



CLEANROOM DESIGN GUIDE

ISO Class	ISO 5	ISO 6	ISO 7	ISO 8
Fed Std 209E	Class 100	Class 1000	Class 10000	Class 100000
GMP Grades	A & B		C	D
National Partitions Design				
Wall System	CleanWall Ultra (Aluminum Post)	CleanWall Ultra (Aluminum Post)	All Systems (Steel Post)	All Systems (Steel Post)
Minimum Wall Surface	Steel	Steel or Vinyl	Vinyl	Vinyl
Optional Surface	Aluminum, HPL, FRP	Aluminum, HPL, FRP	Steel, Aluminum, HPL, FRP	Steel, Aluminum, HPL, FRP
National Partitions Window Design	Flush Window	Flush Window	Standard or Flush Window	Standard or Flush Window
Lights	Incorporated in HEPA filter	LED or Sealed Fixture	LED or Sealed Fixture	LED or Sealed Fixture
Ceiling and Roof				
Ceiling Type	Mod/T-bar	T-bar	T-bar	T-bar
Grid	gasketed	gasketed	gasketed	gasketed
Special items	Hold down clips	Hold down clips	Hold down clips	Hold down clips
Grid support special item	All-thread w/ unistrut all-thread rod turnbuckles	12 ga wire to grid. 10 ga wire to filter turnbuckles at filter	12 ga wire to grid. 10 ga wire to filter turnbuckles at filter	12 ga wire to grid. 10 ga wire to filter turnbuckles at filter
Roof	3" Steel Panel	22 Gauge Roof Deck	22 Gauge Roof Deck	22 Gauge Roof Deck
Beam Spacing	4' o.c.	4' o.c.	8' o.c.	8' o.c.
Roof Load (minimum)	40 PSF	30 PSF	20 PSF	10 PSF
Mechanical Design (An engineer's verification of the mechanical design for your application is recommended.)				
Air Change/Hour	250-600	150-250	50-120	20-50
Filter Cover	70-100%	30-60%	10-30%	5-10%
Filter Velocity	70-110 FPM	70-110 FPM	70-110 FPM	70-110 FPM
Filter Type	99.99 (4-9's) FFU's	99.99 (4-9's) FFU's	99.97 minimum	99.97 minimum
Fan Filter Units (FFU)	Yes	Yes	No	No
Plenum Design	Sealed Plenum	Sealed Plenum	Direct Duct to HEPA	Direct Duct to HEPA
Air return	Low wall	Low wall	Low wall	Low wall/ceiling
Air return registers	Eggcrate optional damper	Eggcrate	Eggcrate	Eggcrate
Miscellaneous (by others)				
Flooring (depends on room use)	Mipolam or equal	Mipolam or equal	Sheet vinyl	Sheet vinyl
Base Molding	6" Cove	6" Cove	6" Cove	4" Rubber
Optional Floor Conductive or nonconductive HPL	Perforated access	Perforated access	Optional	Optional
Paints	Epoxy, Powder Coat, Enamel	Epoxy, Powder Coat, Enamel	Powder Coat, Latex, Enamel	Powder Coat, Latex, Enamel
Certification at Rest	Filter and room scan/report	Filter and room scan/report	Filter and room scan/report	Filter and room scan/report

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This information is provided as a guide, no warranty of any kind is provided.

Consult with a mechanical engineer to verify your application's design requirements.