

Air Volume Calculations for CR Spaces - Table B-1

Project: Cleanrooms Facility for Semiconductors Research

Clean Rooms Facility from IZO 4 : 9 :System

Quotation: BADRY CRT Quote No. 16201-00, Rev 00 - April 2021

(Mech., Elec. & Infra.) - Main Contractor :Client

S.N	Space Ref	Space Name	Classification		Space Area M ²	Space Area Ft ²	Filter Cover-age %	Filter Area M ²	Space Volume M ³	Space Volume Ft ³	ACPH	FPM	CFM Required	AHU Covering
			ISO	CLASS										
1	EN	Facility Entrance	8	100,000	18	194	5%	1	54	1,907	10	8	318	AHU-1 40,000 CFM
2	GR	Changing Room	8	100,000	35	377	5%	2	105	3,709	10	8	618	
3	AL1	Clean Corridor 1	7	10,000	9	97	10%	1	27	954	60	15	954	AHU-2 5,000 CFM
4	WA1	Working Area 1	6	1,000	162	1,747	25%	41	487	17,192	150	27	42,980	
5	GR	Gas Room	7	10,000	30	323	10%	3	90	3,179	60	15	3,179	AHU-3 40,000 CFM
6	YR1	Yellow Room 1	5	100	48	517	65%	31	144	5,086	240	40	20,344	
7	AL2	Clean Corridor 2	7	10,000	18	194	10%	2	54	1,907	60	15	1,907	AHU-4 30,000 CFM
8	LAB1	Clean Room Lab 1	4	10	66	710	100%	66	198	6,993	366	60	42,629	
9	WA2	Working Area 2	6	1,000	66	710	25%	17	198	6,993	150	27	17,483	AHU-5 40,000 CFM
10	YR2	Yellow Room 2	5	100	66	710	65%	43	198	6,993	240	40	27,973	
11	RL	Research Lab	6	1,000	66	710	25%	17	198	6,993	150	27	17,483	AHU-6 30,000 CFM
12	SR	Student Lounge	7	10,000	66	710	10%	7	198	6,993	60	15	6,993	
13	AP1	Aisle Path 1	9	1,000,000	60	646	N/A	0	180	6,358	5	5	530	
14	AP2	Aisle Path 2	9	1,000,000	60	646	N/A	0	180	6,358	5	5	530	
S1	CRF	CR-SC / Air Volume CALC			770	8,292	30%	229	2,311	81,615	Total CFM Required		183,922	185,000