

VGU

VEGA power

Vega Power International PTE.LTD

VGU160 Range°

_ Rev.B _

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
- **VIBRATION** : 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	416	440	460	480	480	480	480	480	480	480
YY	190	200	208	220	200	200	208	220	230	240	240	240	208	220	230	240	240	240	240	240	240	240
△	220	230	240	254	230	230	240	254	266	277	277	277	240	254	266	277	277	277	277	277	277	277
RATING	kVA	kW	kVA	kW	kVA	kW	kVA	kW	kVA	kW	%	kVA	kW	kVA	kW	kVA	kW	kVA	kW	kVA	kW	%
VGU160B	8.1	6.5	8.1	6.5	8.1	6.5	6.2	5.0	8.8	7.1	77.3	9.6	7.7	10.2	8.2	10.2	8.2	10.2	8.2	11.1	8.9	78.3
VGU160C	11.0	8.8	11.0	8.8	11.0	8.8	8.5	6.8	11.9	9.5	79.5	13.0	10.4	13.8	11.0	13.8	11.0	13.8	11.0	15.0	12.0	80.9
VGU160D	13.5	10.8	13.5	10.8	13.5	10.8	11.0	8.8	14.6	11.7	80.8	16.0	12.8	16.9	13.5	16.9	13.5	16.9	13.5	18.3	14.7	82.4
VGU160E	16.0	12.8	16.0	12.8	16.0	12.8	13.5	10.8	17.4	13.9	81.8	18.9	15.1	20.0	16.0	20.0	16.0	20.0	16.0	21.7	17.4	83.6

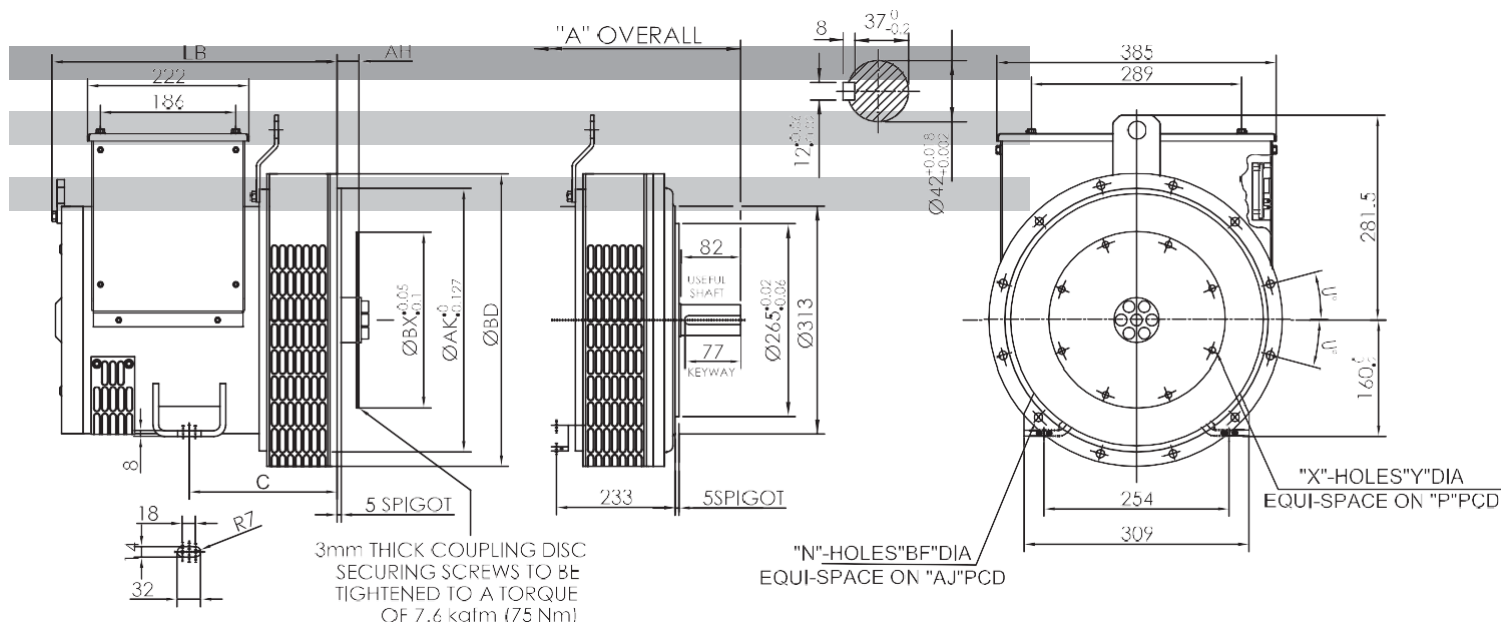
REACTANCE-TIME CONSTANT(s) H CLASS

VGU160 B/C/D/E

60Hz @ 480V		VGU160B	VGU160C	VGU160D	VGU160E					
Xd	Direct axis synchro. reactance unsaturated	1.889	1.858	1.828	1.807					
X'd	Direct axis transient reactance saturated	0.194	0.189	0.186	0.185					
X''d	Direct axis sub transient reactance saturate	0.122	0.118	0.117	0.115					
Xq	Quadra. Axis synchro. reactance unsaturate	0.938	0.923	0.907	0.898					
X''q	Quadra. Axis sub transient reactance satura	0.216	0.212	0.209	0.208					
X2	Negative sequence reactanceunsaturated	0.178	0.178	0.176	0.174					
T'd	Short-Circuit transient time constant	0.012s	0.014s	0.017s	0.018s					
T''d	Sub transient time constant	0.003s	0.003s	0.004s	0.005s					
T'do	Open circuit time constant	0.2s	0.3s	0.3s	0.4s					
Ta	Armature time constant	0.004s	0.005s	0.005s	0.006s					
Kcc	Short circuit ratio	0.529	0.538	0.547	0.553					

OUTLINE DRAWING

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



DATA TABLE - DOUBLE BEARING

Dimension mm	Double BRG	Weight		Packing
		Net(kg)	Gross(kg)	
Model	A			L x W x H (mm)
VGU160B	511.5	83	111	1120x680x700
VGU160C	511.5	93	121	1120x680x700
VGU160D	511.5	101	129	1120x680x700
VGU160E	511.5	108	136	1120x680x700

SAE AVAILABILITY

SAE#					
	6.5	7.5	8	10	11.5
5	x	x			
4		x	x	x	
3				x	x
2					

DATA TABLE - SINGLE BEARING

Dimension mm	SAE 2	SAE 3	SAE 4/5	Weight		Packing
				Net(kg)	Gross(kg)	
Model	LB	LB	LB			L x W x H (mm)
VGU160B	430.5	403.5	391.5	80	108	1120x680x700
VGU160C	430.5	403.5	391.5	90	118	1120x680x700
VGU160D	430.5	403.5	391.5	98	126	1120x680x700
VGU160E	430.5	403.5	391.5	105	133	1120x680x700

Flange mm								Disc(mm)					
SAE#	BD	AK	AJ	BF	N	U°	C	SAE#	BX	P	X	Y	AH
SAE 5	356	314.32	333.38	11	8	22.5	203	11.5	352.42	333.38	8	11	39.6
SAE 4	402	361.95	381	11	12	15	203	10	314.32	295.28	8	11	53.8
SAE 3	451	409.58	428.62	11	12	15	215	8	263.52	244.48	6	11	62
								7.5	241.3	222.25	8	9	30.2
								6.5	215.9	200.02	6	9	30.2