

Life Cycle/Energy Cost Comparison



Glasfloss "PTA" Disposable Panel Filter with PolyStrand® Media vs. Standard Polyester Media

Please Scroll Down to See the Dramatic Energy Savings with New PolyStrand® Media

Input	Calculations	Summary	Graphs	Instructions
Customer Name : <input type="text" value="First, Last"/>		Customer Address : <input type="text" value="Street, City, State, Zip"/>		
Filter Description Filter Type MERV / Efficiency Brand / Manufacturer / Model	Option A <input type="text" value="High loft PTA"/> <input type="text" value="< 6"/> <input type="text" value="Glasfloss"/>	Option B <input type="text" value="Polystrand PTA"/> <input type="text" value="6"/> <input type="text" value="Glasfloss"/>		
Filter Price (\$ per filter)	<input type="text" value="\$ 2"/>	<input type="text" value="\$ 2"/>	<input type="text"/>	
# of Filters in Bank	<input type="text" value="20"/>	<input type="text" value="20"/>	<input type="text"/>	
Estimated Filter Life (months)	<input type="text" value="3"/>	<input type="text" value="3"/>	<input type="text"/>	
Initial Resistance ("WG)	<input type="text" value=".38"/>	<input type="text" value=".27"/>	<input type="text"/>	
Recommended Final Resistance ("WG)	<input type="text" value="1.0"/>	<input type="text" value="1.0"/>	<input type="text"/>	
System Airflow Rate (cfm)	<input type="text" value="40000"/>	<input type="text" value="40000"/>	<input type="text" value="default 2000 * # of filters"/>	
Days in Operation Per Year (system)	<input type="text" value="365"/>	<input type="text" value="365"/>	<input type="text"/>	
Hours in Operation Per Day	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text"/>	
Energy Cost (\$/kWh)	<input type="text" value="\$ 0.08"/>	<input type="text" value="\$ 0.08"/>	<input type="text"/>	
Drive Efficiency (%)	<input type="text" value="99"/> %	<input type="text" value="99"/> %	<input type="text"/>	
Motor Efficiency (%)	<input type="text" value="86"/> %	<input type="text" value="86"/> %	<input type="text"/>	
Fan Efficiency (%)	<input type="text" value="68"/> %	<input type="text" value="68"/> %	<input type="text"/>	
<input type="button" value="Clear All"/>		<input type="button" value="Default Input"/>		<input type="button" value="Print"/>

(printer friendly - B/W)

Data Showing How the Results are Calculated

Input	Calculations	Summary	Graphs	Instructions
Filter Description				
Filter Type	Option A	Option B		
Filter Type	High loft PTA	Polystrand PTA		
MERV / Efficiency	< 6	6		
Brand / Manufacturer / Model	Glasfloss	Glasfloss		
Filter Cost				
Filter Price (\$ per filter)	Option A	Option B		
Filter Price (\$ per filter)	\$2	\$2		
# of Filters in Bank	20	20		
Estimated Filter Life (months)	3	3		
# of Changeouts / Year	4	4		
Subtotal Annual Filter Cost	\$160	\$160		
Energy Cost				
Initial Resistance (Pa)	Option A	Option B		
Initial Resistance (Pa)	95	67		
Recommended Final Resistance (Pa)	249	249		
Average Resistance (Pa)	172	158		
System Airflow (m3/sec)	18.87	18.87		
Filter Airflow (m3/sec)	0.94	0.94		
Filter Life (hours)	2190	2190		
Fan/Motor/Drive Efficiency (%)	57.9	57.9		
Energy Consumption (kWh)	612	562		
Energy Cost Per Filter	\$48.96	\$44.96		
Energy Cost Per Changeout	\$979	\$899		
Subtotal Annual Energy Cost	\$3917	\$3597		
(printer friendly - BMW)				Print

This Summary Shows the Annual Filter and Electricity Cost

As you can see, the difference in initial pressure drop essentially makes the filters free! This was set up for one air handler of 20-24x24x2" filters. Larger air handlers or schools with multiple air handlers will realize this electrical savings in multitudes.

Input	Calculations	Summary	Graphs	Instructions
Customer Name : First, Last		Customer Address : Street, City, State, Zip		
Filter Description	Option A	Option B		
Filter Type	High loft PTA	Polystrand PTA		
MERV / Efficiency	< 6	6		
Brand / Manufacturer / Model	Glasfloss	Glasfloss		
Total Cost Summary	Option A	Option B		
Annual Filter Cost	\$160	\$160		
Annual Energy Cost	\$3917	\$3597		
Total Annual Operating Cost	\$4077	\$3757		
Choose Option B for an annual savings of \$320 That's a 7.8% savings				
View Graph				
(printer friendly - B/W) Print				

This Graph Shows the Difference Between Product Cost and Electrical Cost

As you can see, even this slight difference in initial resistance can result in a tremendous difference in electricity savings.

