



**LONGO**

Largest Independent Electrical-Mechanical Sales & Service Firm in the Tri-State Area

# Drives make everything and everyone greener!



**Drives cut HVAC costs.**

-Properly designed and installed adjustable frequency drives on your HVAC components are the **quickest and most cost effective way to reduce your energy consumption.**

-The idea of using drives to save energy is not new, but the **rising cost of energy** makes it imperative to do it now.

-The positive impact on cost saving and **profitability is immediate** without convoluted formulas or calculations.

-The reduction of your building's carbon footprint can have an impact independent of your energy cost reduction. In this highly charged atmosphere there are potential tenants who place a significant **emphasis on green buildings and their LEED rating.** The higher the LEED score, the more attractive your space becomes.

-As a building manager it doesn't get better than **lowering energy costs** and having the perception of being green. A very attractive color!

-Save time, money, and your nerves with Longo's "line to load" capability. Unlike traditional procedures where electricians install the variable frequency drives and then control people come in trying to sort out the electricians' work, Longo does it all. First, **Longo has the experience and resources** to understand the relationships involved between voltage, power, torque and all the other critical variables. From there we choose the correct installation site and procedure to ensure a minimum of interference.

**-Longo assumes hands on supervision from design to actual installation. This provides you with a single source for planning, implementation and follow up. No more mutiple contractors and their costs, pointing fingers and blurred areas of responsibility.**

**You know drives cut energy and save money. Now, save time, money, and aggravation on the purchase, installation, and setup of variable frequency drives.**



DAILY PICKUP IN THE NORTHEAST

**Wharton Servicenter**  
1 Harry Shupe Blvd. Wharton, NJ 07885  
**Tel: 973-537-0400**  
Fax: 973-537-0404

**Philadelphia Servicenter**  
1400F Adams Road, Bensalem, PA 19020  
**Tel: 215-638-1333**  
Fax: 215-638-1366



**New York Servicenter**  
829 E. 144th St., Bronx, NY 10454  
**Tel: 718-585-5330**  
Fax: 718-585-5337

**Linden Servicenter**  
1625 Pennsylvania Ave., Linden, NJ 07036  
**Tel: 908-925-2900**  
Fax: 908-925-9427

Here is an example of the savings that can be generated when upgrading to more effective VFD program.

## VFD Payback Summary

ABC COMPANY

Date: 5/1/2008

Cost of Electricity: \$ 0.120 / KWh

Total Project Cost: \$ 360,000  
 Rebate:  
 Net Project Cost: \$360,000

Payback: 1.29 Years

Additional savings through demand reduction not included.

Unit #	Quantity	Motor HP	Oversizing % (100% Load HP/Motor HP)	Annual Run hours	Motor Efficiency	Drive Efficiency	Drive System Type	Annual Energy Usage (KWh)		Annual Energy Cost (\$)		Annual Energy Saved (KWh)	Annual Energy Saved (\$)
								Existing	Upgrade	Existing	Upgrade		
1	2	100	100%	8760	93.5%	99%	Outlet Damper	1,283,648	494,049	\$ 154,038	\$ 59,286	789,599	\$ 94,752
2	1	60	100%	8760	92.7%	99%	Outlet Damper	388,418	149,494	\$ 46,610	\$ 17,939	238,924	\$ 28,671
3	1	40	100%	8760	92.5%	99%	Outlet Damper	259,505	99,878	\$ 31,141	\$ 11,985	159,627	\$ 19,155
4	4	150	100%	4260	95.2%	99%	Outlet Damper	1,839,278	707,899	\$ 220,713	\$ 84,948	1,131,378	\$ 135,765
5							Outlet Damper	-	-	\$ -	\$ -	-	\$ -
6							Outlet Damper	-	-	\$ -	\$ -	-	\$ -
TOTALS									1,451,320	452,502	174,158	2,319,528	\$ 278,343

Note: Savings calculation performed using the following typical load profile information.

Load Profile Outlet Damper		Load Profile VFD		3,770,848		Duty Cycle					
%CFM	% Power	% CFM	% Power	% CFM	% Hours	Unit #1	Unit #2	Unit #3	Unit #4	Unit #5	Unit #6
20%	64%	20%	5%	20%	5%	5%	5%	5%	5%	5%	5%
30%	72%	30%	8%	30%	8%	8%	8%	8%	8%	8%	8%
40%	80%	40%	14%	40%	12%	12%	12%	12%	12%	12%	12%
50%	87%	50%	20%	50%	16%	16%	16%	16%	16%	16%	16%
60%	94%	60%	31%	60%	18%	18%	18%	18%	18%	18%	18%
70%	99%	70%	41%	70%	16%	16%	16%	16%	16%	16%	16%
80%	104%	80%	54%	80%	12%	12%	12%	12%	12%	12%	12%
90%	107%	90%	70%	90%	8%	8%	8%	8%	8%	8%	8%
100%	111%	100%	100%	100%	5%	5%	5%	5%	5%	5%	5%
				Total	100%	100%	100%	100%	100%	100%	100%



## Savings? What kind of savings?

A lot of factors can come into play when figuring out the actual savings on a drive installation. At Longo we can prepare a complete payback analysis prior to any work so that the ROI is clear and concise. However, here is a real world example with a recent project for a major building management firm in NYC that puts saving into black and white.

**We installed 11 variable frequency drives on their air handler fans for their HVAC system. The cost of the project was \$147,500 and their savings will be \$143,365 per year, every year!**

*You know the inherent benefits of installing the drives; now it is just a matter of how to have them installed in the most effective and efficient way...a turn key project from Longo.*



MOTORS PUMPS SWITCHGEAR FANS DRIVES CONTROLS