

ALTERNATOR

APPLICATION AND STANDARDS

SUPER RELIABLE MACHINE, MAINLY LAND-USED AS PRIME OR STANDBY POWER

COMPLY WITH STANDARDS OF IEC60034,NEMA MG1-22,ISO8528,CSA C22.2-100,VDE 0530,GB755

SPECIAL FEATURES

- **OVERLOAD** : 15% OVERLOAD FOR 1 HOUR EVERY 12 HOURS
- **WINDING PROTECTION** : VPI(VACUUM PRESSURE IMPREGNATION)+ EPOXY RESIN+ ANTI-HARSH PAINTING
- **SUPER SILENCE** : FAN, MADE OF STEEL, ROTATING EVENLY
- **VIBERATION** : MOST RIGID DYNAMIC-BALANCED ROTOR AND STRONGER BODY
- **EXCITATION** : THE AUXILIARY WINDING AND PMG IS OPTIONAL
- **THERMAL OVERLOAD** : WINDING AND BEARING DETECTOR CAN BE EQUIPPED UPON CUSTOMER REQUEST
- **BEARING** : BIGGER SIZE AND SEAL FOR LIFE
- **TERMINAL BOX**: THREE OPTIONS: HIGH, LOW AND NONE (2mm-CABLE EXTENTION)
- **DIODE**: ACCESS FROM NON-DRIVE END FOR EASY-MAINTENANCE
- **AVR**: AS440 STANDARD, CAN BE UPGRADED TO R438 FOR 3-TIME SHORT CIRCUIT CAPABILITY



GENERAL FEATURES

WIRE WOUND AND CLASS H THERMAL INSULATION

IP23, STANDARD EQUIPPED, AND IP44, IP54 UPON CUSTOMER REQUEST ROUND-SHAPE MACHINE BODY FOR BETTER CENTERLIZATION NAMEPLATE, MADE OF STEEL OR PLASTIC

SPACE HEATER: CAN BE EQUIPPED UPON REQUEST.

VEGA LOGO STAMPED TO THE TOP COVER OF T-BOX

COMMON DATA

Insulation	Altitude	Overspeed	Protection	Leads	Pitch	AVR	Voltage Regulation	Wareform Distortion	TIF	THF
H/H	<=1000m	2250rpm	IP23	12	2/3	AS440	±1	<1,5% No load	<50	<2%

RATING TABLE

H CLASS	50Hz/1500RPM/PF 0.8											60Hz/1800RPM/PF 0.8										
TEMP.	125°C /40°C PRIME POWER								163°C /27°C Standby		Effi.	125°C /40°C PRIME POWER								163°C /27°C Standby		Effi.
Y	380		400		415		440		400		400	416		440		460		480		480		480
YY	190		200		208		220		200		200	208		220		230		240		240		240
Δ	220		230		240		254		230		230	240		254		266		277		277		277
RATING	kVA	kW	kVA	kW	kVA	kW	kVA	kW	kVA	kW	%	kVA	kW	kVA	kW	kVA	kW	kVA	kW	kVA	kW	%
VGU225B	45.0	36.0	45.0	36.0	45.0	36.0	34.0	27.2	48.0	38.4	87.5	50.0	40.0	52.5	42.0	52.5	42.0	55.5	44.4	60.0	48.0	85.7
VGU225C	50.0	40.0	50.0	40.0	50.0	40.0	37.8	30.2	55.1	44.1	88.3	60.0	48.0	62.5	50.0	62.5	50.0	65.0	52.0	71.3	57.0	87.4
VGU225D	60.0	48.0	60.0	48.0	60.0	48.0	45.0	36.0	63.5	50.8	88.9	67.5	54.0	72.5	58.0	72.5	58.0	75.0	60.0	81.1	64.9	88.2
VGU225E	75.0	60.0	75.0	60.0	75.0	60.0	55.0	44.0	83.0	66.4	89.9	85.0	68.0	89.0	71.2	89.0	71.2	95.0	76.0	103	82.4	89.6
VGU225FS	80.0	64.0	80.0	64.0	80.0	64.0	62.0	49.6	87.5	70.0	90.2	89.5	71.6	93.5	74.8	93.5	74.8	99.5	79.6	108	86.0	90.0
VGU225F	85.0	68.0	85.0	68.0	85.0	68.0	75.0	60.0	90.8	72.6	90.3	93.9	75.1	97.6	78.1	100	80.0	104	83.2	114	91.2	90.6
VGU225G	90.0	72.0	90.0	72.0	90.0	72.0	81.3	65.0	95.8	76.6	90.3	98.9	79.1	103	82.1	105	83.9	109	87.2	119	95.2	91.0

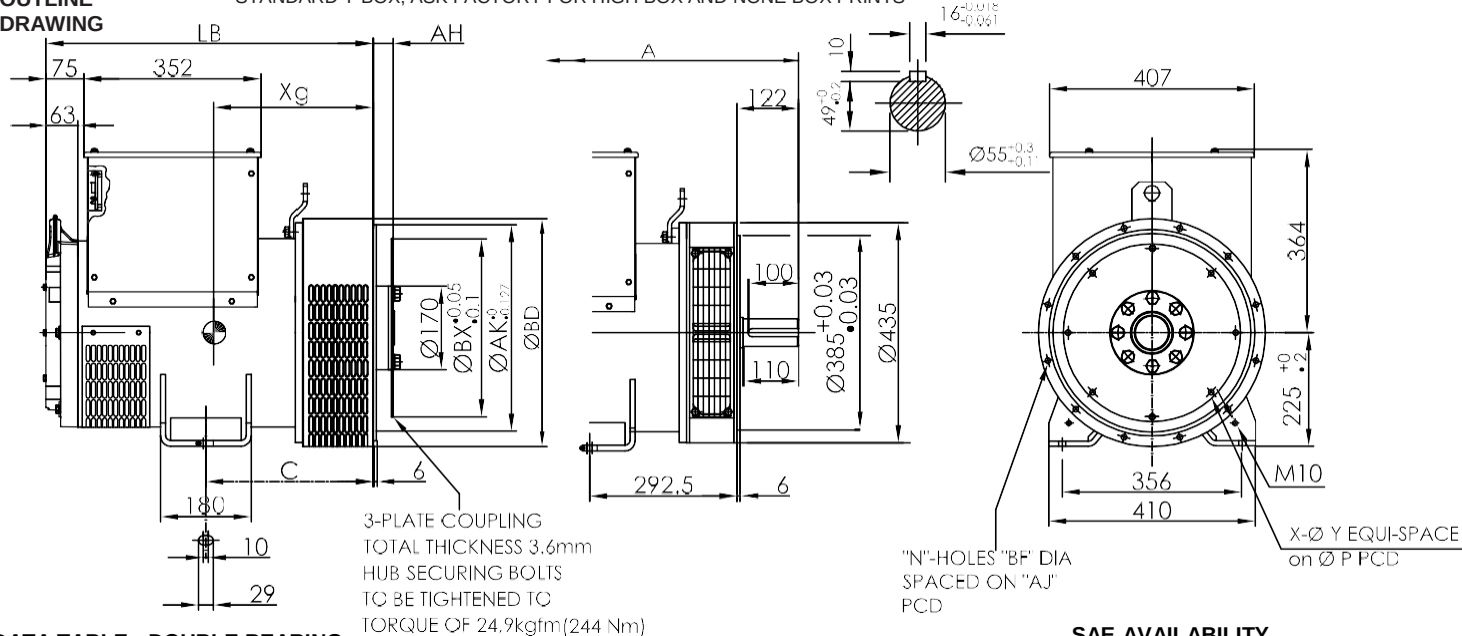
60Hz @ 480V		VGU225B	VGU225C	VGU225D	VGU225E	VGU225FS	VGU225F	VGU225G
Xd	Direct axis synchro. reactance unsaturated	2.48	2.46	2.49	2.12	2.19	2.19	2.19
X'd	Direct axis transient reactance saturated	0.17	0.18	0.18	0.18	0.18	0.18	0.18
X" d	Direct axis sub transient reactance saturated	0.11	0.11	0.12	0.12	0.12	0.12	0.12
Xq	Quadra. Axis synchro. reactance unsaturated	1.15	1.14	1.15	0.98	1.02	1.02	1.02
X" q	Quadra. Axis sub transient reactance saturated	0.12	0.11	0.12	0.11	0.12	0.12	0.12
X2	Negative sequence reactance unsaturated	0.11	0.11	0.12	0.11	0.12	0.12	0.12
Xo	Zero sequence reactance unsaturated	0.07	0.07	0.08	0.08	0.09	0.09	0.09
T'd	Short-Circuit transient time constant	0.025s	0.026s	0.027s	0.03s	0.03s	0.03s	0.03s
T" d	Sub transient time constant	0.006s	0.007s	0.007s	0.008s	0.009s	0.009s	0.009s
T'do	Open circuit time constant	0.065s	0.7s	0.71s	0.74s	0.75s	0.75s	0.75s
Ta	Armature time constant	0.005s	0.0055s	0.006s	0.0065s	0.007s	0.007s	0.007s
Kcc	Short circuit ratio	0.403	0.407	0.402	0.472	0.457	0.457	0.457

REACTANCE-TIME CONSTANT(s) H class

VGU225 B/C/D/E/FS/F/G

**OUTLINE
DRAWING**

STANDARD T-BOX, ASK FACTORY FOR HIGH BOX AND NONE BOX PRINTS



DATA TABLE - DOUBLE BEARING

Dimension . mm .		Double BRG		Weight		Packing
Model		A		Net(kg)	Gross(kg)	L x W x H (mm)
VGU225B		732		249	282	1100×680×890
VGU225C		732		265	298	1100×680×890
VGU225D		822		289	322	1100×680×890
VGU225E		822		325	358	1100×680×890
VGU225FS		867		351	384	1100×680×890
VGU225F		867		361	394	1100×680×890
VGU225G		867		376	409	1100×680×890

SAE AVAILABILITY

SAE	8	10	11.5	14
4	x	x		
3		x	x	
2			x	
1			x	x

DATA TABLE - SINGLE BEARING

Dimension . mm .		SAE 1		SAE 2/3/4		Weight		Packing
Model		LB	Xg	LB	Xg	Net(kg)	Gross(kg)	L x W x H (mm)
VGU225B		664	323	650	311	224	257	1100×680×890
VGU225C		664	333	650	321	240	273	1100×680×890
VGU225D		754	348	740	336	264	297	1100×680×890
VGU225E		754	358	740	346	300	333	1100×680×890
VGU225FS		799	373	785	361	326	359	1100×680×890
VGU225F		799	373	785	361	336	369	1100×680×890
VGU225G		799	373	785	361	351	384	1100×680×890

Flange . mm							Disc(mm)					
SAE#	BD	AK	AJ	BF	N	C	SAE#	BX	P	X	Y	AH
SAE 4	451	361.95	381	11	12	332.5	14	466.72	438.15	8	13.5	25.4
SAE 3	451	409.58	428.62	11	12	332.5	11.5	352.42	333.38	8	11	39.6
SAE 2	490	447.68	466.72	11	12	332.5	10	314.32	295.28	8	11	53.8
SAE 1	553	511.18	530.22	14	12	346.8	8	263.52	244.48	6	11	62

