

Tables D: Air Turnover Heating/Cooling Unit with Filtration Performance Information

(For cooling applications, consult factory. Base Unit Weights do not account for inclusion of cooling coils or exclusion of heat exchanger. Additional configurations are available upon request.)

BAR-136					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
4,500	1.5 (1 motor)	240	450	49 to 93	2,425
9,000	5 (1 motor)	240	450	25 to 46	2,505
12,000	5 (1 motor)	240	450	19 to 35	2,520

BAR-148					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
10,000	5 (1 motor)	240	450	22 to 42	3,455
16,000	7.5 (1 motor)	240	750	14 to 43	3,470

BAR-154					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
14,000	5 (1 motor)	240	450	16 to 30	4,080
22,000	7.5 (1 motor)	240	750	10 to 32	4,140
30,000	10 (1 motor)	520	1,000	16 to 31	4,210
30,000	10 (1 motor)	560	1,250	17 to 39	4,420

BAR-236					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
9,000	1.5 (2 motors)	240	450	25 to 46	4,145
18,000	5 (2 motors)	240	750	12 to 39	4,240
24,000	5 (2 motors)	520	1,000	20 to 39	4,270

BAR-242					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
21,000	5 (2 motors)	240	750	11 to 33	5,240
31,000	7.5 (2 motors)	520	1,000	16 to 30	5,270
31,000	7.5 (2 motors)	560	1,250	17 to 37	5,445

BAR-248					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
22,000	5 (2 motors)	240	750	10 to 32	6,190
35,000	7.5 (2 motors)	520	1,000	14 to 26	6,345
45,000	10 (2 motors)	560	1,250	12 to 26	6,575
45,000	10 (2 motors)	560	1,500	12 to 31	6,730

BAR-254					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
40,000	5 (2 motors)	560	1,750	13 to 41	7,870
60,000	10 (2 motors)	600	2,250	9 to 35	8,310
65,000	15 (2 motors)	600	2,500	9 to 36	8,560

BAR-260					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
54,000	7.5 (2 motors)	600	3,000	10 to 51	11,070
61,000	10 (2 motors)	720	4,000	11 to 61	11,335
74,000	15 (2 motors)	720	4,000	9 to 50	11,385

BAR-272					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
62,000	7.5 (2 motors)	600	3,000	9 to 45	12,160
88,000	15 (2 motors)	720	4,500	8 to 47	12,385
100,000	15 (2 motors)	720	4,500	7 to 42	12,515

Installation Code and Annual Inspections:

All installations and service of BANANZA® equipment must be performed by a contractor qualified in the installation and service of equipment sold and supplied by Bananza and conform to all requirements set forth in the BANANZA® manuals and all applicable governmental authorities pertaining to the installation, service and operation of the equipment. To help facilitate optimum performance and safety, Bananza recommends that a qualified contractor annually inspect your BANANZA® equipment and perform service where necessary, using only replacement parts sold and supplied by Bananza.

Further Information: Applications, engineering and detailed guidance on systems design, installation and equipment performance is available through BANANZA® representatives. Please contact us for any further information you may require, including the Installation, Operation and Service Manual.

This product is not for residential use.

This document is intended to assist licensed professionals in the exercise of their professional judgement.

Bananza

1100 Seven Mile Road NW
Comstock Park, MI 49321
Telephone: 616.726.8800
Toll Free: 800.255.3416
Fax: 616.726.8807

www.bananza.com

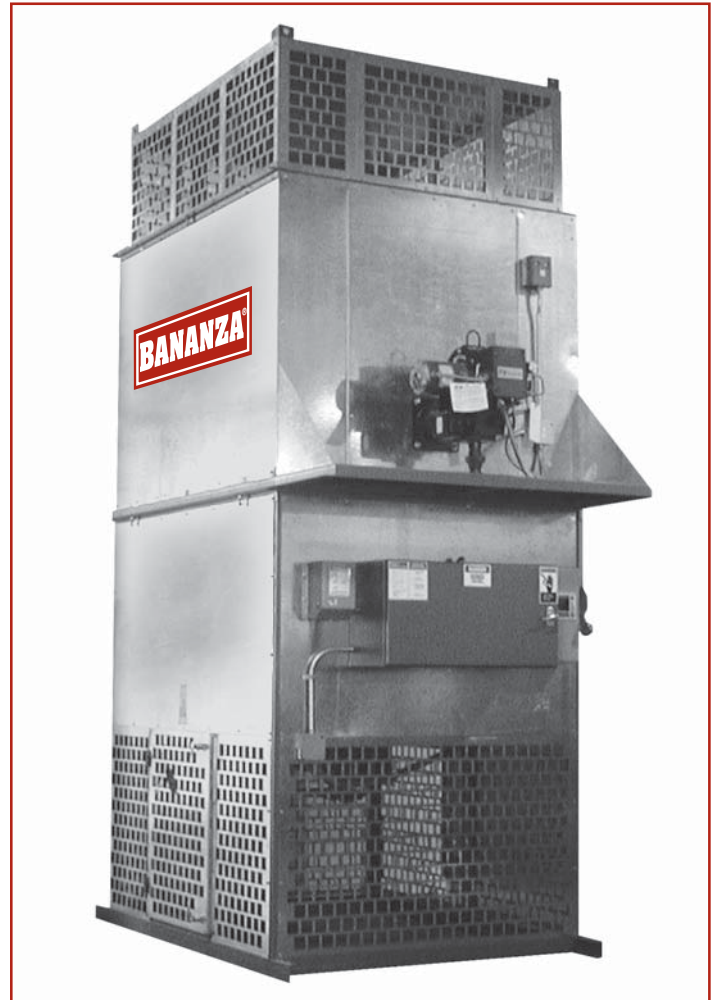
© 2007 Roberts-Gordon, LLC All rights reserved. No part of this work covered by the copyrights herein may be reproduced or copied in any form or by any means – graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems – without written permission of Roberts-Gordon, LLC.

BANANZA®

BAR-Series

Indirect-Fired Air Turnover Units

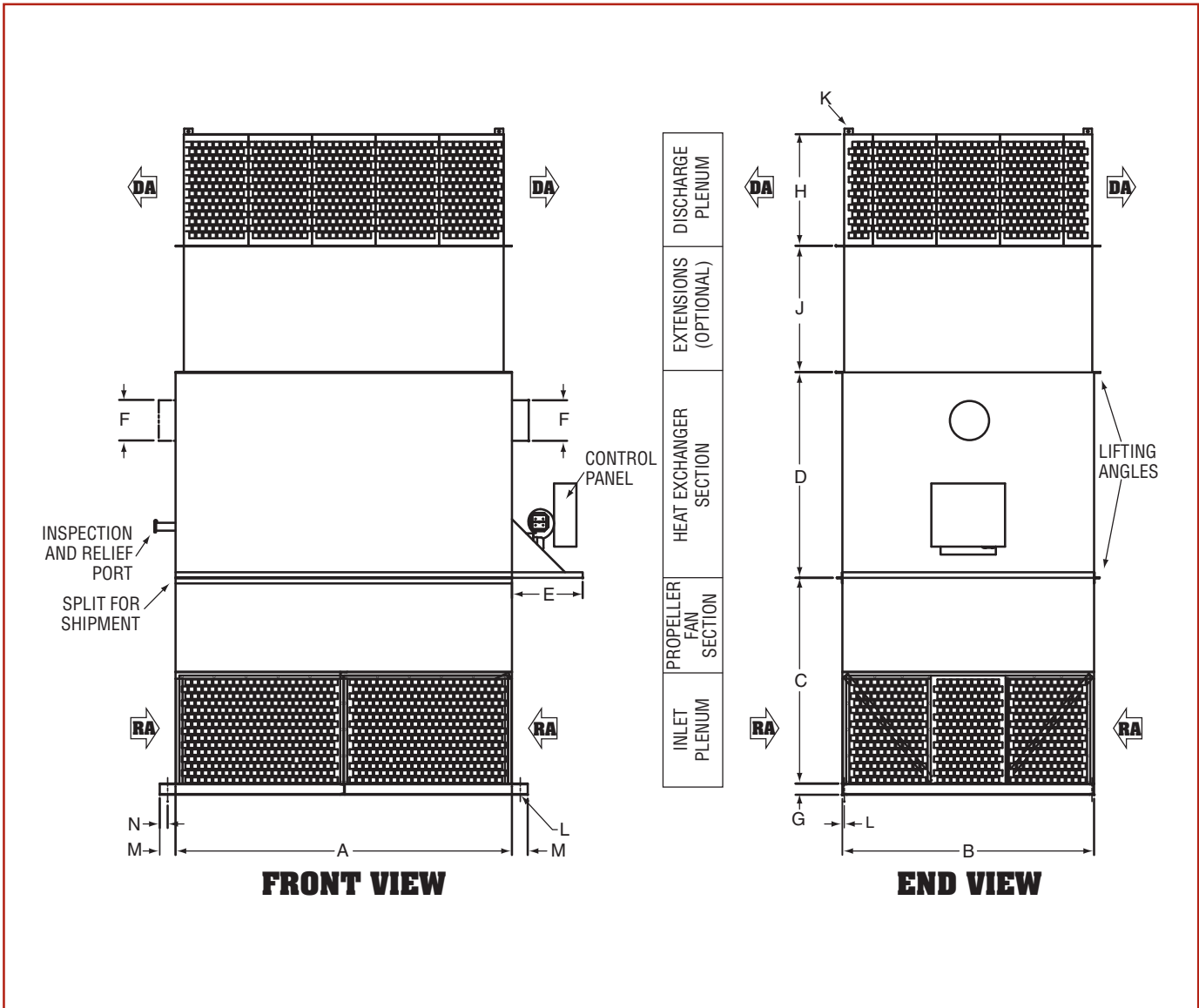
Dimension and Selection Guide



1.800.255.3416
www.bananza.com



BAR-Series Heating Unit



DIMENSIONS									
	BAR-136	BAR-148	BAR-154	BAR-236	BAR-242	BAR-248	BAR-254	BAR-260	BAR-272
A	60	72	85	90	100	116	145	160	165
B	50	60	72	50	55	60	72	84	90
C	75	75	86	60	66	66	72	72	76
D	53	53	65	53	75 - 53 100 - 53 125 - 72	75 - 53 100 - 53 125 - 72 150 - 72 175 - 72	90	96	96
E	35	35	35	35	35	35	35	35	35
F	45 - 6 75 - 6 100 - 8	45 - 6 75 - 6 100 - 8	45 - 6 75 - 6 100 - 8	45 - 6 70 - 6 100 - 8	75 - 6 100 - 8 125 - 10	75 - 6 100 - 8 125 - 10 175 - 12	175 - 12 225 - 12 300 - 14	300 - 14 450 - 16	300 - 14 450 - 16
G	3	3	3	3	3	3	4	4	4
H	24	24	36	24	30	30	36	36	40
J	48	48	48	48	48	48	48	48	48
K	.75	.75	.75	.75	.75	.75	.75	.75	.75
L	.75	.75	.75	.75	.75	.75	.75	.75	.75
M	6	6	6	6	6	6	6	6	6
N	3	3	3	3	3	3	3	3	3

LEGEND
DA = Discharge Air
RA = Return Air

- IMPORTANT NOTES:**
- All dimensions are in inches.
 - All dimensions are subject to change without notice.
 - Due to height of unit, additional support is recommended on top of the unit.
 - Dimension "F" is flue diameter. Flue located on left side of unit for 1,000 MBH heat exchanger and smaller; flue located on right side of unit for 1,250 MBH heat exchanger and larger.
 - Dimensions "D" and "F" may vary depending on heat exchanger size (ex. 45 = 450 MBH heat exchanger).

Tables B: Air Turnover Heating Unit with Filtration Performance Information

(Additional configurations are available upon request.)

BAR-136					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
4,500	1 (1 motor)	240	450	49 to 93	2,425
9,000	3 (1 motor)	240	450	25 to 46	2,505
12,000	5 (1 motor)	240	450	19 to 35	2,520

BAR-148					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
10,000	3 (1 motor)	240	450	22 to 42	3,455
16,000	5 (1 motor)	240	750	14 to 43	3,470

BAR-154					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
14,000	3 (1 motor)	240	450	16 to 30	4,080
22,000	5 (1 motor)	240	750	10 to 32	4,140
30,000	10 (1 motor)	520	1,000	16 to 31	4,210
30,000	10 (1 motor)	560	1,250	17 to 39	4,420

BAR-236					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
9,000	1 (2 motors)	240	450	25 to 46	4,145
18,000	3 (2 motors)	240	750	12 to 39	4,240
24,000	5 (2 motors)	520	1,000	20 to 39	4,270

BAR-242					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
21,000	3 (2 motors)	240	750	11 to 33	5,240
31,000	5 (2 motors)	520	1,000	16 to 30	5,270
31,000	5 (2 motors)	560	1,250	17 to 37	5,445

BAR-248					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
22,000	3 (2 motors)	240	750	10 to 32	6,190
35,000	5 (2 motors)	520	1,000	14 to 26	6,345
45,000	7.5 (2 motors)	560	1,250	12 to 26	6,575
45,000	7.5 (2 motors)	560	1,500	12 to 31	6,730

BAR-254					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
40,000	5 (2 motors)	560	1,750	13 to 41	7,870
60,000	10 (2 motors)	600	2,250	9 to 35	8,310
65,000	10 (2 motors)	600	2,500	9 to 36	8,560

BAR-260					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
54,000	5 (2 motors)	600	3,000	10 to 51	11,070
61,000	7.5 (2 motors)	720	4,000	11 to 61	11,335
74,000	10 (2 motors)	720	4,000	9 to 50	11,385

BAR-272					
CFM	Motor (HP)	Output (MBH) Minimum	Output (MBH) Maximum	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
62,000	7.5 (2 motors)	600	3,000	9 to 45	12,160
88,000	10 (2 motors)	720	4,500	8 to 47	12,385
100,000	15 (2 motors)	720	4,500	7 to 42	12,515

Tables C: Air Turnover Cooling Unit with Filtration Performance Information

(For cooling applications, consult factory. Base Unit Weights do not account for inclusion of cooling coils or exclusion of heat exchanger. Additional configurations are available upon request.)

BAR-136		
CFM	Motor (HP)	Base Unit Weight (lbs.)
4,500	1 (1 motor)	2,425
9,000	3 (1 motor)	2,505
12,000	5 (1 motor)	2,520

BAR-148		
CFM	Motor (HP)	Base Unit Weight (lbs.)
10,000	3 (1 motor)	3,455
16,000	5 (1 motor)	3,470

BAR-154		
CFM	Motor (HP)	Base Unit Weight (lbs.)
14,000	5 (1 motor)	4,080
22,000	5 (1 motor)	4,140
30,000	10 (1 motor)	4,210
30,000	10 (1 motor)	4,420

BAR-236		
CFM	Motor (HP)	Base Unit Weight (lbs.)
9,000	2 (1 motors)	4,145
18,000	3 (2 motors)	4,240
24,000	5 (2 motors)	4,270

BAR-242		
CFM	Motor (HP)	Base Unit Weight (lbs.)
21,000	3 (2 motors)	5,240
31,000	5 (3 motors)	5,270
31,000	5 (3 motors)	5,445

BAR-248		
CFM	Motor (HP)	Base Unit Weight (lbs.)
22,000	3 (2 motors)	6,190
35,000	5 (2 motors)	6,345
45,000	7.5 (2 motors)	6,575
45,000	7.5 (2 motors)	6,730

BAR-254		
CFM	Motor (HP)	Base Unit Weight (lbs.)
40,000	5 (2 motors)	7,870
60,000	10 (2 motors)	8,310
65,000	10 (2 motors)	8,560

BAR-260		
CFM	Motor (HP)	Base Unit Weight (lbs.)
54,000	5 (2 motors)	11,070
61,000	7.5 (2 motors)	11,335
74,000	10 (2 motors)	11,385

BAR-272		
CFM	Motor (HP)	Base Unit Weight (lbs.)
62,000	7.5 (2 motors)	12,160
88,000	10 (2 motors)	12,385
100,000	15 (2 motors)	12,515

BAR-Series Estimated Shipping Weights

ESTIMATED SHIPPING WEIGHTS - BURNERS (ALL MODELS)								
GAS BURNER	Input MBH	300 - 625	626 - 938	939 - 1250	1251 - 1875	1876 - 2500	2501 - 3125	3126 - 5000
	Weight	155	190	230	290	300	340	340
#2 OIL BURNER	Input GPH	2.5 - 4.5	4.6 - 6.7	6.8 - 8.9	9.0 - 13.4	13.5 - 17.9	18 - 22	22.1 - 36
	Weight	125	125	220	220	310	360	385
COMBINATION GAS / #2 OIL BURNER	Input MBH	300 - 625	626 - 938	939 - 1250	1251 - 1875	1876 - 2500	2501 - 3125	3126 - 5000
	Input GPH	2.5 - 4.5	4.6 - 6.7	6.8 - 8.9	9.0 - 13.4	13.5 - 17.9	18 - 22	22.1 - 36
	Weight	200	240	270	360	400	450	500

IMPORTANT NOTES:

- All weights are in pounds.
- All weights are subject to change without notice.
- To determine total unit weight, add the appropriate burner weight to the appropriate base unit weight (as listed in performance information tables).

BAR-Series Selection Guide

To create a complete air turnover unit, choose one base unit and one burner/manifold package using the tables on the following pages. Prices apply for natural gas or LPG units.

1. Choosing A Base Unit Package

Base Unit Package choice is based on model choice. First locate the correct set of tables on the following pages which corresponds to the required type of unit. Locate CFM and MBH requirements on the appropriate set of tables to determine the unit model. If more than one model is applicable, choose the smaller model.

Btu/h Output Required = CFM * 1.08 * Temperature Rise

MBH = Btu/h / 1,000

2. Choosing A Burner/Manifold Package

Choose Burner/Manifold Package based on input, burner type and insurance requirements. Choose a Burner/Manifold Package that can fulfill the maximum output of the model. Note that burner INPUTS are listed rather than outputs.

Burner Input = Burner Output / .8

Tables A: Air Turnover Heating Unit Performance Information

(Additional configurations are available upon request.)

BAR-136					
CFM	Motor (HP)	Output (MBH)	Output (MBH)	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
		Minimum	Maximum		
4,500	1 (1 motor)	240	450	49 to 93	2,225
9,000	2 (1 motor)	240	450	25 to 46	2,280
12,000	3 (1 motor)	240	450	19 to 35	2,305

BAR-148					
CFM	Motor (HP)	Output (MBH)	Output (MBH)	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
		Minimum	Maximum		
10,000	3 (1 motor)	240	450	22 to 42	3,255
16,000	3 (1 motor)	240	750	14 to 43	3,300

BAR-154					
CFM	Motor (HP)	Output (MBH)	Output (MBH)	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
		Minimum	Maximum		
14,000	3 (1 motor)	240	450	16 to 30	3,880
22,000	5 (1 motor)	240	750	10 to 32	3,940
30,000	7.5 (1 motor)	520	1,000	16 to 31	4,115
30,000	7.5 (1 motor)	560	1,250	17 to 39	4,220

BAR-236					
CFM	Motor (HP)	Output (MBH)	Output (MBH)	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
		Minimum	Maximum		
9,000	1 (2 motors)	240	450	25 to 46	3,945
18,000	2 (2 motors)	240	750	12 to 39	3,990
24,000	3 (2 motors)	520	1,000	20 to 39	4,115

BAR-242					
CFM	Motor (HP)	Output (MBH)	Output (MBH)	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
		Minimum	Maximum		
21,000	2 (2 motors)	240	750	11 to 33	4,990
31,000	3 (2 motors)	520	1,000	16 to 30	5,115
31,000	3 (2 motors)	560	1,250	17 to 37	5,240

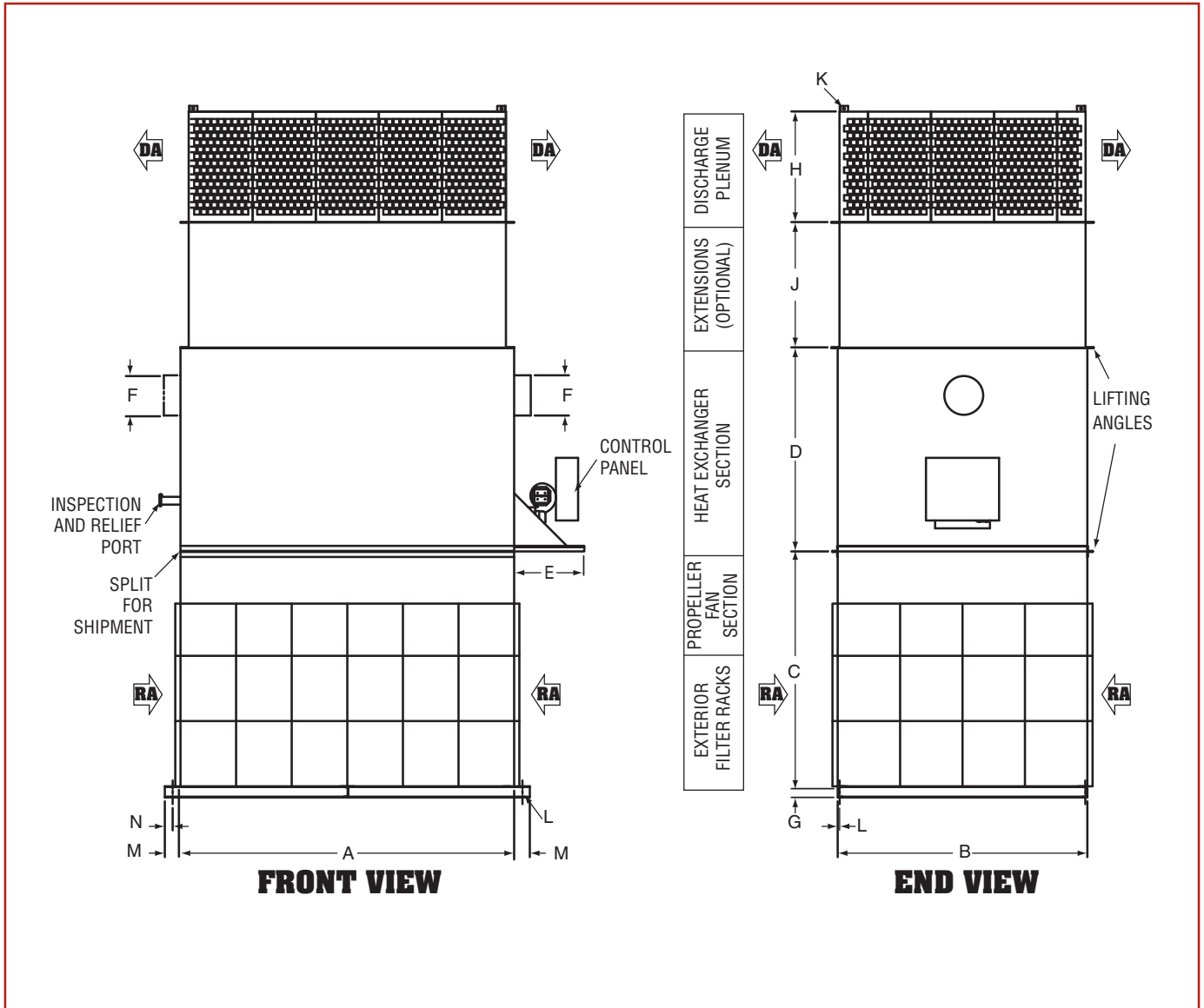
BAR-248					
CFM	Motor (HP)	Output (MBH)	Output (MBH)	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
		Minimum	Maximum		
22,000	3 (2 motors)	240	750	10 to 32	5,990
35,000	5 (2 motors)	520	1,000	14 to 26	6,145
45,000	5 (2 motors)	560	1,250	12 to 26	6,270
45,000	5 (2 motors)	560	1,500	12 to 31	6,270

BAR-254					
CFM	Motor (HP)	Output (MBH)	Output (MBH)	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
		Minimum	Maximum		
40,000	5 (2 motors)	560	1,750	13 to 41	7,670
60,000	7.5 (2 motors)	600	2,250	9 to 35	8,060
65,000	7.5 (2 motors)	600	2,500	9 to 36	8,310

BAR-260					
CFM	Motor (HP)	Output (MBH)	Output (MBH)	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
		Minimum	Maximum		
54,000	5 (2 motors)	600	3,000	10 to 51	10,870
61,000	7.5 (2 motors)	720	4,000	11 to 61	11,135
74,000	7.5 (2 motors)	720	4,000	9 to 50	11,135

BAR-272					
CFM	Motor (HP)	Output (MBH)	Output (MBH)	Temp. Rise Range (°F)	Base Unit Weight (lbs.)
		Minimum	Maximum		
62,000	5 (2 motors)	600	3,000	9 to 45	11,720
88,000	10 (2 motors)	720	4,500	8 to 47	12,185
100,000	10 (2 motors)	720	4,500	7 to 42	12,185

BAR-Series Heating Unit with Filtration



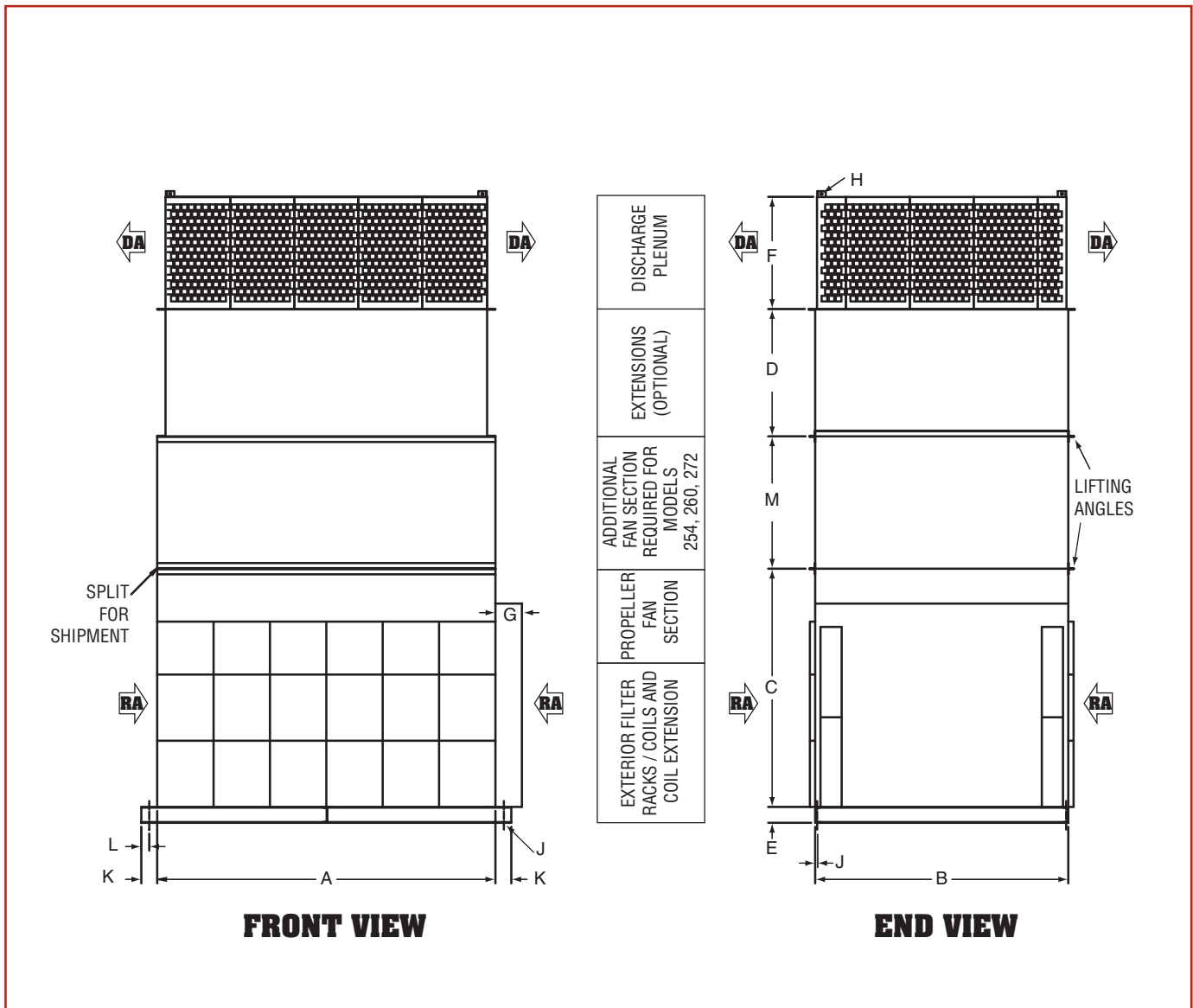
DIMENSIONS									
	BAR-136	BAR-148	BAR-154	BAR-236	BAR-242	BAR-248	BAR-254	BAR-260	BAR-272
A	60	72	85	90	100	116	145	160	165
B	50	60	72	50	55	60	72	84	90
C	75	75	86	60	66	66	72	72	76
D	53	53	65	53	75 - 53 100 - 53 125 - 72	75 - 53 100 - 53 125 - 72 150 - 72 175 - 72	90	96	96
E	35	35	35	35	35	35	35	35	35
F	45 - 6 75 - 6 100 - 8	45 - 6 75 - 6 100 - 8	45 - 6 75 - 6 100 - 8 125 - 10	45 - 6 70 - 6 100 - 8	75 - 6 100 - 8 125 - 10	75 - 6 100 - 8 125 - 10 175 - 12	175 - 12 225 - 12 300 - 14	300 - 14 450 - 16	300 - 14 450 - 16
G	3	3	3	3	3	3	4	4	4
H	24	24	36	24	30	30	36	36	40
J	48	48	48	48	48	48	48	48	48
K	.75	.75	.75	.75	.75	.75	.75	.75	.75
L	.75	.75	.75	.75	.75	.75	.75	.75	.75
M	6	6	6	6	6	6	6	6	6
N	3	3	3	3	3	3	3	3	3

LEGEND
DA = Discharge Air
RA = Return Air

IMPORTANT NOTES:

- All dimensions are in inches.
- All dimensions are subject to change without notice.
- Due to height of unit, additional support is recommended on top of the unit.
- Dimension "F" is flue diameter. Flue located on left side of unit for 1,000 MBH heat exchanger and smaller; flue located on right side of unit for 1,250 MBH heat exchanger and larger.
- Dimensions "D" and "F" may vary depending on heat exchanger size (ex. 45 = 450 MBH heat exchanger).

BAR-Series Cooling Unit with Filtration



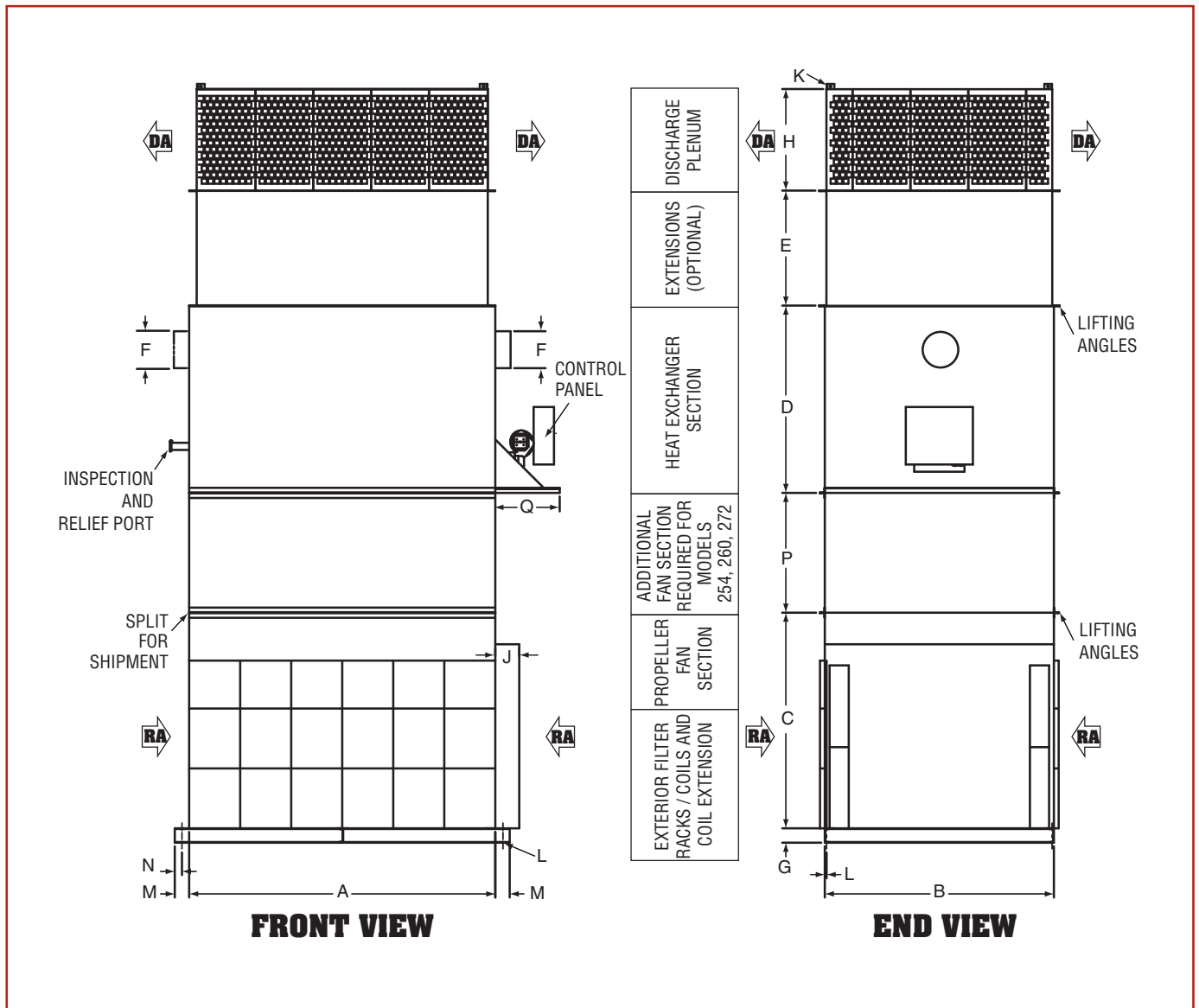
DIMENSIONS									
	BAR-136	BAR-148	BAR-154	BAR-236	BAR-242	BAR-248	BAR-254	BAR-260	BAR-272
A	60	72	85	90	100	116	145	160	165
B	50	60	72	50	55	60	72	84	90
C	75	85	95	85	85	95	90	90	90
D	48	48	48	48	48	48	48	48	48
E	6	6	6	6	6	6	6	6	6
F	24	24	36	24	30	30	36	36	40
G			10	10	16	6			10
H	.75	.75	.75	.75	.75	.75	.75	.75	.75
J	.75	.75	.75	.75	.75	.75	.75	.75	.75
K	6	6	6	6	6	6	6	6	6
L	3	3	3	3	3	3	3	3	3
M	N/A	N/A	N/A	N/A	N/A	N/A	50	50	50

LEGEND
DA = Discharge Air
RA = Return Air

IMPORTANT NOTES:

- All dimensions are in inches.
- All dimensions are subject to change without notice.
- Due to height of unit, additional support is recommended on top of the unit.

BAR-Series Heating and Cooling Unit with Filtration



DIMENSIONS									
	BAR-136	BAR-148	BAR-154	BAR-236	BAR-242	BAR-248	BAR-254	BAR-260	BAR-272
A	60	72	85	90	100	116	145	160	165
B	50	60	72	50	55	60	72	84	90
C	75	85	95	85	85	95	90	90	90
D	53	53	65	53	75 - 53 100 - 53 125 - 72	75 - 53 100 - 53 125 - 72 150 - 72 175 - 72	90	96	96
E	48	48	48	48	48	48	48	48	48
F	45 - 6 75 - 6 100 - 8	45 - 6 75 - 6 100 - 8	45 - 6 75 - 6 100 - 8 125 - 10	45 - 6 75 - 6 100 - 8	75 - 6 100 - 8 125 - 10	75 - 6 100 - 8 125 - 10 175 - 12	175 - 12 225 - 12 300 - 14	300 - 14 450 - 16	300 - 14 450 - 16
G	6	6	6	6	6	6	6	6	6
H	24	24	36	24	30	30	36	36	40
J			10	10	16	6			10
K	.75	.75	.75	.75	.75	.75	.75	.75	.75
L	.75	.75	.75	.75	.75	.75	.75	.75	.75
M	6	6	6	6	6	6	6	6	6
N	3	3	3	3	3	3	3	3	3
P	N/A	N/A	N/A	N/A	N/A	N/A	50	50	50
Q	35	35	35	35	35	35	35	35	35

LEGEND
DA = Discharge Air
RA = Return Air

IMPORTANT NOTES:

- All dimensions are in inches.
- All dimensions are subject to change without notice.
- Due to height of unit, additional support is recommended on top of the unit.
- Dimension "F" is flue diameter. Flue located on left side of unit for 1,000 MBH heat exchanger and smaller; flue located on right side of unit for 1,250 MBH heat exchanger and larger.
- Dimensions "D" and "F" may vary depending on heat exchanger size (ex. 45 = 450 MBH heat exchanger).