Model Selection and Performance

Table 1: Static Pressure Drops for Base Cabinets[1]

Model Option[2]	Inches W.C.
O or V (100% OA, Fixed or Variable)	0.90
M (80/20 Modulating)[3]	1.05
B (80/20 Two-Position)[3]	0.95
F (80/20 Fixed Air Rotation)	0.95

NOTES:

1. Data applies to Horizontal and Upright Models. Add 0.10 to total static pressure on all units with G12 or smaller blower.
2. Base cabinet static pressure drops are calculated using 25ºF entering air temperature and 90ºF exiting air temperature. Static pressure drops for filter sections, inlet hoods and other options/accessories must be added.
3. Includes static pressure drops for dampers.
4. This includes the initial static pressure drop of "clean" filters.
5. Consult factory for exact coil losses in the application.

Important: On units with a filter option, the filters should be changed when the pressure drop reaches 0.60" w.c. Consult factory for change recommendations on high-efficiency filtering options.

Total Static Pressure Drop: After adding the losses from the base cabinet and options/accessories, also add project-specific ductwork losses. These will be user provided.

Table 2: Static Pressure Drops for Options/Accessories

Option/Accessory Description	Inches W.C.
Inlet Hood with Birdscreen	0.05
Filtered Inlet Hood (Includes 1" Aluminum Mesh Filters)[4]	0.10
Motorized Inlet Damper	0.10
Motorized Discharge Damper	0.18
3-Way Single-Deflection Diffuser Head	0.25
3-Way Double-Deflection Diffuser Head	0.35
4-Way Single-Deflection Diffuser Head	0.20
4-Way Double-Deflection Diffuser Head	0.25
Side Access Filter Section (2" 30% Pleated)[4]	0.25
Side Access Filter Section (1" Aluminum Mesh)[4]	0.10
Filter/Mix Box (2" 30% Pleated)[4]	0.20
Filter/Mix Box (1" Aluminum Mesh)[4]	0.05
ADD for 2" Aluminum Mesh Filters on Above Options	0.05
Evaporative Cooling Section (with 6" Thick Media)	0.15
Evaporative Cooling Section (with 12" Thick Media)	0.30
Typical CW or DX Coil Box[5]	0.60 – 0.90
Typical Steam Or HW Coil Box[5]	0.30 – 0.40

Maximum MBH Capacities[1]

Model	100% Outside Air Models[2]		Return Air Models[3]	
	Natural Gas	LP Gas	Natural Gas	LP Gas
AA1700	235	185	Not Available	Not Available
AA3000	375	330	330	315
AA1	450	375	375	355
AA2	940	720	720	690
AA3	1,125	1,050	1,050	1,010
AA4	2,025	1,550	1,550	1,485
AA5	2,800	2,215	2,215	2,125
AA6	3,615	2,770	2,770	2,655
AA7	4,900	3,880	3,880	3,720
AA8	6,000	5,545	5,545	5,315

NOTES:

1. Maximum MBH Capacities listed are based on a unit operating at 750-feet elevation and an outside air (OA) temperature of -10°F.
2. On 100% Outside Air (OA) models, selections are limited to the lesser of the Maximum MBH shown or a temperature rise of 140°F for natural gas or 100°F for propane (LP) gas.
3. On Return Air (RA) models, selections are limited to the lesser of the Maximum MBH shown or a temperature rise of 100°F for natural gas or 95°F for propane (LP) gas.

Gas Manifold Sizing

Gas Manifold Size	Maximum Capacity (MBH)	Min. Pressure Required at Max. MBH (inches w.c.)[(1)]	Maximum Inlet Gas Pressure
1/2"[(2)]	290	8	14"
3/4"	625	9	14"
1"	1,200	13	1#
1-1/4"	2,100	14	5#
1-1/2"	2,700	17	5#
2"	6,000	22	5#

(1) 3" less with low-pressure burners (NP2).

(2) Direct ignition only.

NOTES:
For low-inlet-gas-pressure options, consult factory.

Model Selection, Fan and Motor Requirements

Unit CFM	Model	Fan and Motor Requirements @ Total Static Pressure Shown												Outlet Velocity[2] (FPM)
		1.00"		1.25"		1.50"		1.75"		2.00"		2.50"		
		FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP	
800	AA1700	10-5	0.25	10-5	0.32	10-5	0.35	CF		CF		CF		1,473
1,250		10-5	0.68	10-5	0.75	10-5	0.82	10-5	0.87	10-5	1.00	10-5	1.05	2,302
1,700		9-7	0.75	9-7	0.86	10-5	1.53	10-5	1.63	10-5	1.91	10-5	1.89	2,599
2,000	AA3000	9-7	1.09	9-7	1.18	9-7	1.25	9-7	1.38	10-5	2.40	10-5	2.65	3,058
2,500		10	1.10	10	1.25	10	1.41	9-7	2.15	9-7	2.26	9-7	2.51	2,411
3,000		10	1.50	10	1.70	10	1.85	10	2.10	10	2.29	CF		2,893
3,500		10	2.10	10	2.30	10	2.50	10	2.70	CF		CF		3,376
3,500	AA1	12	1.40	10	2.30	10	2.50	10	2.70	10	2.90	10 HD	3.50	2,400
4,500		12	2.40	12	2.60	12	2.80	12	3.00	10 HD	4.70	CF		3,086
5,500		15	2.60	15	2.90	15	3.30	15-10	3.80	15-10	4.00	15-10	4.50	2,679
4,500	AA2	12	2.40	12	2.60	12	2.80	12	3.00	10 HD	4.70	CF		3,086
5,500		15	2.60	15	2.90	15	3.30	15-10	3.80	15-10	4.00	15-10	4.50	2,679
6,500		15	3.60	15	4.00	15	4.30	15	4.70	15	5.80	15	6.20	3,166
6,000	AA3	15	3.00	15	3.40	15	3.70	15-10	4.50	15-10	4.80	CF		2,922
8,000		18	3.50	18	3.80	15	6.50	15	6.90	15	7.40	15	8.40	2,790
9,000		18	4.80	18	5.40	18	5.80	18	6.20	18	6.60	18	7.50	3,199
10,000	AA4	20	4.00	20	4.50	20	5.10	20	5.60	18	7.30	18	8.30	2,351
12,000		20	5.90	20	6.40	20	6.90	20	7.50	20	8.20	18	11.8	2,821
14,000		20	8.40	20	9.00	20	9.50	20	10.3	20	11.0	20	12.2	3,291
13,000	AA5	22	5.60	22	6.10	22	6.70	22	7.30	22	8.10	20	10.8	2,524
15,000		22	7.40	22	8.20	22	8.90	22	9.50	22	10.4	22	11.8	2,909
17,000		22	9.80	22	10.8	22	11.5	22	12.3	22	13.0	22	14.6	3,300
20,000		22	14.3	22	15.6	22	16.5	22	17.2	22	18.2	22	20.0	3,878
18,000	AA6	25	7.70	25	8.60	25	9.50	25	10.5	25	11.5	25	13.4	2,655
21,000		25	10.8	25	11.7	25	12.7	25	13.6	25	14.7	25	17.1	3,097
23,000		25	13.2	25	14.2	25	15.4	25	16.3	25	17.6	25	19.8	3,391
25,000		25	16.2	25	17.3	25	18.3	25	19.2	25	20.7	25	23.1	3,686
26,000	AA7	30	10.6	30	11.9	30	13.1	30	14.2	30	15.7	30	18.2	2,772
30,000		30	14.1	30	15.7	30	17.1	30	18.4	30	19.8	30	22.8	3,198
35,000		30	19.6	30	21.4	30	23.0	30	24.7	30	26.4	30	29.8	3,731
34,000	AA8[1]	33	16.2	33	17.7	33	19.3	33	21.1	30	25.0	30	28.3	2,869
37,000		33	19.5	33	21.3	33	23.0	33	24.5	30	29.5	30	33.4	3,122
40,000		33	23.3	33	25.4	33	27.1	33	28.7	33	31.3	30	38.8	3,375
45,000		33	30.6	33	32.9	33	35.0	33	36.5	33	39.0	30	48.1	3,797
50,000		33	38.9	33	41.7	33	44.3	33	46.7	33	48.9	CF		4,218

These Models Have Heavy Duty Fans (HD) Included

THIS DATA IS SUBJECT TO CHANGE WITHOUT NOTICE. CONSULT FACTORY FOR SPECIFIC APPLICATIONS

NOTES:

1. Maximum volume for AA8 Return Air models is 45,000 CFM
2. Outlet velocity listed is for fan size shown in the 1.00" TSP column.

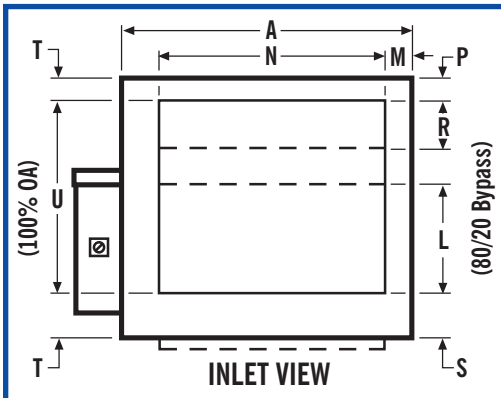
HD designation = Heavy Duty Fans with Pillow Block Bearings. All other fans have sleeve ball bearings.

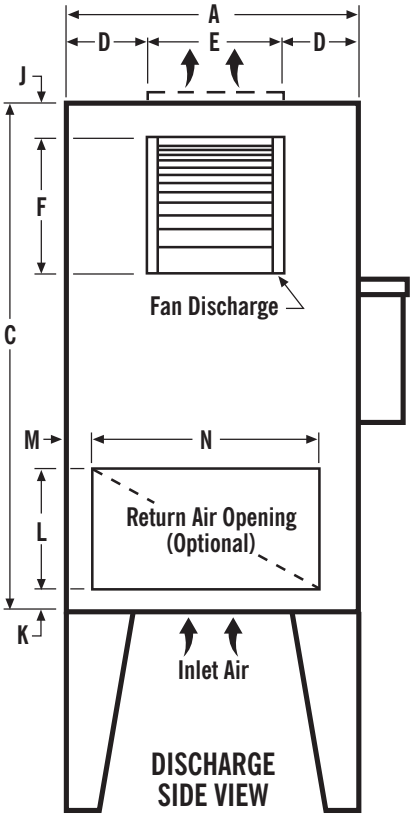
CF = Consult Factory.

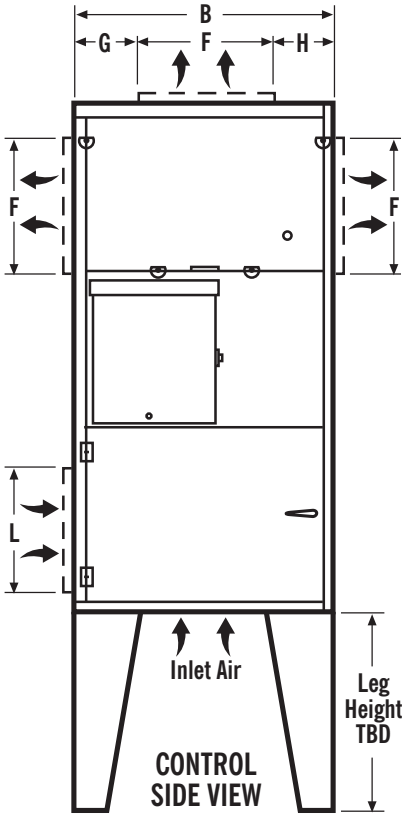
All BHP's listed include drive losses. Fan performanced based on 750' elevation & 90°F discharge temperature.

Dimensional Data

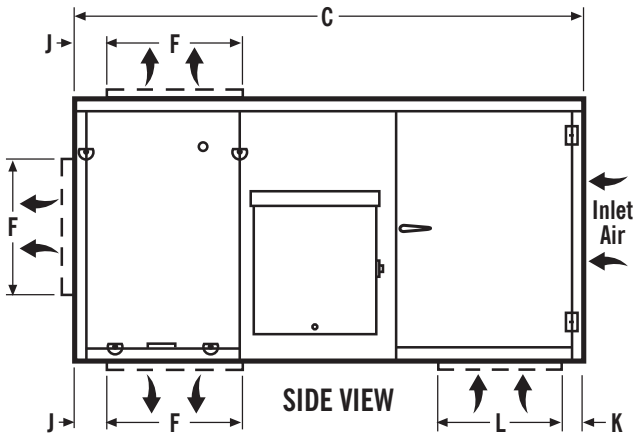
Horizontal Cabinets

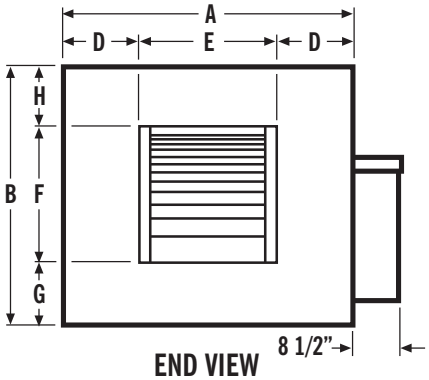






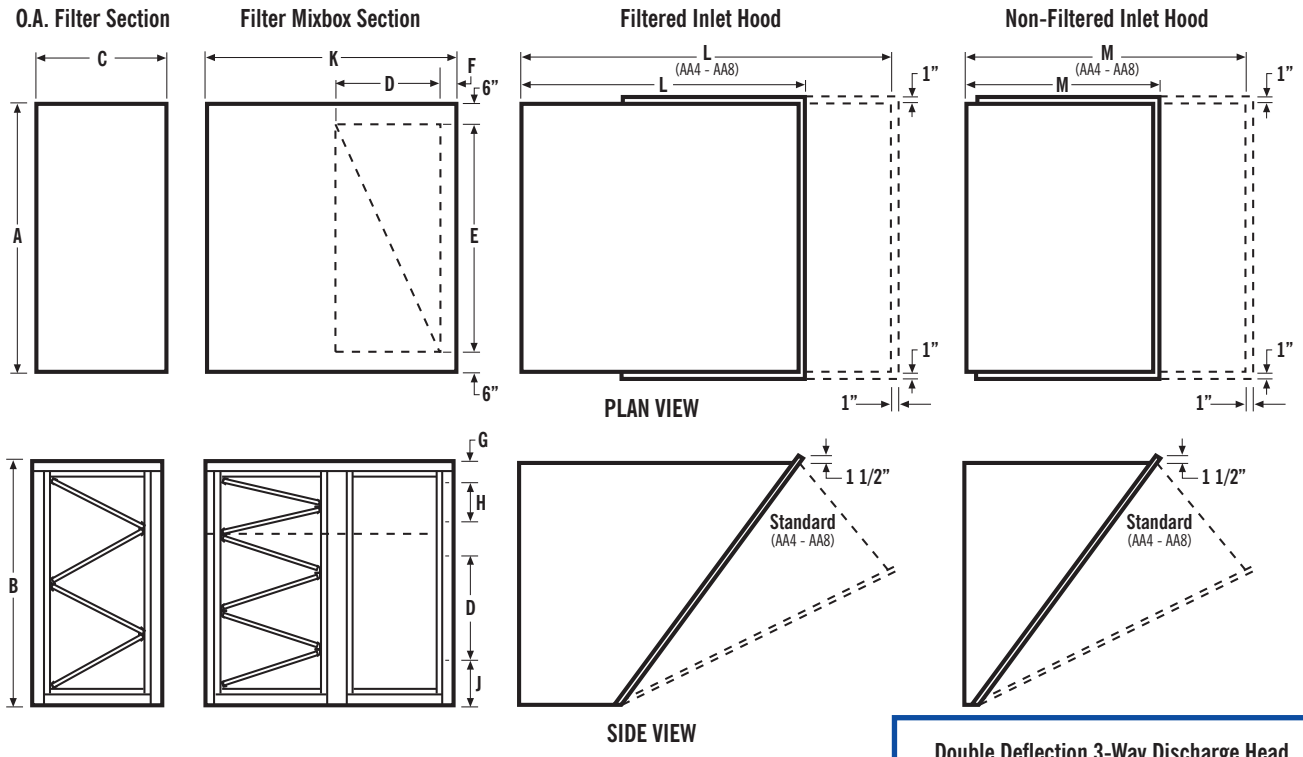
Upright Cabinets

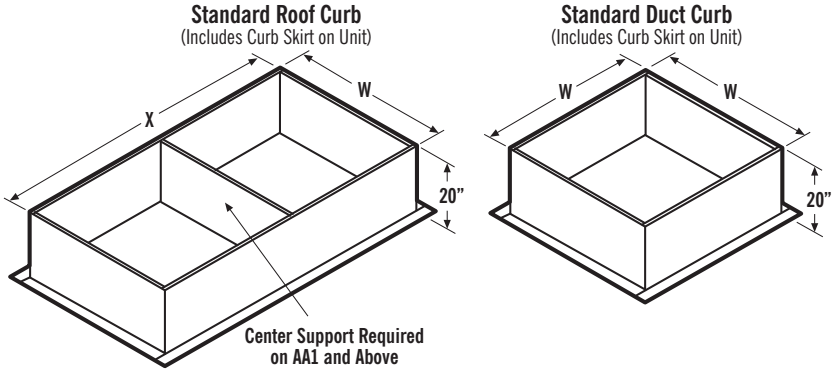




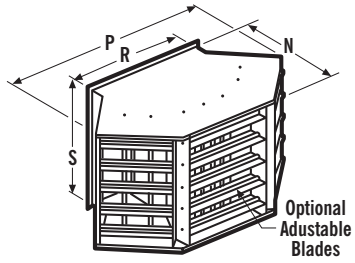
Model	Unit Size			Discharge Openings, Inches						O.A./R.A. Openings, Inches								
	A	B	C	D*	E*	F*	G*	H*	J*	K	L	M	N	P	R	S	T	U
AA1700	28	24	50	CF	7	11-3/8	6-7/16	6-3/16	6-1/2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AA3000	32	28	72	9-7/16	13-1/8	11-3/8	6-7/16	6-3/16	6-1/2	8	12	3-3/4	22	3	6	3	3	18
AA1	40	33	92	10-11/16	18-5/8	15-7/8	8-3/4	8-3/8	6	6	16	4-9/16	29	4	4	5	4	25
AA2	40	33	92	10-11/16	18-5/8	15-7/8	8-3/4	8-3/8	6	6	16	4-9/16	29	4	4	5	4	25
AA3	48	38	92	13-1/16	21-7/8	18-7/8	10-3/8	8-3/4	6	6	20	4-9/16	36	4	5	4	6	26
AA4	55	47	92	15-1/8	24-3/4	24-3/4	11-1/4	11	11-1/4	4	24	4-9/16	41	3	6	8	7-1/2	32
AA5	74	54	102	23-3/8	27-1/4	27-1/4	12-1/4	14-1/2	12-1/4	4	28	3-13/16	60	4	7	9	7	40
AA6	74	54	102	21-3/8	31-1/4	31-1/4	13-1/2	9-1/4	13-1/2	4	28	3-13/16	60	4	7	9	7	40
AA7	90	70	138	26-5/8	36-3/4	36-3/4	16-3/4	16-1/2	16-3/4	4	40	3-11/16	76	5	10	9	10	50
AA8	90	70	138	25-1/8	39-3/4	42-15/16	14-13/16	12-1/4	14 13/16	4	40	3-11/16	76	5	10	9	10	50

NOTES: N/A = Not Available TBD = To Be Determined CF= Consult Factory * = Dimensions are for maximum fan size
This data is subject to change without notice.

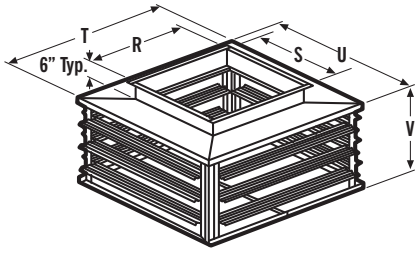




Double Deflection 3-Way Discharge Head



Single Deflection 4-Way Discharge Head



Options & Accessories

Dimensions, Inches																					
Model	A	B	C	D	E	F	G	H	J	K	L	M	N[1]	P[1]	R[1]	S[1]	T	U	V	W[2]	X[2]
AA1700	28	24	18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24	24	19-1/16	28-1/8	14	14	25-1/2	25-1/2	12	24	46
AA3000	32	28	25	12	20	6	3	6	3	46	22-1/2	24-3/8	19-1/16	28-1/8	14	14	25-1/2	25-1/2	12	28	68
AA1	40	33	25	16	28	6	4	4	5	48	26-1/2	26-1/4	20-9/16	33-1/4	19	19	30-1/2	30-1/2	16	36	88
AA2	40	33	25	16	28	6	4	4	5	48	26-1/2	26-1/4	20-9/16	33-1/4	19	19	30-1/2	30-1/2	16	36	88
AA3	48	38	25	20	36	6	4	5	5	53	26-1/2	35-5/8	21-1/2	36-3/8	22-1/4	22-1/4	33-3/4	33-3/4	17	44	88
AA4	55	47	25	24	43	4	6	6	11	53	74	56	22-5/16	39-1/8	25	25	45-7/8	45-7/8	18	51	88
AA5	74	54	25	28	62	4	4	7	8	58	91	73	23-3/16	42-1/8	28	28	48-7/8	48-7/8	24	70	98
AA6	74	54	25	28	62	4	4	7	8	58	91	73	24-5/16	46-1/8	32	32	52-7/8	52-7/8	26	70	98
AA7	90	70	25	40	78	4	9	10	11	70	84	84	26-1/4	52-1/8	38	38	64-1/2	64-1/2	30	85	133
AA8	90	70	25	40	78	4	9	10	11	70	84	84	26-15/16	52-1/8	41	44	67-1/2	70-1/2	35	85	133

NOTES: N/A = Not Available 1 = Dimensions are for maximum fan size 2 = Curb dimensions are for base unit only