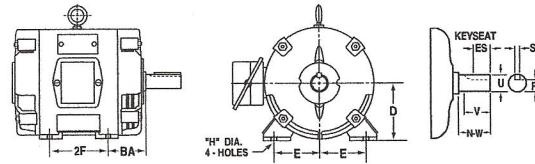


2.3 DIMENSIONS FOR AC MACHINES—INCHES

NEMA FRAME DIMENSIONS—FOOT-MOUNTED AC MACHINES
DIMENSIONS IN INCHES



Frame designations	A max	D	E	2F	BA	H*	U	N-W	V min	Keyseat			AA min
										R	ES min	S	
42		2.62	1.75	1.69	2.06	0.28	0.3750	1.12		0.328		Flat	
48		3.00	2.12	2.75	2.50	0.34	0.5000	1.50		0.453		Flat	
48H		3.00	2.12	4.75	2.50	0.34	0.5000	1.50		0.453		Flat	
56		3.50	2.44	3.00	2.75	0.34	0.6250	1.88		0.517	1.41	0.188	
56H		3.50	2.44	5.00	2.75	0.34	0.6250	1.88		0.517	1.41	0.188	
66		4.12	2.94	5.00	3.12	0.41	0.7500	2.25		0.644	1.91	0.188	
143	7.0	3.50	2.75	4.00	2.25	0.34	0.7500	2.00	1.75	0.644	1.41	0.188	3/4
143T	7.0	3.50	2.75	4.00	2.25	0.34	0.8750	2.25	2.00	0.771	1.41	0.188	3/4
145	7.0	3.50	2.75	5.00	2.25	0.34	0.7500	2.00	1.75	0.644	1.41	0.188	3/4
145T	7.0	3.50	2.75	5.00	2.25	0.34	0.8750	2.25	2.00	0.771	1.41	0.188	3/4
182	9.0	4.50	3.75	4.50	2.75	0.41	0.8750	2.25	2.00	0.771	1.41	0.188	3/4
182T	9.0	4.50	3.75	4.50	2.75	0.41	1.1250	2.75	2.50	0.986	1.78	0.250	3/4
184	9.0	4.50	3.75	5.50	2.75	0.41	0.8750	2.25	2.00	0.771	1.41	0.188	3/4
184T	9.0	4.50	3.75	5.50	2.75	0.41	1.1250	2.75	2.50	0.986	1.78	0.250	3/4
203		5.00	4.00	5.50	3.12	0.41	0.7500	2.25	2.00	0.644	1.53	0.188	
204		5.00	4.00	6.50	3.12	0.41	0.7500	2.25	2.00	0.644	1.53	0.188	
213	10.5	5.25	4.25	5.50	3.50	0.41	1.1250	3.00	2.75	0.986	2.03	0.250	3/4
213T	10.5	5.25	4.25	5.50	3.50	0.41	1.3750	3.38	3.12	1.201	2.41	0.312	1
215	10.5	5.25	4.25	7.00	3.50	0.41	1.1250	3.00	2.75	0.986	2.03	0.250	3/4
215T	10.5	5.25	4.25	7.00	3.50	0.41	1.3750	3.38	3.12	1.201	2.41	0.312	1
224		5.50	4.50	6.75	3.50	0.41	1.0000	3.00	2.75	0.859	2.03	0.250	
225		5.50	4.50	7.50	3.50	0.41	1.0000	3.00	2.75	0.859	2.03	0.250	
254		6.25	5.00	8.25	4.25	0.53	1.1250	3.38	3.12	0.986	2.03	0.250	
254U	12.5	6.25	5.00	8.25	4.25	0.53	1.3750	3.75	3.50	1.201	2.78	0.312	1
254T	12.5	6.25	5.00	8.25	4.25	0.53	1.625	4.00	3.75	1.416	2.91	0.375	1-1/4
256U	12.5	6.25	5.00	10.00	4.25	0.53	1.3750	3.75	3.50	1.201	2.78	0.312	1
256T	12.5	6.25	5.00	10.00	4.25	0.53	1.625	4.00	3.75	1.416	2.91	0.375	1-1/4
284		7.00	5.50	9.50	4.75	0.53	1.2500	3.75	3.50	1.112	2.03	0.250	
284U	14.0	7.00	5.50	9.50	4.75	0.53	1.625	4.88	4.62	1.416	3.78	0.375	1-1/4
284T	14.0	7.00	5.50	9.50	4.75	0.53	1.875	4.62	4.38	1.591	3.28	0.500	1-1/2
284TS	14.0	7.00	5.50	9.50	4.75	0.53	1.625	3.25	3.00	1.416	1.91	0.375	1-1/2
286U	14.0	7.00	5.50	11.00	4.75	0.53	1.625	4.88	4.62	1.416	3.78	0.375	1-1/4
286T	14.0	7.00	5.50	11.00	4.75	0.53	1.875	4.62	4.38	1.591	3.28	0.500	1-1/2
286TS	14.0	7.00	5.50	11.00	4.75	0.53	1.625	3.25	3.00	1.416	1.91	0.375	1-1/2
324		8.00	6.25	10.50	5.25	0.66	1.625	4.88	4.62	1.416	3.78	0.375	
324U	16.0	8.00	6.25	10.50	5.25	0.66	1.875	5.62	5.38	1.591	4.28	0.500	1-1/2
324S	16.0	8.00	6.25	10.50	5.25	0.66	1.625	3.25	3.00	1.416	1.91	0.375	1-1/2
324T	16.0	8.00	6.25	10.50	5.25	0.66	2.125	5.25	5.00	1.845	3.91	0.500	2
324TS	16.0	8.00	6.25	10.50	5.25	0.66	1.875	3.75	3.50	1.591	2.03	0.500	2
326		8.00	6.25	12.00	5.25	0.66	1.625	4.88	4.62	1.416	3.78	0.375	
326U	16.0	8.00	6.25	12.00	5.25	0.66	1.875	5.62	5.38	1.591	4.28	0.500	1-1/2
326S	16.0	8.00	6.25	12.00	5.25	0.66	1.625	3.25	3.00	1.416	1.91	0.375	1-1/2
326T	16.0	8.00	6.25	12.00	5.25	0.66	2.125	5.25	5.00	1.845	3.91	0.500	2
326TS	16.0	8.00	6.25	12.00	5.25	0.66	1.875	3.75	3.50	1.591	2.03	0.500	2

NEMA FRAME DIMENSIONS—FOOT-MOUNTED AC MACHINES—CONTINUED
DIMENSIONS IN INCHES

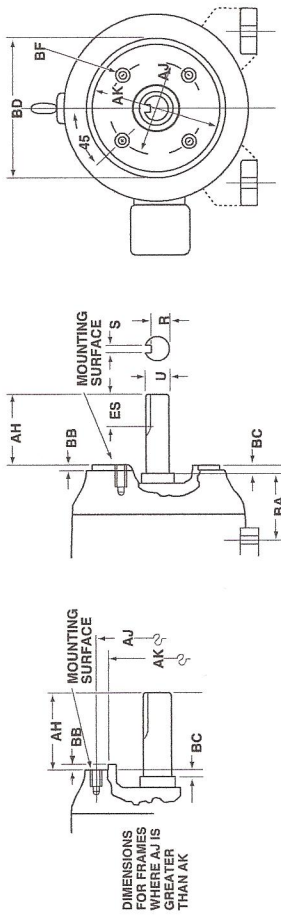
Frame designations	A max	D	E	2F	BA	H*	U	N-W	V min	Keyseat			AA min
										R	ES min	S	
364		9.00	7.00	11.25	5.88	0.66	1.875	5.62	5.38	1.591	4.28	0.500	
364S		9.00	7.00	11.25	5.88	0.66	1.625	3.25	3.00	1.416	1.91	0.375	
364U	18.0	9.00	7.00	11.25	5.88	0.66	2.125	6.38	6.12	1.845	5.03	0.500	2
364US	18.0	9.00	7.00	11.25	5.88	0.66	1.875	3.75	3.50	1.591	2.03	0.500	2
364T	18.0	9.00	7.00	11.25	5.88	0.66	2.375	5.88	5.62	2.021	4.28	0.625	3
364TS	18.0	9.00	7.00	11.25	5.88	0.66	1.875	3.75	3.50	1.591	2.03	0.500	3
365		9.00	7.00	12.25	5.88	0.66	1.875	5.62	5.38	1.591	4.28	0.500	
365S		9.00	7.00	12.25	5.88	0.66	1.625	3.25	3.00	1.416	1.91	0.375	
365U	18.0	9.00	7.00	12.25	5.88	0.66	2.125	6.38	6.12	1.845	5.03	0.500	2
365US	18.0	9.00	7.00	12.25	5.88	0.66	1.875	3.75	3.50	1.591	2.03	0.500	2
365T	18.0	9.00	7.00	12.25	5.88	0.66	2.375	5.88	5.62	2.021	4.28	0.625	3
365TS	18.0	9.00	7.00	12.25	5.88	0.66	1.875	3.75	3.50	1.591	2.03	0.500	3
404		10.00	8.00	12.25	6.62	0.81	2.125	6.38	6.12	1.845	5.03	0.500	
404S		10.00	8.00	12.25	6.62	0.81	1.875	3.75	3.50	1.591	2.03	0.500	
404U	20.0	10.00	8.00	12.25	6.62	0.81	2.375	7.12	6.88	2.021	5.53	0.625	2
404US	20.0	10.00	8.00	12.25	6.62	0.81	2.125	4.25	4.00	1.845	2.78	0.500	2
404T	20.0	10.00	8.00	12.25	6.62	0.81	2.875	7.25	7.00	2.450	5.65	0.750	3
404TS	20.0	10.00	8.00	12.25	6.62	0.81	2.125	4.25	4.00	1.845	2.78	0.500	3
405		10.00	8.00	13.75	6.62	0.81	2.125	6.38	6.12	1.845	5.03	0.500	3/4
405S		10.00	8.00	13.75	6.62	0.81	1.875	3.75	3.50	1.591	2.03	0.500	
405U	20.0	10.00	8.00	13.75	6.62	0.81	2.375	7.12	6.88	2.021	5.53	0.625	2
405US	20.0	10.00	8.00	13.75	6.62	0.81	2.125	4.25	4.00	1.845	2.78	0.500	2
405T	20.0	10.00	8.00	13.75	6.62	0.81	2.875	7.25	7.00	2.450	5.65	0.750	3
405TS	20.0	10.00	8.00	13.75	6.62	0.81	2.125	4.25	4.00	1.845	2.78	0.500	3
444		11.00	9.00	14.50	7.50	0.81	2.375	7.12	6.88	2.021	5.53	0.625	
444S		11.00	9.00	14.50	7.50	0.81	2.125	4.25	4.00	1.845	2.78	0.500	
444U	22.0	11.00	9.00	14.50	7.50	0.81	2.875	8.62	8.38	2.450	7.03	0.750	2-1/2
444US	22.0	11.00	9.00	14.50	7.50	0.81	2.125	4.25	4.00	1.845	2.78	0.500	2-1/2
444T	22.0	11.00	9.00	14.50	7.50	0.81	3.375	8.50	8.25	2.880	6.91	0.875	3
444TS	22.0	11.00	9.00	14.50	7.50	0.81	2.375	4.75	4.50	2.021	3.03	0.625	3
445		11.00	9.00	16.50	7.50	0.81	2.375	7.12	6.88	2.021	5.53	0.625	
445S		11.00	9.00	16.50	7.50	0.81	2.125	4.25	4.00	1.845	2.78	0.500	
445U	22.0	11.00	9.00	16.50	7.50	0.81	2.875	8.62	8.38	2.450	7.03	0.750	2-1/2
445US	22.0	11.00	9.00	16.50	7.50	0.81	2.125	4.25	4.00	1.845	2.78	0.500	2-1/2
445T	22.0	11.00	9.00	16.50	7.50	0.81	3.375	8.50	8.25	2.880	6.91	0.875	3
445TS	22.0	11.00	9.00	16.50	7.50	0.81	2.375	4.75	4.50	2.021	3.03	0.625	3
447T	22.0	11.00	9.00	20.00	7.50	0.81	3.375	8.50	8.25	2.880	6.91	0.875	3
447TS	22.0	11.00	9.00	20.00	7.50	0.81	2.375	4.75	4.50	2.021	3.03	0.625	3
449T	22.0	11.00	9.00	25.00	7.50	0.81	3.375	8.50	8.25	2.880	6.91	0.875	3
449TS	22.0	11.00	9.00	25.00	7.50	0.81	2.375	4.75	4.50	2.021	3.03	0.625	3
504U	25.0	12.50	10.00	16.00	8.50	0.94	2.875	8.62	8.38	2.450	7.28	0.750	2-1/2
504S	25.0	12.50	10.00	16.00	8.50	0.94	2.125	4.25	4.00	1.845	2.78	0.500	2-1/2
505	25.0	12.50	10.00	18.00	8.50	0.94	2.875	8.62	8.38	2.450	7.28	0.750	2-1/2
505S	25.0	12.50	10.00	18.00	8.50	0.94	2.125	4.25	4.00	1.845	2.78	0.500	2-1/2

Reference: NEMA Stds. MG 1-2009, Rev. 1-2010, 4.4.1.

*Frames 42 to 66, inclusive: the H dimension is *Width of Slot*.

*Frames 143 to 505S, inclusive: the H dimension is *Diameter of Hole*.

NEMA FRAME DIMENSIONS—TYPE C FACE-MOUNTING FOOT OR FOOTLESS AC MOTORS
DIMENSIONS IN INCHES



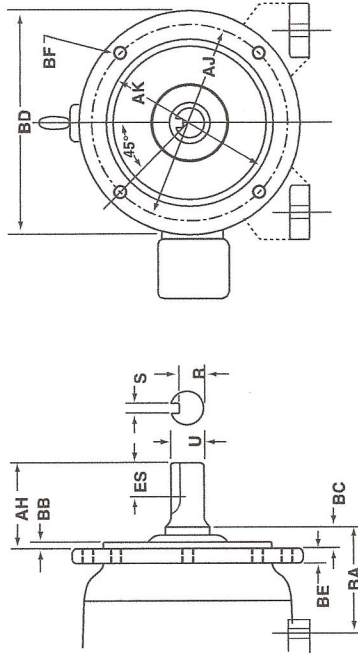
Frame designation†	AJ	AK	BA	BB min	BC	BD max	BF hole		U	AH	Keyseat	
							Number	Tap size			R	ES min
42C	3.750	3.000	2.062	0.16	-0.19	5.00	4	1/4-20	0.3750	1.312	0.328	Flat
48C	3.750	3.000	2.50	0.16	-0.19	5.625	4	1/4-20	0.5000	1.69	0.453	Flat
56C	5.875	4.500	2.75	0.16	-0.19	6.50	4	3/8-16	0.6250	2.06	0.517	0.188
66C	5.875	4.500	2.75	0.16	-0.19	6.50	4	3/8-16	0.7500	2.44	0.644	0.188
143TC and 145TC	5.875	4.500	2.75	0.16	+0.12	6.50	4	3/8-16	0.8750	2.12	0.771	0.188
182C and 184C	5.875	4.500	3.50	0.16	+0.12	6.50	4	3/8-16	0.8750	2.12	0.771	0.188
182TC and 184TC	7.250	8.500	3.50	0.25	+0.12	9.00	4	1/2-13	1.1250	2.62	0.986	0.250
182TCH and 184TCH	5.875	4.500	3.50	0.16	+0.12	6.50	4	3/8-16	1.1250	2.62	0.986	0.250
213C and 215C	7.250	8.500	4.25	0.25	+0.25	9.00	4	1/2-13	1.1250	2.75	0.986	0.250
213TC and 215TC	7.250	8.500	4.25	0.25	+0.25	9.00	4	1/2-13	1.3750	3.12	1.201	0.312
254UC and 256UC	7.250	8.500	4.75	0.25	+0.25	10.00	4	1/2-13	1.3750	3.50	1.201	0.312
254TC and 256TC	7.250	8.500	4.75	0.25	+0.25	10.00	4	1/2-13	1.625	3.75	1.416	0.375
284UC and 286UC	9.000	10.500	4.75	0.25	+0.25	11.25	4	1/2-13	1.625	4.62	1.416	0.375
284TC and 286TC	9.000	10.500	4.75	0.25	+0.25	11.25	4	1/2-13	1.875	4.38	1.591	0.500
284TSC and 286TSC	9.000	10.500	4.75	0.25	+0.25	11.25	4	1/2-13	1.625	3.00	1.416	0.375
324UC and 326UC	11.000	12.500	5.25	0.25	+0.25	14.00	4	5/8-11	1.875	5.38	1.591	0.500
324SC and 326SC	11.000	12.500	5.25	0.25	+0.25	14.00	4	5/8-11	1.625	3.00	1.416	0.375
324TC and 326TC	11.000	12.500	5.25	0.25	+0.25	14.00	4	5/8-11	2.125	5.00	1.845	0.500
324TSC and 326TSC	11.000	12.500	5.25	0.25	+0.25	14.00	4	5/8-11	1.875	3.50	1.591	0.500
364UC and 366UC	11.000	12.500	5.25	0.25	+0.25	14.00	8	5/8-11	2.125	6.12	1.845	0.500

Reference: NEMA Stds. MG 1-2009, Rev. 1-2010, 4.4.4.

† See Pages 2-8 of this manual for dimensions A, D, E, 2F and H.

For tolerances on dimensions, face runout and permissible eccentricity of mounting rabbet, see NEMA Stds. MG 1-2009, Rev. 1-2010, 4.4.4, 4.11 and 4.12.

NEMA FRAME DIMENSIONS — TYPE D FLANGE-MOUNTING FOOT OR FOOTLESS AC MOTORS
DIMENSIONS IN INCHES



Frame designations†	AJ	AK	BA	BB min	BC	BD max	BE nom	BF hole			U	Keyseat			
								Number	Size	Recommended bolt length		AH	R	ES min	S
143TD and 145TD	10.00	9.000	2.75	0.25	0.00	11.00	0.50	4	0.53	1.25	0.8750	2.25	0.771	1.41	0.188
182D and 184D	10.00	9.000	3.50	0.25	0.00	11.00	0.50	4	0.53	1.25	0.8750	2.25	0.771	1.78	0.188
182TD and 184TD	10.00	9.000	3.50	0.25	0.00	11.00	0.50	4	0.53	1.25	1.1250	2.75	0.986	1.78	0.250
213D and 215D	10.00	9.000	4.25	0.25	0.00	11.00	0.50	4	0.53	1.25	1.1250	3.00	0.986	1.78	0.250
213TD and 215TD	10.00	9.000	4.25	0.25	0.00	11.00	0.50	4	0.53	1.25	1.3750	3.38	1.201	2.41	0.312
254UD and 256UD	12.50	11.000	4.75	0.25	0.00	14.00	0.75	4	0.81	2.00	1.3750	3.75	1.201	2.91	0.312
254TD and 256TD	12.50	11.000	4.75	0.25	0.00	14.00	0.75	4	0.81	2.00	1.625	4.00	1.416	2.91	0.375
284UD and 286UD	12.50	11.000	4.75	0.25	0.00	14.00	0.75	4	0.81	2.00	1.625	4.88	1.416	2.91	0.375
284TD and 286TD	12.50	11.000	4.75	0.25	0.00	14.00	0.75	4	0.81	2.00	1.875	4.62	1.591	3.28	0.500
284TSD and 286TSD	12.50	11.000	4.75	0.25	0.00	14.00	0.75	4	0.81	2.00	1.625	3.25	1.416	1.91	0.375
324UD and 326UD	16.00	14.000	5.25	0.25	0.00	18.00	0.75	4	0.81	2.00	1.875	5.62	1.591	3.91	0.500
324SD and 326SD	16.00	14.000	5.25	0.25	0.00	18.00	0.75	4	0.81	2.00	1.625	3.25	1.416	3.91	0.375
324TD and 326TD	16.00	14.000	5.25	0.25	0.00	18.00	0.75	4	0.81	2.00	2.125	5.25	1.845	2.03	0.500
324TSD and 326TSD	16.00	14.000	5.25	0.25	0.00	18.00	0.75	4	0.81	2.00	1.875	3.75	1.591	2.03	0.500
364UD and 365UD	16.00	14.000	5.25	0.25	0.00	18.00	0.75	4	0.81	2.00	2.125	6.38	1.845	2.03	0.500
364USD and 365USD	16.00	14.000	5.25	0.25	0.00	18.00	0.75	4	0.81	2.00	1.875	3.75	1.591	2.03	0.500

Reference: NEMA Stds. MG 1-2009, Rev. 1-2010, 4.4.6.

†See Page 2-8 of this manual for dimensions A, D, E, 2F and H.

For tolerances on dimensions, face runout and permissible eccentricity of mounting rabbet, see NEMA Stds. MG 1-2009, Rev. 1-2010, 4.4.6, 4.11 and 4.12.