The UCR system is suitable for cleanroom classes up to 3.0 according to DIN EN ISO 14644-1. Self-supporting sheet metal provides the basic UCR construction of the plenum, combined with aluminum, stainless steel members with a standard height of 400 mm, connected to aluminum, steel or stainless steel pedestals for floor mounting, or suspended from the room ceiling. Either Ultraflex Ceiling Grid types UFR-55/70-T/E and UFR-55/70-T/P or Ultraflex UFR Ceiling Grids can be used according to ISO-GAP of FDA can be used for the ceiling grid. Filter Fans for the FFU types can be driven by motors or electrically commutated DC motors, supply the cleanroom with clean air (prefilter optional). The UCR system is provided with standard PVC curtains. The FFUs draw room air in and blow it through a HEPA filter into the working area, which is washed with a vertical, low turbulence air. The contamination in the working area is pushed out to the bottom.

Open Systems
The air is flowing below the working area perimeter curtains into the surrounding room and is absorbed again by the FFUs.

Closed System
The UCR system is designed with partition walls and closed ceiling grid plenum. The return air is circulating through the return air chases back to the plenum and is absorbed again by the FFUs. Alternatively, the return air flow for cleanroom classes ISO 7 and 8 can take place through perforated ceiling blisters.

Pedestals
Aluminum anodized
Powder-coated steel similar to RAL 5010
Brushed stainless steel

Note
Additional submittal text and installation concepts can be found in the technical descriptions of the single components.
Product Description

The UCR is a free-standing fully functional cleanroom. The UCR can operate with laminar or turbulent air flow and meets the requirements for classroom classes 2.0 to 8.0 according to DIN EN ISO 14644-1 or M 2.5/1 to M 6.5 (ISO3585) according to US Federal Standard 209E. The UCR system can be installed as an open or closed system, and available wall materials include single PVC strip curtains or PVC panel curtains.

Key Features

- Self-supporting module sheet metal 1 provides the basic UCR construction, combined with stainless steel frames with a standard height of 400 mm, connected to aluminium, stainless or stainless steel pedestals. 1. Either Ultraflex Ceiling Grid (types UFR-55/70-T/E and UFR-55/70-T/P) or Ultralite Cassette Ceiling which is made according to EU-GMP or FDA can be used for the cleanroom ceiling. 2. Filter Fan Units (FFUs) provided with AC motors or electronically commutated EC motors, both have external motor motors with adjustable height pedestals either floor-mounted or on casters. 3. Alternatively, the FFUs can be from 2000 mm to 3000 mm. Any intermediate columns or hangers. The clear height of the UCR can be from 2000 mm to 2500 mm. 4. The FFUs draw room air in and blow it through a HEPA filter (optional prefiltor – standard sensible capacity 2 kW) for Filter Fan Units. 5. The UCR system comes standard with walls and plenum covers with a standard height of 400 mm, connected to aluminium, stainless steel, Macrolon or glass. Coated floors and raised floors made of aluminium or steel are also part of the system. There are various possibilities to combine the different components. Complete solutions with integrated make-up air, exhaust air, and cooling and controls are also available.

System Construction and Function

Self-supporting module sheet metal 1 provides the basic UCR construction, combined with stainless steel frames with a standard height of 400 mm, connected to aluminium, stainless or stainless steel pedestals. 1. Either Ultraflex Ceiling Grid (types UFR-55/70-T/E and UFR-55/70-T/P) or Ultralite Cassette Ceiling which is made according to EU-GMP or FDA can be used for the cleanroom ceiling. 2. Filter Fan Units (FFUs) provided with AC motors or electronically commutated EC motors, both have external motor motors with adjustable height pedestals either floor-mounted or on casters. 3. Either surface mounted or recessed light fixtures. 4. Filter Fan Unit COMPACT with single phase AC motor or electronically commutated EC motor. Self have external motor motors with adjustable height pedestals. 5. Prefilter and/or cooling coil (standard sensible capacity 2 kW) for Filter Fan Units. 6. Air-flow adjustment via plug & play cabling with manual speed controller or programmable LON control. 7. Plexus or PVC panel curtains or PVC strip curtains. 8. Glass or Macrolon glazing. 9. Aluminium or stainless steel doors. 10. Either surface mounted or recessed light fixtures. 11. Plenum covers.

Flexible Flowpath

To achieve this flowpath the UCR is installed with walls and plenum covers. Air simply flows out into the surrounding room. In closed systems, the air is returned through the return air chases 8 and the plenum to the FFUs. To achieve this flowpath the UCR is installed with walls and plenum covers. Problems can be integrated in the return air chases of the ceiling system if required.

The length and width of the UCR can be determined based on the space requirements. Depending on the location of seating components in open to 4900 mm, can be built without any determinable columns or frames. The clear height of the UCR can be from 2000 mm to 2500 mm.