موتور دیزل : Benz	ژنراتور : Stamford

Standby		Prime		
KVA	KW	KVA	KW	
38	31	35	28	دیزل ژنراتور

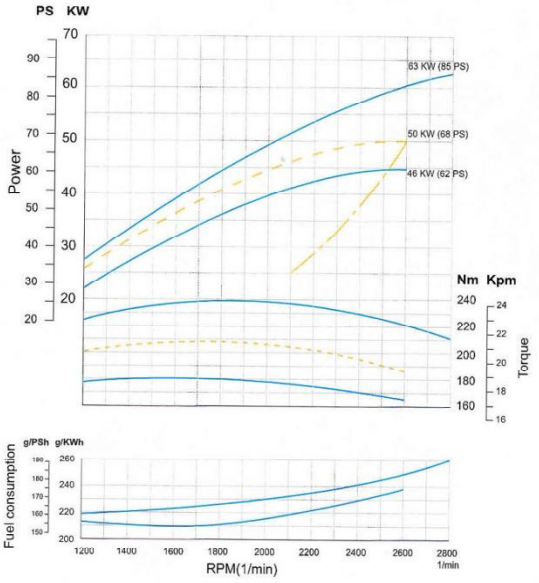
موتور های چهار سیلندر OM 314 در تیپ مختلف قابلیت نصب روی شاسی های مینی بوس و کامیونت های تا ظرفیت شش تن را دارا بوده و علاوه بر آن با تغییراتی جهت کاربرد های صنعتی ، کشاورزی نیز قابل استفاده می باشد . قطعات و لوازم یدکی این محصول جزو تولیدات شرکت می باشد.

This 4 -cylinder engine in various versious can be installed on both minibuses as well as mini-trucks (6 tons). In addition , it also can be used in agricultural and industrial applications.
Spare parts of this engine are part of company's poduction.

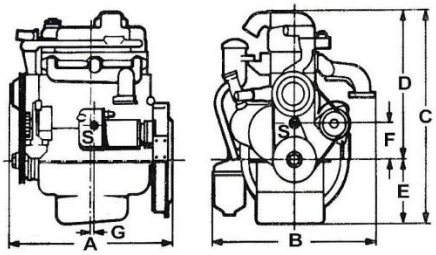
Technical Specification

NO.OF CYLINDERS	4	تعداد سیلندر
MAX (rpm)	2800	ماکزیمم دور بر دقیقه
MAX POWER	85 h.p.	حداکثر قدرت
MAX TORQUE	235 N.m	حداکثر گشتاور
COMPRESSION RATIO	17:1	نسبت تراکم
CYLINDER BORE	97 mm	قطر سیلندر
STROKE	128 mm	کورس پیستون
VOLUME	3.784 lit	حجم جابجایی
MEAN PISTON SPEED	11.9 m/s @ 2800 rpm	سرعت متوسط پیستون
MEAN Eff. PRESSURE	6.8 bar @ 2800 rpm	فشار متوسط موثر
TOTAL ENGINE WEIGHT	325 kg	وزن کلی موتور
POWER / WEIGHT RATIO	4.87 kg/kw	نسبت وزن به قدرت
ROTATION	c.c.w	جهت چرخش (خلاف عقربه های ساعت)
COOLING WATER CAPACITY	7.7 lit.	ظرفیت سیال خنک کننده
MAX LUBRICATING OIL CAPACITY	8 lit.	حداکثر ظرفیت روغن
AIR CONSUMPTION	4.1 m³ / min @ 2800 rpm	مصرف هوا
EMISSION STANDARD	Euro 1 S< 0.05%	استاندارد آلایندگی با سوخت گوگردکمتر از ۰/۰۵٪

Output, torque and fuel consumption



A= 710 m/m
B= 695 m/m
C= 890 m/m
D= 615 m/m
E= 275 m/m
F= 150 m/m
G= 15 m/m
S= center of gravity



ژنراتور		
Manufacturer	Stamford	تولید کننده
Type	PI 144 H	تیپ
Maximum over Speed	2250 rev/min	حداکثر سرعت مجاز
Standby power at rated voltage ,KVA	27.5	توان Standby در ولتاژ نامی
Power factor	0.8	ضریب قدرت
Phase	3	فاز
Frequency, Hz	50	فرکانس
Voltage, V	380~440	ولتاژ
Stator windings	Double Layer Concentric	سیم پیچ استاتور
Voltage Regulation, %	-1< x <+1	تنظیم ولتاژ
Rotor WDG. Resistance	0.857 اهم	مقاومت سیم پیچ روتور
Short circuit ratio	1/Xd	نسبت اتصال کوتاه

WINDING 311

CONTROL SYSTEM	STANDARD AS480 AVR (SELF EXCITED)
VOLTAGE REGULATION	± 1.0 %
SUSTAINED SHORT CIRCUIT	SELF EXCITED MACHINES DO NOT SUSTAIN A SHORT CIRCUIT CURRENT

CONTROL SYSTEM	AS480 AVR WITH OPTIONAL EXCITATION BOOST SYSTEM (EBS)
SUSTAINED SHORT CIRCUIT	REFER TO SHORT CIRCUIT DECREMENT CURVE (page 7)

STATOR WINDING	DOUBLE LAYER CONCENTRIC							
WINDING PITCH	TWO THIRDS							
WINDING LEADS	12							
STATOR WDG. RESISTANCE	0.171 Ohms PER PHASE AT 22°C SERIES STAR CONNECTED							
ROTOR WDG. RESISTANCE	0.89 Ohms at 22°C							
EXCITER STATOR RESISTANCE	22.9 Ohms at 22°C							
EXCITER ROTOR RESISTANCE	0.21 Ohms PER PHASE AT 22°C							
EBS STATOR RESISTANCE	12.9 Ohms at 22°C							
R.F.I. SUPPRESSION	BS EN 61000-6-2 & BS EN 61000-6-4,VDE 0875G, VDE 0875N. refer to factory for others							
WAVEFORM DISTORTION	NO LOAD < 1.5% NON-DISTORTING BALANCED LINEAR LOAD < 5.0%							
MAXIMUM OVERSPEED	2250 Rev/Min							
BEARING DRIVE END	BALL. 6310 - 2RS. (ISO)							
BEARING NON-DRIVE END	BALL. 6306 - 2RS. (ISO)							
	1 BEARING				2 BEARING			
WEIGHT COMP. GENERATOR	172.5 kg				175.5 kg			
WEIGHT WOUND STATOR	75 kg				75 kg			
WEIGHT WOUND ROTOR	65.63 kg				67.34 kg			
WR² INERTIA	0.2541 kgm^2				0.2546 kgm^2			
SHIPPING WEIGHTS in a crate	191 kg				200 kg			
PACKING CRATE SIZE	85 x 51 x 67 (cm)				85 x 51 x 67 (cm)			
	50 Hz				60 Hz			
TELEPHONE INTERFERENCE	THF<2%				TIF<50			
COOLING AIR	0.09 m³/sec 191cfm				0.108 m³/sec 229 cfm			
VOLTAGE SERIES STAR	380/220	400/231	415/240	440/254	416/240	440/254	460/266	480/277
VOLTAGE PARALLEL STAR	190/110	200/115	208/120	220/127	208/120	220/127	230/133	240/138
VOLTAGE SERIES DELTA	220/110	230/115	240/120	254/127	240/120	254/127	266/133	277/138
kVA BASE RATING FOR REACTANCE VALUES	35	35	35	33.3	38.5	41.1	42.4	43.8
Xd DIR. AXIS SYNCHRONOUS	1.85	1.67	1.55	1.31	2.20	2.10	1.98	1.88
X'd DIR. AXIS TRANSIENT	0.17	0.15	0.14	0.12	0.20	0.19	0.18	0.17
X"d DIR. AXIS SUBTRANSIENT	0.12	0.11	0.10	0.09	0.15	0.14	0.14	0.13
Xq QUAD. AXIS REACTANCE	0.89	0.80	0.74	0.63	1.05	1.00	0.95	0.90
X"q QUAD. AXIS SUBTRANSIENT	0.19	0.17	0.16	0.13	0.23	0.22	0.21	0.20
X_L LEAKAGE REACTANCE	0.07	0.06	0.06	0.05	0.08	0.08	0.07	0.07
X_2 NEGATIVE SEQUENCE	0.16	0.14	0.13	0.11	0.19	0.18	0.17	0.16
X_0 ZERO SEQUENCE	0.08	0.07	0.07	0.06	0.09	0.09	0.08	0.08
REACTANCES ARE SATURATED	VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED							
T'd TRANSIENT TIME CONST.	0.026 s							
T"d SUB-TRANSTIME CONST.	0.007 s							
T'do O.C. FIELD TIME CONST.	0.6 s							
Ta ARMATURE TIME CONST.	0.007 s							
SHORT CIRCUIT RATIO	1/Xd							

PI144H

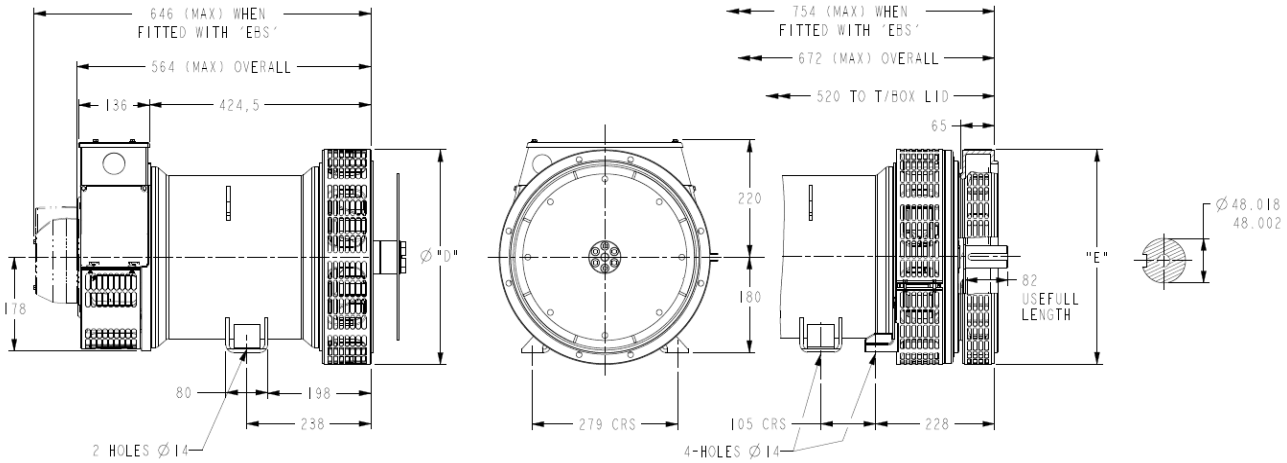
Winding 311 / 0.8 Power Factor

RATINGS

	Class - Temp Rise	Cont. F - 105/40°C				Cont. H - 125/40°C				Standby - 150/40°C				Standby - 163/27°C			
50 Hz	Series Star (V)	380	400	415	440	380	400	415	440	380	400	415	440	380	400	415	440
	Parallel Star (V)	190	200	208	220	190	200	208	220	190	200	208	220	190	200	208	220
	Series Delta (V)	220	230	240	254	220	230	240	254	220	230	240	254	220	230	240	254
	kVA	32.0	32.0	32.0	30.4	35.0	35.0	35.0	33.3	37.5	37.5	37.5	35.6	38.5	38.5	38.5	36.6
	kW	25.6	25.6	25.6	24.3	28.0	28.0	28.0	26.6	30.0	30.0	30.0	28.5	30.8	30.8	30.8	29.3
	Efficiency (%)	87.7	87.9	88.0	88.2	87.1	87.4	87.6	87.9	86.6	87.0	87.2	87.7	86.4	86.8	87.0	87.5
	kW Input	29.2	29.1	29.1	27.6	32.1	32.0	32.0	30.3	34.6	34.5	34.4	32.5	35.6	35.5	35.4	33.5

60 Hz	Series Star (V)	416	440	460	480	416	440	460	480	416	440	460	480	416	440	460	480
	Parallel Star (V)	208	220	230	240	208	220	230	240	208	220	230	240	208	220	230	240
	Delta (V)	240	254	266	277	240	254	266	277	240	254	266	277	240	254	266	277
	kVA	35.2	37.6	38.8	40.0	38.5	41.1	42.4	43.8	41.3	44.1	45.5	46.9	42.4	45.2	46.7	48.1
	kW	28.2	30.1	31.0	32.0	30.8	32.9	33.9	35.0	33.0	35.3	36.4	37.5	33.9	36.2	37.4	38.5
	Efficiency (%)	88.0	88.0	88.1	88.1	87.5	87.5	87.6	87.7	87.1	87.1	87.2	87.3	86.9	86.9	87.0	87.1
	kW Input	32.0	34.2	35.2	36.3	35.2	37.6	38.7	39.9	37.9	40.5	41.7	43.0	39.0	41.7	43.0	44.2

DIMENSIONS



COUPLING DISC	
SAE	"AN"
8	62
10	53.8
11.5	39.6

1-BRG ADAPTOR	
SAE	"D"
4	405
3	451
2	489

8-HOLES SPACED AS 12
8-HOLES SPACED AS 12

2-BRG ADAPTOR	
SAE	"E"
5	359
4	406
3	455
2	493

STAMFORD

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