



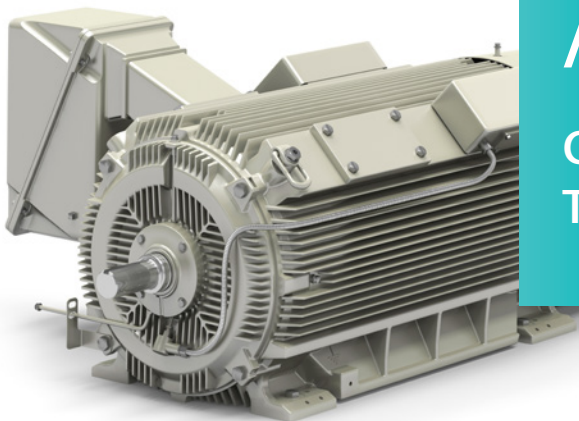
SIEMENS

Ingenuity for life



SIMOTICS
Advantage™ Series

General Purpose MV Motors
Technical Factsheet



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Advantage Series meets or exceeds industry standards.

Motor operators rely on standards to assure performance and Siemens has always been at the forefront of compliance.

- IEEE841 Features
- ANSI
- NEMA
- CSA
- CSA- US
- NEMA Premium® Efficiency

Options

C&D Flanges, Roller Bearings, Bearing Insulation, Thermistors, Thermostats, and Nameplate Additions

Resistive Temperature Detectors

Stick-type are available for 449 frame and standard on all other frames.

Direction of Rotation

Ratings indicated as uni-directional (2P S449) will be listed CW as standard. All other ratings are bi-directional.

IEEE 841 Standard - 2009

For 2 pole motors, exceptions are taken to twice speed or twice frequency vibration and to sound power levels. data is offered in sound pressure.

Shaft Seals

For IP56 and/or specific Inpro/Seal on the drive-end.

Anti-Fungal Treatment

An Anti-Fungal Treatment is offered for the stator in humid areas. For 449 frames only.

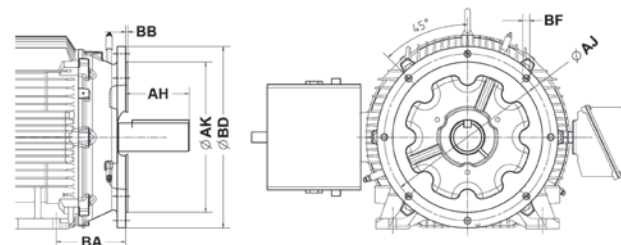
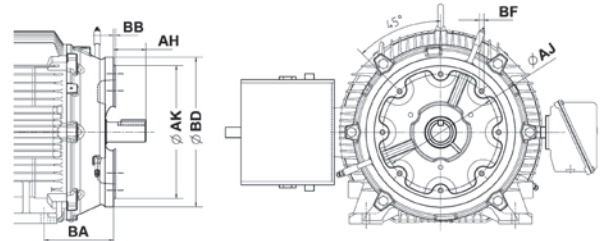
Construction Features	
Enclosure	TEFC (IC411)
Degree of Protection	IP55
HP Range	150 - 1100 HP (2, 4 pole), 150 - 900 HP (6 pole)
Frame Size / Shaft Height	449, S449, 5011, 5810, SH400
Voltage	2300V/4000V
Service Factor	1.15 @ 40°C
Warranty	36 months from date of manufacture
Construction Materials	
Frame	Cast Iron
Bearing Housings	Cast Iron
Main Terminal Box	Fabricated Steel (449 frame), Cast Iron (5011+ frames)
Auxiliary Boxes	Cast Iron - NEMA 4X
Shaft	AISI 1045 (449 frame) 4140 (S449-449T frames), S355J2+-N (5011+ frames)
Rotor	Aluminum Die Cast
Lamination Material	C5 Core Plate
External Cooling Fan	Polyamide & Polypropylene (449) Bronze (S449) Anti-Static Reinforced Polyamide (5011+ frames)
Fan Cover	Cast Iron
Insulation	MiCLAD™ Class F non-hydroscopic, NEMA Class B temp rise (449 frame), MICLASTIC™ VPI (5011+ frames)
Hardware	Zinc Plated Carbon Steel
General Information	
Noise Level	85 dB(A)
Vertical Mounting	N/A
Inverter Operation	Meets NEMA MG1-20 (449 frame) Meets NEMA MG1-31 rated at 6kV (5011+ frames) Variable Torque: 10:1 Constant Torque: 2:1
Paint	Two-part Epoxy
Paint Color	RAL 7030 Gray
Bearing Type	Anti-friction ball
Vibration	0.12 IPS
Hazardous Area	CSA Class 1, Division 2, Groups B, C, D, Temp Class T3 (5011 frame on VFD Temp Class T2D)

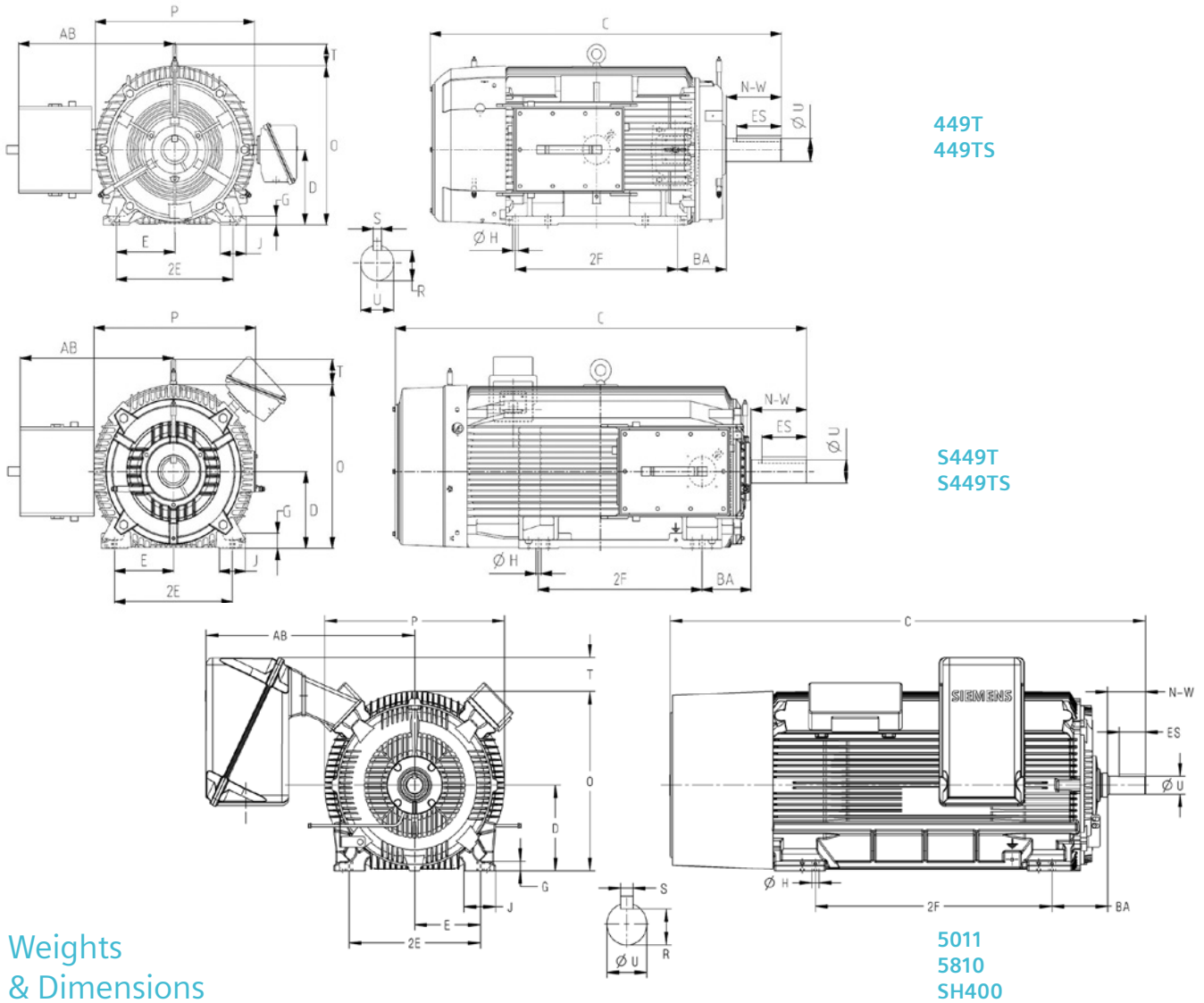
C-Face Dimensions

Frame	Poles	BA	AJ	AK	BD	BF	BB	AH
449TS	All	7.50	14.00	16.00	18.00	0.625-11 UNC	0.25	3.66
449T	4, 6	7.49	14.00	16.00	18.00	0.625-11 UNC	0.25	7.40
5011	4, 6	8.50	14.50	16.50	17.91	0.625-11 UNC	0.25	11.10
5810	4, 6	10.00	14.50	16.50	17.91	0.625-11 UNC	0.25	11.26

D-Flange Dimensions

Frame	Poles	BA	AJ	AK	BD	BF	BB	AH
449TS	All	7.50	20.00	18.00	21.75	0.812	0.25	3.66
449T	4, 6	7.49	20.00	18.00	21.75	0.812	0.25	7.40
5011	4, 6	8.50	22.00	18.00	24.00	0.812	0.25	11.10
5810	4, 6	10.00	30.00	28.00	32.00	0.827	0.25	11.26



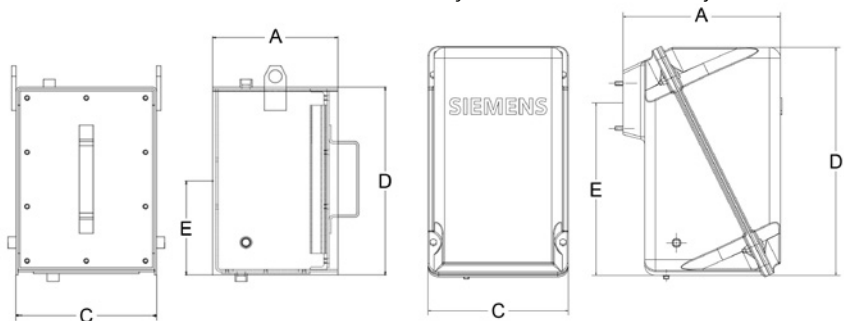


Weights & Dimensions

Frame	Poles	C	2F	N-W	P	U	BA	AB	2E	D	O	R	S	ES	Wgt.
449T	All	53.80	25*	8.50	25.30	3.375	7.50	24.10	18.00	11.000	23.20	2.880	0.875	6.88	2325
449TS	All	50.10	25*	4.75	25.30	2.375	7.50	24.10	18.00	11.000	23.20	2.021	0.625	3.00	2425
S449T	4, 6	62.90	25	8.50	24.90	3.375	7.50	23.40	18.00	11.000	23.40	2.880	0.875	6.88	2975
S449TS	2	62.60	25	4.75	24.90	2.375	7.50	23.40	18.00	11.000	23.40	2.021	0.625	3.00	2975
S449TS	4, 6	59.20	25	4.75	24.90	2.375	7.50	23.40	18.00	11.000	23.40	2.021	0.625	3.00	2975
5011	2	72.40	36	5.75	27.40	2.625	8.50	31.70	20.00	12.500	26.20	2.275	0.625	4.00	4400
5011	4, 6	78.00	36	11.62	27.40	3.875	8.50	31.70	20.00	12.500	26.20	3.309	1.000	10.00	4650
5810	2	78.30	36	6.75	31.00	2.875	10.00	33.00	23.00	14.500	30.00	2.450	0.750	5.00	5400
5810	4, 6	83.20	36	11.88	31.00	4.625	10.00	33.00	23.00	14.500	30.00	4.169	1.250	10.00	6150
SH400	2	83.90	44.10	6.75	31.00	3.375	10.00	34.10	29.53	15.748	32.90	2.880	0.875	5.00	7700
SH400	4, 6	84.90	44.10	8.00	27.40	4.500	10.00	34.10	29.53	15.748	32.90	3.944	1.000	6.50	8850

*(447 frame is 20) application will use the rear jackscrew hole as one of the foundation bolts, thus you will not be able to use jackscrews

Frame	A	C	D	E
449T	11.3	12.6	17.4	8.2
449TS	11.3	12.6	17.4	8.2
S449T	11.3	12.6	17.4	8.2
S449TS	11.3	12.6	17.4	8.2
5011	12.6	12.0	21.5	16.0
5810	12.6	12.0	21.5	16.0
SH400	12.6	12.0	21.5	16.0



HP	Pole	Frame	RPM	kVA/HP Code	FLA 2300V	LRA 2300V	FLA 4000V	LRA 4000V	FLE (%)	FL-PF (%)	FLT (ft /lbs)	LRT (ft /lbs)
150	2	449TS	3600	G	35	218	20	126	93.6	87	220	249
150	4	449T	1800	J	37	262	21	151	94.5	80	440	506
150	6	449T	1200	G	37	230	21	133	94.2	81	663	849
200	2	449TS	3600	F	46	287	26	166	94.2	87	293	325
200	4	449T	1800	H	49	339	28	196	94.4	81	587	763
200	6	S449T	1200	H	48	317	28	183	94.5	82	884	1202
250	2	449TS	3600	F	56	336	32	194	95.0	88	367	407
250	4	449T	1800	H	61	425	35	245	95.0	81	734	1028
250	6	S449T	1200	H	61	418	35	242	95.0	81	1105	1635
300	2	S449TS	3600	E	66	381	38	220	95.2	90	440	475
300	4	S449T	1800	H	72	486	41	281	95.3	82	881	1057
300	6	5011	1200	H	78	517	45	297	94.6	76	1325	1736
350	2	S449TS	3600	F	77	470	45	271	95.2	89	513	585
350	4	S449T	1800	H	82	564	48	326	95.3	83	1028	1316
350	6	5011	1200	H	91	568	52	327	94.6	76	1547	2042
400	2	5011	3600	F	92	543	53	312	95.1	86	588	423
400	4	5011	1800	G	96	608	55	349	94.8	83	1184	1622
400	6	5011	1200	G	100	594	58	342	94.7	79	1768	2139
450	2	5011	3600	G	103	652	59	375	95.2	86	662	510
450	4	5011	1800	H	110	734	63	422	94.9	81	1328	1872
450	6	5810	1200	G	114	636	65	366	95.1	78	1990	2050
500	2	5011	3600	F	113	686	65	395	95.4	87	734	551
500	4	5011	1800	F	118	687	68	395	95.0	84	1474	1769
500	6	5810	1200	F	124	702	72	403	95.3	79	2206	2272
600	2	5810	3600	F	137	832	79	478	95.7	86	882	997
600	4	5810	1800	G	142	936	82	539	95.4	83	1767	2138
600	6	5810	1200	F	148	816	85	469	95.3	80	2651	2678
700	2	5810	3600	G	159	1000	90	569	95.8	87	1027	1140
700	4	5810	1800	G	162	989	93	569	95.4	85	2059	2306
700	6	SH400	1200	F	171	978	99	562	95.6	80	3082	2866
800	2	SH400	3600	G	186	1215	107	699	96.0	84	1173	1103
800	4	5810	1800	G	187	1196	107	688	95.5	84	2356	2827
800	6	SH400	1200	G	196	1200	113	690	95.7	80	3525	3631
900	2	SH400	3600	G	207	1375	119	790	96.1	85	1319	1293
900	4	SH400	1800	G	210	1310	121	753	95.3	84	2643	3039
900	6	SH400	1200	G	220	1352	126	777	95.8	80	3960	4118
1000	2	SH400	3600	G	224	1530	129	880	96.3	87	1464	137
1000	4	SH400	1800	F	231	1403	133	806	95.5	85	2937	3319
1100	2	SH400	3600	G	246	1661	141	955	96.3	87	1612	1531
1100	4	SH400	1800	H	257	1773	148	1020	95.6	84	3231	4265

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Telephone: (800) 333-7421 (Toll Free)
 Email: helpline.sii@siemens.com
 Online: www.lda-portal.siemens.com

Siemens Industry, Inc.
 4620 Forest Avenue
 Norwood, OH 45212 USA
 1-800-241-4453
info.us@siemens.com
www.usa.siemens.com/abovenema

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