



American Electric Motors

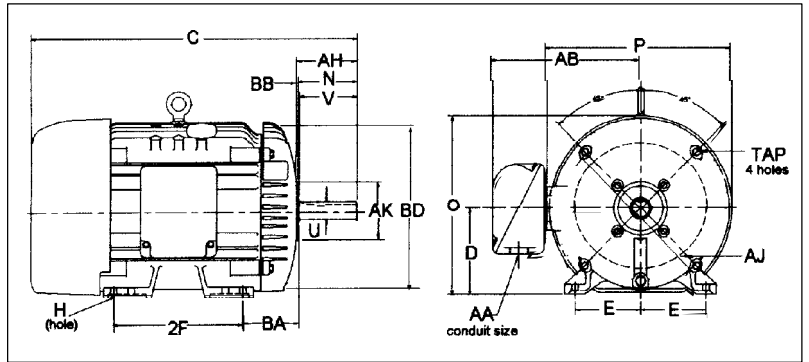
<http://www.americanelectricmotors.com/>

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NEMA Motor Dimensions - Reference Chart

Keyseat Dimensions		NEMA Shaft (U)	Key (R)	Dimen (S)
		3/8	21/64	flat
		1/2	29/64	flat
		5/8	33/64	3/16
		7/8	49/64	3/16
		1-1/8	63/64	1/4
		1-3/8	1-13/64	5/16
		1-5/8	1-13/32	3/8
		1-7/8	1-19/32	1/2
		2-1/8	1-27/32	1/2
		2-3/8	2-1/64	5/8
		2-1/2	2-3/16	5/8
		2-7/8	2-29/64	3/4
		3-3/8	2-7/8	7/8
	3-7/8	3-5/16	1	



* after letter indicates the number is an approximate value. These dimensions are specific to each manufacturer.

Frame	D	E	2F	H	N*	O*	P*	U	V	AA	AB*	AH	AJ	AK	BA	BB	BD*	TAP
42	2-5/8	1-3/4	1-11/16	9/32 slot	1-1/2	5	4-11/16	3/8	1-1/8	3/8	4-1/32	1-5/16	3-3/4	3	2-1/16	1/8	4-5/8	1/4-20
48	3	2-1/8	2-3/4	11/32 slot	1-7/8	5-7/8	5-11/16	1/2	1-1/2	1/2	4-3/8	1-11/16	3-3/4	3	2-1/2	1/8	5-5/8	1/4-20
56	3-1/2	2-7/16	3	11/32 slot	2-7/16	6-7/8	6-5/8	5/8	1-7/8	1/2	5	2-1/16	5-7/8	4-1/2	2-3/4	1/8	6-1/2	3/8-16
56H			5		2-1/8													
143T	3-1/2	2-3/4	4	11/32	2-1/2	6-7/8	6-5/8	7/8	2-1/4	3/4	5-1/4	2-1/8	5-7/8	4-1/2	2-1/4	1/8	6-1/2	3/8-16
145T			5															
182	4-1/2	3-3/4	4-1/2	13/32	2-11/16	8-11/16	7-7/8	7/8	2-1/4	3/4	5-7/8	2-1/8	5-7/8	4-1/2	2-3/4	1/8	6-1/2	3/8-16
184			5-1/2		2-11/16													
182T			4-1/2		3-9/16			1-1/8	2-3/4			2-5/8	7-1/4	8-1/2		1/4	9	1/2-13
184T			5-1/2		3-9/16			1-1/8	2-3/4			2-5/8	7-1/4	8-1/2		1/4	9	1/2-13
213	5-1/4	4-1/4	5-1/2	13/32	3-1/2	10-1/4	9-9/16	1-1/8	3	3/4	7-3/8	2-3/4	7-1/4	8-1/2	3-1/2	1/4	9	1/2-13
215			7		3-1/2			1-1/8	3			2-3/4						
213T			5-1/2		3-7/8			1-3/8	3-3/8			3-1/8						
215T			7		3-7/8			1-3/8	3-3/8			3-1/8						
254U	6-1/4	5	8-1/4	17/32	4-1/16	12-7/8	12-15/16	1-3/8	3-3/4	1	9-5/8	3-1/2	7-1/4	8-1/2	4-1/4	1/4	10	1/2-13
256U			10		4-1/16			1-3/8	3-3/4			3-1/2						
254T			8-1/4		4-5/16			1-5/8	4			3-3/4						
256T			10		4-5/16			1-5/8	4			3-3/4						
284U	7	5-1/2	9-1/2	17/32	5-1/8	14-5/8	14-5/8	1-5/8	4-7/8	1-1/2	13-1/8	4-5/8	9	10-1/2	4-3/4	1/4	11-1/4	1/2-13
286U			11		5-1/8			1-5/8	4-7/8			4-5/8						
284T			9-1/2		4-7/8			1-7/8	4-5/8			4-3/8						
286T			11		4-7/8			1-7/8	4-5/8			4-3/8						
284TS			9-1/2		3-3/8			1-5/8	3-1/4			3						
286TS			11		3-3/8			1-5/8	3-1/4			3						
324U	8	6-1/4	10-1/2	21/32	5-7/8	16-1/2	16-1/2	1-7/8	5-5/8	2	14-1/8	5-3/8	11	12-1/2	5-1/4	1/4	13-3/8	5/8-11
326U			12		5-7/8			1-7/8	5-5/8			5-3/8						
324T			10-1/2		5-1/2			2-1/8	5-1/4			5						
326T			12		5-1/2			2-1/8	5-1/4			5						
324TS			10-1/2		3-15/16			1-7/8	3-3/4			3-1/2						
326TS			12		3-15/16			1-7/8	3-3/4			3-1/2						
364U	9	7	11-1/4	21/32	6-3/4	18-1/2	18-1/4	2-1/8	6-3/8	2-1/2	15-1/16	6-1/8	11	12-1/2	5-7/8	1/4	13-3/8	5/8-11
365U			12-1/4		6-3/4			2-1/8	6-3/8			6-1/8						
364T			11-1/4		6-1/4			2-3/8	5-7/8			5-5/8						
365T			12-1/4		6-1/4			2-3/8	5-7/8			5-5/8						
364TS			11-1/4		4			1-7/8	3-3/4			3-1/2						
365TS			12-1/4		4			1-7/8	3-3/4			3-1/2						
404U	10	8	12-1/4	13/16	7-3/16	20-5/16	20-1/8	2-3/8	7-1/8	3	18	6-7/8	11	12-1/2	6-5/8	1/4	13-7/8	5/8-11
405U			13-3/4		7-3/16			2-3/8	7-1/8			6-7/8						
404T			12-1/4		7-5/16			2-7/8	7-1/4			7						
405T			13-3/4		7-5/16			2-7/8	7-1/4			7						
404TS			12-1/4		4-1/2			2-1/8	4-1/4			4						
405TS			13-3/4		4-1/2			2-1/8	4-1/4			4						
444U	11	9	14-1/2	13/16	8-5/8	22-7/8	22-3/8	2-7/8	8-5/8	3	19-9/16	8-3/8	14	16	7-1/2	1/4	16-3/4	5/8-11
445U			16-1/2		8-5/8	22-7/8	22-3/8	2-7/8	8-5/8			19-9/16						
444T			14-1/2		8-1/2	22-7/8	22-3/8	2-7/8	8-1/2			19-9/16						
445T			16-1/2		8-1/2	22-7/8	22-3/8	2-7/8	8-1/2			19-9/16						
447T			20		8-15/16	22-15/16	22-3/4	3-3/8	8-1/2	3	21-11/16	8-1/4	14	16	7-1/2	1/4	16-3/4	5/8-11
449T			25		8-15/16	22-15/16	22-3/4	3-3/8	8-1/2			21-11/16						
444TS			14-1/2		5-3/16	22-7/8	22-3/8	2-3/8	4-3/4			19-9/16						
445TS			16-1/2		5-3/16	22-7/8	22-3/8	2-3/8	4-3/4			19-9/16						
447TS			20		4-15/16	22-15/16	22-3/4	2-3/8	4-3/4	4NPT	21-11/16	4-1/2						
449TS			25		4-15/16	22-15/16	22-3/4	2-3/8	4-3/4	4NPT	21-11/16	4-1/2						

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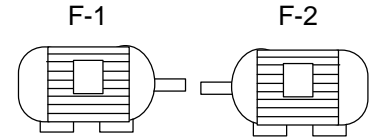
Frame Size Information

Suffix letters after the NEMA frame size indicates that the frame differs in some way from the standard frame. Below is a list of suffixes that may be found after the frame size and their definition.

A	DC Motor or Generator
C	"C" flange mounting on drive end **
D	"D" flange mounting on drive end **
E	Shaft dimensions for elevator motors in frames larger than the 326U frame
H	Frame with an "F" dimension larger than a frame without (small framed motors)
J	Jet pump motors
JM	"C"-face mounted close coupling pump with mechanical seal
JP	"C"-face mounted close coupling pump - packed pump
K	Sump pump motor
LP & LPH	"P" flange mounting vertical solid shaft pump
P & PH	"P" flange mounting vertical hollow shaft pump
S	Standard short shaft
T	Included as part of a frame number-standard dimension
U	Included as part of a frame number-standard dimension
V	Vertical mounting
Y	Special mounting dimensions - manufactured specified
Z	Special shaft dimensions - manufactured specified

** If the face mounting is on the end opposite the drive, the suffix will be as follows: "FC" or "FD"

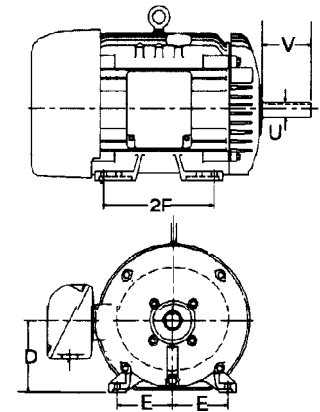
Assembly Position F-1 VS. F-2



Pre-NEMA Motor Dimension Chart

FRAME	U	V	D	2F	E
203	3/4	2	5	5-1/2	4
204	3/4	2	5	6-1/2	4
224	1	2-3/4	5-1/2	6-3/4	4-1/2
225	1	2-3/4	5-1/2	7-1/2	4-1/2
254	1-1/8	3-1/8	6-1/4	8-1/14	5
284	1-1/4	3-3/4	7	9-1/2	5-1/2
324	1-5/8	4-5/8	8	10-1/2	6-1/4
324S	1-5/8	3	8	10-1/2	6-1/4
326	1-5/8	4-5/8	8	12	6-1/4
326S	1-5/8	3	8	12	6-1/4
364	1-7/8	5-3/8	9	11-1/4	7
364S	1-7/8	3-1/2	9	11-1/4	7
356	1-7/8	5-3/8	9	12-1/4	7
365S	1-5/8	3-1/2	9	12-1/4	7

FRAME	U	V	D	2F	E
404	2-1/8	6-1/8	10	12-1/4	8
404S	1-7/8	3-1/2	10	12-1/4	8
405	2-1/8	6-1/8	10	13-3/4	8
405S	1-7/8	3-1/2	10	13-3/4	8
444	2-3/8	6-7/8	11	14-1/2	9
444S	2-1/8	4	11	14-1/2	9
445	2-3/8	6-7/8	11	16-1/2	9
445S	2-1/8	4	11	16-1/2	9
504	2-5/8	7-5/8	12-1/2	16	8
504S	2-1/8	4	12-1/2	16	8
505	2-7/8	8-3/8	12-1/2	18	9
505S	2-1/8	4	12-1/2	18	9
584	2-7/8	11-5/8	14-1/2	18	9
584S	2-3/8	4-3/4	14-1/2	18	9



Standard NEMA Frames VS Horsepower

HP	900 RPM			1200 RPM			1800 RPM			3600 RPM		
	T-Frames 1964-Present	U-Frame 1952-Present	Original NEMA	T-Frames 1964-Present	U-Frame 1952-Present	Original NEMA	T-Frames 1964-Present	U-Frame 1952-Present	Original NEMA	T-Frames 1964-Present	U-Frame 1952-Present	Original NEMA
1	182T	213	225	145T	184	204	143T	182	203			
1.5	184T	213	254	182T	184	224	145T	184	204			
2	213T	215	254	184T	213	225	145T	184	224	143T	182	203
3	215T	254U	284	213T	215	254	182T	213	225	145T	184	204
5	254T	256U	324	215T	254U	284	184T	215	254	145T/182T	184	224
7.5	256T	284U	326	254T	256U	324	213T	254U	284	182T/184T	213	225
10	284T	286U	364	256T	284U	326	215T	256U	324	184T/213T	215	254
15	286T	326U	365	284T	324U	364	254T	284U	326	213T/215T	254U	284
20	324T	364U	404	286T	326U	365	256T	286U	364	215T/254T	256U	324
25	326T	365U	405	324T	364U	404	284T	324U	364/365	254T/256T	284U/286U	326
30	364T	404U	444	324T	365U	405	286T	326U	365/404	256T/284TS	286U/324U	364S/365S
40	365T	405U	445	364T	404U	444	324T	364U	404/405	284TS/286TS	324S/326S	364S/404S
50	404T	444U	504	365T	405U	445	326T	365US	405S/444	286TS/324TS	326S/364US	365S/405S
60	405T	445U	505	404T	444U	504	364TS	404US/405US	444S/445S	324TS/326TS	364US	404S/444S
75	444T	.	.	405T	445U	505	365TS	405US/444US	445S/504S	326TS/364TS	365US/405US	405S/445S
100	445T	.	.	444T	.	.	404TS/405TS	444US/445US	504S/505S	364TS/365TS	404US/444US	444S/504S
125	.	.	.	445T	.	.	444TS/445TS	.	505S	365TS/405TS	405US/445US	445S/505S
150	.	.	.	.	.	.	405TS/444TS	445US	.	404TS/444TS	444US	504S
200	.	.	.	.	.	.	444TS/445TS	.	.	405TS/445TS	445US	505S
250	.	.	.	.	.	.	455TS	.	.	444TS	.	.
										445TS	.	.

Additional Notes:

These charts are provided for reference use only. American Electric Motors is not responsible for an printing errors.

Notes From Front:

- When a "C" flange has been added to a NEMA motor the "BA" dimensions are:

Frame:	"BA":
143-5TC	2-3/4
182-4TC	3-1/2
213-5TC	4-1/4
254-6TC	4-3/4

- Dimensions: C, N, O, P, & AB are specific to each manufacturer. Please call for exact dimensions.