

# HLR 100Z

HVAC Load Reduction Air Cleaning Module



## Decrease Energy Consumption, Lower HVAC Costs

The HLR 100Z module provides lower HVAC costs by reducing the load on HVAC systems from outdoor air. The HLR 100Z cleans indoor air so that it can be safely recirculated, complying with ASHRAE Standard 62.1 and is easily integrated with most HVAC system designs (including VRF). The award-winning, industry-proven Sorbent Ventilation Technology® inside the HLR 100Z helps owners lower equipment replacement costs, decrease energy consumption, and achieve decarbonization goals with the easiest, most cost-effective ventilation solution on the market.



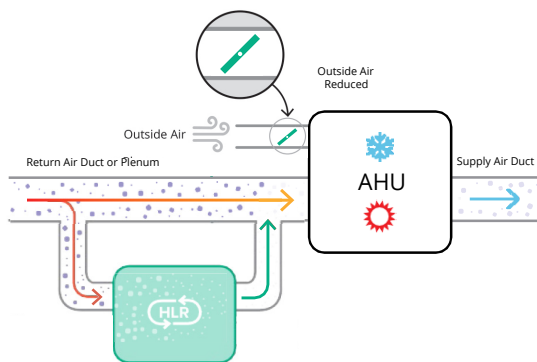
HLR 100Z Module

<b>SAVE ENERGY</b>	<b>REDUCE COSTS</b>	<b>INSTALL EASILY</b>	<b>REDUCE CARBON</b>	<b>IMPROVE AIR QUALITY</b>	<b>EARN LEED/WELL POINTS</b>	<b>NO BYPRODUCTS</b>

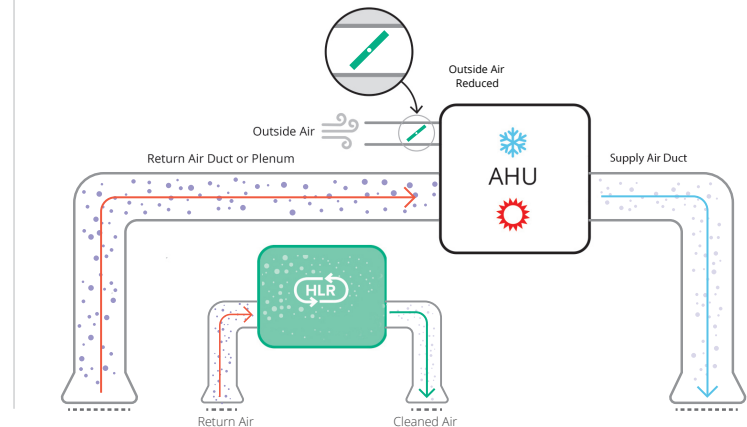
## How it Works

**Indoor Air Scrubbing** – One or more HLR 100Z modules can be installed on the return side of an air handling unit (AHU), a fan coil unit (FCU), or independent of the AHU/FCU. Air is drawn into the HLR 100Z by internal fans, which push the air through sorbent filters that capture and remove all the contaminants of concern from the air stream. Without producing any byproducts, the HLR 100Z then pushes clean air back into the return air stream or space. By cleaning recirculated air, outside air ventilation rates can be safely reduced by up to 85%, and new HVAC equipment can be downsized, using the ASHRAE Standard 62.1 IAQ Procedure.

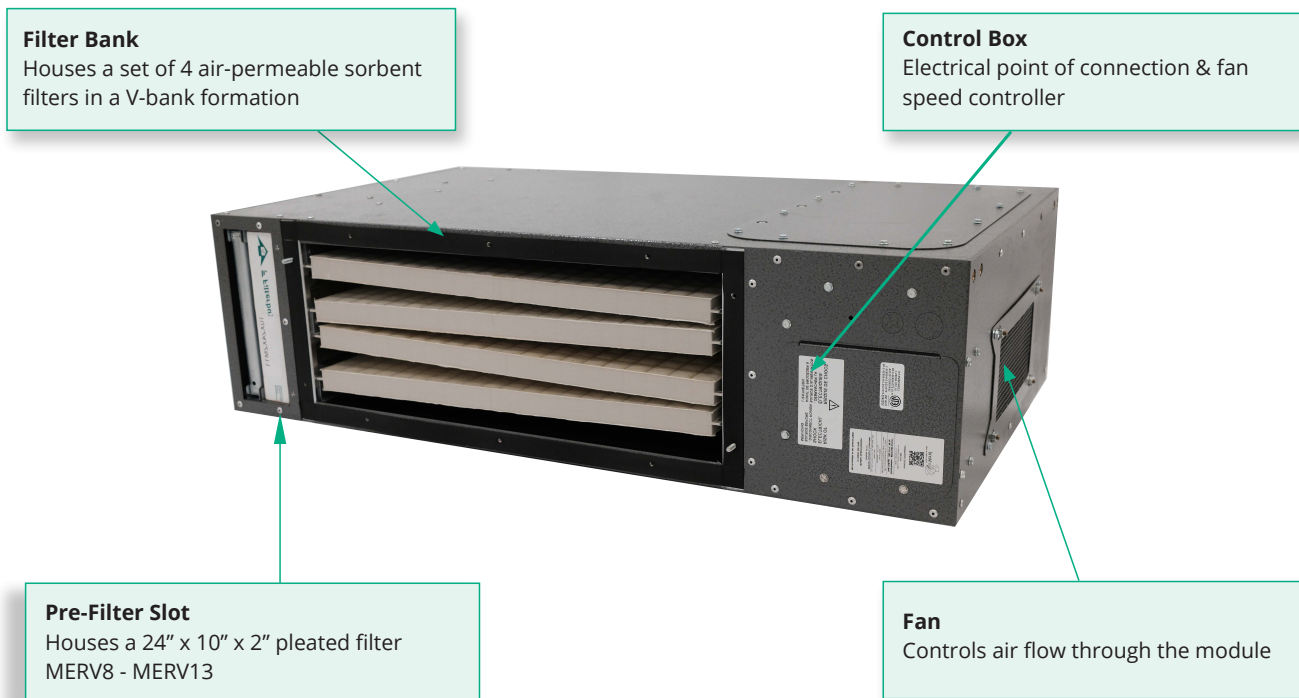
### Integrated with Airside Equipment



### Independent, Directly in Occupied Space



## What's Inside the HLR 100Z Module?



## Broadly Applicable

The HLR 100Z is a small indoor HLR module that integrates with a wide range of zone-based HVAC systems found in offices, schools, retail and other commercial building types that fall under ASHRAE Standard 62.1. Given its small size, flexible orientations, and simple installation, the HLR 100Z is ideally suited for existing building retrofits and new construction.



Office Spaces



Retail



K-12 Schools



Higher Education

## Proven, Award Winning Sorbent Ventilation Technology®

Over 1,000 HLR modules with Sorbent Ventilation Technology have been designed into building ventilation systems around the world by leading consulting engineers and HVAC contractors. Air cleaning efficiency has been validated by ASHRAE 145.2 testing, and energy savings field validated by the U.S. Department of Energy and multiple utilities who have provided incentives for installing HLR modules. Unlike many other air cleaning technologies, independent lab tests show that Sorbent Ventilation Technology does not produce any byproducts. Sorbent Ventilation Technology enabled products have been nominated for and won various awards including the HLR 100M winning 2021 HVAC Product of the Year from Consulting-Specifying Engineer magazine.



# 100Z Module Specifications

## GENERAL SPECS

Installation	Mechanical Room or Air Plenum
Construction	Single wall, Powder-coated Galvanized Steel
Sorbent Filters per Set	4
Typical Airflow	350 CFM
Sound Power Level	58 dBA, 350 CFM, ducted @ 3'
Maximum Allowed External Static Pressure	0.6 WG / 150 Pa with MERV 11 Pre-Filter*
Maintenance	Two-year Filter Replacement 3 to 6-month Pre-Filter Replacement*
Operating Life	20+ years with scheduled maintenance

## COMMUNICATIONS

Fan Speed	0-10 VDC
Start/Stop	24 VAC/DC

## POWER

Voltage (VAC)	Frequency (HZ)	MCA	MOCP	Power Consumption
208-277 V	50/60 Hz	1.32 A	15 A	300 W

## WEIGHTS

Module Shipping Weight	97 lbs	44kg
Filter Shipping Weight	66 lbs	30 kg
Installation/Operating Weight	163 lbs	74kg

## DIMENSIONS (Front View)

Length	40.8" / 1,036 mm
Height	11.3" / 287 mm
Depth	23.9" / 607 mm (Allow Additional 36" Clearance for Filter Service)
Inlet Duct	12.0" x 6.0" 305mm x 152mm
Outlet Duct	9.0" x 4.0" 229 mm x 102mm

## CERTIFICATIONS

HLR Module Safety	UL 60335-2-40:2017 Ed.4 CSA C22.2#236:2015 ed.5
Filter Bank and Filters	UL 900:2015 Ed.8
Air Cleaning Efficiency	ASHRAE 145.2
Compliant under ASHRAE 62.1 and IMC 403.2	

## ASHRAE Standard Compliance

### Standard 62.1 for Ventilation and Acceptable Indoor Air Quality

All of enVerid's HLR products are fully compliant under ASHRAE Standard 62.1. By using ASHRAE's performance-based Indoor Air Quality Procedure (IAQP) rather than the prescriptive Ventilation Rate Procedure (VRP), engineers can calculate a minimum ventilation rate that optimizes indoor air quality and energy efficiency. Introduced in 1981, IAQP determines outdoor air intake rates based on an analysis of contaminant sources and air cleaning capacity to stay below recommended contaminant concentration limits. Tools developed by enVerid's in-house engineering team, including enVerid's online IAQP Calculator, streamline the application of IAQP for engineers.

### Standard 145.2 for Assessing the Performance of Gas-Phase Air Cleaning Systems

HLR technology is one of the only air cleaning technologies to have undergone independent lab tests for cleaning efficiency using ASHRAE Standard 145.2. Independent labs have conducted ASHRAE 145.2 single-pass efficiency testing for all the contaminants of concern required to maintain acceptable indoor air quality in buildings.

\* The Pre-Filter replacement frequency varies based on building conditions. enVerid recommends changing it on the same schedule as other building filters.

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Energy Savings. Air Quality.

enVerid Systems' award-winning Sorbent Ventilation Technology® (SVT®) reduces the cost and carbon emissions of heating, ventilating, and air conditioning commercial buildings and increases their resiliency to polluted outside air. SVT delivers these benefits by filtering harmful contaminants from indoor air so that indoor air quality can be maintained with less outside air ventilation, which is energy intensive and expensive to condition and may be polluted. Reducing outside air requirements enables building owners to install smaller, less expensive HVAC systems that use less energy and to operate existing HVAC systems more energy efficiently. SVT is available in systems sold by leading HVAC manufacturers and in enVerid's HVAC Load Reduction® (HLR®) modules, which can be easily integrated with HVAC systems from any manufacturer. Over 1,000 HVAC systems with SVT have been designed into commercial, academic, and government buildings globally over the past ten years in full compliance with ASHRAE Standard 62.1 and the International Mechanical Code. SVT can also be used to earn LEED and WELL points. For more information, please visit [enverid.com](https://enverid.com)