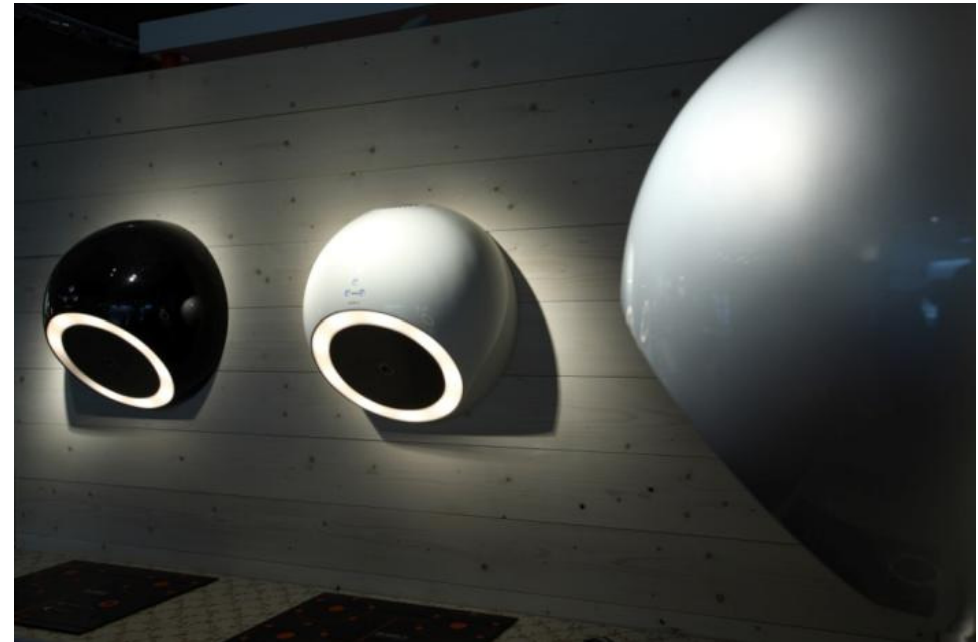




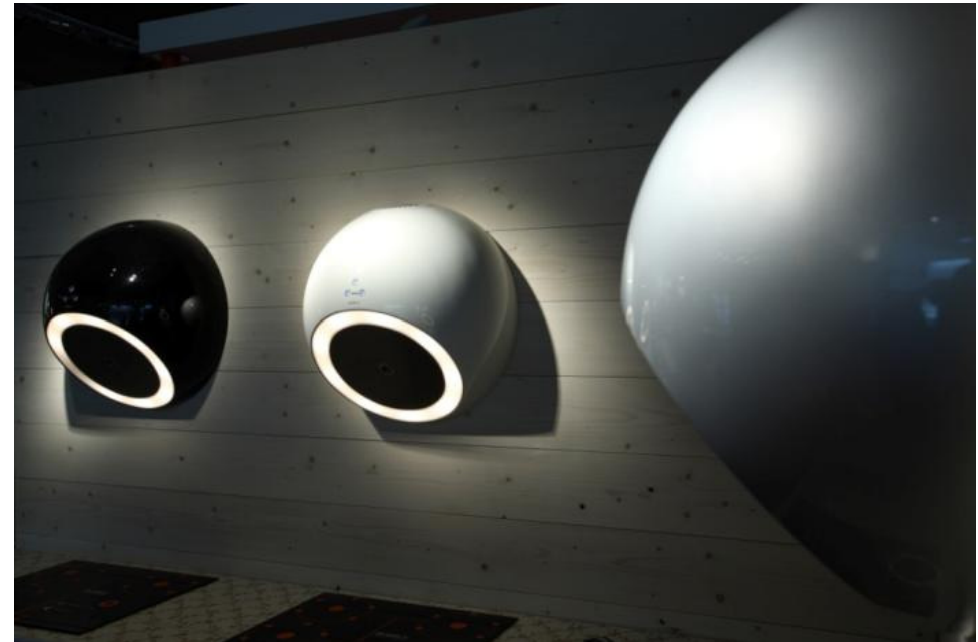
# ELICA BU MOTORS

ventilation product range

- **Standard Motors**
- **blowers current range**
  - plastic scroll
  - sheet metal scroll
  - die-casted scroll
  - NPB: new plastic blower
- **Energy Label**
  - EUP norms-High efficiency
- **high efficiency products**
  - 2011: Smart box
  - 2012: Brushless motor 230V-50Hz



- **Standard Motors**
- **blowers current range**
  - plastic scroll
  - sheet metal scroll
  - die-casted scroll
  - NPB: new plastic blower
- **Energy Label**
  - EUP norms-High efficiency
- **High efficiency products**
  - 2011: Smart box
  - 2012: Brushless motor 230V-50Hz



basic motors present in a blower are:  
*capacitor motors and shaded pole motors*



➤ **capacitor motors (FIME S type)**

- different windings connections are available (serial & not serial)
- stack height: from 15mm to 50mm, for wide power range

➤ **applications**

- range hoods from 500 up to 1000 m<sup>3</sup>/h
- shredders
- pumps



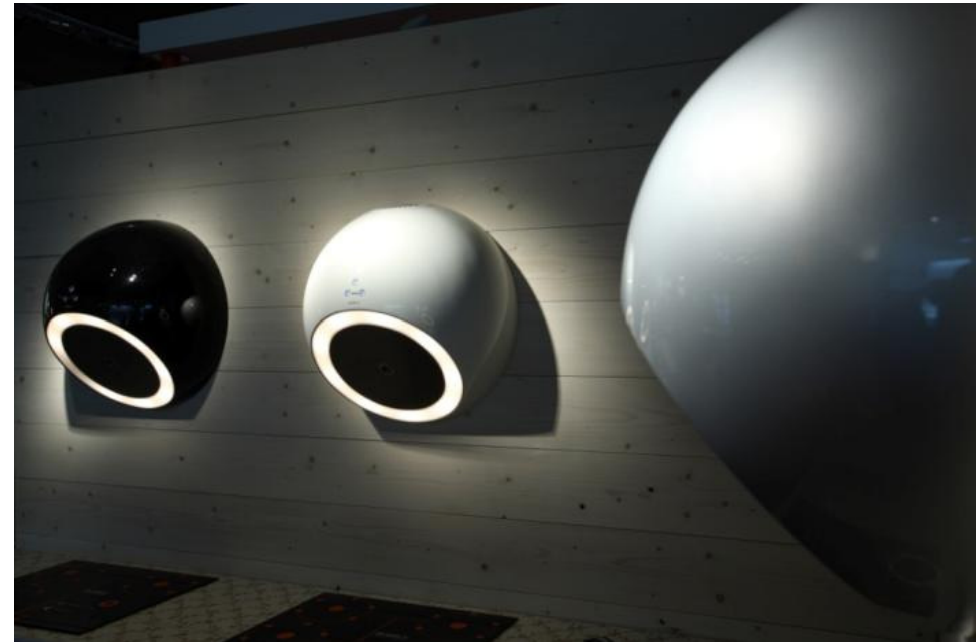
➤ **shaded pole motors (FIME K type)**

- clockwise & anticlockwise
- stack height: from 20mm to 42mm, for wide power range

➤ **applications**

- range hoods up to 500 m<sup>3</sup>/h

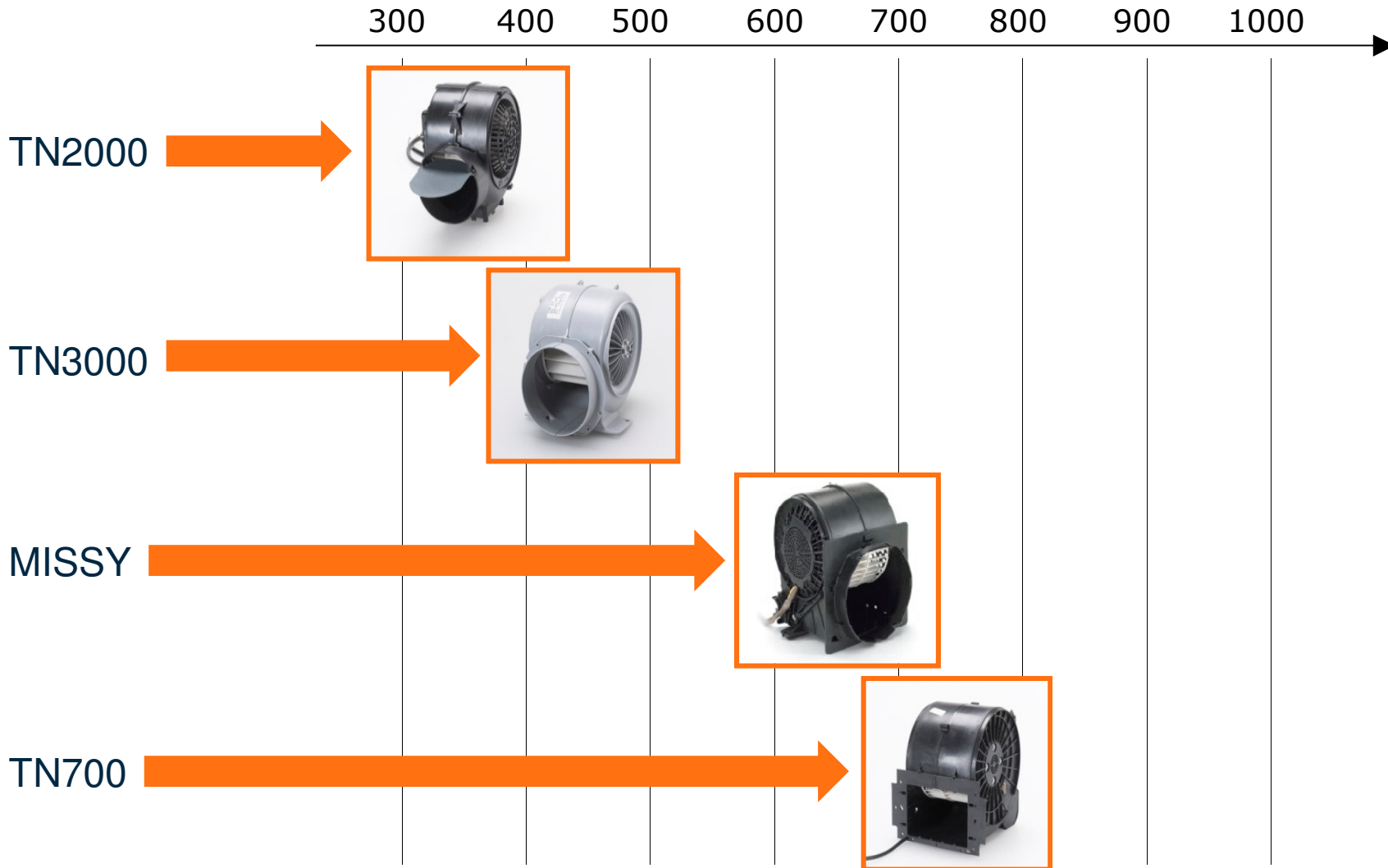
- Standard Motors
- **blowers current range**
  - **plastic scroll**
  - **sheet metal scroll**
  - **die-casted scroll**
  - NPB: new plastic blower
- Energy Label
  - EUP norms-High efficiency
- High efficiency products
  - 2011: Smart box
  - 2012: Brushless motor 230V-50Hz



# BLOWER CURRENT RANGE

plastic scroll

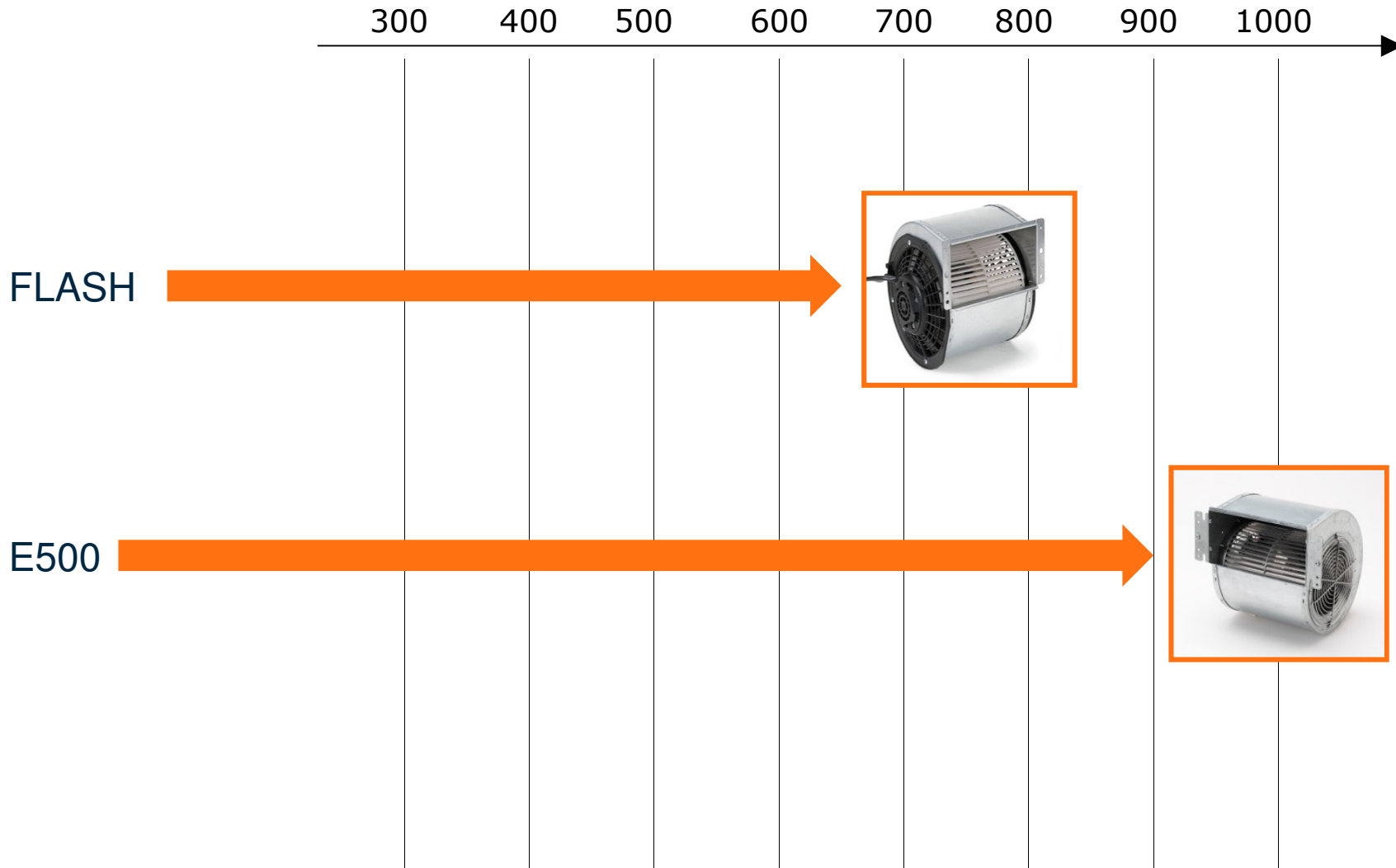
Delivery [m<sup>3</sup>/h]



# BLOWER CURRENT RANGE

sheet metal scroll

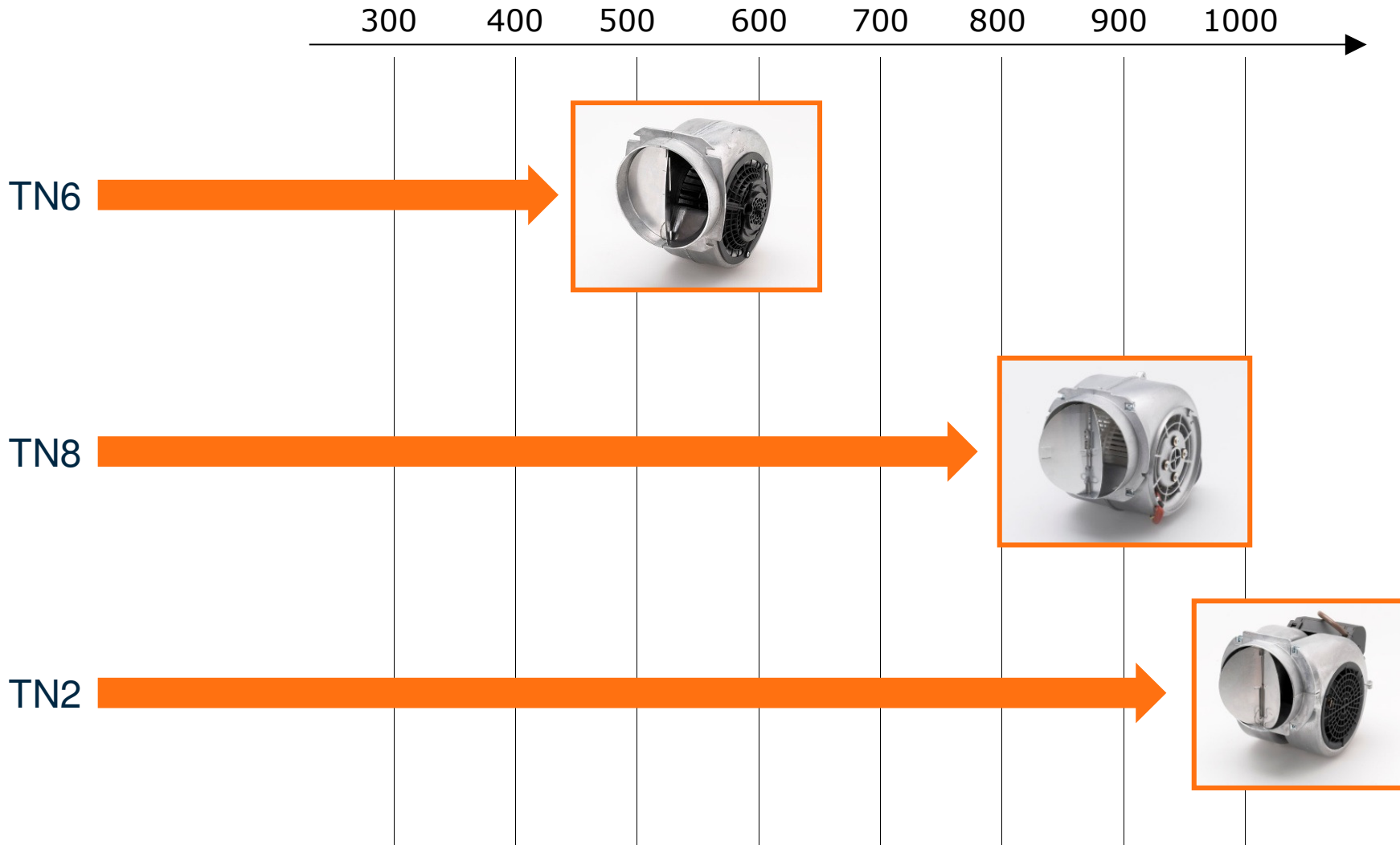
Delivery [m<sup>3</sup>/h]



# BLOWER CURRENT RANGE

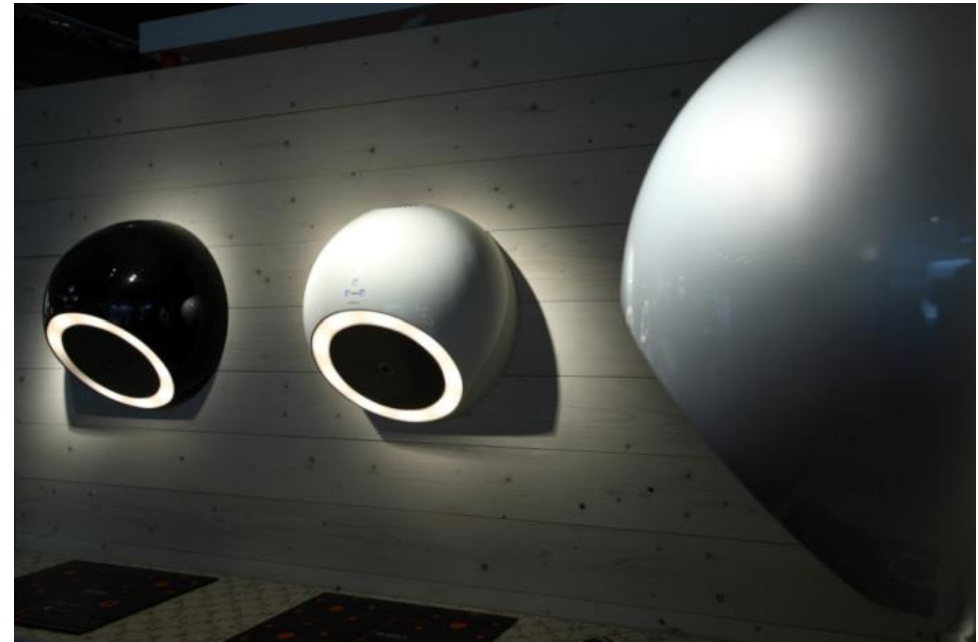
die-casted scroll

Delivery [m3/h]

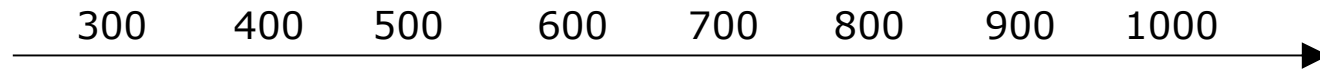




- **Standard Motors**
- **blowers current range**
  - plastic scroll
  - sheet metal scroll
  - die-casted scroll
  - **NPB: new plastic blower**
- **Energy Label**
  - EUP norms-High efficiency
- **High efficiency products**
  - 2011: Smart box
  - 2012: Brushless motor 230V-50Hz



Delivery [m3/h]

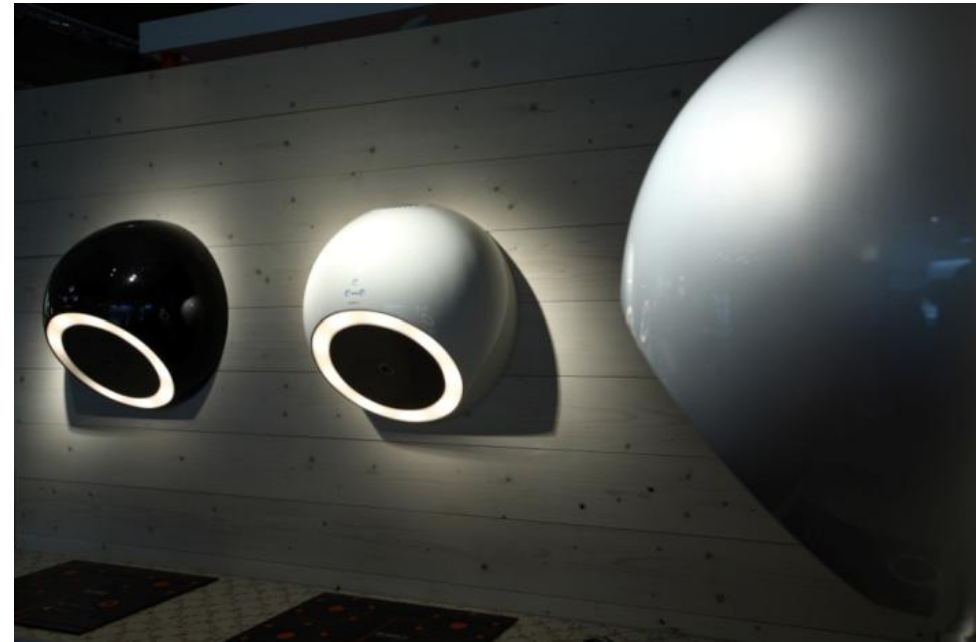


**covers the complete range**

## *advantages*

- **HIGH PERFORMANCES:** up to 1000m<sup>3</sup>/h
- **NOISE REDUCTION**
  - power level  $L_w = 65\text{dB(A)}@700\text{m}^3/\text{h}$  IEC
- **HIGH EFFICIENCY**
- **MOTOR FLEXIBILITY**
  - shaded pole motors, capacitor motors BLDC motors
- **ACCESSORIES**
  - protection grid
  - condenser housing position
  - flange connections
- **PATENT PENDING**
  - EP 2365224A1

- **Standard Motors**
- **blowers current range**
  - plastic scroll
  - sheet metal scroll
  - die-casted scroll
- **new products 2011**
  - NPB: new plastic blower
- **Energy Label**
  - **EUP norms-High efficiency**
- **High efficiency products**
  - 2011: Smart box
  - 2012: Brushless motor 230V-50Hz



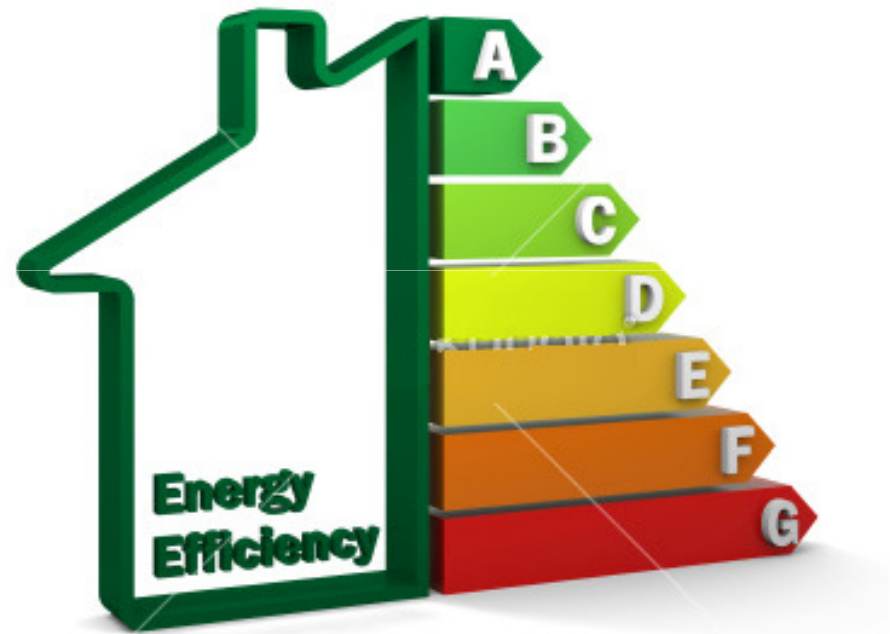
## EuP norms-High efficiency

### **EuP: Energy using Products**

The European Union is promoting laws and directives in order to ensure less pollution in the future environments. One of these directives is the EuP (Energy-using Products).

The EuP purpose is pushing manufactures to produce and distribute high efficiency products.

Minimum efficiency levels (MEI) and timings were fixed for each product categories.

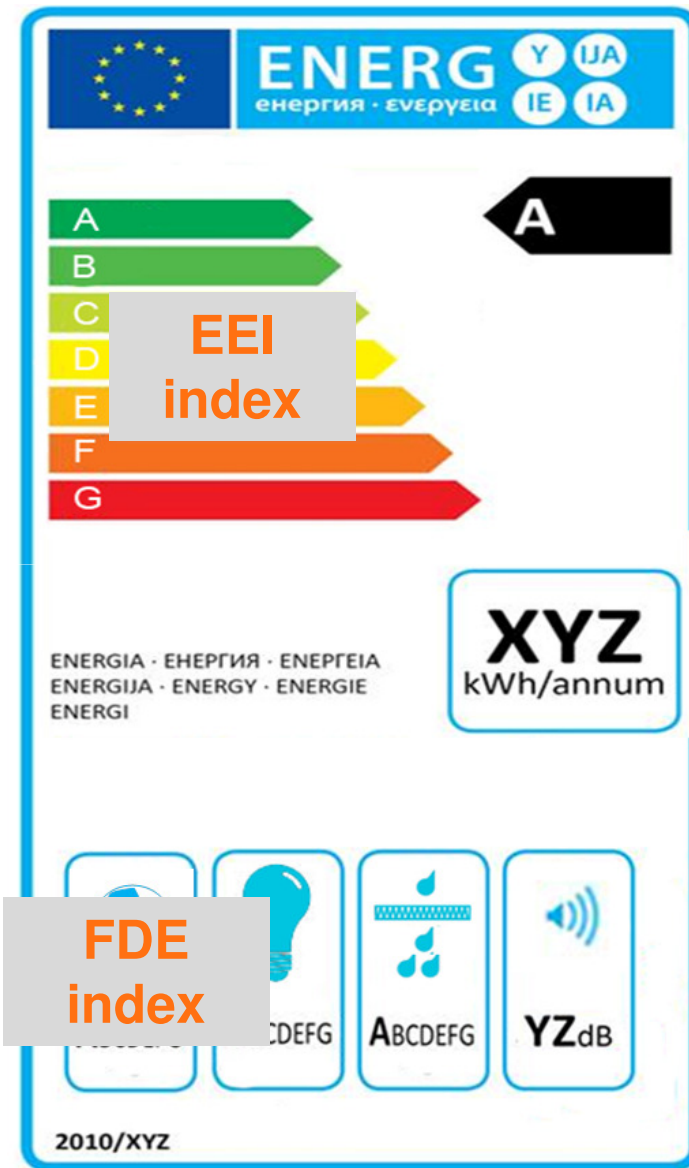


# ENERGY LABEL

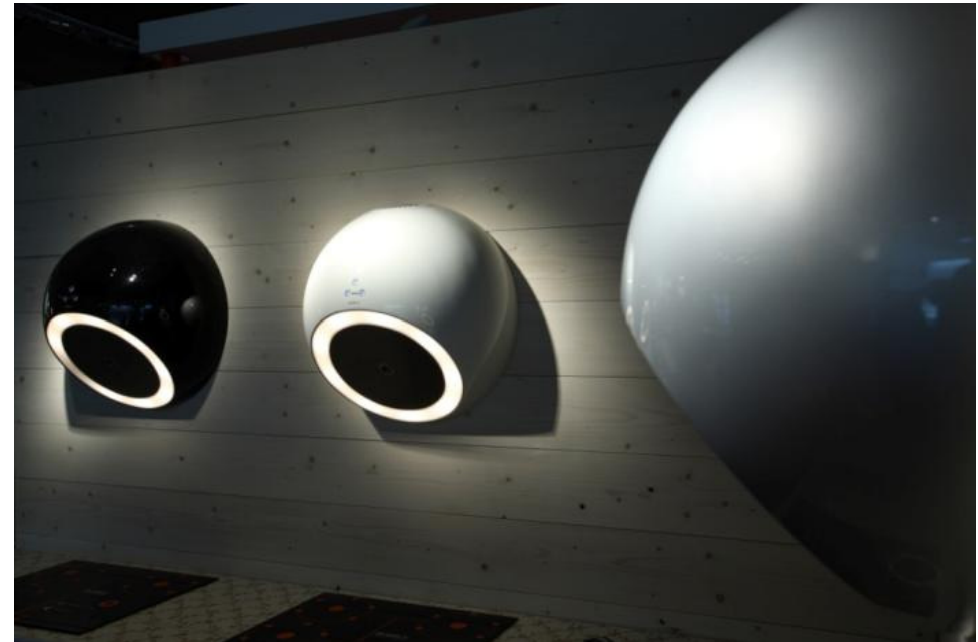
## EuP norms-High efficiency

EuP Introduction for Range Hoods through the Energy Label: new decision in January 2012

The hood energy class is identified by means of EEI (Energy Efficiency Index), while FDE indicates the fluidodynamic efficiency of the system.

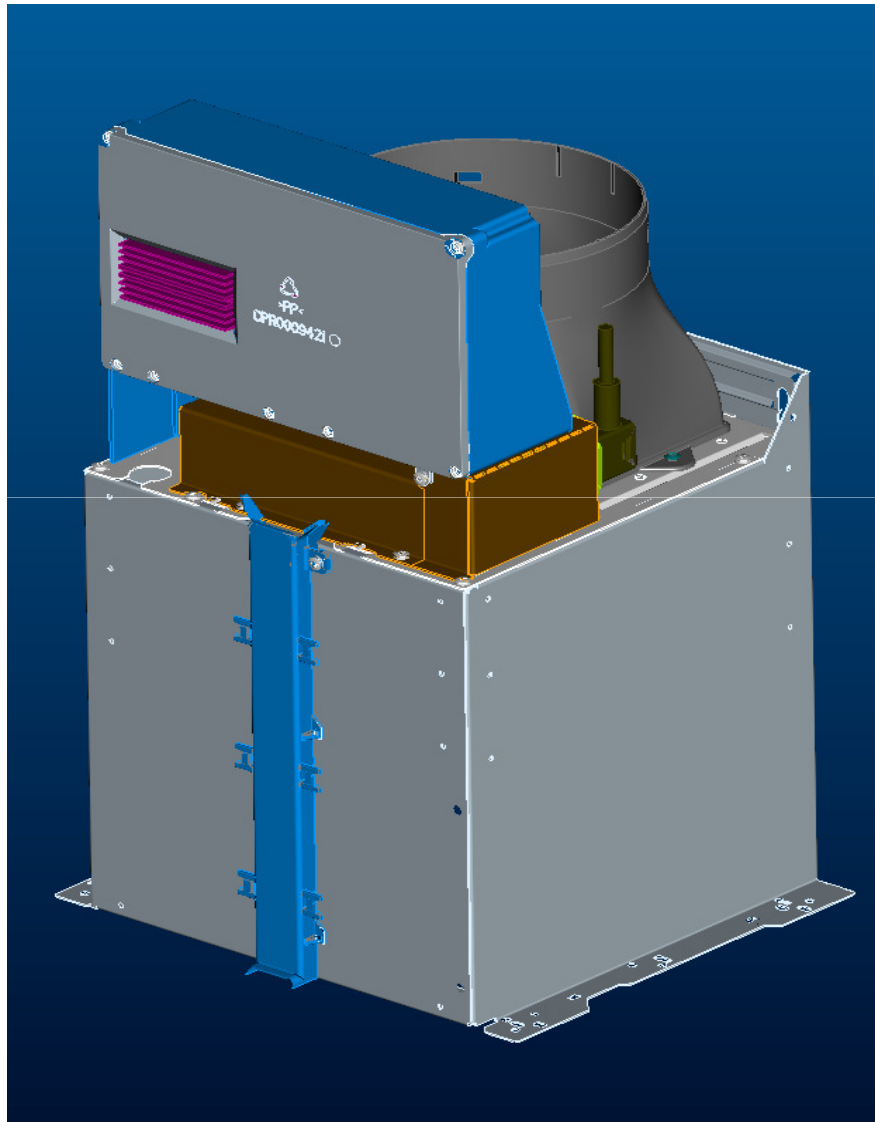


- **Standard Motors**
- **blowers current range**
  - plastic scroll
  - sheet metal scroll
  - die-casted scroll
  - NPB: new plastic blower
- **Energy label**
  - EUP norms
- **High efficiency products**
  - **2011: Smart box**
  - **2012: Brushless motor 230V-50Hz**



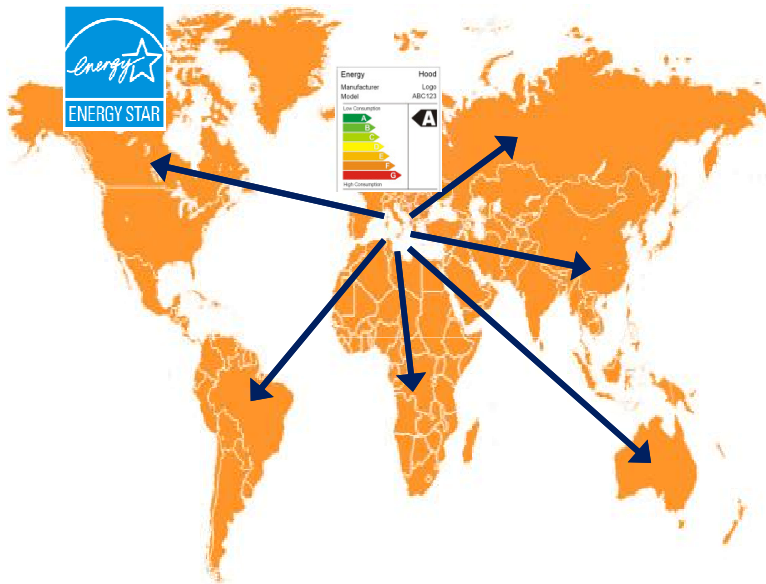
# HIGH EFFICIENCY PRODUCTS

2011: smart box





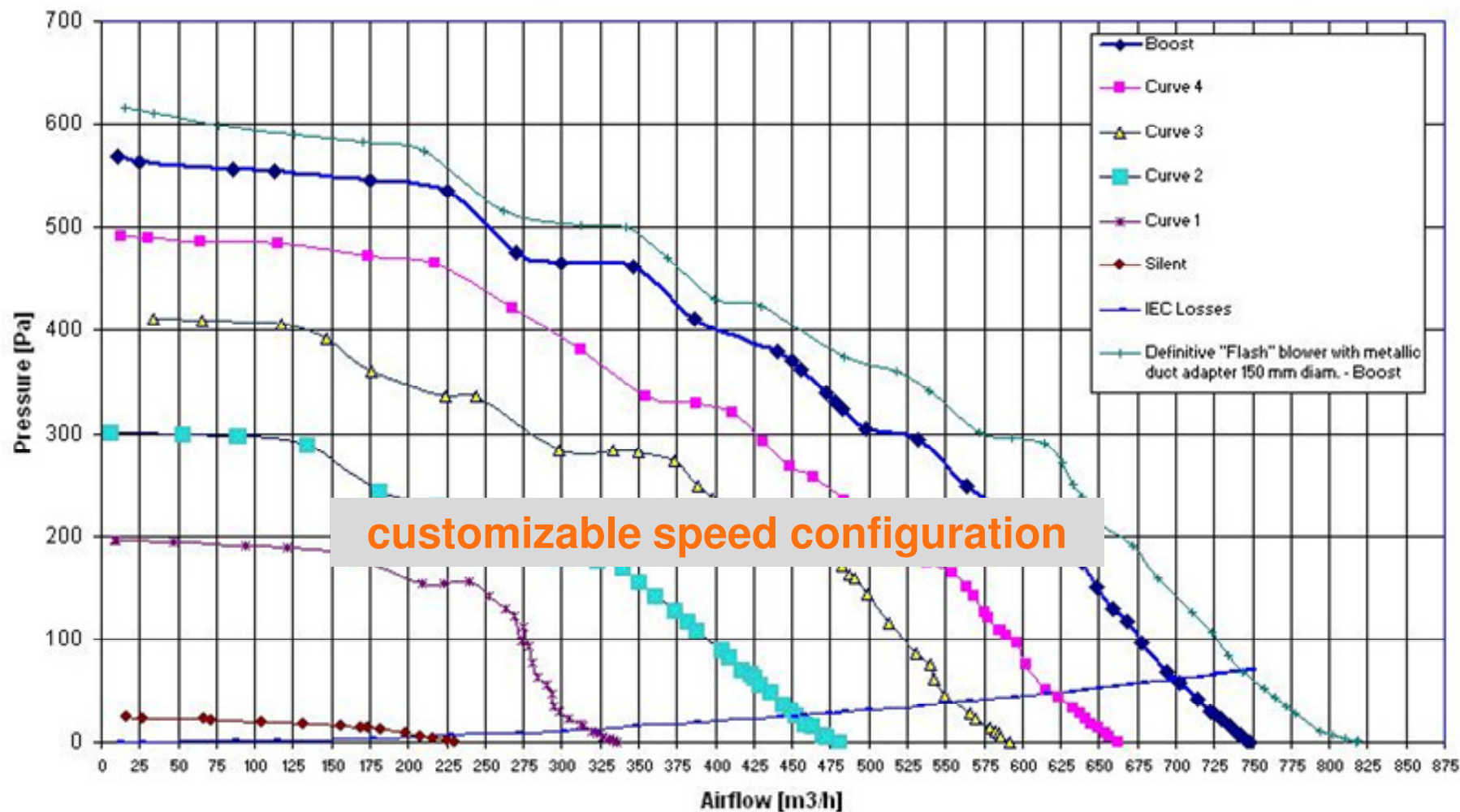
## 2011: smart box



- ❑ “Wide Range” like PC  
(Switching Power Supply)
  
- ❑ The core of Range Hoods at **Low Voltage** (safety):
  1. motor
  2. electronic control
  3. lights
  
- ❑ **EU & UL approvals**, compliance with
  1. EN/IEC 60335-1 e EN/IEC 60335-2-31
  2. UL 507 e CSA C22.2

2011: smart box

GRAPH AIRFLOW/PRESSURE



2012: brushless motor 230V-50Hz

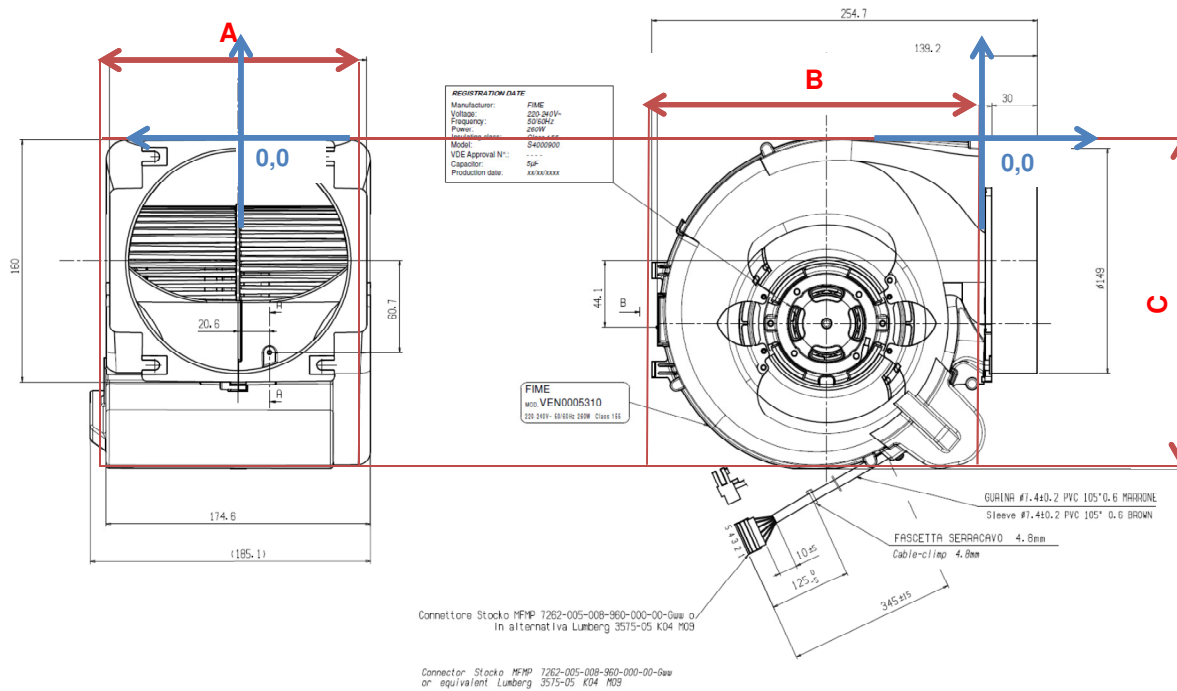
### project target

- Development of a new blower, equipped with EC motor 230V
- High performances to match **top energy label class A+++**
- Like 4 like substitution with current blower series

# HIGH EFFICIENCY PRODUCTS

## 2012: brushless motor 230V-50Hz

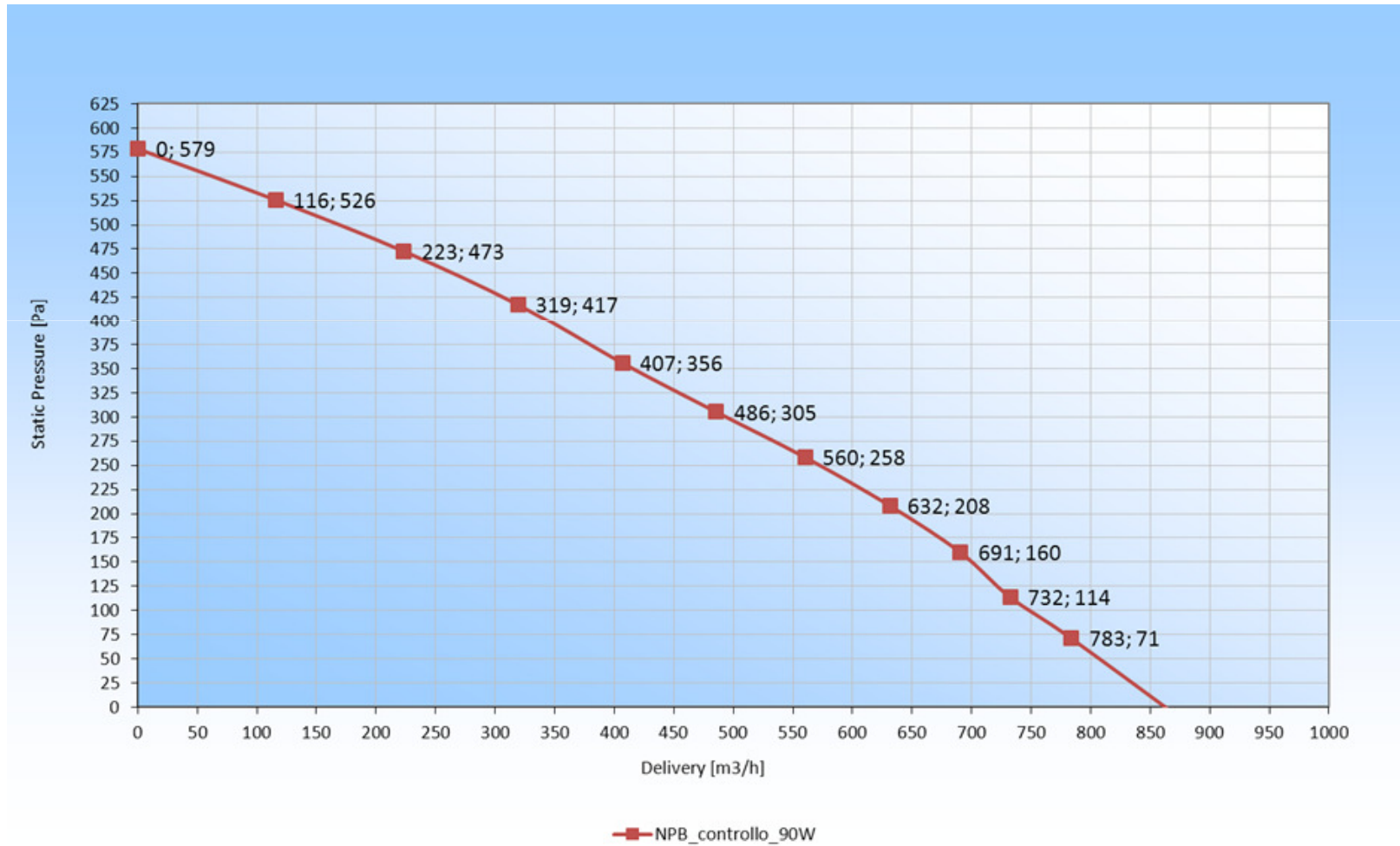
### overalls (project specification)



reference	dimension [mm]
A	175 ± 20
B	220 ± 25
C	218 ± 25

2012: brushless motor 230V-50Hz

delivery-staticPressure characteristic (project specification)



2012: brushless motor 230V-50Hz

## TIMING

- first prototype ON GOING
- internal test wk50/2011
- production pre-series wk24/2012

**stay hungry stay foolish**

*Steve Jobs*