

Motors and mechanical power transmission products for meat grinders

Motors and mechanical power transmission products used in meat grinders and other food processing equipment have to meet high requirements for sanitation, power and toughness. Harsh washdown conditions, in particular, make food processing areas a difficult operating environment.



ABB has supplied Baldor•Reliance® Severe duty motors and Dodge® Quantis speed reducers for use in meat grinders where OEM integral gearmotors proved to be unreliable. Failures of the OEM equipment were due to water ingress and a high overhung load on the output bearing.

Baldor•Reliance® Severe duty motors

Baldor•Reliance® Severe duty motors are reliable, efficient and ruggedly constructed to withstand the tough conditions in food processing applications.

Baldor•Reliance® Severe duty motors – key features

- Output range: 0.37–1100 kW (0.5–1500 HP)
- Choice of premium efficient or energy efficient.
- Inverter-ready¹ to allow variable frequency drive energy savings.
- High strength cast iron construction (frame, end-plates, fan cover and conduit box) helps to reduce vibration.
- High pressure die cast aluminum rotor (through frame 449T) minimizes vibration.
- Cast iron bearing inner caps provide accurate alignment and prevent bearing contamination.
- Positive Lubrication System assures proper bearing lubrication in all mounting positions.
- Stator coil features Class F insulation consisting of Class F and Class H materials.

¹ Except Explosion-Proof versions

- Stator windings are tested to NEMA MG1 high potential voltage standards.
- Epoxy primer inside and out.
- Gaskets on all joints.

Dodge® Quantis speed reducers

The Dodge® Quantis product line offers a full range of modular gear drives engineered for flexibility, greater torque density in a compact housing design, and increased power capabilities. Three gear reducer solutions are available: In-Line Helical (ILH), Motorized Shaft Mount (MSM) and Right Angle Helical-Bevel (RHB). Quantis reducers used in meat grinders or other washdown applications can be supplied with XT Harsh Duty output seals, washdown breathers, and food-grade oil. Quantis E-Z Kleen reducers come with all three of these features, plus a 13 step paint system which has triple the corrosion resistance of standard epoxy paint systems.

Dodge® Quantis speed reducers – key features

- Accommodates input power 0.19–110 kW (0.25–150 HP) depending on ratio
- High output torque ratings up to 14,000 N•m (123,914 in•lb)
- High efficiency up to 98% (ILH)
- Six motor input combinations: IEC B5 flange three-piece coupled, IEC B5 flange clamp collar, NEMA C-Face three-piece coupled, NEMA C-Face clamp collar, separate and integral

- Three mounting options: Base mounted, B5 output flange or B14 output face
- Critical dimensions interchangeable with products from other vendors

Full range of products for food processing applications

ABB's offering for the food and beverage industry ranges from high performance servo motors and drives to washdown duty motors and power transmission products. These products are corrosion-resistant and designed for easy cleaning and maintenance.

All ABB products for the food processing sector are backed by industry-focused engineers trained to analyze and solve customers' problems. By taking a Total Cost of Ownership approach and working with the customer, ABB's team enables customers to maximize efficiency, identify and eliminate waste, reduce unplanned downtime, and increase overall productivity.

For more information please contact:

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