CMTA
A LEGENCE Company

Building Science Leadership

SHOP DRAWING AND SUBMITTAL REVIEW

December 10, 2024

Project Name: **Cabarrus County Behavioral Health** Project Number: **D22-2545**

Submittal description: **388 233600-1.4-A Air Terminal Units** Reviewed By: RD

Engineer's review is only for checking conformance with the design concept and contract documents. Review comments or lack thereof shall not be considered as relieving the contractor from meeting the requirements of the construction documents, including plans and specifications. The contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to the fabrication process or to techniques of construction, for and the safety and coordination of the work of all trades.

☒ Reviewed ☐ Revise and Resubmit

☐ Furnish as Corrected ☐ Rejected

Roy Dayan 12/10/2024
Reviewers Signature and Date

Comments:

1. Changes in inlet sizes are acceptable.
2. No additional comments.

Built-in cover page

Unspecified-0:1.4-A - Product Data

Status	**Open** Submitted
Spec section	233600 AIR TERMINAL UNITS
Manager	**Cody Morton** (Messer Construction Co.)
Responsible contractor	**Mike Harrington** (LB Mechanical Services, LLC)
Reviewers step 01	**Roger Shows** (CMTA Inc - Consulting Engineers)

Reviewed

VAV inlet sizes differ from inlet sizes noted on sheet M703. Please confirm if this is acceptable?

Reviewed by: Erich Sibert

Date: 12/03/2024

Messer Construction Co.

233600 1.4-A

233600 1.4-B

S U B M I T T A L

PROJECT: CABARRUS COUNTY REGIONAL BEHAVIORAL HEALTH CENTER

ENGINEER: CMTA
CHARLOTTE, NC

CONTRACTOR: LB MECHANICAL SERVICES, LLC
2401 GREENLAND AVENUE
CHARLOTTE, NC 28208

EQUIPMENT: AIR TERMINAL UNITS BY NAILOR INDUSTRIES

SUPPLIER: HAHN-MASON AIR SYSTEMS, INC.
4901 DWIGHT EVANS ROAD, STE. 120
CHARLOTTE, NORTH CAROLINA 28217

SUBMITTED BY:

Jason Flowers

HAHN-MASON AIR SYSTEMS, INC.
P.O. BOX 31248
CHARLOTTE, NC 28231-1248

Telephone: 704-523-5000
Fax: 704-523-5171

233600 1.4-A & 1.4-B

Nailor Single Duct VAV Units

Project: Cabarrus County Regional Behavioral Health Center

Customer: LB Mechanical Services, LLC

Engineer: CMTA

Unit inlet sizes differ from inlet sizes noted on sheet M703. Please confirm if his is acceptable?

Item ID	Tag1	Model	Unit Size	Inlet Size	Outlet Size	Primary Max AF (cfm)	Primary Min AF (cfm)	Inlet SP (in wg)	Outlet SP (in wg)	Min Inlet SP (in wg)	MOP	Rad NC	Dis NC	Rad Deducts	Dis Deducts	HW HtgAF (cfm)	HW EWT (°F)	HW EAT (°F)	HW Rows	HW Fluid Flow (gpm)	HW AFV @Min (fpm)	HW AFV @Max (fpm)	HW Total Heat (mbh)	HW LAT (°F)	HW LWT (°F)	HW DT (°F)	HW FV (fps)	HW Fluid PD (ft wg)	Total HW Air PD @Min (in wg)	Total HW Air PD @Max (in wg)	HW Connection Size (in)
1	VAV-1-1	D30RW	8	06	12 X 12 1/2	500	500	0.75	0.25	0.01	15	15	24	18,19,20,26,31,36	27,29,40,51,53,39	500	125	55	4	2	480	480	21	93.8	103.8	21.21	0.84	0.32	0.32	0.32	0.875
2	VAV-1-2	D30RW	8	06	12 X 12 1/2	500	500	0.75	0.25	0.01	15	15	24	18,19,20,26,31,36	27,29,40,51,53,39	500	125	55	4	2	480	480	21	93.8	103.8	21.21	0.84	0.32	0.32	0.32	0.875
3	VAV-1-3	D30RW	8	05	12 X 12 1/2	350	350	0.75	0.25	0.15	15	15	23	18,19,20,26,31,36	27,29,40,51,53,39	350	125	55	4	1.5	336	336	16.2	97.8	103.2	21.85	0.63	0.18	0.18	0.18	0.875
4	VAV-1-4	D30RW	5	05	10 X 10	340	340	0.75	0.25	0.14	15	15	23	18,19,20,26,31,36	27,29,40,51,53,39	340	125	55	4	1.5	489.6	489.6	13.8	92.3	106.5	18.52	0.63	0.15	0.33	0.33	0.875
5	VAV-1-5	D30RW	8	06	12 X 12 1/2	500	500	0.75	0.25	0.01	15	15	24	18,19,20,26,31,36	27,29,40,51,53,39	500	125	55	4	2	480	480	21	93.8	103.8	21.21	0.84	0.32	0.32	0.32	0.875
6	VAV-1-6	D30RW	14	12	24 X 12 1/2	1140	1040	0.75	0.25	0.01	15	15	16	18,19,20,26,31,36	29,30,41,51,52,39	1040	125	55	3	4	499.2	547.2	40	90.8	104.6	20.38	2.24	2.72	0.26	0.3	0.875
7	VAV-1-7	D30RW	16	14	28 X 12 1/2	1590	885	0.75	0.25	0.01	15	15	16	18,19,20,26,31,36	29,30,41,51,52,39	885	125	55	3	3.5	364.1	654.17	37.2	93.8	103.5	21.45	1.47	1.14	0.15	0.4	0.875
8	VAV-1-8	D30RW	14	12	24 X 12 1/2	1250	1100	0.75	0.25	0.01	15	15	19	18,19,20,26,31,36	29,30,41,51,52,39	1100	125	55	4	4.5	528	600	47.9	95.2	103.5	21.49	1.51	1.32	0.38	0.46	0.875
9	VAV-1-9	D30RW	12	09	18 X 12 1/2	840	840	0.75	0.25	0.01	15	15	18	18,19,20,26,31,36	29,30,41,51,52,39	840	125	55	4	3.5	537.6	537.6	36.4	94.9	104	20.96	1.47	1.14	0.39	0.39	0.875
10	VAV-1-10	D30RW	6	06	10 X 10	420	300	0.75	0.25	0.01	15	15	21	18,19,20,26,31,36	27,29,40,51,53,39	300	125	55	4	1.5	432	604.8	13	94.8	107.6	17.42	0.63	0.15	0.27	0.47	0.875
11	VAV-1-11	D30RW	12	09	18 X 12 1/2	900	650	0.75	0.25	0.01	15	15	19	18,19,20,26,31,36	29,30,41,51,52,39	650	125	55	3	2.5	416	576	25.9	91.7	104.1	20.88	1.4	0.93	0.19	0.33	0.875
12	VAV-1-12	D30RW	5	05	10 X 10	320	320	0.75	0.25	0.13	15	15	23	18,19,20,26,31,36	27,29,40,51,53,39	320	125	55	4	1.5	460.8	460.8	13	93.5	107	17.99	0.63	0.15	0.3	0.3	0.875
13	VAV-1-13	D30RW	14	12	24 X 12 1/2	1150	970	0.75	0.25	0.01	15	15	16	18,19,20,26,31,36	29,30,41,51,52,39	970	125	55	4	4	465.6	552	43.7	96.5	103	22.02	1.35	1.05	0.3	0.4	0.875
14	VAV-1-14	D30RW	12	09	18 X 12 1/2	1000	540	0.75	0.25	0.01	15	16	20	18,19,20,26,31,36	29,30,41,51,52,39	540	125	55	3	2.5	345.6	640	23.5	95.1	106.1	18.95	1.4	0.93	0.14	0.39	0.875
15	VAV-1-15	D30RW	5	05	10 X 10	380	200	0.75	0.25	0.17	15	15	23	18,19,20,26,31,36	27,29,40,51,53,39	200	125	55	3	1	288	547.2	8	93.9	108	17.01	0.56	0.1	0.1	0.3	0.875
16	VAV-1-16	D30RW	8	06	12 X 12 1/2	405	405	0.75	0.25	0.01	15	15	20	18,19,20,26,31,36	27,29,40,51,53,39	405	125	55	3	2	388.8	388.8	17	92.9	108.2	16.79	1.12	0.5	0.17	0.17	0.875
17	VAV-1-17	D30RW	10	07	14 X 12 1/2	600	600	0.75	0.25	0.01	15	15	21	18,19,20,26,31,36	27,29,40,51,53,39	600	125	55	4	2.5	493.7	493.71	25.8	94.7	104.2	20.84	1.05	0.53	0.34	0.34	0.875
18	VAV-2-1	D30RW	8	06	12 X 12 1/2	500	500	0.75	0.25	0.01	15	15	24	18,19,20,26,31,36	27,29,40,51,53,39	500	125	55	4	2	480	480	21	93.8	103.8	21.21	0.84	0.32	0.32	0.32	0.875
19	VAV-2-2	D30RW	12	09	18 X 12 1/2	890	890	0.75	0.25	0.01	15	15	19	18,19,20,26,31,36	29,30,41,51,52,39	890	125	55	4	3.5	569.6	569.6	37.5	93.8	103.4	21.58	1.47	1.14	0.43	0.43	0.875
20	VAV-2-3	D30RW	12	09	18 X 12 1/2	960	715	0.75	0.25	0.01	15	16	20	18,19,20,26,31,36	29,30,41,51,52,39	715	125	55	4	3	457.6	614.4	32.3	96.6	103.3	21.69	1.26	0.85	0.3	0.48	0.875
21	VAV-2-4	D30RW	24	16	38 X 18	1520	1070	0.75	0.25	0.01	15	15	15	18,19,20,26,31,36	29,30,41,51,52,39	1070	125	55	3	4.5	231.7	329.14	51.6	99.5	101.9	23.13	1.26	0.83	0.07	0.13	1.375
22	VAV-2-5	D30RW	10	07	14 X 12 1/2	800	500	0.75	0.25	0.01	15	19	24	18,19,20,26,31,36	29,30,41,51,52,39	500	125	55	3	2	411.4	658.29	20	91.2	105.2	19.79	1.12	0.54	0.19	0.41	0.875
23	VAV-2-6	D30RW	24	16	38 X 18	1755	1665	0.75	0.25	0.01	15	16	15	18,19,20,26,31,36	29,30,41,51,52,39	1665	125	55	3	7	360.5	380.03	72.4	95.1	104.1	20.87	1.96	1.95	0.15	0.16	1.375
24	VAV-2-7	D30RW	24	16	38 X 18	1850	555	0.75	0.25	0.01	15	16	15	18,19,20,26,31,36	29,30,41,51,52,39	555	125	55	2	2.5	120.2	400.6	24.9	96.4	104.9	20.13	1.05	0.67	0.02	0.12	0.875
25	VAV-2-8	D30RW	10	08	14 X 12 1/2	840	520	0.75	0.25	0.01	15	18	23	18,19,20,26,31,36	29,30,41,51,52,39	520	125	55	3	2	427.9	691.2	20	90.5	104.8	20.18	1.12	0.54	0.2	0.44	0.875
26	VAV-2-9	D30RW	16	14	28 X 12 1/2	1400	1270	0.75	0.25	0.01	15	15	15	18,19,20,26,31,36	29,30,41,51,52,39	1270	125	55	4	5	522.5	576	54.8	94.8	102.9	22.12	1.4	1.22	0.37	0.43	0.875
27	VAV-2-10	D30RW	14	12	24 X 12 1/2	1215	1125	0.75	0.25	0.01	15	15	18	18,19,20,26,31,36	29,30,41,51,52,39	1125	125	55	4	4.5	540	583.2	48.5	94.7	103.3	21.74	1.51	1.32	0.39	0.44	0.875
28	VAV-2-11	D30RW	12	09	18 X 12 1/2	960	715	0.75	0.25	0.01	15	16	20	18,19,20,26,31,36	29,30,41,51,52,39	715	125	55	4	3	457.6	614.4	32.3	96.6	103.3	21.69	1.26	0.85	0.3	0.48	0.875
29	VAV-2-12	D30RW	16	14	28 X 12 1/2	1520	1150	0.75	0.25	0.01	15	15	15	18,19,20,26,31,36	29,30,41,51,52,39	1150	125	55	3	4.5	473.1	625.37	45	91.1	104.8	20.18	1.89	1.86	0.23	0.37	0.875
30	VAV-2-13	D30RW	8	06	12 X 12 1/2	550	550	0.75	0.25	0.01	15	15	25	18,19,20,26,31,36	27,29,40,51,53,39	550	125	55	4	2.5	528	528	23.3	94.1	106.2	18.84	1.05	0.5	0.38	0.38	0.875
31	VAV-2-14	D30RW	14	12	24 X 12 1/2	970	740	0.75	0.25	0.01	15	15	15	18,19,20,26,31,36	29,30,41,51,52,39	740	125	55	3	3	355.2	465.6	31.8	94.7	103.6	21.4	1.68	1.56	0.15	0.23	0.875
32	VAV-2-15	D30RW	12	09	18 X 12 1/2	770	570	0.75	0.25	0.01	15	15	16	18,19,20,26,31,36	29,30,41,51,52,39	570	125	55	3	2.5	364.8	492.8	24	94.1	105.5	19.51	1.4	0.93	0.15	0.25	0.875
33	VAV-2-16	D30RW	12	09	18 X 12 1/2	1030	420	0.75	0.25	0.01	15	16	21	18,19,20,26,31,36	29,30,41,51,52,39	420	125	55	3	2	268.8	659.2	19.5	97.8	105.3	19.68	1.12	0.6	0.09	0.41	0.875
34	VAV-2-17	D30RW	16	14	28 X 12 1/2	1400	1400	0.75	0.25	0.01	15	15	15	18,19,20,26,31,36	29,30,41,51,52,39	1400	125	55	4	5.5	576	576	58.9	93.8	103.4	21.62	1.54	1.47	0.43	0.43	0.875
35	VAV-2-18	D30RW	8	06	12 X 12 1/2	500	390	0.75	0.25	0.01	15	15	24	18,19,20,26,31,36	27,29,40,51,53,39	390	125	55	3	1.5	374.4	480	15	91	104.5	20.49	0.84	0.29	0.16	0.24	0.875
36	VAV-2-19	D30RW	12	09	18 X 12 1/2	940	350	0.75	0.25	0.01	15	15	20	18,19,20,26,31,36	29,30,41,51,52,39	350	125	55	3	1.5	224	601.6	16.5	98.6	102.8	22.24	0.84	0.35	0.07	0.35	0.875
37	VAV-2-20	D30RW	14	12	24 X 12 1/2	1170	450	0.75	0.25	0.01	15	15	18	18,19,20,26,31,36	29,30,41,51,52,39	450	125	55	2	2	216	561.6	18	91.3	107.1	17.89	1.68	1.31	0.04	0.21	0.875
38	VAV-2-21	D30RW	5	05	10 X 10	250	250	0.75	0.25	0.08	15	15	23	18,19,20,26,31,36	24,28,39,53,59,40	250	125	55	4	1	360	360	10.5	93.9	103.7	21.27	0.42	0.07	0.2	0.2	0.875
39	VAV-2-22	D30RW	12	09	18 X 12 1/2	960	290	0.75	0.25	0.01	15	16	20	18,19,20,26,31,36	29,30,41,51,52,39	290	125	55	2	1.5	185.6	614.4	12	93.1	108.9	16.12	1.26	0.62	0.03	0.24	0.875

DDC Controls To Be Provided By Others And Factory Mounted

Hand Connectionms To Be Coordinated With Contractor Prior To Ordering

233600 1.4-A & 1.4-B

Nailor Single Duct VAV Units

Project: Cabarrus County Regional Behavioral Health Center

Customer: LB Mechanical Services, LLC

Engineer: CMTA

Unit inlet sizes differ from inlet sizes noted on sheet M703. Please confirm if his is acceptable?

Item ID	Tag1	Model	Unit Size	Inlet Size	Outlet Size	Primary Max AF (cfm)	Primary Min AF (cfm)	Inlet SP (in wg)	Outlet SP (in wg)	Min Inlet SP (in wg)	MOP	Rad NC	Dis NC	Rad Deducts	Dis Deducts	HW HtgAF (cfm)	HW EWT (°F)	HW EAT (°F)	HW Rows	HW Fluid Flow (gpm)	HW AFV @Min (fpm)	HW AFV @Max (fpm)	HW Total Heat (mbh)	HW LAT (°F)	HW LWT (°F)	HW DT (°F)	HW FV (fps)	HW Fluid PD (ft wg)	Total HW Air PD @Min (in wg)	Total HW Air PD @Max (in wg)	HW Connection Size (in)
40	VAV-3-1	D30RW	10	07	14 X 12 1/2	600	600	0.75	0.25	0.01	15	15	21	18,19,20,26,31,36	27,29,40,51,53,39	600	125	55	4	2.5	493.7	493.71	25.8	94.7	104.2	20.84	1.05	0.53	0.34	0.34	0.875
41	VAV-3-2	D30RW	10	07	14 X 12 1/2	600	600	0.75	0.25	0.01	15	15	21	18,19,20,26,31,36	27,29,40,51,53,39	600	125	55	4	2.5	493.7	493.71	25.8	94.7	104.2	20.84	1.05	0.53	0.34	0.34	0.875
42	VAV-3-3	D30RW	4	04	10 X 10	140	140	0.75	0.25	0.21	15	15	20	18,19,20,26,31,36	24,28,39,53,59,40	140	125	55	2	1	201.6	201.6	6	92.1	113.6	11.38	0.84	0.16	0.04	0.04	0.875
43	VAV-3-4	D30RW	8	06	12 X 12 1/2	510	510	0.75	0.25	0.01	15	15	24	18,19,20,26,31,36	27,29,40,51,53,39	510	125	55	4	2	489.6	489.6	21.2	93.4	103.6	21.41	0.84	0.32	0.33	0.33	0.875
44	VAV-3-5	D30RW	8	06	12 X 12 1/2	520	320	0.75	0.25	0.01	15	15	24	18,19,20,26,31,36	27,29,40,51,53,39	320	125	55	3	1.5	307.2	499.2	13.8	94.7	106.5	18.54	0.84	0.29	0.11	0.26	0.875
45	VAV-3-6	D30RW	12	09	18 X 12 1/2	710	710	0.75	0.25	0.01	15	15	15	18,19,20,26,31,36	29,30,41,51,52,39	710	125	55	4	3	454.4	454.4	32.1	96.7	103.4	21.61	1.26	0.85	0.29	0.29	0.875
46	VAV-3-7	D30RW	7	07	12 X 12 1/2	600	360	0.75	0.25	0.01	15	15	21	18,19,20,26,31,36	27,29,40,51,53,39	360	125	55	3	1.5	345.6	576	15	92.5	105.3	19.7	0.84	0.29	0.14	0.33	0.875
47	VAV-3-8	D30RW	14	12	24 X 12 1/2	1240	1070	0.75	0.25	0.01	15	15	18	18,19,20,26,31,36	29,30,41,51,52,39	1070	125	55	4	4.5	513.6	595.2	47.2	95.7	103.8	21.18	1.51	1.32	0.36	0.46	0.875
48	VAV-3-9	D30RW	14	12	24 X 12 1/2	1030	1030	0.75	0.25	0.01	15	15	15	18,19,20,26,31,36	29,30,41,51,52,39	1030	125	55	3	4	494.4	494.4	40	91	104.7	20.28	2.24	2.72	0.25	0.25	0.875
49	VAV-3-10	D30RW	7	07	12 X 12 1/2	640	530	0.75	0.25	0.01	15	18	23	18,19,20,26,31,36	27,29,40,51,53,39	530	125	55	4	2.5	508.8	614.4	22.9	94.9	106.5	18.49	1.05	0.5	0.35	0.48	0.875
50	VAV-3-11	D30RW	12	09	18 X 12 1/2	830	830	0.75	0.25	0.01	15	15	18	18,19,20,26,31,36	29,30,41,51,52,39	830	125	55	4	3.5	531.2	531.2	36.1	95.1	104.2	20.83	1.47	1.14	0.38	0.38	0.875
51	VAV-3-12	D30RW	8	05	12 X 12 1/2	390	330	0.75	0.25	0.18	15	15	23	18,19,20,26,31,36	27,29,40,51,53,39	330	125	55	3	1.5	316.8	374.4	14	94.1	106.2	18.84	0.84	0.29	0.12	0.16	0.875
52	VAV-3-13	D30RW	16	14	28 X 12 1/2	1300	1300	0.75	0.25	0.01	15	15	15	18,19,20,26,31,36	29,30,41,51,52,39	1300	125	55	4	5	534.9	534.86	55.5	94.4	102.6	22.38	1.4	1.22	0.38	0.38	0.875
53	VAV-3-14	D30RW	7	07	12 X 12 1/2	640	640	0.75	0.25	0.01	15	18	23	18,19,20,26,31,36	27,29,40,51,53,39	640	125	55	4	2.5	614.4	614.4	25	91.2	104.7	20.28	1.05	0.5	0.48	0.48	0.875
54	VAV-3-15	D30RW	8	06	12 X 12 1/2	500	340	0.75	0.25	0.01	15	15	24	18,19,20,26,31,36	27,29,40,51,53,39	340	125	55	3	1.5	326.4	480	14	93.6	105.9	19.14	0.84	0.29	0.13	0.24	0.875
55	VAV-3-16	D30RW	8	06	12 X 12 1/2	440	300	0.75	0.25	0.01	15	15	23	18,19,20,26,31,36	27,29,40,51,53,39	300	125	55	3	1.5	288	422.4	13.3	95.9	107.1	17.91	0.84	0.29	0.1	0.19	0.875
56	VAV-3-17	D30RW	8	06	12 X 12 1/2	490	330	0.75	0.25	0.01	15	15	24	18,19,20,26,31,36	27,29,40,51,53,39	330	125	55	3	1.5	316.8	470.4	14	94.1	106.2	18.84	0.84	0.29	0.12	0.23	0.875
57	VAV-3-18	D30RW	10	07	14 X 12 1/2	720	720	0.75	0.25	0.01	15	19	23	18,19,20,26,31,36	29,30,41,51,52,39	720	125	55	4	3	592.5	592.46	30	92.9	105.1	19.9	1.26	0.76	0.46	0.46	0.875
58	VAV-3-19	D30RW	8	06	12 X 12 1/2	480	480	0.75	0.25	0.01	15	15	24	18,19,20,26,31,36	27,29,40,51,53,39	480	125	55	4	2	460.8	460.8	20.6	94.6	104.2	20.78	0.84	0.32	0.3	0.3	0.875
59	VAV-3-20	D30RW	5	05	10 X 10	340	340	0.75	0.25	0.14	15	15	23	18,19,20,26,31,36	27,29,40,51,53,39	340	125	55	4	1.5	489.6	489.6	13.8	92.3	106.5	18.52	0.63	0.15	0.33	0.33	0.875
60	VAV-3-21	D30RW	8	06	12 X 12 1/2	510	510	0.75	0.25	0.01	15	15	24	18,19,20,26,31,36	27,29,40,51,53,39	510	125	55	4	2	489.6	489.6	21.2	93.4	103.6	21.41	0.84	0.32	0.33	0.33	0.875
61	VAV-3-22	D30RW	5	05	10 X 10	310	310	0.75	0.25	0.12	15	15	23	18,19,20,26,31,36	27,29,40,51,53,39	310	125	55	4	1.5	446.4	446.4	13	94.2	107.3	17.71	0.63	0.15	0.28	0.28	0.875
62	VAV-3-23	D30RW	7	07	12 X 12 1/2	620	620	0.75	0.25	0.01	15	18	21	18,19,20,26,31,36	27,29,40,51,53,39	620	125	55	4	2.5	595.2	595.2	25	91.8	105	19.98	1.05	0.5	0.46	0.46	0.875
63	VAV-3-24	D30RW	8	06	12 X 12 1/2	440	440	0.75	0.25	0.01	15	15	23	18,19,20,26,31,36	27,29,40,51,53,39	440	125	55	3	2	422.4	422.4	17	91.4	107.5	17.52	1.12	0.5	0.19	0.19	0.875
64	VAV-3-25	D30RW	7	07	12 X 12 1/2	560	400	0.75	0.25	0.01	15	15	20	18,19,20,26,31,36	27,29,40,51,53,39	400	125	55	4	2	384	537.6	18.7	98.2	106.1	18.9	0.84	0.32	0.22	0.39	0.875
65	VAV-3-26	D30RW	12	09	18 X 12 1/2	1010	560	0.75	0.25	0.01	15	16	21	18,19,20,26,31,36	29,30,41,51,52,39	560	125	55	3	2.5	358.4	646.4	23.9	94.4	105.7	19.32	1.4	0.93	0.15	0.39	0.875
66	VAV-3-27	D30RW	6	06	10 X 10	410	300	0.75	0.25	0.01	15	15	20	18,19,20,26,31,36	27,29,40,51,53,39	300	125	55	4	1.5	432	590.4	13	94.8	107.6	17.42	0.63	0.15	0.27	0.45	0.875
67	VAV-3-28	D30RW	8	06	12 X 12 1/2	450	450	0.75	0.25	0.01	15	15	23	18,19,20,26,31,36	27,29,40,51,53,39	450	125	55	3	2	432	432	18	91	107.3	17.72	1.12	0.5	0.2	0.2	0.875
68	VAV-3-29	D30RW	12	09	18 X 12 1/2	750	520	0.75	0.25	0.01	15	15	16	18,19,20,26,31,36	29,30,41,51,52,39	520	125	55	3	2.5	332.8	480	23	95.8	106.4	18.56	1.4	0.93	0.13	0.24	0.875
69	VAV-3-30	D30RW	12	09	18 X 12 1/2	900	570	0.75	0.25	0.01	15	15	19	18,19,20,26,31,36	29,30,41,51,52,39	570	125	55	3	2.5	364.8	576	24.2	94.1	105.5	19.51	1.4	0.93	0.15	0.33	0.875
70	VAV-3-31	D30RW	8	05	12 X 12 1/2	370	370	0.75	0.25	0.17	15	15	23	18,19,20,26,31,36	27,29,40,51,53,39	370	125	55	3	1.5	355.2	355.2	15	92	105	19.97	0.84	0.29	0.15	0.15	0.875
71	VAV-4-1	D30RW	7	07	12 X 12 1/2	760	450	0.75	0.25	0.01	15	19	23	18,19,20,26,31,36	29,30,41,51,52,39	450	125	55	3	2	432	729.6	18	91	107.3	17.72	1.12	0.5	0.2	0.48	0.875
72	VAV-4-2	D30RW	5	05	10 X 10	340	225	0.75	0.25	0.14	15	15	23	18,19,20,26,31,36	27,29,40,51,53,39	225	125	55	3	1	324	489.6	9	91.6	107	18.04	0.56	0.1	0.12	0.25	0.875
73	VAV-4-3	D30RW	24	16	38 X 18	2300	800	0.75	0.25	0.02	15	20	18	18,19,20,26,31,36	29,30,41,51,52,39	800	125	55	2	3.5	173.2	498.05	33	93.3	105.8	19.15	1.47	1.29	0.03	0.17	0.875
74	VAV-4-4	D30RW	24	16	38 X 18	2300	800	0.75	0.25	0.02	15	20	18	18,19,20,26,31,36	29,30,41,51,52,39	800	125	55	2	3.5	173.2	498.05	33	93.3	105.8	19.15	1.47	1.29	0.03	0.17	0.875
75	VAV-4-5	D30RW	8	06	12 X 12 1/2	470	470	0.75	0.25	0.01	15	15	23	18,19,20,26,31,36	27,29,40,51,53,39	470	125	55	4	2	451.2	451.2	20	95	104.4	20.57	0.84	0.32	0.29	0.29	0.875
76	VAV-4-6	D30RW	8	06	12 X 12 1/2	520	230	0.75	0.25	0.01	15	15	24	18,19,20,26,31,36	27,29,40,51,53,39	230	125	55	3	1	220.8	499.2	10.5	97	103.9	21.14	0.56	0.13	0.07	0.26	0.875

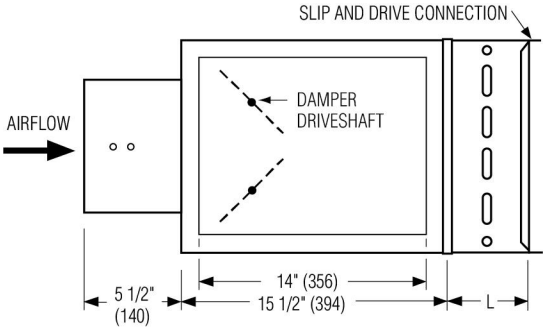
DDC Controls To Be Provided By Others And Factory Mounted

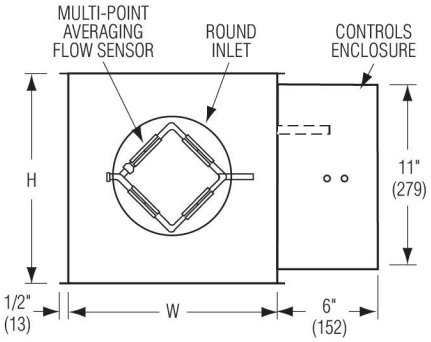
Hand Connectionms To Be Coordinated With Contractor Prior To Ordering

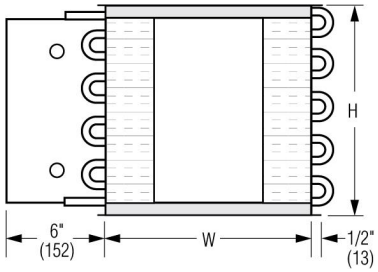
Items: 1, 2, 3, 5, 9, 17, 18, 19, 20, 28, 30, 40, 41, 43, 45, 50, 57, 58, 60, 75

Tags: VAV-1-1; VAV-1-2; VAV-1-3; VAV-1-5; VAV-1-9; VAV-1-17; VAV-2-1; VAV-2-2; VAV-2-3; VAV-2-11; VAV-2-13; VAV-3-1; VAV-3-2; VAV-3-4; VAV-3-6; VAV-3-11; VAV-3-18; VAV-3-19; VAV-3-21; VAV-4-5

233600 1.4-A & 1.4-B







Right-hand controls location shown
*Controls Enclosure optional with field mounted controls

DIMENSIONAL DATA

Unit Size	Inlet Size (Nominal)	Airflow Range cfm (l/s)	Width (W)	Height (H)	Inlet Size	Coil Dim (L)	Coil Connection O.D
8	06	0 – 550 (0 – 260)	12 (305)	12 1⁄2 (318)	5 7⁄8 (149) Round	7 1/2 (191)	7/8 (22)
8	05	0 – 400 (0 – 189)	12 (305)	12 1⁄2 (318)	4 7⁄8 (124) Round	7 1/2 (191)	7/8 (22)
10	07	0 – 800 (0 – 378)	14 (356)	12 1⁄2 (318)	6 7⁄8 (175) Round	7 1/2 (191)	7/8 (22)
12	09	0 – 1400 (0 – 661)	18 (457)	12 1⁄2 (318)	8 7⁄8 (225) Round	7 1/2 (191)	7/8 (22)

FEATURES

• 16 ga. (1.61) corrosion-resistant steel inclined opposed blade damper with extruded PVC seals. 45° rotation, CW to close. Tight close-off. Damper leakage is less than 2% of the terminal rated airflow at 3" w.g. (750 Pa)

Project: CCRBHC (VAVs) **Date:** 11/14/2024
Engineer: **Version No:**
Contractor:

Dimensions are in inches (mm)

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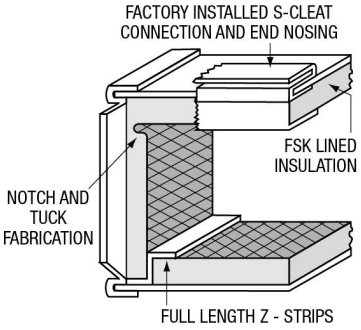
• 1/2" (13) dia. plated steel drive shaft. An indicator mark on the end of the shaft shows damper position
• Multi-point averaging sensor. Supplied with balancing tees
• 1/2" (13) O.D. copper tubes and aluminum ripple fins, 10 per inch
• D1 - Digital Controls: Unknown, Factory Mounted (Supplied by Others)
• MA - Damper Actuator: By Controls Manufacturer
• OR - 22 ga. (0.86) zinc coated steel casing, mechanically sealed, low leakage construction, right hand (determined when looking in the direction of airflow)
• QA - Transformer: 120/24V
• FG1 - 1" (25) Steri-Liner
• FN - Full NEMA 1 type 24V Controls Enclosure
• W4R - Hot Water Coil: 4 Row, Right-hand
• VPBO - Valve/Piping Package: By others (field installed)

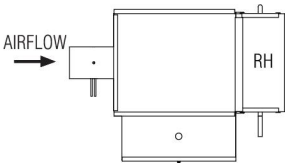
FG1 - Steri-Liner



• 1" (25) thick, rigid fiberglass with a fire resistant reinforced aluminum FSK (foil-scrim-kraft) facing

Meets requirements:
• UL 181 & 723
• NFPA 90A & 90B
• ASTM E 84, C 665, C 1071, C 1338, G21 & G22

OR/W4R - Top View Orientation- Controls Location, Hot Water Coil Connection



Right Hand Controls Location/Right Hand Hot Water Coil Connection

Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

Dimensions are in inches (mm)

Items: 4, 10, 12, 38, 59, 61, 66

Tags: VAV-1-4; VAV-1-10; VAV-1-12; VAV-2-21; VAV-3-20; VAV-3-22; VAV-3-27

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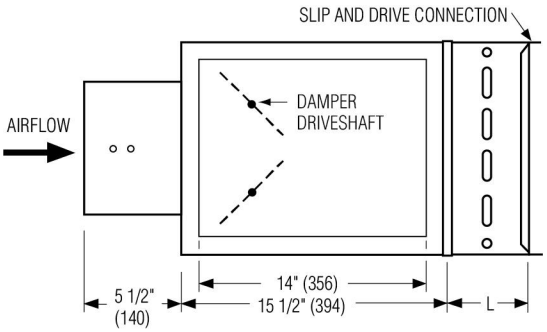

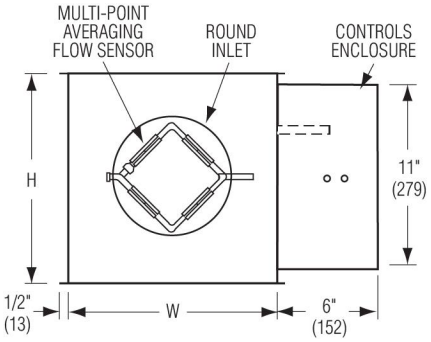

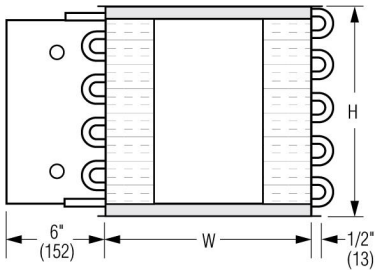

Right-hand controls location shown
*Controls Enclosure optional with field mounted controls

DIMENSIONAL DATA

Unit Size	Inlet Size (Nominal)	Airflow Range cfm (l/s)	Width (W)	Height (H)	Inlet Size	Coil Dim (L)	Coil Connection O.D
05	05	0 – 400 (0 – 189)	10 (254)	10 (254)	4 7/8 (124) Round	7 1/2 (191)	7/8 (22)
06	06	0 – 550 (0 – 260)	10 (254)	10 (254)	5 7/8 (149) Round	7 1/2 (191)	7/8 (22)

FEATURES

- 16 ga. (1.61) corrosion-resistant steel inclined single blade damper with extruded PVC seals. 45° rotation, CW to close. Tight close-off. Damper leakage is less than 2% of the terminal rated airflow at 3" w.g. (750 Pa)
- 1/2" (13) dia. plated steel drive shaft. An indicator mark on the end of the shaft shows damper position
- Multi-point averaging sensor. Supplied with balancing tees
- 1/2" (13) O.D. copper tubes and aluminum ripple fins, 10 per inch
- D1 - Digital Controls: Unknown, Factory Mounted (Supplied by Others)
- MA - Damper Actuator: By Controls Manufacturer

Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

Dimensions are in inches (mm)

• OR - 22 ga. (0.86) zinc coated steel casing, mechanically sealed, low leakage construction, right hand (determined when looking in the direction of airflow)
• QA - Transformer: 120/24V
• FG1 - 1" (25) Steri-Liner
• FN - Full NEMA 1 type 24V Controls Enclosure
• W4R - Hot Water Coil: 4 Row, Right-hand
• VPBO - Valve/Piping Package: By others (field installed)

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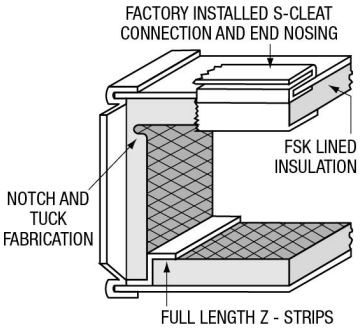
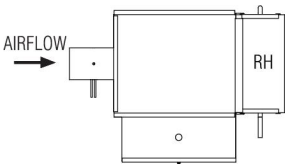
FG1 - Steri-Liner



• 1" (25) thick, rigid fiberglass with a fire resistant reinforced aluminum FSK (foil-scrim-kraft) facing

Meets requirements:
• UL 181 & 723
• NFPA 90A & 90B
• ASTM E 84, C 665, C 1071, C 1338, G21 & G22

OR/W4R - Top View Orientation- Controls Location, Hot Water Coil Connection



Right Hand Controls Location/Right Hand Hot Water Coil Connection

Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

Items: 6, 7, 21, 23, 29, 31, 48

Tags: VAV-1-6; VAV-1-7; VAV-2-4; VAV-2-6; VAV-2-12; VAV-2-14; VAV-3-9

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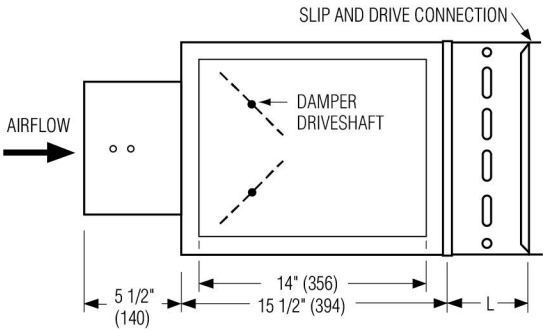

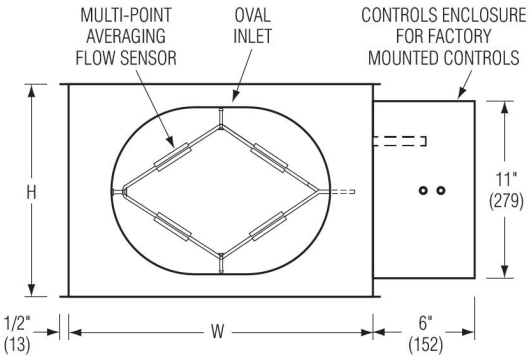

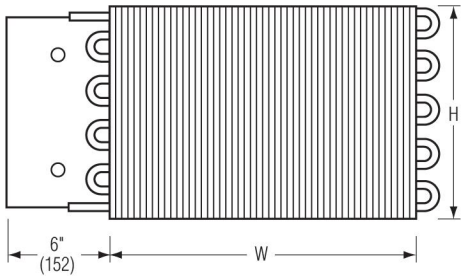

DIMENSIONAL DATA

Unit Size	Inlet Size (Nominal)	Airflow Range cfm (l/s)	Width (W)	Height (H)	Inlet Size	Coil Dim (L)	Coil Connection O.D
14	12	0 – 2500 (0 – 1180)	24 (610)	12 1/2 (318)	12 15/16 x 9 13/16 (329 x 249) Oval	7 1/2 (191)	7/8 (22)
16	14	0 – 3125 (0 – 1475)	28 (711)	12 1/2 (318)	16 1/16 x 9 13/16 (408 x 249) Oval	7 1/2 (191)	7/8 (22)
24	16	0 – 3725 (0 – 1758)	38 (965)	18 (457)	19 3/16 x 9 13/16 (487 x 249) Oval	7 1/2 (191)	1 3/8 (35)

FEATURES

- 16 ga. (1.61) corrosion-resistant steel inclined opposed blade damper with extruded PVC seals. 45° rotation, CW to close. Tight close-off. Damper leakage is less than 2% of the terminal rated airflow at 3" w.g. (750 Pa)
- 1/2" (13) dia. plated steel drive shaft. An indicator mark on the end of the shaft shows damper position
- Multi-point averaging sensor. Supplied with balancing tees
- 1/2" (13) O.D. copper tubes and aluminum ripple fins, 10 per inch
- D1 - Digital Controls: Unknown, Factory Mounted (Supplied by Others)
- MA - Damper Actuator: By Controls Manufacturer
- OR - 22 ga. (0.86) zinc coated steel casing, mechanically sealed, low leakage construction, right hand (determined when looking in the direction of airflow)
- QA - Transformer: 120/24V

Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

Dimensions are in inches (mm)

- FG1 - 1" (25) Steri-Liner
- FN - Full NEMA 1 type 24V Controls Enclosure
- W3R - Hot Water Coil: 3 Row, Right-hand
- VPBO - Valve/Piping Package: By others (field installed)

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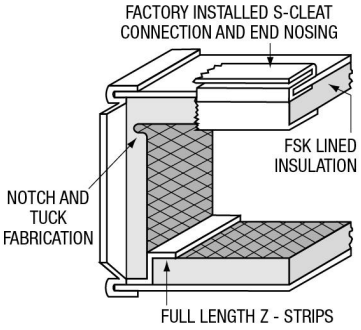
FG1 - Steri-Liner

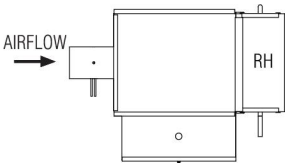


- 1" (25) thick, rigid fiberglass with a fire resistant reinforced aluminum FSK (foil-scrim-kraft) facing

Meets requirements:

- UL 181 & 723
- NFPA 90A & 90B
- ASTM E 84, C 665, C 1071, C 1338, G21 & G22

OR/W3R - Top View Orientation- Controls Location, Hot Water Coil Connection



Right Hand Controls Location/Right Hand Hot Water Coil Connection

Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

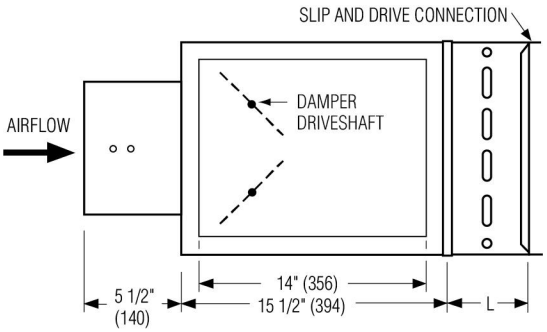
Dimensions are in inches (mm)

D30RW Single Duct Terminal Unit with Hot Water Reheat • Oversized Casing • Digital Controls

Nailor®

Items: 8, 13, 26, 27, 34, 47, 52

Tags: VAV-1-8; VAV-1-13; VAV-2-9; VAV-2-10; VAV-2-17; VAV-3-8; VAV-3-13



233600 1.4-A ^ 1.4-B

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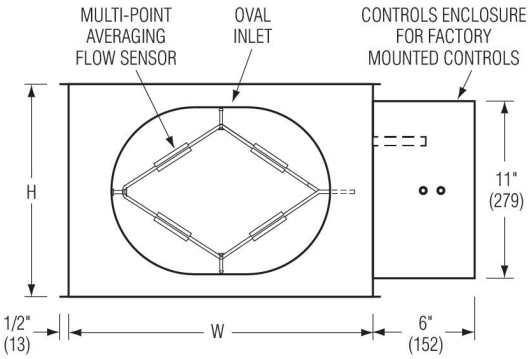
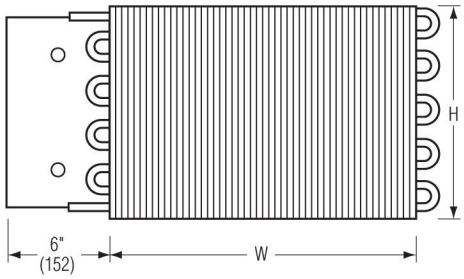




DIMENSIONAL DATA

Unit Size	Inlet Size (Nominal)	Airflow Range cfm (l/s)	Width (W)	Height (H)	Inlet Size	Coil Dim (L)	Coil Connection O.D
14	12	0 – 2500 (0 – 1180)	24 (610)	12 1⁄2 (318)	12 15⁄16 x 9 13⁄16 (329 x 249) Oval	7 1/2 (191)	7/8 (22)
16	14	0 – 3125 (0 – 1475)	28 (711)	12 1⁄2 (318)	16 1⁄16 x 9 13⁄16 (408 x 249) Oval	7 1/2 (191)	7/8 (22)

FEATURES

- 16 ga. (1.61) corrosion-resistant steel inclined opposed blade damper with extruded PVC seals. 45° rotation, CW to close. Tight close-off. Damper leakage is less than 2% of the terminal rated airflow at 3" w.g. (750 Pa)
- 1/2" (13) dia. plated steel drive shaft. An indicator mark on the end of the shaft shows damper position
- Multi-point averaging sensor. Supplied with balancing tees
- 1/2" (13) O.D. copper tubes and aluminum ripple fins, 10 per inch
- D1 - Digital Controls: Unknown, Factory Mounted (Supplied by Others)
- MA - Damper Actuator: By Controls Manufacturer
- OR - 22 ga. (0.86) zinc coated steel casing, mechanically sealed, low leakage construction, right hand (determined when looking in the direction of airflow)
- QA - Transformer: 120/24V
- FG1 - 1" (25) Steri-Liner
- FN - Full NEMA 1 type 24V Controls Enclosure

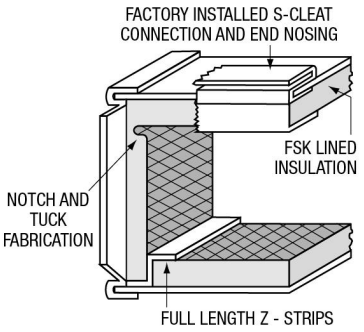
Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

Dimensions are in inches (mm)

- W4R - Hot Water Coil: 4 Row, Right-hand
- VPBO - Valve/Piping Package: By others (field installed)

233600 1.4-A & 1.4-B

FG1 - Steri-Liner

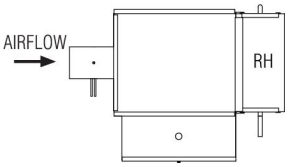


- 1" (25) thick, rigid fiberglass with a fire resistant reinforced aluminum FSK (foil-scrim-kraft) facing

Meets requirements:

- UL 181 & 723
- NFPA 90A & 90B
- ASTM E 84, C 665, C 1071, C 1338, G21 & G22

OR/W4R - Top View Orientation- Controls Location, Hot Water Coil Connection



Right Hand Controls Location/Right Hand Hot Water Coil Connection

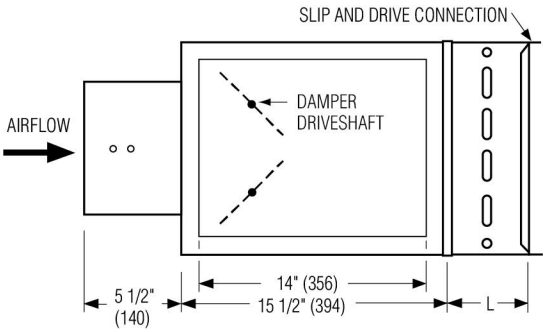
Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

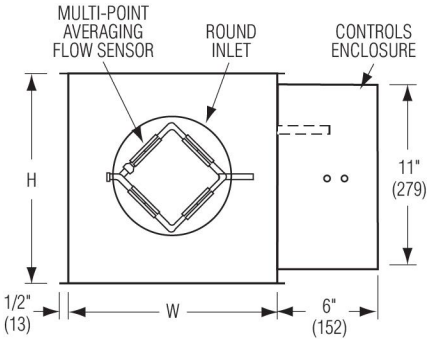
Dimensions are in inches (mm)

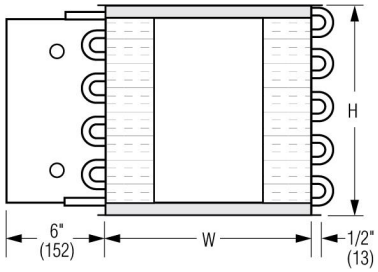
Items: 11, 14, 16, 22, 25, 32, 33, 35, 36, 44, 51, 54, 55, 56, 63, 65, 67, 68, 69, 70, 76

Tags: VAV-1-11; VAV-1-14; VAV-1-16; VAV-2-5; VAV-2-8; VAV-2-15; VAV-2-16; VAV-2-18; VAV-2-19; VAV-3-5; VAV-3-12; VAV-3-15; VAV-3-16; VAV-3-17; VAV-3-24; VAV-3-26; VAV-3-28; VAV-3-29; VAV-3-30; VAV-3-31; VAV-4-6

233600 1.4A & 1.4B







Right-hand controls location shown
*Controls Enclosure optional with field mounted controls

DIMENSIONAL DATA

Unit Size	Inlet Size (Nominal)	Airflow Range cfm (l/s)	Width (W)	Height (H)	Inlet Size	Coil Dim (L)	Coil Connection O.D
8	06	0 – 550 (0 – 260)	12 (305)	12 1⁄2 (318)	5 7⁄8 (149) Round	7 1/2 (191)	7/8 (22)
8	05	0 – 400 (0 – 189)	12 (305)	12 1⁄2 (318)	4 7⁄8 (124) Round	7 1/2 (191)	7/8 (22)
10	07	0 – 800 (0 – 378)	14 (356)	12 1⁄2 (318)	6 7⁄8 (175) Round	7 1/2 (191)	7/8 (22)
10	08	0 – 1100 (0 – 519)	14 (356)	12 1⁄2 (318)	7 7⁄8 (200) Round	7 1/2 (191)	7/8 (22)
12	09	0 – 1400 (0 – 661)	18 (457)	12 1⁄2 (318)	8 7⁄8 (225) Round	7 1/2 (191)	7/8 (22)

Project: CCRBHC (VAVs) **Date:** 11/14/2024
Engineer: **Version No:**
Contractor:

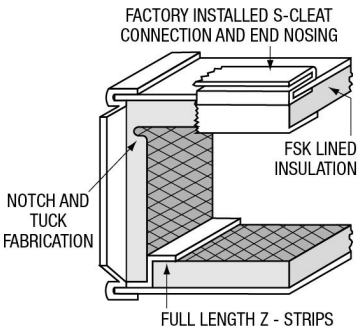
Dimensions are in inches (mm)

FEATURES

233600 1.4A & 1.4B

• 16 ga. (1.61) corrosion-resistant steel inclined opposed blade damper with extruded PVC seals. 45° rotation, CW to close. Tight close-off. Damper leakage is less than 2% of the terminal rated airflow at 3" w.g. (750 Pa)
• 1/2" (13) dia. plated steel drive shaft. An indicator mark on the end of the shaft shows damper position
• Multi-point averaging sensor. Supplied with balancing tees
• 1/2" (13) O.D. copper tubes and aluminum ripple fins, 10 per inch
• D1 - Digital Controls: Unknown, Factory Mounted (Supplied by Others)
• MA - Damper Actuator: By Controls Manufacturer
• OR - 22 ga. (0.86) zinc coated steel casing, mechanically sealed, low leakage construction, right hand (determined when looking in the direction of airflow)
• QA - Transformer: 120/24V
• FG1 - 1" (25) Steri-Liner
• FN - Full NEMA 1 type 24V Controls Enclosure
• W3R - Hot Water Coil: 3 Row, Right-hand
• VPBO - Valve/Piping Package: By others (field installed)

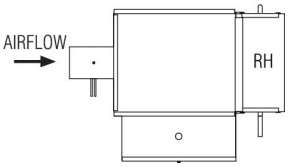
FG1 - Steri-Liner



• 1" (25) thick, rigid fiberglass with a fire resistant reinforced aluminum FSK (foil-scrim-kraft) facing

Meets requirements:
• UL 181 & 723
• NFPA 90A & 90B
• ASTM E 84, C 665, C 1071, C 1338, G21 & G22

OR/W3R - Top View Orientation- Controls Location, Hot Water Coil Connection

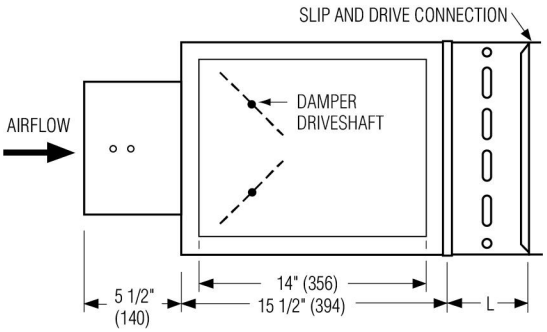


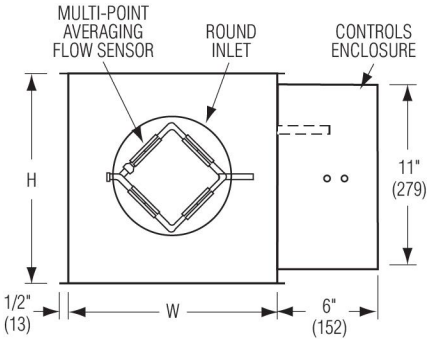
Right Hand Controls Location/Right Hand Hot Water Coil Connection

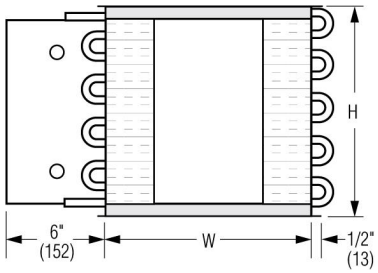
Items: 15, 72

Tags: VAV-1-15; VAV-4-2

233600 1.4A & 1.4B







Right-hand controls location shown
*Controls Enclosure optional with field mounted controls

DIMENSIONAL DATA

Unit Size	Inlet Size (Nominal)	Airflow Range cfm (l/s)	Width (W)	Height (H)	Inlet Size	Coil Dim (L)	Coil Connection O.D
05	05	0 – 400 (0 – 189)	10 (254)	10 (254)	4 7/8 (124) Round	7 1/2 (191)	7/8 (22)

FEATURES

- 16 ga. (1.61) corrosion-resistant steel inclined single blade damper with extruded PVC seals. 45° rotation, CW to close. Tight close-off. Damper leakage is less than 2% of the terminal rated airflow at 3" w.g. (750 Pa)
- 1/2" (13) dia. plated steel drive shaft. An indicator mark on the end of the shaft shows damper position
- Multi-point averaging sensor. Supplied with balancing tees
- 1/2" (13) O.D. copper tubes and aluminum ripple fins, 10 per inch
- D1 - Digital Controls: Unknown, Factory Mounted (Supplied by Others)
- MA - Damper Actuator: By Controls Manufacturer
- OR - 22 ga. (0.86) zinc coated steel casing, mechanically sealed, low leakage construction, right hand (determined when looking in the direction of airflow)
- QA - Transformer: 120/24V

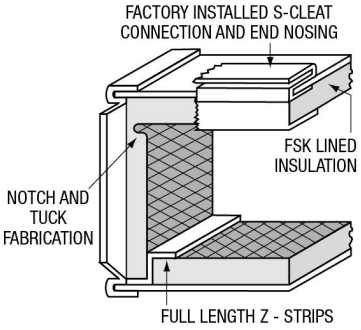
Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

Dimensions are in inches (mm)

- FG1 - 1" (25) Steri-Liner
- FN - Full NEMA 1 type 24V Controls Enclosure
- W3R - Hot Water Coil: 3 Row, Right-hand
- VPBO - Valve/Piping Package: By others (field installed)

233600 1.4A & 1.4B

FG1 - Steri-Liner

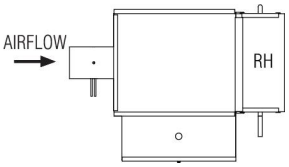


- 1" (25) thick, rigid fiberglass with a fire resistant reinforced aluminum FSK (foil-scrim-kraft) facing

Meets requirements:

- UL 181 & 723
- NFPA 90A & 90B
- ASTM E 84, C 665, C 1071, C 1338, G21 & G22

OR/W3R - Top View Orientation- Controls Location, Hot Water Coil Connection



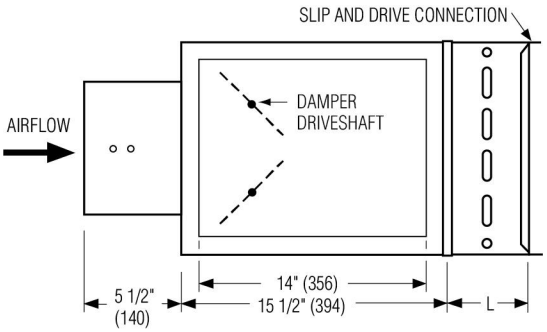
Right Hand Controls Location/Right Hand Hot Water Coil Connection

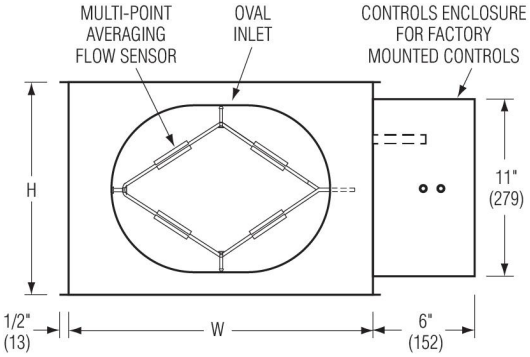
Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

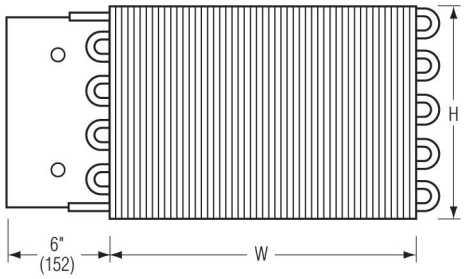
Dimensions are in inches (mm)

Items: 24, 37, 73, 74
Tags: VAV-2-7; VAV-2-20; VAV-4-3; VAV-4-4

233600 1.4A & 1.4B







DIMENSIONAL DATA

Unit Size	Inlet Size (Nominal)	Airflow Range cfm (l/s)	Width (W)	Height (H)	Inlet Size	Coil Dim (L)	Coil Connection O.D
14	12	0 – 2500 (0 – 1180)	24 (610)	12 1⁄2 (318)	12 15⁄16 x 9 13⁄16 (329 x 249) Oval	5 (127)	7/8 (22)
24	16	0 – 3725 (0 – 1758)	38 (965)	18 (457)	19 3⁄16 x 9 13⁄16 (487 x 249) Oval	5 (127)	7/8 (22)

FEATURES

- 16 ga. (1.61) corrosion-resistant steel inclined opposed blade damper with extruded PVC seals. 45° rotation, CW to close. Tight close-off. Damper leakage is less than 2% of the terminal rated airflow at 3" w.g. (750 Pa)
- 1/2" (13) dia. plated steel drive shaft. An indicator mark on the end of the shaft shows damper position
- Multi-point averaging sensor. Supplied with balancing tees
- 1/2" (13) O.D. copper tubes and aluminum ripple fins, 10 per inch
- D1 - Digital Controls: Unknown, Factory Mounted (Supplied by Others)
- MA - Damper Actuator: By Controls Manufacturer
- OR - 22 ga. (0.86) zinc coated steel casing, mechanically sealed, low leakage construction, right hand (determined when looking in the direction of airflow)
- QA - Transformer: 120/24V
- FG1 - 1" (25) Steri-Liner
- FN - Full NEMA 1 type 24V Controls Enclosure

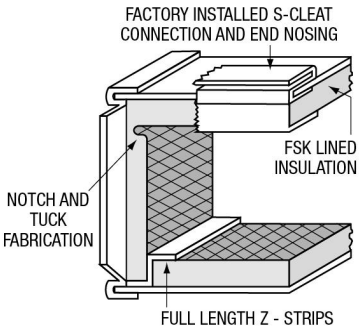
Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

Dimensions are in inches (mm)

- W2R - Hot Water Coil: 2 Row, Right-hand
- VPBO - Valve/Piping Package: By others (field installed)

233600 1.4A & 1.4B

FG1 - Steri-Liner

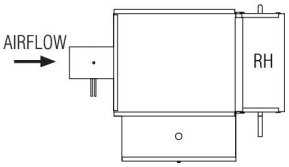


- 1" (25) thick, rigid fiberglass with a fire resistant reinforced aluminum FSK (foil-scrim-kraft) facing

Meets requirements:

- UL 181 & 723
- NFPA 90A & 90B
- ASTM E 84, C 665, C 1071, C 1338, G21 & G22

OR/W2R - Top View Orientation- Controls Location, Hot Water Coil Connection



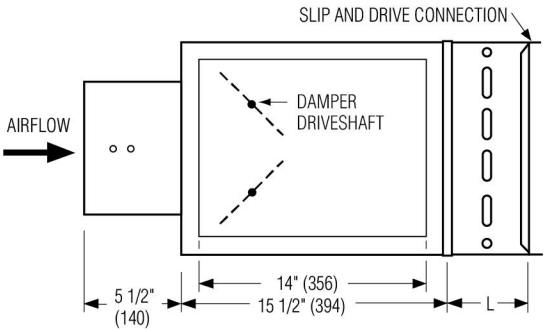
Right Hand Controls Location/Right Hand Hot Water Coil Connection

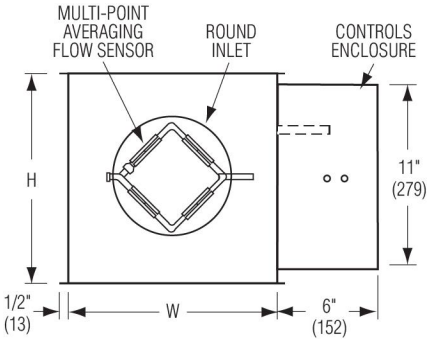
Project: CCRBHC (VAVs) **Date:** 11/14/2024
Engineer: **Version No:**
Contractor:

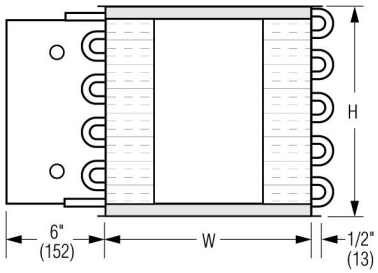
Dimensions are in inches (mm)

Item: 39
Tags: VAV-2-22

233600 1.4A & 1.4B







Right-hand controls location shown
*Controls Enclosure optional with field mounted controls

DIMENSIONAL DATA

Unit Size	Inlet Size (Nominal)	Airflow Range cfm (l/s)	Width (W)	Height (H)	Inlet Size	Coil Dim (L)	Coil Connection O.D
12	09	0 – 1400 (0 – 661)	18 (457)	12 1⁄2 (318)	8 7⁄8 (225) Round	5 (127)	7⁄8 (22)

FEATURES

- 16 ga. (1.61) corrosion-resistant steel inclined opposed blade damper with extruded PVC seals. 45° rotation, CW to close. Tight close-off. Damper leakage is less than 2% of the terminal rated airflow at 3" w.g. (750 Pa)
- 1/2" (13) dia. plated steel drive shaft. An indicator mark on the end of the shaft shows damper position
- Multi-point averaging sensor. Supplied with balancing tees
- 1/2" (13) O.D. copper tubes and aluminum ripple fins, 10 per inch
- D1 - Digital Controls: Unknown, Factory Mounted (Supplied by Others)
- MA - Damper Actuator: By Controls Manufacturer
- OR - 22 ga. (0.86) zinc coated steel casing, mechanically sealed, low leakage construction, right hand (determined when looking in the direction of airflow)
- QA - Transformer: 120/24V

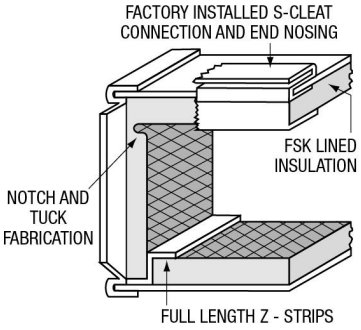
Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

Dimensions are in inches (mm)

- FG1 - 1" (25) Steri-Liner
- FN - Full NEMA 1 type 24V Controls Enclosure
- W2R - Hot Water Coil: 2 Row, Right-hand
- VPBO - Valve/Piping Package: By others (field installed)

233600 1.4A & 1.4B

FG1 - Steri-Liner

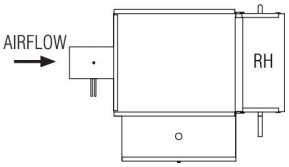


- 1" (25) thick, rigid fiberglass with a fire resistant reinforced aluminum FSK (foil-scrim-kraft) facing

Meets requirements:

- UL 181 & 723
- NFPA 90A & 90B
- ASTM E 84, C 665, C 1071, C 1338, G21 & G22

OR/W2R - Top View Orientation- Controls Location, Hot Water Coil Connection



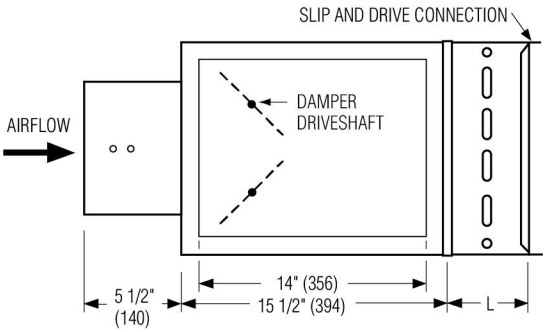
Right Hand Controls Location/Right Hand Hot Water Coil Connection

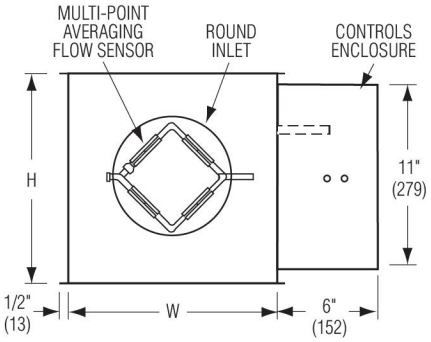
Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

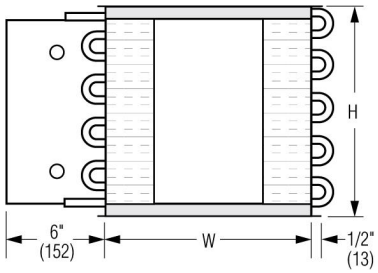
Dimensions are in inches (mm)

Item: 42
Tags: VAV-3-3

233600 1.4A & 1.4B







Right-hand controls location shown
*Controls Enclosure optional with field mounted controls

DIMENSIONAL DATA

Unit Size	Inlet Size (Nominal)	Airflow Range cfm (l/s)	Width (W)	Height (H)	Inlet Size	Coil Dim (L)	Coil Connection O.D
04	04	0 – 225 (0 – 106)	10 (254)	10 (254)	3 7/8 (98) Round	5 (127)	7/8 (22)

FEATURES

- 16 ga. (1.61) corrosion-resistant steel inclined single blade damper with extruded PVC seals. 45° rotation, CW to close. Tight close-off. Damper leakage is less than 2% of the terminal rated airflow at 3" w.g. (750 Pa)
- 1/2" (13) dia. plated steel drive shaft. An indicator mark on the end of the shaft shows damper position
- Multi-point averaging sensor. Supplied with balancing tees
- 1/2" (13) O.D. copper tubes and aluminum ripple fins, 10 per inch
- D1 - Digital Controls: Unknown, Factory Mounted (Supplied by Others)
- MA - Damper Actuator: By Controls Manufacturer
- OR - 22 ga. (0.86) zinc coated steel casing, mechanically sealed, low leakage construction, right hand (determined when looking in the direction of airflow)
- QA - Transformer: 120/24V

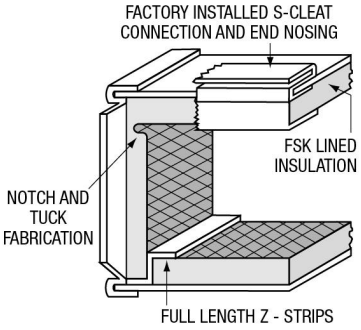
Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

Dimensions are in inches (mm)

- FG1 - 1" (25) Steri-Liner
- FN - Full NEMA 1 type 24V Controls Enclosure
- W2R - Hot Water Coil: 2 Row, Right-hand
- VPBO - Valve/Piping Package: By others (field installed)

233600 1.4A & 1.4B

FG1 - Steri-Liner

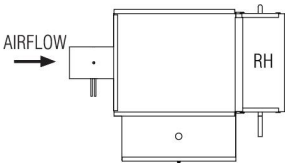


- 1" (25) thick, rigid fiberglass with a fire resistant reinforced aluminum FSK (foil-scrim-kraft) facing

Meets requirements:

- UL 181 & 723
- NFPA 90A & 90B
- ASTM E 84, C 665, C 1071, C 1338, G21 & G22

OR/W2R - Top View Orientation- Controls Location, Hot Water Coil Connection



Right Hand Controls Location/Right Hand Hot Water Coil Connection

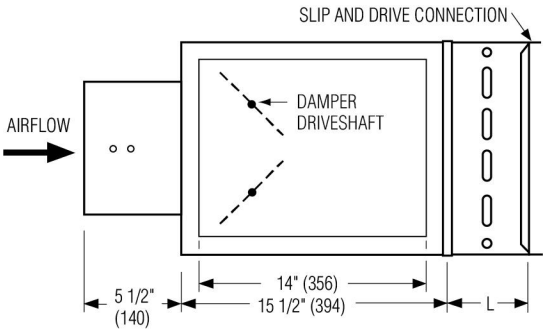
Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

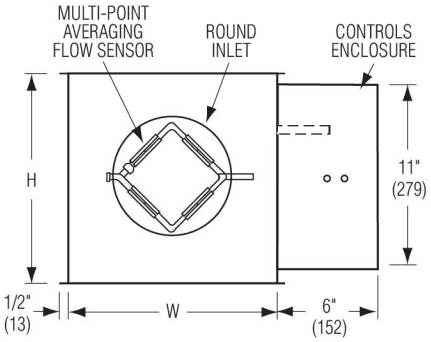
Dimensions are in inches (mm)

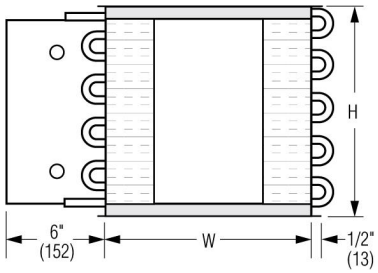
Items: 46, 71

Tags: VAV-3-7; VAV-4-1

233600 1.4A & 1.4B







Right-hand controls location shown
*Controls Enclosure optional with field mounted controls

DIMENSIONAL DATA

Unit Size	Inlet Size (Nominal)	Airflow Range cfm (l/s)	Width (W)	Height (H)	Inlet Size	Coil Dim (L)	Coil Connection O.D
07	07	0 – 800 (0 – 378)	12 (305)	12 1⁄2 (318)	6 7⁄8 (175) Round	7 1/2 (191)	7⁄8 (22)

FEATURES

- 16 ga. (1.61) corrosion-resistant steel inclined opposed blade damper with extruded PVC seals. 45° rotation, CW to close. Tight close-off. Damper leakage is less than 2% of the terminal rated airflow at 3" w.g. (750 Pa)
- 1/2" (13) dia. plated steel drive shaft. An indicator mark on the end of the shaft shows damper position
- Multi-point averaging sensor. Supplied with balancing tees
- 1/2" (13) O.D. copper tubes and aluminum ripple fins, 10 per inch
- D1 - Digital Controls: Unknown, Factory Mounted (Supplied by Others)
- MA - Damper Actuator: By Controls Manufacturer
- OR - 22 ga. (0.86) zinc coated steel casing, mechanically sealed, low leakage construction, right hand (determined when looking in the direction of airflow)
- QA - Transformer: 120/24V

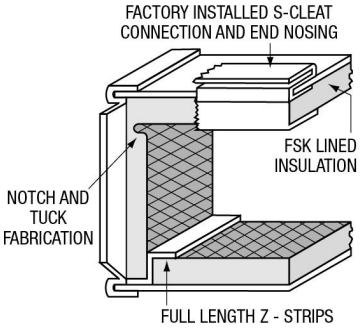
Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

Dimensions are in inches (mm)

- FG1 - 1" (25) Steri-Liner
- FN - Full NEMA 1 type 24V Controls Enclosure
- W3R - Hot Water Coil: 3 Row, Right-hand
- VPBO - Valve/Piping Package: By others (field installed)

233600 1.4A & 1.4B

FG1 - Steri-Liner

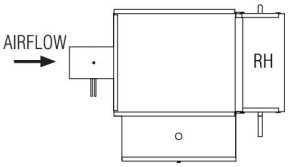


- 1" (25) thick, rigid fiberglass with a fire resistant reinforced aluminum FSK (foil-scrim-kraft) facing

Meets requirements:

- UL 181 & 723
- NFPA 90A & 90B
- ASTM E 84, C 665, C 1071, C 1338, G21 & G22

OR/W3R - Top View Orientation- Controls Location, Hot Water Coil Connection



Right Hand Controls Location/Right Hand Hot Water Coil Connection

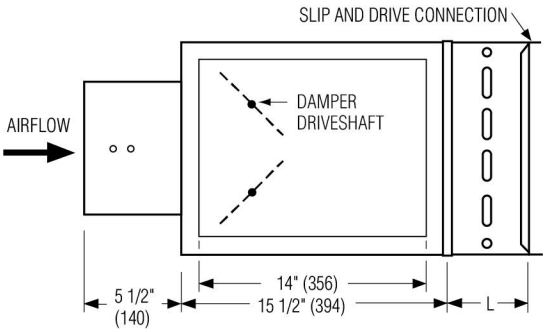
Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

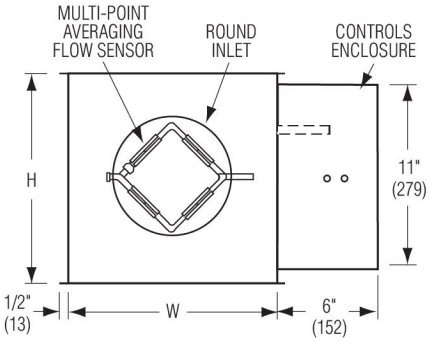
Dimensions are in inches (mm)

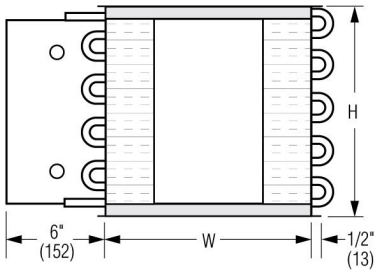
Items: 49, 53, 62, 64

Tags: VAV-3-10; VAV-3-14; VAV-3-23; VAV-3-25

233600 1.4A & 1.4B







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Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

Dimensions are in inches (mm)

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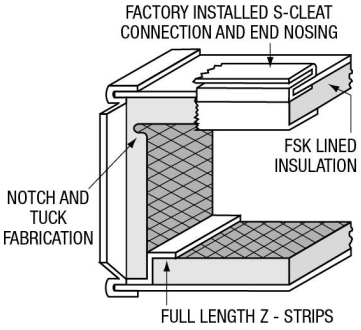
- FN - Full NEMA 1 type 24V Controls Enclosure
- W4R - Hot Water Coil: 4 Row, Right-hand
- VPBO - Valve/Piping Package: By others (field installed)

233600 1.4A & 1.4B

FG1 - Steri-Liner



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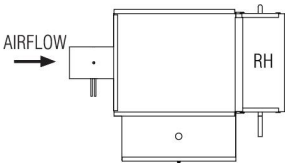

Right Hand Controls Location/Right Hand Hot Water Coil Connection

Project:	CCRBHC (VAVs)	**Date:**	11/14/2024
Engineer:		**Version No:**	
Contractor:			

Dimensions are in inches (mm)