Moore Fans LLC Rating

Phone: (660) 376-3575 http://www.moorefans.com **Fax:(660) 376-2909**

Version 2.38

4/3/2023 9:00

World Renewables Project			**Ref No.:A22-13312-4-5**			**Item No.:18-XF-353 A/B**		
Class:	**10000**		Hub Type:	**HD**		Blade Type:	**EC**	
Blade Tip:	**VE**		Adjustment:	**MAN**		Rotation:	**RH**	
Series:	**36**		Diameter:	**10**	feet	Blades:	**4**	
Temperature:	**90**	Deg. F	Elevation:	**69**	feet	Density Ratio:	**0.960**	**0%**
Volume:	**84546**	ACFM	Air Vel.:	**1149.25**	fpm	Speed:	**313.0**	RPM
Static Pressure:	**0.446**	in H2O	Pv:	**0.079**	in H2O	Pt:	**0.549**	in H2O
Power Reqd.:	**10.43**	bhp	Motor:	**20**	bhp	Total Eff:	**70.1%**	
Power @ 35 deg.	**11.59**	bhp	Bld Natural Freq.:	**10.3**	Hz	Static Eff:	**57.0%**	
Blades Required:	**2.32**		API Blades Req.:	**3**		Blade Load:	**0.581**	
Tip Speed:	**9833.2**	fpm	Deflection Angle:	**50.0**	deg.	Pitch Number:	**1.22**	
Entry Correction:	**1.3**		Tip Clearance:	**0.3**	inches	Angle at Root:	**4.2**	deg
Exit Correction:	**Not Applied**		Draft:	**Forced**		Orientation:	**Horizontal**	
Torque Factor:	**2**		Motor Torque:	**671**	ft. lbs	Torq/Bld:	**168**	ft. lbs
Approx. Fan Wgt.: 85 lbs (39 kgs)			Inertia: 477 lb-ft2 (20.1 kg-m2)			Bore Size:		inches
Unbalance force (G6.3): 1.8 lbs (8 N)			Thrust Load: 224 lbs (102 kg)			Bushing Type:	**U**	
Single Blade Missing Load: 1085 lbs (493 kg)						Qty required:	**1**	

Noise Levels Per Fan (Forced Draft) (Horizontal Orientation) See Note 2

Sound Power Level

dBA	HZ	63	125	250	500	1000	2000	4000	8000
91.2		**97.2**	**96.2**	**93.2**	**88.2**	**86.2**	**80.2**	**74.2**	**68.2**

Sound Pressure Level 1 meter below fan

78.2		**84.2**	**83.2**	**80.2**	**75.2**	**73.2**	**67.2**	**61.2**	**55.2**

Sound Pressure Level 1 meter radially from blade tip

72.9		**78.9**	**77.9**	**74.9**	**69.9**	**67.9**	**61.9**	**55.9**	**49.9**

Class 10000, Series 36, 10 feet Diameter, 4 Blades

Manual Adjustment, Heavy Duty, Extended Chord, CW Rotation Aluminum Blade Material With VE Blade Tips,

Fan Model No. 1036/073-U0-A/36R-VE-4-10.00-4

Fan Drawing: http://www.moorefans.com/pdfs/TMC_839_C.pdf

Note 1: Maximum blade angle to prevent fan stall is 9.6 degrees. Available motor power may limit maximum angle to a lower value.

Note 2: Noise levels are the best estimate of the fan noise with 0 dBA additional noise included due to drive components, flow obstructions or structure reflection and reverberation.

Note 3: The speed torque curve reflects the torque required at the given rpm. The torq/bld is the maximum motor torque divided by the number of blades. The maximum motor torque considers the torque factor and motor hp (not the required hp to operate the fan).

Note 4: Inlet bell ring has been considered for air flow pressure calculation

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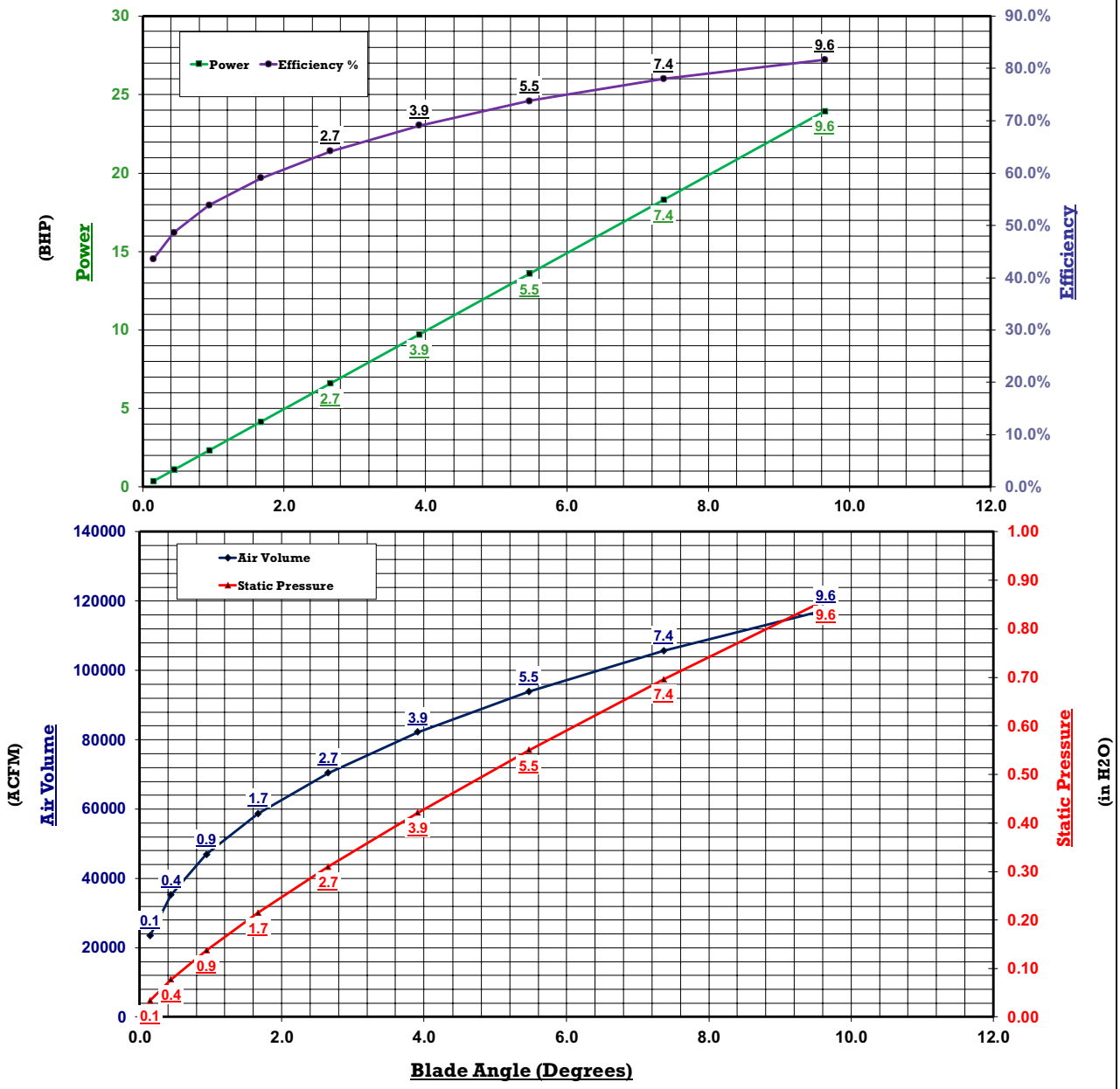
World Renewables Project Ref No.:A22-13312-4-5 Item No.:18-XF-353 A/E

System Performance Curve



Design Angle= 4.2
Est. API Angle= 5.3
Maximum Angle= 9.6

Design Conditions

Class:	10000	Blade Type:	EC	Temperature:	90 Deg. F	Static Pr.:	0.446 in H2O
Series:	36	Blade Tip:	VE	Elevation:	69 feet	Power Req'd:	10.43 bhp
Diameter:	10.00 feet	Adjustment:	MAN	Density Ratio:	0.960	Design Angle:	4.2 deg
RPM:	313	Blades:	4	Air Volume:	84546.00 ACFM	Weight:	Est.: 85 lbs (39 kgs)

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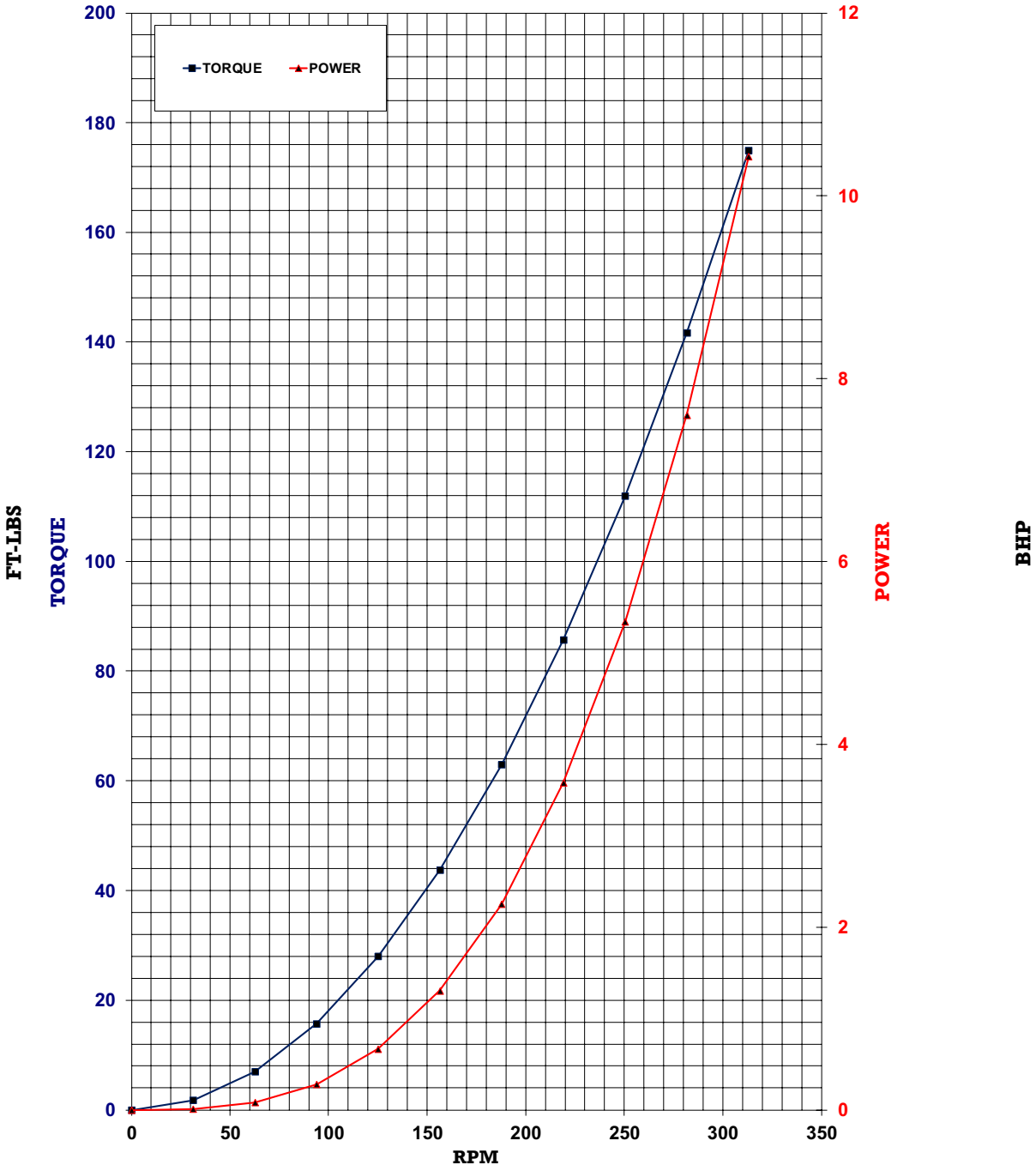
World Renewables Project **Ref No.:A22-13312-4-5** **Item No.:18-XF-353 A**

Class 10000 Speed-Torque Curve



Design Conditions

Class:	10000	Blade Type:	EC	Temperature:	90 Deg. F	Static Pr.:	0.446 in H2O
Series:	36	Blade Tip:	VE	Elevation:	69 feet	Power Req'd:	10.43 bhp
Diameter:	10.00 feet	No. Blades:	4	Density Ratio:	0.960	Design Angle:	4.2 deg
RPM:	313	Rotation:	RH	Air Volume:	84546.00 ACFM	Weightan Wgt.: 85 lbs (39 kgs)	