



FAN SELECTION And PERFORMANCE

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Monday, February 14, 2011

Job Name: AVANI ENVIRONMENTAL
 Reference: Quote: 183536

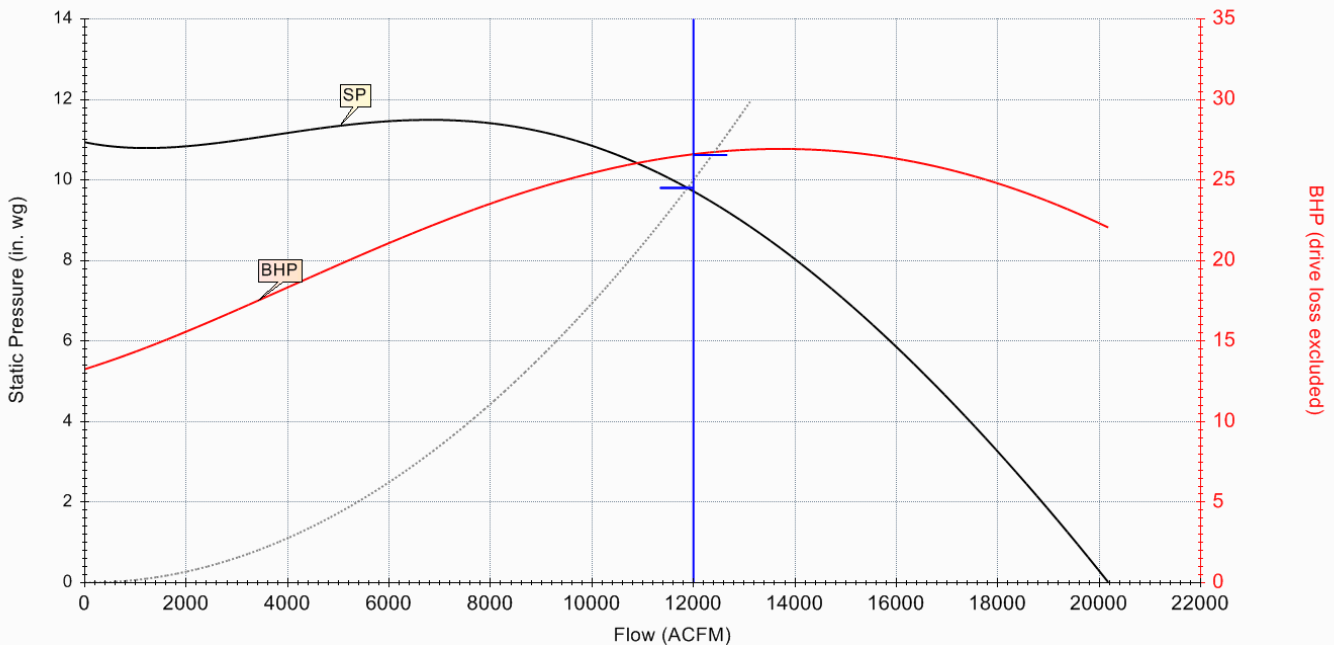
Operating Requirements

Volume, ACFM	12,000
Static Pressure, in. wg	10.0
Density, lb./ft. ³	0.075
Operating Temperature, °F	70
AMCA Arrangement No.	4HM
Motor Frequency, Hz	60
Start-Up Temperature, °F	70

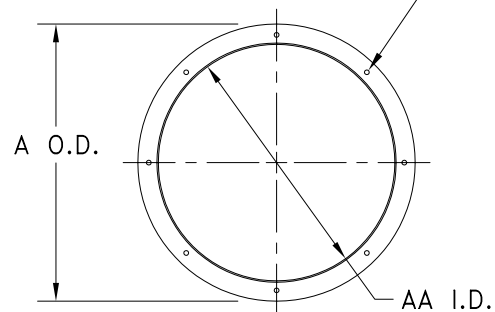
Fan Selection and Specifications

Model	HDBI-270	
Fan RPM	1,750	
Wheel Description	SQ Backward Inclined	
Wheel Width, %	100%	
Wheel Diameter, in.	29.13	
Inlet Diameter, in.	30.00	
Outlet Velocity, ft./min.	2,785	
Fan BHP	26.6	Suggested Motor HP: 30.0
Static Efficiency, %	69.0%	
Cold Start BHP	26.6	
Construction Class	Class III	

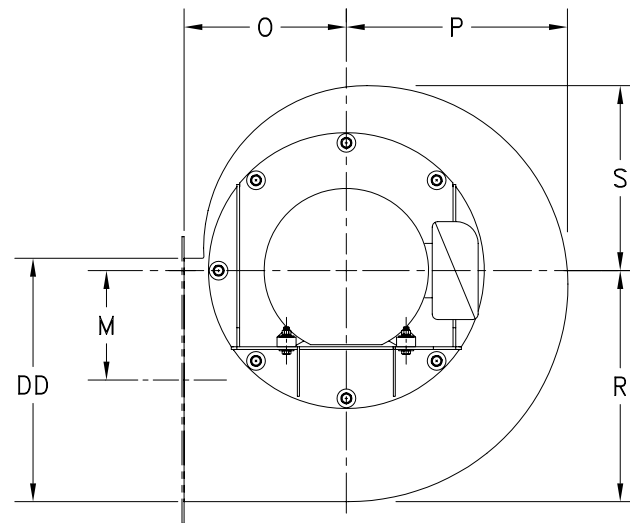
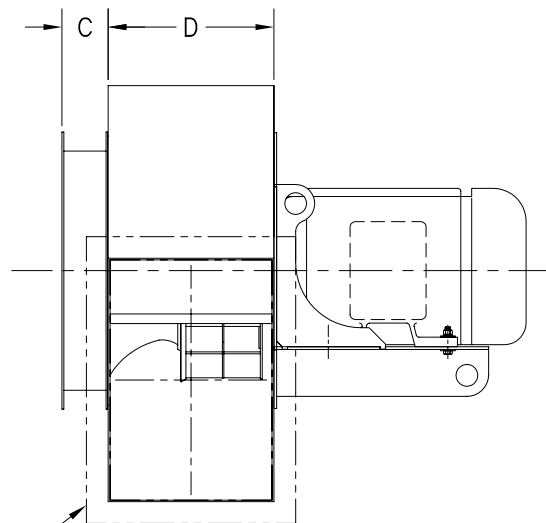
Cincinnati Fan HDBI-270 SQ Backward Inclined Wheel (Full Width) @ 1,750 RPM
 Rating Point: 12,000 ACFM @ 10.0 in. wg SP, 0.075 lb./ft.³ Density, 26.6 BHP



(N) "E" DIA. HOLES ON "B" B.C.



SEE NOTE

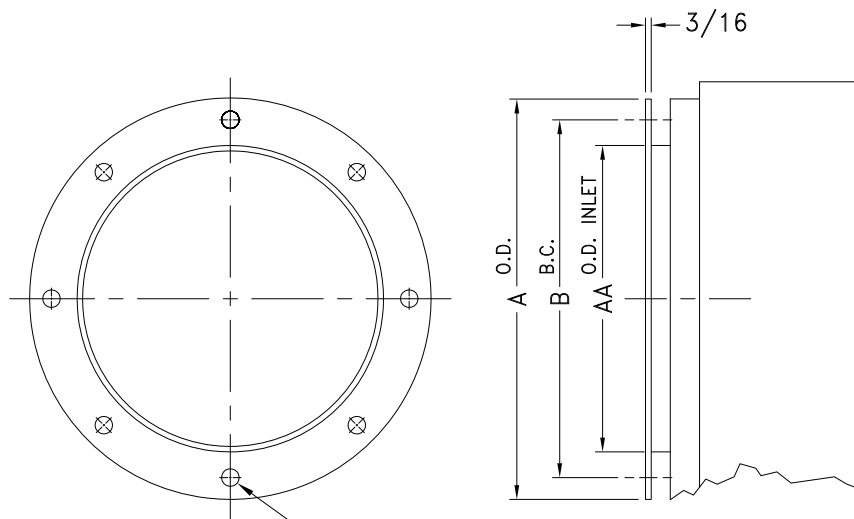


CLOCKWISE ROTATION BOTTOM
HORIZONTAL DISCHARGE SHOWN

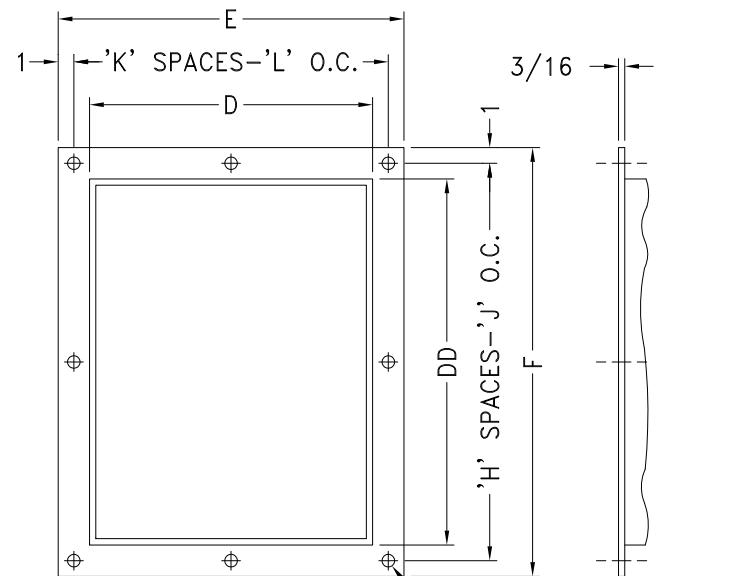
SIZE	C	D	M	O	P	R	S	DD	INLET FLANGE					MOTOR FRAME	WEIGHT (LBS)*
									A O.D.	B B.C.	AA I.D.	N	E		
120	4-1/4	9-3/8	6-3/16	9-15/16	12-3/8	13	10-3/8	13-3/4	16	14-3/8	13	8	7/16	143T-184T	150
130	4-1/4	10-3/8	6-13/16	10-13/16	13-3/4	14-7/16	11-9/16	15-1/4	17-3/4	15-15/16	14-3/8	8		143T-215T	170
150	4-1/4	11-3/8	7-9/16	11-3/4	15-3/16	15-15/16	12-3/4	16-13/16	19-1/4	17-1/2	15-7/8	8		143T-215T	190
160	4-1/4	12-1/2	8-5/16	12-11/16	16-11/16	17-1/2	14	18-7/16	21-1/8	19-3/8	17-3/4	8		143T-256T	210
180	4-1/4	13-7/8	9-1/4	13-13/16	18-7/16	19-7/16	15-1/2	20-3/8	23-1/2	21-1/2	19-3/4	12		143T-326T	270
200	4-1/4	15-1/4	10-1/16	14-15/16	20-1/4	21-1/4	17	22-3/8	25-1/2	23-1/2	21-3/4	12		182T-326T	320
220	4-1/4	16-7/8	11-3/16	16-3/8	22-1/2	23-5/8	18-7/8	24-7/8	28-1/8	26-1/8	24-3/8	12		182T-326T	390
240	6-1/4	18-9/16	12-5/16	18-13/16	24-3/4	26	20-3/4	27-3/8	30-3/4	28-3/4	26-3/4	16		213T-326T	450
270	6-1/4	20-7/16	13-9/16	20-5/8	27-1/4	28-5/8	22-7/8	30-1/16	33-3/4	31-5/8	29-3/4	16	213T-326T	550	
300	6-1/4	22-3/4	15-1/8	22-5/8	30-3/8	31-7/8	25-1/2	33-9/16	37-1/4	35-1/4	33-1/4	16	213T-326T	640	
330	6-1/8	24-7/8	16-9/16	24-11/16	33-3/8	35	28	36-7/8	40-3/8	38-3/4	36-1/2	16	1/2	284T-365T	940
360	6-1/8	27-1/4	18-1/8	27-3/16	36-1/2	38-1/4	30-1/2	40-1/4	43-5/8	42	39-3/4	16		284T-365T	1100

NOTE: SEE DRAWING 27205 FOR DISCHARGE FLANGE DETAILS.
DISCHARGE FLANGE IS OPTIONAL ON SIZES 120 THRU 240,
AND STANDARD ON SIZES 270 THRU 360.

* WEIGHT DOES NOT INCLUDE
MOTOR OR OPTIONS.



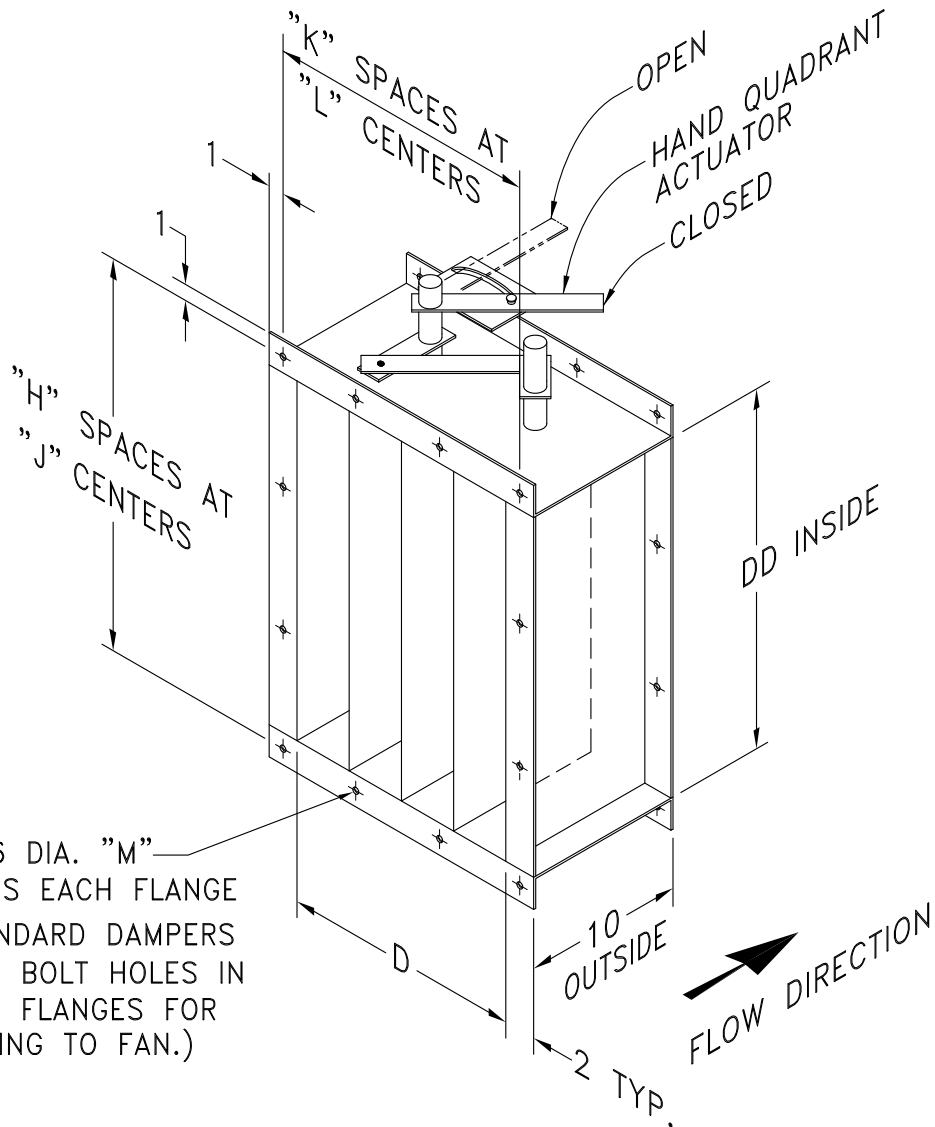
INLET FLANGE
"N" HOLES, "P" DIA.



DISCHARGE FLANGE ①
"M" 7/16 DIA. HOLES

SIZE	INLET					DISCHARGE								
	A O.D.	B B.C.	N	AA DIA.	P	D	E	F	H	J	K	L	M	DD
120	16	14-3/8	8	13-1/4	7/16	9-3/8	13-3/8	17-11/16	2	7-27/32	2	5-11/16	8	13-3/4
130	17-3/4	15-15/16	8	14-5/8	7/16	10-3/8	14-3/8	19-3/16	2	8-19/32	2	6-3/16	8	15-1/4
150	19-1/4	17-1/2	8	16-1/8	7/16	11-3/8	15-3/8	20-3/4	3	6-1/4	2	6-11/16	10	16-13/16
160	21-1/8	19-3/8	8	18	7/16	12-1/2	16-1/2	22-7/16	3	6-13/16	2	7-1/4	10	18-7/16
180	23-1/2	21-1/2	12	20	7/16	13-7/8	17-7/8	24-1/2	3	7-1/2	2	7-15/16	10	20-3/8
200	25-1/2	23-1/2	12	22	7/16	15-1/4	19-1/4	26-3/8	3	8-1/8	3	5-3/4	12	22-3/8
220	28-1/8	26-1/8	12	24-5/8	7/16	16-7/8	20-15/16	28-7/8	4	6-23/32	3	6-5/16	14	24-7/8
240	30-3/4	28-3/4	16	27	7/16	18-9/16	22-5/8	31-3/8	4	7-11/32	3	6-7/8	14	27-3/8
270	33-3/4	31-5/8	16	30	7/16	20-7/16	24-1/2	34-1/8	4	8-1/32	3	7-1/2	14	30-1/16
300	37-1/4	35-1/4	16	33-1/2	7/16	22-3/4	26-3/4	37-5/8	5	7-1/8	3	8-1/4	16	33-9/16
330	40-3/8	38-3/4	16	36-3/4	1/2	24-7/8	28-7/8	40-7/8	7	5-9/16	5	5-3/8	24	36-3/4
360	43-5/8	42	16	40	1/2	27-1/4	31-1/4	44-1/4	7	6-1/32	5	5-27/32	24	40-1/4

NOTE:
① NOT AVAILABLE ON ANY MODEL FOR DOWNBLAST, BOTTOM ANGULAR DOWN OR TOP ANGULAR DOWN DISCHARGE POSITIONS.
DISCHARGE FLANGE IS STANDARD ON SIZES -270 THRU -360.



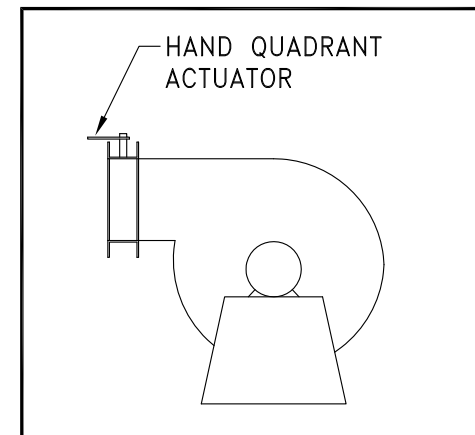
7/16 DIA. "M"
HOLES EACH FLANGE
(STANDARD DAMPERS
HAVE BOLT HOLES IN
BOTH FLANGES FOR
BOLTING TO FAN.)

NOTES:

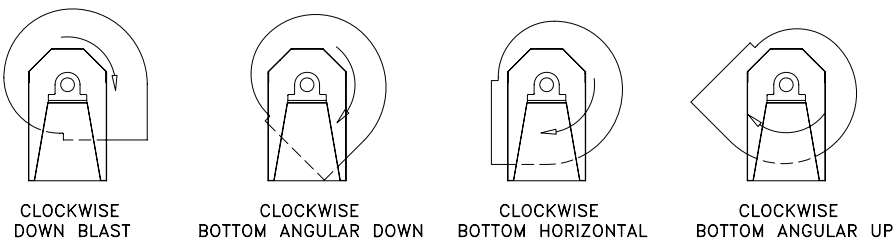
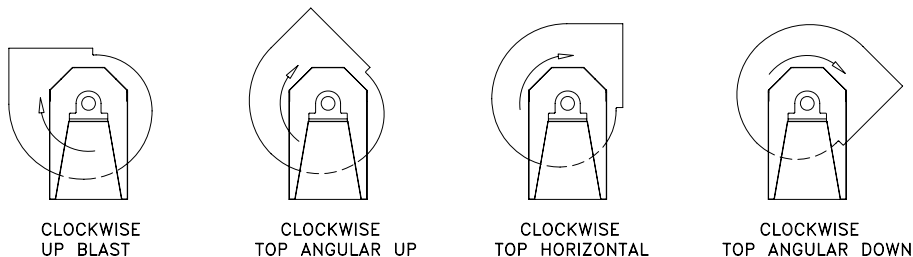
1. OPPOSED BLADE IS STANDARD. □ PARALLEL BLADE IS OPTIONAL.
2. DAMPER BLADES WILL BE PERPENDICULAR TO FAN SHAFT.
3. STANDARD MATERIAL IS CARBON STEEL WITH RUST INHIBITING PRIMER. □ OPTIONAL MATERIAL _____.
4. STANDARD CONSTRUCTION MAX. TEMPERATURE: 300° F.
□ OPTIONAL HIGH TEMPERATURE CONSTRUCTION MAX. TEMPERATURE: 800° F.

SIZE	D	DD	H	J	K	L	M
120	9-3/8	13-11/16	2	7-27/32	2	5-11/16	8
130	10-3/8	15-3/16		8-19/32		6-3/16	
150	11-3/8	16-3/4	3	6-1/4	3	6-11/16	10
160	12-1/2	18-3/8		6-13/16		7-1/4	
180	13-7/8	20-3/8		7-1/2		7-15/16	
200	15-1/4	22-3/8	4	8-1/8	3	5-3/4	12
220	16-15/16	24-7/8		6-23/32		6-5/16	
240	18-5/8	27-3/8	5	7-11/32	5	6-7/8	14
270	20-1/2	30-1/8		8-1/32		7-1/2	
300	22-3/4	33-9/16	7	7-1/8	5	8-1/4	16
330	24-7/8	36-7/8		5-9/16		5-3/8	
360	27-1/4	40-1/4		6-1/32		5-27/32	

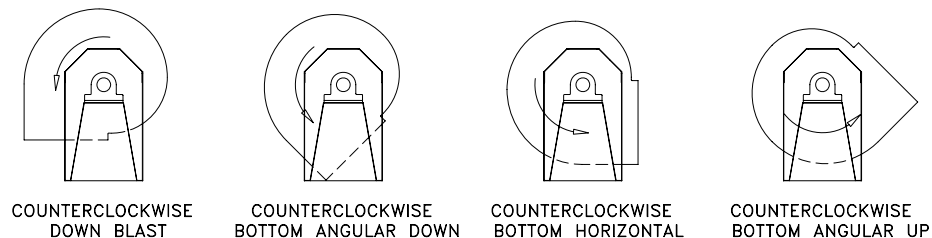
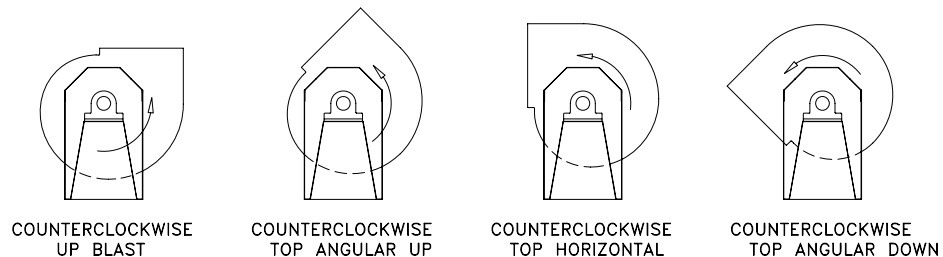
* HOLES PER FLANGE.



CLOCKWISE ROTATION



COUNTERCLOCKWISE ROTATION



NOTES:

1. DIRECTION OF ROTATION IS DETERMINED FROM DRIVE SIDE OF FAN.
2. SAME AS AMCA STANDARD 99-2406-83.