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FOOD & BEVERAGE

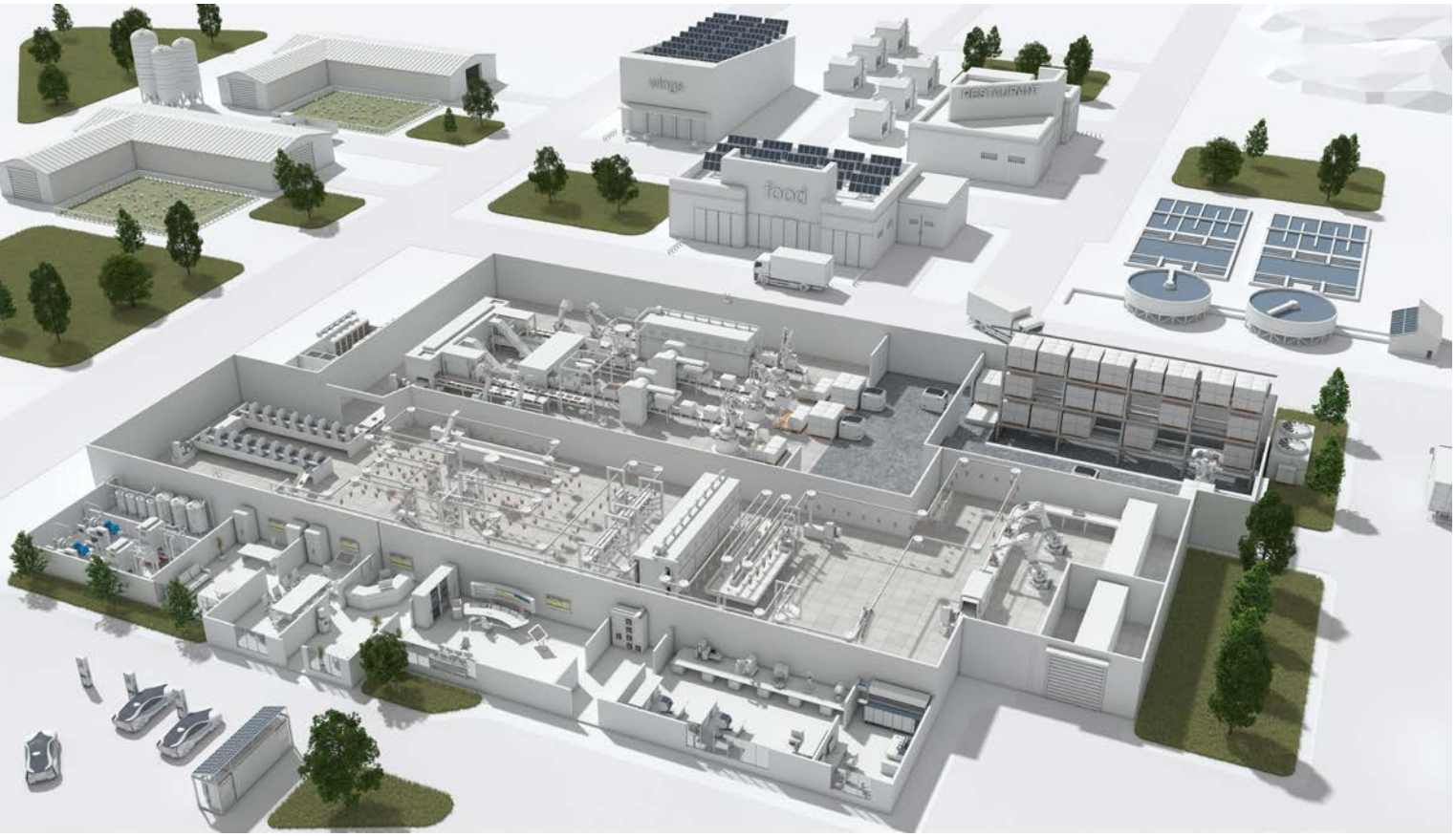
Baldor-Reliance® Food Safe

Stainless steel NEMA motors

BALDOR • RELIANCE

- Food safety first priority of design
- Reliability in intense cleaning environments
- Worker safety from installation through operation
- Increased sustainability with proven longer service life

Food & beverage



Baldor-Reliance Food Safe motors

Now more than ever, it is vital that food and beverage companies choose supplier partners that understand their processes, helping to improve plant reliability, sustainability and achieve productivity goals.

As food producers fight to remain competitive and profitable, all food processing equipment should be designed, used and maintained with food safety principles in mind. Violations of these practices can cost companies thousands, if not millions, to resolve. It is important to not only consider the initial purchase price, but also, the total cost of ownership (TCO), including the cleanability and reliability of the equipment.

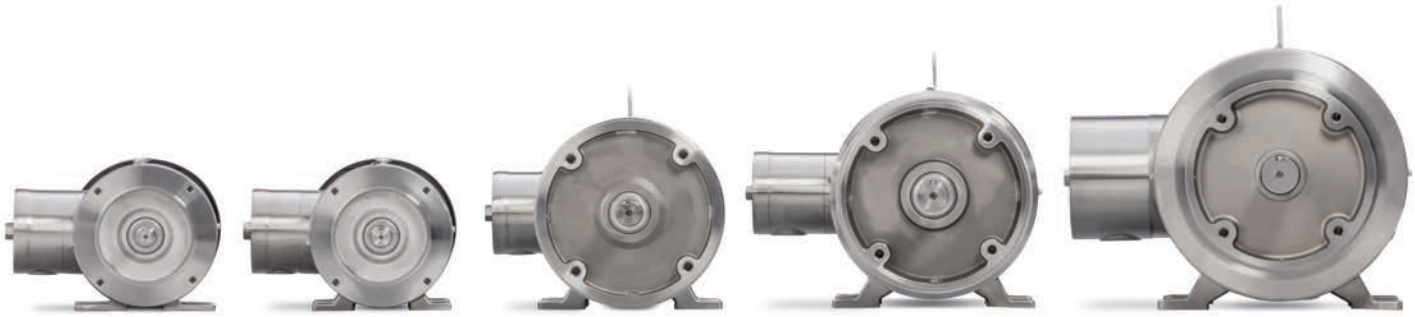
"It can take a single incident to eradicate decades of consumer trust."

For over three decades, ABB has listened to equipment designers, operators and plant maintenance engineers. We've learned about their toughest processing applications in poultry, meat, dairy, snack foods and pharmaceuticals. We took notes when they shared their wish lists of product capabilities and characteristics.

Today's input: **reliability** and **cleanability**

Baldor-Reliance Food Safe motors are designed to perform reliably - at maximum efficiency - around the clock and be effectively cleaned to a hygienic level to ensure uncompromised food safety.

When selecting the highest quality motor suitable for harsh washdown applications, it's possible to achieve sustainability targets of food processing plants. High reliability means high productivity, reduced downtime, waste and CO^2 – creating a sustainable solution that protects the environment.



Reliability
In extreme environments

Corrosive agents, moisture and harsh cleaning chemicals are everyday realities in food and beverage processing. This makes the use of corrosion-resistant materials key to extending the life and reliability of your equipment/motor.

ABB's Baldor-Reliance Food Safe stainless-steel motors are designed to perform longer than any other industrial electric motor available today.

Stainless steel
An all stainless-steel construction - including housing, conduit box, drain plugs, hardware, fan cover and endplates - safeguards against corrosion to avoid costly downtime and repairs. Baldor-Reliance Food Safe motors utilize stainless steel material that meet NAMI (North American Meat Institute) guidelines for compatible materials.

Encapsulation / potted leads
Hardened epoxy resin completely encapsulates the windings for an additional layer of internal protection against water and humidity. The encapsulation extends into the conduit box to prevent moisture from entering the winding.

Shaft seals
Our two-barrier mechanical seal prevents water from entering at the shaft extension of the motor. The viton material is chemical resistant, withstands high temperature and direct spray.

Winding insulation
Food manufacturing plants often have extreme temperature ranges due to processing requirements. To ensure your motor can withstand these swings, Baldor-Reliance Food Safe motors are designed with high temperature Class H insulation with low temperature (Class B) rise for longer insulation and bearing life.

Bearing protection ring
Pairing motors with drives to improve efficiency and sustainability of our motors is expected. Adding an internal shaft grounding ring prevents bearing damage caused by drive-induced currents.

IP69 for water

Flexibility & safety

As operations expand, space and infrastructure become tighter and more congested for service technicians to maintain and install new equipment. To ease the process, Baldor-Reliance Food Safe motors are flexible to ensure installation is seamless and simple, all while keeping workers safe when handling and commissioning the motor.

Our 360 degree **rotatable conduit box** eliminates the need to reorient the motor or reroute your power supply. The middle portion of our 3-piece conduit box can be rotated 360 degrees to align the lead opening in the direction you need it.

When it comes to connecting the leads, our **color-coded leads** system is easily identifiable and simplifies connections points. To ensure a watertight connection, we provide waterproof heat shrink connectors with every motor.

Lifting provisions on 180 - 280 frame sizes allow technicians to safely handle and maneuver larger motors without the potential of injury.

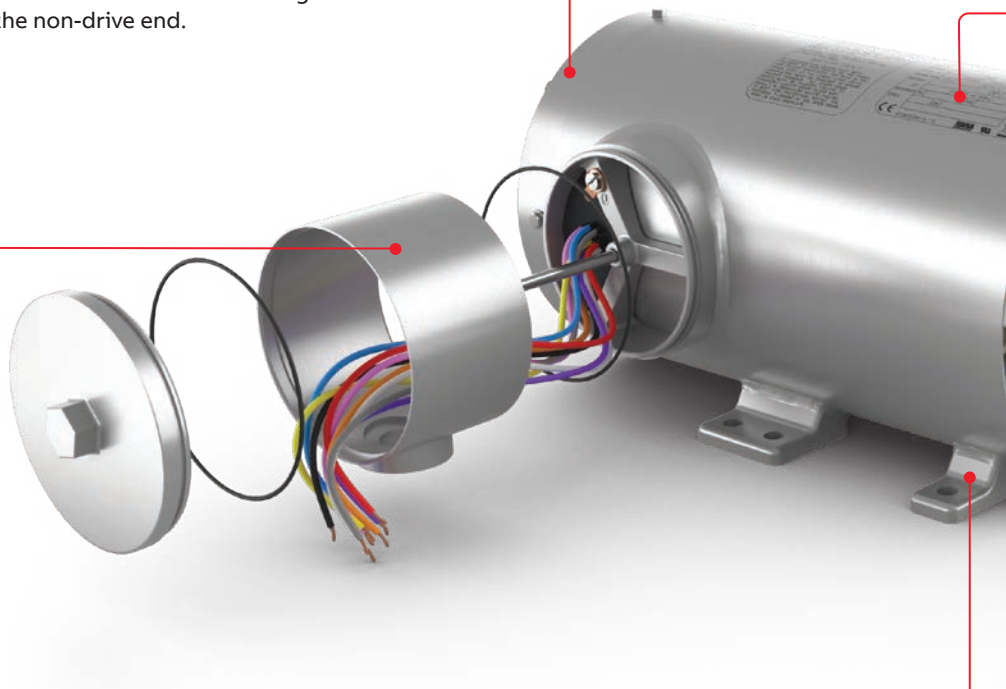
Availability
Built in U.S. manufacturing facilities and available from our industry leading distribution network assures that Food Safe motors are available when and where you need them.

Main specifications	
Rated horsepower	0.5 - 1 Hp, single phase
	0.5 - 30 Hp, three phase
Enclosures	TENV (up to 3 Hp), TEFC
Frame sizes	56C - 286TC
Mounting	Foot mounted, footless (up to 15 Hp)
	Standard, C-face, JM
Voltage	208-230/460; 575 V, three phase
	115/230 V, single phase
Protection	IP69 for water
Insulation class	Class H, with B rise
Lifting provisions	180 - 280 frame
Efficiency	NEMA Premium® (three phase)

For maximum reliability
Effective and efficient

Regular equipment cleaning regimens are required to meet stringent health and safety regulations. To ensure cleanliness, equipment needs to be easily cleaned-in-place (CIP) and properly inspected for safety assurance.

TEFC or TENV
TENV motors eliminate the potential for water and contamination ingress at the non-drive end.



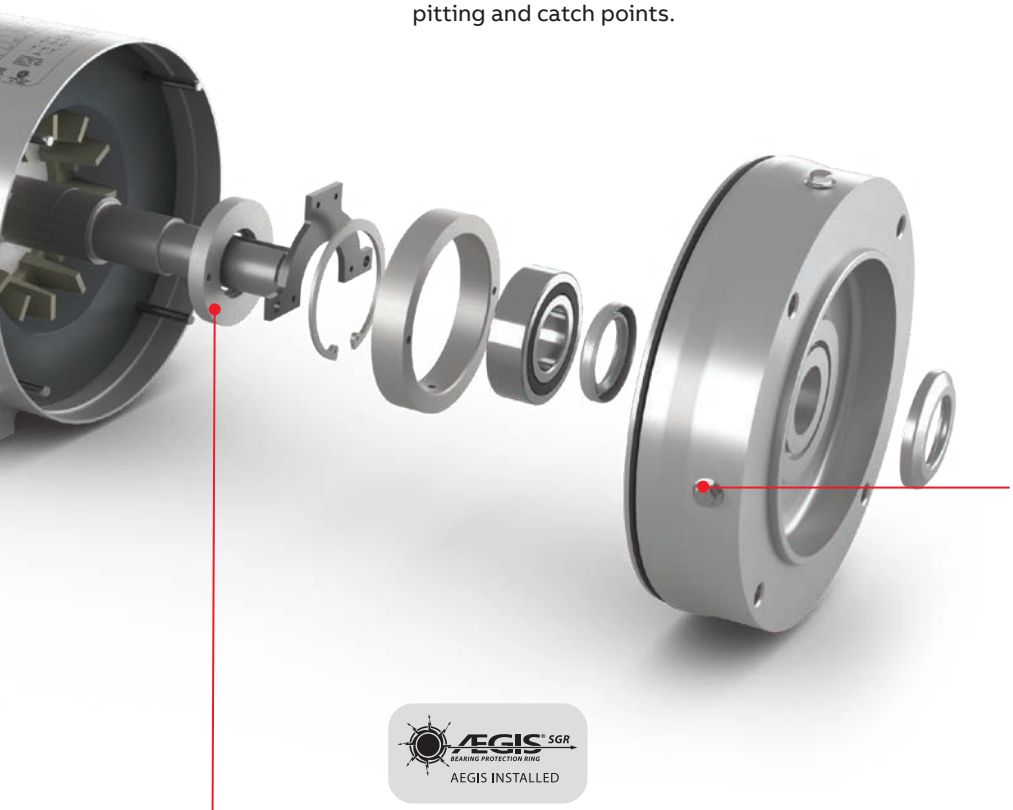
360 rotatable, round conduit box
Three phase only. Our 3-piece rotatable conduit box offers flexibility and safety for lead connection orientation. Waterproof lead connections come standard with every motor. Being round allows for water and debris to easily shed from the motor.

Smooth contours and finish
The smooth contours and finish of the stainless steel material allow for water and debris to shed from the motor housing.

Independent feet (or footless)
Independently welded feet which allow the motor to be effectively cleaned and inspected, especially underneath the motor. An area typically ignored during the cleaning process.

Footless designs allow easier cleaning and eliminates a collection point for food and debris to build up.

IP69 laser marked nameplate
We've fine-tuned how to properly mark motor information to make it legible over the course of the motor's life and be free of pitting and catch points.



Single phase
Single phase ratings have a single conduit box to house the capacitor and leads. Mechanical joints are minimized to one central box that has a gasket with flashing to prevent water from entering the conduit area.

Completely sealed
Plugged drain holes to minimize water ingress.

Stainless steel external **drains** and **hardware** have smooth heads to reduce the risk of pooling and contamination.

AEGIS SGR BEARING PROTECTION RING
AEGIS INSTALLED

Bearing protection ring
AEGIS SGR guarantees the prevention of bearing damage caused by drive-induced currents to maximize inverter duty use.

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new.abb.com/motors-generators/segments/food-beverage

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