

Turbo Compressor



We enable our customers' vital processes which advance a more sustainable world.

Product: Turbo Compressor (KA10)

Product brand: HV-TURBO

Application: Marine

Process: Air Lubrication System

The Marine industry faces a significant challenge to improve environmental emissions and transition to a lower carbon future. The industry target is to reduce emissions by 50% by 2050.

To support our customers in meeting this environmental goal, without sacrificing speed, we have developed a hull air lubrication system, built around our HV-Turbo compressors, which reduces the friction between the vessel and the water giving significant fuel efficiency gain of 7–10%. A typical commercial vessel uses around 400 tonnes of fuel oil a day.

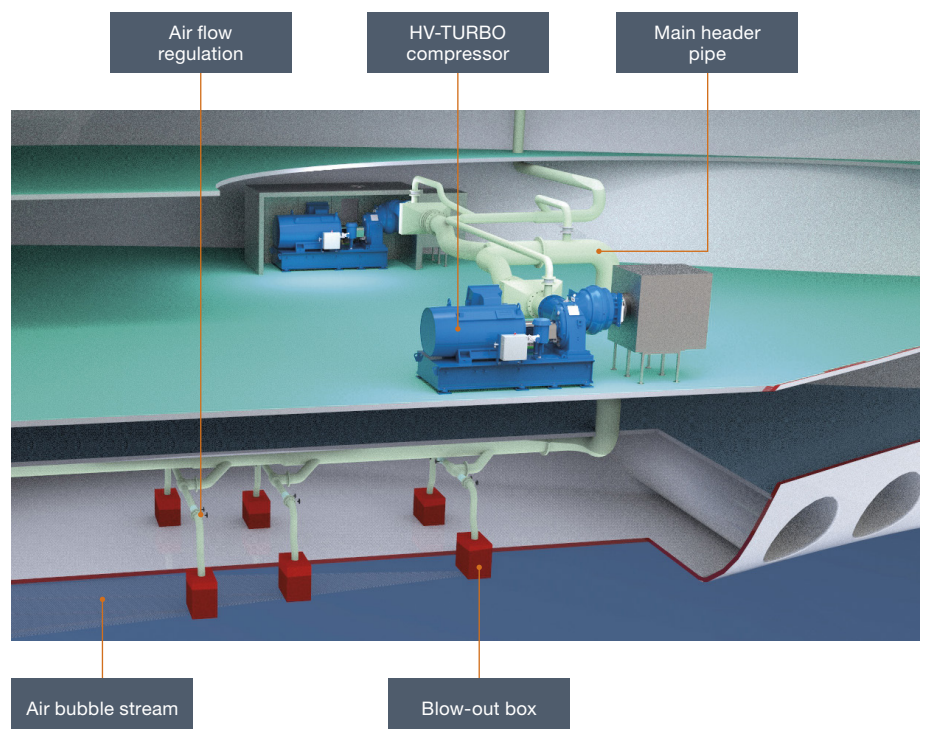
Environmental benefits

Cuts fuel consumption by 7–10 %. **Reduces CO₂ emissions by 129 tonnes a day or 38,000 tonnes a year.** Also contributes to SO₂ reduction.

How it works:

The technology is based on blowing air under the hull of the vessel creating a carpet of bubbles. The air bubbles' distribution across the hull surface reduces the resistance generated between the ship's hull and the water.

Air lubrication systems can be used in all types of vessel operations, and can be retro-fitted to existing vessels. For every tonne of fuel we avoid using, we also reduce the harmful SO₂ emissions from the fuel oil.





For further information about our Turbo Compressors visit: www.howden.com

Key product features

Key carbon impact

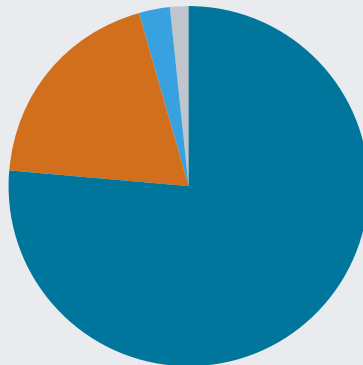
We manufacture our compressors at the location closest to the project, to minimise transportation emissions. Our plant in Germany has a Carbon footprint of just 2753 tonnes of CO₂ per year. We have made a 36% electricity reduction since 2015.

Another source is from our China plant, where we are currently investing in energy saving technology and installing on site renewable solar energy helping to reduce our own transition to a low carbon future.

The upstream material content of our steel is approximately 8 tonnes of CO₂. If we consider the man hours to produce a compressor, divided by our site's footprint, each project is much less than 1% of a plant's output.

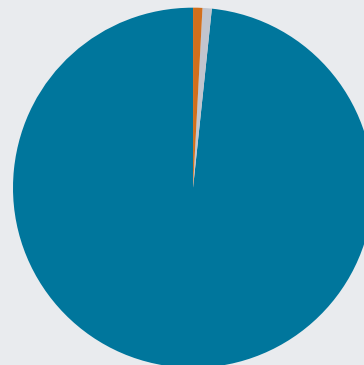
Manufacturing carbon footprint

- Electricity
- Gas
- Vehicles
- Other



Carbon dioxide balance

- Raw materials
- Manufacture
- CO₂ avoided (1 year)



Howden sustainability approach

At Howden we manage our environmental impact through our Howden Environmental, Health and Safety (EHS) standards approach supported by ISO14001 on many of our sites.

From 2021 we will be disclosing our sustainability performance through the CDP carbon disclosure project. We are committed to reducing our internal carbon footprint by 50% by 2030. We will achieve this by focusing on targeted efficiency, investment projects and sourcing renewable energy.

38,000 tonnes CO₂ saved per year for 274 turbo compressors used in materials and manufacturing