

Case note

White washdown Cut saw motor

For use in specialty poultry operations which utilize small AC induction motors for rotational cut saws.

Features:

- White washdown construction
- Labyrinth seals on each end of motor
- Potted leads inside top mounted conduit box
- Stock motor for off-the-shelf availability and immediate installation



kW (Hp)	RPM	IEC frame	Catalog number	"C" dim.	Aprx wt. (lb)	Full load efficiency	Voltage	Full load amps
0.75 (1)	1800	80	WDMM3546-4	10.74	27	74	460	1.7

Case study

Poultry processing plants are a very difficult environment for motors due to the daily cleaning and sanitizing of equipment. Harsh chemicals like sodium hydroxide and other caustics are used to clean equipment and can be extremely corrosive. Not only are caustic chemicals used, high pressure spray is used, sometimes up to 1000 psi with the nozzle held a few inches away from the motor. This ensures all contaminants are removed from the equipment.

Cut-up lines are an integral part of most processing plants. These machines separate different parts of the bird from the carcass. Often accomplished by a saw mounted onto a small motor. In many cases the original equipment is built utilizing IEC frame motors, even if the end user is in the United States.

If the motor fails, finding a replacement locally is difficult and can be very expensive. The original motors are typically not suited for the high pressure washdown environments. Water or other contaminants gain entry by passing through the shaft seal and cause bearings or windings to eventually fail, in a short period of time. These issues cause the processing plant to have a large inventory of replacement motors on hand for planned or unplanned downtime. One poultry processor in Texas was buying and stocking 25 motors per year. Not only are they paying for the initial investment of replacement motors, they are experiencing unplanned downtime costing them at least \$6,000 per event.

Baldor engineers and the processing plant worked together to design a replacement motor to eliminate the need of excess inventory on hand and reduce unplanned downtime. The motor is 0.75 kW (1 Hp), 1800 rpm, white washdown motor in an IEC 80 frame. The leads are sealed by potting compound in the bottom of the conduit box and labyrinth seals installed on each endplate to prevent water ingress. Since replacing the original equipment motors with the Baldor•Reliance® cut saw motor, the processing plant is experiencing less unplanned downtime and the motors are in operation 4 times longer.

“The new motor is like a miracle compared to the old one; we’ve changed sometimes two of the old motors in a single day before Baldor•Reliance motors were installed.”

- Plant Maintenance Supervisor

*Baldor Electric Company is a member of the ABB group

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