



AREM

THE VENTILATION PERFORMANCE

CATALOG

AREM is one of the largest French manufacturers of fans known throughout Europe.

AREM is especially known for its experience in making axial fans. Belt-driven and direct-driven, with short or long casings, with or without venturi, they are all designed in accordance with the specifications for the numerous applications for which they are intended.

Centrifugal fans using forwards or backwards inclined blades have just joined this range, which is one of the most extensive on the market.



STANDARDS - RULES
CONVENTIONS



SMOKE
EXTRACTION



GENERAL
VENTILATION



EXPLOSIVE
ATMOSPHERES



COOLING



DRYING



INDUSTRIAL
VENTILATION



ANCILLARIES



SMOKE
EXTRACTION



GENERAL
VENTILATION



EXPLOSIVE
ATMOSPHERES



COOLING



DRYING



INDUSTRIAL
VENTILATION



Direct-driven...



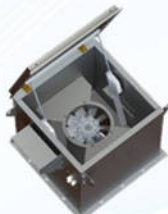
...Belt-driven

AXUS
RANGE :

AX
BX
CX
EX



Soundproof plenum box...

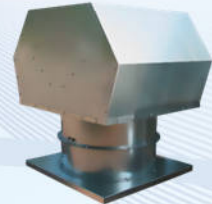


...With motorized opening

PAF
HATCH



Roof fan - Horizontal discharge

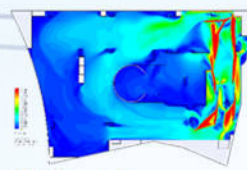


Roof fan -Vertical discharge

TH
TV
TD



Jet fan (Accelerator)



CFD Simulation

JFA
CFD STUDY



Wall-mounted



... With ECM

DA
DA ECM



Available on request

Available on request

Available on request



Axis with EC motors



...Specific with EC motors

AXUS EC
RANGE :

AX
BX
CX
EX





SMOKE
EXTRACTION



GENERAL
VENTILATION



EXPLOSIVE
ATMOSPHERES



COOLING



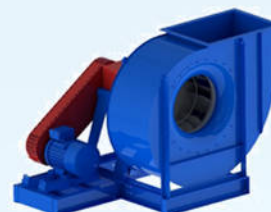
DRYING



INDUSTRIAL
VENTILATION



Direct-driven...



...Belt-driven

BACKWARD CURVED FAN :

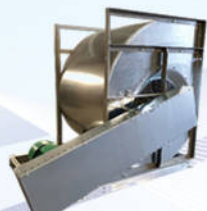
G Series
R Series
V Series
Z Series
VRD/VRDGT
RL/RM EC



Available on request



Direct-driven...



...Belt-driven

FORWARD CURVED FAN :

C Series
VAD
TDA
TMD



Available on request



Plenum box – backwards
inclined blades

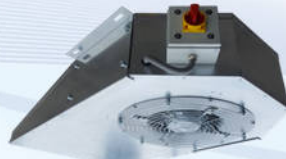


Plenum box – forwards
inclined blades

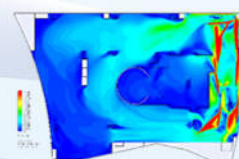
CELN
CELN EC
VGND
VGNT



Available on request



Jet fan (Accelerator)



CFD Simulation

JFC CFD STUDY



Roof fan with horizontal
discharge



Roof fan with vertical
discharge

TCH
TCV
TCO
TCVP



Plastic casing...



...Steel casing

SMALL DIAMETER :

CP
CB



Available on request

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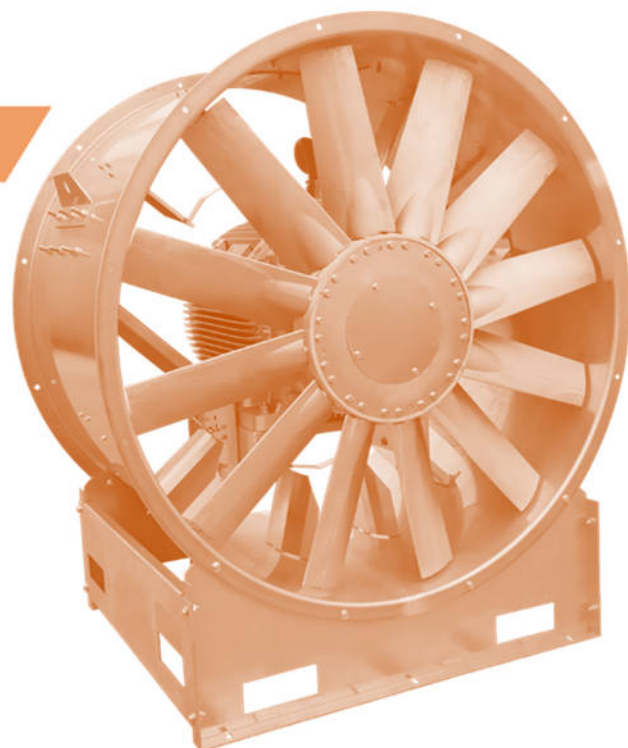
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We reserve the right to make modifications resulting from technical, mechanical, electrical or other types of changes.

The illustrations are non-binding.



SMOKE EXTRACTION – AXIALS



DESCRIPTION

We have a wide range from diameter 400mm to 1600mm, from a few hundred m³/h to 190,000m³/h, with motors with 2, 4 and 6 poles, 1 or 2 speeds. Our fans might also be suitable for use in geographic areas with specific electricity networks, i.e. 60 Hz.

Other motor speeds are available on request.



APPLICATION

Extraction for high temperatures and smoke extraction:

- Car parks and high-rise buildings
- Hospitals
- Stations and airports
- Hypermarkets
- Canteens
- Workshops

More generally, establishments open to the public or employees.



FLUID TEMPERATURE

Spheres of action:

- F200/2h (200°C for 2 hours)
- F300/2h (300°C for 2 hours)
- F400/2h (400°C for 2 hours)

In comfort mode, the fans can be used to extract exhaust air to reduce the ppm concentration.



CONSTRUCTION

The fans are manufactured and certified in accordance with standard EN12101-3. The structure is designed in pre-galvanized steel as standard. To meet your particular requirements, we can manufacture upon request:

- 304L or 316L stainless steel
- Hot-dip galvanized steel
- Surface treatment with epoxy paint

- ✓ **AXUS range: AX - BX - CX**
- ✓ **Plenum box: PAF - FRB**
- ✓ **Roof fan: TD - TV**
- ✓ **Jet fan (Accelerator): JFA**



ANCILLARIES

In line with your requirements, we have safety guards, support feet, rigid coupling flanges, outlet backdraught dampers, on-off switch connectors, etc. to simplify your installation. See **ANCILLARIES** for more information.



OPTION

We can wire motors, switch connectors, make special productions, etc. and study your requirements to meet your specifications and constraints.

CFD (computational fluid dynamics) studies can be organized on request.

Reminder: All conventional and normative elements are presented in the **STANDARDS-RULES-CONVENTIONS**. All ancillaries are presented in the **ANCILLARIES** at the end of the catalog. Please contact the sales team for your specific requirements.



AXUS RANGE – EN12101-3 CERTIFIED

Applicable constants of F200-2h, F300-2h and F400-2h

Our fans are made in France at our factory in Saint-Brisson sur Loire. Our range is from diameter 400mm to 1600mm, from a few hundred m³/h to 190,000m³/h, with motors with 2, 4 and 6 poles, 1 or 2 speeds. Our fans might also be suitable for use in geographic areas with specific electricity networks, i.e. 60 Hz.

Thanks to a range of approved impellers with blades and hubs in aluminium alloy, reinforced with steel for the large sizes and high speeds, we can propose solutions tailored to your constraints.

Optimizing the blade angle and quantity provides the best energy efficiency and the most suitable power for your need.



F200/2h

F300/2h

F400/2h

Certified range:

Motor velocity	Fan diameter	F200	F300	F400
4 Poles (1500 rpm)	400 to 1400	✓	✓	✓
6 Poles (1000 rpm)	400 to 1400	✓	✓	✓
	1500 to 1600	✓	✓	✗
2 Poles (3000 rpm)	400 to 800	✗	✗	✓

Standard construction

- EN12101-3 compliant
- Structure in Z275 pre-galvanized steel sheet
- Long or short casing, with or without inlet bellmouth

Motorization:

- Non-ventilated
- Performance classes IE1, IE2 and IE3 available
- B3 mounting (foot-mounted motor)

On request for specific constraints through the addition of ancillaries:

- Vertical flow
- Contra-rotating, parallel mounting
- Mounting on a frame or particular structure
- Roof installation (see our smoke extraction roof fans)

Option:

- Epoxy paint
- 304L and 316L stainless steel, without or with passivation
- Hot-dip galvanized steel

Ancillaries:

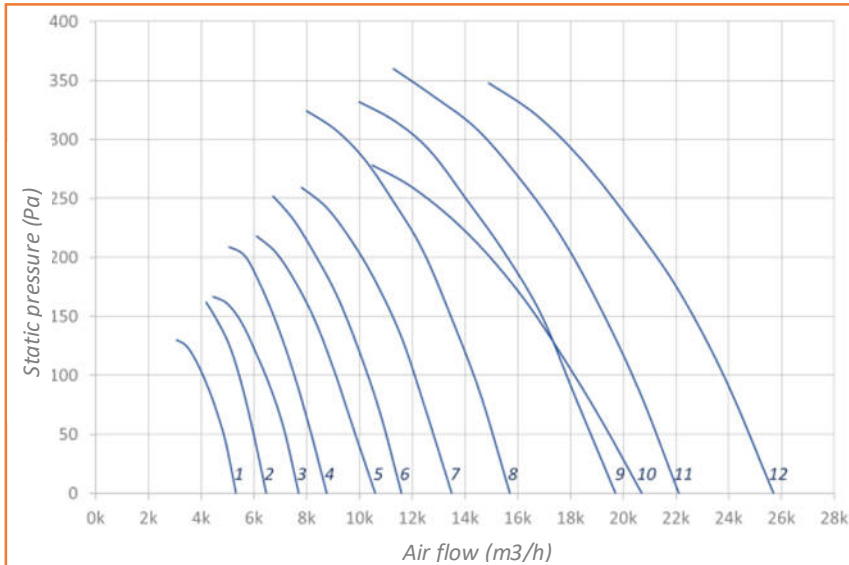
- Fan guards
- Electrical connection
- Connection to the air flow network

To achieve the most competitive lead time for our customers, we keep the largest possible range of motor power in stock and have access to multiple supply sources.

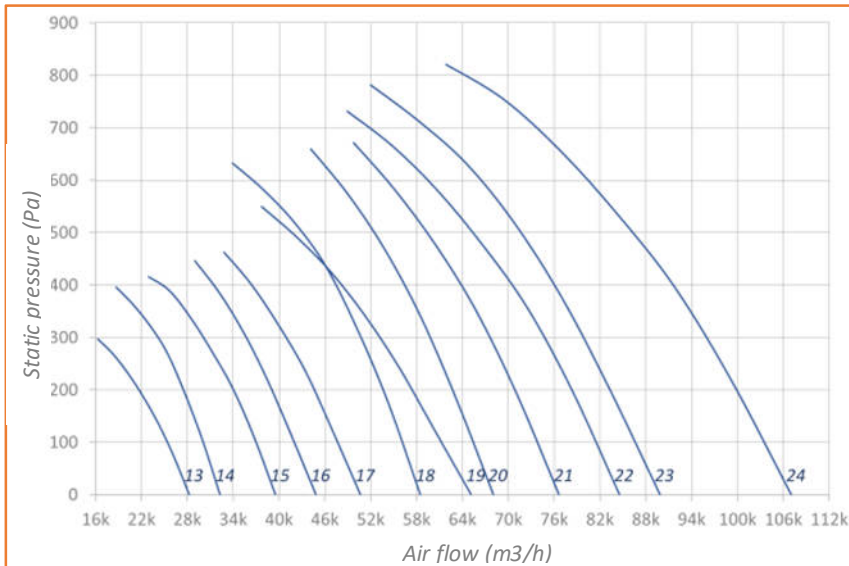


AXUS PERFORMANCES: 4 Poles (1500 rpm)

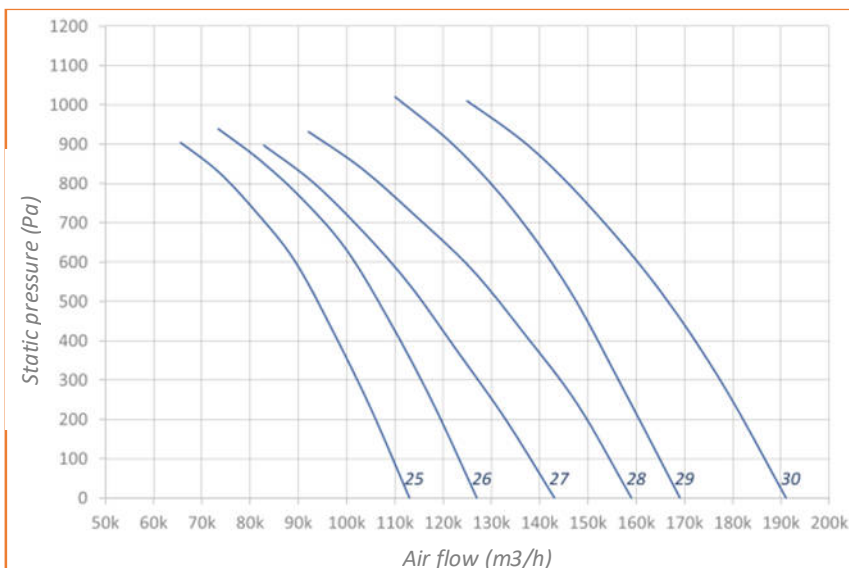
Common operating range



Curve No.	Ø mm	Power kW	Current A
1	400	0.55	1.5
2	450	0.55	1.5
3	450	0.75	1.9
4	500	0.75	1.9
5	500	1.10	2.6
6	560	1.10	2.6
7	560	1.50	3.4
8	630	1.50	3.4
9	630	2.20	4.6
10	710	1.50	3.4
11	710	2.20	4.6
12	710	3.00	6.3



Curve No.	Ø mm	Power kW	Current A
13	800	2.20	4.6
14	800	4.00	7.9
15	800	5.50	11.1
16	900	7.50	14.3
17	900	9.20	17.8
18	900	15.00	30.0
19	1000	11.00	22.7
20	1000	15.00	30.0
21	1000	18.50	36.0
22	1000	22.00	43.5
23	1120	22.00	43.5
24	1120	30.00	55.0



Curve No.	Ø mm	Power kW	Current A
25	1250	30.00	55.0
26	1250	37.00	71.0
27	1400	45.00	85.5
28	1400	55.00	105.5
29	1400	75.00	143.0
30	1400	90.00	169.0

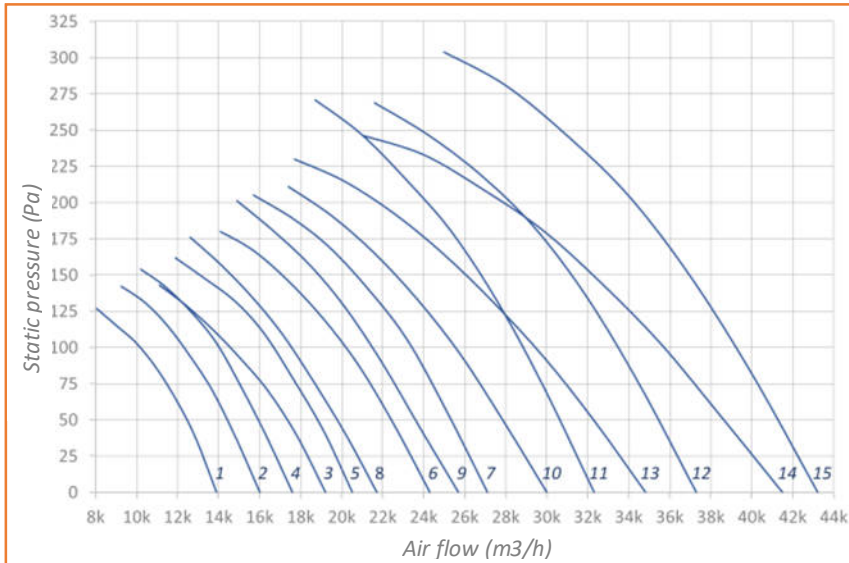
Notes:

The current is indicated for a 400V/50Hz electricity network, variable depending on the motorization.
The curves represent just a very small part of air flow possibilities.

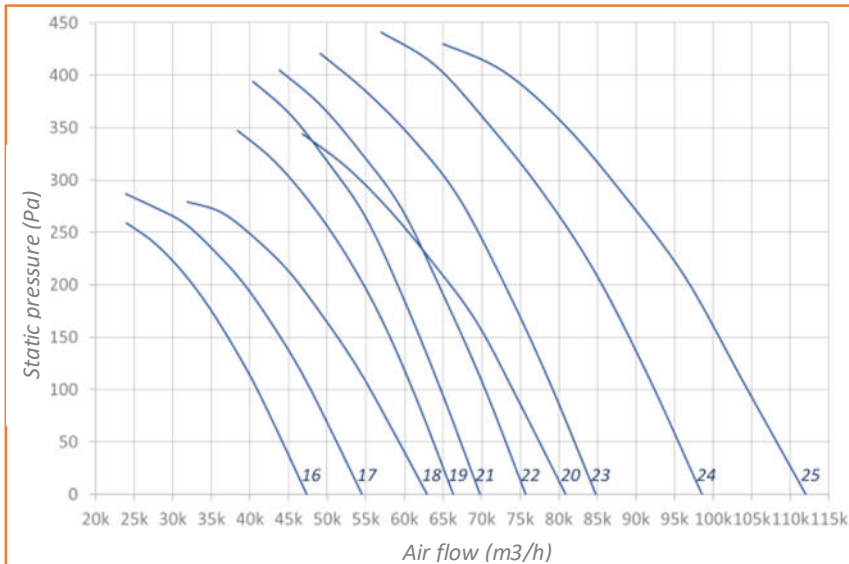


AXUS PERFORMANCES: 6 Poles (1000 rpm)

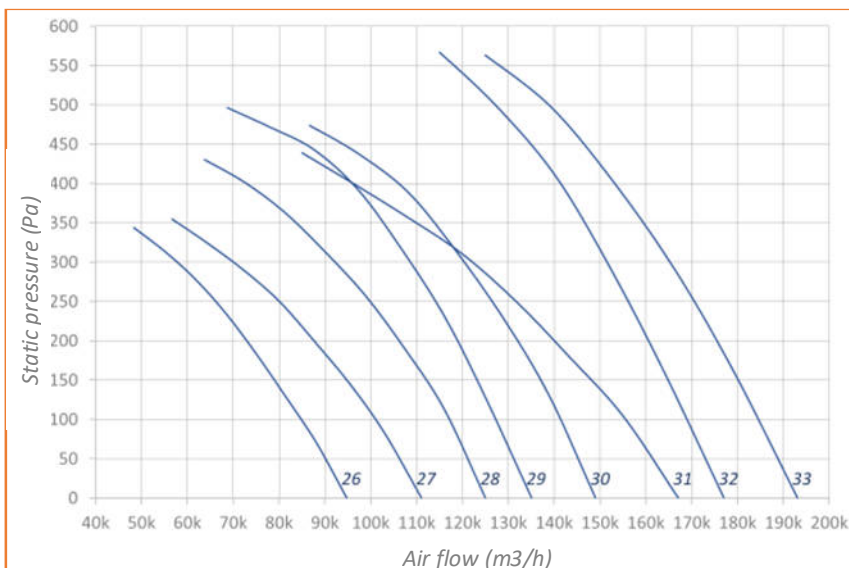
Common operating range



Curve No.	Ø mm	Power kW	Current A
1	630	0.75	2.1
2	710	0.75	2.1
3	710	1.10	2.6
4	800	0.75	2.1
5	800	1.10	2.6
6	800	1.50	3.9
7	800	2.20	5.2
8	900	1.10	2.9
9	900	1.50	3.9
10	900	2.20	5.2
11	900	3.00	7.3
12	900	4.00	8.9
13	1000	2.20	5.2
14	1000	3.00	7.3
15	1000	4.00	9.1



Curve No.	Ø mm	Power kW	Current A
16	1120	3.00	7.3
17	1120	4.00	9.1
18	1120	5.50	12.7
19	1120	7.50	16.9
20	1120	11.00	22.5
21	1250	7.50	16.9
22	1250	9.20	19.1
23	1250	11.00	22.5
24	1250	15.00	28.6
25	1250	18.50	36.4



Curve No.	Ø mm	Power kW	Current A
26	1400	11.00	22.5
27	1400	15.00	28.6
28	1400	22.00	43.1
29	1400	30.00	53.1
30	1400	37.00	67.3
31	1600	30.00	53.1
32	1600	45.00	83.5
33	1600	55.00	99.3

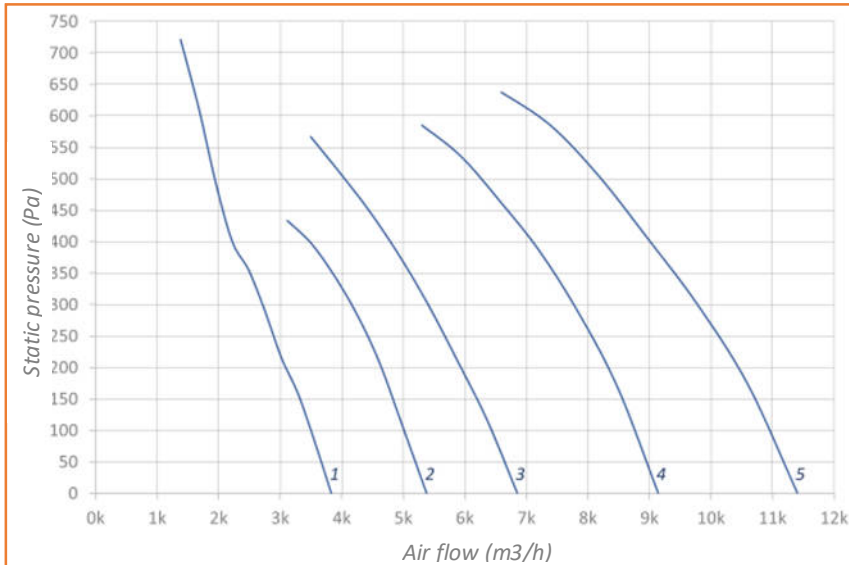
Notes:

The current is indicated for a 400V/50Hz electricity network, variable depending on the motorization.
The curves represent just a very small part of air flow possibilities.

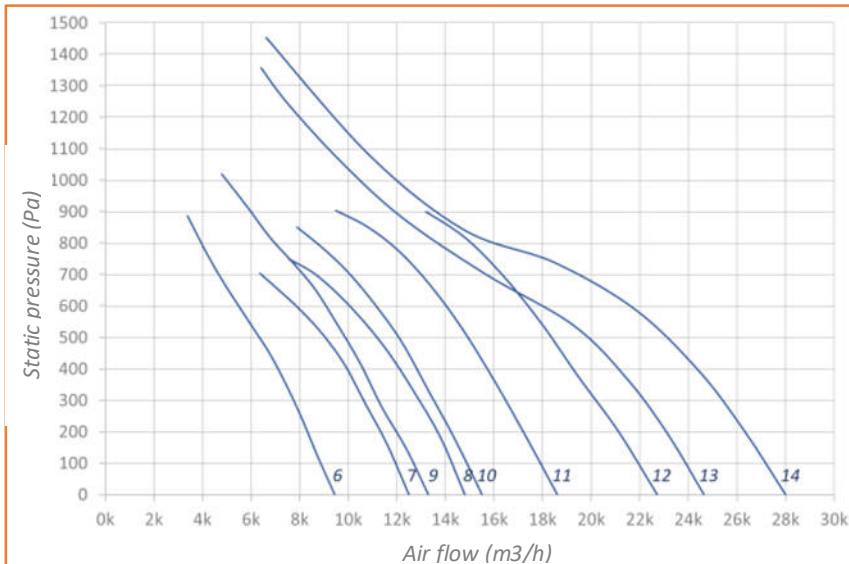


AXUS PERFORMANCES: 2 Poles (3000 rpm)

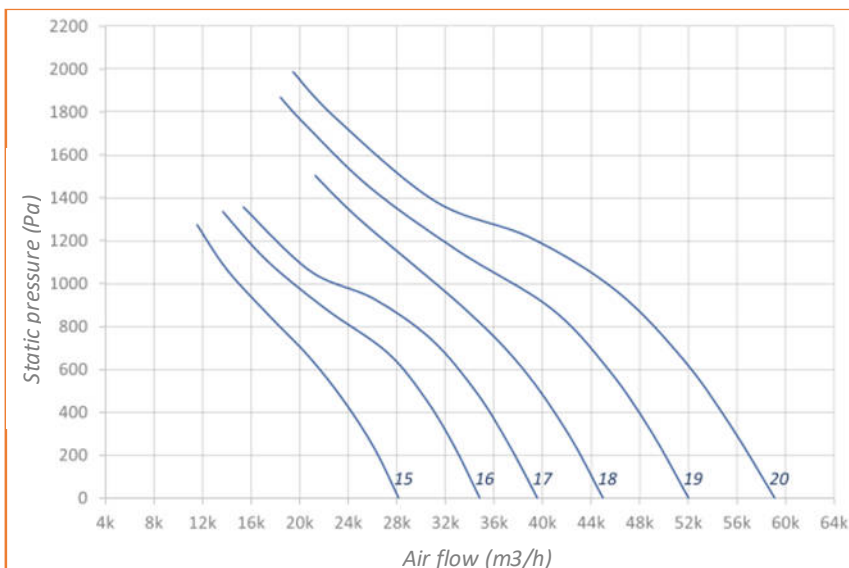
Common operating range



Curve No.	Ø mm	Power kW	Current A
1	400	0.75	1.6
2	400	1.10	2.3
3	450	1.50	3.2
4	450	2.20	4.5
5	450	3.00	6.2



Curve No.	Ø mm	Power kW	Current A
6	500	2.20	4.5
7	500	3.00	6.2
8	500	4.00	7.3
9	560	3.00	6.2
10	560	4.00	7.3
11	560	5.50	9.8
12	560	7.50	13.4
13	630	9.20	17.6
14	630	11.00	21.0



Curve No.	Ø mm	Power kW	Current A
15	710	11.00	21.0
16	710	15.00	29.0
17	710	18.50	34.4
18	800	22.00	40.0
19	800	30.00	54.5
20	800	37.00	68.0

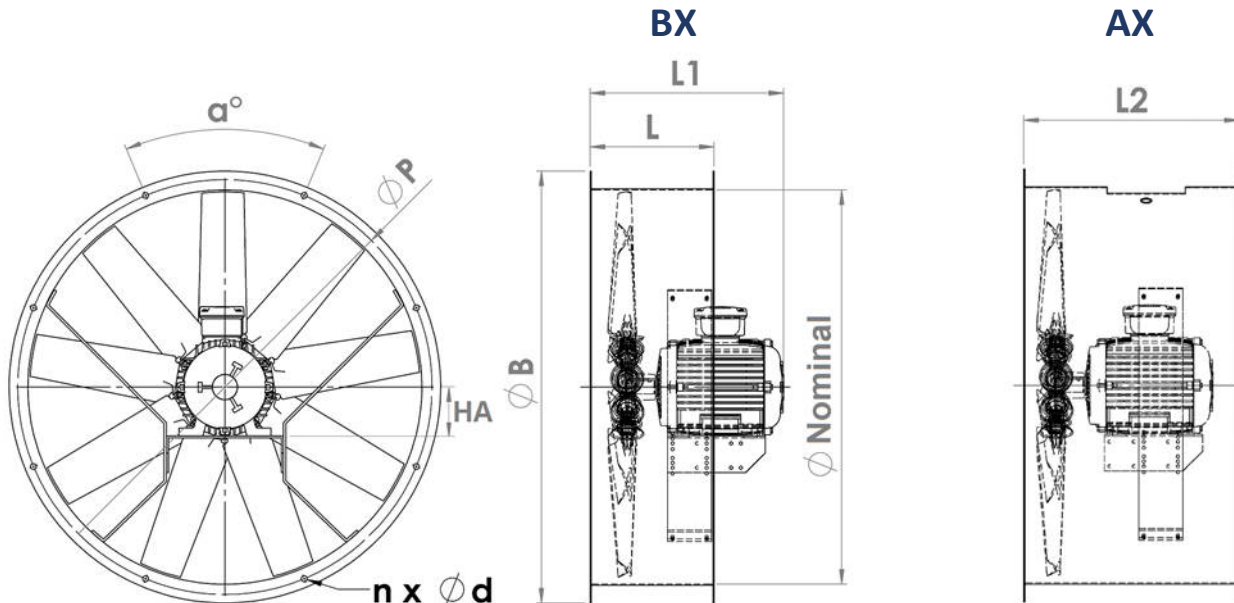
Notes:

The current is indicated for a 400V/50Hz electricity network, variable depending on the motorization.
The curves represent just a very small part of air flow possibilities.



AX / BX DIMENSIONS

AX (long casing) - BX (short casing)



Nominal Ø mm	HA mm	L mm	L2 mm	B mm	n	α °	d mm	P mm	AX weight* kg	BX weight* kg
400	63-100	254	440	470	6	60	12	440	41	37
450	63-112	254	440	520	6	60	12	490	58	54
500	63-112 132	254 425	440 600	572	6	60	12	540	59 98	55 92
560	71-112 132	254 425	440 600	626	6	60	12	594	62 101	57 95
630	63-112 132 160	254 425 425	440 600 675	704	6	60	12	670	65 105 139	59 99 133
710	80-112 132-160	254 425	440 675	780	6	60	12	744	69 142	62 135
800	80-112 132-160 180-200	254 425 600	440 675 865	885	8	45	12	850	72 177 184	65 163 170
900	90-160 180	425 425	675 800	990	12	30	15	954	188 231	171 205
1000	90-160 180 200	425 425 600	675 800 865	1090	12	30	15	1056	206 250 320	187 222 294
1120	100-180 200-225 250-280	465 665 800	800 1010 1010	1230	12	30	15	1190	266 524 689	237 485 639
1250	100-180 200-225 250-280	465 665 800	800 1010 1010	1375	12	30	15	1320	308 549 950	265 506 917
1400	132-180 200-225 250-280	650 650 800	900 1010 1010	1530	12	30	15	1480	348 586 994	326 535 957
1600	132-180 200-225 250-280	650 650 800	900 1010 1010	1730	16	22.5	15	1660	398 616 1035	350 559 993

Notes:

L1 is variable depending on the motorization.

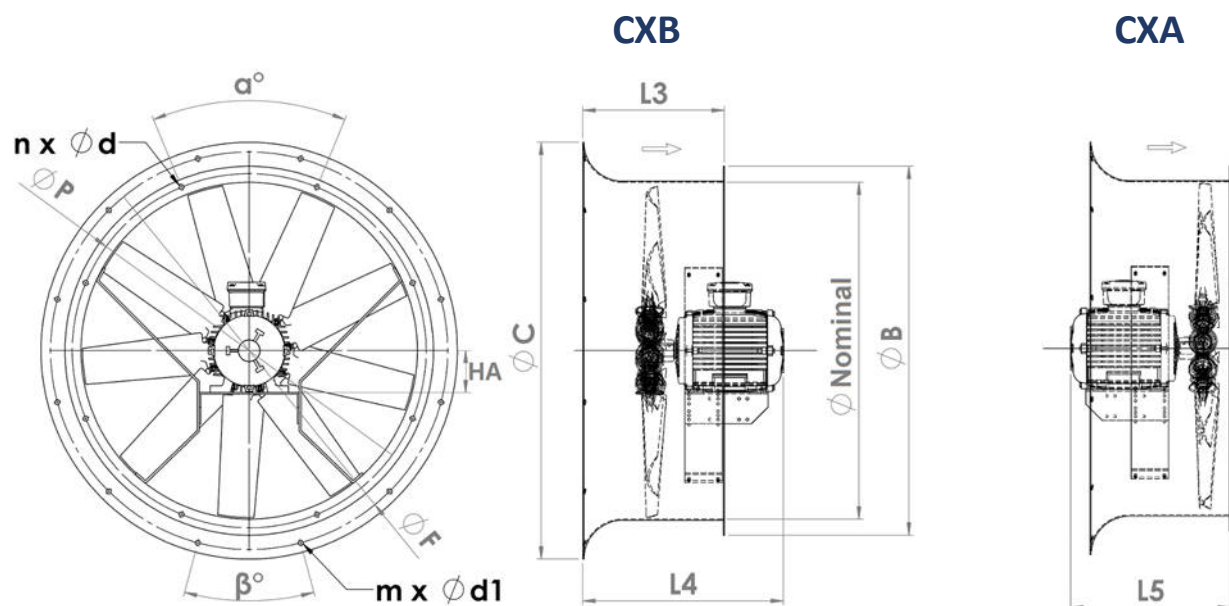
The flange drill holes are by default AREM type. Specify when ordering if your requirement is for the Eurovent standard.

*Weights are provided for information only and include the motor weights of the maximum power (without ancillaries).



CX DIMENSIONS

CX (short casing with inlet bellmouth)



Nominal Ø mm	HA mm	L3 mm	B mm	n -	α °	d mm	P mm	C mm	m -	β °	d1 mm	F mm	CX weight* kg
400	63-100	330	470	6	60	12	440	530	6	60	12	490	47
450	63-112	330	520	6	60	12	490	580	6	60	12	540	60
500	63-112 132	330 425	572	6	60	12	540	685	6	60	12	642	61 101
560	71-112 132	330 425	626	6	60	12	594	715	6	60	12	670	65 105
630	63-112 132 160	330 500 500	704	6	60	12	670	790	6	60	12	744	71 113 147
710	80-112 132-160	330 500	780	6	60	12	744	900	8	45	12	850	77 150
800	80-112 132-160 180-200	340 565 675	885	8	45	12	850	1000	12	30	12	954	80 185 195
900	90-160 180	565 565	990	12	30	15	954	1100	12	30	15	1056	198 241
1000	90-160 180 200	565 565 675	1090	12	30	15	1056	1230	12	30	15	1190	216 255 340
1120	100-180 200-225 250-280	565 750 1110	1230	12	30	15	1190	1360	12	30	15	1320	286 554 719
1250	100-180 200-225 250-280	565 750 1110	1375	12	30	15	1320	1520	12	30	15	1480	338 579 980
1400	132-180 200-225 250-280	750 750 1110	1530	12	30	15	1480	1600	16	22.5	15	1560	388 626 1034
1600	132-180 200-225 250-280	750 750 1110	1730	16	22.5	15	1660	1810	16	22.5	15	1756	438 656 1075

Notes:

L4 and L5 are variable depending on the motorization.

The flange drill holes are by default AREM type. Specify when ordering if your requirement is for the Eurovent standard.

*Weights are provided for information only and include the motor weights of the maximum power (without ancillaries).



REVERSIBLE AXUS

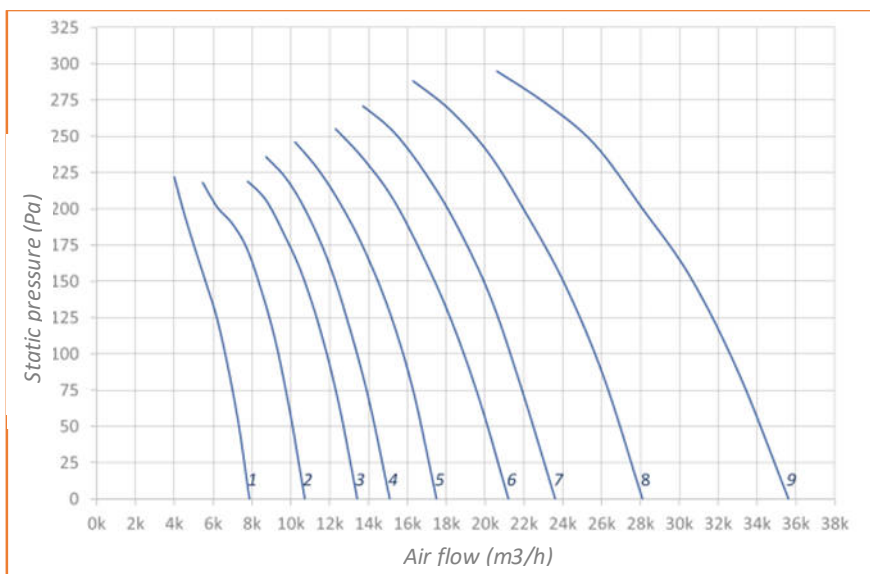
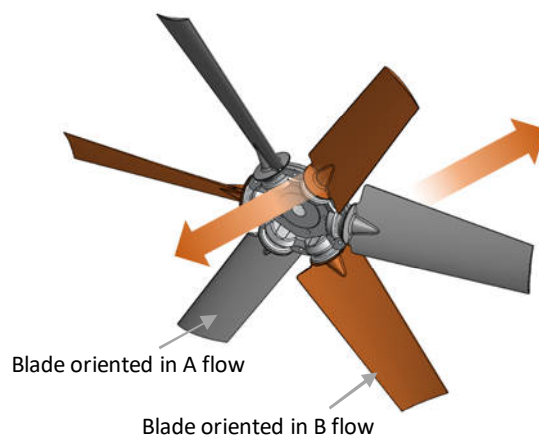
Air flow in direction A or B

We can meet your needs with 100% reversible solutions or a reversible mounting with blades in direction A-B.

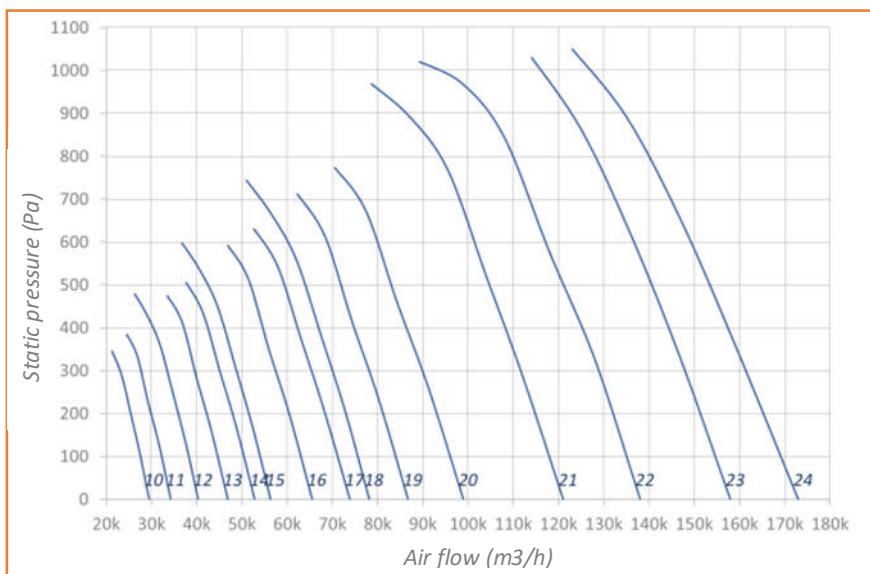
Fully reversible blades



Reversible by alternating the blades



Curve No.	Ø mm	Power kW	Current A
1	630	0.75	1.9
2	630	1.10	2.6
3	630	1.50	3.4
4	710	1.50	3.4
5	710	2.20	4.6
6	710	3.00	6.3
7	800	3.00	6.3
8	800	4.00	7.9
9	800	5.50	11.1



Curve No.	Ø mm	Power kW	Current A
10	900	4.00	7.9
11	900	5.50	11.1
12	1000	5.50	11.1
13	1000	7.50	14.3
14	1000	9.20	17.8
15	1120	11.00	22.7
16	1120	15.00	30.0
17	1120	18.50	36.0
18	1250	18.50	36.0
19	1250	22.00	43.5
20	1250	30.00	55.0
21	1400	45.00	85.5
22	1400	55.00	105.5
23	1400	75.00	143.0
24	1400	90.00	169.0

Notes:

The current is indicated for a 400V/50Hz electricity network, variable depending on the motorization.

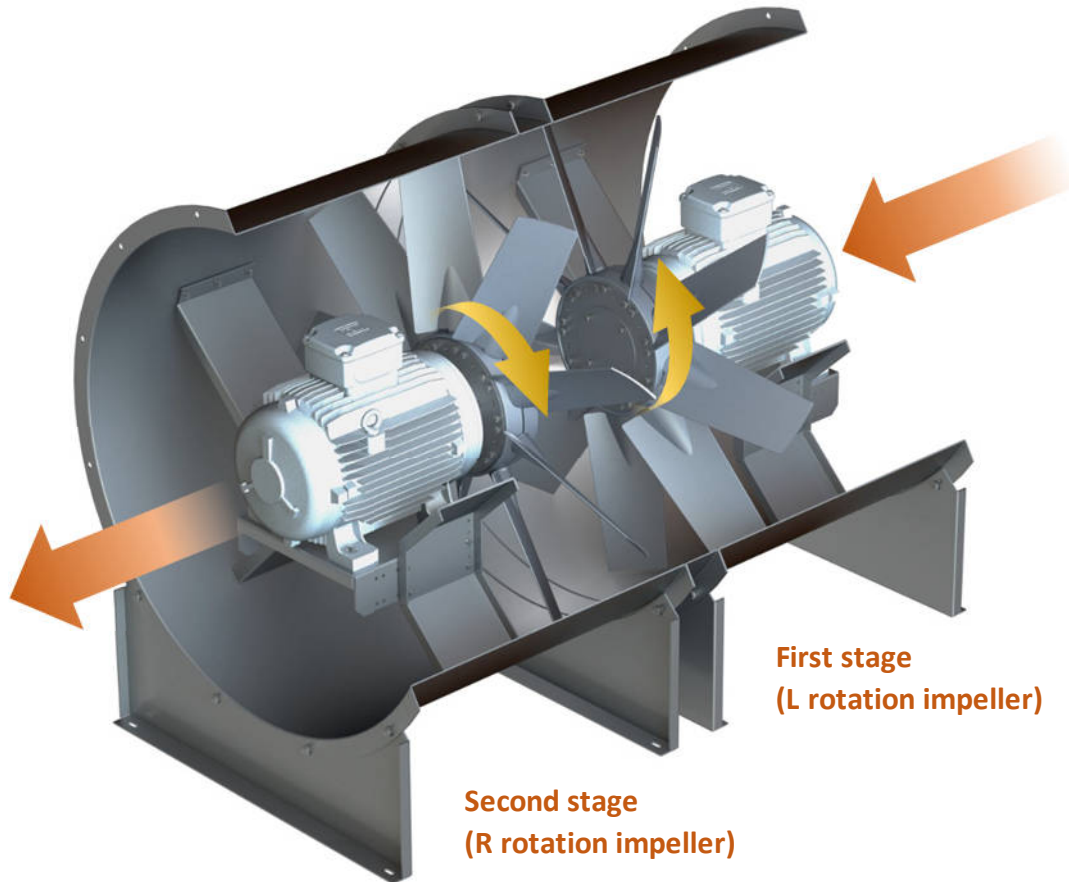
The curves represent just a very small part of air flow possibilities.



CONTRA-ROTATING AXUS

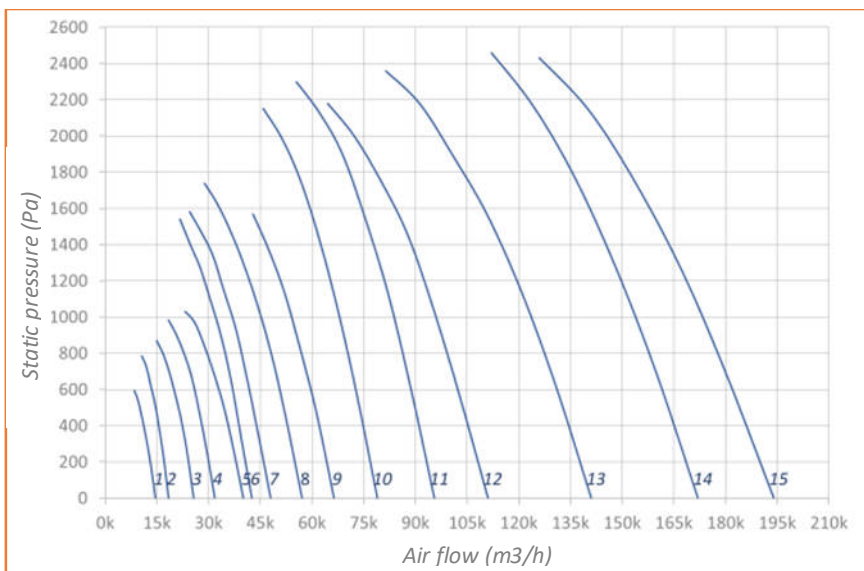
Two-stage axial fan

Standardized in the same conditions as the one-stage solutions, the counter-rotating mounting boosts performances by reducing dimensional constraints. We also propose series or parallel mounting.



First stage
(L rotation impeller)

Second stage
(R rotation impeller)



Curve No.	Ø mm	Power kW	Current A
1	560	2x 1.50	2x 3.4
2	630	2x 2.20	2x 4.6
3	710	2x 3.00	2x 6.3
4	800	2x 4.00	2x 7.9
5	800	2x 5.50	2x 11.1
6	900	2x 7.50	2x 14.3
7	900	2x 9.20	2x 17.8
8	1000	2x 11.00	2x 22.7
9	1000	2x 15.00	2x 30.0
10	1120	2x 22.00	2x 43.5
11	1120	2x 30.00	2x 55.0
12	1250	2x 30.00	2x 55.0
13	1250	2x 45.00	2x 85.5
14	1400	2x 75.00	2x 143.0
15	1400	2x 90.00	2x 169.0

Notes:

The current is indicated for a 400V/50Hz electricity network, variable depending on the motorization.

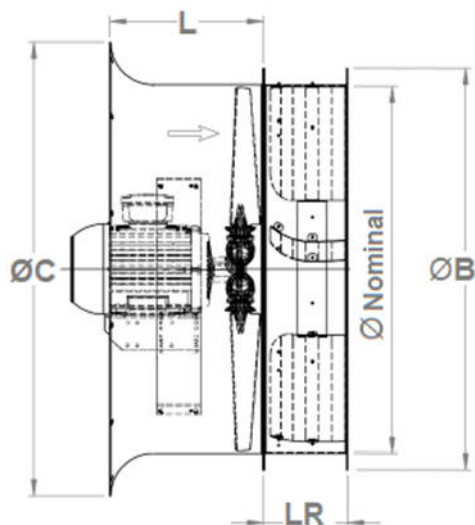
The curves represent just a very small part of air flow possibilities.



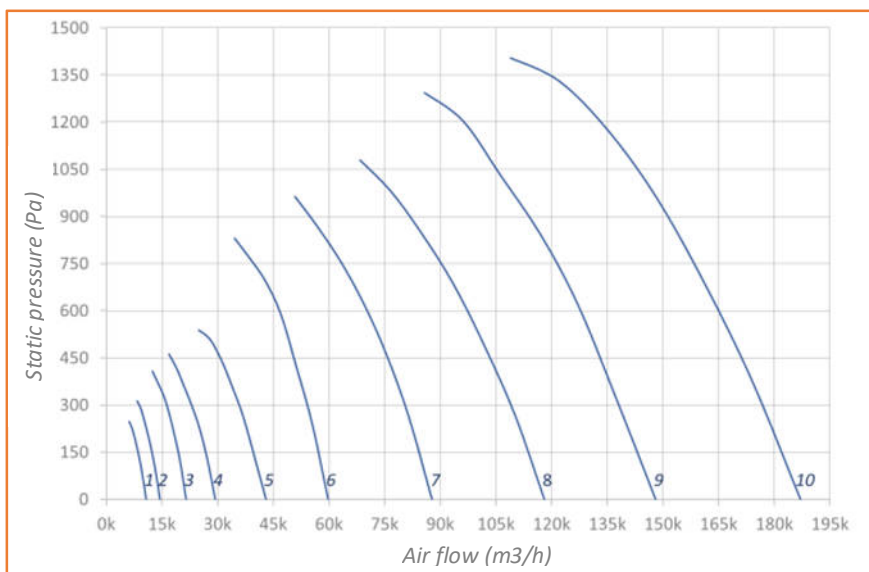
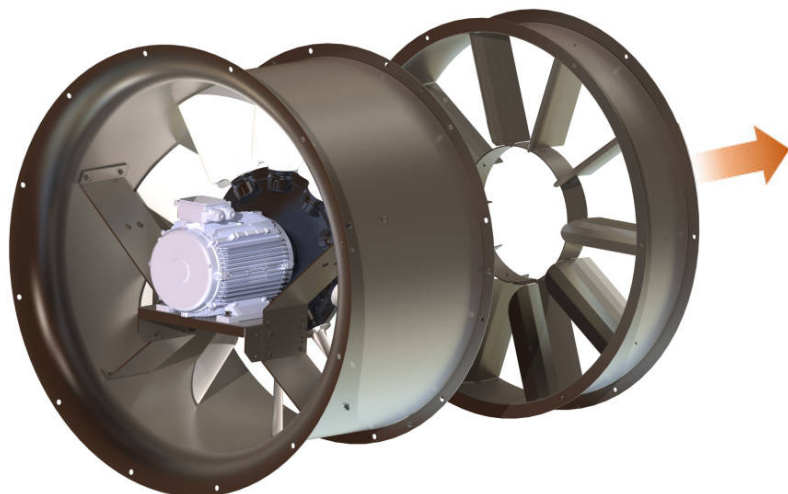
AXUS BOLT-ON GUIDE VANE

Outlet guide vane

Range available from 500mm to 1400mm:



Nominal $\varnothing$ mm	B mm	C mm	L mm	LR mm
500	572	685	425	150
560	626	715	425	150
630	704	790	500	150
710	780	900	500	150
800	885	1000	565	185
900	990	1100	565	185
1000	1090	1230	675	215
1120	1230	1360	1110	215
1250	1375	1520	1110	254
1400	1530	1600	1110	254



Curve No.	$\varnothing$ mm	Power kW	Current A
1	500	1.10	2.6
2	560	1.50	3.4
3	630	3.00	6.3
4	710	4.00	7.9
5	800	7.50	14.3
6	900	18.50	36.0
7	1000	30.00	55.0
8	1120	45.00	85.5
9	1250	55.00	105.5
10	1400	90.00	169.0

Notes:

The current is indicated for a 400V/50Hz electricity network, variable depending on the motorization.
The curves represent just a very small part of air flow possibilities.

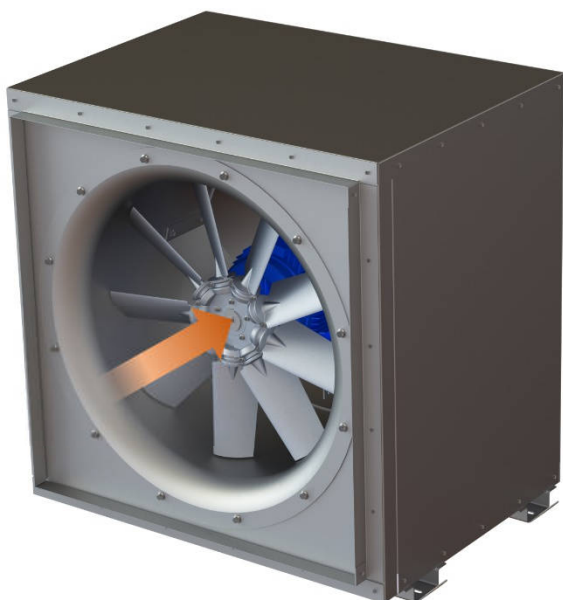


PAF – SOUNDPROOFED PLENUM BOX

Plenum Axial Fan: Axial fan in insulated plenum box

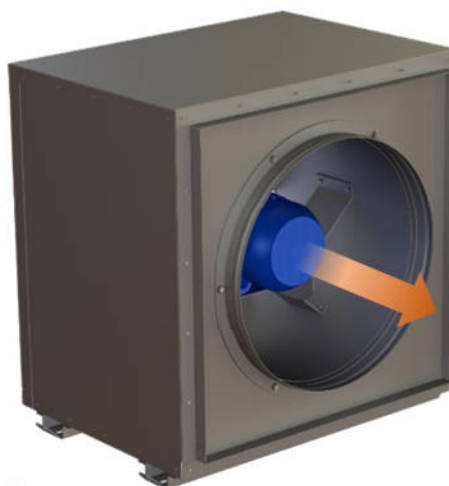
Solutions with soundproof plenum boxes in horizontal flow with or without connection to the inlet and/or outlet are available from diameter 400 to diameter 1250 for motors with a frame size up to 225.

These plenum boxes are made in pre-galvanized steel sheet with or without paint according to your requirements, but they can also be made in stainless steel. Please consult us for larger motorizations and sizes.



Standard:
Rear panel
OPENED

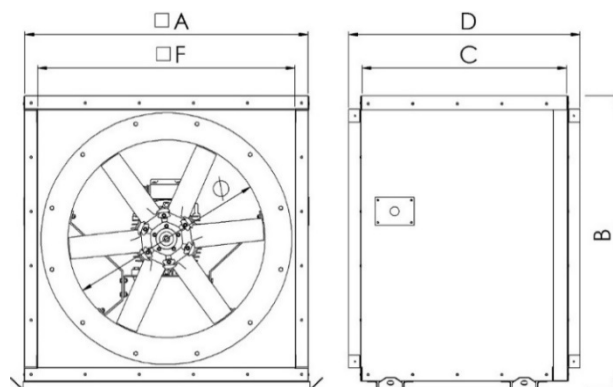
As standard, the PAF is open at the outlet. For specific needs, an option with closure panel is available on request. Consult us.



Option:
Rear panel
CLOSED

		Dimensions (mm)					Max. weight (kg)	Max. frame size (mm)
		□A	B	C	D	□F		
Type 1	Ø 400	920	960	600	695	827	110	90
	Ø 450						115	90
	Ø 500						150	112
Type 2	Ø 550	1025	1065	740	830	928	165	112
	Ø 630						190	132
	Ø 700						200	132
Type 3	Ø 800	1235	1275	900	995	1142	310	160
	Ø 900						320	160
	Ø 1000						480	180
Type 4	Ø 1120	1675	1715	1000	1095	1583	510	225*
	Ø 1250						540	225*

*Motor power up to 45kW





FRB – PLENUM BOX WITH MOTORIZED OPENING

Fire Roof Box: Axial fan in plenum box with motorized hatch

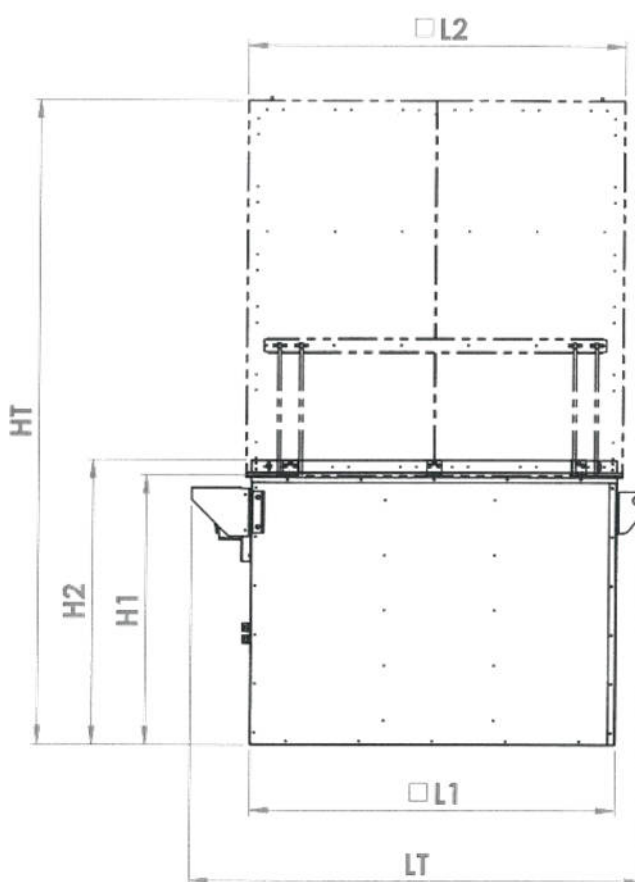
Solutions with plenum boxes in vertical flow with a motorized cover with or without connection to the inlet are available from diameter 400 to diameter 1250 for motors with a frame size up to 225.

Standard construction

- Housing in Z275 pre-galvanized steel
- Certified for 10,000 opening-closing cycles
- WL1500 wind resistance and SL500 weight resistance
- Suitable for snowy, windy or sandy environments

Option:

- Epoxy paint
- Stainless steel



Size	Hatch	D	□L1	□L2	LT	H1	H2	HT	Weight*
Small	FRB-S0400	Ø 400	955	990	1315	900	965	1880	139
	FRB-S0450	Ø 450							141
	FRB-S0500	Ø 500							143
	FRB-S0560	Ø 560							145
Medium	FRB-M0630	Ø 630	1205	1240	1565	1100	1165	2335	200
	FRB-M0710	Ø 710							203
	FRB-M0800	Ø 800							206
Large	FRB-L0900	Ø 900	1495	1540	1855	1100	1165	2635	260
	FRB-L1000	Ø 1000							264
X-Large	FRB-X1120	Ø 1120	1805	1850	2165	1355	1415	3173	420
	FRB-X1250	Ø 1250							425

Dimensions are in mm; *Weights (in kg) without the fan.

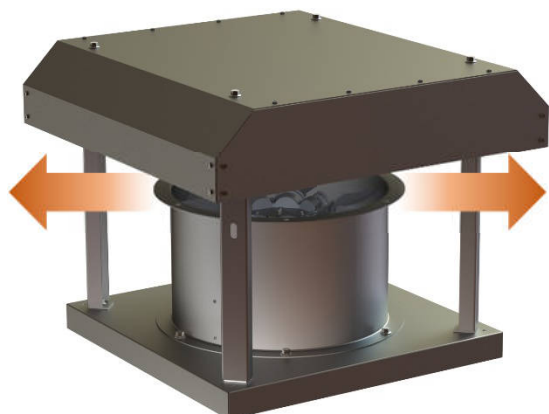


TD / TV – ROOF FANS WITH H. / V. DISCHARGE

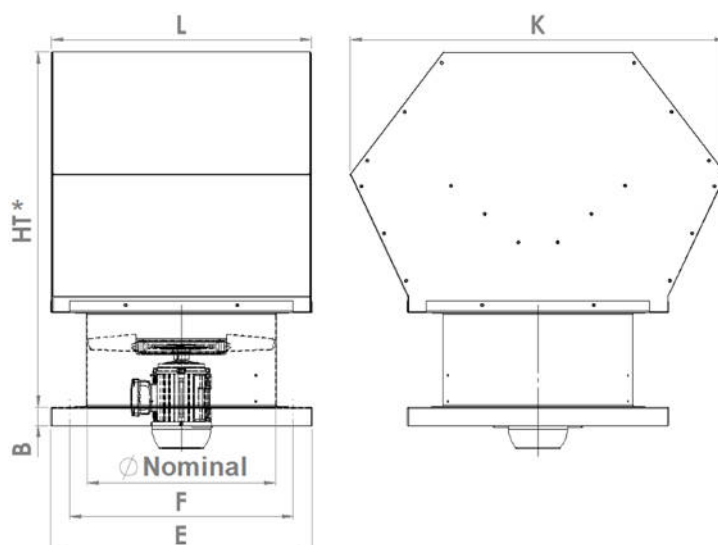
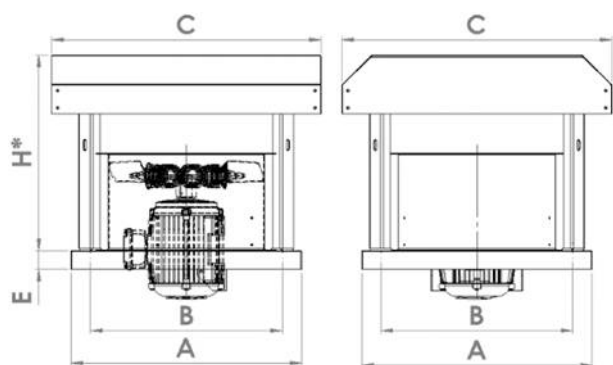
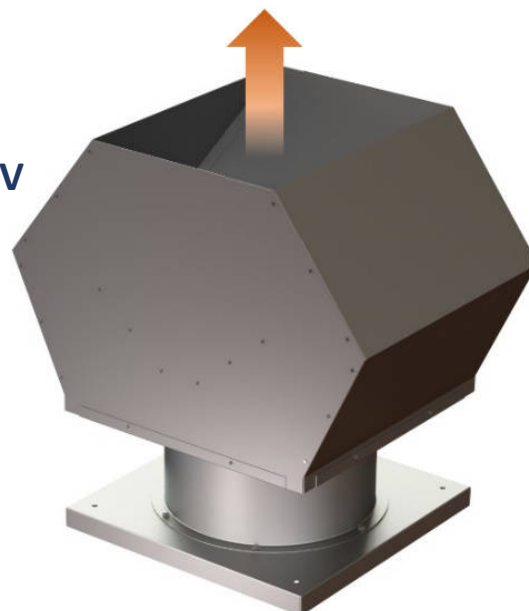
Roof mounting

The TD (H. horizontal discharge) - TV (V. vertical discharge) ranges are ideal for your roof installations. The classic mounting is made with a standardized base plate, but adjustments and specific dimensions can be studied and proposed. The manufacturing characteristics of these products are comparable with those of axial fans in the same operating class. **For optimal installation, we recommend the option with connection to a switch or external junction box for these fans.**

TD



TV



Nominal TD Ø mm	A mm	B mm	C mm	E mm	H* mm
400	600	550	700	50	510
450	600	550	700	50	510
500	700	650	1000	50	705
560	700	650	1000	50	705
630	800	750	1120	50	705
710	900	850	1120	50	705
800	1000	950	1500	50	705
900	1100	1050	1500	50	705
1000	1370	1270	2000	65	815
1120	1370	1270	2000	65	1115
1250	1370	1270	2000	65	1170

Nominal TV Ø mm	B mm	E mm	F mm	K mm	L mm	HT* mm
400	50	600	500	800	600	860
450	50	600	500	800	600	860
500	50	700	600	1000	700	1120
560	50	700	600	1000	700	1120
630	50	800	700	1100	800	1180
710	50	900	800	1100	800	1180
800	50	1000	900	1300	1100	1400
900	50	1100	1000	1300	1100	1230
1000	65	1200	1100	1400	1200	1460
1120	65	1370	1270	1700	1400	1550
1250	65	1370	1270	1700	1400	1590

Notes:

*H / HT: Maximum height with short casing, without ancillaries.



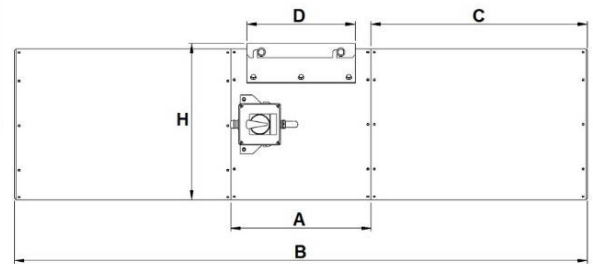
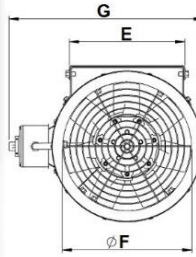
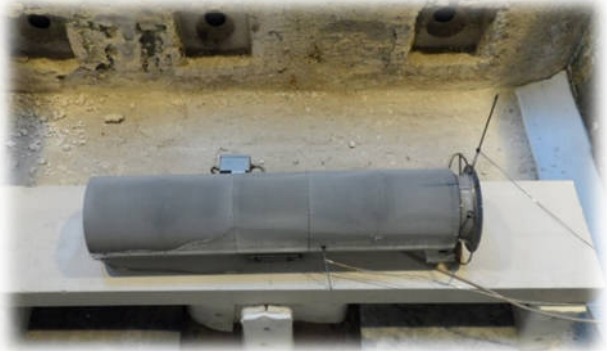
JFA – JETFAN

Unidirectional or bidirectional axial jet fan

This comes in a smaller format and is very efficient, designed to optimize flows, in addition to the smoke extractor and supply air unit, supported by a CFD (computational fluid dynamics) study according to your requirements.

Available in 3 diameters and 3 temperature classes (400°C/2h, 300°C/2h and 200°C/2h), the AREM JFA range produces thrusts from 20N to 60N:

- JFA-S: Ø315mm (unidirectional)
- JFA-M: Ø350mm (unidirectional and reversible)
- JFA-L: Ø400mm (unidirectional and reversible)

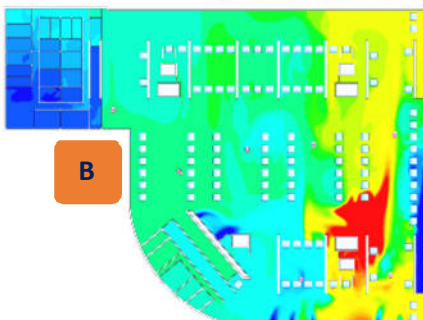
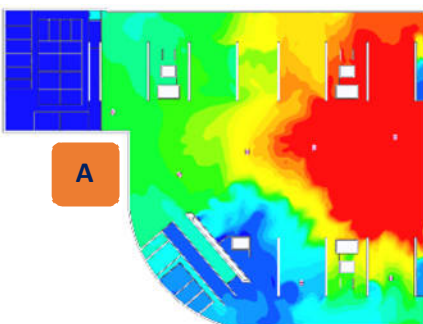


	Dimensions (mm)							
	ØF	A	B	C	D	E	G	H
JFA-S	315	350	1710	680	250	315	520	405
JFA-M	350	350	1710	680	250	315	565	445
JFA-L	400	440	1800	680	340	365	610	495

	Technical characteristics							
	Motor rotation rpm	Nominal thrust N	Installed power kW	Amperage at 400V A	Maximum flow rate m³/s	Air velocity m/s	Acoustic pressure at 1m (dBA)	Maximum weight kg
JFA-S	2810 / 1410	20 / 5	1.1 / 0.3	2.4 / 0.8*	1.05 / 0.53	16 / 8	62 / 45	80
JFA-M	2810 / 1410	40 / 10	1.5 / 0.4	3.6 / 1.3*	1.75 / 0.95	20 / 10	67 / 50	95
JFA-L	2810 / 1410	60 / 15	2.2 / 0.5	4.9 / 1.6*	2.5 / 1.25	24 / 12	72 / 55	120

*Do not size the overload protection system to the limits of the indicated values. Plan for adjustment to offset electricity network fluctuations.

CFD STUDY

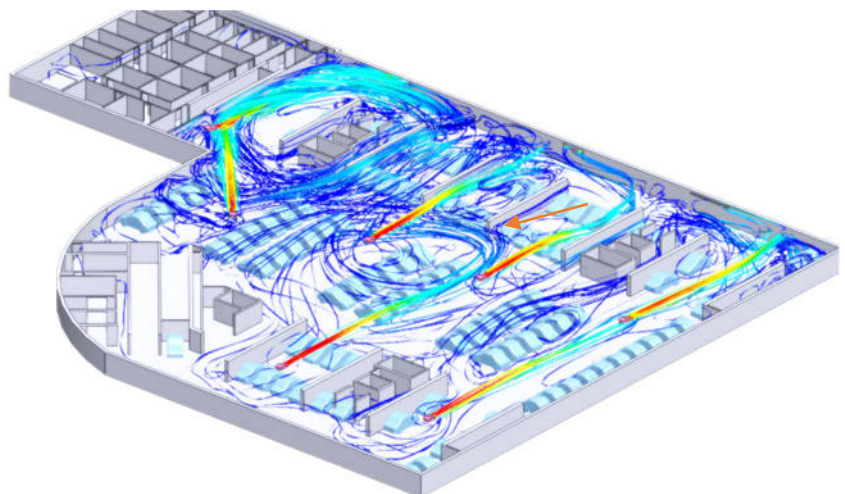


Case study:

Optimize the ventilation system of “Le Sporting d’hiver” car park (Monaco) using CFD tools.

In the absence of jet fans, we observe a concentration of heat (red zone) in the event of fire, see scenario A.

The simulation with jet fans is more efficient and pushes the smoke to the extractors, see scenario B.





SMOKE EXTRACTION – CENTRIFUGALS



DESCRIPTION

We have a wide range from diameter 300mm to 1250mm, from a few hundred m³/h to 140,000m³/h, with motors with 2, 4 and 6 poles, 1 or 2 speeds. Our fans might also be suitable for use in geographic areas with specific electricity networks, i.e. 60 Hz.

Other motor speeds are available on request.



APPLICATION

Extraction for high temperatures and smoke extraction:

- Car parks and high-rise buildings
- Hospitals
- Stations and airports
- Hypermarkets
- Canteens
- Workshops

More generally, industrial establishments open to the public or employees.



FLUID TEMPERATURE

Spheres of action:

- F200/2h (200°C for 2 hours)
- F300/2h (300°C for 2 hours)
- F400/2h (400°C for 2 hours)

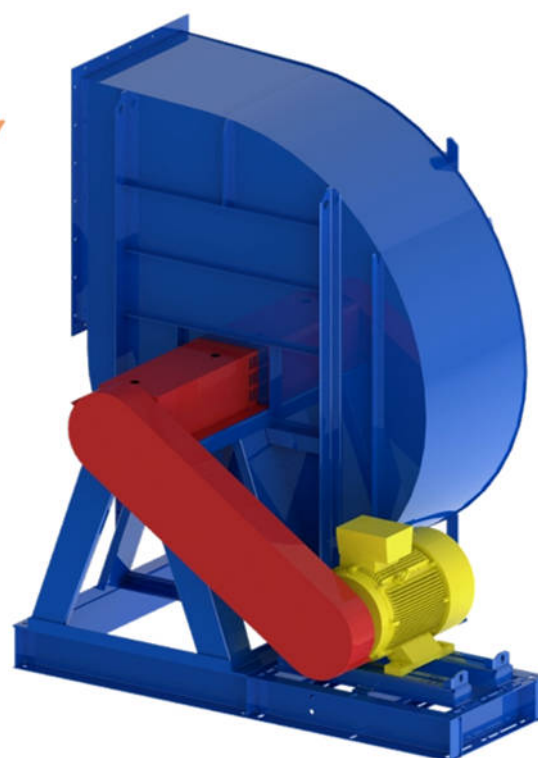
In comfort mode, the fans can be used to extract exhaust air to reduce the ppm concentration.



CONSTRUCTION

The fans are manufactured and certified in accordance with standard EN12101-3. The structure is designed in pre-galvanized steel as standard. To meet your particular requirements, we can manufacture upon request:

- Hot-dip galvanized steel
- Surface treatment with epoxy paint



- ✓ **VAD - VRD range**
- ✓ **Inline centrifugal: CELN - CELN EC**
- ✓ **Jet fan: JFC**



ANCILLARIES

In line with your requirements, we have safety guards, support feet, rigid coupling flanges, outlet backdraught dampers, on-off switch connectors, etc. to simplify your installation. See **ANCILLARIES** for more information.



OPTION

We can wire motors, switch connectors, make special productions, etc. and study your requirements to meet your specifications and constraints. CFD (computational fluid dynamics) studies can be organized on request.

Reminder: All conventional and normative elements are presented in the **STANDARDS-RULES-CONVENTIONS** tab. All ancillaries are presented in the **ANCILLARIES** tab at the end of the catalog. Please contact the sales team for your specific requirements.



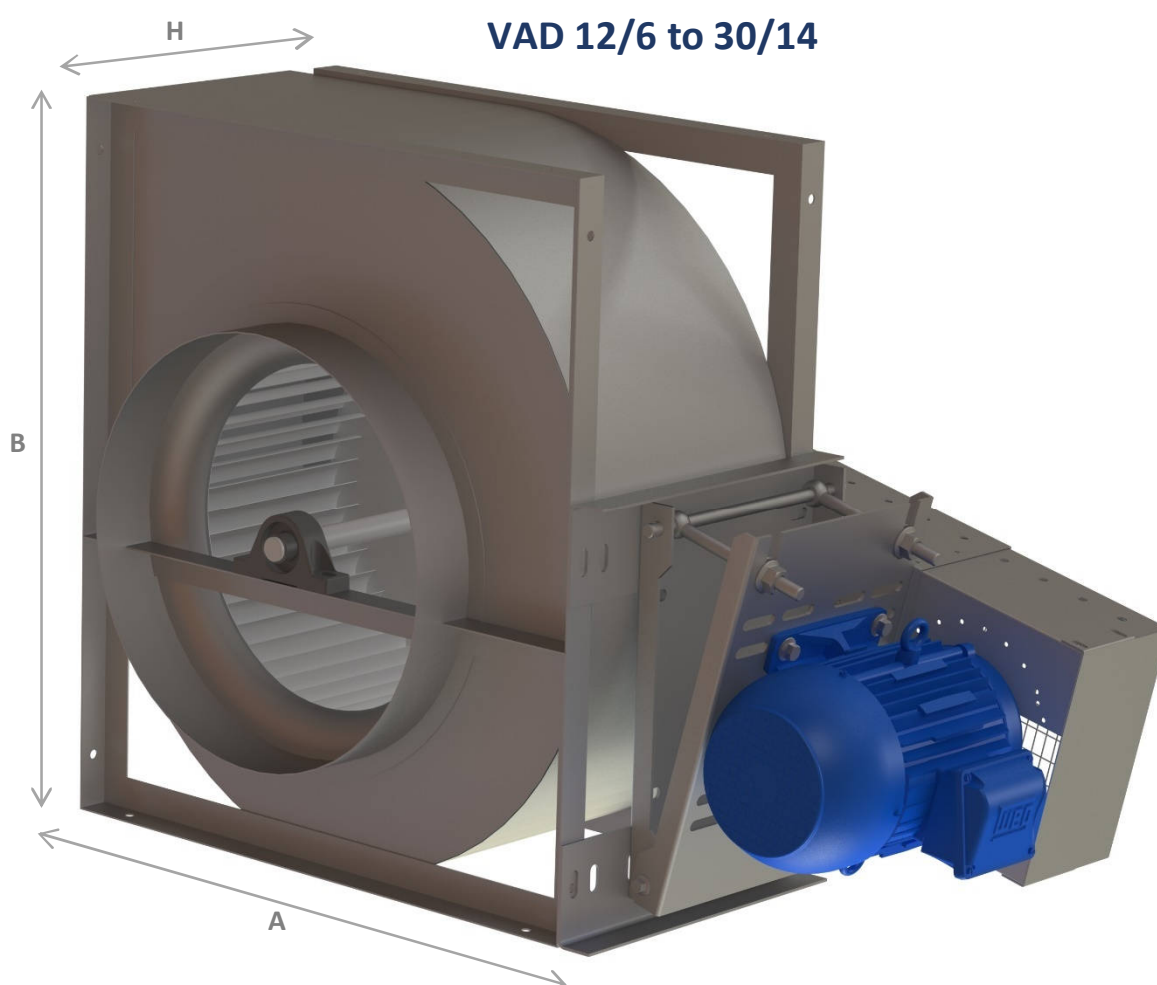
VAD – FORWARD CURVED BLADES

Belt drive

This range of belt-driven fans is fitted with forward inclined blades to provide clean air. The motors are outside the air flow and the entire range is compatible with the reference frames F400-2h, F300-2h and F200-2h. It is available in 7 sizes, from 12/6 to 30/14.

Designed for medium-flow environments with low and medium pressure, this product is particularly suitable for extracting smoke from car parks and tertiary premises. The outlet can be orientated in 4 positions when viewed from the outlet side (see Conventions) and in both rotation directions. This product will be fitted with standard class F one- or two-speed motors.

It is made in pre-galvanized steel sheet and the drive is protected with a housing. The single-inlet impellers are balanced statically and dynamically in accordance with standard ISO 1940 quality G6.3. The bearings are self-aligned, closed and greased for life up to size 18/9. They have greaser fittings and are mounted on a cast-iron stand from size 20/10.

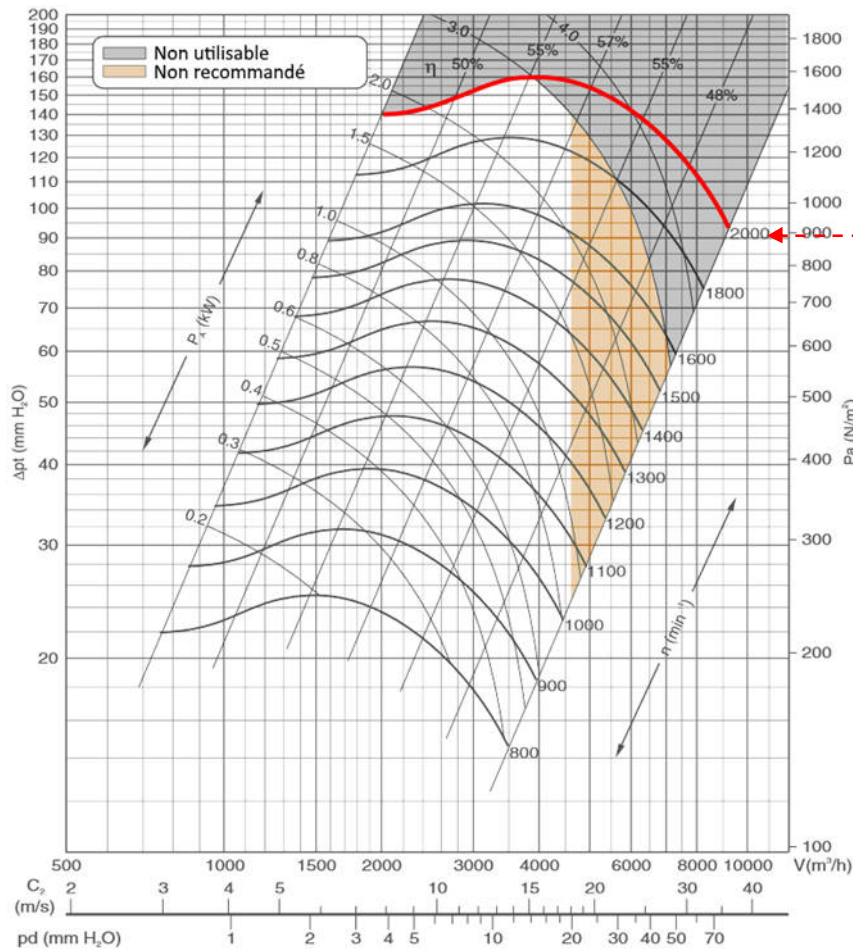


VAD ./.	12/6	15/7	18/9	20/10	22/11	25/13	30/14
A (mm)	505	583	700	840	908	998	1204
B (mm)	534	622	754	935	1019	1142	1374
H (mm)	268	330	368	395	430	487	550
Max. impeller speed (rpm)	2000	1530	1346	1100	970	830	630



VAD 12/6 - 15/7 PERFORMANCES

Common operating range

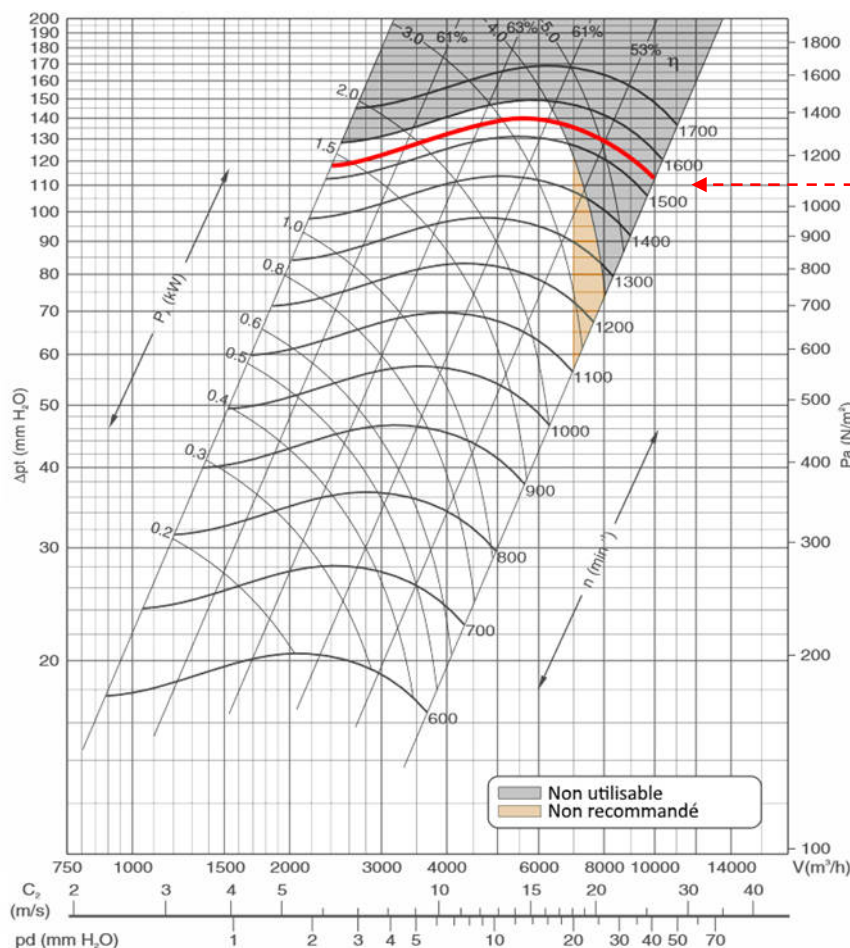


VAD 12/6

Maximum impeller speed:
2000 rpm

Δp_t : Total pressure (Pa or mm H₂O)
 V : Flow rate (m³/h)
 C : Speed at the outlet (m/s)
 P_d : Dynamic pressure (mm H₂O)

Non utilisable = Not used
 Non recommandé = Not recommended



VAD 15/7

Maximum impeller speed:
1530 rpm

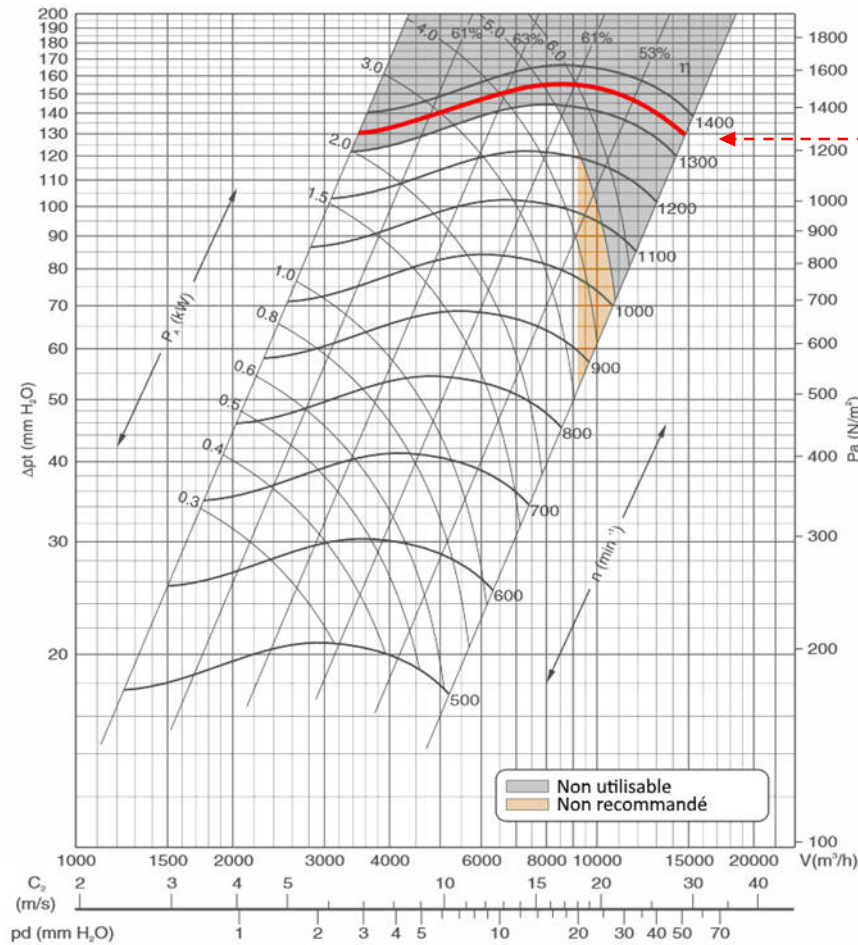
Δp_t : Total pressure (Pa or mm H₂O)
 V : Flow rate (m³/h)
 C : Speed at the outlet (m/s)
 P_d : Dynamic pressure (mm H₂O)

Non utilisable = Not used
 Non recommandé = Not recommended



VAD 18/9 - 20/10 PERFORMANCES

Common operating range



VAD 18/9

Maximum impeller speed:
1346 rpm

Δp_t : Total pressure (Pa or mm H₂O)

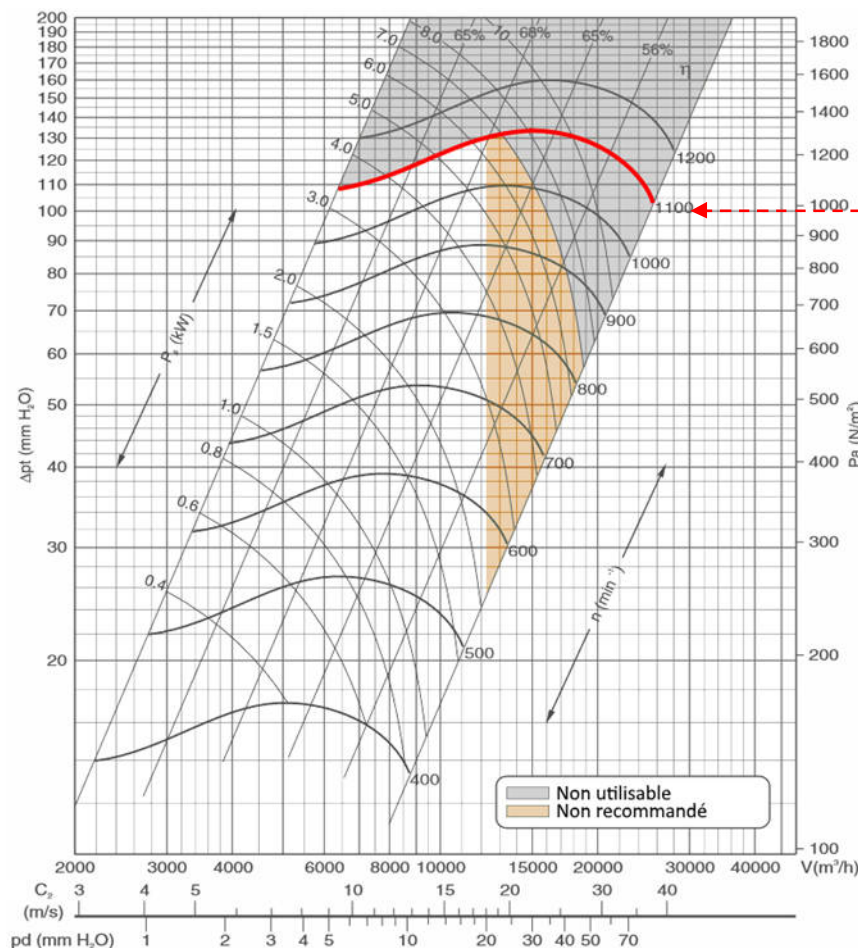
V : Flow rate (m³/h)

C : Speed at the outlet (m/s)

P_d : Dynamic pressure (mm H₂O)

Non utilisable = Not used

Non recommandé = Not recommended



VAD 20/10

Maximum impeller speed:
1100 rpm

Δp_t : Total pressure (Pa or mm H₂O)

V : Flow rate (m³/h)

C : Speed at the outlet (m/s)

P_d : Dynamic pressure (mm H₂O)

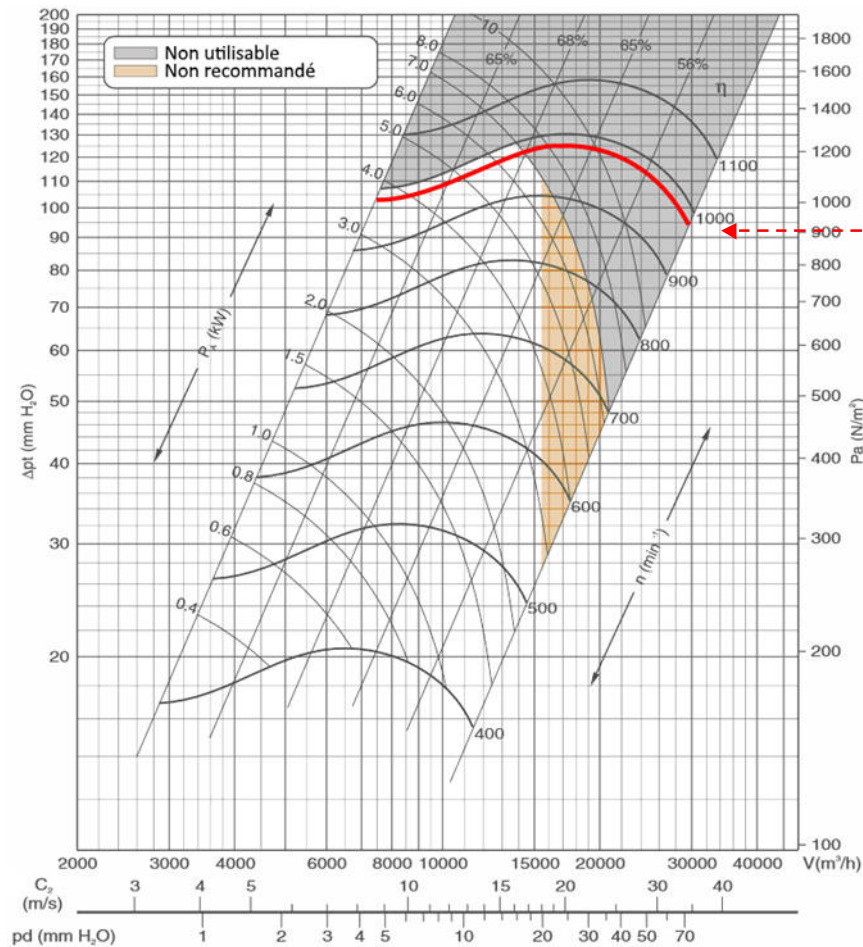
Non utilisable = Not used

Non recommandé = Not recommended



VAD 22/11 - 25/13 PERFORMANCES

Common operating range

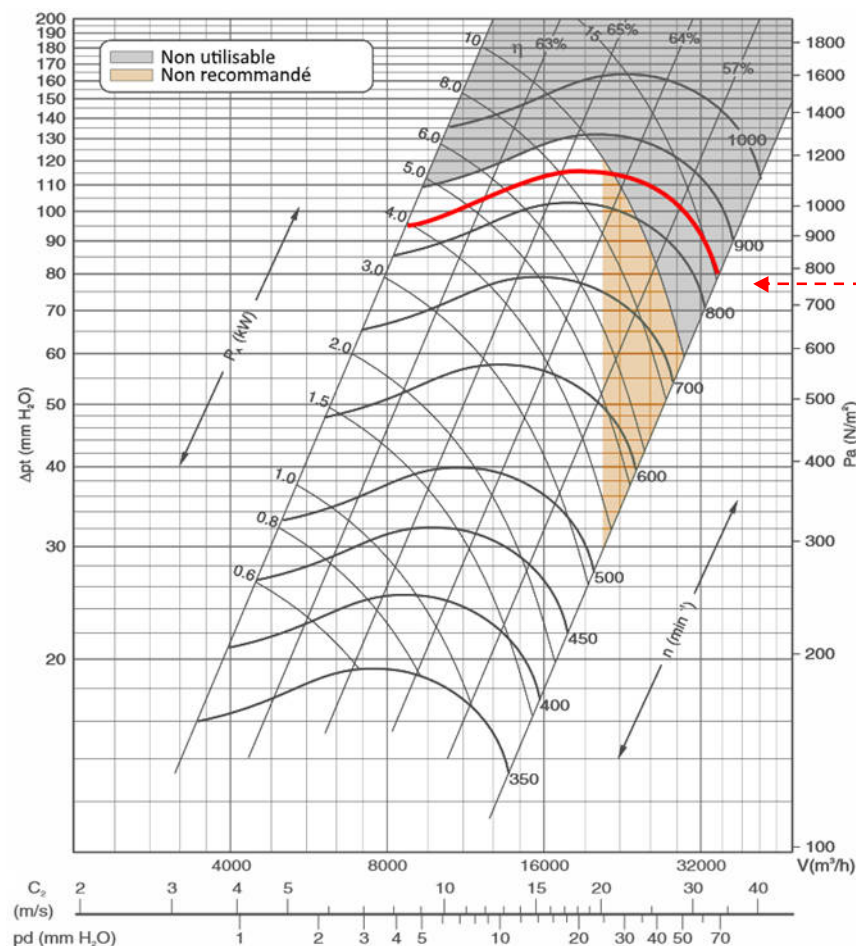


VAD 22/11

Maximum impeller speed:
970 rpm

Δp_t : Total pressure (Pa or mm H₂O)
 V : Flow rate (m³/h)
 C : Speed at the outlet (m/s)
 P_d : Dynamic pressure (mm H₂O)

Non utilisable = Not used
 Non recommandé = Not recommended



VAD 25/13

Maximum impeller speed:
830 rpm

Δp_t : Total pressure (Pa or mm H₂O)
 V : Flow rate (m³/h)
 C : Speed at the outlet (m/s)
 P_d : Dynamic pressure (mm H₂O)

Non utilisable = Not used
 Non recommandé = Not recommended



VAD 30/14 PERFORMANCES

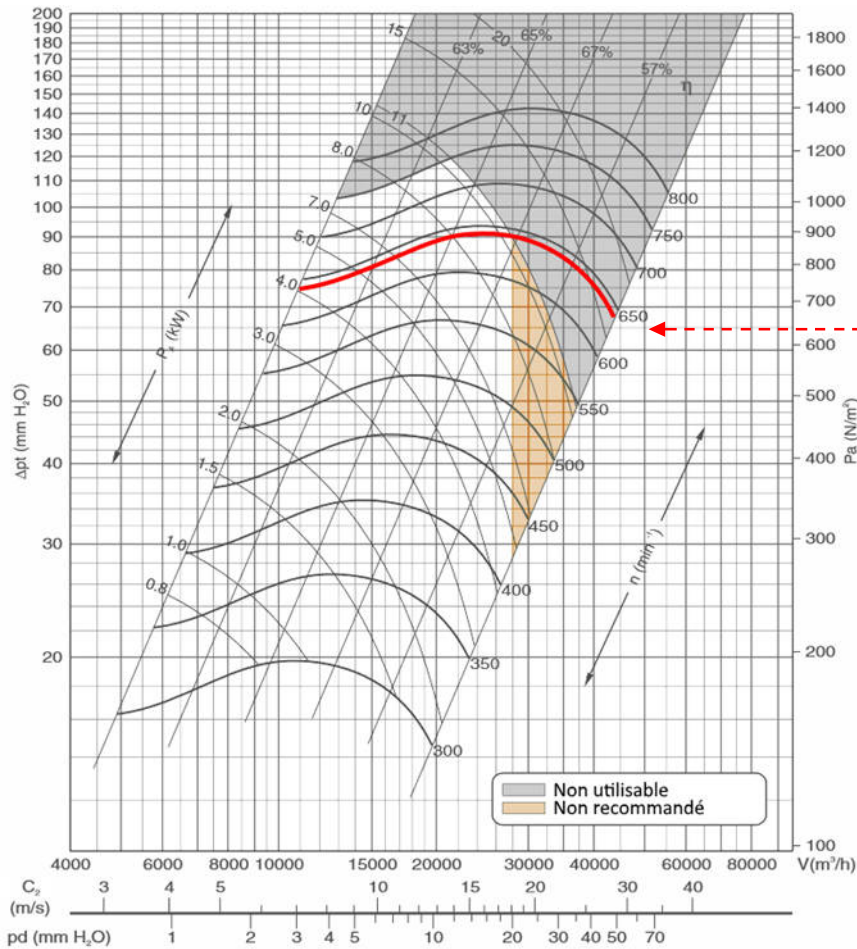
Common operating range

VAD 30/14

Maximum impeller speed:
630 rpm

Δp_t : Total pressure (Pa or mm H₂O)
V: Flow rate (m³/h)
C: Speed at the outlet (m/s)
Pd: Dynamic pressure (mm H₂O)

Non utilisable = Not used
Non recommandé = Not recommended





VRD / VRDGT – BACKWARD CURVED BLADES

Belt drive

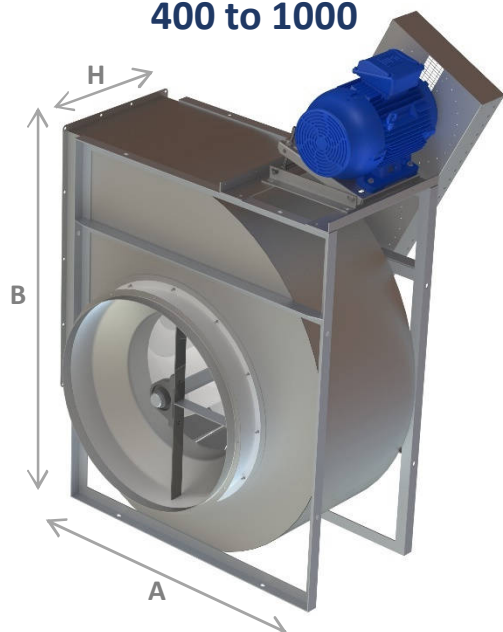
This range of belt-driven fans is fitted with backwards inclined blades. The motors are outside the air flow and the entire range is compatible with the reference frames F400-2h, F300-2h and F200-2h.

Designed for high-flow environments with low and medium pressures, this product is particularly suitable for extracting smoke from car parks and tertiary buildings. The casing is set in a frame with metal corners and can be orientated in 4 positions when viewed from the outlet side (see [STANDARDS-RULES-CONVENTIONS tab](#)) and in both directions of rotation.

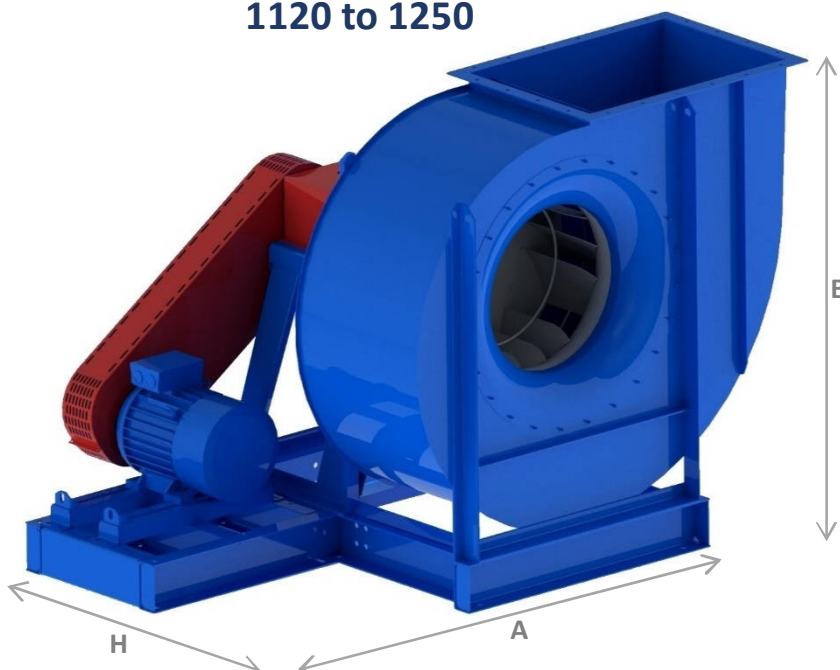
The bearings are fitted with self-aligned ball bearings with eccentric ring clamp. This product will be fitted with standard class F one- or two-speed motors.

It is made in steel sheet and the drive is protected with a housing. The impeller in painted steel is balanced statically and dynamically in accordance with standard ISO 1940 quality G6.3.

VRD
400 to 1000



VRDGT
1120 to 1250



VRD ./.	400	500	630	710	800	900	1000	1120	1250
A (mm)	651	800	999	1121	1255	1408	1541	2400	2695
B (mm)	736	918	1157	1303	1470	1648	1810	2800*	3100*
H (mm)	336	402	504	553	607	669	738	2000	2135
Max. impeller speed (rpm)	2944	2200	1801	1500	1200	1021	976	1320	1150

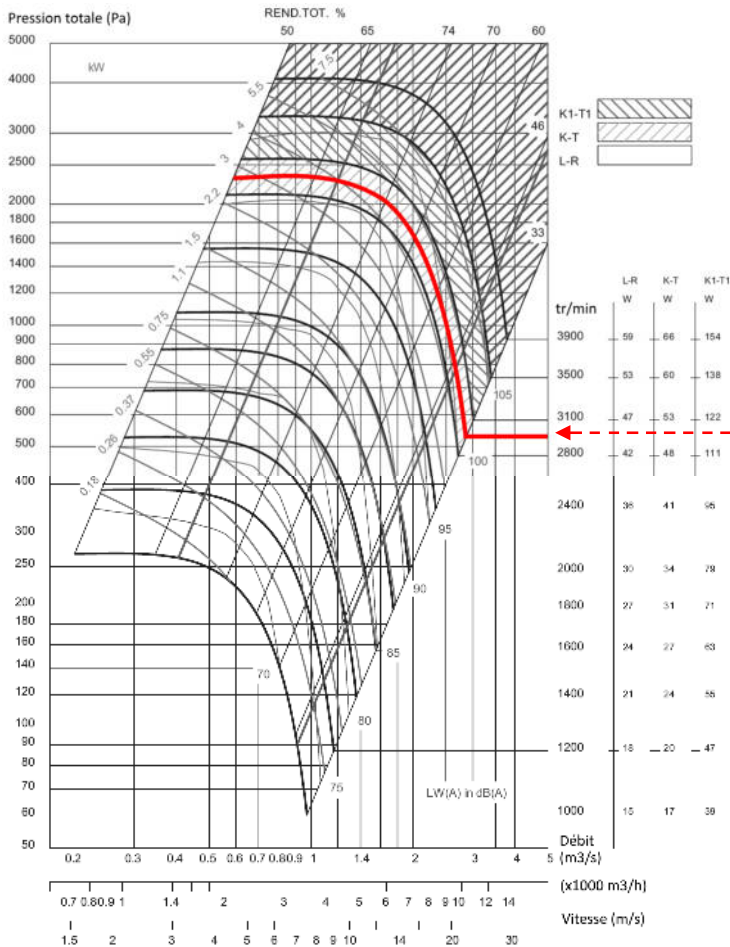
*Maximum height with casing orientated at 45°, variable depending on orientation (0°, 45°, 90°, 270°, 315°)



VRD 400 - 500 PERFORMANCES

Common operating range

VRD 400



Maximum impeller speed:
2944 rpm

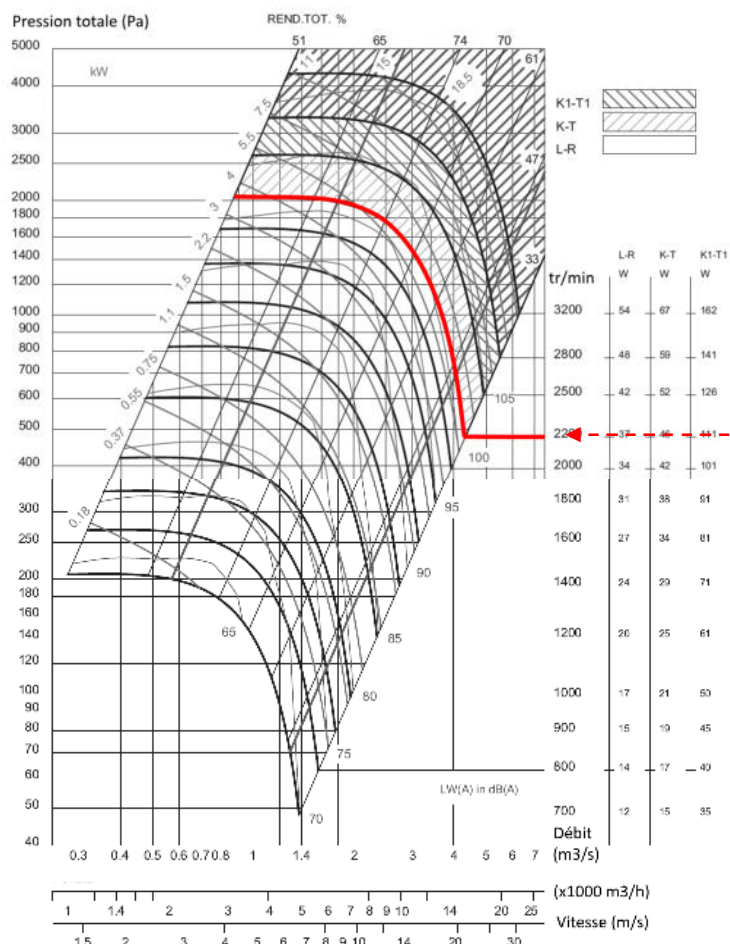
Pression totale = Total pressure (Pa)

Débit = Air flow (m³/h)

Vitesse = Velocity (m/s)

Rend. Tot. = Total efficiency (%)

VRD 500



Maximum impeller speed:
2200 rpm

Pression totale = Total pressure (Pa)

Débit = Air flow (m³/h)

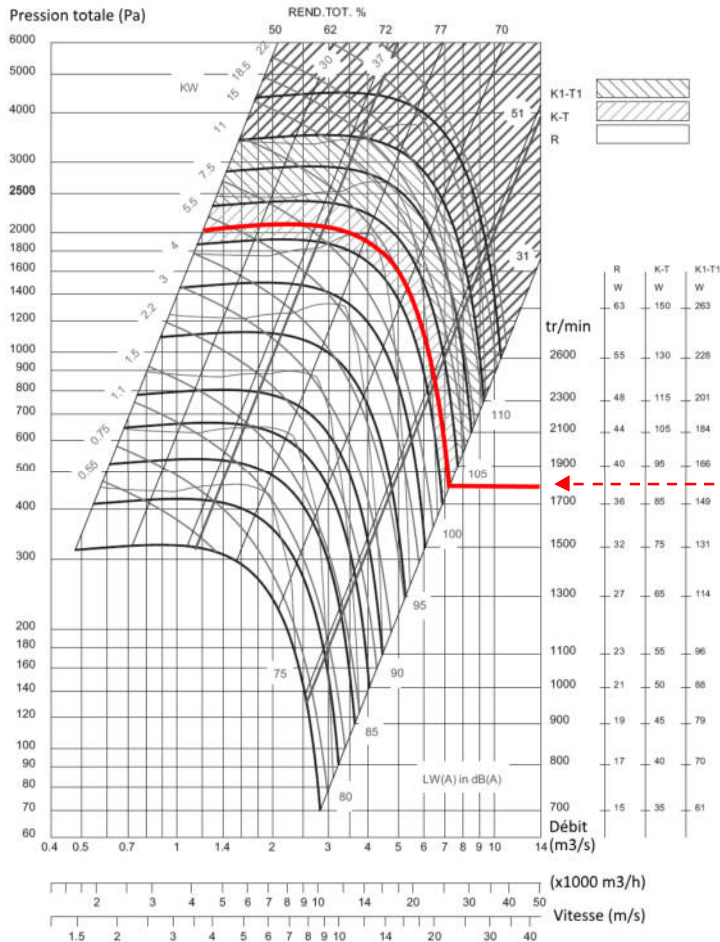
Vitesse = Velocity (m/s)

Rend. Tot. = Total efficiency (%)



VRD 630 - 710 PERFORMANCES

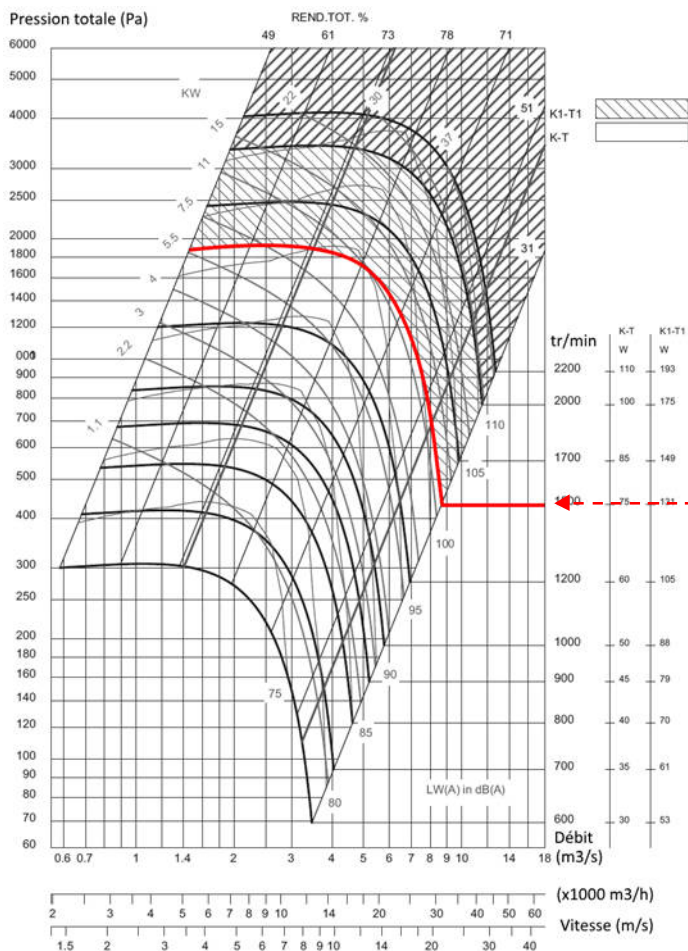
Common operating range



VRD 630

Maximum impeller speed:
1801 rpm

Pression totale = Total pressure (Pa)
Débit = Air flow (m³/h)
Vitesse = Velocity (m/s)
Rend. Tot. = Total efficiency (%)



VRD 710

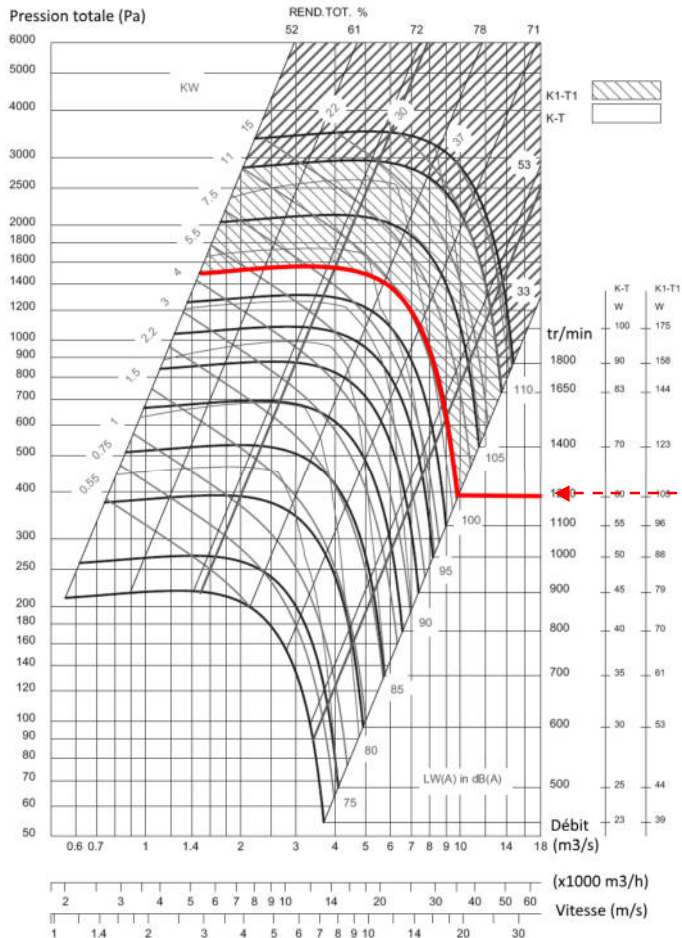
Maximum impeller speed:
1500 rpm

Pression totale = Total pressure (Pa)
Débit = Air flow (m³/h)
Vitesse = Velocity (m/s)
Rend. Tot. = Total efficiency (%)



VRD 800 - 900 PERFORMANCES

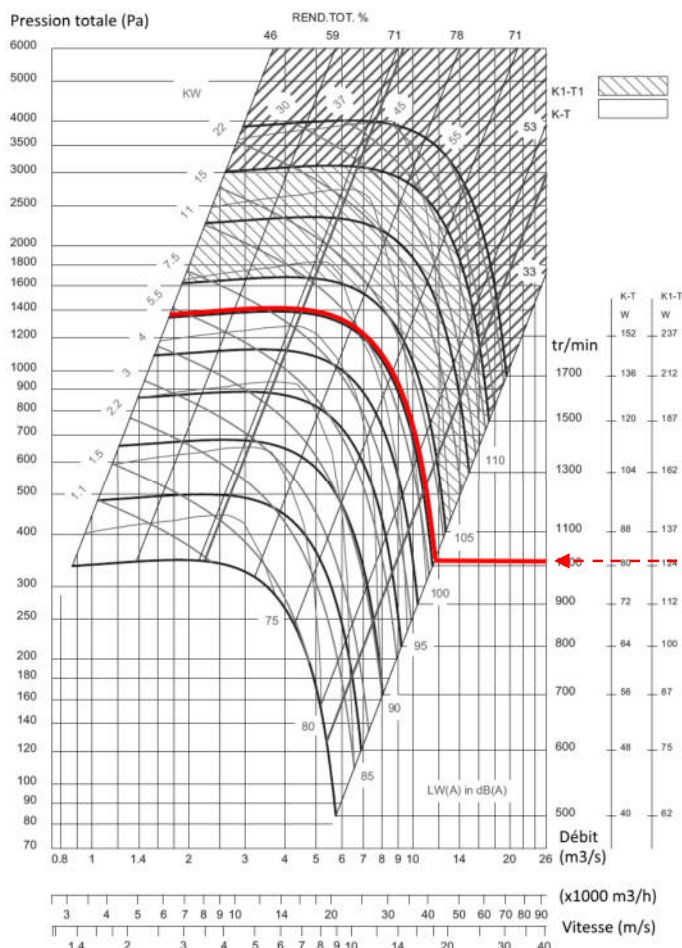
Common operating range



VRD 800

Maximum impeller speed:
1200 rpm

Pression totale = Total pressure (Pa)
Débit = Air flow (m3/h)
Vitesse = Velocity (m/s)
Rend. Tot. = Total efficiency (%)



VRD 900

Maximum impeller speed:
1021 rpm

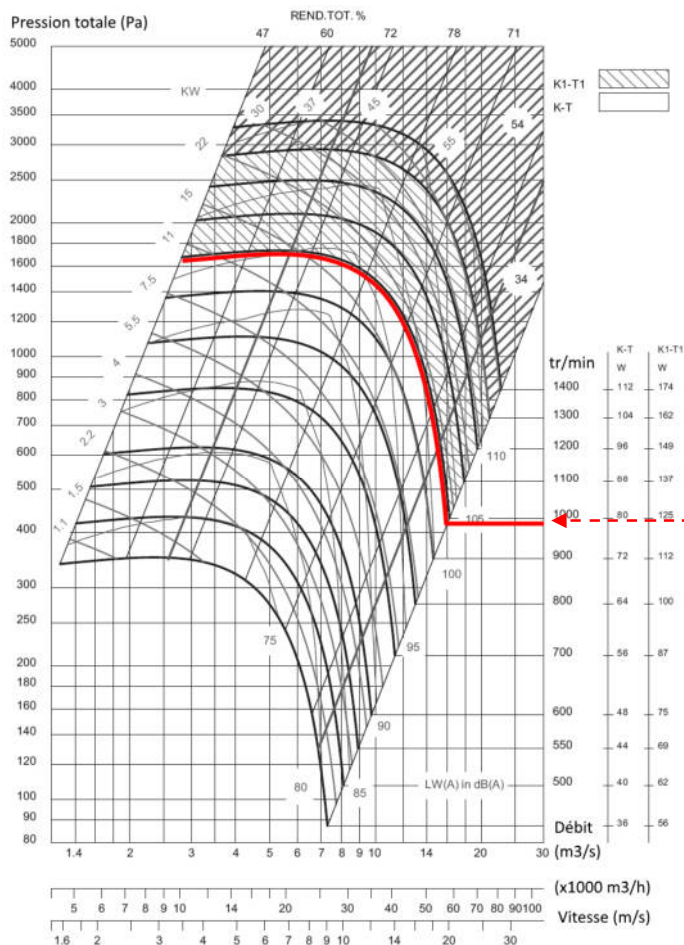
Pression totale = Total pressure (Pa)
Débit = Air flow (m3/h)
Vitesse = Velocity (m/s)
Rend. Tot. = Total efficiency (%)



VRD 1000 PERFORMANCES

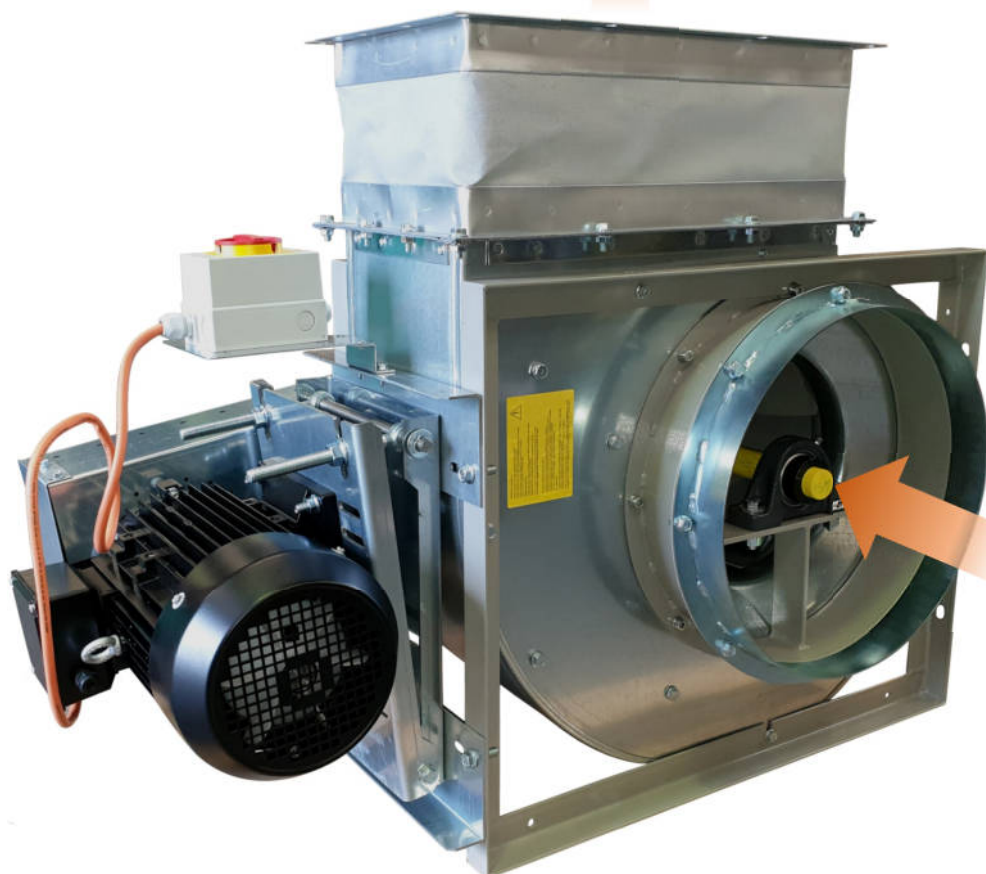
Common operating range

VRD 1000



Maximum impeller speed:
976 rpm

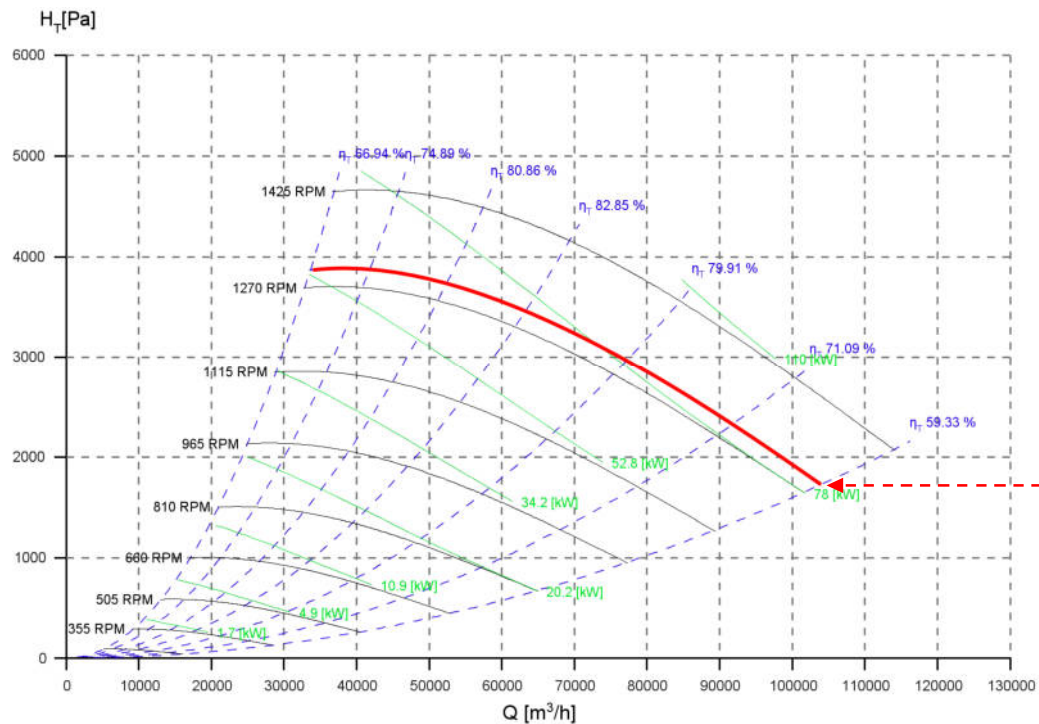
Pression totale = Total pressure (Pa)
Débit = Air flow (m3/h)
Vitesse = Velocity (m/s)
Rend. Tot. = Total efficiency (%)





VRDGT 1120 - 1250 PERFORMANCES

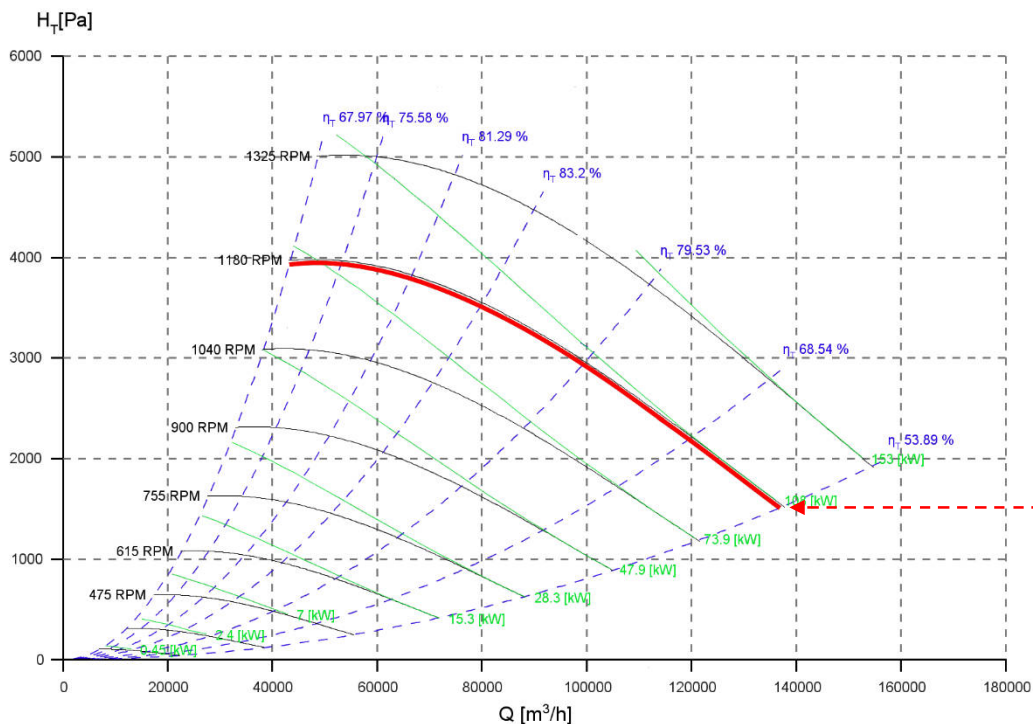
Common operating range



VRDGT 1120

Maximum impeller speed:
1320 rpm

H_t : Total pressure (Pa)
 Q : Flow rate (m³/h)



VRDGT 1250

Maximum impeller speed:
1150 rpm

H_t : Total pressure (Pa)
 Q : Flow rate (m³/h)

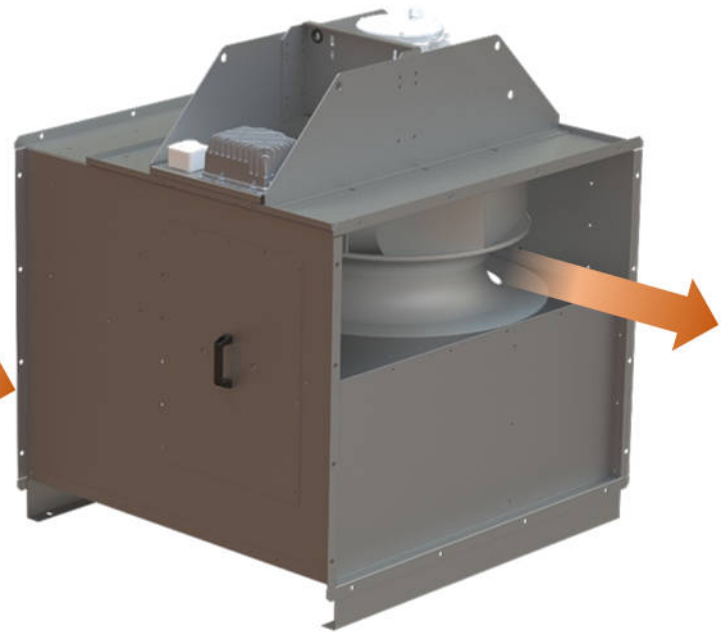
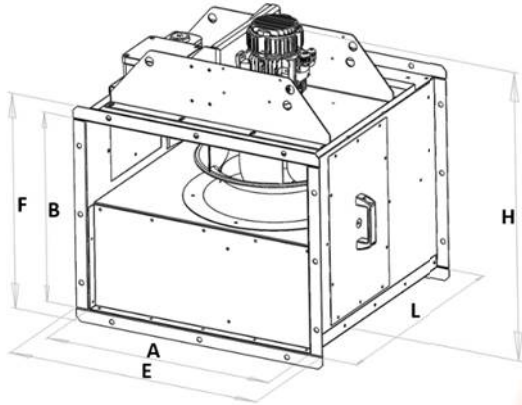


CELN – IN LINE CENTRIFUGAL: AC / EC MOTORIZATION

Backward curved blades

The CELN is a centrifugal plenum box fan, available in 7 sizes and 11 versions. It is designed to transport ambient air or high-temperature air. It is ideal for ventilating professional kitchens or tertiary premises with medium flow rates and pressures.

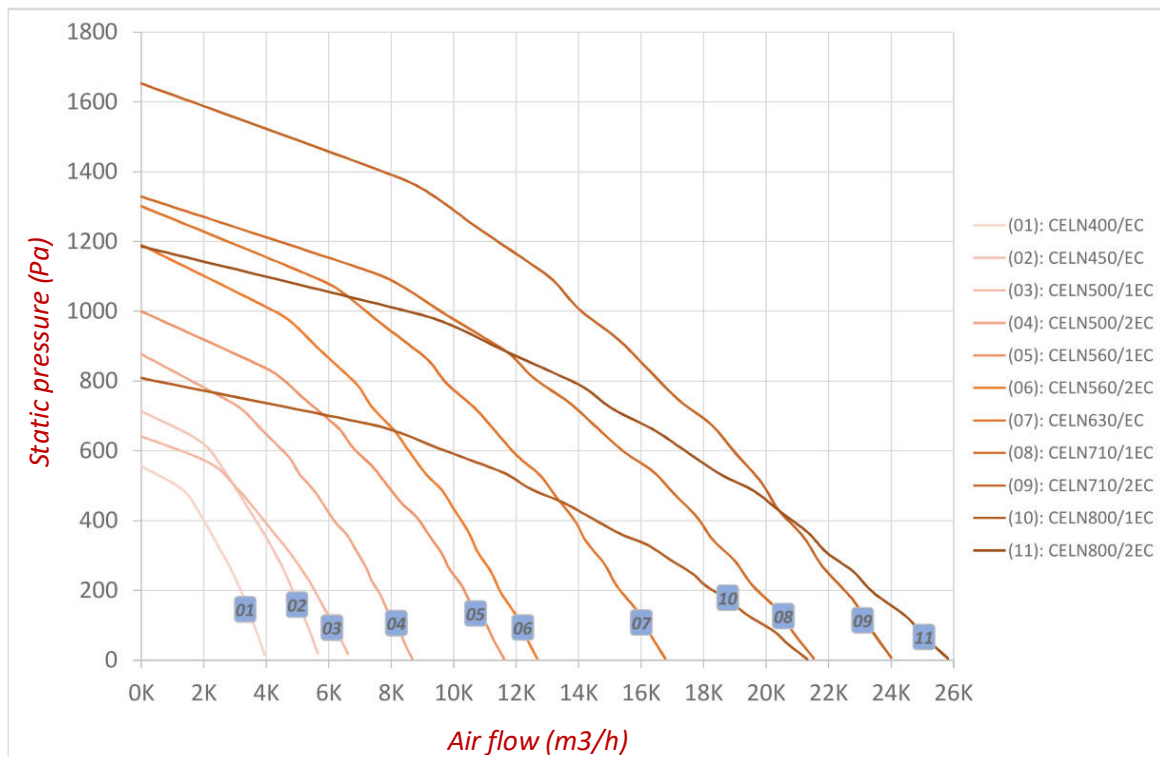
Two types of motorization are available: the version with AC (asynchronous) motor or the version with EC (electronically commutated) motor, which is versatile thanks to the variable speed of the impeller. For maintenance, the plenum box has two inspection hatches to make cleaning easier.



	A mm	B mm	E mm	F mm	H* Mm	L mm	Weight* mm
CELN400	620	500	690	570	770	635	70
CELN450	710	560	780	630	880	730	100
CELN500	795	630	865	700	960	800	117
CELN560	890	700	965	770	1060	905	160
CELN630	1000	800	1070	870	1130	1000	205
CELN710	1120	905	1190	975	1325	1120	280
CELN800	1250	1010	1320	1080	1440	1250	330

Notes:

H and Weight are indicated for EC motorization.

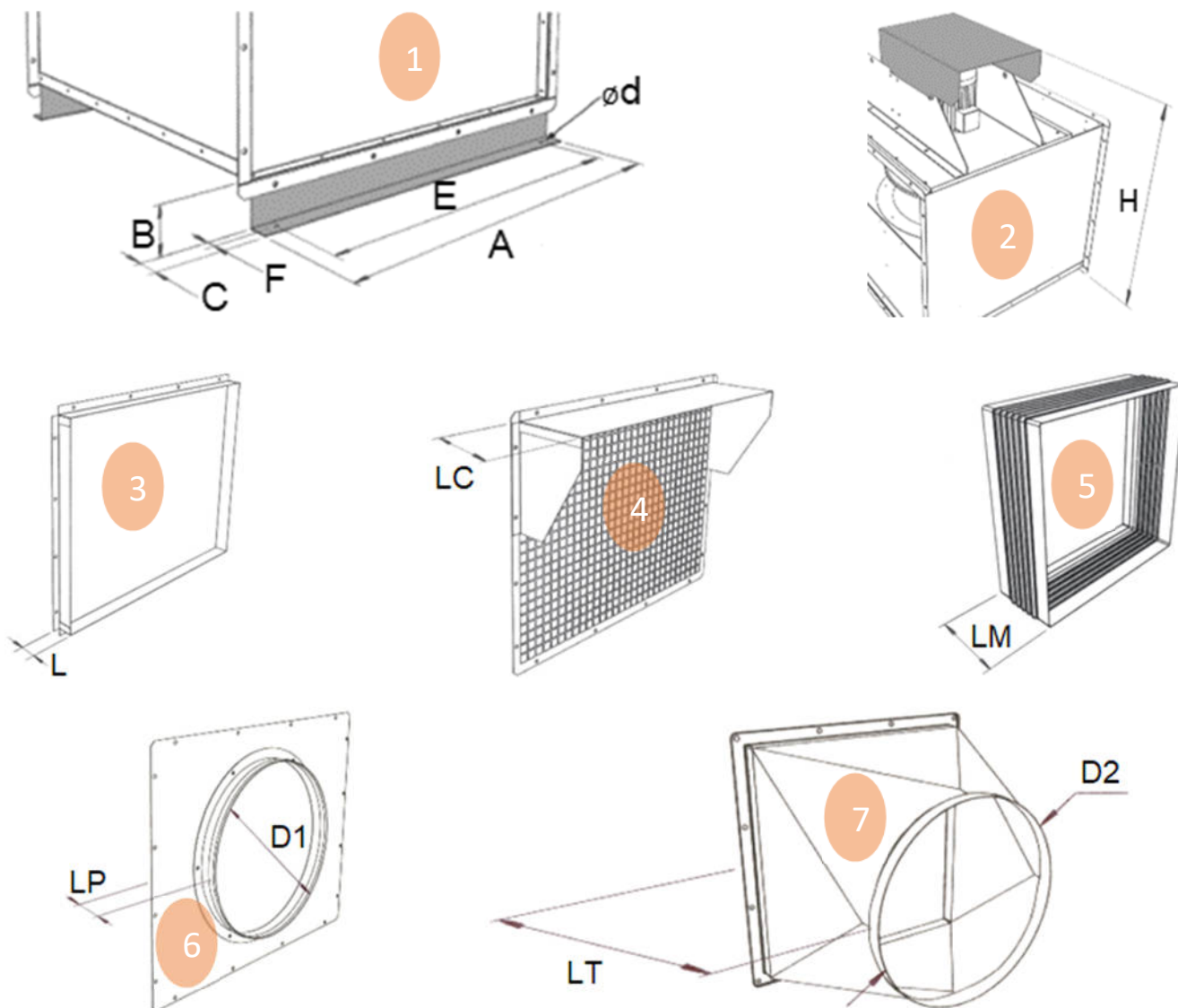




CELN ANCILLARIES

Common ancillaries

- Support feet (1)
- Motor cover (2)
- Matching flange (3)
- Meshed cover / Safety guard (4)
- Flexible coupling flange (5)
- Circular fitting (6)
- "Circle-square" adaptor (7)



	A mm	B mm	C mm	Ød mm	E mm	F mm	H* mm	L mm	LC mm	LM mm	LP mm	D1 mm	LT mm	D2 mm
CELN400	620	≈100	35	11	570	18	845	68	245	195	245	450	540	570
CELN450	710	≈100	35	11	610	18	905	68	250	195	250	500	600	630
CELN500	800	≈100	35	11	720	18	990	68	320	195	320	550	700	710
CELN560	895	≈100	35	11	795	18	1115	68	367	195	367	630	800	800
CELN630	1000	≈110	50	13	870	18	1285	68	315	195	315	700	850	900
CELN710	1165	≈110	50	13	965	18	1440	68	370	195	370	800	900	1000
CELN800	Special: consult the detailed plan						1545	68	450	195	450	900	950	1120

Notes:

*H is variable depending on the motorization.



JFC – JETFAN

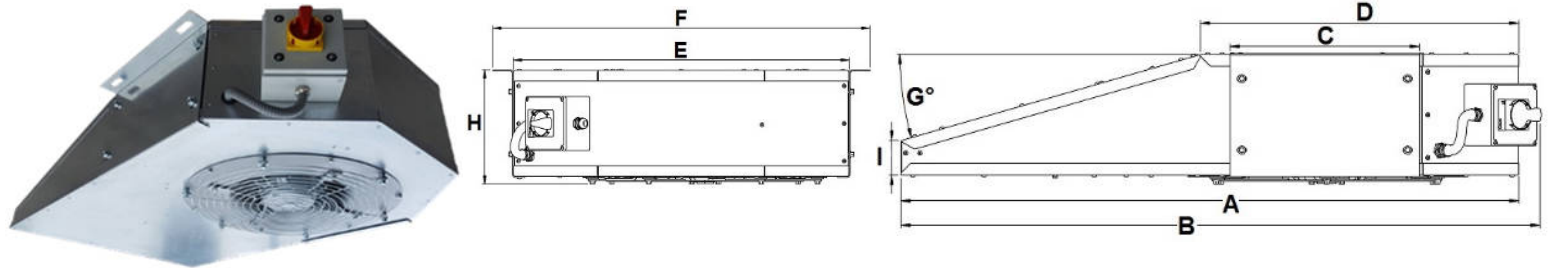
Unidirectional centrifugal jet fan

The AREM JFC is designed to work in environments where there is a fire risk. It is particularly suitable for car parks as it efficiently channels smoke to the extractors. The high speed of the air jets improves smoke evacuation and facilitates the intervention of the emergency services. In comfort operating mode, the AREM JFC ventilates the area and reduces the level of particulates and pollutants from vehicles.

Available in 3 diameters and 3 temperature classes (400°C/2h, 300°C/2h and 200°C/2h), the JFC range produces thrusts from 40N to 95N:

- JFC-S: 40N / 50N (1 speed / 2 speeds)
- JFC-M: 60N / 70N (1 speed / 2 speeds)
- JFC-L: 95N (1 & 2 speeds)

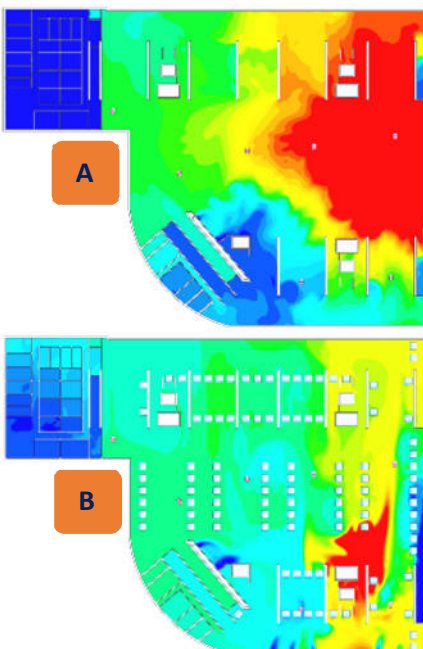
	Dimensions (mm)								
	A	B	C	D	E	F	G°	H	I
JFC-S	1305	1355	400	675	805	905	16	275	75
JFC-M	1660	1665	450	785	955	1055	12	305	90
JFC-L	1905	1890	500	910	1155	1255	12	340	100



	Technical characteristics							
	Motor rotation rpm	Nominal thrust N	Installed power kW	Amperage at 400V A	Maximum flow rate m³/s	Air velocity m/s	Acoustic pressure at 1m (dBA)	Maximum weight kg
JFC-S	1410 / 690	50 / 13	1.2 / 0.3	3.2* / 1.3*	1.35 / 0.7	21 / 10	78 / 61	95
JFC-M	1410 / 690	70 / 18	1.6 / 0.4	5.2* / 1.7*	2.1 / 1.1	24 / 12	82 / 65	115
JFC-L	1410 / 690	95 / 24	2.8 / 0.7	8.2* / 2.4*	2.75 / 1.4	29 / 14	87 / 70	145

*Do not size the overload protection system to the limits of the indicated values. Plan for adjustment to offset electricity network fluctuations.

CFD STUDY

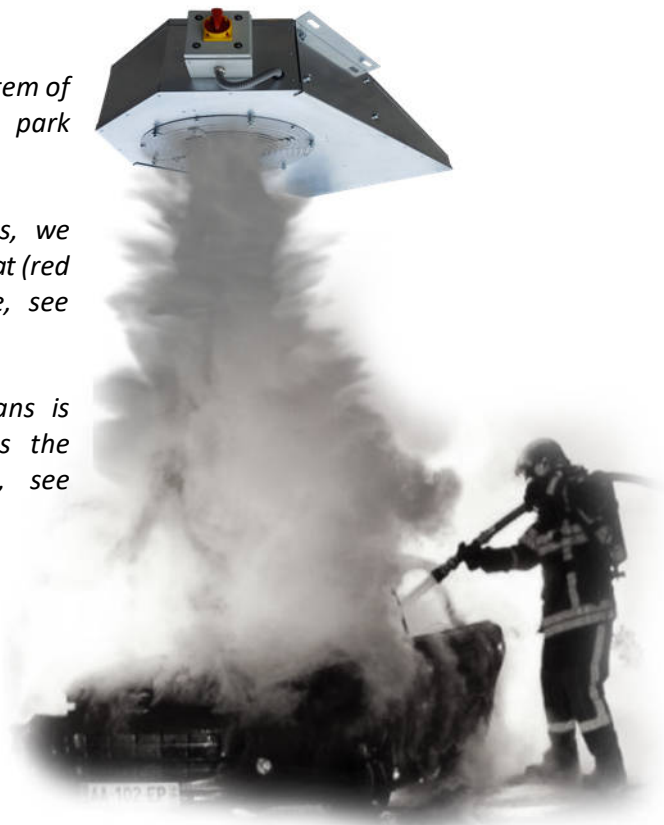


Case study:

Optimize the ventilation system of "Le Sporting d'hiver" car park (Monaco) using CFD tools.

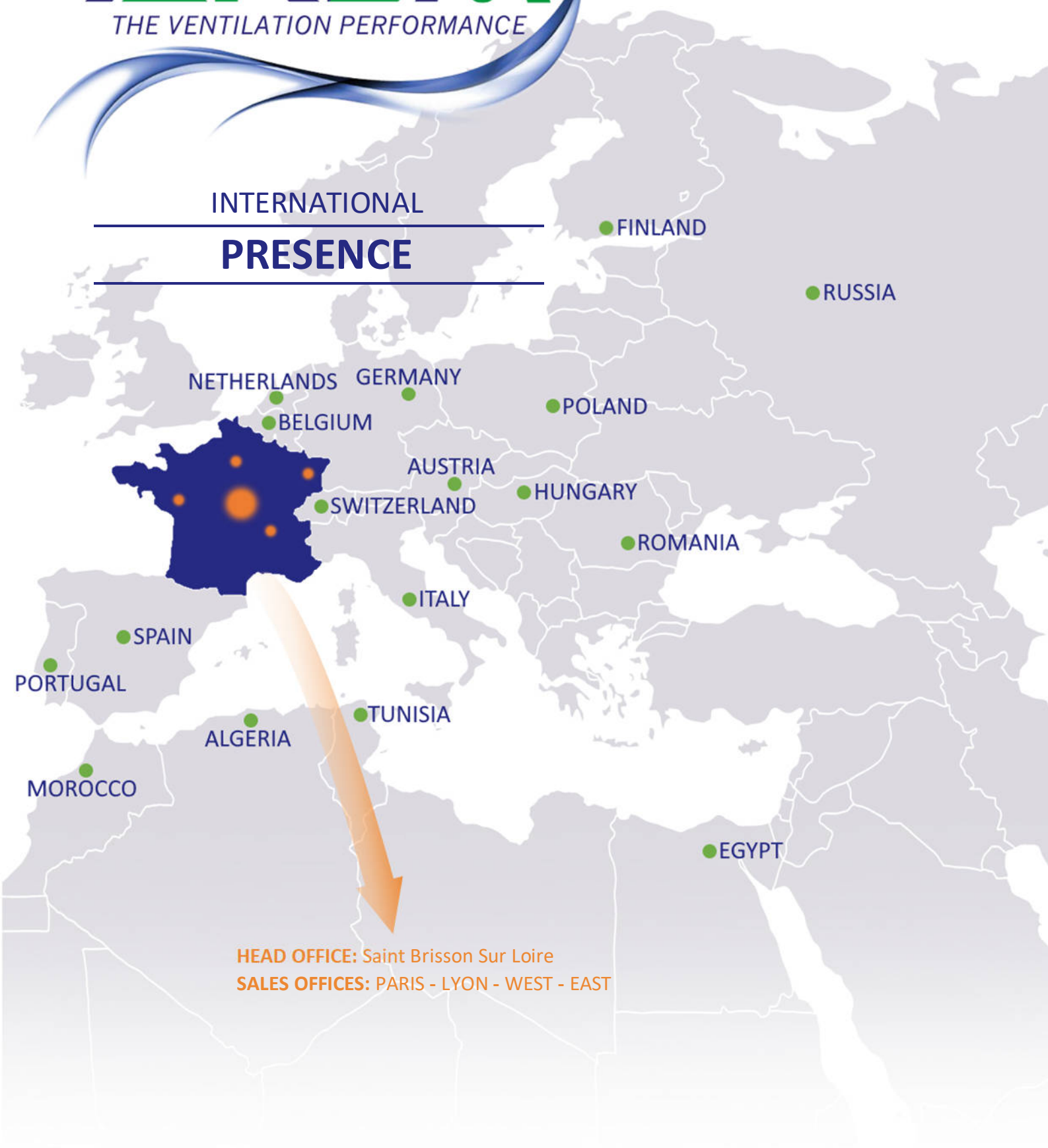
In the absence of jet fans, we notice a concentration of heat (red zone) in the event of fire, see scenario A.

The simulation with jet fans is more efficient and pushes the smoke to the extractors, see scenario B.





INTERNATIONAL PRESENCE



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