

# Process Performance Motors for Cranes



ABB motors power the STS (ship to shore) cranes in the Port of Miami. Each crane contains 4-5 ABB motors.

Leading crane manufacturers stay ahead by supplying products which provide increased reliability, efficiency, safety, and overall cost-effectiveness. ABB has innovative products, solutions and services that can help to achieve these goals.

## What can ABB offer crane manufacturers?

Cranes and other lifting devices have to provide highly reliable operation, often in harsh conditions, while meeting tough requirements for uptime, smooth load handling, and precise controllability.

ABB supplies motors, drives and systems that meet these challenges. ABB's technology leadership, combined with its extensive experience of working with leading companies in the crane sector worldwide, produce reliable solutions that are tailor-made for the industry. Its products and systems can play a major part in maximizing overall performance.

## What motors can ABB offer for cranes?

ABB's low and high voltage motors, both synchronous and induction, are designed for rapid torque variation, load cycling and fast alternation between driving and braking. ABB supplies products and systems for a wide range of crane applications.





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### What is ABB's process performance motor?

ABB's process performance motors range is designed with many add-on options available. The motors can therefore be easily engineered to match the customer's specifications.

### What are the main features and benefits of ABB's process performance motors?

#### Low voltage motors

- IEC sizes 71 to 450
- aluminum and cast iron frames
- output up to 1000 kW
- voltage 220...690 V
- frequency 50 and 60 Hz
- ambient temperature -55° to +70°C

#### High voltage motors

- IEC sizes 315 to 400
- cast iron frame
- voltage 2300...6600 V
- frequency 50 and 60 Hz
- ambient temperature -55° to +70°C

The motors are designed to offer

- reliability - reduced maintenance downtime
- efficiency - EFF1 for lower running costs with maximum productivity
- flexibility - tailored for almost any application or conditions.

Flexibility like the high protection class, and the use of thermistors in the larger motors, mean that the standard units themselves meet the tough requirements for dependable operation in cranes. Options like reinforced construction and higher protection class can easily be added. The motors' lower running temperature increases their momentary overload capacity and extends their lifespan.

Their tough, durable surface treatment enables these motors to withstand harsh ambient conditions. They also have sound environmental and sustainability credentials. From the design stage onwards, special attention has been paid to environmental compatibility in terms of materials, manufacturing and recycling. High operational efficiency supports efforts to reduce CO<sub>2</sub> emissions.

### What about compatibility with frequency converters?

ABB's process performance motors are designed for converter operation. In the low voltage motors the standard winding insulation level is sufficient for voltages up to 500V, and motors for higher voltages are supplied with reinforced winding insulation. The larger motors are equipped with insulated bearings to avoid bearing currents. The motors can be fitted with an external cooling kit to provide 100% torque at low speed in constant torque applications, as well as an encoder or other additional equipment as required.

### What is ABB's total motor offering?

ABB offers several comprehensive ranges of AC motors and generators. Our in-depth knowledge of virtually every type of industrial process ensures we always supply the optimum solution for our customer's needs.

