Product note for North America market

ABB IEC
Low voltage motors

ABB Low voltage motors

ABB has long promoted the benefits of efficient motors, and welcomes the growing number of MEPS and other efficiency regulations around the world. As a leading player in the market, we help to advance MEPS and we play an active role in the bodies that set efficiency standards. Efficiency labels or nameplate markings for Australia/New Zealand, Brazil, Canada, China, Europe, Korea, Switzerland, Turkey & USA available for many ratings when the appropriate variant code is selected.

Common industries: Air separation, COG, HVAC, marine, metal processing, mining, pulp & paper, rubber & plastics, water/wastewater, wind

Typical applications: Blowers, compressors, conveyors, cranes, extruders, fans, heat exchangers, hoists, irrigation, mixers, pumps, roller table, yaw

	Process performance			
	Cast iron	**Aluminum**	**Motors for explosive atmospheres, ExnA, Exd, Exde, Exe**	**General performance**
				
Features	Four properties set ABB process performance motors apart: their efficiency, reliability, use of leading-edge technology, and the virtually limitless options they provide for customization. Process performance motors fulfill all international and national energy efficiency — both now and in the future.		ABB offers a full line of ATEX & IECEx motors; flameproof for Zone 1 or 2, gas groups IIB & IIC, T1-T4 (T5 & T6 upon request); Non-sparking for Zone 2, gas group IIC; dust ignition proof for Zone 21: EPL Db, T 125°C, IP65 or 22: EPL Dc, T 125°C, IP55 or IP65, dust groups IIIB & IIIC.	ABB general performance IE2 motors suit all basic applications where simplicity and off-the-shelf availability is essential.
kW Range	0.09 - 1,000	0.09 - 90	0.09 - 1,000	Aluminum 0.06 - 55 Cast iron 0.25 - 250
Poles	2 - 8, others on request	2 - 8	2 - 8, others on request	Aluminum 2 - 8 Cast iron 2 - 6
Efficiency class	IE2, IE3, IE4	IE2, IE3	IE2, IE3	IE2, IE3 for EU MEPS
Speed	1 or 2	1 or 2	1 or 2	1
Frame sizes	IEC 71 - 450 NEMA 586, 587 & 588	IEC 63 - 280	IEC 71 - 450	Aluminum IEC 56 - 250 Cast iron IEC 71 - 355
Frame material	Cast iron	Aluminum	Cast iron	Aluminum or cast iron
Cooling	IC 411 (TEFC), others on request	IC 411 (TEFC), others on request	IC 411 (TEFC), others on request	IC 411 (TEFC), others on request
Common Hz	50 or 60 Hz	50 or 60 Hz	50 or 60Hz	50 or 60Hz
Protection	IP55, others on request	IP55, others on request	IP55, others on request	IP55, others on request
Winding overload protection	PTC - thermistors, 3 in series, 150ºC, in stator winding (VC436)	Optional on frames 71 - 132; standard on frames 160 - 280 (VC436)	PTC - thermistors, 3 in series, 150ºC, in stator winding (VC436)	Standard for cast iron, PTC - thermistors, 3 in series, 150ºC, in stator winding (VC436) Optional for aluminum frames
Agency approvals	CE, additional certifications on request	CE, additional certifications on request	ATEX, IECEx, CE; Inmetro (Brazil), CNEX (China), PESO/CCoE (India), TR-CU (Russia) on request	CE, additional certifications on request
Literature	LV process performance motors according to EU MEPS, 9AKK105944; LV process performance motors according to AU MEPS, 9AKK105944	LV process performance motors according to EU MEPS, 9AKK105944; LV process performance motors according to AU MEPS, 9AKK105944	LV motors for explosive atmospheres, 9AKK104006	General performance IE2 high efficiency motors according to EU MEPS, 9AKK105789

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Other motors available from ABB are brake, smoke extraction, high ambient, 50Hz single phase, traction, & synchronous reluctance motor-drive packages.

For additional information, please visit http://new.abb.com/motors-generators or contact your Baldor representative.

	Water cooled	HDP	Permanent magnet	Roller table
				
Features	Water cooling is a highly efficient method of transferring heat away from the motor. Cooling efficiency is maintained even at lower speeds, ideal for constant torque applications. Typical applications include thruster and propulsion motors, wind turbine generators water and waste water pumps, tunnel-boring machines, extruders, printing presses and paper machines.	HDP series have been designed to be used in rough operating conditions and to operate only with a frequency converter. Square frame design and high overload capacity gives the motor an excellent dynamic response due to low moment of inertia and high pulse torque. Typical applications include plastic & rubber extrusion, injection molding, winders, conveyors & test benches.	The permanent magnet motor range extends the effective nominal speed range of the rugged industry workhorses down to 100 – 850 rpm. The motors can simplify drive systems by effectively eliminating the need of speed reduction devices. They are designed exclusively for frequency converter supply, where they provide high speed accuracy even without speed sensors because they are synchronous motors without rotor slip. Used to replace traditional AC or DC motor & gearbox combination or slow speed (10-16 pole) AC motor. Typical applications include slurry pumps, machine tool, plastic & rubber extrusion & papermaking.	The roller table motors supplied by ABB are squirrel cage motors which are specially designed for use with frequency converters. Robust in construction, the motors are fully sealed to withstand the tough conditions in rolling mills. The motors are low speed units intended for direct connection to rollers. The pole number and frequency can be selected, avoiding the need for gearboxes and therefore saving on maintenance costs and increasing the overall efficiency of the drive.
kW range	55 - 1,200	IP23, 3 - 750 IP54, 2 - 385	0-200rpm, 17-1120kW at 220rpm 0-300rpm, 25-1600kW at 300rpm 0-430rpm, 38-2240kW at 430rpm 0-600rpm, 57-2500kW at 600rpm	3.3 - 165
Poles	2 - 8	0 - 4,000rpm (high speed versions available)	—	6 - 8; 4 pole on request
Efficiency class	Exempt	Exempt	Exempt	Exempt
Speed	1	Variable speed	Variable speed	Variable speed
Frame sizes	IEC 280 - 450	IEC 132 - 250	IEC 280 - 560	IEC 180 - 450
Frame material	Cast iron	Steel laminated stator, die cast aluminum end shields	Cast iron/Welded steel	Cast iron
Cooling	IC 71W	IC 06 or IC 416	IC 411, IC 416 or IC 71W	IC 410
Common Hz	50 or 60Hz	50 or 60Hz	50 or 60Hz	50 or 60Hz
Protection	IP55, others on request	IP23 or IP54	IP55, others on request	IP55, others on request
Winding overload protection	PTC - thermistors, 3 in series, 150ºC, in stator winding (VC436)	Bimetal detectors, break type (NCC), (3 in series), 140°C, in stator winding VC124	Pt100, 2-wire in stator winding, 1 per phase (VC445)	PTC - thermistors, 3 in series, 150ºC, in stator winding (VC436)
Agency approvals	CE, marine standards on request	CE, UR on request	CE, marine standards on request	CE
Literature	LV Water cooled motors, 9AKK104379	AC Induction low inertia motors High Dynamic Performance (HDP) series, 9AKK105767	—	LV Roller table motors, 9AKK105928

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