

Colorado Convention Center Building Air Health

The Colorado Convention Center (CCC) is committed to researching and adding technology and processes that will keep all at the CCC safe and well going forward through and after these challenging times, whether a visitor or an employee.

MERV 8+Multi Sak & 13 Pleated Filters

The CCC continues to maintain and exceed LEED Certification IAQ requirements as the HVAC systems are fitted with MERV 8 Pleated Filters paired with Multi Sak filters equaling MERV 13 performance rate and MERV 13 Pleated filters, respective to the size of the AHU. This puts the CCC well above Residential/Commercial which is MERV 10 and just below Hospital & General Surgery which is MERV 14.




Global Plasma Solutions (GPS)

GPS Ionization units have been added to all Air Handler Units (AHU) and Heater Pumps giving CCC 100% coverage with ionization unit. These new units pump ions into the air system, those ions travel throughout the system and attach to virus and bacteria thus killing them by removing their hydrogen or they agglomerate with allergens, dust, and other particles allowing for the MERV 8+ and MERV 13 filters to capture them. The product has a 10 year life span and burns the energy it takes to power a lightbulb.



Air Handler & Changes by Areas



Ballrooms & Theatre - Dimensions & ACH

Ballrooms & Theatre	Dimensions W' x L'	Square Feet	Ceiling Height	ACH Calculations		
				Served by FR-11 & AHU-25		
				Volume	CFM	ACH
Mile High => AHU-25				1726200	90000	3.13
Full Ballroom (1-4)	180 X 265	47700	30	1431000		
Prefunction	80 X 246	19,680	15	295200		
Four Seasons => FR-11				1229040	95355	4.66
Full Ballroom (1-4)	146 X 236	34456	30	1033680		
Prefunction	74 X 176	13,024	15	195360		
Bellco Theatre => AHU-38, 39,40,41, 42 & 43				1277270	198000	9.30
Full Theatre		36628	27.5	1089770		
Prefunction / Lobby		12,500	15	187500		
Notes: Calculated with 10% outside air.						
Revised: 01/23/2021						

Abbreviations:
 ACH = Air Changes per Hour
 FR = Fan Room
 AHU = Air Handler Unit
 CFM = Cubic Feet per Minute





Exhibit Halls - Dimensions & ACH

Exhibit Halls	Dimensions W' x L'	Square Feet	Ceiling Height	ACH Calculations		
				Served by Various (See Below)		
				Volume	CFM	ACH
A Hall => FR-01 & FR-02				3150000	293600	5.59
Full Exhibit Hall A		105000	30	3150000		
B Hall => FR-03 & FR-04				2700000	293600	6.52
Full Exhibit Hall B		90000	30	2700000		
C Hall => FR-05 & FR-06				2850000	293600	6.18
Full Exhibit Hall C		95000	30	2850000		
D Hall => AHU-16 & AHU-17				2760000	340000	7.39
Full Exhibit Hall D		92000	30	2760000		
E Hall => AHU-19 & AHU-20				2730000	265000	5.82
Full Exhibit Hall E		91000	30	2730000		
F Hall => AHU-21 & AHU-22				3180000	250000	4.72
Full Exhibit Hall F		106000	30	3180000		
Notes: Calculated with 10% outside air.						
Revised: 01/23/2021						

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Air Handler & Changes by Areas (cont.)




Meeting Rooms => Dimensions & ACH

Meeting Room #	Dimensions W' x L'	Square Feet	Ceiling Height	ACH Calculations		
				Served by FR-07 & FR-09		
				Volume	CFM	ACH
100s => FR-09				810480	125000	9.25
101	30 X 30	900	15	13500		
103	34 X 44	1,496	15	22440		
105	30 X 44	1,320	15	19800		
107	30 X 44	1,320	20	26400		
109	30 X 44	1,320	20	26400		
111	30 X 44	1,320	20	26400		
113	28 X 44	1,144	20	22880		
102	34 X 44	1,496	15	22440		
104	30 X 44	1,320	15	19800		
106	29 X 44	1,276	15	19140		
108	30 X 44	1,320	15	19800		
110	30 X 44	1,320	15	19800		
112	28 X 44	1,144	15	17160		
100s Corridor	21 X 231	4,851	20	97020		
B Lobby		12,500	20	250000		
Four Seasons BOH		12,500	15	187500		
200s => FR-07				741575	127580	10.32
201	43 X 57	2,451	20	49020		
203	43 X 57	2,451	20	49020		
205	47 X 57	2,679	20	53580		
207	47 X 57	2,679	20	53580		
202	29 X 29	841	15	12815		
204	29 X 29	841	15	12815		
206	29 X 29	841	15	12815		
208	29 X 29	841	15	12815		
210	31 X 29	899	15	13485		
212	30 X 29	870	15	13050		
200s Corridor	21 X 214	4,494	20	89880		
A Lobby		13,000	20	260000		
A Concourse	25 X 219	5,475	20	109500		
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Air Handler & Changes by Areas (cont.)



Meeting Rooms => Dimensions & ACH						
Meeting Room #	Dimensions W' x L'	Square Feet	Ceiling Height	ACH Calculations		
				Served by AHU-24 & AHU-26		
				Volume	CFM	ACH
300s => AHU-24				1282540	161000	7.53
301	29 X 57	1,653	20	33060		
302	29 X 57	1,653	20	33060		
303	29 X 57	1,653	20	33060		
304	29 X 57	1,653	20	33060		
300s Corridor	18 X 140	2,520	20	50400		
F Lobby		13,500	20	270000		
F Concourse	40 X 200	8,000	20	160000		
400s => AHU-24						
401	29'X 57	1,653	20	33060		
402	29 X 57	1,653	20	33060		
403	29'X 57	1,653	20	33060		
404	29 X 57	1,653	20	33060		
405	29 X 57	1,653	20	33060		
406	29 X 57	1,653	20	33060		
407	29 X 57	1,653	20	33060		
400s Corridor	18 X 240	4,320	20	86400		
D / E Lobby		9,504	20	190080		
E Concourse	30 X 270	8,100	20	162000		
500s => AHU-26				698860	88000	7.56
501	29 X 57	1,653	20	33060		
502	29 X 57	1,653	20	33060		
503	29 X 57	1,653	20	33060		
504	29 X 57	1,653	20	33060		
505	29 X 57	1,653	20	33060		
506	29 X 57	1,653	20	33060		
507	29 X 57	1,653	20	33060		
500s Corridor	18 X 226	4,068	20	81360		
D Lobby		9,504	20	190080		
D Concourse	70 X 140	9,800	20	196000		
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Air Handler & Changes by Areas (cont.)



Meeting Rooms => Dimensions & ACH						
Meeting Room #	Dimensions W' x L'	Square Feet	Ceiling Height	ACH Calculations		
				Served by FR-08 & FR-10		
				Volume	CFM	ACH
600s => FR-08				968479	131745	8.16
601	38 X 57	2,166	20	43320		
603	38 X 57	2,166	20	43320		
605	42 X 57	2,394	20	47880		
607	44 X 57	2,508	23	57664		
602	27 X 29	783	15	11745		
604	31 X 29	899	15	13485		
606	27 X 29	783	15	11745		
608	31 X 29	899	15	13485		
610	29 X 29	841	15	12615		
612	30 X 29	870	15	13050		
600s Corridor	21 X 203	4,263	15	63945		
C Lobby		6,000	20	120000		
D Lobby		9,504	20	190080		
Bellco Lobby		12,500	20	250000		
C Concourse	25 X 203	5,075	15	76125		
700s => FR-10				899130	125000	8.34
701	29 X 30	870	15	13050		
703	34 X 44	1,496	15	22440		
705	30 x 44	1,320	20	26400		
707	30 X 44	1,320	20	26400		
709	30 X 44	1,320	20	26400		
711	28 X 44	1,144	20	22880		
702	34 X 44	1,496	15	22440		
704	30 X 44	1,320	15	19800		
706	30 X 44	1,320	15	19800		
708	30 X 44	1,320	15	19800		
710	30 X 44	1,320	15	19800		
712	28 X 44	1,144	15	17160		
700s Corridor	21 X 203	4,263	20	85260		
B Lobby		12,500	20	250000		
C Lobby		6,000	20	120000		
Four Seasons BOH		12,500	15	187500		
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Air Handler & Changes by Areas (cont.)



Other Spaces - Dimensions & ACH						
Ballrooms	Dimensions W' x L'	Square Feet	Ceiling Height	ACH Calculations		
				Served by Various (See Below)		
				Volume	CFM	ACH
Centerplate Kitchen => AHU-30						
	Full Kitchen	22718	10	227180	31400	8.29
Which Wich => ? Assumed (2) FCUs @ 1500 CFM						
	Entire Space	3506	10	35060	3000	5.13
Pizza Republica => ? Assumed (4) FCUs @ 1500 CFM						
	Entire Space	5489	10	54890	6000	6.56
Art Retailer => ? Assumed (1) FCUs @ 1500 CFM						
	Entire Space	819	15	12285	1500	7.33
Notes: Calculated with 10% outside air.						
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 CFM = Cubic Feet per Minute
 FCU = Fan Coil Unit