

CATALOG

# NEMA motor Mod-Express®

## Menden build center

**BALDOR • RELIANCE**



- Suitable for use throughout the world
- Wide range of voltages, frequencies, mountings and certifications

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# NEMA motor Mod-Express

## General information

### Catalog notes:

#### Efficiencies

Efficiencies of all 60 Hz motor designs are listed as NEMA nominal at full load (Except the motors designed to meet the Small Motor Rule average efficiencies as specified by the DOE).

#### Full load amps (FLA)

For low voltage amps, double high voltage amps shown, excluding medium voltage amps for 2300/4000 voltage.

#### Motor bearings

Motors with ball bearings are suitable for coupled loads. If a load is belted, a roller bearing may be required, contact your local ABB Sales Office if you have questions or need assistance. Find your local contact center: <http://new.abb.com/contact-centers>.

#### Service factor

NEMA T-frames in TEFC construction have a service factor of 1.15 or greater except where noted. All NEMA U- frame TEFC motors (except explosion-proof) have NEMA open service factors. Fractional horsepower TEFC motors have NEMA open service factors. All Inverter Duty® and Vector Duty® AC motors have 1.0 Service Factors. All DC motors have 1.0 service factors.

#### Mounting holes

Most steel band and cast iron foot-mounted motors have dual mounting holes (143T-145T, 182T-184T, etc.)

#### F1/F2

All Cast iron motors are built with symmetrical frames which may be converted from F1 to F2 by switching endplates and rotor from end-to-end except for L182T, L184T, L213T, L215T and L449T. TEFC 5000 and 5800 frame motors are field convertible from F1 to F2 via swingarm. For ODP 5000 and 5800 Frames, please check with factory for F-1/F-2 conversion. Frames with the "L" prefix have standard NEMA base and BA dimensions. Also applies to TC versions of these frame sizes.

#### Modified motors

Using stock motors, ABB Menden build center can modify motors to fit a variety of applications in only 2 to 5 working days for most modifications. Please see the Mod Express section in this catalog for more information.

#### Custom motors

For information on motor designs and capabilities not found in this catalog, please contact your local ABB sales office. Find your local contact center: <http://new.abb.com/contact-centers>.

## IP protection – Baldor-Reliance® enclosure

### Open motor enclosures:

IP22 or 23 - Open Drip Proof AC or DC Motors

### Totally enclosed motor enclosures\*

IP44 - LV general purpose AC or DC motors\*\*

IP54 - MV general purpose AC motors

IP55 - ABB IEC motors

IP55 - Severe duty AC motors (ECP)

IP55 - Crusher, quarry & dirty duty motors

IP55 - White washdown & paint-free motors

IP56 – LV motors meeting IEEE 841

IP56 - Dirty duty motors

IP56 - Feather picker motors

IP56 - Stainless steel motors (non-encapsulated)

IP69 - for water - SSE stainless steel encapsulated motors

## Summary of IP protection numbers

### First # protection against solid objects

IP - Tests

0 - No protection

1 - Protection against solid objects up to 50 mm (E.G. accidental touch by hands.)

2 - Protection against solid objects up to 12 mm (E.G. fingers)

3 - Protection against solid objects over 2.5 mm (E.G. tools, wires)

4 - Protection against solid objects over 1 mm (E.G. tools, wires, and small wires)

5 - Protection against dust - limited ingress

6 - Totally protected against all dust

### Second # protection against liquids

0 - No protection

1 - Protection against vertical drops of water. (E.G. condensation)

2 - Protection against falling water up to 15 degrees from the vertical.

3 - Protection against falling water up to 60 degrees from the vertical.

4 - Protection against splashing water from all directions, limited ingress.

5 - Protection against low pressure jets of water from all directions, limited ingress.

6 - Protection against strong jets of water. (E.G. Use on ship decks, limited ingress.)

7 - Protection against immersion

8 - Protection against submersion

9 - Protection against high pressure, high temperature spray of water from all directions

## NEMA motor Mod-Express inventory

## IP44

General purpose, foot mounted



**Three phase, totally enclosed, foot mounted**

**1/3 thru 250 Hp**

**Features:**

- 60 Hz designs with 50 Hz information on 2,4,6 pole 1-125 Hp ratings
- Suitable for inverter use per NEMA MG1 Part 31.4.4.2
- Simple F1 to F2 conversion on cast iron frames
- Designed for longevity with a 3 year warranty on premium efficient Super-E® motors

**NEMA 48 thru 449T**

**Applications:**

- Fans
- Pumps
- Blowers
- Conveyors
- Compressors
- Industrial machines
- Other general purpose applications

### General purpose - foot mounted - 2 pole

Power (Hp)	Speed	Frame size	Enclosure	Product ID	List price*	Discounts	C dim.	Aprx. wt. (lbs.)	Full load eff.	Voltage	Full load amps
0.33	3600	48	TENV	7BM3457	\$520	GE3	9.62	20	72	230/460	0.7
0.5	3600	48	TEFC	7BM3460	\$603	GE3	10.73	19	68	230/460	1
0.75	3600	56	TEFC	7BM3541	\$664	GE3	11.35	21	74	230/460	1.3
1	3600	56	TEFC	7BEM3545	\$1,056	GE3	12.25	37	77	230/460	1.4
1.5	3600	143T	TEFC	7BEM3550T	\$1,195	GE3	12.29	36	84	208-230/460	1.9
2	3600	145T	TEFC	7BEM3555T	\$1,309	GE3	13.31	43	85.5	208-230/460	2.5
3	3600	182T	TEFC	7BEM3610T	\$1,452	GE3	15.14	50	86.5	208-230/460	3.6
5	3600	184T	TEFC	7BEM3613T	\$1,610	GE3	16.55	75	88.5	230/460	5.9
7.5	3600	213T	TEFC	7BEM3709T	\$2,412	GE3	17.89	116	89.5	208-230/460	9
10	3600	215T	TEFC	7BEM3711T	\$2,445	GE3	17.89	120	90.2	208-230/460	11.8
15	3600	254T	TEFC	7BEM2394T	\$4,150	GE3	23.28	241	91	230/460	17.5
20	3600	256T	TEFC	7BEM4106T	\$4,555	GE3	23.28	259	91	230/460	23
25	3600	284TS	TEFC	7BEM4107T	\$5,943	GE3	24.7	327	91.7	230/460	29
30	3600	286TS	TEFC	7BEM4108T	\$7,061	GE3	24.7	347	91.7	230/460	34
40	3600	324TS	TEFC	7BEM4109T	\$9,677	GE3	28.78	528	92.4	230/460	46
50	3600	326TS	TEFC	7BEM4114T	\$10,586	GE3	28.78	578	93	208-230/460	56
60	3600	364TS	TEFC	7BEM4310T	\$14,873	GE3	31.36	810	95	230/460	65.1
75	3600	365TS	TEFC	7BEM4313T	\$17,302	GE3	31.36	980	94.5	230/460	80.7
100	3600	405TS	TEFC	7BEM4402T-4	\$22,121	GE3	35.43	1187	95	460	110
125	3600	444TS	TEFC	7BEM4412T-4	\$27,343	GE3	40.83	1901	95	460	137
150	3600	445TS	TEFC	7BEM4413T-4	\$32,173	GE3	41.08	1995	95	460	164
200	3600	447TS	TEFC	7BEM4416T-4	\$38,558	GE3	44.48	2355	95.4	460	213
250	3600	449TS	TEFC	7BEM4425T-4	\$60,041	GE3	49.48	2595	95.8	460	268

### General purpose - foot mounted - 4 pole

Power (Hp)	Speed	Frame size	Enclosure	Product ID	List price*	Discount	C dim.	Aprx. wt. (lbs.)	Full load eff.	Voltage	Full load amps
0.33	1800	56	TEFC	7BM3534	\$560	GE3	11.35	21	68	230/460	0.8
0.5	1800	56	TEFC	7BM3538	\$570	GE3	11.35	23	74	230/460	1
0.75	1800	56	TEFC	7BM3542	\$685	GE3	11.35	25	75.5	208-230/460	1.5
1	1800	143T	TEFC	7BEM3546T	\$1,079	GE3	12.31	35	85.5	230/460	1.5
1.5	1800	145T	TEFC	7BEM3554T	\$1,199	GE3	13.31	41	86.5	230/460	2.2
2	1800	145T	TEFC	7BEM3558T	\$1,268	GE3	13.31	45	86.5	230/460	2.9
3	1800	182T	TEFC	7BEM3611T	\$1,301	GE3	16.55	73	89.5	230/460	4.2
5	1800	184T	TEFC	7BEM3615T	\$1,344	GE3	18.05	93	89.5	230/460	6.7
7.5	1800	213T	TEFC	7BEM3710T	\$1,938	GE3	19.02	128	91.7	230/460	9.4
10	1800	215T	TEFC	7BEM3714T	\$2,188	GE3	20.52	162	91.7	230/460	12
15	1800	254T	TEFC	7BEM2333T	\$3,371	GE3	23.28	270	92.4	230/460	18.1
20	1800	256T	TEFC	7BEM2334T	\$4,087	GE3	23.28	309	93	230/460	24
25	1800	284T	TEFC	7BEM4103T	\$5,345	GE3	27.76	436	93.6	230/460	31
30	1800	286T	TEFC	7BEM4104T	\$6,340	GE3	27.76	437	93.6	230/460	38
40	1800	324T	TEFC	7BEM4110T	\$8,291	GE3	30.28	572	94.1	230/460	48
50	1800	326T	TEFC	7BEM4115T	\$9,058	GE3	30.28	650	94.5	230/460	58
60	1800	364T	TEFC	7BEM4314T	\$13,071	GE3	33.48	912	95	230/460	67.8
75	1800	365T	TEFC	7BEM4316T	\$15,284	GE3	33.44	955	95.4	230/460	84.9
100	1800	405T	TEFC	7BEM4400T	\$18,927	GE3	38.31	1203	95.4	230/460	112
125	1800	444T	TEFC	7BEM4410T-4	\$23,541	GE3	44.75	1969	95.4	460	144
150	1800	445T	TEFC	7BEM4406T-4	\$26,951	GE3	44.75	1826	95.8	460	169
200	1800	445T	TEFC	7BEM4407T-4	\$38,069	GE3	48.24	2497	96.2	460	222
250	1800	447T	TEFC	7BEM4408T-4	\$49,922	GE3	53.22	2818	96.2	460	276

Cast iron frames are shaded.

\*All pricing USD.

## NEMA motor Mod-Express inventory

General purpose, C-face foot mounted

## IP44



**Three phase, totally enclosed, C-face foot mounted**

**1/3 thru 100 Hp**

**Features:**

- Locked DE bearing to allow mounting in any configuration
- 60 Hz designs with 50 Hz information on 2,4,6 pole 1-125 Hp ratings
- Suitable for inverter use per NEMA MG1 Part 31.4.4.2
- Simple F1 to F2 conversion on cast iron frames
- Designed for longevity with a 3 year warranty on premium efficient Super-E® motors

**NEMA 56C thru 405TC**

**Applications:**

- Fans
- Pumps
- Blowers
- Conveyors
- Compressors
- Industrial machines
- Other general purpose applications

### General purpose - C-face foot mounted - 2 pole

Power (Hp)	Speed	Frame size	Enclosure	Product ID	List price*	Discounts	C dim.	Aprx. wt. (lbs.)	Full load eff.	Voltage	Full load amps
0.33	3600	56C	TENV	7BCNM3457	\$634	GE3	10.25	21	72	208-230/460	0.7
0.5	3600	56C	TEFC	7BCM3537	\$645	GE3	11.35	20	68	230/460	1
0.75	3600	56C	TEFC	7BCM3541	\$705	GE3	11.35	22	74	230/460	1.3
1	3600	56C	TEFC	7BCEM3545	\$1,102	GE3	12.25	33	77	230/460	1.4
1.5	3600	143TC	TEFC	7BCEM3550T	\$1,258	GE3	13.29	40	84	230/460	1.9
2	3600	145TC	TEFC	7BCEM3555T	\$1,372	GE3	13.29	44	85.5	230/460	2.5
3	3600	182TC	TEFC	7BCEM3610T	\$1,571	GE3	15.18	50	86.5	230/460	3.6
5	3600	184TC	TEFC	7BCEM3613T	\$1,729	GE3	16.55	78	88.5	230/460	5.9
7.5	3600	213TC	TEFC	7BCEM3709T	\$2,641	GE3	18.63	120	89.5	230/460	9
10	3600	215TC	TEFC	7BCEM3711T	\$2,674	GE3	18.63	121	90.2	230/460	11.6
15	3600	254TC	TEFC	7BCEM2394T	\$5,110	GE3	23.78	250	91	230/460	17.5
20	3600	256TC	TEFC	7BCEM4106T	\$5,515	GE3	23.78	265	91	208-230/460	23
25	3600	284TSC	TEFC	7BCEM4107T	\$7,217	GE3	24.71	303	91.7	230/460	29
30	3600	286TSC	TEFC	7BCEM4108T	\$8,335	GE3	26.39	429	91.7	230/460	34
40	3600	324TSC	TEFC	7BCEM4109T	\$11,148	GE3	28.78	470	92.4	230/460	45
50	3600	326TSC	TEFC	7BCEM4114T	\$12,057	GE3	28.78	578	93	230/460	56
60	3600	364TSC	TEFC	7BCEM4310T	\$16,472	GE3	31.31	830	93.6	230/460	67.3
75	3600	365TSC	TEFC	7BCEM4313T	\$18,900	GE3	31.31	905	93.6	230/460	83.4

### General purpose - C-face foot mounted - 4 pole

Power (Hp)	Speed	Frame size	Enclosure	Product ID	List price*	Discount	C dim.	Aprx. wt. (lbs.)	Full load eff.	Voltage	Full load amps
0.33	1800	56C	TEFC	7BCM3534	\$552	GE3	11.35	21	68	230/460	0.8
0.5	1800	56C	TEFC	7BCM3538	\$611	GE3	11.35	23	74	230/460	1
0.75	1800	56C	TEFC	7BCM3542	\$649	GE3	11.35	26	75.5	208-230/460	1.5
1	1800	143TC	TEFC	7BCEM3546T	\$1,135	GE3	12.23	36	85.5	230/460	1.5
1.5	1800	145TC	TEFC	7BCEM3554T	\$1,255	GE3	13.29	42	86.5	230/460	2.2
2	1800	145TC	TEFC	7BCEM3558T	\$1,324	GE3	14.17	46	86.5	230/460	2.9
3	1800	182TC	TEFC	7BCEM3611T	\$1,406	GE3	16.55	75	89.5	230/460	4.2
5	1800	184TC	TEFC	7BCEM3615T	\$1,449	GE3	18.05	93	89.5	230/460	6.7
7.5	1800	213TC	TEFC	7BCEM3710T	\$2,142	GE3	19.76	151	91.7	230/460	9.4
10	1800	215TC	TEFC	7BCEM3714T	\$2,391	GE3	21.26	165	91.7	230/460	12
15	1800	254TC	TEFC	7BCEM2333T	\$4,222	GE3	23.78	269	92.4	230/460	18.1
20	1800	256TC	TEFC	7BCEM2334T	\$5,564	GE3	23.78	298	93	230/460	24
25	1800	284TC	TEFC	7BCEM4103T	\$7,296	GE3	27.76	437	93.6	230/460	31
30	1800	286TC	TEFC	7BCEM4104T	\$8,418	GE3	27.76	425	93.6	230/460	38
40	1800	324TC	TEFC	7BCEM4110T	\$10,812	GE3	30.28	590	94.1	230/460	48
50	1800	326TC	TEFC	7BCEM4115T	\$11,678	GE3	30.28	780	94.5	230/460	58
60	1800	364TC	TEFC	7BCEM4314T	\$16,286	GE3	33.44	915	95	230/460	68
75	1800	365TC	TEFC	7BCEM4316T	\$18,772	GE3	33.44	907	95.4	230/460	84.9
100	1800	405TC	TEFC	7BCEM4400T	\$23,327	GE3	38.32	1360	95.4	230/460	112

Cast iron frames are shaded.

\*All pricing USD.

## NEMA motor Mod-Express inventory

General purpose, C-face footless

IP44



Three phase, totally enclosed, C-face footless

1/3 thru 30 Hp

Features:

- Footless design reduces weight and improves safety
- Locked DE bearing to allow mounting in any configuration
- 60 Hz designs with 50 Hz information on 2,4,6 pole 1-125 Hp ratings
- Suitable for inverter use per NEMA MG1 Part 31.4.4.2
- Designed for longevity with a 3 year warranty on premium efficient Super-E® motors

NEMA 56C thru 286TC

Applications:

- Fans
- Pumps
- Blowers
- Conveyors
- Compressors
- Industrial machines
- Other general purpose applications

### General purpose - C-face footless - 2 pole

Power (Hp)	Speed	Frame size	Enclosure	Product ID	List price*	Discounts	C dim.	Aprx. wt. (lbs.)	Full load eff.	Voltage	Full load amps
0.33	3600	56C	TENV	7BKM3457	\$553	GE3	10.25	20	72	230/460	0.7
0.5	3600	56C	TEFC	7BVM3537	\$636	GE3	11.35	20	68	230/460	1
0.75	3600	56C	TEFC	7BVM3541	\$695	GE3	11.35	21	74	230/460	1.3
1	3600	56C	TEFC	7BVEM3545	\$1,102	GE3	12.24	32	77	230/460	1.4
1.5	3600	56C	TEFC	7BVEM3550	\$1,242	GE3	12.24	35	84	230/460	1.9
2	3600	56C	TEFC	7BVEM3555	\$1,355	GE3	13.24	43	85.5	230/460	2.5
3	3600	56C	TEFC	7BVEM3559	\$1,480	GE3	14.1	50	86.5	230/460	3.6
5	3600	184TC	TEFC	7BVEM3613T	\$1,729	GE3	16.55	75	88.5	230/460	5.9
7.5	3600	184TC	TEFC	7BVEM3616T	\$2,243	GE3	18.05	96	89.5	230/460	8.1
10	3600	215TC	TEFC	7BVEM3711T	\$2,674	GE3	18.63	125	90.2	208-230/460	12.1
15	3600	215TC	TEFC	7BVEM3713T	\$3,679	GE3	21.26	170	91	230/460	17
20	3600	256TC	TEFC	7BVEM4106T	\$5,515	GE3	23.8	229	91	230/460	23
25	3600	284TSC	TEFC	7BVEM4107T	\$7,217	GE3	22.4	323	91.7	230/460	29
30	3600	286TSC	TEFC	7BVEM4108T	\$8,335	GE3	22.4	383	91.7	230/460	68

### General purpose - C-face footless - 4 pole

Power (Hp)	Speed	Frame size	Enclosure	Product ID	List price*	Discount	C dim.	Aprx. wt. (lbs.)	Full load eff.	Voltage	Full load amps
0.33	1800	56C	TEFC	7BVM3534	\$586	GE3	11.35	21	68	230/460	0.8
0.5	1800	56C	TEFC	7BVM3538	\$598	GE3	11.35	23	74	230/460	1
0.75	1800	56C	TEFC	7BVM3542	\$636	GE3	11.35	26	75.5	208-230/460	1.5
1	1800	56C	TEFC	7BVEM3546	\$1,120	GE3	12.23	36	85.5	230/460	1.5
1.5	1800	56C	TEFC	7BVEM3554	\$1,240	GE3	13.23	42	86.5	230/460	2.2
2	1800	56C	TEFC	7BVEM3558	\$1,309	GE3	13.23	46	86.5	230/460	2.9
3	1800	56C	TEFC	7BVEM3561	\$1,429	GE3	15.62	70	89.5	230/460	4.2
5	1800	184TC	TEFC	7BVEM3615T	\$1,449	GE3	18.05	88	89.5	230/460	6.7
7.5	1800	213TC	TEFC	7BVEM3710T	\$2,412	GE3	19.76	151	91.7	230/460	9.5
10	1800	215TC	TEFC	7BVEM3714T	\$2,694	GE3	21.26	165	91.7	230/460	12
15	1800	254TC	TEFC	7BVEM2333T	\$4,757	GE3	23.8	283	92.4	230/460	18.1
20	1800	256TC	TEFC	7BVEM2334T	\$5,564	GE3	23.8	320	93	230/460	24
25	1800	284TC	TEFC	7BVEM4103T	\$7,296	GE3	27.76	512	93.6	230/460	31
30	1800	286TC	TEFC	7BVEM4104T	\$8,418	GE3	27.76	425	93.6	230/460	38

Cast iron frames are shaded.

\*All pricing USD.



## NEMA motor Mod-Express inventory

ECP/XEX, 841XL, 661XL, dirty duty, quarry duty, crusher duty



### 1/2 thru 800 Hp

#### Features:

- Heavy duty cast iron construction
- Premium efficient electrical designs
- Enhanced ingress protection
- Corrosion resistant epoxy finish

Baldor-Reliance severe duty motors include features designed to protect against contamination, moisture, vibration and corrosion. These motors use Super-E premium efficient electrical designs which are built to handle demanding duty cycles, provide high starting and peak torques, and operate over wide speed ranges. Severe duty motors provide safe, long operating life, reliable performance, and reduced energy consumption in the toughest applications.

### 1/2 - 800 Horsepower

Product line		ECP/XEX	841XL	661XL	Dirty Duty Plus	Quarry Duty	Crusher Duty
	Frame size range for stock products	143T-588	143T-449T	182T-365T	56-256T	145T-215T	180T-588
<b>Electrical features</b>							
<b>Efficiency</b>	Baldor-Reliance motors meet or exceed all efficiency requirements for US, Canada and Mexico regulations	S	S	S	S	S	S
<b>Torque</b>	NEMA Design B torques as a minimum	S	S	S	S	-	-
	NEMA Design C: High torque	-	-	-	-	S	-
	NEMA Design A: High torque design exceed NEMA Design C	-	-	-	-	-	S
<b>Service factor and temperature rise</b>	1.15 service factor – continuous	S	S	S	S	S	-
	1.25 service factor up to 100 Hp, 1.15 service factor over 100 Hp – continuous	-	-	-	-	-	S
<b>Inverter</b>	Class F insulation with Class B rise @ 1.0 service factor	S	S	S	S	S	S
	Suitable for inverter use per NEMA MG1 Part 31.4.4.2	S	S	S	S	S	S
<b>Mechanical features</b>							
<b>IP code</b>	IP55 enclosure ingress protection (143T-L449T frames are IP54 rated)	S	-	-	-	S	S
	IP56 enclosure ingress protection 143T-L449T	-	S	S	S	-	-
	IP66 enclosure ingress protection 586-588 frames	S	-	-	-	-	S
<b>Frame</b>	Steel band frame – aluminum endplates, cast iron conduit box, steel fan cover	-	-	-	S	-	-
	Cast iron frame, endplates, conduit box & fan cover (586-587 frames have fabricated steel fan covers)	S	S	S	-	-	S
	Vertical lifting provisions for shaft up or down mounting	-	-	S	-	-	-
<b>Shaft seals</b>	Sealed joints between frame and endplates	S	S	S	S	S	S
	Neoprene V-ring slinger – DE & ODE	S	-	-	-	S	S
	Non-contact, rotating labyrinth seal – DE & ODE, 143T-L449T frames	-	S	S	S	-	-
	Non-contact, rotating labyrinth seal – DE & ODE, 586-588 frames	S	-	-	-	-	S
	Large dome slinger – DE	-	-	S	-	-	-
<b>Bearings and lubrication</b>	Ball bearings designs	S	S	-	S	S	S
	Roller bearing designs available for belted applications	S	S	S	-	-	S
	Bearings: Non regreasable, lubed for life, double sealed	-	-	-	S	-	-
	Bearings: Regreasable with grease inlet fitting and outlet threaded plug or easy access relief on DE & ODE	S	-	-	-	S	S
	Bearings: Regreasable with PLS lubrication system 140T-449T frames. Grease inlet & auto relief fittings on DE & ODE. (Also included on ECP/XEX & Crusher duty 360T-449T frames)	-	S	S	-	-	-
<b>Paint</b>	Paint: Corrosion resistant 2 part epoxy paint system, exceeding 300 hrs. salt fog test per ASTM B 117, epoxy coated rotor and stator	S	S	S	-	S	S
	Paint: Corrosion resistant 2 part epoxy paint system, exceeding 2,000 hrs. salt fog test per ASTM B 117, epoxy coated rotor and stator	-	-	-	S	-	-
<b>Conduit box</b>	Conduit box: Oversized, lipped cover, threaded NPT inlet and rotatable in 90 degree increments	S	S	S	-	-	S
	Conduit box: Oversized, split with lipped cover, terminal strips and threaded NPT inlet, rotatable in 90 degree increments with gland plate 586-587 frame	S	-	-	-	-	S
	Conduit box: Oversized, lipped cover, threaded NPT inlet, rotatable in 180 degree increments	-	-	-	S	S	-
<b>Nameplate</b>	Nameplate: Stainless steel embossed raised letter	S	S	S	S	-	S
	Nameplate: Stainless steel laser etched letter	-	-	-	-	S	S
<b>Other key features</b>							
<b>Certifications and tests</b>	Nameplate marked Class I, Division 2, Groups A, B, C, D with T2 temperature code or better.	S	S	S	-	-	-
	Meets and exceeds IEEE 841	-	S	S	-	-	-
	Meets and exceeds IEEE 45	-	S	S	S	-	-
	Documented final motor test – ships with motor	-	S	S	-	-	-
<b>Warranty</b>	Warranty – in years from date of manufacture	3	5	5	3	3	3

## NEMA motor Mod-Express inventory

ECP/XEX, severe duty, foot mounted

## IP55



**Three phase, totally enclosed, foot mounted**

**1 thru 250 Hp**

**Features:**

- Robust cast iron construction
- Regreasable bearings all frames
- IP55, IP54 on 5000 frame and larger
- Inverter ready nameplate
- Division 2, class I, groups A,B,C,D markings on nameplate

**NEMA 143T thru 449T**

**Applications:**

- Chemical, oil & gas
- Pulp & paper, forest products
- Metals & foundries
- Cement, aggregate & above ground mining
- Compressors
- Food processing
- Power generation

### Severe duty - ECP/XEX - foot mounted - 2 pole

Power (Hp)	Speed	Frame size	Enclosure	Product ID	List price*	Discounts	C dim.	Aprx. wt. (lbs.)	Full load eff.	Voltage	Full load amps
1	3600	143T	TEFC	7BECP3580T-4	\$1,493	SDM	12.95	59	84	460	1.4
1.5	3600	143T	TEFC	7BECP3583T-4	\$1,698	SDM	12.95	67	85.5	460	2
2	3600	145T	TEFC	7BECP3586T-4	\$1,776	SDM	12.95	74	86.5	460	2.5
3	3600	182T	TEFC	7BECP3660T-4	\$2,100	SDM	15.93	106	88.5	460	3.4
5	3600	184T	TEFC	7BECP3663T-4	\$2,584	SDM	15.93	111	89.5	460	5.7
7.5	3600	213T	TEFC	7BECP3769T-4	\$3,372	SDM	19.5	173	91.7	460	8.6
10	3600	215T	TEFC	7BECP3771T-4	\$3,590	SDM	19.5	215	92.4	460	11
15	3600	254T	TEFC	7BECP2394T-4	\$4,593	SDM	24.78	297	91.7	460	17.2
20	3600	256T	TEFC	7BECP4106T-4	\$5,357	SDM	24.78	328	92.4	460	23
25	3600	284TS	TEFC	7BECP4107T-4	\$6,438	SDM	26.62	342	91.7	460	28
30	3600	286TS	TEFC	7BECP4108T-4	\$7,848	SDM	26.62	396	91.7	460	34
40	3600	324TS	TEFC	7BECP4109T-4	\$10,781	SDM	29.15	566	93	460	46
50	3600	326TS	TEFC	7BECP4114T-4	\$11,298	SDM	29.15	595	93	460	56
60	3600	364TS	TEFC	7BECP4310T-4	\$15,938	SDM	31.37	882	95	460	65.1
75	3600	365TS	TEFC	7BECP4313T-4	\$18,257	SDM	31.37	990	94.5	460	80.7
100	3600	405TS	TEFC	7BECP4402T-4	\$23,038	SDM	35.31	1272	95	460	110
125	3600	444TS	TEFC	7BECP4412T-4	\$27,071	SDM	41.08	1901	95	460	137
150	3600	445TS	TEFC	7BECP4413T-4	\$31,737	SDM	40.83	2017	95	460	164
200	3600	447TS	TEFC	7BECP4416T-4	\$37,579	SDM	44.48	2436	96.2	460	213
250	3600	449TS	TEFC	7BECP44252T-4	\$57,466	SDM	49.48	2633	95.8	460	269

### Severe duty - ECP/XEX - foot mounted - 4 pole

Power (Hp)	Speed	Frame size	Enclosure	Product ID	List price*	Discount	C dim.	Aprx wt. (lbs.)	Full load eff.	Voltage	Full load amps
1	1800	143T	TEFC	7BECP3581T-4	\$1,641	SDM	12.88	64	87.5	460	1.5
1.5	1800	145T	TEFC	7BECP3584T-4	\$1,671	SDM	12.88	72	88.5	460	2.1
2	1800	145T	TEFC	7BECP3587T-4	\$1,745	SDM	12.88	73	87.5	460	2.7
3	1800	182T	TEFC	7BECP3661T-4	\$2,207	SDM	15.93	110	89.5	460	4.1
5	1800	184T	TEFC	7BECP3665T-4	\$2,246	SDM	15.93	119	89.5	460	6.6
7.5	1800	213T	TEFC	7BECP3770T-4	\$2,828	SDM	19.5	170	91.7	460	9.5
10	1800	215T	TEFC	7BECP3774T-4	\$3,386	SDM	19.5	211	92.4	460	12.5
15	1800	254T	TEFC	7BECP2333T-4	\$4,315	SDM	24.78	294	92.4	460	18.1
20	1800	256T	TEFC	7BECP2334T-4	\$4,627	SDM	24.78	333	93	460	24
25	1800	284T	TEFC	7BECP4103T-4	\$6,055	SDM	27.93	437	93.6	460	30
30	1800	286T	TEFC	7BECP4104T-4	\$7,189	SDM	27.93	480	93.6	460	38
40	1800	324T	TEFC	7BECP4110T-4	\$9,406	SDM	30.27	626	94.1	460	48
50	1800	326T	TEFC	7BECP4115T-4	\$11,040	SDM	30.27	668	94.5	460	58
60	1800	364T	TEFC	7BECP4314T-4	\$15,761	SDM	33.49	925	95	460	68
75	1800	365T	TEFC	7BECP4316T-4	\$18,134	SDM	33.44	962	95.4	460	84.9
100	1800	405T	TEFC	7BECP4400T-4	\$22,695	SDM	38.32	1296	95.4	460	112
125	1800	444T	TEFC	7BECP4410T-4	\$26,831	SDM	44.75	1950	95.4	460	144
150	1800	445T	TEFC	7BECP4406T-4	\$31,432	SDM	44.75	2190	95.8	460	169
200	1800	447T	TEFC	7BECP4407T-4	\$37,812	SDM	48.24	2545	96.2	460	222
250	1800	449T	TEFC	7BECP4408T-4	\$47,983	SDM	53.24	2981	96.2	460	276

Cast iron frames are shaded.

All ratings are 1.15 service factor at 40°C ambient. All ratings meet 50°C ambient at 1.00 service factor and the intent of IEEE-45 for weather protection.

\*All pricing USD.

## NEMA motor Mod-Express inventory

IEEE 841XL, severe duty, foot mounted

## IP56



### IEEE 841XL, three phase, totally enclosed, foot mounted

#### 1 thru 250 Hp

#### Features:

- Meets and exceeds the requirements of IEEE Std. 841-2021
- Patented PLS lubrication system for bearing longevity
- Inverter ready nameplate
- Meets IEEE 45 on nameplate
- IEEE 841 test report ships with the motor

#### NEMA 143T thru 449T

#### Applications:

- Chemical, oil & gas
- Pulp & paper, forest products
- Metals & foundries
- Cement, aggregate & above ground mining
- Compressors
- Food processing
- Power generation

### Severe duty - 841XL - foot mounted - 2 pole

Power (Hp)	Speed	Frame size	Enclosure	Product ID	List price*	Discounts	C dim.	Aprx. wt. (lbs.)	Full load eff.	Voltage	Full load amps
1	3600	143T	TENV	7BENCP83580T-4	\$1,562	SD8	11.37	56	84	460	1.3
1.5	3600	143T	TEFC	7BEC83583T-4	\$1,760	SD8	12.88	69	85.5	460	2
2	3600	145T	TEFC	7BEC83586T-4	\$1,932	SD8	12.88	59	85.5	460	2.5
3	3600	182T	TEFC	7BEC83660T-4	\$2,303	SD8	15.93	116	88.5	460	3.4
5	3600	184T	TEFC	7BEC83663T-4	\$2,837	SD8	15.93	132	88.5	460	5.7
7.5	3600	213T	TEFC	7BEC83769T-4	\$3,703	SD8	19.5	179	91.7	460	8.6
10	3600	215T	TEFC	7BEC83771T-4	\$3,942	SD8	19.5	225	91	460	11.3
15	3600	254T	TEFC	7BEC82394T-4	\$5,130	SD8	24.78	308	91	460	17
20	3600	256T	TEFC	7BEC84106T-4	\$5,882	SD8	24.78	328	91	460	22
25	3600	284TS	TEFC	7BEC84107T-4	\$7,191	SD8	26.56	490	91.7	460	28
30	3600	286TS	TEFC	7BEC84108T-4	\$8,614	SD8	26.56	442	91.7	460	34
40	3600	324TS	TEFC	7BEC84109T-4	\$11,785	SD8	29.16	626	92.4	460	44
50	3600	326TS	TEFC	7BEC84114T-4	\$12,293	SD8	29.16	623	93	460	55
60	3600	364TS	TEFC	7BEC84310T-4	\$17,743	SD8	31.37	905	95.4	460	65.1
75	3600	365TS	TEFC	7BEC84313T-4	\$20,061	SD8	31.37	976	94.5	460	80.7
100	3600	405TS	TEFC	7BEC84402T-4	\$24,113	SD8	35.31	1277	95	460	110
125	3600	444TS	TEFC	7BEC84412T-4	\$28,200	SD8	40.98	1968	95	460	137
150	3600	445TS	TEFC	7BEC84413T-4	\$32,406	SD8	40.98	2053	95	460	164
200	3600	447TS	TEFC	7BEC84416T-4	\$42,841	SD8	44.48	2433	96.2	460	213
250	3600	449TS	TEFC	7BEC844252T-4	\$69,026	SD8	49.48	2790	96.2	460	266

### Severe duty - 841XL - foot mounted - 4 pole

Power (Hp)	Speed	Frame size	Enclosure	Product ID	List price*	Discount	C dim.	Aprx. wt. (lbs.)	Full load eff.	Voltage	Full load amps
1	1800	143T	TENV	7BENCP83581T-4	\$1,709	SD8	11.37	60	87.5	460	1.5
1.5	1800	145T	TEFC	7BEC83584T-4	\$1,831	SD8	12.87	72.85	88.5	460	2.1
2	1800	145T	TEFC	7BEC83587T-4	\$1,913	SD8	12.87	78	87.5	460	2.7
3	1800	182T	TEFC	7BEC83661T-4	\$2,422	SD8	15.93	116	89.5	460	4.1
5	1800	184T	TEFC	7BEC83665T-4	\$2,468	SD8	15.93	127	89.5	460	6.6
7.5	1800	213T	TEFC	7BEC83770T-4	\$3,109	SD8	19.5	199	91.7	460	9.5
10	1800	215T	TEFC	7BEC83774T-4	\$3,681	SD8	19.5	231	91.7	460	12.2
15	1800	254T	TEFC	7BEC82333T-4	\$4,739	SD8	24.78	322	92.4	460	17.6
20	1800	256T	TEFC	7BEC82334T-4	\$5,124	SD8	24.78	350	93	460	23.1
25	1800	284T	TEFC	7BEC84103T-4	\$6,646	SD8	27.93	526	93.6	460	30
30	1800	286T	TEFC	7BEC84104T-4	\$7,826	SD8	27.93	545	93.6	460	36
40	1800	324T	TEFC	7BEC84110T-4	\$10,420	SD8	30.66	585	94.1	460	46
50	1800	326T	TEFC	7BEC84115T-4	\$12,233	SD8	30.66	800	94.5	460	57
60	1800	364T	TEFC	7BEC84314T-4	\$17,565	SD8	33.49	913	95	460	68
75	1800	365T	TEFC	7BEC84316T-4	\$19,939	SD8	33.49	971	95.4	460	85.9
100	1800	405T	TEFC	7BEC84400T-4	\$25,217	SD8	38.32	1299	95.4	460	112
125	1800	444T	TEFC	7BEC84410T-4	\$28,604	SD8	44.75	2020	95.4	460	144
150	1800	445T	TEFC	7BEC84406T-4	\$33,827	SD8	44.75	2184	95.8	460	169
200	1800	447T	TEFC	7BEC84407T-4	\$40,698	SD8	48.24	2582	96.2	460	222
250	1800	449T	TEFC	7BEC84408T-4	\$51,952	SD8	53.24	2959	96.2	460	276

Cast iron frames are shaded.

All ratings are 1.15 service factor at 40°C ambient. All ratings meet 50°C ambient at 1.00 service factor and the intent of IEEE-45 for weather protection.

\*All pricing USD.

## NEMA motor Mod-Express inventory

## IP56

IEEE 841XL, severe duty, C-face foot mounted



**IEEE 841XL, three phase, totally enclosed, C-face foot mounted**

**1 thru 75 Hp**

**Features:**

- Meets and exceeds the requirements of IEEE Std. 841-2021
- Patented PLS lubrication system for bearing longevity
- Inverter ready nameplate
- Meets IEEE 45 on nameplate
- IEEE 841 test report ships with the motor
- Locked bearing to allow mounting in any configuration

**NEMA 143T thru 365TC**

**Applications:**

- Chemical, oil & gas
- Pulp & paper, forest products
- Metals & foundries
- Cement, aggregate & above ground mining
- Compressors
- Food processing
- Power generation

### Severe duty - 841XL - C-face foot mounted - 2 pole

Power (Hp)	Speed	Frame size	Enclosure	Product ID	List price*	Discounts	C dim.	Aprx. wt. (lbs.)	Full load eff.	Voltage	Full load amps
1	3600	143TC	TENV	7BCENCP83580T-4	\$1,633	SD8	12	61	84	460	1.3
1.5	3600	143TC	TEFC	7BCECP83583T-4	\$1,830	SD8	13.38	71	85.5	460	2
2	3600	145TC	TEFC	7BCECP83586T-4	\$2,007	SD8	13.38	80	85.5	460	2.5
3	3600	182TC	TEFC	7BCECP83660T-4	\$2,439	SD8	16.69	121	88.5	460	3.4
5	3600	184TC	TEFC	7BCECP83663T-4	\$2,964	SD8	16.69	136	88.5	460	5.7
7.5	3600	213TC	TEFC	7BCECP83769T-4	\$3,843	SD8	20.23	179	91.7	460	8.6
10	3600	215TC	TEFC	7BCECP83771T-4	\$4,079	SD8	20.23	225	91	460	11.3
15	3600	254TC	TEFC	7BCECP82394T-4	\$5,578	SD8	25.28	306	91	460	17
20	3600	256TC	TEFC	7BCECP84106T-4	\$6,327	SD8	25.28	328	91	460	22
25	3600	284TSC	TEFC	7BCECP84107T-4	\$8,629	SD8	26.56	433	91.7	460	28
30	3600	286TSC	TEFC	7BCECP84108T-4	\$10,052	SD8	26.56	470	91.7	460	34
40	3600	324TSC	TEFC	7BCECP84109T-4	\$13,368	SD8	29.16	587	92.4	460	44
50	3600	324TSC	TEFC	7BCECP84114T-4	\$13,881	SD8	29.16	670	93	460	55
60	3600	364TSC	TEFC	7BCECP84310T-4	\$19,269	SD8	31.37	899	95	460	65.1
75	3600	365TSC	TEFC	7BCECP84313T-4	\$21,587	SD8	31.37	1007	94.5	460	80.7

### Severe duty - 841XL - C-face foot mounted - 4 pole

Power (Hp)	Speed	Frame size	Enclosure	Product ID	List price*	Discount	C dim.	Aprx. wt. (lbs.)	Full load eff.	Voltage	Full load amps
1	1800	143TC	TENV	7BCENCP83581T-4	\$1,776	SD8	12	64	87.5	460	1.5
1.5	1800	145TC	TEFC	7BCECP83584T-4	\$1,905	SD8	13.38	75	88.5	460	2.1
2	1800	145TC	TEFC	7BCECP83587T-4	\$1,984	SD8	13.38	78	88.5	460	2.8
3	1800	182TC	TEFC	7BCECP83661T-4	\$2,584	SD8	16.69	120	89.5	460	4.1
5	1800	184TC	TEFC	7BCECP83665T-4	\$2,598	SD8	16.69	131	89.5	460	6.6
7.5	1800	213TC	TEFC	7BCECP83770T-4	\$3,291	SD8	20.23	178	91.7	460	9.5
10	1800	215TC	TEFC	7BCECP83774T-4	\$3,978	SD8	20.23	231	91.7	460	12.2
15	1800	254TC	TEFC	7BCECP82333T-4	\$5,446	SD8	25.28	316	92.4	460	17.6
20	1800	256TC	TEFC	7BCECP82334T-4	\$5,762	SD8	25.28	356	93	460	23.1
25	1800	284TC	TEFC	7BCECP84103T-4	\$8,087	SD8	27.93	430	93.6	460	30
30	1800	286TC	TEFC	7BCECP84104T-4	\$9,261	SD8	27.93	465	93.6	460	36
40	1800	324TC	TEFC	7BCECP84110T-4	\$12,004	SD8	30.66	600	94.1	460	46
50	1800	326TC	TEFC	7BCECP84115T-4	\$13,816	SD8	30.66	683	94.5	460	57
60	1800	364TC	TEFC	7BCECP84314T-4	\$19,091	SD8	33.49	906	95	460	68
75	1800	365TC	TEFC	7BCECP84316T-4	\$21,465	SD8	33.49	992	95.4	460	85.9

Cast iron frames are shaded.

All ratings are 1.15 service factor at 40°C ambient. All ratings meet 50°C ambient at 1.00 service factor and the intent of IEEE-45 for weather protection.

\*All pricing USD.

## NEMA motor Mod-Express inventory

## IP56

IEEE 841XL, severe duty, C-face footless



### IEEE 841XL, three phase, totally enclosed, C-face footless

#### 1 thru 20 Hp

#### Features:

- Meets and exceeds the requirements of IEEE Std. 841-2021
- Patented PLS lubrication system for bearing longevity
- Inverter ready nameplate
- Meets IEEE 45 on nameplate
- IEEE 841 test report ships with the motor
- Locked bearing to allow mounting in any configuration

#### NEMA 143TC thru 256TC

#### Applications:

- Chemical, oil & gas
- Pulp & paper, forest products
- Metals & foundries
- Cement, aggregate & above ground mining
- Compressors
- Food processing
- Power generation

#### Severe duty - 841XL - C-face footless - 2 pole

Power (Hp)	Speed	Frame size	Enclosure	Product ID	List price*	Discounts	C dim.	Aprx. wt. (lbs.)	Full load eff.	Voltage	Full load amps
1	3600	143TC	TENV	7BVENC83580T-4	\$1,548	SD8	12	59	84	460	1.3
1.5	3600	143TC	TEFC	7BVECP83583T-4	\$1,812	SD8	14.56	75	85.5	460	2
2	3600	145TC	TEFC	7BVECP83586T-4	\$1,987	SD8	14.56	83	86.5	460	2.4
3	3600	182TC	TEFC	7BVECP83660T-4	\$2,414	SD8	16.69	121	88.5	460	3.4
5	3600	184TC	TEFC	7BVECP83663T-4	\$2,941	SD8	16.69	132	88.5	460	5.6
7.5	3600	213TC	TEFC	7BVECP83769T-4	\$3,794	SD8	20.24	179	91.7	460	8.6
10	3600	215TC	TEFC	7BVECP83771T-4	\$4,029	SD8	20.24	225	91	460	11.3
15	3600	254TC	TEFC	7BVECP82394T-4	\$5,349	SD8	25.28	304	91	460	17
20	3600	256TC	TEFC	7BVECP84106T-4	\$6,097	SD8	25.28	319	91	460	22

#### Severe duty - 841XL - C-face footless - 4 pole

Power (Hp)	Speed	Frame size	Enclosure	Product ID	List price*	Discount	C dim.	Aprx. wt. (lbs.)	Full load eff.	Voltage	Full load amps
1	1800	143TC	TENV	7BVENC83581T-4	\$1,671	SD8	12	63	87.5	460	1.5
1.5	1800	145TC	TEFC	7BVECP83584T-4	\$1,885	SD8	14.56	76	88.5	460	2.1
2	1800	145TC	TEFC	7BVECP83587T-4	\$1,965	SD8	14.56	79	87.5	460	2.7
3	1800	182TC	TEFC	7BVECP83661T-4	\$2,559	SD8	16.69	117	89.5	460	4.1
5	1800	184TC	TEFC	7BVECP83665T-4	\$2,573	SD8	16.69	128	89.5	460	6.6
7.5	1800	213TC	TEFC	7BVECP83770T-4	\$3,241	SD8	20.24	211	91.7	460	9.5
10	1800	215TC	TEFC	7BVECP83774T-4	\$3,928	SD8	20.24	231	91.7	460	12.2
15	1800	254TC	TEFC	7BVECP82333T-4	\$5,215	SD8	25.28	324	92.4	460	17.6
20	1800	256TC	TEFC	7BVECP82334T-4	\$5,528	SD8	25.28	355	93	460	23.1

Cast iron frames are shaded.

All ratings are 1.15 service factor at 40°C ambient. All ratings meet 50°C ambient at 1.00 service factor and the intent of IEEE-45 for weather protection.

\*All pricing USD.



## Division 2 capabilities

The following list of Severe duty motors are marked for Division 2, Class I, Group A,B,C,D for Sine Wave and Inverter Power. They also include Equivalent Zone markings for Class I, Zone 2, Groups IIA, IIB, IIC for Sine Wave and Inverter Power.

Division 2 Temp Codes are provided in the standard format per the NEC Article 500 requirements. Equivalent Zone Temp Codes are provided in the "T=°C" format because NEC Article 505 does not allow all T Codes permitted by NEC 500. Inverter Temp Codes are provided in the "T=°C" format because they apply to both the Equivalent Zone (NEC 505) requirements and NEC 500 requirements. Please reference the following table for Temperature and Temp Code values.

Maximum Surface Temperature	US (NEC 500) CA (CEC Annex J)	US (NEC 505) CA (CEC Section 18)
450° C	T1	T1
300° C	T2	T2
280° C	T2A	-
260° C	T2B	-
230° C	T2C	-
215° C	T2D	-
200° C	T3	T3

Maximum Surface Temperature	US (NEC 500) CA (CEC Annex J)	US (NEC 505) CA (CEC Section 18)
180° C	T3A	-
165° C	T3B	-
160° C	T3C	-
135° C	T4	T4
120° C	T4A	-
100° C	T5	T5
85° C	T6	T6

Catalog Number	Sine Wave, 1.15 S.F.			Inverter Power, 1.0 S.F.		
	Sine Wave Temp Code	Equivalent Zone Temp Code T = °C	Inverter Temp Code T = °C	V.T. Speed Range (Hz)*	C.T. Speed Range (Hz)*	CHP Speed Range (Hz)
CECP2276T	T3C	160°C	180°C	0-60	0-60	60-90
CECP2294T	T3C	160°C	180°C	3-60	6-60	60-90
CECP2332T	T3C	160°C	180°C	0-60	0-60	60-90
CECP2333T	T3C	160°C	180°C	0-60	0-60	60-90
CECP2333T-4	T3C	160°C	180°C	0-60	0-60	60-90
CECP2334T	T3C	160°C	180°C	0-60	0-60	60-90
CECP2334T-4	T3C	160°C	180°C	0-60	0-60	60-90
CECP3581T	T4	135°C	135°C	0-60	0-60	60-90
CECP3582T	T4	135°C	135°C	0-60	0-60	60-90
CECP3584T	T4	135°C	135°C	0-60	0-60	60-90
CECP3587T	T4	135°C	135°C	0-60	0-60	60-90
CECP3660T	T3C	160°C	160°C	3-60	6-60	60-90
CECP3661T	T3C	160°C	160°C	0-60	0-60	60-90
CECP3663T	T3C	160°C	160°C	3-60	6-60	60-90
CECP3664T	T3C	160°C	160°C	0-60	0-60	60-90
CECP3665T	T3C	160°C	160°C	0-60	0-60	60-90
CECP3667T	T3C	160°C	160°C	0-60	0-60	60-90
CECP3764T	T3C	160°C	160°C	0-60	0-60	60-90
CECP3768T	T3C	160°C	160°C	0-60	0-60	60-90
CECP3769T	T3C	160°C	160°C	3-60	6-60	60-90
CECP3770T	T3C	160°C	160°C	0-60	0-60	60-90
CECP3771T	T3C	160°C	160°C	3-60	6-60	60-90
CECP3774T	T3A	180°C	160°C	0-60	0-60	60-90
CECP4100T	T3C	160°C	180°C	0-60	0-60	60-90
CECP4102T	T3C	160°C	180°C	0-60	0-60	60-90
CECP4103T	T3C	160°C	180°C	0-60	0-60	60-90
CECP4103T-4	T3C	160°C	180°C	0-60	0-60	60-90
CECP4104T	T3C	160°C	180°C	0-60	0-60	60-90
CECP4104T-4	T3C	160°C	180°C	0-60	0-60	60-90
CECP4106T	T3	200°C	200°C	0-60	6-60	60-90
CECP4107T	T3	200°C	200°C	3-60	6-60	60-90
CECP4108T	T3	200°C	200°C	3-60	6-60	60-90
CECP4109T	T3	200°C	200°C	3-60	6-60	60-90
CECP4110T	T3	200°C	200°C	0-60	0-60	60-90
CECP4111T	T3	200°C	200°C	0-60	0-60	60-90
CECP4114T	T3	200°C	200°C	3-60	6-60	60-90
CECP4115T	T3	200°C	200°C	0-60	0-60	60-90
CECP4117T	T3	200°C	200°C	0-60	0-60	60-90
CECP4308T	T3A	180°C	180°C	0-60	6-60	60-90

Catalog Number	Sine Wave, 1.15 S.F.			Inverter Power, 1.0 S.F.		
	Sine Wave Temp Code	Equivalent Zone Temp Code T = °C	Inverter Temp Code T = °C	V.T. Speed Range (Hz)*	C.T. Speed Range (Hz)*	CHP Speed Range (Hz)
CECP4310T	T3	200°C	200°C	0-60	6-60	60-75
CECP4312T	T3A	180°C	180°C	0-60	6-60	60-90
CECP4313T	T3	200°C	200°C	0-60	10-60	60-75
CECP4314T	T3	200°C	200°C	0-60	10-60	60-90
CECP4314T-4	T3	200°C	200°C	0-60	10-60	60-90
CECP4314T-5	T3	200°C	200°C	0-60	10-60	60-90
CECP4316T	T3	200°C	200°C	0-60	15-60	60-90
CECP4400T-4	T2D	215°C	215°C	0-60	10-60	60-90
CECP4402T-4	T3	200°C	200°C	0-60	6-60	60-75
CECP4406T-4	T3	200°C	200°C	0-60	15-60	60-90
CECP4407T-4	T3	200°C	200°C	0-60	30-60	60-90
CECP82276T-4	T3C	160°C	180°C	0-60	0-60	60-90
CECP82332T-4	T3C	160°C	180°C	0-60	0-60	60-90
CECP82333T-4	T3C	160°C	180°C	0-60	0-60	60-90
CECP82333T-5	T3C	160°C	180°C	0-60	0-60	60-90
CECP82334T-4	T3C	160°C	180°C	0-60	0-60	60-90
CECP82334T-5	T3C	160°C	180°C	0-60	0-60	60-90
CECP82394T-4	T3C	160°C	180°C	3-60	6-60	60-90
CECP83580T-4	T4	135°C	135°C	3-60	6-60	60-90
CECP83581T-4	T4	135°C	135°C	0-60	0-60	60-90
CECP83581T-5	T4	135°C	135°C	0-60	0-60	60-90
CECP83582T-4	T4	135°C	135°C	0-60	0-60	60-90
CECP83583T-4	T4	135°C	135°C	3-60	6-60	60-90
CECP83584T-4	T4	135°C	135°C	0-60	0-60	60-90
CECP83586T-4	T4	135°C	135°C	3-60	6-60	60-90
CECP83587T-4	T4	135°C	135°C	0-60	0-60	60-90
CECP83587T-5	T4	135°C	135°C	0-60	0-60	60-90
CECP83660T-4	T3C	160°C	160°C	3-60	6-60	60-90
CECP83661T-4	T3C	160°C	160°C	0-60	0-60	60-90
CECP83661T-5	T3C	160°C	160°C	0-60	0-60	60-90
CECP83663T-4	T3C	160°C	160°C	3-60	6-60	60-90
CECP83664T-4	T3C	160°C	160°C	0-60	0-60	60-90
CECP83665T-4	T3C	160°C	160°C	0-60	0-60	60-90
CECP83665T-5	T3C	160°C	160°C	0-60	0-60	60-90
CECP83667T-4	T3C	160°C	160°C	0-60	0-60	60-90
CECP83764T-4	T3C	160°C	160°C	0-60	0-60	60-90
CECP83768T-4	T3C	160°C	160°C	0-60	0-60	60-90
CECP83769T-4	T3C	160°C	160°C	3-60	6-60	60-90
CECP83770T-4	T3C	160°C	160°C	0-60	0-60	60-90

\* 0 Hz = motor slip Hz

## Division 2 capabilities (continued)

Catalog Number	Sine Wave, 1.15 S.F.			Inverter Power, 1.0 S.F.		
	Sine Wave Temp Code	Equivalent Zone Temp Code T = °C	Inverter Temp Code T = °C	V.T. Speed Range (Hz)*	C.T. Speed Range (Hz)*	CHP Speed Range (Hz)
CECP83770T-5	T3C	160°C	160°C	0-60	0-60	60-90
CECP83771T-4	T3C	160°C	160°C	3-60	6-60	60-90
CECP83774T-4	T3C	160°C	160°C	0-60	0-60	60-90
CECP83774T-5	T3C	160°C	160°C	0-60	0-60	60-90
CECP84100T-4	T3C	160°C	180°C	0-60	0-60	60-90
CECP84102T-4	T3C	160°C	180°C	0-60	0-60	60-90
CECP84103T-4	T3C	160°C	180°C	0-60	0-60	60-90
CECP84103T-5	T3C	160°C	180°C	0-60	0-60	60-90
CECP84104T-4	T3C	160°C	180°C	0-60	0-60	60-90
CECP84104T-5	T3C	160°C	180°C	0-60	0-60	60-90
CECP84106T-4	T3	200°C	200°C	3-60	6-60	60-90
CECP84107T-4	T3	200°C	200°C	3-60	6-60	60-90
CECP84108T-4	T3	200°C	200°C	3-60	6-60	60-90
CECP84109T-4	T3	200°C	200°C	3-60	6-60	60-90
CECP84110T-4	T3	200°C	200°C	0-60	0-60	60-90
CECP84110T-5	T3	200°C	200°C	0-60	0-60	60-90
CECP84111T-4	T3	200°C	200°C	0-60	0-60	60-90
CECP84114T-4	T3	200°C	200°C	3-60	6-60	60-90
CECP84115T-4	T3	200°C	200°C	0-60	0-60	60-90
CECP84115T-5	T3	200°C	200°C	0-60	0-60	60-90
CECP84117T-4	T3	200°C	200°C	0-60	0-60	60-90
CECP84308T-4	T3A	180°C	180°C	0-60	6-60	60-90
CECP84310T-4	T3	200°C	200°C	0-60	6-60	60-75
CECP84312T-4	T3A	180°C	180°C	0-60	6-60	60-90
CECP84313T-4	T3	200°C	200°C	0-60	15-60	60-75
CECP84314T-4	T3	200°C	200°C	0-60	10-60	60-90
CECP84316T-4	T3	200°C	200°C	0-60	15-60	60-90
CENCP83580T-4	T3C	160°C	160°C	3-60	6-60	60-90
CENCP83581T-4	T4	135°C	135°C	0-60	0-60	60-90
ECP2276T	T3C	160°C	180°C	0-60	0-60	60-90
ECP2276T-4	T3C	160°C	180°C	0-60	0-60	60-90
ECP2276T-5	T3C	160°C	180°C	0-60	0-60	60-90
ECP2280T-4	T3C	160°C	180°C	0-60	0-60	60-90
ECP2294T	T3C	160°C	180°C	3-60	6-60	60-90
ECP2332T	T3C	160°C	180°C	0-60	0-60	60-90
ECP2332T-4	T3C	160°C	180°C	0-60	0-60	60-90
ECP2332T-5	T3C	160°C	180°C	0-60	0-60	60-90
ECP2333T	T3C	160°C	180°C	0-60	0-60	60-90
ECP2333T-4	T3C	160°C	180°C	0-60	0-60	60-90
ECP2333T-5	T3C	160°C	180°C	0-60	0-60	60-90
ECP2334T	T3C	160°C	180°C	0-60	0-60	60-90
ECP2334T-4	T3C	160°C	180°C	0-60	0-60	60-90
ECP2334T-5	T3C	160°C	180°C	0-60	0-60	60-90
ECP2394T-4	T3C	160°C	180°C	3-60	6-60	60-90
ECP2394T-5	T3C	160°C	180°C	3-60	6-60	60-90
ECP2395T-4	T3	200°C	200°C	3-60	0-60	60-90
ECP2401T-4	T3C	160°C	180°C	0-60	0-60	60-90
ECP2402T-4	T3	200°C	200°C	3-60	0-60	60-90
ECP3580T	T4	135°C	135°C	3-60	6-60	60-90
ECP3580T-4	T4	135°C	135°C	3-60	6-60	60-90
ECP3580T-5	T4	135°C	135°C	3-60	6-60	60-90
ECP3581T	T4	135°C	135°C	0-60	0-60	60-90
ECP3581T-4	T4	135°C	135°C	0-60	0-60	60-90
ECP3581T-5	T4	135°C	135°C	0-60	0-60	60-90
ECP3582T	T4	135°C	135°C	0-60	0-60	60-90
ECP3582T-4	T4	135°C	135°C	0-60	0-60	60-90
ECP3583T	T4	135°C	135°C	3-60	6-60	60-90
ECP3583T-4	T4	135°C	135°C	3-60	6-60	60-90
ECP3584T	T4	135°C	135°C	0-60	0-60	60-90

\* 0 Hz = motor slip Hz

Catalog Number	Sine Wave, 1.15 S.F.			Inverter Power, 1.0 S.F.		
	Sine Wave Temp Code	Equivalent Zone Temp Code T = °C	Inverter Temp Code T = °C	V.T. Speed Range (Hz)*	C.T. Speed Range (Hz)*	CHP Speed Range (Hz)
ECP3584T-4	T4	135°C	135°C	0-60	0-60	60-90
ECP3584T-5	T4	135°C	135°C	0-60	0-60	60-90
ECP3586T	T4	135°C	135°C	3-60	6-60	60-90
ECP3586T-4	T4	135°C	135°C	3-60	3-60	60-90
ECP3587T	T4	135°C	135°C	0-60	0-60	60-90
ECP3587T-4	T4	135°C	135°C	0-60	0-60	60-90
ECP3587T-5	T4	135°C	135°C	0-60	0-60	60-90
ECP3660T	T3C	160°C	160°C	3-60	6-60	60-90
ECP3660T-4	T3C	160°C	160°C	3-60	6-60	60-90
ECP3660T-5	T3C	160°C	160°C	3-60	6-60	60-90
ECP3661T	T3C	160°C	160°C	0-60	0-60	60-90
ECP3661T-4	T3C	160°C	160°C	0-60	0-60	60-90
ECP3661T-5	T3C	160°C	160°C	0-60	0-60	60-90
ECP3663T	T3C	160°C	160°C	3-60	6-60	60-90
ECP3663T-4	T3C	160°C	160°C	3-60	6-60	60-90
ECP3663T-5	T3C	160°C	160°C	3-60	6-60	60-90
ECP3664T	T3C	160°C	160°C	0-60	0-60	60-90
ECP3664T-4	T3C	160°C	160°C	0-60	0-60	60-90
ECP3665T	T3C	160°C	160°C	0-60	0-60	60-90
ECP3665T-4	T3C	160°C	160°C	0-60	0-60	60-90
ECP3665T-5	T3C	160°C	160°C	0-60	0-60	60-90
ECP3667T	T3C	160°C	160°C	0-60	0-60	60-90
ECP3667T-4	T3C	160°C	160°C	0-60	0-60	60-90
ECP3668T-4	T3C	160°C	160°C	0-60	3-60	60-90
ECP3687T-4	T3C	160°C	160°C	0-60	3-60	60-90
ECP3764T	T3C	160°C	160°C	0-60	0-60	60-90
ECP3764T-4	T3C	160°C	160°C	0-60	0-60	60-90
ECP3764T-5	T3C	160°C	160°C	0-60	0-60	60-90
ECP3768T	T3C	160°C	160°C	0-60	0-60	60-90
ECP3768T-4	T3C	160°C	160°C	0-90	0-60	60-90
ECP3768T-5	T3C	160°C	160°C	0-60	0-60	60-90
ECP3769T	T3C	160°C	160°C	3-60	6-60	60-90
ECP3769T-4	T3C	160°C	160°C	3-60	6-60	60-90
ECP3769T-5	T3C	160°C	160°C	3-60	6-60	60-90
ECP3770T	T3C	160°C	160°C	0-60	0-60	60-90
ECP3770T-4	T3C	160°C	160°C	0-60	0-60	60-90
ECP3770T-5	T3C	160°C	160°C	0-60	0-60	60-90
ECP3771T	T3C	160°C	160°C	3-60	6-60	60-90
ECP3771T-4	T3C	160°C	160°C	3-60	6-60	60-90
ECP3771T-5	T3C	160°C	160°C	3-60	6-60	60-90
ECP3772T-4	T3C	160°C	160°C	0-60	0-60	60-90
ECP3774T	T3C	160°C	160°C	0-60	0-60	60-90
ECP3774T-4	T3C	160°C	160°C	0-60	0-60	60-90
ECP3774T-5	T3C	160°C	160°C	0-60	0-60	60-90
ECP3775T-4	T3C	160°C	160°C	0-60	0-60	60-90
ECP4100T	T3C	160°C	180°C	0-60	0-60	60-90
ECP4100T-4	T3C	160°C	180°C	0-60	0-60	60-90
ECP4100T-5	T3C	160°C	180°C	0-60	0-60	60-90
ECP4102T	T3C	160°C	180°C	0-60	0-60	60-90
ECP4102T-4	T3C	160°C	180°C	0-60	0-60	60-90
ECP4102T-5	T3C	160°C	180°C	0-60	0-60	60-90
ECP4103T	T3C	160°C	180°C	0-60	0-60	60-90
ECP4103T-4	T3C	160°C	180°C	0-60	0-60	60-90
ECP4103T-5	T3C	160°C	180°C	0-60	0-60	60-90
ECP4104T	T3C	160°C	180°C	0-60	0-60	60-90
ECP4104T-4	T3C	160°C	180°C	0-60	0-60	60-90
ECP4104T-5	T3C	160°C	180°C	0-60	0-60	60-90

## Division 2 capabilities (continued)

Catalog Number	Sine Wave, 1.15 S.F.			Inverter Power, 1.0 S.F.		
	Sine Wave Temp Code	Equivalent Zone Temp Code T = °C	Inverter Temp Code T = °C	V.T. Speed Range (Hz)*	C.T. Speed Range (Hz)*	CHP Speed Range (Hz)
ECP4106T	T3	200°C	200°C	3-60	6-60	60-90
ECP4106T-4	T3	200°C	200°C	3-60	6-60	60-90
ECP4106T-5	T3	200°C	200°C	3-60	6-60	60-90
ECP4107T	T3	200°C	200°C	3-60	6-60	60-90
ECP4107T-4	T3	200°C	200°C	3-60	6-60	60-90
ECP4108T	T3	200°C	200°C	3-60	6-60	60-90
ECP4108T-4	T3	200°C	200°C	3-60	6-60	60-90
ECP4109T	T3	200°C	200°C	3-60	6-60	60-90
ECP4109T-4	T3	200°C	200°C	3-60	6-60	60-90
ECP4110T	T3	200°C	200°C	0-60	0-60	60-90
ECP4110T-4	T3	200°C	200°C	0-60	0-60	60-90
ECP4110T-5	T3	200°C	200°C	0-60	0-60	60-90
ECP4111T	T3	200°C	200°C	0-60	0-60	60-90
ECP4111T-4	T3	200°C	200°C	0-60	0-60	60-90
ECP4111T-5	T3	200°C	200°C	0-60	0-60	60-90
ECP4112T-4	T3	200°C	200°C	3-60	6-60	60-90
ECP4113T-4	T3	200°C	200°C	0-60	6-60	60-90
ECP4114T	T3	200°C	200°C	3-60	6-60	60-90
ECP4114T-4	T3	200°C	200°C	3-60	6-60	60-90
ECP4115T	T3	200°C	200°C	0-60	0-60	60-90
ECP4115T-4	T3	200°C	200°C	0-60	0-60	60-90
ECP4115T-5	T3	200°C	200°C	0-60	0-60	60-90
ECP4117T	T3	200°C	200°C	0-60	0-60	60-90
ECP4117T-4	T3	200°C	200°C	0-60	0-60	60-90
ECP4117T-5	T3	200°C	200°C	0-60	1-60	60-90
ECP4124T-4	T3	200°C	200°C	3-60	6-60	60-90
ECP4308T	T3A	180°C	180°C	0-60	6-60	60-90
ECP4308T-4	T3A	180°C	180°C	0-60	6-60	60-90
ECP4308T-5	T3A	180°C	180°C	0-60	6-60	60-90
ECP4310T	T3	200°C	200°C	0-60	6-60	60-75
ECP4310T-4	T3	200°C	200°C	0-60	6-60	60-75
ECP4312T	T3A	180°C	180°C	0-60	6-60	60-90
ECP4312T-4	T3A	180°C	180°C	0-60	6-60	60-90
ECP4313T	T3	200°C	200°C	0-60	10-60	60-75
ECP4313T-4	T3	200°C	200°C	0-60	10-60	60-75
ECP4313T-5	T3	200°C	200°C	0-60	10-60	60-75
ECP4314T	T3	200°C	200°C	0-60	10-60	60-90
ECP4314T-4	T3	200°C	200°C	0-60	10-60	60-90
ECP4314T-5	T3	200°C	200°C	0-60	10-60	60-90
ECP4315T-4	T3C	160°C	180°C	0-60	6-60	60-90
ECP4316T	T3	200°C	200°C	0-60	30-60	60-90
ECP4316T-4	T3	200°C	200°C	0-60	30-60	60-90
ECP4316T-5	T3	200°C	200°C	0-60	30-60	60-90
ECP4316TR-4	T3	200°C	200°C	0-60	30-60	60-90
ECP4400T-4	T2D	215°C	215°C	0-60	10-60	60-90
ECP4400T-5	T2D	215°C	215°C	0-60	10-60	60-90
ECP4400TR-4	T2D	215°C	215°C	0-60	10-60	60-90
ECP4400TS-4	T2D	215°C	215°C	0-60	10-60	60-90
ECP4402T	T3	200°C	200°C	0-60	6-60	60-75
ECP4402T-4	T3	200°C	200°C	0-60	6-60	60-75
ECP4403T	T3A	180°C	180°C	0-60	6-60	60-90
ECP4403T-4	T3A	180°C	180°C	0-60	6-60	60-90
ECP4403TR-4	T3	200°C	200°C	0-60	10-60	60-90
ECP4404T	T3	200°C	200°C	0-60	10-60	60-90
ECP4404T-4	T3	200°C	200°C	0-60	10-60	60-90
ECP4404T-5	T3	200°C	200°C	0-60	10-60	60-90
ECP4404TR-4	T3	200°C	200°C	0-60	10-60	60-90
ECP4406T-4	T3	200°C	200°C	0-60	15-60	60-90
ECP4406T-5	T3	200°C	200°C	0-60	15-60	60-90

Catalog Number	Sine Wave, 1.15 S.F.			Inverter Power, 1.0 S.F.		
	Sine Wave Temp Code	Equivalent Zone Temp Code T = °C	Inverter Temp Code T = °C	V.T. Speed Range (Hz)*	C.T. Speed Range (Hz)*	CHP Speed Range (Hz)
ECP4406TR-4	T3	200°C	200°C	0-60	15-60	60-90
ECP4407T-4	T3	200°C	200°C	0-60	30-60	60-90
ECP4407T-5	T3	200°C	200°C	0-60	30-60	60-90
ECP4407TR-4	T3	200°C	200°C	0-60	30-60	60-90
ECP4407TS-4	T3	200°C	200°C	0-60	30-60	60-90
ECP4408T-4	T3	200°C	200°C	0-60	30-60	60-90
ECP4408TR-4	T3	200°C	200°C	0-60	30-60	60-90
ECP4409T-4	T3	200°C	200°C	0-60	15-60	60-90
ECP4409TR-4	T3	200°C	200°C	0-60	15-60	60-90
ECP4410T-4	T3	200°C	200°C	0-60	10-60	60-90
ECP4410T-5	T3	200°C	200°C	0-60	10-60	60-90
ECP4410TR-4	T3	200°C	200°C	0-60	10-60	60-90
ECP4411T-4	T3	200°C	200°C	0-60	15-60	60-90
ECP4411T-5	T3	200°C	200°C	0-60	15-60	60-90
ECP4411TR-4	T3	200°C	200°C	0-60	15-60	60-90
ECP4412T	T3	200°C	200°C	0-60	15-60	60-75
ECP4412T-4	T3	200°C	200°C	0-60	15-60	60-75
ECP4413T-4	T3	200°C	200°C	0-60	10-60	60-75
ECP44156T-4	T3	200°C	200°C	0-60	15-60	60-90
ECP44156TR-4	T3	200°C	200°C	0-60	15-60	60-90
ECP4416T-4	T3	200°C	200°C	0-60	30-60	60-75
ECP4417T-4	T3C	160°C	200°C	3-60	6-60	60-90
ECP4418T-4	T3A	180°C	180°C	0-60	6-60	60-90
ECP4419T-4	T3	200°C	200°C	0-60	10-60	60-90
ECP44206T-4	T3	200°C	200°C	0-60	30-60	60-90
ECP44206TR-4	T3	200°C	200°C	0-60	30-60	60-90
ECP4420T-4	T3	200°C	200°C	0-60	15-60	60-90
ECP4421T-4	T3	200°C	200°C	0-60	30-60	60-90
ECP4422T-4	T3	200°C	200°C	0-60	15-60	60-90
ECP4423T-4	T2C	230°C	230°C	0-60	30-60	60-90
ECP44252T-4	T2C	230°C	230°C	0-60	30-60	60-75
ECP44256T-4	T2C	230°C	230°C	0-60	30-60	60-90
ECP44256TR-4	T2C	230°C	230°C	0-60	30-60	60-90
ECP44302T-4	T2C	230°C	230°C	0-60	30-60	60-75
ECP44304T-4	T2C	230°C	230°C	0-60	30-60	60-90
ECP44304TR-4	T2C	230°C	230°C	0-60	30-60	60-90
ECP44352T-4	T2C	230°C	230°C	0-60	30-60	60-75
ECP44402T-4	T2C	230°C	230°C	0-60	30-60	60-75
ECP49306T-4	T2C	230°C	230°C	0-60	30-60	60-90
ECP49308T-4	T2A	280°C	280°C	6-60	30-60	60-75
ECP49258T-4	T2C	230°C	260°C	6-60	30-60	60-90
ECP49354T-4	T2C	230°C	230°C	0-60	30-60	60-90
ECP49404T-4	T2C	230°C	230°C	0-60	30-60	60-90
ECP62333TR-4	T3C	160°C	180°C	0-60	0-60	60-90
ECP62334TR-4	T3C	160°C	180°C	0-60	0-60	60-90
ECP63665T-4	T3C	160°C	160°C	0-60	0-60	60-90
ECP63770TR-4	T3C	160°C	160°C	0-60	0-60	60-90
ECP63774TR-4	T3C	160°C	160°C	0-60	0-60	60-90
ECP64103TR-4	T3C	160°C	180°C	0-60	0-60	60-90
ECP64104TR-4	T3C	160°C	180°C	0-60	0-60	60-90
ECP64110TR-4	T3	200°C	200°C	0-60	0-60	60-90
ECP64115TR-4	T3	200°C	200°C	0-60	0-60	60-90
ECP64314TR-4	T3	200°C	200°C	0-60	10-60	60-90
ECP64316TR-4	T3	200°C	200°C	0-60	15-60	60-90
ECP82276T-4	T3C	160°C	180°C	0-60	0-60	60-90
ECP82276T-5	T3C	160°C	180°C	0-60	0-60	60-90
ECP82332T-4	T3C	160°C	180°C	0-60	0-60	60-90

\* 0 Hz = motor slip Hz

## Division 2 capabilities (continued)

Catalog Number	Sine Wave, 1.15 S.F.			Inverter Power, 1.0 S.F.		
	Sine Wave Temp Code	Equivalent Zone Temp Code T = °C	Inverter Temp Code T = °C	V.T. Speed Range (Hz)*	C.T. Speed Range (Hz)*	CHP Speed Range (Hz)
ECP844156TR-4	T3	200°C	200°C	0-60	15-60	60-90
ECP844156TR-5	T3	200°C	200°C	0-60	15-60	60-90
ECP84416T-4	T3	200°C	200°C	0-60	30-60	60-75
ECP84416T-5	T2C	230°C	230°C	0-60	30-60	60-75
ECP844206T-4	T3	200°C	200°C	0-60	30-60	60-90
ECP844206TR-4	T3	200°C	200°C	0-60	30-60	60-90
ECP844206TR-5	T3	200°C	200°C	0-60	30-60	60-90
ECP844252T-4	T2D	215°C	215°C	0-60	30-60	60-75
ECP844252T-5	T2C	230°C	230°C	0-60	30-60	60-75
ECP844256T-4	T2D	215°C	215°C	0-60	30-60	60-90
ECP844256TR-4	T2D	215°C	215°C	0-60	30-60	60-90
ECP844256TR-5	T2D	215°C	215°C	0-60	30-60	60-90
ECP844306T-4	T2C	230°C	230°C	0-60	30-60	60-90
ECP844306TR-4	T2C	230°C	230°C	0-60	30-60	60-90
ECP844306TR-5	T2C	230°C	230°C	0-60	30-60	60-90
ENCP3580T-4	T3C	160°C	160°C	3-60	6-60	60-90
ENCP3581T-4	T4	135°C	135°C	0-60	0-60	60-90
ENCP83580T-4	T3C	160°C	160°C	3-60	6-60	60-90
ENCP83581T-4	T4	135°C	135°C	0-60	0-60	60-90
VECP2276T	T3C	160°C	180°C	0-60	0-60	60-90
VECP2332T	T3C	160°C	180°C	0-60	0-60	60-90
VECP2333T	T3C	160°C	180°C	0-60	0-60	60-90
VECP2333T-4	T3C	160°C	180°C	0-60	0-60	60-90
VECP2334T	T3C	160°C	180°C	0-60	0-60	60-90
VECP2334T-4	T3C	160°C	180°C	0-60	0-60	60-90
VECP3580-4	T4	135°C	135°C	3-60	6-60	60-90
VECP3581	T4	135°C	135°C	0-60	0-60	60-90
VECP3581-4	T4	135°C	135°C	0-60	0-60	60-90
VECP3581T	T4	135°C	135°C	0-60	0-60	60-90
VECP3581T-4	T4	135°C	135°C	0-60	0-60	60-90
VECP3582T	T4	135°C	135°C	0-60	0-60	60-90
VECP3583T-4	T4	135°C	135°C	3-60	6-60	60-90
VECP3584T	T4	135°C	135°C	0-60	0-60	60-90
VECP3584T-4	T4	135°C	135°C	0-60	0-60	60-90
VECP3586T-4	T4	135°C	135°C	3-60	6-60	60-90
VECP3587T	T4	135°C	135°C	0-60	0-60	60-90
VECP3587T-4	T4	135°C	135°C	0-60	0-60	60-90
VECP3660T-4	T3C	160°C	160°C	0-60	6-60	60-90
VECP3661T	T3C	160°C	160°C	0-60	0-60	60-90
VECP3661T-4	T3C	160°C	160°C	0-60	0-60	60-90
VECP3663T-4	T3C	160°C	160°C	3-60	6-60	60-90
VECP3664T	T3C	160°C	160°C	0-60	0-60	60-90
VECP3665T	T3C	160°C	160°C	0-60	0-60	60-90
VECP3665T-4	T3C	160°C	160°C	0-60	0-60	60-90
VECP3667T	T3C	160°C	160°C	0-60	0-60	60-90
VECP3764T	T3C	160°C	160°C	0-60	0-60	60-90
VECP3768T	T3C	160°C	160°C	0-60	0-60	60-90
VECP3769T-4	T3C	160°C	160°C	3-60	6-60	60-90
VECP3770T	T3C	160°C	160°C	0-60	0-60	60-90
VECP3770T-4	T3C	160°C	160°C	0-60	0-60	60-90
VECP3771T-4	T3C	160°C	160°C	3-60	6-60	60-90
VECP3774T	T3C	160°C	160°C	0-60	0-60	60-90
VECP3774T-4	T3C	160°C	160°C	0-60	0-60	60-90
VECP4100T	T3C	160°C	180°C	0-60	0-60	60-90
VECP4102T	T3C	160°C	180°C	0-60	0-60	60-90
VECP4103T	T3C	160°C	180°C	0-60	0-60	60-90
VECP4111T	T3	200°C	200°C	0-60	0-60	60-90
VECP82333T-4	T3C	160°C	180°C	0-60	0-60	60-90
VECP82334T-4	T3C	160°C	180°C	0-60	0-60	60-90

\* 0 Hz = motor slip Hz

Catalog Number	Sine Wave, 1.15 S.F.			Inverter Power, 1.0 S.F.		
	Sine Wave Temp Code	Equivalent Zone Temp Code T = °C	Inverter Temp Code T = °C	V.T. Speed Range (Hz)*	C.T. Speed Range (Hz)*	CHP Speed Range (Hz)
VECP82394T-4	T3C	160°C	180°C	0-60	6-60	60-90
VECP83583T-4	T4	135°C	135°C	3-60	6-60	60-90
VECP83584T-4	T4	135°C	135°C	0-60	0-60	60-90
VECP83586T-4	T4	135°C	135°C	3-60	6-60	60-90
VECP83587T-4	T4	135°C	135°C	0-60	0-60	60-90
VECP83660T-4	T3C	160°C	160°C	3-60	6-60	60-90
VECP83661T-4	T3C	160°C	160°C	0-60	0-60	60-90
VECP83663T-4	T3C	160°C	160°C	3-60	6-60	60-90
VECP83665T-4	T3C	160°C	160°C	0-60	0-60	60-90
VECP83769T-4	T3C	160°C	160°C	3-60	6-60	60-90
VECP83770T-4	T3C	160°C	160°C	0-60	0-60	60-90
VECP83771T-4	T3C	160°C	160°C	3-60	6-60	60-90
VECP83774T-4	T3C	160°C	160°C	0-60	0-60	60-90
VECP84106T-4	T3	200°C	200°C	3-60	6-60	60-90
VENCP83580T-4	T3C	160°C	160°C	3-60	6-60	60-90
VENCP83581T-4	T4	135°C	135°C	0-60	0-60	60-90

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# Variable Speed AC motors

## Capabilities



### **Inverter Duty, Vector Duty, V\*S Master® and RPMAC motors**

Inverter Duty, Vector Duty, V\*S Master and RPMAC Motors exceed all requirements of NEMA MG-1 Parts 30 and 31 for AC induction motors powered from adjustable speed inverter control. Satisfactory motor performance depends on proper drive setup.

### **Super-E® motors**

Super-E motors are inverter-ready and meet NEMA MG 1 Part 31.4.4.2. Super-E motors are suitable for use with inverter drives. Motor inverter setup is unique to each specific application. Proper setup and wiring procedures must be closely followed.

### **Application considerations**

It is necessary that motor-drive applications are commissioned by persons familiar with the operation and setup of adjustable speed drives, applicable electrical codes and any other regulations.

Each drive must be tuned to the motor for the specific application. System operating parameters must be checked, including voltage at motor power leads, to insure that motor/drive setup has been successfully completed. Applications that are not properly setup can lead to substandard performance and failure of system components. In some installations, shaft grounding and isolated bearings may prevent bearing fluting and are available as an option or through Mod Express®.

Reference the chart below for constant torque and variable torque capabilities for each product family. Torque performance depends upon proper drive setup. Motors 48 body style and smaller are suitable for maximum 230V inverter operation.

### **Efficiency savings**

Significant energy savings can be achieved when applying inverter ready motors such as the Baldor-Reliance Super-E to centrifugal load applications (fan and centrifugal pump) and running at reduced speed taking advantage of the affinity laws where motor load and corresponding energy consumption is reduced by the cube of the speed.



# Cooling tower motor inventory

## CTDD, cooling tower direct drive



### CTDD, three phase, totally enclosed, vertical shaft up

#### 180 thru 3285 Nm

#### Features:

- Increased efficiency and power factor performance
- Operates at optimal system efficiency point with variable speed control
- Increased system reliability with fewer mechanical parts
- Simplified installation or retrofit with gearbox foot print
- Replaces high maintenance conventional gear and belt drive arrangements
- Quieter operation than conventional motor/gearbox system

#### Frame FL2562–FL4058

#### Applications:

- Wet and dry cooling towers
- Air cooled condensers
- Air cooled heat exchangers

#### Common Industries:

- HVAC
- Chemical oil & gas
- Power generation

### CTDD - Cooling Tower Direct Drive - 400V

Power (kW)	Speed	Frame size	Enclosure	Product ID	List Price*	Discount	D/S#	Aprx wt (kg)	Shaft "D" (mm)	Shaft "E" (mm)	Shaft "DB"
10.1	530	FL2562	TEAO	7BDDCTRPM2504	\$10,512	SD8	617549-503	195	45	180	M16-2
13.8	500.4	FL2570	TEAO	7BDDCTRPM2505	\$14,085	SD8	617549-504	230	45	180	M16-2
18.3	504	FL2578	TEAO	7BDDCTRPM2506	\$16,719	SD8	617549-505	260	45	180	M16-2
21.1	438.3	FL2882	TEAO	7BDDCTRPM2804	\$19,954	SD8	617557-503	315	60	210	M20-2.5
23.1	382.5	FL2890	TEAO	7BDDCTRPM2805	\$22,171	SD8	617557-504	355	60	210	M20-2.5
22.8	305.4	FL2898	TEAO	7BDDCTRPM2806	\$23,996	SD8	617557-505	390	60	210	M20-2.5
33.1	285	FL3213	TEAO	7BDDCTRPM3202	\$26,894	SD8	619668-504	725	60	210	M20-2.5
46	256.2	FL3614	TEAO	7BDDCTRPM3602	\$32,038	SD8	619666-504	850	75	210	M20-2.5
56.4	229.5	FL4034	TEAO	7BDDCTRPM4004	\$35,526	SD8	619664-504	980	75	210	M20-2.5
74.1	250.5	FL4046	TEAO	7BDDCTRPM4005	\$38,993	SD8	619664-505	1100	75	210	M20-2.5
78.3	227.9	FL4058	TEAO	7BDDCTRPM4006	\$42,481	SD8	619664-506	1220	75	210	M20-2.5

Motors must be modified to its required nominal rating (Power and Speed). Please use Variant Code VC002.

\*All pricing USD.

# Variable Speed AC motors

## Capabilities

Family	Enclosure	Frame size	Constant torque	Variable torque	Comments
<b>Super-E motors 230, 460 and 575 volts (2)</b>					
7BEM	TEFC	56 - 210 (1)	20:1	20:1	General purpose premium efficient
		250 - 320	10:1	20:1	
		360 - 400	4:1	20:1	
		444 - 449	2:1	20:1	
7BEM	ODP	56 - 210 (1)	2:1	20:1	General purpose premium efficient
		250 - 320	2:1	20:1	
		360 - 449	2:1	20:1	
7BECP/XEX and 7BECP8/841XL (3)	TEFC	Please refer to the severe duty section.		Severe duty premium efficient	
7BEWDM	TENV,TEFC	56 - 256 (1)	20:1	20:1	Washdown duty premium efficient
7BESS/SSE	TEFC	56 - 250	2:1	10:1	Stainless steel washdown duty
	TENV	56 - 140	4:1	10:1	
<b>Standard-E motors 230/460 and 575V (2) (3)</b>					
7BM (TEFC)		56 - 326T frames (1)	4:1	20:1	General purpose motors
		360T - 449T	2:1	20:1	
7BM (ODP)		56 - 326T frames (1)	4:1	20:1	
		360T - 449T	2:1	20:1	
7BCP/XT		145T frames	4:1	20:1	Severe duty
		180T - 445T frames	2:1	20:1	
		447T - 449T frames	2:1	20:1	
7BWDM		56 - 215T frames (1)	4:1	20:1	Washdown duty
<b>Inverter duty and vector duty motors 230, 460 and 575 volts</b>					
7BIDCSWDM	TENV	56 - 140	5:1	10:1	Inverter duty, paint free
7BIDCSWDM	TEFC	56 - 215	3:1	10:1	Inverter duty, paint free
7BIDM	TEBC	143 - 5009	1000:1	1000:1	Inverter duty, blower cooled
7BIDNM	TENV	143 - 256	1000:1	1000:1	Inverter duty, totally enclosed non-ventilated
7BZDM	TEBC	143 - 5009	1000:1	1000:1	Vector duty, blower cooled
7BZDNM	TENV	143 - 256	1000:1	1000:1	Vector duty, non-ventilated
7BIDX	TEXP	182 - 405	2:1	10:1	Inverter duty, explosion proof
(2 families)		56 - 405	10:1	10:1	
7BIDWNM	TENV	143 - 254	1000:1	1000:1	Inverter duty, washdown, non-ventilated
7BZDWNM	TENV	143 - 254	1000:1	1000:1	Vector duty, washdown, non-ventilated
<b>V*S master motors 230 &amp; 460 volts</b>					
7BIDNVSM	TENV	56 - 256	1000:1	1000:1	Inverter duty, TENV, V*S master
7BIDVSM	TEFC	182 - 449	1000:1	1000:1	Inverter duty, TEFC, V*S master
7BZDNVSM	TENV	56 - 256	1000:1	1000:1	Vector duty, TENV, V*S master
7BZDVSM	TEFC	182 - 449	1000:1	1000:1	Vector duty, TEFC, V*S master
7BZDVSCP	TEFC-XT	143 - 326	1000:1	1000:1	Vector duty, TEFC-XT, V*S master
<b>RPMAC motors 230 &amp; 460</b>					
7BIDRPMN	TENV	FL180 - FL210	1000:1	1000:1	Inverter duty, TENV, RPMAC
7BIDRPMN	TEFC, TEBC, DPG-FV	FL180 - FL440	1000:1	1000:1	Inverter duty, TEFC, TEBC, DPG-FV, RPMAC
7BZDNRPM	TENV	FL180 - FL210	1000:1	1000:1	Vector duty, TENV, RPMAC
7BZDRPM	TEFC, TEBC	FL180 - L400	1000:1	1000:1	Vector duty, TEFC & TEBC, RPMAC
7BZDPM	TEBC	FL180 - FL440	1000:1	1000:1	Vector duty, TEBC, PM, RPMAC

(1) Baldor-Reliance type 35M frames and larger

(2) For greater speed range capabilities, please select an Inverter Duty, Vector Duty, V\*S Master or RPM AC type motor, or contact your local Regional Sales Office for a custom motor design.

(3) Standard-E EPC efficient motors are suitable for use in adjustable speed applications per NEMA MG 1 Part 30.

# NEMA motor Mod-Express

## Motors used outside of the United States

### Use of Baldor-Reliance motors outside of North America

ABB is capable of supplying a wide range of electric motors suitable for use throughout the world. Both NEMA and IEC designs are available in a wide range of voltages, frequencies, mountings and certifications.

Compliance is not only about a regulated efficiency level to comply with MEPS but in many countries the motors must be certified and show a specific marking or documentation to allow importation and use. Such certification may be testing for efficiency in approved labs within that country. Usually these tests are done by spec and not for a wide ranging family. To avoid later confusion, addressing compliance needs and certifications should be done during the quote process, not after.

Please feel free to contact your local ABB Sales office for assistance in determining what needs to be done to make your export motor compliant.

### 60 Hz Motors marked with 50 Hz data

Certain Baldor-Reliance motors may have secondary 50 Hz nameplate data either at rated or reduced output power. Since most motors in this catalog are designed as 230/460 V, 60 Hz, on 50 Hz many of these motors are rated as 190/380 V. The efficiency on such motors is usually lower on 50 Hz than on 60 Hz and may not be compliant in all countries. Just because these motors are 50 Hz, they may not be CE compliant.

Please feel free to contact your local ABB Sales Office for assistance in determining what needs to be done to make your export motor CE compliant.

### European Union (EU) – CE compliance

The EU ErP Directive, Regulation 640/2009 mandates 7.5 – 375 kW (10-500 Hp 2, 4, and 6-pole low voltage motors (up to 1000 V) sold for use in Europe should be marked with IE3 efficiency level as of January 1, 2015. As of January 1, 2017, motors from 0.75 – 370 kW (1-500 Hp) will need to be IE3. Additionally the motors need to have a CE mark. There is no formal registration process for motors sold for use in the EU.

IE2 motors are still allowed to be sold if used with an adjustable speed drive. These motors will have a sticker stating that it must be used with a drive. Again, the CE mark is required.

Intermittent duty (S2-S8), Brake motors, explosion-proof motors, 8-pole & slower and motors designed only for use with variable speed drives are exempt. Also motors with certain ambient and altitude marking may be exempt from EU regulations.

Note that specific motor construction and marking requirements beyond the motor efficiency level are required for CE compliance. These include nameplate markings, which IEC standards are referenced for compliance, earth ground symbol, IEC lead marking, half and three quarter efficiency levels and more

Please feel free to contact your local ABB Sales Office for assistance in determining what needs to be done to make your export motor CE compliant.

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# NEMA motor Mod-Express

## Ordering information

Motors made for sale in the U.S. must comply with the Small Motor Rule and the Integral Horsepower Rule (10 CFR 431) including those modified from stock. After any modification, the motor must comply with the minimum efficiency levels if the motor is sold for use in the United States.

Motors sold for use in Canada must comply with the applicable regulations such as Natural Resources Canada if used in that country. Motors sold through distribution into Mexico must be registered and comply with NOM ANCE standards. Motors modified and sold for use in Europe must comply with CE for efficiency and other markings. Other countries have their own specific requirements and certifications for those specific countries.

To order, specify the catalog number of the stock product and the MOD number. Use the motor discount for the motor. All modifications should be priced using the modification list price, applying the appropriate multiplier symbol for the motor. Lead times indicated are subject to availability of stock motors in the Menden Warehouses.

Note: Some modifications do not apply to explosion-proof motors. Contact ABB for Approval.

Modifications for the 449T frame 2300 Volt and above as well as the 5008-5810 frame motors have been specifically created for the General Purpose Motor (GPM) product family of Large AC TEFC motors. Factory modifications are not available for the 450 and 500 IEC frame sizes in the GPM product. Some of the modifications may be used on the Severe Duty or Ammonia Compressor ODP products, however please check with the factory prior to order entry to ensure availability of required modification.

### **Mod-Express cancellation policy**

Should it be necessary to cancel an order for a motor after it is modified, but before it ships – a cancellation charge of double the modification charge will be invoiced to the customer. Any MOD order canceled before modification is completed is subject to 25% cancellation charge.

Once shipped, modified motors returned at purchaser's expense will be invoiced at double the MOD fee plus 10% restock fee.

Note: Mod Express for RPM AC, RPM III DC and V\*S Master is available. Contact your local ABB Sales Office for details.

Some modifications cannot be performed on UL, CSA, or UL/CSA Certified Grinders, Buffers, or Belt Sanders without voiding the Certification. In such instances, the Certification Mark(s) would need to be removed. Please contact your ABB representative.

### **Note**

All lead times indicated are subject to availability of stock motors and parts in the Menden warehouse. Please check stock availability before quoting lead time.

Some conversions may not be allowed if they result in a change of operating parameters that affect efficiency or change the EISA or NRCan classification of compliant motors.

Modification prices do not include the cost of the motor, speed reducer, etc.

# NEMA motor Mod-Express

<b>Variant code</b>	<b>Mod-Express Europe</b>	<b>Page no.</b>
<b>Bearings</b>		<b>24</b>
VC701	Add ceramic bearings NEMA 254TT through 449T	
<b>Conduit box</b>		<b>24</b>
VC468	Rotate conduit box lead opening to drive end	
VC469	Rotate conduit box lead opening to opposite drive end	
VC345	Rotate conduit box lead opening to top	
VC418	Add conduit box for thermostat or heater leads	
<b>Drains</b>		<b>25</b>
VC448	Install one stainless steel "T" drain in each end bracket in existing hole	
<b>Drip covers</b>		<b>25</b>
VC005	Install drip cover on TEFC or ODP	
<b>Export packaging</b>		<b>25</b>
VC531	totally enclosed crate packaging	
<b>Grounding screw</b>		<b>26</b>
VC067	Add grounding screw on endplate	
<b>Mounting</b>		<b>26</b>
VC180	Convert mounting configuration for cast iron motor	
<b>Nameplate</b>		<b>27</b>
VC161	Provide auxiliary data plate for remote mounting	
VC002	Replace or add customer nameplate	
VC098	Stainless steel auxiliary data plate	
VC346	Replace with CE marked nameplate	
<b>Paint</b>		<b>27</b>
VC114	Paint motor to customer color	
<b>Space heaters</b>		<b>28</b>
VC450	Add 115V space heaters	
VC451	Add 230V space heaters	
VC357	Add 460V space heaters	
<b>Terminal block</b>		<b>28</b>
VC344	Install terminal block in conduit box and connect leads	
<b>Thermistor</b>		<b>29</b>
VC436	Add winding thermistors to motor	
<b>Thermostats</b>		<b>29</b>
VC122	Add thermostats to motor	
<b>Tropicalization</b>		<b>29</b>
VC347	Protection of winding and mechanical parts. Protection from tropical environment	



## Motor Mod Express®

Modification number	Motor Mod Express® description and list price	Working days required
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### Bearings

VC701	<b>Add isolated bearing NEMA 254T through NEMA 449T</b> (SKF insocoat or equivalent), ODE bearing only	2 DAYS
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NEMA frame	List price *
254T - 256T	\$2336
284T - 286T	\$2932
324T - 326T	\$3268
364T - 365T	\$3386
404T - 405T	\$3544
444T - 445T	\$3704
447T - 449T	\$6348

### Conduit box

**Rotate conduit box lead opening**  
List price per motor \$294\*

VC468	<b>Rotate conduit box lead opening to drive end</b> Not available on steel band motors	2 DAYS
VC469	<b>Rotate conduit box lead opening to opposite drive end</b> Not available on steel band motors.	2 DAYS
VC345	<b>Rotate conduit box lead opening to top</b>	2 DAYS
VC418	<b>Add conduit box for thermostat or heater leads</b> Not for explosion proof motors	Contact your local sales office

NEMA frame	List price * (per motor)
56 - 145T	\$882
182 - 215T	\$1030
254 - 365T	\$1556
404 - 449T	\$1968

\*All pricing USD.

## Motor Mod Express®

Modification number	Motor Mod Express® description and list price	Working days required
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### Drains

VC448

#### Install "T" drain

2 DAYS

Install one stainless steel "T" drain in each end bracket in existing hole. Not required on severe duty or IEEE 841 motors

#### Does not apply to Explosion-proof motors

NEMA frame	List price * (per motor)
56 - 215T	\$446
254T - 326T	Not required
364T - 449T	\$606

### Drip covers

VC005

#### Install dripcover on TEFC or ODP

2 DAYS

NEMA frame	List price * (per motor)
48 - 145T	\$294
182 - 184T	\$316
213 - 215T	\$352
254 - 256T	\$404
284 - 286T	\$488
324 - 326T	\$540
364 - 365T	\$976
404 - 405T	\$976
444 - 449T	\$1384

### Export packaging

VC531

#### Totally enclosed crate packaging

8 DAYS

Replace standard motor packaging with enclosed crate. For NEMA 360 thru 449 frames the enclosed crate has Euro base as standard. Request for Euro pallet on NEMA 320 frame and smaller must be made in shipping instructions.

NEMA frame AC	Enclosed crate List price *
56-215	\$1052
254-326	\$1480
364-445	\$1842
447-449	\$2140
5008-5012	\$14646
5810	\$15958

\*All pricing USD.

# Motor Mod Express®

Modification number	Motor Mod Express® description and list price	Working days required
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## Grounding screw

VC067

**Add grounding screw on endplates**

2 DAYS

Requirement for UL 1081, swimming pool motors only (Includes slinger)(external) not required on IEEE 841 motors.

**List price \$270**

## Mountings

VC180

**Convert mounting configuration for cast iron motor**

3 DAYS

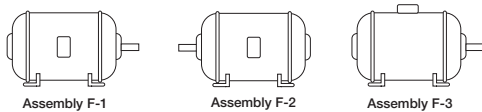
Available on all cast iron AC motors through 449T frames. For conversion to F2 designs, check available inventory before using Mod.

Consists of repositioning endplates vents, condensation drains, and where applicable, the conduit to positions shown in the mounting chart below. Does not apply to Explosion proof motors.

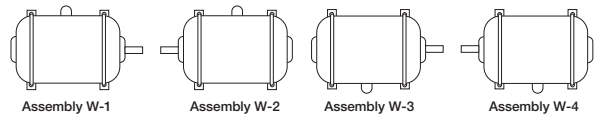
NEMA frame enclosure	Mounting configuration using ? of ModEx mountings section		List price * per motor
	ODP	TEFC	
Up to 184T	Yes	Yes	\$416
213-215T	Yes	Yes	\$416
254-362T	Yes	Yes	\$416
365 - 449T	Yes	Yes	\$416
5008-5810	No	Yes	\$828

Note: For 5008 - 5810 Open motors (WPI, WPII), please contact factory to determine if F2 is achievable).

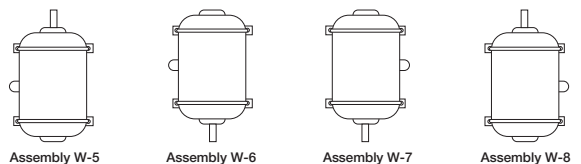
### Floor Mountings



### Wall Mountings



### Ceiling Mountings



\*All pricing USD.

## Motor Mod Express®

Modification number	Motor Mod Express® description and list price	Working days required
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### Nameplate

VC161	<p><b>Provide original nameplate for remote mounting</b></p> <p>Extra nameplate is packed with motor, not mounted. All CSA and UL<sub>R</sub> markings are removed on duplicate nameplates. Shipped loose.</p> <p><b>List per motor: \$246*</b> 5000 Frame and Above: \$738 List*</p>	2 DAYS
VC002	<p><b>Replace nameplate</b></p> <p>Replace motor nameplate which may include customer part numbers, voltage, Hertz, ect.</p> <p><b>List per motor: \$294*</b> 5000 Frame and Above: \$800 List*</p>	2 DAYS
VC098	<p><b>Stainless steel auxiliary data plate</b></p> <p><b>List per motor \$320*</b></p>	2 DAYS
VC346	<p><b>Replace with CE marked nameplate</b></p> <p>Requires engineering approval prior to quote/order. Is not available on severe duty and IEEE 841 marked motors.</p> <p><b>List per motor: \$294*</b></p>	2 DAYS

### Paint

VC114	<p><b>Paint motor to Menden stock paint colors</b></p> <p>Most RAL colors are available. Please check OMS for available color options. Lead-time does not include paint availability.</p>	5 DAYS
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NEMA frame	List price * (per motor)
56 - 215T	\$294
254 - 449T	\$1158
5008 - 5812	\$5436

\*All pricing USD.

\*All pricing USD.

## Motor Mod Express®

Modification number	Motor Mod Express® description and list price	Working days required
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### Space heaters

#### Add space heaters to TEFC or open motors

2 DAYS

VC450	Add 115V space heater in TEFC or open motor
VC451	Add 230V space heater in TEFC or open motor
VC357	Add 460V space heater in TEFC or open motor

NEMA frame	List price * (per motor)
56 - 145T	\$638
182 - 215T	\$804
254 - 365T	\$1196
404 - 449T	\$1360

Note: Strip type space heaters are standard.

### Terminal block

#### VC344 Install IEC Terminal blocks in Conduit box and connection leads

2 DAYS

IEC frame, stocked with terminal blocks.  
Advise how motor leads are to be connected.

Does not apply to Explosion proof motors

NEMA frame	List price * (per motor)
34 Frame - 56-143T	\$456
35 Frame - 56-145T	\$490
182-184	\$544
213-215	\$596
254-256	\$684
284-286	\$706
324-326	\$2062
364-365	\$2062
404-405	\$2062
444-449	\$2062

\*All pricing USD.

## Motor Mod Express®

Modification number	Motor Mod Express® description and list price	Working days required
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### Thermistors

VC436

#### Thermistors

2 DAYS

Thermistors are normally applied in sets of three (3) per motor. One (1) per phase.

Does not apply to Explosion proof motors

List price per motor: \$1338

### Thermostats

VC122

#### Thermostats

2 DAYS

One or more thermostats laced to winding for over temperature protection. These are pilot circuit devices only with leads into conduit box tagged "JJ". Specify normally open or closed contacts. All severe duty ECP/XEX motors require hermetically sealed thermostats to maintain Division 2 marking.

Does not apply to Explosion proof motors

NEMA frame	Number of devices	Standard list price per motor	Hermetically Sealed for Division 2
Single Phase	1	\$370	N/A
Three Phase 42-215T	3 (3)	\$418	\$608
Three Phase 254-449T	3 (3)	\$1114	\$1306
Direct Current 48-215T	1	\$418	N/A

Note: (3) In series with two leads into conduit box. Normally open are in parallel.

### Tropicalization

VC347

#### Protection of windings and mechanical parts

2 DAYS

Protection from tropical environments.

NEMA frame AC	List price * (per motor)
Through 215T	\$488
254-365T	\$700
404-449T	\$1196
5008-5810	\$3218

Note: For 5008 - 5810 this includes epoxy coating of rotor and stator and additional fungus protection.

\*All pricing USD.



# NEMA motor Mod-Express

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7BCEM2394T	7	7BCEP3584T-4	10	7BCEP84109T-4	11	7BEM4412T-4	6	7BVM3537	8	CECP82276T-4	14
7BCEM3545	7	7BCEP3586T-4	10	7BCEP84110T-4	11	7BEM4413T-4	6	7BVM3538	8	CECP82332T-4	14
7BCEM3546T	7	7BCEP3587T-4	10	7BCEP84114T-4	11	7BEM4416T-4	6	7BVM3541	8	CECP82333T-4	14
7BCEM3550T	7	7BCEP3660T-4	10	7BCEP84115T-4	11	7BEM44252T-4	6	7BVM3542	8	CECP82333T-5	14
7BCEM3554T	7	7BCEP3661T-4	10	7BCEP84310T-4	11	7BENCP83580T-4	11	CECP2276T	14	CECP82334T-4	14
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CECP83774T-5	15	ECP3583T-4	15	ECP4103T-4	15	ECP4402T-4	16	ECP62334TR-4	16	VECP3663T	17
CECP84100T-4	15	ECP3584T	15	ECP4103T-5	15	ECP4403T	16	ECP63665T-4	16	VECP3665T	17
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CECP84106T-4	15	ECP3587T-4	15	ECP4106T-5	16	ECP4404TR-4	16	ECP64115TR-4	16	VECP3770T	17
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CECP84108T-4	15	ECP3660T	15	ECP4107T-4	16	ECP4406T-5	16	ECP64316TR-4	16	VECP3771T-4	17
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CECP84110T-4	15	ECP3660T-5	15	ECP4108T-4	16	ECP4407T-4	16	ECP82276T-5	16	VECP3774T-4	17
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CECP84114T-4	15	ECP3661T-5	15	ECP4110T	16	ECP4407TS-4	16	ECP84416T-5	17	VECP4103T	17
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ECP3580T-4	15	ECP3775T-4	15	ECP4316T-4	16	ECP44352T-4	16	VECP3584T-4	17		



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