

DESIGN DATA SHEET

DEPARTMENT OF THE NAVY

NAVAL SEA SYSTEMS COMMAND

DDS 302-1

Supersedes DDS 302-1, dated 3 May 1979

A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS

<u>Paragraph</u>	<u>Contents</u>	<u>Page(s)</u>
A.	References	1
B.	Scope	1
C.	Abbreviations and Symbols	1 and 2
D.	General	2

TABLES

TABLE I: A.C. Motor and Controller Application Requirements

A. References

1. MIL-M-17059 Motor, 60-cycle, Alternating-Current Fractional H.P. (Shipboard Use)
2. MIL-M-17060 Motors, 60-Hertz, Alternating-Current Integral horsepower, Shipboard Use
3. MIL-C-2212 Controller, Electric Motor, A.C. or D.C. and Associated Switching Devices, Naval Shipboard.

B. Scope

This Design Data Sheet is intended for use as a guide in selecting motors, controllers, and master switches, and shows data applicable to typical motor-driven auxiliaries proposed for installation aboard ship.

C. Abbreviations and Symbols

Abbreviations used in this Design Data Sheet are as follows:

DP	dripproof	OF	oil failure switch
DPP	dripproof protected	PB	push button
DPST	double-pole single-throw	PS	pressure switch
EXP	explosion-proof	REQD	required
EXPFC	explosion-proof fan cooled	SBM	submersible
FLS	float switch	SPT	spraytight
HP	high pressure switch	SPTFC	spraytight fan cooled
LP	low pressure switch	TE	totally enclosed
LSW	limit switch	TEFC	totally enclosed fan cooled
LVP	low voltage protection	TS	temperature switch
LVR	low voltage release	WT	watertight
LVRE	low voltage release effect	WTFC	watertight fan cooled
MAG	magnetic		

D. General

The "A.C. Motor Design" column in Table I reflects the Design and Types indicated in References 1 and 2. The definitions of LVP and LVR are as specified in Reference 3.

Table I is provided as a guide and does not modify the requirements of specifications for auxiliaries, or the requirements for the location or application of any specific installation. The time ratings of varying, intermittent, and short-time motors should be, in general, as indicated in Table I, unless there are sufficient tests or service data available to show that a different time rating more closely meets the requirements of the specific application.

For additional and more specific information on equipment requirements and the application of motors and controllers, refer to applicable ship specifications, particularly Sections 300 and 302.

The specifications noted in the "Remarks and Applicable Specifications for Auxiliaries" column of Table I are for illustrative purposes only, and should not be construed as contractual requirements.

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES	
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE			
Auxiliary Propulsion:												
Auxiliary Propulsion Unit	Squirrel Cage/Constant	B	Continuous	SBM	A	Starting	MAG, LVP	Nonautomatic	DP	Local, Remote PB		
Retracting System	Squirrel Cage/Constant	D	Short Time, ½ hour	TE	A	Starting, Reversing	MAG, LVP	Nonautomatic	DP	Local, Remote PB		
Training System	Squirrel Cage/Constant	D	Short Time, ½ hour	TE	A	Starting, Reversing	MAG, LVP	Nonautomatic	DP	Local, Remote PB		
Bow Thruster	Squirrel Cage/Constant	B	Continuous	SBM	A	Starting	MAG, LVP	Nonautomatic	DP	Local, Remote PB		
Capstan, Warping	Squirrel Cage/Multispeed	C	Varying, ½ hour	DPP, WT	A	Starting, Reversing, Speed Selection	MAG, LVP	Nonautomatic	DP or WT	Remote, WT Drum type, Emergency Remote PB	MIL-C-17944	
Capstan, Mooring	Squirrel Cage/Multispeed	C	Varying, ½ hour	DPP, WT	A	Starting, Reversing, Speed Selection	MAG, LVP	Nonautomatic	DP or WT	Remote, WT Drum type, Emergency Remote PB	MIL-C-17944	
Cleaners, Vacuum	Universal/Constant	-	Continuous	DPP	C	Starting	Manual	-	-	-		
Foodservice Equipment												
Dumbwaiter	Squirrel Cage/Varying	D	Intermittent, ½ hour	TE	C	Starting, Reversing	MAG, LVP	Nonautomatic	DP	Remote PB		

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SER-VICE	FUNCTION	OPERA-TION PROTE-CTION	PERFOR-MANCE	ENCL-OSURE		
Foodservice Equipment (Continued):											
Garbage Grinder	Squirrel Cage/Constant	B	Intermittent 1 hour	SPT, SPTFC	C	Starting	MAG, LVP	Nonauto-matic	DP	Remote PB	
Knife Sharpener	Squirrel Cage/Constant	B	Short time, 1/4 hour	DPP	C	Starting	MAG, LVP	Nonauto-matic	DP	PB	
Machine, Bread-Slicing	Capacity Start/Constant	-	Continuous	DPP or TE	C	Starting	Manual	-	DP	-	
Machine, Chopping (Grinding) Meat (0.4 kW (larger than 1/2 HP))	Squirrel Cage/Constant	B	Continuous	DPP or TE	C	Starting	Manual	-	DP	-	
Machine, Chopping (Grinding) Meat (0.4 kW (1/2 HP and less))	Capacity Start/Constant	-	Continuous	DPP or TE	C	Starting	Manual	-	DP	-	
Machine, Dishwashing	Squirrel Cage/Constant	B	Continuous	TE	C	Starting	MAG, LVP	Semi-auto-matic	DP	Local PB	MIL-D-19466

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SER-VICE	FUNCTION	OPERA-TION PROTE-CTION	PERFOR-MANCE	ENCL-OSURE		
Foodservice Equipment (Continued):											
Machine, Dough Divider	As Required	B	Intermittent ½ hour	DPP	C	Starting	Manual	-	DP	-	MIL-D-3886
Machine, Dough Mixing	Squirrel Cage/ Constant	B	Continuous	SPT, SPTFC	C	Starting	MAG, LVP	Nonauto- matic	DP	Remote PB	MIL-D-17013
Machine, Food Mixing (less than 0.4 kW (½ HP))	Squirrel Cage/ Constant	-	Varying, 1 hour	DPP, TE, or TEFC	C	Starting	Manual	-	DP	DPST switch	MIL-M-18900
Machine, Food Mixing (0.4 kW (½ HP) and larger))	Squirrel Cage/ Constant	B	Varying, 1 hour	DPP, TE, or TEFC	C	Starting	MAG, LVP	Nonauto- matic or semi-auto matic	DP	Local PB	MIL-M-18900
Machine, Food Shaping	Squirrel Cage/ Constant	B	Continuous	TE	C	Starting	Manual	-	DP	-	MIL-M-40163
Machine, Meat, Bone and Fish Cutting	Squirrel Cage/ Constant	B	Continuous	TE, TEFC	C	Starting	MAG, LVP	Nonauto- matic	DP	Local PB	MIL-M-16436

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SER-VICE	FUNCTION	OPERA-TION PROTE-CTION	PERFOR-MANCE	ENCL-OSURE		
Foodservice Equipment (Continued):											
Machine, Meat Tenderizing	Squirrel Cage/Constant	B	Continuous	TE	C	Starting	Manual	-	DP	-	MIL-M-17312
Machine, Slicing, Meat	Capacity Start Constant	-	Continuous	TE,DPP	C	Starting	Manual	-	DP	-	
Machine, Vegetable, Peeling	Squirrel Cage/Constant	B	Varying, 1 hour	SPT, SPTFC	C	Starting	Manual	-	WT	-	
Machine, Vegetable Slicer	Capacity Start/Constant	-	Varying, 1 hour	TE,DPP	C	Starting	Manual	-	DP	-	
Toaster Conveyor	Squirrel Cage/Constant	B	Varying	TE,DPP	C	Starting	Manual	-	DP	-	
Trash Compactor	Squirrel Cage/Constant	B	Intermittent 1 hour	SPT, SPTFC	C	Starting	Manual	-	DP	-	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SER-VICE	FUNCTION	OPERATION PROTECTION	PERFOR-MANCE	ENCL-OSURE		
Compressor:											
Air Conditioning	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVP	Nonauto-matic and Automatic	DP	Local TS, PS and PB	MIL-C-23122 MIL-R-16743
Air, Deballast	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVP	Automatic	DP	Local and Remote PB	
Air, Diesel Starting	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVP	Nonauto-matic and Automatic	DP	Local, Remote HP, PS, LP TS	MIL-C-18419
Air, Diver	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	Manual	-	DP	-	
Air, High Pressure	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVP	Automatic	DP	Local PB, HP, LP, TS	MIL-C-18419
Air, Incinerator	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	MAG, LVP	Nonauto-matic	DP	Local PB	
Air, Laundry	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	MAG, LVP	Nonauto-matic	DP	Local PB	
Air, Low Pressure	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVP	Automatic, Nonauto-matic	DP	Local, Remote PB, HP, LP TS, OF	MIL-C-19113

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Compressor (Continued):											
Air, Sewage Holding Tank	Squirrel Cage/Constant	B	Continuous	DP	C	Starting	MAG, LVP	Nonautomatic	DP	Local PB, LSW	
Air, Ship Service	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVP	Automatic	DP	Remote PB, HP, LP	
O ₂ N ₂ Plant	Squirrel Cage/Constant	B	Continuous	DPP, SPT	A	Starting	MAG, LVP	Semiautomatic	DP, WT	Local PB, PS	MIL-S-23639
Prairie Masker	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVP	Nonautomatic	DP	Local, Remote PB	
Refrigeration, Dispenser, Canned Juice & Ice Cream	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	Manual	-	DP	Local TS	MIL-C-19932
Refrigeration, Drinking Water Coolers	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	Manual	-	DP	Local TS	MIL-C-24166

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Compressor (Continued):											
Refrigeration, Frozen Food Cabinet	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	Manual	-	DP	Local TS	MIL-R-21098
Refrigeration, Ice Cream Batch Freezer	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	MAG, LVR	Automatic	DP	Local PB, TS, HP, LP	
Refrigeration, Ice Making Machine Automatic	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	Manual	-	DP	Local TS, HP	MIL-I-19012
Refrigeration, Refrigerator	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	Manual	-	DP	Local TS	MIL-R-21098
Refrigeration, Refrigerator-Freezer Combination	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	Manual	-	DP	Local TS	MIL-R-21098

4-

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Compressor (Continued):											
Refrigeration, Salad-Dessert Dispensing Bar	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	Manual	-	DP	Local LP, TS	MIL-D-19645
Refrigeration, Ship Stores Refrigerating Unit Reciprocating Unloaded Start	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVP	Automatic	DP	Local or Remote TS PS and PB	MIL-R-16743
Refrigeration, Ship Stores Refrigerating Unit Reciprocating Loaded Start	Squirrel Cage/Single or Multispeed	C	Continuous	DPP	A	Starting speed selection	MAG, LVP	Nonautomatic and Automatic	DP	Local TS, PS and PB	MIL-R-16743
Refrigeration, Soft Ice Cream Freezer	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	Manual	-	DP	Local TS	
Refrigeration, Under-Counter Refrigerator	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	Manual	-	DP	Local HP and TS	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SER-VICE	FUNCTION	OPERA-TION PROTE-CTION	PERFOR-MANCE	ENCL-OSURE		
Conveyers:											
Pallet and Package	Squirrel Cage/Constant	B,C	Continuous	As Reqd	C	Starting, Reversing	MAG, LVP	Nonauto-matic	As Reqd	Local, Remote PB	
Stores, Vertical	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting, Reversing	MAG, LVP	Nonauto-matic	DP	ON-OFF switch	MIL-C-23218
Crane:											
Boat or Aircraft (Electro-Hydraulic)	Squirrel Cage/Constant	B	Varying, 1/2 hour	DPP	A	Starting	MAG, LVP	Nonauto-matic	DP	Local, Remote PB	
Boat or Aircraft (Electric)	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVP	Nonauto-matic	DP	Local, Remote PB	
Jib Crane	Squirrel Cage/Multispeed	D	SP	WT	A	Starting, Reversing	MAG, LVP	Nonauto-matic	DP	Remote PB (SBM)	
Curtain, Roller	Squirrel Cage/Varying	C	Short time, 1/2 hour	SPT, SPTFC	A	Starting, Reversing speed selection	MAG, LVP	Nonauto-matic		Local, Remote PB	Limit Switches, as required

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Davit, Rotating Gear	Squirrel Cage/ Varying Speed	D	Short time, ¼ hour	WT	A	Starting, Reversing, speed selection	MAG, LVP	Nonautomatic	DP	Local, Remote PB	Limit Switches and Interlocks as required
Door, Bow and Ramp (Electro-Hydraulic)	Squirrel Cage/ Constant	B	Varying, ¼ hour	DPP	A	Starting	MAG, LVP	Nonautomatic	WT	Local, Remote PB	Limit Switches and Interlocks as required
Door, Motor Operated	Squirrel Cage/ Multispeed	D	Short time, ¼ hour	As Reqd	A	Starting, Reversing, speed selection	MAG, LVP	Nonautomatic	As Reqd	Remote PB	Limit switches and Interlocks as required
Elevator:											
Aircraft (Electro-Hydraulic)	Squirrel Cage/ Multispeed	B,C	Varying, ¼ hour	DPP	A	Starting, speed selection	MAG, LVP	Nonautomatic	As Reqd	Remote PB	MIL-P-17869
Aircraft (Electric)	Squirrel Cage/ Varying, Multispeed	D	As Required	SPT, SPTFC	A	Starting, Reversing, speed selection	MAG, LVP	Nonautomatic	As Reqd	Remote PB	MIL-E-17807
Bomb (Electro-Hydraulic)	Squirrel Cage/ Constant	B	Varying, 1 hour	As Reqd	A	Starting	MAG, LVP	Nonautomatic	DP	Remote PB	MIL-P-17869
Bomb, or Torpedo (Electric)	Squirrel Cage/ Varying Multispeed	D	As Required	As Reqd	A	Starting, Reversing, speed selection	MAG, LVP	Nonautomatic	DP	Remote Drum or PB	MIL-E-17807

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Elevator (Continued):											
Cargo, Main Drive	Squirrel Cage/ Multispeed	D	Intermittent	DPP	A	Starting Reversing speed selection	MAG, LVP	Nonautomatic	As Req'd.	Remote PB	
Pallet	Squirrel Cage/ Multispeed		Varying, 1 hour	DPP	A	Starting, speed selection	MAG, LVP	Nonautomatic	DP	Local, Remote PB	
Screw Type	Squirrel Cage/ Varying, Multi-speed	D	As Required	As Reqd	A	Starting Reversing speed selection	MAG, LVP	Nonautomatic	DP	Remote PB	
Strike Down	Squirrel Cage/ Varying, Multi-speed	D	As Required	As Reqd	A	Starting Reversing speed selection	MAG, LVP	Nonautomatic	DP	Remote PB	
Small Arms and Freight	Squirrel Cage/ Varying, Multi-speed	D	As Required	As Reqd	A	Starting Reversing speed selection	MAG, LVP	Nonautomatic	DP	Remote PB	
Fans:											
Air, Primary	Squirrel Cage/ Constant	B	Continuous	WT	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Fans (Continued):											
Bracket	Shaded Coil/ Varying, Multi-speed	-	Continuous	DR, DPP	C	Starting	Manual	-	-	-	MIL-F-68
Centrifugal	Squirrel Cage/ Multispeed or Constant	B	Continuous	TE	A	Starting or Stopping Speed Selection	MAG, LVP	Nonauto- matic	As Reqd	Local PB	MIL-F-50084
Circulating, Ceiling (Refrigerator Spaces)	Shaded Coil/ Varying	-	Continuous	DP	C	Starting	Manual	-	-	-	
Forced Draft, Main or Port Use (Centrifugal or Vaneaxial)	Squirrel Cage/ Multispeed	B	Continuous	DPP	A	Starting, Speed Selection	MAG, LVP	Nonauto- matic	As Reqd	Local, Remote PB	
Ship Service/ Emergency gas turbine generator enclosure cooling Gland Exhaust	Squirrel Cage/ Constant	B	Continuous	DPP	A	Starting	MAG, LVR	Automatic	DP	Local, Remote PB	MIL-F-18523
	Squirrel Cage/ Constant	B	Continuous	SPTFC	A	Starting	MAG, LVR	Nonauto- matic	As Reqd	Local PB	
Main Engine cooling	Squirrel Cage/ Multispeed	B	Continuous	SPT	A	Starting, speed Selection	MAG, LVR	Automatic and Non- automatic	DP	Local, Remote PB	

-14-

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Fans (Continued):											
Portable	Split Phase/Constant	B	Continuous	EXP	A	Starting	Manual	-	As Reqd	Local PB	
Tubeaxial or Propeller Type	Multispeed or Constant	B	Continuous	EXP SPT	A	Starting	MAG, LVR	Nonauto-matic	As Reqd	Local PB	MIL-F-16081,16082
Unit Cooler	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	Manual LVRE	-	DP	-	
Vaneaxial Type	Squirrel Cage/Two-speed or Constant	B	Continuous	EXP, SPT	A	Starting Speed Selection	MAG, LVP	Nonauto-matic	As Reqd	Local PB	MIL-F-52608
Hoists:											
Accommodation Ladder	Squirrel Cage/Constant	D	Continuous	WT	A	Starting Reversing	MAG, LVP	Nonauto-matic	DP	Remote PB (SBM)	
Ammunition (Hydraulic Dredger)	Capacity Start/Constant	B	Varying, 1/2 hour	SPT, SPTFC	A	Starting	MAG, LVP	Nonauto-matic	WT	Local PB	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SER-VICE	FUNCTION	OPERATION PROTECTION	PERFOR-MANCE	ENCL-OSURE		
Hoists (Continued):											
Monorail	Squirrel Cage/ Variable	C	Intermittent	DPP	A	Starting Reversing Speed Selection	MAG, LVP	Nonauto- matic	DP	Remote PB (SBM)	MIL-M-82021
Wire Rope and Chain (Hatch, Ammunition, and Stores)	Capacity Start/ Constant	C	Short time, 1/4 hour	SPT, WT	A, C	Starting Reversing	MAG, LVP	Nonauto- matic	WT	Local PB	
Hose Reel	Squirrel Cage/ Constant	B	Continuous	SPTFC	A	Starting	MAG, LVP	Nonauto- matic	DP	Local PB	MIL-H-38209
Landing Craft Line Delivery System	Squirrel Cage/ Constant	D	Intermittent	WTFC	A	Starting, Reversing	MAG, LVR	Nonauto- matic	WT	Remote PB (SBM)	
Cargo (Hanger)	Squirrel Cage/ Multispeed	D	Intermittent	DPP	A	Starting, Reversing, Speed, Sel- ection	MAG, LVP	Nonauto- matic	DP	Remote PB (SBM)	
Laundry Equipment:											
Dry-Cleaning Outfit	Squirrel Cage/ Constant	As Reqd	Varying, 2 hours	TE, TEFC	C	Starting or Starting and Reversing	MAG, LVP	Automatic	DP	Local PB	MIL-D-18163

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Laundry Equipment (Continued):											
Ironer, Flatwork	Squirrel Cage/Constant	B	Continuous	TE	C	Starting	MAG, LVP	Nonauto-matic	DP	Local PB	MIL-L-19493
Shaper	Squirrel Cage/Constant		Continuous	TEFC	C	Starting	MAG, LVP	Nonauto-matic	DP	Local PB	
Tumbler, Dryer, Drum	Squirrel Cage/Constant	B	Continuous	TE	C	Starting	Manual	-	-	-	MIL-L-19493
Tumbler, Drying (Submarines)	Squirrel Cage/Constant	-	Continuous	TE, SPT	C	Starting, Reversing	MAG, LVP	Automatic	DP	Local PB	MIL-T-23581
Washer, Extractor	Squirrel Cage/Constant	FF	Intermittent	TE, TEFC	C	Starting Reversing	MAG, LVP	Automatic	DP	Local PB	MIL-L-19493
Washer, Small Type	Squirrel Cage/Constant	-	Continuous	TE, TEFC	C	Starting Reversing	MAG, LVP	Automatic	DP	Local PB	
Washer, Heavy Duty (Submarines)	Squirrel Cage/Constant	B	Continuous	TE, SPT	C	Starting, Reversing	MAG, LVP	Automatic	DP	Local PB	MIL-W-23554

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Motor Generator:											
Arc Welding	Squirrel Cage/Constant	B	Continuous, 60% duty Cycle	DPP	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB	
Interior Communication	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVP	Nonautomatic	DP	Remote PB	MIL-M-19633
Ship Service and Special Frequency Supply	Squirrel Cage/Constant	B	Continuous	DPP TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB	MIL-M-19633
Printing and Lithographic Equipment:											
Offset Press, 43 X 56 cm (17 X 22 inch) and 56 X 86 cm (22 X 34 inch)	Squirrel Cage/Varying.	B	Continuous	DPP	C	Starting, Reversing, Inching	MAG, LVP	Nonautomatic	DP	Remote PB	
Offset Press, 36 X 51 cm (14 X 20 inch)	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	MAG, LVP	Nonautomatic	DP	Remote PB	
Paper Cutting Machine 91 cm (36 inch)	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	MAG, LVP	Nonautomatic	DP	Remote PB	

-18-

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Printing and Lithographic Equipment (Continued):											
Plate-making Machine	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	Manual	-	DP	-	
Temperature Controlled Sink	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	MAG, LVR	Automatic	DP	Local TS	
Vacuum Pump (for camera)	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	Manual	-	DP	-	
Wire Stitcher	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	Manual	-	DP	-	
Pumps:											
A/C, Chilled Water	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB	
A/C, Plant Purge	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Pumps (Continued):											
Aqueous Film Forming Foam Injection	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVR	Nonautomatic	DP	Local and Remote PB	
Auxiliary Boiler Feed	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVP	As Req'd	DP	As Req'd	
Auxiliary Circulate	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVR	Nonautomatic	DP	Remote PB	
Auxiliary Condensate	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVR	Nonautomatic	DP	Remote PB	
Auxiliary Machinery Cooling Water Service	Squirrel Cage/Constant	B	Continuous	TE, TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local, Remote PB	MIL-P-17840
Auxiliary Vacuum	Squirrel Cage/Constant	B	Continuous	WTFC	A	Starting	MAG, LVR	Nonautomatic	DP	Remote PB	
Asroc Fluid Circulating	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	Manual, LVRE	-	DP	Local PB	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SER-VICE	FUNCTION	OPERATION PROTECTION	PERFOR-MANCE	ENCL-OSURE		
Pumps (Continued):											
Bilge	Squirrel Cage/ Constant	B	Continuous	SBM	A	Starting	MAG, LVP	Nonauto-matic	DP	Remote PB	
Bromine Treatment	Squirrel Cage/ Varying	B	Continuous	TEFC	C	Starting	MAG, LVP	Nonauto-matic	WT	Local PB, PS	
Boiler Burner Blower and Fuel	Squirrel Cage/ Varying	B	Continuous	DPP, TEFC	A	Starting	MAG, LVR	Automatic	TE	Local PB	
Centrifugal Pump Priming (Non-Flammable)	Squirrel Cage/ Constant	B	Short time	DPP TEFC	A	Starting	MAG, LVP	Nonauto-matic, Automatic	DP	Local, Remote PB, PS	MIL-V-18683
CO2 Recharge	Squirrel Cage/ Constant	B	As Req'd	DPP	C	Starting	Manual	-	-	-	
Controllable Reversible Pitch Propeller Hydraulic	Squirrel Cage/ Constant	B	Continuous	TEFC	A	Starting	MAG, LVR	Automatic and Non-automatic	DP	Local, Remote PB	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Pumps (Continued): Continuous Wave Illuminator (CWI) Circulating	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB	
Demineralized Water Circulate	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB and PS	
Distilling Plant Pumps: Booster	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Remote PB	
Brine Overboard	Squirrel Cage/Constant	B	Continuous	DPP, TE	A	Starting	MAG, LVP	Nonautomatic	DP	Local, Remote PB	
Circulating	Squirrel Cage/Constant	B	Continuous	TE, TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local, Remote PB	
Condensate	Squirrel Cage/Constant	B	Continuous	TE, TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local, Remote PB	MIL-P-18472

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Pumps (Continued):											
Distiller Distillate	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB	MIL-P-17840
Distiller SW Feed	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB	
Distiller Heater Drain	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVP	Nonautomatic		Remote PB	
Distiller Plant Chemical Feed	Squirrel Cage/Constant	B	Continuous	DPP TEFC	C	Starting	MAG, LVR	Nonautomatic	DP	Local PB	
Evaporator Feed	Squirrel Cage/Constant	B	Continuous	SPT, SPTFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local, Remote PB	
Tube Nest Drain	Squirrel Cage/Constant	B	Continuous	TE, TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local, Remote PB	
Eductor Supply	Squirrel Cage/Constant	B	Continuous	TE, WT	A	Starting	Manual	-	DP	-	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SER-VICE	FUNCTION	OPERA-TION PROTE-CTION	PERFOR-MANCE	ENCL-OSURE		
Pumps (Continued):											
Electronic Cooling and Chilled Water	Squirrel Cage/Constant	B	Continuous	TE	A	Starting	MAG, LVP	Nonauto-matic	DP	PB	
Elevator Oil Supply	Squirrel Cage/Constant	B	Short time, 1 hour	DPP	A	Starting	MAG, LVP	Automatic	DP	Remote PB, FLS	
Elevator, Aircraft, Main	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVP	Automatic	DP	Local PB	
Emergency, Booster and Reserve Feed Transfer	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVR	Nonauto-matic, Automatic	DP	Local, Remote PB, PS	
Fire	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVP	Nonauto-matic	DP	Local PB	
Fresh Water Drain Collecting Tank	Squirrel Cage/Constant	B	Continuous	TE	A	Starting	MAG, LVP	Nonauto-matic	DP	PB	
Fresh Water Service	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVP	Automatic	DP	Local, Remote PB, PS	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Pumps (Continued):											
Fresh Water Booster	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVP	Automatic	DP	Local PB, PS	
Fuel-Oil Service, Port and Cruising	Squirrel Cage/Multispeed	B	Continuous	TE, TEFC	A	Starting, Speed Selection	MAG, LVP	Nonautomatic	DP	Remote PB	
Fuel-Oil Tank Drain	Squirrel Cage/Constant	B	Continuous	TE, TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Remote PB	
Fuel-Oil Transfer	Squirrel Cage/Multispeed	C	Continuous	TE, TEFC	A	Starting, Speed Selection	MAG, LVP	Nonautomatic	TE	Local PB	
Gasoline Defueling	Squirrel Cage/Constant	B	Continuous	EXP, EXPFC	A	Starting	MAG, LVP	Nonautomatic	EXP	Local, Remote PB (EXP)	
Gas Turbine Wash Module	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVR	Nonautomatic	DP	Local, Remote PB	
Hot Fresh Water Recirculating	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SER-VICE	FUNCTION	OPERA-TION PROTE-CTION	PERFOR-MANCE	ENCL-OSURE		
Pumps (Continued):											
Hot Water Circulating	Squirrel Cage/ Constant	B	Continuous	TEFC	A	Starting	MAG, LVP	Nonauto- matic	DP	Local PB	
Incinerator Feedwater cooling	Squirrel Cage/ Constant	B	Continuous	DPP	A	Starting	MAG, LVP	Nonauto- matic	DP	Local PB	
Incinerator Ignition Oil	Squirrel Cage/ Constant	B	Continuous	TEFC	A	Starting	Manual	-	TE	-	
Incinerator Oil	Squirrel Cage/ Constant	B	Continuous	TEFC	A	Starting	Manual	-	TE	-	
Infrared (IR) Suppression	Squirrel Cage/ Constant	B	Continuous	DPP	A	Starting	MAG, LVP	Nonauto- matic	DP	Local PB	
Injection, 76mm Gun	Squirrel Cage/ Constant	B	Continuous	TEFC	A	Starting	MAG, LVP	Nonauto- matic	DP	Local, Remote PB	
Incinerator, Rotating Grate	Squirrel Cage/ Constant	B	Continuous	TEFC	A	Starting	Manual	-	DP	-	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SER-VICE	FUNCTION	OPERATION PROTE-CTION	PERFOR-MANCE	ENCL-OSURE		
Pumps (Continued):											
JP-5 Auxiliary Service	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVP	Nonauto-matic	TE	Local, Remote PB	
JP-5 Defueling	Squirrel Cage/Constant	B	Continuous	TE, TEFC	A	Starting	MAG, LVP	Nonauto-matic	TE	Local PB	MIL-P-19131
JP-5 Priming	Squirrel Cage	B	Short time, 3 Minutes	TE, TEFC	A	Starting, Dual Control	MAG, LVP	Nonauto-matic	TE	Local, Remote PB	MIL-P-18683
JP-5 Service	Squirrel Cage/Constant	B	Continuous	TE, TEFC	A	Starting	MAG, LVP	Nonauto-matic	TE	Local PB	MIL-P-17639
JP-5 Stripping	Squirrel Cage/Constant	B	Short time, 3 Minutes	TE, TEFC	A	Starting	MAG, LVP	Nonauto-matic	TE	Local PB	MIL-P-19131
JP-5 Transfer	Squirrel Cage/Constant	B	Continuous	TE, TEFC	A	Starting	MAG, LVP	Nonauto-matic	TE	Local PB	MIL-P-19131

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES	
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		MASTER SWITCHES
Pumps (Continued):											
Low Pressure Steam Drain Transfer	Squirrel Cage/Constant	B	Continuous	TE	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB	MIL-P-18472
Lube-oil	Squirrel Cage/Multispeed	B	Continuous	TEFC	A	Starting, Speed Selection	MAG, LVR	Nonautomatic	DP	Remote PB	
Lube-oil F.D. Fan	Squirrel Cage/Constant	D	Continuous	TE	A	Starting	MAG, LVP	Nonautomatic	DP	Remote PB	
Lube-oil Pump, turbine-driven Fire Pump	Squirrel Cage/Constant	B	Continuous	TE	A	Starting	MAG, LVR	Nonautomatic	DP	Remote PB	
Lube-oil Pump, Main, Feed Pump	Squirrel Cage/Constant	B	Varying	TE	A	Starting	MAG, LVR	Nonautomatic	DP	Remote PB	
Lube-oil Pump, Main, Service	Squirrel Cage/Multispeed	B	Continuous	TEFC	A	Starting, Speed Selection	MAG, LVR	Nonautomatic	DP	Remote PB	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Pumps (Continued):											
Lube-oil, turbine generator set (STBY)	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVR	Automatic	DP	Remote PB and PS	
Macerator Sewage	Squirrel Cage/Constant	B	Continuous	TE, TEFC	C	Starting, Reversing	MAG, LVP	Automatic and Non-automatic	DP	Local PB, LSW	
Machinery Waste Water Drain	Squirrel Cage/Constant	B	Continuous	TEFC, WT	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB, LSW	
Main Condenser Condensate	Squirrel Cage/Constant	B	Continuous	WTFC	A	Starting	MAG, LVR	Nonautomatic	DP	Remote PB	
Main Condenser Circulating	Squirrel Cage/Multispeed	B	Continuous	DPP	A	Starting, Speed Selection	MAG, LVP	Nonautomatic	DP	Local, Remote PB	
Main Feed Booster	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVR	Nonautomatic	DP	Local PB	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Pumps (Continued):											
Mogas Service	Squirrel Cage/Constant	B	Continuous	EXPFC	A	Starting	MAG, LVP	Nonautomatic	DP	Remote PB	
Mogas Stripping	Squirrel Cage/Constant	B	Continuous	EXPFC	A	Starting	MAG, LVP	Nonautomatic	DP	Remote PB	
Mogas Salt Water Service	Squirrel Cage/Constant	B	Continuous	EXPFC	A	Starting	MAG, LVP	Nonautomatic	DP	Remote PB	
Portable Submersible	Squirrel Cage/Constant	B	Continuous	SBM, (15 FT) 5m.	A	Starting	Manual LVRE	-	WT	-	
Potable Water	Squirrel Cage/Constant	B	Continuous	TEFC, SPT, WT SPTFC, WTFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB, PS	
Potable Water Priming	Squirrel Cage/Varying	-	Continuous	TE	A	Starting	MAG, LVP	Automatic	DP	Local PB, Vacuum SW	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Pumps (Continued):											
Refrigerator Condenser Circulating	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB	
Reserve Feed Transfer	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB	
Sea Water Booster (Emerg. Gen.)	Squirrel Cage/Constant	B	Continuous	SBM	A	No Controller Required	-	-	-	-	MIL-P-17639
Sea Water Circulating, Main Propulsion	Squirrel Cage/Constant	B	Continuous	TE, TEFC	A	Starting	MAG, LVR	Nonautomatic	DP	Local, Remote PB	Interlock Switch With Suction & Discharge Valves.
Sea Water, Service	Squirrel Cage/Constant	B	Continuous	TE, TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local, Remote PB	
Sea Water Booster (Gasoline Sys)	Squirrel Cage/Constant	B	Continuous	EXPFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local, Remote PB	MIL-P-17639

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A. C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Pumps (Continued);											
Sonar Cooling	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local, Remote PB	
SSTG Condenser Circulating	Squirrel Cage/Multispeed	B	Continuous	TE, TEFC	A	Starting, Speed Selection	MAG, LVR	Nonautomatic	DP	Local PB	MIL-P-17840
SSTG Condenser Condensate	Squirrel Cage/Constant	B	Continuous	TE	A	Starting	MAG, LVR	Nonautomatic	DP	Local PB	MIL-P-18472
Sewage	Squirrel Cage/Constant	B	Continuous	TEFC	C	Starting	MAG, LVP	Automatic and Non-automatic	DP	Remote PB, LSW	
Sewage Comminutor	Squirrel Cage/Constant	B	Continuous	TEFC	C	Starting	MAG, LVP	Nonautomatic	DP	Local PB	
Sewage Ejector	Squirrel Cage/Constant	B	Continuous	TE	A	Starting	MAG, LVP	Semiautomatic	DP	Local, Remote PB, LSW	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Pumps (Continued):											
Vacuum, Main Condenser	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVR	Nonautomatic	DP	Remote PB	
Waste Heat, Hot Water Circulating	Squirrel Cage/Constant	B	Continuous	TE, TEFC	A	Starting	MAG, LVR	Automatic Manual	DP	Local PB, PS	
Waste Water Bilge Sump Tank	Squirrel Cage/Constant	B	Continuous	TE	A	Starting	MAG, LVP	Automatic	DP	FLS	
Water Barrier	Squirrel Cage/Constant	D	Intermittent	WT	A	Starting, Reversing	MAG, LVP	Nonautomatic	SBM	Local, Remote PB (SBM)	
Purifiers:											
Diesel Fuel Oil	Squirrel Cage/Constant	B	Continuous	TE, TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB	
JP-5	Squirrel Cage/Constant	B	Continuous	TEFC	A	Starting	MAG, LVP	Semiautomatic	DP	Local PB	MIL-P-22088

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Purifiers (Continued):											
Main Lubricating Oil	Squirrel Cage/Constant	B	Continuous	TE, TEFC	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB	
Shaft Turning Gear	Squirrel Cage/Varying, High Slip	D	Continuous	DPP	A	Starting, Reversing	MAG, LVP	Nonautomatic	DP	Local PB	
Shop Equipment:											
Arbor Press	Squirrel Cage/Constant		Short time	DPP	C	Starting	Manual	-	DP	Switch	
Armature Coil Winder	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	MAG, LVP	Nonautomatic	DP	Local PB	
Bench Grinder	Squirrel Cage/Constant	B	Varying, 1 hour	SPTFC, WT, WTFC	C	Starting	MAG, LVP	Nonautomatic	WT	Local PB	W-G-656
Bench Lathe	Squirrel Cage/Constant	B	Continuous	DPP, TE	C	Starting, Reversing	MAG, LVP	Nonautomatic	DP	Local PB	00-L-125

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Shop Equipment (Continued):											
Bending and Crimping Machine	Squirrel Cage/Varying	D	Varying, 1 hour	DPP	C	Starting	MAG, LVP	Nonautomatic	WT	Local PB	
Boring Mill	Squirrel Cage/Constant	B	Continuous	DPP, TE	C	Starting	MAG, LVP	Nonautomatic	DP	Local PB	
Buffer	Squirrel Cage/Constant	B	Varying, 1/2 hour	SPT, SPTFC, WT, WTFC	C	Starting	MAG, LVP	Nonautomatic	WT	Local PB	W-G-656
Buffer (Oil Burner Cleaner)	Squirrel Cage/Constant	B	Varying, 1/2 hour	SPT, SPTFC, WT, WTFC	C	Starting	MAG, LVP	Nonautomatic	WT	Local PB	00-B-791
Coil Winding Machine	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	MAG, LVP	Nonautomatic	DP	Local PB	
Combination Machine	Squirrel Cage/Constant	B	Intermittent, 1 hour	TE, TEFC	C	Starting	MAG, LVP	Nonautomatic	DP	Local PB	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Shop Equipment (Continued):											
Crank Planer and Shaper	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting	MAG, LVP	Nonautomatic	DP	Local PB	
Double Emery Grinder	Squirrel Cage/Constant	B	Varying, 1 hour	TE, SPTFC, WT, WTFC	C	Starting	MAG, LVP	Nonautomatic	DP	Local PB	
Drill Press	Squirrel Cage/Constant	B	Varying, 1 hour	TE	C	Starting	MAG, LVP	Nonautomatic	DP	Local PB	
Engine Lathe	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting, Reversing	MAG, LVP	Nonautomatic	DP	Local PB	MIL-L-23257
Gap Lathe	Squirrel Cage/Constant	B	Continuous	DPP	C	Starting, Reversing	MAG, LVP	Nonautomatic	DP	Local PB	
Grinder Aerial	Universal/Varying	B	Varying, 1/2 hour	TE	C	Starting	Manual	-	WT	Switch	
Grinder, Pedestal	Squirrel Cage/Constant	B	Continuous	TE	C	Starting	Manual	-	WT	Switch	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SER-VICE	FUNCTION	OPERA-TION PROTE-CTION	PERFOR-MANCE	ENCL-OSURE		
Shop Equipment (Continued):											
Hammer	Squirrel Cage/ Constant	D	Continuous	DPP	C	Starting	MAG, LVP	Nonauto- matic	DP	Local PB	
Internal Grinder	Squirrel Cage/ Constant	B	Continuous	SPT SPTFC	C	Starting	MAG, LVP	Nonauto- matic	WT		
Jewelers Lathe	Universal/ Varying	-	Varying, 1 hour	DPP	C	Starting	MAG, LVP	Nonauto- matic	DP	Foot Switch	MIL-L-23225
Key Cutting Machine	Squirrel Cage/ Constant	B	Intermittent, 1/2 hour	DPP	C	Starting	MAG, LVP	Nonauto- matic	DP	Local PB	
Machine Forming	Squirrel Cage/ Constant	B	Varying, 1 hour	DPP	C	Starting	MAG, LVP	Nonauto- matic	TE	Local PB	
Metal Cutter, Sheet	Squirrel Cage/ Constant	B	Continuous	DPP	C	Starting	MAG, LVP	Nonauto- matic	DP		
Nibbling Machine	Squirrel Cage/ Constant	B	Varying, 1 hour	DPP	C	Starting	MAG, LVP	Nonauto- matic	WT		

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Shop Equipment (Continued);											
Planer and Joiner	Squirrel Cage/ Constant	B	Varying, 1 hour	TE	C	Starting	MAG, LVP	Nonauto- matic	WT		
Portable Drill	As Required/ Varying	-	Intermittent, 15 Minutes	DPP	C	Starting	Manual	-	DP	-	
Power Hacksaw	Squirrel Cage/ Constant	B	Intermittent 1 hour	DPP	C	Starting	MAG, LVP	Nonauto- matic	WT	Local PB	
Precision Lathe	Squirrel Cage/ Varying	B	Continuous	SPT, SPTFC, WT, WTFC DPP	C	Starting, Reversing	MAG, LVP	Nonauto- matic	DP	Foot Switch	00-G-673
Radial Drill	Squirrel Cage/ Constant	B	Varying, 1/2 hour	DPP	C	Starting	MAG, LVP	Nonauto- matic	DP	-	
Routing Machine	Squirrel Cage/ Constant	B	Varying, 1 hour	DPP	C	Starting	Manual	-	DP	-	
Sander Belt and Fish	Squirrel Cage/ Constant			TE	C	Starting	Manual	-	WT	-	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Shop Equipment (Continued):											
Saw, Band	Squirrel Cage/ Constant	B	Varying, 1 hour	TEFC	C	Starting	MAG, LVP	Nonauto- matic	WT	-	MIL-S-80095
Saw, Circular, 30 cm (12 inch)	Squirrel Cage/ Constant	B	Varying, 1 hour	TE	C	Starting	MAG, LVP	Nonauto- matic	WT	-	
Sawdust and Shavings Collecting System Blower	Squirrel Cage/ Constant	B	Continuous	TE	C	Starting	MAG, LVP	Nonauto- matic	DP	-	
Sensitive Drill (Floor Type)	Squirrel Cage/ Multispeed	B	Varying, 1 hour	DPP	C	Starting, Speed Selec- tion	MAG, LVP	Nonauto- matic	DP	-	
Sewing Machine	Squirrel Cage/ Constant	-	Continuous	DPP	C	Starting	Manual	-	DP	-	
Shear, Portable	Universal/ Varying	-	Continuous	DPP	C	Starting	Manual	-	DP	-	

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Shop Equipment (Continued):											
Shoe Finishing Machine	Squirrel Cage/ Constant	B	Continuous	TE	C	Starting	Manual	-	DP	-	
Shoe Repair Machine	Capacitor Start/ Multispeed	B	Continuous	DPP	C	Starting, Speed Selection	Manual	-	DP	-	
Tool Post Grinder (Portable)	Squirrel Cage/ Constant	B	Continuous	TEFC	C	Starting	Manual	-	DP	-	00-G-673
Universal Cutter and Tool Grinder	Squirrel Cage/ Constant	B	Continuous	SPT, SPTFC	C	Starting	MAG, LVP	Nonauto- matic	DP	-	
Universal Milling Machine	Squirrel Cage/ Constant	B	Continuous	DPP	C	Starting	MAG, LVP	Nonauto- matic	DP	-	
Valve Refacer	Universal/ Varying	-	Continuous	DPP	C	Starting	MAG, LVP	Nonauto- matic	DP	-	

-07-

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Shop Equipment (Continued):											
Woodworking Lathe	Squirrel Cage/ Multispeed	B	Continuous	DPP	C	Starting, Speed Selection	MAG, LVP	Nonauto- matic	WT	Local PB	MIL-M-80190
Woodworking Machine	Squirrel Cage/ Constant	B	Varying, 1 hour	SPT, SPTFC, WT, WTFC	C	Starting	MAG, LVP	Nonauto- matic	WT	Local PB	MIL-M-80190
Sliding Padeye	Squirrel Cage/ Constant	D	Intermittent	WT	A	Starting, Reversing	MAG, LVP	Nonauto- matic	DP	Remote PB (WT)	
Stairway, Electric	Squirrel Cage/ Constant	B	Continuous	DPP	A	Starting, Reversing	MAG, LVP	Nonauto- matic	DP	Remote PB	Limit Switch and Interlocks as Reqd
Steering Gear:											
Fill and Drain Pumps	Squirrel Cage/ Constant	B	Continuous	DPP, TEFC	A	Starting	MAG, LVP	Nonauto- matic	DP	Local PB	
Main Pumps	Squirrel Cage/ Constant	C	Varying, 1/2 hour	DPP	A	Starting	MAG, LVR	Nonauto- matic	DP	Remote Mas- ter and Emergency run PB	Selector Switch as Reqd

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES	
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE			
Steering Gear (Continued):												
Servo Pump	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVP or LVR	Nonautomatic	DP	Remote PB	Selector Switch as Reqd	
Towing Machine	As Required/Adjustable, Varying	D	Varying, 1 hour	WT	A	Starting, Reversing, Speed Selection	MAG, LVP	Nonautomatic	WT	Remote Drum		
Turbine Gland Exhauster	Squirrel Cage/Constant	B	Continuous	TE, TEFC	A	Starting	Manual	-	DP	-		
Turning Gear	Squirrel Cage/Constant	D	Continuous	DPP	A	Starting, Reversing	MAG, LVP	Nonautomatic	DP	Local PB		
Turntable, Vehicle	Squirrel Cage/Varying	C	Continuous, Short time, 15 Minutes	TE, TEFC	A	Starting, Reversing	MAG, LVP	Nonautomatic	WT	Remote PB	Limit Switch and Interlocks as Reqd	
Valves, Motor Operated	Squirrel Cage/Constant	B	Continuous	TE, WT	A	Starting, Reversing	MAG, LVP	Automatic and Non-automatic	DP, TE	Local, Remote PB	V-17501	

12-

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Winches:											
Bathythermograph	Squirrel Cage/Multispeed	B	Short time, ½ hour	WT	A	Starting, Speed Selection	MAG, LVP	Nonautomatic	WT	Remote Drum	MIL-W-19882
Constant Tension	Squirrel Cage/Constant Speed	D	Continuous	WT	A	Starting, Reversing	MAG, LVP	Nonautomatic	DP	Remote PB (WT)	
Drum (Boat Davit)	Squirrel Cage/Constant	D	Short Time, ½ hour	SPT, WT	A	Starting, Reversing	MAG, LVR	Nonautomatic	WT	Remote Drum	Drum Switch is Spring Return to "OFF"
Drum (Electric)	Squirrel Cage/Multispeed	D	Varying, ½ hour	SPT, WT	A	Starting, Reversing, Speed Selection	MAG, LVR	Nonautomatic	WT	Remote Drum	
Drum (Hydraulic)	Squirrel Cage/Constant	B	Continuous	WT	A	Starting	MAG, LVP	Nonautomatic	DP	Local PB	MIL-W-17265
Drum (Magnetic Clutch)	Squirrel Cage/Varying	B	Varying, ½ hour	SPT, WT	A	Starting	MAG, LVP	Nonautomatic	WT	Remote PB	
Gypsy	Squirrel Cage/Multispeed	D	Full Load, ½ hour, other, Continuous	WT	A	Starting, Reversing, Speed Selection	MAG, LVR	Nonautomatic	DP	Remote Drum (WT)	MIL-W-15802
Main Deck Ramp	Squirrel Cage/Constant	B	Short Time	DPP	A	Starting, Reversing	MAG, LVP	Nonautomatic	DP	Remote PB	Limit Switch and Interlocks as Req'd

-43-

TABLE 1- A.C. MOTOR AND CONTROLLER APPLICATION REQUIREMENTS (CONT.)

AUXILIARY NAME	MOTOR REQUIREMENTS					CONTROLLER REQUIREMENTS				MASTER SWITCHES	REMARKS AND APPLICABLE SPECIFICATIONS FOR AUXILIARIES
	TYPE/SPEED	A.C. MOTOR DESIGN	DUTY	ENCL-OSURE	NAVY SERVICE	FUNCTION	OPERATION PROTECTION	PERFORMANCE	ENCL-OSURE		
Winches (Continued):											
Vehicle/Amphibian receiver	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVP	Nonautomatic	DP	Remote PB	
Windlass Anchor:											
Electric	Squirrel Cage/Constant	B	Varying	DPP	A	Starting	MAG, LVP	Nonautomatic	DP	Remote PB (WT)	
Replenishment Pump	Squirrel Cage/Constant	B	Continuous	DPP	A	Starting	MAG, LVP	Nonautomatic	DP	Remote PB	
Electrohydraulic	Squirrel Cage/Constant	B	Varying, 1 hour	DPP	A	Starting	MAG, LVP	Nonautomatic	DP	Remote PB	
Window Wipers	Permanent Magnet/Adjustable		Continuous	Open or WT	C	Starting, Speed Selection	Manual OL	-	DP	-	MIL-W-3459B

44-