



## Motion systems

for challenging **heating, ventilation**  
and **air conditioning** applications



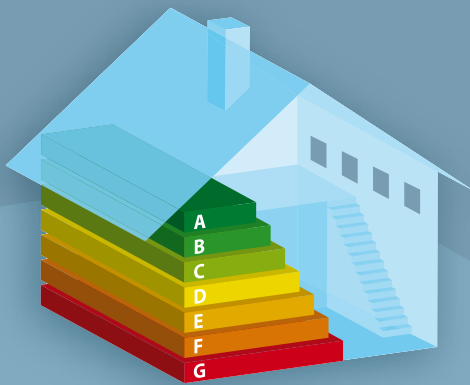
# Challenges in HVAC

The major challenge in the HVAC industry is to develop sustainable systems to improve energy efficiency and comfort for end users, while being environmentally-friendly. The main challenges lie in finding ways to:

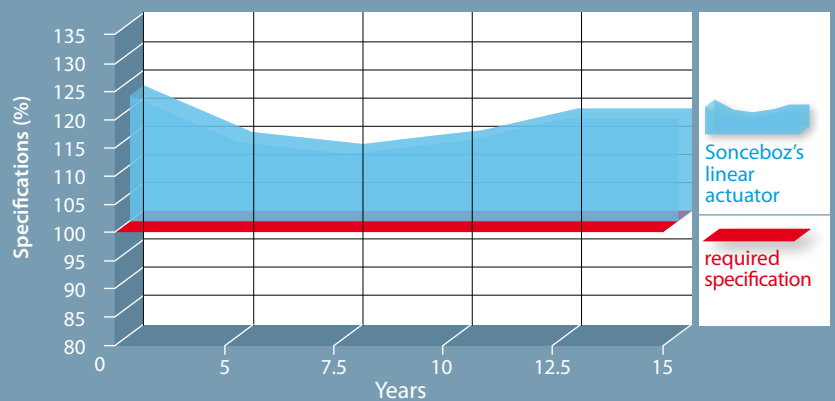
- reduce energy consumption and CO<sub>2</sub> output of HVAC units
- implement optimum control, multifunctional use and modulation range
- decrease need for maintenance by requiring long-lasting electric actuators
- provide state-of-the-art and cost-effective solutions for greater comfort

The small size and robust design of Sonceboz solutions make them suitable for use in any appliance requiring regulation, low energy consumption and enhanced quality. They act either as integrated components, or as standalone subassemblies. They can, for instance, be used in the flow regulation of residential heating elements or directly plugged into the water tap body instead of traditional mixing valves.

## Building energetic labelling



## Linear actuator force over the years



## • Hydronic applications

Used for flow control in heating circuits, the stepper motors improve appliance efficiency by changing the temperature delta on the heat exchanger in combination with power modulation. This makes it possible, for example, to use condensing appliances in high temperature heating circuits. Due to their shape, force and stroke, our motion systems can be used to regulate water flow in heating applications and to improve the regulation of sanitary hot water.

## • Gas applications

Accurate movement of linear actuators leads to optimum regulation of gas flow and better combustion control. This allows OEM's to design and build high-tech boilers that can self-adapt in a closed regulation loop, based on the gas properties. In typical applications such as gas valves, safe and reliable actuation is required to prevent malfunction.

## • Air ventilation and regulation's applications

Ventilation is used to improve air quality in closed rooms. Sonceboz stepper motors control the volumetric flow inside the outlet vent in order to get a specific and steady quantity of fresh air. Sonceboz actuators operate smoothly with very little noise. The use of direct drive actuators helps reduce the maintenance needs of ventilation systems (e.g. dampers, fans or flaps).

# Our solutions

The advanced mechatronic systems expertise allow us to gather an in-depth understanding of customer expectations. Our outstanding track record and successful performance emphasized by the competency and flexibility of our engineering team leads to a win-win partnership with our customers.

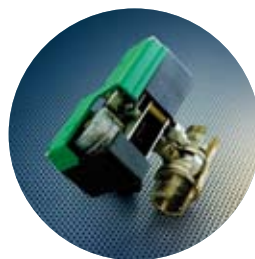
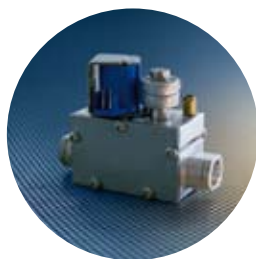
Our experience in design and high-volume manufacturing allow us to offer high-end, cost-effective components. The Sonceboz product portfolio is based on reliable electric stepper motor technology. Our compact **linear actuators** feature different controls and resolution cases as well as a spring return if required. With or without integrated electronics, our range of **hybrid and brushless DC motors** provides torque at low speed for applications requiring positioning and accuracy.

The main advantage of the Sonceboz **complete mechatronic motion systems** is its all-in-one unit functionality and modular design. The systems easily integrate mechanical components with electronics and logics. Using a standalone component in a system results in a lower total cost of ownership for the complete HVAC device.

In-depth R&D and test phases are conducted to provide rugged and compact systems that guarantee customer satisfaction. The endurance of these systems permits them to operate in all critical conditions, both in internal and external appliances.



## Our core expertise proved in multiple HVAC applications:



# Your benefits

- *Correct energy use for any situation thanks to modulation*
- *Environmentally-friendly and extremely accurate*
- *Compact design for innovative solutions and optimum comfort*
- *Low maintenance costs due to long service life of the product*
- *Multitude of operating conditions, due to its extremely high reliability*



## SONCEBOZ Motion systems

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Our core competencies consist of design, development and production of **mechatronic drive systems** and **electric motors** that operate in **harsh environments**. We are committed to improving safety, decreasing energy consumption and minimizing the impact on the environment. Our focus on **innovation, best in class quality** and **exceptional service** is our key to success for worldwide OEM customers and their suppliers.

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