

Venturi Valve Upgrade Kit

Negative Pressure Clinical Research Laboratory



The Venturi Valve Upgrade Kit is an ideal solution for renovating complex labs because the original valve structure can remain in the duct work.

Biocontainment Concerns

Clinical research facilities require precise HVAC controls to maintain proper room pressure, prevent contamination, and preserve research integrity. Due to the strict lab requirements, renovations can be very challenging if not planned properly.

A clinical lab facility located in New York conducting research on cancer, autoimmune disorders, Alzheimer's disease, schizophrenia, and bioelectric medicine required updates to their HVAC infrastructure to modernize their legacy control system and reduce operating costs.

Process

After completing a site survey, which included two floors, and determining that the valve bodies were still in good condition, our team mapped out an upgrade strategy in overnight shifts so as not to disturb researchers and ensure the labs were kept in ideal conditions at all times.

The team removed ceiling panels and detached the pneumatic controls of the legacy brand, which previously required multiple gateways and replaced them with our Upgrade Kit components. Valve types included double ganged supply valves, single exhaust valves for fume hoods, and general exhaust valves which were all hardwired for reliability due to the sensitive nature of the research being conducted.

Results

Gateways and pneumatic controls were eliminated, and fast-acting digital controls were added. The lab HVAC system was then able to tie into the main Metasys building control system, providing a clear view of vital information. The upgrade also eliminates costly 3rd party maintenance visits. From site survey to final turnover, the project only took five weeks to complete.