

M660

CONT 610 kVA



Ratings and Dimensions

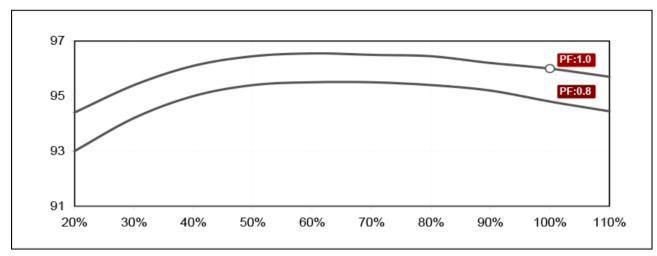
Frequency	50 Hz.								
Wire Connection	12 Wire Three Pheese								
Power Factor	0	,8	0,8 0,			,8	0	,8	
Winding No.	#1	125 #125			#1	.25	#125		
Y Series Star	38	80 400		00	415		440		
YY Parallel Star	19	90	200		208		220		
Δ Series Delta	22	20	2:	30	240		254		
	kVA	kW	kVA	kW	kVA	kW	kVA	kW	
Cont. F 105/40°C	550	440	560	448	550	440	550	440	
Cont. H 125/40°C	600	480	610 488		600	480	590	472	
Stdby H 150/40°C	636	509	640 512		636	509	636	509	
Stdby H 163/27°C	660	528	665	532	660	528	660	528	

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	221	177	221	221	N/A	N/A	N/A	N/A		
Cont. H 125/40°C	240	192	240	240	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		

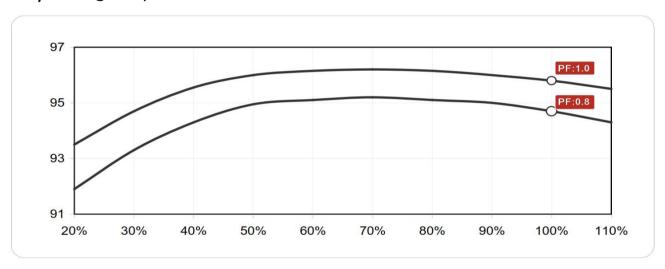
Frequency	60 Hz.									
Wire Connection	12 Wire Three Pheese									
Power Factor	0	,8	0	0,8 0,8			0,8			
Winding No.	#1	#125 #125				.25	#125			
Y Series Star	4:	16	4	40	40	60	480			
YY Parallel Star	20	208		220		230		240		
Δ Series Delta	24	40	254		266		277			
	kVA	kW	kVA	kW	kVA	kW	kVA	kW		
Cont. F 105/40°C	625	500	650	520	660	528	675	540		
Cont. H 125/40°C	681	545	720 576		750	600	750	600		
Stdby H 150/40°C	719	575	750 600		780	624	800	640		
Stdby H 163/27°C	738	590	769	615	798	638	819	655		

Frequency	60 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	#125		#42		#42			
ΔΔ Double Delta	24	0V	240V		240V		240V			
	kVA	kW	kVA	kW	kVA	kW	kVA	kW		
Cont. F 105/40°C	239	191	239	239	N/A	N/A	N/A	N/A		
Cont. H 125/40°C	275	220	275	275	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		

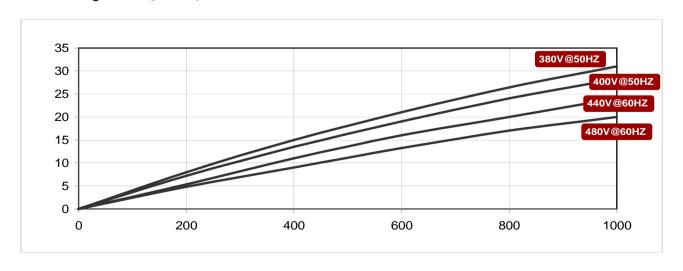
Effiency Curve @ 50 Hz,400V



Effiency Curves @ 60 Hz,480V



Motor Starting Curves @ 50 Hz, 60 Hz Locked Rotor



Technical Data Sheet

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

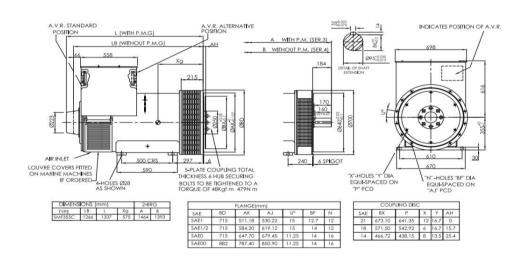
SPECIFICATION

	SELF-EXCITED	S	SUSTAINED SHORT-CIRCUIT: NOT AVAILABLE
EXCITATION	ARAP		
SYSTEM	PMG		
	SX460	S	REGULATION PRECISION : +/-1,0 %
	SX440	0	REGULATION PRECISION : +/-1,0 %
AVR	MX341		, = , = , = , = , = , = , = , = , = , =
	MX321		
WINDING	Н	S	
INSULATION	F		
WALDING DITCH	2/3	S	HIGHER FLEXIBILITY IN USE,BETTER MOTOR STARTING ABILITY
WINDING PITCH	5/6	0	COST-EFFECTIVE POWER SUPPLY SCHEME
	STANDARD	S	
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	
DADALLEI	CT200		
PARALLEL	CT400		
OPERATION	CT600		
	CT1000		
VAUNIDINIC LEADS	12	S	12 LEADS OF WINDING ENDS,
WINDING LEADS	6	0	6 LEADS OF WINDING ENGS
NAACHINE	IP23	S	STANDARD MACHINE PROTECTION
MACHINE PROCTIION	IP44	0	TO AGINST : 1mm OBJECT AND SPLASHING WATER
PROCTION	IP54		
POWER FACTOR	1	0	
POWER FACIOR	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
ATTITODE	>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
TLATROLS	THF	-	<2%
BEARING	DRIVE -END	I	BALL 6320 - 2RS DOUBLE BEARING CONF. ONLY
DEANING	NON DRIVE END	I	BALL 6314- 2RS
WEIGHT	NET	ı	SINGLE BEARING 1365 KG DOUBLE BEARING : 1377G
VV EIGH I	GROSS	ı	SINGLE BEARING 1409 KG DOUBLE BEARING : 1421KG
PACKING SIZE		I	SINGLE B. : 1500x850x1170 mm DOUBLE B. : 1500x850x1170mm

Technical Data Sheet

STANDARD(S) OPTIONAL(O) INFORMATION (I)	SPEC	SPECIFICATION								
	50 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	3,14	2,83	2,63	2,34	3,53	3,30	3,10	2,92		
X'd - Direct axis transient reactance saturated.	0,17	0,15	0,14	0,12	0,17	0,16	0,15	0,14		
X"d - Direct axis sub transient reactance saturated	0,12	0,11	0,10	0,09	0,12	0,11	0,11	0,10		
Xq - Qadro. Axis synchro.reactance unsaturated.	2,45	2,21	2,05	1,82	2,82	2,64	2,48	2,33		
X"q - Quadro. Axis sub transiet reactance saturated.	0,26	0,24	0,22	0,20	0,34	0,32	0,30	0,28		
X2 - Negative sequence reactance unsturated	0,18	0,16	0,15	0,13	0,23	0,22	0,20	0,19		
Xo -Zero sequence reactance unsaturated.	0,08	0,08	0,07	0,06	0,10	0,09	0,09	0,08		
T'd- Short - Circuit transiet time constant		0.08s								
T"d - Sub Transiet time constant		0.012s								
T'do- Open circuit time constant		2,2s								
Ta- Armature time constant	0.018s									
Kcc - Short Circuit Ratio	1/Xd									

Outline Drawing



General Specification

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