



BALDOR

Soft Starters & Dynamic Brakes

Farm Duty
Motors

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.

Definite Purpose
Motors



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.

Material
Unit Handling

Amp Size	Max Hp at VAC			Catalog Number	List Price	Mult. Sym.
Open/Panel – (Available in NEMA 1 and NEMA 12/3R enclosures)						
	208 Volt	230 Volt	460 Volt			
8	1.5	2	5	D70CA	829	E7
16	3	5	10	D71CA	889	E7
30	7.5	10	20	D72CA	1001	E7
55	15	20	40	D73CP	2054	E7
70	20	25	50	D74CP	2679	E7
135	40	50	100	D75CP	4772	E7
	220 Volt	380 Volt	415 Volt			
8	2	3.5	4.0	D90CA	829	E7
16	4	6.5	7.5	D91CA	889	E7
30	8	13.5	15	D92CA	1001	E7
	575 Volt (can be used at 208/230/460 Volts)					
8		5		D80CA	883	E7
16		15		D81CA	935	E7
30		25		D82CA	1042	E7

Brake Motors

200 & 575 Volt
Motors

IEC Frame
Motors

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.

50 Hertz
Motors



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.

Inverter/Vector
Motors & Controls

DC Motors
and Controls

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	495	E7
12	3	3	7.5	—	T71EA	515	E7
24	5	7.5	15	—	T72EA	550	E7
40	10	10	30	—	T73EA	587	E7
Open/Panel – 575 Volts (can be used at 208/230/460 Volts)							
7	1.5	2	3	5	T80EA	532	E7
12	3	3	7.5	10	T81EA	550	E7
24	-	7.5	15	20	T82EA	587	E7

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



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Farm Duty
Motors

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	1143	E7
30	10	10	25	BQ7-030-CP	1214	E7
55	15	20	40	BQ7-055-CP	1601	E7
80	25	30	60	BQ7-080-CP	2400	E7
135	40	50	100	BQ7-135-CP	3841	E7
160	50	60	125	BQ7-160-CP	4507	E7
250	75	100	200	BQ7-250-CP	5465	E7
420	125	150	350	BQ7-420-CP	7665	E7
600	200	200	500	BQ7-600-CP	15596	E7
NEMA 12						
16	3	5	10	BQ7-016-CC	1289	E7
30	10	10	25	BQ7-030-CC	1360	E7
55	15	20	40	BQ7-055-CC	1747	E7
80	25	30	60	BQ7-080-CC	2547	E7
135	40	50	100	BQ7-135-CC	4158	E7
160	50	60	125	BQ7-160-CC	4826	E7
250	75	100	200	BQ7-250-CC	5786	E7
420	125	150	350	BQ7-420-CC	9398	E7
600	200	200	500	BQ7-600-CC	17328	E7

Definite Purpose
Motors

Material
Unit Handling

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200 & 575 Volt
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IEC Frame
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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

50 Hertz
Motors

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.

Inverter/Vector
Motors & Controls

DC Motors
and Controls

Catalog Number	Horsepower	Amps	Voltage	List Price	Mult. Sym.	Notes (a)
Panel Mount						
BQ1-015-CP	1	15	110-125	608	E7	33
BQ2-015-CP	2	15	208-230	608	E7	33
NEMA 1						
BQ1-015-CC	1	15	110-125	785	E7	33
BQ2-015-CC	2	15	208-230	785	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.

Soft Start &
Dynamic Brakes