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# FIRMAN





#### **A Strong Brand for Generators from China**

#### What makes FIRMAN so signicant in generators:

- Selecting high quality materials and components
- Strict manufacturing program
- Strict quality control program and measures
- Innovation of new products by professional R&D
- Strong marketing and sale network
- Complete service network
- Complete line of accessories and spare parts with warranties
- Meeting all relevant safety directives and tests
- Environmentally friendly and meeting relevant exhaust and evaporation emission regulation and noise requirements

#### "FIRMAN" is from a big family.

Founded in 1978, SUMEC Group Corporation is a key member of China National Industry Corporation. It is one of the largest import corporations in China, with more than 30 subsidiaries and annual sales of over 2.8 billion US dollars.

As SUMEC's core subsidiary, SUMEC Machinery & Electric Co., Ltd. is China largest manufacturing and export enterprise of power machineries, with its products covering 0.5- 4000KVA power machineries including tens of series of gasoline and generators, engines, water pumps and welding machines. The products are sold to honorable titles as "Recommended Export Brand by China Chamber of Commerce for Import and Export of Machinery and Electronic Products" and "Strongly Supported Export Brand in Jiangsu Province", but also has become a well-known brand parallel to the brands in Europe, America and Japan.

SUMEC Machinery & Electric Co., Ltd. has been committed to building and improving its technology platform, including product design and development, quality control system, intellectual property protection and product certification, etc. It now possesses dozens of patents at home and abroad, with product technology taking a leading role in China and ranking among the best in international market. It also strengthens all-round cooperations with domestic key universities, including the cooperative research program, campus scholarship and professionals co-training plan with Jiangsu University and Southeast University, which create favorable conditions for talents introduction as the knowledge update and development of the technicians.

SUMEC Machinery & Electric Co., Ltd. actively accelerates the process of industrialization. Having established several manufacturing plants successively, it mow possesses the most advanced equipments in China, about ten high quality production lines, hundreds of CNC machine centers and a huge technological R&D team which ensure its daily production capacity of over 5000 pieces.

#### TRADITION AND HISTORY

- Rigorous selection of raw materials and spare parts, ensuring that all are from first-class suppliers
- Strictly controlled manufacturing process and outgoing quality control
- Professional and proficient technical personnel

#### **Product Features**

Cleaner, Safer and Quieter waterproof canopy ensures protection against ingress of dust and water.

All FIRMAN generators meet or exceed relevant standards for noise and emission legislation.

### Robust and Durable

Compact, robust and flexible structures ensure long service life and quiet operation.

Thicker paint treatments stand the wear and tear in extreme environmental conditions.

Waterproof, soundproof canopies feature flame-proof, heat-resistant, heavy-duty rock wool sound insulation, providing superb noise level retention.

Doors are pressure locked to ensure a watertight seal.

#### Designed to be Easily Transported

Lifting hook provision and forklift access is standard on all units.

Lifting point and forklift access is standard on all units. Compact proportions minimize transportation costs.

#### **Easy to Use**

Control panel is simple and easy to operate.

Built in monitoring of unit's performance ensures high level of information on the status of the generator.

A digital control panel (optional on many competitors' models) is standard on all FIRMAN generators above 13kVA, offering excellent functionality and simplicity of use. A host of options allow the generator to be easily specified to suit the application.

# FIRMAN

- Better performance
- Automatic load Transfer
- Ultra-silent running
- Integrated control system

A FIRMAN automatic household generator keeps that rhythm going by providing dependable protection during unexpected power outages. Available with 8KW to 220KW output capacities, FIRMAN household generators provide worry-free emergency power to support your electrical needs for days, or even weeks. Clean, quiet, automatic backup power - just what your family needs to be safe and comfortable.

- Performance and Reliability FIRMAN alternators are used in the whole range.
- Extensive test and development ensures that the unit will live up to the task.
- A range of industry recognized engines are used to ensure the best power source for the size of generator is used.
- Designed for Simple Serviceability.
- Fully mounted base-tank as standard on all generators throughout the range.

Generator base will hold 110% of total generator fluids (fuels, lubricants and coolants), ensuring containment of any spillage.

large fuel tank reduces condensation, and eliminated corrosion which ensures fuel quality does not deteriorate in the unit. Large fuel tanks as standard reduce the need for refilling.

Large doors also provide comfortable access for mechanical or electrical checks.



# FRMAN®

# BUMBLEBEE

FIRMAN's new line of Bumblebee generators ranging from 10 to 275kva. The generators are purpose designed to be durable, compact and easy to use. The Bumblebee series is a result of FIRMAN's innovation to deliver what our customers are demanding.











is equipped with digital microprocessor, monitoring, controlling and protecting the genset. Adopt module design, host computer monitoring and remote controlling function can be integrated in an independent control system.







#### **Models**







	SDG10FS/SDG12FS	SDG11FS/SDG13FS	SDG13FS/SDG16FS
Rated Frequency (Hz)	50/60	50/60	50/60
Prime Power (KVA)	10/12	11/13	12.5/16
Standby power (KVA)	11/13.2	12/14	14/18
Noise Level (7m) [dB(A)]	67	67	67
Fuel Tank Capacity (L)	50	50	50
Overall Dimension (mm)	1650X720X980	1650X720X980	1750X720X980
Net Weight (kg)	500	510	580







	SDG16FS/SDG20FS	SDG20FS/SDG26FS	SDG25FS/SDG30FS
Rated Frequency (Hz)	50/60	50/60	50/60
Prime Power (KVA)	16/20	20/26	25/30
Standby power (KVA)	18/22	22/28.6	27.5/33
Noise Level (7m) [dB(A)]	67	68	68
Fuel Tank Capacity (L)	50	80	80
Overall Dimension (mm)	1750X720X980	1750X730X980	1850X730X980
Net Weight (kg)	590	635	650











## Models







	SDG28FS/SDG33FS	SDG30FS/SDG38FS	SDG33FS/SDG43F
Rated Frequency (Hz)	50/60	50/60	50/60
Prime Power (KVA)	28/32.5	30/38	33/43
Standby power (KVA)	31/36	33/41.8	36/47
Noise Level (7m) [dB(A)]	68	69	69
Fuel Tank Capacity (L)	80	80	100
Overall Dimension (mm)	1850X730X980	2050X750X1090	2050X750X1090
Net Weight (kg)	660	820	900







	SDG40FS/SDG50FS	SDG43FS	SDG63FS/SDG68FS
Rated Frequency (Hz)	50/60	50	50/60
Prime Power (KVA)	40/50	43	63/68
Standby power (KVA)	44/55	47	69/74
Noise Level (7m) [dB(A)]	69	70	70
Fuel Tank Capacity (L)	100	120	140
Overall Dimension (mm)	2050X780X1090	2200X950X1250	2200X950X1250
Net Weight (kg)	925	1050	1200









## Models







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	SDG85FS/SDG95FS	SDG115FS/SDG130FS	SDG140FS/SDG150F
Rated Frequency (Hz)	50/60	50/60	50/60
Prime Power (KVA)	85/95	115/130	140/150
Standby power (KVA)	94/105	127/143	154/165
Noise Level (7m) [dB(A)]	70	70	70
Fuel Tank Capacity (L)	140	200	200
Overall Dimension (mm)	2350X950X1300	2900X1030X1500	3000X1030X1500
Net Weight (kg)	1250	1680	1720

	SDG200FS/SDG215FS	SDG250FS/SDG265FS	SDG275FS/SDG300FS
Rated Frequency (Hz)	50/60	50/60	50/60
Prime Power (KVA)	200/215	250/265	275/300
Standby power (KVA)	220/237	275/292	303/330
Noise Level (7m) [dB(A)]	71	72	72
Fuel Tank Capacity (L)	400	400	400
Overall Dimension (mm)	3500X1130X1830	3600X1130X1830	3700X1130X1980
Net Weight (kg)	2500	2800	2950

#### **Technical data** (400V/50HZ)

Generating Set		SDG10FS	SDG11FS	SDG13FS
Rated Frequency	Hz	50	50	50
Drive Bourer	KVA	10	11	12.5
Prime Power	KW	8	8.8	10
Ctandley navier	KWA	11	12	14
Standby power	KW	8.8	10	11
Rated Voltage	V	230/400V	230/400V	230/400V
Rated Current	Α	14.5	15.9	18.1
Rated Rotation Speed	r/min	1500	1500	1500
Alternator				
Alternator Brand		FIRMAN	FIRMAN	FIRMAN
Alternator Model		FG11K	FG11K	FG14K
Alternator Type		A.C. Synchronous	A.C. Synchronous	A.C. Synchronous
Pole No.		4	4	4
Power Factor		0.8	0.8	0.8
Insulation Class		Н	Н	Н
Protection Class		IP23	IP23	IP23
Max. Ambient Temperature	°C	40	40	40
Engine				
Engine Brand		FIRMAN	FIRMAN	FIRMAN
Engine Model		FD380DY	FD385DY	FD480DY
Governor/Class		Mechanical	Mechanical	Mechanical
Cylinder No.		3	3	4
Cylinder arrangement		Vertical in-line	Vertical in-line	Vertical in-line
Type of injection		Direct injection	Direct injection	Direct injection
Cooling mode		Water cooled	Water cooled	Water cooled
Bore and stroke	mm	80 x 90	85 x 90	80 x 90
Displacement	L	1.357	1.532	1.809
Compression ratio		18:1	18:1	18:1
Engine Prime Power	KW	10	11	14
Battery capacit		12V 45Ah x1	12V 45Ah x1	12V 45Ah x1
Lubricanting Oil Capacity	L	4.5	4.5	5.5
Coolant Capacity	L	4	4	8
Fuel consumption (100%/75% prime load)	L/h	1.88/1.41	1.88/1.41	2.35/3.13
Fuel Type		0# Diesel (Natural temperat	ture) -10# (winter) -35# (cold)	)
Genset				
Panel Type		FCM8410	FCM8410	FCM8410
Noise Level (7m)	dB(A)	67	67	67
Fuel Tank Capacity	L	50	50	50
Overall Dimension	mm	1650X720X980	1650X720X980	1750X720X980
Net Weight	kg	500	510	580

Computing Sat	_	SDG16FS	SDG20FS	SDG25FS
Generating Set	Hz	50 50	50 50	50 50
Rated Frequency			20	
Prime Power	KVA KW	16	16	25
		-		
Standby power	KWA	18 14	22	27.5
Detect Velterne	KW			
Rated Voltage	V	230/400V	230/400V	230/400V
Rated Current	A	23.1	28.9	36.1
Rated Rotation Speed	r/min	1500	1500	1500
Alternator		5/8/444	5/84444	5/DMAN
Alternator Brand		FIRMAN	FIRMAN	FIRMAN
Alternator Model		FG16K	FG20K	FG25K
Alternator Type		A.C. Synchronous	A.C. Synchronous	A.C. Synchronous
Pole No.		4	4	4
Power Factor		0.8	0.8	0.8
Insulation Class		Н	Н	Н
Protection Class		IP23	IP23	IP23
Max. Ambient Temperature	°C	40	40	40
Engine				
Engine Brand		FIRMAN	FIRMAN	FIRMAN
Engine Model		FD485DY	FD490DY	FD490D1Y
Governor/Class		Mechanical	Mechanical	Mechanical
Cylinder No.		4	4	4
Cylinder arrangement		Vertical in-line	Vertical in-line	Vertical in-line
Type of injection		Direct injection	Direct injection	Direct injection
Cooling mode		Water cooled	Water cooled	Water cooled
Bore and stroke	mm	85 x 95	90 x100	90 x105
Displacement	L	2.156	2.54	2.67
Compression ratio		18:1	18:1	18:1
Engine Prime Power	KW	17	21	24
Battery capacit		12V 45Ah x1	12V 45Ah x1	12V 45Ah x1
Lubricanting Oil Capacity	L	5.5	6	6
Coolant Capacity	L	8	12	12
Fuel consumption (100%/75%	6 prime load) L/h	2.35/3.13	3.89/5.18	3.89/5.18
Fuel Type		0# Diesel (Natural tempe	erature) -10# (winter) -35# (col	d)
Genset				
Panel Type		FCM8410	FCM8410	FCM8410
Noise Level (7m)	dB(A)	67	68	68
Fuel Tank Capacity	L	50	80	80
Overall Dimension	mm	1750X720X980	1750X730X980	1850X730X980
Net Weight	kg	590	635	650

#### Technical data (400V/50HZ)

Generating Set		SDG28FS	SDG30FS	SDG33FS
Rated Frequency	Hz	50	50	50
	KVA	28	30	33
Prime Power	KW	22	24	26
Otan diameter	KWA	31	33	36
Standby power	KW	25	26.4	29
Rated Voltage	V	230/400V	230/400V	230/400V
Rated Current	Α	40.5	43.4	47.7
Rated Rotation Speed	r/min	1500	1500	1500
Alternator				
Alternator Brand		FIRMAN	FIRMAN	FIRMAN
Alternator Model		FG28K	FG31K	FG35K
Alternator Type		A.C. Synchronous	A.C. Synchronous	A.C. Synchronous
Pole No.		4	4	4
Power Factor		0.8	0.8	0.8
Insulation Class		Н	Н	Н
Protection Class		IP23	IP23	IP23
Max. Ambient Temperature	°C	40	40	40
Engine				
Engine Brand		FIRMAN	FIRMAN	FIRMAN
Engine Model		FD495DY	FD4100DY	FD4102DY
Governor/Class		Mechanical	Mechanical	Mechanical
Cylinder No.		4	4	4
Cylinder arrangement		Vertical in-line	Vertical in-line	Vertical in-line
Type of injection		Direct injection	Direct injection	Direct injection
Cooling mode		Water cooled	Water cooled	Water cooled
Bore and stroke	mm	95 x 105	100 x 118	102 x 118
Displacement	L	2.977	3.707	3.875
Compression ratio		18:1	18:1	18:1
Engine Prime Power	KW	24.2	30	31.2
Battery capacit		12V 45Ah x1	12V 45Ah x1	12V 45Ah x1
Lubricanting Oil Capacity	L	6	10	10
Coolant Capacity	L	12	12	12
Fuel consumption (100%/75% prime load)	L/h	3.89/5.18	5.18/6.9	5.18/6.9
Fuel Type		0# Diesel (Natural temperate	ure) -10# (winter) -35# (cold)	
Genset				
Panel Type		FCM8410	FCM8410	FCM8410
Noise Level (7m)	dB(A)	68	69	69
Fuel Tank Capacity	L	80	80	100
Overall Dimension	mm	1850X730X980	2050X750X1090	2050X750X1090
Net Weight	kg	660	820	900

Generating Set		SDG40FS	SDG43FS	SDG63FS
Rated Frequency	Hz	50	50	50
Prime Power	KVA	40	43	63
	KW	32	34	50
Standby power	KWA	44	47	69
, p	KW	35.2	37	55
Rated Voltage	V	230/400V	230/400V	230/400V
Rated Current	Α	57.8	62.1	91.1
Rated Rotation Speed	r/min	1500	1500	1500
Alternator				
Alternator Brand		FIRMAN	FIRMAN	FIRMAN
Alternator Model		FG40K	FG43K	FG63K
Alternator Type		A.C. Synchronous	A.C. Synchronous	A.C. Synchronous
Pole No.		4	4	4
Power Factor		0.8	0.8	0.8
Insulation Class		Н	Н	Н
Protection Class		IP23	IP23	IP23
Max. Ambient Temperature	°C	40	40	40
Engine				
Engine Brand		FIRMAN	FIRMAN	FIRMAN
Engine Model		FD4105DY	FD4108DY	FD4108ZDT
Governor/Class		Mechanical	Mechanical	Mechanical
Cylinder No.		4	4	4
Cylinder arrangement		Vertical in-line	Vertical in-line	Vertical in-line
Type of injection		Direct injection	Direct injection	Direct injection
Cooling mode		Water cooled	Water cooled	Water cooled
Bore and stroke	mm	105 x 118	108 x 135	108 x 125
Displacement	L	4.1	5.18	4.58
Compression ratio		18:1	18:1	18:1
Engine Prime Power	KW	36.2	36	54
Battery capacit		12V 45Ah x2	12V 80Ah x1	12V 80Ah x1
Lubricanting Oil Capacity	L	14	14	14
Coolant Capacity	L	12	12	12
Fuel consumption (100%/75	% prime load) L/h	5.18/6.9		12.25/13.85
Fuel Type		0# Diesel (Natural temper	rature) -10# (winter) -35# (cold	)
Genset				
Panel Type		FCM8410	FCM8410	FCM8410
Noise Level (7m)	dB(A)	69	70	70
Fuel Tank Capacity	L	100	120	140
Overall Dimension	mm	2050X780X1090	2200X950X1250	2200X950X1250
Net Weight	kg	925	1050	1200

#### **Technical data** (400V/50HZ)

Generating Set		SDG85FS	SDG115FS	SDG140FS
Rated Frequency	Hz	50	50	50
Datas Barrer	KVA	85	115	140
Prime Power	KW	68	92	112
Otan Illian and I	KWA	94	127	154
Standby power	KW	75	101	123
Rated Voltage	V	230/400V	230/400V	230/400V
Rated Current	Α	122.8	166.2	202.3
Rated Rotation Speed	r/min	1500	1500	1500
Alternator				
Alternator Brand		FIRMAN	FIRMAN	FIRMAN
Alternator Model		FG85K	FG113K	FG140K
Alternator Type		A.C. Synchronous	A.C. Synchronous	A.C. Synchronous
Pole No.		4	4	4
Power Factor		0.8	0.8	0.8
Insulation Class		Н	Н	Н
Protection Class		IP23	IP23	IP23
Max. Ambient Temperature	°C	40	40	40
Engine				
Engine Brand		FIRMAN	FIRMAN	FIRMAN
Engine Model		FD4110ZLDT	FD6105ZLDT	FD6108ZLDT
Governor/Class		Electronic	Electronic	Electronic
Cylinder No.		4	6	6
Cylinder arrangement		Vertical in-line	Vertical in-line	Vertical in-line
Type of injection		Direct injection	Direct injection	Direct injection
Cooling mode		Water cooled	Water cooled	Water cooled
Bore and stroke	mm	110 x 125	105 x 125	108 x 125
Displacement	L	4.75	6.49	6.87
Compression ratio		18:1	18:1	18:1
Engine Prime Power	KW	77	103	116
Battery capacit		12V 80Ah x2	12V 80Ah x2	12V 80Ah x2
Lubricanting Oil Capacity	L	14	16	16
Coolant Capacity	L	12	24	24
Fuel consumption (100%/75% prime load)	L/h	13.2/16.62	17.6/19.2	22.4/26.5
Fuel Type		0# Diesel (Natural temperature	) -10# (winter) -35# (cold)	
Genset				
Panel Type		FCM8410	FCM8410	FCM8410
Noise Level (7m)	dB(A)	70	70	70
Fuel Tank Capacity	L	140	200	200
Overall Dimension	mm	2350X950X1300	2900X1030X1500	3000X1030X1500
Net Weight	kg	1250	1680	1720

Generating Set		SDG200FS	SDG250FS	SDG275FS
Rated Frequency	Hz	50	50	50
	KVA	200	250	275
Prime Power	KW	160	200	220
	KWA	220	275	303
Standby power	KW	176	220	242
Rated Voltage	V	230/400V	230/400V	230/400V
Rated Current	А	289.1	361.3	397.4
Rated Rotation Speed	r/min	1500	1500	1500
Alternator				
Alternator Brand		FIRMAN	FIRMAN	FIRMAN
Alternator Model		FG200K	FG250K	FG275K
Alternator Type		A.C. Synchronous	A.C. Synchronous	A.C. Synchronous
Pole No.		4	4	4
Power Factor		0.8	0.8	0.8
Insulation Class		Н	Н	Н
Protection Class		IP23	IP23	IP23
Max. Ambient Temperature	°C	40	40	40
Engine				
Engine Brand		FIRMAN	FIRMAN	FIRMAN
Engine Model		FD6120ZLDT	FD6126ZLDT	FD6126ZLD1T
Governor/Class		Electronic	Electronic	Electronic
Cylinder No.		6	6	6
Cylinder arrangement		Vertical in-line	Vertical in-line	Vertical in-line
Type of injection		Direct injection	Direct injection	Direct injection
Cooling mode		Water cooled	Water cooled	Water cooled
Bore and stroke	mm	120 x 130	126 x 130	126 x 130
Displacement	L	8.82	9.726	9.726
Compression ratio		18:1	18:1	18:1
Engine Prime Power	KW	175	208	230
Battery capacit		12V 80Ah x2	12V 120Ah x2	12V 120Ah x2
Lubricanting Oil Capacity	L	24	24	24
Coolant Capacity	L	45	45	45
Fuel consumption (100%/75%	6 prime load) L/h	32/42.6	34/45.4	34/45.4
Fuel Type		0# Diesel (Natural temper	rature) -10# (winter) -35# (co	old)
Genset				
Panel Type		FCM8410	FCM8410	FCM8410
Noise Level (7m)	dB(A)	71	72	72
Fuel Tank Capacity	L	400	400	400
Overall Dimension	mm	3500X1130X1830	3600X1130X1830	3700X1130X1980
Net Weight	kg	2500	2800	2950

#### **Technical data** (440V/60HZ)

Generating Set		SDG12FS	SDG13FS	SDG16FS
Rated Frequency	Hz	60	60	60
Police Pours	KVA	12	13	16
Prime Power	KW	9.6	10.4	12.8
Ctandley mayor	KWA	13.2	14	18
Standby power	KW	10.6	11	14.1
Rated Voltage	V	254/440V	254/440V	254/440V
Rated Current	Α	15.7	17.1	21
Rated Rotation Speed	r/min	1800	1800	1800
Alternator				
Alternator Brand		FIRMAN	FIRMAN	FIRMAN
Alternator Model		FG13K	FG13K	FG16K
Alternator Type		A.C. Synchronous	A.C. Synchronous	A.C. Synchronous
Pole No.		4	4	4
Power Factor		0.8	0.8	0.8
Insulation Class		Н	Н	Н
Protection Class		IP23	IP23	IP23
Max. Ambient Temperature	°C	40	40	40
Engine				
Engine Brand		FIRMAN	FIRMAN	FIRMAN
Engine Model		FD380DY	FD385DY	FD480DY
Governor/Class		Mechanical	Mechanical	Mechanical
Cylinder No.		3	3	4
Cylinder arrangement		Vertical in-line	Vertical in-line	Vertical in-line
Type of injection		Direct injection	Direct injection	Direct injection
Cooling mode		Water cooled	Water cooled	Water cooled
Bore and stroke	mm	80 x 90	85 x 90	80 x 90
Displacement	L	1.357	1.532	1.809
Compression ratio		18:1	18:1	18:1
Engine Prime Power	KW	8.5	9.5	12.5
Battery capacit		12V 45Ah x1	12V 45Ah x1	12V 45Ah x1
Lubricanting Oil Capacity	L	4.5	4.5	5.5
Coolant Capacity	L	4	4	8
Fuel consumption (100%/75% prime load)	L/h	1.88/1.41	1.88/1.41	2.35/3.13
Fuel Type		0# Diesel (Natural temperat	ture) -10# (winter) -35# (cold)	)
Genset				
Panel Type		FCM8410	FCM8410	FCM8410
Noise Level (7m)	dB(A)	67	67	67
Fuel Tank Capacity	L	50	50	50
Overall Dimension	mm	1650X720X980	1650X720X980	1750X720X980
Net Weight	kg	500	510	580

Concreting Set	_	SDG20FS	SDG26FS	SDG30FS
Generating Set	Hz	5DG20F5 60	5DG26F3 60	5DG30F3 60
Rated Frequency			26	
Prime Power	KVA KW	20	20.8	30
Standby power	KWA	22	28.6	26.4
Detect Welfer and	KW			
Rated Voltage	V	254/440V	254/440V	254/440V
Rated Current	A	26.2	34.1	39.4
Rated Rotation Speed	r/min	1800	1800	1800
Alternator		=======		
Alternator Brand		FIRMAN	FIRMAN	FIRMAN
Alternator Model		FG21K	FG27K	FG30K
Alternator Type		A.C. Synchronous	A.C. Synchronous	A.C. Synchronous
Pole No.		4	4	4
Power Factor		0.8	0.8	0.8
Insulation Class		Н	Н	Н
Protection Class		IP23	IP23	IP23
Max. Ambient Temperature	°C	40	40	40
Engine				
Engine Brand		FIRMAN	FIRMAN	FIRMAN
Engine Model		FD485DY	FD490DY	FD490D1Y
Governor/Class		Mechanical	Mechanical	Mechanical
Cylinder No.		4	4	4
Cylinder arrangement		Vertical in-line	Vertical in-line	Vertical in-line
Type of injection		Direct injection	Direct injection	Direct injection
Cooling mode		Water cooled	Water cooled	Water cooled
Bore and stroke	mm	85 x 95	90 x 100	90 x 105
Displacement	L	2.156	2.54	2.67
Compression ratio		18:1	18:1	18:1
Engine Prime Power	KW	15.2	19.2	22.2
Battery capacit		12V 45Ah x1	12V 45Ah x1	12V 45Ah x1
<b>Lubricanting Oil Capacity</b>	L	5.5	6	6
Coolant Capacity	L	8	12	12
Fuel consumption (100%/75%	% prime load) L/h	2.35/3.13	3.89/5.18	3.89/5.18
Fuel Type		0# Diesel (Natural tempe	erature) -10# (winter) -35# (cold	1)
Genset				
Panel Type		FCM8410	FCM8410	FCM8410
Noise Level (7m)	dB(A)	67	68	68
Fuel Tank Capacity	L	50	80	80
Overall Dimension	mm	1750X720X980	1750X730X980	1850X730X980
Net Weight	kg	590	650	670

#### Technical data (440V/60HZ)

Generating Set		SDG33FS	SDG38FS	SDG43FS
Rated Frequency	Hz	60	60	60
	KVA	32.5	38	43
Prime Power	KW	26	30.4	34
Otan Illian and I	KWA	36	41.8	47
Standby power	KW	29	33.4	37.8
Rated Voltage	V	254/440V	254/440V	254/440V
Rated Current	Α	42.6	49.9	56.4
Rated Rotation Speed	r/min	1800	1800	1800
Alternator				
Alternator Brand		FIRMAN	FIRMAN	FIRMAN
Alternator Model		FG33K	FG38K	FG45K
Alternator Type		A.C. Synchronous	A.C. Synchronous	A.C. Synchronous
Pole No.		4	4	4
Power Factor		0.8	0.8	0.8
Insulation Class		Н	Н	Н
Protection Class		IP23	IP23	IP23
Max. Ambient Temperature	°C	40	40	40
Engine				
Engine Brand		FIRMAN	FIRMAN	FIRMAN
Engine Model		FD495DY	FD4100DY	FD4102DY
Governor/Class		Mechanical	Mechanical	Mechanical
Cylinder No.		4	4	4
Cylinder arrangement		Vertical in-line	Vertical in-line	Vertical in-line
Type of injection		Direct injection	Direct injection	Direct injection
Cooling mode		Water cooled	Water cooled	Water cooled
Bore and stroke	mm	95 x 105	100 x 118	102 x 118
Displacement	L	2.977	3.707	3.875
Compression ratio		18:1	18:1	18:1
Engine Prime Power	KW	24.2	28.2	31.2
Battery capacit		12V 45Ah x1	12V 45Ah x2	12V 45Ah x2
Lubricanting Oil Capacity	L	6	10	10
Coolant Capacity	L	12	12	12
Fuel consumption (100%/75% prime load)	L/h	3.89/5.18	5.18/6.9	5.18/6.9
Fuel Type		0# Diesel (Natural temperate	ure) -10# (winter) -35# (cold)	
Genset				
Panel Type		FCM8410	FCM8410	FCM8410
Noise Level (7m)	dB(A)	68	69	69
Fuel Tank Capacity	L	80	80	100
Overall Dimension	mm	1850X730X980	2050X750X1090	2050X750X1090
Net Weight	kg	660	820	900

Computing Set	_	SDG50FS	SDG68FS	SDCOFFS
Generating Set	Hz	60 60	5DG66F5 60	SDG95FS 60
Rated Frequency		50	68	95
Prime Power	KVA	40	54	95 76
Standby power	KWA	55 44	74 59	105 84
Detect Veltere	KW			
Rated Voltage	V	254/440V	254/440V	254/440V
Rated Current	A	65.6	89.2	124.7
Rated Rotation Speed	r/min	1800	1800	1800
Alternator				
Alternator Brand		FIRMAN	FIRMAN	FIRMAN
Alternator Model		FG51K	FG68K	FG96K
Alternator Type		A.C. Synchronous	A.C. Synchronous	A.C. Synchronous
Pole No.		4	4	4
Power Factor		0.8	0.8	0.8
Insulation Class		Н	Н	Н
Protection Class		IP23	IP23	IP23
Max. Ambient Temperature	°C	40	40	40
Engine				
Engine Brand		FIRMAN	FIRMAN	FIRMAN
Engine Model		FD4105DY	FD4108ZDT	FD4110ZLDT
Governor/Class		Mechanical	Mechanical	Electronic
Cylinder No.		4	4	4
Cylinder arrangement		Vertical in-line	Vertical in-line	Vertical in-line
Type of injection		Direct injection	Direct injection	Direct injection
Cooling mode		Water cooled	Water cooled	Water cooled
Bore and stroke	mm	105 x 118	108 x 125	110 x 125
Displacement	L	4.1	4.58	4.75
Compression ratio		18:1	18:1	18:1
Engine Prime Power	KW	36.2	54	77
Battery capacit		12V 45Ah x2	12V 80Ah x1	12V 80Ah x2
Lubricanting Oil Capacity	L	14	14	14
Coolant Capacity	L	12	12	12
Fuel consumption (100%/75% pri	ime load) L/h	5.18/6.9	12.25/13.85	13.2/16.62
Fuel Type		0# Diesel (Natural tempera	ature) -10# (winter) -35# (cold)	
Genset				
Panel Type		FCM8410	FCM8410	FCM8410
Noise Level (7m)	dB(A)	69	70	70
Fuel Tank Capacity	L	100	140	140
Overall Dimension	mm	2050X780X1090	2200X950X1250	2350X950X1300
Net Weight	kg	950	1200	1250

#### Technical data (440V/60HZ)

Generating Set		SDG130FS	SDG150FS	SDG215FS
Rated Frequency	Hz	60	60	60
Drime Device	KVA	130	150	215
Prime Power	KW	104	120	172
Standby naver	KWA	143	165	237
Standby power	KW	114	132	189
Rated Voltage	V	254/440V	254/440V	254/440V
Rated Current	Α	170.6	196.8	282.1
Rated Rotation Speed	r/min	1800	1800	1800
Alternator				
Alternator Brand		FIRMAN	FIRMAN	FIRMAN
Alternator Model		FG135K	FG150K	FG225 K
Alternator Type		A.C. Synchronous	A.C. Synchronous	A.C. Synchronous
Pole No.		4	4	4
Power Factor		0.8	0.8	0.8
Insulation Class		Н	Н	Н
Protection Class		IP23	IP23	IP23
Max. Ambient Temperature	°C	40	40	40
Engine				
Engine Brand		FIRMAN	FIRMAN	FIRMAN
Engine Model		FD6105ZLDT	FD6108ZLDT	FD6120ZLDT
Governor/Class		Electronic	Electronic	Electronic
Cylinder No.		6	6	6
Cylinder arrangement		Vertical in-line	Vertical in-line	Vertical in-line
Type of injection		Direct injection	Direct injection	Direct injection
Cooling mode		Water cooled	Water cooled	Water cooled
Bore and stroke	mm	105 x 125	108 x 125	120 x 130
Displacement	L	6.49	6.87	8.82
Compression ratio		18:1	18:1	18:1
Engine Prime Power	KW	103	116	175
Battery capacit		12V 80Ah x2	12V 80Ah x2	12V 80Ah x2
Lubricanting Oil Capacity	L	16	16	24
Coolant Capacity	L	24	24	45
Fuel consumption (100%/75% prime load)	L/h	17.6/19.2	22.4/26.5	32/42.6
Fuel Type		0# Diesel (Natural temperature)	-10# (winter) -35# (cold)	
Genset				
Panel Type		FCM8410	FCM8410	FCM8410
Noise Level (7m)	dB(A)	70	70	71
Fuel Tank Capacity	L	200	200	400
Overall Dimension	mm	2900X1030X1500	3000X1030X1500	3500X1130X1830
Net Weight	kg	1680	1720	2500

Generating Set		SDG265FS	SDG300FS
Rated Frequency	Hz	60	60
Prime Power	KVA	265	300
	KW	212	240
Standby power	KWA	292	330
	KW	233	264
Rated Voltage	V	254/440V	254/440V
Rated Current	A	347.7	393.7
Rated Rotation Speed	r/min	1800	1800
Alternator			
Alternator Brand		FIRMAN	FIRMAN
Alternator Model		FG270K	FG300K
Alternator Type		A.C. Synchronous	A.C. Synchronous
Pole No.		4	4
Power Factor		0.8	0.8
Insulation Class		Н	Н
Protection Class		IP23	IP23
Max. Ambient Temperature	°C	40	40
Engine			
Engine Brand		FIRMAN	FIRMAN
Engine Model		FD6126ZLDT	FD6126ZLD1T
Governor/Class		Electronic	Electronic
Cylinder No.		6	6
Cylinder arrangement		Vertical in-line	Vertical in-line
Type of injection		Direct injection	Direct injection
Cooling mode		Water cooled	Water cooled
Bore and stroke	mm	126 x 130	126 x 130
Displacement	L	9.726	9.726
Compression ratio		18:1	18:1
Engine Prime Power	KW	208	230
Battery capacit		12V 120Ah x2	12V 120Ah x2
Lubricanting Oil Capacity	L	24	24
Coolant Capacity	L	45	45
Fuel consumption (100%/75	5% prime load) L/h	34/45.4	34/45.4
Fuel Type		0# Diesel (Natural temperature)	-10# (winter) -35# (cold)
Genset			
Panel Type		FCM8410	FCM8410
Noise Level (7m)	dB(A	72	72
Fuel Tank Capacity	L	400	400
Overall Dimension	mm	3600X1130X1830	3700X1130X1980
Net Weight	kg	2800	2950













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