INTEGRITY™
CLEANROOM PRODUCTION SOLUTIONS

ANTISTAT™
ESD & PRODUCTION CONSUMABLES

Learning about Contamination Control - Part 2:

What Makes a Cleanroom

Contents

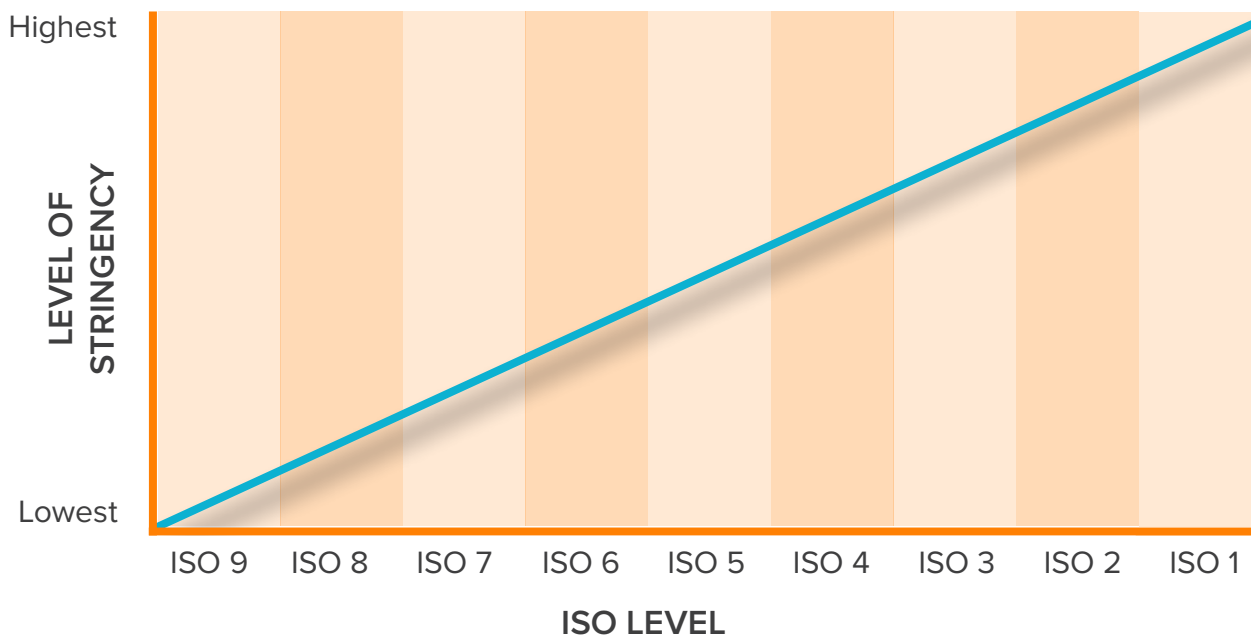Call one of our ESD experts: +1 512-713-0127

The Fundamentals of a Cleanroom

ISO levels within your cleanroom

Depending on your sector, industry and needs, different ISO levels will be required to ensure the quality, reliability, and performance of products that require a pristine environment for manufacturing, testing, or research.

The ISO ranking works with ISO 9 being the least stringent of standards, where cleanroom measures are minimal, while ISO 1 holds the most stringent of standards, where contamination control is at its highest.

Types of cleanroom
There are several different styles and types of cleanrooms - each have their own benefits and features, making them unique.

Turnkey Cleanroom
These cleanrooms are heavy duty and seen as a more permanent solution. These cleanroom set ups are built to last.

Modular Cleanroom
Modular cleanrooms are fully manufactured off site, usually built of a metal framework and constructed on site. Because they are built on site, they can be easily expanded, moved and changed to the needs of the user.

Softwall (Flexible Wall) Cleanroom
These cleanrooms use clear vinyl strip curtains which isolate the cleanroom from the outside environment, while also allowing for easy passage of materials and personnel in and out of the clean area.

Hybrid Cleanroom
Hybrid cleanrooms are a mix of modular cleanrooms with either softwall or standard building walls. These are a cheaper solution to modular cleanrooms and speeds up the construction process.

Mobile Cleanroom
Mobile cleanrooms are constructed off site and can be brought to location fully built. They can either be standalone cabins or built within large vehicles such as lorries for full mobility.

Inflatable Clean Tent
Intended for users that require temporary cleanroom facilities, clean tents are lightweight, low particulate and portable.

TYPE OF CLEANROOM	ISO RANGE
Turnkey Cleanroom	ISO 4
Modular Cleanroom	ISO 7
Softwall Cleanroom	ISO 6
Hybrid Cleanroom	ISO 7
Mobile Cleanroom	ISO 5
Inflatable Clean Tent	ISO 5

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What we offer:

At Integrity, we provide Turnkey, Modular and Softwall cleanrooms and Inflatable Clean Tents (as pictured).

As experts in the industry, we offer one of the most comprehensive ranges of cleanrooms on the market.

Our efficient cleanroom construction service means we can have your cleanroom fully operational within days.

Turnkey Cleanroom

Modular Cleanroom

Softwall Cleanroom

Inflatable Clean Tent

Choosing your Cleanroom Setup

Cleanroom Flexibility

When it comes to cleanrooms, it is easy to upgrade and downgrade between ISO levels meaning you can keep your clean area performing at a premium rate.

The flexibility of altering your cleanroom can be as easy as adding additional environmental controls such as lights, ESD Antistatic, temperature, humidity and particulates (such as High Efficiency Particulate Air (HEPA) filters or Ultra Low Penetration Air (ULPA) filters).

Visit our website: **www.integritycleanroom.com**

ISO levels depending on your Industry

Below is a basic guide to recommended cleanroom setups by industry. However, speaking to a professional is important as the classification of cleanroom and the controls required is dependent on specific needs.

INDUSTRY	ISO RANGE	AIRFLOW RATE	CONTROLS	ADDITIONAL FEATURES
Aerospace	ISO 5	240	Temp, Humidity	No outgas materials
Automotive	ISO 8	30	HVAC*	Robust
Defence	ISO 6	150	HVAC	ESD Safe
Electronics	ISO 7	90	HVAC	ESD Safe
Energy & Nuclear	ISO 7	90	HVAC	Soft side walls for cable connection
Food	ISO 8	30	HVAC	N/A
Healthcare	ISO 5	240	Temp, Humidity, HVAC	Laminar Flow
Pharmaceutical	ISO 6	150	Temp, Humidity, HVAC	Laminar Flow
Photolithography	ISO 6	150	Light	N/A**
Semi-conductor	ISO 5	240	Temp, Humidity, HVAC	ESD Safe

*HVAC - Heating, ventilation, and air conditioning (HVAC) is the use of various technologies to control the temperature, humidity, and purity.

**Whilst yellow (amber) lights were originally seen as a mandatory feature within Photolithography rooms, due to the introduction of LED lights in the cleanroom, they are no longer compulsory and are down to user preference.

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Additional Cleanroom Features

Some additional features installed within a cleanroom can increase convenience and even increase productivity.

These features are usually added when first building the cleanroom, however, depending on size of your cleanroom and surrounding areas, can be added on at a later date.

Air Shower

Air showers are used to remove the dust particles or particulate from cleanroom personnel. It is located at the main entrance of the cleanroom.

Transfer Hatch

Using a transfer hatch (or a pass through) to pass materials into, out of, or between sections of a cleanroom helps to limit traffic and maintain appropriate pressure in the cleanroom as well as reducing potential for contamination.

Clean Hood

The clean hood laminar flow booth provides a bench top, particle-free working environment for your process.

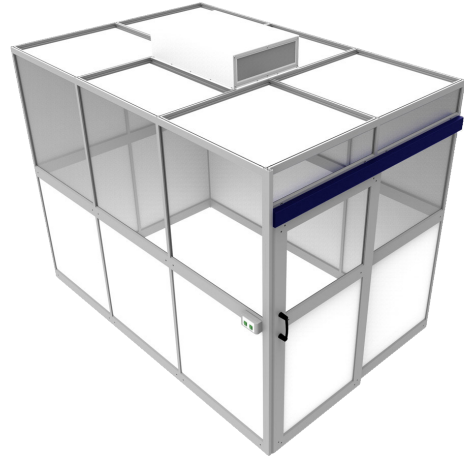Air Shower

Transfer Hatch

Clean Hood

Our Range

Cleanrooms

Integrity Portable Cleanroom Tent*

Integrity Modular Cleanroom**

* Three sizes available.
** Photo currently showing a 3 x 2 cleanroom. More sizes available.

Cleanroom Features

Transfer Hatch

Laminar Flow

Integrity Clean Hood

Follow the QR code to the left for our cleanroom tent. For other styles of cleanroom please contact our expert team.

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Notes:

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ISO 9001 QUALITY ASSURED

We are focused on meeting our customer's expectations and delivering exceptional customer satisfaction.

CUSTOMER FOCUSED APPROACH

With over 35 years' experience, our service culture is the very core of our customer's success.

STANDARD OF EXCELLENCE

From beginning to end our team of knowledgeable experts are here to help.

ADDRESS

ANTISTAT Inc. 1000 Heritage Center Circle,
Round Rock, Texas 78664 US

CONTACT US

+1 512-713-0127 | sales@integritycleanroom.com | www.integritycleanroom.com
+1 512-580-4220 | sales@antistat.com | www.antistat.com

ANTISTAT INC.

Registered: TEXAS 802169334 EIN: 47-3354006

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Updated January 2024