



Diesel Engine Generator
Specialist Manufacturer
ENERGEN Co., Ltd.

ENERGEN GENERATOR

A New Challenge
To Leap Into The World,
Global Energen

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CEO Greeting

We are a manufacturer of generators, working to help people live together in the beautiful world.

This company was established by specialists that have worked in generator manufacturing for more than 20 years.

Our slogan is Creative Value based management, and we dutifully practice this in both our professional and personal lives.

We will do our best to become a leader of high efficiency low carbon generator development.

President YoungSik Ha

2 History

- **2011 JUN.** Established Energen Co., Ltd. for the purpose of manufacturing generators, etc.
- **2012 MAR.** Acquired the ISO9001 & 14001 certification by ICR
- **MAY.** Expansion of Plant B
- **JUL.** Accredited to Corporate Affiliated Research Institute (No. 2012112178)
- **DEC.** Direct production confirmation certificate (generator)
- **2013 AUG.** Electricity Corporation License Acquisition (Gyeongnam-01565)
- **2014 JUN.** Patent Registration (Patent No. 10-1414108) Diesel engine generators with emission purification function
- **JUL.** Patent Registration (Patent No. 10-1420805) Diesel engine type generator with seismic function
- **JUL.** Expansion of Plant C
- **2015 MAR.** Join the Korea Electrical Industry Cooperative Union
- **APR.** Technical Innovation Small and Medium Business (INNO-BIZ) Confirmation (R151101-00396)
- **DEC.** Certificate of direct production confirmation (division board, closed distribution board, motor control board)
- **2016 JUL.** Registration of Small and Medium Business Consultation in Namgang area, South-East Korea Power Co., Ltd.
- **JUL.** Diesel Generator Group Standard Product Marking Certificate (KEMC (No. 2016-0056))
- **JUL.** Confirmation of Group Standard Products Excellent in Diesel Generator (KEMC (No. 2016-0056))
- **OCT.** K-Mark Certificate (Performance) 1500 kW (Korea Testing Laboratory PC12016-121)
- **2017 JAN.** K-Mark Certificate (Performance) 2000kW (Korea Testing Laboratory PC12017-002)
- **JUN.** Acquisition of certificate of designation of excellent diesel generator (Procurement Service 2017123)
- **JUN.** Certificate of maintenance qualified company of 5 power generation companies (Korea Southern, Western, Central, East-West, South-East Power Co., Ltd.)
- **JUN.** CE authentication
- **2018 JAN.** Membership of the Government Procurement Excellent Products Council
- **AUG.** Commendation from the Director of the Procurement Service
- **DEC.** Korea Industrial Complex Corporation Commendation
- **2019 JAN.** Qualification certificate for supply of equipment and materials from five power generation companies (Emergency Generator) (South Korea, West, Central, East-West and South-East Power Co., Ltd.)
- **JAN.** Korea Water Resources Corporation Water Industry Equipment Suppliers Certificate
- **JAN.** Patent Registration (Patent No. 10-1938651) Smoke Reduction Recycling Compound Device for Generator
- **FEB.** Additional smoke reduction device for business items
- **MAY.** Selection of a pilot purchasing system for LH technology development products
- **DEC.** LH Selection of Excellent New Technology (Product)
- **2020 JUL.** Patent Registration (Patent No. 10-2136141) (Emergency Generator with Fault Prevention Function using Artificial Intelligence Algorithm)
- **JUL.** Certificate of direct production confirmation (maximum hydroelectric power controller, monitoring device, power protection monitoring device, intensive display control device, instrumentation control device)
- **JUL.** Direct production confirmation certificate (Regent building installation)
- **SEPT.** Korea Electric Research Institute's selection of intensive fostering family companies

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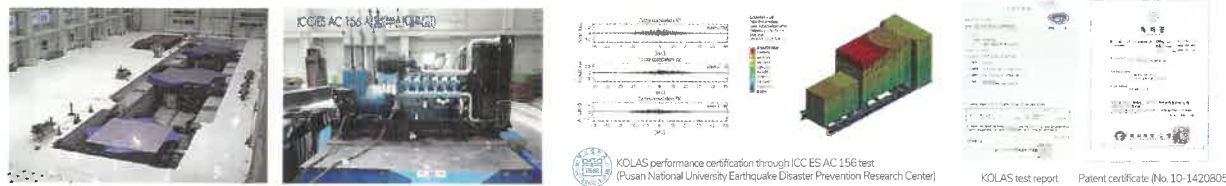
Current Status Of Certification

				
Technology innovation type small business confirmation (INNOBIZ)	Equipment supply qualification registration certificate (5 Power Generation Companies)	Collective standard product mark certificate	Water industry equipment supplier registration certificate (Korea Water Resources Corporation)	Excellent collective standard product certificate
				
Certificate of designation of outstanding products (Diesel Generator(2017123) 215 types)	Government Procurement Excellent Products Association (Certificate of membership)	Maintenance Qualified Enterprise Certificate (5 Power Generation Companies)	Direct production certificate (Generator)	Direct production confirmation certificate (Power distribution, controller, accessory)
				
Direct production confirmation certificate (Intelligent Building Equipment)	General - Patent Office (smoke reduction regeneration complex device for generators)	Patent (Diesel engine type generator with seismic function)	Patent (smoke reduction regeneration complex device for generators)	Patent (Diesel engine type generator with exhaust gas purification function)
				
CE certification	K-mark certificate (PC12017-002)2000kW	Excellent new technology Confirmation (LH)	Patent (Emergency generator with failure prevention function using AI algorithm)	Certificate of Intensive Fostering Family Company (Korea Electric Laboratory)
				
	ISO 14001		ISO 9001	

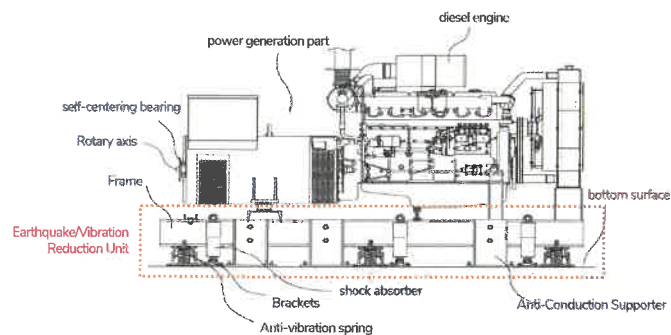
Introduction Of Excellent Procurement Products

:: Technical Certification

Korea's first internationally accredited organization (KOLAS) performance certification
Stable emergency power supply even in an earthquake with a seismic intensity of 8



:: Design Diagram



:: Product Line-up

Designated number of excellent procurement products:
2017123 (total of 215 types)

- 380/220V EG0020MPE(20kW)-EG2640FPC(2,640kW)
- 3300V EGH3360FP(360kW)-EGH32640FPC(2,640kW)
- 6600V EGH6360FP(360kW)-EGH62640FPC(2,640kW)

- ※ Parallel control system possible
- ※ Outdoor type and soundproof type can be manufactured



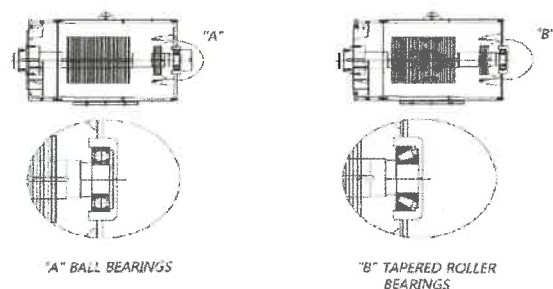
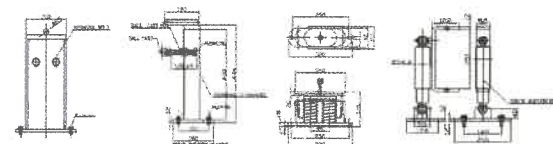
:: Key Technology

Earthquake resistance and vibration reduction technology of DEG Common Bed

As a technology applied with Energen's patented technology (No. 10-1420805), it is designed to be strong against earthquake and vibration through the optimal design of vibration isolation spring, shock absorber, and seismic stopper.

Earthquake resistance and vibration reduction technology of DEG Generator

The self-centering bearing installed so that the rotating shaft of the generator rotates with minimum friction maintains a constant gap between the stator and the rotor even if vibration or shock is applied from the engine or from the outside



Major Performance

2014



Demand	Korea Western Power Plant
Buyer	STX Engine
Project	Taeon IGCC
Capacity	2500kw 480V 60Hz



Demand	Hyundai Heavy Industries (Saudi)
Buyer	
Project	Ma'aden Ammonia Project
Capacity	2250kw 480V 60Hz



Demand	Pohang Maritime Port Authority
Buyer	Ministry of Oceans and Fisheries
Project	Dokdo-ri Residence Generator Replacement
Capacity	90kw 380v 60Hz



Demand	Seoul Olympic Commemoration National Sports Promotion Agency
Project	Central supply room emergency generator improvement work
Capacity	1500kw 6600V 60Hz

2016



Demand	Hyundai Engineering (Yeosu)
Buyer	Samhyuk Engineering
Project	lotte versalis special rubber project (lvsr)
Capacity	2000kw, 1750kw, 1500kw



Demand	(Turkey)
Buyer	STX Engine
Project	Kirikkale LPP
Capacity	1800kw

2017



Demand	Changwon
Buyer	SK
Project	Seokdong Sosagan Road Tunnel
Capacity	1750kw x 3set



Demand	Changwon
Buyer	
Project	Baseball Stadium Construction
Capacity	750kw

2019



Demand	National Cancer Center
Buyer	
Project	National Cancer Center Extension
Capacity	2250kw 6600v 60Hz



Demand	Gyeonggi-do construction company
Project	Gyeonggi-do new office building construction
Capacity	1500kw x 3, 500kw x 2



Demand	Korea LH Corp.
Buyer	
Project	Daegu Yeongyeong S1BL
Capacity	P1600kw



Demand	Korea Expressway Corporation
Project	Sangbuk Tunnel (ventilator 2) emergency generator
Capacity	1500kw

Product Descriptions



SCANIA ENGINE SERIES



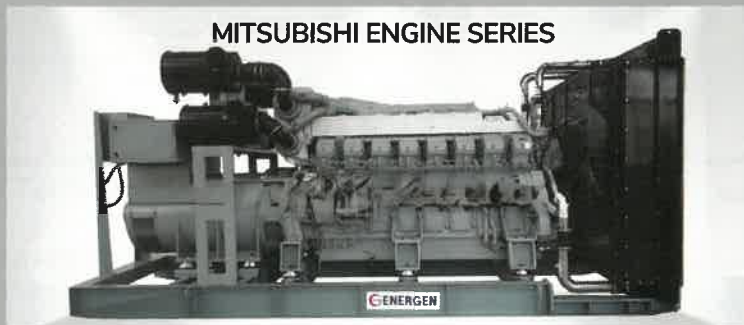
DOOSAN ENGINE SERIES



CUMMINS ENGINE SERIES



BAUDOIN ENGINE SERIES



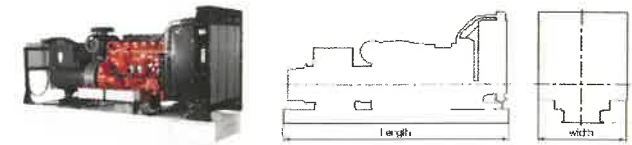
MITSUBISHI ENGINE SERIES



CATERPILLAR ENGINE SERIES88



MTU ENGINE SERIES



SET MODEL		EG0250-S	EG0275-S	EG0300-S	EG0330-S	EG0360-S	EG0400-S	EG0450-S	EG0500-S	EG0560-S	EG0610-S	EG0660-S	EG0700-S	
GENERATOR	Stand-by	KW	250	275	300	330	360	400	450	500	560	610	660	700
	Prime	KW	227	250	272	300	327	363	409	454	509	554	600	636
	Voltage	V	220/127, 380/220, 440/254, 3,300, 6,600											
	Frequency	Hz	60											
	Revolution	RPM	1800											
	Phase/Wire		4Pole, 3Phase, 4Wire											
	Power Factor	%	0.8											
	Excitation		Brushless Self Exciting or PMG (Permanent Magnet Generator)											
	Insulation Class		H CLASS											

MANUFACTURER		SCANIA												
ENGINE	Model	DC09072A (02-11)	DC09072A (02-12)	DC09072A (02-13)	DC09072A (02-14)	DC13072A (02-11)	DC13072A (02-12)	DC13072A (02-13)	DC1649A (10-28C)	DC1649A (10-28D)	DC16072A (02-11)	DC16072A (02-12)	DC16072A (02-13)	
	Stand-by	HP	280	308	338	370	408	448	503	550	617	678	731	754
	Prime	HP	254	280	307	336	371	407	457	500	561	619	664	685
	Revolution	RPM	1800											
	No. of Cylinder	EA	5	5	5	5	6	6	6	8	8	8	8	8
	Bore x Stroke	mm	130x140	130x140	130x140	130x140	130x160	130x160	130x160	127x154	127x154	130x154	130x154	130x154
	Displacement	cc	9300	9300	9300	9300	12700	12700	12700	15600	15600	16400	16400	16400
	Compression Ratio		16.0:1	16.0:1	16.0:1	16.0:1	16.3:1	16.3:1	16.3:1	16.0:1	16.0:1	16.7:1	16.7:1	16.7:1
	Engine Type		4-stroke, Internal combustion Diesel Engine (with radiator or heat exchanger)											
	Aspiration		Turbocharged & Aftercooled											
Starting System		Electric motor by DC24 battery												
Governor		Electronic type												
Fuel Consumption	L/Hr	58.9	65.6	72.6	80.6	82.1	91.5	104.8	118.2	134	144.9	155.5	160.4	
Coolant Capacity	L	37	37	37	37	45	45	45	68	68	68	68	68	
Lub. Oil Capacity	L	36	36	36	36	36	36	36	35	35	48	48	48	

DIM	Length	mm	2900	2900	2900	2900	3100	3100	3100	3100	3100	3100	3100
	Width	mm	1014	1014	1014	1014	1128	1128	1128	1316	1316	1316	1316
	Height	mm	1558	1558	1558	1558	1795	1795	1795	1920	1920	1920	1920
	Weight	kg	2805	2805	2851	2873	3181	3231	3431	3503	3803	4653	4703

PAD	Length	mm	3500	3500	3500	3500	3700	3700	3700	3700	3700	3700	3700
	Width	mm	1400	1400	1400	1400	1600	1600	1600	1600	1600	1600	1600
	Height	mm	300	300	300	300	300	300	300	300	300	400	400

DA	Radiator air flow	m³/min	500	500	500	500	821	821	821	1079	1079	1079	1079
	Combustion air flow	m³/min	20	23	25	28	28	32	36	41	46	50	54
	E.A (Open)	m²	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.1	2.1	2.1	2.1
	O.A (Open)	m²	1.3	1.3	1.3	1.3	1.5	1.5	1.5	2.8	2.8	2.8	2.8

- 1) There are various models according to the requirements other than the above model.
- 2) The above specifications may be changed to improve the performance of the product, and the amount of fuel consumed may vary depending on the operation.

SET MODEL		EG0075	EG0090	EG0115	EG0130	EG0145	EG0175	EG0200	EG0230	EG0250	EG0275	
GENERATOR	Stand-by (60/50)	KW	75/61	90/73	115/91	130/103	145/120	175/145	200/175	230/205	250/-	275/250
	Prime (60/50)	KW	68/54	82/65	104/88	118/100	131/110	159/133	181/155	209/184	227/-	250/215
	Voltage	V	220/127, 380/220, 440/254, 3300, 6600									
	Frequency	Hz	60/50									
	Revolution	RPM	1800/1500									
	Phase/Wire		1ø 2W, 1ø 3W, 3ø 3W, 3ø 4W									
	Power Factor	%	80(LAGGING)									
	Excitation		Brushless Self Excitation Revolving Field									
	Insulation Class		H									

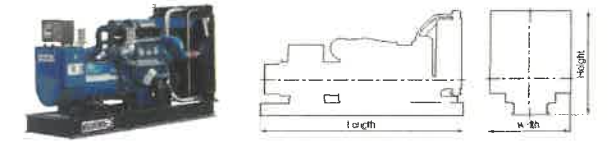
Manufacturer		Doosan									
Model		D1146	D1146	D1146T	D1146T	P086TI-1	DE12T	P086TI	DP086LA	P126TI-3	P126TI
Stand-by (60/50)	PS	143/116	143/116	202/160	202/160	260/223	270/226	303/270	344/305	375/-	405/370
Prime (60/50)	PS	130/105	130/105	170/145	170/145	237/203	245/205	279/240	310/273	343/-	378/328
Revolution	RPM	1800/1500									
No. of Cylinder		I-6	I-6	I-6	I-6	I-6	I-6	I-6	I-6	I-6	I-6
Bore x Stroke	mm	111x139	111x139	111x139	111x139	111x139	123x155	111x139	111x139	123x155	123x155
Displacement	L	8.071	8.071	8.071	8.071	8.071	11.051	8.071	8.071	11.051	11.051
Compression Ratio		17.5 : 1	17.5 : 1	16.8 : 1	16.8 : 1	16.4 : 1	17.1 : 1	16.4 : 1	16.7 : 1	17.1 : 1	17.1 : 1
Engine Type		4Cycle Water Cooled									
Aspiration		NATURAL		TURBO CHARGED							
Starting System		Starting Electric Motor by Battery									
Governor		Mechanical Type				Electric TYPE	Mechanical TYPE	Electric Type			
Fuel Consumption(60/50)	L/Hr	26.6/23.2	26.6/23.2	35.1/32.5	35.1/32.5	46.7/42.4	49/45.8	56.8/50.6	62.9/56	76.5	76.5/70.3
Coolant Capacity	L	14	14	14	14	14	19	14	14	19	19
Lub. Oil Capacity	L	15.5	15.5	15.5	15.5	15.5	23	15.5	15.5	23	23

DIM	Length	mm	2,400	2,400	2,400	2,400	2,650	2,600	2,650	2,650	2,994	2,994
	Width	mm	850	850	850	850	850	920	850	926	1,107	1,107
	Height	mm	1,492	1,492	1,492	1,492	1,685	1,478	1,685	1,870	1,634	1,634
	Weight	kg	1,414	1,414	1,414	1,414	1,921	1,821	1,921	1,921	2,343	2,343

PAD	Length	mm	3,100	3,100	3,100	3,100	3,300	3,300	3,300	3,600	3,600	3,600
	Width	mm	1,400	1,400	1,400	1,400	1,400	1,400	1,600	1,600	1,600	1,600
	Height	mm	250	250	250	250	300	300	300	300	300	300

D.A	Radiator air flow	m³/min	230	230	230	230	224	433	224	224	433	433
	Combustion air flow	m³/min	16.57	16.57	19.07	19.07	21.53	21.95	23.35	25.1	27.12	27.68
	E.A (Open)	m²	0.56	0.56	0.56	0.56	0.9	0.9	0.9	1.1	1.1	1.1
	O.A (Open)	m²	0.64	0.64	0.64	0.64	1.1	1.1	1.1	1.3	1.3	1.3

- 1) There are various models according to the requirements other than the above model.
- 2) The above specifications may be changed to improve the performance of the product, and the amount of fuel consumed may vary depending on the operation.



SET MODEL		EG0300	EG0330	EG0360	EG0400	EG0450	EG0500	EG0550	EG0600	EG0660	EG0700	EG0750	
GENERATOR	Stand-by (60/50)	KW	300/255	330/280	360/320	400/360	450/400	500/460	550/500	600/500	660/-	700/600	750/660
	Prime (60/50)	KW	272/235	300/250	327/295	363/310	409/364	454/400	500/455	545/460	600/-	636/545	681/600
	Voltage	V	220/127, 380/220, 440/254, 3300, 6600										
	Frequency	Hz	60/50										
	Revolution	RPM	1800/1500										
	Phase/Wire		1ø 2W, 1ø 3W, 3ø 3W, 3ø 4W										
	Power Factor	%	80(LAGGING)										
	Excitation		Brushless Self Excitation Revolving Field										
	Insulation Class		H										

Manufacturer		Doosan										
Model		P126TI-2	DP126LA	DP126LB	P158LE	DP158LC	DP158LD	DP180LA	DP180LB	DP222LA	DP222LB	DP222LC
Stand-by (60/50)	PS	465/400	510/437	547/492	623/563	697/610	756/693	836/750	899/832	1002/-	1063/903	1126/983
Prime (60/50)	PS	418/360	470/399	498/445	547/494	634/555	687/630	760/682	817/756	911/-	967/821	1023/894
Revolution	RPM	1800/1500										
No. of Cylinder		I-6	I-6	I-6	V-8	V-8	V-8	V-10	V-10	V-12	V-12	V-12
Bore x Stroke	mm	123x155	123x155	123x155	128x142	128x142	128x142	128x142	128x142	128x142	128x142	128x142
Displacement	L	11.051	11.051	11.051	14.618	14.618	14.618	18.273	18.273	21.927	21.927	21.927
Compression Ratio		17.1 : 1	17.2 : 1	17.2 : 1	15 : 1	15 : 1	15 : 1	15 : 1	15 : 1	15 : 1	15 : 1	15 : 1
Engine Type		4Cycle Water Cooled										
Aspiration		TURBO CHARGED										
Starting System		Starting Electric Motor by Battery										
Governor		Electric Type										
Fuel Consumption(60/50)	L/Hr	89.5/73.8	87.9/80.5	96.4/85.8	118.6/102.5	123.8/111.5	139.6/127.1	154.1/140.5	165.3/150.7	179.9/161.7	192.8/172.7	203.8/183.2
Coolant Capacity	L	19	23	23	20	20	20	21	21	23	23	23
Lub. Oil Capacity	L	23	44	44	21	22	22	34	34	40	40	40

DIM	Length	mm	2,994	3,040	3,040	2,990	2,990	2,990	3,200	3,200	3,390	3,390	3,390
	Width	mm	1,107	1,107	1,107	1,396	1,396	1,396	1,397	1,397	1,397	1,397	1,397
	Height	mm	1,634	1,735	1,735	1,875	1,793	1,783	1,873	1,873	2,130	2,130	2,130
	Weight	kg	2,476	2,693	2,693	2,834	3,157	3,484	3,616	4,031	4,250	4,452	4,452

PAD	Length	mm	3,600	3,600	3,600	3,600	3,800	3,800	3,800	4,000	4,000	4,000
	Width	mm	1,600	1,900	1,900	1,900	2,000	2,000	2,000	2,000	2,000	2,000
	Height	mm	300	300	300	300	400	400	400	400	400	400

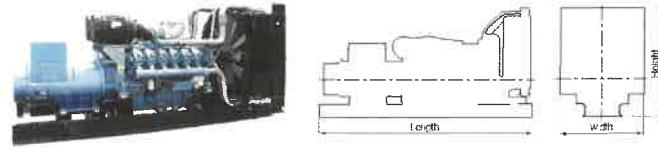
D.A	Radiator air flow	m³/min	530	528	528	618	850	850	850	850	1,050	1,050	1,050
	Combustion air flow	m³/min	30.22	25	27	36.9	34.5	36.6	43	45.5	53.5	56	58.6
	E.A (Open/Grille)	m²	1.1	1.3	1.3	1.5	1.8	1.8	1.8	1.8	2.2	2.2	2.2
	O.A (Open/Grille)	m²	1.3	1.6	1.6	1.9	2.1	2.1	2.1	2.1	2.6	2.6	2.6

- 1) There are various models according to the requirements other than the above model.
- 2) The above specifications may be changed to improve the performance of the product, and the amount of fuel consumed may vary depending on the operation.

9 BAUDOIN

ENERGEGENERATOR

A New Challenge To Leap Into The World Global Energy



SET MODEL		EG0800-B	EG0900-B	EG1000-B	EG1100-B	EG1200-B	EG1300-B	EG1400-B	EG1500-B	EG1600-B	EG1700-B	
GENERATOR	Stand-by	KW	800	900	1000	1100	1200	1300	1400	1500	1600	1700
	Prime	KW	727	818	909	1000	1091	1182	1273	1364	1455	1545
	Voltage	V	220/127, 380/220, 440/254, 3300, 6600									
	Frequency	Hz	60/50									
	Revolution	RPM	1800/1500									
	Phase/Wire		1ø 2W, 1ø 3W, 3ø 3W, 3ø 4W									
	Power Factor	%	80(LAGGING)									
	Excitation		Brushless Self Excitation Revolving Field									
	Insulation Class		H									

Manufacturer		Baudoin										
Model		12M26D902	12M26D1012	12M26D1115	12M33D1320	12M33D1320	12M33D1420	16M33D1680	16M33D1680	16M33D1785	16M33D1920	
Stand-by (60/50)	PS	1226/1077	1376/1226	1516/1316	1795/1564	1795/1564	1931/1645	2285/1904	2285/1904	2427/2243	2611/2447	
Prime (60/50)	PS	1115/979	1251/1115	1379/1196	1632/1414	1632/1414	1754/1496	2081/1740	2081/1740	2209/2039	2373/2222	
Revolution	RPM	1800/1500										
No. of Cylinder		V-12	V-12	V-12	V-12	V-12	V-12	V-16	V-16	V-16	V-16	
Bore x Stroke	mm	150x150	150x150	150x150	150x185	150x185	150x185	150x185	150x185	150x185	150x185	
Displacement	L	31.8	31.8	31.8	39.2	39.2	39.2	52.3	52.3	52.3	52.3	
Compression Ratio		15.5:1	15.5:1	15.5:1	15:1	15:1	15:1	15:1	15:1	15:1	15:1	
Engine Type		4Cycle Water Cooled										
Aspiration		TURBO CHARGED										
Starting System		Starting Electric Motor by Battery										
Governor		Electric Type						ECU				
Fuel Consumption(60/50)	L/Hr	203.3/168.9	222.3/192.1	241.4/208.0	283.9/234.1	283.9/234.1	304.7/257.3	358.3/296.7	358.3/296.7	376.3/345.2	417.7/380.9	
Coolant Capacity	L	234	234	234	246	246	246	405	405	405	435	
Lub. Oil Capacity	L	113	113	113	146	146	146	180	180	180	180	

DIM	Length	mm	4470	4470	4470	4900	4900	4900	5100	5100	5230	5230
	Width	mm	1665	1665	1665	1985	1985	1985	2256	2256	2256	2256
	Height	mm	2136	2136	2136	2276	2276	2276	2588	2588	2938	2938
	Weight	kg	7800	8000	8310	8500	8500	8700	11000	11000	11000	11000

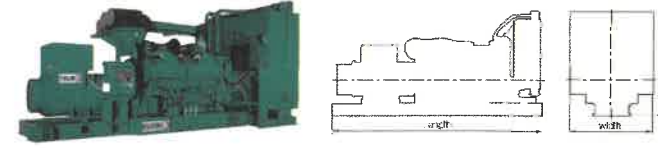
PAD	Length	mm	5,200	5,200	5,200	5,500	5,500	6,000	6,000	6,000	6,500	6,500
	Width	mm	2,500	2,500	2,500	2,700	2,700	2,700	2,700	2,700	3,500	3,500
	Height	mm	450	450	450	450	450	500	500	500	550	550

D.A	Radiator air flow	m³/min	942	942	942	1580	1580	1580	2293	2293	2293	2293
	E.A (Open)	m²	2.49	2.49	2.49	2.99	2.99	2.99	4	4	4.77	4.77
	O.A (Open)	m²	3	3	3	3.65	3.65	3.65	4.9	4.9	5.8	5.8

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10 CUMMINS

SET MODEL		EG0800-C	EG0900-C	EG1000-C	EG1250-C	EG1500-C	EG2000-C	EG2250-C	EG2500-C	EG2750-C		
GENERATOR	Stand-by	KW	800	900	1000	1250	1500	2000	2250	2500	2750	
	Prime	KW	750	800	900	1100	1350	1818	-	-	2500	
	Voltage	V	220/127, 380/220, 440/254, 3300, 6600									
	Frequency	Hz	60									
	Revolution	RPM	1800									
	Phase/Wire		4Pole, 3Phase, 4Wire									
	Power Factor	%	80(LAGGING)									
	Excitation		P.M.G - Permanent Magnet Generator									
	Insulation Class		H									

Manufacturer		CUMMINS									
Model		QSK23-G3	QST30-G3	KTA38-G14	KTA50-G3	KTA50-G9	QSK60-G6	QSK60-G9	QSK60-G19	QSK78-G8	
Stand-by	HP	1200	1350	1490	1850	2220	2922	3251	2715	4060	
Prime	HP	1085	1220	1350	1742	1855	2647	-	-	3670	
Revolution	RPM	1800									
No. of Cylinder	EA	I-6	V-12	V-12	V-16	V-16	V-16	V-16	V-16	V-16	
Bore x Stroke	mm	170x170	140x165	140x165	159x159	159x159	159x190	159x190	159x190	170x190	
Displacement	cc	23150	30480	30480	50300	50300	60200	60200	60200	77600	
Compression Ratio		16.0:1	14.0:1	14.0:1	13.9:1	13.9:1	14.5:1	14.5:1	14.5:1	15.5:1	
Engine Type		4-stroke, Internal combustion Diesel Engine (with radiator or heat exchanger)									
Aspiration		Turbocharged Aftercooled									
Starting System		Electric motor by DC24 battery									
Governor		Electronic Type									
Fuel Consumption	L/Hr	206	228	306	330	392	521	569	655.3	704	
Coolant Capacity	L	46.5	85	124	161	174	193	193	194	224	
Lub. Oil Capacity	L	103	133	135	152	152	378	378	378	413	

DIM	Length	mm	4300	4297	4470	5180	5960	6175	6175	7051	7138
	Width	mm	1855	1673	1780	2000	2033	2286	2494	2713	2750
	Height	mm	2150	2079	2330	2238	2330	2537	3200	3186	3388
	Weight	kg	6528	6296	8350	10075	10326	15945	17217	23299	23777

PAD	Length	mm	5200	5200	5500	6000	6700	6700	6700	8000	8500
	Width	mm	2400	2400	2500	2500	2500	3000	3000	3200	3200
	Height	mm	300	300	350	400	400	500	500	500	500

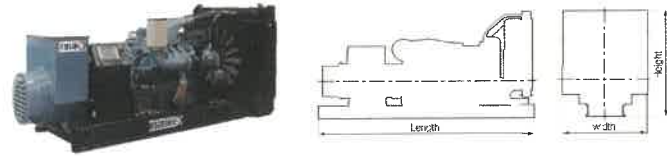
D.A	Radiator air flow	m³/min	1416	1146	1062	1698	1362	1998	1998	2649	3060
	Combustion air flow	m³/min	67.9	76.3	86.1	110.4	125	174	183	193	236
	E.A (Open)	m²	3	2.4	2.2	3.6	2.8	4.2	4.2	5.5	6.4
	O.A (Open)	m²	3.5	2.9	2.7	4.3	3.5	5.2	5.2	6.8	7.8

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11 MTU

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SET MODEL		EG0900-U	EG1000-U	EG1200-U	EG1250-U	EG1600-U	EG1750-U	EG2100-U	EG2300-U	EG2500-U	EG2750-U	EG3250-U	
GENERATOR	Stand-by (60/50)	KW	900/800	1000/870	1200/980	1250	1600/1450	1750/1600	2100/1800	2300/2000	2500/2250	2750/2500	3250/2650
	Prime (60/50)	KW	820/727	910/800	1090/890	-	1400/1320	1600/1430	1880/1650	2100/1820	2300/2030	2500/2220	2800/2420
	Voltage	V	220/127, 380/220, 440/254, 3300, 6600										
	Frequency	Hz	60/50										
	Revolution	RPM	1800/1500										
	Phase/Wire		4Pole, 3Phase, 4Wire										
	Power Factor	%	80(LAGGING)										
	Excitation		Brushless Self Excitation										
	Insulation Class		H										

MANUFACTURER		MTU											
Model		16V2000G 45/25	16V2000G 85/65	18V2000G 85/65	18V2000G 76S	12V4000G 43/23	12V4000G 83/63	16V4000G 43/23	16V4000G 83/63	20V4000G 43/23	20V4000G 83/63	20V4000G 83/63L	
ENGINE	Stand-by (60/50)	HP	1354/1194	1495/1307	1757/1475	1839	2328/2112	2561/2347	3058/2635	3353/2930	3674/3245	4036/3580	4680/3822
	Prime (60/50)	HP	1227/1086	1354/1194	1597/1341	-	2038/1904	2328/2112	2709/2411	3058/2635	3339/2950	3674/3245	4036/3473
	Revolution	RPM	1800/1500										
	No. of Cylinder	EA	16	16	18	18	12	12	16	16	20	20	20
	Bore x Stroke	mm	130x150	130x150	130x150	135x156	170x210	170x210	170x210	170x210	170x210	170x210	170x210
	Displacement	cc	31800	31800	35800	40200	57200	57200	76300	76300	95400	95400	95400
	Compression Ratio		14:1	14:1	14:1	17.5:1	16.5:1	16.5:1	16.5:1	16.5:1	16.5:1	16.5:1	16.5:1
	Engine Type		4-stroke, Internal combustion Diesel Engine (with radiator or heat exchanger)										
	Aspiration		Turbocharged with Aftercooler										
	Starting System		Electric motor by DC24 Battery										
GOVERNOR		Electronic Type											
Fuel Consumption(60/50)	L/Hr	240/207	265/227	314/260	329.9	404/349	459/402	537/436	609/484	619/538	701/698	878/643	
Coolant Capacity	L	110	110	120	73	200	200	225	225	255	255	255	
Lub. Oil Capacity	L	102	102	130	122	260	260	300	300	390	390	390	

DIM	Length	mm	4230	4230	4600	5036	6400	6400	7300	7300	7900	7900	9100
	Width	mm	1900	1900	2130	2275	2150	2150	2377	2377	2370	2370	2370
	Height	mm	2300	2300	2400	2459	2450	2450	3280	3280	3280	3280	3280
	Weight	kg	6890	6990	8060	9525	11300	11300	15183	15433	16182	16182	20673

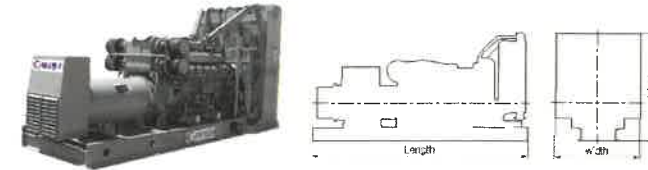
PAD	Length	mm	5000	5000	5500	5500	6500	7000	8000	8000	8500	8500	10000
	Width	mm	2500	2500	2500	2700	2700	2700	2700	2700	3000	3000	3000
	Height	mm	400	400	400	400	400	400	500	500	500	500	500

D.A	Radiator air flow	m³/min	1476	1476	1716	1758	1598	1850	2141	2522	2591	3643	4079
	Combustion air flow	m³/min	84	87	108	102	138	144	186	192	228	246	270
	E.A (Open)	m²	3.1	3.1	3.6	3.8	3.3	3.9	4.5	5.3	5.4	7.6	8.5
	O.A (Open)	m²	3.7	3.7	4.3	4.6	4.1	4.7	5.5	6.5	6.7	9.3	10.4

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SET MODEL		EG0800-MI	EG0900-MI	EG1000-MI	EG1200-MI	EG1320-MI	EG1500-MI	EG1600-MI	EG1750-MI	EG2000-MI	
GENERATOR	Stand-by (60/50)	KW	800/690	900/800	1,000/900	1,200/1,118	1,320/1,200	1,500/1,400	1,600/1,495	1,750/1,590	2,000
	Prime (60/50)	KW	710/620	790/697	900/820	1,075/1,015	1,210/1,095	1,340/1,250	1,440/1,365	1,650/1,490	1,800
	Voltage	V	220/127, 380/220, 440/254, 3300, 6600								
	Frequency	Hz	60/50								
	Revolution	RPM	1800/1500								
	Phase/Wire		4Pole, 3Phase, 4Wire								
	Power Factor	%	80(LAGGING)								
	Excitation		Brushless Self Excitation								
	Insulation Class		H								

MANUFACTURER		MITSUBISHI										
Model		S12A2-PTA	S12A2-PTA2	S12H-PTA	S12R-PTA	S12R-PTA2	S12R-PTAA2	S16R-PTA	S16R-PTA2	S16R-PTAA2		
ENGINE	Stand-by (60/50)	HP	1146/970	1233/1086	1448/1314	1702/1595	1903/1723	2139/1882	2279/2131	2547/2359	2822	
	Prime (60/50)	HP	980/880	1118/994	1314/1193	1528/1448	1729/1562	1940/1711	2064/1944	2312/2145	2540	
	Revolution	RPM	1800/1500									
	No. of Cylinder	EA	12	12	12	12	12	12	16	16	16	
	Bore x Stroke	mm	150x160	150x160	150x175	170x180	170x180	170x180	170x180	170x180	170x180	
	Displacement	cc	33930	33930	37110	49030	49030	65370	65370	65370	65370	
	Compression Ratio		14.5:1	15.3:1	14:1	14:1	13.5:1	13.5:1	14:1	13.5:1	14:1	
	Engine Type		4-stroke, Internal combustion Diesel Engine (with radiator or heat exchanger)									
	Aspiration		Turbocharged with Aftercooler					Turbocharged with air-to-air	Turbocharged with Aftercooler		Turbocharged with air-to-air	
	Starting System		Electric motor by DC24 Battery									
GOVERNOR		Electronic Type										
Fuel Consumption(60/50)	L/Hr	222/182	2569	265/238	305	358/287	404	408/363	479/438	521/403		
Coolant Cap(ENGINE)	L	100	100	100	125	125	125	170	170	170		
Coolant Cap(SET)	L	215	235	285	305	305	327	350	445	413		
Lub. Oil Capacity	L	120	120	200	180	180	180	230	230	230		

DIM	Length	mm	3800	4000	4100	4300	4750	5000	5200	5280	5700
	Width	mm	1600	1650	1650	1820	1820	2200	2700	2700	2400
	Height	mm	1990	2320	2330	1340	2780	2980	2900	2900	3330
	Weight	kg	6400	6740	8175	9385	9900	11850	12500	12800	13900

PAD	Length	mm	4500	4500	5000	5200	5200	5500	6000	6000	6500
	Width	mm	2000	2000	2200	2500	2500	3000	3000	3000	3000
	Height	mm	400	400	400	400	450	400	400	400	400

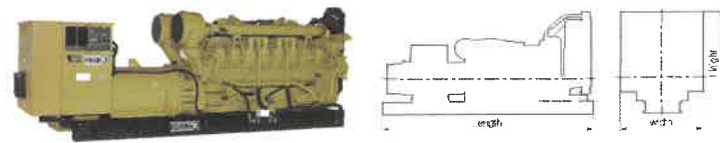
D.A	Radiator air flow	m³/min	1100	1380	1800	1800	1800	1800	1950	2040	2500
	Combustion air flow	m³/min	78	85	93	109	121	148	141	160	194
	E.A (Open)	m²	2.3	2.9	3.8	3.8	3.8	3.8	4.1	4.3	5.2
	O.A (Open)	m²	2.8	3.5	4.5	4.5	4.6	4.6	5.0	5.2	6.4

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13 CATERPILLAR

ENERGEGENERATOR

A New Challenge To Expand The World Global Market



SET MODEL		EG0800-R	EG1000-R	EG1100-R	EG1250-R	EG1400-R	EG1500-R	EG1750-R	EG2000-R	EG2500-R	EG3000-R
GENERATOR	Stand-by KW	800	1000	1100	1250	1400	1500	1750	2000	2500	3000
	Prime KW	725	910	1000	1135	1275	1360	1600	1825	2250	2725
	Voltage V	220/127, 380/220, 440/254, 3300, 6600									
	Frequency Hz	60									
	Revolution RPM	1800									
	Phase/Wire	4Pole, 3Phase, 4Wire									
	Power Factor %	80(LAGGING)									
	Excitation	P.M.G - Permanent Magnet Generator									
	Insulation Class	H									

Manufacturer		CATERPILLAR									
Model		3412	C32	3512	3512	3512B	3512B	3516	3516B	3516C	C175-16
Stand-by HP		1180	1502	1603	1818	2032	2172	2520	2876	3634	4423
Prime HP		1072	1341	1455	1662	1848	1971	2304	2628	3272	4034
Revolution RPM		1800									
No. of Cylinder EA		V-12	V-12	V-12	V-12	V-12	V-12	V-16	V-16	V-16	V-16
Bore x Stroke mm		137x152	145x162	170x190	170x190	170x190	170x190	170x190	170x190	170x215	175x220
Displacement cc		27020	32100	51800	51800	51800	51800	69000	69000	78080	84670
Compression Ratio		13:1	15:1	13.5:1	13.5:1	14:1	14:1	13.5:1	14:1	14.7:1	15.3:1
Engine Type		4-stroke, Internal combustion Diesel Engine(with radiator or heat exchanger)									
Aspiration		Turbocharged & Aftercooled	Air to Air Aftercooled	Turbocharged & Aftercooled					Air to Air Aftercooled	Turbocharged & Aftercooled	
Starting System		Electric motor by DC24 battery									
Governor		Electronic Type									
Fuel Consumption L/Hr		222	263	306	354	377	405	470	559	657	806
Coolant Capacity(SET) L		120	147	287	287	306	306	398	370	405	1039
Lub. Oil Capacity L		139	99	311	311	311	311	402	402	401	540

DIM	Length	mm	4485	4475	5138	5138	5241	5241	5815	6267	6983	7802
	Width	mm	1742	2011	2188	2188	2286	2286	2286	3051	3010	3410
	Height	mm	1987	2174	2368	2368	2342	2342	2368	2588	2570	2890
	Weight	kg	7200	10000	12000	13000	14500	14500	15500	17000	19000	23000

PAD	Length	mm	5000	5100	5800	5800	6000	6000	7000	7000	7700	8400
	Width	mm	2500	2600	2600	2600	3000	3000	3000	3200	3200	3500
	Height	mm	400	400	500	500	500	500	500	500	500	500

D.A	Radiator air flow	m³/min	1464	987	1331	1614	1430	1501	1671	2011	2800	2933
	Combustion air flow	m³/min	70	82.6	92.3	106	123.9	127.9	155.8	171.4	204.2	264.2
	EA (Open)	m²	3.1	2.1	2.8	3.4	3	3.1	3.5	4.2	5.8	6.1
	O.A (Open)	m²	3.7	2.5	3.4	4.1	3.7	3.9	4.4	5.2	7.1	7.6

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14 Supply Range

:: Standard

- Generator set(w/ base frame & radiator)
- Silencer(industrial type)
- Flexible connector
- Battery(lead-acid type)
- Filters(Fuel, Lube oil etc. spare portion)



[Anti-vibration spring]



[Battery]

:: Select Options

- Fuel oil Daily Tank
 - Free standing type
 - Mounted base type
- Diesel Particulate Filter
- Enclosure
 - Weather-proof
 - Weather&sound-proof



[Corrugated Pipe]



[trial run]



[Bonnet]

:: Control Panel

- Mounted Engine Instrument Panel
- Mounted Generator set Panel
- Free-standing Generator set Panel



[Engine Start Panel]



[Mounted Control Panel]



[Self Standing Control Panel]

15

Installation Information

ENERGEGENERATOR

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:: Generator Foundation

If a concrete foundation is required, minimum design guidelines include

- Strength must support wet weight of units plus dynamic loads.
- Outside dimensions exceed that of the generator set a minimum of 300mm(1ft) on all sides.
- Depth sufficient to attain a minimum weight equal to generator set wet weight (only if large mass, ie, inertia block, is specified for vibration control)
- $FD = W / (D \times B \times L)$
- FD = foundation depth, m(ft)
- W = total wet weight of generator set, kg(lb)
- D = density of concrete, kg/m³(lb/ft³)
note : use 2403 for metric units and 150 for English units.
- B = foundation width, m(ft)
- L = foundation length, m(ft)



:: Other Information

CAPACITY(kW)	EXHAUST GAS PIPE SIZE	SPRING ISOLATER	STARTING BATTERY
2,500 kW Class	20 INCH(500A)	2,000 kg x 14EA	DC24V, 1200AH (DC12V - 200AH x 6EA)
2,250 kW Class	16 INCH(400A)	2,000 kg x 14EA	
2,000 kW Class	16 INCH(400A)	2,000 kg x 14EA	
1,750 kW Class	16 INCH(400A)	2,000 kg x 10EA	
1,600 kW Class	16 INCH(400A)	2,000 kg x 10EA	DC24V, 800AH (DC12V - 200AH x 4EA)
1,500 kW Class	12 INCH(300A)	2,000 kg x 10EA	
1,200 kW Class	12 INCH(300A)	2,000 kg x 8EA	
1,000 kW Class	10 INCH(250A)	2,000 kg x 8EA	
900 kW Class	10 INCH(250A)	2,000 kg x 8EA	DC24V, 400AH (DC12V - 200AH x 2EA)
800 kW Class	10 INCH(250A)	1,500 kg x 8EA	
750 kW Class	6 INCH(150A)	1,500 kg x 6EA	
650 kW Class	6 INCH(150A)	1,500 kg x 6EA	
500 kW Class	6 INCH(150A)	1,000 kg x 6EA	
400 kW Class	6 INCH(150A)	750 kg x 6EA	
300 kW Class	4 INCH(100A)	750 kg x 6EA	
250 kW Class	4 INCH(100A)	750 kg x 6EA	
200 kW Class	4 INCH(100A)	500 kg x 6EA	
175 kW Class	4 INCH(100A)	500 kg x 6EA	

16

Generator Output

ENERGEGENERATOR

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:: Emergency Output

Rated Definition: variable load, annual 200 hours limit
This rating can be used for generators used as emergency power applications when the load fluctuates where the normally available electricity supply chain or grid fails and the operation time is less than 200 hours per year.

:: Common Use Output

Rated Definition: Variable load, unlimited running time
This rating can be used for generator sets used to supply power 24 hours a day, 365 days a year in places where supply chain or grid access is not available. Average output is 70% of PRP. Up to 1 hour out of 12 hours 10% overload is possible for technical purposes. Overload operation shall not exceed 50 hours per year.

- Generator set located in isolated areas

:: Continuous Output

Rated Definition: Constant load, unlimited running time
This rating is a generator set parallel to the national power network or grid, which operates at 100% 24/7, and the surplus power can be applied to the generator set that is sent to the grid.

- Combined Heat & Power (CHP)
*The above ratings are in accordance with ISO8528 and ISO3046.

:: Unit Conversions

1Hp = 0.746kW	1PS = 0.735kW	1HP = 1.0138PS	1PS = 0.986HP
1CMM = 1m ³ /min	1CFM = 35.3m ³ /min	1kWh = 860kcal	1kWh = 3,412BTU
1kWh = 3,600 KJ	1kgf/m ³ = 98kPa	1g/PS-H = 1.36g/kW-h	1Liter = 0.833kg(Diesel)

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