klima celje
INDUSTRIJA AEROTERMIČNIH NAPRAV D.D.

12/2017

AKSIALNI VENTILATORJI
AXIAL FANS

AVS, AVSV
EX AVS, EX AVSV

VSEBINA

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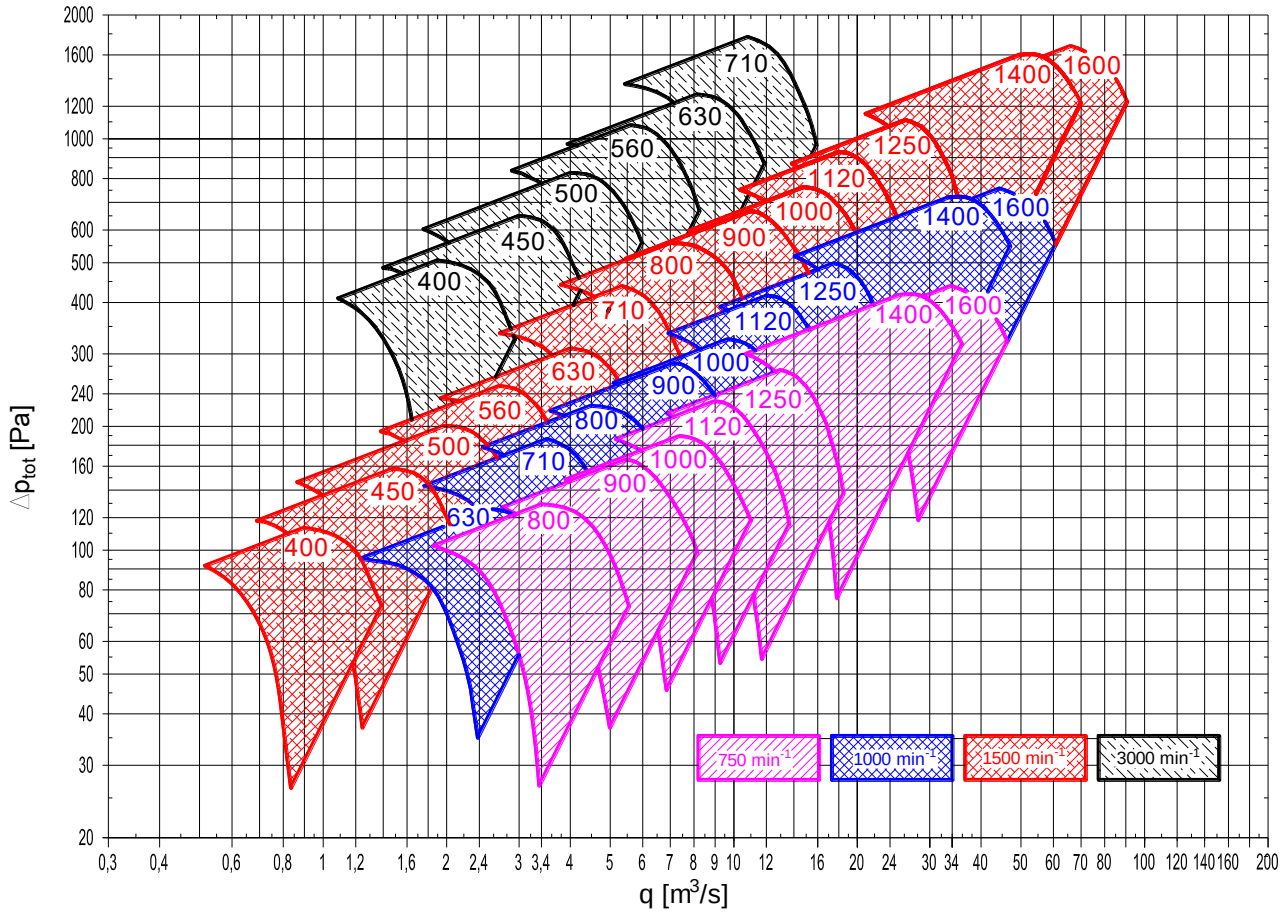
ZBIRNI DIAGRAM

SELECTION DIAGRAM



TEHNIČNI OPIS

AVS – aksialni ventilatorji brez vodilnika
AVSV – aksialni ventilatorji z vodilnikom - za večje tlake, namenjeni so za vgradnjo s tlačnim cevovodom ali difuzorjem.

Aksialni ventilatorji tip AVS so namenjeni za široko področje uporabe v sistemih prezračevanja, klimatizacije in kot tehnološki ventilatorji v procesni industriji. Primerni so za večje količine zraka pri relativno nizkih tlakih za temperature medija do 55°C.
Tekač ima profilirane, kokilno odlite lopatice, ki zagotavljajo dober izkoristek in relativno nizek zvočni nivo. Material lopatic in pesta je korozijsko odporna Al zlitina. V mirovanju lahko spreminjamo nastavni kot lopatic in tako prilagodimo karakteristiko ventilatorja zahtevani delovni točki sistema. Tekač je statično in dinamično uravnotežen v klasi G 6,3 po DIN ISO 1940-1. Varjeno ohišje je standardno barvano z RAL 7011.
Za pogon se uporabljajo trifazni IEC elektromotorji 3x400 V, 50 Hz, IP 55, izolacija F z vgrajenimi PTC tipali za termično zaščito. Električni priključek pri kanalski izvedbi je v zunanji priključni dozi, pri kratki izvedbi z lijakom pa v priključni dozi motorja.
Ventilatorje izdelujemo od nazivne velikosti Ø 400 do Ø 1600 mm po standardni vrsti ISO - R20.

Aksialni ventilatorji z vodilnikom AVSV dosegajo večje totalne tlake. Uporabljajo se za vgradnjo s tlačnim kanalom ali izstop z difuzorjem v sistemih z večjimi zračnimi upori.

Tehnične lastnosti ventilatorjev omogočajo izbiro direktno gnanega ventilatorja v območju optimalnega izkoristka.

Posebne izvedbe

- EX AVS – za delovanje v potencialno eksplozivni atmosferi (direktiva 2014/34/EU) II 2G Ex c IIB T4 – stran 33;
- ventilatorji za odvod dima in toplote – prospekt ODT-AV;
- AVT ventilatorji za hlajenje el. naprav – transformatorjev;
- ohišje vroče pocinkano;
- ohišje in pesto tekača 1.4301, 1.4404, 1,4571;
- ventilatorji z jermenskim pogonom;
- ventilatorji s prisilnim hlajenjem motorja za višje temperature;
- izvedba ventilatorja glede na zahteve kupca.

Prodajno tehnična služba vam za dane podatke in namen uporabe izbere tehnično in cenovno najugodnejši ventilator.

GENERAL

AVS – axial fans without guide vane
AVSV – axial fans with guide vane for high pressure systems and installation with pressure duct or diffuser.

AVS type axial fans are designed for wide field of applications in ventilation and air-condition systems and as technological fans in process industry. They are suitable for larger airflows at relative low pressure for the medium temperatures up to 55°C.
Airfoil mold casted impeller blades ensure high efficiency ratio and relatively low sound level. Blades and hub material is corrosion resistant Al alloy. At fan standstill the blades angle is adjustable and the fan characteristic can be adjusted according to system operating point. Impeller is statically and dynamically balanced in class G 6,3 according to DIN ISO 1940-1. Welded casing is standard painted with RAL 7011.
For drive the IEC three-phase motors are used: 3x400 V, 50Hz, IP 55, insulation class F, PTC sensors for thermal protection. Electrical connection: duct design has terminal box on the fan casing and short design in the motor terminal box.
We produce fans from diameter Ø400 to Ø1600 mm according ISO-R20 standard.

Axial fans with guide vane AVSV achieve higher total pressure. They are mainly used for installation in a duct or with diffuser in systems with higher pressure drop.

Fan technical characteristics enables in most cases that direct driven fan can operate in range of optimal efficiency ratio.

Special designs

- EX AVS fans for operation in potentially explosive atmosphere (2014/34/EC) II 2G Ex c IIB T4– page 33;
- fans for smoke and heat extraction – catalogue ODT-AV;
- AVT fans for electrical equipment cooling - transformers;
- hot dip galvanized casing;
- casing and impeller hub from 1.4301, 1.4404, 1,4571;
- belt driven fans;
- fans with forced cooling motor for higher temperatures;
- fan design according to customer's requests.

Sales and technical department can select for you the most suitable fan according to given data and field of use.

OZNAČEVANJE

AVS(V) 630 – 4/8 – xx – xxx

Smer pretoka in vgradnja
- Desna smer pretoka
- Vertikalna vgradnja
- Dodatne zahteve

Izvedba AL (za AVS)

Število polov:
2, 4, 6, 8;
2/4, 4/8; 4/6, 6/8

Nazivni premer [mm]

Tip aksialnega ventilatorja
AVS brez vodilnika
AVSV z vodilnikom
EX AVS Ex izvedba brez vodilnika
EX AVSV Ex izvedba z vodilnikom

FAN DESIGNATION

Airflow direction and installation
- Right flow direction
- Vertical design
- Additional requests

Design AL (for AVS)

Motor poles no.
2, 4, 6, 8;
2/4, 4/8; 4/6, 6/8

Nominal diameter [mm]

Axial fan type
AVS without guide vane
AVSV with guide vane
EX AVS Ex design without guide vane
EX AVSV Ex design with guide vane

TEHNIČNI PODATKI AVS in AVSV

Tip Type	n RPM	Kot Angle	Motor 400V; 50Hz			Teža Weight		
			P_{EM}	I_N	IEC	AVS		AVSV
AVS AVSV	[min^{-1}]		[kW]	[A]		AL [kg]	AK [kg]	[kg]
400-2	3000	16°-21°	1,5	3,2	90	24	41	47
		22°-32°	2,2	4,51	90	26	44	50
400-4	1500	16°-32°	0,25	1,07	71	17	24	30
400-2/4	3000/1500	16°-24°	1,50/0,37	3,38/0,90	90	/	41	47
		16°-30°	2,00/0,50	4,63/1,24	90	/	47	53
450-2	3000	16°-20°	2,2	4,51	90	/	54	61
		21°-27°	3,0	5,93	100	/	62	69
450-4	1500	16°-26°	0,37	1,07	71	18	27	34
		27°-32°	0,55	1,46	80	21	38	45
450-2/4	3000/1500	16°-18°	2,00/0,50	4,63/1,24	90	/	57	64
		19°-32°	3,60/0,90	8,45/2,48	100	/	74	81
500-2	3000	16°	3,0	5,93	100	/	69	77
		17°-23°	4,0	7,32	112	/	76	84
500-4	1500	16°	0,37	1,07	71	20	30	38
		17°-25°	0,55	1,46	80	22	41	49
		26°-32°	0,75	2,06	80	23	42	50
500-2/4	3000/1500	16°-20°	3,60/0,90	8,45/2,48	100	/	72	80
		21°-27°	4,80/1,20	9,57/2,48	112	/	83	91
560-2	3000	16°-18°	5,5	13,7	132	/	104	114
		18°-21°	7,5	13,7	132	/	107	117
		22°-30°	11	20,0	160	/	120	130
560-4	1500	16°-19°	0,75	1,89	80	30	48	58
		20°-28°	1,1	2,7	90	34	53	63
		29°-32°	1,5	3,5	90	36	59	69
560-2/4	3000/1500	16°-23°	8,20/2,20	15,1/4,90	132	/	130	140
		24°-32°	12,0/3,30	22,2/7,33	160	/	163	173
630-2	3000	16°	7,5	13,7	132	/	117	128
		17°-21°	11	20,0	132	/	130	141
		22°-28°	15	26,6	160	/	174	185
		29°-32°	18,5	32,6	160	/	191	202
630-4	1500	16°-18°	1,1	2,7	90	36	55	66
		19°-24°	1,5	3,5	90	39	61	72
		25°-32°	2,2	4,88	100	43	67	78
630-6	1000	16°	0,25	0,91	71	29	37	48
		17°-23°	0,37	1,21	80	31	48	59
		24°-32°	0,55	1,78	80	31	50	61
630-2/4	3000/1500	16°-17°	8,20/2,20	15,1/4,90	132	/	140	151
		18°-23°	12,0/3,30	22,2/7,33	160	/	174	185
		24°-32°	17,0/4,30	30,7/9,71	160	/	191	202
630-4/6	1500/1000	16°-31°	2,00/0,75	4,17/2,29	100	/	67	78
710S-2	3000	16°	15	27,4	160	/	/	228
		17°-20°	18,5	33,7	160	/	/	245
		21°-24°	22	39,9	180	/	/	282
710S-4	1500	16°-20°	2,2	4,88	100	/	/	116
		21°-26°	3,0	6,4	100	/	/	120
		27°-28°	4,0	8,28	112	/	/	126
710S-6	1000	16°-24°	0,75	2,19	90	/	/	102
		25°-28°	1,1	2,98	90	/	/	104
710S-2/4	3000/1500	16°-19°	17,0/4,30	30,7/9,71	160	/	/	245
710S-4/6	1500/1000	16°-27°	3,00/1,00	7,80/2,88	112	/	/	124

TECHNICAL DATA AVS and AVSV

Tip Type	n RPM	Kot Angle	Motor 400V; 50Hz			Teža Weight		
			P_{EM}	I_N	IEC	AVS		AVSV
AVS AVSV	[min^{-1}]		[kW]	[A]		AL [kg]	AK [kg]	[kg]
710-2	3000	16°	15	27,4	160	/	221	239
		17°-20°	18,5	33,7	160	/	238	256
		21°-23°	22	39,9	180	/	274	292
710-4	1500	16°-20°	2,2	4,88	100	71	109	127
		21°-24°	3,0	6,4	100	75	113	131
		25°-30°	4,0	8,28	112	81	119	137
		32°	5,5	10,8	132	96	106	124
710-6	1000	16°-23°	0,75	2,19	90	64	95	113
		24°-31°	1,1	2,98	90	66	97	115
		32°	1,5	4,00	100	72	105	123
710-2/4	3000/1500	16°-19°	17,0/4,30	30,7/9,71	160	/	238	256
710-4/6	1500/1000	16°-27°	3,00/1,00	7,80/2,88	112	/	116	134
800-4	1500	14°-18°	4,0	8,28	112	/	154	176
		19°-24°	5,5	10,8	132	/	174	196
		25°-32°	7,5	14,3	132	/	186	208
800-6	1000	14°-19°	1,1	2,98	90	73	112	134
		20°-24°	1,5	4,0	100	78	121	143
		25°-32°	2,2	5,12	112	87	127	149
800-8	750	14°-22°	0,55	1,96	90	74	112	134
		23°-29°	0,75	2,42	100	78	121	143
		30°-32°	1,1	3,21	100	81	122	144
800-4/6	1500/1000	14°-26°	6,00/2,20	11,8/5,66	132	/	186	208
		27°-32°	10,0/3,30	21,1/8,40	160	/	230	252
800-4/8	1500/750	14°-22°	5,00/1,20	10,2/3,09	132	/	178	200
		23°-28°	6,50/1,80	13,9/5,62	132	/	186	208
		29°-32°	10,0/2,50	20,2/6,60	160	/	223	245
900-4	1500	14°	5,5	10,8	132	/	203	230
		15°-19°	7,5	14,3	132	/	215	242
		20°-26°	11	20,9	160	/	260	287
		27°-32°	15	28,1	160	/	279	306
900-6	1000	14°-20°	2,2	5,12	112	/	140	167
		21°-26°	3,0	7,0	132	/	159	186
		27°-32°	4,0	8,9	132	/	174	201
900-8	750	14°-22°	1,1	3,21	100	/	134	161
		23°-28°	1,5	4,19	112	/	140	167
		29°-32°	2,2	5,7	132	/	165	192
900-4/6	1500/1000	14°-24°	10,0/3,30	21,1/8,40	160	/	260	287
		25°-30°	13,0/4,40	25,3/10,8	160	/	279	306
		31°-32°	16,0/5,40	30,5/13,9	180	/	329	356
900-4/8	1500/750	14°-24°	10,0/2,50	20,2/6,60	160	/	253	280
		25°-30°	12,5/3,50	23,4/8,30	160	/	274	301
		31°-32°	16,0/4,50	29,9/11,0	180	/	318	345

Tip Type	n RPM	Kot Angle	Motor 400V; 50Hz			Teža Weight		
			P_{EM}	I_N	IEC	AVS		AVSV
AVS AVSV	[min^{-1}]		[kW]	[A]		AL [kg]	AK [kg]	[kg]
1000-4	1500	14°-19°	11	20,9	160	/	281	313
		20°-24°	15	28,1	160	/	300	332
		25°-30°	18,5	33,3	180	/	338	370
		31°-32°	22	40,3	180	/	351	383
1000-6	1000	14°-19°	3,0	7,0	132	/	181	213
		20°-24°	4,0	8,9	132	/	196	228
		25°-30°	5,5	12,0	132	/	200	232
		31°-32°	7,5	15,8	160	/	237	269
1000-8	750	14°-20°	1,5	4,19	112	/	160	192
		21°-28°	2,2	5,7	132	/	187	219
		29°-32°	3,0	7,3	132	/	191	223
1000-4/6	1500/1000	14°-17°	10,0/3,30	21,1/8,40	160	/	281	313
		18°-21°	13,0/4,40	25,3/10,8	160	/	300	332
		22°-25°	16,0/5,40	30,5/13,9	180	/	351	383
		26°-28°	20,0/6,70	37,2/15,4	180	/	360	392
1000-4/8	1500/750	14°-17°	10,0/2,50	20,2/6,60	160	/	274	306
		18°-21°	12,5/3,50	23,4/8,30	160	/	296	328
		22°-25°	16,0/4,50	29,9/11,0	180	/	341	373
		26°-28°	20,0/5,00	37,7/12,9	180	/	355	387
1120-4	1500	14°-16°	15	28,1	160	/	368	409
		17°-19°	18,5	33,3	180	/	406	447
		20°-22°	22	39,9	180	/	420	461
		23°-28°	30	53,8	200	/	470	511
		29°-30°	37	66,9	225	/	525	566
1120-6	1000	14°-19°	5,5	12	132	/	269	310
		20°-24°	7,5	15,8	160	/	309	350
		25°-30°	11	22,4	160	/	331	372
1120-8	750	14°-19°	2,2	5,7	132	/	257	298
		20°-24°	3,0	7,3	132	/	261	302
		25°-30°	4,0	9,3	160	/	296	337
1120-4/6	1500/1000	14°-17°	16,0/5,40	30,5/13,9	180	/	420	461
		18°-20°	20,0/6,70	37,2/15,4	180	/	428	469
1120-4/8	1500/750	14°-17°	16,0/4,50	29,9/11,0	180	/	409	450
		18°-20°	20,0/5,00	37,7/12,9	180	/	424	465
1250S-4*	1500	14°-17°	30	53,8	200	/	/	586
		18°-20°	37	66,9	225	/	/	641
		21°-23°	45	80,2	225	/	/	668
		24°-28°	55	97,0	250	/	/	730
1250S-6*	1000	14°-20°	11	22,4	160	/	/	428
		21°-26°	15	29,4	180	/	/	473
		27°-28°	18,5	35,3	200	/	/	519

Tip Type	n RPM	Kot Angle	Motor 400V; 50Hz			Teža Weight		
			P_{EM}	I_N	IEC	AVS		AVSV
AVS AVSV	[min^{-1}]		[kW]	[A]		AL [kg]	AK [kg]	[kg]
1250-4	1500	16°-17°	37	66,9	225	/	619	696
		18°-20°	45	80,2	225	/	652	729
		21°-25°	55	97,6	250	/	714	791
		26°-32°	75	133	280	/	844	921
1250-6	1000	16°-19°	11	22,4	160	/	411	488
		20°-25°	15	29,4	180	/	457	534
		26°-30°	18,5	35,3	200	/	502	579
		31°-32°	22	42,1	200	/	511	588
1250-8	750	16°-20°	5,5	12,7	160	/	387	464
		21°-28°	7,5	16,3	160	/	408	485
		29°-32°	11	23,7	180	/	456	533
1400-4*	1500	11°	45	80,2	225	/	**	**
		12°-15°	55	97,6	250	/	**	**
		16°-20°	75	133	280	/	**	**
		21°-24°	90	159	280	/	**	**
		25°-28°	110	191	315	/	**	**
		30°-31°	132	229	315	/	**	**
1400-6*	1000	11°-13°	15	29,4	200	/	**	**
		14°-17°	18,5	35,3	200	/	**	**
		18°-20°	22	42,1	200	/	**	**
		21°-27°	30	56,3	225	/	**	**
		28°-31°	37	67,4	250	/	**	**
1400-8*	750	11°-16°	7,5	16,3	160	/	**	**
		17°-23°	11	23,7	180	/	**	**
		24°-29°	15	32,1	200	/	**	**
		30°-31°	18,5	38,8	225	/	**	**
1600-4*	1500	9°-13°	75	133	280	/	**	**
		14°-16°	90	159	280	/	**	**
		17°-19°	110	191	315	/	**	**
		20°-22°	132	229	315	/	**	**
		23°-25°	160	274	315	/	**	**
		26°-29°	200	341	315	/	**	**
1600-6*	1000	9°-11°	18,5	35,3	225	/	**	**
		12°-13°	22	42,1	250	/	**	**
		14°-18°	30	56,3	250	/	**	**
		19°-21°	37	67,4	250	/	**	**
		22°-25°	45	81,5	280	/	**	**
		26°-29°	55	99,2	280	/	**	**
1600-8*	750	9°-15°	11	23,7	180	/	**	**
		16°-19°	15	32,1	200	/	**	**
		20°-24°	18,5	38,8	225	/	**	**
		25°-28°	22	43,8	225	/	**	**

Parametri el. motorja lahko odstopajo glede na njegovega proizvajalca.

Natančnejši parametri motorja se določijo glede na zahtevano obratovalno točko ventilatorja.

* samo AVSV

** odvisno od motorja

Parameters of the electric motor can deviate with regard to its producer.

More detailed motor parameters are determined according to the required fan operating point.

* AVSV only

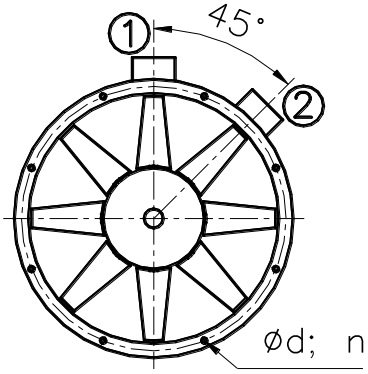
** depending on the motor

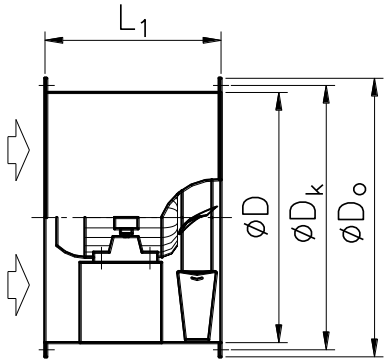
AKSIALNI VENTILATORJI AVS

AVS AXIAL FANS

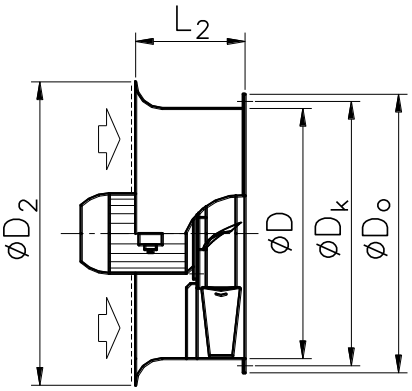
Izvedbe in dimenzije

Designs and dimensions





Standardna izvedba
Standard design



AL - kratka izvedba z lijakom
AL - shaped inlet casing

Standardna smer pretoka: **LEVA** (motor na sesalni strani)
Standard air flow direction: **LEFT** (motor on suction side)

Standardna vrsta vgradnje: **HORIZONTALNA**
Standard mounting position: **HORIZONTAL**

AVS -	ØD [mm]	$ØD_k$ [mm]	$ØD_o$ [mm]	Ød [mm]	n	L_1 [mm]	L_1* [mm]	L_2 [mm]	$ØD_2$ [mm]	z Št. lopatic Blades No.	Priklj. doza Terminal box
400	400	438	464	Ø9,5	12	400		240	500	7	1
450	450	487	513	Ø9,5	12	450		240	550	7	1
500	500	541	567	Ø9,5	12	500		240	650	7	1
560	560	605	639	Ø11,5	16	550		240	710	8	1
630	630	674	708	Ø11,5	16	650	500	240	790	8	1
710	710	751	785	Ø11,5	16	700	550	240	870	7	2
800	800	837	871	Ø11,5	24	650		300	960	8	2
900	900	958	1004	Ø14	24	800	700	/	1100	8	2
1000	1000	1067	1107	Ø14	24	800	700	/	1200	8	2
1120	1120	1200	1250	Ø18	32	1000	800	/	1360	9	2
1250	1250	1337	1387	Ø18	32	1000	800	/	1480	8	2

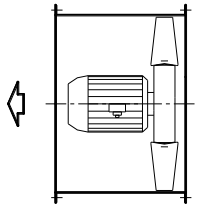
L_1* – za 4,6-polne elektromotorje (AVS 630 – 710)
– za 6,8-polne elektromotorje (AVS 900 – 1250)

L_1* – For 4,6-pole motors (AVS 630 – 710)
– For 6,8-pole motors (AVS 900 – 1250)

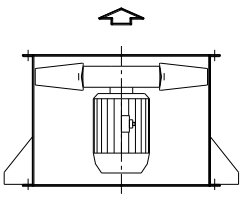
Smer pretoka in vgradnja

Airflow direction and mounting positions

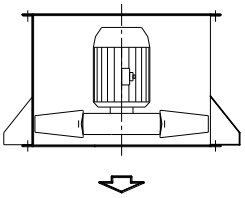
Smer pretoka: DESNA (motor na tlačni strani)
Airflow direction: RIGHT (motor on pressure side)



Standardna vertikalna izvedba
Standard vertical design



Vertikalna izvedba: DOL
Vertical design: DOWN



Možne so tudi kombinacije posebnih vrst vgradnje z desno smerjo pretoka
Combinations with special mounting positions and right air flow direction are also possible.

Določitev šumnosti AVS

Zvočna moč je odvisna v glavnem od pretoka zraka in totalnega tlaka ventilatorja (diagram Lw_t).
Korekcija zvočne moči nastopa zaradi:
- premera ventilatorja (K_D);
- nastavnega kota lopatic (K_α);
- lege obratovalne točke v diagramu (K_L).

Nivo zvočne moči je:

$Lw = Lw_t + K_D + K_\alpha + K_L$ (dB)

Nivo zvočne moči po posameznih središčnih frekvencah oktavnega pasu določimo po enačbi:
$Lw_{okt} = Lw + K_{okt}$ (dB)

Sound level data AVS

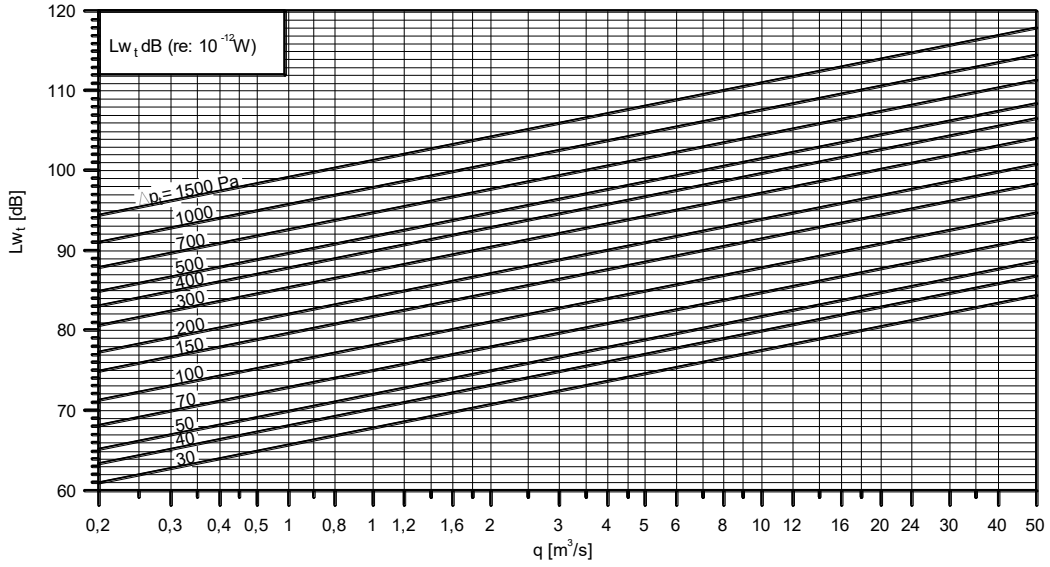
Sound power level depends on the quantity of supplied air and the total pressure of the fan.
Correction values depend of:
- fan diameter (K_D);
- blades angle (K_α);
- position of operating point in graph (K_L).

The sound power level is:

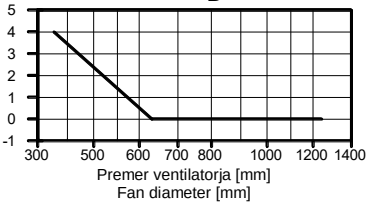
$Lw = Lw_t + K_D + K_\alpha + K_L$ (dB)

Sound power level in the individual octave bands are determined by equation:
$Lw_{okt} = Lw + K_{okt}$ (dB)

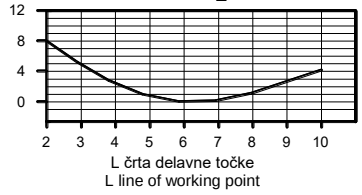
Lw_t



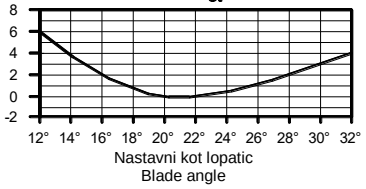
K_D



K_L

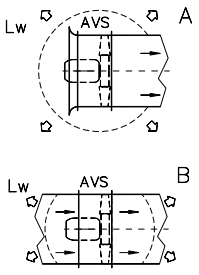


K_α



Vgradnja Installation.	f_r (Hz)	K_{okt} (dB)							
		63	125	250	500	1k	2k	4k	8k
"A"	90 – 180	-8	-7	-6	-5	-8	-15	-22	-30
	181 – 355	-16	-8	-7	-6	-5	-8	-15	-22
	356 – 710	-22	-16	-8	-7	-6	-5	-8	-15
"B"	90 – 180	-7	-7	-7	-9	-10	-22	-35	-49
	181 – 355	-7	-7	-7	-7	-9	-10	-22	-35
	356 – 710	-8	-7	-7	-7	-7	-9	-10	-22

Vgradnja / Installation

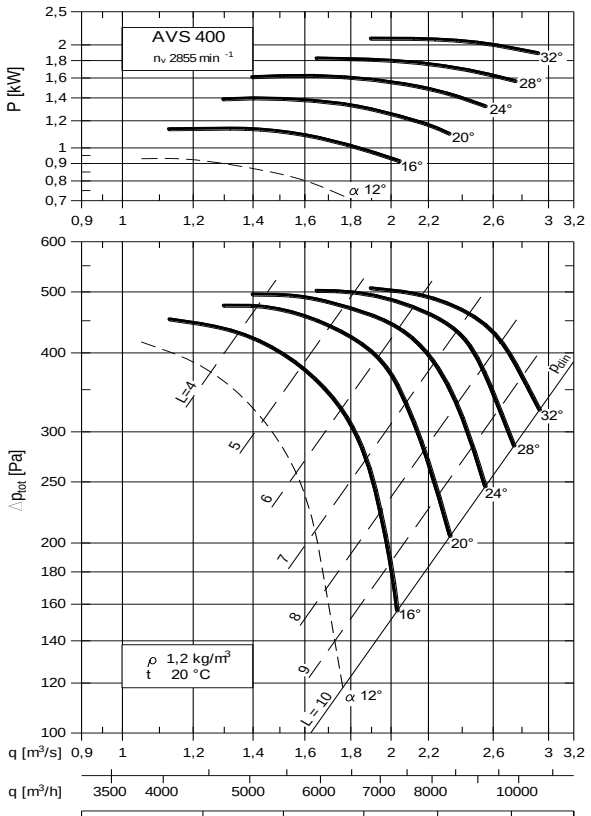


$f_r = \frac{n}{60} \cdot z \quad [Hz]$ Lastna frekvenca lopatic (Hz)

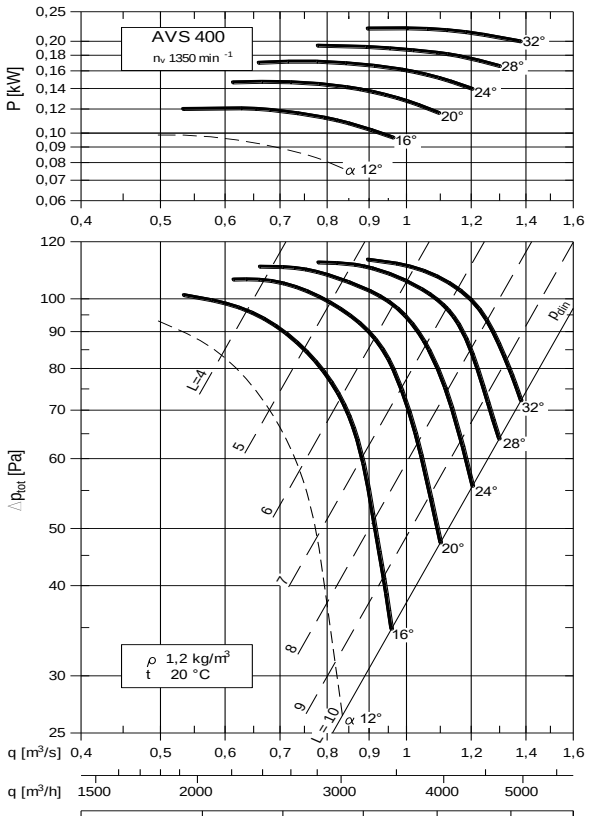
z – število lopatic (glej str. 5)
n – vrtljaji (min^{-1})

$f_r = \frac{n}{60} \cdot z \quad [Hz]$ Blades frequency (Hz)

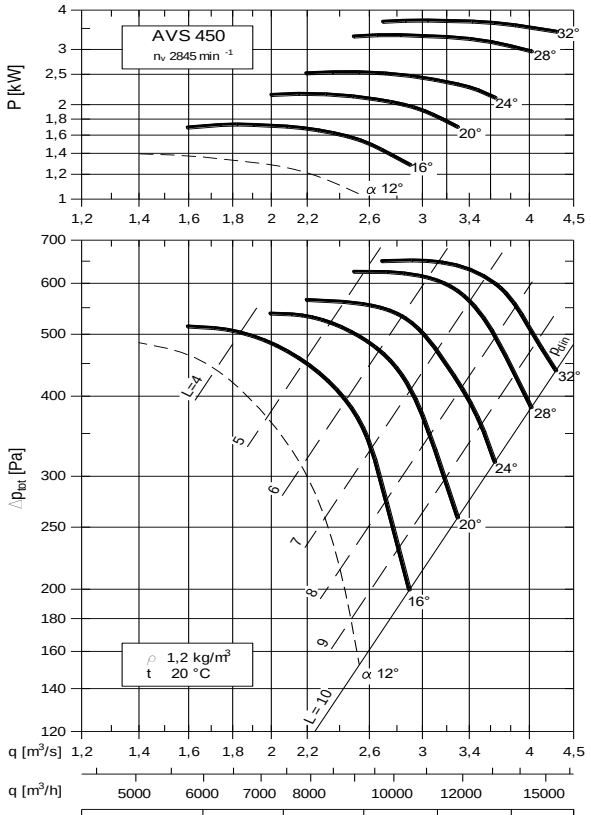
z – blades number (see page 5)
n – RPM (min^{-1})



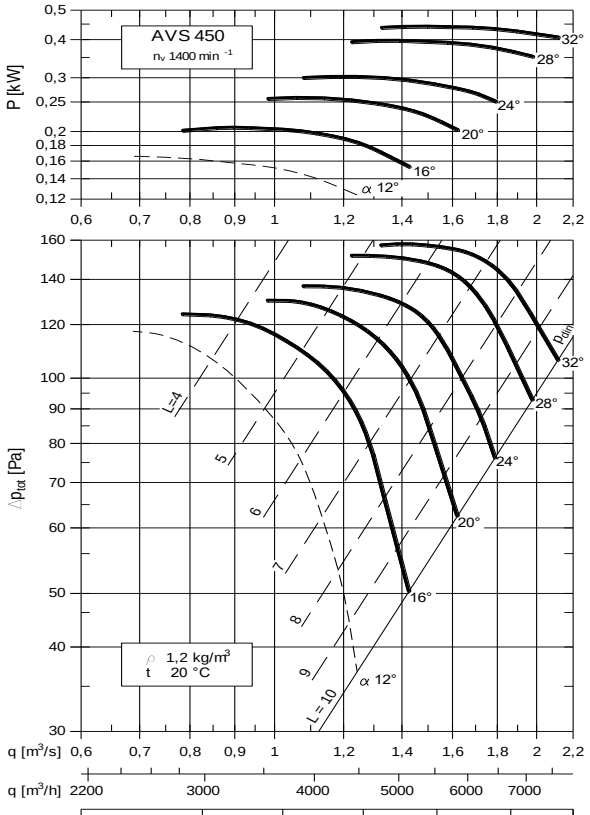
α_{max}	16°	20°	24°	28°	32°
el. mot. (kW)	1,5		2,2		



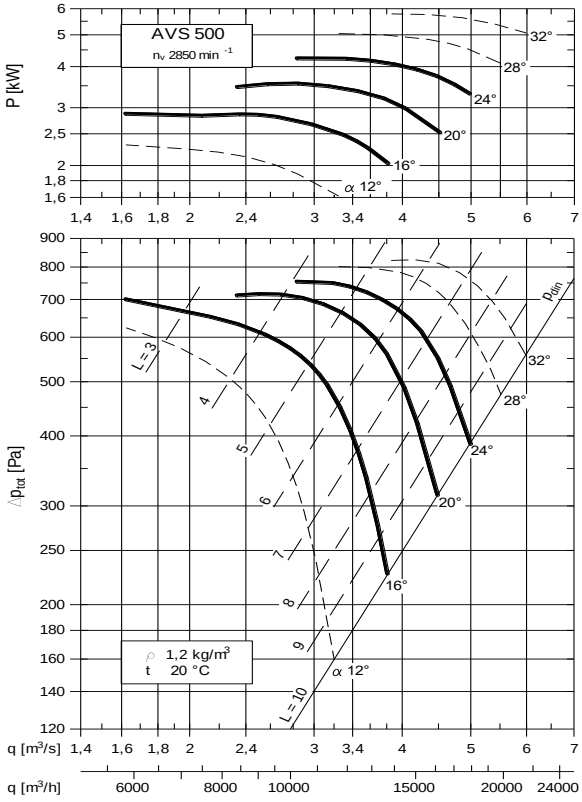
α_{max}	16°	20°	24°	28°	32°
el. mot. (kW)	0,25				



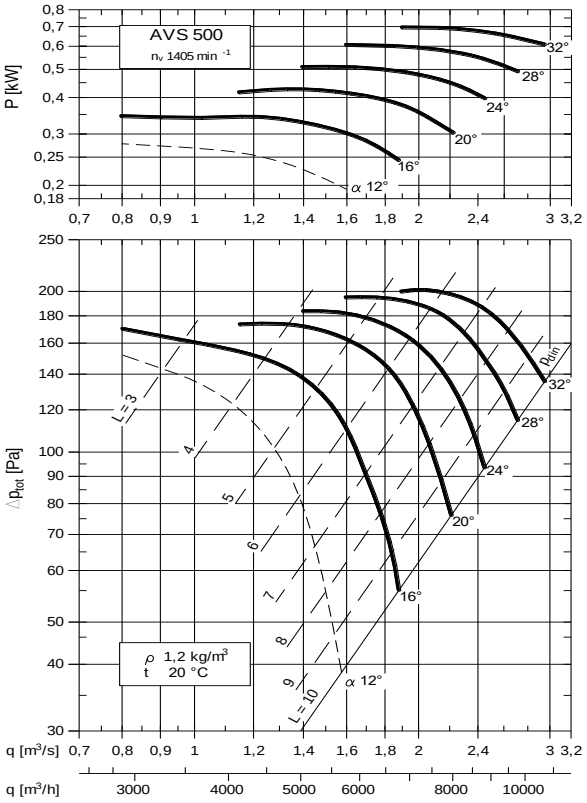
α_{max}	16°	20°	24°	28°	32°
el. mot. (kW)	2,2		3,0	4,0	



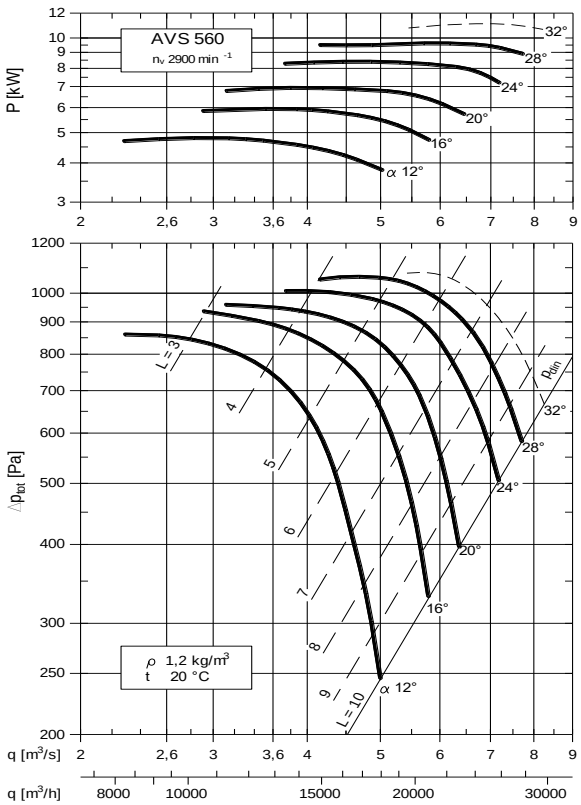
α_{max}	16°	20°	24°	28°	32°
el. mot. (kW)	0,37			0,55	



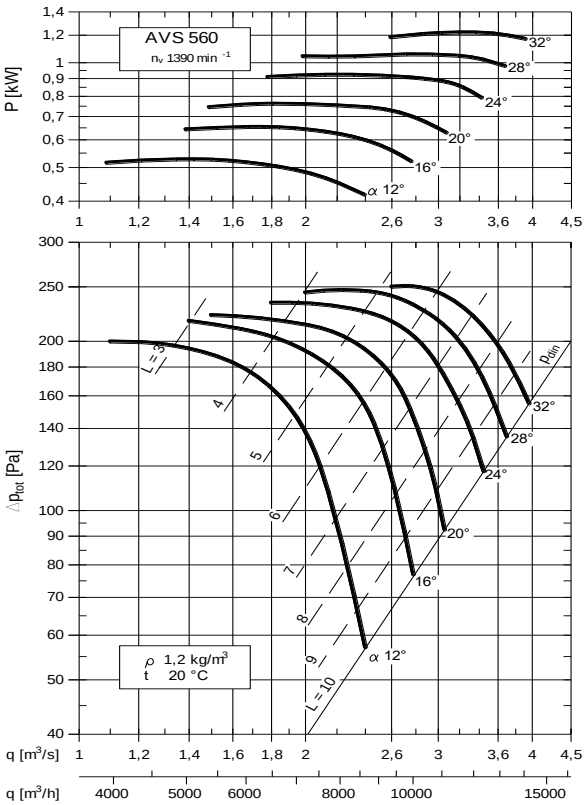
α_{max}	16°	20°	24°	28°	32°
el. mot. (kW)	3,0	4,0	-		



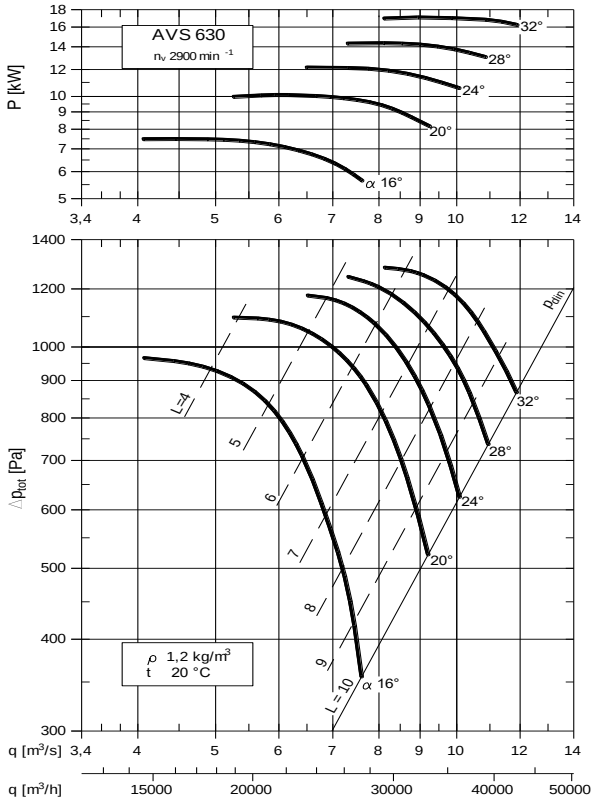
α_{max}	16°	20°	24°	28°	32°
el. mot. (kW)	0,37	0,55		0,75	



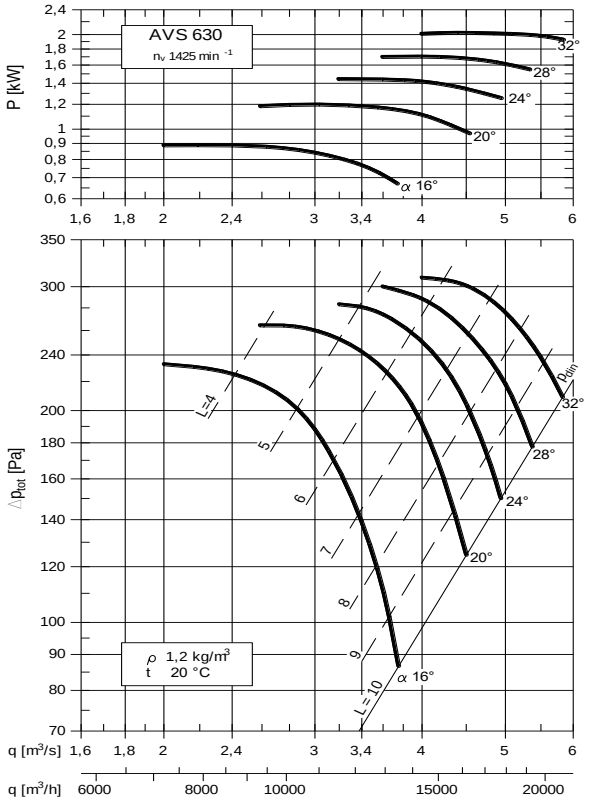
α_{max}	12°	16°	20°	24°	28°	32°
el. mot. (kW)	5,5	7,5		11,0		-



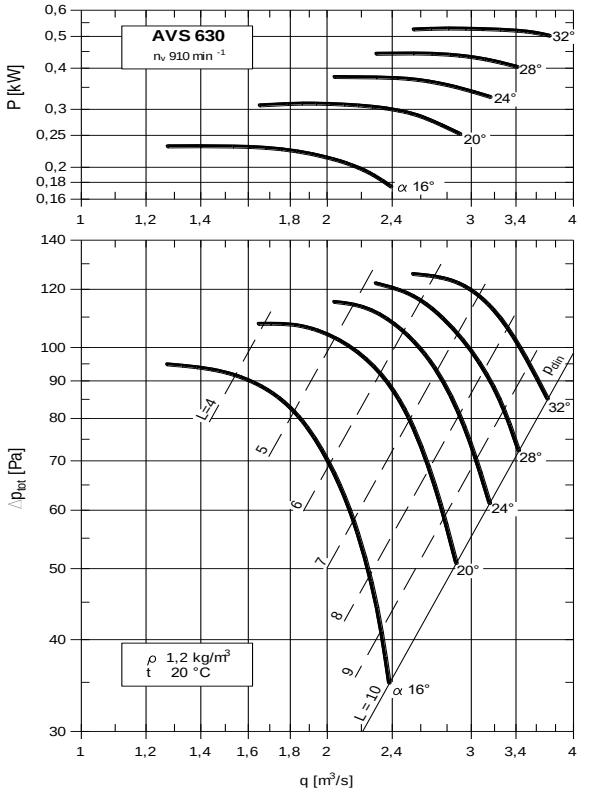
α_{max}	12°	16°	20°	24°	28°	32°
el. mot. (kW)	0,55	0,75		1,1		1,5



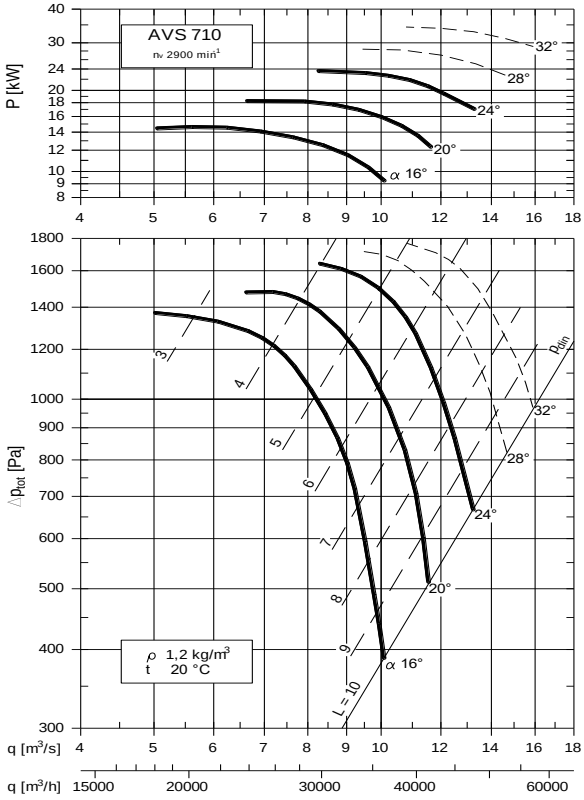
α_{max}	16°	20°	24°	28°	32°
el. mot. (kW)	7,5	11	15		18,5



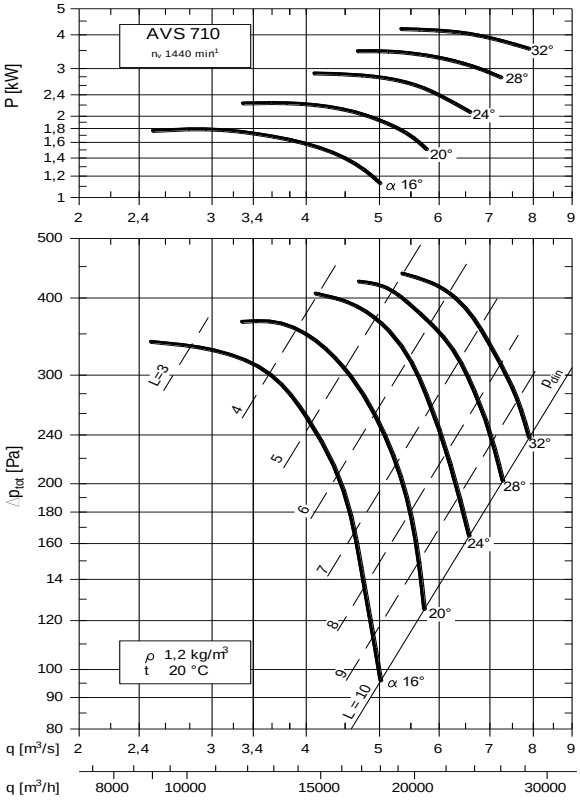
α_{max}	16°	20°	24°	28°	32°
el. mot. (kW)	1,1	1,5		2,2	



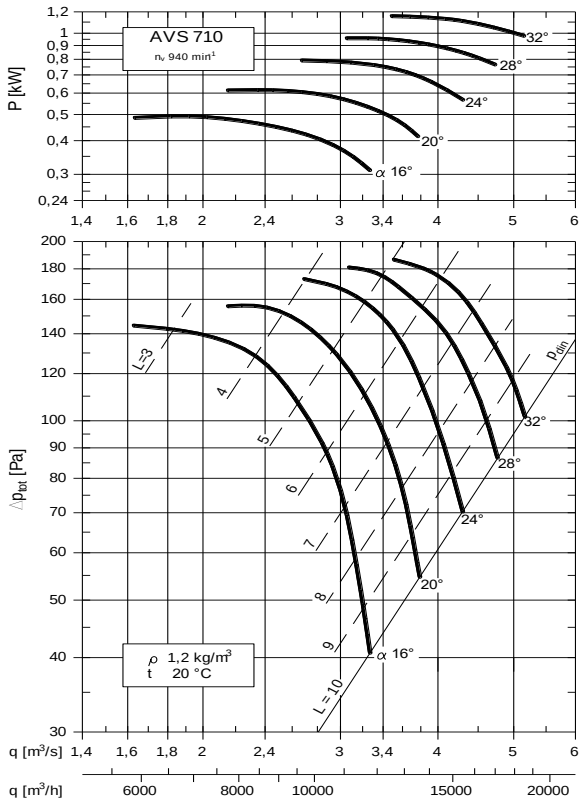
α_{max}	16°	20°	24°	28°	32°
el. mot. (kW)	0,25	0,37	0,55		



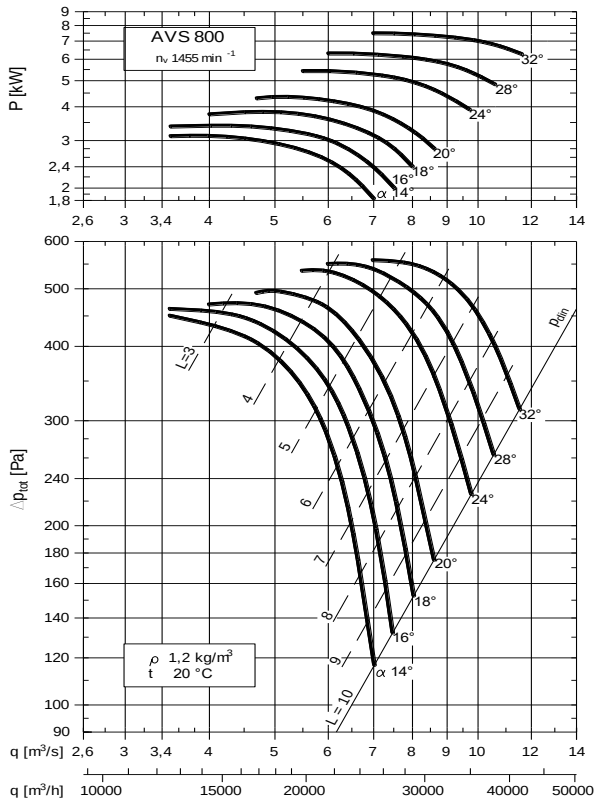
α_{max}	16°	20°	24°	28°	32°
el. mot. (kW)	15,0	18,5	(22°)	-	-



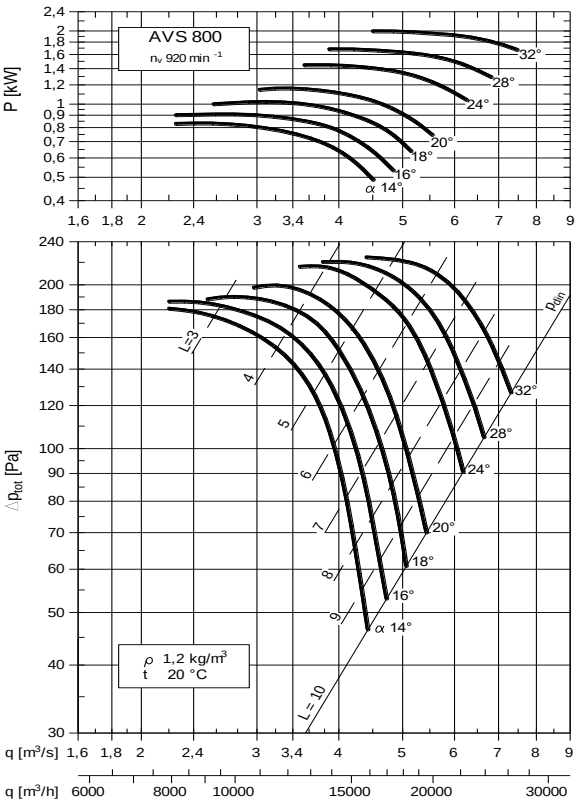
α_{max}	16°	20°	24°	28°	32°
el. mot. (kW)	2,2		3,0	4,0	5,5



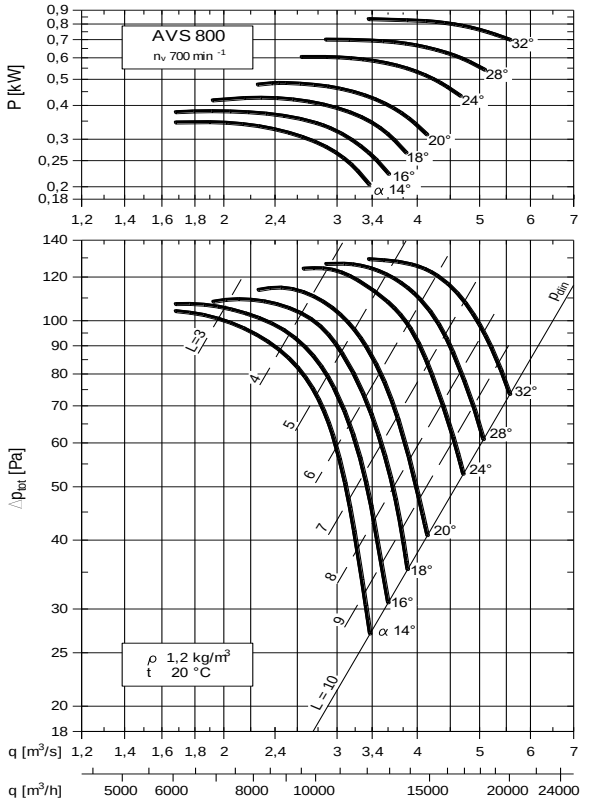
α_{max}	16°	20°	24°	28°	32°
el. mot. (kW)	0,55	0,75	1,1		1,5



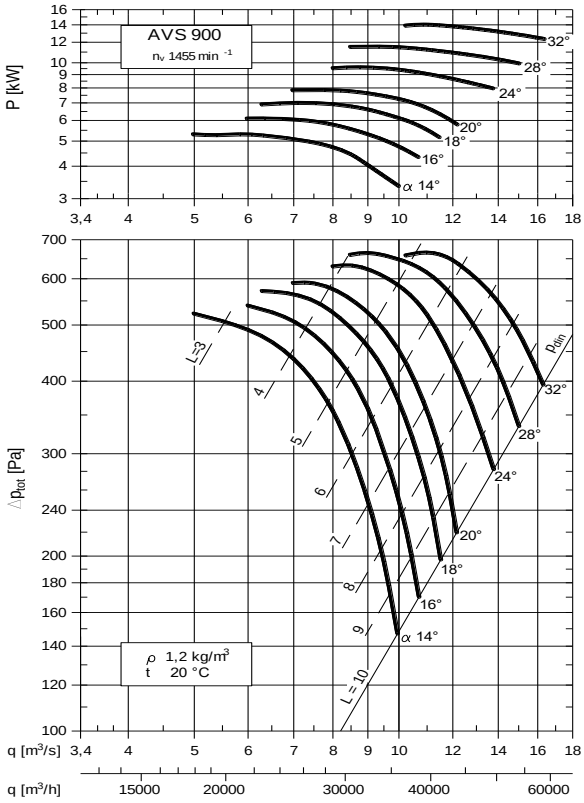
αmax	14°	16°	18°	20°	24°	28°	32°
el. mot. (kW)	4,0			5,5		7,5	



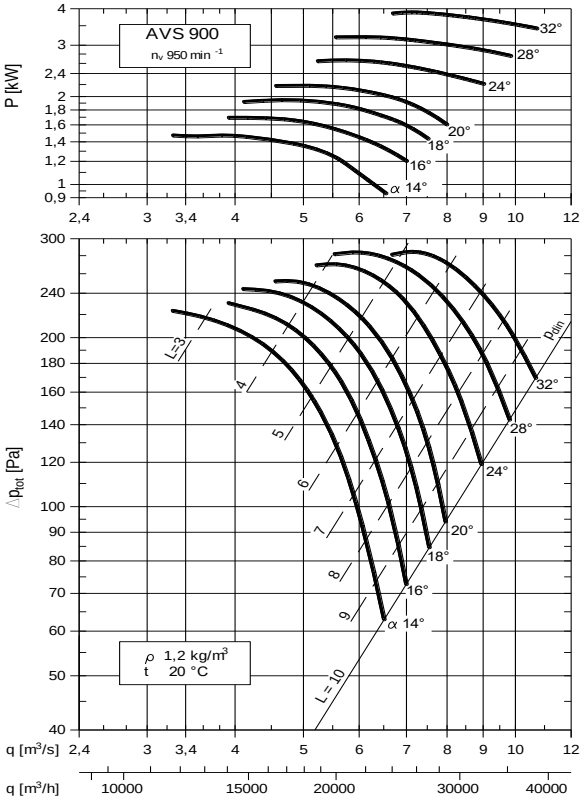
αmax	14°	16°	18°	20°	24°	28°	32°
el. mot. (kW)	1,1			1,5		2,2	



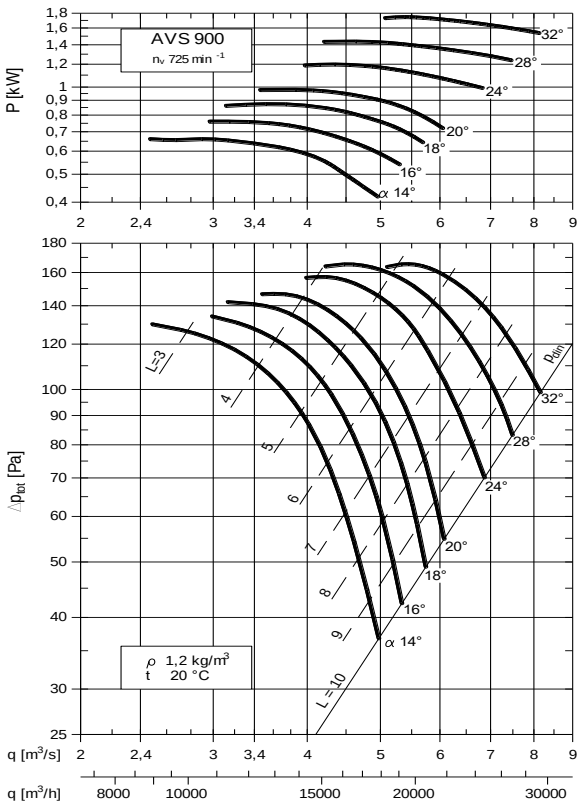
αmax	14°	16°	18°	20°	24°	28°	32°
el. mot. (kW)	0,37	0,55			0,75		1,1



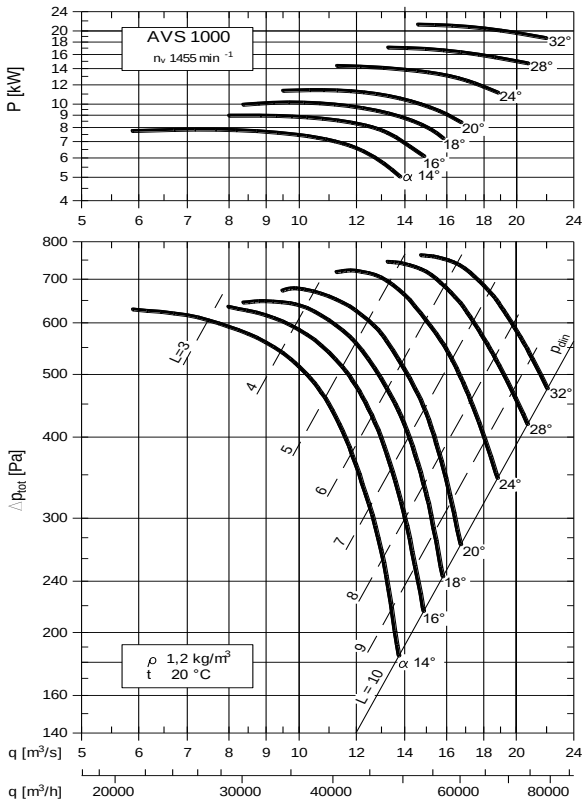
α_{max}	14°	16°	18°	20°	24°	28°	32°
el. mot. (kW)	5,5	7,5		11,0		15,0	



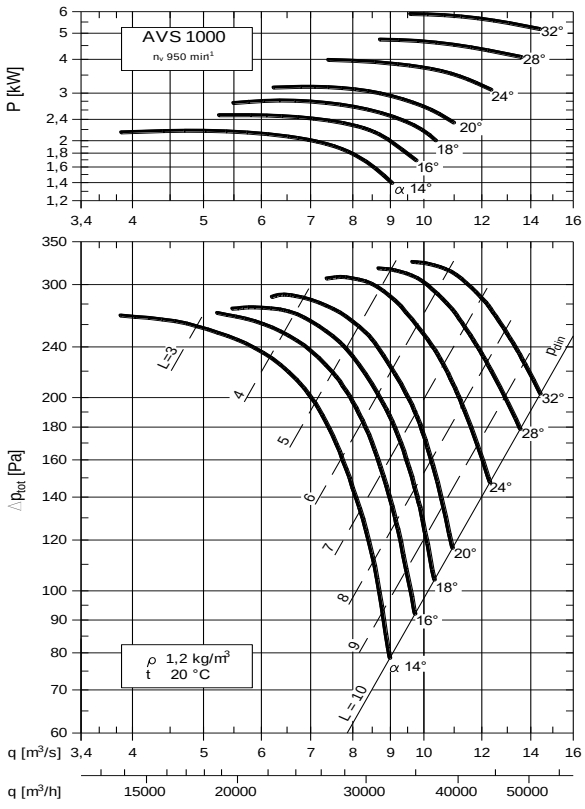
α_{max}	14°	16°	18°	20°	24°	28°	32°
el. mot. (kW)	1,5	2,2			3,0	4,0	



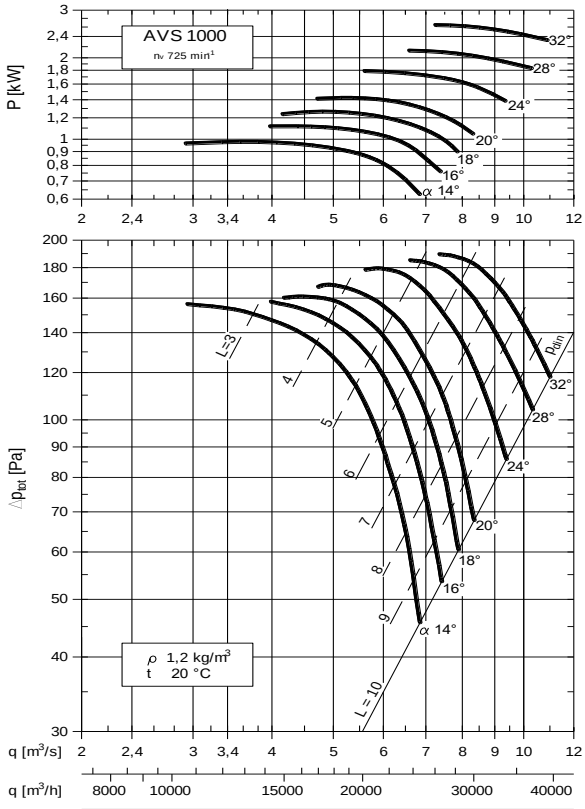
α_{max}	14°	16°	18°	20°	24°	28°	32°
el. mot. (kW)	0,75	1,1			1,5		2,2



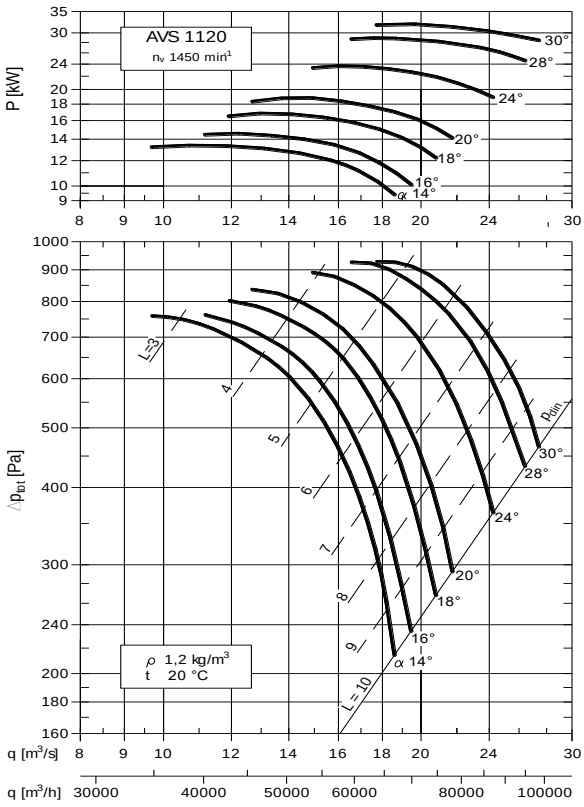
α_{max}	14°	16°	18°	20°	24°	28°	32°
el. mot. (kW)	9,0		11,0	15,0		18,5	22,0



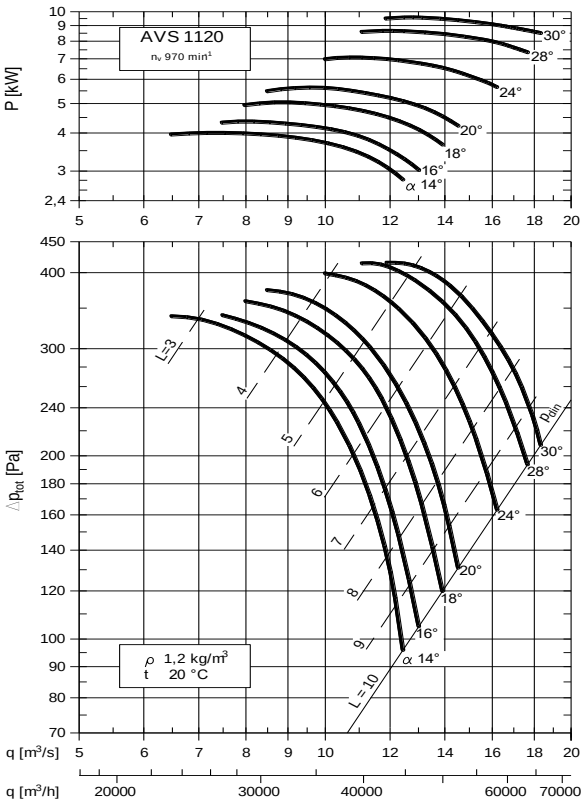
α_{max}	14°	16°	18°	20°	24°	28°	32°
el. mot. (kW)	2,2	3,0		4,0		5,5	7,5



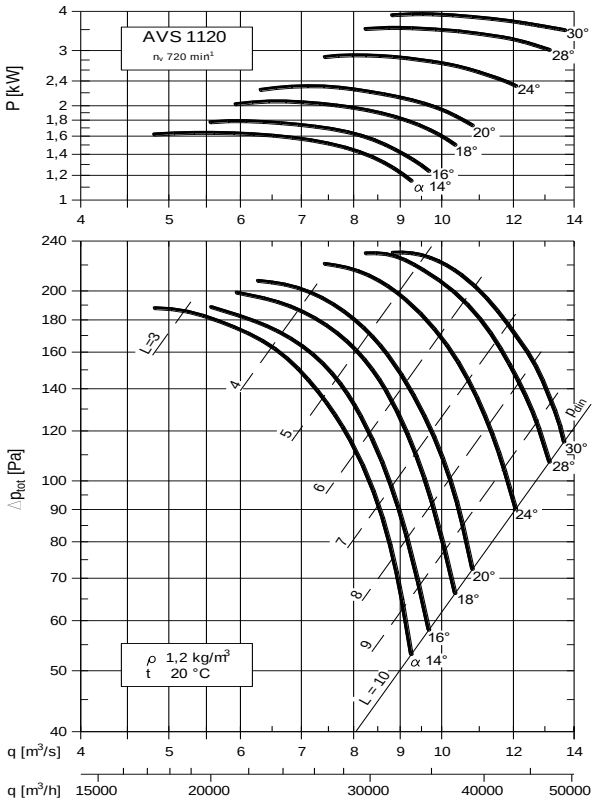
α_{max}	14°	16°	18°	20°	24°	28°	32°
el. mot. (kW)	1,1	1,5			2,2		3,0



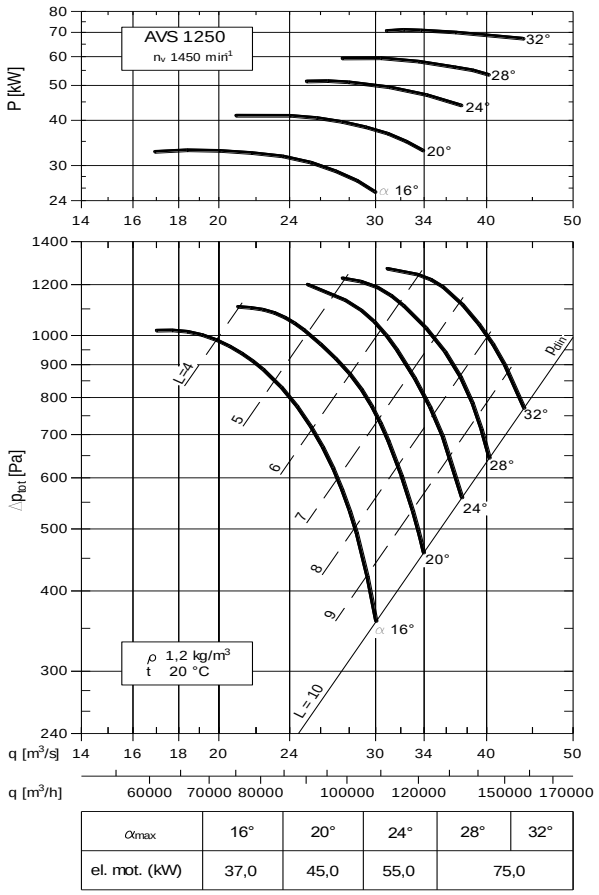
α_{max}	14°	16°	18°	20°	24°	28°	30°
el. mot. (kW)	15,0		18,5	22,0	30,0		37,0



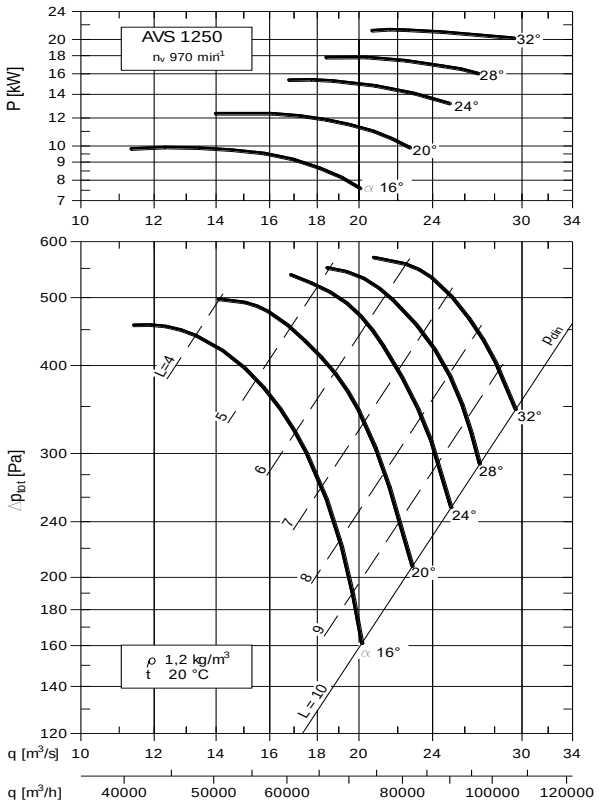
α_{max}	14°	16°	18°	20°	24°	28°	30°
el. mot. (kW)	4,0	5,5		7,5		11,0	



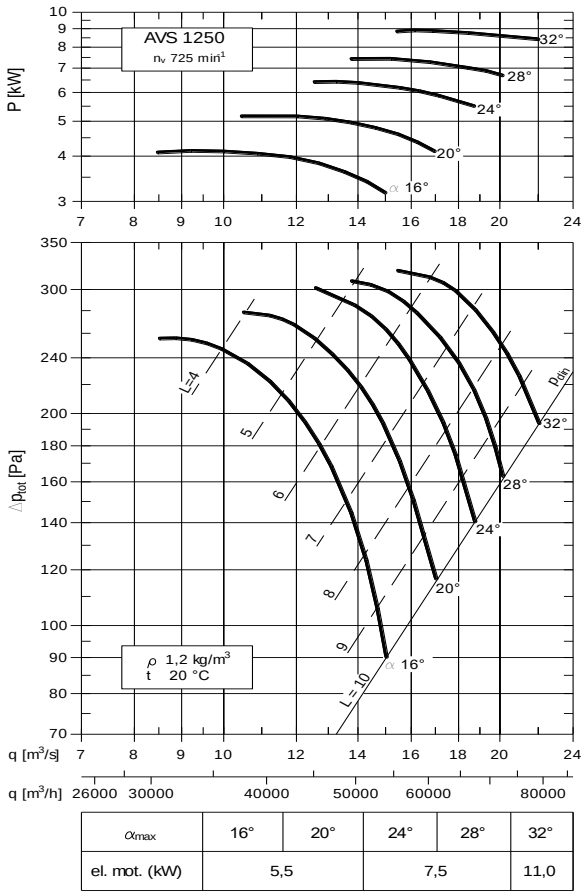
α_{max}	14°	16°	18°	20°	24°	28°	30°
el. mot. (kW)	2,2			3,0		4,0	



αmax	16°	20°	24°	28°	32°
el. mot. (kW)	37,0	45,0	55,0	75,0	



αmax	16°	20°	24°	28°	32°
el. mot. (kW)	11,0	15,0	18,5		22,0



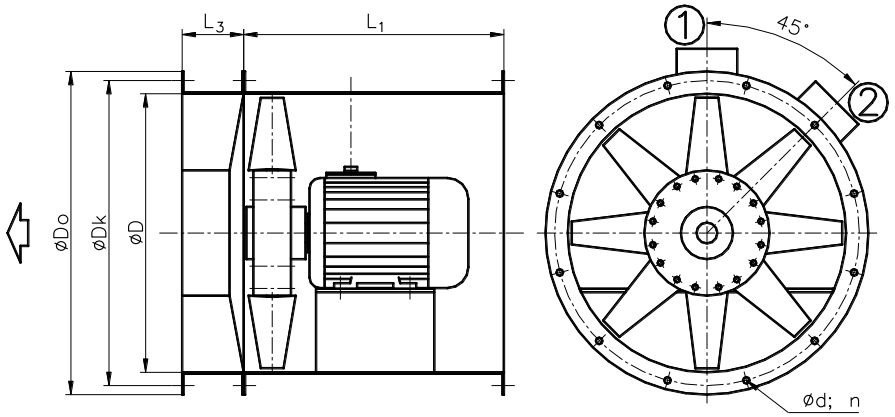
αmax	16°	20°	24°	28°	32°
el. mot. (kW)	5,5		7,5		11,0

AKSIALNI VENTILATORJI AVSV

AVSV AXIAL FANS

Dimenzije

Dimensions



Standardna vrsta vgradnje: **HORIZONTALNA**
Standard mounting position: **HORIZONTAL**

AVSV -	ØD [mm]	ØDk [mm]	ØDo [mm]	Ød [mm]	n	L1 [mm]	L1* [mm]	L3 [mm]	Z Št. lopatic Blades No.	Priklj. doza Terminal box
400	400	438	464	Ø9,5	12	400		110	7	1
450	450	487	513	Ø9,5	12	450		110	7	1
500	500	541	567	Ø9,5	12	500		110	7	1
560	560	605	639	Ø11,5	16	550		110	8	1
630	630	674	708	Ø11,5	16	650	500	110	8	1
710 S	710	751	785	Ø11,5	16	700	550	140	9	2
710	710	751	785	Ø11,5	16	700	550	140	7	2
800	800	837	871	Ø11,5	24	650		140	8	2
900	900	958	1004	Ø14	24	800	700	140	8	2
1000	1000	1067	1107	Ø14	24	800	700	140	8	2
1120	1120	1200	1250	Ø18	32	1000	800	140	9	2
1250 S	1250	1337	1387	Ø18	32	1000	800	140	11	2
1250	1250	1337	1387	Ø18	32	1000	800	250	8	2
1400	1400	1491	1552	Ø18	32	**	**	250	8	2
1600	1600	1663	1732	Ø18	40	**	**	250	8	2

L1* – za 4,6-polne elektromotorje (AVS 630 – 710)
– za 6,8-polne elektromotorje (AVS 900 – 1250)

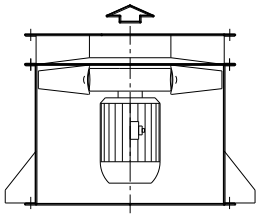
** Odvisno od velikosti elektromotorja

L1* – For 4,6-pole motors (AVS 630 – 710)
– For 6,8-pole motors (AVS 900 – 1250)

** Depends on electric motor's size

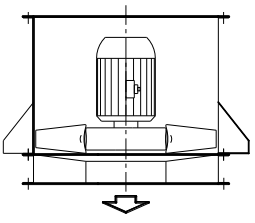
Vgradnja

Standardna vertikalna izvedba
Standard vertical design



Mounting positions

Vertikalna izvedba: DOL
Vertical design: DOWN



Nudimo tudi posebne izvedbe in vgradnje na zahtevo kupca.
We offer special designs and mounting positions upon customer's request.

Določitev šumnosti AVSV

Zvočna moč je odvisna v glavnem od pretoka zraka in totalnega tlaka ventilatorja (diagram Lw_t).
Korekcija zvočne moči nastopa zaradi:
- premera ventilatorja (K_D);
- nastavnega kota lopatic (K_α);
- lege obratovalne točke v diagramu (K_L).

Nivo zvočne moči je:

$Lw = Lw_t + K_D + K_\alpha + K_L$ (dB)

Nivo zvočne moči po posameznih središčnih frekvencah oktavnega pasu določimo po enačbi:
$Lw_{okt} = Lw + K_{okt}$ (dB)

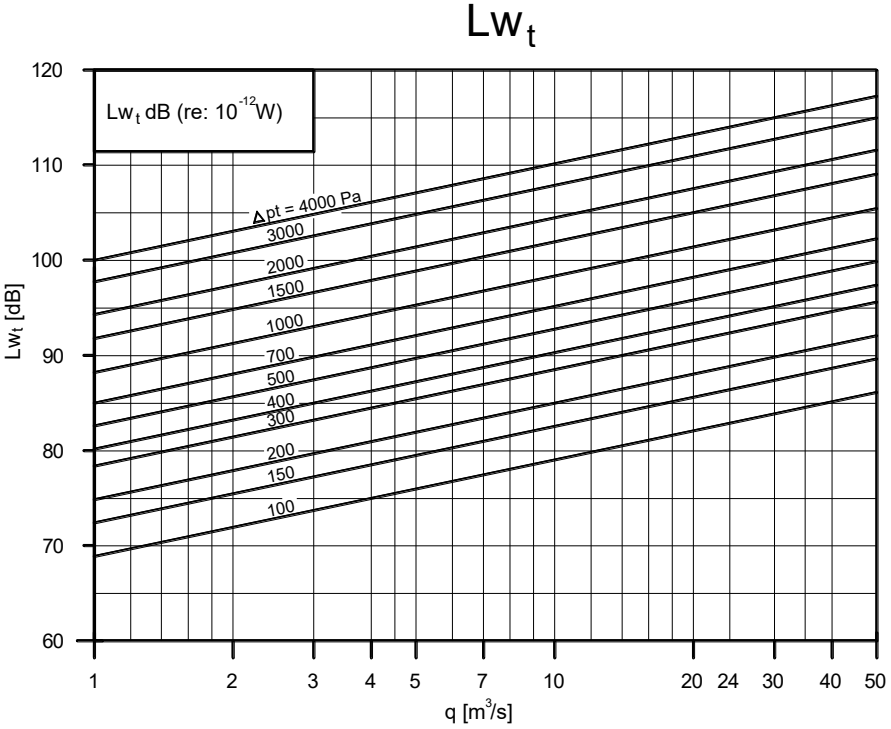
Sound level data AVSV

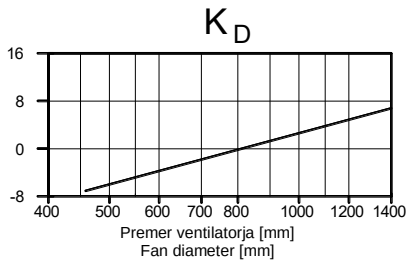
Sound power level depends on the quantity of supplied air and the total pressure of the fan.
Correction values depend of:
- fan diameter (K_D);
- blades angle (K_α);
- position of operating point in garph (K_L).

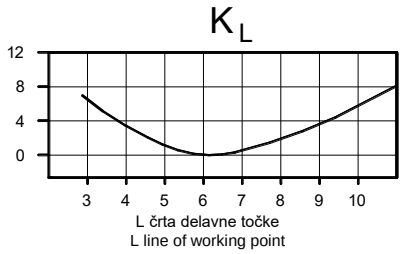
The sound power level is:

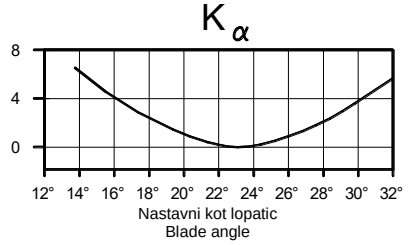
$Lw = Lw_t + K_D + K_\alpha + K_L$ (dB)

Sound power level in the individual octave bands are determined by equation:
$Lw_{okt} = Lw + K_{okt}$ (dB)



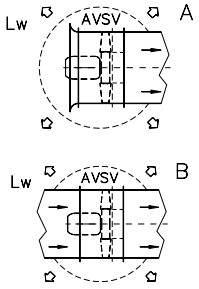






Vgradnja Installat.	f_r (Hz)	K_{okt} (dB)							
		63	125	250	500	1k	2k	4k	8k
"A"	90 – 180	-16	-8	-4	-6	-10	-16	-22	-28
	181 – 355	-18	-14	-7	-4	-7	-11	-17	-24
	356 – 710	-21	-16	-13	-6	-4	-8	-12	-20
"B"	90 – 180	-16	-11	-8	-13	-19	-27	-32	-40
	181 – 355	-18	-17	-11	-11	-16	-22	-29	-36
	356 – 710	-21	-19	-17	-13	-13	-19	-24	-32

Vgradnja / Instalation

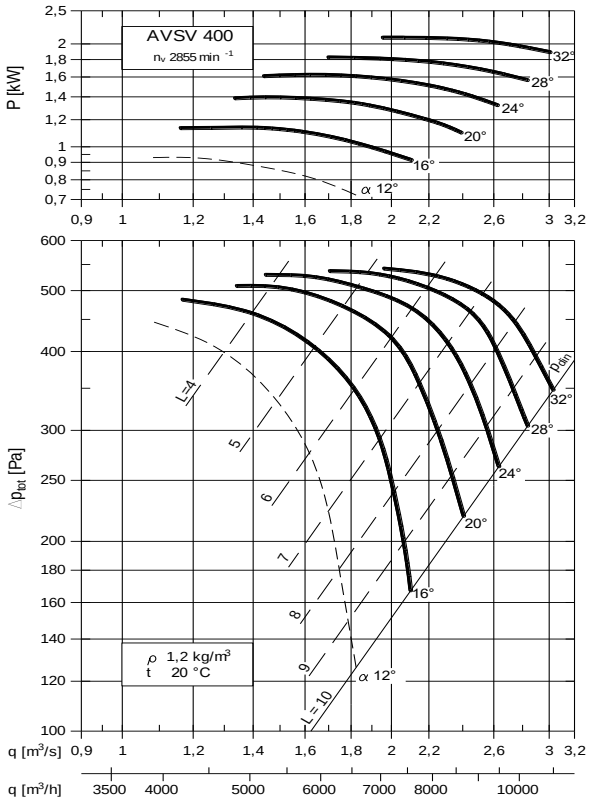


$f_r = \frac{n}{60} \cdot z \quad [Hz]$ Lastna frekvenca lopatic (Hz)

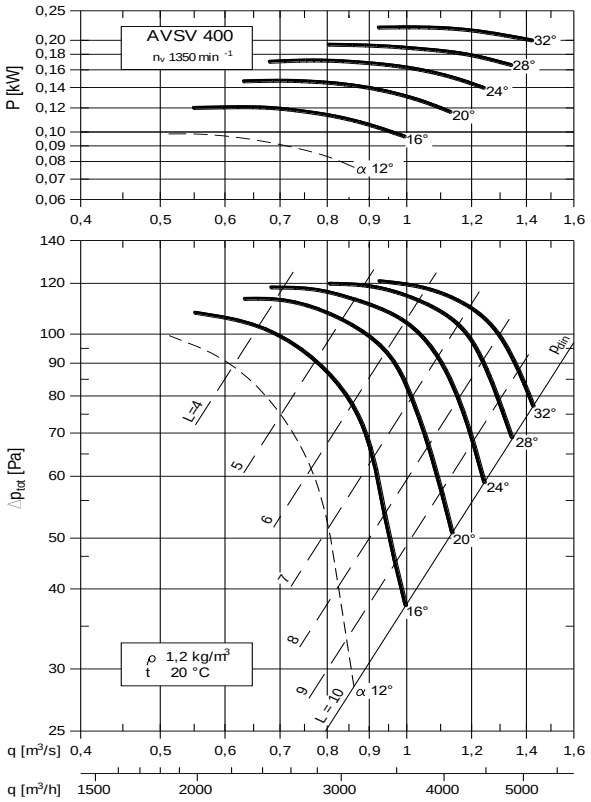
z – število lopatic
n – vrtljaji (min^{-1})

$f_r = \frac{n}{60} \cdot z \quad [Hz]$ Blades frequency (Hz)

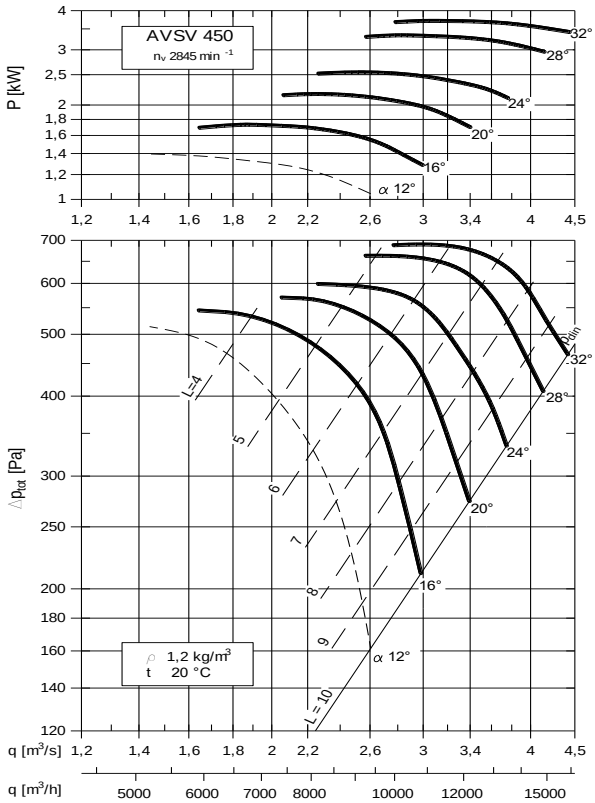
z – blades number
n – RPM (min^{-1})



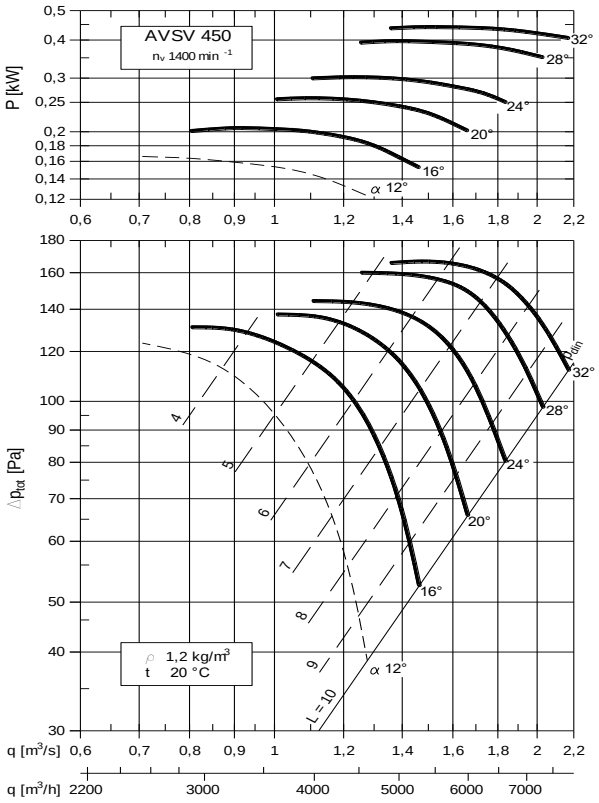
αmax	16°	20°	24°	28°	32°
el. mot. (kW)	1,5		2,2		



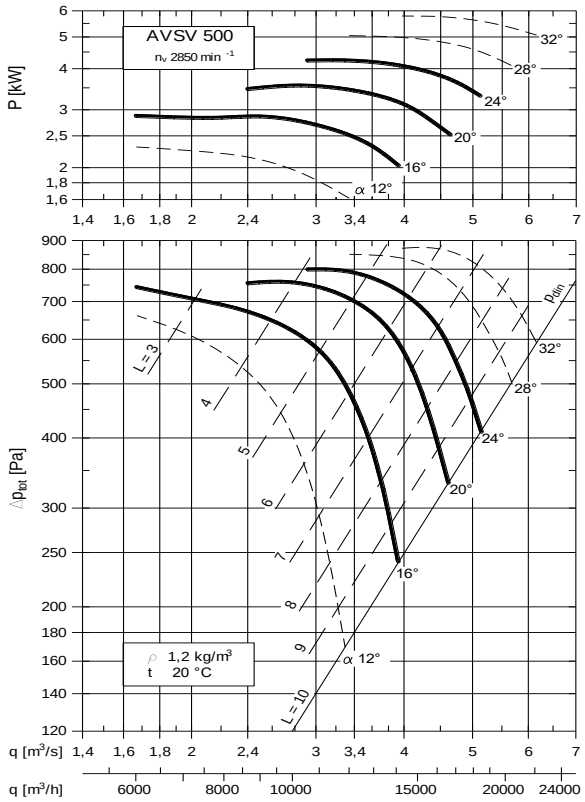
αmax	16°	20°	24°	28°	32°
el. mot. (kW)	0,25				



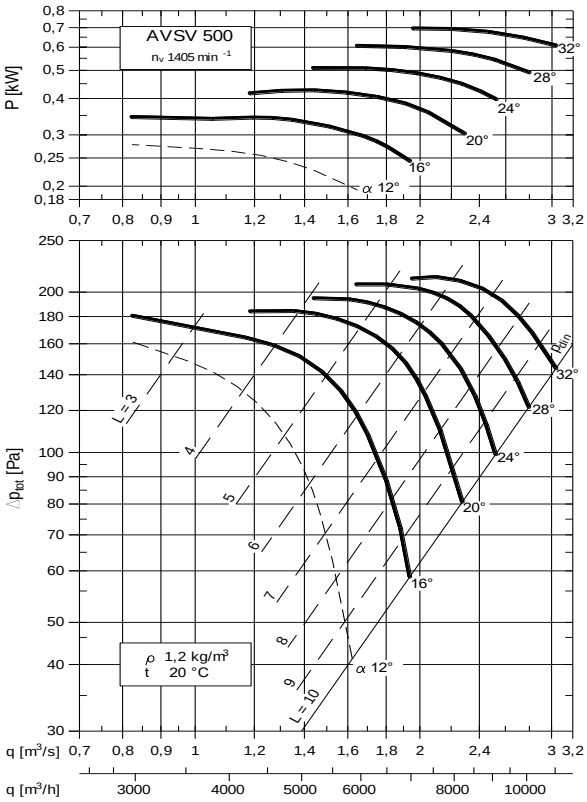
αmax	16°	20°	24°	28°	32°
el. mot. (kW)	2,2		3,0	4,0	



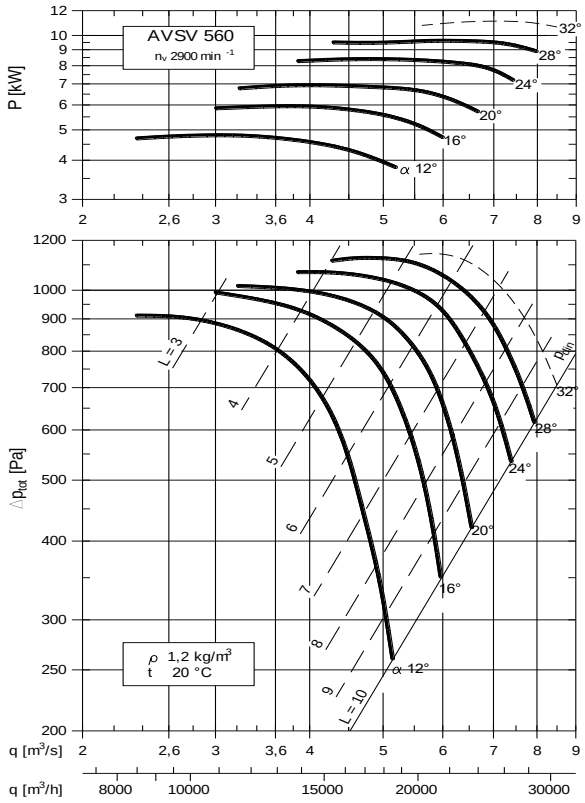
αmax	16°	20°	24°	28°	32°
el. mot. (kW)	0,37			0,55	



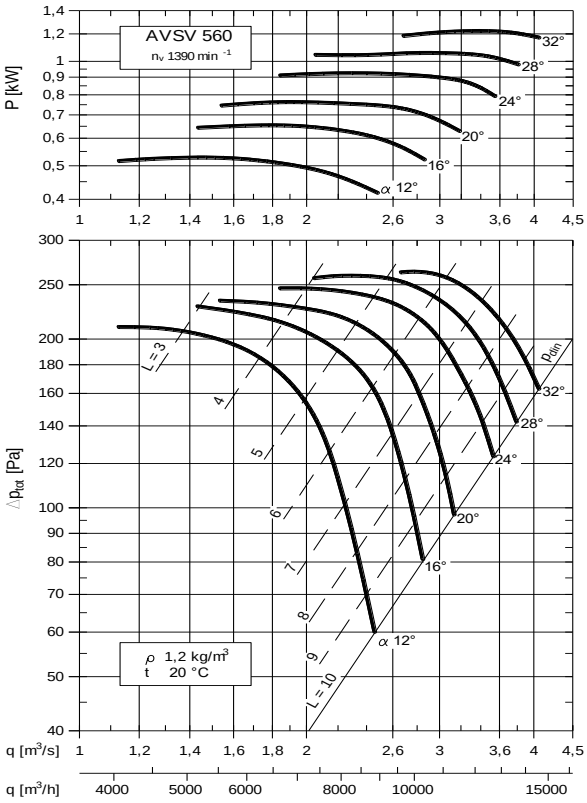
α_{max}	16°	20°	24°	28°	32°
el. mot. (kW)	3,0	4,0	-		



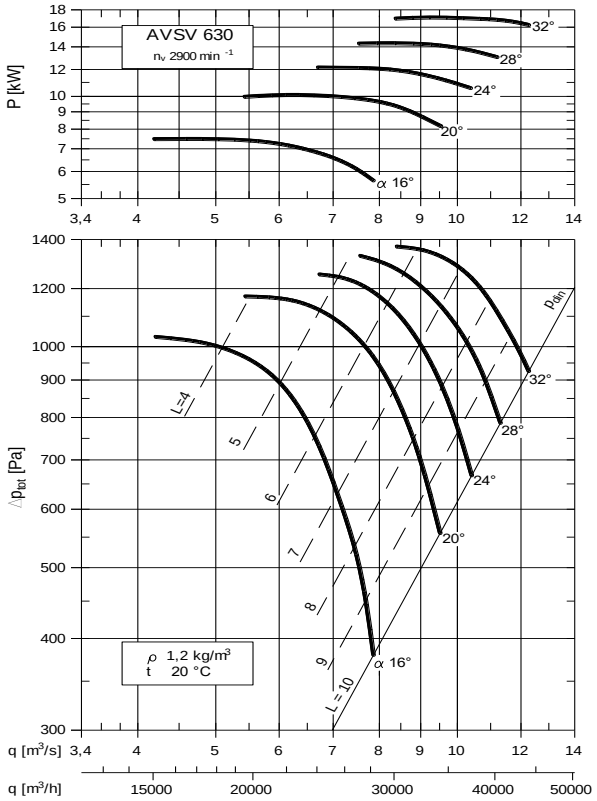
α_{max}	16°	20°	24°	28°	32°
el. mot. (kW)	0,37	0,55		0,75	



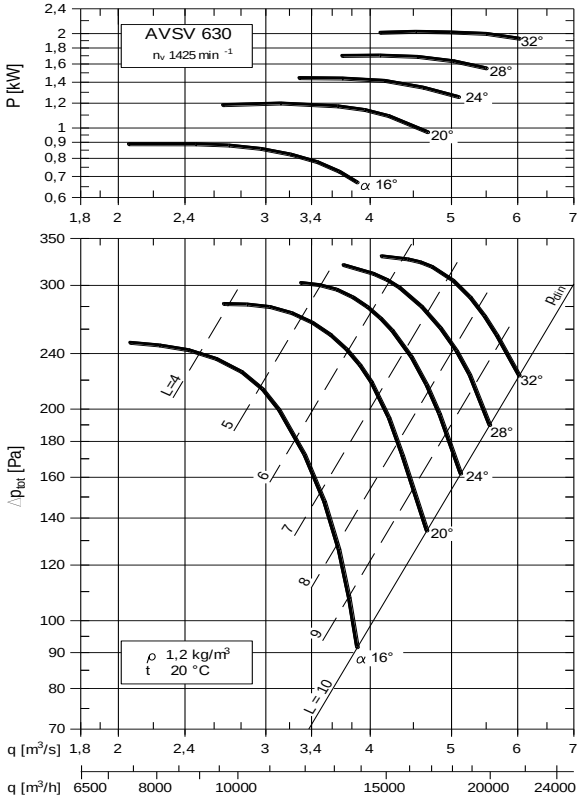
α_{max}	12°	16°	20°	24°	28°	32°
el. mot. (kW)	5,5	7,5		11,0		-



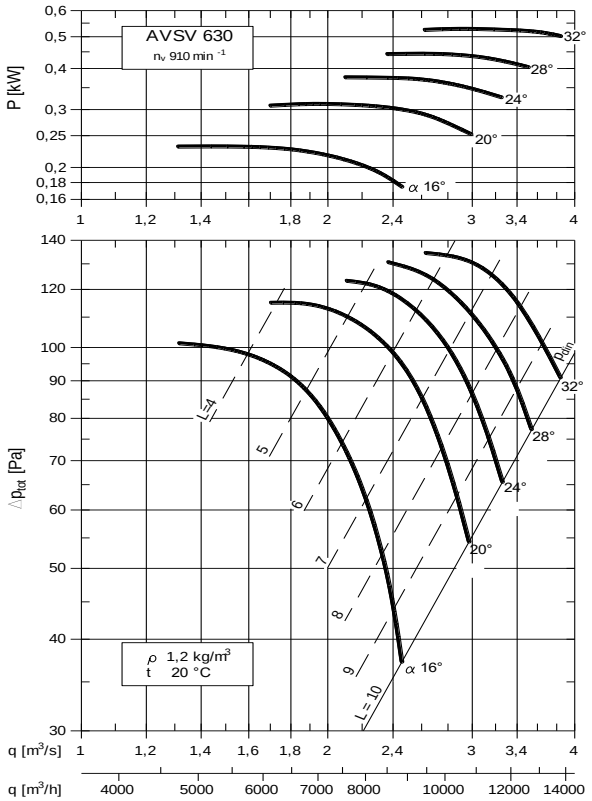
α_{max}	12°	16°	20°	24°	28°	32°
el. mot. (kW)	0,55	0,75	1,1			1,5



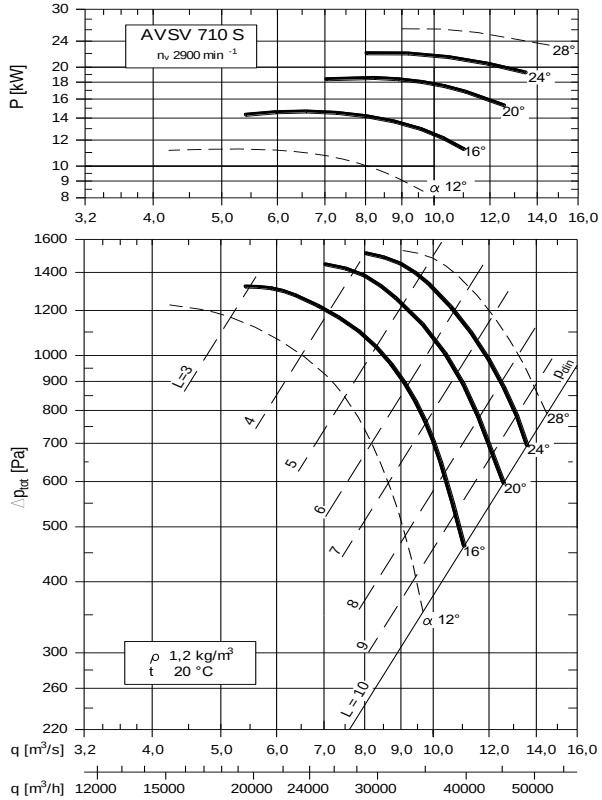
αmax	16°	20°	24°	28°	32°
el. mot. (kW)	7,5	11	15		18,5



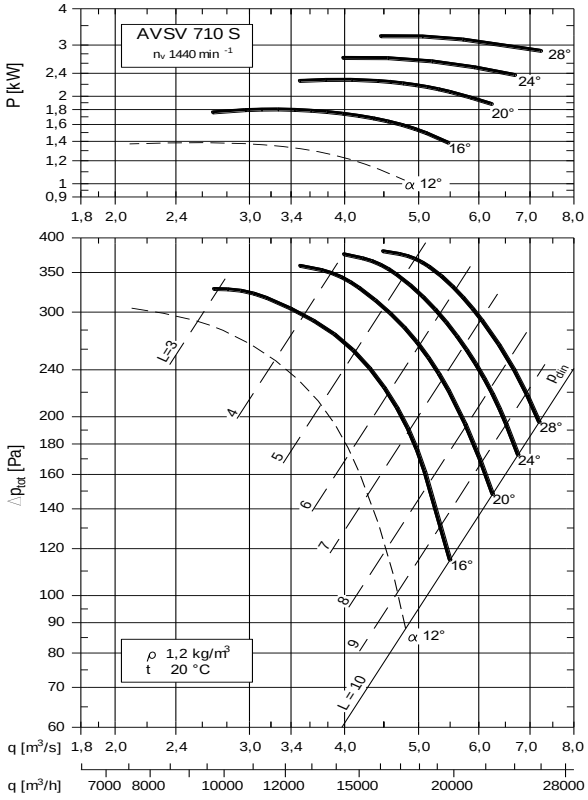
αmax	16°	20°	24°	28°	32°
el. mot. (kW)	1,1	1,5		2,2	



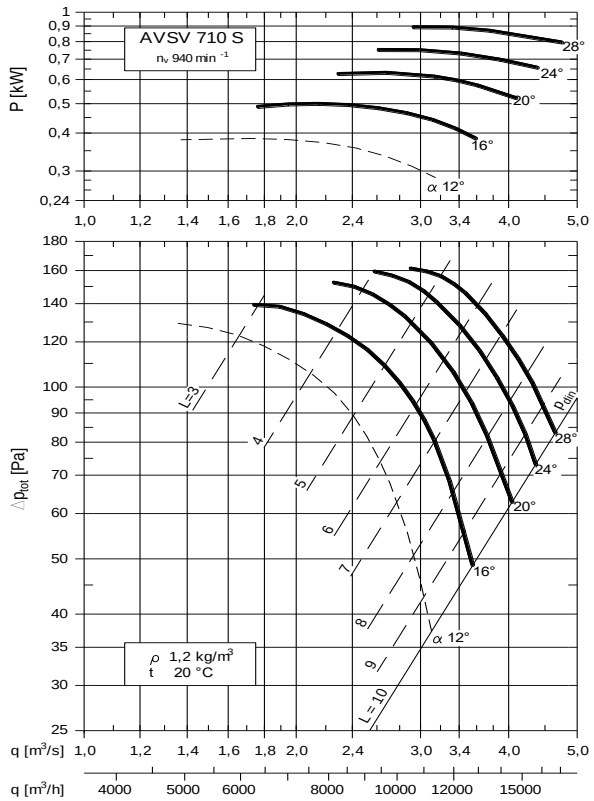
αmax	16°	20°	24°	28°	32°
el. mot. (kW)	0,25	0,37	0,55		



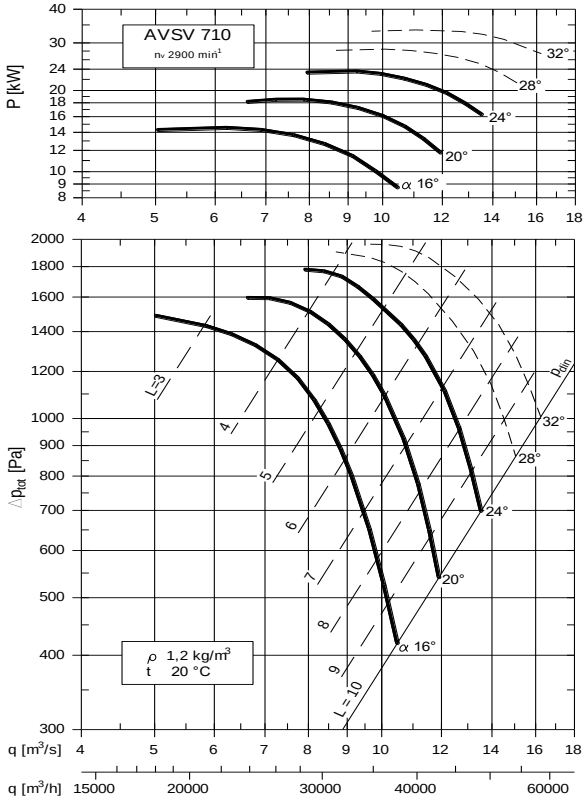
α_{max}	16°	20°	24°	28°
el. mot. (kW)	15,0	18,5	22,0	-



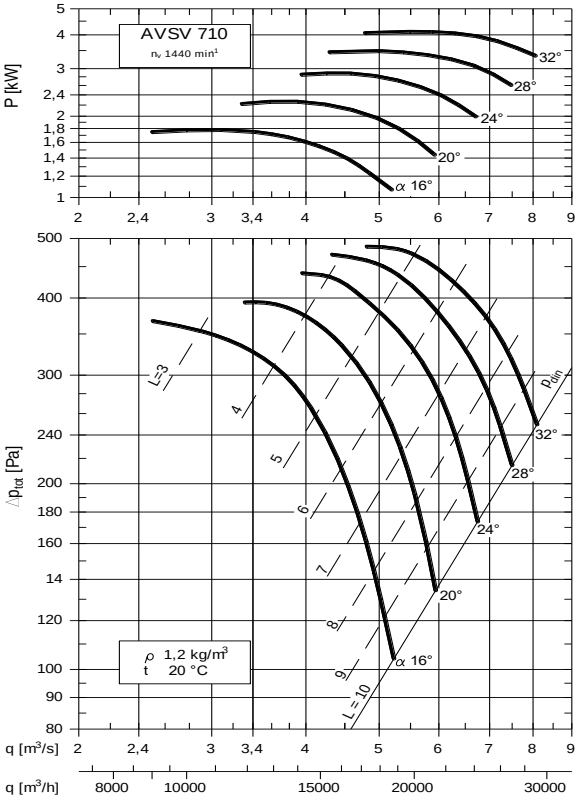
α_{max}	16°	20°	24°	28°
el. mot. (kW)	2,2	3,0		4,0



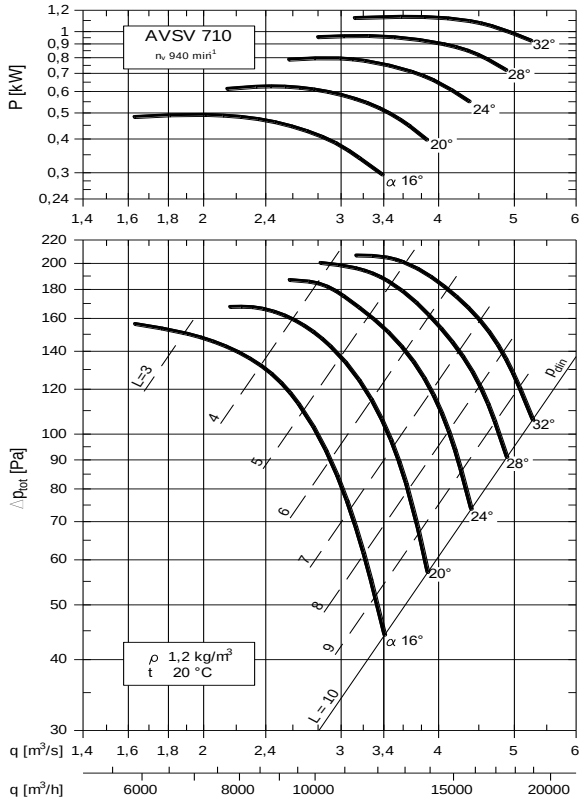
α_{max}	16°	20°	24°	28°
el. mot. (kW)	0,75		1,1	



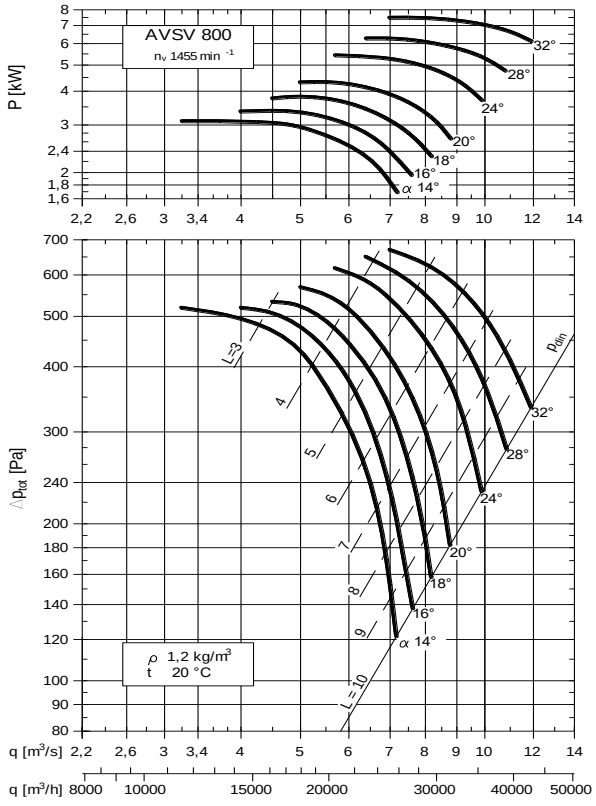
α_{max}	16°	20°	24°	28°	32°
el. mot. (kW)	15,0	18,5	(22°)	-	-



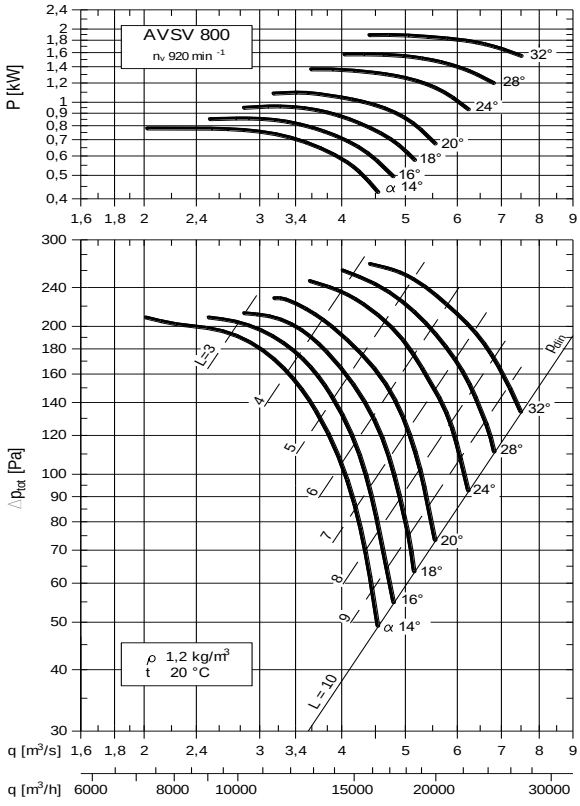
α_{max}	16°	20°	24°	28°	32°
el. mot. (kW)	2,2		3,0	4,0	5,5



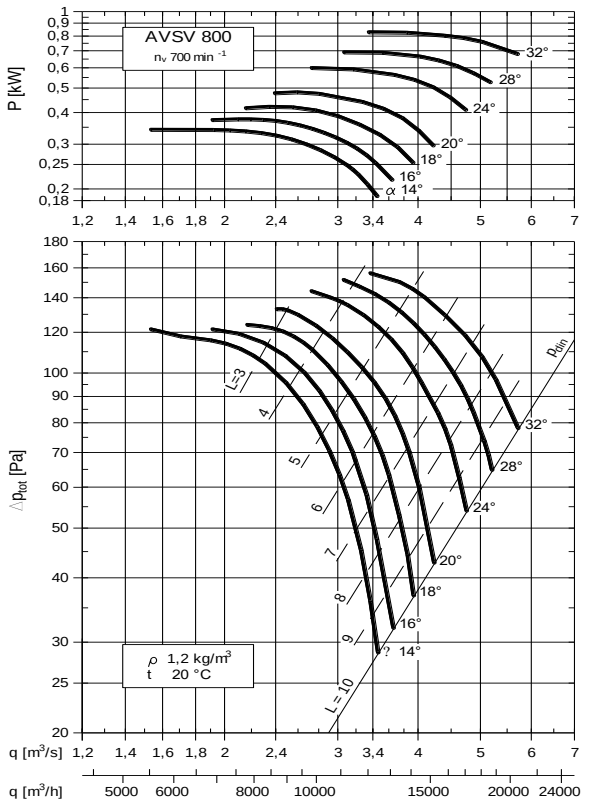
α_{max}	16°	20°	24°	28°	32°
el. mot. (kW)	0,55	0,75	1,1		1,5



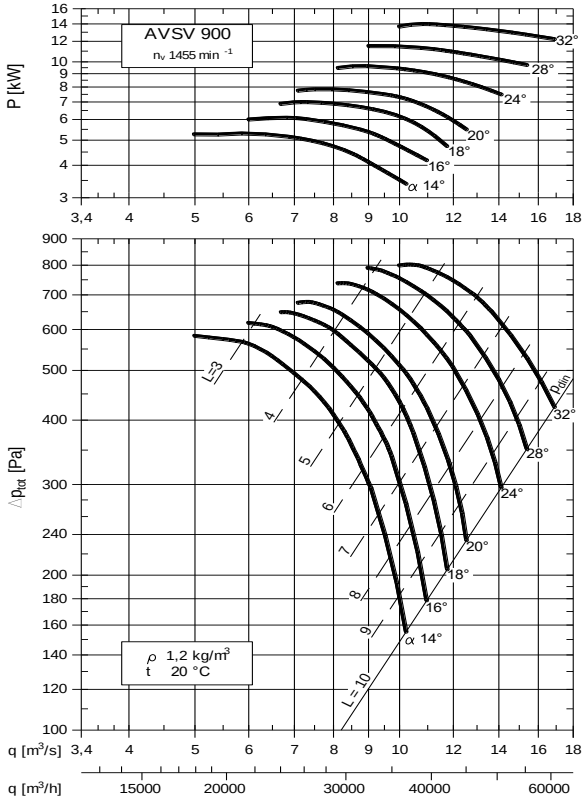
α_{max}	14°	16°	18°	20°	24°	28°	32°
el. mot. (kW)	4,0			5,5		7,5	



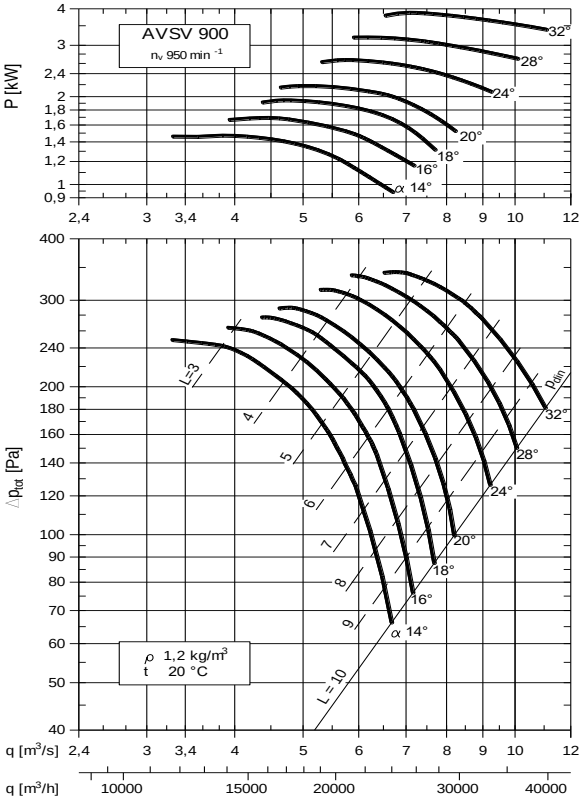
α_{max}	14°	16°	18°	20°	24°	28°	32°
el. mot. (kW)	1,1			1,5		2,2	



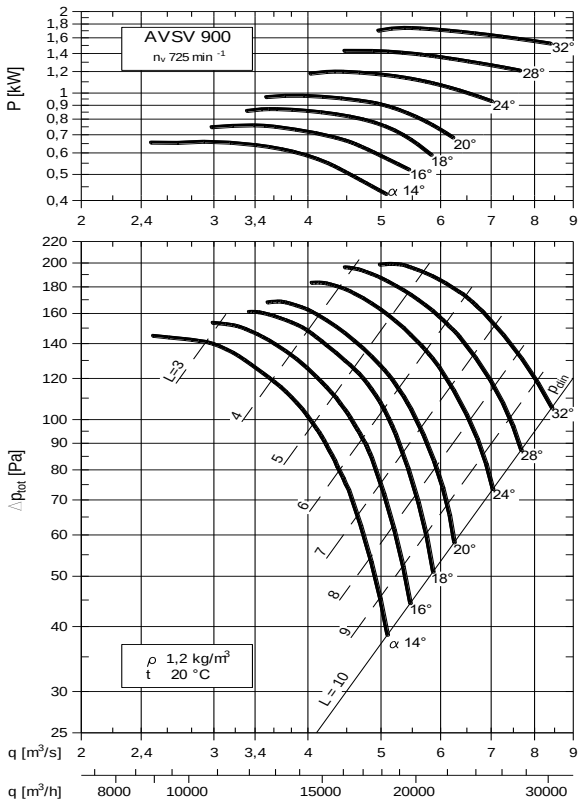
α_{max}	14°	16°	18°	20°	24°	28°	32°
el. mot. (kW)	0,37	0,55			0,75		1,1



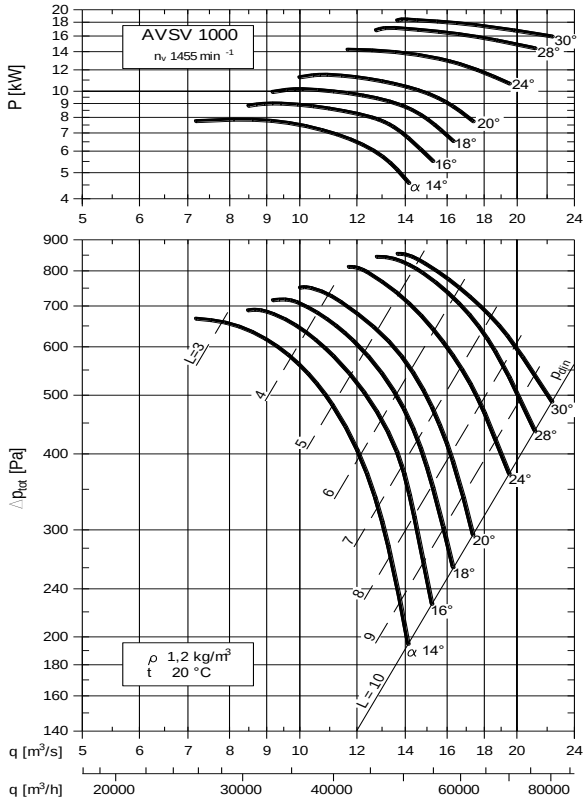
α_{max}	14°	16°	18°	20°	24°	28°	32°
el. mot. (kW)	5,5	7,5		11,0		15,0	



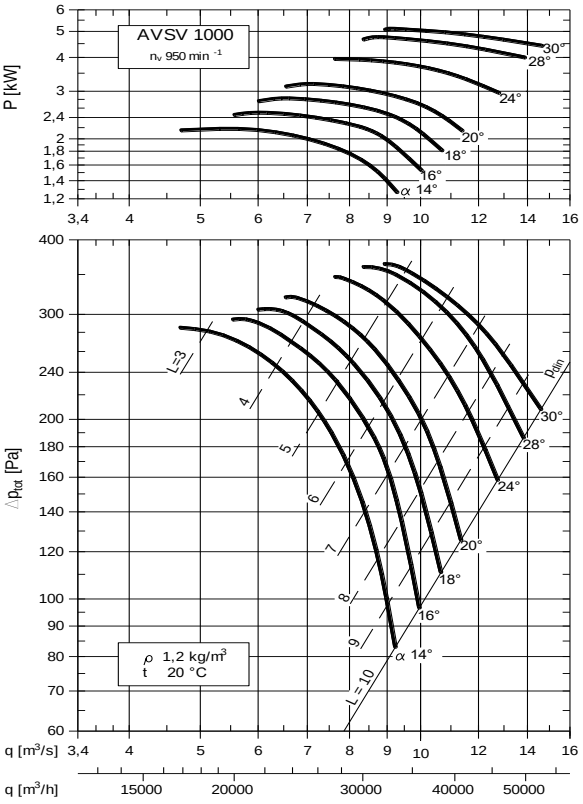
α_{max}	14°	16°	18°	20°	24°	28°	32°
el. mot. (kW)	1,5	2,2		3,0	4,0		



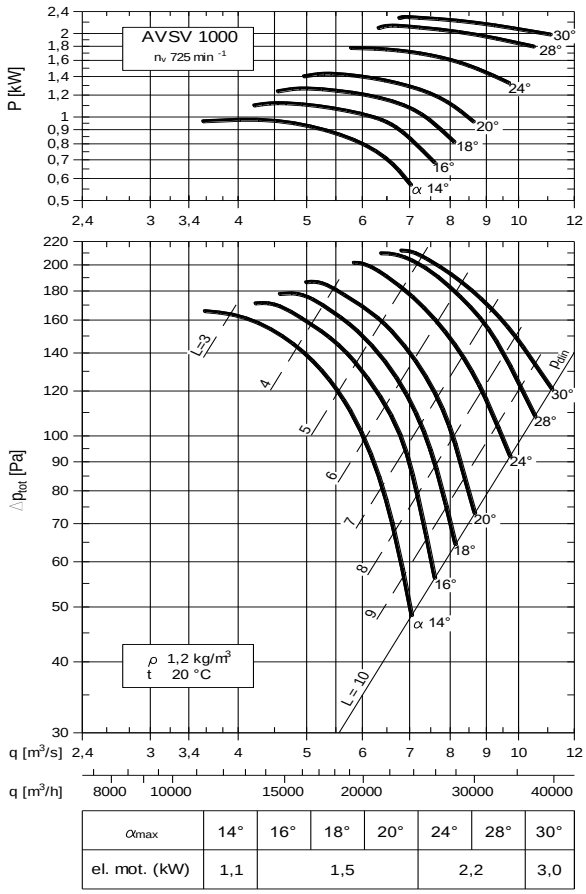
α_{max}	14°	16°	18°	20°	24°	28°	32°
el. mot. (kW)	0,75	1,1			1,5		2,2



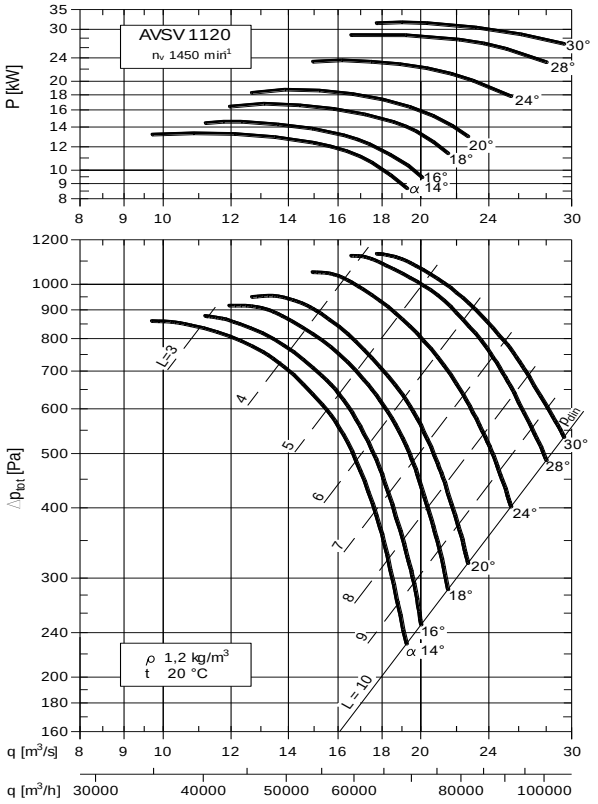
α_{max}	14°	16°	18°	20°	24°	28°	30°
el. mot. (kW)	11,0			15,0		18,5	



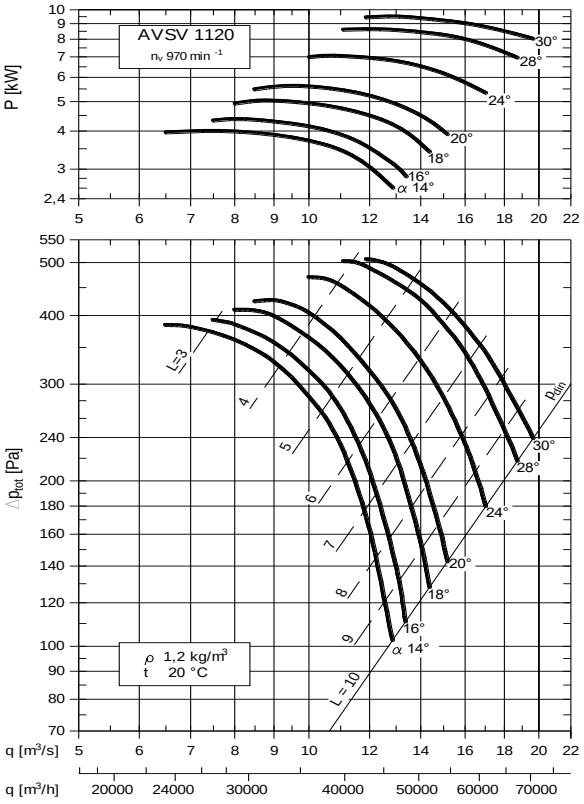
α_{max}	14°	16°	18°	20°	24°	28°	30°
el. mot. (kW)	2,2	3,0		4,0		5,5	



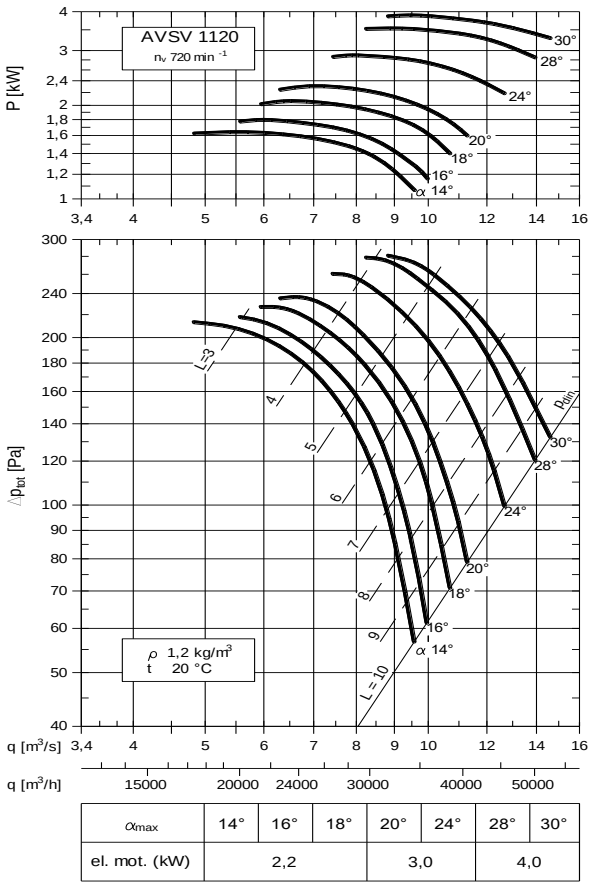
α_{max}	14°	16°	18°	20°	24°	28°	30°
el. mot. (kW)	1,1	1,5			2,2		3,0



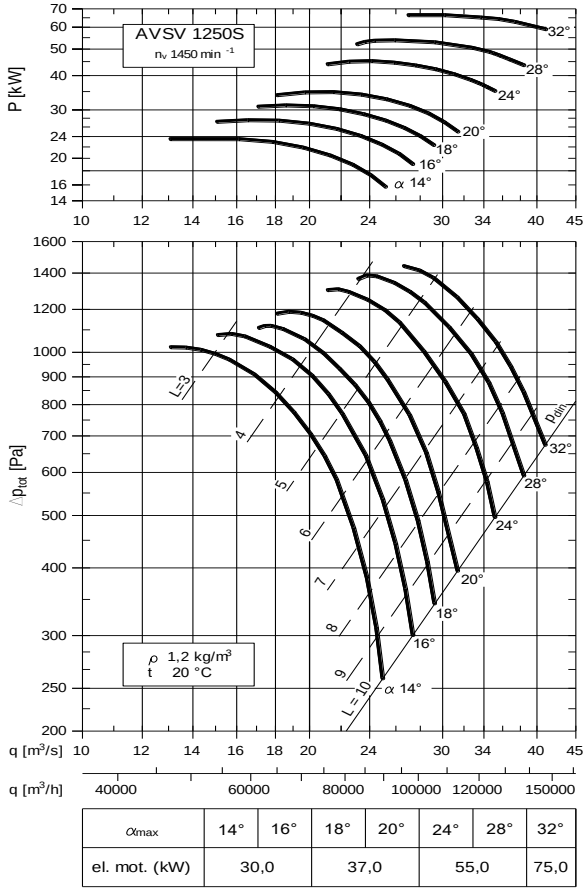
α_{max}	14°	16°	18°	20°	24°	28°	30°
el. mot. (kW)	15,0		18,5	22,0	30,0		37,0



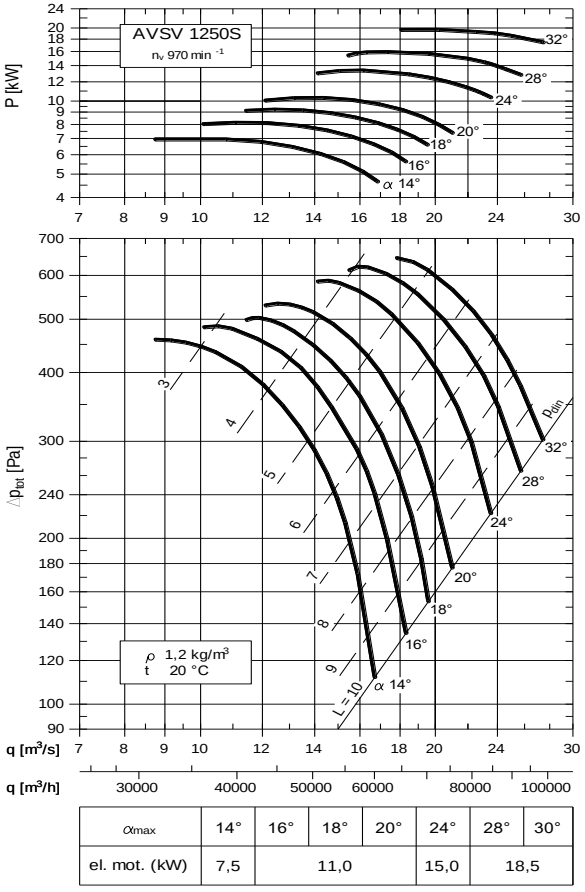
α_{max}	14°	16°	18°	20°	24°	28°	30°
el. mot. (kW)	4,0	5,5		7,5		11,0	



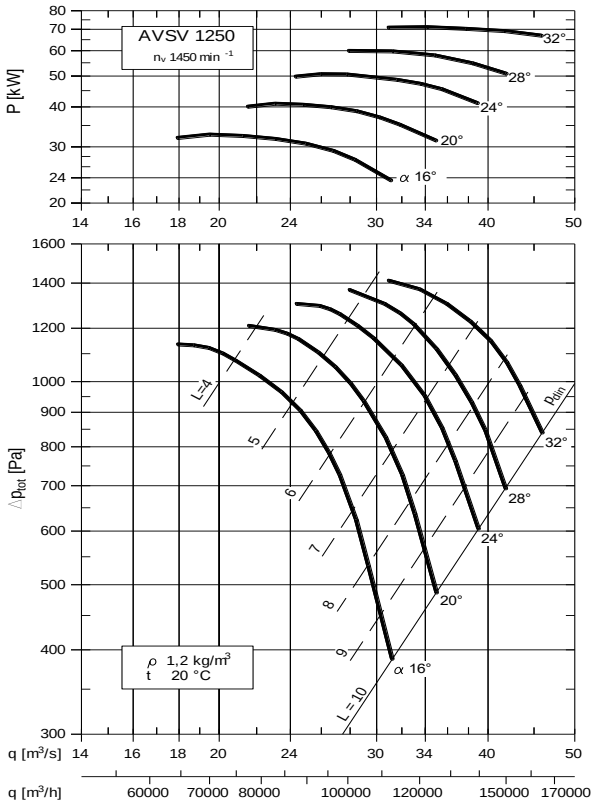
α_{max}	14°	16°	18°	20°	24°	28°	30°
el. mot. (kW)	2,2			3,0		4,0	



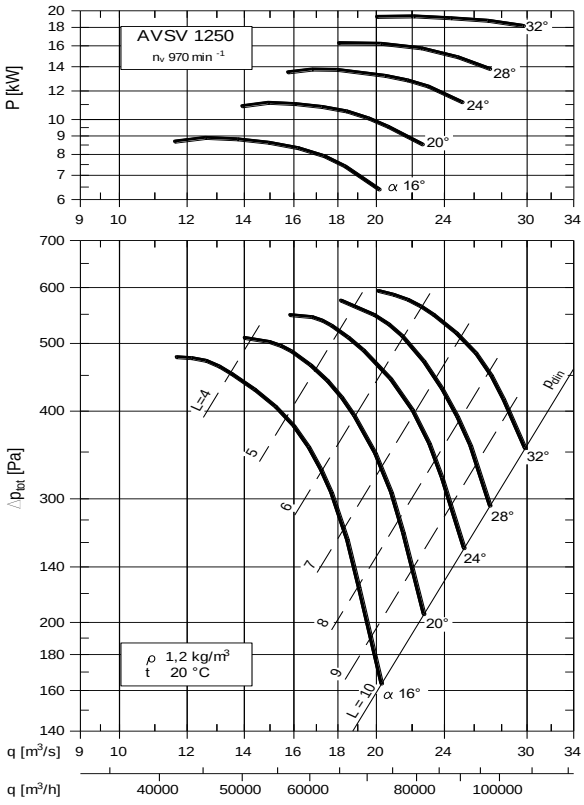
α_{max}	14°	16°	18°	20°	24°	28°	32°
el. mot. (kW)	30,0		37,0		55,0		75,0



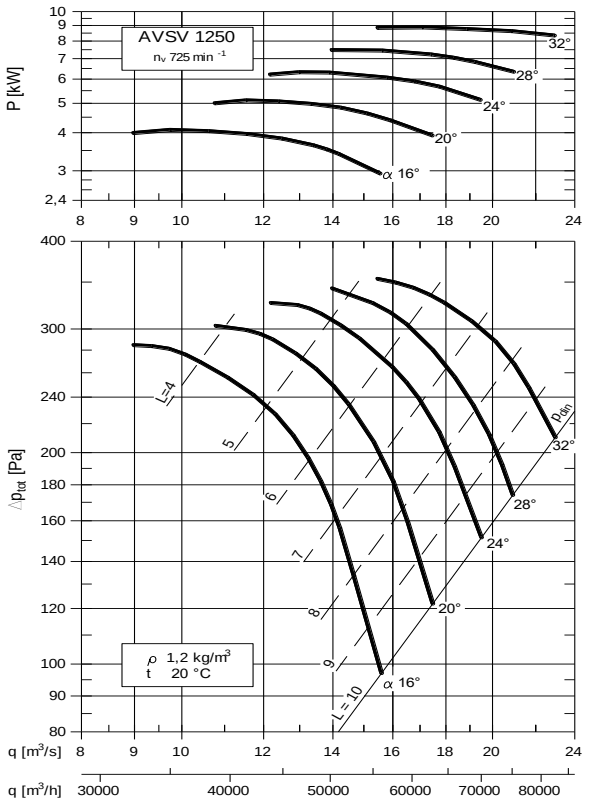
α_{max}	14°	16°	18°	20°	24°	28°	30°
el. mot. (kW)	7,5	11,0			15,0	18,5	



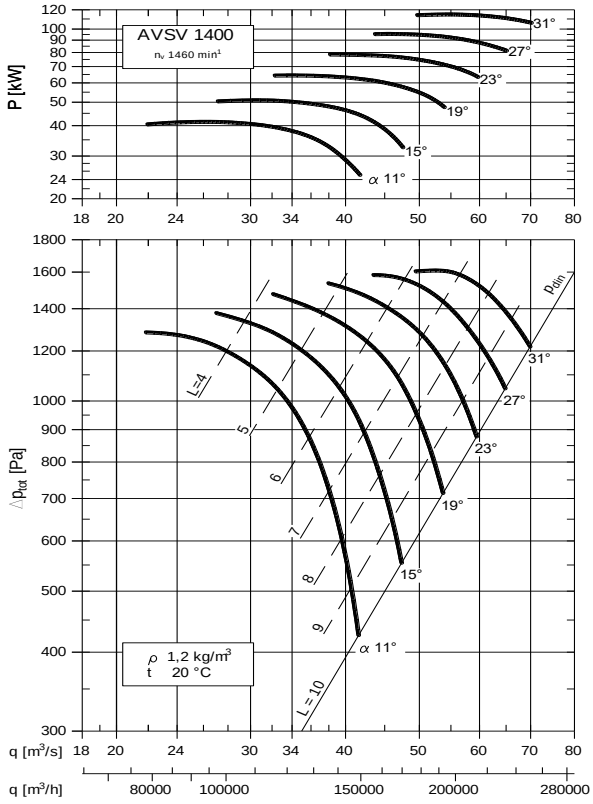
αmax	16°	20°	24°	28°	32°
el. mot. (kW)	37,0	45,0	55,0	75,0	



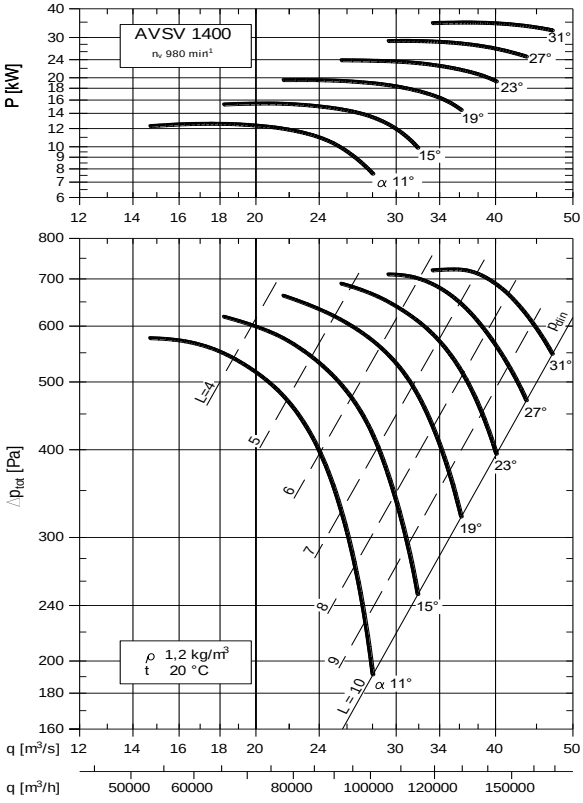
αmax	16°	20°	24°	28°	32°
el. mot. (kW)	11,0		15,0	18,5	22,0



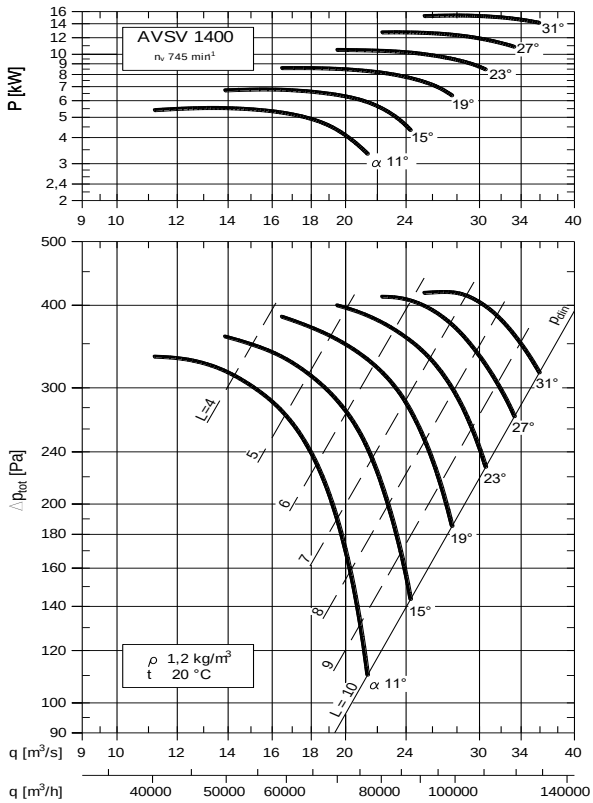
αmax	16°	20°	24°	28°	32°
el. mot. (kW)	5,5		7,5		11,0



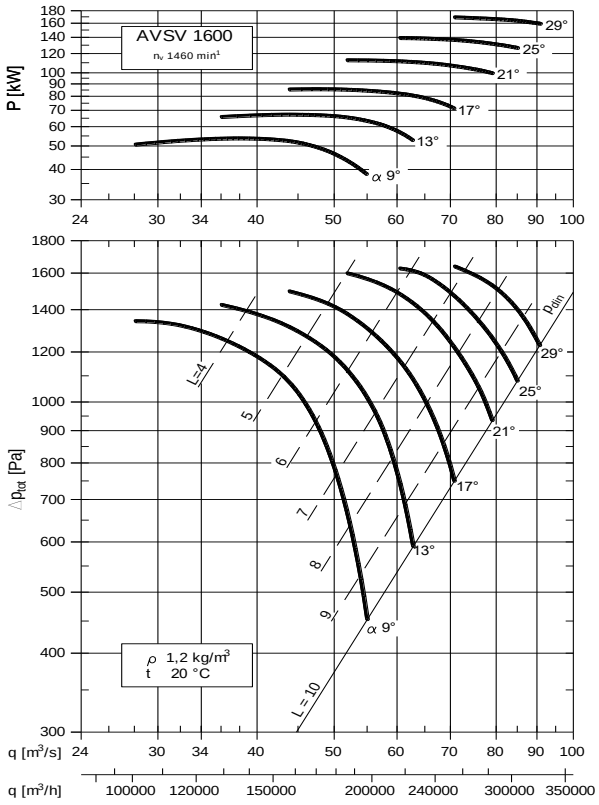
α_{max}	11°	15°	19°	23°	27°	31°
el. mot. (kW)	45,0	55,0	75,0	90,0	110,0	132,0



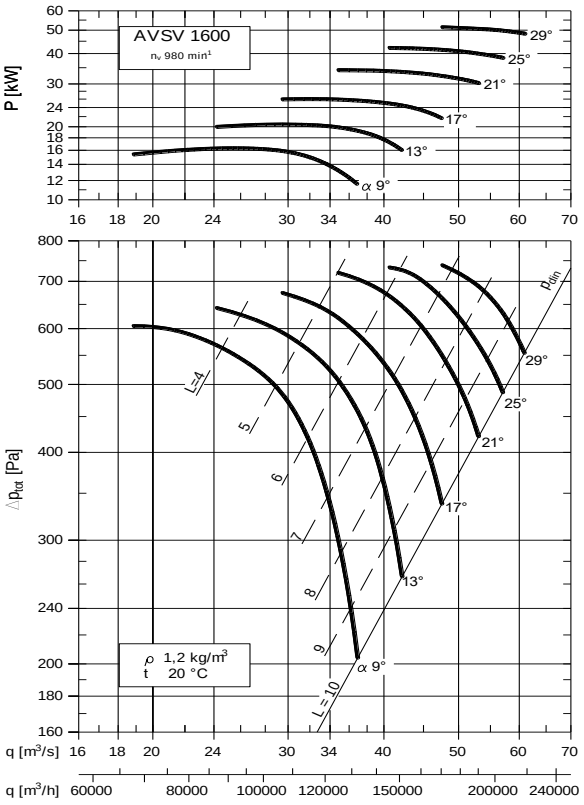
α_{max}	11°	15°	19°	23°	27°	31°
el. mot. (kW)	15,0	18,5	22,0	30,0		37,0



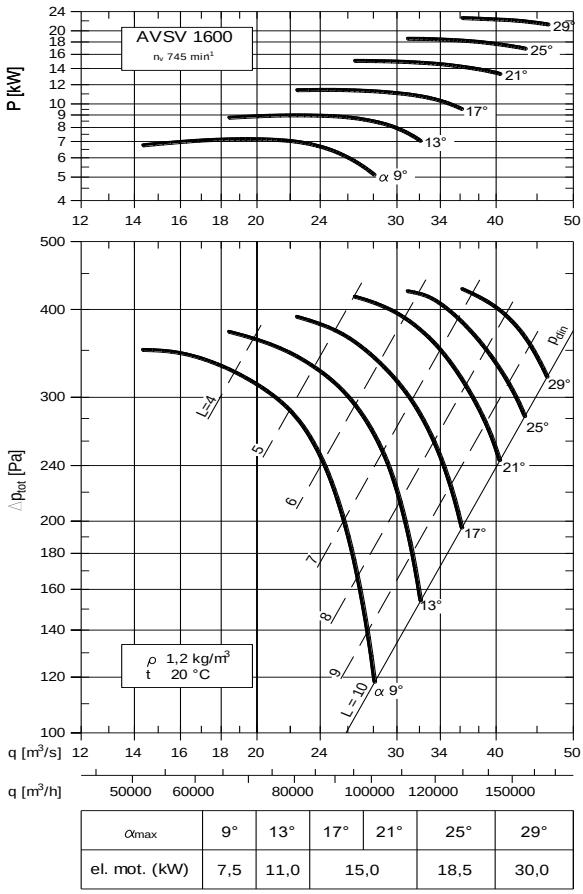
α_{max}	11°	15°	19°	23°	27°	31°
el. mot. (kW)	5,5	7,5	11,0		15,0	18,5



αmax	9°	13°	17°	21°	25°	29°
el. mot. (kW)	55,0	75,0	90,0	132,0	160,0	200,0



αmax	9°	13°	17°	21°	25°	29°
el. mot. (kW)	18,5	22,0	30,0	37,0	45,0	55,0



αmax	9°	13°	17°	21°	25°	29°
el. mot. (kW)	7,5	11,0	15,0		18,5	30,0

AKSIALNI VENTILATORJI EX AV in EX AVV

Eksplozijsko varna izvedba

Eksplozivne zmesi plinov in par z zrakom, se lahko pojavijo na posameznih mestih, kot rezultat proizvodnega procesa ali kot posledica okvar. Vžig zmesi z iskro ali prekomernim segrevanjem posameznih delov lahko povzroči eksplozijo ali požar. Ventilatorji EX AV izdelani v skladu z zahtevami ATEX onemogočajo nastanek eksplozije ali požara, kot posledice njihovega obratovanja. Prav tako pa mora tudi uporabnik pri izbiri, montaži, uporabi in vzdrževanju strogo upoštevati standarde, predpise in navodila.

Uporaba

Uporaba aksialnih ventilatorjev **EX AV** je dovoljena v eksplozijsko ogroženih prostorih nadzemne industrije:

- cona nevarnosti 0: uporaba ni dovoljena
- cona nevarnosti 1: **Ex II 2G c IIB T4**
- cona nevarnosti 2: **Ex II 3G c IIB T4**

Največja dopustna stalna obratovalna temperatura medija je 40°C.

Tehnični opis

Eksplozijsko varni ventilatorji EX AV so v osnovi enaki kot standardni AVS, vendar s konstrukcijskimi rešitvami, ki ustrezajo direktivi 2014/34/EU in standardom EN ISO 80079-36 ter EN 14986 (c – konstrukcijska varnost).
Ventilatorji EX AV imajo vgrajene standardne trifazne elektromotorje 3x400V; 50 Hz; IP 55, v proti eksplozijski zaščiti II 2G EEx de IIC T4. Motorji so opremljeni s PTC tipali za termično zaščito.
Vklop, izklop, in regulacija vrtljajev ventilatorja je možna z eno ali dvostopenjskim stikalom ali frekvenčnim pretvornikom, ki morajo biti obvezno nameščeni izven cone nevarnosti. Stikala za namestitev v cono nevarnosti nudimo po posebnem naročilu.

Označevanje

Označevanje je enako kot pri standardnih ventilatorjih, dodana je samo predpona EX.
Primer oznake

EX AV 450-4 AL	II 2G c IIB T4 ali II 3G c IIB T4
EX AV 800-4/6	II 2G c IIB T4 ali II 3G c IIB T4
EX AVV 900-6	II 2G c IIB T4 ali II 3G c IIB T4

Tehnične karakteristike

Tehnične karakteristike so enake kot pri ventilatorjih AVS oziroma AVSV.
Standardno dobavljamo samo ventilatorje z eno hitrostjo vrtenja.

AXIAL FANS TYPE EX AV and EX AVV

Fans for hazardous area

Explosive compositions of gases and fumes with air can occur as a result of production process, or consequence of malfunction. Mixture ignition with spark or excessive heating of individual parts, can cause explosion or fire. Axial fans type EX AV are designed according to directives ATEX, which prevent explosion or fire, due to their operation. Also the customer has to strictly consider all the regulations and guidelines, by selection, mounting, usage and maintenance of the fan.

Application

The use of the **EX AV** axial fans is permitted for hazardous zones in industrial areas:

- hazardous zone 0: not allowed
- hazardous zone 1: **Ex II 2G c IIB T4**
- hazardous zone 2: **Ex II 3G c IIB T4**

The maximum continuous medium operating temperature is 40°C.

Technical description

Explosion proof EX AV fans are basically similar to standard AVS type, with construction solutions that conform to directive 2014/34/EC and norm EN ISO 80079-36 & EN 14986 (c – construction safety).
EX AV fans have standard IEC three-phase electro motors installed 3x400V; 50Hz; IP55, with explosion proof protection II 2G EEx de IIC T4 and PTC sensors for thermal protection.
Start, stop and RPM regulation is possible with one or two-speed switches or frequency converters. For switches and frequency converters it is mandatory to mount them outside of the hazardous zone. Switches for use inside the hazardous zone are available by special customer's request.

Designation

Designation is the same as standard fans, only the EX prefix is added.
Designation example

EX AV 450-4 AL	II 2G c IIB T4 or II 3G c IIB T4
EX AV 800-4/6	II 2G c IIB T4 or II 3G c IIB T4
EX AVV 900-6	II 2G c IIB T4 or II 3G c IIB T4

Technical data

Technical data of the fans for hazardous area are identical AVS and AVSV.
Only the fans with one speed motors are in standard production program.

DODATNA OPREMA

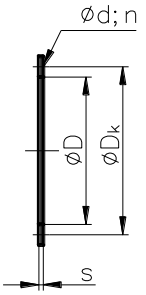
ACCESSORIES

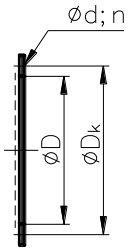
Prirobnica D
Flange D

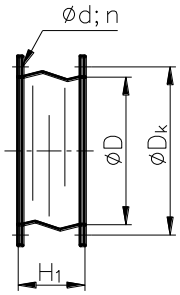
MZ D Zaščitna mreža
MZ D Protective grid

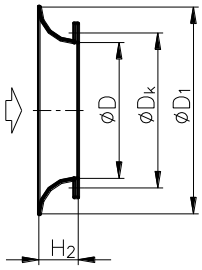
EP D Elastični priključek
EP D Flexible connection

LV D Sesalni lijak
LV D Inlet funnel
LVZ D Sesalni lijak z mrežo
LVZ D Inlet funnel with grid

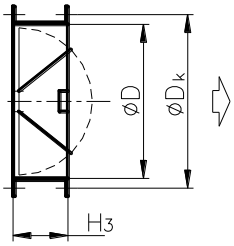






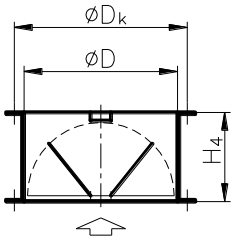


SLH D Horizontalna samodvižna loputa
SLH D Horizontal back draft shutter



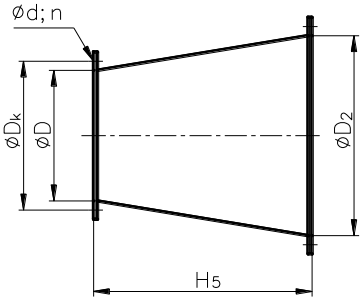
ξ = 0,2 – 0,24 AVSV
ξ = 0,9 – 1,6 AVS

SL D Vertikalna samodvižna loputa
SL D Vertical back draft shutter

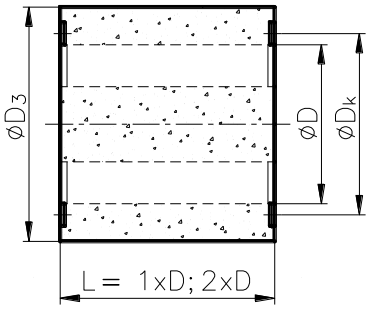


ξ = 0,2 – 0,24 AVSV
ξ = 0,9 – 1,6 AVS

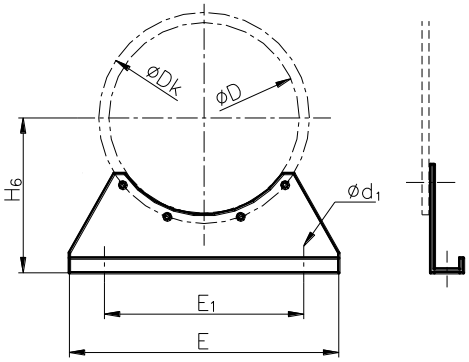
Difuzor D / D_2
Diffuser D / D_2



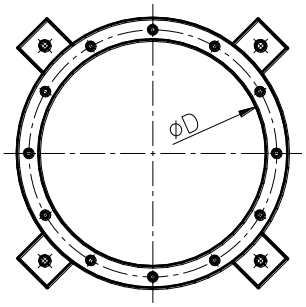
DZ D x L Dušilec zvoka
DZJ D x L Dušilec zvoka z jedrom
DZ D x L Silencer
DZJ D x L Silencer with core



MF D Noge – horizontalne
MF D Mounting feet – horizontal

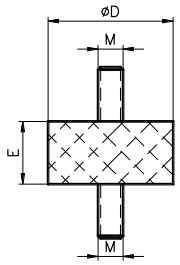


Noge – vertikalne D
Mounting feet – vertical D

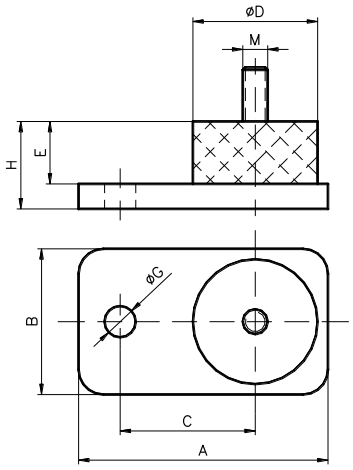


ØD	ØDk	Ød	n	s	H_1	$ØD_1$	H_2	H_3	H_4	$ØD_2$	$ØD_3$	H_5	H_6	E	E_1	$Ød_1$
400	438	9,5	12	6	120	500	110	250	220	500	600	355	320	320	280	10
450	487	9,5	12	6	120	600	110	250	250	560	650	400	340	360	320	10
500	541	9,5	12	6	150	650	110	250	280	630	700	450	370	400	350	12
560	605	11,5	16	6	150	710	110	250	310	710	760	500	400	440	390	12
630	674	11,5	16	6	150	790	110	250	350	800	830	560	430	500	440	14
710	751	11,5	16	6	150	870	140	250	400	900	910	630	480	600	540	14
800	837	11,5	24	6	150	960	140	350	440	1000	1000	710	530	650	580	14
900	958	14	24	8	150	1100	140	350	500	1120	1100	800	580	700	630	16
1000	1067	14	24	8	150	1200	150	350	550	1250	1300	900	680	800	720	16
1120	1200	18	32	8	150	1360	250	400	620	1400	1420	1000	740	900	820	16
1250	1337	18	32	8	150	1490	250	400	700	1600	1550	1120	800	1000	920	16
1400	1491	18	32	10	150	1640	250	500	800	1800	1700	1250	880	1100	980	20
1600	1663	18	40	10	200	1860	250	500	900	2000	1900	1400	980	1260	1140	20

Amortizerji
Anti-vibration mounts



Amortizerji s ploščo
Anti-vibration mounts with bracket



AVS AVSV EX AVS	EM Poli / poles	ØD x E	M	A	B	C	H	ØG	Kom/vent. Pcs./fan
400	2, 4, 2/4	Ø30 x 25	M8	80	40	45	33	Ø12	4
450	2, 2/4	Ø40 x 30	M8	90	50	50	38	Ø12	4
	4	Ø30 x 25	M8	80	40	45	33	Ø12	4
500	2, 2/4	Ø50 x 30	M10	105	60	60	40	Ø14	4
	4	Ø40 x 30	M8	90	50	50	38	Ø12	4
560	2, 2/4	Ø50 x 30	M10	105	60	60	40	Ø14	4
	4, 6	Ø40 x 30	M8	90	50	50	38	Ø12	4
630	2, 2/4	Ø60 x 30	M12	120	70	65	42	Ø15	4
	4,6, 4/6	Ø50 x 30	M10	105	60	60	40	Ø14	4
710	2, 2/4	Ø60 x 30	M12	120	70	65	42	Ø15	4
	4,6, 4/6	Ø50 x 30	M10	105	60	60	40	Ø14	4
800	4, 6, 8	Ø60 x 30	M12	120	70	65	42	Ø15	4
900	4, 6, 8	Ø70 x 50	M12	130	80	70	62	Ø18	4
1000	4, 6, 8	Ø70 x 50	M12	130	80	70	62	Ø18	4
1120	4, 6, 8	Ø70 x 50	M12	130	80	70	62	Ø18	4
1250	4, 6, 8	Ø100 x 50	M16	185	110	100	65	Ø22	4
1400	*	*	*	*	*	*	*	*	*
1600	*	*	*	*	*	*	*	*	*

* Glede na velikost el.motorja

* Depends of the size of the el.motor

ELEKTRIČNA STIKALA in REGULATORJI

STS6 Servisno stikalo

6 polno servisno stikalo z dvema krmilnima kontaktoma.
Za AVS in AVSV je stikalo lahko vgrajeno na ventilator namesto priključne doze. Možna je tudi ločena dobava.

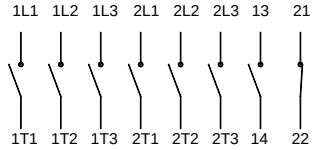
Za EX AV je obvezna vgradnja izven cone ogroženosti.

SWITCHES AND SPEED CONTROLLERS

STS6 Maintenance switch

6 pole maintenance switch with 2 auxiliary contacts.
AVS and AVSV: switch can be installed on the fan as terminal box. Separate delivery is also possible.

For EX AV mounting outside hazardous zone is mandatory



Tip Type	P_N [kW]	I_N [kW]	L x B x H [mm]
STS6 - 5,5	5,5	20	120 x 85 x 107
STS6 - 7,5	7,5	25	190 x 100 x 110
STS6 - 11	11	32	190 x 100 x 110
STS6 - 15	15	40	250 x 145 x 124
STS6 - 22	22	63	250 x 145 x 124
STS6 - 30	30	80	300 x 200 x 222
STS6 - 37	37	100	300 x 200 x 222
STS6 - 45	45	125	400 x 300 x 245
STS6 - 55	55	160	400 x 300 x 245
STS6 - 132	132	275	560 x 380 x 367

SBZ I Enostopenjsko stikalo

Stikalo je namenjeno za vklop / izklop in tokovno varovanje z bimetalom eno hitrostnih motorjev 3x400 V. Stikalo je izbrano glede na nazivni tok el. motorja.

- stikalo 0 - 1
- 3 x 400V, 50/60 Hz
- ohišje je iz odporne plastike, zaščita IP 55, 75 °C
- omogoča zaščito motorja z bimetalom
- signalna luč za delovanje motorja
- signalna luč za okvaro motorja
- vklop / izklop motorja s prostorskim termostatom.
- dimenzije 240x 190 x 100

SBZ I One speed switch

The switch enables power connection to one speed motors 3x400 V and current overload protection. The switch is selected according to nominal current of the electric motor.

- ON / OFF switch
- 3 x 400V, 50/60 Hz
- casing made of resistant plastic, IP 55, 75 °C
- current overload protection of motor
- motor operation control lamp
- motor failure control lamp
- motor starting / stopping by means of room thermostat.
- dimensions 240 x 190 x 100

SBZ II Dvostopenjsko stikalo

Stikalo je namenjeno za vklop / izklop in tokovno varovanje z bimetalom dvohitrostnih motorjev 3x400 V. Stikalo je izbrano glede na vezavo in nazivni tok motorja v posamezni hitrosti.

- stikalo 0 - 1 - 2
- Ostalo je enako kot pri SBZ I

SBZ II Two speed switch

The switch enables power connection to two speed motors 3x400 V and current overload protection at high and low speed. Switch types for separate and Dahlander windings are different.

- 0 - 1 - 2 switch
- Other is the same as at SBZ I

Frekvenčni pretvorniki z enofaznim vhodom in trifaznim izhodom

Enofazni frekvenčni pretvorniki se uporabljajo za regulacijo hitrosti vrtenja trifaznih motorjev vezanih v Δ3x230V do moči 1,5 kW**.** Omogočajo optimalno krmiljenje in zaščito motorjev ki imajo vgrajena PTC tipala ali termo kontakte. S frekvenčnim pretvornikom lahko istočasno vzporedno napajamo več ventilatorjev, skupna moč ne sme presegati nazivne moči frekvenčnega regulatorja.

Frequency converters with mono phase inlets and three phase outlets

One phase frequency converters are used for RPM regulation of three phase electro motors connected Δ3x230V with power up to 1,5 kW. They enable optimal control and protection of el. motors. They can regulate two or more fans parallel as long as the current limit is not exceeded. They also have TK contacts with no automatic restart.

Trifazni frekvenčni pretvorniki

Trifazni frekvenčni pretvorniki se uporabljajo za regulacijo hitrosti vrtenja trifaznih motorjev z vezavo Δ400V/Y690V in omogočajo optimalno krmiljenje in zaščito motorjev. Motorji morajo biti vezani v Δ400V in opremljeni s PTC tipali ali TC. S frekvenčnim pretvornikom se lahko istočasno vzporedno napaja več ventilatorjev, skupna moč ne sme presegati nazivne moči regulatorja.

Three phase frequency converters

Three phase frequency converters are used for RPM regulation of three phase motors with connection Δ400/Y690V. Motors have to be connected in Δ400V and equipped with PTC sensors or TC. They enable optimal control and protection of el. motors. They can regulate two or more fans parallel as long as the current / power limit is not exceeded.

VEZALNE SHEME
Trifazni IEC elektromotorji

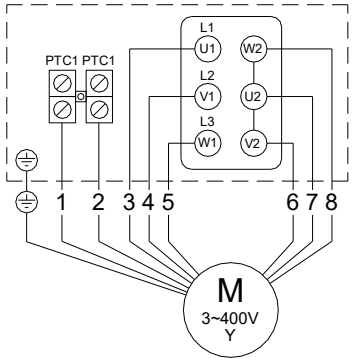
WIRING DIAGRAMS
Three phase IEC motors

Motor Δ 3~230V / Y 3~400V do 2,2 kW, ena hitrost

Vezava Y 3~400V **Connection Y 3~400V**

- direktni zagon
- FP 3~400V

- direct start up
- FC 3~400V

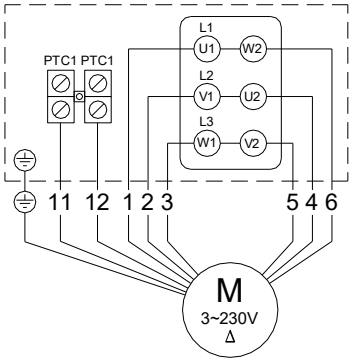


Motor Δ 3~230V / Y 3~400V up to 2,2 kW; single speed

Vezava Δ 3~230V **Connection Δ 3~230V**

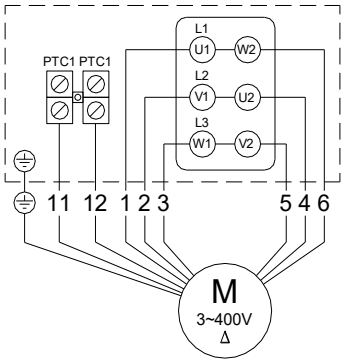
- za frekvenčni pretvornik 230V

- for frequency converter 230V



Motor Δ 3~400V / Y 3~690V nad 3,0 kW, ena hitrost **Motor 3~400V / Y 3~690V over 3,0 kW, single speed**

Vezava Δ 3~400V
- direktni zagon
- frekvenčni pretvornik 3~400V
- nad 7,5 kW priporočamo zagon Y/Δ, tiristorski zagon ali frekvenčni pretvornik

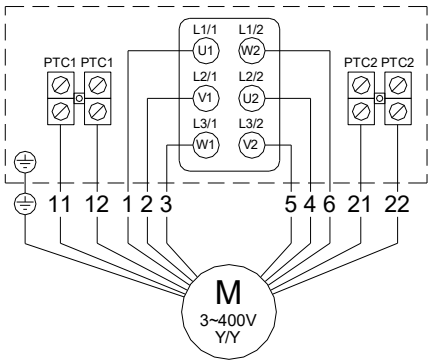


Connection Δ 3~400V
- Direct start up.
- Frequency converter 3~400V.
- Over 7,5 kW it is recommended to start with Y/Δ, electronic soft start or frequency converter.

Dve hitrosti – vezava Y/Y, ločeno navitje **Two speeds – Y/Y connection; separate winding**

Mala hitrost

Low speed



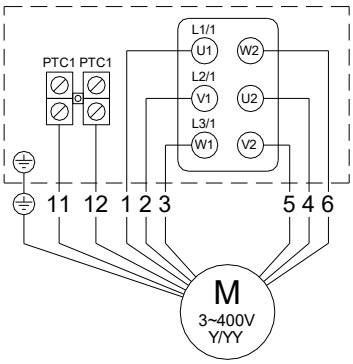
Visoka hitrost

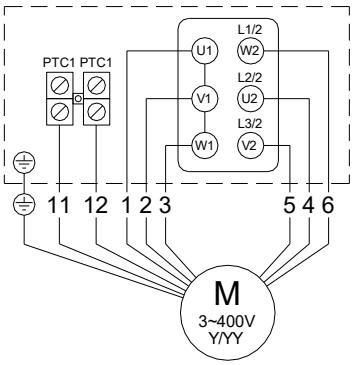
High speed

Dve hitrosti – vezava Y/YY, Dahlander navitje **Two speeds – Y/YY connection; Dahlander winding**

Mala hitrost

Low speed





Visoka hitrost

High speed

POPISNI TEKST AVS, AVSV

Poz.	Kol.	Opis	Cena EUR/kos	Skupno EUR
		Aksialni ventilator *(z vodilnikom)* za notranjo *(zunanjo)* vgradnjo in obratovalno temperaturo do 55°C. Ventilator je vgrajen v kanal *(v kanal s prostim sesanjem - v kanal s prostim izstopom - v steno…).* Ohišje s prirobnicami je iz jeklene pločevine in korozijsko zaščiteno z barvanjem - RAL 7040 *(vroče pocinkano…)*. Tekač s profiliranimi lopaticami iz aluminijeve zlitine z nastavljivim kotom v mirovanju je statično in dinamično uravnotežen v klasi G 6,3 po DIN ISO 1940-1. **Proizvod:** **KLIMA CELJE d.d.** **Tip:** **AVS *(AVSV)*……...** **Tehnični podatki** pretok q..... m^3/s totalni tlak Δp_t ..... Pa obratovalna temperatura t..... °C vgradnja horizontalna *(vertikalna)* **Elektromotor** moč elektromotorja P ..... kW vrtljaji elektromotorja n..... min^{-1} napetost U..... V frekvenca f ..... Hz nazivni tok I ..... A zaščita IP 55 PTC da *(ne)* **Dodatna oprema** ……		

SPECIFICATION AVS; AVSV

Pos. No.	Qty.	Subject	Unit price EUR	Total EUR
		Axial fan *(with guide vane)* for inside *(outdoor)* mounting and operating temperature up to 55°C. Fan for duct installation *(duct installation with free inlet - duct installation with free outlet – wall installation…)*. Steel fan casing with flanges is painted with RAL 7040 *(hot dip galvanized,…)*. Impeller has aluminium mould cast airfoil blades with adjustable angle at fan standstill. Impeller is statically and dynamically balanced in G 6,3 class according to DIN ISO 1940-1. **Producer:** **KLIMA CELJE d.d.** **Type:** **AVS *(AVSV)*……** **Technical data** Flow rate q..... m^3/s Total pressure Δp_t..... Pa Operating temperature t..... °C Installation horizontal *(vertical)* **Electromotor** Power P..... kW RPM n..... min^{-1} Voltage U..... V Frequency f..... Hz Nominal current I..... A Protection class IP 55 PTC Yes *(No)* **Accessories** ……		

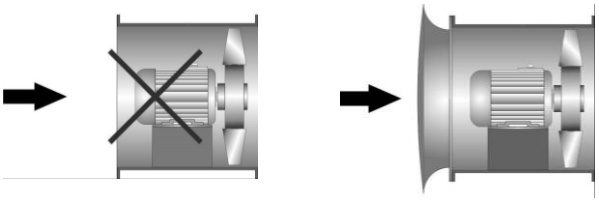
POPISNI TEKST EX AVS, EX AVSV

Poz.	Kol.	Opis	Cena EUR/kos	Skupno EUR
		Aksialni ventilator *(z vodilnikom)* za obratovanje v eksplozijsko nevarnem okolju za notranjo *(zunanjo)* vgradnjo in obratovalno temperaturo do 40°C. Ventilator je vgrajen v kanal *(v kanal s prostim sesanjem - v kanal s prostim izstopom - v steno…).* Ohišje s prirobnicami je iz jeklene pločevine in korozijsko zaščiteno z barvanjem - RAL 7040 *(vroče pocinkano……)*. Tekač s profiliranimi lopaticami iz aluminijeve zlitine z nastavljivim kotom v mirovanju je statično in dinamično uravnotežen v klasi G 6,3 po DIN ISO 1940-1. Ventilator ima atest po standardu EN 13463-1 in EN 14986. **Proizvod:** **KLIMA CELJE d.d.** **Tip:** **EX AVS *(EX AVSV)*……...** **Cona nevarnosti 1 *(2*)** ***Zaščita:* Ex II 2G c IIB *T4 (Ex II 3G c IIB T4)*** **Tehnični podatki** pretok q.....m^3/s totalni tlak Δp_t.....Pa obratovalna temperatura t.....°C vgradnja horizontalna *(vertikalna)* **Elektromotor** moč elektromotorja P.....kW vrtljaji elektromotorja n.....min^{-1} napetost U.....V frekvenca f.....Hz nazivni tok I.....A zaščita IP 55 PTC da *(ne)* **Dodatna oprema** …… …… …… …… ……		

SPECIFICATION EX AVS; EX AVSV

Pos. No.	Qty.	Subject	Unit price EUR	Total EUR
		Axial fan *(with guide vane)* for operation in an explosion hazardous environment for inside *(outdoor)* mounting and operating temperature up to 40°C. Fan is installed into duct *(duct with free inlet – duct with free outlet – into wall…)*. Steel fan casing with flanges is painted with RAL 7040 *(hot dip galvanized,…)*. Impeller has aluminium mould cast airfoil blades with adjustable angle at fan standstill. Impeller is statically and dynamically balanced in G 6,3 class according to DIN ISO 1940-1. Fan is certificated according to standard EN 13463-1 and EN 14986. **Producer:** **KLIMA CELJE d.d.** **Type:** **EX AVS *(EX AVSV)*……** **Hazardous zone 1 *(2)*** **Protection: Ex II 2G c IIB *T4 (Ex II 3G c IIB T4)*** **Technical data** Flow rate q.....m^3/s Total pressure Δp_t.....Pa Operating temperature t.....°C Installation horizontal *(vertical)* **Electromotor** Power P.....kW RPM n.....min^{-1} Voltage U.....V Frequency f.....Hz Nominal current I.....A Protection class IP 55 PTC Yes *(No)* **Accessories** …… …… …… …… ……		

PRIMERI VGRADNJE



Napačno Incorrect

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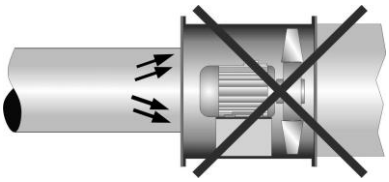

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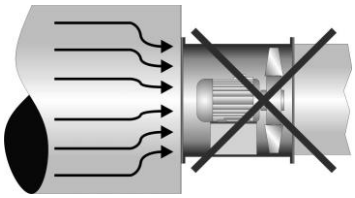

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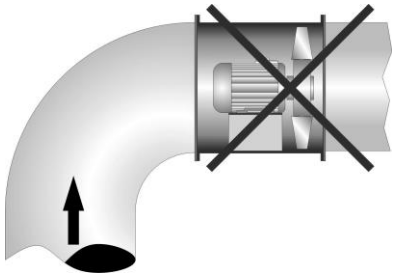

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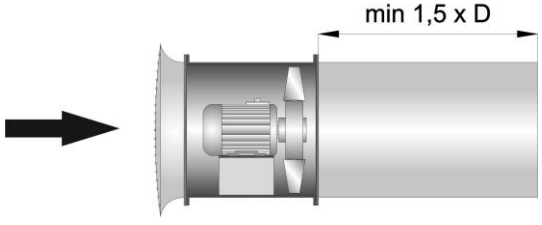

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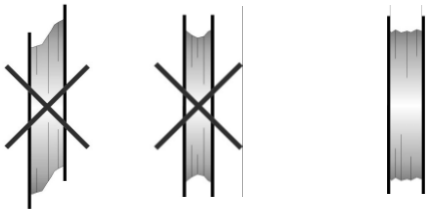
INSTALLATION EXAMPLES



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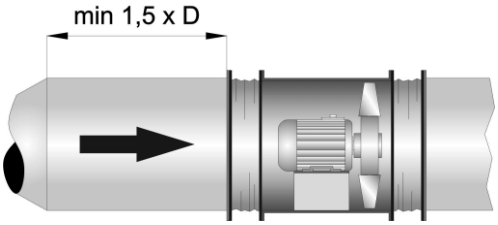

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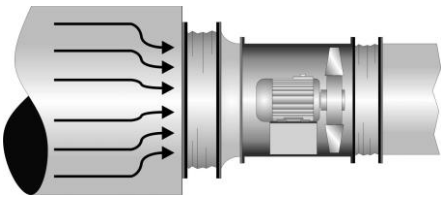

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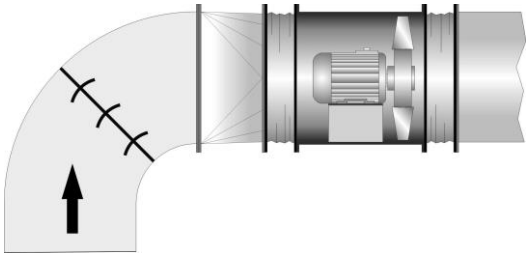

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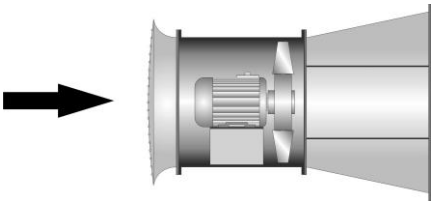

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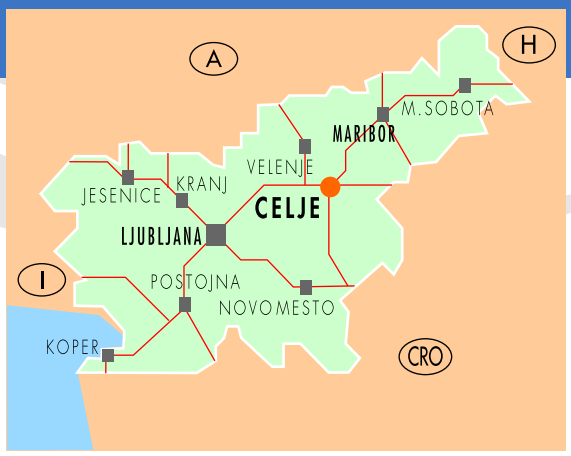
Podatki v tem prospektu so informativni. Pridržujemo si pravico sprememb brez predhodnega obvestila.
Data in this brochure are informative. We reserve the right to changes without prior notice.



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