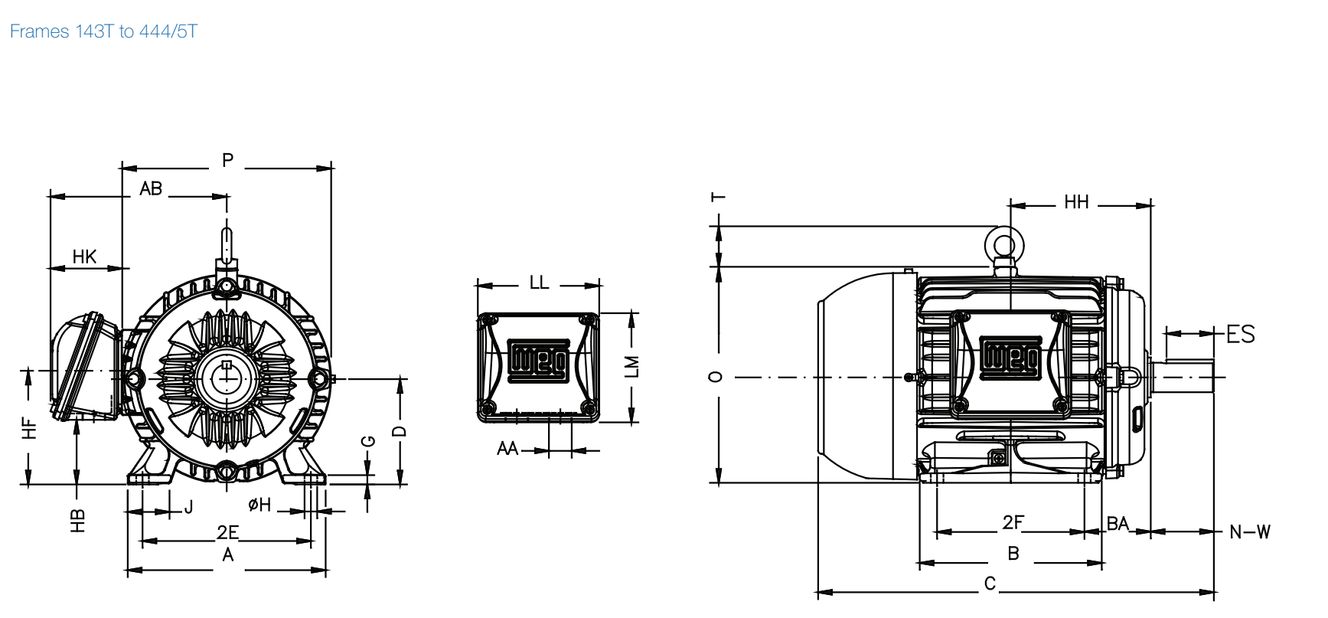
1-800-ASK-4WEG
Sales

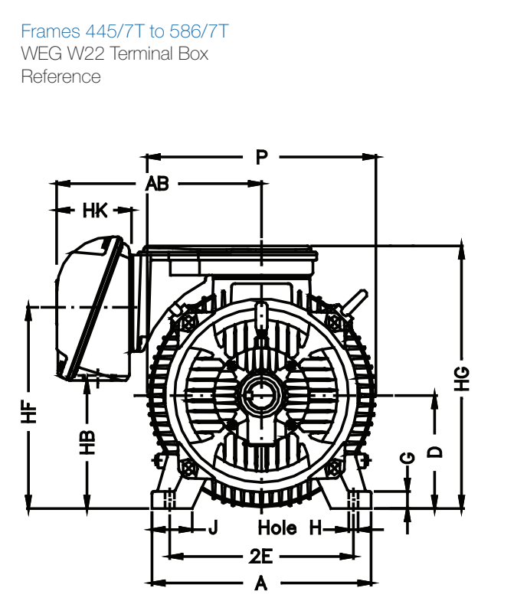
1-800-839-2529
Warranty

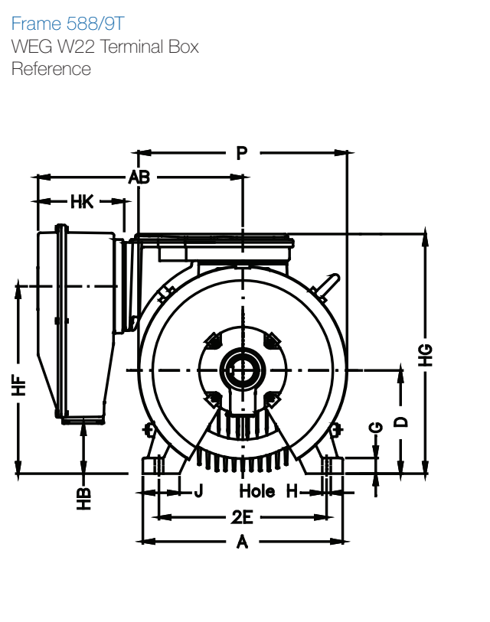
1-800-ASK-4WEG
After Hours Sales
Select after hours option

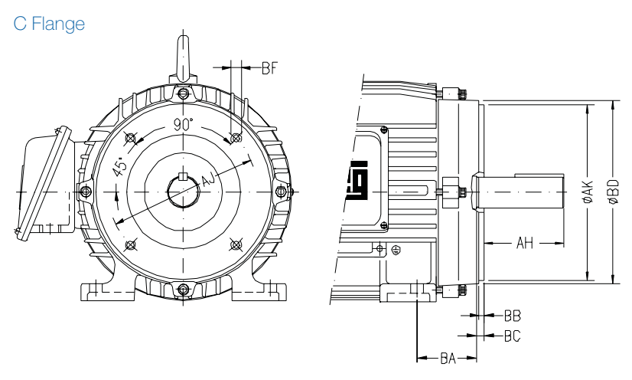
1-877-WEG-DRIV
Drives Tech Support

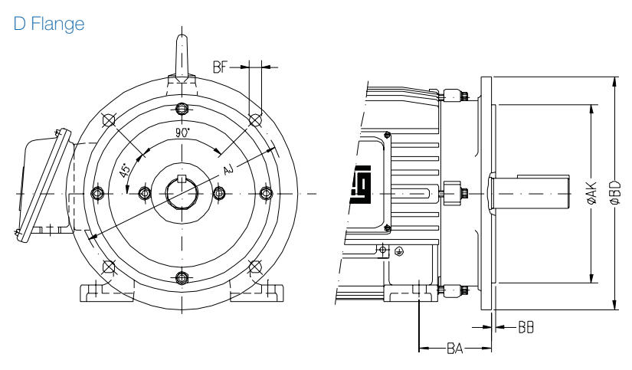
NEMA Standard Dimensions


Frames 143T to 444/5T


Frames 445/7T to 586/7T
WEG W22 Terminal Box
Reference


Frame 588/9T
WEG W22 Terminal Box
Reference


C Flange


D Flange

This drawing is not representative of all frame sizes. It is used as a dimension guide only.
Dimension C, O, P and all Terminal Box dimensions are specific to WEG W22 General Purpose Motors.

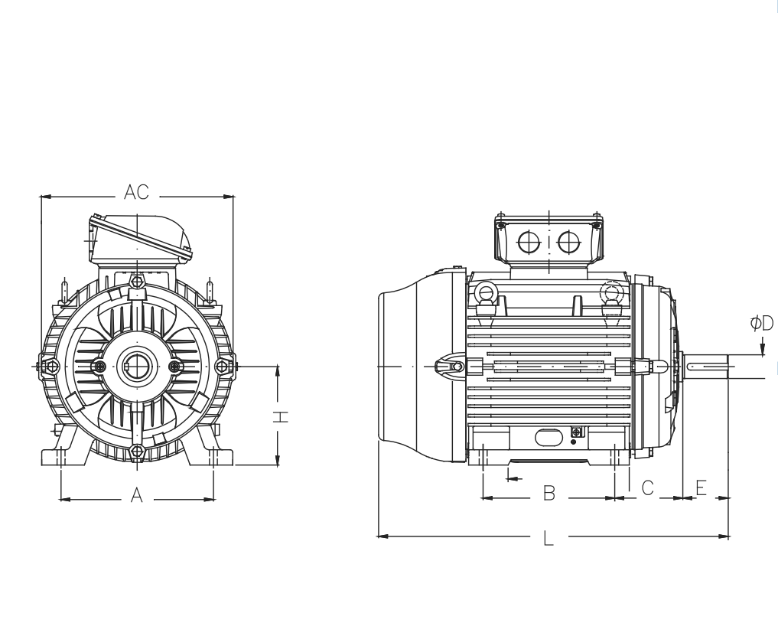
Dimensions in inches

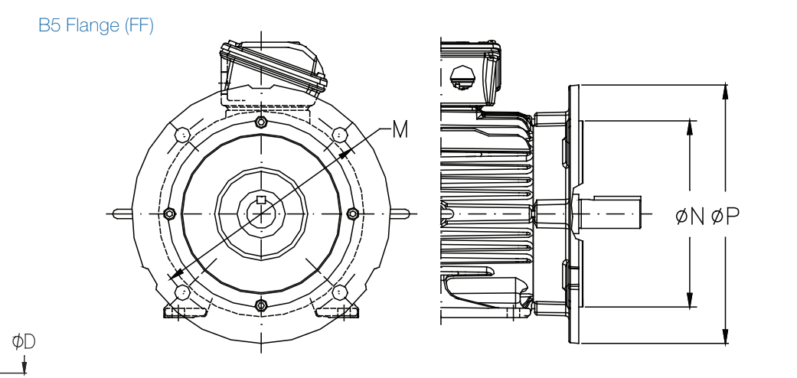
NEMA Frames	MOUNTING				A	B	C	D	G	J	O	K	P	T	KEYWAY			SHAFT EXTENSION	
	2E	2F	H	BA											S	R	ES	N-W	U
143T	5.500	4.000	0.344	2.250	6.457	5.157	12.346	3.500	0.354	1.437	7.122	-	7.047	-	0.187	0.765	1.575	2.250	0.875
145T		5.000				6.142	13.346												
182T	7.500	4.500	0.406	2.750	8.661	5.945	14.860	4.500	0.394	1.594	9.343		8.740	1.772	0.250	0.984	1.969	2.750	1.125
184T		5.500				6.969	15.860												
213T	8.500	5.500		3.500	9.764	7.362	18.021	5.250	0.827	1.988	10.841	2.165	10.669		0.313	1.203	2.480	3.375	1.375
215T		7.000				8.858	19.517												
254T	10.000	8.252	0.531	4.250	12.126	10.000	23.213	6.250		2.539	12.598	2.559	12.953	2.087	0.375	1.406	2.756	4.000	1.625
256T		10.000				11.732	24.945												
284TS	11.000	9.500		4.750	13.780	11.575	25.061	7.000	1.023	3.110	14.067	2.874	14.173				2.480	3.250	
284T							26.433								0.500	1.594	3.149	4.622	1.875
286TS		11.000				13.071	26.557								0.375	1.406	2.480	3.250	1.625
286T							27.929								0.500	1.594	3.149	4.622	1.875
324TS	12.500	10.500	0.657	5.250	15.157		28.120	8.000	1.300	3.189	15.953	3.189	15.827	2.441			2.756	3.750	
324T							29.620									1.844	3.937	5.250	2.125
326TS		12.000				14.567	29.616									1.594	2.756	3.750	1.875
326T							31.116									1.844	3.937	5.250	2.125
364/5TS	14.000	11.260/12.244	0.660	5.875	17.165	16.220	32.276	9.000	1.480	3.150	17.716	4.921	17.914	-		1.591	1.968	3.748	1.875
364/5T							34.251								0.625	2.019	4.330	5.874	2.375
404/5TS	16.000	12.244/13.740	0.810	6.625	19.921	18.386	36.732	10.000	1.811	3.937	19.566	5.669	19.134		0.500	1.842	2.756	4.250	2.125
404/5T							39.730								0.750	2.449	5.512	7.250	2.875
444/5TS	18.000	14.500/16.500		7.500	21.929	20.315	41.443	11.000	1.630		22.795	5.866	23.583		0.625	2.021	3.000	4.750	2.375
444/5T							45.193								0.875	2.880	7.087	8.500	3.375
445/7TS		16.500/20.000			21.496	23.897	45.301		1.654		25.291			4.620	0.625	2.021	3.000	4.750	2.375
445/7T							49.051								0.875	2.880	7.087	8.500	3.375
447/9TS		20.000/25.000			21.929	31.535	52.588		1.630	4.331		6.692			0.625	2.021	3.000	4.750	2.375
447/9T							56.338								0.875	2.880	7.087	8.500	3.375
L447/9TS		20.000/25.000					53.431			3.937	23.874	8.780	25.866		0.625	2.021	3.000	4.750	2.375
L447/9T							57.181								0.875	2.880	7.087	8.500	3.375
504/5TS	20.000	16.000/18.000	1.250	8.500	24.724	24.449	48.215	12.500	2.146	4.724	25.425	7.228		4.880	0.625	2.021	3.000	4.750	2.375
504/5T							54.095								0.875	3.134	8.661	10.630	3.625
586/7TS	23.000	22.000/25.000	1.181	10.000	29.528	29.921	54.829	14.500	2.492	5.512	28.985	9.055	28.977	5.590	0.625	2.021	3.000	4.750	2.375
586/7T							61.704								1.000	3.312	8.661	11.625	3.875
588/9TS		28.000/32.000				37.980	62.506					12.795		8.464	0.625	2.021	3.000	4.750	2.375
588/9T							69.381								1.000	3.312	8.661	11.625	3.875

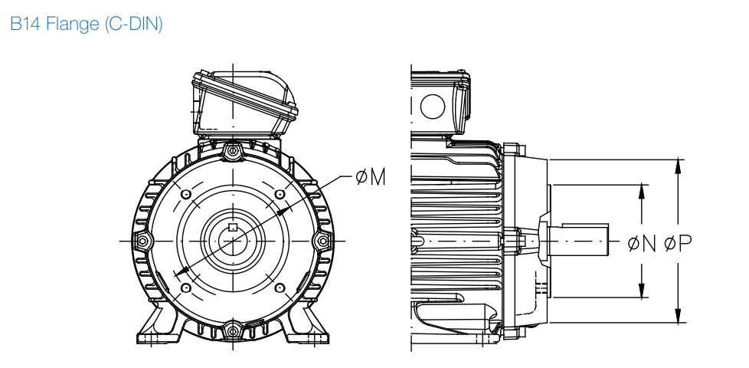
NEMA Frames	TERMINAL BOX									d1	BEARINGS		"C" FLANGE DIMENSIONS									"D" FLANGE DIMENSIONS						
	AB	HB	HF	HG	HH	HK	LL	LM	AA		D.E.	N.D.E	BA	AJ	AK	BD	BF NUMBER	BF TAP SIZE	BB	BC	AH	BA	AJ	AK	BD	BF NUMBER	BF TAP SIZE	BB
143T	6.181	1.728	3.500	-	4.250	2.638	4.527	4.094	NPT3/4"	A 4	6205 ZZ	6204 ZZ	2.250(A)	5.875	4.500	6.500	4	UNC 3/8"x16	0.156	0.125	2.125	2.250	10.000	9.000	11.000	4	0.562	0.203
145T					4.750								2.750(B)															
182T	7.559	2.236	4.500		5.000	3.110	5.512	5.236	NPT1"		6207 ZZ	6206 ZZ	2.750(A)	7.250	8.500	8.875		UNC 1/2"x13	0.250		2.625	2.750						
184T					5.500								3.500(B)															
213T	8.583	3.006	5.250		6.250						6308 ZZ	6207 ZZ	3.500(A)							0.250	3.125	3.500						
215T					7.000								4.250(B)															
254T	10.394	3.061	6.565		8.376	3.937	7.795	7.402	NPT1 1/2"		6309 C3	6209 C3	4.250(A)								3.75	4.250	12.500	11.000	14.000		0.828	
256T					9.250								4.750(B)															
284TS	10.984	3.535	7.000		9.500						6311 C3	6211 C3	4.750	9.000	10.500	11.031					3.000	4.750						
284T																					4.375							
286TS					10.250																3.000							
286T																					4.375							
324TS	12.480	4.811	8.708		10.500	4.645	8.976	8.543	NPT 2"		6312 C3	6212 C3	5.250	11.000	12.500	13.583		UNC 5/8"x11			3.500	5.250	16.000	14.000	18.000			
324T																					5.000							
326TS					11.250																3.500							
326T																					5.000							
364/5TS	16.378	4.055	-		12.362	6.378	9.646	10.119	NPT 3"	UNC 3/4"-10	6314 C3	6314 C3	5.875			15.551	8				3.500	5.875			17.716			
364/5T																					5.625							
404/5TS		5.040			14.213								6.625								4.000	6.625	20.000	18.000	22.000	8		
404/5T											6316 C3										7.000							
444/5TS	18.386	5.394			15.748	5.787	11.811	11.890	2xNPT 3"		6314 C3		7.500	14.000	16.000	17.913					4.500	7.500			21.653			
444/5T											6319 C3	6316 C3									8.250							
445/7TS	20.670	12.598	20.724	26.850	11.803	6.968	14.646	15.040			6314 C3	6314 C3									4.500							
445/7T											6319 C3	6316 C3									8.250							
447/9TS											6314 C3	6314 C3									4.500							
447/9T											6322 C3	6319 C3									8.250							
L447/9TS	23.071	11.417	20.551	28.236	11.500	8.464	15.906	17.244			6314 C3	6314 C3									4.500	8.500	22.000	18.000	24.803			0.250
L447/9T											6322 C3	6319 C3									8.250							
504/5TS	20.670	15.275	24.291	29.409	10.394	6.968	14.646	15.040			6314 C3	6314 C3	8.500	14.500	16.500						4.500	10.000	30.000	28.000	32.000			
504/5T											6319 C3	6316 C3									10.375							
586/7TS	23.977	17.322	26.732	34.015	13.386	8.464	15.906	17.244			6314 C3	6314 C3	10.000								4.500							
586/7T										UNC 7/8"-9	6322 C3	6319 C3									11.375							
588/9TS	27.600	8.464	28.346			12.520	17.441	28.740		UNC 3/4"-10	6314 C3	6314 C3																
588/9T										UNC 7/8"-9	6322 C3	6319 C3																

Notes: (A) - NEMA Standard (B) BA dimension for WEG cast iron motors with C-Flange

IEC Critical Dimensions




B5 Flange (FF)


B14 Flange (C-DIN)

This drawing is not representative of all frame sizes. It is used as a dimension guide only.
Dimension L is specific to WEG W22 IEC General Purpose Metric Motors.

Dimensions in millimeters / inches

Frame	A	AC	B	C	Shaft		L	B5 Flange (FF) Dimensions				B14 Flange (C-DIN) Dimensions			
					D	E		Flange	M	N	P	Flange	M	N	P
63	100 3.937	125 4.921	80 3.150	40 0.433	11 0.433	23 0.906	216 8.504	FF-115	115 4.528	95 3.740	140 5.512	C-90	75 2.953	60 2.362	90 3.543
71	112 4.409	141 5.551	90 3.543	45 1.772	14 0.551	30 1.181	248 9.764	FF-130	130 5.118	110 4.331	160 6.299	C-105	85 3.346	70 2.756	105 4.134
80	125 4.921	159 6.260	100 3.937	50 1.969	19 0.748	40 1.575	276 10.866	FF-165	165 6.496	130 5.118	200 7.874	C-120	100 3.937	80 3.150	120 4.724
L80							325 12.795					C-140	115 4.528	95 3.740	140 5.512
90S	140 5.512	179 7.047		56 2.205	24 0.945	50 1.969	304 11.969								
L90S							335 13.189								
90L			125 4.921				329 12.953								
L90L							360 14.173								
100L	160 6.299	199 7.835	140 5.512	63 2.480	28 1.102	60 2.362	376 14.803	FF-215	215 8.465	180 7.087	250 9.843	C-160	130 5.118	110 4.331	160 6.299
L100L							420 16.535								
112M	190 7.480	222 8.740	140 5.512	70 2.756			393 15.472								
L112M							423 16.654								
132S	216 8.504	271 10.669		89 3.504	38 1.496	80 3.150	452 17.795	FF-265	265 10.433	230 9.055	300 11.811	C-200	165 6.496	130 5.118	200 7.874
132M			178 7.008				490 19.291								
132M/L							515 20.276								
160M	254 10.000	329 12.953	210 8.268	108 4.252	42 1.654	110 4.331	598 23.543	FF-300	300 11.811	250 9.843	350 13.780				
160L			254 10.000				642 25.276								
180M	279 10.984	360 14.173	241 9.488	121 4.764	48 1.890		664 26.142								
180L			279 10.984				702 27.638								
200M	318 12.520	402 15.827	267 10.512	133 5.236	55 2.165		729 28.701	FF-350	350 13.780	300 11.811	400 15.748				
200L			305 12.008				767 30.197								
225S/M	356 14.016	455 17.913	286/311 11.260/12.244	149 5.866	55 2.165	110 4.331	856 33.701	FF-400	400 15.748	350 13.780	450 17.717				
					60 2.362	140 5.512	886 34.882								
250S/M	406 15.984	486 19.134	311/349 12.244/13.740	168 6.614	60 2.362	140 5.512	965 37.992	FF-500	500 19.685	450 17.717	550 21.654				
					65 2.559	140 5.512									
280S/M	457 17.992	599 23.583	368/419 14.488/16.496	190 7.480	65 2.559	140 5.512	1071 42.165								
					75 2.953	140 5.512									
315S/M	508 20.000	657 25.866	406/457 15.984/17.992	216 8.504	65 2.559	140 5.512	1244 48.976	FF-600	600 23.622	550 21.654	660 25.984				
					80 3.150	170 6.693	1274 50.157								
315L			508 20.000		65 2.559	140 5.512	1353 53.268								
					80 3.150	170 6.693	1383 54.449								
355M/L	610 24.016	736 28.976	560/630 22.047/24.803	254 10.000	75 2.953	140 5.512	1412 55.591	FF-740	740 29.134	680 26.772	800 31.496				
					100 3.937	210 8.268	1482 58.346								
355A/B			710/800 27.953/31.496		75 2.953	140 5.512	1607 63.268								
					100 3.937	210 8.268	1677 66.024								

NEMA Frame Assignments

NEMA FRAME PROGRAM	"T" FRAMES 1964								"U" FRAMES 1952								ORIGINAL NEMA FRAMES							
	3600		1800		1200		900		3600		1800		1200		900		3600		1800		1200		900	
HP	ODP	TEFC	ODP	TEFC	ODP	TEFC	ODP	TEFC	ODP	TEFC	ODP	TEFC	ODP	TEFC	ODP	TEFC	ODP	TEFC	ODP	TEFC	ODP	TEFC	ODP	TEFC
1	-	-	143T	143T	145T	145T	182T	182T	-	-	182	182	184	184	213	213	-	-	203	203	204	204	225	225
1.5	143T	143T	145T	145T	182T	182T	184T	184T	182	182	184	184	184	184	213	213	203	203	204	204	224	224	254	254
2	145T	145T	145T	145T	184T	184T	213T	213T	184	184	184	184	213	213	215	215	204	204	224	224	225	225	254	254
3	145T	182T	182T	182T	213T	213T	215T	215T	184	1847	213	213	215	215	254U	254U	224	224	225	225	254	254	284	284
5	182T	184T	184T	184T	215T	215T	254T	254T	213	213	215	215	254U	254U	256U	256U	225	225	254	254	284	284	324	324
7.5	184T	213T	213T	213T	254T	254T	256T	256T	215	215	254U	254U	256U	256U	284U	284U	254	254	284	284	324	324	326	326
10	213T	215T	215T	215T	256T	256T	284T	284T	254U	254U	256U	256U	284U	284U	286U	286U	286	286	324	324	326	326	364	364
15	215T	254T	254T	254T	284T	284T	286T	286T	256U	256U	284U	284U	324U	324U	326U	326U	324	324	326	326	364	364	365	365
20	254T	256T	256T	256T	286T	286T	324T	324T	284U	286U	286U	286U	326U	326U	364U	364U	326	326	364	364	365	365	404	404
25	256T	284TS	284T	284T	324T	324T	326T	326T	286U	324U	324U	324U	364U	364U	365U	365U	364S	365S	364	365	404	404	405	405
30	284TS	286TS	286T	286T	326T	326T	364T	364T	324S	326S	326U	326U	365U	365U	404U	404U	364S	404S	365	404	405	405	444	444
40	286TS	324TS	324T	324T	364T	364T	365T	365T	326S	364US	364U	364U	404U	404U	405U	405U	365S	405S	404	405	444	444	445	445
50	324TS	326TS	326T	326T	365T	365T	404T	404T	364US	364US	365US	365US	405U	405U	444U	444U	404S	444S	405S	444S	445	445	504U	504U
60	326TS	364TS	364TS	364TS	404T	404T	405T	405T	365US	405US	404US	405US	444U	444U	445U	445U	405S	445S	444S	445S	504U	504U	505	505
75	364TS	365TS	365TS	365TS	405T	405T	444T	444T	404US	444US	405US	444US	445U	445U	-	-	444S	504S	445S	504S	505	505	-	-
100	365TS	405TS	404TS	405TS	444T	444T	445T	445T	405US	445US	444US	445US	-	-	-	-	445S	505S	504S	505S	-	-	-	-
125	404TS	444TS	405T	444TS	445T	445T	-	-	444US	444US	445US	445US	-	-	-	-	504S	504S	505S	505S	-	-	-	-
150	405TS	445TS	444TS	445TS	-	-	-	-	445US	445US	-	-	-	-	-	-	505S	505S	-	-	-	-	-	-
200	444TS	444TS	445TS	445TS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
250	445TS	445TS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

IEC Enclosure Ratings (IP Designation)

Level	1st Numeral: Protection against Solids	2nd Numeral: Protection against Liquids
0	Non-protected	Non-protected
1	Objects greater than 50 mm	Dripping water
2	Objects greater than 12 mm	Dripping water on enclosure tilted up to 15 degrees
3	Objects greater than 2.5 mm	Spraying water up to 60 degrees from both sides
4	Objects greater than 1.0 mm	Splashing water from all sides
5	Dust-protected	Water jets
6	Dust-tight	Heavy seas

NEMA Enclosure Ratings for Controls

Protection Against:	1	2	3	3S	4	4X	6	6P	12	13	PW12
	Indoor	Indoor	Outdoor	Outdoor	Indoor/ Outdoor	Indoor/ Outdoor	Indoor/ Outdoor	Indoor/ Outdoor	Indoor	Indoor	Indoor/ Outdoor
Accidental Bodily Contact	NEMA 1	NEMA 2	NEMA 3	NEMA 3S	NEMA 4	NEMA 4X	NEMA 6	NEMA 6P	NEMA 12	NEMA 13	-
Falling Dirt	NEMA 1	NEMA 2	NEMA 3	NEMA 3S	NEMA 4	NEMA 4X	NEMA 6	NEMA 6P	NEMA 12	NEMA 13	-
Dust, Lint, Non-Volatile Fibers	-	-	NEMA 3	NEMA 3S	NEMA 4	NEMA 4X	NEMA 6	NEMA 6P	NEMA 12	NEMA 13	-
Windblown Dust	-	-	NEMA 3	NEMA 3S	NEMA 4	NEMA 4X	NEMA 6	NEMA 6P	-	-	-
Falling Liquid, Light Splash	-	NEMA 2	NEMA 3	NEMA 3S	NEMA 4	NEMA 4X	NEMA 6	NEMA 6P	NEMA 12	NEMA 13	-
Hosedown, Heavy Splash	-	-	-	-	NEMA 4	NEMA 4X	NEMA 6	NEMA 6P	-	-	-
High-Pressure, High-Temperature Spray	-	-	-	-	-	-	-	-	-	-	PW12
Exposure to Cleaning, Sanitizing Chemicals	-	-	-	-	-	-	-	-	-	-	PW12
Rain, Snow, Sleet	-	-	NEMA 3	NEMA 3S	-	-	NEMA 6	NEMA 6P	-	-	-
Ice Buildup	-	-	-	NEMA 3S	-	-	-	-	-	-	-
Oil or Coolant Seepage	-	-	-	-	-	-	-	-	NEMA 12	NEMA 13	-
Oil, Coolant Spray or Splash	-	-	-	-	-	-	-	-	-	NEMA 13	-
Occasional Submersion	-	-	-	-	-	-	NEMA 6	NEMA 6P	-	-	-
Prolonged Submersion	-	-	-	-	-	-	-	NEMA 6P	-	-	-
Corrosive Agents	-	-	-	-	-	NEMA 4X	-	NEMA 6P	-	-	-

Voltage Effects on Induction Motor Performance

Characteristic	110% of Voltage	90% of Voltage
Starting Torque	Increase 21%	Decrease 19%
Maximum Torque	Increase 21%	Decrease 19%
Slip	Decrease 15-20%	Increase 20-30%
100% Load Efficiency	Decrease 0-3%	Decrease 0-2%
75% Load Efficiency	Decrease 0-3%	Little Change
50% Load Efficiency	Decrease 0-5%	Increase 0-1%
100% Power Factor	Decrease 5-15%	Increase 1-7%
75% Power Factor	Decrease 5-15%	Increase 2-7%
50% Power Factor	Decrease 10-20%	Increase 3-10%
Full Load Current	Decrease Slightly-5%	Increase 5-10%
Starting Current	Increase 10%	Decrease 10%
Full Load Temperature Rise	Decrease 10%	Increase 10-15%
Maximum Overload Capacity	Increase 5%	Decrease 5-7%
Noise	Increase Slightly	Decrease Slightly

NEMA vs. IEC Terminal Markings

NEMA	IEC
T1	U1
T2	V1
T3	W1
T4	U2
T5	V2
T6	W2
T7	U5
T8	V5
T9	W5
T10	U6
T11	V6
T12	W6

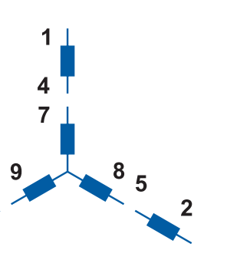
Electrical Formulas

Motor Type	Single Phase	Three Phase	Direct Current
Horsepower	$\frac{I \times E \times Eff \times PF}{746}$	$\frac{I \times E \times x\ Eff \times 1.73 \times PF}{746}$	$\frac{I \times E \times Eff}{746}$
kVA	$\frac{I \times E}{1000}$	$\frac{I \times E \times 1.73}{1000}$	—
Kilowatts	$\frac{I \times E \times PF}{1000}$	$\frac{I \times E \times 1.73 \times PF}{1000}$	$\frac{I \times E}{1000}$
Amperes when Horsepower is known	$\frac{HP \times 746}{E \times Eff \times PF}$	$\frac{HP \times 746}{1.73 \times E \times Eff \times PF}$	$\frac{HP \times 746}{E \times Eff}$
Amperes when Kilowatts is known	$\frac{KW \times 1000}{E \times PF}$	$\frac{KW \times 1000}{1.73 \times E \times PF}$	$\frac{KW \times 1000}{E}$
Amperes	$\frac{KVA \times 1000}{E}$	$\frac{KVA \times 1000}{1.73 \times E}$	—

E=Volts I = Amperes Eff = Percent efficiency PF = Power factor HP = Horsepower KVA = Kilovolt-Amps

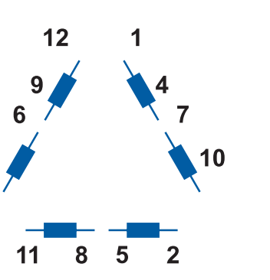
Three Phase Wiring Diagrams
NEMA

Dual Voltage
Y Connected



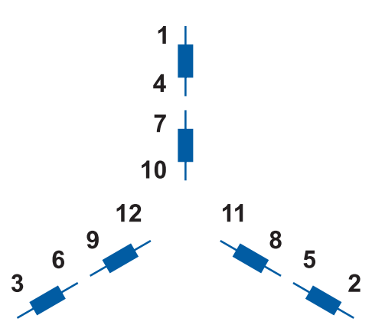
Voltage	L1	L2	L3	Join
Low	1,7	2,8	3,9	4&5&6
High	1	2	3	4&7, 5&8, 6&9

Dual Voltage
Delta Connected



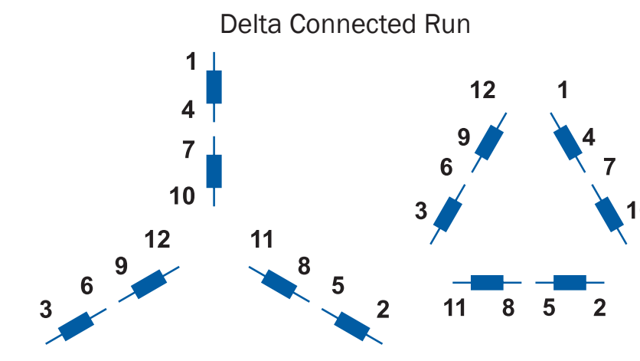
Voltage	L1	L2	L3	Join
Low	1,6, 7,12	2,4, 8,10	3,5, 9,11	-
High	1,12	2,10	3,11	4&7, 5&8, 6&9

Dual Voltage
External Y Connected



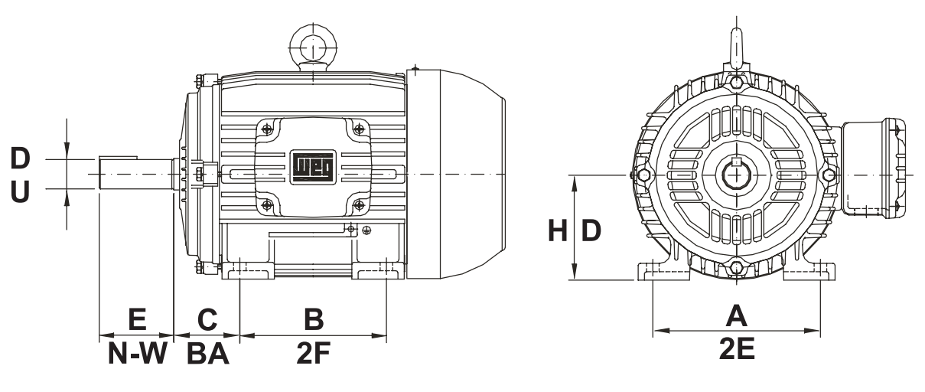
Voltage	L1	L2	L3	Join
Low	1,7	2,8	3,9	4&5&6, 10&11&12
High	1	2	3	4&7, 5&8, 6&9

Dual Voltage
Y Connected
Delta Connected Run



Voltage		L1	L2	L3	Join
Low	Start	1,7	2,8	3,9	4&5&6, 10&11&12
	Run	1,6, 7,12	2,4, 8,10	3,5, 9,11	-
High	Start	1	2	3	4&7, 5&8, 6&9, 10&11&12
	Run	1,12	2,10	3,11	4&7, 5&8, 6&9

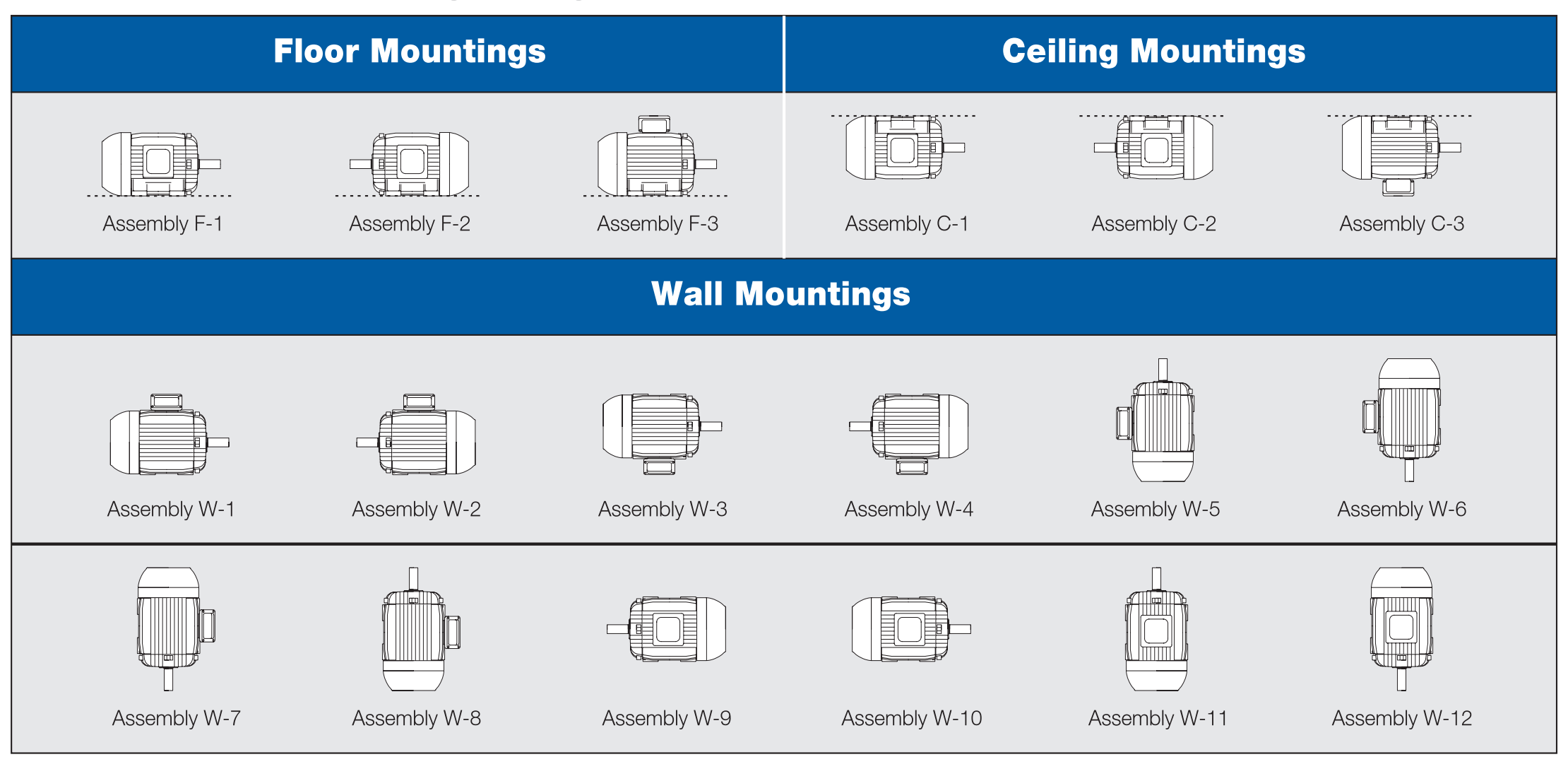
NEMA & IEC Dimensions Comparison



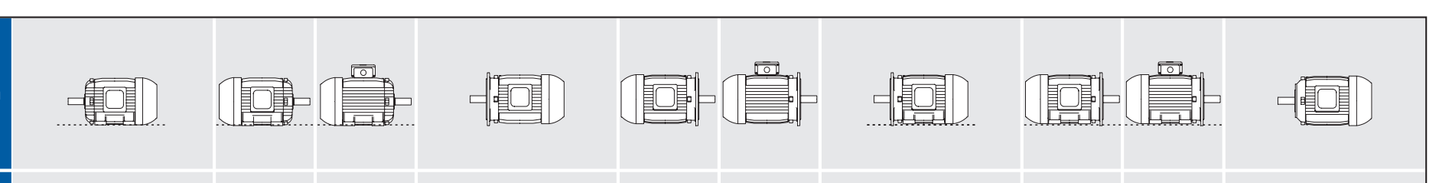
Dimensions shown are in millimeters / inches

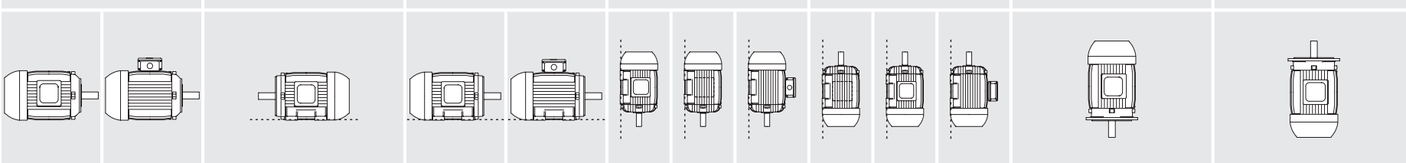
IEC	H	A	B	C	K	D	E
NEMA	D	2E	2F	BA	H	U	N-W
90S	90 3.543	140 5.512	100 3.937	56 2.205	10 0.394	24 0.945	50 1.969
143T	88.9 3.500	139.7 5.500	101.6 4.000	57.2 2.250	8.7 0.344	22.2 0.875	57.2 2.250
90L	90 3.543	140 5.512	100 3.937	56 2.205	10 0.394	24 0.945	50 1.969
145T	88.9 3.500	139.7 5.500	127 5.000	57.2 2.250	8.7 0.344	22.2 0.875	57.2 2.250
112S	112 4.409	190 7.480	140 5.512	70 2.756	12 0.472	28 1.102	60 2.362
182T	114.3 4.500	190.5 7.500	114.3 4.500	69.9 2.750	10.3 0.406	28.6 1.125	69.9 2.750
112M	112 4.409	190 7.480	140 5.512	70 2.756	12 0.472	28 1.102	60 2.362
184T	114.3 4.500	190.5 7.500	139.7 5.500	69.9 2.750	10.3 0.406	28.6 1.125	69.9 2.750
132S	132 5.197	216 8.504	140 5.512	89 3.504	12 0.472	38 1.496	80 3.150
213T	133.4 5.250	215.9 8.500	139.7 5.500	88.9 3.500	10.3 0.406	34.9 1.375	85.7 3.375
132M	132 5.197	216 8.504	178 7.008	89 3.504	12 0.472	38 1.496	80 3.150
215T	133.4 5.250	215.9 8.500	177.8 7.000	88.9 3.500	10.3 0.406	34.9 1.375	85.7 3.375
160M	160 6.299	254 10.000	210 8.268	108 4.252	14.5 0.571	42 1.654	110 4.331
254T	158.8 6.250	254 10.000	209.6 8.252	108.0 4.250	13.5 0.531	41.3 1.625	101.6 4.000
160L	160 6.299	254 10.000	254 10.000	108 4.252	14.5 0.571	42 1.654	110 4.331
256T	158.8 6.250	254 10.000	254 10.000	108 4.250	13.5 0.531	41.3 1.625	101.6 4.000
180M	180 7.087	279 10.984	241 9.488	121 4.764	14.5 0.571	48 1.890	110 4.331
284T	177.8 7.000	279.4 11.000	241.3 9.500	120.7 4.750	13.5 0.531	47.6 1.875	117.4 4.622
180L	180 7.087	279 10.984	279 10.984	121 4.764	14.5 0.571	48 1.890	110 4.331
286T	177.8 7.000	279.4 11.000	279.4 11.000	120.7 4.750	13.5 0.531	47.6 1.875	117.4 4.622
200M	-	-	-	-	-	-	-
324T	203.2 8.000	317.5 12.500	266.7 10.500	133.4 5.250	16.7 0.657	54 2.125	133.4 5.250
200L	200 7.874	318 12.520	305 12.008	133 5.236	18.5 0.728	55 2.165	110 4.331
326T	203.2 8.000	317.5 12.500	304.8 12.000	133.4 5.250	16.7 0.657	54 2.125	133.4 5.250
225S	225 8.858	356 14.016	286 11.260	149 5.866	18.5 0.728	55 2.165	110 4.331
364T	228.6 9.000	355.6 14.000	286 11.260	149.2 5.875	16.8 0.660	60.3 2.375	149.2 5.874
225M	225 8.858	356 14.016	311 12.244	149 5.866	18.5 0.728	60 2.362	140 5.512
365T	228.6 9.000	355.6 14.000	311 12.244	149.2 5.875	16.8 0.660	60.3 2.375	149.2 5.874
250M	250 9.843	406 15.984	349 13.740	168 6.614	24 0.945	65 2.559	140 5.512
405T	254 10.000	406.4 16.000	349 13.740	168.3 6.625	20.6 0.810	73 2.875	184.2 7.250
280S	280 11.024	457 17.992	368 14.488	190 7.480	24 0.945	65 2.559	140 5.512
444T	279.4 11.000	457.2 18.000	368.3 14.500	190.5 7.500	20.6 0.810	85.7 3.375	215.9 8.500
280M	280 11.024	457 17.992	419 16.496	190 7.480	24 0.945	75 2.953	140 5.512
445T	279.4 11.000	457.2 18.000	419.1 16.500	190.5 7.500	20.6 0.810	85.7 3.375	215.9 8.500
315S	315 12.402	508 20.000	406 15.984	216 8.504	28 1.102	65 2.559	140 5.512
504Z	317.5 12.500	508 20.000	406.4 16.000	215.9 8.500	31.8 1.250	92.1 3.625	270 10.630
315M	315 12.402	508 20.000	457 17.992	216 8.504	28 1.102	80 3.150	170 6.693
505Z	317.5 12.500	508 20.000	457.2 18.000	215.9 8.500	31.8 1.250	92.1 3.625	270 10.630
355M	355 13.976	610 24.016	560 22.047	254 10.000	28 1.102	75 2.953	140 5.512
586T	368.3 14.500	584.2 23.000	558.8 22.000	254 10.000	30 1.181	98.4 3.875	295.3 11.625
355L	355 13.976	610 24.016	630 24.803	254 10.000	28 1.102	100 3.937	210 8.268
587T	368.3 14.500	584.2 23.000	635 25.000	254 10.000	30 1.181	98.4 3.875	295.3 11.625

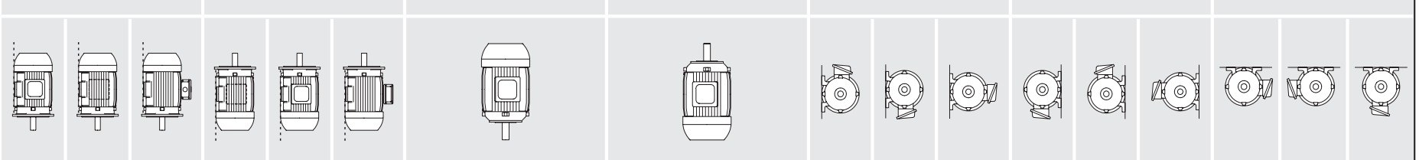
NEMA Standard Mounting Configurations


Floor Mountings **Ceiling Mountings**
Wall Mountings

IEC Standard Mounting Configurations

Assembly	**Configuration**										
	Reference	B3R	B3L	B3T	B5R	B5L	B5T	B35R	B35L	B35T	B14R
Details	**Frame**	With Feet	With Feet		Without Feet	Without Feet		With Feet	With Feet		Without Feet
	Mounting	Base or Rails	Base or Rails		Flange FF	Flange FF		Base or Flange FF	Base or Flange FF		Flange FC

Assembly	**Configuration**														
	Reference	B14L	B14T	B34R	B34L	B34T	V5L	V5R	V5T	V6L	V6R	V6T	V1L	V3L	
Details	**Frame**	Without Feet		With Feet	With Feet		With Feet			With Feet			Without Feet	Without Feet	
	Mounting	Flange FC		Base or Flange FC	Base or Flange FC		Wall			Wall			Flange FF	Flange FF	

Assembly	**Configuration**																		
	Reference	V15L	V15R	V15T	V36L	V36R	V36T	V18L	V19L	B6L	B6R	B6T	B7L	B7R	B7T	B8L	B8R	B8T	
Details	**Frame**	With Feet			With Feet			Without Feet	Without Feet	With Feet			With Feet			With Feet			
	Mounting	Wall or Flange FF			Wall or Flange FF			Flange C	Flange C	Wall			Wall			Ceiling			

Understanding The New Electric Motor Energy Efficiency Regulations

Minimal Nominal Efficiency Standard (Premium)

Item	Power in HP	Power in kW	Energy Efficiency Standard (Percentage)					
			Open			Enclosed		
			2 Pole	4 Pole	6 Pole	2 Pole	4 Pole	6 Pole
1	1	0.75	77	85.5	82.5	77	85.5	82.5
2	1.5	1.1	84	86.5	86.5	84	86.5	87.5
3	2	1.5	85.5	86.5	87.5	85.5	86.5	88.5
4	3	2.2	85.5	89.5	88.5	86.5	89.5	89.5
5	4	3	86.5	89.5	89.5	88.5	89.5	89.5
6	5	3.7	86.5	89.5	89.5	88.5	89.5	89.5
7	5.5	4	86.5	89.5	89.5	88.5	89.5	89.5
8	7.5	5.5	88.5	91	90.2	89.5	91.7	91
9	10	7.5	89.5	91.7	91.7	90.2	91.7	91
10	15	11	90.2	93	91.7	91	92.4	91.7
11	20	15	91	93	92.4	91	93	91.7
12	25	19	91.7	93.6	93	91.7	93.6	93
13	30	22	91.7	94.1	93.6	91.7	93.6	93
14	40	30	92.4	94.1	94.1	92.4	94.1	94.1
15	50	37	93	94.5	94.1	93	94.5	94.1
16	60	45	93.6	95	94.5	93.6	95	94.5
17	75	55	93.6	95	94.5	93.6	95.4	94.5
18	100	75	93.6	95.4	95	94.1	95.4	95
19	125	90	94.1	95.4	95	95	95.4	95
20	150	110	94.1	95.8	95.4	95	95.8	95.8
21	175	132	95	95.8	95.4	95.4	96.2	95.8
22	200	150	95	95.8	95.4	95.4	96.2	95.8

This table applies to:

- NEMA Motors from 1 HP up to and including 200 HP or IEC (Metric) Motors larger than 0.746 kW and up to and including 150 kW
- 2 Pole (3600 RPM), 4 Pole (1800 RPM) or 6 Pole (1200 RPM)
- NEMA T frame or IEC (metric) 90 frame and above
- NEMA design A or B, or IEC design N
- Standard shaft, R-shaft (tapered) or S-shaft (short) or an IEC (metric) equivalent

Minimal Nominal Efficiency Standard (Energy Efficient)

Item	Power in HP	Power in kW	Energy Efficiency Standard (Percentage)							
			Open				Enclosed			
			2 Pole	4 Pole	6 Pole	8 Pole	2 Pole	4 Pole	6 Pole	8 Pole
1.	1	0.75	75.5	82.5	80.0	74.0	75.5	82.5	80.0	74.0
2.	1.5	1.1	82.5	84.0	84.0	75.5	82.5	84.0	85.5	77.0
3.	2	1.5	84.0	84.0	85.5	85.5	84.0	84.0	86.5	82.5
4.	3	2.2	84.0	86.5	86.5	86.5	85.5	87.5	87.5	84.0
5.	4	3	84.0	86.5	86.5	86.5	85.5	87.5	87.5	84.0
6.	5	3.7	85.5	87.5	87.5	87.5	87.5	87.5	87.5	85.5
7.	5.5	4	85.5	87.5	87.5	87.5	87.5	87.5	87.5	85.5
8.	7.5	5.5	87.5	88.5	88.5	88.5	88.5	89.5	89.5	85.5
9.	10	7.5	88.5	89.5	90.2	89.5	89.5	89.5	89.5	88.5
10.	15	11	89.5	91.0	90.2	89.5	90.2	91.0	90.2	88.5
11.	20	15	90.2	91.0	91.0	90.2	90.2	91.0	90.2	89.5
12.	25	19	91.0	91.7	91.7	90.2	91.0	92.4	91.7	89.5
13.	30	22	91.0	92.4	92.4	91.0	91.0	92.4	91.7	91.0
14.	40	30	91.7	93.0	93.0	91.0	91.7	93.0	93.0	91.0
15.	50	37	92.4	93.0	93.0	91.7	92.4	93.0	93.0	91.7
16.	60	45	93.0	93.6	93.6	92.4	93.0	93.6	93.6	91.7
17.	75	55	93.0	94.1	93.6	93.6	93.0	94.1	93.6	93.0
18.	100	75	93.0	94.1	94.1	93.6	93.6	94.5	94.1	93.0
19.	125	90	93.6	94.5	94.1	93.6	94.5	94.5	94.1	93.6
20.	150	110	93.6	95.0	94.5	93.6	94.5	95.0	95.0	93.6
21.	175	132	94.5	95.0	94.5	93.6	95.0	95.0	95.0	94.1
22.	200	150	94.5	95.0	94.5	93.6	95.0	95.0	95.0	94.1
23.	250	185	94.5	95.4	95.4	94.5	95.4	95.0	95.0	94.5
24.	300	225	95.0	95.4	95.4		95.4	95.4	95.0	
25.	350	260	95.0	95.4	95.4		95.4	95.4	95.0	
26.	400	300	95.4	95.4			95.4	95.4		
27.	450	335	95.8	95.8			95.4	95.4		
28.	500	375	95.8	95.8			95.4	95.8		

This table applies to:

- 8-pole (900 RPM) construction, or
- U frame or equivalent IEC (metric) dimensions, or
- NEMA design C or IEC (metric) design H, or
- Close-coupled pump motor (JM, JP, P Base etc..), or
- Fire pump duty motor, or
- Vertically-mounted solid shaft normal thrust motor, as tested in the horizontal configuration, or
- Footless construction, or
- NEMA design B motors of size greater than 200 HP and up to and including 500 HP or IEC design N motor of size greater than 150 kW and up to and including 375 kW.
- Integral gear motors
- Voltage other than 230V & 460V