

## A KNOWLEDGEABLE PARTNER AT YOUR SIDE

### WE SUPPORT THE DEVELOPMENT OF ANY AIR MOVING PRODUCT

Leveraging its extensive experience in the topic of air movement, HW Ventilation offers its customers the opportunity to outsource the engineering and the production of their new fans. The design and development of a new product requires a series of important activities in which HW Ventilation can be a valuable partner.



#### **Concept definition**

The concept definition is the first step of the product development process. During this stage our engineers work closely with the customers to agree upon the needs the new product shall meet and the features it shall have in order to meet those needs.

#### **Material selection**

HW Ventilation has always put particular attention to the choice of its products materials.

Different working conditions, and different environments in which fans can be employed, require combinations of materials to suit various operating temperatures, humidity levels, revolutions per minute. We support our customer to select the right [materials](#) for their products, and make sure they carry all the relevant certifications and are compliant to existing regulations (i.e. ATEX, UL94, etc.)

#### **CAD/CAM and FEM analysis**

Next stage is the industrial design. In this phase our engineers perform CAD/CAM drawings and FEM simulations, activities which are key to find possible issues, refine the concept and design a prototype.

**Prototyping**

If the simulations and drawings don't show particular problems, a polypropylene prototype of the product is created and tested in our wind tunnel. At this stage it is crucial to verify whether its performance levels are consistent with our expectations and put in place corrective actions.

**Final design**

Once refinements are completed, the final design is ready and can be utilized to create the product molding tools and start the production of samples of the final product. Tests are then performed to verify the samples efficiency and noise emission levels, and their compliance with international regulations (i.e. ERP).

**Production**

The customer has the chance to outsource also the production of their new products to HW Ventilation. HW Ventilation is an ISO 9001 certified company, and operates in compliance with the highest quality standards. All materials employed in our production process carry the relevant certifications.