

# Matched AC Drive and AC Motor Solutions



ACCU-Torq Severe Duty Cast Iron AC Motors

ACCU-Torq Vector Duty AC Motors

Commander C200 AC Drives

Unidrive M700 AC Drives

0.25 - 350 HP

230 V | 460 V | 575 V



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# Nidec Motor Corporation Matched AC Drive & Motor Solutions

Nidec world-class matched solutions bring together Control Techniques' AC drives and US Motors' induction motors. Unidrive M700 high performance AC drives and Commander C200 general purpose AC drives have been matched with ACCU-Torq severe duty cast iron and vector duty steel and aluminum induction motors to make selection easy for most applications.

## Vector duty AC motor

0.25 HP - 20 HP  
230 V | 460 V | 575 V

Encoder-equipped ACCU-Torq® motors are an error-free solution to applications requiring accurate positioning or precise speed control without the rapid acceleration dynamics of a servomotor. ACCU-Torq is designed to be used with inverters and vector drives in applications requiring up to a 5000:1 constant torque speed range.



## Severe duty AC motor

3 HP - 350 HP  
ETO\* up to 1000 HP  
230 V | 460 V

ACCU-Torq® TEBC motors are used in variable frequency drive applications requiring full rated torque at zero speed utilizing closed or open loop (Sensorless Vector) controls. The cast iron construction makes this motor an ideal choice for process lines, chemical plants, paper mills or any other severe duty environment.

\*engineered to order



## Commander C200 AC drive

0.33 HP - 200 HP  
115 V | 200-240 V | 380-480 V

Commander C200 is available in nine frame sizes up to 200 HP. This versatile drive has several cost and space saving features, such as "snap in" expandable I/O or communication options and onboard PLC (C200 only) using IEC-61131-3 compliant programming software. Commander C200 has been designed for applications that require flexible integration with systems via industrial Ethernet protocols and fieldbuses together with advanced open-loop motor Rotor Flux Control (RFC-A).



## Unidrive M700 AC drive

1 HP - 4,200 HP  
200-240 V | 380-480 V | 575 V | 690 V

Unidrive M700 series high-performance variable speed AC/servo drives deliver maximum machine throughput through enhanced single axis control and multi-axis network synchronization. Onboard real-time Ethernet (IEEE 1588 V2), Advanced Motion Controller, and high speed I/O for position capture enables machine builders to create more sophisticated and flexible machines. The onboard Ethernet is also compatible with EtherNet/IP, Modbus TCP, and Real-Time Motion over Ethernet (RTMoE) for network flexibility.



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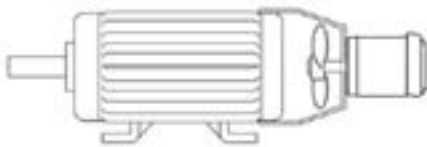
# ACCU-Torq® Severe Duty Cast Iron AC Motors

Totally enclosed blower cooled (TEBC) and Totally enclosed, non-ventilated (TENV), Vector Duty, 5000:1 constant torque

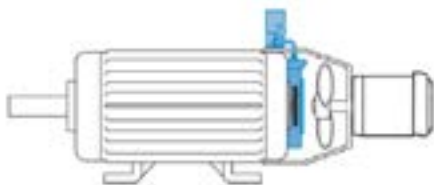


ACCU-Torq® Severe Duty AC Motor

## Axial Blower Configurations:

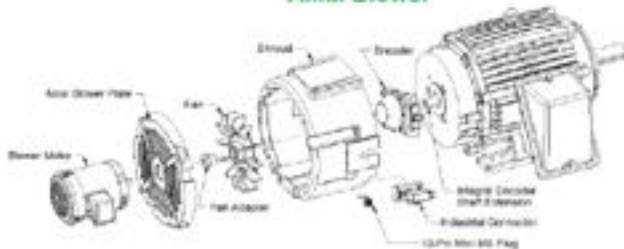


(Stock, Conversion or ETO)



w/ Encoder (Conversion or ETO)

## Axial Blower



ACCU-Torq® severe duty cast iron AC motors are used in constant torque applications requiring rated torque across a wide speed range utilizing closed or open loop (Sensorless Vector) controls up to 350 HP. Additionally, engineered to order (ETO) motors can be manufactured up to 1,000 HP. Brake and encoder provisions are available on all ratings, and shaft grounding ring (ODE 400 frame and above) and class H insulation is standard.

## Product Features:

- INVERTER GRADE® insulation system
- Constant torque operation from zero to base speed
- Constant power (HP) operation to two times base speed up to 250 frame and 1.5 times base speed above 250 frame
- F-1 Standard, field convertible to F-2
- Normally closed class F thermostats standard (one per phase)
- Shaft grounding ring standard on all ratings
- Encoder provision on all ratings (\*Avtron ASSEMAV32 recommended)
- Radial blower configurations available as ETO
- Corro-Duty construction on TEBC models
- Insulated shaft ODE 400 frame and above

\*An Encoder is required for closed loop operation

## Typical Applications:

- Packaging machinery
- Extruders
- Winders
- Process Lines
- Cranes and Hoists
- Slitters

## Key data

Horsepower:	3 – 350 HP **Consult Factory for motors up to 1,000 HP
Speed Range:	5000:1
Poles:	4 and 6
Rated Voltages:	230/460 and 460 Volts
Temp Rise:	Continuous duty at 40 °C ambient
Insulation:	Class H
Warranty:	Three year limited warranty

\*\*For details, refer to: [www.usmotors.com](http://www.usmotors.com)



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# ACCU-Torq® Vector Duty Steel & Aluminum AC Motors

Totally enclosed, non-ventilated (TENV), Vector Duty, 5000:1 constant torque



ACCU-Torq® Motor



ACCU-Torq® Motor



ACCU-Torq® Motor, Encoder & Brake Configuration



ACCU-Torq® Motor & Encoder Configuration



ACCU-Torq® Motor & Brake Configuration

## ACCU-Torq® Motor Shaft-Grounding Ring Option:

- Reduce potential bearing failures caused by induced shaft currents
- AEGIS® brand



ACCU-Torq® vector duty steel and aluminum AC motors are used in constant torque applications requiring rated torque across a wide speed range utilizing closed or open loop (Sensorless Vector) controls up to 20 HP. Brake, encoder, and shaft grounding ring provisions are available on all ratings, and class F insulation is standard.

## Product Features:

- Totally Enclosed Non-Ventilated construction (TENV)
- Constant torque operation; zero to base speed on vector drives
- Constant power (HP) operation to twice base speed
- Optimized for operation with IGBT and intelligent power module AC drives (NEMA® Design A)
- F-1 Standard, field convertible to F-2 for 180 frame and above
- Normally closed thermostats standard (one per phase)
- Shaft grounding ring option on all ratings
- Encoder provision on all ratings (\*Avtron ASSEMAV32 recommended)
- Brake provision on all ratings

*\*An Encoder is required for closed loop operation*

## Typical Applications:

- Packaging machinery
- Extruders
- Material handling
- Index and positioning
- Positive displacement pumps
- DC Motor Replacements

## Key data

Horsepower:	0.25 – 20 HP
Speed Range:	5000:1
Poles:	4 and 6
Rated Voltages:	230/460 and 575 Volts
Temp Rise:	Continuous duty at 40 °C ambient
Insulation:	Class F Insulation
Warranty:	Three year limited warranty

\*For details, refer to: [www.usmotors.com](http://www.usmotors.com)



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# Unidrive M700 High Performance AC Drives

Class leading induction and permanent magnet motor performance, with real-time Ethernet



Unidrive M700 Frame Size 3

Unidrive M700 delivers maximum machine throughput through greater control with single and multi-axis network synchronization. Onboard real-time Ethernet (IEEE 1588 V2), Advanced Motion Controller, and high speed I/O for position capture enables machine builders to easily create more sophisticated and flexible machines. The onboard Ethernet is also compatible with EtherNet/IP, Modbus TCP, and Real Time Motion over Ethernet (RTMoE) for network flexibility. The Unidrive M702 variant provides dual safety inputs while the Unidrive M701 replaces Ethernet connectivity with RS485 to provide Modbus RTU communications.

## Other Unidrive M700 benefits include:

### Maximize machine productivity through integration with centralized control systems

- Ethernet IEEE 1588 V2 hardware implementation for maximum synchronization accuracy
- Integrated dual port Ethernet switch for easy connectivity
- Up to three SI modules to add position feedback, I/O, machine control and industry standard fieldbus and Ethernet communications

### Maximize machine productivity through shaft performance with any motor technology

- High bandwidth motor control algorithm for open and closed loop induction, synchronous permanent magnet, and servo motors with up to 3,300 Hz current loop bandwidth and 250 Hz speed loop bandwidth
- Increase flexibility and reduce system costs through simultaneously connecting up to three\* high performance encoder channels as standard

### Onboard PLC and Advanced Motion Controller

- Simple onboard PLC with real-time task for interfacing with the drive's 1.5 axis Advanced Motion Controller.
- MCI machine control module available for additional axis and network control

\*The functionality is dependent upon the encoder types being used.

## Dimensions & Weights

Frame Size	Dimensions H x W x D (in)	Weight (lbs)
03	14.4 x 3.3 x 7.9	9.9
04	14.4 x 4.9 x 7.9	14.3
05	14.4 x 5.6 x 7.6	16.3
06	14.4 x 8.3 x 8.9	30.9
07	20 x 10.6 x 11.0	61.7
08	29.7 x 12.2 x 11.4	114.6
09A	41.3 x 12.2 x 11.4	146.6
09E	41.3 x 12.2 x 11.4	101.4
10E	41.3 x 12.2 x 11.4	101.4
11E	46.9 x 12.2 x 12.3	138.9



## Key data

Heavy Duty rating: 1.0 HP to 4,200 HP (0.75 kW to 2.8 MW)

Normal Duty rating: 1.5 HP to 4,200 HP (1.0 kW to 2.8 MW)

Control connections: M700/M701 models  
3 x Analog inputs, 3 x Digital inputs,  
2 x Analog outputs, 3 x Digital I/O,  
1 x Safe Torque Off input (STO), 1 x Relay

M702 models  
3 x Digital inputs, 3 x Digital outputs,  
2 x Safe Torque Off inputs (STO), 1 x Relay

Intelligence: Onboard PLC and Advanced Motion Controller

Onboard comms: M700 & M702 – Ethernet, M701 – RS485

Feedback: 2 x Encoder inputs  
1 x Simulated encoder output

Keypad: No keypad as standard, order separately

SI option slots: 3

Parameter cloning via: PC tools, Smartcard, SD card

# Commander C200 General Purpose AC Drives

Flexible machine integration through communications and onboard PLC



Commander C200 Frame Size 3

The Commander C200 delivers benchmark functionality at no added cost to the base drive itself. Plug-in options, dynamic performance, PLC functionality and other advanced features such as industrial standard fieldbuses, Ethernet, and Modbus RTU communications ensure that in more complex applications Commander C200 can deliver more than the average general purpose drive - giving you lower cost solutions and better productivity in your motor control applications.

## Enhance up-time and system flexibility

- Flexible system integration and remote diagnostics through optional industrial Ethernet and fieldbus communication
- Flexible I/O that is expandable with an SI-I/O option module
- Enhanced functionality and onboard PLC programming provides a low-cost system solution, minimizing the need for additional equipment such as a PLC

## High performance open loop motor control

- RFC-A (Rotor Flux Control) algorithm for exceptional induction motor control of demanding applications
- Closed loop current control without a position feedback device
- Speed control for conveyors, fans, pumps, and mixers, where their function are controlled remotely with fieldbus or Ethernet communications

## Key data

Heavy Duty Ratings: 0.33 HP to 150 HP (0.25 kW to 110 kW)

Normal Duty Ratings: 0.33 HP to 200 HP (0.25 kW to 132 kW)

Supply phases: Frame size 1 and 2: 110 V drives 1Ø, 230 V drives 1Ø or 3Ø; Frame size 5 and larger 3Ø; 460 V drives 3Ø

Control connections: 3x Analog I/O, 5x Digital I/O, 1x Relay

Drive rating: IP21 / UL open class as standard

Keypad: Fixed LED

Option slots: 1 (frame size 2 and above)

Parameter cloning via: PC tools, SD card

## Dimensions & Weights

Frame Size	Dimensions H x W x D (in)	Weight (lbs)
01	6.3 x 3.0 x 5.1	1.7
02	8.1 x 3.1 x 5.9	2.2
03	8.9 x 3.5 x 6.3	3.3
04	10.9 x 4.5 x 6.9	6.9
05	15.4 x 5.6 x 7.9	16.3
06	15.4 x 8.3 x 9.0	30.9
07	21.9 x 10.6 x 11.0	61.7
08	31.7 x 12.2 x 11.4	114.6
09A	43.6 x 12.2 x 11.4	146.6
09E	39.8 x 12.2 x 11.4	101.4

Additional distance should be added to the height dimension (H) when the AI options are fitted.



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# Unidrive M700 AC Drive and Severe Duty AC Motor Solutions

## Open/Closed Loop



Unidrive M700  
Frame Size 3

Keypad  
ordered  
separately



ACCU-Torq Severe Duty  
TEBC Motor

ACCU-Torq Severe Duty Cast Iron Motors - 230 V and 460 V							Unidrive M700 AC Drives	
Motor Rated Power (HP)	RPM (Max Safe RPM)	NEMA Frame	Motor Order Code	Motor Rated Current (A) 230/460	Voltage (V)	Blower Full Load Amps 230/460	Unidrive M700 Order Code* - 230 V	Unidrive M700 Order Code* - 460 V
3	1800 (4000)	182TC	HN3T2BC	9.4/4.7	230/460	TENV	M70x-03200106A	M70x-03400062A
	1200 (4000)	213TC	HN3T3BC	9.2/4.6	230/460	TENV	M70x-03200106A	M70x-03400062A
5	1800 (4000)	213TC	HN5T2BC	16.2/8.1	230/460	TENV	M70x-04200185A	M70x-03400100A
	1200 (4000)	215TC	HN5T3BC	15.3/7.7	230/460	TENV	M70x-04200185A	M70x-03400100A
7.5	1800 (4000)	213TC	HN7T2BC	21.4/10.7	230/460	TENV	M70x-06200330A	M70x-04400150A
	1200 (4000)	254TC	HN7T3BC	20.4/10.2	230/460	TENV	M70x-06200330A	M70x-04400150A
10	1800 (4000)	254TC	HN10T2BC	28.4/14.2	230/460	TENV	M70x-06200330A	M70x-04400150A
	1200 (4000)	256TC	HN10T3BC	27.3/13.7	230/460	TENV	M70x-06200330A	M70x-04400150A
	1800 (4000)	215TC	B10T2BC	29.2/14.6	230/460	1.5/0.75	M70x-06200330A	M70x-04400150A
	1200 (4000)	256TC	B10T3BC	27.4/13.7	230/460	1.5/0.75	M70x-06200330A	M70x-04400150A
15	1800 (4000)	254TC	B15T2BC	40/20	230/460	1.5/0.75	M70x-06200440A	M70x-05400270A
	1200 (4000)	284T	B15T3B	40.2/20.1	230/460	1.7/0.9	M70x-06200440A	M70x-05400270A
20	1800 (4000)	256TC	B20T2BC	53.8/26.9	230/460	1.5/0.75	M70x-07200610A	M70x-05400270A
	1200 (4000)	286T	B20T3B	55.8/27.9	230/460	1.7/0.9	M70x-07200610A	M70x-05400300A
25	1800 (4000)	284T	B25T2B	65.2/32.6	230/460	1.7/0.9	M70x-07200750A	M70x-06400350A
	1200 (3000)	324T	B25T3B	75.6/37.8	230/460	3/1.5	M70x-07200830A	M70x-06400420A
30	1800 (4000)	286T	B30T2B	77.8/38.9	230/460	1.7/0.9	M70x-07200830A	M70x-06400420A
	1200 (3000)	326T	B30T3B	84/42	230/460	3/1.5	M70x-08201160A	M70x-06400420A
40	1800 (3000)	324T	B40T2B	105/52.5	230/460	3/1.5	M70x-08201160A	M70x-07400660A
	1200 (3000)	364T	B40T3B	100.8/50.4	230/460	3/1.5	M70x-08201160A	M70x-07400660A
50	1800 (3000)	326T	B50T2B	121.8/60.9	230/460	3/1.5	M70x-08201320A	M70x-07400660A
	1200 (3000)	365T	B50T3B	124/62	230/460	3/1.5	M70x-08201320A	M70x-07400660A
60	1800 (3000)	364T	B60T2B	145/72.5	230/460	3/1.5	M70x-09201760A	M70x-07400770A
	1200 (3000)	404T	B60T3B	155.4/77.7	230/460	5.7/2.8	M70x-09201760A	M70x-07401000A
75	1800 (3000)	365T	B75T2B	191.2/95.6	230/460	3/1.5	M70x-09202190A	M70x-07401000A
	1200 (3000)	405T	B75T3B	197.4/98.7	230/460	5.7/2.8	M70x-09202190A	M70x-07401000A
100	1800 (3000)	405T	B100T2B	237.4/118.7	230/460	5.7/2.8	M70x-10202830E	M70x-08401340A
	1200 (3000)	444T	B100T3B	256.2/128.1	230/460	5.7/2.8	M70x-10202830E	M70x-08401340A
125	1800 (3000)	444T	B125T2C	172.2	460	5.7/2.8		M70x-09402000A
150	1800 (3000)	445T	B150T2C	189	460	5.7/2.8		M70x-09402000A
200	1800 (3000)	447T	B200T2C	252	460	5.7/2.8		M70x-10402700E
250	1800 (2000)	449T	B250T2C	303.5	460	7.8/3.9		M70x-10403200E
300	1800 (2000)	449T	B300T2C	343.4	460	7.8/3.9		M70x-11403770E
350	1800 (2000)	449T	B350T2C	415.8	460	7.8/3.9		M70x-11404170E

\*Add 10101AB100 to the base order code when ordering standard US (60 Hz) default products.  
Note: Ratings are for Heavy Duty, 3 kHz switching frequency.

An Encoder is required for closed loop operation

Order String - Frame Size Key	M70x Drive Range:
Example: M70x-XX_ _ _ _ _Y	M700 = Ethernet, single STO input
XX = Frame Size (03-11 above)	M701 = RS-485, single STO input
A - AC in AC out	M702 = Ethernet, dual STO inputs
Y = E - Requires external line reactor	



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# Unidrive M700 AC Drive and Vector Duty AC Motor Solutions

## Open/Closed Loop



Unidrive M700  
Frame Size 3

KI keypad  
ordered  
separately



ACCU-Torq Vector Duty  
TENV Motor

ACCU-Torq Vector Duty Steel and Aluminium Motors - 230 V and 460 V							Unidrive M700 AC Drives	
Motor Rated Power (HP)	RPM (Max Safe RPM)	NEMA Frame	Motor Order Code	Motor Rated Current (A)	Voltage (V)	Motor Enclosure	Unidrive M700 Order Code* - 230 V	Unidrive M700 Order Code* - 460 V
0.25	1800 (3600)	56C	UN14T2BC	1.1/0.5	230/460	TENV	M70x-03200050A	M70x-03400025A
0.33	1800 (3600)	56C	UN13T2BC	1.2/0.6	230/460	TENV	M70x-03200050A	M70x-03400025A
0.5	1800 (3600)	56C	UN12T2BC	1.6/0.8	230/460	TENV	M70x-03200050A	M70x-03400025A
1	1800 (3600)	143TC	UN1T2BC	3.4/1.7	230/460	TENV	M70x-03200050A	M70x-03400025A
	1800 (3600)	56C	UN1T2BFC	3.4/1.7	230/460	TENV	M70x-03200050A	M70x-03400025A
	1200 (2400)	145TC	UN1T3BC	3.9/1.9	230/460	TENV	M70x-03200050A	M70x-03400025A
1.5	1800 (3600)	145TC	UN32T2BC	4.9/2.4	230/460	TENV	M70x-03200050A	M70x-03400025A
2	1800 (3600)	145TC	UN2T2BC	5.9/2.9	230/460	TENV	M70x-03200066A	M70x-03400031A
	1200 (2400)	184TC	UN2T3BC	6.5/3.3	230/460	TENV	M70x-03200066A	M70x-03400045A
3	1800 (3600)	182TC	UN3T2BC	10.6/5.3	230/460	TENV	M70x-03200106A	M70x-03400062A
	1200 (2400)	213TC	UN3T3BC	9.6/4.7	230/460	TENV	M70x-03200106A	M70x-03400062A
5	1800 (3600)	184TC	UN5T2BC	14.6/7.4	230/460	TENV	M70x-04200185A	M70x-03400078A
	1200 (2400)	215TC	UN5T3BC	16.8/8.4	230/460	TENV	M70x-04200185A	M70x-03400100A
7.5	1800 (3600)	213TC	UN7T2BC	19.7/9.9	230/460	TENV	M70x-04200250A	M70x-03400100A
	1200 (2400)	254TC	UN7T3BC	20.8/10.4	230/460	TENV	M70x-04200250A	M70x-04400150A
10	1800 (3600)	215TC	UN10T2BC	26.6/13.3	230/460	TENV	M70x-06200330A	M70x-04400150A
	1200 (2400)	256TC	UN10T3BC	26.6/13.3	230/460	TENV	M70x-06200330A	M70x-04400150A
15	1800 (3600)	254TC	UN15T2BC	37.8/18.7	230/460	TENV	M70x-06200440A	M70x-05400270A
20	1800 (3600)	256TC	UN20T2BC	52.5/26	230/460	TENV	M70x-07200610A	M70x-05400270A

ACCU-Torq Vector Duty Steel and Aluminium Motors - 575 V							Unidrive M700 AC Drives	
Motor Rated Power (HP)	RPM (Max Safe RPM)	NEMA Frame	Motor Order Code	Motor Rated Current (A)	Voltage (V)	Motor Enclosure	Unidrive M700 Order Code* - 575 V	
0.5	1800 (3600)	56C	UN12T2GC	0.6	575	TENV	M70x-05500030A	
1	1800 (3600)	145TC	UN1T2GC	1.4	575	TENV	M70x-05500030A	
2	1800 (3600)	145TC	UN2T2GC	2.3	575	TENV	M70x-05500030A	
3	1800 (3600)	182TC	UN3T2GC	4.3	575	TENV	M70x-05500069A	
5	1800 (3600)	184TC	UN5T2GC	5.9	575	TENV	M70x-05500069A	
7.5	1800 (3600)	213TC	UN7T2GC	7.9	575	TENV	M70x-06500100A	
10	1800 (3600)	215TC	UN10T2GC	10.5	575	TENV	M70x-06500150A	
15	1800 (3600)	254TC	UN15T2GC	14.9	575	TENV	M70x-06500150A	
20	1800 (3600)	256TC	UN20T2GC	20.8	575	TENV	M70x-06500230A	

\*Add 10101AB100 to the base order code when ordering standard US (60 Hz) default products

Notes:

Ratings are for Heavy Duty, 3 kHz switching frequency

**An Encoder is required for closed loop operation**

Order String - Frame Size Key	M70x Drive Range:
Example: M70x-XX_ _ _ _ _Y	M700 = Ethernet, single STO input
XX = Frame Size (03-11 above)	M701 = RS-485, single STO input
Y = A - AC in AC out	M702 = Ethernet, dual STO inputs
E - Requires external line reactor	



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# Commander C200 AC Drive and Severe Duty AC Motor Solutions

## Open Loop



Commander C200 Frame Size 3



ACCU-Torq Severe Duty  
TEBC Motor

ACCU-Torq Severe Duty Cast Iron Motors - 230 V and 460 V							Commander C200 AC Drives	
Motor Rated Power (HP)	RPM (Max Safe RPM)	NEMA Frame	Motor Order Code	Motor Rated Current (A) 230/460	Voltage (V)	Blower Full Load Amps 230/460	Commander C200 Order Code* - 230 V	Commander C200 Order Code* - 460 V
3	1800 (4000)	182TC	HN3T2BC	9.4/4.7	230/460	TENV	C200-03200100A	C200-03400056A
	1200 (4000)	213TC	HN3T3BC	9.2/4.6	230/460	TENV	C200-03200100A	C200-03400056A
5	1800 (4000)	213TC	HN5T2BC	16.2/8.1	230/460	TENV	C200-04200176A	C200-03400094A
	1200 (4000)	215TC	HN5T3BC	15.3/7.7	230/460	TENV	C200-04200176A	C200-03400094A
7.5	1800 (4000)	213TC	HN7T2BC	21.4/10.7	230/460	TENV	C200-05200250A	C200-04400135A
	1200 (4000)	254TC	HN7T3BC	20.4/10.2	230/460	TENV	C200-05200250A	C200-04400135A
10	1800 (4000)	254TC	HN10T2BC	28.4/14.2	230/460	TENV	C200-06200330A	C200-04400170A
	1200 (4000)	256TC	HN10T3BC	27.3/13.7	230/460	TENV	C200-06200330A	C200-04400170A
	1800 (4000)	215TC	B10T2BC	29.2/14.6	230/460	1.5/0.75	C200-06200330A	C200-04400170A
	1200 (4000)	256TC	B10T3BC	27.4/13.7	230/460	1.5/0.75	C200-06200330A	C200-04400170A
15	1800 (4000)	254TC	B15T2BC	40/20	230/460	1.5/0.75	C200-06200440A	C200-05400270A
	1200 (4000)	284T	B15T3B	40.2/20.1	230/460	1.7/0.9	C200-06200440A	C200-05400270A
20	1800 (4000)	256TC	B20T2BC	53.8/26.9	230/460	1.5/0.75	C200-07200610A	C200-05400270A
	1200 (4000)	286T	B20T3B	55.8/27.9	230/460	1.7/0.9	C200-07200610A	C200-05400300A
25	1800 (4000)	284T	B25T2B	65.2/32.6	230/460	1.7/0.9	C200-07200750A	C200-06400350A
	1200 (3000)	324T	B25T3B	75.6/37.8	230/460	3/1.5	C200-07200830A	C200-06400420A
30	1800 (4000)	286T	B30T2B	77.8/38.9	230/460	1.7/0.9	C200-07200830A	C200-06400420A
	1200 (3000)	326T	B30T3B	84/42	230/460	3/1.5	C200-08201160A	C200-06400420A
40	1800 (3000)	324T	B40T2B	105/52.5	230/460	3/1.5	C200-08201160A	C200-07400660A
	1200 (3000)	364T	B40T3B	100.8/50.4	230/460	3/1.5	C200-08201160A	C200-07400660A
50	1800 (3000)	326T	B50T2B	121.8/60.9	230/460	3/1.5	C200-08201320A	C200-07400660A
	1200 (3000)	365T	B50T3B	124/62	230/460	3/1.5	C200-08201320A	C200-07400660A
60	1800 (3000)	364T	B60T2B	145/72.5	230/460	3/1.5	C200-09201760A	C200-07400770A
	1200 (3000)	404T	B60T3B	155.4/77.7	230/460	5.7/2.8	C200-09201760A	C200-07401000A
75	1800 (3000)	365T	B75T2B	191.2/95.6	230/460	3/1.5	C200-09202190A	C200-07401000A
	1200 (3000)	405T	B75T3B	197.4/98.7	230/460	5.7/2.8	C200-09202190A	C200-07401000A
100	1800 (3000)	405T	B100T2B	237.4/118.7	230/460	5.7/2.8		C200-08401340A
	1200 (3000)	444T	B100T3B	256.2/128.1	230/460	5.7/2.8		C200-08401340A
125	1800 (3000)	444T	B125T2C	172.2	460	5.7/2.8		C200-09402000A
150	1800 (3000)	445T	B150T2C	189	460	5.7/2.8		C200-09402240A

\*Add 10101AB100 to the base order code when ordering standard US (60 Hz) default products.  
Note: Ratings are for Heavy Duty, 3 kHz switching frequency

### Order String - Frame Size Key

Example: C200-XX\_ \_ \_ \_ \_ A

XX = Frame Size (01 to 9 above)



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# Commander C200 AC Drive and Vector Duty AC Motor Solutions

## Open Loop



Commander C200 Frame Size 3



ACCU-Torq Vector Duty  
TENV Motor

ACCU-Torq Vector Duty Steel and Aluminium Motors - 230 V and 460 V							Commander C200 AC Drives - 230 V and 460 V	
Motor Rated Power (HP)	RPM (Max Safe RPM)	NEMA Frame	Motor Order Code	Motor Rated Current (A) 230/460	Voltage (V)	Motor Enclosure	Commander C200 Order Code* - 230 V	Commander C200 Order Code* - 460 V
0.25	1800 (3600)	56C	UN14T2BC	1.1/0.5	230/460	TENV	C200-02200024A	C200-02400013A
0.33	1800 (3600)	56C	UN13T2BC	1.2/0.6	230/460	TENV	C200-02200024A	C200-02400013A
0.5	1800 (3600)	56C	UN12T2BC	1.6/0.8	230/460	TENV	C200-02200024A	C200-02400013A
1	1800 (3600)	143TC	UN1T2BC	3.4/1.7	230/460	TENV	C200-02200042A	C200-02400018A
	1800 (3600)	56C	UN1T2BFC	3.4/1.7	230/460	TENV	C200-02200042A	C200-02400018A
	1200 (2400)	145TC	UN1T3BC	3.9/1.9	230/460	TENV	C200-02200056A	C200-02400023A
1.5	1800 (3600)	145TC	UN32T2BC	4.9/2.4	230/460	TENV	C200-02200056A	C200-02400032A
2	1800 (3600)	145TC	UN2T2BC	5.9/2.9	230/460	TENV	C200-02200075A	C200-02400032A
	1200 (2400)	184TC	UN2T3BC	6.5/3.3	230/460	TENV	C200-02200075A	C200-02400041A
3	1800 (3600)	182TC	UN3T2BC	10.6/5.3	230/460	TENV	C200-04200133A	C200-03400056A
	1200 (2400)	213TC	UN3T3BC	9.6/4.7	230/460	TENV	C200-04200133A	C200-03400056A
5	1800 (3600)	184TC	UN5T2BC	14.6/7.4	230/460	TENV	C200-04200176A	C200-03400094A
	1200 (2400)	215TC	UN5T3BC	16.8/8.4	230/460	TENV	C200-04200176A	C200-03400094A
7.5	1800 (3600)	213TC	UN7T2BC	19.7/9.9	230/460	TENV	C200-05200250A	C200-04400135A
	1200 (2400)	254TC	UN7T3BC	20.8/10.4	230/460	TENV	C200-05200250A	C200-04400135A
10	1800 (3600)	215TC	UN10T2BC	26.6/13.3	230/460	TENV	C200-06200330A	C200-04400135A
	1200 (2400)	256TC	UN10T3BC	26.6/13.3	230/460	TENV	C200-06200330A	C200-04400135A
15	1800 (3600)	254TC	UN15T2BC	37.8/18.7	230/460	TENV	C200-06200440A	C200-05400270A
20	1800 (3600)	256TC	UN20T2BC	52.5/26	230/460	TENV	C200-07200610A	C200-05400270A

\*Add 10101AB100 to the base order code when ordering standard US (60Hz) default products

Note: Ratings are for Heavy Duty, 3 kHz switching frequency

### Order String - Frame Size Key

Example: C200-XX\_ \_ \_ \_ \_ A

XX = Frame Size (01 to 9 above)



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## How to Order and Options

### How to Order an ACCU-Torq Motor

Example ordering instructions, line items:

1. Motor Order Code
2. Encoder Order Code - optional (Avtron ASSEMAV32 Recommended)
3. Brake Order Code – optional



An Encoder is required for closed loop operation Avtron AV32 Avtron AV56

### ACCU-Torq Motor Options

Encoder and Brake options come pre-assembled to the motor from the factory

#### Factory Recommended

Encoders							
Make	Model	Order Code	Bearings	Sensor	Duty	Connector	Frames
Avtron	AV32	ASSEMAV32	Yes	Optical	Mill	TENV MS 10-Pin TEBC Bayonet 10-Pin	TENV 56-256 TEBC 215-449
Avtron	AV56	ASSEMAV56*	No	Magnetic	Heavy, brake	10-Pin Industrial	TENV 56-256 TEBC 254-449
Avtron	HS25A	ASSEMHS25A	Yes	Optical	Light	MS 10-Pin	TENV 56-256
Avtron	HS35A	ASSEMHS35A	Yes	Optical	Light	MS 10-Pin	TEBC 215-449
Dynapar	HS20	ASSEMHS20	Yes	Optical	Light	MS 10-Pin	TENV 56-256
Dynapar	HS35R	ASSEMHS35R	Yes	Optical	Light	Bayonet 10-Pin	TEBC 215-449
Dynapar	ST56	ASSEMST56*	No	Magnetic	Heavy, brake	10-Pin Industrial	TEBC 215-449
EPC	260	ASSEM260	Yes	Optical	Light	MS 10-Pin	TENV 56-256
EPC	25T	ASSEM25T	Yes	Optical	Mill	Bayonet 10-Pin	TEBC 215-449

\*Required for brake mounting with encoders on TENV motors.  
All encoders listed have Line-Driver Outputs, 1024 PPR, and ship with connector plugs.

Stearns® 56000 Series Brakes					
Enclosure	Order Code	Coil Volts (V)	Nominal Static Torque	Enclosure	Frames
TENV	ASSEM630866	115/208-230	6 lb-ft	IP23, STEEL HOUSING	56-256
TENV	ASSEM630865	115/208-230	10 lb-ft	IP23, STEEL HOUSING	56-256
TENV	ASSEM630868	208-230/460	6 lb-ft	IP23, STEEL HOUSING	56-256
TENV	ASSEM630867	208-230/460	10 lb-ft	IP23, STEEL HOUSING	56-256

Brake/encoder TEBC motors require radial blower configuration and are Engineered to Order (ETO), consult factory for availability  
Connections to brakes: flying leads in brake enclosure  
Brakes rated for holding only, not to be applied for stopping  
Universal mount for vertical and horizontal mounted motors

### Vector Duty Motor Order Options

Shaft Grounding Ring	
Frames	Order Code
56 to 140	ASSEM645681
180	ASSEM645682
210	ASSEM645683
250	ASSEM645684

Note: Shaft grounding ring standard on Severe Duty Cast Iron motors

### How to Order an AC Drive

Example ordering instructions, line items:

1. Drive Order Code
2. Keypad Order Code - optional
3. Option module Order Code - optional



### AC Drive Options

Commander C200 Only Options		Unidrive M700 Only Options	
Drive Options and Accessories			
Option	Description	Order Code	
Drive Configuration & Programming	Configuration software	UNIDRIVE-M-CONNECT	
	Drive to PC USB cable (requires a RS485 adaptor)	CT-USB-CABLE	
	8 GB SD card	CTSD8GB	
	Smartcard 8k memory	SMARTCARD	
	Smartcard 64k memory	SMARTCARD-64	
	Smartcard with SD card adaptor, no SD card	SD-CARD-ADAPTOR	
Operator Interfaces	Parameter cloning 4 GB (includes 4 GB SD card)	AI-SMART-ADAPTOR	
	Parameter cloning (requires an SD card)	AI-BACKUP-ADAPTOR	
	Remote display cable	UM-LCD-485-XXX**	
	Plain text LCD display	KI-KEYPAD-LCD	
	Plain text LCD keypad with real-time clock	KI-KEYPAD-RTC	
	Remote LCD display with real-time clock	REMOTE-KEYPAD-RTC	
Input / Output*	Remote LCD display	REMOTE-KEYPAD	
	Extended I/O	SI-I/O	
	Communications*	PROFIBUS DP	SI-PROFIBUS
		DeviceNet	SI-DEVICENET
		CANopen	SI-CANOPEN
		PROFINET RT	SI-PROFINET
EtherCAT		SI-ETHERCAT	
EtherNet/IP, Modbus TCP		SI-ETHERNET	
Machine Control	Modbus RTU	KI-485-ADAPTOR	
	Modbus RTU	AI-485-ADAPTOR	
	Applications, SyPTPro	SI-APPS-PLUS	
Application Programming Software & Diagnostics	Advanced machine control	MCI200	
	Advanced machine control, Ethernet	MCI210	
	PLC programming	MACHINE-CONTROL-STUDIO	
Feedback	Digital oscilloscope	CTSCOPE	
	DB15 to terminal breakout board for encoder feedback cable	SM-ETC	
	MS 10-pin encoder cable	ENCO-xxx***	
	10-Pin Industrial encoder cable	ENCI-xxx***	
	Bayonet 10-Pin encoder cable	ENCB-xxx***	
	Encoder module	SI-ENCODER	
Power Accessories	Universal encoder	SI-UNI-ENCODER	
	External EMC filters	See Unidrive M Accessories brochure	
	Line & load reactors		
Dynamic braking resistors			
Environmental Protection & Cable Management	UL Type 1 conduit kits	See Unidrive M Accessories brochure	
	IP65 & IP55 through panel mounting kits		

\*Commander C200 frame sizes 2 and up accept 1 SI option; Unidrive M700 accepts up to 3 SI options  
\*\*XXX=cable length in 5 foot increments (max 330 ft), standard lengths are (005, 010, 015, 025 and 050).  
\*\*\*Ships with flying leads at drive end. Recommended to use SM-ETC for easy encoder drive connection.  
xxx = cable length in feet, standard lengths are (010, 015, 025, 050, 075, and 100).



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