

BROCHURE

Baldor-Reliance® washdown motors

Optimal protection and reliability

BALDOR • RELIANCE



Cleanability, reliability, availability

A brand you trust

Baldor-Reliance® washdown motors come in a variety of designs to fit the many needs in the marketplace. From white washdown to paint-free, stainless steel to Food Safe, these choices allow you to select the right motor for the amount of protection required for your specific application. While some applications may see just a light washdown, others may require the harshest high-pressure cleaning and caustic solutions.

When and where you need a motor

Built in U.S. manufacturing facilities and available from our industry-leading global distribution network assures that Baldor-Reliance washdown motors are available when and where you need them.

Minimize unplanned downtime

Each design is specifically tailored to different areas/zones within a production environment. We have a solution to keep your motors in service longer, with fewer failures, no matter how harsh the conditions.



A brand you trust



Global distribution



Uptime

Know the zone

Save money by specifying the right equipment for the operating environment

“What's the most cost-effective design available that will provide the best longevity for my equipment?”

That is the most common question we get every day when we talk with food producers. The answer is not as simple as just choosing the appropriate horsepower, speed or torque and basing it all on price. It goes beyond the initial purchase price, and an evaluation of the total cost of ownership is critical.

Underspecifying a motor can be very costly. Selecting and installing a motor based on the operating environment is paramount to ensuring your process runs without interruption and keeps your operations clean and safe.

Following the National Sanitation Foundation (NSF) guidelines, food equipment standards are designed in a manner that classifies different surfaces or areas of equipment into defined zones of exposure.



Food zone 1



Zone 1 areas are where direct contact with food products is normal and expected. Components must be able to withstand aggressive, high-pressure, high-temperature cleaning methods.

Splash zone 2



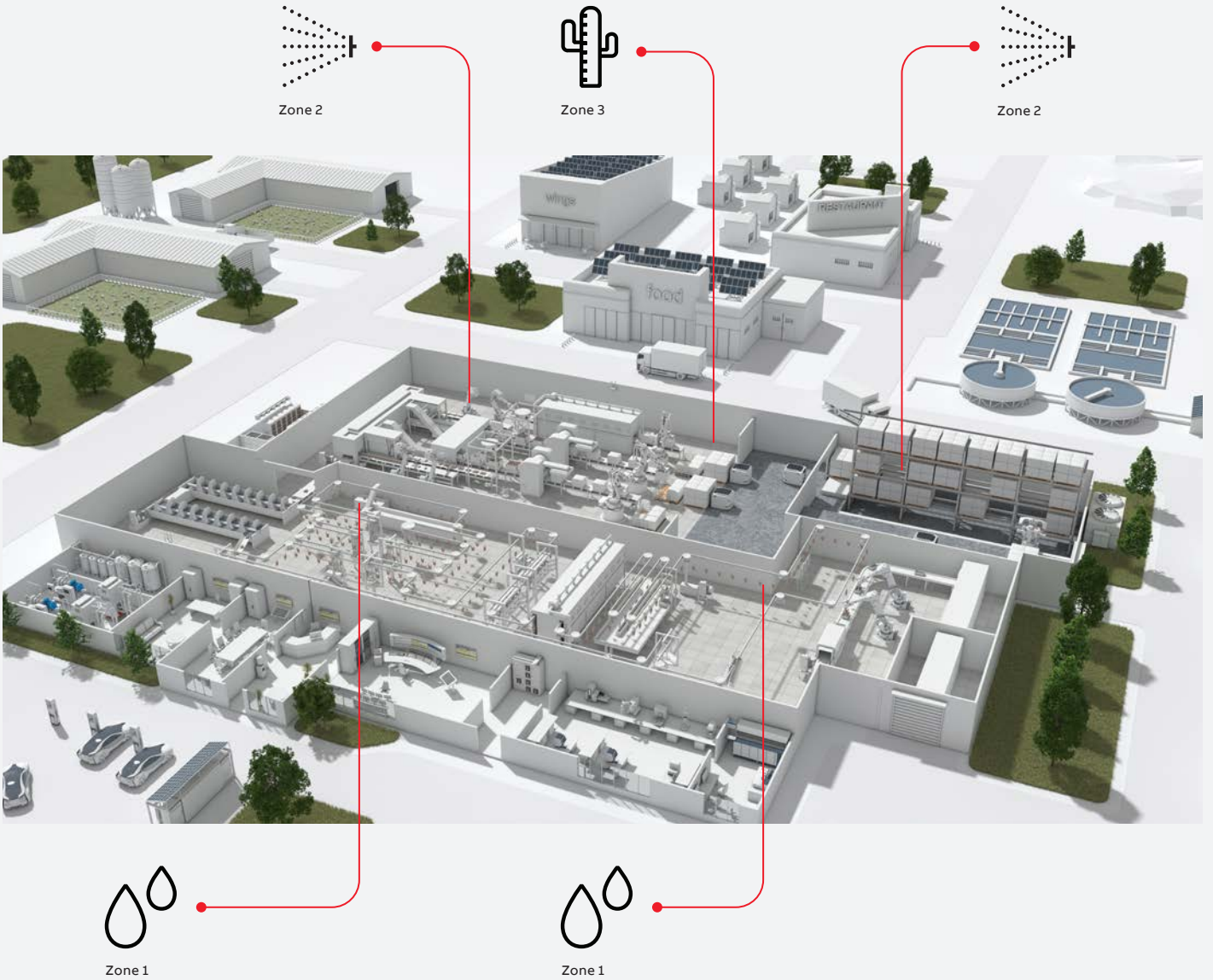
Direct contact with food products is not expected with the potential that liquids used in processing or cleaning may come into contact with the equipment. Equipment must be able to withstand regular or frequent washdowns.

Dry zone 3



Equipment is typically located outside of a normal washdown area where direct contact with food products during normal operation is not expected.

Food & beverage



White washdown motors

Features

- Stainless steel hardware
- Neoprene gaskets
- Double sealed ball bearings
- Lip and v-ring seal on drive end
- Two-part epoxy finish

Broadest selection

- Single and three phase
- Pump designs
- Brake motors
- Shaft grounding
- Sinewave and inverter

Specifications

Horsepower	1/3 - 75 HP (Three phase) 1/2 - 1-1/2 HP (Single phase)
Frame	56C - 444TC
Voltage	115/230, 230/460, 575 volt
Speed	3600, 1800 or 1200 RPM
Enclosure	TEFC & TENV
IP code	IP55
Mounting styles	Standard foot-mounted, C-face, foot-mounted, and footless
Frame material	Heavy gauge steel or cast iron
Hardware	300 series stainless steel
Finish	White epoxy topcoat



Single phase

Three phase

Specialty

Cast iron

Baldor-Reliance white washdown motors have been the workhorse of the food industry for over 30 years, delivering reliability and energy cost savings. These motors are designed for wet, humid environments that see splashing and light washdown.

Minimizing corrosion

Corrosion is a significant issue in the food and beverage industry, and that is why we continually improve our designs to ensure corrosion is minimized.

- Stainless steel hardware and shaft extension
- Two-part epoxy finish that is five times more resistant to corrosion and chipping than standard paint

Sealed frame

Neoprene gaskets, lip and v-ring seals keep moisture from entering the internals of the motor. As the motor heats up and cools down, condensation can build up. To relieve this condensation, maintenance-friendly drain holes and plugs can be removed.

Paint free motors

Features

- Stainless steel frame, base, shaft and hardware
- Rotating non-contact labyrinth seal
- Neoprene gaskets
- Double sealed ball bearings

Broadest selection

- Single and three phase
- Sinewave and inverter

Specifications

Horsepower	1/2 - 10 HP (Three phase)
Frame	56C - 215TC
Voltage	230/460, 575 volt
Speed	3600, 1800 or 1200 RPM
Enclosure	TEFC & TENV
IP code	IP55
Mounting styles	C-face, foot-mounted, and footless
Frame material	Stainless steel
Hardware	300 series stainless steel
Finish	Stainless steel/aluminum



Three phase inverter duty



Conduit box



Endplate and seal

When an application requires cleaning solutions and light washdowns that could potentially compromise the surface of a painted motor, paint free motors are the answer.

Protecting the internals

A rotating non-contact labyrinth seal on the drive end shaft extension protects the motor bearings by rotating and expelling contaminants. As an added layer of protection to ensure debris does not reach the bearing lubricant, double sealed bearings are standard on paint free motors. By utilizing sealed bearings, relubrication and maintenance is minimized.

Stainless steel motors

Features

- Stainless steel frame, base, shaft and hardware
- Rotating non-contact labyrinth seal
- Neoprene gaskets
- Double sealed ball bearings

Broadest selection

- Single and three phase
- Sinewave and inverter

Specifications

Horsepower	1/3 - 20 HP (Three phase)
Frame	56C - 256TC
Voltage	230/460, 575 volt
Speed	3600, 1800 or 1200 RPM
Enclosure	TEFC & TENV
IP code	IP56
Mounting styles	C-face, foot-mounted, and footless
Frame material	Stainless steel
Hardware	300 series stainless steel
Finish	Polished stainless steel



Three phase inverter duty



Conduit box



Shaft seal

When the application requires caustic cleaning solutions and sanitizing washdowns that will compromise the surface of a standard washdown motor, stainless steel motors are the answer.

Minimize your risk of safety violations

Designed for harsh food processing environments; impervious to rust and deterioration caused by caustic sanitizing.

Stainless steel motors utilize corrosion-resistant materials across all components minimizing your risk of potential violations for inadequate equipment.

Food Safe motors

Features

- All stainless steel construction
- Epoxy encapsulated windings and conduit box
- Two-barrier mechanical seal on the output shaft
- 360 degree rotatable conduit box (three phase)
- Laser marked nameplate
- Removable condensation drain holes with stainless steel plugs for thorough drainage
- Independently welded feet

Broadest selection

- Single and three phase
- Pump designs
- Sinewave and inverter
- Feather picker option for tight spaces with cord that provides connection outside washdown area

Specifications

Horsepower	1/2 - 30 HP (Three phase) 1/2 - 1 HP (Single phase)
Frame	56 - 286TC
Voltage	115/230, 230/460, 575 volt
Speed	3600, 1800 or 1200 RPM
Enclosure	TEFC & TENV
IP code	IP69 for water
Mounting styles	Standard foot-mounted, C-face, foot-mounted, and footless
Frame material	Stainless steel
Hardware	300 series stainless steel
Finish	Polished stainless steel



Single phase



Three phase inverter duty



Feather picker

Designed for food processing where reliability and cleanability are of utmost importance in an intense, caustic cleaning environment. 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.

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

Reliability

- Available with internal AEGIS bearing protection ring (up to 10 Hp) to help mitigate harmful bearing currents
- 3 year warranty on Food Safe (2 year on feather picker)
- NEMA Premium® efficiency

Cleanability

- Smooth contours and finish with a rotatable, round conduit box allow water and debris to shed from the housing
- Independent feet allow the motor to be effectively and efficiently cleaned

Flexibility & safety

- Our rotatable conduit box eliminates the need to reorient the motor to match power supply
- Color-coded leads are easily identifiable and make connection safer and easier with field-tested, waterproof connectors
- Lifting provisions on 180 – 280 frame allow for easier and safer maneuvering

Expansion to the line

Since the creation of the white washdown motor in the mid-1980s, the Baldor-Reliance line of motors has been on the cutting edge for wet applications. This full line of motors provides a long, trouble-free life in the harshest washdown applications.



—
1980s

Stainless steel hardware and shaft extensions, coated rotor with two-part paint



—
1986

White washdown motor
Double-sealed bearings



—
1995

Paint-free motor
Stainless steel frame, motor base, shaft and hardware, ball-burnished aluminum endplates, rotating non-contact labyrinth seal



—
2017

Food Safe motor
All stainless-steel construction, totally encapsulated windings, labyrinth seal on drive end and opposite drive end, internal lip seal and an external axial face seal, laser marked nameplate



—
2020

Cast-iron washdown motor
Rugged cast iron construction, stainless steel shaft extension and hardware, white epoxy corrosion resistant finish

—
2022

Shaft grounding Food Safe motors provide increased reliability in variable speed performance

Smart sensors for motors

The ABB Ability™ Smart Sensor for motors are IP66/67 rated, so any Zone 2 or 3 washdown areas are suitable to have condition monitoring.

Sensor features

Suitable for Zone 2 washdown areas

The ABB Ability Smart Sensor is designed for harsh environments. Its enclosure withstands high vibration levels, protects the sensor from dust and water ingress and is rated IP66/67. In addition, the sensor is certified for ATEX, IECEx and NEC500, making it compliant with the strictest requirements for equipment operating in explosive atmospheres such as grain handling.

Health checks

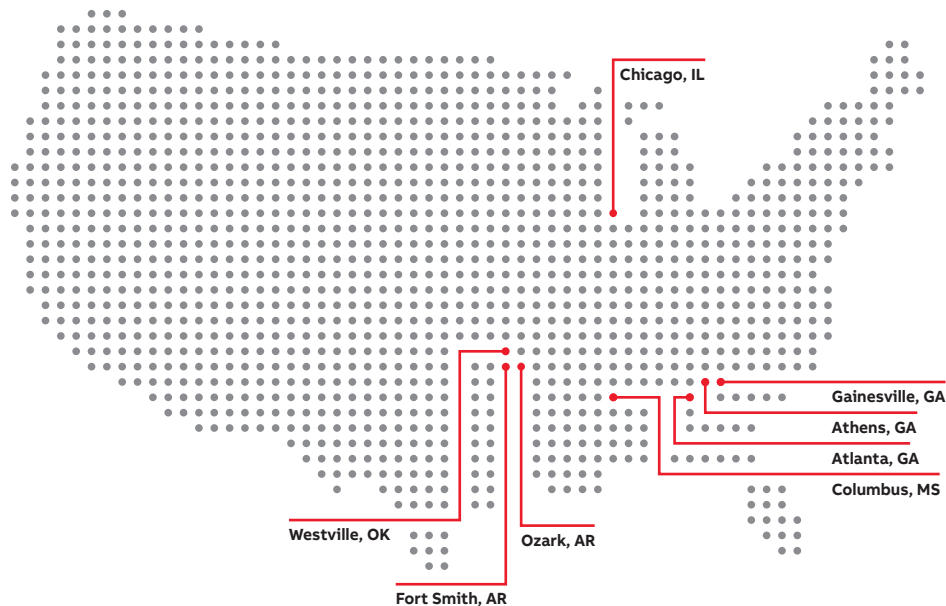
Based on ABB's extensive know-how, advanced algorithms are used to analyze the data and produce meaningful information such as temperature, vibration, load, number of starts and more. The sensor sends this information directly to a smartphone or gateway and to a dedicated ABB Ability Smart Sensor portal. Data is also tracked over time for trend analysis so you can schedule preventative maintenance and eliminate unplanned downtime.



Flexibility

Custom capabilities, Mod Express & accessories

Modifying or designing a custom washdown motor is a specialized task because the motors must meet rigorous safety and quality requirements. Our network of manufacturing facilities and modification centers have the training and capabilities to design or modify a motor to fit your exact requirements.



Manufacturing locations: Fort Smith, AR; Ozark, AR; Athens, GA; Gainesville, GA; Columbus MS; Westville, OK
Mod Express centers: Fort Smith, AR; Atlanta, GA; Chicago, IL



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