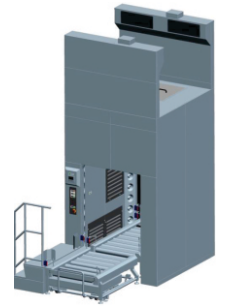


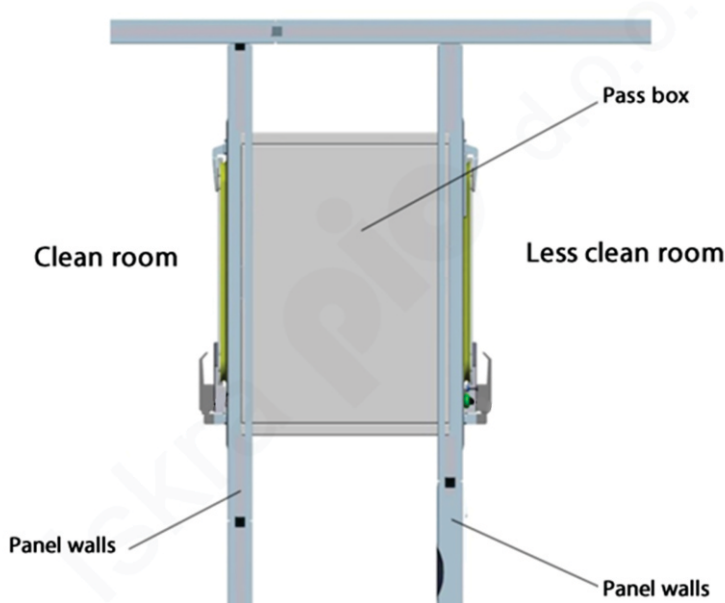


MATERIAL AIR LOCKS

Operator, product and environment protection
ISO 4 to ISO 8 (ISO 14644-1:1999)
Class A to D according to GMP



Material barriers enable transfer of pharmaceutical material and equipment between rooms with different cleanliness classifications and pressure cascades. With a controlled interlock the material barriers prevent irruption/contamination of air from less clean into clean room and opposite. They are designed and made according to GMP directives and usually built-in walls (size according to customer demands).



Basic characteristics

- system works in interlock function (only one door can be opened at the time)
- easy maintenance
- easy cleaning and disinfecting
- visible surfaces are brushed, welds and connections are treated and cleaned
- rounded corners
- sealant construction of the system
- implementation of safety measures
- easily accessible components
- easy control
- pass-through bench housing - AISI 304,
- pass-through tunnel - AISI 304 or AISI 316
- available in different sizes
- implementation according to customer demands

Passive material air locks

- mechanical interlock function
- doors on both sides are sealed, equipped with handles and made of safety glass
- possibility of UV light



Active material air locks

- electrical interlock function
- signalization lights on both sides
- air-ventilation system - recirculation
- doors on both sides are sealed, equipped with handles and made of safety glass
- filtration - HEPA filter - gel sealed (on the ceiling)
- microprocessor system control

Active material air locks have an additional ventilation system. Recirculating AHU unit provides the cleaning process with vertical – unidirectional distribution of clean air through the bench.

VHP/H2O2 Pass-box

Sterilization by H2O2 evaporation

- integrated Iskra PIO VHP sterilization system (open loop)
- electrical interlock function
- two sealant doors with hardened safety glass
- leak proof design with inflatable silicone seals
- signalization lights on both sides
- air-ventilation system
- filtration - HEPA filter - gel sealed (on the ceiling)
- SIEMENS controller
- SCADA/HMI



De-dusting cabin

De-dusting system removes particles from material surface and establishes clean conditions inside the cabin.

- double vertical sliding doors with safety elements
- de-dusting function:
 - jets/nozzle for efficient de-dusting
- cleaning function:
 - sufficient number of airflow changes inside the air lock
 - recirculation AHU unit
 - F9 and H14 HEPA filtrated air
- suitable pressure among zones (overpressure/under-pressure)
- control system:
 - SIEMENS controller
 - operational modes: automatic, manual, service
 - control touch panels on both sides for simple and efficient operation
- possibility of automatic transport

Technical details

Material air locks are totally autonomous units. They have its own control which assures interlock function between doors and a signalization for the user. Optionally they can provide potential free status signals. Construction is easy to clean, done from stainless steel in general, all materials are water-resistant, stable to cleaning and decontamination agents and to UV light.



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