DIESEL ENGINE

for Gen-Set Applications

DAEWOO

MAIN SPECIFICATION

MODEL / TYPE		DB33		P034TI		DB58	
		4 CYCLE, WATER-COOLED, VERTICAL IN-LINE		4 CYCLE, WATER-COOLED, VERTICAL IN-LINE		4 CYCLE, WATER-COOLED, VERTICAL IN-LINE	
ASPIRATION		NATURALLY ASPIRATED		TURBOCHARGED AND INTERCOOLED		NATURALLY ASPIRATED	
REVOLUTION		1,500 RPM	1,800 RPM	1,500 RPM	1,800 RPM	1,500 RPM	1,800 RPM
RATED OUTPUT (PS/kW)	STAND-BY	39 / 29	47 / 35	65 / 48	82 / 60	80 / 59	95 / 70
	PRIME	35 / 26	43 / 32	57 / 42	75 / 55	73 / 54	87 / 64
DIRECTION OF CRANKSHAFT ROTATION		COUNTER-CLOCKWISE VIEWED FROM FLYWHEEL		COUNTER-CLOCKWISE VIEWED FROM FLYWHEEL		COUNTER-CLOCKWISE VIEWED FROM FLYWHEEL	
NO. OF CYL.-BORE × STROKE		4 - 102mm × 100mm		4 - 102mm × 100mm		6 - 102mm × 118mm	
FIRING ORDER		1 - 3 - 4 - 2		1 - 3 - 4 - 2		1 - 5 - 3 - 6 - 2 - 4	
DISPLACEMENT (ℓ)		3.268		3.268		5.785	
COMPRESSION RATIO		17.5 to 1		17.2 to 1		17.5 to 1	
FUEL CONSUMPTION, STAND-BY (ℓ / hr)		7.8	9.2	12.5	15.6	15.3	18.1
FUEL INJECTION TIMING		BTDC 18°		BTDC 13°		BTDC 20°	
FUEL INJECTION PUMP		ZEXEL IN-LINE "A" TYPE		ZEXEL IN-LINE "AS" TYPE		ZEXEL IN-LINE "A" TYPE	
GOVERNOR		MECHANICAL ALL SPEED CONTROL GOV.(RSV)		MECHANICAL ALL SPEED CONTROL GOV.(RSV)		MECHANICAL ALL SPEED CONTROL GOV.(RSV)	
COOLING FAN		BLOWER TYPE (6 BLADES, STEEL, ø455)		BLOWER TYPE (6 BLADES, STEEL, ø520)		BLOWER TYPE (6 BLADES, STEEL, ø520)	
LUB. OIL CAPACITY (ℓ)		8.5		7.5		14.5	
COOLING WATER CAPACITY (ℓ)		8.5 (Engine Only)		8.5 (Engine Only)		12 (Engine Only)	
CHARGING ALTERNATOR		24V - 45A		24V - 45A		24V - 45A	
STARTING MOTOR		24V - 4.5kW		24V - 4.5kW		24V - 4.5kW	
FLYWHEEL HOUSING SAE No.		3		3		3	
FLYWHEEL SIZE No.		11 1/2 (PCD:333.38mm/13.125inch)		11 1/2 (PCD:333.38mm/13.125inch)		11 1/2 (PCD:333.38mm/13.125inch)	
DRY WEIGHT(kg)		310		335		450	
OUTSIDE DIMENSIONS (mm)	LENGTH	870		869.5		1,155	
	WIDTH	705		728		705	
	HEIGHT	749		841		854	

MODEL / TYPE		P126TI		P126TI-Ⅱ		P158LE-1	
		4 CYCLE, WATER-COOLED, VERTICAL IN-LINE		4 CYCLE, WATER-COOLED, VERTICAL IN-LINE		4 CYCLE, WATER-COOLED, 90° V-TYPE	
ASPIRATION		TURBOCHARGED AND INTERCOOLED		TURBOCHARGED AND INTERCOOLED		TURBOCHARGED AND INTERCOOLED	
REVOLUTION		1,500 RPM	1,800 RPM	1,500 RPM	1,800 RPM	1,500 RPM	1,800 RPM
RATED OUTPUT (PS/kW)	STAND-BY	370 / 272	405 / 298	400 / 294	465 / 342	492 / 362	546 / 402
	PRIME	328 / 241	378 / 278	NOT FIXED	NOT FIXED	444 / 327	498 / 366
DIRECTION OF CRANKSHAFT ROTATION		COUNTER-CLOCKWISE VIEWED FROM FLYWHEEL		COUNTER-CLOCKWISE VIEWED FROM FLYWHEEL		COUNTER-CLOCKWISE VIEWED FROM FLYWHEEL	
NO. OF CYL.-BORE × STROKE		6 - 123mm × 155mm		6 - 126mm × 155mm		8 - 128mm × 142mm	
FIRING ORDER		1 - 5 - 3 - 6 - 2 - 4		1 - 5 - 3 - 6 - 2 - 4		1 - 5 - 7 - 2 - 6 - 3 - 4 - 8	
DISPLACEMENT (ℓ)		11.051		11.051		14.618	
COMPRESSION RATIO		17.1 to 1		17.1 to 1		15.0 to 1	
FUEL CONSUMPTION, STAND-BY (ℓ / hr)		66.2	76.5	NOT FIXED	82.5	86.1	103
FUEL INJECTION TIMING		BTDC 16°		BTDC 16°		BTDC 16°	
FUEL INJECTION PUMP		ZEXEL IN-LINE "P" TYPE		ZEXEL IN-LINE "P" TYPE		BOSCH IN-LINE "P" TYPE	
GOVERNOR		ELECTRIC GOV.(GAC)		ELECTRIC GOV.(GAC)		ELECTRIC GOV.(GAC)	
COOLING FAN		BLOWER TYPE (7 BLADES, PLASTIC, ø755)		BLOWER TYPE (7 BLADES, PLASTIC, ø755)		BLOWER TYPE (7 BLADES, PLASTIC, ø915)	
LUB. OIL CAPACITY (ℓ)		25		25		24	
COOLING WATER CAPACITY (ℓ)		19 (Engine Only)		19 (Engine Only)		20 (Engine Only)	
CHARGING ALTERNATOR		24V - 45A		24V - 45A		24V - 45A	
STARTING MOTOR		24V - 6.0kW		24V - 6.0kW		24V - 6.6kW	
FLYWHEEL HOUSING SAE No.		1		1		1	
FLYWHEEL SIZE No.		14 (PCD:438.15mm/17.25inch)		14 (PCD:438.15mm/17.25inch)		14 (PCD:438.15mm/17.25inch)	
DRY WEIGHT(kg)		910		910		950	
OUTSIDE DIMENSIONS (mm)	LENGTH	1,383		1,383		1,484	
	WIDTH	870		913		1,389	
	HEIGHT	1,207		1,207		1,161.5	

* Only for Engine

D1146		D1146T		P086TI-1		P086TI	
4 CYCLE, WATER-COOLED, VERTICAL IN-LINE		4 CYCLE, WATER-COOLED, VERTICAL IN-LINE		4 CYCLE, WATER-COOLED, VERTICAL IN-LINE		4 CYCLE, WATER-COOLED, VERTICAL IN-LINE	
NATURALLY ASPIRATED		TURBOCHARGED		TURBOCHARGED AND INTERCOOLED		TURBOCHARGED AND INTERCOOLED	
1,500 RPM	1,800 RPM	1,500 RPM	1,800 RPM	1,500 RPM	1,800 RPM	1,500 RPM	1,800 RPM
116 / 85	143 / 105	160 / 118	200 / 147	223 / 164	260 / 191	270 / 199	303 / 223
105 / 77	130 / 96	145 / 107	170 / 125	203 / 149	237 / 174	240 / 177	279 / 205
COUNTER-CLOCKWISE VIEWED FROM FLYWHEEL		COUNTER-CLOCKWISE VIEWED FROM FLYWHEEL		COUNTER-CLOCKWISE VIEWED FROM FLYWHEEL		COUNTER-CLOCKWISE VIEWED FROM FLYWHEEL	
6 - 111mm × 139mm		6 - 111mm × 139mm		6 - 111mm × 139mm		6 - 111mm × 139mm	
1 - 5 - 3 - 6 - 2 - 4		1 - 5 - 3 - 6 - 2 - 4		1 - 5 - 3 - 6 - 2 - 4		1 - 5 - 3 - 6 - 2 - 4	
8.071		8.071		8.071		8.071	
17.6 to 1		16.8 to 1		16.7 to 1		16.4 to 1	
20.8	26.6	27.0	37.0	39.5	47.1	48.4	56.8
BTDC 18°		BTDC 18°		BTDC 12°		BTDC 12°	
ZEXEL IN-LINE "AD" TYPE		ZEXEL IN-LINE "AD" TYPE		ZEXEL IN-LINE "P" TYPE		ZEXEL IN-LINE "P" TYPE	
MECHANICAL ALL SPEED CONTROL GOV.(RSV)		MECHANICAL ALL SPEED CONTROL GOV.(RSV)		ELECTRIC GOV.(GAC)		ELECTRIC GOV.(GAC)	
BLOWER TYPE (6 BLADES, STEEL, ø590)		BLOWER TYPE (6 BLADES, STEEL, ø590)		BLOWER TYPE (7 BLADES, PLASTIC, ø660.4)		BLOWER TYPE (7 BLADES, PLASTIC, ø660.4)	
17.5		17.5		17.5		17.5	
14 (Engine Only)		14 (Engine Only)		14 (Engine Only)		14 (Engine Only)	
24V - 45A		24V - 45A		24V - 45A		24V - 45A	
24V - 4.5kW		24V - 4.5kW		24V - 6.0kW		24V - 6.0kW	
2		2		1		1	
11 1/2 (PCD:333.38mm/13.125inch)		11 1/2 (PCD:333.38mm/13.125inch)		14 (PCD:438.15mm/17.25inch)		14 (PCD:438.15mm/17.25inch)	
720		780		790		790	
1,224		1,277		1,242		1,242	
727		824		918		918	
973		1,074		1,099.5		1,099.5	

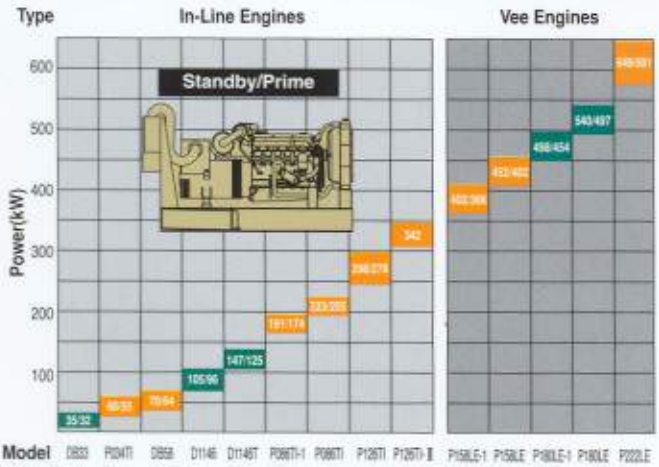
P158LE		P180LE-1		P180LE		P222LE	
4 CYCLE, WATER-COOLED, 90° V-TYPE		4 CYCLE, WATER-COOLED, 90° V-TYPE		4 CYCLE, WATER-COOLED, 90° V-TYPE		4 CYCLE, WATER-COOLED, 90° V-TYPE	
TURBOCHARGED AND INTERCOOLED		TURBOCHARGED AND INTERCOOLED		TURBOCHARGED AND INTERCOOLED		TURBOCHARGED AND INTERCOOLED	
1,500 RPM	1,800 RPM	1,500 RPM	1,800 RPM	1,500 RPM	1,800 RPM	1,500 RPM	1,800 RPM
563 / 414	615 / 452	601 / 442	677 / 498	674 / 496	734 / 540	781 / 574	883 / 649
494 / 363	547 / 402	548 / 403	617 / 454	602 / 443	676 / 497	723 / 532	803 / 591
COUNTER-CLOCKWISE VIEWED FROM FLYWHEEL		COUNTER-CLOCKWISE VIEWED FROM FLYWHEEL		COUNTER-CLOCKWISE VIEWED FROM FLYWHEEL		COUNTER-CLOCKWISE VIEWED FROM FLYWHEEL	
8 - 128mm × 142mm		10 - 128mm × 142mm		10 - 128mm × 142mm		12 - 128mm × 142mm	
1 - 5 - 7 - 2 - 6 - 3 - 4 - 8		1 - 6 - 5 - 10 - 2 - 7 - 3 - 8 - 4 - 9		1 - 6 - 5 - 10 - 2 - 7 - 3 - 8 - 4 - 9		1 - 12 - 5 - 8 - 3 - 10 - 6 - 7 - 2 - 11 - 4 - 9	
14.618		18.273		18.273		21.927	
15.0 to 1		15.0 to 1		15.0 to 1		15.0 to 1	
102.9	118.2	110	124.7	128.7	144.6	154.3	173.5
BTDC 16°		BTDC 16°		BTDC 16°		BTDC 16°	
BOSCH IN-LINE "P" TYPE		BOSCH IN-LINE "P" TYPE		BOSCH IN-LINE "P" TYPE		BOSCH IN-LINE "P" TYPE	
ELECTRIC GOV.(GAC)		ELECTRIC GOV.(GAC)		ELECTRIC GOV.(GAC)		ELECTRIC GOV.(GAC)	
BLOWER TYPE (7 BLADES, PLASTIC, ø915)		BLOWER TYPE (7 BLADES, PLASTIC, ø915)		BLOWER TYPE (7 BLADES, PLASTIC, ø915)		BLOWER TYPE (7 BLADES, PLASTIC, ø915)	
24		38		38		43	
20 (Engine Only)		21 (Engine Only)		21 (Engine Only)		* 23 (Engine Only)	
24V - 45A		24V - 45A		24V - 45A		24V - 45A	
24V - 6.6kW		24V - 6.6kW		24V - 6.6kW		24V - 6.6kW	
1		1		1		1	
14 (PCD:438.15mm/17.25inch)		14 (PCD:438.15mm/17.25inch)		14 (PCD:438.15mm/17.25inch)		14 (PCD:438.15mm/17.25inch)	
950		1,175		1,175		1,575	
1,484		1,557		1,557		1,717	
1,389		1,389		1,389		1,389	
1,161.5		1,248		1,248		1,288	

Whenever you need a power, There are Daewoo Engines.

- Long Overhaul Interval
- Easy Maintenance & Operation
- Low Fuel & Oil Consumption

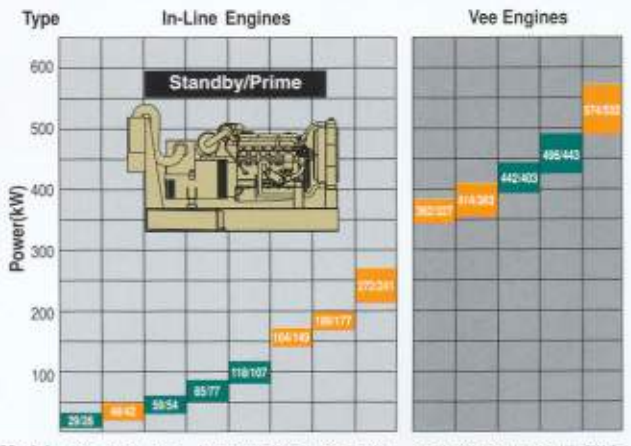
Engine Line - Up

60 Hz Engine Line - Up



Model	D833	P034TI	D858	D1146	D1146T	P086TI-1	P086TI	P126TI	P126TI-Ⅱ	P158LE-1	P158LE	P180LE-1	P180LE	P222LE
Type	NA	TI	NA	NA	TC	TI	TI	TI	TI	TI	TI	TI	TI	TI
Disp.(ℓ)	3.3	3.3	5.8	8.1	8.1	8.1	8.1	11.1	11.1	14.6	14.6	18.3	18.3	21.9

50 Hz Engine Line - Up



Model	D833	P034TI	D858	D1146	D1146T	P086TI-1	P086TI	P126TI	P158LE-1	P158LE	P180LE-1	P180LE	P222LE
Type	NA	TI	NA	NA	TC	TI	TI	TI	TI	TI	TI	TI	TI
Disp.(ℓ)	3.3	3.3	5.8	8.1	8.1	8.1	8.1	11.1	14.6	14.6	18.3	18.3	21.9

- Legend : NA(Natural Aspirated), TC(Turbocharged), TI(Turbo-Intercooled)

SCOPE OF SUPPLY

Standard equipments

- Basic engine (from fan to flywheel)
- Basic engine along with
  - Starting motor
  - Charging alternator
  - Water temp. sensor & switch
  - Oil pressure switch
  - Oil level gauge
  - Magnetic pick-up
- Spare fuel filter (1set)
- Spare oil filter (1set)
- Parts book
- Maintenance manual
- Operation manual

Standard accessory parts

- Radiator ass'y & connection hoses
- Air cleaner ass'y & bracket with flexible hose (intake to air cleaner), service indicator
- Bellows
- Stop solenoid & bracket (Only for mechanical governor type)

KS A 9001 / ISO 9001
APPROVED BY KOREAN REGISTER OF SHIPPING

Jun/04

DAEWOO
DAEWOO HEAVY INDUSTRIES & MACHINERY LTD.

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Fax : 82-2-2167-3299
Web site : www.enginepark.co.kr

Specifications are subject to change without prior notice.

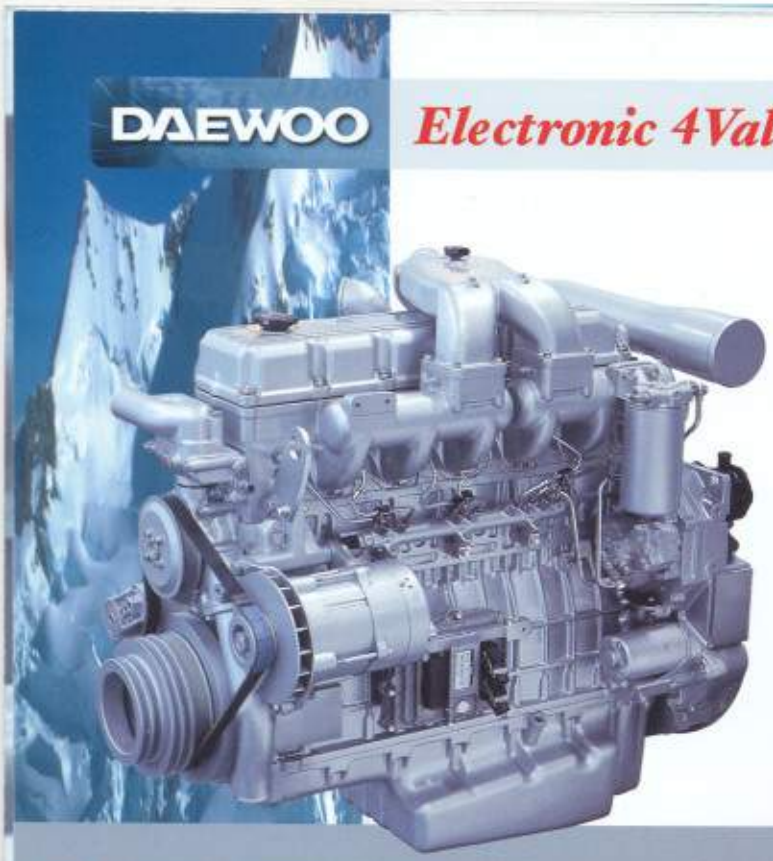
Advanced
DAEWOO DIESEL ENGINE
DL08, DV11

DAEWOO
DAEWOO HEAVY INDUSTRIES & MACHINERY LTD.

DAEWOO

Electronic 4Valves-CRDi System

www.enginepark.co.kr



DL08

320 PS THE HIGHEST POWER IN IT'S CLASS

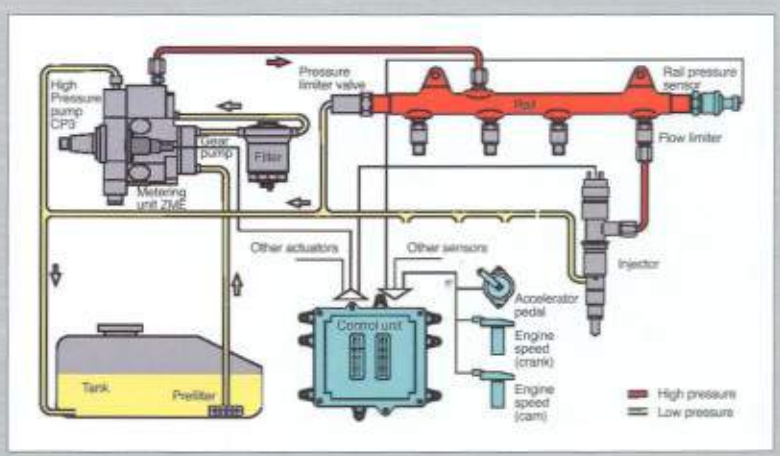
- Maximum Rating : 320Ps/135kg.m
- High Power-to-Weight Ratio : 2.3kg/Ps
- The Most Economic Fuel Consumption In It's Class
- Maximized Durability (50% longer life than the previous DE Series)
- Low Maintenance (Oil Filter : 40,000-60,000km)
- User Friendly Accessories :
  - Jake Brake (Engine Brake)
  - 440cc Air Compressor

DV11

420 PS THE HIGHEST POWER IN IT'S CLASS

- Maximum Rating : 420Ps/195kg.m
- High Power-to-Weight Ratio : 1.96kg/Ps
- The Most Economic Fuel Consumption In It's Class
- Maximized Durability (50% longer life than the previous DE Series)
- Low Maintenance (Oil Filter : 40,000-60,000km)
- User Friendly Accessories :
  - Jake Brake (Engine Brake)
  - 300cc, 550cc Air Compressor

- **Electronic Common Rail Injection System**
  - High pressure injection(1600 bar)
  - Delivers high torque at low engine speed
  - Application flexibility relative to injection pressure and timing
  - Multiple injection for quite and optimized combustion
  - Potential solution to the future emission challenge



BUS CAN

KWP 2000

INJECTORS

INJECTORS PRESSURE ADJUSTMENT

PREHEATING

ACCELERATOR

ENGINE SPEED

FUEL PRESSURE

COOLANT TEMPERATURE

FUEL TEMPERATURE

OIL PRESSURE & TEMPERATURE

ATMOSPHERIC PRESSURE

BOOST PRESSURE & TEMPERATURE

KEY ON/OFF

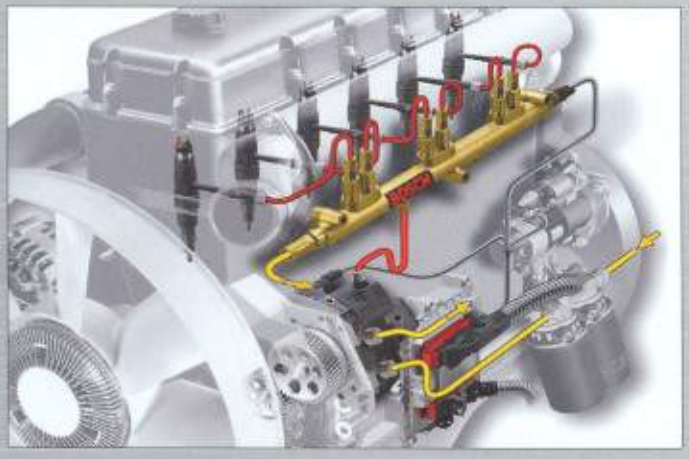
BATTERY

System Function

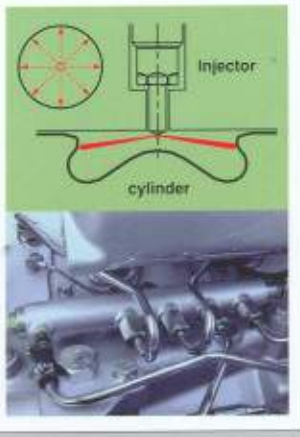
- Fuel quantity and metering control
- EGR, boost and fuel pressure control
- Monitoring and back-up
- Diagnosis
- Communication
- System startup, After run mode

Communication and diagnosing tools

- Managing the PTO rpm
- Remote control
- Self- diagnosis of critical operating factors
- Alarm indication
- Vehicle EOL



Electronic Common Rail System



4-Valves Per Cylinder System

DAEWOO

Electronic 4Valves-CRDi System

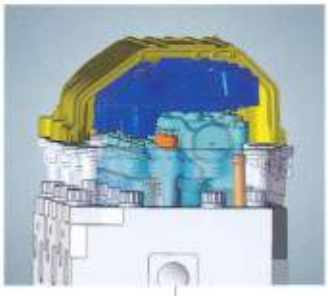
www.enginepark.co.kr

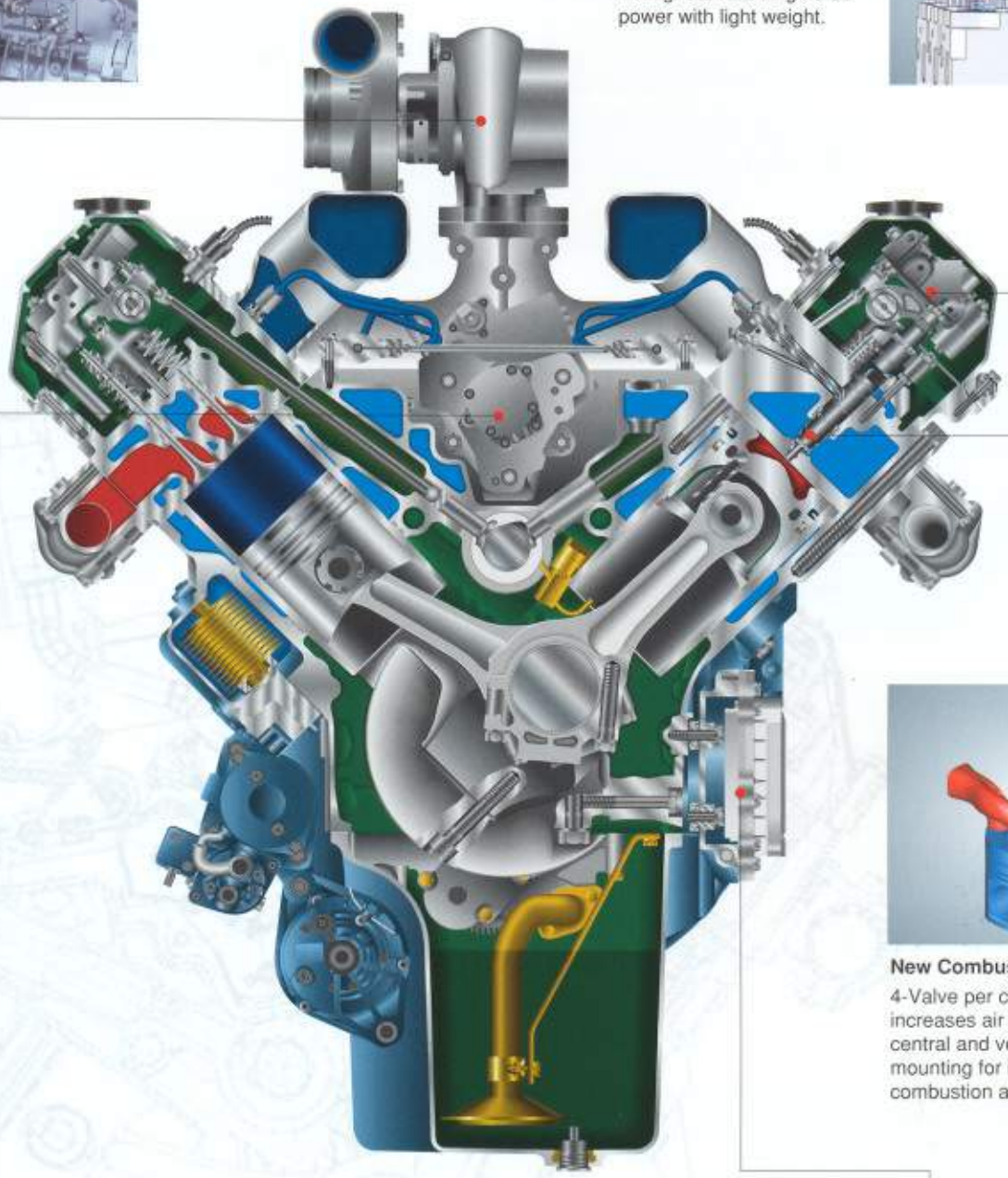
Turbocharger

Wastegate turbocharger allows optimized combustion at low speed as well as high speed.

Jake Brake

Jake Brake mounted on the engine overhead changes the timing of engine exhaust valves, turning the engine into a giant air compressor for highest retarding horse power with light weight.





New Combustion System

4-Valve per cylinder design increases air flow and allows central and vertical injetors mounting for improved combustion and low emission.

Electronic Control Unit System(ECU) & High Pressure Pump

Excellent application flexibility relative to high injection pressure, timing and injection event can be optimized independently to get quite, high-torque, low-emission and efficient diesel engine.

DAEWOO **EURO - III**

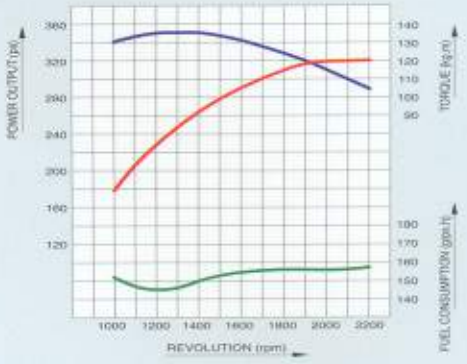
www.enginepark.co.kr

Engine Specification

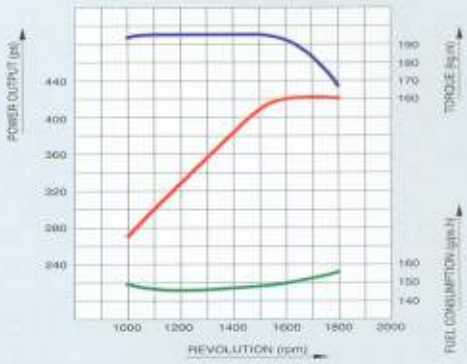
Description	Unit	Specification	
Model Name		DL08	DV11
Emission Level		EURO- Ⅲ	
Type		I6, Water-Cooled,Direct Injection	V6, Water-Cooled,Direct Injection
Aspiration		Turbocharged & Intercooled	
Bore Size x Stroke	mm	108 × 139	128 × 142
Displacement	cc	7,640	10,964
Firing Order		1 - 5 - 3 - 6 - 2 - 4	1 - 4 - 2 - 5 - 3 - 6
No. of valves per cylinder		Intake 2, exhaust 2	
Treatment of Blow-by Gas		CCV (Closed Crankcase Ventilation)	
Treatment of Exhaust Gas		iEGR (Internal Exhaust Gas Recirculation)	
Control		Fully Electronic	
Fuel System		Common Rail	
Maximum Rating	ps/rpm	320 / 2200	420 / 1800
Maximum Torque	kg.m/rpm	135 / 1200 ~ 1400	195 / 1100 ~ 1500
Engine Brake		JAKE BRAKE(Optional)	

Performance Curve

DL08

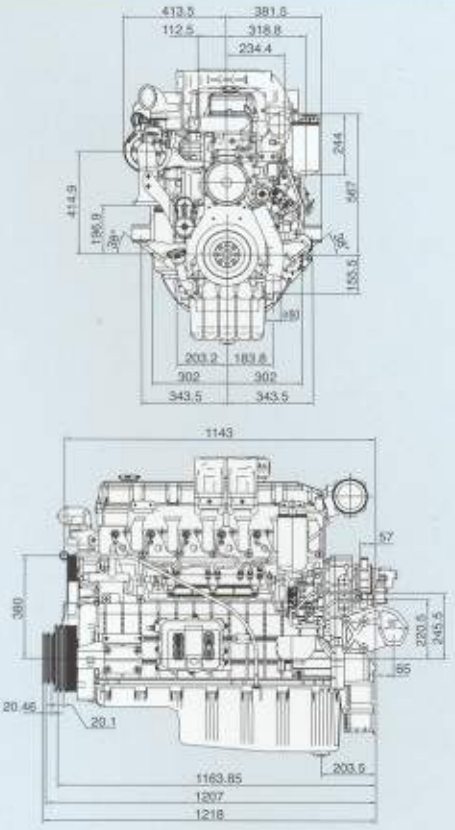


DV11

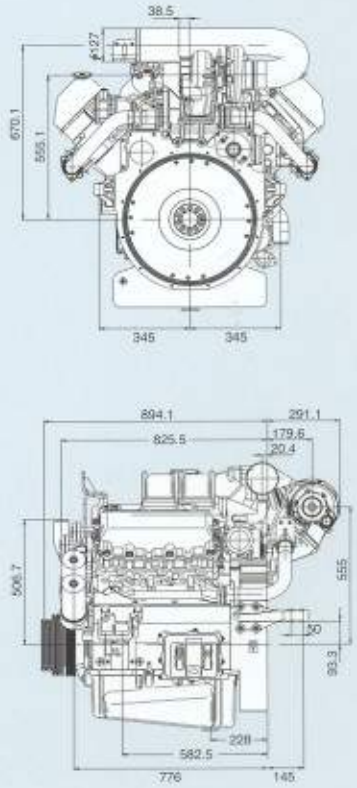


Dimension

DL08



DV11



※ Specification are subject to change without prior notice

DAEWOO

Diesel & Gas Engines

DAEWOO
DAEWOO HEAVY INDUSTRIES & MACHINERY LTD.

Automotive/Industrial Engines

Automotive engines We independently developed low-emission diesel engines for heavy and medium duty vehicles in compliance with EURO-1 in 1998 and EURO-2 in 2000. We have also been developing diesel engines in compliance with EURO-3, aiming at their mass production early in 2004. Daewoo's research and development program has led to the introduction of two diesel models. The company's two new diesel offerings are, the 7.6 L in-line six-cylinder, DL08 rated 235 kW at 2200 r/min and the 11.0 L V-6, DV11 rated 309 kW at 1800 r/min. Daewoo reported that these new engines are compliant with Stage-3 European emissions standards. Daewoo now offers engines from 133 kW through 309 kW with 12 models.

Industrial engines We independently developed low-emission diesel engines for industrial equipment to meet TIER-2 in 2002, which are exported all over the world including to advanced countries for industrial equipment to comply with TIER-3 emission regulation and further TIER-4 guidelines.

DL08 - EURO Ⅲ

- In-Line 6 Cylinder, Turbo-Intercooled type
- Bore × Stroke : 108mm × 139mm(7.6 Liter)
- Max. Power : 235kW[320PS] at 2200rpm

DV11 - EURO Ⅲ

- Vee 6 Cylinder, Turbo-Intercooled type
- Bore × Stroke : 128mm × 142mm(11.0 Liter)
- Max. Power : 309kW[420PS] at 1800rpm

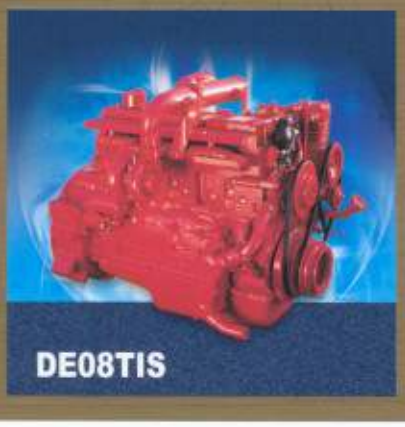
4 Valve System

Common Rail Fuel System

We have also been developing diesel engines daewoo's expanded its range of industrial engines with the introduction of three new diesel models. The DB58TIS, 5.8 L in-line six-cylinder, rated 129 kW at 2200 r/min; the DE08TIS, 8.1 L in-line six-cylinder rated 155 kW at 2100 r/min and the DE12TIS, 11.1 L in-line six-cylinder, rated 235 kW at 2000 r/min. These engines were engineered to meet EPA Tier 2 emission standards for U.S. applications in earthmoving and forklift truck products. These range of industrial engines supplied by Daewoo can be adapted for use in a variety of heavy machinery applications. The heavy industrial engine line now offers engines from 46 to 238 kW with 15 models.

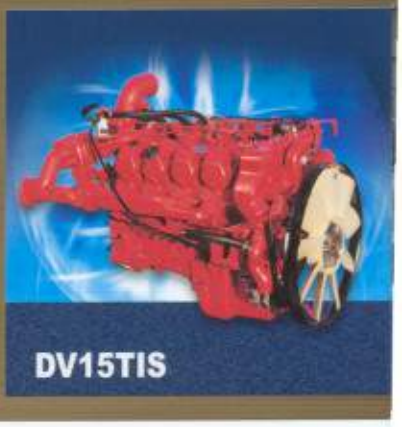
DV11

DB58TI



DE08TIS

DE12TIS



DV15TIS

Automotive Engines

Production tolerance : ±5%

Model	Type			Displacement	ISO 3046(Gross)		Emission Level
	Combustion	No of cyl.	Aspiration	(liter)	Max. Power kW(hp) / rpm	Max. Torque N.m / rpm	
D1146	DI	6	NA	8.1	133(181) / 2,500	554 / 1,600	EURO-Ⅰ
D1146TI	DI	6	TI	8.1	150(205) / 2,300	735 / 1,200	EURO-Ⅰ
DE08TIS	DI	6	TI	8.1	176(240) / 2,300	882 / 1,200	EURO-Ⅱ
DL08	DI	6	TI	7.6	235(320) / 2,200	1,323 / 1,200	EURO-Ⅲ
DE12	DI	6	NA	11.1	165(225) / 2,200	800 / 1,400	EURO-Ⅰ
DE12T	DI	6	TC	11.1	220(300) / 2,200	1,078 / 1,300	EURO-Ⅰ
DE12TI	DI	6	TI	11.1	250(340) / 2,100	1,323 / 1,260	EURO-Ⅰ
DE12TIS	DI	6	TI	11.1	250(340) / 2,100	1,372 / 1,260	EURO-Ⅱ
DV11	DI	6	TI	11.0	309(420) / 1,800	1,911 / 1,100	EURO-Ⅲ
DV15T	DI	V8	TC	14.6	273(370) / 2,300	1,421 / 1,300	EURO-Ⅰ
DV15TI	DI	V8	TI	14.6	309(420) / 2,100	1,666 / 1,200	EURO-Ⅰ
DV15TIS	DI	V8	TI	14.6	309(420) / 2,100	1,666 / 1,200	EURO-Ⅱ

Note) NA : Naturally Aspirated, TC : Turbocharged, TI : Turbo-Intercooled

Industrial Engines

Production tolerance : ±5%

Model	Type			Displacement	Bore × Stroke	ISO 3046(Gross)		Emission Level
	Combustion	No of cyl.	Aspiration	(liter)	(mm)	Max. Power kW(hp) / rpm	Max. Torque N.m / rpm	
DB33	DI	4	NA	3.3	102×100	46(62) / 2,300	201 / 1,600	TIER-Ⅰ / Stage-1
DB58	DI	6	NA	5.8	102×118	74(99) / 2,200	373 / 1,600	TIER-Ⅰ / Stage-1
DB58S	DI	6	NA	5.8	102×118	74(99) / 2,200	373 / 1,600	TIER-Ⅱ / Stage-2
DB58T	DI	6	TC	5.8	102×118	100(134) / 2,200	465 / 1,600	TIER-Ⅰ / Stage-1
DB58TI	DI	6	TI	5.8	102×118	118(158) / 2,200	588 / 1,600	TIER-Ⅰ / Stage-1
DB58TIS	DI	6	TI	5.8	102×118	127(170) / 2,200	696 / 1,400	TIER-Ⅱ / Stage-2
D1146	DI	6	NA	8.1	111×139	114(153) / 2,200	579 / 1,600	TIER-Ⅰ / Stage-1
D1146T	DI	6	TC	8.1	111×139	127(171) / 2,200	686 / 1,300	TIER-Ⅰ / Stage-1
DE08T	DI	6	TC	8.1	111×139	118(158) / 2,200	618 / 1,400	TIER-Ⅱ / Stage-2
D1146TI	DI	6	TI	8.1	111×139	147(197) / 1,900	804 / 1,400	TIER-Ⅰ / Stage-1
DE08TIS	DI	6	TI	8.1	111×139	156(209) / 2,100	902 / 1,300	TIER-Ⅱ / Stage-2
DE12T	DI	6	TC	11.1	123×155	188(253) / 2,000	1,058 / 1,400	TIER-Ⅰ / Stage-1
DE12TI	DI	6	TI	11.1	123×155	214(287) / 2,000	1,117 / 1,400	TIER-Ⅰ / Stage-1
DE12TIS	DI	6	TI	11.1	123×155	238(319) / 2,000	1,324 / 1,400	TIER-Ⅱ / Stage-2
DV15T	DI	V8	TC	14.6	128×142	221(296) / 2,000	1,215 / 1,300	TIER-Ⅰ / Stage-1

Note) NA : Naturally Aspirated, TC : Turbocharged, TI : Turbo-Intercooled

Gen Set/Power Unit Engines

Generator engines **Daewoo also offer 10 diesel models for standby and prime generator set applications. The P086TI, 8.1 L in-line six-cylinder, rated 223 kW at 1800 r/min and P126TI, 11.1 L in-line six-cylinder, rated 298 kW at 1800 r/min engines are available for gensets with the capability currently of moving beyond Tier 2 emission levels. All 10 model Daewoo designed engines being offered(35 to 649 kW) are all U.S. EPA Tier 1 and Tier 2 certified.**

Power Unit engines **Daewoo also introduced 10 different models for power unit applications that range from 50 to 589 kW. These engine sizes are being offered with the variable-speed operation controls and configurations for power unit drive and power pack applications direct from the factory. The packages also include Daewoo's standard or optional accessories.**

Features

- Maintained performance, air temp 40℃, altitude 1000m
- Tropical cooling system(50℃)
- Guaranteed power output 0 to +2%
- Low exhaust emissions
- Low noise levels
- G Drive, G Pac, P Drive & P Pac configuration

Durability & low noise

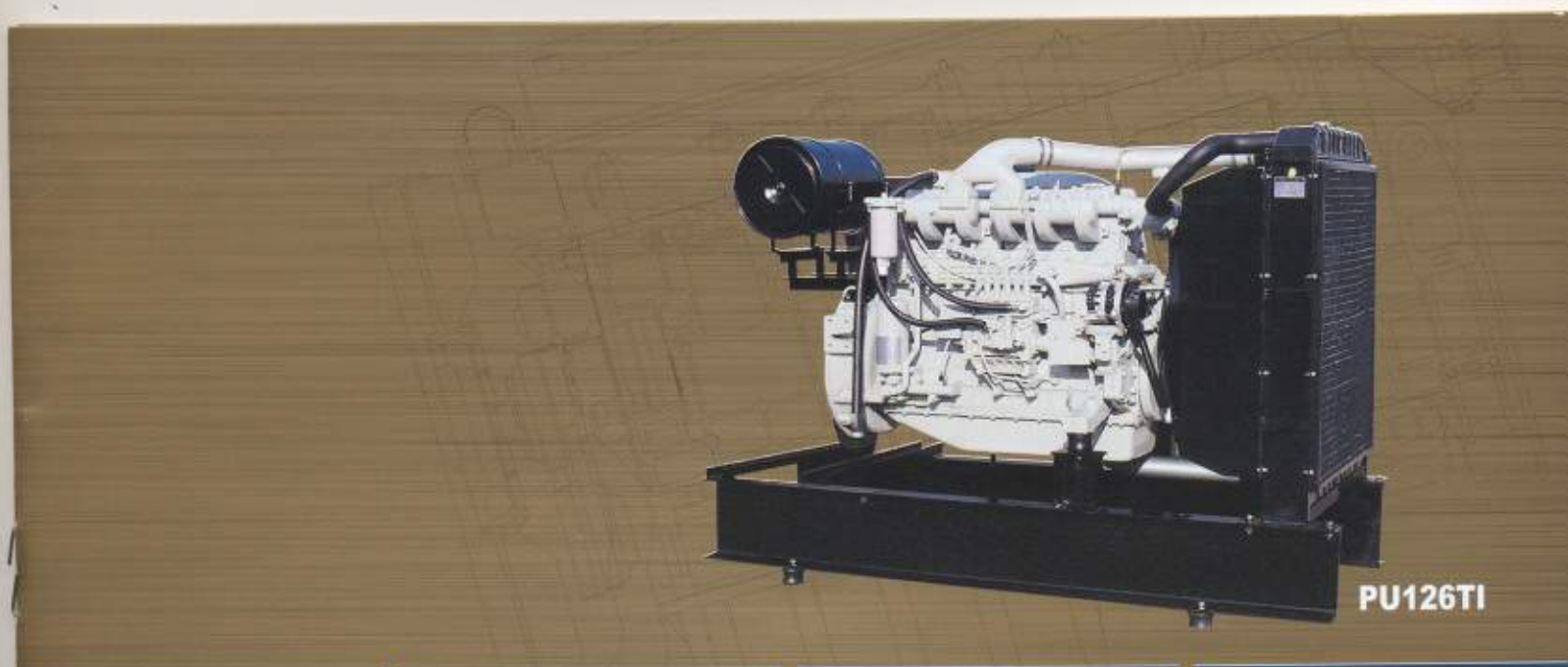
Designed for the easiest, fastest and most economical installation. Well-balanced to produce smooth and vibration-free operation with low noise level. To maintain a controlled working temperature in cylinders and combustion chambers, the engine is equipped with piston cooling. The engine is also fitted with replaceable cylinder liners and valve seats/guides to ensure maximum durability and service life of the engine.

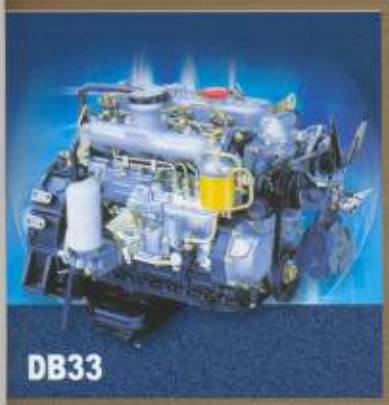
Low exhaust emission

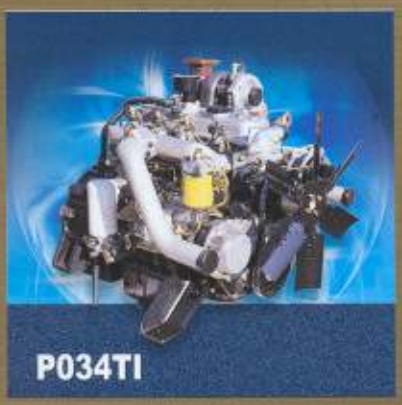
The state of the art, high-tech injection and charging system with low internal losses contributes to excellent combustion and low fuel consumption. All the engines comply with EPA/CARB Tier 1 and Tier 2 exhaust emission regulations.

Easy service & maintenance

Easily accessible service and maintenance points contribute to the ease of service of the engine.







Generator Engines (G Drive / G Pac)

Production tolerance : ±5%

Model	Type			Displacement	Bore×Stroke	Output ISO 3046		Dimension	Dry Weight
	Combustion	No of cyl.	Aspiration	(liter)	(mm)	kW(PS)@1800rpm Standby / Prime	kW(PS)@1500rpm Standby / Prime	L×W×H(mm)	(kg)
DB33	DI	4	NA	3.3	102×100	35(47) / 32(43)	29(39) / 26(35)	870×705×749	310
P034TI	DI	4	TI	3.3	102×100	60(82) / 55(75)	48(65) / 42(57)	870×728×841	335
DB58	DI	6	NA	5.8	102×118	70(95) / 64(87)	59(80) / 54(73)	1155×705×854	450
D1146	DI	6	NA	8.1	111×139	105(143) / 96(130)	85(116) / 77(105)	1224×727×973	720
D1146T	DI	6	TC	8.1	111×139	148(202) / 134(182)	118(160) / 107(145)	1277×824×1074	780
P086TI	DI	6	TI	8.1	111×139	223(303) / 205(279)	199(270) / 177(240)	1242×918×1100	790
P126TI	DI	6	TI	11.1	123×155	298(405) / 278(378)	272(370) / 241(328)	1383×870×1207	910
P158LE	DI	V8	TI	14.6	128×142	452(615) / 402(547)	414(563) / 363(494)	1484×1389×1162	950
P180LE	DI	V10	TI	18.3	128×142	540(734) / 497(676)	496(674) / 443(602)	1557×1389×1248	1175
P222LE	DI	V12	TI	21.9	128×142	649(883) / 591(803)	574(781) / 532(723)	1717×1389×1288	1575

Note) NA-Naturally Aspirated, TC-Turbocharged, TI-Turbocharged & Intercooled

Power Unit Engines(P Drive / P Pac)

Production tolerance : ±5%

Model	Type			Displacement	Bore×Stroke	Output DIN6270B(Max. rating)	Dimension	Dry Weight
	Combustion	No of cyl.	Aspiration	(liter)	(mm)	kW(PS)@rpm	L×W×H(mm)	(kg)
PU034	DI	4	NA	3.3	102×100	50(68)@3000	875×705×713	310
PU066	DI	6	NA	5.8	102×118	85(116)@2800	1155×705×775	450
PU086	DI	6	NA	8.1	111×139	117(160)@2200	1224×727×973	720
PU086T	DI	6	TC	8.1	111×139	151(205)@2200	1277×824×1074	780
PU086TI	DI	6	TI	8.1	111×139	213(290)@2200	1242×918×1100	790
PU126TI	DI	6	TI	11.1	123×155	294(400)@2100	1383×870×1207	910
PU158TI	DI	V8	TI	14.6	128×142	397(540)@2100	1484×1389×1162	950
PU180TI	DI	V10	TI	18.3	128×142	478(650)@2100	1557×1389×1248	1175
PU222TI	DI	V12	TI	21.9	128×142	589(800)@2100	1717×1389×1288	1575

Note) NA-Naturally Aspirated, TC-Turbocharged, TI-Turbocharged & Intercooled

Marine Engines

Daewoo's complete line of marine engines include improvement and modifications to the fuel system as well as a new turbo design, improved exhaust manifold and intercooler design. Daewoo offers heavy-, medium- and light-duty application engines available in output from 51 to 736 kW with 11 base engine configurations. The products meet all known current and future IMO regulations on NO. emissions and offer increased fuel economy.
Daewoo is able to supply complete propulsion and onboard electrical power packages.

Daewoo is also introducing a number of reduction gear boxes and stern arrangements for a complete package. Daewoo's 11 models of marine auxiliary engines and generators covering a range from 32 to 530 kW round out its family of marine products.

1 Turbocharger & Intercooler

Fresh water cooled and charged air controlled Turbocharger allows the optimized intake air condition and combustion. Intercooler allows sufficient air supply to prevent from smoke at low speed operation.

2 Air filter

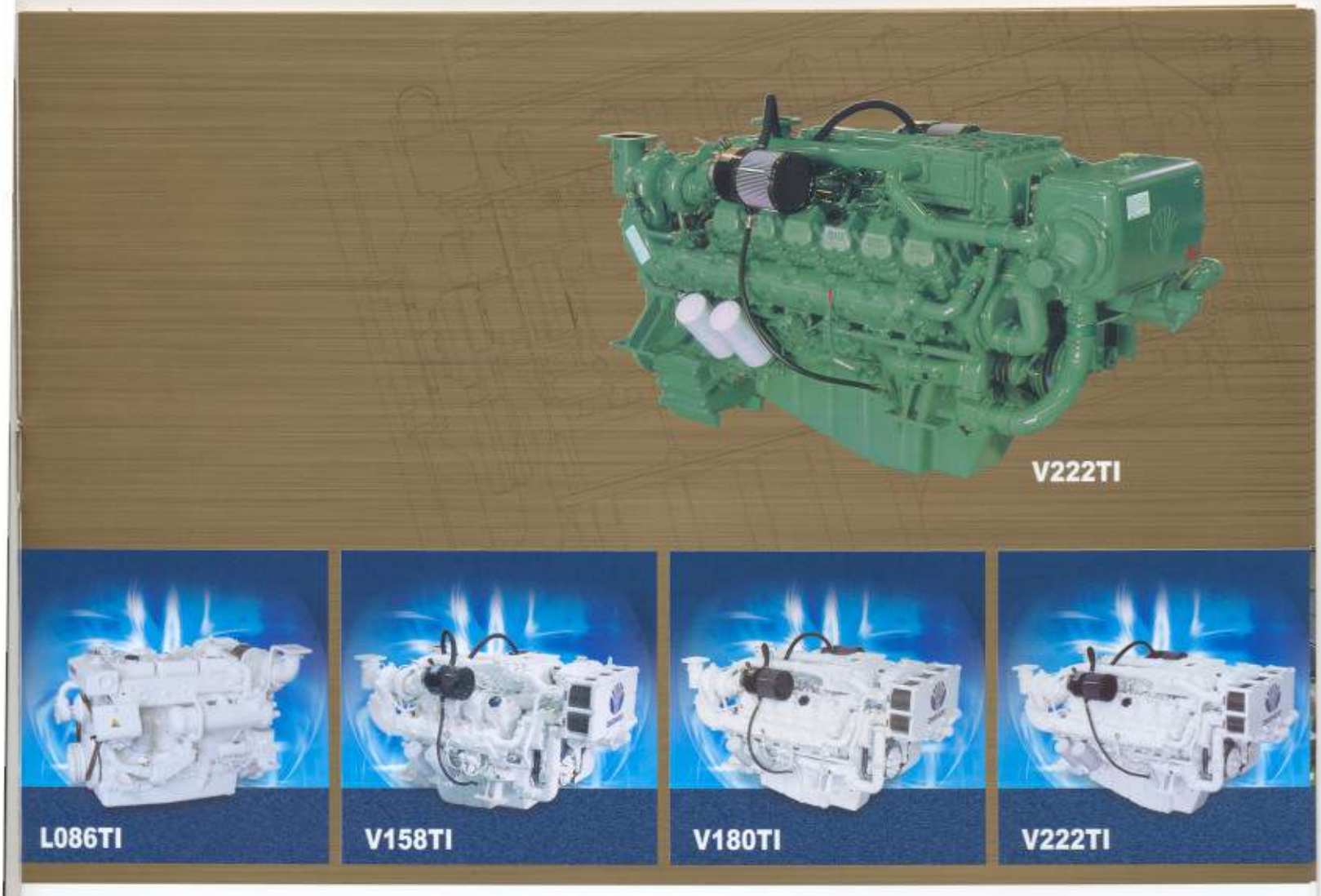
New air filter system makes the cleanliness of engine room due to circulation of breather gas. Extend oil change interval up to 500hours and decrease oil consumption are offered.

3 By pass fuel filter

Increase filtering capability and centrifugal type filter can increase engine durability.

4 Fuel lines

Pipe connection is applied to prevent from burst, tear and leak due to deterioration of rubber hoses. Dual pipe options are available to comply with IMO regulations.



Marine Propulsion Engines

Production tolerance : ±5%

Model	Type			Displacement (liter)	Bore×Stroke (mm)	Output ISO 3046 (kW(PS)@rpm)			Dimension L×W×H(mm)	Dry Weight (kg)
	Combustion	No of cyl.	Aspiration			Heavy Duty	Medium Duty	Light Duty		
L034	DI	4	NA	3.3	102×100	51(70)@3000	-	-	1130×705×821	468
L034TI	DI	4	TI	3.3	102×100	88(120)@3000	106(145)@3300	-	1130×705×773	498
L136	DI	6	NA	8.1	111×139	118(160)@2200	-	-	1544×770×1031	928
L136T	DI	6	TC	8.1	111×139	147(200)@2200	-	177(240)@2500	1561×770×1060	938
L136TI	DI	6	TI	8.1	111×139	169(230)@2200	-	-	1552×770×1124	998
L086TI	DI	6	TI	8.1	111×139	210(285)@2100	232(315)@2300	265(360)@2500	1554×800×1202	1012
MD196TI	DI	6	TI	11.1	123×155	235(320)@2000	-	-	1695×854×1155	1329
L126TI	DI	6	TI	11.1	123×155	265(360)@2000	294(400)@2100	-	1695×854×1155	1410
V158TI	DI	V8	TI	14.6	128×142	353(480)@1800	397(540)@2100	500(680)@2300	1872×1222×1111	1710
V180TI	DI	V10	TI	18.3	128×142	441(600)@1800	478(650)@2100	603(820)@2300	2016×1222×1192	2065
V222TI	DI	V12	TI	21.9	128×142	530(720)@1800	588(800)@2100	736(1000)@2300	2263×1222×1250	2460

Note) Dimension & Dry weight - With Reduction Gear

Marine Auxiliary Engines

Production tolerance : ±5%

Model	Type			Displacement (liter)	Bore×Stroke (mm)	Continuous Rating(ICFN)		Dimension L×W×H(mm)	Dry Weight (kg)
	Combustion	No of cyl.	Aspiration			kW(PS)@1800rpm	kW(PS)@1500rpm		
AD034	DI	4	NA	3.3	102×100	32(43)	26(35)	789×739×739	372
AD034TI	DI	4	TI	3.3	102×100	55(75)	42(57)	789×702×773	402
AD136	DI	6	NA	8.1	111×139	92(125)	77(105)	1120×770×1019	743
AD136T	DI	6	TC	8.1	111×139	125(170)	107(145)	1120×770×1023	748
AD136TI	DI	6	TI	8.1	111×139	138(188)	115(157)	1120×770×1023	777
AD086TI	DI	6	TI	8.1	111×139	186(253)	151(205)	1120×800×1094	790
AD196TI	DI	6	TI	11.1	123×155	199(270)	173(235)	1193×854×1072	1009
AD126TI	DI	6	TI	11.1	123×155	247(336)	206(280)	1193×854×1072	1060
AD158TI	DI	V8	TI	14.6	128×142	353(480)	302(410)	1037×1222×1074	1375
AD180TI	DI	V10	TI	18.3	128×142	441(600)	357(485)	1195×1222×1169	1545
AD222TI	DI	V12	TI	21.9	128×142	530(720)	446(606)	1353×1222×1199	1735

Note) Dimension & Dry weight - Engine Only

Natural Gas Engine

We have voluntarily taken the initiative regarding the protection of the earths environment and the enhancement of alternative energy utilization. In 1999, we developed ultra-low-pollution CNG (compressed natural gas) engines that are used for natural gas buses in Korea and other foreign countries. And recently, we have succeeded in developing LPNG (low pressure natural gas) engines for industrial equipment and generator applications. The company's two new CNG models are the 8.1 L in-line six-cylinder, GE08TI rated 191 kW at 2300 r/min and the 11.1 L in-line six-cylinder, GE12TI rated 250 kW at 2100 r/min.

In addition, Daewoo has produced a line of continuous power heavy industrial gas engines for use in the prime and continuous power markets. Daewoo offers five models ranging from 146 to 460 kW.

GE12TI(CNG)

GV222TI

Automotive CNG Engines

Production tolerance : ±5%

Model	Type			Displacement	Bore×Stroke	Output kW(PS)@rpm	Torque N.m(kg.m)@rpm	Dimension	Dry Weight
	Combustion	No of cyl.	Aspiration	(liter)	(mm)	ISO1585	ISO1585	L×W×H(mm)	(kg)
GE08TI	SI	6	TI	8.1	111×139	191(260)@2300	980(100)@1300	1232×1030×813	745
GE12TI	SI	6	TI	11.1	123×155	250(340)@2100	1372(140)@1260	1372×834×1064	890

CNG(Compressed Natural Gas) for Vehicle

Natural Gas Generator Engines

Production tolerance : ±5%

Model	Type			Displacement	Bore×Stroke	Output ISO 3046		Dimension	Dry Weight
	Combustion	No of cyl.	Aspiration	(liter)	(mm)	kW(PS)@1800rpm Standby / Prime	kW(PS)@1500rpm Standby / Prime	L×W×H(mm)	(kg)
GB58TI	SI	IN-6	TI	5.8	102×118	105(143) / 100(136)	89(121) / 85(115)	1,185×683×901	506
GE08TI	SI	6	TI	8.1	111×139	165(221) / 150(201)	146(196) / 128(172)	1242×918×1100	790
GE12TI	SI	6	TI	11.1	123×155	225(306) / 200(272)	200(272) / 175(238)	1383×870×1207	890
GV158TI	SI	V8	TI	14.6	128×142	300(408) / 270(367)	264(354) / 230(308)	1484×1389×1162	950
GV180TI	SI	V10	TI	18.3	128×142	380(509) / 340(456)	335(455) / 290(394)	1557×1389×1248	1175
GV222TI	SI	V12	TI	21.9	128×142	460(616) / 410(549)	405(543) / 350(469)	1717×1389×1288	1575

Co-Gen & Industrial applications

Cold Chamber

Emission Test Cell

Anechoic Chamber

Durability Test Cell

Engine Research & Development center

Engine R&D center is constantly pursuing total customer satisfaction. We have a fully equipped ultra modern engine testing facilities which include exhaust gas analysis, run-in cells, cold test cells, and anechoic cell..... In order to assure the engine's endurance and reliability, we have conducted a variety of tests which include; cold starting test under minus 30 degrees Celsius, noise test and emissions gas test, high-speed test exceeding 130% of capacity, 1,000-hour overload and thermal shock test 3,000-hour endurance test.

In vehicle condition, off-road, rough terrain and fleet tests are being done and it will be accumulated up to 2.5 million kilometer long drive test.

Application

Daewoo engines have been installed in over 650 different applications. We are confident that Daewoo will provide total customer satisfaction in any applications; Engines for automotive, truck and bus applications, as well as marine application for yachts, naval guard ships and patrol boats, Engines for generators, Industrial engines for mobile construction equipment and large special application vehicles.

S ENGINES

K2power

http://www.k2power.co.kr

GAS ENGINE GENERATOR

DAEWOO INTERNATIONAL

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Telex: DAEWOO K23341
TEL: 82-2-759-2114
FAX: 82-2-753-9489

www.daewoo.com

K2power Introduction

K2power LTD., founded in 1999 as an employee owned company, has a rich history of producing high quality generator sets and industrial air compressors. With its mass production facilities strategically located in Asan, South Korea, K2power Ltd. plays a central role in the Korean Generator Industry through domestic and export sales.
K2power Ltd. presently provides high quality generator sets and air compressors to dealers, governments and end users in over 50 countries, and new markets and customers are being added daily.

K2power Ltd. was originally formed in 1977 as a division of Daewoo Heavy Industries, Ltd. from its inception, its goal was to produce and offer to its customers a better quality product and provide the best possible after sales service. Over 30 years later this commitment to customer satisfaction has not changed. K2power Ltd. presently offers powered by a variety of engines manufactured by Hyundai, Daewoo, and others.
K2power Ltd. is sensitive to the requirements of various countries with regard to safety standards, electrical codes and exhaust gas emissions.

K2power Ltd. strives to provide quality products that not only meet the certification requirements of governmental regulations and applicable standards organizations but also exceed the efficiency and performance expectations of the customer. All K2power Ltd. generator set models have been tested for durability and performance in a variety of use environments. Optional accessories allow for operation in the extremes of cold and heat and each generator produced has its circuits protected and monitored by test proven monitoring and protection devices.

Our generator sets (open skid or trailer mounted, sound attenuated or weather protected models, automatic parallel models and large containerized models) have and are continuing to receive positive customer acclaim both at home and abroad.

K2power Ltd's products provide optimum efficiency along with ease of maintenance. The compact structure and the latest technology combined with an abundance of common sense design and engineering, are key elements in each K2power Ltd. generator sets and air compressor units. These key elements provide for exceptional ease of maintenance as well as ease of operation. Each K2power Ltd. product is designed with the customer in mind. Precise controls, easy to read gauges and LED panels along with various safety devices, make our products some of the most user friendly products available in the world today.

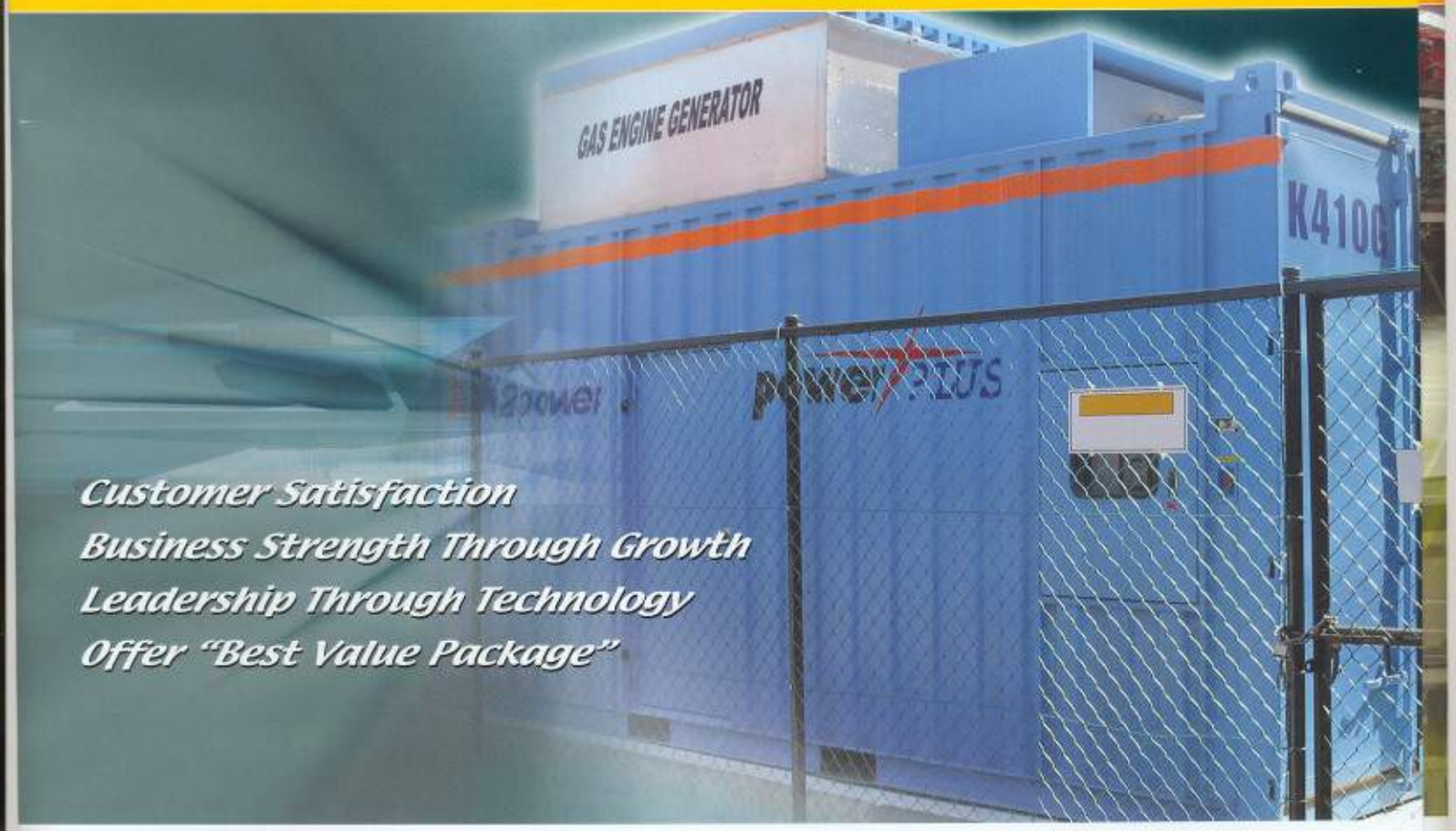
K2power Ltd. engineers and designers are diligently striving to keep K2power Ltd., and its customers at the leading edge of the electrical generator industry in the 21st century. Proprietary innovative technology, rapid customer support and a passion to achieve worldwide leadership through customer satisfaction are the driving force of the K2power Ltd. family. Please allow us the opportunity to welcome you as one of the many satisfied family members of K2power Ltd..

Contact K2power Ltd. or one of its many worldwide partners for a TOTAL SOLUTION quotation of your electrical power needs today.

- ***Environmentally Friendly***
- ***Heavy Duty and Proven Reliability***
- ***Advanced Technology and High Performance***
- ***Easy Operation & Maintenance***
- ***Compact Design and Variable Functions***

Digital Control Panel

- Auto Sequencing of Gen-Set
- Power Monitoring Function of Gen-Set
- Engine-Generator Set Monitoring
- Engine-Generator Set Protection
- Remote Control & Monitoring
- User Interface Function



Customer Satisfaction
Business Strength Through Growth
Leadership Through Technology
Offer "Best Value Package"

DIGITAL CONTROL PANEL

Protection	Engine Stop	GCB Trip	Pre-Alarm LED	Alarm LED	Error Message
Over Speed	●	●	X	●	●
Low Oil Pressure	●	●	●	●	●
High Coolant Temperature	●	●	●	●	●
Fail to Start	●	●	X	●	●
Emergency Stop	●	●	X	●	●
Over Voltage	●	●	X	●	●
Over Current	X	●	X	●	●
Under Voltage	X	●	X	●	●
Ground Fault	X	●	X	●	●
Error Operating of GCB / ATS	X	X	●	X	●
Error Battery Charging	X	X	●	X	●
Low Coolant Temperature	X	X	●	X	●
High / Low Voltage of Battery	X	X	●	X	●
Over Load	X	X	●	X	●

Note - ● : Fitted as standard
GCB : Gen. Circuit Breaker
× : Not available.
ATS : Automatic Transfer Switch

K2POWER
GAS ENGINE GENERATOR

GENERAL SPECIFICATION

Model	Capacity (Prime Power)				Gas Engine		Skid type			
	50Hz(1500rpm)		60Hz(1800rpm)				Length mm	Width mm	Height mm	Net Weight kg
	kVA	kW	kVA	kW	Model	Aspiration				
K145G	141	113	165	132	GE08TIC	T/C + I/C	2,800	1,000	1,697	2,300
K200G	196	156	227	182	GE12TIC	T/C + I/C	3,300	1,371	1,770	2,700
K260G	250	200	295	236	GV158TIC	T/C + I/C	3,450	1,460	2,086	3,400
K335G	318	255	381	305	GV180TIC	T/C + I/C	3,750	1,460	2,086	3,900
K410G	388	311	466	373	GV222TIC	T/C + I/C	3,900	1,460	2,086	4,320

NOTE)

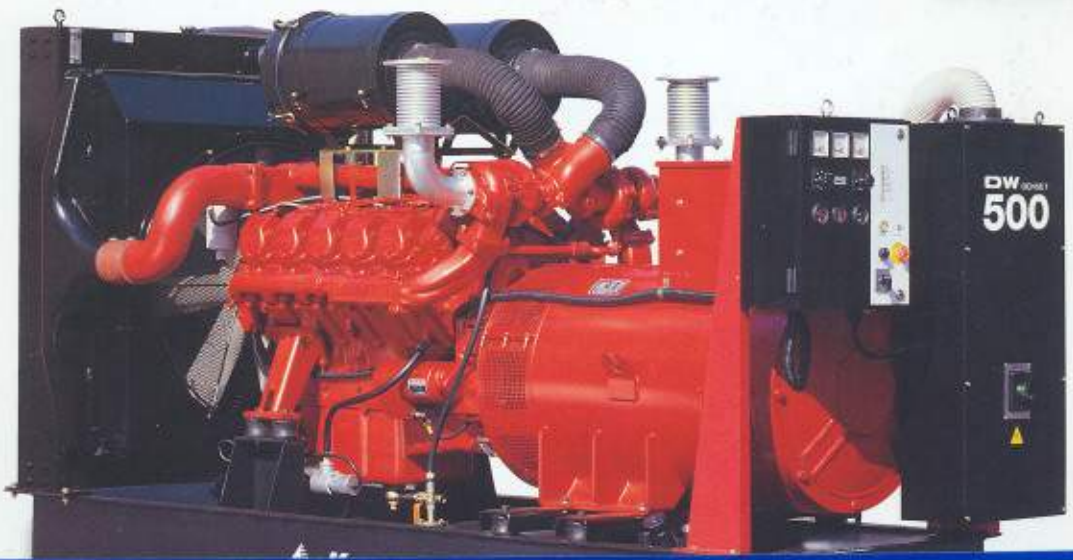
T/C : Turbo Charger I/C : Intercooler(air to water)

Ratings represent engine performance in accordance with ISO 3046 at reference conditions equivalent to those specified in ISO 3046/1 based on the use of natural gas having a min. lower calorific value of 33.5MJ/m³.

Prime Power = Power available at variable load. The permissible average power output (during 24h period) shall not exceed 70% of the prime power rating. An overload of 10% is permitted for one hour in every twelve hours of operation.

K2POWER

DIESEL GENERATOR



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www.daewoo.com

SMICC ISO14001

SMICC ISO 9001

Power Supply Equipment

K2 POWER LTD. is playing a pivotal role in the electrical power supply market by producing high quality Daewoo, Hyundai diesel engine powered generating sets.

Stand-by or Prime, K2 POWER Electrical Generators are capable of interfacing with Utility Company power for emergency or peak load needs. The reliable K2 POWER generators also work well in harsh environments and remote locations as a prime source of electrical power.

K2 POWER personnel work as hard as the K2 POWER equipment they build to maintain a strong reputation for reliability and quality. The K2 POWER reputation continues to be recognized worldwide by utility and industrial users of skid mounted, trailer mounted, sound attenuated, weather proof and containerized generators.

K2 POWER LTD.'s commitment to maintaining a competitive edge through advanced technology, major roles in international business management and contributions to users' safety, convenience and world environmental protection have boosted K2 POWER LTD. to a leading position in the World marketplace.

Features

Diesel Engine

DHI&M has over 40 years of successful diesel engine production. DAEWOO Diesel Engines have a strong reputation for fuel economy, high efficiency and durability. DAEWOO diesel engines are literally running every day, all day all over the world.
Today, with streamlined and integrated through process production facilities, DAEWOO is a famous diesel engine producer in Asia.

DAEWOO Diesel Engines for Generator Applications boast:

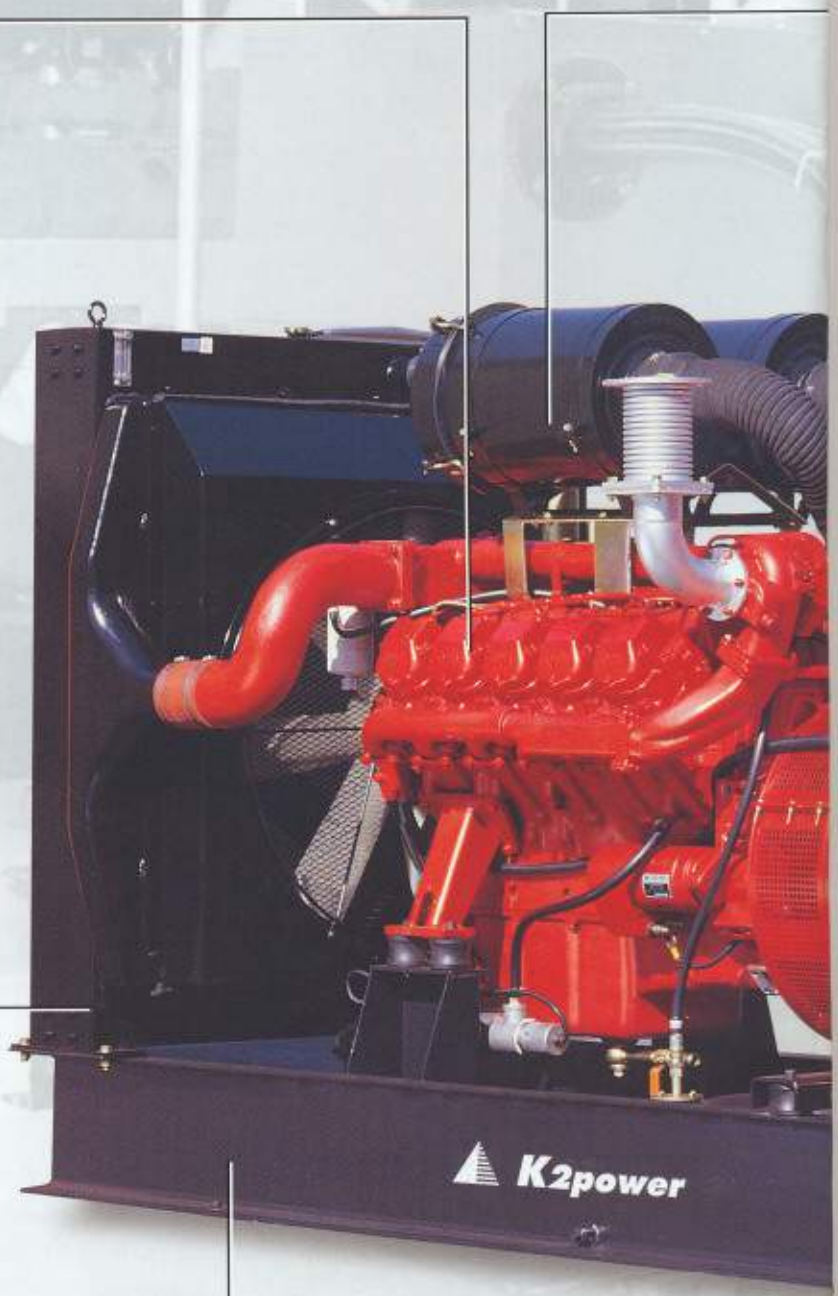
- A long history of proven reliability, essential for critical electrical generation applications.
- Advance Technology properly applied to promote efficiency and ease of service.
- High power output at Low operating cost.
- High pressure direct injection with high swirl combustion chamber design optimizes power to fuel consumption and reduces exhaust emissions.

Oil Filter

Oil filter elements are designed for 100% filtration at lower pressure drops to better facilitate cold starts while maintaining maximum contaminate removal and maximum lubrication capability.

Radiator & Intercooler

High thermal efficiency radiators and intercoolers (if equipped) combined with the standard engine mounted blower fan, insure adequate cooling in most environments. For desert and equatorial operations an optional extra high capacity radiator is also available.
On air to air intercooler equipped models, the engine intake charge air maintains a constant temperature and density for extremely efficient combustion.



Fuel Filter

Fuel filters are easily accessed for service. The spin on cartridge type fuel filter requires no special tools for replacement.

Frame and Integral Fuel Tank

The engine and alternator are resiliently mounted to reduce vibration and noise. The standard fuel tank includes suction and return lines, a large filler tube with breather for quick fills, a filler tube filter to trap course contaminates, a sight level gauge and drain plug.

http://www.k2power.co.kr

Air Cleaner

Air cleaner is extra high capacity to low maintenance cost and boosts engine performance. Clogging is indicated by the restriction indicator mounted on the air cleaner housing.

Engine Governing System

The Mechanical Governor provides accurate control of engine speed under varying loads.
Electric Governors are available for applications requiring a more precise control of engine speed. Electric Governors are applied on DW170~DW600. All electrical engine control actuators are sealed and require no maintenance.

Control Panel

- Easy access control panels have hinged front covers.
- LED indicators light for low oil pressure, high coolant temperature, over speed, over voltage, etc.
- Auto safety shut down device is standard for all models.

Main Circuit Breaker

- High capacity interruption.
- High capacity silver alloy contacts for long useful life.
- Minimum arc design means low maintenance cost.
- Optimal cabinet design allows for versitile distribution.

Alternator

Alternator design is simple and rugged. Components are easily accessed for routine maintenance, repair or replacement. The Heavy Duty Alternator complies with NEMA, IEEE and ANSI standards for temperature rise.

Type	: Revolving Field
Frequency	: 60Hz/50Hz
Phase & Wire	: 3P4W
PF	: 0.8
Pole	: 4p, 208~480VAC
Insulation Class	: H
Excitation	: Self-Excited, Brushless
One-step load (NFPA 110)	: 100% Rating
Coupling	: Flexible Disc
Bearing	: Single, Ball Bearing Type
Rotor	: With damping cage
Enclosure	: IP21
Over Speed	: 2,250 rpm (125% of rated rpm)

Vibration Isolator

Engine / Alternator and bed frame are isolation mounted to reduce vibration. Reliability testing has insured durability and longevity against frequent transportation and operation on irregular terrain.

Soundproof

For Silent Operating

K2 POWER Generator sets can be sound proofed to minimize the sound pollution. The basic generator is fitted with a sound attenuated weather proof canopy which maximizes the space economic design of the basic open style generator.

Outstanding Features

Compact Structure

Optimum space design provides for a compact and powerful electrical generating package.
The K2 POWER Generator design provides greater accessibility for servicing in a compact design reflecting a totally practical engineering approach Instrument cluster and panel controls are easily accessed and read for easy operation.

Easy Maintenance

The standard skid mounted generator allows easy access to all engine and alternator components. Sound attenuated or weather proof canopies can be easily unbolted and removed to allow total access if so equipped.

Easy to Move

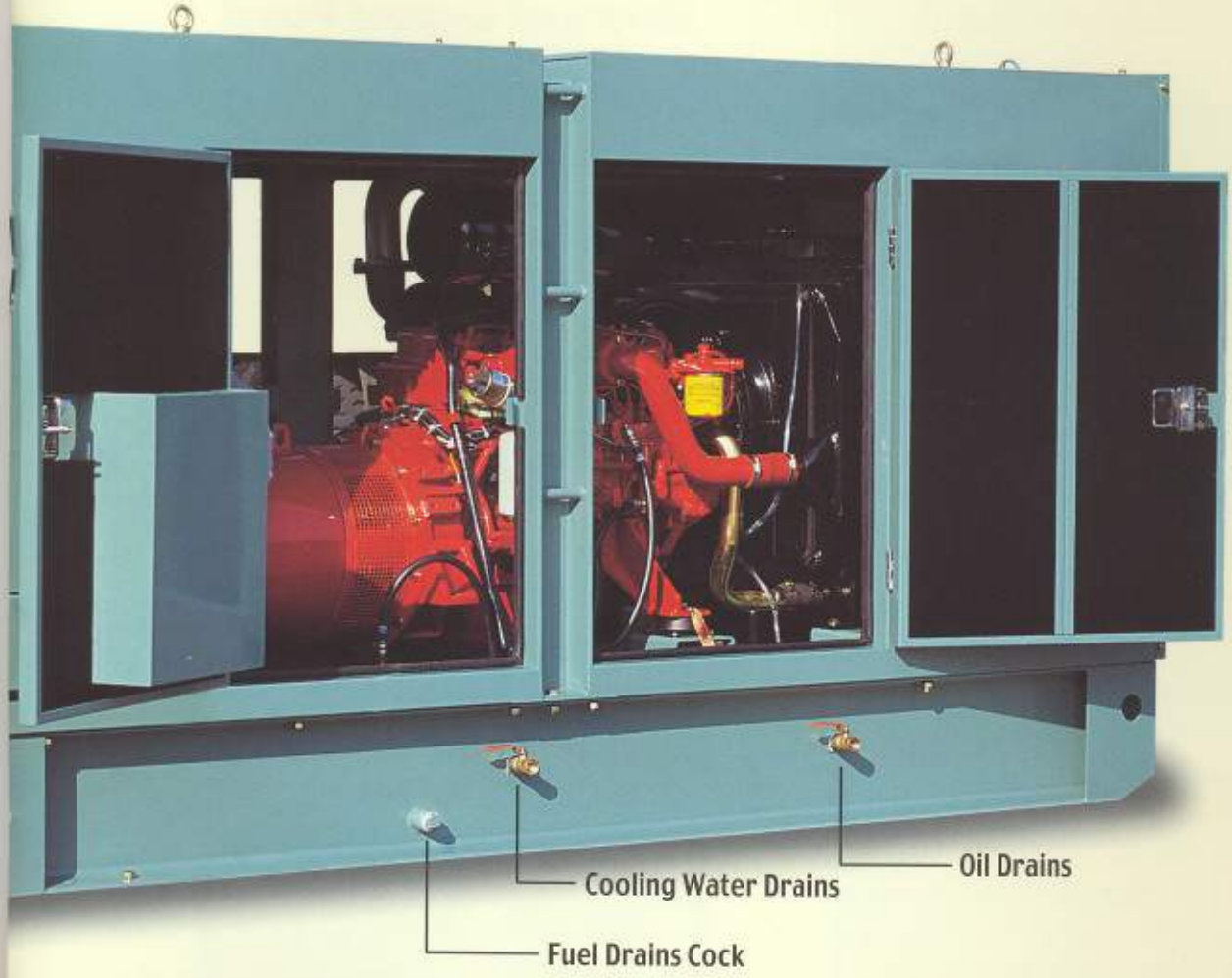
In most cases the K2 POWER Generator can be easily moved with an appropriate sized fork truck. The center lifting eye on covered units provides a quick and easy method to lift or relocate the generator.

Environmentally Friendly

The EPA exhaust emission compliant engine and optional sound attenuated enclosure along with the stand vibration absorption mounts insure a minimum of noise and air pollution.

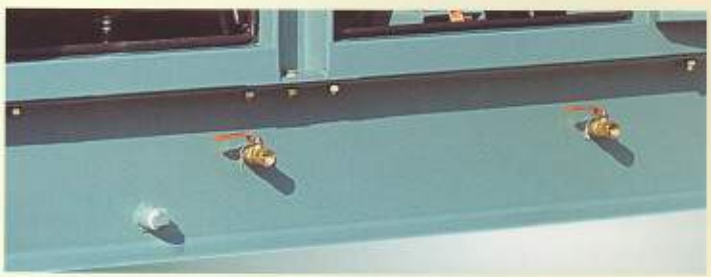
Ladder Access On Canopies

Access ladders are provided for all canopies. Ladders are designed into the side panels which allows for wide door openings. All doors are fitted with flush mounted handles to maintain a sleek design and reduce overall width.



Fuel Gauge & Fuel Filling

Fuel filling is easy and the filler tube is an anti-belching design which includes a built in removable fuel strainer. A large mechanical fuel gauge provide easy viewing.



Fuel Drain Cock

The easily accessible fuel drain is provided for quick and easy maintenance of the fuel system.

Oil and Cooling Water Drains

Cooling Water and Engine oil drains are provided for easy servicing.

Product

Mounted Control Panel (Standard Analogue Type)

- Central control panel
- Compact design and variable function.
- Fault indicating lamps

Proven Reliability(Gen. Control Unit.)

■ Vibration	: 1.2G Below
■ Shock	: 25Hz, X-Y-Z direction
■ Storage Temp.	: - 40 ~ 85℃
■ Operating Temp.	: - 20 ~ 85℃
■ Relative Humidity	: up to 95%
■ Surge Test	: 110V, 400ms
■ Burst Noise	: IEC-1000-4-4-LEVEL3, ±2000V
■ Static Electricity	: IEC-1000-4-2-LEVEL 3, In Air ±8000V, Directly ±6000V

Battery Charger

Stable output voltage against variable input

Fuse Holder

Arranged fuse holder for easy maintenance.

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Mounted Control Panel (Digital Type[option])

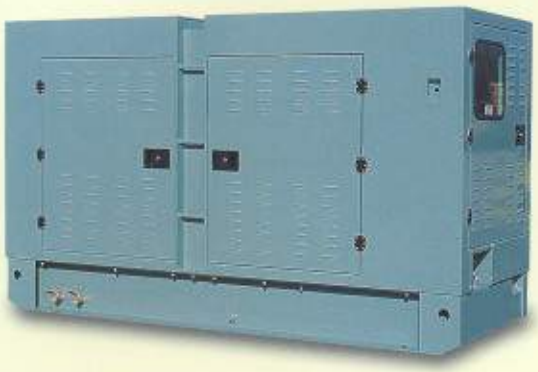
- Digital controller
- Easy operation & maintenance
- Super quality and durability
- Light and compact
- High performance

Digital Controller

▶ **Main Functions**
- Auto Sequencing of Gen. Set
- Power Monitoring Function of Gen. Set
- Engine & Alternator Set Monitoring
- Engine & Alternator Set Protection
- Remote Control & Monitoring with PC
- User Interface Function

▶ **Display with LCD**
Voltage & Ampere, Speed(rpm), Frequence(Hz), Power Factor(PF), Power(kW), Battery Voltage, Coolant Temp. Oil Pressure, kWH, Running Hour

▶ **Safety Device**
The digital controller is provided total protection for generator set.



Weather Proof (Bonnet)

External drain plugs for oil, fuel and cooling water are fitted for convenience in performing routine maintenance. Large fuel gauge is fitted for simple viewing.
For major engine overhauls, the canopy(bonnet) can be simply unbolted, which allows full access to the engine. The innovative designs of the weather proof series has achieved significant size and weight reductions over all models.

Containerized Generator Set

Military or high grade commercial generator system powered by DAEWOO Engine. Totally self-contained system with internal fuel tank, control and monitoring panel, and manual switchgear with outlet panels.

- No need special install device
- Critical sound attenuating design
- Easy movable with trailer
- Over size cooling system
- Digital Control Panel
- Parallel Operation

Self standing Panel

Self standing panel from K2 POWER consists of proven components, integrated and packaged to meet customer needs. As an integral part of a complete power system, K2 POWER self standing panel serves as a monitoring and switching station for all electric sources as required by the various application. K2 POWER designs and produces a complete line of self standing panel for three basic applications : standby/emergency use, prime use.
K2 POWER can meets various sizing and installation requirements for all systems.

Parallel Operation System

Paralleling is an integrated function of our genset control. In addition to all monitoring, protection, governing, and voltage regulation functions. K2 POWER provides all paralleling control functions, including synchronizing, load sharing, and paralleling protection. The K2 POWER control even provides utility (mains) paralleling functions such as import/export control and var/power factor control. The panel of parallel operation not only saves space, but can also vastly improve system reliability and performance.

※ Trailer is optional item.

Product Line

Hyundai Series Ratings

Model	60Hz(1,800rpm)				50Hz(1,500rpm)				Diesel Engine			
	Standby		Prime		Standby		Prime					
	kW	kVA	kW	kVA	kW	kVA	kW	kVA	Model	Manufacturer	Aspiration	Governor
K20H	20	25	18	23	16	20	15	18	D4BB	HYUNDAI	NA	Mechanical
K26H	26	33	24	30	20	26	19	24			NA(60Hz) TC(50Hz)	
K35H	35	44	32	40	-	-	-	-			TC	

Daewoo Series Ratings

Model	60Hz(1,800rpm)				50Hz(1,500rpm)				Diesel Engine			
	Standby		Prime		Standby		Prime					
	kW	kVA	kW	kVA	kW	kVA	kW	kVA	Model	Manufacturer	Aspiration	Governor
DW50	50	63	45	56	40	50	36	45	P034TI	DAEWOO	TC+IC	Mechanical
DW60	60	75	55	69	48	60	44	55	DB58		NA	
DW85	85	106	77	96	70	88	64	80	D1146		NA	
DW115	115	144	105	131	101	126	92	115	D1146T		TC	
DW170	170	212	155	194	145	181	132	165	P086TI-1		TC+IC	Electronic
DW200	200	250	182	228	176	220	160	200	P086TI		TC+IC	
DW275	275	344	250	313	242	303	220	275	P126TI		TC+IC	
DW320	320	400	290	362	282	353	256	320	P158LE-2		TC+IC	
DW360	360	450	327	409	320	400	288	360	P158LE-1		TC+IC	
DW400	400	500	364	455	370	463	320	400	P158LE		TC+IC	
DW450	450	563	409	511	396	495	360	450	P180LE-1		TC+IC	
DW500	500	625	445	556	440	550	400	500	P180LE		TC+IC	
DW600	600	750	541	676	528	660	480	600	P222LE		TC+IC	

※ NA : Naturally Aspiration, TC : Turbo Charged, TC + IC : Turbo Charged + Intercooler

Containerized Series Ratings

Model	60Hz(1,800rpm)				50Hz(1,500rpm)				Diesel Engine			
	Standby		Prime		Standby		Prime					
	kW	kVA	kW	kVA	kW	kVA	kW	kVA	Model	Manufacturer	Aspiration	Governor
P600S	600	750	541	676	528	660	480	600	P222LE × 1	DAEWOO	Turbo Charged & Intercooled	Electronic
P1000D	1,000	1,250	890	1,112	880	1,100	800	1,000	P180LE × 2			
P1200D	1,200	1,500	1,082	1,352	1,056	1,320	960	1,200	P222LE × 2			

※ All above performance according to ISO 8528 standard reference conditions.

Specification

Hyundai Series General Specifications

Model	Fuel Consumption (L/H, @75% Load)		Fuel Tank Capacity(Skid Type)	Generator Set Dimension(Skid Type)			
	60Hz	50Hz	Liter	Length (mm)	Width (mm)	Height (mm)	Weight (Kg)
K20H	5.4	3.8	64	1,660	660	1,226	655
K26H	6.5	5.1	64	1,720	660	1,226	682
K35H	8.8	-	75	1,810	720	1,226	707

Daewoo Series General Specifications

Model	Fuel Consumption (L/H, @75% Load)		Fuel Tank Capacity(Skid Type)	Generator Set Dimension(Skid Type)			
	60Hz	50Hz	Liter	Length (mm)	Width (mm)	Height (mm)	Weight (Kg)
DW50	10.2	8.0	100	2,288	750	1,630	1,095
DW60	13.3	10.7	150	2,570	850	1,630	1,318
DW85	15.9	13.2	150	2,773	850	1,630	1,808
DW115	20.5	18.0	150	2,773	850	1,630	1,874
DW170	31.3	25.8	160	3,085	940	1,630	2,136
DW200	36.7	31.3	160	3,085	940	1,630	2,331
DW275	53.1	44.8	220	3,348	1,015	1,630	2,664
DW320	57.5	50.2	320	3,263	1,150	1,875	2,882
DW360	64.8	56.5	320	3,283	1,387	1,875	3,312
DW400	72.1	62.8	320	3,283	1,387	1,875	3,312
DW450	81.6	71.6	360	3,512	1,387	1,875	3,864
DW500	88.8	79.6	360	3,512	1,387	1,875	3,934
DW600	112.9	98.1	400	3,927	1,387	1,875	4,373

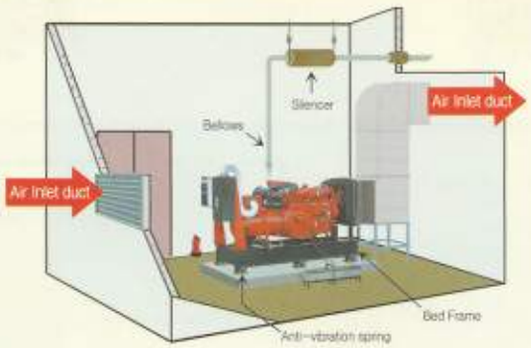
Containerized Series General Specifications

Model	Fuel Consumption (L/H, @75% Load)		Control Panel	Sound Attenuation	Generator Set Dimension			Container (ISO)
	60Hz	50Hz			Length (mm)	Width (mm)	Height (mm)	
P600S	113	98	Parallel Control with Digital Controller	73 dB(A) at 7m	6,058	2,438	2,896	20ft
P1000D	178	159			12,192	2,438	2,896	40ft
P1200D	226	196			12,192	2,438	2,896	40ft

In many cases the photographs in this catalog show optional equipment.
Specification values quoted in this catalog have been rounded, and direct conversions from metric may be slightly different from those shown.
K2 POWER products and specifications are subject to improvement and change without notice.
Performance may vary due to operating conditions. The performance shown represents nominal values obtained under typical operating conditions.

Installation

Radiator Cooling Type



Installation Detail

Series	Model	Foundation(m)			Anti-Vibration Spring		Load Wire (Thickness(SQ) x Core(C))				Battery
		Length	Width	Height	Capa.(kg)	Q'ty	208V	220V	380V	440V	(Capa x Q'ty)
HYUNDAI	K20H	1.810	0.960	0.200	200	4	14SQ x 1C	14SQ x 1C	5.5SQ x 1C	5.5SQ x 1C	100AH x 1
	K26H	1.870	0.960	0.200	200	4	14SQ x 1C	14SQ x 1C	8SQ x 1C	5.5SQ x 1C	100AH x 1
	K35H	1.960	1.020	0.200	200	4	22SQ x 1C	22SQ x 1C	14SQ x 1C	8SQ x 1C	100AH x 1
DAEWOO	DW50	2.330	1.050	0.200	400	4	80SQ x 1C	80SQ x 1C	38SQ x 1C	38SQ x 1C	120AH x 2
	DW60	2.450	1.150	0.200	400	6	100SQ x 1C	100SQ x 1C	38SQ x 1C	38SQ x 1C	120AH x 2
	DW85	2.810	1.150	0.240	400	6	125SQ x 1C	125SQ x 1C	80SQ x 1C	38SQ x 1C	120AH x 2
	DW115	2.810	1.150	0.250	400	6	100SQ x 2C	100SQ x 2C	125SQ x 1C	80SQ x 1C	120AH x 2
	DW170	3.150	1.150	0.250	450	6	150SQ x 2C	150SQ x 2C	200SQ x 1C	200SQ x 1C	120AH x 2
	DW200	3.150	1.150	0.270	450	6	200SQ x 2C	200SQ x 2C	200SQ x 1C	200SQ x 1C	120AH x 2
	DW275	3.400	1.220	0.280	550	6	250SQ x 2C	250SQ x 2C	100SQ x 2C	100SQ x 2C	150AH x 2
	DW320	3.330	1.450	0.280	400	10	200SQ x 3C	325SQ x 2C	125SQ x 2C	125SQ x 2C	150AH x 2
	DW360	3.330	1.450	0.290	400	10	250SQ x 3C	250SQ x 3C	200SQ x 2C	200SQ x 2C	150AH x 2
	DW400	3.330	1.450	0.290	400	10	250SQ x 3C	250SQ x 3C	200SQ x 2C	200SQ x 2C	150AH x 2
	DW450	3.530	1.450	0.320	500	10	250SQ x 3C	250SQ x 3C	200SQ x 2C	200SQ x 2C	150AH x 2
	DW500	3.530	1.450	0.320	500	10	250SQ x 4C	200SQ x 4C	200SQ x 2C	125SQ x 4C	150AH x 2
	DW600	3.950	1.450	0.330	500	10	250SQ x 4C	200SQ x 4C	125SQ x 4C	125SQ x 4C	150AH x 2

Series	Model	Radiator Type						Exhaust Pipe (EA x A)		
		Dimension			Air Inlet Duct	Air Outlet Duct	Air Consumption			
		Length(m)	Width(m)	Area(m^2)	(m^2)	(m^2)	(m^3/min)	Basis (10m)	Length (20m)	Length (30m)
HYUNDAI	K20H	0.505	0.500	0.253	0.093	0.077	59.8	1 x 65	1 x 65	1 x 65
	K26H	0.505	0.500	0.253	0.093	0.077	59.8	1 x 65	1 x 65	1 x 65
	K35H	0.660	0.600	0.396	0.093	0.077	59.8	1 x 65	1 x 65	1 x 65
DAEWOO	DW50	0.660	0.720	0.475	0.195	0.163	124	1 x 80	1 x 90	1 x 90
	DW60	0.760	0.590	0.448	0.240	0.200	152	1 x 80	1 x 100	1 x 100
	DW85	0.750	0.830	0.623	0.314	0.262	199	1 x 100	1 x 100	1 x 100
	DW115	0.750	0.830	0.623	0.348	0.290	222	1 x 100	1 x 100	1 x 125
	DW170	0.750	0.830	0.623	0.428	0.357	275	1 x 100	1 x 125	1 x 125
	DW200	0.910	1.000	0.910	0.591	0.493	377	1 x 100	1 x 125	1 x 125
	DW275	0.995	1.080	1.075	0.859	0.716	546	1 x 125	1 x 150	1 x 150
	DW320	0.995	1.080	1.075	0.933	0.777	595	2 x 125	2 x 150	2 x 150
	DW360	0.995	1.080	1.075	1.030	0.859	657	2 x 125	2 x 150	2 x 150
	DW400	1.226	1.271	1.558	1.104	0.920	705	2 x 125	2 x 150	2 x 150
	DW450	1.226	1.271	1.558	1.305	1.088	831	2 x 125	2 x 150	2 x 150
	DW500	1.226	1.271	1.558	1.422	1.185	906	2 x 125	2 x 150	2 x 150
	DW600	1.226	1.271	1.558	1.660	1.383	1.060	2 x 150	2 x 150	2 x 175

※ This installation data would be changed by site conditions.

K2POWER LIMITED

K2power

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