

Baldor-Reliance® NEMA motors

ABB is the leading global marketer, designer, and manufacturer of NEMA motors. For more than 100 years, Baldor-Reliance industrial electric motors have been designed for quality, reliability, and efficiency.

We believe that building a sustainable tomorrow takes all of us – the company, employees, customers, suppliers, and the communities in which we live and work. We are making long-term investments in our customer-first culture with technology, processes, and people to ensure the industry can rely on us to deliver the NEMA motors they need.

BALDOR • RELIANCE

General purpose motors				
Product / offering		Features and benefits	Suggested applications	ID load*
Single phase motors Totally enclosed • 0.08-15 Hp (0.06-11 kW) Open drip proof • 0.17-10 Hp (0.12-7.5 kW)		<ul style="list-style-type: none"> Vibration dampening base to reduce noise Dynamically balanced rotor to increase bearing life Superior switch design to optimize torque profile Robust heavy-gauge steel for durability C-face designs have locked driven end bearing to allow for mounting in any position 	Pumps, fans, compressors, material handling, machine tools, general industrial equipment	
Learn more				
Three phase motors Totally enclosed • 0.125-400 Hp (0.09-298 kW) Open drip proof • 0.25-450 Hp (0.18-336 kW)		<ul style="list-style-type: none"> Inverter duty motors suitable per NEMA MG1 Cast iron frame makes F1 to F2 conduit box conversion simple C-face designs have locked driven end bearing to allow for mounting in any position Footless designs available to reduce overall weight and improve safety 3 year warranty 	Pumps, fans, compressors, material handling, machine tools, general industrial equipment	Variable Torque (VT), Constant Torque (CT)
Learn more				
Severe duty motors				
Product / offering		Features and benefits	Suggested applications	ID load*
Severe Duty XT motors Totally enclosed, three phase • 1-300 Hp (0.75-224 kW)		<ul style="list-style-type: none"> Inverter duty motors suitable per NEMA MG1 Robust cast iron frame Easy-to-read laser etched nameplate C-face designs have locked driven end bearing to allow for mounting in any position Multi-color leads for easy connection Division 2, Class I, Group A,B,C,D markings on nameplate Sealed bearings on 143T-256T frames 3 year warranty 	Severe duty applications in chemical, oil and gas, pulp and paper, bulk material handling, water and wastewater, and power generation.	Variable Torque (VT), Constant Torque (CT)
Learn more				
Severe Duty XEX motors Totally enclosed, three phase • 1-900 Hp (0.75-670 kW)		<ul style="list-style-type: none"> Inverter duty motors suitable per NEMA MG1 Robust cast iron frame Regreasable bearings on all frame sizes C-face designs have locked driven end bearing to allow for mounting in any position Easy-to-read 304-stainless steel nameplate Division 2, Class I, Group A,B,C,D markings on nameplate 3 year warranty 	Applications within severe process industries including pumps, fans, compressors, material handling, machine tools, general industrial equipment	Variable Torque (VT), Constant Torque (CT)
Learn more				

*ID load is the inverter duty load type

Severe duty motors continued				
Product / Offering		Features and benefits	Suggested applications	ID load*
IEEE 841XL motors Totally enclosed, three phase • 1-350 Hp (0.75-260 kW)		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • Meets and exceeds the requirements for IEEE Std 841™-2021 • Patented PLS lubrication system to extend operating life • Division 2, Class I, Group A,B,C,D markings on nameplate • IP56 • Meets IEEE 45 on nameplate • IEEE 841 test report ships with the motor • 5 year warranty 	Applications within severe process industries including chemical, oil and gas, pulp and paper, metal and foundries, bulk material handling and power generation	Variable Torque (VT), Constant Torque (CT)
Learn more				
IEEE 841XL vertical solid shaft P-Base motors Totally enclosed three phase Normal thrust • 3-75 Hp (2.2-56 kW) Medium thrust • 3-40 Hp (2.2-30 kW) High thrust • 50-75 Hp (37.3-56 kW)		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • Meets and exceeds the requirements for IEEE Std 841™-2021 • Patented PLS lubrication system to extend operating life • Division 2, Class I, Group A,B,C,D markings on nameplate • Vertical lifting provisions for ease of installations • 5 year warranty 	Applications within severe process industries. Vertical turbine pumps, inline pumps, end suction pumps.	Variable Torque (VT), Constant Torque (CT)
Learn more				
IEEE 841 / 661XL motors Totally enclosed, three phase • 5-75 Hp (3.7-60 kW)		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • Meets and exceeds the requirements for IEEE Std 841™-2021 • Roller bearing for belted applications, 40,000hr^{L10} life per API 661 • Vertical lifting provisions for shaft up and down mounting • Patented PLS lubrication system to extend operating life • IP56 enclosure: dome shaft slinger, bronze labyrinth shaft seal, gasketed conduit box and cover • Division 2, Class I, Group A,B,C,D markings on nameplate • Meets IEEE 45 on nameplate • IEEE 841 test report ships with the motor • 5 year warranty 	Belt driven heat exchangers	Variable Torque (VT)
Learn more				
Crusher duty motors Totally enclosed, three phase • 5-600 Hp (3.7-445 kW)		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • High torque NEMA Design A, exceeds NEMA Design C torques • 1.25SF up to 100 Hp, 1.15SF over 100 Hp • Easy-to-read 304 stainless steel nameplate • Oversized ball bearings up to 50 Hp, ball and roller bearings from 60Hp and up • IP55 thru L449 frame. IP66 for 586/7/8 frames include ODE insulated bearing • 3 year warranty 	Aggregate/cement crushers, belt conveyors, screens, above ground mining equipment	Variable Torque (VT), Constant Torque (CT)
Learn more				
RPM XE - extreme efficient motors Totally enclosed, three phase • 10-100 Hp (7.5-75 kW)		<ul style="list-style-type: none"> • Designed for across the line operation • Operates at true synchronous speed regardless of load • Efficiency two to four levels above NEMA Premium® (up to IE5) • Severe duty NEMA Design B, 1.15SF (TEFC 1800 RPM) • Power dense and standard NEMA frame sizes 	Centrifugal fan and pumps, continuous applications, compressors, applications demanding reduced weight or inertia	Variable Torque (VT), Constant Torque (CT), Constant Power (CP)
Learn more				
Quarry duty motors Totally enclosed, three phase • 2-10 Hp (1.5-7.5 kW)		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • High torque NEMA Design C torques • Steel band frame with cast iron endplates and conduit box for rugged design • IP55 enclosure for extra protection • 3 year warranty 	Above ground mining, belt conveyors, bulk material handling	Variable Torque (VT), Constant Torque (CT)
Learn more				

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Severe duty motors continued				
Product / Offering		Features and benefits	Suggested applications	ID load*
Dirty Duty® Plus Totally enclosed, three phase • 0.5-10 Hp (0.37-7.5 kW)		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • Meets IEEE 45 on nameplate • Epoxy paint system passed over 2,000 hour salt fog test per ASTM B 117 • Steel band frame with cast iron endplates and conduit box for rugged design (IP56) • Permanently lubricated, double sealed ball bearings to extend operating life • 3 year warranty 	Pumps, conveyors, marine	Variable Torque (VT), Constant Torque (CT)
Learn more				
Washdown duty motors				
Product / offering		Features and benefits	Suggested applications	ID load*
Food Safe stainless steel motors Totally enclosed, three phase • 0.5-30 Hp (0.37-29 kW) Totally enclosed, single phase • 0.5-1 Hp (0.37-0.75 kW) Close coupled pump • 1-20 Hp (0.75-15 kW)		<ul style="list-style-type: none"> • Three phase motors are inverter duty suitable per NEMA MG 1 • 300 series stainless steel • Individually welded feet for ease of cleaning • Smooth contours and advanced sealing • Encapsulated, color coded leads and epoxy encapsulated windings • Exceeds IP69 for water • Removable condensation drains in each nameplate • Available with AEGIS shaft grounding ring 1/2 - 10 Hp (0.37- 7.5 kW) • 3 year warranty 	Food processing where reliability in intense cleansing environments is of utmost importance.	Variable Torque (VT), Constant Torque (CT)
Learn more				
Stainless Steel Totally enclosed, three phase • 0.33-20 Hp (0.25-15 kW)		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • 300 series stainless steel motor frame, endplates, conduit box, shaft, base and hardware • IP56 • Labyrinth seals on both ends • 3 year warranty 	Food processing, packaging equipment in harsh cleaning environments.	Variable Torque (VT), Constant Torque (CT)
Learn more				
Paint-free Totally enclosed, three phase • 0.5-10 Hp (0.37-7.5 kW)		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • No exterior paint • 300 series stainless steel motor frame, base, shaft and hardware • IP55 • Labyrinth seal on drive end shaft extension • 3 year warranty 	Food processing, packaging equipment where frequent wash cycles can compromise the surface of a painted motor.	Variable Torque (VT), Constant Torque (CT)
Learn more				
White washdown motors Totally enclosed, Single phase • 0.50-1.5 Hp (0.37-1.12 kW) Totally enclosed, three phase • 0.33-20 Hp (0.25-15 kW)		<ul style="list-style-type: none"> • Three phase motors are inverter duty suitable per NEMA MG1 • 300 series stainless steel hardware • Stainless steel shaft extensions • Neoprene gaskets, double sealed ball bearings • White epoxy, corrosion resistant finish • Available in jet pump, close-coupled pump, brake motor, feather picker and cut saw for poultry processing • IP55 • 3 year warranty 	Food processing and packaging equipment where washdown conditions occur.	Variable Torque (VT), Constant Torque (CT)
Learn more				
White washdown feature cast iron motors Totally enclosed, three phase • 5-75 Hp (3.7-56 kW)		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • White epoxy, corrosion resistant finish • 300 series stainless steel hardware • Stainless steel shaft extensions • Available in standard, C-face and close-coupled pump mounting • IP55 • 3 year warranty 	Food processing, packaging equipment where washdown conditions occur, pumps and wastewater processing.	Variable Torque (VT), Constant Torque (CT)

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Explosion proof motors				
Product / offering		Features and benefits	Suggested applications	ID load*
General purpose XP motors Totally enclosed, single phase • 0.25-5 Hp (0.18-3.7 kW) Totally enclosed, three phase • 0.25-60 Hp (0.18-45 kW)		<ul style="list-style-type: none"> • Three phase motors are inverter duty motors suitable for NEMA MG1 (above 1 Hp) • UL and CSA approved for Division 1, Class I, Group D, Class II Group F & G • Normally closed thermostats (> 1 Hp) • 3 year warranty 	Pumps, fans, conveyors in customer specified Division 1 hazardous locations.	Variable Torque (VT), Constant Torque (CT)
Learn more				
Severe duty XP Totally enclosed, three phase • 1-250 Hp (0.75-186 kW)		<ul style="list-style-type: none"> • Inverter Duty motors suitable for NEMA MG1 • UL and CSA approved for Division 1, Class I, Groups C & D, Class II Group E, F & G • UL listed breather drain to protect against humidity • Normally closed thermostats • Suitable for 55°C ambient at 1.0SF • IP55 thru 320 frame, IP66 360 frame and larger • 3 year warranty 	Pumps, fans, conveyors in customer specified Division 1 hazardous locations.	Variable Torque (VT), Constant Torque (CT)
Learn more				
Drill rig duty XP Totally enclosed, three phase • 0.25-200 Hp (0.37-150 kW)		<ul style="list-style-type: none"> • Inverter Duty motors suitable for NEMA MG1 • UL and CSA approved for Division 1, Class I, Groups C & D • UL listed breather drain to protect against humidity • Normally closed thermostats • Suitable for 55°C ambient at 1.0SF • IP55 enclosure marked on nameplate • 3 year warranty 	Pumps, fans, conveyors, on and off shore rig service bulk fuel terminals, transfer stations in customer specified Division 1 hazardous locations.	Variable Torque (VT), Constant Torque (CT)
Learn more				
Drill rig duty XP close coupled pump Totally enclosed, three phase • 3-10 Hp (2.2-7.5 kW)		<ul style="list-style-type: none"> • Inverter Duty motors suitable for NEMA MG1 • UL and CSA approved for Division 1, Class I, Groups C & D with T3C temperature code • Close coupled pump design available in 240/460 and 575volt. • UL listed breather drain to protect against humidity • Normally closed thermostats • IP55 enclosure, marked on nameplate • 3 year warranty 	Customer specified Division 1 hazardous area, chemical, oil and gas industrial pumps, fixed and variable speed operations.	Variable Torque (VT), Constant Torque (CT)
Learn more				
Pump motors				
Product / offering		Features and benefits	Suggested applications	ID load*
Jet motors (56J) Totally enclosed, three phase • 0.33-3 Hp (0.25-2.2 kW) Open drip proof, three phase • 0.33-3 Hp (0.25-2.2 kW) Totally enclosed, single phase • 0.33-2 Hp (0.25-1.5 kW) Open drip proof, single phase • 0.33-3 Hp (0.25-2.2 kW)		<ul style="list-style-type: none"> • Three phase motors are inverter duty suitable per NEMA MG1 • Sturdy steel frame, cast aluminum endplates, with steel bearing seat inserts to reduce weight and enhance reliability • Opposite drive end shaft is slotted for easy installation • Dynamically balanced rotor to reduce noise and increase bearing life • Single phase products have automatic thermal overload protection • Single phase products have superior switch design to optimize torque profile • Offered in explosion proof and washdown enclosures 	Residential and industrial pumps, commercial machinery, food and beverage, wastewater and agricultural applications.	Variable Torque (VT), Constant Torque (CT)
Learn more				

*ID load is the inverter duty load type

Pump motors continued				
Product / offering		Features and benefits	Suggested applications	ID load*
<p>Close coupled pump motors</p> <p>Totally enclosed, three phase</p> <ul style="list-style-type: none"> • 1-50 Hp (0.75-37 kW) <p>Open drip proof, three phase</p> <ul style="list-style-type: none"> • 1-75 Hp (0.75 - 56 kW) <p>Totally enclosed, single phase</p> <ul style="list-style-type: none"> • 3-5 Hp (2.24-3.7 kW) <p>Open drip proof, single phase</p> <ul style="list-style-type: none"> • 3 - 10 Hp (2.24 - 7.5 kW) 		<ul style="list-style-type: none"> • Three phase motors are inverter duty suitable per NEMA MG1 • Motor flange and shaft are designed to support the pump unit • Oversized ball bearings with locked drive end construction to minimize endplay • Available with shaft grounding protection for VFD driven pumps • Offered in explosion proof and washdown enclosures • 3 year warranty 	<p>Residential and industrial pump applications requiring JM, JP and West Coast Fit.</p>	<p>Variable Torque (VT), Constant Torque (CT)</p>
<p>Learn more</p>				
<p>Vertical p-base motors</p> <p>Normal thrust</p> <ul style="list-style-type: none"> • 3-75 Hp (2.24-56 kW) <p>Medium thrust</p> <ul style="list-style-type: none"> • 3-40 Hp (2.24-30 kW) <p>High thrust</p> <ul style="list-style-type: none"> • 50-75 Hp (37-56 kW) 		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • Vertical lifting provisions for ease of installation • Severe duty construction for harsh environments (cast iron construction with corrosion-resistant epoxy finish) • Easy-to-read stainless steel nameplate 	<p>Centrifugal pumps, sump pumps, turbine pumps, in-line pumps, fans, aerators, mixers, autoclaves.</p>	<p>Variable Torque (VT), Constant Torque (CT)</p>
<p>Learn more</p>				
<p>Submersible motors</p> <p>Totally enclosed, Wet pit/15 minutes in air</p> <ul style="list-style-type: none"> • 1-450 Hp (0.75-336 kW) <p>Dry pit/ continuous in air</p> <ul style="list-style-type: none"> • 1-150 Hp (0.75-112 kW) 		<ul style="list-style-type: none"> • Inverter duty motors suitable for NEMA MG1 • 416 stainless steel shaft • Two NC thermostats • UL listed and CSA certified • Division 1, Class I, Groups C & D, T3C (T2A on Inverter) • 5 year pro-rated warranty 	<p>Wet and dry pit pump applications; slurry pumps, aerators, mixers</p>	<p>Variable Torque (VT), Constant Torque (CT)</p>
<p>Learn more</p>				
<p>Immersible motors</p> <p>Totally enclosed, three phase</p> <ul style="list-style-type: none"> • 5-250 Hp (3.73-186 kW) 		<ul style="list-style-type: none"> • Inverter duty motors suitable for NEMA MG1 • P-base or C-face mounting • Totally enclosed, blower-cooled enclosure • Patented immersible motor sealing system • IP67 • Space heaters standard 	<p>Capable of running under water for two weeks under maximum depth of 30ft of water. Used in dry pit applications in flood plains and in slurry pits.</p>	<p>Variable Torque (VT), Constant Torque (CT)</p>
<p>Learn more</p>				
<p>Fire pump motors</p> <p>Three phase, foot mounted</p> <ul style="list-style-type: none"> • 10 - 300 Hp (7.5 - 224 kW) <p>Three phase footless</p> <ul style="list-style-type: none"> • 10 - 100 Hp (7.5 - 75 kW) 		<ul style="list-style-type: none"> • Inverter duty motors suitable for NEMA MG1 • Closed coupled pump • NEMA Design B, 60Hz • UL file E481231 • Open drip proof enclosure for relatively clean and dry environments • Exterior red paint RAL3002 	<p>UL listed fire pumps installed per NFPA-20.</p>	<p>Variable Torque (VT), Constant Torque (CT)</p>
<p>Learn more</p>				

*ID load is the inverter duty load type

HVAC motors				
Product / offering		Features and benefits	Suggested applications	ID load*
Critical Cooling motors TEAO and TEFC, three phase induction <ul style="list-style-type: none"> • 1-30 Hp (0.75-22.4 kW) TEFC, three phase FASR (IE5+) <ul style="list-style-type: none"> • 5-20 Hp (3.7-15 kW) 		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • Lifetime warranty against bearing failures caused by shaft currents • Hybrid ceramic bearings on both motor ends • Two rotor designs: standard induction (NEMA Premium/IE3) or FASR (ultra premium/IE5+) • 5 year warranty 	Mission-critical HVAC applications in data centers, hospitals, clean rooms, commercial and industrial buildings. Ideal for fan arrays, CRAC (computer room AC), and variable speed applications.	Variable Torque (VT)
Learn more				
Shaft grounded motors (-BG) Baldor-Reliance shaft grounding brush <ul style="list-style-type: none"> • 1-50 Hp (0.75-37 kW) (-G) AEGIS bearing protection rings <ul style="list-style-type: none"> • 1-100 Hp (0.75-75 kW) 		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • Enclosed or Open Drip Proof, foot mounted, C-face • Internally mounted shaft grounding brush or ring to mitigate shaft currents • Class H insulation • 3 year warranty 	Fans, pumps, blowers, unit handling, HVAC systems, variable speed applications.	Variable Torque (VT), Constant Torque (CT)
Learn more				
Chiller/cooling tower motors Totally enclosed, three phase <ul style="list-style-type: none"> • 3-60 Hp (2.2-45 kW) Inverter duty <ul style="list-style-type: none"> • 1-100 Hp (0.75-75 kW) 		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • TEFC and TEAO designs • Designed for wet, high humidity environments • 4 barrier shaft sealing system • Available with internally mounted AEGIS shaft grounding ring and space heaters • IP55 • Multiple lifting provisions • 3 year warranty 	Belted or drive shaft chiller/cooling towers, fans, pumps, air handling systems.	Variable Torque (VT)
Learn more				
General HVAC motors Totally enclosed, open drip proof, three phase <ul style="list-style-type: none"> • 1-100 Hp (0.75-75 kW) 		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • External provisions for shaft current mitigation • ODP and TEFC design with ball bearings and plugged grease packages • 3 year warranty 	Heating, ventilation, air conditioning blower and fan motors.	Variable Torque (VT)
Learn more				
Fan and blower Open drip proof, single phase <ul style="list-style-type: none"> • 0.25-1.5 Hp (0.18-1.1 kW) Open drip proof, three phase <ul style="list-style-type: none"> • 0.25-5 Hp (0.19-3.7 kW) 		<ul style="list-style-type: none"> • Three phase motors are inverter duty suitable per NEMA MG1 • Resilient cushion base for low noise and reduced vibration • Terminal panel for ease of connectivity • Lubed for life double shielded bearings • Automatic thermal overload protection 	Blowers, fans, condensers, unit heaters, air circulation, ventilation, freezers.	Variable Torque (VT)
Learn more				

*ID load is the inverter duty load type

HVAC motors continued				
Product / offering		Features and benefits	Suggested applications	ID load*
Application specific HVAC motors Condenser fans • 0.5-1.5 Hp (0.37-1.1 kW) Direct drive fans • 0.25-1 Hp (0.2-0.75 kW) Yoke/Pedestal fan • 0.25-0.5 Hp (0.2-0.37 kW) Ventilation fan • 0.5-1 Hp (0.37-0.75 kW)		<ul style="list-style-type: none"> • Motors designed to cover a wide range of applications and industries with very specific requirements. 	Used in ventilation, air-over, condenser, fan and blower motor, direct-drive and yoke/ pedestal fan designs	Variable Torque (VT)
Learn more				
Farm duty motors				
Product / offering		Features and benefits	Suggested applications	ID load*
General farm duty motor Single phase • 0.33-16 Hp (0.25-12 kW) Three phase • 0.5-100 Hp (0.37-75 kW)		<ul style="list-style-type: none"> • Three phase motors are inverter duty suitable per NEMA MG1 • Lubed for life double sealed bearings • Lip seal and v-ring slinger on drive end for ingress protection • Two part epoxy paint for tough environments 	Agricultural fans and blowers, pumps and other general purpose applications.	Variable Torque (VT), Constant Torque (CT)
Learn more				
Grain drying motors Centrifugal fan • 3-50 Hp (2.2-37 kW) Vane axial fan • 1.5-15 Hp (1.12-11.2 kW) Universal crop dryer • 5-15 Hp (3.7-11.2 kW) Aeration fan • 0.5-3 Hp (3.7-2.2 kW) Grain stirring • 1.5 Hp (1.1 kW)		<ul style="list-style-type: none"> • Three phase motors are inverter duty per NEMA MG1 • Screens on open drip proof models to protect against debris • Lubed for life double sealed bearings • Longer than NEMA shaft lengths • Two part epoxy paint for tough environments 	High pressure grain drying, centrifugal and vane axial fans, aeration, and stirring	Variable Torque (VT), Constant Torque (CT)
Learn more				
Application specific farm duty motors Auger drive • 0.33-1.5 Hp (0.25-1.1 kW) Dairy vacuum pump • 7.5-10 Hp (5.6-7.5 kW) (PSC) direct drive fan • 0.25-1 Hp (0.2-0.75 kW) Incubator/hatchery vent fan • 0.33 Hp (0.25 kW) Instant reversing • 0.33-1 Hp (0.25-0.75 kW) Irrigation tower drive • 0.75-2 Hp (0.55-1.5 kW) Metering pump • 0.33 Hp (0.25 kW)		<ul style="list-style-type: none"> • Three phase motors are inverter duty per NEMA MG1 • Lubed for life double sealed bearings • Two part epoxy paint for tough environments • Modified design to suit your farm duty application 	Mechanical gates and doors, hoists, bulk feeders, poultry feed auger drives, aeration fans, confinement houses, exhaust fans, incubator and hatchery fans, grille mount vent fans, metering pumps, vacuum pumps, HVAC condensers and more.	Variable Torque (VT), Constant Torque (CT)
Learn more				

*ID load is the inverter duty load type

Definite purpose motors				
Product / offering		Features and benefits	Suggested applications	ID load*
Definite purpose motors • 0.13-500 Hp (0.09-373 kW)		<ul style="list-style-type: none"> • Three phase motors are inverter duty suitable per NEMA MG1 • Motors designed to cover a wide range of applications and industries with very specific requirements. 	2 speed applications, pressure washers, woodworking, Pre-1952 NEMA U-frame, automotive duty	Variable Torque (VT), Constant Torque (CT)
Learn more				
Unit handling				
Product / offering		Features and benefits	Suggested applications	ID load*
General unit handling motors Totally enclosed, single and three phase • 0.5-7.5 Hp (0.37-5.6 kW)		<ul style="list-style-type: none"> • Three phase motors are suitable for inverter use per NEMA MG 1 • Low profile F-3 conduit box on 56 and 140T frames • Footed frames include slotted feet for easy mounting on OEM conveyors • UL/CSA recognized and CE certified • 3 year warranty 	Conveyors, baggage handling, unit handling, packaging, door operators, elevators, hoists.	Constant Torque (CT)
Learn more				
High cycle brake motors Totally enclosed, three phase • 0.5-3 Hp (0.37-2.2 kW)		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • Cast aluminum frame design for increased thermal dissipation • Low inertia, high efficiency motor • Fast action DC brake with integral rectifier 	Frequent start/stop applications, conveyors, baggage handling, unit handling, packaging, door operators, elevators, hoists.	Constant Torque (CT)
Learn more				
D-series brake motors Totally enclosed, three phase • 0.5-10 Hp (0.37-7.5 kW)		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • Low profile F-3 conduit box on most designs • Fast action spring set DC brake with integral rectifier • Magnetically released power-off type brakes flange mounted to motor with a manual release lever 	Conveyors, baggage handling, unit handling, packaging, door operators, elevators, hoists.	Constant Torque (CT)
Learn more				
Short-series brake motors Totally enclosed, three phase • 1/2-5 Hp (0.37-3.7 kW)		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • Low profile F-3 conduit box on most designs • Fast action spring set DC brake with integral rectifier • Magnetically released power-off type brakes integrally mounted to the motor for compact design 	Conveyors, baggage handling, unit handling, packaging, door operators, elevators, hoists.	Constant Torque (CT)
Learn more				
Variable speed motors				
Product / offering		Features and benefits	Suggested applications	ID load*
EC Titanium™ Motor only • 1-20 Hp (0.75-15 kW) Integrated motor-drive (top mount) • 1-10 Hp (0.75-7.5 kW) Integrated motor-drive (axial mount) • 1-7.5 Hp (0.75-5.5 kW)		<ul style="list-style-type: none"> • For inverter use only • FASR rotor (Ferrite Assisted Synchronous Reluctance) technology • IE5+ motor efficiency • Permanent magnet PWM AC drive control • Internal shaft grounding brush for shaft current mitigation • IP54 • Built in ABB Ability™ and Bluetooth communications • C-face, footed and footless design, and plenum use aluminum housing designs available 	Fans, pumps, compressors, HVAC systems, variable speed applications, general purpose applications.	Variable Torque (VT), Constant Torque (CT)
Learn more				

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Variable speed motors continued				
Product / offering		Features and benefits	Suggested applications	ID load*
<p>AC laminated frame - RPM AC motors</p> <p>Totally enclosed and DPG-FV (drip-proof guarded force vent)</p> <ul style="list-style-type: none"> • 5-1750 Hp (3.73-1305 kW) <p>Learn more</p>		<ul style="list-style-type: none"> • For inverter use only • Power dense square laminated frame • Internal shaft grounding brush for shaft current mitigation • Continuous torque performance from zero to base speed • 3 thermostats, one per phase • Class H insulation with and without encoders • 1000:1 constant torque speed range • Rotor options: standard induction, interior permanent magnet and caged-IPM designs • ABB Ability™ smart sensor mounting provisions 	Centrifugal pumps and fans; plastic extruders, winders, crane and hoists, traction, oil drilling, test stands.	Variable Torque (VT), Constant Torque (CT), Constant Power (CP)
<p>AC V*S Master motors</p> <p>Inverter Duty</p> <ul style="list-style-type: none"> • 0.33-300 Hp (0.25-224 kW) <p>Vector Duty</p> <ul style="list-style-type: none"> • 0.5-300 Hp (0.37-224 kW) <p>Learn more</p>		<ul style="list-style-type: none"> • Constant torque performance across entire speed range • Provisions for encoder mounting • Vector Duty available for closed loop system • One thermostat per phase • Inverter duty motor with feedback provision • 3 normally closed thermostats • 3 year warranty 	Extruders, conveyors, crane and hoist, winders, web processing, process control, test stands.	Variable Torque (VT), Constant Torque (CT), Constant Power (CP)
<p>Direct drive cooling tower motors</p> <p>Totally enclosed, three phase</p> <ul style="list-style-type: none"> • 7.5-250 Hp (5.6-186 kW) <p>Learn more</p>		<ul style="list-style-type: none"> • For inverter use only • RPM AC synchronous PM motor with laminated finned construction • Increased system reliability with the replacement of gearbox and jack shaft • Smaller footprint design • Quieter operation 	Wet and dry cooling towers, Air cooled condensers, air cooled heat exchangers	Variable Torque (VT)
Marine Duty motors				
Product / offering		Features and benefits	Suggested applications	ID load*
<p>Reliance Duty Master</p> <ul style="list-style-type: none"> • 1/5-500 Hp (0.15 - 373 kW) <p>Learn more</p>		<ul style="list-style-type: none"> • Compliance with the highest performance standards (MIL-I-45208 inspection, MIL-M-17059 Fractional Hp AC motors, MIL-M-17060 Integral Hp AC motors, MIL-DTL-17060 Integral Hp AC motors, MIL-P-17840 pumps, and MIL-F-18953 fans) • Customized testing, inspection and software • Navy approved sealed insulation system per MIL-STD-2037 • Designed in accordance with international industry standards (IEEE 45, USCG, ABS, NEMA MG1) 	Designed for optimized performance and longer life in critical above-deck and below-deck applications	Variable Torque (VT), Constant Torque (CT)
<p>Marine duty motors</p> <ul style="list-style-type: none"> • 1/5-3000 Hp (0.15 - 2,237 kW) <p>Learn more</p>		<ul style="list-style-type: none"> • Inverter duty motors suitable per NEMA MG1 • Designed in accordance with international standards (IEEE 45, USCG, ABS, Lloyd's Register, DNV) • Stainless steel nameplate • Corrosion proof hardware • Marine duty insulation 	Utilized across the marine industry on marine vessels, offshore platforms, passenger ships, and ocean-going vessels. Winches and cranes, drives, propulsion, thrusters, steering gears, compressors, pumps, fans and air handling	Variable Torque (VT), Constant Torque (CT)

*ID load is the inverter duty load type

Servo motors				
Product / offering		Features and benefits	Suggested applications	ID load*
AC brushless B-series motors • 1.63-20 Nm continuous torque Learn more		<ul style="list-style-type: none"> • B-series does not utilize rare earth magnets for an eco-friendly and sustainable design • Used for high precision • Low cogging with minimal ripple • Design is interchangeable with C and N-Series for versatility • cURus/CE certified quality design 	Machine tools, labeling, medium to high inertia applications, large loads, material handling, winding, and fast cycle time applications.	Variable Torque (VT), Constant Torque (CT)
AC brushless C-series motors Totally enclosed • 1.2-134 Nm continuous torque Learn more		<ul style="list-style-type: none"> • Peak torques 3x continuous • Designed with bonded neodymium magnets and medium inertia rotor for load inertia matching • Completely encapsulated winding • Multiple feedback types • cURus/CE certified quality design 	Cut-to-length, flying shear, machining, labeling, material handling, winding, robotics.	Variable Torque (VT), Constant Torque (CT)
AC brushless N-series motors Totally enclosed • 0.4-40 Nm continuous torque Learn more		<ul style="list-style-type: none"> • Peak torques are 4x continuous • Designed with bonded neodymium magnets and medium inertia rotor for load inertia matching • Completely encapsulated winding • Multiple feedback types • cURus/CE certified quality design 	Cut-to-length, flying shear, machining, labeling, material handling, winding, 3D printing, robotics.	Variable Torque (VT), Constant Torque (CT)
AC brushless stainless steel motors (SSBSM) • 0.45-3.6 Nm continuous torque Learn more		<ul style="list-style-type: none"> • Peak torques 3-4x continuous • All stainless steel construction (304 housing, 416 shaft) • Watertight sealed to IP67 and 1500 psi for washdown applications • FDA shaft seal • Laser etched nameplate • Standard and low inertia models available • BISSC/UL/CSA/CE agency approved 	Packaging, food handling, bakery machinery, beverage equipment, measuring dispensing equipment.	Variable Torque (VT), Constant Torque (CT)
HDS series • 0.7-53 Nm continuous torque Learn more		<ul style="list-style-type: none"> • Peak torques 3x continuous • Features neodymium magnet for improved performance • Less than 2% cogging torque • Compact, segmented lamination design • Completely encapsulated winding • UL, CE 	Cut-to-length, flying shear, machining, labeling, material handling, winding, 3D printing, robotics.	Variable Torque (VT), Constant Torque (CT)

*ID load is the inverter duty load type

DC motors				
Product / offering		Features and benefits	Suggested applications	ID load*
Fractional DC Wound field NEMA & IEC • 0.25-3 Hp (0.18-2.2 kW) Permanent magnet NEMA & IEC • 0.25-5 Hp (0.18-3.7 kW)		<ul style="list-style-type: none"> • Inverter duty operation from SCR controls (20:1 constant torque with 90 or 180VDC armatures) • Two designs available: wound field and permanent magnet • Tachometer adaptable • Class F insulation • Double sealed bearings • Available in explosion proof and washdown enclosures • UL and CSA Certified 	Conveyors, extruders, packaging equipment, mixers, winders, printing presses, and metering pumps.	Variable Torque (VT), Constant Torque (CT), Constant Power (CP)
Learn more				
RPM III NEMA & IEC • 5-500 Hp (3.7-372 kW)		<ul style="list-style-type: none"> • Unique laminated square frame design for improved commutation • Square frame allows for increased rating per frame size • Larger armature allows for optimum power generation and better ventilation for heat dissipation • Patented PLS bearing lubrication system • Highly customizable 	Mill drives, tube mills, coating lines, winders, printing presses, extruders, mixers, spindle drives.	Variable Torque (VT), Constant Torque (CT), Constant Power (CP)
Learn more				
Round frame motors NEMA • 5-500 Hp (3.7-372 kW)		<ul style="list-style-type: none"> • SCR drive motors • High dielectric stability • Class F insulation • Variety of enclosures • Tachometer adaptable 	Process lines, extruders, conveyors, test stands, winders, printing press, crane and hoist, web processing, machine tools.	Variable Torque (VT), Constant Torque (CT), Constant Power (CP)
Learn more				
Condition monitoring				
Product / offering		Features and benefits	Suggested applications	
ABB Ability™ smart sensors for motors		<ul style="list-style-type: none"> • ABB Ability Smart Sensor converts motor into a smart device to let you know when it is time for service. The Smart Sensor can be easily attached to motors without the need for wiring. It collects operational data and health information of the motor. 	Suitable for both finned and rolled steel motors. Rated for hazardous locations.	
Learn more				

*ID load is the inverter duty load type

Please note: This is ABB's global offering and some products might not be available in your country. This document demonstrates the extensive product lines that are available as catalog number items. Additional configurations and capabilities are available. Please contact your local ABB NEMA sales office for assistance.

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