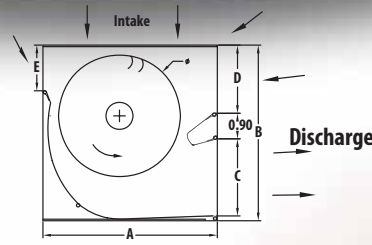
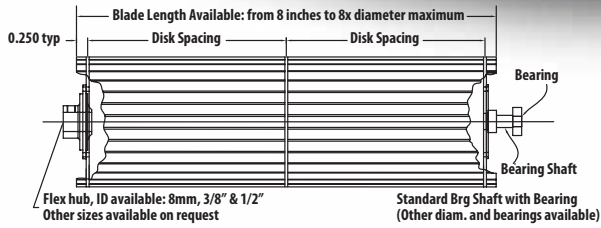


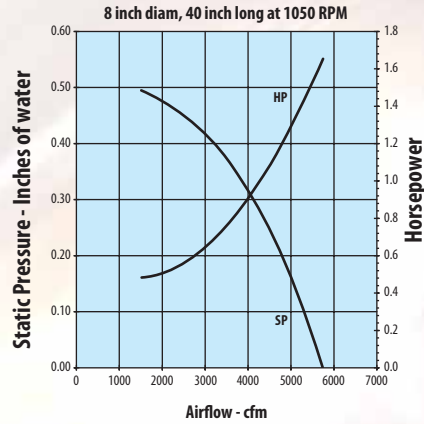
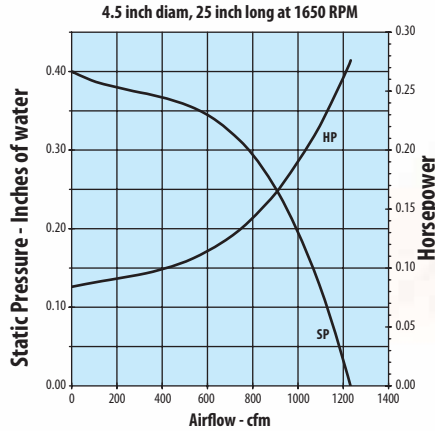
PERFORMANCE CURVES

LARGE TANGENTIAL WHEELS



Wheel Diameter	Housing Dimensions				
	A	B	C	D	E
4"	6.25"	6.00"	2.70"	2.24"	1.30"
4.5"	6.65"	6.50"	3.00"	2.50"	1.25"
5"	7.15"	7.25"	3.12"	3.02"	1.91"
5.5"	7.63"	8.00"	3.45"	3.50"	2.15"
6"	8.00"	8.75"	3.90"	3.75"	1.80"
8"	10.00"	11.50"	5.00"	5.40"	3.25"

Blower Wheel is available Clockwise (as shown) and Counterclockwise



Performance curves of all sizes at any speed are available on request

CFM of Large Tangential Wheels at zero static pressure (free air)

Wheel Diameter (in.)	Wheel Length (in.)							Maximum Static Pressure (in.)
	15	20	25	30	35	40	45	
	CFM at 1650 rpm							at 1650 rpm
4"	525	700	900	1050	N/A	N/A	N/A	0.23"
4.5"	750	1000	1225	1500	1725	N/A	N/A	0.40"
5"	1000	1350	1700	2025	2375	2700	N/A	0.49"
	CFM at 1050 rpm							at 1050 rpm
5"	650	860	1075	1300	1500	1725	N/A	0.20"
5.5"	860	1150	1425	1700	2000	2300	N/A	0.24"
6"	900	1200	1500	1800	2125	2425	2750	0.28"
8"	2150	2900	3600	4300	5025	5750	6500	0.50"

Tests were performed on 4", 5" and 6" by 27.25" long wheels according to AMCA standard 210-85, other values were extrapolated using the fan laws.

Standard wheel diameters available are 4", 4 1/2", 5", 5 1/2", 6" and 8". Other diameters are available. All lengths up to 48" or a maximum of 8 times the diameter are available.

How to select the optimum wheel diameter, wheel length and running speed to provide the desired CFM for your system:

1) For specified wheel dimensions, a change in speed will optimize your system:

$$N_{new} = N_{old} \times \left(\frac{CFM_{new}}{CFM_{old}} \right)$$

Resulting in:

$$HP_{new} = HP_{old} \times \left(\frac{N_{new}}{N_{old}} \right)^3$$

$$SP_{new} = SP_{old} \times \left(\frac{N_{new}}{N_{old}} \right)^2$$

2) If the static pressure is acceptable, wheel length can be optimized (while other conditions remain constant):

$$L_{new} = L_{old} \times \left(\frac{CFM_{new}}{CFM_{old}} \right)$$

Resulting in:

$$HP_{new} = HP_{old} \times \left(\frac{L_{new}}{L_{old}} \right)$$

3) If static pressure is not acceptable, wheel diameter must be resized using:

$$SP_{new} = SP_{old} \times \left(\frac{D_{new}}{D_{old}} \right)^2$$

$$CFM_{new} = CFM_{old} \times \left(\frac{D_{new}}{D_{old}} \right)^3$$

$$SP_{new} = SP_{old} \times \left(\frac{N_{new}}{N_{old}} \right)^5$$

Where

N= Speed (Revolutions per Minute)
 CFM= Volume (Cubic Feet per Minute)
 HP= Horsepower
 SP= Static Pressure (inches of water)
 L= Wheel Length (inches)
 D= Wheel Diameter (inches)



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