

# CONT 250 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	#125 #125			#1	.25	#125			
Y Series Star	38	380 400		415		440				
YY Parallel Star	19	90	200		208		220			
△ Series Delta	2:	20	2:	30	240		254			
	kVA	kW	kVA	kW	kVA	kW	kVA	kW		
Cont. F 105/40°C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Cont. H 125/40°C	250.0	200.0	250.0 200.0		250.0	200.0	N/A	N/A		
Stdby H 150/40°C	265.0	212.0	265.0	212.0	265.0	212.0	N/A	N/A		
Stdby H 163/27°C	275.0	220.0	275.0	220.0	275.0	220.0	N/A	N/A		

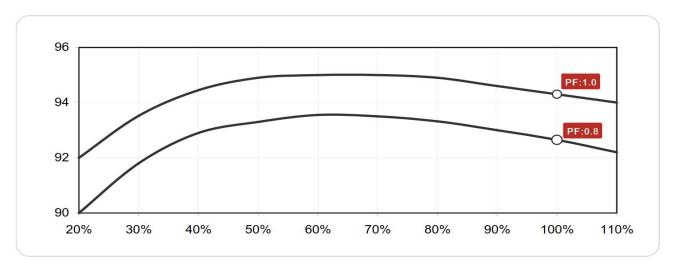
Frequency	50 Hz.									
Wire Connection		12 Wire Si	ngle Phase		4 Wire Single Phase					
Power Factor	0	,8	1		0,8		1			
Winding No.	#1	.25			#41		#41			
ΔΔ Double Delta	220-23	0-240V	220-230-240V		220-230-240V		220-230-240V			
	kVA	kW	kVA	kW	kVA	kW	kVA	kW		
Cont. F 105/40°C	138	110	N/A	N/A	N/A	N/A	N/A	N/A		
Cont. H 125/40°C	150	120	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	125 #125			#125		#125			
Y Series Star	4:	16	44	40	460		480			
YY Parallel Star	20	08	220		230		240			
△ Series Delta	24	40	2!	54	266		277			
	kVA	kW	kVA	kW	kVA	kW	kVA	kW		
Cont. F 105/40°C	268.0	214.4	278.0	222.4	289.0	231.2	289.0	231.2		
Cont. H 125/40°C	294.0	235.2	300.0 240.0		315.0	252.0	315.0	252.0		
Stdby H 150/40°C	308.0	246.4	315.0	252.0	335.0	268.0	335.0	268.0		
Stdby H 163/27°C	315.0	252.0	325.0	260.0	345.0	276.0	345.0	276.0		

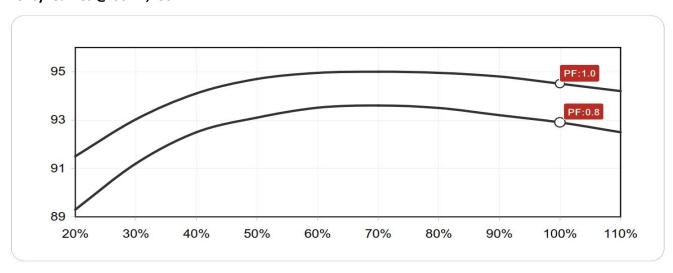
Frequency	60 Hz.									
Wire Connection	12 Wire Single Phase				4 Wire Single Phase					
Power Factor	0	,8		1 0,		,8	1			
Winding No.	#1	25 #125		#42		#42				
ΔΔ Double Delta	24	.0V	240V		240V		240V			
	kVA	kW	kVA	kW	kVA	kW	kVA	kW		
Cont. F 105/40°C	165	132	N/A	N/A	N/A	N/A	N/A	N/A		
Cont. H 125/40°C	176	141	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**

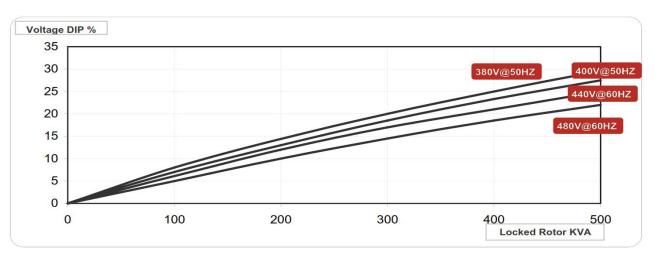
## Effiency Curve @ 50 Hz,400V



## Effiency Curves @ 60 Hz,480V



## Motor Starting Curves @ 50 Hz, 60 Hz Locked Rotor



# **Technical Data Sheet**

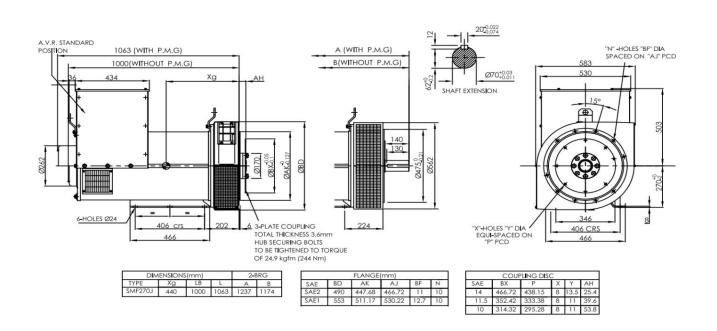
# STANDARD(S) OPTIONAL(O) INFORMATION (I) SPECIFICATION

	SELF-EXCITED	S	SUSTAINED SHORT-CIRCUIT: NOT AVAILABLE
EXCITATION	ARAP		SOSTAINED SHORT CINCOTT. NOT AVAILABLE
SYSTEM	PMG		
	SX460	S	REGULATION PRECISION : +/-1,0 %
	SX440	0	REGULATION PRECISION : +/-1,0 %
AVR	MX341		ACCOLATION TRECISION : 17 1,0 70
	MX321		
WINDING	Н	S	
INSULATION	F		
	2/3	S	HIGHER FLEXIBILITY IN USE,BETTER MOTOR STARTING ABILITY
WINDING PITCH	5/6	0	COST-EFFECTIVE POWER SUPPLY SCHEME
	STANDARD	S	COST ETTECTIVE TOWER SOFT ET SCHEINE
WINDING	"ANTI-HARSH"	0	SPECIAL TREATMENT OF WINDING TO AGINST HASRH ENVIROMENT
PROTECTION	SPACE HEATER	0	TO HEAT UP AIR TO REMOVE THE HUMMINITY AROUND WINDING
	THERMAL SENSOR	0	TO DETECT THE WINDING TEMPERATURE OR BEARING'S
	CT100	0	
	CT200		
PARALLEL	CT400		
OPERATION	CT600		
	CT1000		
	12	S	12 LEADS OF WINDING ENDS,
WINDING LEADS	6	0	6 LEADS OF WINDING ENGS
A A CLUATE	IP23	S	STANDARD MACHINE PROTECTION
MACHINE	IP44	0	TO AGINST : 1mm OBJECT AND SPLASHING WATER
PROCTIION	IP54		
DOWED FACTOR	1	0	
POWER FACTOR	0,8	S	
	SINGLE BEARING	S	
CONNECTION TO	DOUBLE BEARING	0	
ENGINE	BELT DRIVE	0	
	VERTICAL		
OVERSPEED		ı	MAX ROTATING SPEED : 2250 RPM
ATTITUDE	<=1000m	ı	DERATING IS NO NEED
ATTITUDE	>1000m	ı	DERATING NEEDED, REFERS TO RATING BOOK
ELECTIRICAL	TDF/THC	ı	NO LOAD < 1,5 %, NON DISTORATING BALANCED LINEAR LOAD< 5,0 %
FEATRUES	TIF	I	<50
FEATRUES	THF	I	<2%
DEADING	DRIVE -END	I	BALL 6309 - 2RS DOUBLE BEARING CONF. ONLY
BEARING	NON DRIVE END	I	BALL 6306 - 2RS
WEIGHT	NET	ı	SINGLE BEARING 683 KG DOUBLE BEARING : 711KG
WEIGHT	GROSS	I	SINGLE BEARING 717 KG DOUBLE BEARING : 745KG
PACKING SIZE		I	SINGLE B. : 1100 x680x890 mm DOUBLE B. : 1100x680X890mm

## **Technical Data Sheet**

STANDARD(S) OPTIONAL(O) INFORMATION (I)	SPECI	SPECIFICATION							
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	1.939	1.750	1.626	_	2.651	2.475	2.370	2.221	
X'd - Direct axis transient reactance saturated.	0.103	0.093	0.086	_	0.164	0.153	0.147	0.137	
X"d - Direct axis sub transient reactance saturated	0.070	0.064	0.059	_	0.096	0.090	0.086	0.080	
Xq - Qadro. Axis synchro.reactance unsaturated.	0.886	0.800	0.743	_	1.206	1.126	1.078	1.010	
X"q - Quadro. Axis sub transiet reactance saturated.	0.163	0.147	0.137	_	0.138	0.129	0.123	0.116	
X2 - Negative sequence reactance unsturated	0.117	0.105	0.098	_	0.117	0.109	0.105	0.098	
Xo -Zero sequence reactance unsaturated.	0.044	0.040	0.037	_	0.048	0.045	0.043	0.040	
T'd- Short - Circuit transiet time constant		0.045s							
T"d - Sub Transiet time constant		0.015s							
T'do- Open circuit time constant		1,27s							
Ta- Armature time constant		0.03s							
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