Denso Products and Services Americas, Inc.

DENSO spot coolers are commercial products that are significantly different from typical residential portable air conditioners.

DENSO introduced the world's first portable cooling unit in 1982. Our products are intended to provide emergency cooling in construction sites, telecommunication shelters, hospitals, warehouses and storage facilities. These units are significantly different from residential portable air conditioners in both size and functionality. They are bigger in size and are manufactured in small quantities. But most importantly, both the cool air and hot air (from the condenser) is rejected into the same space. In other words, there are no physical boundaries separating the air discharges. These units are commonly called spot coolers.

On the other hand, typical residential portable air conditioners are used in residential facilities, such as single or multifamily homes, nursing homes etc. These units are smaller in size and are manufactured in large quantities. Usually, they are available in either single-duct or dual-duct configurations that affect product performance. Single-duct units draw all of the condenser inlet air from the conditioned space without the means of a duct, and discharge the hot condenser outlet air to the unconditioned space through a duct. Dual-duct units draw some or all of the condenser inlet air from the unconditioned space through a duct, and may draw additional condenser inlet air from the conditioned space. The condenser outlet air is discharged to the unconditioned space by means of a separate duct.

Washington Department of Ecology should establish separate definitions for single-duct and dual-duct portable air conditioners

For the reasons outlined above, both the U.S. Department of Energy (DOE) and the California Energy Commission (CEC) are regulating DENSO's portable air conditioners (i.e. spot coolers) differently from residential portable air conditioners. We urge Washington Department of Ecology to do the same and establish definitions for single-duct and dual-duct portable air conditioners consistent with the DOE definitions listed in 10 CFR part 430.2 as shown below:

Single-duct portable air conditioner means a portable air conditioner that draws all of the condenser inlet air from the conditioned space without the means of a duct, and discharges the condenser outlet air outside the conditioned space through a single duct attached to an adjustable window bracket.

Dual-duct portable air conditioner means a portable air conditioner that draws some or all of the condenser inlet air from outside the conditioned space through a duct attached to an adjustable window bracket, may draw additional condenser inlet air from the conditioned space, and discharges the condenser outlet air outside the conditioned space by means of a separate duct attached to an adjustable window bracket.

Washington Department of Ecology should postpone the compliance date for spot coolers to January 1, 2025

As mentioned above, spot coolers are usually larger in size than typical residential portable air conditioners. On average, they have a larger refrigerant charge which is comparable to small commercial stationary air conditioners. Spot coolers are subject to the same safety standards as these commercial stationary air conditioners. Manufacturers like DENSO face the same challenges as commercial stationary air conditioner manufacturers and therefore should be treated the same way.

The transition to lower GWP refrigerants will take more than two years to complete. Products will have to be entirely redesigned. In addition, time will be needed to certify these products to the appropriate UL safety standards and test them to develop performance ratings (i.e. energy efficiency, cooling capacity etc.). The redesign and certification processes will take significantly longer than two years. That is why DENSO will not be ready to transition to lower GWP refrigerants by January 1, 2024.

The fact that there are some residential portable air conditioners using A2L refrigerants on the market today does not justify lumping all portable air conditioners into one category. We urge State of Washington to limit the compliance date of January 1, 2024 to single-duct and dual-duct portable air conditioners.

Summary

DENSO supports Washington Department of Ecology's efforts to reduce HFC emissions in the state of Washington. However, our spot coolers are commercial products that do not meet the typical definition of residential portable air conditioners. We believe that spot coolers should be treated like other commercial air conditioners and be required to meet the same compliance date of January 1, 2025.