



YASKAWA

***Application  
Report:  
VFD Fan  
Drives Increase  
Mushroom Growers  
Revenue***

Yaskawa has sold 100s of ac drives to mushroom growers in eastern Pennsylvania.

Not impressed? Then consider the fact that one order totaled 200 drives to a single grower -- a grower who ships an incredible 550,000 pounds of mushrooms each week!

That's a lot of mushrooms, even by pizza house standards. But most importantly, more of them are "Number One" table-grade quality. Quality which commands a premium market price.

The Yaskawa ac drives were originally sold and installed to accomplish typical goals - produce significant dollar savings by reducing the amount of energy needed to power fans that circulating air through "growing - houses". That worked exactly as expected.

What wasn't expected, however, was a significant increase in mushroom quality and the resulting increase in growers' revenues.

During the first few growing months after replacing mechanical air-flow baffle systems, producers noticed an impressive reduction in mushroom "scaling." Scaling is a flaking condition that turns "number one" mushrooms into "number twos," and seals their fate as ingredients for soup.

Mushroom growing is not as simple as it sounds. Crop-producing soil in the growing house loses its ability to produce over a period of ten weeks or so and must be removed and replaced. Moisture levels are critical, as are air circulation levels, which vary as the soil progresses through its ten week cycle. According to the growers, the application of variable frequency drives to growing house ventilation systems has eliminated leaks around baffles which throttle air being churned by fans running at full speed. The result is precise control of air movement and improved quality in the mushroom crop.

So, what about energy savings? Although eastern Pennsylvania is one of the few areas of the country where utility companies have no rebate program for the installation of energy-saving drives, the largest grower estimated their payback time for installation of drives in each of their 200 houses to be ten months.

The utility company was even more optimistic, stating that the energy saved by being able to run 7.5 and 15 hp fans at scaled-back speeds, can provide a payback in less than seven months.

Additionally, the drives have eliminated mechanical problems normally associated with baffles. Built-in accel/decel ramps have reduced mechanical stress on belts and pulleys and also reduced noise levels.

So there you have it. Smooth, scale-free mushrooms basking in the moist darkness of their energy-efficient growing rooms, compliments of Yaskawa's ac drives. Further proof that fan applications can be found in the strangest, darkest places.