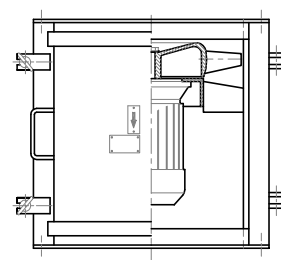
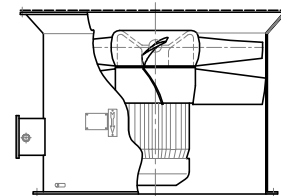


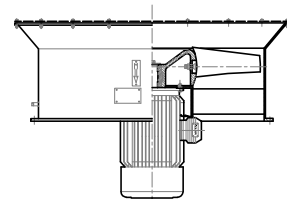
Axial-flow fans WMOR



Axial-flow fans WMOD



Axial-flow fans WMOB



Axial-flow fans WMOS

1. DESTINATION

Marine axial-flow WMOR and WMOD fans are destined for operation in ventilation systems of seagoing ships with unrestricted cruising area as well as offshore objects. They may be used as exhaust or supply fans and be installed inside the compartments or on weather decks.

2. OPERATING CONDITIONS

Working parameters of fans are shown on enclosed performance curves $P_s=f(V)$ with respect to inert gas of specific density $\rho=1,2\text{ kg/m}^3$ and temperature $t=20\text{ deg.C}$, where :

- $P_s\text{ (Pa)}$ - fan static pressure
- $V(\text{m}^3/\text{h})$ - air displacement

Allowable tolerances of working parameters of fans (air displacement, pressure, power consumption and efficiency) are in accordance with standard PN-77/M-43021.

Temperature of conveyed medium should not exceed +45 deg.C, dust contents $0,3\text{ g/m}^3$.

3. CONSTRUCTION

- housing : steel pipe ended with drilled flanges, welded. On the housing a terminal box with cable gland for supply connection cable is mounted.

- Sizes of cable glands:
- DN=200-355 Pg20
 - DN=400-500 Pg27
 - DN=560-800 Pg33
 - DN=1000-1600 Pg42

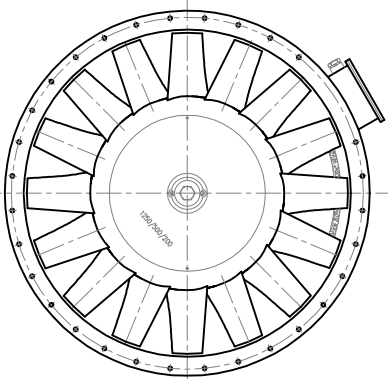
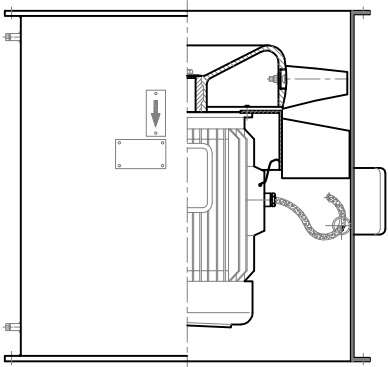
Housing of fan is provided with air-guide, to which electric motor-impeller set is screwed.

WMOD-type fans are provided with hinged door to which the air guide with motor-impeller set is fastened. Fans in explosion-proof execution are fitted with brass lining on inner surface of housing in way of impeller.

- air guide : made of steel sheet, welded, straightens the air flow and is also the supporting bracket of electric motor.
- impeller : made of aluminium alloys sea-water resistant. Impeller blades screwed to the hub, impeller dynamically balanced.
- electric motor : induction, squirrel-cage, three-phase, in marine execution, suitable for 50 or 60 Hz electric installation. All the motors are of high-efficiency IE2 class "GREEN responsibility".

4. SURFACE TREATMENT

Standard treatment - hot-dip galvanized. On request fans may be painted with marine paints set agreed with the Buyer.



5. TYPES AND SIZES OF FANS

- nominal diameters:

DN=200	DN=500	DN=1000
DN=250	DN=560	DN=1120
DN=315	DN=630	DN=1250
DN=355	DN=710	DN=1400
DN=400	DN=800	DN=1600
DN=450	DN=900	
- executions:

L - light, made of steel sheet 3-10 mm and with flanges of normal number of holes
C - heavy, made of steel sheet 10 mm and with flanges of double number of holes
- types:

N - supply
W - exhaust
- door opening:

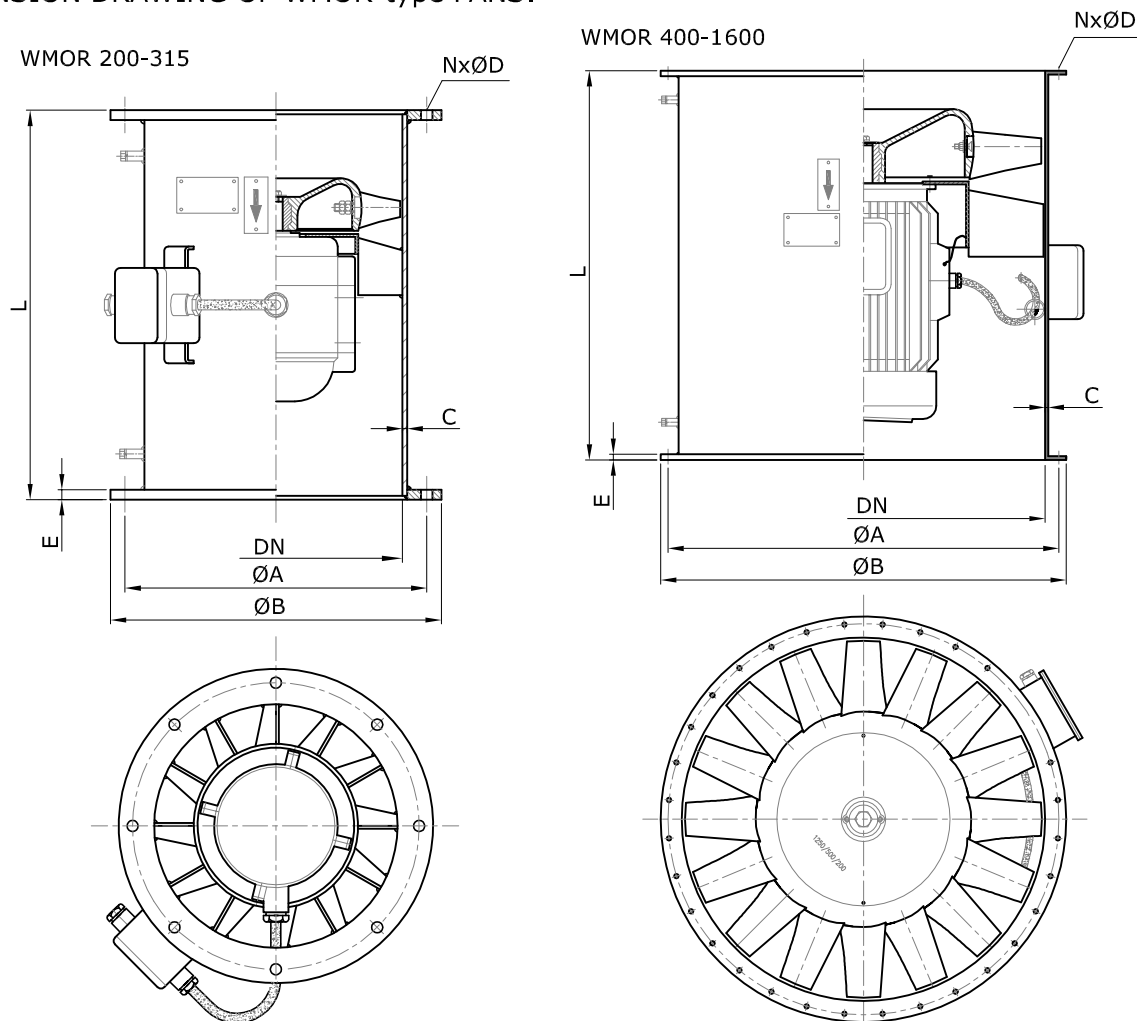
l - to the left
p - to the right
- non-spark: additional sign Ex

6. MARKING

of marine axial-flow fan WMOD type of nominal diameter DN=500 mm, with impeller hub diameter 280 mm, of light execution L, exhaust type W, with door opened to the left - l, with impeller blades pitch 30° , in standard execution: execution:

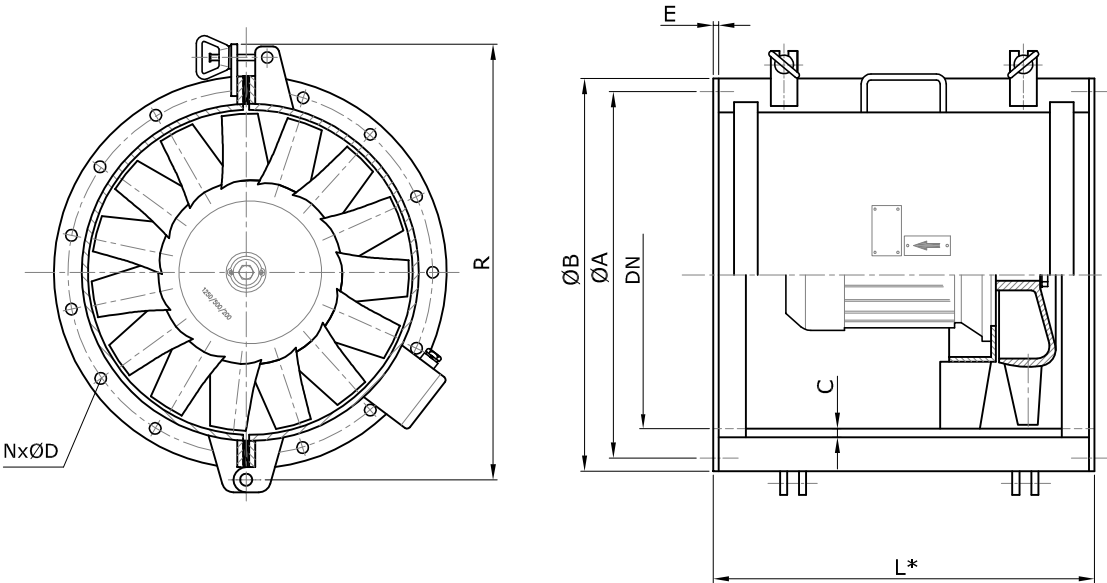
AXIAL-FLOW FAN
WMOR 500/280-L-W- 30° -l

7. DIMENSION DRAWING OF WMOR-type FANS:



Fantype	DN	A	B	L	N	D	C	E	Weight kg
WMOR 200 L	200	260	290	350	8	12	3	5	19,3
WMOR 200 C	200	260	290	350	16	12	8	10	33,6
WMOR 250 L	250	310	340	400	8	12	3	5	23
WMOR 250 C	250	310	340	400	16	12	8	10	42,8
WMOR 315 L	315	370	405	400	12	12	3	5	30
WMOR 315 C	315	370	405	400	24	12	10	10	56
WMOR 355 L	355	410	445	400	12	12	3	5	38
WMOR 355 C	355	410	445	400	24	12	10	10	78
WMOR 400 L	400	460	490	500	12	12	4	5	58,5
WMOR 400 C	400	460	490	500	24	12	10	10	92,5
WMOR 450 L	450	510	540	500	12	12	5	6	65
WMOR 450 C	450	510	540	500	24	12	10	12	112
WMOR 500 L	500	560	590	650	16	12	6	8	162
WMOR 500 C	500	560	590	650	32	12	10	12	199
WMOR 560 L	560	640	690	700	16	14	6	8	136
WMOR 560 C	560	640	690	700	32	14	10	12	186
WMOR 630 L	630	695	730	650	16	14	6	8	172
WMOR 630 C	630	695	730	650	32	14	10	12	190
WMOR 710 L	710	775	810	750	24	14	6	8	212
WMOR 710 C	710	775	810	750	48	14	10	12	300
WMOR 800 L	800	865	900	750	24	14	6	8	308
WMOR 800 C	800	865	900	750	48	14	10	12	340
WMOR 900 L	900	965	1000	850	32	14	6	10	405
WMOR 900 C	900	965	1000	850	64	14	10	12	435
WMOR 1000 L	1000	1065	1100	950	32	14	6	10	426
WMOR 1000 C	1000	1065	1100	950	64	14	10	12	520
WMOR 1120 L	1120	1205	1250	1200	32	14	6	10	680
WMOR 1120 C	1120	1205	1250	1200	64	14	10	12	720
WMOR 1250 L	1250	1335	1380	1200	32	14	6	12	722
WMOR 1250 C	1250	1335	1380	1200	64	14	10	12	870
WMOR 1400 L	1400	1485	1530	1300	32	14	6	12	980
WMOR 1400 C	1400	1485	1530	1300	64	14	10	12	1160
WMOR 1600 L	1600	1685	1730	1400	32	14	6	12	1280
WMOR 1600 C	1600	1685	1730	1400	64	14	10	12	1460

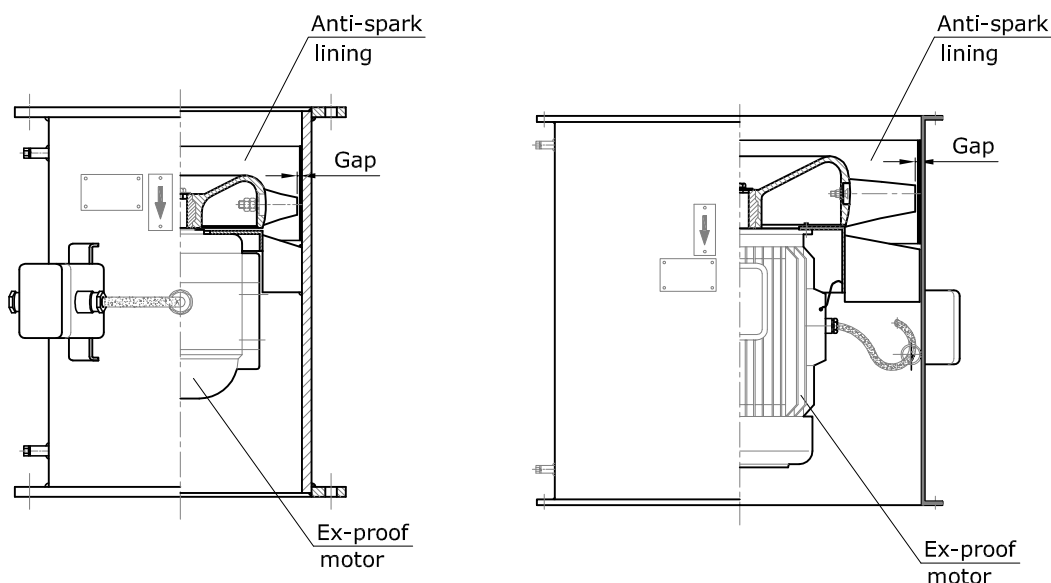
8. DIMENSION DRAWING OF WMOD-type FANS:



Fantype	DN	A	B	L*	N	D	C	E	R	Weight kg
WMOD 400 L WMOD 400 C	400	460	490	500	12 24	12	10	10	540	105
WMOD 450 L WMOD 450 C	450	510	540	500	12 24	12	10	10	600	145
WMOD 500 L WMOD 500 C	500	560	590	650	16 32	12	10	12	660	186
WMOD 560 L WMOD 560 C	560	640	690	700	16 32	14	10	12	740	195
WMOD 630 L WMOD 630 C	630	695	730	650	16 32	14	10	12	800	310
WMOD 710 L WMOD 710 C	710	775	810	750	24 48	14	10	12	900	370
WMOD 800 L WMOD 800 C	800	865	900	750	24 48	14	10	12	1000	460
WMOD 900 L WMOD 900 C	900	965	1000	900	32 64	14	10	12	1100	535
WMOD 1000 L WMOD 1000 C	1000	1065	1100	950	32 64	14	10	12	1200	750
WMOD 1120 L WMOD 1120 C	1120	1205	1250	1200	32 64	14	10	12	1350	900
WMOD 1250 L WMOD 1250 C	1250	1335	1380	1200	32 64	14	10	12	1500	1190
WMOD 1400 L WMOD 1400 C	1400	1485	1530	1300	32 64	14	10	14	1700	1520
WMOD 1600 L WMOD 1600 C	1600	1685	1730	1400	32 64	14	10	14	1880	

*) - Lenght may vary depending on motor size.

9. FANS IN NON-SPARKING EXECUTION:



9.1. APPLICATION

Marine explosion-proof axial-flow fans WMOR Ex and WMOD Ex are destined for transport of air contaminated with vapours or dusts of explosion-dangerous substances, defined by SOLAS Chapter VII Part A (with conformity to IMO-IMDG Code).

EExe or EExd safety class of used in Ex fans electrical motors or other electrical equipment is determined by IMO-class of dangerous substances, that may be expected in conveyed air.

El. motore safety class, as well as IP enclosure and temperature class (ignition class) are to be defined by the Customer after agreement with the Classification Society.

9.2. CERTIFICATION

Lloyd's Register Type Approval System 1996
Approval Certificate No.98/62

Germanischer Lloyd Approval Certificate
No. 40 256-01 HH

9.3. CONSTRUCTION

- **h o u s i n g** : steel pipe ended with drilled flanges, welded. Inside the housing an air guide for air stream straightening and el-motor supporting is fastened. On the housing in way of impeller a brass ring of 2 mm thickness is fitted as a protection against sparking in case of fan emergency.

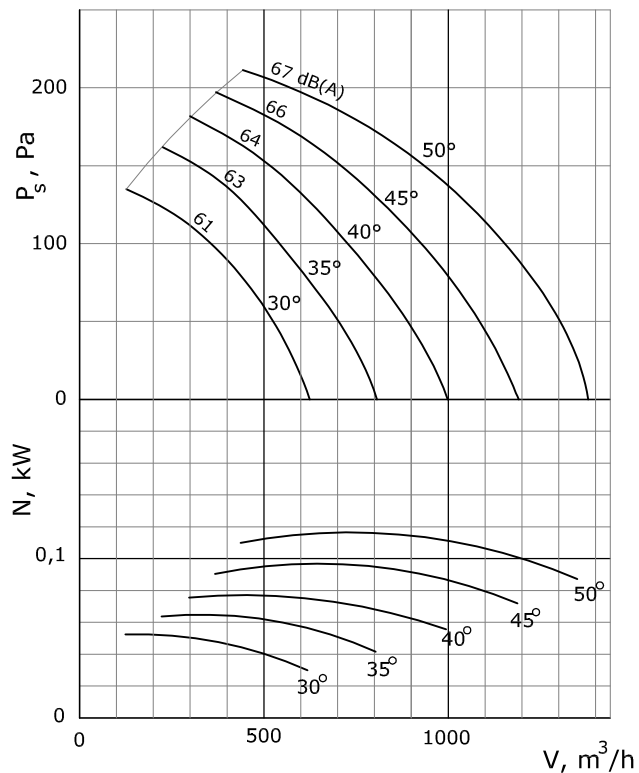
An air gap between housing and impeller blades edge is 2-13 mm, depending on motor shaft bearing diameter.

On the fan housing a cable gland and screwed cover enabling supply cable connection to el-motor terminal box, are mounted. On request the fans are delivered with external terminal box in ordinary or ex-proof execution or with internal cable leaded in protective steel pipe.

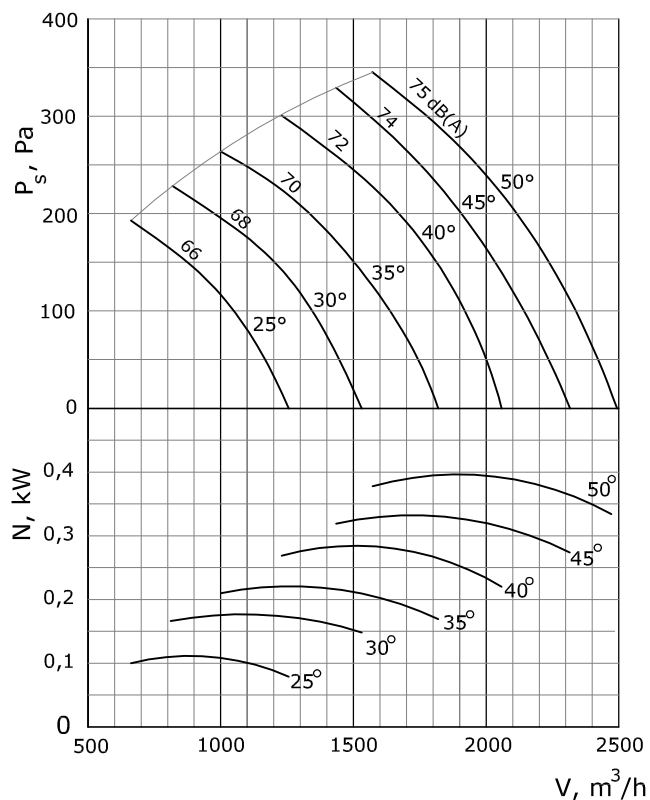
- **i m p e l l e r** : made of sea-water resistant aluminium alloy - silumin (AK-11). Impeller blades screwed to the hub, impeller dynamically balanced.

- **e l e c t r i c m o t o r** : induction, squirrel-cage. three-phase, totally enclosed, in marine execution, suitable for 50 or 60 Hz electric installation, of EExe or EExde class (see 9.1.).

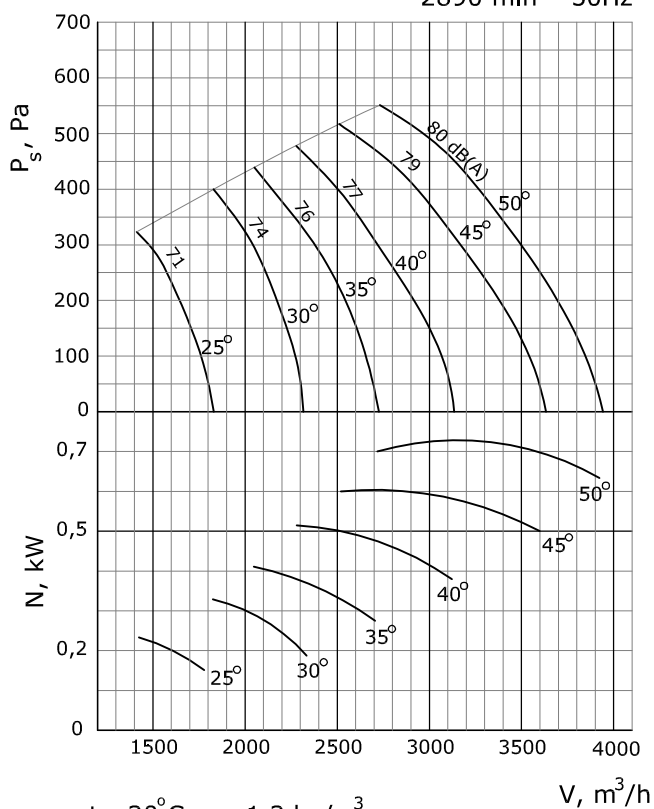
WMOR 200/110
2810 min⁻¹ 50Hz



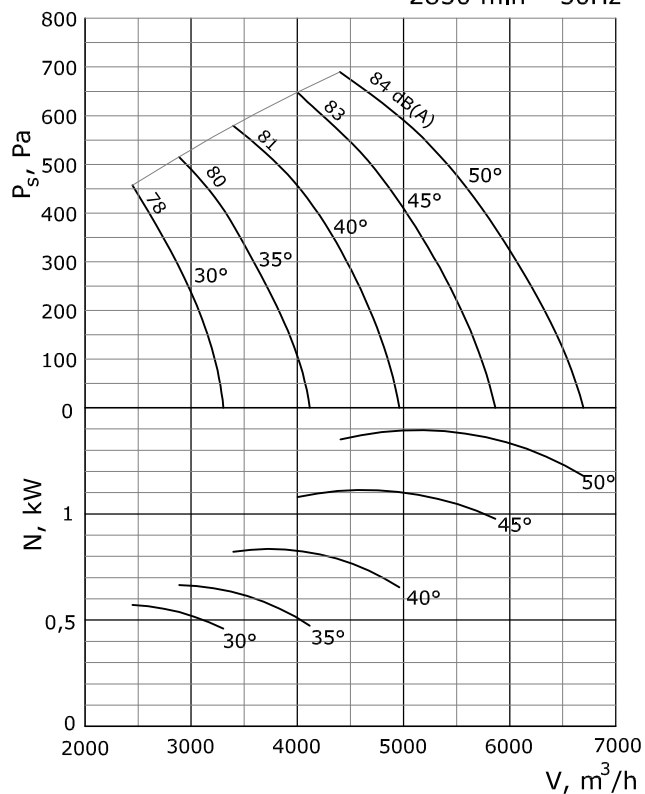
WMOR 250/175
2810 min⁻¹ 50Hz



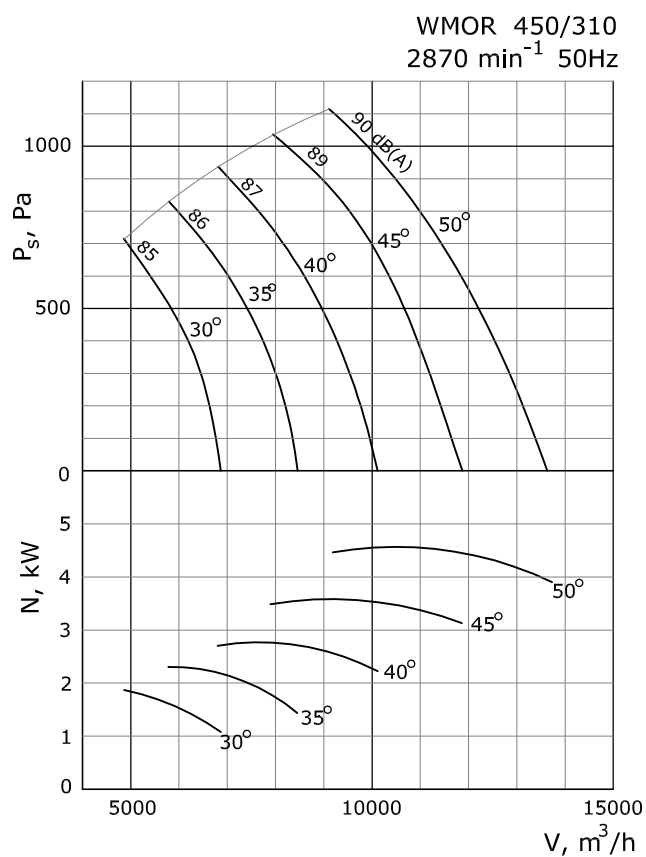
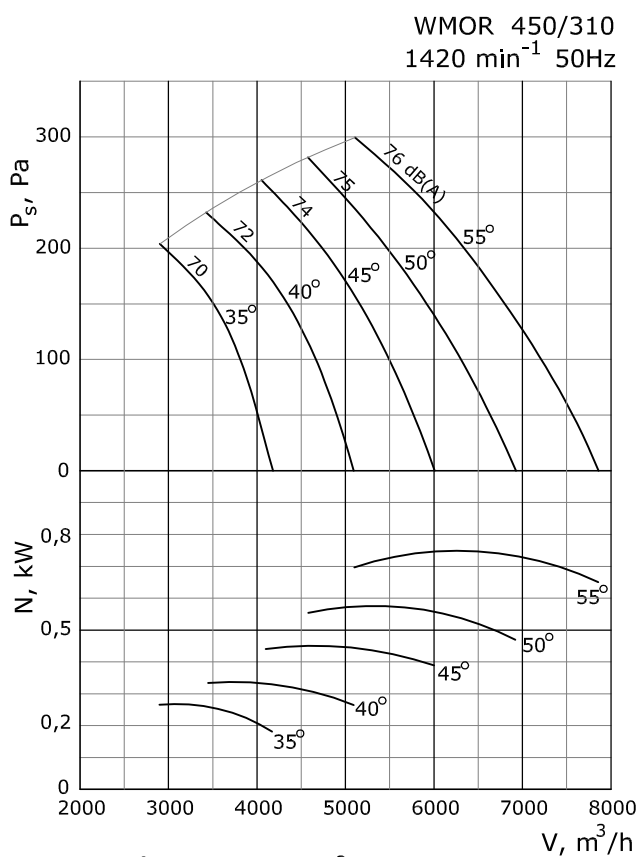
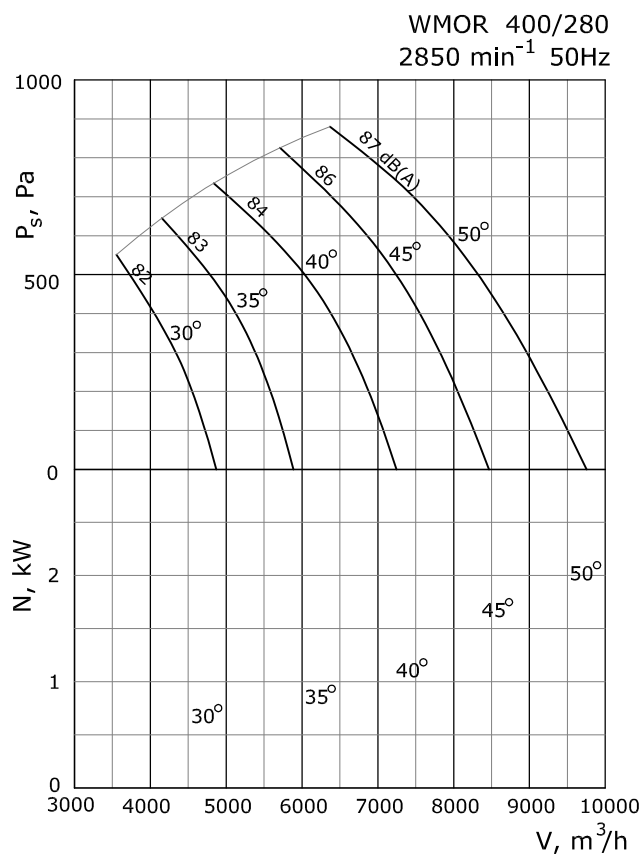
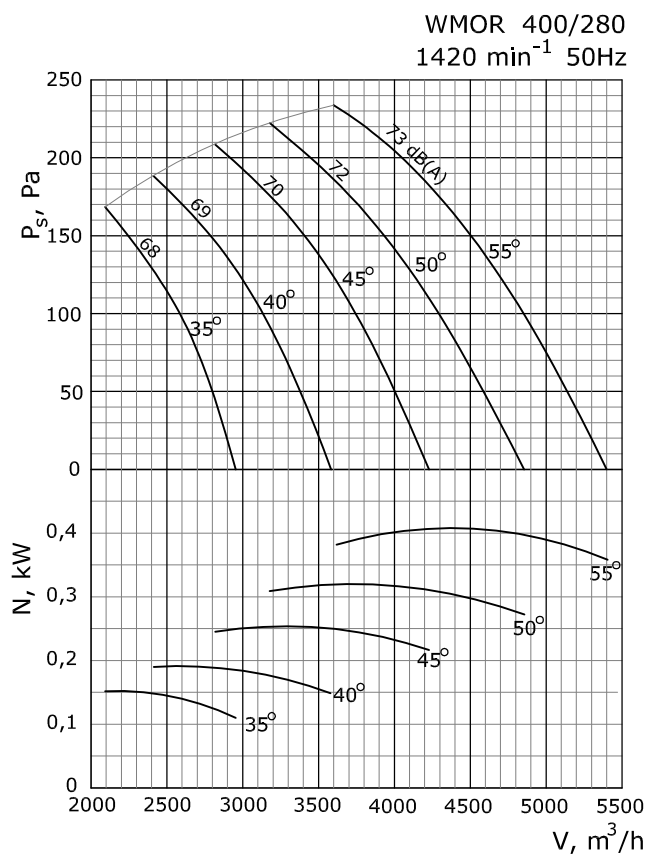
WMOR 315/220
2890 min⁻¹ 50Hz



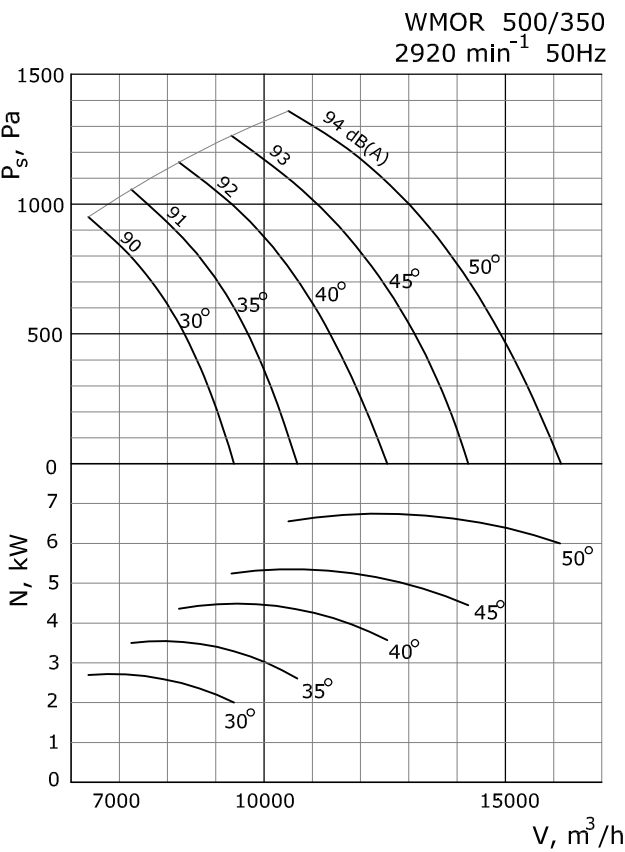
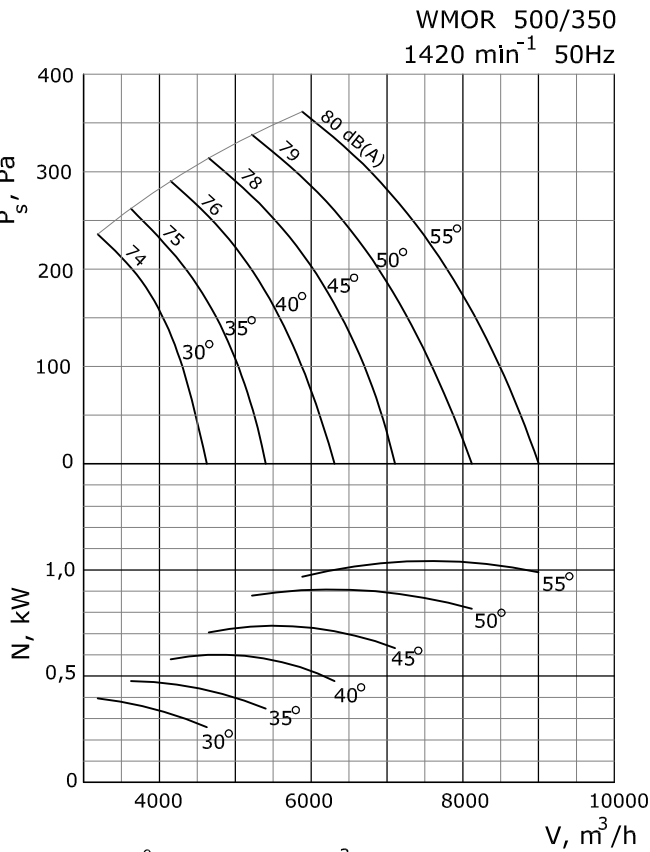
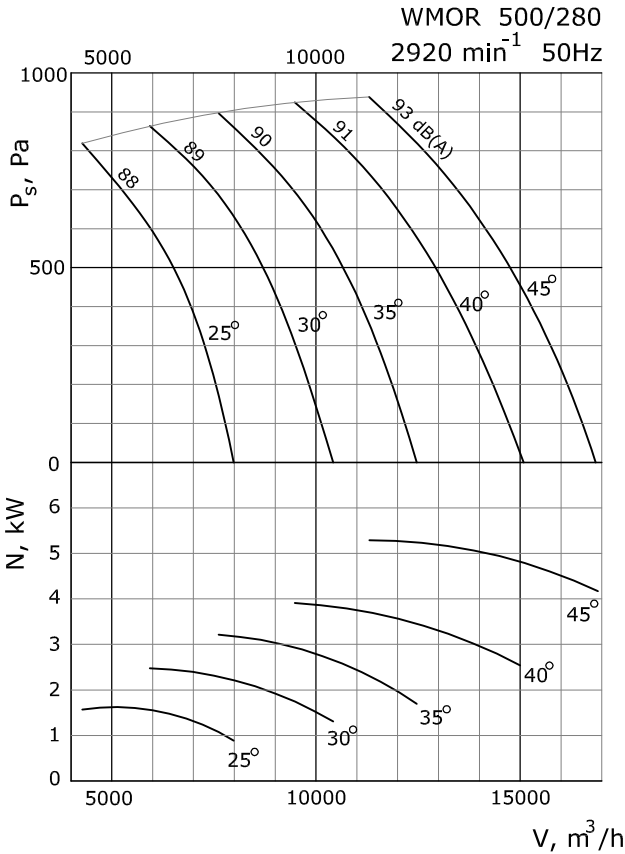
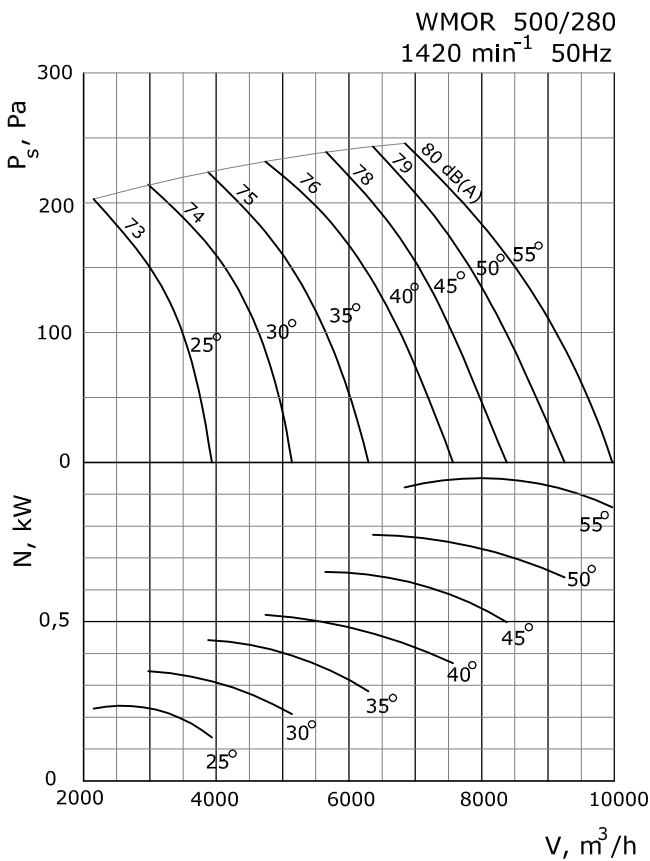
WMOR 355/250
2850 min⁻¹ 50Hz



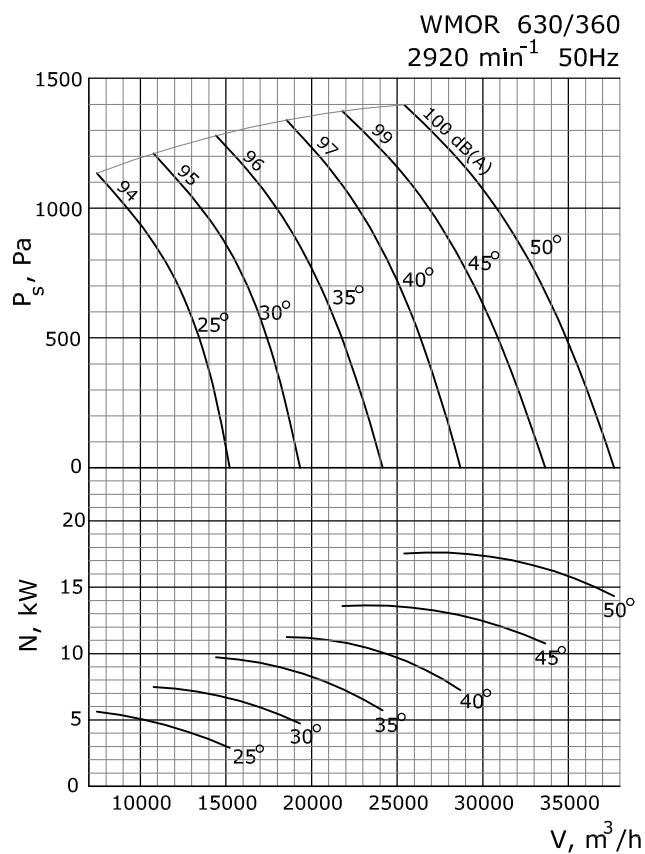
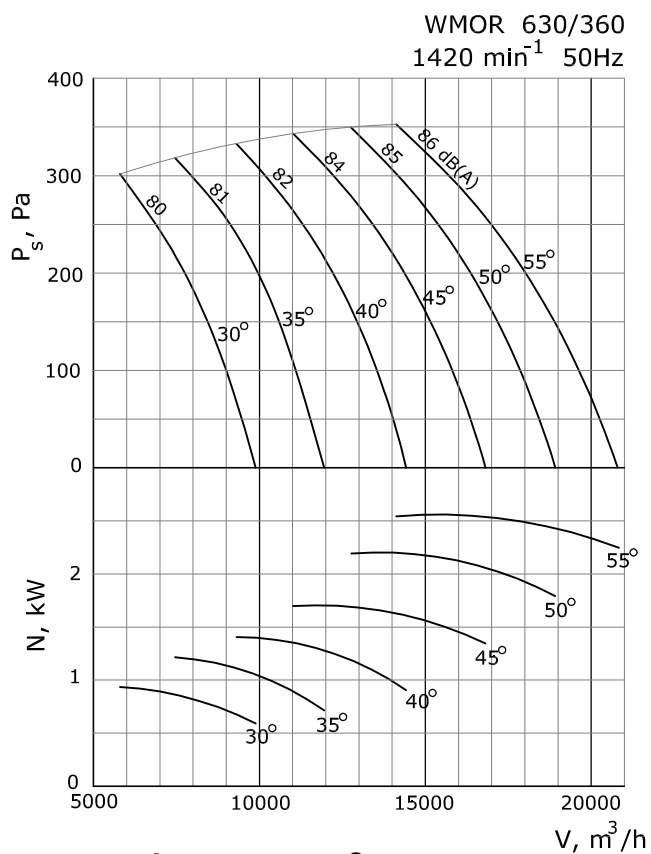
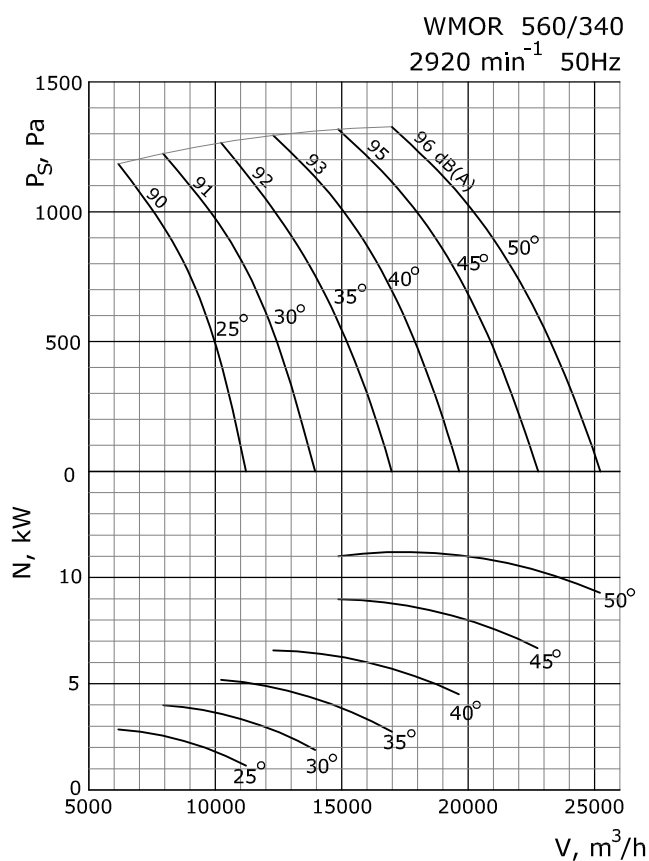
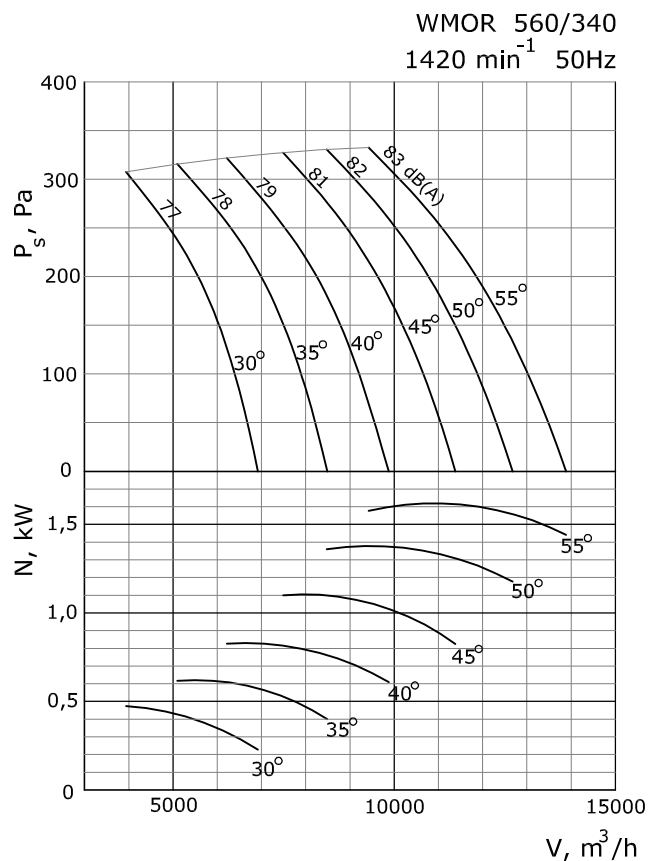
$t = 20^\circ\text{C}$, $\rho = 1,2 \text{ kg/m}^3$
Fan sound level L_{pA} 1 m



$t = 20^\circ\text{C}$, $\rho = 1,2 \text{ kg/m}^3$
Fan sound level L_{pA} 1 m

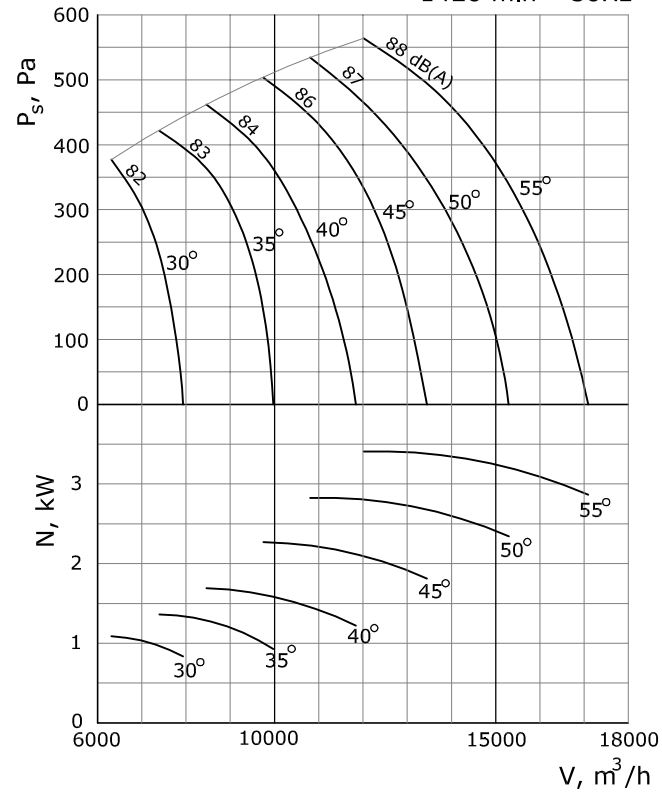


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Fan sound level L_{pA} 1 m

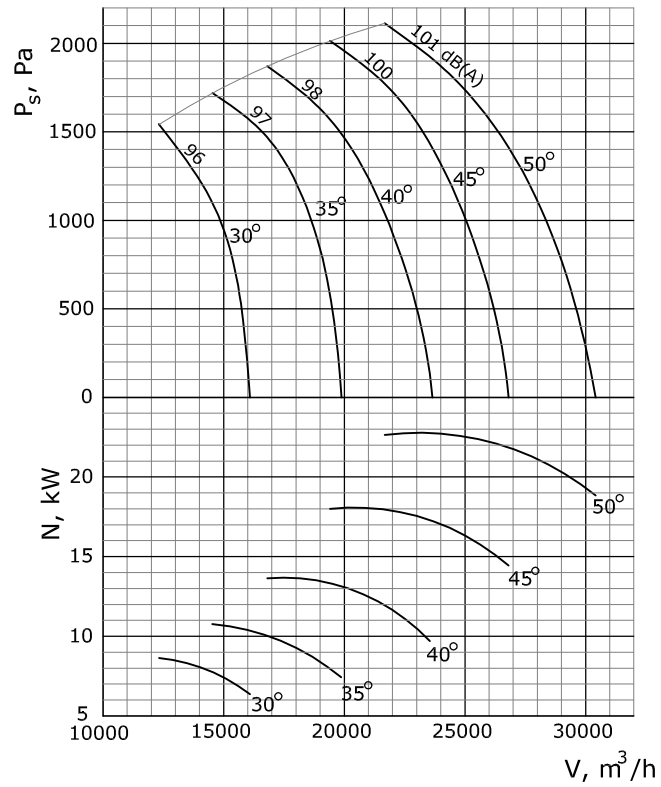


$t = 20^\circ\text{C}$, $\rho = 1,2 \text{ kg/m}^3$
Fan sound level L_{pA} 1 m

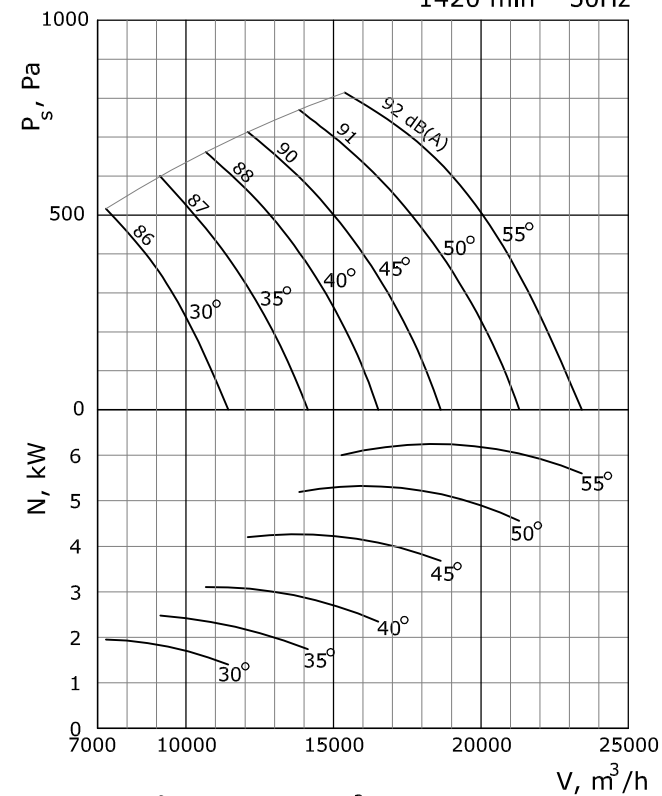
WMOR 630/440
1420 min⁻¹ 50Hz



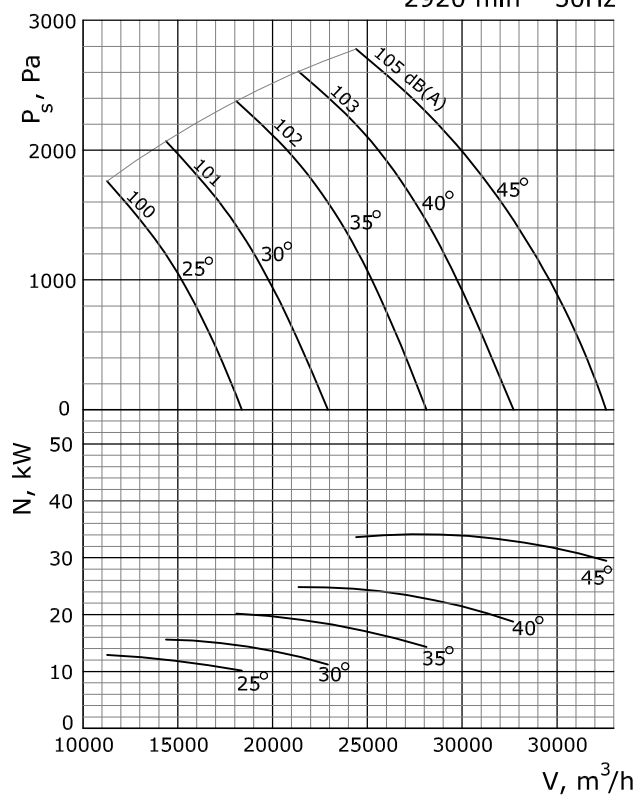
WMOR 630/440
2920 min⁻¹ 50Hz



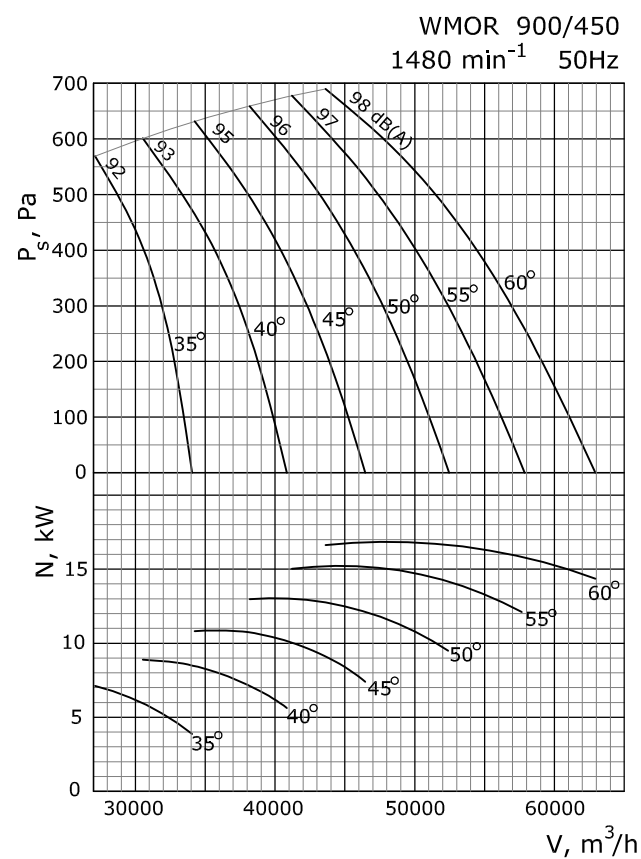
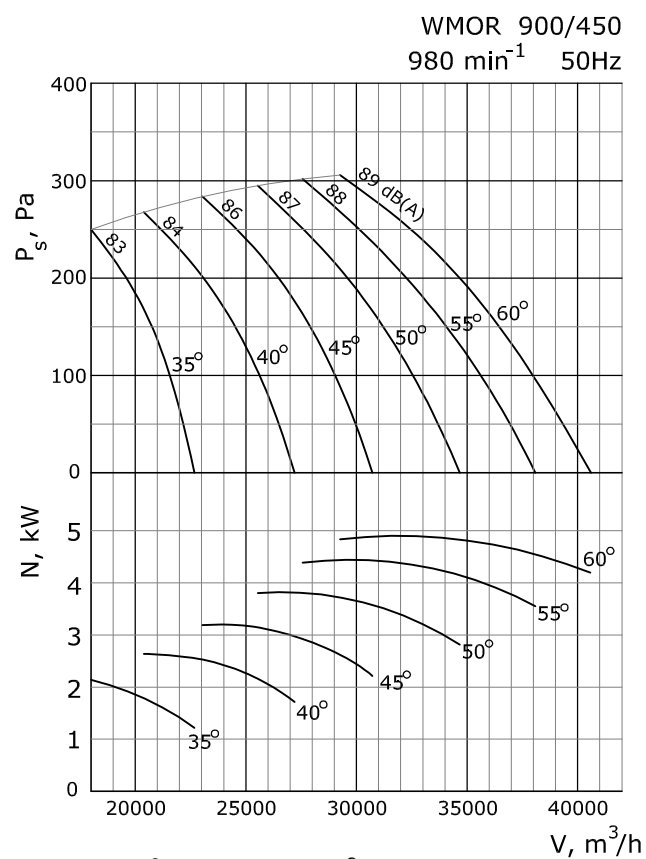
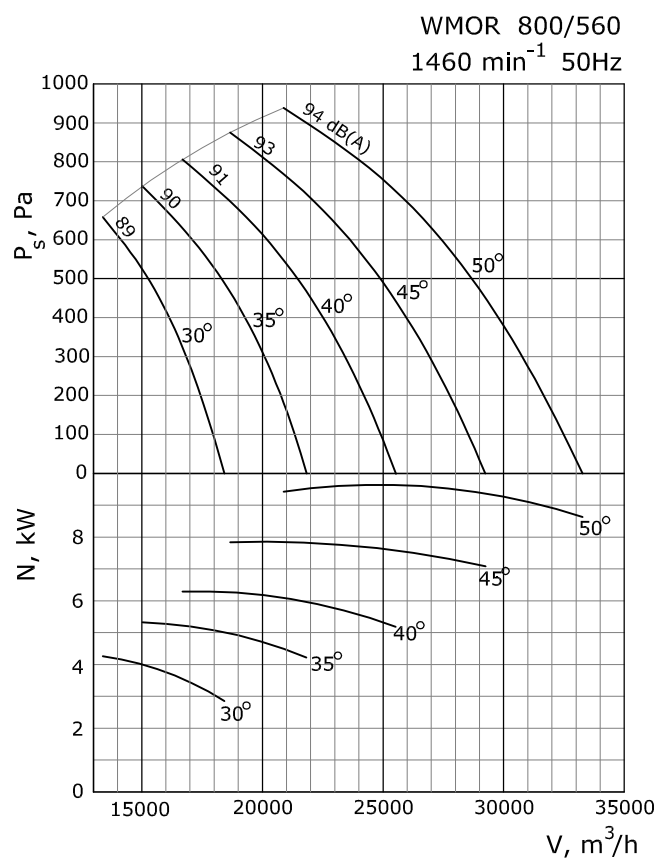
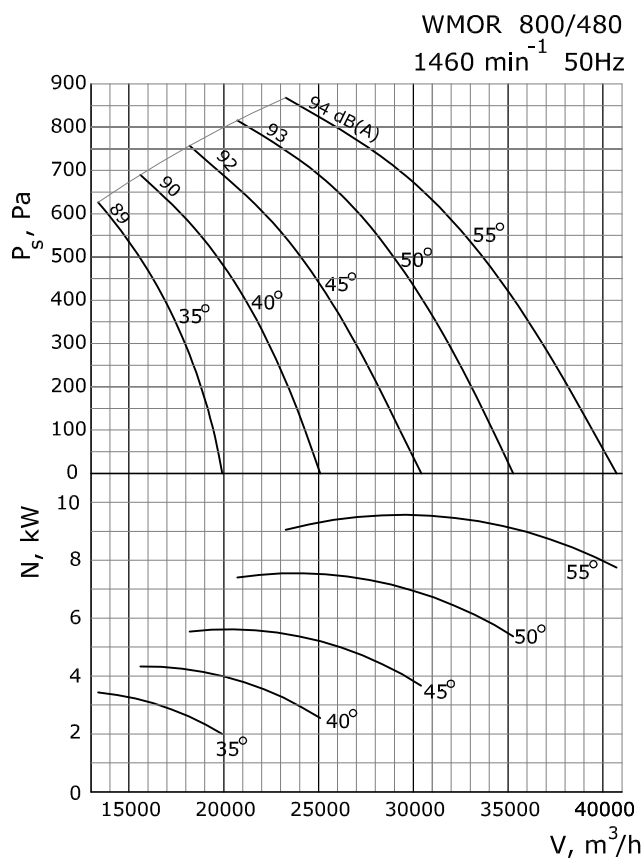
WMOR 710/470
1420 min⁻¹ 50Hz



WMOR 710/470
2920 min⁻¹ 50Hz



$t = 20^\circ\text{C}$, $\rho = 1,2 \text{ kg/m}^3$
Fan sound level L_{pA} 1 m

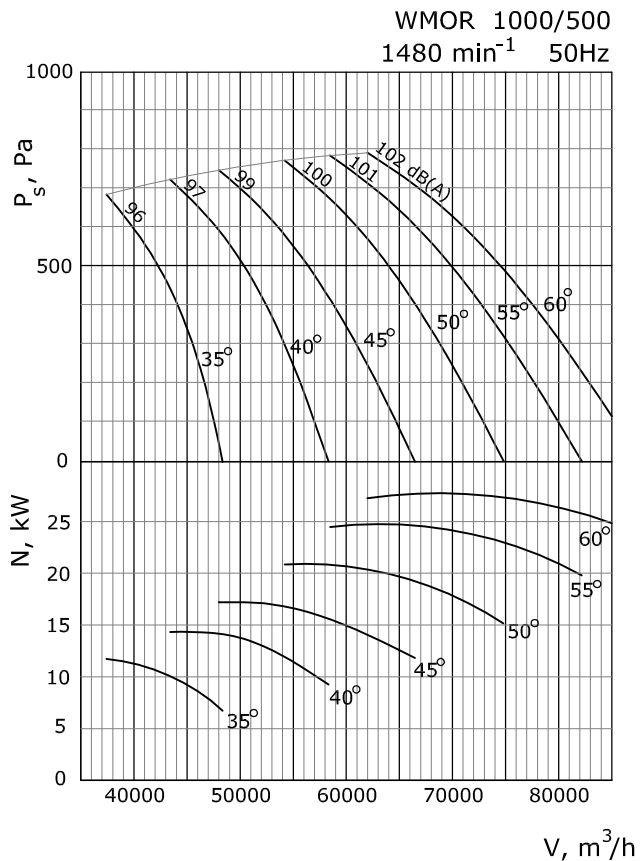
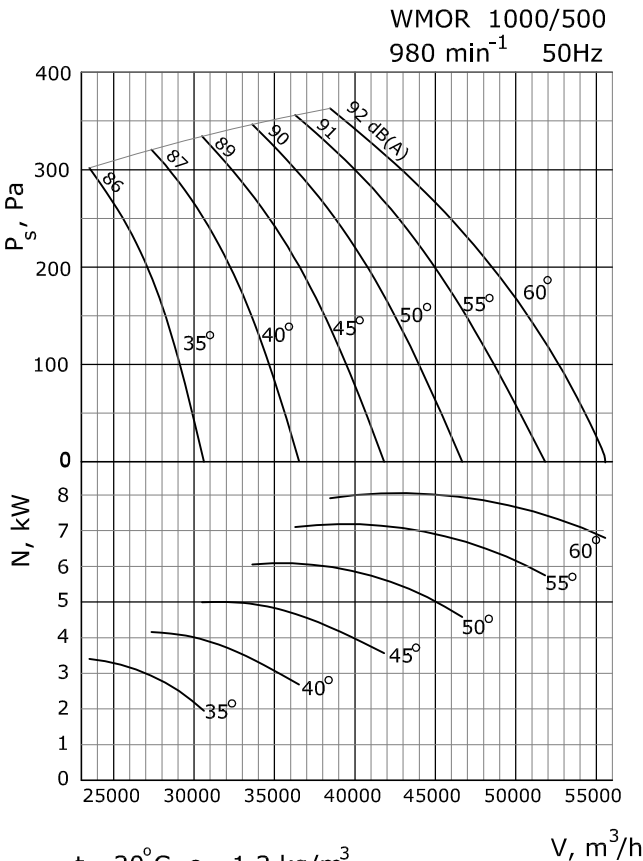
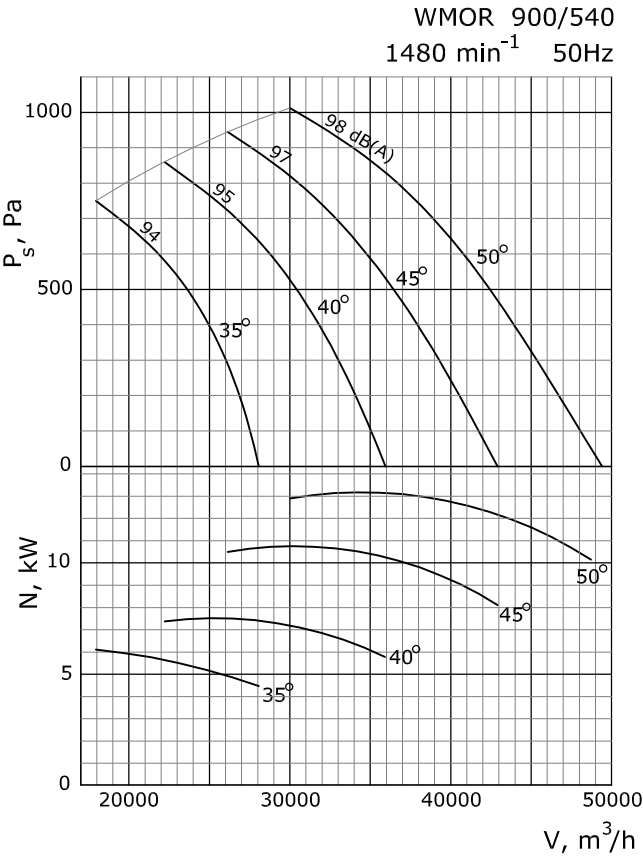
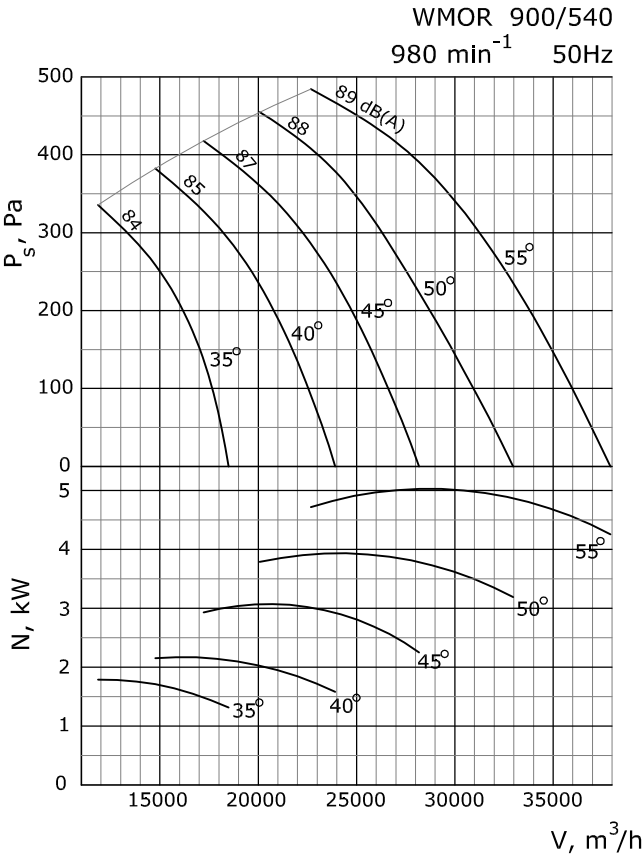


$t = 20^\circ\text{C}$, $\rho = 1,2 \text{ kg/m}^3$
Fan sound level L_{pA} 1 m

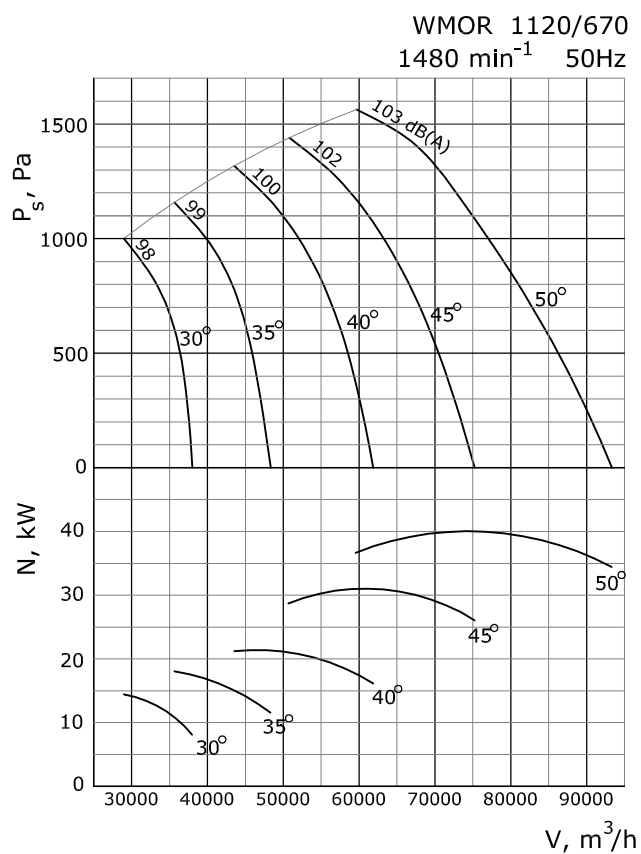
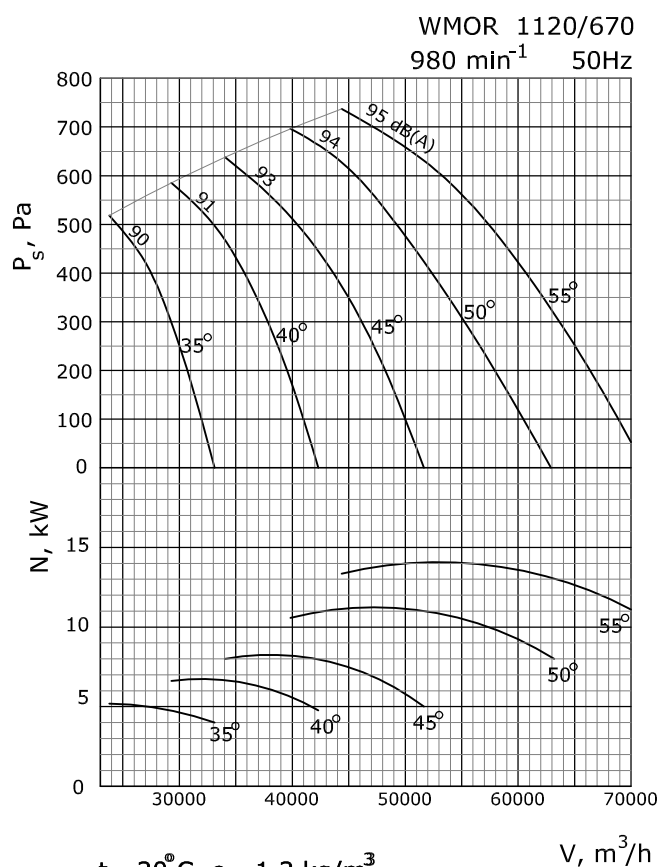
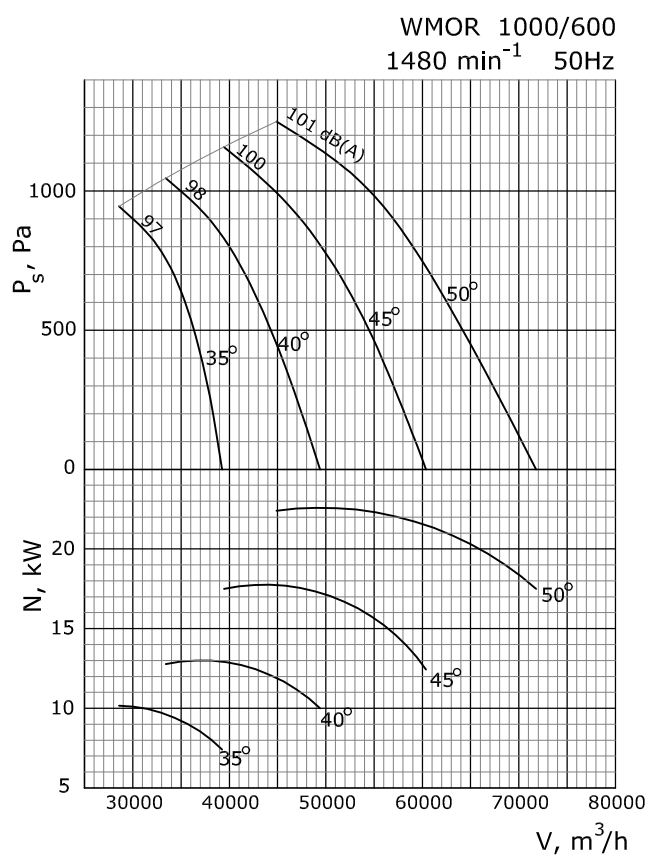
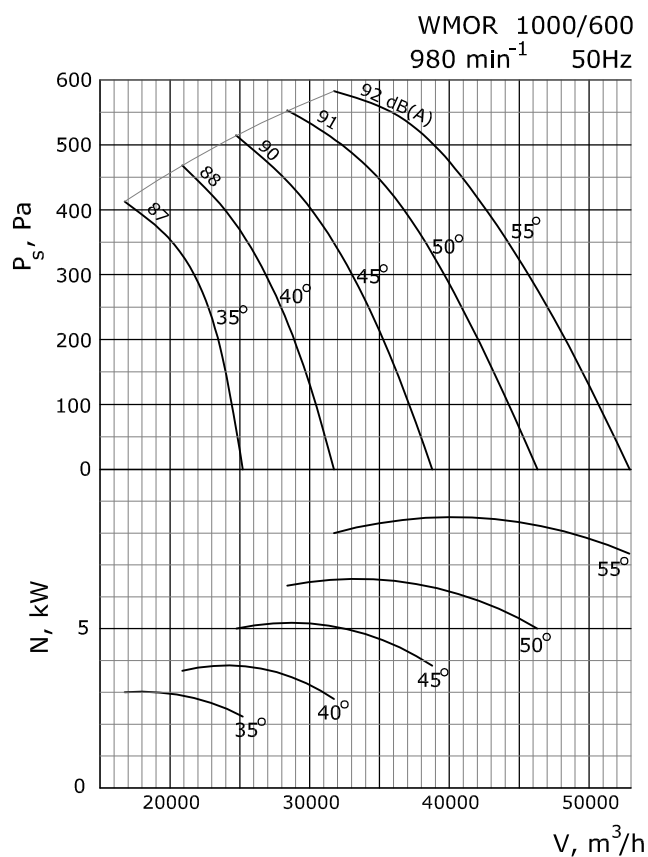


MARINE AXIAL-FLOW FANS WMOR and WMOD

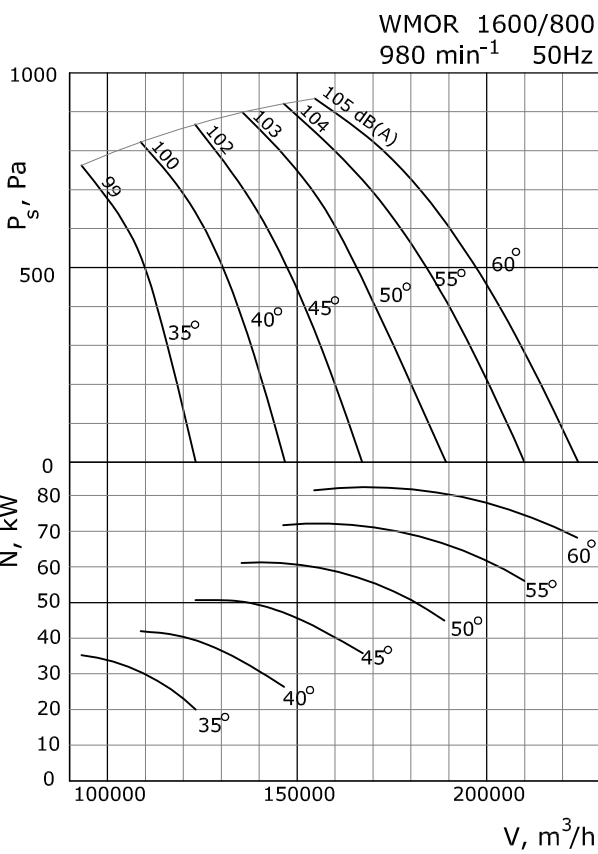
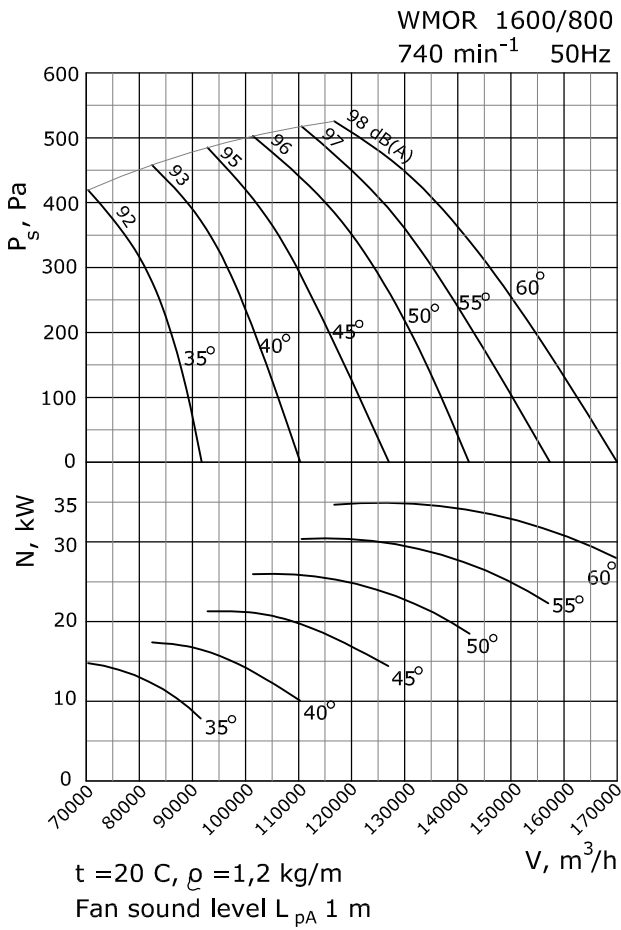
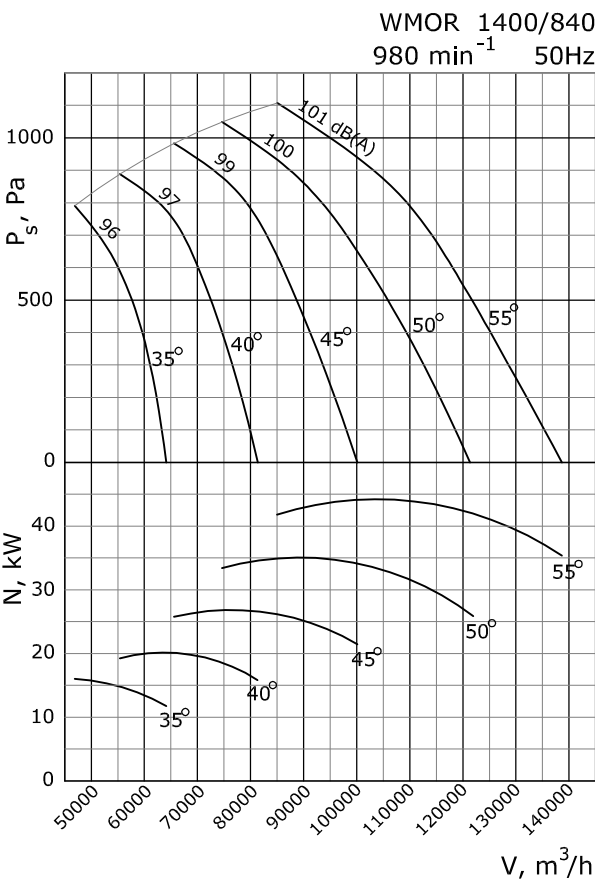
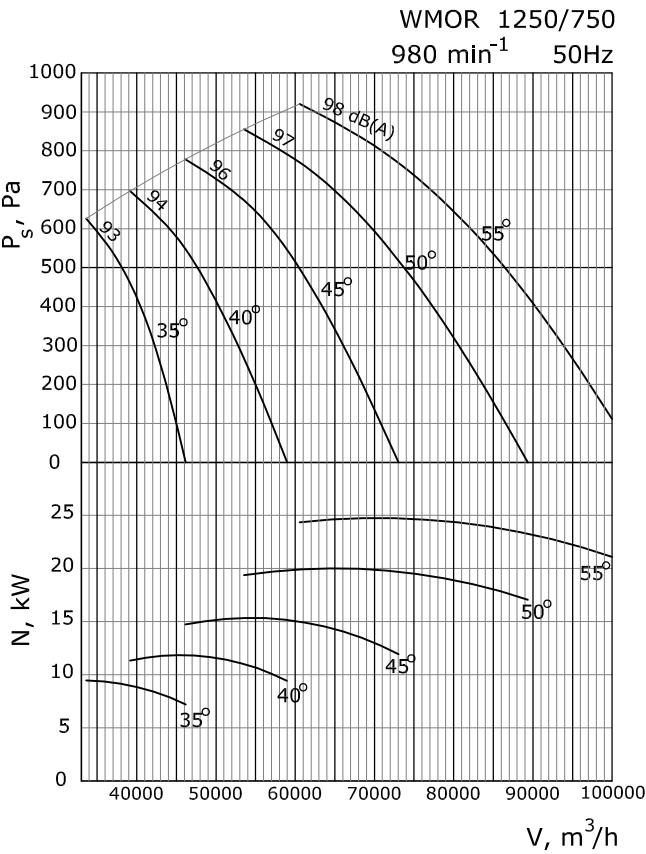
ALWO
A1-01
Sheet 11/22



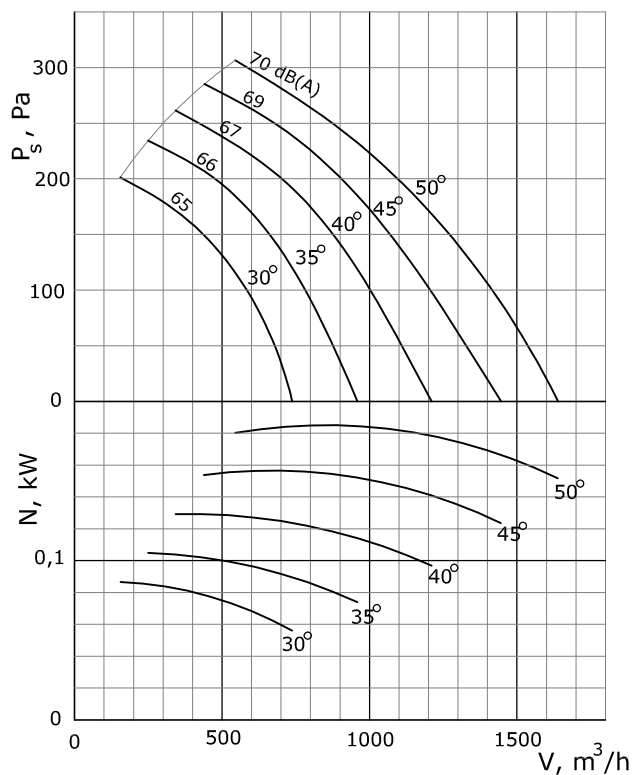
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Fan sound level L_{pA} 1 m



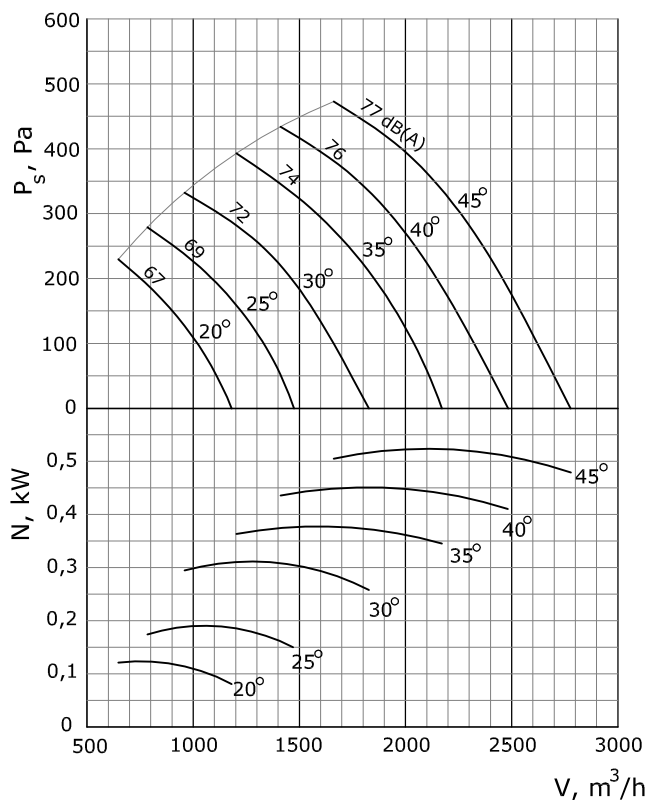
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Fan sound level L_{pA} 1 m



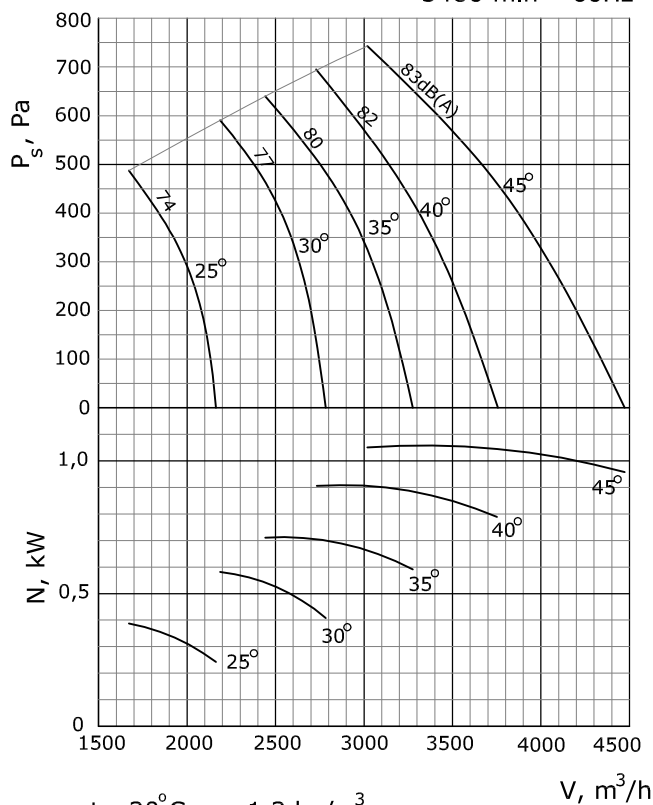
WMOR 200/110
3420 min⁻¹ 60Hz



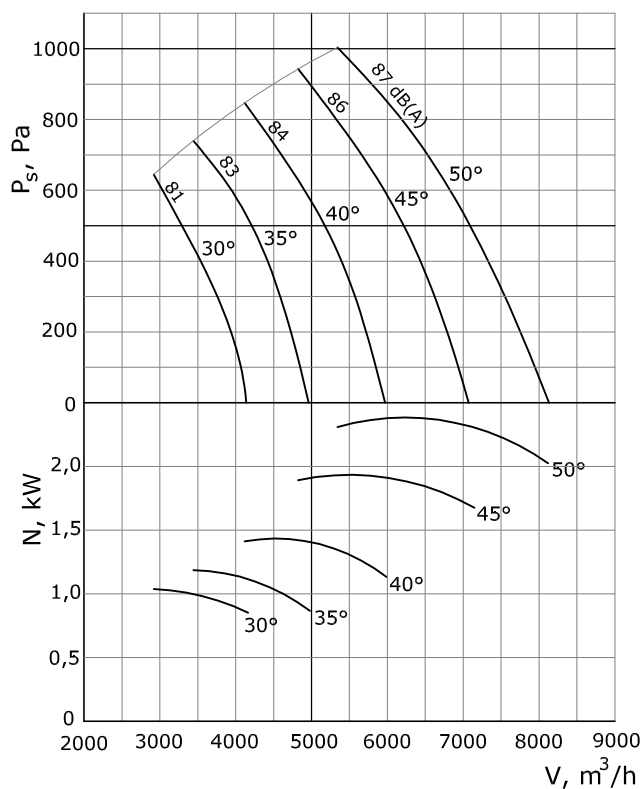
WMOR 250/175
3420 min⁻¹ 60Hz



WMOR 315/220
3480 min⁻¹ 60Hz

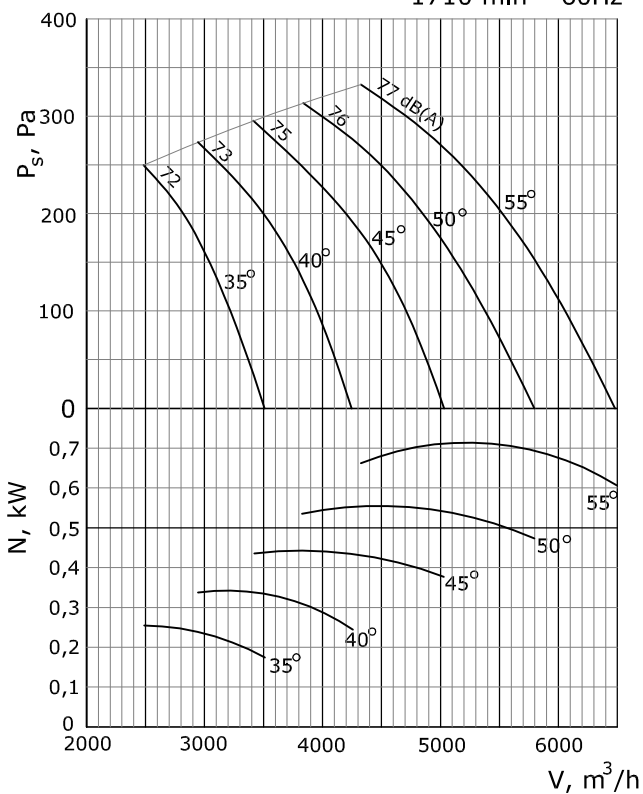


WMOR 355/250
3450 min⁻¹ 60Hz

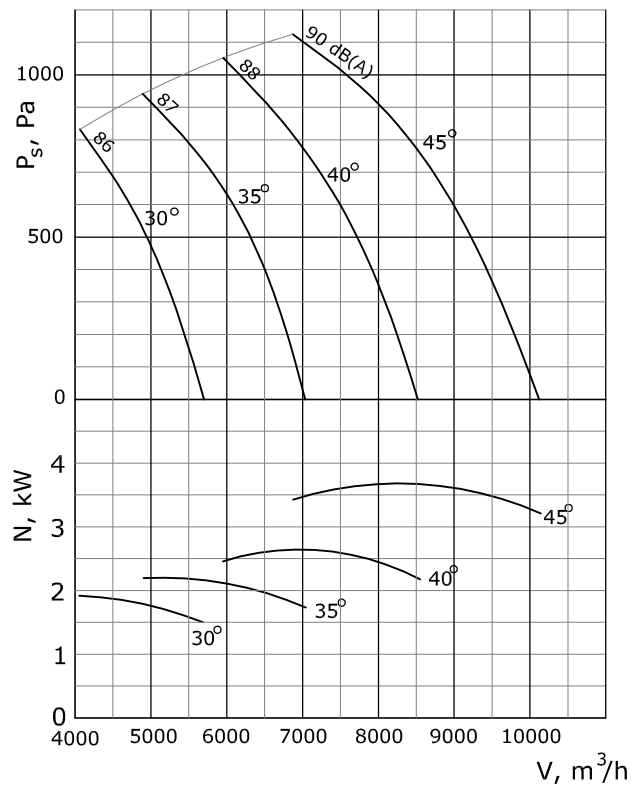


$t = 20^\circ\text{C}$, $\rho = 1,2 \text{ kg/m}^3$
Fan sound level L_{pA} 1 m

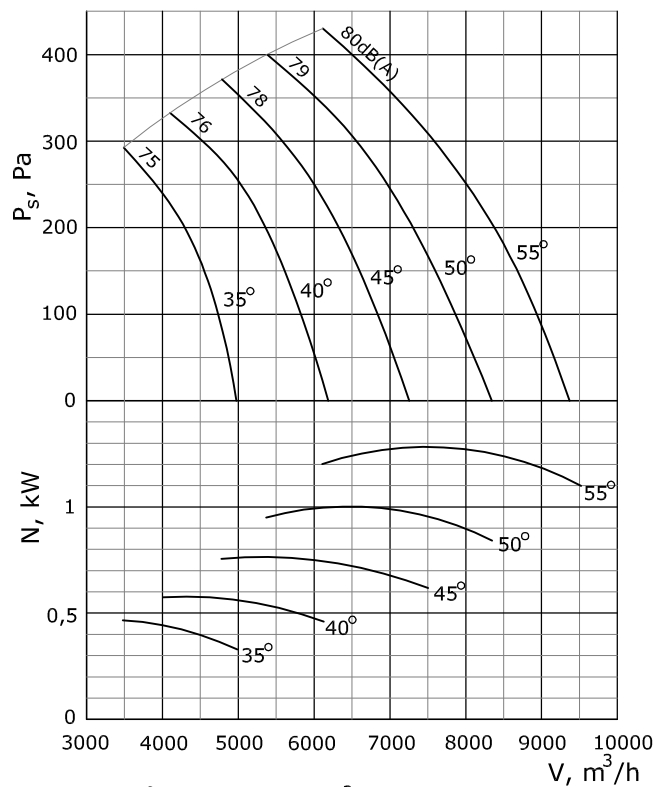
WMOR 400/280
1710 min⁻¹ 60Hz



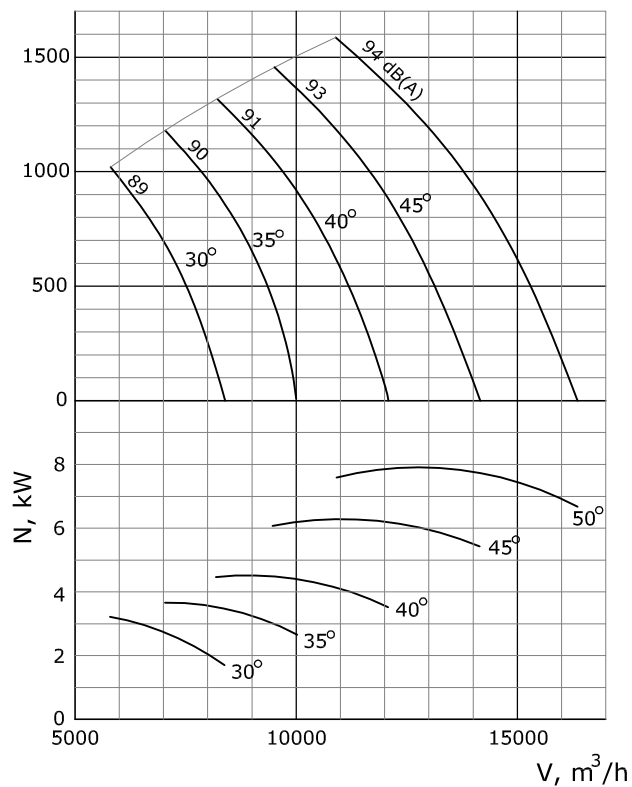
WMOR 400/280
3450 min⁻¹ 60Hz



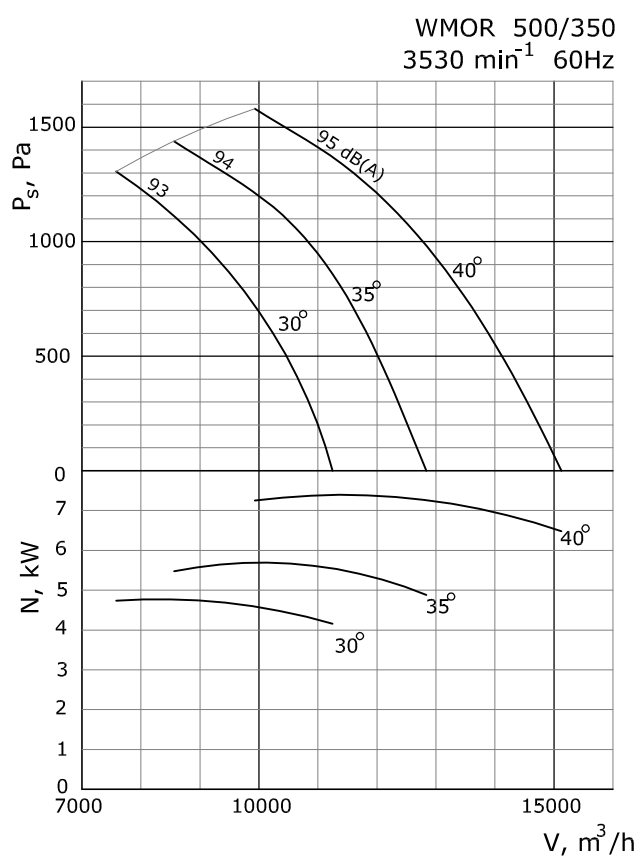
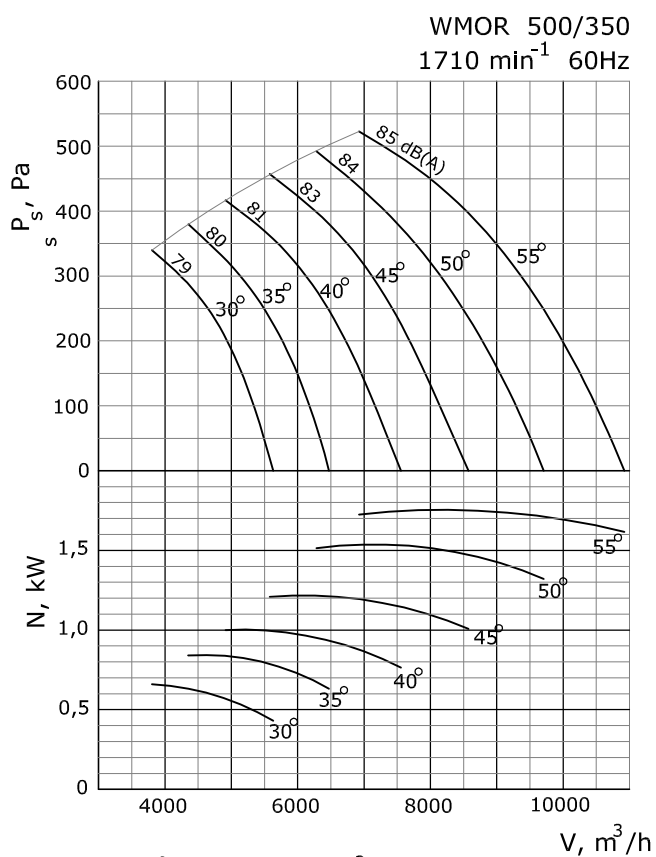
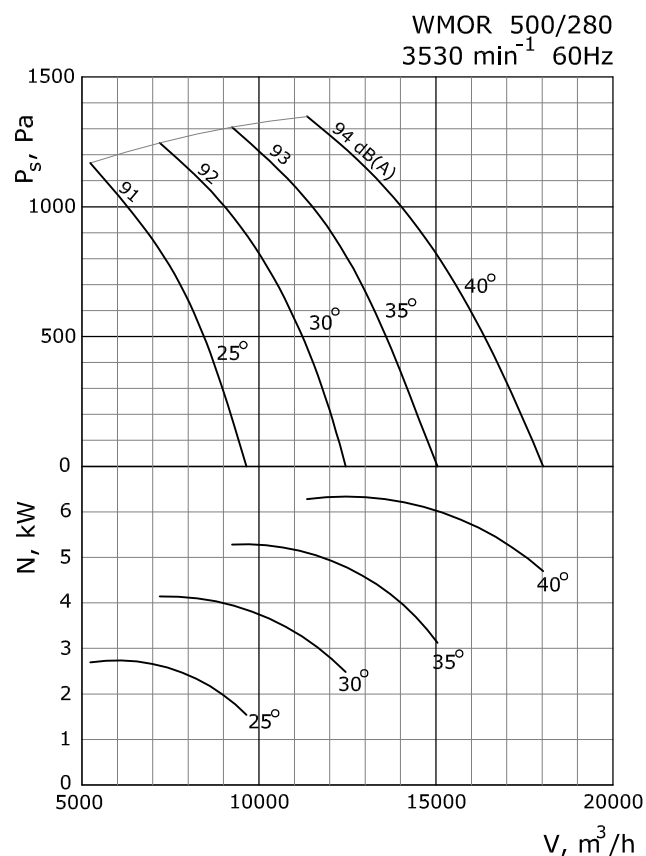
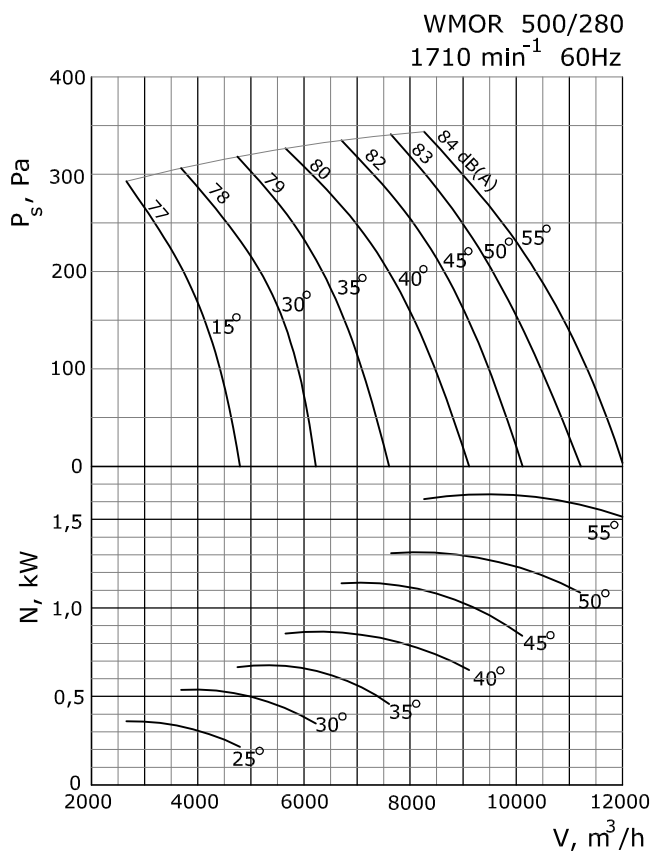
WMOR 450/310
1710 min⁻¹ 60Hz



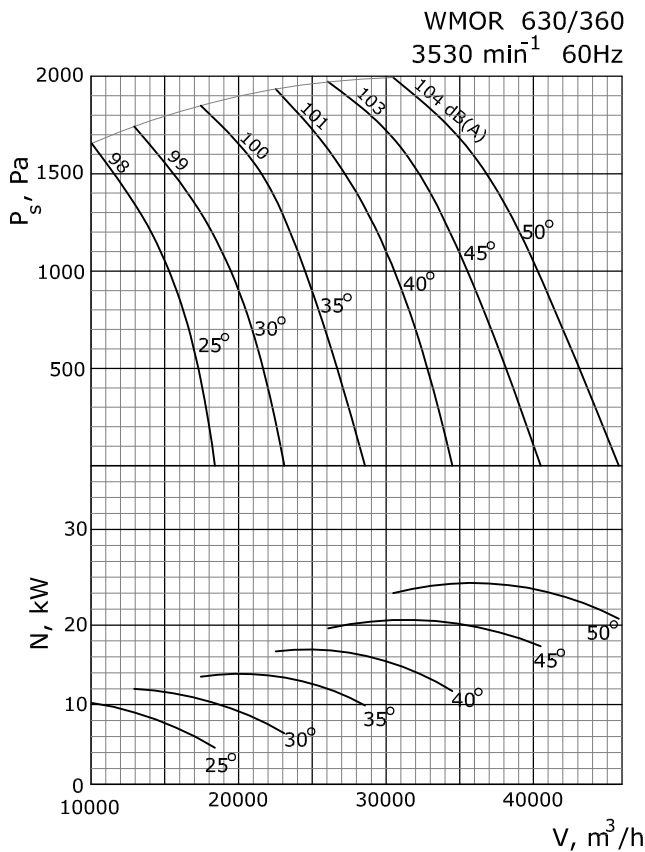
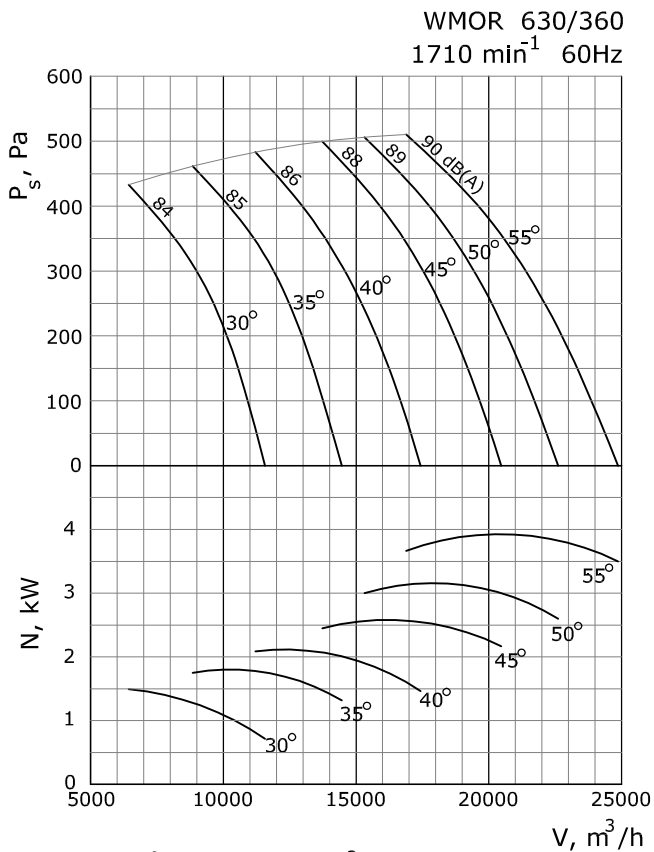
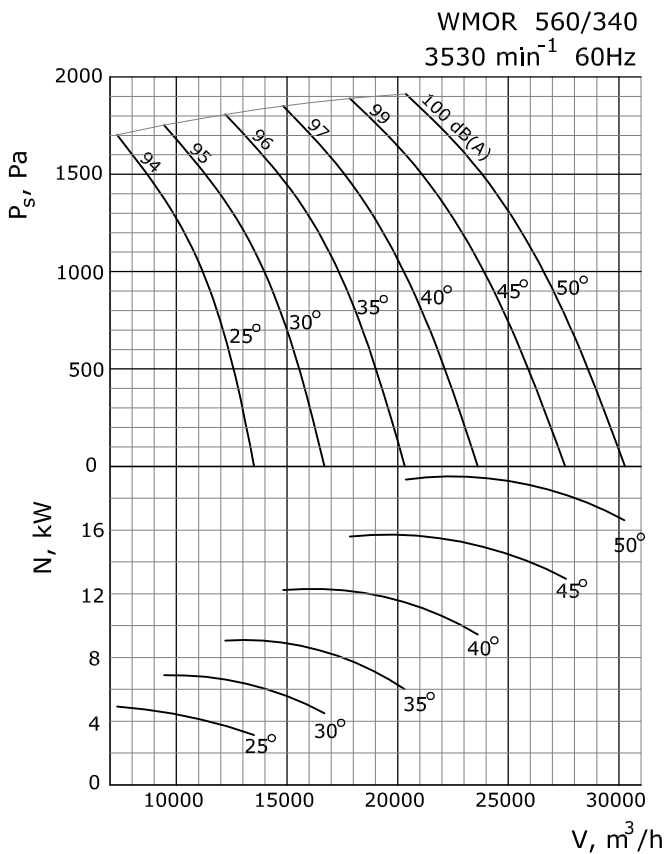
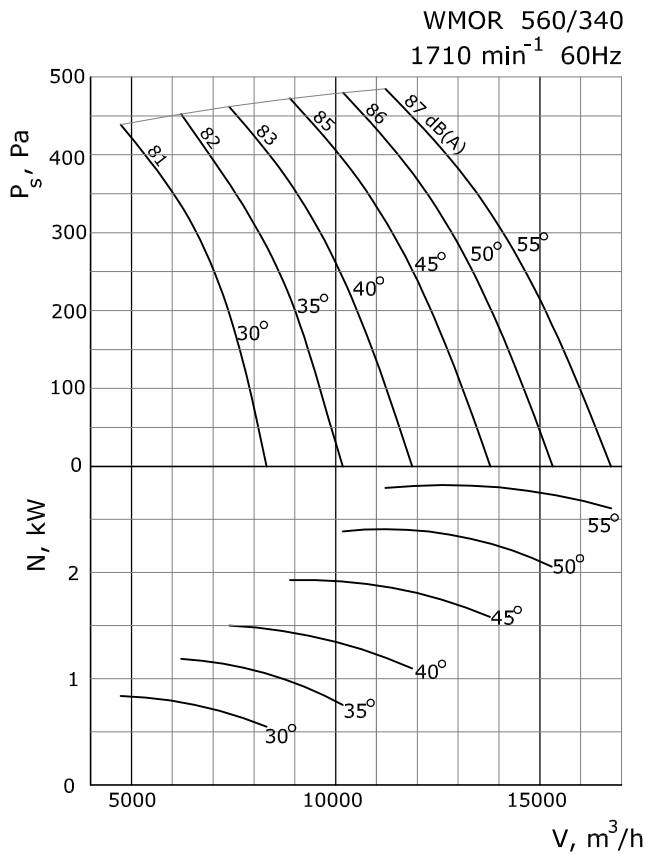
WMOR 450/310
3450 min⁻¹ 60Hz



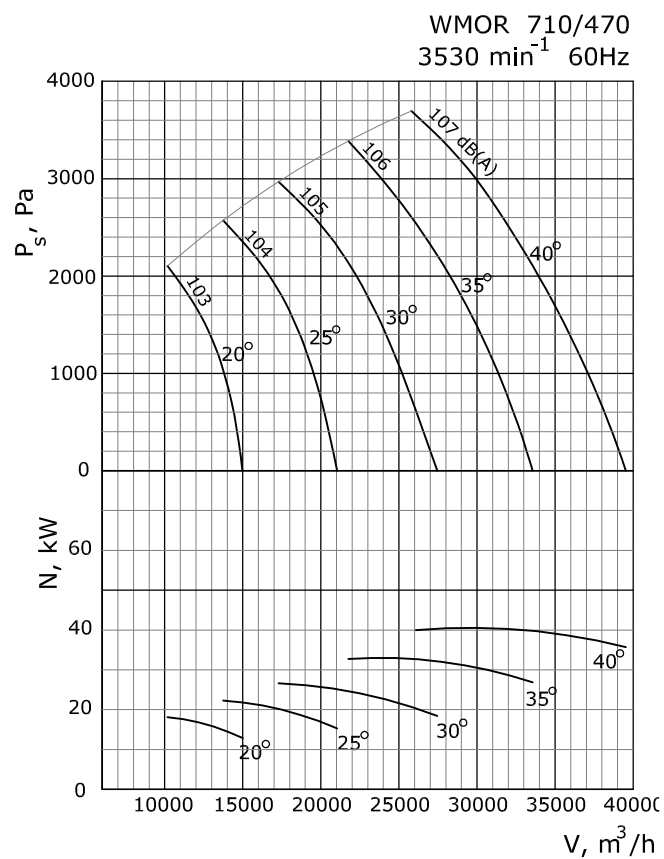
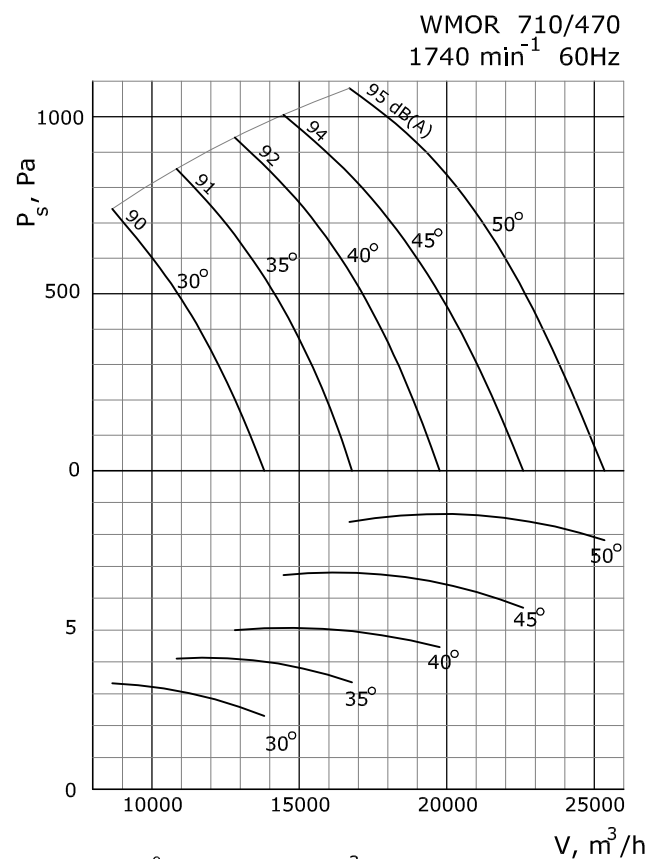
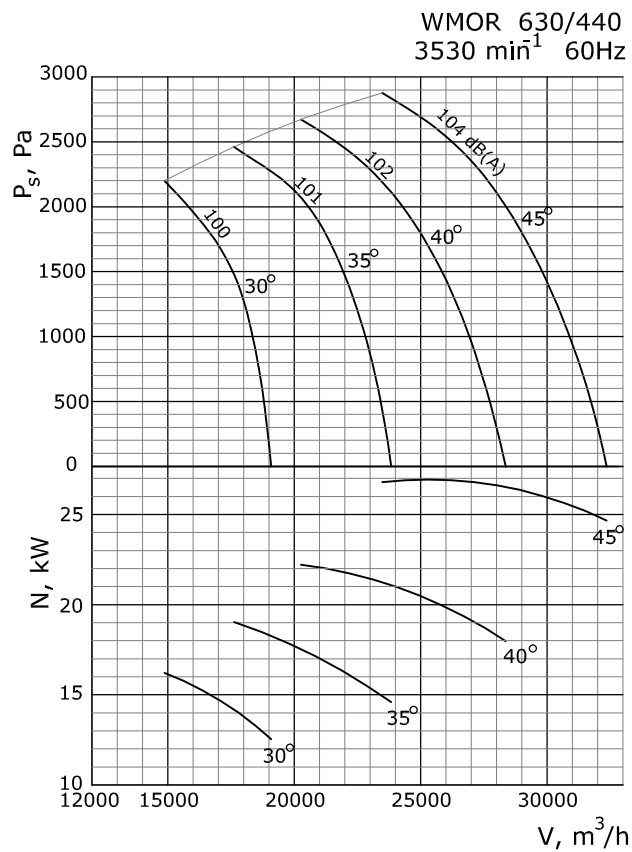
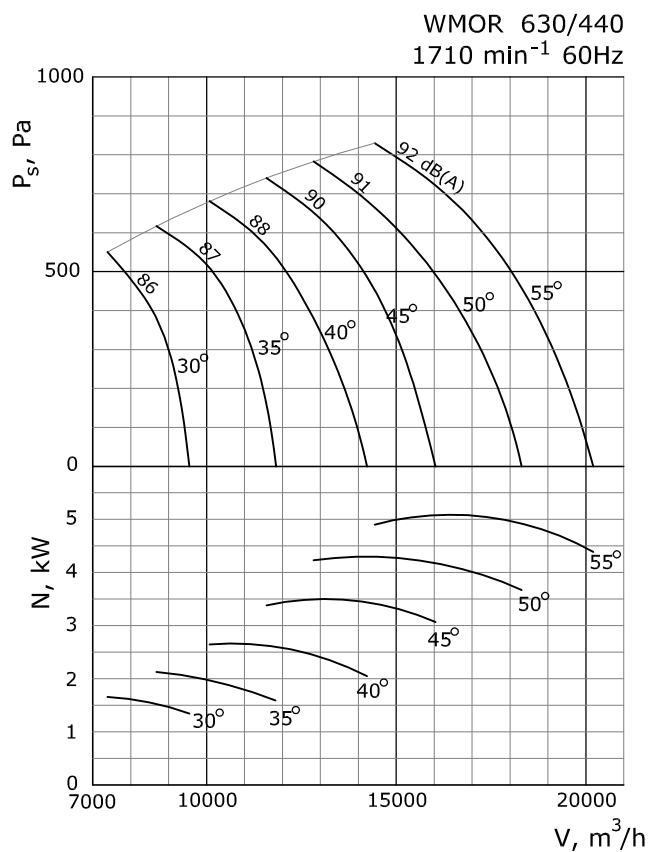
$t = 20^\circ\text{C}$, $\rho = 1,2 \text{ kg/m}^3$
Fan sound level L_{pA} 1 m



$t = 20^\circ\text{C}$, $\rho = 1,2 \text{ kg/m}^3$
Fan sound level L_{pA} 1 m



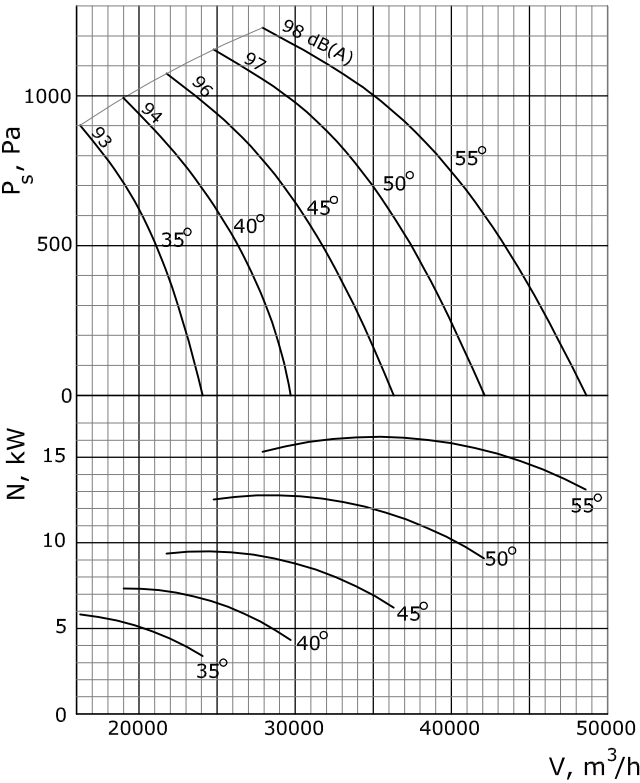
$t = 20^\circ\text{C}, \rho = 1,2 \text{ kg/m}^3$
Fan sound level $L_{pA} 1 \text{ m}$



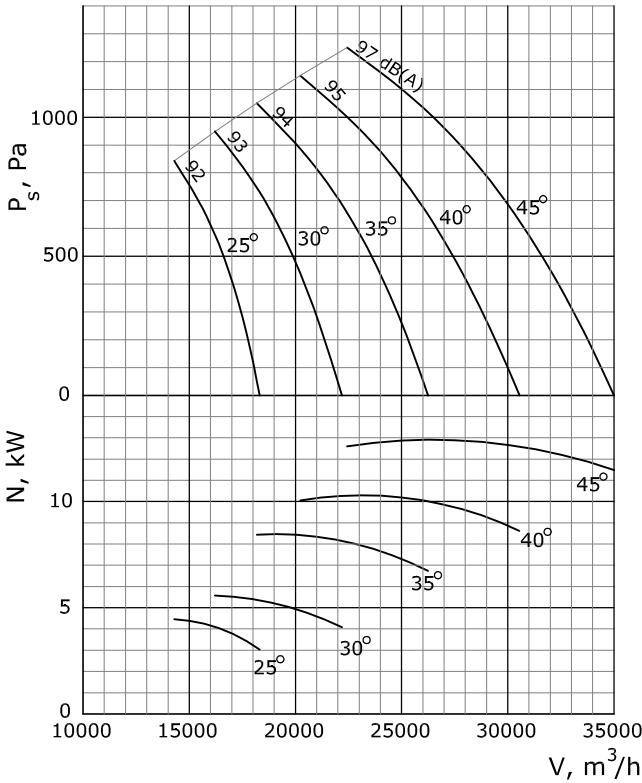
$t = 20^{\circ}\text{C}$, $\rho = 1,2 \text{ kg/m}^3$
Fan sound level L_{pA} 1 m



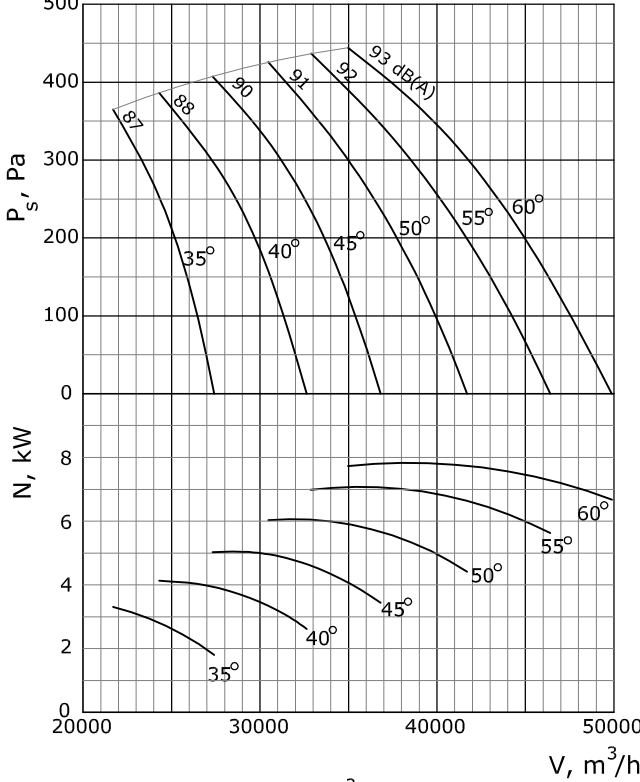
WMOR 800/480
1740 min⁻¹ 60Hz



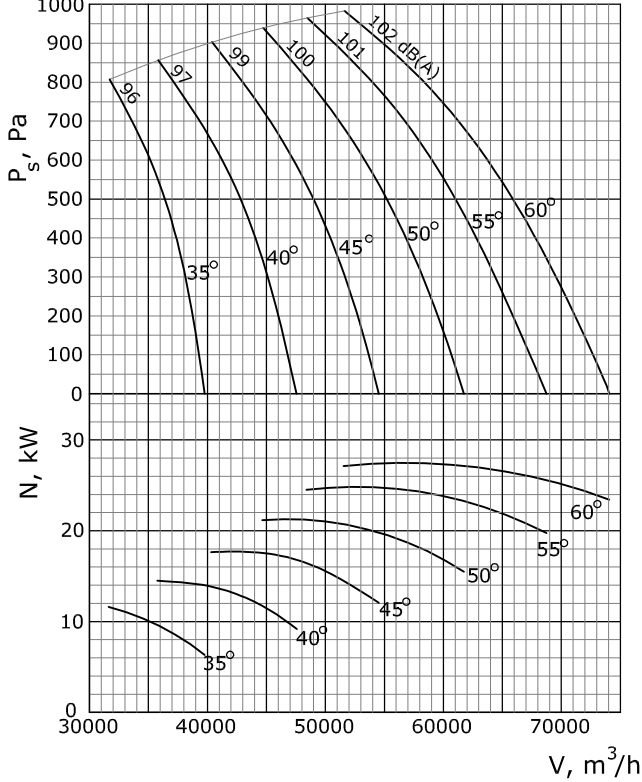
WMOR 800/560
1740 min⁻¹ 60Hz



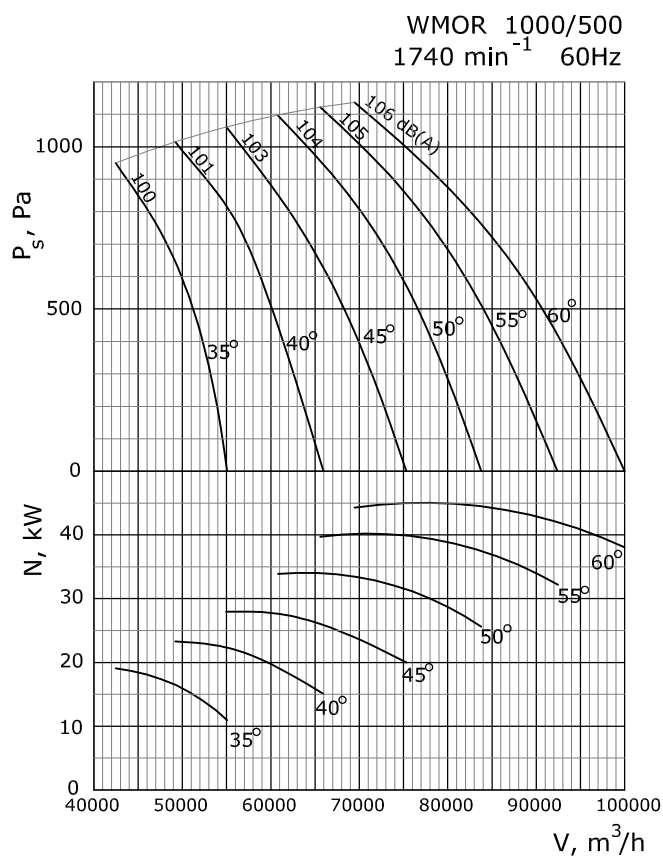
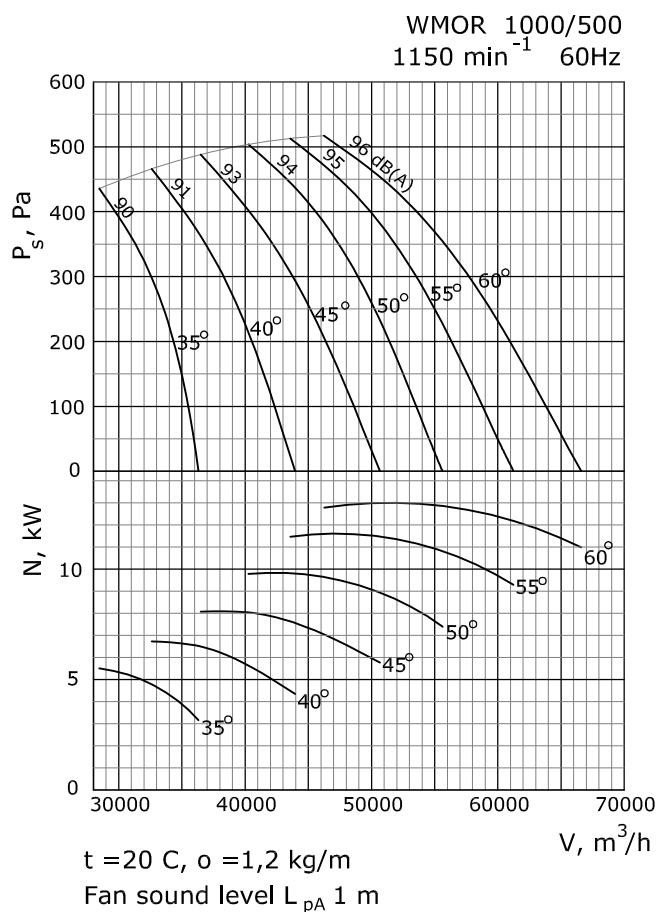
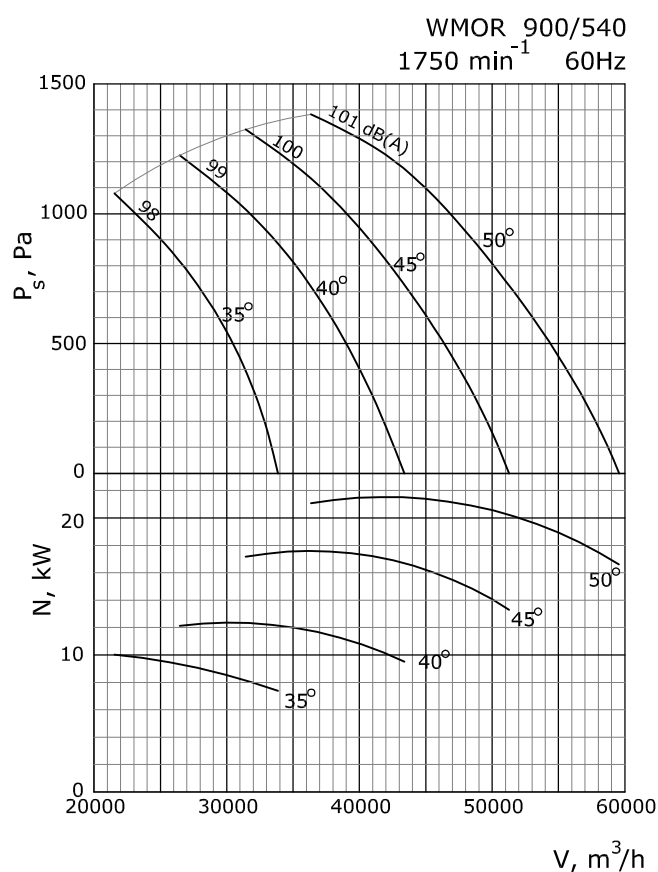
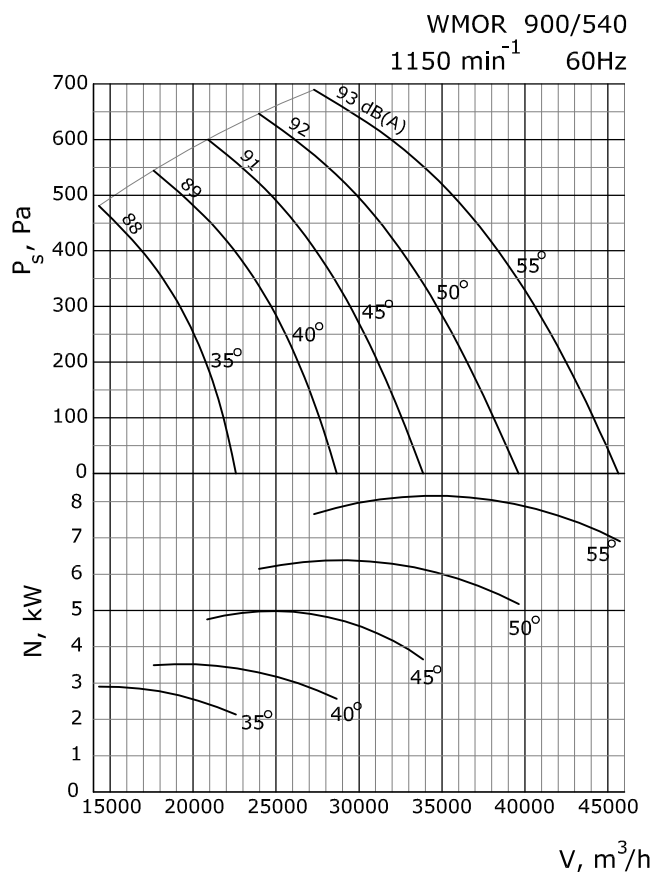
WMOR 900/450
1150 min⁻¹ 60Hz

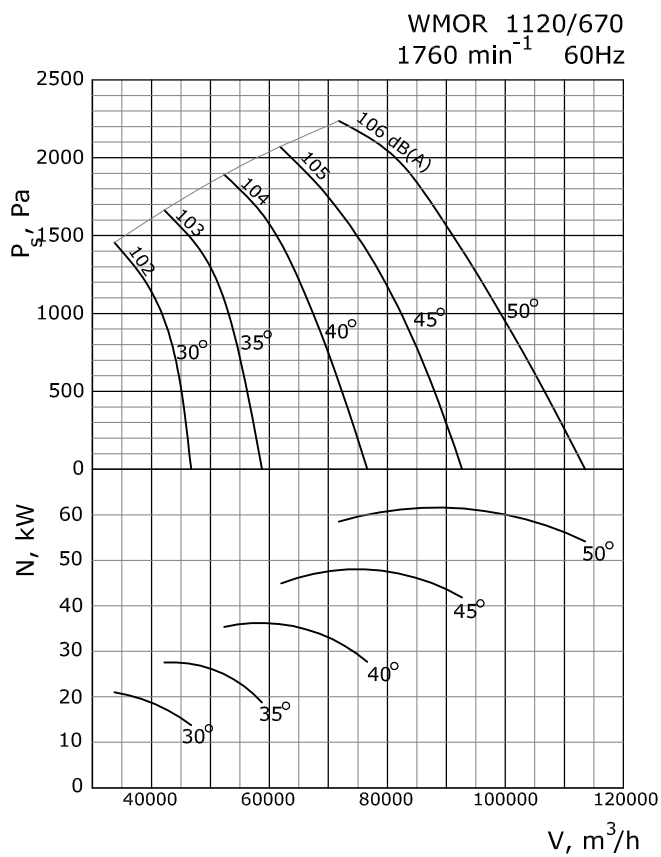
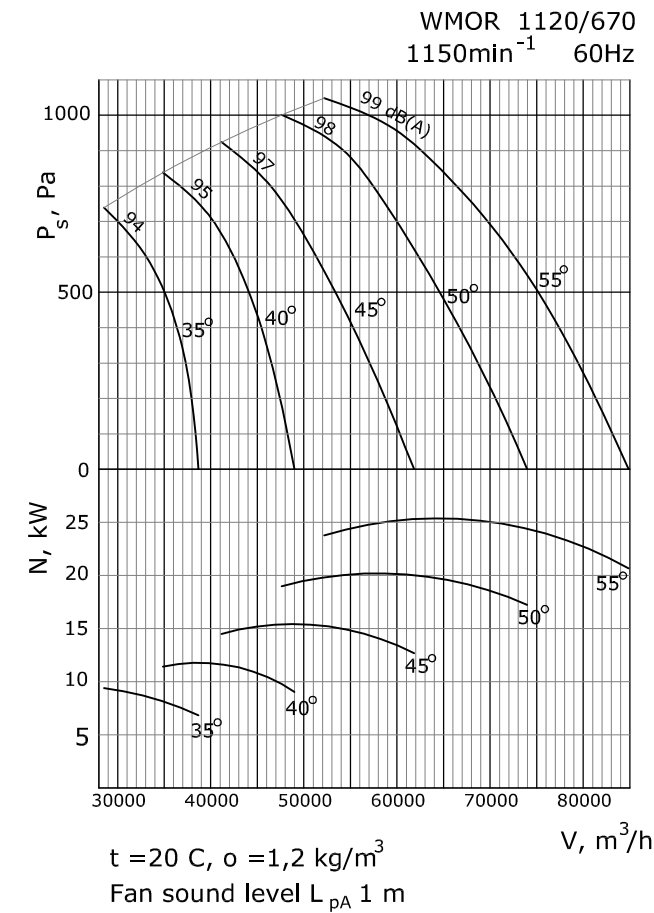
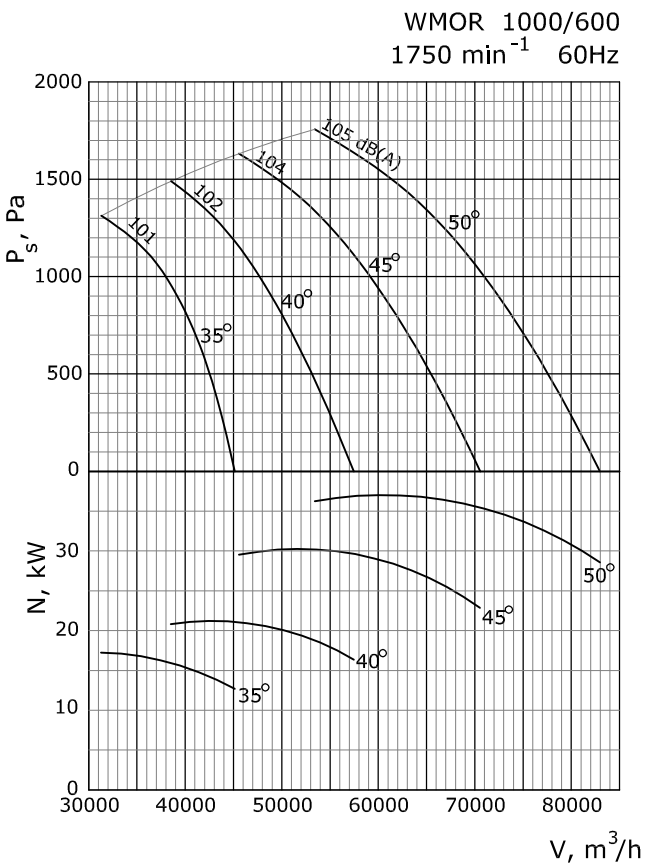
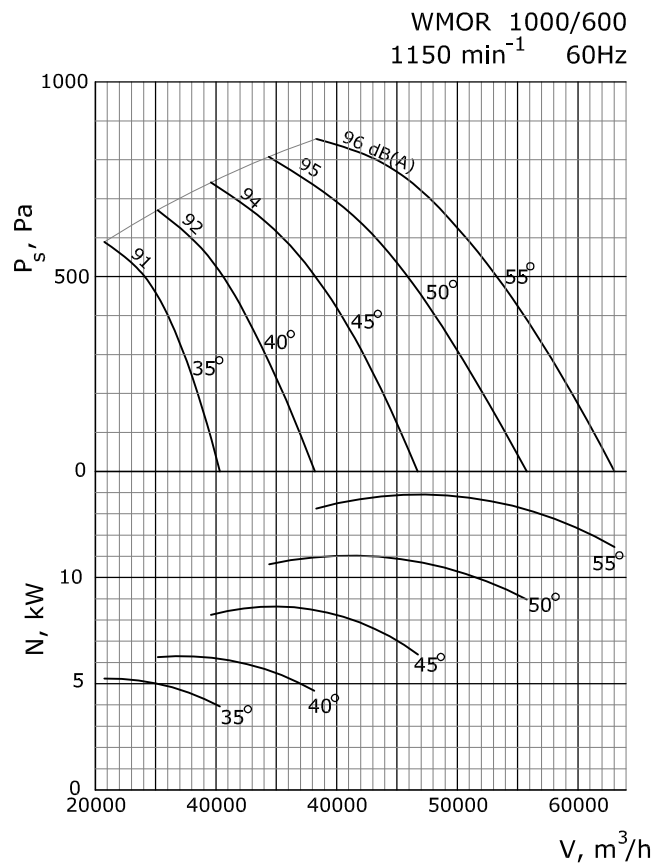


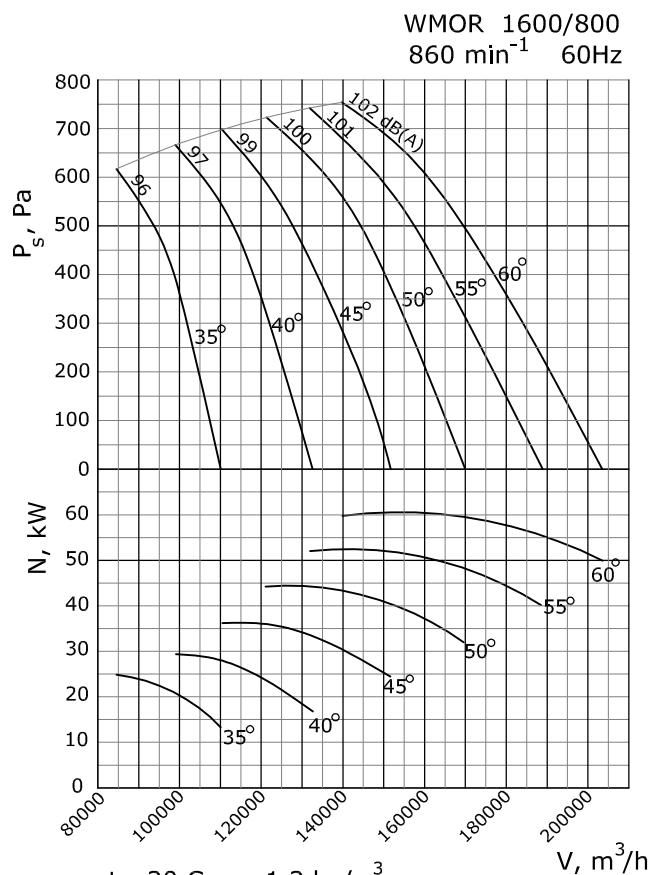
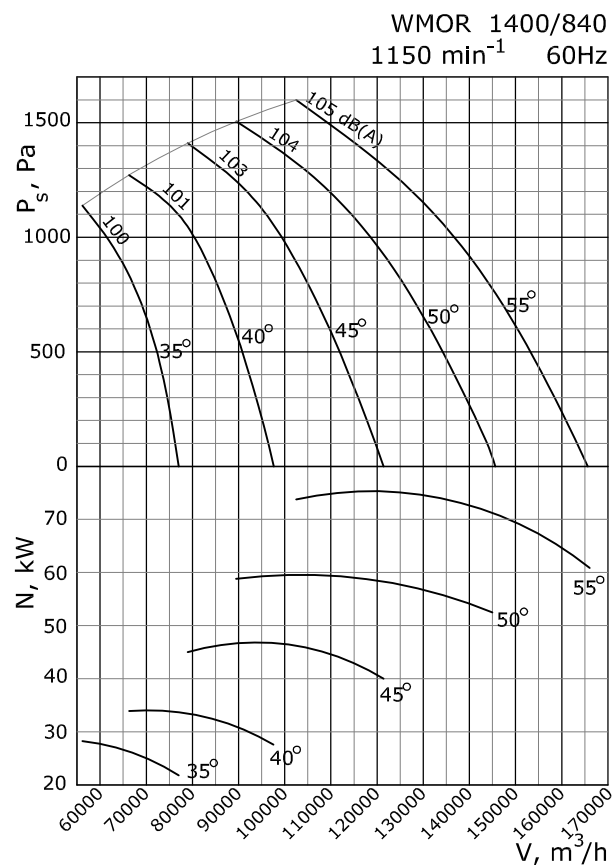
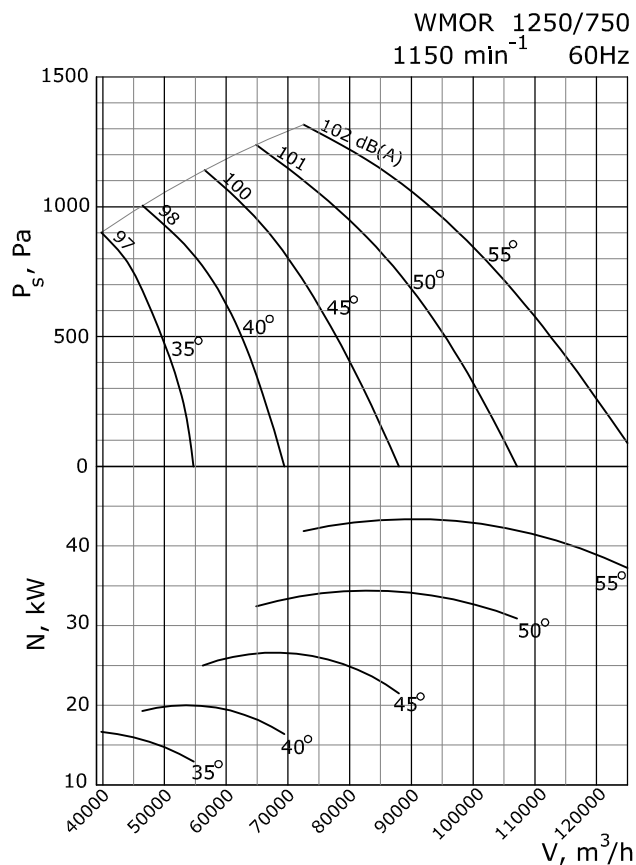
WMOR 900/450
1740 min⁻¹ 60Hz



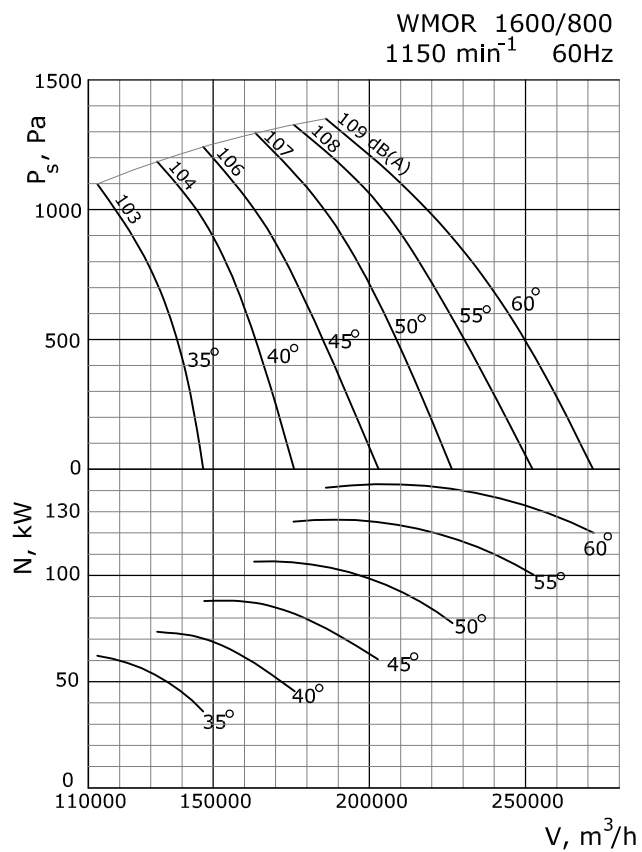
$t = 20\text{ °C}$, $\rho = 1,2\text{ kg/m}^3$
Fan sound level L_{pA} 1 m







$t = 20\text{ }^{\circ}\text{C}$, $\rho = 1,2\text{ kg/m}^3$
Fan sound level L_{PA} 1 m



1. DESTINATION

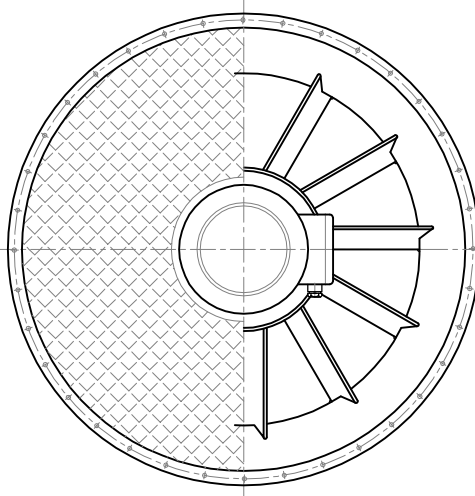
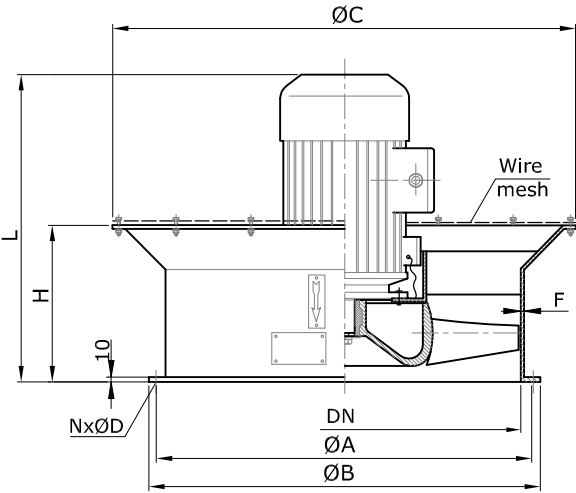
Marine axial-flow fans WMOW type are destined for operation in ventilation systems of seagoing ships of unrestricted cruising area as well as offshore objects. They may be used as exhaust or supply and shall be installed inside the compartments.

2. OPERATING CONDITIONS

For determining of fan working parameters the performance curves from Catalogue Card ALWO/A1-01 (WMOR fans) may be used. Free air discharge pressure losses are to be considered.

3. CONSTRUCTION

Housing: steel pipe ended with drilled flange on bottom, welded.
Upper part in shape of cone, fitted with screwed wire guard of mesh size 13x13 mm.
Air guide: made of steel sheet, welded, straightens the air stream and is also the supporting bracket for electric motor.
Fan impeller: made of aluminium alloys sea-water resistant. Impeller blades screwed to the hub, impeller dynamically balanced.
Electric motor: induction, squirrel cage, three-phase totalle enclosed, in marine execution, suitable for 50 or 60 Hz electric installation.
All the motors are of high-efficiency IE2 class "GREEN responsibility".



4. SIZES AND TYPES OF FANS

- nominal diameters : DN=400, 500, 560, 630, 710, 800, 900, 1000, 1120, 1250, 1400 and 1600 mm.
- types: N - supply
W - exhaust
- non-spark: additional sign Ex

5. SURFACE TREATMENT

Standard treatment - hot-dip galvanized.
On request fans may be painted with marine paints set agreed with the Buyer.

6. MARKING

of marine axial-flow fan WMOW of nominal diameter DN = 630 mm, with impeller hub diameter 380 mm, exhaust type W and with impeller blade pitch 45°

AXIAL-FLOW FAN WMOW 630/380-W-45°

Fantype	DN	A	B	L	N	D	C	H	F	Weight
	mm									kg
WMOW 400	400	460	490	550	8	12	540	240	4	60
WMOW 500	500	560	590	680	12	12	650	250	6	120
WMOW 560	560	640	640	750	12	14	730	270	6	138
WMOW 630	630	695	730	700	12	14	800	300	6	165
WMOW 710	710	775	810	680	16	14	900	330	6	210
WMOW 800	800	865	900	760	16	14	1000	360	6	290
WMOW 900	900	965	1000	850	16	14	1120	400	6	370
WMOW 1000	1000	1065	1100	900	16	14	1250	450	6	480
WMOW 1120	1120	1205	1250	1060	24	14	1400	500	6	600
WMOW 1250	1250	1335	1380	1250	24	14	1570	570	6	840
WMOW 1400	1400	1485	1530	1325	32	14	1750	640	6	1020
WMOW 1600	1600	1685	1730	1400	32	14	1980	700	6	1180

1. DESTINATION

Marine axial-flow fans WMOB are destined for operation ventilation systems of seagoing ships with unrestricted cruising area as well as offshore objects. They may be used as exhaust or supply fans and be installed inside the sheltered compartments.

2. OPERATING CONDITIONS

For determining of fan working parameters the performance curves from Catalogue Card ALWO/A1-01 (WMOR fans) may be used.

Free air discharge pressure losses are to be considered.

3. CONSTRUCTION

- **h o u s i n g** : steel pipe ended with drilled flange, welded. On the housing a terminal box with cable gland for supply connection cable is mounted.

Sizes of cable glands: DN=400, 500 Pg27
DN=560-800 Pg33
DN=1000-1600 Pg42

Housing of fan is provided with air-guide, to which electric motor-impeller set is screwed.

Fan upside is provided with protective wire mesh 13x13 mm.

Fans in explosion-proof execution are fitted with brass lining on inner surface of housing in way of impeller.

- **a i r g u i d e** : made of steel sheet, welded,
- straightens the air flow and is also the supporting bracket of electric motor.

- **i m p e l l e r** : made of aluminium alloys sea-water resistant. Impeller blades screwed to the hub, impeller dynamically balanced.

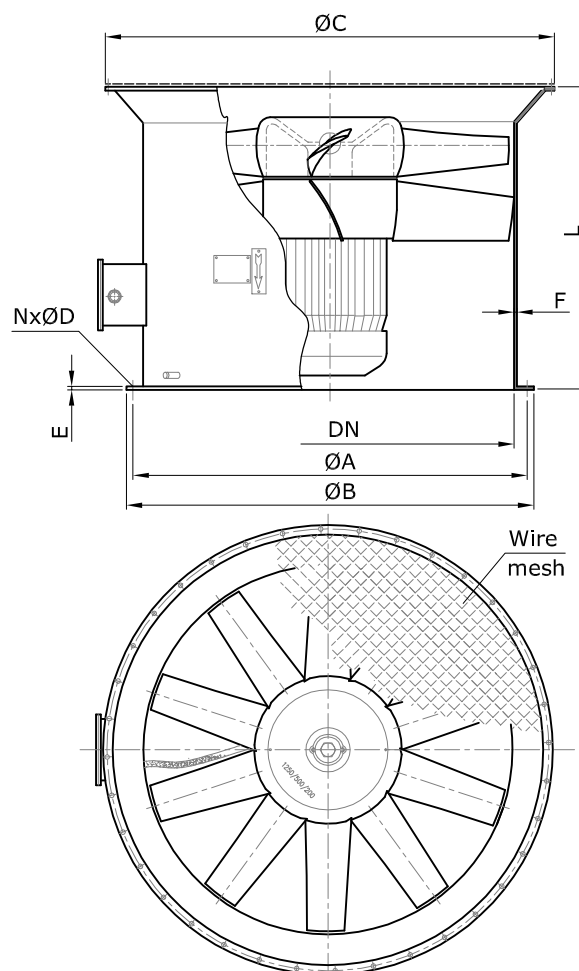
- **e l e c t r i c m o t o r** : induction, squirrel-cage. three-phase, in marine execution, suitable for 50 or 60 Hz electric installation.

All the motors are of high-efficiency IE2 class "GREEN responsibility".

4. SURFACE TREATMENT

Standard treatment - hot-dip galvanized.

On request fans may be painted with marine paints set agreed with the Buyer.



5. SIZES AND TYPES OF FANS

-nominal diameters: DN=400 DN=710 DN=1120

DN=500 DN=800 DN=1250
DN=560 DN=900 DN=1400
DN=630 DN=1000 DN=1600

-types: N - supply
W - exhaust
non-spark: additional sign Ex

6. MARKING

of marine axial-flow fan WMOB type of nominal diameter DN=500 mm, with impeller hub diameter 280 mm, exhaust type W, with impeller blades pitch 30°, in standard execution:

AXIAL-FLOW FAN WMOB 500/280-W-30°

Fantype	DN	A	B	L	N	D	C	E	F	Weight
	mm									kg
WMOB 400	400	460	490	550	8	12	640	10	4	65
WMOB 500	500	560	590	700	12	12	760	10	6	174
WMOB 560	560	640	640	750	12	14	820	10	6	144
WMOB 630	630	695	730	700	12	14	930	10	6	180
WMOB 710	710	775	810	800	16	14	1010	10	6	221
WMOB 800	800	865	900	800	16	14	1100	10	6	318
WMOB 900	900	965	1000	920	16	14	1230	10	6	405
WMOB 1000	1000	1065	1100	1000	16	14	1360	10	6	540
WMOB 1120	1120	1205	1250	1300	24	14	1480	10	6	1100
WMOB 1250	1250	1335	1380	1300	24	14	1610	10	6	1145
WMOB 1400	1400	1485	1530	1400	32	14	1760	10	6	1250
WMOB 1600	1600	1685	1730	1400	32	14	1980	10	6	1410

1. DESTINATION

Marine axial-flow fans WMOS type are destined for operation in ventilation systems of seagoing ships of unrestricted cruising area as well as offshore objects. They may be used as exhaust or supply and shall be installed inside the compartments.

2. OPERATING CONDITIONS

For determining of fan working parameters the performance curves from Catalogue Card ALWO/A1-01 (WMOR fans) may be used. Free air discharge pressure losses are to be considered.

3. CONSTRUCTION

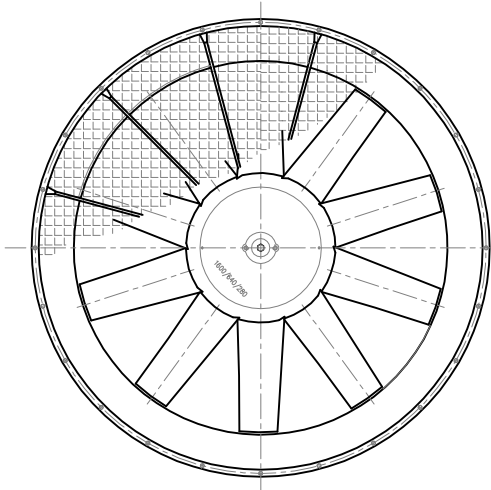
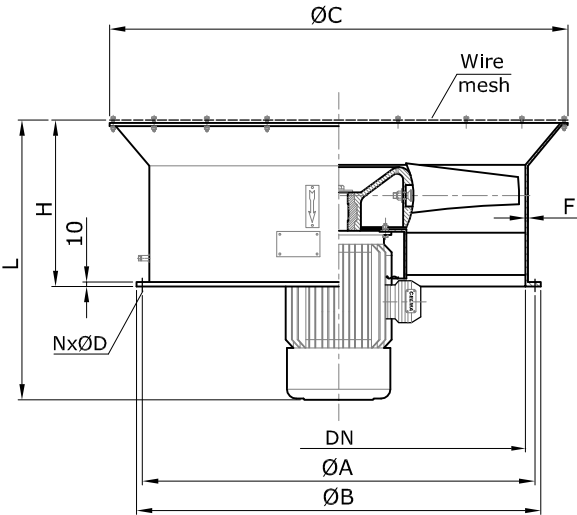
Housing: steel pipe ended with drilled flange on bottom, welded.
Upper part in shape of cone, fitted with screwed wire guard of mesh size 13x13 mm.
Air guide: made of steel sheet, welded, straightens the air stream and is also the supporting bracket for electric motor.
Fan impeller: made of aluminium alloys sea-water resistant. Impeller blades screwed to the hub, impeller dynamically balanced.
Electric motor: induction, squirrel cage, three-phase totalle enclosed, in marine execution, suitable for 50 or 60 Hz electric installation.
All the motors are of high-efficiency IE2 class "GREEN responsibility".

4. SIZES AND TYPES OF FANS

- nominal diameters : DN=400, 500, 560, 630, 710, 800, 900, 1000, 1120, 1250, 1400 and 1600 mm.
- types: N - supply
W - exhaust
- non-spark: additional sign Ex

5. SURFACE TREATMENT

Standard treatment - hot-dip galvanized.
On request fans may be painted with marine paints set agreed with the Buyer.

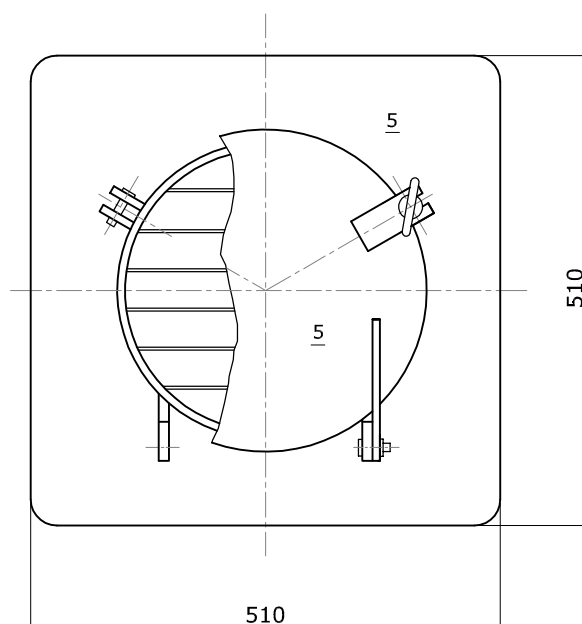
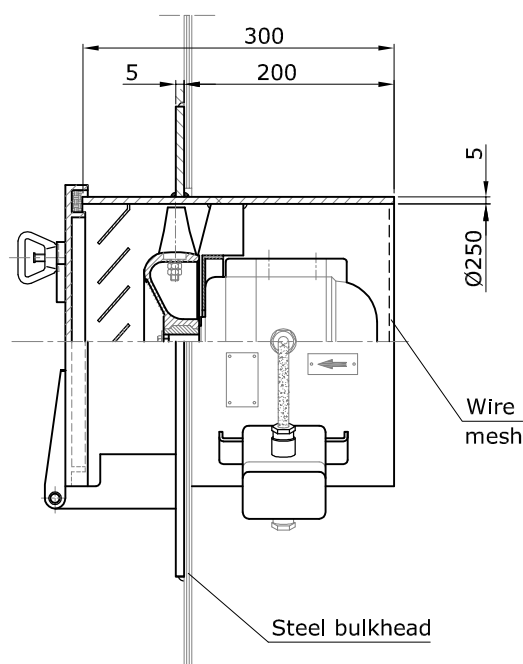


6. MARKING

of marine axial-flow fan WMOS of nominal diameter DN = 630 mm, with impeller hub diameter 380 mm, of exhaust type W and with impeller blade pitch 45°:

AXIAL-FLOW FAN WMOS 630/380-W-45°

Fantype	DN	A	B	L	N	D	C	H	F	Weight
	mm									kg
WMOS 400	400	460	490	550	8	12	540	240	4	60
WMOS 500	500	560	590	680	12	12	650	250	6	120
WMOS 560	560	640	640	750	12	14	730	270	6	138
WMOS 630	630	695	730	700	12	14	800	300	6	165
WMOS 710	710	775	810	680	16	14	900	330	6	210
WMOS 800	800	865	900	760	16	14	1000	360	6	290
WMOS 900	900	965	1000	850	16	14	1120	400	6	370
WMOS 1000	1000	1065	1100	900	16	14	1250	450	6	480
WMOS 1120	1120	1205	1250	1000	24	14	1400	500	6	600
WMOS 1250	1250	1335	1380	1150	24	14	1570	570	6	840
WMOS 1400	1400	1485	1530	1200	32	14	1750	640	6	1020
WMOS 1600	1600	1685	1730	1250	32	14	1980	700	6	1180



1. DESTINATION

Marine axial-flow fans WMOZ-250 are destined for installation on external bulkheads of compartments on seagoing ships of unrestricted trading area and offshore objects.

They may be utilised for extraction of air from ventilated spaces.

2. OPERATING CONDITIONS

Allowable tolerances of working parameters of fans (air displacement, pressure, power consumption and efficiency) are in accordance with standard PN-77/M-43021.

Temperature of conveyed medium should not exceed +45 deg.C, dust contents 0,3 g/m³.

Airflow	Total pressure	Speed	Maximum noise level	Motor rated power	Supply	Fan total weight
m ³ /s	Pa	min ⁻¹	dB(A)	kW	V/Hz	kg
0,46	170	2800	71	0,5	3x380/50	29
0,56	250	3400	85	0,64	3x440/60	29

3. CONSTRUCTION

- **h o u s i n g** : steel pipe welded to steel mounting flange. On the housing a terminal box with PG20 cable gland for supply connection cable is mounted.

Housing of fan is provided with air-guide, to which electric motor-impeller set is screwed.

- **a i r g u i d e** : made of steel sheet, welded, straightens the air flow and is also the supporting bracket of electric motor.

- **i m p e l l e r** : made of aluminium alloys sea-water resistant. Impeller blades screwed to the hub, impeller dynamically balanced.

- **e l e c t r i c m o t o r** : induction, squirrel-cage, three-phase, in marine execution, suitable for 50 or 60 Hz electric installation.

Fan's outlet is provided with circular louver with hinged weathertight/fire cover.

Air inlet is protected with steel wire mesh made stainless steel.

Mounting flange destined for welding. On request may be delivered with the drilled flanges.

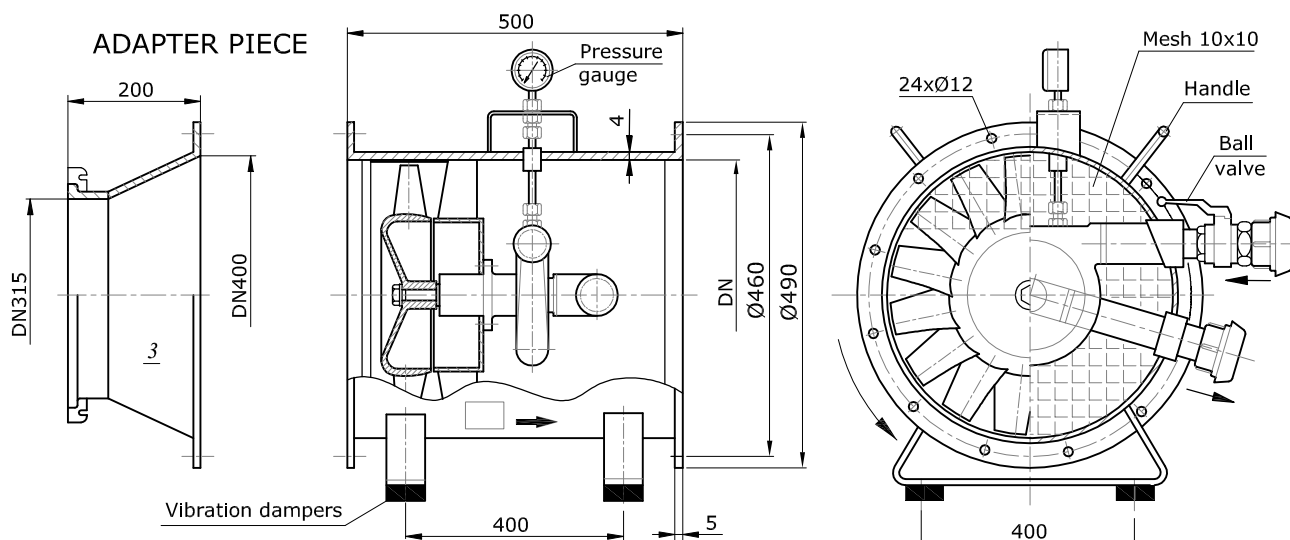
4. SURFACE TREATMENT

Standard treatment - hot-dip galvanized.

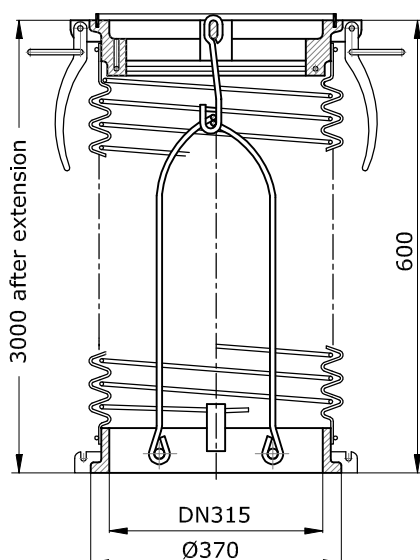
On request fans may be painted with marine paints set agreed with the Buyer.

6. MARKING

AXIAL-FLOW FAN
WMOZ 250/175-35°

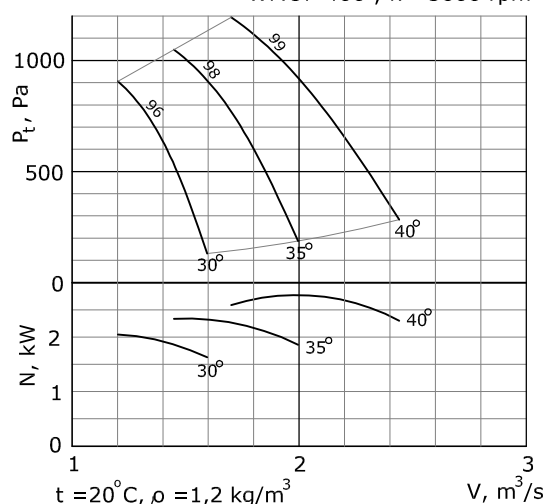


FLEXIBLE HOSE DN315



3. PERFORMANCE CURVES

WMOP 400, $n = 3600$ rpm



1. DESIGNATION

Marine gas freeing fans WMOP type are destined for operation in gas dangerous areas classified as zone 0 acc. to IEC 79-10, where the use of electric motors is not allowed.

They can be applied for gas freeing from tanks and holds of oil-, gas and chemical carriers.

WMOP type fans may be used as supply or exhaust fans.

2. CONSTRUCTION

The casing of the fan is made of carbon steel, hot deep galvanized. Impeller of sea water resistive aluminium alloy AK11, statically and dynamically balanced.

The casing from inside, in way of impeller, lined with brass sheet, 2 mm thick.

Fan drive - water turbine WM 3,25 F 0,30 VENT made of bronze (for fresh or sea water).

Water connection - Storz DN50 coupling or other, as per order.

Fan air inlet and outlet protected with wire mesh of stainless steel.

The fan may be delivered with anti-static DN315 flexible hoses, adapter piece DN400/DN315 and with water hoses with Storz DN50 (or others), 15 m long.

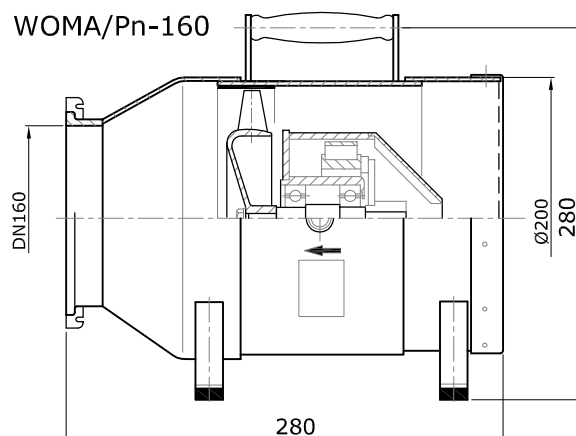
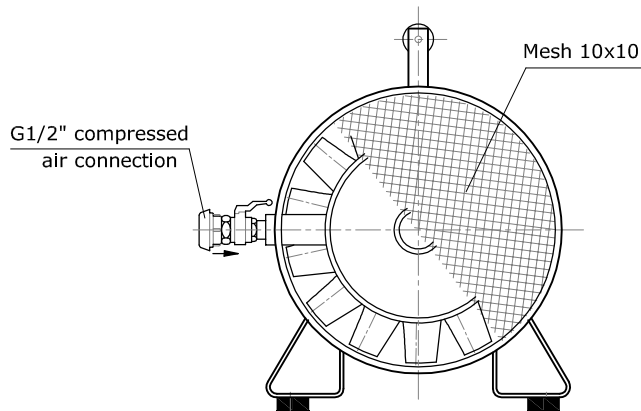
4. OPERATION PARAMETERS

Supply water working pressure -	0,6 MPa
Revolutions-	3600 min ⁻¹
Rated power of water turbine -	3,0 kW
Fan capacity/pressure -	as per diagram
Fan total weight -	61 kg

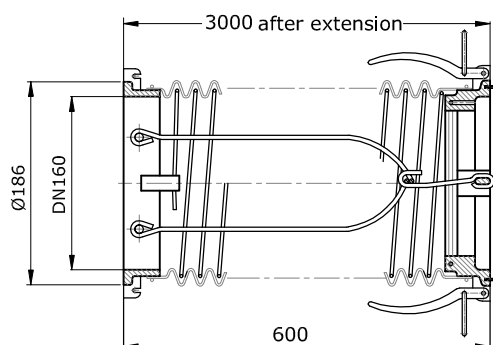
5. MARKING

of WMOP fan of nominal diameter 400 mm, with blade pitch 40°:

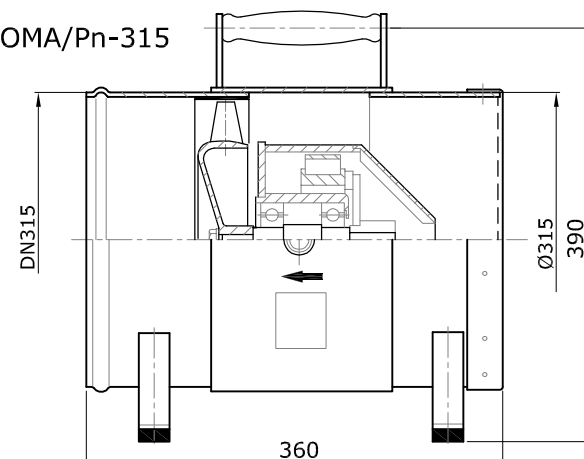
GAS FREEING FAN WMOP 400/280-40°-Ex



FLEXIBLE HOSE DN160



WOMA/Pn-315



1. DESIGNATION

Marine axial-flow, aluminium fans, WOMA/Pn type fans, with pneumatic drive are destined for operation in surrounding of chemically active vapours and gases.

They may be applied on seagoing ships of unrestricted cruising area as well as on offshore objects.

2. CONSTRUCTION

WOMA/Pn fans are of explosion proof execution. Housing made of sea water resistant aluminium, provided with flexible hose connection. Impeller made of aluminium alloy AK11, statically and dynamically balanced. The casing from inside, in way of impeller, is lined with brass sheet, 2 mm thick. Air turbine shall be supplied with dry and clean compressed air of working pressure 4-6 bar. Air turbine - aluminium. Fan air inlet provided with protective brass wire guard. Connection of compressed air fitted with isolating ball valve.

Flexible hoses DN160 (see drawing) or DN315 (commercial type) supplied on request.

3. TECHNICAL DATA

Performance - see capacity curves.

Consumption of compressed air at 4 bar working pressure:

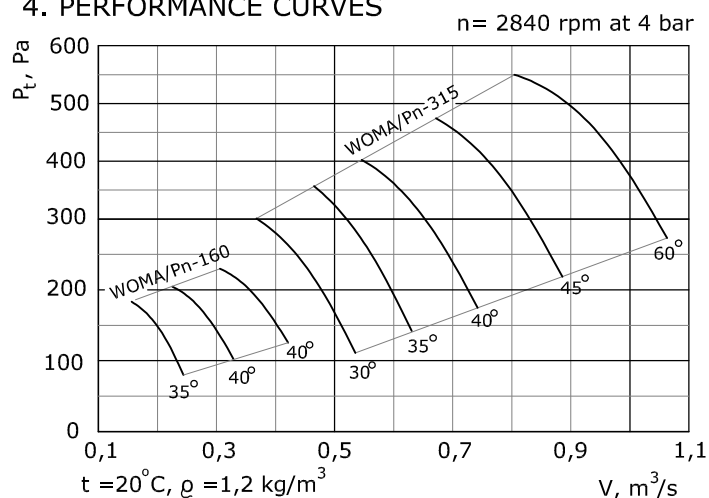
WOMA/Pn-160: 0,01 m³/s

WOMA/Pn-315: 0,02 m³/s

Fan weight: WOMA/Pn-160: 8,2 kg

WOMA/Pn-315: 15,0 kg

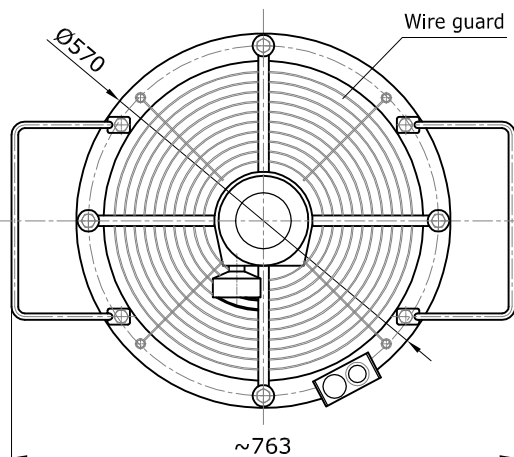
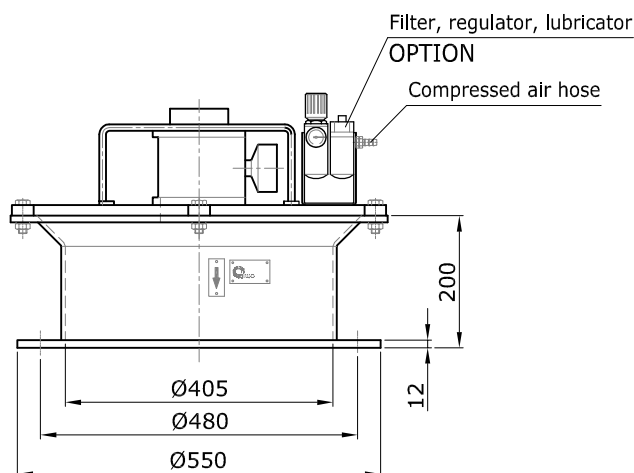
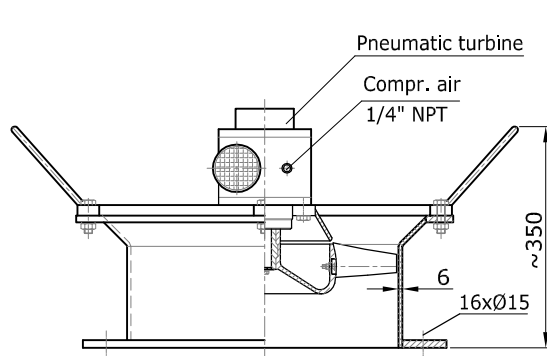
4. PERFORMANCE CURVES



5. MARKING

of WOMA/Pn fan of nominal diameter 315 mm, with blade pitch 40°:

PORTABLE AXIAL FAN WOMA/Pn 315-40°-Ex



3. TECHNICAL DATA

Performance - see capacity curve.

Drive: 6,2 bar filtered and lubricated air
Air filter , lubriactor and presure regulator
supplied as an option.

Rated power: 3,6 kW

Rated speed: 2500 rpm

Fan weight: 34 kg

1. DESIGNATION

Marine axial-flow, aluminium fans WMOG type fans, with pneumatic drive, are destined for gas freeing or ventilation of tanks on oil tankers or other spaces where use of electrically driven fans is not allowed.

Provided with handles for transportation.

To be bolted to structure fitted coamings.

2. CONSTRUCTION

WMOG fans are of explosion proof execution.

Housing made of sea water resistant aluminium, wire guard - stainless steel.

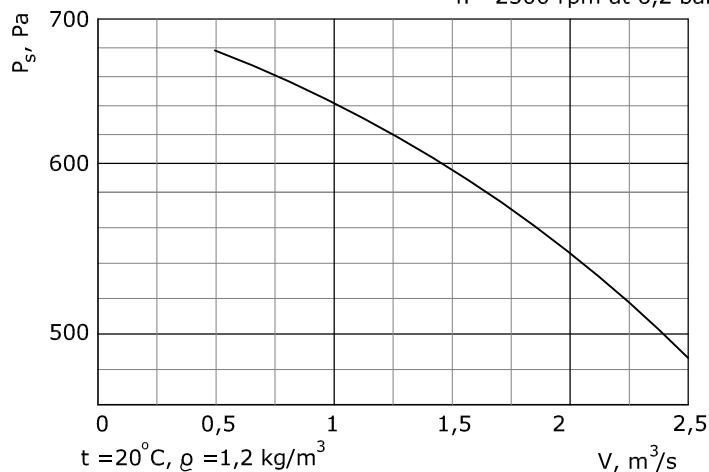
Impeller made of aluminium alloy AK11, statically and dynamically balanced.

Fan driven by the water turbine.

Air flow direction: supply (exhaust on request)

4. PERFORMANCE CURVE

n= 2500 rpm at 6,2 bar



5. MARKING

GAS FREEING FAN WMOG 400/280

Other dimensions and capacities available on request.