HW Ventilation

MAV METAL AXIAL VENTILATORS

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Description and specifications:

MAV ventilators are high efficiency duct ventilators, designed to increase airflow performances and lower noise emission.
The ventilators have diameters ranging from 300 mm to 1250 mm.
The ventilators normal working temperatures range from -40° C to +120° C, and can reach up to 200/300° C with customized solutions.

Applications:

Residential and industrial HVAC/R, radiators, heat-exchangers, ventilation for livestock, dryers and kilns.

Impeller:

MAV ventilators can be assembled employing a variety of HW Ventilation fans.

Fixed pitch axial flow fans – 6/8/10/14 blade configurations
- TS (subtypes G, D) – airfoil profile axial impellers, diameters from 230 mm to 906 mm
- Q – sickle profile axial impellers, diameters from 230 mm to 750 mm

Variable pitch axial flow fans – 5/9/12/16 blade configurations
- TM (subtypes N, V) – airfoil profile axial impellers, diameters from 300 mm to 1270 mm
- R – reversible axial impellers, diameters from 550 mm to 966 mm
- SR – sickle profile axial impellers, diameters from 550 mm to 1100 mm
- C – sickle profile axial impellers, diameters from 450 mm to 1282 mm

All HW Ventilation impellers have been tested against ErP 2015 directive for energy efficiency of axial fans in our **AMCA 210-07 wind tunnel**.

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Blade and hub/boss materials

Following is a list of standard blade materials:

MATERIAL	DESCRIPTION	STD. COLOR*	OP. TEMPERATURE ***
PPG	Polypropylene Glass Reinforced (PP 30% glass)	Orange	-20°C to +85°C
PAG	Polyamide Glass Reinforced (PA6)	White	-40°C to +120°C
RYT	Ryton	Brown	-50°C to +200°C
PAA**	Antistatic Polyamide	Black	-40°C to +120°C
PAX**	Antistatic, Self extinguishing PA	Black	-40°C to +120°C
PAM**	Antistatic, Self extinguishing, Magnetically shielded PA	Black	-40°C to +120°C

*Custom colors available upon request **ATEX materials for hazardous environments ***Contact technical dpt. for customized advise

Hubs and bosses are made of a highly resistant **light aluminum alloy.**
Customized solutions for every special need in terms of performance, design, color are available upon request.

MAV for high-temperature applications

MAV ventilators are available also in high-temperature resistant versions, which employ C impellers totally made of aluminum. Such special configurations have been successfully tested by Applus third-party, according to international standard **EN 12101-3:2002**. The ventilator successfully resisted at a temperature of **200°C for two hours**, and at **300°C for two hours**.
The full test report is available upon request.

Applus
EN 12101-3:2002
300°C FOR 2 HOURS

Motor:

High efficiency (IE2, IE3) standard asynchronous three-phase motors.

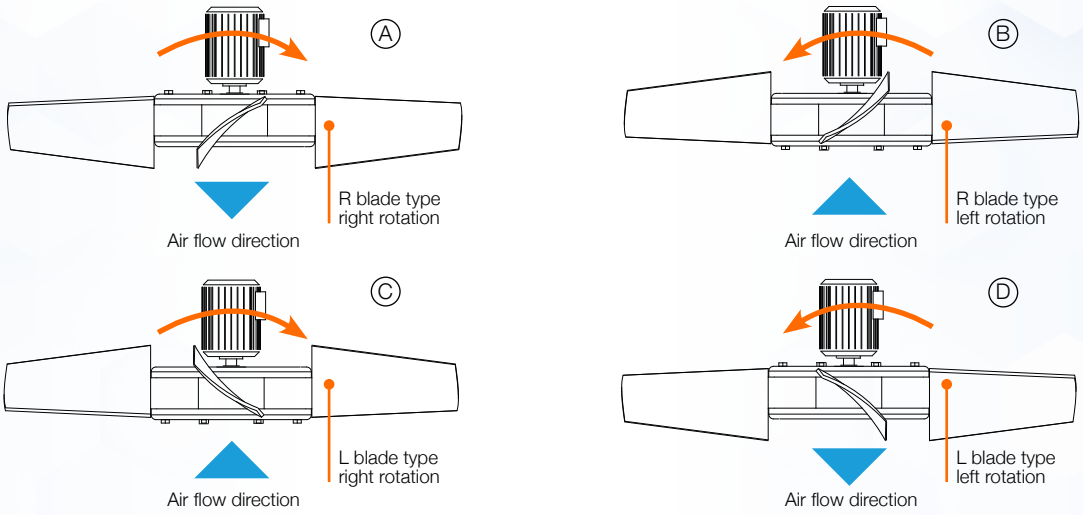
- Standard tension 400V, 50Hz
- Power from 0.12kW to 15kW
- 2, 4, 6 poles
- Suitable for use with inverter
- Class F insulation
- Housing protection level IP55
- Low noise
- Simple maintenance
- Available configurations: B3 with foot mounting, flange mounted B5, flange mounted B14

Casing:

Short casing made of steel sheet, with fixing flanges.
The casing can be treated with epoxy paint to prevent corrosion and rust.
AISI Inox 304-316 available upon request.

Execution:

The impeller is directly coupled to the motor.
Airflow can go from impeller to motor (sucking air), or from motor to impeller (pushing air).

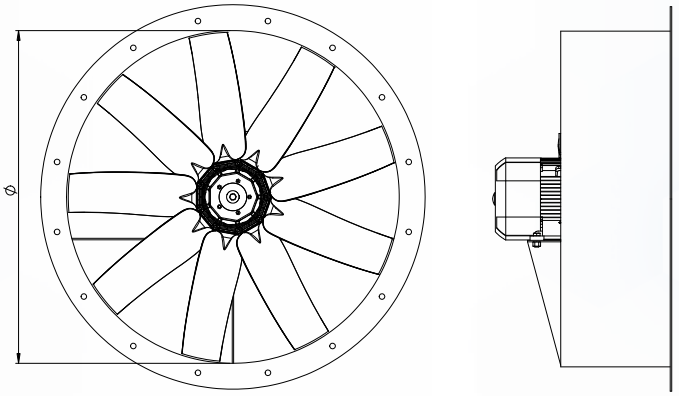


Accessories available upon request:

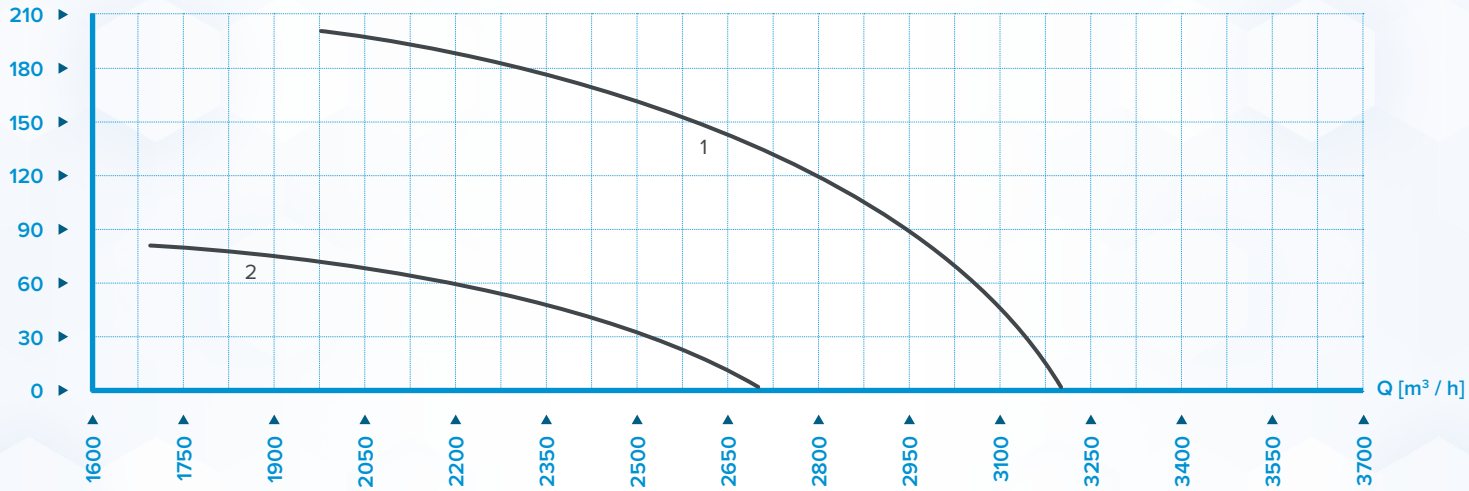
- Flat protection guards
- Support feet
- Inlet cone
- Counter-flange
- Inspection door
- Shutters
- Silencers

Performance diagrams

The performance diagrams in the following section of this datasheet are those of a standard MAV configuration. For the scope of this datasheet, we decided to choose **highly efficient**, **low noise** HW Ventilation sickle profile axial impeller – **type Q** and **type C**. Q type impellers have a fixed pitch hub and were utilized for MAV with diameters up to 600 mm. C type impellers have a variable pitch hub and were utilized for MAV with diameters up to 1250 mm. Q and C blades are available in a wide variety of materials (see Impeller section). The performance data showed in this datasheet are referred to blades made of **Polypropylene** / **Polyamide**. Impellers are balanced according to **UNI ISO 1940**. Performance data of other impeller configurations are accessible through our **Qualyfan** selection software, or directly asking to our technical team. All HW Ventilation impellers have been tested against ErP 2015 directive for energy efficiency of axial fans in our AMCA 210-07 wind tunnel.

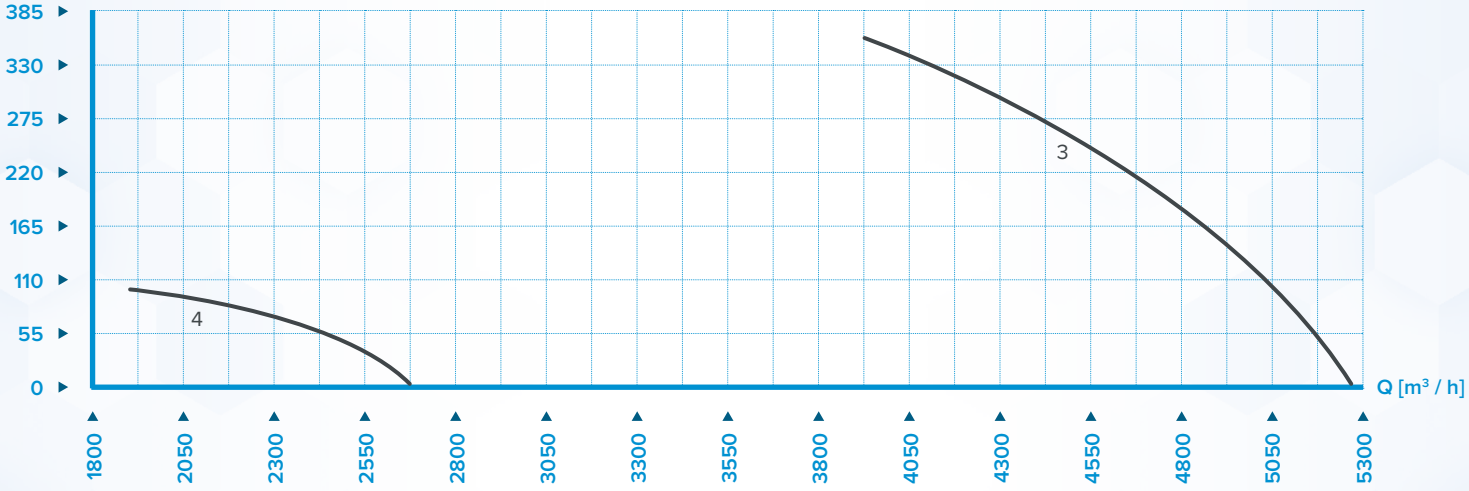


MAV Ø 315



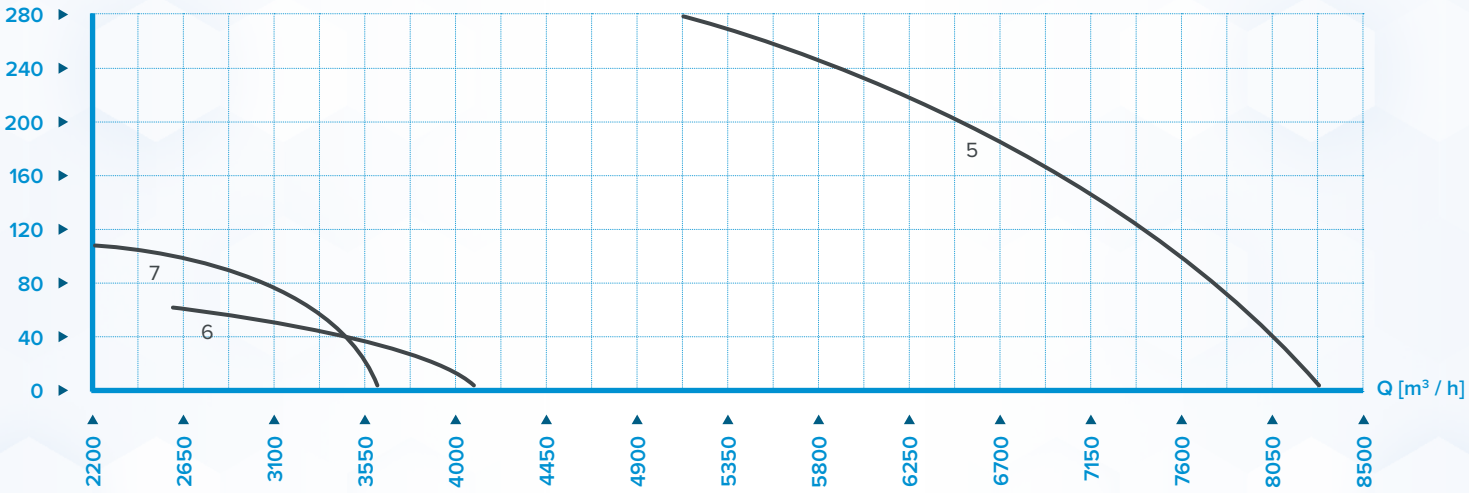
n°	Ø	impeller	Power [kW]	rpm	Max Airflow Q [m³/h]	Optimal Airflow [m³/h]	Optimal Static Pressure Ps [Pa]	Overall efficiency [%]	N
1	315	6-3/Q/25°	0,25	2710	3200	2030	195	39,8	49,7
2	315	6-6/Q/40°	0,12	1350	2650	1690	82	34	No ErP

MAV Ø 355



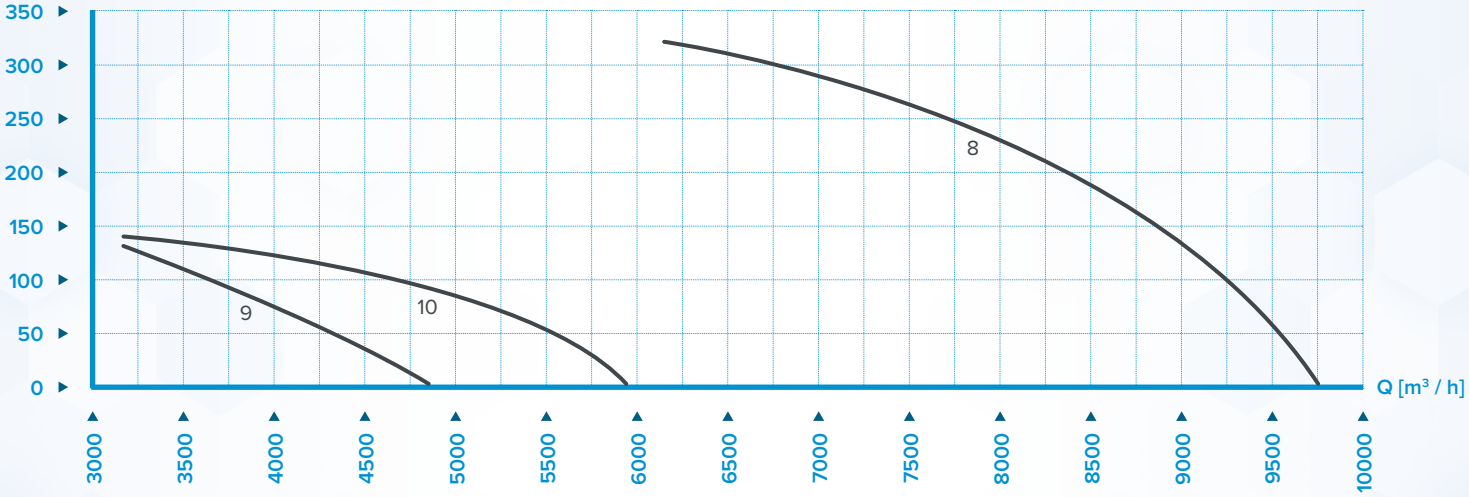
n°	Ø	impeller	Power [kW]	rpm	Max Airflow Q [m³/h]	Optimal Airflow [m³/h]	Optimal Static Pressure Ps [Pa]	Overall efficiency [%]	N
3	355	6-3/Q/30°	0,55	2760	5200	3320	240	36,5	44,2
4	355	6-6/Q/30°	0,12	1350	2570	1875	85	38,9	No ErP

MAV Ø 400



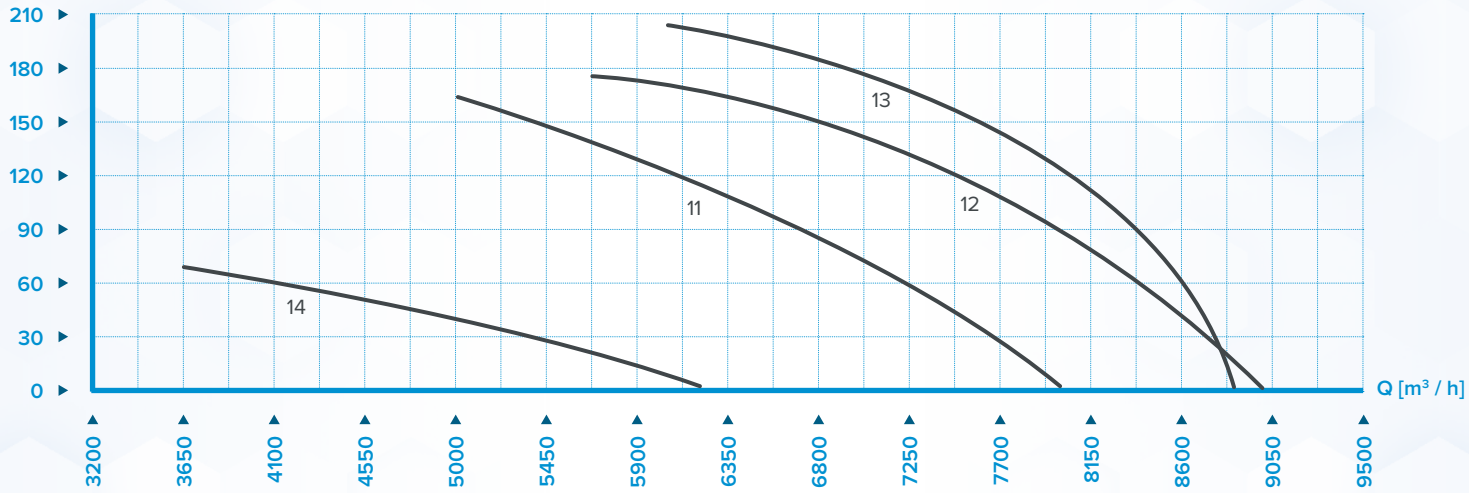
n°	Ø	impeller	Power [kW]	rpm	Max Airflow Q [m³/h]	Optimal Airflow [m³/h]	Optimal Static Pressure Ps [Pa]	Overall efficiency [%]	N
5	400	6-3/Q/35°	1,1	2770	8250	5250	82	35,6	41,5
6	400	6-3/Q/35°	0,12	1350	4050	2550	70	34,9	46,7
7	400	6-6/Q/30°	0,18	1350	3540	2250	115	39,6	50,6

MAV Ø 450



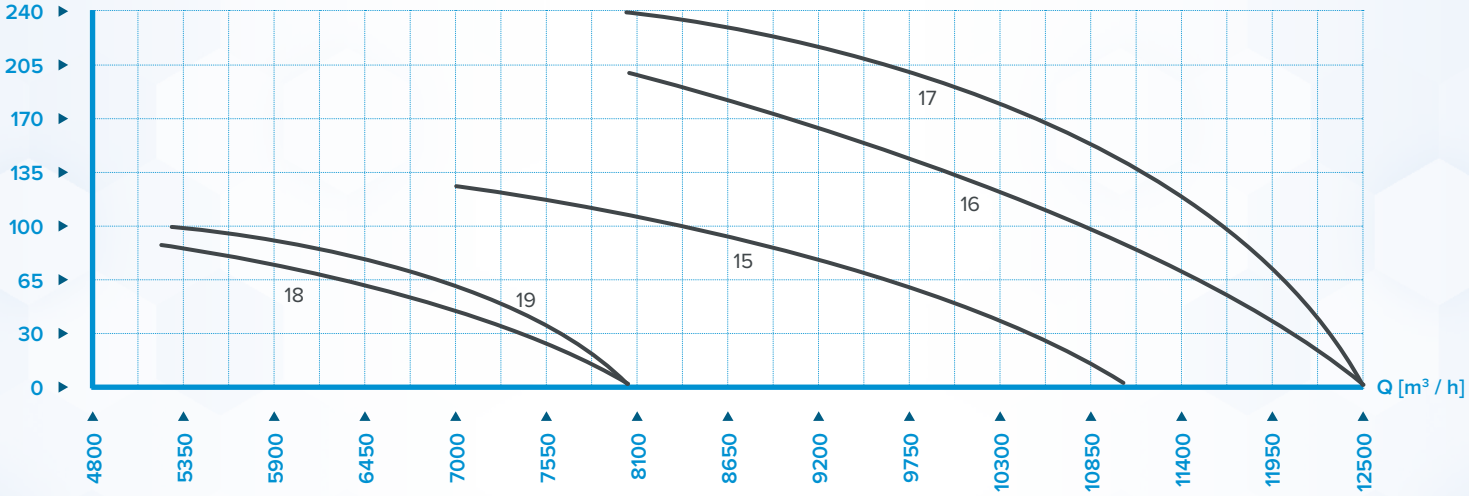
n°	Ø	impeller	Power [kW]	rpm	Max Airflow Q [m³/h]	Optimal Airflow [m³/h]	Optimal Static Pressure Ps [Pa]	Overall efficiency [%]	N
8	450	6-3/Q/30°	1,5	2840	9700	6180	330	39,3	44,6
9	450	6-6/Q/30°	0,25	1350	4850	3090	130	40,4	50,2
10	450	6-6/Q/35°	0,37	1370	5900	3750	140	38,4	47,4

MAV Ø 500



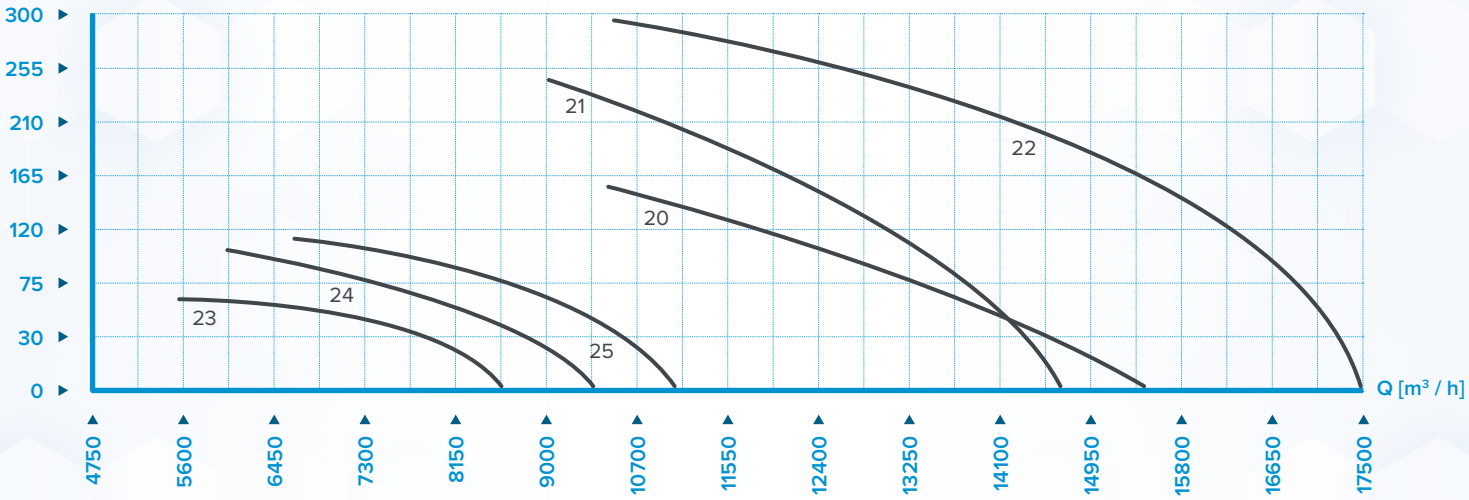
n°	Ø	impeller	Power [kW]	rpm	Max Airflow Q [m³/h]	Optimal Airflow [m³/h]	Optimal Static Pressure Ps [Pa]	Overall efficiency [%]	N
11	500	6-6/Q/35°	0,55	1370	7770	4950	160	39,3	47,2
12	500	8-8/Q/40°	0,75	1380	8950	5660	180	35,7	42,6
13	500	10-10/Q/40°	1,1	1400	9300	5900	210	34,1	40,4
14	500	6-6/Q/40°	0,18	880	5800	3690	70	35,6	46,4

MAV Ø 560



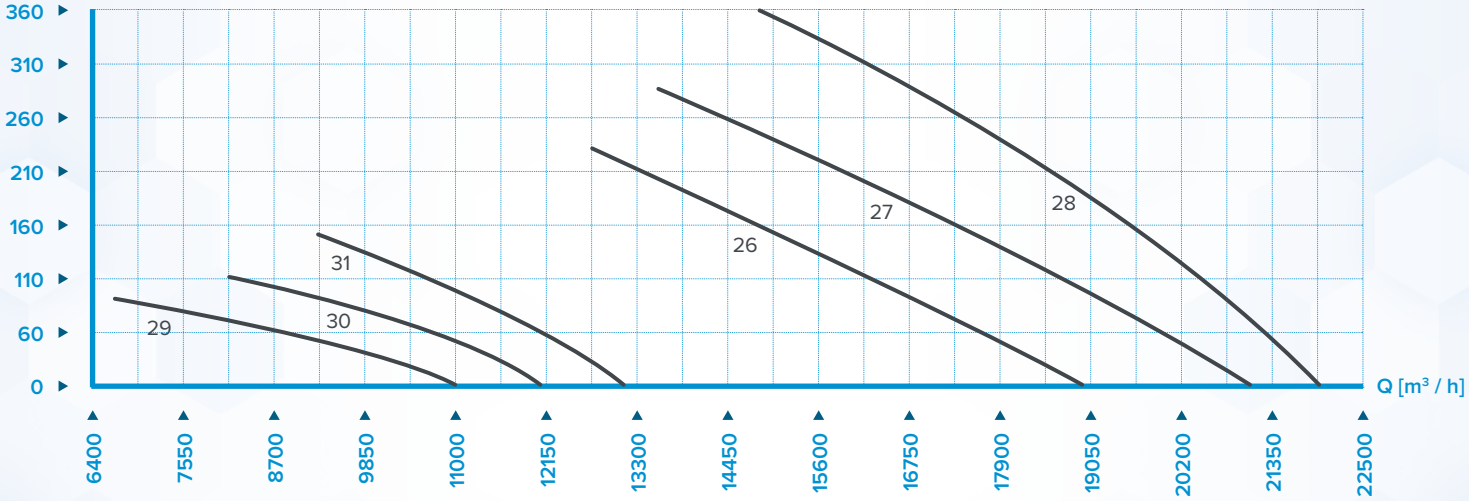
n°	Ø	impeller	Power [kW]	rpm	Max Airflow Q [m³/h]	Optimal Airflow [m³/h]	Optimal Static Pressure Ps [Pa]	Overall efficiency [%]	N
15	560	8-4/Q/40°	0,75	1380	11250	7150	130	33	40
16	560	6-6/Q/40°	1,1	1400	12400	7900	200	39,8	45,9
17	560	10-10/Q/40°	1,5	1400	12510	7980	240	35,9	41,1
18	560	6-6/Q/40°	0,25	900	8000	5100	85	36,5	46
19	560	10/10/Q/40°	0,37	900	8050	5150	100	32,3	40,9

MAV Ø 630



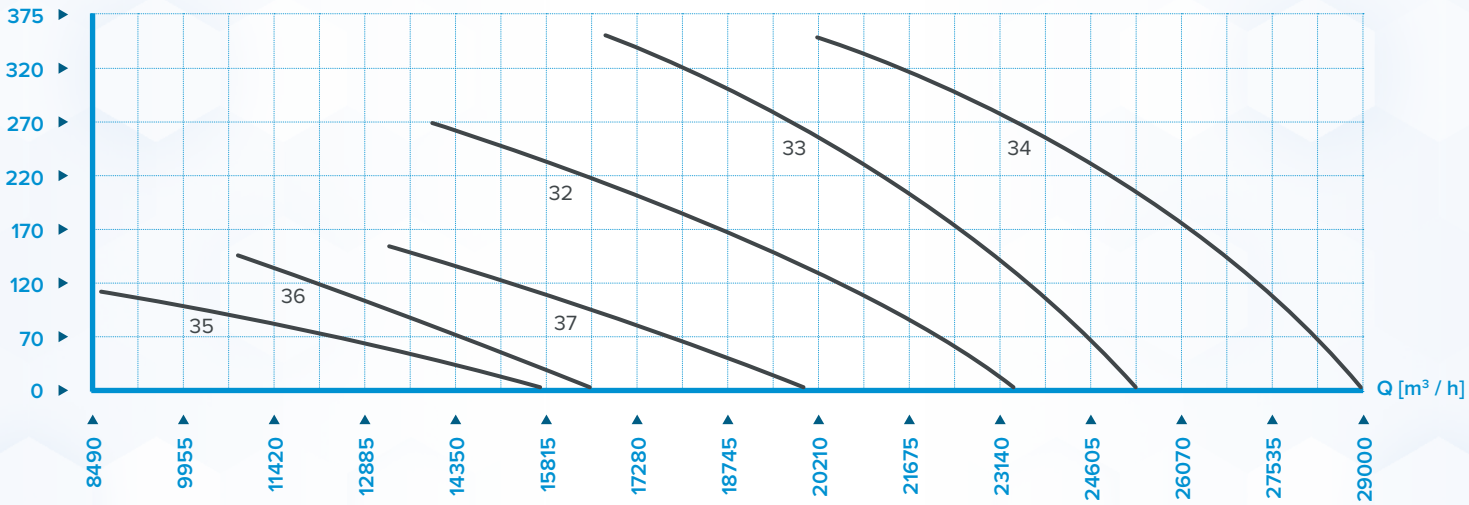
n°	Ø	impeller	Power [kW]	rpm	Max Airflow Q [m³/h]	Optimal Airflow [m³/h]	Optimal Static Pressure Ps [Pa]	Overall efficiency [%]	N
20	630	8-4/Q/40°	1,1	1400	15350	9780	150	34,4	40,2
21	630	8-8/Q/35°	1,5	1400	14370	9200	260	41	46
22	630	10/10/Q/40°	2,2	1420	17000	10810	285	37,4	41,4
23	630	8-4/Q/35°	0,25	900	8620	5450	60	33,9	43,8
24	630	8-8/Q/35°	0,37	900	9250	5870	106	36,9	45,3
25	630	10-10/Q/40°	0,55	900	10950	6970	120	33,2	40,5

MAV Ø 710



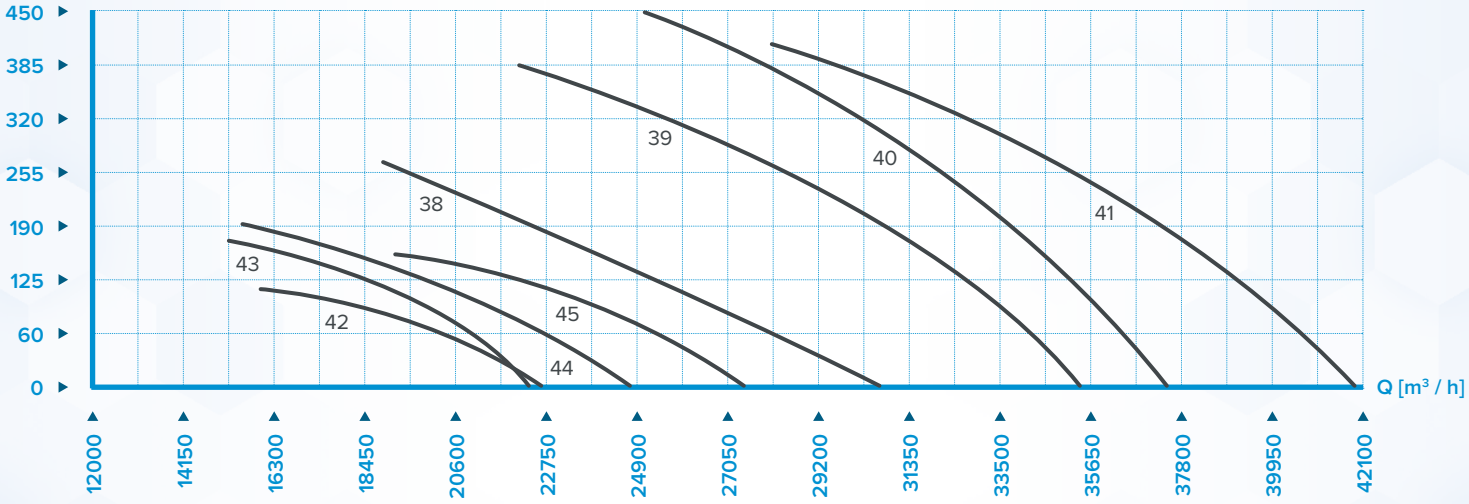
n°	Ø	impeller	Power [kW]	rpm	Max Airflow Q [m³/h]	Optimal Airflow [m³/h]	Optimal Static Pressure Ps [Pa]	Overall efficiency [%]	N
26	710	5-5/C/35°	1,5	1400	18950	12420	230	48	52,9
27	710	9-9/C/35°	2,2	1420	20750	13000	290	42	45,8
28	710	12-12/C/35°	3	1420	21850	14600	360	44,8	47,9
29	710	5-5/C/32,5°	0,37	900	11050	6500	100	46,7	55,6
30	710	9-9/C/32,5°	0,55	900	12000	8100	110	41,8	49,6
31	710	12-12/C/32,5°	0,75	920	13050	8960	145	41,3	48

MAV Ø 800



n°	Ø	impeller	Power [kW]	rpm	Max Airflow Q [m³/h]	Optimal Airflow [m³/h]	Optimal Static Pressure Ps [Pa]	Overall efficiency [%]	N
32	800	5-5/C/35°	2,2	1420	23500	13650	265	49,2	53,6
33	800	9-9/C/32,5°	3	1420	25100	15680	340	50,4	53,8
34	800	12-12/C/35°	4	1430	29500	19600	365	44,8	47,1
35	800	5-5/C/35°	0,55	900	14900	8600	110	44,3	52,1
36	800	9-9/C/32,5°	0,75	920	15900	9910	140	45,5	52,3
37	800	12-12/C/35°	1,1	925	18980	12750	155	41,3	46,8

MAV Ø 900



n°	Ø	impeller	Power [kW]	rpm	Max Airflow Q [m³/h]	Optimal Airflow [m³/h]	Optimal Static Pressure Ps [Pa]	Overall efficiency [%]	N
38	900	5-5/C/35°	3	1420	29880	18770	260	52,5	56,2
39	900	9-9/C/35°	4	1430	34790	21870	380	51,5	53,7
40	900	12-12/C/32,5°	5,5	1450	36000	24800	440	53,1	54,7
41	900	16-8/C/35°	7,5	1450	41700	27950	410	45,1	46,1
42	900	5-5/C/35°	0,75	920	19400	12200	110	45,5	52,4
43	900	9-9/C/35°	1,1	925	22500	14100	160	46,8	52,3
44	900	12-12/C/32,5°	1,5	945	23900	16390	190	49	53,7
45	900	16-8/C/35°	2,2	955	27400	18400	175	41,6	45,8

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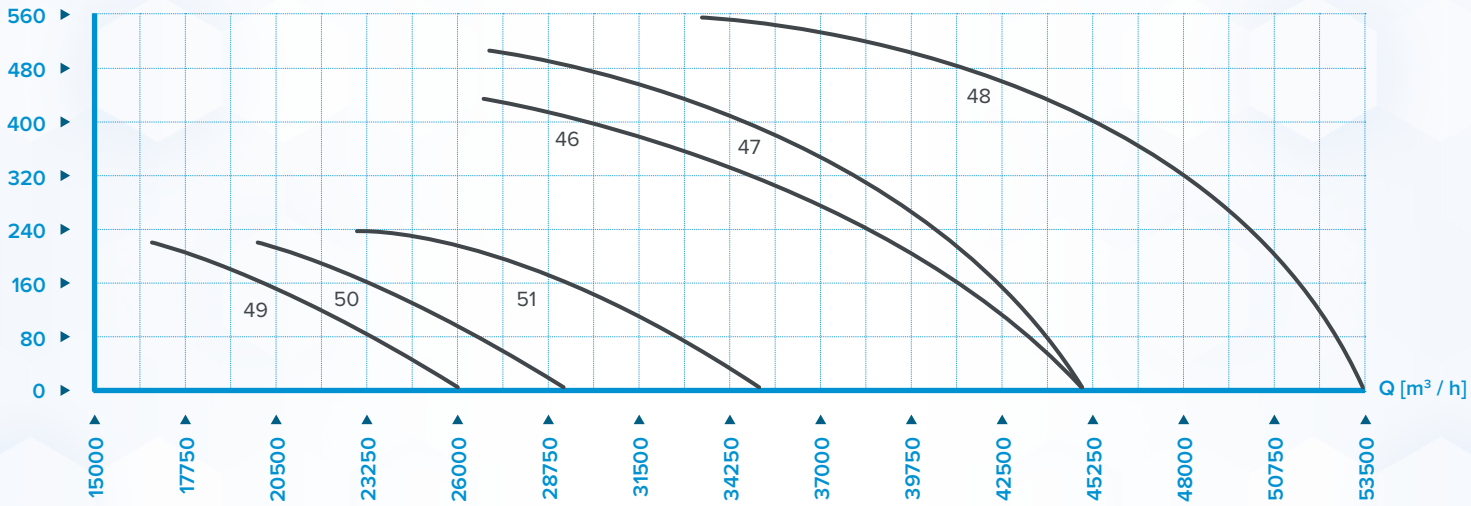
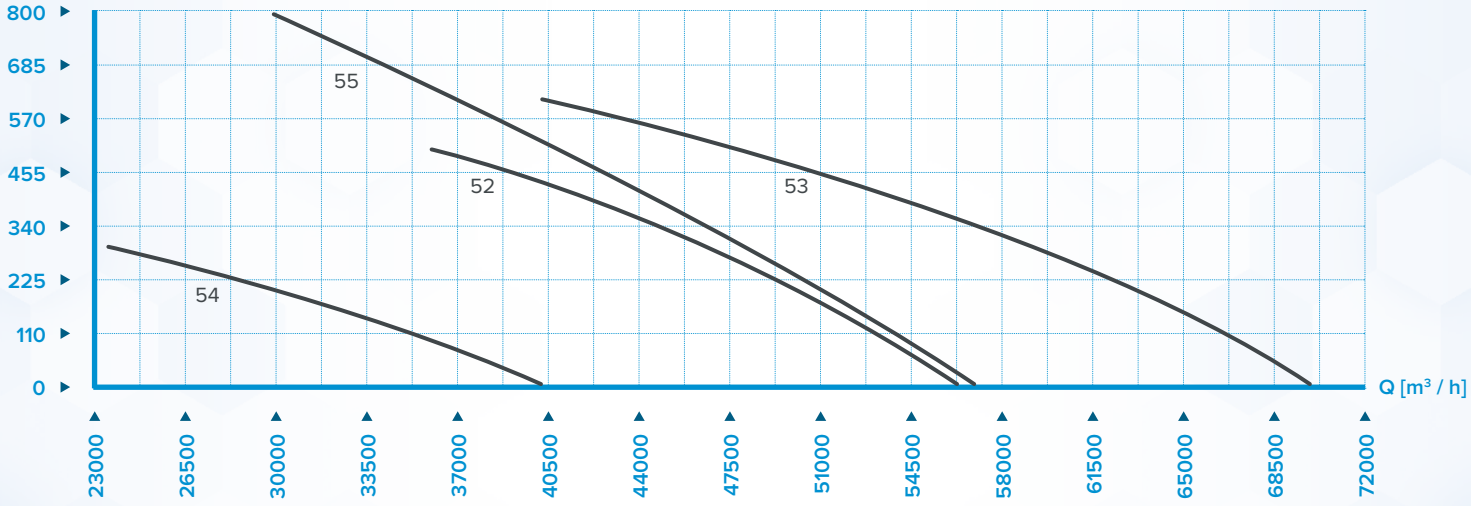
MAV Ø 1000



n°	Ø	impeller	Power [kW]	rpm	Max Airflow Q [m³/h]	Optimal Airflow [m³/h]	Optimal Static Pressure Ps [Pa]	Overall efficiency [%]	N
46	1000	9-9/C/35°	5,5	1450	44900	27800	440	55,8	57,2
47	1000	12-12/C/32,5°	7,5	1450	44100	27100	520	53,6	54,5
48	1000	16-16/C/32,5°	11	1460	53200	33650	550	45,1	45,1
49	1000	9-9/C/32,5°	1,5	945	25300	15400	180	48,9	54
50	1000	12-12/C/32,5°	2,2	955	29000	17900	225	49,7	53,8
51	1000	16-16/C/32,5°	3	960	35150	22200	240	42,1	45

MAV Ø 1120



n°	Ø	impeller	Power [kW]	rpm	Max Airflow Q [m³/h]	Optimal Airflow [m³/h]	Optimal Static Pressure Ps [Pa]	Overall efficiency [%]	N
52	1120	12-12/C/32,5°	11	1460	55950	36300	530	46,5	46,5
53	1120	16-16/C/32,5°	15	1460	68600	39500	610	45,8	45,6
54	1120	12-12/C/35°	4	960	40100	23100	260	43	45,6
55	1120	16-16/C/35°	5,5	960	49400	30850	260	40,3	42

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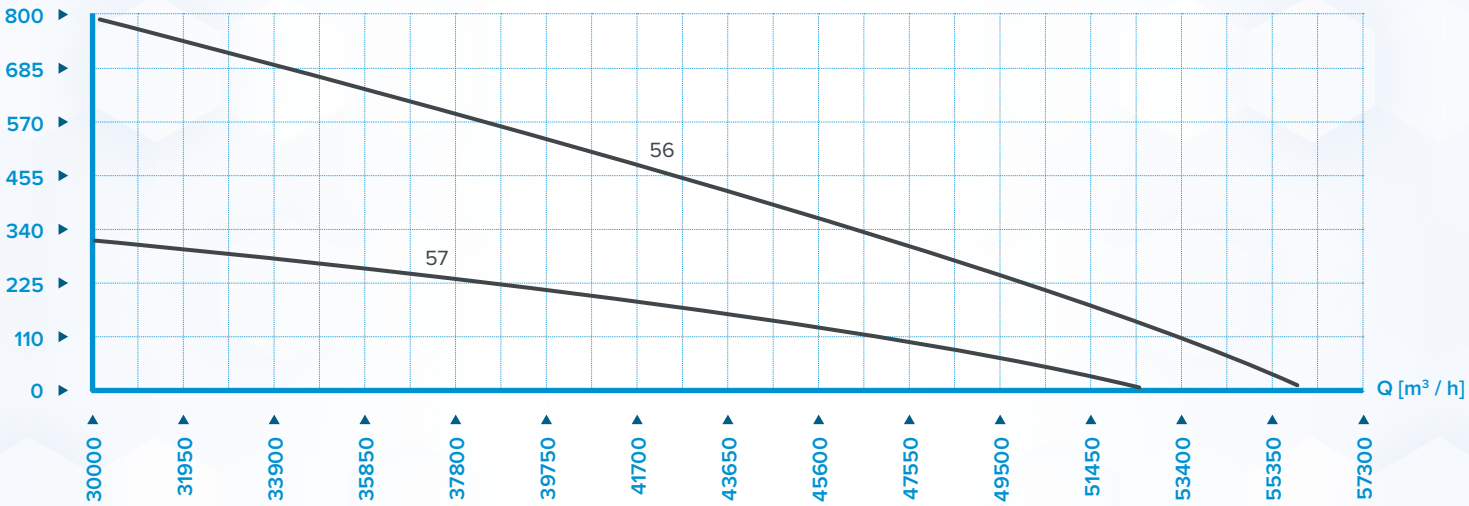
MAV Ø 1250



n°	Ø	impeller	Power [kW]	rpm	Max Airflow Q [m³/h]	Optimal Airflow [m³/h]	Optimal Static Pressure Ps [Pa]	Overall efficiency [%]	N
56	1250	16-16/C/25°	15	1460	56200	29500	790	45,9	45,7
57	1250	16-16/C/30°	5,5	960	52100	29950	290	44,5	46,2

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