SKS ENGINEERS, LLC

CLEANROOMS

BY SKS ENGINEERS

LET SKS PARTNER WITH YOU TO CREATE THE PERFECT ENVIRONMENT FOR YOUR PRODUCTS

www.sksengineers.com

SERVICES

SKS has over 20 years of turnkey design for industrial process, hygienic food production, and medical isolation cleanrooms. We also review existing cleanrooms for compliance, safety, and retrofitting for new processes. We have a firm consisting of process, control, electrical, mechanical, piping, structural and code compliance engineers. We provide assistance from concept through final commissioning. Our firm makes sure your final product is safe, efficient, and meets all of your specified goals.

STANDARDS

SKS follows all standards to ensure your cleanroom will be designed properly. The ISO 14644 Cleanroom Standards classifies a cleanroom based on the size and number of airborne particles per cubic meter per air.

ISO 14644-1 CLEANROOM STANDARDS

Class	maximum particles / m3						FDE STD 209E equivalent
	≥0.1 µm	≥0.2 µm	≥0.3 µm	≥0.5 µm	≥1 µm	≥5 µm	
ISO 1	10	2.37	1.02	0.35	0.083	0.0029	
ISO 2	100	23.7	10.2	3.5	0.83	0.029	
ISO 3	1,000	237	102	35	8.3	0.29	Class 1 Cleanroom
ISO 4	10,000	2,370	1,020	350	83	2.9	Class 10 Cleanroom
ISO 5	100,000	23,700	10,200	3,500	832	29	Class 100 Cleanroom
ISO 6	1,000,000	237,000	102,000	35,000	8,320	293	Class 1,000 Cleanroom
ISO 7	10,000,000	2,370,000	1,020,000	350,000	83,200	2,930	Class 10,000 Cleanroom
ISO 8	100,000,000	23,700,000	10,200,000	3,500,000	832,000	29,300	Class 100,000 Cleanroom
ISO 9	1,000,000,000	237,000,000	102,000,000	35,000,000	8,320,000	293,000	Room air

CONTACT US

Call or email Chris Shaffer for more information or to visit any of our cleanroom projects.

office: 217-877-2100
cell: 217-454-2101
email: chris.shaffer@sksengineers.com

CLEANROOM EXPERTISE

SINGLE PASS CLEANROOMS

- Ambient air is filtered into the cleanroom and transferred out into the surrounding building space.
- Typically used where there is no need for temperature or humidity control

RECIRCULATING AIR CLEANROOMS

- Air handling units condition the air, which is drawn through low wall returns into the ceiling plenum.
- Typically used for cleanrooms with temperature and humidity requirements.

CLIMATE CONTROL

- Proper mechanical equipment sizing, room isolation and control system design is critical to achieve the tight humidity and temperature tolerances of many processes.
- Well thought out filtration and ventilation design minimizes down time for maintenance.

ELECTRICAL DESIGN

- Proper electrical and static grounding design minimizes product loss.
- Proper electrical system design provides a system that is safe even under harsh production conditions such as pressurized cleaning, chemical exposure and temperature extremes.