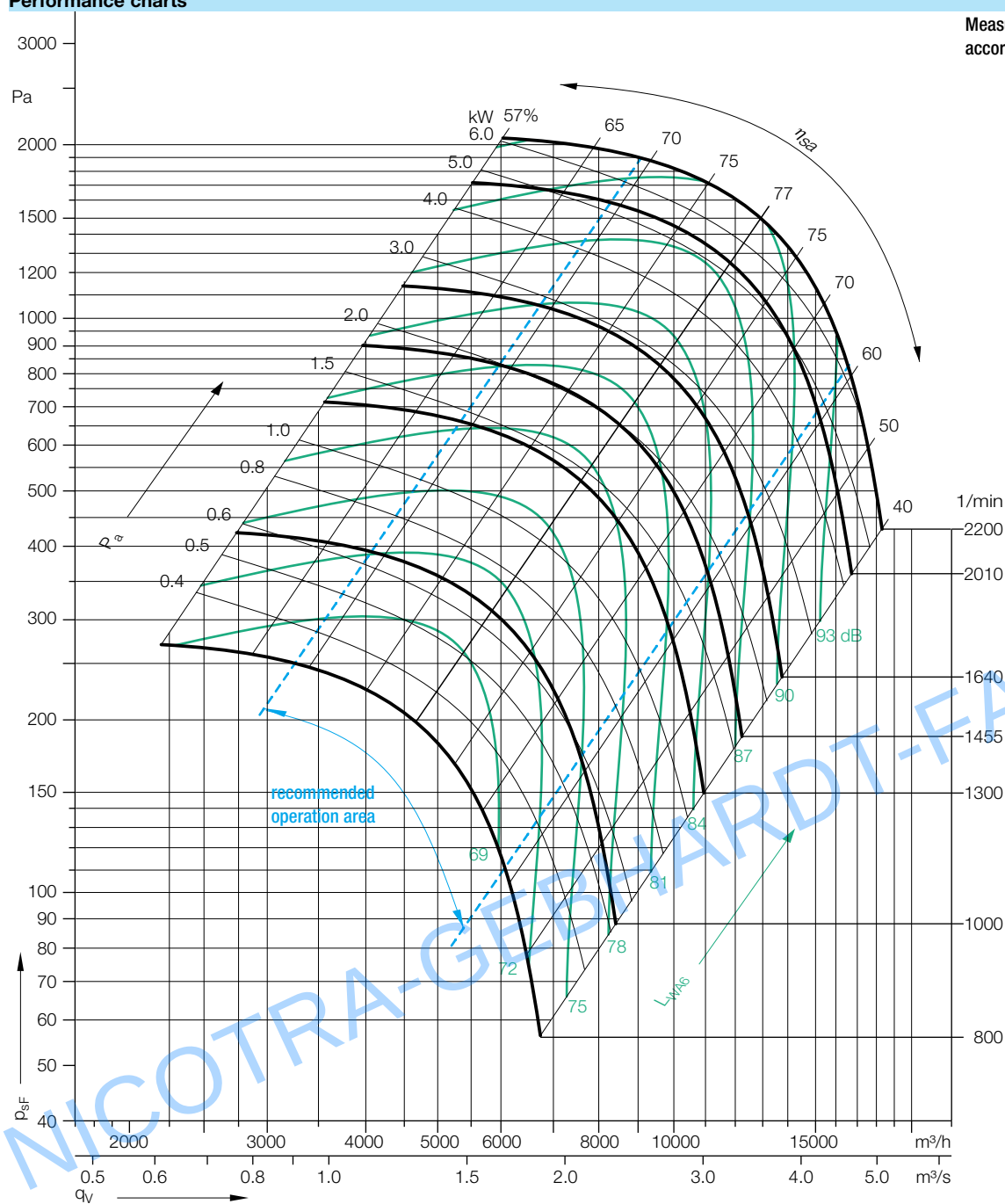


RLO 51-	a	a1	a2	b	ØD	z x ØD1	ØD2	ØD3	ØD4	ØD5	ØD6	ØD7	ØD8	s (min/max)
4550-D42	203	228	84	143	510	8 x Ø9.5	510	340	515	331.9	487	82	42	2.0/6.0
4550-D38	203	228	84	143	510	8 x Ø9.5	510	340	515	331.9	487	82	38	2.0/6.0
4550-D28	203	228	84	143	510	8 x Ø9.5	510	340	515	331.9	487	82	28	2.0/6.0
4550-D24	203	228	84	143	510	8 x Ø9.5	510	340	515	331.9	487	82	24	2.0/6.0

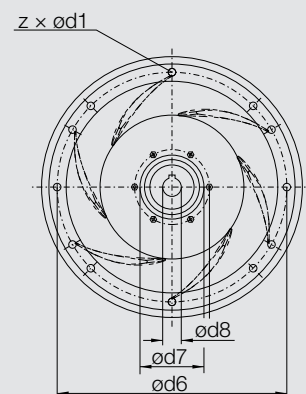
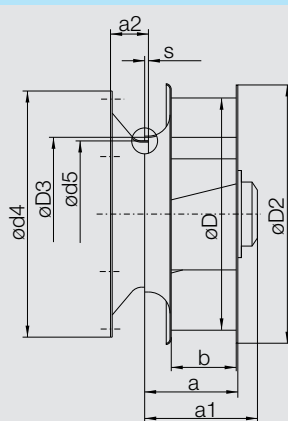
RLO E1-5056-D..

with Taper Lock Bushes

Performance charts

 $\rho_1 = 1.20 \text{ kg/m}^3$ Measured in installation A
according to ISO 5801:

Dimensions in mm, subject to change.

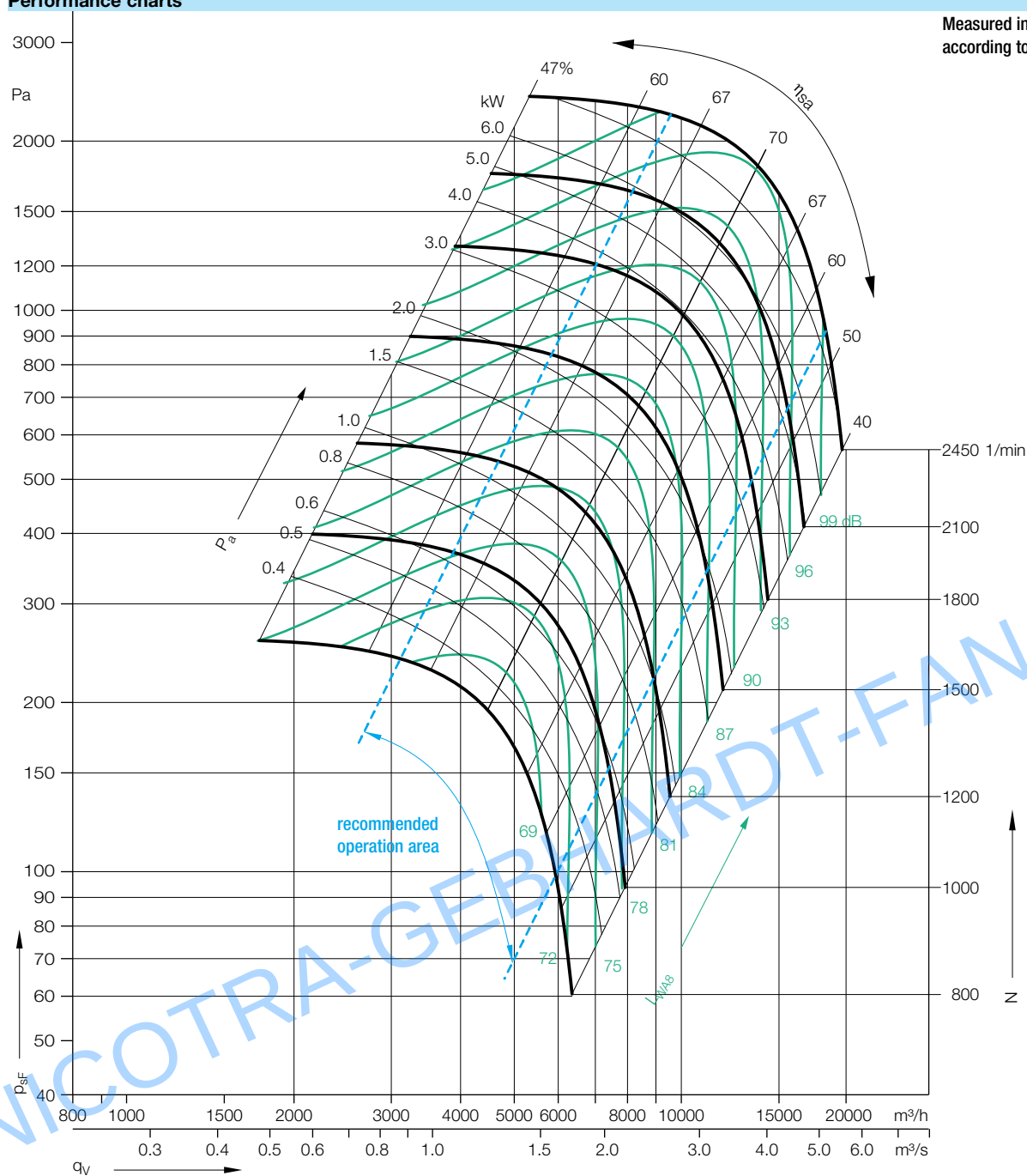


RLO E1-	a	a1	a2	b	øD	z x ød1	øD2	øD3	øD4	øD5	øD6	øD7	øD8	s (min/max)
5056-D38	227.5	—	91	160	570	8 x ø9.5	640	380	565	371	541	112	38	3.8/9.5
5056-D28	227.5	—	91	160	570	8 x ø9.5	640	380	565	371	541	112	28	3.8/9.5

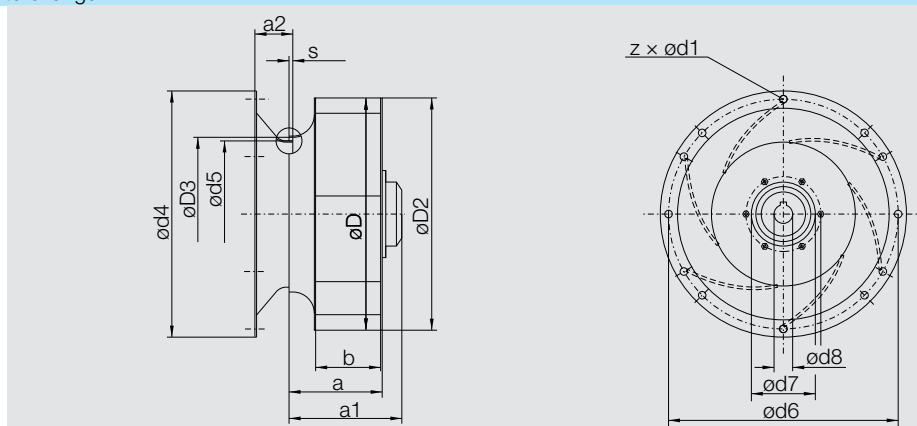
RLO 51-5056-D..

with Taper Lock Bushes

Performance charts

 $\rho_1 = 1.20 \text{ kg/m}^3$ Measured in installation A
according to ISO 5801:

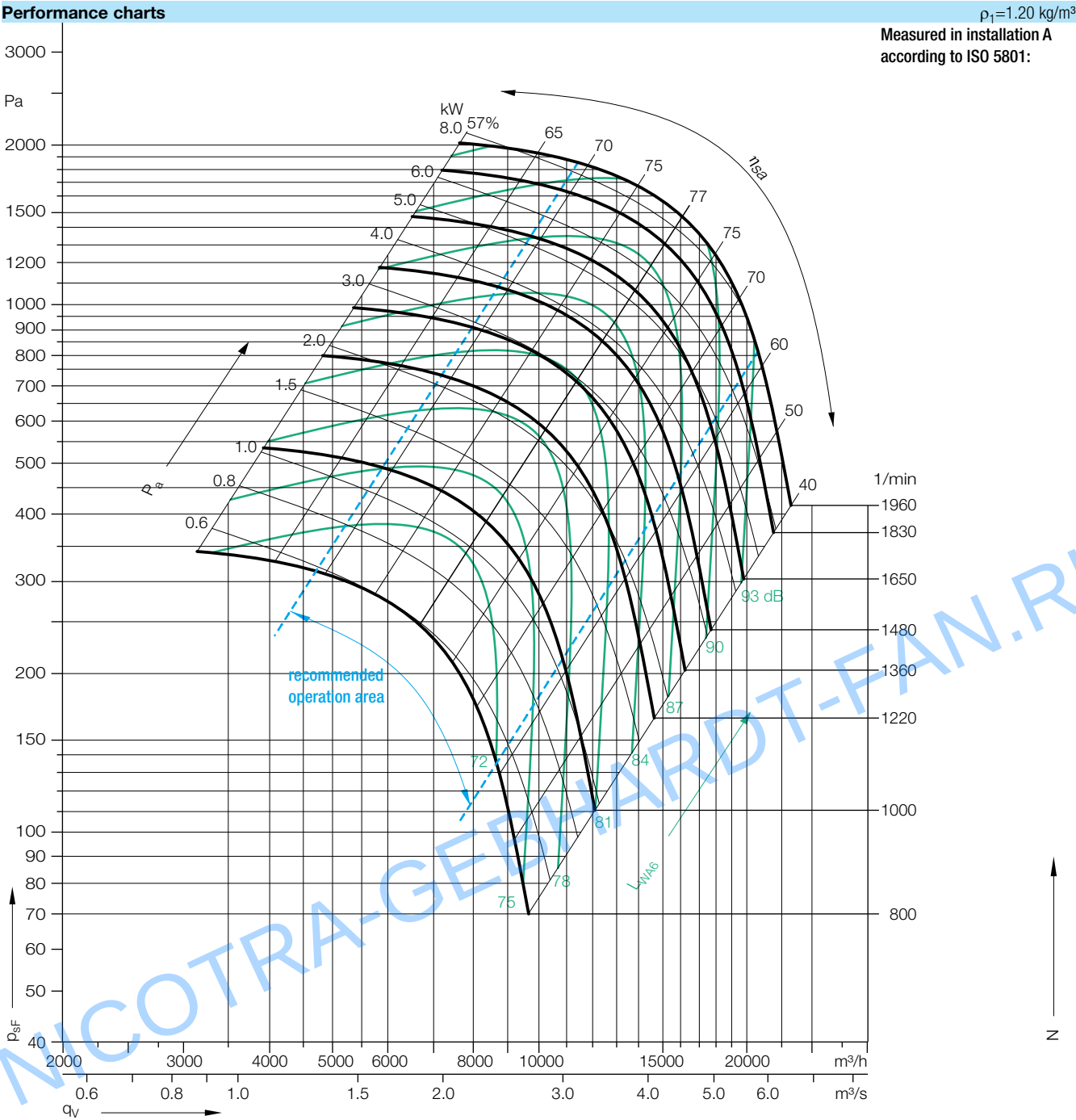
Dimensions in mm, subject to change.



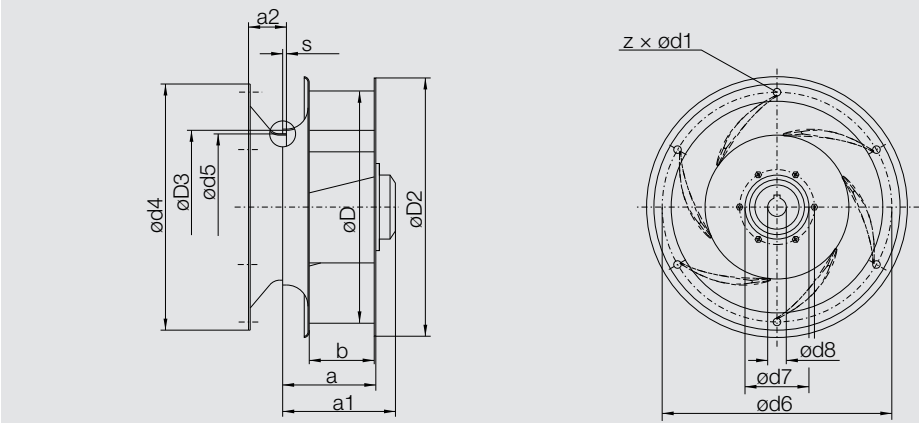
RLO 51-	a	a1	a2	b	ØD	z x Ød1	ØD2	ØD3	ØD4	ØD5	ØD6	ØD7	ØD8	s (min/max)
5056-D42	228.5	233.8	91	160	570	8 x Ø9.5	570	380	565	370.9	541	112	42	2.0/6.0
5056-D38	228.5	233.8	91	160	570	8 x Ø9.5	570	380	565	370.9	541	112	38	2.0/6.0
5056-D28	228.5	233.8	91	160	570	8 x Ø9.5	570	380	565	370.9	541	112	28	2.0/6.0

RLO E1-5663-D.. with Taper Lock Bushes

Performance charts



Dimensions in mm, subject to change.

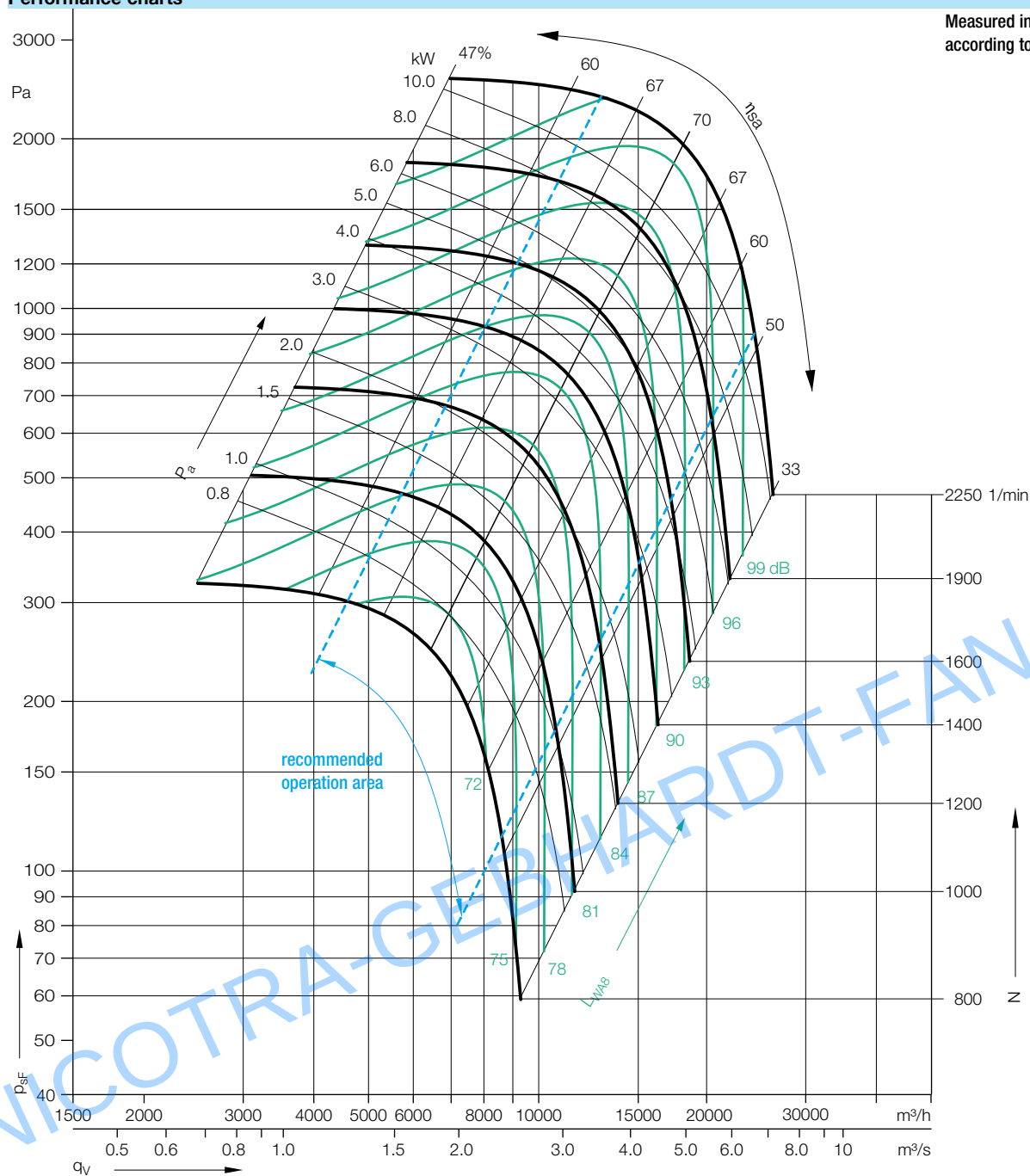


RLO E1-	a	a1	a2	b	øD	z × ød1	øD2	øD3	øD4	øD5	øD6	øD7	øD8	s (min/max)
5663-D42	252	—	104	180	640	8 × ø12	718	426	640	417	605	112	42	4.3/10.7
5663-D38	252	—	104	180	640	8 × ø12	718	426	640	417	605	112	38	4.3/10.7
5663-D28	252	—	104	180	640	8 × ø12	718	426	640	417	605	112	28	4.3/10.7

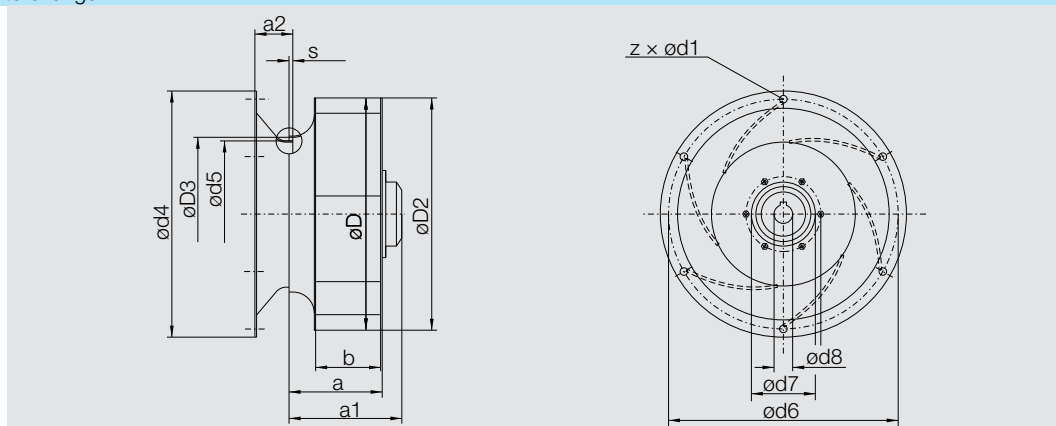
RLO 51-5663-D..

with Taper Lock Bushes

Performance charts

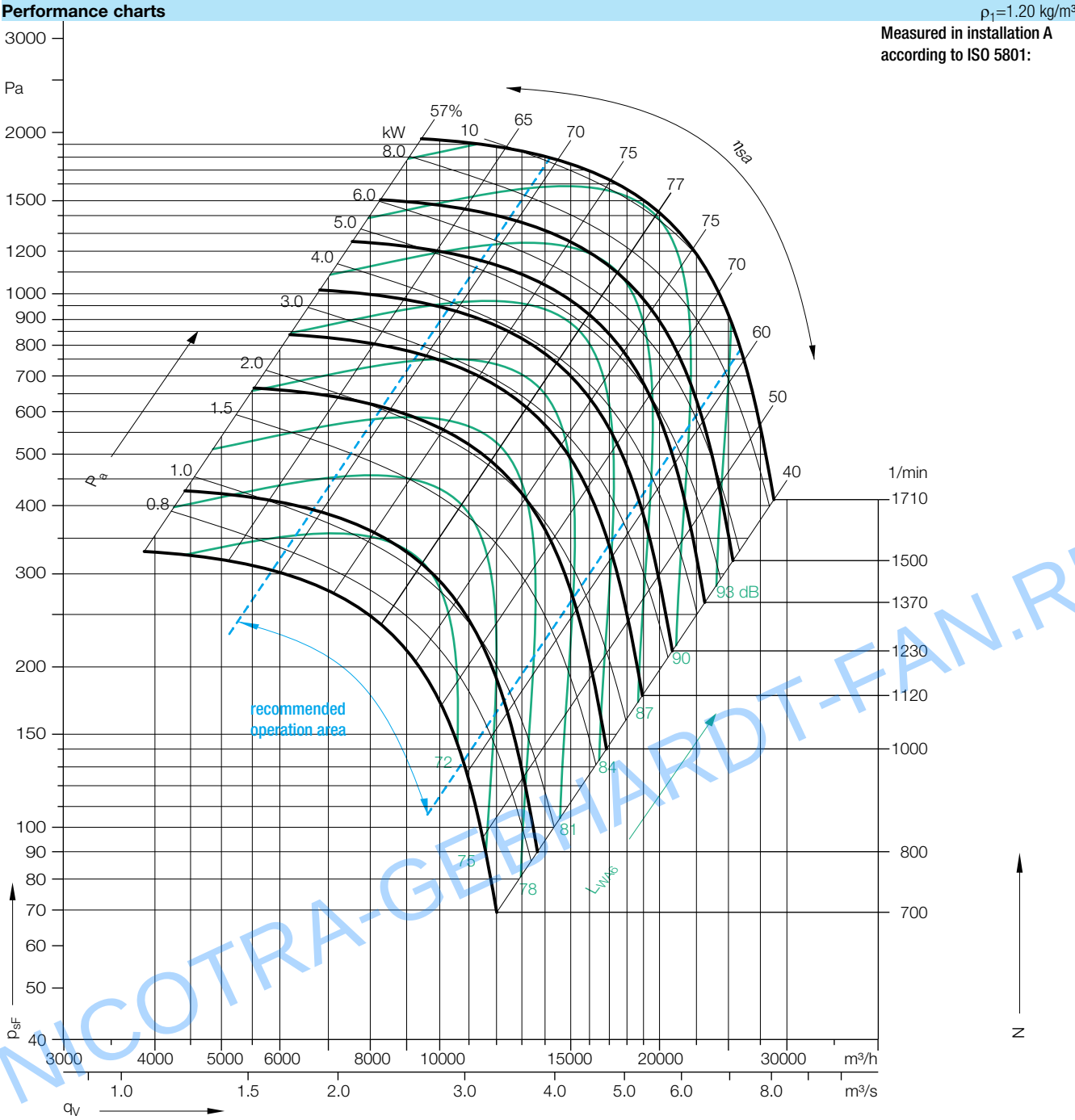
 $\rho_1 = 1.20 \text{ kg/m}^3$ Measured in installation A
according to ISO 5801:

Dimensions in mm, subject to change.

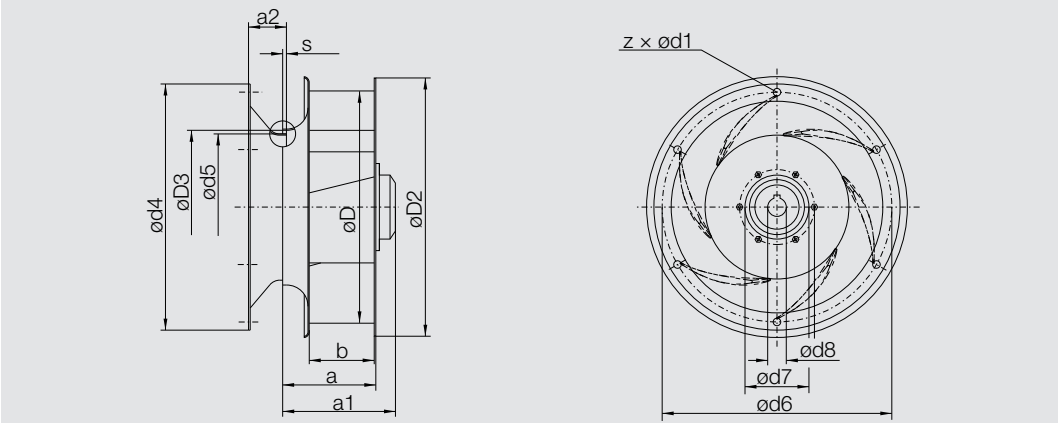


RLO 51-	a	a1	a2	b	ØD	z x ØD1	ØD2	ØD3	ØD4	ØD5	ØD6	ØD7	ØD8	s (min/max)
5663-D42	252.8	258.1	104	179.8	640	8 x Ø12	640	426	640	417.9	605	112	42	2.0/7.0
5663-D38	252.8	258.1	104	179.8	640	8 x Ø12	640	426	640	417.9	605	112	38	2.0/7.0
5663-D28	252.8	258.1	104	179.8	640	8 x Ø12	640	426	640	417.9	605	112	28	2.0/7.0

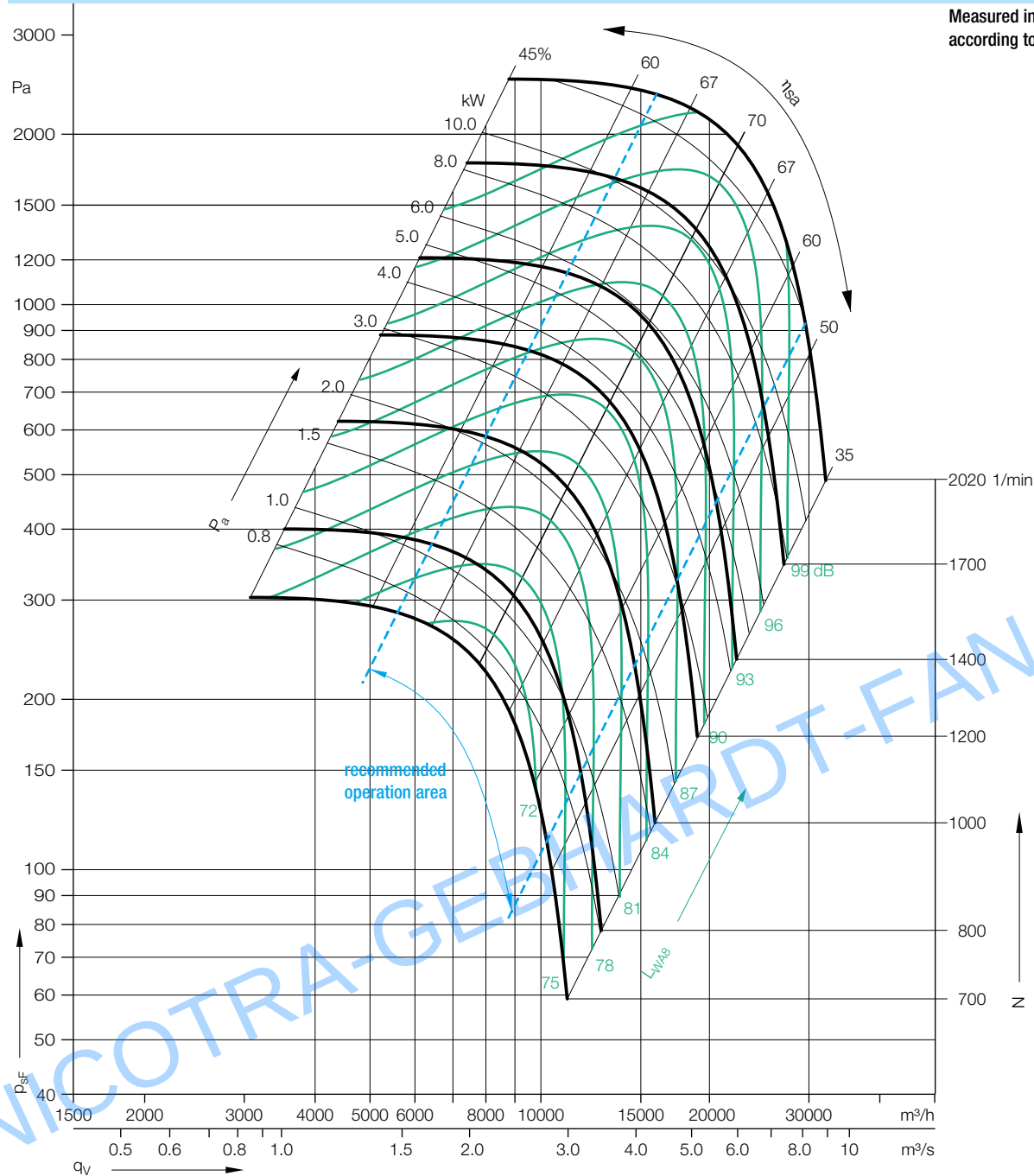
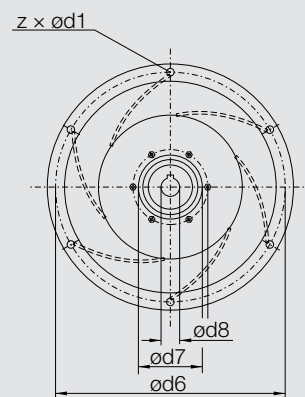
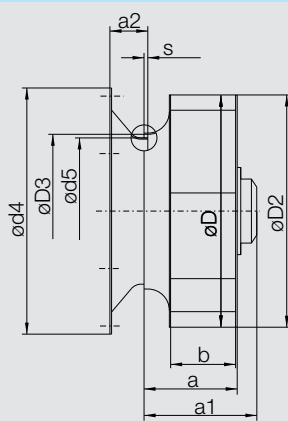
RLO E1-6371-D.. with Taper Lock Bushes



Dimensions in mm, subject to change.



RLO E1-	a	a1	a2	b	ϕD	$z \times \phi d_1$	ϕD_2	ϕD_3	ϕD_4	ϕD_5	ϕD_6	ϕD_7	ϕD_8	s (min/max)
6371-D42	282	—	121.2	202	718	8 $\times$ $\phi 12$	808	479	710	469	674	112	42	4.8/11.9
6371-D38	282	—	121.2	202	718	8 $\times$ $\phi 12$	808	479	710	469	674	112	38	4.8/11.9

RLO 51-6371-D..**with Taper Lock Bushes****Performance charts** $\rho_1 = 1.20 \text{ kg/m}^3$ Measured in installation A
according to ISO 5801:**Dimensions** in mm, subject to change.

RLO 51-	a	a1	a2	b	ØD	z x ØD1	ØD2	ØD3	ØD4	ØD5	ØD6	ØD7	ØD8	s (min/max)
6371-D48	283	288.3	122	202	718	8 x Ø12	718	479	710	468.7	674	112	48	2.0/7.0
6371-D42	283	288.3	122	202	718	8 x Ø12	718	479	710	468.7	674	112	42	2.0/7.0
6371-D38	283	288.3	122	202	718	8 x Ø12	718	479	710	468.7	674	112	38	2.0/7.0

Nicotra Gebhardt worldwide

nicotra-gebhardt.com

AUSTRALIA

65 Yale Drive,
Epping, VIC 3076
Phone +61 3 9017 5333
Fax +61 3 8401 3969
E-mail info@nicotra.com.au

BELGIUM

Haeghensgoed, 13 - 00/01
9270 Laarne
Phone +32 (0)9-336-00-01
Fax +32 (0)9-336-00-05
E-mail info.nicotra@nicotra.be

CHINA

88 Tai'An Road, XinQiao, ShiJi, Panyu
Guangzhou 511450
PR CHINA
Phone +86 (0)20-39960570
Fax +86 (0)20-39960569
E-mail sales@nicotra-china.com

FRANCE

Leader's Park Bat A1
3 chemin des Cytises
69340 Francheville
Phone +33 (0)4 72 79 01 20
Fax +33 (0)4 72 79 01 21
E-mail g.cauche@nicotra-gebhardt.com

GERMANY

Gebhardtstraße 19-25
74638 Waldenburg
Phone +49 (0)7942 101 0
Fax +49 (0)7942 101 170
E-mail info@nicotra-gebhardt.com

GREAT BRITAIN

Unit D, Rail Mill Way
Parkgate Business Park
Rotherham
South Yorkshire
S62 6JQ
Phone +044 01709-780760
Fax +044 01709-780762
E-mail sales@nicotra.co.uk

INDIA

Plot no 28F & 29, Sector-31, Kasna,
Greater Noida-201 308 U.P (India)
Phone +91 120 4783400
Phone +91 22 65702056 (Mumbai)
Phone +91 80 25727830 (Bangalore)
E-mail info@nicotraindia.com

ITALY

Via Modena, 18
24040 Zingonia (BG)
Phone +39 035 873 111
Fax +39 035 884 319
E-mail info@nicotra-gebhardt.com



MALAYSIA

Lot 1799, Jalan Balakong
Taman Perindustrian Bukit Belimbing
43300 Seri Kembangan
Selangor
Phone +603 8961-2588
Fax +603 8961-8337
E-mail info_malaysia@nicotra-gebhardt.com

SPAIN

Ctra. Alcalá-Villar del Olmo, Km. 2,830
28810 Villalbilla-Madrid
Phone +34 918-846110
Fax +34 918-859450
E-mail info@nicotra.es

SINGAPORE

3, Science Park Drive, # 04-07, The Franklin
Singapore Science Park 1
Singapore 118223
Phone +65 6265 1522
Fax +65 6265 2400
E-mail info_singapore@nicotra-gebhardt.com

SWEDEN

Kraketorpsгатan 30
43153 Mölndal
Phone 0046 31-874540
Fax 0046 31-878590
E-mail info.se@nicotra-gebhardt.com

THAILAND

6/29 Soi Suksawadi 2, Moo 4, Suksawadi Road,
Kwang Jomthong, Khet Jomthong,
Bangkok 10150
Phone +662 476-1823-6
Fax +662 476-1827
E-mail sales@nicotra.co.th

UNITED STATES

PO BOX 900921
Sandy, Utah 84090
Phone 001(801) 733-0248
Fax 001(801) 315-9400
Mobile 001(801) 682 0898
E-mail mike.sehgal@gebhardtffans.com
<http://www.gebhardtffans.com/>

Nicotra Gebhardt Germany

Nicotra Gebhardt GmbH
Gebhardtstraße 19-25
74638 Waldenburg
Germany
Phone +49 (0)7942 101 0
Fax +49 (0)7942 101 170
E-Mail info@nicotra-gebhardt.com

Nicotra Gebhardt Italy

Nicotra Gebhardt S.p.A
Via Modena, 18
24040 Zingonia (BG)
Italy
Phone +39 035 873 111
Fax +39 035 884 319
E-Mail info@nicotra-gebhardt.com

NICOTRA | **Gebhardt**
fan|tastic solutions