High Performance Centrifugal Impeller

Issue 1.0 EN
June 2012

RLO51
RLOE1

NICOTRA | Gebhardt
fan|tastic solutions

Ready for the next generation

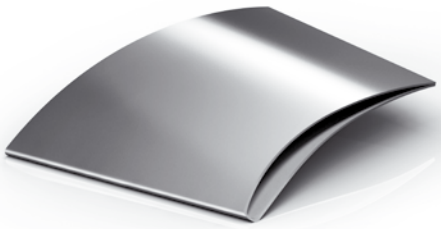
Nicotra Gebhardt – the professionals in profiling
Nicotra Gebhardt is the first port of call for profiled impeller blades. We brought the first hollow section airfoil blades onto the market in 1975. Since then we have been achieving the absolutely best efficiencies in our fans in every application.
Our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

The plus factors of the new Generation

- **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

Simple and reliable 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.

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.

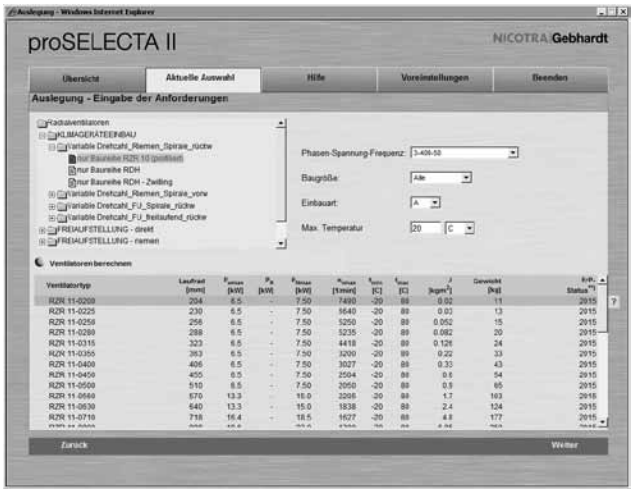
So that you can be sure. Models and options that are technically not permissible, are automatically excluded in proSELECTA II. So there is no chance that you will configure a “wrong” device option.

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.

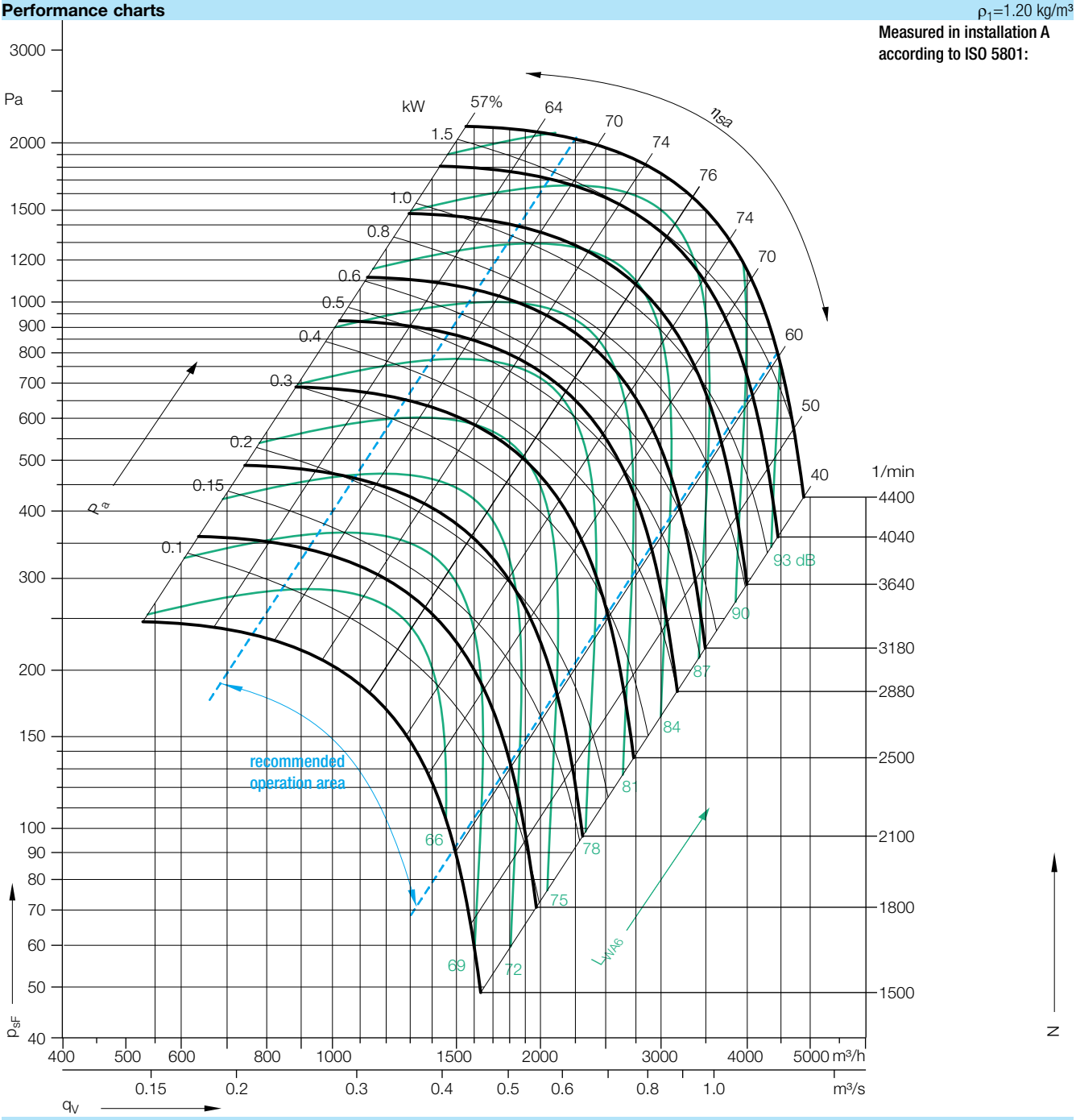


RLO E1-2528-D.. with Taper Lock Bushes

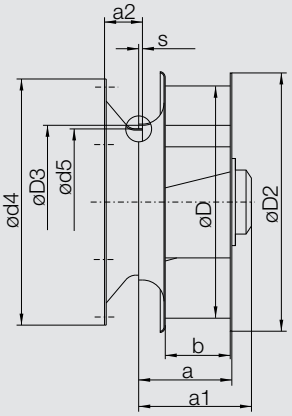
Performance charts

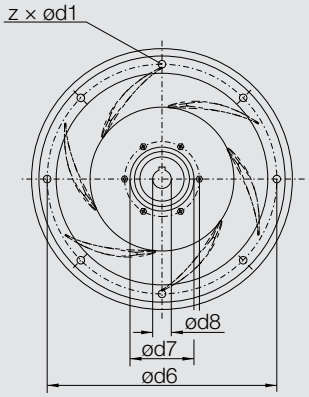
ρ_1=1.20 kg/m³

Measured in installation A according to ISO 5801:



Dimensions in mm, subject to change.





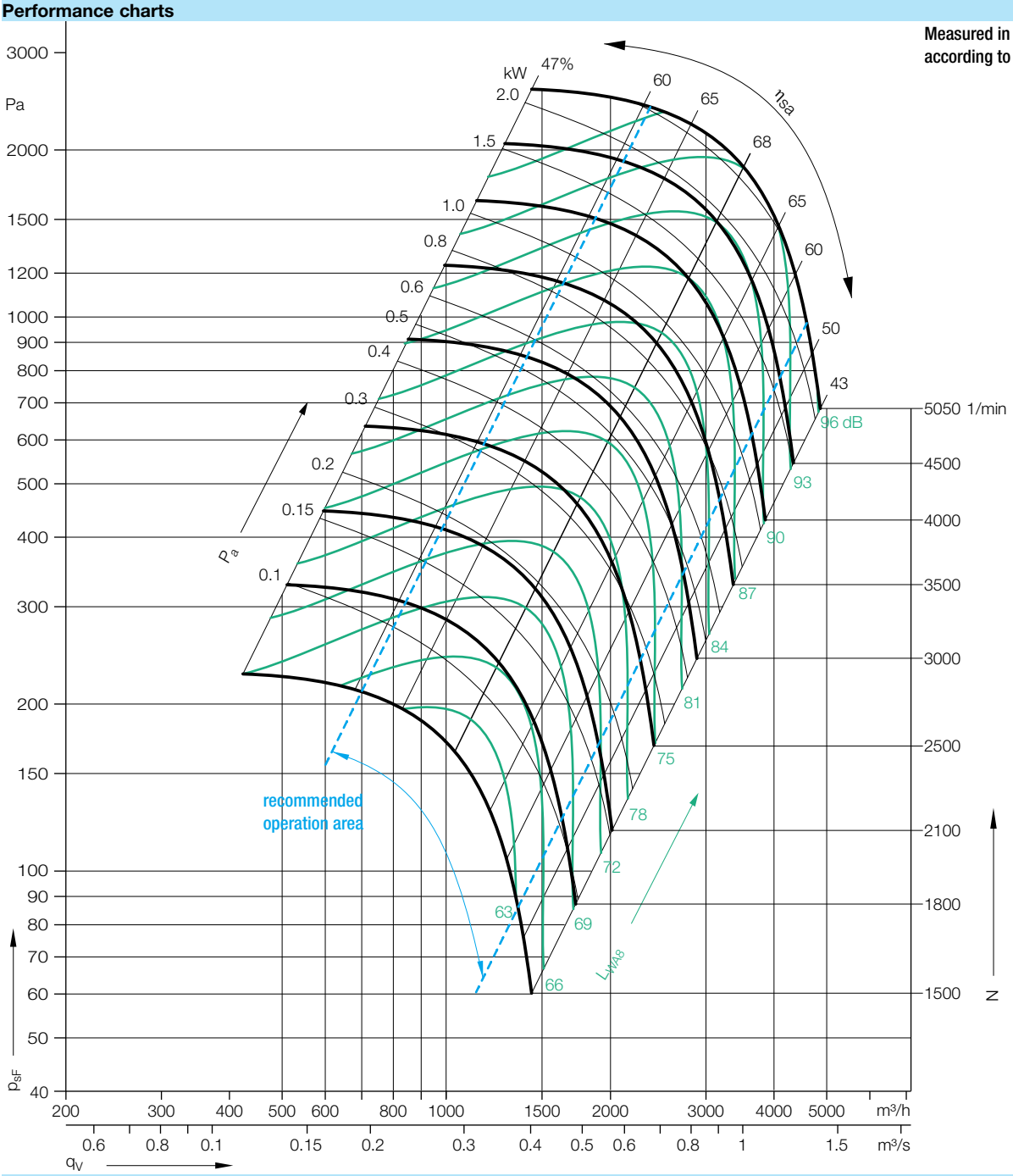
RLO E1-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
2528-D28	115.9	141.4	47	80.9	288	6 × ø7	323	191	306	183.5	286	82	28	2.0/4.0
2528-D24	115.9	141.4	47	80.9	288	6 × ø7	323	191	306	183.5	286	82	24	2.0/4.0
2528-D19	115.9	141.4	47	80.9	288	6 × ø7	323	191	306	183.5	286	82	19	2.0/4.0
2528-D14	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

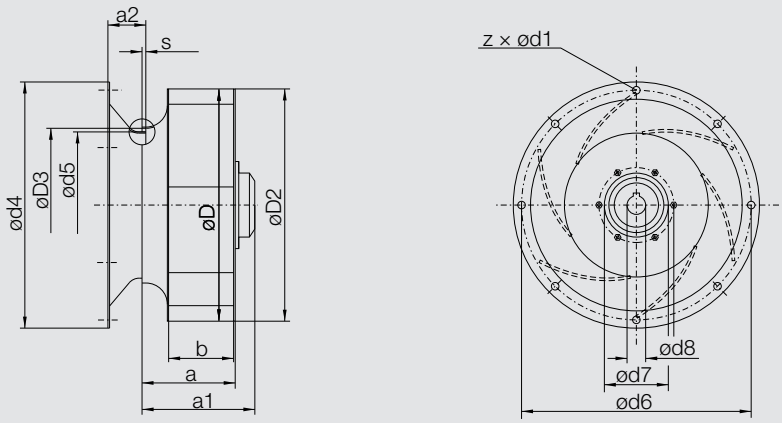
Performance charts

ρ_1=1.20 kg/m³

Measured in installation A according to ISO 5801:



Dimensions in mm, subject to change.



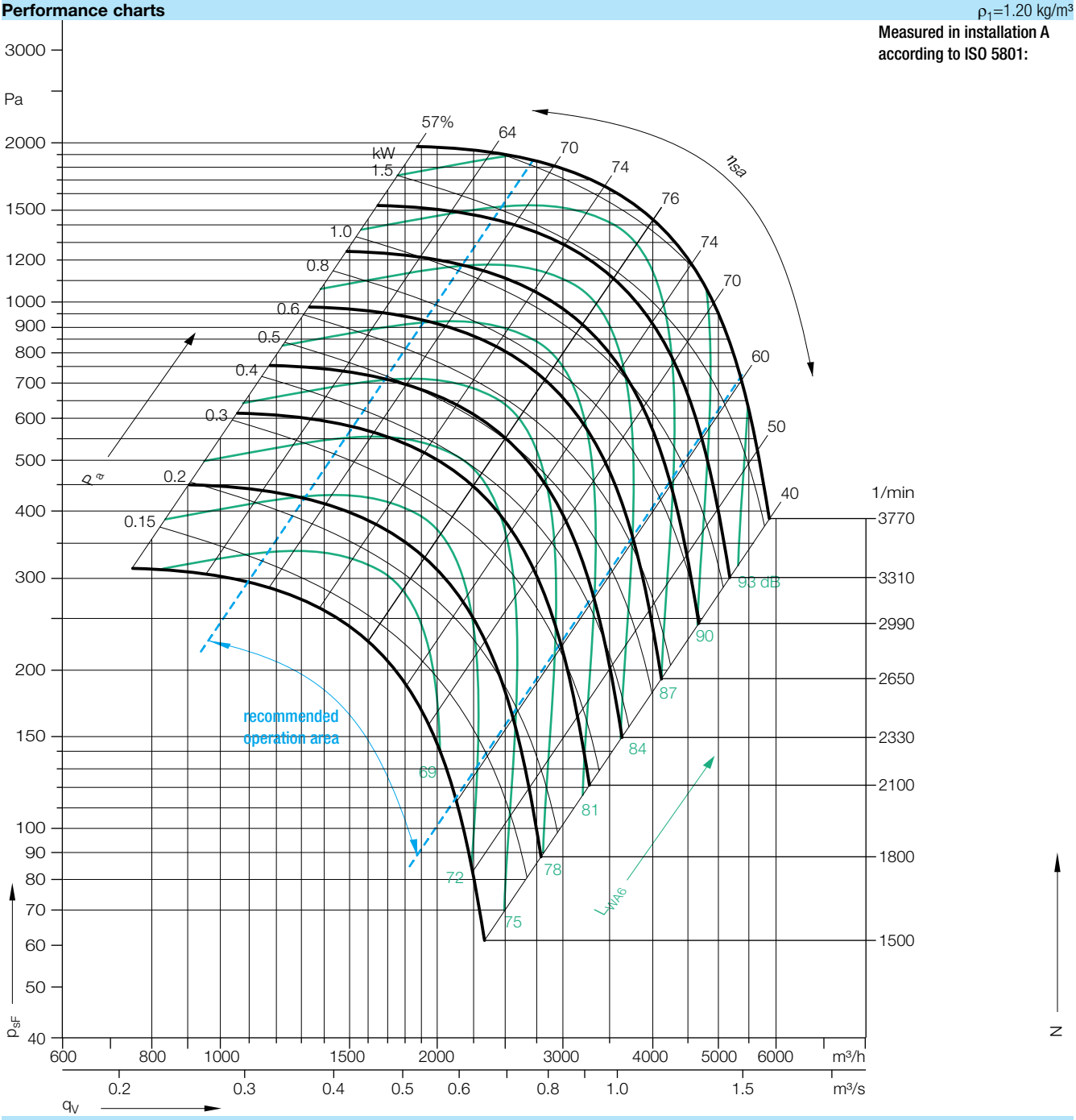
RLO 51-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
2528-D28	115.9	141.4	47	80.9	288	6 × ø7	288	191	306	183.5	286	82	28	2.0/4.0
2528-D24	115.9	141.4	47	80.9	288	6 × ø7	288	191	306	183.5	286	82	24	2.0/4.0
2528-D19	115.9	141.4	47	80.9	288	6 × ø7	288	191	306	183.5	286	82	19	2.0/4.0
2528-D14	115.9	141.4	47	80.9	288	6 × ø7	288	191	306	183.5	286	82	14	2.0/4.0

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

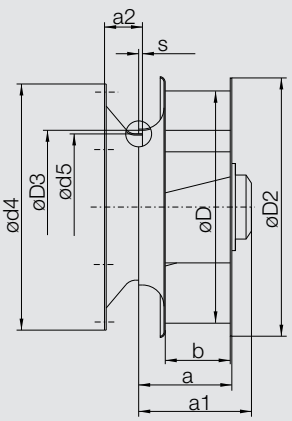
Performance charts

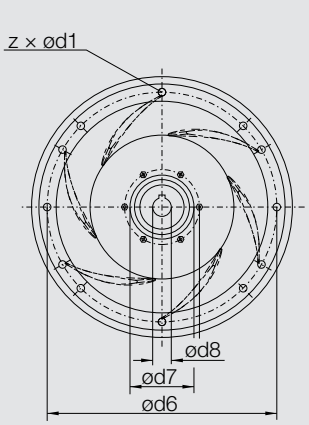
ρ_1=1.20 kg/m³

Measured in installation A according to ISO 5801:



Dimensions in mm, subject to change.





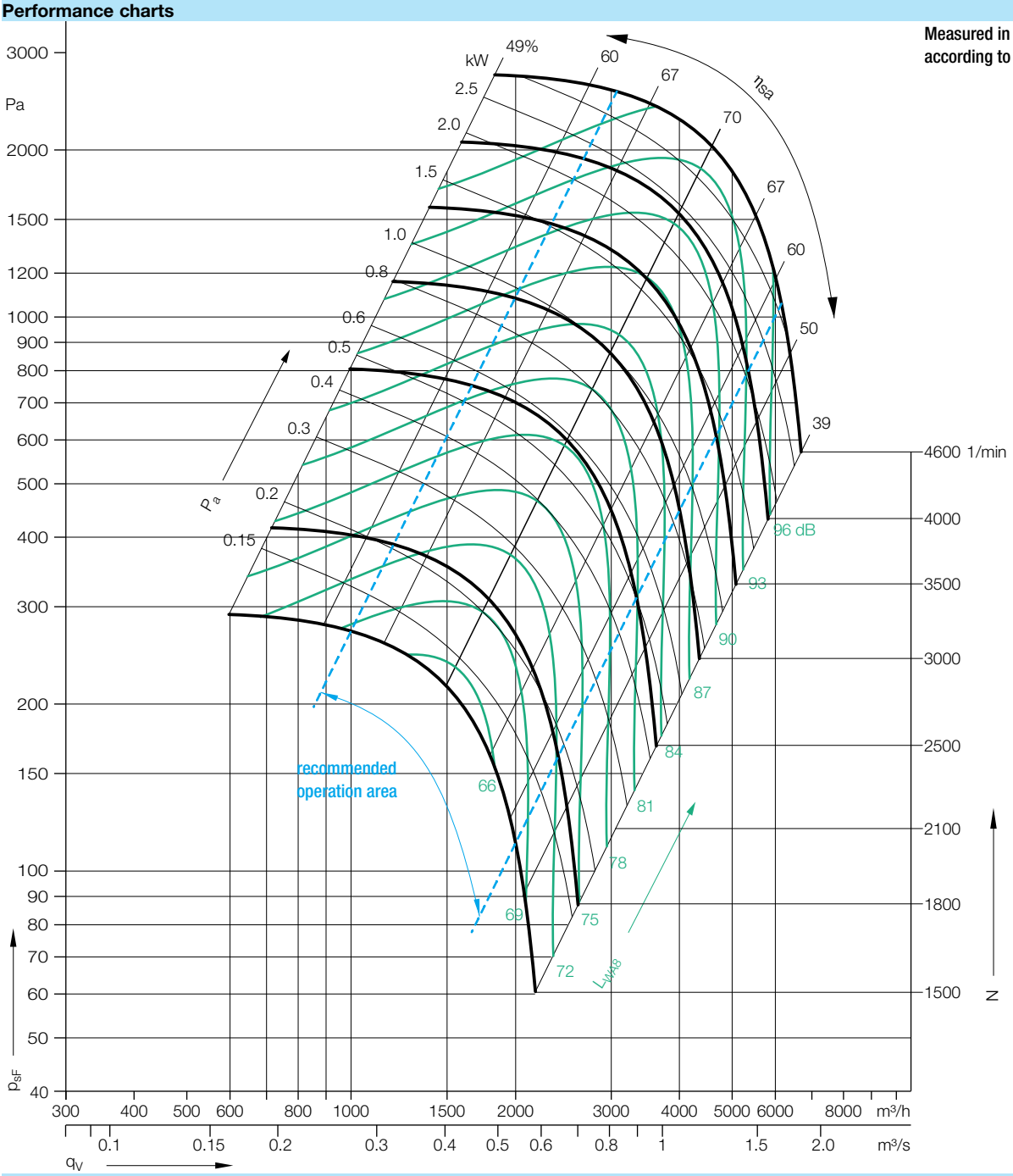
RLO E1-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
2831-D24	129.3	154.8	54	90.8	323	8 × ø9.5	363	216	348	207.7	322	82.4	24	2.2/5.4
2831-D19	129.3	154.8	54	90.8	323	8 × ø9.5	363	216	348	207.7	322	82.4	19	2.2/5.4

RLO 51-2831-D.. with Taper Lock Bushes

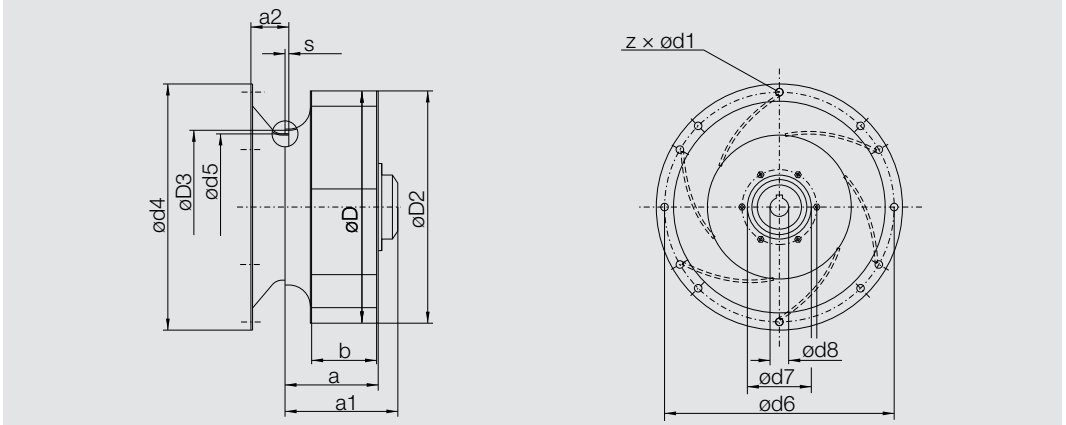
Performance charts

ρ_1=1.20 kg/m³

Measured in installation A according to ISO 5801:



Dimensions in mm, subject to change.



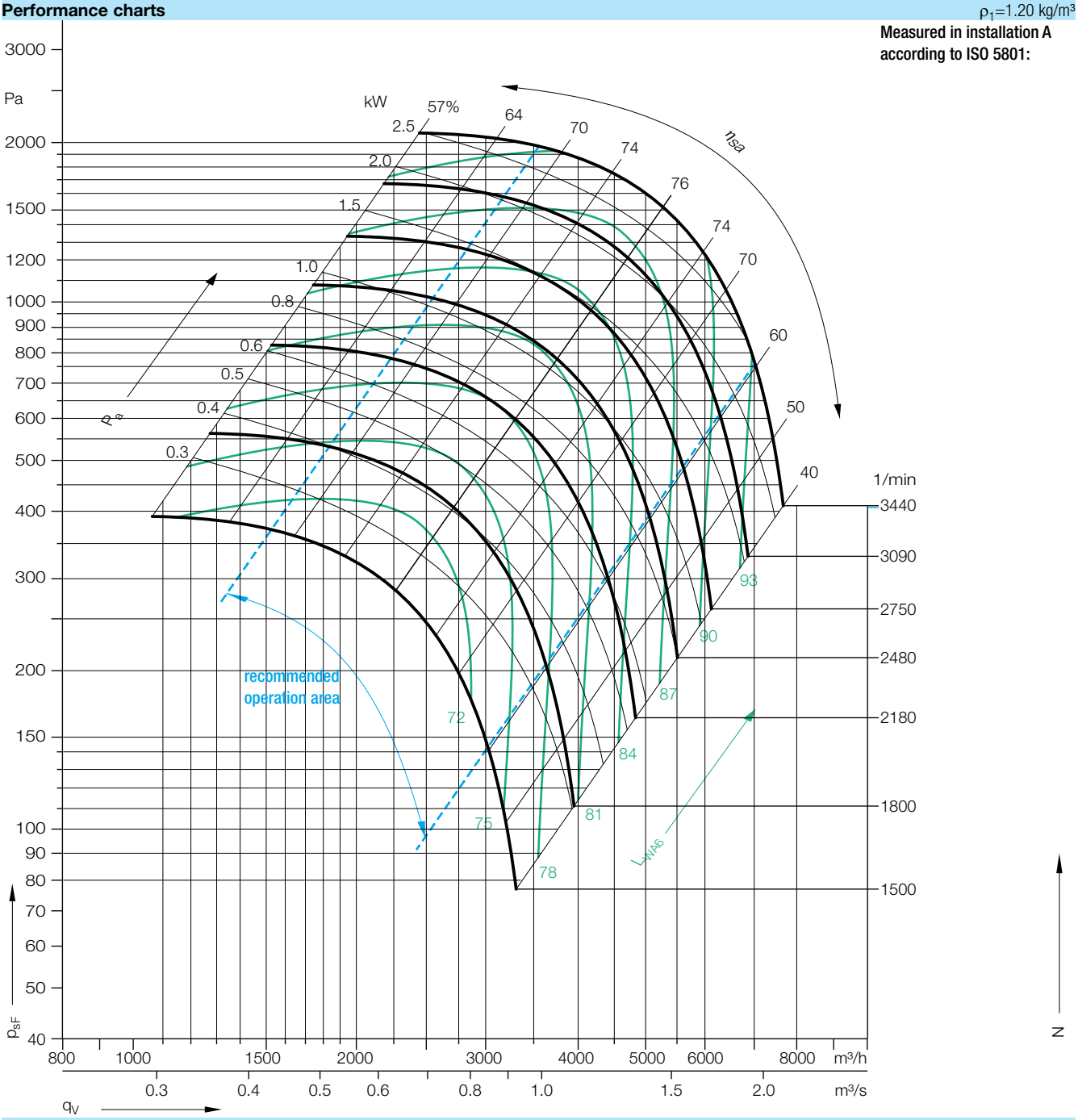
RLO 51-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
2831-D38	129.3	154.8	54	90.8	323	8 × ø9.5	323	216	348	207.7	322	82	38	2.0/4.0
2831-D28	129.3	154.8	54	90.8	323	8 × ø9.5	323	216	348	207.7	322	82	28	2.0/4.0
2831-D24	129.3	154.8	54	90.8	323	8 × ø9.5	323	216	348	207.7	322	82	24	2.0/4.0
2831-D19	129.3	154.8	54	90.8	323	8 × ø9.5	323	216	348	207.7	322	82	19	2.0/4.0

RLO E1-3135-D.. with Taper Lock Bushes

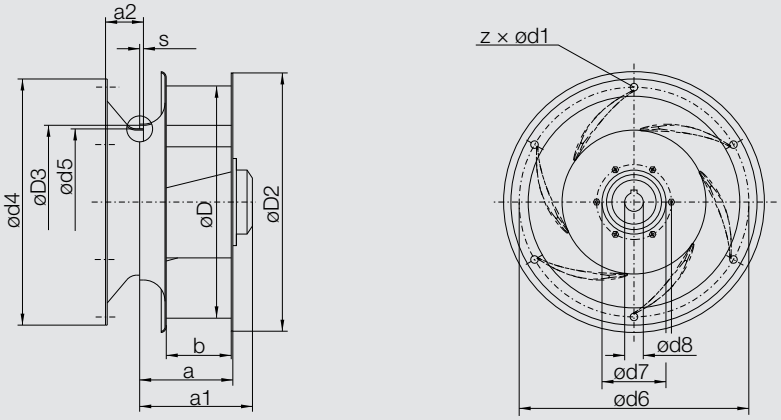
Performance charts

ρ_1=1.20 kg/m³

Measured in installation A according to ISO 5801:



Dimensions in mm, subject to change.



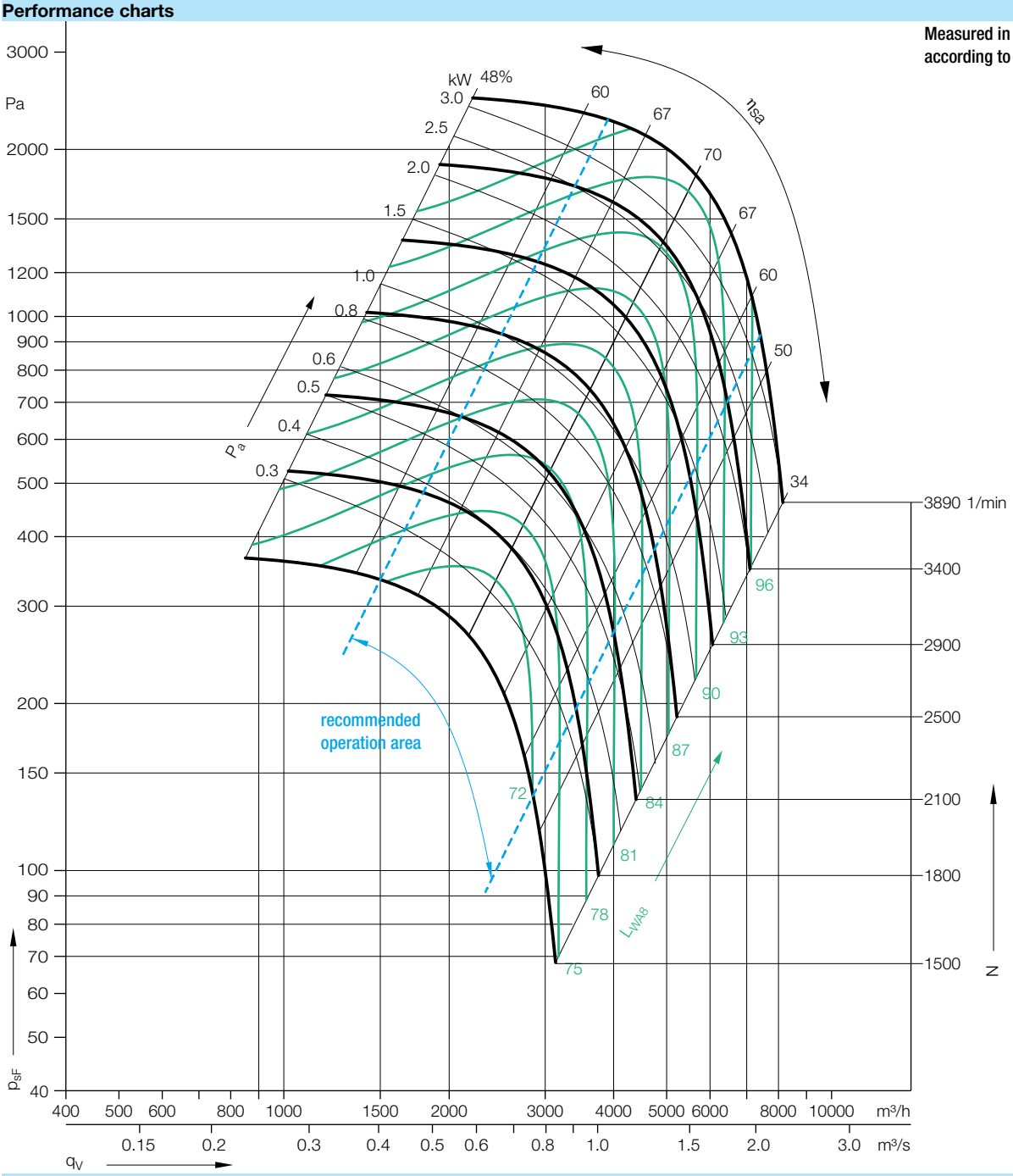
RLO E1-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
3135-D28	145.5	171	58	102	363	8 × ø9.5	406	241	382	235	356	82.4	28	2.4/6.0
3135-D24	145.5	171	58	102	363	8 × ø9.5	406	241	382	235	356	82.4	24	2.4/6.0
3135-D19	145.5	171	58	102	363	8 × ø9.5	406	241	382	235	356	82.4	19	2.4/6.0

RLO 51-3135-D.. with Taper Lock Bushes

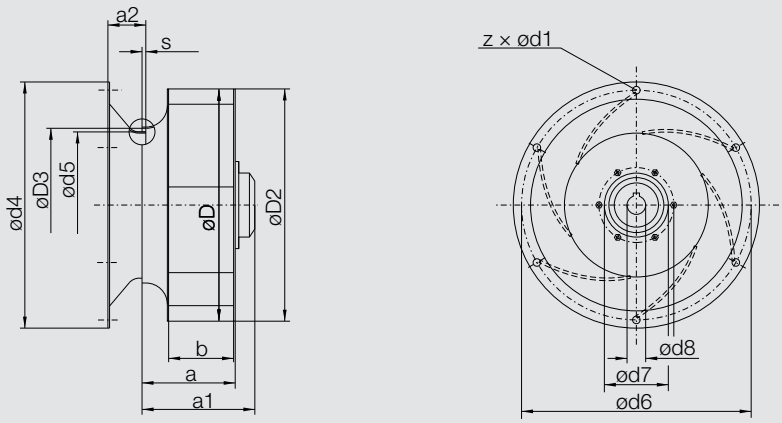
Performance charts

ρ_1=1.20 kg/m³

Measured in installation A according to ISO 5801:



Dimensions in mm, subject to change.



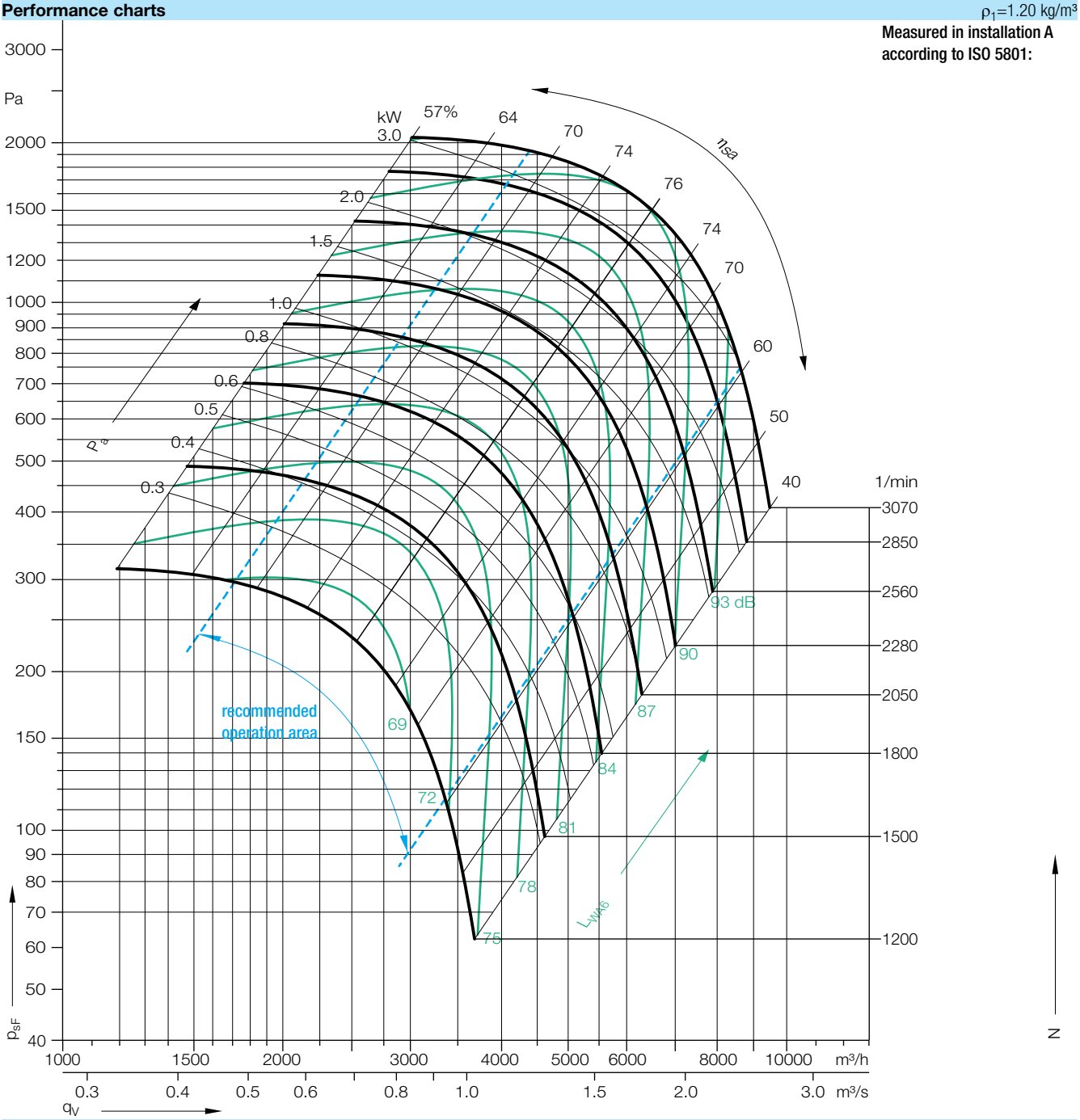
RLO 51-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
3135-D38	145.5	171	58	102	363	8 × ø9.5	363	241	382	235.1	356	82	38	2.0/4.0
3135-D28	145.5	171	58	102	363	8 × ø9.5	363	241	382	235.1	356	82	28	2.0/4.0
3135-D24	145.5	171	58	102	363	8 × ø9.5	363	241	382	235.1	356	82	24	2.0/4.0
3135-D19	145.5	171	58	102	363	8 × ø9.5	363	241	382	235.1	356	82	19	2.0/4.0
3135-D14	145.5	171	58	102	363	8 × ø9.5	363	241	382	235.1	356	82	14	2.0/4.0

RLO E1-3540-D.. with Taper Lock Bushes

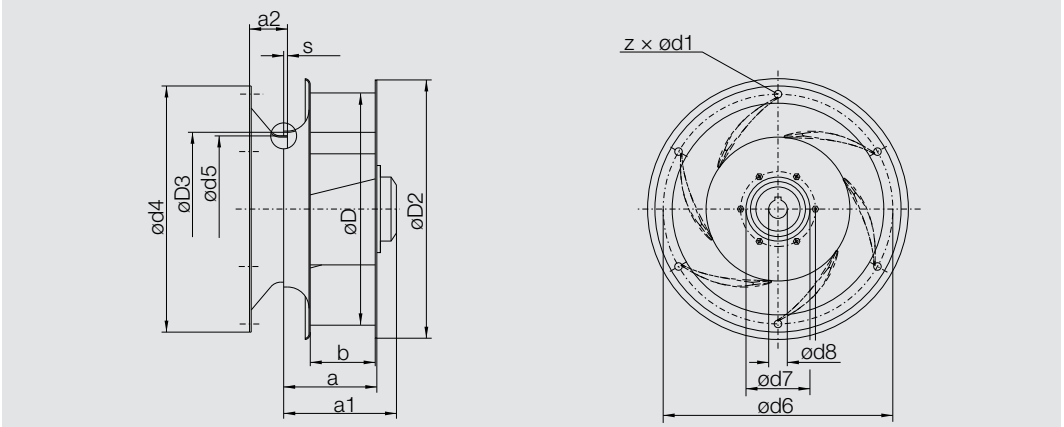
Performance charts

ρ_1=1.20 kg/m³

Measured in installation A
according to ISO 5801:



Dimensions in mm, subject to change.



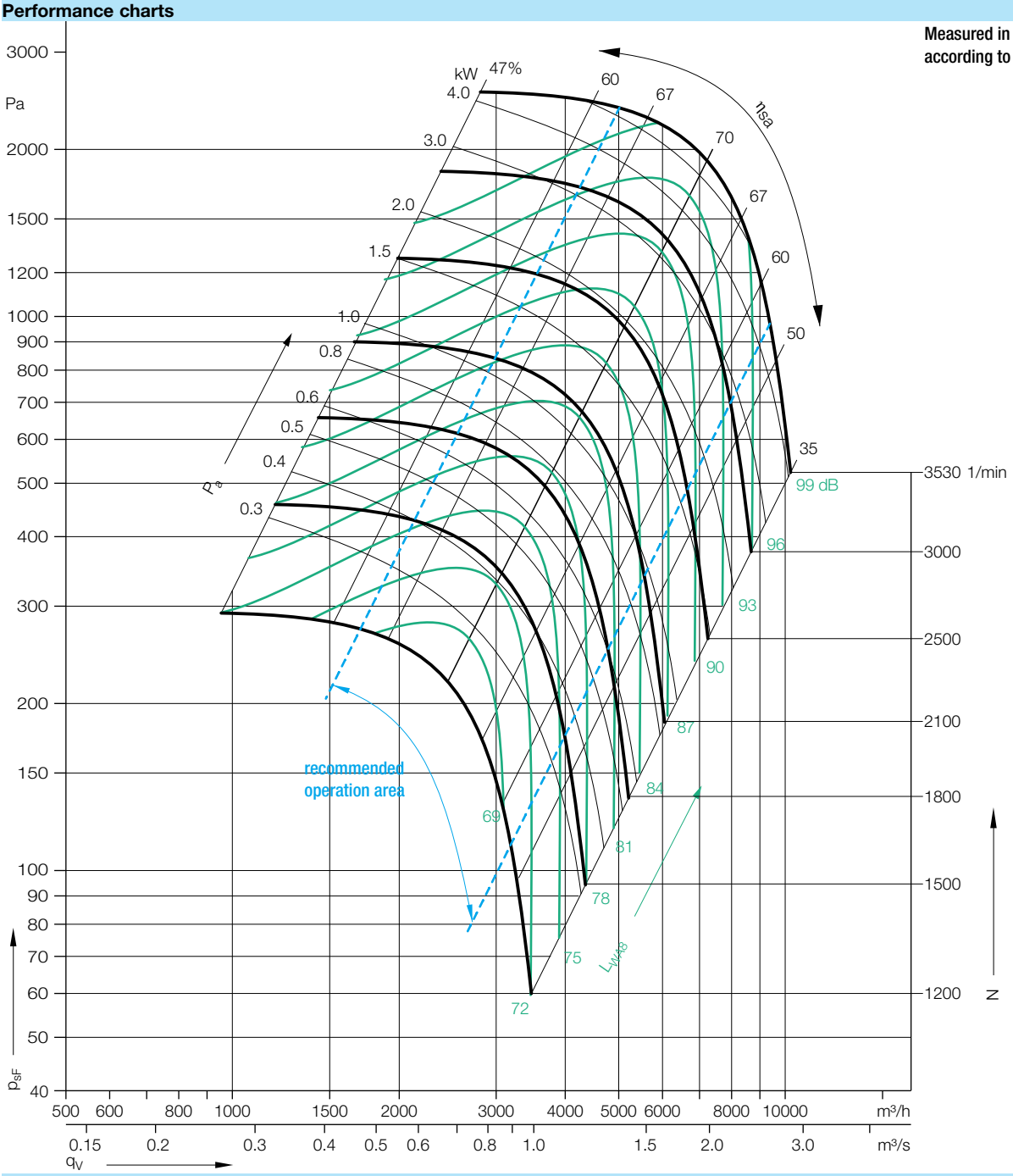
RLO E1-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
3540-D28	162.5	187.5	69	114	406	8 × ø9.5	455	271	422	265	395	130	28	2.7/6.8
3540-D24	162.5	187.5	69	114	406	8 × ø9.5	455	271	422	265	395	130	24	2.7/6.8
3540-D19	162.5	187.5	69	114	406	8 × ø9.5	455	271	422	265	395	130	19	2.7/6.8

RLO 51-3540-D.. with Taper Lock Bushes

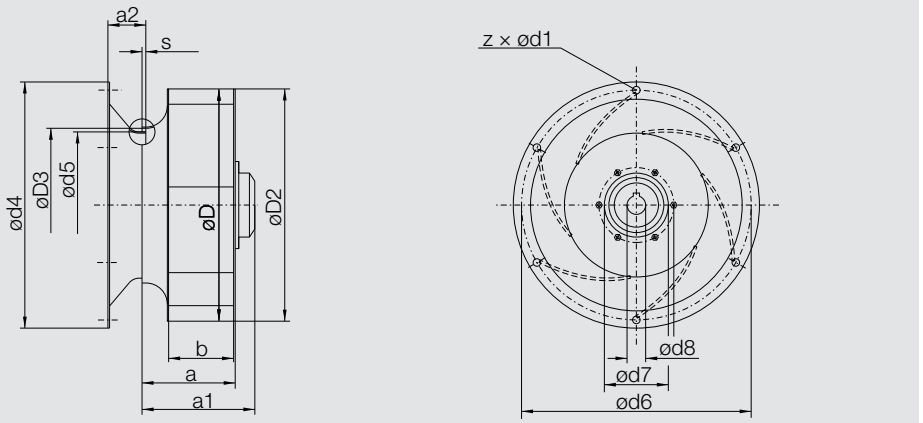
Performance charts

ρ_1=1.20 kg/m³

Measured in installation A according to ISO 5801:



Dimensions in mm, subject to change.



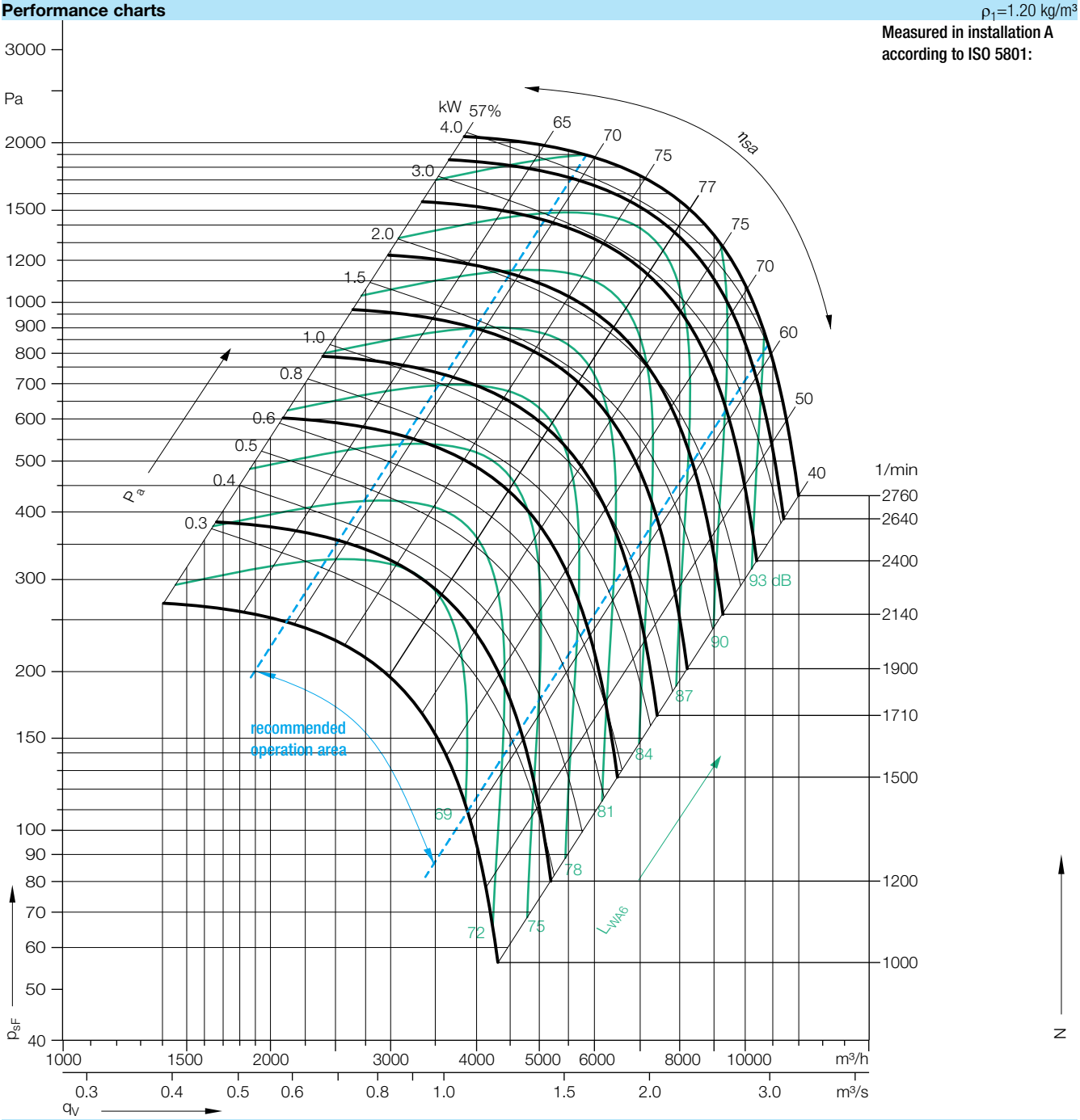
RLO 51-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
3540-D38	162.5	188	70	114	406	8 × ø9.5	406	271	422	265	395	82	38	2.0/5.0
3540-D28	162.5	188	70	114	406	8 × ø9.5	406	271	422	265	395	82	28	2.0/5.0
3540-D24	162.5	188	70	114	406	8 × ø9.5	406	271	422	265	395	82	24	2.0/5.0
3540-D19	162.5	188	70	114	406	8 × ø9.5	406	271	422	265	395	82	19	2.0/5.0

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

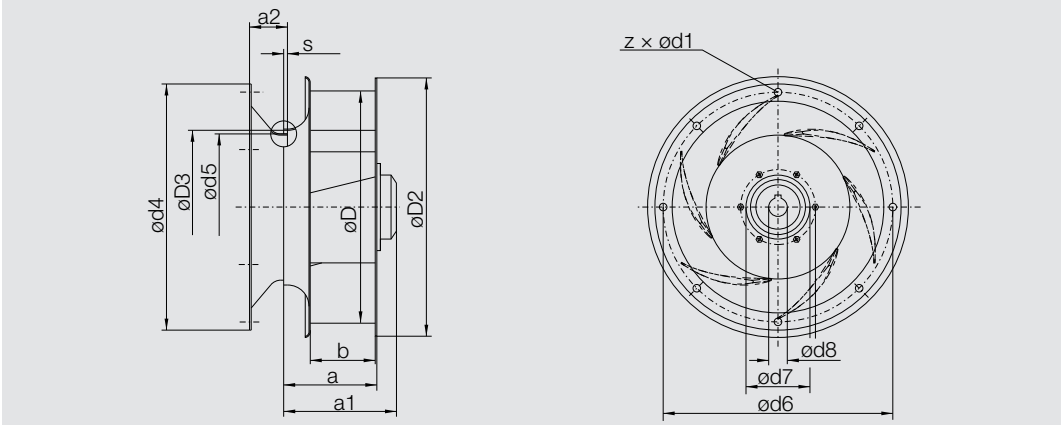
Performance charts

ρ_1=1.20 kg/m³

Measured in installation A according to ISO 5801:



Dimensions in mm, subject to change.



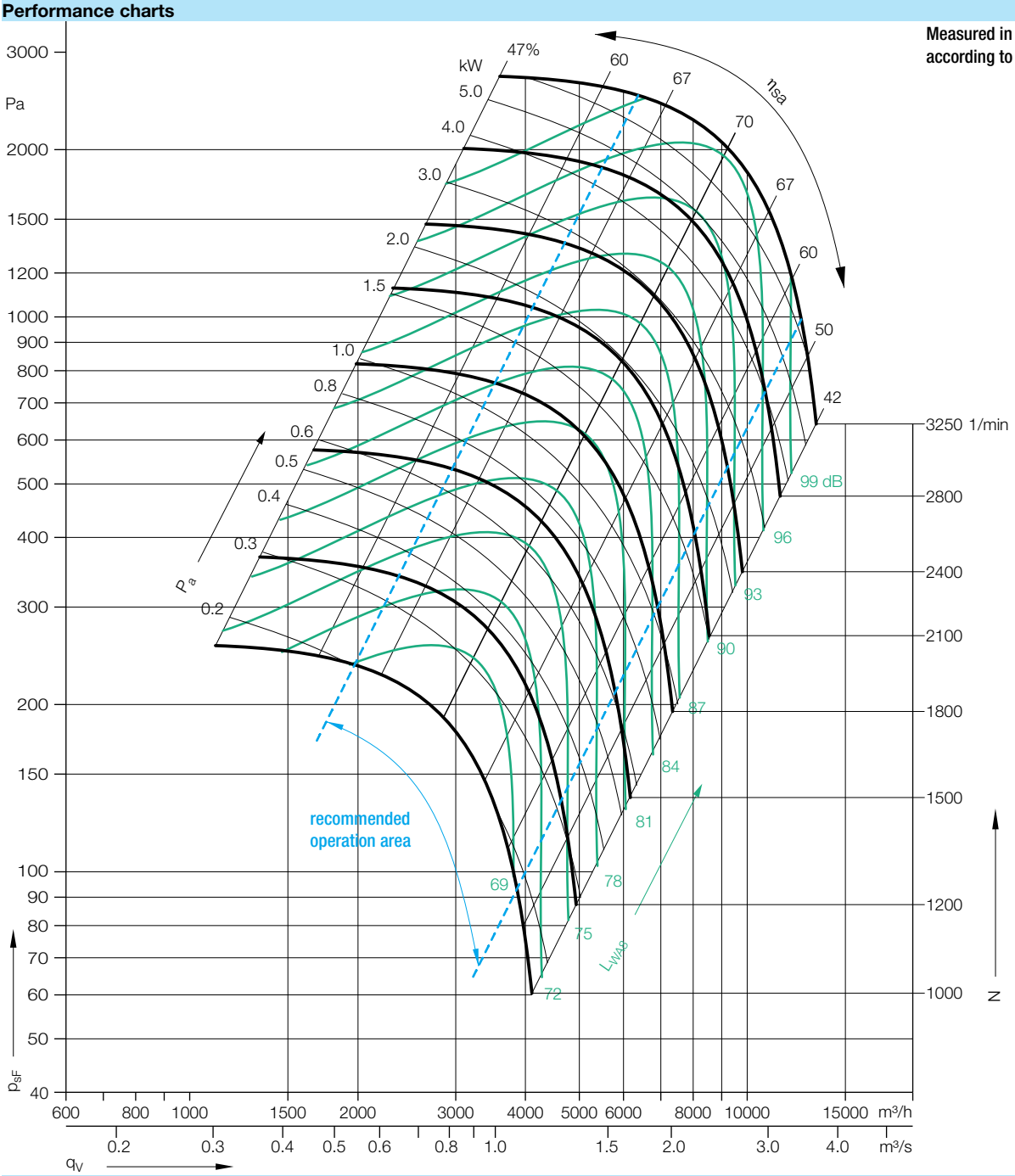
RLO E1-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
4045-D38	180	205	76	128	455	6 × ø9.5	510	303	464	295	438	130	38	3.0/7.6
4045-D28	180	205	76	128	455	6 × ø9.5	510	303	464	295	438	130	28	3.0/7.6
4045-D24	180	205	76	128	455	6 × ø9.5	510	303	464	295	438	130	24	3.0/7.6

RLO 51-4045-D.. with Taper Lock Bushes

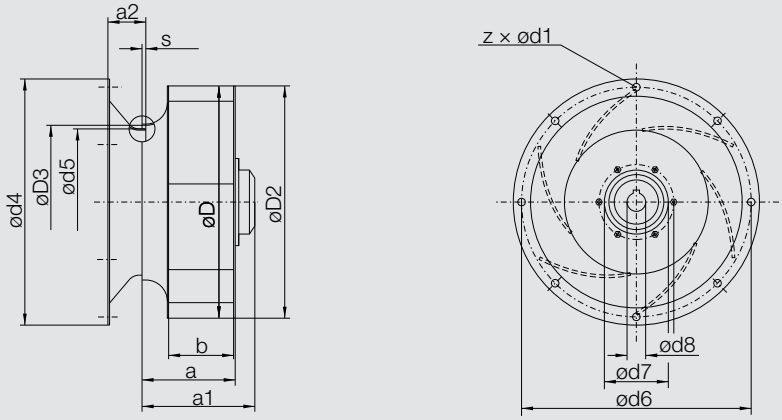
Performance charts

ρ_1=1.20 kg/m³

Measured in installation A according to ISO 5801:



Dimensions in mm, subject to change.



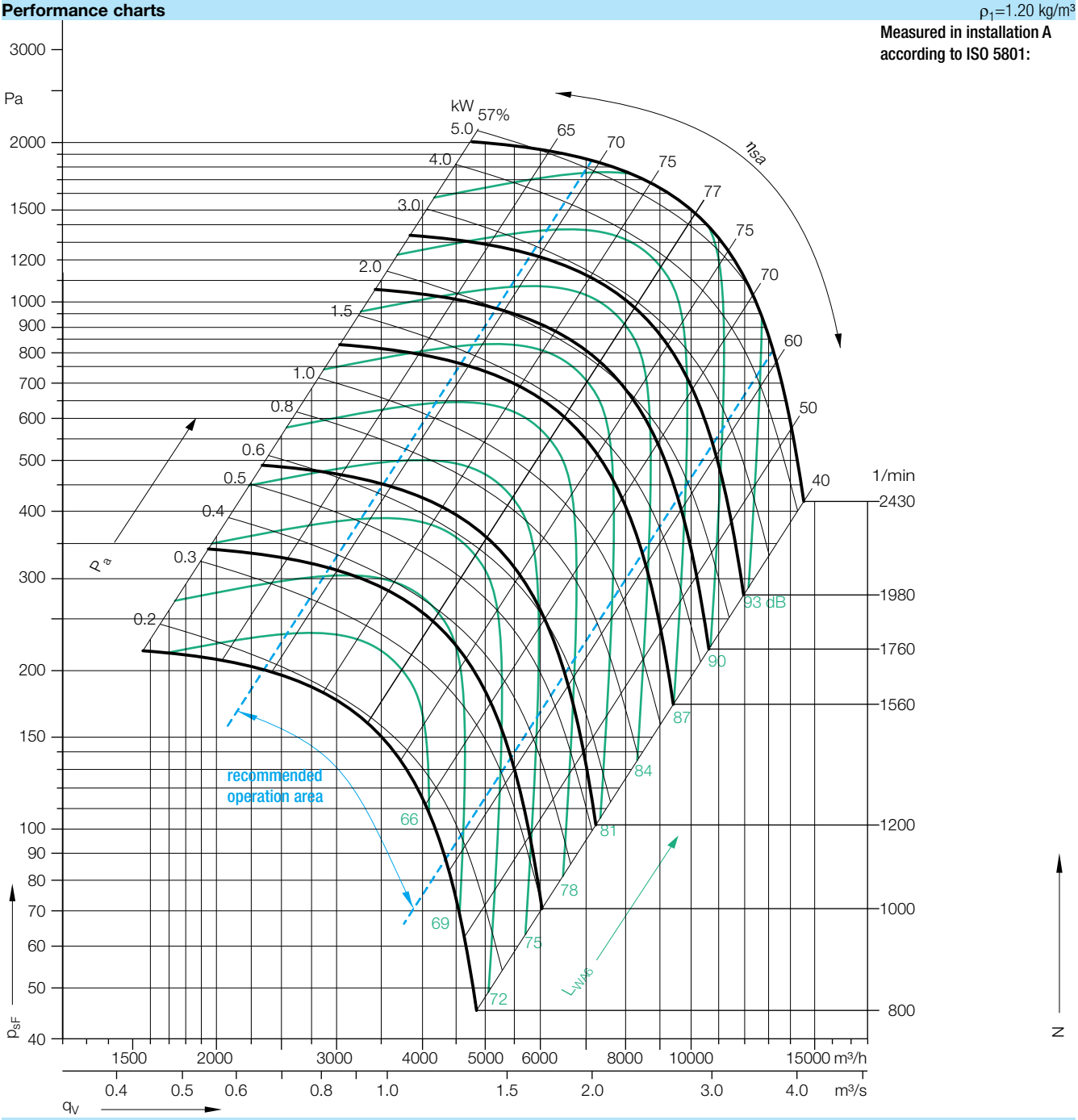
RLO E1-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
4045-D42	180.9	206.4	76.5	127.9	455	6 × ø9.5	455	303	464	295.2	438	82	42	2.0/5.0
4045-D38	180.9	206.4	76.5	127.9	455	6 × ø9.5	455	303	464	295.2	438	82	38	2.0/5.0
4045-D28	180.9	206.4	76.5	127.9	455	6 × ø9.5	455	303	464	295.2	438	82	28	2.0/5.0
4045-D24	180.9	206.4	76.5	127.9	455	6 × ø9.5	455	303	464	295.2	438	82	24	2.0/5.0
4045-D19	180.9	206.4	76.5	127.9	455	6 × ø9.5	455	303	464	295.2	438	82	19	2.0/5.0

RLO E1-4550-D.. with Taper Lock Bushes

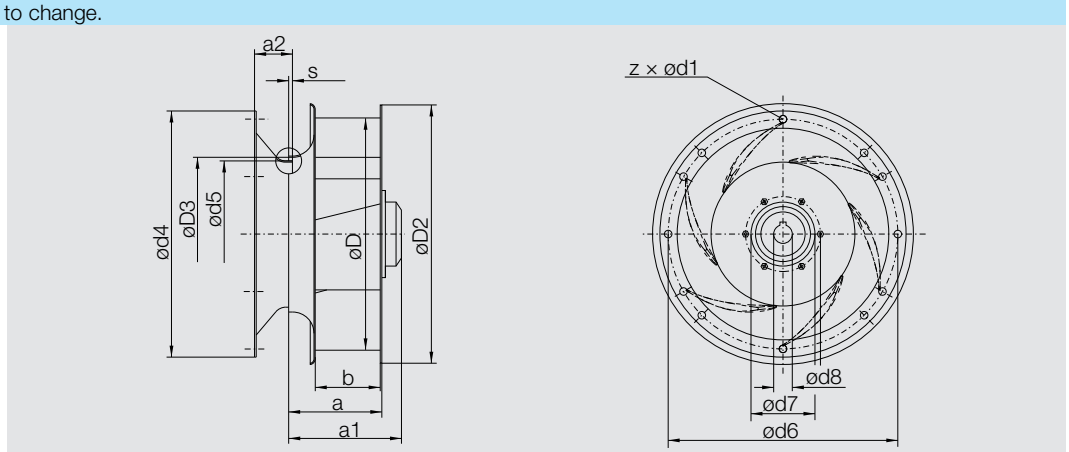
Performance charts

ρ_1=1.20 kg/m³

Measured in installation A according to ISO 5801:



Dimensions in mm, subject to change.



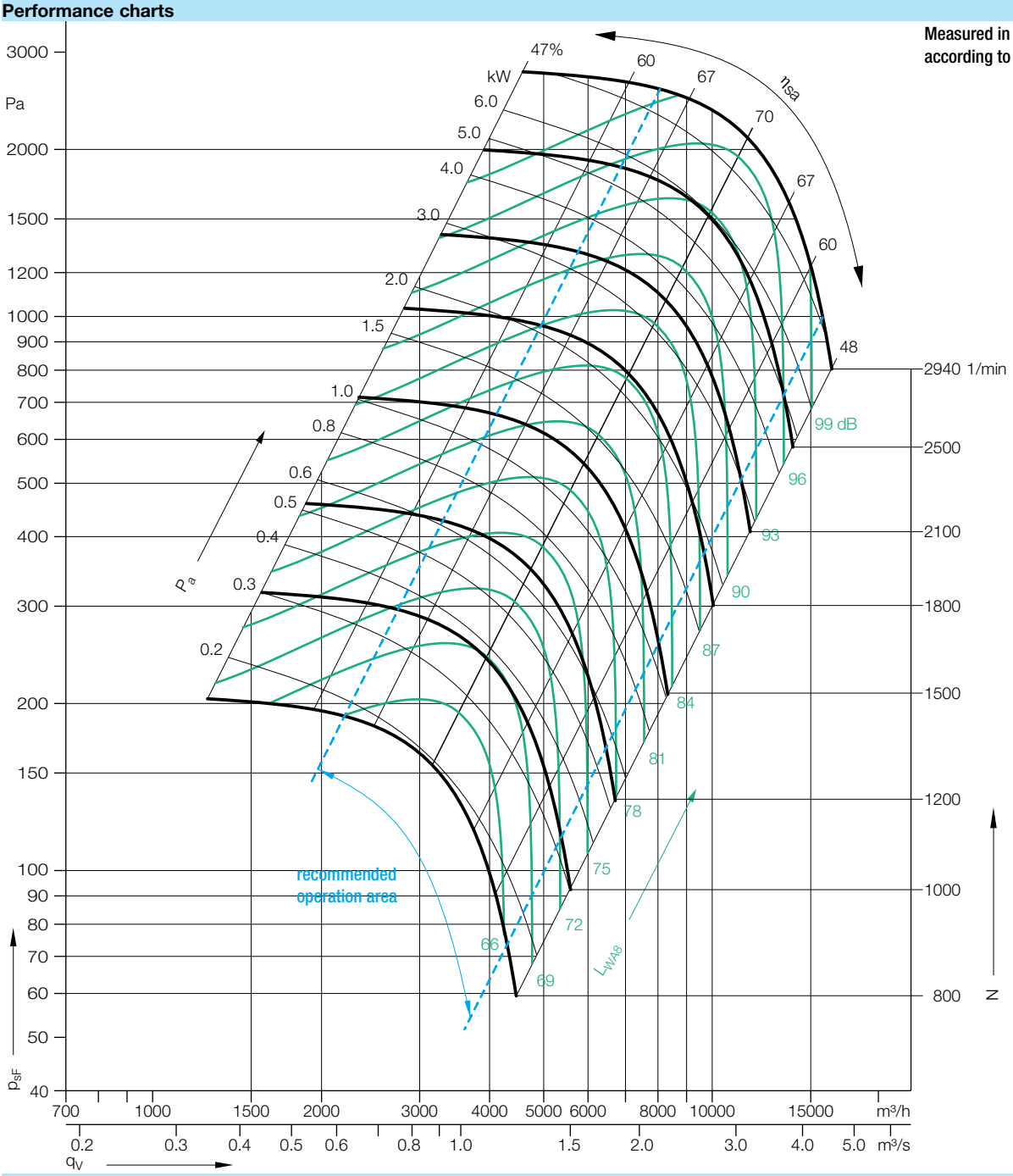
RLO E1-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
4550-D38	202	227	84	143	510	8 × ø9.5	570	340	515	332	487	130	38	3.4/8.5
4550-D28	202	227	84	143	510	8 × ø9.5	570	340	515	332	487	130	28	3.4/8.5
4550-D24	202	227	84	143	510	8 × ø9.5	570	340	515	332	487	130	24	3.4/8.5

RLO 51-4550-D.. with Taper Lock Bushes

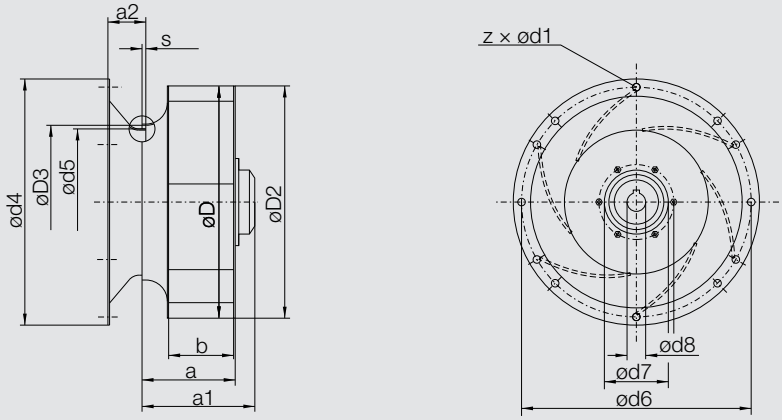
Performance charts

ρ_1=1.20 kg/m³

Measured in installation A according to ISO 5801:



Dimensions in mm, subject to change.



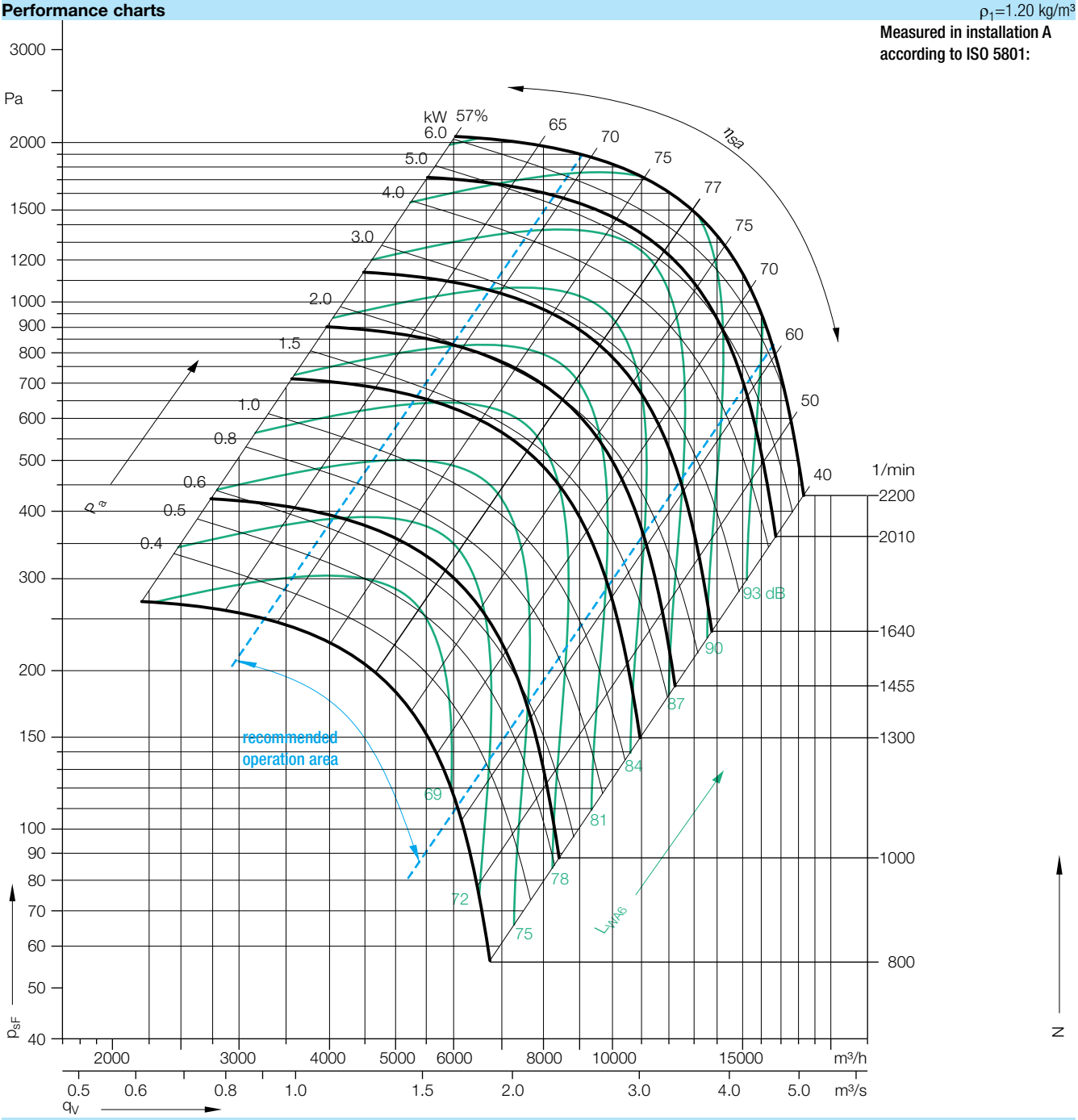
RLO 51-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
4550-D42	203	228	84	143	510	8 × ø9.5	510	340	515	331.9	487	82	42	2.0/6.0
4550-D38	203	228	84	143	510	8 × ø9.5	510	340	515	331.9	487	82	38	2.0/6.0
4550-D28	203	228	84	143	510	8 × ø9.5	510	340	515	331.9	487	82	28	2.0/6.0
4550-D24	203	228	84	143	510	8 × ø9.5	510	340	515	331.9	487	82	24	2.0/6.0

RLO E1-5056-D.. with Taper Lock Bushes

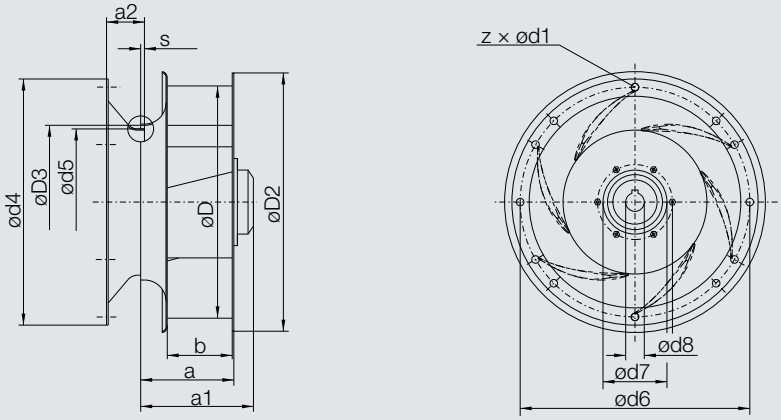
Performance charts

ρ_1=1.20 kg/m³

Measured in installation A
according to ISO 5801:



Dimensions in mm, subject to change.



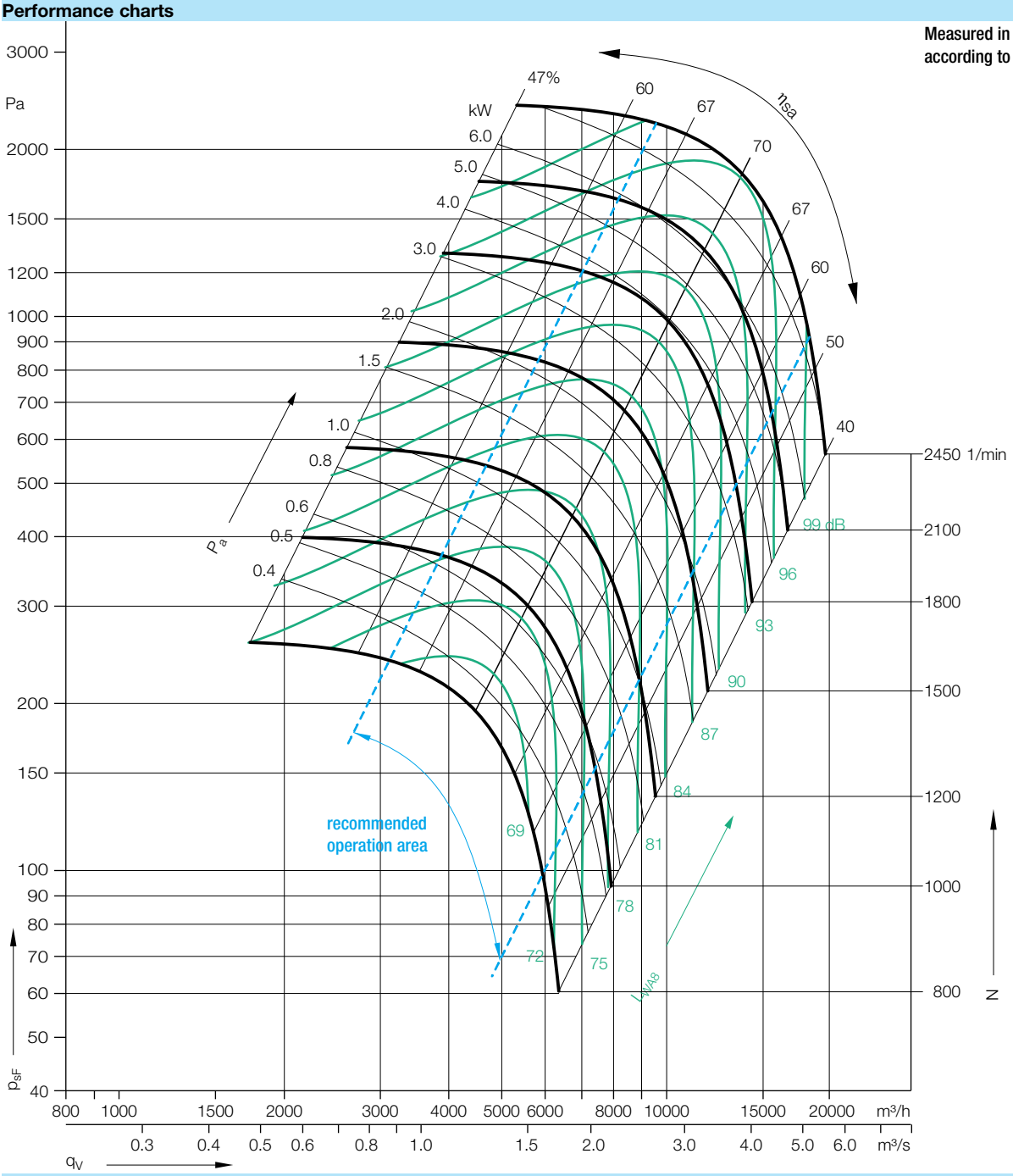
RLO E1-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
5056-D38	227.5	–	91	160	570	8 × ø9.5	640	380	565	371	541	112	38	3.8/9.5
5056-D28	227.5	–	91	160	570	8 × ø9.5	640	380	565	371	541	112	28	3.8/9.5

RLO 51-5056-D.. with Taper Lock Bushes

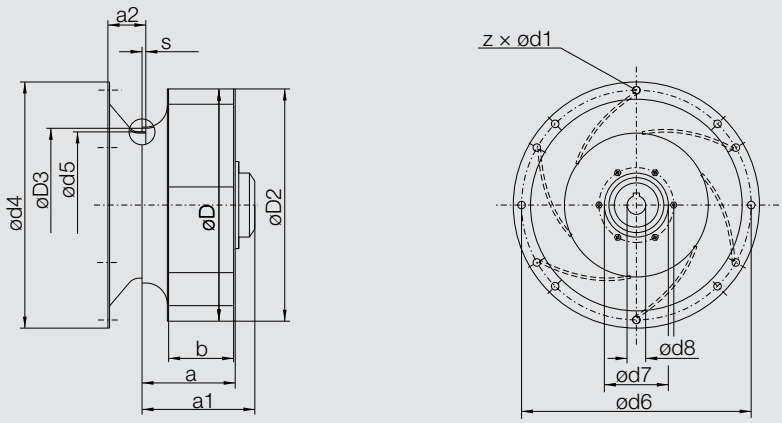
Performance charts

ρ_1=1.20 kg/m³

Measured in installation A according to ISO 5801:



Dimensions in mm, subject to change.



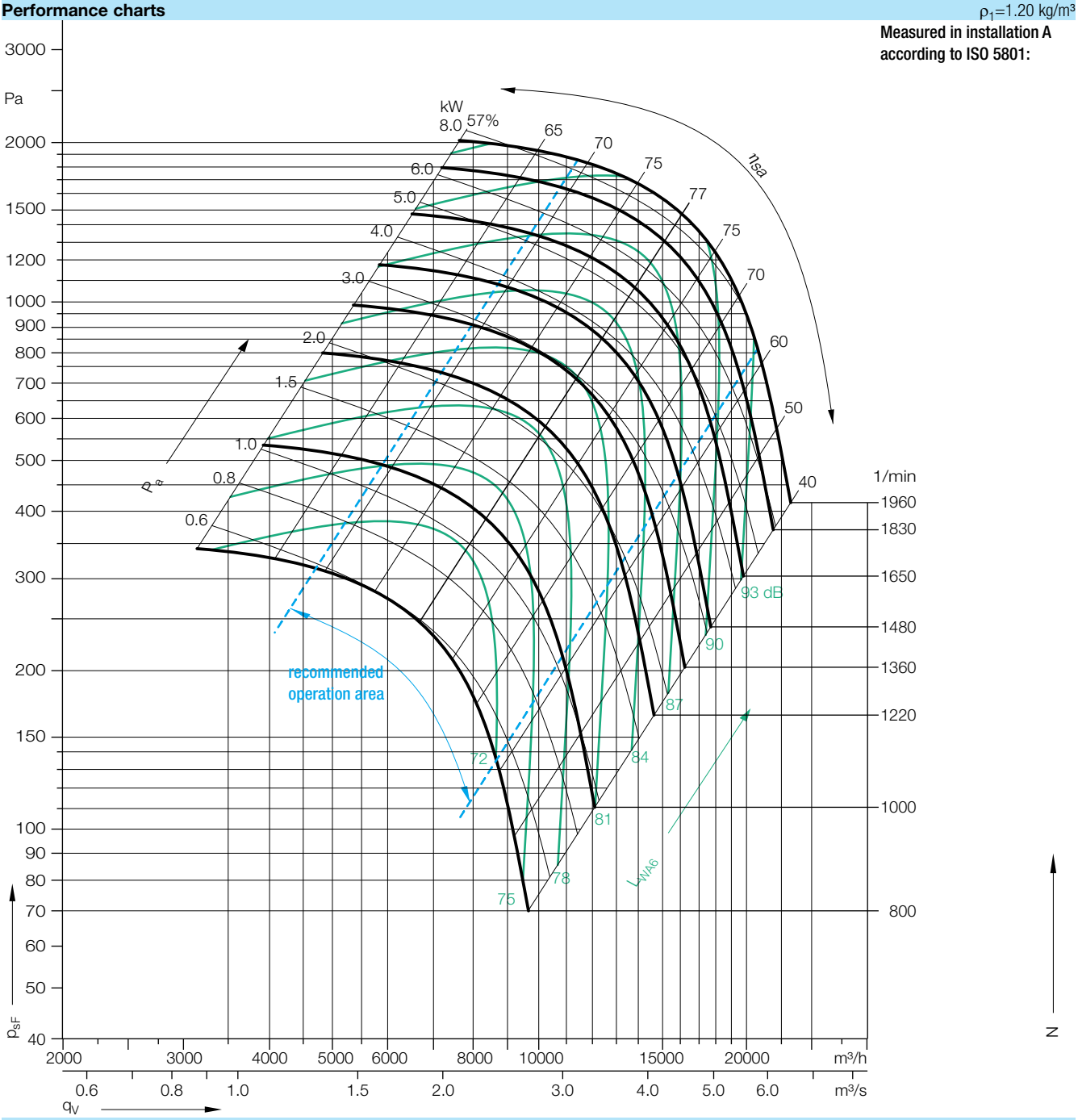
RLO 51-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
5056-D42	228.5	233.8	91	160	570	8 × ø9.5	570	380	565	370.9	541	112	42	2.0/6.0
5056-D38	228.5	233.8	91	160	570	8 × ø9.5	570	380	565	370.9	541	112	38	2.0/6.0
5056-D28	228.5	233.8	91	160	570	8 × ø9.5	570	380	565	370.9	541	112	28	2.0/6.0

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

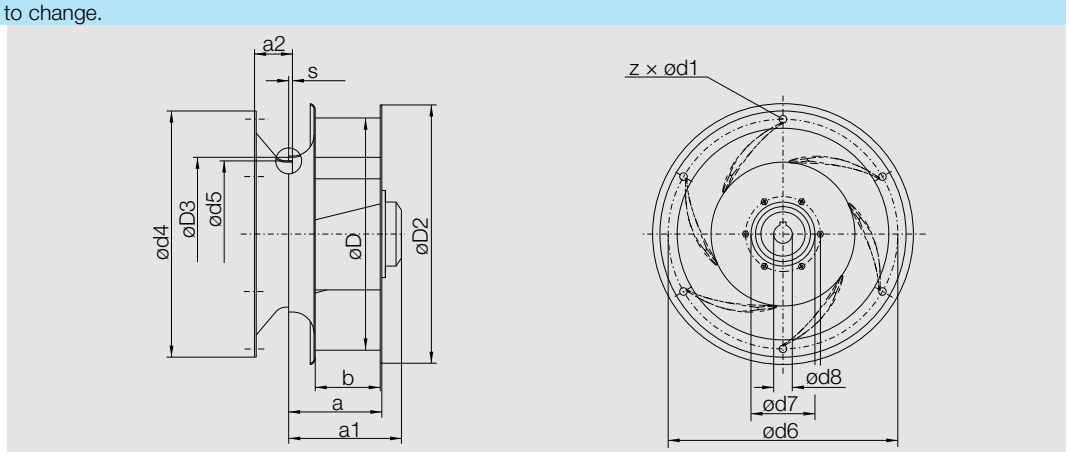
Performance charts

ρ_1=1.20 kg/m³

Measured in installation A according to ISO 5801:



Dimensions in mm, subject to change.



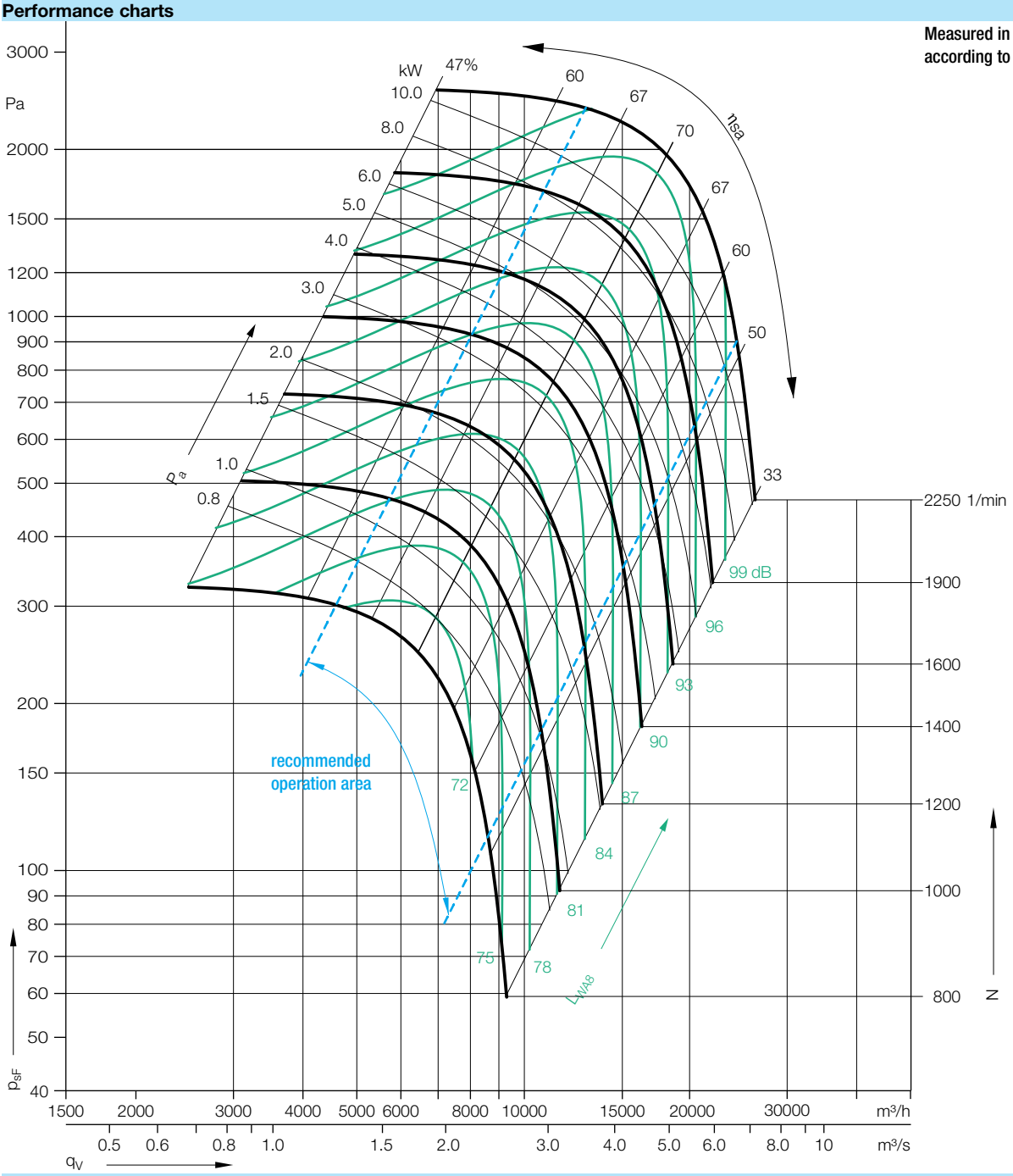
RLO E1-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
5663-D42	252	–	104	180	640	8 × ø12	718	426	640	417	605	112	42	4.3/10.7
5663-D38	252	–	104	180	640	8 × ø12	718	426	640	417	605	112	38	4.3/10.7
5663-D28	252	–	104	180	640	8 × ø12	718	426	640	417	605	112	28	4.3/10.7

RLO 51-5663-D.. with Taper Lock Bushes

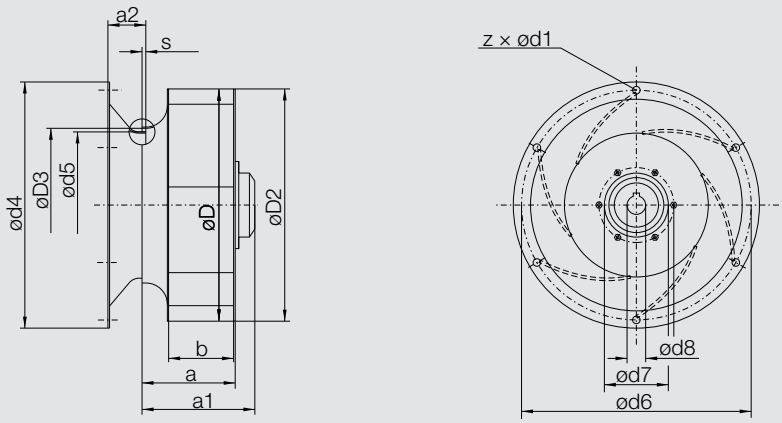
Performance charts

ρ_1=1.20 kg/m³

Measured in installation A according to ISO 5801:



Dimensions in mm, subject to change.



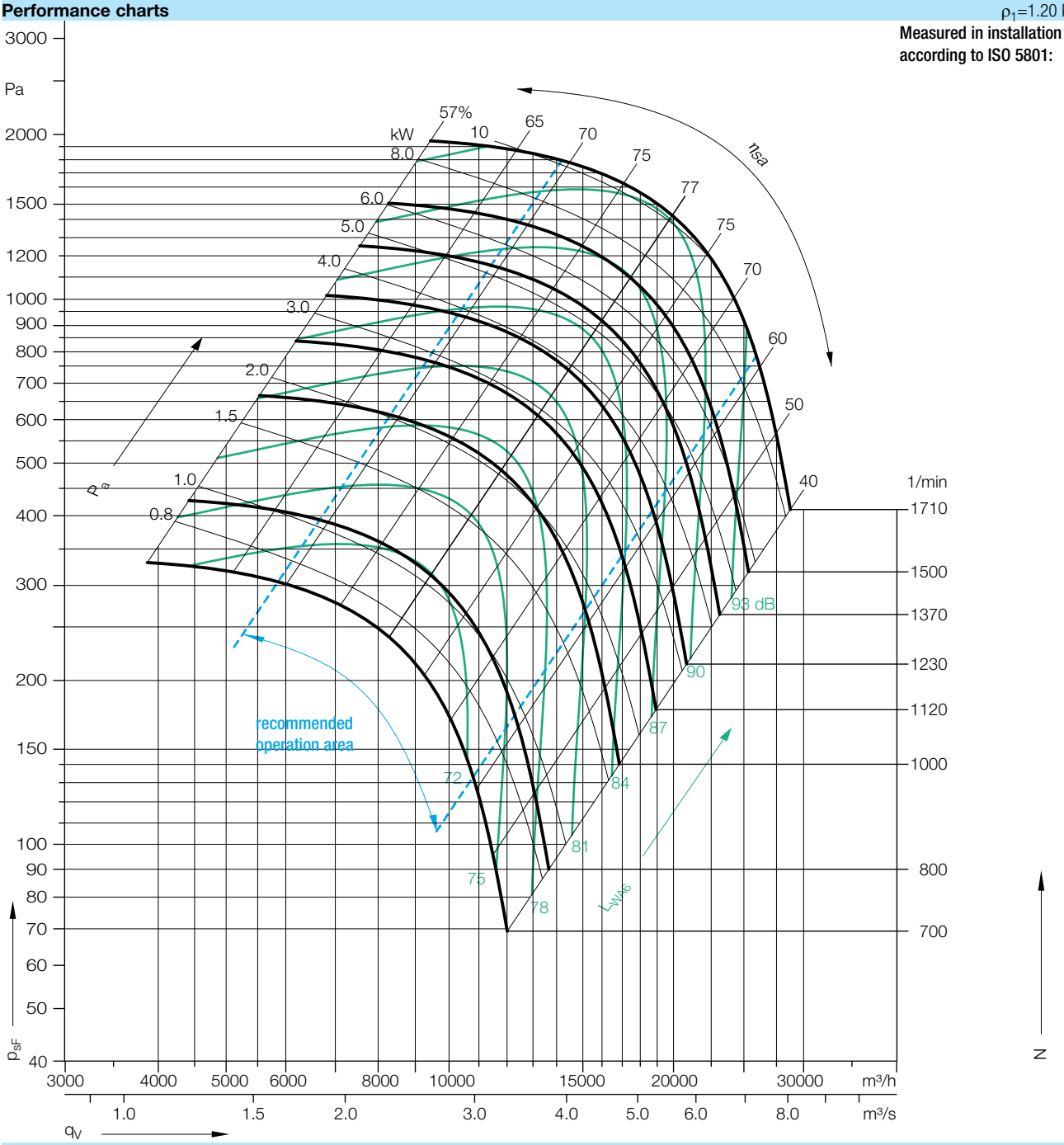
RLO 51-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
5663-D42	252.8	258.1	104	179.8	640	8 × ø12	640	426	640	417.9	605	112	42	2.0/7.0
5663-D38	252.8	258.1	104	179.8	640	8 × ø12	640	426	640	417.9	605	112	38	2.0/7.0
5663-D28	252.8	258.1	104	179.8	640	8 × ø12	640	426	640	417.9	605	112	28	2.0/7.0

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

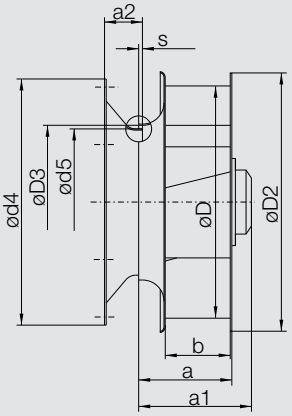
Performance charts

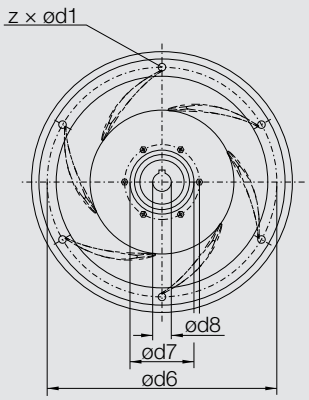
ρ_1=1.20 kg/m³

Measured in installation A according to ISO 5801:



Dimensions in mm, subject to change.





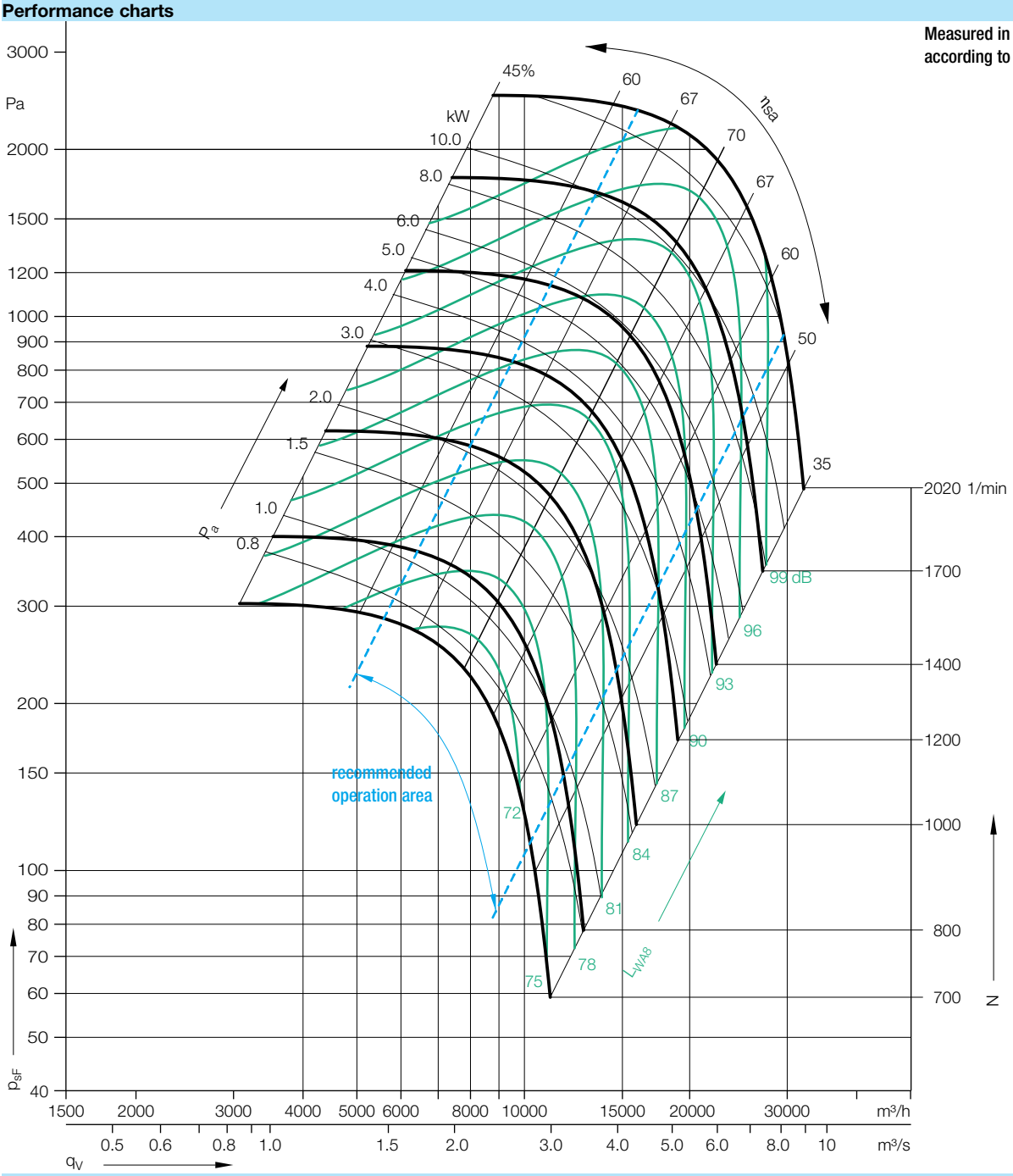
RLO E1-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
6371-D42	282	–	121.2	202	718	8 × ø12	808	479	710	469	674	112	42	4.8/11.9
6371-D38	282	–	121.2	202	718	8 × ø12	808	479	710	469	674	112	38	4.8/11.9

RLO 51-6371-D.. with Taper Lock Bushes

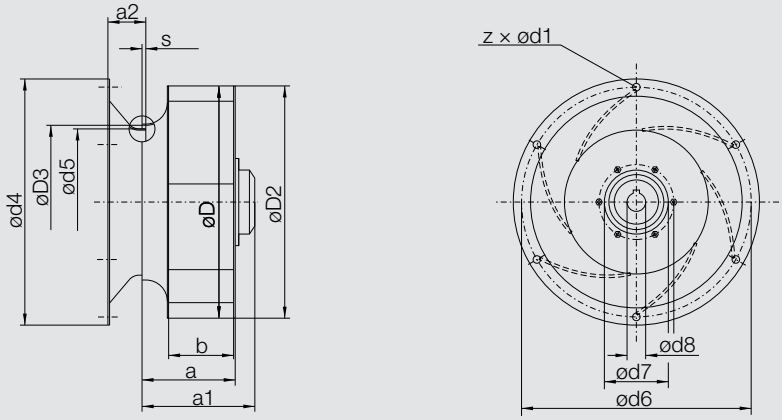
Performance charts

ρ_1=1.20 kg/m³

Measured in installation A according to ISO 5801:



Dimensions in mm, subject to change.



RLO 51-	a	a1	a2	b	øD	z × ød1	øD2	øD3	ød4	ød5	ød6	ød7	ød8	s (min/max)
6371-D48	283	288.3	122	202	718	8 × ø12	718	479	710	468.7	674	112	48	2.0/7.0
6371-D42	283	288.3	122	202	718	8 × ø12	718	479	710	468.7	674	112	42	2.0/7.0
6371-D38	283	288.3	122	202	718	8 × ø12	718	479	710	468.7	674	112	38	2.0/7.0

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