

Digital Soft Start Controls



9 thru 900 Amps
9 thru 900 Amps

208-460V 50/60 Hz.
208-575V 50/60 Hz.

Applications: Controlled ramp start and stop, minimize spillage in material handling, reduced water hammer in pumping, reduced wear on mechanical gears, eliminate high inrush current, and energy optimizing of under loaded motors. Typical applications include: pumps, conveyors, fans, reciprocating compressors and screw and rotary compressors

Features: Six SCR three phase voltage control with programmable starting ramp and current limit. Application software senses changing load conditions and adapts to increase performance. Power factor optimization eliminates motor over-fluxing and allows under-loaded or over-sized motors to operate more efficiently. NEMA 1 enclosure.

Design Specifications

- MOV protection
- Current feedback
- Microprocessor Control
- Power factor sensing
- Energy optimization
- One programmable input
- Two programmable form C outputs

Custom Product Capabilities

- NEMA 12, 4 or 3R enclosures with bypass contactor
- Flange mounted input disconnect
- Input circuit breaker or fuses
- Input contactor
- 3 wire start/stop pushbuttons
- 2 wire Hand-Off-Auto switch
- Indicating lights
- Large units up to 1800 amps

Environmental and Operating Conditions

- Input voltage 3 phase 208-575V
- Control voltage 120VAC
- Input frequency 50/60 Hz
- Humidity 90% RH condensing
- 3000 feet altitude
- 40°C ambient temperature

Protective Features

- Current limit
- Shorted SCR detection
- SCR overload
- Shear pin-over-current detection
- Low current/under-load detection
- Input phase loss on start up
- Heat sink over-temperature

Output	Voltage	208-460V, 230-575V
	Current	9-900A
	Horsepower	Voltage and application rated, 5-700Hp
	Short Circuit	5000 Amperes symmetrical
	Altitude Derate	1% per 330 feet above 3300 feet
	Temperature Derate	2% per one °C above 40°C up to 60°C
Overload	Standard Duty	300% Motor full load amps at 35 seconds, 400% Motor full load amps at 6 seconds
	Medium Duty	300% Motor full load amps at 60 seconds, 400% Motor full load amps at 12 seconds
	Heavy Duty	300% Motor full load amps at 80 seconds, 400% Motor full load amps at 35 seconds
Input Ratings	Voltage	208-460V, 230-575V
	Frequency	50/60 Hz
	Phase	Three Phase
Control Spec	Control Method	Microprocessor controlled full wave, three phase, six thyristor firing
	Start Time	Programmable 1-255 seconds
	Stop Time	Programmable 0-255 seconds
	Voltage Pedestal	Programmable: Start 10-60%, Kick 60-90%, Stop 10-60%
	Current Limit	800% of rated current
	Power Factor	Continuously monitored to eliminate motor over-flux for power optimizing
SCR Spec	Peak Inverse Voltage	460VAC controllers 1400V
		575VAC controllers 1600V
	Heat Loss	3.3 Watts per 1 Ampere running current
Ambient Conditions	Temperature	Enclosed 0-40°C
	Cooling	Convection / Forced Air included when required
	Altitude	3300 feet above sea level

Farm Duty Motors

Definite Purpose Motors

Material Unit Handling

Brake Motors

200 & 575 Volt Motors

IEC Frame Motors

50 Hertz Motors

Inverter/Vector Motors & Controls

DC Motors and Controls

Soft Starters & Dynamic Brakes



Digital Soft Start Controls - Typical Applications

Standard Duty

- Agitator
- Axial Blower
- Axial Fan
- Band Saw
- Centrifugal Pump
- Chiller
- Escalator
- Low Inertia Fan
- Propeller Fan
- Small Pump

Medium Duty

- Circular Saw
- Conveyor, Screw Feeder
- Drilling Press
- Elevator
- Flywheel Press
- Grinder
- Hammer Press

- High Inertia Fan
- Large Pump
- Mill Mixer
- Pelletizer / Pulper
- Positive Displacement Pump
- Reciprocating Compressor
- Vibrating Screen

Heavy Duty

- Centrifugal Blower
- Centrifugal Fan
- Chipper
- Disintegrator
- Loaded Centrifuge
- Loaded Mixer
- Loaded Screw Compressor
- Loaded Reciprocating Compressor
- Pulverizer
- Rock Crusher
- Separator

Standard Duty ^(a)			Medium Duty ^(b)			Heavy Duty ^(c)			Cont. Output Amps	Catalog Number	List Price	Mult. Sym.	Size
208V ^(d)	230V	460V	208V ^(d)	230V	460V	208V ^(d)	230V	460V					
Motor Application Horsepower @ 10 Starts per hour Maximum													
—	—	5	—	—	5	—	—	—	9	MD7-009-CB	1,789	E7	1
3	5	10	—	—	7.5	—	—	5	16	MD7-016-CB	1,858	E7	1
5	7.5	15	—	5	10	—	—	7.5	23	MD7-023-CB	2,045	E7	1
7.5	10	20	5	7.5	15	—	—	10	30	MD7-030-CB	2,221	E7	1
10	15	30	7.5	10	20	—	5	15	44	MD7-044-CB	2,531	E7	1
15	20	40	10	15	30	5	7.5	20	59	MD7-059-CB	2,836	E7	1
20	25	50	15	15	40	7.5	10	30	72	MD7-072-CB	3,207	E7	1
25	30	60	15	20	50	10	15	40	85	MD7-085-CB	3,390	E7	1
30	40	75	20	30	60	15	20	50	105	MD7-105-CB	4,087	E7	1
40	50	100	30	40	75	20	30	60	146	MD7-146-CB	4,828	E7	1
50	60	125	40	50	100	30	40	75	174	MD7-174-CB	6,400	E7	2
60	75	150	50	60	125	40	50	100	202	MD7-202-CB	7,103	E7	2
75	100	200	60	75	150	50	60	125	242	MD7-242-CB	7,634	E7	2
Motor Application Horsepower @ 3 Starts per hour Maximum													
100	125	250	75	100	200	60	75	150	300	MD7-300-CB	8,509	E7	2
125	150	300	100	125	250	75	100	200	370	MD7-370-CB	9,214	E7	2
150	200	400	125	150	300	100	125	250	500	MD7-500-CB	12,599	E7	3
200		500	150	200	400	125	150	300	600	MD7-600-CB	13,679	E7	3
		600	200		500	150	200	400	750	MD7-750-CB	16,330	E7	3
		700			600	200		500	900	MD7-900-CB	17,679	E7	3

Standard Duty ^(a)			Medium Duty ^(b)			Heavy Duty ^(c)			Cont. Output Amps	Catalog Number	List Price	Mult. Sym.	Size
575V			575V			575V							
Motor Application Horsepower @ 10 Starts per hour Maximum													
	7.5			5			—		9	MD8-009-CB	2,057	E7	1
	10			7.5			5		16	MD8-016-CB	2,137	E7	1
	20			10			7.5		23	MD8-023-CB	2,351	E7	1
	25			20			10		30	MD8-030-CB	2,554	E7	1
	40			30			20		44	MD8-044-CB	2,910	E7	1
	50			40			30		59	MD8-059-CB	3,261	E7	1
	60			50			40		72	MD8-072-CB	3,687	E7	1
	75			60			50		85	MD8-085-CB	3,898	E7	1
	100			75			60		105	MD8-105-CB	4,699	E7	1
	125			125			100		146	MD8-146-CB	5,553	E7	1
	150			—			—		174	MD8-174-CB	7,359	E7	2
	200			150			125		202	MD8-202-CB	8,167	E7	2
	250			200			150		242	MD8-242-CB	8,778	E7	2
Motor Application Horsepower @ 3 Starts per hour Maximum													
	250			—			—		300	MD8-300-CB	9,648	E7	2
	300			250			—		370	MD8-370-CB	10,597	E7	2
	400			300			300		500	MD8-500-CB	14,486	E7	3
	500			400			400		600	MD8-600-CB	15,733	E7	3
	600			500			500		750	MD8-750-CB	18,783	E7	3
	700			600			600		900	MD8-900-CB	20,332	E7	3

(a) 300% Motor FLA @ 35 Sec., 400% Motor FLA @ 6 Sec.

(b) 300% Motor FLA @ 60 Sec., 400% Motor FLA @ 12 Sec.

(c) 300% Motor FLA @ 80 Sec., 400% Motor FLA @ 35 Sec.

(d) 208V applications are UL listed only to 196V.

Digital Soft Start Controls - Dimensions

Dimensions

Size	Outside			Mounting		Ap'x. Shpg. Wgt. lbs. (kg)
	Height Inches (mm)	Width Inches (mm)	Depth Inches (mm)	Height Inches (mm)	Width Inches (mm)	
1	16.5 (420)	8.7 (222)	7.7 (195)	15.7 (400)	5.9 (150)	16.1 (7.3) or 18.3 (8.3) > 44 amp
2	20.2 (520)	13.4 (340)	10.4 (265)	19.7 (500)	9.8 (250)	34.5 (15.7) or 48.4 (22) > 200 amp
3	24 (610)	26.6 (675)	15.7 (400)	22.7 (575)	19.7 (500)	143 (65) or 158.4 (72) > 600 amp

Digital Soft Start Controls - Accessories



External MOV

(Metal Oxide Varistor type voltage surge suppressor)

- Protects from line-to-line voltage spikes
- Recommended for all low line impedance applications

Catalog Number	Volts	List Price	Mult. Sym.
MOV505L	460	108	E7
MOV620EL	575	102	E7



Remote Keypad with Cable

- 32 Character English alphanumeric display
- NEMA 4X indoor enclosure
- Backlit LCD

Catalog Number	Cable Length	List Price	Mult. Sym.
CBLDS015KP	5 ft.	453	E8

Expansion Board

- Two programmable relay outputs with FORM C contact (normally open and normally closed)
- Two programmable analog outputs (0-10V @ 10mA maximum)
- One programmable or 4-20mA analog input

Catalog Number	List Price	Mult. Sym.
EB0389A00SP	681	E8

Farm Duty Motors

Definite Purpose Motors

Material Unit Handling

Brake Motors

200 & 575 Volt Motors

IEC Frame Motors

50 Hertz Motors

Inverter/Vector Motors & Controls

DC Motors and Controls

Soft Starters & Dynamic Brakes



Multipurpose Solid State Soft Starter

8 thru 420 Amps
8 thru 30 Amps

208/230/460V 60 Hz.
208/230/460/575V 60 Hz.



Applications: Controlled ramp start and stop, minimize spillage in material handling applications and water hammer in pumping equipment. Current limit provides a current ceiling to limit peak demand on start and constant current starting of high inertial loads such as chippers, centrifuges and compressors. Typical applications include: small and large pumps, conveyors, low and high inertia fans, reciprocating compressors, screw and rotary compressors.

Features: Six SCR power devices and several enclosure options. Tachometer feedback may be used to provide consistent starting independent of load conditions on textile, material handling and pumping equipment.

Design Specifications

- Current feedback
- Microprocessor Control
- Power factor sensing
- Energy optimization
- One programmable input
- Two programmable form C outputs
- Programmable current limit

Environmental and Operating Conditions

- Input voltage
3 phase 208-575V
- Control voltage 120VAC
- Input frequency 50/60 Hz
- Humidity 90% RH condensing
- 3000 feet altitude
- 40°C ambient temperature

Protective Features

- Current limit
- Shorted SCR detection
- SCR overload
- Shear pin-over-current detection
- Low current/under-load detection
- Input phase loss on start up
- Heat sink over-temperature

Model Number	208/230/460 VAC 60 Hz.	MA7-008-CA	MA7-016-CA	MA7-030-CA	MB7-055-CP	MB7-080-CP	MB7-160-CP	MB7-250-CP	MB7-420-CP	
Control only	208/230/460/575 VAC 60 Hz.	MA8-008-CA	MA8-016-CA	MA8-030-CA	—	—	—	—	—	
Output Ratings	Hp Rating	230 VAC	2	5	10	20	30	60	100	150
		460 VAC	5	10	20	40	60	125	200	350
		575 VAC	5	10	20	—	—	—	—	—
	Current Rating	8 Amp	16 Amp	30 Amp	55 Amp	80 Amp	160 Amp	240 Amp	420 Amp	
	Overload Rating	Continuous 115% of FLA; 400% for 30 seconds								
Derate	Above 1000m (3300 Ft.) decrease amp rating 1% for each additional 100m (330 ft.)									
	Above 45° (115°F) decrease amp rating 1.0% for each additional °C (0.84%/°F)									
Input Rating	Frequency	60 Hz. ±5%								
	Voltage	+10% to -15% (except for 575 VAC units max. VAC is 620)								
	Phase	Three Phase								
Control Spec.	Control Method	6 SCRs connected in inverse parallel for full-wave control								
	Start Time	Adjustable 3-50 seconds (current limit starting is not timed)								
	Stop Time	Adjustable 5-50 seconds to extend stopping time								
	Initial Torque	Adjustable starting 0-75%; Stopping 0-100%								
	Current Limit	Adjustable 75-400% of full load amps								
	Pulse Time	Adjustable 0-1.5 seconds								
	Current Monitor	Adjustable 50-400% of full load amps (causes a contact closure or control shut down when current level is reached after starting)								
	Power Factor	Adjustable for max. reduced motor voltage dependent on motor load								
	Control Power	Self-powered					External Transformer			
	Status Contacts	125 VAC at 0.5 Amp normally open								
SCR Spec.	Peak Inverse Voltage	460 VAC Starters 1200 VAC								
		575 VAC Starters 1600 VAC								
Protective Functions	Heat Loss	3.3 watts per running amp								
	Over Current	Over current shut down at 450% of motor full load amps								
	Shorted SCR Detection	Shunt trip contact								
	SCR Thermostat	Trips on over temperature of heat sink on 55 amp sizes and above								
Ambient Conditions	Voltage Transient	Metal oxide varistor (MOV)								
	Temperature	Enclosed 0-45°C (32 to 113°F) open/panel 0 to 50°C (32 to 122°F)								
	Cooling	Convection					Forced Air			

Multipurpose Solid State Soft Starter

Amp Size	Max Hp at VAC				Catalog Number	List Price	Mult. Sym.
	208	230	460	575			
Combination Starter (a)							
NEMA 12 (can also be used for NEMA 1)							
55	15	20	40	—	MB7-055-GC	5,834	E7
80	25	30	60	—	MB7-080-GC	6,398	E7
160	50	60	125	—	MB7-160-GC	13,634	E7
250	75	100	200	—	MB7-250-GC	15,685	E7
420	150	150	350	—	MB7-420-GC	20,111	E7
NEMA 1 - 208/230/460 Volts							
80	25	30	60	—	MB7-080-AB	7,748	E7
160	50	60	125	—	MB7-160-AB	10,217	E7
250	60	75	150	—	MB7-250-AB-1	12,200	E7
250	75	100	200	—	MB7-250-AB	12,754	E7
420	150	150	350	—	MB7-420-AB	14,645	E7
Non-Combination Starter (a)							
NEMA 1							
160	50	60	125	—	MB7-160-BB	8,641	E7
250	75	100	200	—	MB7-250-BB	9,615	E7
420	150	150	350	—	MB7-420-BB	11,557	E7
Control Only							
Open/Panel							
8	2	2	5	—	MA7-008-CA	1,269	E7
16	3	5	10	—	MA7-016-CA	1,335	E7
30	7.5	10	20	—	MA7-030-CA	1,566	E7
55	15	20	40	—	MB7-055-CP	2,968	E7
80	25	30	60	—	MB7-080-CP	4,253	E7
160	50	60	125	—	MB7-160-CP	5,535	E7
250	75	100	200	—	MB7-250-CP	7,584	E7
420	150	150	350	—	MB7-420-CP	9,526	E7
8	2	2	5	5	MA8-008-CA	1,324	E7
16	3	5	10	10	MA8-016-CA	1,402	E7
30	7.5	10	20	25	MA8-030-CA	1,621	E7
NEMA 1							
160	50	60	125	—	MB7-160-CB	6,724	E7
250	75	100	200	—	MB7-250-CB	8,813	E7
420	150	150	350	—	MB7-420-CB	10,614	E7

(a) Combination Starter includes control, overload relay and circuit breaker. Non-combination Starter includes control and overload relay.

(b) Uses a shunt bypass contactor to short SCR after ramp up (not a full voltage bypass starter). Custom controls available.

Single Phase Starter

7 thru 110 Amps

115/230V 50/60 Hz.



Applications: Use with existing or new magnetic starter. This industrial solid state control will reduce initial starting torque and current of single phase motors allowing them to be started with minimum voltage drop. High starting torque problems such as belt slippage may be eliminated. Ideal for crop driers, augers, bucket elevators and fan or pump applications.

Features: Two adjustable starting torque settings. Adjustable starting ramp time to 30 seconds.

Amp Size	Max Hp at VAC		Catalog Number	List Price	Mult. Sym.	Notes (a)
	115	230				
Open/Panel - 115/230 Volts						
7	1/4	3/4	S20CA	538	E7	19
12	1/2	2	S21CA	559	E7	19
24	2	3	S22CA	597	E7	19
40	3	7.5	S23CA	637	E7	19
110	10	—	S25CA	1,065	E7	19

NOTE: To size single phase starters use the motor FLA. There is a great variation in FLA between motor manufacturers in these sizes.

(a) See notes on inside back flap and pages 5-6.

Farm Duty Motors

Definite Purpose Motors

Material Unit Handling

Brake Motors

200 & 575 Volt Motors

IEC Frame Motors

50 Hertz Motors

Inverter/Vector Motors & Controls

DC Motors and Controls

Soft Starters & Dynamic Brakes

BALDOR

Definite Purpose Soft Start Control

8 thru 135 Amps
8 thru 30 Amps
8 thru 30 Amps

208/230/460V 60 Hz.
220/380/415V 50 Hz.
575V 60 Hz.



Applications: Use with magnetic starter. Excellent for retrofit on cranes, conveyors or fans. Can be used on single speed, multispeed and reversing, soft starting windmilling fans and soft plug reversing.

Features: Two adjustable starting torque settings for reversing or two speed applications. Adjustable ramp time from 2-30 seconds.

Amp Size	Max Hp at VAC			Catalog Number	List Price	Mult. Sym.
	208 Volt	230 Volt	460 Volt			
Open/Panel – (Available in NEMA 1 and NEMA 12/3R enclosures)						
	208 Volt	230 Volt	460 Volt			
8	1.5	2	5	D70CA	900	E7
16	3	5	10	D71CA	965	E7
30	7.5	10	20	D72CA	1,087	E7
55	15	20	40	D73CP	2,229	E7
70	20	25	50	D74CP	2,907	E7
135	40	50	100	D75CP	5,179	E7
	220 Volt	380 Volt	415 Volt			
8	2	3.5	4.0	D90CA	900	E7
16	4	6.5	7.5	D91CA	965	E7
30	8	13.5	15	D92CA	1,087	E7
	575 Volt (can be used at 208/230/460 Volts)					
8		5		D80CA	959	E7
16		15		D81CA	1,015	E7
30		25		D82CA	1,131	E7

Three Phase Torque Control

7 thru 40 Amps
7 thru 24 Amps

208/230/460V 50/60 Hz.
208/230/460/575V 50/60 Hz.



Applications: Use with magnetic starter. A low cost way to reduce starting torque on three phase motors. An alternative to ballast resistors on cranes and conveyors. Suitable for reduced torque on start. Designed to be used with a magnetic contactor. Not suitable for starting high torque loads.

Features: Two adjustable starting torque settings for reversing or two speed applications. Adjustable starting ramp time to 7 seconds.

Amp Size	Max Hp at VAC				Catalog Number	List Price	Mult. Sym.
	208	230	460	575			
Open/Panel – 208/230/460 Volts							
7	1.5	2	3	—	T70EA	538	E7
12	3	3	7.5	—	T71EA	559	E7
24	5	7.5	15	—	T72EA	597	E7
40	10	10	30	—	T73EA	637	E7
Open/Panel – 575 Volts (can be used at 208/230/460 Volts)							
7	1.5	2	3	5	T80EA	578	E7
12	3	3	7.5	10	T81EA	597	E7
24	-	7.5	15	20	T82EA	637	E7

Farm Duty Motors

Definite Purpose Motors

Material Unit Handling

Brake Motors

200 & 575 Volt Motors

IEC Frame Motors

50 Hertz Motors

Inverter/Vector Motors & Controls

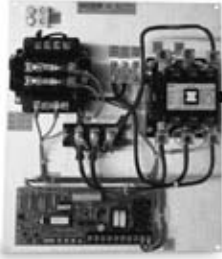
DC Motors and Controls

Soft Start & Dynamic Brakes

Multipurpose Dynamic Brake

**5-500 HP
5-600 HP**

**208-460V 50/60 Hz
230-575V 50/60 Hz**



Applications: Stopping coasting loads such as chippers, saws, cutting tools and conveyors. It can also be used to stop windmilling fans before starting.

Features: The Multipurpose Brake is a microprocessor based solid state brake designed to eliminate the problems common to traditional DC injection brakes. To eliminate blown fuses and welded contacts, the microprocessor senses when AC is no longer present before turning "on" the braking. A faster zero speed sensing circuit turns off the braking as soon as the motor stops to reduce motor heating.

Design Specifications

- Microprocessor based control
- SCR/Diode power circuit
- Line contactor
- Motor voltage sensing circuit
- Zero speed sensing
- Four braking time ranges
- Three operating modes
- Two adjustable braking magnitude potentiometers

Environmental and Operating Conditions

- 40 degrees C
- 1000 feet elevation
- Open panel design
- 208, 230, 460, 575 volt input line voltage
- 50/60 Hz input frequency
- Control voltage 120 VAC

Protective Features

- Shorted SCR protection
- Motor terminal voltage sensing
- Time delay to allow motor flux to collapse
- Motor starter interlock contact

Model Number	208/230/460 VAC 50-60 Hz. (a)	BQ7-016-CP	BQ7-030-CP	BQ7-055-CP	BQ7-080-CP	BQ7-135-CP	BQ7-160-CP	BQ7-250-CP	BQ7-420-CP	BQ7-600-CP		
	230/460/575 VAC 50-60 Hz. (a)	BQ8-016-CP	BQ8-030-CP	BQ8-055-CP	BQ8-080-CP	BQ8-135-CP	BQ8-160-CP	BQ8-250-CP	BQ8-420-CP	BQ8-600-CP		
Output Ratings	Hp Rating	230 VAC	5	10	20	30	50	60	100	150	250	
		460 VAC	10	20	40	60	100	125	200	350	500	
		575 VAC	10	30	50	75	125	150	250	400	600	
	Current Rating		16	30	55	80	135	160	250	420	600	
	Derate	Above 1000m (3300 Ft.) decrease amp rating 1% for each additional 100m (330 ft.) Above 45° (115°F) decrease amp rating 1.5% for additional °C (0.84%/°F)										
Input Rating	Frequency	50-60 Hz. ±5%										
	Voltage	control board 115 VAC +10% to -15%										
	Phase	Three Phase										
Control Spec.	Control Type	Microprocessor Based										
	Control Method	Common Anode SCR and diode to achieve DC										
	Control Power	External control transformer (supplied with certain models) 115 VAC 50-60 Hz. to the control board										
	Power Consumption	1.5 VA by the control board										
	Operating Modes		Master mode (brake controls starting and stopping of motor)									
			Prestop mode (prestop a windmilling load)									
			Basic mode (for replacement of existing dynamic brake)									
	Brake Timer Ranges	1-17 seconds; 15-32 seconds; 30-47 seconds; 45-62 seconds										
	Zero Speed Sensor	Selectable (brake disengages when motor stops rotating)										
	M Contact Rating	10 amp at 125 VAC										
	Brake Magnitudes	Two adjustable brake magnitudes										
	Status LEDs	Power/Ready/Run/Braking										
	Peak Inverse Voltage	460 VAC controls - 1200V; 575 VAC controls - 1600V										
	Heat Loss	1 watt per amp while braking										
Diagnostics	Error Indicators	Improper line voltages; Motor contactor failed to open; Brake contactor failed to open; Improper line frequency										
Dimensions	Height x Width x Depth	14.75" x 12.88" x 5"	14.75" x 12.88" x 6"	21" x 21" x 8"	33" x 33" x 9.75"							
	Ambient Conditions	Temperature	Enclosed 0-45°C (32° to 113°F) open/panel 0 to 50°C (32° to 122°F)									

(a) For 50 Hz. applications use the brakes without a transformer and supply a separate 115 VAC supply to the brake control board and contactor. The brake can also be ordered as a BQ9 - XXX - XX for 380/400/415 VAC applications. It will have the control transformer mounted on the panel.

Farm Duty Motors

Definite Purpose Motors

Material Unit Handling

Brake Motors

200 & 575 Volt Motors

IEC Frame Motors

50 Hertz Motors

Inverter/Vector Motors & Controls

DC Motors and Controls

Soft Starters & Dynamic Brakes

Multipurpose Dynamic Brake

Amp Size	Max Hp at VAC			Catalog Number	List Price	Mult. Sym.
	208	230	460			
Open/Panel						
16	3	5	10	BQ7-016-CP	1,241	E7
30	10	10	25	BQ7-030-CP	1,318	E7
55	15	20	40	BQ7-055-CP	1,738	E7
80	25	30	60	BQ7-080-CP	2,605	E7
135	40	50	100	BQ7-135-CP	4,168	E7
160	50	60	125	BQ7-160-CP	4,891	E7
250	75	100	200	BQ7-250-CP	5,931	E7
420	125	150	350	BQ7-420-CP	8,318	E7
600	200	200	500	BQ7-600-CP	16,924	E7
NEMA 12						
16	3	5	10	BQ7-016-CC	1,399	E7
30	10	10	25	BQ7-030-CC	1,476	E7
55	15	20	40	BQ7-055-CC	1,896	E7
80	25	30	60	BQ7-080-CC	2,764	E7
135	40	50	100	BQ7-135-CC	4,512	E7
160	50	60	125	BQ7-160-CC	5,237	E7
250	75	100	200	BQ7-250-CC	6,279	E7
420	125	150	350	BQ7-420-CC	10,198	E7
600	200	200	500	BQ7-600-CC	18,803	E7

Application Notes

- Stopping Time** The Baldor Dynamic Brake can stop the motor faster than the motor will start (at full volts). However, this could damage the motor. It is best that the motor should not stop any faster than the motor starts. A dynamic brake should never be set to stop a load faster than the load starts. Stopping the motor too fast or too frequently can cause motor overheating and possible failure.
- Motor Sizing** Each stop with a dynamic brake should be treated as a start for calculating duty cycle and for sizing the motor. The brake does not have a duty cycle limit.
- Holding Brake** A solid state brake is not a substitute for a mechanical holding brake.
- Motor Types** The Multipurpose Brake has been designed to operate on 3-phase induction motors.
- Brake Sizing** Use the motor FLA and operating voltage to size the brake. All Baldor Multipurpose Brakes can be used on high inertia loads. Extended stopping times are available for use on high inertia loads.

WARNING: A DC injection brake is not a replacement for a mechanical or safety brake for emergency stopping

Single Phase Electronic Motor Brake



Applications: Efficient alternative to mechanical brakes, suitable for woodworking machinery, machine tools, bench grinders and buffers. Ideal for OEM equipment or for retrofitting into an existing application.

Features: Automatic braking for single-phase motors. User adjustable torque and brake time. Prevents restarts after power has been removed for 7 seconds. Accommodates frequent start/stop applications. Available in panel mount for system integration or with line cord, plug and receptacle in a NEMA 1 enclosure for easy installation.

Catalog Number	Horsepower	Amps	Voltage	List Price	Mult. Sym.	Notes (a)
Panel Mount						
BQ1-015-CP	1	15	110-125	660	E7	33
BQ2-015-CP	2	15	208-230	660	E7	33
NEMA 1						
BQ1-015-CC	1	15	110-125	852	E7	33
BQ2-015-CC	2	15	208-230	852	E7	33

SUFFIX: CP = 6"x5"x3" module without cord, receptacle, switch or enclosure.
CC = 8"x8"x4.5" NEMA 1 enclosure with 9ft. cord, receptacle and switch.

(a) See notes on inside back flap and pages 5-6.