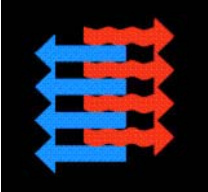


Johnson MarCraft Total SOLUTION™



Case Study: PLASTIPAK PACKAGING PLYMOUTH, MI

BUILDING DESCRIPTION:

- **SIZE:** 600,000 square feet
- **LOCATION:** PINEVILLE, LA
- **TYPE:** Manufacturing Facility
- **ACTIVITY:** Plastics Injection/Blow Molding

CHALLENGE:

- Operating 24/7, with high heat gain, a consistent RH and temperature must be maintained to prevent condensation bubbles and manufacturing defects in the blow-molding production process that produces all types of plastic bottles, including those for Gatorade and Kraft Salad Dressing.

JOHNSON TOTAL SOLUTION™:

- 5 floor-mounted Johnson Air Rotation® units and 2 Johnson roof-mounted make-up air units (150 hp) will deliver 1,630 tons of cooling, compared to 9 Air Rotation® look-alikes and 2 roof-tops (540 hp) in an alternate proposal.

RESULT:

- Over \$234,000/year in perpetual electrical cost savings due to reduction of equipment by nearly 500 HP perpetually.
- Less floor space used.
- Temperature/RH are maintained +/- 2° or %.
- Ability to clean the coils at floor level, with easy access, whereas Johnson "look-alikes" mounted the coils 20' high near the ceiling.
- Filters are at floor level, in plain view for constant monitoring, ensuring proper operating conditions.
- Reduced installation costs for additional piping/wiring for additional units (from competitor) to accomplish same tonnage.



Plastipak, headquartered in Plymouth, Michigan, is one of the world's largest manufacturers of all types of plastic bottles (detergents, soda, beverages, etc.). Plastipak's 10 facilities in the United States and 2 facilities in Brazil vary in size, but are typically about 150,000 s.f. of production area and another 400,000 s.f. of warehouse. In all of the facilities, the blow molding and injection molding process generates considerable heat and blow molding has to be done at a consistent relative humidity to prevent condensation bubbles and manufacturing defects in the product.