

500CONT 500 kVA



Ratings and Dimensions

Frequency	50 Hz.									
Wire Connection	12 Wire Three Pheese									
Power Factor	0	,8	0	,8	0	,8	0	,8		
Winding No.	#1	.25	#1	.25	#1	25	#125			
Y Series Star	38	80	40	00	4:	15	440			
YY Parallel Star	19	190 200				08	220			
△ Series Delta	2	20 230			24	40	2.	54		
	kVA	kW	kVA	kW	kVA	kW	kVA	kW		
Cont. F 105/40°C	400.0	320.0	445.0	356.0	400.0	320.0	400.0	320.0		
Cont. H 125/40°C	450.0	360.0	500.0 400.0		450.0	360.0	450.0	360.0		
Stdby H 150/40°C	478.0	382.0	512.0	410.0	478.0	382.0	478.0	382.0		
Stdby H 163/27°C	495.0	396.0	520.0 416.0		495.0	396.0	495.0	396.0		

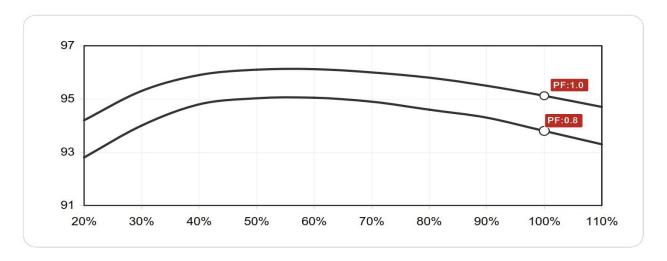
Frequency	50 Hz.									
Wire Connection		12 Wire Si	ngle Phase		4 Wire Single Phase					
Power Factor	0	0,8 1			0	,8	1			
Winding No.	#1	.25			#41		#41			
ΔΔ Double Delta	220-23	0-240V)-240V 220-230-240V		220-230-240V		220-230-240V			
	kVA	kW	kVA	kW	kVA	kW	kVA	kW		
Cont. F 105/40°C	161	129	N/A	N/A	N/A	N/A	N/A	N/A		
Cont. H 125/40°C	180	144	N/A	N/A	N/A	N/A	N/A	N/A		
Stdby H 150/40°C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Stdby H 163/27°C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

Frequency	60 Hz.									
Wire Connection	12 Wire Three Pheese									
Power Factor	0	,8	0	,8	0	,8	0	,8		
Winding No.	#1	25	#1	.25	#1	25	#125			
Y Series Star	4:	16	4	40	46	50	480			
YY Parallel Star	20	08	22	20	23	30	240			
△ Series Delta	24	40	2!	54	26	56	2	77		
	kVA	kW	kVA	kW	kVA	kW	kVA	kW		
Cont. F 105/40°C	481.0	385.0	500.0	400.0	531.0	425.0	538.0	430.0		
Cont. H 125/40°C	525.0	420.0	550.0 440.0		581.0	465.0	594.0	475.0		
Stdby H 150/40°C	550.0	440.0	581.0	581.0 465.0		490.0	625.0	500.0		
Stdby H 163/27°C	569.0	455.0	600.0 480.0		631.0	505.0	644.0	515.0		

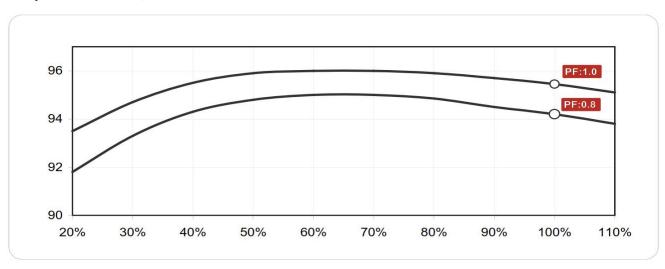
Frequency	60 Hz.									
Wire Connection		12 Wire Si	ngle Phase		4 Wire Single Phase					
Power Factor	0	,8		1 0,8		,8	1			
Winding No.	#1	±125 #125			#42		#42			
ΔΔ Double Delta	24	10V 240V		240V		240V				
	kVA	kW	kVA	kW	kVA	kW	kVA	kW		
Cont. F 105/40°C	186	149	N/A	N/A	N/A	N/A	N/A	N/A		
Cont. H 125/40°C	210	168	N/A N/A		N/A	N/A	N/A	N/A		
Stdby H 150/40°C	N/A	N/A	N/A N/A		N/A	N/A	N/A	N/A		
Stdby H 163/27°C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

Effiency and Motor Starting

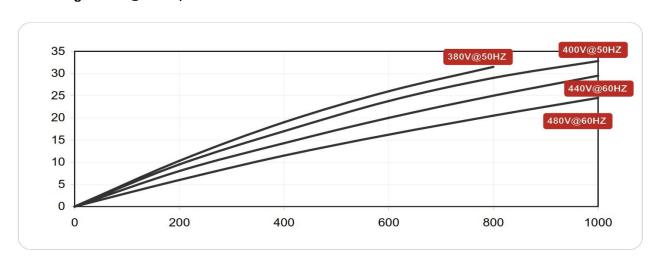
Effiency Curve @ 50 Hz,400V



Effiency Curves @ 60 Hz,480V



Motor Starting Curves @ 50 Hz, 60 Hz Locked Rotor



Technical Data Sheet

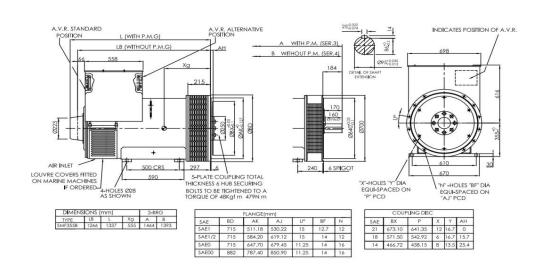
STANDARD(S) OPTIONAL(O) INFORMATION (I) SPECIFICATION

SELF-EXCITED S SUSTAINED SHORT-CIRCUIT: NOT AVAILABLE								
SYSTEM	FXCITATION	SELF-EXCITED	S	SUSTAINED SHORT-CIRCUIT: NOT AVAILABLE				
AVR M-AVR 44		ARAP						
M-AVR 44	31312141	PMG						
M-AVR 32		M-AVR 46	S	REGULATION PRECISION : +/-1,0 %				
M-AVR 34	۸\/R	M-AVR 44	0	REGULATION PRECISION : +/-1,0 %				
WINDING H S	AVIN	M-AVR 32						
INSULATION F		M-AVR 34						
WINDING PITCH	WINDING	Н	S					
WINDING PITCH	INSULATION	F						
S7ADARD S	WINDING DITCH	2/3	S	HIGHER FLEXIBILITY IN USE,BETTER MOTOR STARTING ABILITY				
WINDING	WINDING PITCH	5/6	0	COST-EFFECTIVE POWER SUPPLY SCHEME				
PROTECTION		STANDARD	S					
THERMAL SENSOR O TO DETECT THE WINDING TEMPERATURE OR BEARING'S	WINDING	"ANTI-HARSH"	0	SPECIAL TREATMENT OF WINDING TO AGINST HASRH ENVIROMENT				
PARALLEL CT200 CT400 CT400 CT600 CT1000 CT10000 CT10000 CT10000 CT10000 CT10000 CT10000 CT10000 CT100000 CT100000 CT100000 CT100000 CT100000 CT100000 CT100000 CT1000000 CT1000000 CT1000000 CT1000000 CT1000000 CT1000000 CT1000000 CT1000000 CT100000000 CT10000000 CT1000000000000000000000000000000000000	PROTECTION	SPACE HEATER	0	TO HEAT UP AIR TO REMOVE THE HUMMINITY AROUND WINDING				
PARALLEL CT200 CT400 CT600 CT1000 CT10000 CT10000 CT10000 CT10000 CT10000 CT10000 CT100000 CT100000 CT100000 CT100000 CT100000 CT100000 CT1000000 CT1000000 CT1000000 CT1000000 CT1000000 CT10000000 CT1000000 CT10000000 CT10000000 CT10000000 CT1000000000000000000000000000000000000		THERMAL SENSOR	0	TO DETECT THE WINDING TEMPERATURE OR BEARING'S				
Detail		CT100	0					
CT400 CT600 CT600 CT1000 CT1000 WINDING LEADS 12 \$ 12 LEADS OF WINDING ENDS, 6 \$ 6 LEADS OF WINDING ENDS, 6 \$ 6 LEADS OF WINDING ENDS, 6 \$ 6 LEADS OF WINDING ENDS, 6 \$ 0 LEADS OF WINDING ENDS, 6 \$ 0 LEADS OF WINDING ENDS, 8 \$ STANDARD MACHINE PROTECTION 1 P23 \$ STANDARD MACHINE PROTECTION 1 P44 \$ O TO AGINST: 1mm OBJECT AND SPLASHING WATER 1 P54 \$ O AGINST: 1mm OBJECT AND SPLASHING WATER 2 DOWER FACTOR 1 0 P0 \$ O AGINST: 1mm OBJECT AND SPLASHING WATER 0 P0 \$ O AGINST: 1mm OBJECT AND SPLASHING WATER 0 P0 \$ O AGINST: 1mm OBJECT AND SPLASHING WATER 0 P0 \$ O AGINST: 1mm OBJECT AND SPLASHING WATER 0 P0 \$ O AGINST: 1mm OBJECT AND SPLASHING WATER 0 P0 \$ O AGINST: 1mm OBJECT AND SPLASHING WATER 0 P0 \$ O AGINST: 1mm OBJECT AND SPLASHING WATER 0 P0 \$ O AGINST: 1mm OBJECT AND SPLASHING WATER 0 P0	DADALLEI	CT200						
CT600 CT1000		CT400						
NUMBRISHED 12 S 12 LEADS OF WINDING ENDS	OPERATION	CT600						
MACHINE		CT1000						
MACHINE IP23 S STANDARD MACHINE PROTECTION IP44 O TO AGINST : 1mm OBJECT AND SPLASHING WATER	AMAIDING LEADS	12	S	12 LEADS OF WINDING ENDS,				
IP44	WINDING LEADS	6	0	6 LEADS OF WINDING ENGS				
PROCTIION	NAA CHINIE	IP23	S	STANDARD MACHINE PROTECTION				
POWER FACTOR		IP44	0	TO AGINST : 1mm OBJECT AND SPLASHING WATER				
O,8	PROCITION	IP54						
O,8 S SINGLE BEARING S	DOWED FACTOR	1	0					
CONNECTION TO ENGINE DOUBLE BEARING BELT DRIVE O VERTICAL OVERSPEED ATTITUDE C=1000m C=1000m DERATING IS NO NEED >1000m DERATING NEEDED, REFERS TO RATING BOOK TDF/THC INDICATE INDICATE INDICATING BALANCED LINEAR LOAD TIF I <50 THF I <2% DRIVE -END DRIVE -END I BALL 6317 - 2RS DOUBLE BEARING CONF. ONLY NON DRIVE END NET I SINGLE BEARING 1065 KG DOUBLE BEARING: 1075KG	POWER FACTOR	0,8	S					
BELT DRIVE O VERTICAL		SINGLE BEARING	S					
VERTICAL VERTICAL OVERSPEED I MAX ROTATING SPEED : 2250 RPM ATTITUDE <=1000m	CONNECTION TO	DOUBLE BEARING	0					
OVERSPEED I MAX ROTATING SPEED : 2250 RPM ATTITUDE <=1000m	ENGINE	BELT DRIVE	0					
ATTITUDE		VERTICAL						
NO DERATING NEEDED, REFERS TO RATING BOOK	OVERSPEED		ı	MAX ROTATING SPEED : 2250 RPM				
S1000m I DERATING NEEDED, REFERS TO RATING BOOK	ATTITLIDE	<=1000m	ı	DERATING IS NO NEED				
TIF	ATTITUDE	>1000m	ı	DERATING NEEDED, REFERS TO RATING BOOK				
### FEATRUES TIF		TDF/THC	ı	· · · · · · · · · · · · · · · · · · ·				
### THF I <2% ### DRIVE -END I BALL 6317 - 2RS DOUBLE BEARING CONF. ONLY NON DRIVE END I BALL 6314 - 2RS ### WFIGHT I SINGLE BEARING 1065 KG DOUBLE BEARING : 1075 KG		· · · · · · · · · · · · · · · · · · ·	ı	<50				
BEARING NON DRIVE END I BALL 6314- 2RS NET I SINGLE BEARING 1065 KG DOUBLE BEARING : 1075 KG	FEATRUES	THF	ı	<2%				
NON DRIVE END I BALL 6314- 2RS NET I SINGLE BEARING 1065 KG DOUBLE BEARING : 1075KG	BEARING	DRIVE -END	I	BALL 6317 - 2RS DOUBLE BEARING CONF. ONLY				
WEIGHT		NON DRIVE END	ı	BALL 6314- 2RS				
WEIGHT GROSS I SINGLE BEARING 1105 KG DOUBLE BEARING : 1117KG	\\\	NET	ı	SINGLE BEARING 1065 KG DOUBLE BEARING : 1075KG				
	WEIGHT	GROSS	ı	SINGLE BEARING 1105 KG DOUBLE BEARING : 1117KG				
PACKING SIZE SINGLE B. : 1350x850x1060 mm DOUBLE B. : 1400x850x1060mm	PACKING SIZE		ı					

Technical Data Sheet

STANDARD(S) OPTIONAL(O) INFORMATION (I)	SPEC	SPECIFICATION								
		5() HZ			60 HZ				
SERIES STAR (V)	380	400	415	440	416	440	460	480		
PARALLEL STAR (V)	190	200	208	220	208	220	230	240		
SERIES DELTA (V)	220	230	240	254	240	254	266	277		
Xd - Direct axis synchro. Reactance unsaturated	3.27	2.95	2.74	2.44	3.94	3.69	3.57	3.35		
X'd - Direct axis transient reactance saturated.	0.18	0.16	0.15	0.13	0.18	0.17	0.16	0.15		
X"d - Direct axis sub transient reactance saturated	0.13	0.12	0.11	0.10	0.13	0.12	0.12	0.11		
Xq - Qadro. Axis synchro.reactance unsaturated.	2.66	2.40	2.23	1.98	3.12	2.92	2.82	2.65		
X"q - Quadro. Axis sub transiet reactance saturated.	0.26	0.24	0.22	0.20	0.34	0.32	0.31	0.29		
X2 - Negative sequence reactance unsturated	0.19	0.17	0.16	0.14	0.23	0.22	0.21	0.20		
Xo -Zero sequence reactance unsaturated.	0.11	0.10	0.09	0.08	0.11	0.10	0.10	0.09		
T'd- Short - Circuit transiet time constant		0.08s								
T"d - Sub Transiet time constant		0.012s								
T'do- Open circuit time constant		2s								
Ta- Armature time constant		0.017s								
Kcc - Short Circuit Ratio				1,	/Xd			·		

Outline Drawing



Maranello designs, manufactures and markets the alternators which comply with the national and international standards. The alternator can be broadly used in the all-purposed application, such as backup, rental, telecom and marine, and also can be used in a.

Compliant with Standards

Other certifications can be considered on request.

Electrical Features

Automatic Voltage Regulator (AVR)

The high efficiency semiconductors of the AVR ensure positive build-up from initial low levels of residual voltage.

2/3 Winding Pitch

Effectively eliminates the effect of the third harmonics so as to avoid excessive neutral currents.

Varible Voltage Output

Standard voltage output can be achieved through the reconnectable 12 wire, and the beyond-the-standard voltage might be achieved by optional winding.

Overload Capability

Be capable of running at constant load limited to the insulation class with the possibility of overload up to 10% for 1 hour every 12 hours. (Continuous Duty -S1).

High Efficiency and Motor Starting Capacity

Optimizing design greatly improves the efficiency and motor starting capacity.

Mechanical Features

Bracket + Flexible Disc

The combination of casting braket and flexible disc makes product to be coupled with any brand of engine whose interface is international design

Terminal Box

Metal-made and accessed easily, it also can be customized on requests.

Shaft and Key

Rotors assembly is dymastically balanced under ISO8528 and BS5000 regulation, and double-bearing is balanced with half-key.

Bearing

Bearing is greased in the factory for life, and regreasable bearing is available on request.

Machine Protection

The standard protection is IP23, and IP44 is optional

Insulation and Impregnation

H-class Insulation

Materials used in the insulation system is classed "H", specially the copper wire applied is able to withstand 200°C

Vacuum Pressure Impregnation (VPI)

The advanced impregnation equipment is applied to ensure the electrical insulation and mechanical strength.

Winding Protection

Standard:

The winding is protected against relative humidity< 95%.

Optional:

The special-treated winding ("ANTI-HARSH") is recommended to apply for the environment humidity > 95%, or harsh environment such as atmospheric contaminants or salty water spr