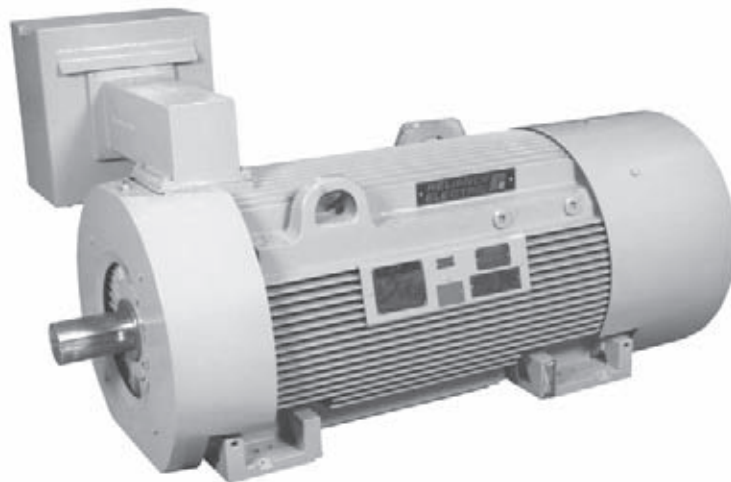


LIBERATOR

LARGE AC MOTORS

Liberator Large AC Motors, Standard Model Number

The Reliance Liberator® Large AC Standard Motor Product Line is available as pre-engineered model-numbers with the availability for select modifications through the Quick-Mod program. These models cover commonly requested ratings, and are easily selectable which makes it simple to choose the right motor. Select model numbers are normally stocked.



Liberator Quickship Features:

- 300 through 1500 HP
- Three enclosure types: WPI, WP-II & TEFC
- Either 1200, 1800 or 3600 RPM
- 3-60-2300/4000V
- TEFC frames give foot-hole match for 5007 (507), 5008 (508), 5009 (509), 5010, 5011, 5012 & 5810 frames
- SolidCure epoxy form wound VPI insulation system
- 100 ohm platinum winding RTDs (2/ph)
- Provisions for bearing RTDs
- Space heaters 120V (144° C)
- Anti-Friction bearings (except where noted)
- Frame grounding provisions
- Div. 2, Class 1, Groups C & D, T3A
- Oversized main T/Box

HP Rating	TEFC
Low Rating	Class B @ 1.15 SF
Middle Rating	Class B @ 1.0 SF & Class F @ 1.15 SF
High Rating	Class F @ 1.0 SF

liberator GENERAL PURPOSE LARGE AC MOTORS

Totally Enclosed Fan Cooled (TEFC) Liberator motors are available from 250 to 1000 horsepower

- F1 T/box location (field changeable to F2 on TEFC)
- Tapped holes for vertical jackscrews
- Reversing rotation
- Cast iron frame and end shields
- CSA certified

Each model number has three ratings to provide greater flexibility to meet requirements. This is accomplished by re-rating the temperature rise and service factor capability at the different HPs (see chart above and on pg. 2). A full set of data, curves and dimension sheets is available for each rating. Standard nameplates show all three ratings.

Quick-Mod Program:

The Quick-Mod program allows for common modifications to be performed on all Quickship model numbered motors. Stock models can be modified in one week or less (depending on availability at time of order).

Available Quick-mod options include:

- Inpro seals
- Special nameplate marking
- Single rated nameplates
- Bearing RTDs
- Air Filters (WP-II only)
- F1 to F2 (TEFC only)

✓ Aggregate/Cement

Food

✓ Mining

✓ Forest/Paper

✓ Petro/Chem

Unit/Baggage Handling

✓ HVAC/Industrial Air Handling

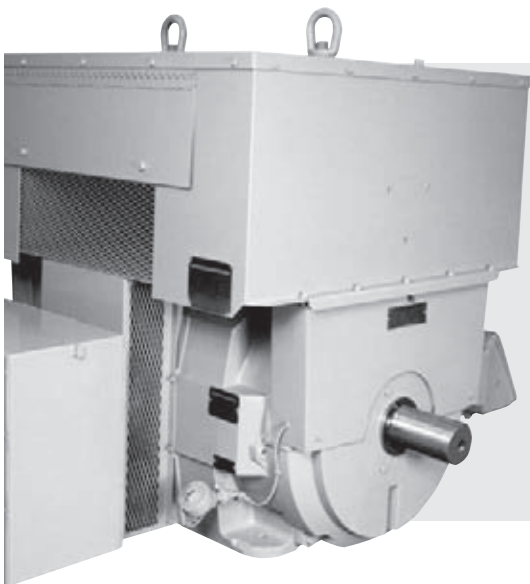
✓ Environmental/Fluid Power

✓ Automotive

✓ Metals

Typical Data for Liberator QuickShip and Stock 3600 RPM WP-I, WP-II & TEFC Models

Model No.	HP	2300V AMPS (0.575 for 4000v)				EFFICIENCY POWER FACTOR				TYPICAL RPM			TYPICAL TORQUE				FRAME SIZE	Dimension Sheet Drawing No.
		FL	NL	LR	LR Code	FL	3/4	FL	3/4	FL	PU	BD	FL (lb-ft)	LR %FL	PU %FL	BD %FL		
TEFC-3600 RPM																		
QS33209AN	300	69	23	500	H	93.5	92.8	87.5	83.9	3579	540	3463	440	91	91	338	G5008	616836-62
QS33209AN	350	79	23	500	G	93.9	93.4	88.8	86.1	3575	540	3463	514	78	78	290	G5008	616836-62
QS33209AN	400	89	23	500	F	94.1	93.8	89.4	87.5	3571	540	3463	588	68	68	253	G5008	616836-62
QS33210AN	450	101	31	756	H	94.6	94.2	88.5	85.2	3580	540	3462	660	97	95	346	G5010	616159-83
QS33210AN	500	111	31	756	G	94.8	94.5	89.3	86.6	3577	540	3462	734	88	85	311	G5010	616159-83
QS33210AN	600	131	31	756	F	94.9	94.9	90.2	88.5	3572	540	3462	882	73	71	259	G5010	616159-83
QS33207AN	600	135	45	1008	H	95.5	95.2	87.1	83.7	3585	540	3498	879	99	96	340	G5810	616151-37
QS33207AN	700	155	45	1008	G	95.6	95.5	88.2	85.7	3582	540	3498	1026	85	82	291	G5810	616151-37
QS33207AN	800	176	45	1008	F	95.7	95.7	88.7	87.1	3579	540	3498	1174	74	72	255	G5810	616151-37
WPII-3600 RPM																		
QS31204AN	300	70	24	523	H	94.4	94.2	85.2	80.8	3575	324	3421	441	131	102	346	E5006	608961-987
QS31204AN	350	80	24	523	G	94.5	94.5	86.7	83.4	3571	324	3421	515	112	87	299	E5006	608961-987
QS31204AN	400	90	24	523	F	94.5	94.7	87.6	85.1	3566	324	3421	589	98	76	262	E5006	608961-987
QS31205AN	450	103	37	698	G	94.9	94.8	86.5	82.6	3574	540	3445	662	115	98	313	E5008	608961-988
QS31205AN	500	113	37	698	G	94.9	95	87.4	84.2	3571	540	3445	735	103	88	284	E5008	608961-988
QS31205AN	600	134	37	698	E	94.8	95.1	88.5	86.4	3565	540	3445	884	86	73	237	E5008	608961-988
QS31207AN	600	136	48	1019	H	95.1	95.2	87.1	83.2	3576	540	3447	881	148	107	338	E5010	608961-989
QS31207AN	700	157	48	1019	G	95.2	95.3	88.4	85.5	3572	540	3447	1028	127	92	291	E5010	608961-989
QS31207AN	800	177	48	1019	F	95.1	95.4	89.1	87.1	3568	540	3447	1178	111	80	256	E5010	608961-989
WPII-3600 RPM																		
QS32204AN	300	70	24	523	H	94.4	94.2	85.2	80.8	3575	324	3421	441	131	102	346	E5006	615328-8
QS32204AN	350	80	24	523	G	94.5	94.5	86.7	83.4	3571	324	3421	515	112	87	299	E5006	615328-8
QS32204AN	400	90	24	523	F	94.5	94.7	87.6	85.1	3566	324	3421	589	98	76	262	E5006	615328-8
QS32205AN	450	103	37	698	G	94.9	94.8	86.5	82.6	3574	540	3445	662	115	98	313	E5008	615328-9
QS32205AN	500	113	37	698	G	94.9	95	87.4	84.2	3571	540	3445	735	103	88	284	E5008	615328-9
QS32205AN	600	134	37	698	E	94.8	95.1	88.5	86.4	3565	540	3445	884	86	73	237	E5008	615328-9
QS32207AN	600	136	48	1019	H	95.1	95.2	87.1	83.2	3576	540	3447	881	148	107	338	E5010	615328-10
QS32207AN	700	157	48	1019	G	95.2	95.3	88.4	85.5	3572	540	3447	1028	127	92	291	E5010	615328-10
QS32207AN	800	177	48	1019	F	95.1	95.4	89.1	87.1	3568	540	3447	1178	111	80	256	E5010	615328-10
QS32214SN	800	188	39.8	629.4	F	94.4	94.2	84.6	80.8	3571	0	3455	1177	83	83	248	O5808	616853-006
QS32214SN	900	209	39.8	629.4	E	94.5	94.4	85.5	82.6	3567	0	3455	1325	74	74	221	O5808	616853-006
QS32214SN	1000	230	39.8	629.4	D	94.6	94.6	86.1	83.9	3563	0	3455	1474	67	67	199	O5808	646853-006
QS32216SN	1000	230	47.2	1013.7	J	95.7	95.5	85.1	80.4	3587	540	3479	1467	117	92	340	O5810	616852-002
QS32216SN	1250	280	47.2	1013.7	G	95.8	95.9	87.1	84.1	3578	540	3479	1833	93	73	274	O5810	616852-002
QS32216SN	1500	333	47.2	1013.7	E	95.8	96.1	88.1	86.2	3573	540	3479	2205	78	61	230	O5810	616852-002

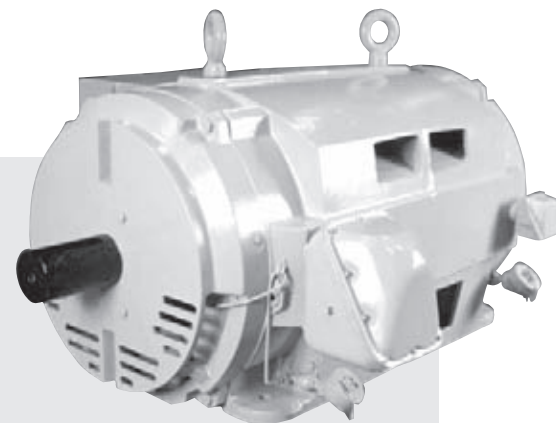


WP-II

Weather Protected Type-II Enclosure (WP-II) Liberator motors are available from 300-1500 horsepower.

WP-I

Liberator Weather Protected Type-I (WP-I) motors are available from 300 to 1250 horsepower.



HP Rating	WP-I & WP-II
Low rating	Class B @ 1.15 SF
Middle rating	Class B @ 1.15 SF
High rating	Class B @ 1.0 SF

Typical Data for Liberator QuickShip and Stock 1800 RPM WP-I, WP-II & TEFC Models

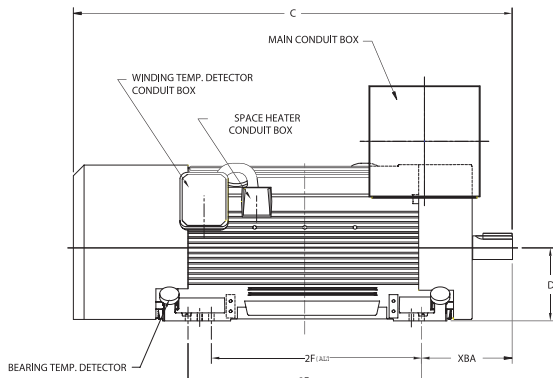
Model No. (...AN w/o Brg. RTD ...AT with Brg. RTD)	HP	2300V AMPS (0.575 for 4000v)				EFFICIENCY		POWER FACTOR		TYPICAL RPM			TYPICAL TORQUE				FRAME SIZE	Dimension Sheet Drawing No.
		FL	NL	LR	LR Code	FL	3/4	FL	3/4	FL	PU	BD	FL (lb-ft)	LR %FL	PU %FL	BD %FL		
TEFC-1800 RPM																		
QS33404AN / T	300	71	26	492	H	94.2	93.7	83.9	80.3	1791	270	1752	879	118	96	280	G5008	616836-9
QS33404AN / T	350	82	26	492	G	94.4	94.2	84.9	82.4	1789	270	1752	1028	101	82	241	G5008	616836-9
QS33404AN / T	400	94	26	492	F	94.4	94.4	85.3	83.8	1787	270	1752	1176	88	72	212	G5008	616836-9
QS33405AN / T	450	104	35	718	H	95	94.8	85	82	1790	270	1752	1320	122	99	271	G5010	616159-13
QS33405AN / T	500	115	35	718	G	95.1	95	85.6	83.3	1789	270	1752	1468	110	89	244	G5010	616159-13
QS33405AN / T	600	137	35	718	E	95	95.3	85.7	85	1786	270	1752	1764	92	74	204	G5010	616159-13
QS33407AN / T	600	137	45	1000	H	95.5	95.5	85.6	82.7	1791	270	1752	1759	135	119	279	G5012	616158-9
QS33407AN / T	700	158	45	1000	G	95.6	95.7	86.5	84.5	1789	270	1752	2055	116	102	240	G5012	616158-9
QS33407AN / T	800	181	45	1000	F	95.5	95.8	86.4	85.6	1787	270	1752	2351	101	89	211	G5012	616158-9
WPI-1800 RPM																		
QS31404AN / T	300	68	17	486	H	94.2	94.1	88.8	87	1785	144	1721	882	139	88	267	E5006	608961-990
QS31404AN / T	350	78	17	486	G	94.2	94.4	89.2	88.2	1782	144	1721	1031	119	75	229	E5006	608961-990
QS31404AN / T	400	89	17	486	E	94.1	94.5	89.1	88.8	1779	144	1721	1180	104	66	201	E5006	608961-990
QS31405AN / T	450	110	48	745	H	94.8	94.9	81.5	76.1	1783	72	1695	1325	112	105	320	E5008	608961-991
QS31405AN / T	500	118	48	745	G	94.8	95	83	78.3	1781	72	1695	1473	101	94	289	E5008	608961-991
QS31405AN / T	600	139	48	745	F	94.6	95.1	84.7	81.5	1776	72	1695	1773	84	78	241	E5008	608961-991
QS31407AN / T	600	143	60	1070	J	95.1	95.3	82.9	77.8	1783	72	1691	1767	132	119	342	E5010	608961-992
QS31407AN / T	700	162	60	1070	G	95.1	95.4	84.8	80.8	1780	72	1691	2063	113	102	295	E5010	608961-992
QS31407AN / T	800	184	60	1070	F	95	95.4	85.9	82.9	1777	72	1691	2362	99	89	259	E5010	608961-992
QS31409AN / T	800	181	58	1245	H	95.5	95.8	86.8	83.6	1780	270	1687	2360	123	106	300	E5012	608961-993
QS31409AN / T	900	202	58	1245	G	95.3	95.8	87.6	85.1	1777	270	1687	2657	109	94	267	E5012	608961-993
QS31409AN / T	1000	224	58	1245	F	95.2	95.8	88	86.2	1775	270	1687	2959	98	84	241	E5012	608961-993
WPII-1800 RPM																		
QS32404AN / T	300	68	17	486	H	94.2	94.1	88.8	87	1785	144	1721	882	139	88	267	E5006	615328-11
QS32404AN / T	350	78	17	486	G	94.2	94.4	89.2	88.2	1782	144	1721	1031	119	75	229	E5006	615328-11
QS32404AN / T	400	89	17	486	E	94.1	94.5	89.1	88.8	1779	144	1721	1180	104	66	201	E5006	615328-11
QS32405AN / T	450	110	48	745	H	94.8	94.9	81.5	76.1	1783	72	1695	1325	112	105	320	E5008	615328-12
QS32405AN / T	500	118	48	745	G	94.8	95	83	78.3	1781	72	1695	1473	101	94	289	E5008	615328-12
QS32405AN / T	600	139	48	745	F	94.6	95.1	84.7	81.5	1776	72	1695	1773	84	78	241	E5008	615328-12
QS32407AN / T	600	143	60	1070	J	95.1	95.3	82.9	77.8	1783	72	1691	1767	132	119	342	E5010	615328-13
QS32407AN / T	700	162	60	1070	G	95.1	95.4	84.8	80.8	1780	72	1691	2063	113	102	295	E5010	615328-13
QS32407AN / T	800	184	60	1070	F	95	95.4	85.9	82.9	1777	72	1691	2362	99	89	259	E5010	615328-13
QS32409AN / T	800	181	58	1245	H	95.5	95.8	86.8	83.6	1780	270	1687	2360	123	106	300	E5012	615328-14
QS32409AN / T	900	202	58	1245	G	95.3	95.8	87.6	85.1	1777	270	1687	2657	109	94	267	E5012	615328-14
QS32409AN / T	1000	224	58	1245	F	95.2	95.8	88	86.2	1775	270	1687	2959	98	84	241	E5012	615328-14

Typical Data for Liberator QuickShip and Stock 1200 RPM TEFC Models

X Model No. (...AN w/o Brg. RTD ...AT with Brg. RTD)	HP	2300V AMPS (0.575 for 4000v)				EFFICIENCY		POWER FACTOR		TYPICAL RPM			TYPICAL TORQUE				FRAME SIZE	Dimension Sheet Drawing No.
		FL	NL	LR	LR Code	FL	3/4	FL	3/4	FL	PU	BD	FL	LR	PU	BD		
QS33604AN / AT	300	70.4	24.5	522.6	H	94.8	94.7	84.1	80.4	1193	180	1163	1320	135	98	270	G5010	616159-13
QS33604AN / AT	350	80.9	24.5	522.6	G	94.9	94.9	85.4	82.6	1192	180	1163	1542	116	84	233	G5010	616159-13
QS33604AN / AT	400	92.3	24.5	522.6	F	94.8	95.1	85.5	84.1	1191	180	1163	1764	101	73	204	G5010	616159-13
QS33605AN / AT	450	104.5	36	793.9	J	95.4	95.4	84.4	80.8	1193	180	1163	1980	144	102	271	G5012	616158-9
QS33605AN / AT	500	115.1	36	793.9	H	95.4	95.5	85.2	82.4	1193	180	1163	2200	130	92	245	G5012	616159-9
QS33605AN / AT	600	137.4	36	793.9	F	95.3	95.7	85.8	84.4	1191	180	1163	2646	108	76	205	G5012	616158-9
QS33607AN / AT	600	140.2	45.2	1004	H	95.6	95.5	83.8	80.1	1195	180	1168	2636	147	123	297	G400J	616164-15
QS33607AN / AT	700	161.2	45.2	1004	G	95.7	95.7	84.9	82.3	1194	180	1168	3079	126	106	256	G400J	616164-15
QS33607AN / AT	800	183.1	45.2	1004	F	95.7	95.9	85.4	83.7	1193	180	1168	3522	110	92	224	G400J	616164-15

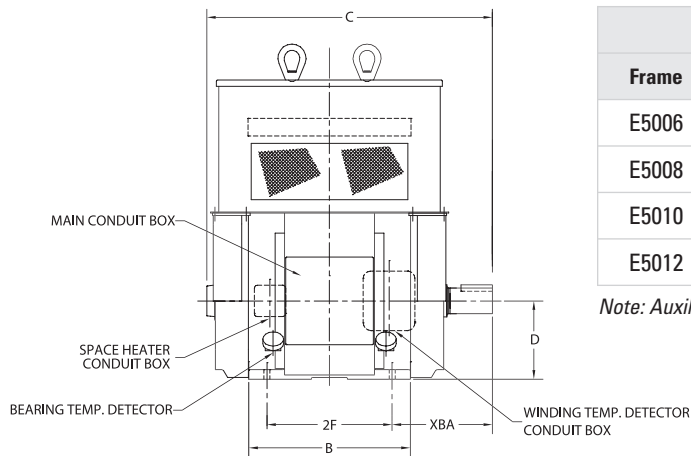
LIBERATOR PRODUCTION MOTORS

For more diverse needs, Liberator products are also available from production with ODP, WP-II AND TEFC enclosures. These motors are suitable for accepting modifications from an expanded list of options. For more information and available modifications please refer to the Reliance Industrial Motors Catalog.



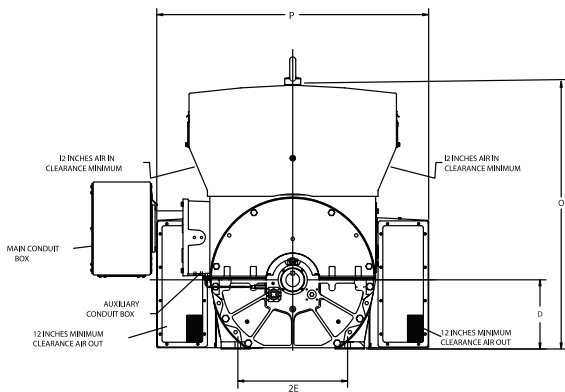
TEFC enclosures						
Frame	Measured In	C	B	2F (ALT)	D	XBA
G5008	Inches	60.14	25.00	22.00	12.50	15.50
G5010	Inches	67.14	32.00	28.00	12.50	15.50
G5012	Inches	75.14	40.00	36.00	12.50	15.50
G5810	Inches	86.07	41.50	36.00	14.50	17.00

Note: Auxiliary conduit boxes shown for reference only.



WP-II (5000) Enclosures						
Frame	Measured In	C	B	2F	D	XBA
E5006	Inches	44.50	25.76	20.00	12.50	15.50
E5008	Inches	49.50	30.75	25.00	12.50	15.50
E5010	Inches	56.50	37.75	32.00	12.50	15.50
E5012	Inches	64.50	45.75	40.00	12.50	15.50

Note: Auxiliary conduit boxes shown for reference only.



WP-II (5800) Enclosures								
Frame	B	C	D	2E	2F	O	P	Max Weight
O5808	40.1	58.5	14.5	23.0	28.0	55.5	57.8	6700
O5810	48.1	66.5	14.5	23.0	36.0	55.5	57.8	7700

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