

# FIRMAN®





# FIRMAN<sup>®</sup>

## A Strong Brand for Generators from China

FIRMAN has specialized in the developing, manufacturing and sale of excellent generators, including portable gasoline generators and professional diesel generators supplying, commissioning from 1 to 4000KVA through more than 20 years of experience. FIRMAN shall solidify its leading role in generators through innovation of new products.

### 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

### “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 SUMAC's core subsidiary, SUMAC 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.

SUMAC 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.

SUMAC Machinery & Electric Co., Ltd. actively accelerates the process of industrialization. Having established several manufacturing plants successively, it now 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.

### What makes FIRMAN so significant 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



## A Strong Brand for Generators from China

Our home is a busy place. There are many reasons to equip your home with a standby power generator and it is probably much easier than you think. A FIRMAN automatic household generator keeps that rhythm going by providing dependable protection during unexpected power outages. Available with 8 to 220kW output capacities, FIRMAN residential 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.

For the homeowner, backup power can mean the difference between staying put and moving out. With a FIRMAN power system, a home standby generator or a residential emergency generator, you've got a potent ally on your side when the lights go out - power for life without interruption.

### 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.



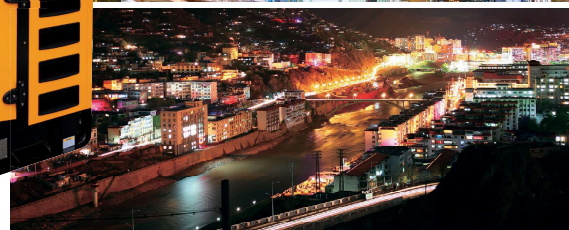
# FIRMAN

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.

- ◆ Better performance
- ◆ Automatic load Transfer
- ◆ Ultra-silent running
- ◆ Integrated control system
- ◆ Safer power for sensitive equipment





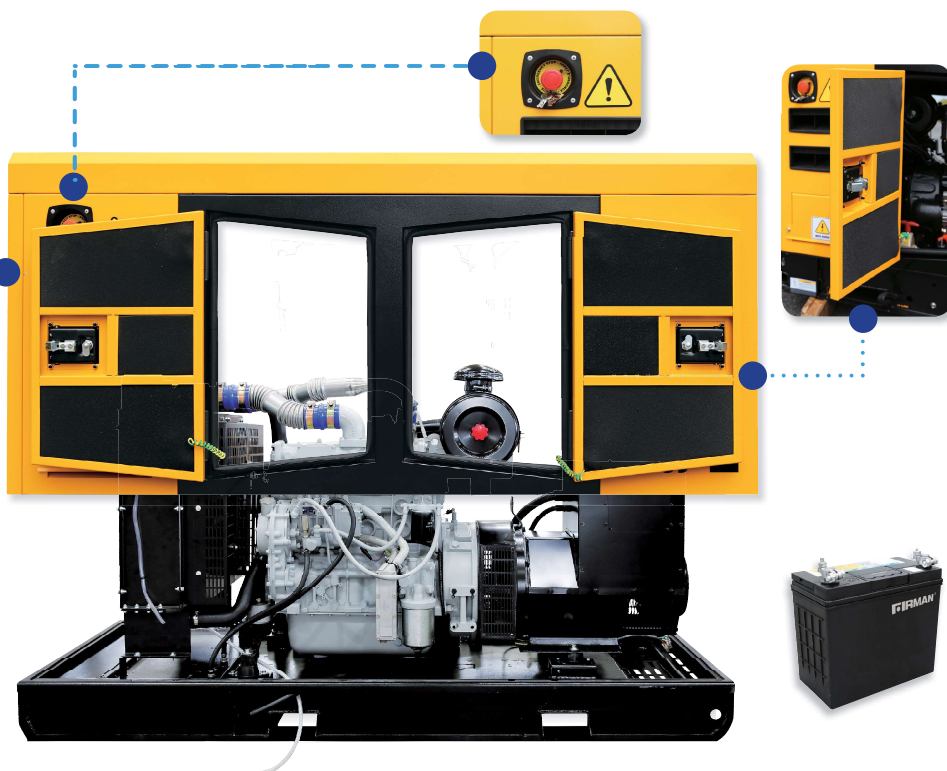
# FIRMAN<sup>®</sup> BUMBLEBEE

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.



## HGM4020N

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.





### 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.

### Models



	SDG10FS/SDG12FS	SDG11FS/SDG13FS	SDG13FS/SDG16FS
Rated Frequency (Hz)	50/60	50/60	50/60
Prime Power (KVA)	11/12	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)	1630X740X980	1630X740X980	1780X770X980
Net Weight (kg)	500	510	580

	SDG16FS/SDG20FS	SDG20FS/SDG26FS	SDG26FS/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)	1780X770X980	1780X770X980	1880X770X980
Net Weight (kg)	590	635	650



Models



SDG28FS/SDG33FS



SDG30FS/SDG38FS



SDG33FS/SDG43FS

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)	1880X770X980	2080X790X1120	2130X790X1120
Net Weight (kg)	660	820	900



SDG40FS/SDG50FS



SDG43FS



SDG63FS/SDG68FS

Rated Frequency (Hz)	50/60	50/60	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)	2130X790X1120	2130X960X1270	2280X960X1270
Net Weight (kg)	925	1050	1200





Models



	SDG85FS/SDG95FS	SDG115FS/SDG130FS	SDG140FS/SDG150FS
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)	2380X960X1320	2920X1070X1520	2920X1070X1520
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)	3680X1170X1870	3680X1170X1870	3780X1170X1870
Net Weight (kg)	2500	2800	2950



Technical data (400V/50HZ)

Generating Set		SDG10FS	SDG11FS	SDG13FS
Rated Frequency	KHz	50	50	50
Prime Power	KVA	10	11	12,5
	KW	8	8,8	10
Standby power	KWA	11	12	14
	KW	8,8	10	11
Rated Voltage	V	230/400V	230/400V	230/400V
Rated Current	A	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		H	H	H
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 temperature) -10# (winter) -35# (cold)			
Genset				
Panel Type		HGM4020N	HGM4020N	HGM4020N
Noise Level (7m)	dB(A)	67	67	67
Fuel Tank Capacity	L	50	50	50
Overall Dimension	mm	1630X740X980	1630X740X980	1780X770X980
Net Weight	kg	500	510	580

Generating Set		SDG16FS	SDG20FS	SDG25FS
Rated Frequency	Hz	50	50	50
Prime Power	KVA	16	20	25
	KW	13	16	20
Standby power	KVA	18	22	27,5
	KW	14	17,8	22
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				
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	H	H	H	
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
Lubricanting Oil Capacity	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 temperature) -10# (winter) -35# (cold)			
Genset				
Panel Type		HGM4020N	HGM4020N	HGM4020N
Noise Level (7m)	dB(A)	67	68	68
Fuel Tank Capacity	L	50	80	80
Overall Dimension	mm	1780X770X980	1780X770X980	1880X770X980
Net Weight	kg	590	635	650

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

Generating Set		SDG28FS	SDG30FS	SDG33FS	
Rated Frequency		Hz	50	50	
Prime Power	KVA	28	30	33	
	KW	22	24	26	
Standby power	KVA	31	33	36	
	KW	25	26,4	29	
Rated Voltage		V	230/400V	230/400V	
Rated Current		A	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		H	H	H	
Protection Class		IP23	IP23	IP23	
Max. Ambient Temperature		°C	40	40	
Engine					
Engine Brand		FIRMAN	FIRMAN	FIRMAN	
Engine Model		FD485DY	FD4100DY	FD4102DY	
Governor/Class		Mechanical	Mechanical	Mechanical	
Cylinder No.		4	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	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 x1	12V 45Ah x1
Lubricating 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 temperature) -10# (winter) -35# (cold)			
Genset					
Panel Type		HGM4020N	HGM4020N	HGM4020N	
Noise Level (7m)		dB(A)	68	69	69
Fuel Tank Capacity		L	80	80	100
Overall Dimension		mm	1880X770X980	1880X770X980	2130X790X1120
Net Weight		kg	660	820	900

Generating Set		SDG40FS	SDG43FS	SDG63FS	
Rated Frequency		Hz	50	50	
Prime Power	KVA	40	43	63	
	KW	32	34	50	
Standby power	KVA	44	47	69	
	KW	35,2	37	55	
Rated Voltage		V	230/400V	230/400V	
Rated Current		A	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		H	H	H	
Protection Class		IP23	IP23	IP23	
Max. Ambient Temperature		℃	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 x1	12V 80Ah x1	12V 80Ah x1
Lubricating Oil Capacity		L	14	14	14
Coolant Capacity		L	12	12	12
Fuel consumption (100%/75% prime load)		L/h	5,18/6,9		12,25/13,25
Fuel Type		0# Diesel (Natural temperature) -10# (winter) -35# (cold)			
Genset					
Panel Type		HGM4020N	HGM4020N	HGM4020N	
Noise Level (7m)		dB(A)	69	70	70
Fuel Tank Capacity		L	100	120	140
Overall Dimension		mm	2130X790X1120	2130X990X1270	2280X990X1270
Net Weight		kg	925	1050	1200

Technical data (400V/50HZ)

Generating Set		SDG85FS	SDG115FS	SDG140FS
Rated Frequency	Hz	50	50	50
Prime Power	KVA	85	115	140
	KW	68	92	112
Standby power	KWA	94	127	154
	KW	75	101	123
Rated Voltage	V	230/400V	230/400V	230/400V
Rated Current	A	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	H	H	H	
Protection Class	IP23	IP23	IP23	
Max. Ambient Temperature	℃	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
Lubricating 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		HGM4020N	HGM4020N	HGM4020N
Noise Level (7m)	dB(A)	70	70	70
Fuel Tank Capacity	L	140	200	200
Overall Dimension	mm	2380X990X1320	2920X1070X1520	2920X1070X1520
Net Weight	kg	1250	1680	1720

Generating Set		SDG200FS	SDG250FS	SDG275FS
Rated Frequency	Hz	50	50	50
Prime Power	KVA	200	250	275
	KW	160	200	220
	KWA	220	275	303
Standby power	KW	176	220	242
	V	230/400V	230/400V	230/400V
Rated Voltage				
Rated Current	A	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		H	H	H
Protection Class		IP23	IP23	IP23
Max. Ambient Temperature	℃	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% prime load)	L/h	32/42,6	34/45,4	34/45,4
Fuel Type		0# Diesel (Natural temperature) -10# (winter) -35# (cold)		
Genset				
Panel Type		HGM4020N	HGM4020N	HGM4020N
Noise Level (7m)	dB(A)	71	72	72
Fuel Tank Capacity	L	400	400	400
Overall Dimension	mm	3680X1170X1870	3680X1170X1870	3780X1170X1870
Net Weight	kg	2500	2800	2950

Technical data (440V/60HZ)

Generating Set		SDG12FS	SDG13FS	SDG16FS
Rated Frequency	KHz	60	60	60
Prime Power	KVA	12	13	16
	KW	9,6	10,4	12,8
Standby power	KWA	13,2	14	18
	KW	10,6	11	14,1
Rated Voltage	V	254/440V	254/440V	254/440V
Rated Current	A	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		H	H	H
Protection Class		IP23	IP23	IP23
Max. Ambient Temperature	℃	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	80 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 temperature) -10# (winter) -35# (cold)			
Genset				
Panel Type		HGM4020N	HGM4020N	HGM4020N
Noise Level (7m)	dB(A)	67	67	67
Fuel Tank Capacity	L	50	50	50
Overall Dimension	mm	1680X760X1020	1680X760X1020	1780X760X1020
Net Weight	kg	500	510	580

Generating Set		SDG20FS	SDG26FS	SDG30FS
Rated Frequency		Hz	60	60
Prime Power	KVA	20	26	30
	KW	16	20,8	24
Standby power	KWA	22	28,6	33
	KW	18	22,9	26,4
Rated Voltage		V	254/440V	254/440V
Rated Current		A	26,2	34,1
Rated Rotation Speed		r/min	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		H	H	H
Protection Class		IP23	IP23	IP23
Max. Ambient Temperature		°C	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
Displacement		L	2,156	2,54
Compression ratio			18:1	18:1
Engine Prime Power		KW	15,2	19,2
Battery capacity		12V 45Ah x1	12V 45Ah x1	12V 45Ah x1
Lubricanting Oil Capacity		L	5,5	6
Coolant Capacity		L	8	12
Fuel consumption (100%/75% prime load)		L/h	2,35/3,13	3,89/5,18
Fuel Type		0# Diesel (Natural temperature) -10# (winter) -35# (cold)		
Genset				
Panel Type		HGM4020N	HGM4020N	HGM4020N
Noise Level (7m)		dB(A)	67	68
Fuel Tank Capacity		L	50	80
Overall Dimension		mm	1780X770X1020	1880X770X1020
Net Weight		kg	590	670



Technical data (440V/60HZ)

Generating Set		SDG33FS	SDG38FS	SDG43FS
Rated Frequency	KHz	60	60	60
Prime Power	KVA	32,5	38	43
	KW	26	30,4	34
Standby power	KWA	36	41,8	47
	KW	29	33,4	37,8
Rated Voltage	V	254/440V	254/440V	254/440V
Rated Current	A	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		H	H	H
Protection Class		IP23	IP23	IP23
Max. Ambient Temperature	℃	40	40	40
Engine				
Engine Brand		FIRMAN	FIRMAN	FIRMAN
Engine Model		FD485DY	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
Lubricating 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 temperature) -10# (winter) -35# (cold)		
Genset				
Panel Type		HGM4020N	HGM4020N	HGM4020N
Noise Level (7m)	dB(A)	68	69	69
Fuel Tank Capacity	L	80	80	100
Overall Dimension	mm	1880X770X1120	2080X790X1120	2080X820X1120
Net Weight	kg	660	820	900

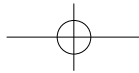
Generating Set		SDG50FS	SDG68FS	SDG95FS
Rated Frequency	Hz	60	60	60
Prime Power	KVA	50	68	95
	KW	40	54	76
Standby power	KWA	55	74	105
	KW	44	59	84
Rated Voltage	V	254/440V	254/440V	254/440V
Rated Current	A	65,6	89,2	124,7
Rated Rotation Speed	r/min	1800	1800	1800
Alternator				
Alternator Brand	FIRMAN	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	H	H	H	
Protection Class	IP23	IP23	IP23	
Max. Ambient Temperature	℃	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 capacity		12V 45Ah x2	12V 80Ah x1	12V 80Ah x2
Lubricating 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	13,2/16,62
Fuel Type	0# Diesel (Natural temperature) -10# (winter) -35# (cold)			
Genset				
Panel Type	HGM4020N	HGM4020N	HGM4020N	
Noise Level (7m)	dB(A)	69	70	70
Fuel Tank Capacity	L	100	140	140
Overall Dimension	mm	2080X820X1120	2280X990X1270	2380X990X1320
Net Weight	kg	950	1200	1250

Technical data (440V/60HZ)

Generating Set		SDG130FS	SDG150FS	SDG215FS
Rated Frequency	KHz	60	60	60
Prime Power	KVA	130	150	215
	KW	104	120	172
Standby power	KWA	143	165	237
	KW	114	132	189
Rated Voltage	V	254/440V	254/440V	254/440V
Rated Current	A	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		H	H	H
Protection Class		IP23	IP23	IP23
Max. Ambient Temperature	℃	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		HGM4020N	HGM4020N	HGM4020N
Noise Level (7m)	dB(A)	70	70	71
Fuel Tank Capacity	L	200	200	400
Overall Dimension	mm	2920X1070X1520	3020X1070X1520	3720X1170X2000
Net Weight	kg	1680	1720	2500

Generating Set		SDG265FS	SDG300FS
Rated Frequency	Hz	60	60
Prime Power	KVA	265	300
	KW	212	240
	KWA	292	330
Standby power	KW	233	59264
	V	254/440V	254/440V
Rated Voltage			
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		H	H
Protection Class		IP23	IP23
Max. Ambient Temperature	℃	40	40
Engine			
Engine Brand		FIRMAN	FIRMAN
Engine Model		FD6126ZLDT	FD6126ZLDT
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% prime load)	L/h	34/45,4	34/45,4
Fuel Type	0# Diesel (Natural temperature) -10# (winter) -35# (cold)		
Genset			
Panel Type		HGM4020N	HGM4020N
Noise Level (7m)	dB(A)	72	72
Fuel Tank Capacity	L	400	400
Overall Dimension	mm	3720X1170X2000	3820X1170X2000
Net Weight	kg	2800	2950





## BETTER POWER BETTER LIFE

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