

## **ETALINE** The energy saving fan

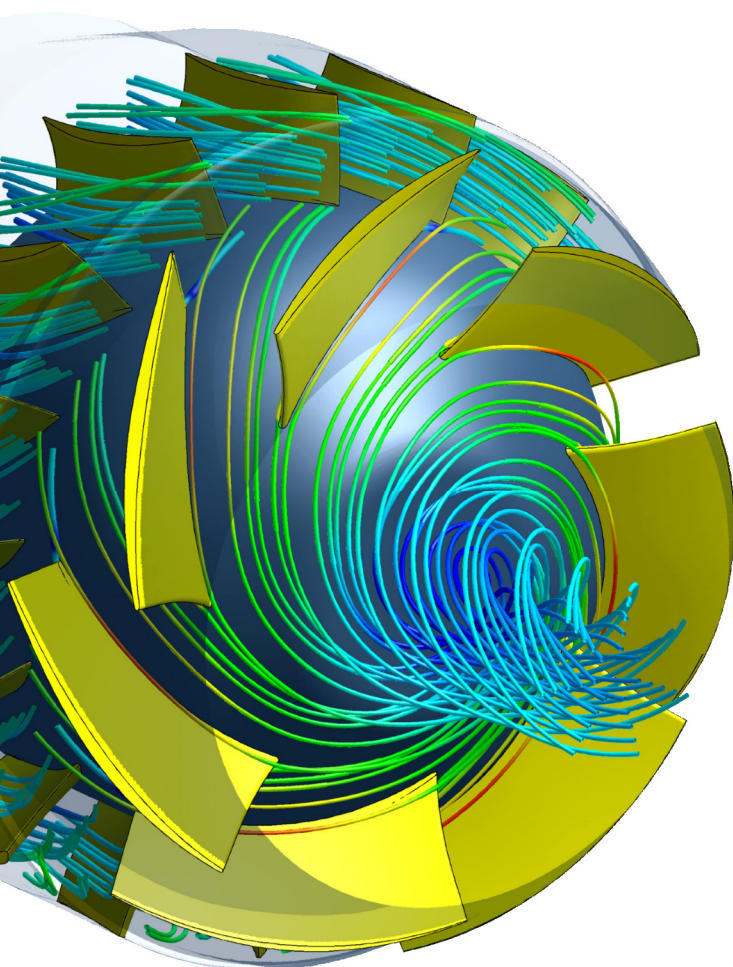
Saves Energy · Saves Space · Saves Money







## The responsibility for man and nature



### ETALINE **saves Energy**

ETALINE is the first fundamental innovation in new ventilator product development in decades. The development goal was, through effective aerodynamics, reduce the energy consumption of the fan. The R&D was with intense use of advanced CFD (Computational Fluid Dynamics) software. The implementation of the calculation results made new design elements and manufacturing methods for the ventilators necessary.

ETALINE in its range of fans is with the **highest efficiency** and thus with the **lowest power consumption** on the market!

Please compare!

The main design elements:

- **Rotor with adjoining stator**

Unlike normal low pressure fans ETALINE has a fixed stator, which at rotor outlet converts unwanted turbulence into usable static pressure. This leads to a significant pressure and efficiency increase.

**Rising energy and raw material prices are driving inflation and jeopardizing prosperity and the social certitude of broad population classes. In addition, the protection of our environment requires major efforts in saving energy and raw materials.** These global challenges require new products that use significantly less energy and raw material resources, which are becoming increasingly scarce.

The objectives for commencing development were to clearly reduce energy and raw material consumption of ventilators through significantly improved aerodynamics as opposed to other existing solutions.

## ETALINE - Pure efficiency

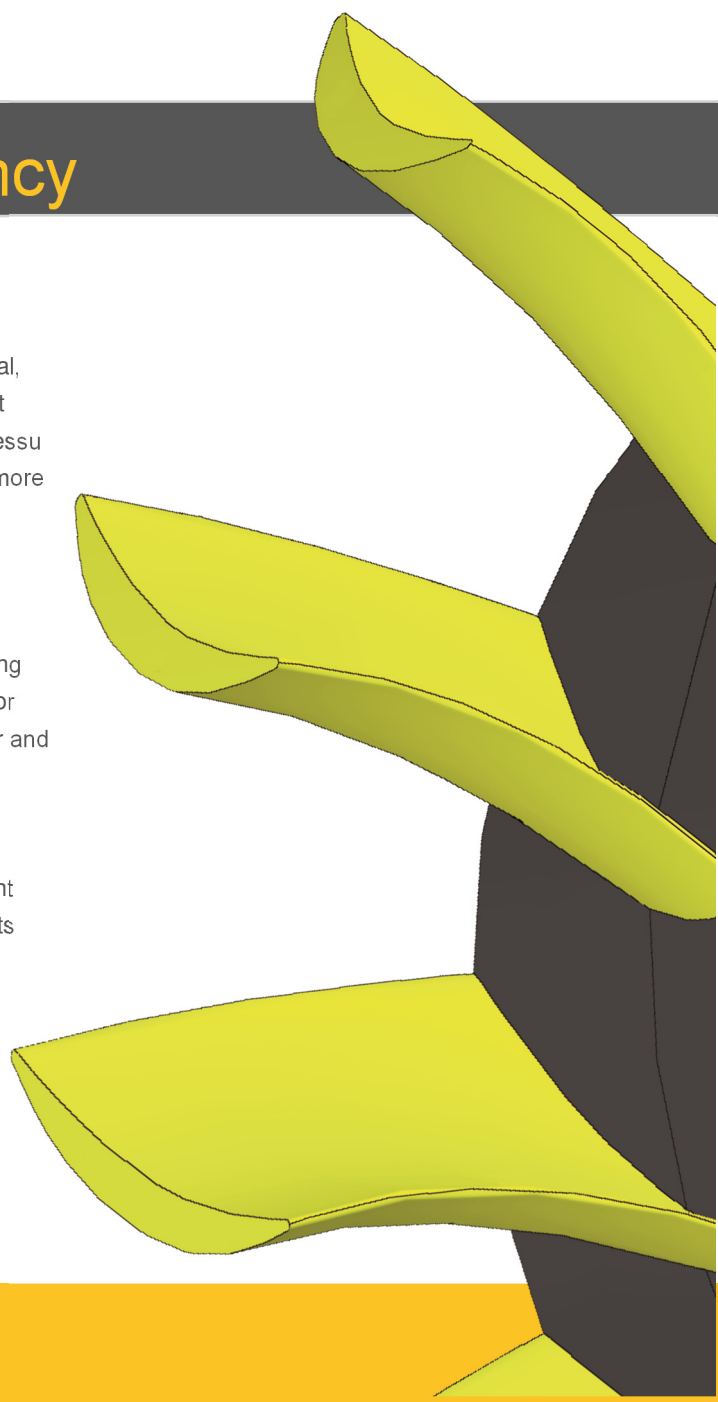
- **Three-dimensional, curved blades**

ETALINE is the first ventilator in its performance segment with real, three-dimensionally shaped rotor and stator blades. This makes it possible for the rotor and stator to be ventilated correctly. The pressure profile in the blade surface can also be designed significantly more effectively and without loss.

- **Continuous meridian channel**

The air stream always flows in the ventilator so that no loss-making displacements can form. The drive motors are housed in the stator hub, without disruptive influence on the aerodynamics of the rotor and protected from contamination.

All conventional motors can be used. Voltage and frequency controllable AC motors and EC motors. The combination with different drive motors and the high aerodynamic efficiency of ETALINE sets new benchmarks for energy saving and efficiency.







## ETALINE - Lightweight and uncomplicated

### ETALINE saves Space

The highly efficient, aerodynamic design also achieves high performance density. Therefore, the outer dimensions of the ventilator are equal to the connection diameter. When used as an IN-LINE ventilator, no additional installation space is required and it is aesthetically attractive if installed in full view.

Compact dimensions are becoming increasingly important in times of explosive raw material and energy prices. Reduced use of valuable raw materials and lower transport volume.

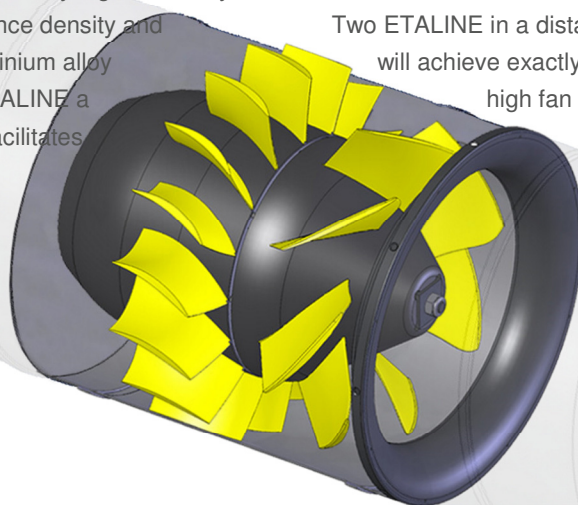
Smaller motor dimensions due to very high efficiency, lower material use due to high performance density and the use of saltwater-proof aluminium alloy (from model 400 mm) make ETALINE a „lightweight“ and significantly facilitates installation.

### ETALINE is Complete

ETALINE is an Inline Tube Fan designed for direct installation to a duct system. Compared to conventional fans, whether forward or backward curved, ETALINE requires no additional housing. Thus there are no additional mounting pressure losses or expenses for a housing.

On the contrary, via uniform, turbulence free airflow through a very efficient working stator, the pressure losses in adjoining parts are lower.

Two ETALINE in a distance of only 20% of duct diameter in series will achieve exactly twice the pressure build-up with unchanged high fan efficiency.







## ETALINE - Is cost effective

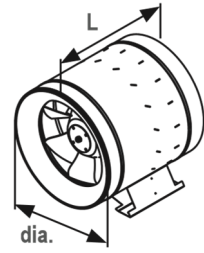
### ETALINE **saves Money**

A high efficiency fan causes lower power consumption and thus lower operating costs. This is even more important when considering that electricity accounts for approximately 70...90 % of the lifetime costs.

Extraordinary is that such an energy-saving product is not expensive, but usually more favourable in price than solutions with well-known fans.



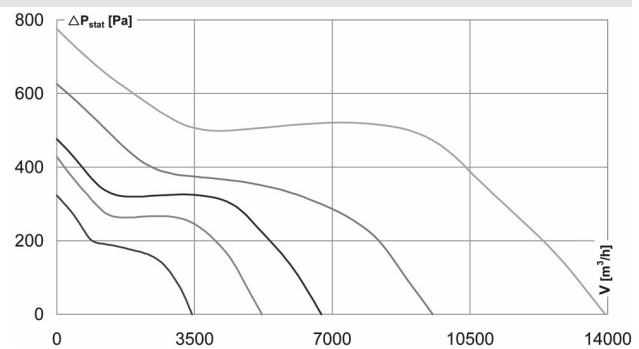
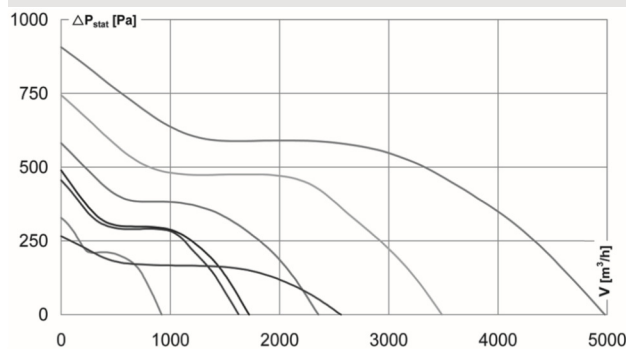
Over a wide range the ETALINE has three different types of drive motors available. Thus, you have the possibility for selecting the optimal fan for your application. Common to all versions is a very high aerodynamic efficiency of the fan and the absolute top position in total efficiency and thus in energy savings.



## ETALINE with voltage controllable motors

These fans can be connected directly to a 230 V/50 Hz mains supply, or with a transformer for variable speed regulation.

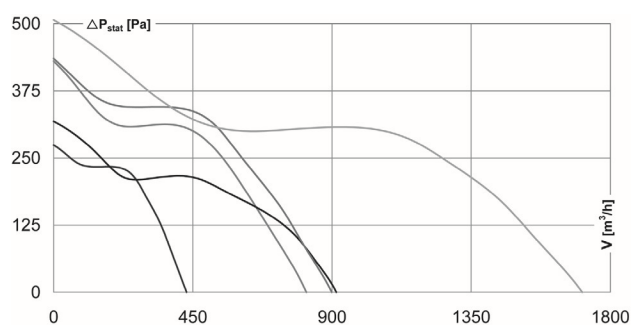
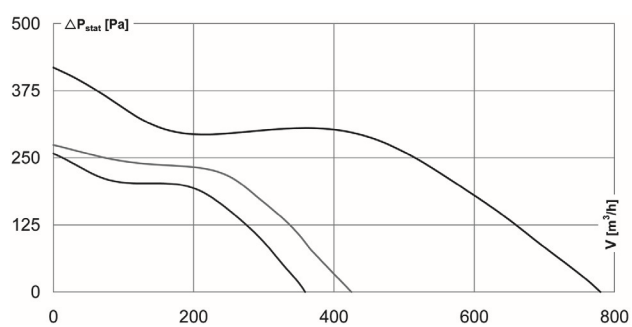
Type	Motor Characteristic			total efficiency		Dimensions		Weight [kg]
	U [V]	P <sub>i</sub> [W]	I <sub>max</sub> [A]	η <sub>la</sub> [%]	η <sub>t</sub> [%]	Ø dia. [mm]	L [mm]	
EL 200 E2 01	230V ~	100	0,5	33,0	36,6	201	225	2,9
EL 250 E2 06	230V ~	160	0,8	47,0	50,6	250	215	5,3
EL 250 E2 01	230V ~	180	1,0	44,8	49,2	250	278	6,4
EL 280 E2 02	230V ~	270	1,6	50,8	55,0	281	308	8,3
EL 315 E2 03	230V ~	270	1,6	50,6	54,8	315	308	8,4
EL 315 E2 01	230V ~	530	3,2	52,5	56,7	315	351	14,2
EL 355 E4 01	230V ~	160	1,2	46,3	50,5	354	396	13,5
EL 355 E2 01	230V ~	960	5,4	50,5	54,8	354	396	17,3
EL 400 E4 01	230V ~	215	1,5	46,0	50,9	403	417	12,8
EL 450 E4 01	230V ~	450	3,1	50,3	54,8	453	467	18,4
EL 500 E4 01	230V ~	700	3,7	48,4	52,3	504	515	23,2
EL 560 E4 01	230V ~	1120	7,6	49,6	53,9	564	582	38,0
EL 630 E4 01	230V ~	2140	11,4	55,4	59,9	634	655	43,1



## ETALINE 3-step

For controls with transformer. For controls with different outputs.

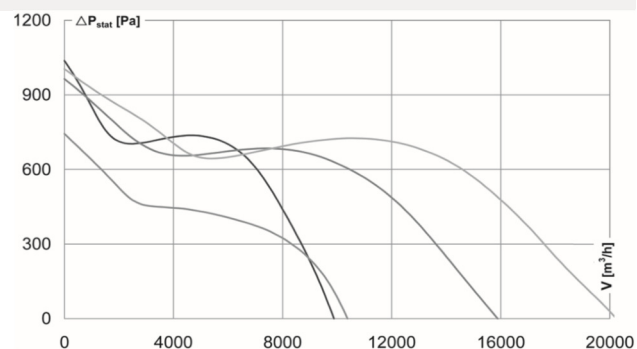
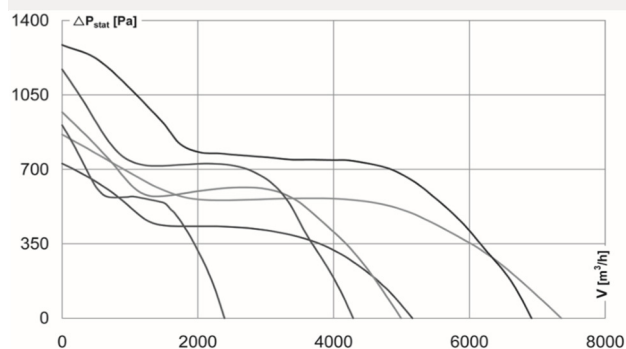
Type	Motor Characteristic			total efficiency		Dimensions		Weight [kg]
	U [V]	P <sub>i</sub> [W]	I <sub>max</sub> [A]	η <sub>la</sub> [%]	η <sub>t</sub> [%]	Ø dia. [mm]	L [mm]	
EL 125 E2M 01	230V ~	52	0,2	21,0	22,0	123	215	2,4
EL 150 E2M 01	230V ~	51	0,2	27,0	29,0	148	215	2,2
EL 150L E2M 01	230V ~	130	0,6	28,6	31,5	149	260	3,4
EL 160 E2M 01	230V ~	52	0,2	28,0	29,0	159	215	2,2
EL 160L E2M 01	230V ~	130	0,6	30,0	33,0	159	260	3,4
EL 200 E2M 01	230V ~	110	0,5	30,0	33,0	201	225	-
EL 200L E2M 01	230V ~	130	0,6	34,0	36,0	199	245	3,3
EL 250 E2M 01	230V ~	180	0,8	49,0	53,0	250	278	-



## ETALINE with frequency controllable motors

These fans are designed for operation with frequency converters. The sizes 560, 630 and 710 can also be connected directly to 400 V/50 Hz three phase operation. Through frequency control the efficiency in partial load is also very high.

Type	Motor Characteristic			total efficiency		Dimensions		Weight [kg]
	U [V]	P <sub>1</sub> [W]	I <sub>max</sub> [A]	η <sub>fa</sub> [%]	η <sub>t</sub> [%]	Ø dia. [mm]	L [mm]	
EL 250 D2 01	230V 3~	380	1,5	51,0	55,0	315	355	6,6
EL 315 D2 01	230V 3~	560	3,0	59,4	64,0	315	355	15,5
EL 355 D2 01	230V 3~	920	3,2	56,0	60,0	354	396	17,5
EL 400 D2 01	400V 3~	1570	3,2	57,0	62,0	407	417	20,3
EL 400 D4 01	230V 3~	660	2,7	54,0	59,0	407	417	14,8
EL 450 D4 01	230V 3~	1000	4,4	59,0	63,0	453	467	18,9
EL 500 D4 01	230V 3~	1930	7,1	60,0	65,0	504	515	23,6
EL 560 D4 01	400V 3~	1070	2,8	54,6	60,4	564	417	28,0
EL 630 D4 01	400V 3~	2170	5,4	62,5	67,4	634	417	39,3
EL 710 D4 01	400V 3~	3740	7,7	63,0	67,3	714	467	49,0



## ETALINE with EC motors

ETALINE with EC motors are by far the most energy saving fans on the market. Both in full and partial load operation, the fan total efficiency is very high.

Type	Motor Characteristic			total efficiency		Dimensions		Weight [kg]
	U [V]	P <sub>1</sub> [W]	I <sub>max</sub> [A]	η <sub>fa</sub> [%]	η <sub>t</sub> [%]	Ø dia. [mm]	L [mm]	
EL 400 EC 01	230V ~	1540	8,8	59,5	65,9	403	416	14,0
EL 450 EC 01	230V ~	1700	9,9	66,0	72,0	453	467	17,5
EL 500 EC 01	400V 3~	1850	3,3	69,1	75,0	504	515	21,3
EL 560 EC 01	400V 3~	2450	4,4	63,3	68,8	564	582	31,0
EL 630 EC 01	400V 3~	2890	3,8	69,0	75,0	634	654	38,4
EL 710 EC 01	400V 3~	3100	5,7	69,7	75,3	714	732	50,7

