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stroco

MOBILE HEATING SOLUTIONS

100% Danish Heaters for Buses

Two topics have been in the news a lot lately – the price of fuel and climate change.

These topics affect transport operators too. Operating costs need to be kept low and transitioning to net zero is a central concern. Most of the discussion here focuses on traction power, but there are many other components that use energy that can contribute to efficiencies and sustainability. We chatted to Søren Rasmussen from Stroco to find out what the Danish heater manufacturer is doing in these areas.

Josephine Cordero Sapién: Stroco ApS manufactures heating solutions for buses. What’s the company’s back story?

Søren Rasmussen: The company was founded in 1972 by Jørgen Strøier together with Holger Pedersen. In 1972 Holger Pedersen was working at a garage in Varde, Denmark that dealt with buses and trains – it had a workshop for these types of vehicles. Strøier came to that garage from another company and the two got talking. They realised they could make a new type of heater for buses and trains though these days the company just makes heaters for buses.

What was new about the heaters they devised was that they were heaters that used water. Previously there were only air heaters on the market so Strøier and Pedersen invented this new type of heater.

Initially, Holger Pedersen ran a company called HP Machinery, while Strøier ran Stroco. Both of them passed on their companies to their sons – and HP Machinery became JP Machinery. In 2020 JP Machinery



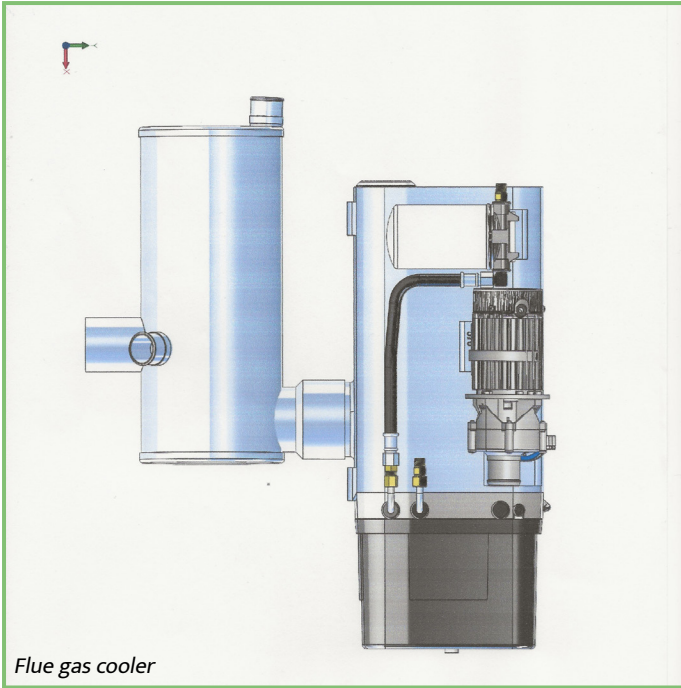
Stroco 35.02 LE Hybrid heater

then bought Stroco but later this year everything will be consolidated into just Stroco, which is easier for our customers to understand from a branding perspective.

As a company now, we make heaters for buses that are 100% Danish-made. Throughout our history, we’ve always been a first mover on new things in the bus manufacturing industry and we continue to innovate today.

JCS: What innovations does Stroco have in the pipeline?

SR: We’re currently working on a new product that will use the heat from the heater exhaust to feed back into the heater and heat up the water. This heat in the heater exhaust is nearly 300 degrees. By not letting this heat go to waste, you can save on fuel to run the heater, which makes it both more environmentally friendly and cheaper to run. We estimate that this will save between 10 and 20% of the cost of fuel.



Flue gas cooler

This is why we were recently chosen by Chinese bus manufacturer Golden Dragon. They will now only use Stroco heaters for all of their electric buses for the Nordic market. The first of these will start passenger service in Norway later this year. We've already sent our first heaters to China so they can be installed on these buses.

One of the features that makes our hybrid heater a versatile choice is that you can see the flame. When you use HVO as the fuel, the flame burns blue. When the flame is there, the heater is operational. If you can't see the flame, the heater can't run. It's a safety feature – like the pilot light in your boiler. Stroco hybrid heaters have a visible flame when using HVO as a fuel.

You see lots of electric buses that say on the side '100% fossil fuel-free' but that's not true if they're still using regular diesel for their heaters. And they have to use diesel if their heating pump isn't enough. This configuration is the case for many electric buses on the roads today. In that case it's not exactly true that they're 100% fossil fuel-free. Because our hybrid heaters permit HVO as a fuel, which is also known as renewable diesel, we make electric buses greener too.

Our aim is that this product will work not just with Stroco heaters but other existing heaters on the market where the heat from the exhaust can reach temperatures of 400–600 degrees.

This is a product for diesel buses, rather than electric buses. But there are still many of these in passenger service and this retrofit would help make the existing vehicles a little bit greener.

JCS: You also make heaters for electric buses, including a hybrid heater. What are its main benefits?

SR: One key benefit is that you can switch fuel sources. When there is enough power on the bus, you can use electric power to run the heater. But if there isn't enough power, you can switch to powering the heater using an alternative fuel such as HVO – hydrotreated vegetable oil –, diesel, biodiesel, ethanol or RME. As an aside, this is actually one of the benefits of our heaters – the wide range of fuels they will take. The customer is able to specify so our heaters are very versatile.

A lot of electric buses on the market today use heating pumps that cannot produce enough heat on the bus if outside temperatures drop to below zero, which is often the case in Nordic countries. If these buses are fitted with a hybrid heater, the heater will always produce sufficient heat, regardless of the external temperature.

JCS: What lies ahead for Stroco in 2023?

SR: We want to produce and sell as many Stroco heaters as possible! We are constantly developing our heaters to make them greener. We have a versatile product portfolio that offers customers low daily running costs and low maintenance costs. It's our objective to further develop our high-quality heaters and ensure our customers receive the optimal product for their needs.

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Fuel Saving Heaters

Danish produced heaters, designed to deliver better economy for your buses



Heaters:

- Runs on diesel, biodiesel, HVO, RME and ethanol
- Can be equipped for electric night operation
- Can be equipped with LE-function

Electricity:

- Fossil-free heating in electric buses
- Up to 4 heating elements
- From 7.5kW to 60kW
- From 400VDC to 727VDC

Hybrid:

- Heating for electric buses
- environment-friendly combi heater
- Specially developed for hybrid and electric buses
- 100% fossil free when using HVO

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